

Renew Harbor Island



Work today, protect tomorrow.

1st Quarter 2024 Groundwater Monitoring and Corrective Action Report

For Michigan Part 115 CCR Solid Waste
Regulations

Former J.B. Sims Generating Station

April 30, 2024

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1.0 Introduction

The U.S. Environmental Protection Agency's (EPA) final Coal Combustion Residuals (CCR) Rule 40 CFR §257 and Michigan's Part 115 Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451 (Part 115), establish a comprehensive set of requirements for the management and disposal of CCR (or coal ash) in surface impoundments by electric utilities. The former J.B. Sims Generating Station (facility or Site) was a coal-fired power generation facility operated by Grand Haven Board of Light & Power (GHBLP) that ceased operations in February 2020 (**Figure 1**). The CCR generated at the former generating station were stored in two CCR units that are subject to the CCR Rule and Part 115 and identified as: (1) the inactive Units 1/2 Impoundment and (2) the Unit 3A/B Impoundments (**Figure 2**).

The inactive Units 1/2 Impoundment was a depression in the ground where sluiced ash was disposed and ceased receiving CCR material in 2012. The former Unit 3A/B Impoundments were engineered clay-lined, above-ground units and ceased receiving CCR material in July 2020. Excavation of CCR material from Unit 3A/B Impoundments was conducted in December 2020.

A new groundwater monitoring network was established in 2022 for both of the CCR units, including installation of new background wells. Background data collection occurred between November 2022 and August 2023 (HDR, 2023d). The first sample event after background monitoring under the updated monitoring network occurred in October 2023, and was considered both a detection and assessment monitoring event based on the prior status of the Site in assessment monitoring under the prior well network. Both statistically significant increases (SSI) of constituents in groundwater above the background values and also statistically significant levels (SSLs) of constituents over groundwater protection standards (GPS) were identified from the October 2023 sample event. Therefore, the status of the groundwater monitoring program for both CCR units is assessment monitoring and evaluation of potential remedies. The Site is initiating assessment of corrective measures on April 30, 2024. Following the identification of SSIs, a Response Action Plan was submitted to EGLE March 8, 2024.

This Quarterly Groundwater Monitoring Report presents the monitoring activities completed during the first quarter of 2024.



Figure 1 | Site Vicinity Map

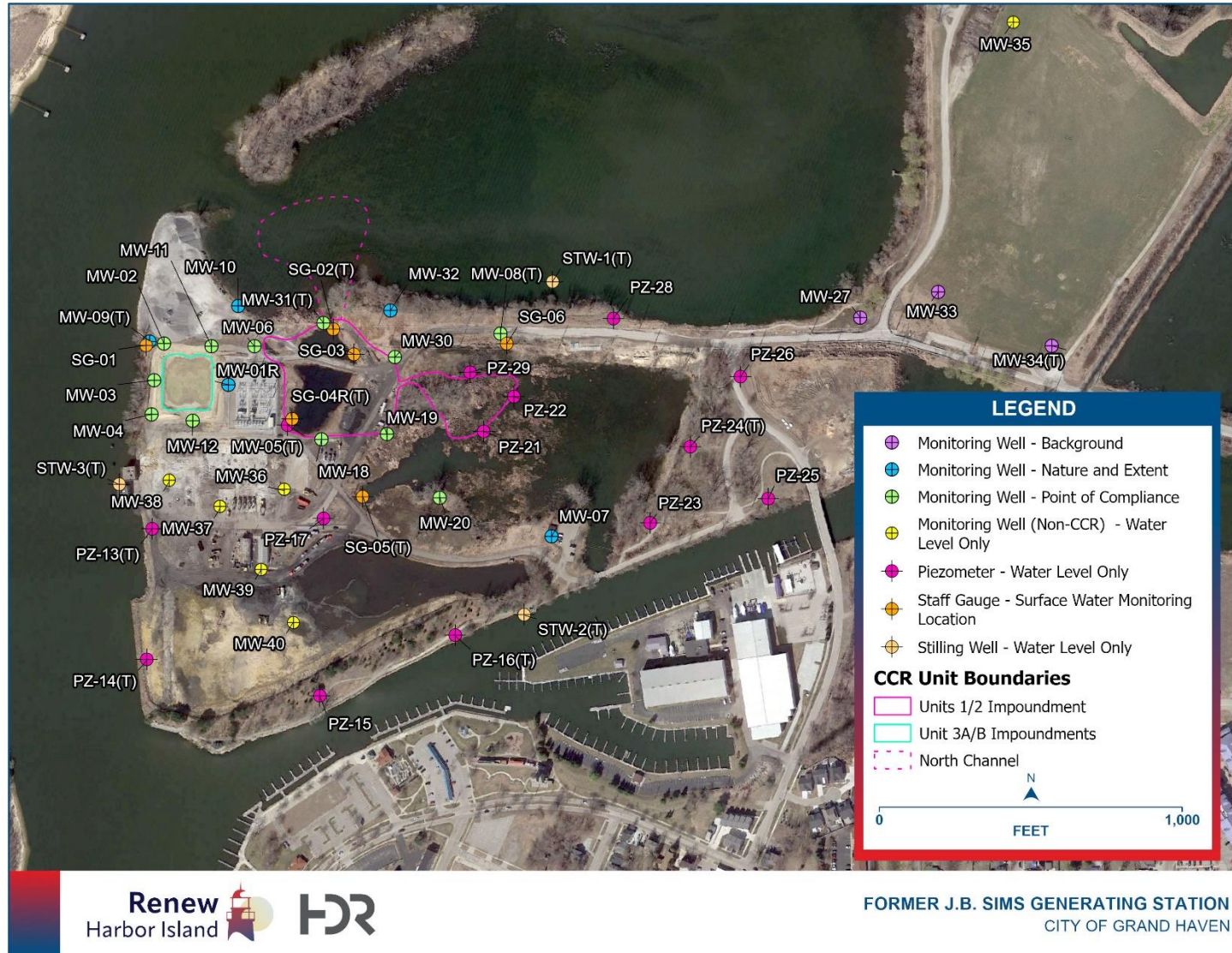


Figure 2 | Former J.B. Sims CCR Units and Monitoring Wells

2.0 Facility Description

The former CCR Unit 3A/B Impoundments were clay-lined above-ground units that received CCR materials during operations from August 1983 to July 30, 2020. Although the former coal-fired power generation facility ceased operations in February 2020, the Site continued to use the Unit 3A/B Impoundments to clean out the hoppers, vessels, etc. prior to demolition of the buildings. In July 2020, following the clean out procedures, the Unit 3A/B Impoundments ceased accepting CCR materials. CCR materials were excavated from the Unit 3A/B Impoundments between June 2020 and December 2020. The CCR removal verification report was submitted to EGLE by GHBLP for review and approval on December 11, 2020 (Golder, 2020). EGLE denied the removal verification in written communications on January 27, 2021. Additional tasks are required for verification of ash removal from the unit.

The Units 1/2 Impoundment was a depression in the ground where sluiced ash was disposed. The inactive Units 1/2 Impoundment ceased receiving CCR materials in 2012. The monitoring network for the Units 1/2 impoundment consisted of one background monitoring well (MW-07), four (4) downgradient detection monitoring wells (MW-1R, MW-05, MW-06, MW-08), and an additional five (5) assessment monitoring wells (MW-02, MW-03, MW-04, MW-09, and MW-10). Based on information provided to HDR, it appears that GHBLP, EPA, and EGLE discussed the boundary for the inactive Units 1/2 Impoundment on January 14, 2021. During that discussion, a boundary of the Units 1/2 Impoundment was agreed upon that includes an area of sluiced ash disposal further to the east than the original boundary (**Figure 2**). It was also agreed between all parties that the former northern outlet channel from the Units 1/2 Impoundment would be evaluated for potential inclusion in the revised boundary (**Figure 2**).

2.1 Hydrogeology

The uppermost aquifer across Harbor Island is located between the surface and 39 feet below surface and consists of fine sand with gravel and silt lenses, clay, peat, ash, and municipal solid waste. From 2022 through first quarter 2024, groundwater was encountered between 0.58 and 16.22 feet below ground surface within the unconsolidated fill material. The bottom of the aquifer is believed to consist of a continuous clay and dense silt observed between 20.8 – 39.0 feet below surface. The clay and dense silt are observed in borings MW-12, MW-17, PZ-16, PZ-26, PZ-24, PZ-25, MW-30.

The regional general direction of groundwater flow across the Harbor Island is west to southwest towards Lake Michigan (Western Michigan University, 1981). The Grand River is located on the northern and western side of the Site, and the South Channel is located on the south side of Harbor Island. Internal to the Island there are several influences to groundwater flow and direction. Specifically, the following features:

- Various fill materials observed in boring logs,
- Surface water features, such as the inactive Units 1/2 Impoundment and internal wetland,

- Former coal yard area which may have lower infiltration rates due to compaction from heavy equipment and stockpiling.

These features influence the groundwater velocity and direction and are very localized. Boring logs contained in the Field Summary Report of Results from Approved Work Plan - Piezometer Installation and Additional Data Collection show the observed fill materials encountered during well installation (Golder, 2022). During the water level monitoring events conducted between September 2022 and February 2024, groundwater mounding is shown around monitoring well MW-01R, consistent with observations made by Golder between October and December 2021 (Golder, 2022). Groundwater flow in the area east of the internal wetland is consistent with regional groundwater flow and the flow of the Grand River toward the west. Groundwater data from the 2023 show groundwater flow beneath Unit 3A/B Impoundments is consistently west toward the Grand River (HDR, 2024). Groundwater flow beneath Units 1/2 Impoundment is seasonably and spatially variable; flow is generally northward toward near the North Channel (**Figure 2**), east from the ponds of Units 1/2 Impoundment toward the wetland, and potentially south near MW-05 (HDR, 2024). The wetland east of the Units 1/2 Impoundment appears to provide a hydraulic sink between the CCR impoundments and the wells situated to the east of the wetland (PZ-23 through PZ-26, MW-27, MW-33, and MW-34).

2.2 Monitoring Well Network

The monitoring well network consists of the monitoring wells (MW-#) and piezometers (PX-#) listed in **Table 1** and shown in **Figure 2**. The monitoring wells are sampled for water quality and water levels are monitored. The piezometers are monitored only for water levels. As of November 2022, the monitoring network is composed of the following:

Background Monitoring Wells

The following three (3) wells are the background monitoring well network for both the Units 1/2 Impoundment and Unit 3A/B Impoundments. A review of groundwater contour maps indicates groundwater does not flow from the CCR units towards the background wells. Therefore, the groundwater monitored at these locations appears to represent groundwater at Harbor Island that has not been impacted by CCR materials.

- MW-27
- MW-33
- MW-34

Units 1/2 Impoundment

The following seven (7) wells are the waste boundary monitoring well network for the Units 1/2 Impoundment. The compliance well locations are spaced along the waste boundary such that if contaminants were present in the groundwater passing the waste boundary, they would be detected by one or more of the wells (**Figure 2**):

- MW-06
- MW-08
- MW-20
- MW-30

- MW-18
- MW-19
- MW-31

Unit 3A/B Impoundments

The following five (5) wells are the waste boundary monitoring wells for the former Unit 3A/B, spaced along the waste boundary such that if contaminants were present in the groundwater passing the waste boundary, they would be detected by one or more of the wells (**Figure 2**):

- MW-02
- MW-03
- MW-04
- MW-11
- MW-12

Nature and Extent Wells

The following five (5) wells are monitored to evaluate groundwater flow and transport at the Island, and therefore are considered nature and extent wells (**Figure 2**). These wells will not be used to determine if there is an SSI at an individual CCR unit.

Units 1/2 Impoundment	Unit 3A/B Impoundments
• MW-01R	• MW-07
• MW-09	• MW-10
• MW-10	• MW-32

Water Level Wells

The following monitoring wells and piezometers are monitored for water levels to continue to monitor the groundwater flow across the Island (**Figure 2**):

- PZ-13
- PZ-14
- PZ-15
- PZ-16
- PZ-17
- PZ-21
- PZ-22
- PZ-23
- PZ-24
- PZ-25
- PZ-26
- PZ-28
- PZ-29
- MW-35
- MW-36
- MW-37
- MW-38
- MW-39
- MW-40

The following piezometers surround the Units 1/2 impoundment on the east side. Since they were installed in an area of standing water within the wetland that often requires a boat for access, these piezometers may be monitored less frequently:

- PZ-21
- PZ-22
- PZ-29

Transducers are installed in the wells, stilling wells, and staff gauges above marked with an asterisk. The transducers are collecting groundwater elevation data on a continuous one-hour frequency.

The Hydrogeologic Monitoring Plan will be submitted in the second quarter of 2024 to reflect the revised monitoring network.

3.0 Monitoring

3.1 Groundwater Monitoring

Table 1 provides well identification numbers, well locations, and the dates samples were collected. Any deviation in sample collection from the 2022 Harbor Island Work Plan for CCR Compliance are outlined in **Section 3.3**.

Table 1. Assessment Monitoring in the First Quarter 2024		
Monitoring Well I.D.	Date Monitored	Well Designation
Background Monitoring Wells (Unit 1/2 Impoundments and Units 3A/B Impoundment)		
MW-27	2/13/2024	Background
MW-33	2/12/2024	Background
MW-34	2/12/2024	Background
Unit 1/2 Impoundments		
MW-06	2/13/2024	Point of Compliance
MW-08	2/13/2024	Point of Compliance
MW-18	2/13/2024	Point of Compliance
MW-19	2/13/2024	Point of Compliance
MW-20	2/13/2024	Point of Compliance
MW-30	2/12/2024	Point of Compliance
MW-31	2/12/2024	Point of Compliance
MW-07	2/13/2024	Nature and Extent
MW-10	2/13/2024	Nature and Extent
MW-32	2/12/2024	Nature and Extent
Units 3A/B Impoundment		
MW-02	2/13/2024	Point of Compliance
MW-03	2/14/2024	Point of Compliance
MW-04	2/14/2024	Point of Compliance
MW-11	2/13/2024	Point of Compliance
MW-12	2/13/2024	Point of Compliance
MW-01R	2/13/2024	Nature and Extent
MW-09	2/13/2024	Nature and Extent
MW-10	2/13/2024	Nature and Extent

Table 1. Assessment Monitoring in the First Quarter 2024

Monitoring Well I.D.	Date Monitored	Well Designation
Water Level Only		
MW-05	2/12/2024	Water Level Only
PZ-13	2/12/2024	Water Level Only
PZ-14	2/12/2024	Water Level Only
PZ-15	2/12/2024	Water Level Only
PZ-16	2/12/2024	Water Level Only
PZ-17	2/12/2024	Water Level Only
PZ-21	2/12/2024 ¹	Water Level Only
PZ-22	2/12/2024 ¹	Water Level Only
PZ-23	2/12/2024	Water Level Only
PZ-24	2/12/2024	Water Level Only
PZ-25	2/12/2024	Water Level Only
PZ-26	2/12/2024	Water Level Only
PZ-28	2/12/2024	Water Level Only
PZ-29	2/12/2024	Water Level Only
MW-35	2/12/2024	Water Level Only
MW-37	2/12/2024	Water Level Only
MW-38	2/12/2024	Water Level Only
MW-39	2/12/2024	Water Level Only
MW-40	2/12/2024	Water Level Only

3.2 Surface Water Monitoring

Surface water monitoring coincides with the groundwater sampling. Stilling wells (STW-1, STW-2, and STW-3) and SG-01 are monitored for water levels. Staff gauges (SG-02, SG-03 SG-04R SG-05, and SG-06) are monitored for water levels and a surface water sample is collected at these locations (**Figure 2**). Surface water elevations are mapped with the groundwater elevations to evaluate the flow of groundwater under the Island and in connection with the Grand River and wetland surface waters. Surface water monitoring dates are shown in **Table 2**. Deviations from the work plan are outlined in **Section 3.3**.

Table 2. Dates of Surface Water Monitoring in First Quarter 2024

Well ID	Water Level Date	Sample Date
SG-01 ¹	2/12/2024 ²	Water Level Only
SG-02	2/12/2024	2/14/2024
SG-03	2/12/2024	2/14/2024
SG-04R	2/12/2024	2/14/2024
SG-05	2/12/2024 ²	2/14/2024
SG-06	2/12/2024 ²	2/14/2024
STW-1 ¹	2/12/2024 ¹	Water Level Only
STW-2 ¹	2/12/2024	Water Level Only

Table 2. Dates of Surface Water Monitoring in First Quarter 2024		
Well ID	Water Level Date	Sample Date
STW-3'	2/12/2024	Water Level Only

1 – Location is not sampled under Work Plan.
 2 – Monitoring location was dry; no surface water sample or water level was collected.

3.3 Water Level and Sample Collection

Water elevations are provided in **Table 4** pursuant to the 2022 Harbor Island Work Plan for CCR Compliance (HDR, 2022). Transducer data collection is conducted during the quarterly groundwater sampling events. Monitoring wells were purged with a peristaltic pump until field parameters (pH, turbidity, conductivity, dissolved oxygen, temperature, and oxidation reduction potential) stabilized. The results of field measurements were recorded on a field data form, which is maintained as part of the field records. After water quality parameters stabilized, samples were collected and tested for the parameters listed in **Table 3**. For quality control, one field duplicate sample was collected for each CCR unit per sampling event (two duplicate samples total per event). The following deviations from the 2022 Harbor Island Work Plan for CCR Compliance were noted during the first quarter 2024 sampling event:

February 2024:

- Water levels were not collected from PZ-21 or PZ-22, due to deep water limiting access.
- Water levels were not collected from SG-01, SG-05, or SG-06 due to low surface water conditions leaving the staff gauges dry and no water level was collected.
- A surface water sample was collected at SG-05, but low water levels did not allow for sample collection at the gauge location. The actual sample location was 5 feet north of the original sampling location.
- A surface water sample was collected at SG-06, but low water levels did not allow for sample collection at the gauge location. The actual sample location was 340 feet east of the original sampling location off an existing dock.

Surface water samples were collected using a clean container affixed to a pole. Before samples were collected, the following water quality parameters were measured: pH, turbidity, conductivity, dissolved oxygen, temperature, and oxidation reduction potential. The results of field measurements were recorded on a field data form, which is maintained as part of the field records. Surface water samples were delivered under Chain of Custody to Trace Analytical Laboratories in Muskegon, Michigan.

3.4 Analytical Testing

Samples from the wells listed in **Table 1** were analyzed for the constituents listed in **Table 3**.

Table 3. Constituents of Interest for Assessment Monitoring	
Metals are Total Metals	
Antimony	Lithium
Arsenic	Mercury

Table 3. Constituents of Interest for Assessment Monitoring	
Metals are Total Metals	
Barium	Molybdenum
Beryllium	Nickel
Boron	Radium-226/228
Cadmium	Selenium
Calcium	Silver
Chloride	Sulfate
Chromium	Thallium
Cobalt	Total Dissolved Solids (TDS)
Copper	Vanadium
Fluoride	Zinc
Iron	Additional Parameters
Lead	Total Suspended Solids (TSS)

3.5 Data Validation and Management

Data validation and data management tasks were performed per the 2022 Harbor Island Work Plan for CCR Compliance (HDR, 2022). Data validation was performed for sampling dates provided in **Table 1**. Data validation was conducted to eliminate any data that did not meet validation criteria and designate a data qualifier for any data quality limitation discovered.

All samples and quality control (QC) data for the reporting period were reviewed and evaluated, and no samples were rejected. Most QC analyses were within reportable limits; however, when QC was outside control limits, samples were reported as estimated. Data analyses required minimal qualifications, and all data were usable, even when qualified. Data validation reports are contained in **Appendix B**.

4.0 Monitoring Results

4.1 Water Levels and Groundwater Flow Direction

A potentiometric contour map was developed for the first quarter 2024 sampling event using the data provided in **Table 4**. The map displays the groundwater elevations as well as the potentiometric contours and is provided in **Appendix A**. Groundwater was observed between 2.87 and 13.09 feet below ground surface near the impoundments or between 579.58 and 582.07 feet amsl.

Potentiometric contours created from the groundwater elevations in **Table 4** show north and northwestern flow beneath Unit 3A/B Impoundments toward the Grand River, consistent with previous observations. Flow beneath Units 1/2 Impoundment is generally eastward toward the internal wetland, with the exception of flow near the North Channel outlet where

groundwater flow is north from SG-02 toward MW-31. The internal wetland has consistently shown to be a sink for Harbor Island.

Groundwater flow observed at background wells MW-27, MW-33, and MW-34 was consistent with previous observations. Flow is southward from MW-35 toward MW-33 and MW-34. The potentiometric contours confirm that groundwater from under the CCR impoundments does not flow toward background monitoring wells and confirms they are appropriate background monitoring locations.

The first period of transducer data collected spans 53 days between December 21, 2023 through February 12, 2024. Groundwater elevation measurements collected from the transducers are provided in **Figure 3**. Trends observed from the limited dataset show as follows:

- SG-02 is generally higher in surface water elevation than MW-31, with the exception of a three-day period between January 25 and January 28 which coincides with a precipitation event and higher temperatures that could have resulted in snowmelt. This indicates over the majority of the monitoring period, surface water is contributing to groundwater.
- SG-04R is generally higher in surface water elevation than MW-05, approximately 70 percent of the time monitored, with the exception of periods between January 12 and January 14 as well as January 24 through February 2 which coincide with a precipitation event and higher temperatures that could have resulted in snowmelt. This indicates over the majority of the monitoring period, surface water is contributing to groundwater.
- STW-2 was at a lower surface water elevation than PZ-16 for the duration of the period. This indicates groundwater is discharging to the Grand River on that west side of the Island.
- SG-07 was at a lower surface water elevation than PZ-24 for the duration of the period. This indicates groundwater from the eastern side of the Island is discharging into the internal wetland.

Well ID	2/12/2024
MW-01R	581.92
MW-02	579.58
MW-03	579.60
MW-04	579.82
MW-05	580.70
MW-06	581.12
MW-07	579.48
MW-08	579.36

Table 4. Groundwater and Surface Water Elevations in the first quarter 2024	
Well ID	2/12/2024
MW-09	579.43
MW-10	579.68
MW-11	581.29
MW-12	582.07
PZ-13	579.36
PZ-14	579.74
PZ-15	580.08
PZ-16	579.34
PZ-17	580.45
MW-18	580.12
MW-19	579.66
MW-20	579.79
PZ-21 ¹	--
PZ-22 ¹	--
PZ-23	579.63
PZ-24	580.02
PZ-25	579.46
PZ-26	580.37
MW-27	580.28
PZ-28	579.44
PZ-29	579.70
MW-30	579.88
MW-31	580.37
MW-32	580.10
MW-33	581.68
MW-34	580.11
MW-35	582.05
MW-36	581.09
MW-37	580.54
MW-38	580.37
MW-39	580.56
MW-40	581.23
SG-01	DRY
SG-02	580.85
SG-03	580.80
SG-04R	580.79
SG-05	DRY
SG-06	DRY
SG-07	579.16
STW-1	DRY

Table 4. Groundwater and Surface Water
Elevations in the first quarter 2024

Well ID	2/12/2024
STW-2	579.07
STW-3	579.35

Note: "-" denotes no measurement was taken.
¹Deep water prevented access to well to collect measurement.

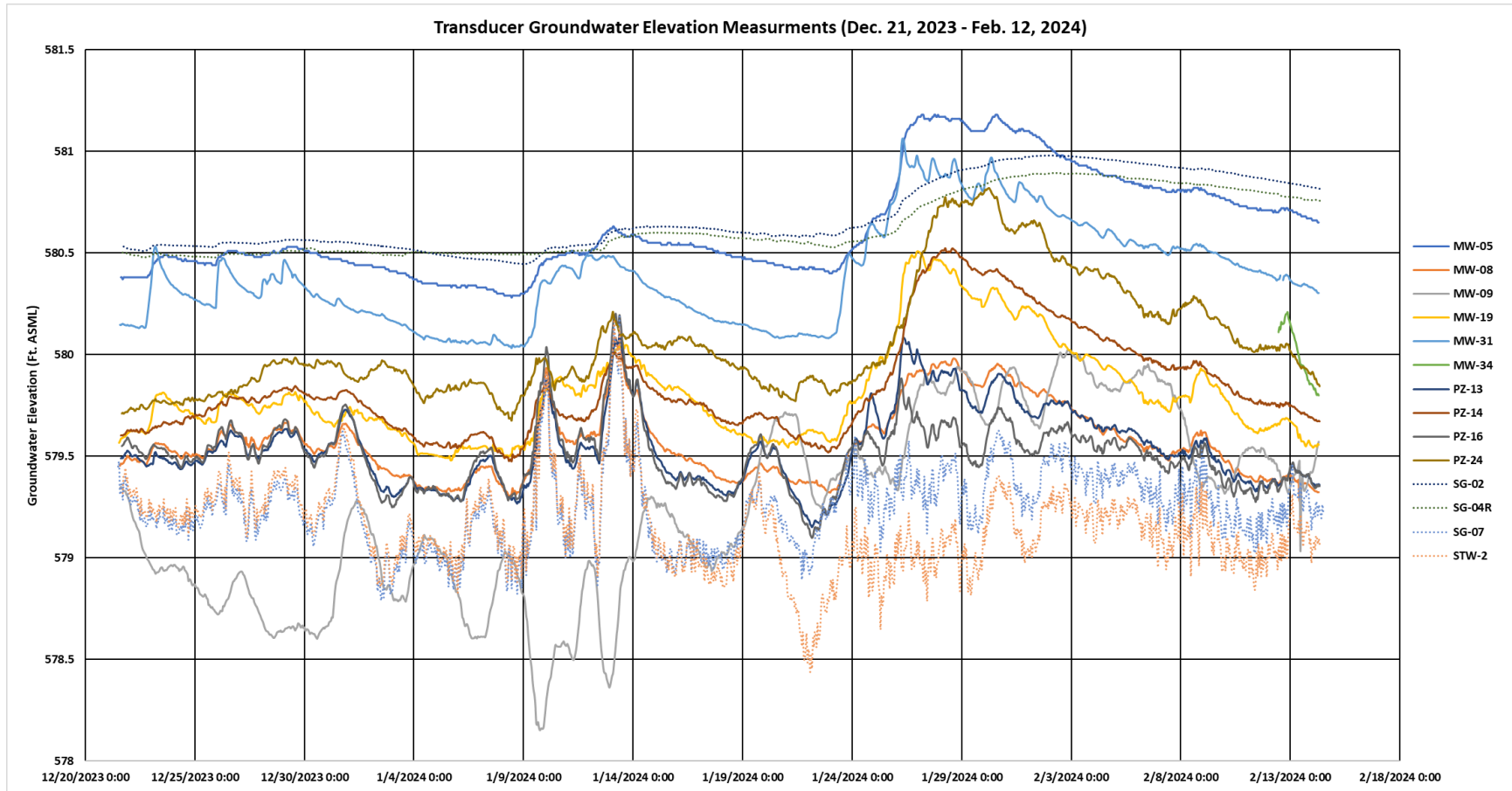


Figure 3 | Transducer Groundwater Elevation Measurements

4.2 Water Quality

In February 2024, the second assessment monitoring event was conducted and the monitoring well network provided in **Table 1** was sampled for the COIs contained in **Table 3**. The water quality data collected to date is presented in **Appendix C**, and laboratory reports are provided in **Appendix D**.

4.2.1 Calculation of Groundwater Protection Standards

As required in Michigan Rule R 299.4441(9), the owner must establish GPS for each constituent detected in the groundwater when in assessment monitoring. The background value (UTL), maximum contaminant level (MCLs), applicable state cleanup criteria, and site groundwater protections standards (GPS) for both CCR units are provided in **Table 5**.

Table 5. Background Values and Groundwater Protection Standards for both Unit 1/2 Impoundments and Units 3A/B Impoundment

Parameter**	Site-Specific Background Level (UTL)	MCL	State Non-Res. Drinking Water Cleanup Criteria for Groundwater*	GSI*	GPS
Unit	mg/L	mg/L	mg/L	mg/L	mg/L
Boron	4.0	NV	0.50	7.20	4.0
Calcium	250	NV	N/A	N/A	250
Chloride	120	NV	250	50	120
Fluoride	0.45	4.0	2.0	NV	2.0
Sulfate	100	NV	250	NV	250
Total Dissolved Solids	950	500	NV	NV	950
Antimony	0.0012	0.0060	0.0060	0.13	0.0060
Arsenic	0.0040	0.010	0.010	0.010	0.010
Barium	0.58	2.0	2.0	1.3 ¹	1.3
Beryllium	0.000059	0.0040	NV	0.036 ¹	0.0040
Cadmium	0.00015	0.0050	0.0050	0.0025 ¹	0.0025 ¹
Chromium	0.042	0.10	0.10	0.12 ¹	0.10
Cobalt	0.0021	0.0060	0.10	0.10	0.0060
Fluoride	0.45	4.0	2.0	NV	2.0
Lead	0.0016	0.0015	0.0040	0.014 ¹	0.0016
Lithium	0.10	0.040	0.35	0.44	0.10
Mercury	0.00016	0.0020	0.0020	0.0013	0.0013
Molybdenum	0.0093	0.10	0.210	3.2	0.10
Radium 226 and 228 combined	2.6	5.00	NV	NV	5.00
Selenium	0.00089	0.050	0.050	0.0050	0.0050
Thallium	0.000075	0.0020	0.0020	0.0037	0.0020
Copper	0.020	1.30	1.0	0.021 ¹	0.021 ¹
Iron	83	0.30	0.30	NV	83
Nickel	0.023	NV	0.10	0.12 ¹	0.10

Table 5. Background Values and Groundwater Protection Standards for both Unit 1/2 Impoundments and Units 3A/B Impoundment

Parameter**	Site-Specific Background Level (UTL)	MCL	State Non-Res. Drinking Water Cleanup Criteria for Groundwater*	GSI*	GPS
Unit	mg/L	mg/L	mg/L	mg/L	mg/L
Silver	0.00011	0.10	0.0098	0.00020	0.00020
Vanadium	0.00093	NV	0.0062	0.027	0.0062
Zinc	0.038	5.00	5.00	0.27 ¹	0.27 ¹

*Cleanup Criteria Requirements for Response Activity (Formerly the Part 201 Generic Cleanup Criteria and Screening Levels) found in R 299.44 Generic groundwater cleanup criteria.

**Metals data is analyzed and reported as total metals.

NV=no value

¹Per Footnote G of Table 1 Cleanup Criteria Requirements for Response Activity (Formerly the Part 201 Generic Cleanup Criteria and Screening Levels) of the Groundwater Surface Water (GSI) criteria list, values noted are calculated based on the hardness (expressed as CaCO₃) of the receiving waters. Surface water sample from the Grand River (SG-01) had a hardness of 270 mg/L was used in the calculation of specific GSI values. The Grand River discharges into Lake Michigan, thus the GSI Criteria for Surface Water Protected for Drinking Water Use, is provided above.

4.2.2 Identification of Groundwater Protection Standard (GPS) Exceedances

The February 2024 sampling data from downgradient wells was compared to the GPS values provided in **Table 5**, and several COIs were found to exceed GPS at both CCR units. To determine if an exceedance of a GPS value was statistically significant, the 95% lower confidence limit (95LCL) was calculated for each COI at each of the downgradient wells. The statistical output files are in **Appendix E**.

Units 1/2 Impoundment

Constituents that exceeded GPS at statistically significant levels (SSLs) are provided in **Table 6** for the Units 1/2 Impoundment. The SSLs are consistent with the October 2023 sample event, and there are no new wells with SSLs or new COIs at SSLs over GPS.

Table 6. February 2024 LCLs that Exceed GPS for the Units 1/2 Impoundment			
Constituent	GPS (mg/L)	Well	95LCL (mg/L)
Arsenic	0.010	MW-08	0.023
		MW-18	0.020
Boron	4.0	MW-06	8.7
		MW-07	11
		MW-08	5.1
		MW-31	4.1
		MW-10	11
Calcium	250	MW-18	310
		MW-19	450
		MW-30	430
Chloride	120	MW-10	150
Fluoride	2.0	MW-18	3.6

Table 6. February 2024 LCLs that Exceed GPS for the Units 1/2 Impoundment			
Constituent	GPS (mg/L)	Well	95LCL (mg/L)
		MW-31	4.7
		MW-10	4.5
Lithium	0.10	MW-06	0.17
		MW-30	0.12
		MW-10	0.79
		MW-32	0.11
Sulfate	250	MW-18	700
		MW-19	901
		MW-30	820
		MW-10	400
Total Dissolved Solids	950	MW-06	1,100
		MW-18	1,300
		MW-19	1,800
		MW-30	2,100
		MW-10	1,700

Unit 3A/B Impoundments

Concentrations that exceeded GPS at SSLs are provided in **Table 7** for Unit 3A/B Impoundments. In comparison to the October 2023 sample event, the February 2024 resulting SSLs are consistent, with the exception of sulfate at MW-01R and MW-09 that are new exceedances. A revised SSL memorandum will be issued to reflect the changes.

Table 7. February 2024 LCLs that Exceed GPS for Unit 3A/B Impoundments			
Constituent	GPS (mg/L)	Well	95LCL (mg/L)
Boron	4.0	MW-01R	83
		MW-02	89
		MW-09	5.5
		MW-10	11
Calcium	250	MW-03	350
		MW-04	340
		MW-09	310
Chloride	120	MW-02	130
		MW-03	160
		MW-04	170
		MW-10	150
Fluoride	2.0	MW-01R	8.8
		MW-02	8.7
		MW-09	2.4
		MW-10	4.5
Lithium	0.10	MW-01R	1.8
		MW-02	1.2

Constituent	GPS (mg/L)	Well	95LCL (mg/L)
		MW-09	0.29
		MW-10	0.79
Sulfate	250	MW-01R	300
		MW-03	320
		MW-04	530
		MW-09	260
		MW-10	400
Total Dissolved Solids	950	MW-01R	2,300
		MW-02	1,700
		MW-03	2,000
		MW-04	1,800
		MW-09	1,100
		MW-10	1,700

5.0 Summary

The following observations are based on CCR Rule compliance groundwater monitoring during the first quarter 2024:

- One groundwater sampling event was conducted in the first quarter 2024 between February 12 and February 14, 2024.
- Groundwater flow measured in the first quarter beneath Units 1/2 Impoundment flowed generally eastward toward the wetland and north near MW-31 toward SG-02.
- Groundwater flow measured in the first quarter beneath Unit 3A/B Impoundments is primarily west northwest toward the Grand River.
- No monitoring locations were installed or abandoned or repaired in first quarter 2024.
- Transducer data collected indicates surface water from the ponds within Unit 1/2 Impoundments contributes to groundwater. Groundwater on the south and eastern sides of the Island appear to be discharging to surface water.
- A Response Action Plan was submitted to EGLE and the operating record March 8, 2024.
- The LCLs were calculated after the February 2024 assessment monitoring event and were compared to GPS values. The following SSLs were identified for Units 1/2 Impoundment:
 - Arsenic – MW-08, MW-18
 - Boron – MW-06, MW-07, MW-08, MW-10, MW-31
 - Calcium – MW-18, MW-19, MW-30
 - Chloride – MW-10
 - Fluoride – MW-10, MW-18, MW-31
 - Lithium – MW-06, MW-10, MW-30, MW-32

- Sulfate – MW-10, MW-18, MW-19, MW-30
- TDS – MW-06, MW-10, MW-18, MW-19, MW-30

LCLs that exceeded GPS at SSLs in February 2024 are consistent with those observed in October 2023.

- The LCLs were calculated after the October 2023 assessment monitoring event and were compared to GPS values. The following SSLs were identified for the Unit 3A/B Impoundments:
 - Boron – MW-01R, MW-02, MW-09, MW-10
 - Calcium – MW-03, MW-04, MW-09
 - Chloride – MW-02, MW-03, MW-04, MW-10
 - Fluoride – MW-01R, MW-02, MW-09, MW-10
 - Lithium – MW-01R, MW-02, MW-09, MW-10
 - Sulfate – MW-01R, MW-03, MW-04, MW-09, MW-10
 - TDS – MW-01R, MW-02, MW-03, MW-04, MW-09, MW-10
- The Hydrogeologic Monitoring Plan is anticipated to be submitted to EGLE in the second quarter of 2024.

6.0 References

ERM, 2017. Groundwater Monitoring System Certification for the Grand Haven Board of Light and Power, Environmental Resources Management Michigan, Inc. November 2017.

Golder Associates, Inc., 2020. Unit 3 Impoundments – CCR Removal Documentation Report. December 11, 2020.

Golder Associates, Inc., 2022. Field Summary Report of Results from Approved Work Plan -Piezometer Installation and Additional Data Collection. February 15, 2022.HDR Inc, 2022. 2022 Harbor Island Work Plan for CCR Compliance. April 8, 2022. Amended June 23, 2022.

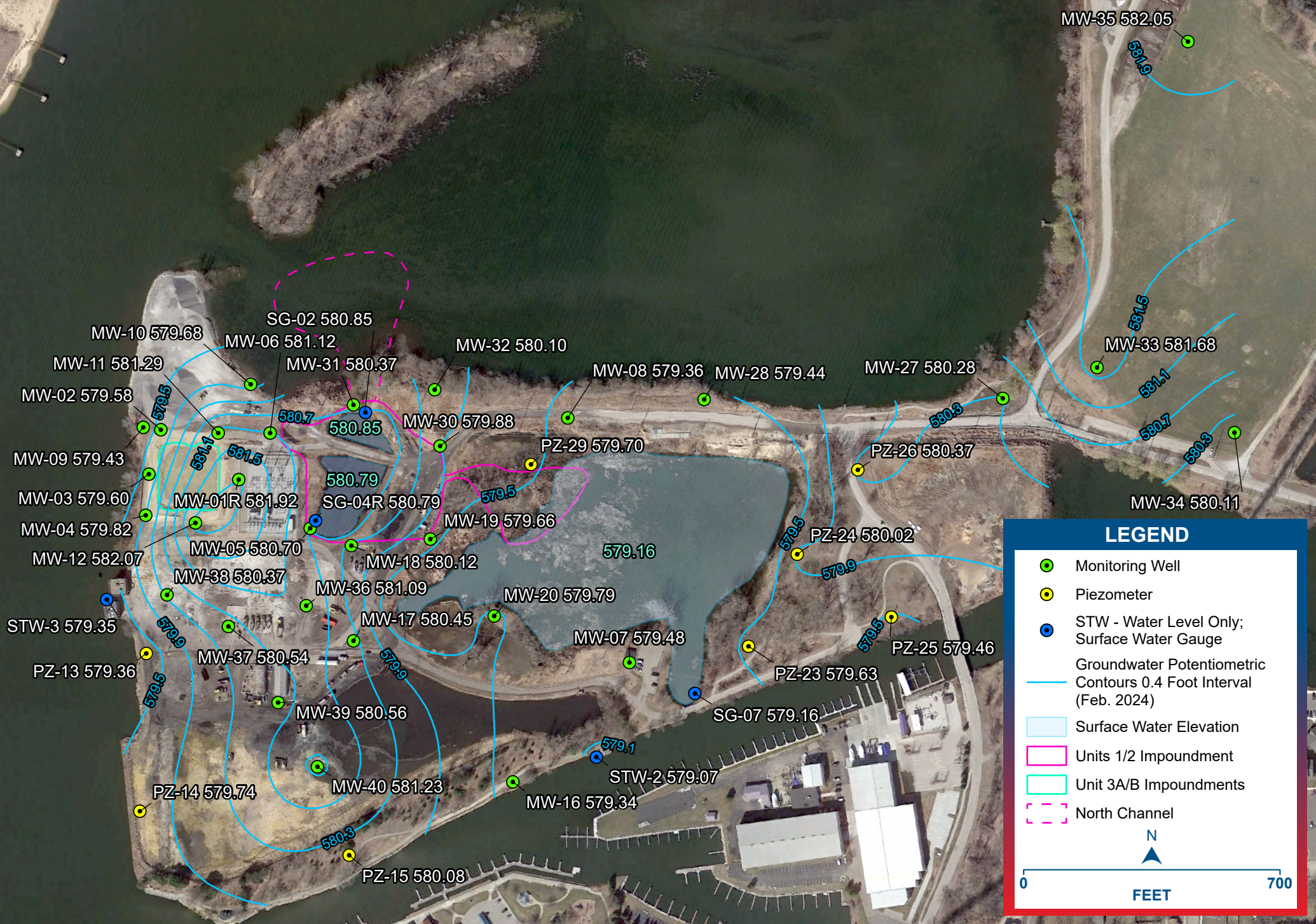
HDR, 2022., 2022 Harbor Island Work Plan for CCR Compliance. April 8, 2022. Revised June 23, 2022.

HDR, 2024., 4th Quarter 2023 Groundwater Monitoring Report. January 31, 2024.

Western Michigan University, Department of Geology. "Hydrogeologic Atlas of Michigan, Volume 1". The Department of Geology, Kalamazoo, Michigan. 1981.

Appendix A

Potentiometric Surface Map



LEGEND

- Monitoring Well
- Piezometer
- STW - Water Level Only; Surface Water Gauge
- Groundwater Potentiometric Contours 0.4 Foot Interval (Feb. 2024)
- Surface Water Elevation
- Units 1/2 Impoundment
- Unit 3A/B Impoundments
- - - North Channel

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Appendix B

Data Validation Reports

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Quarterly Assessment Monitoring

Data Package Number: 24B0629

Lab Report Date: 3/4/2024

Data Validator: Andrew Byks

Data Validation Completion Date: 4/18/2024

General Overall Assessment:

Data are usable without qualification.

Data are usable with qualification (as noted below).

Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-30	GW	24B0629-01	02/12/2024	X	X	X	X	X	X	
MW-31	GW	24B0629-02	02/12/2024	X	X	X	X	X	X	
MW-32	GW	24B0629-03	02/12/2024	X	X	X	X	X	X	
MW-33	GW	24B0629-04	02/12/2024	X	X	X	X	X	X	
MW-34	GW	24B0629-05	02/12/2024	X	X	X	X	X	X	
MWT-30	GW	24B0629-06	02/12/2024	X	X	X	X	X	X	
MWT-34	GW	24B0629-07	02/12/2024	X	X	X	X	X	X	
MW-01R	GW	24B0629-08	02/13/2024	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-02	GW	24B0629-09	02/13/2024	X	X	X	X	X	X	
MW-03	GW	24B0629-10	02/14/2024	X	X	X	X	X	X	
MW-04	GW	24B0629-11	02/14/2024	X	X	X	X	X	X	
MW-06	GW	24B0629-12	02/13/2024	X	X	X	X	X	X	
MW-07	GW	24B0629-13	02/13/2024	X	X	X	X	X	X	
MW-08	GW	24B0629-14	02/13/2024	X	X	X	X	X	X	
MW-09	GW	24B0629-15	02/13/2024	X	X	X	X	X	X	
MW-10	GW	24B0629-16	02/13/2024	X	X	X	X	X	X	
MW-11	GW	24B0629-17	02/13/2024	X	X	X	X	X	X	
MW-12	GW	24B0629-18	02/13/2024	X	X	X	X	X	X	
MW-18	GW	24B0629-19	02/13/2024	X	X	X	X	X	X	
MW-19	GW	24B0629-20	02/13/2024	X	X	X	X	X	X	
MW-20	QC	24B0629-21	02/13/2024	X	X	X	X	X	X	
MW-27	QC	24B0629-22	02/13/2024	X	X	X	X	X	X	
SG-02	SW	24B0629-23	02/14/2024	X	X	X	X	X	X	
SG-03	SW	24B0629-24	02/14/2024	X	X	X	X	X	X	
SG-04R	SW	24B0629-25	02/14/2024	X	X	X	X	X	X	
SG-05	SW	24B0629-26	02/14/2024	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO₃, CO₃, hardness

Any planned sampling or analysis NOT completed? If yes, explain: N/A

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in all samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits			RLs as requested				RLs for the following were not met Bicarbonate alkalinity – 17 samples (results > RL) B – all samples (results > RL) Carbonate alkalinity – 17 samples (results > RL) Fe – all samples (results > RL), except MW-12 Mg – all samples (results > RL) K – 25 samples (results > RL) Na – all samples (results > RL) SO4 – 12 samples (results > RL) Total alkalinity – 17 samples (results > RL) TDS – 17 samples (results > RL)
	X				X		
			MDLs<RLs	X			
			MDLs<GPS	X			
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See “Minimum QC Procedures for Project Parameters” table		X		MS recoveries outside control limits for Cl
Laboratory Control Sample (Recovery)	X		See “Minimum QC Procedures for Project Parameters” table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See “Minimum QC Procedures for Project Parameters” table	X			
Field Duplicate (RPD)		X	RPD ≤ 20%			X	MW-10/MWT-10: Sb and Hg non-detect in parent sample and detected in FD; Be, Co, Cu, Ni, Zn, Rad RPDs >20% MW-33/MWT-33: Hg non-detect in parent sample and detect in FD; Rad 226 and Rad 228 RPDs > 20%
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Chloride and sulfate matrix spikes were outside of control limits in T147176-MS1. The result for this analyte, in the non-spiked version of the sample, must be considered estimated. Chloride in six samples required qualification as estimated with high bias (J+) due to recovery outside of control limits high in an associated matrix spike sample.

Comments:

pH in two samples required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Iron in sample MW-12 required qualification as estimated but not detected (UJ) due to not being detected at detection limits greater than those requested.

Beryllium and molybdenum were detected in parent sample MW-30 but not detected in field duplicate MWT-30. Beryllium and molybdenum required qualification in parent sample MW-30 required qualification as estimated with high bias (J+) and in field duplicate MWT-30 as estimated but not detected (UJ).

Lead and zinc were not detected in parent sample MW-30 and detected in field duplicate MWT-30. Lead and zinc in parent sample MW-30 required qualification as estimated but not detected (UJ) and in field duplicate MWT-30 as estimated with high bias (J+).

Arsenic, barium, chromium, copper, nickel, selenium, Rad-226, Rad-228, and combined radium had RPDs >20% in the MW-30/MWT-30 parent/field duplicate pair. Arsenic, barium, chromium, copper, nickel, and selenium qualification as required estimated with low bias (J-) in parent sample MW-30 and estimated with high bias (J+) in field duplicate MWT-30. Rad-226, Rad-228, and combined radium required qualification as estimated with high bias (J+) in parent sample MW-30 and as estimated with low bias (J-) in field duplicate MWT-30.

Beryllium, lead, molybdenum, and zinc were not detected in parent sample MW-34 but were detected in field duplicate MWT-34. Beryllium, lead, molybdenum, and zinc required qualification as estimated but not detected in parent sample MW-34, and as estimated with high bias (J+) in field duplicate MWT-34.

Arsenic, barium, chromium, selenium, Rad-228, and combined radium had RPDs >20% in the MW-34/MWT-34 parent/field duplicate pair. Arsenic, barium, and selenium required qualification as estimated with low bias (J-) in parent sample MW-34 and as estimated with high bias (J+) in field duplicate MWT-34. Chromium, Rad-228, and combined radium required qualification as estimated with high bias (J+) in parent sample MW-34 and in field duplicate MWT-34 as estimate with low bias (J-).

Appendix C

Analytical Data Reporting Tables

Sample Location:				MW-01R									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/29/2022	1/3/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Field Parameters													
Conductivity	mS/cm	N	--	2.39	3.06	2.731	2.595	3	3.1	3.23	3.22	3.13	2.51
Dissolved Oxygen	mg/L	N	--	0.08	0.05	0.07	0.28	0.11	0.03	0.01	0.01	0.03	0.22
Oxidation Reduction Potential	mV	N	--	42.3	3.6	-155.6	-185.5	-202.3	-210.1	-163.8	-165.1	-126.2	-57.3
pH	su	N	--	7.74	6.02	7.75	7.76	7.75	7.8	7.81	7.68	7.71	7.52
Temperature	deg c	N	--	12.5	9	6.9	5.9	7.2	10.7	13.5	17.2	16.1	6.1
Turbidity	NTU	N	--	0.02	0.26	0.17	0.02	0.02	0.02	0.02	1.33	0.95	1.79
Appendix III													
Boron	mg/L	T	4.0	100	110	73	70	78	110	150 J+	140 D	160 D	38 D
Calcium	mg/L	T	250	240	200	290	310	280	240	210 D	160 D	130 D	400 D
Chloride	mg/L	T	120	150	160	52	120	130	150	170 D	180 D	210 D	49 D
Fluoride	mg/L	T	2.0	14	14	9.5	8.1	8.8	10	15 D	14 D	14 D	4.8 D
Sulfate (as SO4)	mg/L	T	250	590	400	350	780	780	540	290 D	110 D	8.8 D	980 D
Total Dissolved Solids	mg/L	T	950	2400 J-	2300	2200	2100	2400	2400	2400 D	2400 D	2600 D	2200 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00033	0.00023 J	< 0.00025 U	0.00034	0.0012	< 0.00050 U	0.00071 JD	0.00025	0.00022 J	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.0020	0.0015	0.0013	0.0013	0.00077	0.00073	0.0019 J+	0.0017	0.0013	0.0041
Barium	mg/L	T	1.3	0.30	0.30	0.25	0.22	0.21	0.29	0.29 D	0.38	0.56	0.54 D
Beryllium	mg/L	T	0.0040	0.00021 J	0.00032	0.00020 J	0.00020 J	0.00012 J	0.00020 J	0.00036 J+	0.00035	0.00026	0.00015 J
Cadmium	mg/L	T	0.0025	0.00011 J	0.000062 J	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	0.00034 J+	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.0013	0.0024	0.0016	0.0016	0.0013	0.0019	0.0043	0.0037	0.0022	0.022
Cobalt	mg/L	T	0.0060	0.0011	0.0012	0.0011	0.0023	0.0017	0.00081	0.0045 J+	0.0016	0.0010	0.0040
Fluoride	mg/L	T	2.0	14	14	9.5	8.1	8.8	10	15 D	14 D	14 D	4.8 D
Lead	mg/L	T	0.0040	0.0014	0.00082	< 0.0011 U	0.00044 J	< 0.0011 U	0.00080 J	0.0053 J+	0.0010 JD	0.00074	0.0017 JD
Lithium	mg/L	T	0.10	2.2	2.8	1.6	1.7	1.5	2.3	3.2 D	3.3	3.4 D	0.77 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0011 J	0.00062 J	0.00076 J	0.0020	< 0.0031 U	0.00033 J	0.00077 J+	0.00082 J	0.00074 J	0.0056
Radium 226 and 228	pCi/L	T	5.0	< 0.656 UJ	< 0.828 U	1.06	1.28	< 0.737 U	< 1.1 U	0.601	1.26	< 0.674 U	1.09
Radium-226	pCi/L	T	--	< 0.176 UJ	< 0.125 U	< 0.139 U	< 0.212 U	< 0.233 U	< 0.322 U	< 0.164 U	0.152	< 0.182 U	< 0.137 U
Radium-228	pCi/L	T	--	< 0.656 UJ	< 0.828 U	0.982	1.23	< 0.737 U	< 1.1 UJ	< 0.534 U	1.11	< 0.674 U	1.05
Selenium	mg/L	T	0.0050	0.00060	0.00059	0.00058	0.00097	0.00056	0.00030 J	0.00076 J+	0.00066	0.00073	0.0018
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.00038 UD	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	3.0 J	2.0 J	5.0	2.0 J	2.0 J	< 4.0 U	2.0 J	3.0 J	< 4.0 UD	< 4.0 UD
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.00027	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.0013 B	0.00045	0.00029	0.001
Iron	mg/L	T	83	0.75	1.1	0.55	0.50	0.59	0.79	0.48	0.16	0.22	0.85 D
Nickel	mg/L	T	0.10	0.0015	0.0025	0.0016	0.0026	0.0018	0.0013	0.0053	0.0027	0.0021	0.022
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	0.00069 J	0.00067 J	< 0.00062 U	< 0.00062 U	0.0013	0.0016	0.0046	0.0035	0.0018	0.0018
Zinc	mg/L	T	0.27	0.014	0.0012	0.0012	0.0018	0.013	< 0.0012 U	0.0085	0.0012	0.0013	0.0016
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	1100	1200	870	830	920	1100	1300 D	1400	1700 D	560 D
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	110	92	110	110	120	110	100 D	96 D	100 D	110 D
Potassium	mg/L	T	--	69	66	50	43	60 J	65	89 D	90 D	98 D	34 D
Sodium	mg/L	T	--	330	370	250	240	280	380	430 D	430 D	500 D	140 D
Total Alkalinity	mg/L	T	--	1100	1200	870	830	920	1100	1300 D	1400	1700 D	560 D

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-02									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/28/2022	1/4/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	3.36	4.1	3.07	2.616	3.66	3.524	4.17	4.07	4.21	3.40
Dissolved Oxygen	mg/L	N	--	0.28	0.49	0.2	0.41	0.08	0.06	0.07	0.1	0.03	0.26
Oxidation Reduction Potential	mV	N	--	89.4	-215.7	-185.2	-169.9	-135.7	-138.9	-137.4	-133.8	-166.8	-146.1
pH	su	N	--	7.11	7.06	7.33	7.35	7.13	7.45	7.29	7.21	7.11	7.25
Temperature	deg c	N	--	12.8	12	11.2	9.6	10.2	11.7	12.1	14	15	10.3
Turbidity	NTU	N	--	0.02	0.02	0.02	0.49	3.66	5.05	6.89	3.3	8.78	5.11
Appendix III													
Boron	mg/L	T	4.0	88	86	100	98	73	95	110 J+	99 D	110 D	100 D
Calcium	mg/L	T	250	210	180	210	240	190	210	210 D	180 D	190 D	220 D
Chloride	mg/L	T	120	150	140	67	140	150	140	140 D	130 D	140 D	140 D
Fluoride	mg/L	T	2.0	9.2	10	4.5	9.4	8.7	9.2	10 D	9.7 D	9.7 D	9.5 D
Sulfate (as SO4)	mg/L	T	250	0.86 J	2.2 J	< 0.41 U	1.1 J	< 0.41 U	< 0.41 U	< 0.41 UD	0.93 JD	< 0.41 UD	0.41 UD
Total Dissolved Solids	mg/L	T	950	1700	1800	0.94 U	1700	1700	1700	2100 J	1900 D	1600 D	1800 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00015 J	0.00016 J	< 0.00025 U	0.00019 J	0.00063 J	< 0.00050 U	0.00024 J	0.00018 J	0.00029	< 0.00010 U
Arsenic	mg/L	T	0.010	0.0082	0.0076	0.0086	0.0078	0.0083	0.012	0.0096 J+	0.0086	0.0074	0.00044 J
Barium	mg/L	T	1.3	0.51	0.53	0.55	0.51	0.38	0.48	0.47	0.45	0.42	0.73
Beryllium	mg/L	T	0.0040	0.00028	0.00034	0.00042	0.00029	0.00015 J	0.00021 J	0.00032 J+	0.00043	0.00052	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	0.000046 J	< 0.00016 U	0.000041 J	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00049	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.022	0.054	0.057	0.046	0.019	0.030	0.068	0.054	0.032	0.00038
Cobalt	mg/L	T	0.0060	0.0038	0.0060	0.0080	0.0066	0.0031	0.0039	0.0089 J+	0.0076	0.0063	0.00024 J
Fluoride	mg/L	T	2.0	9.2	10	4.5	9.4	8.7	9.2	10 D	9.7 D	9.7 D	9.5 D
Lead	mg/L	T	0.0040	0.0010	0.0024	0.0030	0.0027	0.0018 J	0.0041	0.0039 J+	0.0017	0.0020	< 0.00010 U
Lithium	mg/L	T	0.10	1.2	1.5	1.5	1.6	0.87	1.2	1.7	1.4	1.2 D	1.4 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0052	0.0062	0.011	0.011	0.0088	0.0064	0.0062 J+	0.0052	0.0051	0.0038
Radium 226 and 228	pCi/L	T	5.0	< 2.18 U	< 2.8 U	3.35	1.56	< 0.686 U	1.67	1.67	2.45	1.16	1.95
Radium-226	pCi/L	T	--	< 0.547 U	0.781	0.642	0.398	< 0.302 U	0.58	0.714	0.743	< 0.354 U	1.07
Radium-228	pCi/L	T	--	< 2.18 UJ	< 2.8 UG	< 3.21 UG	< 1.24 UG	< 0.686 U	< 1.2 UJ	0.957	1.71 G	< 0.897 U	0.882
Selenium	mg/L	T	0.0050	0.0010	0.0012	0.0012	0.00095	0.00050	0.0010	0.0014 J+	0.0012	0.0018	0.00056
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00062	< 0.000075 U
Total Suspended Solids	mg/L	T	--	67	58	58	56	100	90	20 D	16 D	6.1 D	59
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.00081	0.0018	0.0025	0.0020	0.0011	0.0014	0.0026 B	0.0018	0.0025	0.00023 J
Iron	mg/L	T	83	23	22	24	30	27	27	24	20	18 D	31 D
Nickel	mg/L	T	0.10	0.015	0.023	0.042	0.035	0.017	0.014	0.025	0.022	0.018	0.00093 J
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.027	0.0014	0.0036	0.0035	0.0032	0.0013	0.0026	0.0067	0.0049	0.0044	< 0.00062 U
Zinc	mg/L	T	0.27	0.023	0.0030	0.0033	0.0022	0.025	0.0019	0.0027	0.0041	0.0036	0.0020
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	1900	2000	1900	1800	1800	1900	460	2100	2300	1800 D
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD
Magnesium	mg/L	T	--	63	59	70	78	68	71	62	58 D	57 D	77 D
Potassium	mg/L	T	--	50	44	53	45	41	44	56 J	46 D	47 D	50 D
Sodium	mg/L	T	--	250	250	260	260	220	280	320 D	310 D	310 D	280 D
Total Alkalinity	mg/L	T	--	1900	2000	1900	1800	1800	1900	460	2100	2300	1800 D

Notes:

ug/l - micrograms per liter.
mg/l = milligrams per liter.
su - standard pH units (pH is a field parameter)
pCi/L = picocuries per liter.
All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
J+ Same as J, and the reported concentration is potentially biased high.
J- Same as J, and the reported concentration is potentially biased low.
UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-03									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/28/2022	1/4/2023	2/7/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023	2/14/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	0.344	3.52	3.43	2.459	3.15	3.08	3.19	3.19	3.03	2.98
Dissolved Oxygen	mg/L	N	--	0.16	0.26	0.2	0.21	0.03	0.01	0.05	0.09	0.06	0.2
Oxidation Reduction Potential	mV	N	--	-180	-139.7	-212.9	-184.2	-92.8	-194.3	-129.6	-110.7	-116.1	-194.1
pH	su	N	--	7.31	7.32	7.2	7.45	7.26	7.59	7.44	7.31	7.28	7.44
Temperature	deg c	N	--	13.3	11.4	9.2	7.3	9.3	11.8	12.5	14.9	14.9	9.6
Turbidity	NTU	N	--	0.02	0.68	2.4	0.02	1.4	0.02	0.02	0.21	0.26	2.12
Appendix III													
Boron	mg/L	T	4.0	4.4	3.3	4.2	4.3	3.9	4.1	4.3 J+	4.1	4.3 D	4.5 D
Calcium	mg/L	T	250	390	290	400	410	360	400	430 D	350 D	380 D	360 D
Chloride	mg/L	T	120	300	190	240	190	150	140	160 D	170 D	180 D	140 D
Fluoride	mg/L	T	2.0	0.65	1.6	0.62	0.52	0.60	0.54	0.54 D	0.61 D	0.60 D	0.61 D
Sulfate (as SO4)	mg/L	T	250	42	460	230	550	760	690	510 D	480 D	380 D	310 D
Total Dissolved Solids	mg/L	T	950	2200 J-	1700	2300	2300	2300	2300	2300 D	2300 D	2200 D	2000 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00087 J	0.000092 J	< 0.00025 U	0.00011 J	0.00045 J	< 0.00050 U	< 0.00050 UD	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.00084	0.0011	0.0012 J	0.0011	0.00050 J	0.00049 J	0.00091 J+	0.00076	0.0011	0.00097
Barium	mg/L	T	1.3	0.43	0.13	0.50	0.30	0.34	0.43	0.38 D	0.38	0.41	0.42 D
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.00026 U	0.000053 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.00015 J	5.7E-05 J
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	0.00011 J	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.0046	0.0061	0.0049	0.0073	0.0033	0.0037	0.0060	0.0053	0.0030	0.0037
Cobalt	mg/L	T	0.0060	0.00088	0.00044 J	0.00081 J	0.00097	0.00044 J	0.00050 J	0.0012 J+	0.0011	0.0013	0.00037 J
Fluoride	mg/L	T	2.0	0.65	1.6	0.62	0.52	0.60	0.54	0.54 D	0.61 D	0.6 D	0.61 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00050 UD	< 0.00050 UD	0.00022 J	< 0.00050 UD
Lithium	mg/L	T	0.10	0.044	0.065	0.039	0.045	0.037	0.035	0.050	0.041	0.035	0.033 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00024	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	0.00072 J	< 0.0031 U	< 0.00062 U	< 0.0031 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	0.00085 J	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	1.92	< 1.32 U	0.75	1.76	0.81	1.38	1.26	0.996	1.34	1.48
Radium-226	pCi/L	T	--	0.583	0.526	0.242	< 0.217 U	0.268	0.574	< 0.209 U	0.417	< 0.312 U	0.466
Radium-228	pCi/L	T	--	1.34	< 1.32 UG	< 0.67 U	1.55	< 0.767 U	< 1.15 U	1.18	< 0.763 U	1.08	1.02
Selenium	mg/L	T	0.0050	0.00042 J	< 0.00022 U	< 0.0011 U	0.00040 J	< 0.00022 U	0.00017 J	0.00042 J+	0.00034 J	0.00053	0.00062
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 UD	0.00018 J	0.00038 UD
Total Suspended Solids	mg/L	T	--	4.0	15	4.0	1.0 J	< 4.0 U	< 4.0 U	< 4.0 U	3.0 JD	< 4.0 U	< 4.0 U
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.0010 U	< 0.00020 U	< 0.00020 U	0.00025	0.00030 B	0.00024 J	0.00091	0.00025
Iron	mg/L	T	83	3.7	5.9	2.5	1.6	2.0	0.78	0.31	0.28	0.43	1.4 D
Nickel	mg/L	T	0.10	0.0016	0.015	< 0.0032 U	0.0018	0.00085 J	0.00087 J	0.0016	0.0015	0.0017	0.00094 J
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.0012	< 0.00062 U
Zinc	mg/L	T	0.027	0.019	< 0.0012 U	< 0.0059 U	< 0.0012 U	0.018	< 0.0012 U	0.0019	< 0.0012 U	0.002	< 0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	1800	690	1600	1200	1100	1100	1300 D	1300	1400 D	1300
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 UD	< 0.16 U	< 0.31 UD	70
Magnesium	mg/L	T	--	210	91	220	220	210	220	210 D	200 D	200 D	210 D
Potassium	mg/L	T	--	20	18	20	15	20	17	20	18 D	18 D	19 D
Sodium	mg/L	T	--	130	74	120	110	100	110	100 D	110 D	100 D	110 D
Total Alkalinity	mg/L	T	--	1800	690	1600	1200	1100	1100	1300 D	1300	1400 D	1300

Notes:
 ug/l - micrograms per liter.
 mg/l = milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:
 U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 J+ Same as J, and the reported concentration is potentially biased high.
 J- Same as J, and the reported concentration is potentially biased low.
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-04									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/28/2022	1/4/2023	2/7/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023	2/14/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	0.237	2.47	2.56	2.044	2.81	2.82	2.81	2.74	2.52	2.55
Dissolved Oxygen	mg/L	N	--	0.15	0.1	0.07	0.79	0.15	0.06	0.05	0.16	0.14	0.30
Oxidation Reduction Potential	mV	N	--	-137.4	-113.2	-175.9	-126.6	43.2	-91.9	-113.3	-130.1	-133.3	-96.7
pH	su	N	--	7.34	7.39	7.23	7.45	7.35	7.66	7.43	7.34	7.26	7.4
Temperature	deg c	N	--	13.1	10.5	8.7	6.5	7.2	10.5	13.1	16.4	16.1	8.0
Turbidity	NTU	N	--	1.95	0.02	0.02	0.02	0.02	0.02	0.28	2.98	1.42	1.83
Appendix III													
Boron	mg/L	T	4.0	4.0	3.9	3.8	3.8	3.5	4.3	4.1 J+	4.0	4.7 DJ	4.1 D
Calcium	mg/L	T	250	310	360	350	390	340	400	410 D	330 D	360 D	350 D
Chloride	mg/L	T	120	180	300	200	220	220	200	190 D	160 D	150 D	130 D
Fluoride	mg/L	T	2.0	1.2	0.76	1.3	1.4	1.3	1.3	1.2 D	1.4 D	1.9 D	1.4 D
Sulfate (as SO4)	mg/L	T	250	410	1.8 J	530	580	700	690	610 D	610 D	630 D	640 D
Total Dissolved Solids	mg/L	T	950	1700	2100	1700	1800	1900	2100	2000 D	1900 D	1800 D	1800 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.000071 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00041 J	< 0.00050 U	< 0.00050 UD	0.00012 J+	< 0.0001 U	< 0.0005 UD
Arsenic	mg/L	T	0.010	0.0012	0.00078	0.0012	0.0012	0.00060	0.00047 J	0.00092 J+	0.00088	0.001	0.00058
Barium	mg/L	T	1.3	0.11	0.46	0.13	0.12	0.10	0.12	0.15 D	0.12	0.12	0.11 D
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	0.00038 UD
Chromium, Total	mg/L	T	0.10	0.0027	0.0060	0.0047	0.0049	0.0026	0.0031	0.0046	0.0044	0.0027	0.0026
Cobalt	mg/L	T	0.0060	0.00035 J	0.00093	0.00062	0.00065	0.00031 J	0.00036 J	0.00074 J+	0.00062	0.00045 J	0.00018 J
Fluoride	mg/L	T	2.0	1.2	0.76	1.3	1.4	1.3	1.3	1.2 D	1.4 D	1.9 D	1.4 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	< 0.00050 UJ	< 0.00010 U	< 0.0001 U	0.0005 UD
Lithium	mg/L	T	0.10	0.067	0.047	0.061	0.074	0.054	0.061	0.074	0.074	0.066 D	0.048 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0013	< 0.00062 U	0.00074 J	0.00086 J	< 0.0031 U	0.00041 J	0.00044 J+	0.0012	0.0015	0.00037 J
Radium 226 and 228	pCi/L	T	5.0	1.43	1.08	1.55	1.23	< 0.752 U	1.49	1.2	1.29	1.2	0.868 U
Radium-226	pCi/L	T	--	< 0.206 U	0.159	0.175	< 0.198 U	< 0.189 U	< 0.214 U	0.232	0.152 J-	0.275	0.155 U
Radium-228	pCi/L	T	--	1.28	0.916	1.38	1.16	< 0.752 U	1.33 J	0.963	1.14	0.924	0.868 U
Selenium	mg/L	T	0.0050	< 0.00022 U	0.00041 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	0.00017 J+	0.00021 J+	0.00024 J	0.00043 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	10	8.0	11	10	11	12	8.1 D	< 4.0 UJ	8.0	4.0 U
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00027	< 0.00020 U
Iron	mg/L	T	83	4.7	6.3	5.6	6.3	6.1	6.8	6.8	5.0	5.6 D	5.5 D
Nickel	mg/L	T	0.10	0.012	0.0019	0.018	0.019	0.011	0.013	0.022	0.019	0.013	0.010
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.0044	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.0059	< 0.0012 U	< 0.0012 U	< 0.0012 UJ	0.0015	< 0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	800	1800	720	690	720	740	730	750	780	680 D
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	0.31 UD
Magnesium	mg/L	T	--	96	200	110	120	120	140	130 D	120 D	120 D	120 D
Potassium	mg/L	T	--	21	20	20	18	21	24	26	23 D	24 D	21 D
Sodium	mg/L	T	--	83	110	84	83	89	100	93 D	87 D	83 D	80 D
Total Alkalinity	mg/L	T	--	800	1800	720	690	720	740	730	750	780	680 D

Notes:

ug/l - micrograms per liter.
 mg/l = milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 J+ Same as J, and the reported concentration is potentially biased high.
 J- Same as J, and the reported concentration is potentially biased low.
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-06									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/29/2022	1/3/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	1.78	2.13	2.16	1.973	2	2.05	2.04	2	2.02	1.63
Dissolved Oxygen	mg/L	N	--	0.1	0.6	0.07	0.14	0.35	0.08	0.24	0.38	0.24	0.15
Oxidation Reduction Potential	mV	N	--	38.1	-139	-193.2	-148.9	-173.5	-184.3	-182.7	-80.3	-176.8	145.9
pH	su	N	--	7.33	7.26	6.42	7.21	7.28	7.36	7.27	7.17	7.26	7.2
Temperature	deg c	N	--	13.9	10.9	7.6	8.1	8.4	11.2	13.4	16.8	16.6	8.8
Turbidity	NTU	N	--	0.02	1.13	2.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Appendix III													
Boron	mg/L	T	4.0	12	9.5	10	9.5	7.5	8.6	9.7 J+	9.9	11 D	7.3 D
Calcium	mg/L	T	250	220	230	250	310	250	270	290 D	230 D	240 D	280 D
Chloride	mg/L	T	120	160	120	110	82	57	73	71 D	76 D	79 D	18 D
Fluoride	mg/L	T	2.0	1.3	1.4	1.1	1.0	1.1	1.0	1.1 D	1.4 D	1.2 D	0.98 D
Sulfate (as SO4)	mg/L	T	250	16	9.6	20	7.3	9.4	20	16 D	0.98 JD	< 0.41 UD	1.5 JD
Total Dissolved Solids	mg/L	T	950	1300	1200	1300	1200	1200	1200	1300 D	1200 D	1100 D	1100 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.000075 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00036 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.00080	0.00065	0.00058	0.00054 J	0.00047 J	0.00065	0.00062 J+	0.00082	0.001	0.00057
Barium	mg/L	T	1.3	1.5	1.5	1.6	1.4	0.99	1.3	1.4 D	1.4 D	1.5 D	1.4 D
Beryllium	mg/L	T	0.0040	< 0.000054 U	< 0.000052 U	0.000052 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.0015	0.0021	0.0021	0.0030	0.0014	0.0012	0.0020	0.0023	0.0015	0.0012
Cobalt	mg/L	T	0.0060	0.00048 J	0.00057	0.00067	0.00073	0.00050 J	0.00046 J	0.00080 J+	0.00067	0.00047 J	0.00035 J
Fluoride	mg/L	T	2.0	1.3	1.4	1.1	1.0	1.1	1.0	1.1 D	1.4 D	1.2 D	0.98 D
Lead	mg/L	T	0.0040	0.00035 J	0.00025 J	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	0.00027 J+	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Lithium	mg/L	T	0.10	0.23	0.22	0.20	0.23	0.15	0.19	0.22	0.19 D	0.19 D	0.13 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00064 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00031 U	0.00026 J	0.00027 J+	< 0.00025 U	0.00025 J	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	0.864	0.637	< 0.715 U	1.91	< 0.646 U	0.92	0.824	0.938	1.58	0.965
Radium-226	pCi/L	T	--	0.419	0.238	0.24	< 0.212 U	0.402	0.259	0.331	0.465	0.432	0.358
Radium-228	pCi/L	T	--	< 0.449 U	< 0.631 U	< 0.715 U	1.7	< 0.646 U	< 0.772 U	< 0.606 U	< 0.735 U	1.15	< 0.85 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00020 J	0.00022 J+	0.00019 J	0.0002 J	0.00047 J
Thallium	mg/L	T	0.0020	< 0.000076 U	< 0.000075 U	< 0.000038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	36	45	42	65	53	43	41 D	37 D	48	73
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00028
Iron	mg/L	T	83	15	17	16	26	19	18	14	19 D	19 D	31 D
Nickel	mg/L	T	0.10	0.0011 J	0.0011 J	0.0012	0.00092 J	< 0.00065 U	< 0.00065 U	0.0010 J	0.00090 J	0.00079 J	0.00065 U
Silver	mg/L	T	0.00020	< 0.000051 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00064 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.060	0.0019	0.0018	0.0012	0.094	< 0.0012 U	0.0018	0.0013	0.0018	< 0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	1100	1100	1000	1100	1100	990	1100 D	1100	1000 D	980 D
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	110	95	100	96	90	100	100 D	90 D	89 D	81 D
Potassium	mg/L	T	--	32	24	23	20	20	23	26	24 D	26 D	20 D
Sodium	mg/L	T	--	110	78	84	69	63	82	87	77 D	71 D	49 D
Total Alkalinity	mg/L	T	--	1100	1100	1000	1100	1100	990	1100 D	1100	1000 D	980 D

Notes:

ug/l - micrograms per liter.
 mg/l = milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:

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 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 J+ Same as J, and the reported concentration is potentially biased high.
 J- Same as J, and the reported concentration is potentially biased low.
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-07								Initial Assessment Monitoring		Assessment Monitoring	
Compliance Phase:				Background Monitoring											
Sample Date:				11/30/2022	1/4/2023	2/7/2023	3/13/2023	4/18/2023	5/23/2023	6/27/2023	8/7/2023	10/24/2023	2/13/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample		
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent		
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Field Parameters															
Conductivity	mS/cm	N	--	0.46	1.21	1.206	1.209	1.25	1.24	1.25	1.25	1.23	1.25		
Dissolved Oxygen	mg/L	N	--	0.12	0.3	0.08	0.21	0.03	0.23	0.43	0.72	0.22	0.2		
Oxidation Reduction Potential	mV	N	--	57.2	-88	-103.1	-143.9	-68	-109.4	-140.5	-15.7	-141	-74.7		
pH	su	N	--	6.88	7.04	6.93	6.58	6.86	6.93	6.88	6.65	6.88	7.02		
Temperature	deg c	N	--	12.2	11	10	8.6	9.6	11.3	13	14.8	14.6	9.7		
Turbidity	NTU	N	--	5.89	4.2	4.07	0.02	2.94	1.5	0.02	0.72	0.74	9.13		
Appendix III															
Boron	mg/L	T	4.0	13	11	12	11	10	12	11 J+	11	12 D	11 D		
Calcium	mg/L	T	250	140	140	140	150	130	150	160 D	120 D	150 D	140 D		
Chloride	mg/L	T	120	15	15	14	14	14	13	13 D	13 D	14 D	14 D		
Fluoride	mg/L	T	2.0	0.14	0.070 J	0.12	< 0.055 U	0.14	0.11	0.080 JD	0.083 JD	0.14 D	0.068 JD		
Sulfate (as SO4)	mg/L	T	250	29	30	33	20	17	15	18 D	19 D	26 D	32 D		
Total Dissolved Solids	mg/L	T	950	660	470	650	500	620	660	720 D	620 D	620 D	680 D		
Appendix IV															
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.000071 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U		
Arsenic	mg/L	T	0.010	0.0023 J	0.0021 J	0.0023 J	0.0018 J	0.0013 J	0.0023 J	0.0020 J+	0.0020 J	0.0029 J	0.0021 J		
Barium	mg/L	T	1.3	0.33	0.34	0.36	0.30	0.25	0.34	0.35	0.34	0.38	0.35		
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	0.000062 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000066 J	0.000055 J	< 0.000052 U		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.0038	0.0030	0.0037	0.0042	0.0028	0.0029	0.0033	0.0032	0.0036	0.0032		
Cobalt	mg/L	T	0.0060	0.00071	0.00088	0.00099	0.00099	0.00087	0.00095	0.0011 J+	0.00098	0.00098	0.00074		
Fluoride	mg/L	T	2.0	0.14	0.070 J	0.12	< 0.055 U	0.14	0.11	0.080 JD	0.083 JD	0.14 D	0.068 JD		
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U		
Lithium	mg/L	T	0.10	0.0054	0.0070	0.0052	0.0067	0.0083	0.0055	0.010	0.0042	0.0062	0.0031		
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U		
Radium 226 and 228	pCi/L	T	5.0	1.12	1.26 J+	1.03	1.12	0.674	< 0.928 U	< 0.697 U	2.36	1.76	0.937		
Radium-226	pCi/L	T	--	0.444	0.53	0.333	0.38	0.475	0.309	0.341	0.665	0.475	0.495		
Radium-228	pCi/L	T	--	0.676	0.729 J+	0.693	< 0.835 U	< 0.559 U	< 0.928 U	< 0.697 U	1.7	1.28	0.789 U		
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00010 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00023 J		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Total Suspended Solids	mg/L	T	--	44	36	35	33	33	39	39	41 D	38	29		
Michigan CCR Part 115															
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00027	< 0.00020 U		
Iron	mg/L	T	83	16	13	13	15	14	19	17	14	18 D	15 D		
Nickel	mg/L	T	0.10	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U		
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U		
Zinc	mg/L	T	0.27	0.016	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.025	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.0035	< 0.0012 U		
Additional Parameters															
Bicarbonate Alkalinity	mg/L	T	--	660	580	630	610	640	630	620	620	600 D	610 D		
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD		
Magnesium	mg/L	T	--	37	37	37	38	38	40	36	35 D	38 D	38 D		
Potassium	mg/L	T	--	5.4	5.4	5.2	5.7	4.8	4.4	4.7	5.1	4.9	4.7 D		
Sodium	mg/L	T	--	53	47	47	47	59	57	56	48 D	51 D	52 D		
Total Alkalinity	mg/L	T	--	660	580	630	610	640	630	620	620	600 D	610 D		

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- J The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- U The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-08									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				12/1/2022	1/5/2023	2/7/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	1.06	1.13	1.133	0.787	1.03	0.99	1.03	1.02	0.87	0.89
Dissolved Oxygen	mg/L	N	--	0.2	0.09	0.05	0.55	0.06	0.09	0.04	0.09	1.53	0.30
Oxidation Reduction Potential	mV	N	--	-159.3	-119.3	-133.9	-149.9	-121.2	-145.3	-103.6	-127.6	-180.6	-141.1
pH	su	N	--	7.17	6.21	7.16	7.51	7.25	7.33	7.24	7.26	7.27	7.34
Temperature	deg c	N	--	9.6	6.9	6.2	5.2	7.3	11.6	14	16.7	14.7	6.2
Turbidity	NTU	N	--	0.02	0.02	0.66	0.02	1.04	0.02	2.11	5.63	0.02	2.79
Appendix III													
Boron	mg/L	T	4.0	2.5	4.4	9.3	7.1	6.6	7.0	7.8 J+	7.1	4.1 D	7.0 D
Calcium	mg/L	T	250	150	160	150	150	130	140	150 D	120 D	130 D	120 D
Chloride	mg/L	T	120	17	23	35	30	28	25	29 D	30 D	17 D	25 D
Fluoride	mg/L	T	2.0	0.40	0.56	1.1	1.3	1.1	0.92	1.0 D	1.0 D	0.55 D	1.0 D
Sulfate (as SO4)	mg/L	T	250	13	25	5.3	26	2.0 J	< 0.41 U	< 0.41 UD	< 0.41 UD	1.7 JD	5.6 D
Total Dissolved Solids	mg/L	T	950	560	480	630	480	560	550	610 D	530 D	440 D	530 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00095 J	0.00054 J	0.00020 J	0.00016 J	0.00028	< 0.00010 U	0.00011 J	< 0.00010 U	< 0.00010 U	< 0.00010 U
Arsenic	mg/L	T	0.010	0.0069	0.021	0.049	0.045	0.050	0.041	0.038 J+	0.029	0.011	0.03
Barium	mg/L	T	1.3	1.2	1.3	1.5	1.4	1.1	1.2	1.4 D	1.2 D	0.98	1.0 D
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U
Chromium, Total	mg/L	T	0.10	0.0067	0.0093	0.0015	0.0011	0.00084	0.0011	0.00094	0.00087	0.00061	0.00070
Cobalt	mg/L	T	0.0060	0.00034 J	0.00045 J	0.00070	0.00060	0.00051 J	0.00059	0.00062 J+	0.00058	0.00034 J	0.00034 J
Fluoride	mg/L	T	2.0	0.40	0.56	1.1	1.3	1.1	0.92	1.0 D	1.0 D	0.55 D	1.0 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	0.00086	< 0.00022 U	0.00022 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U	< 0.00011 J
Lithium	mg/L	T	0.10	0.063	0.11	0.14	0.14	0.11	0.13	0.12	0.076 D	0.097 D	0.097 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0024	0.0018	0.0015	0.0028	0.00095 J	0.00068 J	0.00039 J+	0.00036 J	0.0016	0.0017
Radium 226 and 228	pCi/L	T	5.0	1.43	1.62 J+	< 0.836 U	1.13	1.18	1.14	< 0.606 U	2.1	0.891	< 0.848 U
Radium-226	pCi/L	T	--	0.277	0.31	0.286	< 0.255 U	0.32	0.396	0.19	0.358	< 0.234 U	< 0.126 U
Radium-228	pCi/L	T	--	1.16	1.31 J+	< 0.836 U	< 1 UG	0.858	< 0.835 U	< 0.606 U	1.74 G	< 0.744 U	< 0.848 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00016 J	0.00014 J+	0.00014 J	0.00015 J	0.00034 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	62	55	49	42	36	31	30	20	43	46
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	0.00043	< 0.00020 U	0.00045	0.00034	< 0.00020 U	< 0.00020 U	0.00021 J	0.00035
Iron	mg/L	T	83	32	30	21	22	18	18	15	13	22 D	22 D
Nickel	mg/L	T	0.10	0.00093 J	0.0013	0.0015	0.0013	0.0011 J	0.0011 J	0.0011 J	0.0010 J	0.00085 J	0.0026
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.054	< 0.0012 U	0.0040	0.0013	0.12	0.0014	0.0018	< 0.0012 U	0.0025	< 0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	540	510	560	470	510	490	480	480	460 D	440 D
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	27	30	33	27	29	28	26	26 D	22 D	23 D
Potassium	mg/L	T	--	8.8	12	14	7.6 J	12	11	12	12	8.6 D	8.6 D
Sodium	mg/L	T	--	21	27	38	33	35	35	40	36 D	23 D	32 D
Total Alkalinity	mg/L	T	--	540	510	560	470	510	490	480	480	460 D	440 D

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-09									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/28/2022	1/4/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Field Parameters													
Conductivity	mS/cm	N	--	1.33	1.49	1.593	1.472	2.02	1.95	1.95	1.92	1.63	2.03
Dissolved Oxygen	mg/L	N	--	0.19	0.2	1.89	0.35	0.08	0.07	0.05	0.17	0.07	0.34
Oxidation Reduction Potential	mV	N	--	42	-183.9	-138.4	-131.5	-112.3	-107.1	-117	-114.7	-69.3	-106.1
pH	su	N	--	7.2	7.22	7.22	7.4	7.22	7.52	7.28	7.21	7.16	7.14
Temperature	deg c	N	--	12.7	10.5	8.5	6.8	7.7	10.6	12.1	15	15.7	7.7
Turbidity	NTU	N	--	0.02	0.02	1.04	0.02	0.55	0.66	0.71	2.01	0.49	1.89
Appendix III													
Boron	mg/L	T	4.0	6.0	5.8	6.1	5.1	4.9	5.9	6.3 J+	5.7	6.9 D	5.3 D
Calcium	mg/L	T	250	270	230	300	400	390	410	430 D	330 D	310 D	420 D
Chloride	mg/L	T	120	15	17	18	16	12	11	11 D	12 D	12 D	18 D
Fluoride	mg/L	T	2.0	2.1	2.4	2.6	2.5	2.5	2.7	2.9 D	2.9 D	2.8 D	2.2 D
Sulfate (as SO4)	mg/L	T	250	110	83	210	480	650	580	500 D	450 D	210 D	610 D
Total Dissolved Solids	mg/L	T	950	960	740	1100	1400	1600	1600	1500 D	1400 D	1100 D	1600 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.000073 J	< 0.000050 U	0.00023 J	0.000092 J	0.00037 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.0025	0.0023	0.0023	0.0023	0.0013	0.0013	0.0027 J+	0.0024	0.0023	0.0015
Barium	mg/L	T	1.3	0.59	2.4	0.36	0.38	0.18	0.20	0.17	0.20	0.28	0.31 D
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000058 J	< 0.000052 UJ	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.0022	0.0028	0.0032	0.0030	0.0018	0.0019	0.0031	0.0027	0.0018	0.0016
Cobalt	mg/L	T	0.0060	0.00035 J	0.00046 J	0.00058	0.00099	0.00053	0.00037 J	0.00069 J+	0.00075	0.00024 J	0.00058
Fluoride	mg/L	T	2.0	2.1	2.4	2.6	2.5	2.7	2.9 D	2.9 D	2.9 D	2.8 D	2.2 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Lithium	mg/L	T	0.10	0.29	0.34	0.33	0.31	0.26	0.29	0.34	0.33	0.29 D	0.26 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.0024	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.028	0.033	0.029	0.021	0.020	0.012	0.019 J+	0.019	0.021	0.0097
Radium 226 and 228	pCi/L	T	5.0	0.789	< 0.678 U	< 0.642 UJ	< 0.796 U	< 0.688 U	< 0.912 U	< 0.742 U	< 0.821 U	< 0.688 U	< 0.98 U
Radium-226	pCi/L	T	--	< 0.16 U	< 0.0959 U	< 0.125 UJ	< 0.223 U	< 0.184 U	< 0.22 U	< 0.186 U	< 0.163 U	< 0.237 U	< 0.12 U
Radium-228	pCi/L	T	--	0.69	< 0.678 U	< 0.642 UJ	< 0.796 U	< 0.688 U	< 0.912 U	< 0.742 U	< 0.821 U	< 0.688 U	< 0.98 U
Selenium	mg/L	T	0.0050	0.00026 J	< 0.00022 U	0.00028 J	0.00024 J	< 0.00022 U	0.00012 J	0.00027 J+	0.00026 J	0.00023 J	0.00024 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	45	51	52	50	56	52	46	48	39	47
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00043	< 0.00020 U	< 0.00020 U
Iron	mg/L	T	83	17	19	19	24	25	25	19	16	15 D	22 D
Nickel	mg/L	T	0.10	0.00088 J	0.0020	0.0020	0.0033	0.0018	0.0010 J	0.0012	0.0012	0.00072 J	0.006
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.025	0.0015	< 0.0012 UJ	< 0.0012 U	0.018	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	750	710	750	620	610	400	720	660	780 D	610 D
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	38	36	44	50	53	53	47	46 D	41 D	55 D
Potassium	mg/L	T	--	13	16	16	10 J	15	14	16	17	15 D	13 D
Sodium	mg/L	T	--	29	28	26	26	26	29	30	27 D	27 D	26 D
Total Alkalinity	mg/L	T	--	750	710	750	620	610	400	720	660	780 D	610 D

Notes:

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-10								Initial Assessment Monitoring		Assessment Monitoring	
Compliance Phase:				Background Monitoring											
Sample Date:				11/29/2022	1/4/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/23/2023	2/13/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample		
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent		
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Field Parameters															
Conductivity	mS/cm	N	--	1.96	2.48	2.34	2.16	2.51	2.18	2.83	3.19	2.68	2.37		
Dissolved Oxygen	mg/L	N	--	0.08	0.04	0.07	0.05	0.02	0.03	0.11	0.02	0.07	0.18		
Oxidation Reduction Potential	mV	N	--	-20.3	-245.6	-222.9	-200.2	-189.2	-197.6	-216.2	-168	-149.1	-116.1		
pH	su	N	--	7.85	7.79	7.05	8.19	7.96	8.81	7.85	7.74	7.47	7.8		
Temperature	deg c	N	--	11.1	7.7	5.9	4.6	6.5	10.3	13.4	17	14.8	5.3		
Turbidity	NTU	N	--	0.02	0.02	0.65	0.02	0.29	2.21	0.02	1.01	0.02	3.61		
Appendix III															
Boron	mg/L	T	4.0	25	14	9.7	4.5	9.2	17	26 J+	28 D	23 D	8.7 D		
Calcium	mg/L	T	250	220	220	280	460	280	210	210 D	160 D	190 D	310 D		
Chloride	mg/L	T	120	220	170	130	92	140	160	320 D	430 D	310 D	140 D		
Fluoride	mg/L	T	2.0	7.1	5.7	4.0	2.7	4.6	6.5	7.3 D	7.7 D	6 D	3.3 D		
Sulfate (as SO4)	mg/L	T	250	490	620	880	360	950	410	200 D	140 D	330 D	840 D		
Total Dissolved Solids	mg/L	T	950	1700	1800	1800	2400	1900	1500	1700 D	1900 D	1600 D	1800 D		
Appendix IV															
Antimony	mg/L	T	0.0060	0.00013 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00034 J	< 0.00050 U	0.00011 J	0.00011 J	< 0.00010 UJ	< 0.00050 UD		
Arsenic	mg/L	T	0.010	0.00049 J	0.00034 J	0.00038 J	0.00037 J	0.00020 J	0.00055	0.00073 J+	0.0011	0.00094	0.00025 J		
Barium	mg/L	T	1.3	0.32	0.57	0.28	0.23	0.14	0.16	0.23	0.16	0.28	0.46	0.32 D	
Beryllium	mg/L	T	0.0040	< 0.000054 U	0.000071 J	< 0.000052 U	0.000054 J	< 0.000052 U	0.00022 J	0.000092 J+	0.00015 J	0.000052 J-	< 0.000052 U		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD		
Chromium, Total	mg/L	T	0.10	0.0040	0.0050	0.0026	0.0018	0.0019	0.0042	0.0070	0.0085	0.0042	0.0013		
Cobalt	mg/L	T	0.0060	0.00038 J	0.00040 J	0.00041 J	0.00053	0.00030 J	0.0018	0.00068 J+	0.00090	0.00038 J-	0.00010 U		
Fluoride	mg/L	T	2.0	7.1	5.7	4.0	2.7	4.6	6.5	7.3 D	7.7 D	6 D	3.3 D		
Lead	mg/L	T	0.0040	< 0.00023 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	0.00012 J	0.00017 J	0.0005 UD		
Lithium	mg/L	T	0.10	0.92	0.83	0.54	1.6	0.99	0.83	1.1	1.2	0.94 D	0.56 D		
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 UJ	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0072	0.0033	0.0048	0.0036	0.0035 J	0.0056	0.0019 J+	0.0028	0.0027	0.00080 J		
Radium 226 and 228	pCi/L	T	5.0	< 0.775 U	< 0.645 U	1.36	< 1.09 U	< 0.605 UJ	< 0.801 U	< 0.752 U	< 0.736 U	< 0.897 UJ	1.22		
Radium-226	pCi/L	T	--	< 0.171 U	< 0.119 U	< 0.121 U	< 0.231 U	< 0.155 UJ	< 0.248 U	< 0.179 U	< 0.142 U	< 0.229 UJ	0.206		
Radium-228	pCi/L	T	--	< 1 U	< 0.645 U	1.31	< 1.09 UG	< 0.605 UJ	< 0.801 U	< 0.752 U	< 0.736 U	< 0.897 UJ	1.01		
Selenium	mg/L	T	0.0050	0.00031 J	0.00028 J	0.00031 J	0.00046 J	< 0.00022 U	0.00039 J	0.00036 J+	0.00041 J	0.00036 J	0.00083		
Thallium	mg/L	T	0.0020	< 0.000076 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD		
Total Suspended Solids	mg/L	T	--	4.0	4.0	1.0 J	9.0	8.0 J+	2.0 J	< 4.0 U	2.0 J	< 4.0 U	< 4.0 U		
Michigan CCR Part 115															
Copper	mg/L	T	0.021	0.00049	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.0013	< 0.00020 U	< 0.00020 U	0.00038 J-	< 0.00020 U		
Iron	mg/L	T	83	3.7	3.7	3.9	7.2	7.3	6.2	4.5	3.2	2.4 D	3.7 D		
Nickel	mg/L	T	0.10	0.00089 J	0.00087 J	< 0.00065 U	< 0.00065 U	< 0.00065 U	0.0018	0.00088 J	0.0012	0.00076 J-	< 0.00065 U		
Silver	mg/L	T	0.00020	< 0.000051 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00025 UD		
Vanadium	mg/L	T	0.027	< 0.00064 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.0013	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U		
Zinc	mg/L	T	0.27	0.014	0.0012	< 0.0012 U	< 0.0012 U	0.013	0.0018	0.0012	0.0014	0.0025 J-	< 0.0012 U		
Additional Parameters															
Bicarbonate Alkalinity	mg/L	T	--	680	580	320	140	340	540	720	770	700 D	240 D		
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD		
Magnesium	mg/L	T	--	85	86	91	95	76	63	59	58 D	61 D	86 D		
Potassium	mg/L	T	--	44	33	31	40	42	36	46	48 D	45 D	41 D		
Sodium	mg/L	T	--	220	160	120	140	160	190	310 D	390 D	300 D	120 D		
Total Alkalinity	mg/L	T	--	680	580	320	140	340	540	720	770	700 D	240 D		

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-11									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/29/2022	1/3/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	1.38	1.4	1.9	1.413	1.77	1.76	1.85	1.68	1.4	1.38
Dissolved Oxygen	mg/L	N	--	0.1	0.31	0.25	0.19	0.23	0.09	0.13	0.22	0.31	0.07
Oxidation Reduction Potential	mV	N	--	76.8	-142.4	-161.7	-121	-157.9	-136.5	-64.7	-27.6	-179.4	140.9
pH	su	N	--	7.28	7.32	7.4	7.47	7.33	7.34	7.31	7.22	7.44	7.33
Temperature	deg c	N	--	13.6	11.7	9.9	7.5	7.8	10.6	13.2	15.3	15.9	9.2
Turbidity	NTU	N	--	0.02	1.53	0.02	0.02	0.02	1.25	5.01	0.02	0.02	0.02
Appendix III													
Boron	mg/L	T	4.0	8.5	13	4.8 B	2.8	1.5	2.0	3.0 J+	7.2	12 D	8.1 D
Calcium	mg/L	T	250	240	130	300	380	320	320	350 D	240 D	150 D	230 D
Chloride	mg/L	T	120	95	84	78	62	52	53	72 D	73 D	88 D	62 D
Fluoride	mg/L	T	2.0	0.81	1.4	0.37	0.32	0.21	0.22	0.25 D	0.69 D	1.2 D	0.75 D
Sulfate (as SO4)	mg/L	T	250	13 J	10	42	180	210	87	17 D	1.8 JD	< 0.41 UD	< 0.41 UD
Total Dissolved Solids	mg/L	T	950	970 J-	680	1200	1100	1200	1200	1100 D	930 D	1800 D	880 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00082 J	0.00069	< 0.000050 U	< 0.000050 U	0.00028 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U
Arsenic	mg/L	T	0.010	0.0017	0.0041	0.0016	0.0011	0.0061	0.0010	0.0012 J+	0.0019	0.0023	0.0012
Barium	mg/L	T	1.3	0.74	1.2	0.59	0.60	0.36	0.41	0.50	0.57	0.87	0.83
Beryllium	mg/L	T	0.0040	< 0.000052 U	0.000091 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	0.00073	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00080	0.0086	0.0010	0.00087	0.00045	0.00052	0.0012	0.0018	0.0063	0.00062
Cobalt	mg/L	T	0.0060	0.00036 J	0.0012	0.00061	0.00072	0.00040 J	0.00040 J	0.00066 J+	0.00061	0.00023 J	0.00026 J
Fluoride	mg/L	T	2.0	0.81	1.4	0.37	0.32	0.21	0.22	0.25 D	0.69 D	1.2 D	0.75 D
Lead	mg/L	T	0.0040	0.0025	0.068	0.0018 J	< 0.00022 U	< 0.0011 U	< 0.00050 U	0.0038 J+	0.00017 J	0.00036 J	0.00031 J
Lithium	mg/L	T	0.10	0.10	0.22	0.052	0.028	0.0059	0.0084	0.022	0.095	0.15 D	0.077 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0017	0.0029	0.0015	< 0.00062 U	< 0.00062 U	0.00043 J	0.00066 J+	0.0013	0.0015	0.00066 J
Radium 226 and 228	pCi/L	T	5.0	1.19	1.32	< 0.91 U	1.07	1.67	0.812	< 1.0 U	1.76	0.764	1.13
Radium-226	pCi/L	T	--	0.445	0.422	0.352	0.304	0.406	0.228	0.243	0.409	0.469	0.514
Radium-228	pCi/L	T	--	0.75	0.903	< 0.91 U	< 0.84 U	1.26	< 0.721 U	< 1.0 U	1.35	< 0.624 U	< 0.765 U
Selenium	mg/L	T	0.0050	0.00022 J	0.00031 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00014 J	0.00016 J+	0.00021 J	0.00020 J	0.00071
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	21	35	10	11	4.0	< 4.0 U	4.0	6.0	19	9.0
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.00043	0.019	0.00047	< 0.00020 U	< 0.00020 U	0.00024 J	0.00056 B	0.0016	< 0.00020 U	< 0.00020 J
Iron	mg/L	T	83	8.7	10	4.9	6.1	3.6	3.8	4.2	6.7	11 D	8.5 D
Nickel	mg/L	T	0.10	0.0013	0.0094	0.0015	0.0012	0.00065 J	0.00068 J	0.0013	0.0018	0.0015	0.0011 J
Silver	mg/L	T	0.00020	< 0.000050 U	0.00014	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.027	< 0.00062 U	0.00062 J	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.032	0.10	0.0085	< 0.0012 U	0.033	< 0.0012 U	0.0049	0.0031	0.0018	0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	840	600	860	810	800	840	890	800	660 D	760 D
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	60	55	63	67	60	55	55	56 D	52 D	61 D
Potassium	mg/L	T	--	15	19	11	8.5	5.7	5.5	8.1	14	18 D	14 D
Sodium	mg/L	T	--	57	70	37	25	21	26	38	50 D	67 D	51 D
Total Alkalinity	mg/L	T	--	840	600	860	810	800	840	890	800	660 D	760 D

Notes:

ug/l - micrograms per liter.
 mg/l = milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:

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- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-12									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/28/2022	1/3/2023	2/7/2023	3/13/2023	4/19/2023	5/23/2023	6/27/2023	8/7/2023	10/23/2023	2/14/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	0.459	0.387	0.542	0.311	0.52	0.44	0.55	0.67	0.64	0.33
Dissolved Oxygen	mg/L	N	--	1.62	8.72	8.46	10.31	1.03	2.93	0.12	0.08	0.16	11.12
Oxidation Reduction Potential	mV	N	--	93.4	47.4	-14.8	87.6	26.2	131	54.9	-30.1	-118.7	36.8
pH	su	N	--	7.67	7	7.8	8.16	7.92	7.77	7.52	7.47	7.46	8.32
Temperature	deg c	N	--	8.8	3.3	1.3	3	9.7	13.9	17.5	20.9	15.9	3.5
Turbidity	NTU	N	--	0.02	0.02	0.02	0.02	0.02	1.92	0.02	0.02	0.31	0.02
Appendix III													
Boron	mg/L	T	4.0	0.39	0.24	0.26	0.19	0.20	0.27	0.33 J+	0.36	0.42 D	0.22 D
Calcium	mg/L	T	250	77	46	78	77	55	63	64	95 D	95 D	40 D
Chloride	mg/L	T	120	24	16	27	18	16	15	17 D	22 D	26 D	17 D
Fluoride	mg/L	T	2.0	0.54	0.43	0.23	0.48	0.23	0.22	0.26 D	0.28 D	0.26 D	0.46 D
Sulfate (as SO4)	mg/L	T	250	180	130	180	120	110	99	110 D	130 D	130 D	84 D
Total Dissolved Solids	mg/L	T	950	360	210	340	200	260	270	330 D	420	200	100 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00071	0.0011	0.00076	0.00053	0.00094	0.00092	0.00064	0.00040	0.00041	0.00035
Arsenic	mg/L	T	0.010	0.0028	0.0019	0.0018	0.0014	0.0019	0.0024	0.0029 J+	0.0034	0.0031	0.0016
Barium	mg/L	T	1.3	0.030	0.017	0.024	0.025	0.022	0.032	0.043	0.053	0.060	0.022
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	0.00067	0.00078	0.0014	0.00062	0.0012	0.0016	0.0024 J+	0.0022	0.0011	0.00054
Chromium, Total	mg/L	T	0.10	0.00034	0.00048	0.00046	0.00067	0.00054	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.0002 U	0.00099
Cobalt	mg/L	T	0.0060	0.00019 J	< 0.00010 U	0.00014 J	< 0.00010 U	< 0.00010 U	0.00026 J	0.00050 J+	0.00053	0.00038 J	< 0.00010 U
Fluoride	mg/L	T	2.0	0.54	0.43	0.23	0.48	0.23	0.22	0.26 D	0.28 D	0.26 D	0.46 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00015 J	0.00014 J+	0.00021 J	0.00021 J	< 0.00010 U
Lithium	mg/L	T	0.10	0.0037	0.0033	0.0022 J	0.0025 J+	0.0037	0.0043	0.0064	0.0042	0.0048	0.0023 J
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00016 J	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0087	0.0072	0.0067	0.0056	0.0057	0.0069	0.0082 J+	0.0088	0.0096	0.0051
Radium 226 and 228	pCi/L	T	5.0	< 0.543 U	< 0.459 U	< 0.685 U	< 0.619 U	0.809	1.09	< 0.59 UJ	< 0.578 UJ	< 0.517 U	< 0.749 U
Radium-226	pCi/L	T	--	< 0.13 U	< 0.0702 U	< 0.0727 U	< 0.126 U	< 0.129 U	< 0.136 U	< 0.124 U	< 0.106 UJ	< 0.212 U	< 0.116 U
Radium-228	pCi/L	T	--	< 0.543 U	< 0.459 U	< 0.685 U	< 0.619 U	0.793	1.07	< 0.59 UJ	< 0.578 UJ	< 0.517 U	< 0.749 U
Selenium	mg/L	T	0.0050	0.0015	0.0022	0.0023	0.00093	0.0017	0.00076	0.00021 J+	0.00013 J	0.00029 J	0.00089
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	< 4.0 U	< 4.0 U	2.0 J	< 4.0 U	1.0 J	< 4.0 U	< 4.0 UJ	0.98 J+	< 4.0 U	< 4.0 U
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.00055	0.00092	0.0010	0.0010	0.0015	0.0016	0.0012 B	0.00094	0.00071	0.0012
Iron	mg/L	T	83	< 0.26 U	< 0.026 U	0.033 J	0.027 J	< 0.026 U	< 0.026 U	0.051	0.064	0.037 J	0.026 UJ
Nickel	mg/L	T	0.10	0.0025	0.0023	0.0035	0.0016	0.0021	0.0025	0.0031	0.0035	0.0026	0.0014
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00085 J	0.0013	0.0012	0.00095 J	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.027	0.0068	0.0080	0.0095	0.0037	0.0090	0.0074	0.0085	0.010	0.0080	0.0027
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	86	55	52	46	85	95	140	140	190 D	47
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U
Magnesium	mg/L	T	--	17	12	2.4	12	13	15	14	19	22 D	11 D
Potassium	mg/L	T	--	1.3	0.70	0.74	0.82	1.0	1.3	1.3	1.8	1.7	0.62
Sodium	mg/L	T	--	13	11	14	9.9	9.4	11	11	14	16 D	9.8 D
Total Alkalinity	mg/L	T	--	86	55	52	46	85	95	140	140	190 D	47

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

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- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-18									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/5/2023	2/8/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	1.54	2.06	1.788	1.554	1.4	1.52	1.62	1.46	1.6	1.51
Dissolved Oxygen	mg/L	N	--	0.09	0.19	0.72	0.22	0.34	0.15	0.29	0.05	0.3	0.05
Oxidation Reduction Potential	mV	N	--	66.8	-126.8	-70.8	-69.8	-31.3	-22.1	-88.4	-92.8	-80	132.6
pH	su	N	--	7.05	7.02	7.2	7.12	7.19	7.16	7.16	7.25	7.16	7.27
Temperature	deg c	N	--	9.9	6.5	5.2	3.8	6.3	11.3	17.2	17.8	15.3	5.5
Turbidity	NTU	N	--	0.02	0.02	0.09	0.02	0.52	0.02	0.02	7.06	0.59	0.02
Appendix III													
Boron	mg/L	T	4.0	2.2	2.0	2.3	1.9	1.8	2.6	2.7 J+	2.3	3.0 D	3.5 D
Calcium	mg/L	T	250	450	410	380	330	270	340	240 D	250 D	360 D	370 D
Chloride	mg/L	T	120	28	26	22	19	16	19	24 D	27 D	22 D	24 D
Fluoride	mg/L	T	2.0	3.5	3.3	3.5	3.8	3.8	3.9	4.4 D	5.1 D	4.5 D	3.4 D
Sulfate (as SO4)	mg/L	T	250	1200	1200	480	740	660	780	760 D	620 D	800 D	980 D
Total Dissolved Solids	mg/L	T	950	1800	1700	1600	1200	1200	1400	1400 D	1100 D	1400 D	1400 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00012 J	0.00013 J	0.00032 J	0.00014 J	0.00030	< 0.00050 U	0.00012 J	< 0.00010 U	0.00013 J	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.029	0.020	0.023	0.019	0.021	0.015	0.029 J+	0.030	0.041	0.024
Barium	mg/L	T	1.3	0.021	0.018	0.015	0.012	0.013	0.023	0.024	0.023	0.025	0.015 D
Beryllium	mg/L	T	0.0040	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U
Cadmium	mg/L	T	0.0025	0.00022 J	0.00030	< 0.00016 U	0.00018 J	0.00018 J	0.00044 J	0.00030 J+	0.000089 J	< 0.000075 U	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	< 0.00018 U	< 0.00018 U	< 0.00018 U	< 0.00018 U	< 0.00018 U	0.00025 J+	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U
Cobalt	mg/L	T	0.0060	0.0060	0.0054	0.0048	0.0032	0.0020	0.0019	0.0032 J+	0.0023	0.0017	0.0023
Fluoride	mg/L	T	2.0	3.5	3.3	3.5	3.8	3.8	3.9	4.4 D	5.1 D	4.5 D	3.4 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00050 U	0.00016 J+	0.00032 J	0.00014 J	< 0.00050 UD
Lithium	mg/L	T	0.10	0.044	0.042	0.029	0.027	0.026	0.029	0.041	0.045	0.039 D	0.020 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.013	0.012	0.011	0.013	0.014	0.0090	0.019 J+	0.021	0.02	0.011
Radium 226 and 228	pCi/L	T	5.0	0.618	< 0.478 U	< 0.501 U	< 0.592 U	1.27	< 0.701 UJ	< 0.872 U	0.73	< 0.625 U	< 0.578 U
Radium-226	pCi/L	T	--	< 0.131 U	< 0.0981 U	< 0.083 U	< 0.202 U	< 0.137 U	< 0.122 UJ	< 0.124 U	< 0.105 U	< 0.209 U	< 0.114 U
Radium-228	pCi/L	T	--	0.584	< 0.478 U	< 0.501 U	< 0.592 U	1.24	< 0.701 UJ	< 0.872 U	0.713	< 0.625 U	< 0.578 U
Selenium	mg/L	T	0.0050	0.00031 J	0.00041 J	0.00034 J	0.00086	0.00079	0.00016 J	0.00018 J+	0.00016 J	0.00082	0.0012
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	12	4.0	13	2.0 J	6.0	6.0	11	7.9 D	11 D	4.0 U
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.00043	0.00043	0.00043	0.00043	0.00062	0.00055	0.00088 B	0.0015	0.00047	0.00033
Iron	mg/L	T	83	10	8.6	6.8	5.4	4.3	5.3	5.8	4.9	7.0 D	7.7 D
Nickel	mg/L	T	0.10	0.011	0.011	0.0094	0.0074	0.0051	0.0050	0.0075	0.0049	0.0047	0.0056
Silver	mg/L	T	0.0020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.074	0.088	0.060	0.068	0.043	0.038	0.061	0.028	0.054	0.042
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	160	110	100	130	140	130	150	200	200 D	120
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U
Magnesium	mg/L	T	--	37	36	33	26	22	29	28	21	30 D	42 D
Potassium	mg/L	T	--	11	12	11	9.4	8.7	10	11	11	11 D	8.9 D
Sodium	mg/L	T	--	21	20	21	17	15	18	20	20	20 D	24 D
Total Alkalinity	mg/L	T	--	160	110	100	130	140	130	150	200	200 D	120

Notes:

ug/l - micrograms per liter.
 mg/l = milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 J+ Same as J, and the reported concentration is potentially biased high.
 J- Same as J, and the reported concentration is potentially biased low.
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-19									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/3/2023	2/8/2023	3/13/2023	4/18/2023	5/22/2023	6/28/2023	8/7/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	1.91	2.56	2.493	2.196	2.31	2.29	1.98	20.4	2.2	1.77
Dissolved Oxygen	mg/L	N	--	0.12	0.41	1.03	0.13	0.02	0.09	0.32	0.4	0.26	0.05
Oxidation Reduction Potential	mV	N	--	68.7	-134.8	-70.2	-77.1	-7.9	-118.4	-112.9	-36.8	-109.1	141.9
pH	su	N	--	7	6.39	6.98	6.9	6.92	7.07	6.9	6.82	6.88	6.73
Temperature	deg c	N	--	9.2	7.3	6.3	5.7	8	11.4	13.9	16.7	15.8	5.9
Turbidity	NTU	N	--	0.02	1.6	2.27	0.02	2.59	0.02	0.02	0.02	0.02	2.48
Appendix III													
Boron	mg/L	T	4.0	2.6	2.0	2.2	1.5	1.6	1.8	2.3 J+	1.9	2.6 D	1.8 D
Calcium	mg/L	T	250	530	510	550	510	450 E	480	460 D	360 D	470 D	490 D
Chloride	mg/L	T	120	75	64	66	46	42	40	37 D	38 D	50 D	39 D
Fluoride	mg/L	T	2.0	2.2	2.3	1.9	1.7	1.8	1.9	1.9 D	2.2 D	2.0 D	1.6 D
Sulfate (as SO4)	mg/L	T	250	1300	1300	600	1100	1200	1100	800 D	830 D	1100 D	1000 D
Total Dissolved Solids	mg/L	T	950	2200 J-	2200	2200	2100	2000	2000	1600 D	1600 D	1900 D	1800 D
Appendix IV													
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00072 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.0061	0.0055	0.0055	0.0043	0.0032	0.0031	0.0069 J+	0.0073	0.0067	0.0026
Barium	mg/L	T	1.3	0.046	0.050	0.047	0.036	0.030	0.040	0.040	0.037	0.044	0.037 D
Beryllium	mg/L	T	0.0040	< 0.000052 U	0.000063 J	< 0.00026 U	0.000061 J	0.000057 J	0.000071 J	0.000077 J+	0.000072 J	< 0.000052 U	0.000086 J
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.00027	0.00053	< 0.00088 U	0.00037	< 0.00018 U	< 0.00020 U	0.00031	0.00029	< 0.00020 U	< 0.00020 U
Cobalt	mg/L	T	0.0060	0.00046 J	0.00069	0.00078 J	0.00096	0.00069	0.00042 J	0.00050 J+	0.00044 J	0.00013 J	0.00023 J
Fluoride	mg/L	T	2.0	2.2	2.3	1.9	1.7	1.8	1.9	1.9 D	2.2 D	2.0 D	1.6 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Lithium	mg/L	T	0.10	0.099	0.11	0.099	0.090	0.11	0.085	0.090	0.098	0.089 D	0.073 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.013	0.011	0.0095	0.011	0.0090	0.0051	0.012 J+	0.013	0.010	0.0039
Radium 226 and 228	pCi/L	T	5.0	< 0.589 U	0.626	1.03	1.08	0.933	0.904	< 0.561 U	1.17	< 1.13 U	0.779
Radium-226	pCi/L	T	--	0.235	0.222	0.266	0.171	< 0.183 U	0.216	< 0.129 U	0.179	< 0.156 U	0.219
Radium-228	pCi/L	T	--	< 0.589 U	< 0.503 U	0.761	0.911	0.818	0.688	< 0.561 U	0.993	< 1.13 UG	0.561
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 UJ	< 0.00010 U	< 0.00010 U	0.00012 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	27	25	16	6.0	23	19	29	33	26	17
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.0010 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U
Iron	mg/L	T	83	15	18	16	13	12	13	16	15	24 D	20 D
Nickel	mg/L	T	0.10	0.0024	0.0028	< 0.0032 U	0.0024	0.0017	0.0011 J	0.0015	0.0015	0.0012	0.0012
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.027	0.0023	< 0.0012 U	< 0.0059 U	< 0.0012 U	0.0042	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	330	340	310	280	240	260	340	330	270 D	290
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U
Magnesium	mg/L	T	--	49	42	45	38	43	45	32	30 D	39 D	39 D
Potassium	mg/L	T	--	18	22	16	20	16	15	17	16 D	15 D	15 D
Sodium	mg/L	T	--	48	40	44	37	38	38	36	31 D	37 D	33 D
Total Alkalinity	mg/L	T	--	330	340	310	280	240	260	340	330	270 D	290

Notes:
ug/l - micrograms per liter.
mg/l = milligrams per liter.
su - standard pH units (pH is a field parameter)
pCi/L = picocuries per liter.
All metals were analyzed as total unless otherwise indicated.

Qualifiers:
U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
J+ Same as J, and the reported concentration is potentially biased high.
J- Same as J, and the reported concentration is potentially biased low.
UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-20									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/4/2023	2/7/2023	3/13/2023	4/18/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	1.2	1.24	1.232	1.218	1.37	1.41	1.17	1.18	1.26	1.17
Dissolved Oxygen	mg/L	N	--	0.24	0.1	0.02	0.12	0.16	0.05	0.32	0.26	0.72	0.21
Oxidation Reduction Potential	mV	N	--	-142	-148.2	-153.3	-153	-162.4	-159.7	-174.4	-105.9	-179.7	-128.7
pH	su	N	--	7.23	7.5	7.29	7.2	7.44	7.45	7.3	7.14	7.33	7.45
Temperature	deg c	N	--	9.7	7.2	6.7	5.7	7.2	10.8	13.1	19.6	14.8	6.5
Turbidity	NTU	N	--	0.02	0.02	1.91	0.02	0.02	0.02	0.02	0.02	0.02	1.14
Appendix III													
Boron	mg/L	T	4.0	1.1	0.83	0.87	0.82	0.80	0.92	1.1 J+	1.1	1.1 D	0.72 D
Calcium	mg/L	T	250	130	120	140	170	130	130	58	110 D	130 D	120 D
Chloride	mg/L	T	120	70	66	62	60	88	92	71 D	70 D	70 D	41 D
Fluoride	mg/L	T	2.0	0.55	0.26	0.24	0.26	0.21	0.21	0.22 D	0.23 D	0.23 D	0.25 D
Sulfate (as SO4)	mg/L	T	250	42	78	120	110	85	76	30 D	19 D	33 D	78 D
Total Dissolved Solids	mg/L	T	950	660	660	690	680	760	770	650 D	570 D	650 D	640 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.000096 J	0.000054 J	0.000066 J	0.000062 J	0.00016 J	< 0.00010 U	0.00011 J	0.00014 J	< 0.00010 U	< 0.00010 U
Arsenic	mg/L	T	0.010	0.0015	0.0012	0.0012	0.0012	0.0013	0.0015	0.0016 J+	0.0017	0.0017	0.0011
Barium	mg/L	T	1.3	0.94	0.61	0.47	0.37	0.31	0.42	0.43	0.49	0.53	0.42
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000052 J
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00019 J	< 0.00018 U	0.00025	0.00029	0.00021 J	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00022 J
Cobalt	mg/L	T	0.0060	0.0013	0.0013	0.0016	0.0016	0.0014	0.0013	0.0014 J+	0.0011	0.00095	0.0011
Fluoride	mg/L	T	2.0	0.55	0.26	0.24	0.26	0.21	0.21	0.22 D	0.23 D	0.23 D	0.25 D
Lead	mg/L	T	0.0040	0.0023	0.0016	0.0016	0.0016	0.0028	0.0023	0.0028 J+	0.0023	0.0018	0.0013
Lithium	mg/L	T	0.10	0.074	0.065	0.049	0.055	0.060	0.062	0.083	0.079	0.071 D	0.029 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0041	0.0039	0.0041	0.0038	0.0036	0.0048	0.0048 J+	0.0051	0.0047	0.0045
Radium 226 and 228	pCi/L	T	5.0	1.47	0.822 J+	< 0.499 U	< 0.536 U	0.591	< 0.59 U	< 0.467 U	1.08	< 0.581 U	< 0.894 U
Radium-226	pCi/L	T	--	< 0.153 U	0.198	0.134	0.161	< 0.166 U	0.193	< 0.122 U	0.118	< 0.19 U	< 0.195
Radium-228	pCi/L	T	--	1.32	0.624 J+	< 0.499 U	< 0.536 U	0.541	< 0.59 U	< 0.467 U	0.958	< 0.581 U	< 0.894 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00013 J	0.00011 J+	0.00010 J	0.00011 J	0.00026 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	0.00011 J
Total Suspended Solids	mg/L	T	--	40	42	33	37	44	42	37 D	37	38 D	33
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.00034	0.00023 J	0.00023 J	< 0.00020 U	0.00024 J	0.00029	0.00036 B	0.00053	0.00025	0.00040
Iron	mg/L	T	83	21	19	18	19	21	22	18	16	20 D	18 D
Nickel	mg/L	T	0.10	0.0091	0.0091	0.0095	0.0099	0.0092	0.0094	0.0098	0.0078	0.0066	0.0061
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.0027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.071	0.024	0.028	0.029	0.060	0.028	0.030	0.025	0.024	0.016
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	540	470	470	460	520	540	470	460	560 D	460
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U
Magnesium	mg/L	T	--	57	53	52	56	57	62	47	48 D	53 D	45 D
Potassium	mg/L	T	--	13	13	11	12	13	12	13	13	12 D	8.5 D
Sodium	mg/L	T	--	65	59	57	56	63	79	67	57 D	61 D	48 D
Total Alkalinity	mg/L	T	--	540	470	470	460	520	540	470	460	560 D	460

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- J The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-27									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/5/2023	2/7/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023	2/13/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	2.46	2.01	1.651	1.047	1.04	1.65	2.5	2.57	2.99	1.65
Dissolved Oxygen	mg/L	N	--	1.35	0.17	0.24	0.93	0.07	0.19	0.04	0.23	0.05	1.64
Oxidation Reduction Potential	mV	N	--	-87.3	-137.6	-79.1	-134.3	-52.1	-80.9	-89	-104.5	-191.3	-62.8
pH	su	N	--	6.86	6.92	6.81	6.95	6.81	6.77	6.86	6.78	6.77	6.93
Temperature	deg c	N	--	8.7	6.7	5	4.5	7.2	11.7	16.5	20.8	15.2	5.6
Turbidity	NTU	N	--	0.02	0.73	1.33	0.02	4.08	3.32	3.55	8.15	9.71	3.01
Appendix III													
Boron	mg/L	T	4.0	0.31	0.17	0.16	0.14	0.14	0.20	0.45 J+	0.44	0.32 D	0.16 D
Calcium	mg/L	T	250	200	180	180	180	100	130	180 D	150 D	190 D	160 D
Chloride	mg/L	T	120	120	84	69	60	38	52	110 D	100 D	110 D	44 D
Fluoride	mg/L	T	2.0	0.37	0.29	0.31	0.41	0.42	0.35	0.36 D	0.41 D	0.43 D	0.4 D
Sulfate (as SO4)	mg/L	T	250	6.8	41	58	47	14	1.8 J	0.56 JD	3.0 D	2.4 JD	72 D
Total Dissolved Solids	mg/L	T	950	920	710	790	620	460	590	790 D	690 D	870 D	1300 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00013 J	0.000075 J	0.000099 J	0.000060 J	0.00028	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U
Arsenic	mg/L	T	0.010	0.00086	0.00070	0.00069	0.00069	0.00095	0.00096	0.0010 J+	0.0012	0.0011	0.00082
Barium	mg/L	T	1.3	0.21	0.17	0.16	0.12	0.074	0.15	0.25	0.25	0.31	0.16
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.018	0.016	0.0097	0.0099	0.0083	0.025	0.027	0.034	0.028	0.0090
Cobalt	mg/L	T	0.0060	0.00063	0.00056	0.00052	0.00043 J	0.00024 J	0.00063	0.00092 J+	0.00083	0.00075	0.00037 J
Fluoride	mg/L	T	2.0	0.37	0.29	0.31	0.41	0.42	0.35	0.36 D	0.41 D	0.43 D	0.40 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U
Lithium	mg/L	T	0.10	0.0086	0.0088	0.0067	0.0073	0.0075	0.0073	0.017 D	0.0093	0.0099	0.0050
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00041 J	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	0.823	< 0.639 U	< 0.729 U	< 0.889 U	1.15	1.61	0.84	1.76	< 0.857 U	< 0.774 U
Radium-226	pCi/L	T	--	0.367	0.23	< 0.127 U	< 0.197 U	< 0.171 U	< 0.325 U	0.458	0.477	0.464	0.22
Radium-228	pCi/L	T	--	< 0.679 U	< 0.639 U	< 0.729 U	< 0.889 U	1.03	1.47 J	< 0.578 U	1.28	< 0.857 U	< 0.774 U
Selenium	mg/L	T	0.0050	0.00023 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00016 J	0.00021 J+	0.00022 J	0.0002 J	0.00053
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	34	27	22	14	5.0	11	19 D	11	22	23
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.00030	< 0.00020 U	0.0016	< 0.00020 U	0.00022 J	0.00032	< 0.00020 U	0.00023 J	0.00024 J	0.00020 U
Iron	mg/L	T	83	13	11	11	8.3	5.5	7.6	9.4	8.0	11 D	9.9 D
Nickel	mg/L	T	0.10	0.00077 J	0.0010 J	0.0010 J	0.00077 J	< 0.00065 U	0.00087 J	0.00067 J	0.00075 J	< 0.00065 U	0.00076 J
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00082 J	0.00093 J	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.0096	< 0.0012 U	0.0016	< 0.0012 U	0.0079	0.0013	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	1200	880	800	590	480	770	1100 D	1100	1400 D	790 D
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	45	45	47	44	26	31	33	35 D	40 D	55 D
Potassium	mg/L	T	--	7.6	7.3	6.2	5.8	4.1	6.5	11	12	11 D	4.9 D
Sodium	mg/L	T	--	92	68	59	61	41	52	75	80 D	82 D	59 D
Total Alkalinity	mg/L	T	--	1200	880	800	590	480	770	1100 D	1100	1400 D	790 D

Notes:

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

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 - J+ Same as J, and the reported concentration is potentially biased high.
 - J- Same as J, and the reported concentration is potentially biased low.
 - UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 - R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 - D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-30									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/3/2023	2/6/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023	2/12/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	2.26	3.18	3.025	2.273	2.73	2.66	2.85	2.67	2.21	2.68
Dissolved Oxygen	mg/L	N	--	0.12	0.39	0.04	0.35	0.29	0.05	0.01	0.12	0.41	0.14
Oxidation Reduction Potential	mV	N	--	-55.7	-281.2	-134.9	-148.7	-151.8	-86.8	-105.6	-92.7	-301.7	-73.8
pH	su	N	--	7.07	6.48	7.16	7.25	7.17	7.16	7.21	6.94	7.05	7.18
Temperature	deg c	N	--	10.1	7.2	6.4	4.8	6.6	10.7	13.6	17	15	6.2
Turbidity	NTU	N	--	0.02	0.02	1.21	0.02	0.02	0.5	0.02	0.02	0.02	0.02
Appendix III													
Boron	mg/L	T	4.0	2.2	1.7	2.1	3.5	1.7	1.9	1.9 J+	1.8	2.1 D	1.9 D
Calcium	mg/L	T	250	470	460 E	480	960	430	430	460 D	400 D	390 D	440 D
Chloride	mg/L	T	120	190	190	190	140	120	98	110 D	98 D	97 D	110 DJ+
Fluoride	mg/L	T	2.0	1.0	1.4	1.0	1.2	1.1	1.1	0.91 D	1.1 D	1.2 D	1.1 D
Sulfate (as SO4)	mg/L	T	250	780	1000	830	940	970	850	940 D	860 D	610 D	820 D
Total Dissolved Solids	mg/L	T	950	2200 J	2400	2000	2300	2200	2100	2800 J	2300 D	1800	2100 D
Appendix IV													
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00040 J	< 0.00050 U	< 0.00050 UD	< 0.00010 U	< 0.00010 U	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.00046 J	0.00070	< 0.00050 U	0.00039 J	< 0.00010 U	0.00012 J	0.00027 J+	0.00043 J	0.00063	0.00021 J-
Barium	mg/L	T	1.3	0.10	0.089	0.10	0.045	0.047	0.058	0.066 D	0.048	0.058	0.067 J-
Beryllium	mg/L	T	0.0040	< 0.000052 U	0.000053 J	< 0.00026 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U	0.00011 J+
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.014	0.012	0.0087	0.010	0.0058	0.0052	0.012	0.013	0.0081	0.0049 J-
Cobalt	mg/L	T	0.0060	0.00091	0.0044	0.00096 J	0.0028	0.0011	0.00054	0.0013 J+	0.0011	0.00053	0.0011
Fluoride	mg/L	T	2.0	1.0	1.4	1.0	1.2	1.1	1.1	0.91 D	1.1 D	1.2 D	1.1 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00050 UJ	< 0.00050 UD	< 0.0001 U	0.0005 UJD
Lithium	mg/L	T	0.10	0.13	0.15	0.12	0.27	0.11	0.11	0.12 D	0.14	0.12 D	0.10 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	0.0036	< 0.0031 U	0.0017	< 0.0031 U	0.00032 J	0.00082 J+	0.0011 J	0.00061 J	0.00073 J+
Radium 226 and 228	pCi/L	T	5.0	< 0.873 UJ	0.445 J	< 0.624 UJ	< 0.659 U	0.875	< 0.783 U	0.586 J+	0.911	< 0.526 U	0.793 J+
Radium-226	pCi/L	T	--	< 0.238 UJ	0.139 J	< 0.0915 UJ	< 0.2 U	< 0.141 U	< 0.194 U	0.0986 J+	< 0.163 UJ	< 0.228 U	< 0.117 UJ
Radium-228	pCi/L	T	--	< 0.873 UJ	< 0.443 UJ	< 0.624 UJ	< 0.659 U	0.844	< 0.783 UJ	0.82	< 0.566 UJ	0.82	0.721 J+
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	0.00011 J+	0.00012 J	0.00013 J	0.00039 J-
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.00038 UD	< 0.000075 U	0.00038 UD
Total Suspended Solids	mg/L	T	--	4.0	11	< 4.0 UJ	5.0	6.0	4.0	< 4.0 UD	5.0	4.0 D	< 4.0 U
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	0.00037 J+	< 0.0010 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00054	0.00024 J-
Iron	mg/L	T	83	0.87	3.6	0.99	8.8	4.1	2.4	2.9	1.4 D	2.0 D	2.0 D
Nickel	mg/L	T	0.10	0.00080 J	0.0045	< 0.0032 U	0.0041	0.0018	0.00070 J	0.0021	0.0011 J	< 0.00065 U	0.0018 J-
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.0053	< 0.0012 U	< 0.0059 U	< 0.0012 U	0.0049	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 UJ
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	930	760	880	660	630	640	< 0.16 U	690	780 D	690 D
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	110	120	120	250	120	110	120 D	100 D	95 D	110 D
Potassium	mg/L	T	--	12	15	16	17	12	9.6	11	13	10 D	10 D
Sodium	mg/L	T	--	120	110	120	220	98	95	95 D	88 D	82 D	89 D
Total Alkalinity	mg/L	T	--	930	760	880	660	630	640	< 0.16 U	690	780 D	690 D

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
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- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-31											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring		Assessment Monitoring	
Sample Date:				12/1/2022	1/4/2023	2/7/2023	3/14/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023	2/12/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample		
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2		
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
Field Parameters															
Conductivity	mS/cm	N	--	1.35	1.4	1.327	1.23	1.28	1.21	1.24	1.41	1.23	1.10		
Dissolved Oxygen	mg/L	N	--	1.65	0.09	0.21	0.11	0.11	0.09	1.39	0.05	0.15	0.05		
Oxidation Reduction Potential	mV	N	--	-150	-262.2	-129.3	-214.9	-274.4	-220	-113.9	-55.8	-82.4	149.7		
pH	su	N	--	7.84	7.7	7.85	7.76	7.87	7.85	8	7.78	7.67	7.8		
Temperature	deg c	N	--	8.7	7.6	6.3	4	6.5	13.2	14.4	17.8	14.9	7.0		
Turbidity	NTU	N	--	2.61	0.02	1.27	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Appendix III															
Boron	mg/L	T	4.0	4.8	3.8	4.2	4.0	3.6	4.5	5.4 J+	4.8	5.1 D	4.4 D		
Calcium	mg/L	T	250	180	190	170	200	170	160	130 D	150 D	170 D	170 D		
Chloride	mg/L	T	120	120	100	110	97	94	92	110 D	110 D	100 D	99 DJ+		
Fluoride	mg/L	T	2.0	4.6	4.9	4.7	4.6	5.1	5.2	4.7 D	5.1 D	4.6 D	4.5 D		
Sulfate (as SO4)	mg/L	T	250	180	250	200	250	250	160	120 D	100 D	72 D	150 D		
Total Dissolved Solids	mg/L	T	950	850	940 J	780	860	810	760	760 D	860 D	730 D	810 D		
Appendix IV															
Antimony	mg/L	T	0.0060	0.000069 J	< 0.000050 U	0.000080 J	0.00012 J	0.00013 J	< 0.00010 U	< 0.00010 U	0.00012 J	< 0.00010 U	< 0.00010 U		
Arsenic	mg/L	T	0.010	0.0018	0.0013	0.0012	0.0010	0.0011	0.0014	0.0016 J+	0.0016	0.0012	0.0010		
Barium	mg/L	T	1.3	0.21	0.14	0.19	0.15	0.12	0.13	0.23	0.16	0.16	0.13		
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 UJ	< 0.000052 U	0.000054 J		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 UJ	< 0.000075 U	0.000084 J		
Chromium, Total	mg/L	T	0.10	0.0021	0.0018	0.0024	0.0019	0.0019	0.0029	0.0023	0.0023	0.0025	0.0022		
Cobalt	mg/L	T	0.0060	0.00015 J	0.00015 J	0.00020 J	0.00018 J	0.00016 J	0.00021 J	0.00018 J+	0.00018 J	0.00013 J	0.00028 J		
Fluoride	mg/L	T	2.0	4.6	4.9	4.7	4.6	5.1	5.2	4.7 D	5.1 D	4.6 D	4.5 D		
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00031 J	< 0.00010 UJ	< 0.00010 U	< 0.00010 U	< 0.00010 U		
Lithium	mg/L	T	0.10	0.052	0.048	0.052	0.054	0.046	0.053	0.056 D	0.054	0.049	0.039 D		
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0021	0.0013	0.0013	0.0011 J	0.0011 J	0.0012	0.0018 J+	0.0011 J	0.0013	0.0011 J		
Radium 226 and 228	pCi/L	T	5.0	0.753	< 0.641 U	0.717	< 0.725 U	0.592	1.14	0.58	1.23	< 0.497 U	1.01		
Radium-226	pCi/L	T	--	0.187	0.203	0.187	< 0.189 U	0.254	0.184	0.27	0.262 J+	< 0.208 U	0.171		
Radium-228	pCi/L	T	--	0.566	< 0.641 U	0.53	< 0.725 U	< 0.527 U	0.959	< 0.489 U	0.97	< 0.497 U	0.842		
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00011 J	0.00012 J+	0.00015 J	0.00014 J	0.00074		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 UJ	< 0.000075 UJ	< 0.000075 U	0.000088 J		
Total Suspended Solids	mg/L	T	--	2.0 J	4.0	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	1.0 J	< 4.0 U	< 4.0 UD		
Michigan CCR Part 115															
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00027	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00023 J		
Iron	mg/L	T	83	2.5	1.4	1.5	1.1	0.77	1.2	0.92	0.21	0.13	0.19		
Nickel	mg/L	T	0.10	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	0.0023		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00005 U		
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U		
Zinc	mg/L	T	0.27	0.0082	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.010	0.0014	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U		
Additional Parameters															
Bicarbonate Alkalinity	mg/L	T	--	410	340	350	320	290	320	340	410	440 D	340 D		
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD		
Magnesium	mg/L	T	--	37	36	38	42	36	33	34	38 D	35 D	36 D		
Potassium	mg/L	T	--	9.9	11	11	11	10	9.9	12	12	11 D	9.6 D		
Sodium	mg/L	T	--	60	46	51	48	50	53	64	56 D	56 D	54 D		
Total Alkalinity	mg/L	T	--	410	340	350	320	290	320	340	410	440 D	340 D		

Notes:

ug/l - micrograms per liter.
 mg/l = milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:

- J The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-32									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/4/2023	2/8/2023	3/14/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023	2/12/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Field Parameters													
Conductivity	mS/cm	N	--	1.29	1.29	1.258	1.175	1.29	1.2	1.05	0.99	1.14	0.96
Dissolved Oxygen	mg/L	N	--	0.07	0.08	0.08	0.1	0.1	0.33	0.12	0.13	0.29	0.09
Oxidation Reduction Potential	mV	N	--	-184.5	-222.8	-184.7	-188.5	-199.5	-221.7	-209.8	-141.4	-186.3	138.7
pH	su	N	--	7.69	7.5	7.57	7.53	7.67	7.75	7.65	7.52	7.53	7.64
Temperature	deg c	N	--	10.2	8.3	6.6	6.3	7.4	11.1	13	15.9	14.9	7.0
Turbidity	NTU	N	--	0.02	0.02	2.17	0.02	0.02	0.02	0.02	0.02	0.02	4.52
Appendix III													
Boron	mg/L	T	4.0	3.8	3.0	3.0	2.9	2.6	3.1	3.9 J+	3.7	5.0 D	3.0 D
Calcium	mg/L	T	250	200	180	190	220	190	190	150 D	130 D	150 D	180 D
Chloride	mg/L	T	120	47	50	50	50	45	42	41 D	44 D	47 D	39 DJ+
Fluoride	mg/L	T	2.0	1.5	1.5	1.4	1.6	1.4	1.5	1.4 D	1.6 D	1.8 D	1.5 D
Sulfate (as SO4)	mg/L	T	250	100	110	54	170	190	140	48 D	17 D	17 D	83 D
Total Dissolved Solids	mg/L	T	950	790	700	730	770	800	790	600 D	550 D	640 D	680 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00067 J	< 0.00050 U	< 0.00050 U	0.00072 J	0.0014 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	0.00070
Arsenic	mg/L	T	0.010	0.00061	0.00045 J	0.00052 J	0.00047 J	0.00044 J	0.00055	0.00058 J+	0.00062	0.00058	0.0024
Barium	mg/L	T	1.3	0.62	0.60	0.57	0.41	0.29	0.34	0.37	0.41	0.85	0.059
Beryllium	mg/L	T	0.0040	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	0.00070 J
Cadmium	mg/L	T	0.0025	< 0.00032 U	< 0.00032 U	< 0.00032 U	< 0.00032 U	< 0.00032 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	0.00019 J
Chromium, Total	mg/L	T	0.10	0.00046	0.00065	0.00057	0.00055	0.00039	0.00038	0.00032	0.00031	0.00031	0.0030
Cobalt	mg/L	T	0.0060	0.00034 J	0.00036 J	0.00039 J	0.00041 J	0.00031 J	0.00037 J	0.00068 J+	0.00058	0.00038 J	0.0019
Fluoride	mg/L	T	2.0	1.5	1.5	1.4	1.6	1.4	1.5	1.4 D	1.6 D	1.8 D	1.5 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00012 J	0.00014 J+	< 0.00010 U	< 0.0001 U	0.00038 J
Lithium	mg/L	T	0.10	0.15	0.14	0.12	0.11	0.094	0.10	0.13 D	0.14	0.19 D	0.10 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0051	0.0043	0.0038	0.0032	0.0034	0.0045	0.0047 J+	0.0046	0.0045	0.0073
Radium 226 and 228	pCi/L	T	5.0	0.614	< 0.497 U	< 0.601 U	< 0.732 U	0.877	0.847	< 0.607 U	0.985	< 0.589 U	< 0.53 U
Radium-226	pCi/L	T	--	< 0.184 U	0.219	0.152	< 0.195 U	< 0.164 U	0.206	< 0.0916 U	0.403 J+	< 0.18 U	< 0.156 U
Radium-228	pCi/L	T	--	0.492	< 0.497 U	< 0.601 U	< 0.732 U	0.773	0.641	< 0.607 U	< 0.848 U	< 0.589 U	< 0.53 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	0.0010
Thallium	mg/L	T	0.0020	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U
Total Suspended Solids	mg/L	T	--	42	43	39	40	39	31	29 D	11	23	32 D
Michigan CCR Part 115													
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00020 J	< 0.00020 U	< 0.00020 U	0.00041	0.016
Iron	mg/L	T	83	20	18	18	19	18	17	15	11	11 D	17 D
Nickel	mg/L	T	0.10	0.0013	0.0016	0.0012	0.0012	0.00096 J	0.00088 J	0.0012	0.00086 J	0.00077 J	0.023
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.031	0.0022	0.0026	0.0025	0.030	0.0037	0.0026	0.0030	0.0035	0.0049
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	560	490	500	450	440	430	440	440	520 D	440 D
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	38	34	35	37	34	34	28	28 D	30 D	32 D
Potassium	mg/L	T	--	13	13	12	11	9.8	9.7	12	13	13 D	9.1 D
Sodium	mg/L	T	--	36	29	29	30	27	30	33	32 D	35 D	30 D
Total Alkalinity	mg/L	T	--	560	490	500	450	440	430	440	440	520 D	440 D

Notes:

ug/l - micrograms per liter.
 mg/l = milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:

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 J- Same as J, and the reported concentration is potentially biased low.
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-33									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				12/1/2022	1/5/2023	2/8/2023	3/15/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023	2/12/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	1.1	0.99	0.949	0.859	0.91	0.92	0.901	0.98	1.0	0.78
Dissolved Oxygen	mg/L	N	--	0.81	1.02	0.75	0.2	0.23	0.06	0.05	0.01	0.02	0.4
Oxidation Reduction Potential	mV	N	--	-28.5	-72.8	-61.2	-37.4	-63.6	-86.2	-106.6	-121.9	-107.1	-11.1
pH	su	N	--	7.12	6.49	7.14	6.96	7.04	7.02	7.03	6.98	6.86	7.27
Temperature	deg c	N	--	8.3	4.8	2.4	3.6	8.8	10.7	13.7	17.2	15.8	7.1
Turbidity	NTU	N	--	0.02	0.02	1.17	0.02	3.44	0.55	0.02	1.07	3.25	3.07
Appendix III													
Boron	mg/L	T	4.0	0.18	0.091	0.086	0.067	0.082	0.085	0.11 J+	0.12	0.16 D	0.078 D
Calcium	mg/L	T	250	200	170	170	190	150	160	150 D	150 D	180 D	150 D
Chloride	mg/L	T	120	58	51	50	39	27	17	20 D	23 D	45 D	35 DJ+
Fluoride	mg/L	T	2.0	0.29	0.24	0.21 J	0.23	0.28	0.25	0.26 D	0.27 D	0.24 D	0.27 D
Sulfate (as SO4)	mg/L	T	250	100	58	65	42	23	1.9 J	4.3 D	1.6 JD	69 D	20 D
Total Dissolved Solids	mg/L	T	950	750 J	630	680	590	580	600	600 D	570 D	690 D	550 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00098	0.00088	0.00079	0.00059	0.0012	0.00017 J	0.00020 J	0.00015 J	0.00048	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.0031	0.0014	0.0016	0.0017	0.0040	0.0038	0.0032 J+	0.0027	0.0027	0.0012
Barium	mg/L	T	1.3	0.084	0.086	0.092	0.076	0.073	0.095	0.088	0.098	0.090	0.44 D
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.00026 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	0.000049 J	0.00010 J	0.00014 J	0.00015 J	< 0.00016 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	0.00023 J	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.0021	0.0028	0.0029	0.0027	0.0029	0.0039	0.0050	0.0059	0.0029	0.019
Cobalt	mg/L	T	0.0060	0.00075	0.00049 J	0.00082	0.0017	0.0020 J	0.00083	0.00039 J+	0.00041 J	0.00053	0.0012
Fluoride	mg/L	T	2.0	0.29	0.24	0.21 J	0.23	0.28	0.25	0.26 D	0.27 D	0.24 D	0.27 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.0011 U	0.00026 J	0.00015 J+	0.00015 J	0.00037 J	0.0014 JD
Lithium	mg/L	T	0.10	0.0051	0.0069	0.0043	0.0047	0.0061	0.0052	< 0.0094 UD	0.0041	0.0054	0.0028
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 UJ	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0047	0.0037	0.0031	0.0031	0.0060 J	0.0026	0.00068 J+	0.00052 J	0.0032	0.00027 J
Radium 226 and 228	pCi/L	T	5.0	0.825	< 0.587 U	0.949	< 0.852 U	< 0.815 U	1.61	0.828	1.15	< 0.621 U	< 0.892 U
Radium-226	pCi/L	T	--	< 0.267 U	< 0.14 U	< 0.125 U	< 0.204 U	< 0.232 U	< 0.256 U	0.154	0.276 J+	< 0.282 UJ	< 0.162 U
Radium-228	pCi/L	T	--	0.794	< 0.587 U	0.833	< 0.852 U	< 0.815 U	1.48 J	< 0.768 U	0.875	< 0.621 UJ	< 0.892 U
Selenium	mg/L	T	0.0050	0.00089	0.00076	0.00055	0.00038 J	< 0.0011 U	0.00033 J	0.00033 J+	0.00029 J	0.00059	0.00054
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	2.0 J	5.0	10	1.0 J	9.0	17	21	22	10	6.0
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.0079	0.016	0.016	0.020	0.0067	0.0017	0.0011 B	0.00079	0.0032	0.00099
Iron	mg/L	T	83	1.2	2.5	2.8	2.5	4.6	7.7	8.7	4.4 D	1.1 D	0.0036
Nickel	mg/L	T	0.10	0.020	0.016	0.017	0.019	0.023	0.014	0.0081	0.0049	0.0077	0.0036
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.00011	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	0.00065 J	0.00079 J	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.0071	0.0036	0.0050	0.0053	0.012	0.0014	< 0.0012 U	< 0.0012 U	0.018	0.0035
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	460	430	400	390	440	480	440	480	420 D	330 D
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	22	19	18	17	16	18	16	16	19 D	16 D
Potassium	mg/L	T	--	3.8	5.4	4.6	4.1	4.0	4.1	4.4	5.1	4.9	3.4 D
Sodium	mg/L	T	--	38	25	24	26	22	22	23	22	30 D	25 D
Total Alkalinity	mg/L	T	--	460	430	400	390	440	480	440	480	420 D	330 D

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

- Qualifiers:**
- J The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
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 - J+ Same as J, and the reported concentration is potentially biased high.
 - J- Same as J, and the reported concentration is potentially biased low.
 - UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 - R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 - D Dilution greater than 1, flagged by Trace.

Sample Location:				MW-34									
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring
Sample Date:				12/1/2022	1/5/2023	2/8/2023	3/15/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023	2/12/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters													
Conductivity	mS/cm	N	--	2.14	1.07	1.96	1.49	1.86	1.89	2.05	2.05	1.93	1.82
Dissolved Oxygen	mg/L	N	--	0.87	1.19	0.29	0.45	1.05	2.73	0.09	0.97	0.7	1.92
Oxidation Reduction Potential	mV	N	--	-120.5	-104.4	-119.7	-95	-63.4	-100.5	-113.8	-124.6	-163.1	-98.9
pH	su	N	--	6.65	7.66	6.78	6.68	6.53	6.6	6.75	6.69	6.62	6.63
Temperature	deg c	N	--	12.9	4.9	9.4	7.8	8	10.3	12.4	14.6	14.8	9.8
Turbidity	NTU	N	--	4.96	0.02	5.58	2.11	5.87	0.02	0.02	3.15	1.77	4.76
Appendix III													
Boron	mg/L	T	4.0	3.2	2.7	1.9 B	1.8	1.6	2.5	4.0 J+	3.6	4.1 D	1.9 D
Calcium	mg/L	T	250	220	190	220	210	210	210	220 D	190 D	220 D	210 D
Chloride	mg/L	T	120	33	27	24	23	23	22	23 D	24 D	25 D	20 D3+
Fluoride	mg/L	T	2.0	0.35	0.20	0.23	0.24	0.21	0.23	0.26 D	0.29 D	0.28 D	0.21 D
Sulfate (as SO4)	mg/L	T	250	2.5 J	1.9 J	< 0.41 U	0.87 J	0.56 J	< 0.41 U	< 0.41 UD	< 0.41 UD	< 0.41 UD	< 0.41 UD
Total Dissolved Solids	mg/L	T	950	820	750	800	790	700	760	820 D	770 D	800 D	730 D
Appendix IV													
Antimony	mg/L	T	0.0060	0.00023 J	0.00011 J	0.000095 J	0.00013 J	0.00091 J	0.00010 J	0.00016 J	0.00015 J	0.00014 J	< 0.00050 UD
Arsenic	mg/L	T	0.010	0.0016	0.0010	0.00088	0.00090	0.00089 J	0.0010	0.0013 J+	0.0012	0.0013	0.00017 J-
Barium	mg/L	T	1.3	0.54	0.54	0.58	0.50	0.17	0.49	0.53	0.49	0.52	0.066 D-
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.00026 U	0.000059 J	< 0.000052 UJ	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	0.000036 J	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Chromium, Total	mg/L	T	0.10	0.024	0.022	0.025	0.029	< 0.00088 U	0.027	0.034	0.028	0.019	0.0050 J+
Cobalt	mg/L	T	0.0060	0.0015	0.0013	0.0013	0.0013	< 0.00050 U	0.0014	0.0018 J+	0.0016	0.0013	0.00061
Fluoride	mg/L	T	2.0	0.35	0.20	0.23	0.24	0.21	0.23	0.26 D	0.29 D	0.28 D	0.21 D
Lead	mg/L	T	0.0040	0.0069	0.0016	0.00059	0.00094	< 0.0011 U	0.00074	0.00087 J+	0.00091	0.00063	0.00050 UJ
Lithium	mg/L	T	0.10	0.077	0.086	0.053	0.012	0.046	0.065	0.088 D	0.10	0.099 D	0.043 D
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0018	0.00081 J	< 0.00062 U	< 0.00062 U	0.0079	0.0018	0.00030 J+	< 0.00025 U	< 0.00025 U	0.00025 UJ
Radium 226 and 228	pCi/L	T	5.0	2.02	1.15	1.28	1.34	1.99	1.81	2.79	1.24	2.4	1.86 J+
Radium-226	pCi/L	T	--	0.57	0.534	0.654	0.558	0.396	0.561	0.357	0.637 J+	0.699	0.527
Radium-228	pCi/L	T	--	1.45	< 0.849 U	< 0.918 U	0.78	1.59	1.25 J	2.44	< 0.862 U	1.7	1.33 J+
Selenium	mg/L	T	0.0050	0.00034 J	0.00025 J	0.00027 J	0.00023 J	< 0.0011 U	0.00029 J	0.00030 J+	0.00027 J	0.00031 J	0.00039 J-
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	110	52	83	44	160	160	170 D	130	150	120
Michigan CCR Part 115													
Copper	mg/L	T	0.021	0.0034	0.00075	0.00033	0.0085	< 0.0010 U	0.00069	0.00045 B	0.00043	0.00045	0.00024 J
Iron	mg/L	T	83	73	70	83	78	75	77	77	64 D	70 D	72 D
Nickel	mg/L	T	0.10	0.0016	0.0013	0.0012	0.0013	< 0.0032 U	0.0016	0.0020	0.0018	0.0015	0.00089 J
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.0031 U	0.00065 J	0.00069 J	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.031	0.0019	0.0023	0.0023	0.020	0.0015	0.0018	0.0017	0.0021	0.0012 UJ
Additional Parameters													
Bicarbonate Alkalinity	mg/L	T	--	1100	950	920	890	880	950	970 D	970	1000 D	830 D
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD
Magnesium	mg/L	T	--	30	23	22	21	20	24	27	26 D	29 D	23 D
Potassium	mg/L	T	--	11	13	9.5	8.5	8.4	8.9	12	13	13 D	8.8 D
Sodium	mg/L	T	--	34	30	28	22	23	30	38	33 D	38 D	26 D
Total Alkalinity	mg/L	T	--	1100	950	920	890	880	950	970 D	970	1000 D	830 D

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

- Qualifiers:**
- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
 - J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 - J+ Same as J, and the reported concentration is potentially biased high.
 - J- Same as J, and the reported concentration is potentially biased low.
 - UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 - R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 - D Dilution greater than 1, flagged by Trace.

Sample Location:				SG-02								Initial Assessment Monitoring		Assessment Monitoring	
Compliance Phase:				Background Monitoring											
Sample Date:				12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample		
Unit:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
Sample Matrix:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Field Parameters															
Conductivity	mS/cm	N	--	1.42	1.0	--	0.898	0.93	1.03	1.56	1.66	1.47	0.84		
Dissolved Oxygen	mg/L	N	--	5.28	9.57	--	4.27	10.32	7.83	8.9	9.54	8.29	14.38		
Oxidation Reduction Potential	mV	N	--	147.3	-25.2	--	131.1	13.3	16.1	25.6	69.3	-44.9	135.6		
pH	su	N	--	8.02	8.38	--	8	8.23	9.14	8.52	8.7	8.15	8.01		
Temperature	deg c	N	--	2.8	3.5	--	2.7	8.9	26.6	26.2	29.6	17.5	3.6		
Turbidity	NTU	N	--	1.62	0.02	--	1.2	2.41	6.62	4.2	3.26	6.09	0.46		
Appendix III															
Boron	mg/L	T	4.0	4.0	2.2	--	2.1	2.0	2.8	5.6 J+	6.9	7.0 D	3.5 D		
Calcium	mg/L	T	250	210	140	--	140	130	150	210 D	170 D	180 D	140 D		
Chloride	mg/L	T	120	75	46	--	41	37	40	86 D	120 D	99 D	52 D		
Fluoride	mg/L	T	2.0	2.6	1.9	--	2.3	2.6	3.3	4.6 D	5.1 D	3.6 D	2.2 D		
Sulfate (as SO4)	mg/L	T	250	620	360	--	350	400	430	620 D	640 D	530 D	380 D		
Total Dissolved Solids	mg/L	T	950	1100	660	--	580	680	740	1200 D	1400 D	1100	690 D		
Appendix IV															
Antimony	mg/L	T	0.0060	0.00051	0.00043	--	0.00066	0.00058 J	0.0012	0.00085	0.0011	0.00061	0.00038		
Arsenic	mg/L	T	0.010	0.0019	0.0012	--	0.0018	0.0017 J	0.0032	0.0037	0.0091	0.0023	0.0012		
Barium	mg/L	T	1.3	0.049	0.033	--	0.034	0.22	0.080	0.13	0.11	0.060	0.037		
Beryllium	mg/L	T	0.0040	0.000060 J	< 0.000052 U	--	< 0.000052 U	< 0.00027 U	< 0.000052 U	0.00029	0.00014 J	< 0.000052 U	< 0.000052 U		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00017 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.00038	0.00024 J	--	0.00057	< 0.00091 U	0.00046	0.00091	0.00080	0.00036	0.00025		
Cobalt	mg/L	T	0.0060	0.00021 J	0.00022 J	--	0.00028 J	< 0.00052 U	0.00035 J	0.00040 J	0.00057	0.00015 J	0.00012 J		
Fluoride	mg/L	T	2.0	2.6	1.9	--	2.3	2.6	3.3	4.6 D	5.1 D	3.6 D	2.2 D		
Lead	mg/L	T	0.0040	0.0013	0.00081	--	0.0012	0.0020 J	0.0011	0.00050 J	0.0012	0.00064	0.00061		
Lithium	mg/L	T	0.10	0.046	0.032	--	0.035	0.038	0.053	0.067	0.085	0.058	0.042 D		
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00022	0.00016 U		
Molybdenum	mg/L	T	0.10	0.0069	0.0060	--	0.011	0.0062 J	0.016	0.0072	0.012	0.0081	0.0069		
Radium 226 and 228	pCi/L	T	5.0	< 0.342 U	0.712 J+	--	< 0.551 U	1.42	1.49	1.44	1.28	< 0.532 U	< 1.0 U		
Radium-226	pCi/L	T	--	0.151	< 0.121 U	--	< 0.177 U	0.266	0.229	0.456	0.329	< 0.265 U	< 0.18 U		
Radium-228	pCi/L	T	--	< 0.342 U	0.627 J+	--	< 0.551 U	1.15	1.26	0.981	0.954	< 0.532 U	< 1.0 U		
Selenium	mg/L	T	0.0050	0.00073	0.00059	--	0.0010	< 0.0011 U	0.0013	0.0013	0.0014	0.0008	0.0018		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00039 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Total Suspended Solids	mg/L	T	--	< 4.0 U	3.0 J	--	1.0 J	0.99 J	1.0 J	30	14	< 3.9 UD	< 4.0 U		
Michigan CCR Part 115															
Copper	mg/L	T	0.021	0.0010	0.00085	--	0.011	0.0011 J	0.0014	0.0012	0.0010	0.00047	0.00089		
Iron	mg/L	T	83	0.20	0.15	--	0.20	0.23	0.16	0.27	0.48	0.28	0.14		
Nickel	mg/L	T	0.10	0.0023	0.0020	--	0.0023	< 0.0034 U	0.0027	0.0036	0.0040	0.0034	0.0020		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	--	< 0.000050 U	< 0.00026 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U		
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	--	< 0.00062 U	< 0.0032 U	0.0019	0.0014	0.0052	0.00072 J	< 0.00062 U		
Zinc	mg/L	T	0.27	0.0041	0.0031	--	0.0029	0.029	0.0014	0.0024	0.0028	0.0050	0.0013		
Additional Parameters															
Bicarbonate Alkalinity	mg/L	T	--	96	76	--	62	71	35	73	65	130 D	93		
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	19	< 0.31 UD	< 0.16 U		
Magnesium	mg/L	T	--	48	31	--	28	28	33	53	63 D	57 D	37 D		
Potassium	mg/L	T	--	13	9.1	--	8.0	7.3	6.8	18	21 D	16 D	9.1 D		
Sodium	mg/L	T	--	40	24	--	22	21	27	52	62 D	58 D	31 D		
Total Alkalinity	mg/L	T	--	96	76	--	62	71	35	73	83	130 D	93		

Notes:

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

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- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:

Background Monitoring

SC-03

Compliance Phase:

Sample Date:

Sample Type:

Unit:

Groundwater Protection Standard

Field Parameters	Constituent	Unit	Fraction	Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Conductivity	ms/cm	N	T		1.45	1.0	--	0.896	1.15	1.05	1.53	1.56	1.49	1.84	1.48	1.49	1.48	1.48
Dissolved Oxygen	mg/L	N	T		5.23	9.58	--	3.98	9.77	7.37	8.71	9.56	8.26	8.36	8.26	8.26	8.26	8.26
Oxidation Reduction Potential	mV	N	T		138.3	-32.4	--	-50.1	8	10	17	71.4	-42.1	135.5	135.5	135.5	135.5	135.5
pH	deg c	N	T		8	8.42	--	7.82	6.24	8.91	8.63	8.67	8.14	8.03	8.03	8.03	8.03	8.03
Temperature	deg c	N	T		2	3.3	--	0.9	8.3	28.6	25.9	29.5	17.7	3.6	3.6	3.6	3.6	3.6
Turbidity	NTU	N	T		1.2	0.36	--	0.02	4.45	38.1	5.36	4.27	5.56	0.44	0.44	0.44	0.44	0.44

Appendix III

Boron	mg/L	T			3.9	2.0	--	2.1	2.0	2.9	5.81+	7.5	6.9 D	3.4 D	3.4 D	3.4 D	3.4 D	3.4 D
Calcium	mg/L	T			250	120	--	150	140	160	220 D	180 D	180 D	180 D	180 D	180 D	180 D	180 D
Chloride	mg/L	T			120	42	--	43	27	41	86 D	120 D	100 D	53 D	53 D	53 D	53 D	53 D
Fluoride	mg/L	T			2.0	1.8	--	2.3	2.7	3.6	4.6 D	5.0 D	3.6 D	2.2 D	2.2 D	2.2 D	2.2 D	2.2 D
Sulfate (as SO4)	mg/L	T			250	350	--	350	400	450	620 D	640 D	590 D	370 D	370 D	370 D	370 D	370 D
Total Dissolved Solids	mg/L	T			990	480	--	630	660	740	1200 D	1400 D	1100	1400 D	1400 D	1400 D	1400 D	1400 D
Boron	mg/L	D			4.0	--	--	--	--	2.7	--	--	--	--	--	--	--	--
Calcium	mg/L	D			250	--	--	--	--	150	--	--	--	--	--	--	--	--

Appendix IV

Antimony	mg/L	T			0.0060	0.00049	--	0.00067	0.0010 J	0.0013	0.00088	0.0012	0.00063	0.00050	0.00050	0.00050	0.00050	0.00050
Arsenic	mg/L	T			0.010	0.0018	--	0.0020	0.0016 J	0.0041	0.0040	0.0094	0.0024	0.0024	0.0024	0.0024	0.0024	0.0024
Barium	mg/L	T			1.3	0.98	--	0.96	0.027	0.097	0.13	0.13	0.61	0.98	0.98	0.98	0.98	0.98
Beryllium	mg/L	T			0.0040	< 0.000052 U	--	0.00078 J	< 0.00016 U	0.00056	0.00040	0.00091 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T			0.0025	< 0.000032 U	--	0.00038 J	< 0.00016 U	< 0.00075 U	< 0.00040 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T			0.10	0.0043	--	0.0092	< 0.00088 U	0.0025	0.0012	0.0012	0.00069	0.00032	0.00032	0.00032	0.00032	0.00032
Cobalt	mg/L	T			0.0060	0.00017 J	--	0.00033 J	< 0.00030 J	0.00058	0.00055	0.00055	0.0003 J	0.00011 J	0.00011 J	0.00011 J	0.00011 J	0.00011 J
Fluoride	mg/L	T			2.0	2.5	--	2.5	2.7	3.6	4.6 D	5.0 D	3.6 D	2.2 D	2.2 D	2.2 D	2.2 D	2.2 D
Lithium	mg/L	T			0.10	0.0012	--	0.0020	< 0.0011 U	0.0033	0.00076	0.00091	0.00066	0.00059	0.00059	0.00059	0.00059	0.00059
Mercury	mg/L	T			0.0013	0.0016	--	0.0056	0.0037	0.051	0.067	0.090	0.059	0.031 D	0.031 D	0.031 D	0.031 D	0.031 D
Molybdenum	mg/L	T			0.10	0.0066	--	0.010	0.0097	0.020	0.0069	0.013	0.0083	0.0066	0.0066	0.0066	0.0066	0.0066
Radium 226 and 228	pg/L	T			5.0	< 0.443 U	--	< 0.531 U	1.01	< 0.658 U	< 0.653 U	< 0.842 U	< 0.58 U	< 0.661 U	< 0.661 U	< 0.661 U	< 0.661 U	< 0.661 U
Radium 226	pg/L	T			--	0.14	--	< 0.193 U	1.21	0.199	0.363	0.253	< 0.236 U	< 0.139 U	< 0.139 U	< 0.139 U	< 0.139 U	< 0.139 U
Radium 228	pg/L	T			--	0.129	--	< 0.193 U	1.21	0.199	0.363	0.253	< 0.236 U	< 0.139 U	< 0.139 U	< 0.139 U	< 0.139 U	< 0.139 U
Selenium	mg/L	T			0.0050	0.00070	--	0.0010	0.0021 J	0.0018	0.0012	0.0016	0.00081	0.0018	0.0018	0.0018	0.0018	0.0018
Thallium	mg/L	T			0.0020	< 0.000075 U	--	< 0.000075 U	< 0.00038 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U	< 0.00075 U
Total Suspended Solids	mg/L	T			9.0	1.0 J	--	6.0	3.0 J	33	34	16	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U
Antimony	mg/L	D			0.0060	--	--	--	--	< 0.00038 U	--	--	--	--	--	--	--	--
Arsenic	mg/L	D			0.010	--	--	--	--	0.0035	--	--	--	--	--	--	--	--
Barium	mg/L	D			1.3	--	--	--	--	0.073	--	--	--	--	--	--	--	--
Beryllium	mg/L	D			0.0040	--	--	--	--	< 0.00078 U	--	--	--	--	--	--	--	--
Cadmium	mg/L	D			0.0025	--	--	--	--	< 0.00018 U	--	--	--	--	--	--	--	--
Chromium, Total	mg/L	D			0.10	--	--	--	--	< 0.00012 U	--	--	--	--	--	--	--	--
Cobalt	mg/L	D			0.0060	--	--	--	--	< 0.00028 U	--	--	--	--	--	--	--	--
Fluoride	mg/L	D			2.0	--	--	--	--	0.0099	--	--	--	--	--	--	--	--
Lithium	mg/L	D			0.10	--	--	--	--	0.039	--	--	--	--	--	--	--	--
Molybdenum	mg/L	D			0.10	--	--	--	--	0.018	--	--	--	--	--	--	--	--
Selenium	mg/L	D			0.0050	--	--	--	--	0.0020	--	--	--	--	--	--	--	--
Thallium	mg/L	D			0.0020	--	--	--	--	< 0.00015 U	--	--	--	--	--	--	--	--

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Copper	mg/L	T			0.021	0.00093	--	0.016	< 0.0010 U	0.0030	0.0013	0.0010	0.00051	0.00083	0.00083	0.00083	0.00083	0.00083
Iron	mg/L	T			83	0.18	--	0.35	0.20	0.66	0.31	0.48	0.29	0.13	0.13	0.13	0.13	0.13
Nickel	mg/L	T			0.10	0.0022	--	0.0026	0.0032 J	0.0039	0.0036	0.0039	0.0035	0.0019	0.0019	0.0019	0.0019	0.0019
Silver	mg/L	T			0.0020	< 0.000050 U	--	< 0.00092 U	< 0.00025 U	< 0.00050 U	< 0.00050 U	< 0.00050 U	< 0.00050 U	< 0.00050 U	< 0.00050 U	< 0.00050 U	< 0.00050 U	< 0.00050 U
Vanadium	mg/L	T			0.027	< 0.00062 U	--	0.0092 J	< 0.0031 U	0.0049	0.0020	0.0053	0.0007 J	0.00062 U	0.00062 U	0.00062 U	0.00062 U	0.00062 U
Zinc	mg/L	T			0.27	0.0042	--	0.0047	< 0.00099 U	0.0060	0.0029	0.0024	0.00099	0.0012	0.0012	0.0012	0.0012	0.0012
Copper	mg/L	D			0.021	--	--	--	--	< 0.00012 U	--	--	--	--	--	--	--	--
Iron	mg/L	D			83	--	--	--	--	0.10	--	--	--	--	--	--	--	--
Nickel	mg/L	D			0.10	--	--	--	--	< 0.00018 U	--	--	--	--	--	--	--	--
Silver	mg/L	D			0.0020	--	--	--	--	< 0.000038 U	--	--	--	--	--	--	--	--
Vanadium	mg/L	D			0.027	--	--	--	--	< 0.00024 U	--	--	--	--	--	--	--	--
Zinc	mg/L	D			0.27	--	--	--	--	< 0.00017 U	--	--	--	--	--	--	--	--

Additional Parameters

Bicarbonate Alkalinity	mg/L	T			110	71	--	73	71	41	73	69	130 D	92	92	92	92	92
Carbonate Alkalinity	mg/L	T			< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	16	< 0.31 UD	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U
Potassium	mg/L	T			47	26	--	8.3	29	37	56	67 D	57 D	35 D	35 D	35 D	35 D	35 D
Sodium	mg/L	T			13	8.1	--	3.0	7.2	7.1	19	22 D	17 D	8.7 D	8.7 D	8.7 D	8.7 D	8.7 D
Total Alkalinity	mg/L	T			38	20	--	23	21	28	57	66 D	58 D	30 D	30 D	30 D	30 D	30 D
Total Alkalinity	mg/L	D			110	71	--	73	71	41	73	85	120 D	92	92	92	92	92
Magnesium	mg/L	D			--	--	--	--	--	34	--	--	--	--	--	--	--	--
Potassium	mg/L	D			--	--	--	--	--	6.7	--	--	--	--	--	--	--	--
Sodium	mg/L	D			--	--	--	--	--	35	--	--	--	--	--	--	--	--

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- Pd/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.
- Qualifiers:**
- U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J - The analyte was positive/identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain OC criteria were not met)
- + - Same as J, and the reported concentration is potentially biased high.
- - Same as J, and the reported concentration is potentially biased low.
- U - The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.

Sample Location:				SG-04R											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring		Assessment Monitoring	
Sample Date:				12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	10/24/2023		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample		
Unit:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
Sample Matrix:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
Field Parameters															
Conductivity	mS/cm	N	--	1.0	1.64	--	1.404	1.96	1.79	2.56	2.56	2.12	1.41		
Dissolved Oxygen	mg/L	N	--	6.42	9.64	--	10.26	10.46	7.17	6.62	8.21	8.36	11.92		
Oxidation Reduction Potential	mV	N	--	125.3	-34.8	--	-34	91.5	29.9	368	58.7	-33.8	155.6		
pH	su	N	--	8.03	8.44	--	8.05	8.21	8.3	8.24	8.68	8.36	7.2		
Temperature	deg c	N	--	3.3	4	--	5.9	8.2	25.6	25.9	23.8	17.1	2.7		
Turbidity	NTU	N	--	7.25	1.1	--	3.22	1.04	5.27	10.6	2.28	5.92	8.1		
Appendix III															
Boron	mg/L	T	4.0	3.0	2.1	--	2.6	2.4	3.2	5.0 J+	5.4	5.4 D	4.5 D		
Calcium	mg/L	T	250	430	300	--	370	310	390	600 D	580 DE	500 D	340 D		
Chloride	mg/L	T	120	27	22	--	21	20	22	33 D	38 D	35 D	23 D		
Fluoride	mg/L	T	2.0	2.6	2.0	--	2.3	2.7	3.5	5.0 D	5.3 D	3.7 D	2.3 D		
Sulfate (as SO4)	mg/L	T	250	1200	890	--	750	880	1000	1600 D	1800 D	820 D	890 D		
Total Dissolved Solids	mg/L	T	950	1800	1200	--	1200	1400	1600	2500 D	2700 D	2200	1400 D		
Appendix IV															
Antimony	mg/L	T	0.0060	0.00059	0.00052	--	0.00069	0.0011 J	0.00064 J	0.0013 D	0.0011	0.00089	< 0.00050 UD		
Arsenic	mg/L	T	0.010	0.00099	0.00091	--	0.0016	0.0026 J	0.0012	0.0043	0.0058	0.0017	0.0019		
Barium	mg/L	T	1.3	0.022	0.019	--	0.023	0.040	0.039	0.040 D	0.029	0.029	0.027 D		
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	--	< 0.000052 U	< 0.00026 U	< 0.000052 U	0.00012 J	0.000066 J	< 0.000052 U	0.000057 J		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 UD		
Chromium, Total	mg/L	T	0.10	0.00019 J	0.00028	--	0.00035	< 0.00088 U	0.00040	0.0010	0.00028	0.00063	0.00060		
Cobalt	mg/L	T	0.0060	0.00024 J	0.00028 J	--	0.00037 J	< 0.00050 U	0.00032 J	0.0011	0.00083	0.00063	0.00029 J		
Fluoride	mg/L	T	2.0	2.6	2.0	--	2.3	2.7	3.5	5.0 D	5.3 D	3.7 D	2.3 D		
Lead	mg/L	T	0.0040	0.00033 J	0.00027 J	--	0.00047 J	0.0011 J	0.0013 J	0.0025 JD	0.00054 JD	0.00022 J	0.0015 JD		
Lithium	mg/L	T	0.10	0.044	0.039	--	0.0089	0.043	0.056	0.072	0.084	0.064	0.049 D		
Mercury	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0078	0.0066	--	0.0073	0.010	0.0072	0.013	0.016	0.016	0.0091		
Radium 226 and 228	pCi/L	T	5.0	< 0.408 U	< 0.497 U	--	< 0.672 U	< 0.809 U	< 0.803 U	1.82	< 0.788 U	< 0.641 U	0.651		
Radium-226	pCi/L	T	--	< 0.11 U	< 0.109 U	--	< 0.167 U	< 0.213 U	0.264	0.233	< 0.133 U	< 0.2 U	0.186		
Radium-228	pCi/L	T	--	< 0.408 U	< 0.497 U	--	< 0.672 U	< 0.809 U	< 0.803 U	1.59	< 0.788 U	< 0.641 U	< 0.639 U		
Selenium	mg/L	T	0.0050	0.0015	0.0014	--	0.0016	0.0013 J	0.0012	0.0023	0.0028	0.0024	0.0023		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 UD	< 0.00038 UD	< 0.000075 U	< 0.00038 UD		
Total Suspended Solids	mg/L	T	--	5.0	< 4.0 U	--	3.0 J	1.0 J	5.0	23	9.0	< 4.0 U	14		
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Copper	mg/L	T	0.021	0.00047	0.00048	--	0.012	0.0012	0.00056	0.0018	0.00071	0.00086	0.0013		
Iron	mg/L	T	83	0.055	0.11	--	0.11	0.13	0.19	0.31	0.089	0.05	0.36 D		
Nickel	mg/L	T	0.10	0.0025	0.0028	--	0.0027	< 0.0032 U	0.0022	0.0055	0.0041	0.0035	0.0037		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	--	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD		
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	--	< 0.00062 U	< 0.0031 U	0.00094 J	0.0041	0.0065	< 0.00062 U	0.00097 J		
Zinc	mg/L	T	0.27	0.0037	0.0023	--	0.0033	0.0061 J	0.0012	0.0070	0.0019	0.0086	0.0062		
Additional Parameters															
Bicarbonate Alkalinity	mg/L	T	--	110	87	--	98	100	62	50	30	61 D	100		
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	13	< 0.31 UD	< 0.16 U		
Magnesium	mg/L	T	--	41	30	--	33	29	35	53	62 D	57 D	44 D		
Potassium	mg/L	T	--	15	10	--	9.8	9.1	10	17	21	12 D	9.1 D		
Sodium	mg/L	T	--	24	20	--	21	19	22	39	40 D	34 D	26 D		
Total Alkalinity	mg/L	T	--	110	87	--	98	100	62	50	43	61 D	100		

Notes:

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

- Qualifiers:**
- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
 - J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 - J+ Same as J, and the reported concentration is potentially biased high.
 - J- Same as J, and the reported concentration is potentially biased low.
 - UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 - R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 - D Dilution greater than 1, flagged by Trace.

Sample Location:

SG-05

Compliance Phase: Background Monitoring

Initial Assessment Monitoring

Sample Date:	12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024
Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Sample Matrix:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Protection	Standard	Result	Result	Result	Result	Result	Result

Field Parameters	Unit	Fraction	Protection	Standard	Result	Result	Result	Result	Result	Result	Result	Result	
Conductivity	µS/cm	N	--		0.731	0.98	--	0.742	1.11	0.75	0.61	0.359	0.91
Dissolved Oxygen	mg/L	N	--		6.85	13.1	--	15.74	6.77	7.83	11.25	11.39	0.59
Oxidation Reduction Potential	mV	N	--		-4.6	-44.6	--	6.4	18.3	16.3	153.3	39.2	-28.7
pH	su	N	--		7.44	8.02	--	8.28	7.88	8.31	6.73	9.19	7.67
Temperature	deg C	N	--		4.1	4	--	9.8	7.6	27.8	23.4	28.9	19.5
Turbidity	NTU	N	--		9.38	8.02	--	9.83	26.6	6.8	7.84	4.36	29.3

Appendix III

Boron	mg/L	T	4.0	0.59	0.60	--	0.48	0.57	0.36	0.46 J+	0.39	0.72 D	0.45 D
Calcium	mg/L	T	250	140	120	--	120	120	81	34	34	120 D	130 D
Chloride	mg/L	T	120	79	51	--	61	50	54	64 D	29 D	54 D	54 D
Fluoride	mg/L	T	2.0	0.73	0.98	--	0.94	0.69	0.30	0.42 D	0.45 D	0.29 D	0.68 D
Sulfate (as SO4)	mg/L	T	250	8.4 J	150	--	38 J	110	43	38 D	110	12 D	7.2 D
Total Dissolved Solids	mg/L	T	950	620	630	--	460	570	400	320 D	210 D	510 D	520 D
Calcium	mg/L	D	4.0	--	--	--	0.88	--	--	--	--	--	--
Calcium	mg/L	D	250	--	--	--	120	--	--	--	--	--	--

Appendix IV

Antimony	mg/L	T	0.0060	0.00018 J	0.000093 J	--	0.00030	0.0010 J	0.00029	0.0010	0.00044	0.00016 J	0.00011 J
Arsenic	mg/L	T	0.10	0.00094	0.00056	--	0.00071	0.0026 J	0.0017	0.0024	0.0013	0.00088	0.0010
Barium	mg/L	T	1.3	0.58	0.23	--	0.35	0.039	0.20	0.11	0.16	0.51	0.50
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	--	< 0.000052 U	< 0.00016 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00016 U	< 0.000075 U	0.00011 J	0.00075	0.00094 J	0.00041
Chromium, Total	mg/L	T	0.10	0.00096	0.00024 J	--	0.00048	< 0.00088 U	0.00035	0.00049	0.0017	0.00099	0.0020
Cobalt	mg/L	T	0.0060	0.00037 J	0.00025 J	--	0.00029 J	< 0.00050 U	0.00023 J	0.00032 J	0.00033 J	0.00027 J	0.00046 J
Fluoride	mg/L	T	2.0	0.73	0.98	--	0.94	0.69	0.30	0.42 D	0.45 D	0.29 D	0.68 D
Lead	mg/L	T	0.0040	0.00023 J	0.00038 J	--	0.00045 J	0.0012 J	0.0022	0.0040	0.0095	0.0031	0.011
Lithium	mg/L	T	0.10	0.038	0.033	--	0.0045	0.029	0.016	0.022	0.027	0.039	0.016 D
Magnesium	mg/L	T	0.0013	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00012 J	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.00077 J	0.0029	--	0.0013	0.0090	0.0083	0.0087	0.0015	0.00085 J	0.00058 J
Radium 226 and 228	mg/L	T	5.0	0.851	< 0.122 U	--	< 0.776 U	0.888	< 0.758 U	< 0.818 U	< 0.82 U	< 0.771 U	< 0.889 U
Radium 226	PC/L	T	5.0	0.308	< 0.122 U	--	< 0.188 U	0.306	< 0.219 U	< 0.154 U	< 0.147 U	< 0.286 U	0.216
Radium 228	PC/L	T	5.0	0.43	< 0.537 U	--	< 0.776 U	0.306	< 0.758 U	< 0.818 U	< 0.82 U	< 0.771 U	< 0.889 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	--	< 0.00022 U	0.0013 J	0.00022 J	0.00038 J	0.00027 J	0.00017 J	< 0.00054
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.000038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	5.0	7.9	7.9	--	8.0	17	6.0	14	73	12	120
Antimony	mg/L	D	0.0060	--	--	--	0.0004 J	--	--	--	--	--	--
Arsenic	mg/L	D	0.10	--	--	--	0.00053 J	--	--	--	--	--	--
Beryllium	mg/L	D	0.0040	--	--	--	< 0.00026 U	--	--	--	--	--	--
Cadmium	mg/L	D	0.0025	--	--	--	< 0.00016 U	--	--	--	--	--	--
Chromium, Total	mg/L	D	0.10	--	--	--	0.025	--	--	--	--	--	--
Cobalt	mg/L	D	0.0060	--	--	--	0.0012 J	--	--	--	--	--	--
Lead	mg/L	D	0.0040	--	--	--	< 0.0011 U	--	--	--	--	--	--
Lithium	mg/L	D	0.10	--	--	--	0.032	--	--	--	--	--	--
Mercury	mg/L	D	0.0013	--	--	--	< 0.00016 U	--	--	--	--	--	--
Molybdenum	mg/L	D	0.10	--	--	--	< 0.0031 U	--	--	--	--	--	--
Selenium	mg/L	D	0.0050	--	--	--	< 0.0011 U	--	--	--	--	--	--
Thallium	mg/L	D	0.0020	--	--	--	< 0.00038 U	--	--	--	--	--	--

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Copper	mg/L	T	0.021	0.00029	0.00036	--	0.0089	0.0011 J	0.00084	0.0028	0.0066	0.0012	0.0063
Iron	mg/L	T	83	3.0	1.5	--	2.7	3.2	1.1	0.74	1.1	2.9 D	7.2 D
Nickel	mg/L	T	0.10	0.0013	0.0015	--	0.0012	< 0.0032 U	0.0025	0.0034	0.0026	0.0012	0.0024
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	--	0.00053	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.027	< 0.00062 U	< 0.00062 U	--	0.0022	< 0.0031 U	0.0012	0.00069 J	0.00089 J	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.030	0.0018	--	0.0060 J	0.0024	0.0090	0.019	0.043	0.019	0.019
Copper	mg/L	D	0.021	--	--	--	< 0.0010 U	--	--	--	--	--	--
Iron	mg/L	D	83	--	--	--	0.12	--	--	--	--	--	--
Nickel	mg/L	D	0.10	--	--	--	< 0.0032 U	--	--	--	--	--	--
Silver	mg/L	D	0.00020	--	--	--	< 0.00025 U	--	--	--	--	--	--
Vanadium	mg/L	D	0.027	--	--	--	< 0.0031 U	--	--	--	--	--	--
Zinc	mg/L	D	0.27	--	--	--	0.043	--	--	--	--	--	--

Additional Parameters

Carbonate Alkalinity	mg/L	T	--	490	270	--	290	290	240	65	96	400 D	400
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	46	16	< 0.31 UD	< 0.16 U
Hardness	mg/L	T	--	27	23	--	26	26	25	21	12	24 D	26 D
Potassium	mg/L	T	--	8.1	6.5	--	7.9	6.8	4.3	0.31	0.79	8.5 D	7.9 D
Sodium	mg/L	T	--	43	30	--	38	34	37	44	21	40 D	43 D
Total Alkalinity	mg/L	T	--	490	270	--	290	290	240	110	110	400 D	400
Magnesium	mg/L	D	--	--	--	--	--	--	--	--	--	--	--
Potassium	mg/L	D	--	--	--	--	7.4	--	--	--	--	--	--
Sodium	mg/L	D	--	--	--	--	34	--	--	--	--	--	--

Notes:
 µg/L - micrograms per liter.
 mg/L - milligrams per liter.
 su - standard pH units (pH is a field parameter)
 PC/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.
Qualifiers:
 U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
 J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 + - Same as J, and the reported concentration is potentially biased high.
 - - Same as J, and the reported concentration is potentially biased low.
 U - The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 D - Dilution greater than 1, flagged by Trasa.

Sample Location:				SG-06									Initial Assessment Monitoring		Assessment Monitoring
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring		Assessment Monitoring	
Sample Date:				12/2/2022	1/5/2023	2/6/2023	3/13/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Sample Matrix:				Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Field Parameters															
Conductivity	mS/cm	N	--	--	--	--	--	--	--	--	--	0.69	0.74	--	
Dissolved Oxygen	mg/L	N	--	--	--	--	--	--	--	--	--	4.93	6.01	--	
Oxidation Reduction Potential	mV	N	--	--	--	--	--	--	--	--	--	60.2	-40.4	--	
pH	su	N	--	--	--	--	--	--	--	--	--	7.37	7.98	--	
Temperature	deg c	N	--	--	--	--	--	--	--	--	--	24.3	19.1	--	
Turbidity	NTU	N	--	--	--	--	--	--	--	--	--	7.35	4.89	--	
Appendix III															
Boron	mg/L	T	4.0	--	--	--	--	--	--	--	--	0.21	0.24 D	--	
Calcium	mg/L	T	250	--	--	--	--	--	--	--	--	69 D	82 D	--	
Chloride	mg/L	T	120	--	--	--	--	--	--	--	--	53 D	56 D	--	
Fluoride	mg/L	T	2.0	--	--	--	--	--	--	--	--	0.18 D	0.18 D	--	
Sulfate (as SO4)	mg/L	T	250	--	--	--	--	--	--	--	--	15 D	30 D	--	
Total Dissolved Solids	mg/L	T	950	--	--	--	--	--	--	--	--	380 D	410 D	--	
Appendix IV															
Antimony	mg/L	T	0.0060	--	--	--	--	--	--	--	--	< 0.00010 U	0.00014 J	--	
Arsenic	mg/L	T	0.010	--	--	--	--	--	--	--	--	0.0016	0.0016	--	
Barium	mg/L	T	1.3	--	--	--	--	--	--	--	--	0.10	0.092	--	
Beryllium	mg/L	T	0.0040	--	--	--	--	--	--	--	--	< 0.000052 U	< 0.000052 U	--	
Cadmium	mg/L	T	0.0013	--	--	--	--	--	--	--	--	< 0.000075 U	< 0.000075 U	--	
Chromium, Total	mg/L	T	0.10	--	--	--	--	--	--	--	--	0.00088	0.00044	--	
Cobalt	mg/L	T	0.0060	--	--	--	--	--	--	--	--	0.00019 J	0.00018 J	--	
Fluoride	mg/L	T	2.0	--	--	--	--	--	--	--	--	0.18 D	0.18 D	--	
Lead	mg/L	T	0.0040	--	--	--	--	--	--	--	--	0.00071	0.00053 J	--	
Lithium	mg/L	T	0.10	--	--	--	--	--	--	--	--	0.0061	0.0087	--	
Mercury	mg/L	T	0.0013	--	--	--	--	--	--	--	--	< 0.00016 U	0.0002	--	
Molybdenum	mg/L	T	0.10	--	--	--	--	--	--	--	--	0.00039 J	0.0034	--	
Radium 226 and 228	pCi/L	T	5.0	--	--	--	--	--	--	--	--	< 0.926 U	< 0.838 U	--	
Radium-226	pCi/L	T	--	--	--	--	--	--	--	--	--	< 0.16 U	< 0.288 U	--	
Radium-228	pCi/L	T	--	--	--	--	--	--	--	--	--	< 0.926 U	< 0.838 U	--	
Selenium	mg/L	T	0.0050	--	--	--	--	--	--	--	--	0.00015 J	0.00012 J	--	
Thallium	mg/L	T	0.0020	--	--	--	--	--	--	--	--	< 0.000075 U	< 0.000075 U	--	
Total Suspended Solids	mg/L	T	--	--	--	--	--	--	--	--	--	120	< 4.0 UD	--	
Michigan CCR Part 115															
Copper	mg/L	T	0.021	--	--	--	--	--	--	--	--	0.00089	0.00054	--	
Iron	mg/L	T	83	--	--	--	--	--	--	--	--	0.55	0.23	--	
Nickel	mg/L	T	0.10	--	--	--	--	--	--	--	--	0.00084 J	0.0011 J	--	
Silver	mg/L	T	0.00020	--	--	--	--	--	--	--	--	< 0.000050 U	< 0.00005 U	--	
Vanadium	mg/L	T	0.027	--	--	--	--	--	--	--	--	< 0.00062 U	< 0.00062 U	--	
Zinc	mg/L	T	0.27	--	--	--	--	--	--	--	--	0.0045	0.0080	--	
Additional Parameters															
Bicarbonate Alkalinity	mg/L	T	--	--	--	--	--	--	--	--	--	230	270 D	--	
Carbonate Alkalinity	mg/L	T	--	--	--	--	--	--	--	--	--	< 0.16 U	< 0.31 UD	--	
Magnesium	mg/L	T	--	--	--	--	--	--	--	--	--	21	25 D	--	
Potassium	mg/L	T	--	--	--	--	--	--	--	--	--	0.78	5 D	--	
Sodium	mg/L	T	--	--	--	--	--	--	--	--	--	29 D	35 D	--	
Total Alkalinity	mg/L	T	--	--	--	--	--	--	--	--	--	230	270 D	--	

Notes:

ug/l - micrograms per liter.
 mg/l - milligrams per liter.
 su - standard pH units (pH is a field parameter)
 pCi/L = picocuries per liter.
 All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
 J+ Same as J, and the reported concentration is potentially biased high.
 J- Same as J, and the reported concentration is potentially biased low.
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
 D Dilution greater than 1, flagged by Trace.

Appendix D

Laboratory Reports

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673



231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

April 02, 2024

Ms. Molly Reeves
HDR Michigan Inc.
1000 Oakbrook Dr., Suite 200
Ann Arbor, MI 48104

Phone: (734) 263-7138

RE: Trace Project 24B0629
Client Project City of Grand Haven - Harbor Island

Dear Ms. Reeves:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Mink".

Jon Mink
Senior Project Manager
Enclosures



Wisconsin Accreditation No. FID: 998044080 / TNI EL V1:2016

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Trace Analytical Laboratories, Inc.
 2241 Black Creek Road
 Muskegon, MI 49444-2673



231-773-5998 Phone
 888-979-4469 Fax
 www.trace-labs.com

SAMPLE SUMMARY

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
24B0629-01	MW-30	Ground Water	AB/TB	02/12/24 16:18	02/13/24 08:06
24B0629-02	MW-31	Ground Water	AB/TB	02/12/24 15:00	02/13/24 08:06
24B0629-03	MW-32	Ground Water	AB/TB	02/12/24 16:30	02/13/24 08:06
24B0629-04	MW-33	Ground Water	AB/TB	02/12/24 15:18	02/13/24 08:06
24B0629-05	MW-34	Ground Water	AB/TB	02/12/24 14:00	02/13/24 08:06
24B0629-06	MWT- 30	Ground Water	AB/TB	02/12/24 16:18	02/13/24 08:06
24B0629-07	MWT- 34	Ground Water	AB/TB	02/12/24 14:00	02/13/24 08:06
24B0629-08	MW-01R	Ground Water	AB/TB	02/13/24 14:35	02/14/24 12:30
24B0629-09	MW-02	Ground Water	AB/TB	02/13/24 12:15	02/14/24 12:30
24B0629-10	MW-03	Ground Water	AB/TB	02/14/24 09:40	02/14/24 12:30
24B0629-11	MW-04	Ground Water	AB/TB	02/14/24 08:32	02/14/24 12:30
24B0629-12	MW-06	Ground Water	AB/TB	02/13/24 12:43	02/14/24 12:30
24B0629-13	MW-07	Ground Water	AB/TB	02/13/24 15:35	02/14/24 12:30
24B0629-14	MW-08	Ground Water	AB/TB	02/13/24 10:22	02/14/24 12:30
24B0629-15	MW-09	Ground Water	AB/TB	02/13/24 11:20	02/14/24 12:30
24B0629-16	MW-10	Ground Water	AB/TB	02/13/24 13:45	02/14/24 12:30
24B0629-17	MW-11	Ground Water	AB/TB	02/13/24 14:30	02/14/24 12:30
24B0629-18	MW-12	Ground Water	AB/TB	02/13/24 17:30	02/14/24 12:30
24B0629-19	MW-18	Ground Water	AB/TB	02/13/24 16:00	02/14/24 12:30
24B0629-20	MW-19	Ground Water	AB/TB	02/13/24 08:36	02/14/24 12:30
24B0629-21	MW-20	Ground Water	AB/TB	02/13/24 14:30	02/14/24 12:30
24B0629-22	MW-27	Ground Water	AB/TB	02/13/24 09:30	02/14/24 12:30
24B0629-23	SG-02	Surface Water	AB/TB	02/14/24 10:15	02/14/24 12:30
24B0629-24	SG-03	Surface Water	AB/TB	02/14/24 10:25	02/14/24 12:30
24B0629-25	SG-04R	Surface Water	AB/TB	02/14/24 09:40	02/14/24 12:30
24B0629-26	SG-05	Surface Water	AB/TB	02/14/24 10:45	02/14/24 12:30

CERTIFICATE OF ANALYSIS

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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
LOQ	Limit of Quantitation
LOD	Limit of Detection
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.
 Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

DATA QUALIFIERS

Trace ID: 24B0629-01

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note PH01t : The pH was analyzed at 9:45
-----------	--

Trace ID: 24B0629-02

Analysis: SM 4500-H+ B-11

pH	Note PH01u : The pH was analyzed at 9:47
-----------	--

Trace ID: 24B0629-03

Analysis: SM 4500-H+ B-11

pH	Note PH01v : The pH was analyzed at 9:48
-----------	--

Trace ID: 24B0629-04

CERTIFICATE OF ANALYSIS

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Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: EPA 300.0 Rev. 2.1

Chloride	Note MS07 : The MS recovery was out of control. The result for this analyte, in the non-spiked version of the sample, must be considered estimated.
Sulfate as SO4	Note MS07 : The MS recovery was out of control. The result for this analyte, in the non-spiked version of the sample, must be considered estimated.

Analysis: SM 4500-H+ B-11

pH	Note PH01w : The pH was analyzed at 9:50
-----------	--

Trace ID: 24B0629-05

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note PH01x : The pH was analyzed at 9:51
-----------	--

Trace ID: 24B0629-06

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note PH01y : The pH was analyzed at 9:52
-----------	--

Trace ID: 24B0629-07

Analysis: EPA 200.8 Rev. 5.4

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Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note PH01z : The pH was analyzed at 9:53
-----------	--

Trace ID: 24B0629-08

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note PH01 : The pH was analyzed at 14:06
-----------	--

Trace ID: 24B0629-09

Analysis: SM 4500-H+ B-11

pH	Note H04 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note PH01b : The pH was analyzed at 14:08

Trace ID: 24B0629-10

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note PH01c : The pH was analyzed at 14:09
-----------	---

Trace ID: 24B0629-11

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Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note PH01d : The pH was analyzed at 14:10
-----------	---

Trace ID: 24B0629-12

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH	Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time.
pH	Note PH01e : The pH was analyzed at 14:11

Trace ID: 24B0629-13

Analysis: SM 4500-H+ B-11

pH	Note PH01f : The pH was analyzed at 14:12
-----------	---

Trace ID: 24B0629-14

Analysis: SM 4500-H+ B-11

pH	Note H04 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note PH01g : The pH was analyzed at 14:13

Trace ID: 24B0629-15

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

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Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
-------------	---

Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
-----------------	---

Analysis: SM 4500-H+ B-11

pH	Note H04 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
-----------	--

pH	Note PH01h : The pH was analyzed at 14:14
-----------	---

Trace ID: 24B0629-16

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
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Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
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Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
-------------	---

Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
-----------------	---

Analysis: SM 4500-H+ B-11

pH	Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time .
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pH	Note PH01i : The pH was analyzed at 14:15
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Trace ID: 24B0629-17

Analysis: SM 4500-H+ B-11

pH	Note PH01j : The pH was analyzed at 14:16
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Trace ID: 24B0629-18

Analysis: SM 4500-H+ B-11

pH	Note PH01k : The pH was analyzed at 14:17
-----------	---

Trace ID: 24B0629-19

Analysis: EPA 200.8 Rev. 5.4

Antimony	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
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Cadmium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
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Lead	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
-------------	---

Thallium	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
-----------------	---

Analysis: SM 4500-H+ B-11

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pH Note PH01l : The pH was analyzed at 14:18

Trace ID: 24B0629-20

Analysis: EPA 200.8 Rev. 5.4

Antimony Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Cadmium Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Lead Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Thallium Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH Note H04 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.

pH Note PH01m : The pH was analyzed at 14:19

Trace ID: 24B0629-21

Analysis: SM 4500-H+ B-11

pH Note PH01n : The pH was analyzed at 14:20

Trace ID: 24B0629-22

Analysis: SM 4500-H+ B-11

pH Note H04 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.

pH Note PH01o : The pH was analyzed at 14:21

Trace ID: 24B0629-23

Analysis: SM 4500-H+ B-11

pH Note PH01p : The pH was analyzed at 14:22

Trace ID: 24B0629-24

Analysis: SM 4500-H+ B-11

pH Note PH01q : The pH was analyzed at 14:23

Trace ID: 24B0629-25

Analysis: EPA 200.8 Rev. 5.4

Antimony Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Cadmium Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Lead Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

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Thallium

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Analysis: SM 4500-H+ B-11

pH

Note PH01r : The pH was analyzed at 14:24

Trace ID: 24B0629-26

Analysis: SM 4500-H+ B-11

pH

Note PH01s : The pH was analyzed at 14:25

Trace ID: T147176-MS1

Analysis: EPA 300.0 Rev. 2.1

Chloride

Note MS07 : The MS recovery was out of control. The result for this analyte, in the non-spiked version of the sample, must be considered estimated.

Sulfate as SO4

Note MS07 : The MS recovery was out of control. The result for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T147222-DUP1

Analysis: SM 4500-H+ B-11

pH

Note PH01t : The pH was analyzed at 9:45

Trace ID: T147285-DUP1

Analysis: SM 4500-H+ B-11

pH

Note PH01a : The pH was analyzed at 14:07

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-01 Date Collected: 02/12/24 16:18 Matrix: Ground Water
 Sample ID: MW-30 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	1.9 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	440 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.10 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	110 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	10 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	89 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.00021 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Barium	0.067 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	0.00011 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.0011 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.00024 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	0.00073 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00025
Selenium	0.00039 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-01 Date Collected: 02/12/24 16:18 Matrix: Ground Water
 Sample ID: MW-30 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147176</i>									
Fluoride	1.1 mg/L	0.10	5	02/13/24	ljs	02/14/24	ljs	N	0.055
Chloride	110 mg/L	7.5	50	02/13/24	ljs	02/14/24	ljs		6.0
Sulfate as SO4	820 mg/L	30	50	02/13/24	ljs	02/14/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	690 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	690 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	2100 mg/L	38	3.846154	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147242</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/14/24	ch	02/14/24	ch		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147222</i>									
pH	7.04 pH Units		1	02/12/24	mj	02/13/24	mj	PH01t	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-02 Date Collected: 02/12/24 15:00 Matrix: Ground Water
 Sample ID: MW-31 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 7470A									
<i>Batch: T147299</i>									
Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Boron	4.4 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	170 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.039 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	36 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	9.6 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	54 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Antimony	<0.00010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.0010 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.13 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	0.000054 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	0.000084 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000075
Cobalt	0.00028 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00023 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Lead	<0.00010 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	0.0011 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00025
Selenium	0.00074 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	0.000088 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs	J	0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-02 Date Collected: 02/12/24 15:00 Matrix: Ground Water
 Sample ID: MW-31 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147176</i>									
Fluoride	4.5 mg/L	0.10	5	02/13/24	ljs	02/14/24	ljs	N	0.055
Chloride	99 mg/L	0.75	5	02/13/24	ljs	02/14/24	ljs		0.60
Sulfate as SO4	150 mg/L	6.0	10	02/13/24	ljs	02/14/24	ljs		0.82
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	340 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	340 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	810 mg/L	20	2	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147242</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1.010101	02/14/24	ch	02/14/24	ch		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147222</i>									
pH	7.79 pH Units		1	02/12/24	mj	02/13/24	mj	PH01u	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-03 Date Collected: 02/12/24 16:30 Matrix: Ground Water
 Sample ID: MW-32 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	3.0 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	180 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.10 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	32 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	9.1 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	30 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	0.00070 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.0024 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.059 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	0.000070 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	0.00019 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000075
Cobalt	0.0019 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.016 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.00038 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Molybdenum	0.0073 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.0010 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-03 Date Collected: 02/12/24 16:30 Matrix: Ground Water
 Sample ID: MW-32 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147176</i>									
Fluoride	1.5 mg/L	0.10	5	02/13/24	ljs	02/14/24	ljs	N	0.055
Chloride	39 mg/L	0.75	5	02/13/24	ljs	02/14/24	ljs		0.60
Sulfate as SO4	83 mg/L	3.0	5	02/13/24	ljs	02/14/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	440 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	440 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	680 mg/L	20	2.040816	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147242</i>									
Total Suspended Solids	32 mg/L	4.0	1.010101	02/14/24	ch	02/14/24	ch		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147222</i>									
pH	7.35 pH Units		1	02/12/24	mj	02/13/24	mj	PH01v	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-04 Date Collected: 02/12/24 15:18 Matrix: Ground Water
 Sample ID: MW-33 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	0.078 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	150 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.0028 mg/L	0.0025	1	02/21/24	fs	03/01/24	ckd	N	0.0019
Magnesium	16 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	3.4 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	25 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.0012 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.44 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.0012 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.00099 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.0014 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02, J	0.00050
Molybdenum	0.00027 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00025
Selenium	0.00054 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-04 Date Collected: 02/12/24 15:18 Matrix: Ground Water
 Sample ID: MW-33 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147176</i>									
Fluoride	0.27 mg/L	0.10	5	02/13/24	ljs	02/14/24	ljs	N	0.055
Chloride	35 mg/L	0.75	5	02/13/24	ljs	02/14/24	ljs	MS07	0.60
Sulfate as SO4	20 mg/L	3.0	5	02/13/24	ljs	02/14/24	ljs	MS07	0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	330 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	330 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	550 mg/L	20	2	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147242</i>									
Total Suspended Solids	6.0 mg/L	4.0	1	02/14/24	ch	02/14/24	ch		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147222</i>									
pH	7.14 pH Units		1	02/12/24	mj	02/13/24	mj	PH01w	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-05 Date Collected: 02/12/24 14:00 Matrix: Ground Water
 Sample ID: MW-34 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	1.9 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	210 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.043 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	23 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	8.8 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	26 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.00017 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Barium	0.066 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00061 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.00024 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	<0.00025 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00039 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-05 Date Collected: 02/12/24 14:00 Matrix: Ground Water
 Sample ID: MW-34 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147176</i>									
Fluoride	0.21 mg/L	0.10	5	02/13/24	ljs	02/14/24	ljs	N	0.055
Chloride	20 mg/L	0.75	5	02/13/24	ljs	02/14/24	ljs		0.60
Sulfate as SO4	<0.41 mg/L	3.0	5	02/13/24	ljs	02/14/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	830 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	830 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	730 mg/L	20	2	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147242</i>									
Total Suspended Solids	120 mg/L	4.0	1	02/14/24	ch	02/14/24	ch		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147222</i>									
pH	6.58 pH Units		1	02/12/24	mj	02/13/24	mj	PH01x	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-06 Date Collected: 02/12/24 16:18 Matrix: Ground Water
 Sample ID: MWT- 30 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	1.8 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	440 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.10 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	110 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	9.8 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	87 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.0013 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.45 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.0012 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.00092 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.0014 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02, J	0.00050
Molybdenum	<0.00025 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00063 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-06 Date Collected: 02/12/24 16:18 Matrix: Ground Water
 Sample ID: MWT- 30 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147176</i>									
Fluoride	1.1 mg/L	0.10	5	02/13/24	ljs	02/14/24	ljs	N	0.055
Chloride	110 mg/L	7.5	50	02/13/24	ljs	02/14/24	ljs		6.0
Sulfate as SO4	830 mg/L	30	50	02/13/24	ljs	02/14/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	670 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	670 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	2100 mg/L	40	4	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147242</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/14/24	ch	02/14/24	ch		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147222</i>									
pH	7.05 pH Units		1	02/12/24	mj	02/13/24	mj	PH01y	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-07 Date Collected: 02/12/24 14:00 Matrix: Ground Water
 Sample ID: MWT- 34 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	2.0 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	220 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.050 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	24 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	9.1 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	26 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.00056 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.20 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	0.000084 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00087 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.00031 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.0019 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02, J	0.00050
Molybdenum	0.0018 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00080 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-07 Date Collected: 02/12/24 14:00 Matrix: Ground Water
 Sample ID: MWT- 34 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	0.21 mg/L	0.10	5	02/14/24	ljs	02/14/24	ljs	N	0.055
Chloride	21 mg/L	0.75	5	02/14/24	ljs	02/14/24	ljs		0.60
Sulfate as SO4	<0.41 mg/L	3.0	5	02/14/24	ljs	02/14/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	840 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	840 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	830 mg/L	42	4.166667	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147242</i>									
Total Suspended Solids	120 mg/L	4.0	1.010101	02/14/24	ch	02/14/24	ch		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147222</i>									
pH	6.60 pH Units		1	02/12/24	mj	02/13/24	mj	PH01z	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-08 Date Collected: 02/13/24 14:35 Matrix: Ground Water
 Sample ID: MW-01R Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	38 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	400 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.77 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	110 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	34 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	140 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.0041 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.54 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	0.00015 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.0040 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.0010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.0017 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02, J	0.00050
Molybdenum	0.0056 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.0018 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-08 Date Collected: 02/13/24 14:35 Matrix: Ground Water
 Sample ID: MW-01R Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	4.8 mg/L	0.10	5	02/14/24	ljs	02/14/24	ljs	N	0.055
Chloride	49 mg/L	0.75	5	02/14/24	ljs	02/14/24	ljs		0.60
Sulfate as SO4	980 mg/L	30	50	02/14/24	ljs	02/15/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	560 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	560 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	2200 mg/L	38	3.846154	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.44 pH Units		1	02/13/24	mj	02/14/24	cem	PH01	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-09 Date Collected: 02/13/24 12:15 Matrix: Ground Water
 Sample ID: MW-02 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	100 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	220 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	1.4 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	77 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	50 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	280 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.00044 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Barium	0.73 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00024 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00023 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Lead	<0.00010 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	0.0038 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00056 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-09 Date Collected: 02/13/24 12:15 Matrix: Ground Water
 Sample ID: MW-02 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	9.5 mg/L	0.10	5	02/14/24	ljs	02/14/24	ljs	N	0.055
Chloride	140 mg/L	3.8	25	02/14/24	ljs	02/15/24	ljs		3.0
Sulfate as SO4	<0.41 mg/L	3.0	5	02/14/24	ljs	02/14/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147345</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	1800 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/17/24	aeo	02/17/24	aeo	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	1800 mg/L	10	2	02/17/24	aeo	02/17/24	aeo		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	1800 mg/L	42	4.166667	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	59 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.10 pH Units		1	02/13/24	mj	02/14/24	cem	H04, PH01b	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-10 Date Collected: 02/14/24 09:40 Matrix: Ground Water
 Sample ID: MW-03 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	4.5 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	360 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.033 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	210 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	19 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	110 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.00097 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.42 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	0.000057 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00037 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00025 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	<0.00025 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00062 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-10 Date Collected: 02/14/24 09:40 Matrix: Ground Water
 Sample ID: MW-03 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	0.61 mg/L	0.10	5	02/14/24	ljs	02/14/24	ljs	N	0.055
Chloride	140 mg/L	3.8	25	02/14/24	ljs	02/15/24	ljs		3.0
Sulfate as SO4	310 mg/L	15	25	02/14/24	ljs	02/15/24	ljs		2.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147529</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	1300 mg/L	5.0	1	02/22/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	70 mg/L	5.0	1	02/22/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	1300 mg/L	5.0	1	02/22/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	2000 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.25 pH Units		1	02/14/24	mj	02/14/24	cem	PH01c	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-11 Date Collected: 02/14/24 08:32 Matrix: Ground Water
 Sample ID: MW-04 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	4.1 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	350 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.048 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	120 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	21 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	80 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.00058 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.11 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00018 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	0.00037 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00025
Selenium	0.00043 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-11 Date Collected: 02/14/24 08:32 Matrix: Ground Water
 Sample ID: MW-04 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	1.4 mg/L	0.10	5	02/14/24	ljs	02/14/24	ljs	N	0.055
Chloride	130 mg/L	7.5	50	02/14/24	ljs	02/15/24	ljs		6.0
Sulfate as SO4	640 mg/L	30	50	02/14/24	ljs	02/15/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	680 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	680 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	1800 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.26 pH Units		1	02/14/24	mj	02/14/24	cem	PH01d	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-12 Date Collected: 02/13/24 12:43 Matrix: Ground Water
 Sample ID: MW-06 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	7.3 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	280 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.13 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	81 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	20 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	49 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.00057 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	1.4 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00035 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00028 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	<0.00025 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00047 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-12 Date Collected: 02/13/24 12:43 Matrix: Ground Water
 Sample ID: MW-06 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	0.98 mg/L	0.10	5	02/14/24	ljs	02/14/24	ljs	N	0.055
Chloride	18 mg/L	0.75	5	02/14/24	ljs	02/14/24	ljs		0.60
Sulfate as SO4	1.5 mg/L	3.0	5	02/14/24	ljs	02/14/24	ljs	J	0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	980 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	980 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	1100 mg/L	40	4	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	73 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.07 pH Units		1	02/13/24	mj	02/14/24	cem	H02, PH01e	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-13 Date Collected: 02/13/24 15:35 Matrix: Ground Water
 Sample ID: MW-07 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	11 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	140 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.0031 mg/L	0.0025	1	02/21/24	fs	03/01/24	ckd	N	0.0019
Magnesium	38 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	4.7 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	52 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.00021 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Barium	0.35 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00074 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00010 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	<0.00025 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00023 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-13 Date Collected: 02/13/24 15:35 Matrix: Ground Water
 Sample ID: MW-07 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	0.068 mg/L	0.10	5	02/14/24	ljs	02/15/24	ljs	J, N	0.055
Chloride	14 mg/L	0.75	5	02/14/24	ljs	02/15/24	ljs		0.60
Sulfate as SO4	32 mg/L	3.0	5	02/14/24	ljs	02/15/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	610 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	610 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	680 mg/L	20	2	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	29 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	6.95 pH Units		1	02/13/24	mj	02/14/24	cem	PH01f	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-14 Date Collected: 02/13/24 10:22 Matrix: Ground Water
 Sample ID: MW-08 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	7.0 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	120 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.097 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	23 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	8.6 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	32 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.030 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	1.0 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00034 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00035 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.00011 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Molybdenum	0.0017 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00034 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-14 Date Collected: 02/13/24 10:22 Matrix: Ground Water
 Sample ID: MW-08 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	1.0 mg/L	0.10	5	02/14/24	ljs	02/15/24	ljs	N	0.055
Chloride	25 mg/L	0.75	5	02/14/24	ljs	02/15/24	ljs		0.60
Sulfate as SO4	5.6 mg/L	3.0	5	02/14/24	ljs	02/15/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	440 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	440 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	530 mg/L	20	2.040816	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	46 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.01 pH Units		1	02/13/24	mj	02/14/24	cem	H04, PH01g	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-15 Date Collected: 02/13/24 11:20 Matrix: Ground Water
 Sample ID: MW-09 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	5.3 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	420 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.26 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	55 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	13 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	26 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.0015 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.31 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00058 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	0.0097 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00024 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-15 Date Collected: 02/13/24 11:20 Matrix: Ground Water
 Sample ID: MW-09 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	2.2 mg/L	0.10	5	02/14/24	ljs	02/15/24	ljs	N	0.055
Chloride	18 mg/L	0.75	5	02/14/24	ljs	02/15/24	ljs		0.60
Sulfate as SO4	610 mg/L	30	50	02/14/24	ljs	02/15/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	610 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	610 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	1600 mg/L	38	3.846154	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	47 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	6.93 pH Units		1	02/13/24	mj	02/14/24	cem	H04, PH01h	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-16 Date Collected: 02/13/24 13:45 Matrix: Ground Water
 Sample ID: MW-10 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	8.7 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	310 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.56 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	86 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	41 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	120 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.00025 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Barium	0.32 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	<0.00010 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	0.00080 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00025
Selenium	0.00083 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-16 Date Collected: 02/13/24 13:45 Matrix: Ground Water
 Sample ID: MW-10 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	3.3 mg/L	0.10	5	02/14/24	ljs	02/15/24	ljs	N	0.055
Chloride	140 mg/L	7.5	50	02/14/24	ljs	02/15/24	ljs		6.0
Sulfate as SO4	840 mg/L	30	50	02/14/24	ljs	02/15/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	240 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	240 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147218</i>									
Total Dissolved Solids	1800 mg/L	38	3.846154	02/14/24	ch	02/14/24	ch	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.56 pH Units		1	02/13/24	mj	02/14/24	cem	H02, PH01i	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-17 Date Collected: 02/13/24 14:30 Matrix: Ground Water
 Sample ID: MW-11 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	8.1 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	230 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.077 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	61 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	14 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	51 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.0012 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.83 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00026 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Lead	0.00031 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs	J	0.00010
Molybdenum	0.00066 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00025
Selenium	0.00071 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-17 Date Collected: 02/13/24 14:30 Matrix: Ground Water
 Sample ID: MW-11 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147221</i>									
Fluoride	0.75 mg/L	0.10	5	02/14/24	ljs	02/15/24	ljs	N	0.055
Chloride	62 mg/L	0.75	5	02/14/24	ljs	02/15/24	ljs		0.60
Sulfate as SO4	<0.41 mg/L	3.0	5	02/14/24	ljs	02/15/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	760 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	760 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	880 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	9.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.29 pH Units		1	02/13/24	mj	02/14/24	cem	PH01j	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-18 Date Collected: 02/13/24 17:30 Matrix: Ground Water
 Sample ID: MW-12 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	0.22 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	40 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.0023 mg/L	0.0025	1	02/21/24	fs	03/01/24	ckd	J, N	0.0019
Magnesium	11 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	0.62 mg/L	0.25	1	02/21/24	fs	03/01/24	ckd		0.036
Sodium	9.8 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	0.00035 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.0016 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.022 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	0.00054 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	<0.00010 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.0012 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00010 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	0.0051 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00089 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-18 Date Collected: 02/13/24 17:30 Matrix: Ground Water
 Sample ID: MW-12 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	0.46 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	17 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	84 mg/L	3.0	5	02/15/24	ljs	02/16/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	47 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	47 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	100 mg/L	20	2	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.88 pH Units		1	02/13/24	mj	02/14/24	cem	PH01k	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-19 Date Collected: 02/13/24 16:00 Matrix: Ground Water
 Sample ID: MW-18 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	3.5 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	370 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.020 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	42 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	8.9 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	24 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.024 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.015 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.0023 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.00033 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	0.011 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.0012 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-19 Date Collected: 02/13/24 16:00 Matrix: Ground Water
 Sample ID: MW-18 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	3.4 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	24 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	980 mg/L	30	50	02/15/24	ljs	02/16/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	120 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	120 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	1400 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.24 pH Units		1	02/13/24	mj	02/14/24	cem	PH01I	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-20 Date Collected: 02/13/24 08:36 Matrix: Ground Water
 Sample ID: MW-19 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147299

Mercury	<0.00016 mg/L	0.00020	1	02/20/24	fs	02/20/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Boron	1.8 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	490 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.073 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	39 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	15 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	33 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.0026 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.037 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	0.000086 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00023 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00050 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Molybdenum	0.0039 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00012 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-20 Date Collected: 02/13/24 08:36 Matrix: Ground Water
 Sample ID: MW-19 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	1.6 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	39 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	1000 mg/L	60	100	02/15/24	ljs	02/16/24	ljs		8.2
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	290 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	290 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	1800 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	17 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	6.88 pH Units		1	02/13/24	mj	02/14/24	cem	H04, PH01m	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-21 Date Collected: 02/13/24 14:30 Matrix: Ground Water
 Sample ID: MW-20 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147435

Mercury	<0.00016 mg/L	0.00020	1	02/22/24	ckd	02/22/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147451

Boron	0.72 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	120 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.029 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	45 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	8.5 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	48 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147451

Antimony	<0.00010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.0011 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.42 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	0.000059 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.0011 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs		0.00010
Copper	0.00040 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.0013 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	0.0045 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00026 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs	J	0.00010
Thallium	0.00011 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs	J	0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-21 Date Collected: 02/13/24 14:30 Matrix: Ground Water
 Sample ID: MW-20 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	0.25 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	41 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	78 mg/L	3.0	5	02/15/24	ljs	02/16/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	460 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	460 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	640 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	33 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.11 pH Units		1	02/13/24	mj	02/14/24	cem	PH01n	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-22 Date Collected: 02/13/24 09:30 Matrix: Ground Water
 Sample ID: MW-27 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147435

Mercury	<0.00016 mg/L	0.00020	1	02/22/24	ckd	02/22/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147451

Boron	0.16 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	160 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.0050 mg/L	0.0025	1	02/21/24	fs	03/01/24	ckd	N	0.0019
Magnesium	55 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	4.9 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	59 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147451

Antimony	<0.00010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.00082 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.16 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00037 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	<0.00010 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	<0.00025 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.00053 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-22 Date Collected: 02/13/24 09:30 Matrix: Ground Water
 Sample ID: MW-27 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	0.40 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	44 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	72 mg/L	3.0	5	02/15/24	ljs	02/16/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	790 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.31 mg/L	10	2	02/19/24	bm	02/22/24	bm	N	0.31
Total Alkalinity as CaCO3 at pH 4.5	790 mg/L	10	2	02/19/24	bm	02/22/24	bm		0.31
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	1300 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	23 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	6.91 pH Units		1	02/13/24	mj	02/14/24	cem	H04, PH01o	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-23 Date Collected: 02/14/24 10:15 Matrix: Surface Water
 Sample ID: SG-02 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147435

Mercury	<0.00016 mg/L	0.00020	1	02/22/24	ckd	02/22/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147451

Boron	3.5 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	140 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.042 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	37 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	9.1 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	31 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147451

Antimony	0.00038 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.0012 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.037 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00012 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00089 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.00061 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	0.0069 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.0018 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-23 Date Collected: 02/14/24 10:15 Matrix: Surface Water
 Sample ID: SG-02 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	2.2 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	52 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	380 mg/L	15	25	02/15/24	ljs	02/16/24	ljs		2.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	93 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	93 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	690 mg/L	20	2	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	8.02 pH Units		1	02/14/24	mj	02/14/24	cem	PH01p	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-24 Date Collected: 02/14/24 10:25 Matrix: Surface Water
 Sample ID: SG-03 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147435

Mercury	<0.00016 mg/L	0.00020	1	02/22/24	ckd	02/22/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147451

Boron	3.4 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	140 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.031 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	35 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	8.7 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	30 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147451

Antimony	0.00050 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00010
Arsenic	0.0012 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.036 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00011 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.00083 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.00059 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	0.0066 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.0018 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-24 Date Collected: 02/14/24 10:25 Matrix: Surface Water
 Sample ID: SG-03 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	2.2 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	53 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	370 mg/L	15	25	02/15/24	ljs	02/16/24	ljs		2.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	92 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	92 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	1400 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	8.05 pH Units		1	02/14/24	mj	02/14/24	cem	PH01q	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-25 Date Collected: 02/14/24 09:40 Matrix: Surface Water
 Sample ID: SG-04R Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147435

Mercury	<0.00016 mg/L	0.00020	1	02/22/24	ckd	02/22/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147451

Boron	4.5 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	340 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.049 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	44 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	9.1 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	26 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147451

Antimony	<0.00050 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00050
Arsenic	0.0019 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.027 mg/L	0.012	5	02/21/24	fs	02/23/24	acs		0.0034
Beryllium	0.000057 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.000052
Cadmium	<0.00038 mg/L	0.0012	5	02/21/24	fs	02/23/24	acs	DL02	0.00038
Cobalt	0.00029 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.0013 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.0015 mg/L	0.0028	5	02/21/24	fs	02/23/24	acs	DL02, J	0.00050
Molybdenum	0.0091 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00025
Selenium	0.0023 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.00038 mg/L	0.0019	5	02/21/24	fs	02/23/24	acs	DL02	0.00038

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-25 Date Collected: 02/14/24 09:40 Matrix: Surface Water
 Sample ID: SG-04R Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	2.3 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	23 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	890 mg/L	30	50	02/15/24	ljs	02/16/24	ljs		4.1
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	100 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	100 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	1400 mg/L	40	4	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	14 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.99 pH Units		1	02/14/24	mj	02/14/24	cem	PH01r	

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-26 Date Collected: 02/14/24 10:45 Matrix: Surface Water
 Sample ID: SG-05 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 7470A
 Batch: T147435

Mercury	<0.00016 mg/L	0.00020	1	02/22/24	ckd	02/22/24	acs		0.00016
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147451

Boron	0.45 mg/L	0.044	5	02/21/24	fs	03/01/24	ckd		0.0082
Calcium	130 mg/L	1.3	5	02/21/24	fs	03/01/24	ckd		0.38
Lithium	0.016 mg/L	0.012	5	02/21/24	fs	03/01/24	ckd	N	0.0094
Magnesium	26 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.050
Potassium	7.9 mg/L	1.2	5	02/21/24	fs	03/01/24	ckd		0.18
Sodium	43 mg/L	0.62	5	02/21/24	fs	03/01/24	ckd		0.44

Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147451

Antimony	0.00011 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00010
Arsenic	0.0010 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Barium	0.50 mg/L	0.0025	1	02/21/24	fs	02/23/24	acs		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000052
Cadmium	0.00041 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.000075
Cobalt	0.00046 mg/L	0.00052	1	02/21/24	fs	02/23/24	acs	J	0.00010
Copper	0.0063 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Lead	0.011 mg/L	0.00055	1	02/21/24	fs	02/23/24	acs		0.00010
Molybdenum	0.00058 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00025
Selenium	0.00054 mg/L	0.00050	1	02/21/24	fs	02/23/24	acs		0.00010
Thallium	<0.000075 mg/L	0.00038	1	02/21/24	fs	02/23/24	acs		0.000075

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-26 Date Collected: 02/14/24 10:45 Matrix: Surface Water
 Sample ID: SG-05 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
WET CHEMISTRY									
Analysis Method: EPA 300.0 Rev. 2.1									
<i>Batch: T147283</i>									
Fluoride	0.68 mg/L	0.10	5	02/15/24	ljs	02/16/24	ljs	N	0.055
Chloride	54 mg/L	0.75	5	02/15/24	ljs	02/16/24	ljs		0.60
Sulfate as SO4	7.2 mg/L	3.0	5	02/15/24	ljs	02/16/24	ljs		0.41
Analysis Method: SM 2320 B-11									
<i>Batch: T147372</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	400 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	02/19/24	bm	02/22/24	bm	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	400 mg/L	5.0	1	02/19/24	bm	02/22/24	bm		0.16
Analysis Method: SM 2540 C-15									
<i>Batch: T147424</i>									
Total Dissolved Solids	520 mg/L	20	2	02/20/24	tjh	02/21/24	tjh/ean	N	
Analysis Method: SM 2540 D-15									
<i>Batch: T147275</i>									
Total Suspended Solids	120 mg/L	4.0	1	02/15/24	ch	02/15/24	tjh		4.0
Analysis Method: SM 4500-H+ B-11									
<i>Batch: T147285</i>									
pH	7.64 pH Units		1	02/14/24	mj	02/14/24	cem	PH01s	

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QUALITY CONTROL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147299	Analysis Description: Mercury, Total, EPA 7470/7471
QC Batch Method: EPA 7470A Prep	Analysis Method: EPA 7470A

METHOD BLANK: T147299-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

LABORATORY CONTROL SAMPLE: T147299-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00192	96	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T147299-MSD1 Original: 24B0629-03

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0	0.00200	0.00190	0.00194	95	97	76-123	2	20	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147435	Analysis Description: Mercury, Total, EPA 7470/7471
QC Batch Method: EPA 7470A Prep	Analysis Method: EPA 7470A

METHOD BLANK: T147435-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

LABORATORY CONTROL SAMPLE: T147435-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00184	92	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T147435-MSD1 Original: 24B0629-21

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0	0.00200	0.00236	0.00220	118	110	76-123	7	20	

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Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147298	Analysis Description: Calcium, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.7 Rev. 4.4

METHOD BLANK: T147298-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Boron	mg/L	<0.0088	0.0088	
Calcium	mg/L	<0.26	0.26	
Potassium	mg/L	<0.25	0.25	
Lithium	mg/L	<0.0025	0.0025	
Magnesium	mg/L	<0.10	0.10	
Sodium	mg/L	<0.12	0.12	

LABORATORY CONTROL SAMPLE: T147298-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Boron	mg/L	3.20	3.19	100	85-115	
Calcium	mg/L	32.0	31.8	99	85-115	
Potassium	mg/L	32.0	31.5	99	85-115	
Lithium	mg/L	3.20	3.28	102	85-115	
Magnesium	mg/L	32.0	32.3	101	85-115	
Sodium	mg/L	32.0	32.1	100	85-115	

MATRIX SPIKE: T147298-MS1 Original: 24B0629-01

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	1.89	3.20	5.03	98	70-130	
Calcium	mg/L	441	32.0	471	95	70-130	
Potassium	mg/L	10.1	32.0	42.0	100	70-130	
Lithium	mg/L	0.101	3.20	3.38	103	70-130	
Magnesium	mg/L	108	32.0	142	105	70-130	
Sodium	mg/L	89.2	32.0	118	89	70-130	

MATRIX SPIKE: T147298-MS2 Original: 24B0629-02

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	4.40	3.20	7.22	88	70-130	
Calcium	mg/L	175	32.0	200	79	70-130	
Potassium	mg/L	9.58	32.0	42.0	101	70-130	
Lithium	mg/L	0.0388	3.20	3.43	106	70-130	

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MATRIX SPIKE: T147298-MS2 Original: **24B0629-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Magnesium	mg/L	36.4	32.0	68.0	99	70-130	
Sodium	mg/L	53.8	32.0	84.5	96	70-130	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147451	Analysis Description: Sodium, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.7 Rev. 4.4

METHOD BLANK: T147451-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Boron	mg/L	0.00321	0.0088	J
Calcium	mg/L	<0.26	0.26	
Potassium	mg/L	0.0580	0.25	J
Lithium	mg/L	<0.0025	0.0025	
Magnesium	mg/L	<0.10	0.10	
Sodium	mg/L	<0.12	0.12	

LABORATORY CONTROL SAMPLE: T147451-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Boron	mg/L	1.60	1.58	99	85-115	
Calcium	mg/L	16.0	16.0	100	85-115	
Potassium	mg/L	16.0	16.0	100	85-115	
Lithium	mg/L	1.60	1.67	105	85-115	
Magnesium	mg/L	16.0	16.4	102	85-115	
Sodium	mg/L	16.0	15.9	99	85-115	

MATRIX SPIKE: T147451-MS1 Original: **24B0629-21**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	0.721	1.60	2.29	98	70-130	
Calcium	mg/L	122	16.0	142	128	70-130	
Potassium	mg/L	8.48	16.0	25.5	106	70-130	
Lithium	mg/L	0	1.60	1.74	109	70-130	
Magnesium	mg/L	44.6	16.0	63.5	118	70-130	
Sodium	mg/L	48.0	16.0	65.9	112	70-130	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

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QC Batch: T147298

Analysis Description: Thallium, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

METHOD BLANK: T147298-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Arsenic	mg/L	<0.00055	0.00055	
Barium	mg/L	<0.0025	0.0025	
Beryllium	mg/L	<0.00025	0.00025	
Cadmium	mg/L	<0.00025	0.00025	
Cobalt	mg/L	<0.00052	0.00052	
Copper	mg/L	<0.00025	0.00025	
Molybdenum	mg/L	<0.0012	0.0012	
Lead	mg/L	<0.00055	0.00055	
Antimony	mg/L	<0.00025	0.00025	
Selenium	mg/L	0.000115	0.00050	J
Thallium	mg/L	<0.00038	0.00038	

LABORATORY CONTROL SAMPLE: T147298-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Arsenic	mg/L	0.200	0.195	97	85-115	
Barium	mg/L	3.20	3.25	102	85-115	
Beryllium	mg/L	0.400	0.381	95	85-115	
Cadmium	mg/L	0.100	0.101	101	85-115	
Cobalt	mg/L	3.20	3.16	99	85-115	
Copper	mg/L	3.20	3.03	95	85-115	
Molybdenum	mg/L	3.20	3.40	106	85-115	
Lead	mg/L	0.200	0.209	105	85-115	
Antimony	mg/L	0.200	0.214	107	85-115	
Selenium	mg/L	0.200	0.186	93	85-115	
Thallium	mg/L	0.200	0.212	106	85-115	

MATRIX SPIKE: T147298-MS1

Original: 24B0629-01

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0	0.200	0.209	104	70-130	
Barium	mg/L	0.0669	3.20	3.42	105	70-130	
Beryllium	mg/L	0	0.400	0.335	84	70-130	
Cadmium	mg/L	0	0.100	0.0961	96	70-130	
Cobalt	mg/L	0.00108	3.20	3.11	97	70-130	
Copper	mg/L	0	3.20	2.89	90	70-130	

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MATRIX SPIKE: T147298-MS1 Original: **24B0629-01**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Molybdenum	mg/L	0	3.20	3.73	116	70-130	
Lead	mg/L	0	0.200	0.206	103	70-130	
Antimony	mg/L	0	0.200	0.216	108	70-130	
Selenium	mg/L	0	0.200	0.169	85	70-130	
Thallium	mg/L	0	0.200	0.210	105	70-130	

MATRIX SPIKE: T147298-MS2 Original: **24B0629-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.00105	0.200	0.192	95	70-130	
Barium	mg/L	0.133	3.20	3.46	104	70-130	
Beryllium	mg/L	0	0.400	0.349	87	70-130	
Cadmium	mg/L	0	0.100	0.0975	98	70-130	
Cobalt	mg/L	0	3.20	3.04	95	70-130	
Copper	mg/L	0	3.20	2.81	88	70-130	
Molybdenum	mg/L	0.00110	3.20	3.50	109	70-130	
Lead	mg/L	0	0.200	0.209	104	70-130	
Antimony	mg/L	0	0.200	0.221	111	70-130	
Selenium	mg/L	0.000739	0.200	0.169	84	70-130	
Thallium	mg/L	0	0.200	0.213	107	70-130	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147451

Analysis Description: Thallium, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

METHOD BLANK: T147451-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Arsenic	mg/L	<0.00055	0.00055	
Barium	mg/L	<0.0025	0.0025	
Beryllium	mg/L	<0.00025	0.00025	
Cadmium	mg/L	<0.00025	0.00025	
Cobalt	mg/L	<0.00052	0.00052	
Copper	mg/L	<0.00025	0.00025	
Molybdenum	mg/L	<0.0012	0.0012	
Lead	mg/L	<0.00055	0.00055	
Antimony	mg/L	<0.00025	0.00025	
Selenium	mg/L	<0.00050	0.00050	

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METHOD BLANK: T147451-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Thallium	mg/L	<0.00038	0.00038	

LABORATORY CONTROL SAMPLE: T147451-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Arsenic	mg/L	0.100	0.0988	99	85-115	
Barium	mg/L	1.60	1.65	103	85-115	
Beryllium	mg/L	0.200	0.193	96	85-115	
Cadmium	mg/L	0.0500	0.0501	100	85-115	
Cobalt	mg/L	1.60	1.60	100	85-115	
Copper	mg/L	1.60	1.56	97	85-115	
Molybdenum	mg/L	1.60	1.64	103	85-115	
Lead	mg/L	0.100	0.105	105	85-115	
Antimony	mg/L	0.100	0.110	110	85-115	
Selenium	mg/L	0.100	0.0932	93	85-115	
Thallium	mg/L	0.100	0.104	104	85-115	

MATRIX SPIKE: T147451-MS1 Original: **24B0629-21**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.00114	0.100	0.101	99	70-130	
Barium	mg/L	0.416	1.60	2.10	105	70-130	
Beryllium	mg/L	0	0.200	0.185	92	70-130	
Cadmium	mg/L	0	0.0500	0.0502	100	70-130	
Cobalt	mg/L	0.00108	1.60	1.54	96	70-130	
Copper	mg/L	0	1.60	1.46	91	70-130	
Molybdenum	mg/L	0.00452	1.60	1.75	109	70-130	
Lead	mg/L	0.00127	0.100	0.102	100	70-130	
Antimony	mg/L	0	0.100	0.112	112	70-130	
Selenium	mg/L	0	0.100	0.0912	91	70-130	
Thallium	mg/L	0	0.100	0.101	101	70-130	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147176
 QC Batch Method: IC Prep W

Analysis Description: Fluoride
 Analysis Method: EPA 300.0 Rev. 2.1

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METHOD BLANK: T147176-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chloride	mg/L	<0.15	0.15	
Fluoride	mg/L	<0.020	0.020	
Sulfate as SO4	mg/L	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T147176-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chloride	mg/L	5.00	<10	99	90-110	J
Fluoride	mg/L	1.00	1.01	101	90-110	
Sulfate as SO4	mg/L	5.00	4.97	99	90-110	

MATRIX SPIKE: T147176-MS1 Original: **24B0629-04**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	34.8	25.0	67.5	131	80-120	MS07
Fluoride	mg/L	0.271	5.00	5.36	102	80-120	
Sulfate as SO4	mg/L	20.3	25.0	51.2	124	80-120	MS07

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147221	Analysis Description: Sulfate
QC Batch Method: IC Prep W	Analysis Method: EPA 300.0 Rev. 2.1

METHOD BLANK: T147221-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chloride	mg/L	<0.15	0.15	
Fluoride	mg/L	<0.020	0.020	
Sulfate as SO4	mg/L	<0.60	0.60	

LABORATORY CONTROL SAMPLE: T147221-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chloride	mg/L	5.00	4.94	99	90-110	
Fluoride	mg/L	1.00	1.01	101	90-110	
Sulfate as SO4	mg/L	5.00	4.96	99	90-110	

MATRIX SPIKE: T147221-MS1 Original: **24B0629-07**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
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MATRIX SPIKE: T147221-MS1 Original: **24B0629-07**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	20.6	25.0	49.7	116	80-120	
Fluoride	mg/L	0.214	5.00	5.60	108	80-120	
Sulfate as SO4	mg/L	0	25.0	28.2	113	80-120	

MATRIX SPIKE: T147221-MS2 Original: **24B0629-12**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	17.8	25.0	44.1	105	80-120	
Fluoride	mg/L	0.980	5.00	6.08	102	80-120	
Sulfate as SO4	mg/L	1.51	25.0	28.5	108	80-120	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147283

Analysis Description: Chloride

QC Batch Method: IC Prep W

Analysis Method: EPA 300.0 Rev. 2.1

METHOD BLANK: T147283-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chloride	mg/L	<0.15	0.15	
Fluoride	mg/L	<0.020	0.020	
Sulfate as SO4	mg/L	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T147283-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chloride	mg/L	5.00	<10	98	90-110	J
Fluoride	mg/L	1.00	1.01	101	90-110	
Sulfate as SO4	mg/L	5.00	4.98	100	90-110	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147345

Analysis Description: Alkalinity, Bicarbonate

QC Batch Method: SM 2320 B-11

Analysis Method: SM 2320 B-11

LABORATORY CONTROL SAMPLE: T147345-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	96.5	96	88-112	

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LABORATORY CONTROL SAMPLE: T147345-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	96.5	96	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	96.5	96	88-112	

SAMPLE DUPLICATE: T147345-DUP1

Original: 24B0629-01

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	692	674	3	20	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	0	<10		20	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	692	674	3	20	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147372

Analysis Description: Alkalinity, Total

QC Batch Method: SM 2320 B-11

Analysis Method: SM 2320 B-11

LABORATORY CONTROL SAMPLE: T147372-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	94.4	94	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	94.4	94	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	94.4	94	88-112	

SAMPLE DUPLICATE: T147372-DUP1

Original: 24B0629-23

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	93.0	93.9	1	20	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	0	<5.0		20	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	93.0	93.9	1	20	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147529

Analysis Description: Alkalinity, Carbonate

QC Batch Method: SM 2320 B-11

Analysis Method: SM 2320 B-11

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LABORATORY CONTROL SAMPLE: T147529-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	90.7	91	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	90.7	91	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	90.7	91	88-112	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147218

Analysis Description: Total Dissolved Solids

QC Batch Method: SM 2540 C-15

Analysis Method: SM 2540 C-15

METHOD BLANK: T147218-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Dissolved Solids	mg/L	9.00	10	J

LABORATORY CONTROL SAMPLE: T147218-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Dissolved Solids	mg/L	500	514	103	80-120	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147424

Analysis Description: Total Dissolved Solids

QC Batch Method: SM 2540 C-15

Analysis Method: SM 2540 C-15

METHOD BLANK: T147424-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Dissolved Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T147424-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Dissolved Solids	mg/L	500	450	90	80-120	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

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QC Batch: T147242 Analysis Description: Total Suspended Solids
 QC Batch Method: SM 2540 D-15 Analysis Method: SM 2540 D-15

METHOD BLANK: T147242-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<4.0	4.0	

LABORATORY CONTROL SAMPLE: T147242-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	93.0	93	85-115	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147275 Analysis Description: Total Suspended Solids
 QC Batch Method: SM 2540 D-15 Analysis Method: SM 2540 D-15

METHOD BLANK: T147275-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<4.0	4.0	

LABORATORY CONTROL SAMPLE: T147275-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	88.0	88	85-115	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147222 Analysis Description: pH, SM 4500
 QC Batch Method: *** DEFAULT PREP *** Analysis Method: SM 4500-H+ B-11

SAMPLE DUPLICATE: T147222-DUP1 Original: 24B0629-01

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
pH	pH Units	7.04	7.04	0	20	PH01t

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147285 Analysis Description: pH, SM 4500
 QC Batch Method: *** DEFAULT PREP *** Analysis Method: SM 4500-H+ B-11

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SAMPLE DUPLICATE: T147285-DUP1

Original: **24B0629-08**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
pH	pH Units	7.44	7.48	0.5	20	PH01a

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 Office Phone: Call Phone: 734.223.7138
 Email Address: mollyreeves@hdrinc.com
 Billing Email Address: lara.zawalden@hdrinc.com

Trace Use:

Logged By: MSB
 Checked By: MSB
 Soil Vials Preserved (circle if applicable):
 MeOH Low Level Lab
 Sample Collection Time (hrs):

Trace ID No.
 24130629

Requested Turnaround Times (TAT)

- Standard: 5-10 Business days
 - 3 Business Days*
 - 1 Business Day*
- * Rush TAT Requires Prior Approval

Matrix Key:

- WW = Wastewater
- DW = Drinking Water
- GW = Groundwater
- LW = Liquid Waste
- O = Oil
- WI = Wipes
- S = Solid
- SL = Sludge
- A = Air
- U = Unknown

Project Name: Grand Haven Harbor Island		Sampled By (print): Andrew Byks/Tanten Buszka	
Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name
1	2/12/24	1618	MMW-30
2	2/12/24	1500	MMW-31
3	2/12/24	1630	MMW-32
4	2/12/24	1518	MMW-33
5	2/12/24	1400	MMW-34
U	2/12/24	1618	MMW-30
X	2/12/24	1400	MMW-34

Metals	Field Filtered (Y or N)	Matrix	Number of Containers	Cool ≤ 4°C	Preservation	40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)
		→			Hydrochloric Acid (HCl)	X	X	X	X
					Nitric Acid (HNO3)	X	X	X	X
					Sulfuric Acid (H2SO4)	X	X	X	X
					Sodium Thiosulfate	X	X	X	X
					Sodium Hydroxide (NaOH)	X	X	X	X
					Ascorbic Acid	X	X	X	X
					Trizma	X	X	X	X
					Other	X	X	X	X

Analysis Requested	Received By	Date	Time
	MSB		

Please Sign

Released By: Andrew G. Buszka
 Received By: MSB
 Date: 2/13/24
 Time: 8:06

Form 70-Z-2

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2241 Black Creek Road
Muskegon, MI 49444-2673



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888-979-4469 Fax
www.trace-labs.com



Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
www.trace-labs.com

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Report Results To:

Company Name: HDR Inc.
Report To: Molly Reeves
Mailing Address: 1000 Oakbrook Drive, Suite 200
City, State, Zip Code: Ann Arbor, MI 48104
Office Phone:
Cell Phone: 734.263.7138
Email Address: molly.reeves@hdrinc.com

PO #: 10337505
Contact Name: Lara Zawalden
Billing Address (if different): 1000 Oakbrook Drive, Suite 200
City, State, Zip Code: Ann Arbor, MI 48104
Phone Number: 734.223.9074
Billing Email Address: larazawalden@hdrinc.com

Trace Use:

Logged By: NY
Checked By: BY
Soil Volatiles Preserved (circle if applicable):
MeOH Low Level Lab
Sample Collection Time (hrs):

Trace ID No.
24B0629

Requested Turnaround Times (TAT)

Standard: 5-10 Business days
 3 Business Days*
 1 Business Day*
* Rush TAT Requires Prior Approval

Matrix Key:

WW = Wastewater O = Oil A = Air
DW = Drinking Water WI = Wipes U = Unknown
GW = Groundwater S = Solid
LW = Liquid Waste SL = Sludge

Analysis Requested

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filtered (Y or N)	Matrix - see above →	Number of Containers	Cool ≤ 4°C	Preservation										40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)	Remarks/Notes	Possible Health Hazards?									
								Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other																	
8	2/13/24	1435	MW-01R	N	GW	6	6	5																								
9	2/13/24	1215	MW-02	N	GW	6	6	5																								
10	2/14/24	940	MW-03	N	GW	6	6	5																								
11	2/14/24	832	MW-04	N	GW	6	6	5																								
12	2/13/24	1243	MW-06	N	GW	6	6	5																								
13	2/13/24	1535	MW-07	N	GW	6	6	5																								
14	2/13/24	1022	MW-08	N	GW	6	6	5																								
15	2/13/24	1120	MW-09	N	GW	6	6	5																								
16	2/13/24	1345	MW-10	N	GW	6	6	5																								
17	2/13/24	1430	MW-11	N	GW	6	6	5																								

Please Sign		Released By	Date	Time	Released By	Date	Time
<input type="checkbox"/>			2/14/24	1230			
<input type="checkbox"/>							

In executing this Chain of Custody, the client acknowledges the terms as set forth at www.trace-labs.com/terms-of-agreement.
Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

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 Muskegon, MI 49444-2673
 Phone 231.773.5998
 Fax 888.979.4469
 www.trace-labs.com

CHAIN-OF-CUSTODY RECORD

Trace ID No.
24B0629

Report Results To:

Company Name: HDR Inc.
 Report To: Mely Reeves
 Mailing Address: 1000 Oakbrook Drive, Suite 200
 City, State, Zip Code: Ann Arbor, MI 48104
 Office Phone: Cell Phone: 734.223.7138
 Email Address: molly.reeves@hdrinc.com
 Billing Address: 1000 Oakbrook Drive, Suite 200
 City, State, Zip Code: Ann Arbor, MI 48104
 Phone Number: 734.223.9074
 Billing Email Address: lara.zawaidah@hdrinc.com

Trace Use:

Logged By: NY
 Checked By: BY
 MeOH Low Level Lab
 Sample Collection Time (hrs.):

Requested Turnaround Times (TAT)

Standard: 5-10 Business days
 3 Business Days*
 1 Business Day*
 * Rush TAT Requires Prior Approval

Matrix Key:

WW = Wastewater O = Oil A = Air
 DW = Drinking Water WI = Wipes U = Unknown
 GW = Groundwater S = Solid
 LW = Liquid Waste SL = Sludge

Analysis Requested

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filtered (Y or N)	Matrix - see above →	Number of Containers	Preservation												40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)	Remarks/Notes	Possible Health Hazards?													
							Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other																						
18	2/13/24	1730	MW-12	N	GW	6	6	5																													
19	2/13/24	1600	MW-18	N	GW	6	6	5																													
20	2/13/24	0836	MW-19	N	GW	6	6	5																													
21	2/13/24	1430	MW-20	N	GW	6	6	5																													
22	2/13/24	0930	MW-27	N	GW	6	6	5																													
23	2/14/24	1015	SG-02	N	SW	6	6	5																													
24	2/14/24	1025	SG-03	N	SW	6	6	5																													
25	2/14/24	940	SG-04R	N	SW	6	6	5																													
26	2/14/24	1045	SG-05	N	SW	6	6	5																													

Please Sign		Date	Time	Released By		Date	Time
1)	<u>[Signature]</u>	2/14/24	1230	2)	<u>[Signature]</u>		
3)	<u>[Signature]</u>			4)	<u>[Signature]</u>		

Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

In executing this Chain of Custody, the client acknowledges the terms as set forth at www.trace-labs.com/terms-of-agreement.

CERTIFICATE OF ANALYSIS

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-13-24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 845									
Initials: CM									
Package Description: Cooler									
Package Temp °C	1.4	1.4							
Representative Sample Temp °C	5.8	5.6							

Sample Receipt

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier Client Drop-off
- Yes No Custody seals intact (if applicable)
- UPS Fed Ex US Mail Other

Sample Condition

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other
- Air bubbles absent from VOAs

Chain of Custody (COC)

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

Notes:

Cooler 2
 pants 2, 3, and 6

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-13-24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 840									
Initials: Cm									
Package Description: Cooler									
Package Temp °C	2.0	2.0							
Representative Sample Temp °C	6.2	6.0							

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

Cooler 1
 points 1, 4, 5, and 7

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24B0629

HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-14-24	Original Observation	Corrected Temperature					
Time: 1315		IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank
Initials: CM							
Package Description: cooler							
Package Temp °C	0.1	0.1					
Representative Sample Temp °C	2.3	2.1					

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

*CM
2-14-24*

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

Cooler 1 of 5
 points 14, 15, 20, and 22

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2.14.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1317									
Initials: CM									
Package Description: COOLER									
Package Temp °C	1.9	1.9							
Representative Sample Temp °C	1.6	1.4							

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

Cooler 2 of 5
 points 10, 11, and 21

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2.14.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1319									
Initials: CM									
Package Description: Cooler									
Package Temp °C	0.2	0.2							
Representative Sample Temp °C	1.0	0.8							

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

cooler 3 of 5
 points 12, 17, 18, and 19

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24B0629

HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-14-24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1323									
Initials: CM									
Package Description: cooler									
Package Temp °C	1.7	1.7							
Representative Sample Temp °C	2.4	2.2							

Sample Receipt

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier Client Drop-off
- Yes No Custody seals intact (if applicable)
- UPS Fed Ex US Mail Other

Sample Condition

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other
- Air bubbles absent from VOAs

Chain of Custody (COC)

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

Notes:

Cooler 5 of 5
 points 23, 24, 25, and 26

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24B0629

HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2.14.21	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1321									
Initials: CM									
Package Description: Cooler									
Package Temp °C	0.8	0.8							
Representative Sample Temp °C	2.3	2.1							

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace _____

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs _____

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

Cooler 4 of 5
 points 8, 9, 13, and 16

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2241 Black Creek Road
Muskegon, MI 49444-2673



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888-979-4469 Fax
www.trace-labs.com

April 02, 2024

Ms. Molly Reeves
HDR Michigan Inc.
1000 Oakbrook Dr., Suite 200
Ann Arbor, MI 48104

Phone: (734) 263-7138

RE: Trace Project 24B0629
Client Project City of Grand Haven - Harbor Island

Dear Ms. Reeves:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Mink".

Jon Mink
Senior Project Manager
Enclosures



Wisconsin Accreditation No. FID: 998044080 / TNI EL V1:2016

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 2241 Black Creek Road
 Muskegon, MI 49444-2673



231-773-5998 Phone
 888-979-4469 Fax
 www.trace-labs.com

SAMPLE SUMMARY

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
24B0629-01	MW-30	Ground Water	AB/TB	02/12/24 16:18	02/13/24 08:06
24B0629-02	MW-31	Ground Water	AB/TB	02/12/24 15:00	02/13/24 08:06
24B0629-03	MW-32	Ground Water	AB/TB	02/12/24 16:30	02/13/24 08:06
24B0629-04	MW-33	Ground Water	AB/TB	02/12/24 15:18	02/13/24 08:06
24B0629-05	MW-34	Ground Water	AB/TB	02/12/24 14:00	02/13/24 08:06
24B0629-06	MWT- 30	Ground Water	AB/TB	02/12/24 16:18	02/13/24 08:06
24B0629-07	MWT- 34	Ground Water	AB/TB	02/12/24 14:00	02/13/24 08:06
24B0629-08	MW-01R	Ground Water	AB/TB	02/13/24 14:35	02/14/24 12:30
24B0629-09	MW-02	Ground Water	AB/TB	02/13/24 12:15	02/14/24 12:30
24B0629-10	MW-03	Ground Water	AB/TB	02/14/24 09:40	02/14/24 12:30
24B0629-11	MW-04	Ground Water	AB/TB	02/14/24 08:32	02/14/24 12:30
24B0629-12	MW-06	Ground Water	AB/TB	02/13/24 12:43	02/14/24 12:30
24B0629-13	MW-07	Ground Water	AB/TB	02/13/24 15:35	02/14/24 12:30
24B0629-14	MW-08	Ground Water	AB/TB	02/13/24 10:22	02/14/24 12:30
24B0629-15	MW-09	Ground Water	AB/TB	02/13/24 11:20	02/14/24 12:30
24B0629-16	MW-10	Ground Water	AB/TB	02/13/24 13:45	02/14/24 12:30
24B0629-17	MW-11	Ground Water	AB/TB	02/13/24 14:30	02/14/24 12:30
24B0629-18	MW-12	Ground Water	AB/TB	02/13/24 17:30	02/14/24 12:30
24B0629-19	MW-18	Ground Water	AB/TB	02/13/24 16:00	02/14/24 12:30
24B0629-20	MW-19	Ground Water	AB/TB	02/13/24 08:36	02/14/24 12:30
24B0629-21	MW-20	Ground Water	AB/TB	02/13/24 14:30	02/14/24 12:30
24B0629-22	MW-27	Ground Water	AB/TB	02/13/24 09:30	02/14/24 12:30
24B0629-23	SG-02	Surface Water	AB/TB	02/14/24 10:15	02/14/24 12:30
24B0629-24	SG-03	Surface Water	AB/TB	02/14/24 10:25	02/14/24 12:30
24B0629-25	SG-04R	Surface Water	AB/TB	02/14/24 09:40	02/14/24 12:30
24B0629-26	SG-05	Surface Water	AB/TB	02/14/24 10:45	02/14/24 12:30

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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
LOQ	Limit of Quantitation
LOD	Limit of Detection
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.
Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

DATA QUALIFIERS

Trace ID: 24B0629-01

Analysis: EPA 200.8 Rev. 5.4

Silver	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
---------------	---

Trace ID: 24B0629-04

Analysis: EPA 200.8 Rev. 5.4

Silver	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
---------------	---

Trace ID: 24B0629-05

Analysis: EPA 200.8 Rev. 5.4

Silver	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
---------------	---

Trace ID: 24B0629-06

Analysis: EPA 200.8 Rev. 5.4

Silver	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
---------------	---

Trace ID: 24B0629-07

Analysis: EPA 200.8 Rev. 5.4

Silver	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
---------------	---

Trace ID: 24B0629-08

Analysis: EPA 200.8 Rev. 5.4

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Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-10

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-11

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-12

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-15

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-16

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-19

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-20

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Trace ID: 24B0629-25

Analysis: EPA 200.8 Rev. 5.4

Silver

Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-01 Date Collected: 02/12/24 16:18 Matrix: Ground Water
 Sample ID: MW-30 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	2.0 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00024 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Nickel	0.0018 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-02 Date Collected: 02/12/24 15:00 Matrix: Ground Water
 Sample ID: MW-31 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Iron	0.19 mg/L	0.050	1	02/21/24	fs	03/01/24	ckd		0.026
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Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Copper	0.00023 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Nickel	0.0023 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-03 Date Collected: 02/12/24 16:30 Matrix: Ground Water
 Sample ID: MW-32 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	17 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.016 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.023 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0049 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-04 Date Collected: 02/12/24 15:18 Matrix: Ground Water
 Sample ID: MW-33 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
 Batch: T147298

Iron	1.1 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
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Analysis Method: EPA 200.8 Rev. 5.4
 Batch: T147298

Copper	0.00099 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0036 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0035 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-05 Date Collected: 02/12/24 14:00 Matrix: Ground Water
 Sample ID: MW-34 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	72 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00024 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Nickel	0.00089 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-06 Date Collected: 02/12/24 16:18 Matrix: Ground Water
 Sample ID: MWT- 30 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	1.6 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00092 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0036 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0033 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-07 Date Collected: 02/12/24 14:00 Matrix: Ground Water
 Sample ID: MWT- 34 Date Received: 02/13/24 08:06

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	76 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00031 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0011 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0019 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-08 Date Collected: 02/13/24 14:35 Matrix: Ground Water
 Sample ID: MW-01R Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	0.85 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.0010 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.022 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	0.0018 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0016 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-09 Date Collected: 02/13/24 12:15 Matrix: Ground Water
 Sample ID: MW-02 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	31 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00023 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Nickel	0.00093 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0020 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-10 Date Collected: 02/14/24 09:40 Matrix: Ground Water
 Sample ID: MW-03 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	1.4 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00025 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.00094 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-11 Date Collected: 02/14/24 08:32 Matrix: Ground Water
 Sample ID: MW-04 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	5.5 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.010 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-12 Date Collected: 02/13/24 12:43 Matrix: Ground Water
 Sample ID: MW-06 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	31 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00028 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	<0.00065 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-13 Date Collected: 02/13/24 15:35 Matrix: Ground Water
 Sample ID: MW-07 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	15 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	<0.00065 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-14 Date Collected: 02/13/24 10:22 Matrix: Ground Water
 Sample ID: MW-08 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	22 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00035 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0026 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-15 Date Collected: 02/13/24 11:20 Matrix: Ground Water
 Sample ID: MW-09 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	22 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0060 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-16 Date Collected: 02/13/24 13:45 Matrix: Ground Water
 Sample ID: MW-10 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	3.7 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	<0.00065 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-17 Date Collected: 02/13/24 14:30 Matrix: Ground Water
 Sample ID: MW-11 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	8.5 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs	J	0.00020
Nickel	0.0011 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-18 Date Collected: 02/13/24 17:30 Matrix: Ground Water
 Sample ID: MW-12 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4
Batch: T147298

Iron	<0.026 mg/L	0.050	1	02/21/24	fs	03/01/24	ckd		0.026
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Analysis Method: EPA 200.8 Rev. 5.4
Batch: T147298

Copper	0.0012 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0014 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0027 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-19 Date Collected: 02/13/24 16:00 Matrix: Ground Water
 Sample ID: MW-18 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	7.7 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	0.00033 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0056 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.042 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-20 Date Collected: 02/13/24 08:36 Matrix: Ground Water
 Sample ID: MW-19 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147298</i>									
Iron	20 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147298</i>									
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-21 Date Collected: 02/13/24 14:30 Matrix: Ground Water
 Sample ID: MW-20 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147451</i>									
Iron	18 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147451</i>									
Copper	0.00040 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0061 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.016 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-22 Date Collected: 02/13/24 09:30 Matrix: Ground Water
 Sample ID: MW-27 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147451</i>									
Iron	9.9 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147451</i>									
Copper	<0.00020 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.00076 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	<0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-23 Date Collected: 02/14/24 10:15 Matrix: Surface Water
 Sample ID: SG-02 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147451</i>									
Iron	0.14 mg/L	0.050	1	02/21/24	fs	03/01/24	ckd		0.026
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147451</i>									
Copper	0.00089 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0020 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0013 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-24 Date Collected: 02/14/24 10:25 Matrix: Surface Water
 Sample ID: SG-03 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147451</i>									
Iron	0.13 mg/L	0.050	1	02/21/24	fs	03/01/24	ckd		0.026
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147451</i>									
Copper	0.00083 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0019 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.0012 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-25 Date Collected: 02/14/24 09:40 Matrix: Surface Water
 Sample ID: SG-04R Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147451</i>									
Iron	0.36 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147451</i>									
Copper	0.0013 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0037 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.00025 mg/L	0.00025	5	02/21/24	fs	02/23/24	acs	DL02	0.00025
Vanadium	0.00097 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs	J	0.00062
Zinc	0.0062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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ANALYTICAL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24B0629-26 Date Collected: 02/14/24 10:45 Matrix: Surface Water
 Sample ID: SG-05 Date Received: 02/14/24 12:30

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
METALS, TOTAL									
Analysis Method: EPA 200.7 Rev. 4.4									
<i>Batch: T147451</i>									
Iron	7.2 mg/L	0.25	5	02/21/24	fs	03/01/24	ckd		0.13
Analysis Method: EPA 200.8 Rev. 5.4									
<i>Batch: T147451</i>									
Copper	0.0063 mg/L	0.00025	1	02/21/24	fs	02/23/24	acs		0.00020
Nickel	0.0024 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00065
Silver	<0.000050 mg/L	0.000050	1	02/21/24	fs	02/23/24	acs		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.00062
Zinc	0.019 mg/L	0.0012	1	02/21/24	fs	02/23/24	acs		0.0012

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QUALITY CONTROL RESULTS

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147298	Analysis Description: Iron, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.7 Rev. 4.4

METHOD BLANK: T147298-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/L	<0.050	0.050	

LABORATORY CONTROL SAMPLE: T147298-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/L	32.0	32.0	100	85-115	

MATRIX SPIKE: T147298-MS1 Original: 24B0629-01

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	2.03	32.0	34.4	101	70-130	

MATRIX SPIKE: T147298-MS2 Original: 24B0629-02

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	0.193	32.0	31.8	99	70-130	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147451	Analysis Description: Iron, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.7 Rev. 4.4

METHOD BLANK: T147451-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/L	<0.050	0.050	

LABORATORY CONTROL SAMPLE: T147451-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/L	16.0	16.2	101	85-115	

MATRIX SPIKE: T147451-MS1 Original: 24B0629-21

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	0.193	32.0	31.8	99	70-130	

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MATRIX SPIKE: T147451-MS1 Original: **24B0629-21**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	18.5	16.0	35.8	108	70-130	

Trace Project ID: 24B0629
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147298	Analysis Description: Nickel, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.8 Rev. 5.4

METHOD BLANK: T147298-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.000050	0.000050	
Copper	mg/L	<0.00025	0.00025	
Nickel	mg/L	<0.0012	0.0012	
Vanadium	mg/L	<0.0012	0.0012	
Zinc	mg/L	<0.0012	0.0012	

LABORATORY CONTROL SAMPLE: T147298-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.100	0.105	105	85-115	
Copper	mg/L	3.20	3.03	95	85-115	
Nickel	mg/L	3.20	3.04	95	85-115	
Vanadium	mg/L	3.20	3.16	99	85-115	
Zinc	mg/L	3.20	2.96	93	85-115	

MATRIX SPIKE: T147298-MS1 Original: **24B0629-01**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Silver	mg/L	0	0.100	0.101	101	70-130	
Copper	mg/L	0	3.20	2.89	90	70-130	
Nickel	mg/L	0	3.20	2.93	91	70-130	
Vanadium	mg/L	0	3.20	3.26	102	70-130	
Zinc	mg/L	0	3.20	2.69	84	70-130	

MATRIX SPIKE: T147298-MS2 Original: **24B0629-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Silver	mg/L	0	0.100	0.103	103	70-130	
Copper	mg/L	0	3.20	2.81	88	70-130	
Nickel	mg/L	0	3.20	2.91	91	70-130	

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MATRIX SPIKE: T147298-MS2 Original: **24B0629-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Vanadium	mg/L	0	3.20	3.14	98	70-130	
Zinc	mg/L	0	3.20	2.69	84	70-130	

Trace Project ID: 24B0629

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T147451

Analysis Description: Copper, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

METHOD BLANK: T147451-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.000050	0.000050	
Copper	mg/L	<0.00025	0.00025	
Nickel	mg/L	<0.0012	0.0012	
Vanadium	mg/L	<0.0012	0.0012	
Zinc	mg/L	<0.0012	0.0012	

LABORATORY CONTROL SAMPLE: T147451-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.0500	0.0524	105	85-115	
Copper	mg/L	1.60	1.56	97	85-115	
Nickel	mg/L	1.60	1.57	98	85-115	
Vanadium	mg/L	1.60	1.63	102	85-115	
Zinc	mg/L	1.60	1.55	97	85-115	

MATRIX SPIKE: T147451-MS1 Original: **24B0629-21**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Silver	mg/L	0	0.0500	0.0516	103	70-130	
Copper	mg/L	0	1.60	1.46	91	70-130	
Nickel	mg/L	0.00610	1.60	1.49	92	70-130	
Vanadium	mg/L	0	1.60	1.62	101	70-130	
Zinc	mg/L	0.0156	1.60	1.45	90	70-130	

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-13-24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 845									
Initials: CM									
Package Description: Cooler									
Package Temp °C	1.4	1.4							
Representative Sample Temp °C	5.8	5.6							

Sample Receipt

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier Client Drop-off
- Yes No Custody seals intact (if applicable)
- UPS Fed Ex US Mail Other

Sample Condition

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other
- Air bubbles absent from VOAs

Chain of Custody (COC)

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

Notes:

Cooler 2
 pants 2, 3, and 6

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-13-24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 840									
Initials: Cm									
Package Description: Cooler									
Package Temp °C	2.0	2.0							
Representative Sample Temp °C	6.2	6.0							

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

Cooler 1
 points 1, 4, 5, and 7

CERTIFICATE OF ANALYSIS

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24B0629

HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-14-24	Original Observation	Corrected Temperature					
Time: 1315							
Initials: CM		IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	
Package Description: cooler							
Package Temp °C	0.1	0.1					
Representative Sample Temp °C	2.3	2.1					
					Temp Blank	Client Sample	

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

*CM
2-14-24*

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

Cooler 1 of 5
 points 14, 15, 20, and 22

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2.14.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1317									
Initials: CM									
Package Description: Cooler									
Package Temp °C	1.9	1.9							
Representative Sample Temp °C	1.6	1.4							

Sample Receipt

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier Client Drop-off
- Yes No Custody seals intact (if applicable)
- UPS Fed Ex US Mail Other

Sample Condition

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other
- Air bubbles absent from VOAs

Chain of Custody (COC)

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

Notes:

Cooler 2 of 5
 points 10, 11, and 21

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24B0629
 HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2.14.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1319									
Initials: CM									
Package Description: Cooler									
Package Temp °C	0.2	0.2							
Representative Sample Temp °C	1.0	0.8							

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present Yes No Custody seals intact (if applicable)

Trace Courier Client Drop-off UPS Fed Ex US Mail Other

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace _____

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs _____

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

cooler 3 of 5
 points 12, 17, 18, and 19

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24B0629

HDR Michigan Inc.
 Project Manager: Jon Mink

Sample Log In Checklist

Date: 2-14-24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1323									
Initials: CM									
Package Description: cooler									
Package Temp °C	1.7	1.7							
Representative Sample Temp °C	2.4	2.2							

Sample Receipt

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier Client Drop-off
- Yes No Custody seals intact (if applicable)
- UPS Fed Ex US Mail Other

Sample Condition

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other
- Air bubbles absent from VOAs

Chain of Custody (COC)

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

Notes:

Cooler 5 of 5
 points 23, 24, 25, and 26

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24B0629
 HDR Michigan Inc.

Project Manager: Jon Mink

Sample Log In Checklist

Date: 2.14.21	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1321									
Initials: CM									
Package Description: Cooler									
Package Temp °C	0.8	0.8							
Representative Sample Temp °C	2.3	2.1							

Sample Receipt

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier Client Drop-off

Yes No Custody seals intact (if applicable)

UPS Fed Ex US Mail Other

Sample Condition

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace _____

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other

Air bubbles absent from VOAs _____

Chain of Custody (COC)

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

Notes:

Cooler 4 of 5
 points 8, 9, 13, and 16

CERTIFICATE OF ANALYSIS

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ANALYTICAL REPORT

PREPARED FOR

Attn: Jon Mink
Trace Analytical Laboratories
2241 Black Creek Road
Muskegon, Michigan 49444

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JOB DESCRIPTION

24B0630

JOB NUMBER

810-93914-1

Eurofins Eaton Analytical South Bend

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



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Authorized for release by
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Definitions/Glossary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Trace Analytical Laboratories
Project: 24B0630

Job ID: 810-93914-1

Job ID: 810-93914-1

Eurofins Eaton Analytical South Bend

Job Narrative 810-93914-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/15/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

Gas Flow Proportional Counter

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Client Sample ID: MW-27

Lab Sample ID: 810-93914-1

No Detections.

Client Sample ID: SG-02

Lab Sample ID: 810-93914-2

No Detections.

Client Sample ID: SG-03

Lab Sample ID: 810-93914-3

No Detections.

Client Sample ID: SG-04R

Lab Sample ID: 810-93914-4

No Detections.

Client Sample ID: SG-05

Lab Sample ID: 810-93914-5

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Client Sample ID: MW-27

Lab Sample ID: 810-93914-1

Date Collected: 02/13/24 09:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.220		0.123	0.125	1.00	0.154	pCi/L	02/19/24 10:28	03/14/24 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		30 - 110					02/19/24 10:28	03/14/24 09:34	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.509	U	0.485	0.487	1.00	0.774	pCi/L	02/19/24 10:31	03/07/24 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		30 - 110					02/19/24 10:31	03/07/24 11:49	1
Y Carrier	78.1		30 - 110					02/19/24 10:31	03/07/24 11:49	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.729	U	0.500	0.503	5.00	0.774	pCi/L		03/15/24 13:32	1

Client Sample ID: SG-02

Lab Sample ID: 810-93914-2

Date Collected: 02/14/24 10:15

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0641	U	0.103	0.103	1.00	0.180	pCi/L	02/19/24 10:28	03/14/24 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	52.0		30 - 110					02/19/24 10:28	03/14/24 09:34	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	-0.236	U	0.499	0.500	1.00	1.00	pCi/L	02/19/24 10:31	03/07/24 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	52.0		30 - 110					02/19/24 10:31	03/07/24 11:50	1
Y Carrier	79.6		30 - 110					02/19/24 10:31	03/07/24 11:50	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.0641	U	0.510	0.510	5.00	1.00	pCi/L		03/15/24 13:32	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Client Sample ID: SG-03

Lab Sample ID: 810-93914-3

Date Collected: 02/14/24 10:25

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.123	U	0.0965	0.0971	1.00	0.139	pCi/L	02/19/24 10:28	03/14/24 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.5		30 - 110					02/19/24 10:28	03/14/24 09:34	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.461	U	0.420	0.422	1.00	0.661	pCi/L	02/19/24 10:31	03/07/24 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.5		30 - 110					02/19/24 10:31	03/07/24 11:50	1
Y Carrier	75.5		30 - 110					02/19/24 10:31	03/07/24 11:50	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.584	U	0.431	0.433	5.00	0.661	pCi/L		03/15/24 13:32	1

Client Sample ID: SG-04R

Lab Sample ID: 810-93914-4

Date Collected: 02/14/24 09:40

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.186		0.121	0.122	1.00	0.170	pCi/L	02/19/24 10:28	03/14/24 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		30 - 110					02/19/24 10:28	03/14/24 09:34	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.465	U	0.408	0.410	1.00	0.639	pCi/L	02/19/24 10:31	03/07/24 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		30 - 110					02/19/24 10:31	03/07/24 11:50	1
Y Carrier	72.9		30 - 110					02/19/24 10:31	03/07/24 11:50	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.651		0.426	0.428	5.00	0.639	pCi/L		03/15/24 13:32	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93914-1

Client Sample ID: SG-05

Lab Sample ID: 810-93914-5

Date Collected: 02/14/24 10:45

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.216		0.143	0.144	1.00	0.197	pCi/L	02/19/24 10:28	03/14/24 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		30 - 110					02/19/24 10:28	03/14/24 09:34	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.240	U	0.510	0.511	1.00	0.889	pCi/L	02/19/24 10:31	03/07/24 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		30 - 110					02/19/24 10:31	03/07/24 11:46	1
Y Carrier	77.8		30 - 110					02/19/24 10:31	03/07/24 11:46	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.456	U	0.530	0.531	5.00	0.889	pCi/L		03/15/24 13:32	1

Tracer/Carrier Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
810-93914-1	MW-27	88.8	
810-93914-2	SG-02	52.0	
810-93914-3	SG-03	73.5	
810-93914-4	SG-04R	80.3	
810-93914-5	SG-05	81.5	
LCS 160-648752/2-A	Lab Control Sample	89.0	
MB 160-648752/1-A	Method Blank	101	

Tracer/Carrier Legend
Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
810-93914-1	MW-27	88.8	78.1
810-93914-2	SG-02	52.0	79.6
810-93914-3	SG-03	73.5	75.5
810-93914-4	SG-04R	80.3	72.9
810-93914-5	SG-05	81.5	77.8
LCS 160-648753/2-A	Lab Control Sample	89.0	81.9
MB 160-648753/1-A	Method Blank	101	82.6

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

QC Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-648752/1-A
Matrix: Drinking Water
Analysis Batch: 652384

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 648752

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04516	U	0.0525	0.0527	1.00	0.0843	pCi/L	02/19/24 10:28	03/14/24 09:21	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	101		30 - 110		02/19/24 10:28	03/14/24 09:21	1			

Lab Sample ID: LCS 160-648752/2-A
Matrix: Drinking Water
Analysis Batch: 652384

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 648752

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-226	11.3	10.97		1.16	1.00	0.0907	pCi/L	97	90 - 110
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.0		30 - 110						

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-648753/1-A
Matrix: Drinking Water
Analysis Batch: 651439

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 648753

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.07909	U	0.237	0.237	1.00	0.427	pCi/L	02/19/24 10:31	03/07/24 11:48	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	101		30 - 110		02/19/24 10:31	03/07/24 11:48	1			
Y Carrier	82.6		30 - 110		02/19/24 10:31	03/07/24 11:48	1			

Lab Sample ID: LCS 160-648753/2-A
Matrix: Drinking Water
Analysis Batch: 651439

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 648753

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-228	9.15	10.30		1.39	1.00	0.591	pCi/L	113	80 - 120
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.0		30 - 110						
Y Carrier	81.9		30 - 110						

QC Association Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Rad

Prep Batch: 648752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93914-1	MW-27	Total/NA	Drinking Water	PrecSep-21	
810-93914-2	SG-02	Total/NA	Drinking Water	PrecSep-21	
810-93914-3	SG-03	Total/NA	Drinking Water	PrecSep-21	
810-93914-4	SG-04R	Total/NA	Drinking Water	PrecSep-21	
810-93914-5	SG-05	Total/NA	Drinking Water	PrecSep-21	
MB 160-648752/1-A	Method Blank	Total/NA	Drinking Water	PrecSep-21	
LCS 160-648752/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep-21	

Prep Batch: 648753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93914-1	MW-27	Total/NA	Drinking Water	PrecSep_0	
810-93914-2	SG-02	Total/NA	Drinking Water	PrecSep_0	
810-93914-3	SG-03	Total/NA	Drinking Water	PrecSep_0	
810-93914-4	SG-04R	Total/NA	Drinking Water	PrecSep_0	
810-93914-5	SG-05	Total/NA	Drinking Water	PrecSep_0	
MB 160-648753/1-A	Method Blank	Total/NA	Drinking Water	PrecSep_0	
LCS 160-648753/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep_0	

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Client Sample ID: MW-27

Lab Sample ID: 810-93914-1

Date Collected: 02/13/24 09:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:34
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651439	FLC	EET SL	03/07/24 11:49
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: SG-02

Lab Sample ID: 810-93914-2

Date Collected: 02/14/24 10:15

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:34
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651439	FLC	EET SL	03/07/24 11:50
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: SG-03

Lab Sample ID: 810-93914-3

Date Collected: 02/14/24 10:25

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:34
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651439	FLC	EET SL	03/07/24 11:50
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: SG-04R

Lab Sample ID: 810-93914-4

Date Collected: 02/14/24 09:40

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:34
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651439	FLC	EET SL	03/07/24 11:50
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Client Sample ID: SG-05

Lab Sample ID: 810-93914-5

Date Collected: 02/14/24 10:45

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:34
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:46
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Accreditation/Certification Summary

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93914-1

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Pos			
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93914-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-93914-1	MW-27	Drinking Water	02/13/24 09:30	02/15/24 09:00
810-93914-2	SG-02	Drinking Water	02/14/24 10:15	02/15/24 09:00
810-93914-3	SG-03	Drinking Water	02/14/24 10:25	02/15/24 09:00
810-93914-4	SG-04R	Drinking Water	02/14/24 09:40	02/15/24 09:00
810-93914-5	SG-05	Drinking Water	02/14/24 10:45	02/15/24 09:00

1

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110 S Hill Street
 South Bend, IN 46617
 Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)

Client Contact:
 Shipping/Receiving
 Company: TestAmerica Laboratories, Inc.
 Address: 13715 Rider Trail North,
 City: Earth City
 State, Zip: MO, 63045
 Phone: 314-298-8566(Tel) 314-298-8757(Fax)
 Email:
 Project Name: 24B0630
 Site:
 Project #: 81000263
 SSOV#:

Sampler:
 Lab PM:
 Fullmer, Karen
 E-Mail: Karen.Fullmer@et.eurofins.com
 State - Michigan

Due Date Requested: 3/19/2024
 TAT Requested (days):
 Analysis Requested
 State of Origin: Michigan
 Accreditations Required (See note):
 State - Michigan

COC No: 810-36739-1
 Page: Page 1 of 1
 Job #: 810-93914-1

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
MW-27 (810-93914-1)	2/13/24	09:30		Drinking Water		X	X	4	
SG-02 (810-93914-2)	2/14/24	10:15		Drinking Water		X	X	4	
SG-03 (810-93914-3)	2/14/24	10:25		Drinking Water		X	X	4	
SG-04R (810-93914-4)	2/14/24	09:40		Drinking Water		X	X	4	
SG-05 (810-93914-5)	2/14/24	10:45		Drinking Water		X	X	4	

Field Filtered Sample (Yes or No)
 903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)
 904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)
 Ra226 228GFPC_P/ Combined Ra226 & Ra228 Calc (St. Louis)

Preservation Codes:
 A - HCl
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDTA
 M - Hexane
 N - None
 O - AsK2O
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCA
 W - pH 4.5
 Y - Trizma
 Z - other (specify)
 Other:

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification
 Unconfirmed

Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <i>Asyur</i>	2-15-24	1600	
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Custody Seals Intact: Yes No Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:



810-93914 Chain of Custody

Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order #
Batch #

CHAIN OF CUSTODY RECORD

Page ___ of ___

REPORT TO: **Shaded area for EEA use only** SAMPLER (Signature) PWS ID # STATE (sample origin) PROJECT NAME PO#

Jon Mink, Tim Brewer (jmink@trace-labs.com, tbrewer@trace-labs.com) Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444 231-773-5998

BILL TO: Accounts Payable, Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444

LAB Number

COLLECTION DATE TIME AM PM COMPLIANCE MONITORING YES NO POPULATION SERVED SOURCE WATER TEST NAME SAMPLE REMARKS CHLORINATED YES NO # OF CONTAINERS MATRIX CODE TURNAROUND TIME

LAB Number	COLLECTION		COMPLIANCE MONITORING	POPULATION SERVED	SOURCE WATER	TEST NAME	SAMPLE REMARKS	CHLORINATED		# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
	DATE	TIME						AM	PM			
1	02/13/24	9:30	X			Radium 226/228				4	SW	SW
2	02/14/24	10:15	X			Radium 226/228				4	SW	SW
3	02/14/24	10:25	X			Radium 226/228				4	SW	SW
4	02/14/24	9:40	X			Radium 226/228				4	SW	SW
5	02/14/24	10:45	X			Radium 226/228				4	SW	SW
6												
7												
8												
9												
10												
11												
12												
13												
14												

PH Acceptable
Less than 2

Quarant

RELINQUISHED BY: (Signature) DATE TIME RECEIVED BY: (Signature) DATE TIME RECEIVED FOR LABORATORY BY: DATE TIME

MATRIX CODES: DW-DRINKING WATER, RW-REAGENT WATER, GM-GROUND WATER, EM-EXPOSURE WATER, SM-SURFACE WATER, PW-POOL WATER, WM-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES: SW = Standard Written: (15 working days) 0%, RW = Rush Verbal: (5 working days) 50%, RW = Rush Written: (5 working days) 75%

LAB COMMENTS: LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT. CONDITIONS UPON RECEIPT (check one): Iced: Wet/Blue, Ambient, °C Upon Receipt, N/A

06-LO-F0435 Issue 6.0 Effective Date: 2016-09-20



Chain of Custody Record



Client Information (Sub Contract Lab)

Sampler: Lab PM: **Fullmer, Karen**
 Phone: E-Mail: **Karen.Fullmer@et.eurofins.com**
 Test/America Laboratories, Inc. State - Michigan
 Accreditations Required (See note): State - Michigan

Address: **13715 Rider Trail North,**
 City: **Earth City**
 State, Zip: **MO, 63045**
 Phone: **314-298-8566(Tel) 314-298-8757(Fax)**
 Email:

Project Name: **24B0630**
 Site:

Due Date Requested: **3/19/2024**
 TAT Requested (days):
 PO #:
 WO #:
 Project #: **81000263**
 SSO#:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Sediment, Other)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)	Ra226_228GFP_C/P/Combined Ra226 & Ra228 Calc (St. Louis)	Total Number of Containers	Special Instructions/Note:
MW-27 (810-93914-1)	2/13/24	09:30 Eastern		Drinking Water		X	X	X	X		4	
SG-02 (810-93914-2)	2/14/24	10:15 Eastern		Drinking Water		X	X	X	X		4	
SG-03 (810-93914-3)	2/14/24	10:25 Eastern		Drinking Water		X	X	X	X		4	
SG-04R (810-93914-4)	2/14/24	09:40 Eastern		Drinking Water		X	X	X	X		4	
SG-05 (810-93914-5)	2/14/24	10:45 Eastern		Drinking Water		X	X	X	X		4	

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:

Preservation Codes:
 M - Hexane
 N - None
 O - ASN02
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Y - Trizma
 Z - other (specify)

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *Aym*
 Relinquished by: _____ Date/Time: 2-15-24 16:00
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Disposal By Lab
 Archive For _____ Months

Special Instructions/QC Requirements:

Received by: **Richard Thomley**
 Date/Time: *2/16/24 09:10*
 Company: _____
 Received by: _____ Date/Time: _____ Company: _____
 Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93914-1

Login Number: 93914

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Moore, Gary

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93914-1

Login Number: 93914

List Number: 2

Creator: Thornley, Richard W

List Source: Eurofins St. Louis

List Creation: 02/16/24 11:48 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





ANALYTICAL REPORT

PREPARED FOR

Attn: Jon Mink
Trace Analytical Laboratories
2241 Black Creek Road
Muskegon, Michigan 49444

Generated 4/4/2024 2:58:23 PM

JOB DESCRIPTION

24B0630

JOB NUMBER

810-93944-1

Eurofins Eaton Analytical South Bend

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



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Authorized for release by
Karen Fullmer, Project Manager
Karen.Fullmer@et.eurofinsus.com
(574)233-4777



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Definitions/Glossary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Trace Analytical Laboratories
Project: 24B0630

Job ID: 810-93944-1

Job ID: 810-93944-1

Eurofins Eaton Analytical South Bend

Job Narrative 810-93944-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/15/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

Receipt Exceptions

The reference method requires samples to have a pH of less than 2. The following samplea were received with a pH of 7: MW-01R (810-93944-1), MW-02 (810-93944-2), MW-03 (810-93944-3), MW-04 (810-93944-4), MW-06 (810-93944-5), MW-07 (810-93944-6), MW-08 (810-93944-7), MW-09 (810-93944-8), MW-10 (810-93944-9), MW-11 (810-93944-10), MW-12 (810-93944-11), MW-18 (810-93944-12), MW-19 (810-93944-13) and MW-20 (810-93944-14). The samples were adjusted to the appropriate pH in the laboratory.

Affected Containers

810-93944-B-3
810-93944-A-2
810-93944-C-3
810-93944-C-2
810-93944-D-2

Gas Flow Proportional Counter

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Eaton Analytical South Bend

Detection Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-01R	Lab Sample ID: 810-93944-1
No Detections.	
Client Sample ID: MW-03	Lab Sample ID: 810-93944-3
No Detections.	
Client Sample ID: MW-04	Lab Sample ID: 810-93944-4
No Detections.	
Client Sample ID: MW-06	Lab Sample ID: 810-93944-5
No Detections.	
Client Sample ID: MW-07	Lab Sample ID: 810-93944-6
No Detections.	
Client Sample ID: MW-08	Lab Sample ID: 810-93944-7
No Detections.	
Client Sample ID: MW-09	Lab Sample ID: 810-93944-8
No Detections.	
Client Sample ID: MW-10	Lab Sample ID: 810-93944-9
No Detections.	
Client Sample ID: MW-11	Lab Sample ID: 810-93944-10
No Detections.	
Client Sample ID: MW-12	Lab Sample ID: 810-93944-11
No Detections.	
Client Sample ID: MW-18	Lab Sample ID: 810-93944-12
No Detections.	
Client Sample ID: MW-19	Lab Sample ID: 810-93944-13
No Detections.	
Client Sample ID: MW-20	Lab Sample ID: 810-93944-14
No Detections.	

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-01R

Lab Sample ID: 810-93944-1

Date Collected: 02/13/24 14:05

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0366	U	0.0758	0.0759	1.00	0.137	pCi/L	02/20/24 11:10	03/13/24 07:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		30 - 110					02/20/24 11:10	03/13/24 07:34	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	1.05		0.548	0.556	1.00	0.753	pCi/L	02/20/24 11:13	02/27/24 12:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		30 - 110					02/20/24 11:13	02/27/24 12:14	1
Y Carrier	77.0		30 - 110					02/20/24 11:13	02/27/24 12:14	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	1.09		0.553	0.561	5.00	0.753	pCi/L		03/13/24 17:31	1

Client Sample ID: MW-03

Lab Sample ID: 810-93944-3

Date Collected: 02/14/24 09:40

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.466		0.172	0.177	1.00	0.181	pCi/L	02/20/24 11:10	03/13/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.3		30 - 110					02/20/24 11:10	03/13/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	1.02		0.649	0.655	1.00	0.959	pCi/L	02/20/24 11:13	02/27/24 12:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.3		30 - 110					02/20/24 11:13	02/27/24 12:14	1
Y Carrier	87.5		30 - 110					02/20/24 11:13	02/27/24 12:14	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	1.48		0.671	0.678	5.00	0.959	pCi/L		03/13/24 17:31	1

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-04

Lab Sample ID: 810-93944-4

Date Collected: 02/14/24 08:32

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.112	U	0.101	0.101	1.00	0.155	pCi/L	02/20/24 11:10	03/13/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		30 - 110					02/20/24 11:10	03/13/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.596	U	0.545	0.548	1.00	0.868	pCi/L	02/20/24 11:13	02/27/24 12:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		30 - 110					02/20/24 11:13	02/27/24 12:14	1
Y Carrier	78.1		30 - 110					02/20/24 11:13	02/27/24 12:14	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.708	U	0.554	0.557	5.00	0.868	pCi/L		03/13/24 17:31	1

Client Sample ID: MW-06

Lab Sample ID: 810-93944-5

Date Collected: 02/13/24 12:43

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.358		0.138	0.142	1.00	0.152	pCi/L	02/20/24 11:10	03/13/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					02/20/24 11:10	03/13/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.608	U	0.539	0.542	1.00	0.850	pCi/L	02/20/24 11:13	02/27/24 12:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					02/20/24 11:13	02/27/24 12:14	1
Y Carrier	70.7		30 - 110					02/20/24 11:13	02/27/24 12:14	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.965		0.556	0.560	5.00	0.850	pCi/L		03/13/24 17:31	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-07

Lab Sample ID: 810-93944-6

Date Collected: 02/13/24 15:35

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.495		0.156	0.162	1.00	0.156	pCi/L	02/20/24 11:10	03/13/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110					02/20/24 11:10	03/13/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.442	U	0.484	0.486	1.00	0.789	pCi/L	02/20/24 11:13	02/27/24 12:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110					02/20/24 11:13	02/27/24 12:14	1
Y Carrier	74.8		30 - 110					02/20/24 11:13	02/27/24 12:14	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.937		0.509	0.512	5.00	0.789	pCi/L		03/13/24 17:31	1

Client Sample ID: MW-08

Lab Sample ID: 810-93944-7

Date Collected: 02/13/24 10:22

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0880	U	0.0827	0.0831	1.00	0.126	pCi/L	02/20/24 11:10	03/13/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		30 - 110					02/20/24 11:10	03/13/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.343	U	0.501	0.502	1.00	0.848	pCi/L	02/20/24 11:13	02/27/24 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		30 - 110					02/20/24 11:13	02/27/24 12:15	1
Y Carrier	67.7		30 - 110					02/20/24 11:13	02/27/24 12:15	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.431	U	0.508	0.509	5.00	0.848	pCi/L		03/13/24 17:31	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-09

Lab Sample ID: 810-93944-8

Date Collected: 02/13/24 11:20

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0109	U	0.0600	0.0600	1.00	0.120	pCi/L	02/20/24 11:10	03/13/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.8		30 - 110					02/20/24 11:10	03/13/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.339	U	0.574	0.575	1.00	0.980	pCi/L	02/20/24 11:13	02/27/24 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.8		30 - 110					02/20/24 11:13	02/27/24 12:15	1
Y Carrier	70.7		30 - 110					02/20/24 11:13	02/27/24 12:15	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.350	U	0.577	0.578	5.00	0.980	pCi/L		03/13/24 17:31	1

Client Sample ID: MW-10

Lab Sample ID: 810-93944-9

Date Collected: 02/13/24 13:45

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.206		0.129	0.130	1.00	0.179	pCi/L	02/20/24 11:10	03/13/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		30 - 110					02/20/24 11:10	03/13/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	1.01		0.664	0.670	1.00	0.975	pCi/L	02/20/24 11:13	02/27/24 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		30 - 110					02/20/24 11:13	02/27/24 12:13	1
Y Carrier	60.9		30 - 110					02/20/24 11:13	02/27/24 12:13	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	1.22		0.676	0.682	5.00	0.975	pCi/L		03/13/24 17:31	1

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-11

Lab Sample ID: 810-93944-10

Date Collected: 02/13/24 14:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.514		0.145	0.152	1.00	0.119	pCi/L	02/20/24 11:10	03/13/24 07:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		30 - 110					02/20/24 11:10	03/13/24 07:36	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.612	U	0.495	0.498	1.00	0.765	pCi/L	02/20/24 11:13	02/27/24 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		30 - 110					02/20/24 11:13	02/27/24 12:13	1
Y Carrier	73.6		30 - 110					02/20/24 11:13	02/27/24 12:13	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.13		0.516	0.521	5.00	0.765	pCi/L		03/13/24 17:31	1

Client Sample ID: MW-12

Lab Sample ID: 810-93944-11

Date Collected: 02/13/24 17:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0276	U	0.0637	0.0637	1.00	0.116	pCi/L	02/20/24 11:10	03/13/24 07:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		30 - 110					02/20/24 11:10	03/13/24 07:36	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.611	U	0.481	0.484	1.00	0.749	pCi/L	02/20/24 11:13	02/27/24 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		30 - 110					02/20/24 11:13	02/27/24 12:13	1
Y Carrier	71.8		30 - 110					02/20/24 11:13	02/27/24 12:13	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.639	U	0.485	0.488	5.00	0.749	pCi/L		03/13/24 17:31	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-18

Lab Sample ID: 810-93944-12

Date Collected: 02/13/24 16:00

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0791	U	0.0739	0.0742	1.00	0.114	pCi/L	02/20/24 11:10	03/13/24 07:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.8		30 - 110					02/20/24 11:10	03/13/24 07:36	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.302	U	0.352	0.353	1.00	0.578	pCi/L	02/20/24 11:13	02/27/24 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.8		30 - 110					02/20/24 11:13	02/27/24 12:13	1
Y Carrier	74.0		30 - 110					02/20/24 11:13	02/27/24 12:13	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.381	U	0.360	0.361	5.00	0.578	pCi/L		03/13/24 17:31	1

Client Sample ID: MW-19

Lab Sample ID: 810-93944-13

Date Collected: 02/13/24 08:36

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.219		0.106	0.107	1.00	0.138	pCi/L	02/20/24 11:10	03/13/24 07:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110					02/20/24 11:10	03/13/24 07:36	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.561		0.374	0.378	1.00	0.550	pCi/L	02/20/24 11:13	02/27/24 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110					02/20/24 11:13	02/27/24 12:13	1
Y Carrier	74.8		30 - 110					02/20/24 11:13	02/27/24 12:13	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.779		0.389	0.393	5.00	0.550	pCi/L		03/13/24 17:31	1

Client Sample Results

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-20

Lab Sample ID: 810-93944-14

Date Collected: 02/13/24 14:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.195		0.0983	0.0998	1.00	0.126	pCi/L	02/20/24 11:10	03/13/24 07:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		30 - 110					02/20/24 11:10	03/13/24 07:36	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.327	U	0.526	0.527	1.00	0.894	pCi/L	02/20/24 11:13	02/27/24 12:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		30 - 110					02/20/24 11:13	02/27/24 12:14	1
Y Carrier	53.5		30 - 110					02/20/24 11:13	02/27/24 12:14	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.522	U	0.535	0.536	5.00	0.894	pCi/L		03/13/24 17:31	1

Tracer/Carrier Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)			
Lab Sample ID	Client Sample ID	Ba (30-110)			
810-93944-1	MW-01R	89.5			
810-93944-3	MW-03	67.3			
810-93944-4	MW-04	89.3			
810-93944-5	MW-06	90.3			
810-93944-6	MW-07	89.8			
810-93944-7	MW-08	90.0			
810-93944-8	MW-09	90.8			
810-93944-9	MW-10	85.5			
810-93944-10	MW-11	93.3			
810-93944-11	MW-12	87.8			
810-93944-11 DU	MW-12	83.3			
810-93944-12	MW-18	84.8			
810-93944-13	MW-19	89.8			
810-93944-14	MW-20	92.0			
LCS 160-648898/2-A	Lab Control Sample	95.8			
MB 160-648898/1-A	Method Blank	90.3			

Tracer/Carrier Legend
Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
810-93944-1	MW-01R	89.5	77.0
810-93944-3	MW-03	67.3	87.5
810-93944-4	MW-04	89.3	78.1
810-93944-5	MW-06	90.3	70.7
810-93944-6	MW-07	89.8	74.8
810-93944-7	MW-08	90.0	67.7
810-93944-8	MW-09	90.8	70.7
810-93944-9	MW-10	85.5	60.9
810-93944-10	MW-11	93.3	73.6
810-93944-11	MW-12	87.8	71.8
810-93944-11 DU	MW-12	83.3	78.9
810-93944-12	MW-18	84.8	74.0
810-93944-13	MW-19	89.8	74.8
810-93944-14	MW-20	92.0	53.5
LCS 160-648899/2-A	Lab Control Sample	95.8	87.9
MB 160-648899/1-A	Method Blank	90.3	86.7

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

QC Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-648898/1-A
Matrix: Drinking Water
Analysis Batch: 652315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 648898

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.02151	U	0.0461	0.0462	1.00	0.0849	pCi/L	02/20/24 11:10	03/13/24 07:21	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	90.3		30 - 110		02/20/24 11:10	03/13/24 07:21	1			

Lab Sample ID: LCS 160-648898/2-A
Matrix: Drinking Water
Analysis Batch: 652315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 648898

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	11.17		1.14	1.00	0.0828	pCi/L	99	90 - 110
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	95.8		30 - 110						

Lab Sample ID: 810-93944-11 DU
Matrix: Drinking Water
Analysis Batch: 652334

Client Sample ID: MW-12
Prep Type: Total/NA
Prep Batch: 648898

Analyte	Sample		DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Sample Qual	Result	DU Qual	Uncert. (2σ+/-)					
Radium-226	0.0276	U	0.05503	U	0.0577	1.00	0.0897	pCi/L	0.23	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	83.3		30 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-648899/1-A
Matrix: Drinking Water
Analysis Batch: 649967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 648899

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3786	U	0.324	0.325	1.00	0.506	pCi/L	02/20/24 11:13	02/27/24 12:13	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	90.3		30 - 110		02/20/24 11:13	02/27/24 12:13	1			
Y Carrier	86.7		30 - 110		02/20/24 11:13	02/27/24 12:13	1			

QC Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-648899/2-A
Matrix: Drinking Water
Analysis Batch: 649967

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 648899

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
										Radium-228
LCS LCS										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	95.8		30 - 110							
Y Carrier	87.9		30 - 110							

Lab Sample ID: 810-93944-11 DU
Matrix: Drinking Water
Analysis Batch: 650047

Client Sample ID: MW-12
Prep Type: Total/NA
Prep Batch: 648899

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit
DU DU										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	83.3		30 - 110							
Y Carrier	78.9		30 - 110							

QC Association Summary

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93944-1

Rad

Prep Batch: 648898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93944-1	MW-01R	Total/NA	Drinking Water	PrecSep-21	
810-93944-3	MW-03	Total/NA	Drinking Water	PrecSep-21	
810-93944-4	MW-04	Total/NA	Drinking Water	PrecSep-21	
810-93944-5	MW-06	Total/NA	Drinking Water	PrecSep-21	
810-93944-6	MW-07	Total/NA	Drinking Water	PrecSep-21	
810-93944-7	MW-08	Total/NA	Drinking Water	PrecSep-21	
810-93944-8	MW-09	Total/NA	Drinking Water	PrecSep-21	
810-93944-9	MW-10	Total/NA	Drinking Water	PrecSep-21	
810-93944-10	MW-11	Total/NA	Drinking Water	PrecSep-21	
810-93944-11	MW-12	Total/NA	Drinking Water	PrecSep-21	
810-93944-12	MW-18	Total/NA	Drinking Water	PrecSep-21	
810-93944-13	MW-19	Total/NA	Drinking Water	PrecSep-21	
810-93944-14	MW-20	Total/NA	Drinking Water	PrecSep-21	
MB 160-648898/1-A	Method Blank	Total/NA	Drinking Water	PrecSep-21	
LCS 160-648898/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep-21	
810-93944-11 DU	MW-12	Total/NA	Drinking Water	PrecSep-21	

Prep Batch: 648899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93944-1	MW-01R	Total/NA	Drinking Water	PrecSep_0	
810-93944-3	MW-03	Total/NA	Drinking Water	PrecSep_0	
810-93944-4	MW-04	Total/NA	Drinking Water	PrecSep_0	
810-93944-5	MW-06	Total/NA	Drinking Water	PrecSep_0	
810-93944-6	MW-07	Total/NA	Drinking Water	PrecSep_0	
810-93944-7	MW-08	Total/NA	Drinking Water	PrecSep_0	
810-93944-8	MW-09	Total/NA	Drinking Water	PrecSep_0	
810-93944-9	MW-10	Total/NA	Drinking Water	PrecSep_0	
810-93944-10	MW-11	Total/NA	Drinking Water	PrecSep_0	
810-93944-11	MW-12	Total/NA	Drinking Water	PrecSep_0	
810-93944-12	MW-18	Total/NA	Drinking Water	PrecSep_0	
810-93944-13	MW-19	Total/NA	Drinking Water	PrecSep_0	
810-93944-14	MW-20	Total/NA	Drinking Water	PrecSep_0	
MB 160-648899/1-A	Method Blank	Total/NA	Drinking Water	PrecSep_0	
LCS 160-648899/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep_0	
810-93944-11 DU	MW-12	Total/NA	Drinking Water	PrecSep_0	

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-01R
Date Collected: 02/13/24 14:05
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93944-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:34
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	649967	CMM	EET SL	02/27/24 12:14
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-03
Date Collected: 02/14/24 09:40
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93944-3
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:35
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	649967	CMM	EET SL	02/27/24 12:14
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-04
Date Collected: 02/14/24 08:32
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93944-4
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:35
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	649967	CMM	EET SL	02/27/24 12:14
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-06
Date Collected: 02/13/24 12:43
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93944-5
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:35
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	649967	CMM	EET SL	02/27/24 12:14
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-07

Lab Sample ID: 810-93944-6

Date Collected: 02/13/24 15:35

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:35
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	649967	CMM	EET SL	02/27/24 12:14
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-08

Lab Sample ID: 810-93944-7

Date Collected: 02/13/24 10:22

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:35
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	649967	CMM	EET SL	02/27/24 12:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-09

Lab Sample ID: 810-93944-8

Date Collected: 02/13/24 11:20

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:35
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	649967	CMM	EET SL	02/27/24 12:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-10

Lab Sample ID: 810-93944-9

Date Collected: 02/13/24 13:45

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:35
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	650047	CMM	EET SL	02/27/24 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-11

Lab Sample ID: 810-93944-10

Date Collected: 02/13/24 14:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:36
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	650047	CMM	EET SL	02/27/24 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-12

Lab Sample ID: 810-93944-11

Date Collected: 02/13/24 17:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:36
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	650047	CMM	EET SL	02/27/24 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-18

Lab Sample ID: 810-93944-12

Date Collected: 02/13/24 16:00

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:36
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	650047	CMM	EET SL	02/27/24 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Client Sample ID: MW-19

Lab Sample ID: 810-93944-13

Date Collected: 02/13/24 08:36

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:36
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	650047	CMM	EET SL	02/27/24 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Client Sample ID: MW-20

Lab Sample ID: 810-93944-14

Date Collected: 02/13/24 14:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648898	KAC	EET SL	02/20/24 11:10
Total/NA	Analysis	903.0		1	652334	SWS	EET SL	03/13/24 07:36
Total/NA	Prep	PrecSep_0			648899	KAC	EET SL	02/20/24 11:13
Total/NA	Analysis	904.0		1	650047	CMM	EET SL	02/27/24 12:14
Total/NA	Analysis	Ra226_Ra228 Pos		1	652370	SCB	EET SL	03/13/24 17:31

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Accreditation/Certification Summary

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93944-1

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	03-31-24
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Pos			
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

- EPA = US Environmental Protection Agency
- None = None
- TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

- EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-93944-1	MW-01R	Drinking Water	02/13/24 14:05	02/15/24 09:00
810-93944-3	MW-03	Drinking Water	02/14/24 09:40	02/15/24 09:00
810-93944-4	MW-04	Drinking Water	02/14/24 08:32	02/15/24 09:00
810-93944-5	MW-06	Drinking Water	02/13/24 12:43	02/15/24 09:00
810-93944-6	MW-07	Drinking Water	02/13/24 15:35	02/15/24 09:00
810-93944-7	MW-08	Drinking Water	02/13/24 10:22	02/15/24 09:00
810-93944-8	MW-09	Drinking Water	02/13/24 11:20	02/15/24 09:00
810-93944-9	MW-10	Drinking Water	02/13/24 13:45	02/15/24 09:00
810-93944-10	MW-11	Drinking Water	02/13/24 14:30	02/15/24 09:00
810-93944-11	MW-12	Drinking Water	02/13/24 17:30	02/15/24 09:00
810-93944-12	MW-18	Drinking Water	02/13/24 16:00	02/15/24 09:00
810-93944-13	MW-19	Drinking Water	02/13/24 08:36	02/15/24 09:00
810-93944-14	MW-20	Drinking Water	02/13/24 14:30	02/15/24 09:00

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n Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order #
Batch #

810-93944 Chain of Custody

CHAIN OF CUSTODY RECORD

Page _____ of _____

REPORT TO: Jon Mink, Tim Brewer (jmink@trace-labs.com, tbrewer@trace-labs.com) Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444 231-773-5998

BILL TO: Accounts Payable, Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444

SAMPLER (Signature) PWS ID # STATE (sample origin) PROJECT NAME PO#

COMPLIANCE MONITORING Yes No POPULATION SERVED SOURCE WATER 24B0630 24B0630

LAB Number	COLLECTION			SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED		# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
	DATE	TIME					YES	NO			
1	02/13/24	14:35	X	MMW-01R 0	Radium 226/228				4	GW	SW
2	02/13/24	12:15	X	MMW-02 0	Radium 226/228				4	GW	SW
3	02/14/24	9:40	X	MMW-03 0	Radium 226/228				4	GW	SW
4	02/14/24	8:32	X	MMW-04 0	Radium 226/228				4	GW	SW
5	02/13/24	12:43	X	MMW-06 0	Radium 226/228				4	GW	SW
6	02/13/24	15:35	X	MMW-07 0	Radium 226/228				4	GW	SW
7	02/13/24	10:22	X	MMW-08 0	Radium 226/228				4	GW	SW
8	02/13/24	11:20	X	MMW-09	Radium 226/228				4	GW	SW
9	02/13/24	13:45	X	MMW-10	Radium 226/228				4	GW	SW
10	02/13/24	14:30	X	MMW-11	Radium 226/228				4	GW	SW
11	02/13/24	17:30	X	MMW-12	Radium 226/228				4	GW	SW
12	02/13/24	16:00	X	MMW-18	Radium 226/228				4	GW	SW
13	02/13/24	8:36	X	MMW-19	Radium 226/228				4	GW	SW
14	02/13/24	14:30	X	MMW-20	Radium 226/228				4	GW	SW

PH Acceptable
Less than 2

RELINQUISHED BY: (Signature) *BWS* DATE *2/14/24* TIME AM PM RECEIVED BY: (Signature) *Fedex* DATE DATE TIME AM PM

RELINQUISHED BY: (Signature) DATE DATE TIME AM PM RECEIVED FOR LABORATORY BY: DATE DATE TIME AM PM

RELINQUISHED BY: (Signature) DATE DATE TIME AM PM

MATRIX CODES:
 DW-DRINKING WATER
 RW-REAGENT WATER
 GW-GROUND WATER
 EW-EXPOSURE WATER
 SW-SURFACE WATER
 PW-POOL WATER
 WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES
 SW = Standard Written: (15 working days) 0%
 RV = Rush Verbal: (5 working days) 50%
 RW = Rush Written: (5 working days) 75%
 IV = Immediate Verbal: (3 working days) 100%
 IW = Immediate Written: (3 working days) 125%
 SP = Weekend, Holiday
 STAT = Less than 48 hours
 CALL

LAB COMMENTS: LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

CONDITIONS UPON RECEIPT (check one):
 Iced: Wet/Blue: Ambient: °C Upon Receipt: N/A

Sample analysis will be provided according to the standard EEA Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA.

06-LOI-0435 Issue 6.0 Effective Date: 2016-09-20

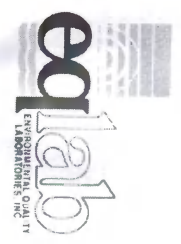
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LABORATORY: Eurofins Eaton Analytical (Indiana)
 ADDRESS: 110 South Hill Street
 South Bend, IN 46617-2702

**ANALYTICAL SERVICES REQUEST
 AND CHAIN OF CUSTODY**

CONTACT: Pamela Brown
 RECEIVED DATE: 14-February-2024



Page 1 of 1

Client ID: 1502-01-01
 Folder #: 352140
 Matrix: DRINKING WATER
 Sample ID: 3974212
 SAMPLE INFORMATION

EQLAB Rep: YRIOS
 Date Collected: 14-Feb-2024
 Collected Time: 09:00
 Total Containers: 4

CONTAINER ID	TEST NAME	CONTAINER	METHOD
3974212-1	RADIUM 226	1000 ML	SM 7500-Ra B
3974212-1	URANIUM	250 ML	EPA 200.8
3974212-1	GROSS ALPHA / GROSS BETA	1000 ML	SM 7110B
	RADIUM 228	1000 ML	SM 7500-Ra D

Comments:

RELINQUISHED BY / DATE

APPROVED BY / DATE

Amphaine

02/14/24

TURN AROUND TIME:

10 days

P. O. #:

7M2230A

RECEIVED BY / DATE:

Brown - 2-15-24 ORS

Ambient

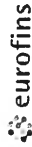
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Eurofins Eaton Analytical South Bend

110 S Hill Street
 South Bend, IN 46617
 Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc.		Phone: Address: City: State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:		Fullmer, Karen E-Mail: Karen.Fullmer@eurofins.com		Michigan		810-36739-1	
Due Date Requested: 3/19/2024 TAT Requested (days):		Accreditations Required (See note): State - Michigan		Perform MS/MSD (Yes or No)		903.0/PreSep. 21 EPA 903.0 - Radium 226 (St. Louis)		Page: Page 1 of 2 Job #: 810-93944-1	
Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, D=dewar, O=oil)	Field Filtered Sample (Yes or No)	903.0/PreSep. 21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PreSep. 0 EPA 904.0 - Radium 228 & Ra228 Calc (St. Louis)	Analysis Requested	Special Instructions/Note:
MW-01R (810-93944-1)	2/13/24	14:05 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-02 (810-93944-2)	2/13/24	12:15 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-03 (810-93944-3)	2/13/24	09:40 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-04 (810-93944-4)	2/13/24	08:32 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-06 (810-93944-5)	2/13/24	12:43 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-07 (810-93944-6)	2/13/24	15:35 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-08 (810-93944-7)	2/13/24	10:22 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-09 (810-93944-8)	2/13/24	11:20 Eastern	Drinking Water	Drinking Water	X	X	X		
MW-10 (810-93944-9)	2/13/24	13:45 Eastern	Drinking Water	Drinking Water	X	X	X		

Preservation Codes:
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2OAS
 Q - Na2SO3
 R - Na2SO4
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 Y - Trizma
 Z - other (specify)
 Other:

Special Instructions/Note:

Analysis Requested:

Field Filtered Sample (Yes or No): X

Perform MS/MSD (Yes or No): X

903.0/PreSep. 21 EPA 903.0 - Radium 226 (St. Louis): X

904.0/PreSep. 0 EPA 904.0 - Radium 228 & Ra228 Calc (St. Louis): X

Total Number of Containers: 4

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month):
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: _____ Date/Time: 2-15-24 1600 Company: Richard Thornley
 Received by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Cooler Temperature(s) °C and Other Remarks:



Eurofins Eaton Analytical South Bend

110 S Hill Street
 South Bend, IN 46617
 Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Lab PM: Fullmer, Karen	Carrier Tracking No(s): 810-36739.2
Client Contact: Shipping/Receiving		E-Mail: Karen.Fullmer@et.eurofins.com	State of Origin: Michigan
Company: TestAmerica Laboratories, Inc.		Address: 13715 Rider Trail North, Earth City, MO, 63045	Job #: 810-93944-1
Address: 13715 Rider Trail North, Earth City, MO, 63045		Phone: 314-298-8566(Tel) 314-298-8757(Fax)	Page: Page 2 of 2
Due Date Requested: 3/19/2024		Project #: 81000263	COC No: 810-36739.2
TAT Requested (days):		SSOW#: 24B0630	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:
PO #:		90.0/PreSep_21 EPA 903.0 - Radium 226 (St Louis)	M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Y - Trizma Z - other (specify)
WO #:		904.0/PreSep_0 EPA 904.0 - Radium 228 & Ra228 Calc (St Louis)	
Field Filtered Sample (Yes or No)		904.0/PreSep_0 EPA 904.0 - Radium 228 & Ra228 Calc (St Louis)	
Perform MS/MSD (Yes or No)		904.0/PreSep_0 EPA 904.0 - Radium 228 & Ra228 Calc (St Louis)	
Sample Identification - Client ID (Lab ID)		903.0/PreSep_21 EPA 903.0 - Radium 226 (St Louis)	
Sample Date	Sample Time	Sample Type (G-comp, G-grab)	Matrix (W=water, S=solid, O=soil, G=grab)
2/13/24	14:30 Eastern		Drinking Water
2/13/24	17:30 Eastern		Drinking Water
2/13/24	16:00 Eastern		Drinking Water
2/13/24	08:36 Eastern		Drinking Water
2/13/24	14:30 Eastern		Drinking Water
Total Number of containers			
Special Instructions/Note:			

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification

Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: Date: Method of Shipment:
 Relinquished by: Date/Time: Received by: Richard Thornley Company
 Relinquished by: Date/Time: Received by: Company
 Relinquished by: Date/Time: Received by: Company
 Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:



Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93944-1

Login Number: 93944

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Moore, Gary

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93944-1

Login Number: 93944

List Number: 2

Creator: Thornley, Richard W

List Source: Eurofins St. Louis

List Creation: 02/16/24 11:36 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Jon Mink
Trace Analytical Laboratories
2241 Black Creek Road
Muskegon, Michigan 49444

Generated 3/15/2024 2:43:57 PM

JOB DESCRIPTION

24B0630

JOB NUMBER

810-93941-1

Eurofins Eaton Analytical South Bend

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



Generated
3/15/2024 2:43:57 PM

Authorized for release by
Karen Fullmer, Project Manager
Karen.Fullmer@et.eurofinsus.com
(574)233-4777



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Definitions/Glossary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Trace Analytical Laboratories
Project: 24B0630

Job ID: 810-93941-1

Job ID: 810-93941-1

Eurofins Eaton Analytical South Bend

Job Narrative 810-93941-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/15/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

Receipt Exceptions

The reference method requires samples to have a pH of less than 2. The following samplea were received with a pH of 7: MW-30 (810-93941-1), MW-31 (810-93941-2), MW-32 (810-93941-3), MW-33 (810-93941-4), MW-34 (810-93941-5), MWT-30 (810-93941-6) and MWT-34 (810-93941-7). The samples were adjusted to the appropriate pH in the laboratory.

Affected Containers

810-93941-A-5
810-93941-B-7
810-93941-C-5

Gas Flow Proportional Counter

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Client Sample ID: MW-30

Lab Sample ID: 810-93941-1

No Detections.

Client Sample ID: MW-31

Lab Sample ID: 810-93941-2

No Detections.

Client Sample ID: MW-32

Lab Sample ID: 810-93941-3

No Detections.

Client Sample ID: MW-33

Lab Sample ID: 810-93941-4

No Detections.

Client Sample ID: MW-34

Lab Sample ID: 810-93941-5

No Detections.

Client Sample ID: MWT-30

Lab Sample ID: 810-93941-6

No Detections.

Client Sample ID: MWT-34

Lab Sample ID: 810-93941-7

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical South Bend



Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Client Sample ID: MW-30

Lab Sample ID: 810-93941-1

Date Collected: 02/12/24 16:18

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0718	U	0.0749	0.0752	1.00	0.117	pCi/L	02/19/24 10:28	03/14/24 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.3		30 - 110					02/19/24 10:28	03/14/24 09:34	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.721		0.423	0.428	1.00	0.604	pCi/L	02/19/24 10:31	03/07/24 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.3		30 - 110					02/19/24 10:31	03/07/24 11:46	1
Y Carrier	82.2		30 - 110					02/19/24 10:31	03/07/24 11:46	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	0.793		0.430	0.435	5.00	0.604	pCi/L		03/15/24 13:32	1

Client Sample ID: MW-31

Lab Sample ID: 810-93941-2

Date Collected: 02/12/24 15:00

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.171		0.105	0.107	1.00	0.143	pCi/L	02/19/24 10:28	03/14/24 09:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.5		30 - 110					02/19/24 10:28	03/14/24 09:33	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.842		0.420	0.427	1.00	0.569	pCi/L	02/19/24 10:31	03/07/24 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.5		30 - 110					02/19/24 10:31	03/07/24 11:46	1
Y Carrier	80.4		30 - 110					02/19/24 10:31	03/07/24 11:46	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226 and 228	1.01		0.433	0.440	5.00	0.569	pCi/L		03/15/24 13:32	1

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Client Sample ID: MW-32

Lab Sample ID: 810-93941-3

Date Collected: 02/12/24 16:30

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0998	U	0.0989	0.0993	1.00	0.156	pCi/L	02/19/24 10:28	03/14/24 09:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		30 - 110					02/19/24 10:28	03/14/24 09:33	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.345	U	0.332	0.334	1.00	0.530	pCi/L	02/19/24 10:31	03/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		30 - 110					02/19/24 10:31	03/07/24 11:47	1
Y Carrier	83.0		30 - 110					02/19/24 10:31	03/07/24 11:47	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.445	U	0.346	0.348	5.00	0.530	pCi/L		03/15/24 13:32	1

Client Sample ID: MW-33

Lab Sample ID: 810-93941-4

Date Collected: 02/12/24 15:18

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.000	U	0.0772	0.0772	1.00	0.162	pCi/L	02/19/24 10:28	03/14/24 14:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		30 - 110					02/19/24 10:28	03/14/24 14:39	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.681	U	0.569	0.573	1.00	0.892	pCi/L	02/19/24 10:31	03/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		30 - 110					02/19/24 10:31	03/07/24 11:47	1
Y Carrier	78.9		30 - 110					02/19/24 10:31	03/07/24 11:47	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.681	U	0.574	0.578	5.00	0.892	pCi/L		03/15/24 13:32	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Client Sample ID: MW-34

Lab Sample ID: 810-93941-5

Date Collected: 02/12/24 14:00

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.527		0.195	0.201	1.00	0.223	pCi/L	02/19/24 10:28	03/14/24 14:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.3		30 - 110					02/19/24 10:28	03/14/24 14:39	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.33		0.596	0.609	1.00	0.783	pCi/L	02/19/24 10:31	03/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.3		30 - 110					02/19/24 10:31	03/07/24 11:47	1
Y Carrier	80.4		30 - 110					02/19/24 10:31	03/07/24 11:47	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.86		0.627	0.641	5.00	0.783	pCi/L		03/15/24 13:32	1

Client Sample ID: MWT-30

Lab Sample ID: 810-93941-6

Date Collected: 02/12/24 16:18

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0375	U	0.0733	0.0734	1.00	0.131	pCi/L	02/19/24 10:28	03/14/24 14:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		30 - 110					02/19/24 10:28	03/14/24 14:39	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.412	U	0.340	0.342	1.00	0.523	pCi/L	02/19/24 10:31	03/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		30 - 110					02/19/24 10:31	03/07/24 11:47	1
Y Carrier	78.5		30 - 110					02/19/24 10:31	03/07/24 11:47	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.450	U	0.348	0.350	5.00	0.523	pCi/L		03/15/24 13:32	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Client Sample ID: MWT-34

Lab Sample ID: 810-93941-7

Date Collected: 02/12/24 14:00

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.467		0.160	0.165	1.00	0.137	pCi/L	02/19/24 10:28	03/14/24 14:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		30 - 110					02/19/24 10:28	03/14/24 14:39	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.548	U	0.508	0.510	1.00	0.806	pCi/L	02/19/24 10:31	03/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		30 - 110					02/19/24 10:31	03/07/24 11:47	1
Y Carrier	82.2		30 - 110					02/19/24 10:31	03/07/24 11:47	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.02		0.533	0.536	5.00	0.806	pCi/L		03/15/24 13:32	1

Tracer/Carrier Summary

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93941-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
810-93941-1	MW-30	76.3	
810-93941-2	MW-31	80.5	
810-93941-3	MW-32	89.5	
810-93941-4	MW-33	80.3	
810-93941-5	MW-34	79.3	
810-93941-6	MWT-30	85.3	
810-93941-7	MWT-34	81.0	
LCS 160-648752/2-A	Lab Control Sample	89.0	
MB 160-648752/1-A	Method Blank	101	
Tracer/Carrier Legend			
Ba = Ba Carrier			

Method: 904.0 - Radium-228 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
810-93941-1	MW-30	76.3	82.2
810-93941-2	MW-31	80.5	80.4
810-93941-3	MW-32	89.5	83.0
810-93941-4	MW-33	80.3	78.9
810-93941-5	MW-34	79.3	80.4
810-93941-6	MWT-30	85.3	78.5
810-93941-7	MWT-34	81.0	82.2
LCS 160-648753/2-A	Lab Control Sample	89.0	81.9
MB 160-648753/1-A	Method Blank	101	82.6
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

QC Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-648752/1-A
Matrix: Drinking Water
Analysis Batch: 652384

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 648752

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04516	U	0.0525	0.0527	1.00	0.0843	pCi/L	02/19/24 10:28	03/14/24 09:21	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	101		30 - 110		02/19/24 10:28	03/14/24 09:21	1			

Lab Sample ID: LCS 160-648752/2-A
Matrix: Drinking Water
Analysis Batch: 652384

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 648752

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-226	11.3	10.97		1.16	1.00	0.0907	pCi/L	97	90 - 110
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.0		30 - 110						

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-648753/1-A
Matrix: Drinking Water
Analysis Batch: 651439

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 648753

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.07909	U	0.237	0.237	1.00	0.427	pCi/L	02/19/24 10:31	03/07/24 11:48	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	101		30 - 110		02/19/24 10:31	03/07/24 11:48	1			
Y Carrier	82.6		30 - 110		02/19/24 10:31	03/07/24 11:48	1			

Lab Sample ID: LCS 160-648753/2-A
Matrix: Drinking Water
Analysis Batch: 651439

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 648753

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-228	9.15	10.30		1.39	1.00	0.591	pCi/L	113	80 - 120
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.0		30 - 110						
Y Carrier	81.9		30 - 110						

QC Association Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Rad

Prep Batch: 648752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93941-1	MW-30	Total/NA	Drinking Water	PrecSep-21	
810-93941-2	MW-31	Total/NA	Drinking Water	PrecSep-21	
810-93941-3	MW-32	Total/NA	Drinking Water	PrecSep-21	
810-93941-4	MW-33	Total/NA	Drinking Water	PrecSep-21	
810-93941-5	MW-34	Total/NA	Drinking Water	PrecSep-21	
810-93941-6	MWT-30	Total/NA	Drinking Water	PrecSep-21	
810-93941-7	MWT-34	Total/NA	Drinking Water	PrecSep-21	
MB 160-648752/1-A	Method Blank	Total/NA	Drinking Water	PrecSep-21	
LCS 160-648752/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep-21	

Prep Batch: 648753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93941-1	MW-30	Total/NA	Drinking Water	PrecSep_0	
810-93941-2	MW-31	Total/NA	Drinking Water	PrecSep_0	
810-93941-3	MW-32	Total/NA	Drinking Water	PrecSep_0	
810-93941-4	MW-33	Total/NA	Drinking Water	PrecSep_0	
810-93941-5	MW-34	Total/NA	Drinking Water	PrecSep_0	
810-93941-6	MWT-30	Total/NA	Drinking Water	PrecSep_0	
810-93941-7	MWT-34	Total/NA	Drinking Water	PrecSep_0	
MB 160-648753/1-A	Method Blank	Total/NA	Drinking Water	PrecSep_0	
LCS 160-648753/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep_0	

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Client Sample ID: MW-30
Date Collected: 02/12/24 16:18
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93941-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:34
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:46
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: MW-31
Date Collected: 02/12/24 15:00
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93941-2
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:33
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:46
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: MW-32
Date Collected: 02/12/24 16:30
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93941-3
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652406	FLC	EET SL	03/14/24 09:33
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: MW-33
Date Collected: 02/12/24 15:18
Date Received: 02/15/24 09:00

Lab Sample ID: 810-93941-4
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652384	SWS	EET SL	03/14/24 14:39
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Client Sample ID: MW-34

Lab Sample ID: 810-93941-5

Date Collected: 02/12/24 14:00

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652384	SWS	EET SL	03/14/24 14:39
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: MWT-30

Lab Sample ID: 810-93941-6

Date Collected: 02/12/24 16:18

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652384	SWS	EET SL	03/14/24 14:39
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Client Sample ID: MWT-34

Lab Sample ID: 810-93941-7

Date Collected: 02/12/24 14:00

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			648752	KAC	EET SL	02/19/24 10:28
Total/NA	Analysis	903.0		1	652384	SWS	EET SL	03/14/24 14:39
Total/NA	Prep	PrecSep_0			648753	KAC	EET SL	02/19/24 10:31
Total/NA	Analysis	904.0		1	651337	FLC	EET SL	03/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	652694	SCB	EET SL	03/15/24 13:32

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93941-1

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Pos			
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93941-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-93941-1	MW-30	Drinking Water	02/12/24 16:18	02/15/24 09:00
810-93941-2	MW-31	Drinking Water	02/12/24 15:00	02/15/24 09:00
810-93941-3	MW-32	Drinking Water	02/12/24 16:30	02/15/24 09:00
810-93941-4	MW-33	Drinking Water	02/12/24 15:18	02/15/24 09:00
810-93941-5	MW-34	Drinking Water	02/12/24 14:00	02/15/24 09:00
810-93941-6	MWT-30	Drinking Water	02/12/24 16:18	02/15/24 09:00
810-93941-7	MWT-34	Drinking Water	02/12/24 14:00	02/15/24 09:00

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Eurofins Eaton Analytical South Bend

110 S Hill Street
 South Bend, IN 46617
 Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)
 Client Contact: **Fullmer, Karen**
 Shipping/Receiving: **Karen Fullmer@et.eurofins.com**
 Company: **TesAmerica Laboratories, Inc.**
 Address: **13715 Rider Trail North,**
 City: **Earth City**
 State Zip: **MO, 63045**
 Phone: **314-298-8566(Tel) 314-298-8757(Fax)**
 Email: **W/O #**
 Project Name: **24B0630**
 Site: **SSOV#:**

Sampler: **Fullmer, Karen**
 Phone: **Karen Fullmer@et.eurofins.com**
 Lab PM: **State - Michigan**
 Carrier Tracking No(s): **810-93941-1**
 State of Origin: **Michigan**
 COC No: **810-36739.1**
 Page: **Page 1 of 1**

Analysis Requested
 Due Date Requested: **3/19/2024**
 TAT Requested (days):
 PO #:
 W/O #:
 Project #: **81000263**
 SSOV#:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=soil, O=overst, BT=trass, A=Al)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
MMW-30 (810-93941-1)	2/12/24	16:18	Eastern	drinking Water		X	X	4	
MMW-31 (810-93941-2)	2/12/24	15:00	Eastern	drinking Water		X	X	4	
MMW-32 (810-93941-3)	2/12/24	16:30	Eastern	drinking Water		X	X	4	
MMW-33 (810-93941-4)	2/12/24	15:18	Eastern	drinking Water		X	X	4	
MMW-34 (810-93941-5)	2/12/24	14:00	Eastern	drinking Water		X	X	4	
MMWT-30 (810-93941-6)	2/12/24	16:18	Eastern	drinking Water		X	X	4	
MMWT-34 (810-93941-7)	2/12/24	14:00	Eastern	drinking Water		X	X	4	

Analysis Requested
 903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)
 904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)
 Ra226_228GFPC_PI Combined Ra226 & Ra228 Calc (St. Louis)

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDTA
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2SO4
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Y - Trizma
 Z - other (specify)

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (Specify) **Primary Deliverable Rank: 2**
 Empty Kit Relinquished by: **Date:**
 Relinquished by: **Date/Time:** *2-15-24 16:00*
 Relinquished by: **Date/Time:**
 Relinquished by: **Date/Time:**
 Custody Seals Intact: **Custody Seal No.:**
 Δ Yes Δ No
 Cooler Temperature(s) °C and Other Remarks:

Chain of Custody Record



Environment Testing

110 S Hill Street
 South Bend, IN 46617
 Phone: 574-233-4777 Fax: 574-233-8207

Client Information (Sub Contract Lab)

Company: **TestAmerica Laboratories, Inc.**

Address: **13715 Rider Trail North,**

City: **Earth City**

State, Zip: **MO, 63045**

Phone: **314-298-8566(Tel) 314-298-8757(Fax)**

Email: **WO #:**

Project Name: **24B0630**

Site: **SSOW#:**

Sampler: **Lab PM: Fullmer, Karen**
 Phone: **E-Mail: Karen.Fullmer@et.eurofins.com**

Due Date Requested: **3/19/2024**
 TAT Requested (days): **State - Michigan**

Carrier Tracking No(s): **810-93944-1**
 State of Origin: **Michigan**

COC No: **810-36739-1**
 Page: **Page 1 of 2**
 Job #: **810-93944-1**

Preservation Codes: **M - Hexane, N - None, O - Ash/02, P - Na2O/S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4.5, Y - Trizma, Z - other (specify)**

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (Water, Seawater, Overwater, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)			Perform MS/MSD (Yes or No)			Total Number of containers	Special Instructions/Note:
						903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)	Ra226_228GFPC_P/ Combined Ra226 & Ra228 Calc (St. Louis)	903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)	Ra226_228GFPC_P/ Combined Ra226 & Ra228 Calc (St. Louis)		
MMW-01R (810-93944-1)	2/13/24	14:05	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-02 (810-93944-2)	2/13/24	12:15	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-03 (810-93944-3)	2/13/24	09:40	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-04 (810-93944-4)	2/13/24	08:32	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-06 (810-93944-5)	2/13/24	12:43	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-07 (810-93944-6)	2/13/24	15:35	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-08 (810-93944-7)	2/13/24	10:22	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-09 (810-93944-8)	2/13/24	11:20	Eastern	drinking Water		X	X	X	X	X	X	4	
MMW-10 (810-93944-9)	2/13/24	13:45	Eastern	drinking Water		X	X	X	X	X	X	4	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analysis & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/method being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification

Unconfirmed Deliverable Requested: I, II, III, IV, Other (Specify) **Primary Deliverable Rank: 2**

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For **Months**

Special Instructions/QC Requirements: **Special Instructions/QC Requirements:**

Empty Kit Relinquished by: **Date:** **Time:** **Method of Shipment:**

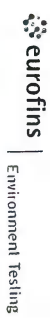
Relinquished by: **Date/Time:** **Company:** **Received by:** **Date/Time:** **Company:**

Relinquished by: **Date/Time:** **Company:** **Received by:** **Date/Time:** **Company:**

Custody Seals Intact: **Δ Yes Δ No** **Custody Seal No.:** **Cooler Temperature(s) °C and Other Remarks:**

Eurofins Eaton Analytical South Bend
 110 S Hill Street
 South Bend, IN 46817
 Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record



Client Information (Sub Contract Lab)
 Client Contact: **TestAmerica Laboratories, Inc.**
 Address: 13715 Rider Trail North
 City: Earth City
 State, zip: MO, 63045
 Phone: 314-298-8568(Tel) 314-298-8757(Fax)
 Email: 314-298-8568(Tel) 314-298-8757(Fax)

Shipping/Receiving
 Company: TestAmerica Laboratories, Inc.
 Address: 13715 Rider Trail North
 City: Earth City
 State, zip: MO, 63045
 Phone: 314-298-8568(Tel) 314-298-8757(Fax)
 Email: 314-298-8568(Tel) 314-298-8757(Fax)

Project Name: 24B0630
Site:
PO #:
WC #:
Project #: 81000263
SSOM#:

Due Date Requested: 3/19/2024
TAT Requested (days):

Lab P/N:
Filler: Karen
Email: Karen.Fullmer@et.eurofins.com
Accreditations Required (See note): State - Michigan
Carrier/Tracking No(s):
State of Origin: Michigan

COC No: 810-36739.2
Page: Page 2 of 2
Job #: 810-93944-1

Analysis Requested
 903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)
 904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)
 Ra226_228GFPC_PJ Combined Ra226 & Ra228 Calc (St. Louis)

Preservation Codes:
 A - HCl
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDTA
 M - Hexane
 N - None
 O - AsHAcO2
 P - Na2OAS
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 Y - Triema
 Z - other (specify)
 Other:

Special Instructions/Note:

Primary Deliverable Rank: 2
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
Special Instructions/QC Requirements:

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Sealed, Overstabil, Brixhaus, AsH)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers
MMW-11 (810-93944-10)	2/13/24	14:30	Eastern	Drinking Water		X		4
MMW-12 (810-93944-11)	2/13/24	17:30	Eastern	Drinking Water		X		4
MMW-18 (810-93944-12)	2/13/24	16:00	Eastern	Drinking Water		X		4
MMW-19 (810-93944-13)	2/13/24	08:36	Eastern	Drinking Water		X		4
MMW-20 (810-93944-14)	2/13/24	14:30	Eastern	Drinking Water		X		4

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyze & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above, or analyst/status/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification
Uncertified
Deliverable Requested: I, II, III, IV, Other (specify)
Empty Kit Relinquished by:
Relinquished by:
Relinquished by:
Relinquished by:

Custody Seals Intact: **Custody Seal No.:** _____
Date/Time: _____ **Company:** _____
Date/Time: _____ **Company:** _____
Date/Time: _____ **Company:** _____
Date/Time: _____ **Company:** _____



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www.Eurofltr 810.93941 Chain of Custody

Analytical

CHAIN OF CUSTODY RECORD

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order #
Batch #

Page ___ of ___

REPORT TO: Jon Mink, Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444
BILL TO: Accounts Payable, Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444

SAMPLER (Signature)
COMPLIANCE MONITORING

Yes No

POPULATION SERVED
SOURCE WATER

PWS ID # STATE (sample origin)

PROJECT NAME
FO#

CHLORINATED
OF CONTAINERS

MATRIX CODE
TURNAROUND TIME

LAB Number	COLLECTION		SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED		# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
	DATE	TIME				YES	NO			
1	02/12/24	16:18	X	MMW-30	Radium 226/228				GW	SW
2	02/12/24	15:00	X	MMW-31	Radium 226/228				GW	SW
3	02/12/24	16:30	X	MMW-32	Radium 226/228				GW	SW
4	02/12/24	15:18	X	MMW-33	Radium 226/228				GW	SW
5	02/12/24	14:00	X	MMW-34	Radium 226/228				GW	SW
6	02/12/24	16:18	X	MMW-30	Radium 226/228				GW	SW
7	02/12/24	14:00	X	MMW-34	Radium 226/228				GW	SW
8										
9										
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12										
13										
14										

PIR Acceptance

less than 2

RELINQUISHED BY: (Signature)
ABayer

DATE: 2/13/24
TIME: 17:00
RECEIVED BY: (Signature)
Fedex

DATE: 2/15/24
TIME: 08:00
RECEIVED FOR LABORATORY BY: *Alma*

LAB COMMENTS
LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

CONDITIONS UPON RECEIPT (check one):
Iced: Wet/Blue: Ambient: °C Upon Receipt: N/A

MATRIX CODES:
 DW-DRINKING WATER
 RW-REAGENT WATER
 GW-GROUND WATER
 EW-EXPOSURE WATER
 SW-SURFACE WATER
 PM-POOL WATER
 WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES
 SW = Standard Written: (15 working days) 0%
 RW = Rush Verbal: (5 working days) 50%
 RW = Rush Written: (5 working days) 75%

IV = Immediate Verbal: (3 working days) 100%
IW = Immediate Written: (3 working days) 125%
SP = Weekend, Holiday CALL
STAT = Less than 48 hours CALL

* Please call, expedited service not available for all testing

06-LO-FQA35 Issue 6.0 Effective Date: 2016-09-20

Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93941-1

Login Number: 93941

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Moore, Gary

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93941-1

Login Number: 93941

List Number: 2

Creator: Thornley, Richard W

List Source: Eurofins St. Louis

List Creation: 02/16/24 12:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





ANALYTICAL REPORT

PREPARED FOR

Attn: Jon Mink
Trace Analytical Laboratories
2241 Black Creek Road
Muskegon, Michigan 49444

Generated 4/11/2024 2:58:12 PM

JOB DESCRIPTION

24B0630

JOB NUMBER

810-93944-2

Eurofins Eaton Analytical South Bend

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



Generated
4/11/2024 2:58:12 PM

Authorized for release by
Karen Fullmer, Project Manager
Karen.Fullmer@et.eurofinsus.com
(574)233-4777



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Definitions/Glossary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Trace Analytical Laboratories
Project: 24B0630

Job ID: 810-93944-2

Job ID: 810-93944-2

Eurofins Eaton Analytical South Bend

Job Narrative 810-93944-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/15/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

Receipt Exceptions

The reference method requires samples to have a pH of less than 2. The following samplea were received with a pH of 7: MW-01R (810-93944-1), MW-02 (810-93944-2), MW-03 (810-93944-3), MW-04 (810-93944-4), MW-06 (810-93944-5), MW-07 (810-93944-6), MW-08 (810-93944-7), MW-09 (810-93944-8), MW-10 (810-93944-9), MW-11 (810-93944-10), MW-12 (810-93944-11), MW-18 (810-93944-12), MW-19 (810-93944-13) and MW-20 (810-93944-14). The samples were adjusted to the appropriate pH in the laboratory.

Affected Containers

810-93944-B-3
810-93944-A-2
810-93944-C-3
810-93944-C-2
810-93944-D-2

Gas Flow Proportional Counter

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Eaton Analytical South Bend

Detection Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Client Sample ID: MW-02

Lab Sample ID: 810-93944-2

No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Client Sample ID: MW-02

Lab Sample ID: 810-93944-2

Date Collected: 02/13/24 12:15

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.07		0.459	0.469	1.00	0.534	pCi/L	03/20/24 09:53	04/11/24 07:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	68.0		30 - 110					03/20/24 09:53	04/11/24 07:35	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.882		0.499	0.505	1.00	0.708	pCi/L	02/21/24 09:04	03/08/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		30 - 110					02/21/24 09:04	03/08/24 11:47	1
Y Carrier	87.1		30 - 110					02/21/24 09:04	03/08/24 11:47	1

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.95		0.678	0.689	5.00	0.708	pCi/L		04/11/24 07:23	1

Tracer/Carrier Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
810-93944-2	MW-02	68.0	
LCS 160-653260/2-A	Lab Control Sample	75.3	
LCSD 160-653260/3-A	Lab Control Sample Dup	83.0	
MB 160-653260/1-A	Method Blank	74.0	

Tracer/Carrier Legend
Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
810-93944-2	MW-02	85.3	87.1
LCS 160-649000/2-A	Lab Control Sample	107	80.0
MB 160-649000/1-A	Method Blank	102	89.0

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

QC Sample Results

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-653260/1-A
Matrix: Drinking Water
Analysis Batch: 656476

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 653260

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.09122	U	0.0675	0.0680	1.00	0.0922	pCi/L	03/20/24 09:53	04/11/24 07:20	1
Carrier	MB %Yield	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Ba Carrier	74.0		30 - 110				03/20/24 09:53	04/11/24 07:20	1	

Lab Sample ID: LCS 160-653260/2-A
Matrix: Drinking Water
Analysis Batch: 656476

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 653260

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	11.92		1.23	1.00	0.103	pCi/L	105	90 - 110
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	75.3		30 - 110						

Lab Sample ID: LCSD 160-653260/3-A
Matrix: Drinking Water
Analysis Batch: 656476

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 653260

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER
				Uncert. (2σ+/-)							Limit
Radium-226	11.3	11.57		1.18	1.00	0.105	pCi/L	102	90 - 110	0.15	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	83.0		30 - 110								

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-649000/1-A
Matrix: Drinking Water
Analysis Batch: 651637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 649000

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.2880	U	0.272	0.273	1.00	0.431	pCi/L	02/21/24 09:04	03/08/24 11:55	1
Carrier	MB %Yield	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Ba Carrier	102		30 - 110				02/21/24 09:04	03/08/24 11:55	1	
Y Carrier	89.0		30 - 110				02/21/24 09:04	03/08/24 11:55	1	

QC Sample Results

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93944-2

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-649000/2-A
Matrix: Drinking Water
Analysis Batch: 651637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 649000

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	9.14	9.831		1.29	1.00	0.488	pCi/L	108	80 - 120

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		30 - 110
Y Carrier	80.0		30 - 110

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QC Association Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Rad

Prep Batch: 649000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93944-2	MW-02	Total/NA	Drinking Water	PrecSep_0	
MB 160-649000/1-A	Method Blank	Total/NA	Drinking Water	PrecSep_0	
LCS 160-649000/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep_0	

Prep Batch: 653260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-93944-2	MW-02	Total/NA	Drinking Water	PrecSep-21	
MB 160-653260/1-A	Method Blank	Total/NA	Drinking Water	PrecSep-21	
LCS 160-653260/2-A	Lab Control Sample	Total/NA	Drinking Water	PrecSep-21	
LCSD 160-653260/3-A	Lab Control Sample Dup	Total/NA	Drinking Water	PrecSep-21	

Lab Chronicle

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Client Sample ID: MW-02

Lab Sample ID: 810-93944-2

Date Collected: 02/13/24 12:15

Matrix: Drinking Water

Date Received: 02/15/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			653260	KAK	EET SL	03/20/24 09:53
Total/NA	Analysis	903.0		1	656486	SWS	EET SL	04/11/24 07:35
Total/NA	Prep	PrecSep_0			649000	KAC	EET SL	02/21/24 09:04
Total/NA	Analysis	904.0		1	651625	FLC	EET SL	03/08/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	656454	FLC	EET SL	04/11/24 07:23

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Accreditation/Certification Summary

Client: Trace Analytical Laboratories
 Project/Site: 24B0630

Job ID: 810-93944-2

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Pos			
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

- EPA = US Environmental Protection Agency
- None = None
- TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

- EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Trace Analytical Laboratories
Project/Site: 24B0630

Job ID: 810-93944-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-93944-2	MW-02	Drinking Water	02/13/24 12:15	02/15/24 09:00

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Trace Analytical

CHAIN OF CUSTODY RECORD

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order #
Batch #

Page _____ of _____

810-93944 Chain of Custody
Managed area for EEA use only

REPORT TO:

Jon Mink, Tim Brewer (jmink@trace-labs.com, tbrewer@trace-labs.com) Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444 231-773-5998

BILL TO:

Accounts Payable, Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444

SAMPLER (Signature)

PWS ID #

STATE (sample origin)

PROJECT NAME

PO#

COMPLIANCE MONITORING

Yes

No

POPULATION SERVED

SOURCE WATER

24B0630

24B0630

LAB Number

COLLECTION

SAMPLING SITE

TEST NAME

SAMPLE REMARKS

CHLORINATED

NO OF CONTAINERS

MATRIX CODE

TURNAROUND TIME

LAB Number	DATE		TIME		RECEIVED BY: (Signature)	DATE	TIME		RECEIVED FOR LABORATORY BY:	DATE	TIME		LAB COMMENTS	LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT	CONDITIONS UPON RECEIPT (check one): Ice: <input type="checkbox"/> Wet/Blue <input type="checkbox"/> Ambient <input type="checkbox"/> °C Upon Receipt <input type="checkbox"/>	N/A	
	DATE	TIME	AM	PM			AM	PM			AM	PM					AM
1	02/13/24	14:35															
2	02/13/24	12:15															
3	02/14/24	9:40															
4	02/14/24	8:32															
5	02/13/24	12:43															
6	02/13/24	15:35															
7	02/13/24	10:22															
8	02/13/24	11:20															
9	02/13/24	13:45															
10	02/13/24	14:30															
11	02/13/24	17:30															
12	02/13/24	16:00															
13	02/13/24	8:36															
14	02/13/24	14:30															

RELINQUISHED BY: (Signature)

DATE

TIME

RECEIVED BY: (Signature)

DATE

TIME

RECEIVED FOR LABORATORY BY:

DATE

TIME

LAB COMMENTS

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

RELINQUISHED BY: (Signature)

DATE

TIME

RECEIVED BY: (Signature)

DATE

TIME

RECEIVED FOR LABORATORY BY:

DATE

TIME

LAB COMMENTS

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

RELINQUISHED BY: (Signature)

DATE

TIME

RECEIVED BY: (Signature)

DATE

TIME

RECEIVED FOR LABORATORY BY:

DATE

TIME

LAB COMMENTS

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

MATRIX CODES:

DW-DRINKING WATER

RW-REAGENT WATER

GW-GROUND WATER

EW-EXPOSURE WATER

SW-SURFACE WATER

PW-POOL WATER

WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days) 0%

RW = Rush Verbal: (5 working days) 50%

EW = Rush Written: (5 working days) 75%

SW = Standard Written: (3 working days) 100%

RW = Immediate Verbal: (3 working days) 125%

EW = Immediate Written: (3 working days) 150%

SP = Weekend, Holiday

STAT = Less than 48 hours

CALL

CALL

CALL

CALL

Sample analysis will be provided according to the standard EEA Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA.

06-LOI0435 Issue 6.0 Effective Date: 2016-09-20

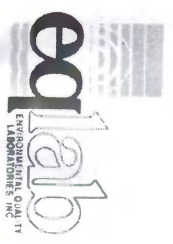
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LABORATORY: Eurofins Eaton Analytical (Indiana)
 ADDRESS: 110 South Hill Street
 South Bend, IN 46617-2702

**ANALYTICAL SERVICES REQUEST
 AND CHAIN OF CUSTODY**

CONTACT: Pamela Brown
 RECEIVED DATE: 14-February-2024



Sample ID: 3974212
 Matrix: DRINKING WATER
 Client ID: 1502-01-01
 Folder #: 352140

EQLAB Rep: YRIOS
 Date Collected: 14-Feb-2024
 Collected Time: 09:00
 Total Containers: 4

CONTAINER ID	TEST NAME	CONTAINER	METHOD
3974212-1	RADIUM 226	1000 ML	SM 7500-Ra B
3974212-1	URANIUM	250 ML	EPA 200.8
3974212-1	GROSS ALPHA / GROSS BETA	1000 ML	SM 7110B
3974212-1	RADIUM 228	1000 ML	SM 7500-Ra D

Comments:

RELINQUISHED BY / DATE
 2-14-24 Amy

APPROVED BY / DATE
 [Signature] 02/14/24

ENVIRONMENTAL QUALITY LABORATORIES, INC. P.O. BOX 1100

TURN AROUND TIME: 10 days

P. O. #: 7M12230A

RECEIVED BY / DATE: [Signature] 2-15-24 ORS

Ambient

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Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93944-2

Login Number: 93944

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Moore, Gary

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-93944-2

Login Number: 93944

List Number: 2

Creator: Thornley, Richard W

List Source: Eurofins St. Louis

List Creation: 02/16/24 11:36 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Appendix E

LCL Statistical Tables, Plots, and LCL Values

Grand Haven, February 2024 - 95% Confidence Limits for Assessment Monitoring

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-06	Appendix III	Boron	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	8.7
MW-06	Appendix III	Calcium	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	240
MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	62
MW-06	Appendix III	Fluoride	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	1.1
MW-06	Appendix III	pH (field)	su	10	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	7.2
MW-06	Appendix III	Sulfate (as SO4)	mg/L	10	10%	2022-11-29 to 2024-02-13	Gamma MLE Bootstrap LCL	6.2
MW-06	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	1,100
MW-06	Appendix IV	Antimony	mg/L	10	80%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-06	Appendix IV	Arsenic	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.00058
MW-06	Appendix IV	Barium	mg/L	10	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	1.3
MW-06	Appendix IV	Beryllium	mg/L	10	90%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-06	Appendix IV	Cadmium	mg/L	10	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-06	Appendix IV	Chromium, Total	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.0015
MW-06	Appendix IV	Cobalt	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.00049
MW-06	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	1.1
MW-06	Appendix IV	Lead	mg/L	10	70%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-06	Appendix IV	Lithium	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.17
MW-06	Appendix IV	Mercury	mg/L	10	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-06	Appendix IV	Molybdenum	mg/L	10	70%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00025
MW-06	Appendix IV	Radium 226 and 228	pCi/L	10	20%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.64
MW-06	Appendix IV	Selenium	mg/L	10	50%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-06	Appendix IV	Thallium	mg/L	10	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-06	Part 115	Copper	mg/L	10	90%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-06	Part 115	Iron	mg/L	10	0%	2022-11-29 to 2024-02-13	Adjusted Gamma LCL	16
MW-06	Part 115	Nickel	mg/L	10	30%	2022-11-29 to 2024-02-13	Normal MLE LCL	0.00061
MW-06	Part 115	Silver	mg/L	10	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-06	Part 115	Vanadium	mg/L	10	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-06	Part 115	Zinc	mg/L	10	20%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.0012
MW-07	Appendix III	Boron	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	11
MW-07	Appendix III	Calcium	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	140
MW-07	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	13
MW-07	Appendix III	Fluoride	mg/L	10	10%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.079
MW-07	Appendix III	pH (field)	su	10	0%	2022-11-30 to 2024-02-13	Normal LCL	6.8
MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	20
MW-07	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	580
MW-07	Appendix IV	Antimony	mg/L	10	90%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-07	Appendix IV	Arsenic	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.00019
MW-07	Appendix IV	Barium	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.31
MW-07	Appendix IV	Beryllium	mg/L	10	70%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-07	Appendix IV	Cadmium	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-07	Appendix IV	Chromium, Total	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.00031
MW-07	Appendix IV	Cobalt	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.00085
MW-07	Appendix IV	Fluoride (App IV)	mg/L	10	10%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.079
MW-07	Appendix IV	Lead	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-07	Appendix IV	Lithium	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0050
MW-07	Appendix IV	Mercury	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-07	Appendix IV	Molybdenum	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00025
MW-07	Appendix IV	Radium 226 and 228	pCi/L	10	20%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.64
MW-07	Appendix IV	Selenium	mg/L	10	80%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-07	Appendix IV	Thallium	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-07	Part 115	Copper	mg/L	10	90%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-07	Part 115	Iron	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	14
MW-07	Part 115	Nickel	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00065
MW-07	Part 115	Silver	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-07	Part 115	Vanadium	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-07	Part 115	Zinc	mg/L	10	70%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.0012
MW-08	Appendix III	Boron	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	5.1
MW-08	Appendix III	Calcium	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	130
MW-08	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	23
MW-08	Appendix III	Fluoride	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	0.72
MW-08	Appendix III	pH (field)	su	10	0%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	7.2
MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	30%	2022-12-01 to 2024-02-13	Gamma MLE Bootstrap LCL	3.2
MW-08	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	500
MW-08	Appendix IV	Antimony	mg/L	10	40%	2022-12-01 to 2024-02-13	Normal MLE LCL	0.000030
MW-08	Appendix IV	Arsenic	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	0.023

MW-08	Appendix IV	Barium	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	1.1
MW-08	Appendix IV	Beryllium	mg/L	10	100%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-08	Appendix IV	Cadmium	mg/L	10	100%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-08	Appendix IV	Chromium, Total	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	0.00077
MW-08	Appendix IV	Cobalt	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	0.00043
MW-08	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	0.72
MW-08	Appendix IV	Lead	mg/L	10	70%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-08	Appendix IV	Lithium	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	0.095
MW-08	Appendix IV	Mercury	mg/L	10	100%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-08	Appendix IV	Molybdenum	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	0.00094
MW-08	Appendix IV	Radium 226 and 228	pCi/L	10	30%	2022-12-01 to 2024-02-13	Normal MLE LCL	0.66
MW-08	Appendix IV	Selenium	mg/L	10	50%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.00014
MW-08	Appendix IV	Thallium	mg/L	10	100%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-08	Part 115	Copper	mg/L	10	50%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-08	Part 115	Iron	mg/L	10	0%	2022-12-01 to 2024-02-13	Normal LCL	18
MW-08	Part 115	Nickel	mg/L	10	0%	2022-12-01 to 2024-02-13	Adjusted Gamma LCL	0.0010
MW-08	Part 115	Silver	mg/L	10	100%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-08	Part 115	Vanadium	mg/L	10	100%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-08	Part 115	Zinc	mg/L	10	30%	2022-12-01 to 2024-02-13	Nonparametric LCL around the Median	0.0012
MW-18	Appendix III	Boron	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	2.2
MW-18	Appendix III	Calcium	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	310
MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	20
MW-18	Appendix III	Fluoride	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	3.6
MW-18	Appendix III	pH (field)	su	11	0%	2022-11-30 to 2024-02-13	Normal LCL	7.1
MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	700
MW-18	Appendix III	Total Dissolved Solids	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	1,300
MW-18	Appendix IV	Antimony	mg/L	11	36%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00012
MW-18	Appendix IV	Arsenic	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.020
MW-18	Appendix IV	Barium	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.017
MW-18	Appendix IV	Beryllium	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-18	Appendix IV	Cadmium	mg/L	11	27%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.00012
MW-18	Appendix IV	Chromium, Total	mg/L	11	91%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00018
MW-18	Appendix IV	Cobalt	mg/L	11	0%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median**	0.0019
MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	3.6
MW-18	Appendix IV	Lead	mg/L	11	73%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00022
MW-18	Appendix IV	Lithium	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.029
MW-18	Appendix IV	Mercury	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-18	Appendix IV	Molybdenum	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.011
MW-18	Appendix IV	Radium 226 and 228	pCi/L	11	73%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.57
MW-18	Appendix IV	Selenium	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.00029
MW-18	Appendix IV	Thallium	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-18	Part 115	Copper	mg/L	11	0%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00043
MW-18	Part 115	Iron	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	5.5
MW-18	Part 115	Nickel	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0056
MW-18	Part 115	Silver	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-18	Part 115	Vanadium	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-18	Part 115	Zinc	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.044
MW-19	Appendix III	Boron	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	1.8
MW-19	Appendix III	Calcium	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	450
MW-19	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	42
MW-19	Appendix III	Fluoride	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	1.8
MW-19	Appendix III	pH (field)	su	10	0%	2022-11-30 to 2024-02-13	Normal LCL	6.7
MW-19	Appendix III	Sulfate (as SO4)	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	901
MW-19	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	1,800
MW-19	Appendix IV	Antimony	mg/L	10	90%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-19	Appendix IV	Arsenic	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0041
MW-19	Appendix IV	Barium	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.037
MW-19	Appendix IV	Beryllium	mg/L	10	30%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.000056
MW-19	Appendix IV	Cadmium	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-19	Appendix IV	Chromium, Total	mg/L	10	50%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-19	Appendix IV	Cobalt	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.00038
MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	1.8
MW-19	Appendix IV	Lead	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-19	Appendix IV	Lithium	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.088
MW-19	Appendix IV	Mercury	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-19	Appendix IV	Molybdenum	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0080
MW-19	Appendix IV	Radium 226 and 228	pCi/L	10	30%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.59
MW-19	Appendix IV	Selenium	mg/L	10	90%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-19	Appendix IV	Thallium	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000075

MW-19	Part 115	Copper	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-19	Part 115	Iron	mg/L	10	0%	2022-11-30 to 2024-02-13	Normal LCL	14
MW-19	Part 115	Nickel	mg/L	10	10%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.0014
MW-19	Part 115	Silver	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-19	Part 115	Vanadium	mg/L	10	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-19	Part 115	Zinc	mg/L	10	80%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.0012
MW-20	Appendix III	Boron	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.84
MW-20	Appendix III	Calcium	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	110
MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	63
MW-20	Appendix III	Fluoride	mg/L	11	0%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.21
MW-20	Appendix III	pH (field)	su	11	0%	2022-11-30 to 2024-02-13	Normal LCL	7.3
MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	51
MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	650
MW-20	Appendix IV	Antimony	mg/L	11	27%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.000068
MW-20	Appendix IV	Arsenic	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0013
MW-20	Appendix IV	Barium	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.39
MW-20	Appendix IV	Beryllium	mg/L	11	91%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-20	Appendix IV	Cadmium	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-20	Appendix IV	Chromium, Total	mg/L	11	45%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.00015
MW-20	Appendix IV	Cobalt	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0012
MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.21
MW-20	Appendix IV	Lead	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0018
MW-20	Appendix IV	Lithium	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.054
MW-20	Appendix IV	Mercury	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-20	Appendix IV	Molybdenum	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	0.0039
MW-20	Appendix IV	Radium 226 and 228	pCi/L	11	55%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.54
MW-20	Appendix IV	Selenium	mg/L	11	55%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00011
MW-20	Appendix IV	Thallium	mg/L	11	91%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-20	Part 115	Copper	mg/L	11	9%	2022-11-30 to 2024-02-13	Normal MLE LCL	0.00024
MW-20	Part 115	Iron	mg/L	11	0%	2022-11-30 to 2024-02-13	Normal LCL	18
MW-20	Part 115	Nickel	mg/L	11	0%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.0078
MW-20	Part 115	Silver	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-20	Part 115	Vanadium	mg/L	11	100%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-20	Part 115	Zinc	mg/L	11	0%	2022-11-30 to 2024-02-13	Nonparametric LCL around the Median*	0.024
MW-30	Appendix III	Boron	mg/L	14	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	1.8
MW-30	Appendix III	Calcium	mg/L	14	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	430
MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	110
MW-30	Appendix III	Fluoride	mg/L	14	0%	2022-11-30 to 2024-02-12	Normal LCL	1.0
MW-30	Appendix III	pH (field)	su	14	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	7.1
MW-30	Appendix III	Sulfate (as SO4)	mg/L	14	0%	2022-11-30 to 2024-02-12	Normal LCL	820
MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0%	2022-11-30 to 2024-02-12	Normal LCL	2,100
MW-30	Appendix IV	Antimony	mg/L	14	86%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000050
MW-30	Appendix IV	Arsenic	mg/L	14	21%	2022-11-30 to 2024-02-12	Normal MLE LCL	0.00025
MW-30	Appendix IV	Barium	mg/L	14	0%	2022-11-30 to 2024-02-12	Normal LCL	0.063
MW-30	Appendix IV	Beryllium	mg/L	14	86%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000052
MW-30	Appendix IV	Cadmium	mg/L	14	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000032
MW-30	Appendix IV	Chromium, Total	mg/L	14	0%	2022-11-30 to 2024-02-12	Normal LCL	0.0084
MW-30	Appendix IV	Cobalt	mg/L	14	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00088
MW-30	Appendix IV	Fluoride (App IV)	mg/L	14	0%	2022-11-30 to 2024-02-12	Normal LCL	1.0
MW-30	Appendix IV	Lead	mg/L	14	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00022
MW-30	Appendix IV	Lithium	mg/L	14	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.12
MW-30	Appendix IV	Mercury	mg/L	14	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00016
MW-30	Appendix IV	Molybdenum	mg/L	14	36%	2022-11-30 to 2024-02-12	Normal MLE LCL	0.00041
MW-30	Appendix IV	Radium 226 and 228	pCi/L	14	57%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.53
MW-30	Appendix IV	Selenium	mg/L	14	64%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00012
MW-30	Appendix IV	Thallium	mg/L	14	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000075
MW-30	Part 115	Copper	mg/L	14	79%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00020
MW-30	Part 115	Iron	mg/L	14	0%	2022-11-30 to 2024-02-12	Normal LCL	1.8
MW-30	Part 115	Nickel	mg/L	14	29%	2022-11-30 to 2024-02-12	Normal MLE LCL	0.00090
MW-30	Part 115	Silver	mg/L	14	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000050
MW-30	Part 115	Vanadium	mg/L	14	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00062
MW-30	Part 115	Zinc	mg/L	14	71%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.0012
MW-31	Appendix III	Boron	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	4.1
MW-31	Appendix III	Calcium	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	160
MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	98
MW-31	Appendix III	Fluoride	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	4.7
MW-31	Appendix III	pH (field)	su	10	0%	2022-12-01 to 2024-02-12	Normal LCL	7.8
MW-31	Appendix III	Sulfate (as SO4)	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	140
MW-31	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	780

MW-31	Appendix IV	Antimony	mg/L	10	50%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.000069
MW-31	Appendix IV	Arsenic	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	0.0012
MW-31	Appendix IV	Barium	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	0.14
MW-31	Appendix IV	Beryllium	mg/L	10	90%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.000052
MW-31	Appendix IV	Cadmium	mg/L	10	90%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.000032
MW-31	Appendix IV	Chromium, Total	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	0.0020
MW-31	Appendix IV	Cobalt	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	0.00016
MW-31	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	4.7
MW-31	Appendix IV	Lead	mg/L	10	90%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.00010
MW-31	Appendix IV	Lithium	mg/L	10	0%	2022-12-01 to 2024-02-12	Normal LCL	0.047
MW-31	Appendix IV	Mercury	mg/L	10	100%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.00016
MW-31	Appendix IV	Molybdenum	mg/L	10	0%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.0011
MW-31	Appendix IV	Radium 226 and 228	pCi/L	10	30%	2022-12-01 to 2024-02-12	Normal MLE LCL	0.47
MW-31	Appendix IV	Selenium	mg/L	10	50%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.00012
MW-31	Appendix IV	Thallium	mg/L	10	90%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.000075
MW-31	Part 115	Copper	mg/L	10	80%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.00020
MW-31	Part 115	Iron	mg/L	10	0%	2022-12-01 to 2024-02-12	Adjusted Gamma LCL	0.60
MW-31	Part 115	Nickel	mg/L	10	90%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.00065
MW-31	Part 115	Silver	mg/L	10	100%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.000050
MW-31	Part 115	Vanadium	mg/L	10	100%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.00062
MW-31	Part 115	Zinc	mg/L	10	70%	2022-12-01 to 2024-02-12	Nonparametric LCL around the Median	0.0012
MW-01R	Appendix III	Boron	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	83
MW-01R	Appendix III	Calcium	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	210
MW-01R	Appendix III	Chloride (as Cl)	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	110
MW-01R	Appendix III	Fluoride	mg/L	11	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	8.8
MW-01R	Appendix III	pH (field)	su	11	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	7.7
MW-01R	Appendix III	Sulfate (as SO4)	mg/L	11	0%	2022-11-29 to 2024-02-13	Adjusted Gamma LCL	300
MW-01R	Appendix III	Total Dissolved Solids	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	2,300
MW-01R	Appendix IV	Antimony	mg/L	11	27%	2022-11-29 to 2024-02-13	Lognormal MLE Likelihood Profile LCL	0.00028
MW-01R	Appendix IV	Arsenic	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	0.0012
MW-01R	Appendix IV	Barium	mg/L	11	0%	2022-11-29 to 2024-02-13	Lognormal H-LCL	0.28
MW-01R	Appendix IV	Beryllium	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	0.00019
MW-01R	Appendix IV	Cadmium	mg/L	11	64%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-01R	Appendix IV	Chromium, Total	mg/L	11	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median**	0.0013
MW-01R	Appendix IV	Cobalt	mg/L	11	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median**	0.0011
MW-01R	Appendix IV	Fluoride (App IV)	mg/L	11	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	8.8
MW-01R	Appendix IV	Lead	mg/L	11	18%	2022-11-29 to 2024-02-13	Gamma MLE Bootstrap LCL	0.00087
MW-01R	Appendix IV	Lithium	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	1.8
MW-01R	Appendix IV	Mercury	mg/L	11	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-01R	Appendix IV	Molybdenum	mg/L	11	9%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median**	0.00068
MW-01R	Appendix IV	Radium 226 and 228	pCi/L	11	55%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.66
MW-01R	Appendix IV	Selenium	mg/L	11	0%	2022-11-29 to 2024-02-13	Adjusted Gamma LCL	0.00057
MW-01R	Appendix IV	Thallium	mg/L	11	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-01R	Part 115	Copper	mg/L	11	45%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median*	0.00020
MW-01R	Part 115	Iron	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	0.46
MW-01R	Part 115	Nickel	mg/L	11	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.0015
MW-01R	Part 115	Silver	mg/L	11	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-01R	Part 115	Vanadium	mg/L	11	18%	2022-11-29 to 2024-02-13	Gamma MLE Bootstrap LCL	0.00099
MW-01R	Part 115	Zinc	mg/L	11	9%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.0012
MW-02	Appendix III	Boron	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	89
MW-02	Appendix III	Calcium	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	190
MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	130
MW-02	Appendix III	Fluoride	mg/L	10	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	8.7
MW-02	Appendix III	pH (field)	su	10	0%	2022-11-28 to 2024-02-13	Normal LCL	7.2
MW-02	Appendix III	Sulfate (as SO4)	mg/L	10	60%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.41
MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	1,700
MW-02	Appendix IV	Antimony	mg/L	10	30%	2022-11-28 to 2024-02-13	Normal MLE LCL	0.000096
MW-02	Appendix IV	Arsenic	mg/L	10	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.0074
MW-02	Appendix IV	Barium	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	0.45
MW-02	Appendix IV	Beryllium	mg/L	10	10%	2022-11-28 to 2024-02-13	Normal MLE LCL	0.00021
MW-02	Appendix IV	Cadmium	mg/L	10	70%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000041
MW-02	Appendix IV	Chromium, Total	mg/L	10	0%	2022-11-28 to 2024-02-13	Adjusted Gamma LCL	0.022
MW-02	Appendix IV	Cobalt	mg/L	10	0%	2022-11-28 to 2024-02-13	Adjusted Gamma LCL	0.0035
MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	8.7
MW-02	Appendix IV	Lead	mg/L	10	10%	2022-11-28 to 2024-02-13	Normal MLE LCL	0.0015
MW-02	Appendix IV	Lithium	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	1.2
MW-02	Appendix IV	Mercury	mg/L	10	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-02	Appendix IV	Molybdenum	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0054
MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	33%	2022-11-28 to 2023-10-24	Normal MLE LCL	0.90

MW-02	Appendix IV	Selenium	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	0.00086
MW-02	Appendix IV	Thallium	mg/L	10	90%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-02	Part 115	Copper	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0012
MW-02	Part 115	Iron	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	22
MW-02	Part 115	Nickel	mg/L	10	0%	2022-11-28 to 2024-02-13	Normal LCL	0.015
MW-02	Part 115	Silver	mg/L	10	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-02	Part 115	Vanadium	mg/L	10	10%	2022-11-28 to 2024-02-13	Normal MLE LCL	0.0020
MW-02	Part 115	Zinc	mg/L	10	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.0020
MW-03	Appendix III	Boron	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	3.9
MW-03	Appendix III	Calcium	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	350
MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-11-28 to 2024-02-14	Adjusted Gamma LCL	160
MW-03	Appendix III	Fluoride	mg/L	10	0%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.54
MW-03	Appendix III	pH (field)	su	10	0%	2022-11-28 to 2024-02-14	Normal LCL	7.3
MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	320
MW-03	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	2,000
MW-03	Appendix IV	Antimony	mg/L	10	60%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000092
MW-03	Appendix IV	Arsenic	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	0.00075
MW-03	Appendix IV	Barium	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	0.31
MW-03	Appendix IV	Beryllium	mg/L	10	70%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000052
MW-03	Appendix IV	Cadmium	mg/L	10	90%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000032
MW-03	Appendix IV	Chromium, Total	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	0.0040
MW-03	Appendix IV	Cobalt	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	0.00060
MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.54
MW-03	Appendix IV	Lead	mg/L	10	90%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00022
MW-03	Appendix IV	Lithium	mg/L	10	0%	2022-11-28 to 2024-02-14	Normal LCL	0.037
MW-03	Appendix IV	Mercury	mg/L	10	90%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00016
MW-03	Appendix IV	Molybdenum	mg/L	10	80%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00025
MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	10%	2022-11-28 to 2024-02-14	Normal MLE LCL	0.94
MW-03	Appendix IV	Selenium	mg/L	10	30%	2022-11-28 to 2024-02-14	Normal MLE LCL	0.00023
MW-03	Appendix IV	Thallium	mg/L	10	90%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000075
MW-03	Part 115	Copper	mg/L	10	50%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00020
MW-03	Part 115	Iron	mg/L	10	0%	2022-11-28 to 2024-02-14	Adjusted Gamma LCL	1.1
MW-03	Part 115	Nickel	mg/L	10	10%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00087
MW-03	Part 115	Silver	mg/L	10	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000050
MW-03	Part 115	Vanadium	mg/L	10	90%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00062
MW-03	Part 115	Zinc	mg/L	10	60%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.0012
MW-04	Appendix III	Boron	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	3.9
MW-04	Appendix III	Calcium	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	340
MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	170
MW-04	Appendix III	Fluoride	mg/L	12	0%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	1.2
MW-04	Appendix III	pH (field)	su	12	0%	2022-11-28 to 2024-02-14	Normal LCL	7.3
MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	530
MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	1,800
MW-04	Appendix IV	Antimony	mg/L	12	75%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000071
MW-04	Appendix IV	Arsenic	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	0.00071
MW-04	Appendix IV	Barium	mg/L	12	0%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.11
MW-04	Appendix IV	Beryllium	mg/L	12	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000052
MW-04	Appendix IV	Cadmium	mg/L	12	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000032
MW-04	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	0.0032
MW-04	Appendix IV	Cobalt	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	0.00040
MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	1.2
MW-04	Appendix IV	Lead	mg/L	12	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00010
MW-04	Appendix IV	Lithium	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	0.058
MW-04	Appendix IV	Mercury	mg/L	12	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00016
MW-04	Appendix IV	Molybdenum	mg/L	12	17%	2022-11-28 to 2024-02-14	Normal MLE LCL	0.00056
MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	17%	2022-11-28 to 2024-02-14	Normal MLE LCL	0.98
MW-04	Appendix IV	Selenium	mg/L	12	50%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00013
MW-04	Appendix IV	Thallium	mg/L	12	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000075
MW-04	Part 115	Copper	mg/L	12	92%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00020
MW-04	Part 115	Iron	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	5.5
MW-04	Part 115	Nickel	mg/L	12	0%	2022-11-28 to 2024-02-14	Normal LCL	0.011
MW-04	Part 115	Silver	mg/L	12	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.000050
MW-04	Part 115	Vanadium	mg/L	12	100%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.00062
MW-04	Part 115	Zinc	mg/L	12	67%	2022-11-28 to 2024-02-14	Nonparametric LCL around the Median	0.0012
MW-09	Appendix III	Boron	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	5.5
MW-09	Appendix III	Calcium	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	310
MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0%	2022-11-28 to 2024-02-13	Lognormal H-LCL	13
MW-09	Appendix III	Fluoride	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	2.4
MW-09	Appendix III	pH (field)	su	11	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	7.2

MW-09	Appendix III	Sulfate (as SO4)	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	260
MW-09	Appendix III	Total Dissolved Solids	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	1,100
MW-09	Appendix IV	Antimony	mg/L	11	55%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000092
MW-09	Appendix IV	Arsenic	mg/L	11	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.0015
MW-09	Appendix IV	Barium	mg/L	11	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.20
MW-09	Appendix IV	Beryllium	mg/L	11	91%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-09	Appendix IV	Cadmium	mg/L	11	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-09	Appendix IV	Chromium, Total	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0021
MW-09	Appendix IV	Cobalt	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	0.00045
MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	2.4
MW-09	Appendix IV	Lead	mg/L	11	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-09	Appendix IV	Lithium	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	0.29
MW-09	Appendix IV	Mercury	mg/L	11	91%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-09	Appendix IV	Molybdenum	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	0.018
MW-09	Appendix IV	Radium 226 and 228	pCi/L	11	91%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.68
MW-09	Appendix IV	Selenium	mg/L	11	18%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00022
MW-09	Appendix IV	Thallium	mg/L	11	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-09	Part 115	Copper	mg/L	11	82%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-09	Part 115	Iron	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	18
MW-09	Part 115	Nickel	mg/L	11	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0012
MW-09	Part 115	Silver	mg/L	11	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-09	Part 115	Vanadium	mg/L	11	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-09	Part 115	Zinc	mg/L	11	64%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.0012
MW-10	Appendix III	Boron	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	11
MW-10	Appendix III	Calcium	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	210
MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0%	2022-11-29 to 2024-02-13	Adjusted Gamma LCL	150
MW-10	Appendix III	Fluoride	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	4.5
MW-10	Appendix III	pH (field)	su	11	0%	2022-11-29 to 2024-02-13	Normal LCL	7.6
MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	400
MW-10	Appendix III	Total Dissolved Solids	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	1,700
MW-10	Appendix IV	Antimony	mg/L	11	64%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00010
MW-10	Appendix IV	Arsenic	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	0.00033
MW-10	Appendix IV	Barium	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	0.21
MW-10	Appendix IV	Beryllium	mg/L	11	45%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median*	0.000052
MW-10	Appendix IV	Cadmium	mg/L	11	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-10	Appendix IV	Chromium, Total	mg/L	11	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.0019
MW-10	Appendix IV	Cobalt	mg/L	11	9%	2022-11-29 to 2024-02-13	Lognormal MLE Likelihood Profile LCL	0.00039
MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	4.5
MW-10	Appendix IV	Lead	mg/L	11	82%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00017
MW-10	Appendix IV	Lithium	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	0.79
MW-10	Appendix IV	Mercury	mg/L	11	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-10	Appendix IV	Molybdenum	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	0.0026
MW-10	Appendix IV	Radium 226 and 228	pCi/L	11	73%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.74
MW-10	Appendix IV	Selenium	mg/L	11	18%	2022-11-29 to 2024-02-13	Gamma MLE Bootstrap LCL	0.00029
MW-10	Appendix IV	Thallium	mg/L	11	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-10	Part 115	Copper	mg/L	11	73%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-10	Part 115	Iron	mg/L	11	0%	2022-11-29 to 2024-02-13	Normal LCL	3.8
MW-10	Part 115	Nickel	mg/L	11	45%	2022-11-29 to 2024-02-13	Gamma MLE Bootstrap LCL	0.00055
MW-10	Part 115	Silver	mg/L	11	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-10	Part 115	Vanadium	mg/L	11	91%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-10	Part 115	Zinc	mg/L	11	27%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median*	0.0012
MW-11	Appendix III	Boron	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	3.9
MW-11	Appendix III	Calcium	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	220
MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	63
MW-11	Appendix III	Fluoride	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.38
MW-11	Appendix III	pH (field)	su	10	0%	2022-11-29 to 2024-02-13	Normal LCL	7.3
MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	20%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median**	0.41
MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	930
MW-11	Appendix IV	Antimony	mg/L	10	70%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-11	Appendix IV	Arsenic	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.0011
MW-11	Appendix IV	Barium	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.52
MW-11	Appendix IV	Beryllium	mg/L	10	90%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-11	Appendix IV	Cadmium	mg/L	10	90%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000032
MW-11	Appendix IV	Chromium, Total	mg/L	10	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median**	0.00052
MW-11	Appendix IV	Cobalt	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.00038
MW-11	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	0.38
MW-11	Appendix IV	Lead	mg/L	10	30%	2022-11-29 to 2024-02-13	Gamma MLE Bootstrap LCL	0.00064
MW-11	Appendix IV	Lithium	mg/L	10	0%	2022-11-29 to 2024-02-13	Adjusted Gamma LCL	0.043
MW-11	Appendix IV	Mercury	mg/L	10	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00016

MW-11	Appendix IV	Molybdenum	mg/L	10	20%	2022-11-29 to 2024-02-13	Normal MLE LCL	0.00055
MW-11	Appendix IV	Radium 226 and 228	pCi/L	10	20%	2022-11-29 to 2024-02-13	Normal MLE LCL	0.79
MW-11	Appendix IV	Selenium	mg/L	10	30%	2022-11-29 to 2024-02-13	Gamma MLE Bootstrap LCL	0.00018
MW-11	Appendix IV	Thallium	mg/L	10	100%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-11	Part 115	Copper	mg/L	10	30%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00020
MW-11	Part 115	Iron	mg/L	10	0%	2022-11-29 to 2024-02-13	Normal LCL	5.2
MW-11	Part 115	Nickel	mg/L	10	0%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00068
MW-11	Part 115	Silver	mg/L	10	90%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-11	Part 115	Vanadium	mg/L	10	90%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-11	Part 115	Zinc	mg/L	10	30%	2022-11-29 to 2024-02-13	Nonparametric LCL around the Median*	0.0012
MW-12	Appendix III	Boron	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.25
MW-12	Appendix III	Calcium	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	62
MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	18
MW-12	Appendix III	Fluoride	mg/L	13	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.26
MW-12	Appendix III	pH (field)	su	13	0%	2022-11-28 to 2024-02-13	Normal LCL	7.5
MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0%	2022-11-28 to 2024-02-13	Adjusted Gamma LCL	110
MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	230
MW-12	Appendix IV	Antimony	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.00053
MW-12	Appendix IV	Arsenic	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0020
MW-12	Appendix IV	Barium	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.028
MW-12	Appendix IV	Beryllium	mg/L	13	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000052
MW-12	Appendix IV	Cadmium	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0010
MW-12	Appendix IV	Chromium, Total	mg/L	13	46%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median*	0.00020
MW-12	Appendix IV	Cobalt	mg/L	13	38%	2022-11-28 to 2024-02-13	Normal MLE LCL	0.000025
MW-12	Appendix IV	Fluoride (App IV)	mg/L	13	0%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.26
MW-12	Appendix IV	Lead	mg/L	13	54%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00017
MW-12	Appendix IV	Lithium	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0032
MW-12	Appendix IV	Mercury	mg/L	13	92%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00016
MW-12	Appendix IV	Molybdenum	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0066
MW-12	Appendix IV	Radium 226 and 228	pCi/L	13	85%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.54
MW-12	Appendix IV	Selenium	mg/L	13	0%	2022-11-28 to 2024-02-13	Adjusted Gamma LCL	0.00060
MW-12	Appendix IV	Thallium	mg/L	13	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000075
MW-12	Part 115	Copper	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.00091
MW-12	Part 115	Iron	mg/L	13	38%	2022-11-28 to 2024-02-13	Normal MLE LCL	0.021
MW-12	Part 115	Nickel	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0022
MW-12	Part 115	Silver	mg/L	13	100%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.000050
MW-12	Part 115	Vanadium	mg/L	13	54%	2022-11-28 to 2024-02-13	Nonparametric LCL around the Median	0.00062
MW-12	Part 115	Zinc	mg/L	13	0%	2022-11-28 to 2024-02-13	Normal LCL	0.0062
MW-32	Appendix III	Boron	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	3.0
MW-32	Appendix III	Calcium	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	160
MW-32	Appendix III	Chloride (as Cl)	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	43
MW-32	Appendix III	Fluoride	mg/L	10	0%	2022-11-30 to 2024-02-12	Adjusted Gamma LCL	1.4
MW-32	Appendix III	pH (field)	su	10	0%	2022-11-30 to 2024-02-12	Normal LCL	7.6
MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	58
MW-32	Appendix III	Total Dissolved Solids	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	650
MW-32	Appendix IV	Antimony	mg/L	10	60%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000050
MW-32	Appendix IV	Arsenic	mg/L	10	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00045
MW-32	Appendix IV	Barium	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	0.33
MW-32	Appendix IV	Beryllium	mg/L	10	90%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000052
MW-32	Appendix IV	Cadmium	mg/L	10	90%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000032
MW-32	Appendix IV	Chromium, Total	mg/L	10	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00031
MW-32	Appendix IV	Cobalt	mg/L	10	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00034
MW-32	Appendix IV	Fluoride (App IV)	mg/L	10	0%	2022-11-30 to 2024-02-12	Adjusted Gamma LCL	1.4
MW-32	Appendix IV	Lead	mg/L	10	70%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00010
MW-32	Appendix IV	Lithium	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	0.11
MW-32	Appendix IV	Mercury	mg/L	10	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00016
MW-32	Appendix IV	Molybdenum	mg/L	10	0%	2022-11-30 to 2024-02-12	Normal LCL	0.0039
MW-32	Appendix IV	Radium 226 and 228	pCi/L	10	60%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.53
MW-32	Appendix IV	Selenium	mg/L	10	90%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00010
MW-32	Appendix IV	Thallium	mg/L	10	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000075
MW-32	Part 115	Copper	mg/L	10	70%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00020
MW-32	Part 115	Iron	mg/L	10	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	11
MW-32	Part 115	Nickel	mg/L	10	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00086
MW-32	Part 115	Silver	mg/L	10	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.000050
MW-32	Part 115	Vanadium	mg/L	10	100%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.00062
MW-32	Part 115	Zinc	mg/L	10	0%	2022-11-30 to 2024-02-12	Nonparametric LCL around the Median	0.0025

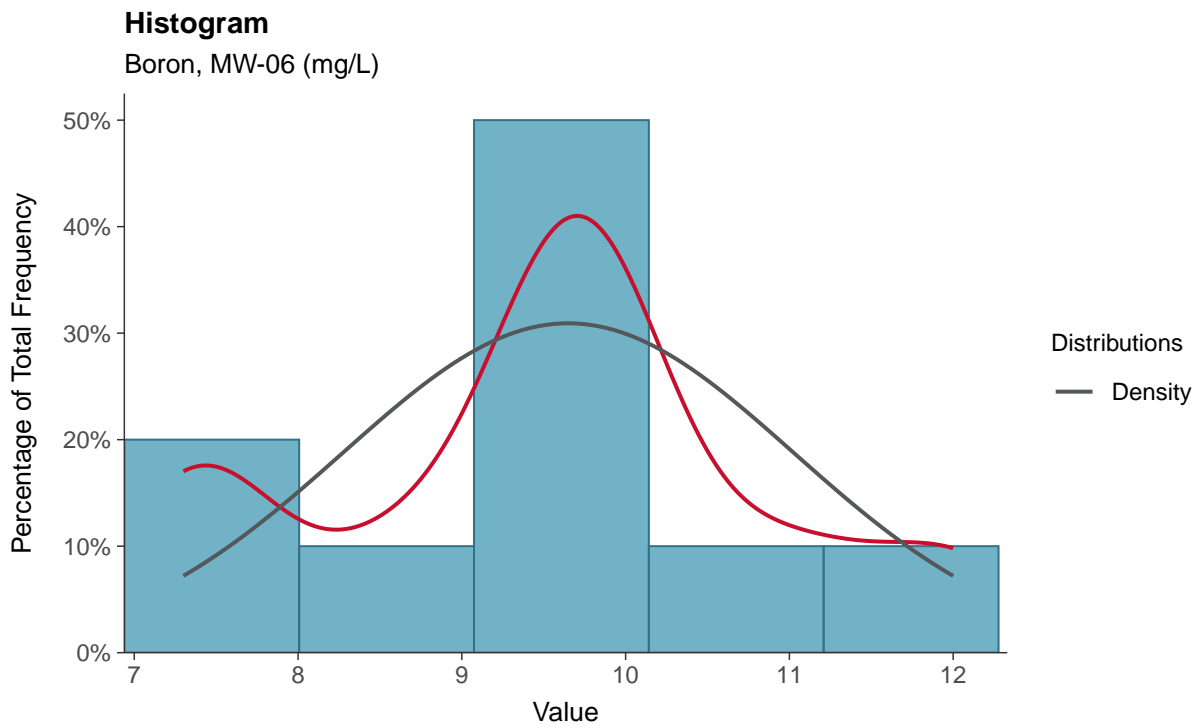
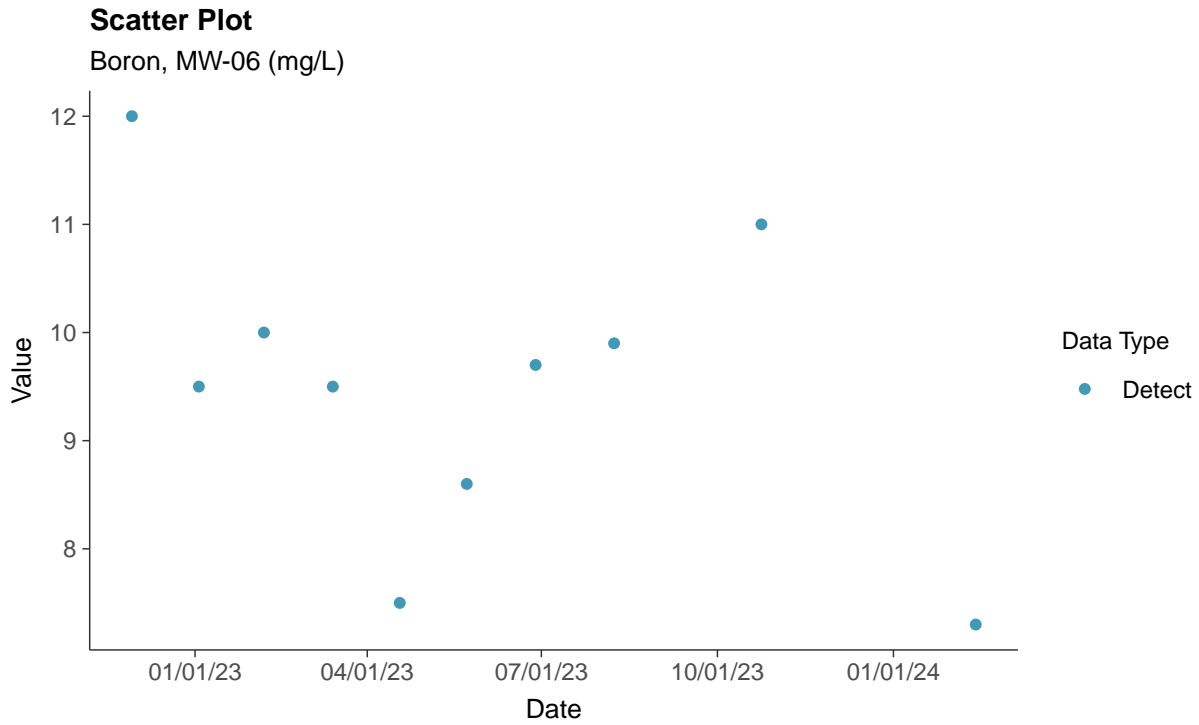
* While one or more parametric distributions fit the data, nonparametric LCLs are reported due to negative parametric LCLs.

** While one or more parametric distributions fit the data, nonparametric LCLs are reported due to high parametric estimates of the LCL relative to the mean and median.



Appendix III: Boron, MW-06

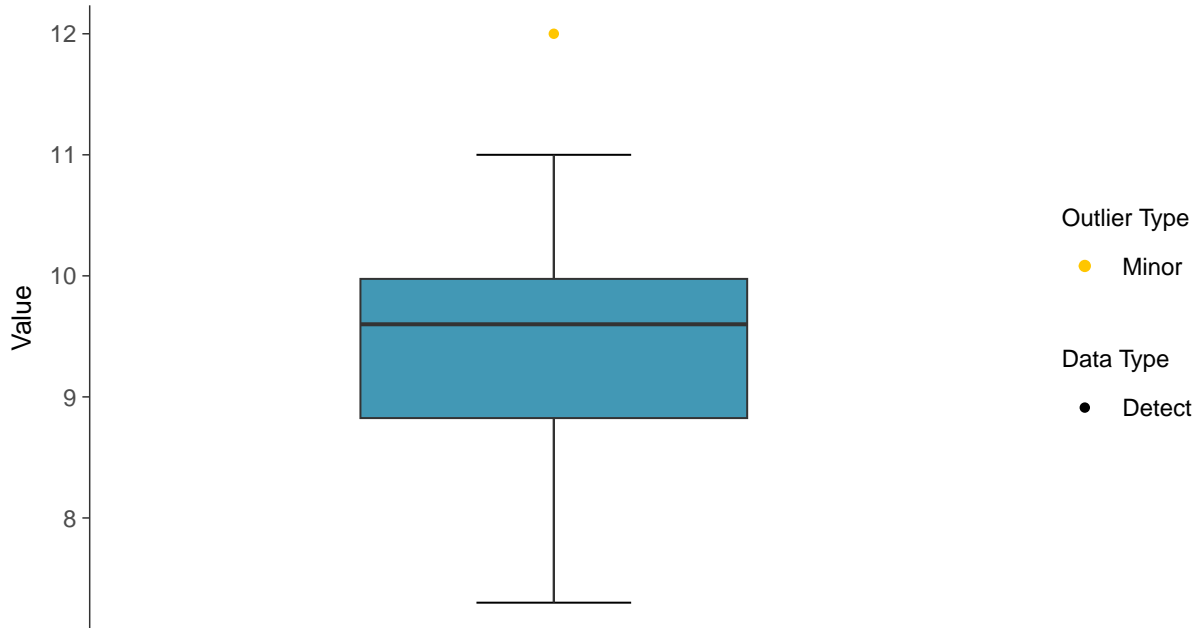
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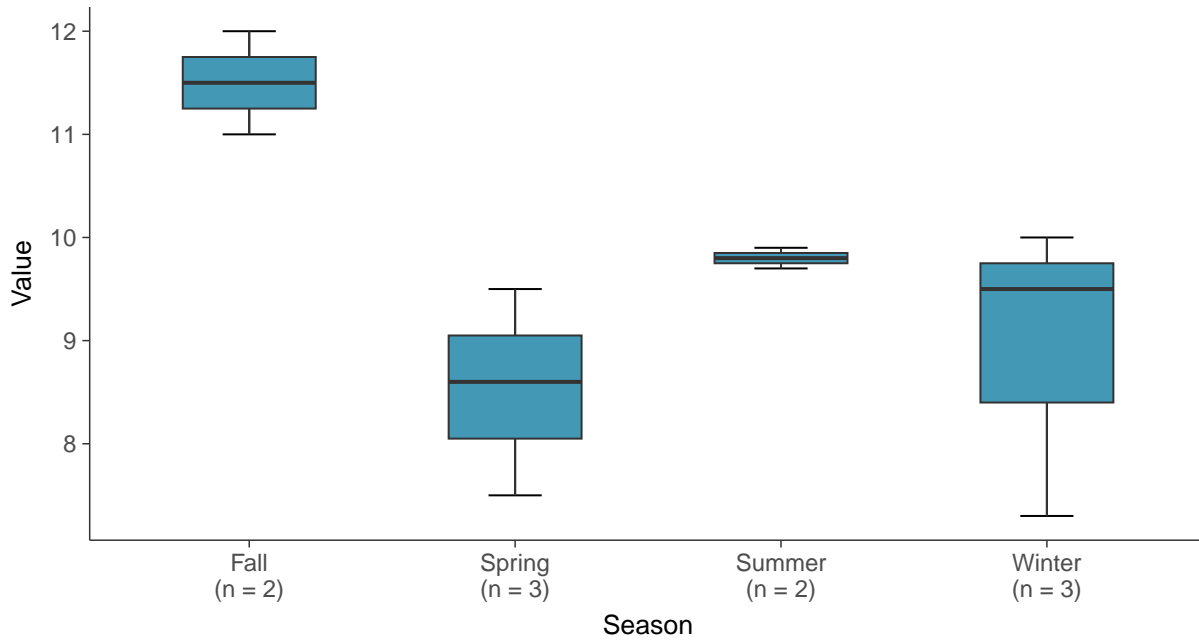
Boxplot

Boron, MW-06 (mg/L)



Boxplot by Season

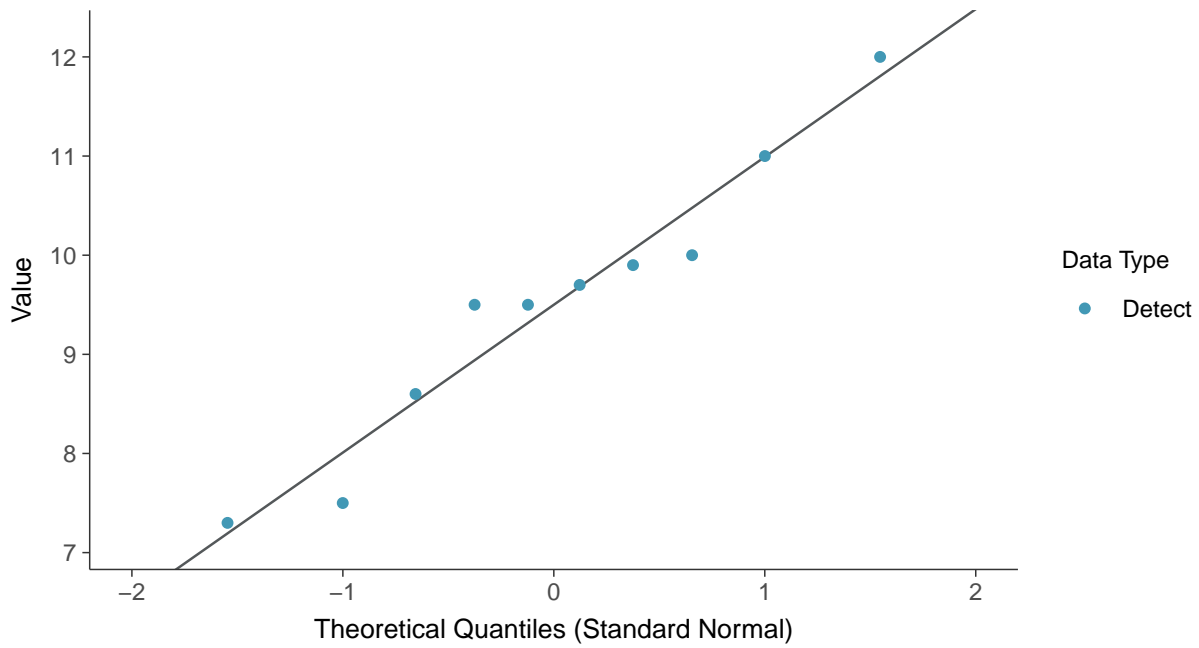
Boron, MW-06 (mg/L)





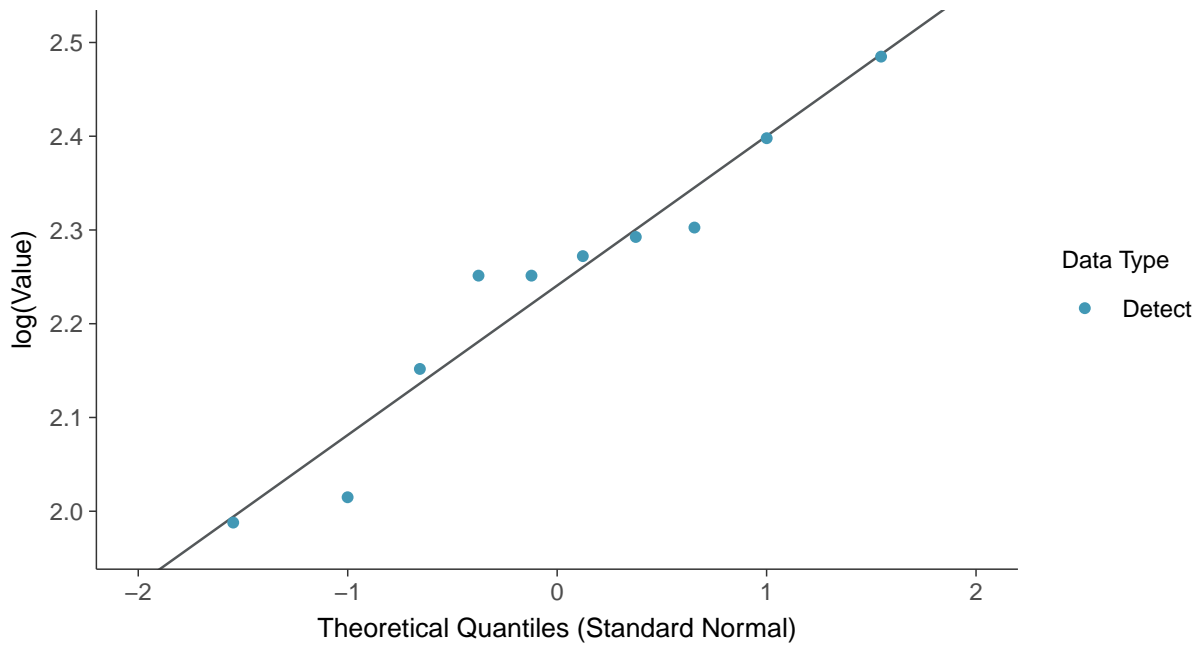
Normal Q-Q plot

Boron, MW-06 (mg/L)



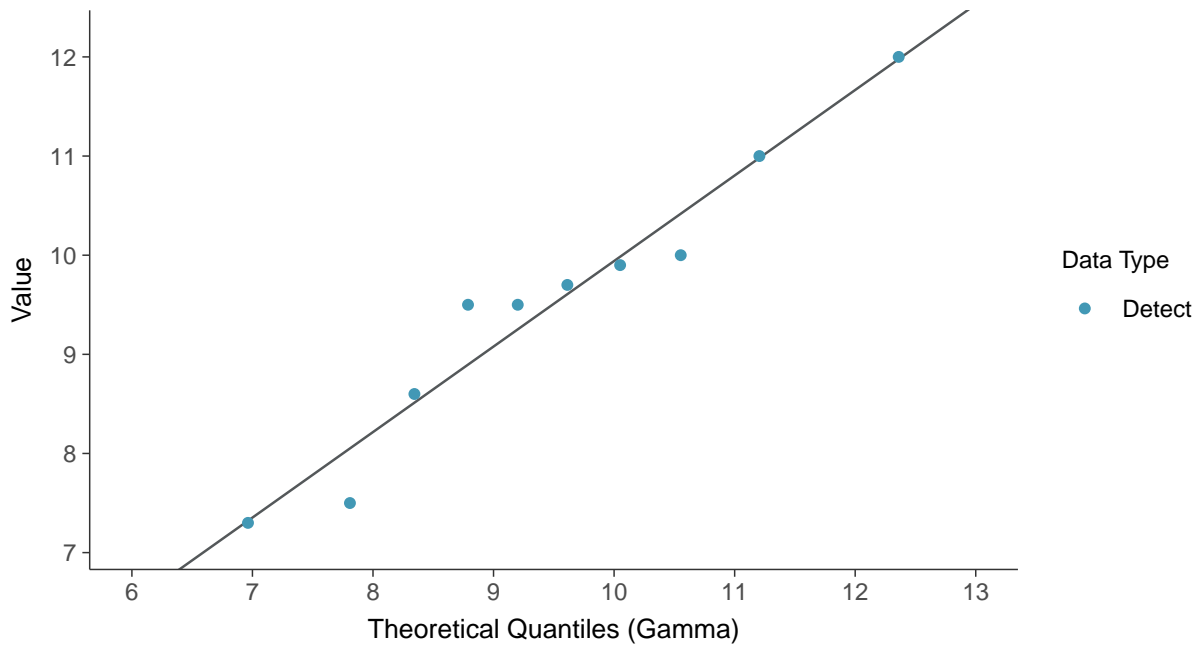
Lognormal Q-Q plot

Boron, MW-06 (mg/L)

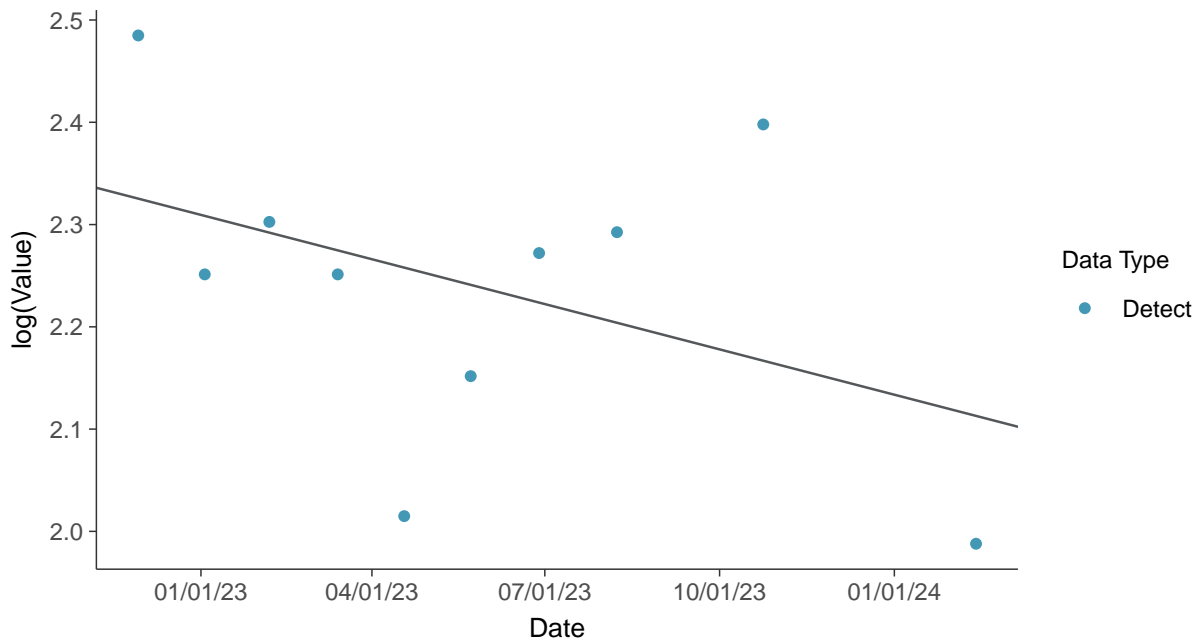




Gamma Q-Q plot
Boron, MW-06 (mg/L)



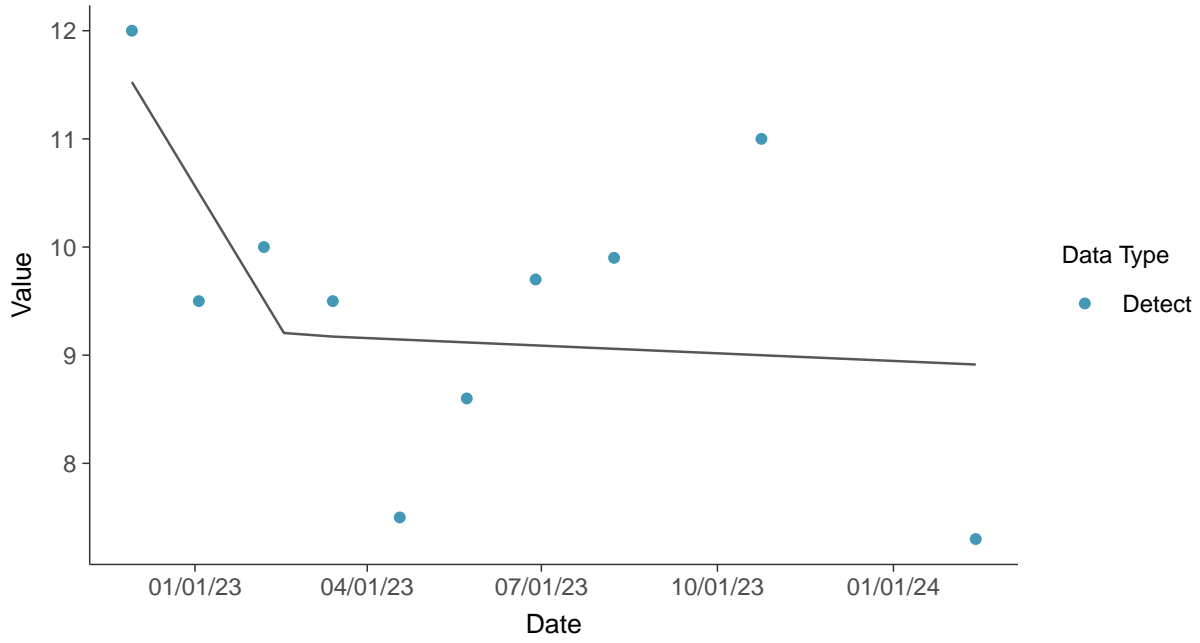
Trend Regression: Lognormal MLE
Boron, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear

Boron, MW-06 (mg/L)



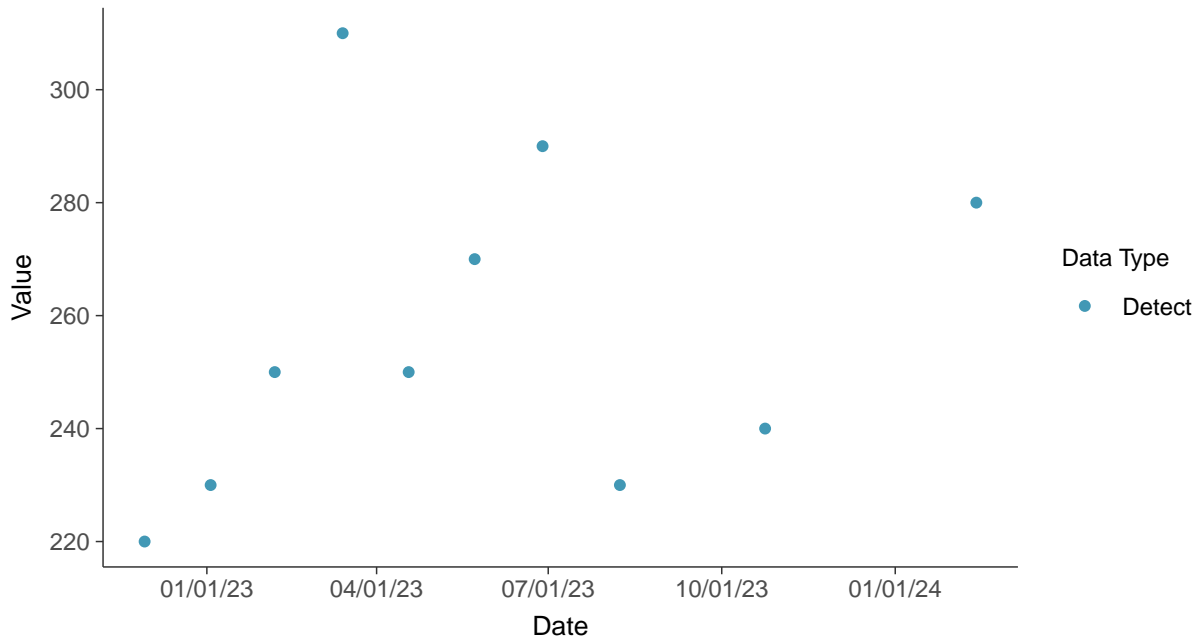


Appendix III: Calcium, MW-06

ID: 1_16_4_107

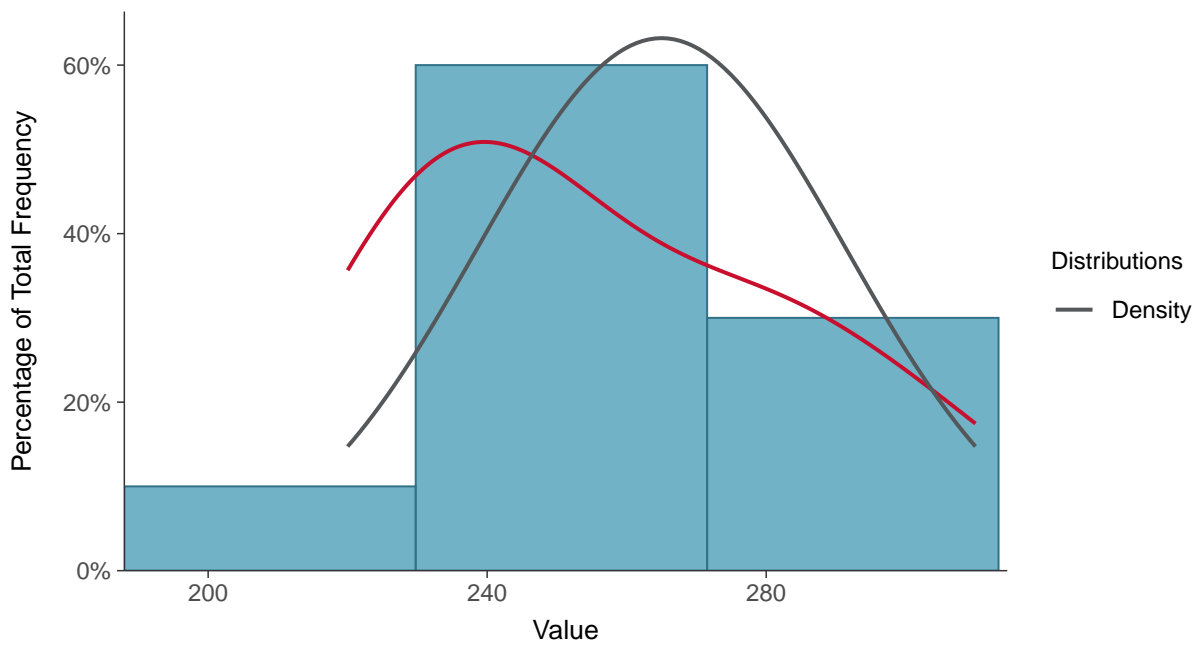
Scatter Plot

Calcium, MW-06 (mg/L)



Histogram

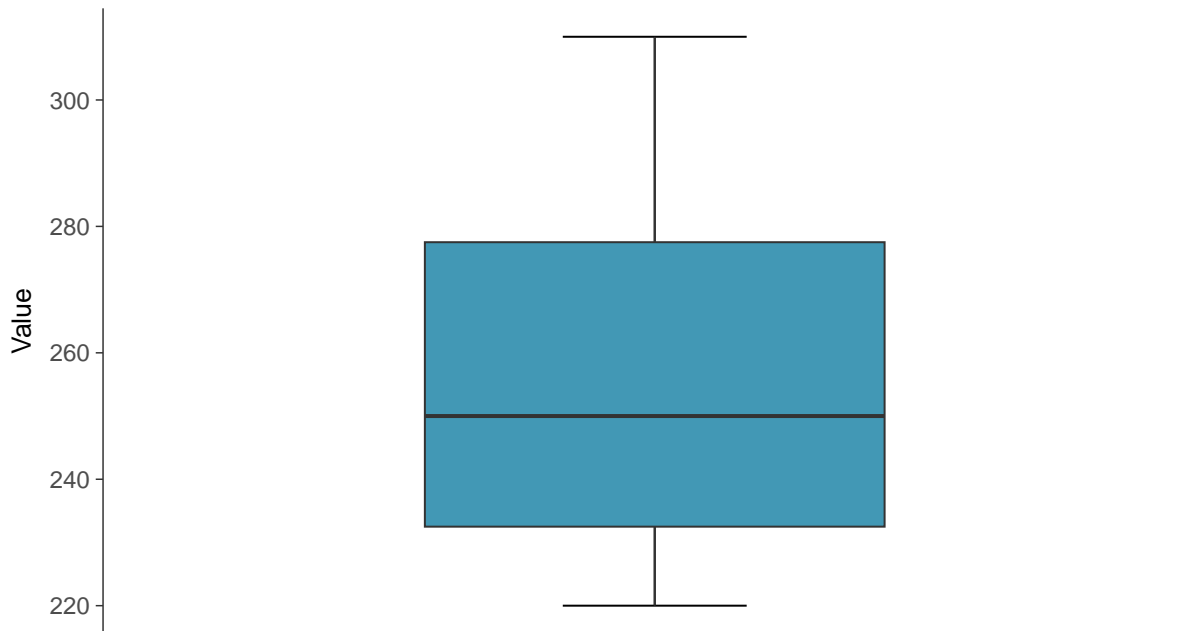
Calcium, MW-06 (mg/L)





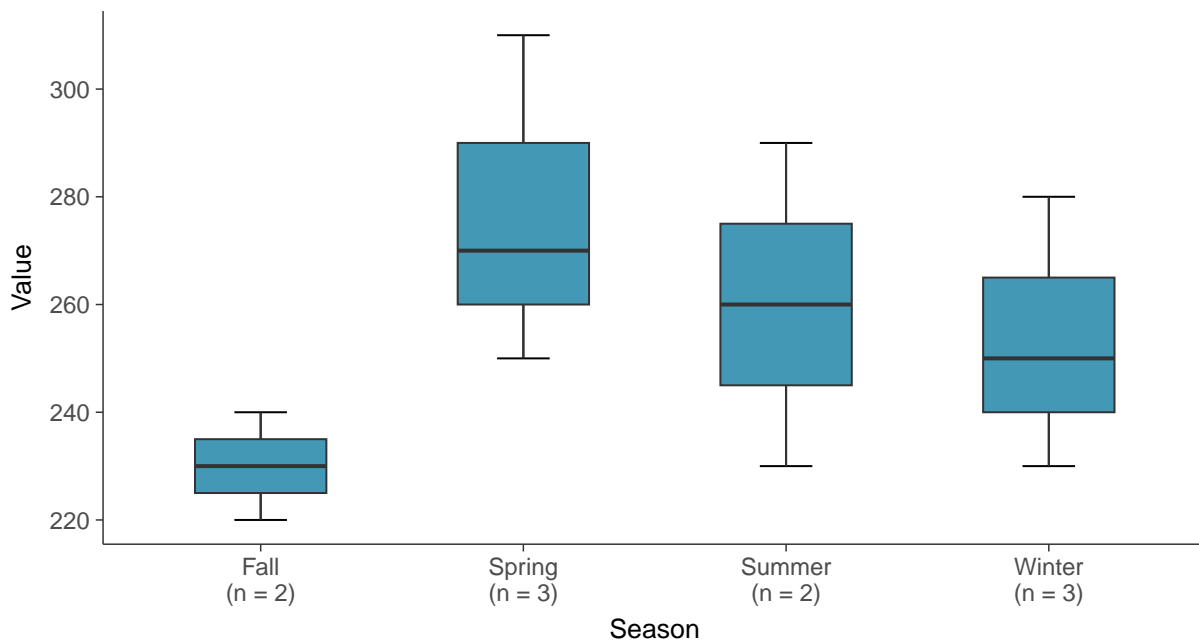
Boxplot

Calcium, MW-06 (mg/L)



Boxplot by Season

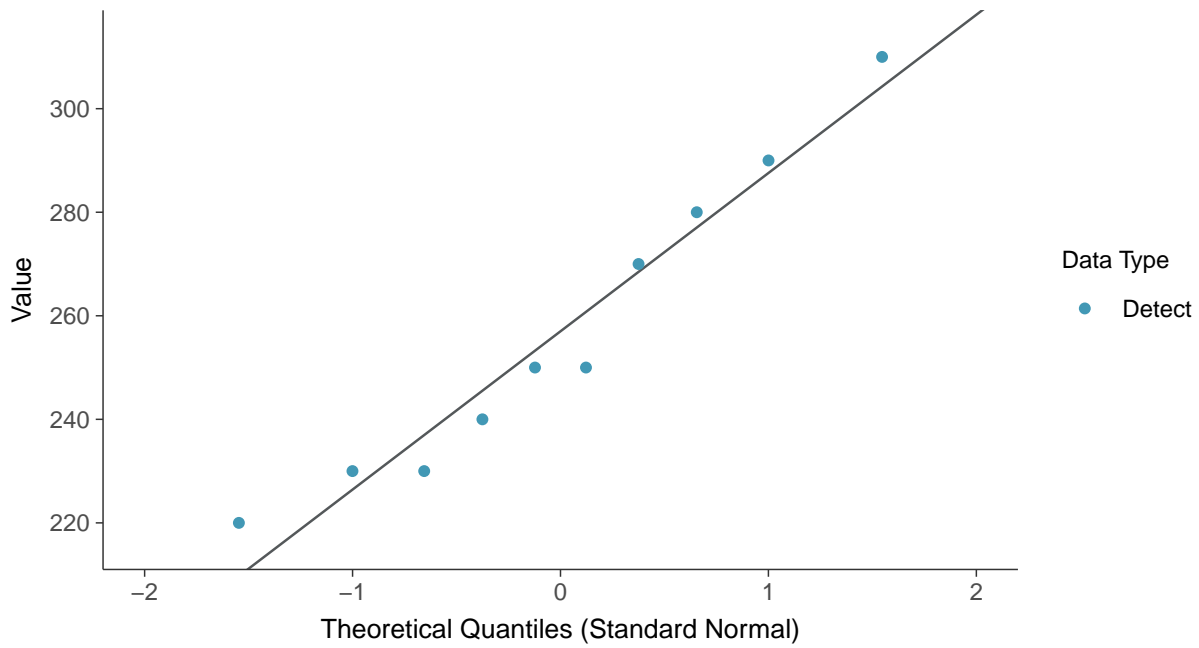
Calcium, MW-06 (mg/L)





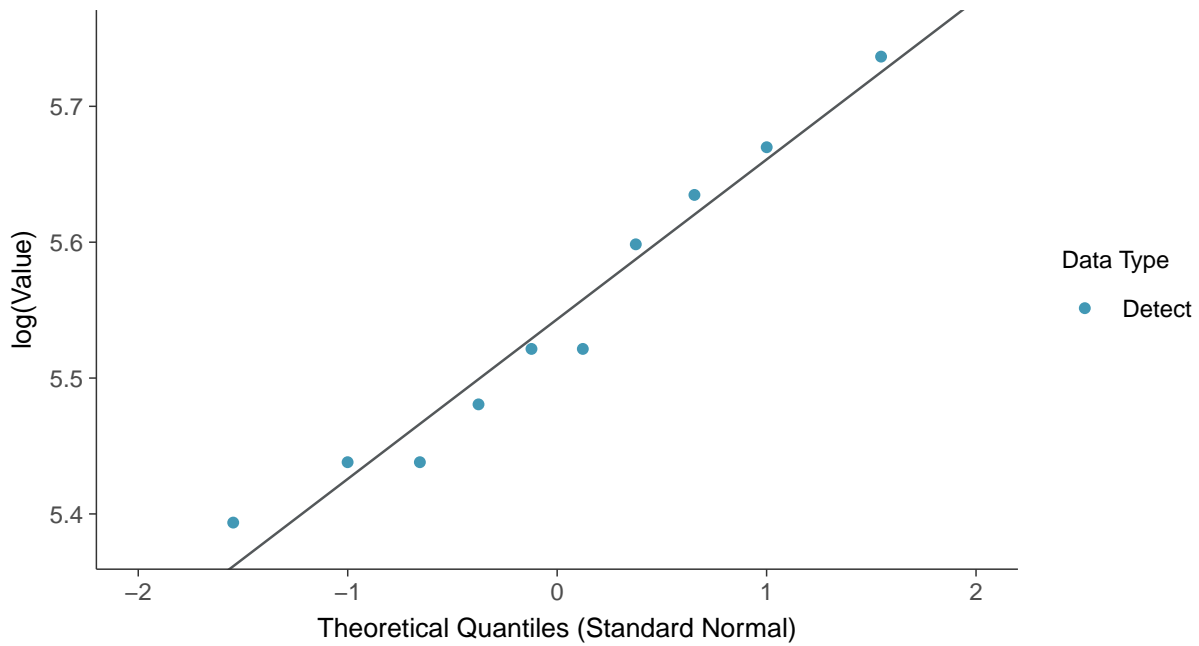
Normal Q-Q plot

Calcium, MW-06 (mg/L)



Lognormal Q-Q plot

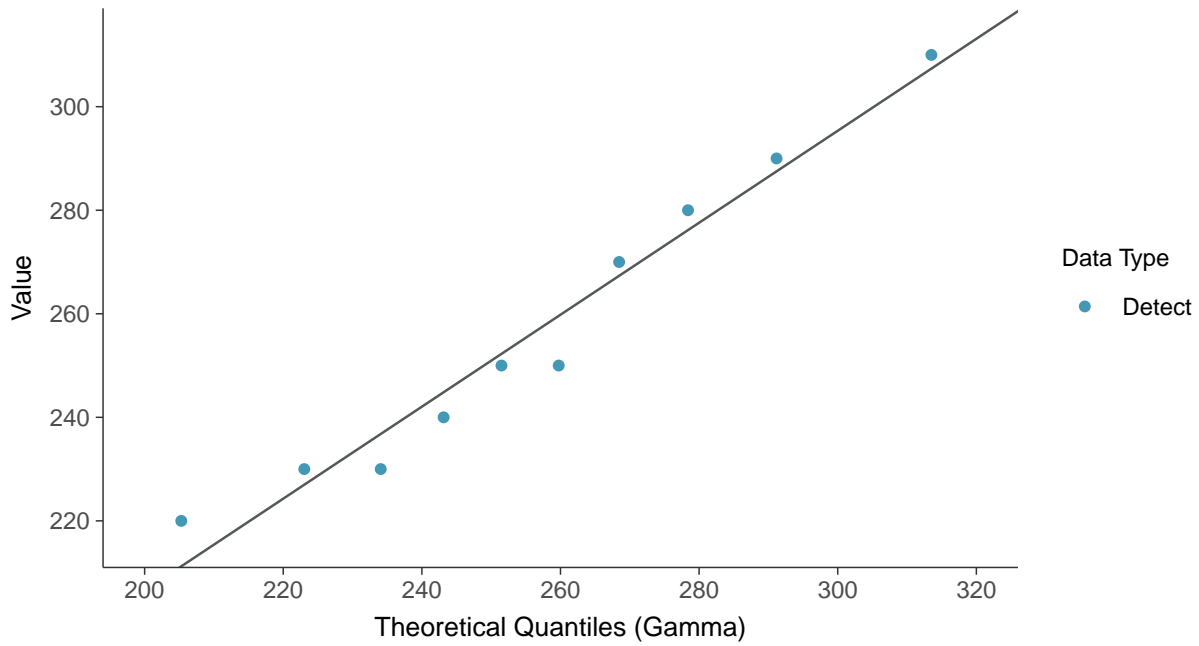
Calcium, MW-06 (mg/L)





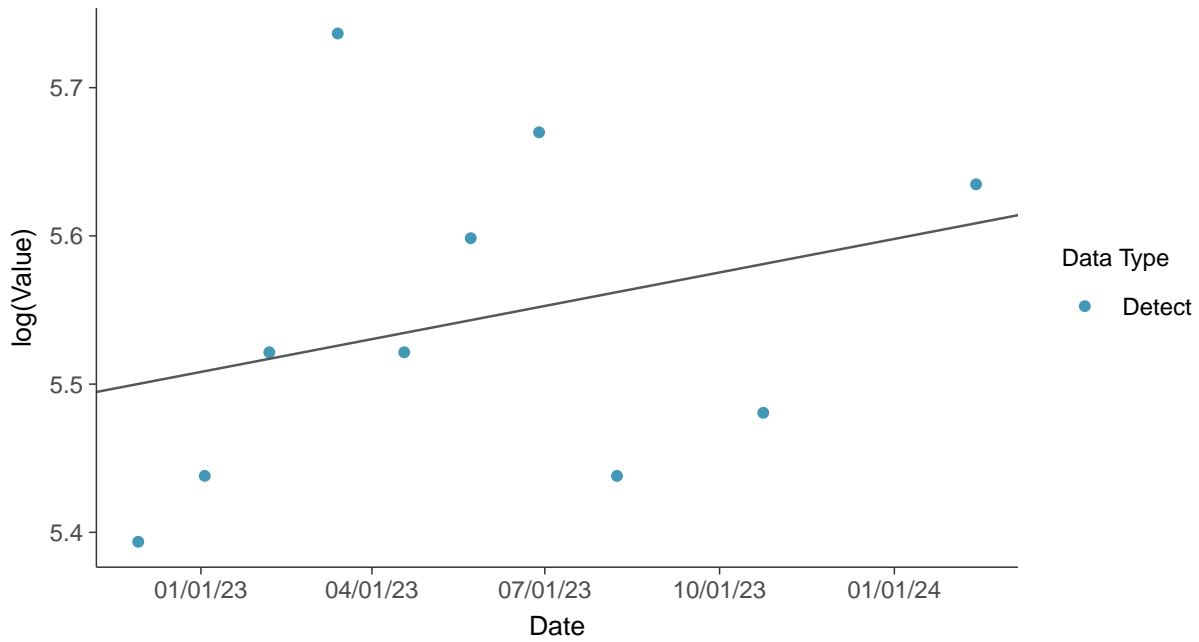
Gamma Q-Q plot

Calcium, MW-06 (mg/L)



Trend Regression: Lognormal MLE

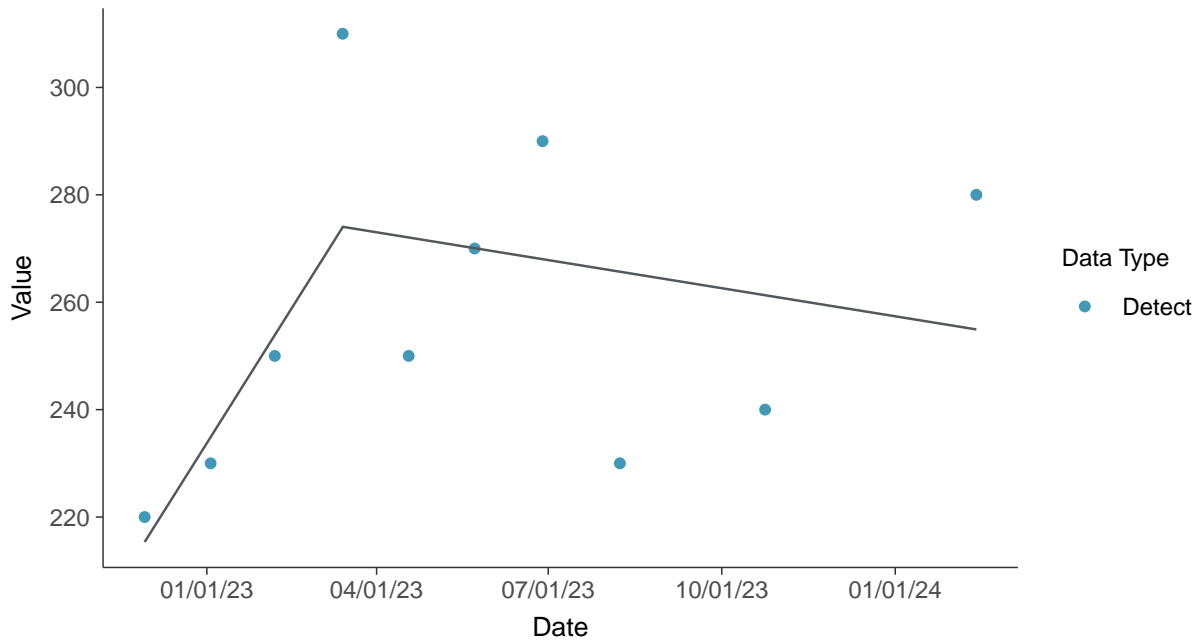
Calcium, MW-06 (mg/L)





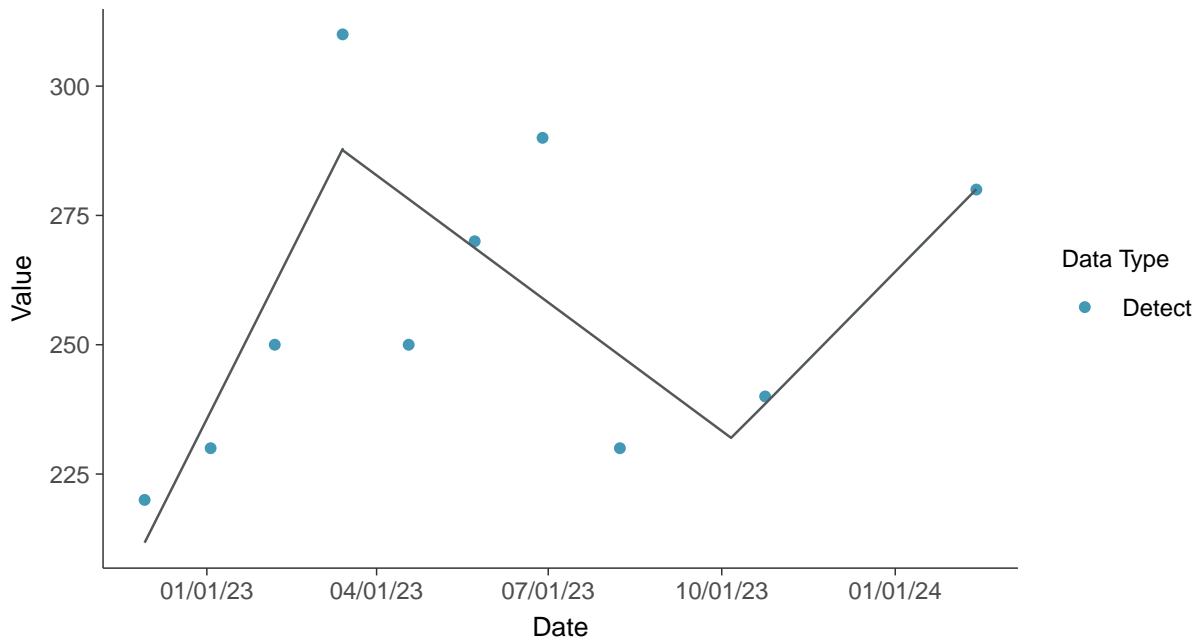
Trend Regression: Piecewise Linear-Linear

Calcium, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-06 (mg/L)



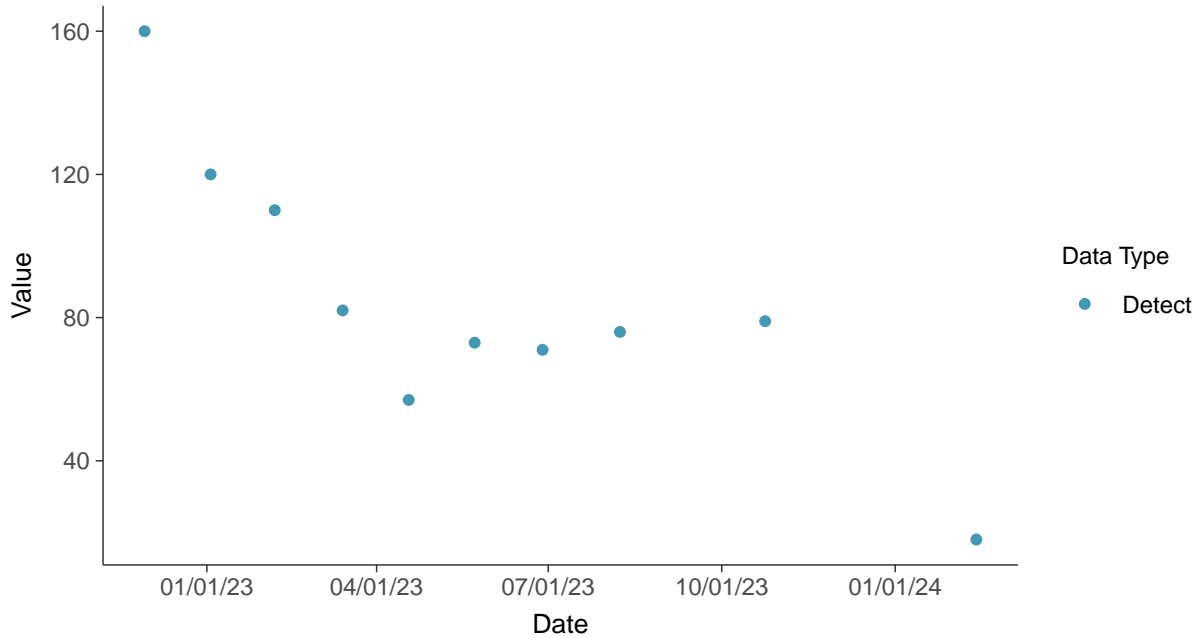


Appendix III: Chloride (as Cl), MW-06

ID: 1_16_4_108

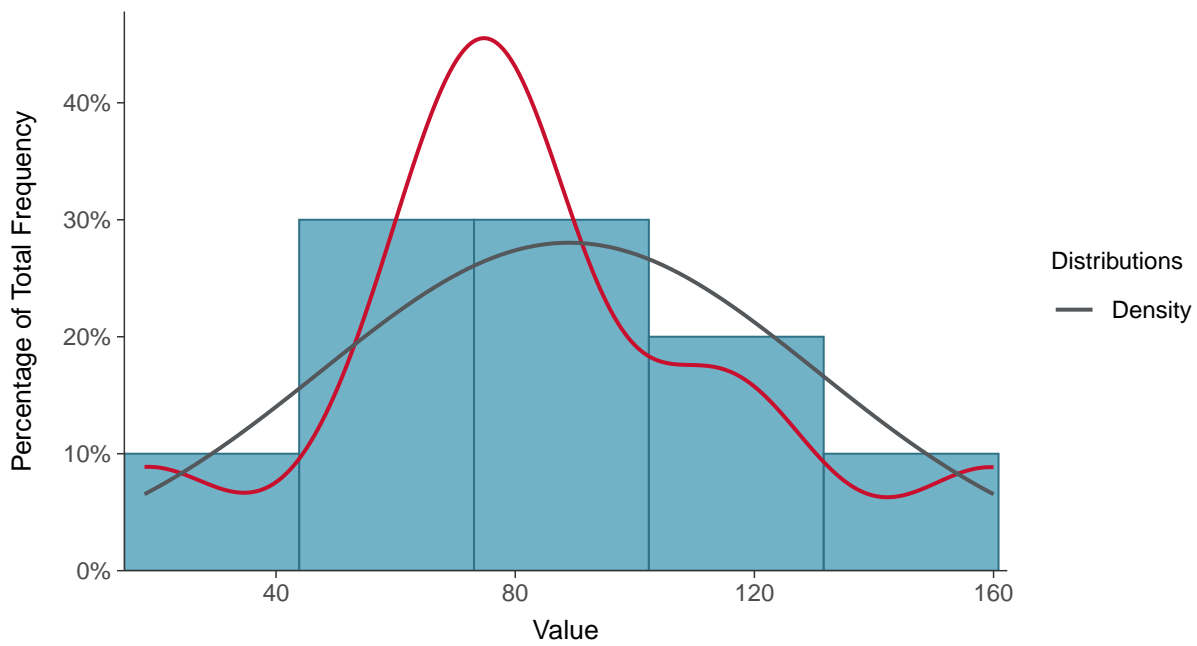
Scatter Plot

Chloride (as Cl), MW-06 (mg/L)



Histogram

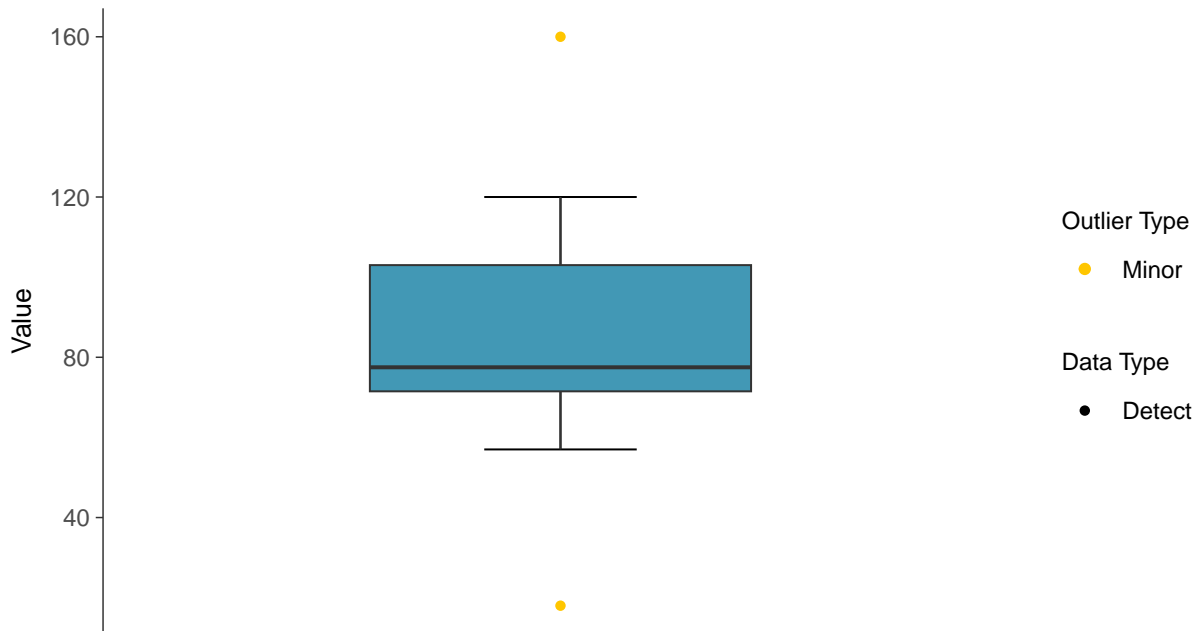
Chloride (as Cl), MW-06 (mg/L)





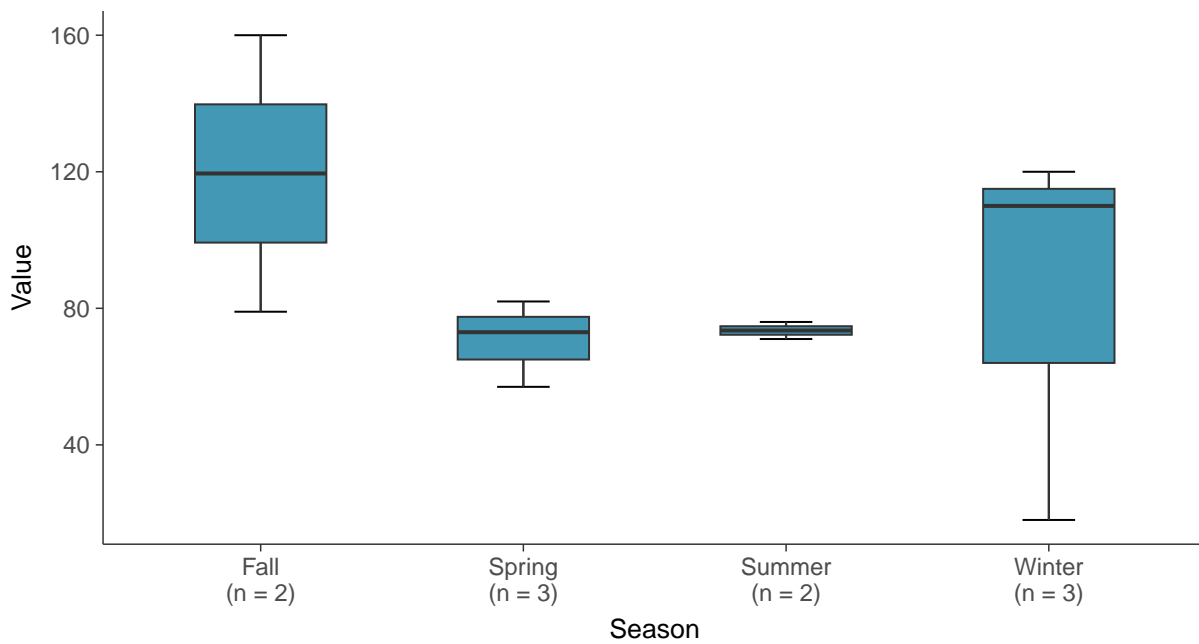
Boxplot

Chloride (as Cl), MW-06 (mg/L)



Boxplot by Season

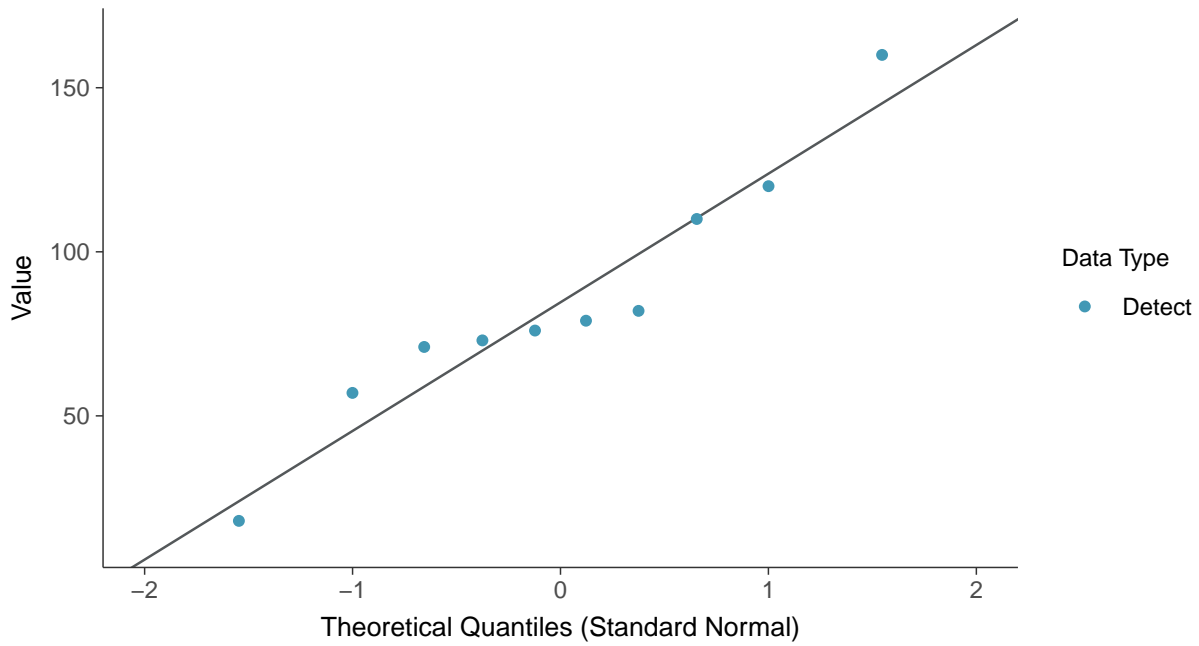
Chloride (as Cl), MW-06 (mg/L)





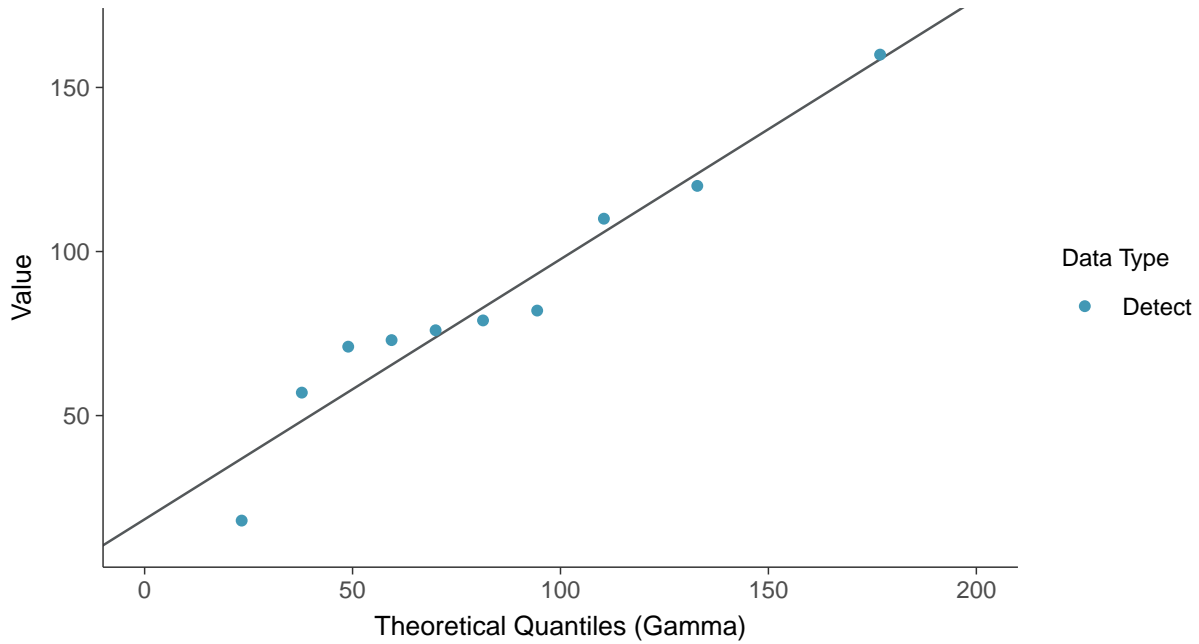
Normal Q-Q plot

Chloride (as Cl), MW-06 (mg/L)



Gamma Q-Q plot

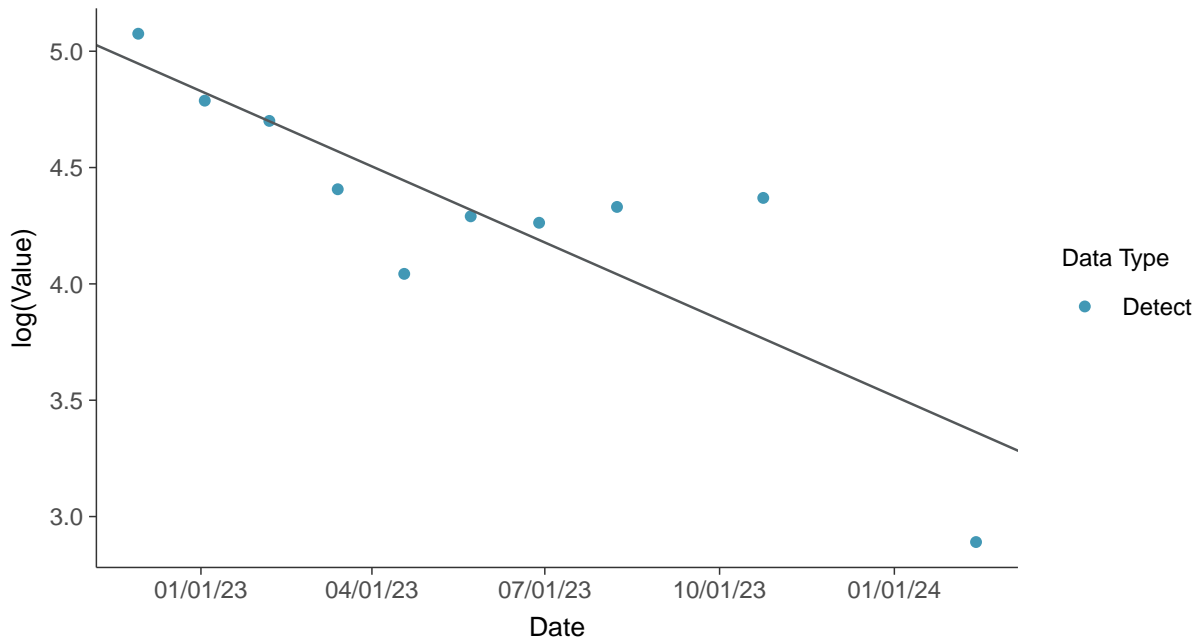
Chloride (as Cl), MW-06 (mg/L)





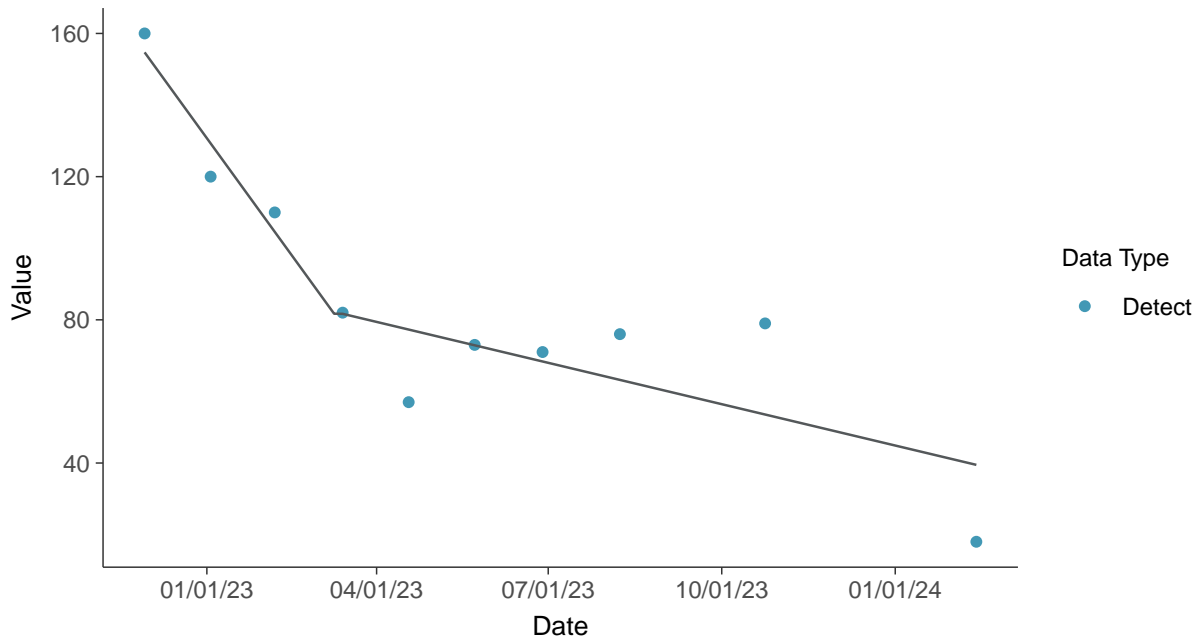
Trend Regression: Lognormal MLE

Chloride (as Cl), MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear

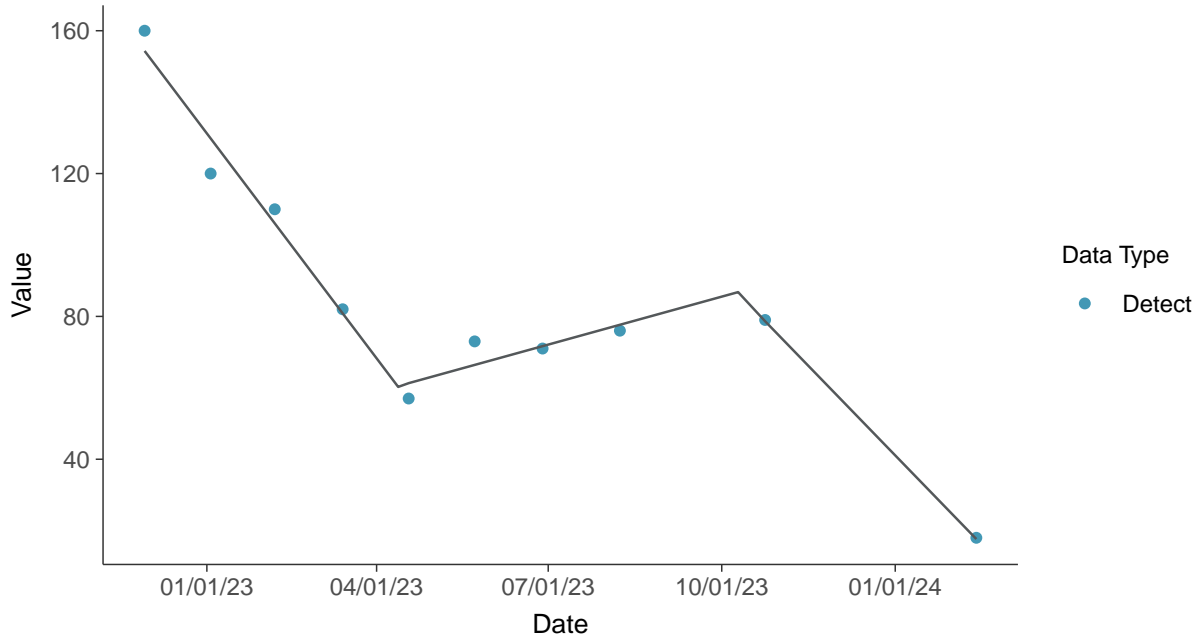
Chloride (as Cl), MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

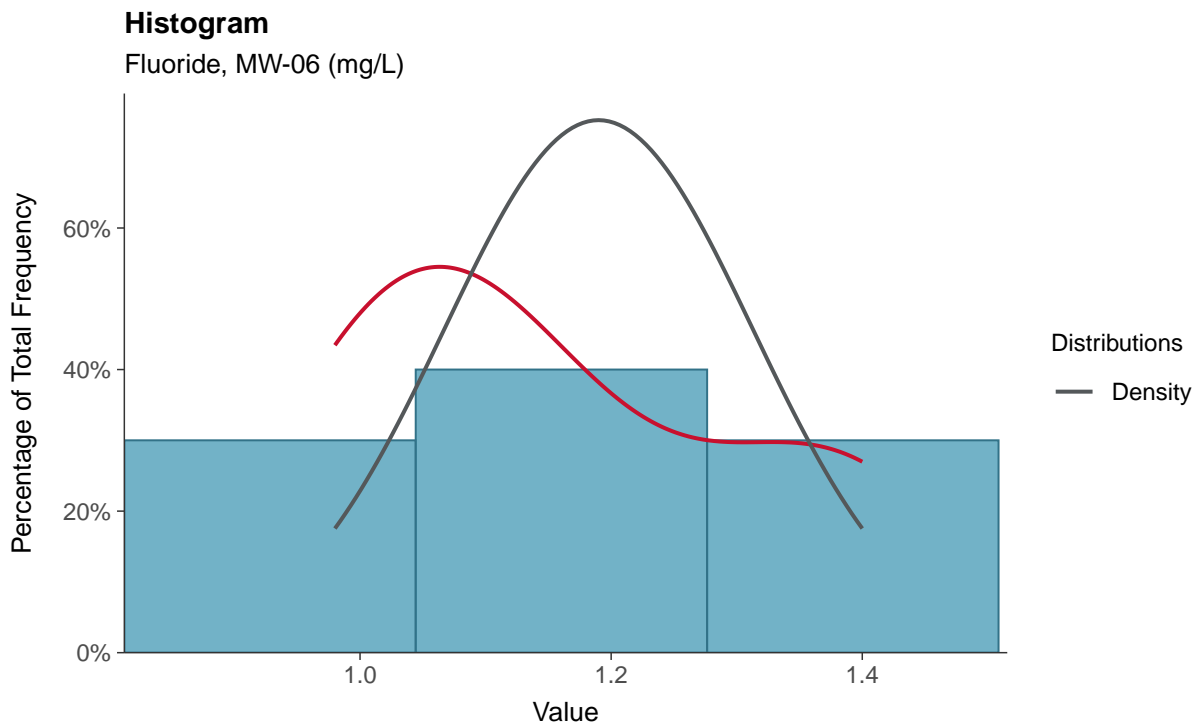
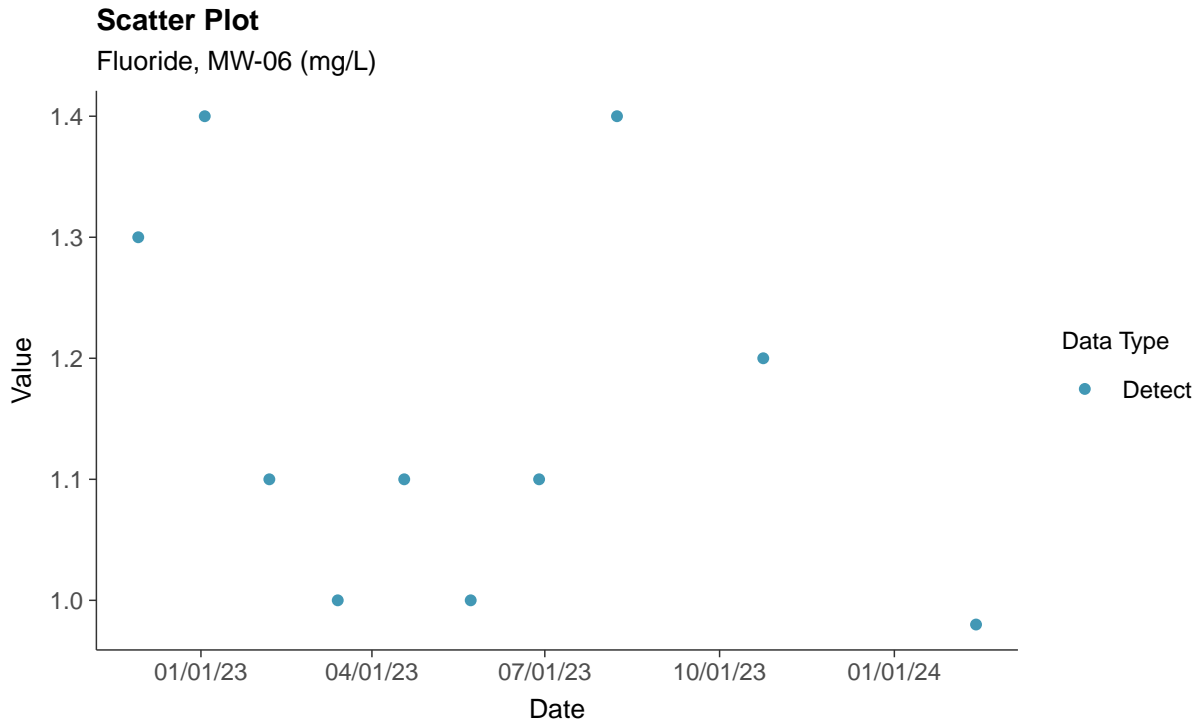
Chloride (as Cl), MW-06 (mg/L)





Appendix III: Fluoride, MW-06

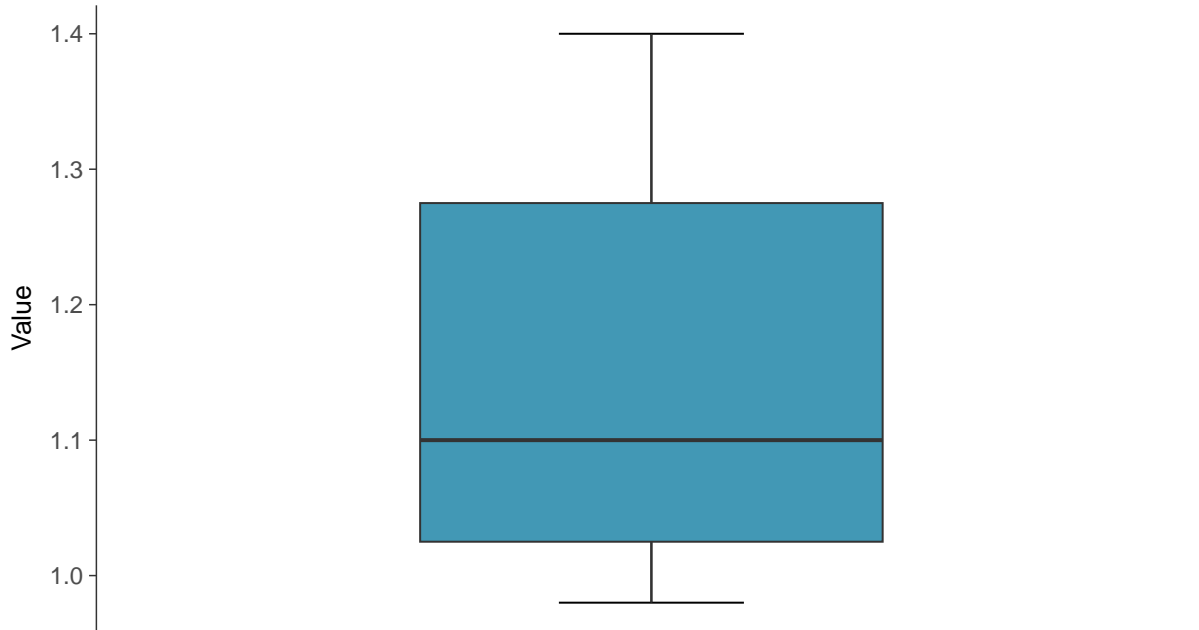
ID: 1_16_4_112





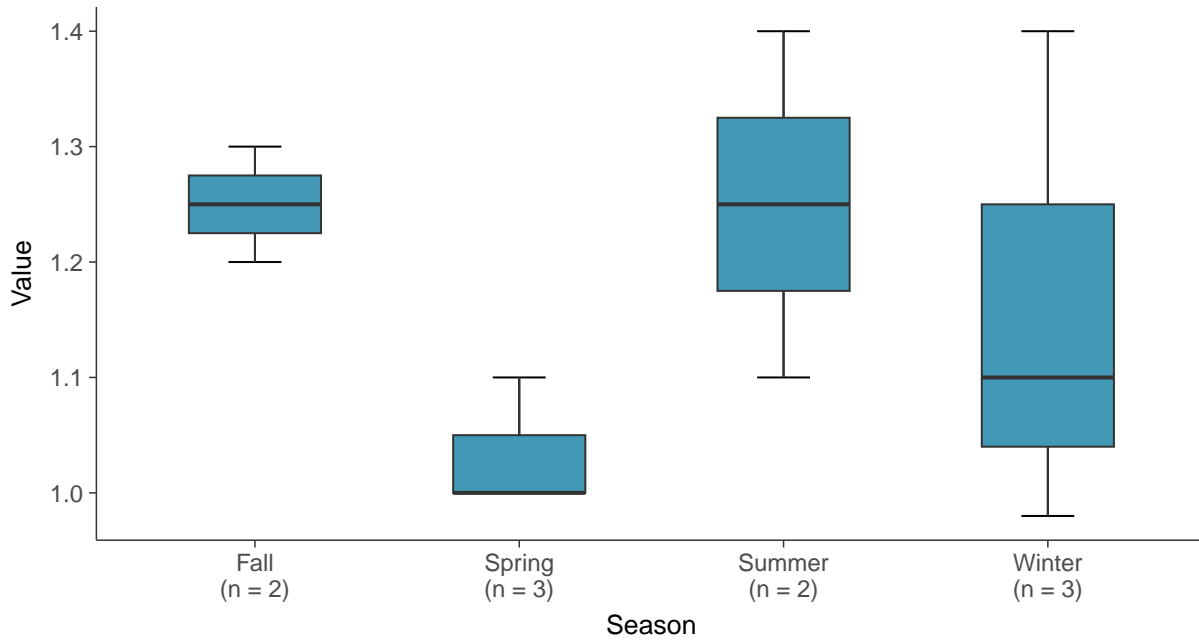
Boxplot

Fluoride, MW-06 (mg/L)



Boxplot by Season

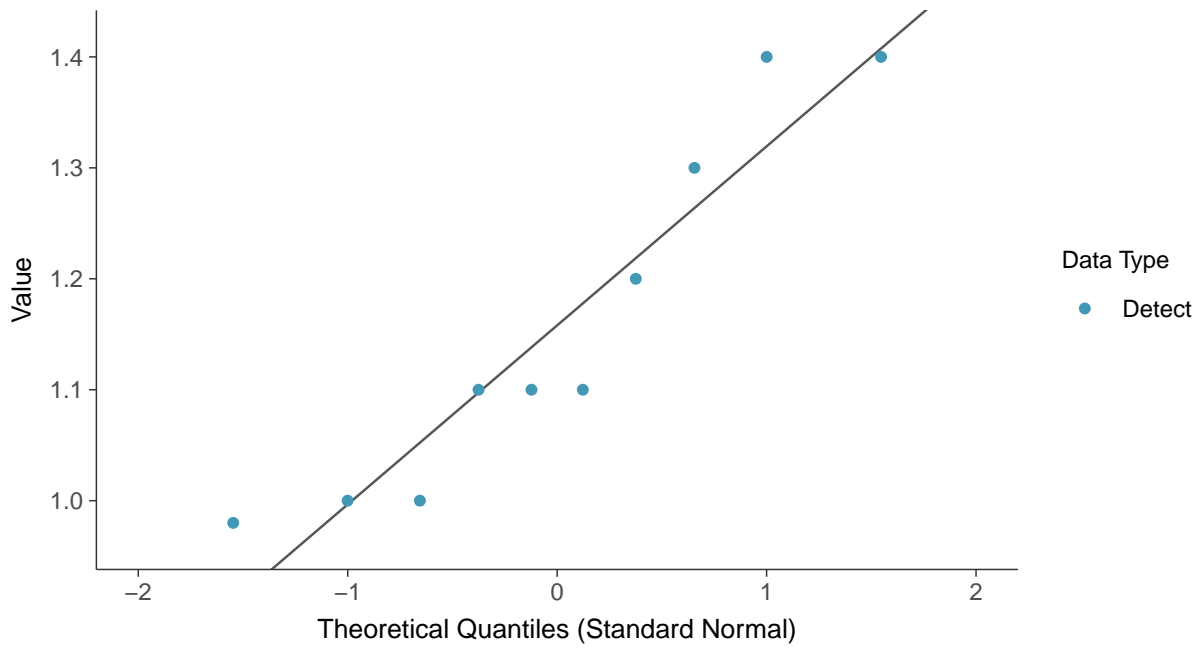
Fluoride, MW-06 (mg/L)





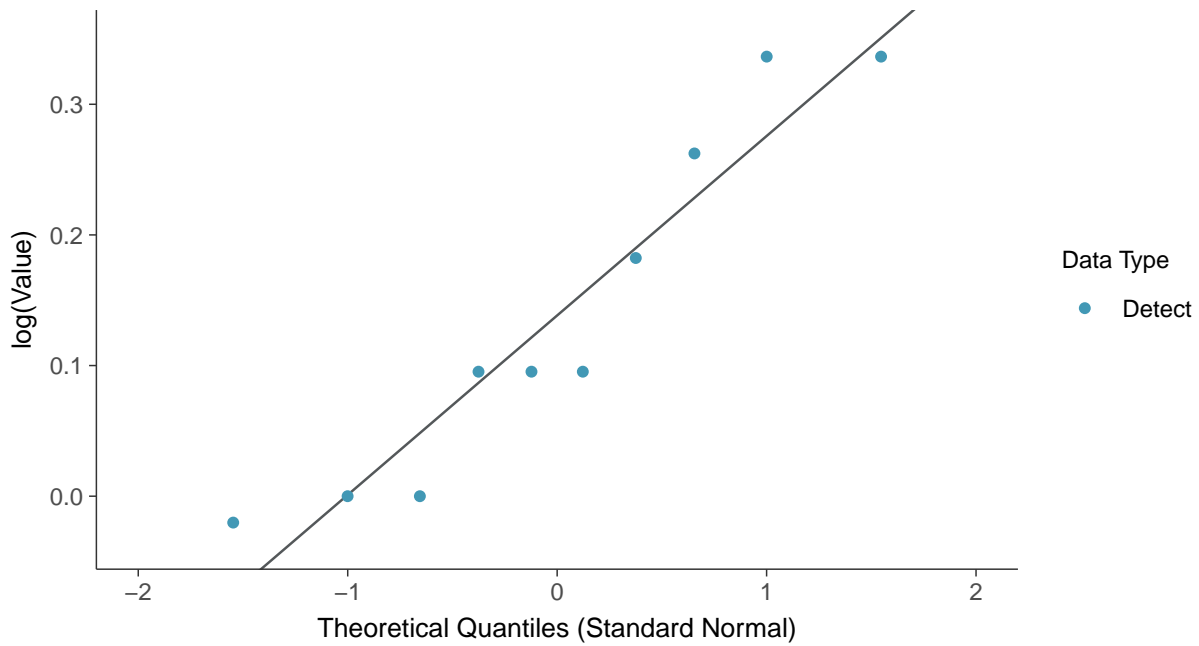
Normal Q-Q plot

Fluoride, MW-06 (mg/L)



Lognormal Q-Q plot

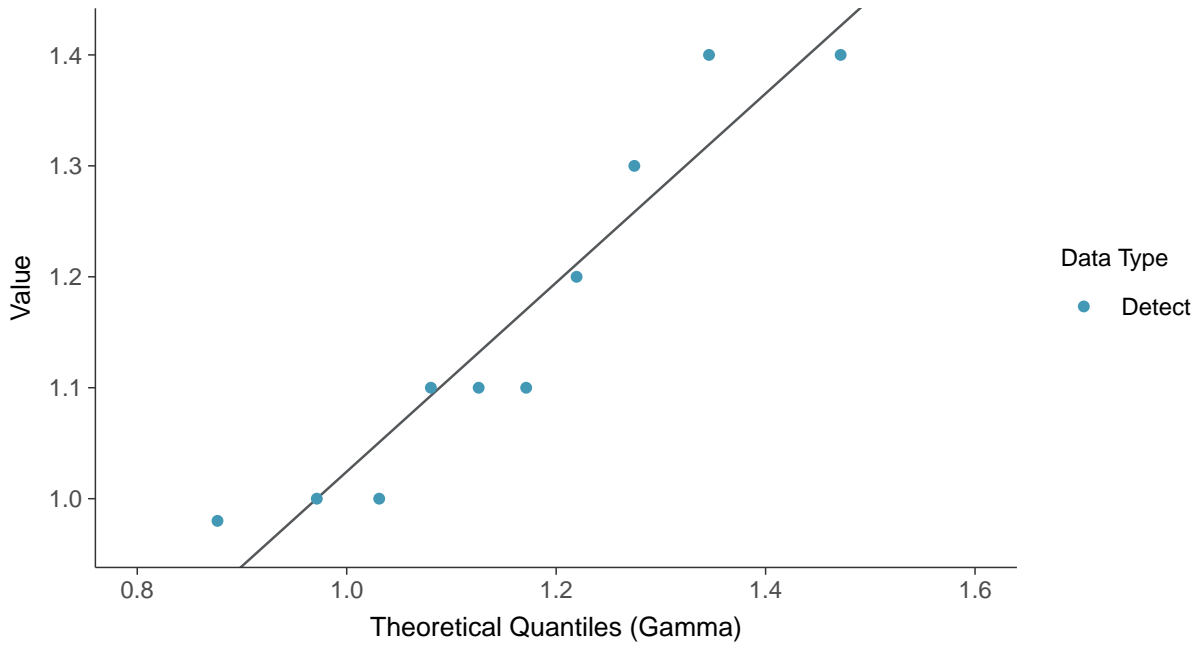
Fluoride, MW-06 (mg/L)





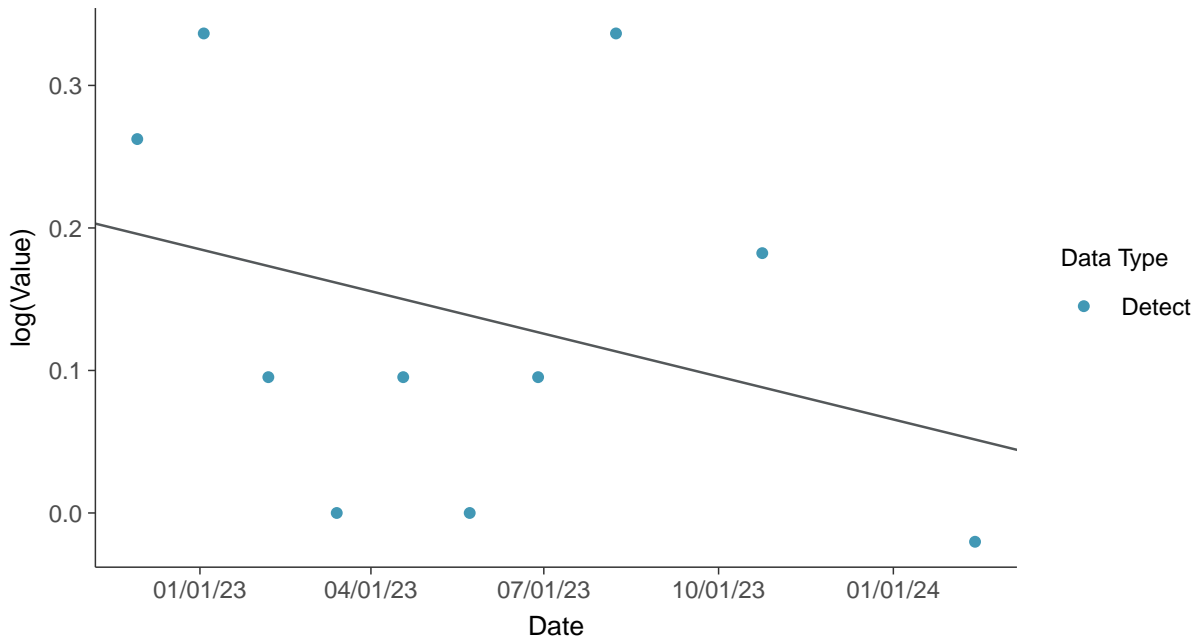
Gamma Q-Q plot

Fluoride, MW-06 (mg/L)



Trend Regression: Lognormal MLE

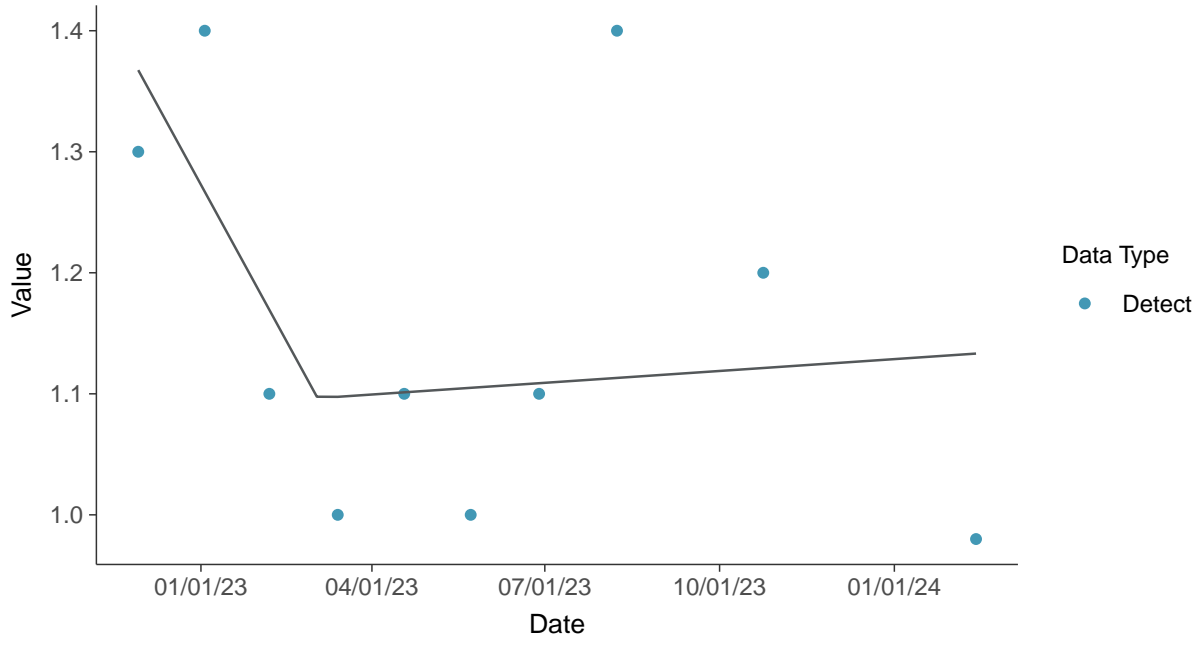
Fluoride, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear

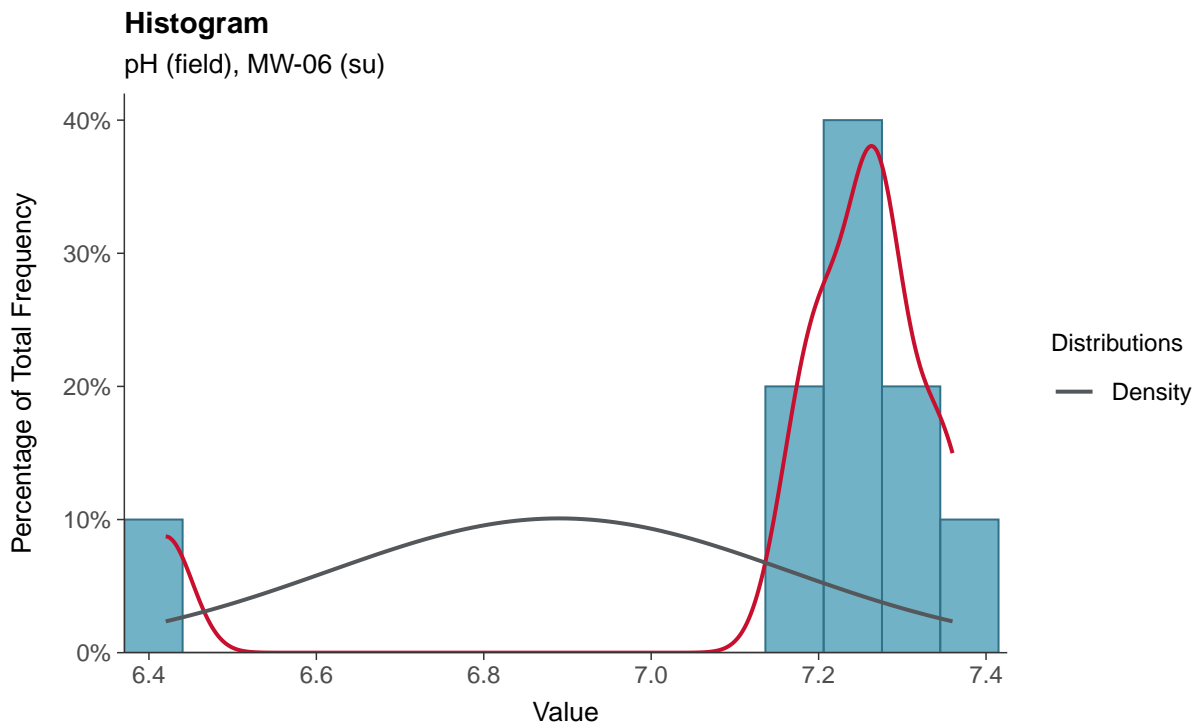
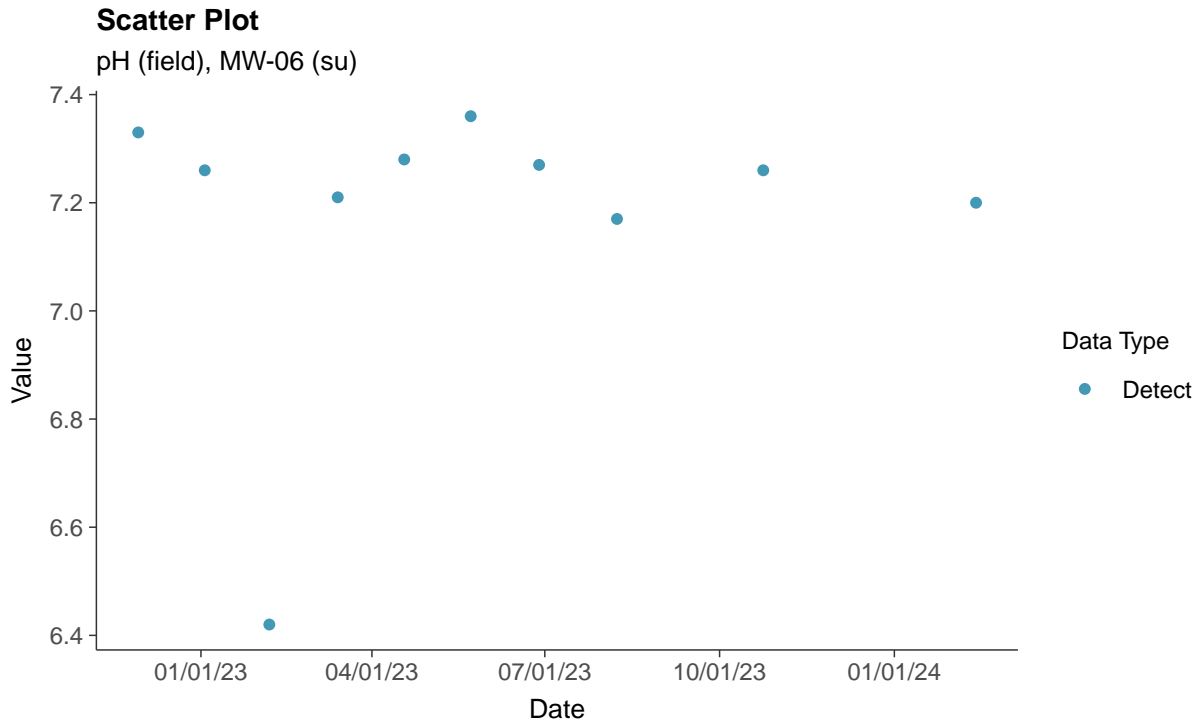
Fluoride, MW-06 (mg/L)





Appendix III: pH (field), MW-06

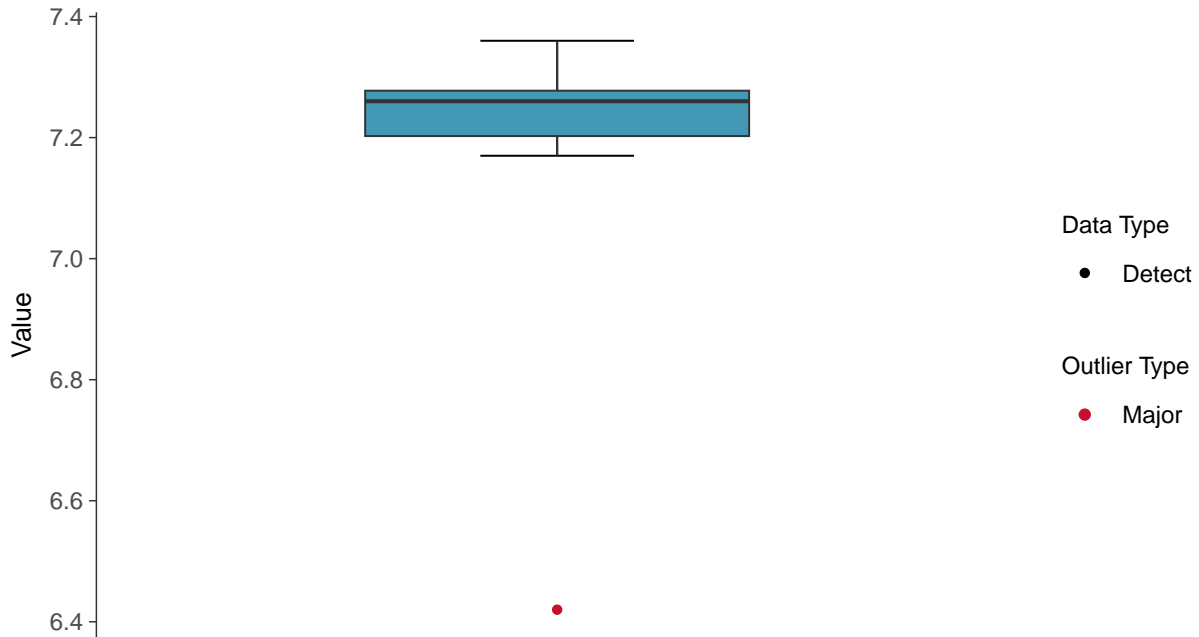
ID: 1_16_4_120





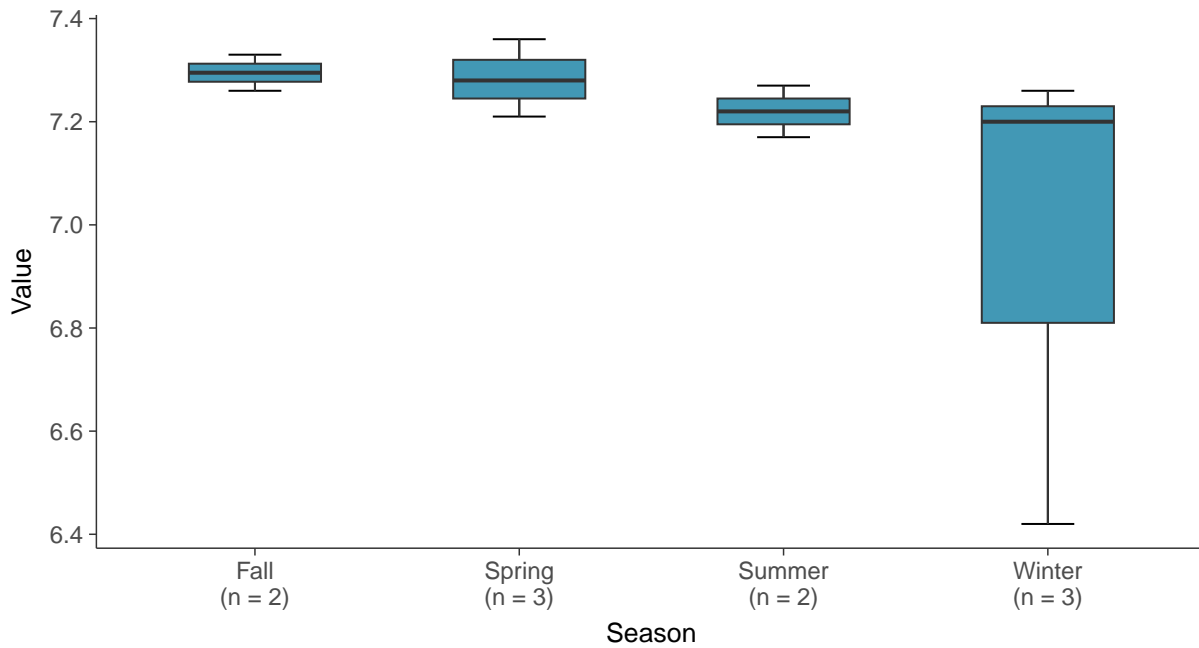
Boxplot

pH (field), MW-06 (su)



Boxplot by Season

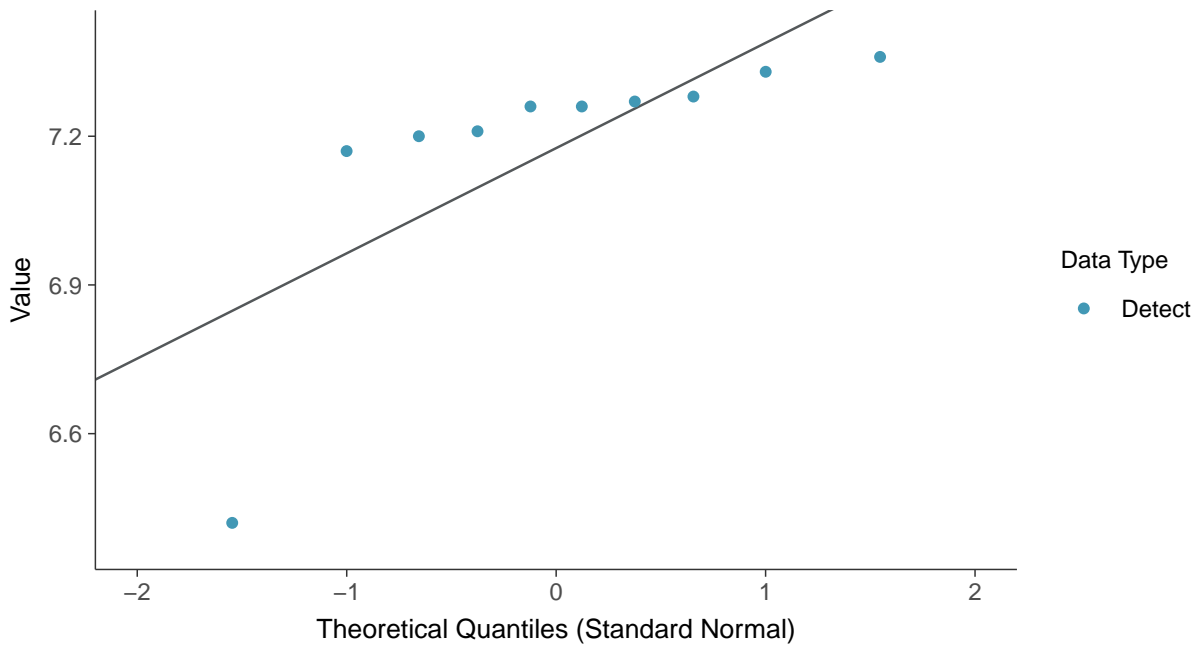
pH (field), MW-06 (su)





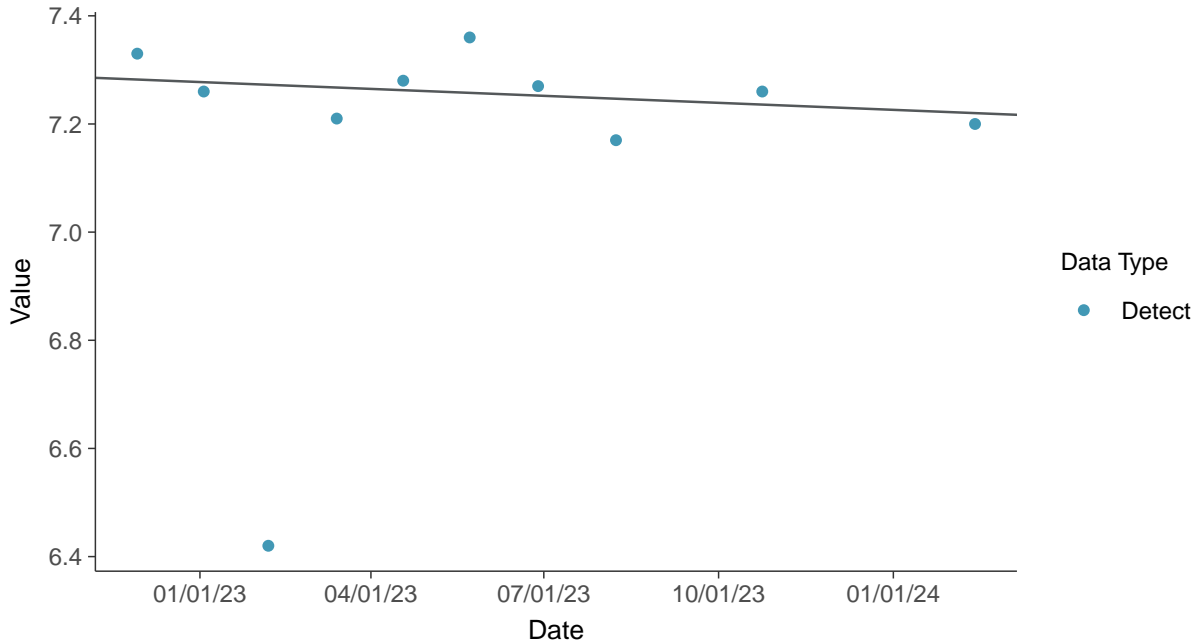
Normal Q-Q plot

pH (field), MW-06 (su)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

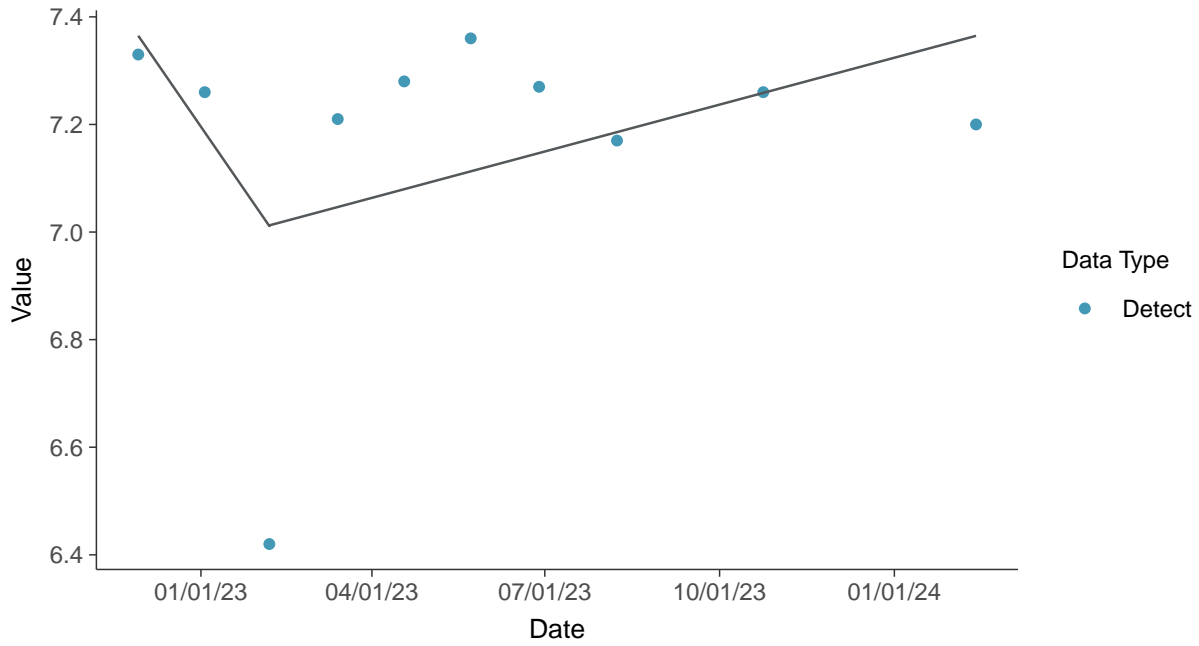
pH (field), MW-06 (su)





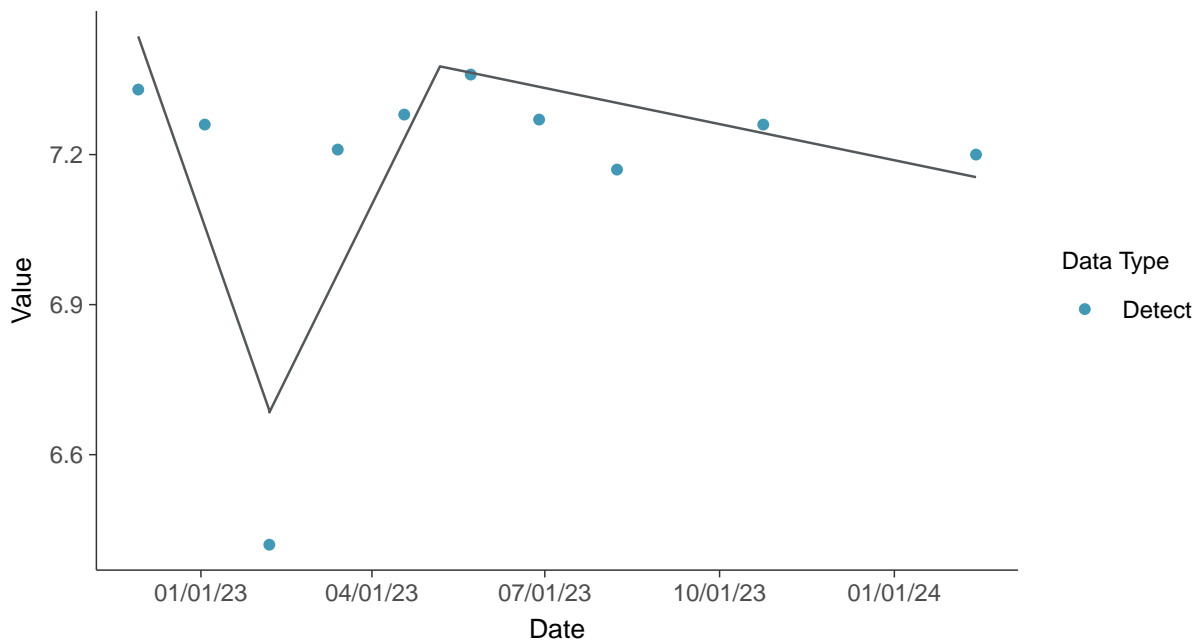
Trend Regression: Piecewise Linear-Linear

pH (field), MW-06 (su)



Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-06 (su)



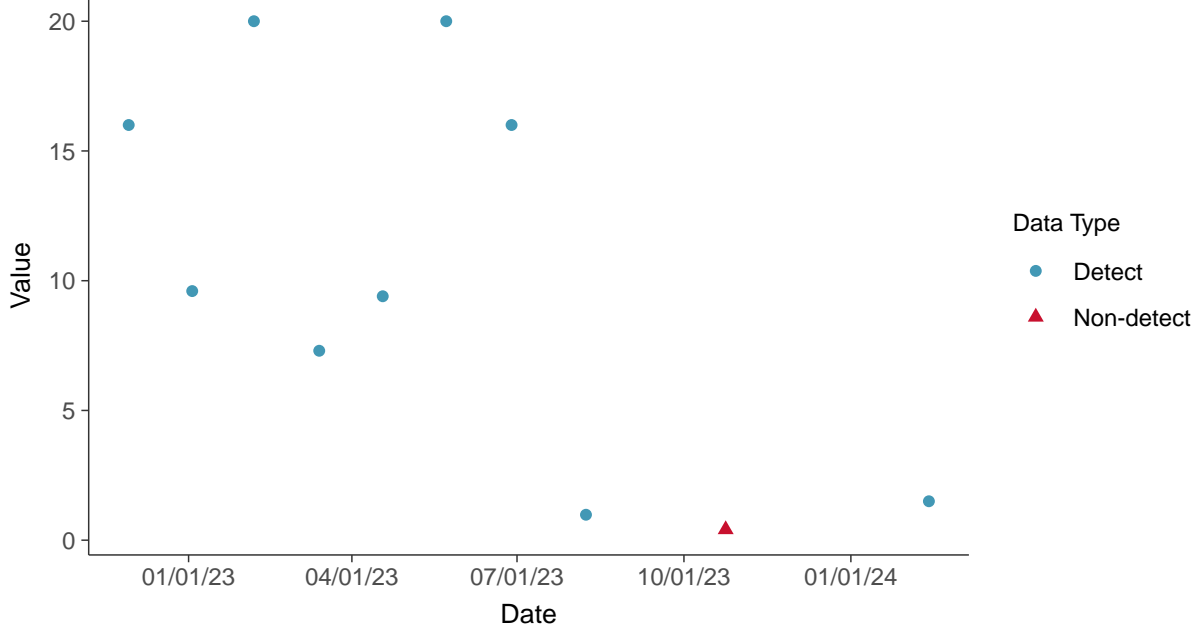


Appendix III: Sulfate (as SO₄), MW-06

ID: 1_16_4_124

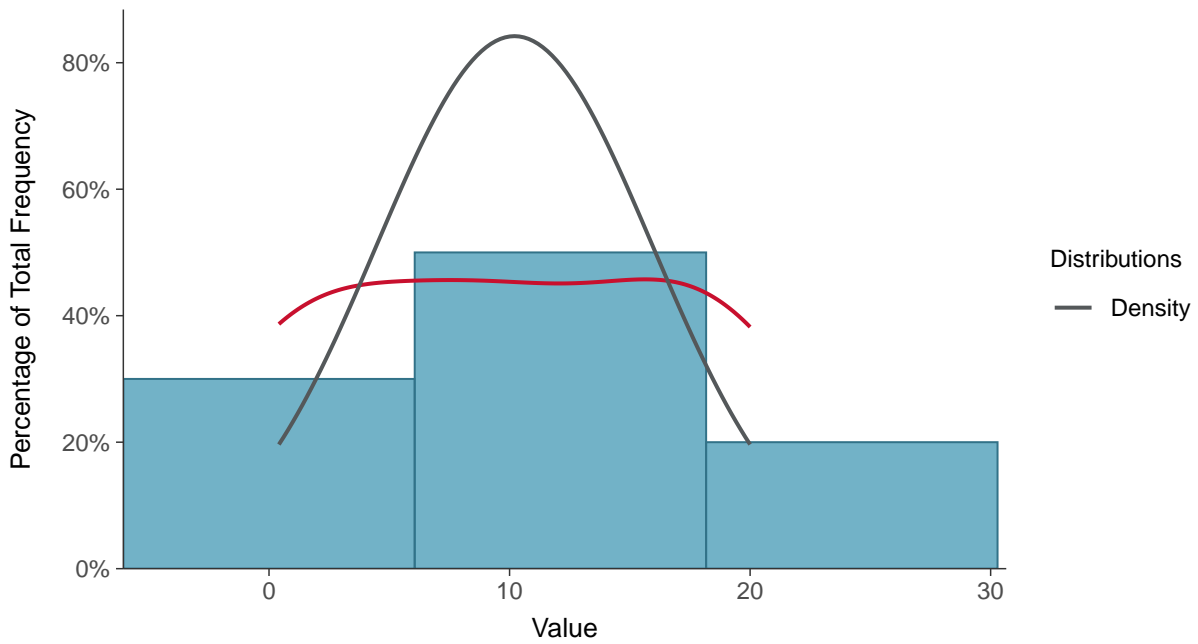
Scatter Plot

Sulfate (as SO₄), MW-06 (mg/L)



Histogram

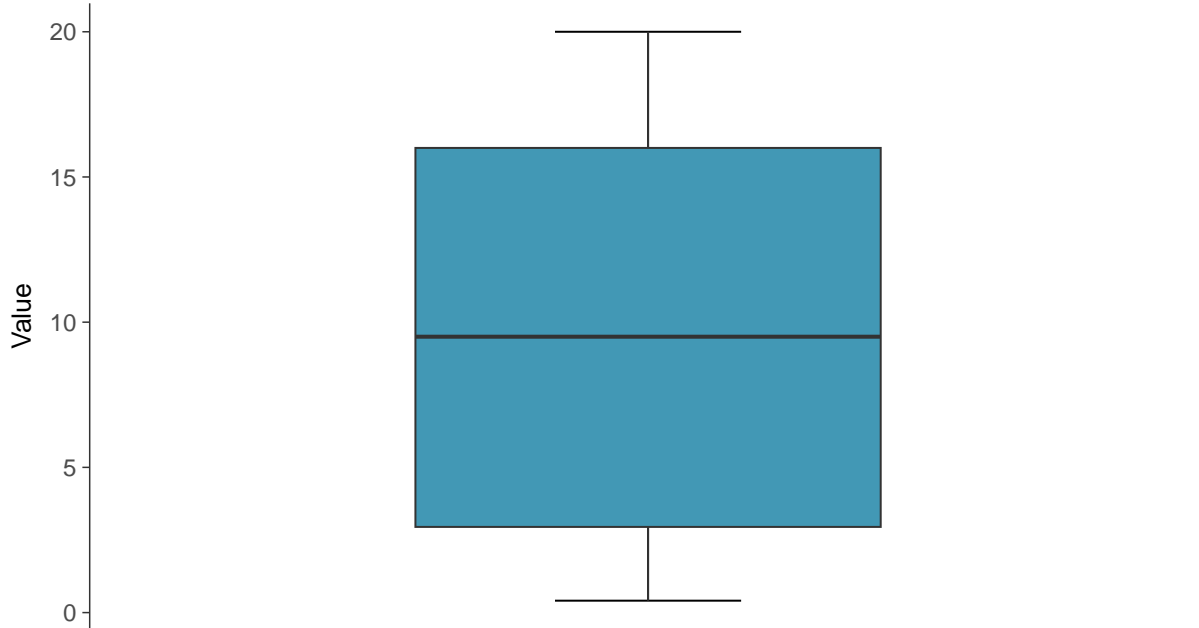
Sulfate (as SO₄), MW-06 (mg/L)





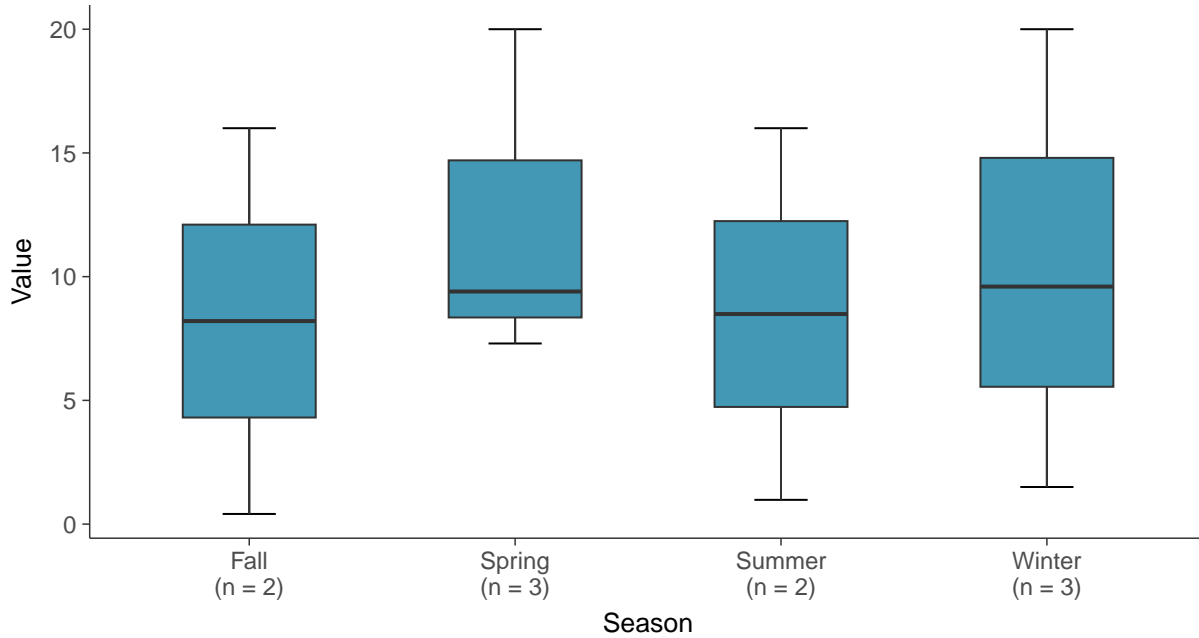
Boxplot

Sulfate (as SO₄), MW-06 (mg/L)



Boxplot by Season

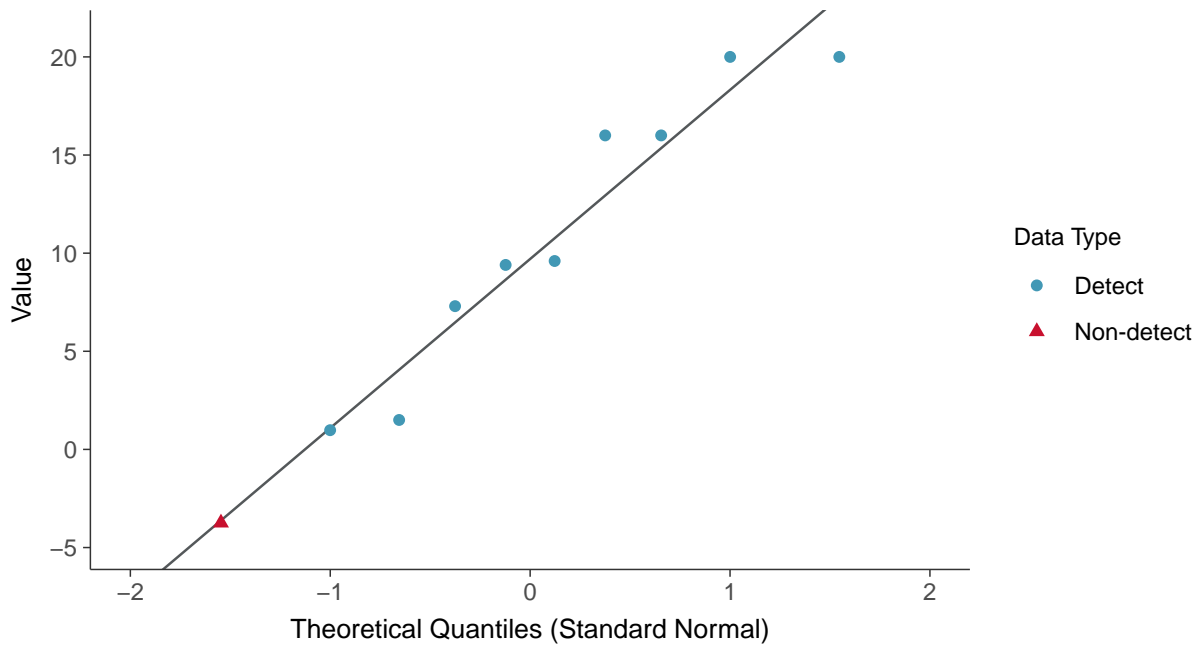
Sulfate (as SO₄), MW-06 (mg/L)





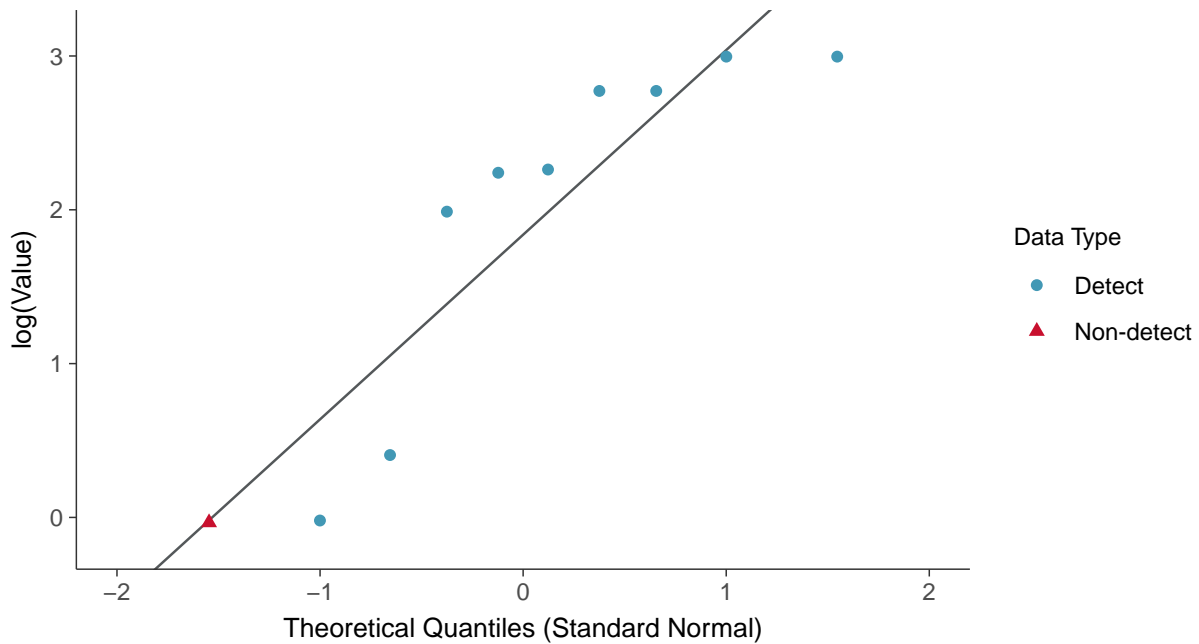
Normal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO₄), MW-06 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

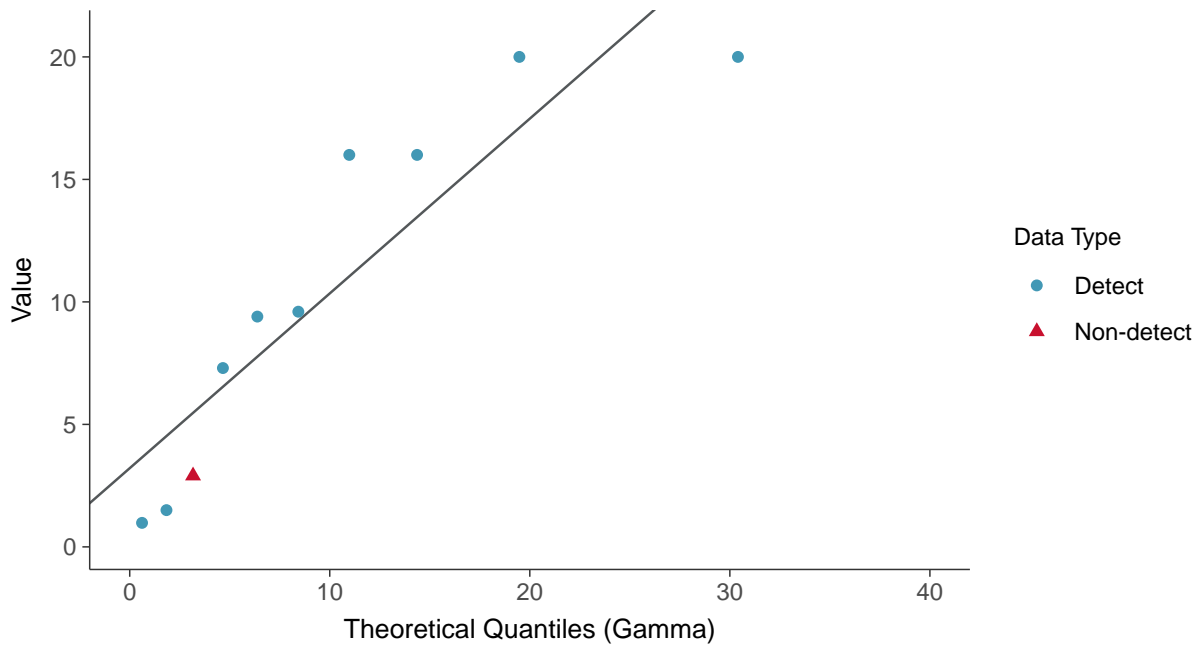
Sulfate (as SO₄), MW-06 (mg/L)





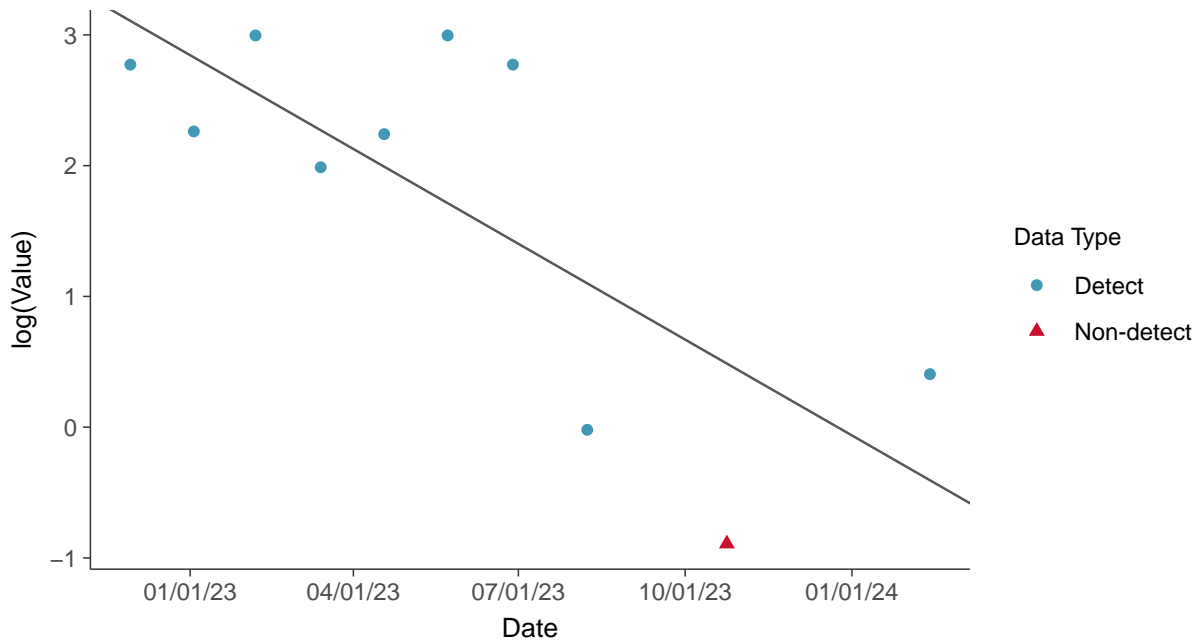
Gamma Q-Q plot using ROS Imputed Estimates

Sulfate (as SO₄), MW-06 (mg/L)



Trend Regression: Lognormal MLE

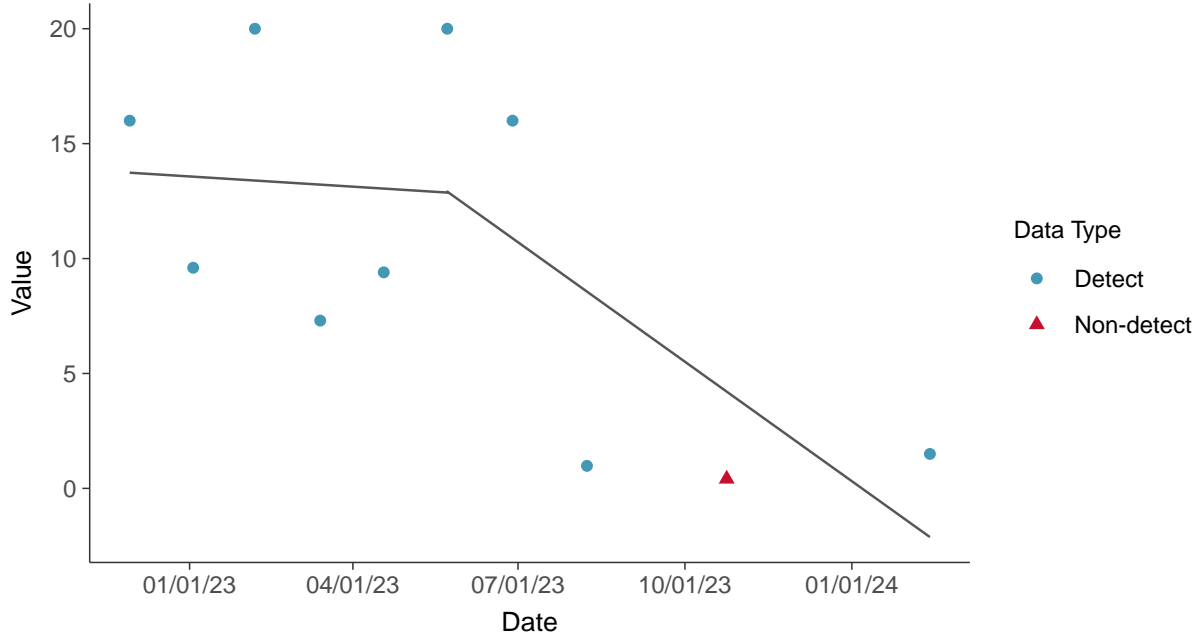
Sulfate (as SO₄), MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-06 (mg/L)



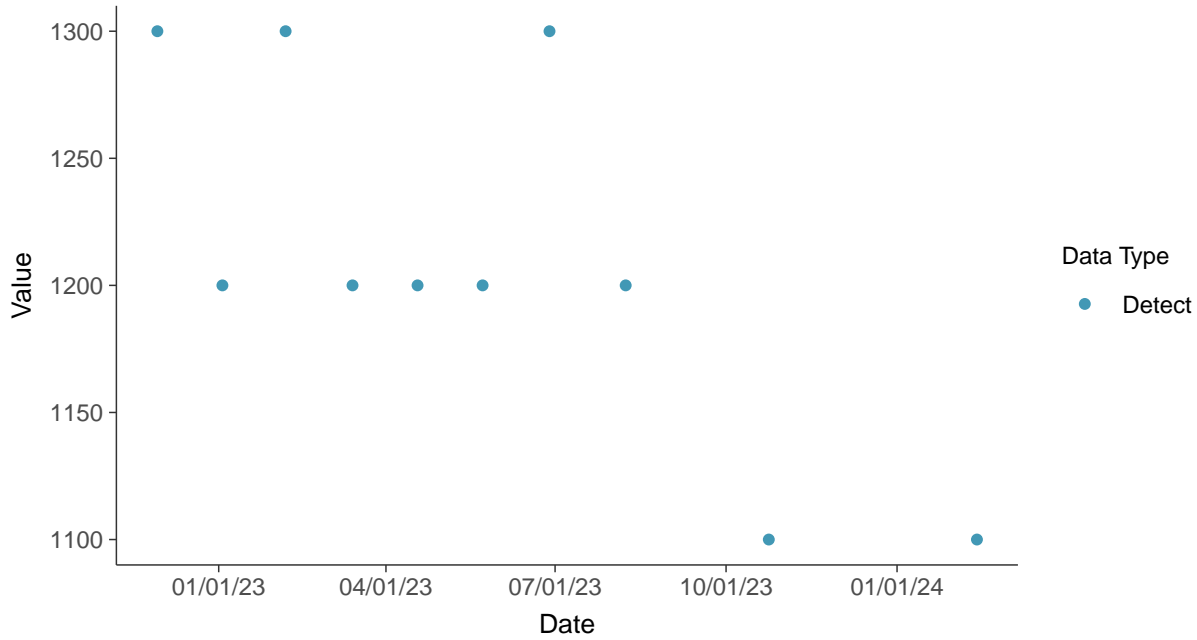


Appendix III: Total Dissolved Solids, MW-06

ID: 1_16_4_126

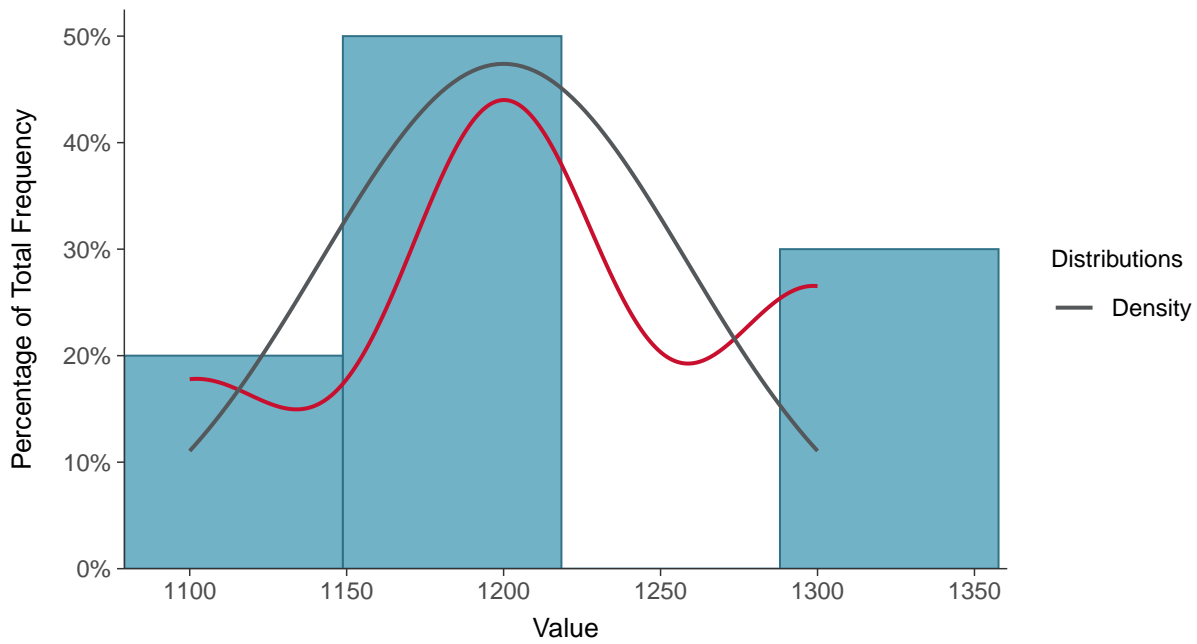
Scatter Plot

Total Dissolved Solids, MW-06 (mg/L)



Histogram

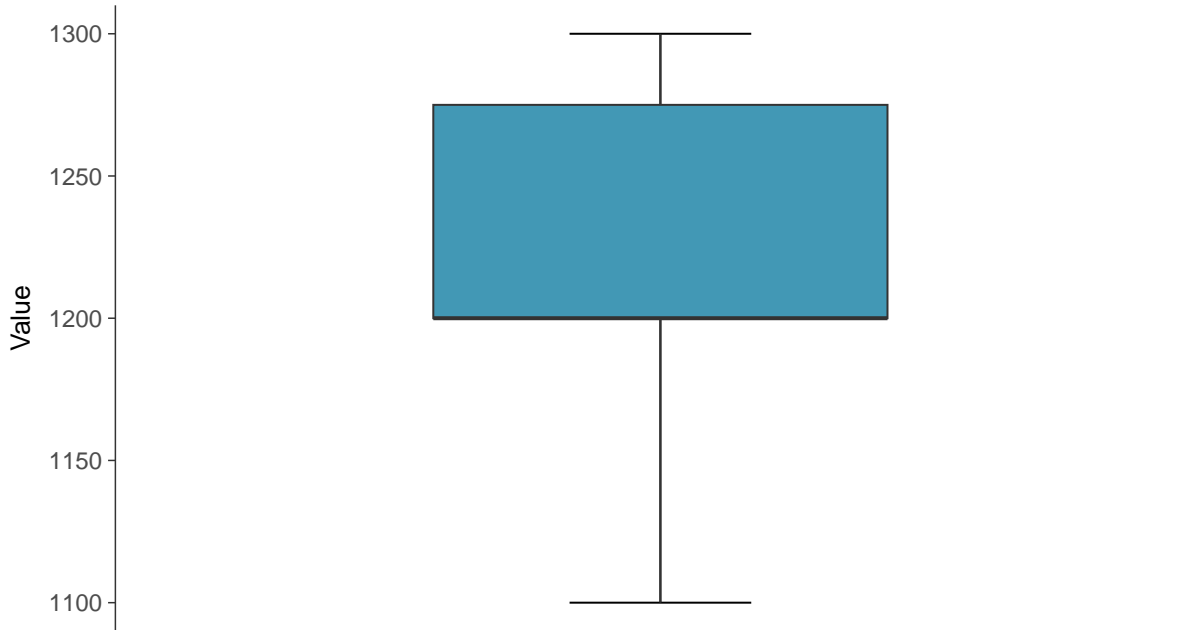
Total Dissolved Solids, MW-06 (mg/L)





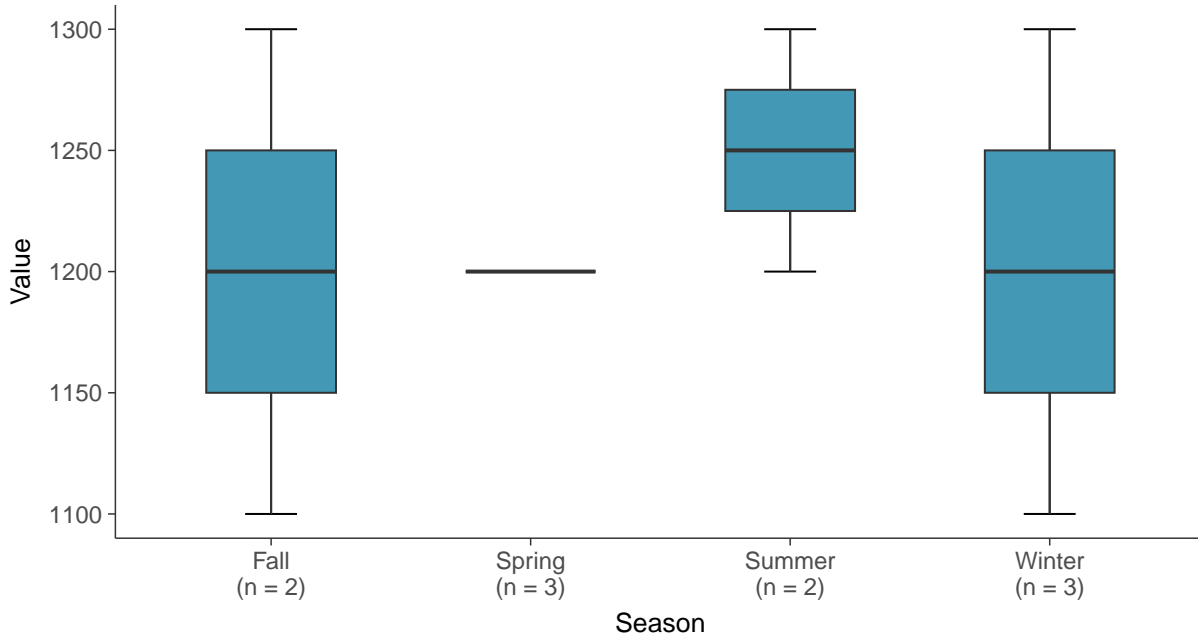
Boxplot

Total Dissolved Solids, MW-06 (mg/L)



Boxplot by Season

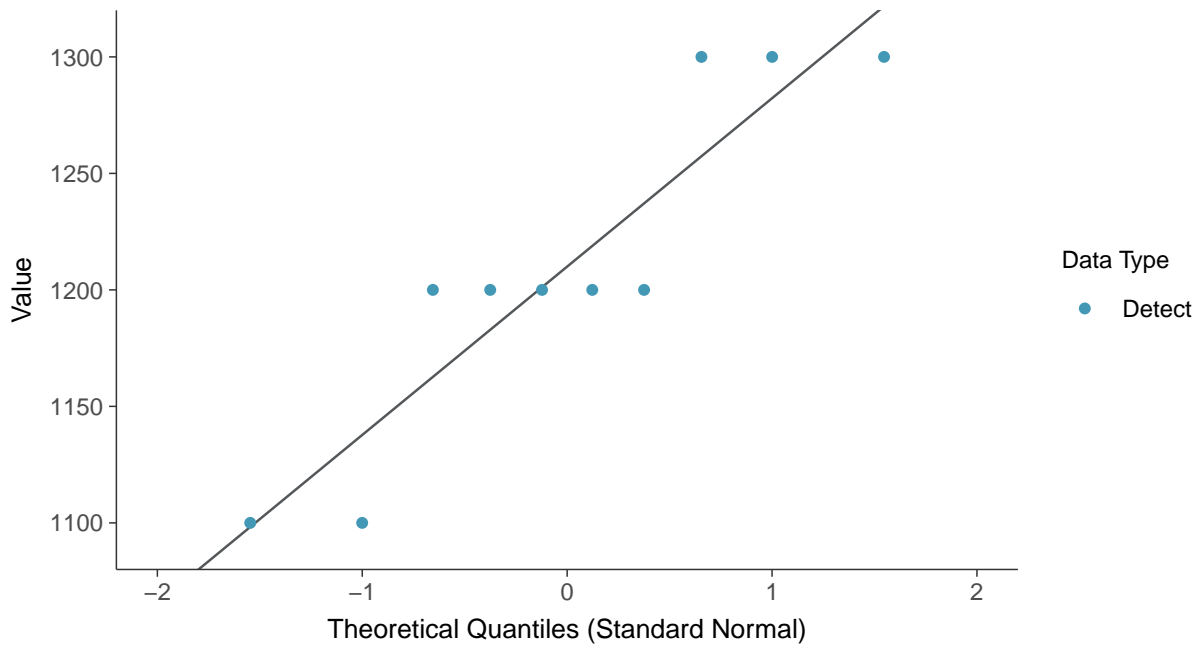
Total Dissolved Solids, MW-06 (mg/L)





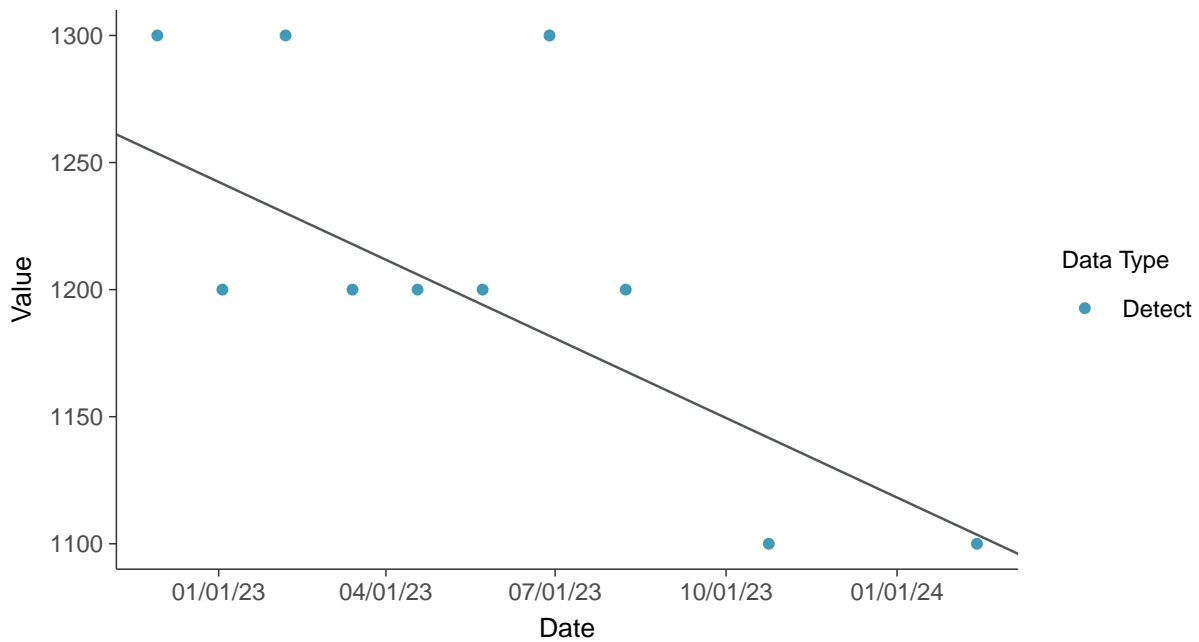
Normal Q-Q plot

Total Dissolved Solids, MW-06 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

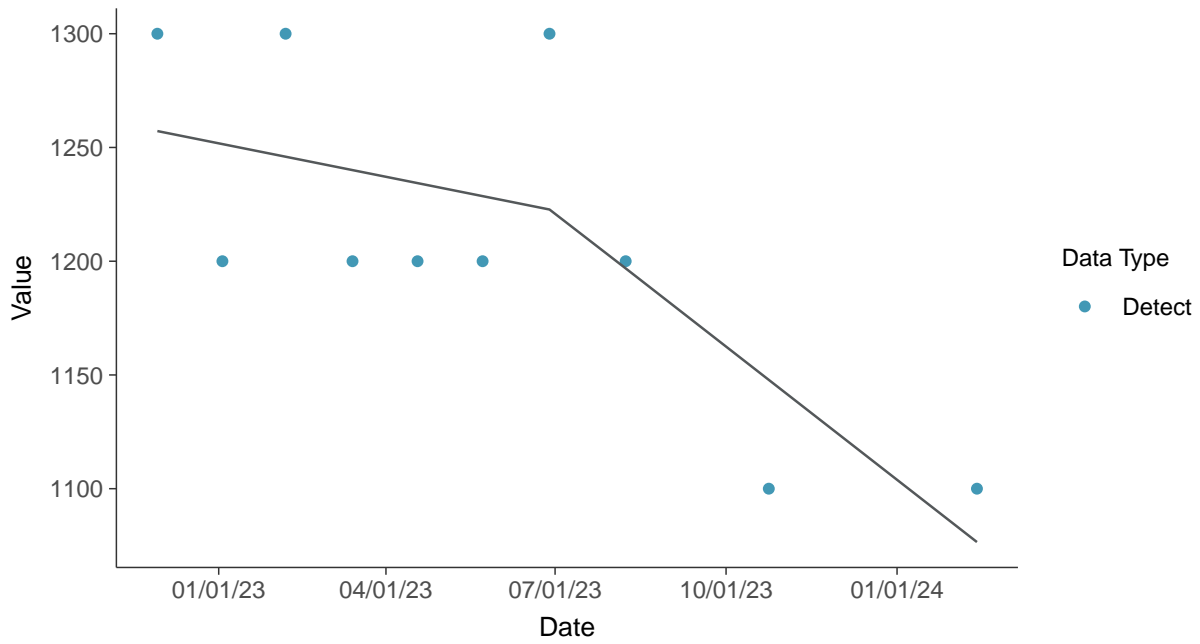
Total Dissolved Solids, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-06 (mg/L)



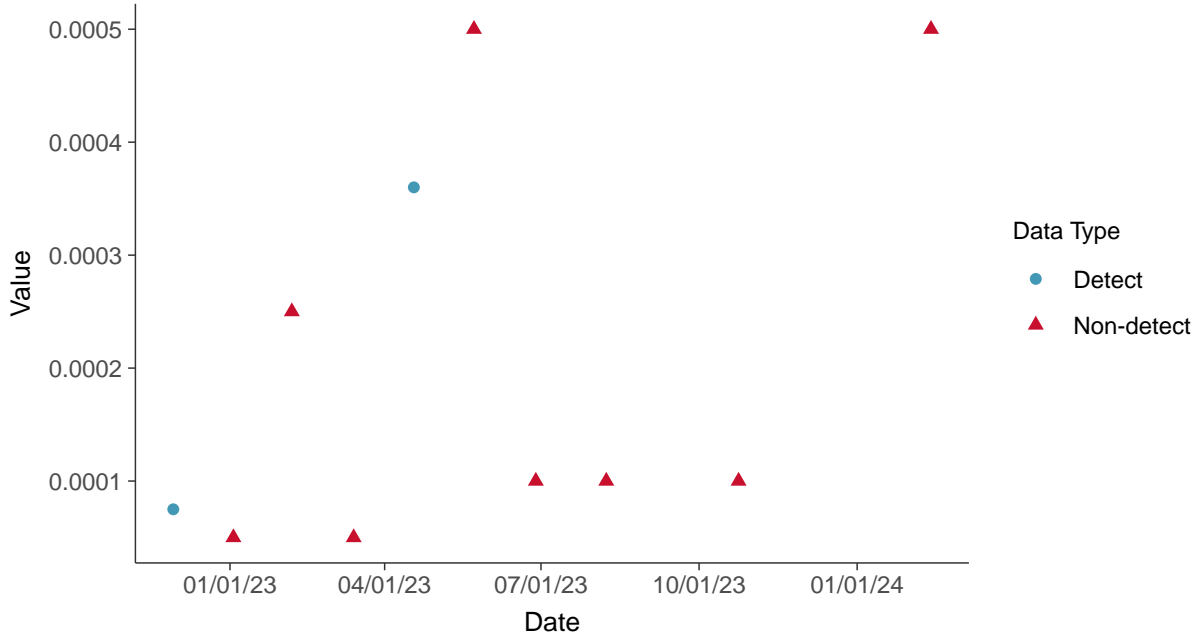


Appendix IV: Antimony, MW-06

ID: 1_16_5_101

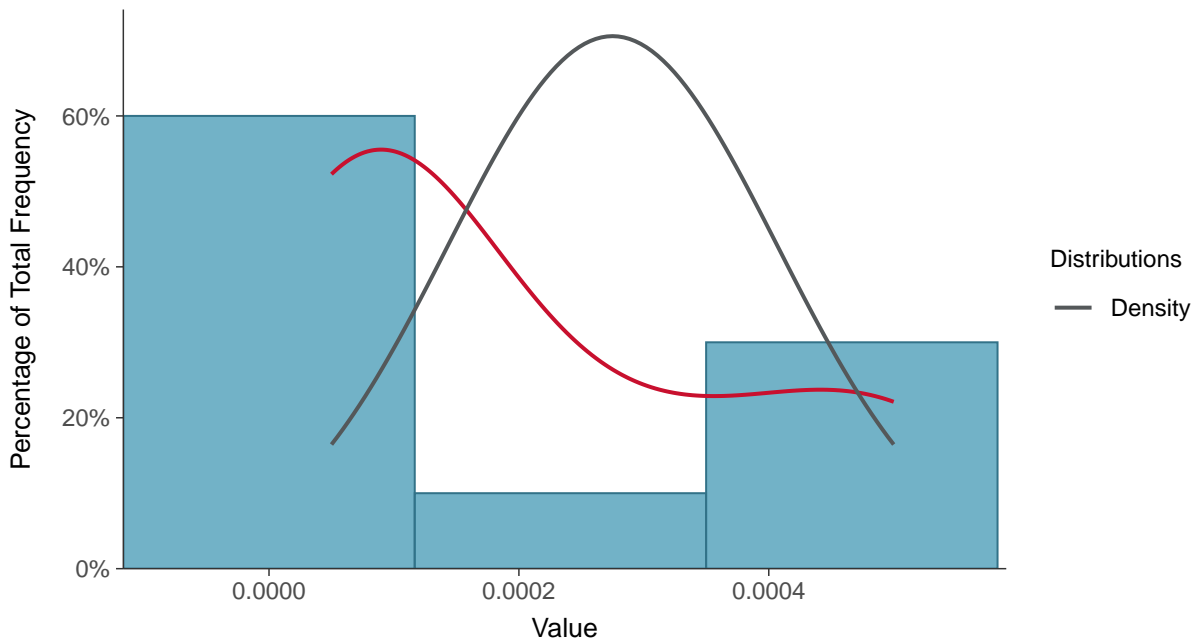
Scatter Plot

Antimony, MW-06 (mg/L)



Histogram

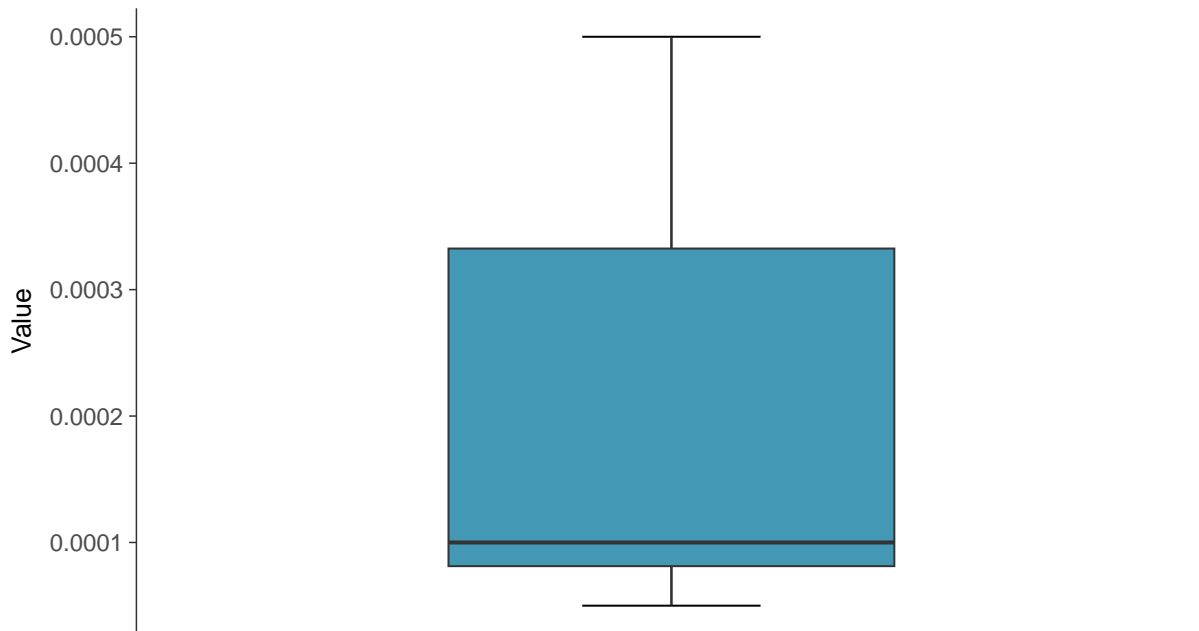
Antimony, MW-06 (mg/L)





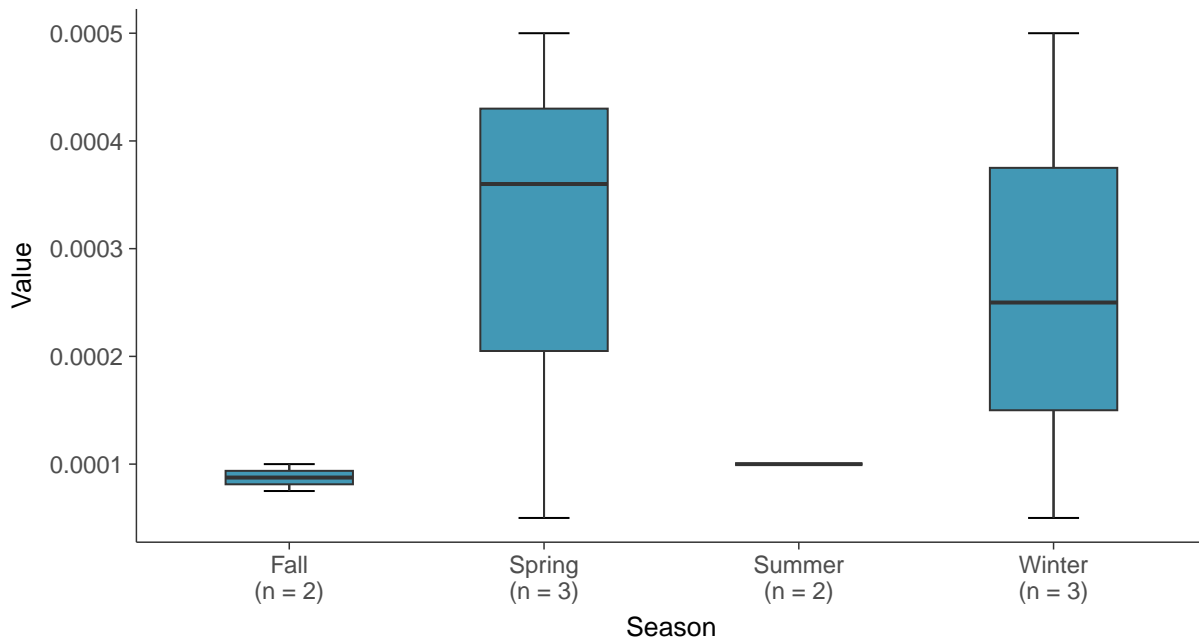
Boxplot

Antimony, MW-06 (mg/L)



Boxplot by Season

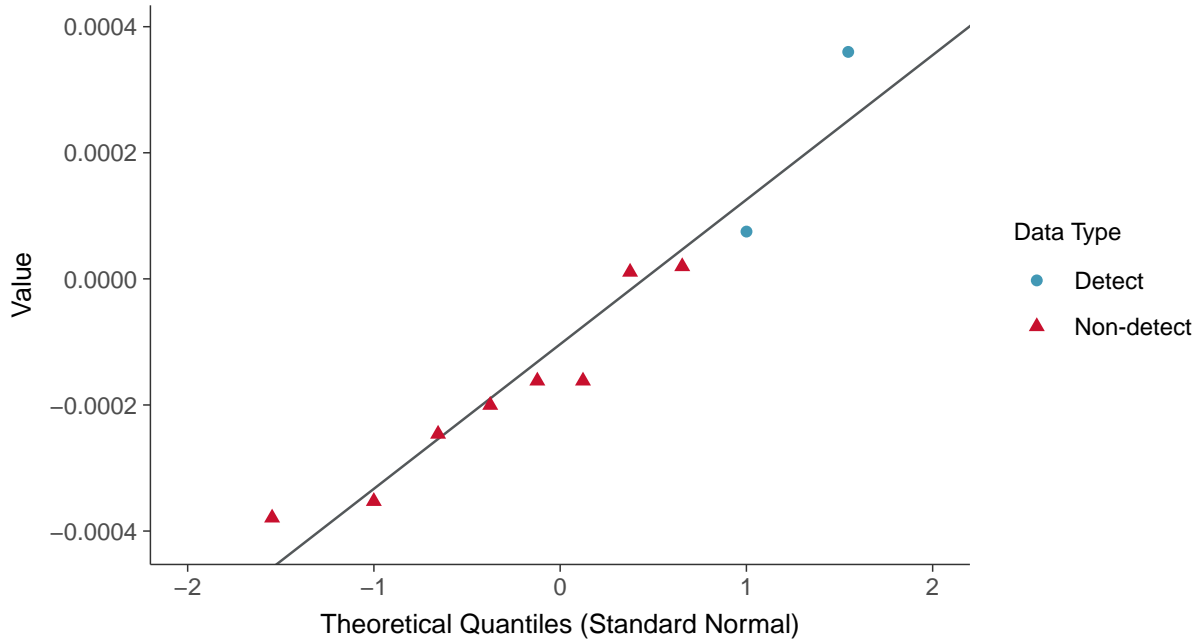
Antimony, MW-06 (mg/L)





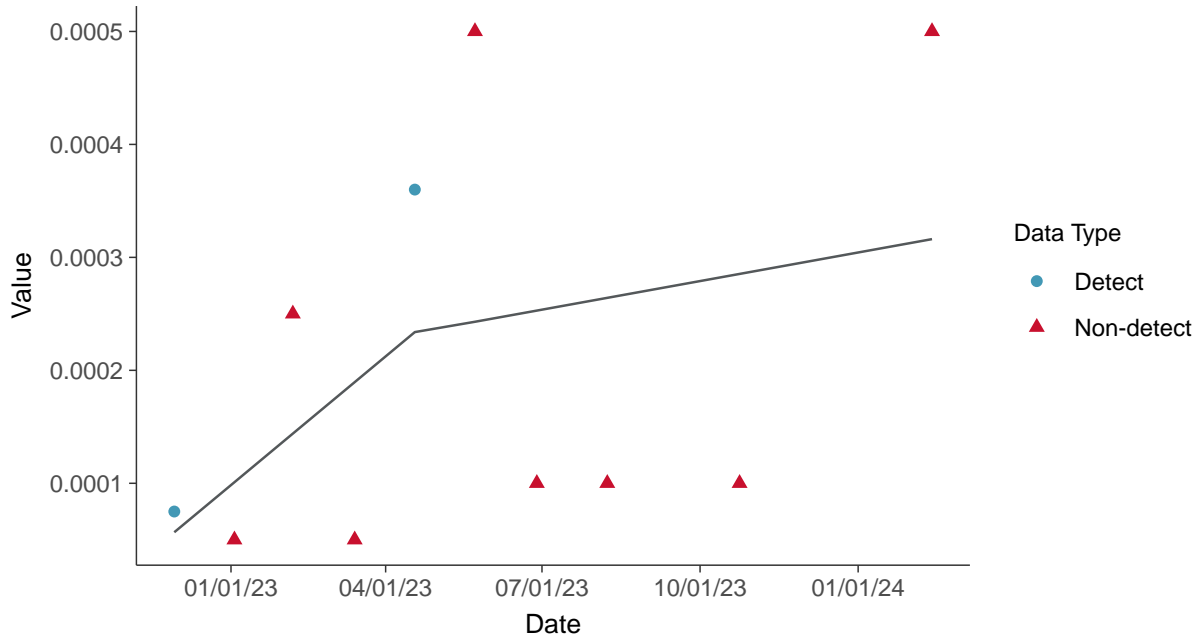
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-06 (mg/L)



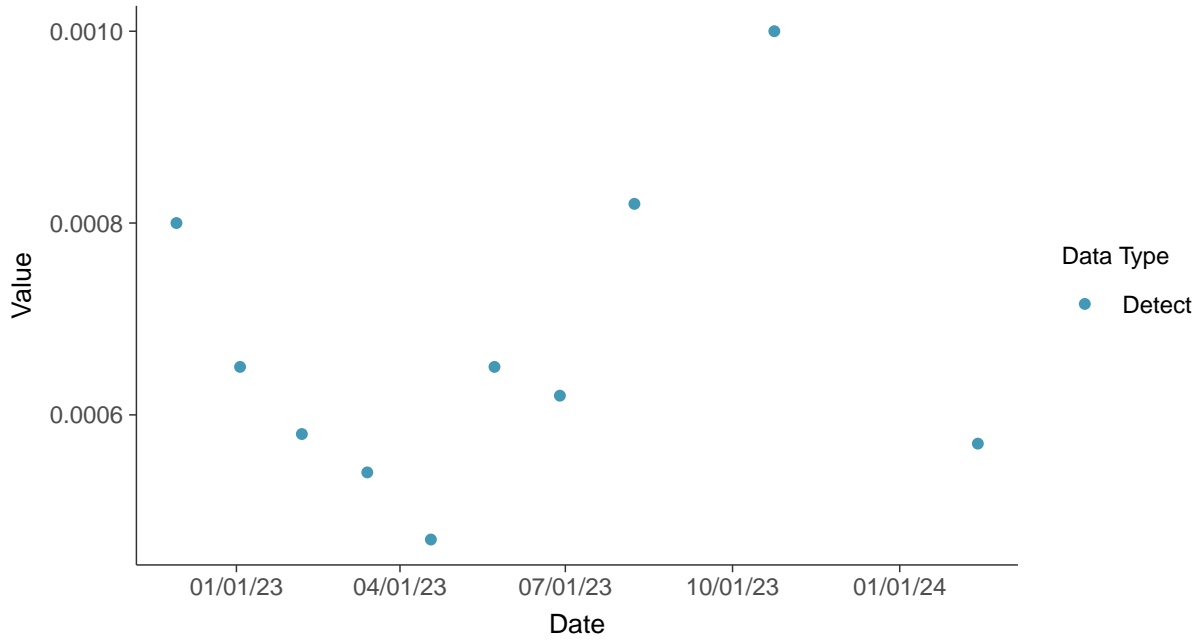


Appendix IV: Arsenic, MW-06

ID: 1_16_5_102

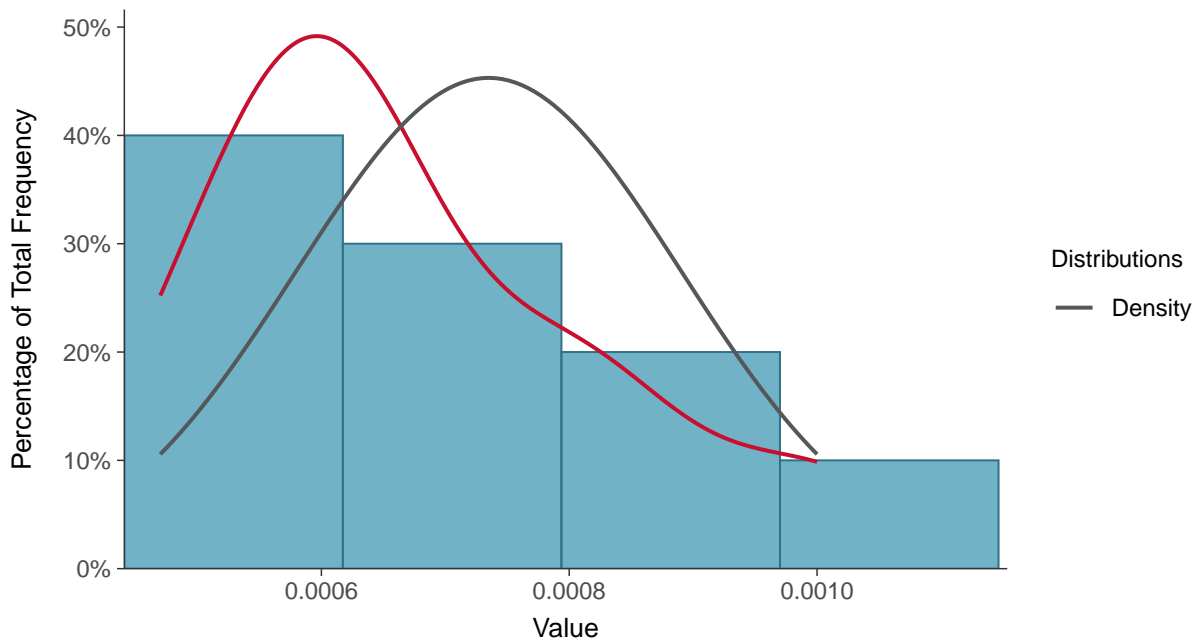
Scatter Plot

Arsenic, MW-06 (mg/L)



Histogram

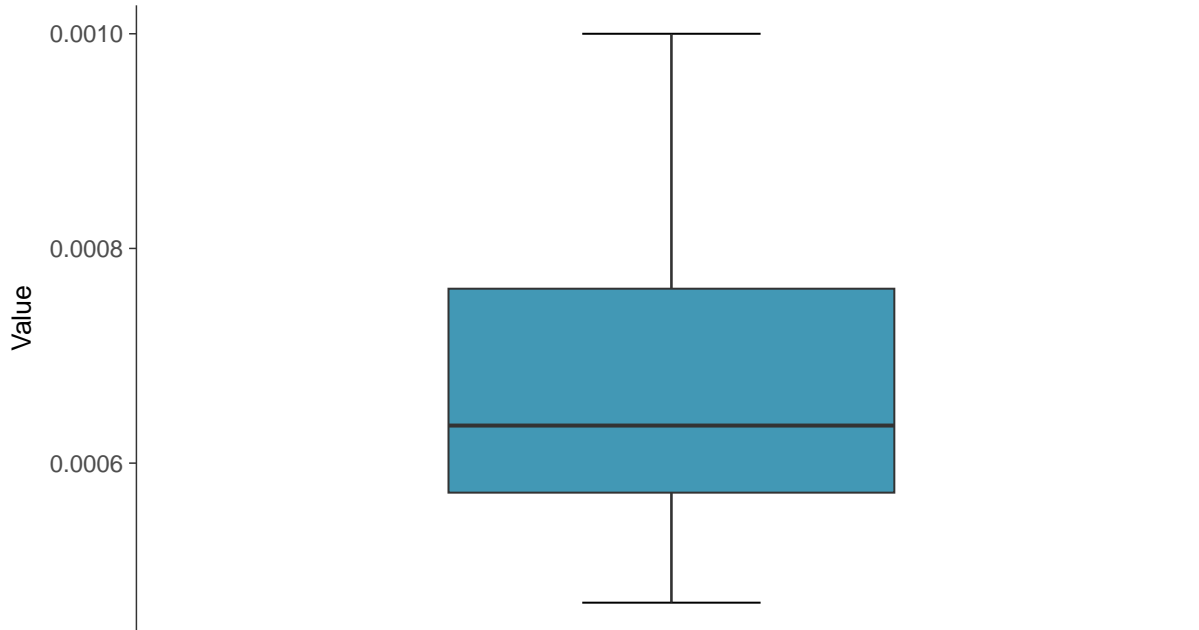
Arsenic, MW-06 (mg/L)





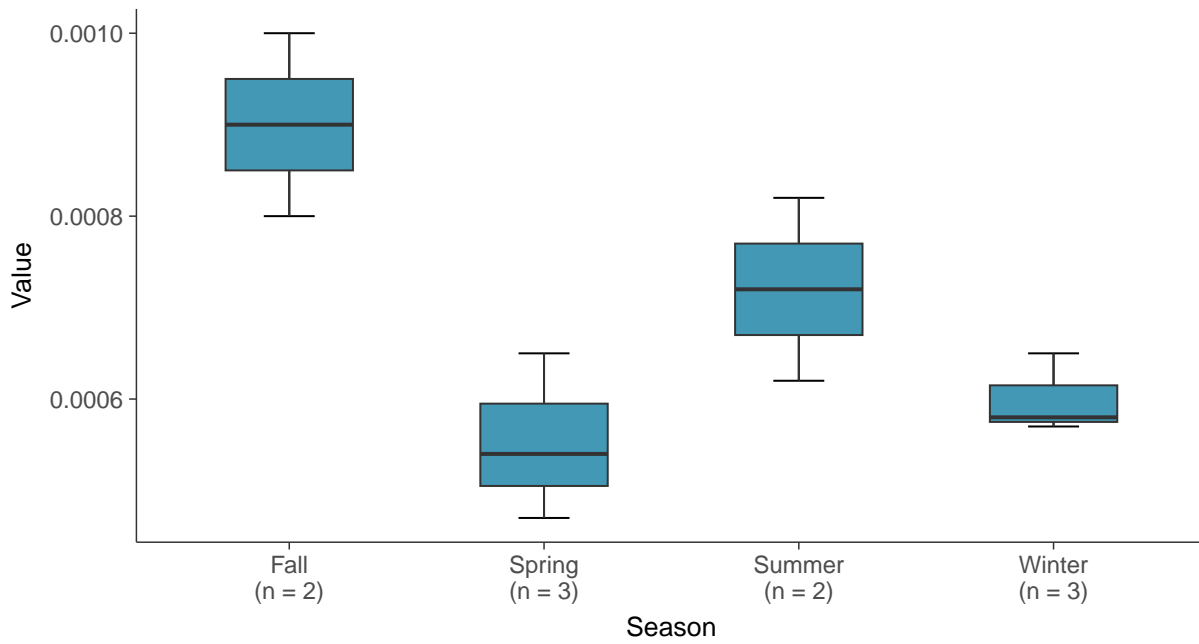
Boxplot

Arsenic, MW-06 (mg/L)



Boxplot by Season

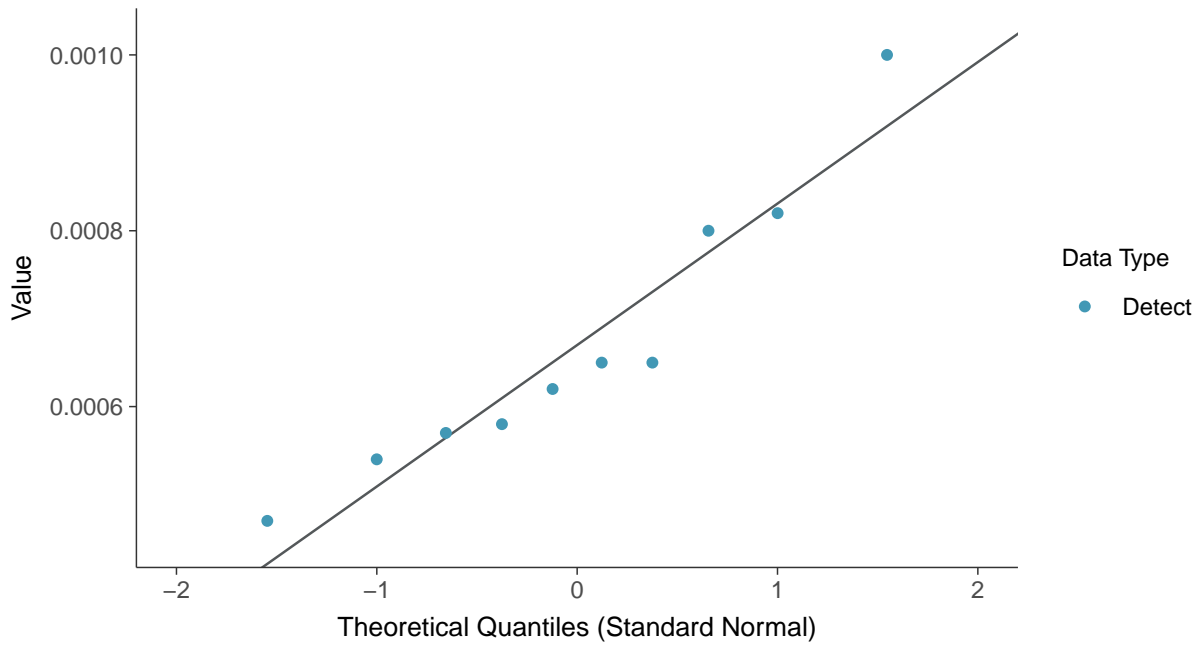
Arsenic, MW-06 (mg/L)





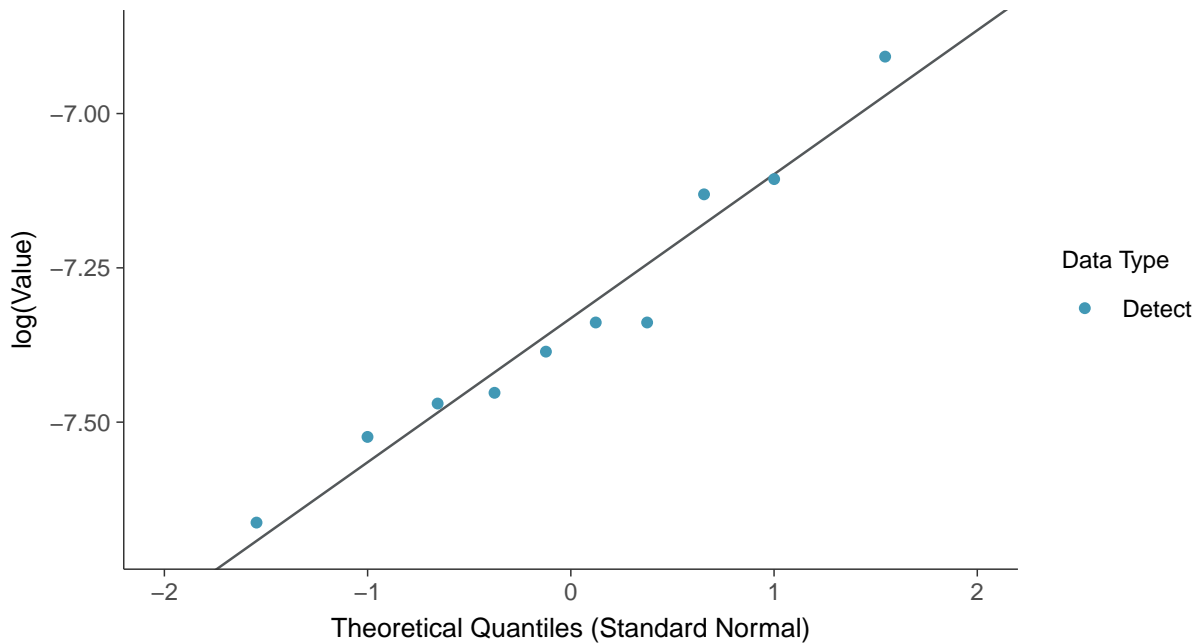
Normal Q-Q plot

Arsenic, MW-06 (mg/L)



Lognormal Q-Q plot

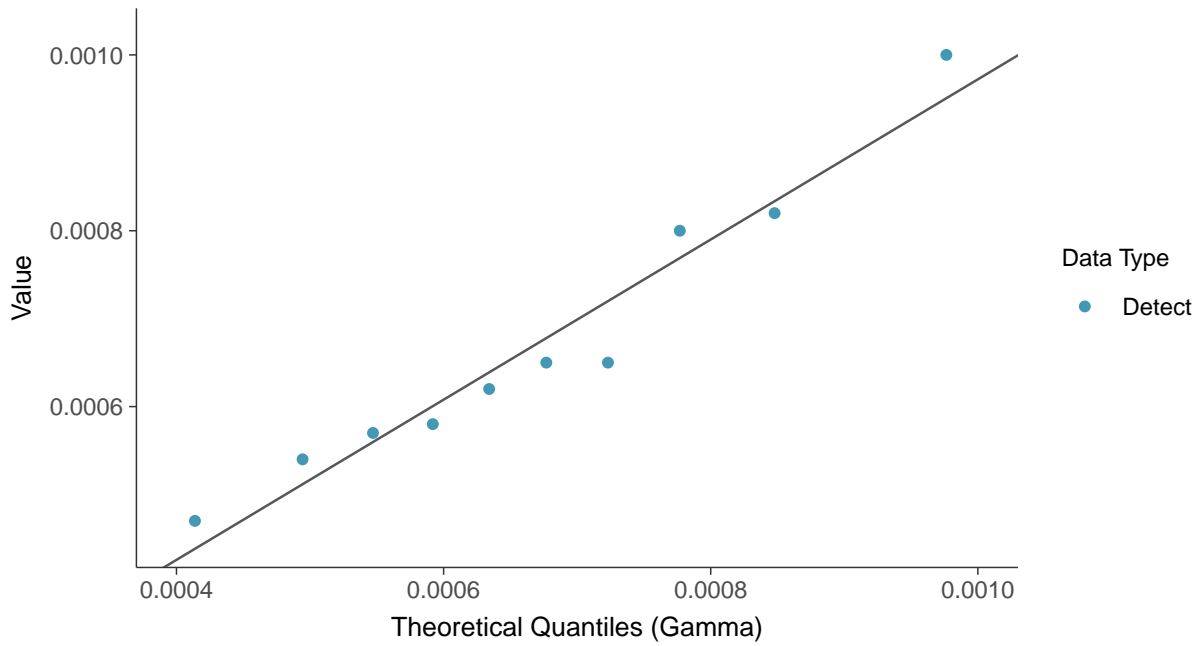
Arsenic, MW-06 (mg/L)





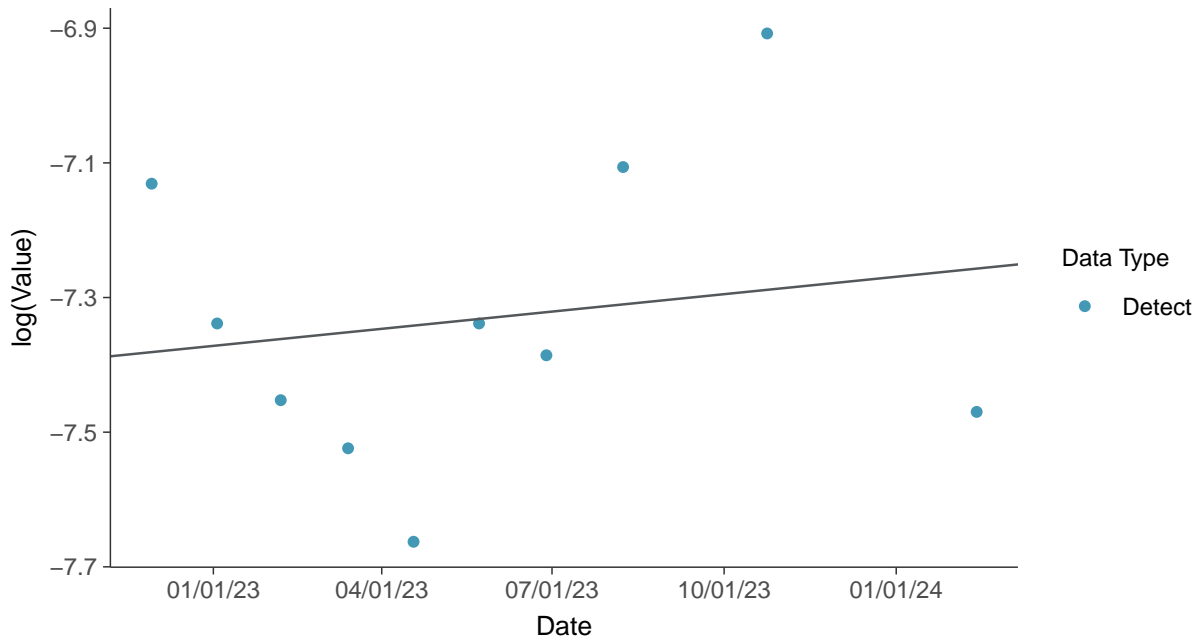
Gamma Q-Q plot

Arsenic, MW-06 (mg/L)



Trend Regression: Lognormal MLE

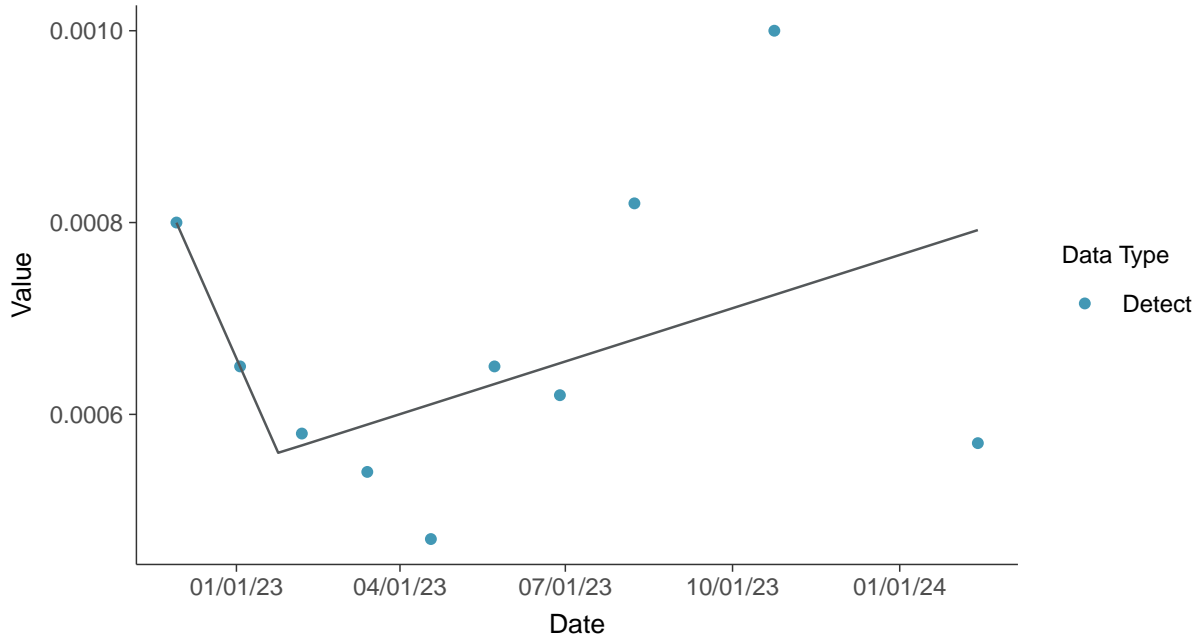
Arsenic, MW-06 (mg/L)





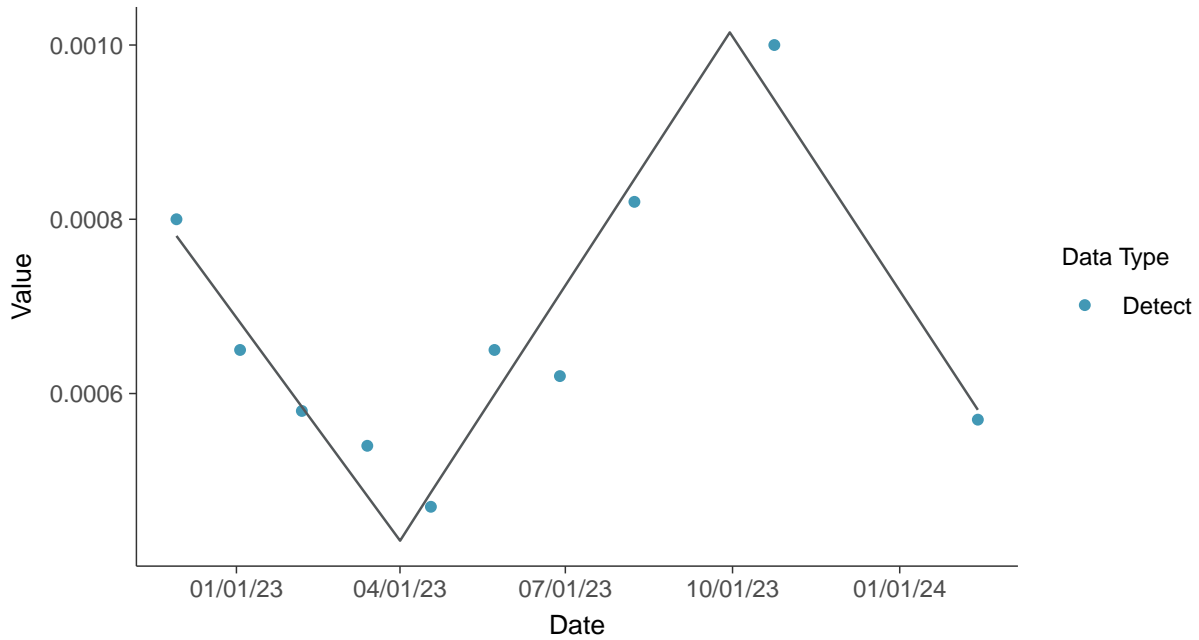
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

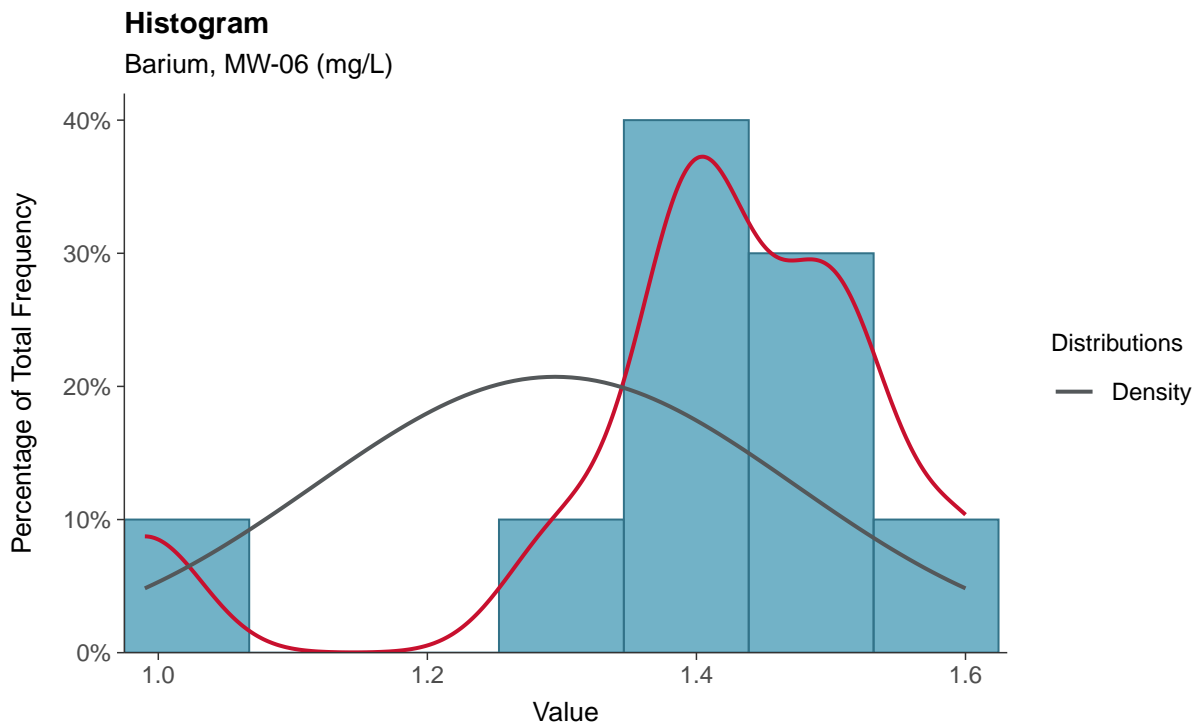
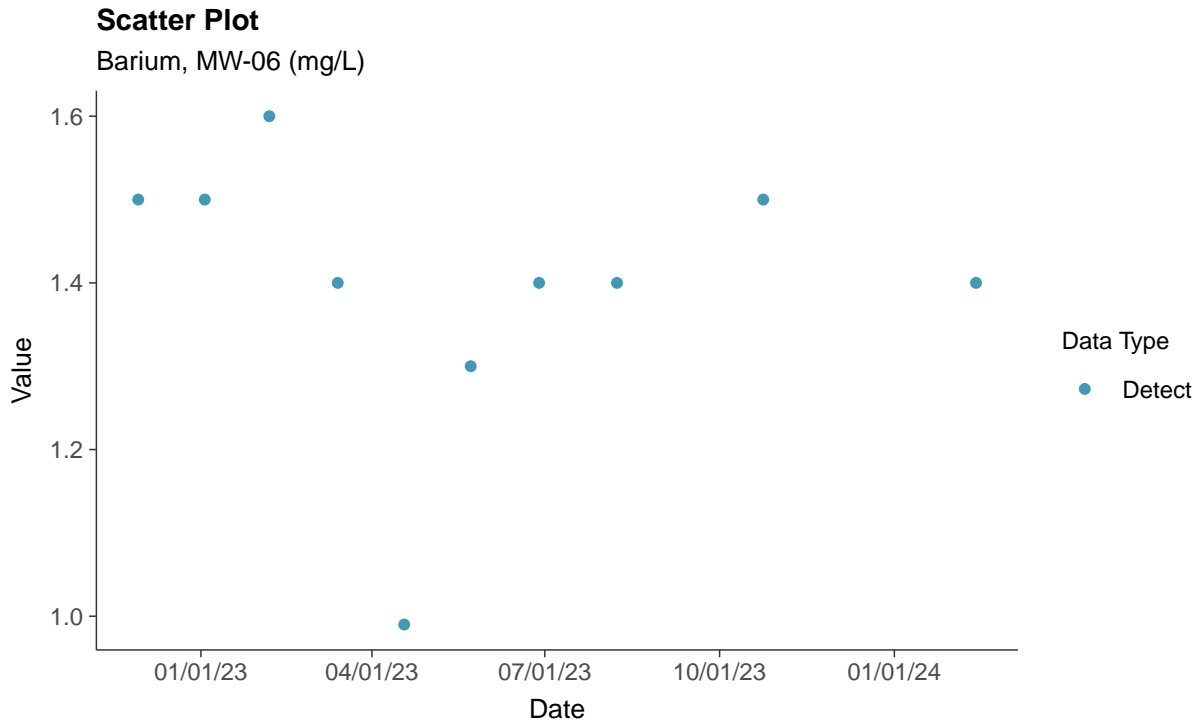
Arsenic, MW-06 (mg/L)





Appendix IV: Barium, MW-06

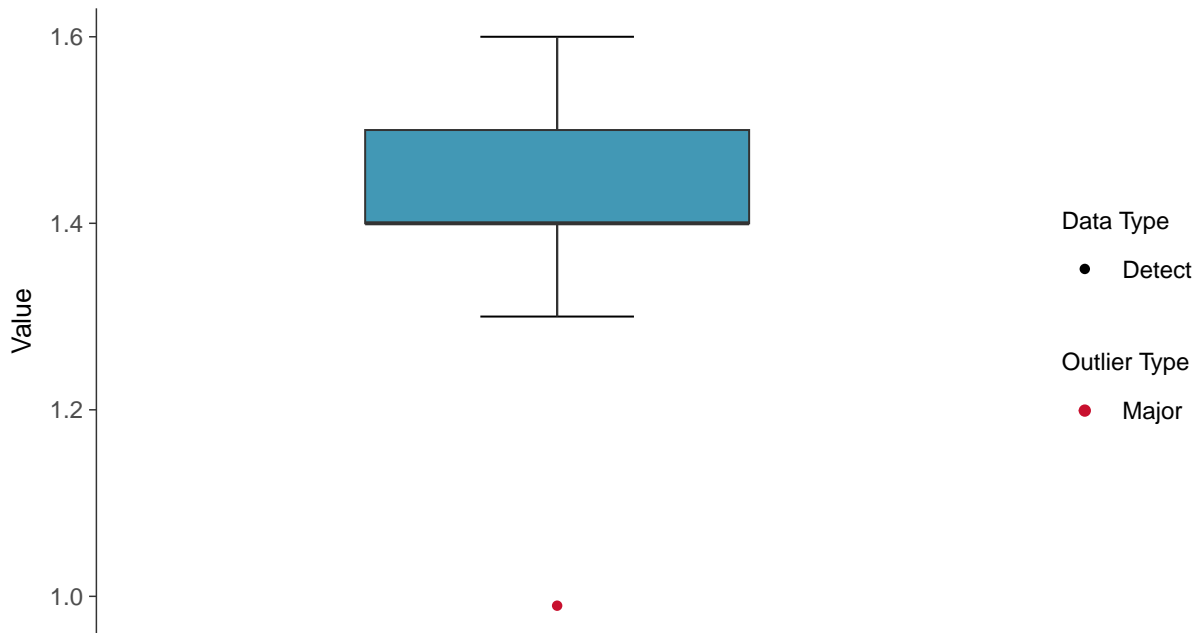
ID: 1_16_5_103





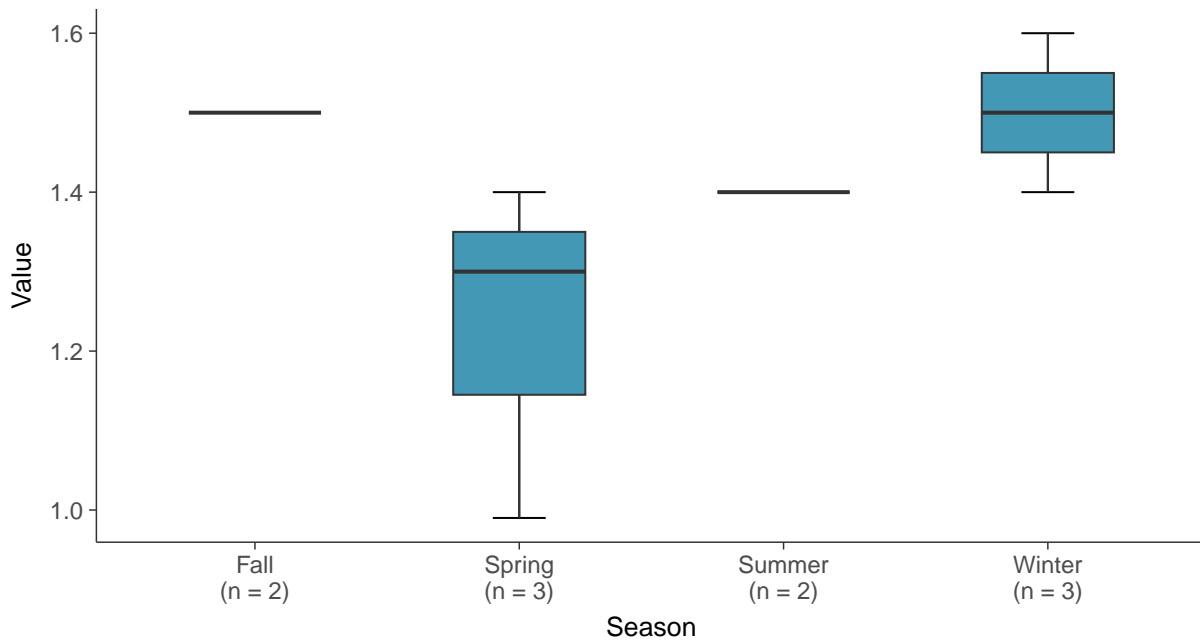
Boxplot

Barium, MW-06 (mg/L)



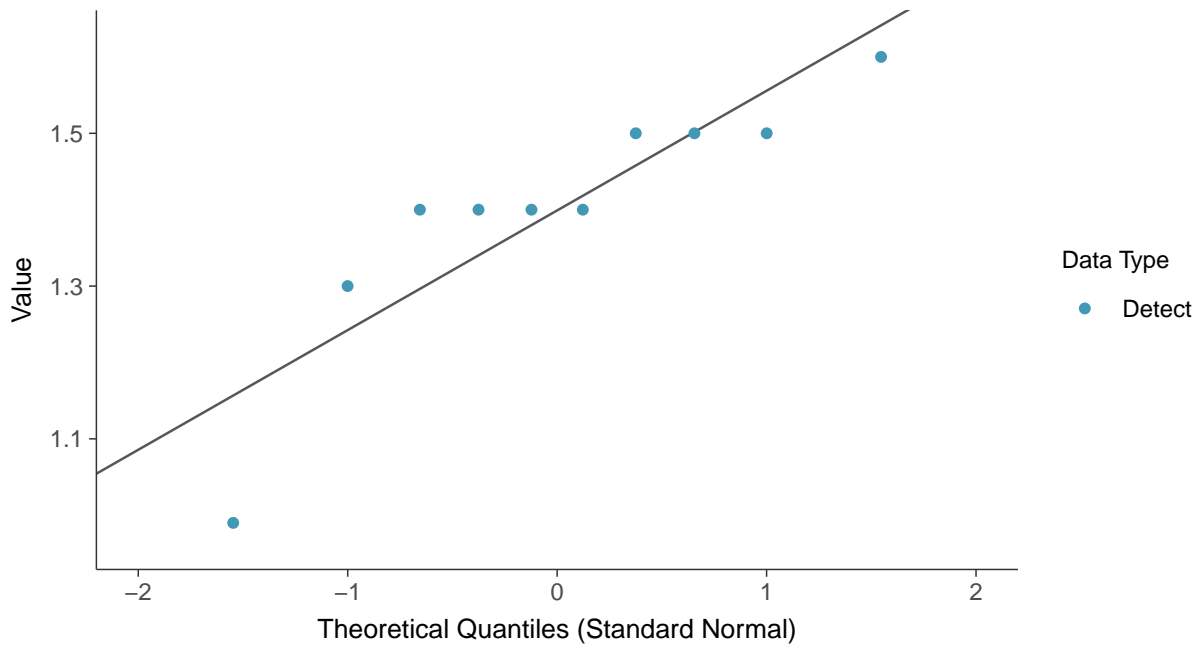
Boxplot by Season

Barium, MW-06 (mg/L)

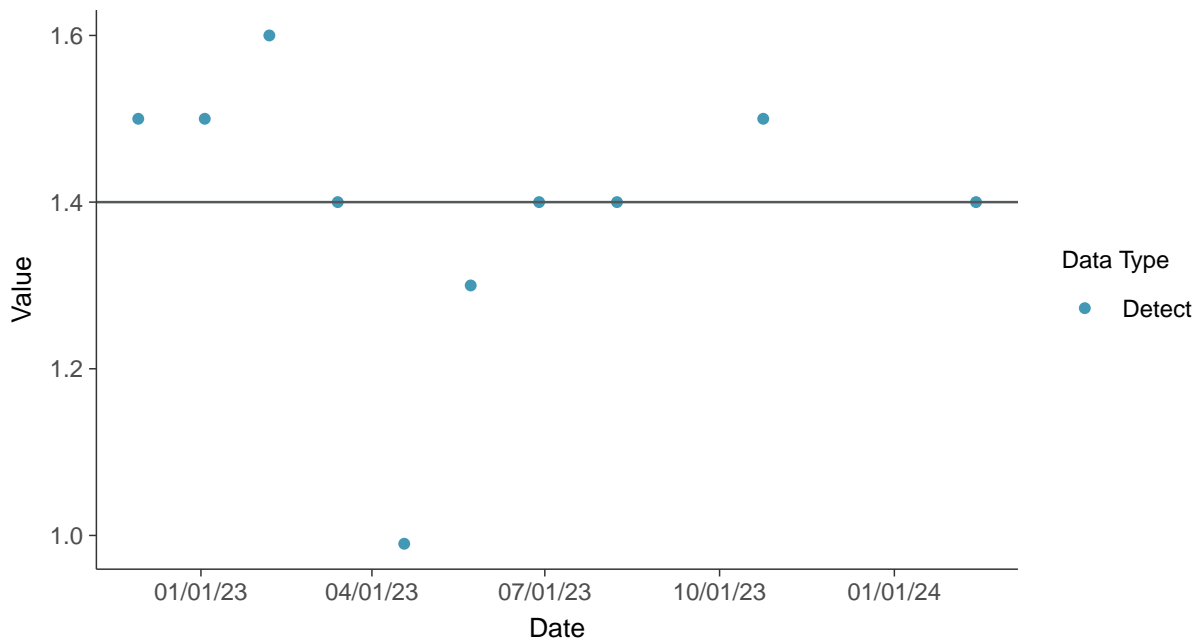




Normal Q-Q plot
Barium, MW-06 (mg/L)

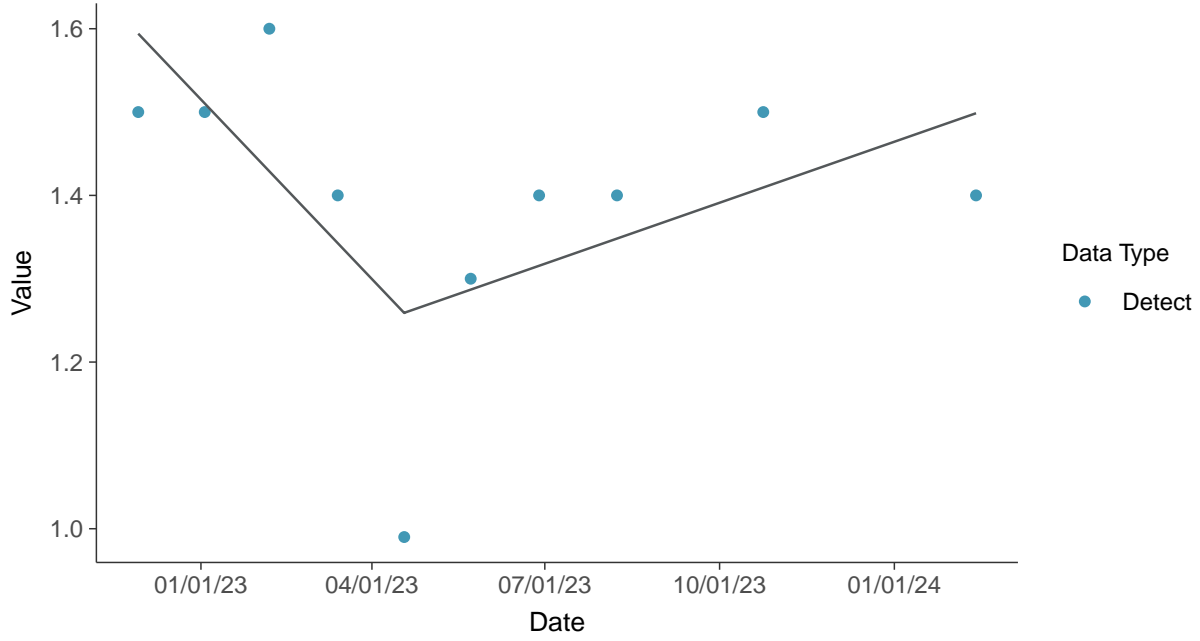


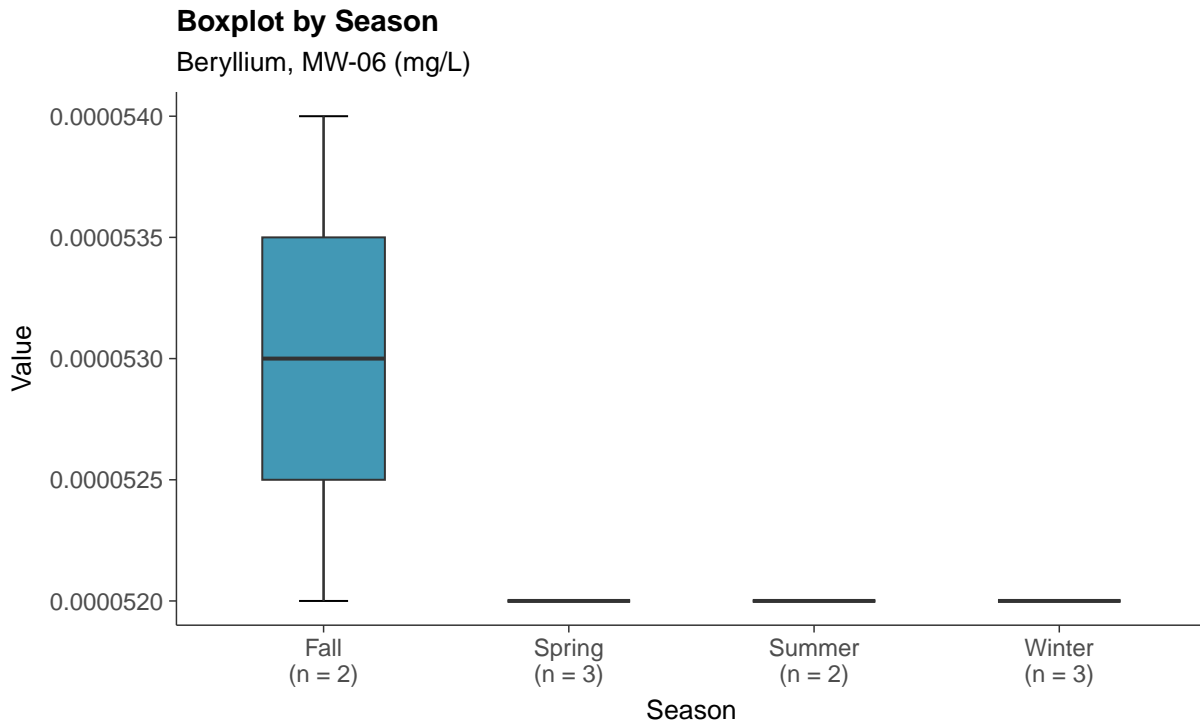
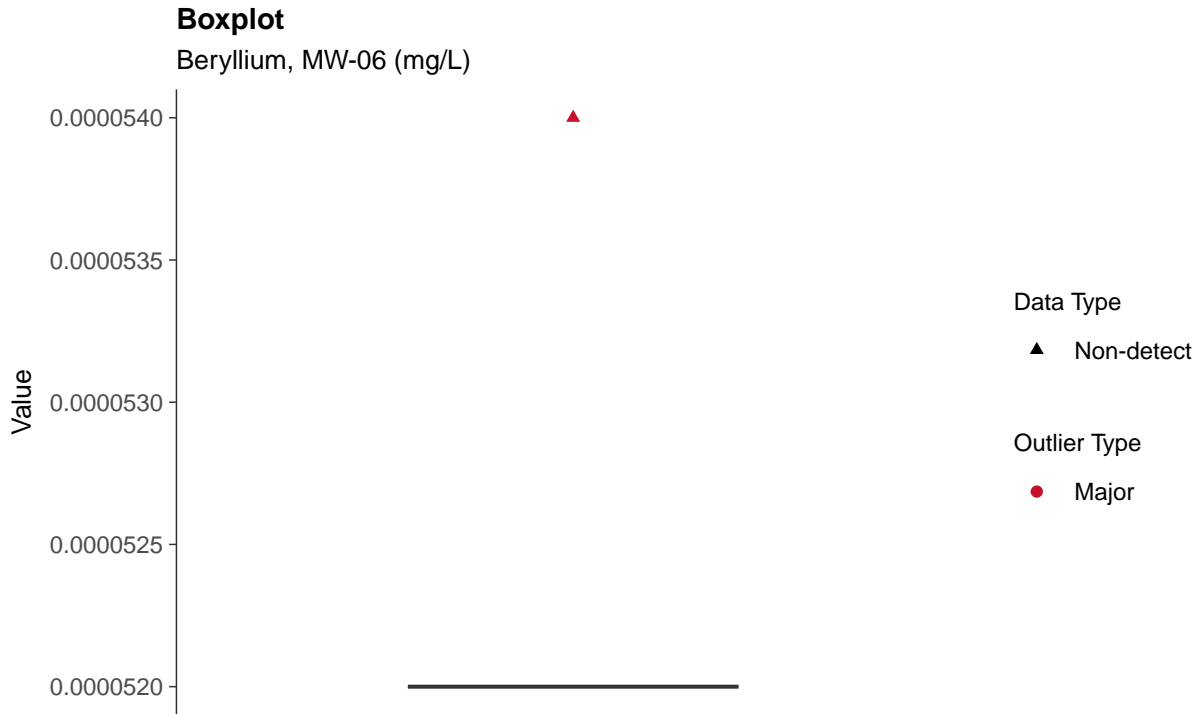
Trend Regression: Mann-Kendall/Theil-Sen Estimate
Barium, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear
Barium, MW-06 (mg/L)

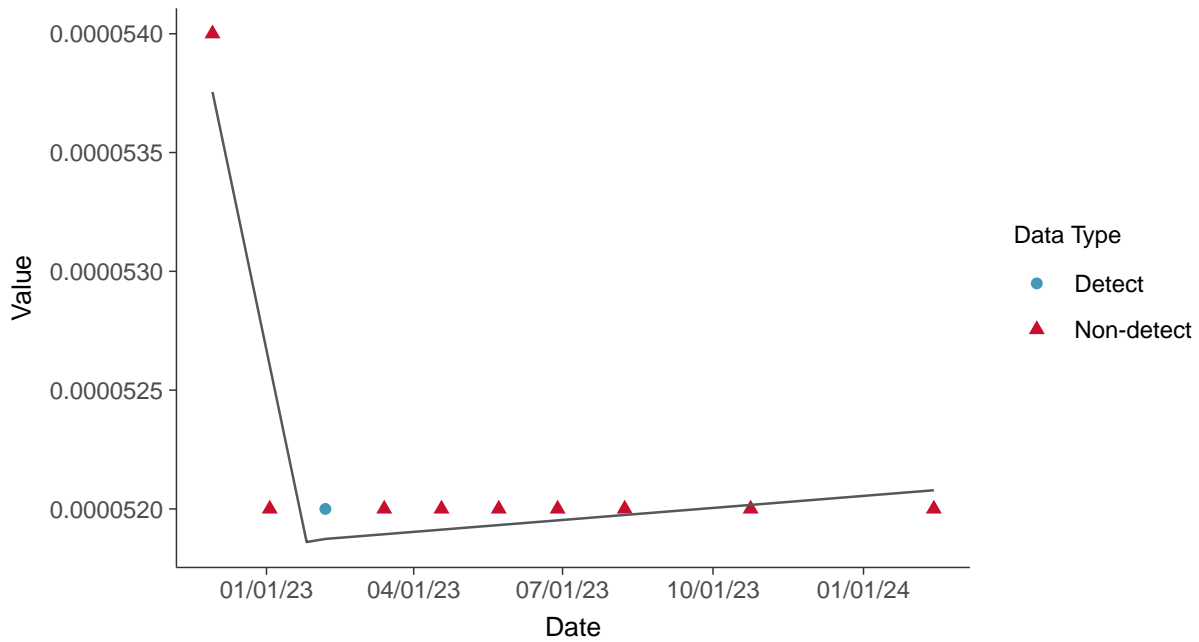






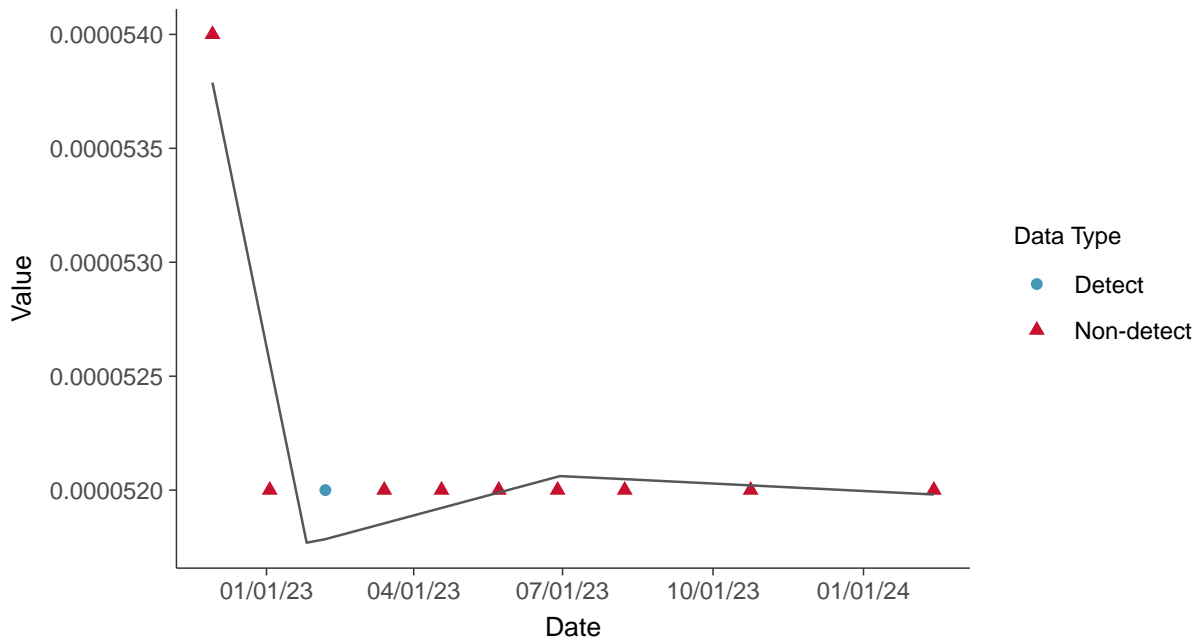
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-06 (mg/L)



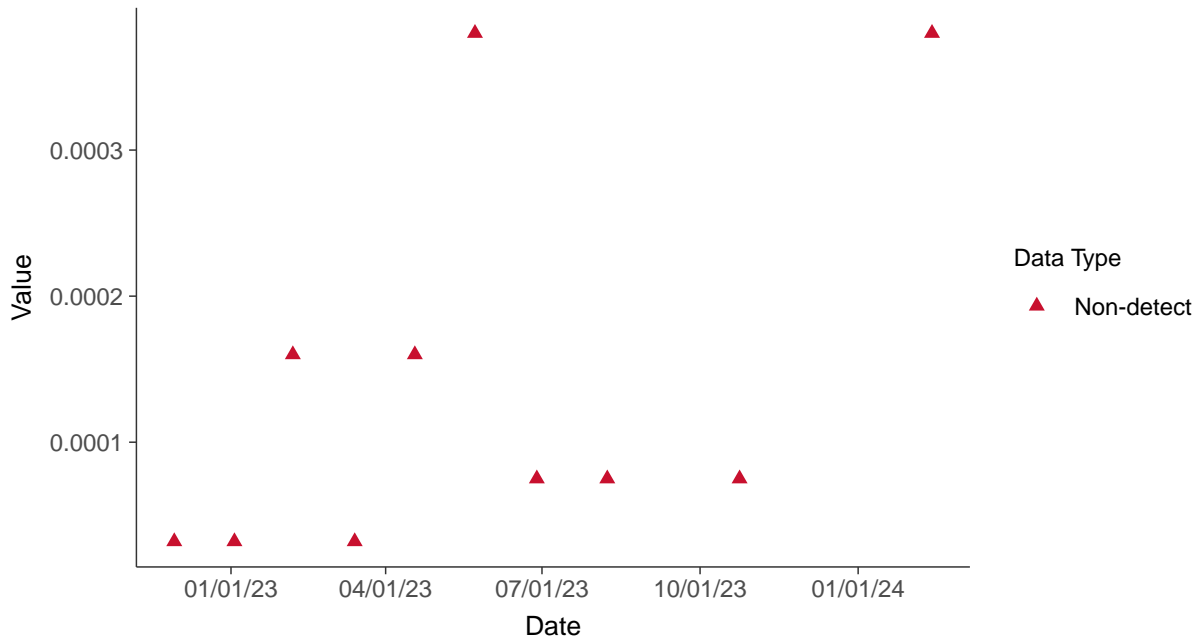


Appendix IV: Cadmium, MW-06

ID: 1_16_5_106

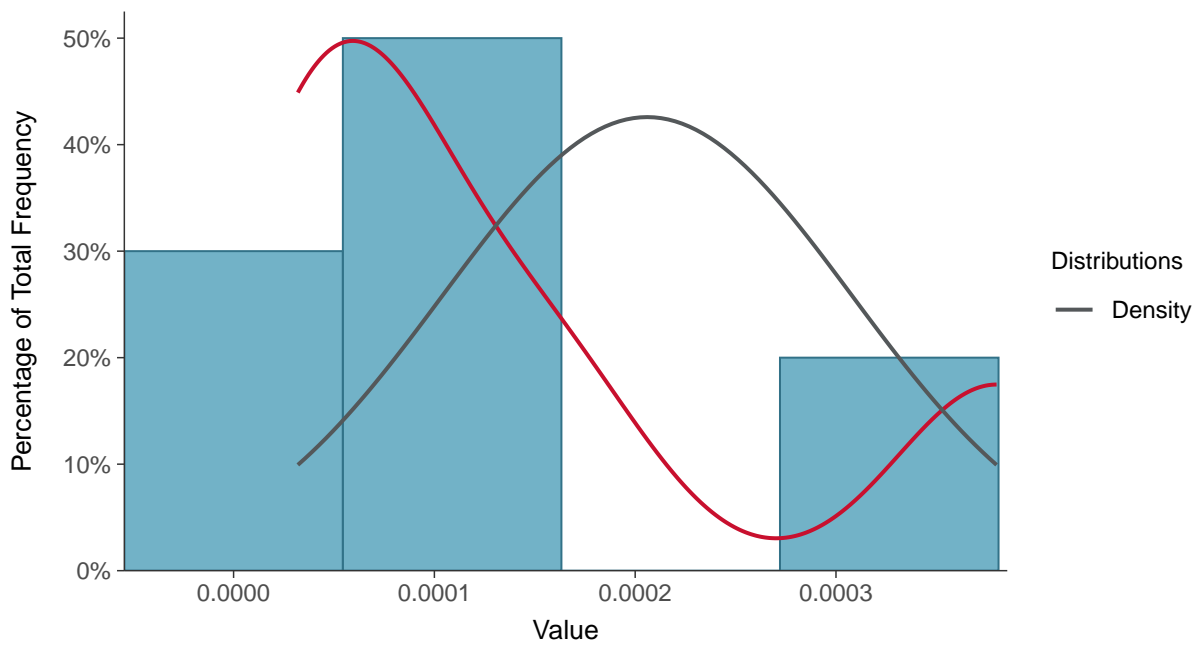
Scatter Plot

Cadmium, MW-06 (mg/L)



Histogram

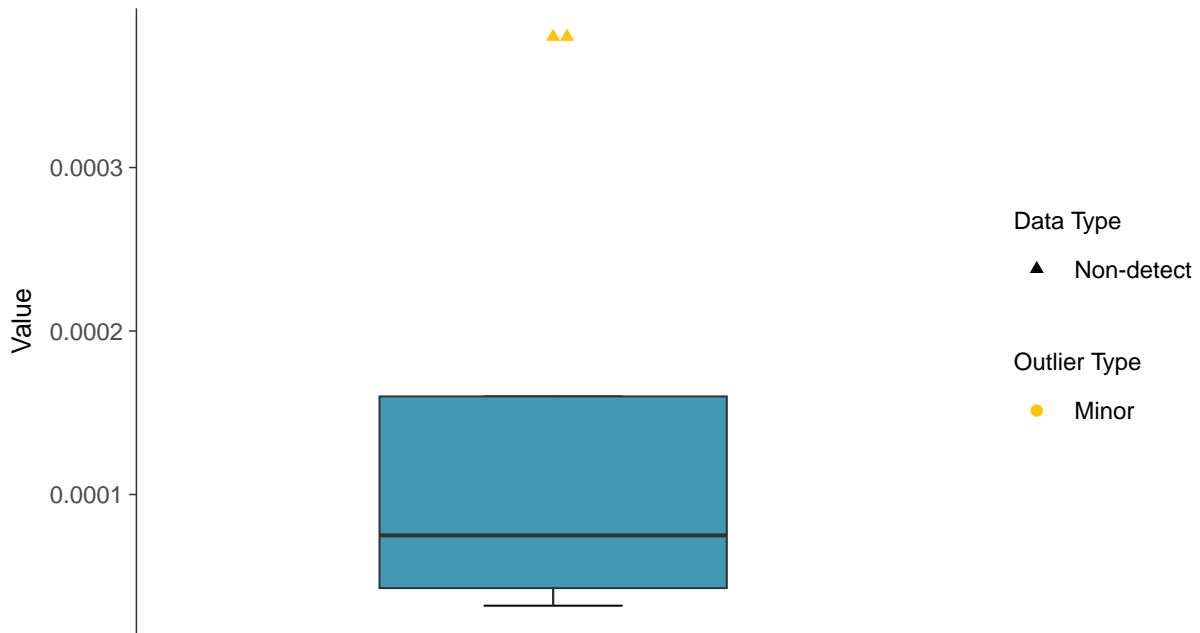
Cadmium, MW-06 (mg/L)





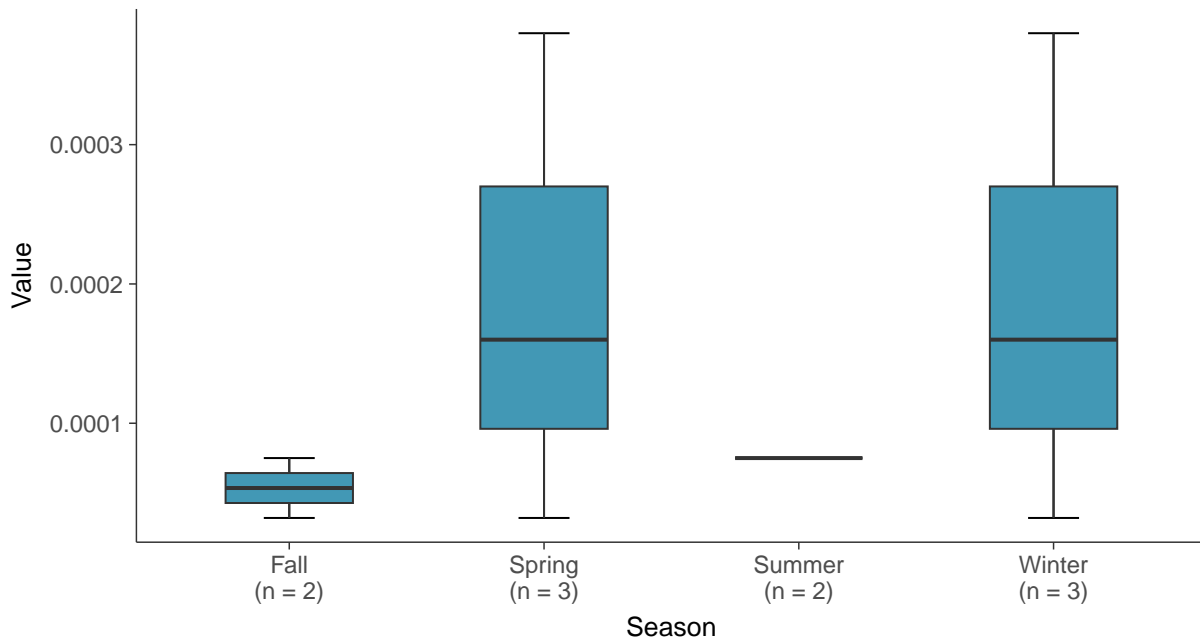
Boxplot

Cadmium, MW-06 (mg/L)



Boxplot by Season

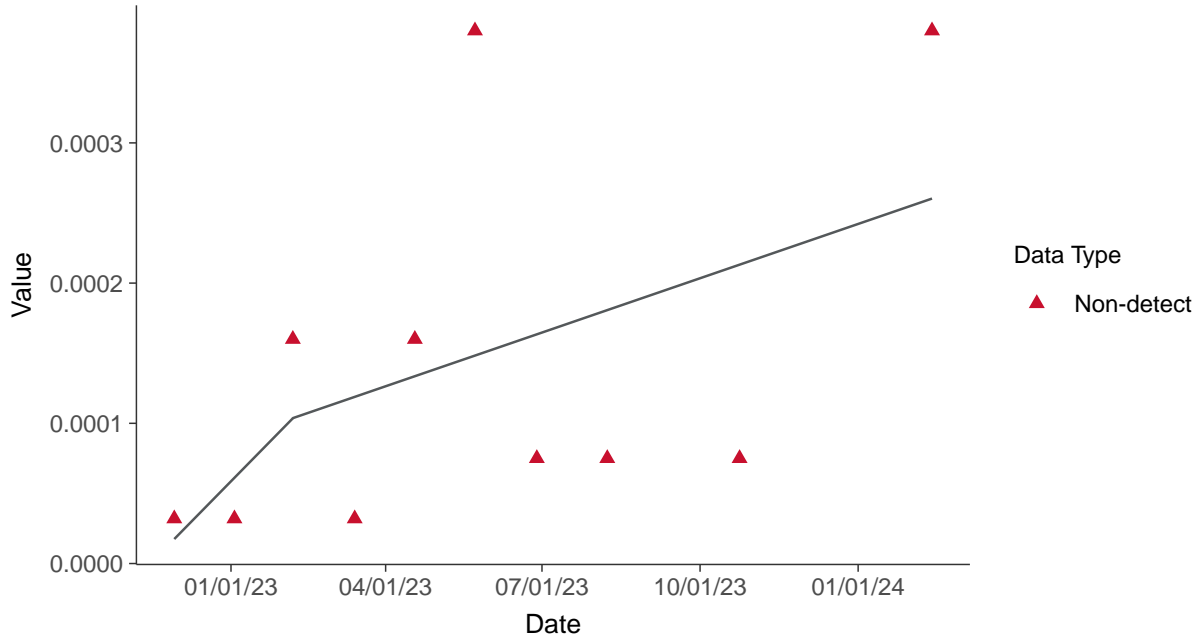
Cadmium, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear

Cadmium, MW-06 (mg/L)



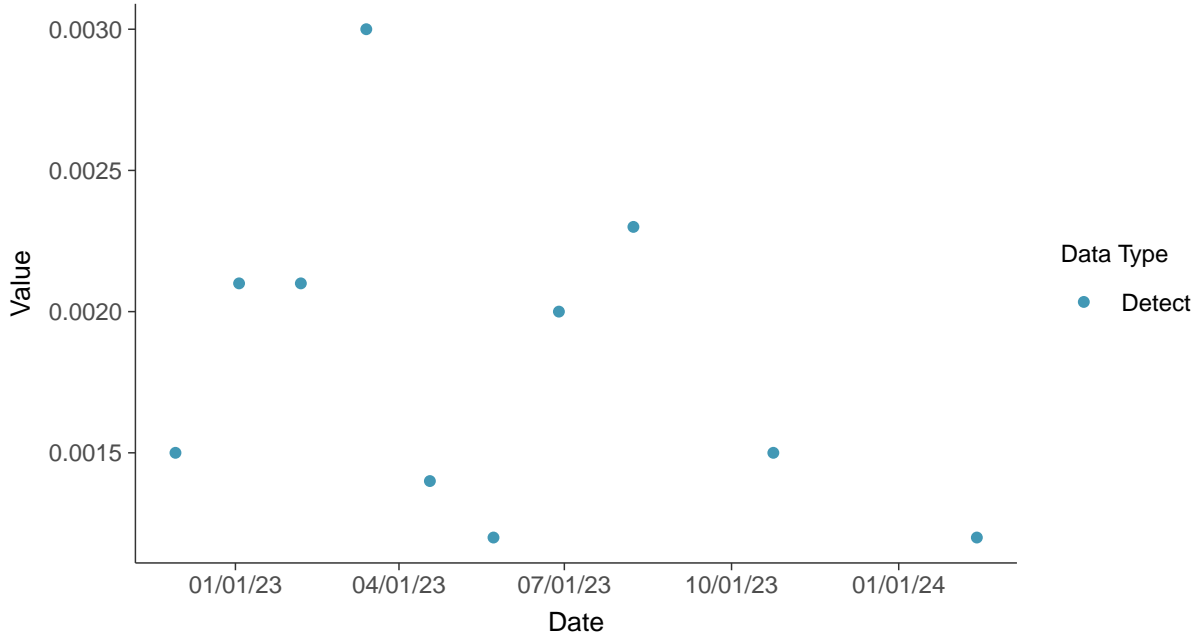


Appendix IV: Chromium, Total, MW-06

ID: 1_16_5_109

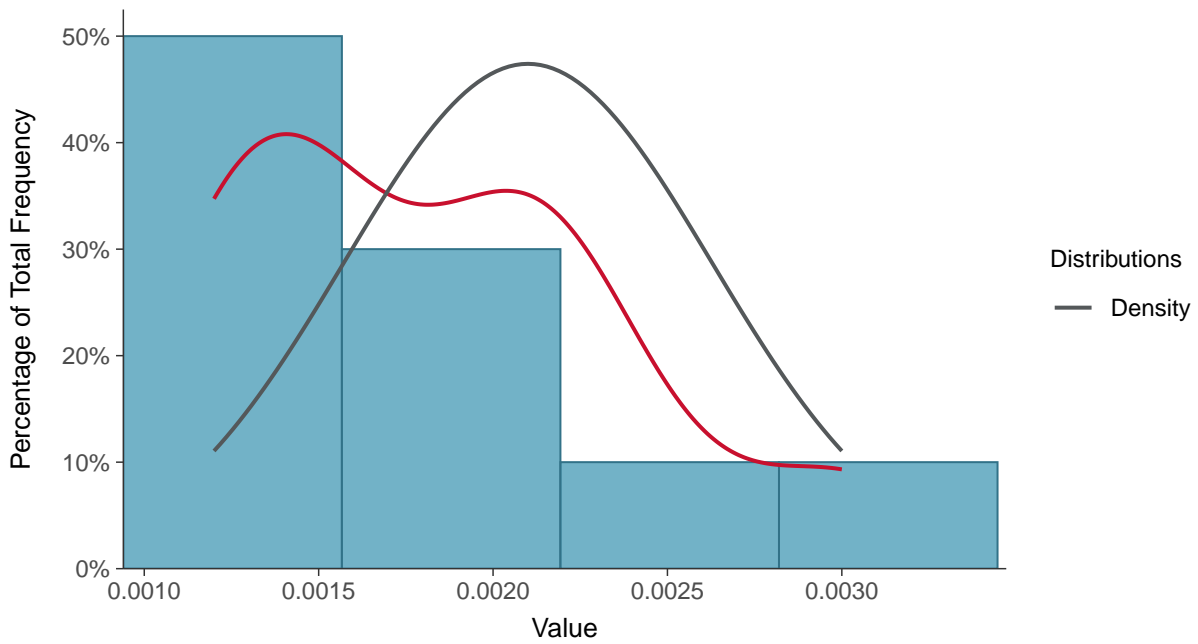
Scatter Plot

Chromium, Total, MW-06 (mg/L)



Histogram

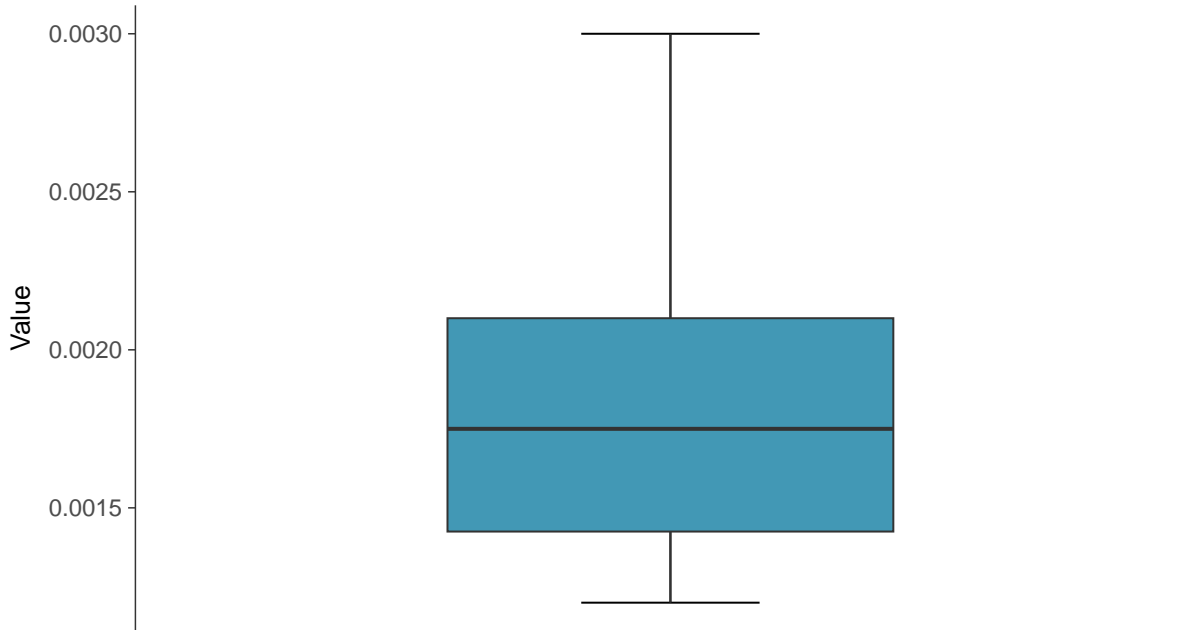
Chromium, Total, MW-06 (mg/L)





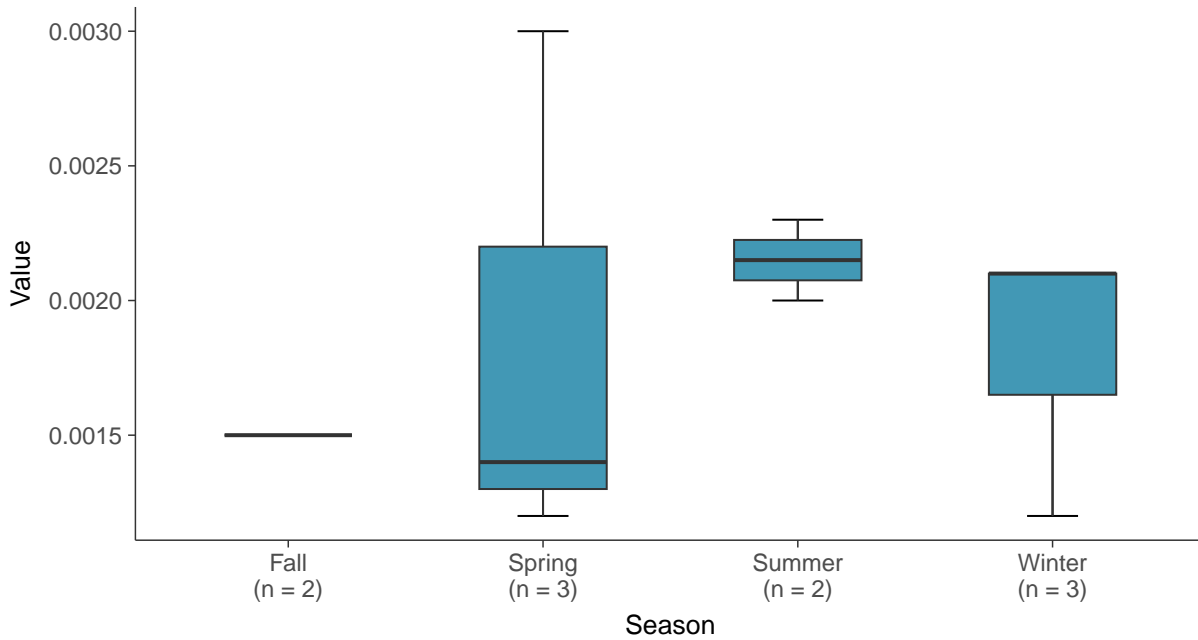
Boxplot

Chromium, Total, MW-06 (mg/L)



Boxplot by Season

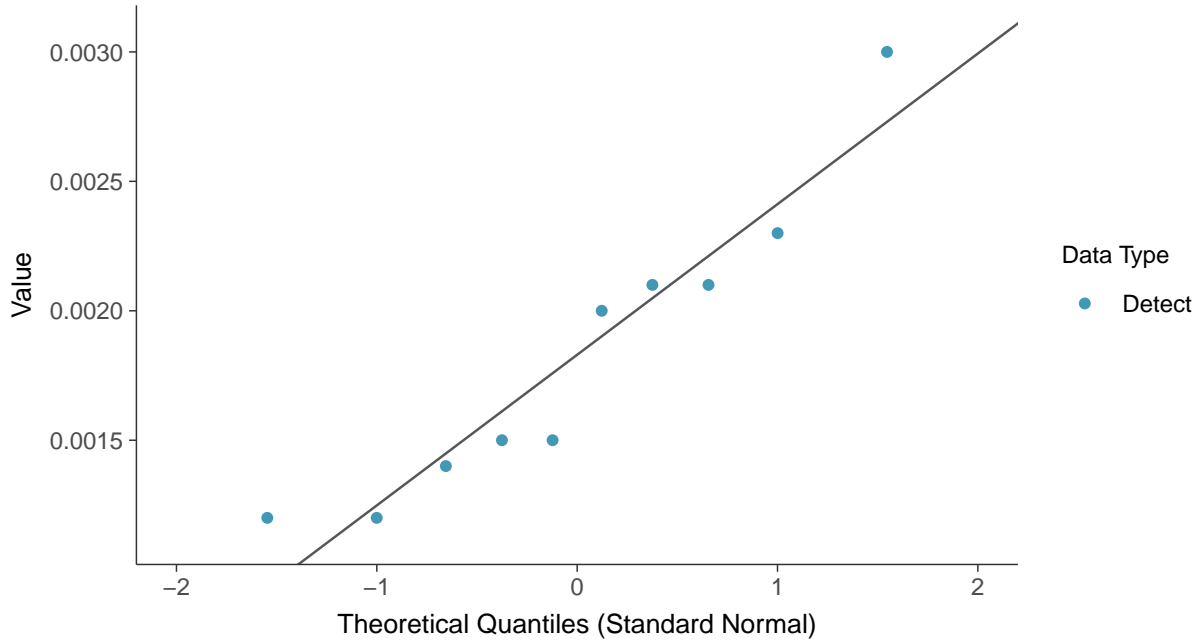
Chromium, Total, MW-06 (mg/L)





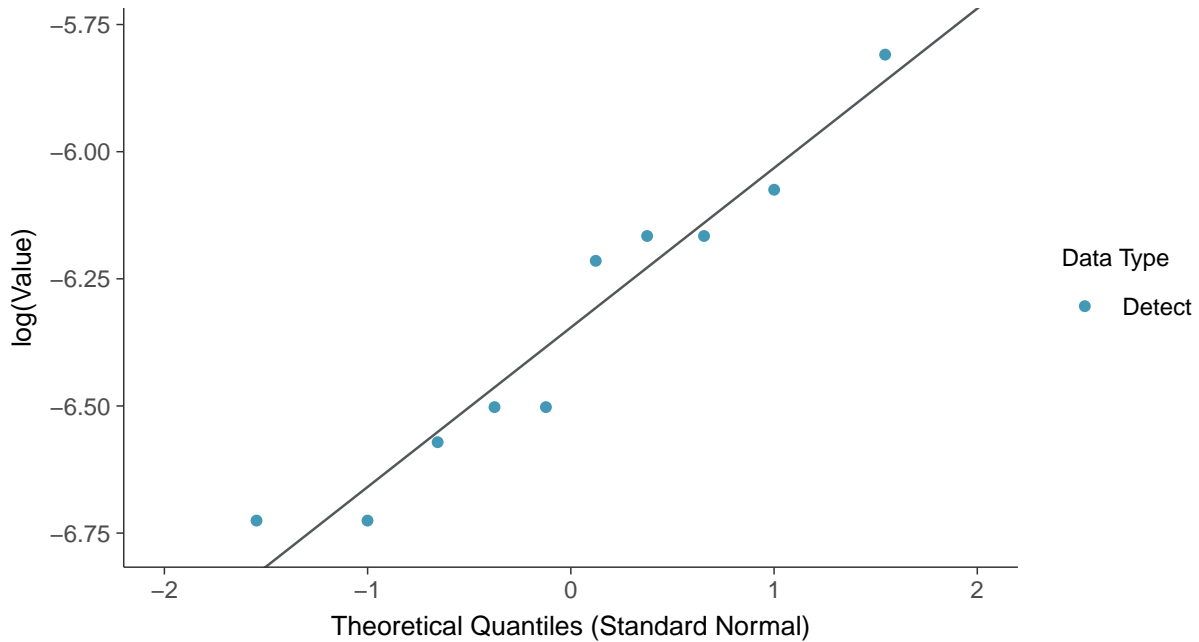
Normal Q-Q plot

Chromium, Total, MW-06 (mg/L)



Lognormal Q-Q plot

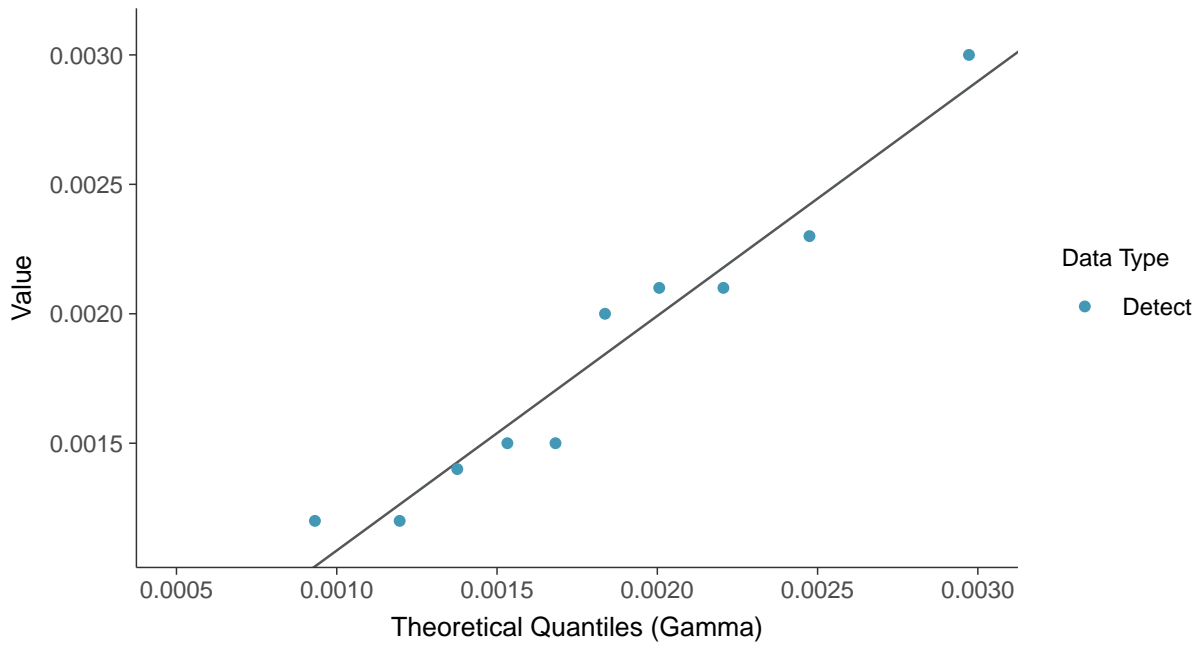
Chromium, Total, MW-06 (mg/L)





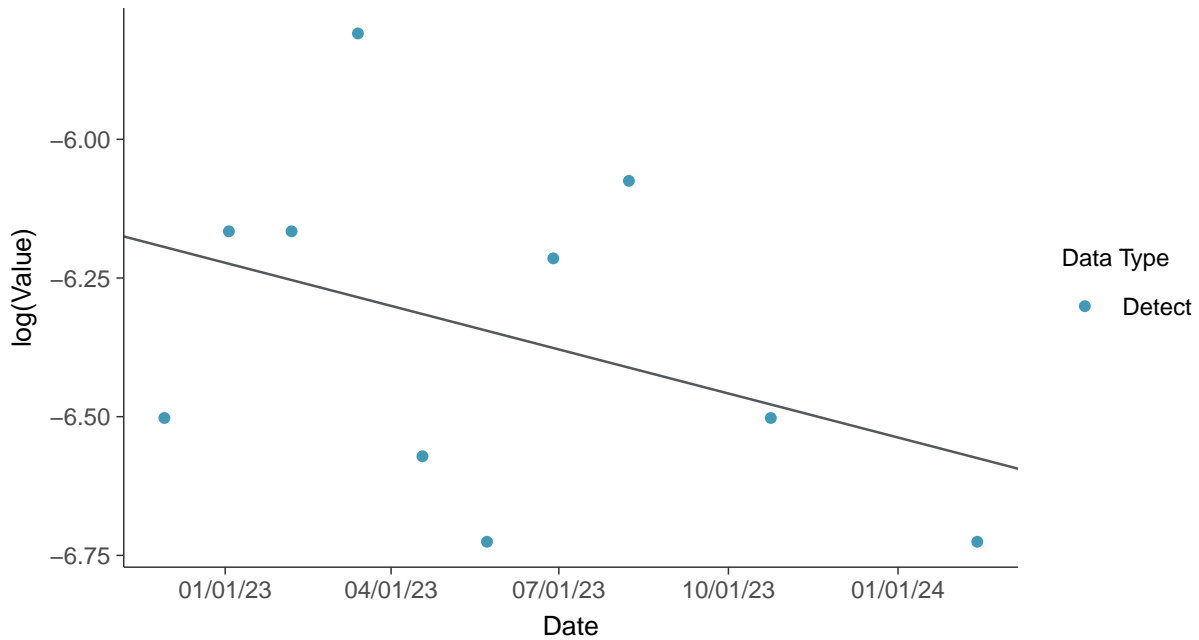
Gamma Q-Q plot

Chromium, Total, MW-06 (mg/L)



Trend Regression: Lognormal MLE

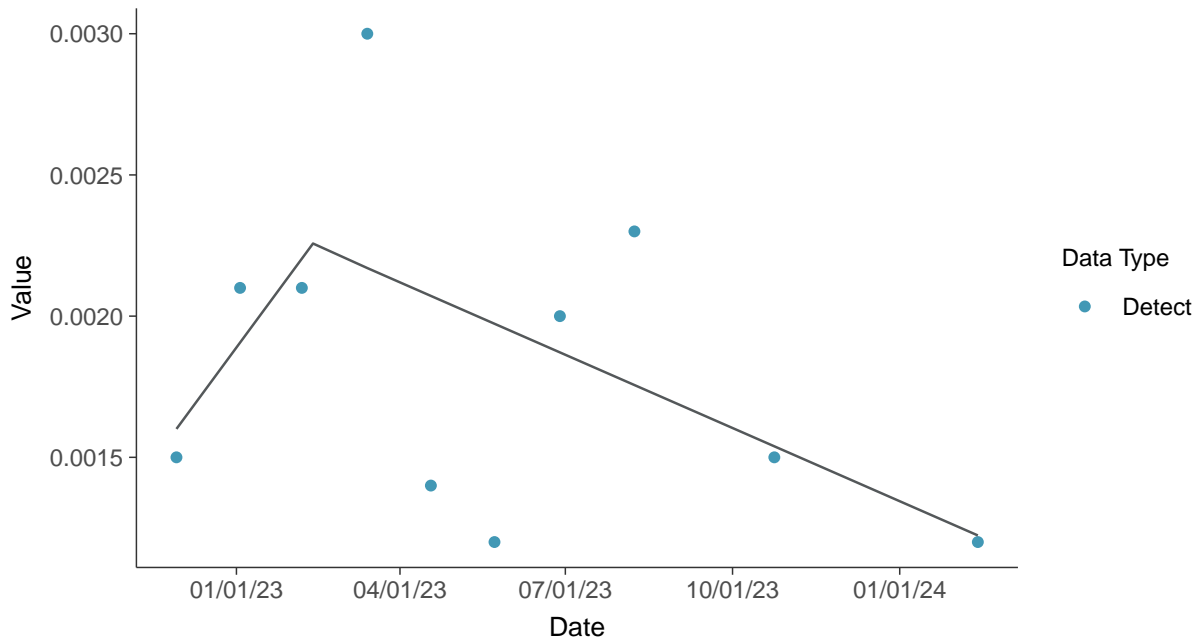
Chromium, Total, MW-06 (mg/L)





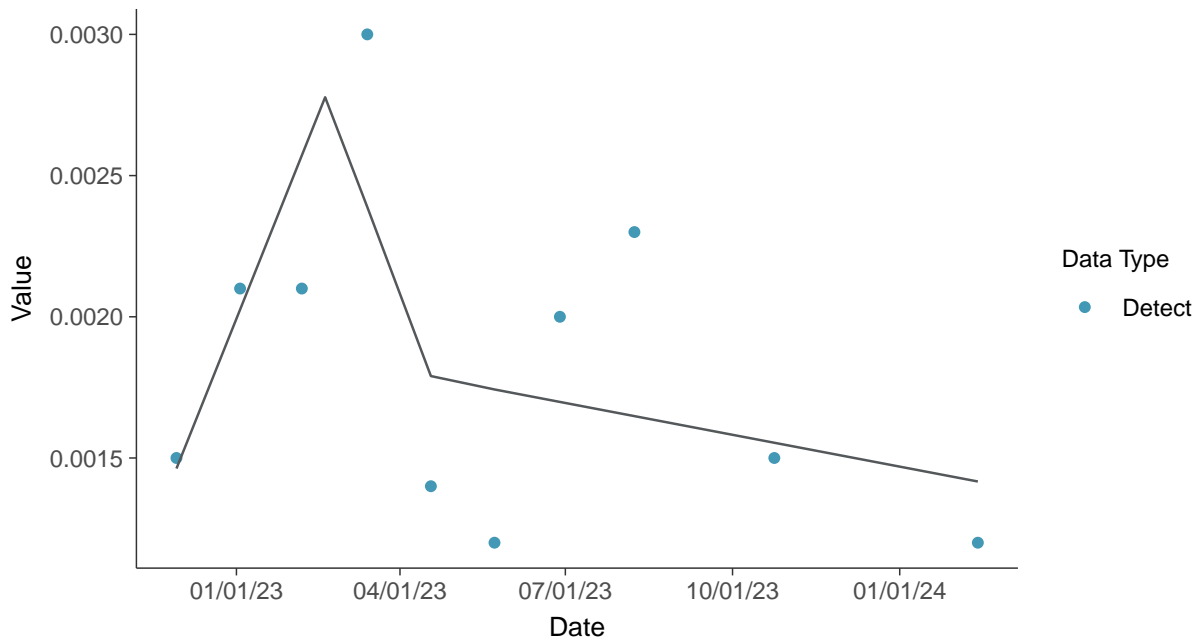
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-06 (mg/L)



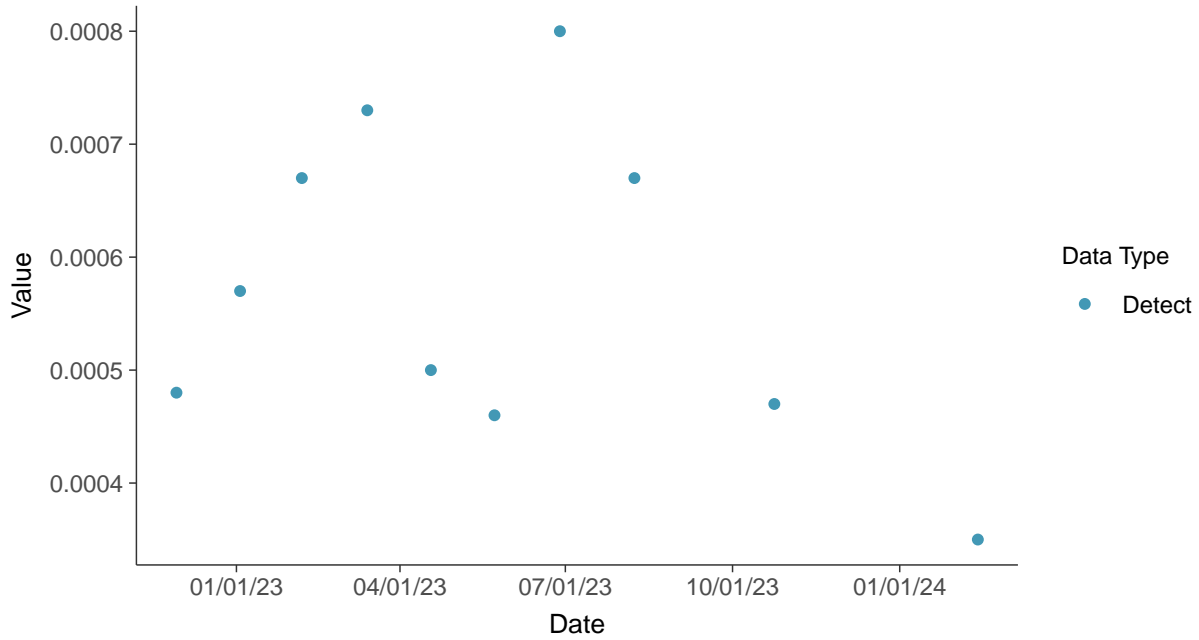


Appendix IV: Cobalt, MW-06

ID: 1_16_5_110

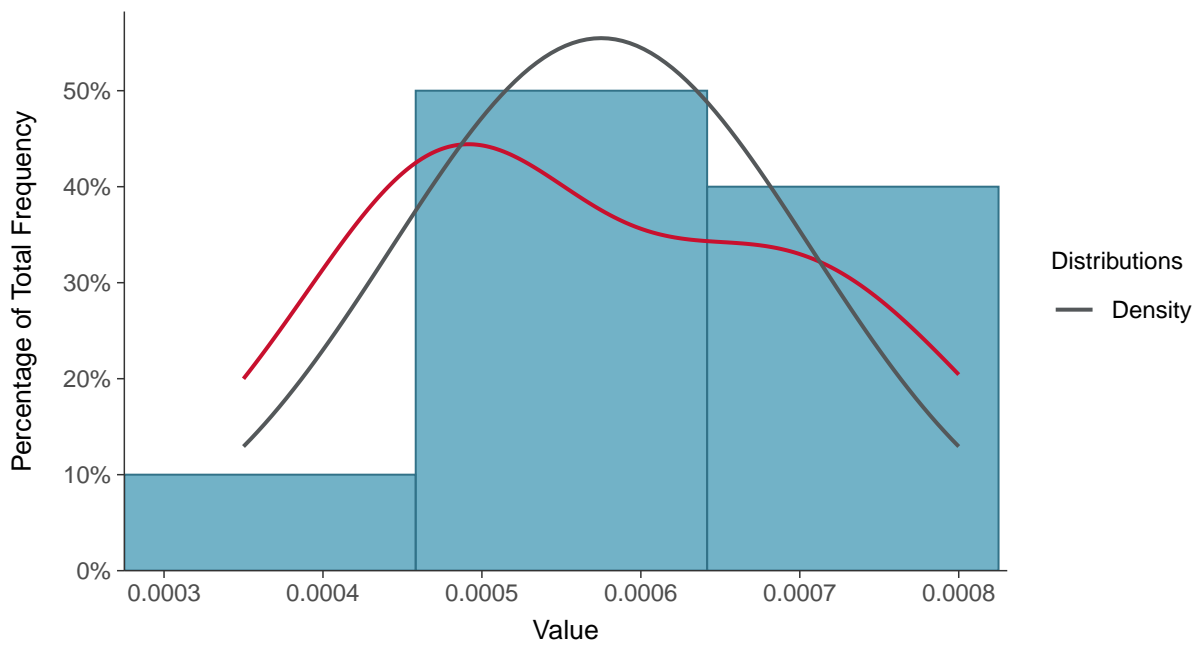
Scatter Plot

Cobalt, MW-06 (mg/L)



Histogram

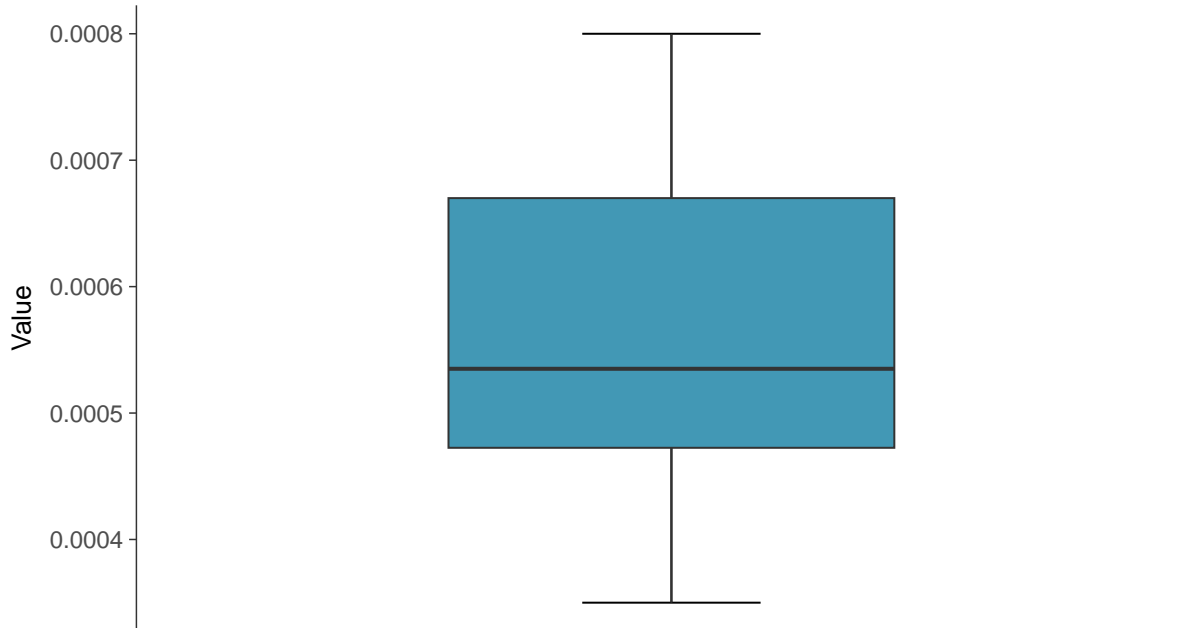
Cobalt, MW-06 (mg/L)





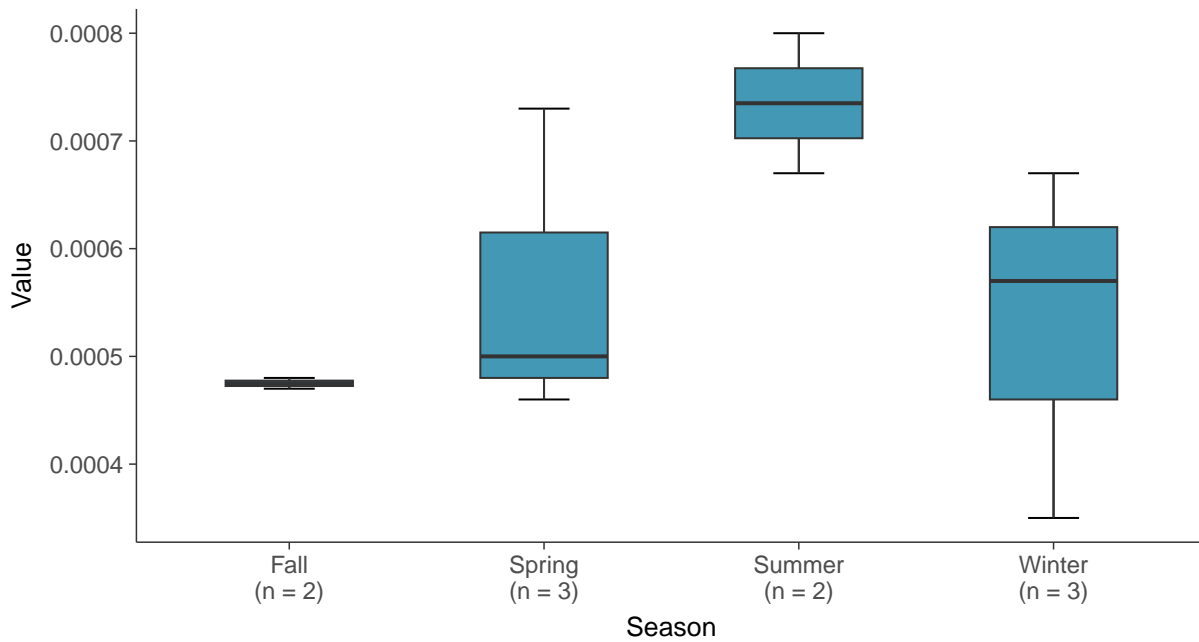
Boxplot

Cobalt, MW-06 (mg/L)



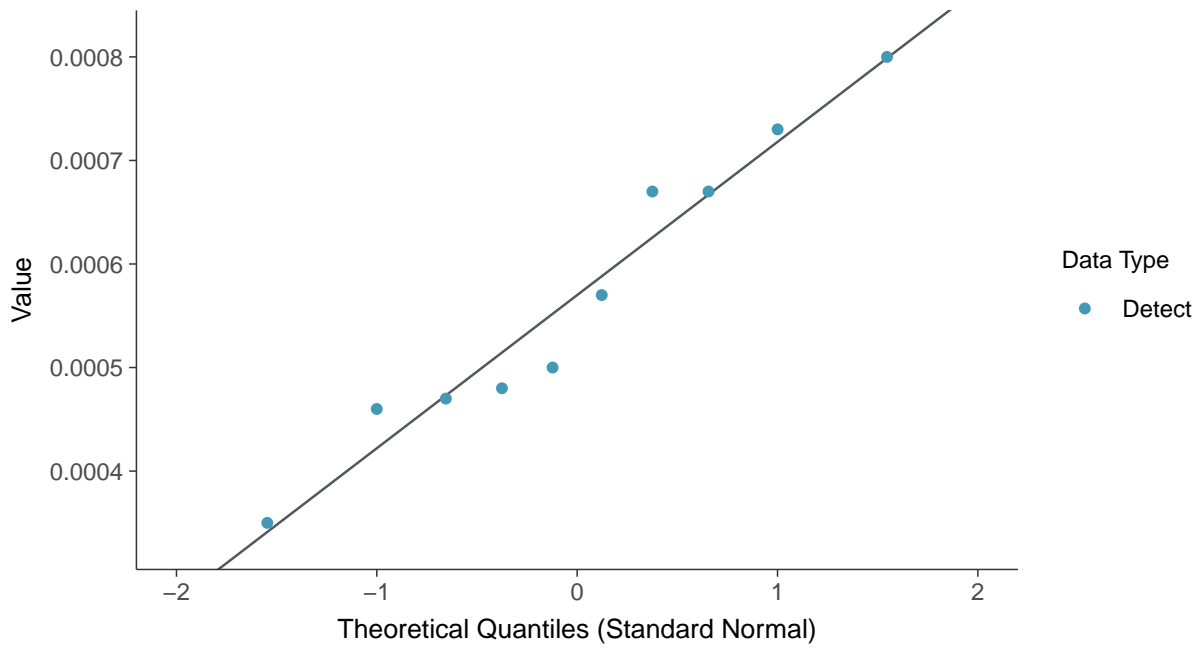
Boxplot by Season

Cobalt, MW-06 (mg/L)

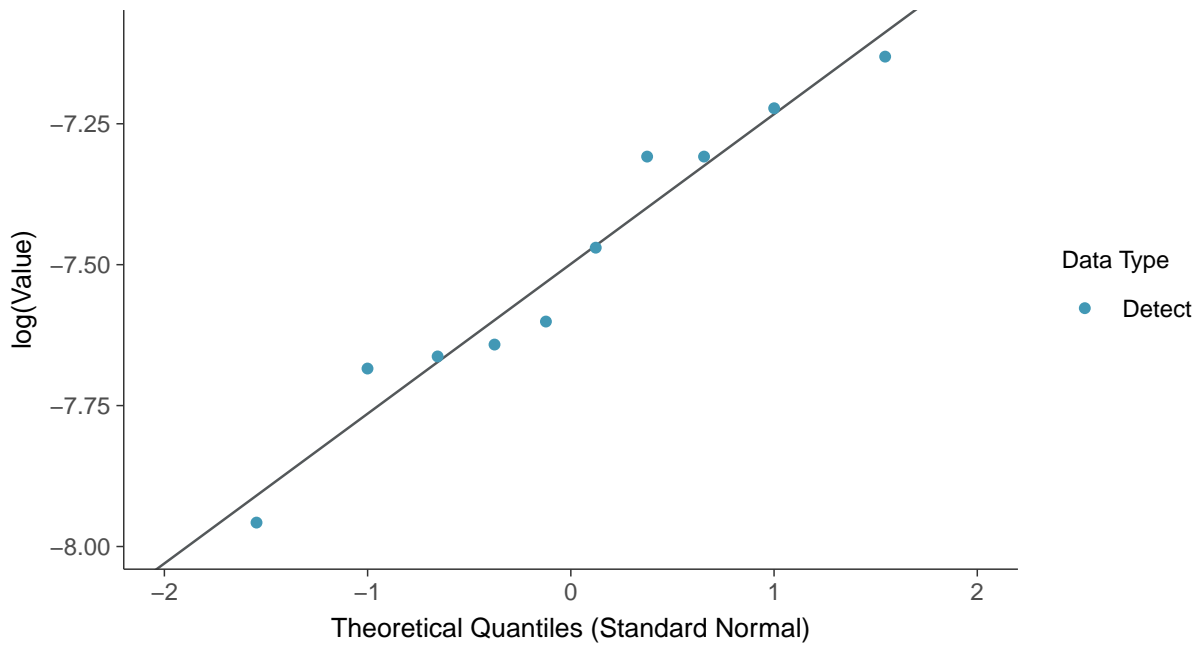




Normal Q-Q plot
Cobalt, MW-06 (mg/L)

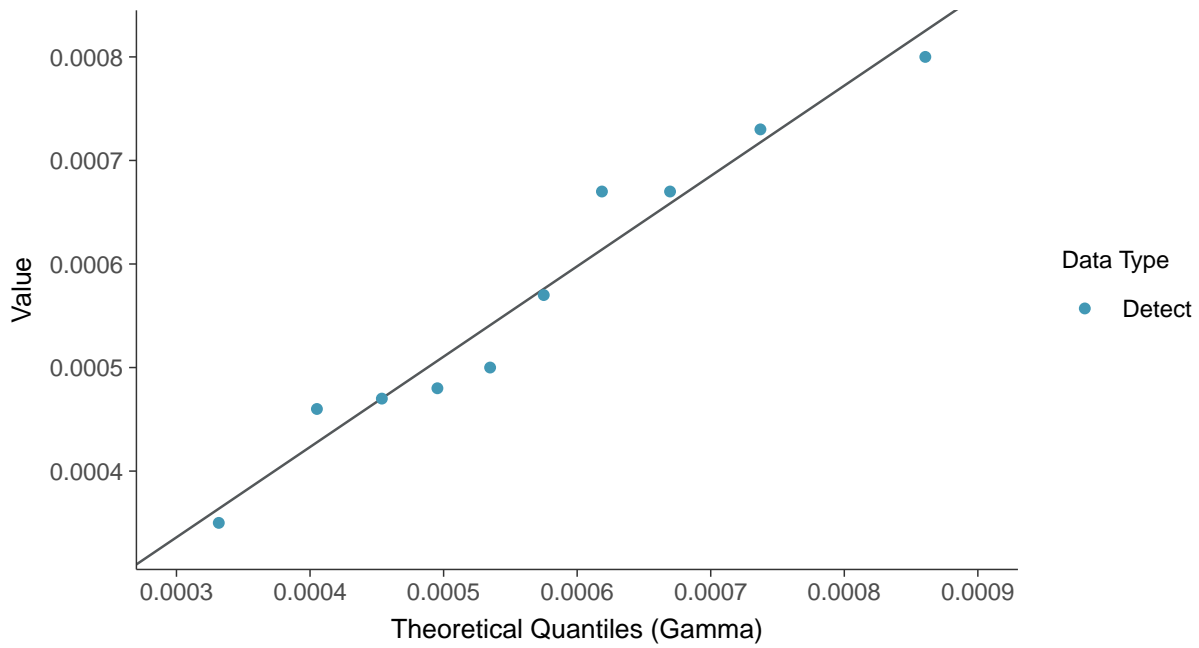


Lognormal Q-Q plot
Cobalt, MW-06 (mg/L)

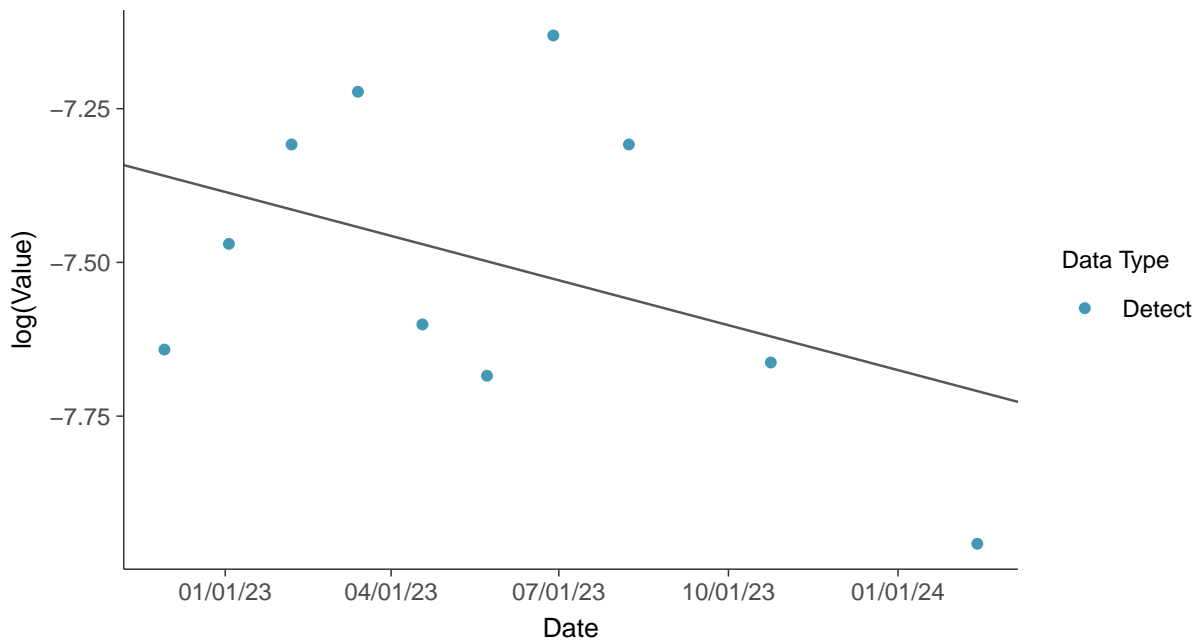




Gamma Q-Q plot
Cobalt, MW-06 (mg/L)



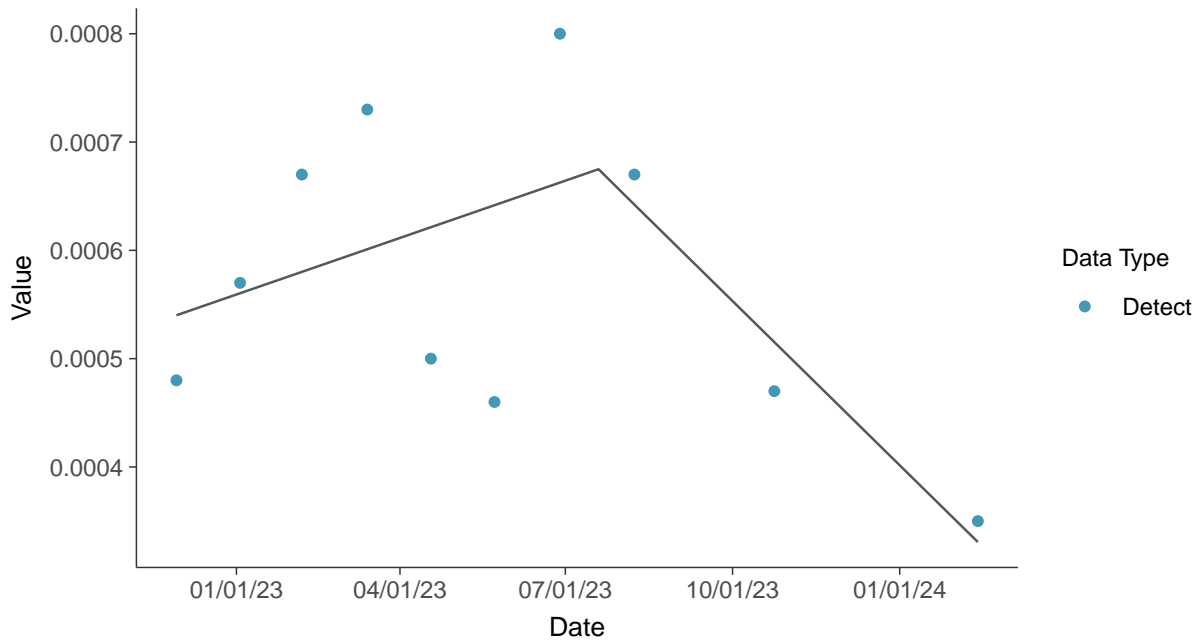
Trend Regression: Lognormal MLE
Cobalt, MW-06 (mg/L)





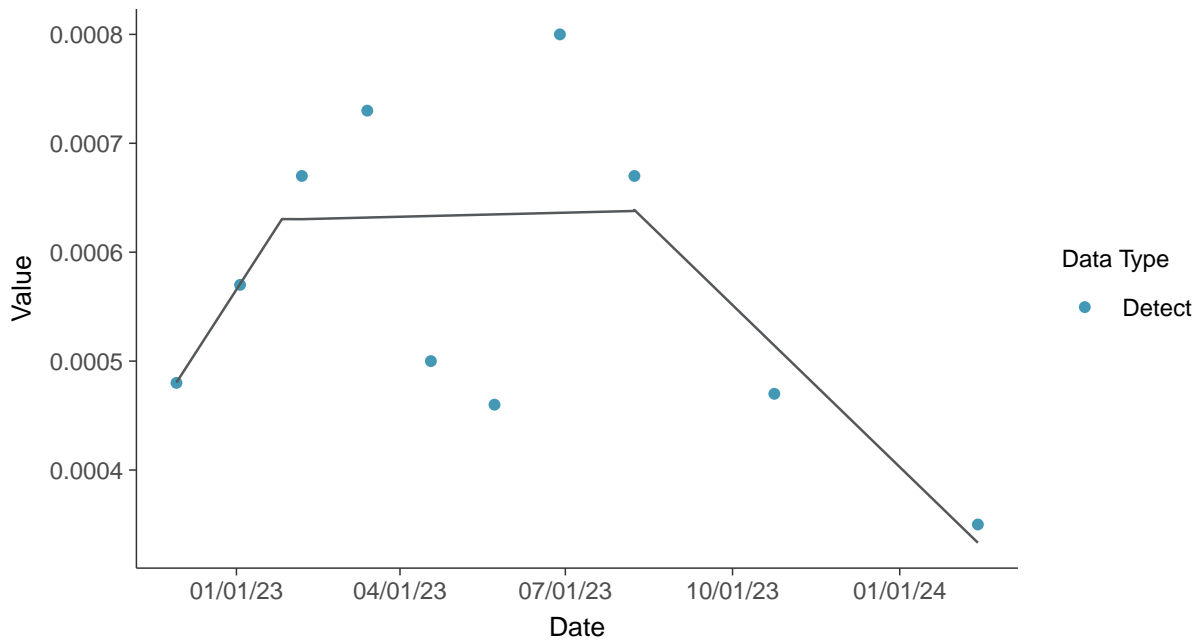
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-06 (mg/L)



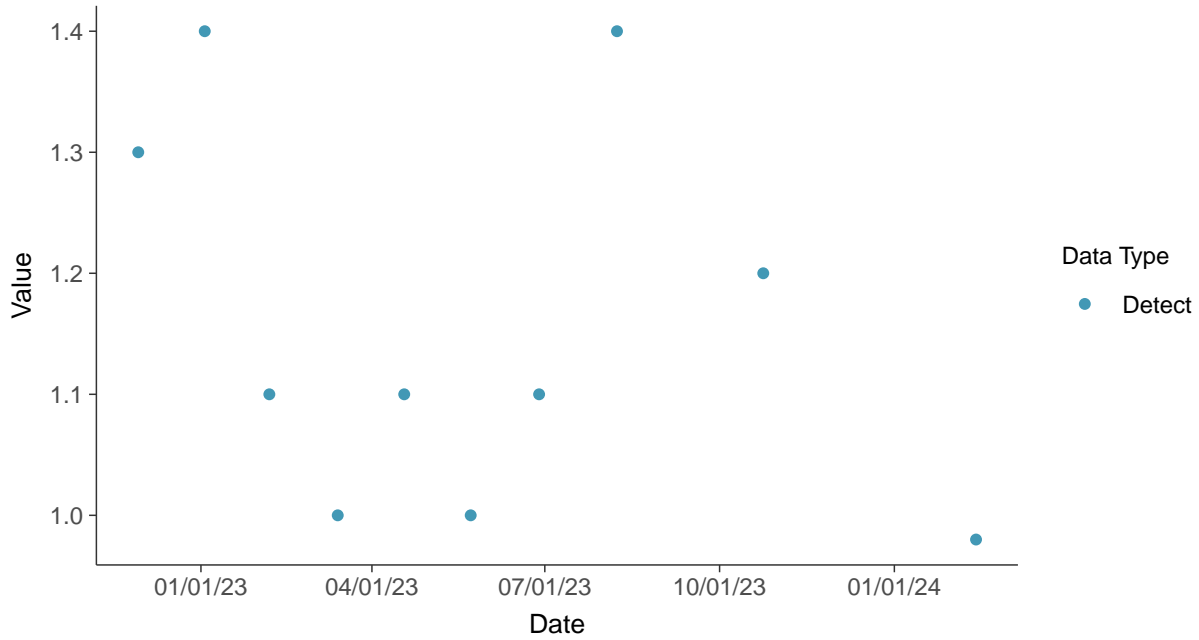


Appendix IV: Fluoride (App IV), MW-06

ID: 1_16_5_113

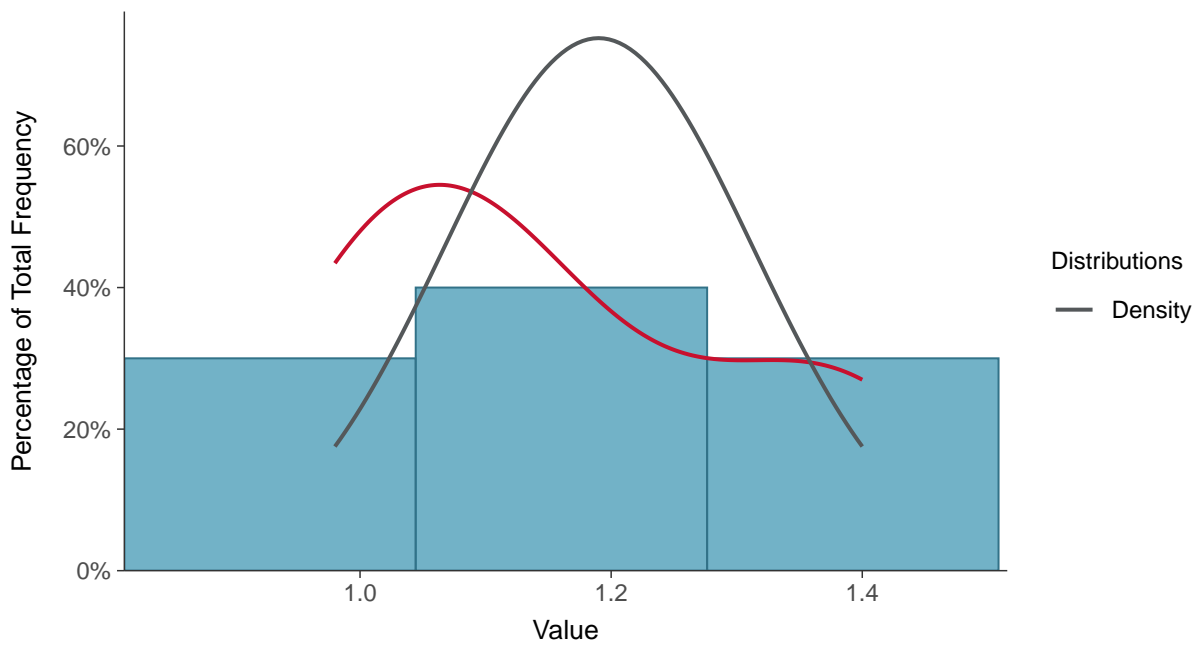
Scatter Plot

Fluoride (App IV), MW-06 (mg/L)



Histogram

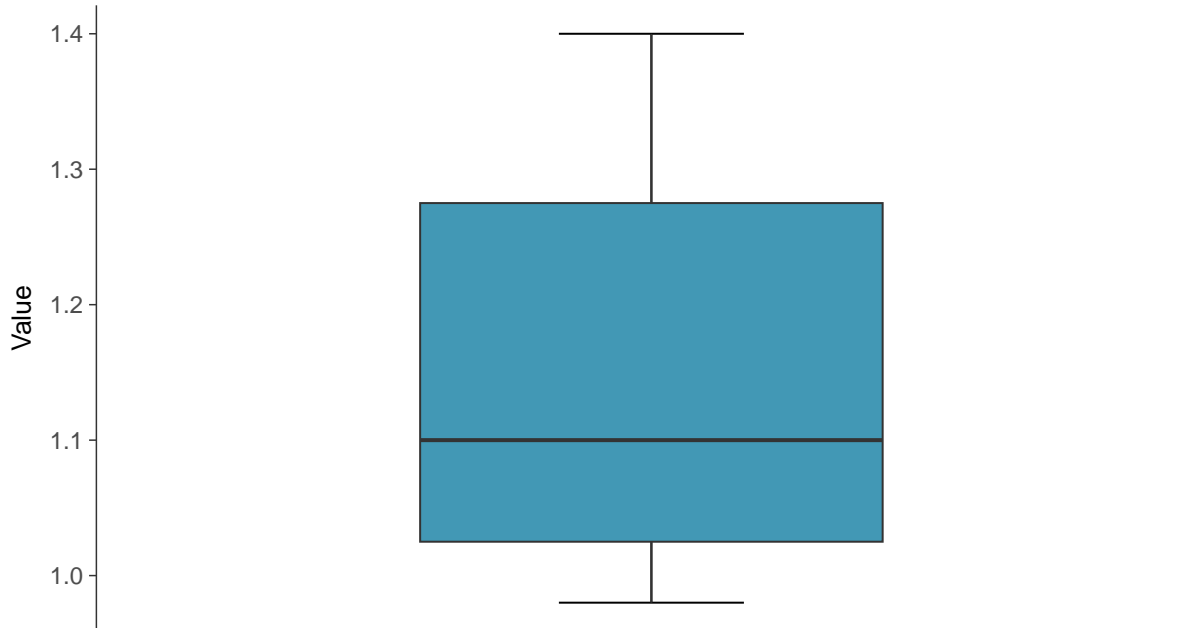
Fluoride (App IV), MW-06 (mg/L)





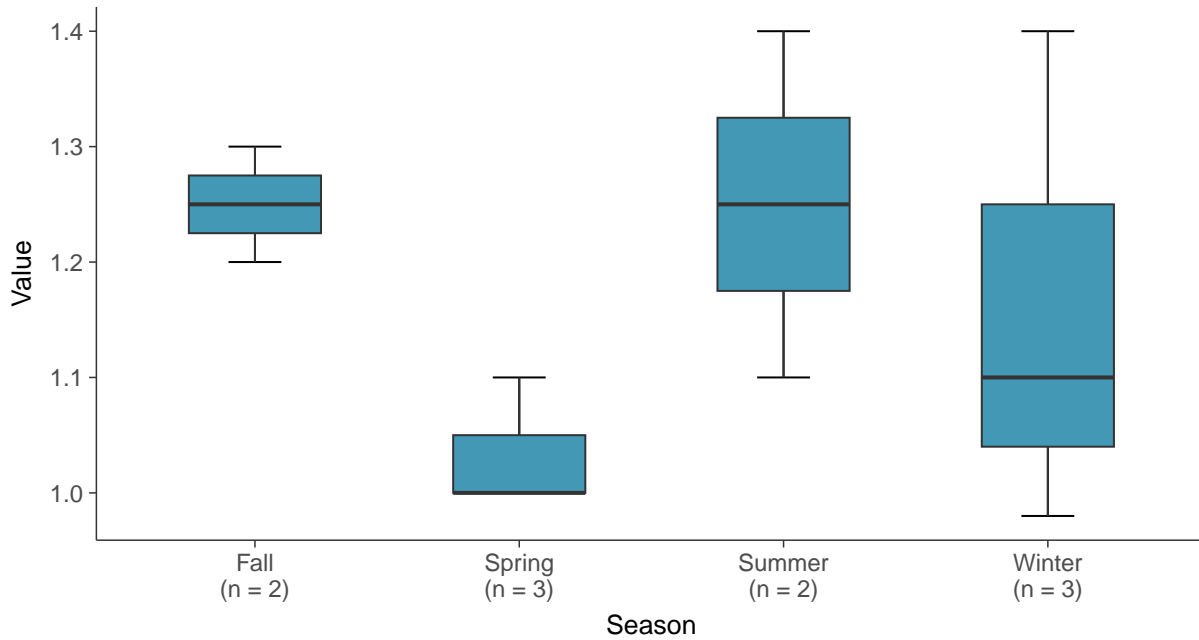
Boxplot

Fluoride (App IV), MW-06 (mg/L)



Boxplot by Season

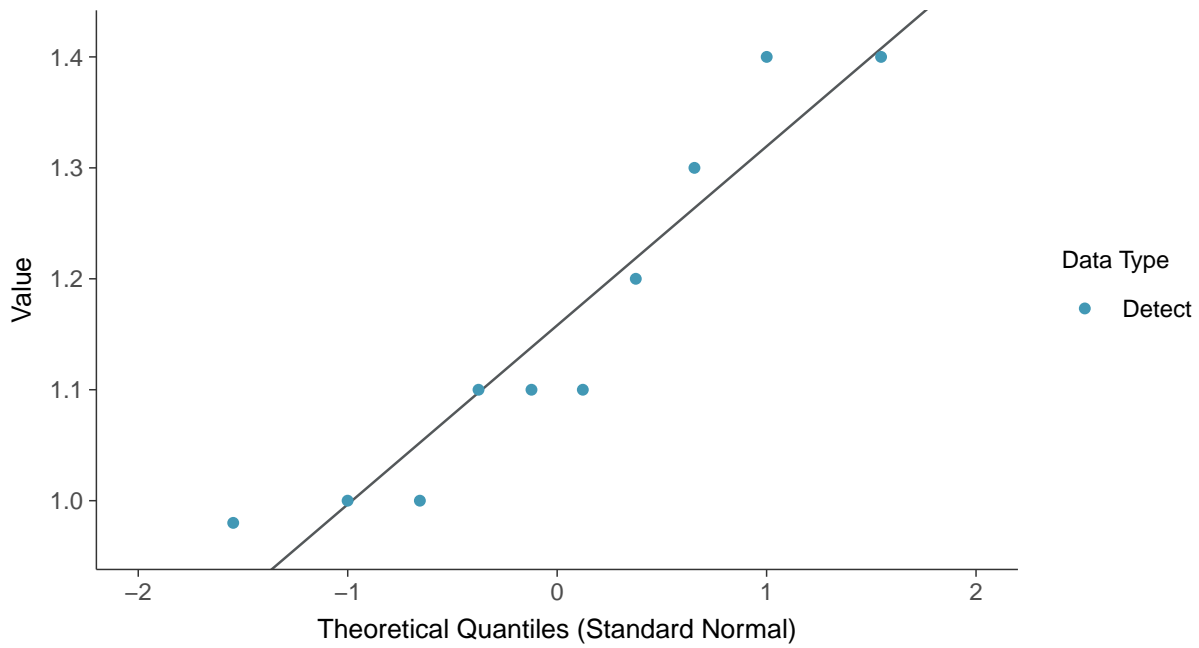
Fluoride (App IV), MW-06 (mg/L)





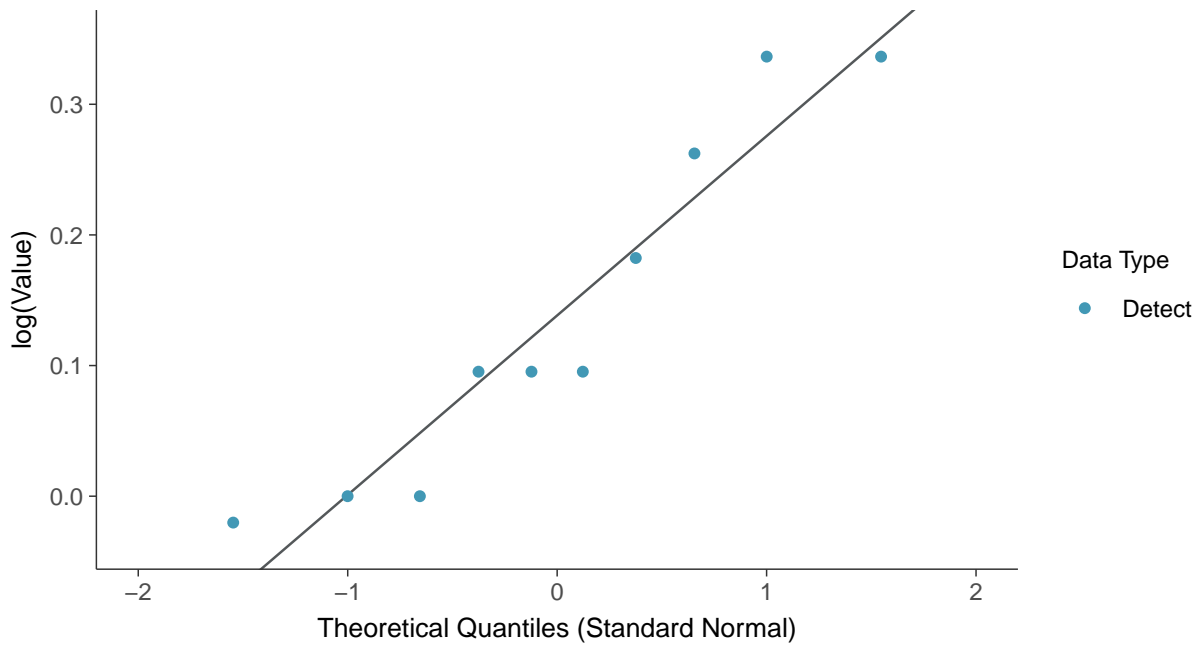
Normal Q-Q plot

Fluoride (App IV), MW-06 (mg/L)



Lognormal Q-Q plot

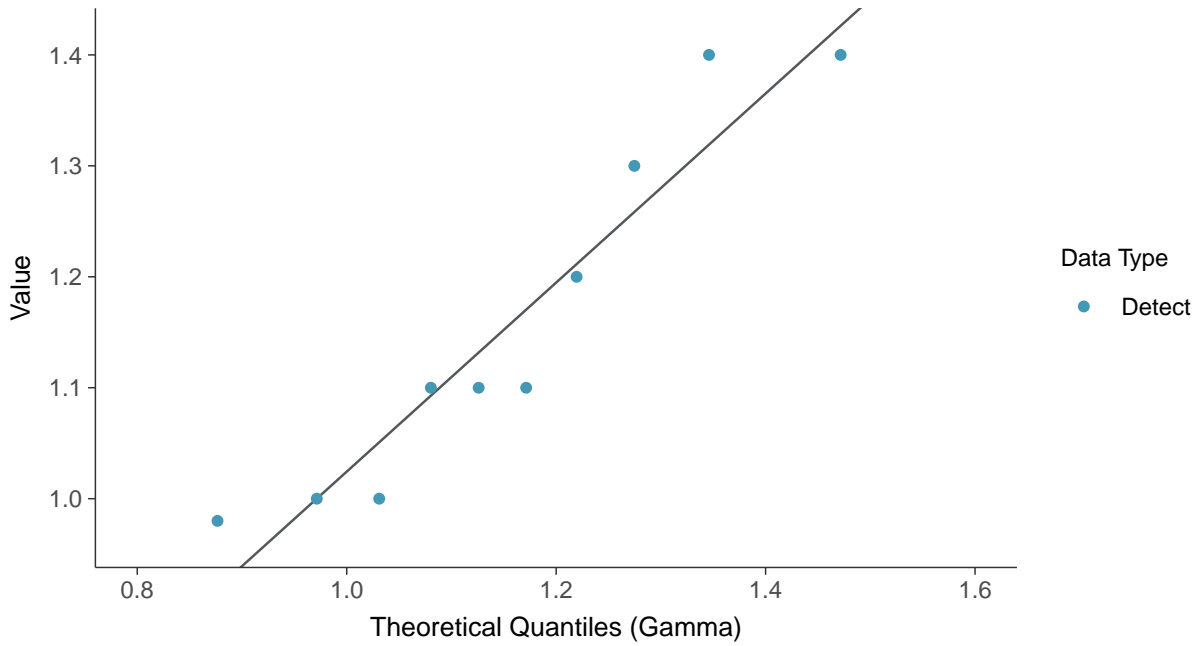
Fluoride (App IV), MW-06 (mg/L)





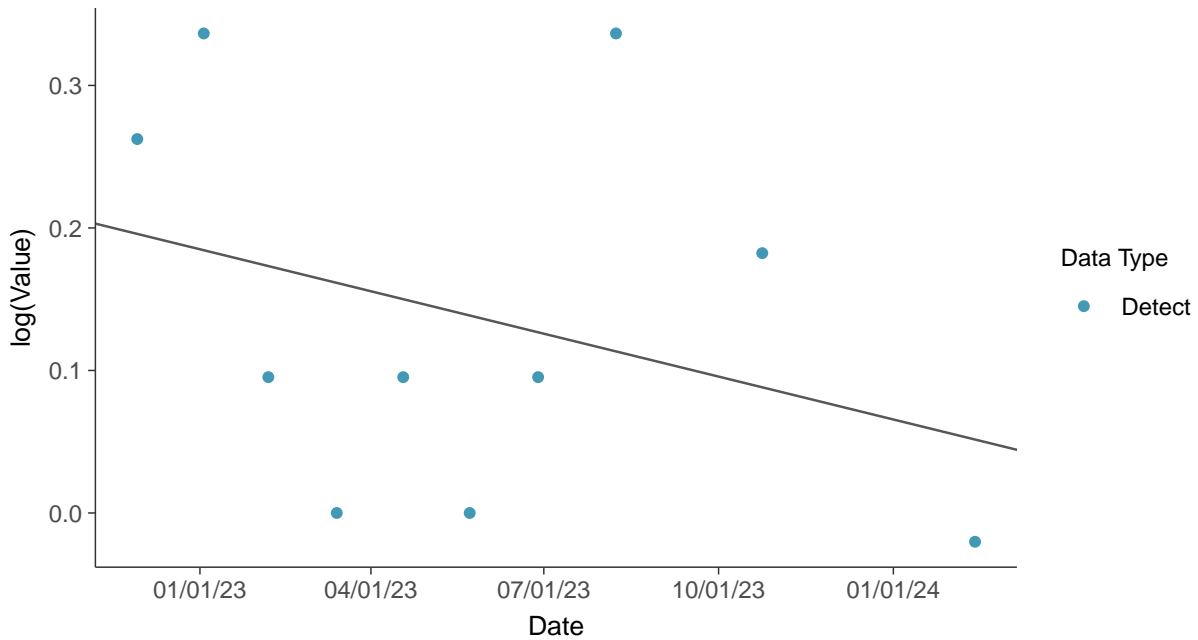
Gamma Q-Q plot

Fluoride (App IV), MW-06 (mg/L)



Trend Regression: Lognormal MLE

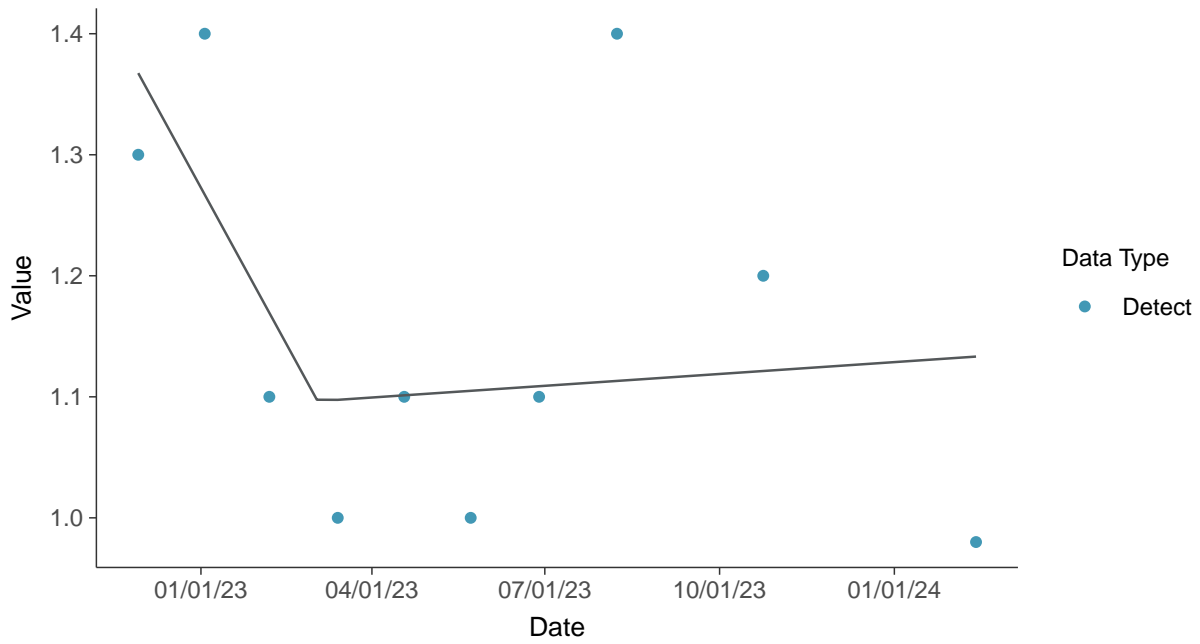
Fluoride (App IV), MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear

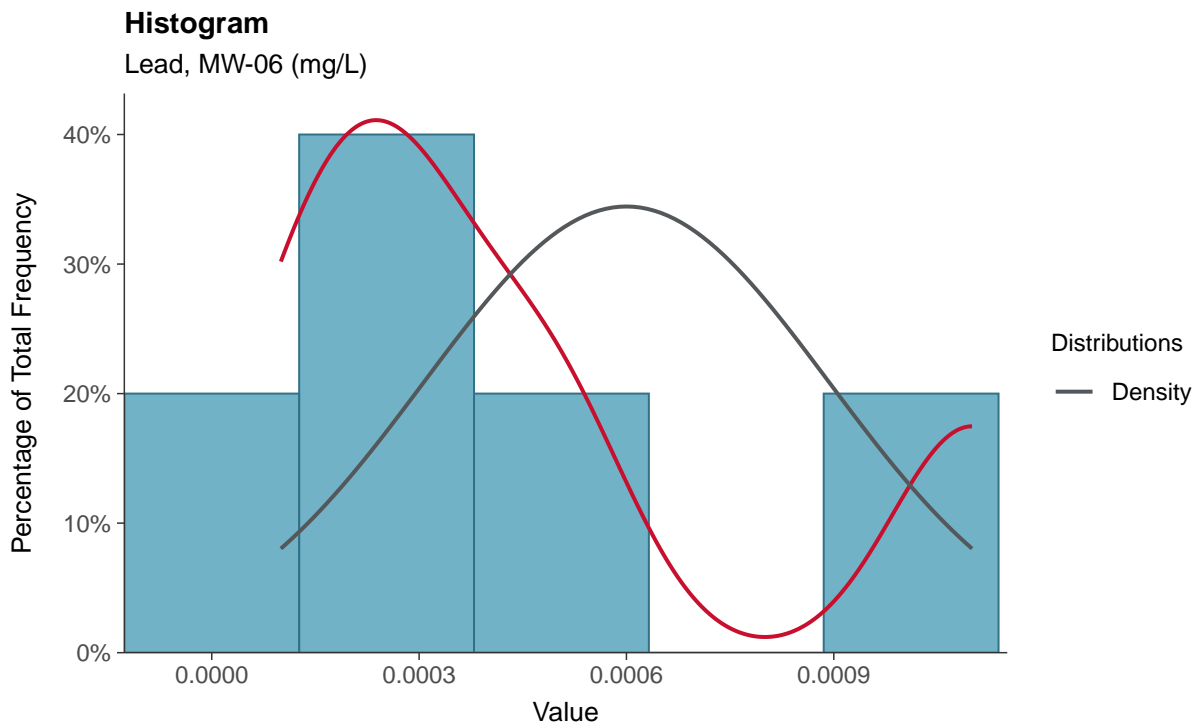
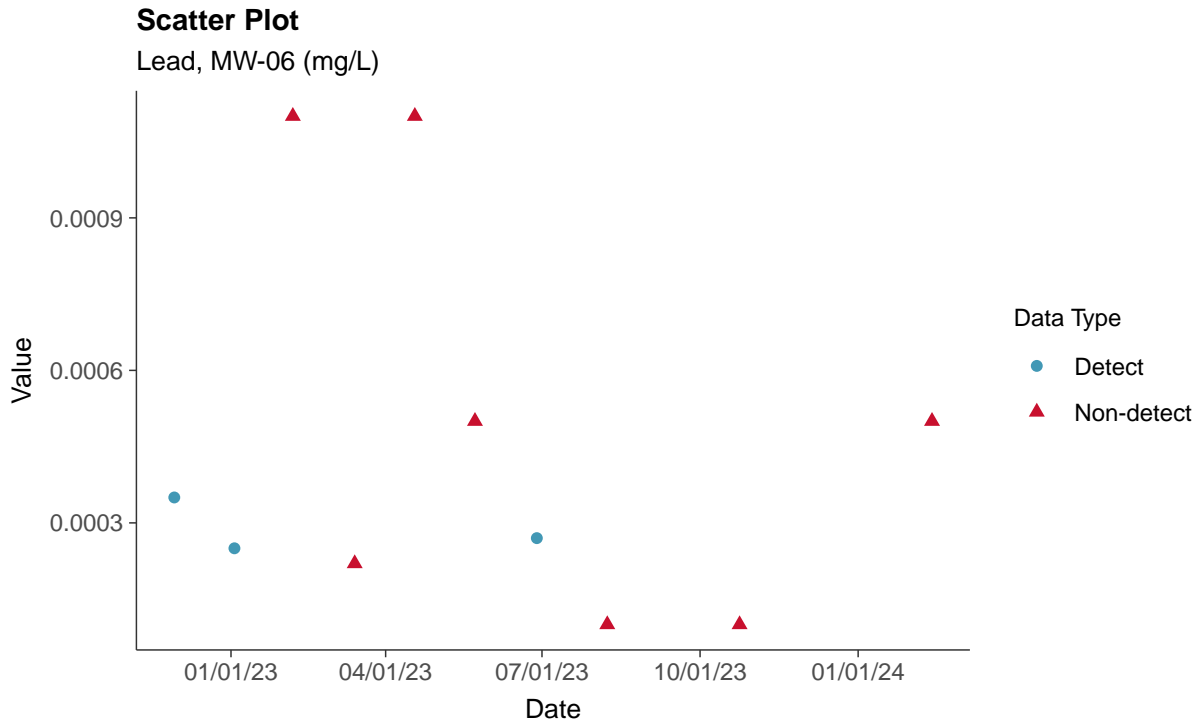
Fluoride (App IV), MW-06 (mg/L)





Appendix IV: Lead, MW-06

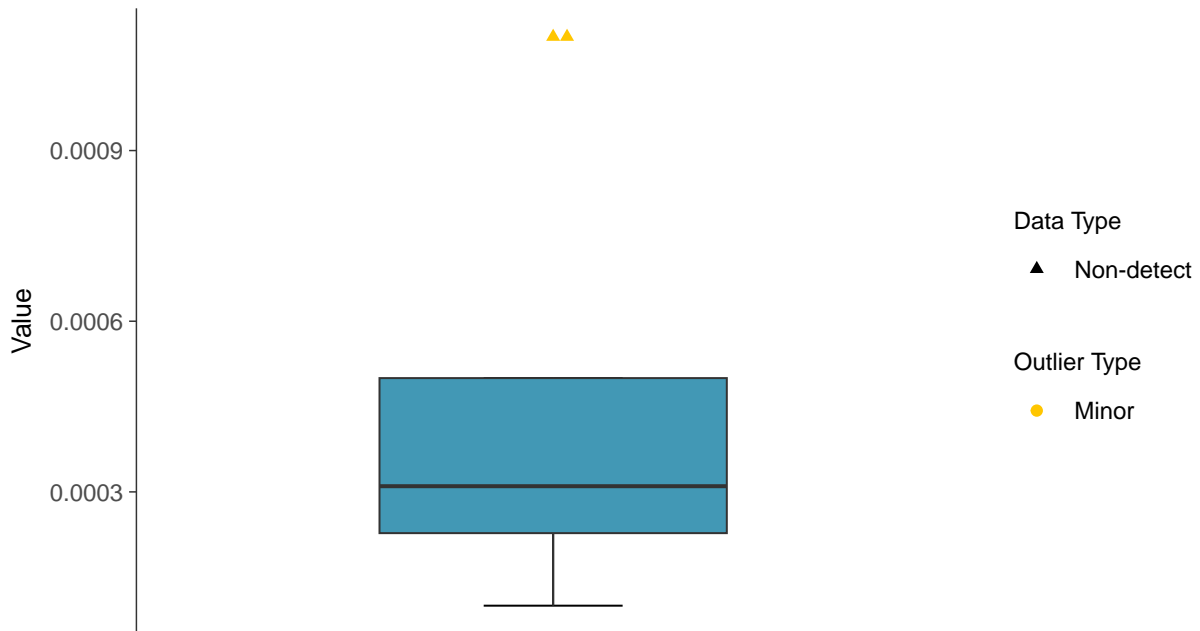
ID: 1_16_5_115





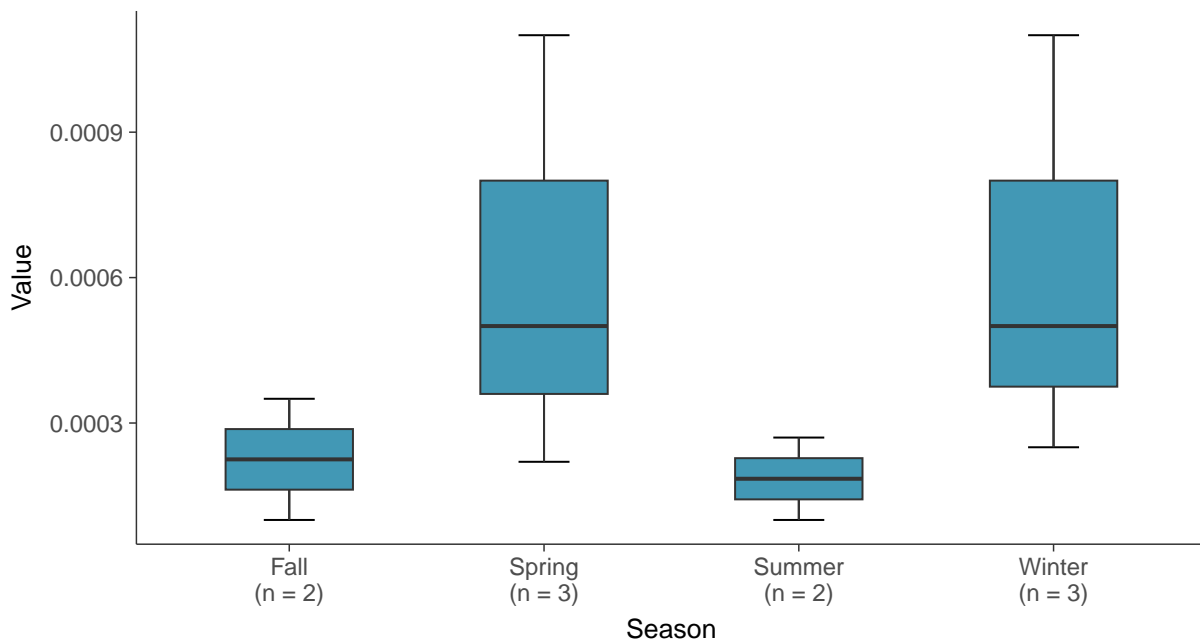
Boxplot

Lead, MW-06 (mg/L)



Boxplot by Season

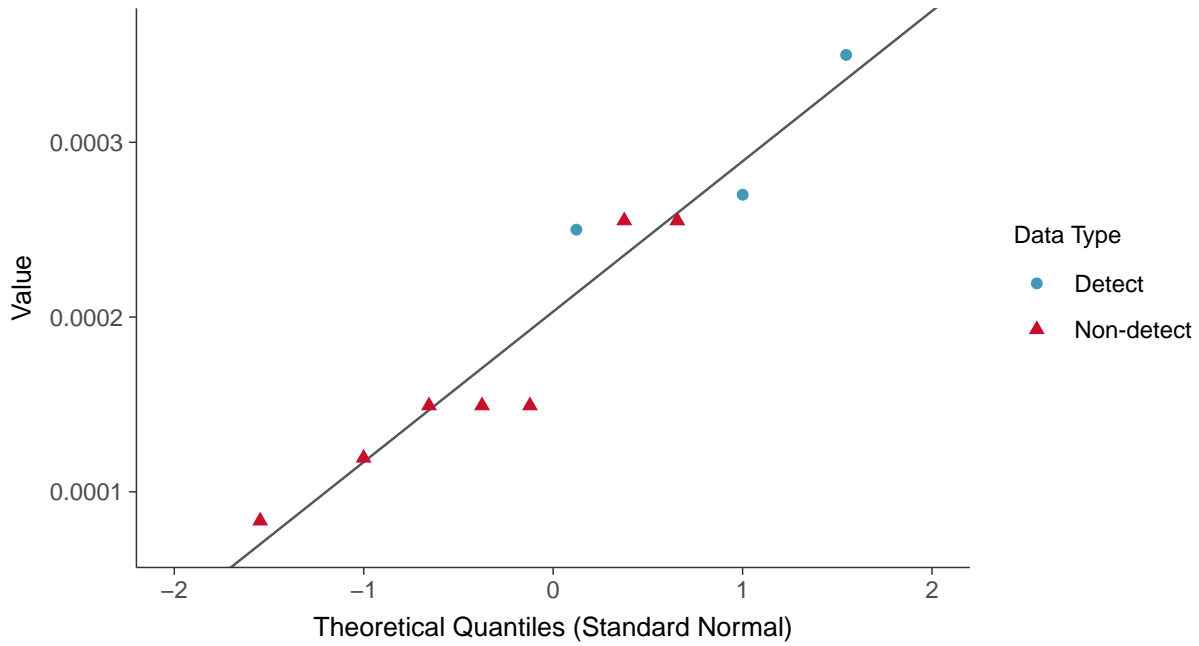
Lead, MW-06 (mg/L)





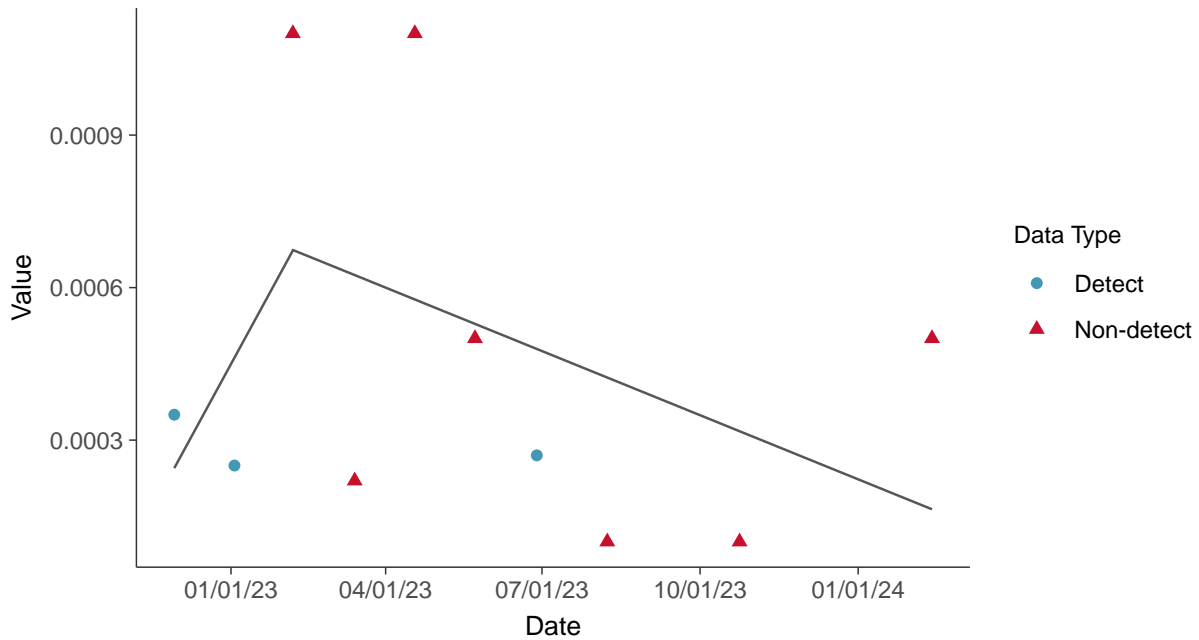
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear

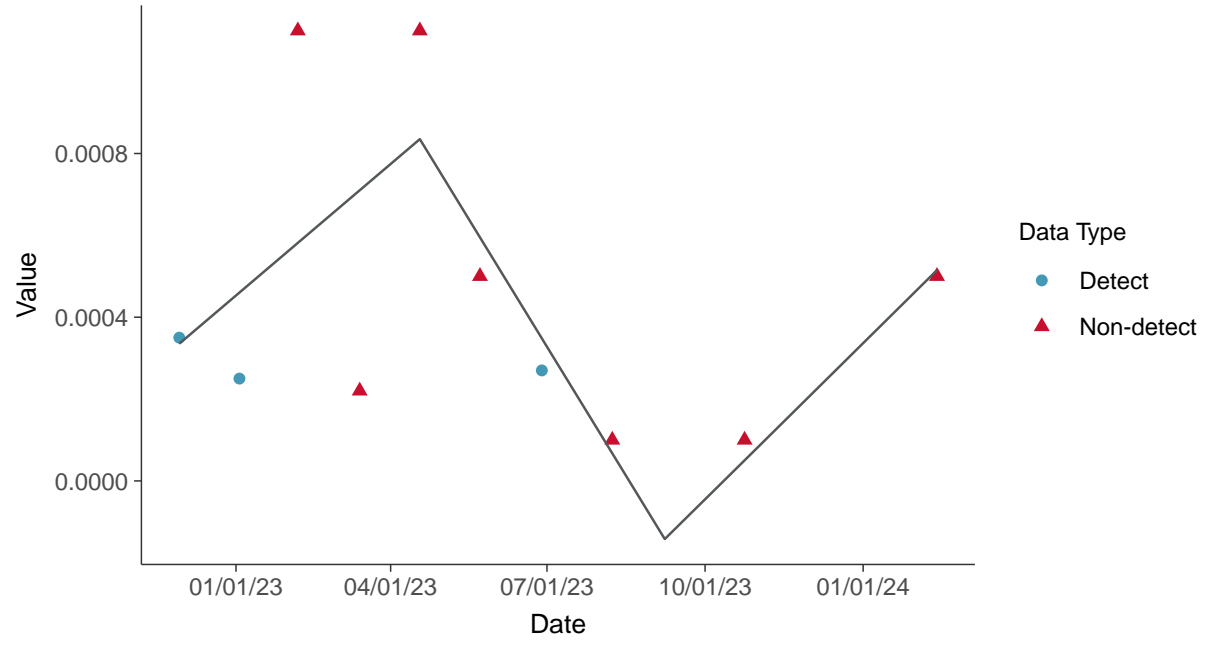
Lead, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

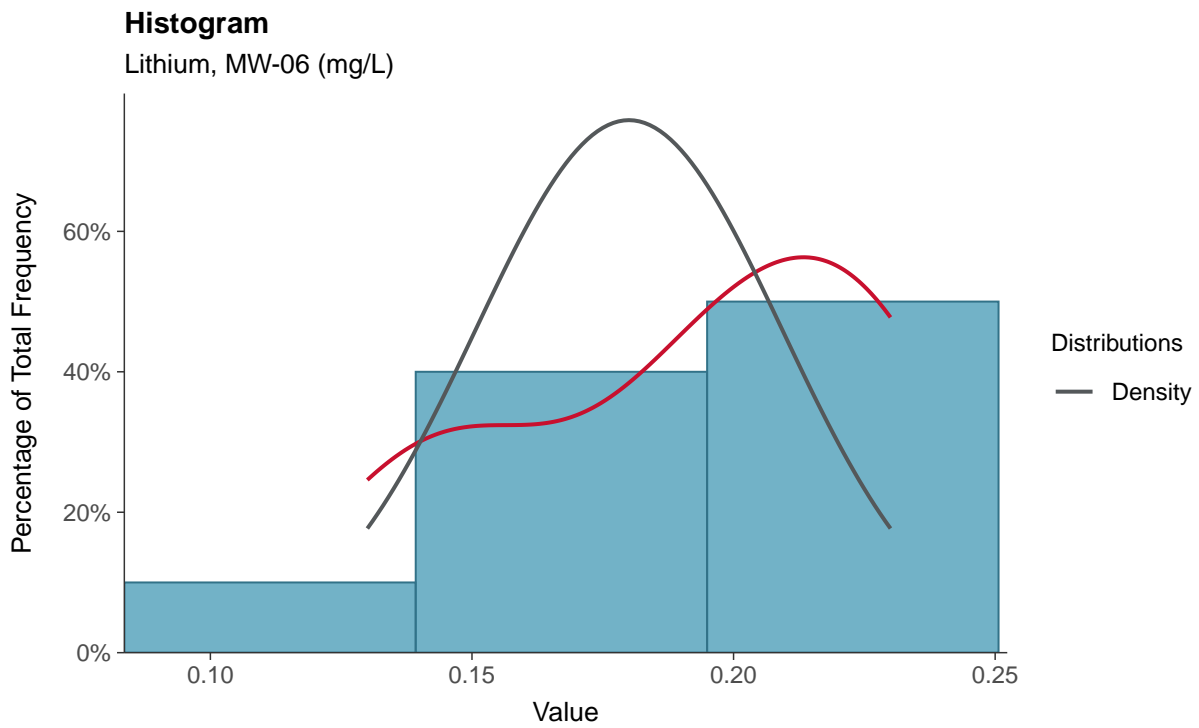
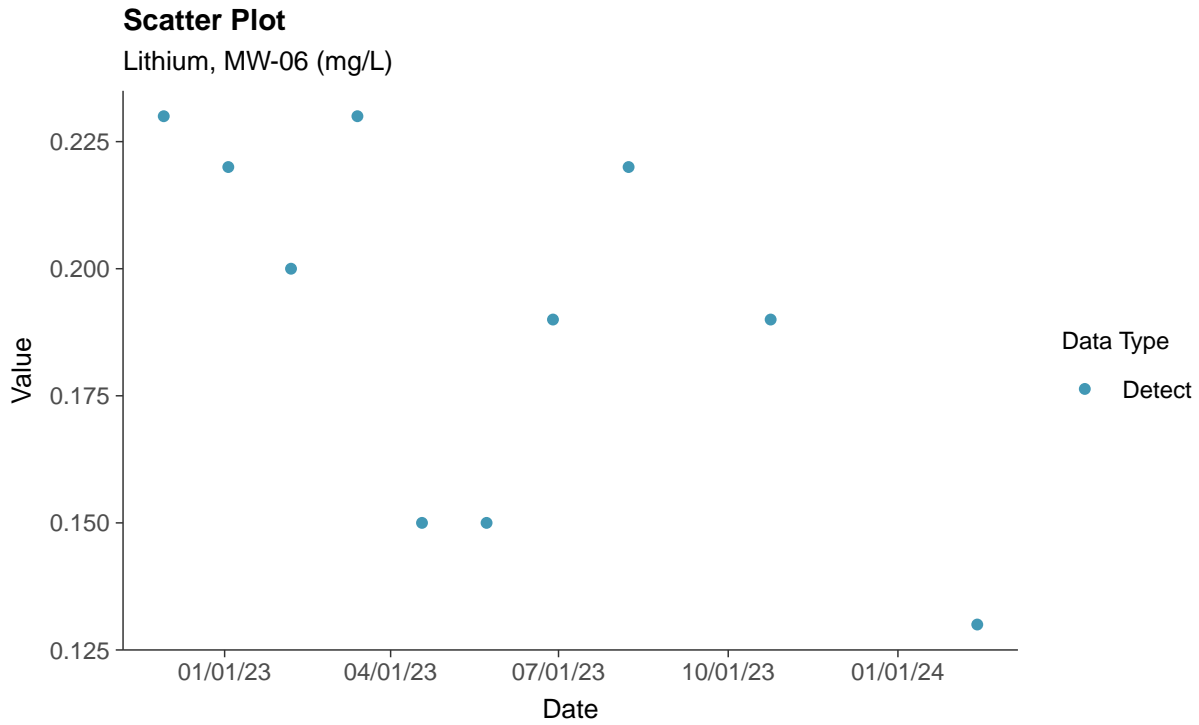
Lead, MW-06 (mg/L)





Appendix IV: Lithium, MW-06

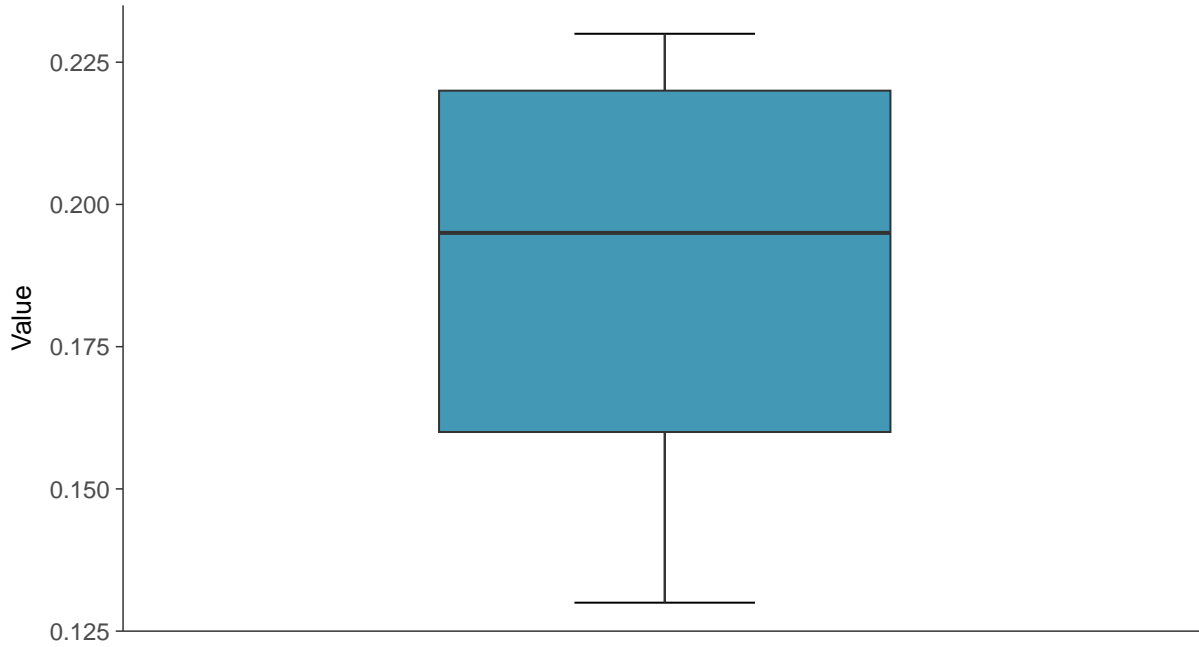
ID: 1_16_5_116





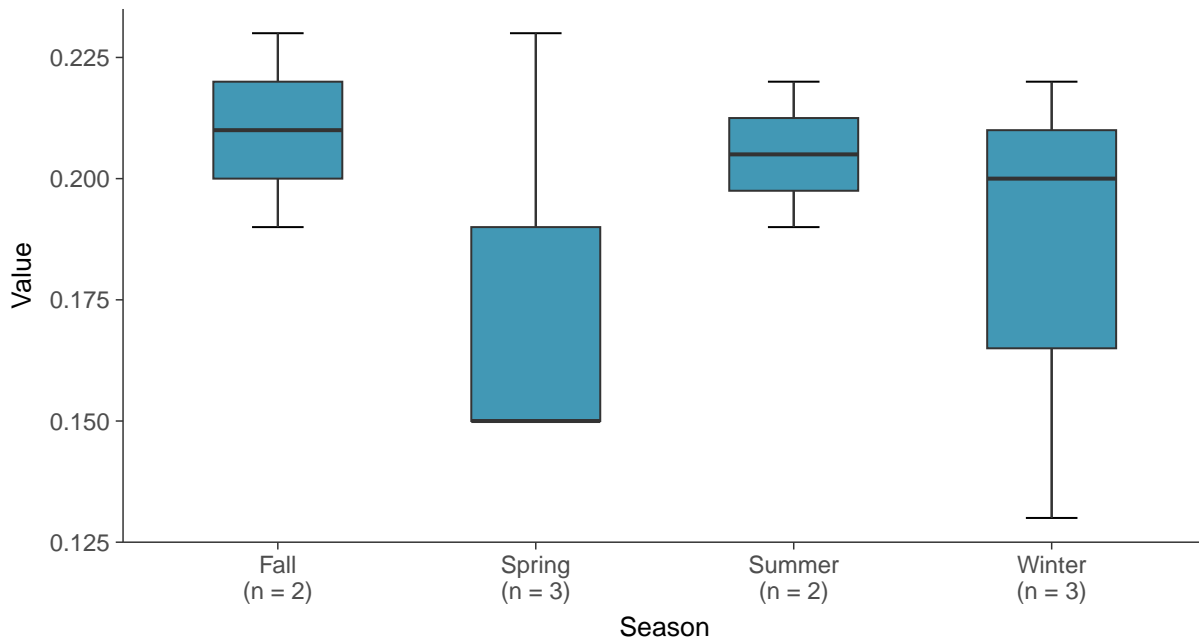
Boxplot

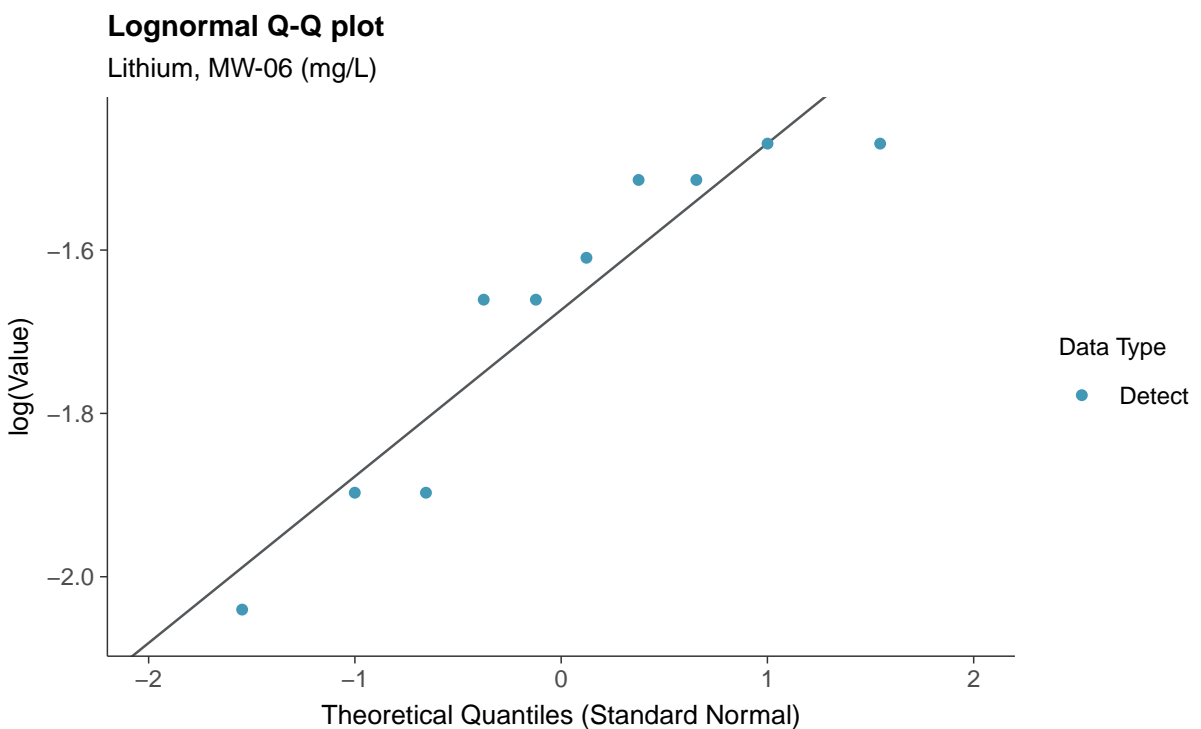
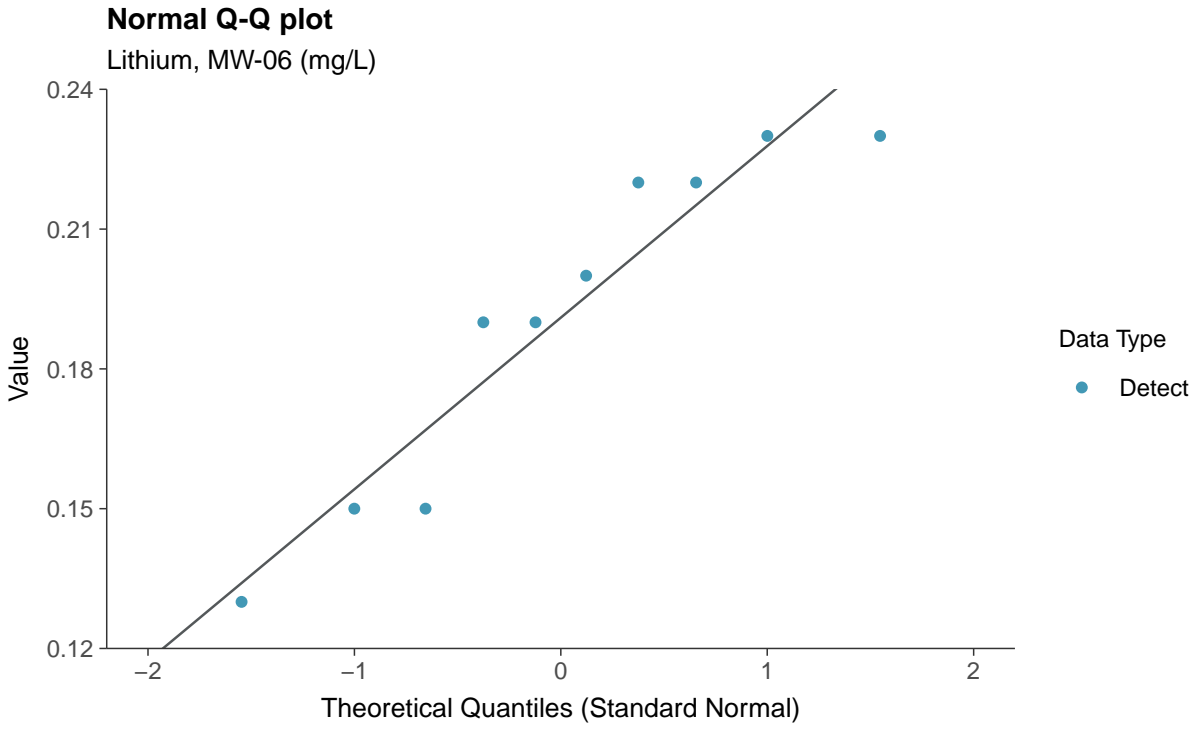
Lithium, MW-06 (mg/L)

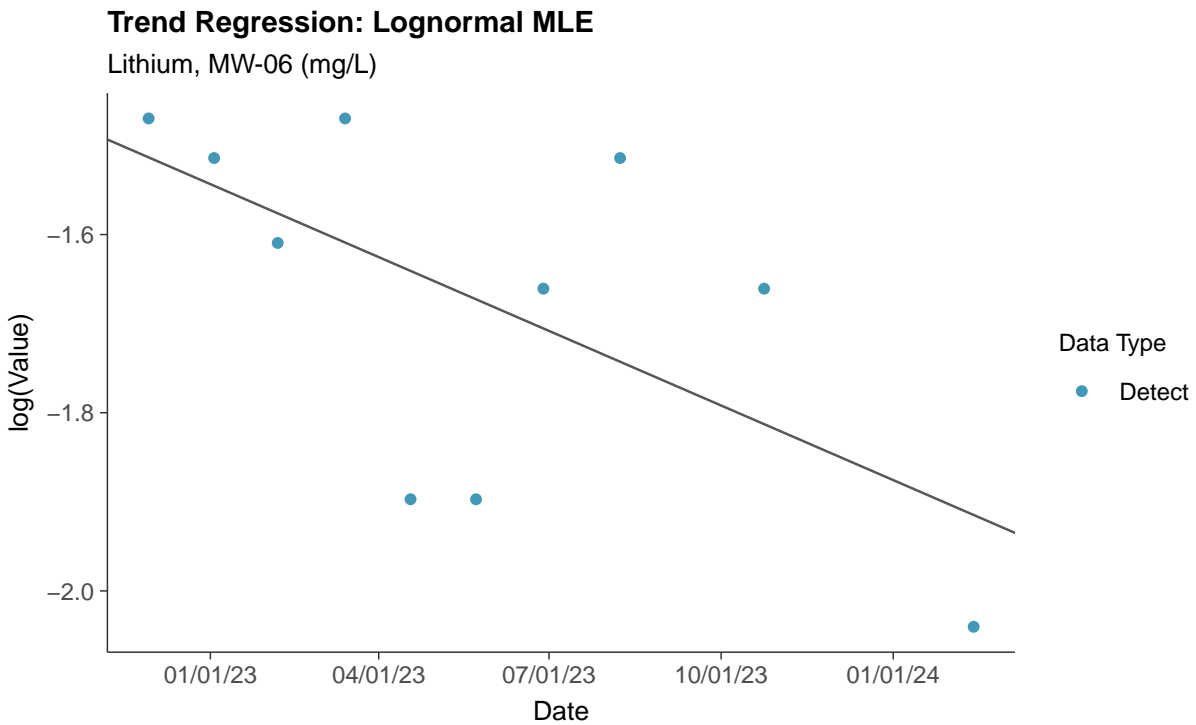
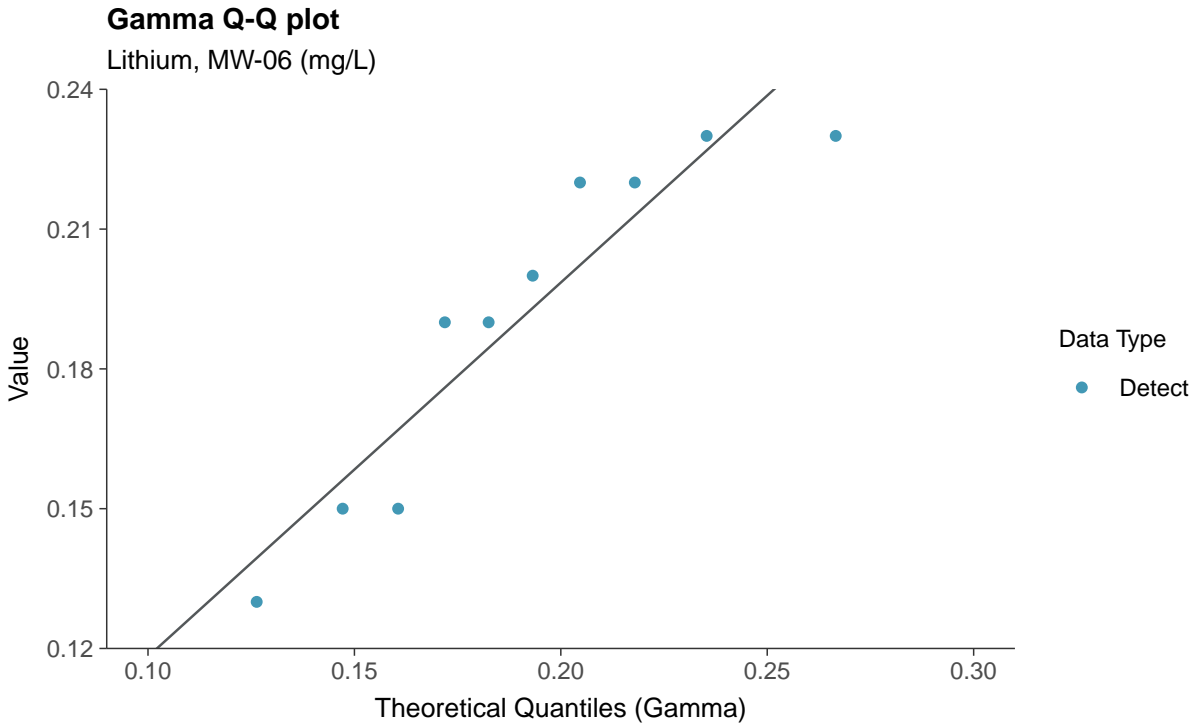


Boxplot by Season

Lithium, MW-06 (mg/L)



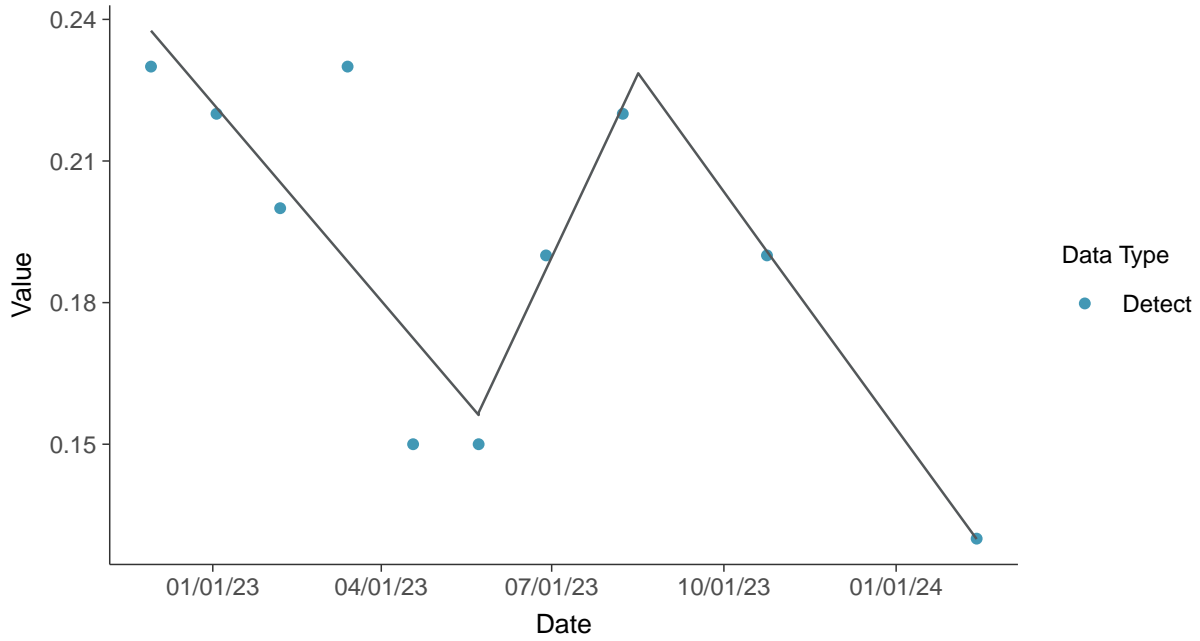






Trend Regression: Piecewise Linear-Linear-Linear

Lithium, MW-06 (mg/L)



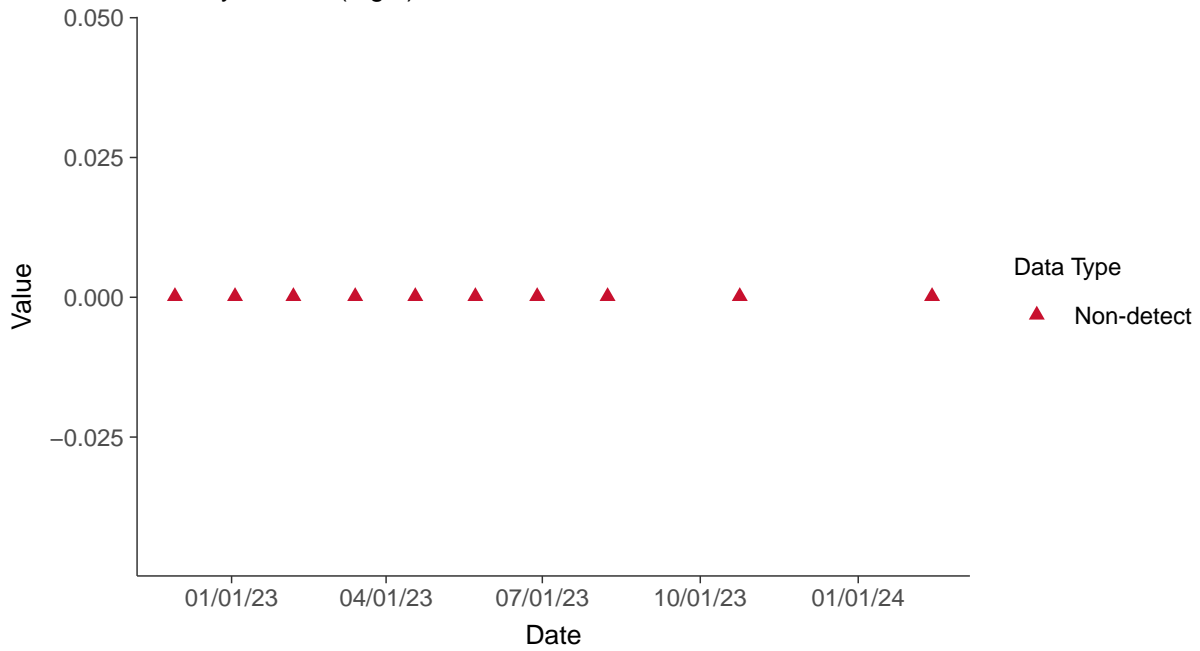


Appendix IV: Mercury, MW-06

ID: 1_16_5_117

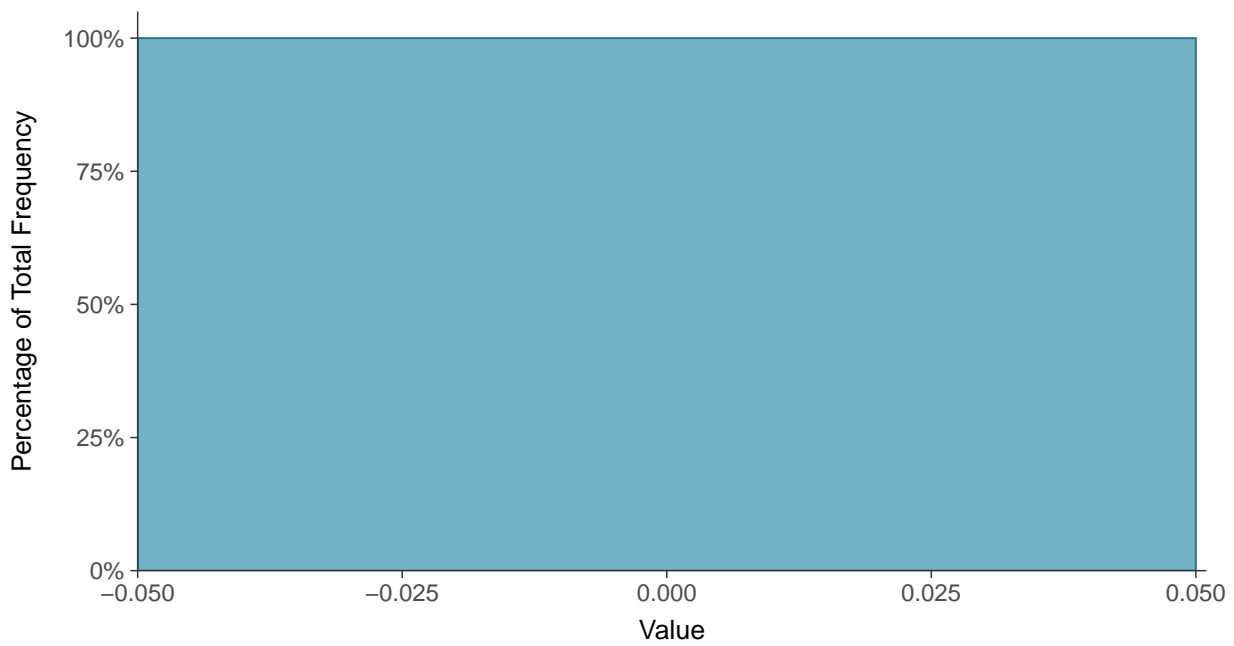
Scatter Plot

Mercury, MW-06 (mg/L)



Histogram

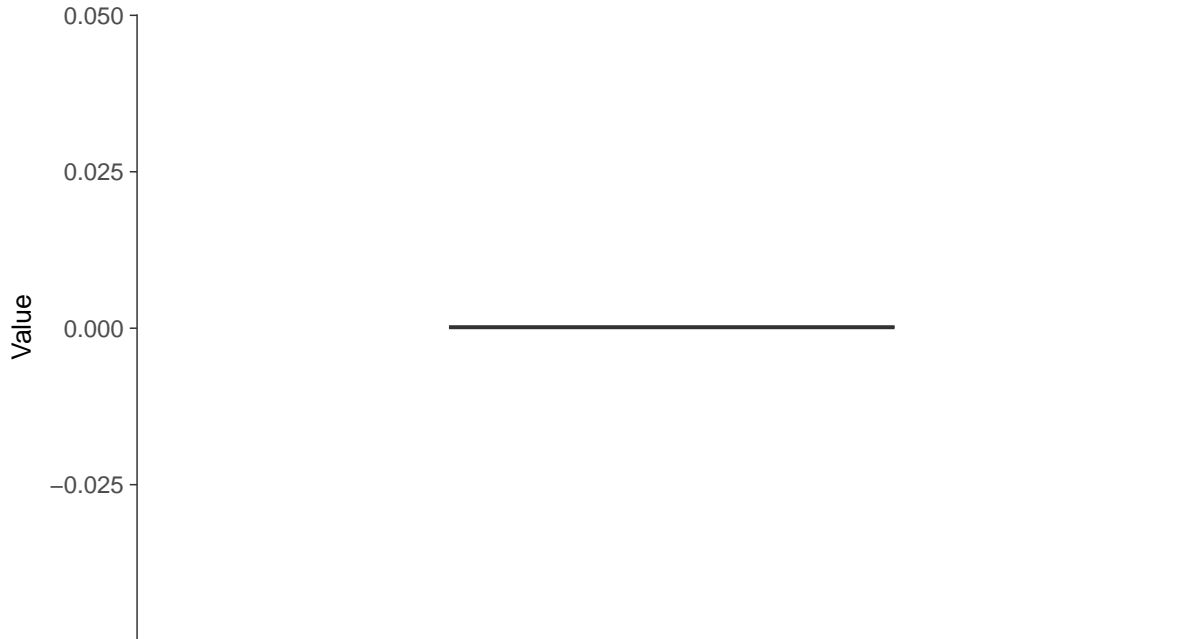
Mercury, MW-06 (mg/L)





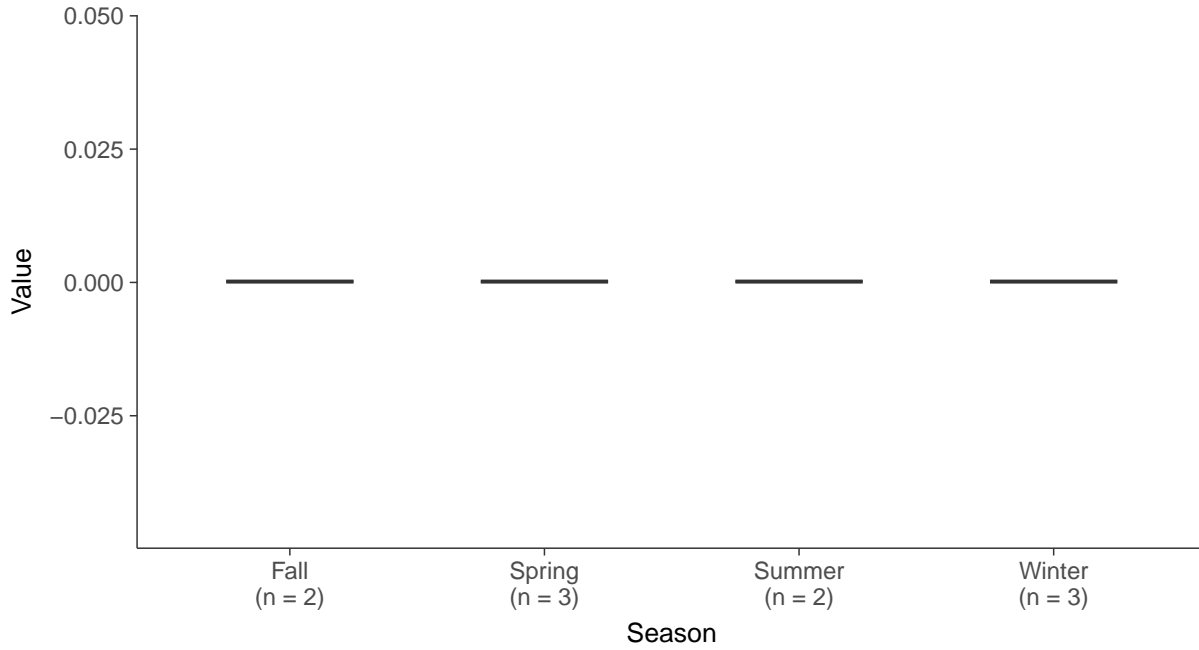
Boxplot

Mercury, MW-06 (mg/L)



Boxplot by Season

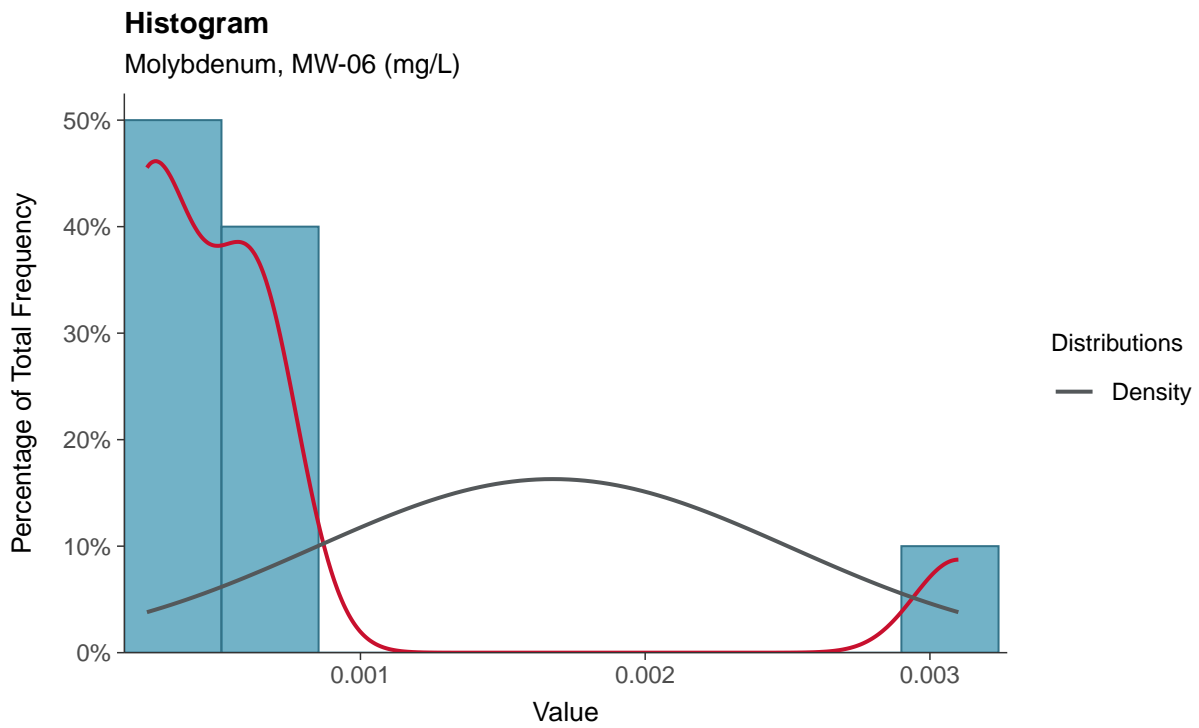
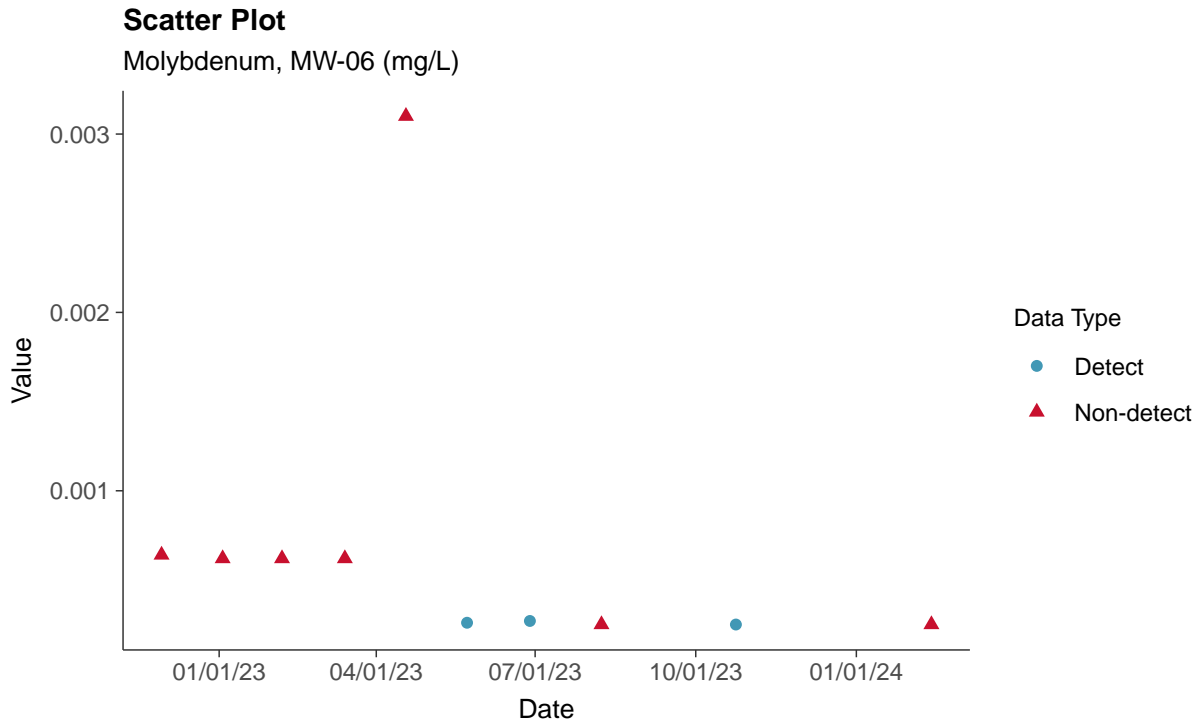
Mercury, MW-06 (mg/L)





Appendix IV: Molybdenum, MW-06

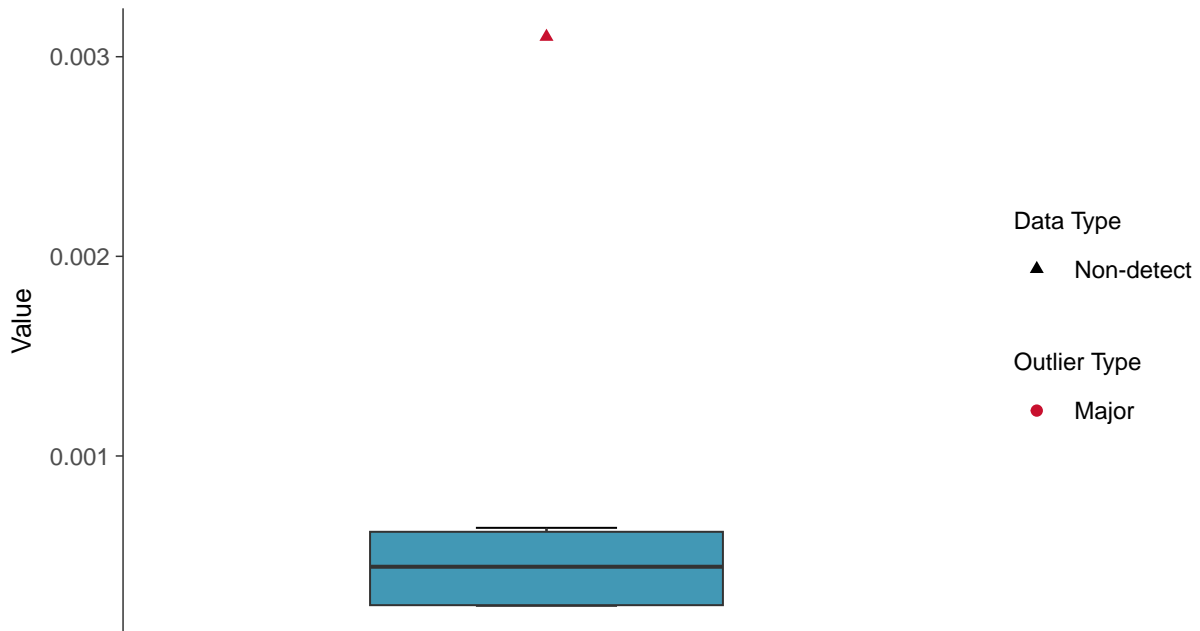
ID: 1_16_5_118





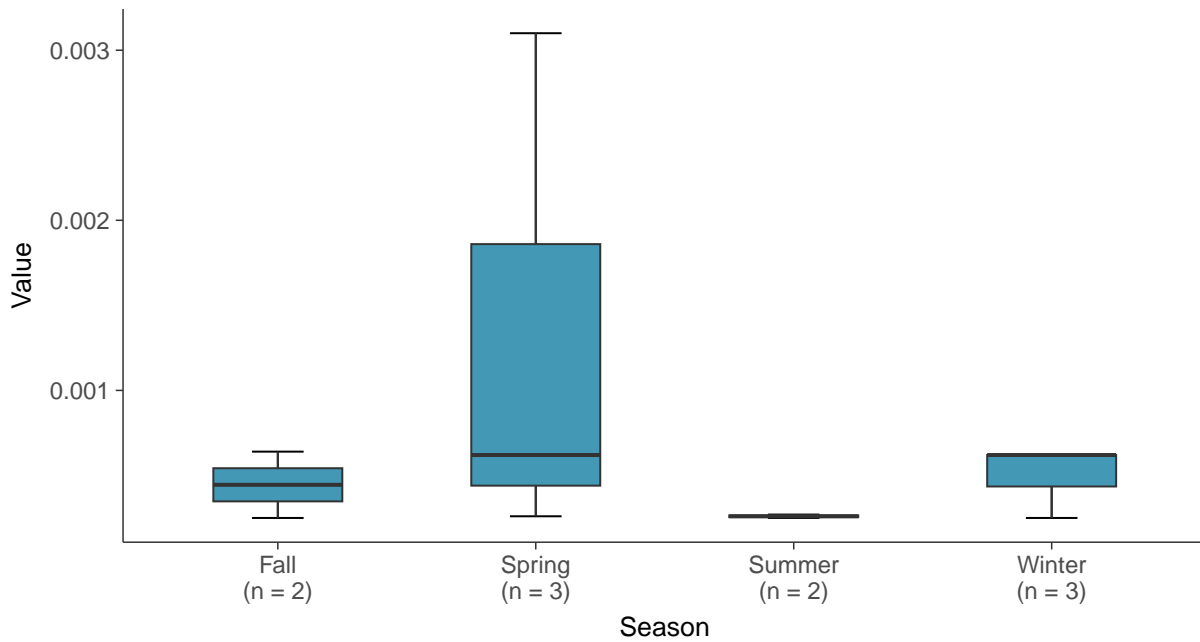
Boxplot

Molybdenum, MW-06 (mg/L)



Boxplot by Season

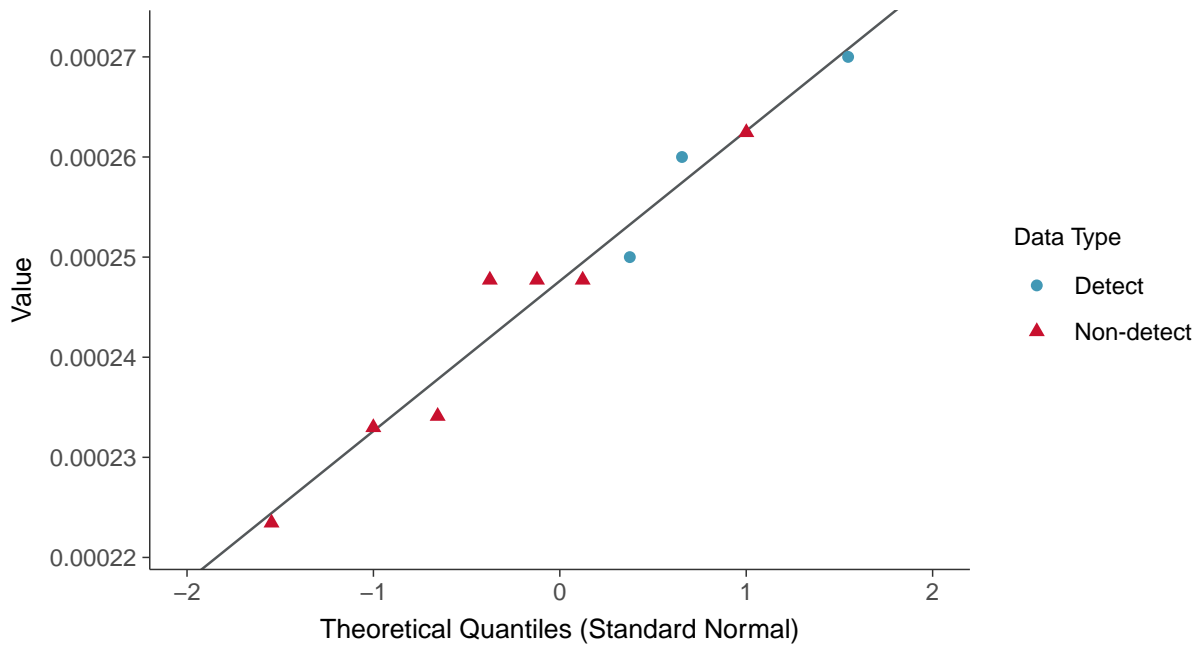
Molybdenum, MW-06 (mg/L)





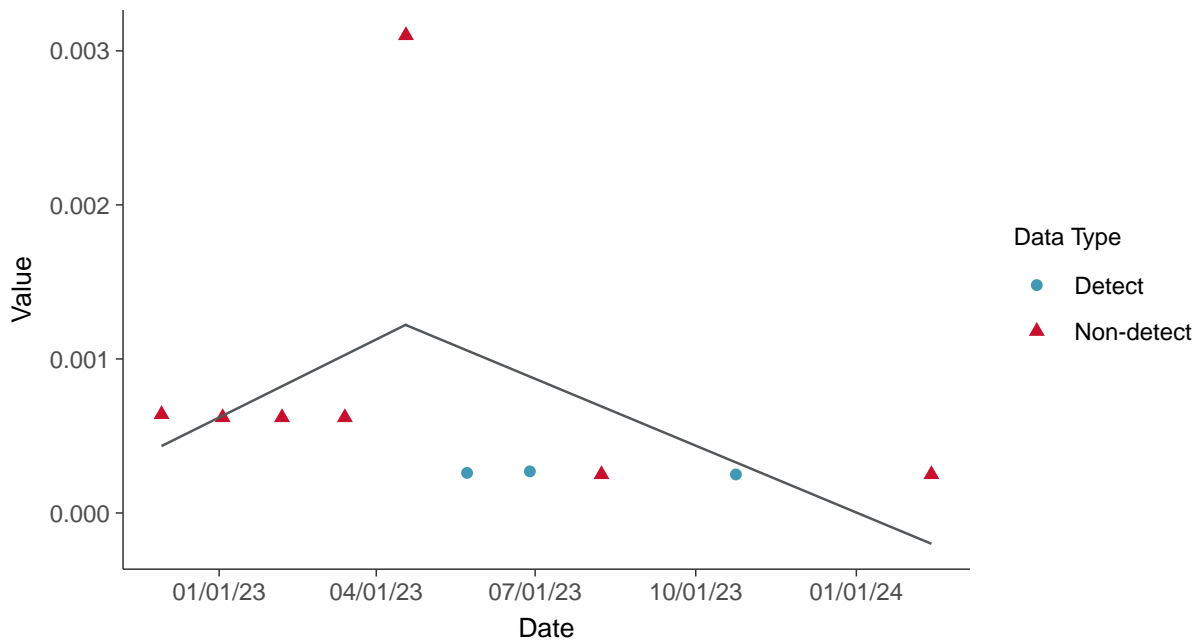
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear

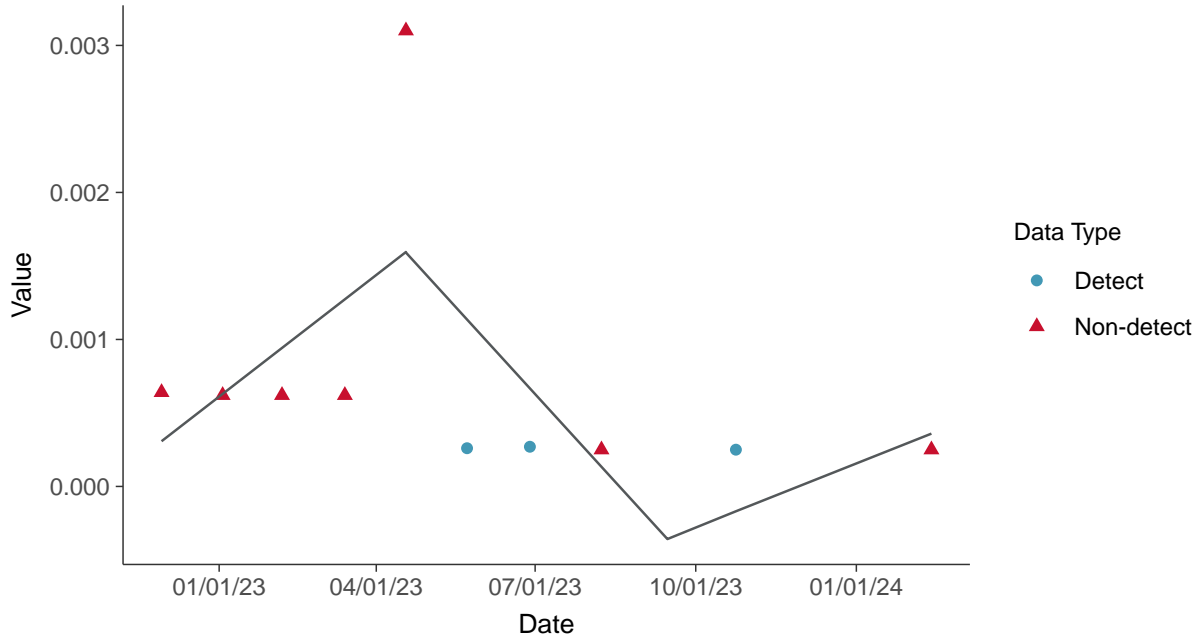
Molybdenum, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-06 (mg/L)



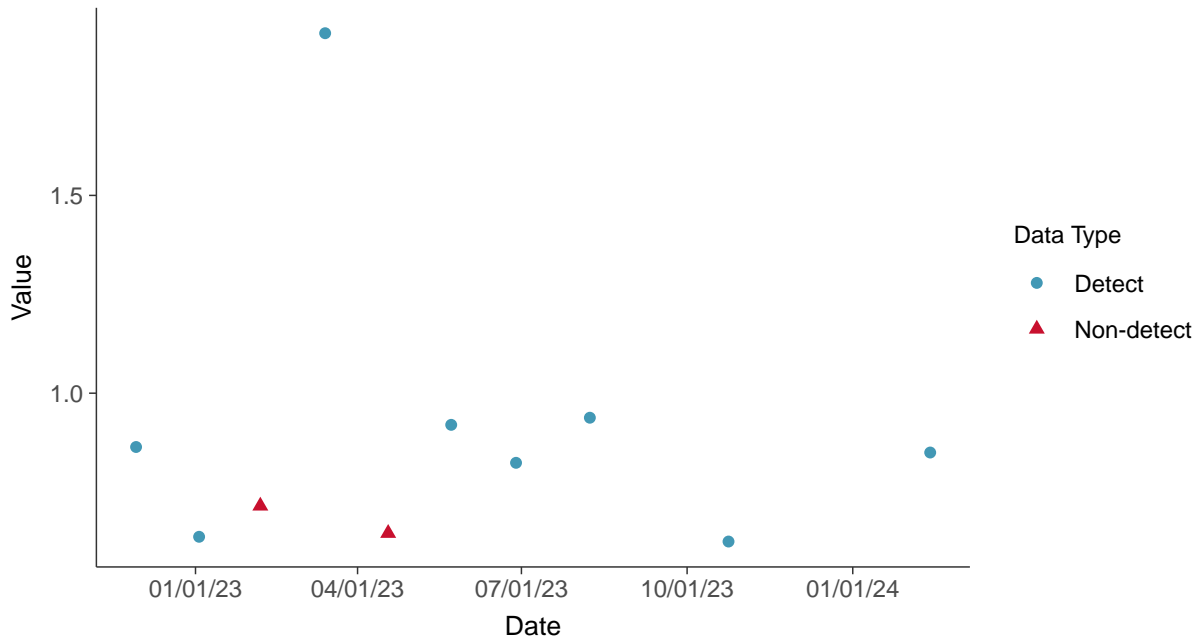


Appendix IV: Radium 226 and 228, MW-06

ID: 1_16_5_121

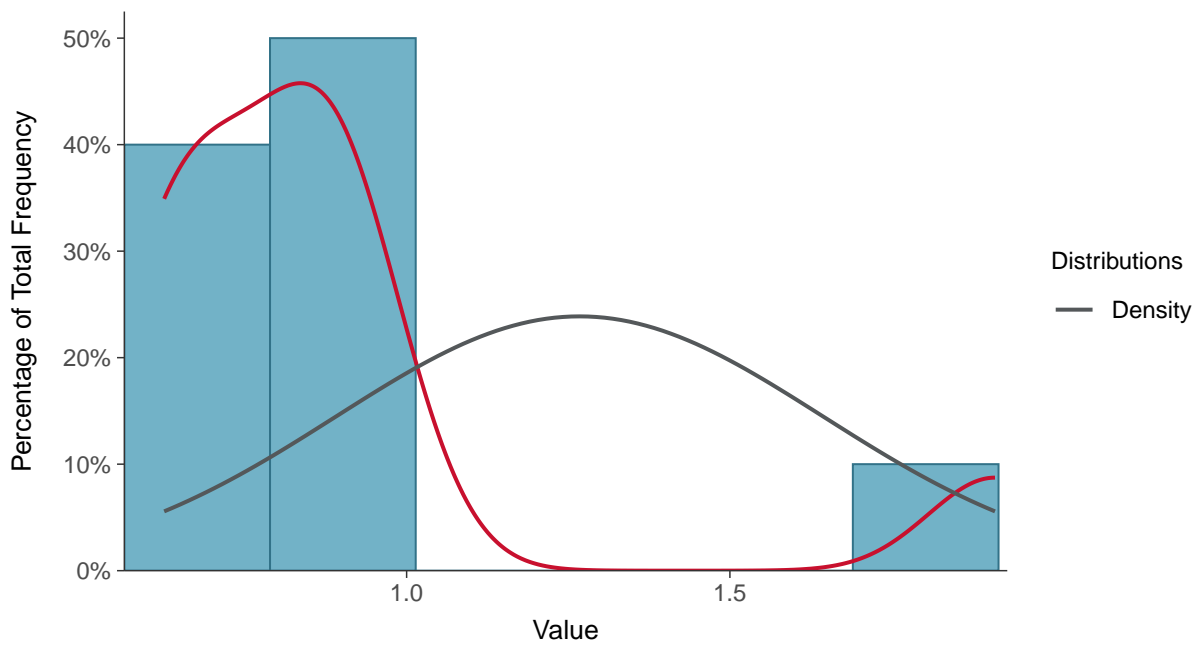
Scatter Plot

Radium 226 and 228, MW-06 (pCi/L)



Histogram

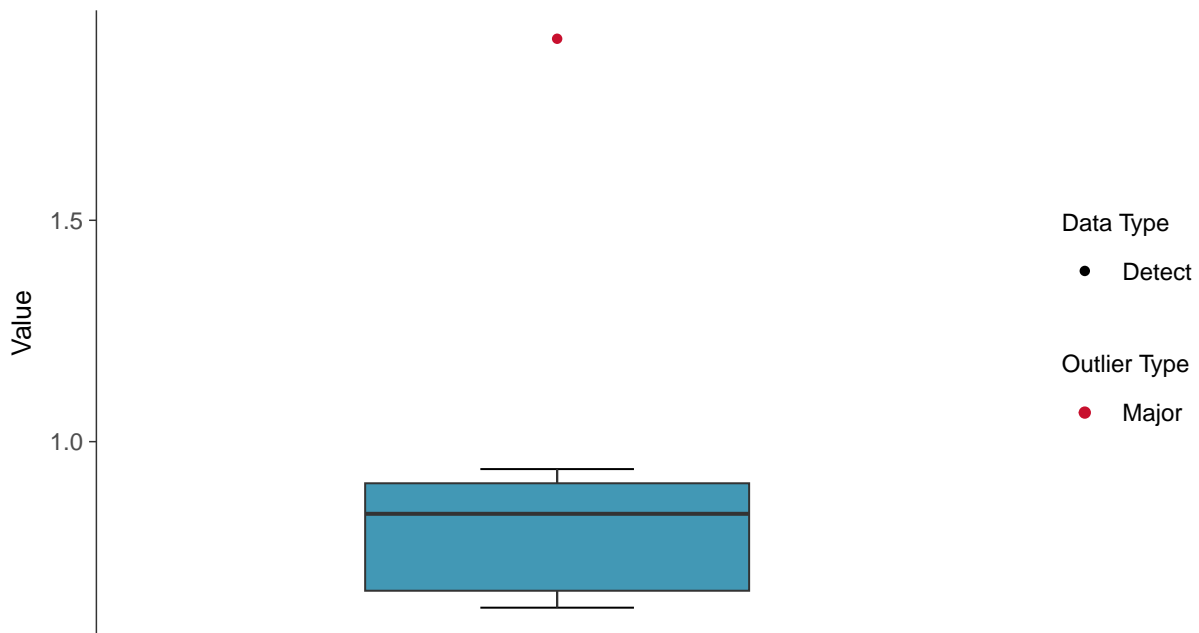
Radium 226 and 228, MW-06 (pCi/L)





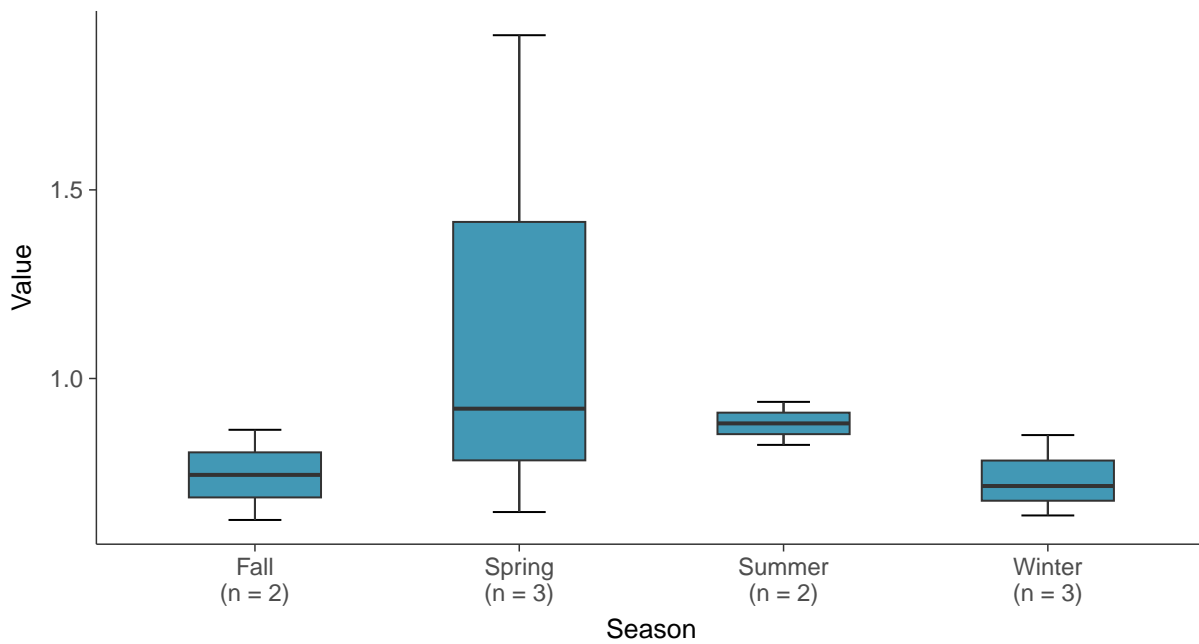
Boxplot

Radium 226 and 228, MW-06 (pCi/L)



Boxplot by Season

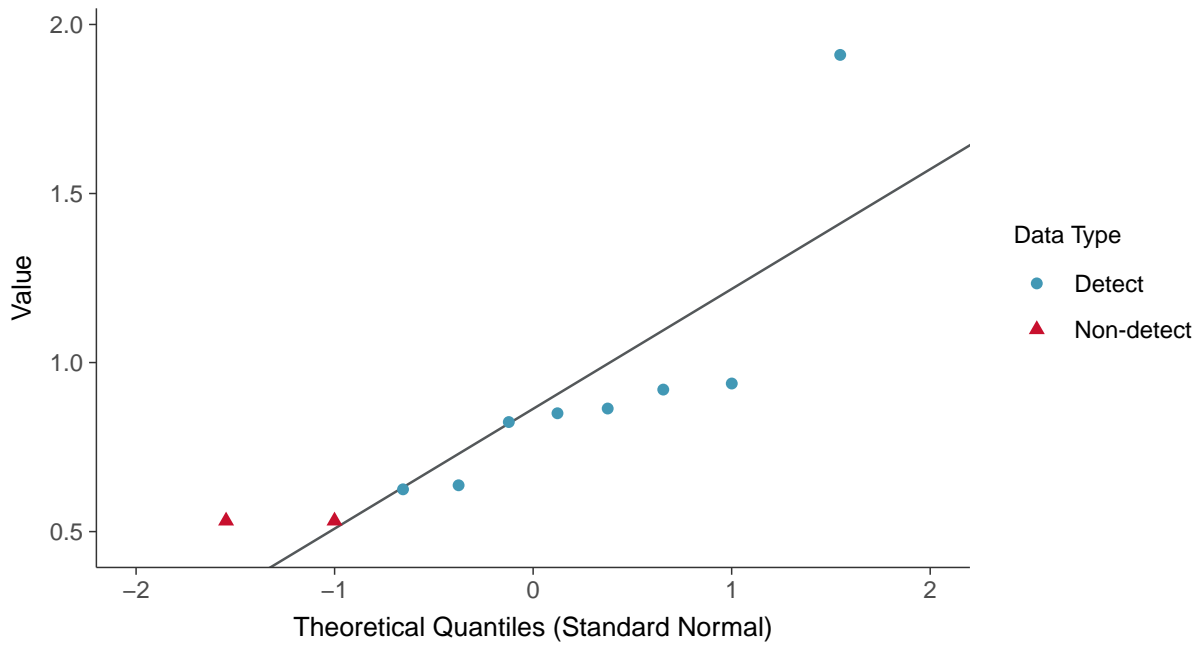
Radium 226 and 228, MW-06 (pCi/L)





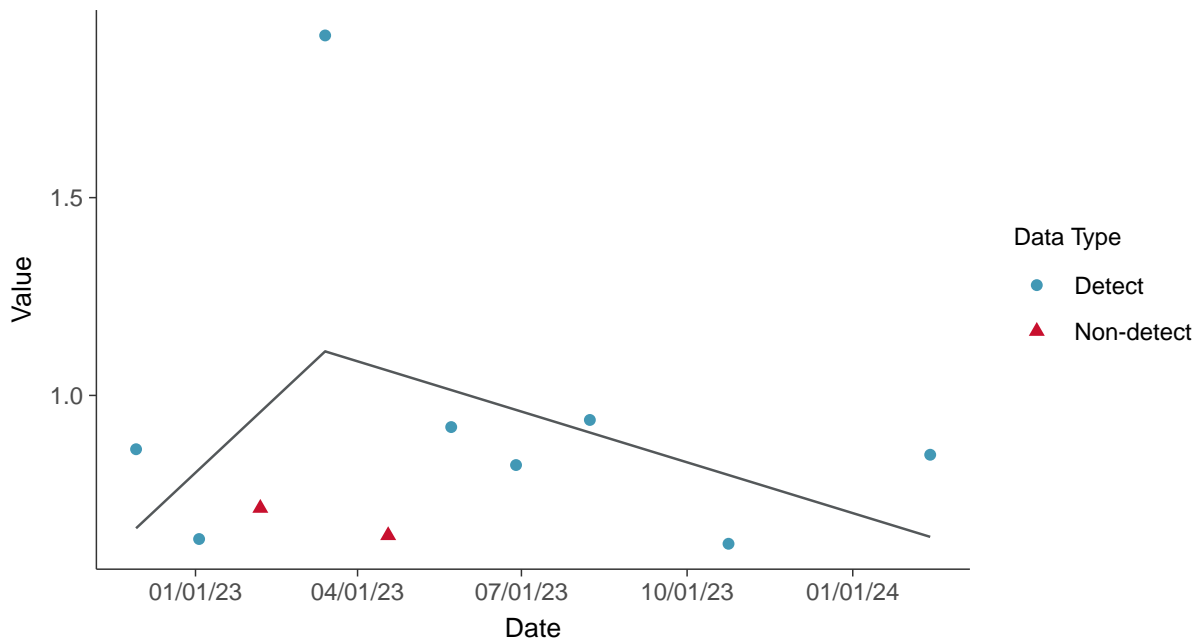
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-06 (pCi/L)



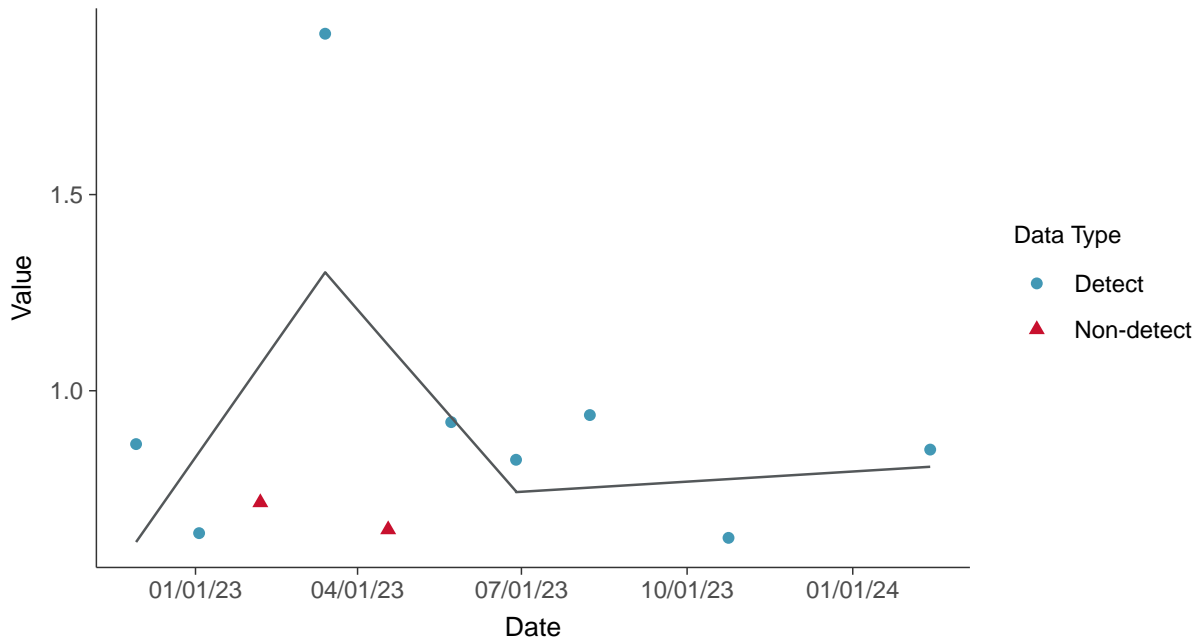
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-06 (pCi/L)





Trend Regression: Piecewise Linear-Linear-Linear
Radium 226 and 228, MW-06 (pCi/L)



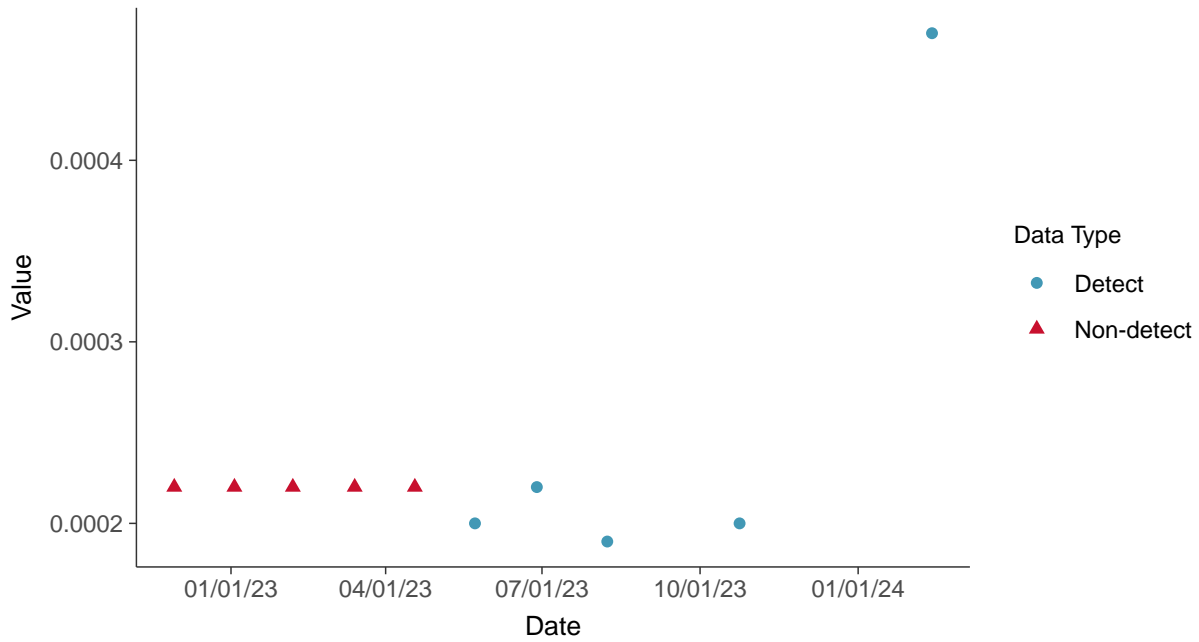


Appendix IV: Selenium, MW-06

ID: 1_16_5_122

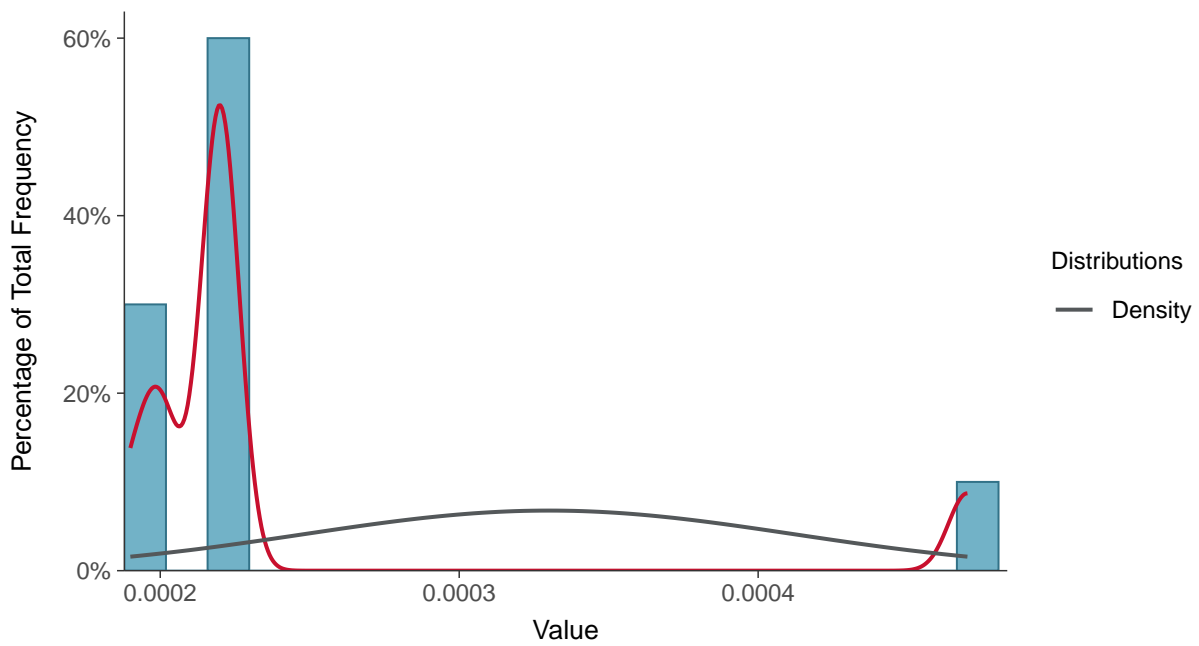
Scatter Plot

Selenium, MW-06 (mg/L)



Histogram

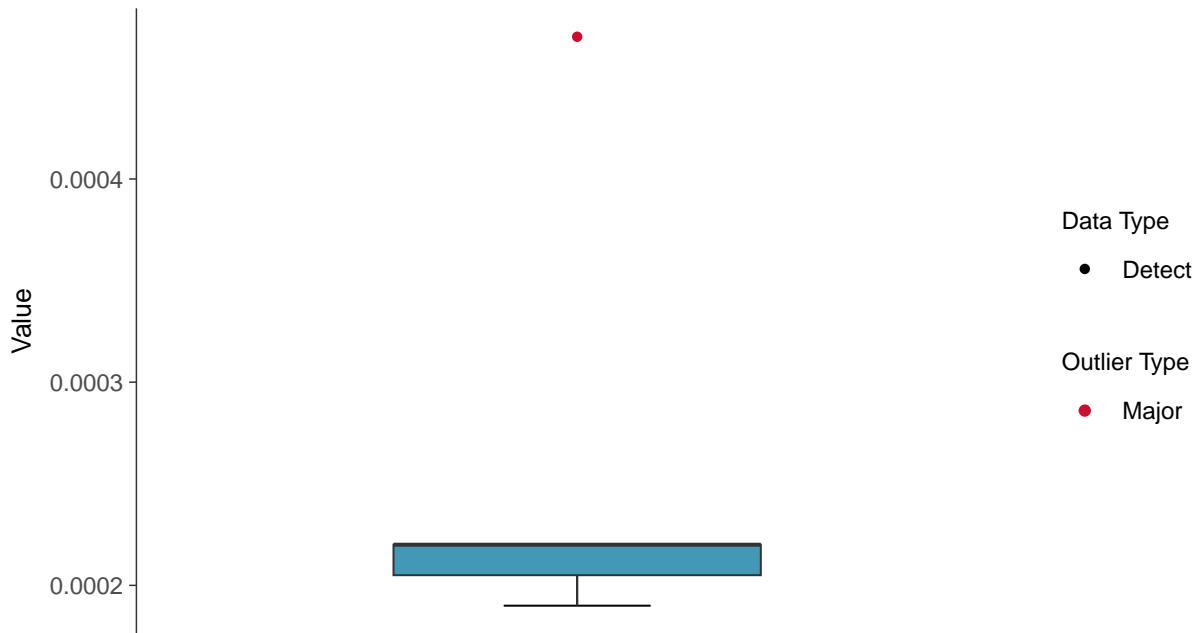
Selenium, MW-06 (mg/L)





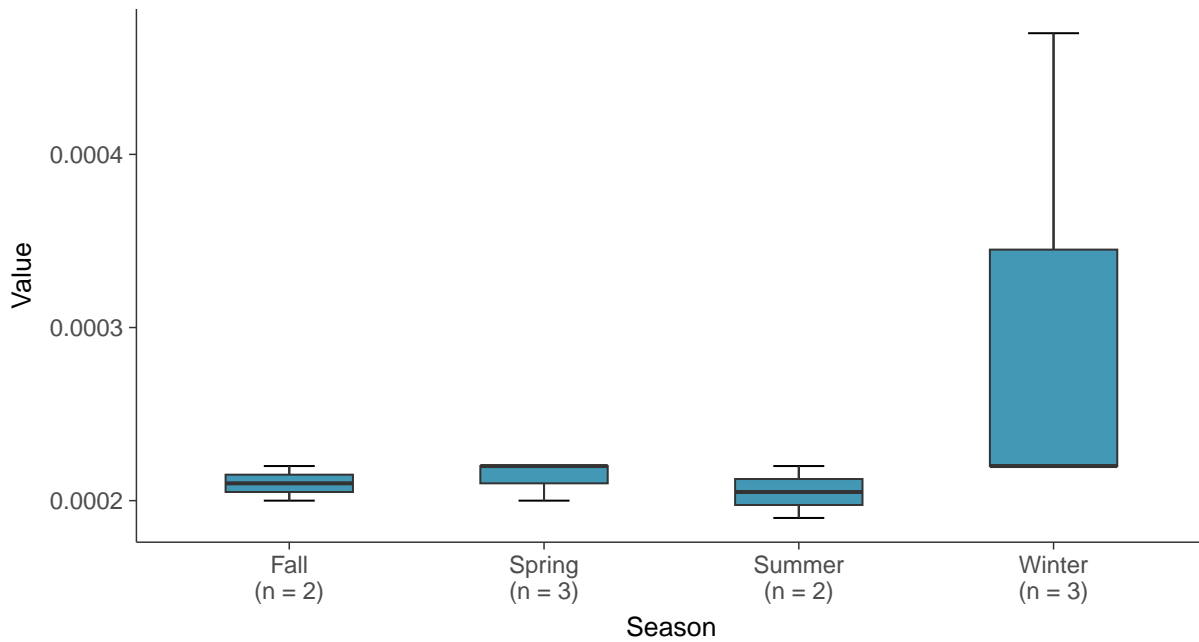
Boxplot

Selenium, MW-06 (mg/L)



Boxplot by Season

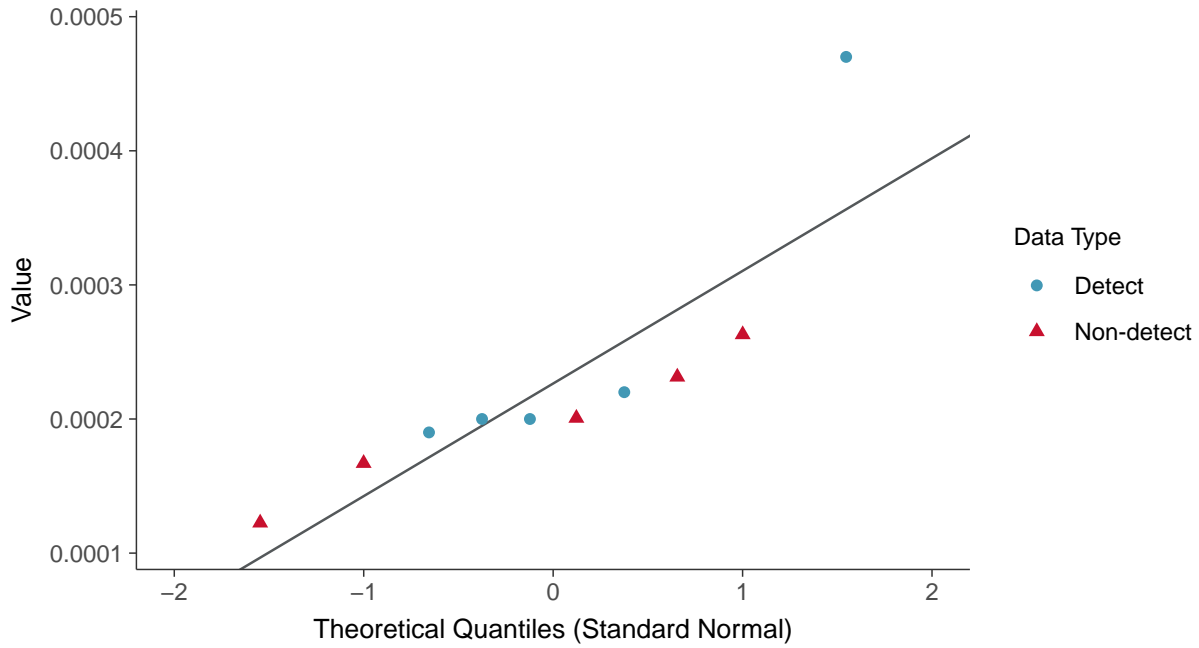
Selenium, MW-06 (mg/L)





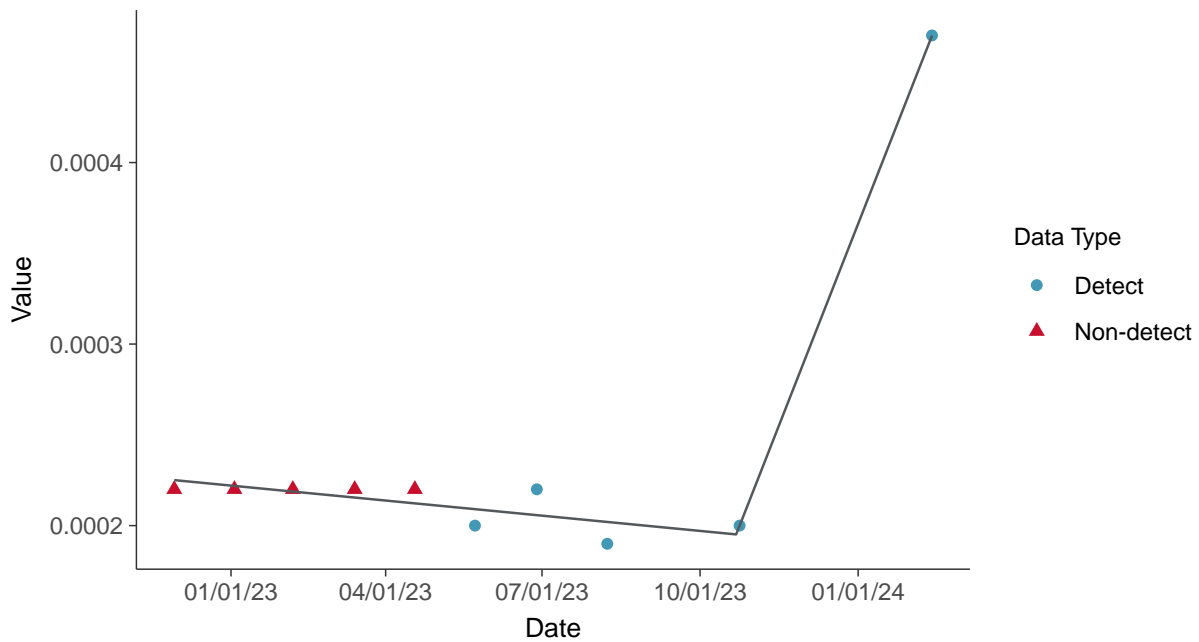
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-06 (mg/L)



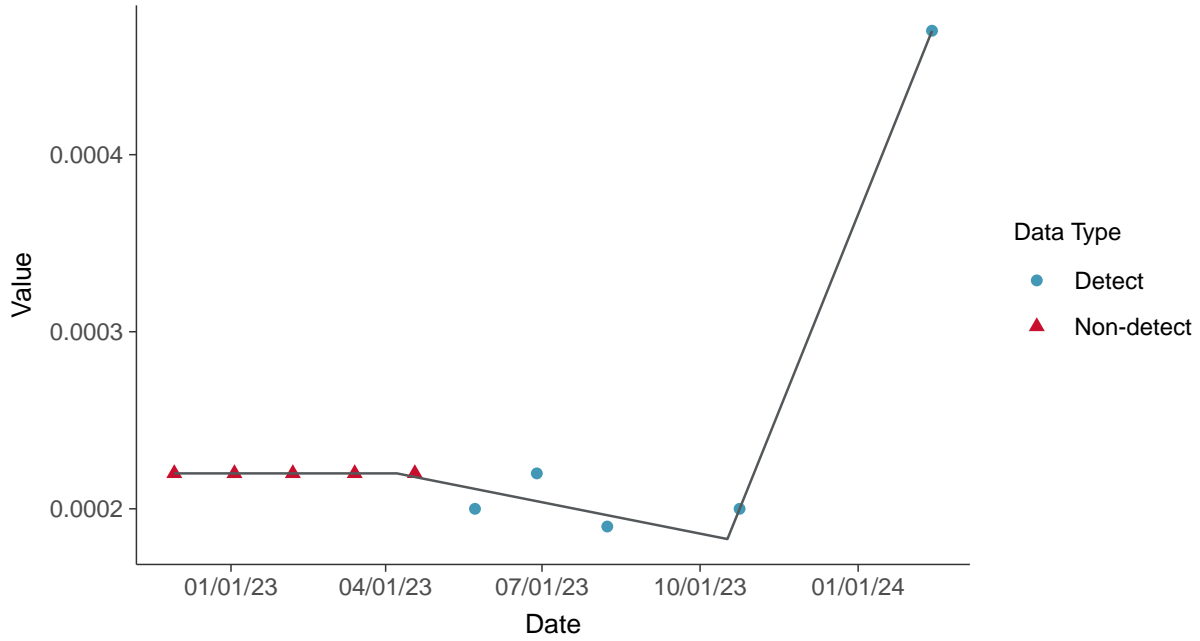
Trend Regression: Piecewise Linear-Linear

Selenium, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-06 (mg/L)



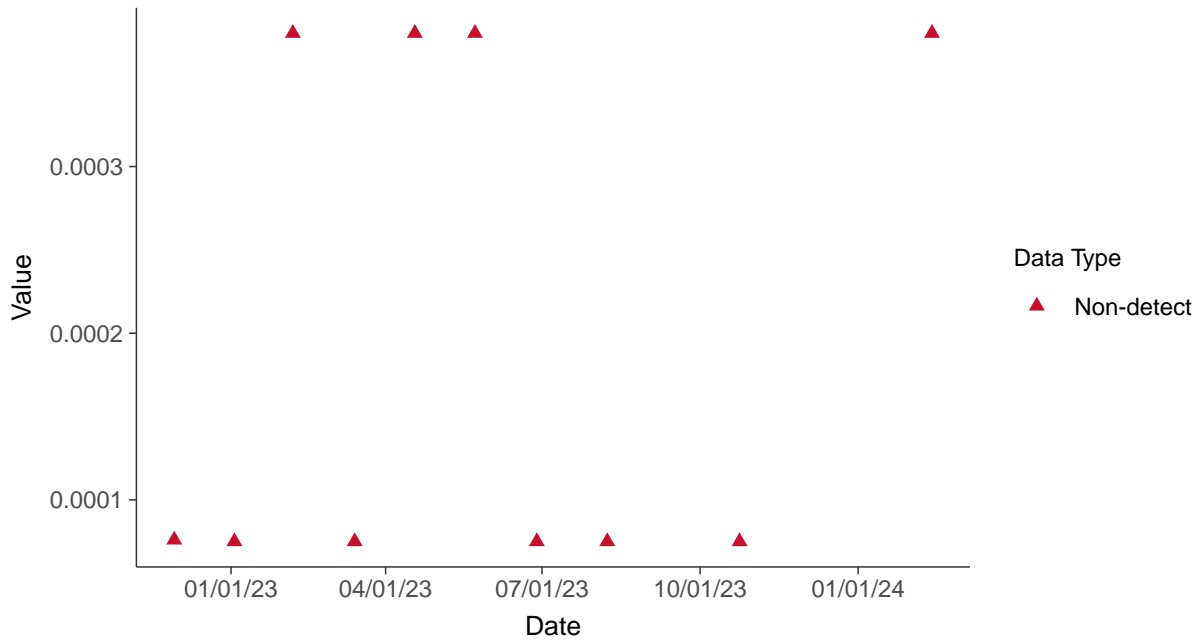


Appendix IV: Thallium, MW-06

ID: 1_16_5_125

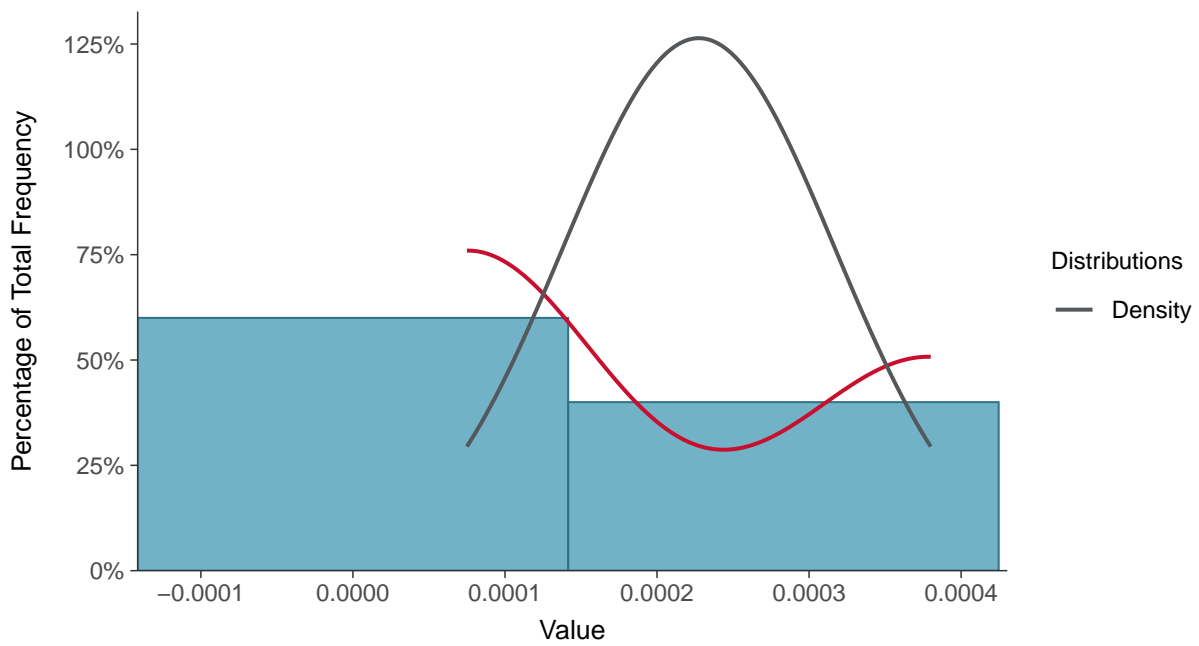
Scatter Plot

Thallium, MW-06 (mg/L)



Histogram

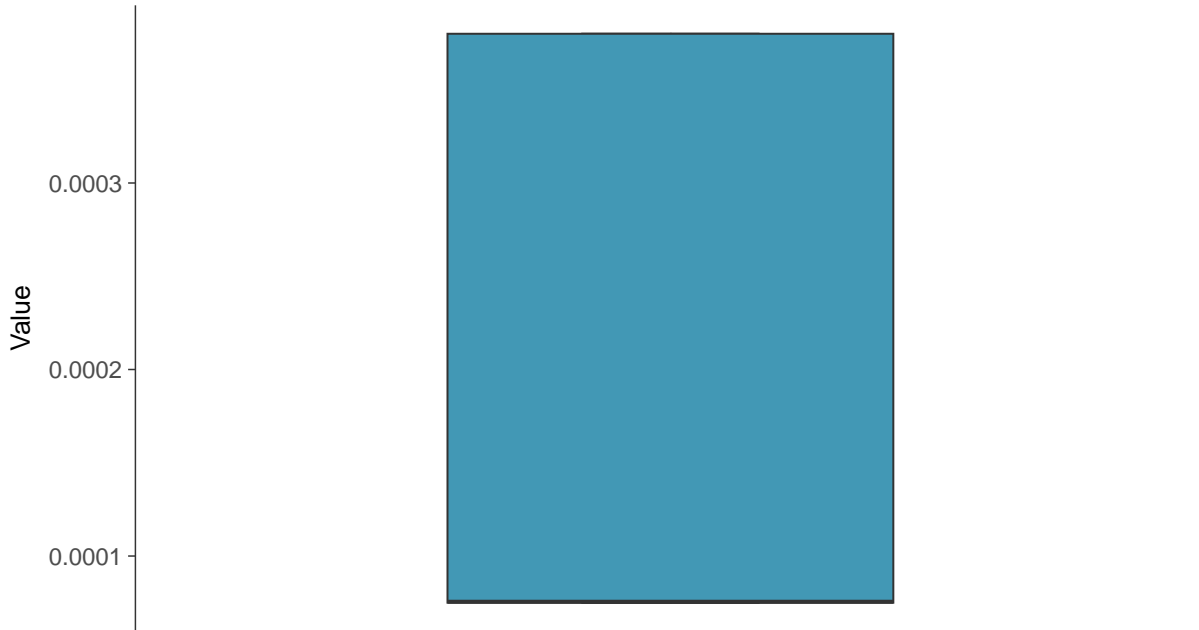
Thallium, MW-06 (mg/L)





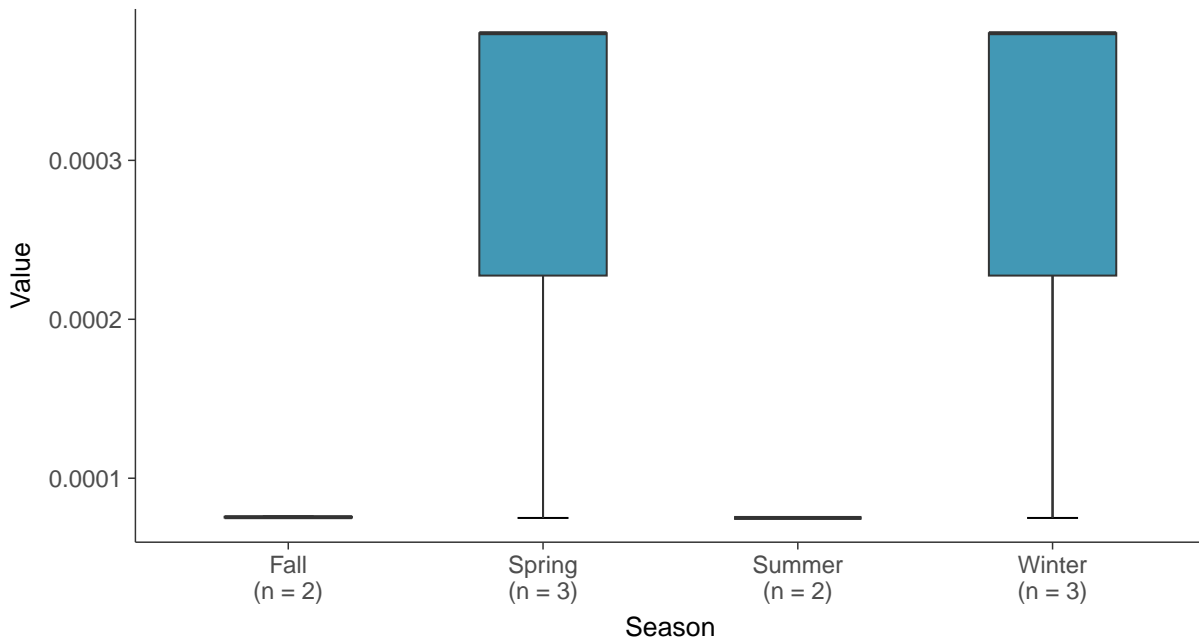
Boxplot

Thallium, MW-06 (mg/L)



Boxplot by Season

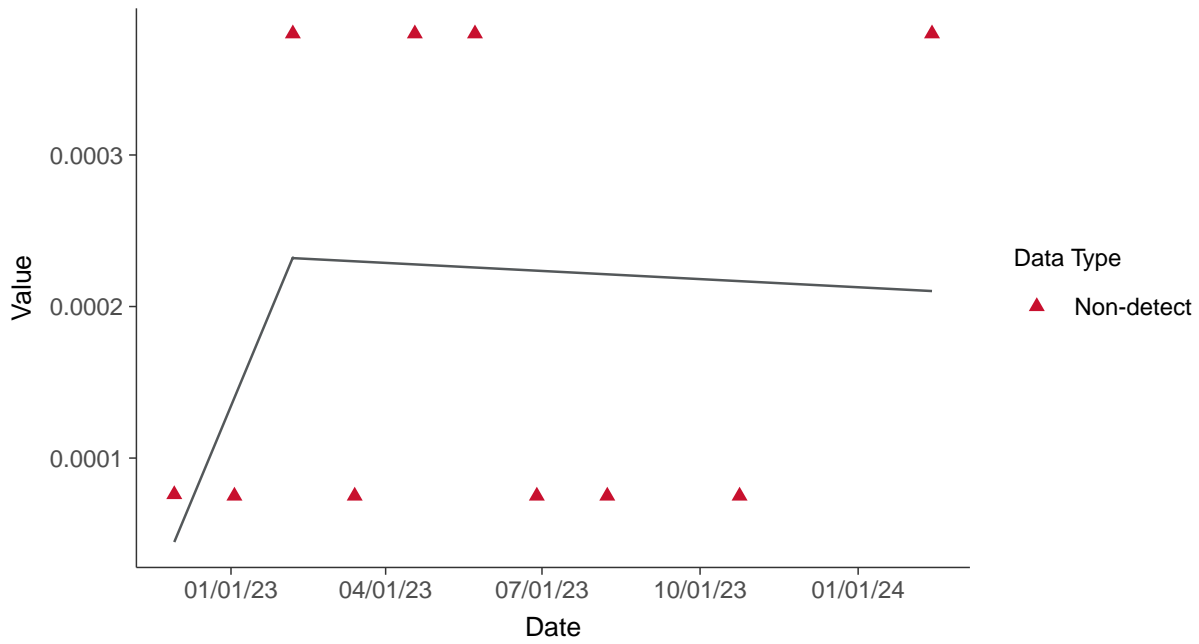
Thallium, MW-06 (mg/L)





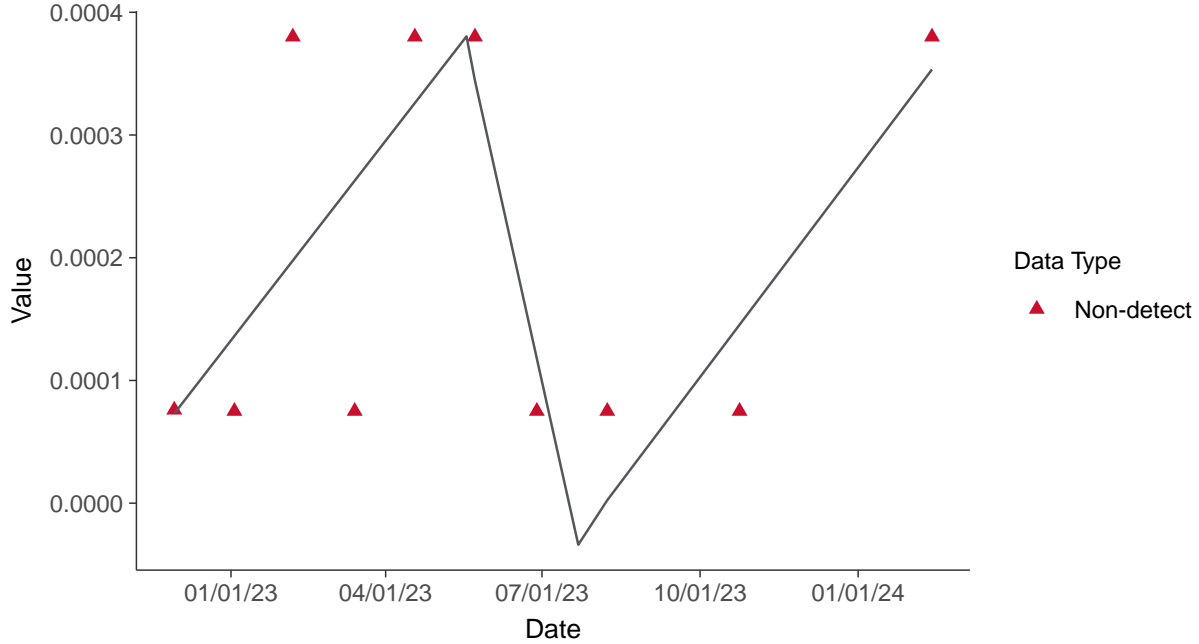
Trend Regression: Piecewise Linear-Linear

Thallium, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-06 (mg/L)



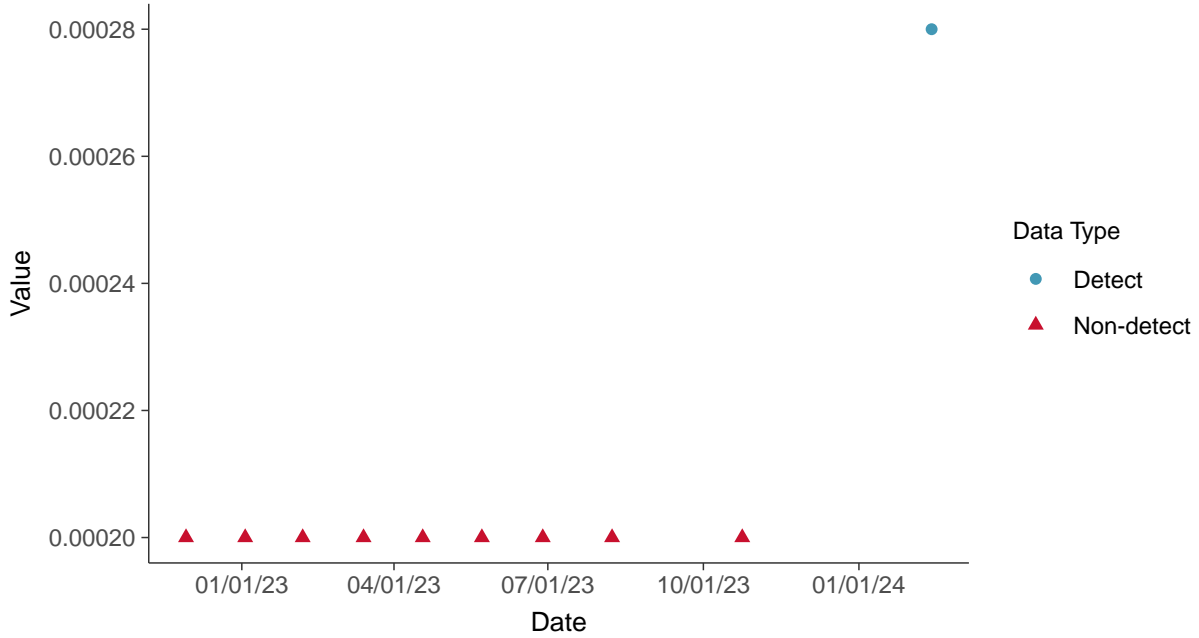


Part 115: Copper, MW-06

ID: 1_16_6_111

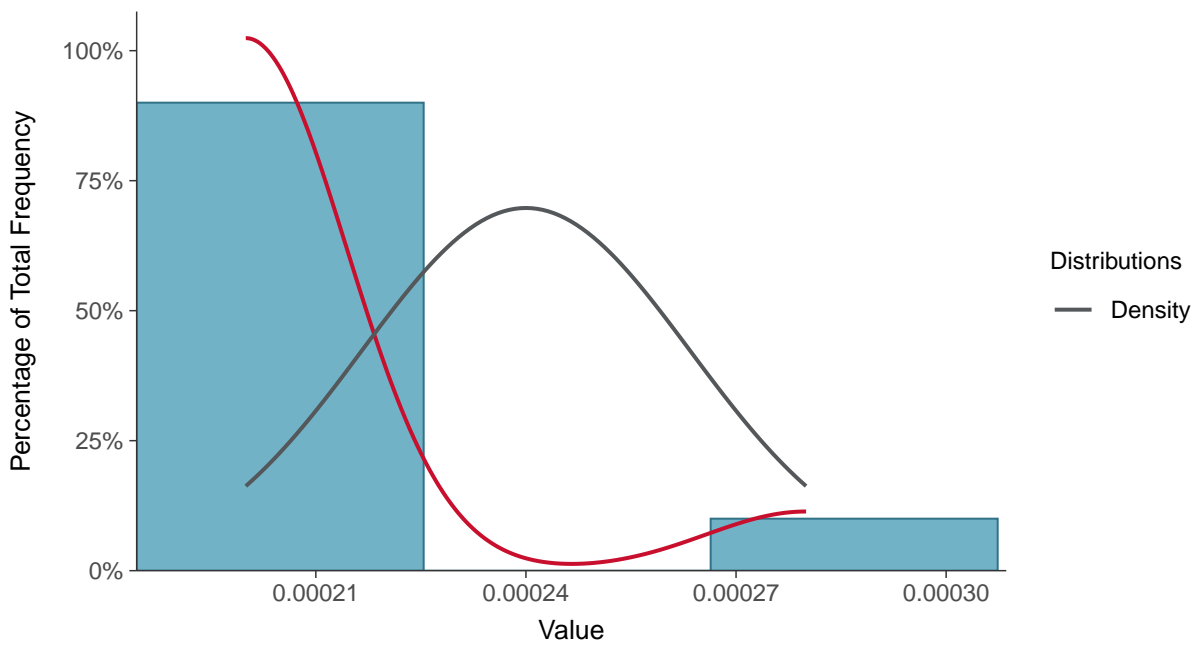
Scatter Plot

Copper, MW-06 (mg/L)



Histogram

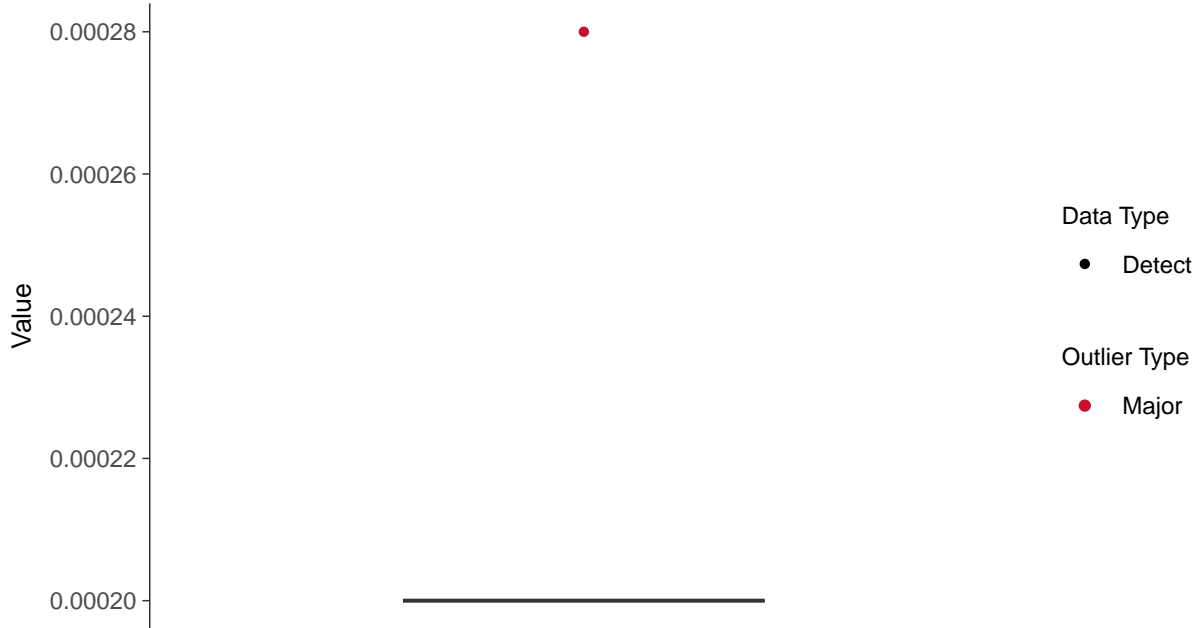
Copper, MW-06 (mg/L)





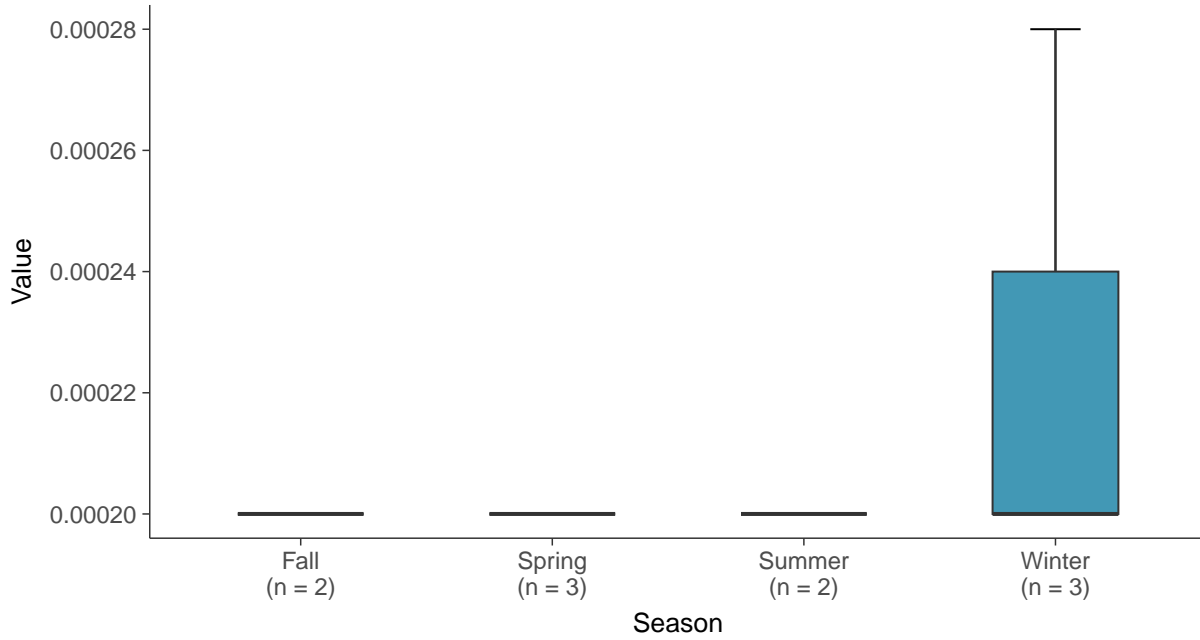
Boxplot

Copper, MW-06 (mg/L)



Boxplot by Season

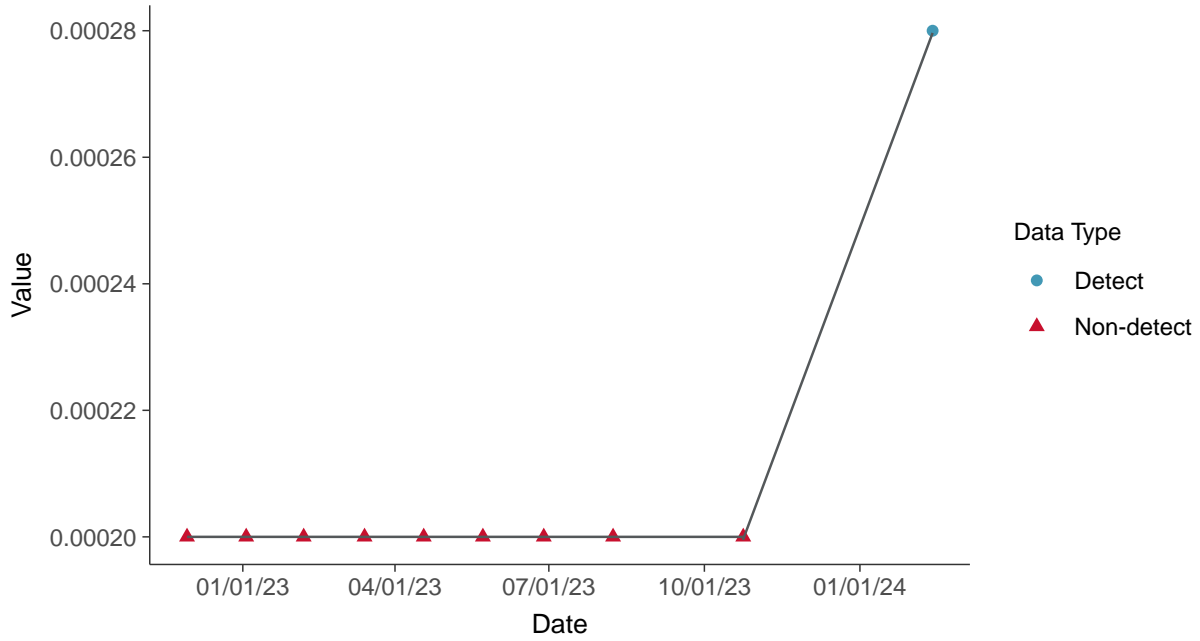
Copper, MW-06 (mg/L)





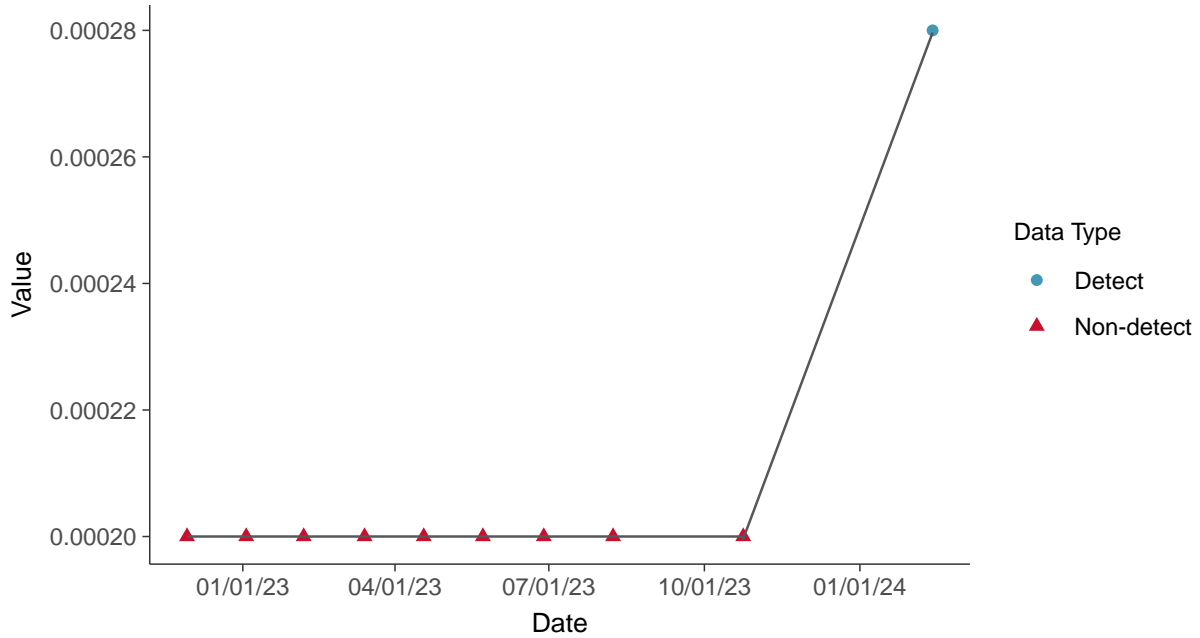
Trend Regression: Piecewise Linear-Linear

Copper, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-06 (mg/L)



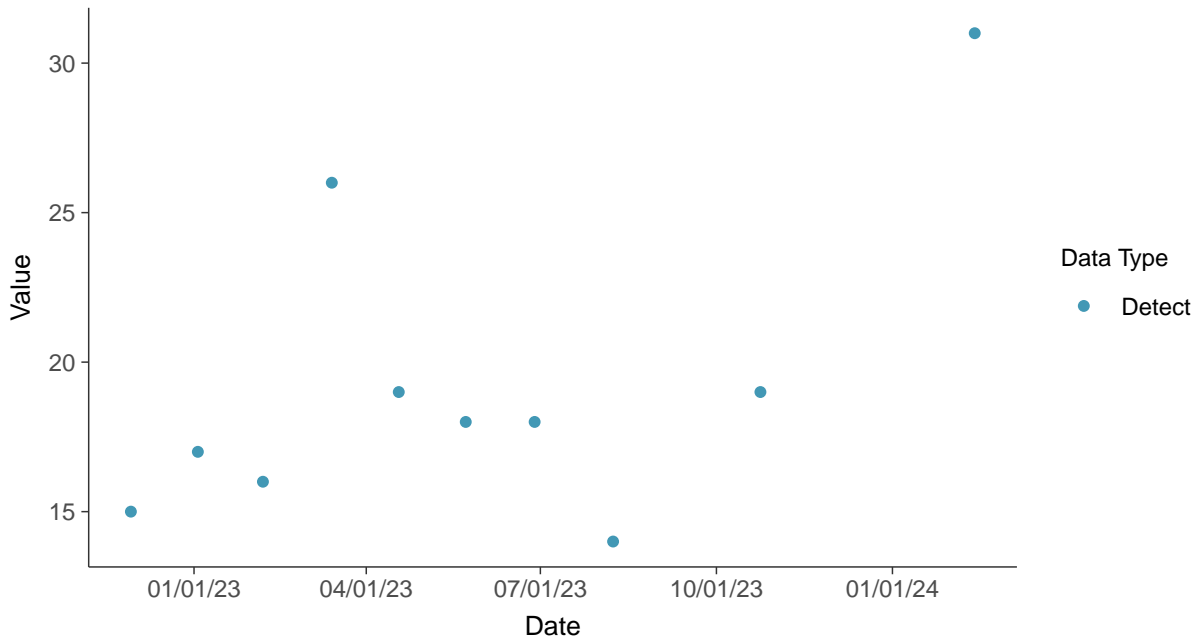


Part 115: Iron, MW-06

ID: 1_16_6_114

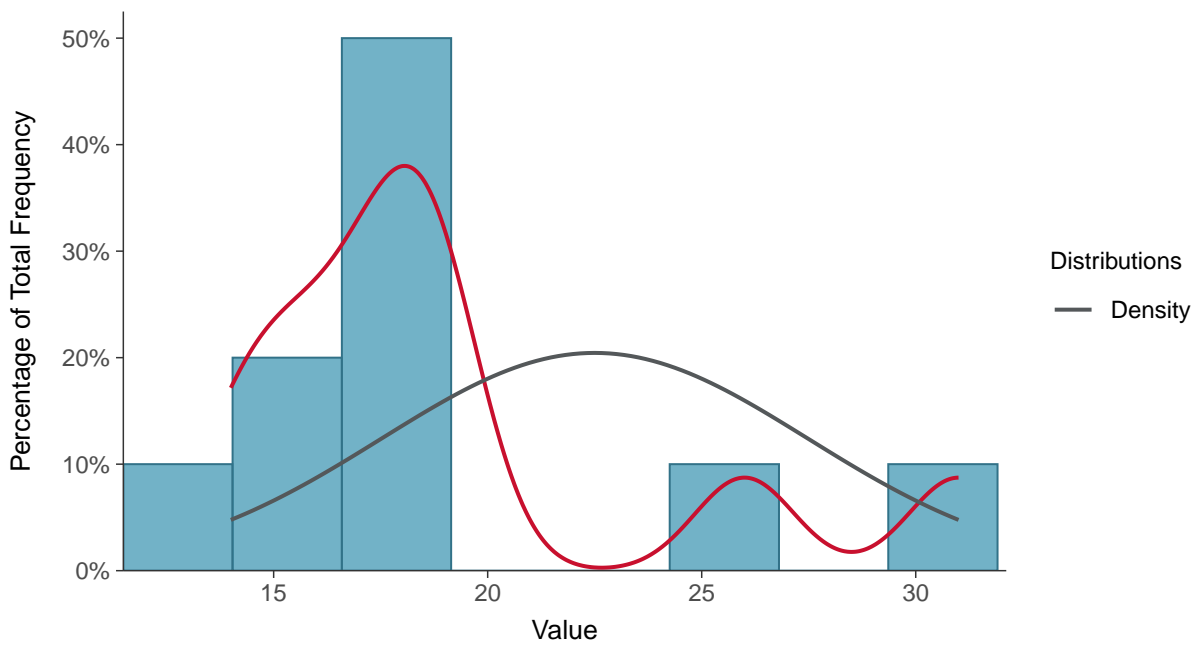
Scatter Plot

Iron, MW-06 (mg/L)



Histogram

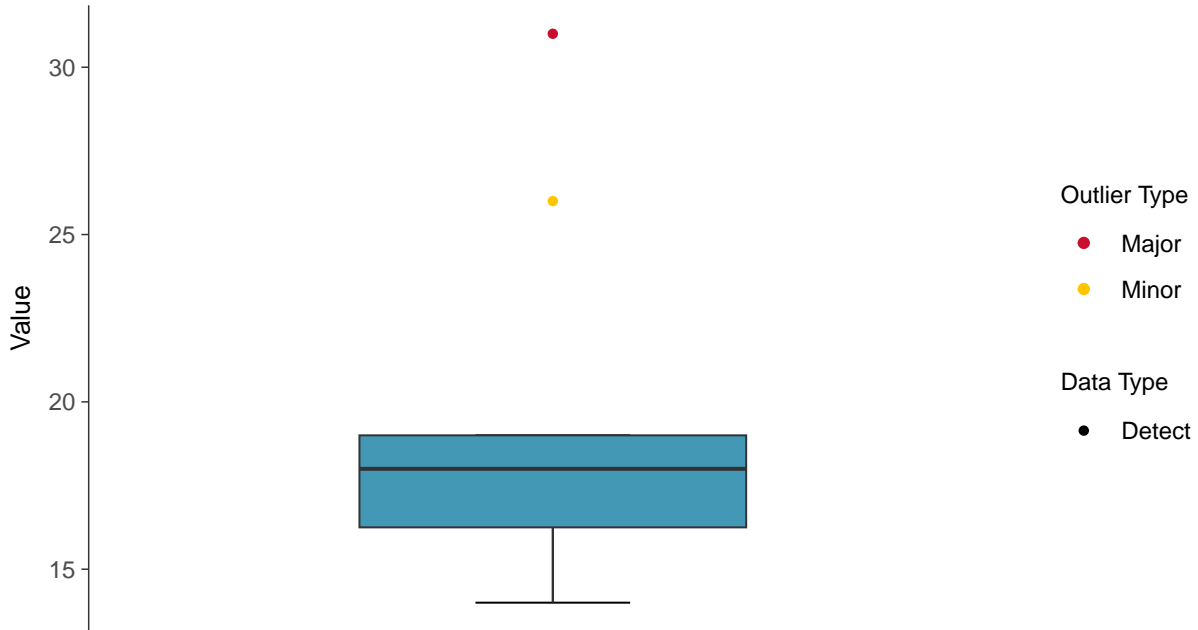
Iron, MW-06 (mg/L)





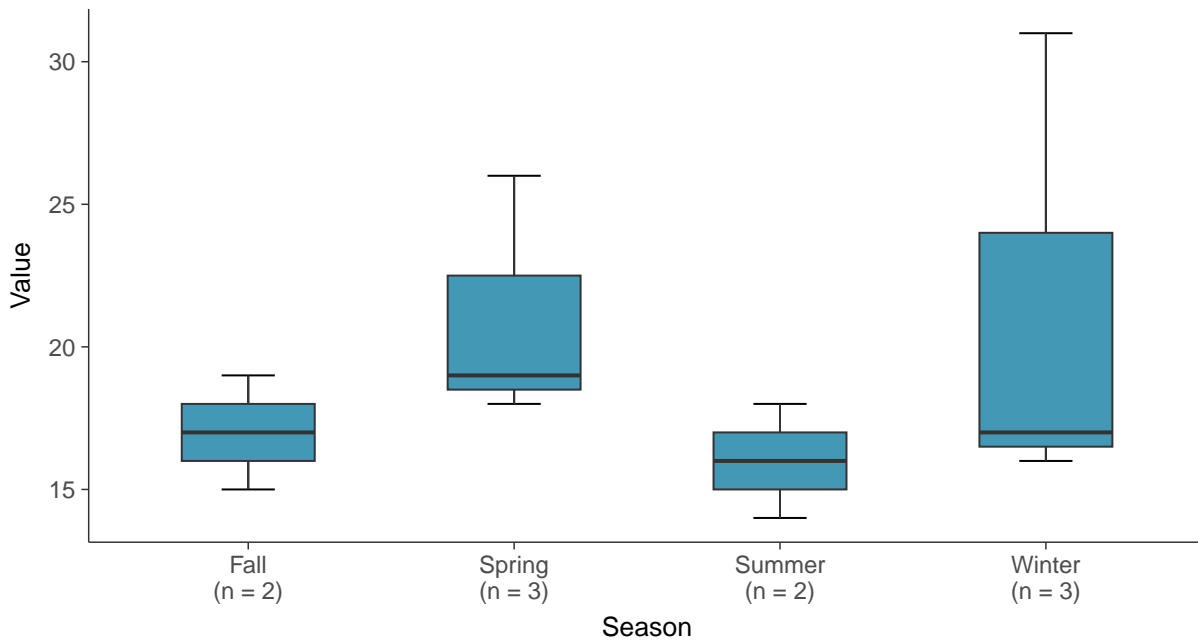
Boxplot

Iron, MW-06 (mg/L)



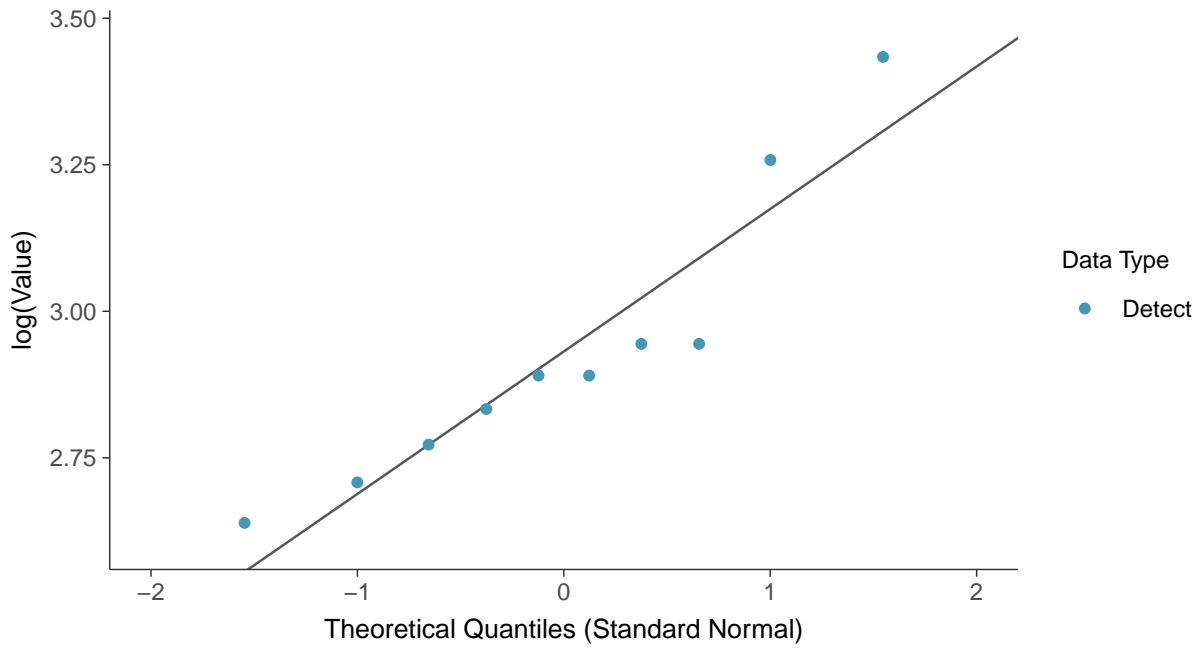
Boxplot by Season

Iron, MW-06 (mg/L)

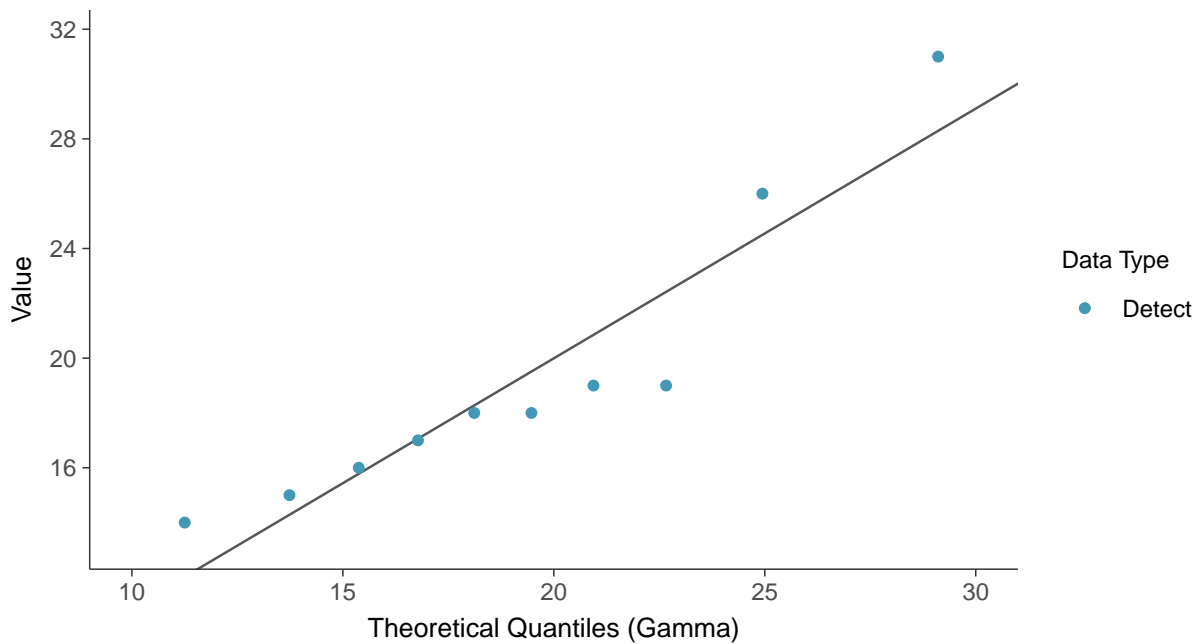




Lognormal Q-Q plot
Iron, MW-06 (mg/L)



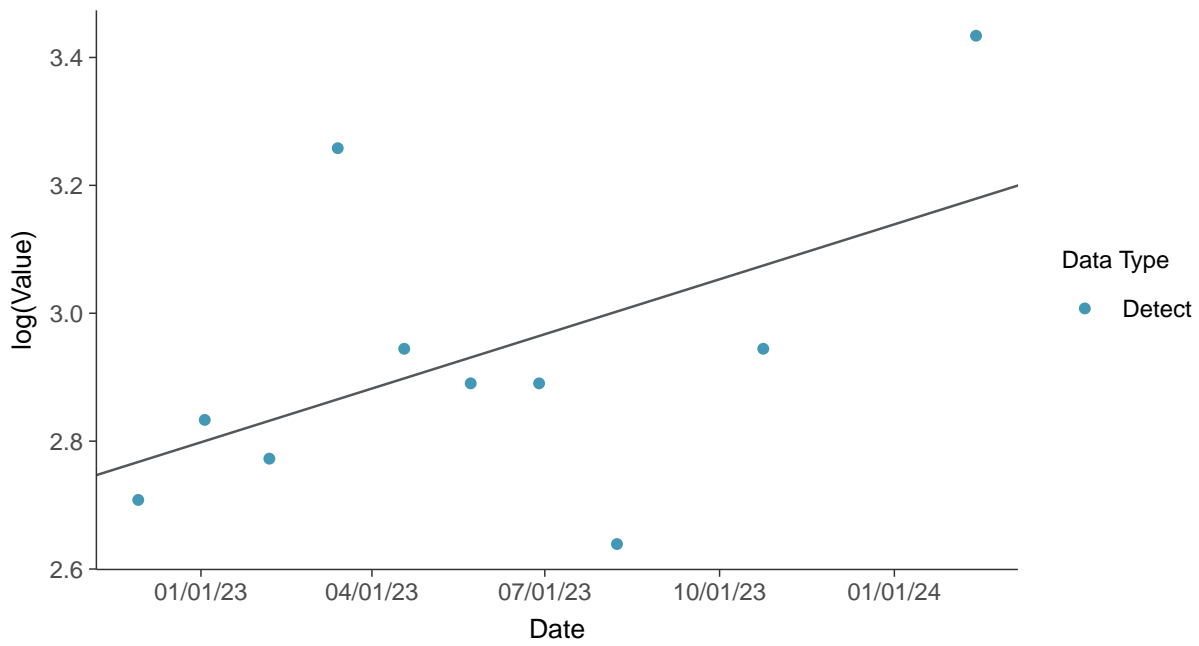
Gamma Q-Q plot
Iron, MW-06 (mg/L)





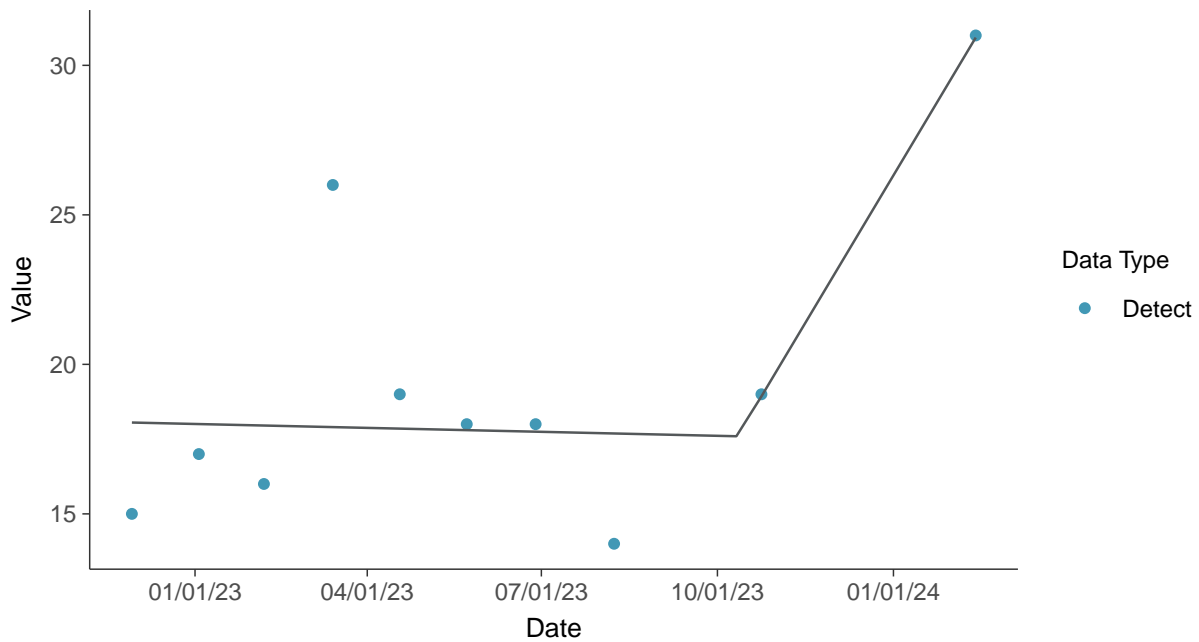
Trend Regression: Lognormal MLE

Iron, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear

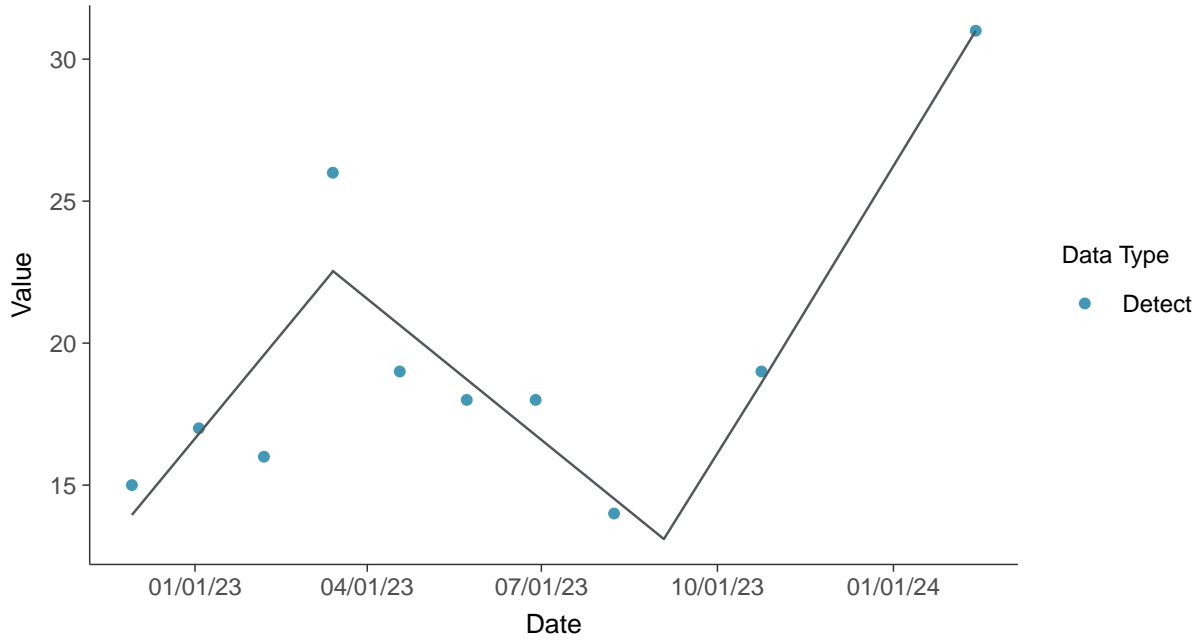
Iron, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-06 (mg/L)



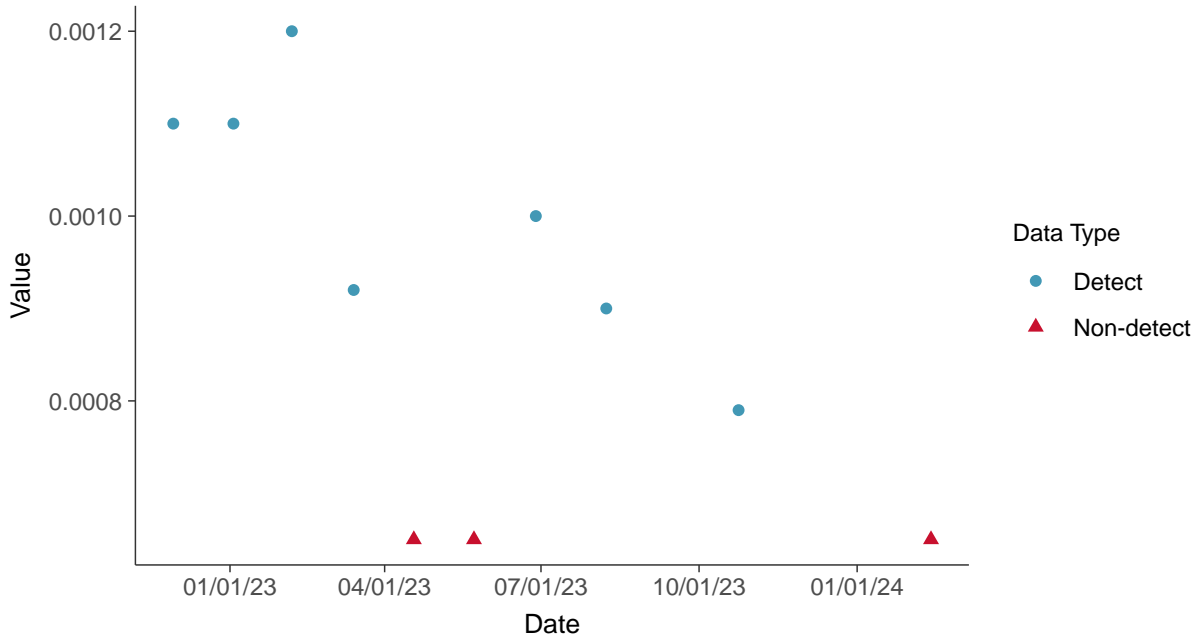


Part 115: Nickel, MW-06

ID: 1_16_6_119

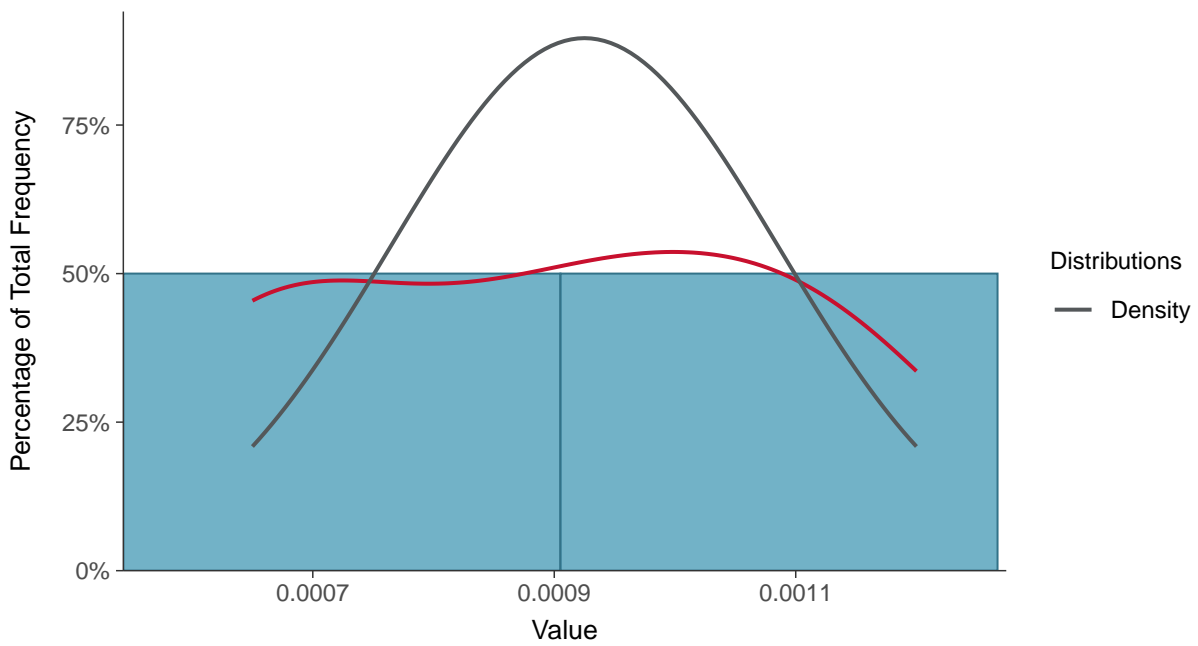
Scatter Plot

Nickel, MW-06 (mg/L)



Histogram

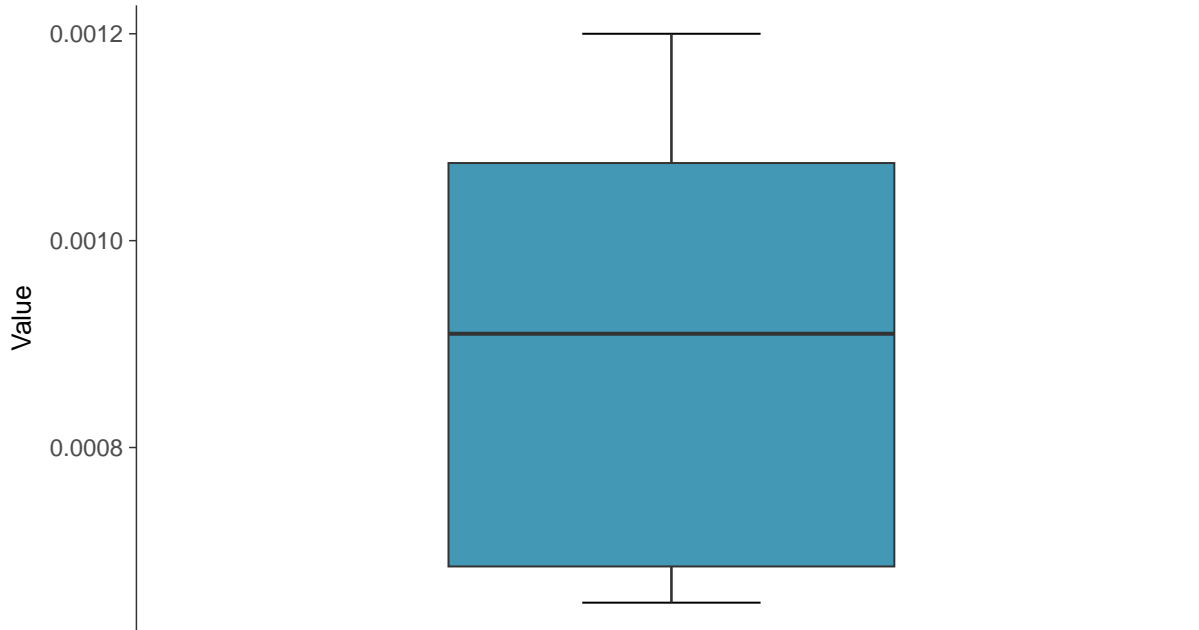
Nickel, MW-06 (mg/L)





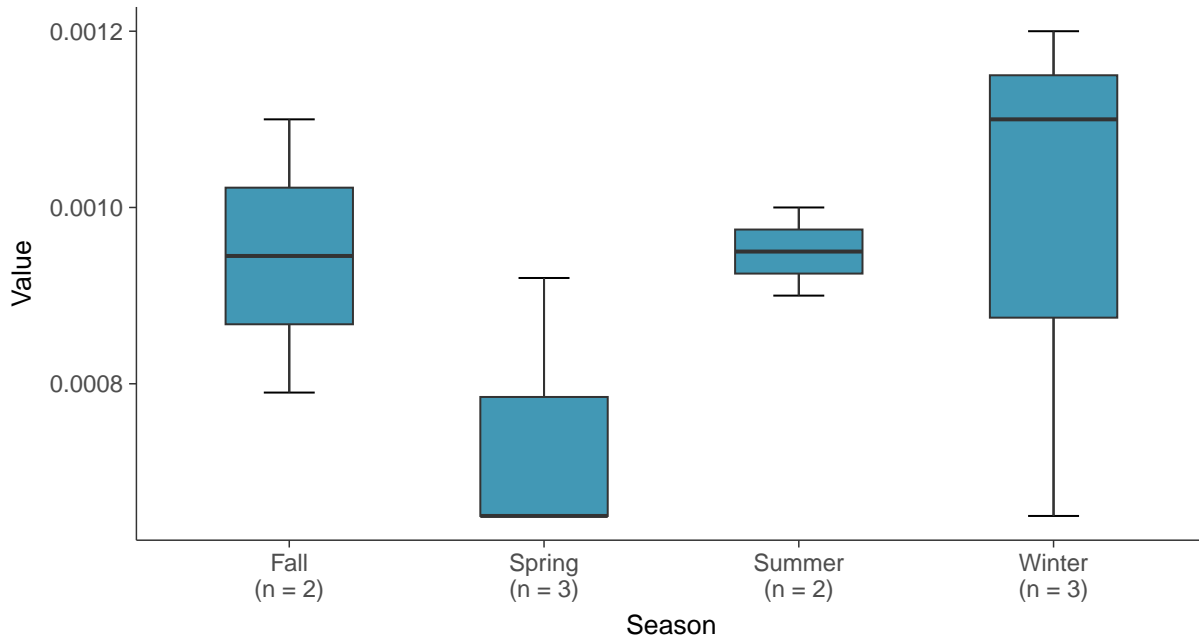
Boxplot

Nickel, MW-06 (mg/L)



Boxplot by Season

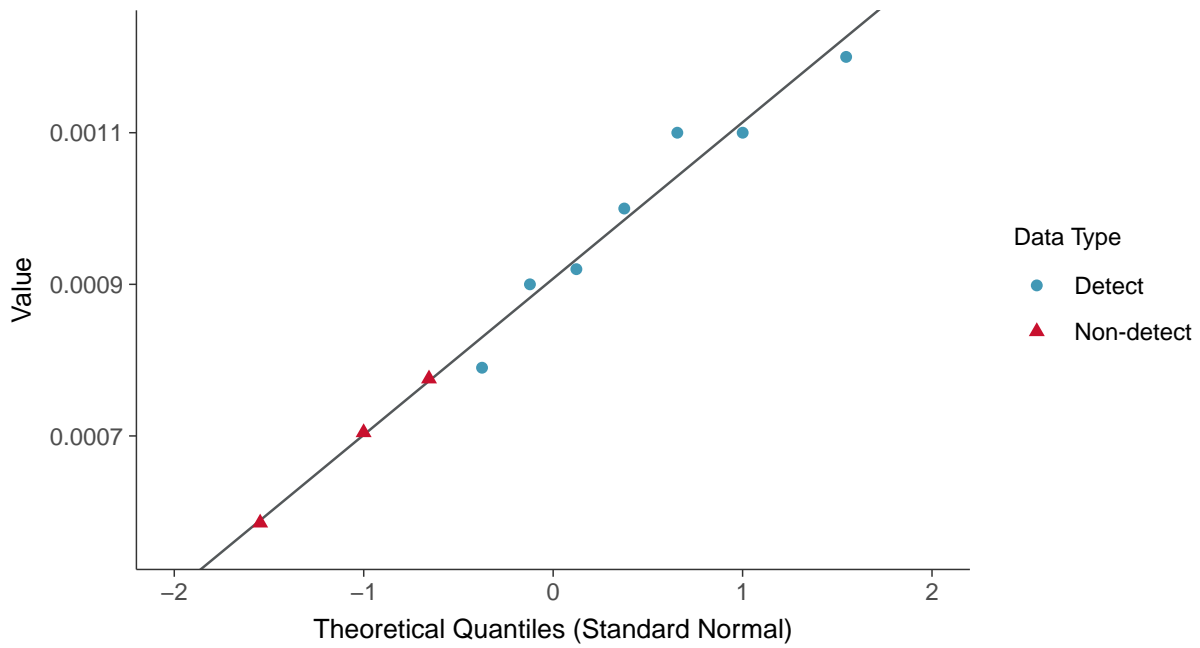
Nickel, MW-06 (mg/L)





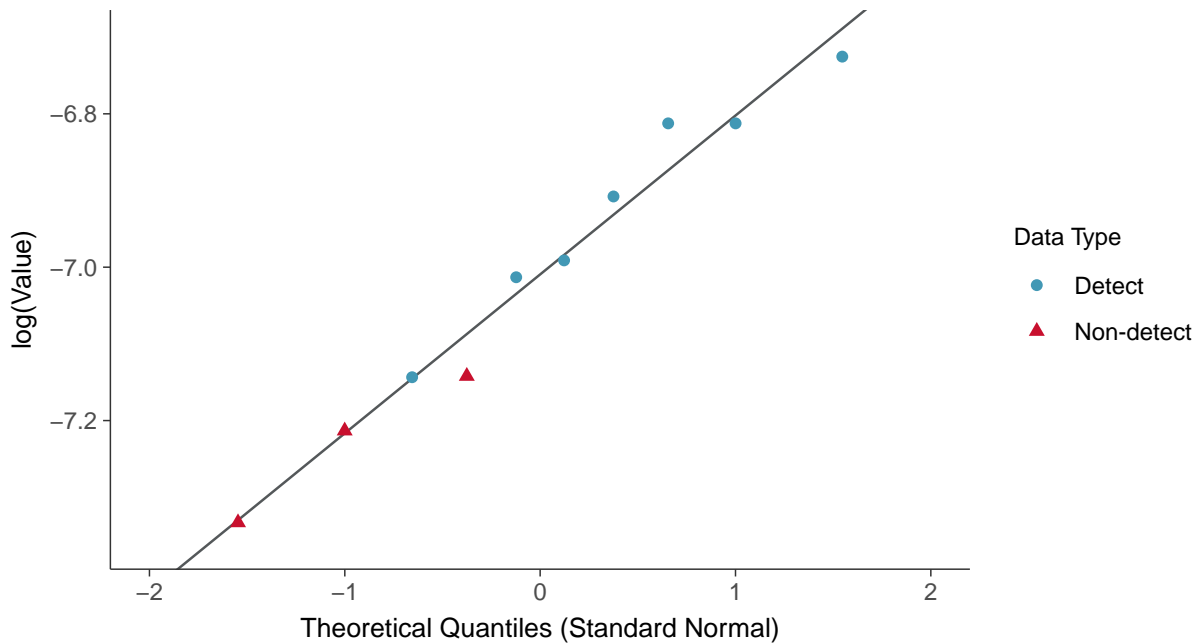
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-06 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

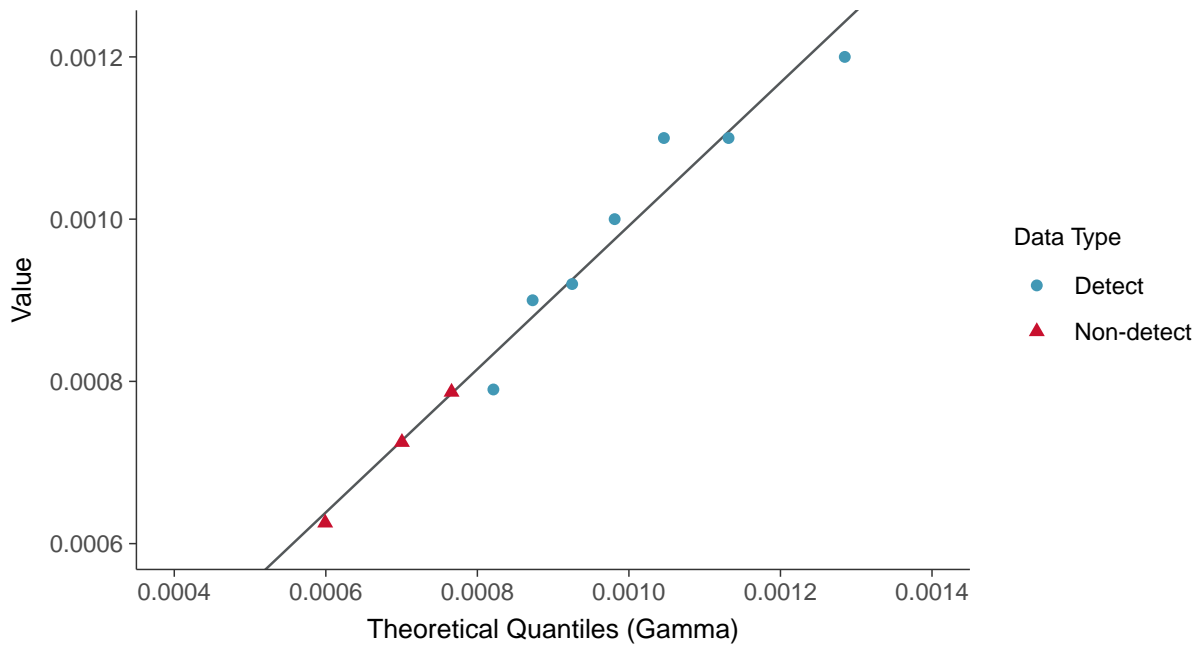
Nickel, MW-06 (mg/L)





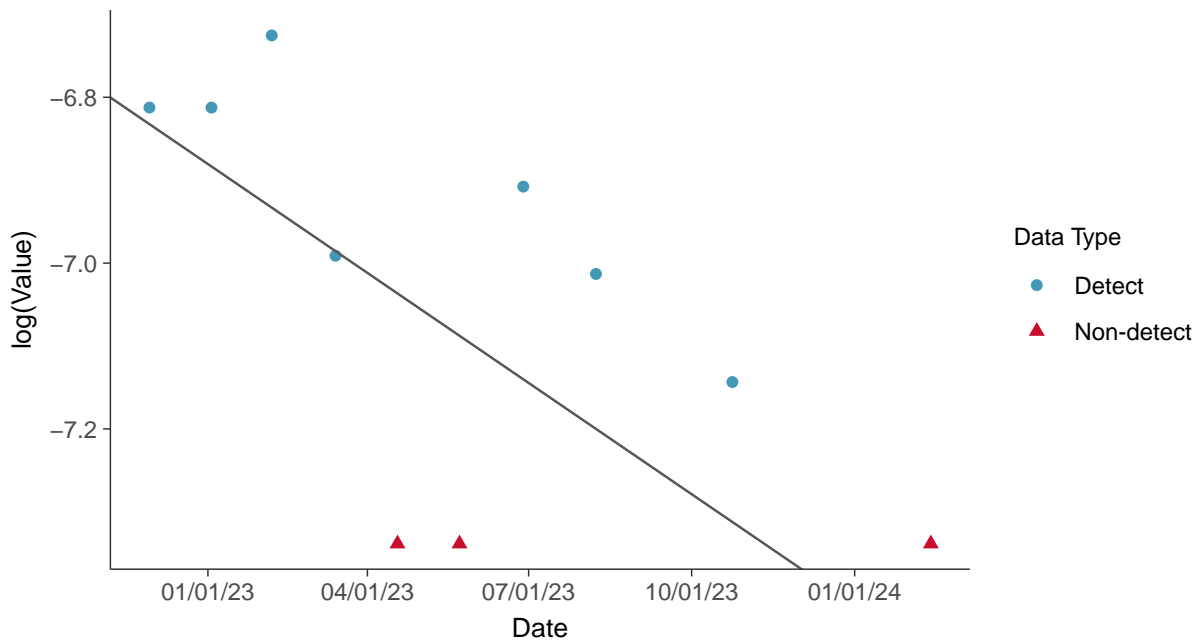
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-06 (mg/L)



Trend Regression: Lognormal MLE

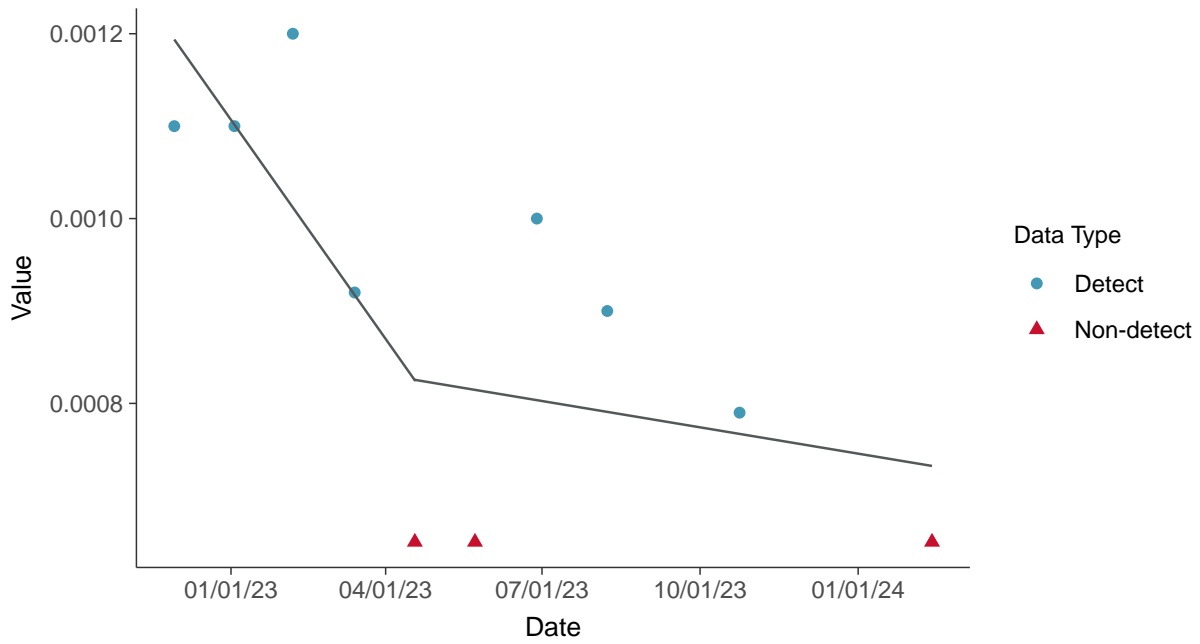
Nickel, MW-06 (mg/L)





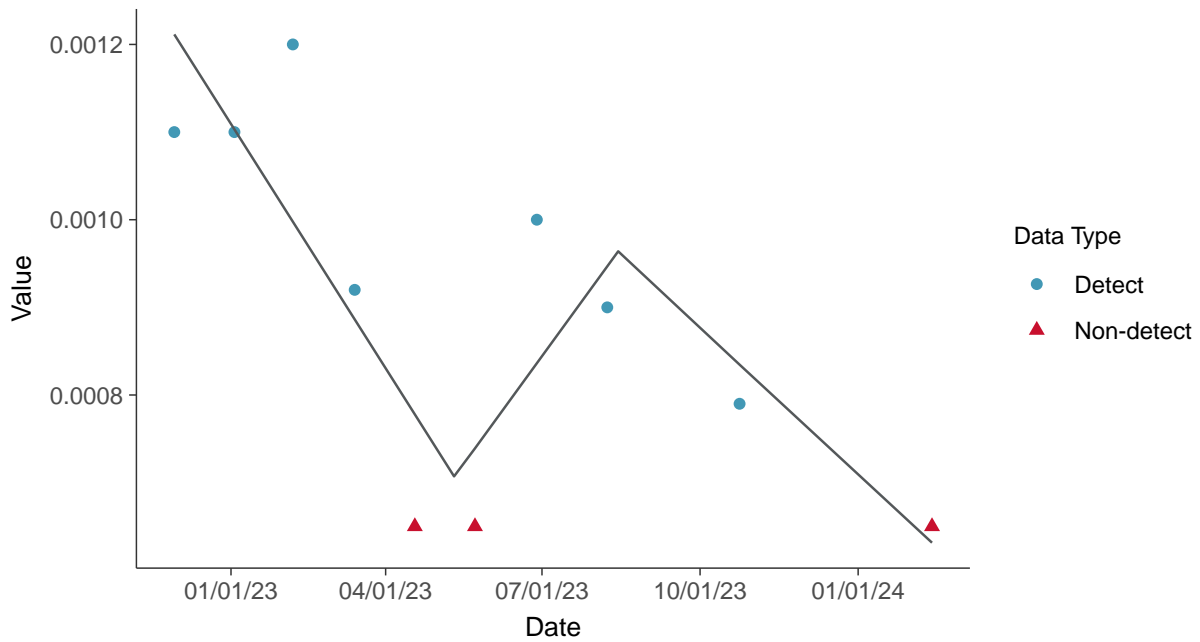
Trend Regression: Piecewise Linear-Linear

Nickel, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Nickel, MW-06 (mg/L)



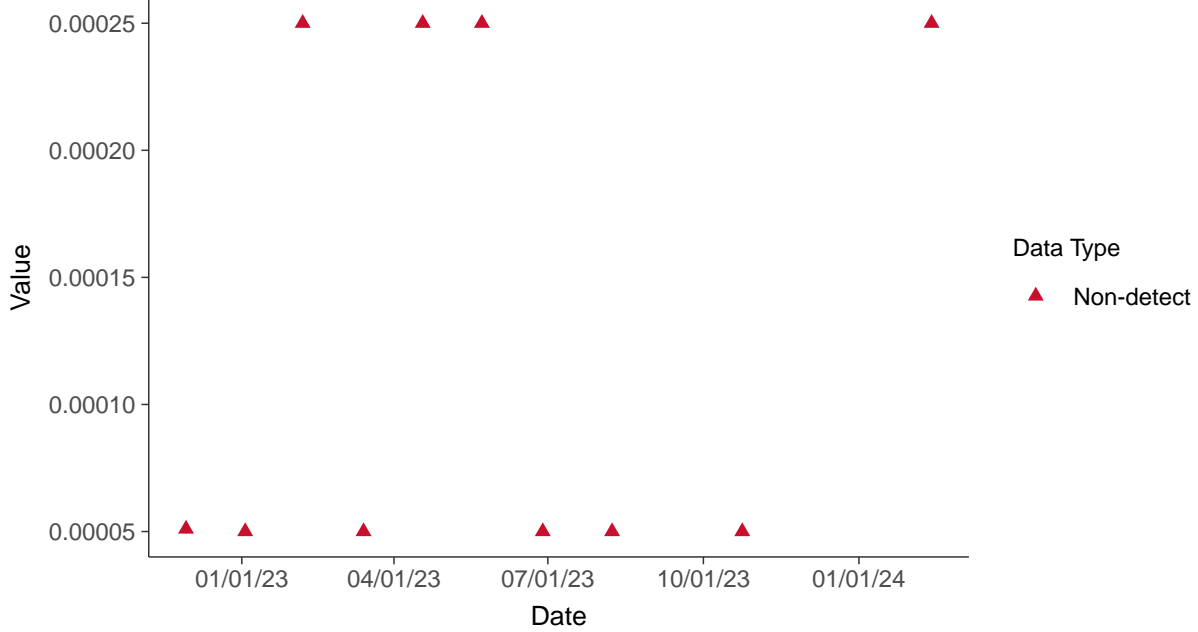


Part 115: Silver, MW-06

ID: 1_16_6_123

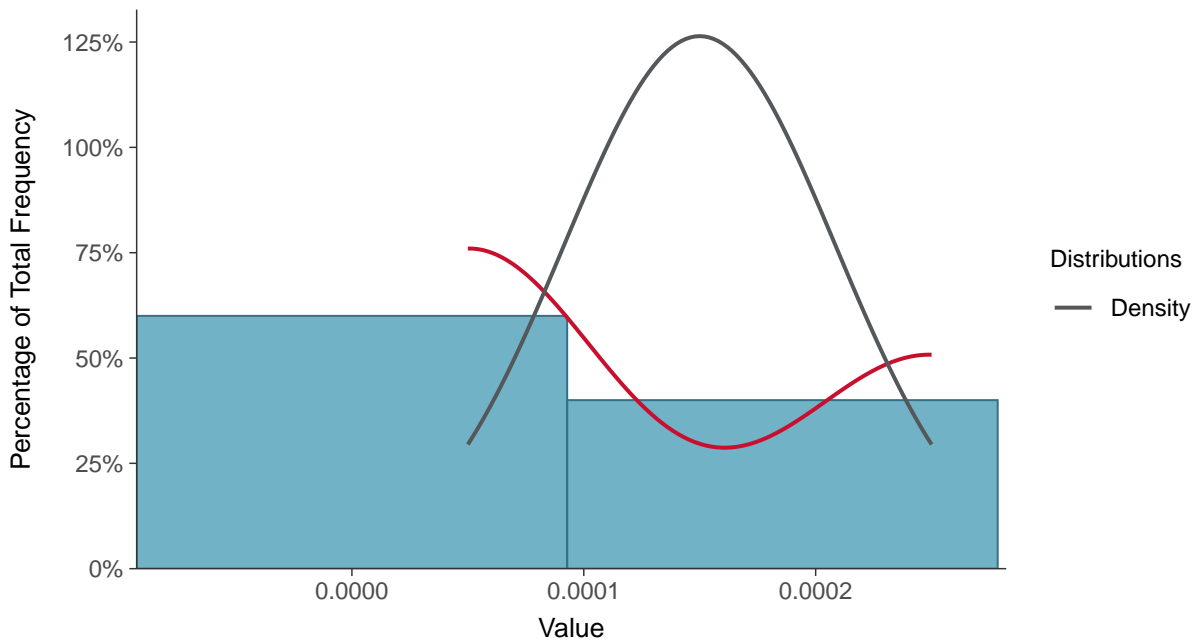
Scatter Plot

Silver, MW-06 (mg/L)



Histogram

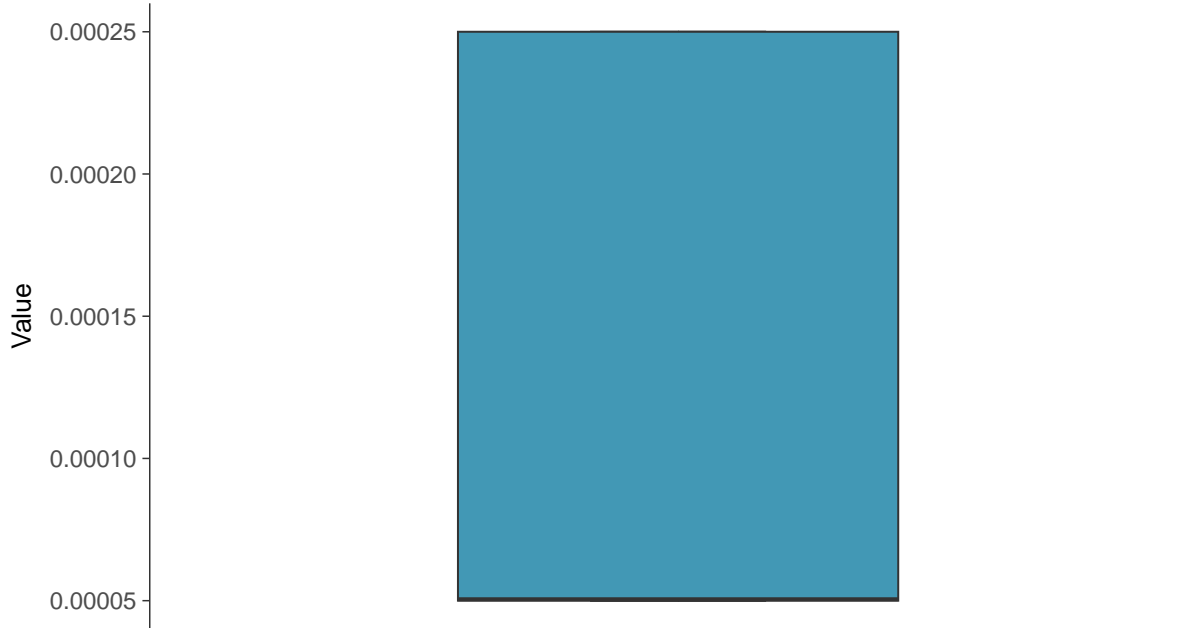
Silver, MW-06 (mg/L)





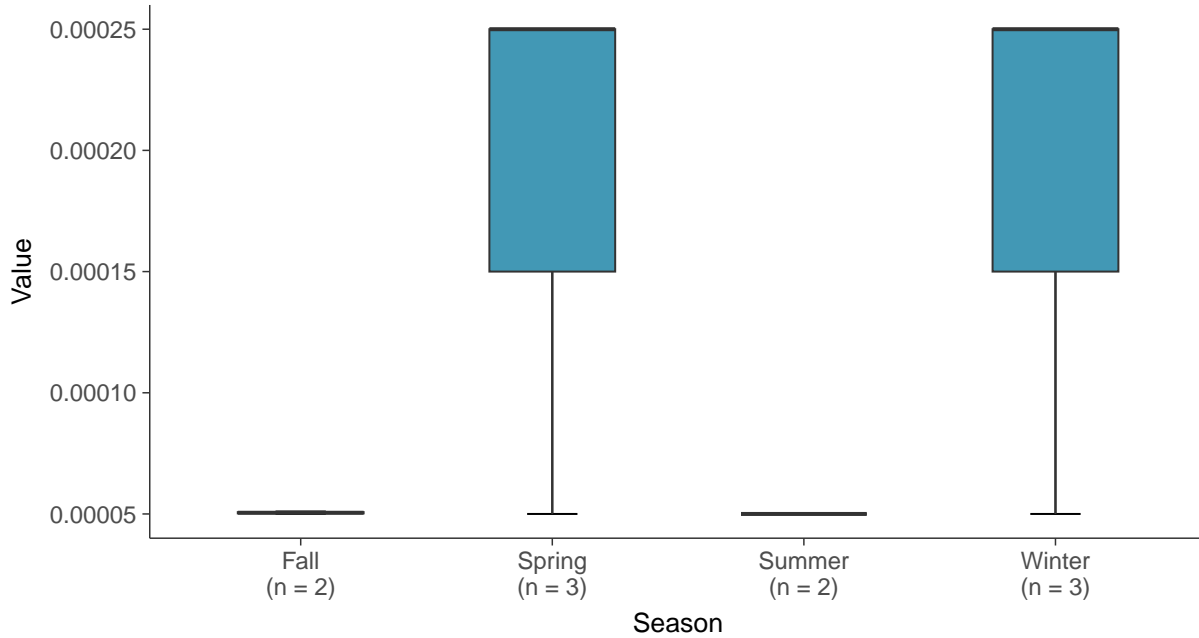
Boxplot

Silver, MW-06 (mg/L)



Boxplot by Season

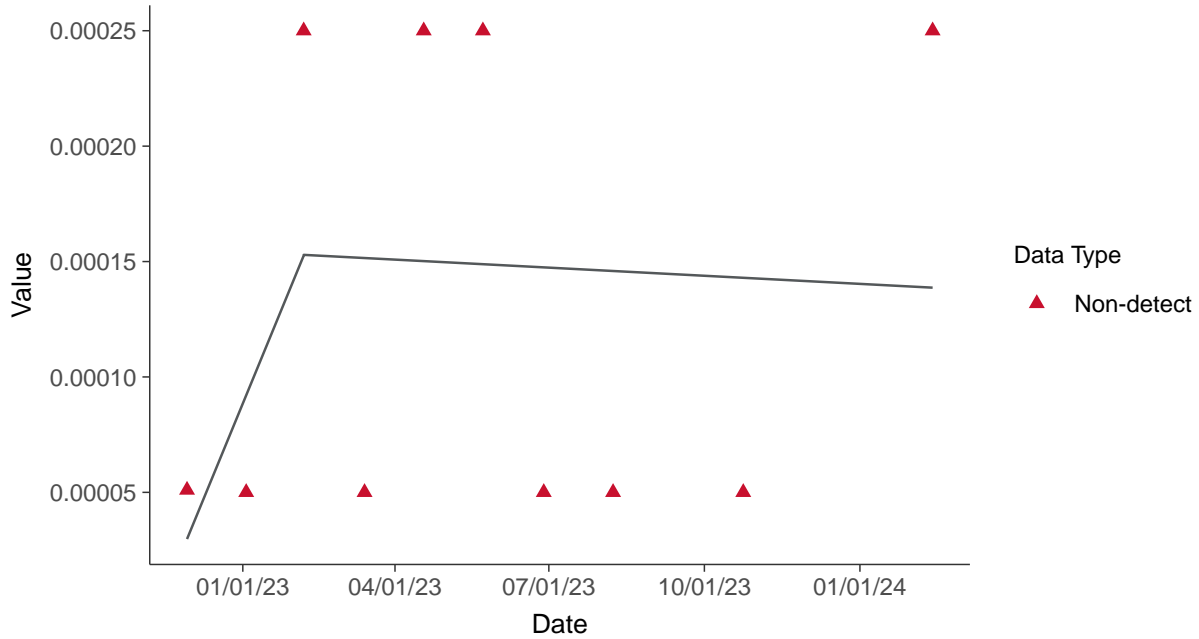
Silver, MW-06 (mg/L)





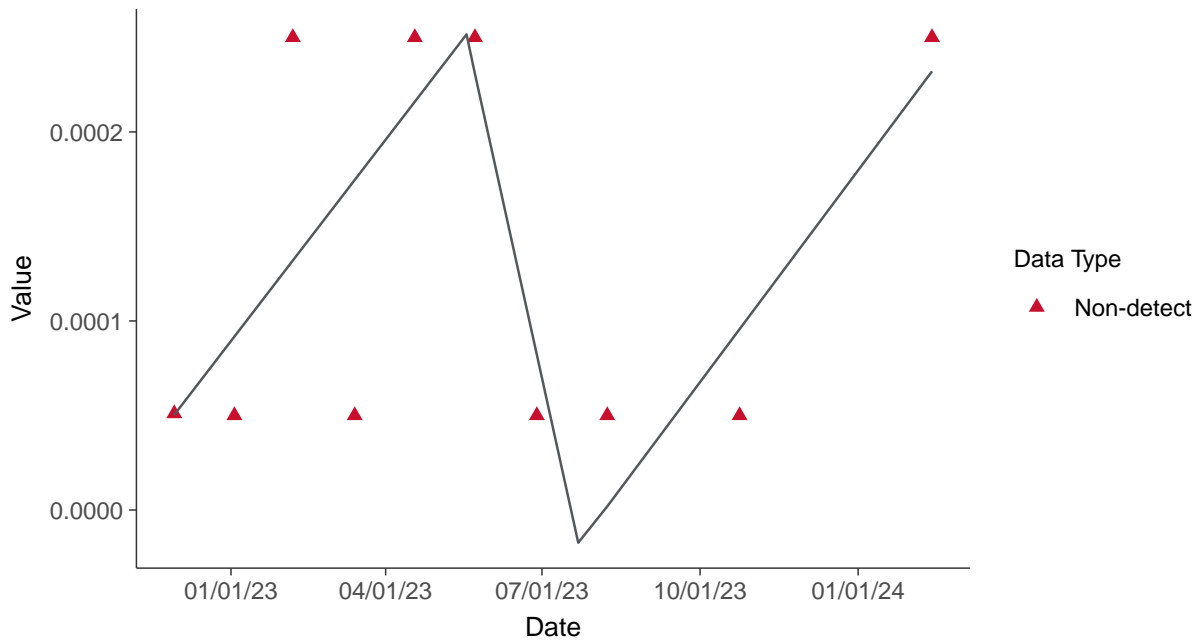
Trend Regression: Piecewise Linear-Linear

Silver, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-06 (mg/L)



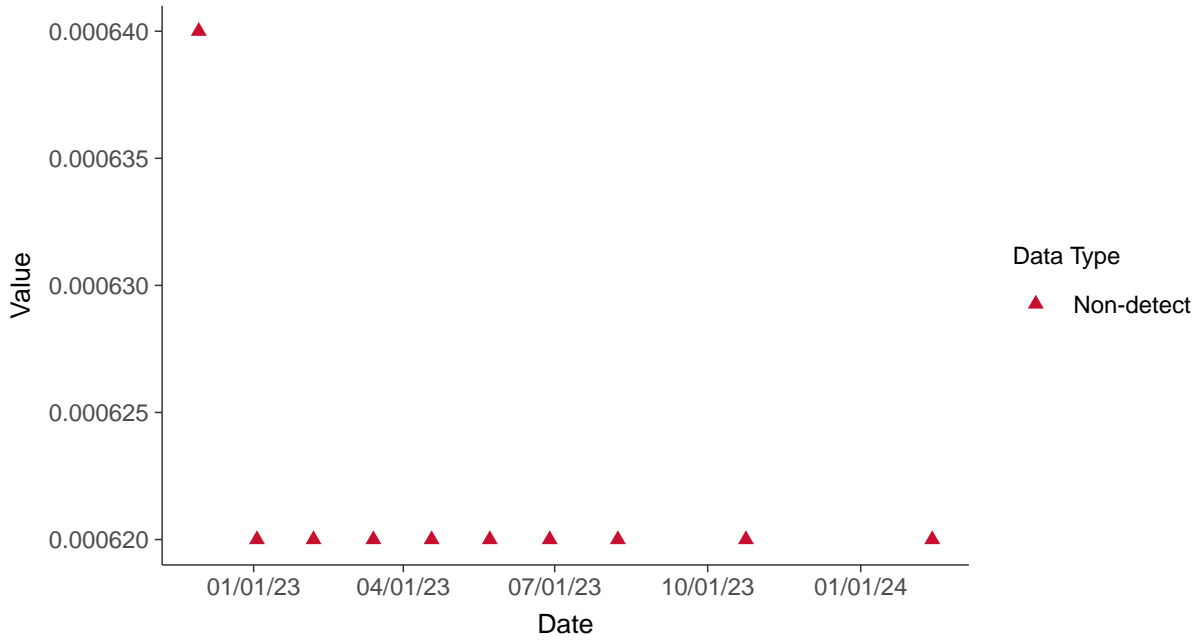


Part 115: Vanadium, MW-06

ID: 1_16_6_129

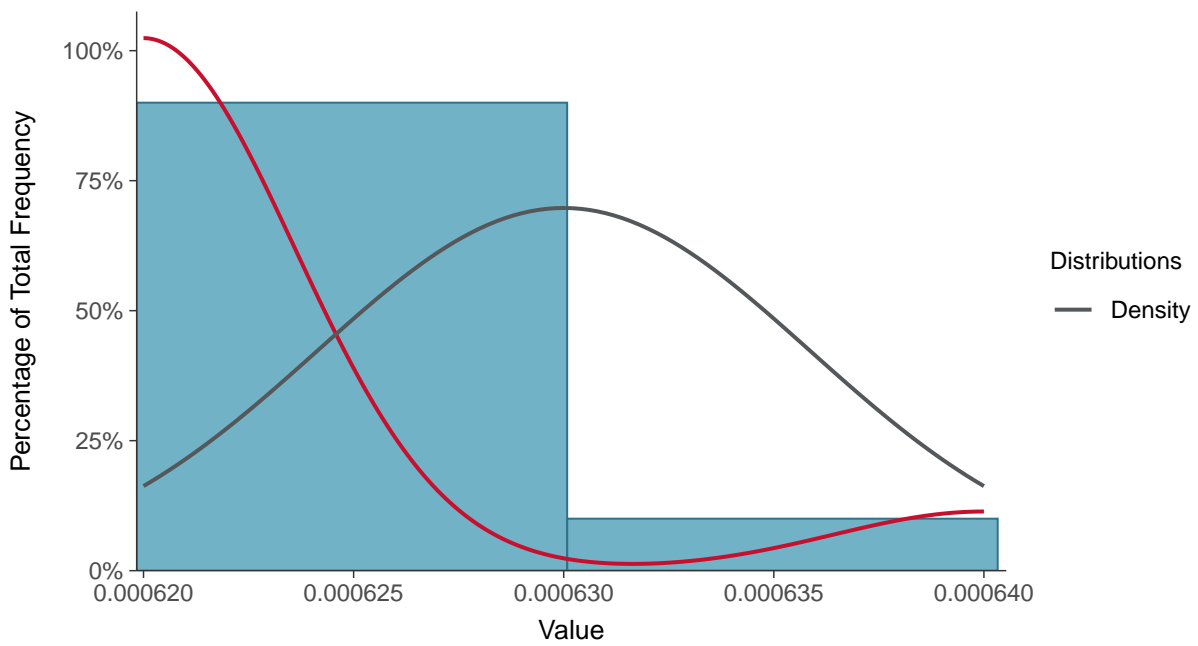
Scatter Plot

Vanadium, MW-06 (mg/L)



Histogram

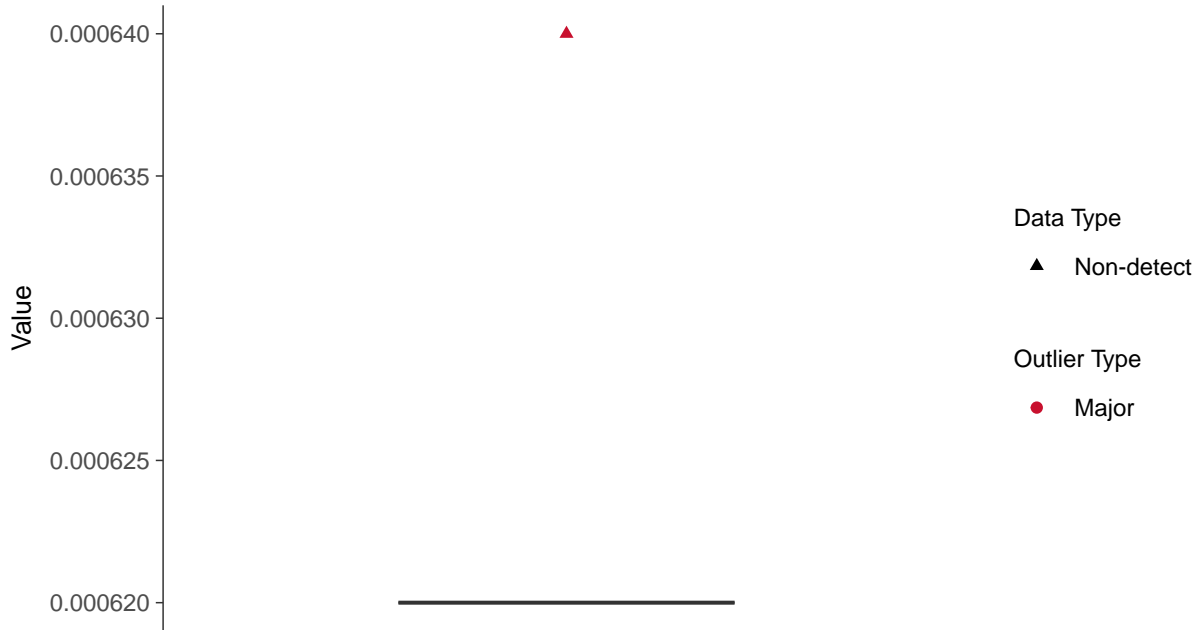
Vanadium, MW-06 (mg/L)





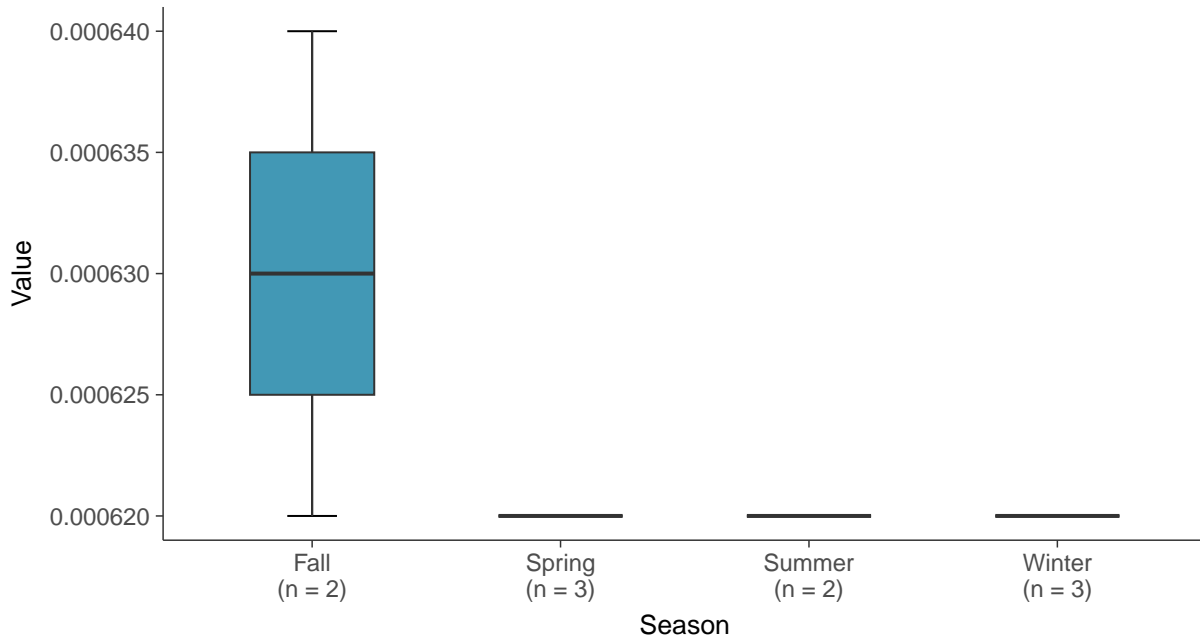
Boxplot

Vanadium, MW-06 (mg/L)



Boxplot by Season

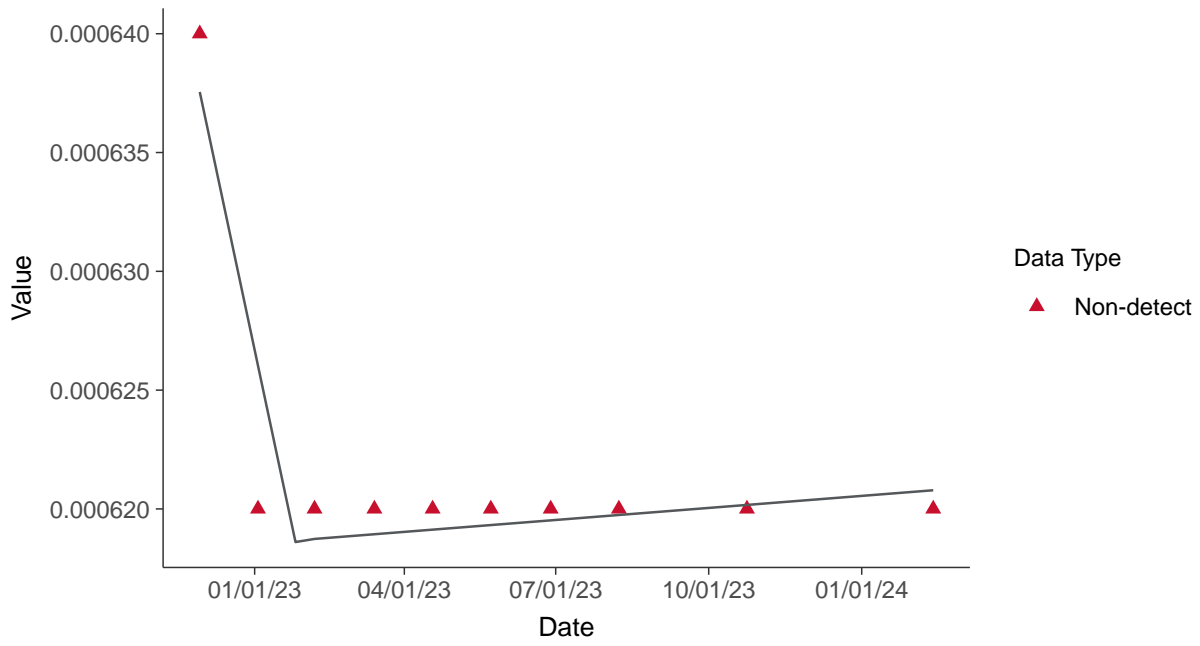
Vanadium, MW-06 (mg/L)





Trend Regression: Piecewise Linear-Linear

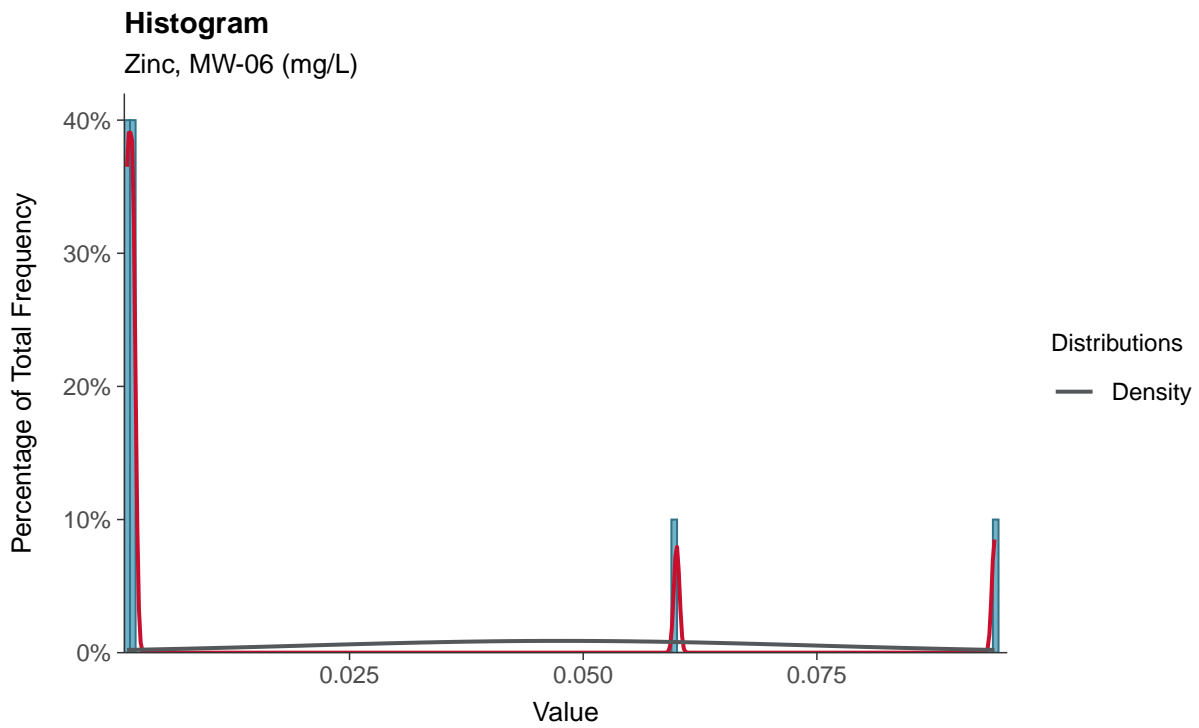
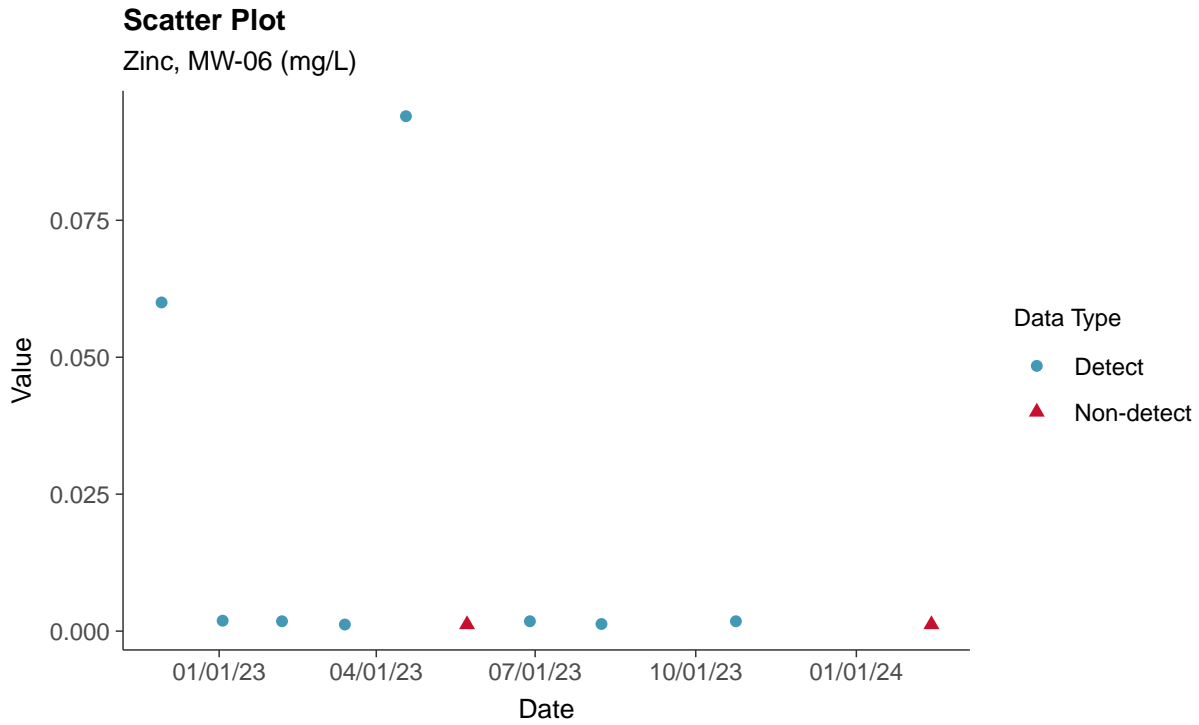
Vanadium, MW-06 (mg/L)





Part 115: Zinc, MW-06

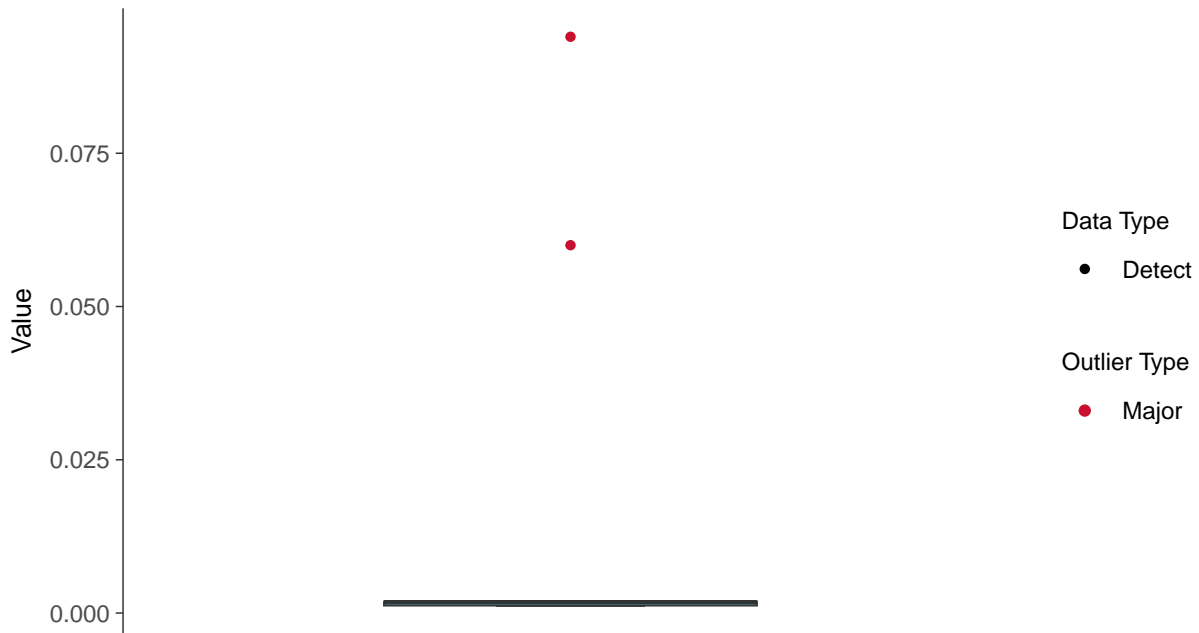
ID: 1_16_6_130





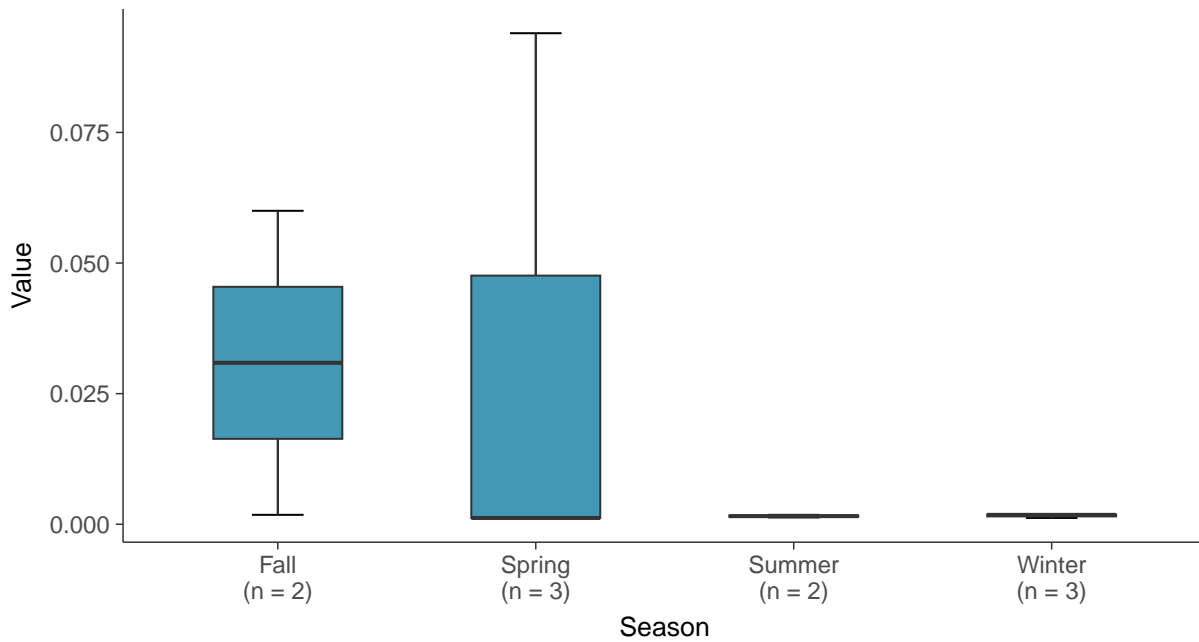
Boxplot

Zinc, MW-06 (mg/L)



Boxplot by Season

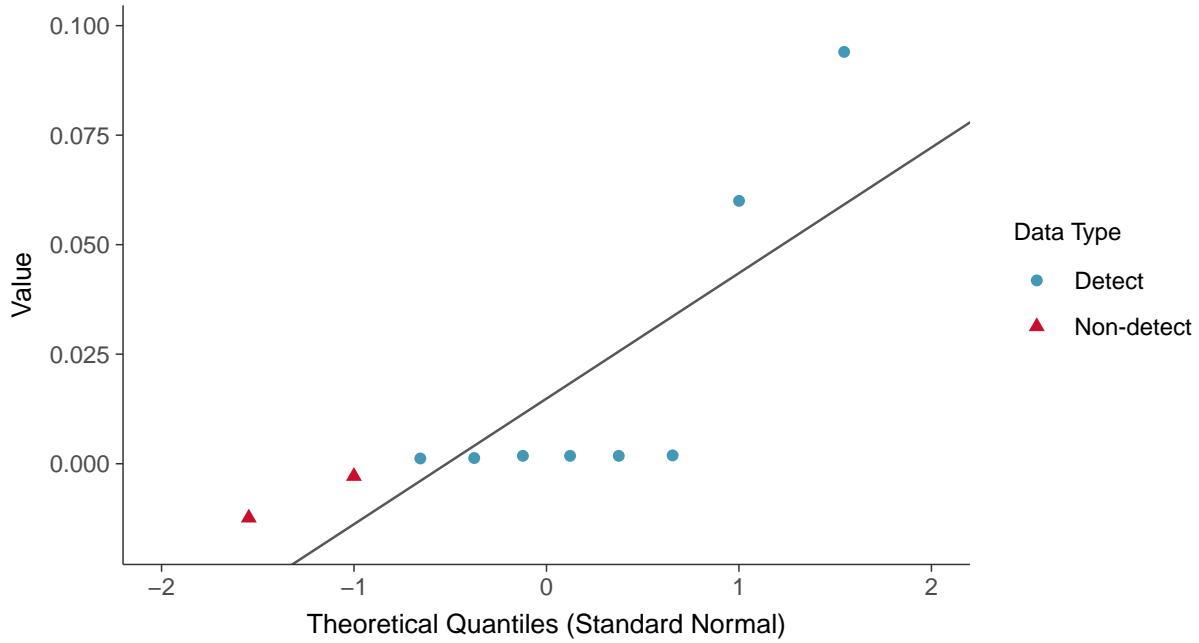
Zinc, MW-06 (mg/L)





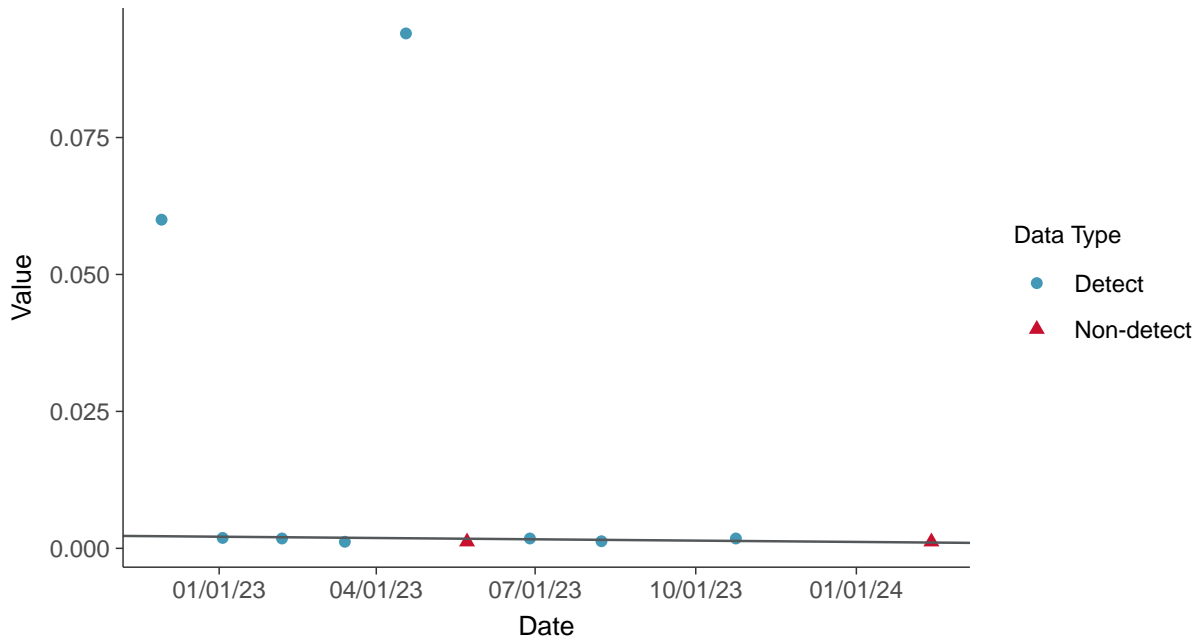
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-06 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

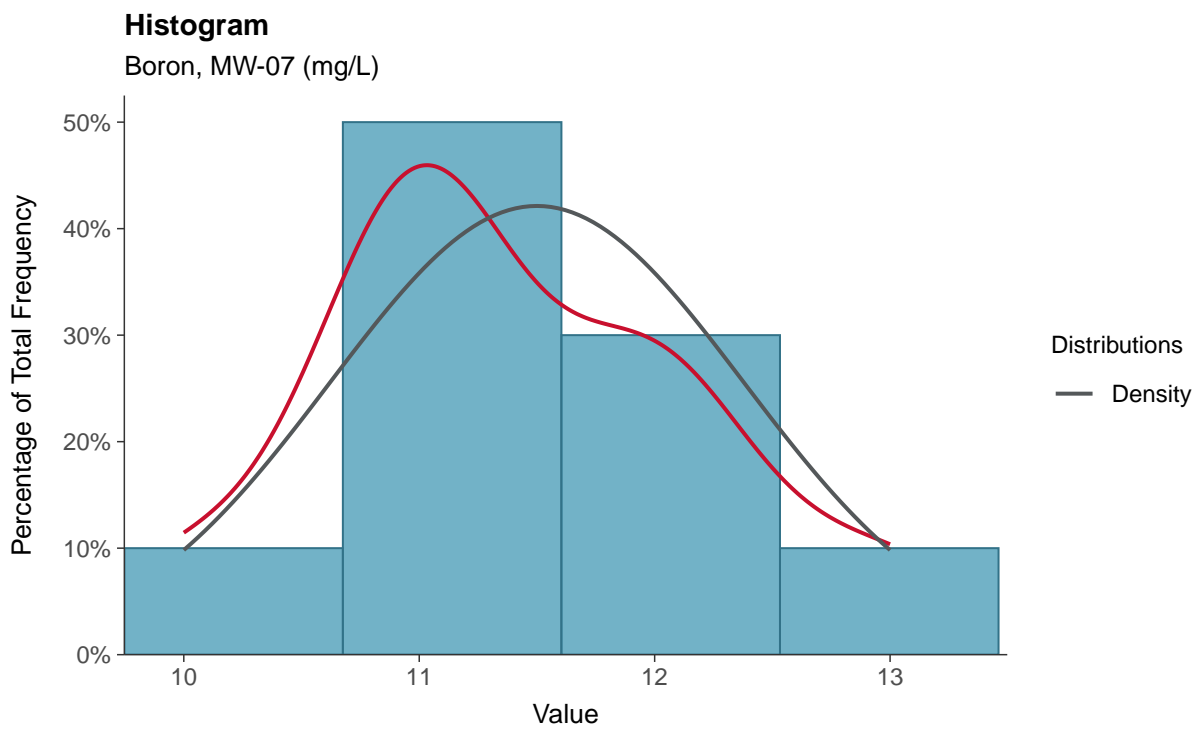
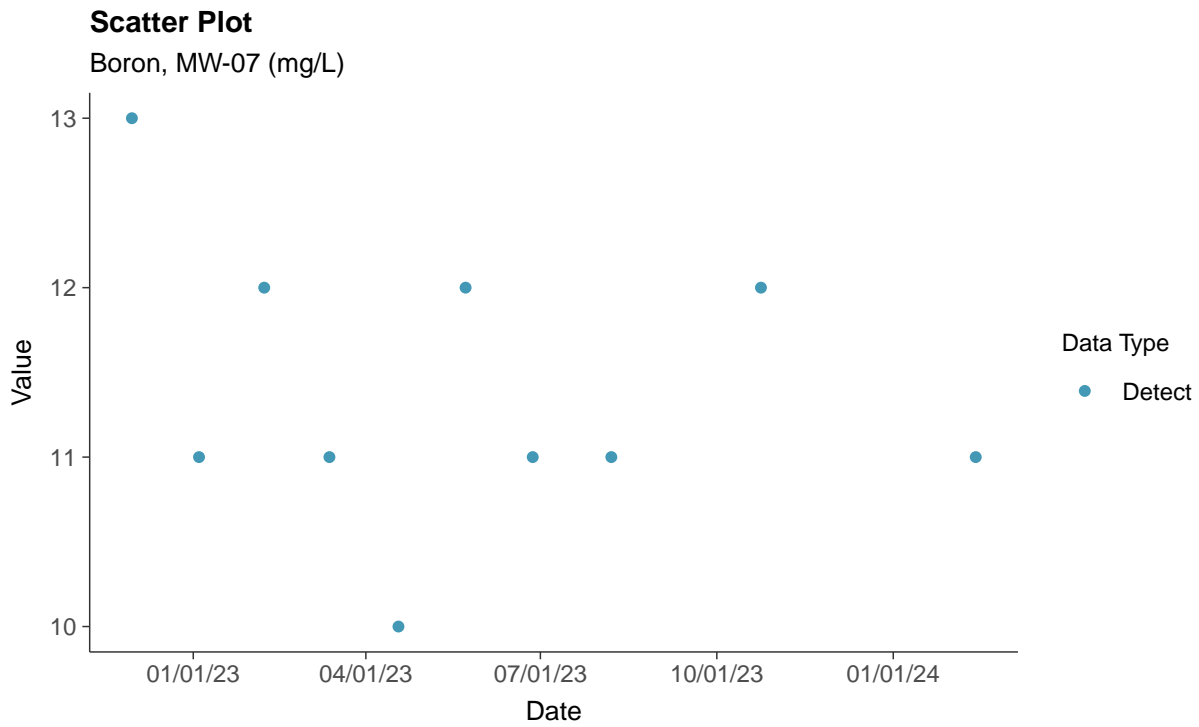
Zinc, MW-06 (mg/L)





Appendix III: Boron, MW-07

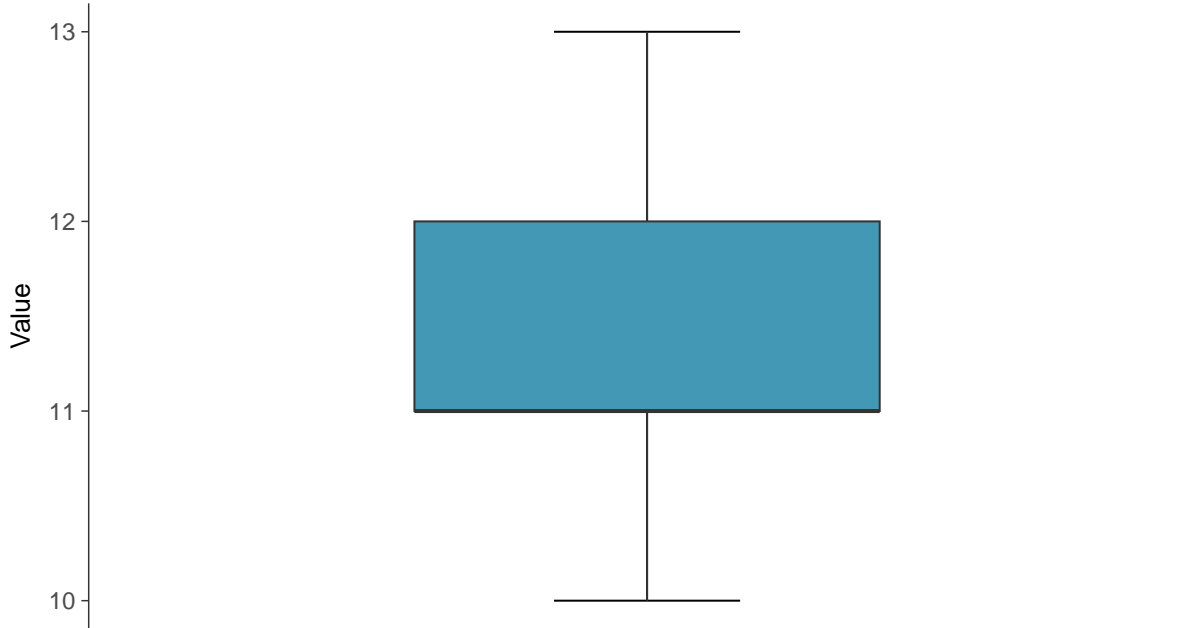
ID: 1_17_4_105





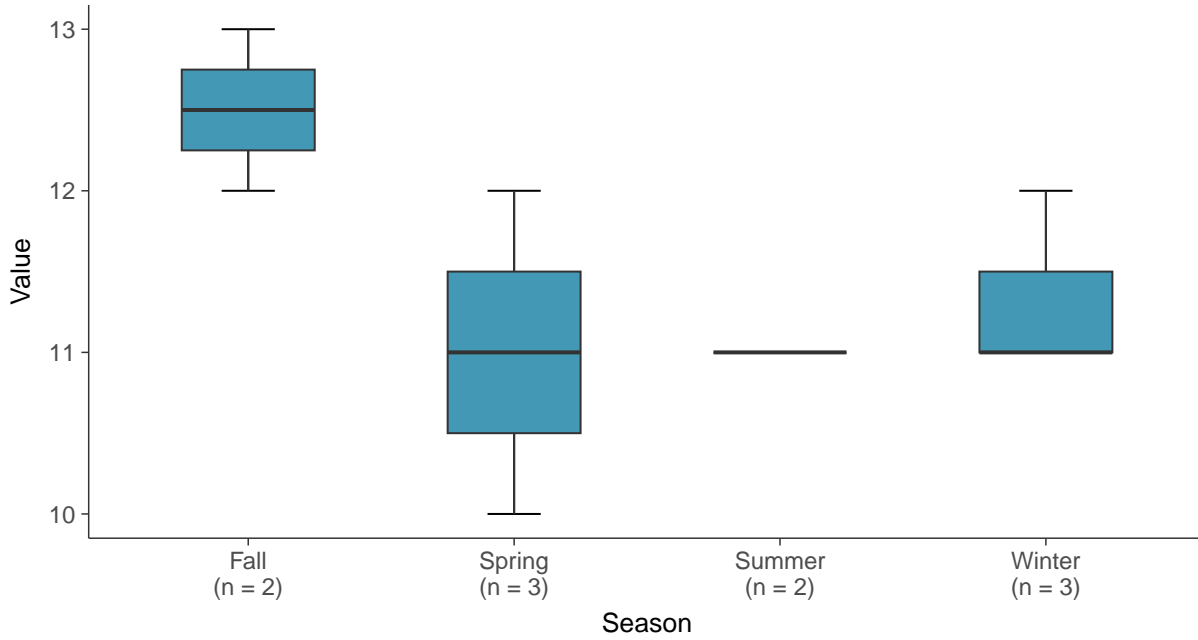
Boxplot

Boron, MW-07 (mg/L)



Boxplot by Season

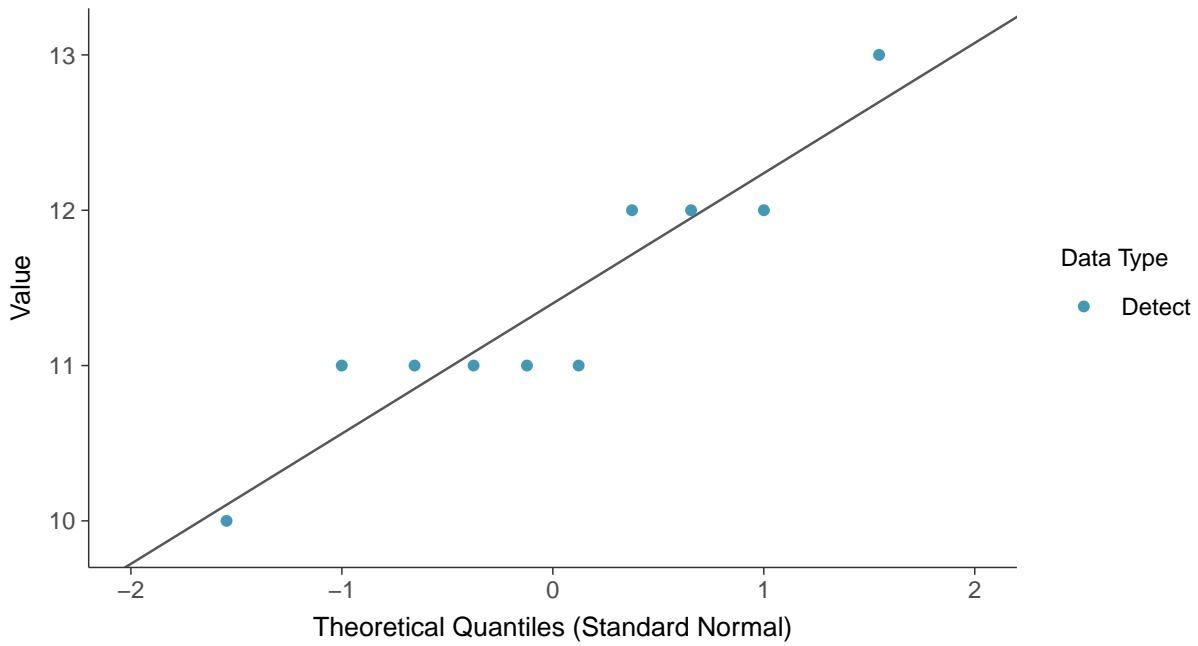
Boron, MW-07 (mg/L)





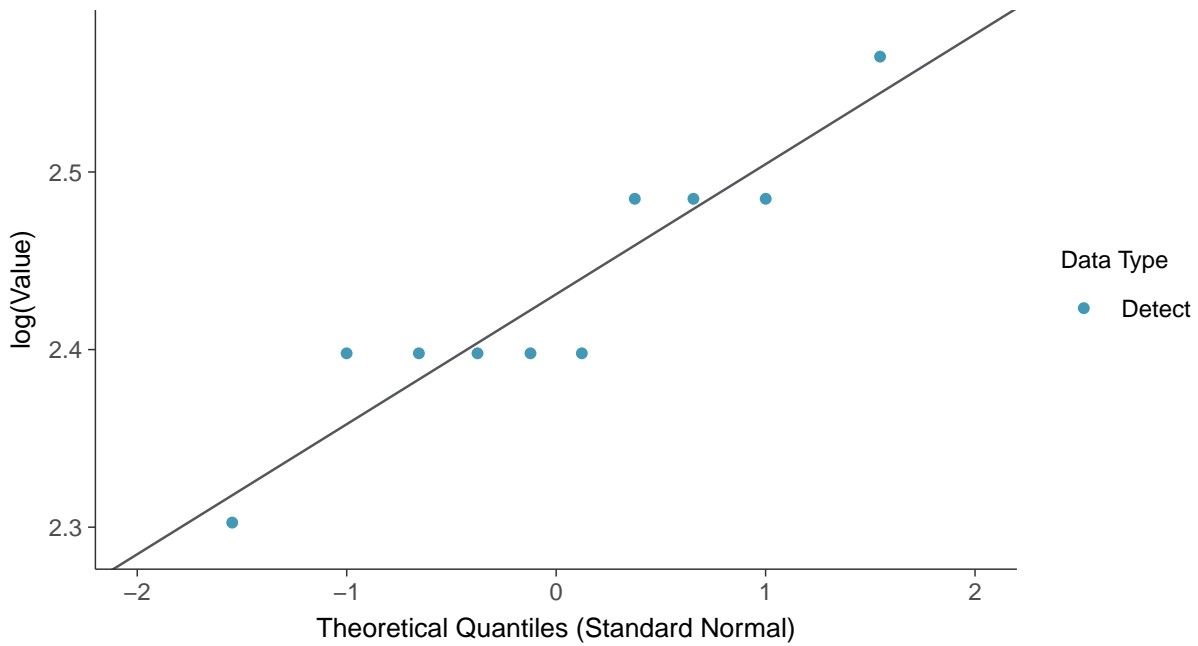
Normal Q-Q plot

Boron, MW-07 (mg/L)



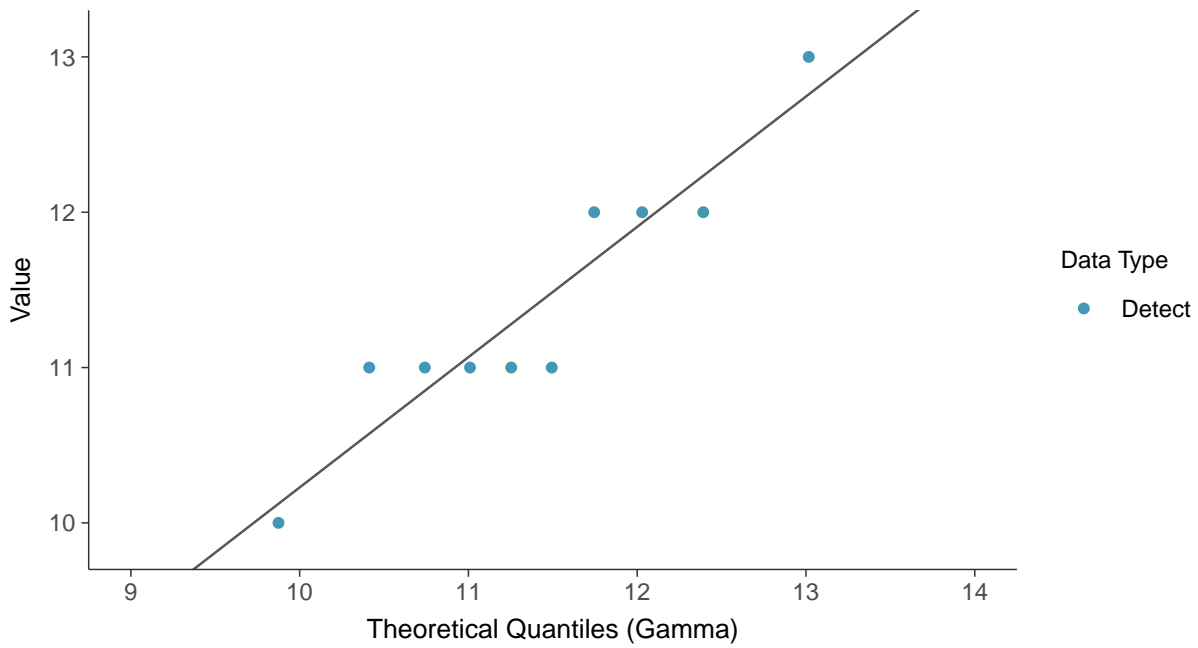
Lognormal Q-Q plot

Boron, MW-07 (mg/L)

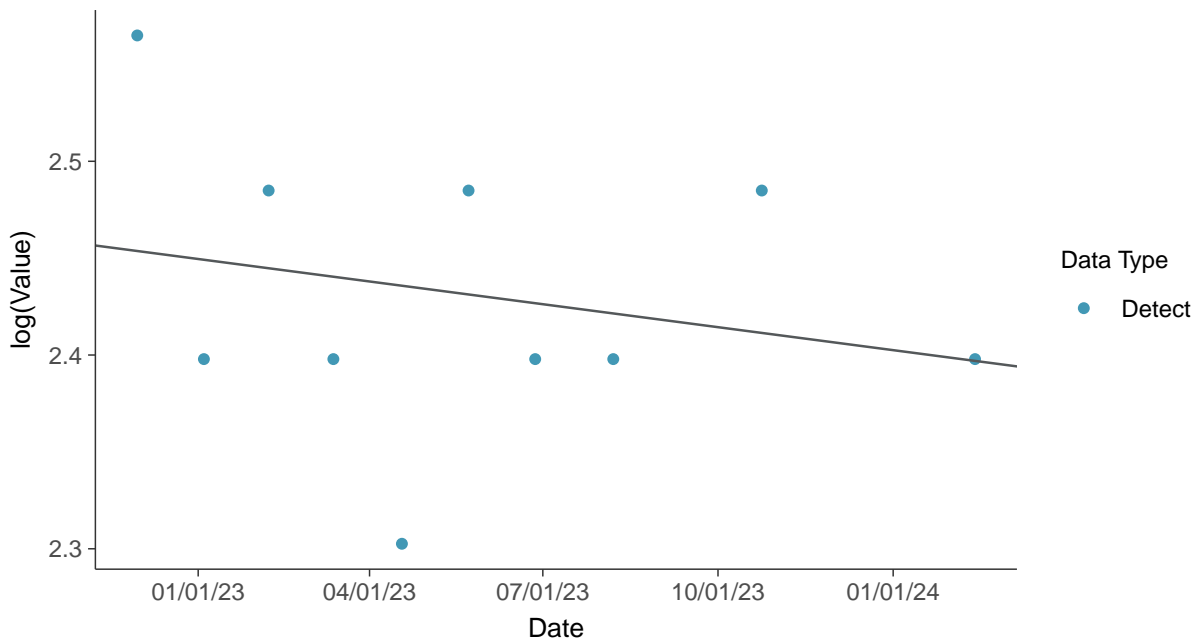




Gamma Q-Q plot
Boron, MW-07 (mg/L)



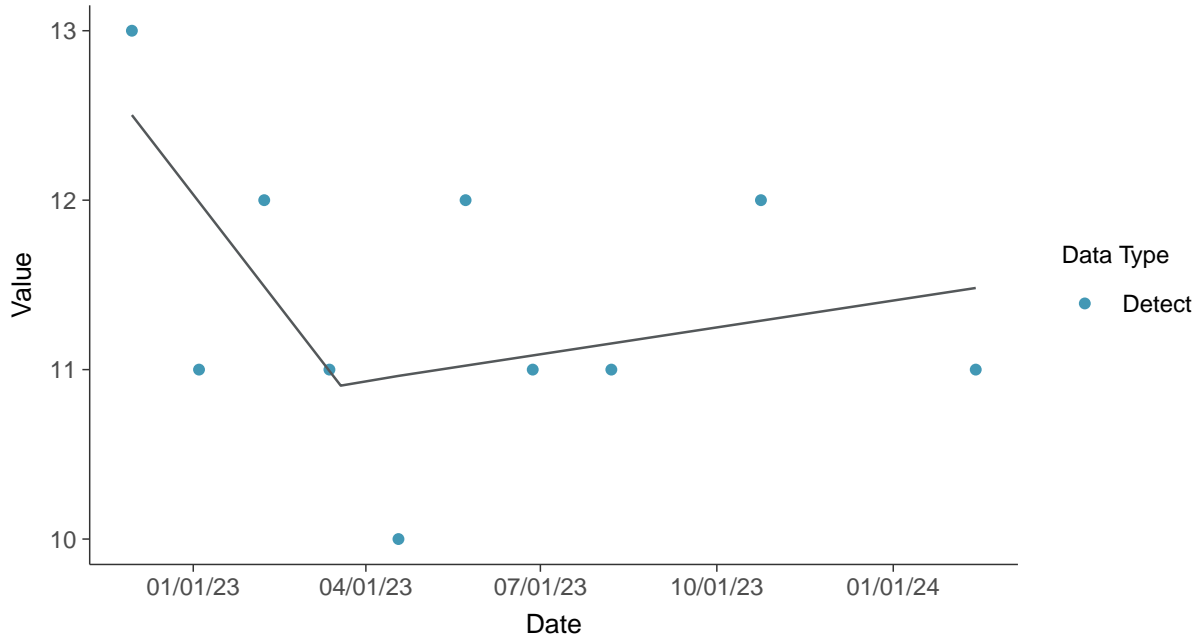
Trend Regression: Lognormal MLE
Boron, MW-07 (mg/L)





Trend Regression: Piecewise Linear-Linear

Boron, MW-07 (mg/L)



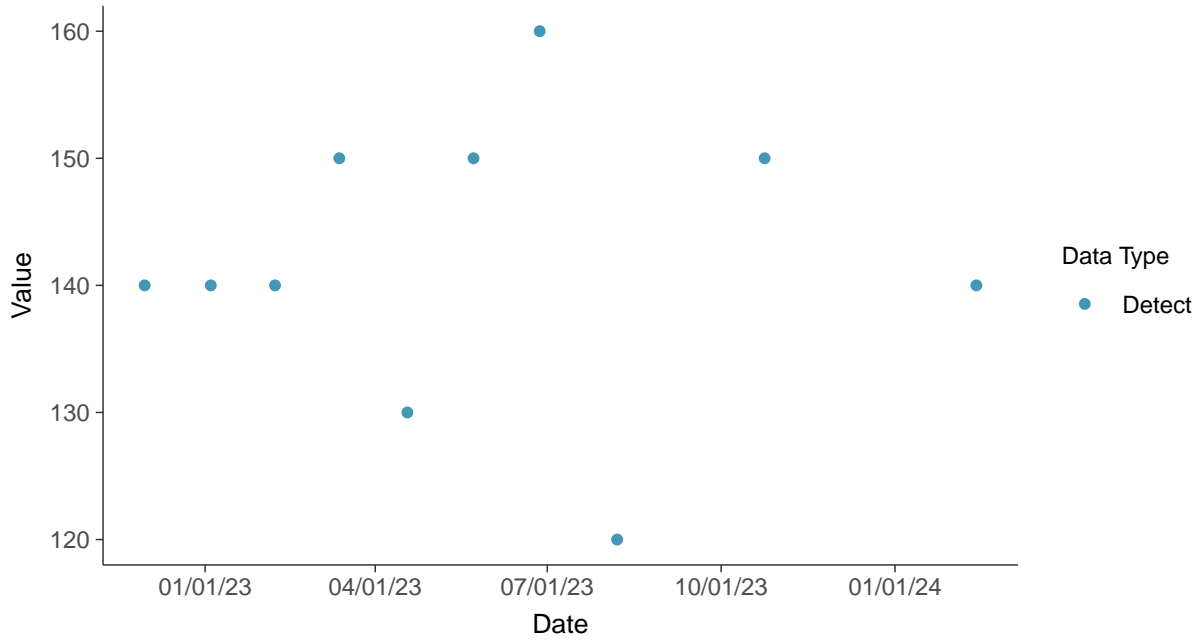


Appendix III: Calcium, MW-07

ID: 1_17_4_107

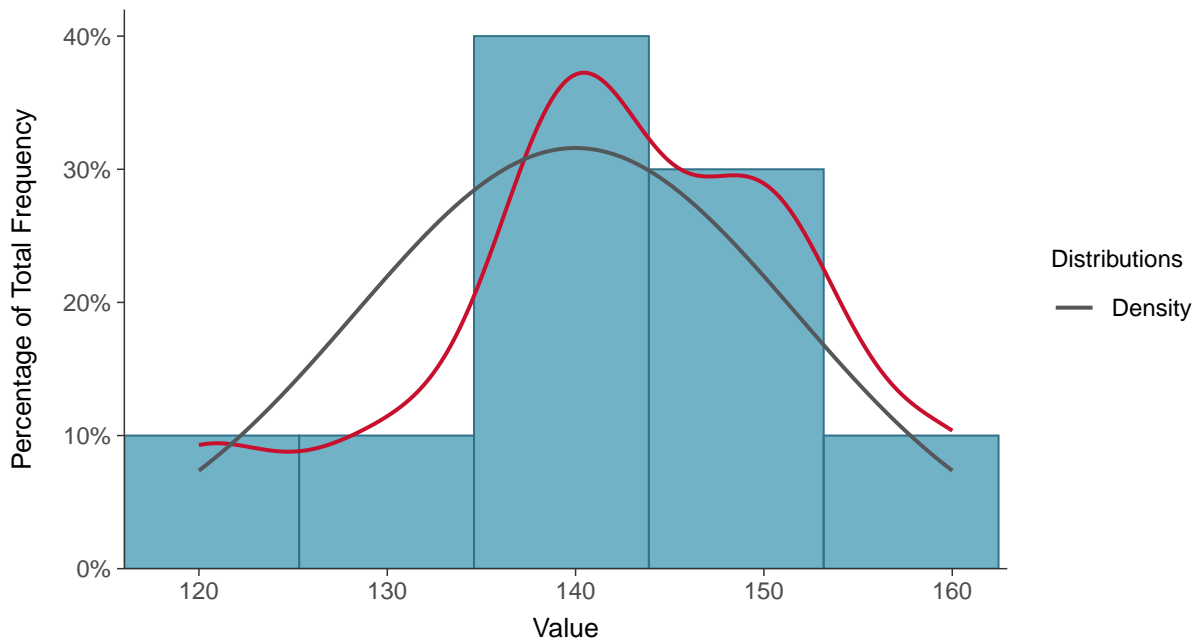
Scatter Plot

Calcium, MW-07 (mg/L)



Histogram

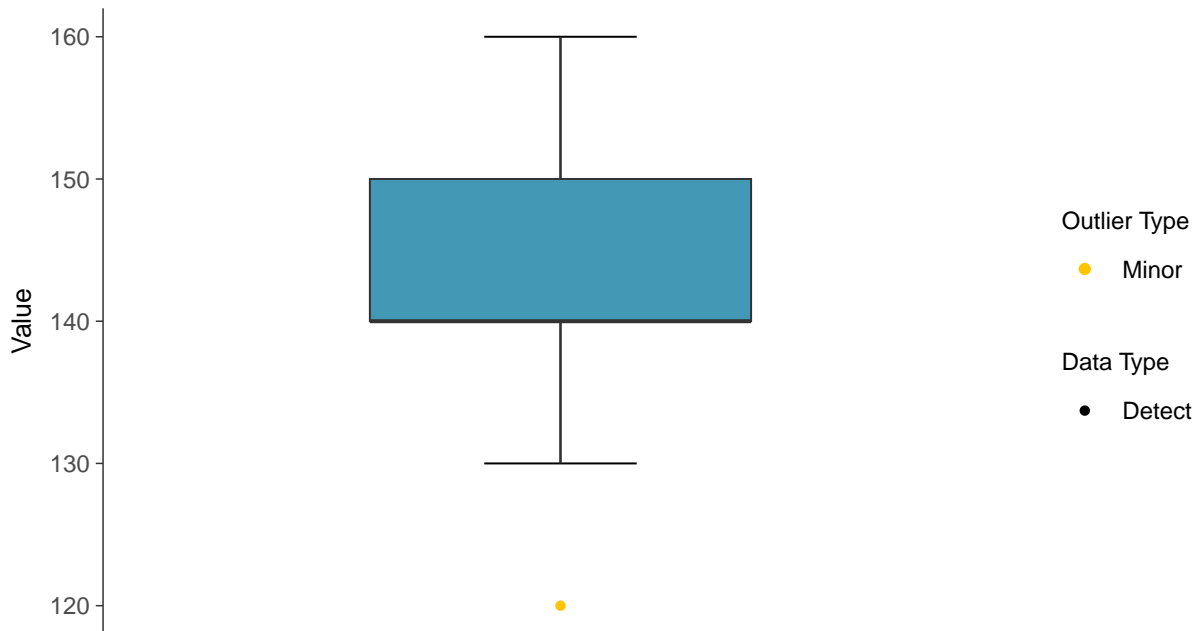
Calcium, MW-07 (mg/L)





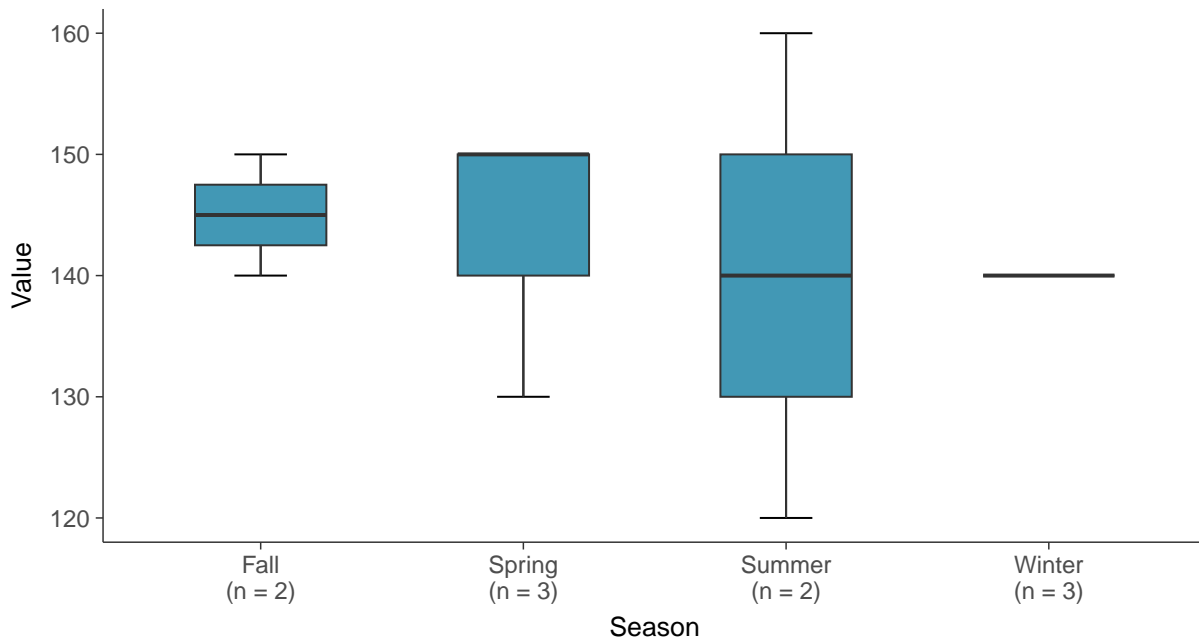
Boxplot

Calcium, MW-07 (mg/L)



Boxplot by Season

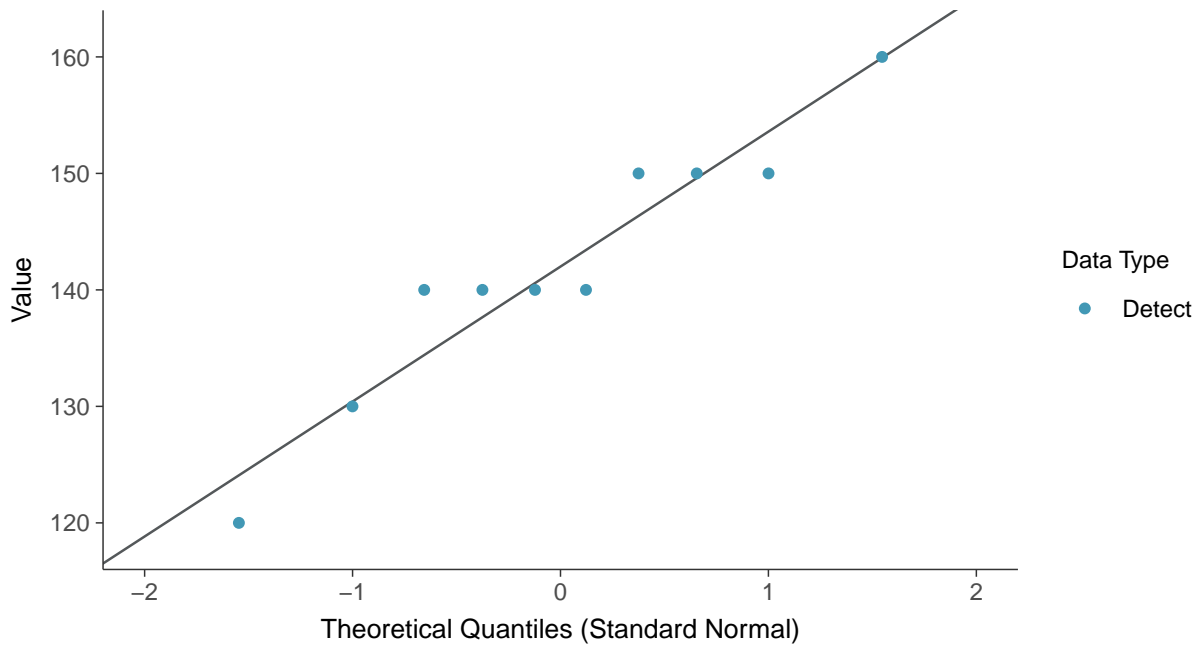
Calcium, MW-07 (mg/L)





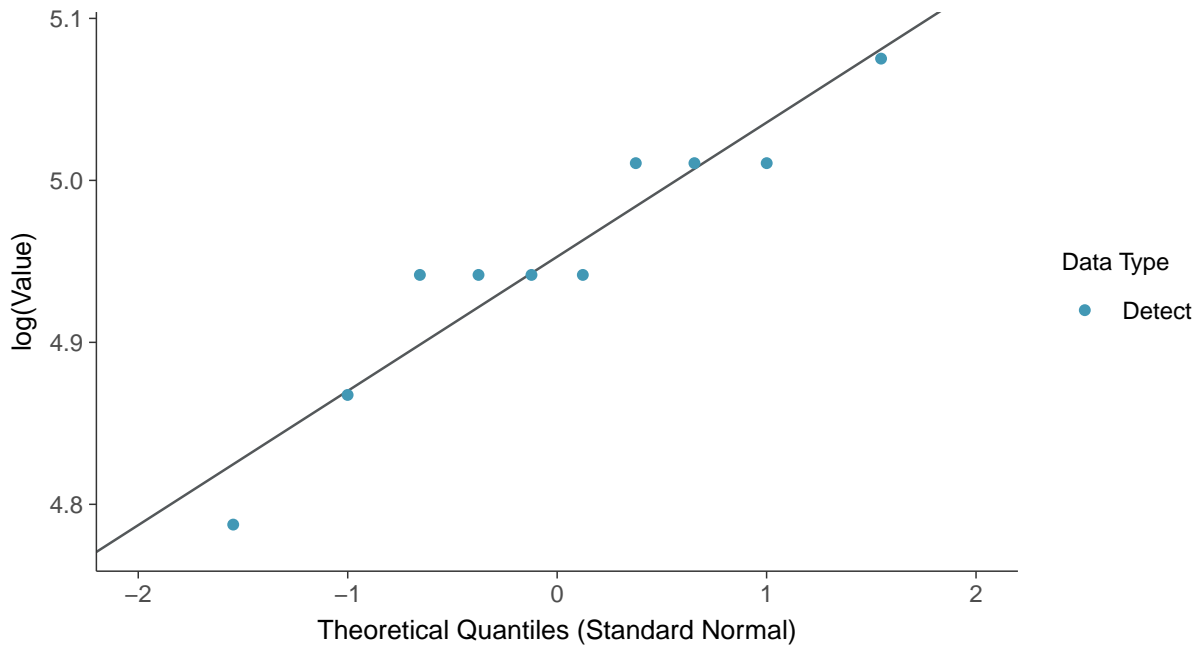
Normal Q-Q plot

Calcium, MW-07 (mg/L)



Lognormal Q-Q plot

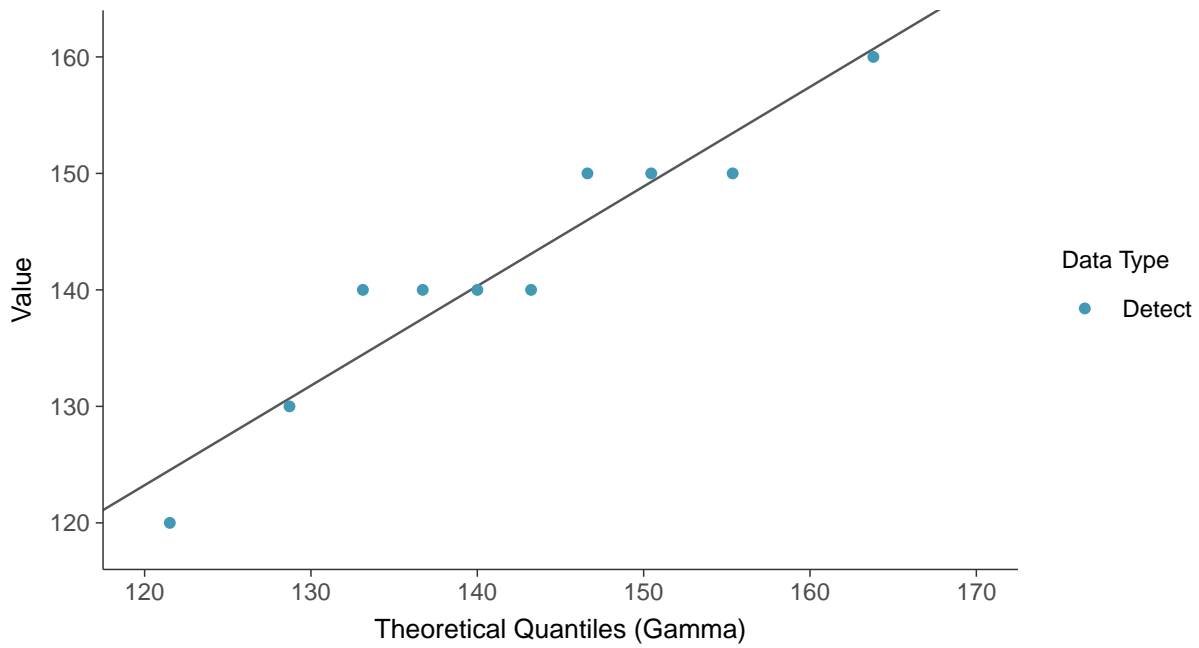
Calcium, MW-07 (mg/L)





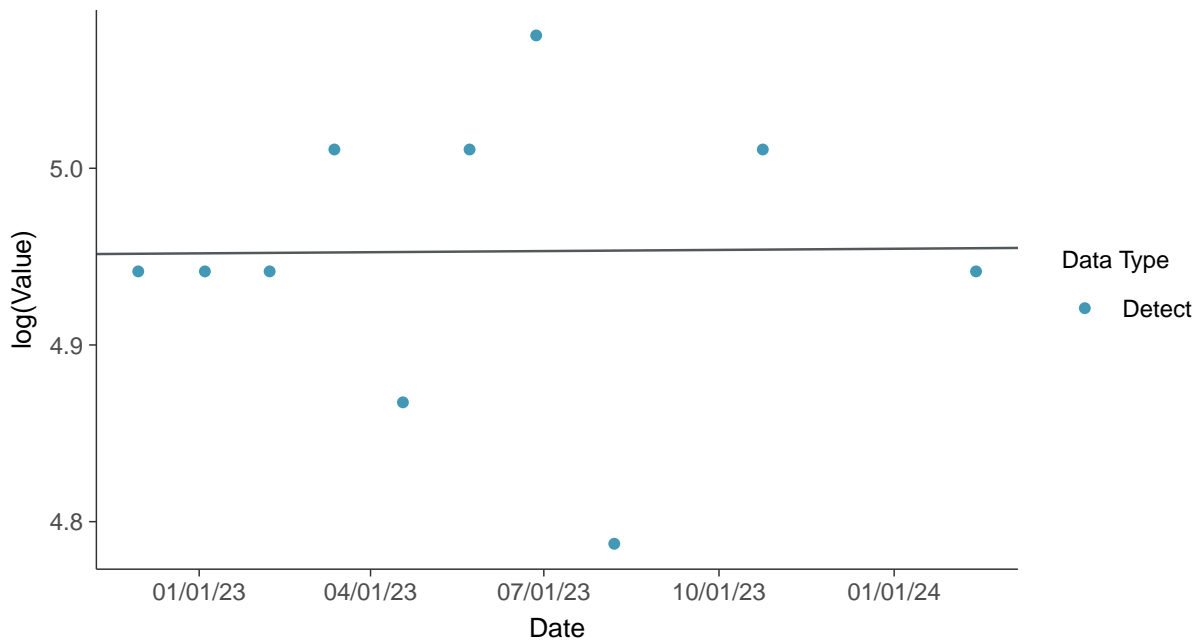
Gamma Q-Q plot

Calcium, MW-07 (mg/L)



Trend Regression: Lognormal MLE

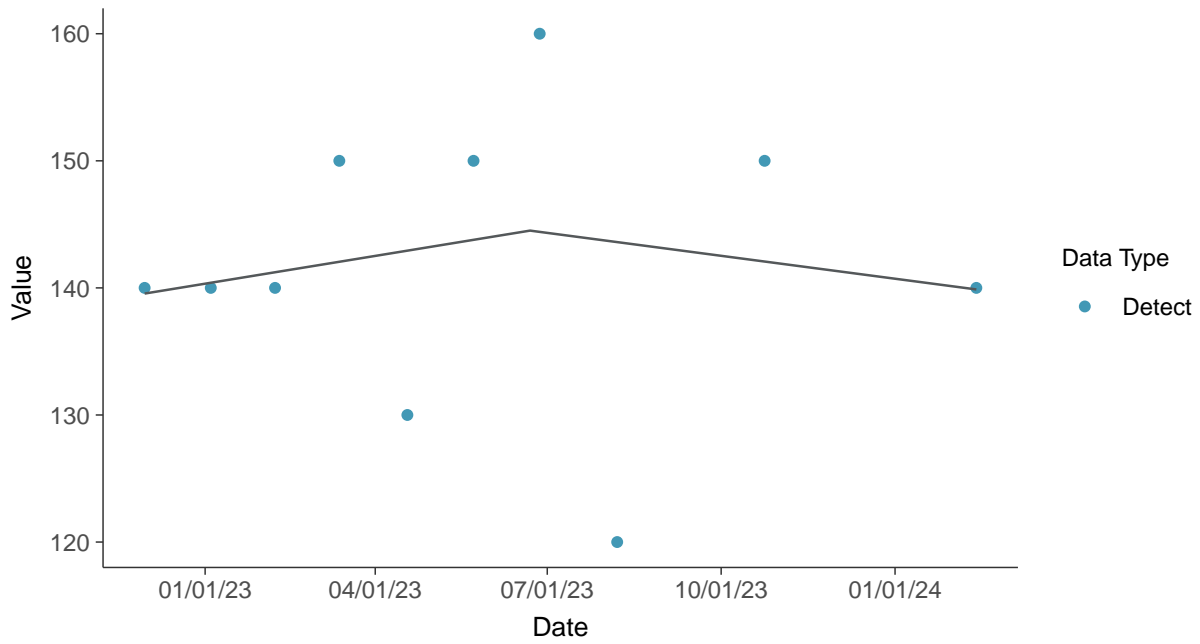
Calcium, MW-07 (mg/L)





Trend Regression: Piecewise Linear-Linear

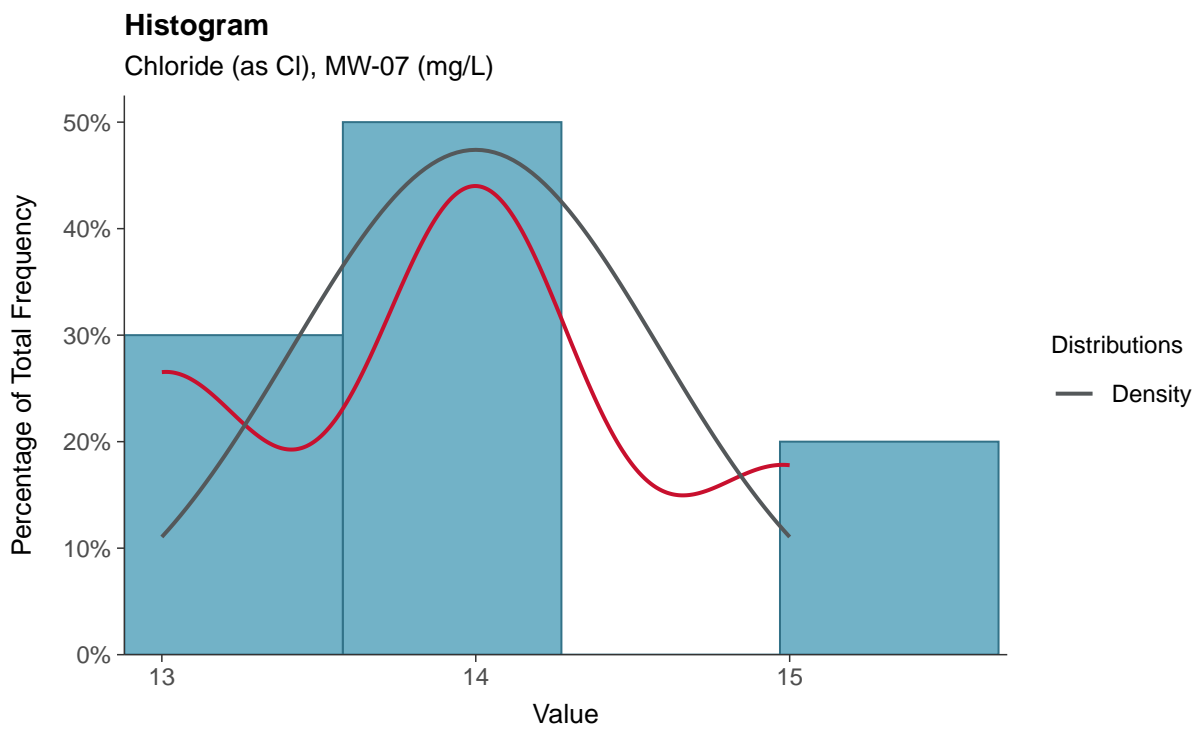
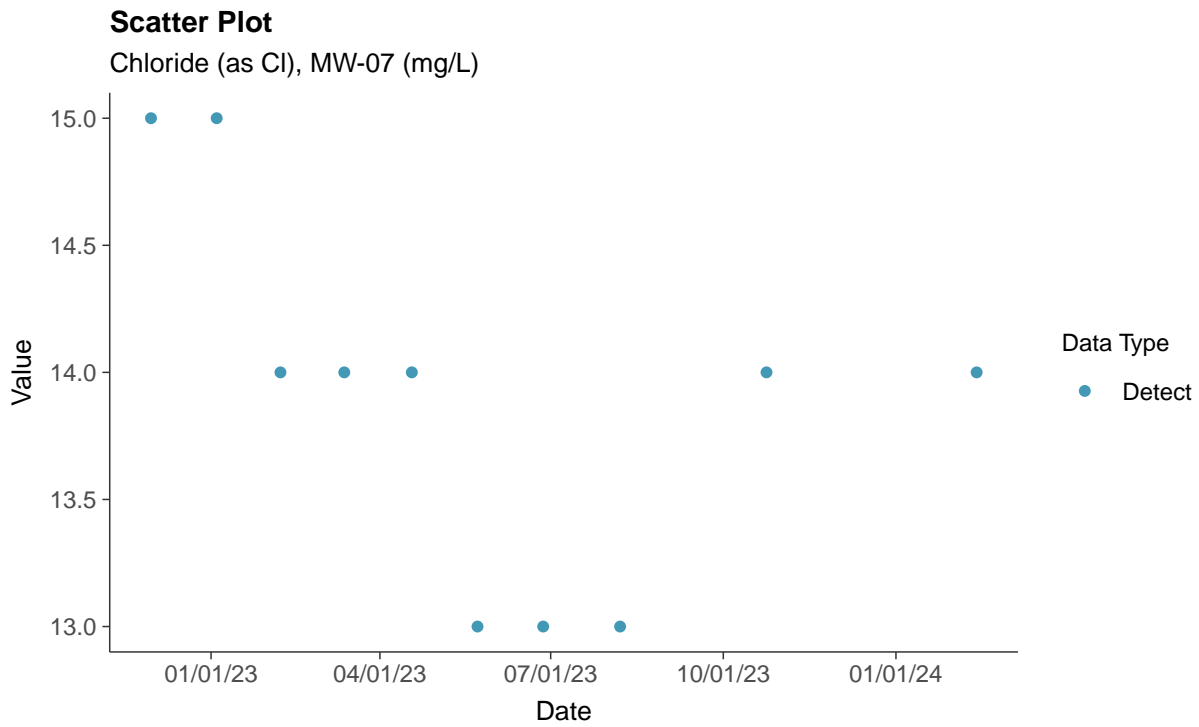
Calcium, MW-07 (mg/L)





Appendix III: Chloride (as Cl), MW-07

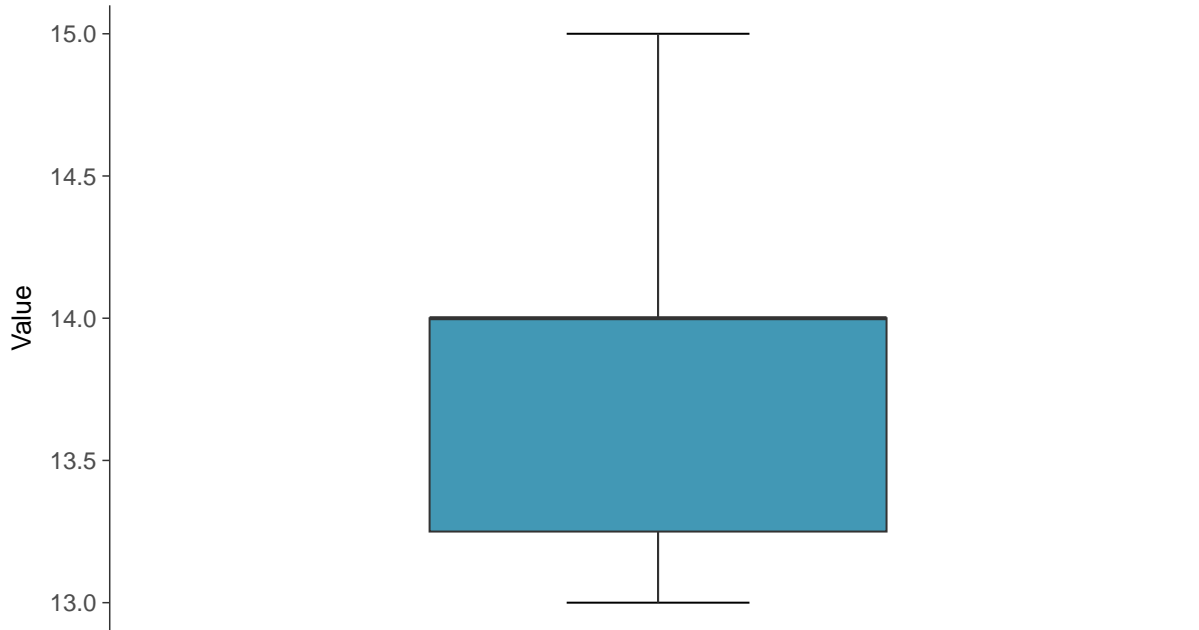
ID: 1_17_4_108





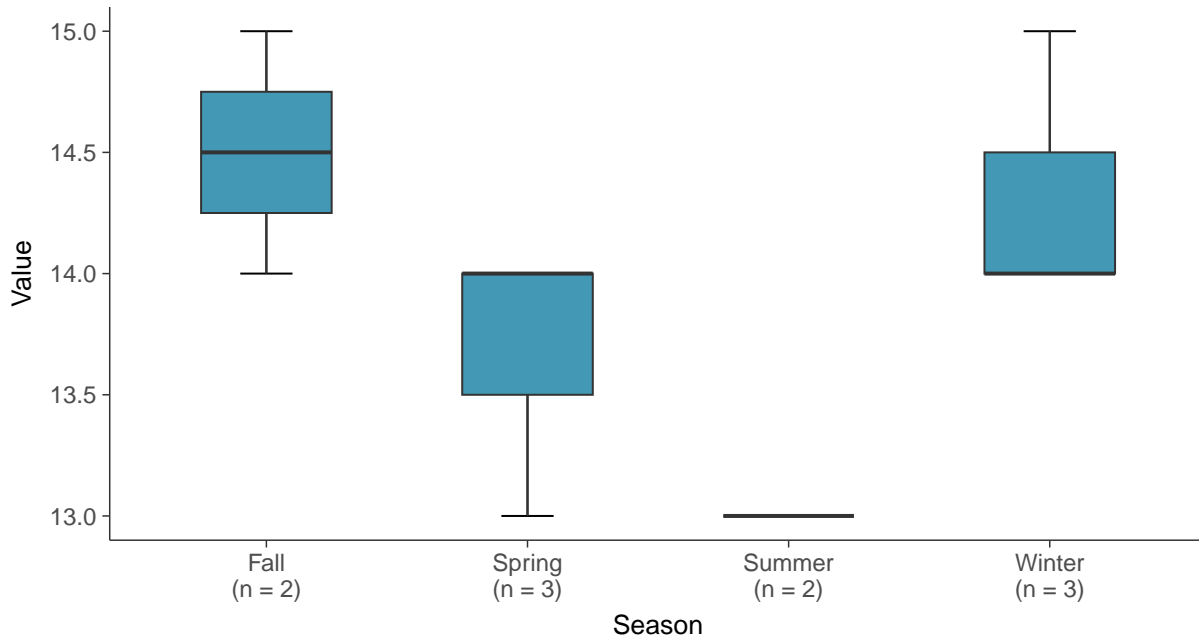
Boxplot

Chloride (as Cl), MW-07 (mg/L)



Boxplot by Season

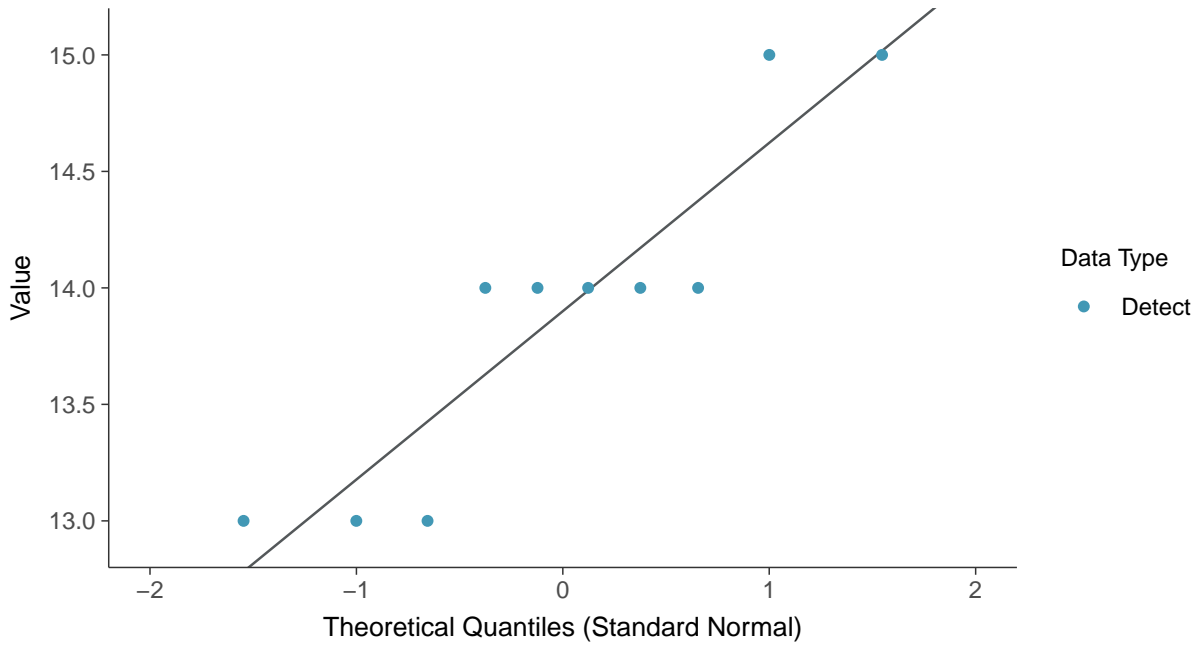
Chloride (as Cl), MW-07 (mg/L)





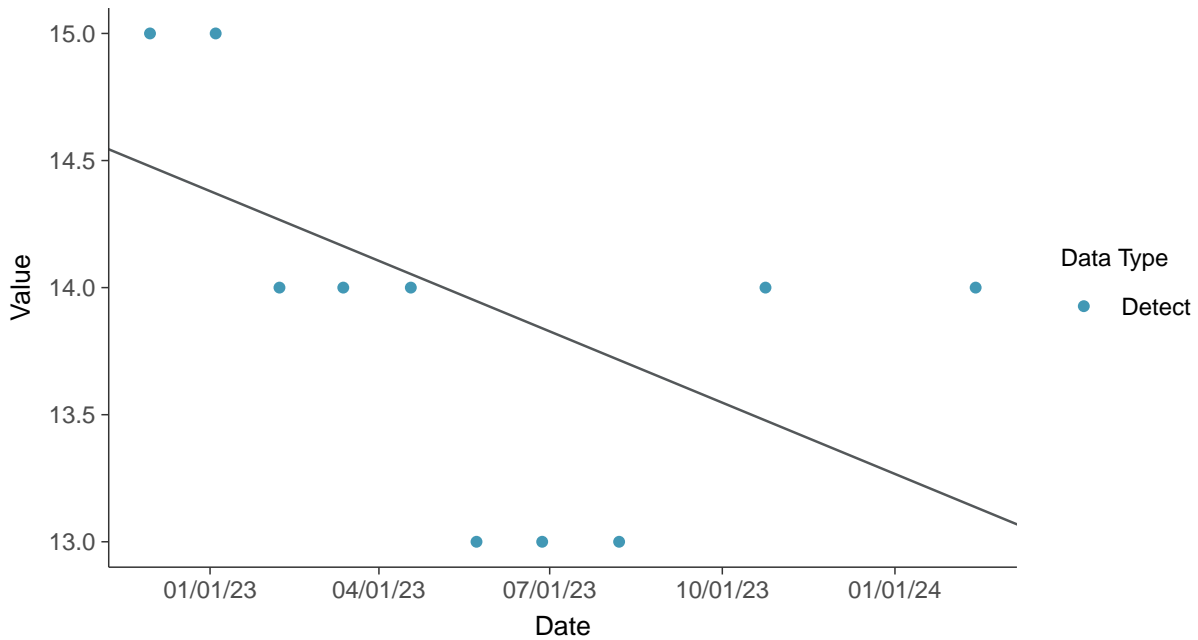
Normal Q-Q plot

Chloride (as Cl), MW-07 (mg/L)



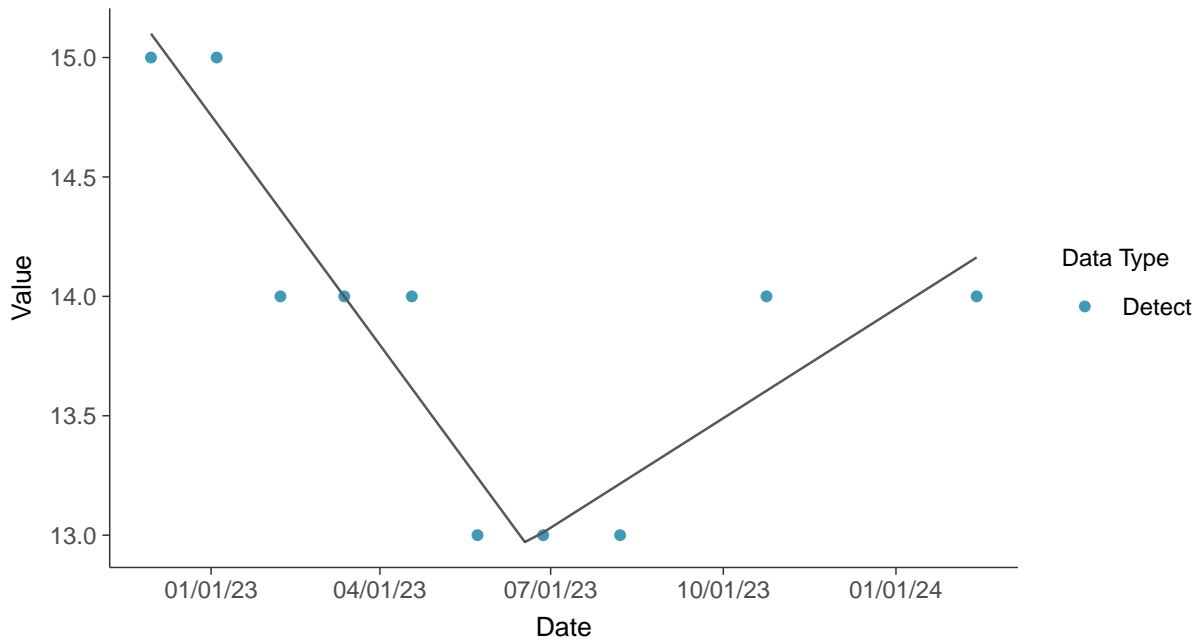
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride (as Cl), MW-07 (mg/L)





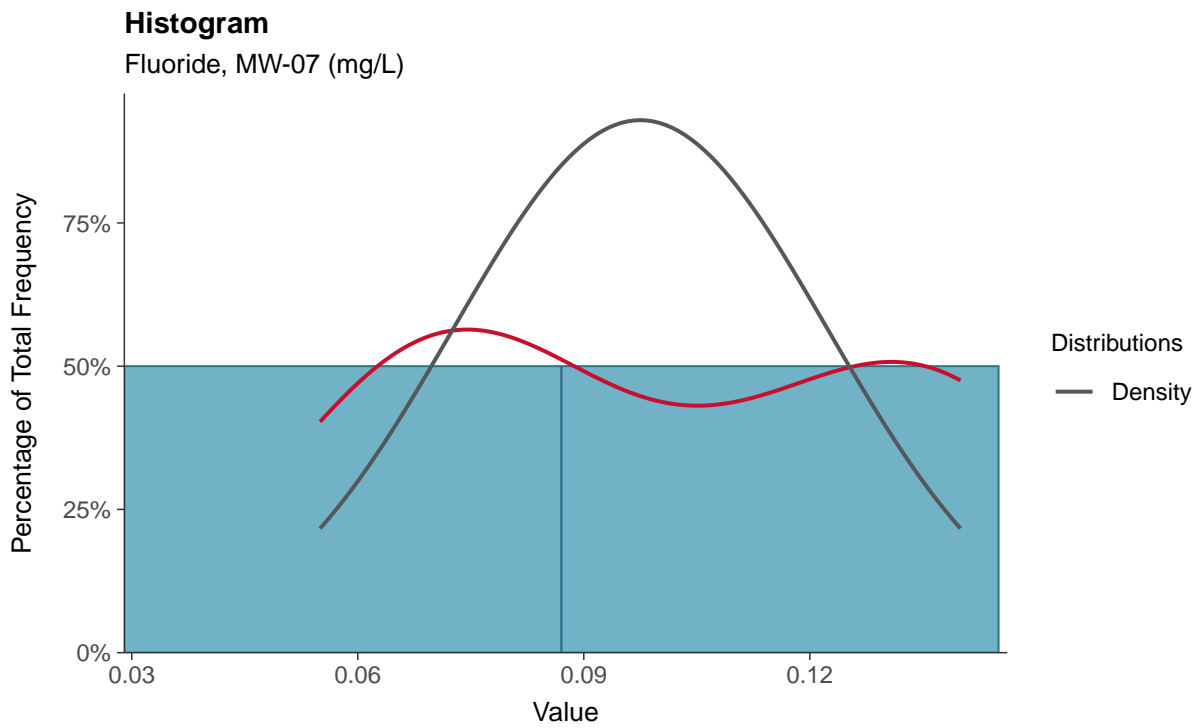
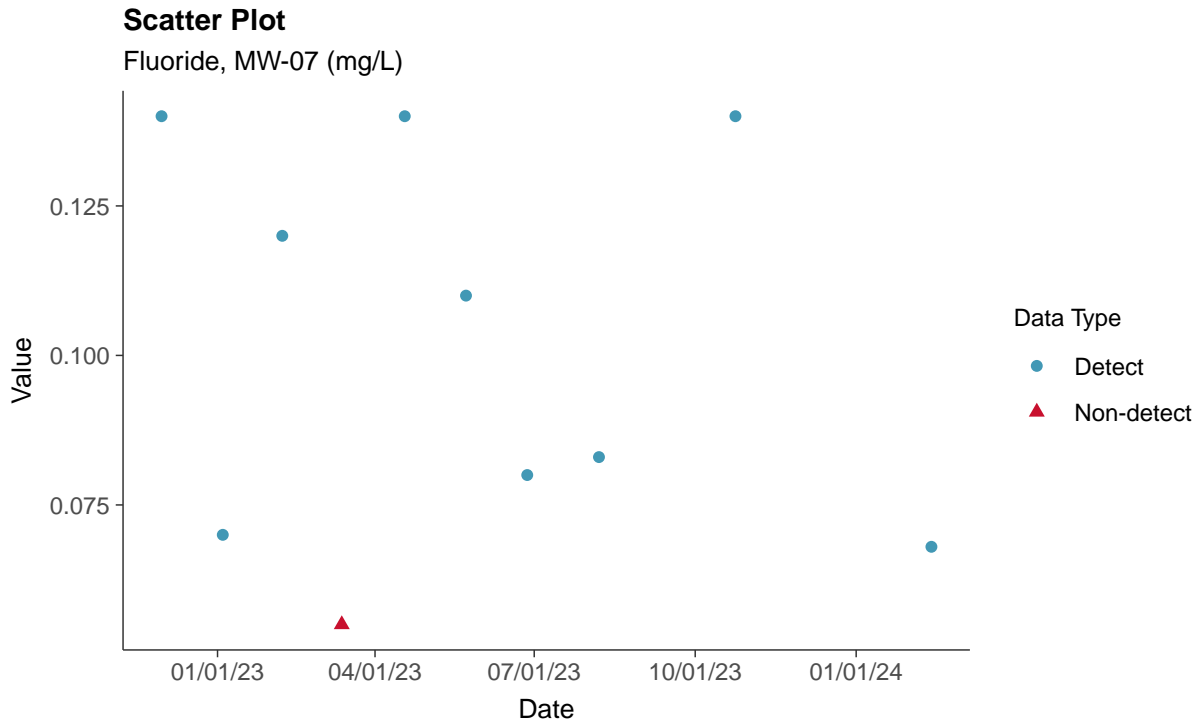
Trend Regression: Piecewise Linear-Linear
Chloride (as Cl), MW-07 (mg/L)





Appendix III: Fluoride, MW-07

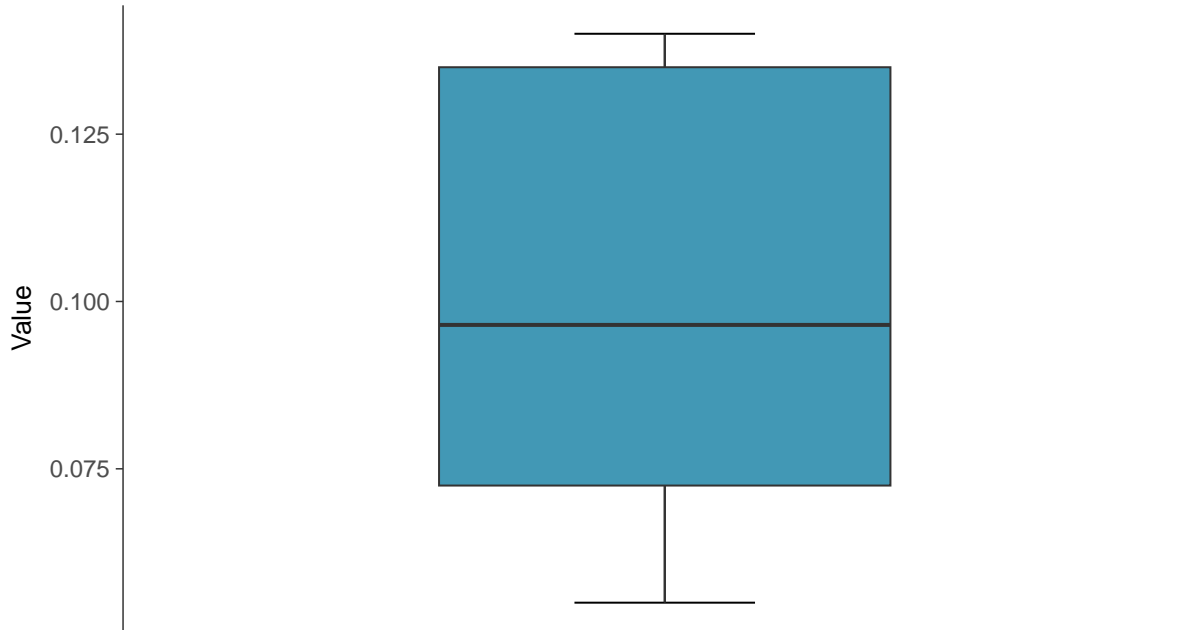
ID: 1_17_4_112





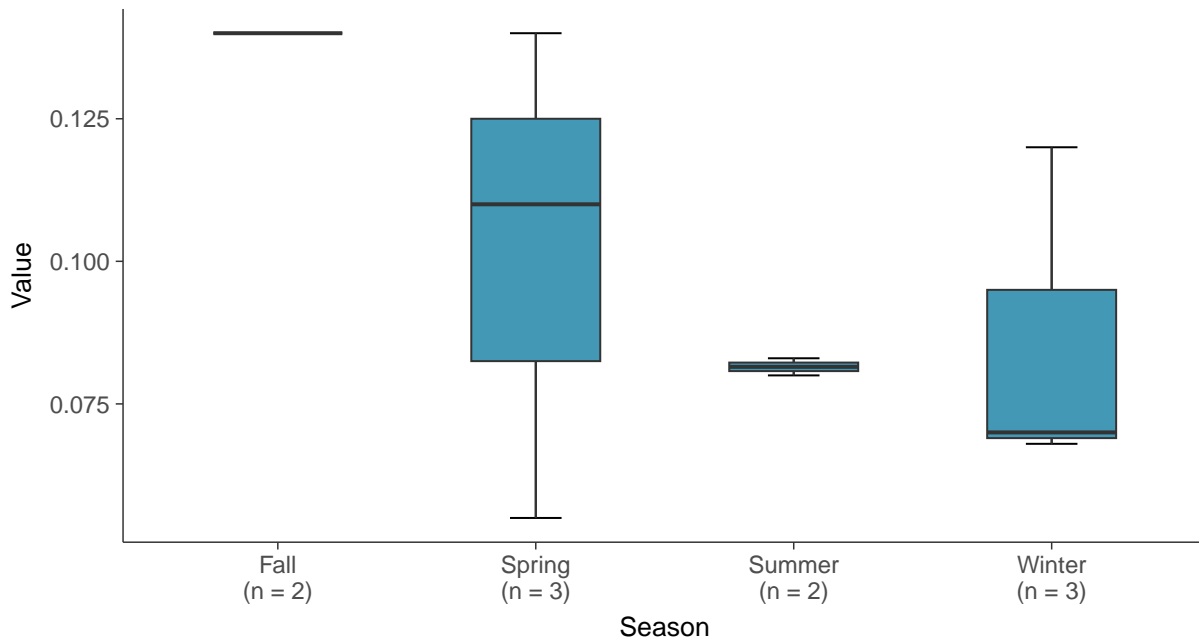
Boxplot

Fluoride, MW-07 (mg/L)



Boxplot by Season

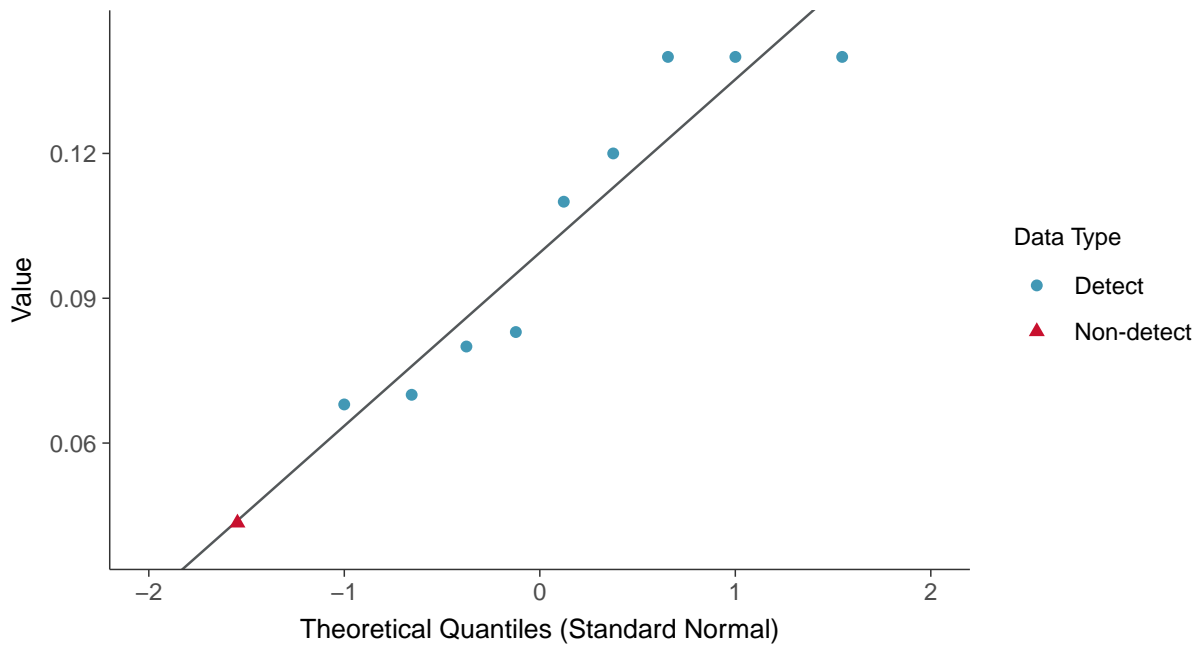
Fluoride, MW-07 (mg/L)





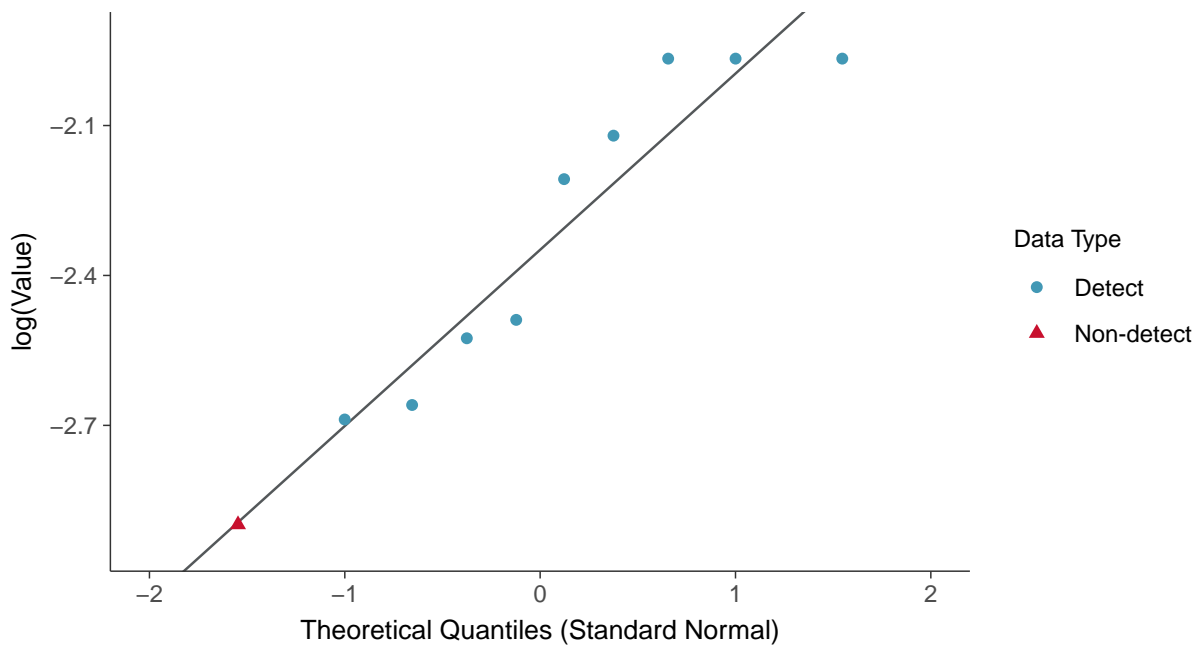
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-07 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

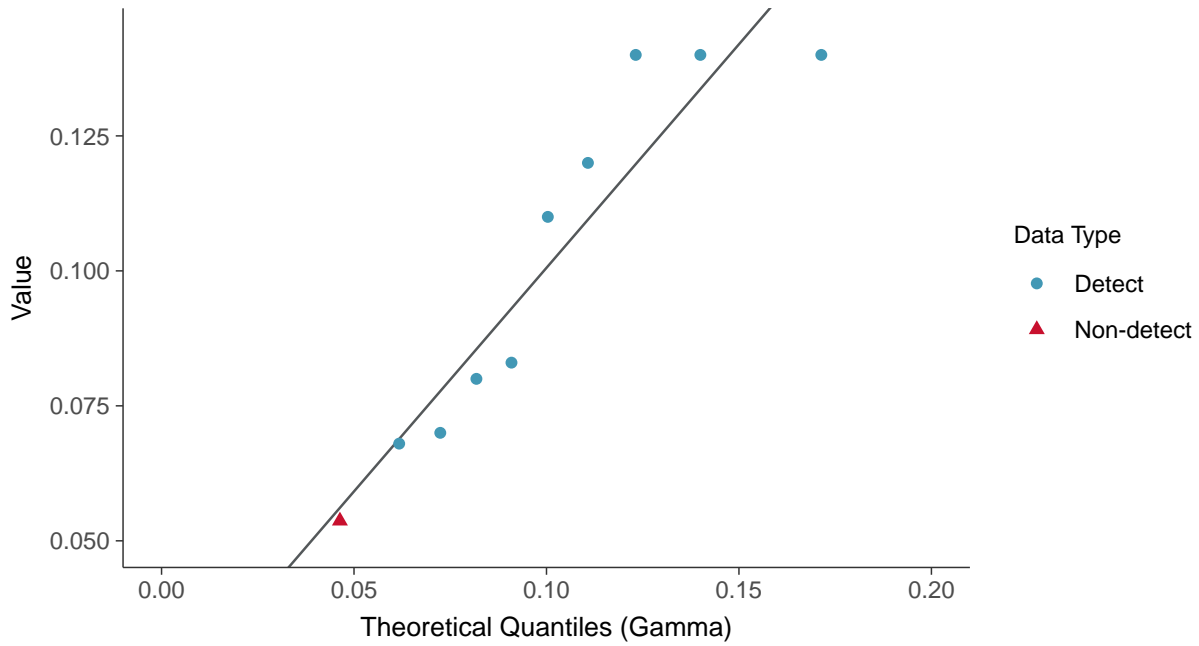
Fluoride, MW-07 (mg/L)





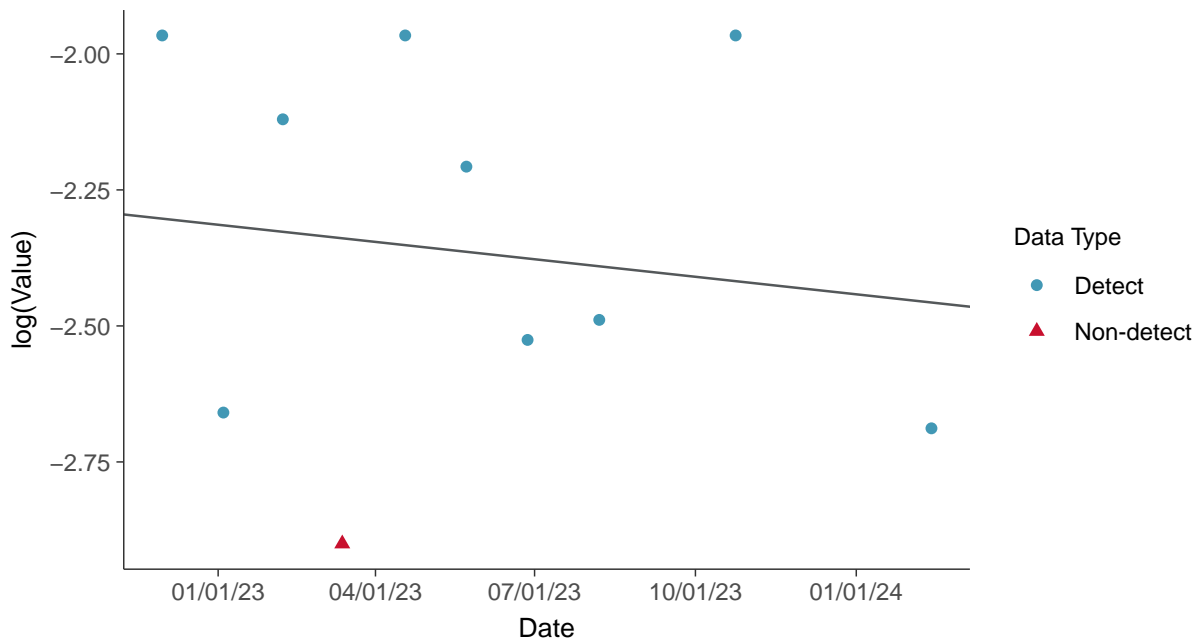
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-07 (mg/L)



Trend Regression: Lognormal MLE

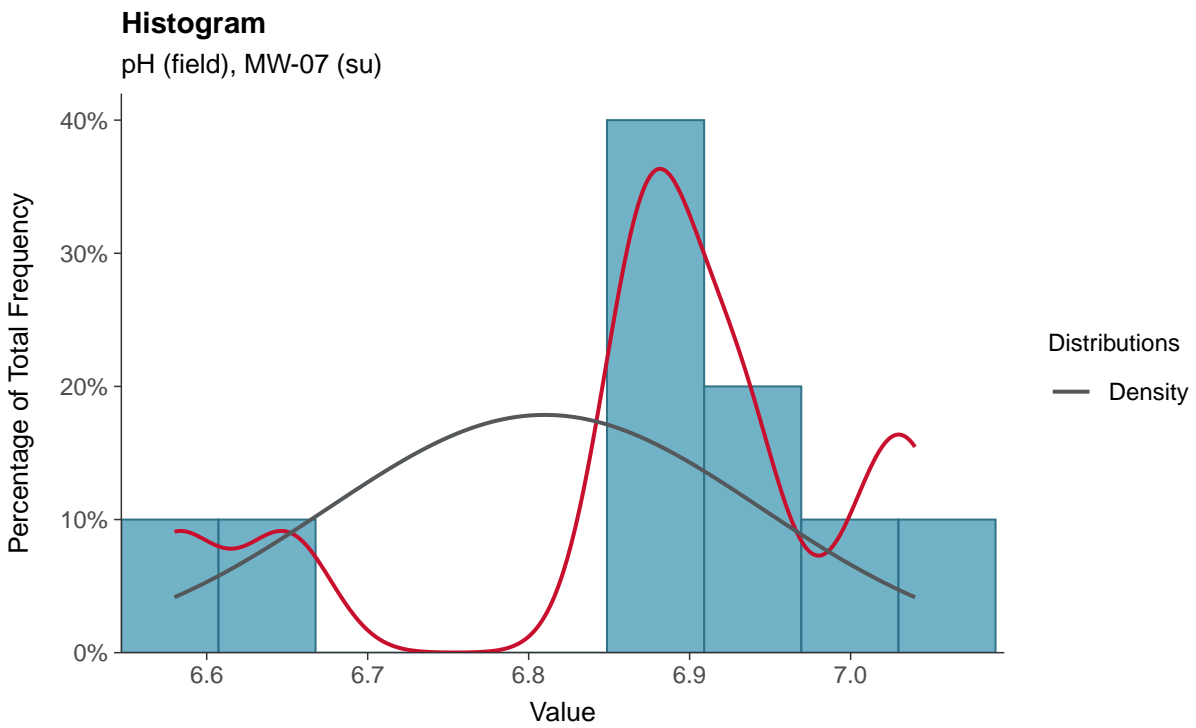
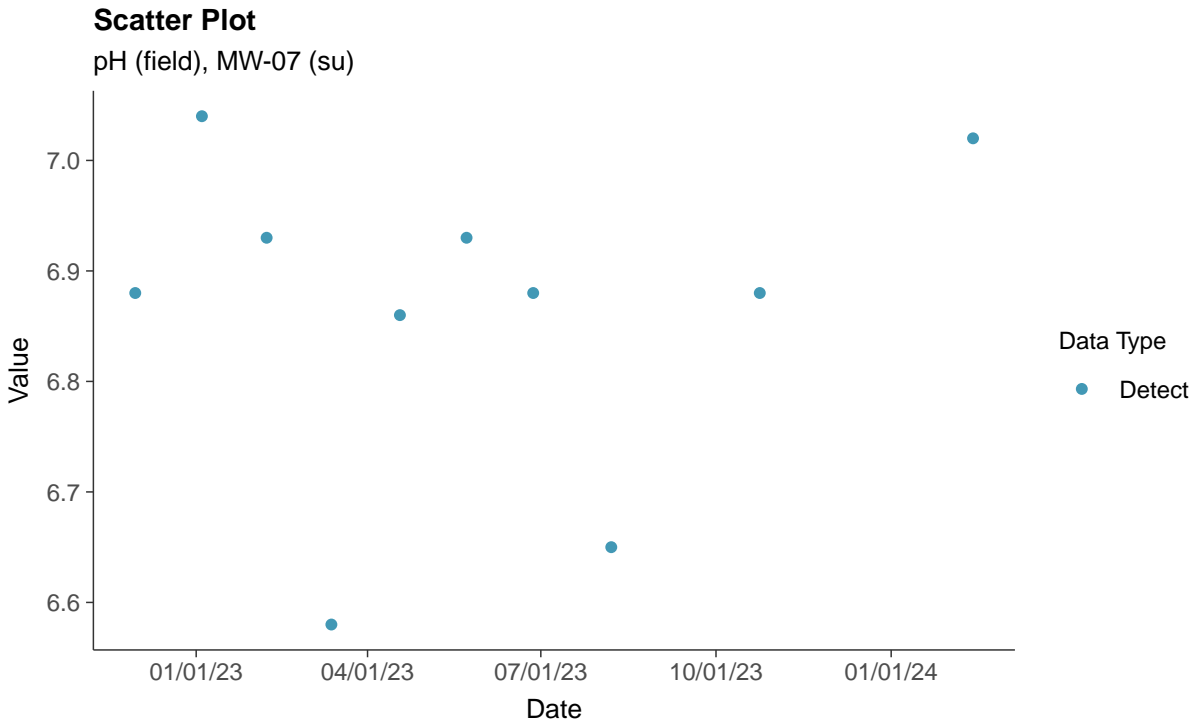
Fluoride, MW-07 (mg/L)





Appendix III: pH (field), MW-07

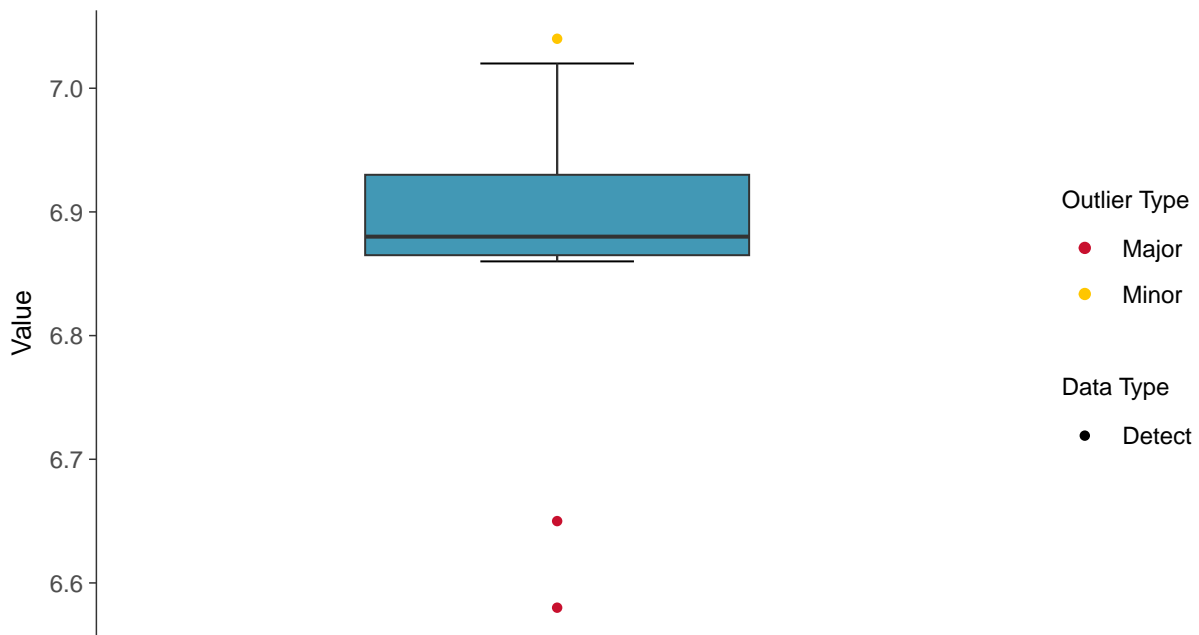
ID: 1_17_4_120





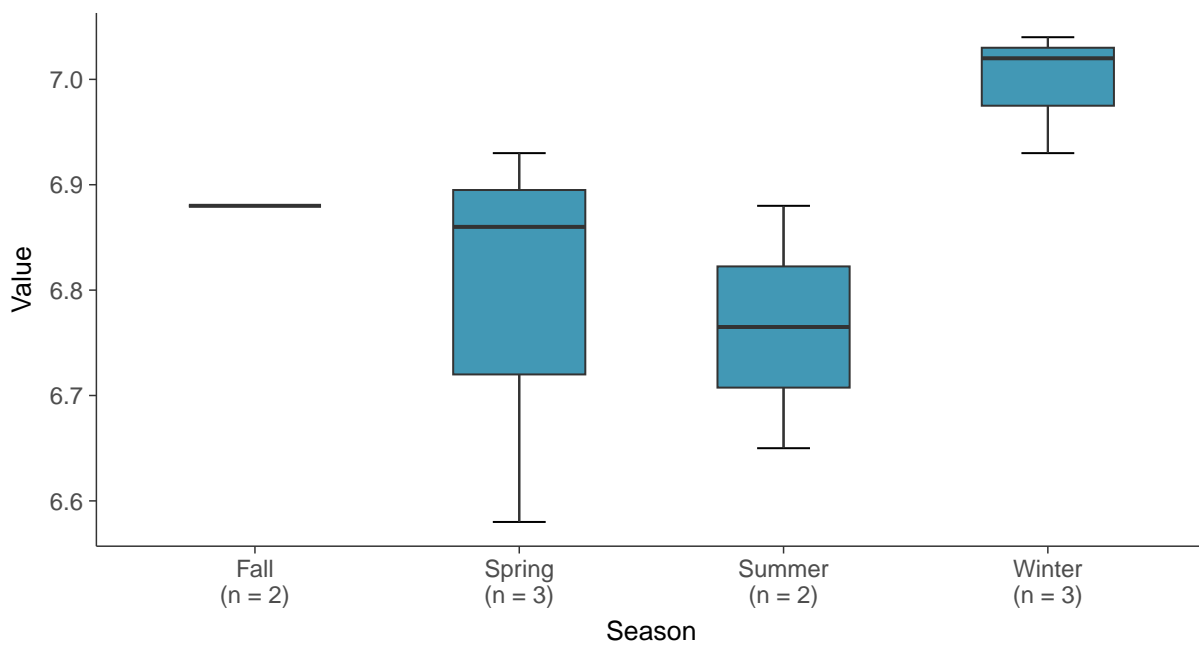
Boxplot

pH (field), MW-07 (su)



Boxplot by Season

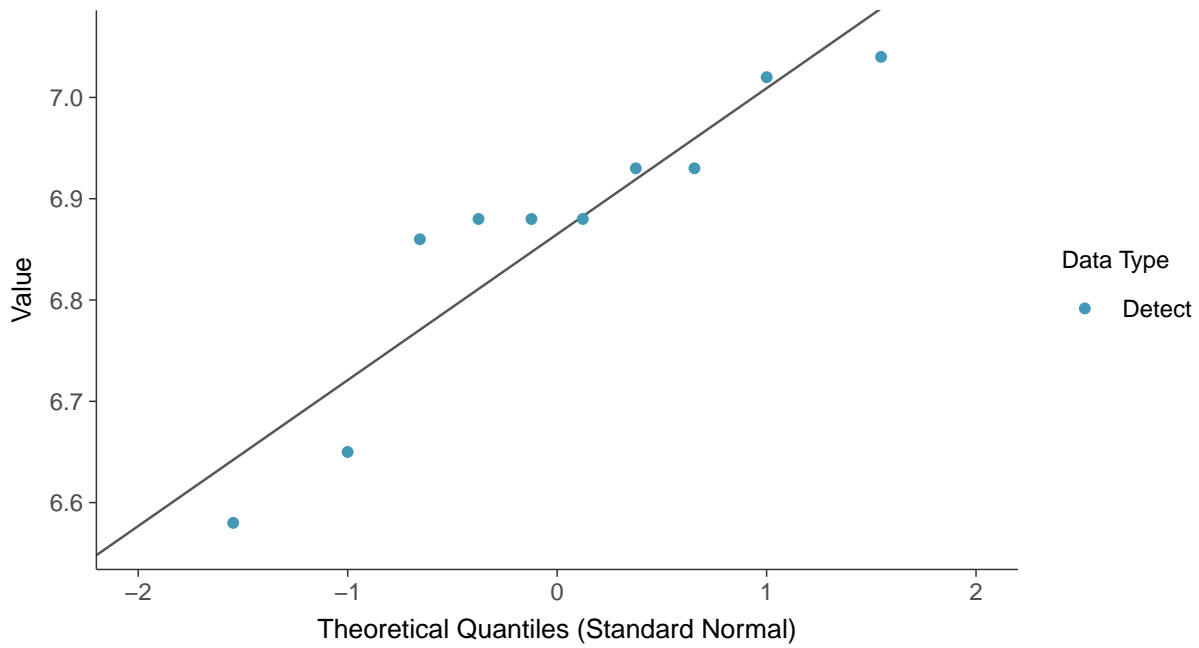
pH (field), MW-07 (su)





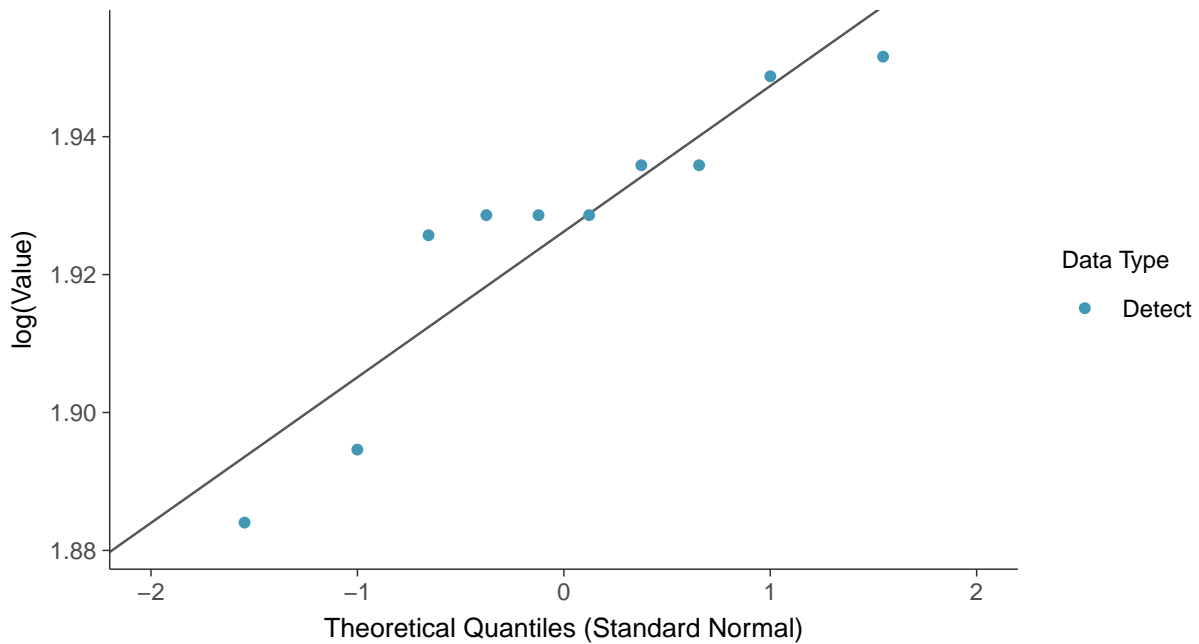
Normal Q-Q plot

pH (field), MW-07 (su)



Lognormal Q-Q plot

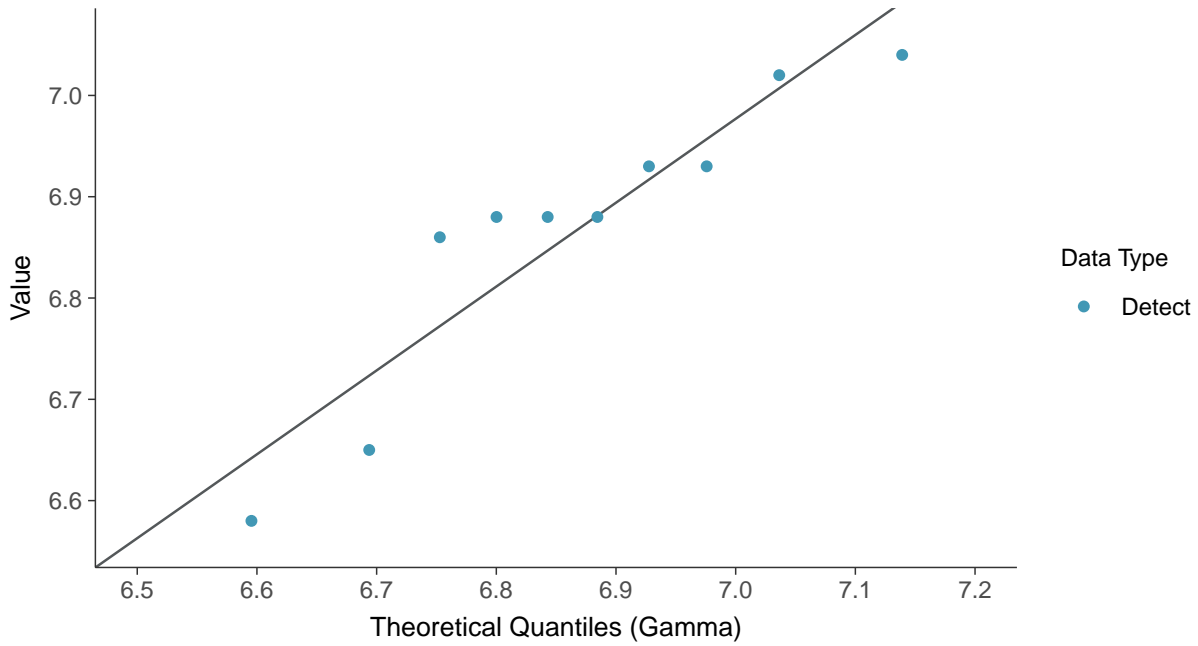
pH (field), MW-07 (su)





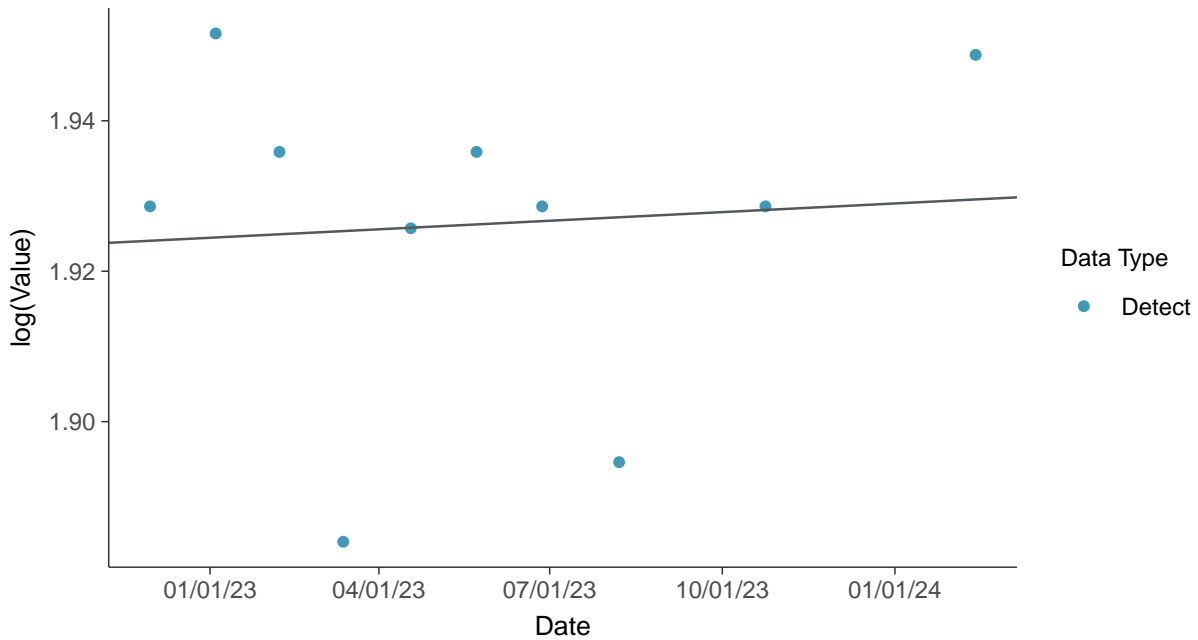
Gamma Q-Q plot

pH (field), MW-07 (su)



Trend Regression: Lognormal MLE

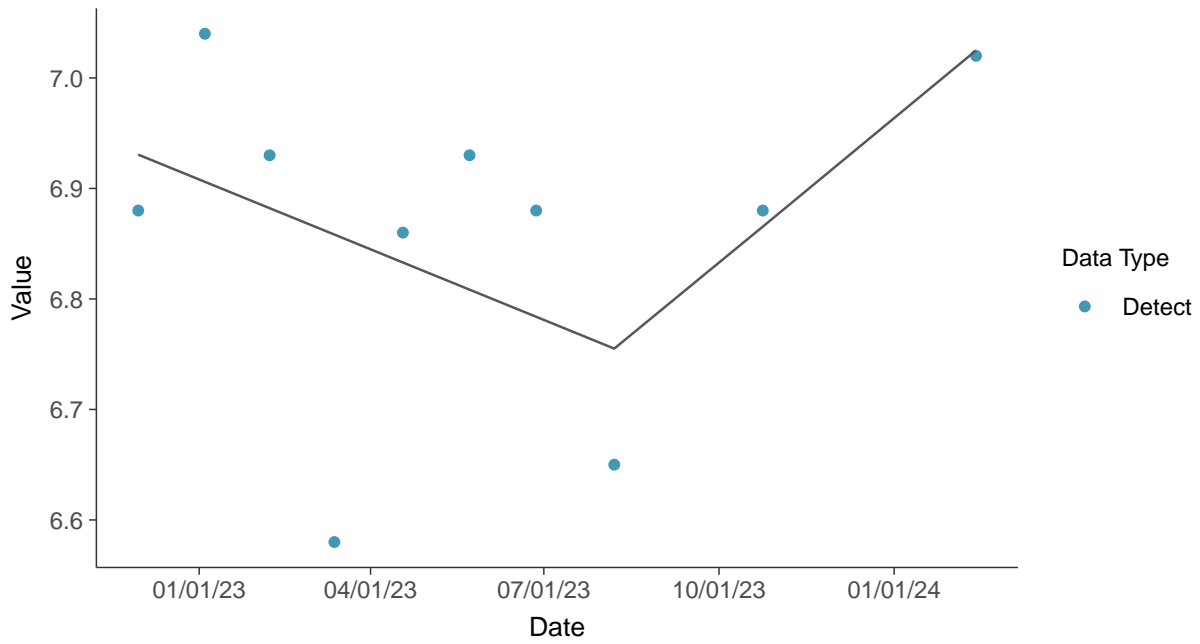
pH (field), MW-07 (su)





Trend Regression: Piecewise Linear-Linear

pH (field), MW-07 (su)



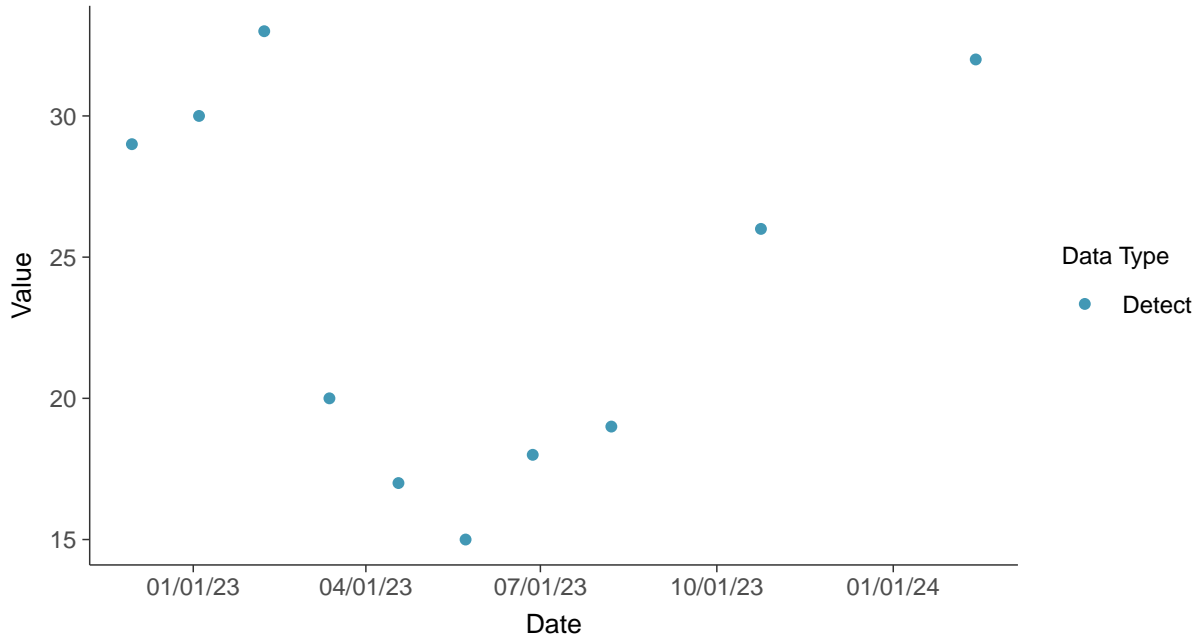


Appendix III: Sulfate (as SO₄), MW-07

ID: 1_17_4_124

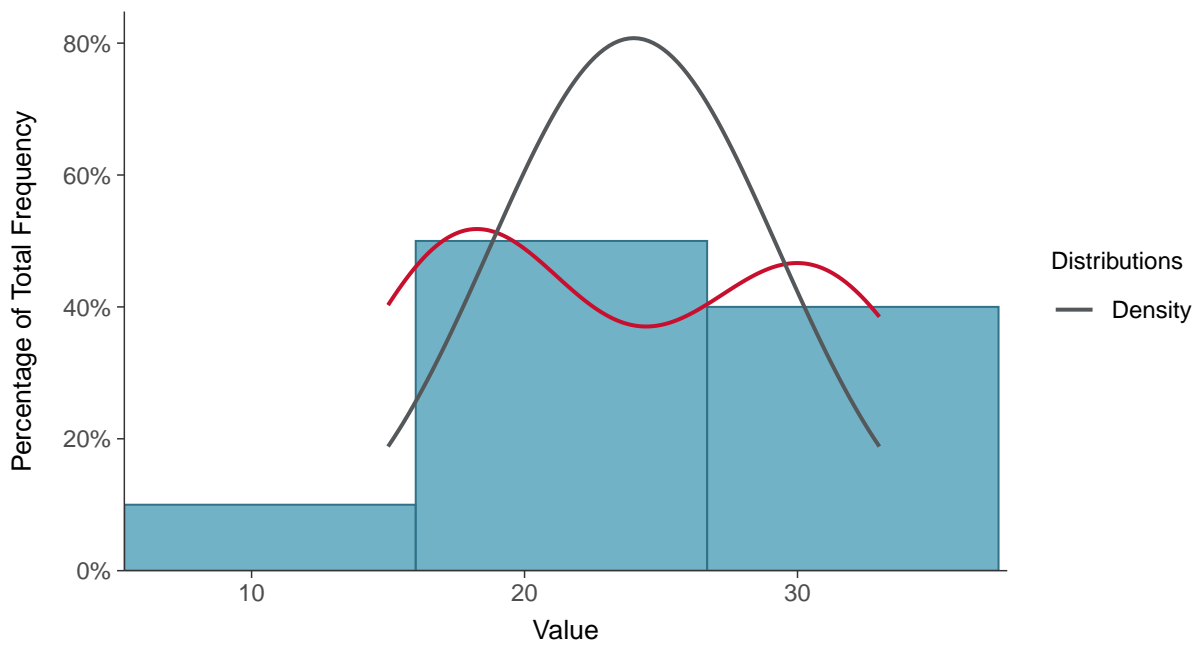
Scatter Plot

Sulfate (as SO₄), MW-07 (mg/L)



Histogram

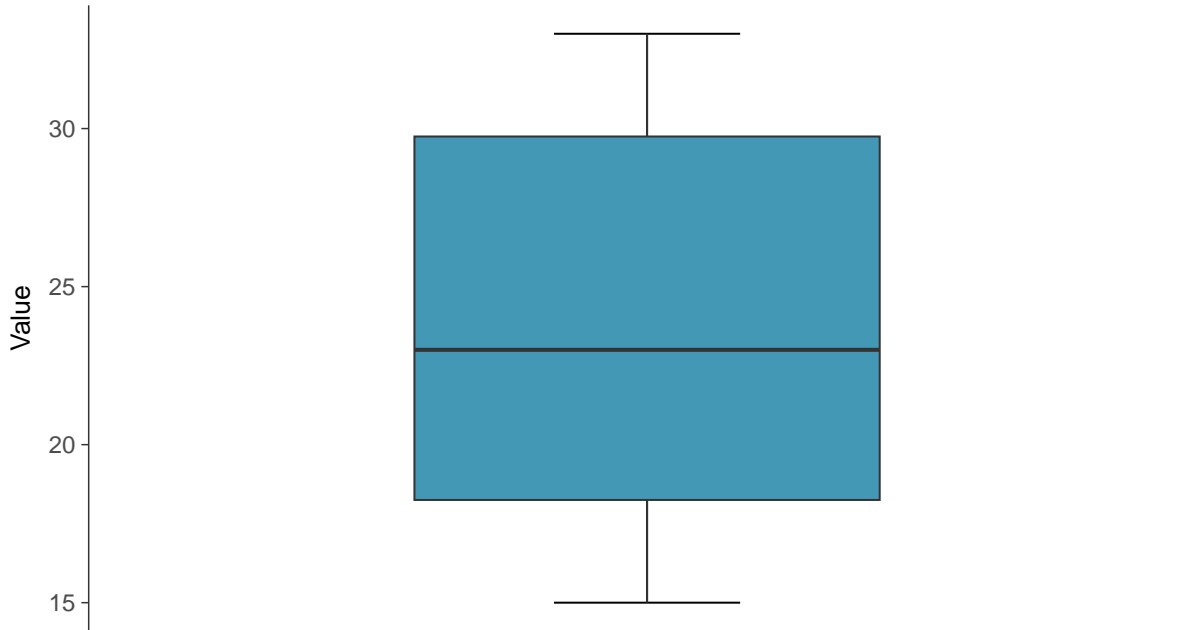
Sulfate (as SO₄), MW-07 (mg/L)





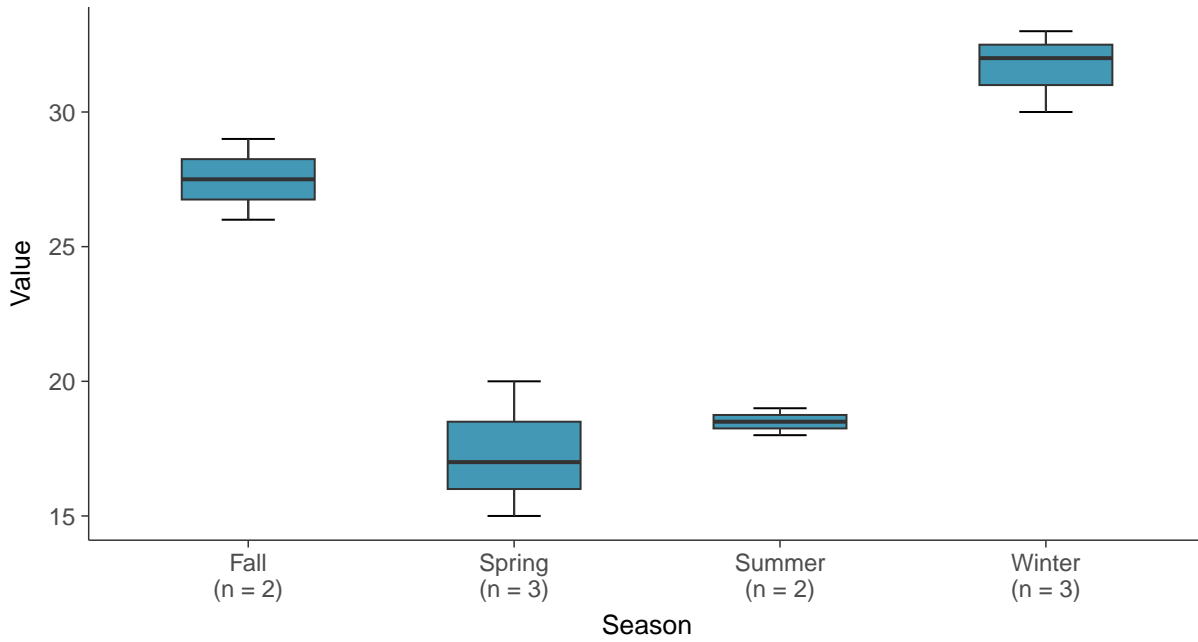
Boxplot

Sulfate (as SO₄), MW-07 (mg/L)



Boxplot by Season

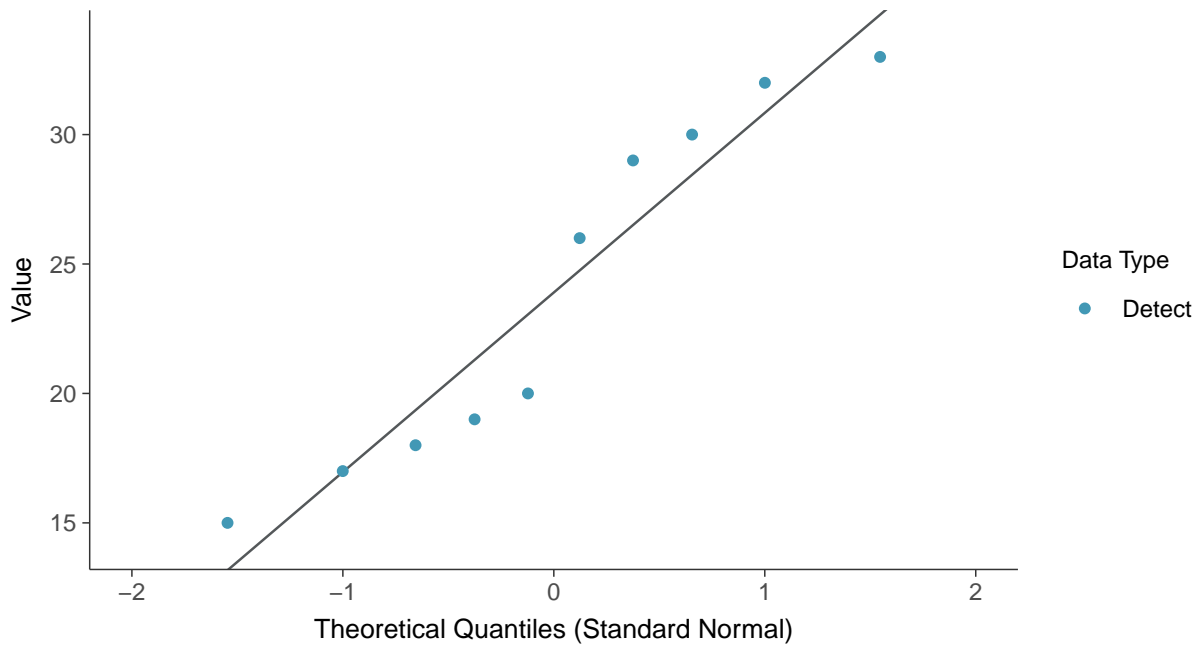
Sulfate (as SO₄), MW-07 (mg/L)





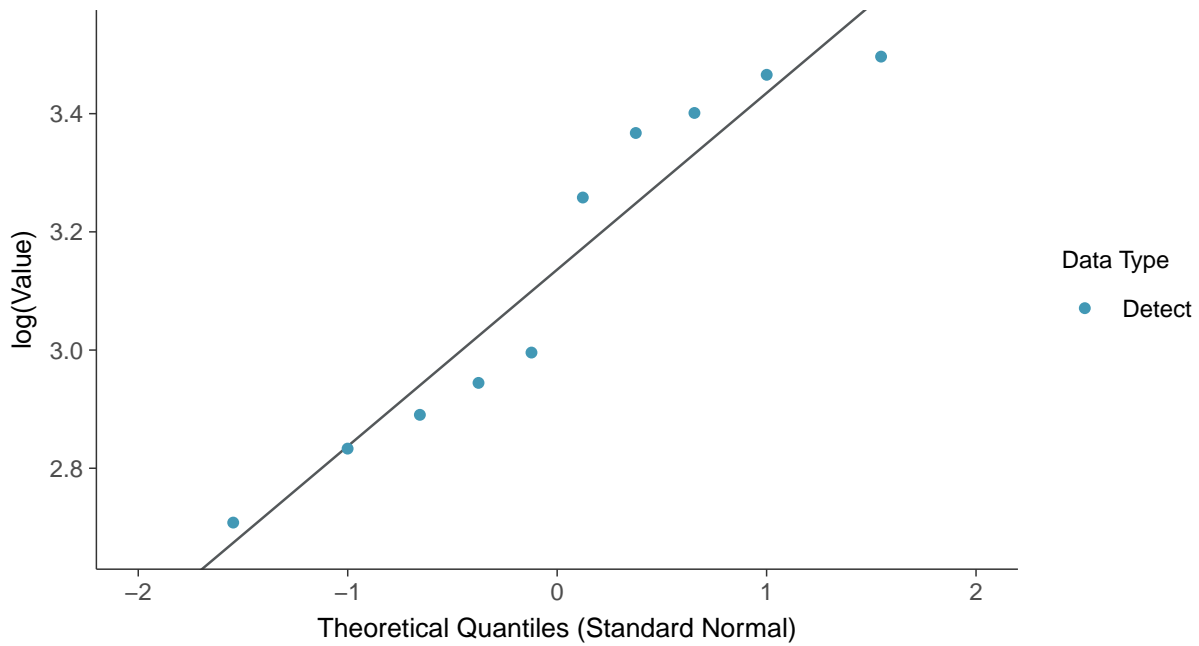
Normal Q-Q plot

Sulfate (as SO₄), MW-07 (mg/L)



Lognormal Q-Q plot

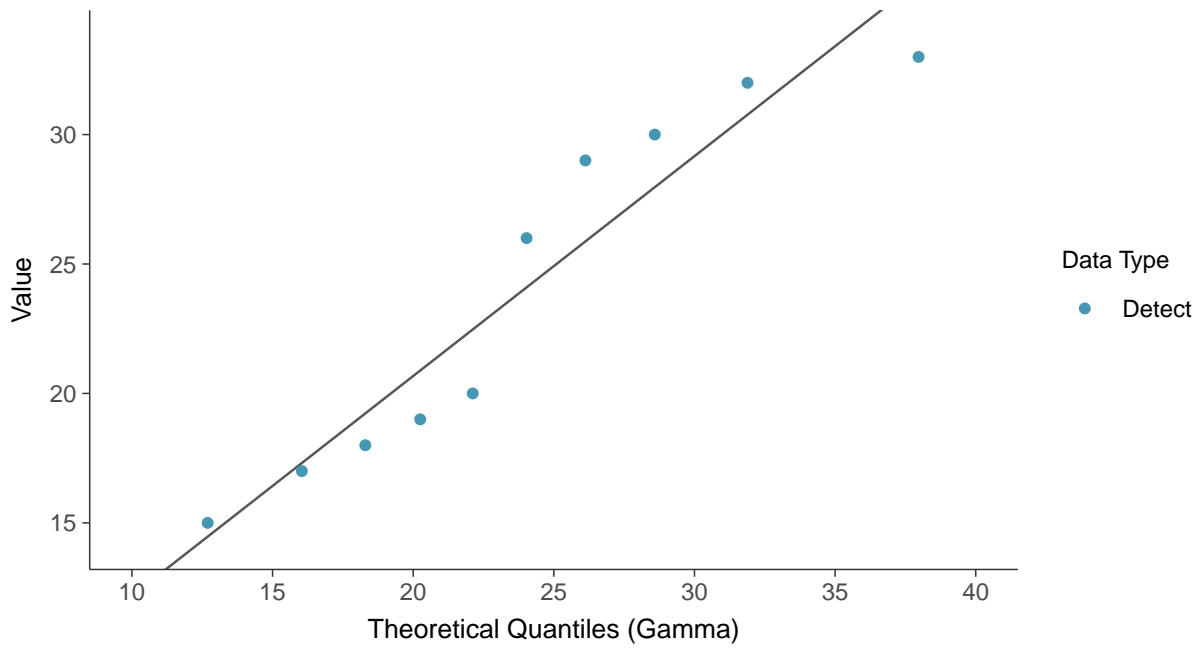
Sulfate (as SO₄), MW-07 (mg/L)





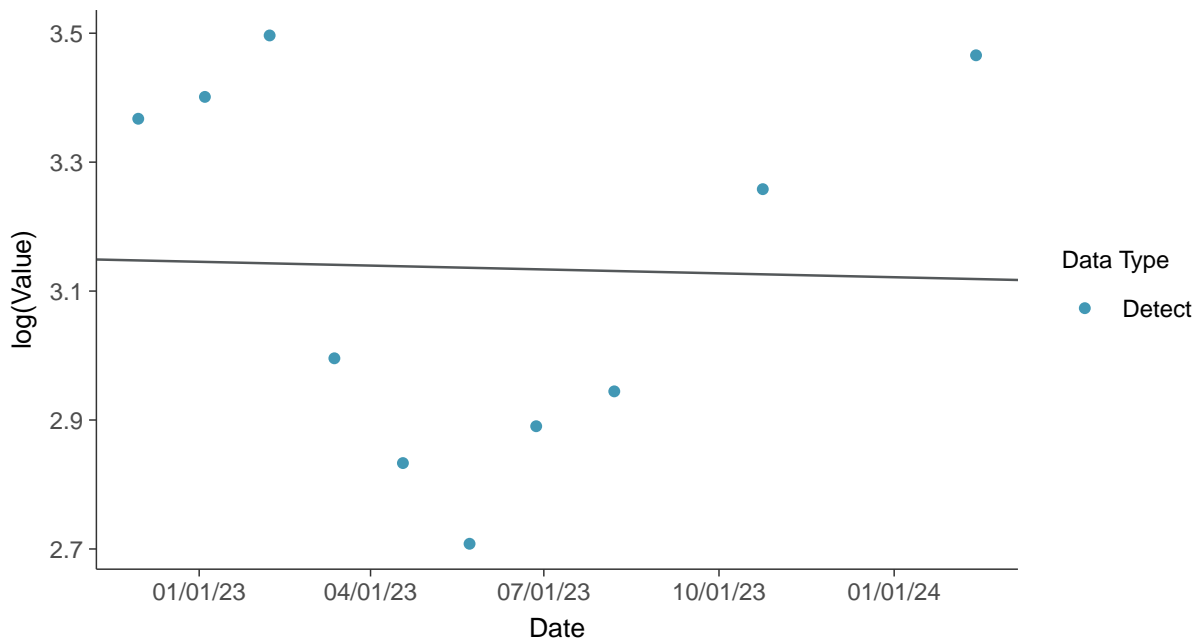
Gamma Q-Q plot

Sulfate (as SO₄), MW-07 (mg/L)



Trend Regression: Lognormal MLE

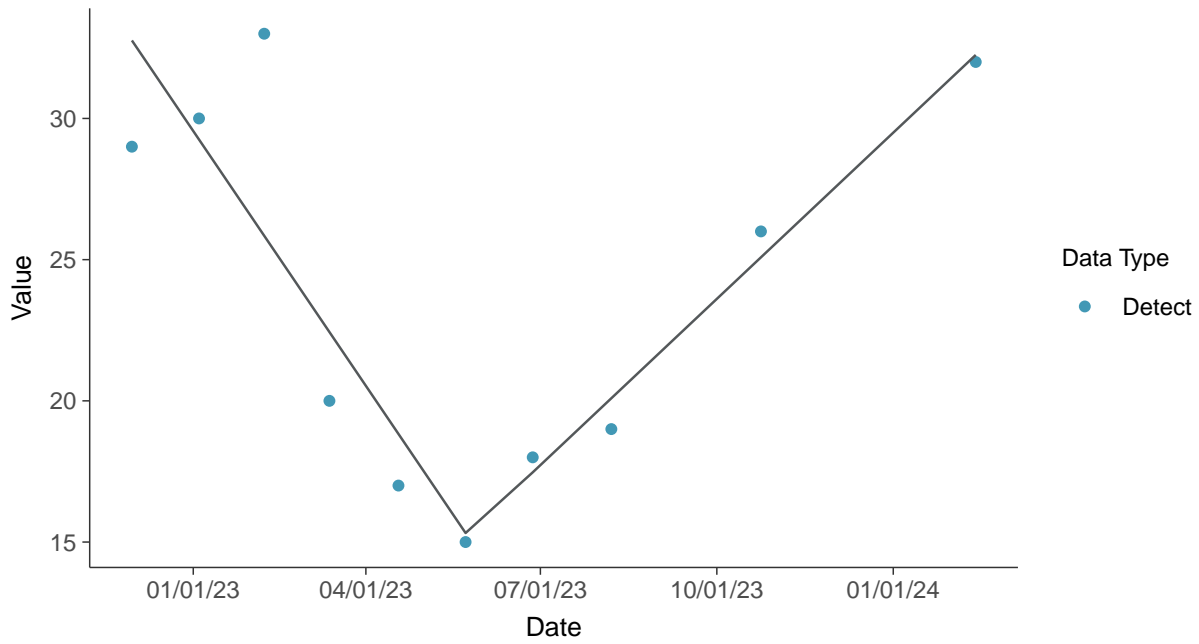
Sulfate (as SO₄), MW-07 (mg/L)





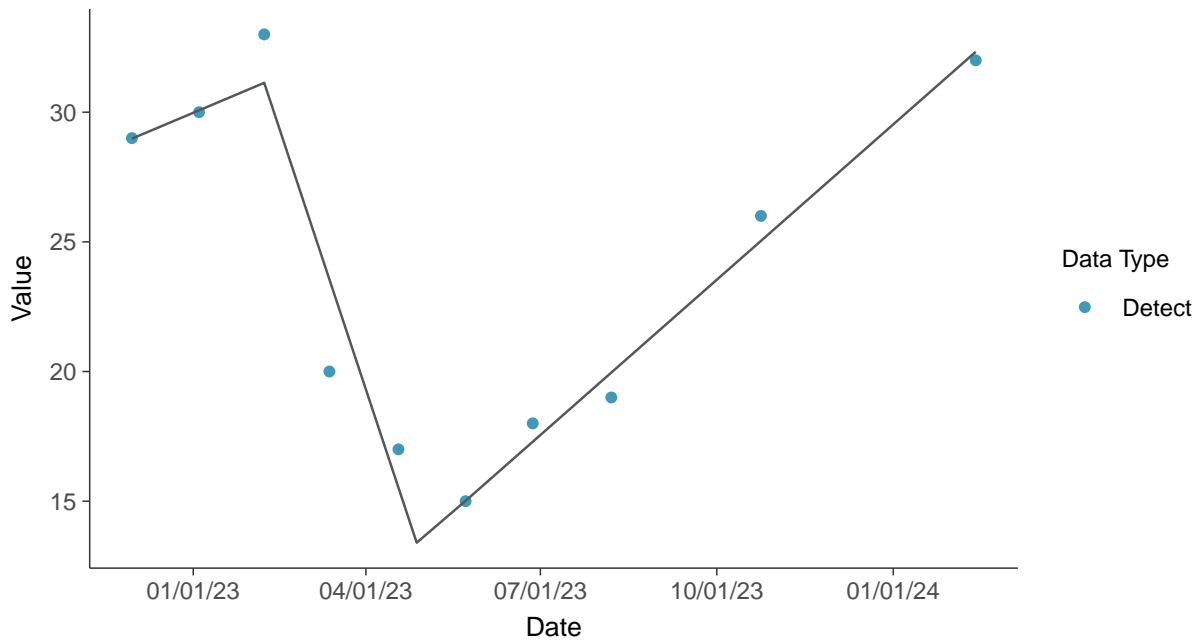
Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO₄), MW-07 (mg/L)



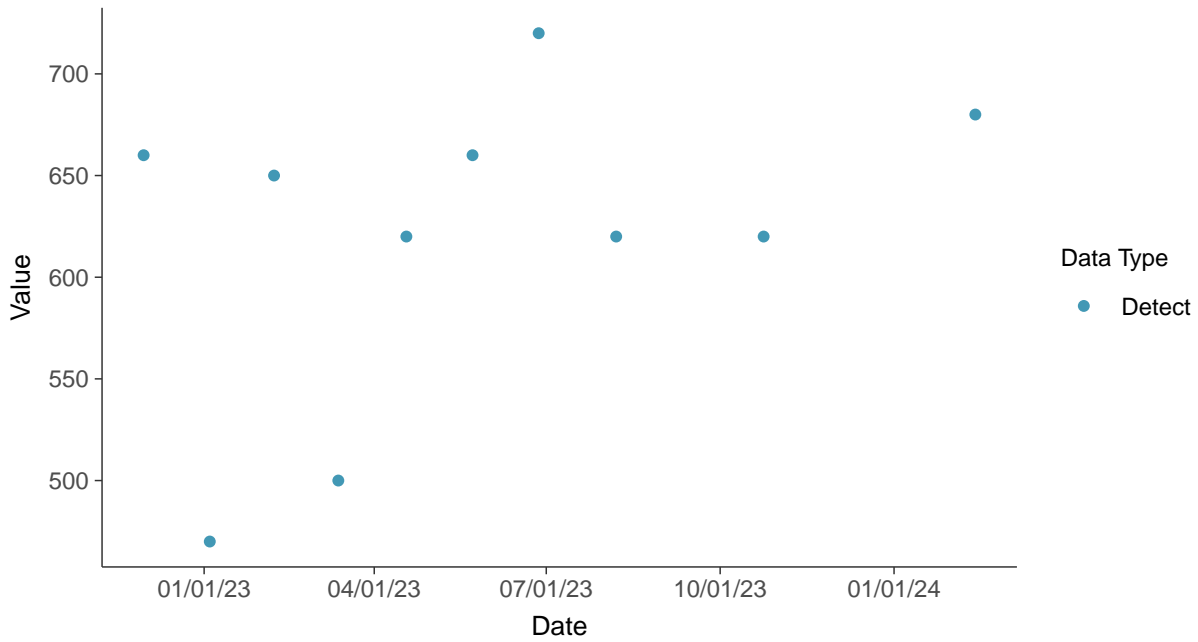


Appendix III: Total Dissolved Solids, MW-07

ID: 1_17_4_126

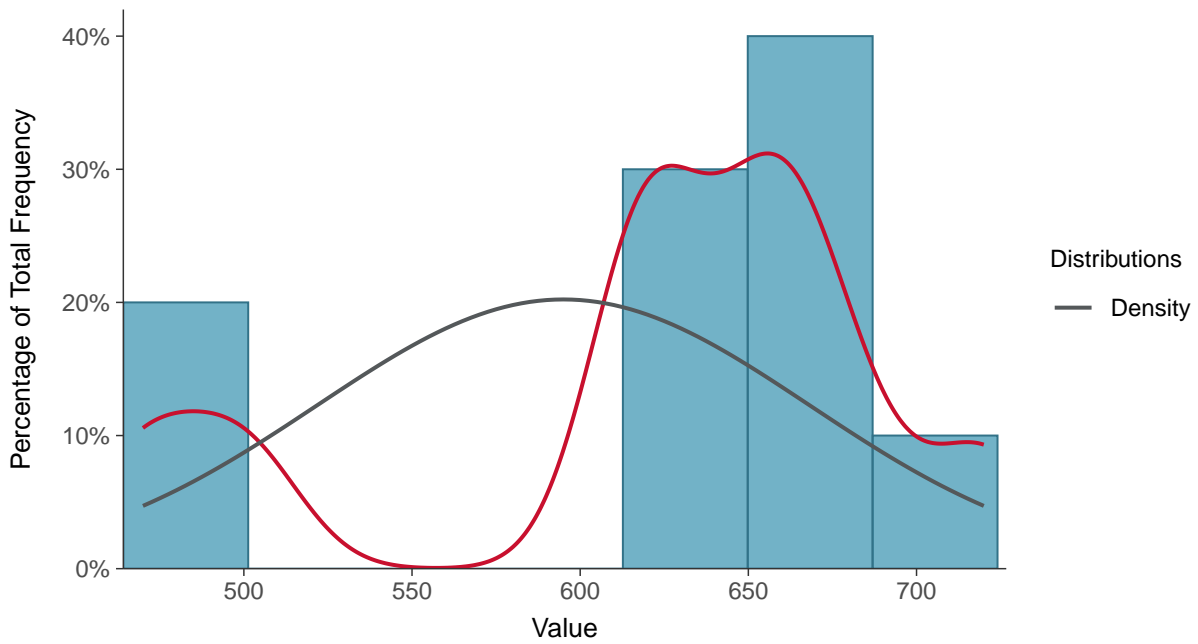
Scatter Plot

Total Dissolved Solids, MW-07 (mg/L)



Histogram

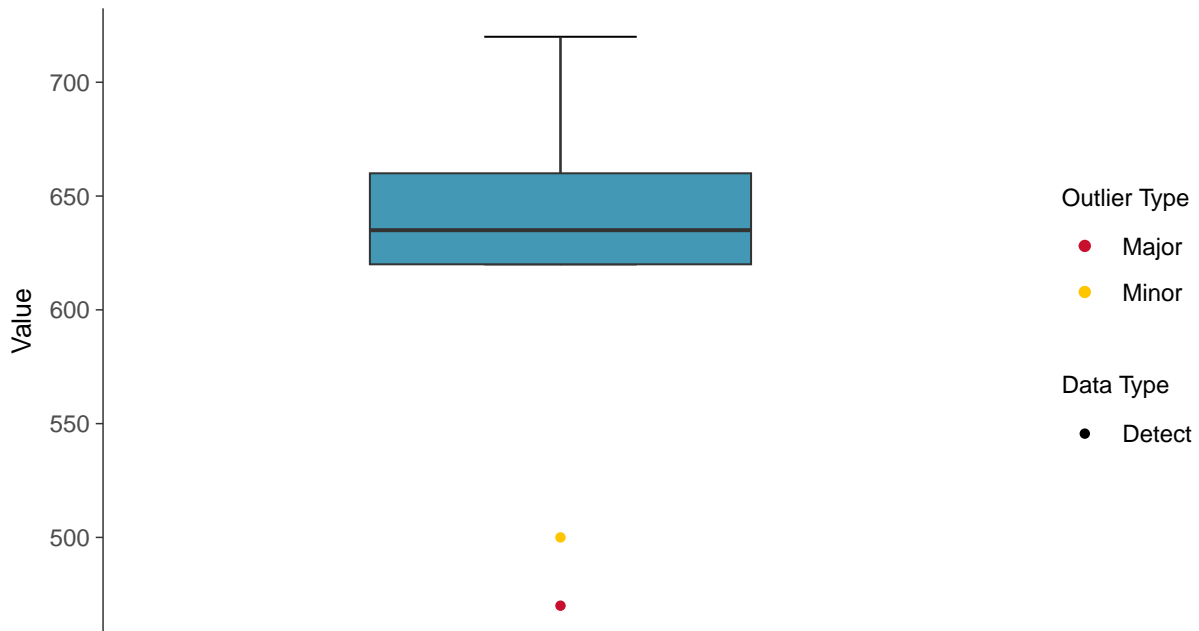
Total Dissolved Solids, MW-07 (mg/L)





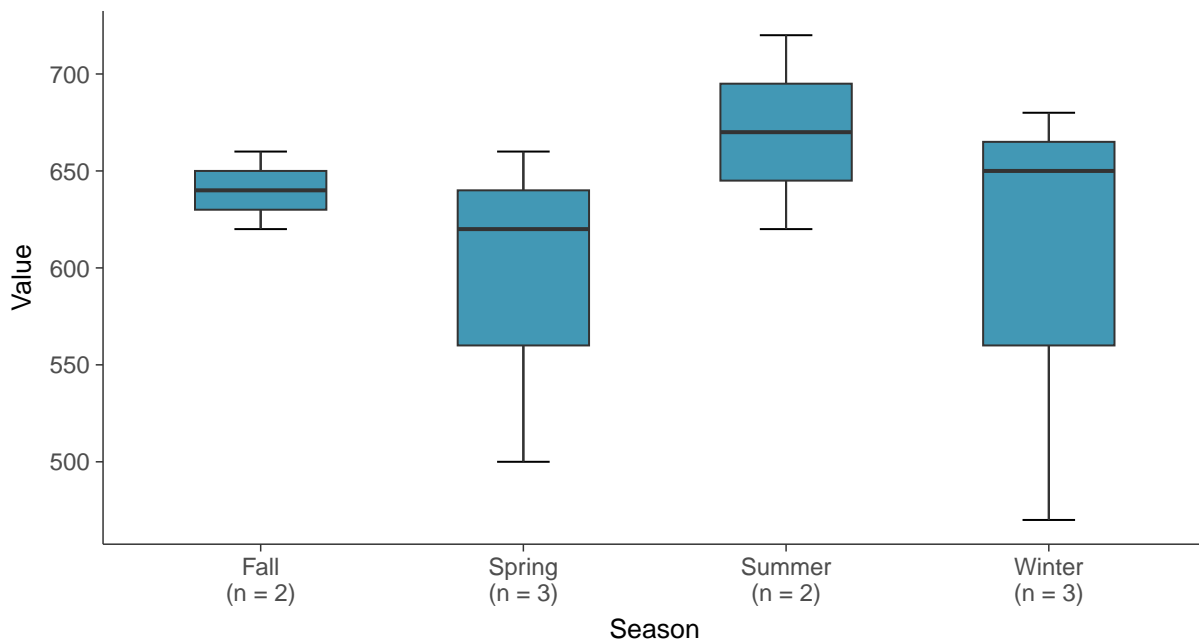
Boxplot

Total Dissolved Solids, MW-07 (mg/L)



Boxplot by Season

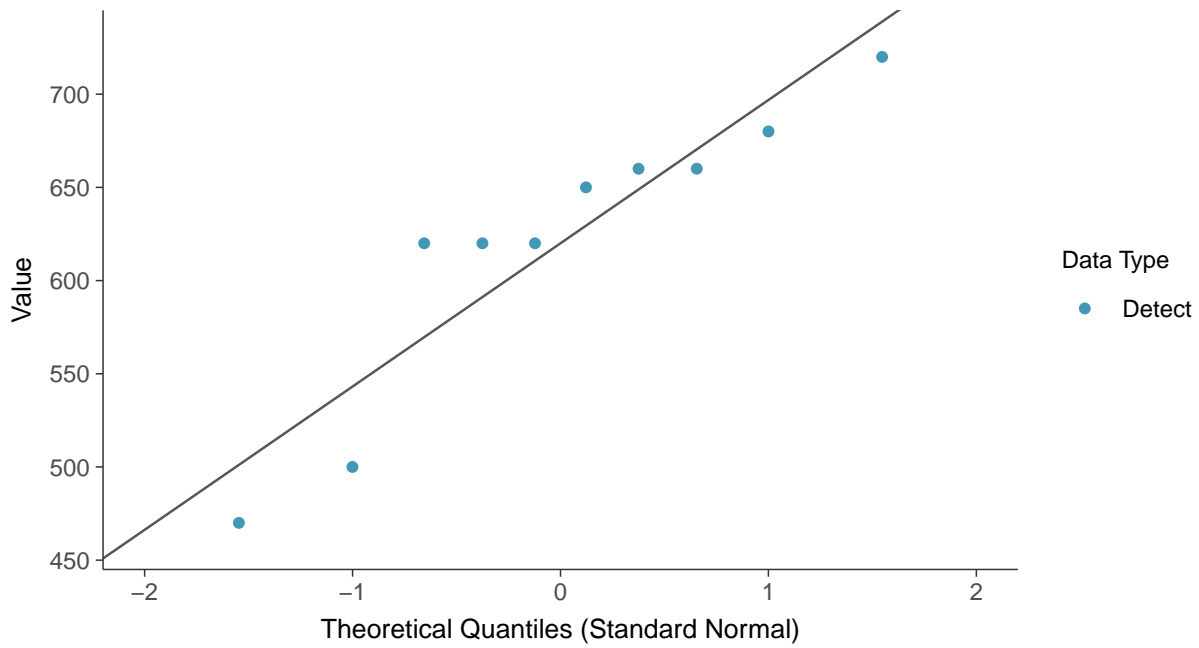
Total Dissolved Solids, MW-07 (mg/L)





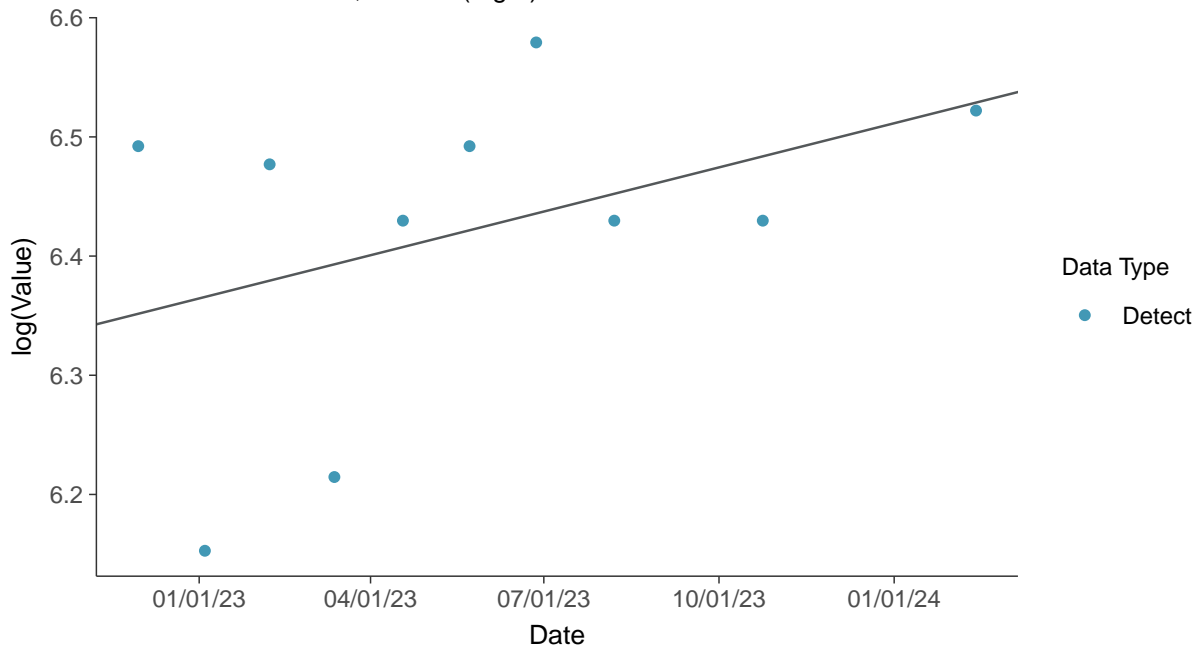
Normal Q-Q plot

Total Dissolved Solids, MW-07 (mg/L)



Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-07 (mg/L)



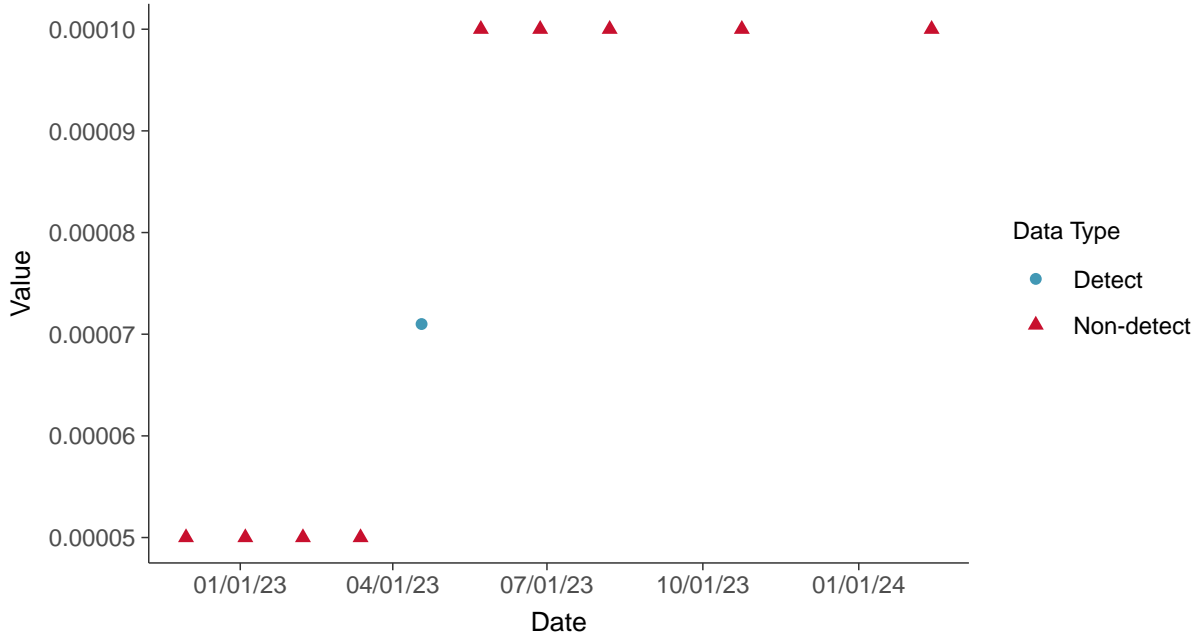


Appendix IV: Antimony, MW-07

ID: 1_17_5_101

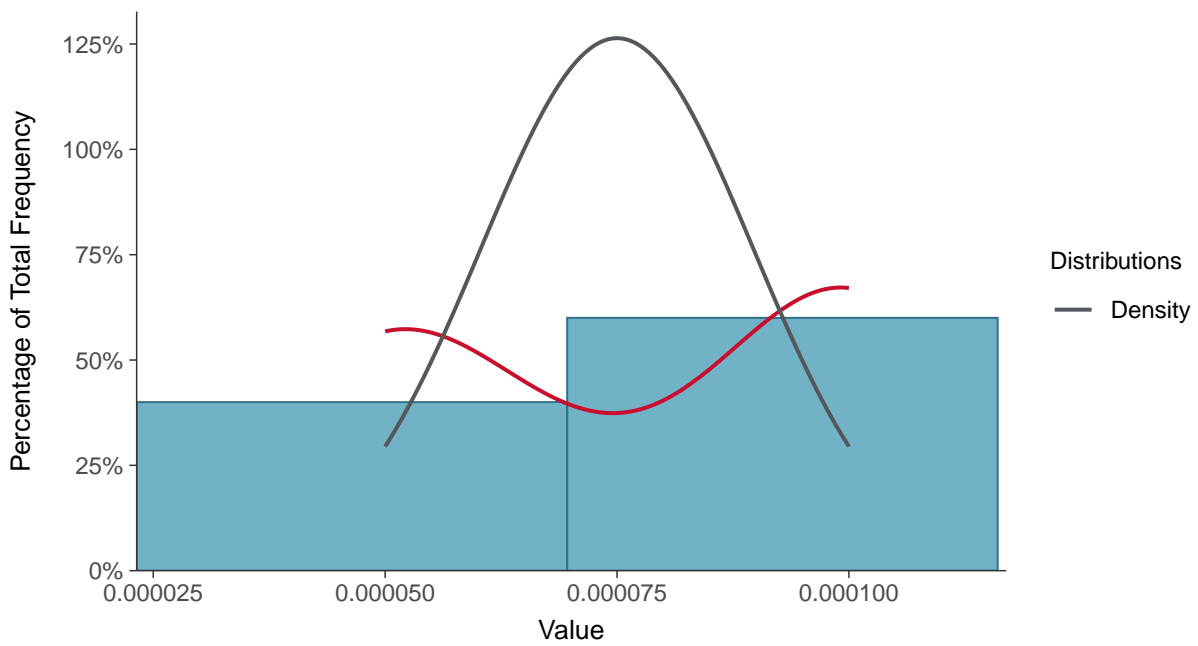
Scatter Plot

Antimony, MW-07 (mg/L)



Histogram

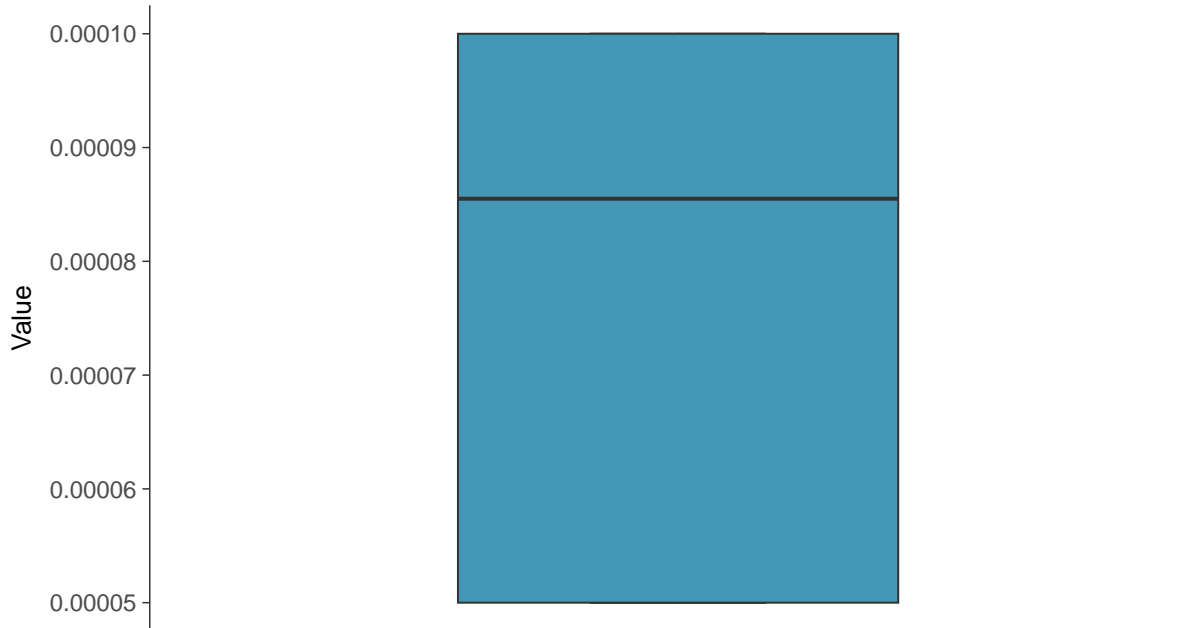
Antimony, MW-07 (mg/L)





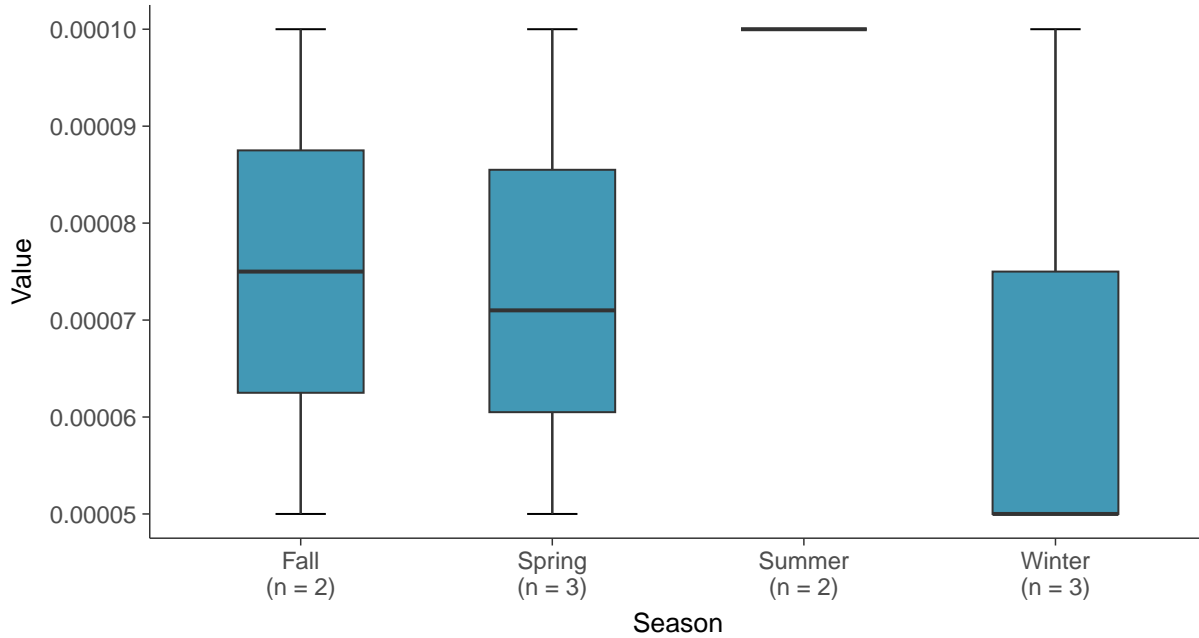
Boxplot

Antimony, MW-07 (mg/L)



Boxplot by Season

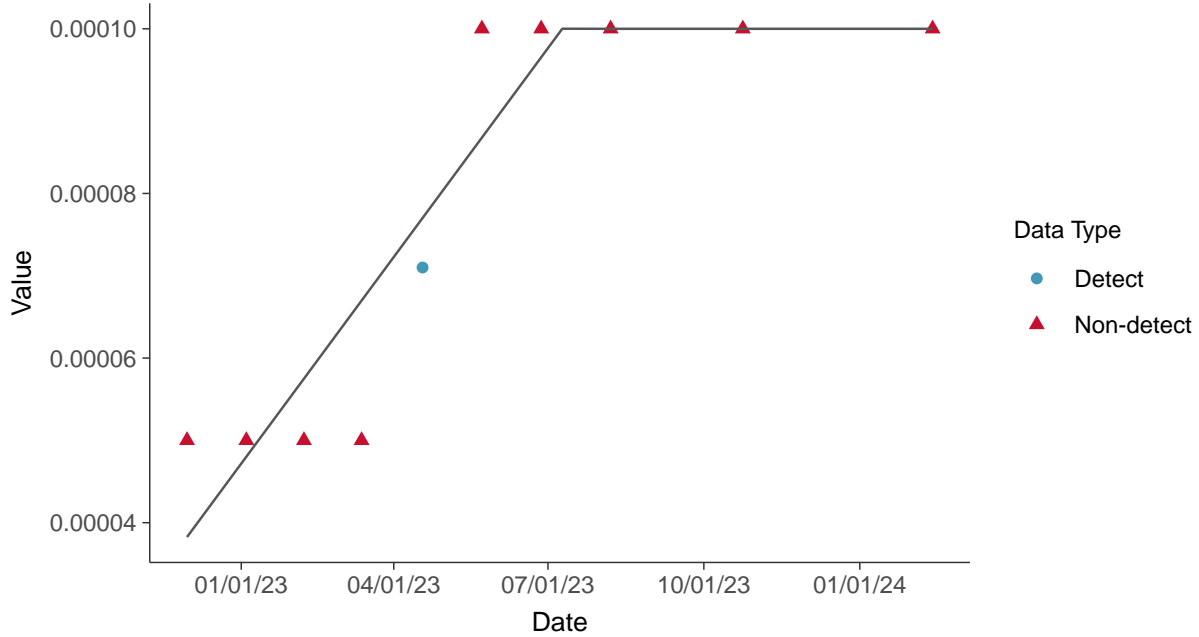
Antimony, MW-07 (mg/L)





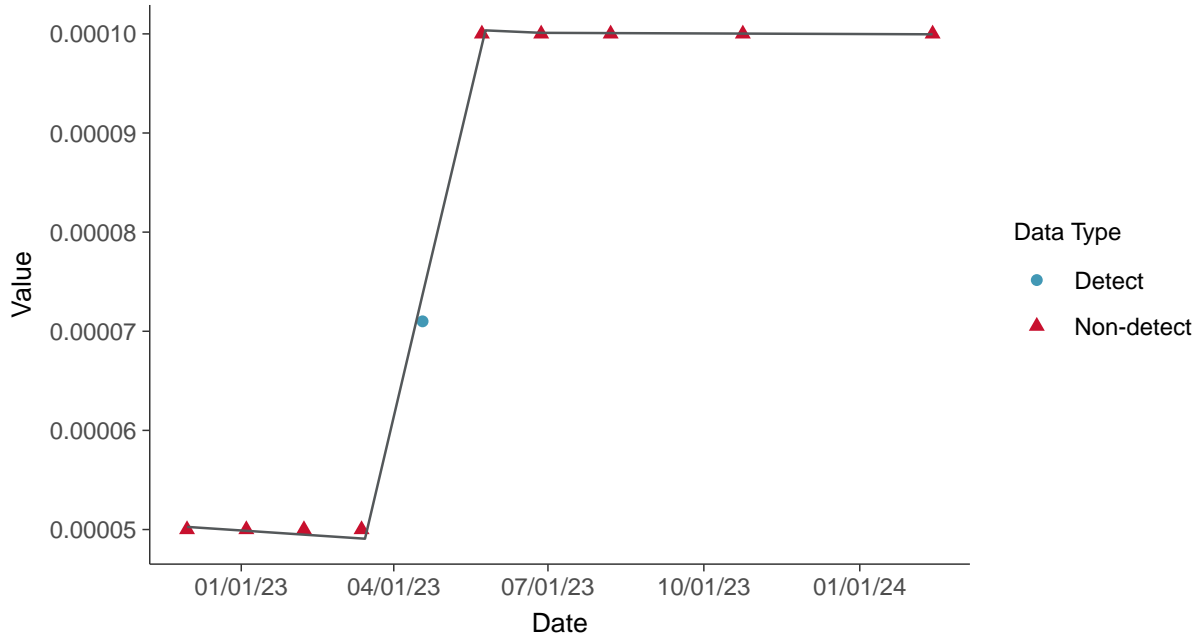
Trend Regression: Piecewise Linear-Linear

Antimony, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-07 (mg/L)



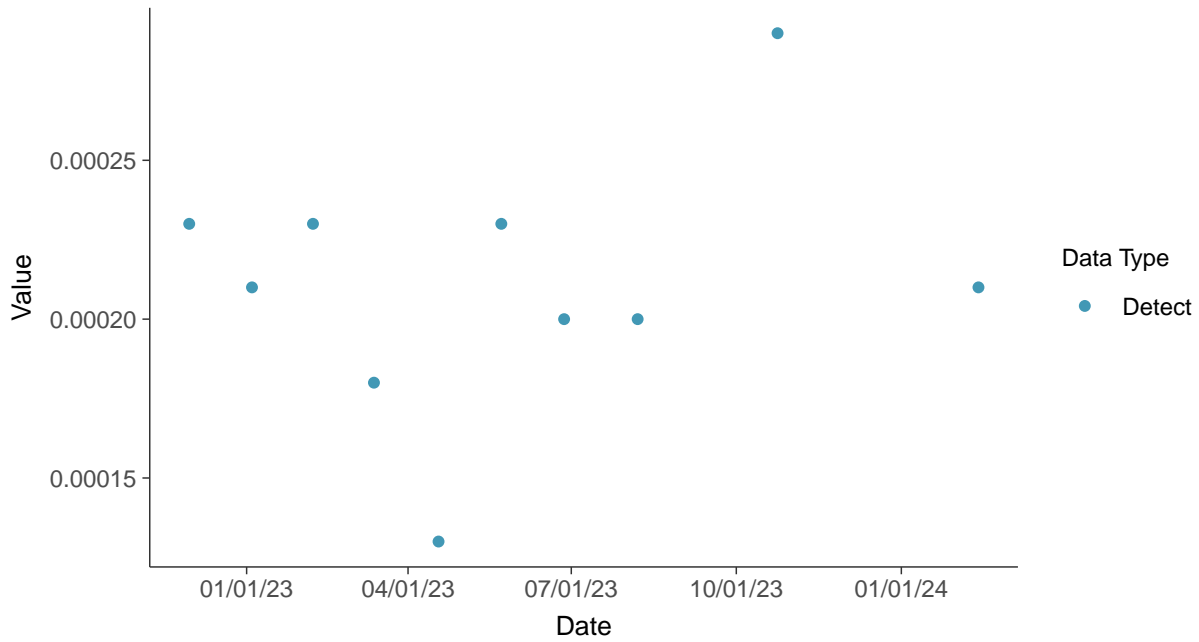


Appendix IV: Arsenic, MW-07

ID: 1_17_5_102

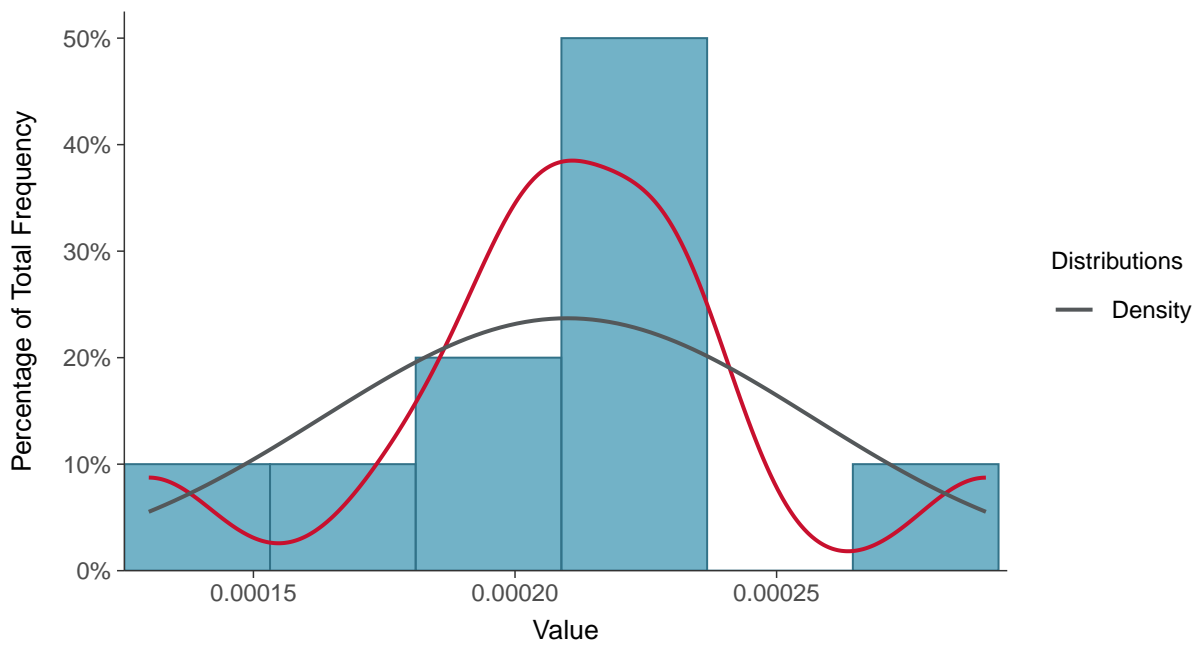
Scatter Plot

Arsenic, MW-07 (mg/L)



Histogram

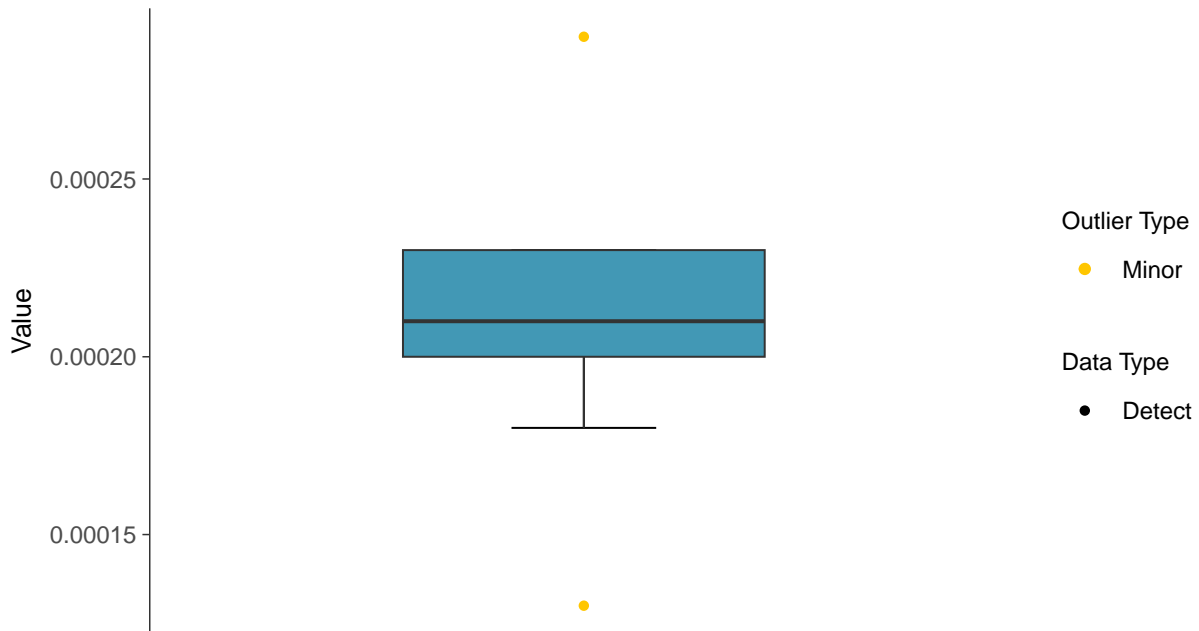
Arsenic, MW-07 (mg/L)





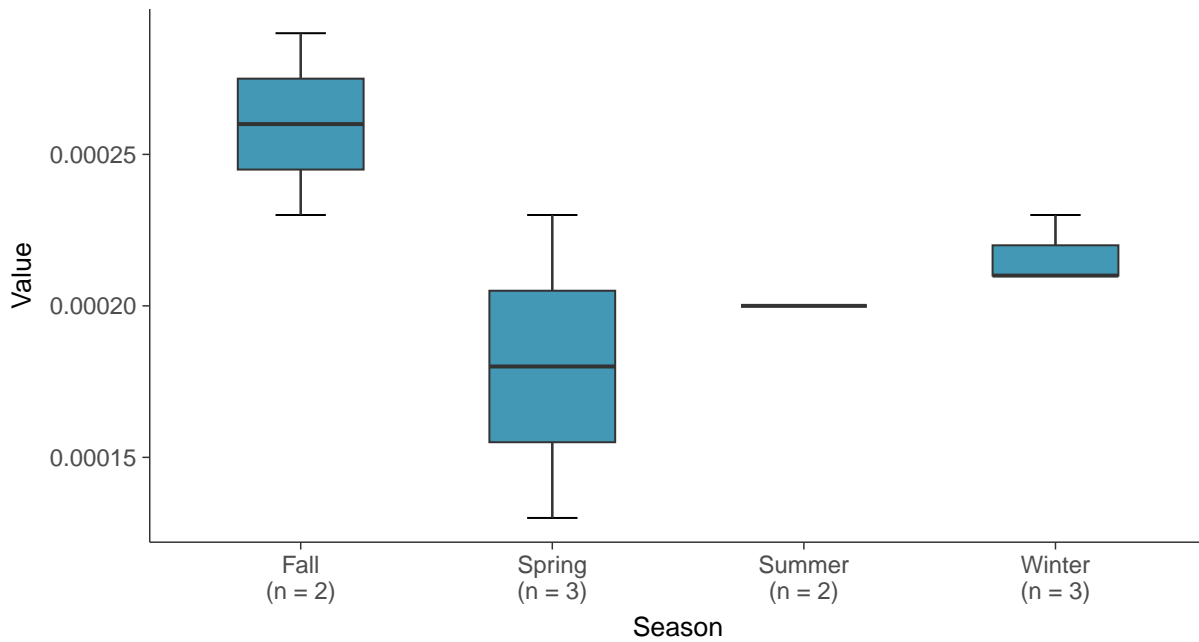
Boxplot

Arsenic, MW-07 (mg/L)



Boxplot by Season

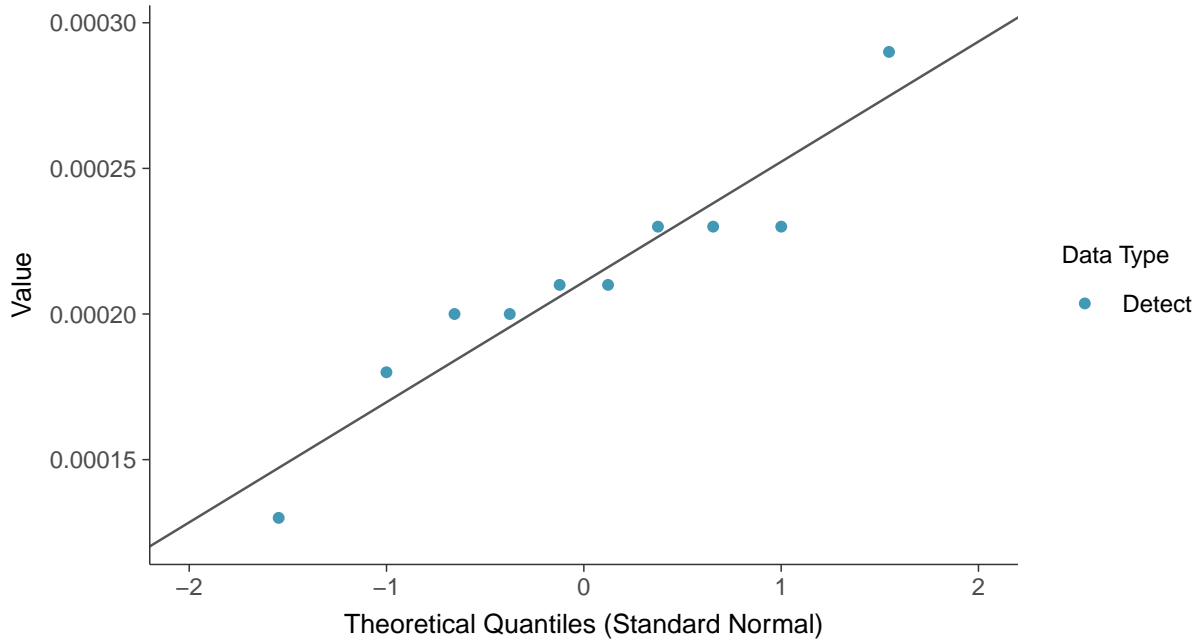
Arsenic, MW-07 (mg/L)





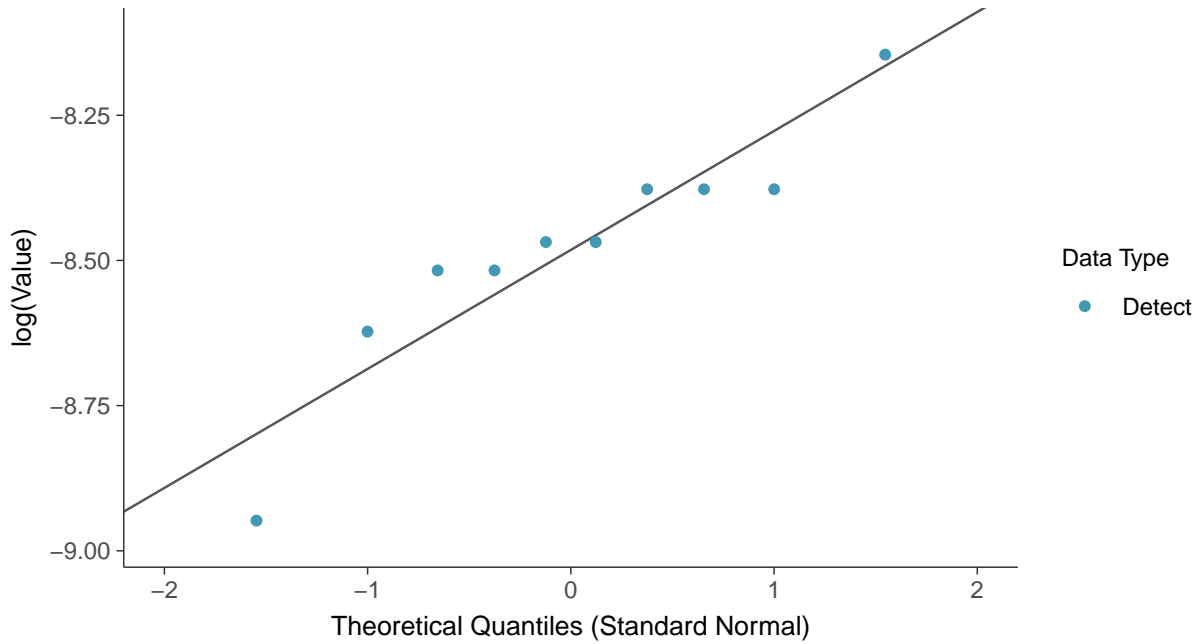
Normal Q-Q plot

Arsenic, MW-07 (mg/L)



Lognormal Q-Q plot

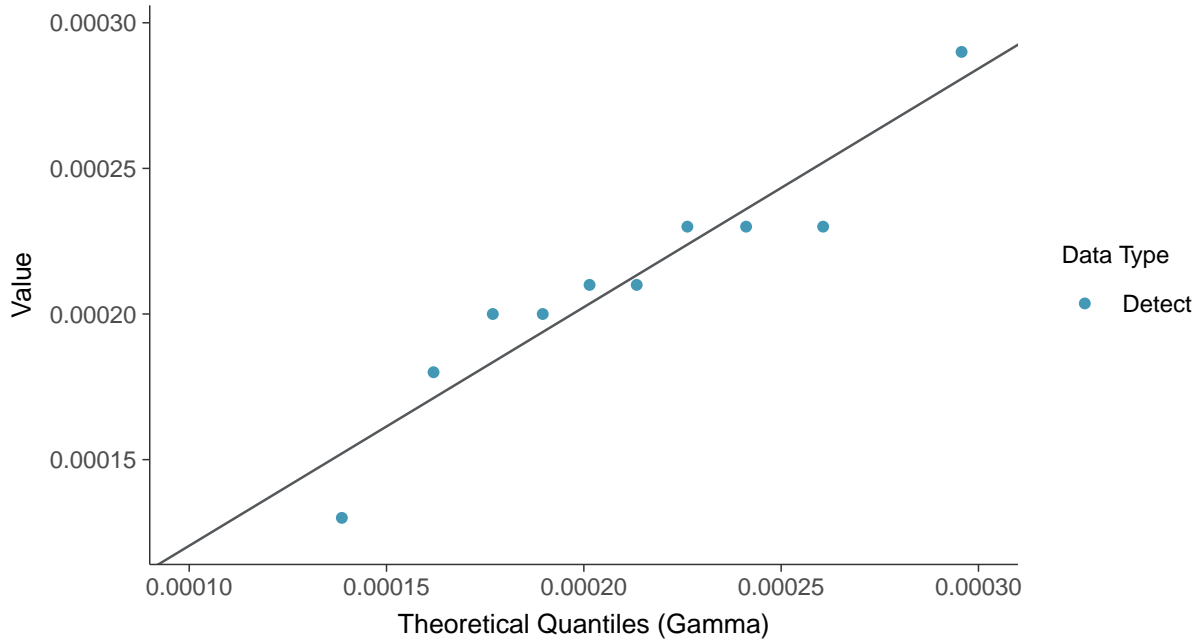
Arsenic, MW-07 (mg/L)





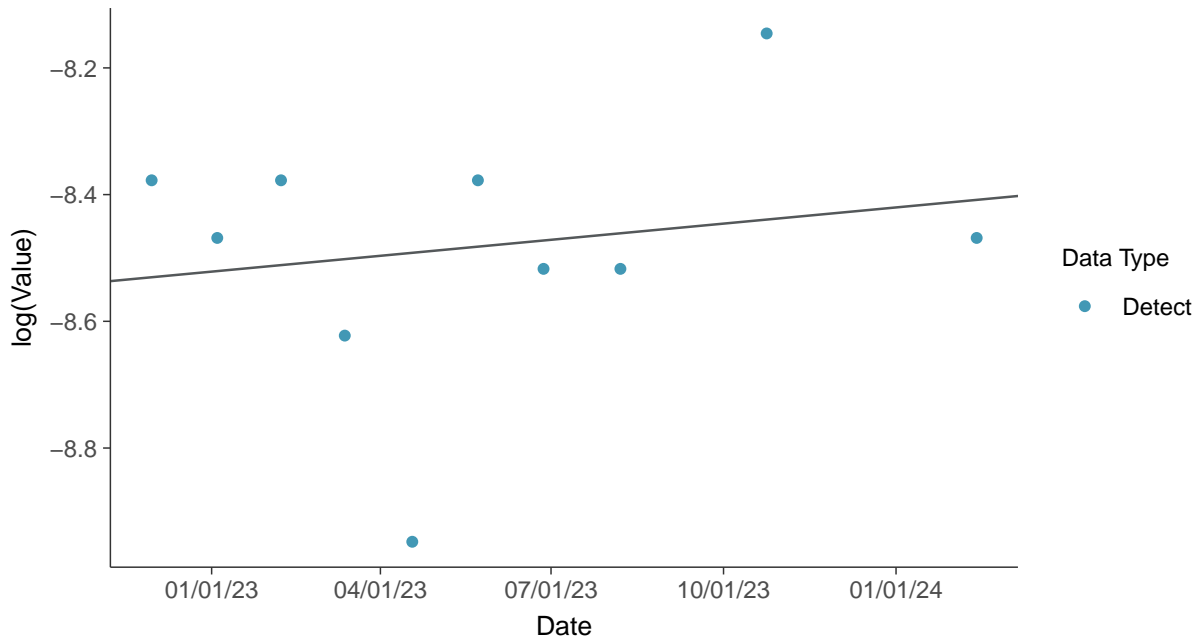
Gamma Q-Q plot

Arsenic, MW-07 (mg/L)



Trend Regression: Lognormal MLE

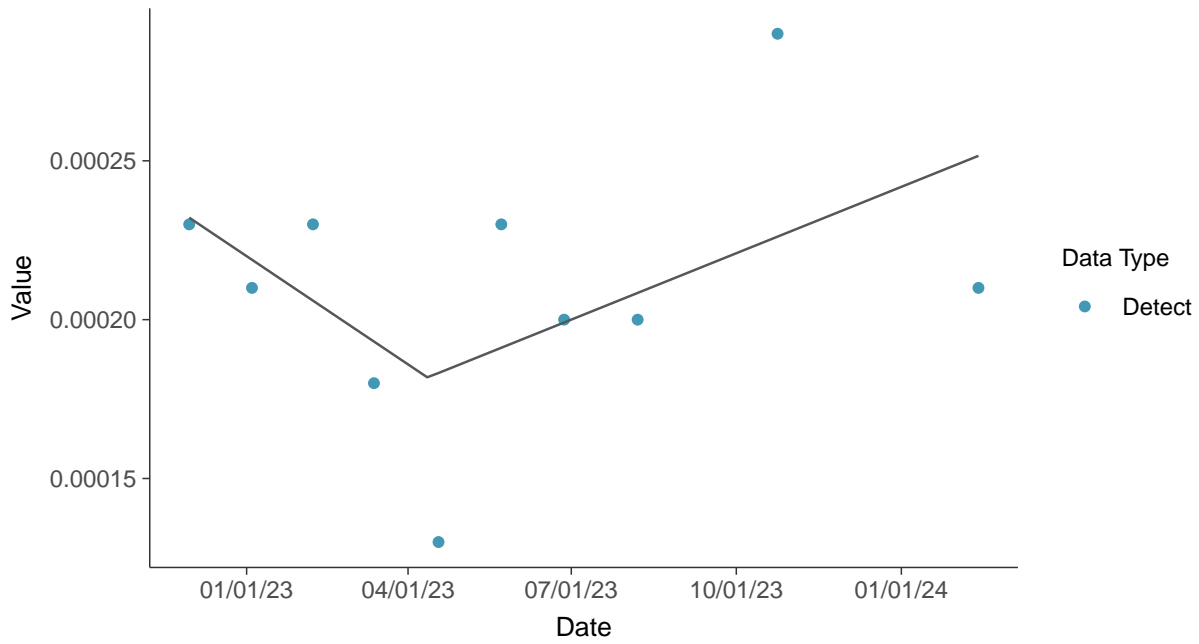
Arsenic, MW-07 (mg/L)





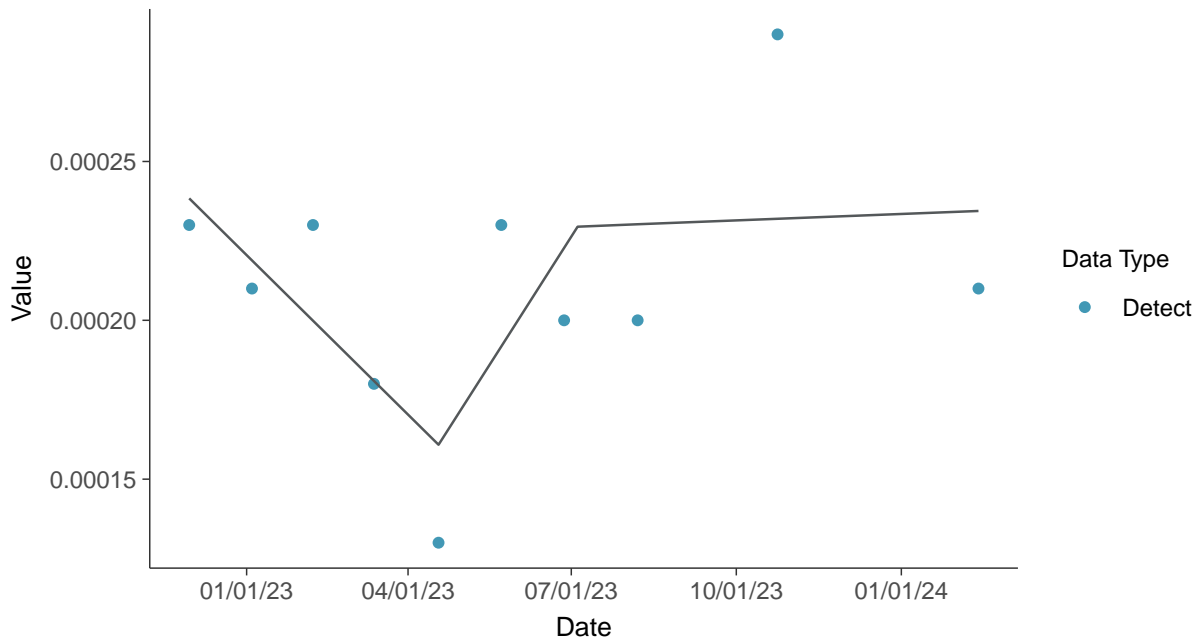
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

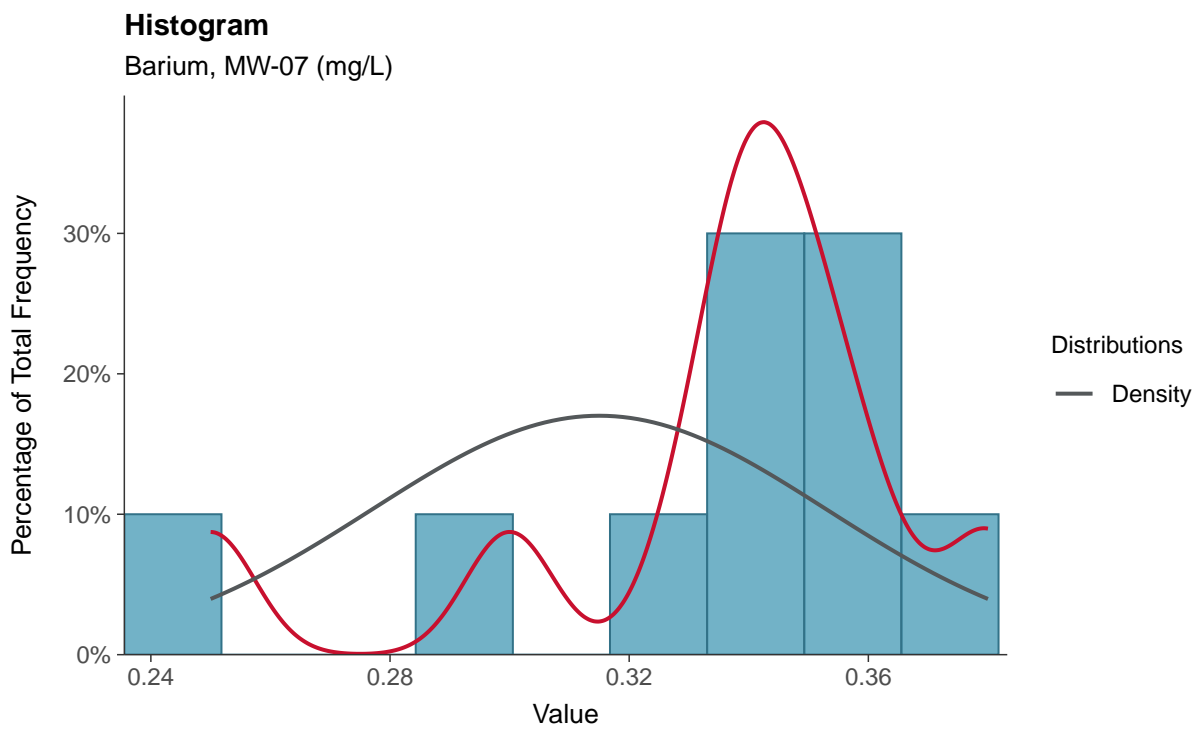
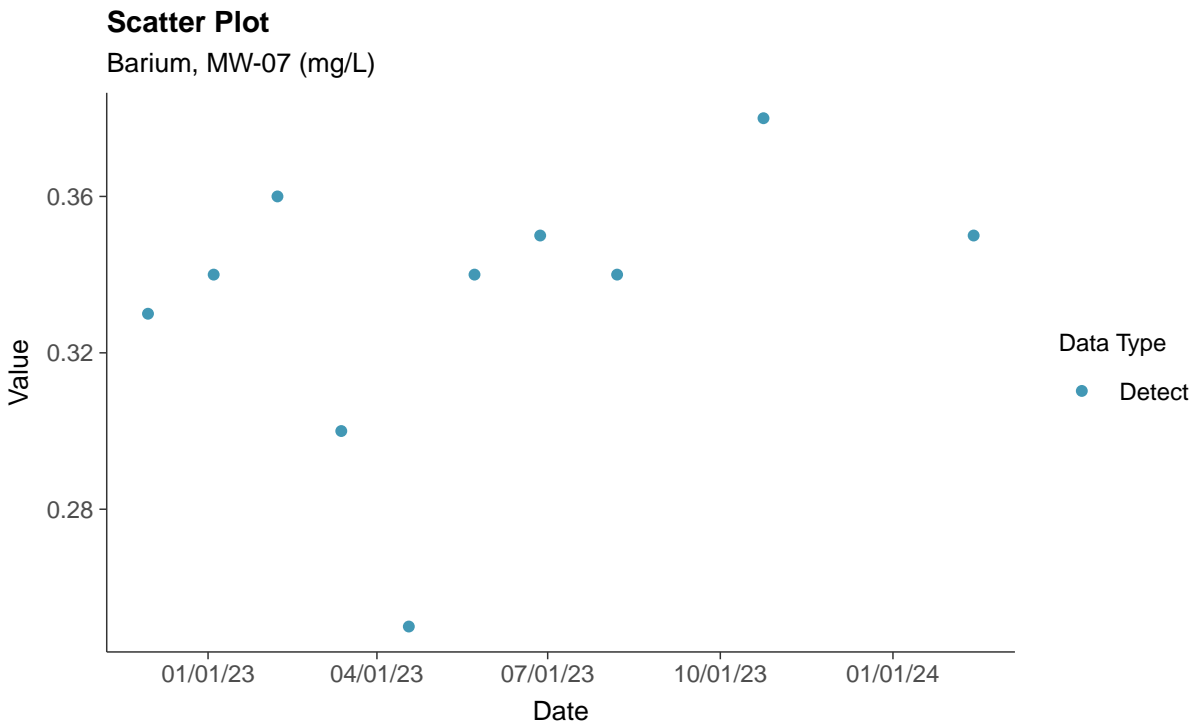
Arsenic, MW-07 (mg/L)





Appendix IV: Barium, MW-07

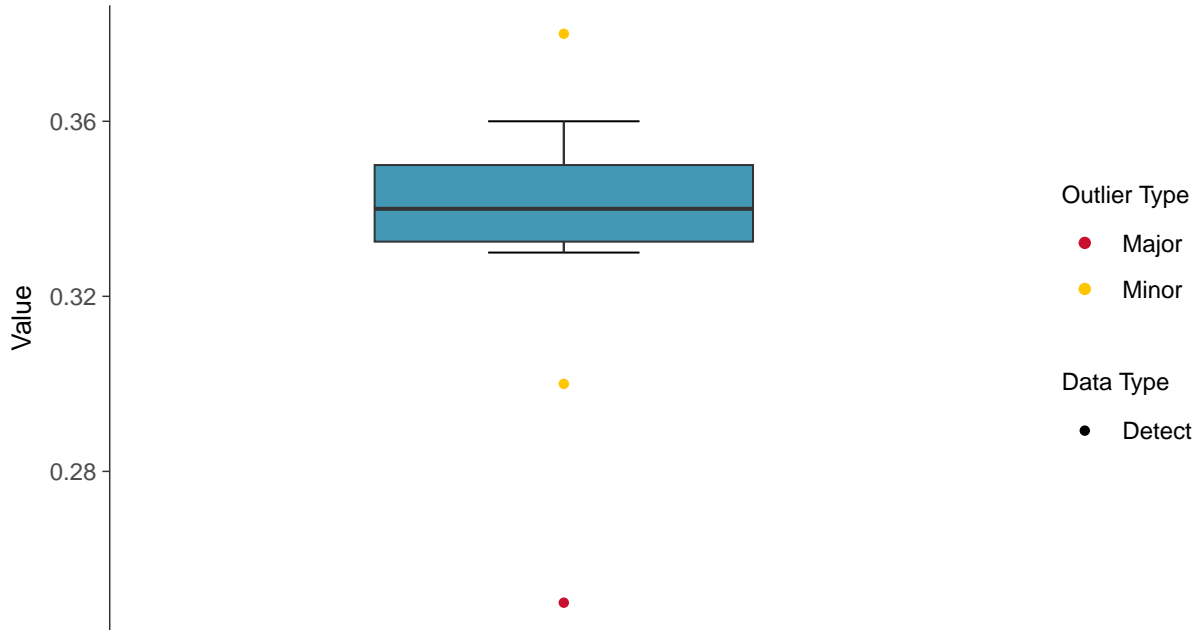
ID: 1_17_5_103





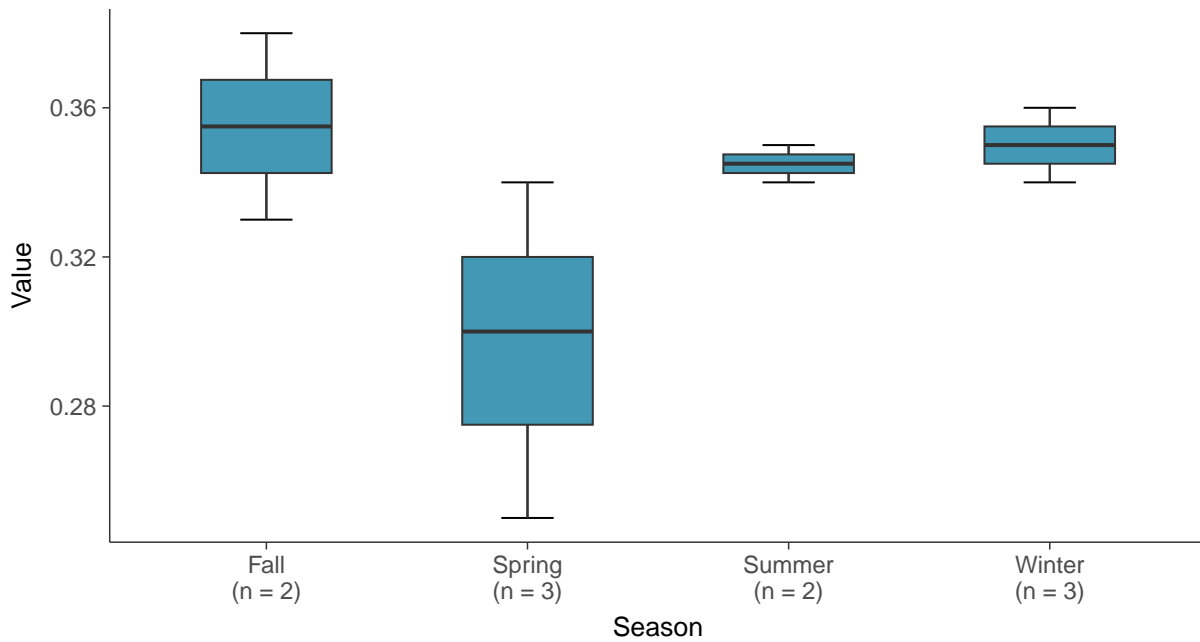
Boxplot

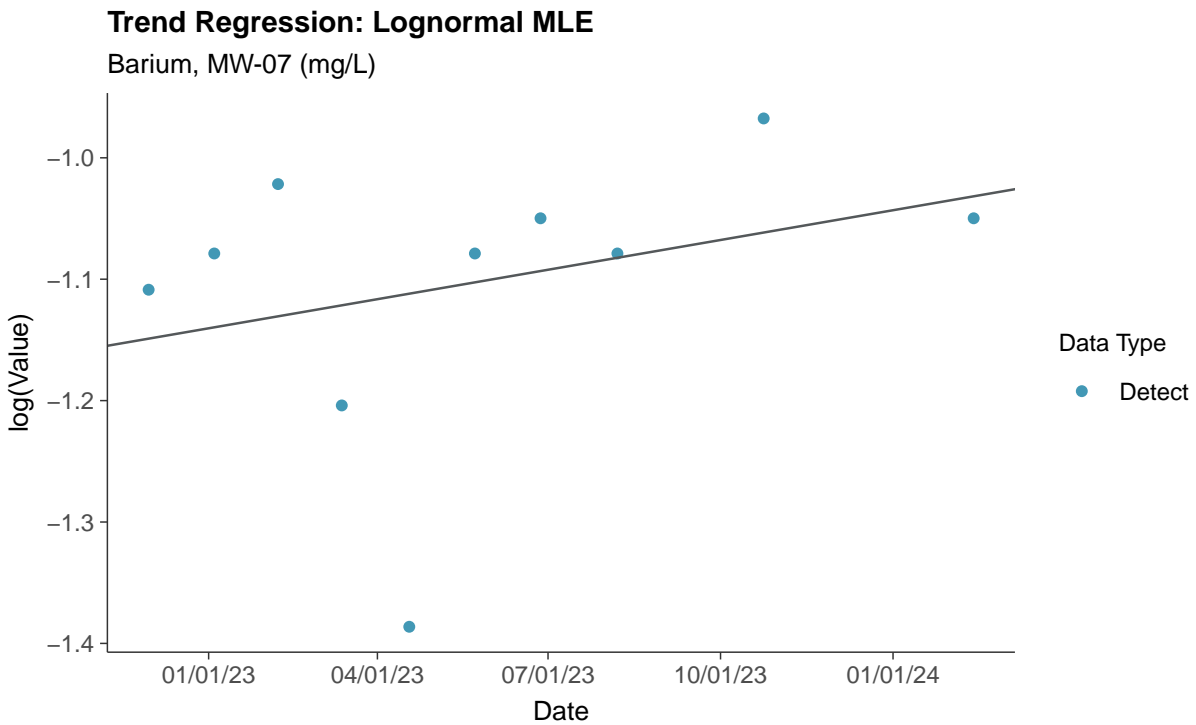
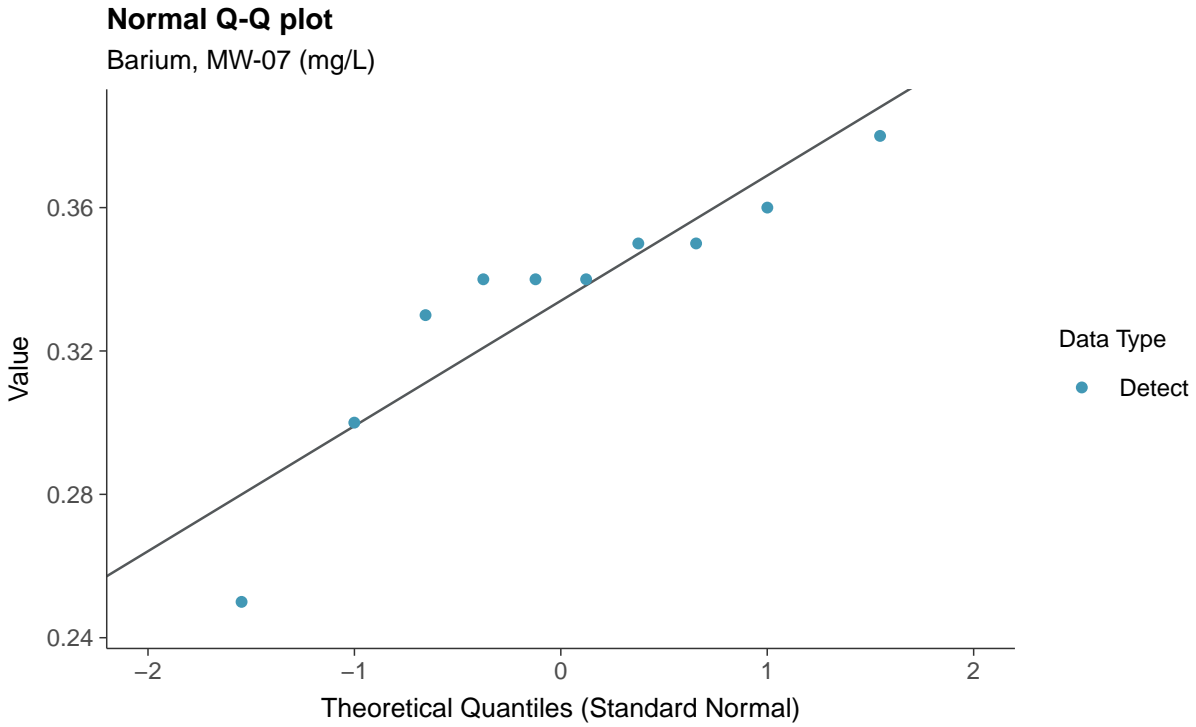
Barium, MW-07 (mg/L)



Boxplot by Season

Barium, MW-07 (mg/L)

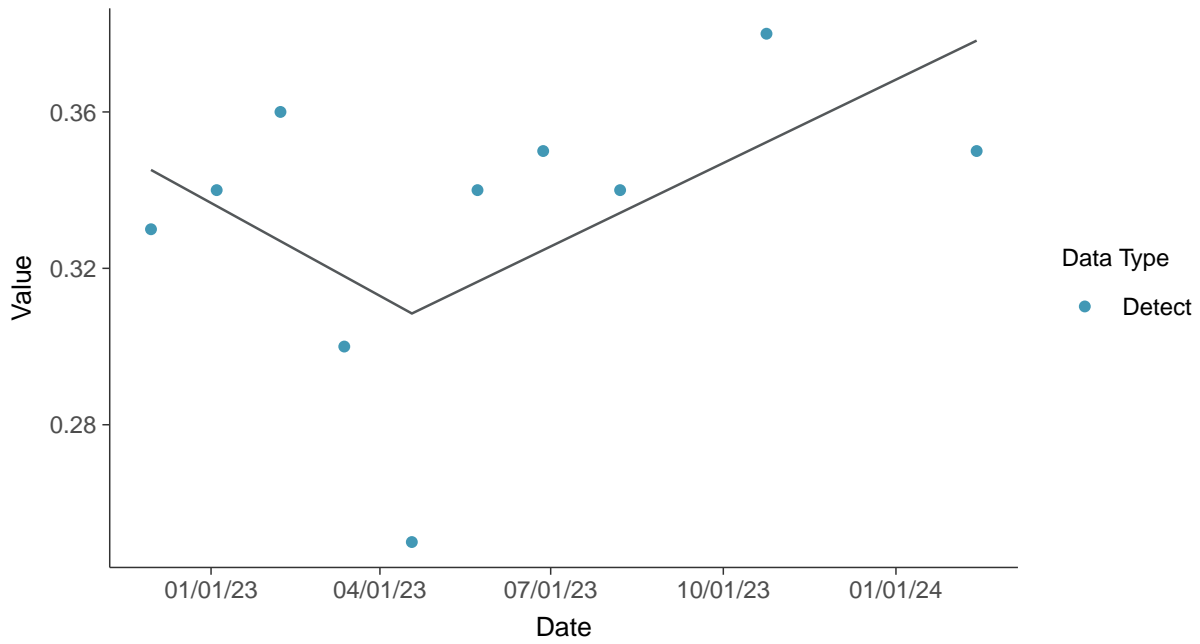






Trend Regression: Piecewise Linear-Linear

Barium, MW-07 (mg/L)



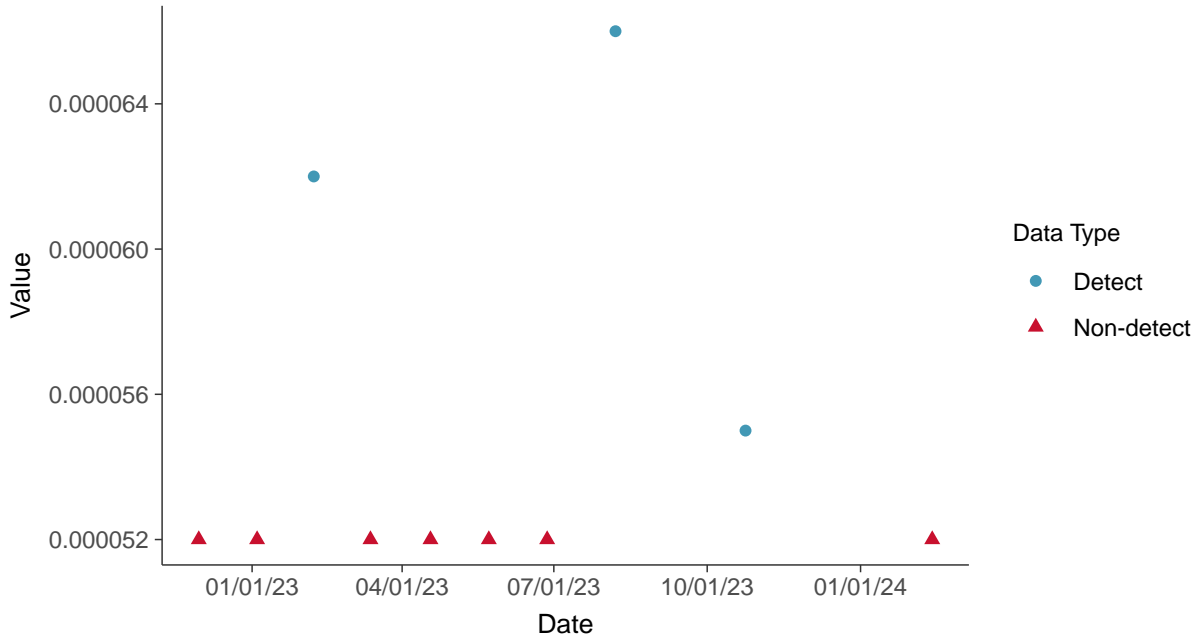


Appendix IV: Beryllium, MW-07

ID: 1_17_5_104

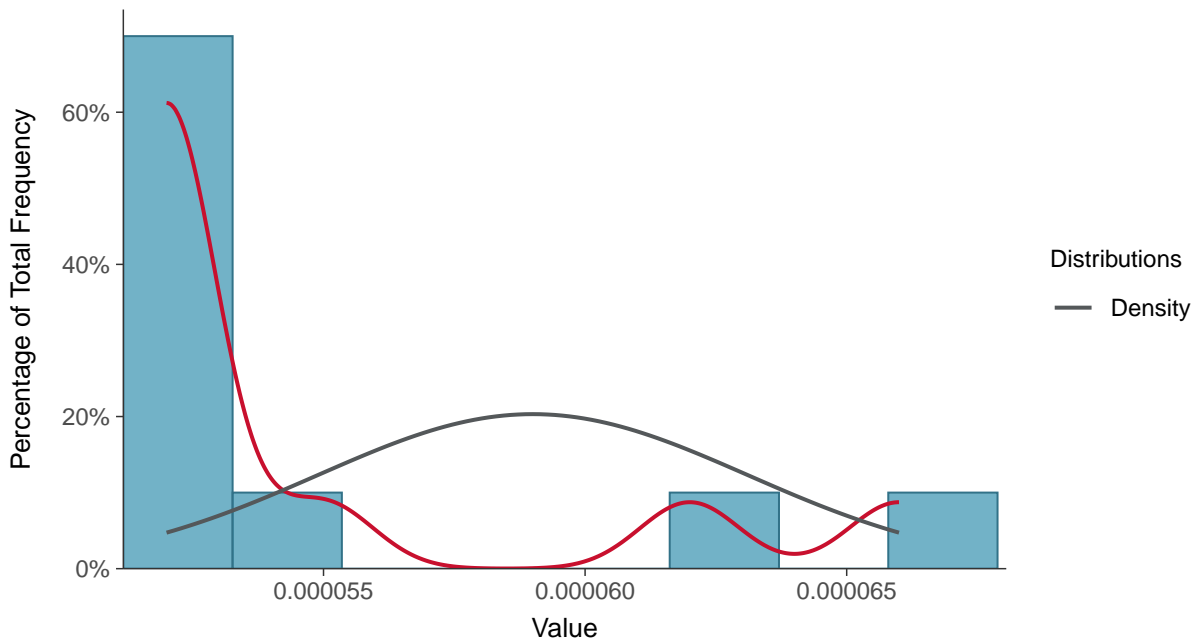
Scatter Plot

Beryllium, MW-07 (mg/L)



Histogram

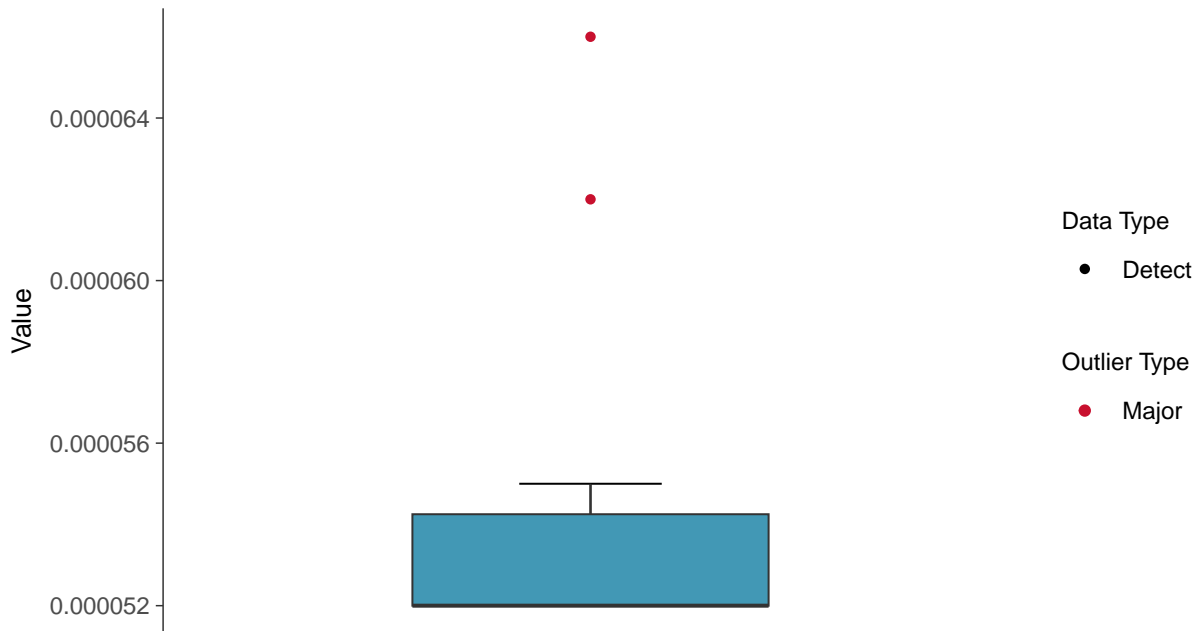
Beryllium, MW-07 (mg/L)





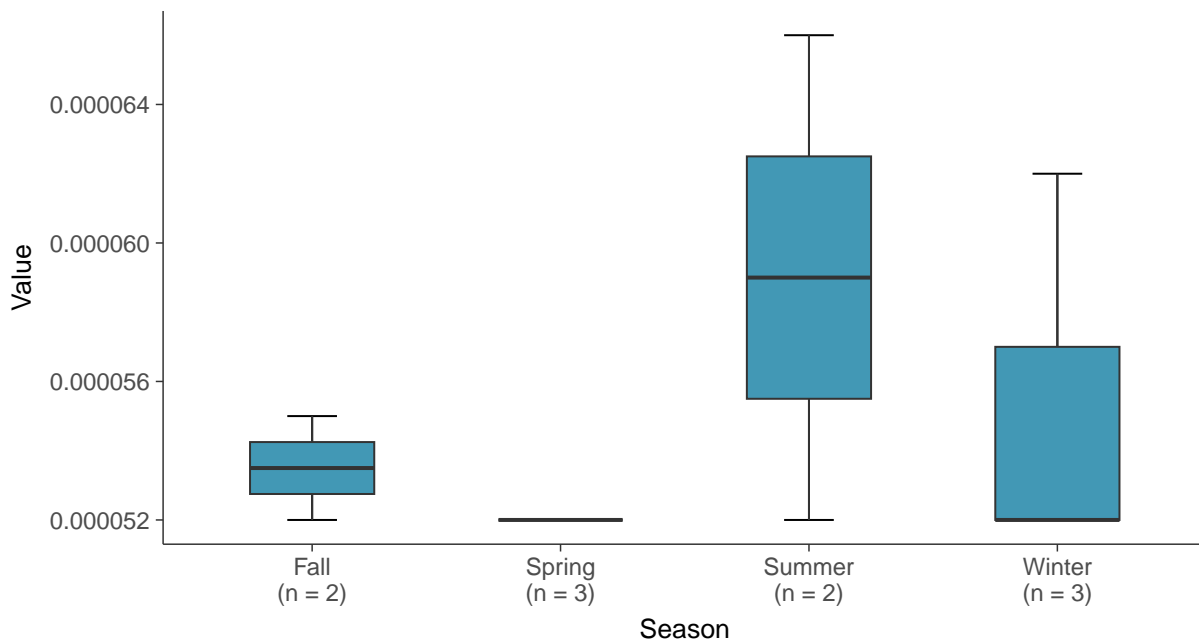
Boxplot

Beryllium, MW-07 (mg/L)



Boxplot by Season

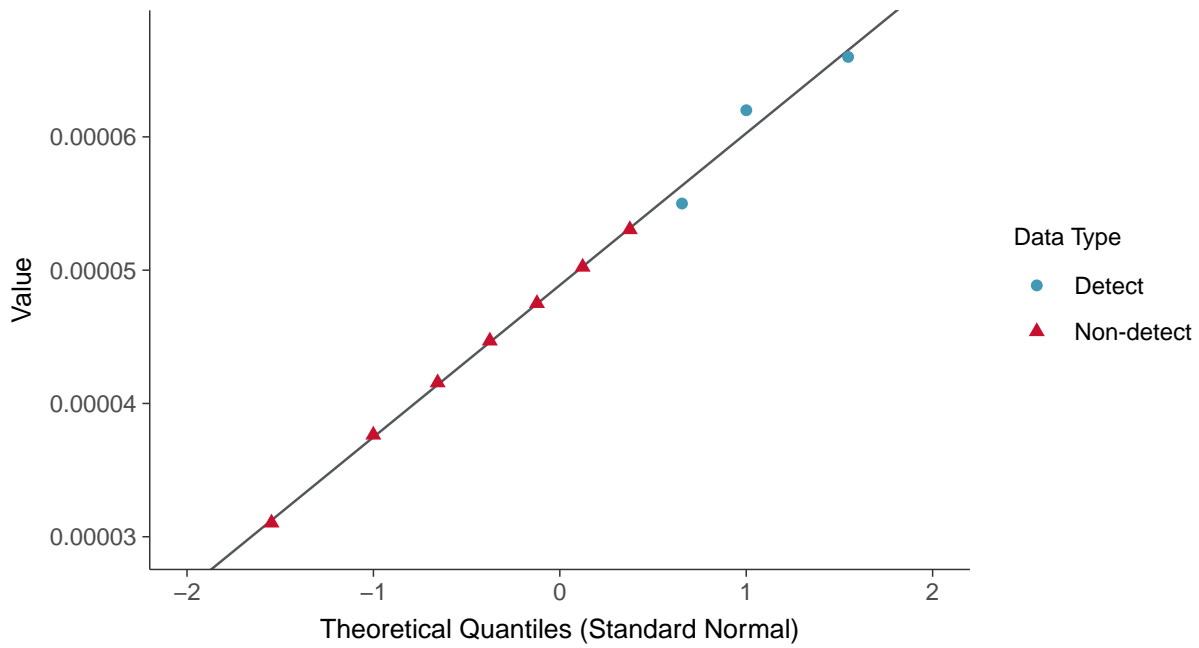
Beryllium, MW-07 (mg/L)





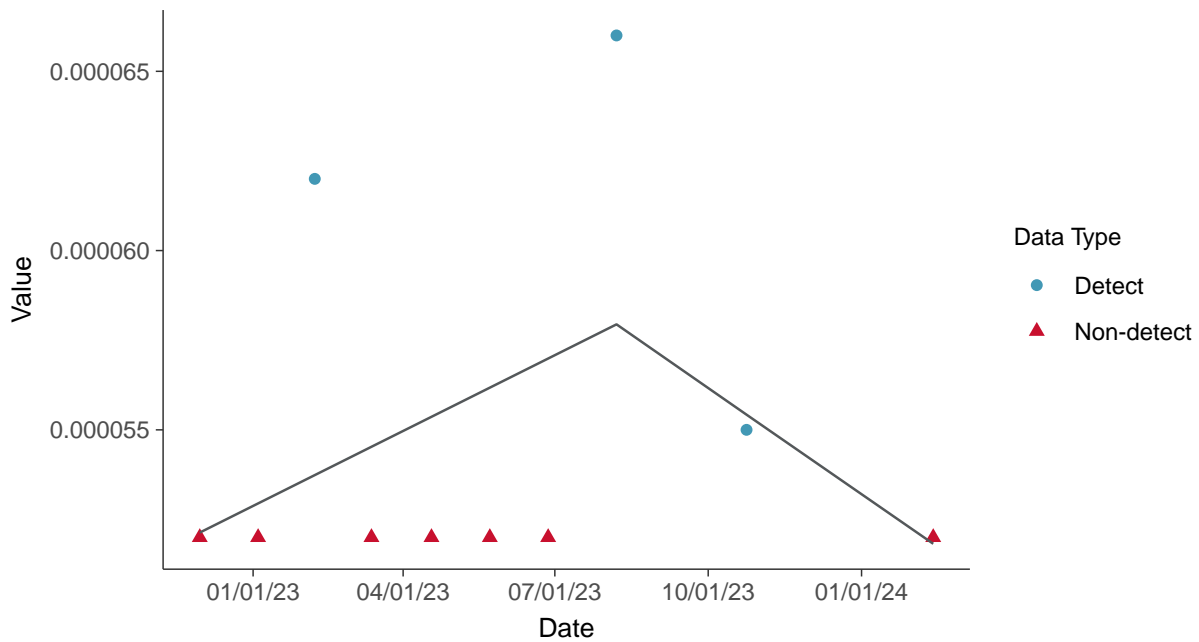
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear

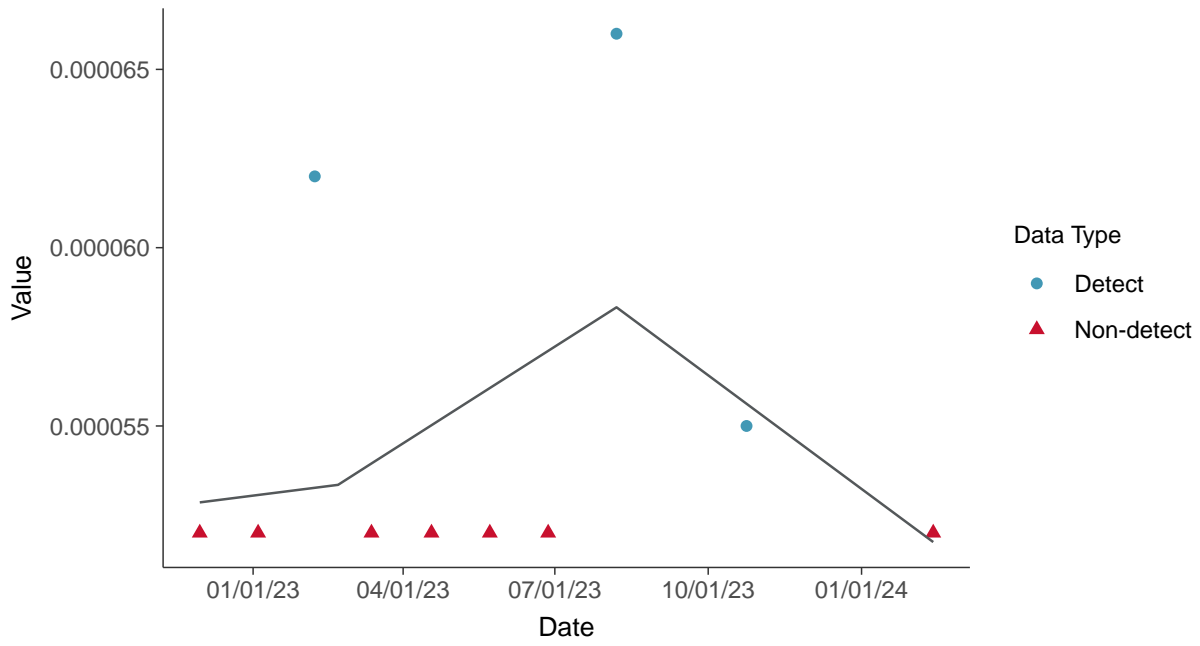
Beryllium, MW-07 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

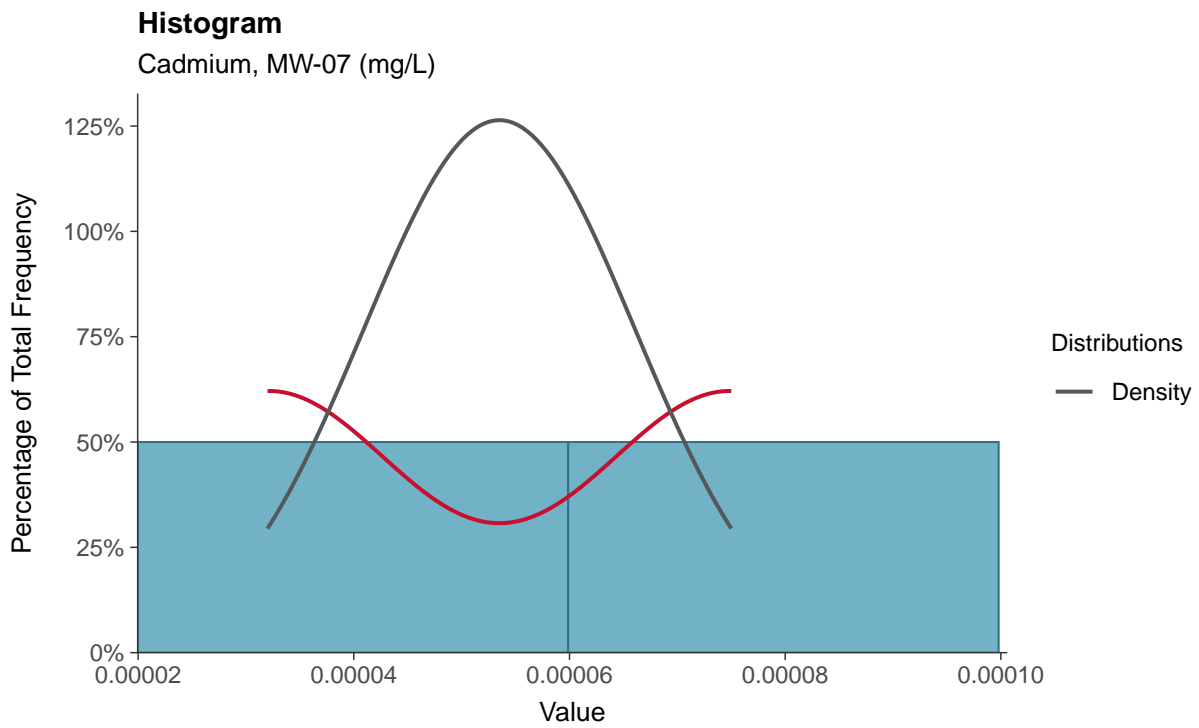
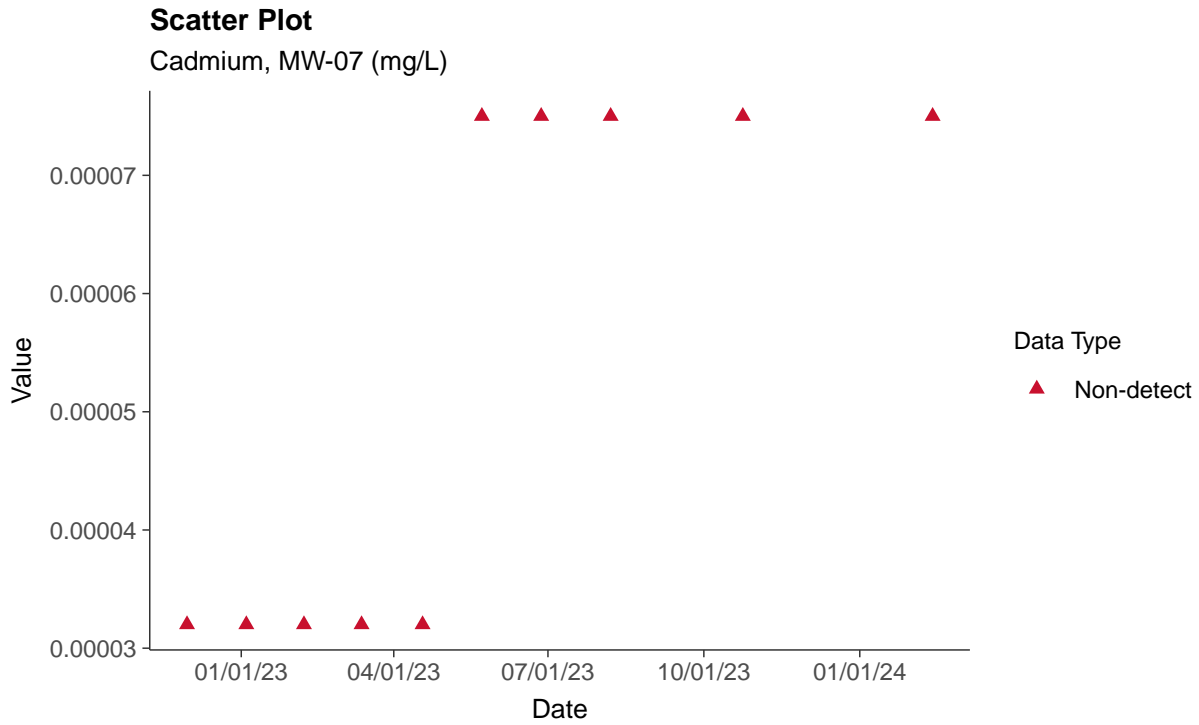
Beryllium, MW-07 (mg/L)





Appendix IV: Cadmium, MW-07

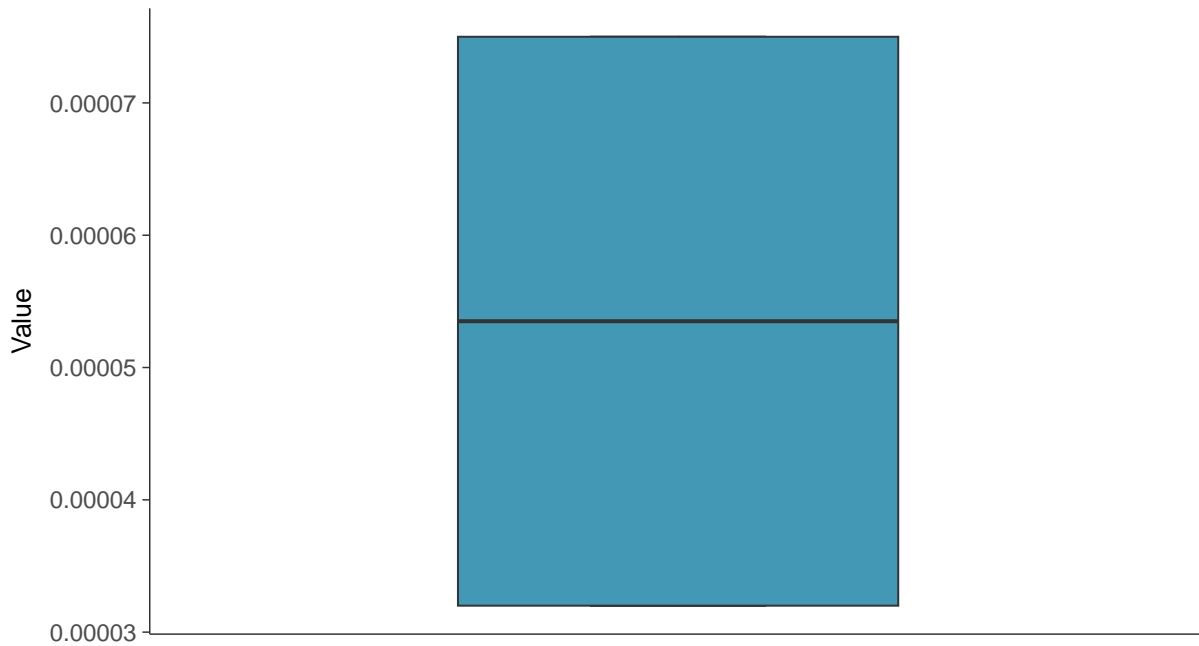
ID: 1_17_5_106





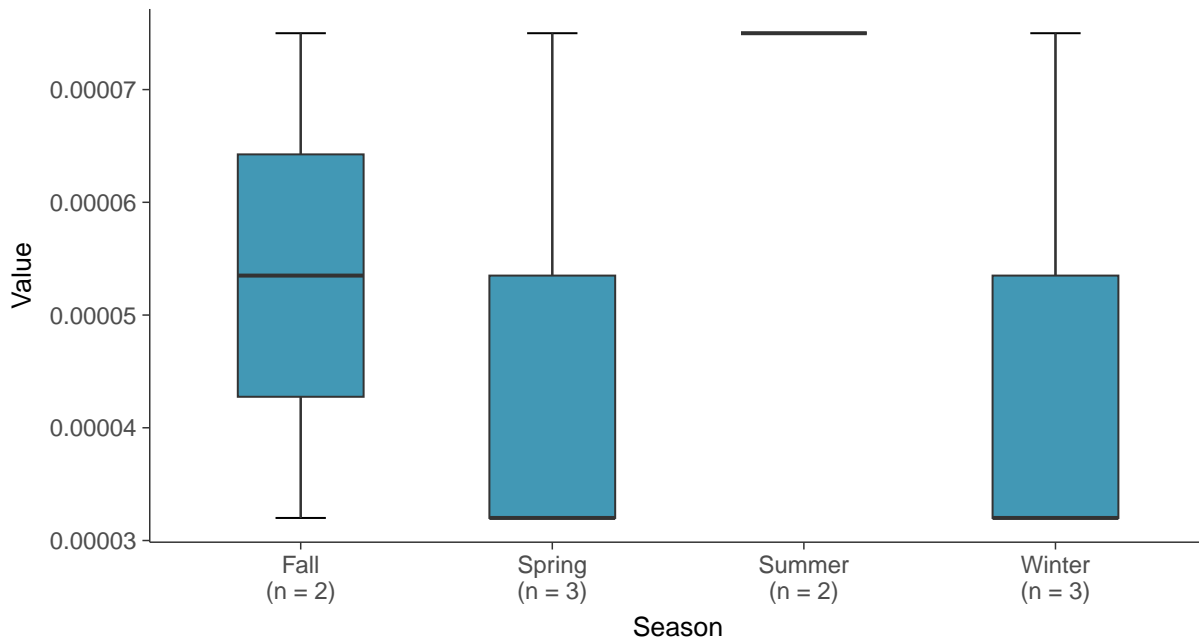
Boxplot

Cadmium, MW-07 (mg/L)



Boxplot by Season

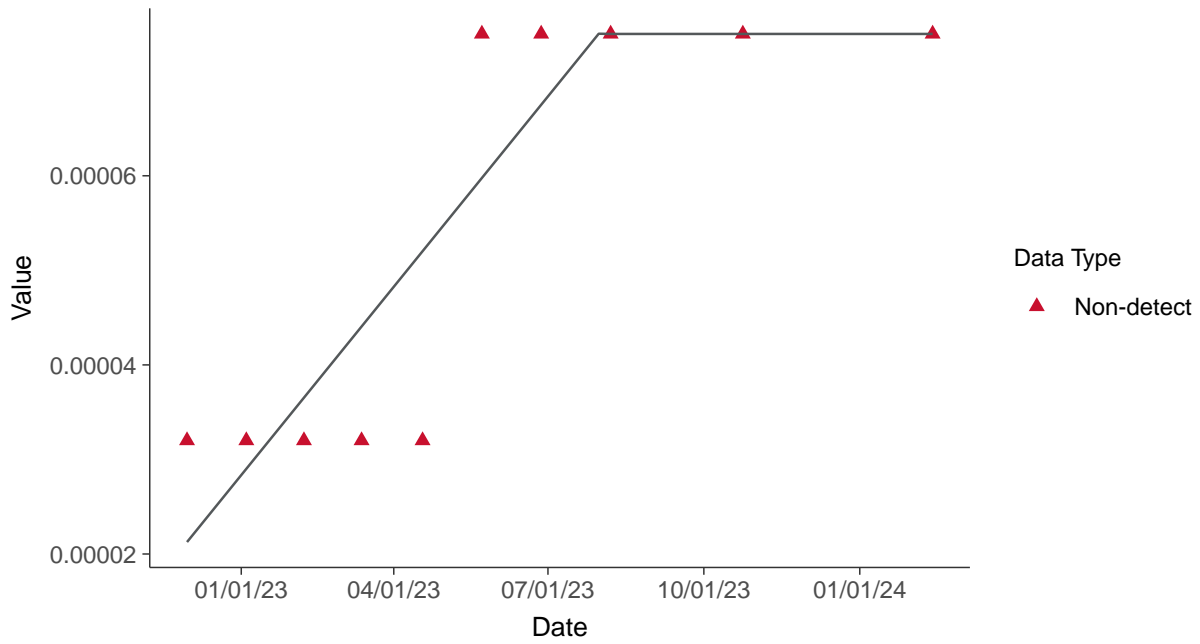
Cadmium, MW-07 (mg/L)





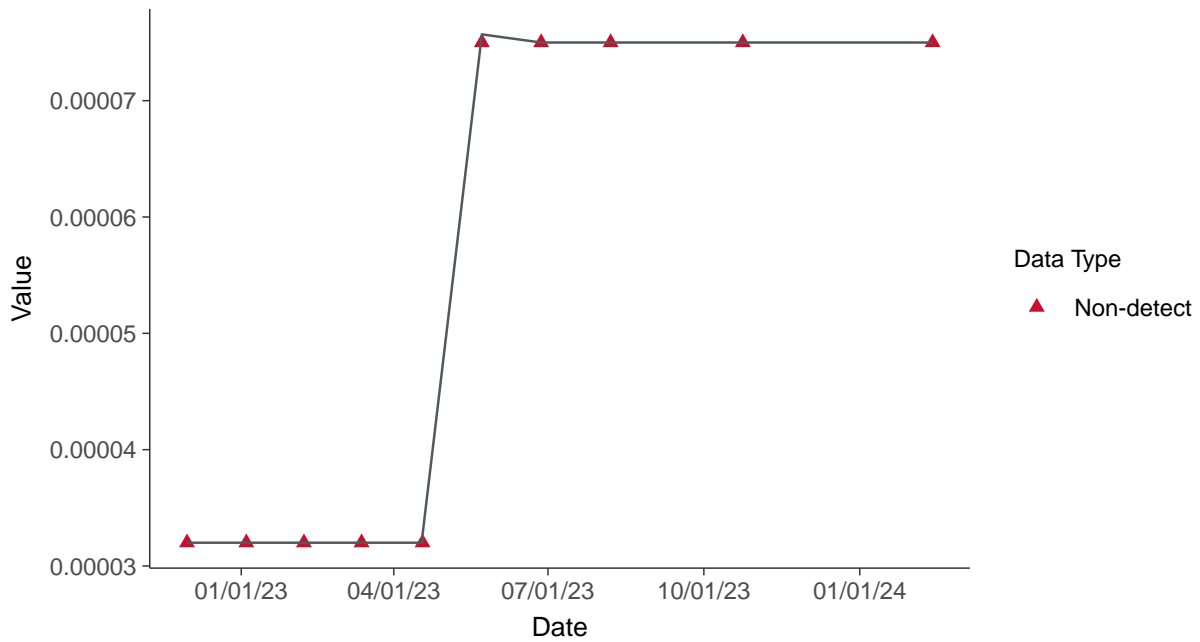
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-07 (mg/L)



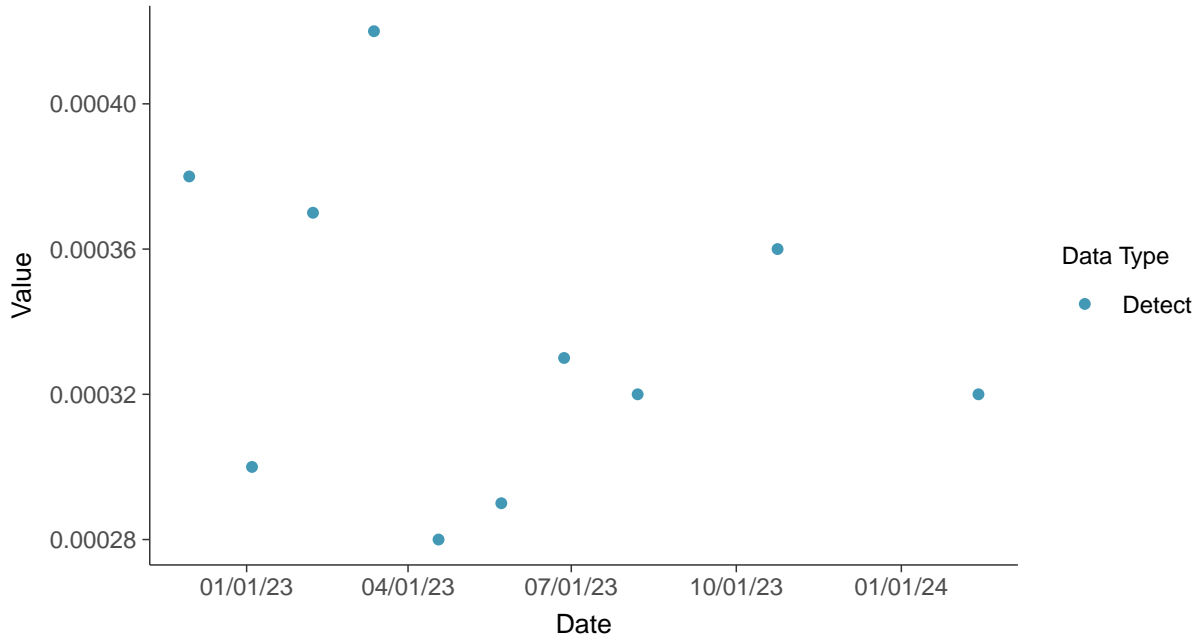


Appendix IV: Chromium, Total, MW-07

ID: 1_17_5_109

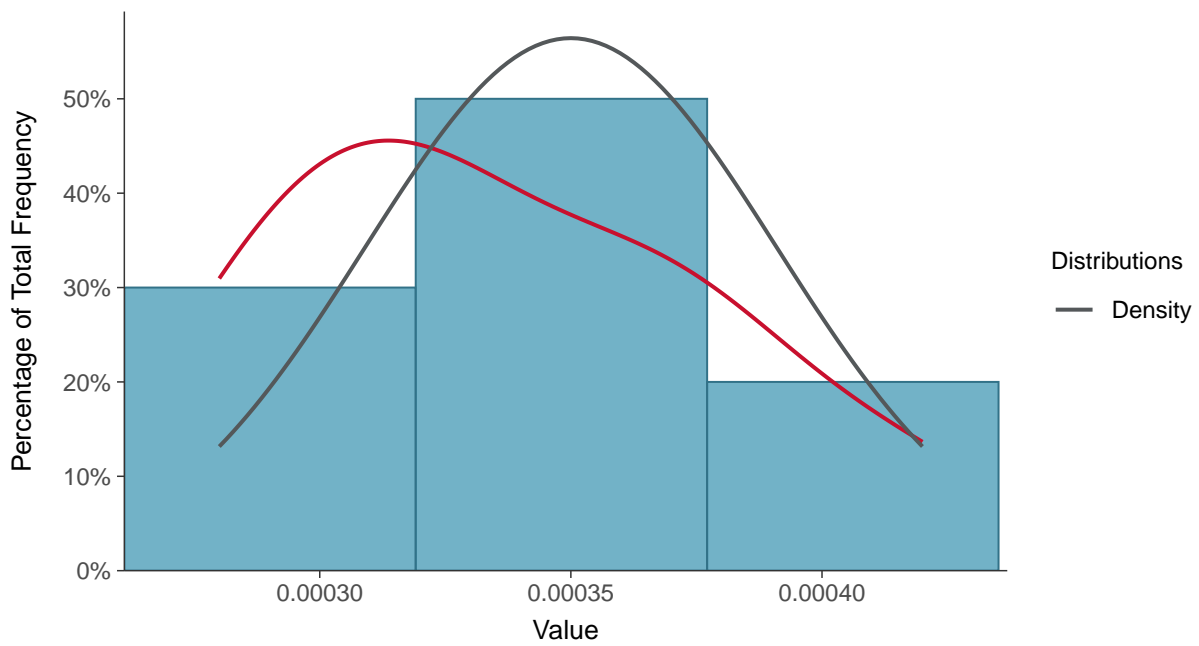
Scatter Plot

Chromium, Total, MW-07 (mg/L)



Histogram

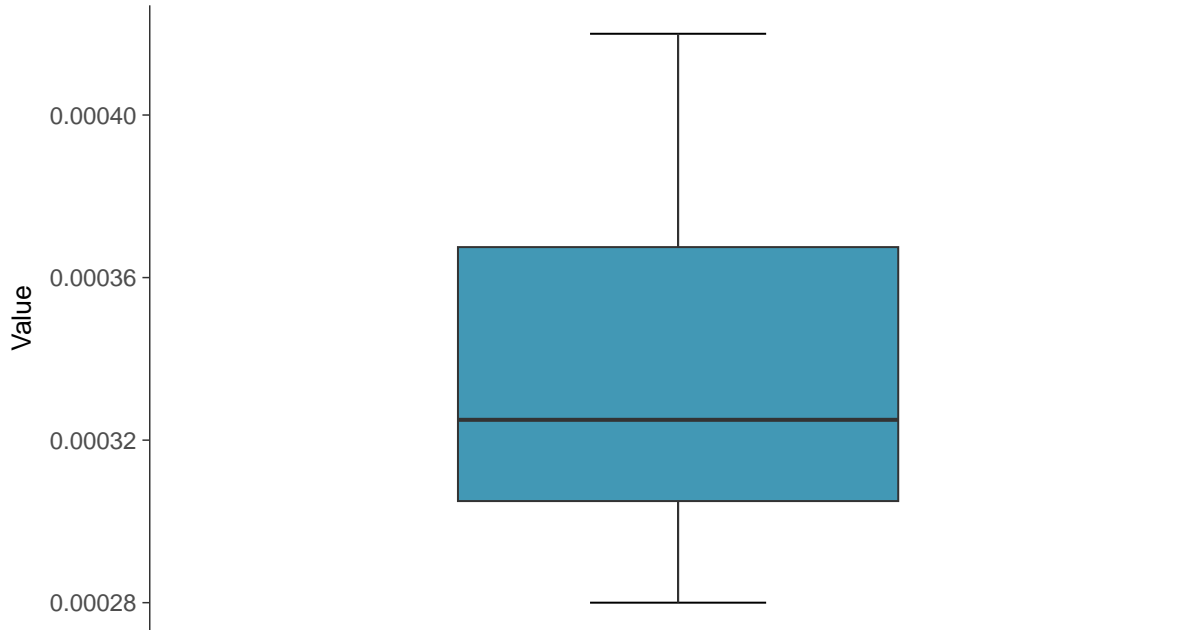
Chromium, Total, MW-07 (mg/L)





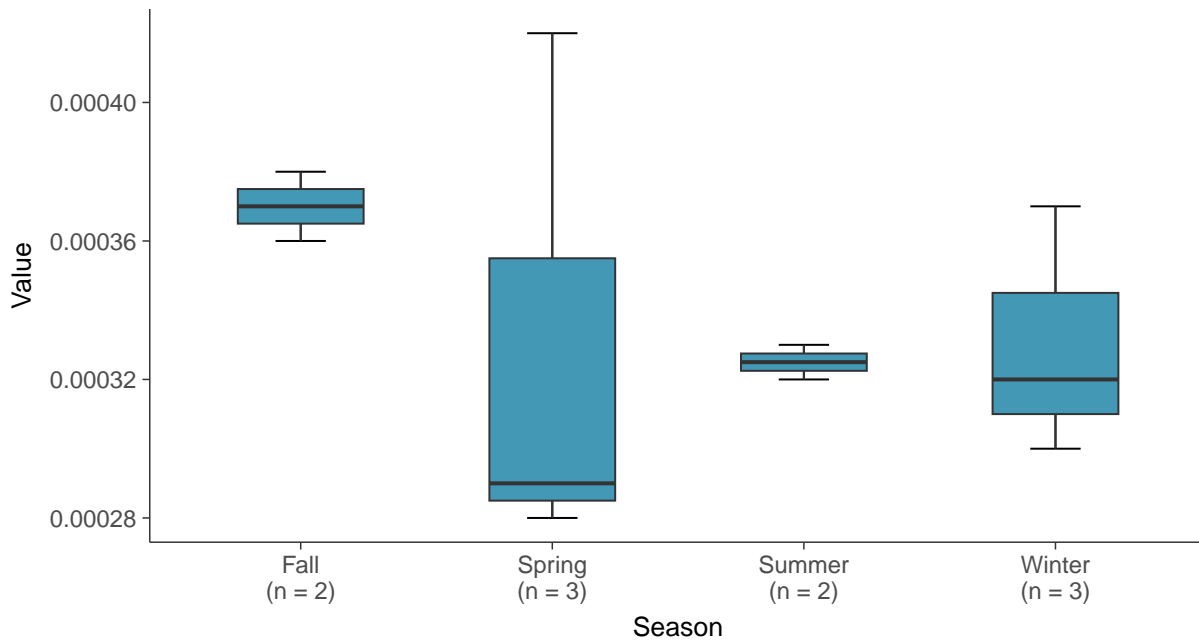
Boxplot

Chromium, Total, MW-07 (mg/L)



Boxplot by Season

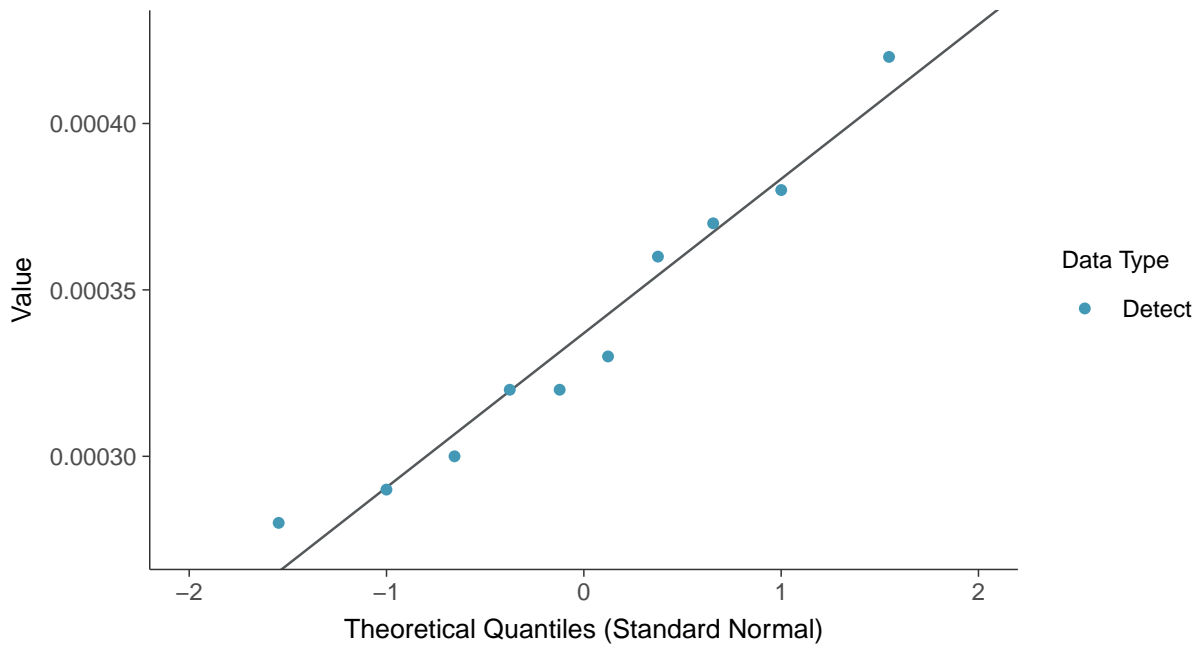
Chromium, Total, MW-07 (mg/L)





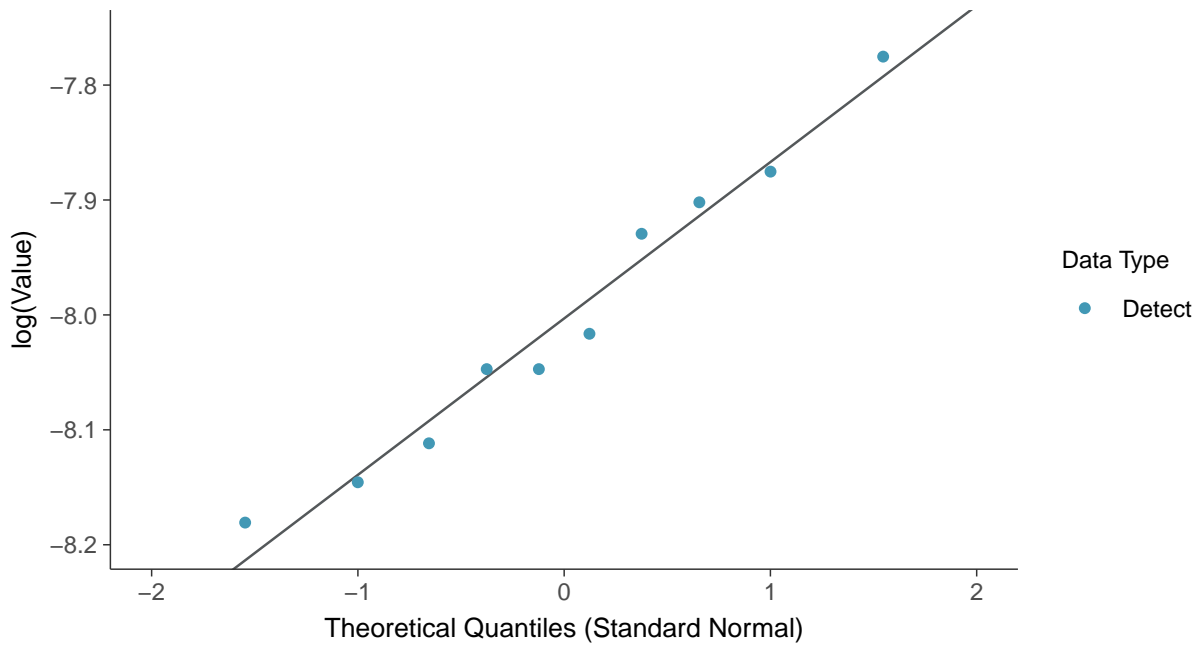
Normal Q-Q plot

Chromium, Total, MW-07 (mg/L)



Lognormal Q-Q plot

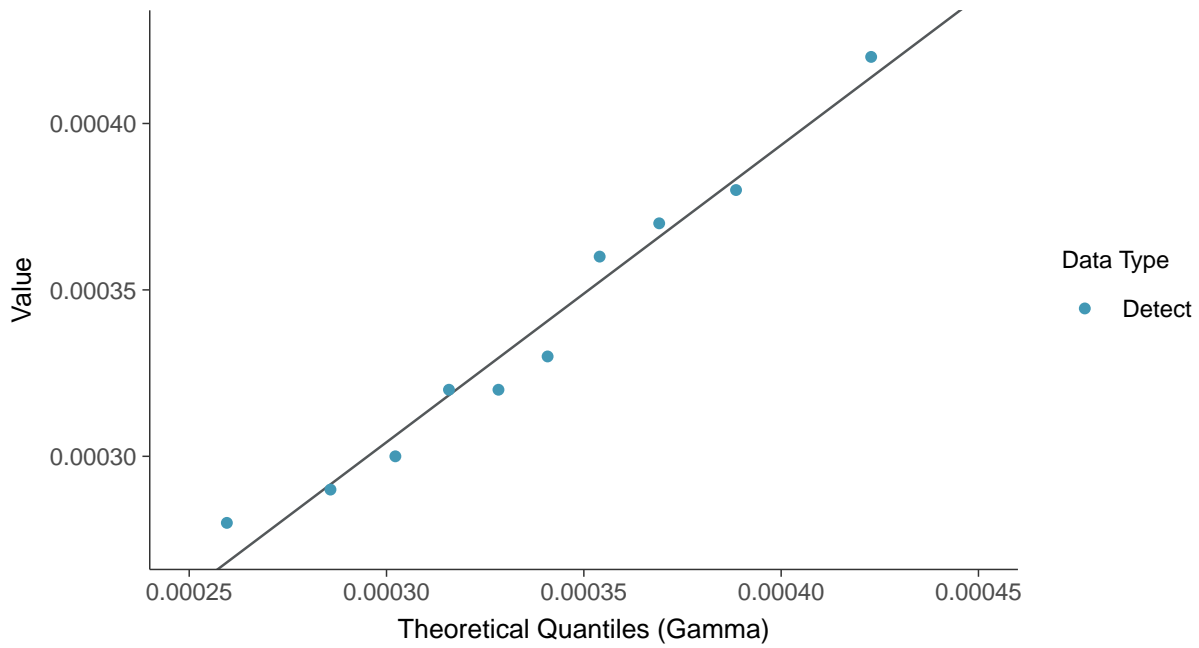
Chromium, Total, MW-07 (mg/L)





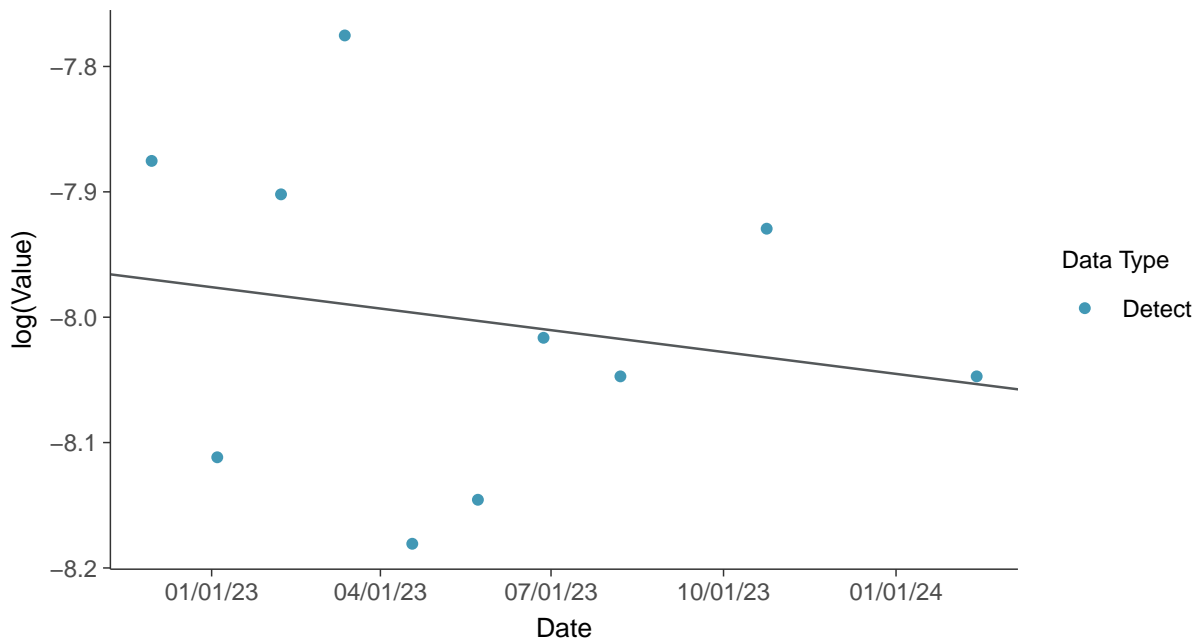
Gamma Q-Q plot

Chromium, Total, MW-07 (mg/L)



Trend Regression: Lognormal MLE

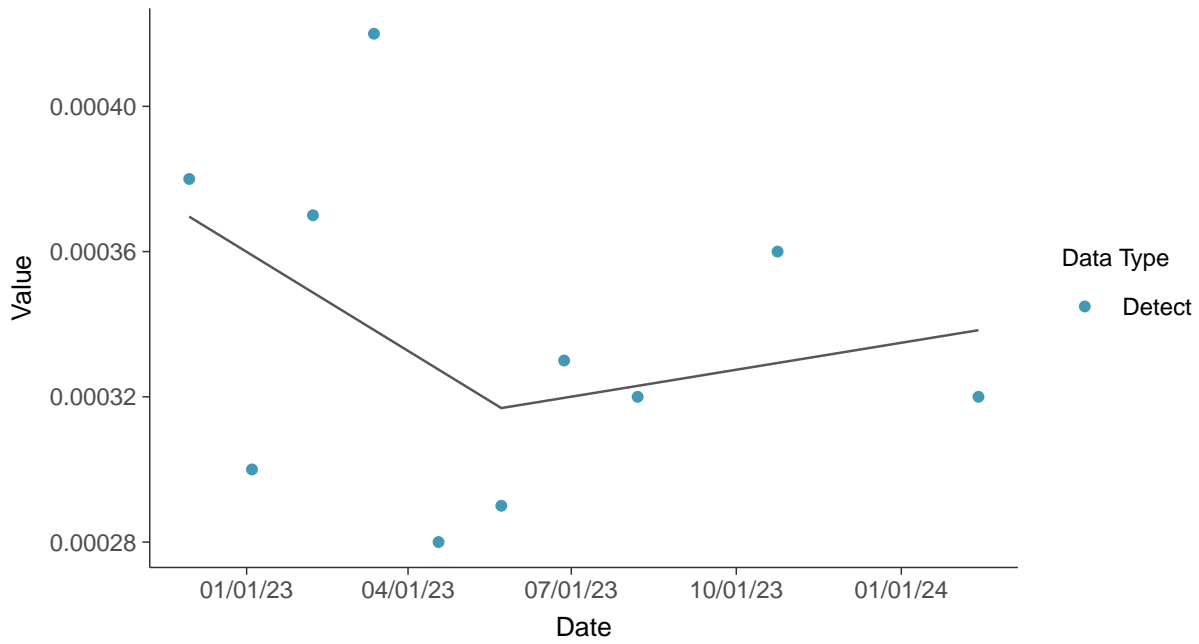
Chromium, Total, MW-07 (mg/L)





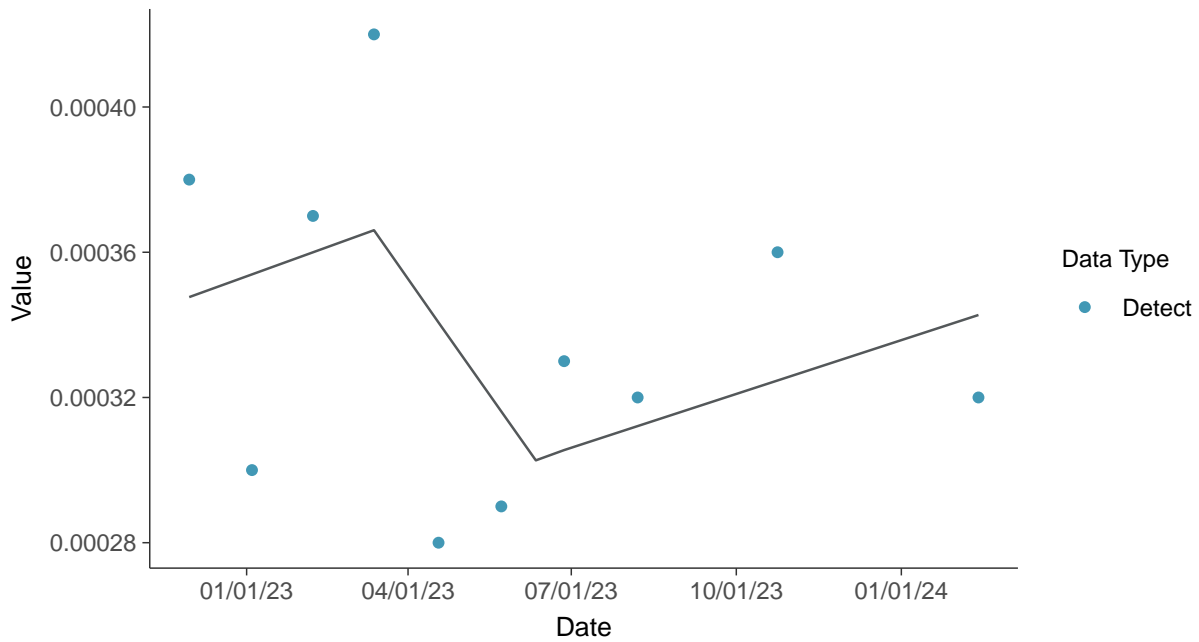
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-07 (mg/L)



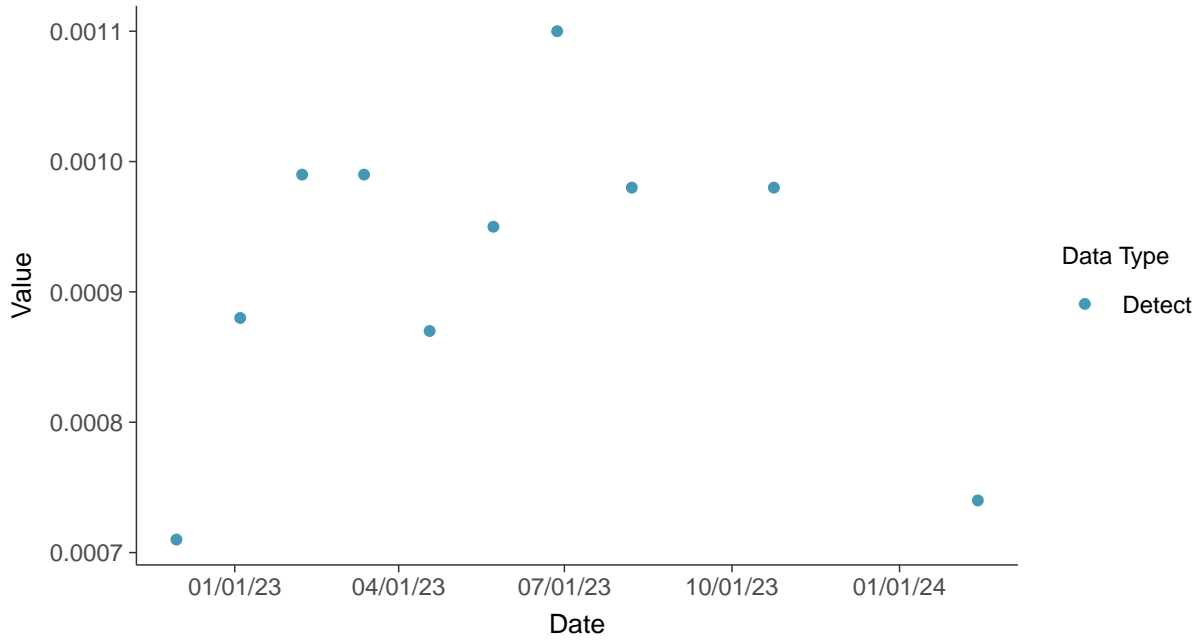


Appendix IV: Cobalt, MW-07

ID: 1_17_5_110

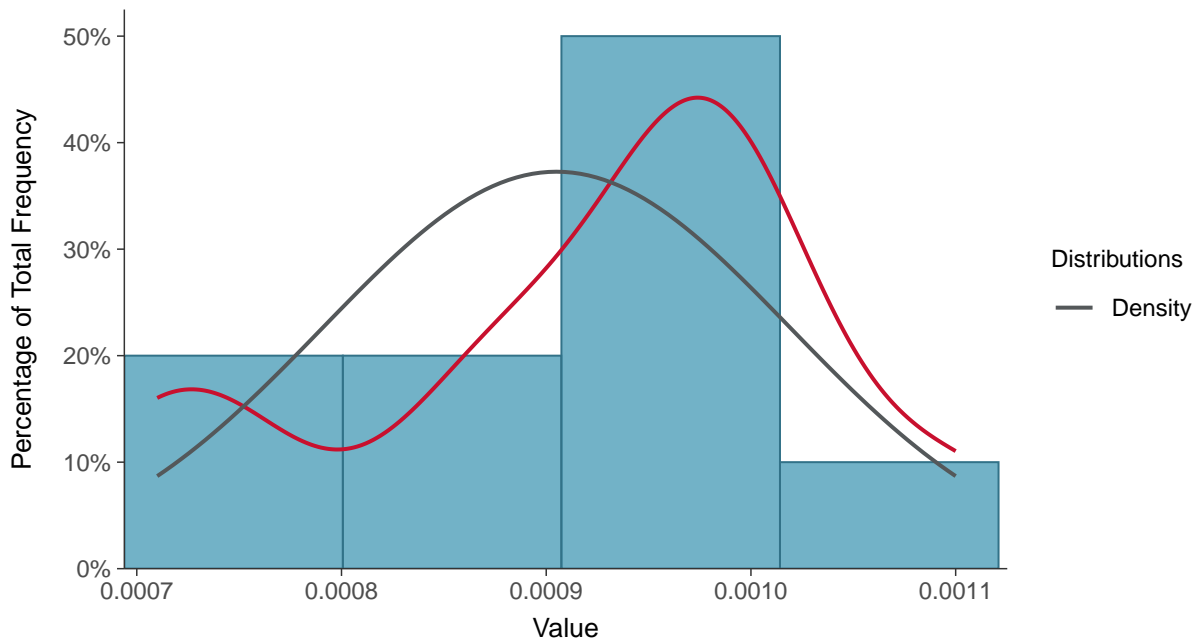
Scatter Plot

Cobalt, MW-07 (mg/L)



Histogram

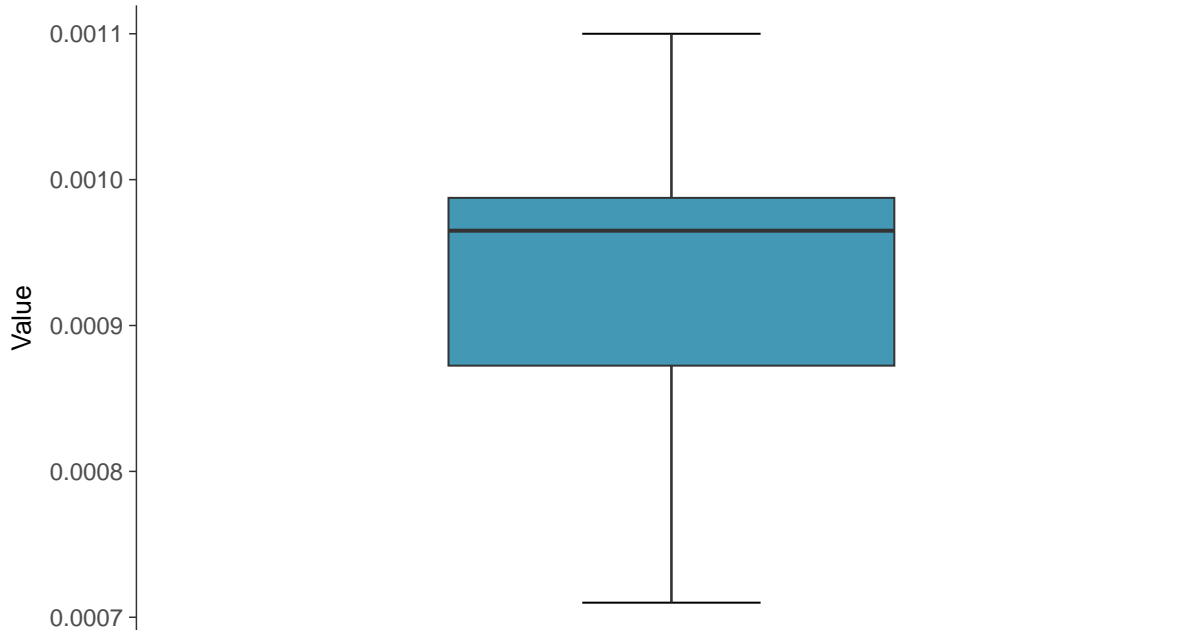
Cobalt, MW-07 (mg/L)





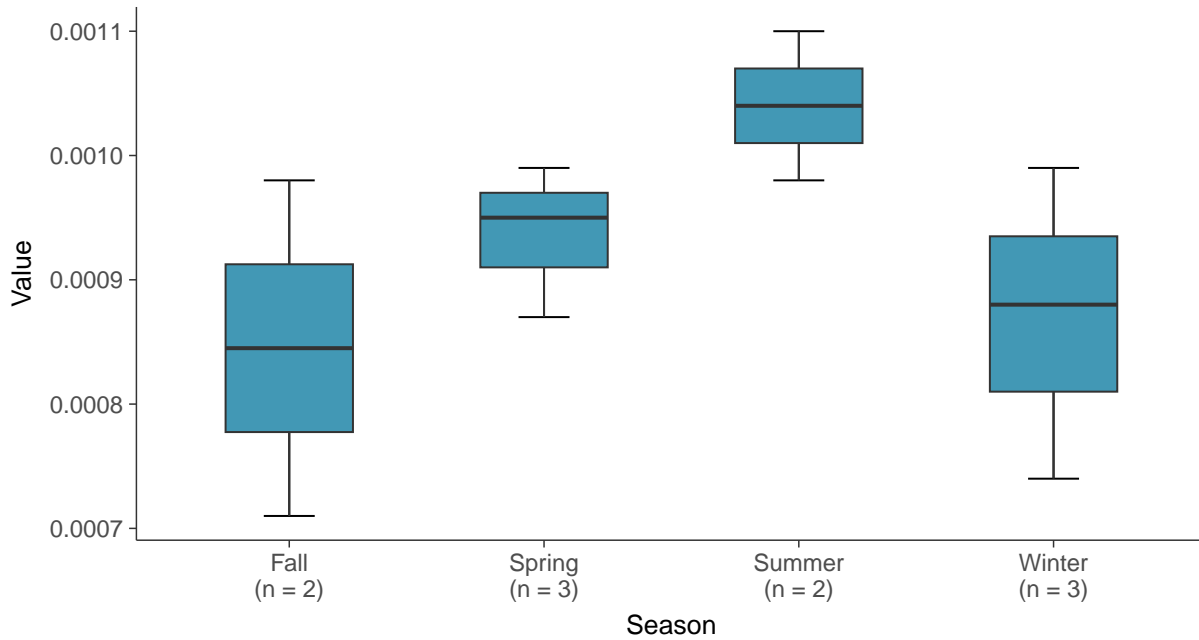
Boxplot

Cobalt, MW-07 (mg/L)



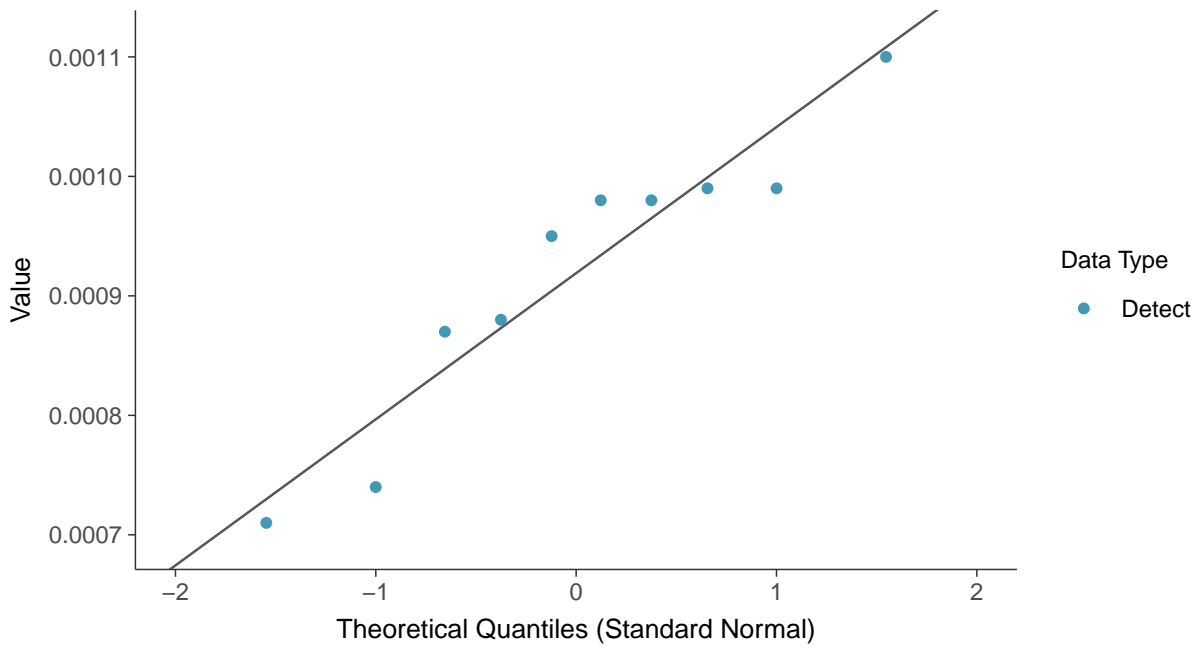
Boxplot by Season

Cobalt, MW-07 (mg/L)

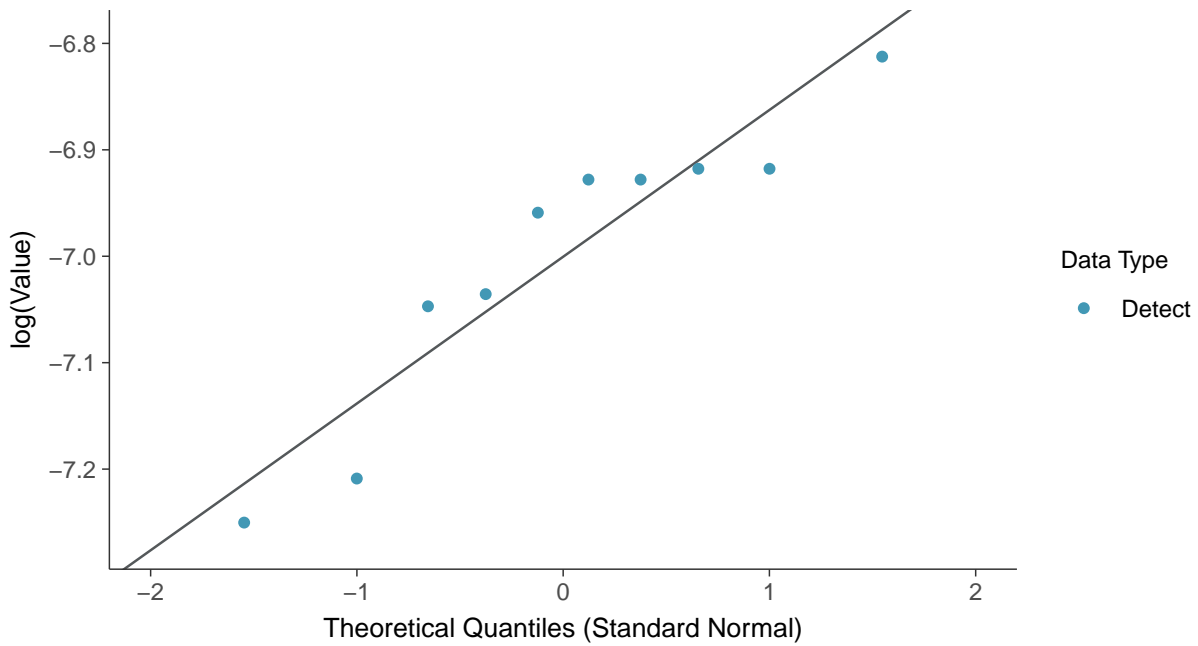




Normal Q-Q plot
Cobalt, MW-07 (mg/L)

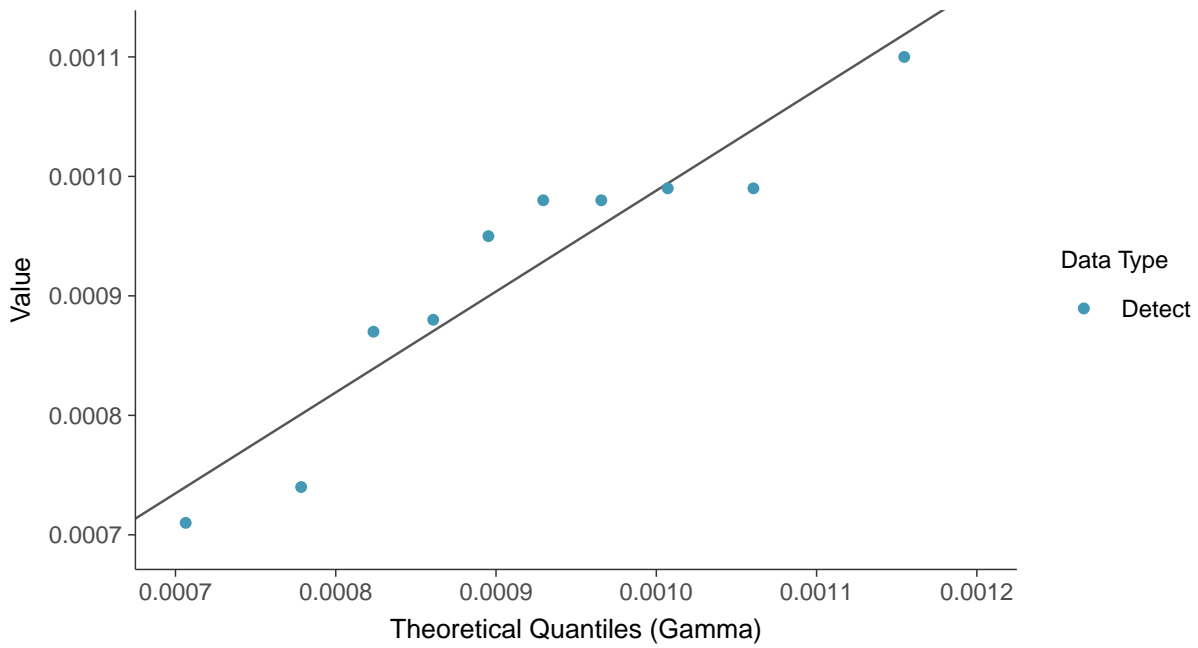


Lognormal Q-Q plot
Cobalt, MW-07 (mg/L)

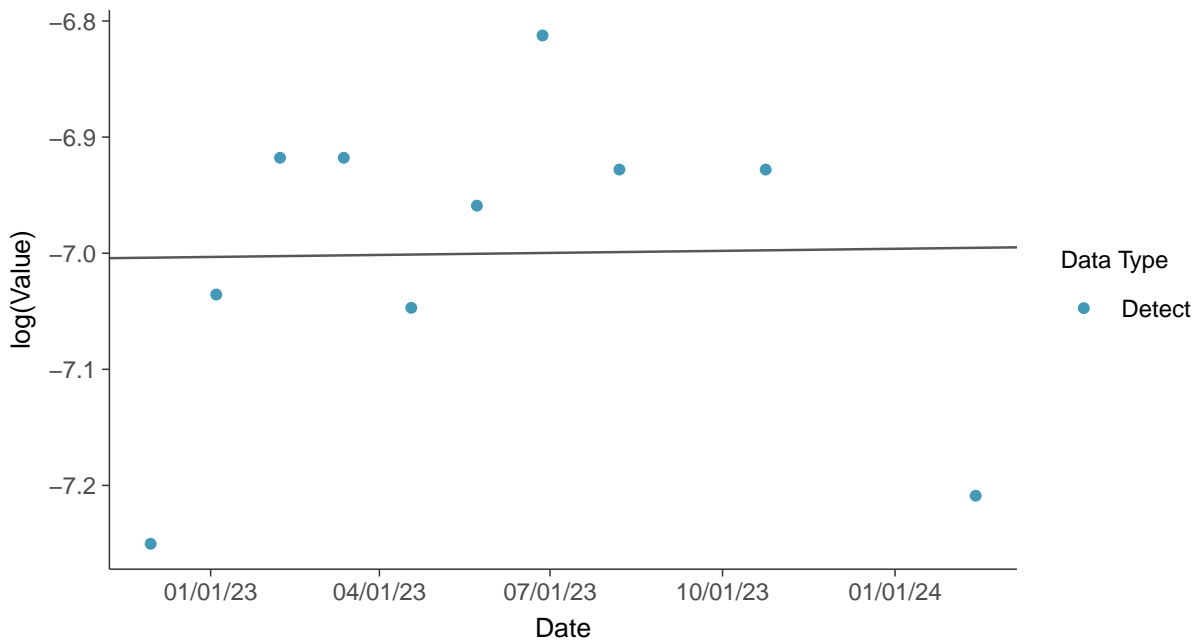




Gamma Q-Q plot
Cobalt, MW-07 (mg/L)



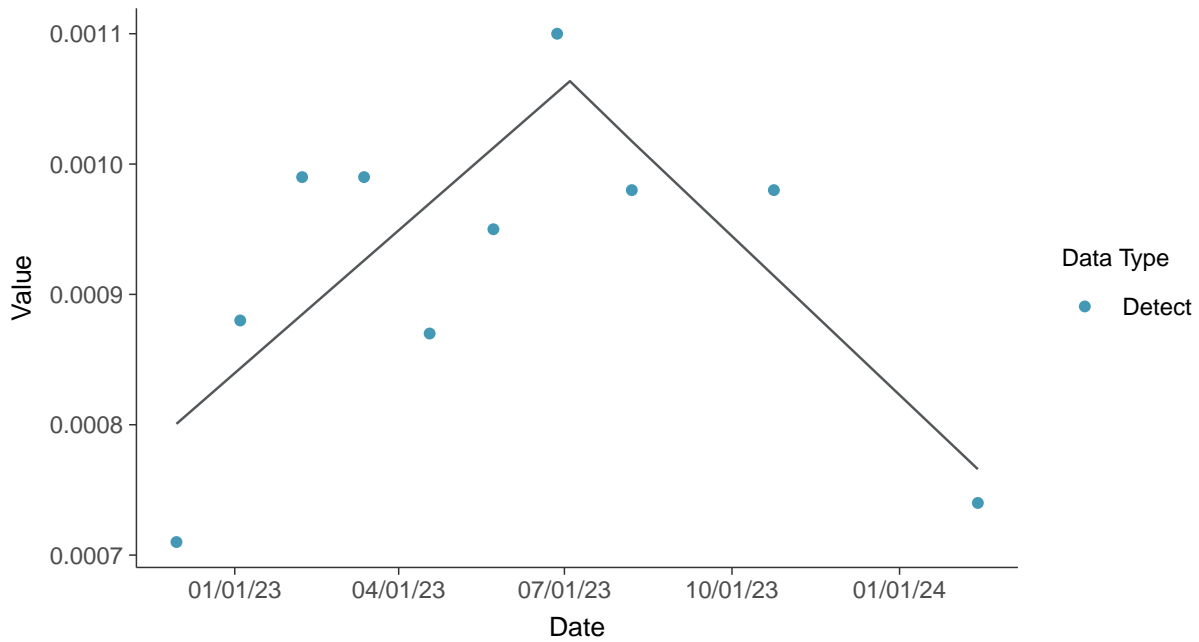
Trend Regression: Lognormal MLE
Cobalt, MW-07 (mg/L)





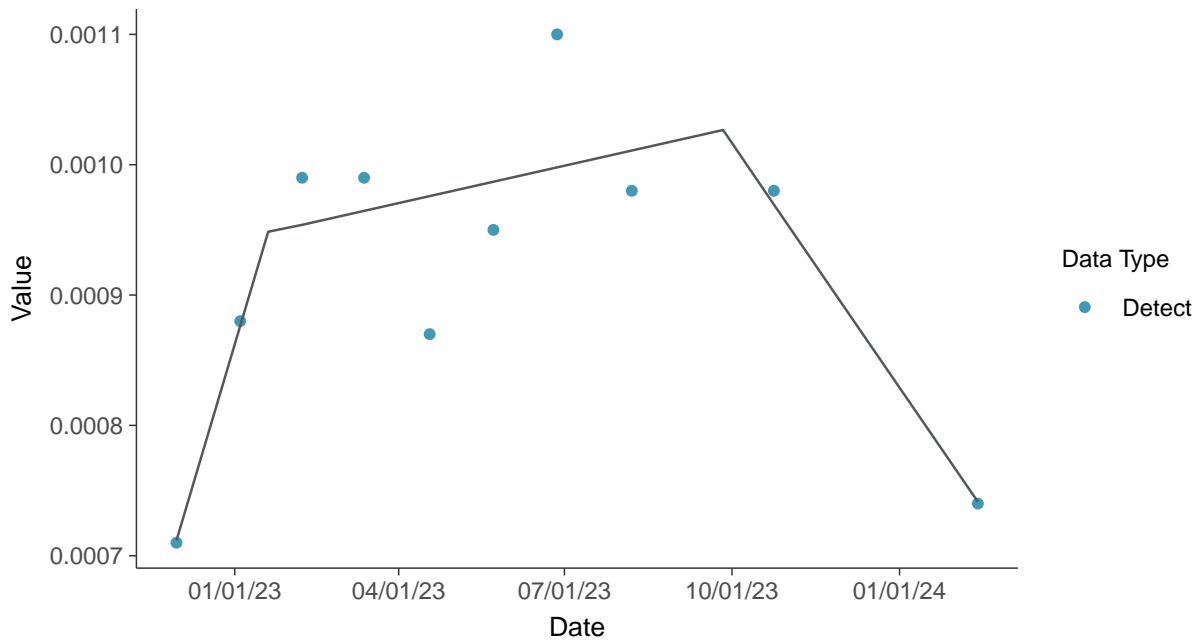
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

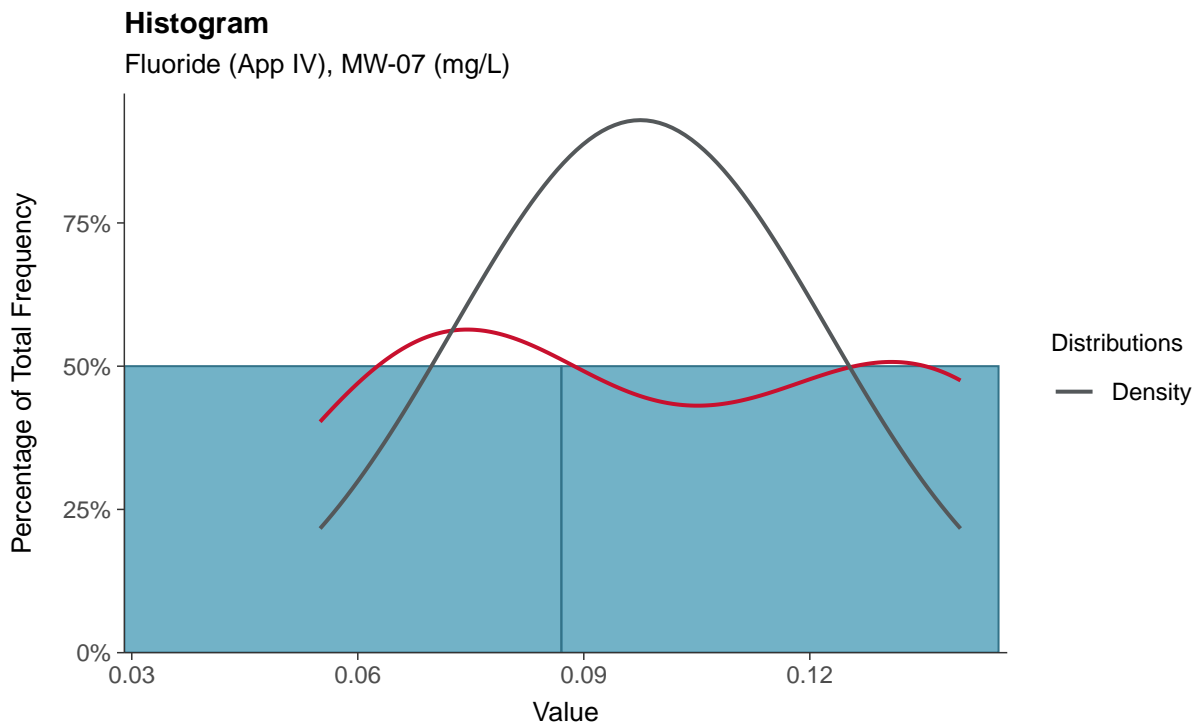
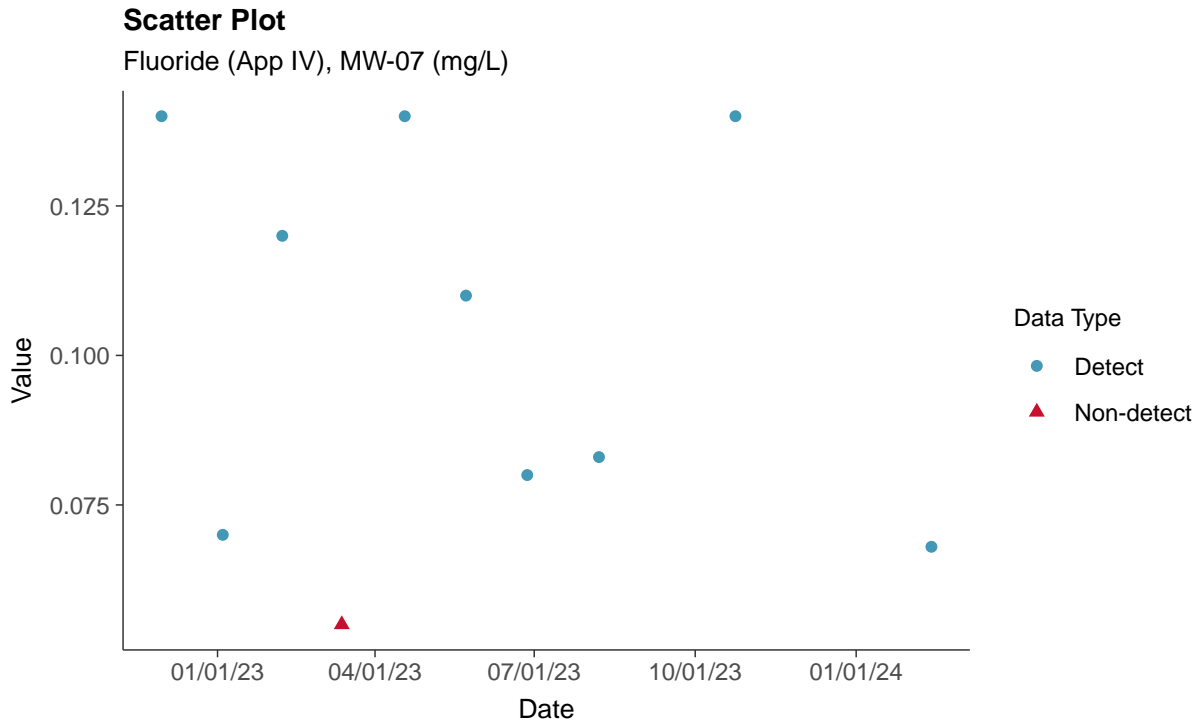
Cobalt, MW-07 (mg/L)





Appendix IV: Fluoride (App IV), MW-07

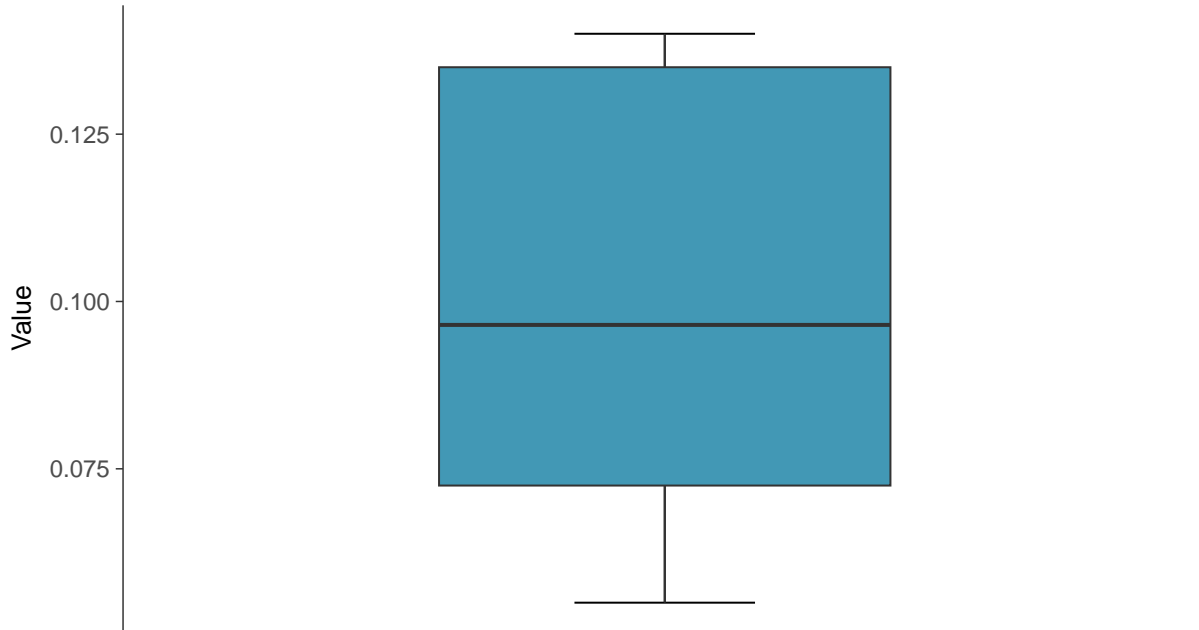
ID: 1_17_5_113





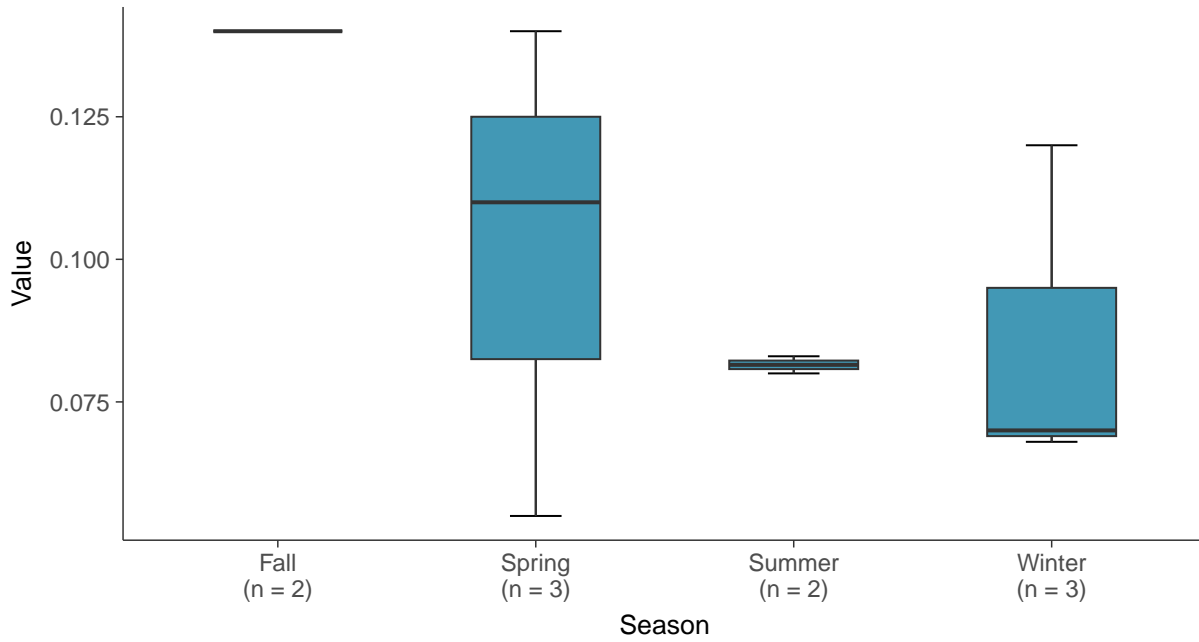
Boxplot

Fluoride (App IV), MW-07 (mg/L)



Boxplot by Season

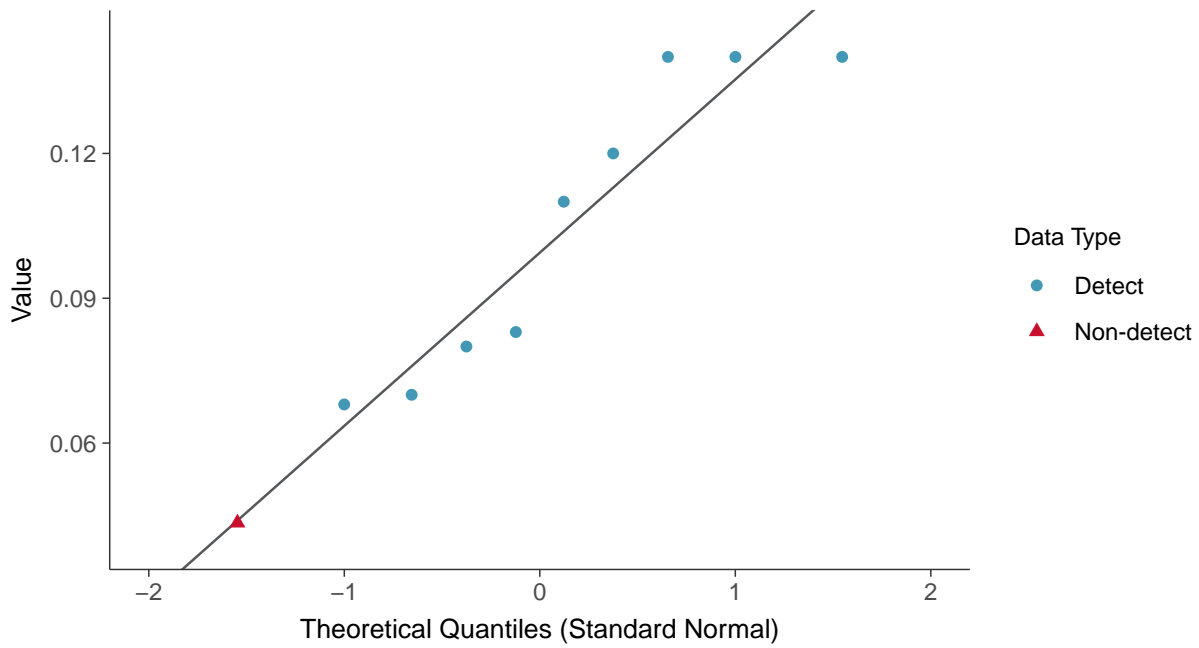
Fluoride (App IV), MW-07 (mg/L)





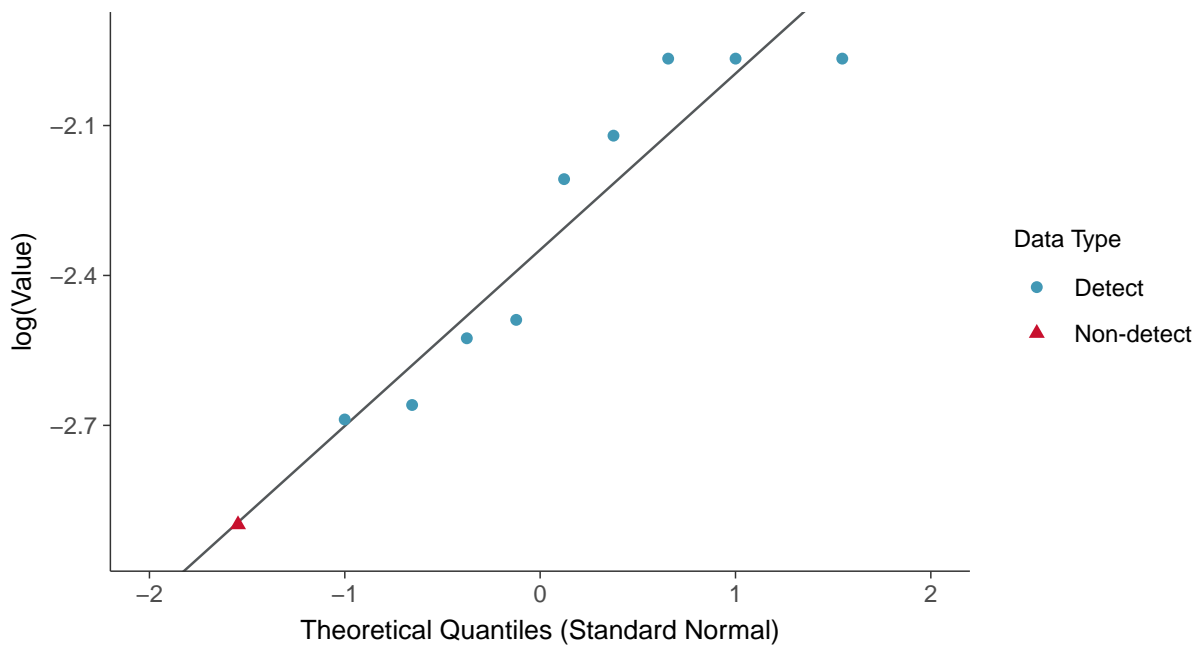
Normal Q-Q plot using ROS Imputed Estimates

Fluoride (App IV), MW-07 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

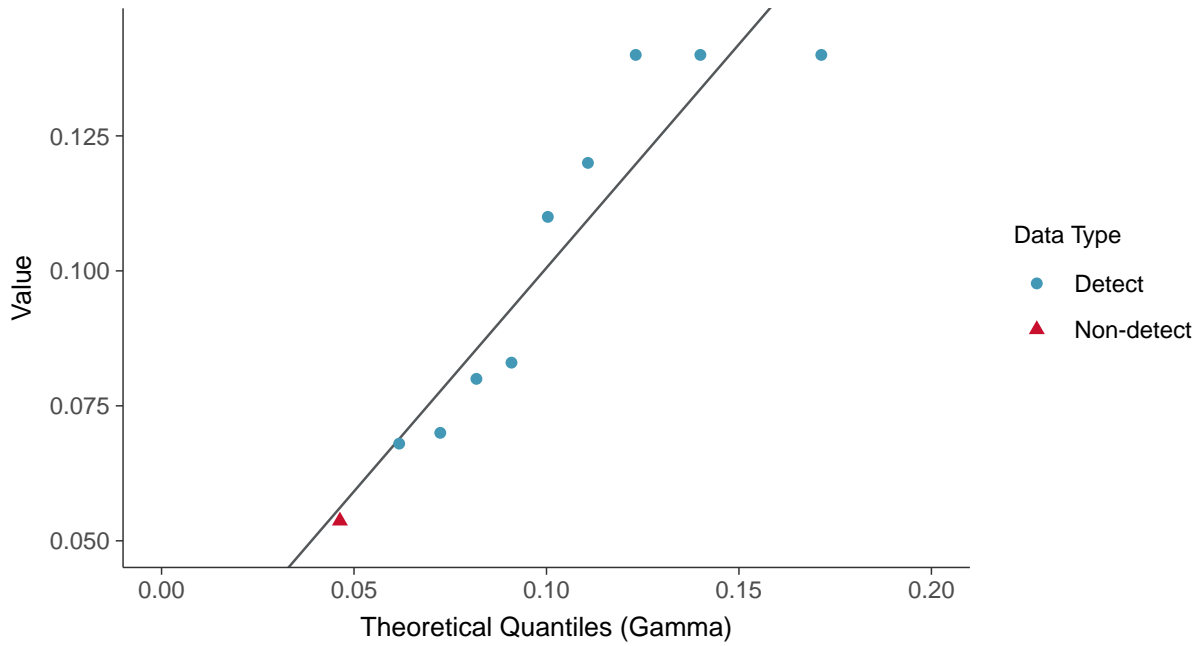
Fluoride (App IV), MW-07 (mg/L)





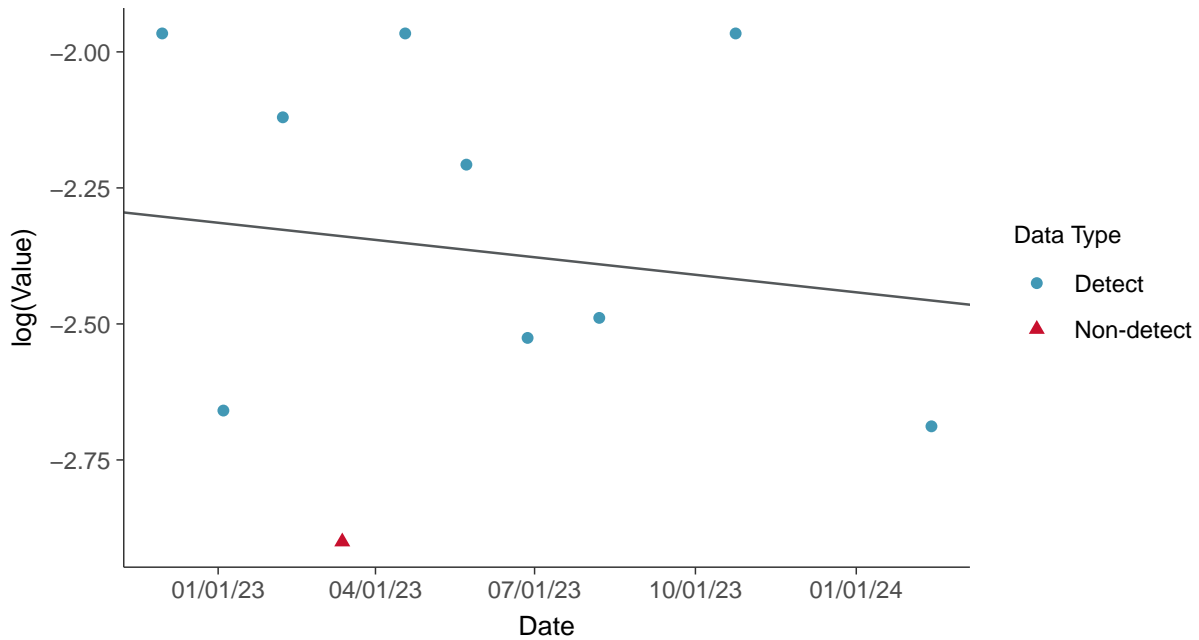
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride (App IV), MW-07 (mg/L)



Trend Regression: Lognormal MLE

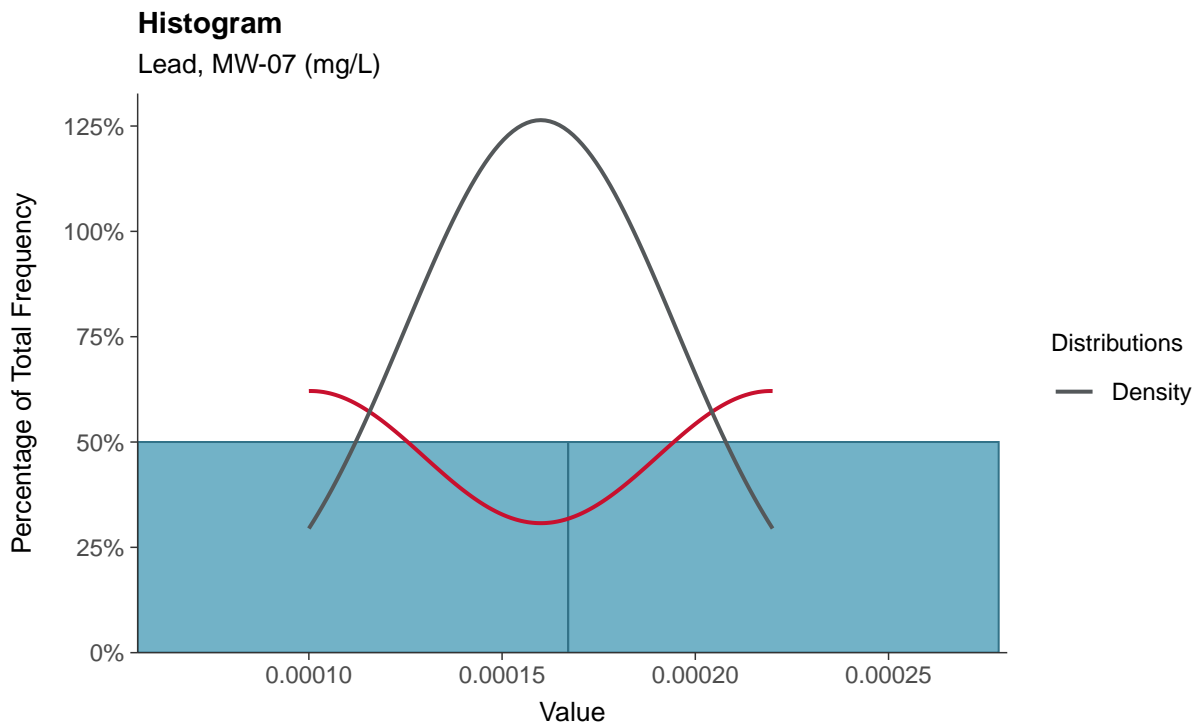
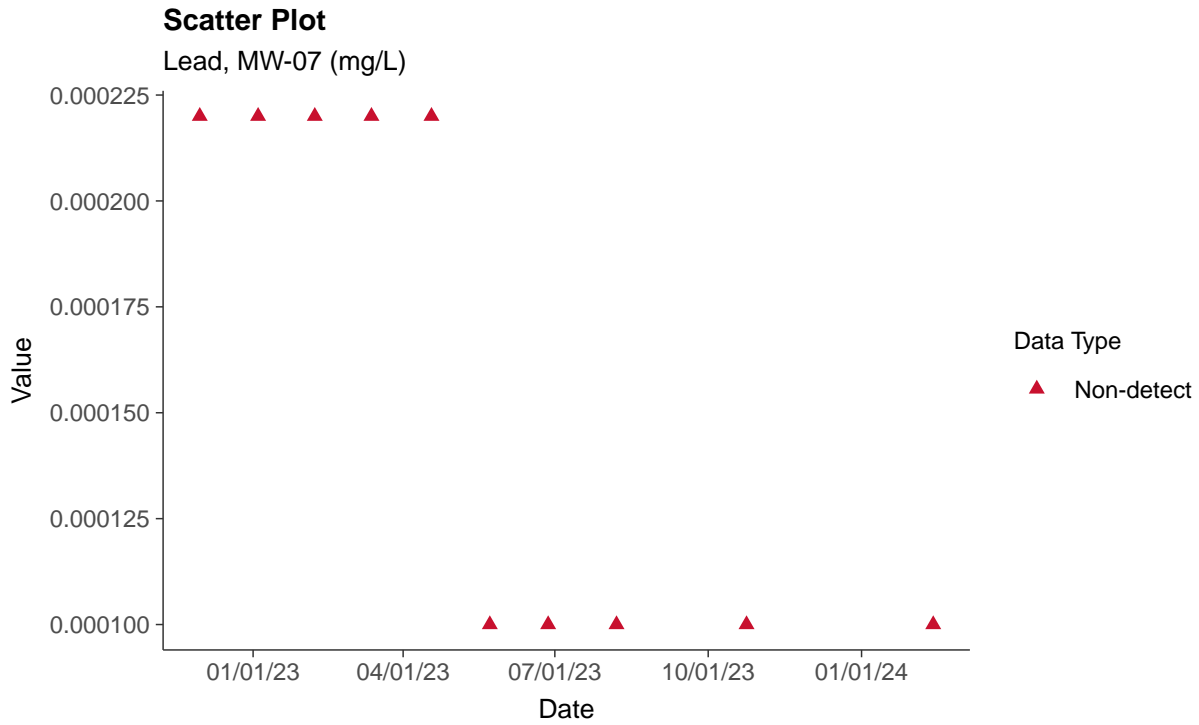
Fluoride (App IV), MW-07 (mg/L)





Appendix IV: Lead, MW-07

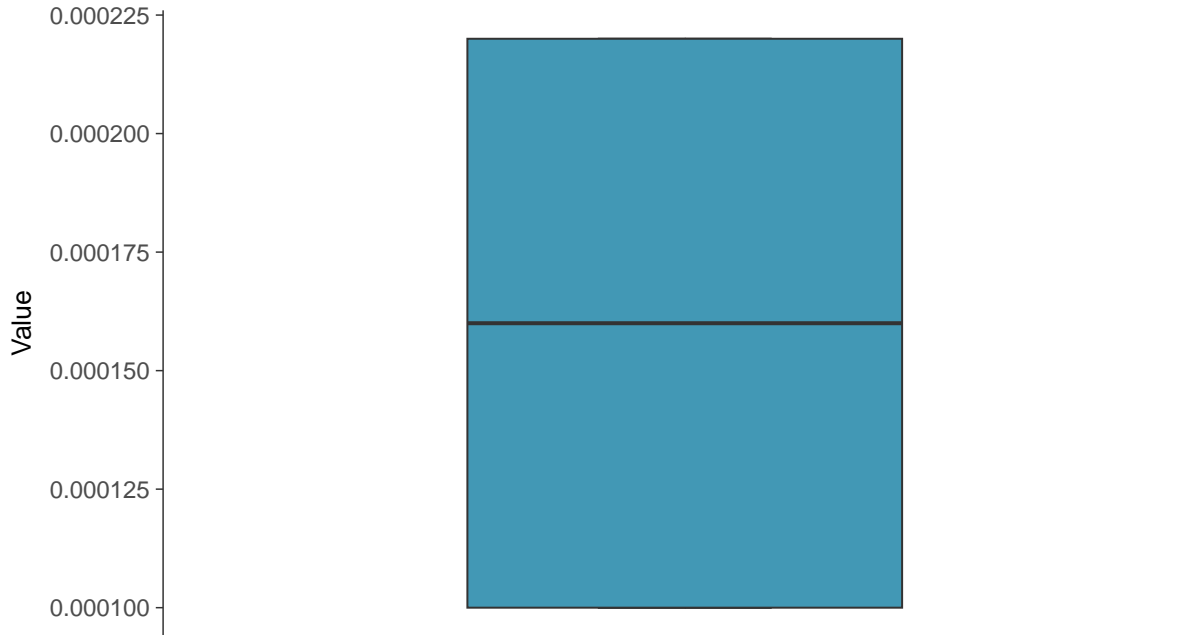
ID: 1_17_5_115





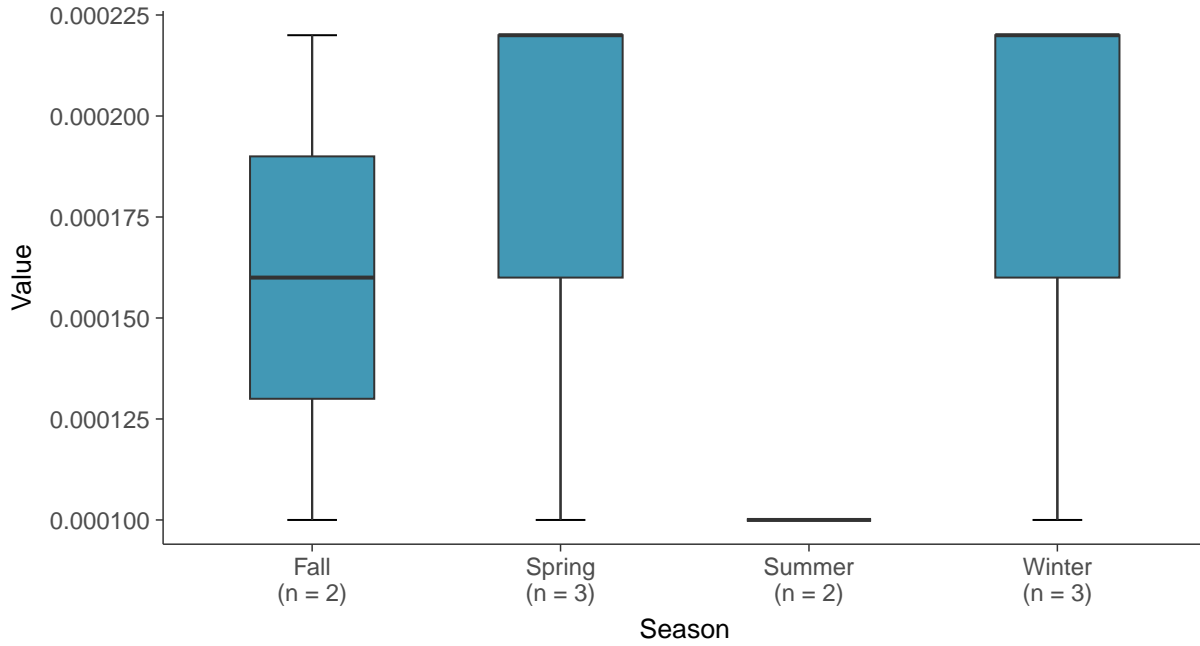
Boxplot

Lead, MW-07 (mg/L)



Boxplot by Season

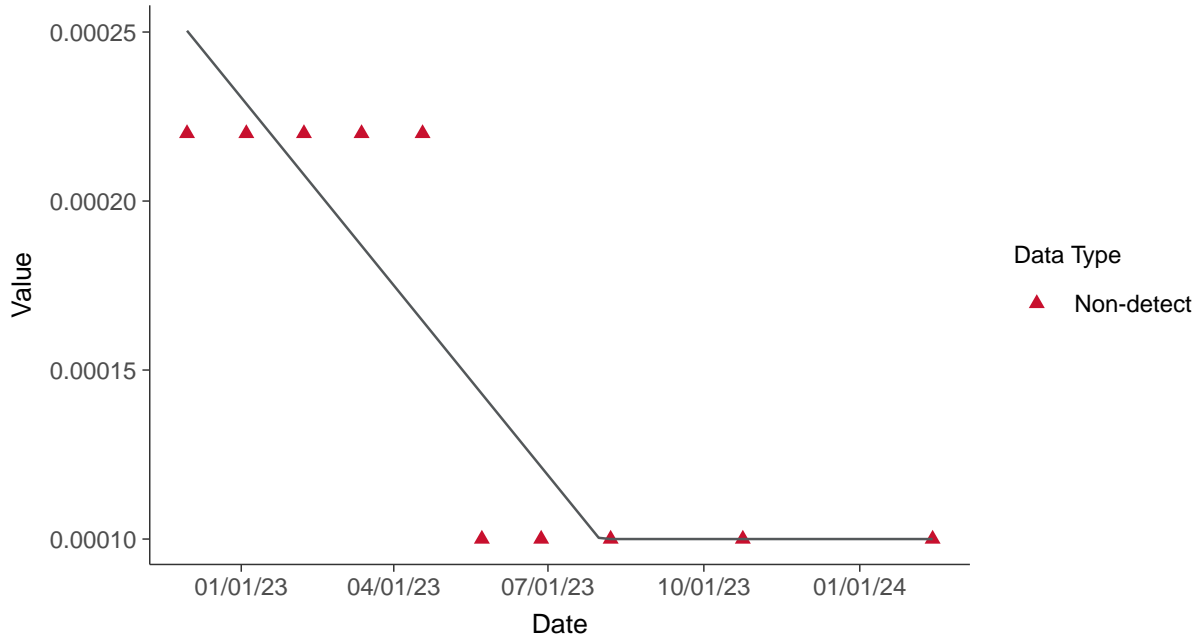
Lead, MW-07 (mg/L)





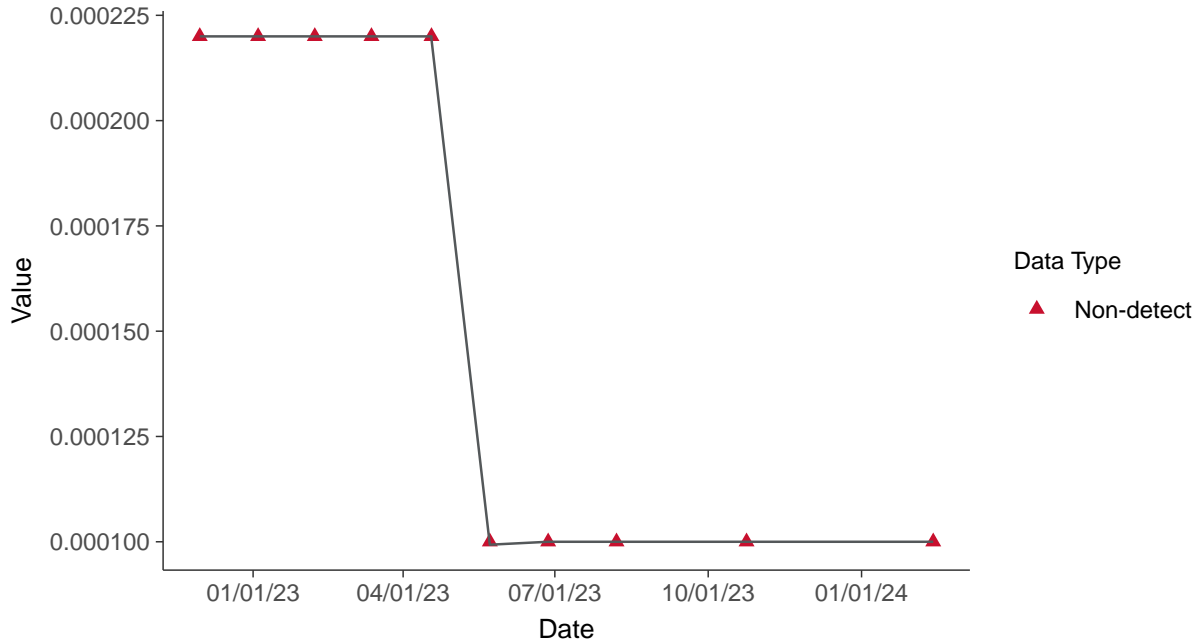
Trend Regression: Piecewise Linear-Linear

Lead, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-07 (mg/L)



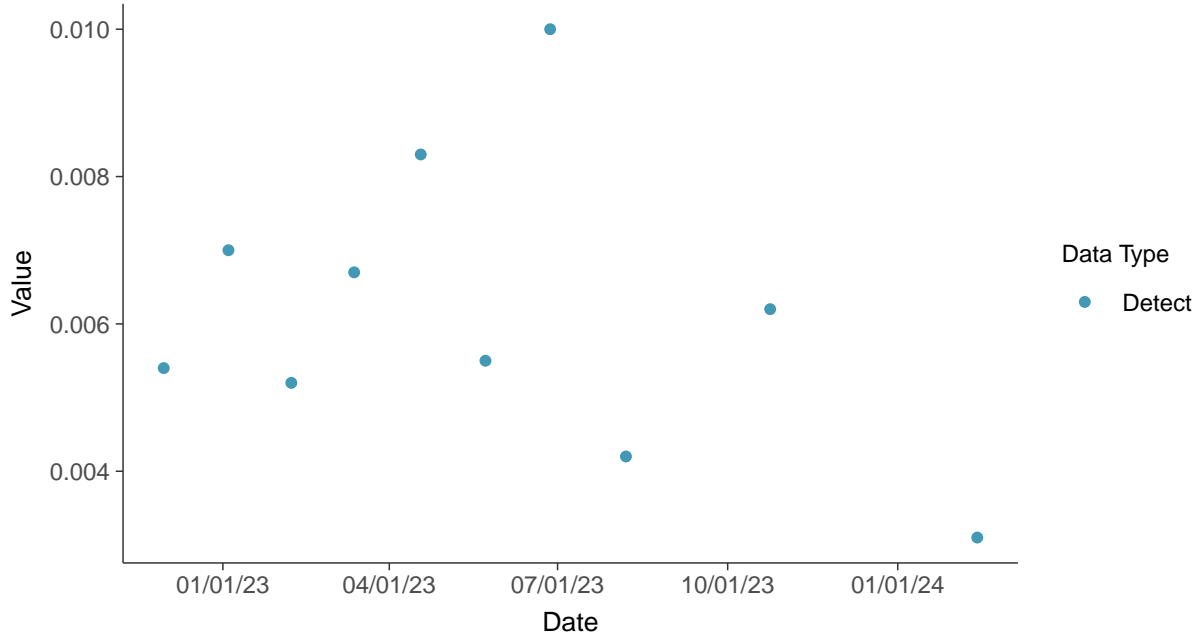


Appendix IV: Lithium, MW-07

ID: 1_17_5_116

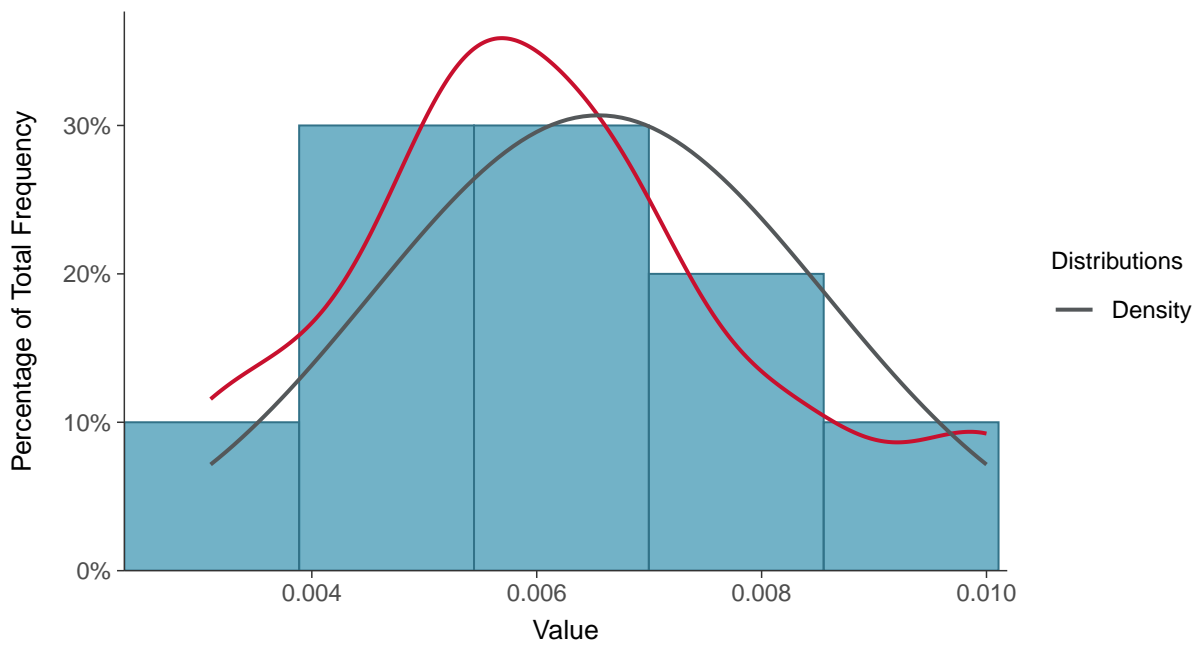
Scatter Plot

Lithium, MW-07 (mg/L)



Histogram

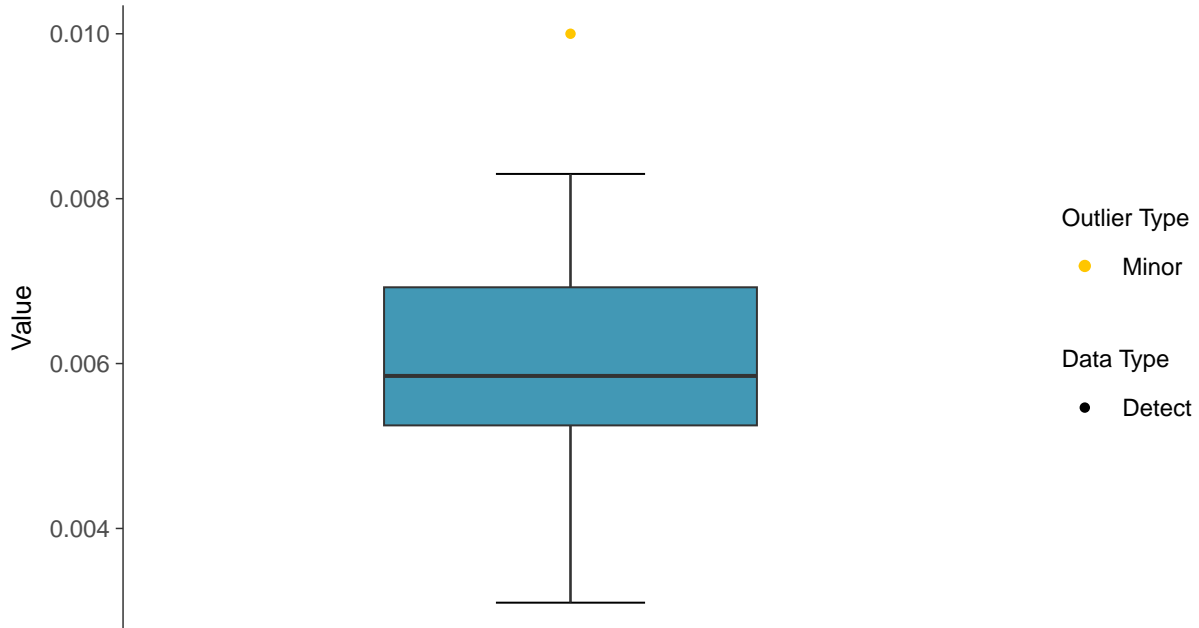
Lithium, MW-07 (mg/L)





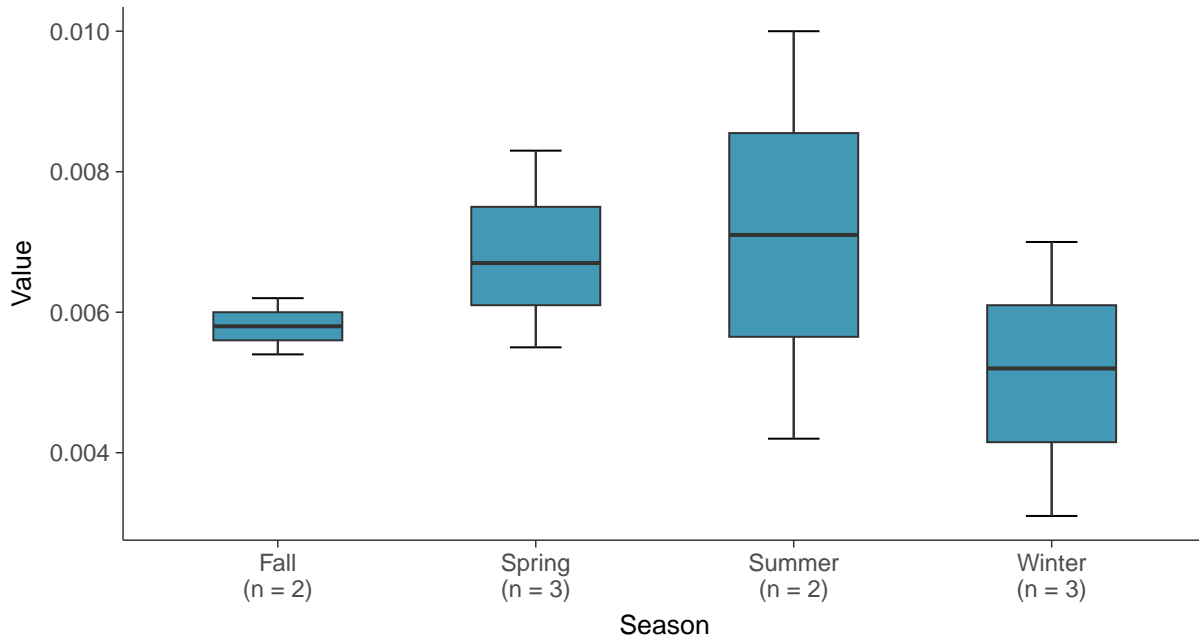
Boxplot

Lithium, MW-07 (mg/L)



Boxplot by Season

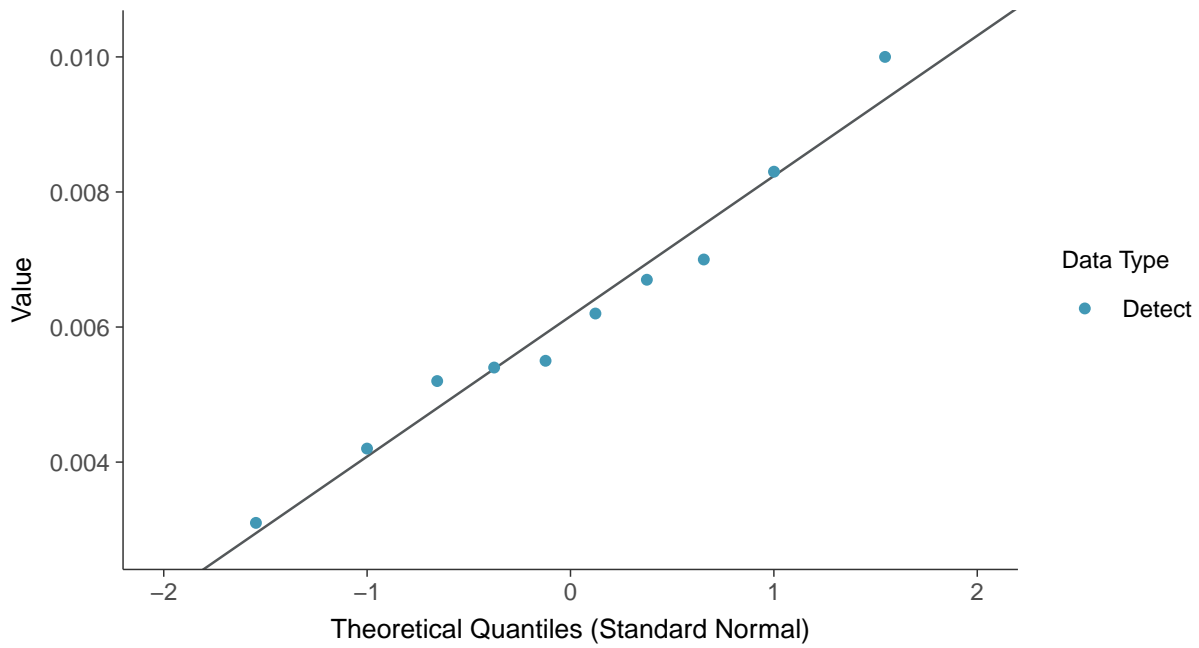
Lithium, MW-07 (mg/L)





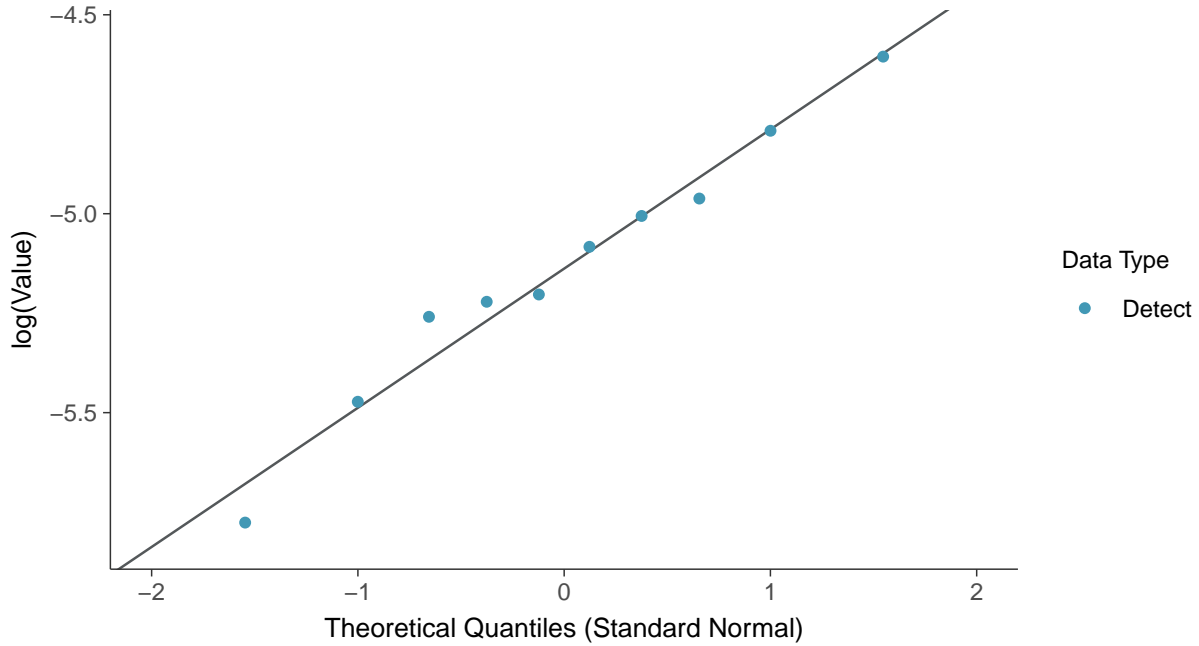
Normal Q-Q plot

Lithium, MW-07 (mg/L)



Lognormal Q-Q plot

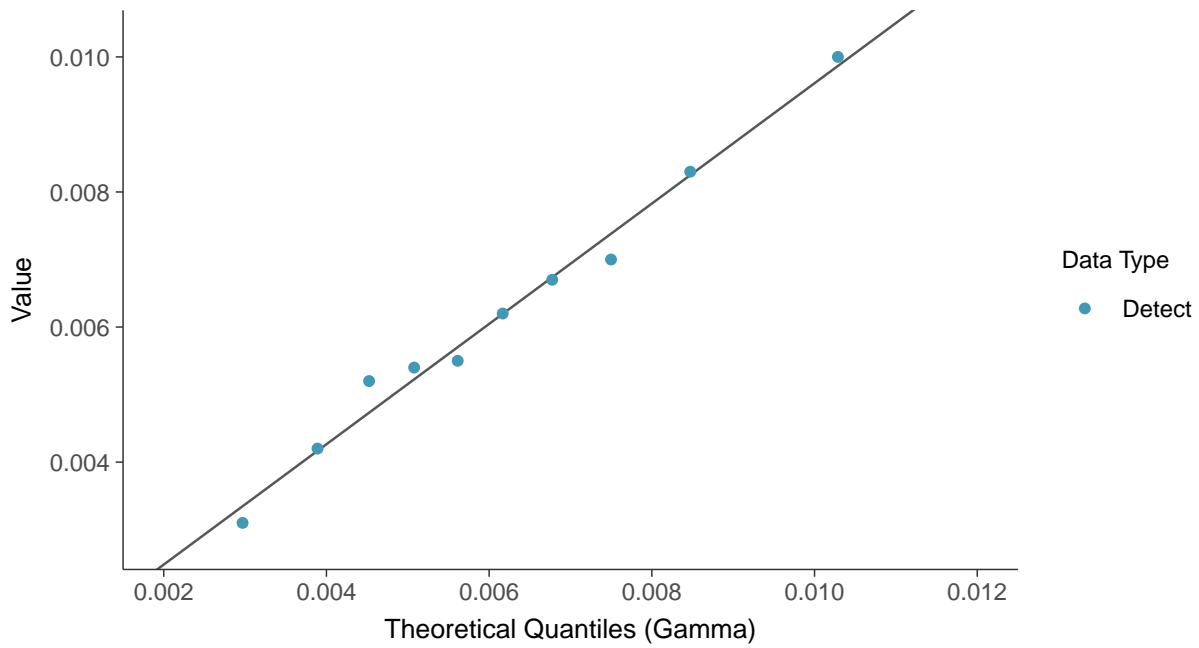
Lithium, MW-07 (mg/L)





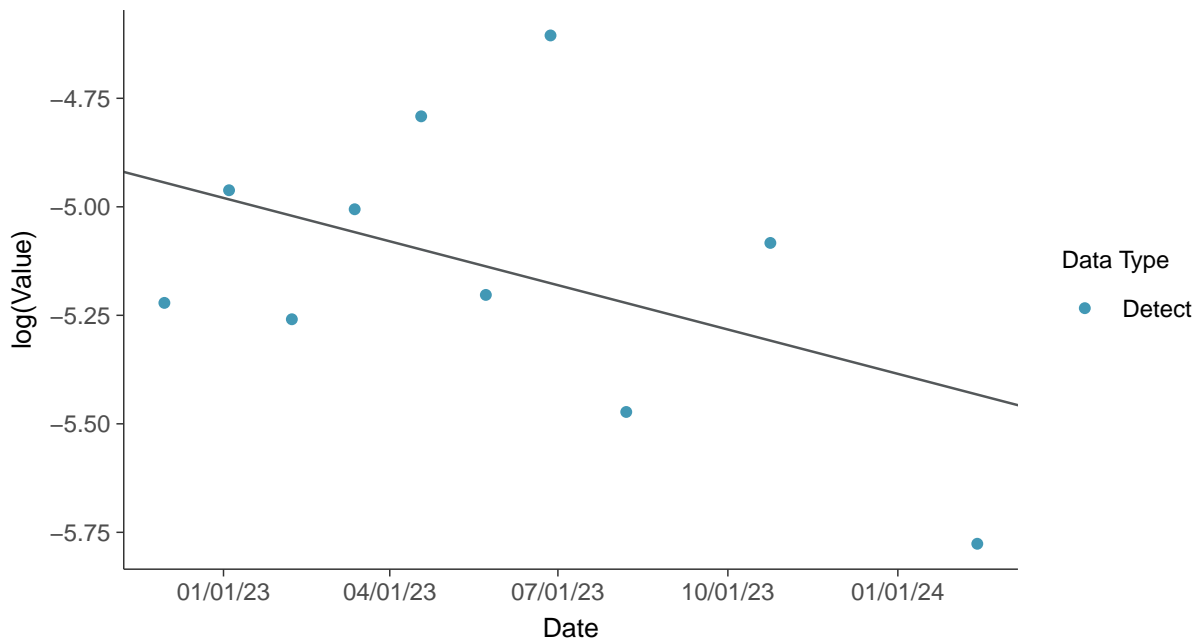
Gamma Q-Q plot

Lithium, MW-07 (mg/L)



Trend Regression: Lognormal MLE

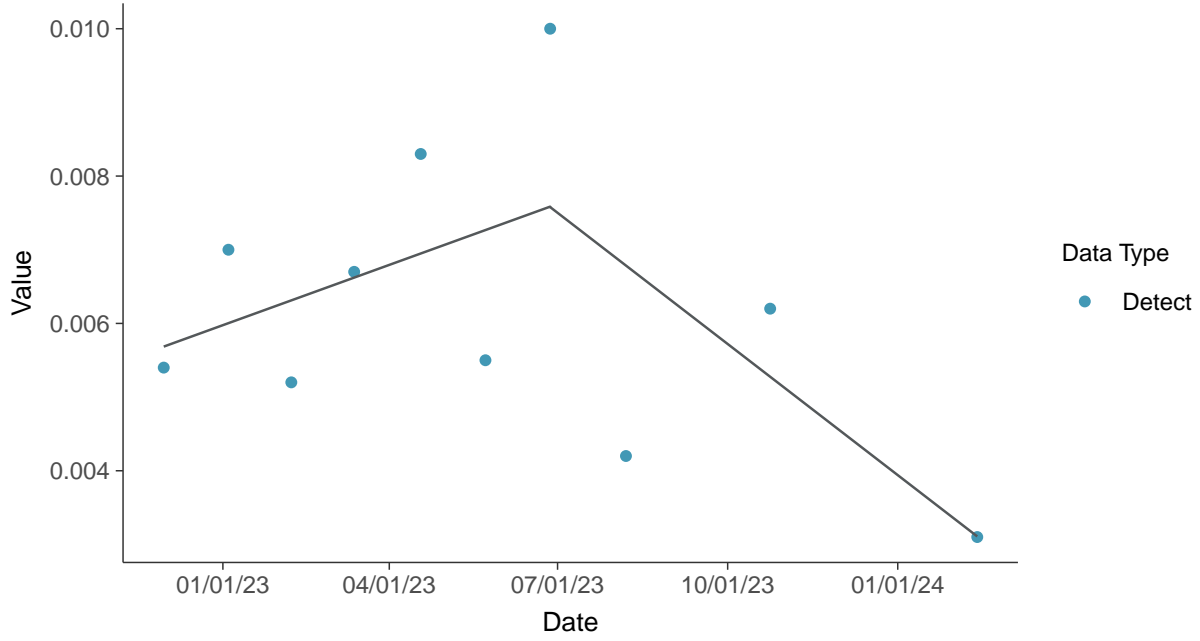
Lithium, MW-07 (mg/L)





Trend Regression: Piecewise Linear-Linear

Lithium, MW-07 (mg/L)



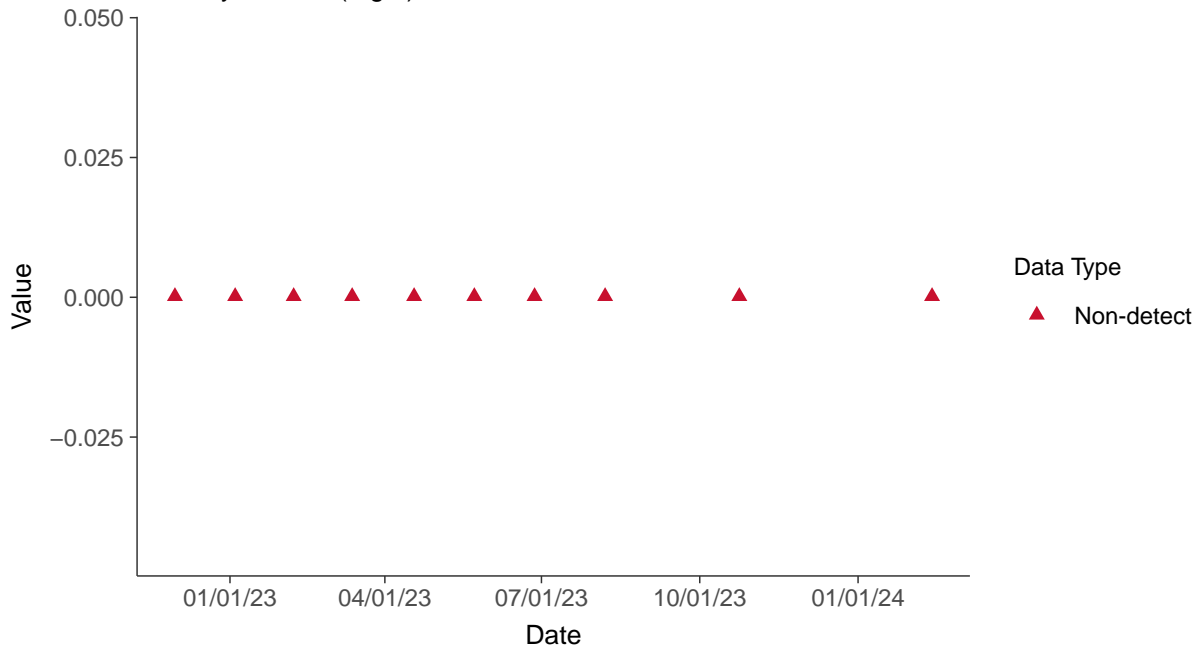


Appendix IV: Mercury, MW-07

ID: 1_17_5_117

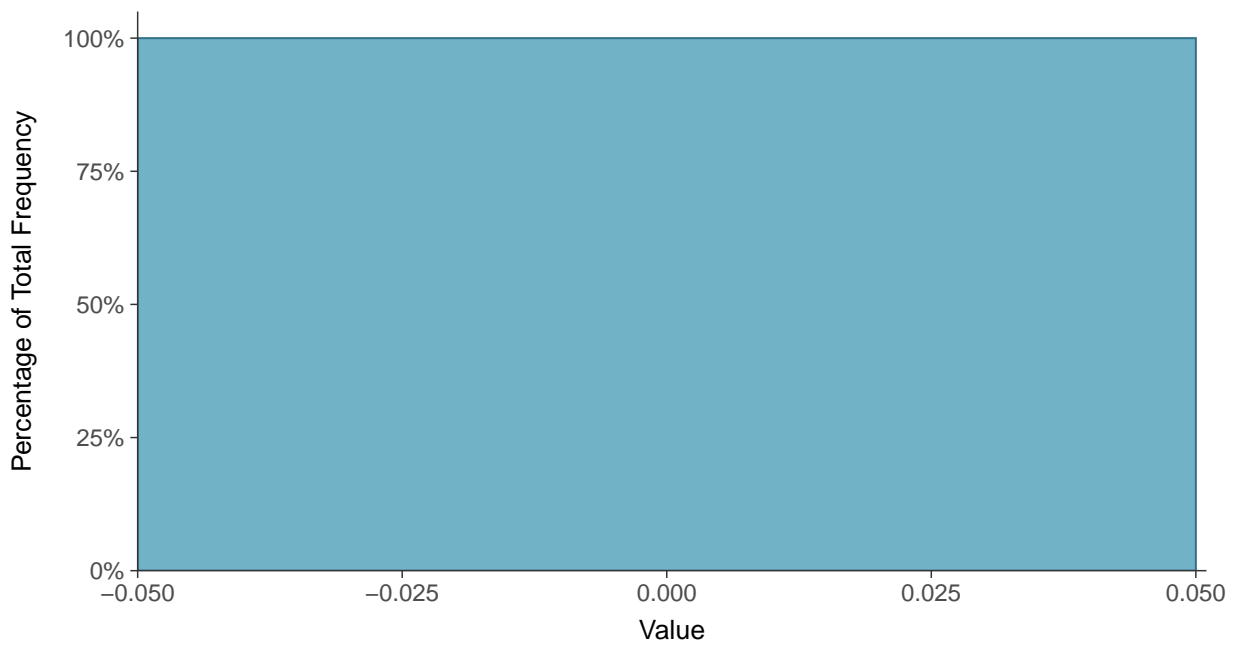
Scatter Plot

Mercury, MW-07 (mg/L)



Histogram

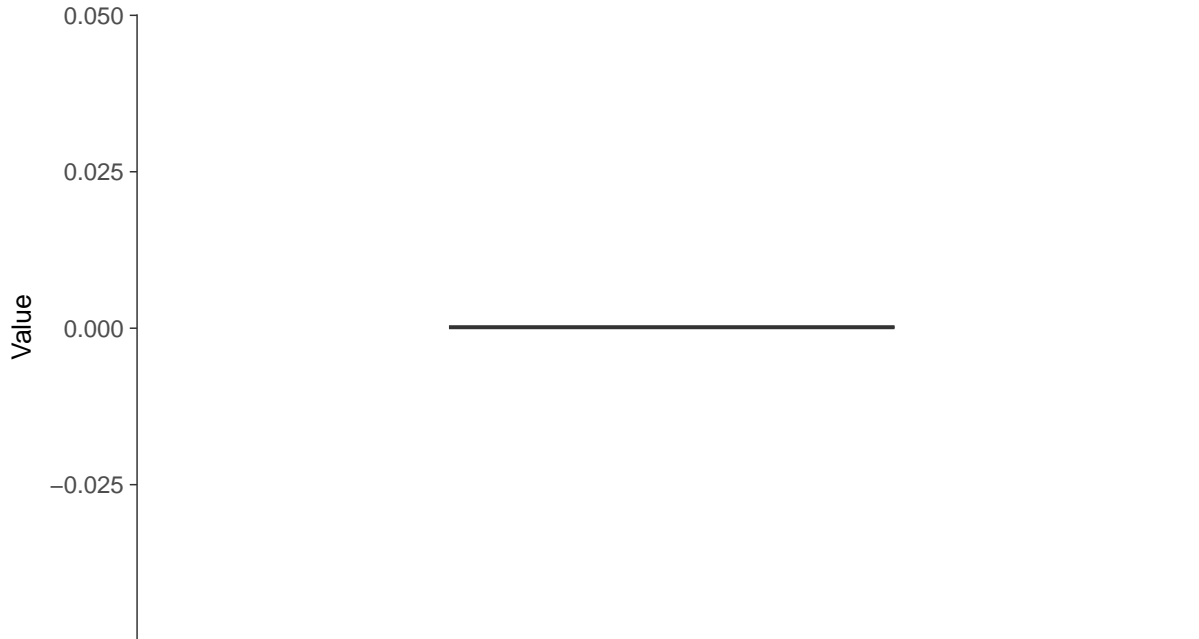
Mercury, MW-07 (mg/L)





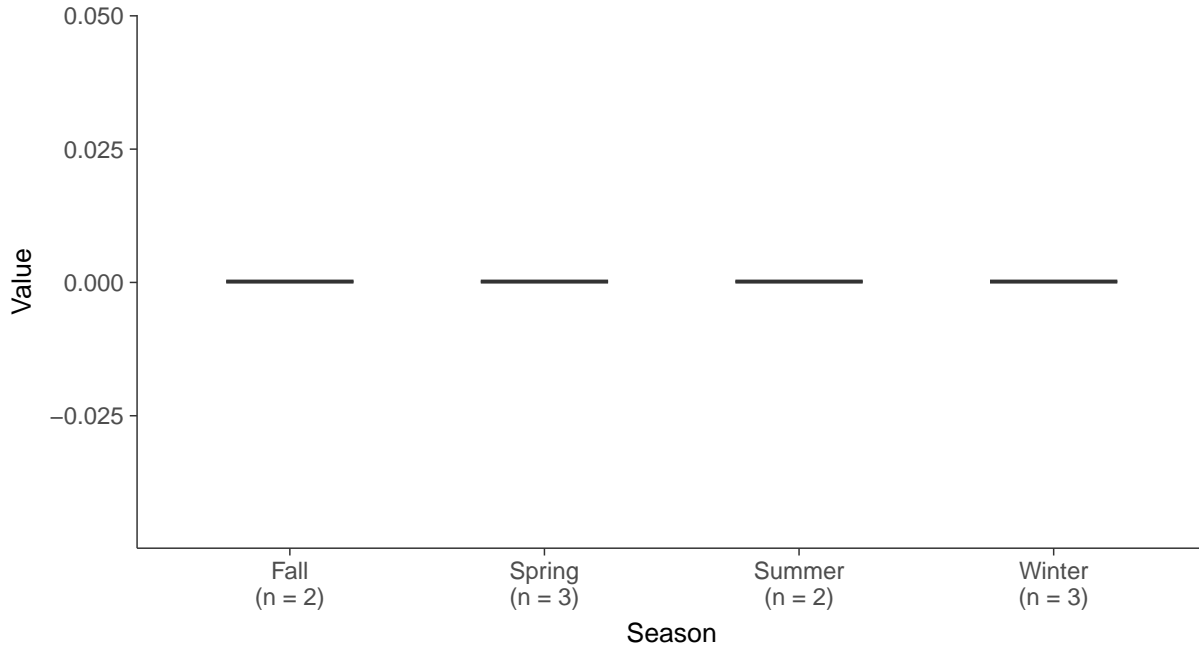
Boxplot

Mercury, MW-07 (mg/L)



Boxplot by Season

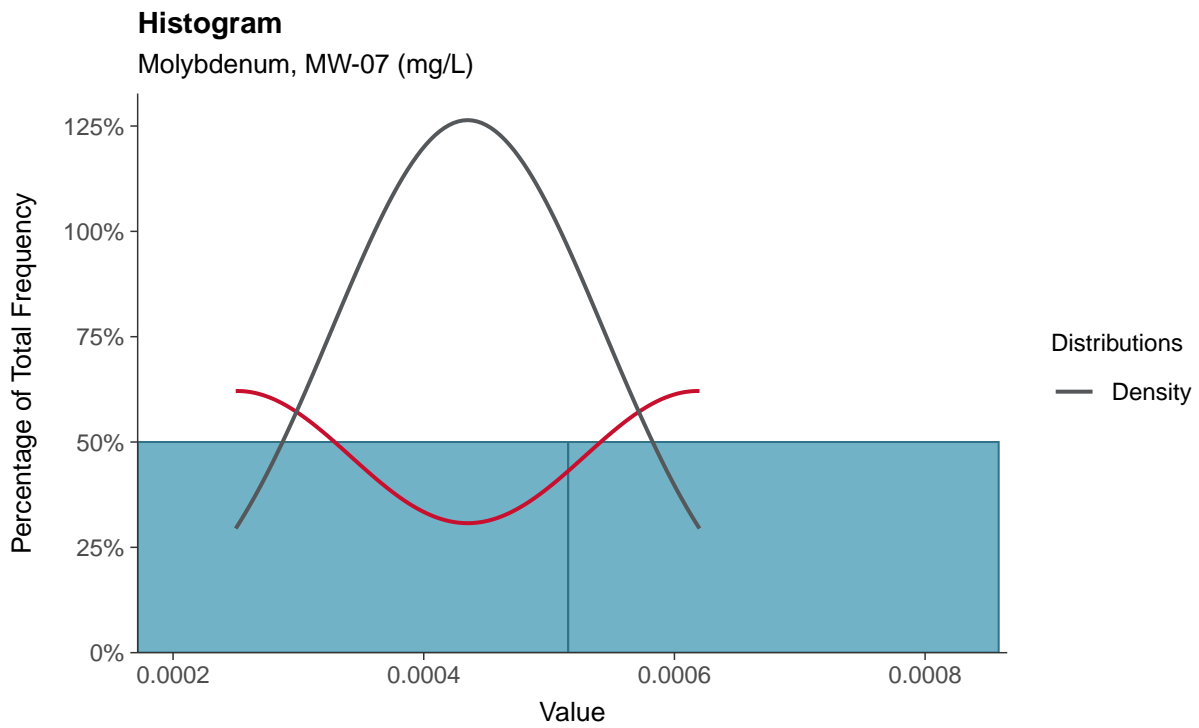
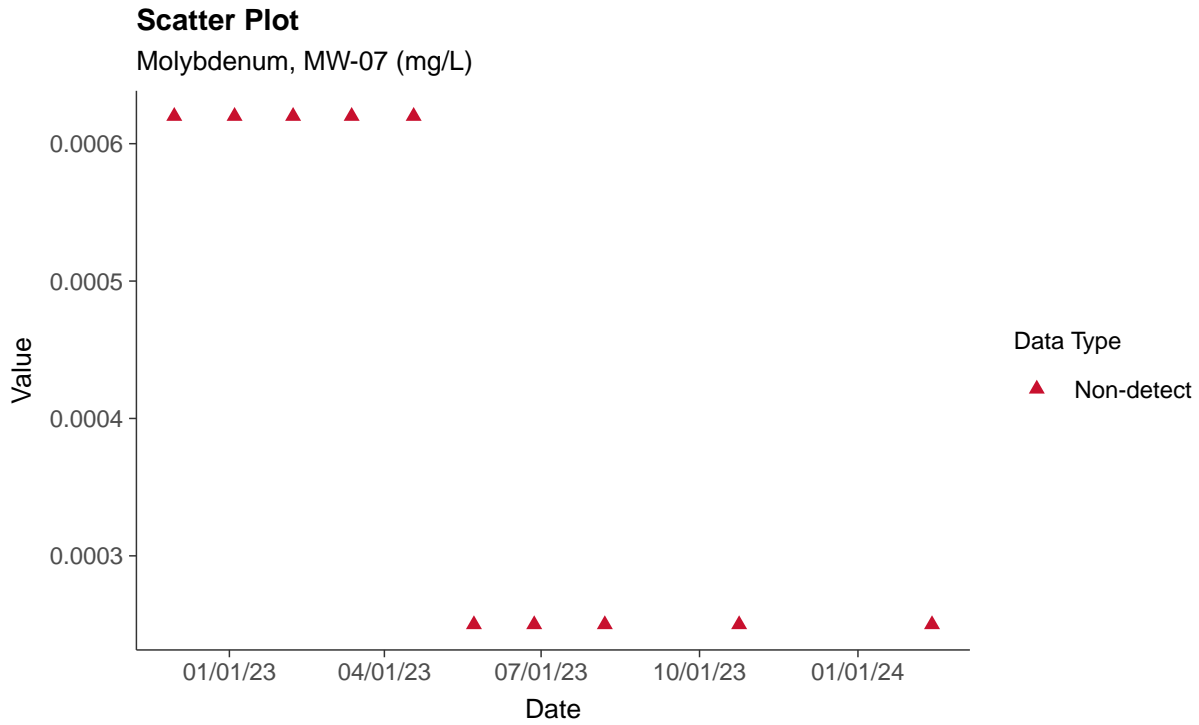
Mercury, MW-07 (mg/L)





Appendix IV: Molybdenum, MW-07

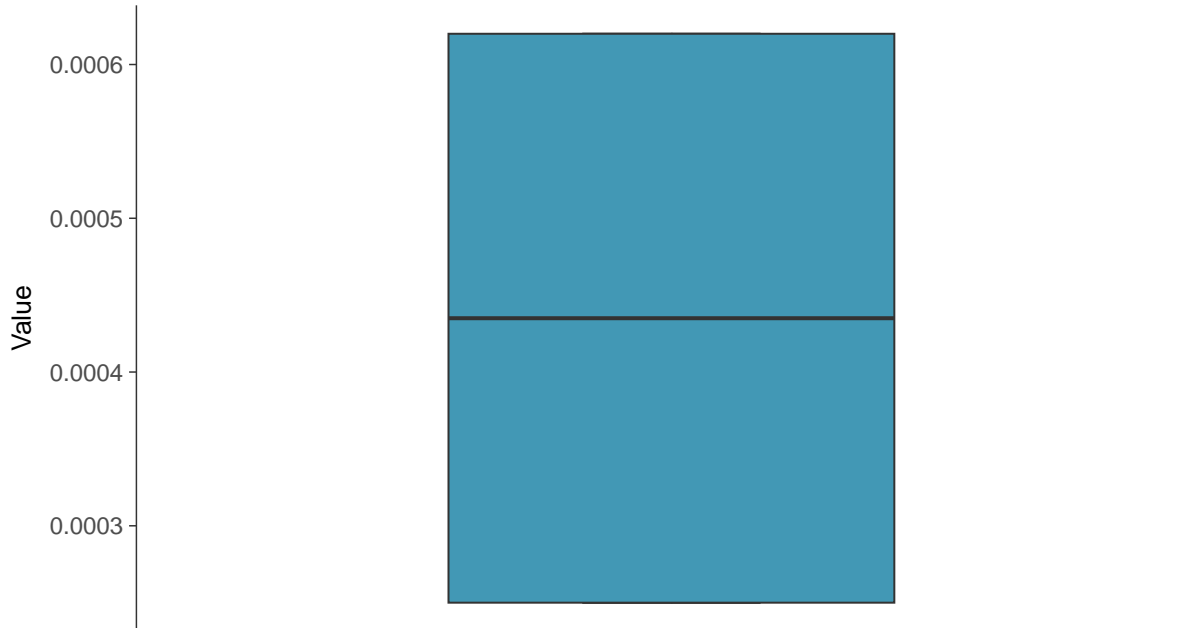
ID: 1_17_5_118





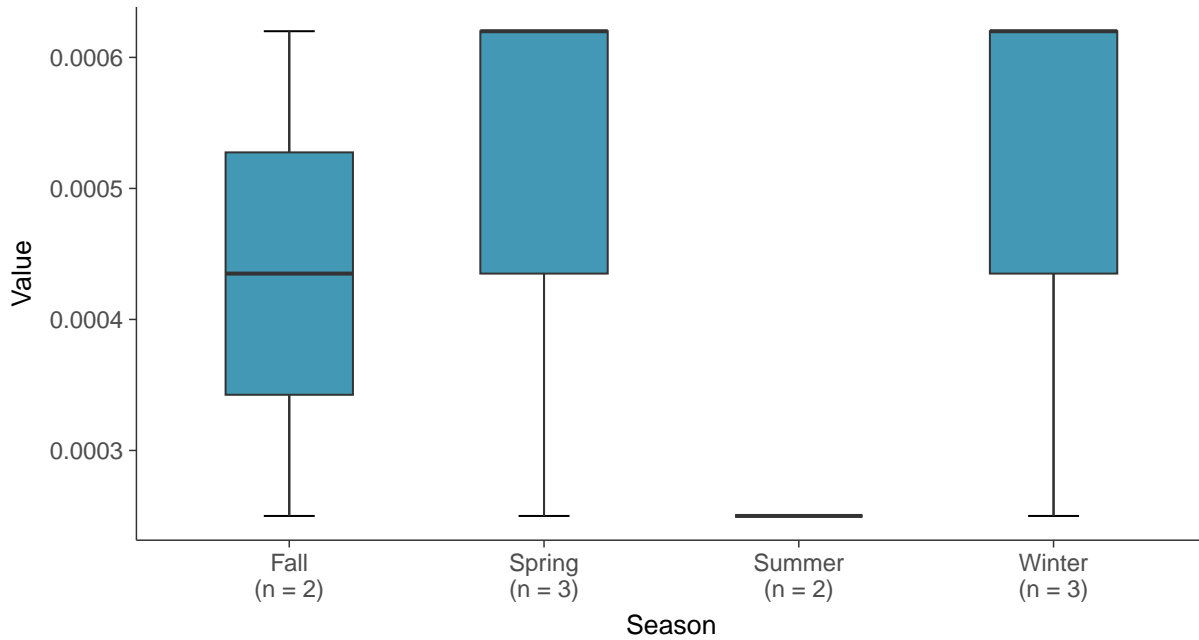
Boxplot

Molybdenum, MW-07 (mg/L)



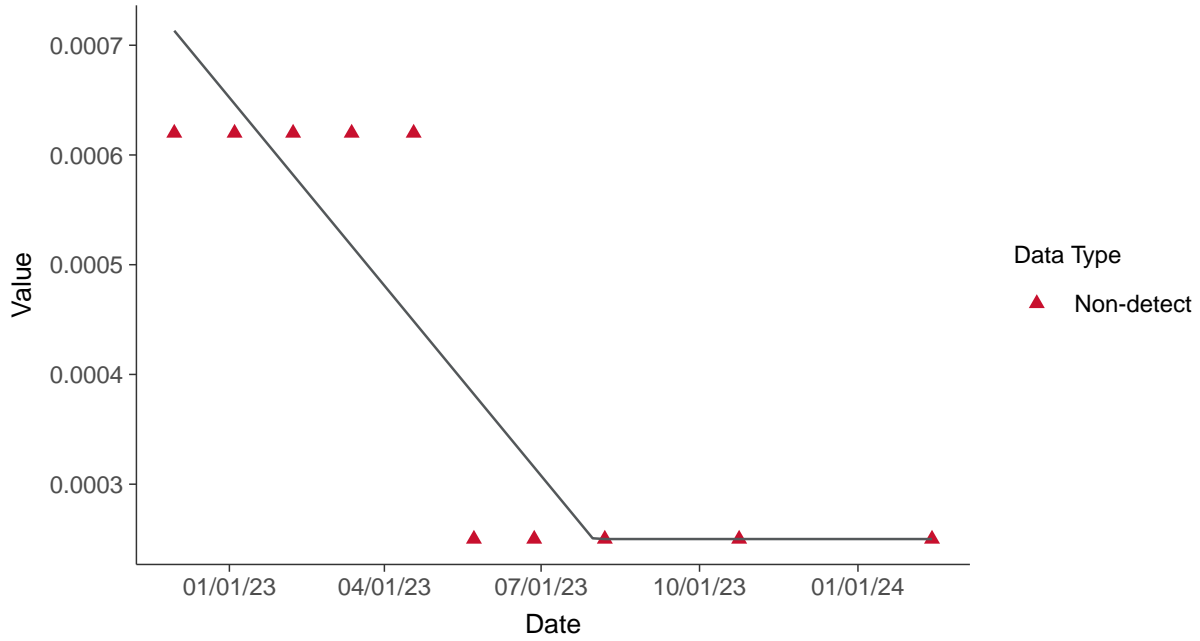
Boxplot by Season

Molybdenum, MW-07 (mg/L)

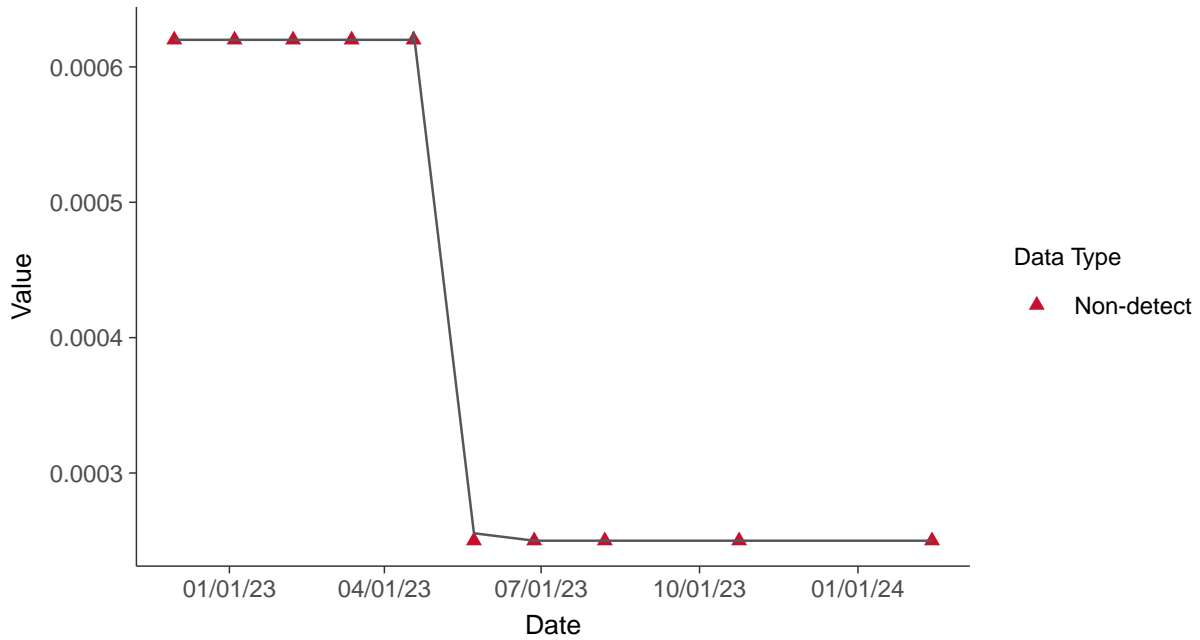




Trend Regression: Piecewise Linear-Linear
Molybdenum, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Molybdenum, MW-07 (mg/L)



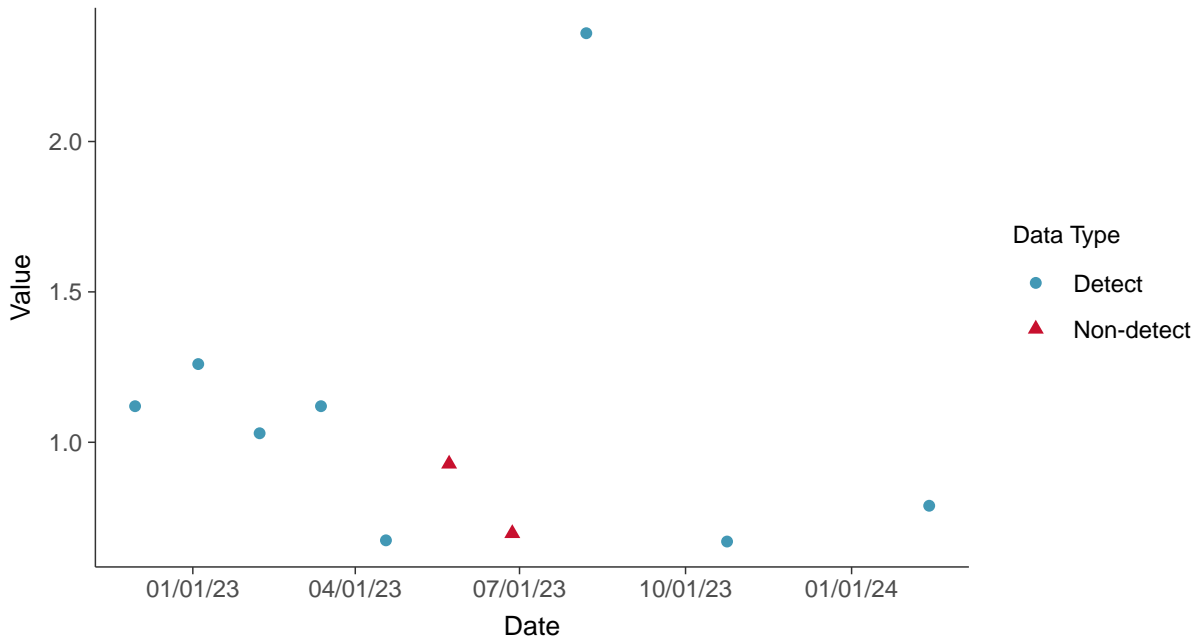


Appendix IV: Radium 226 and 228, MW-07

ID: 1_17_5_121

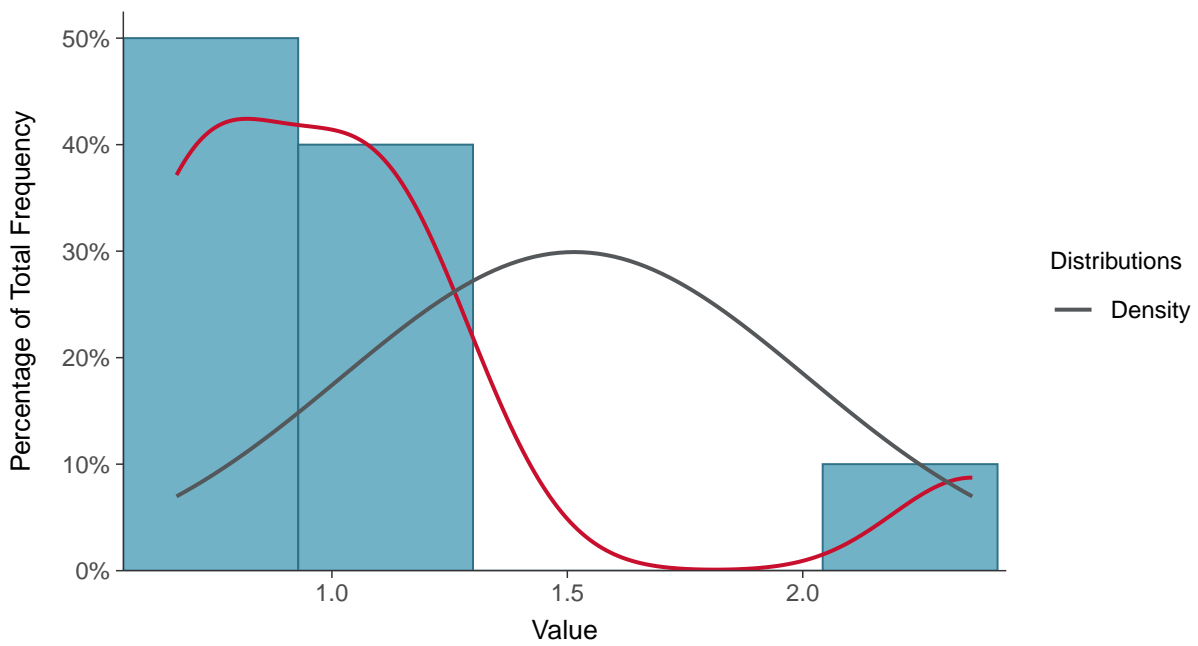
Scatter Plot

Radium 226 and 228, MW-07 (pCi/L)



Histogram

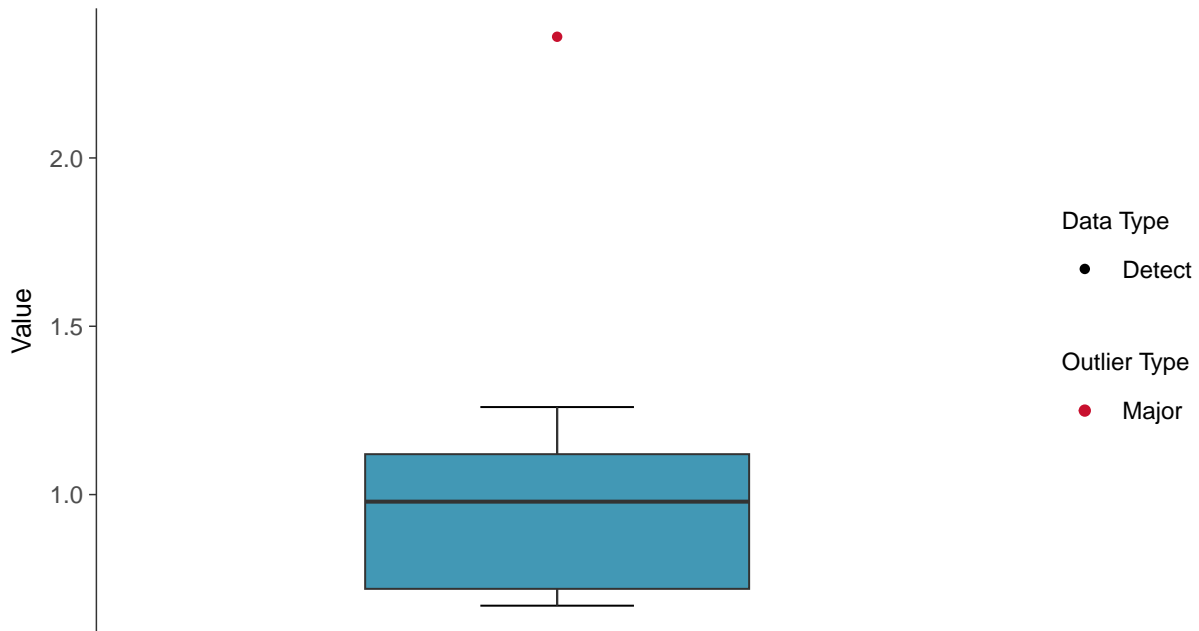
Radium 226 and 228, MW-07 (pCi/L)





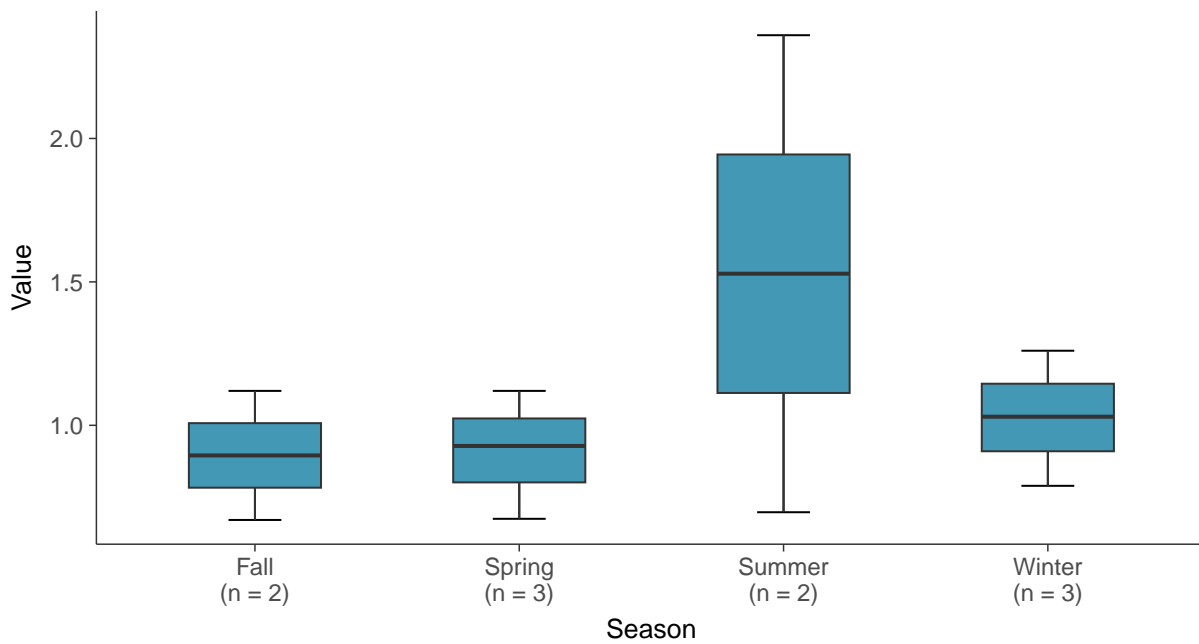
Boxplot

Radium 226 and 228, MW-07 (pCi/L)



Boxplot by Season

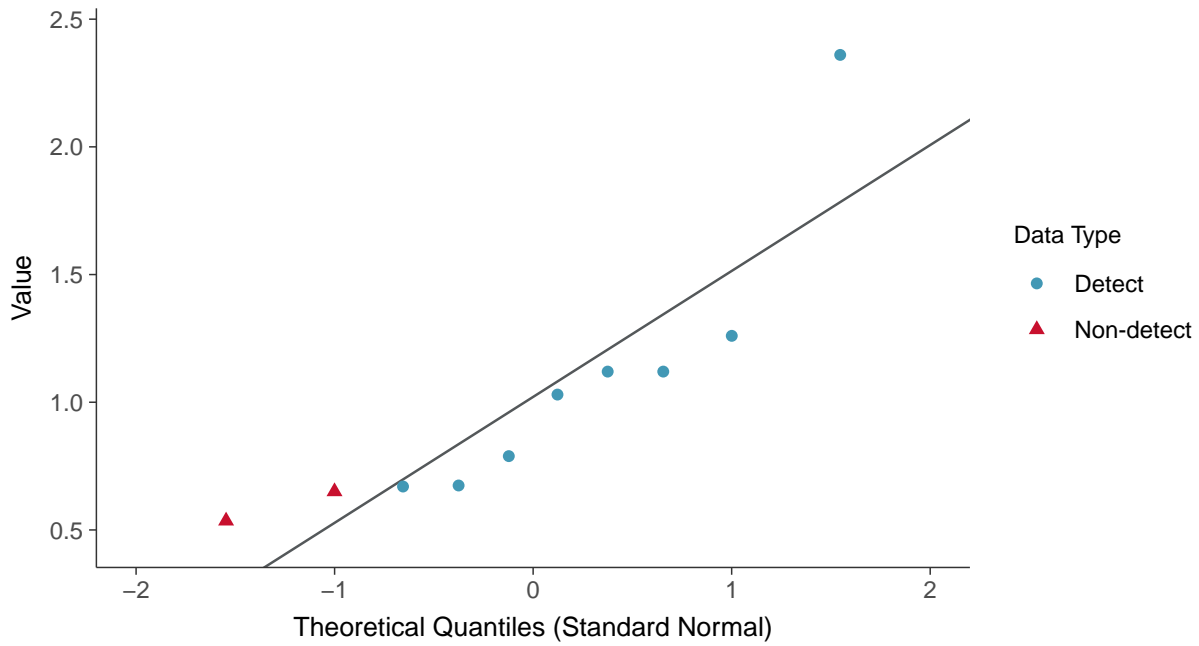
Radium 226 and 228, MW-07 (pCi/L)





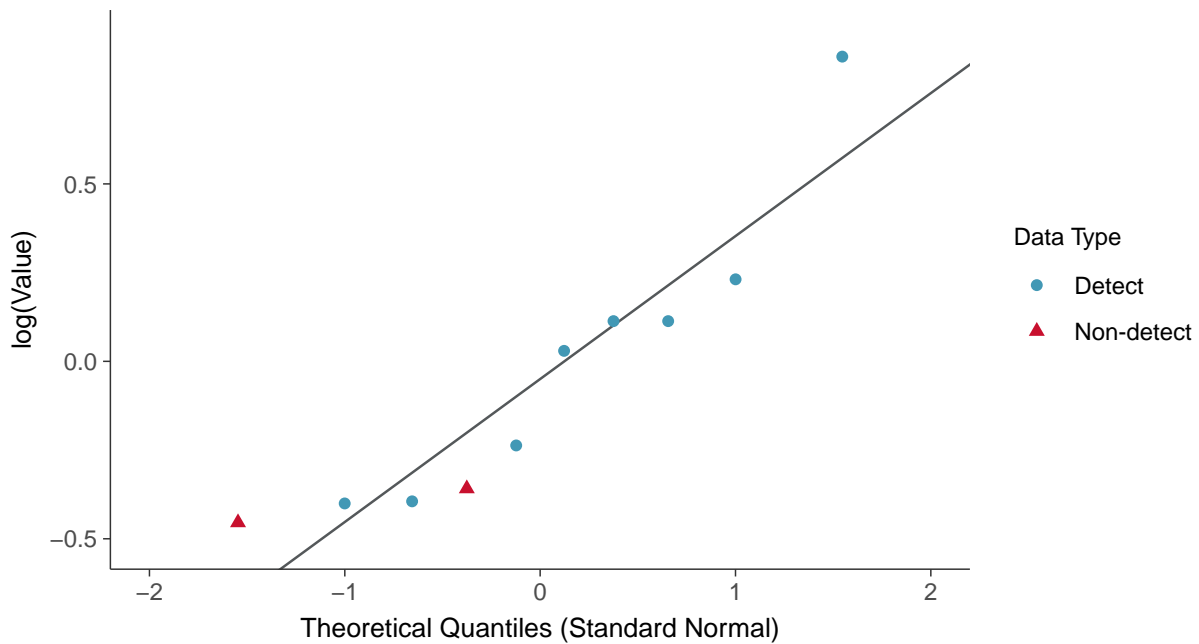
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-07 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

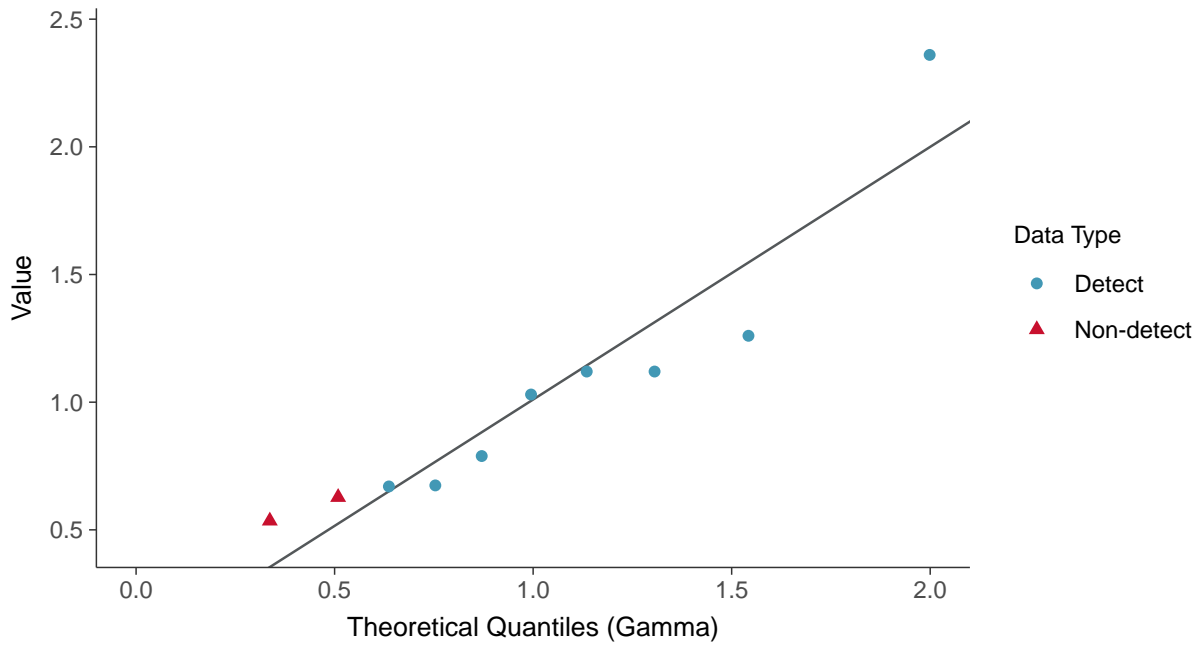
Radium 226 and 228, MW-07 (pCi/L)





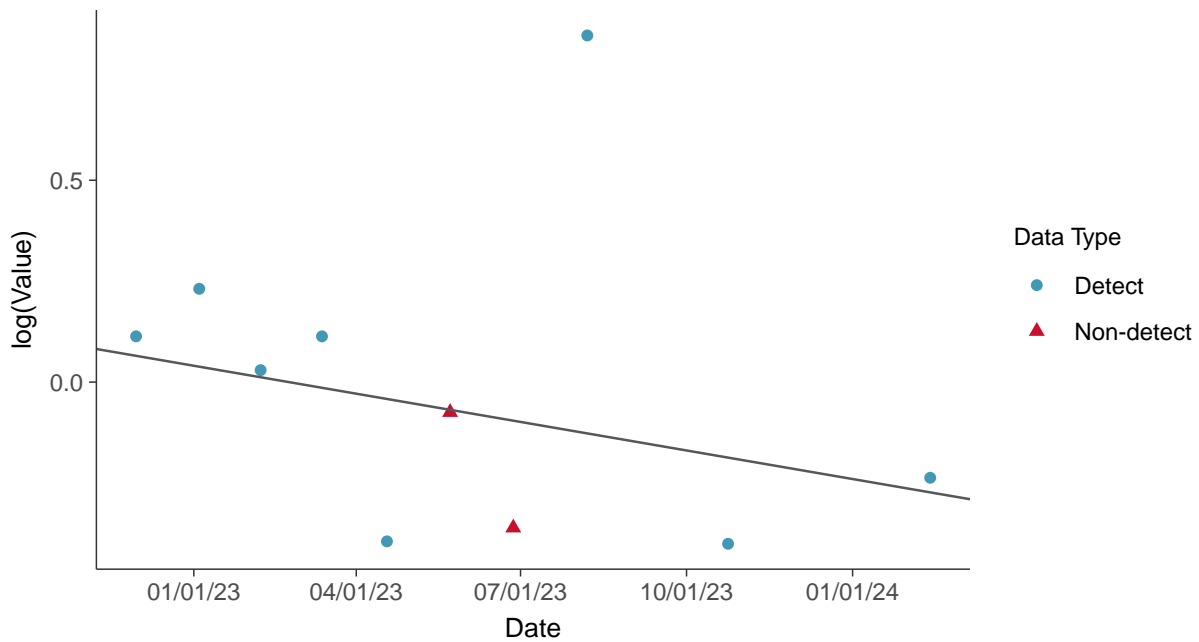
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-07 (pCi/L)



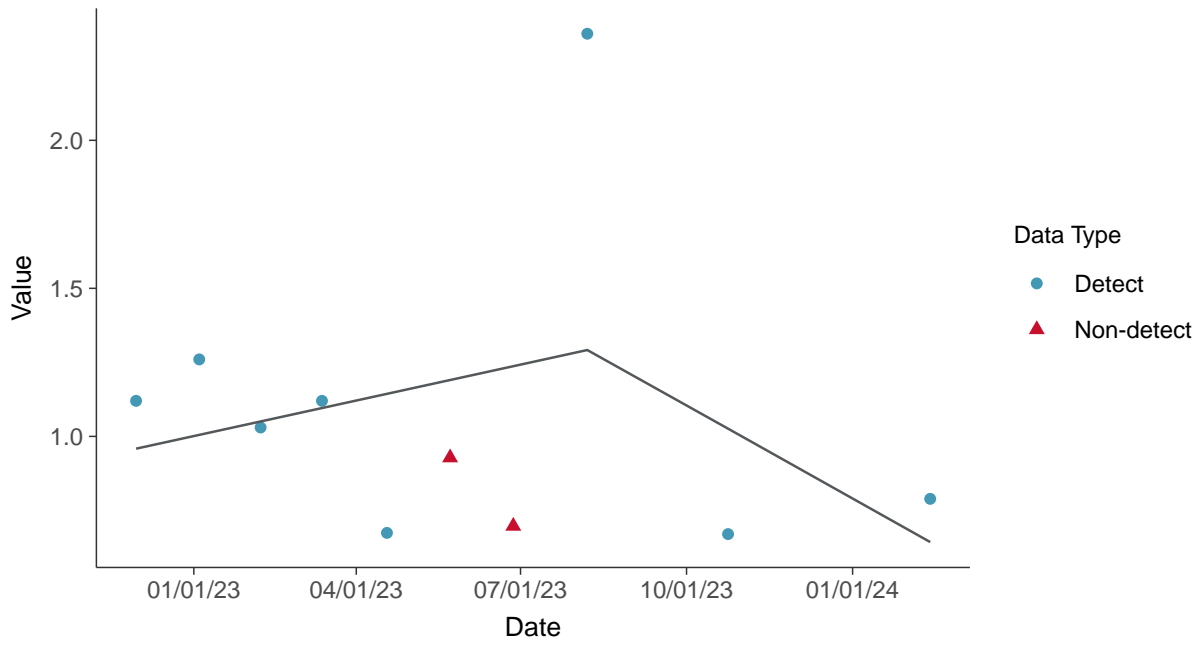
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-07 (pCi/L)





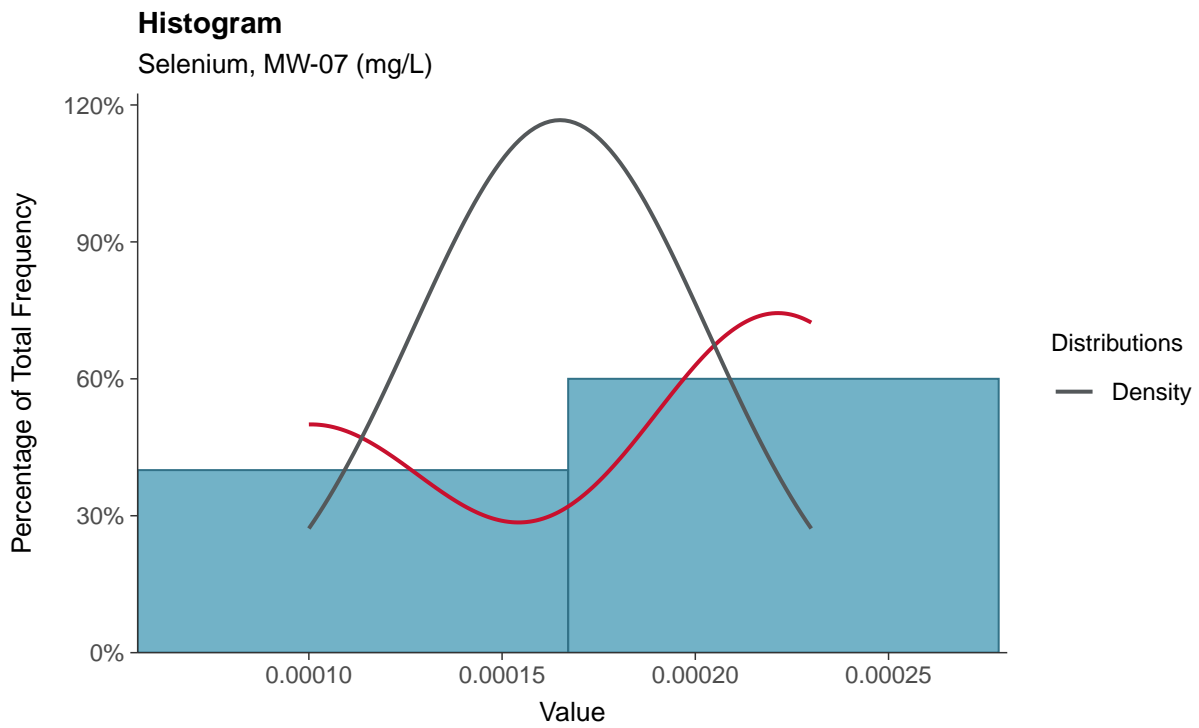
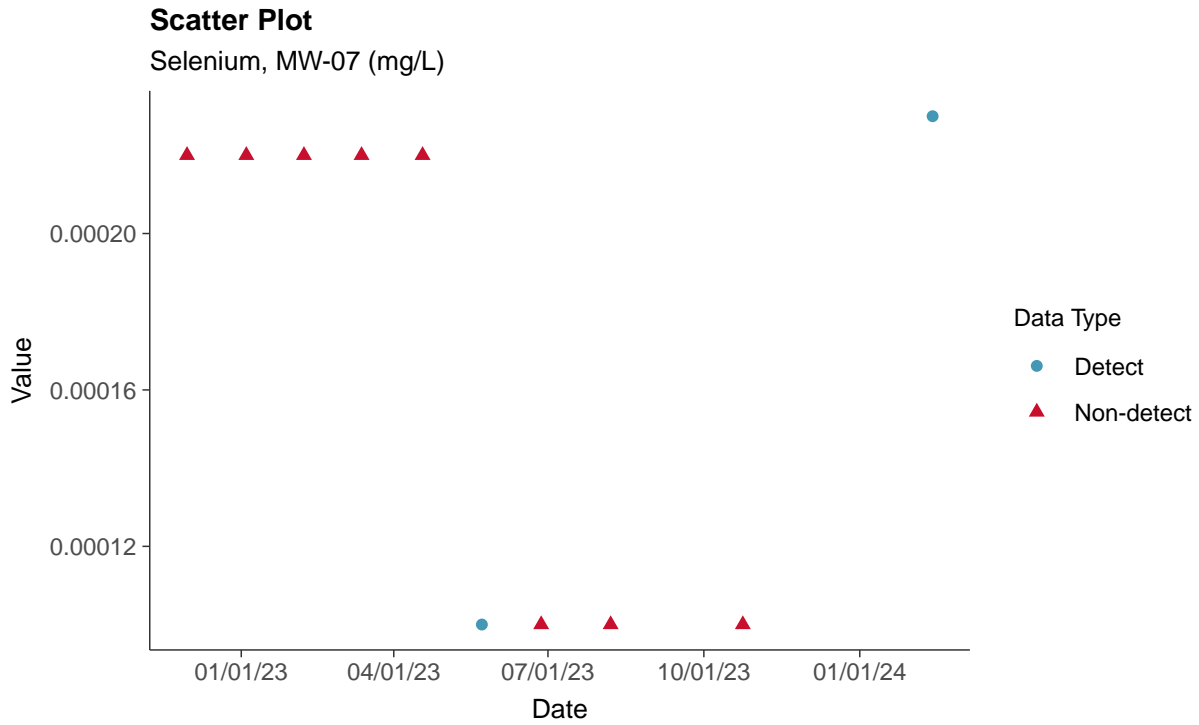
Trend Regression: Piecewise Linear-Linear
Radium 226 and 228, MW-07 (pCi/L)





Appendix IV: Selenium, MW-07

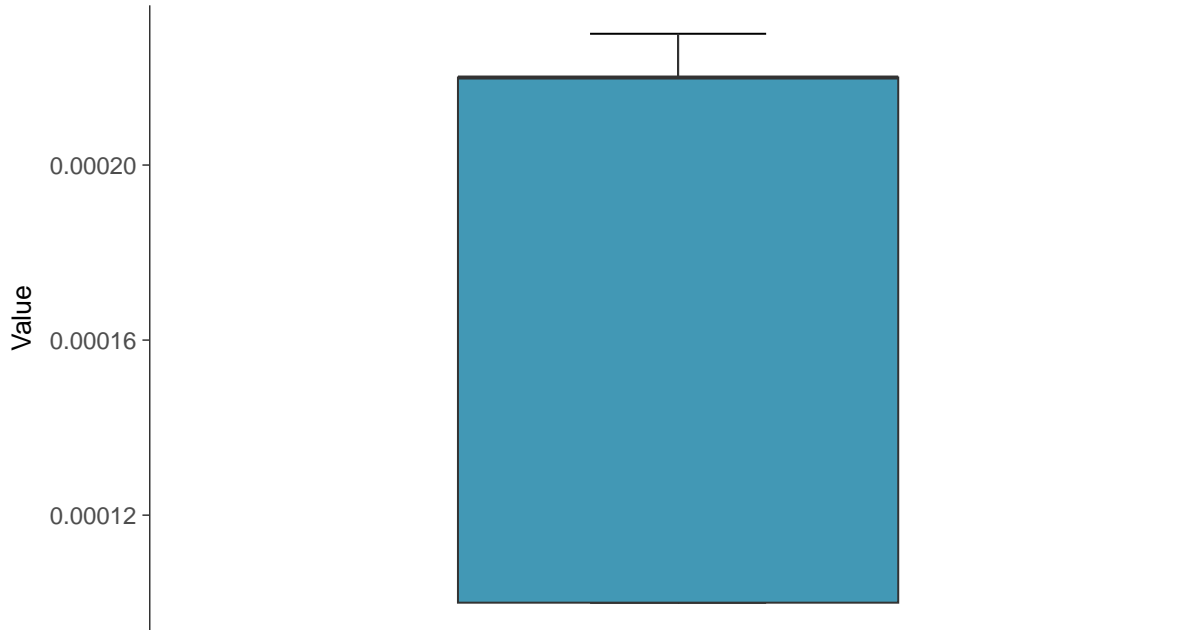
ID: 1_17_5_122





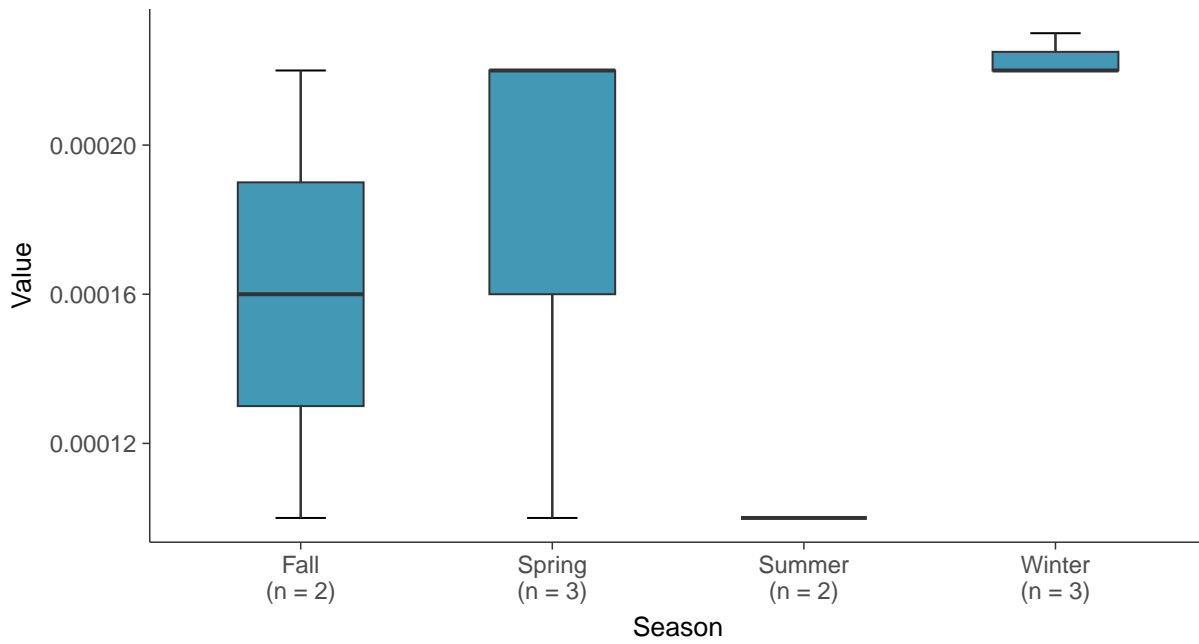
Boxplot

Selenium, MW-07 (mg/L)



Boxplot by Season

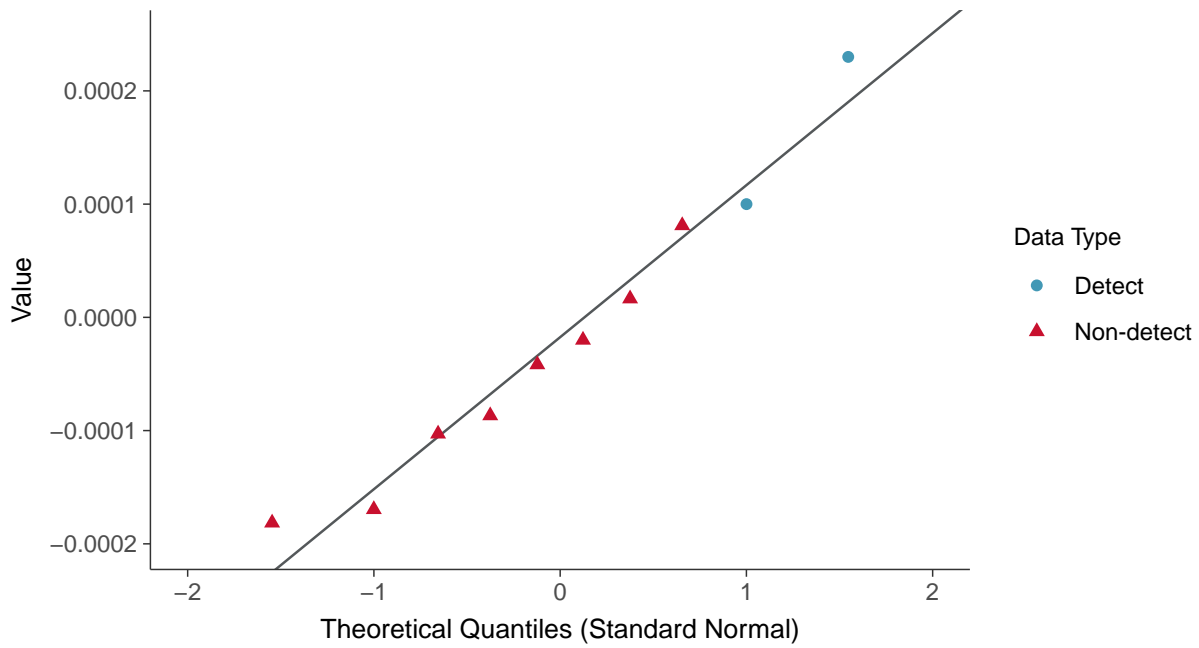
Selenium, MW-07 (mg/L)





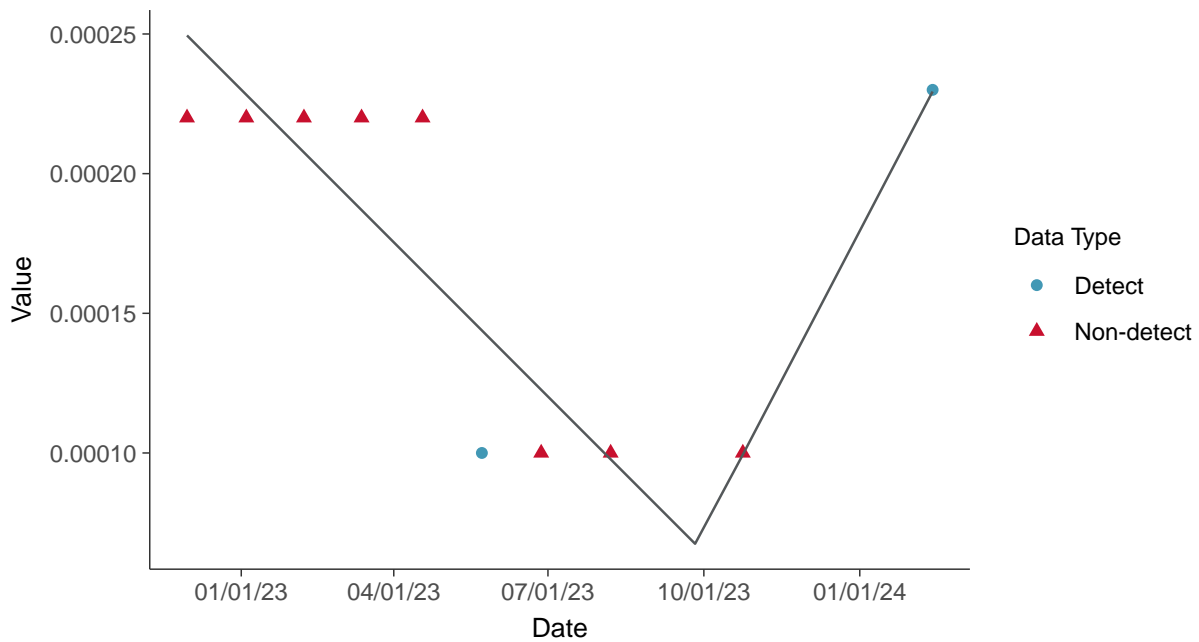
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear

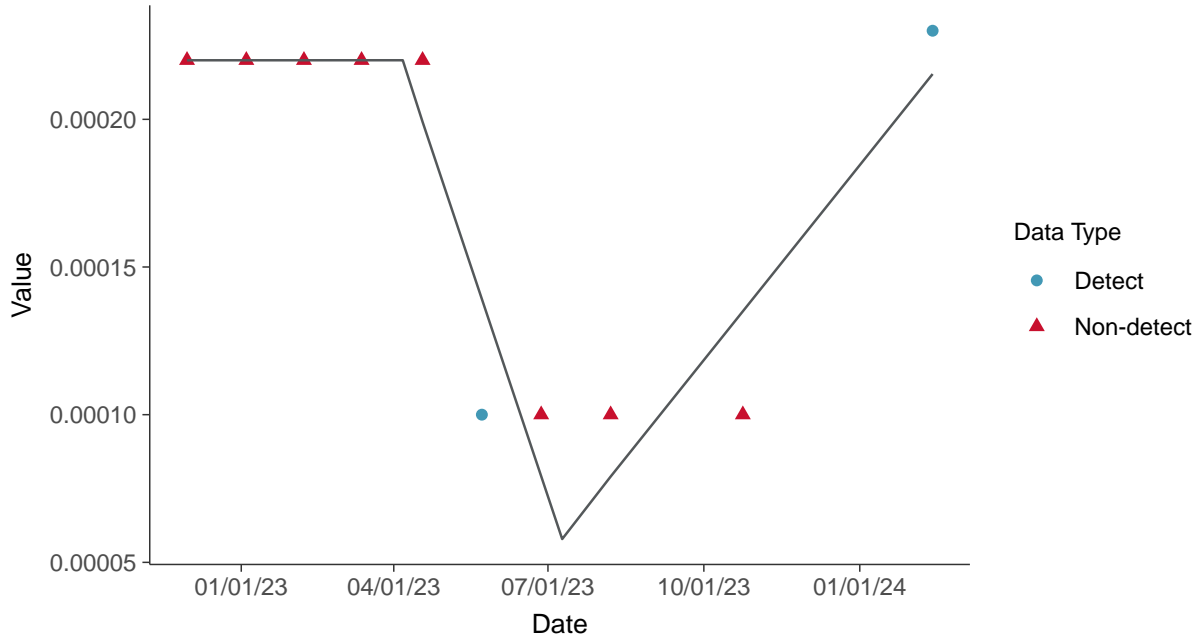
Selenium, MW-07 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-07 (mg/L)



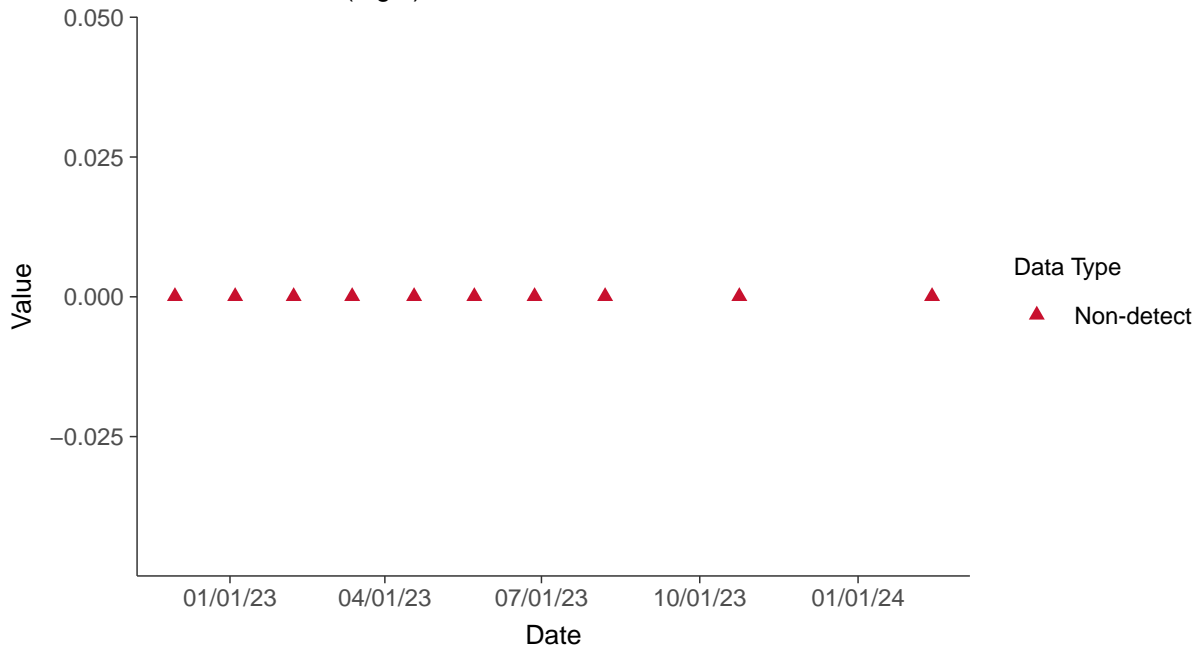


Appendix IV: Thallium, MW-07

ID: 1_17_5_125

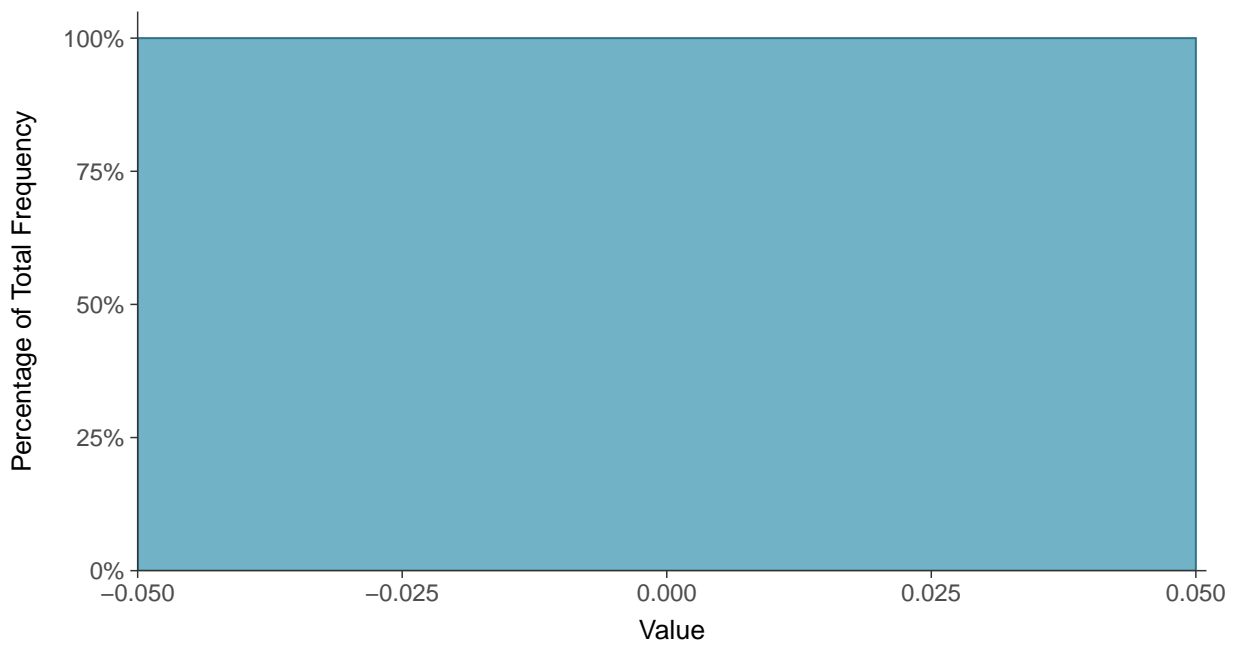
Scatter Plot

Thallium, MW-07 (mg/L)



Histogram

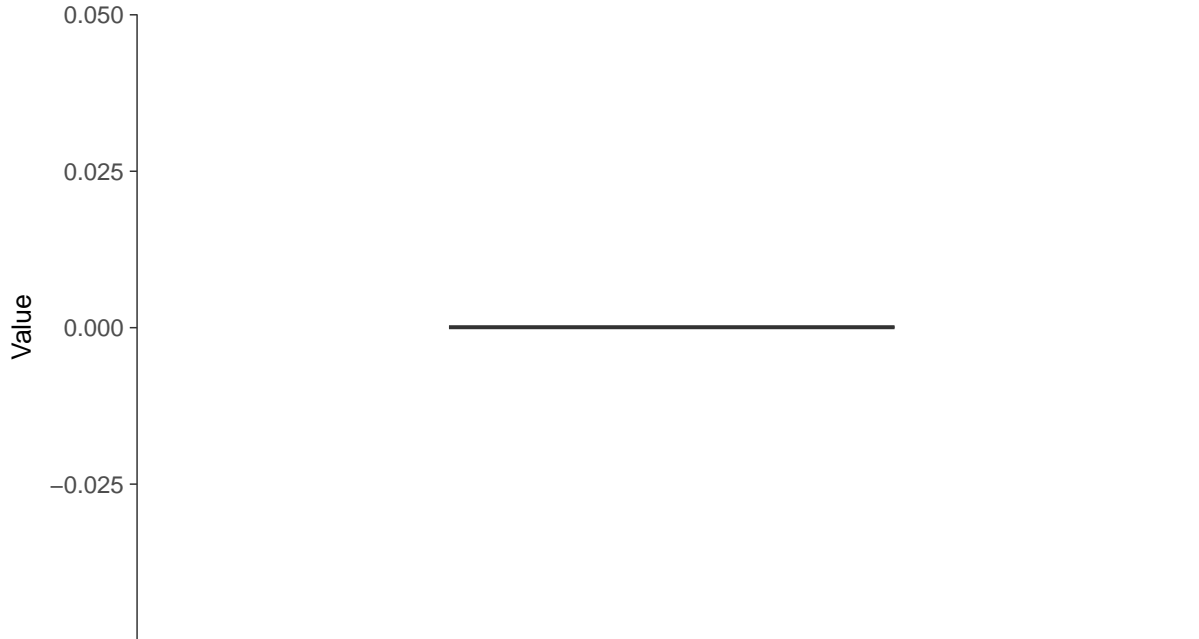
Thallium, MW-07 (mg/L)





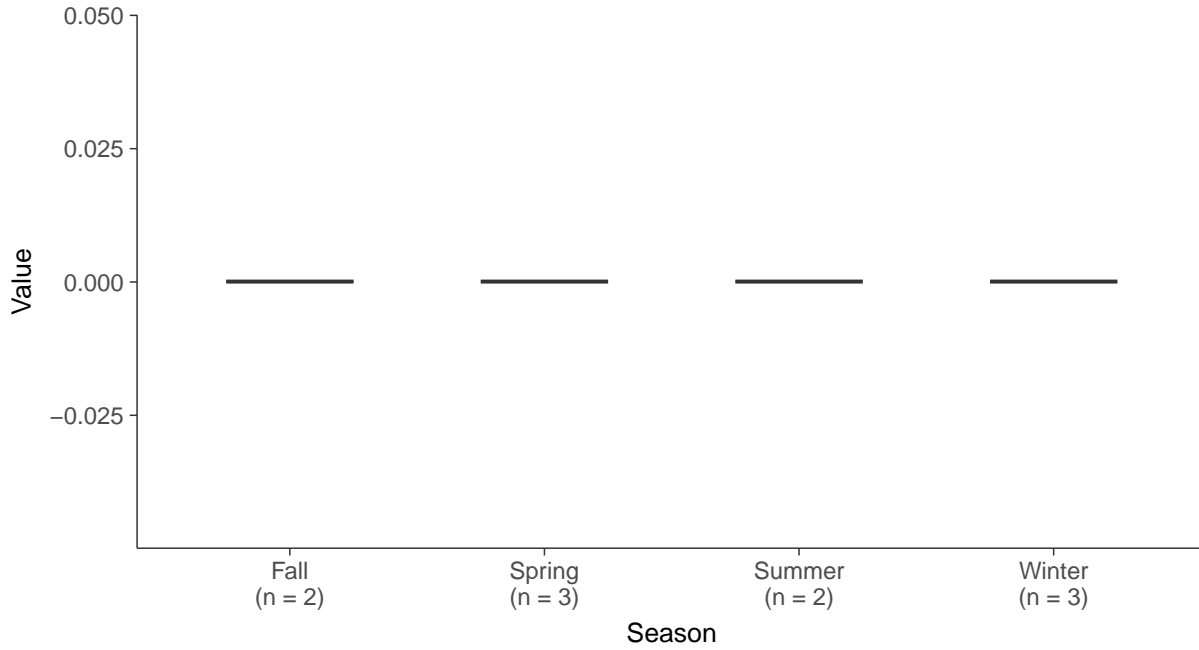
Boxplot

Thallium, MW-07 (mg/L)



Boxplot by Season

Thallium, MW-07 (mg/L)

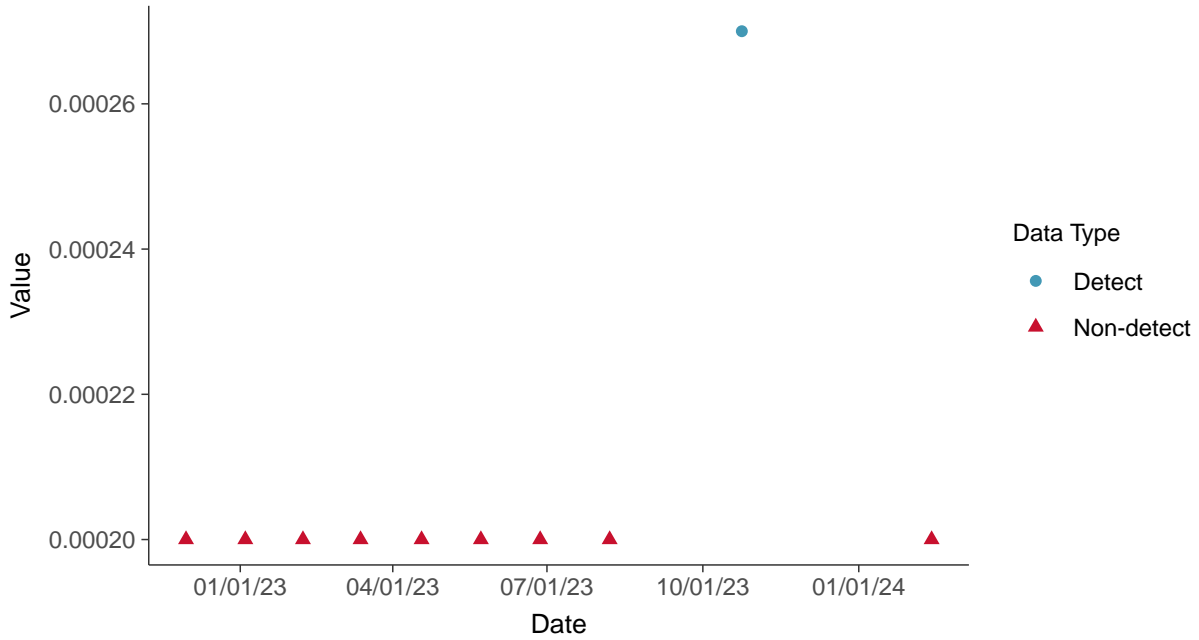




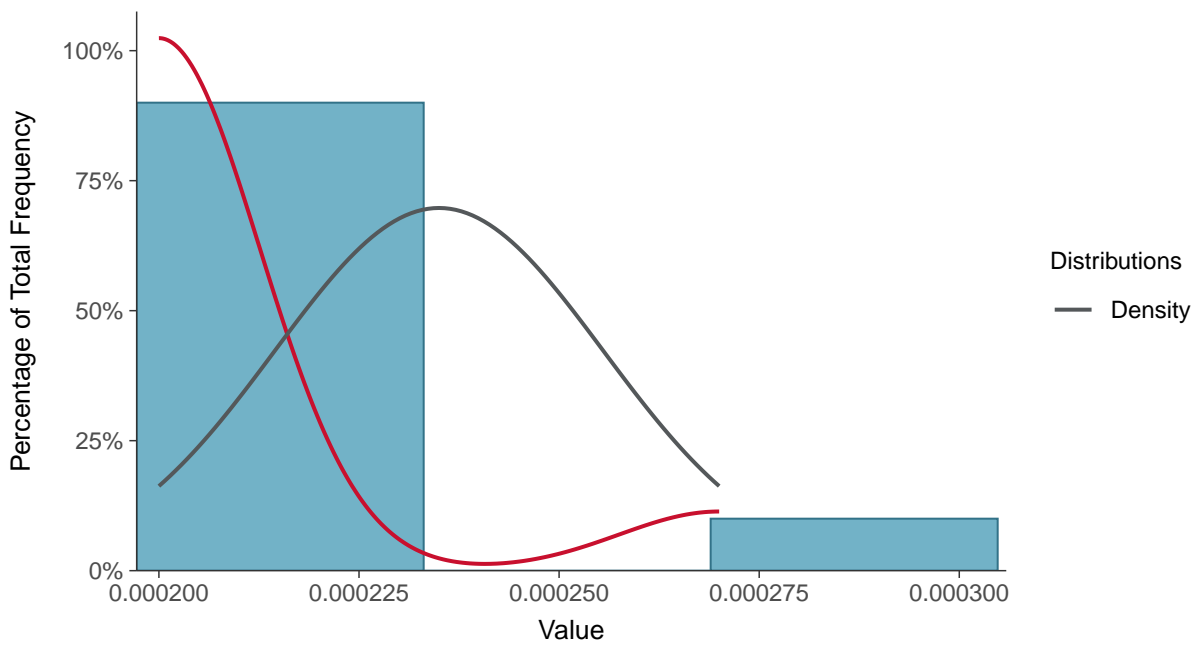
Part 115: Copper, MW-07

ID: 1_17_6_111

Scatter Plot
Copper, MW-07 (mg/L)



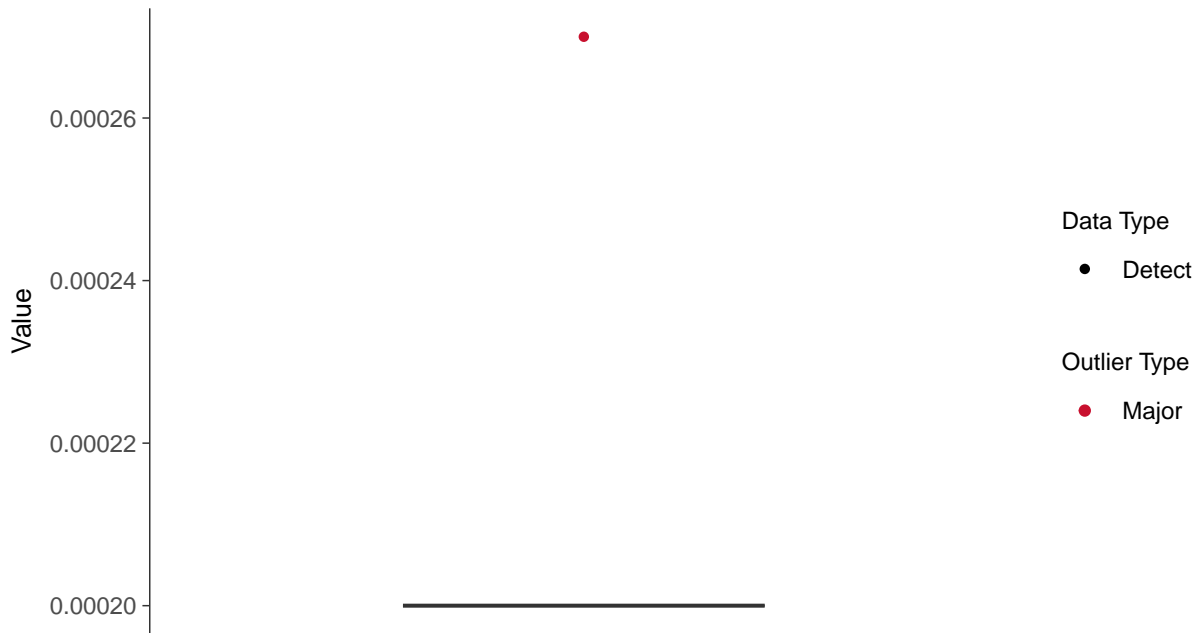
Histogram
Copper, MW-07 (mg/L)





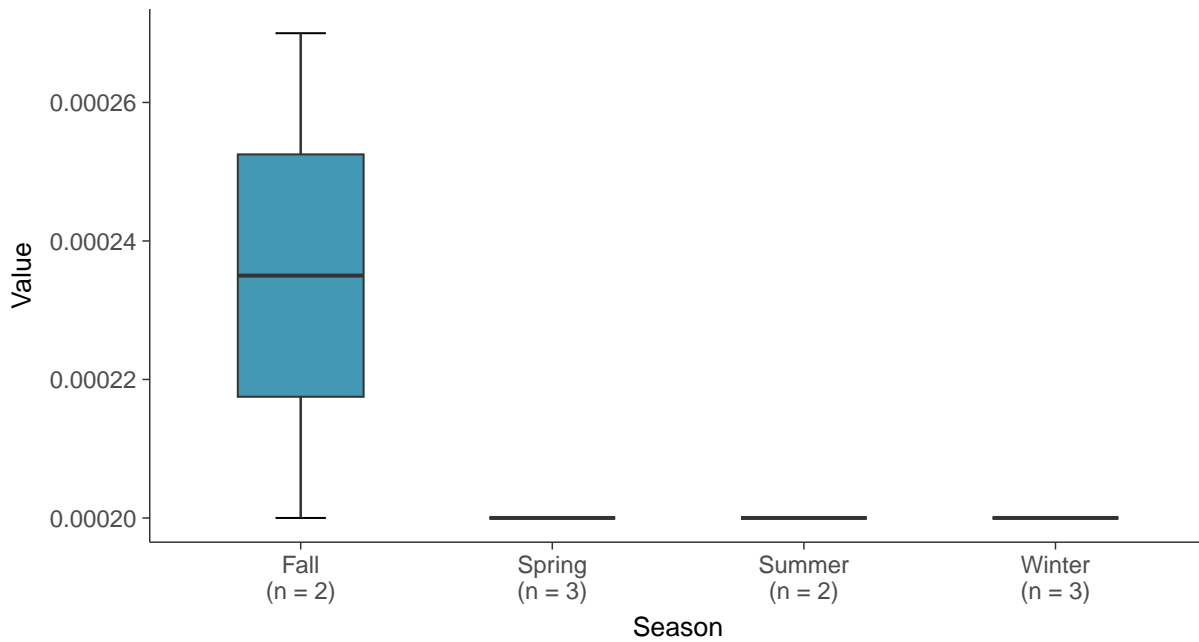
Boxplot

Copper, MW-07 (mg/L)



Boxplot by Season

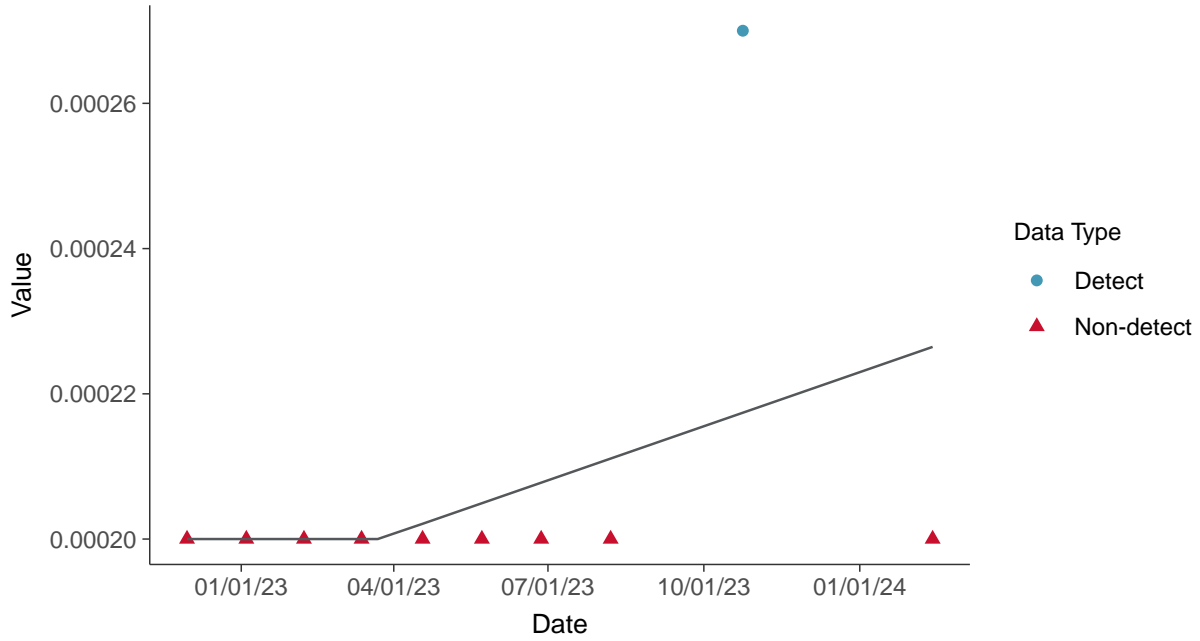
Copper, MW-07 (mg/L)





Trend Regression: Piecewise Linear-Linear

Copper, MW-07 (mg/L)



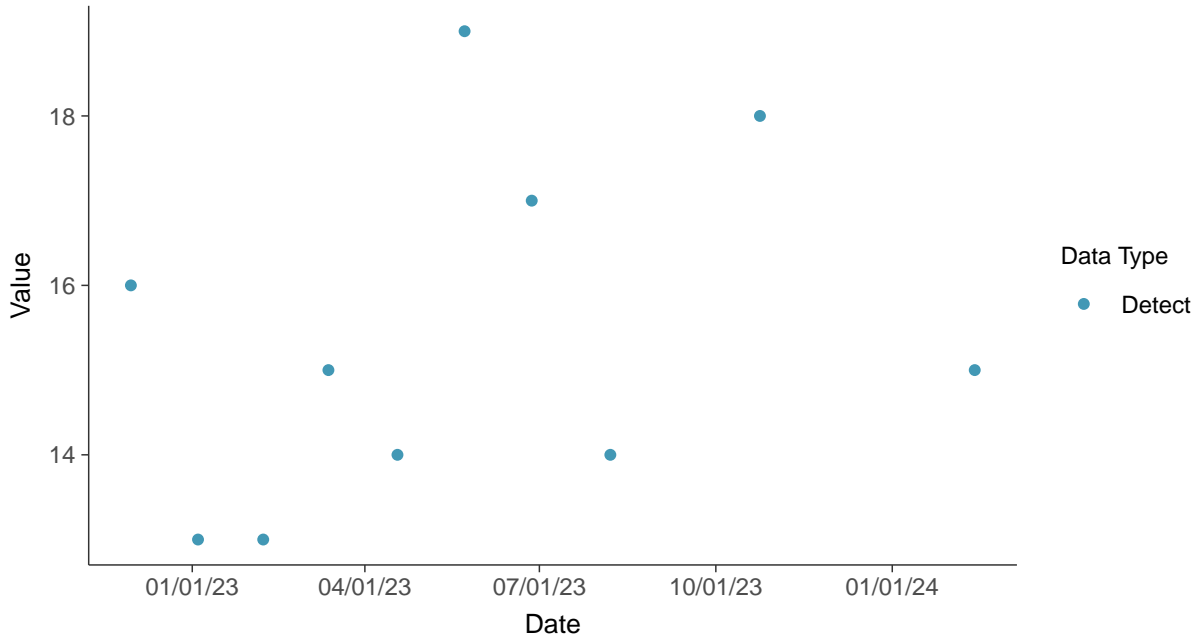


Part 115: Iron, MW-07

ID: 1_17_6_114

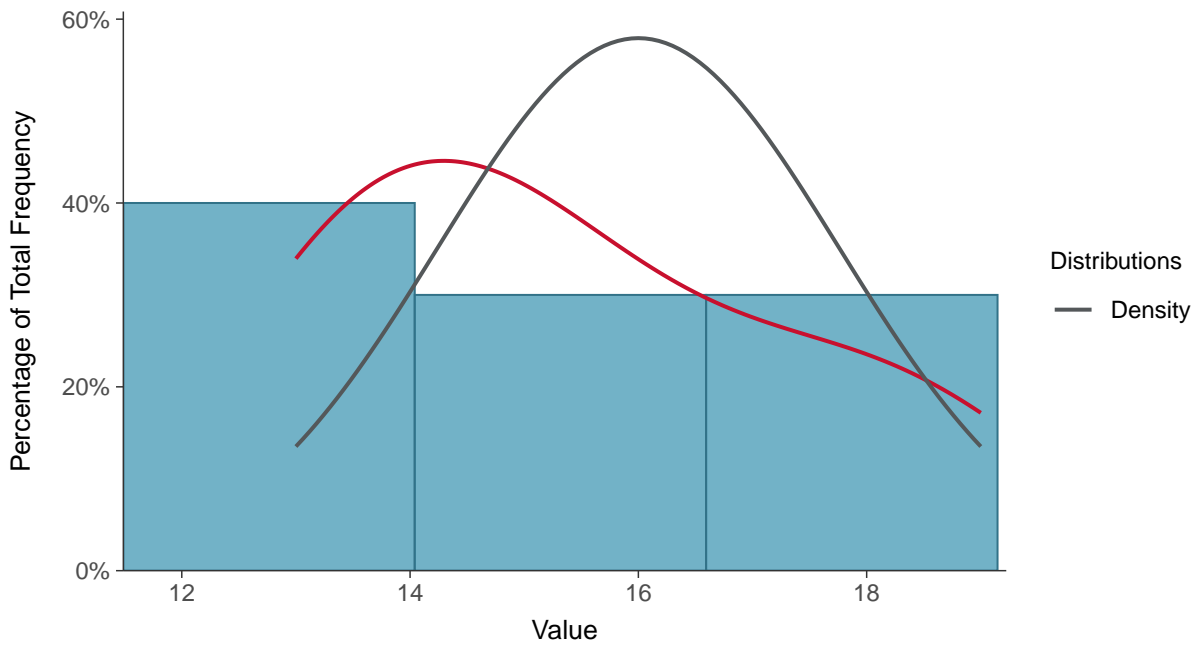
Scatter Plot

Iron, MW-07 (mg/L)



Histogram

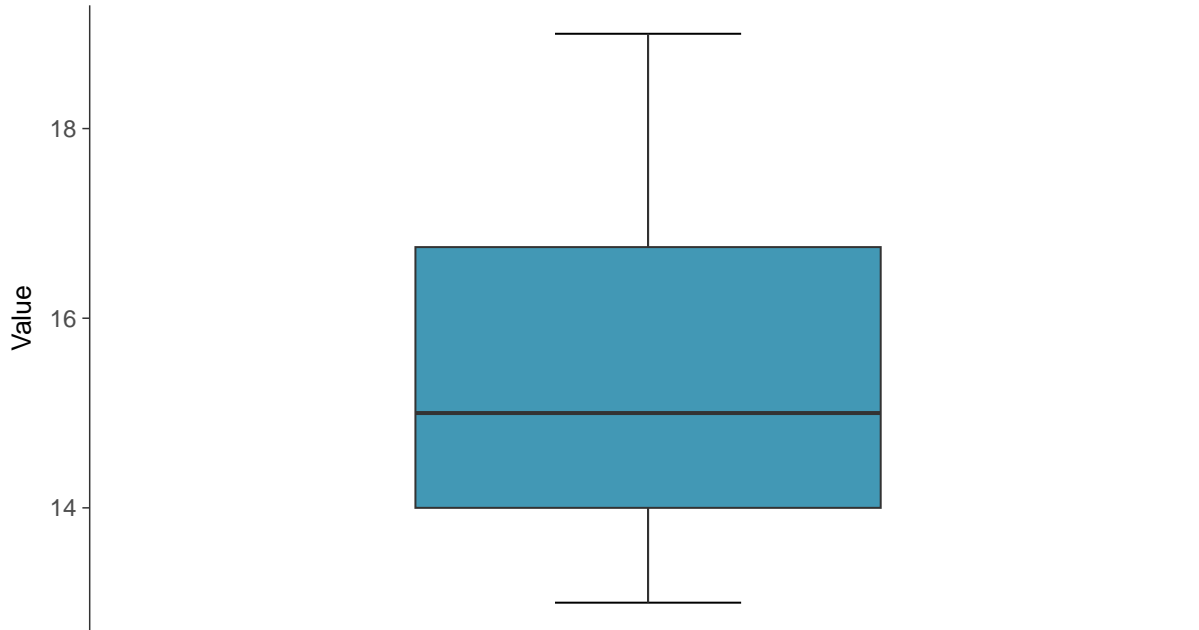
Iron, MW-07 (mg/L)





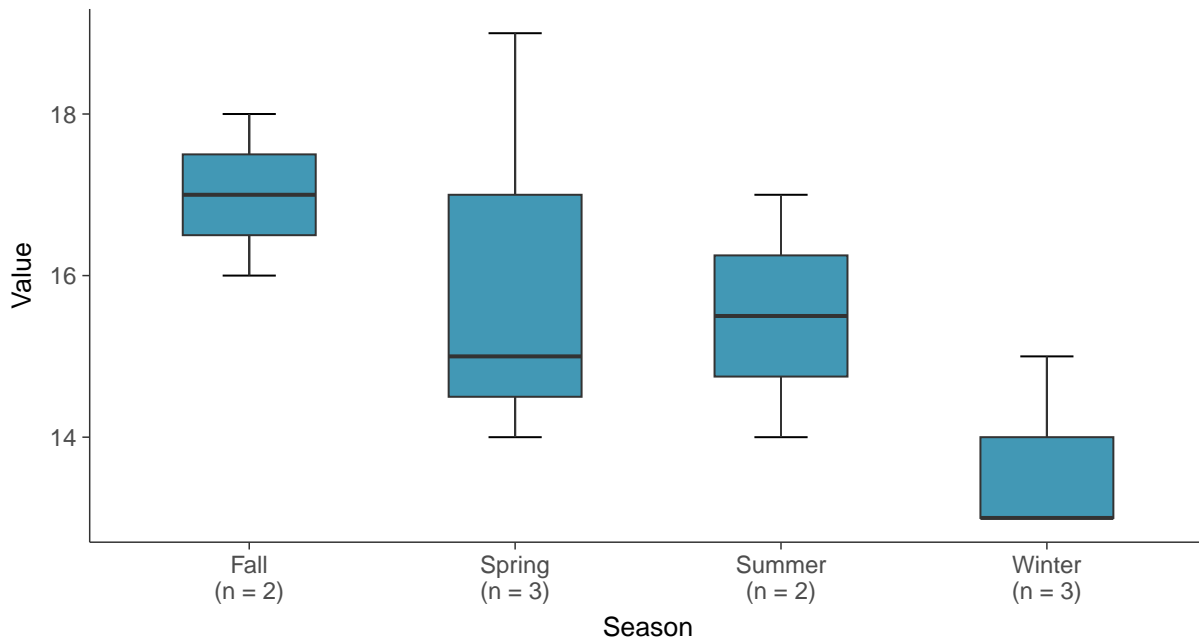
Boxplot

Iron, MW-07 (mg/L)



Boxplot by Season

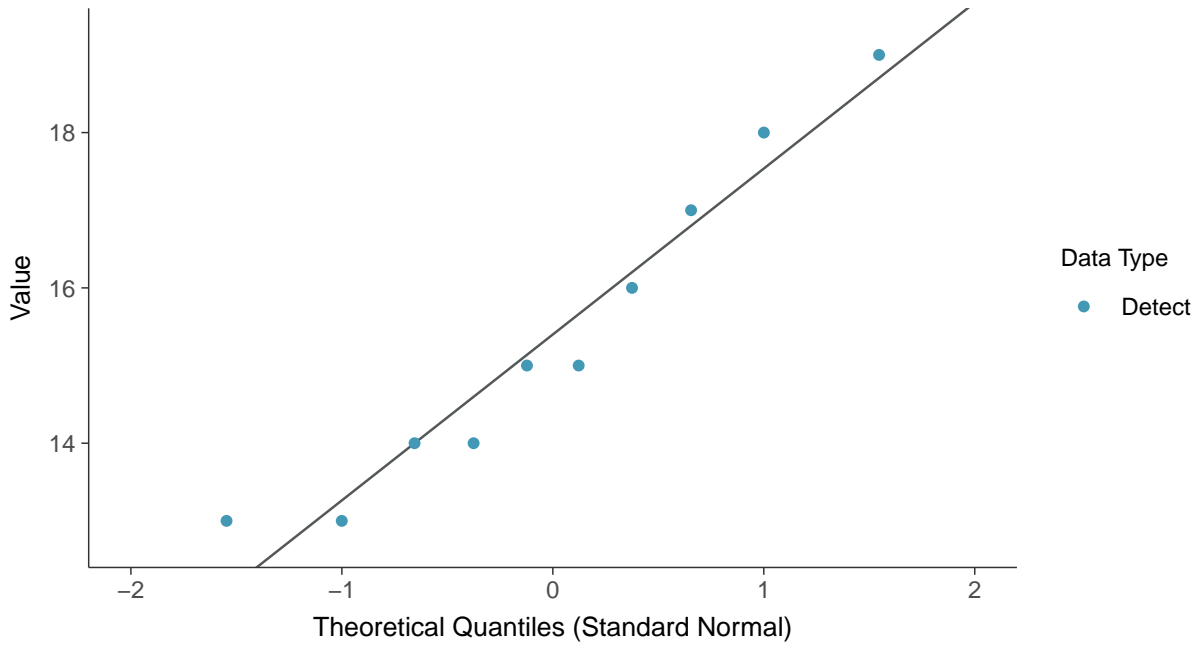
Iron, MW-07 (mg/L)





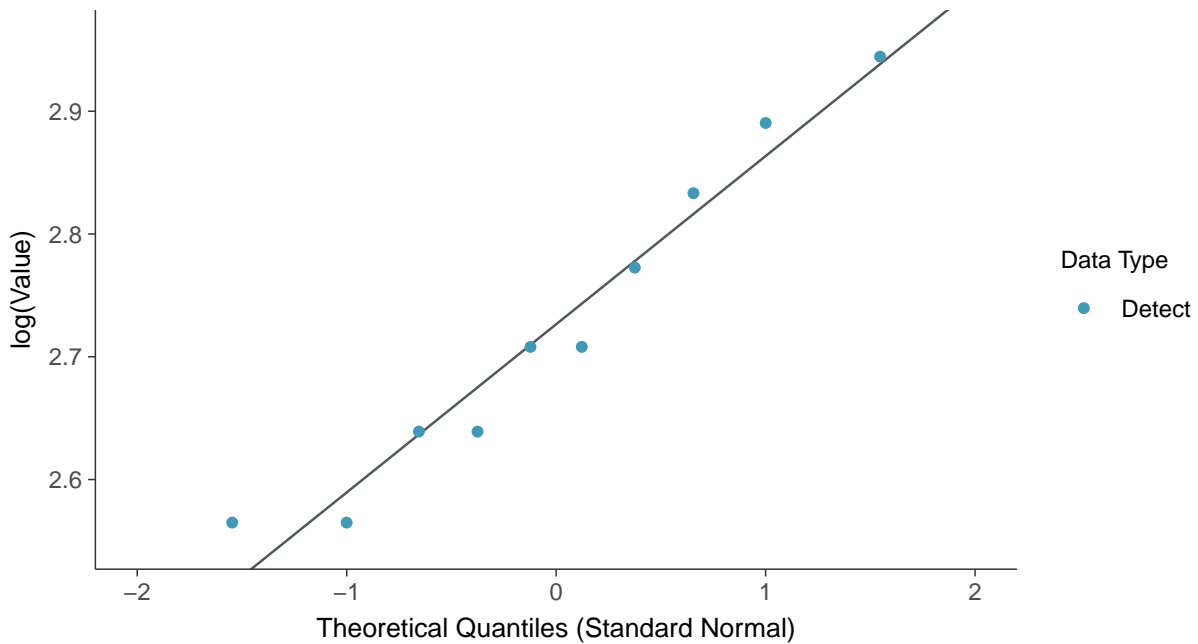
Normal Q-Q plot

Iron, MW-07 (mg/L)



Lognormal Q-Q plot

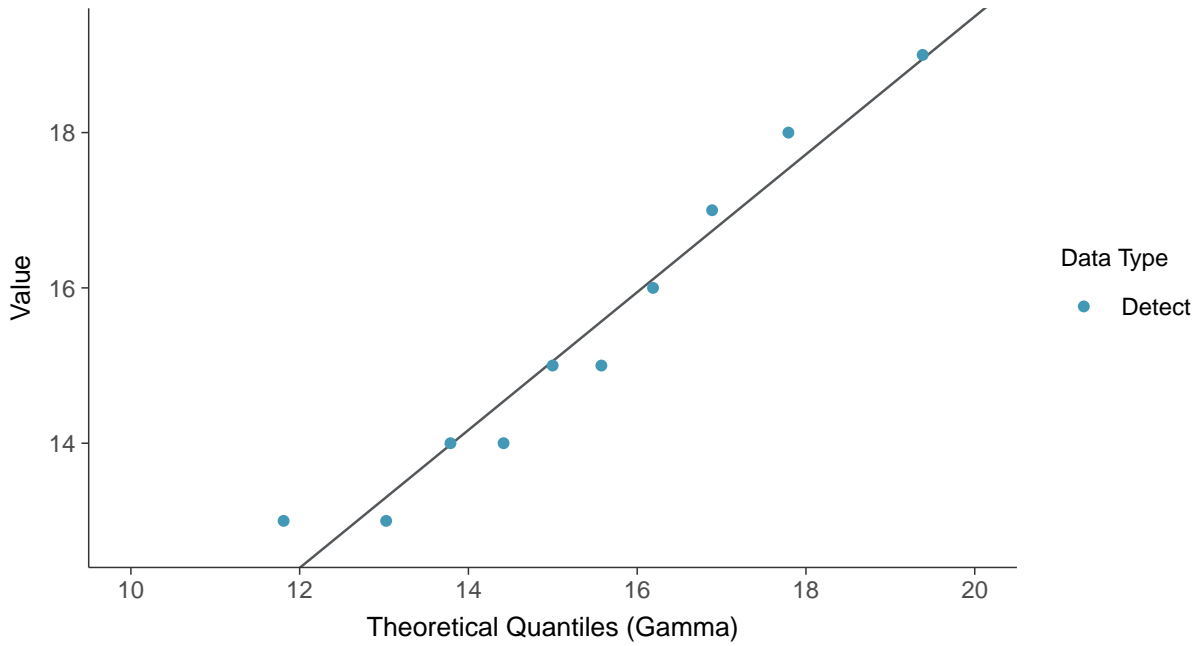
Iron, MW-07 (mg/L)





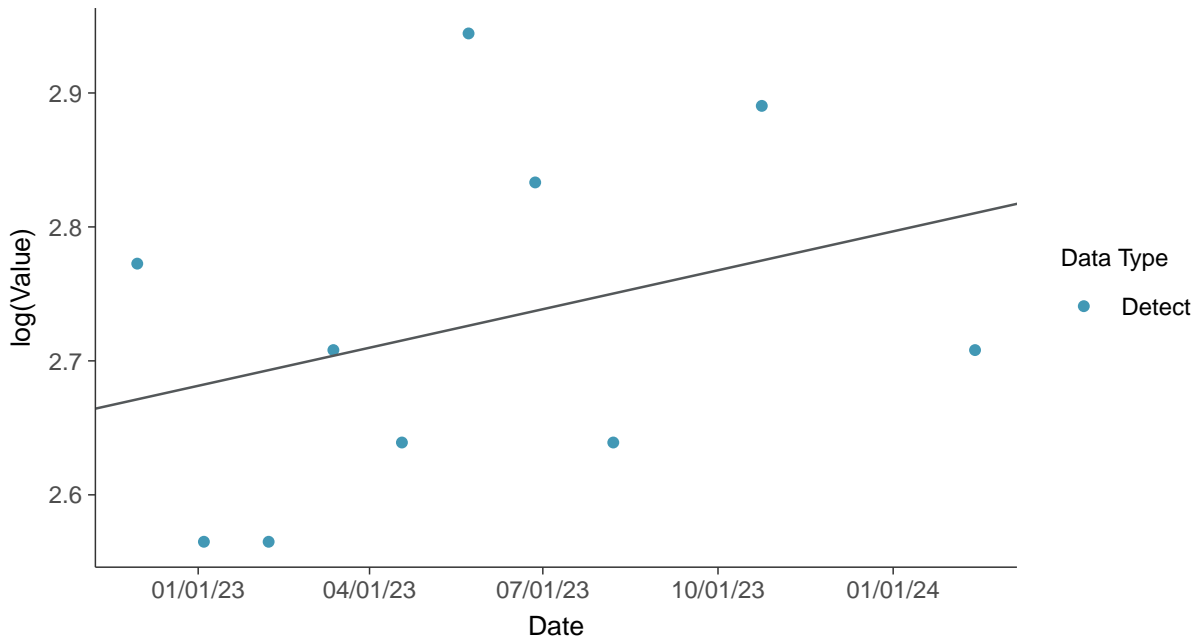
Gamma Q-Q plot

Iron, MW-07 (mg/L)



Trend Regression: Lognormal MLE

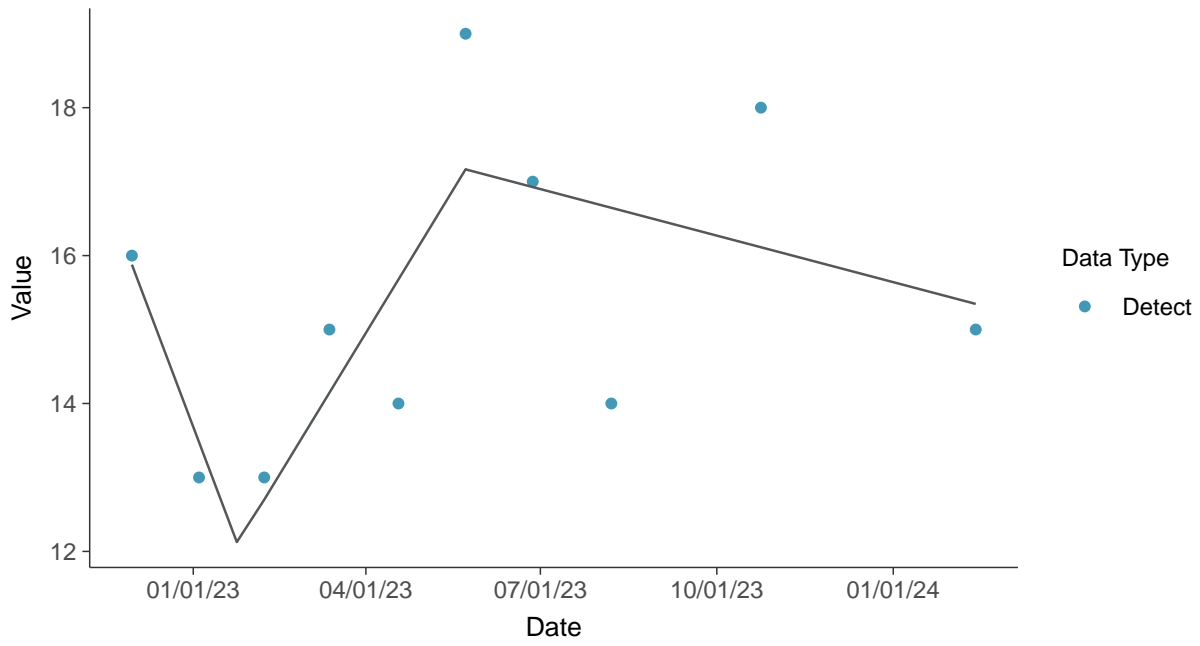
Iron, MW-07 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

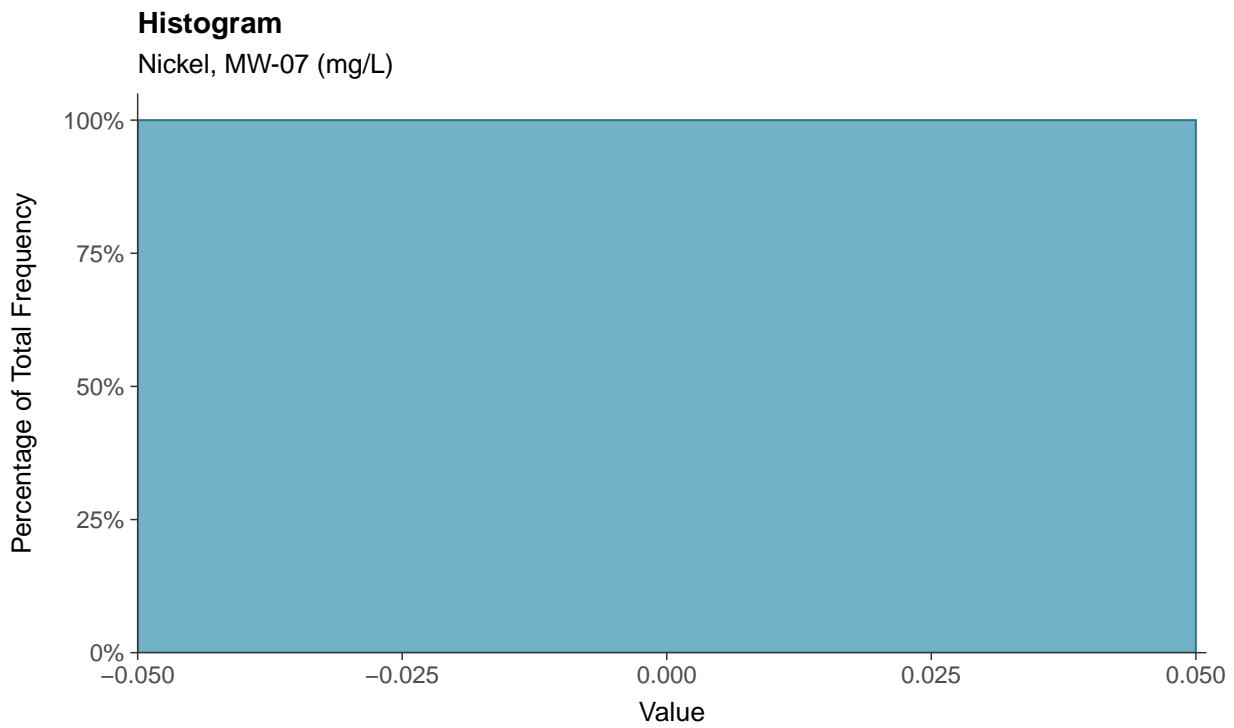
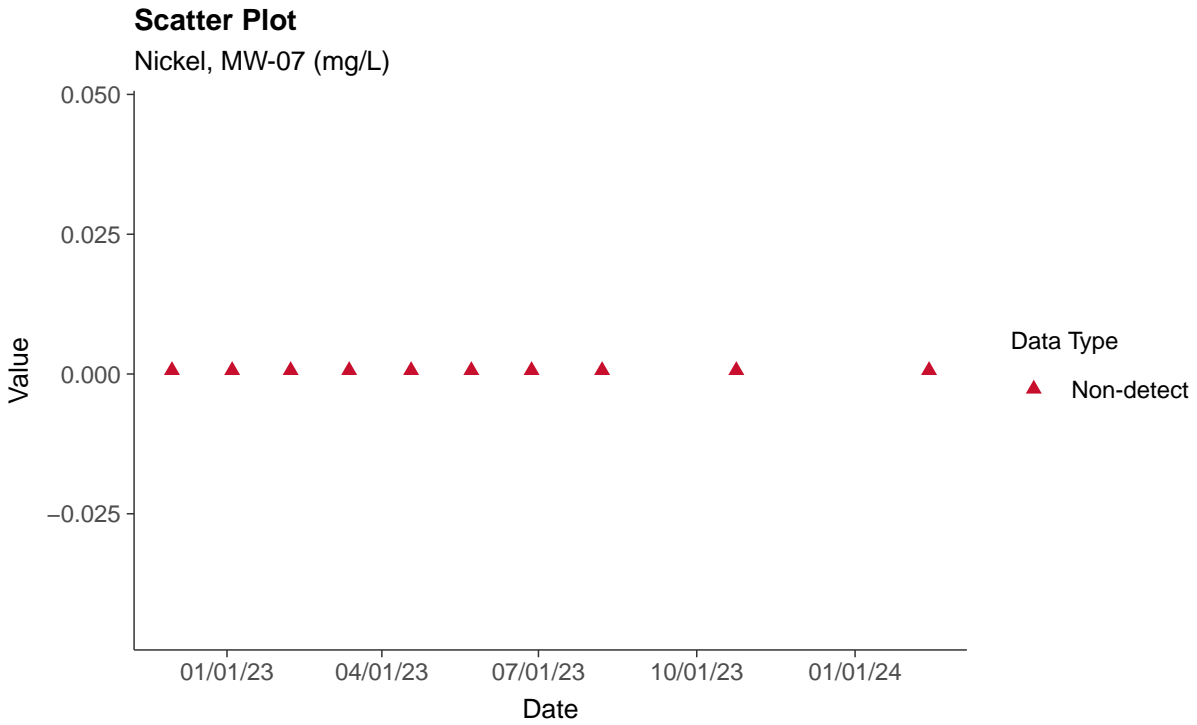
Iron, MW-07 (mg/L)





Part 115: Nickel, MW-07

ID: 1_17_6_119





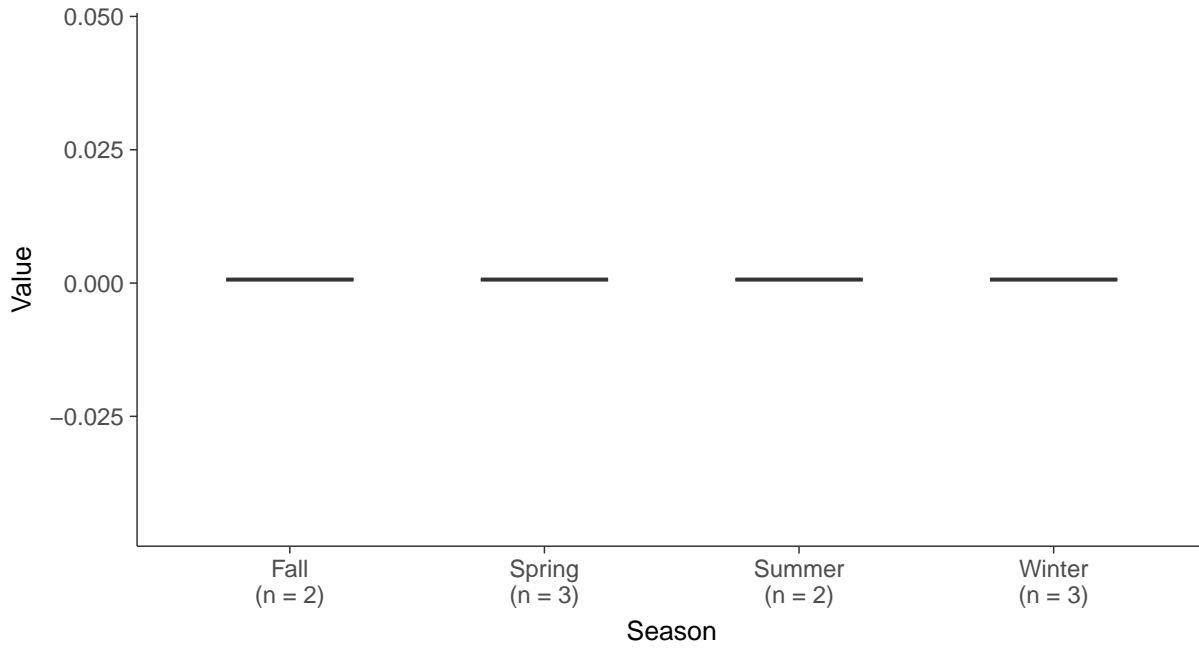
Boxplot

Nickel, MW-07 (mg/L)



Boxplot by Season

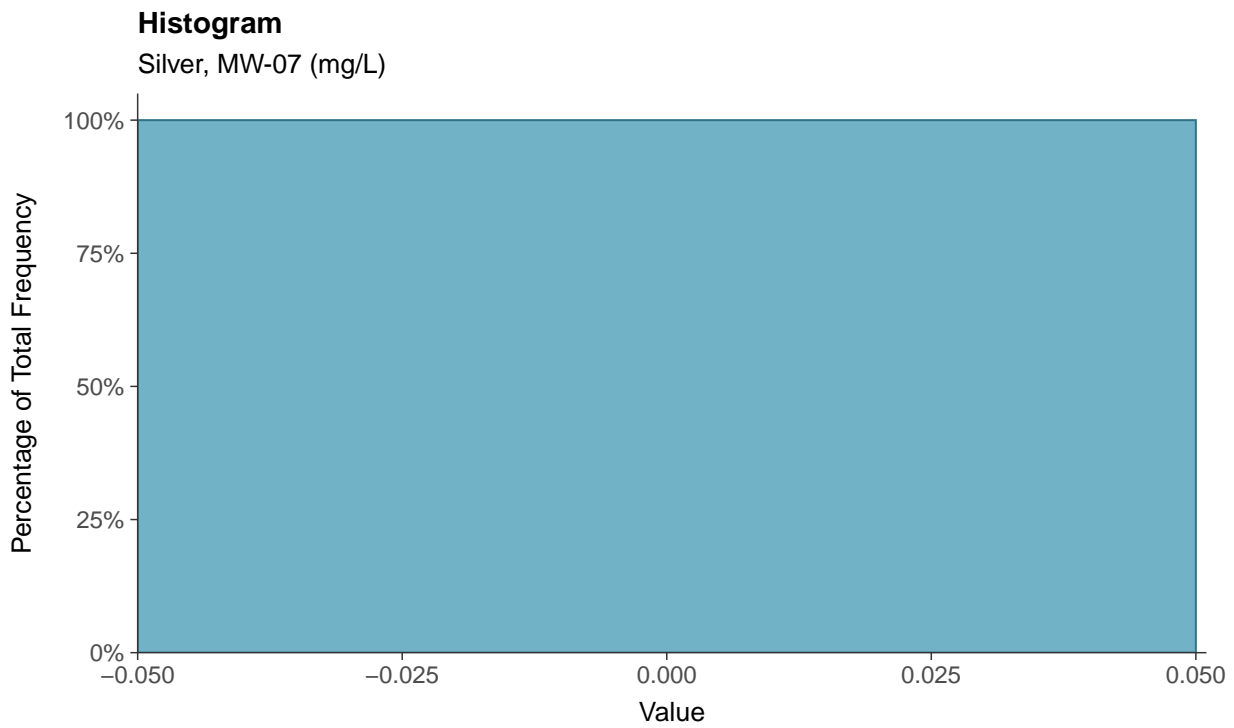
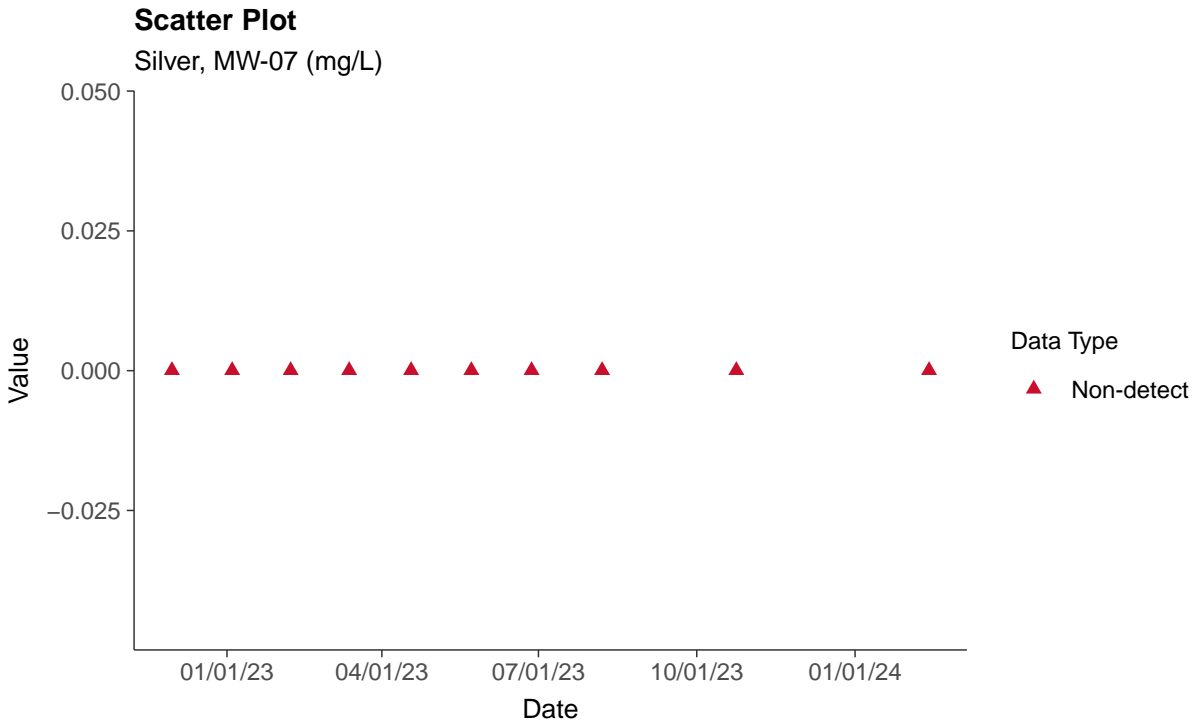
Nickel, MW-07 (mg/L)





Part 115: Silver, MW-07

ID: 1_17_6_123





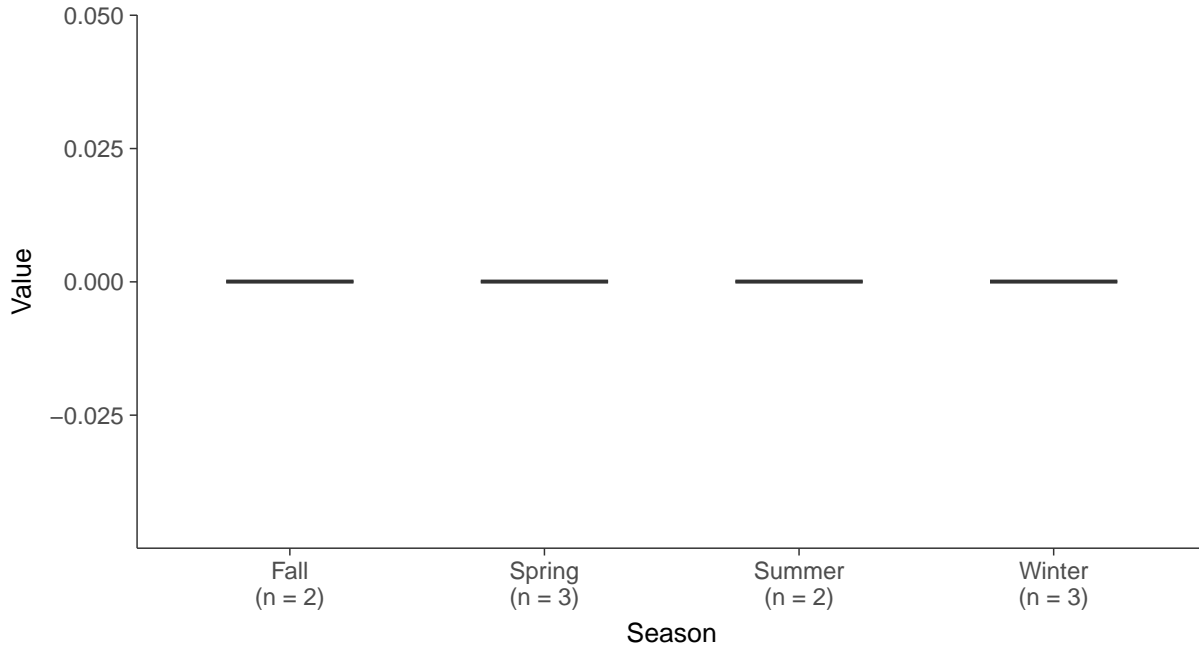
Boxplot

Silver, MW-07 (mg/L)



Boxplot by Season

Silver, MW-07 (mg/L)



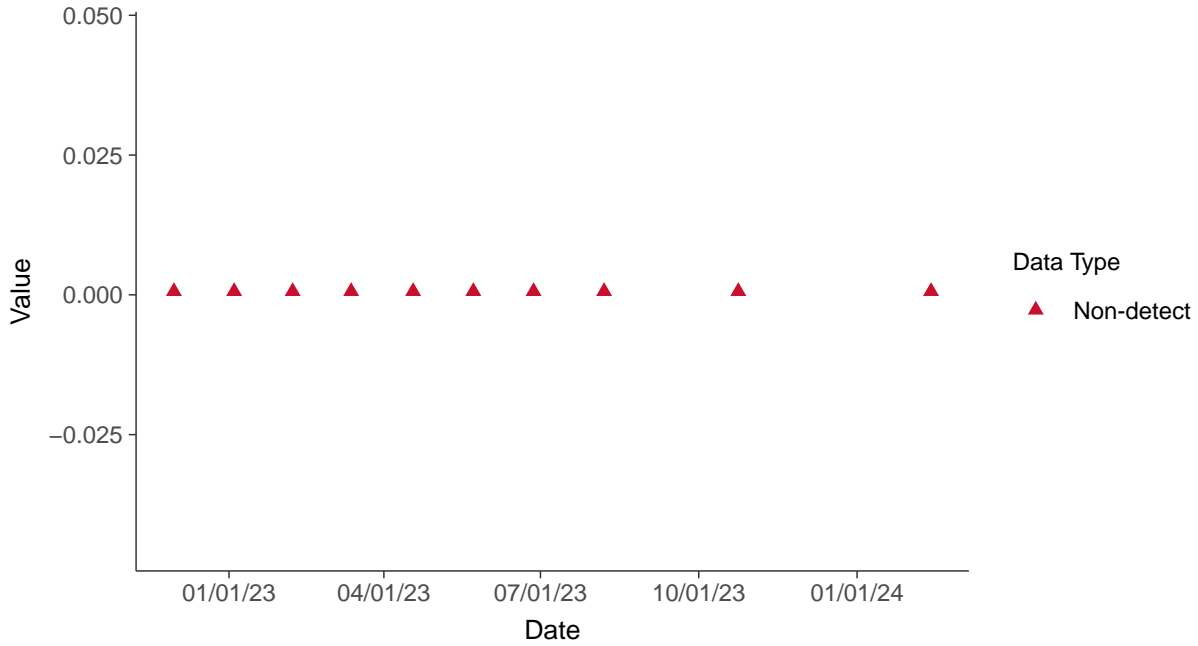


Part 115: Vanadium, MW-07

ID: 1_17_6_129

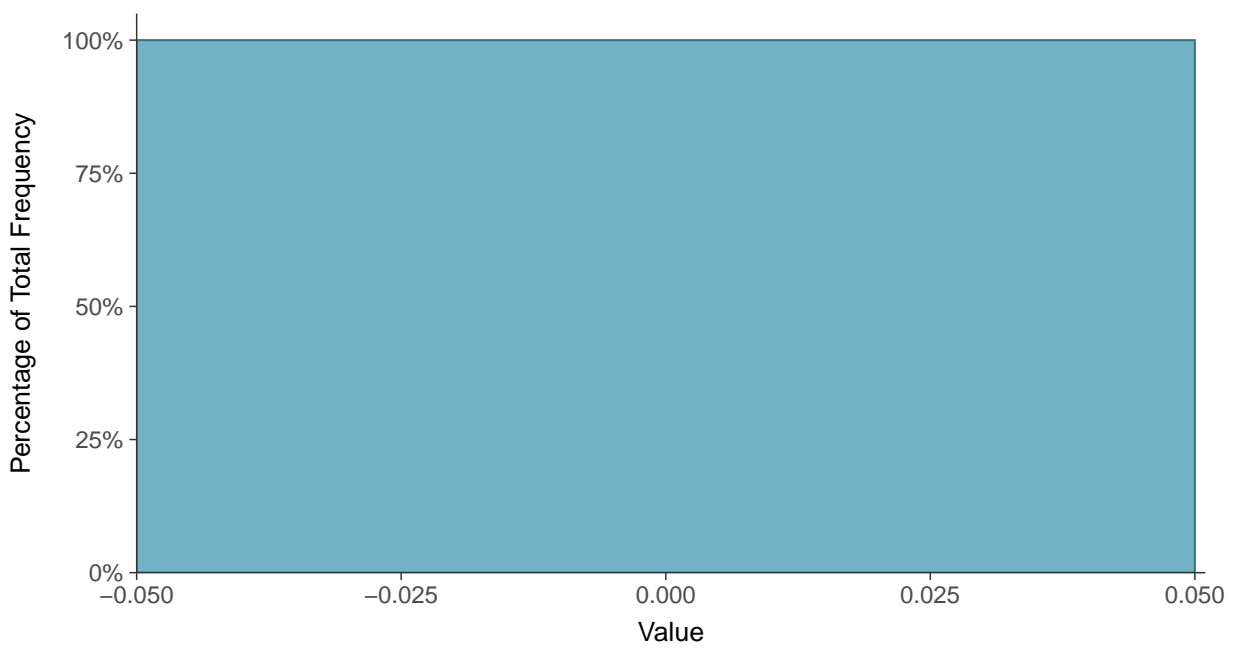
Scatter Plot

Vanadium, MW-07 (mg/L)



Histogram

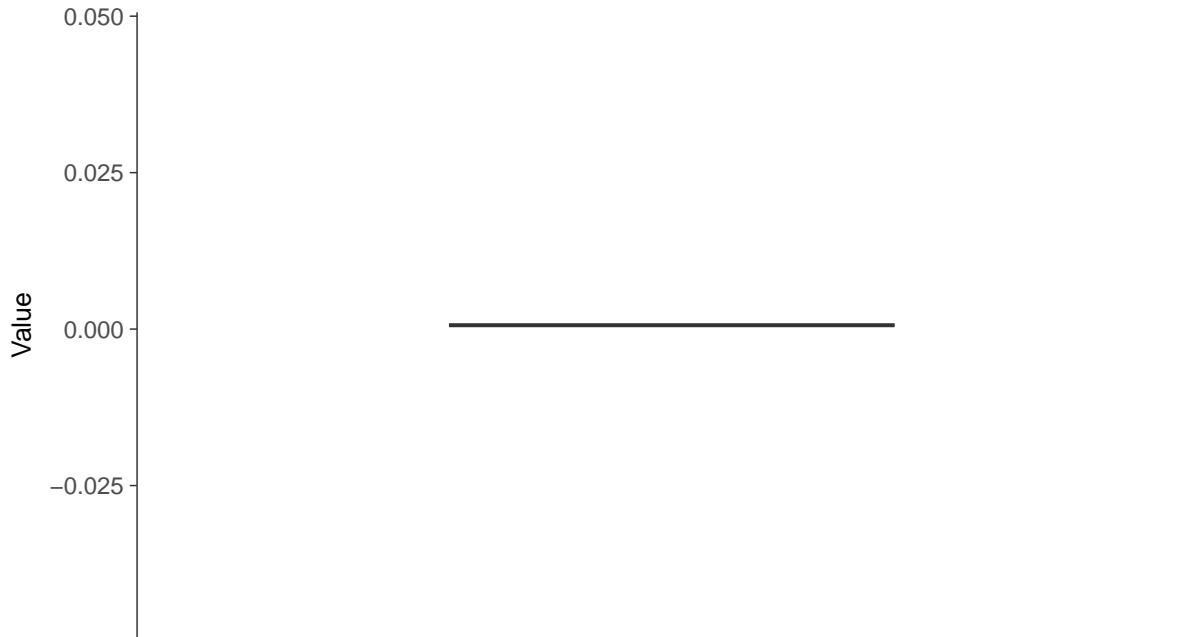
Vanadium, MW-07 (mg/L)





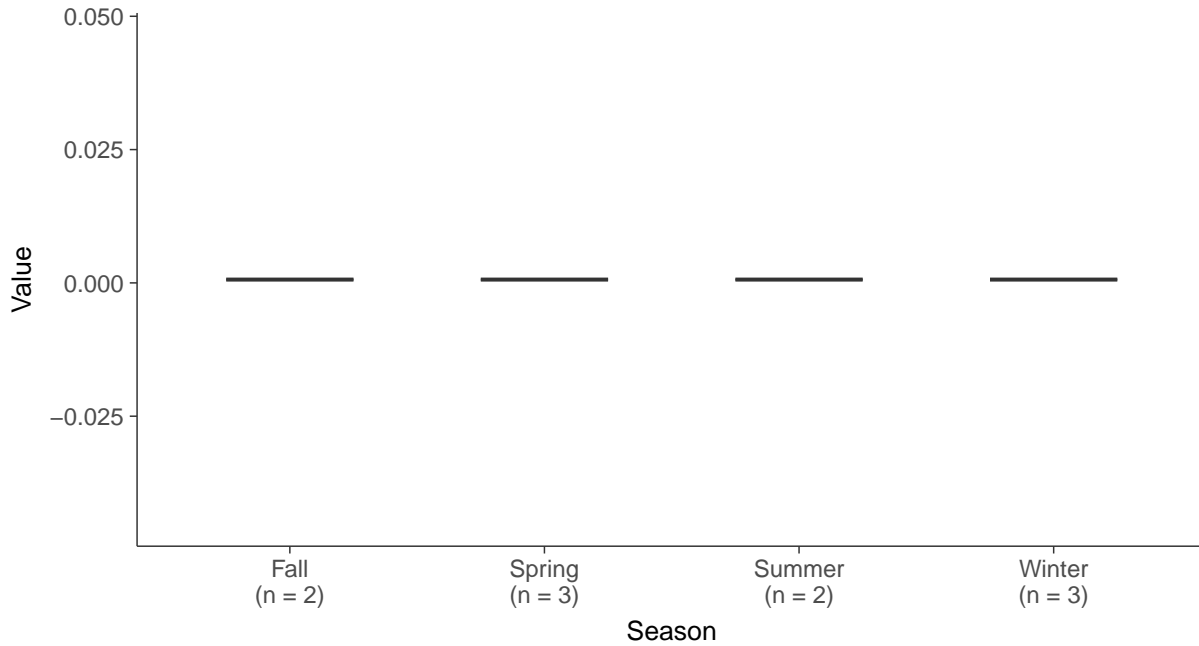
Boxplot

Vanadium, MW-07 (mg/L)



Boxplot by Season

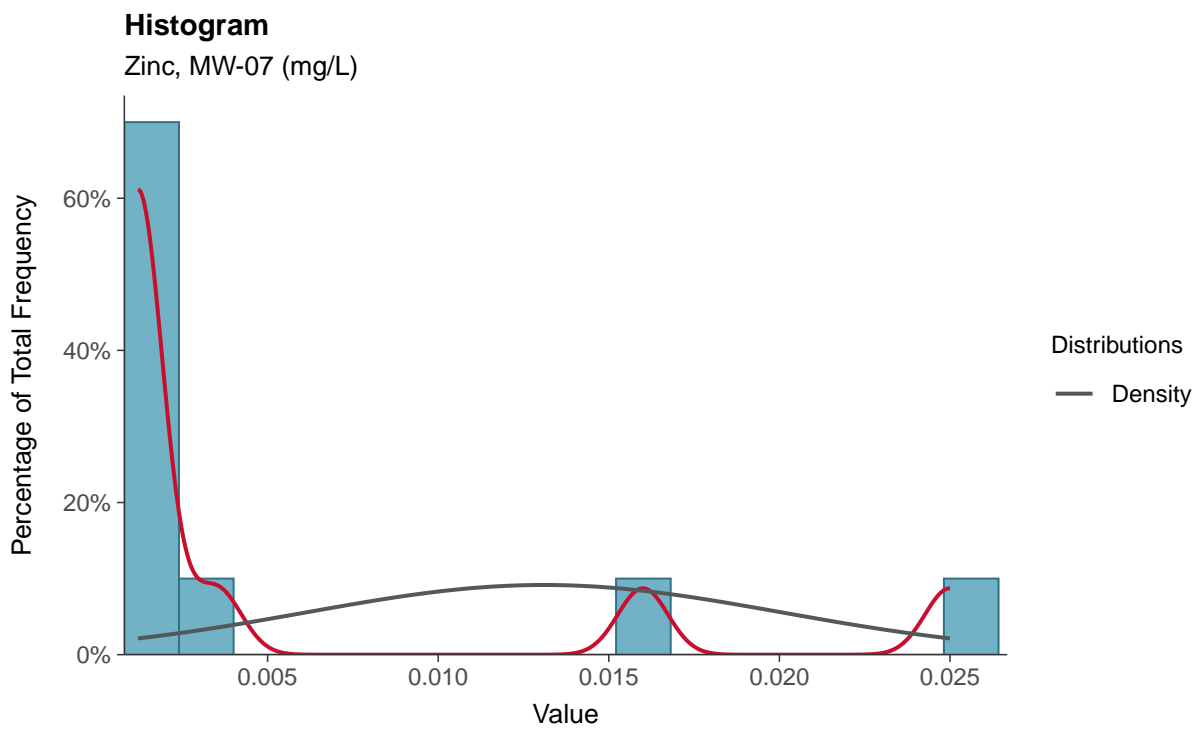
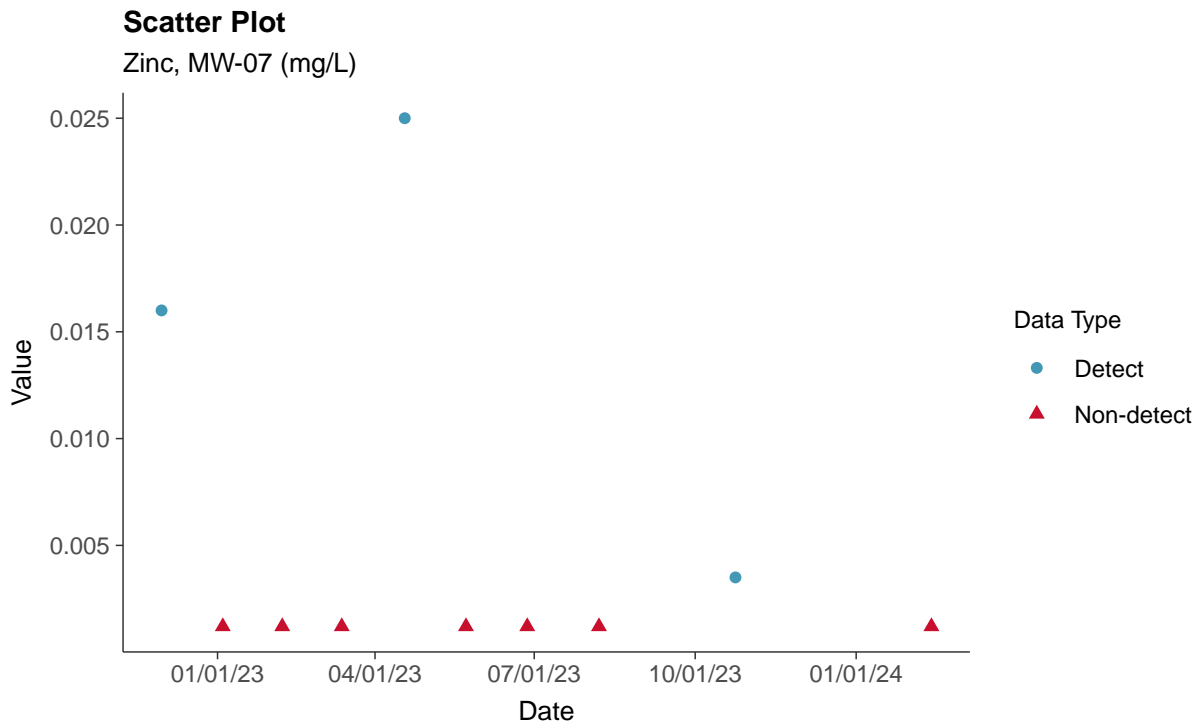
Vanadium, MW-07 (mg/L)





Part 115: Zinc, MW-07

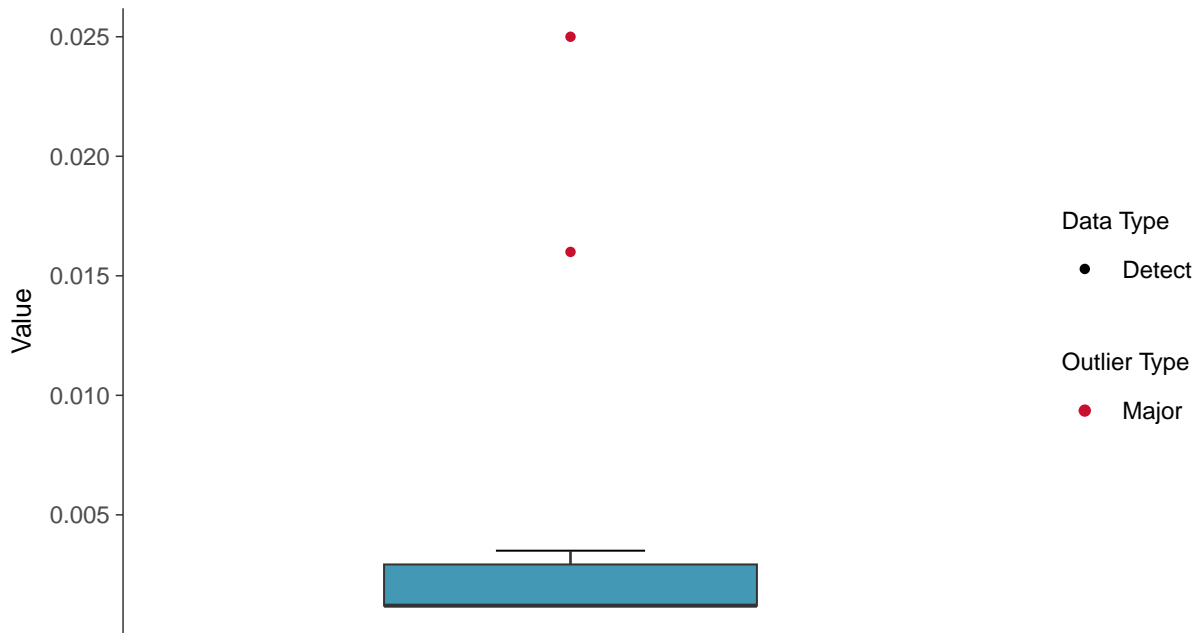
ID: 1_17_6_130





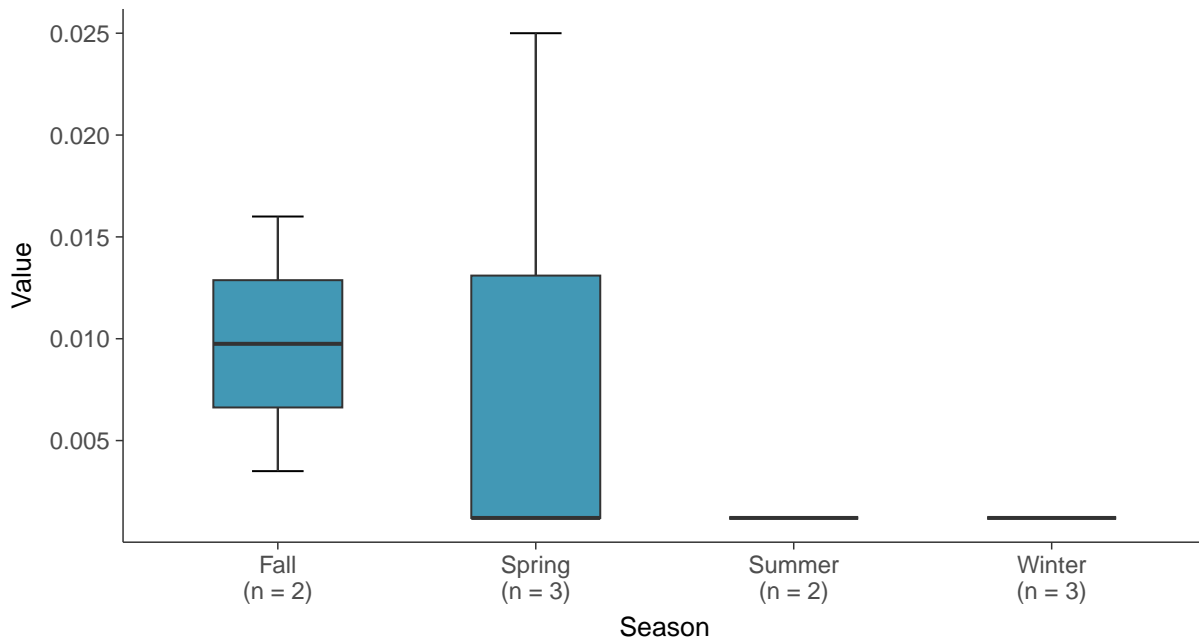
Boxplot

Zinc, MW-07 (mg/L)



Boxplot by Season

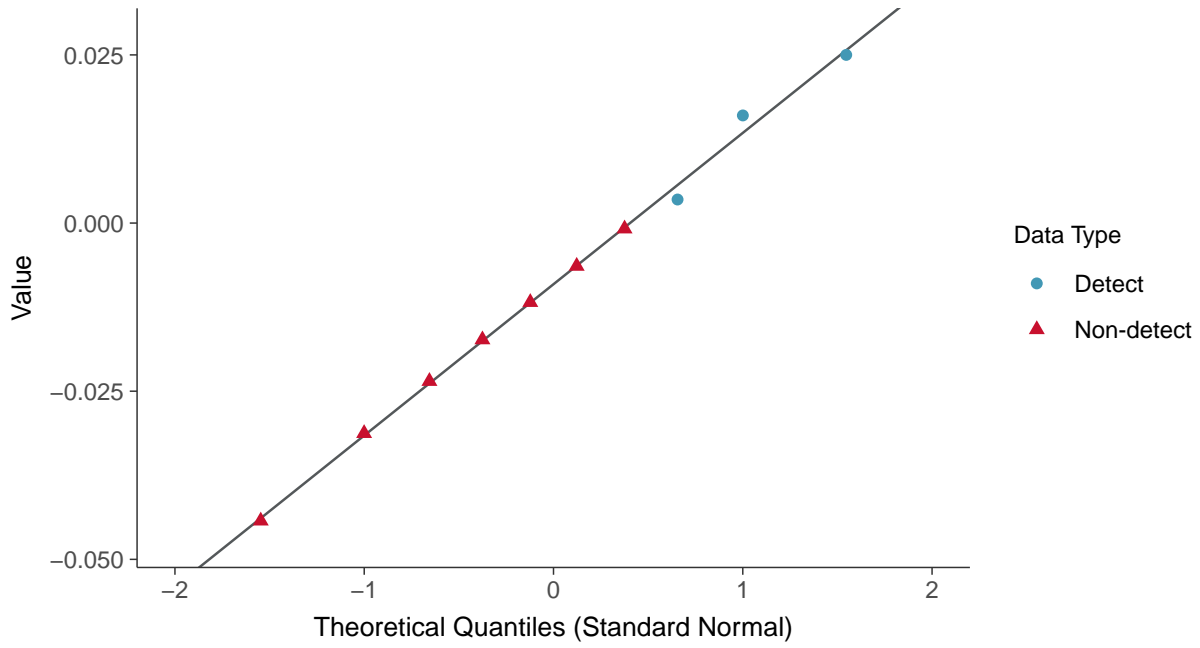
Zinc, MW-07 (mg/L)





Normal Q-Q plot using ROS Imputed Estimates

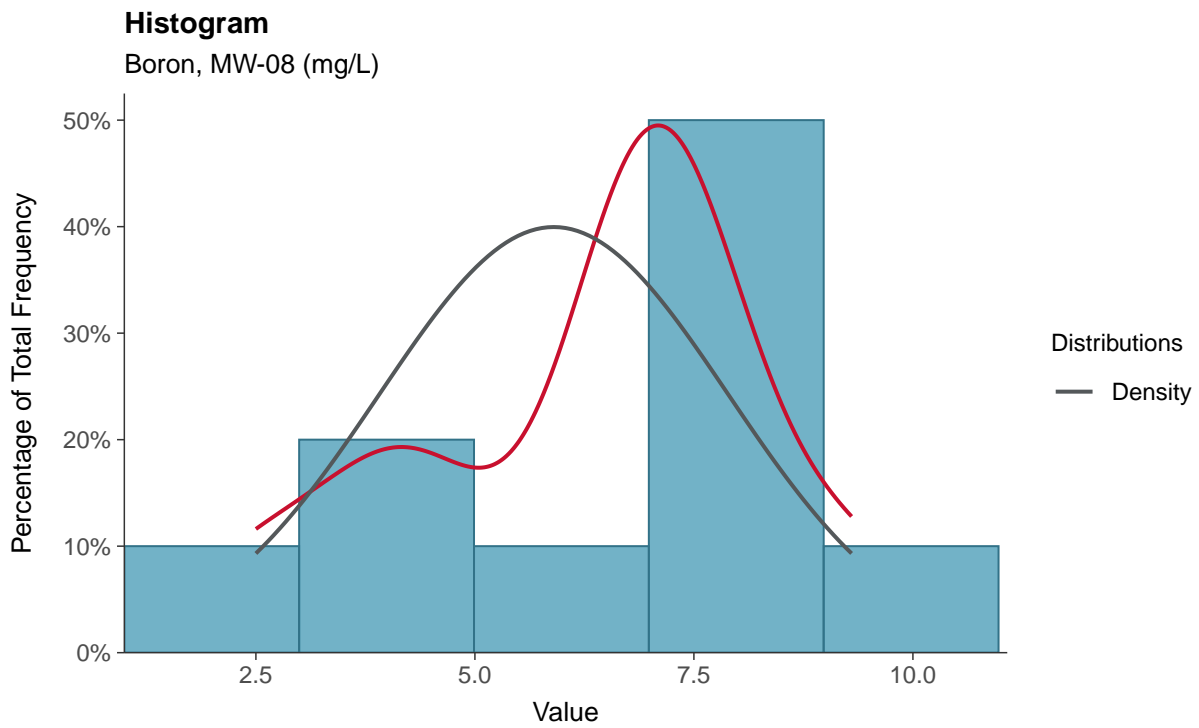
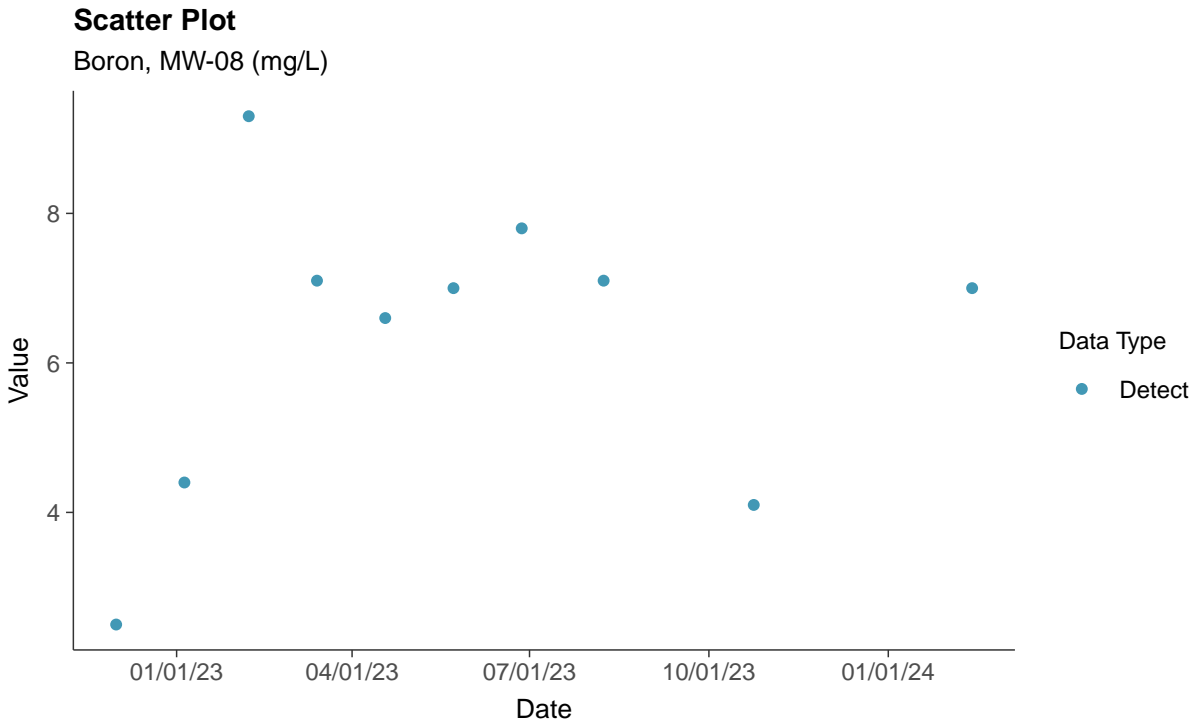
Zinc, MW-07 (mg/L)





Appendix III: Boron, MW-08

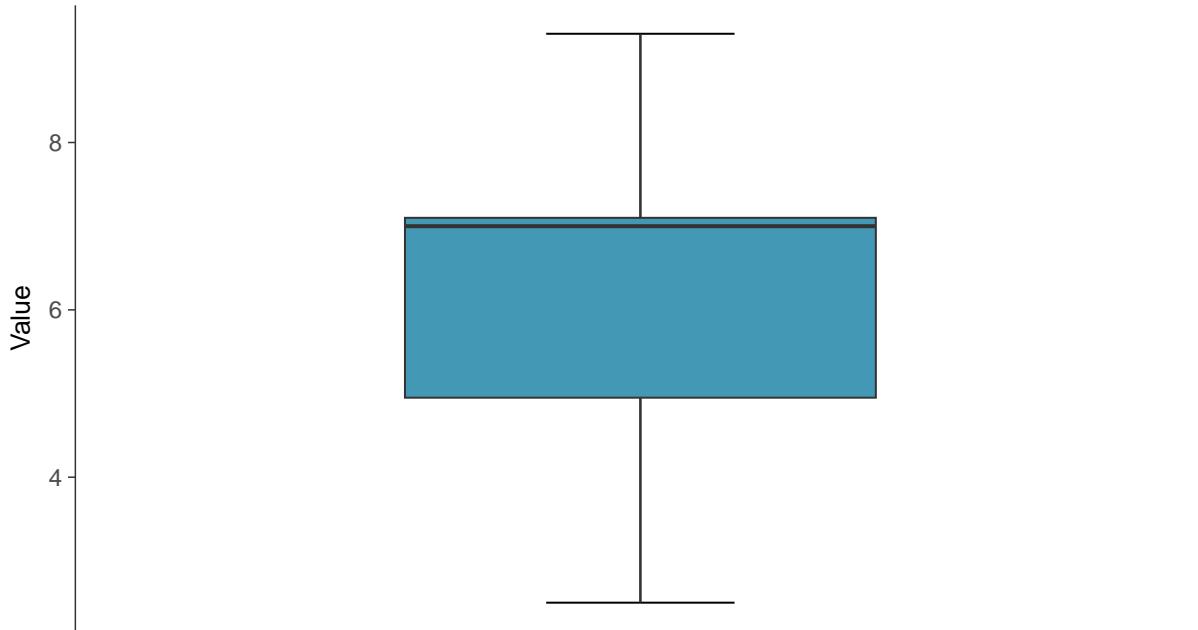
ID: 1_18_4_105





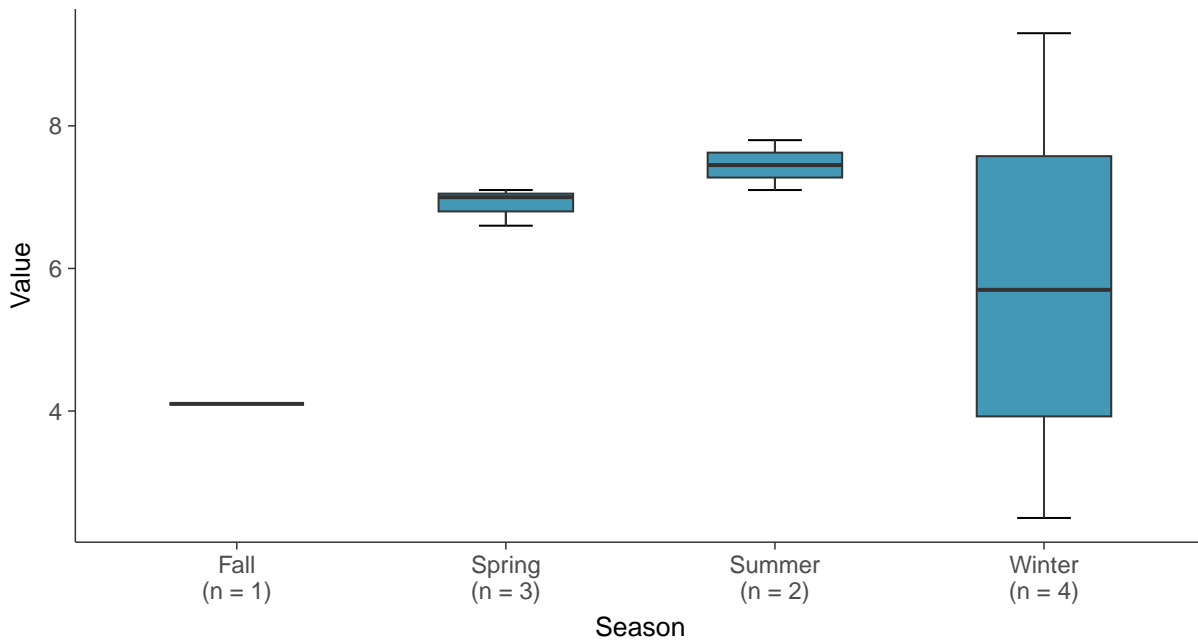
Boxplot

Boron, MW-08 (mg/L)



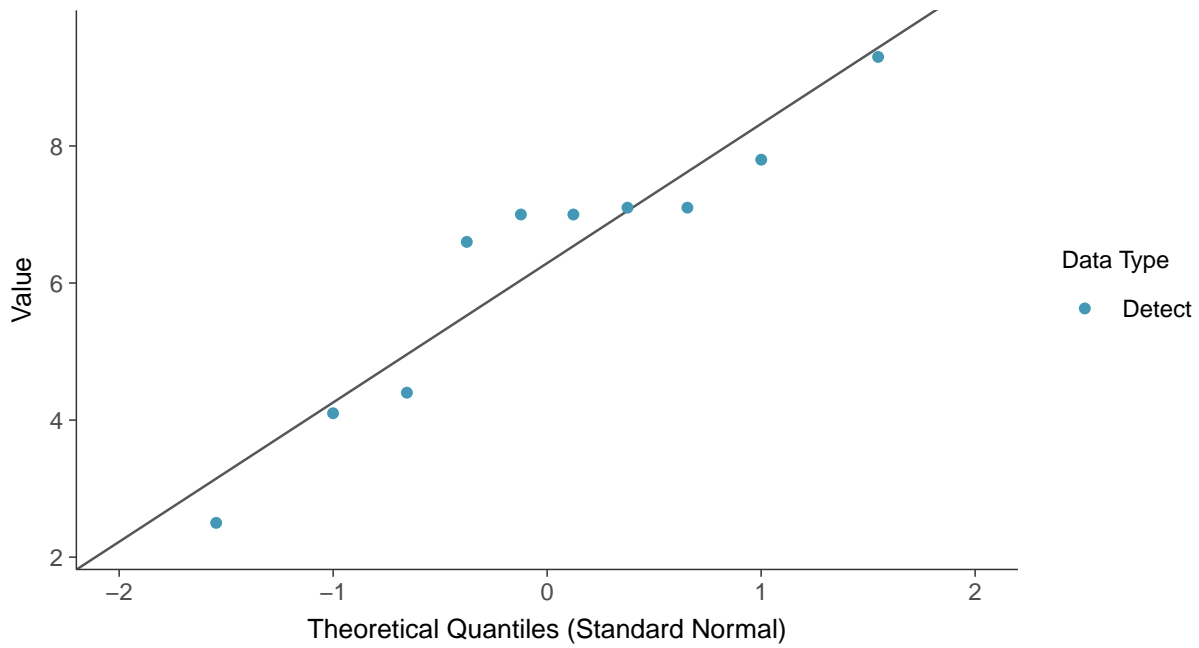
Boxplot by Season

Boron, MW-08 (mg/L)

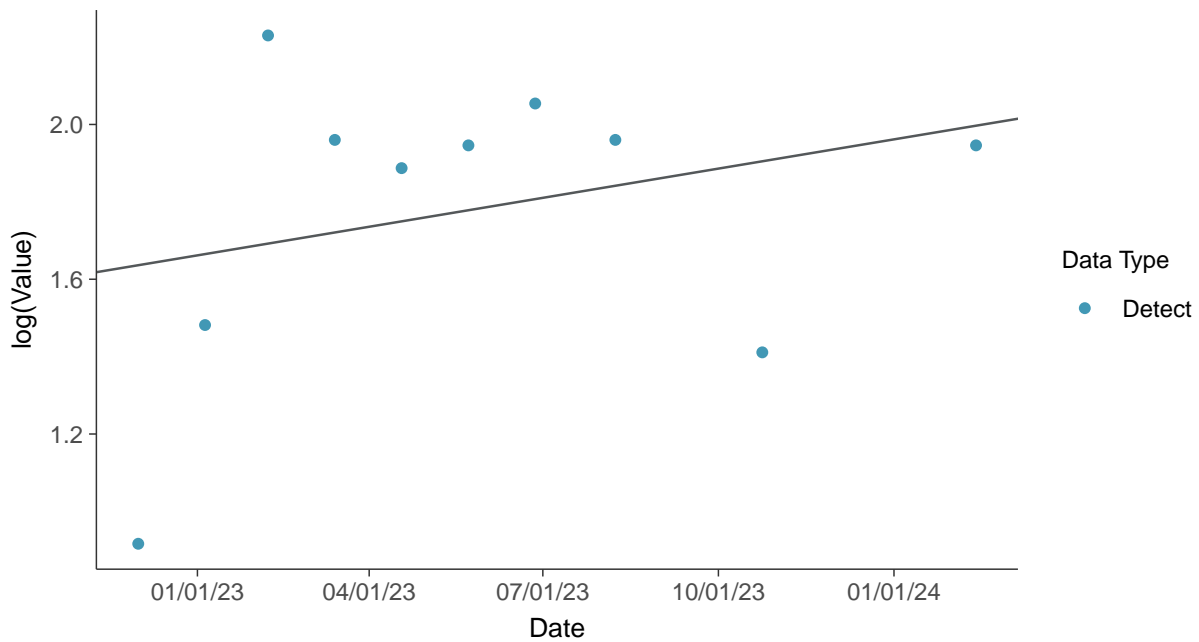




Normal Q-Q plot
Boron, MW-08 (mg/L)



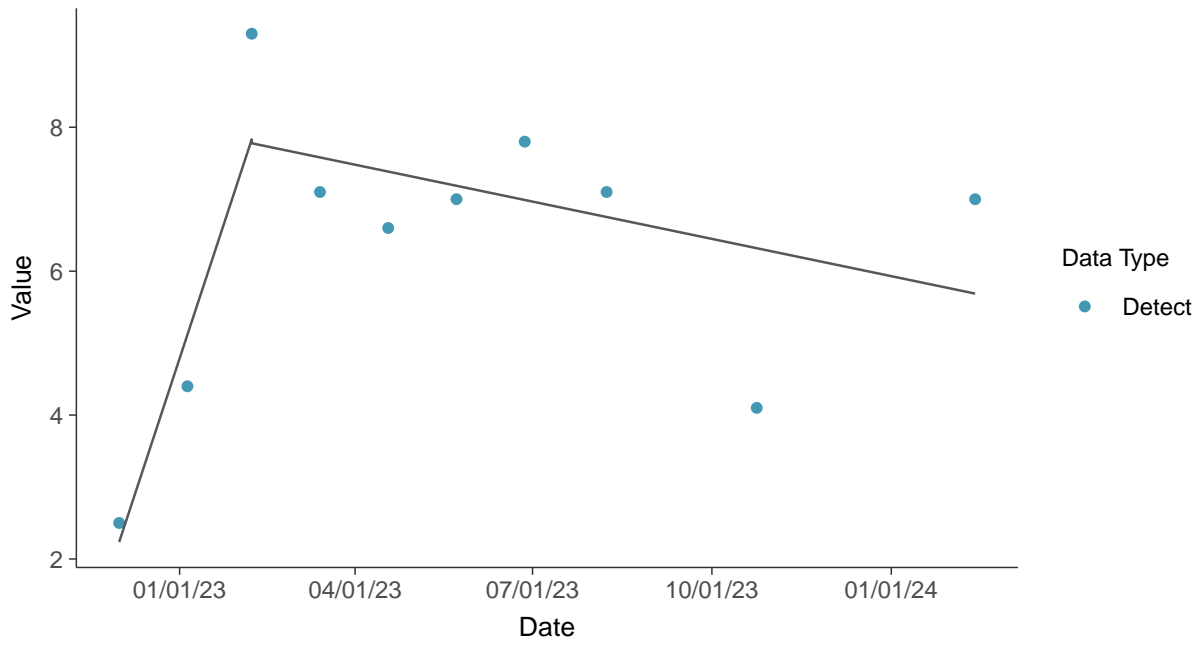
Trend Regression: Lognormal MLE
Boron, MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear

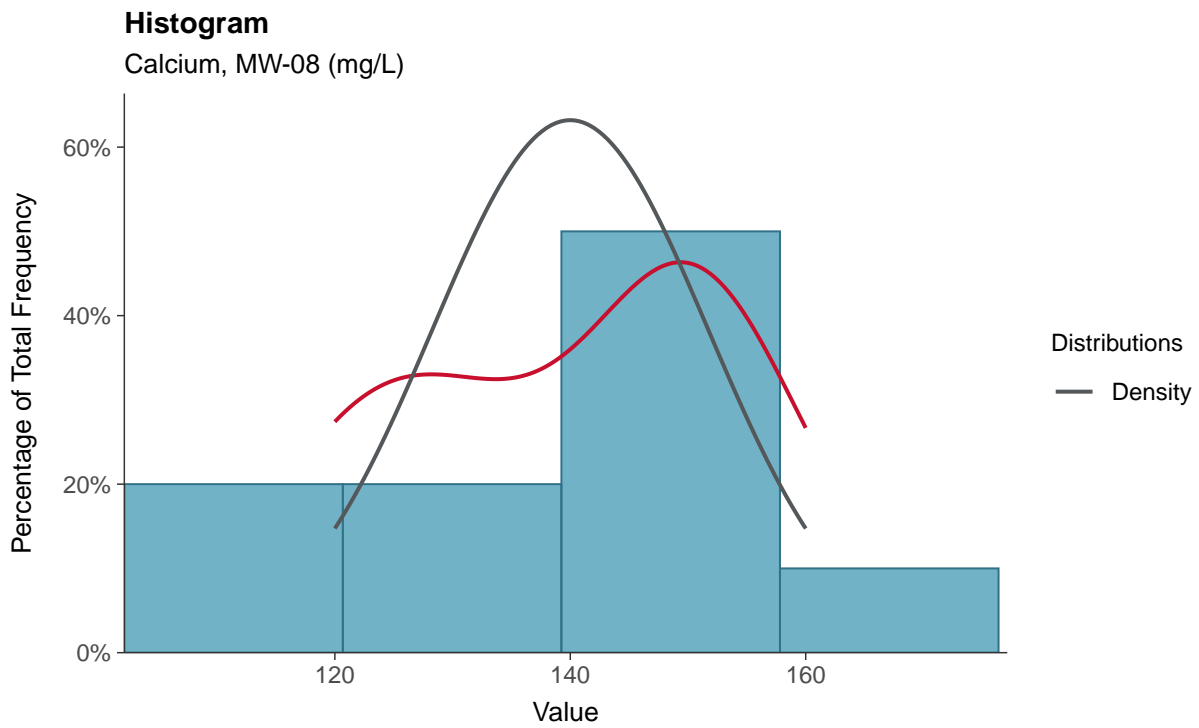
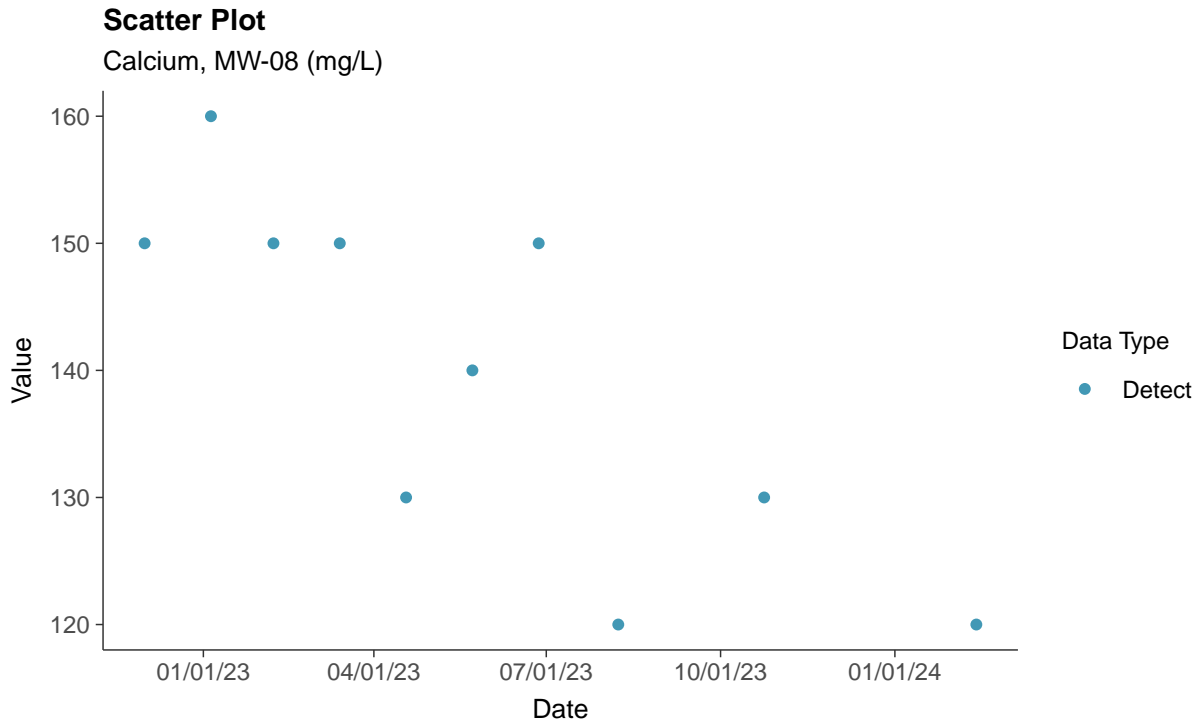
Boron, MW-08 (mg/L)





Appendix III: Calcium, MW-08

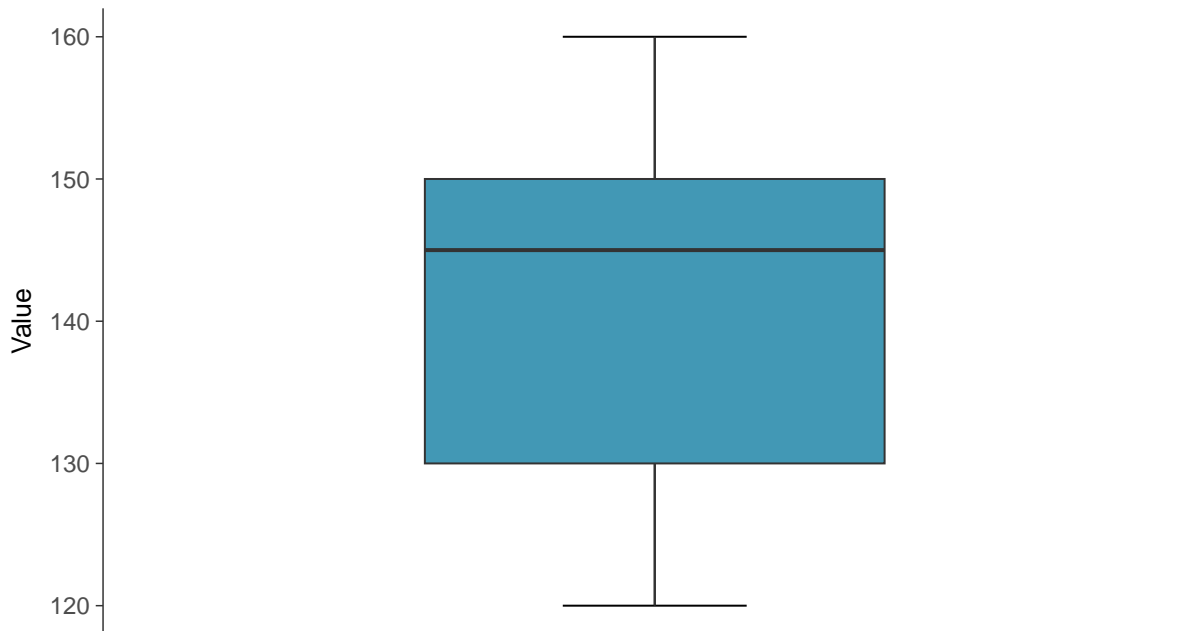
ID: 1_18_4_107





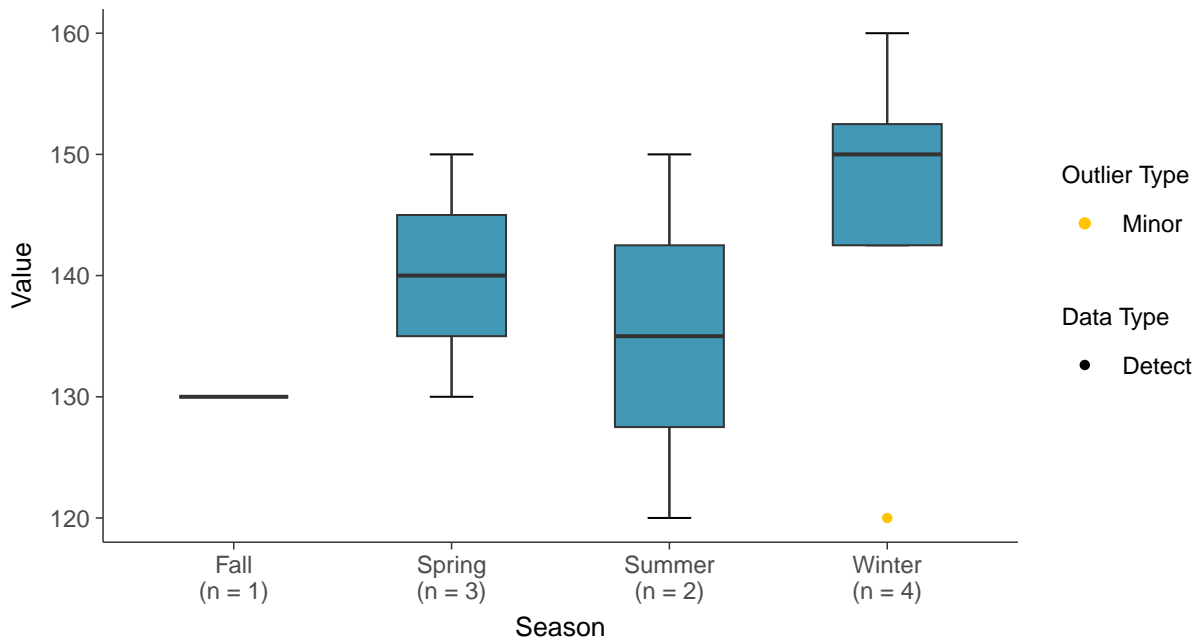
Boxplot

Calcium, MW-08 (mg/L)



Boxplot by Season

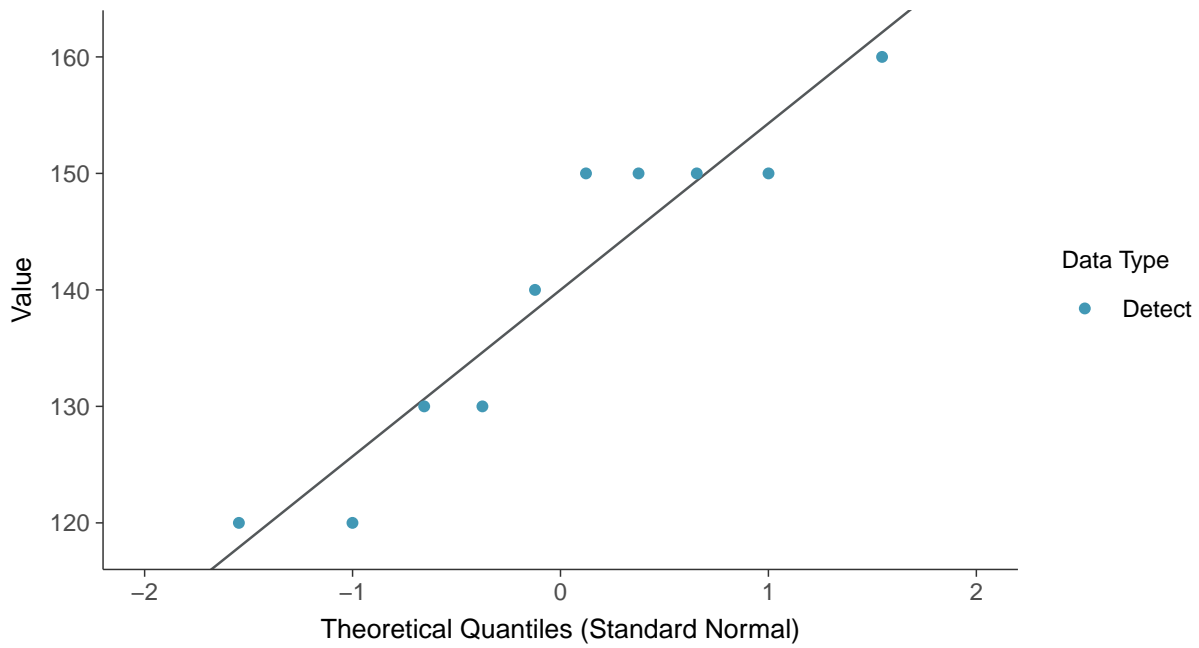
Calcium, MW-08 (mg/L)





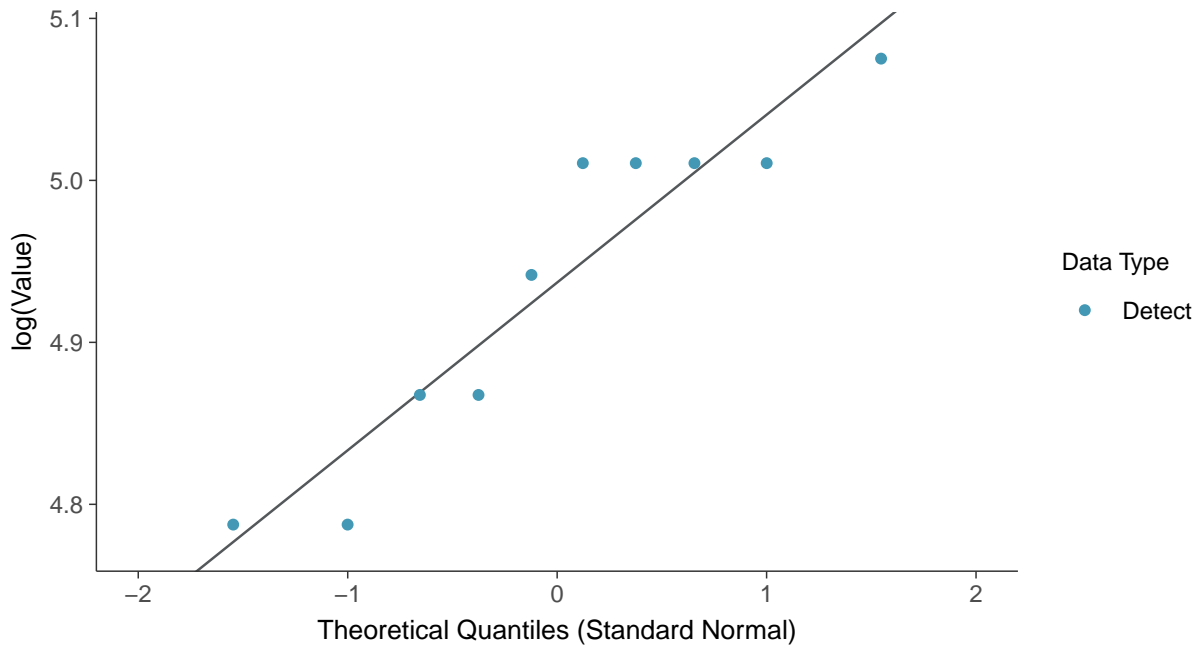
Normal Q-Q plot

Calcium, MW-08 (mg/L)



Lognormal Q-Q plot

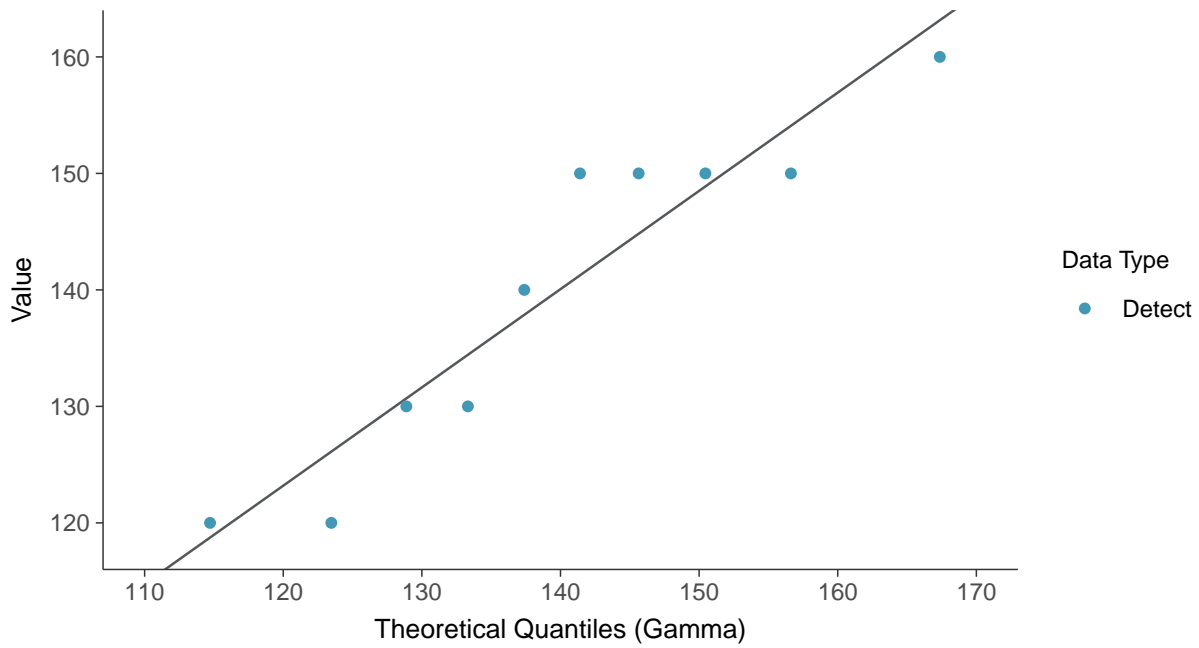
Calcium, MW-08 (mg/L)





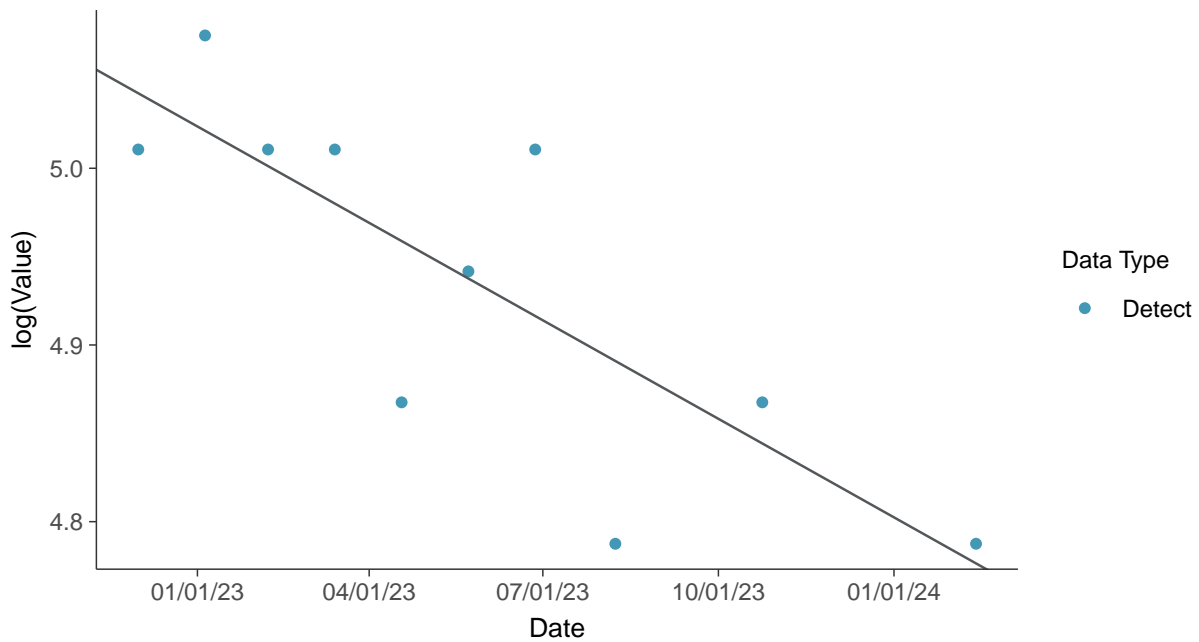
Gamma Q-Q plot

Calcium, MW-08 (mg/L)



Trend Regression: Lognormal MLE

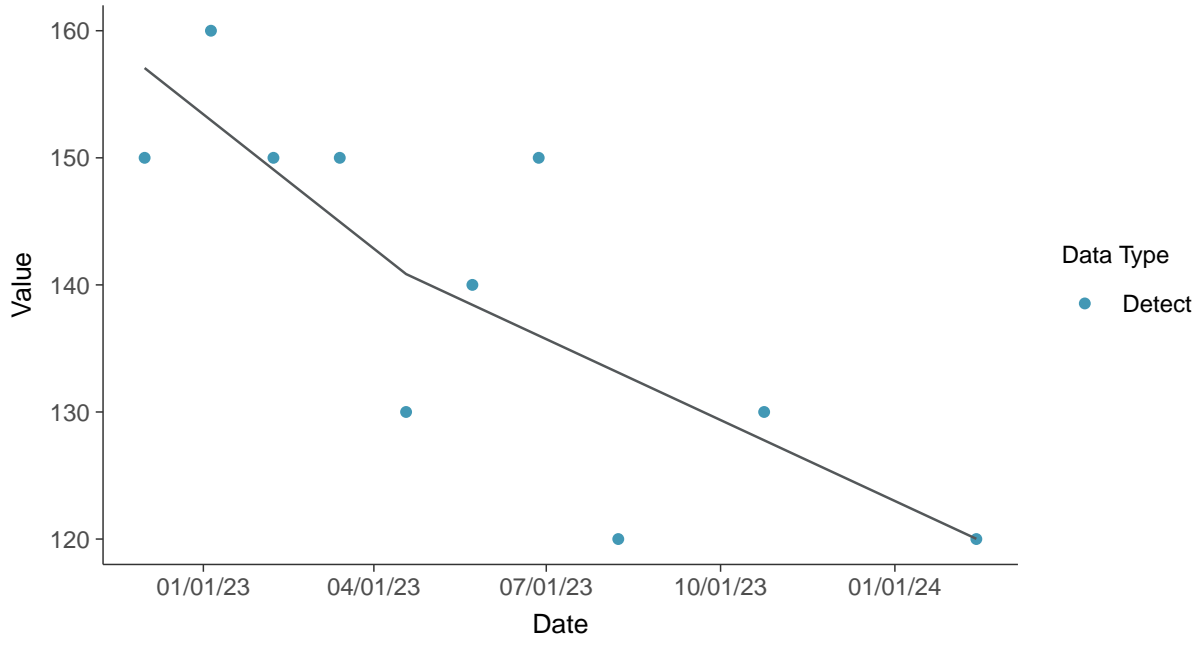
Calcium, MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear

Calcium, MW-08 (mg/L)



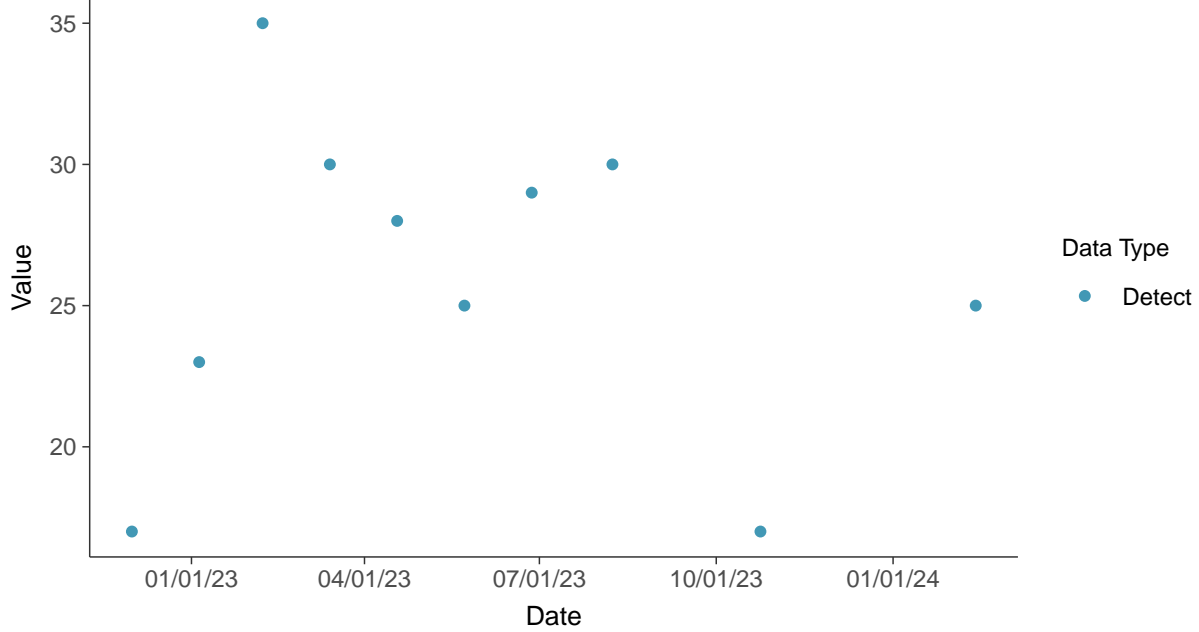


Appendix III: Chloride (as Cl), MW-08

ID: 1_18_4_108

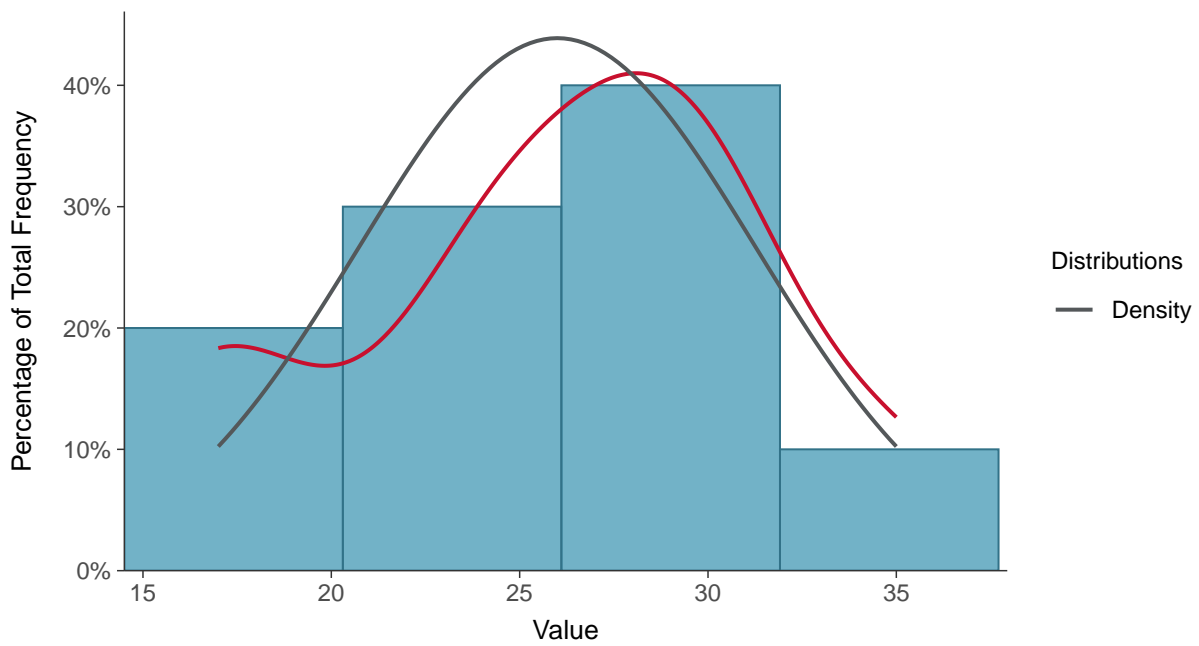
Scatter Plot

Chloride (as Cl), MW-08 (mg/L)



Histogram

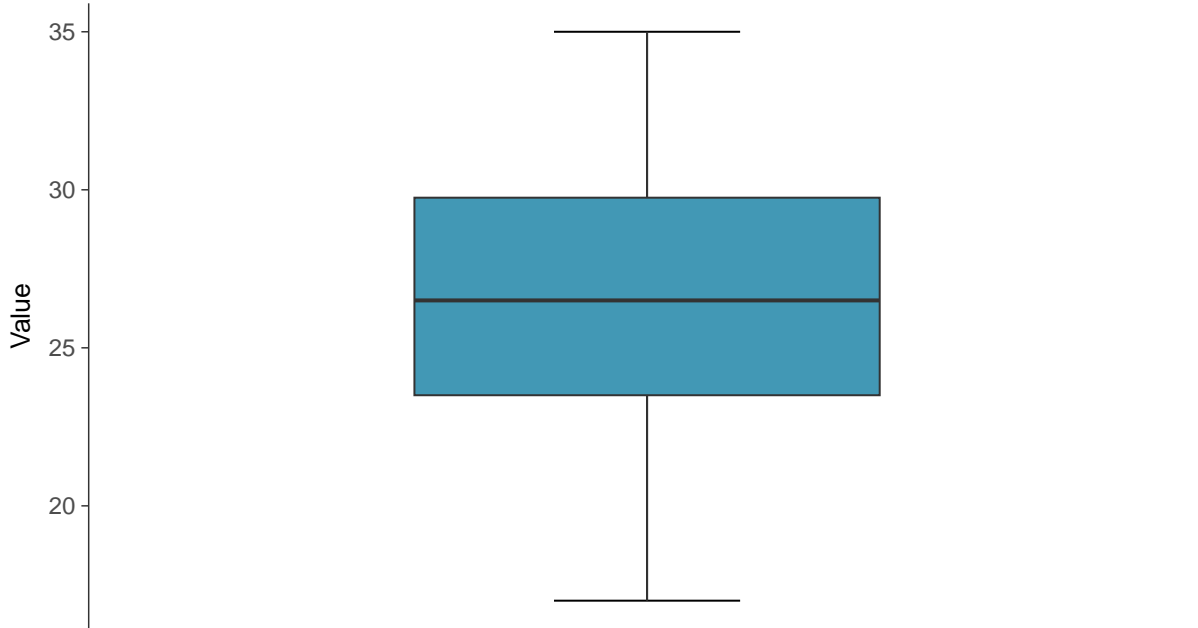
Chloride (as Cl), MW-08 (mg/L)





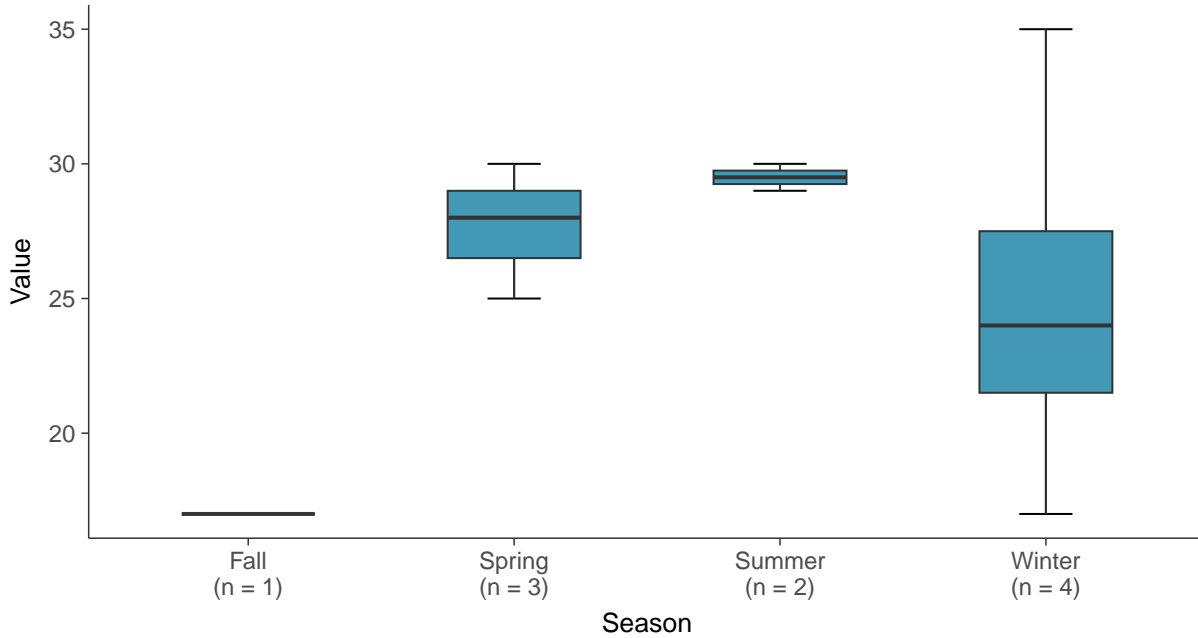
Boxplot

Chloride (as Cl), MW-08 (mg/L)



Boxplot by Season

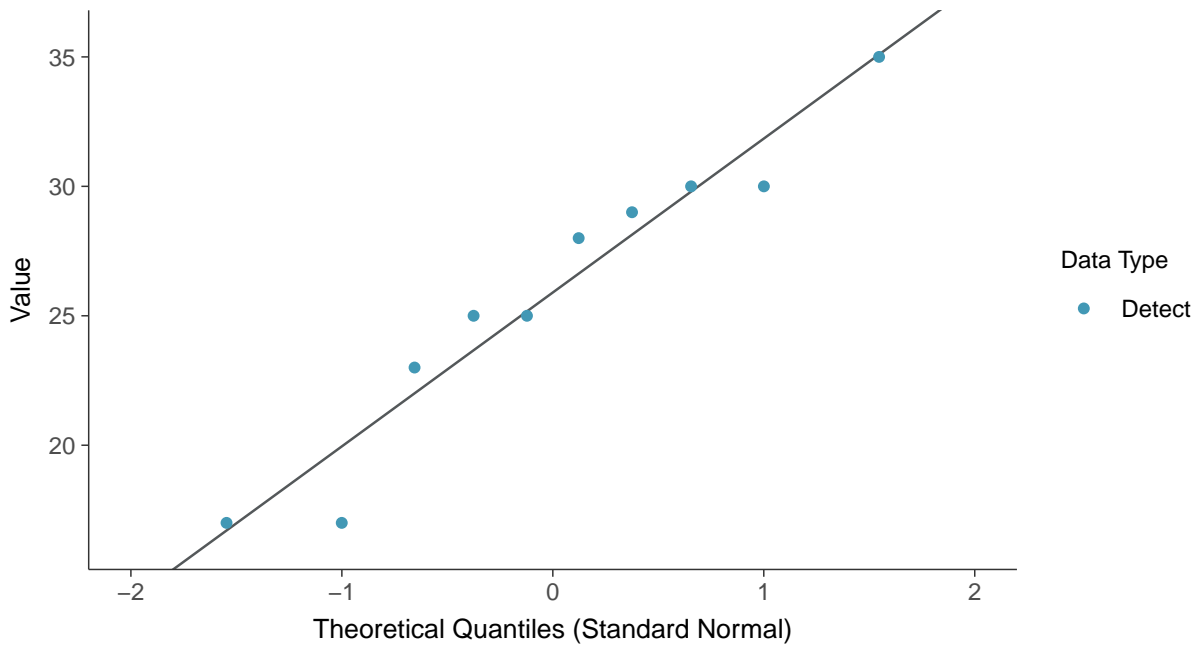
Chloride (as Cl), MW-08 (mg/L)





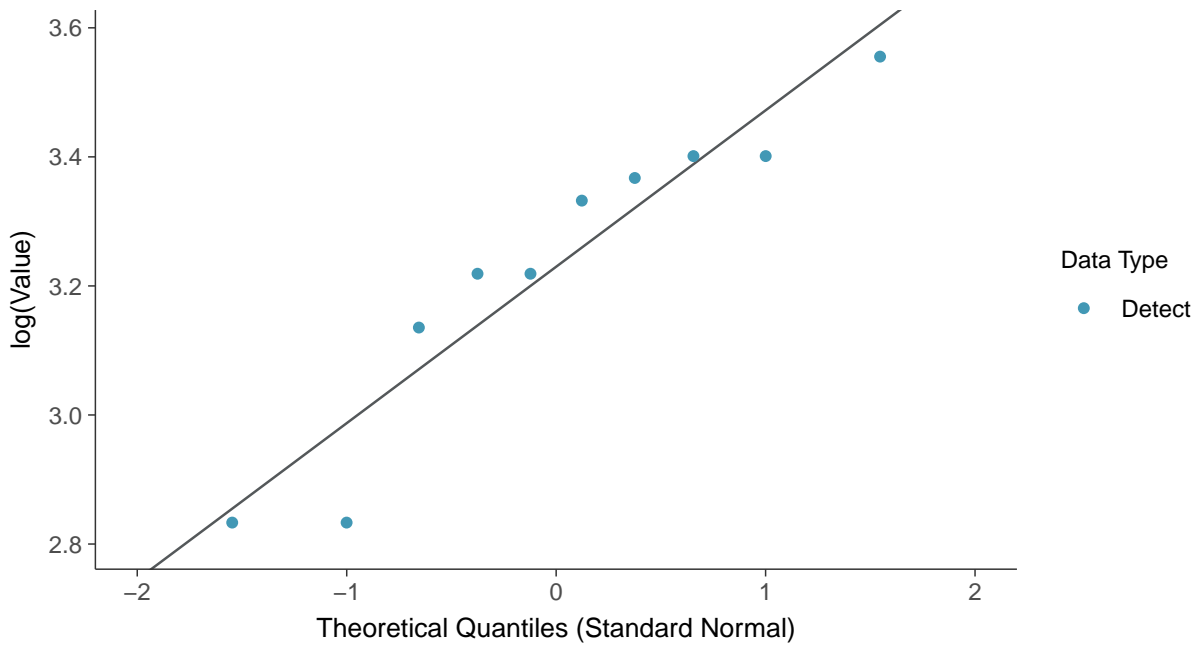
Normal Q-Q plot

Chloride (as Cl), MW-08 (mg/L)



Lognormal Q-Q plot

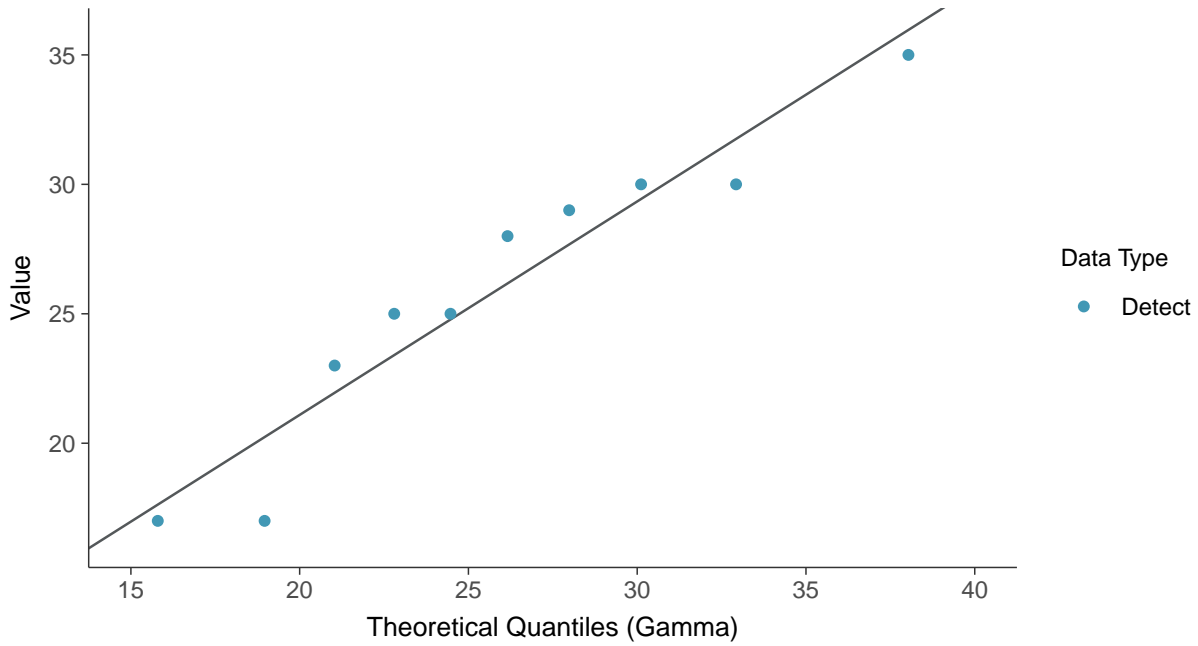
Chloride (as Cl), MW-08 (mg/L)





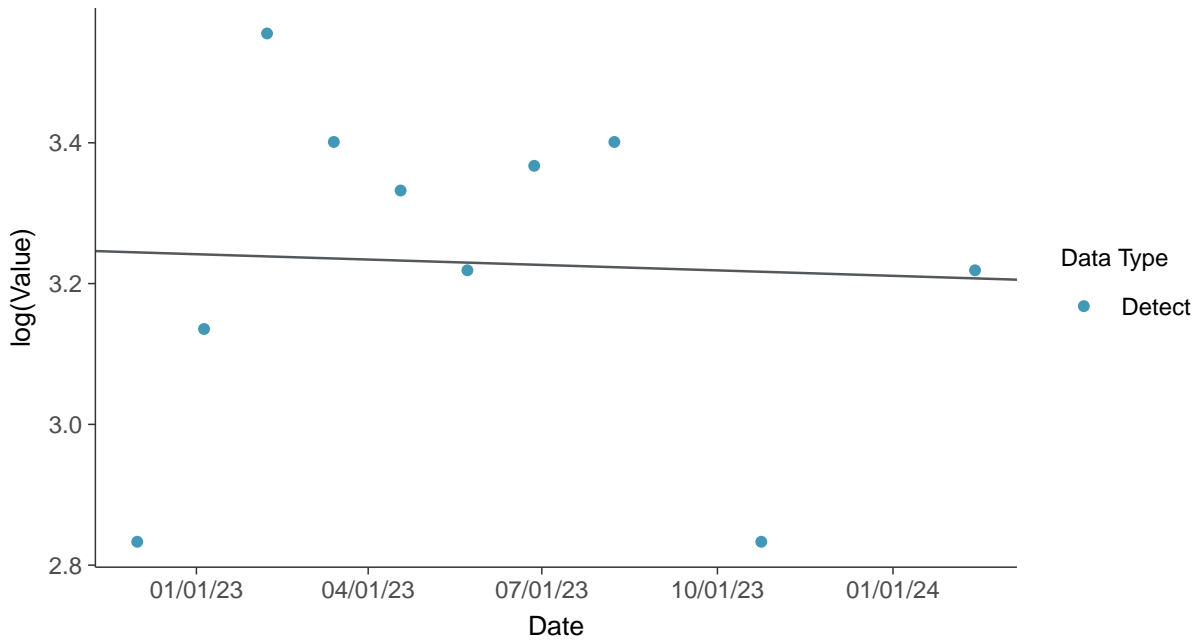
Gamma Q-Q plot

Chloride (as Cl), MW-08 (mg/L)



Trend Regression: Lognormal MLE

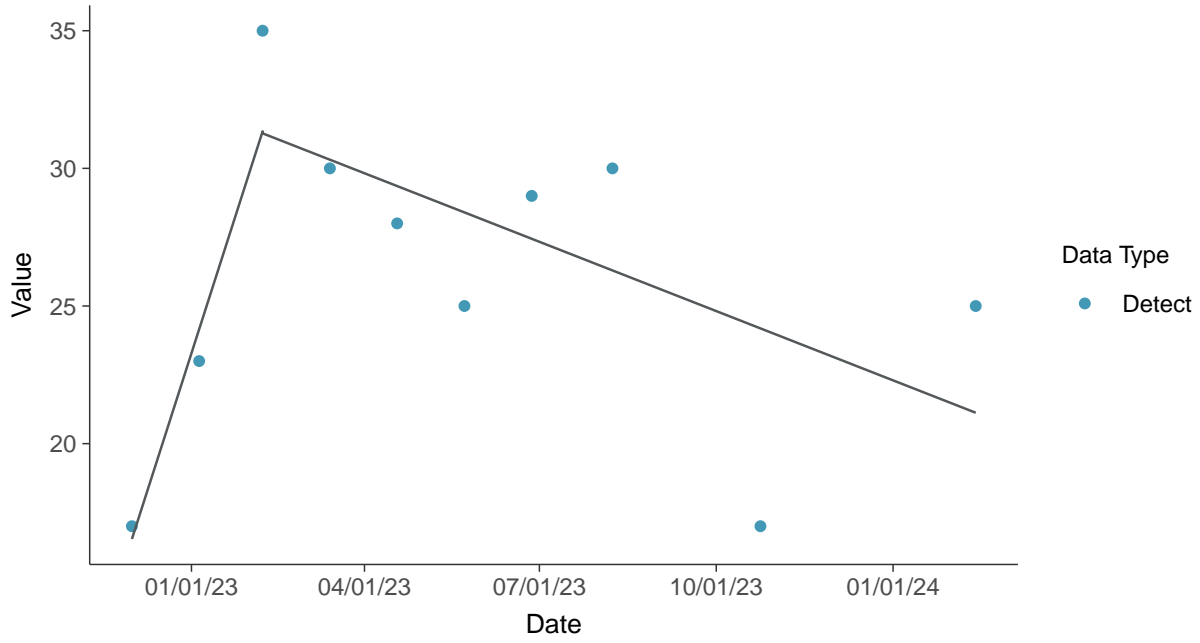
Chloride (as Cl), MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-08 (mg/L)



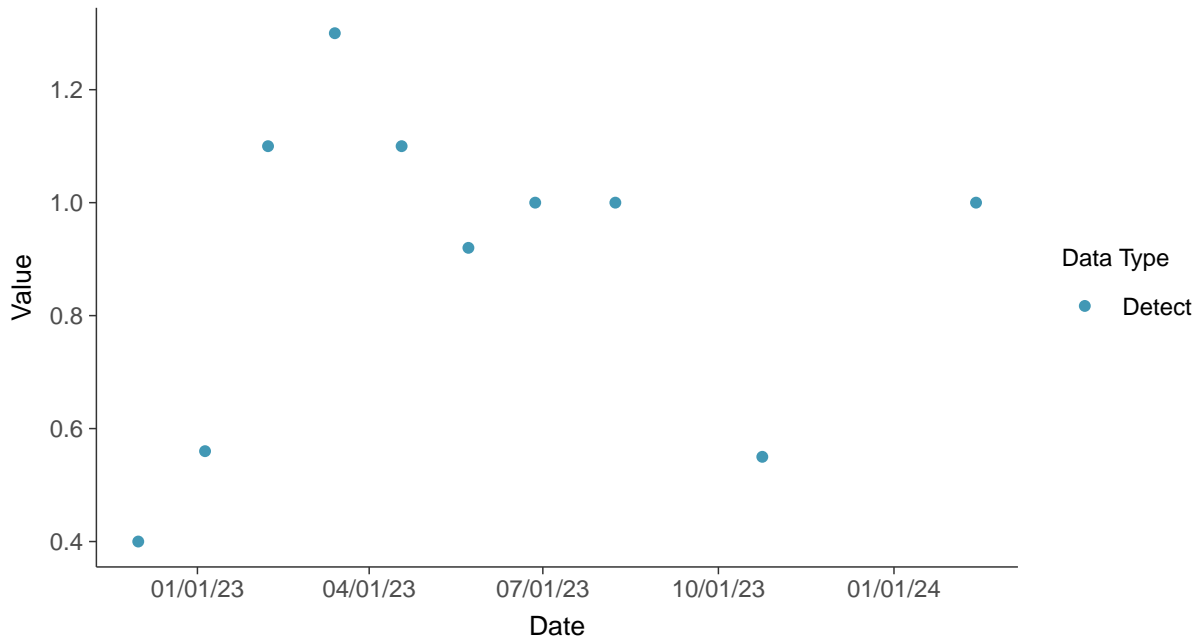


Appendix III: Fluoride, MW-08

ID: 1_18_4_112

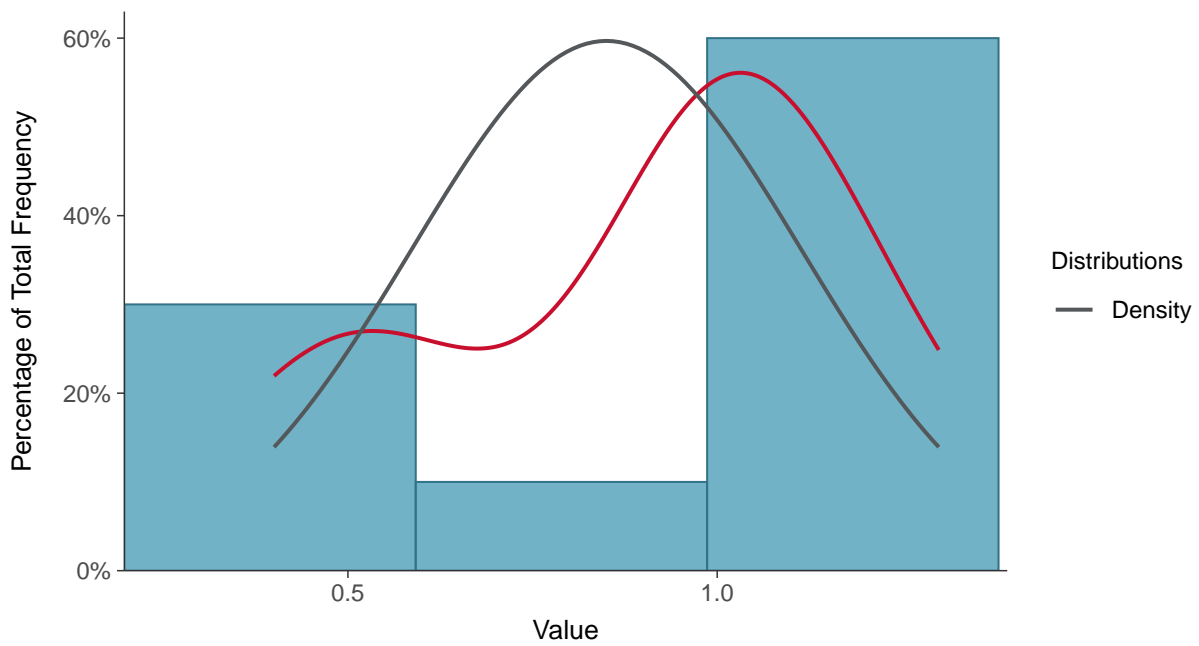
Scatter Plot

Fluoride, MW-08 (mg/L)



Histogram

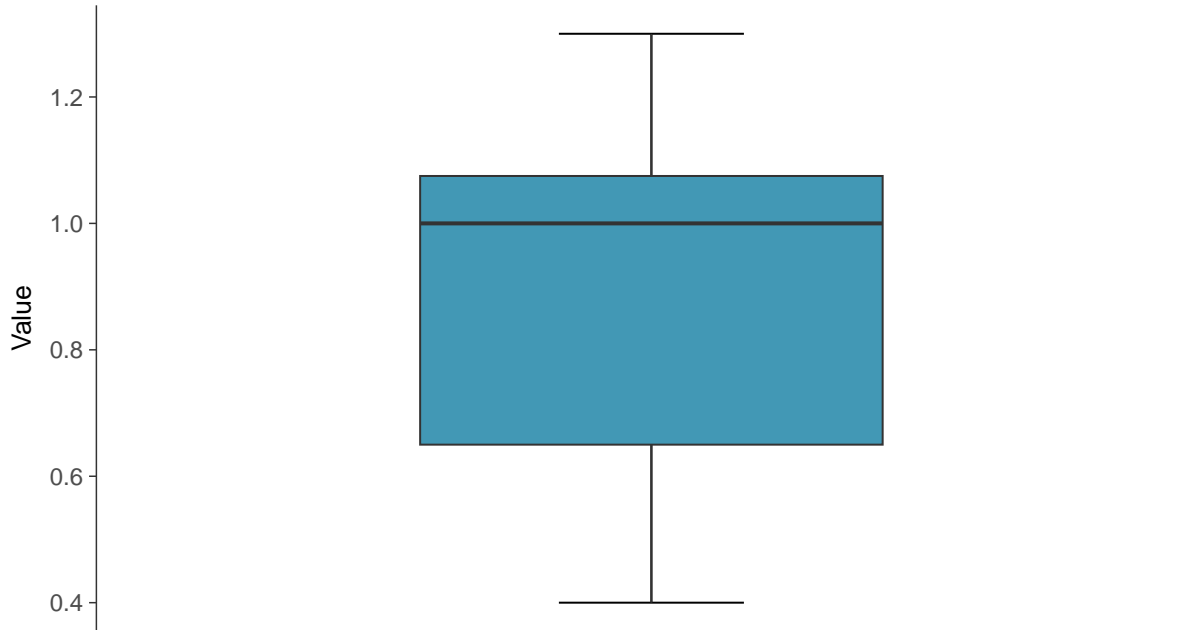
Fluoride, MW-08 (mg/L)





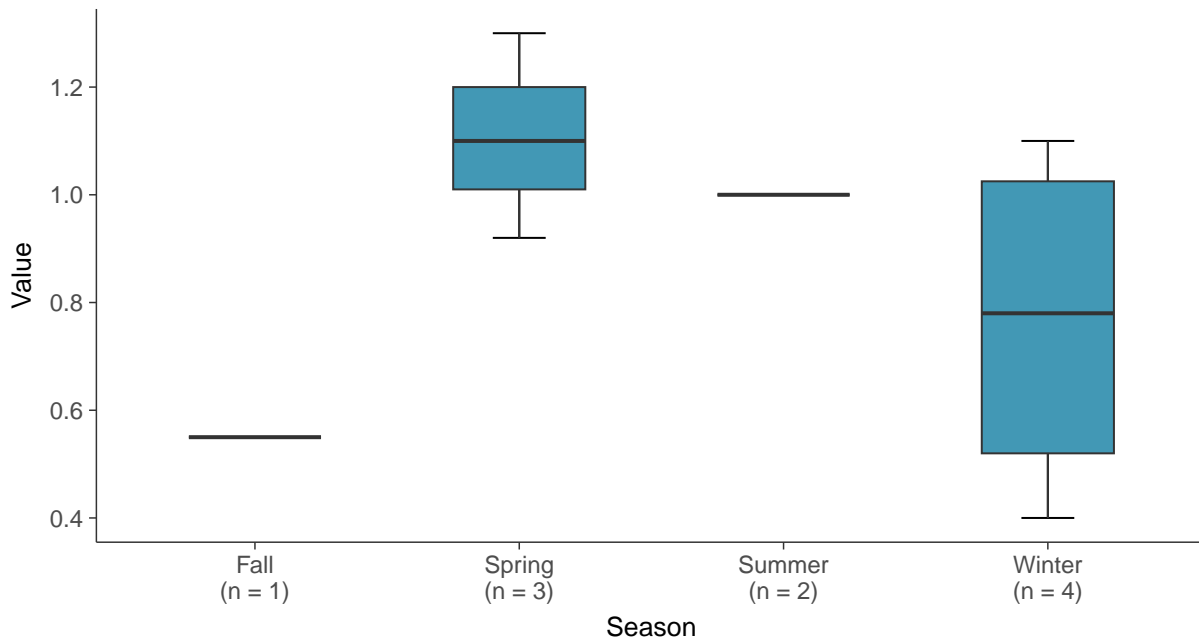
Boxplot

Fluoride, MW-08 (mg/L)



Boxplot by Season

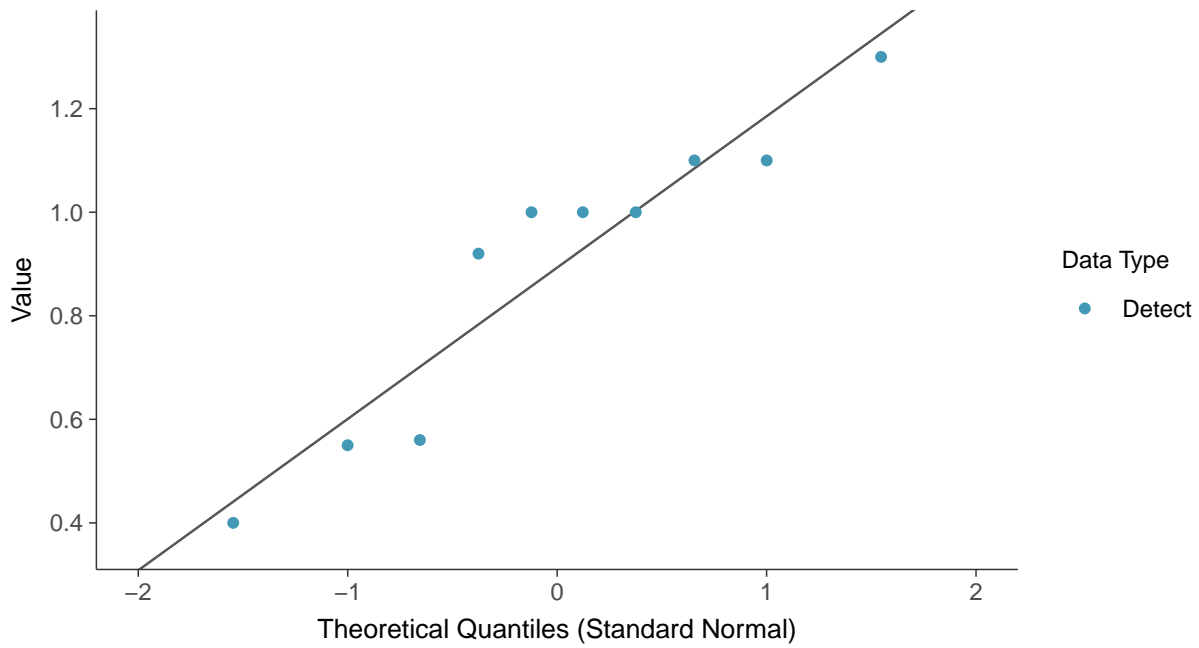
Fluoride, MW-08 (mg/L)





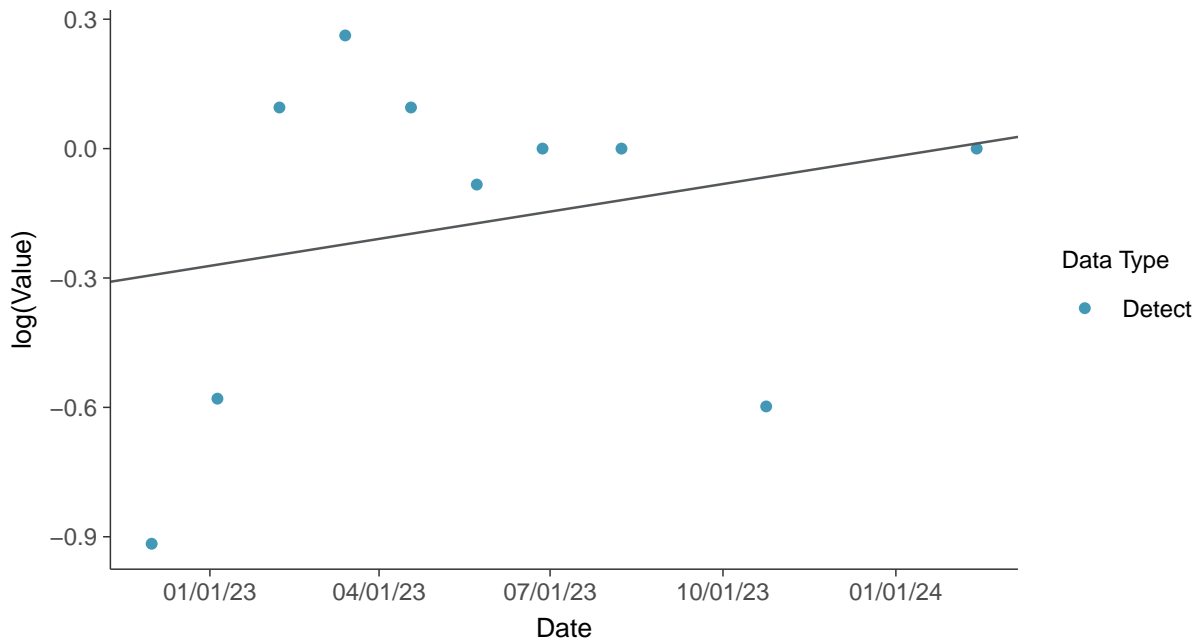
Normal Q-Q plot

Fluoride, MW-08 (mg/L)



Trend Regression: Lognormal MLE

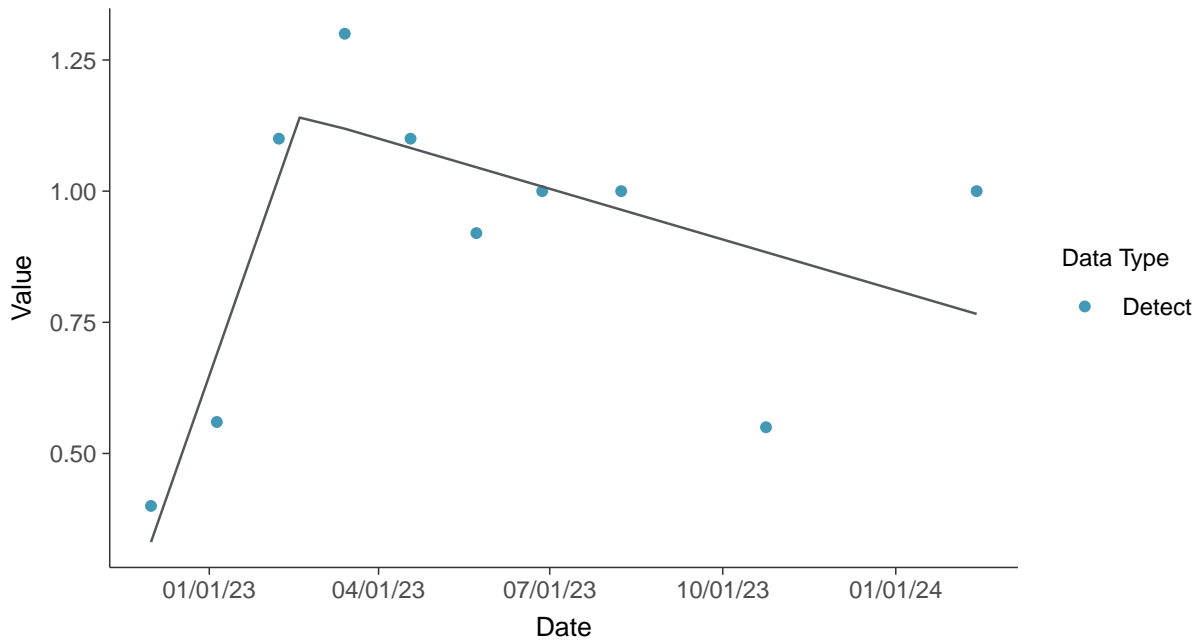
Fluoride, MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear

Fluoride, MW-08 (mg/L)



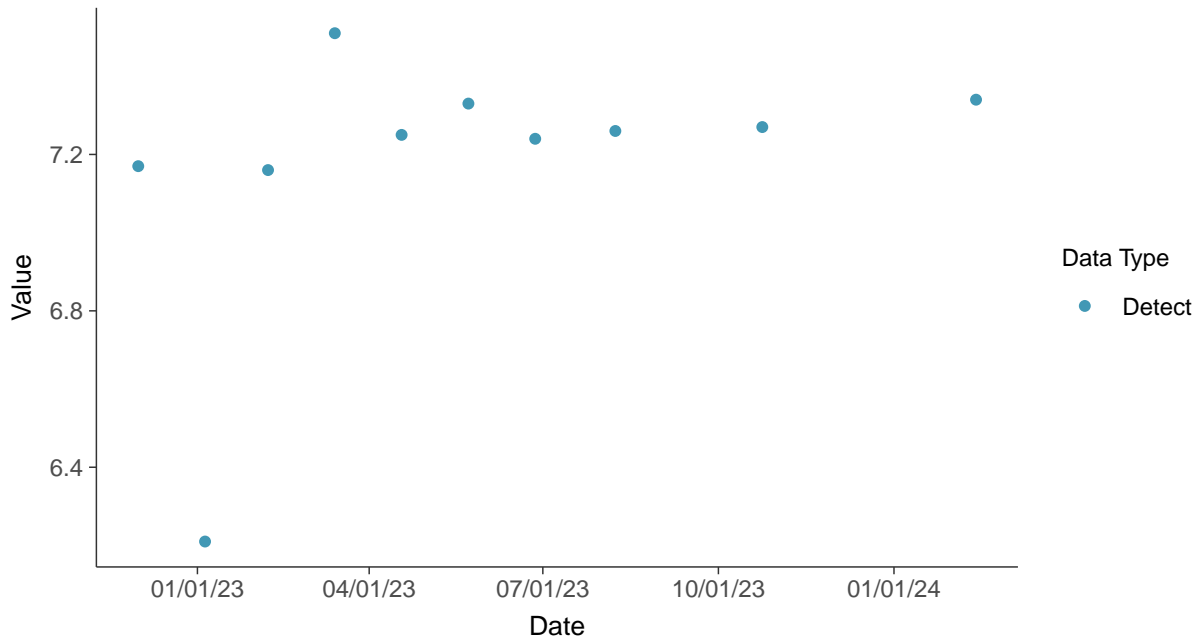


Appendix III: pH (field), MW-08

ID: 1_18_4_120

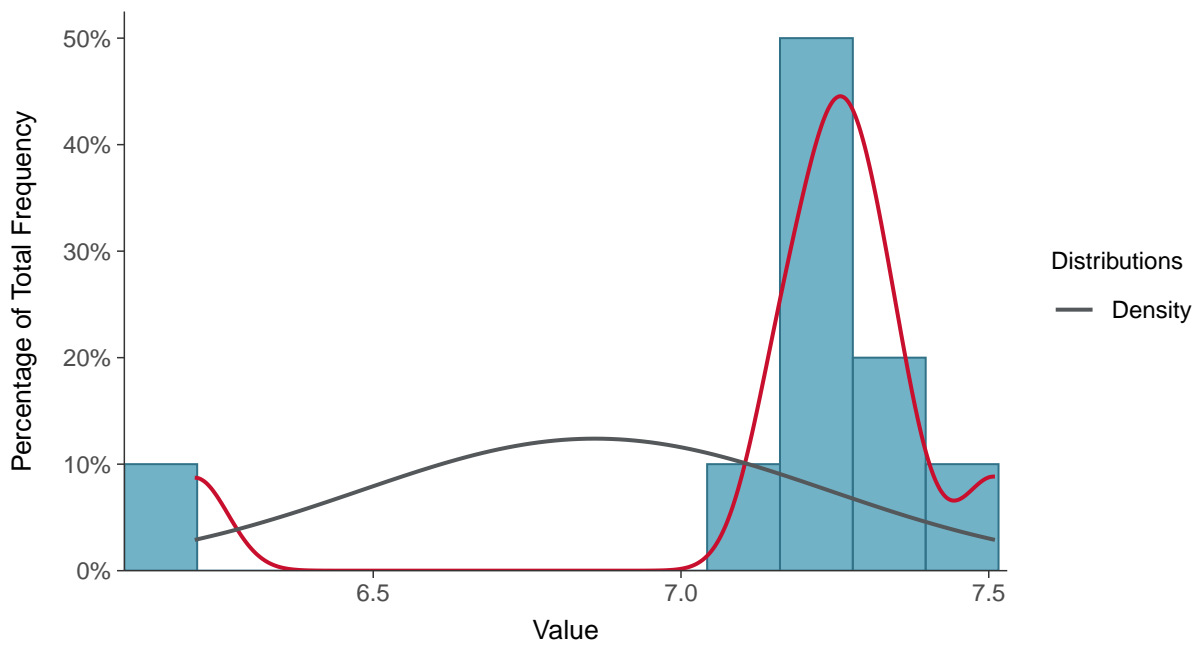
Scatter Plot

pH (field), MW-08 (su)



Histogram

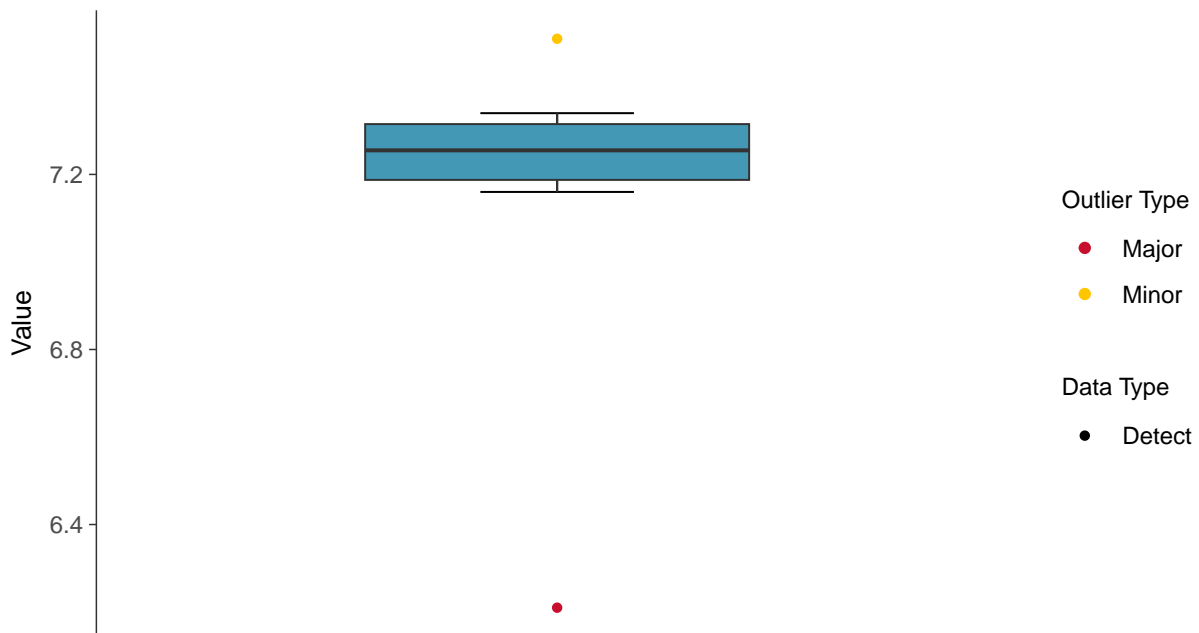
pH (field), MW-08 (su)





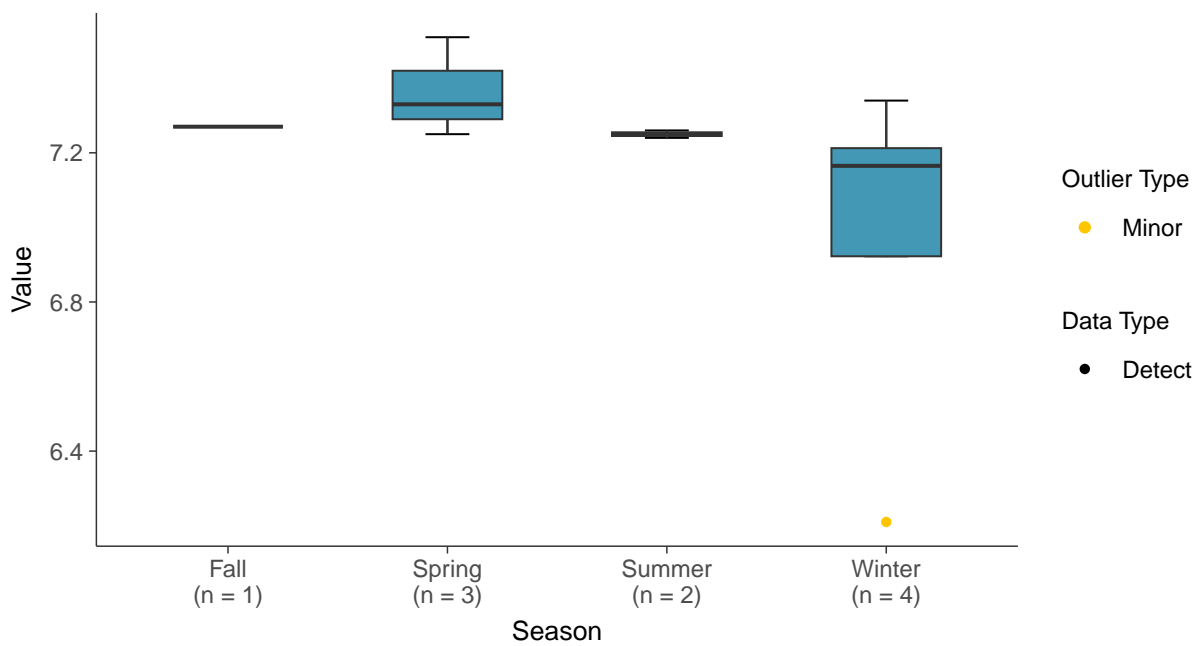
Boxplot

pH (field), MW-08 (su)



Boxplot by Season

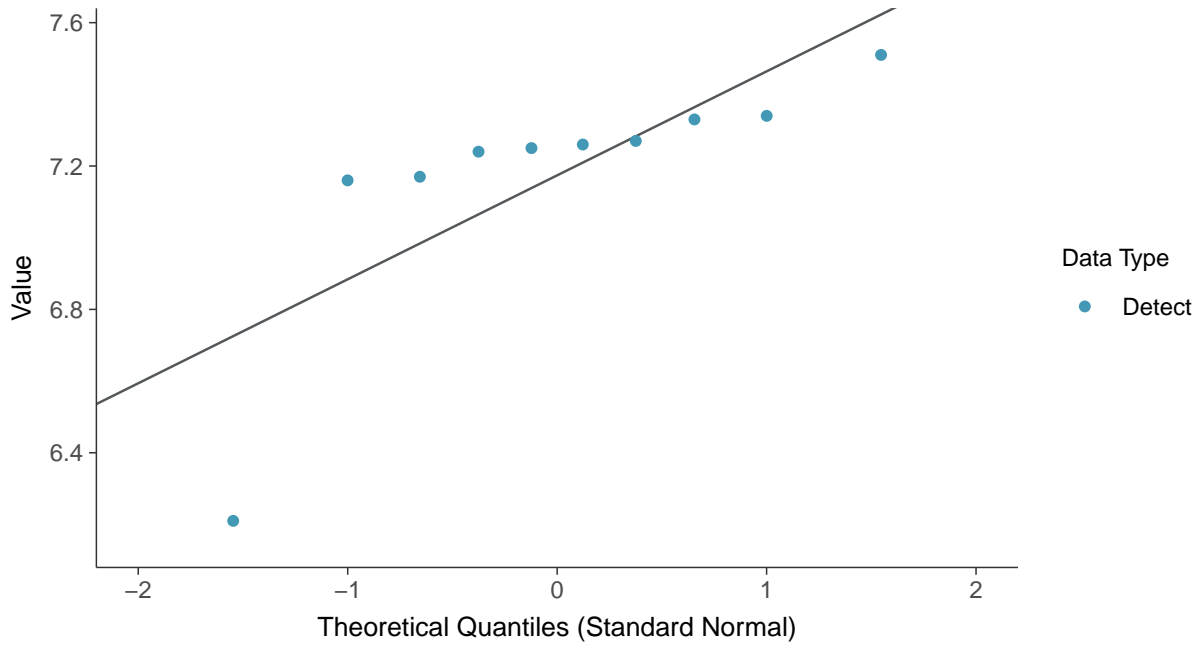
pH (field), MW-08 (su)





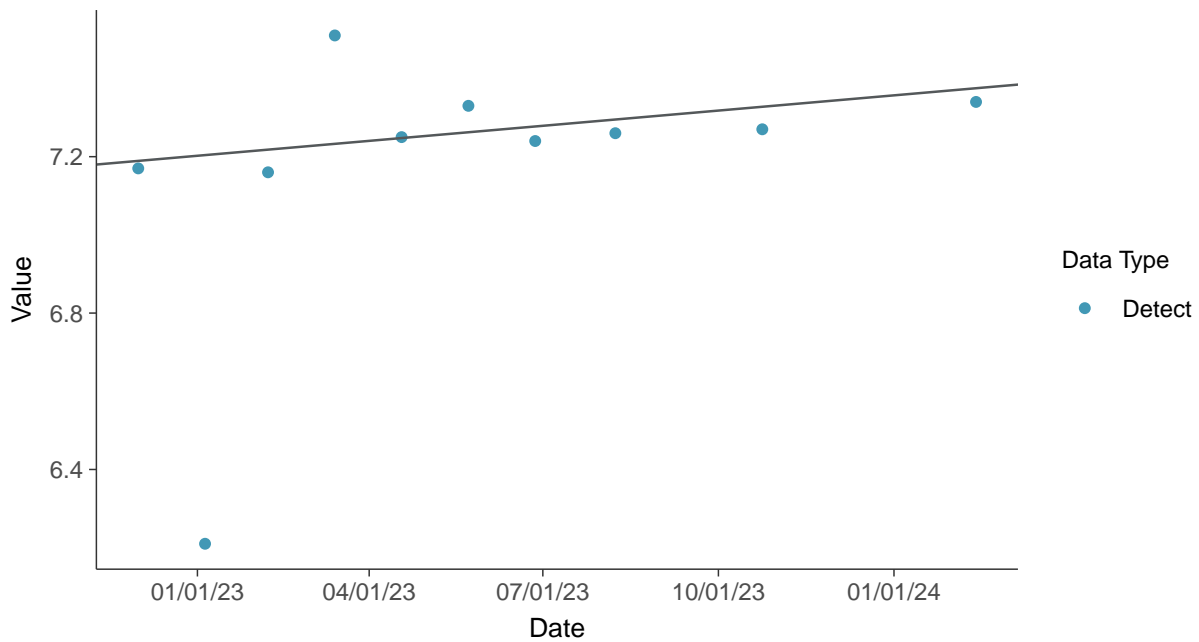
Normal Q-Q plot

pH (field), MW-08 (su)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

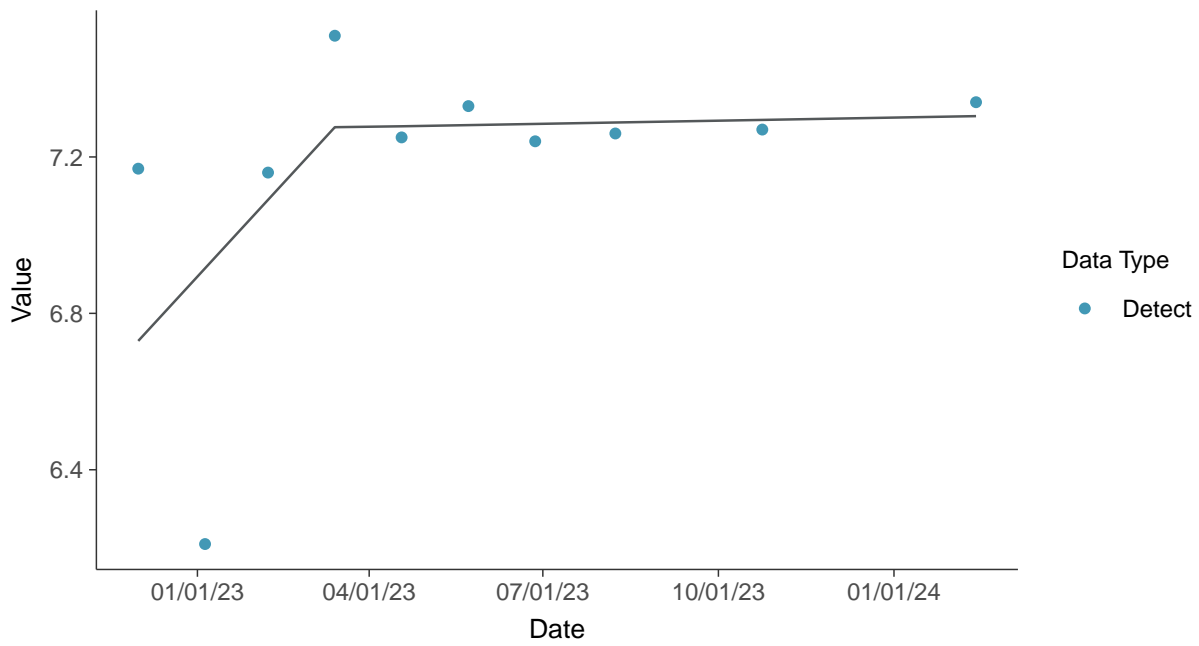
pH (field), MW-08 (su)





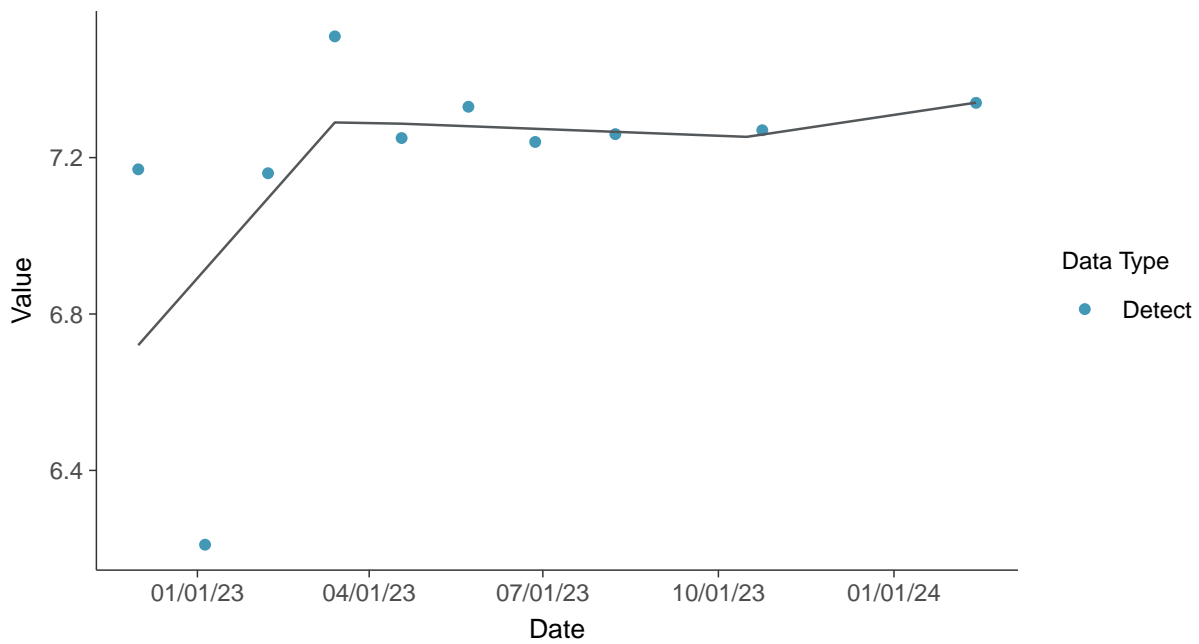
Trend Regression: Piecewise Linear-Linear

pH (field), MW-08 (su)



Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-08 (su)



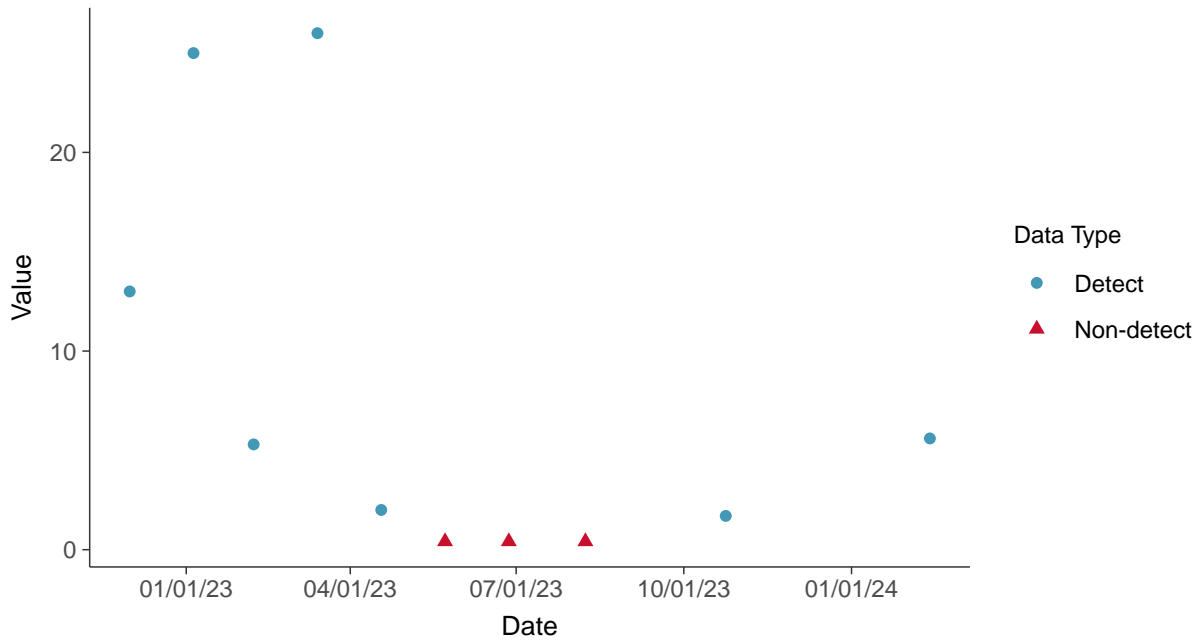


Appendix III: Sulfate (as SO₄), MW-08

ID: 1_18_4_124

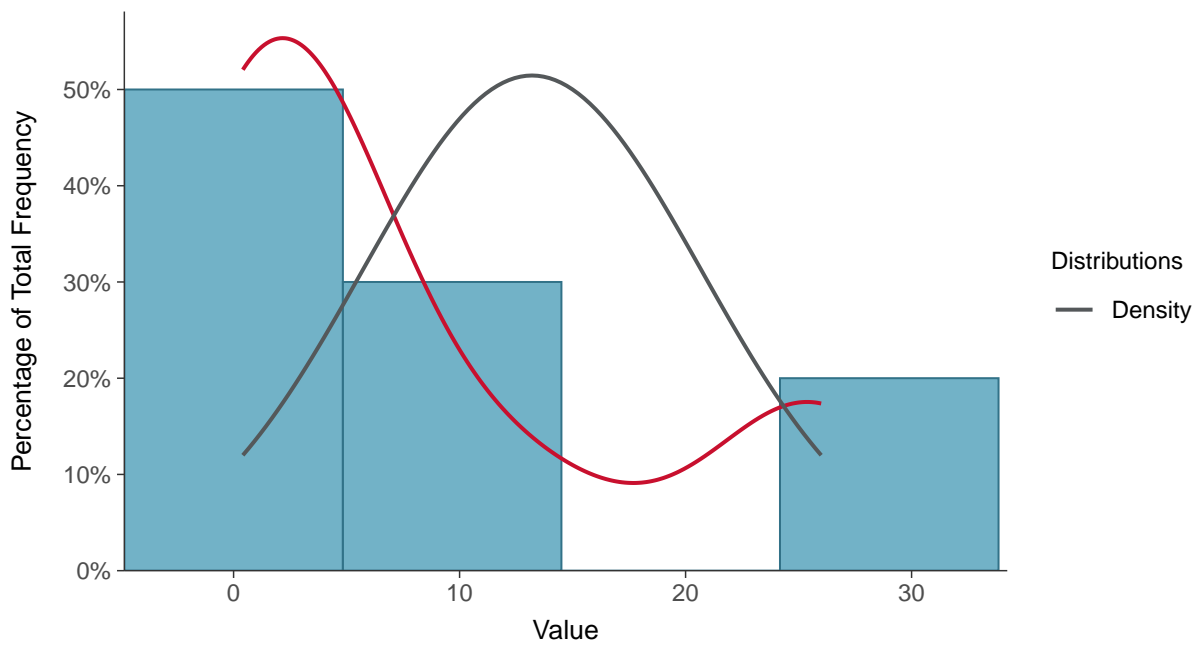
Scatter Plot

Sulfate (as SO₄), MW-08 (mg/L)



Histogram

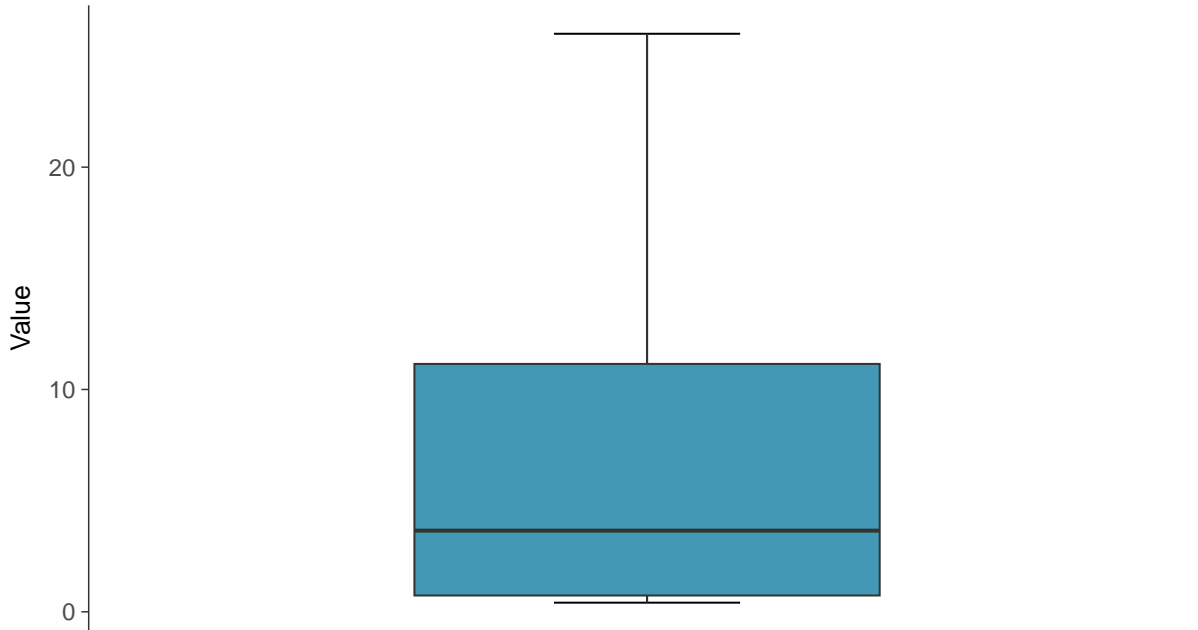
Sulfate (as SO₄), MW-08 (mg/L)





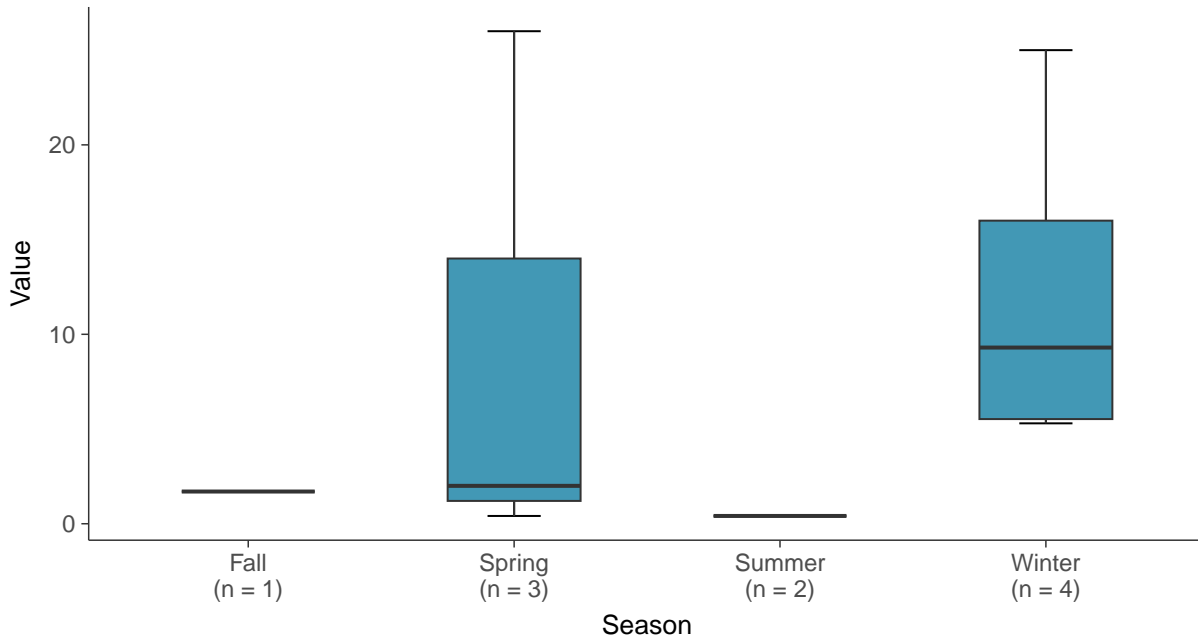
Boxplot

Sulfate (as SO₄), MW-08 (mg/L)



Boxplot by Season

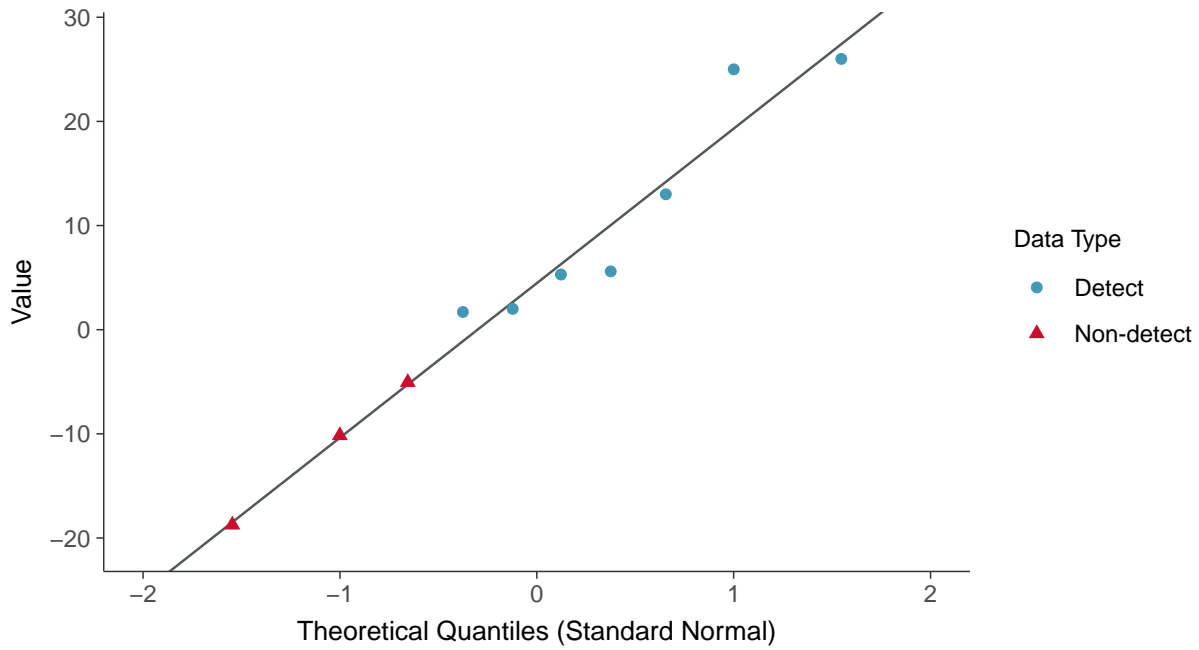
Sulfate (as SO₄), MW-08 (mg/L)





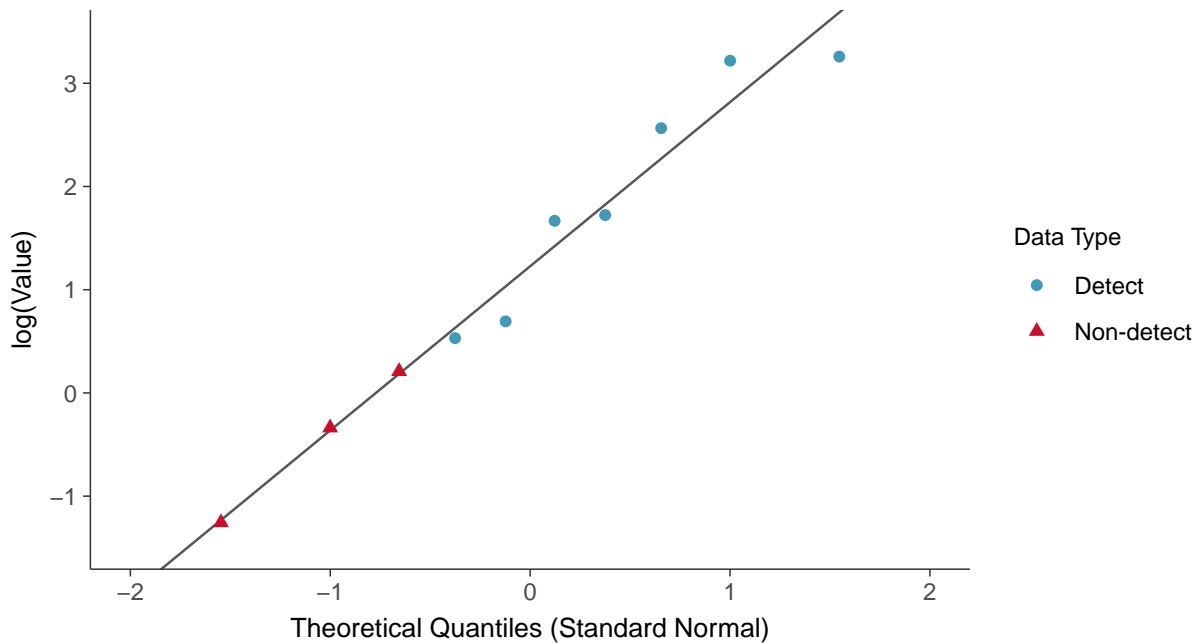
Normal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO₄), MW-08 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

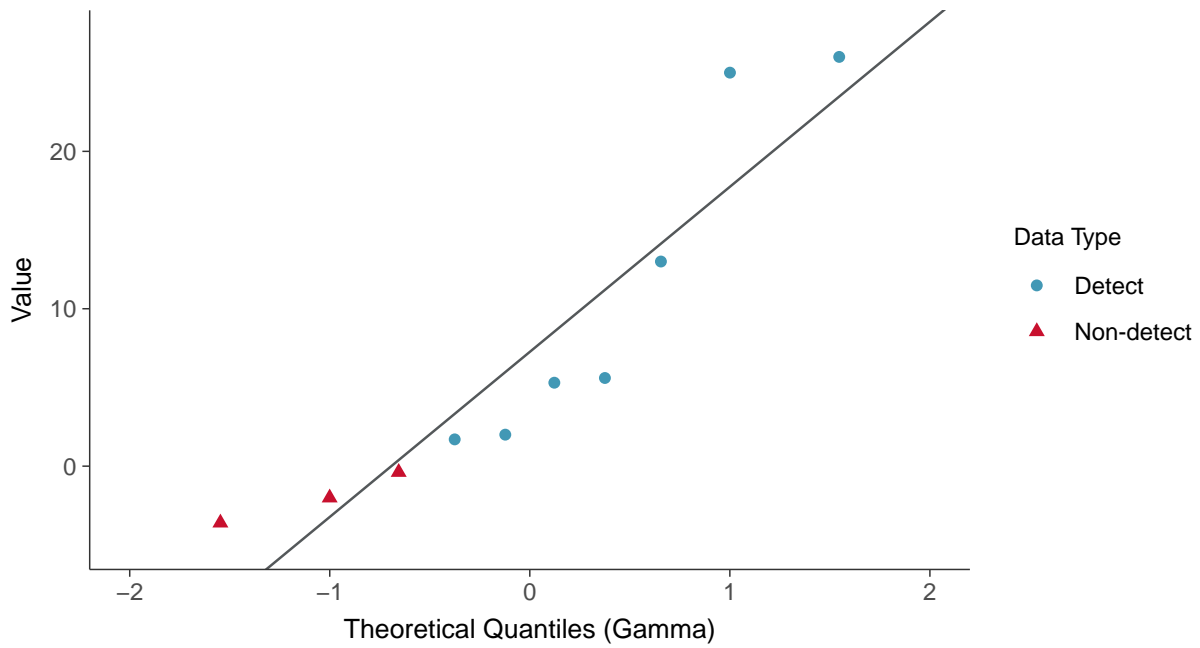
Sulfate (as SO₄), MW-08 (mg/L)





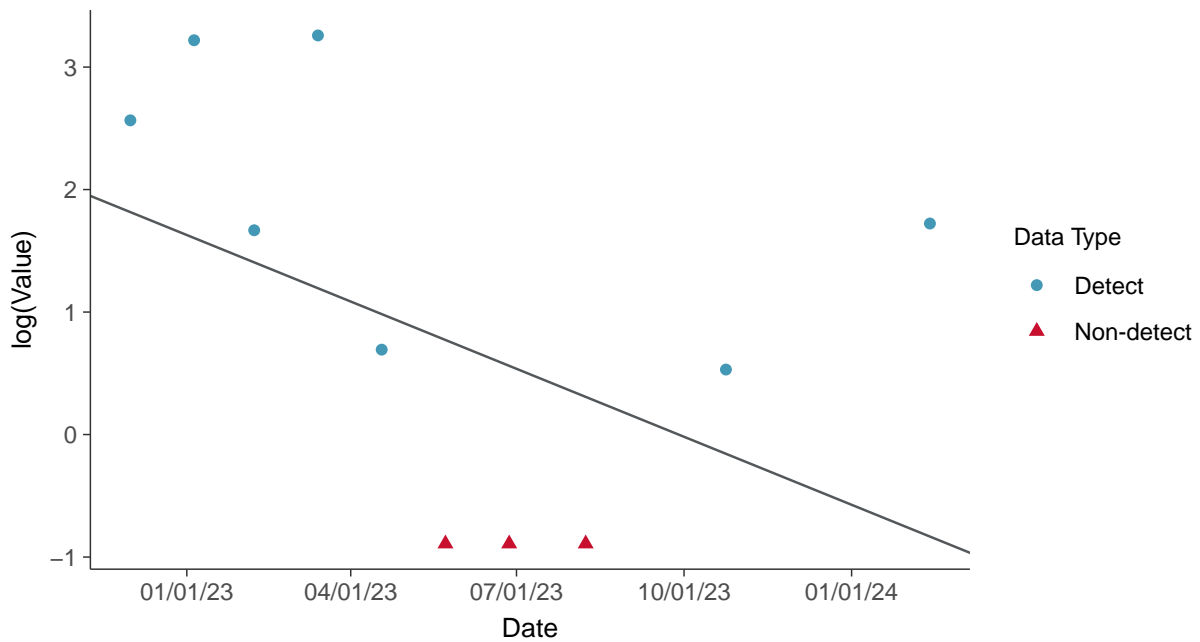
Gamma Q-Q plot using ROS Imputed Estimates

Sulfate (as SO₄), MW-08 (mg/L)



Trend Regression: Lognormal MLE

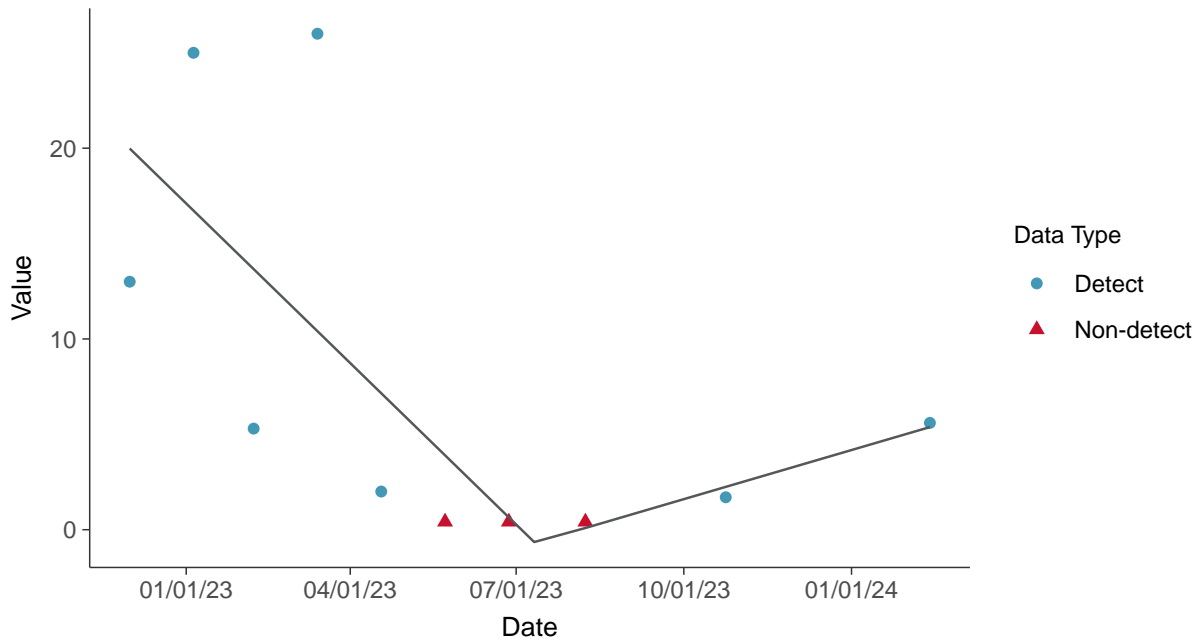
Sulfate (as SO₄), MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-08 (mg/L)



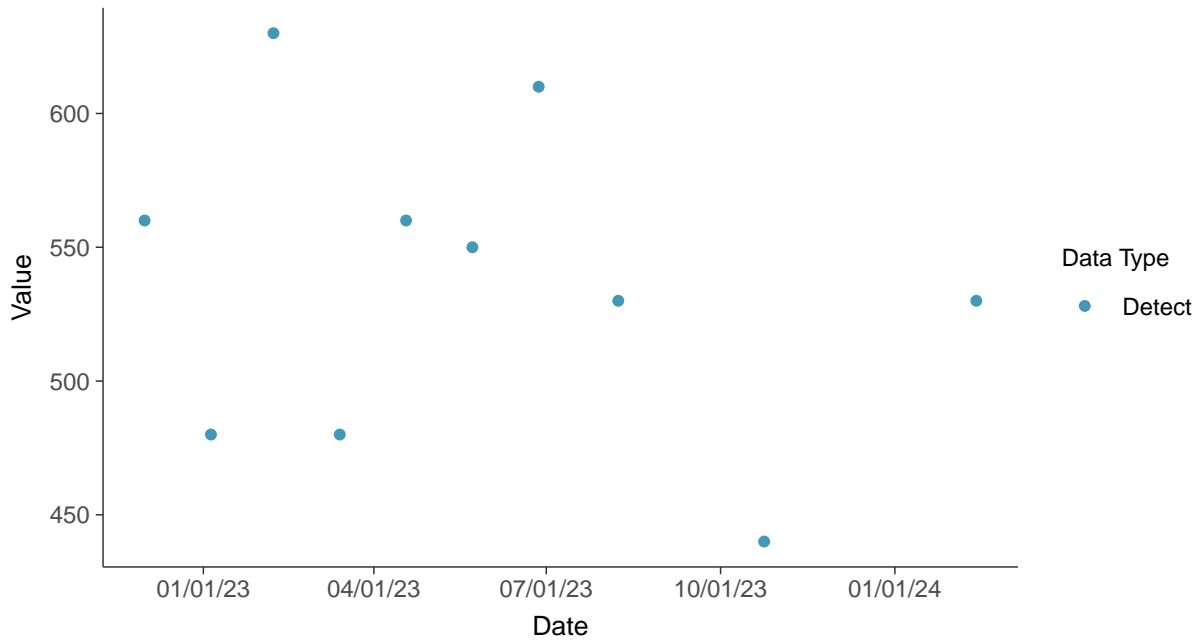


Appendix III: Total Dissolved Solids, MW-08

ID: 1_18_4_126

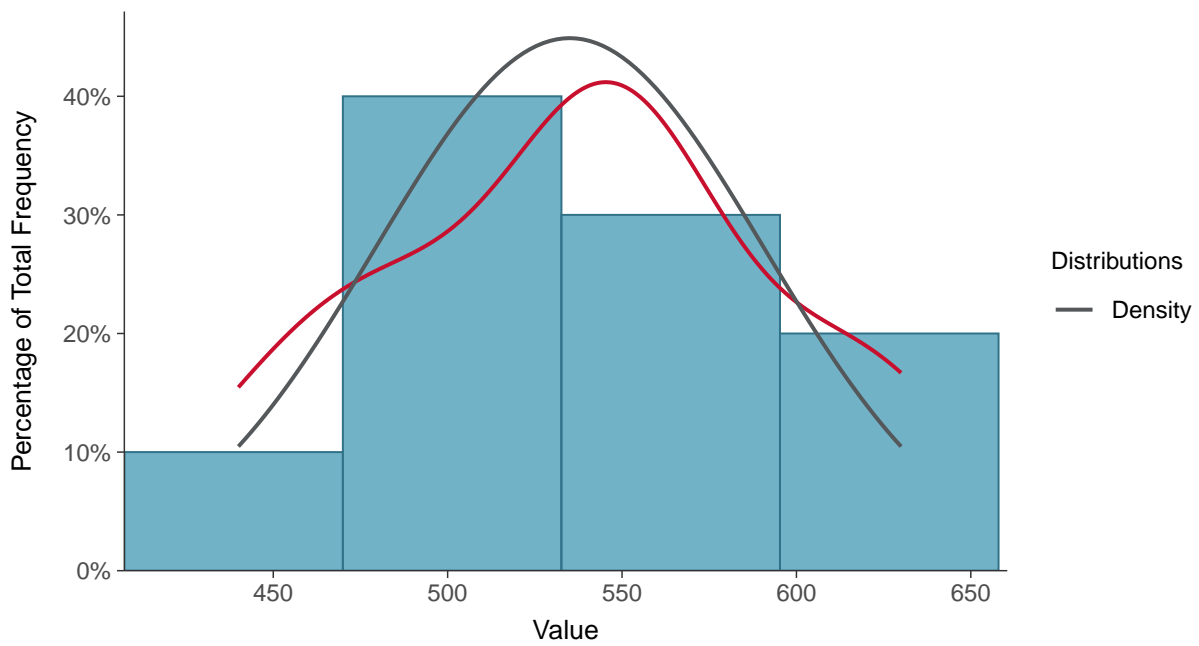
Scatter Plot

Total Dissolved Solids, MW-08 (mg/L)



Histogram

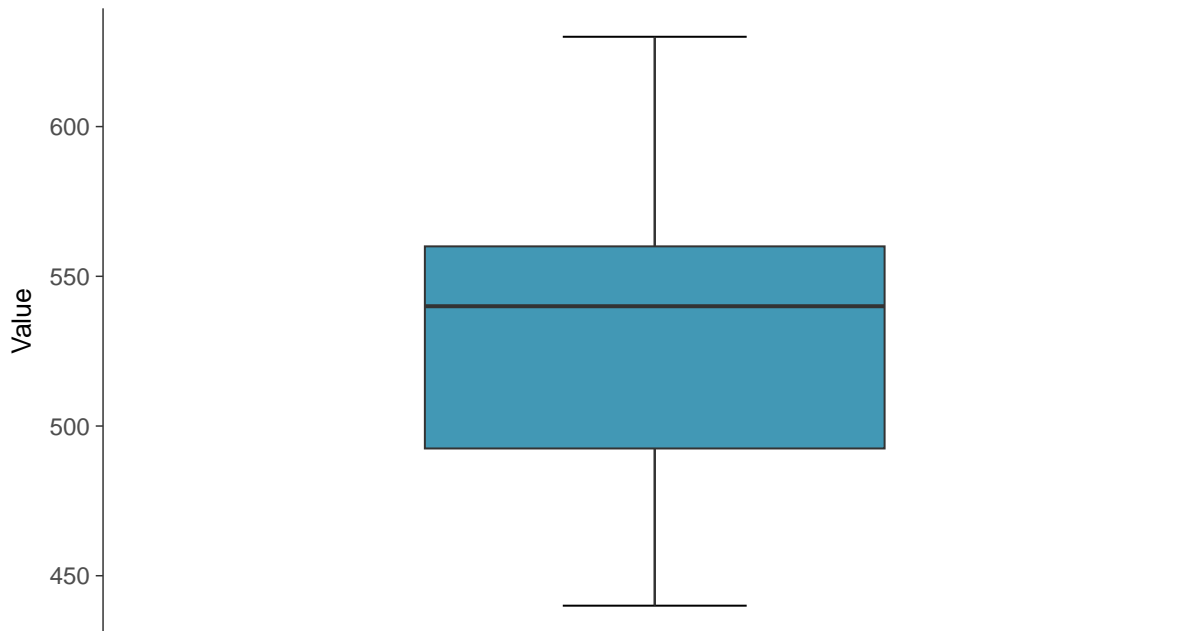
Total Dissolved Solids, MW-08 (mg/L)





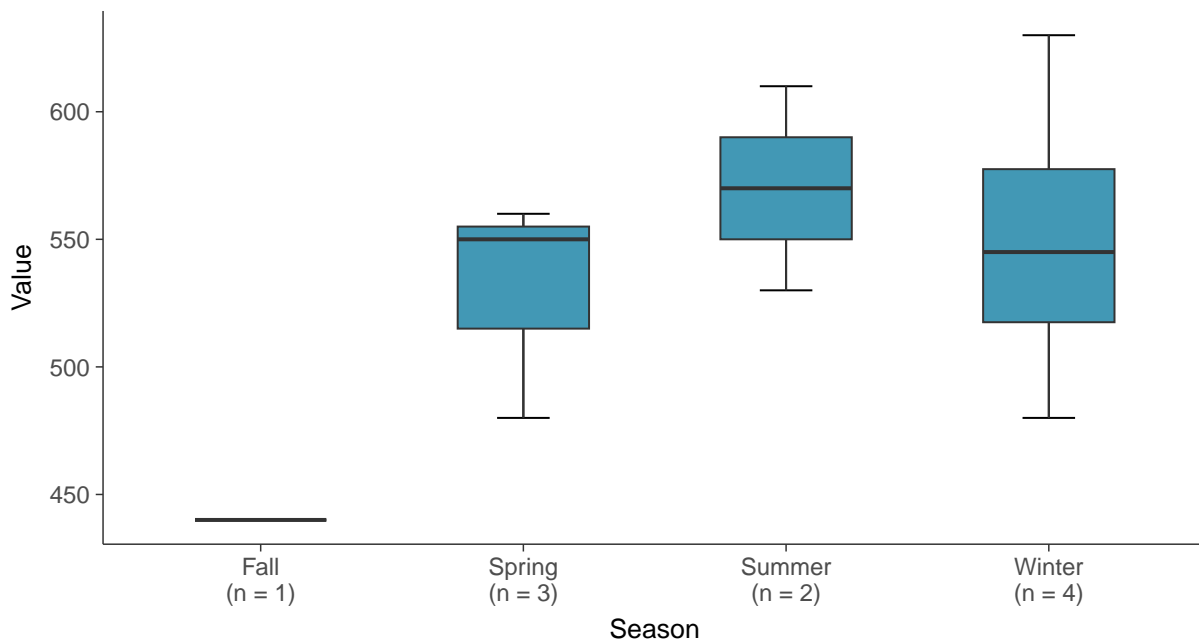
Boxplot

Total Dissolved Solids, MW-08 (mg/L)



Boxplot by Season

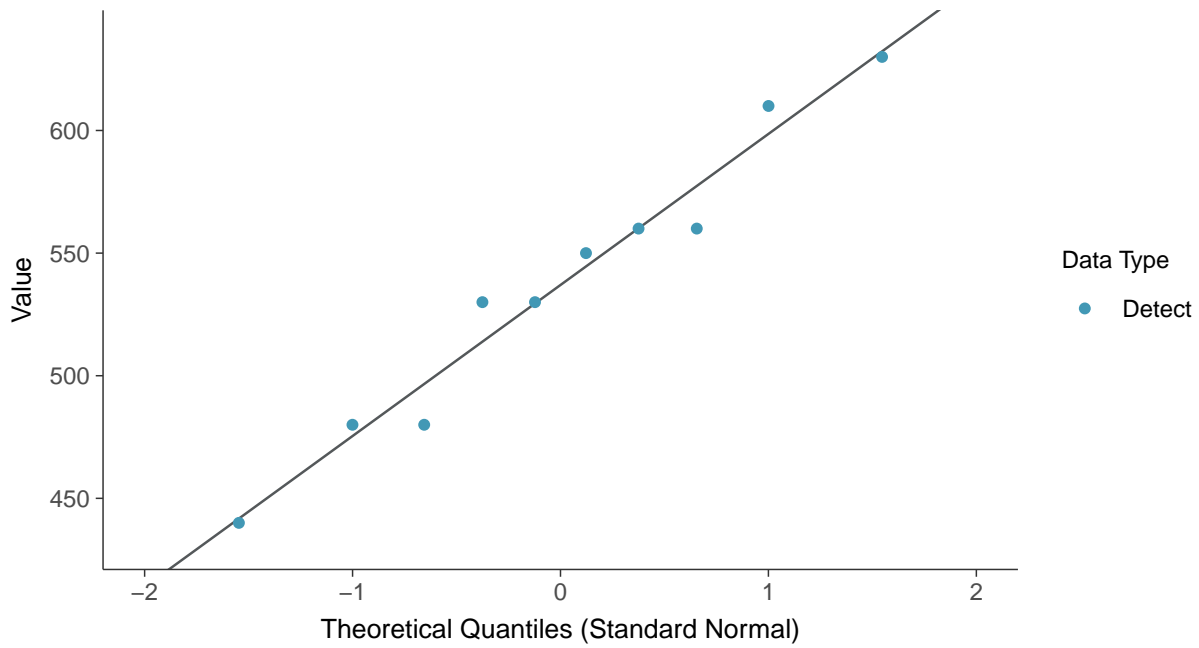
Total Dissolved Solids, MW-08 (mg/L)





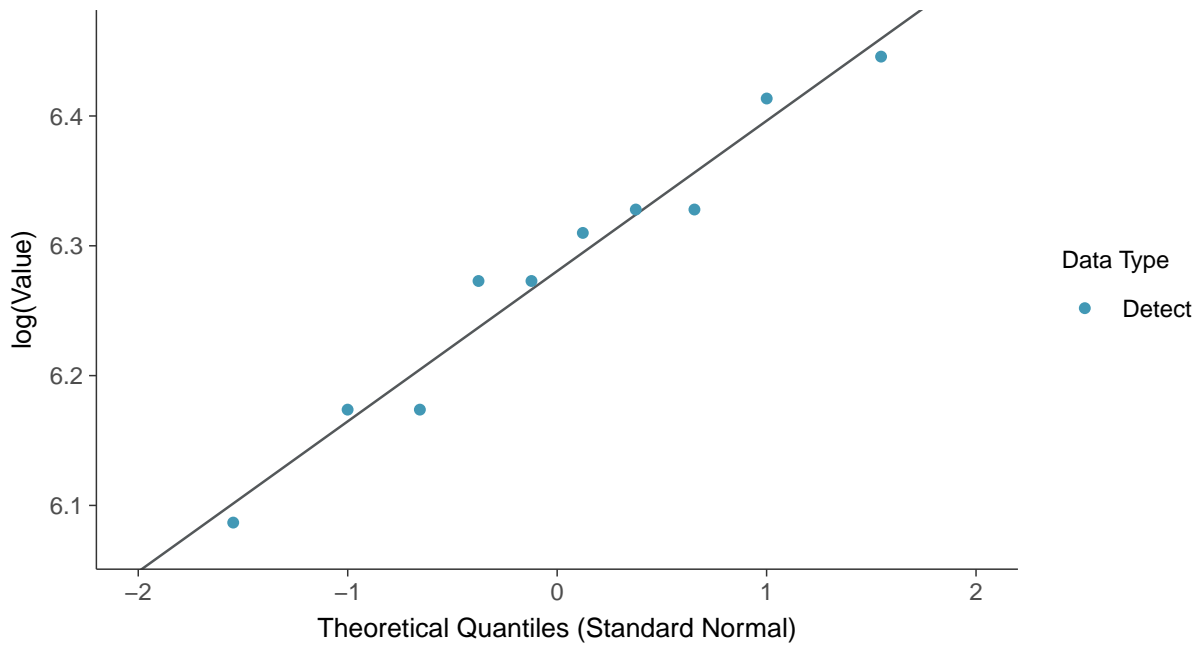
Normal Q-Q plot

Total Dissolved Solids, MW-08 (mg/L)



Lognormal Q-Q plot

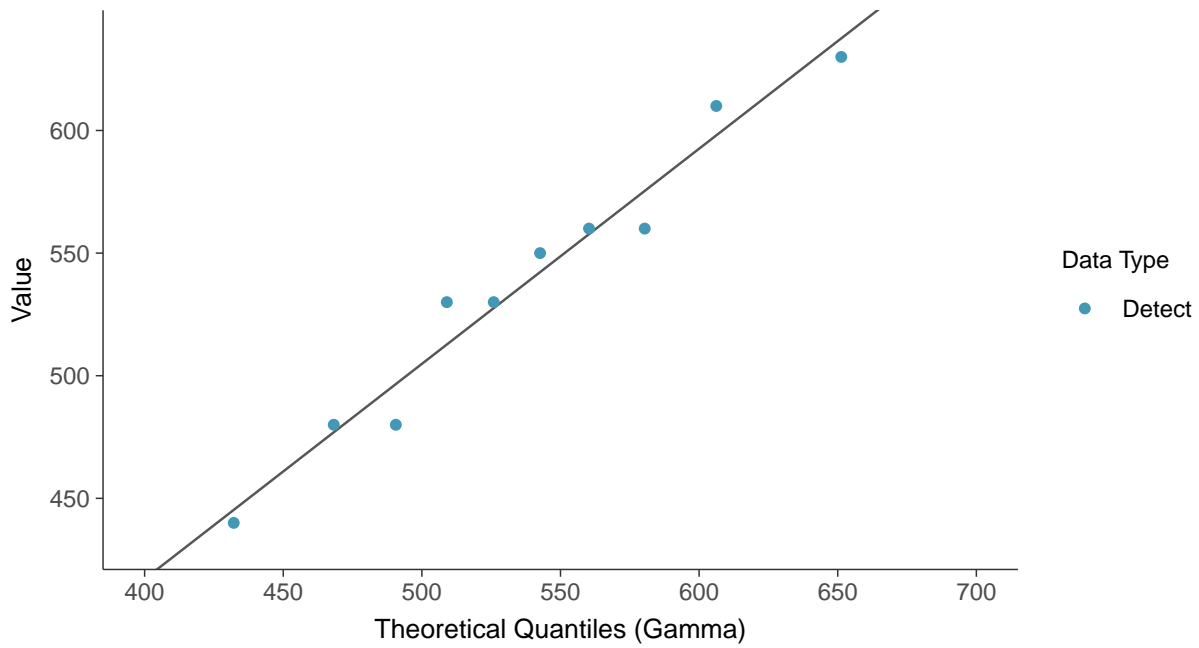
Total Dissolved Solids, MW-08 (mg/L)





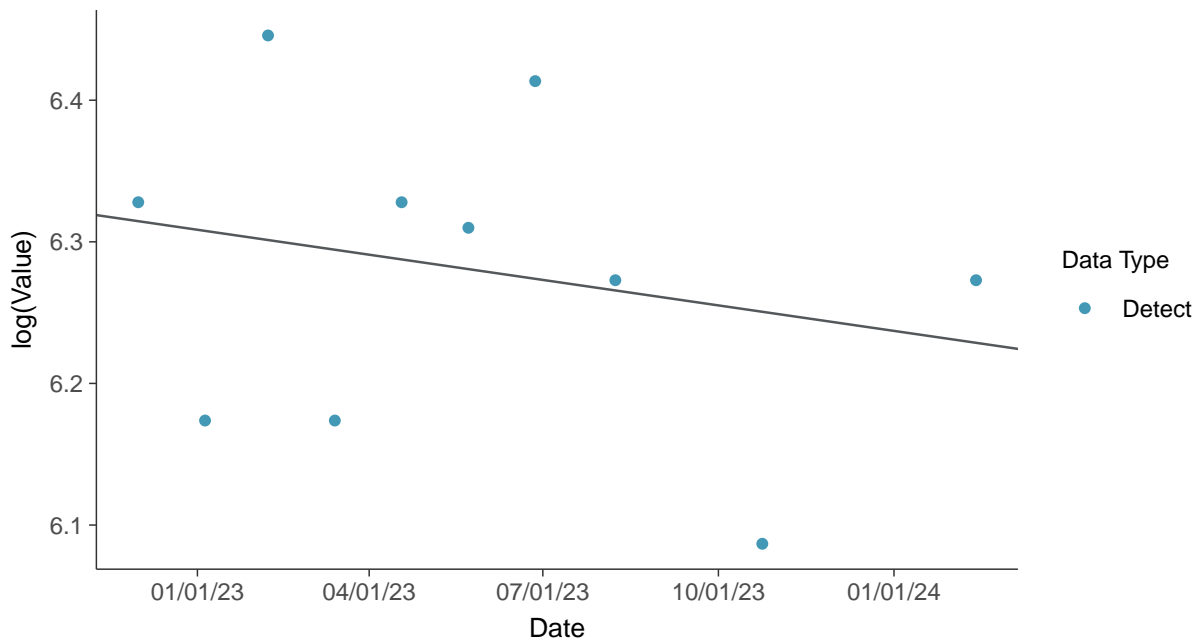
Gamma Q-Q plot

Total Dissolved Solids, MW-08 (mg/L)



Trend Regression: Lognormal MLE

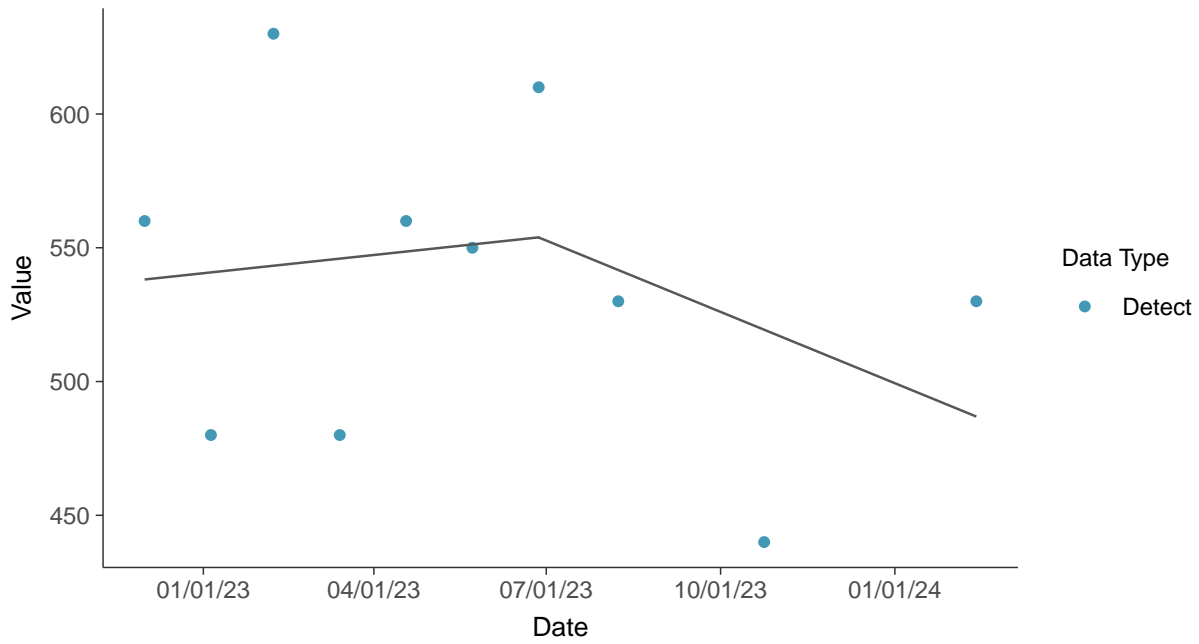
Total Dissolved Solids, MW-08 (mg/L)





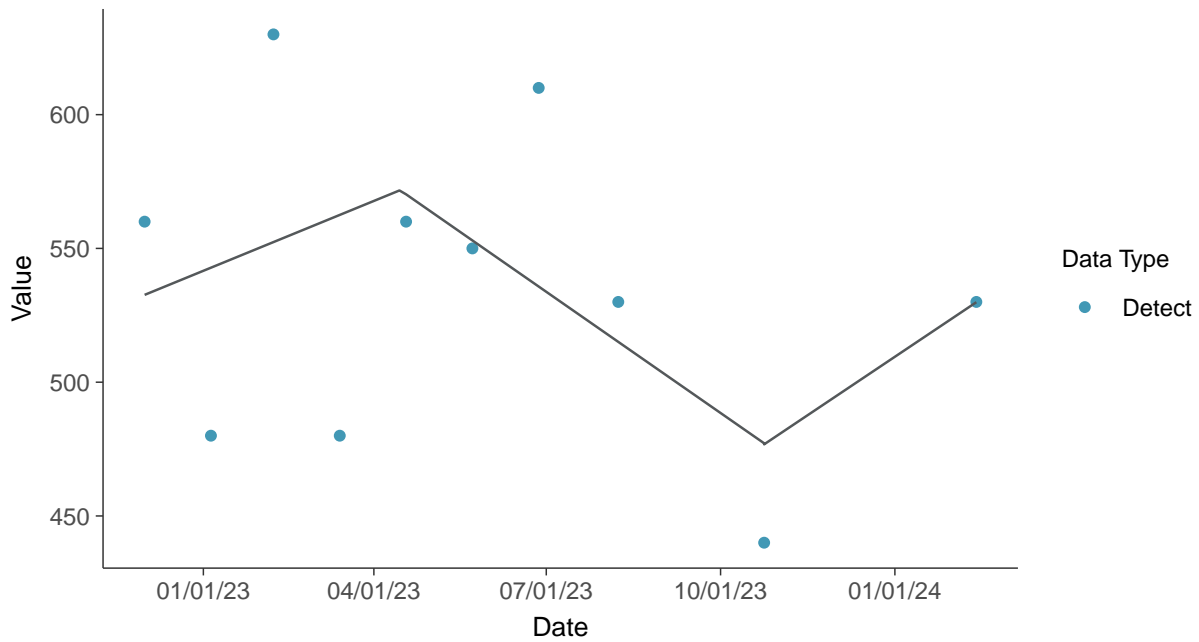
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

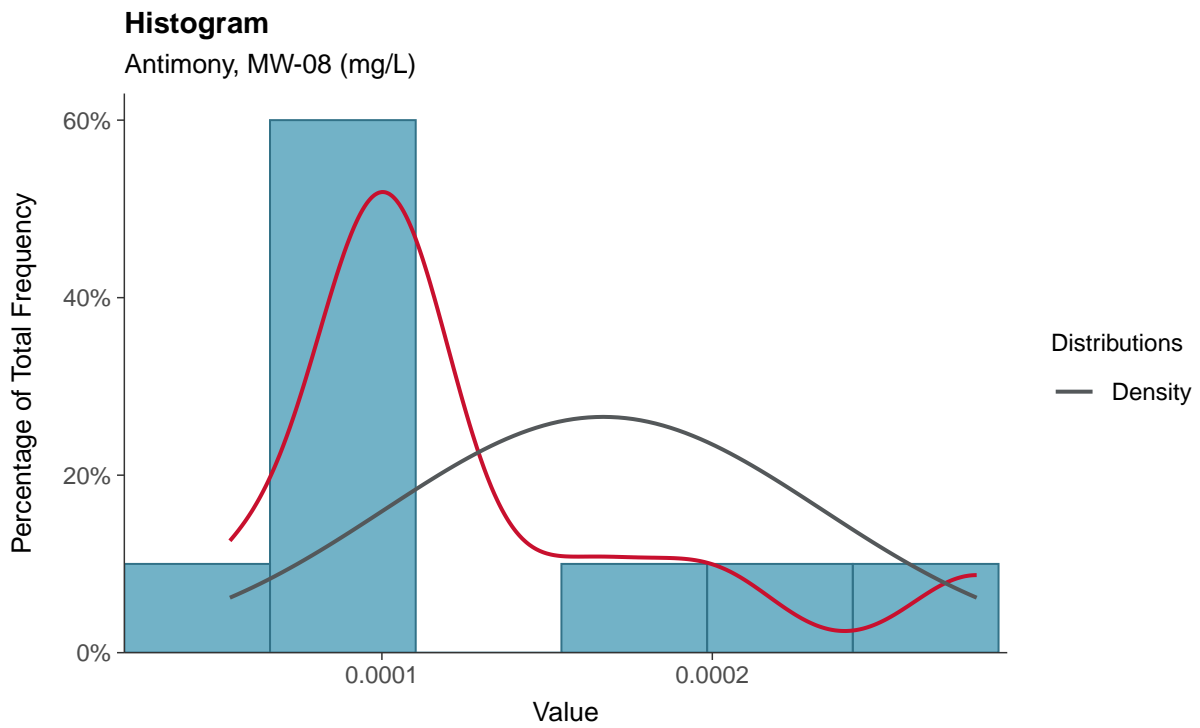
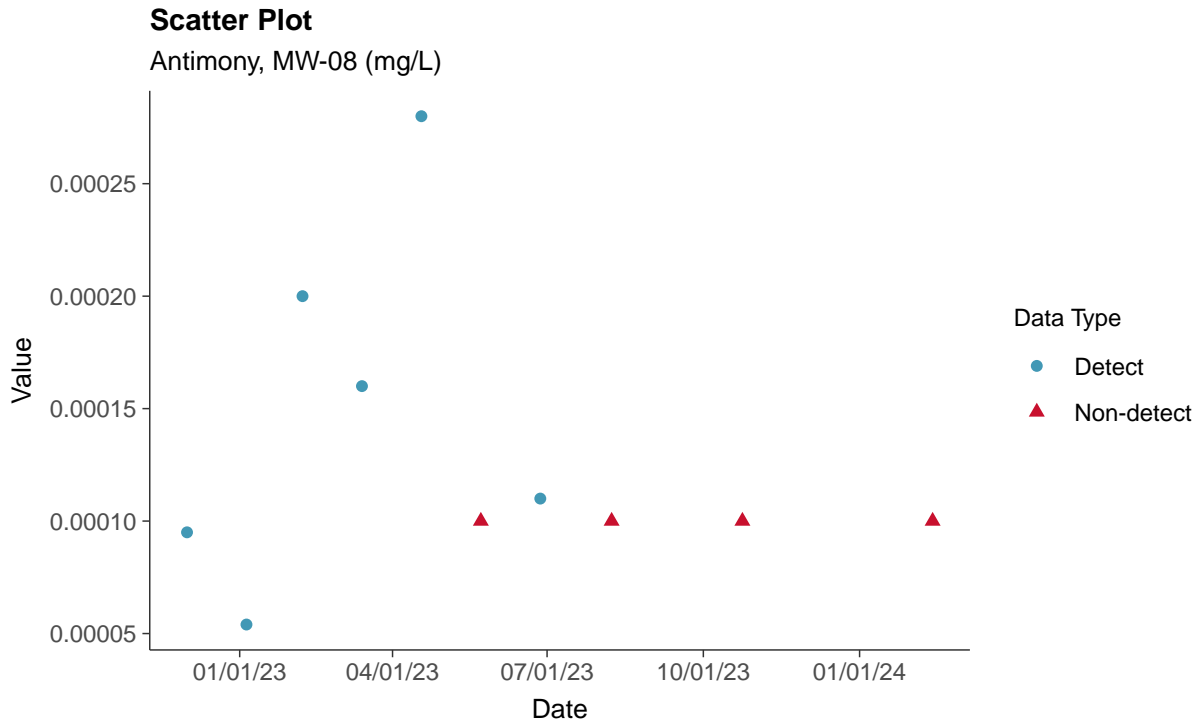
Total Dissolved Solids, MW-08 (mg/L)





Appendix IV: Antimony, MW-08

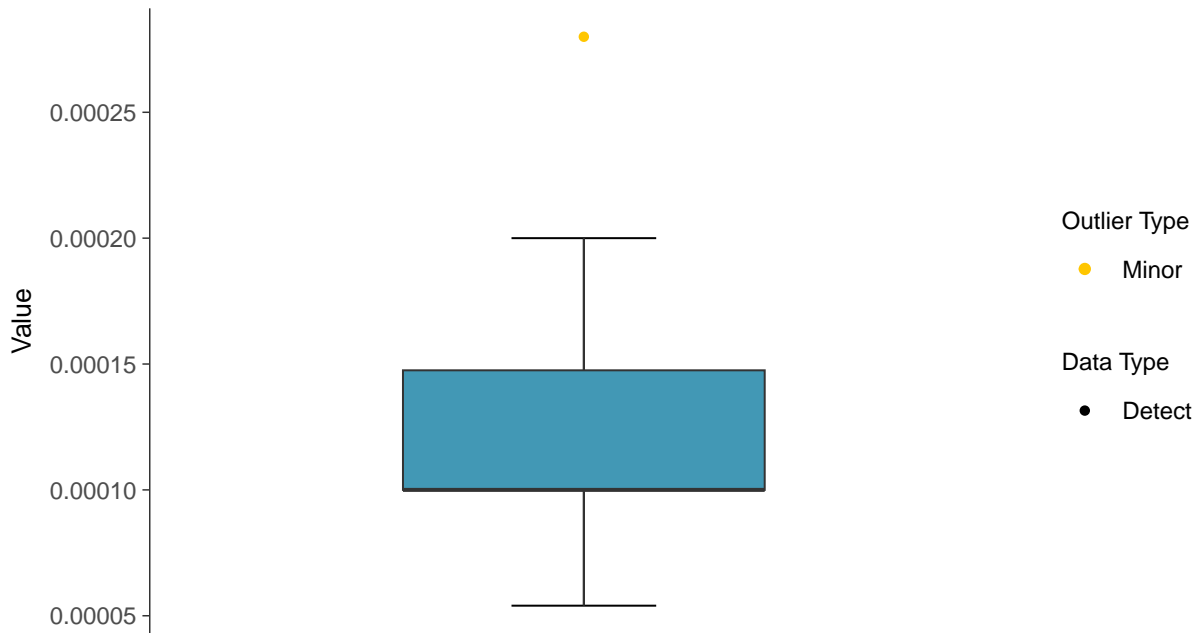
ID: 1_18_5_101





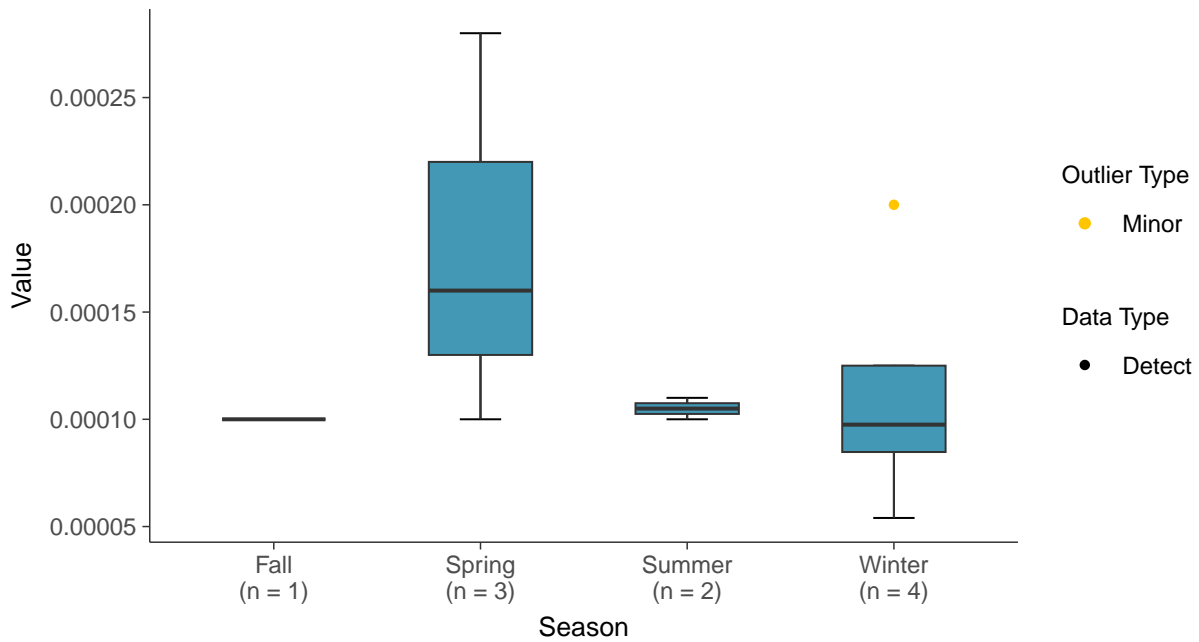
Boxplot

Antimony, MW-08 (mg/L)



Boxplot by Season

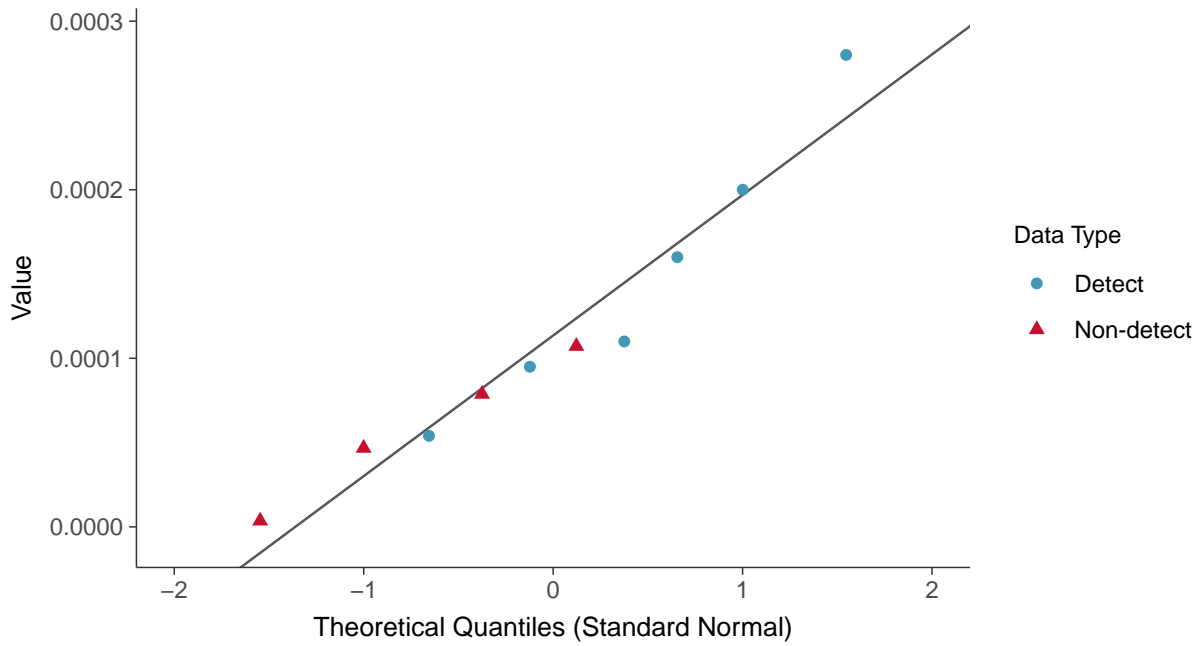
Antimony, MW-08 (mg/L)





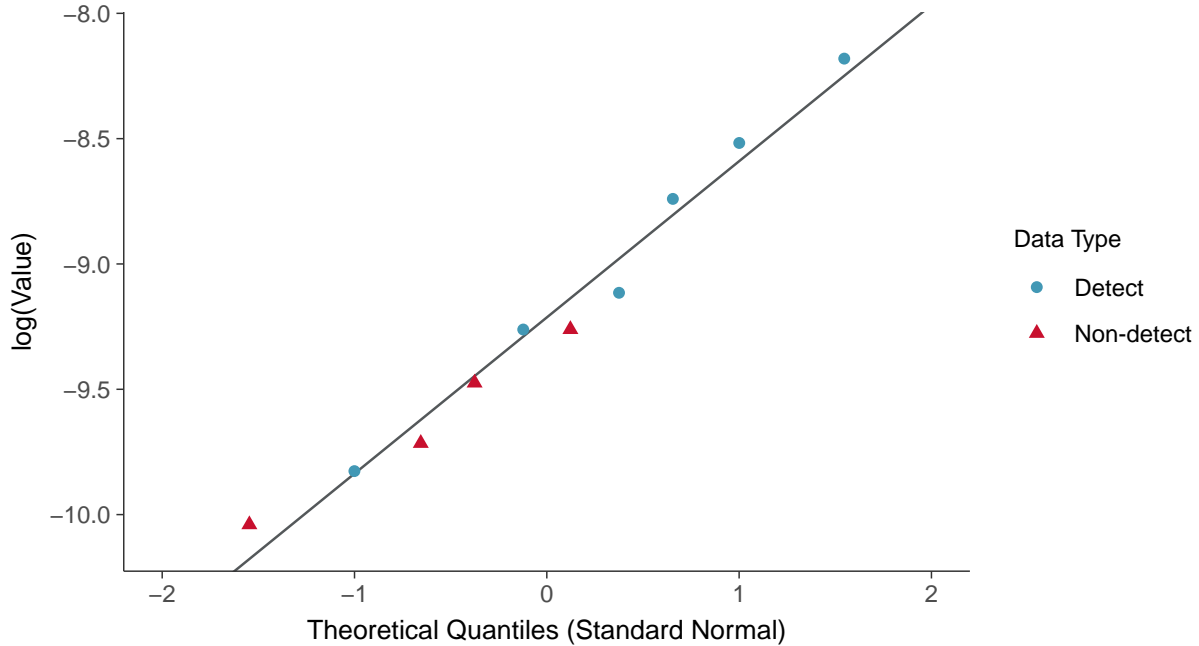
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-08 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

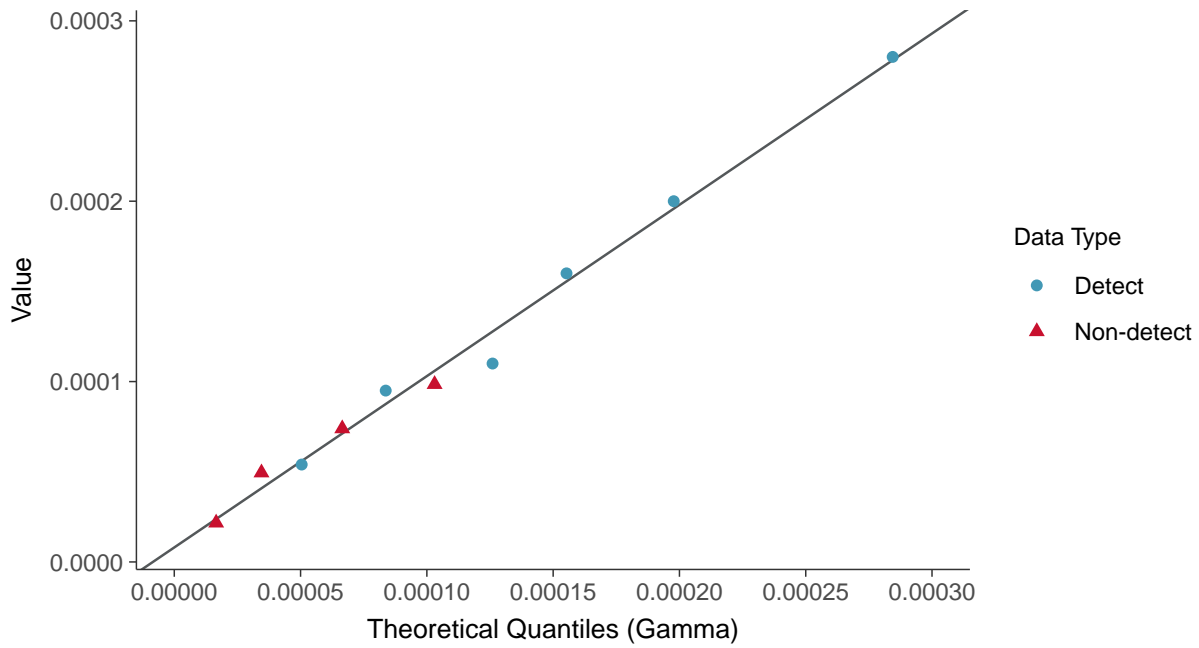
Antimony, MW-08 (mg/L)





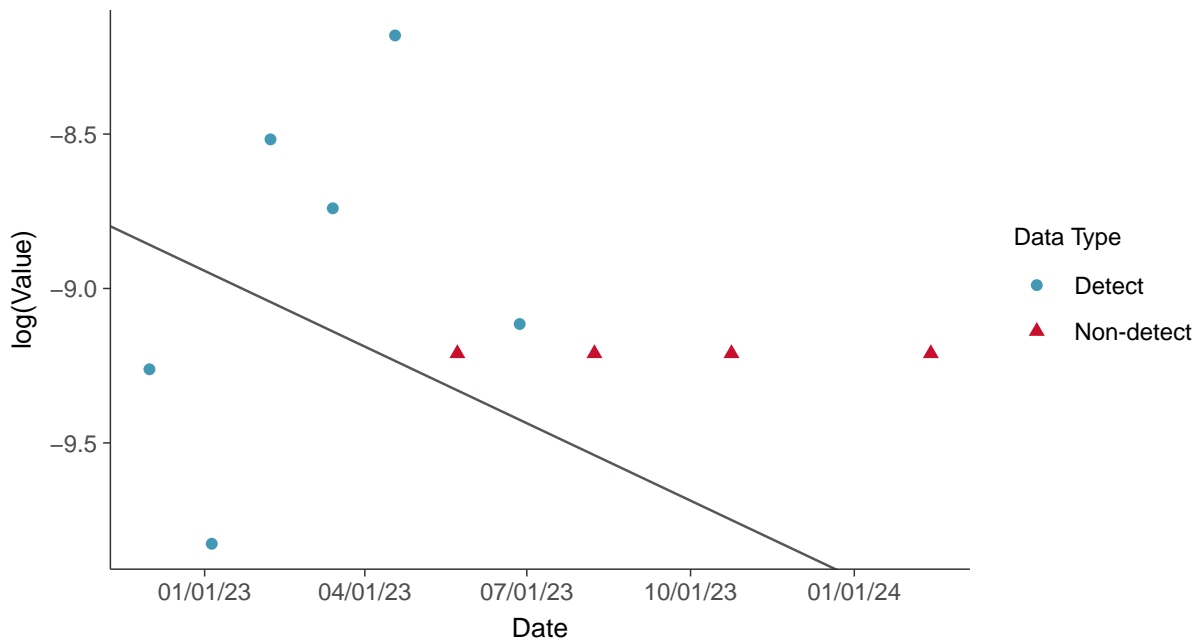
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-08 (mg/L)



Trend Regression: Lognormal MLE

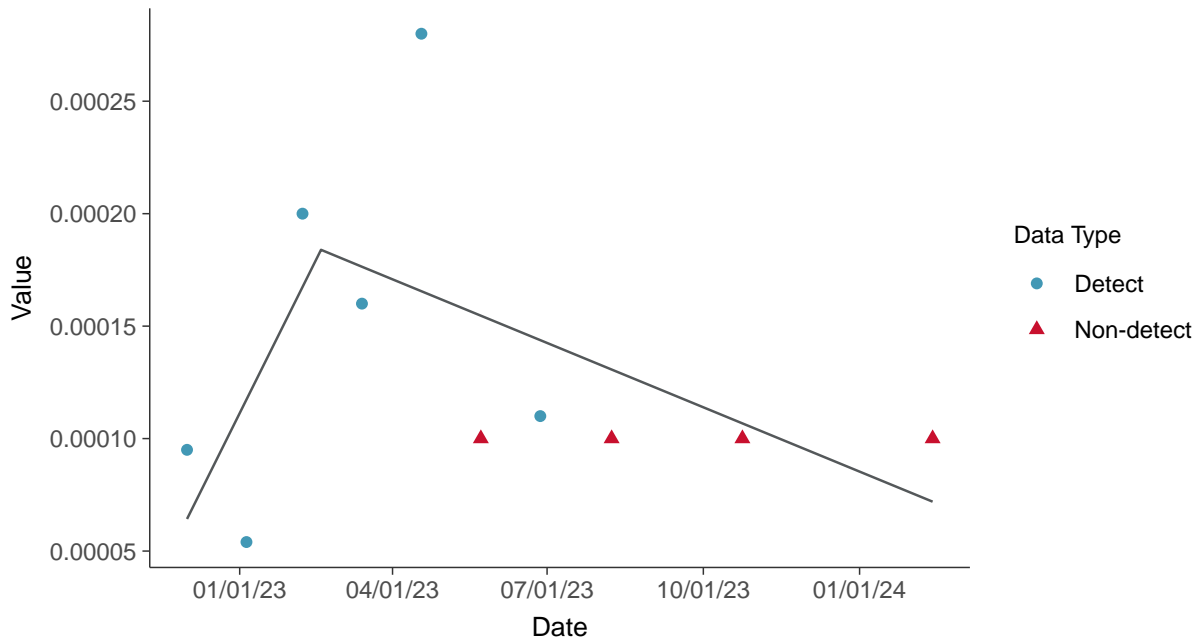
Antimony, MW-08 (mg/L)





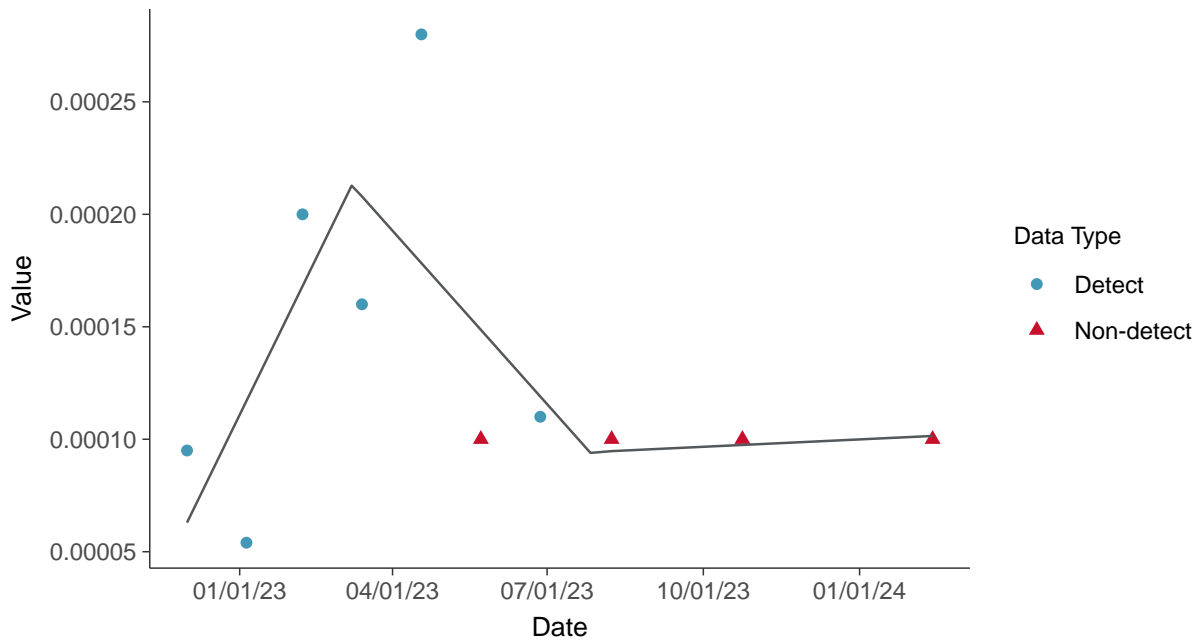
Trend Regression: Piecewise Linear-Linear

Antimony, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

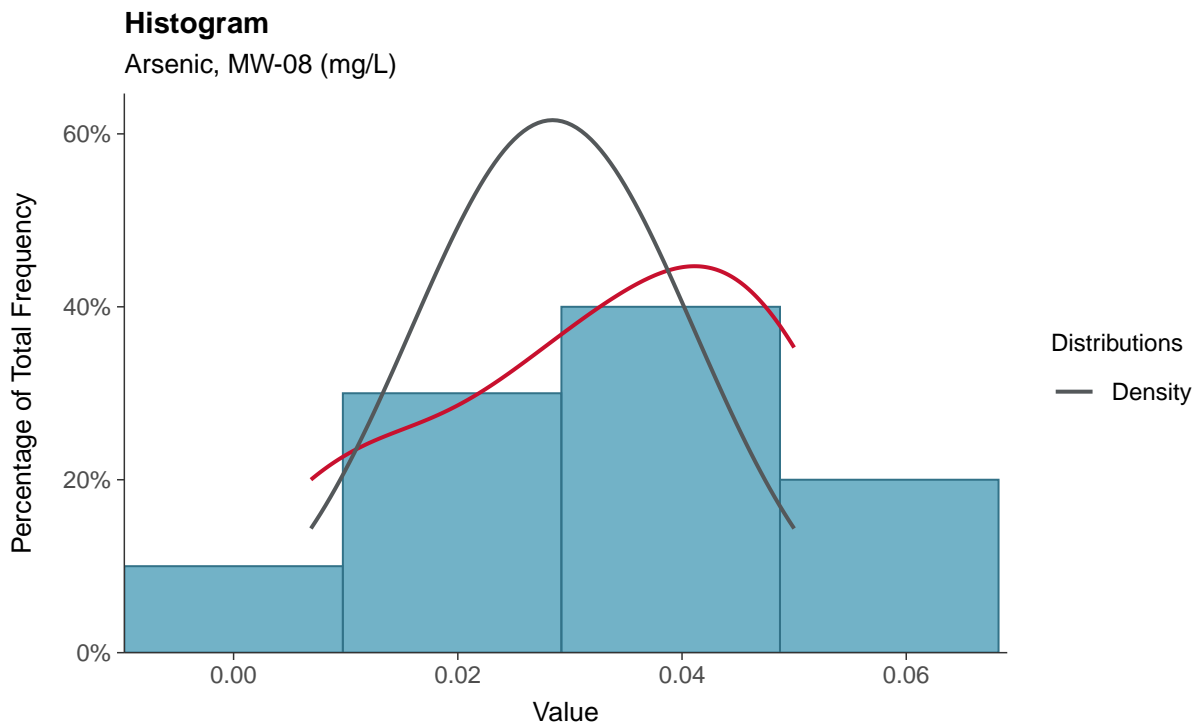
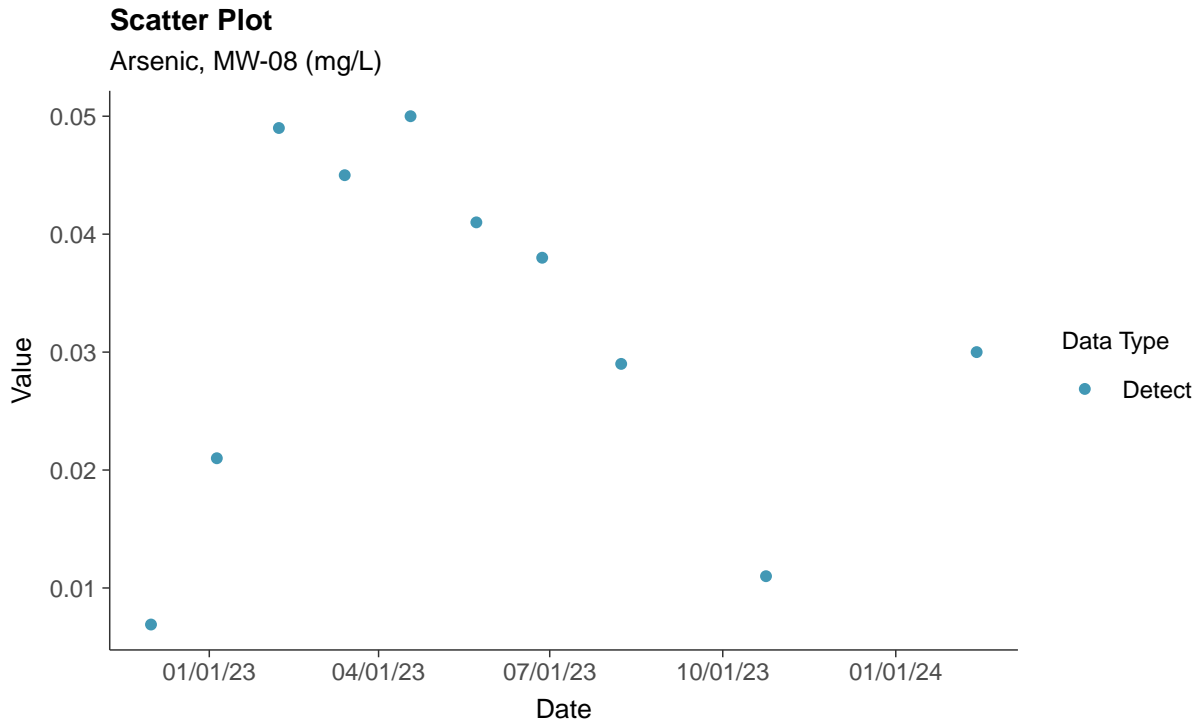
Antimony, MW-08 (mg/L)





Appendix IV: Arsenic, MW-08

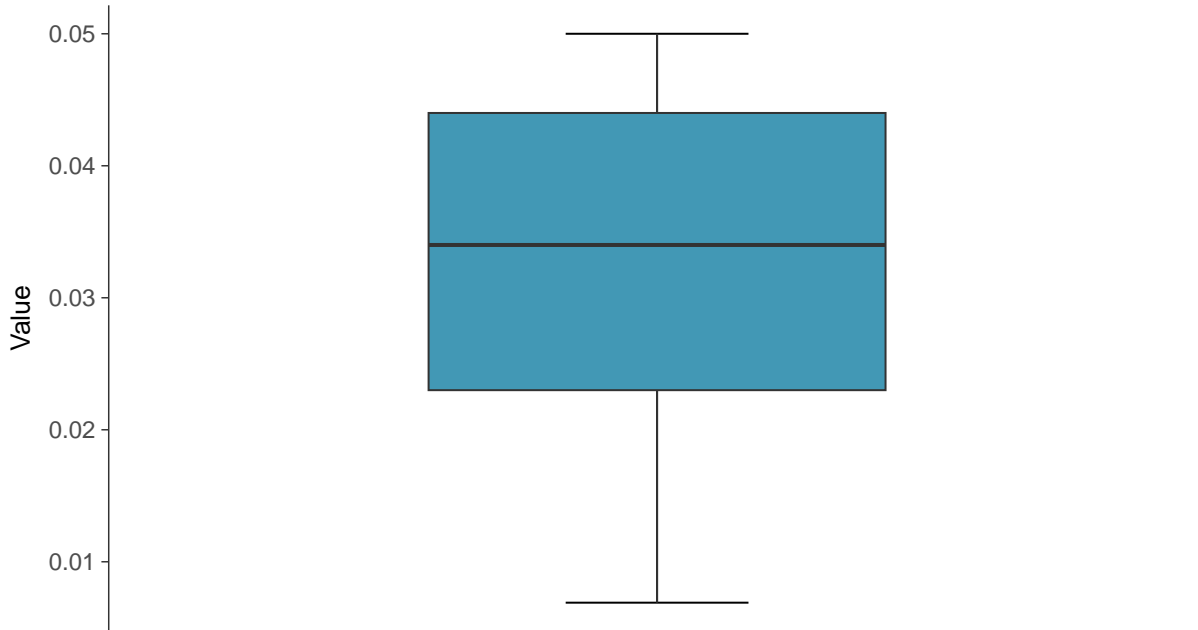
ID: 1_18_5_102





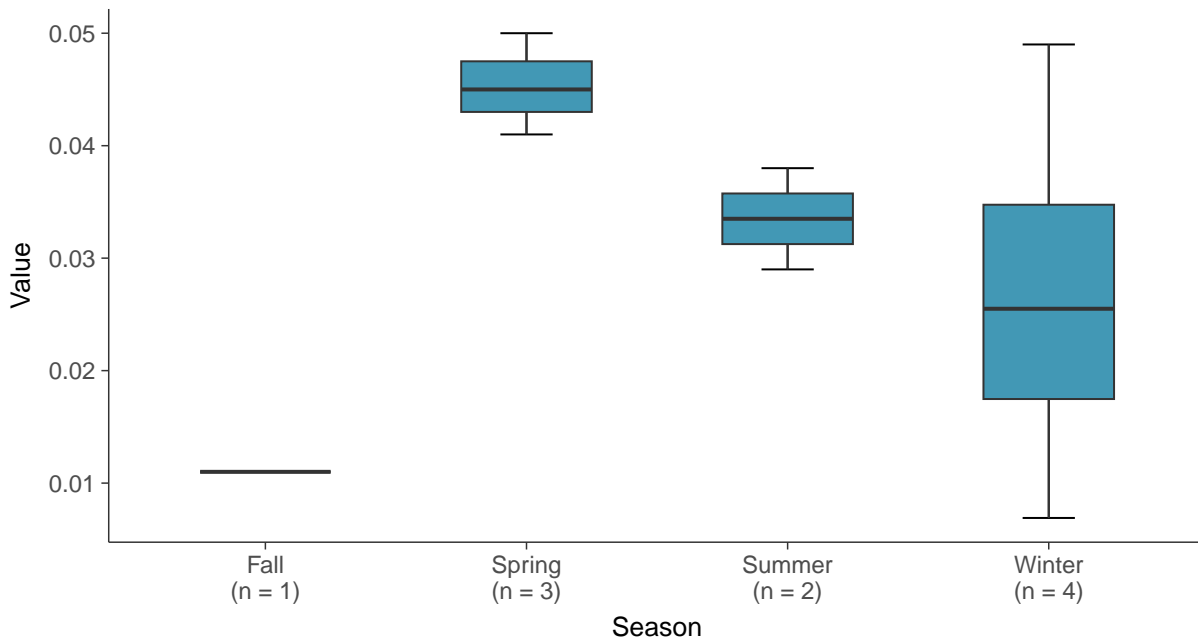
Boxplot

Arsenic, MW-08 (mg/L)



Boxplot by Season

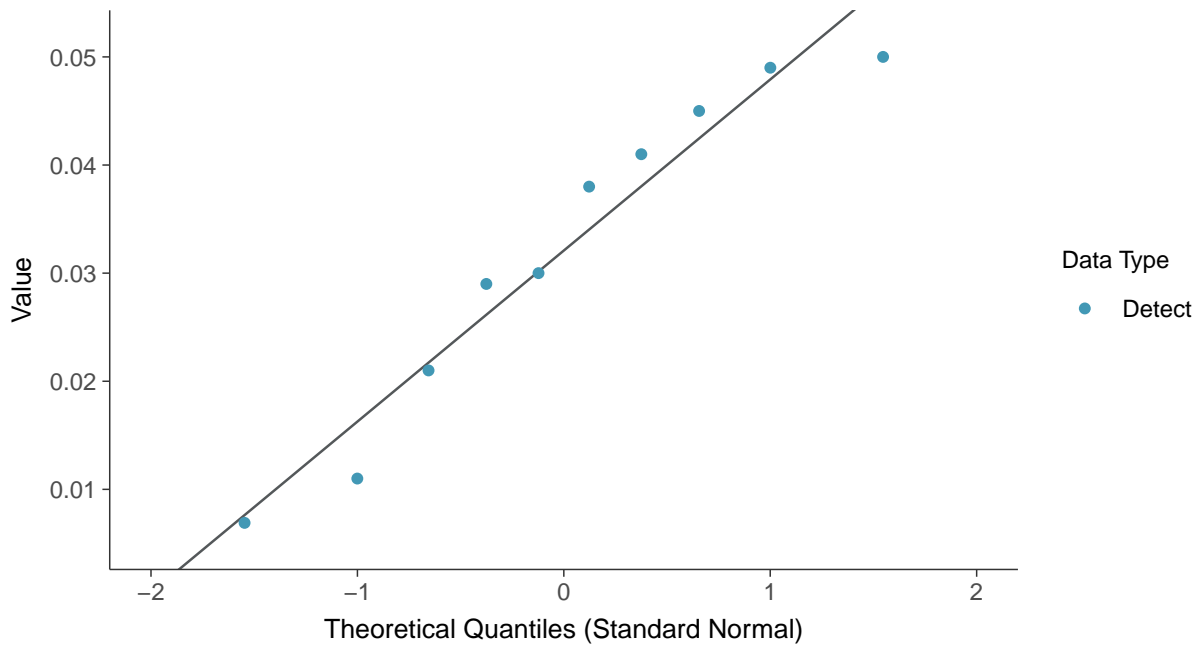
Arsenic, MW-08 (mg/L)





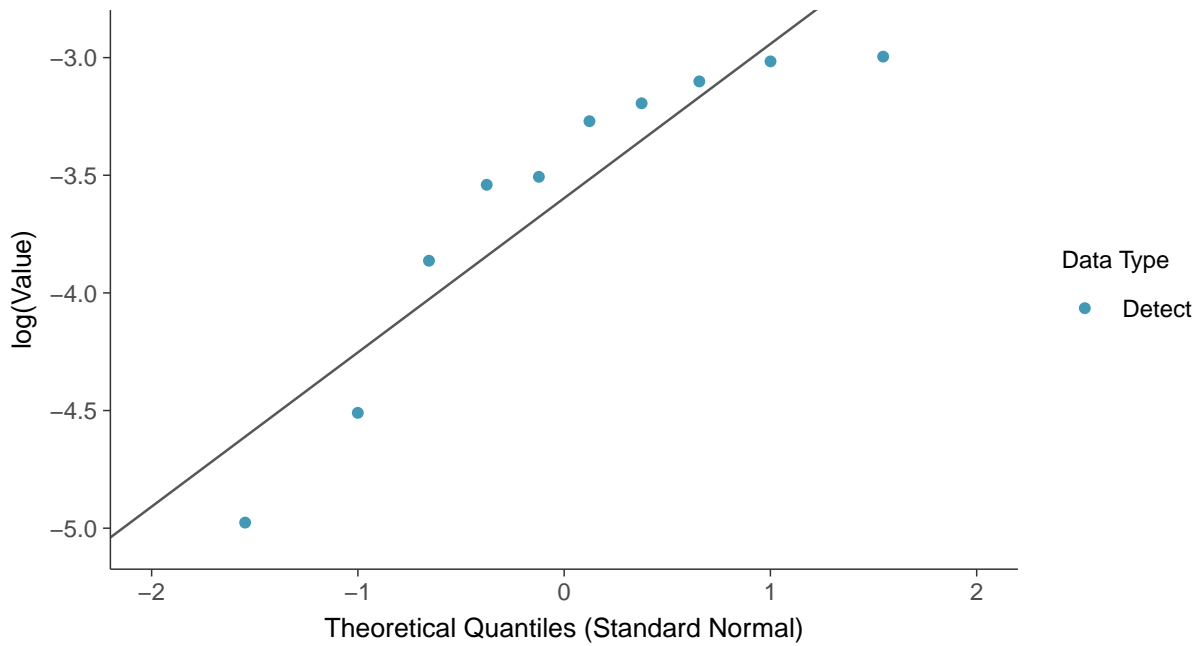
Normal Q-Q plot

Arsenic, MW-08 (mg/L)



Lognormal Q-Q plot

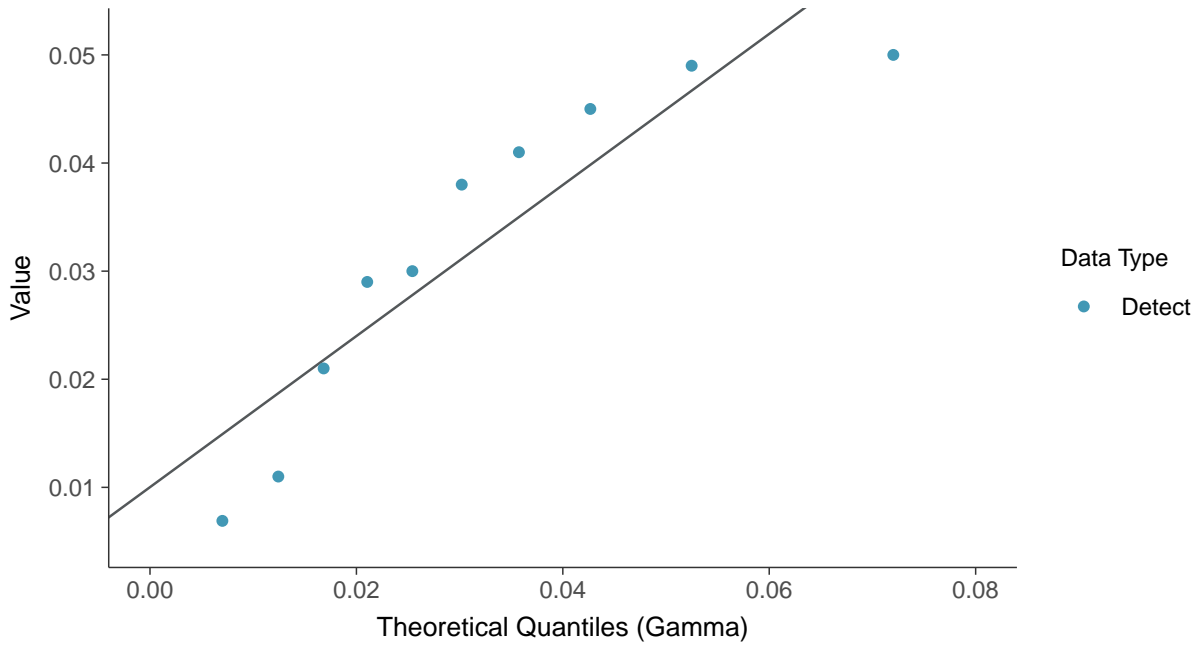
Arsenic, MW-08 (mg/L)





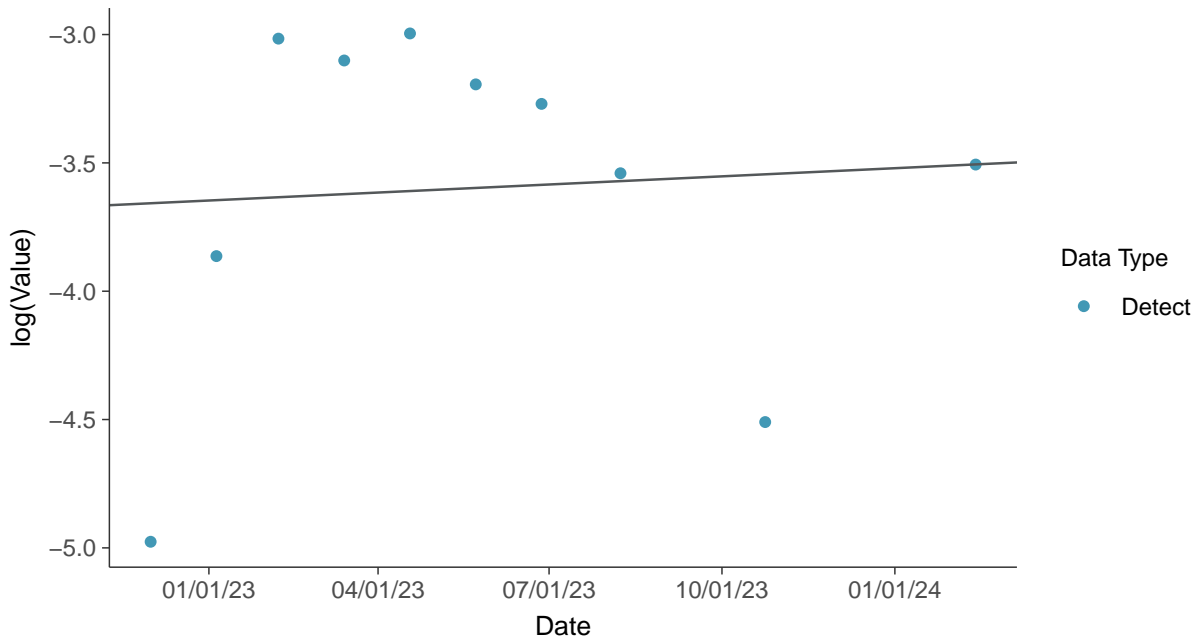
Gamma Q-Q plot

Arsenic, MW-08 (mg/L)



Trend Regression: Lognormal MLE

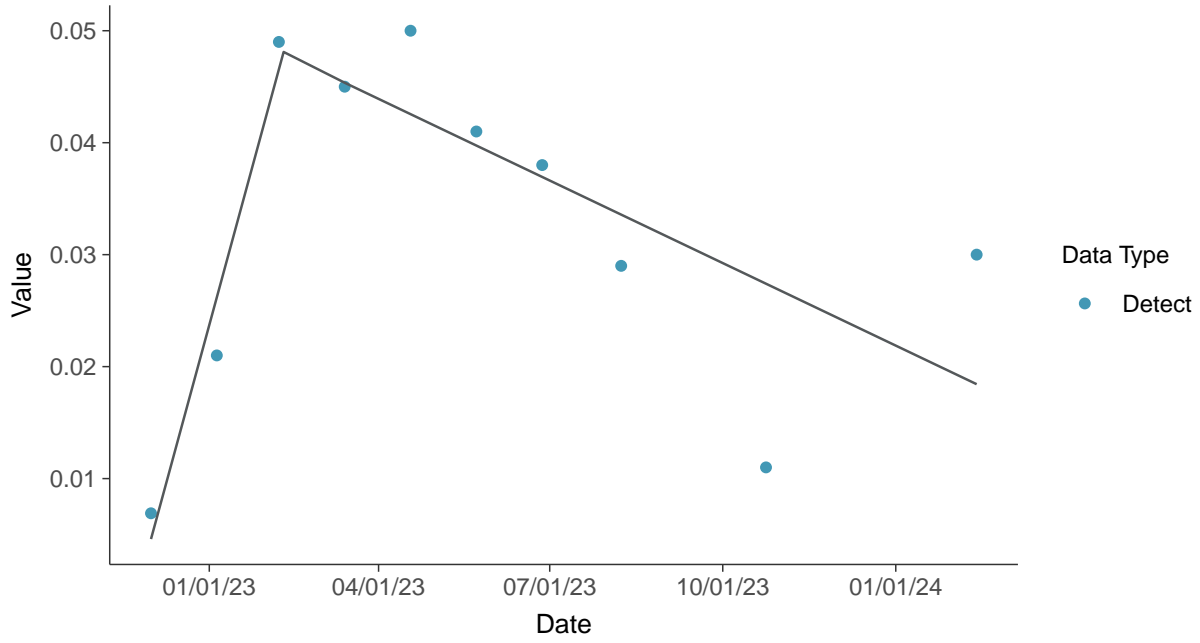
Arsenic, MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear

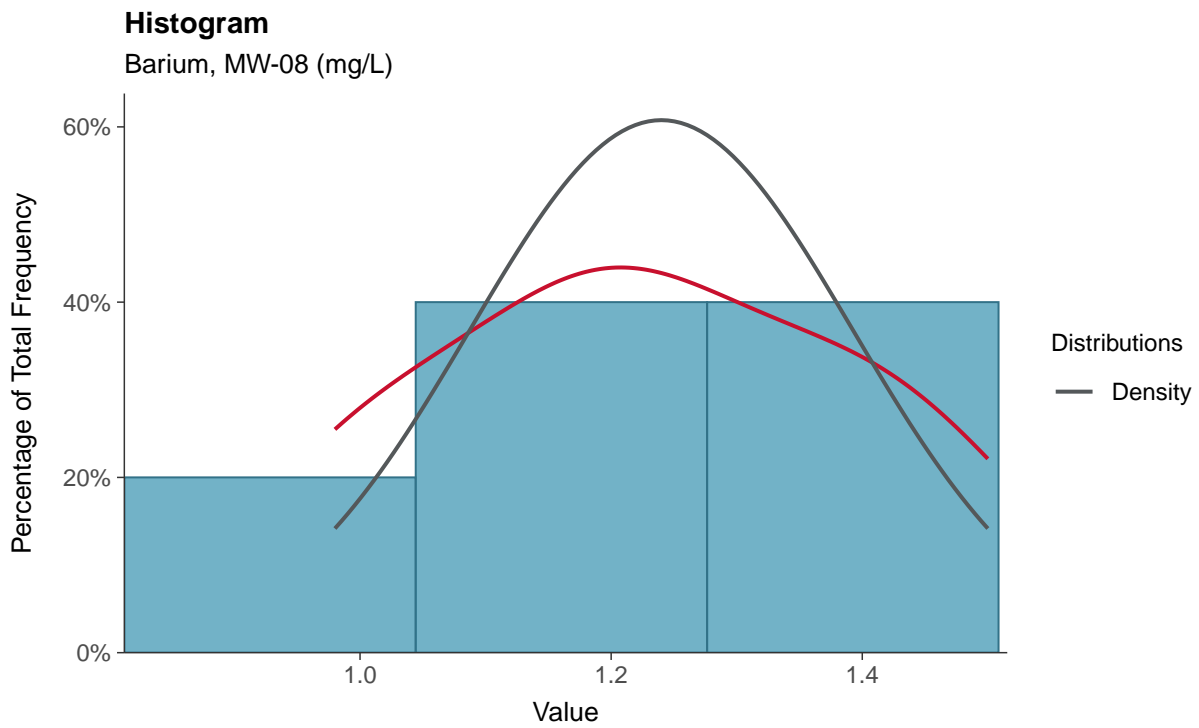
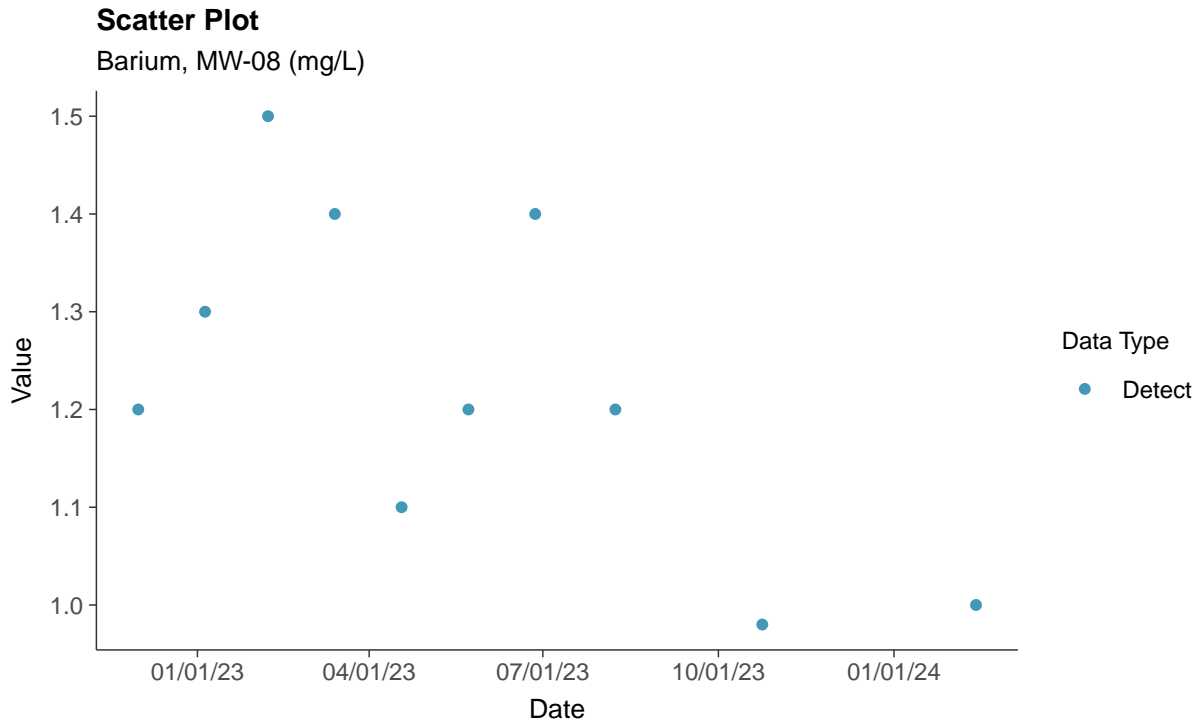
Arsenic, MW-08 (mg/L)





Appendix IV: Barium, MW-08

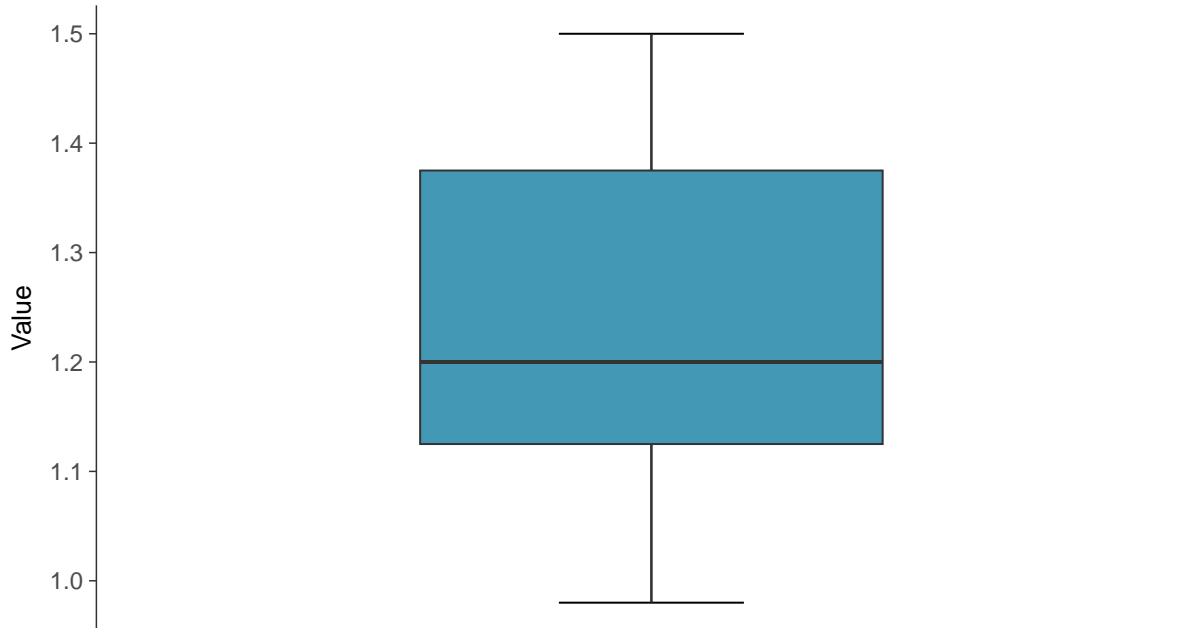
ID: 1_18_5_103





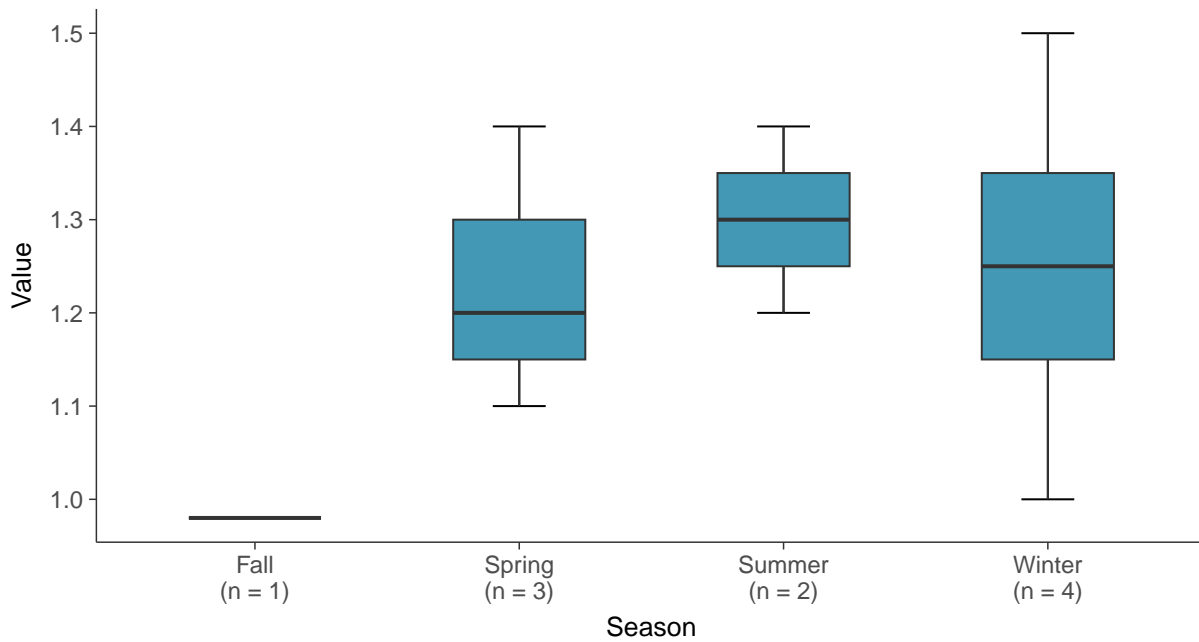
Boxplot

Barium, MW-08 (mg/L)



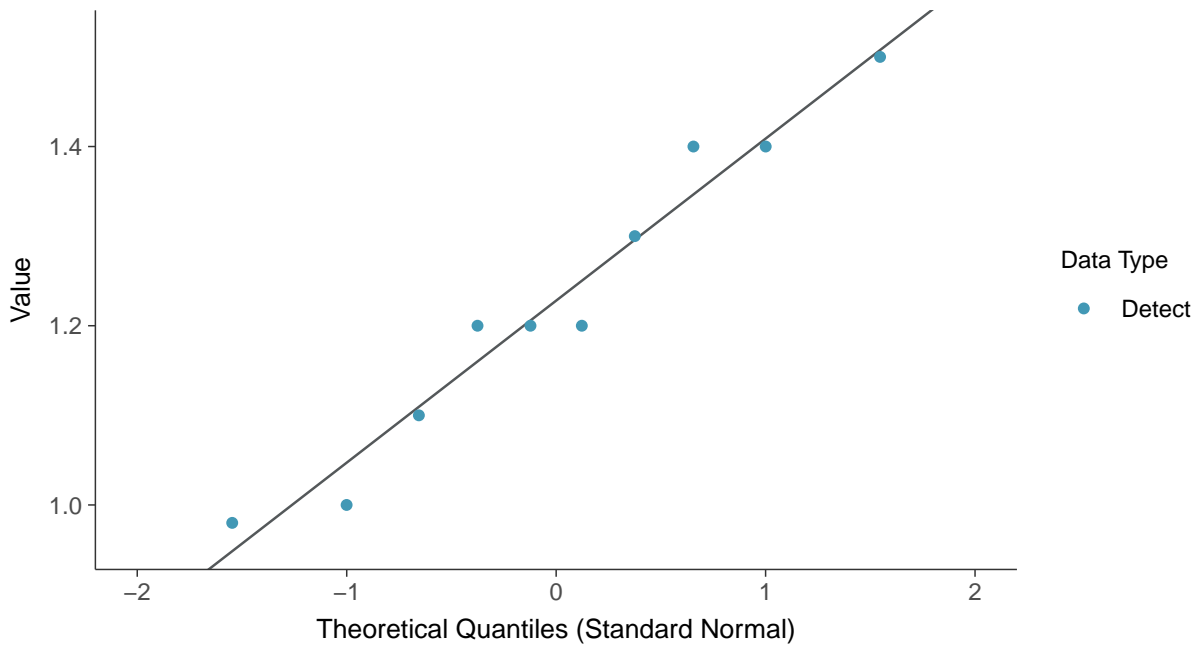
Boxplot by Season

Barium, MW-08 (mg/L)

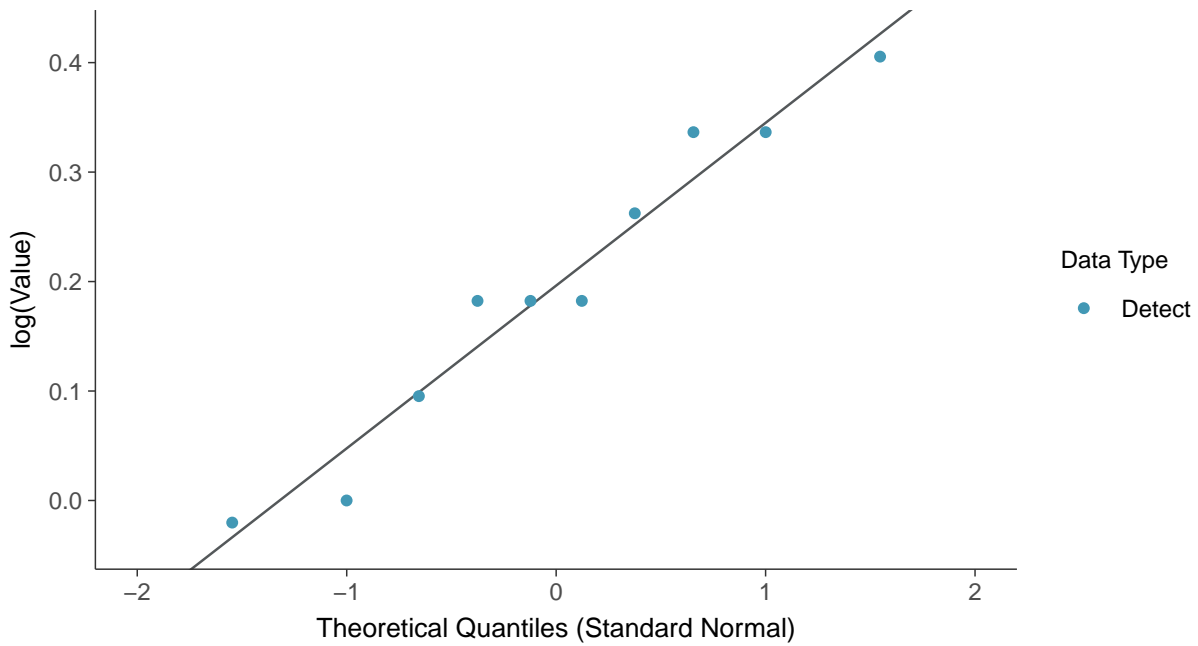




Normal Q-Q plot
Barium, MW-08 (mg/L)

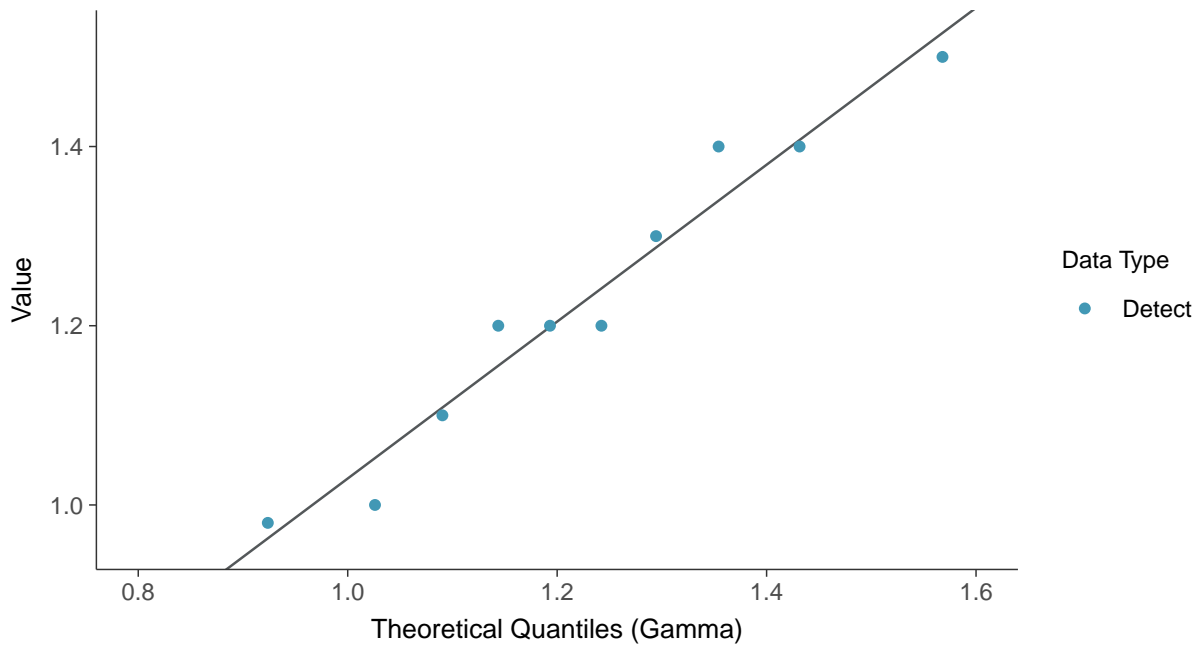


Lognormal Q-Q plot
Barium, MW-08 (mg/L)

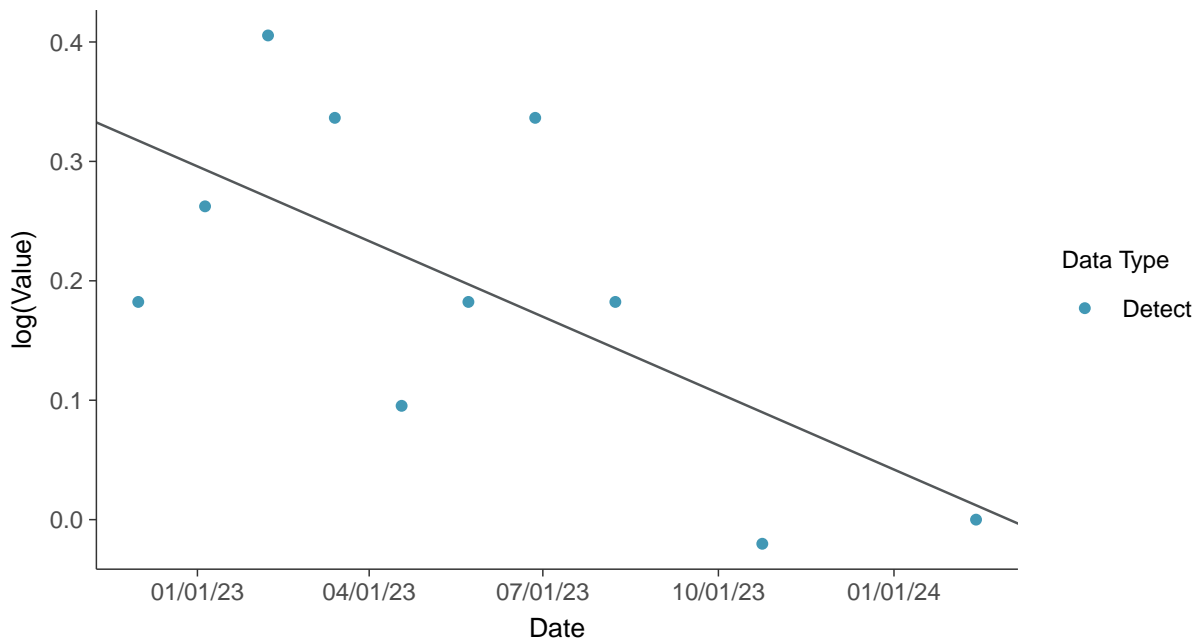




Gamma Q-Q plot
Barium, MW-08 (mg/L)

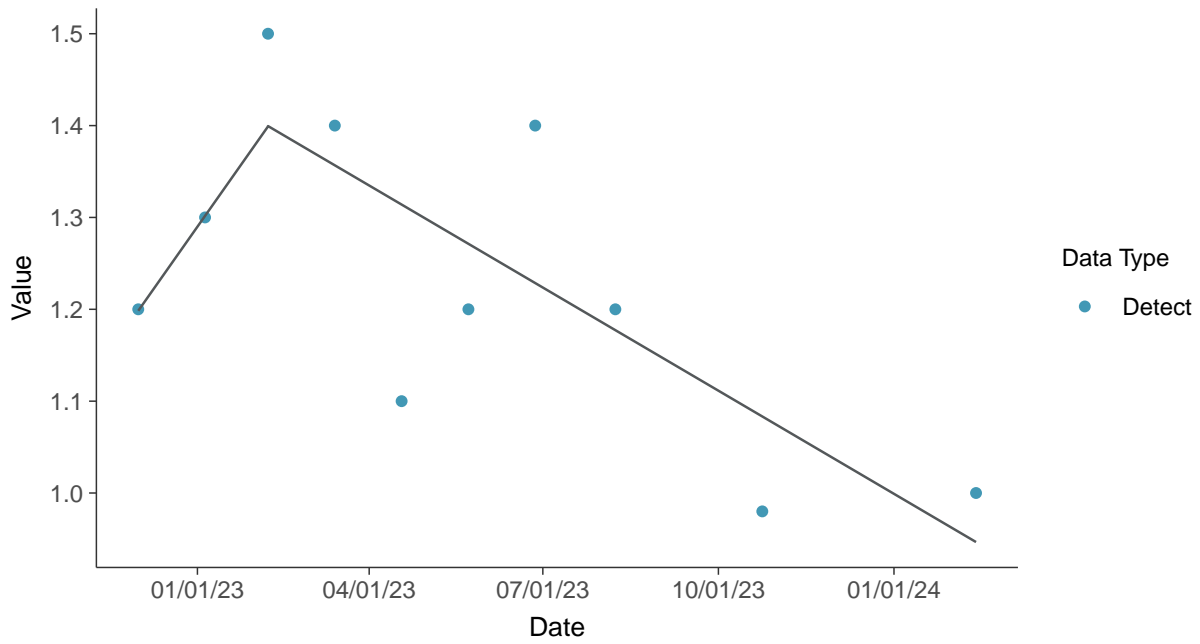


Trend Regression: Lognormal MLE
Barium, MW-08 (mg/L)





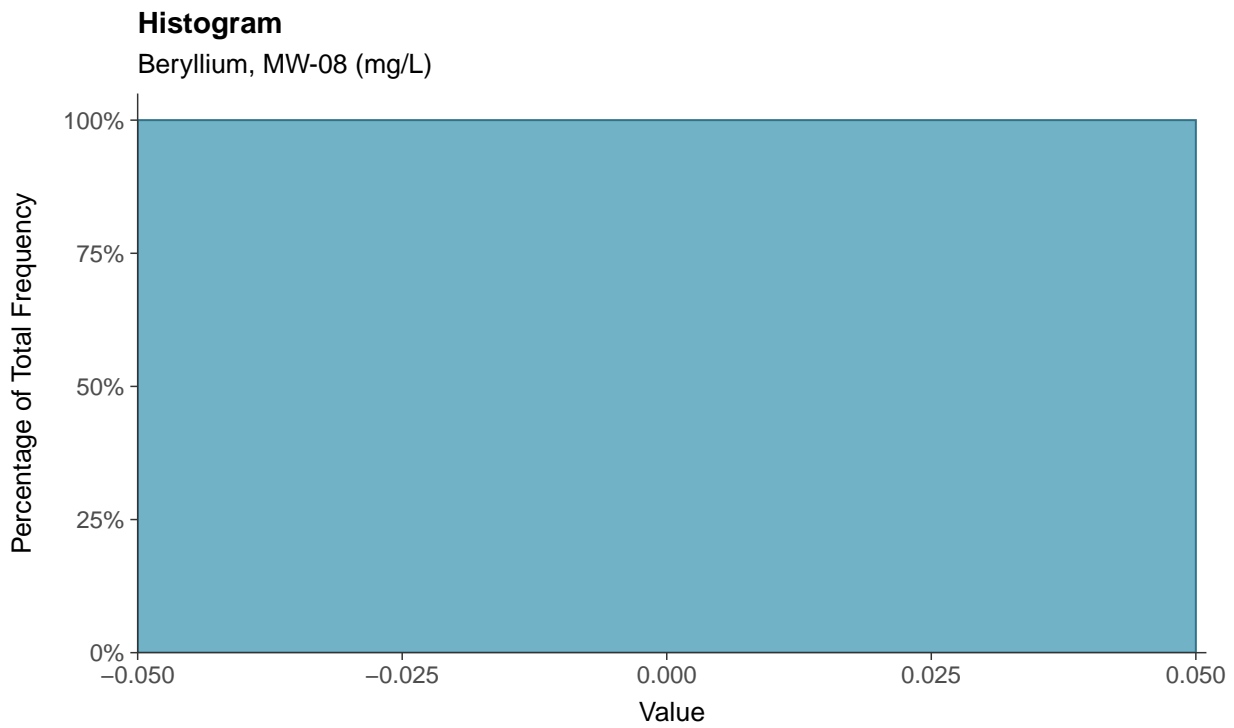
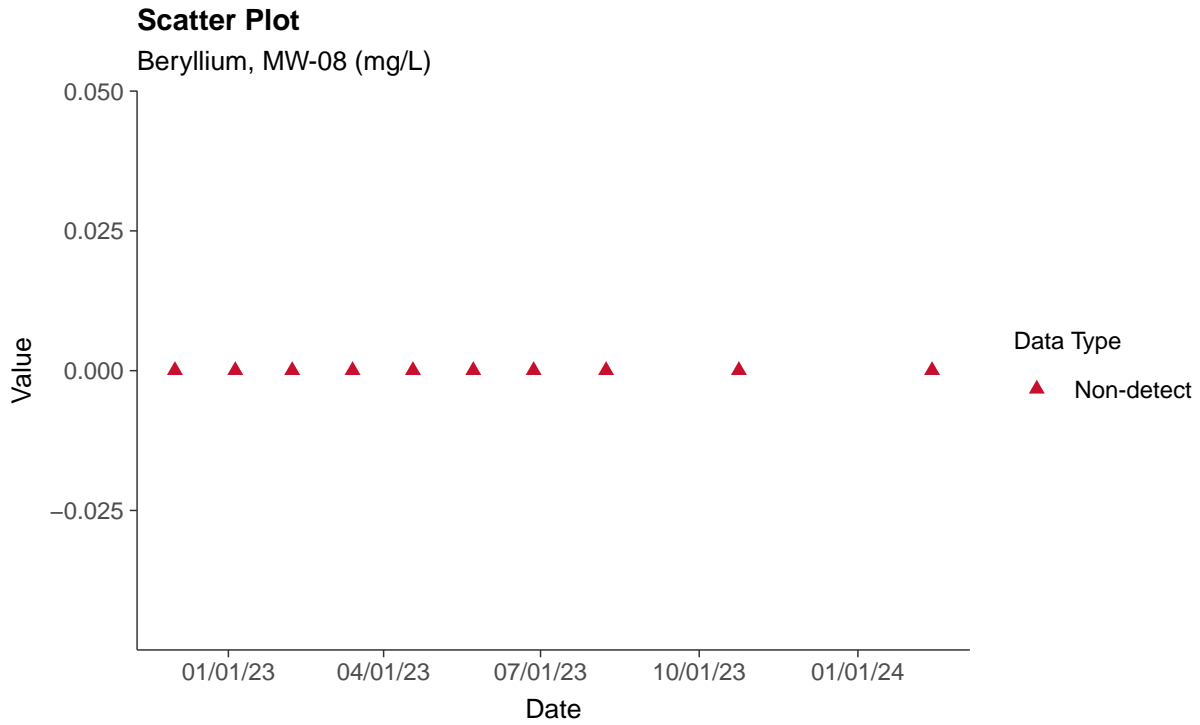
Trend Regression: Piecewise Linear-Linear
Barium, MW-08 (mg/L)





Appendix IV: Beryllium, MW-08

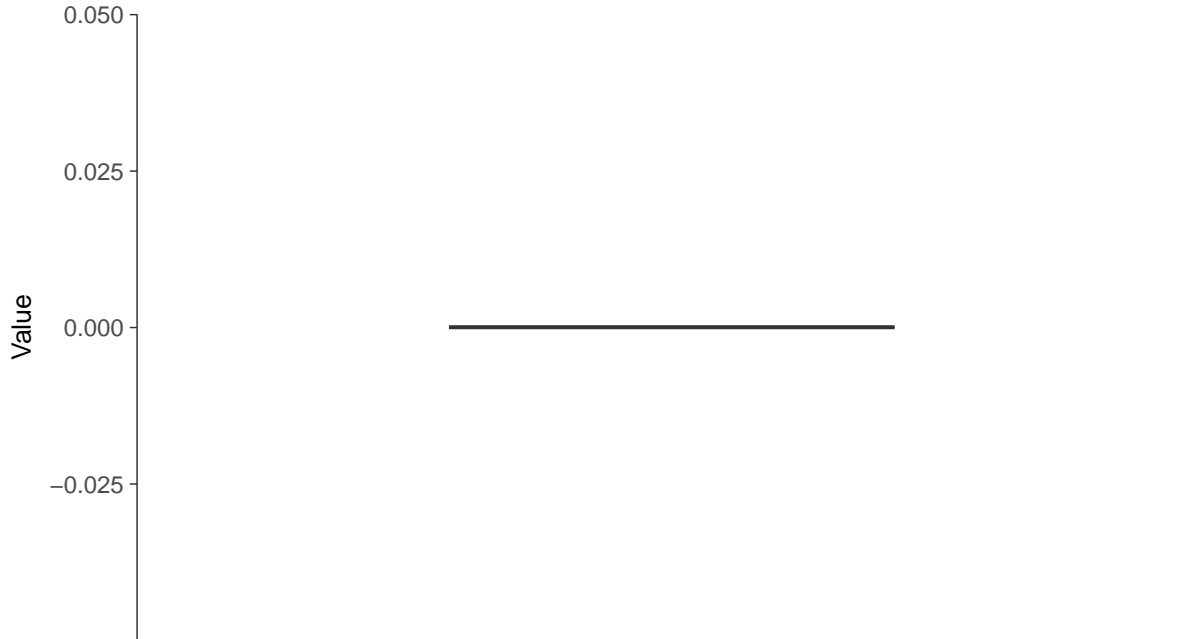
ID: 1_18_5_104





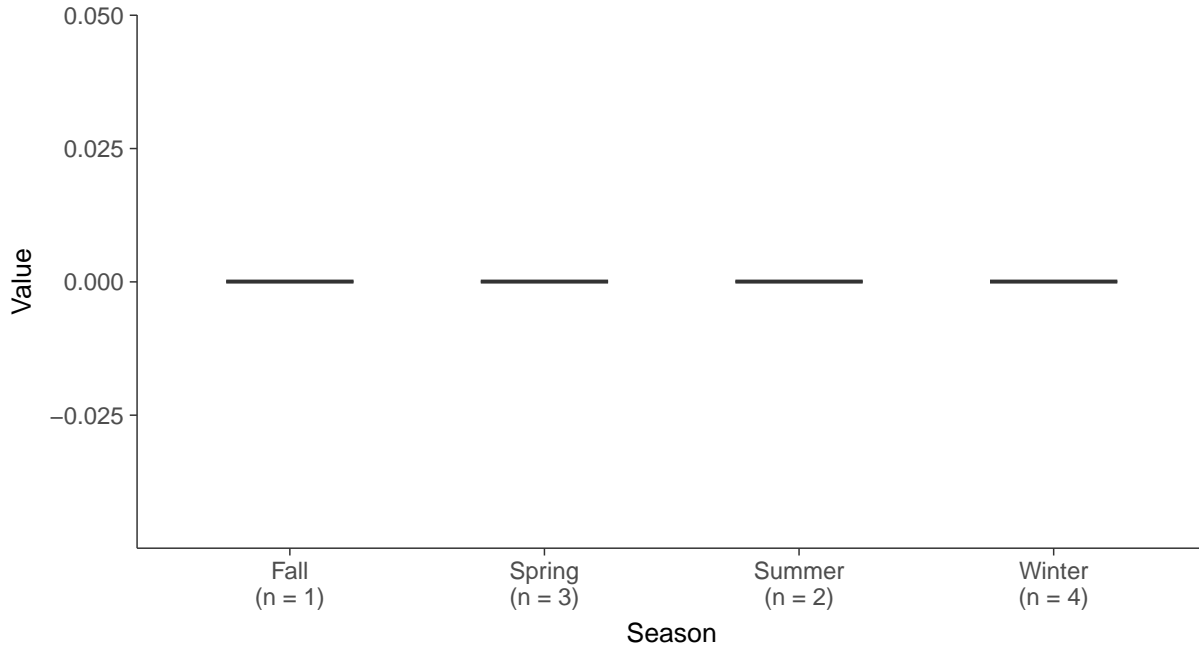
Boxplot

Beryllium, MW-08 (mg/L)



Boxplot by Season

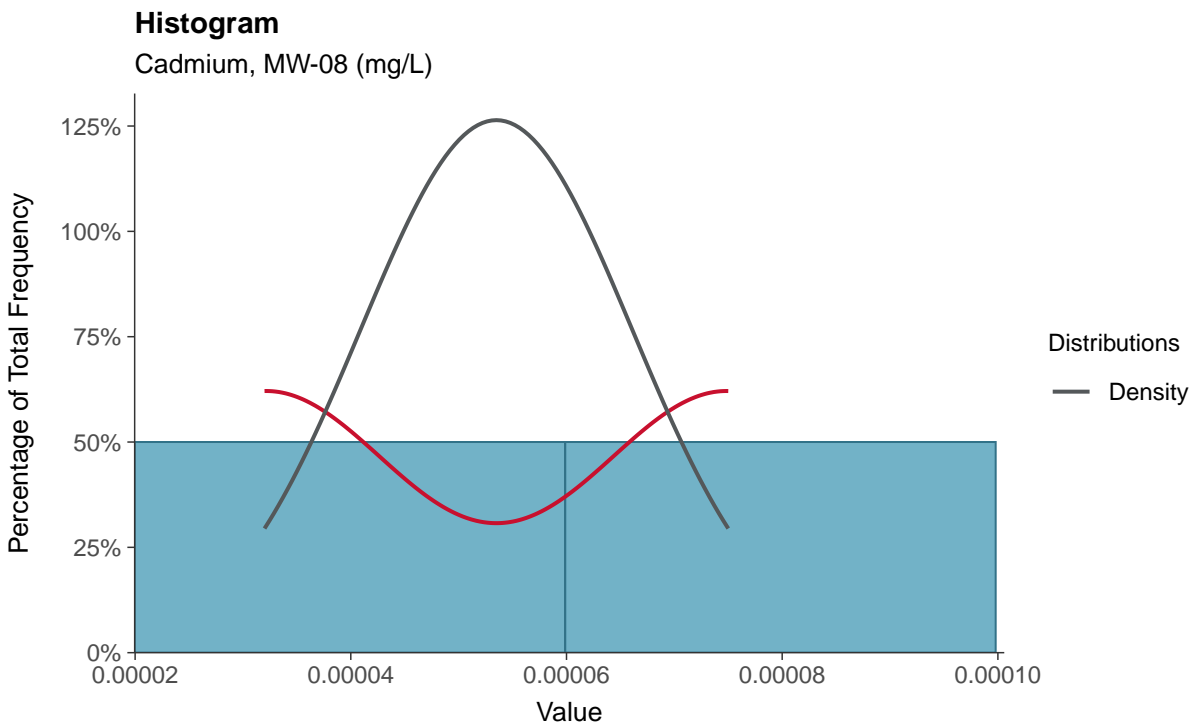
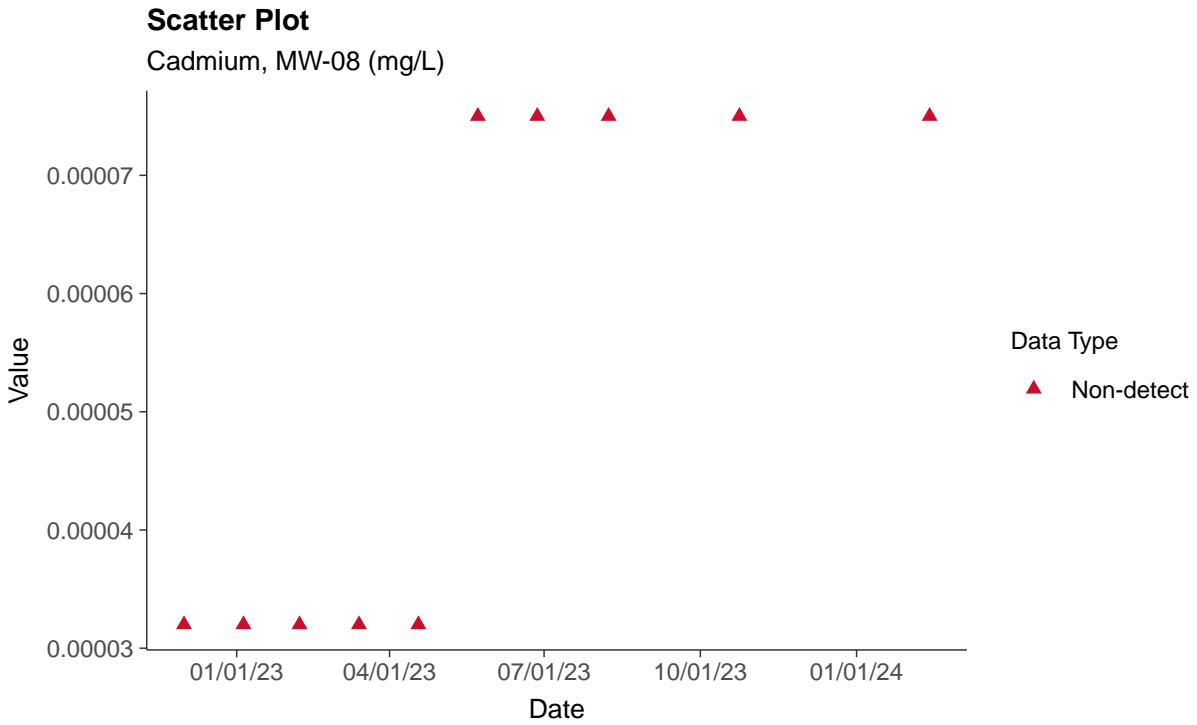
Beryllium, MW-08 (mg/L)





Appendix IV: Cadmium, MW-08

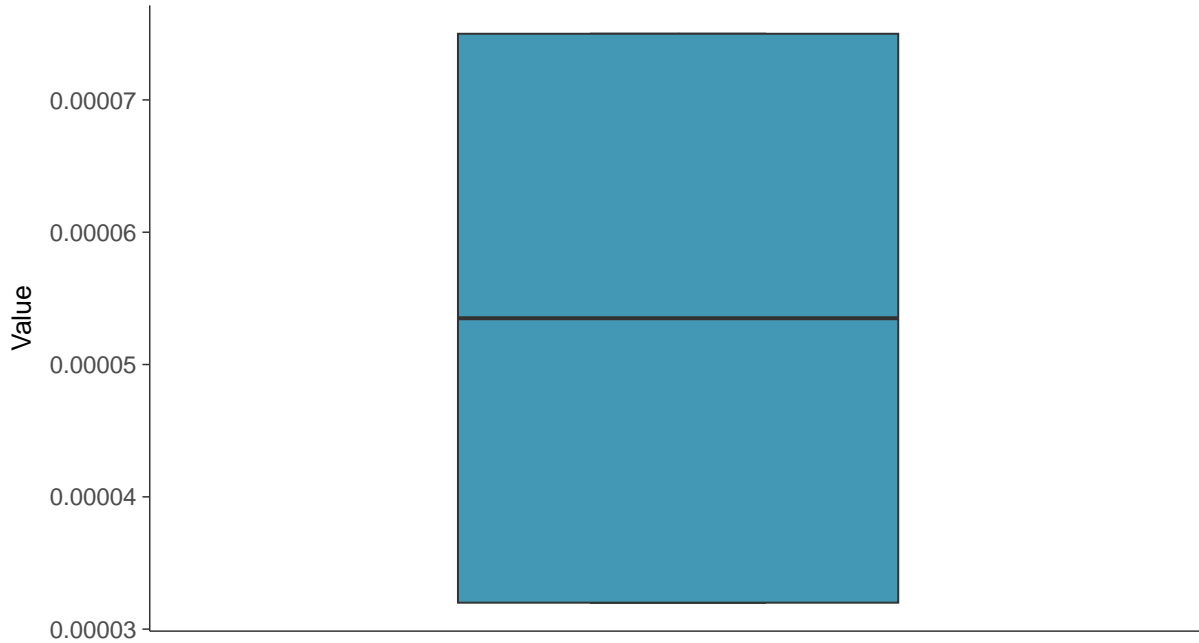
ID: 1_18_5_106





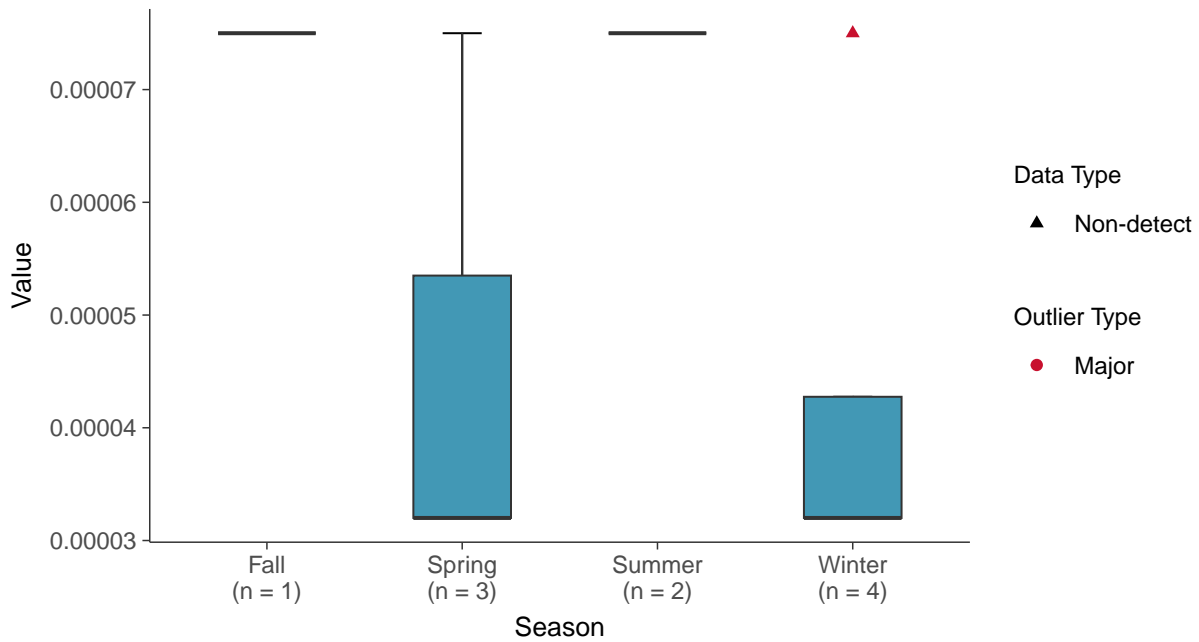
Boxplot

Cadmium, MW-08 (mg/L)



Boxplot by Season

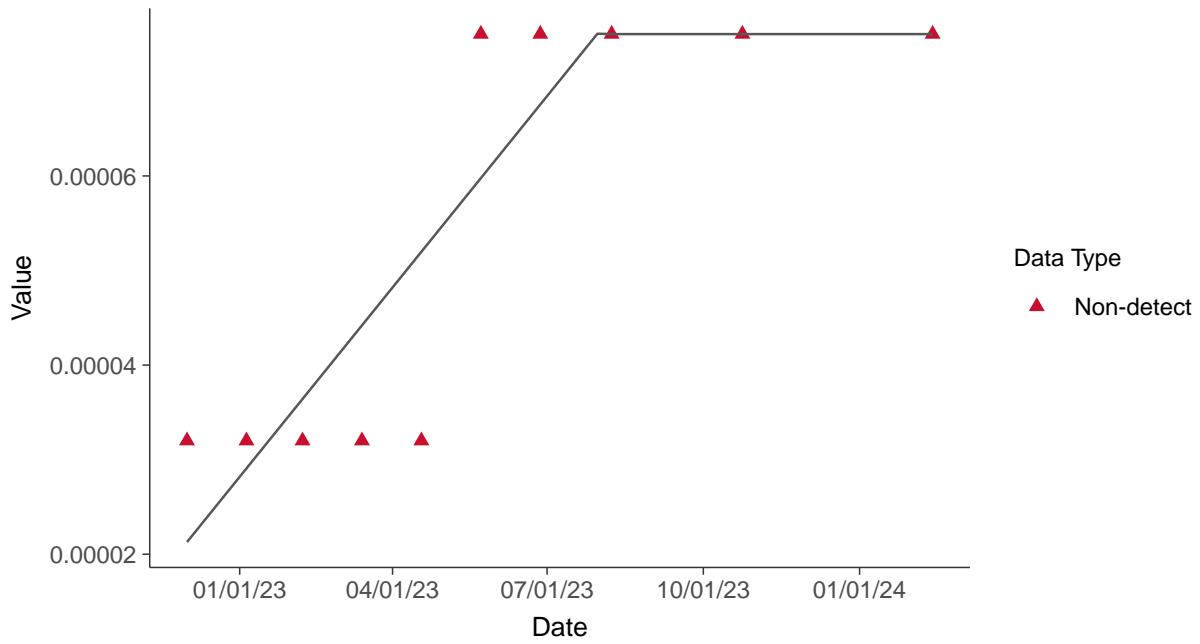
Cadmium, MW-08 (mg/L)





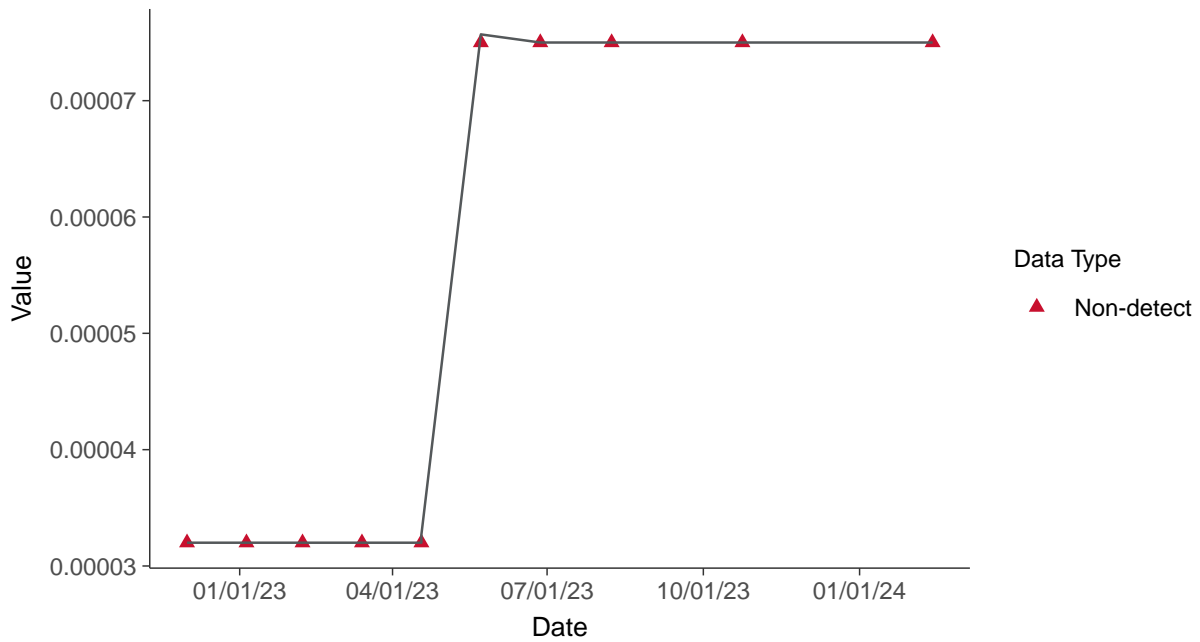
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-08 (mg/L)



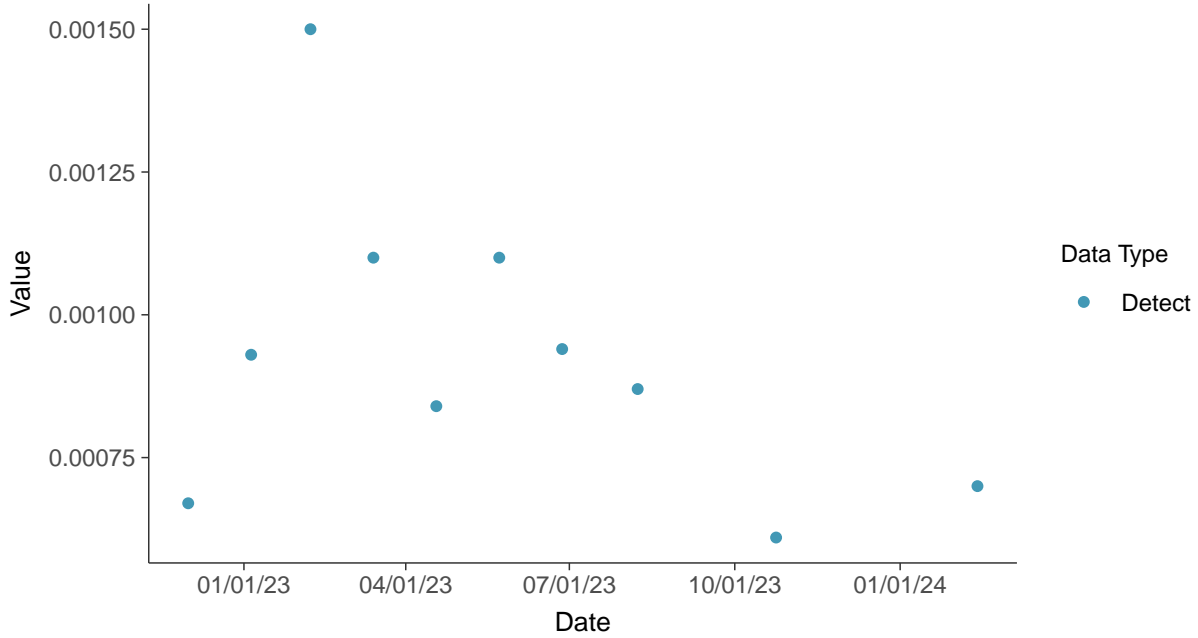


Appendix IV: Chromium, Total, MW-08

ID: 1_18_5_109

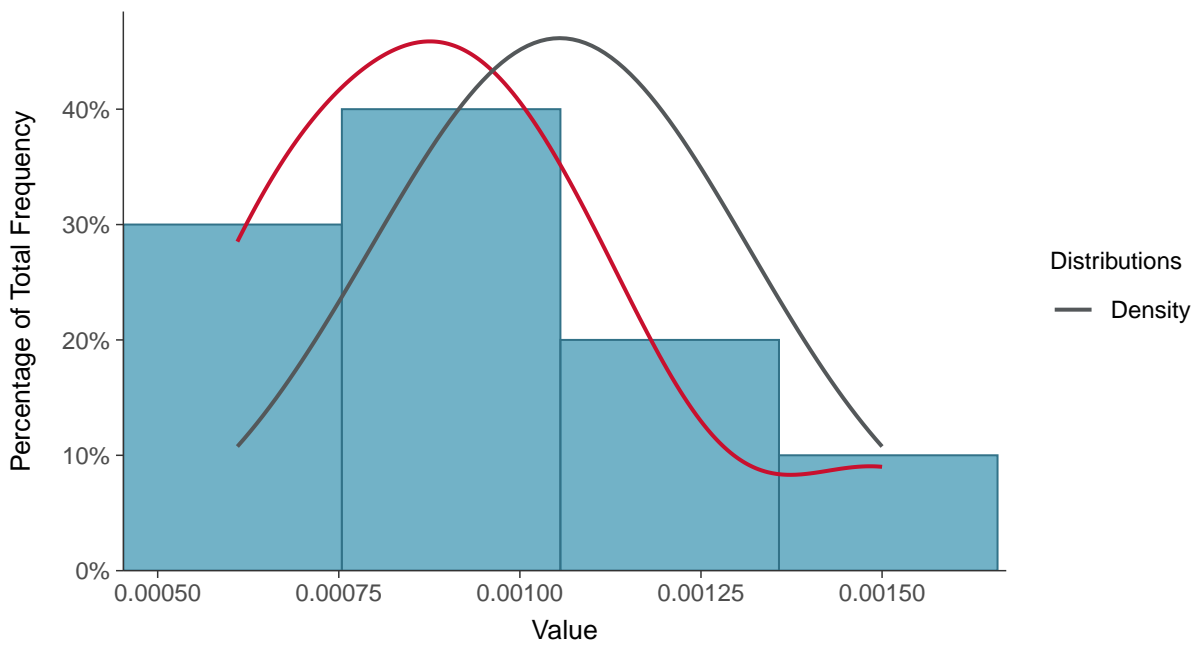
Scatter Plot

Chromium, Total, MW-08 (mg/L)



Histogram

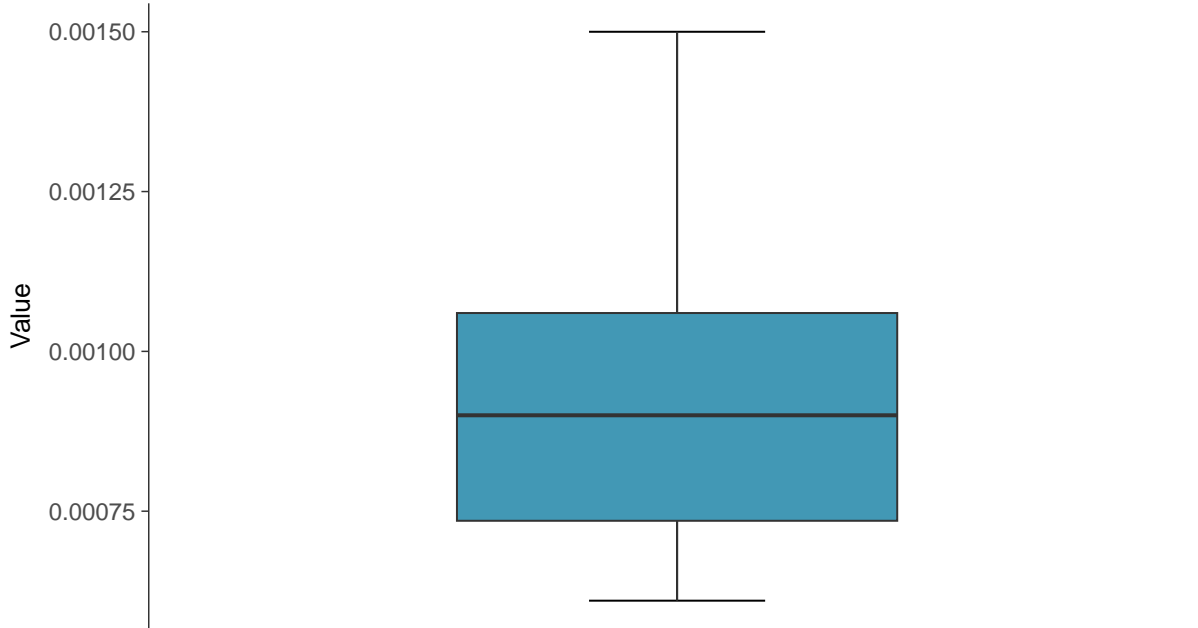
Chromium, Total, MW-08 (mg/L)





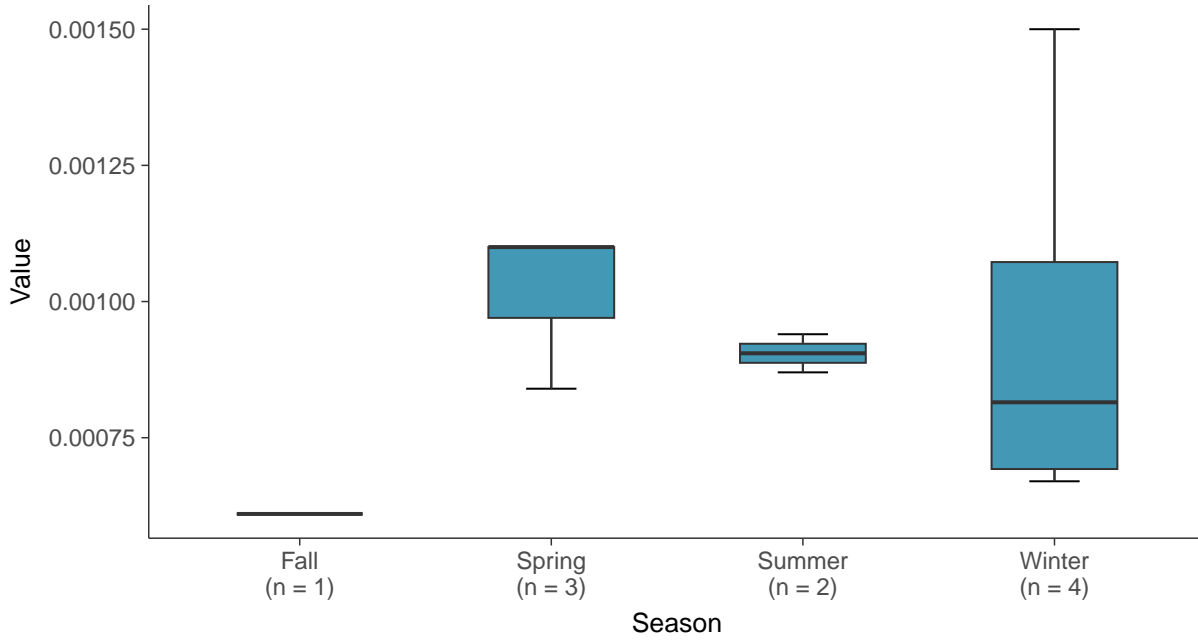
Boxplot

Chromium, Total, MW-08 (mg/L)



Boxplot by Season

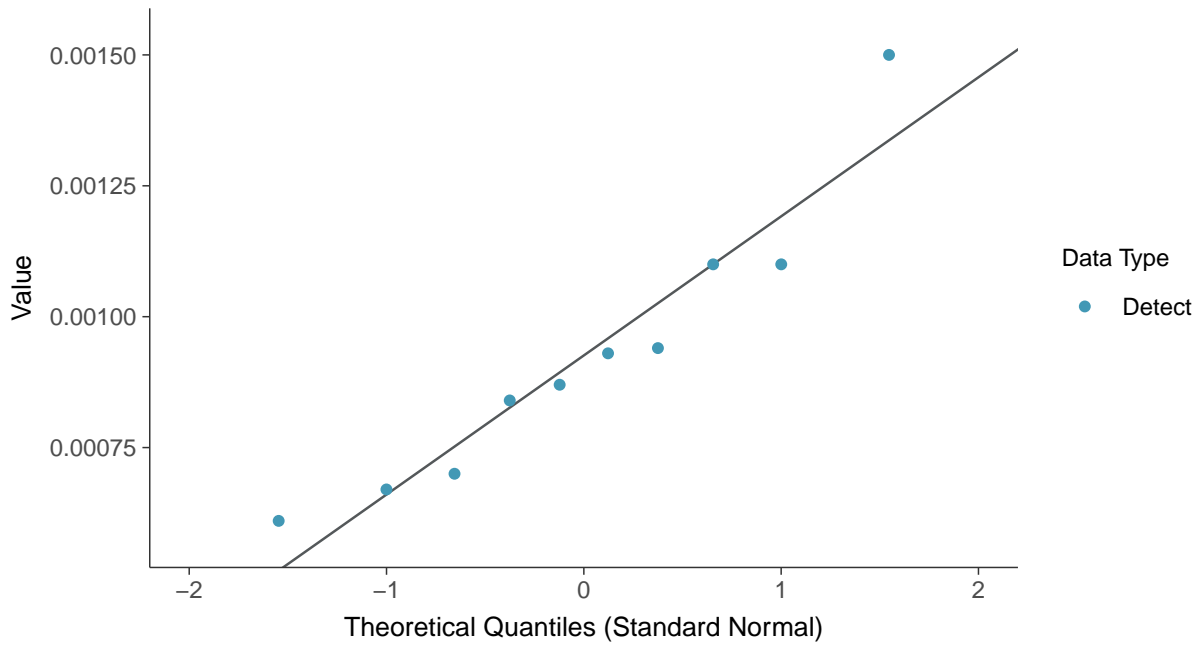
Chromium, Total, MW-08 (mg/L)





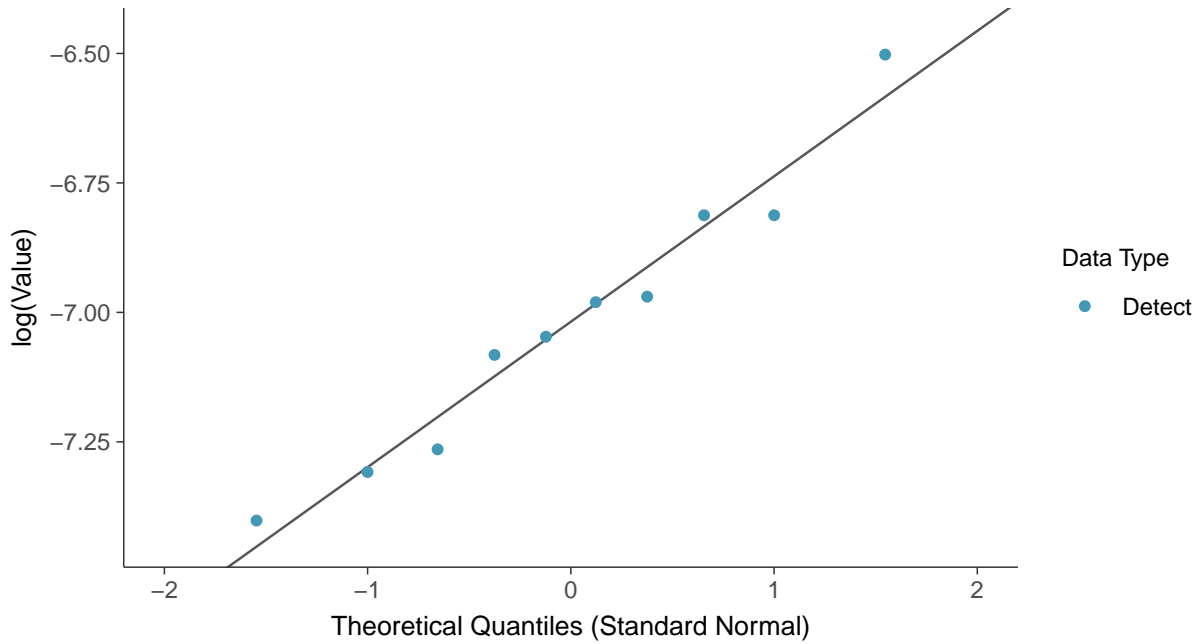
Normal Q-Q plot

Chromium, Total, MW-08 (mg/L)



Lognormal Q-Q plot

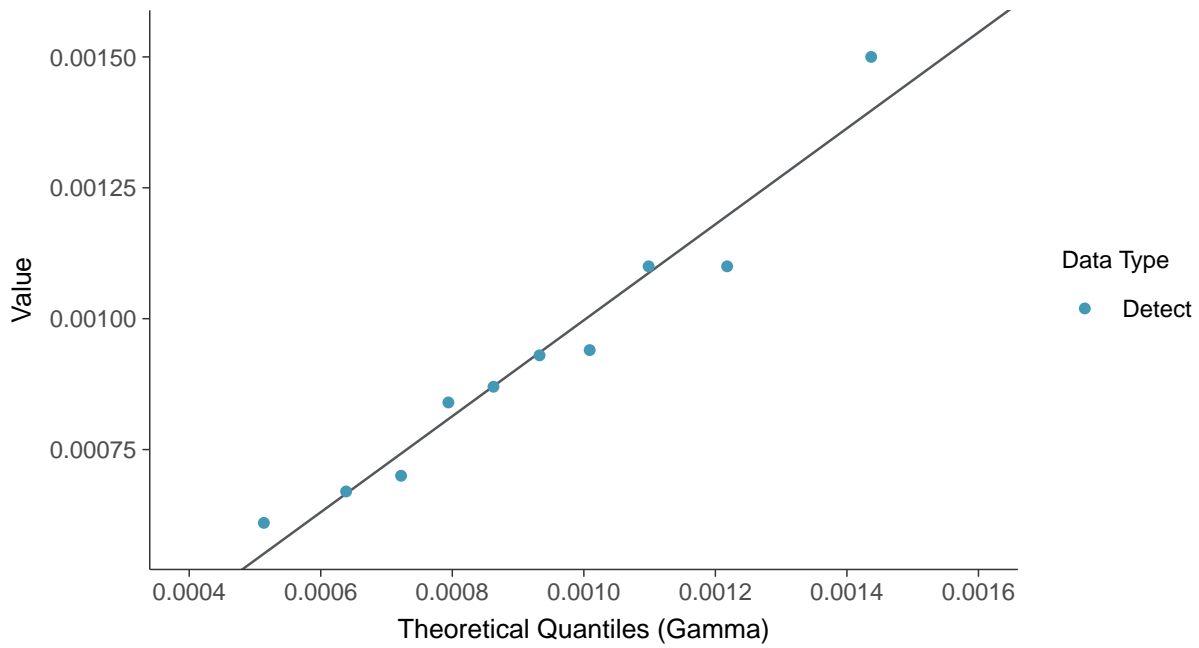
Chromium, Total, MW-08 (mg/L)





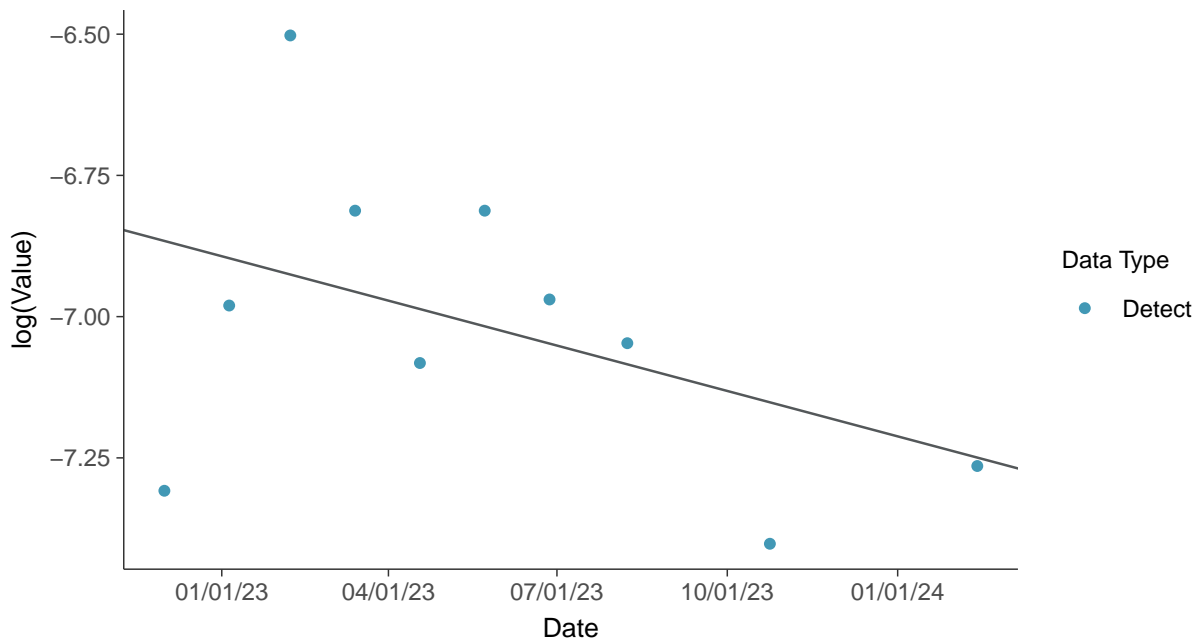
Gamma Q-Q plot

Chromium, Total, MW-08 (mg/L)



Trend Regression: Lognormal MLE

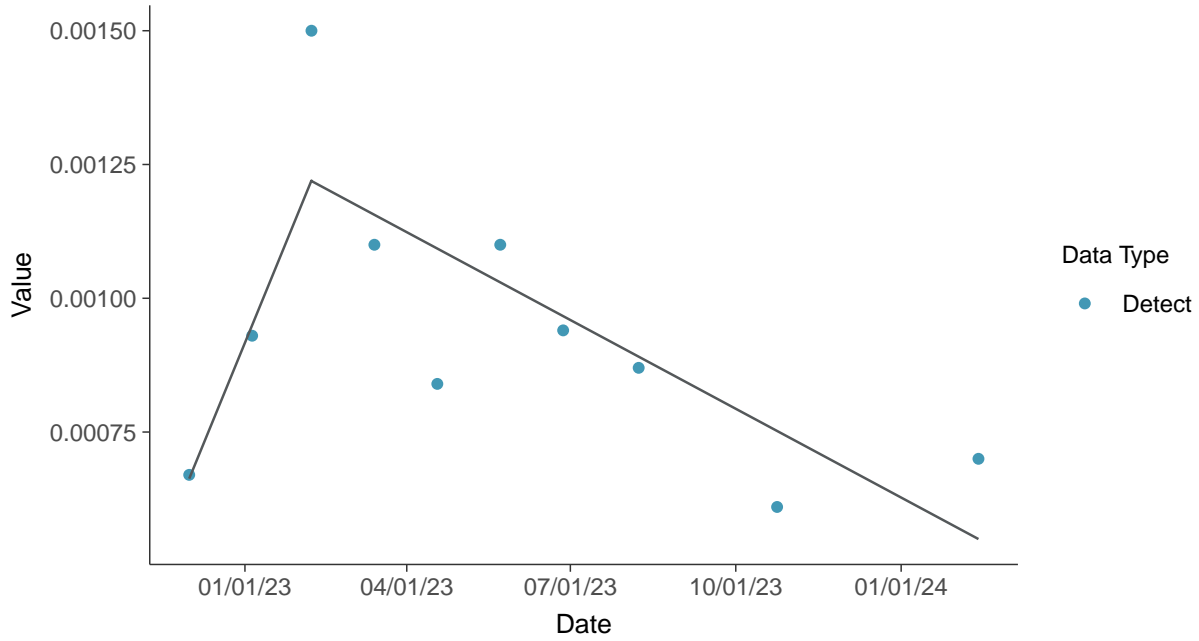
Chromium, Total, MW-08 (mg/L)





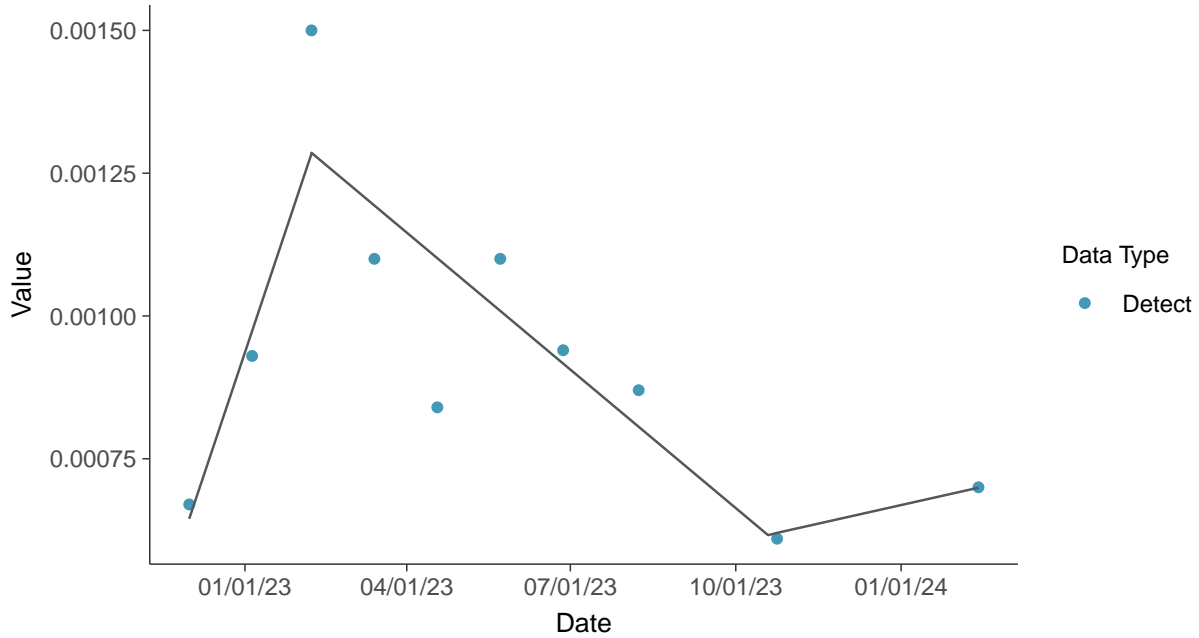
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

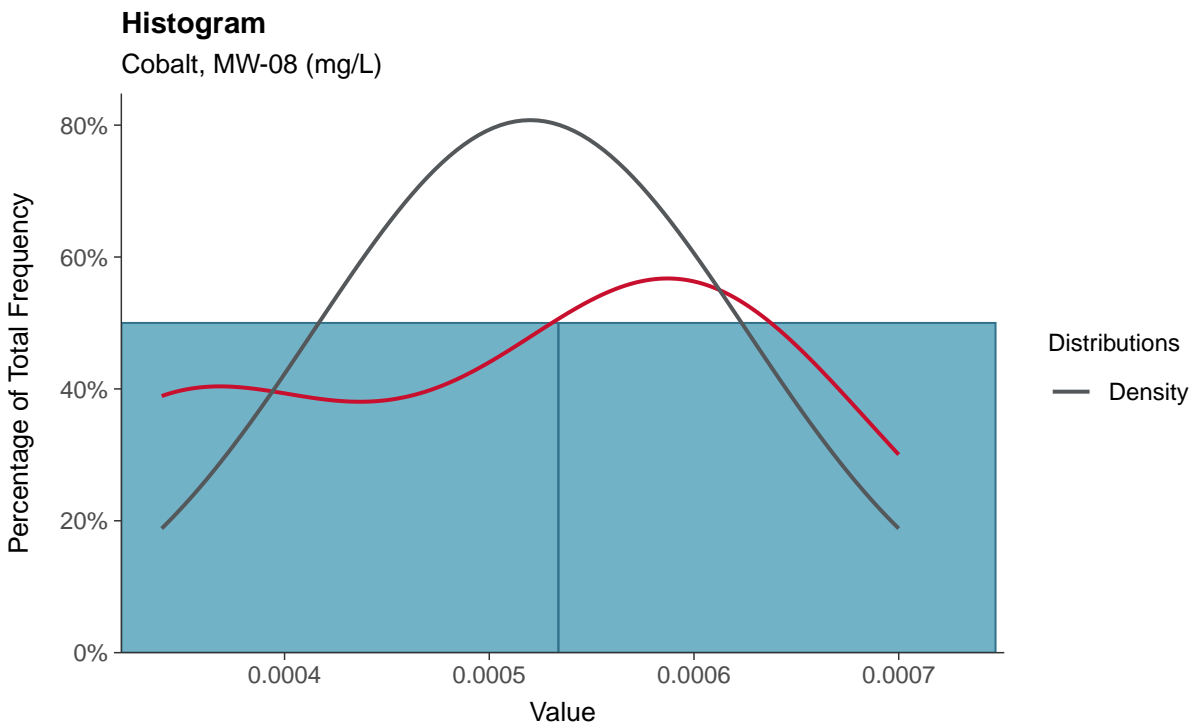
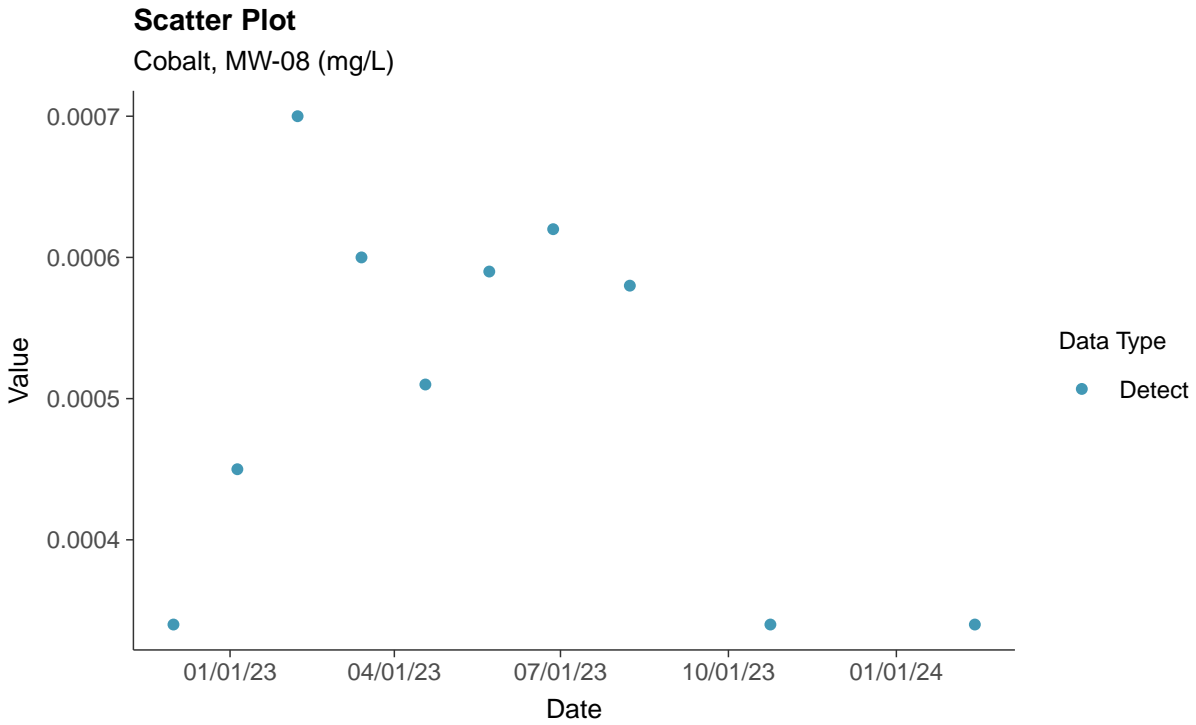
Chromium, Total, MW-08 (mg/L)





Appendix IV: Cobalt, MW-08

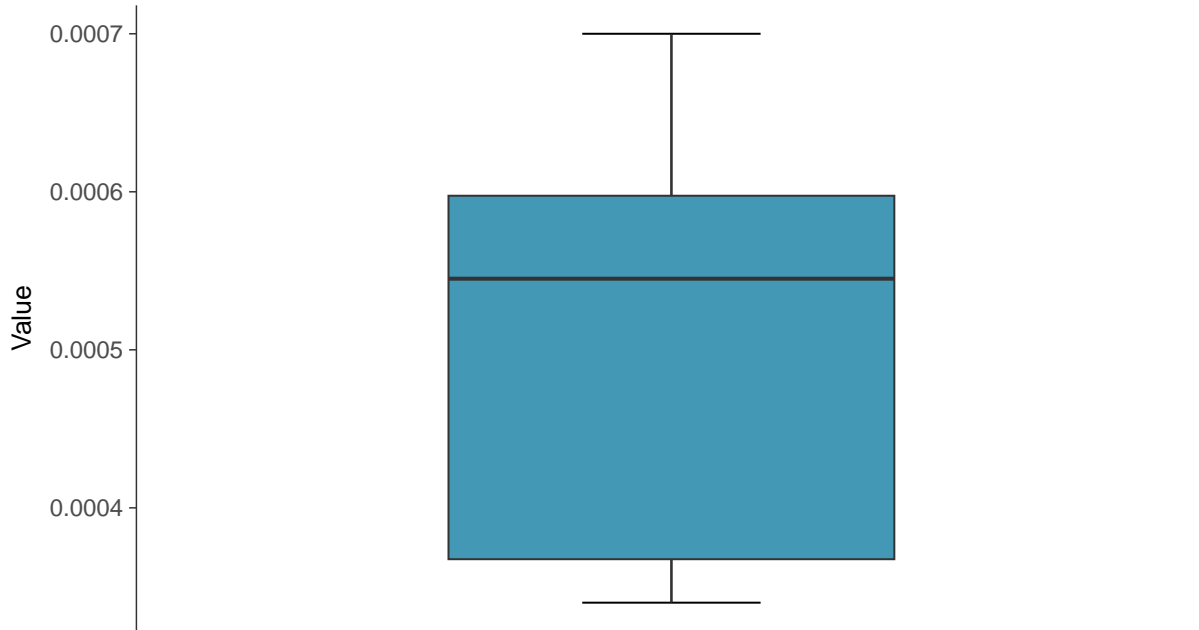
ID: 1_18_5_110





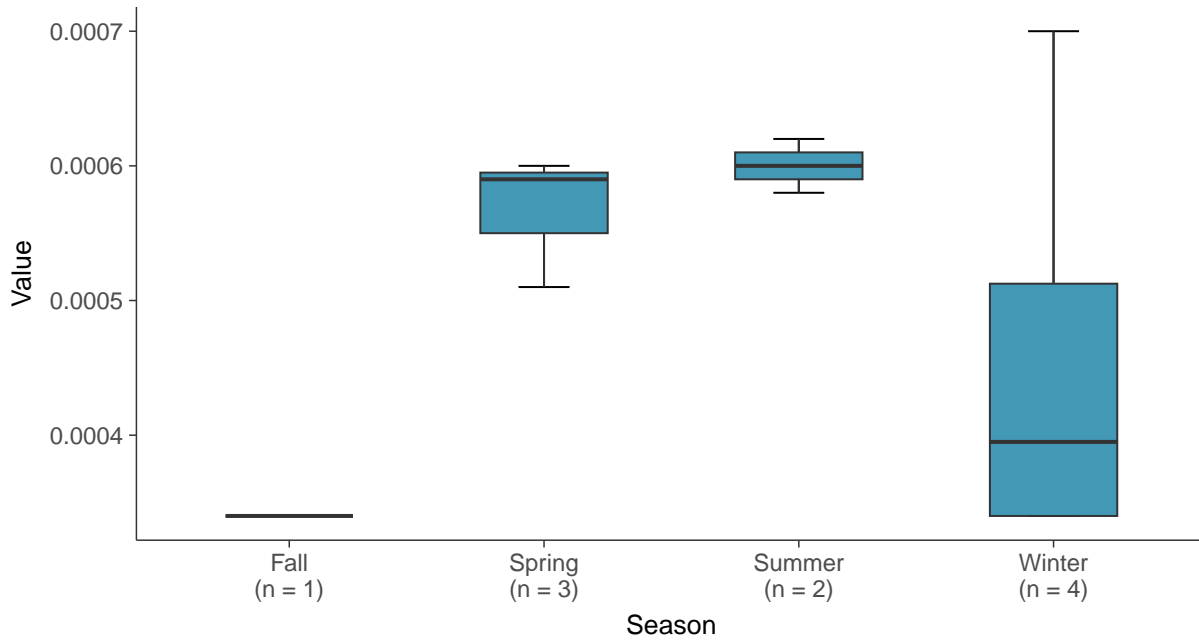
Boxplot

Cobalt, MW-08 (mg/L)



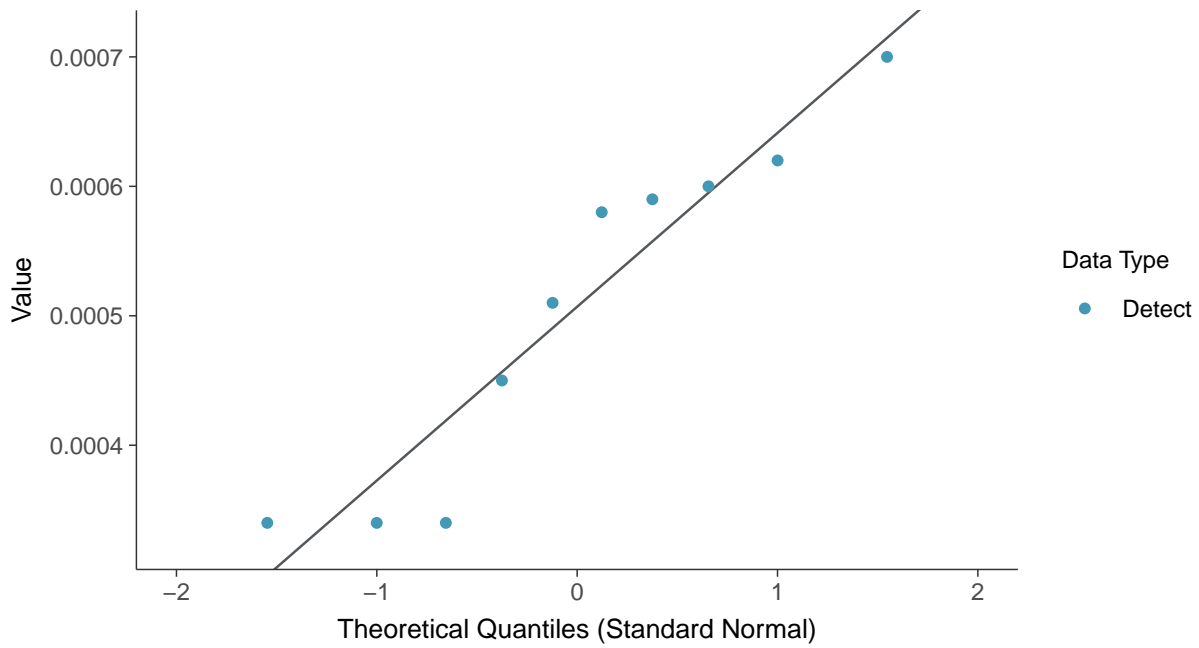
Boxplot by Season

Cobalt, MW-08 (mg/L)

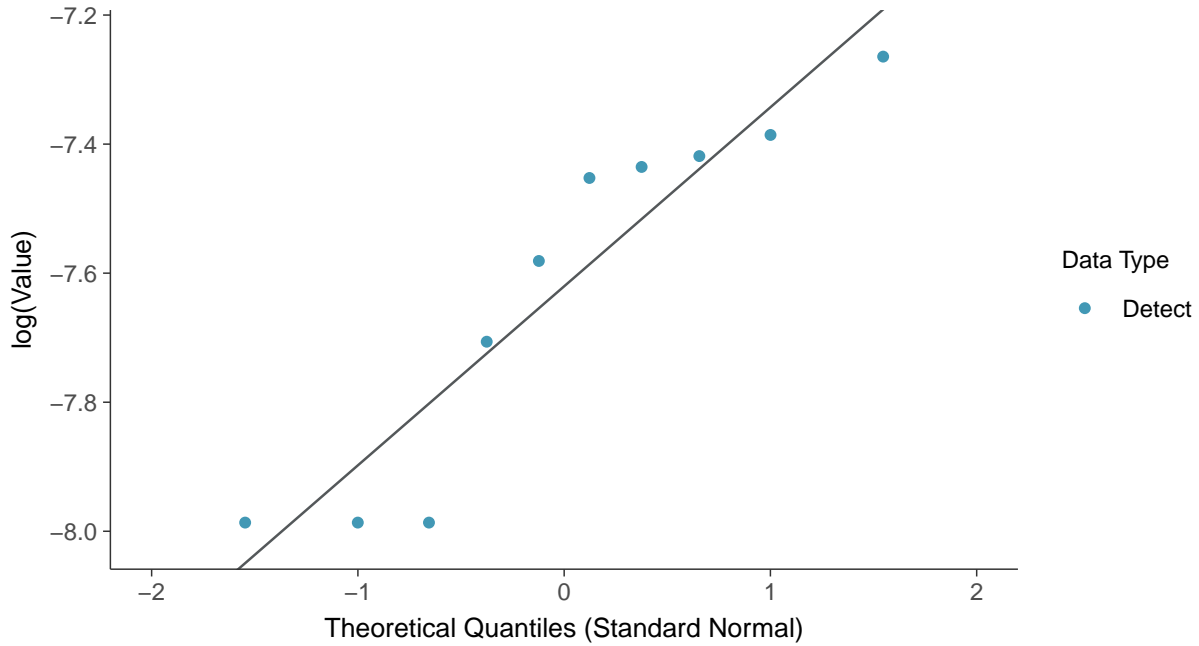




Normal Q-Q plot
Cobalt, MW-08 (mg/L)

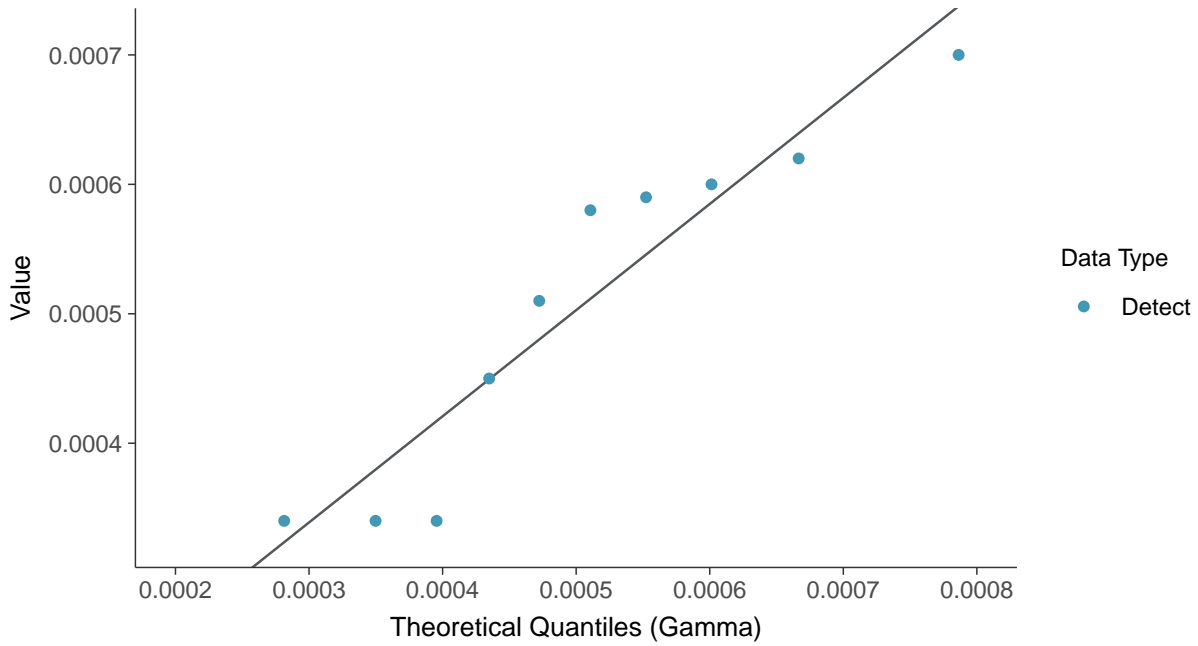


Lognormal Q-Q plot
Cobalt, MW-08 (mg/L)

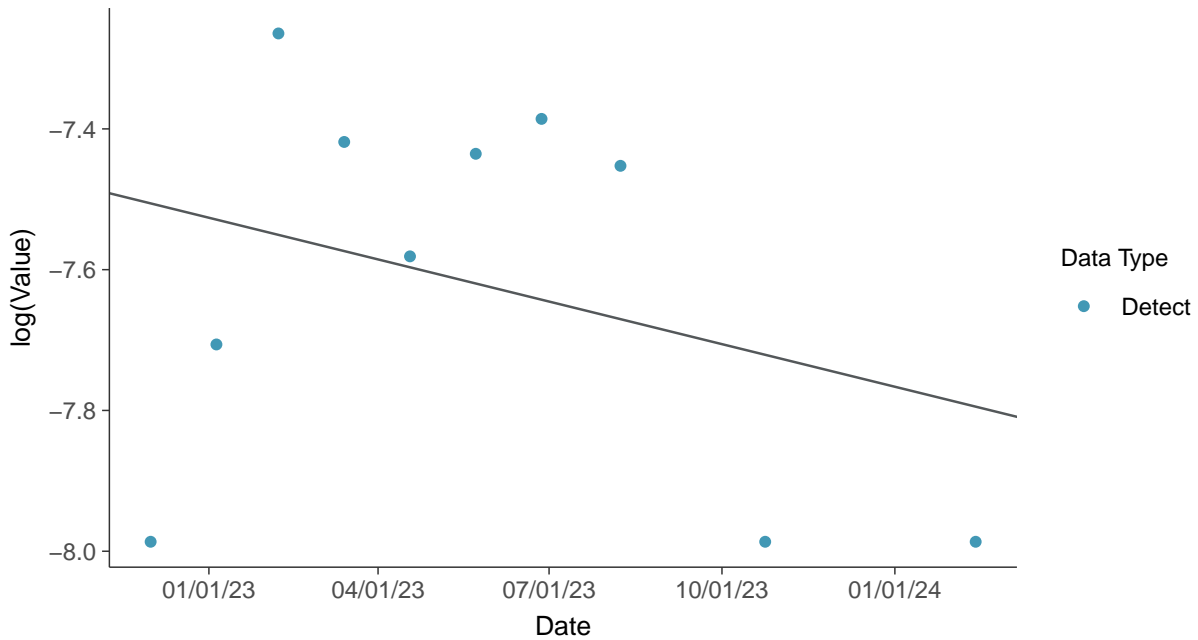




Gamma Q-Q plot
Cobalt, MW-08 (mg/L)



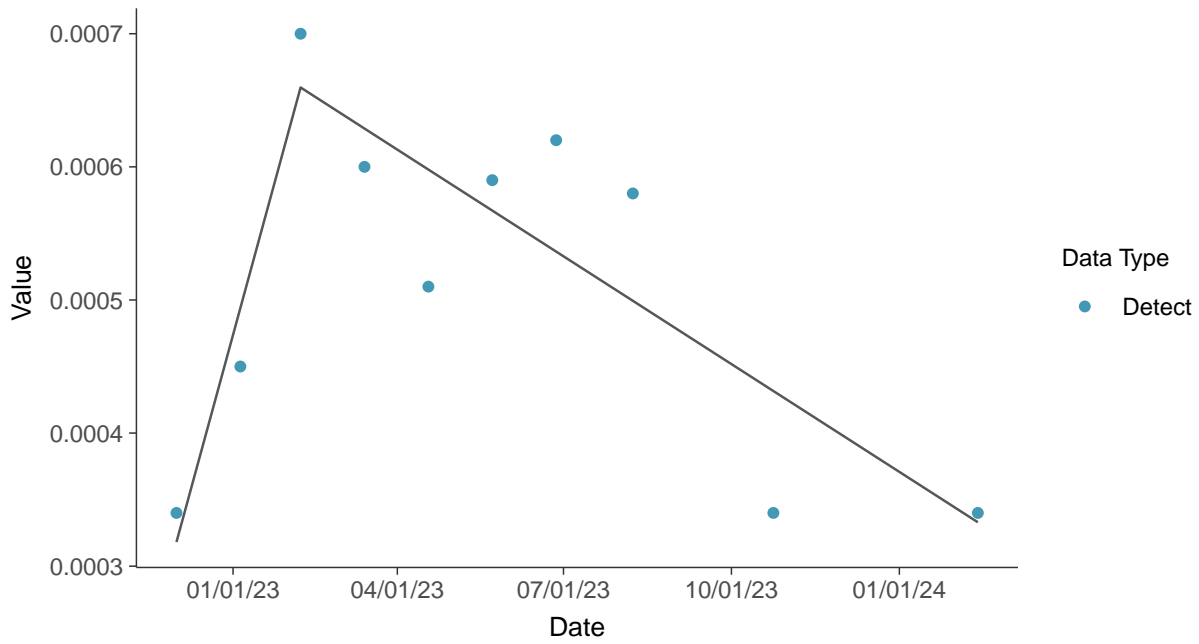
Trend Regression: Lognormal MLE
Cobalt, MW-08 (mg/L)





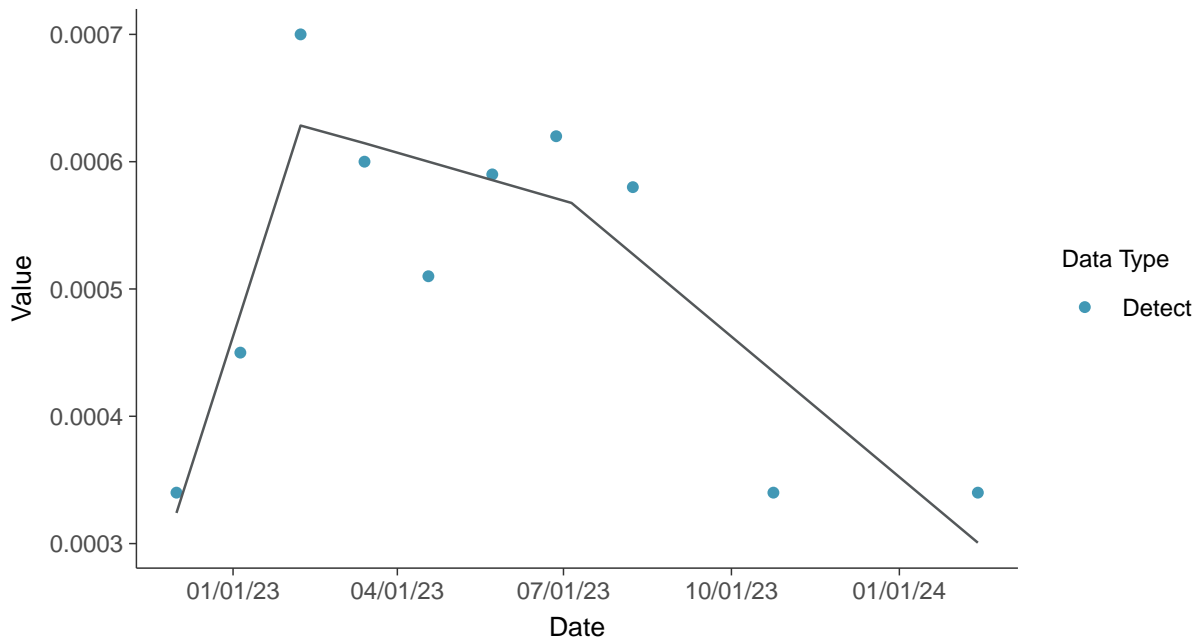
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-08 (mg/L)



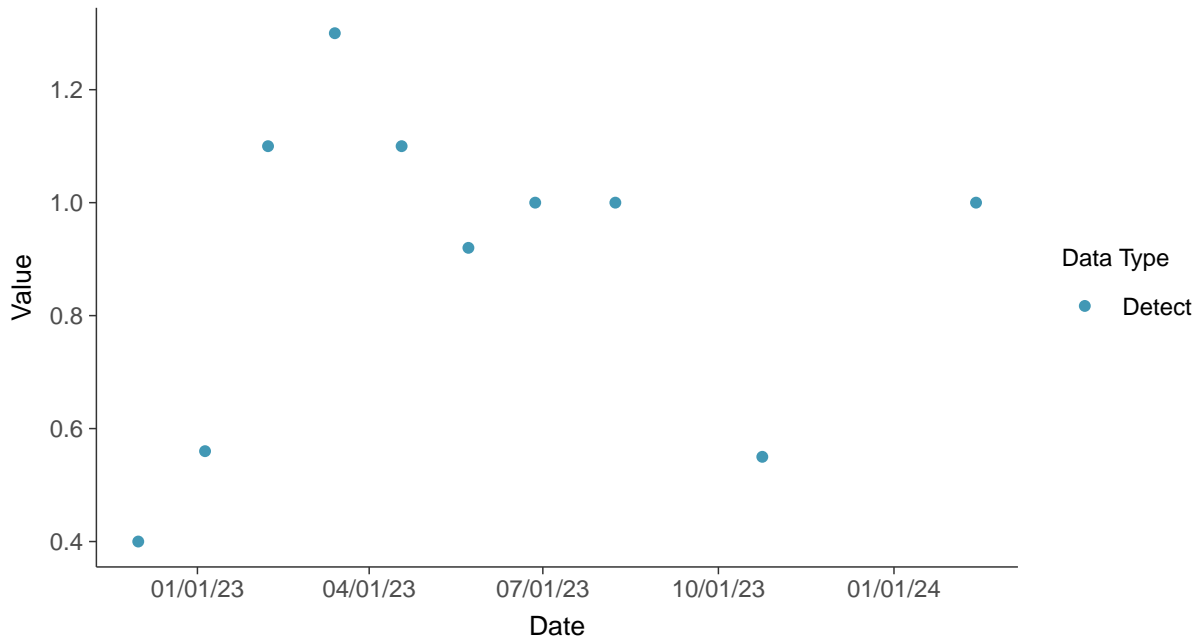


Appendix IV: Fluoride (App IV), MW-08

ID: 1_18_5_113

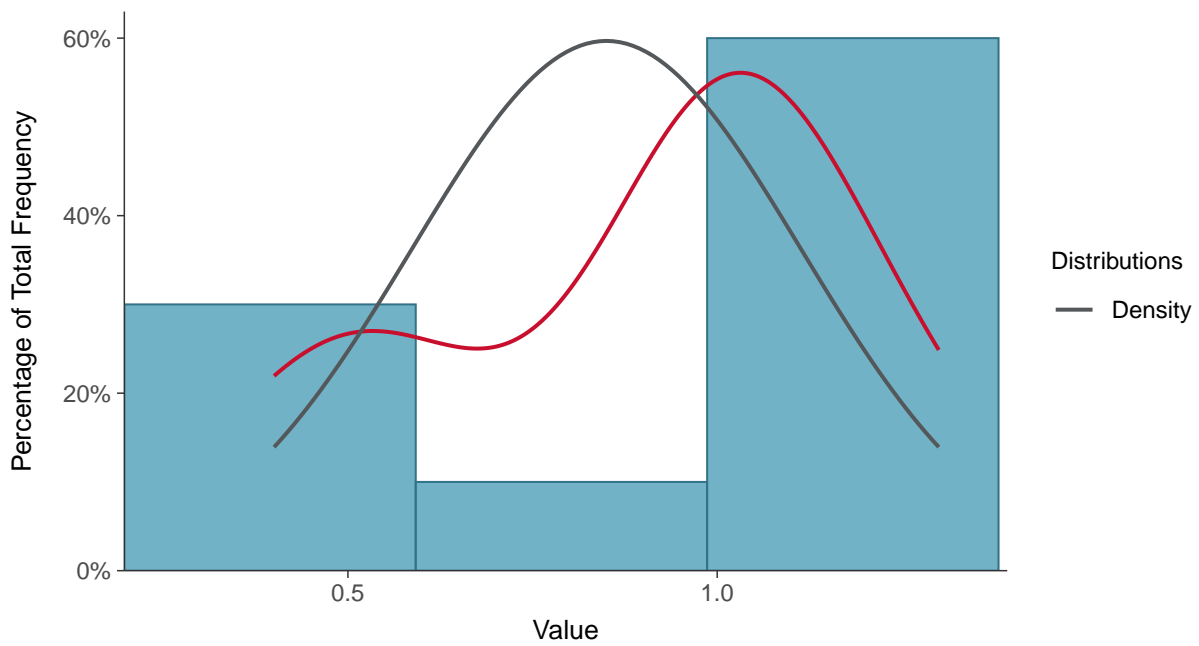
Scatter Plot

Fluoride (App IV), MW-08 (mg/L)



Histogram

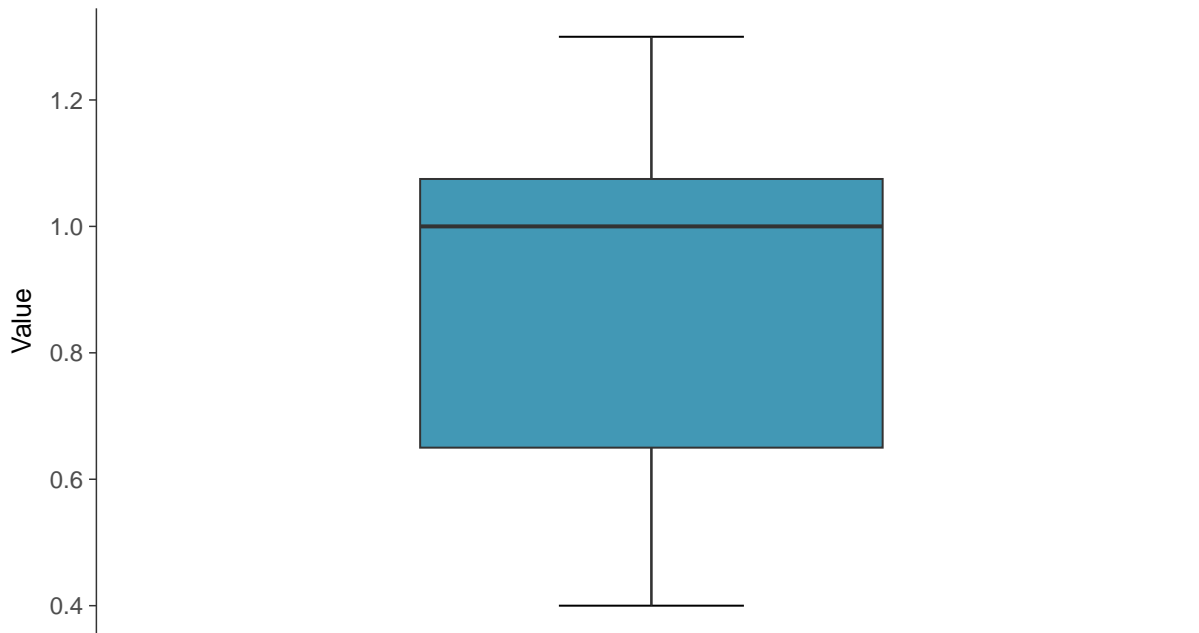
Fluoride (App IV), MW-08 (mg/L)





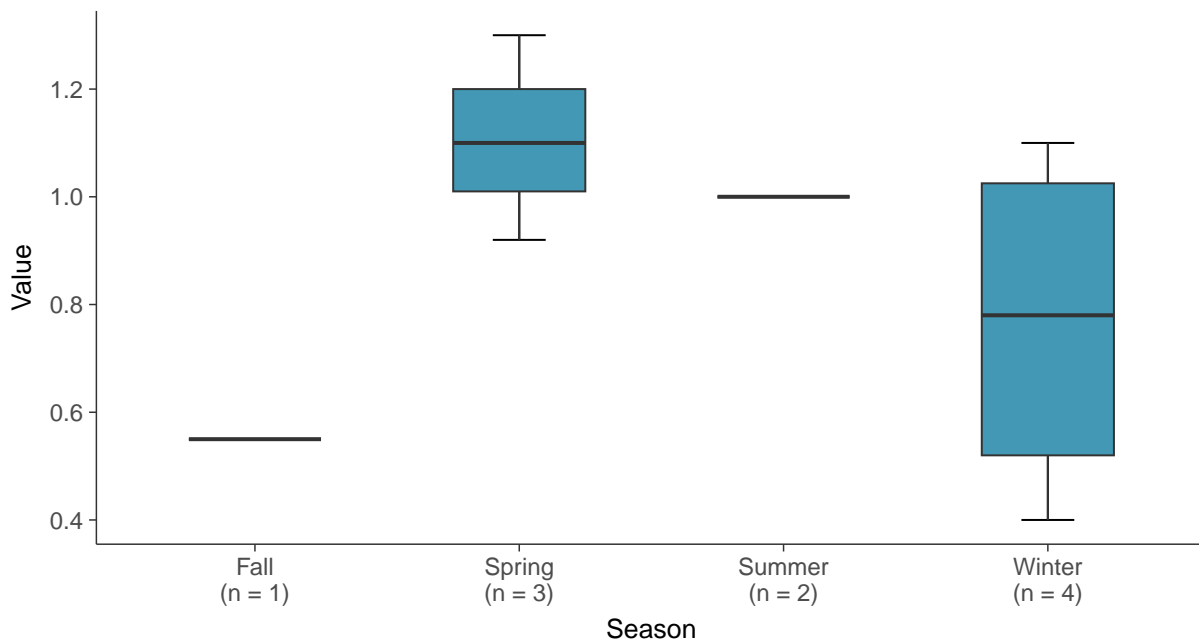
Boxplot

Fluoride (App IV), MW-08 (mg/L)



Boxplot by Season

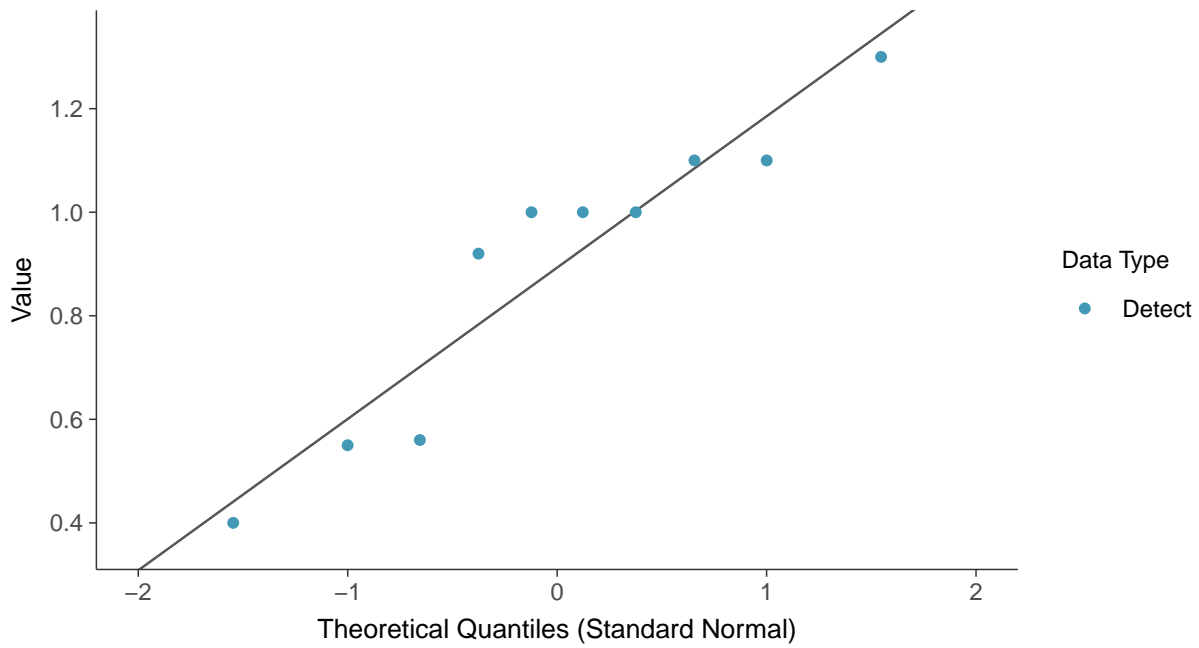
Fluoride (App IV), MW-08 (mg/L)





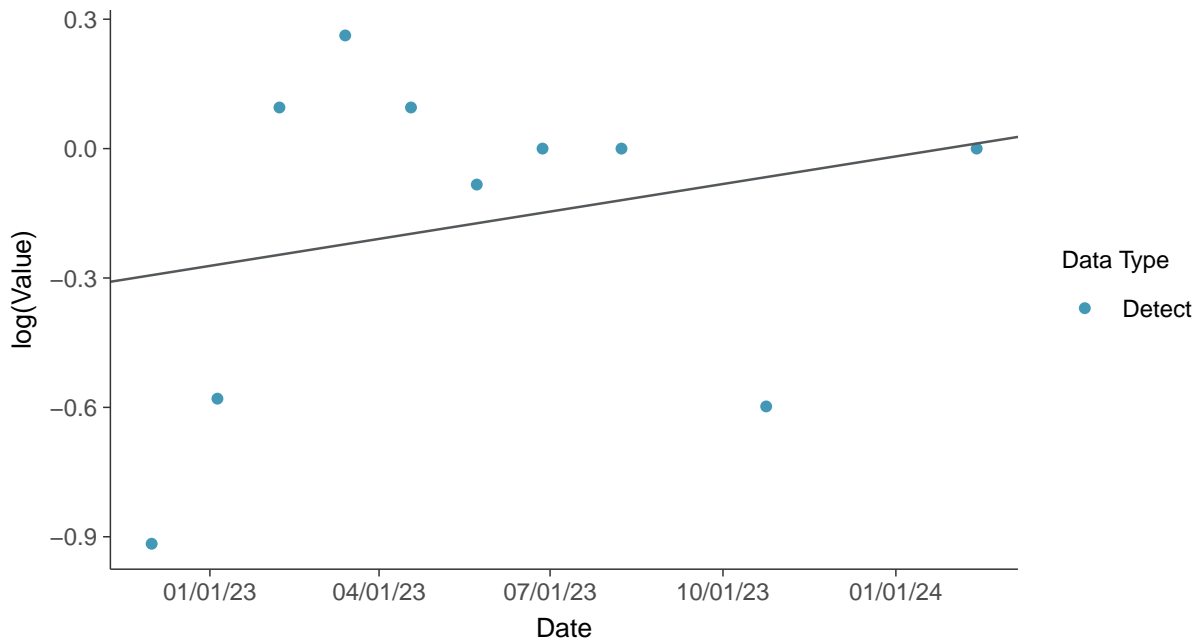
Normal Q-Q plot

Fluoride (App IV), MW-08 (mg/L)



Trend Regression: Lognormal MLE

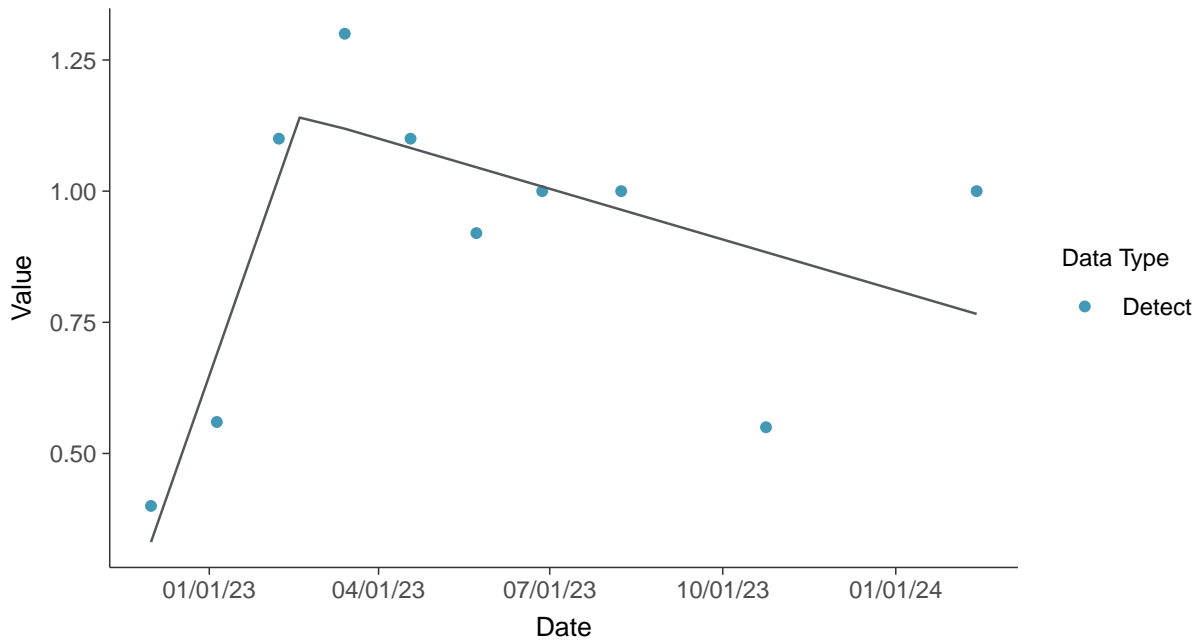
Fluoride (App IV), MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-08 (mg/L)



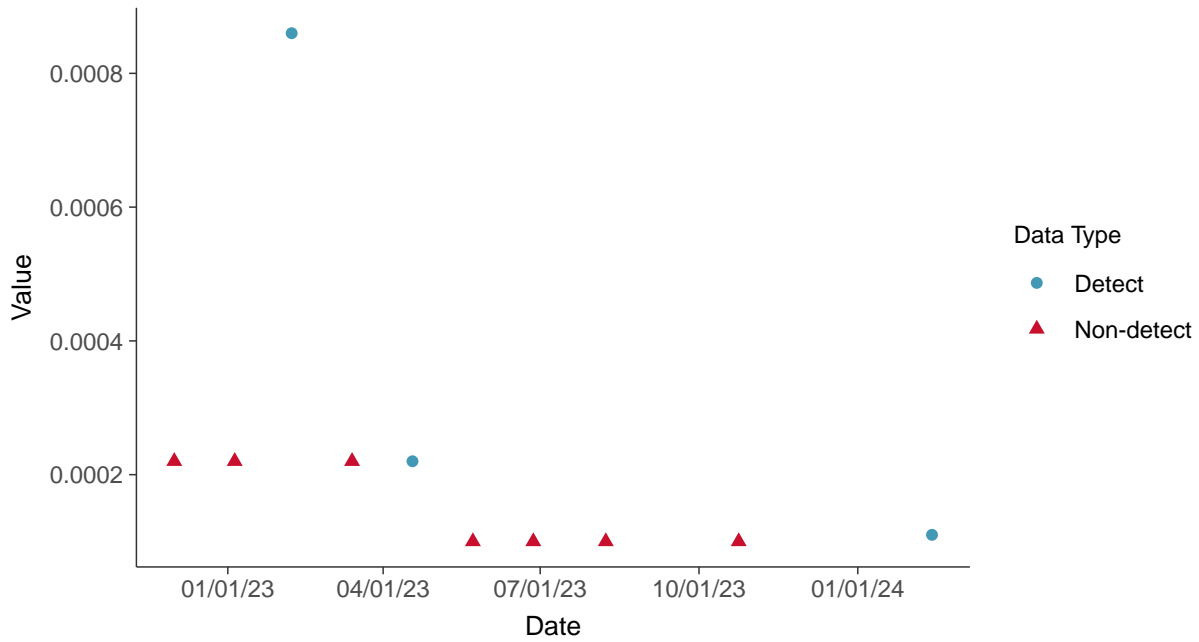


Appendix IV: Lead, MW-08

ID: 1_18_5_115

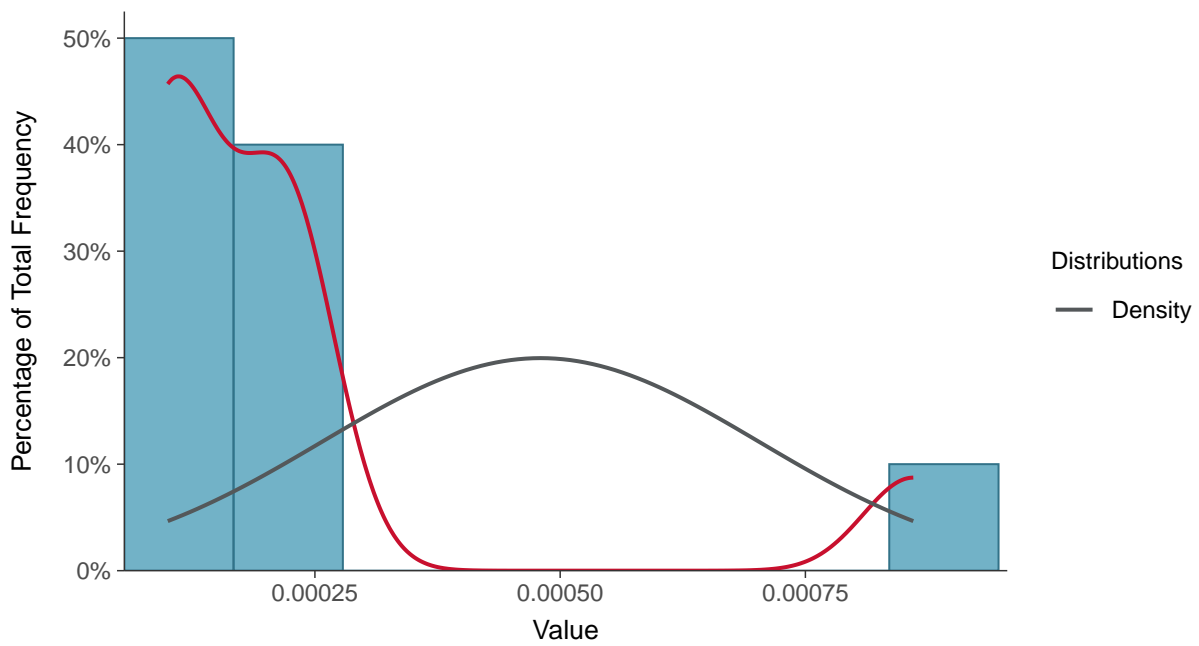
Scatter Plot

Lead, MW-08 (mg/L)



Histogram

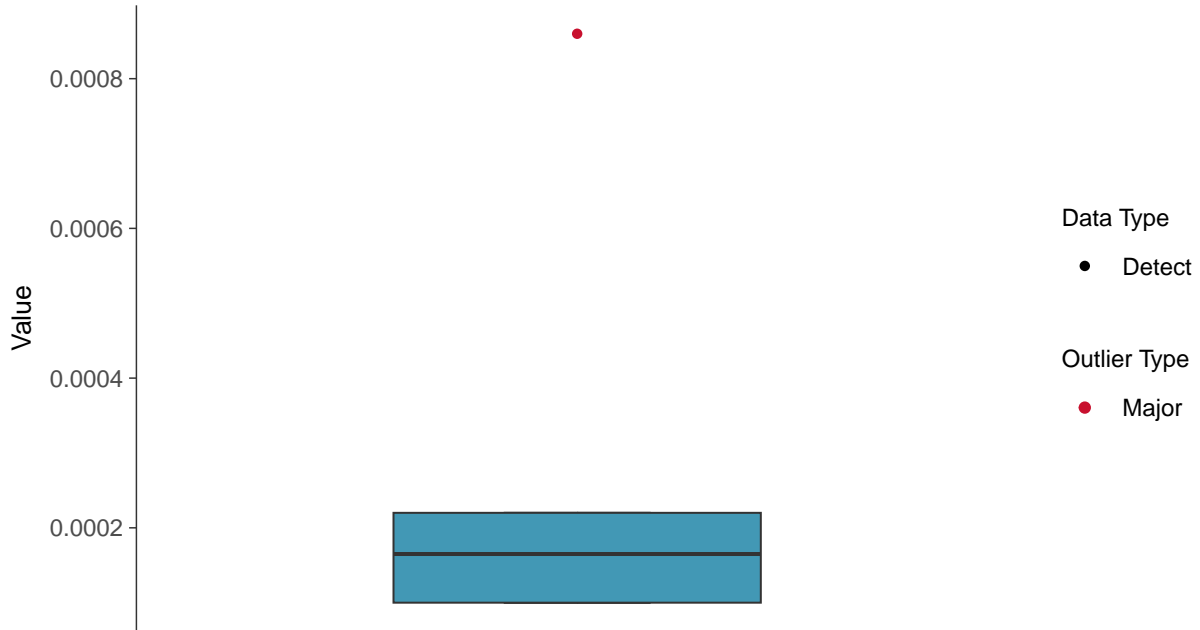
Lead, MW-08 (mg/L)





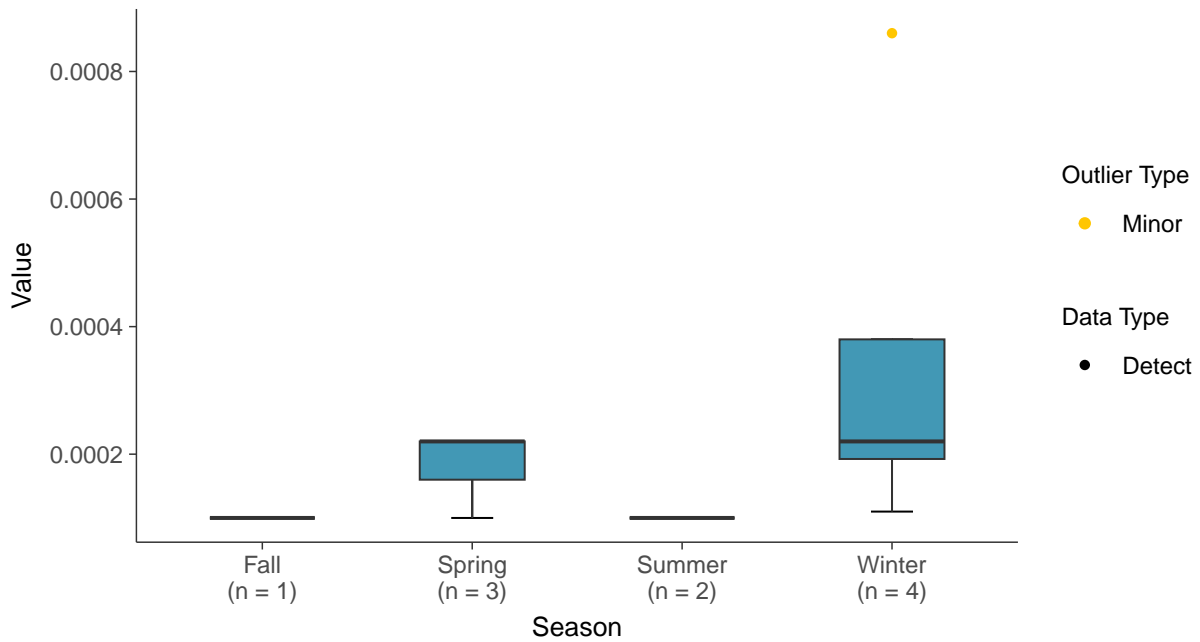
Boxplot

Lead, MW-08 (mg/L)



Boxplot by Season

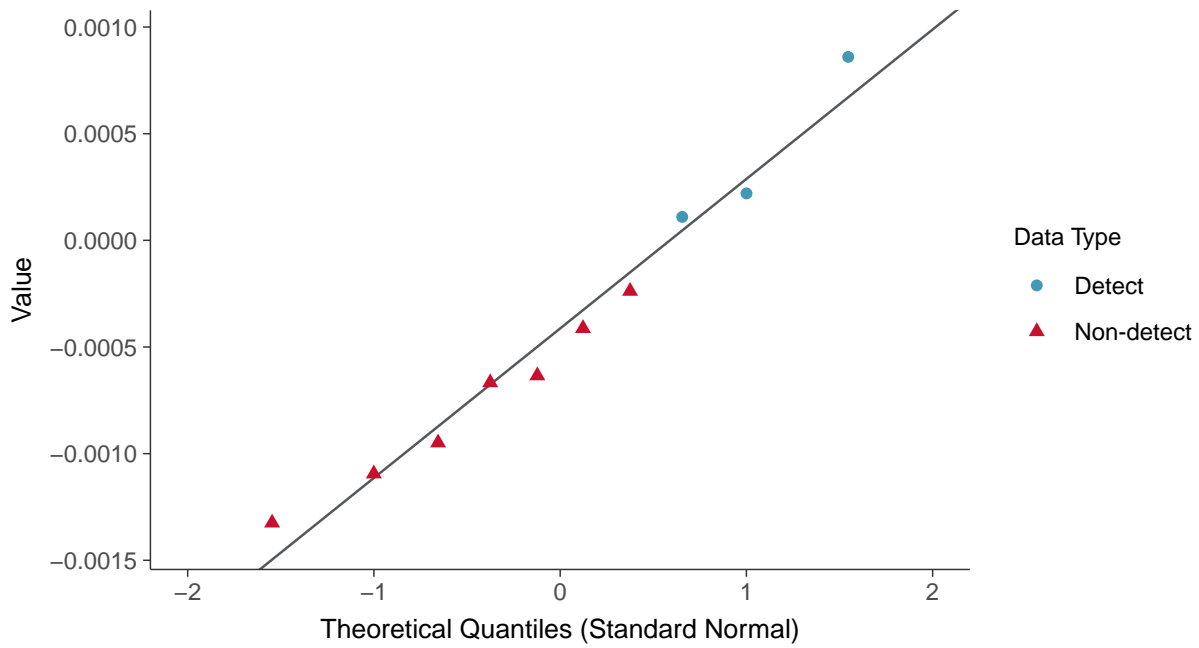
Lead, MW-08 (mg/L)





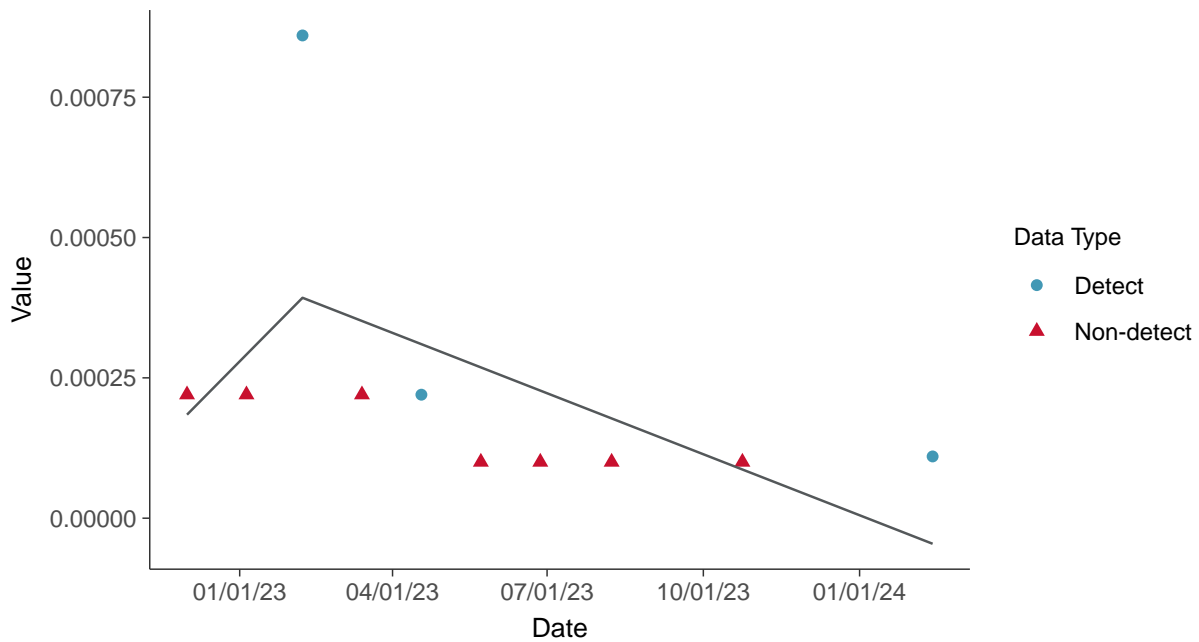
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear

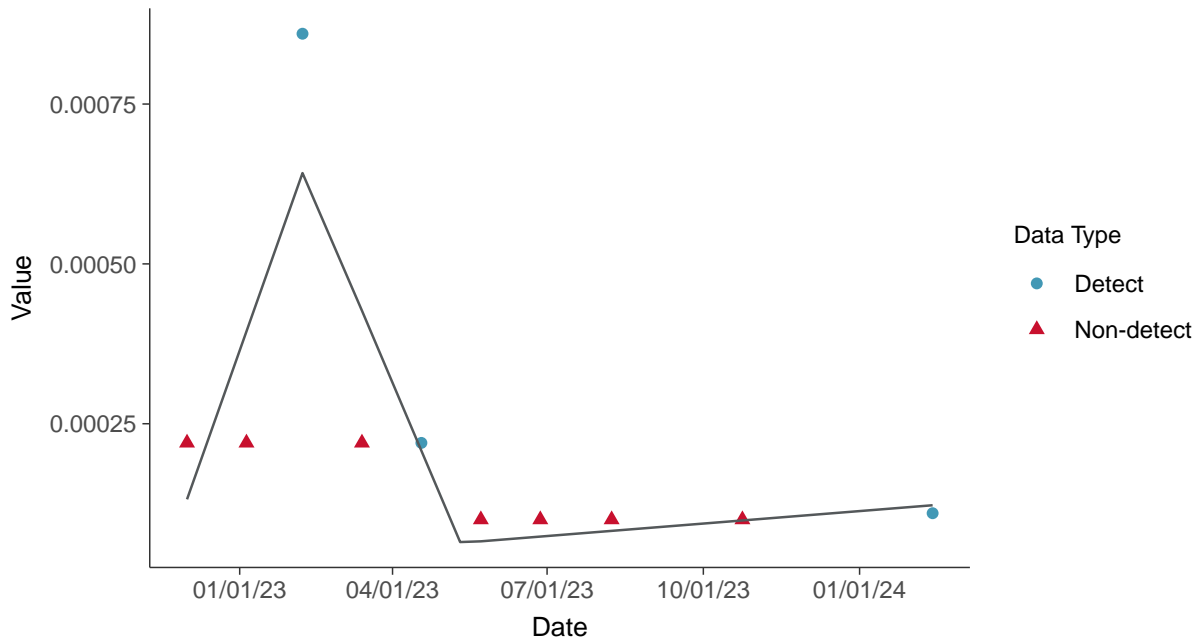
Lead, MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

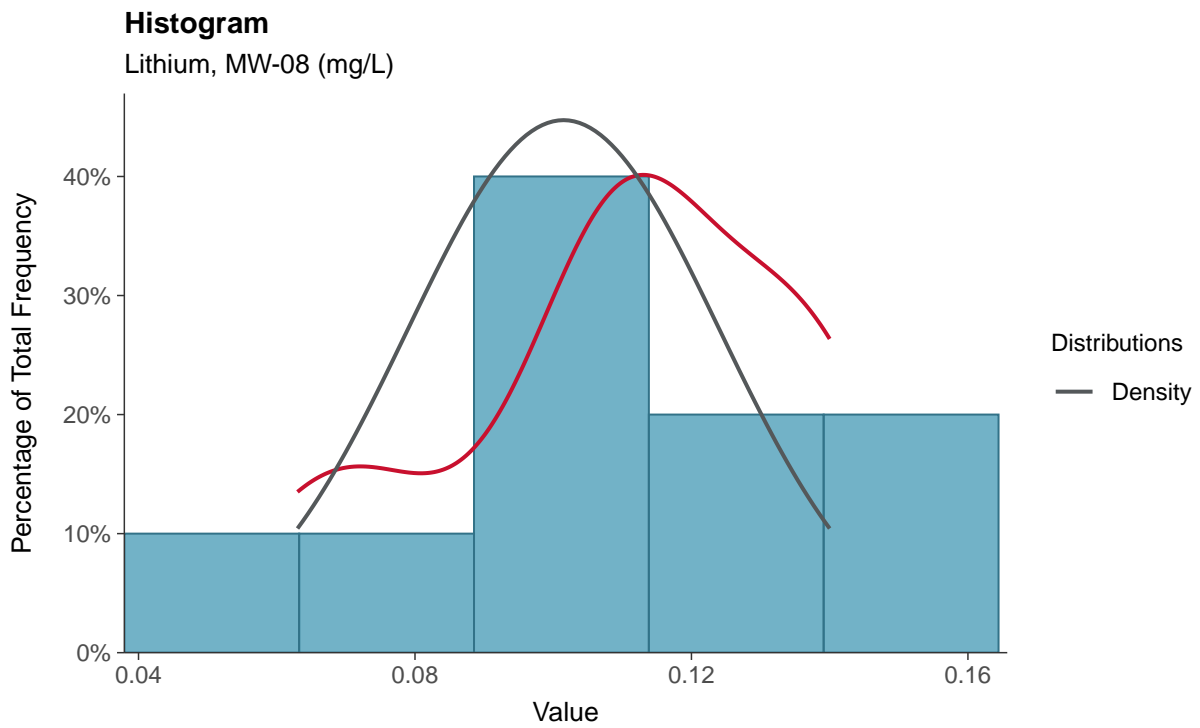
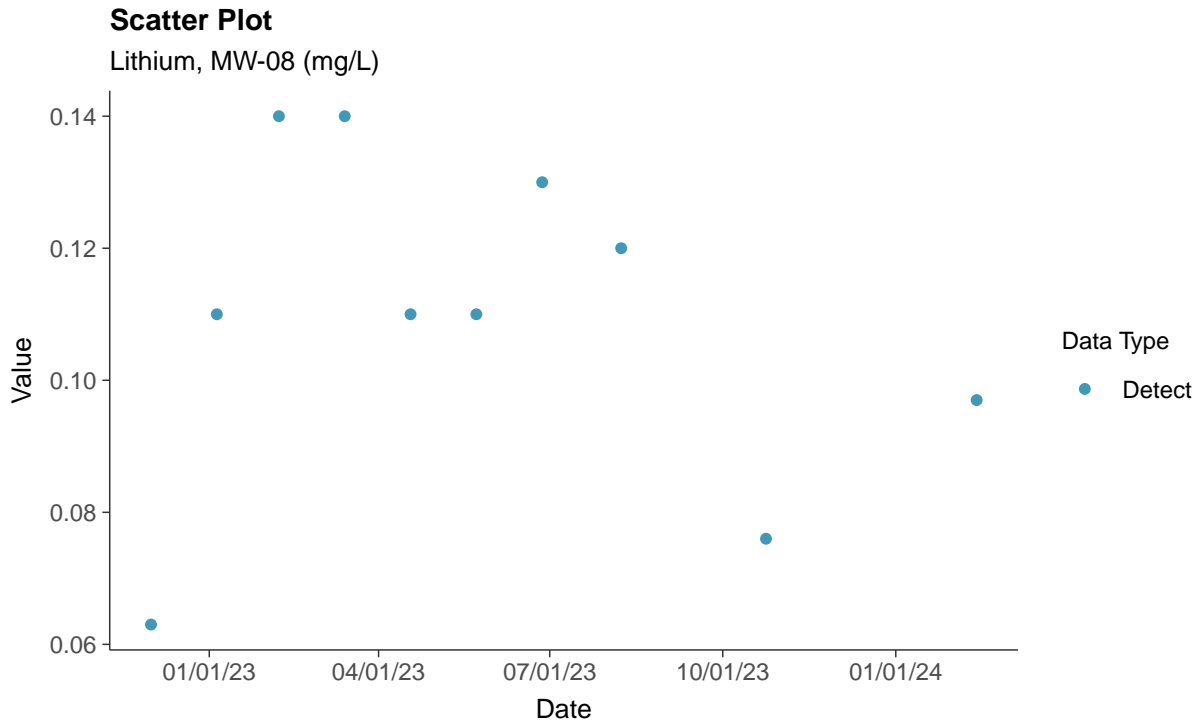
Lead, MW-08 (mg/L)





Appendix IV: Lithium, MW-08

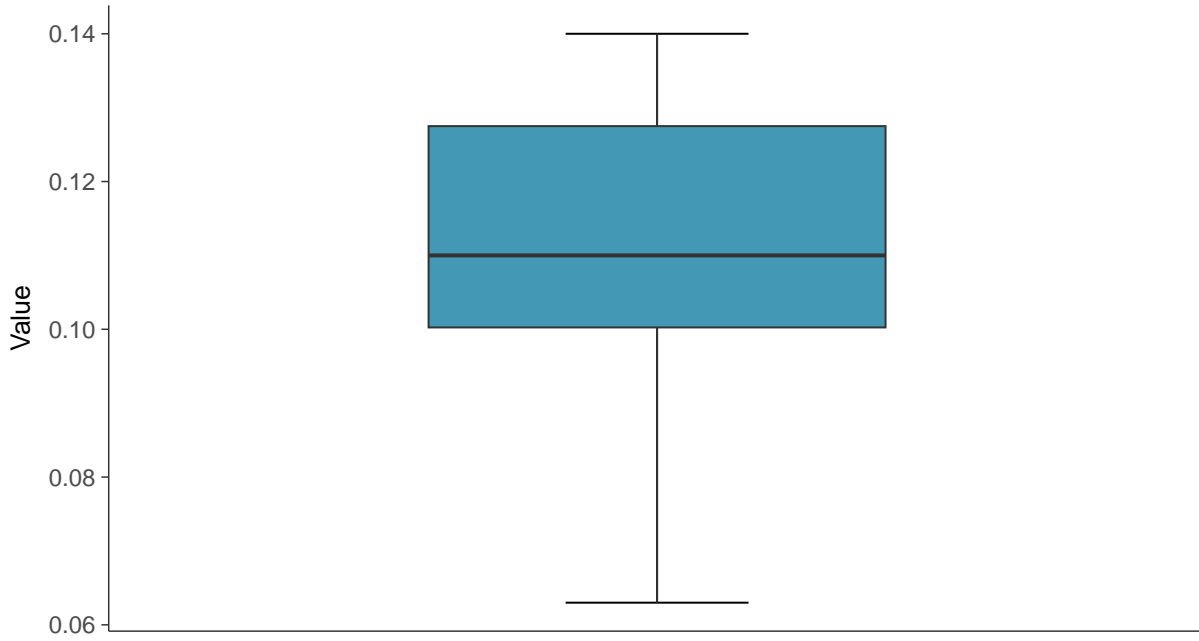
ID: 1_18_5_116





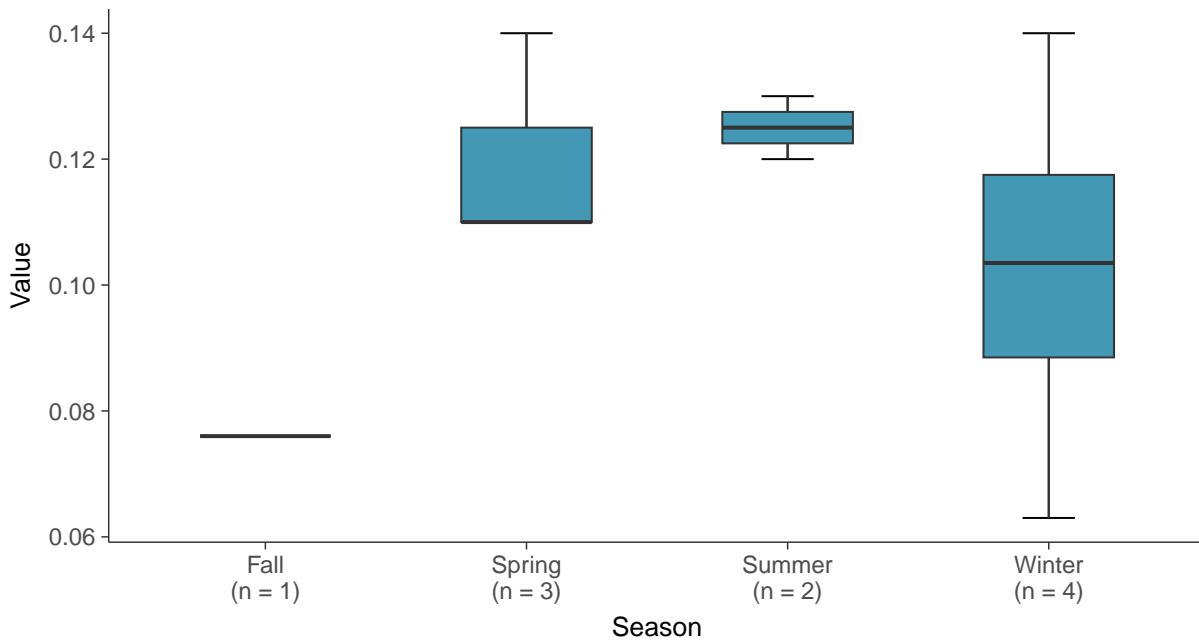
Boxplot

Lithium, MW-08 (mg/L)



Boxplot by Season

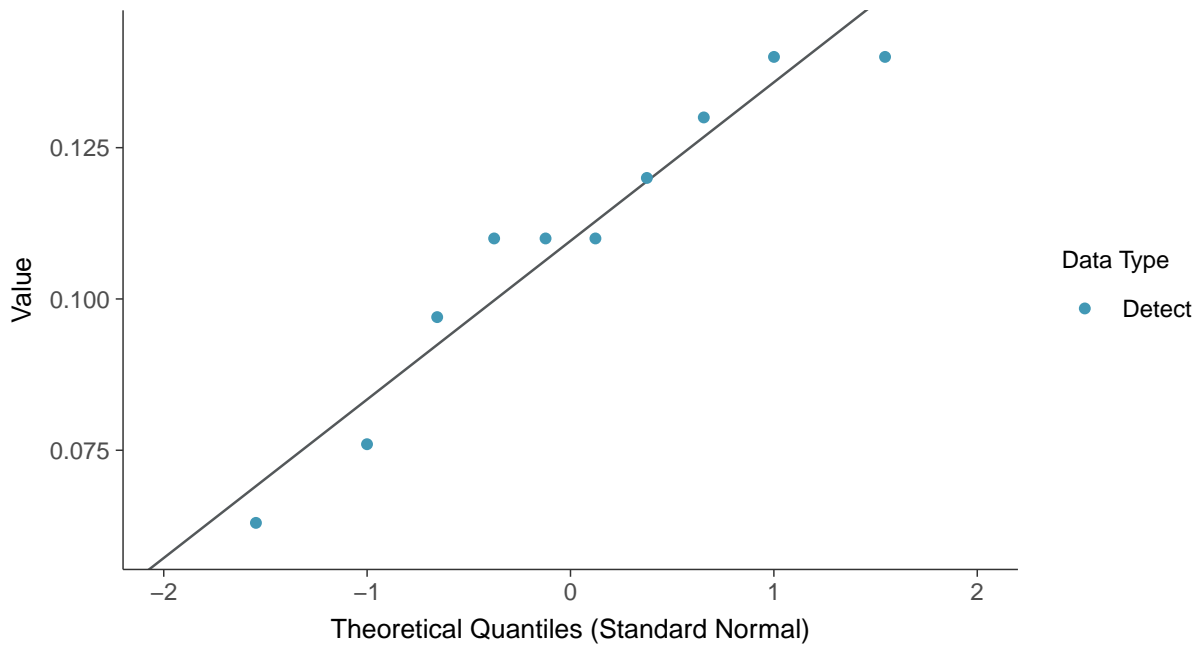
Lithium, MW-08 (mg/L)





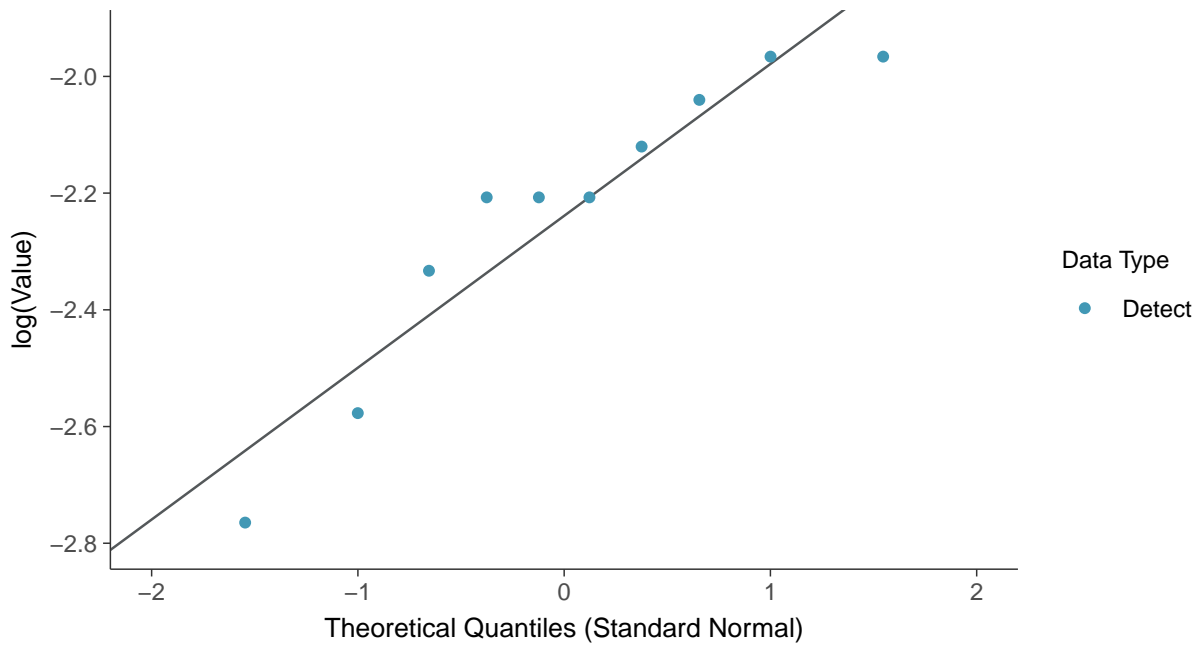
Normal Q-Q plot

Lithium, MW-08 (mg/L)



Lognormal Q-Q plot

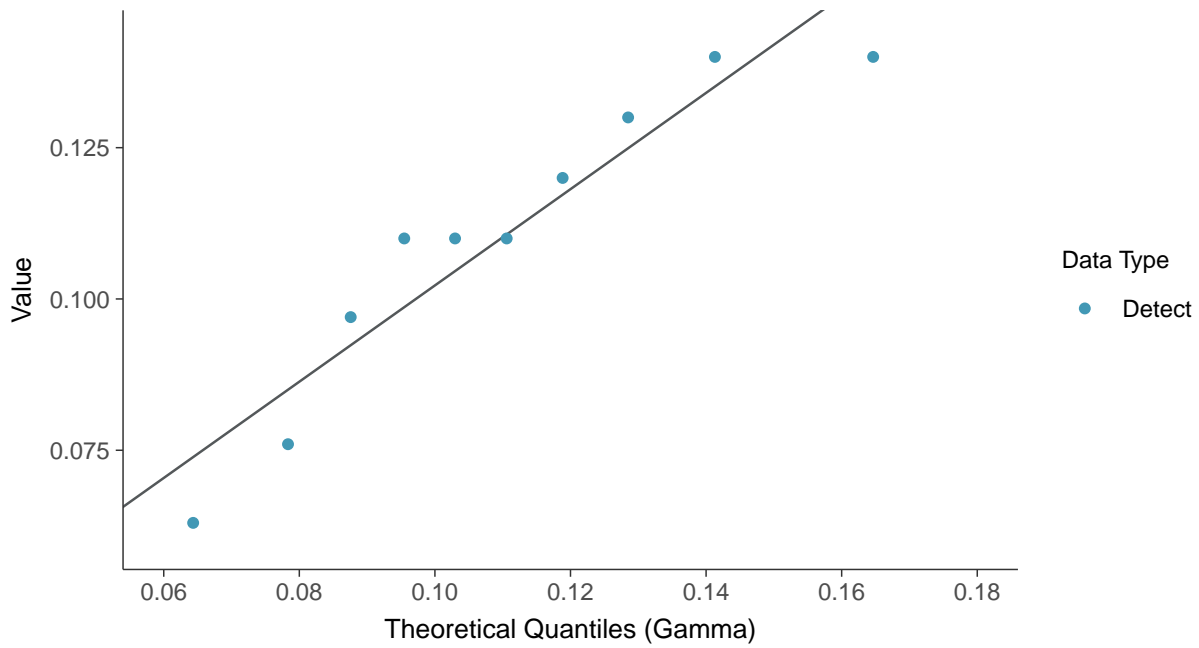
Lithium, MW-08 (mg/L)





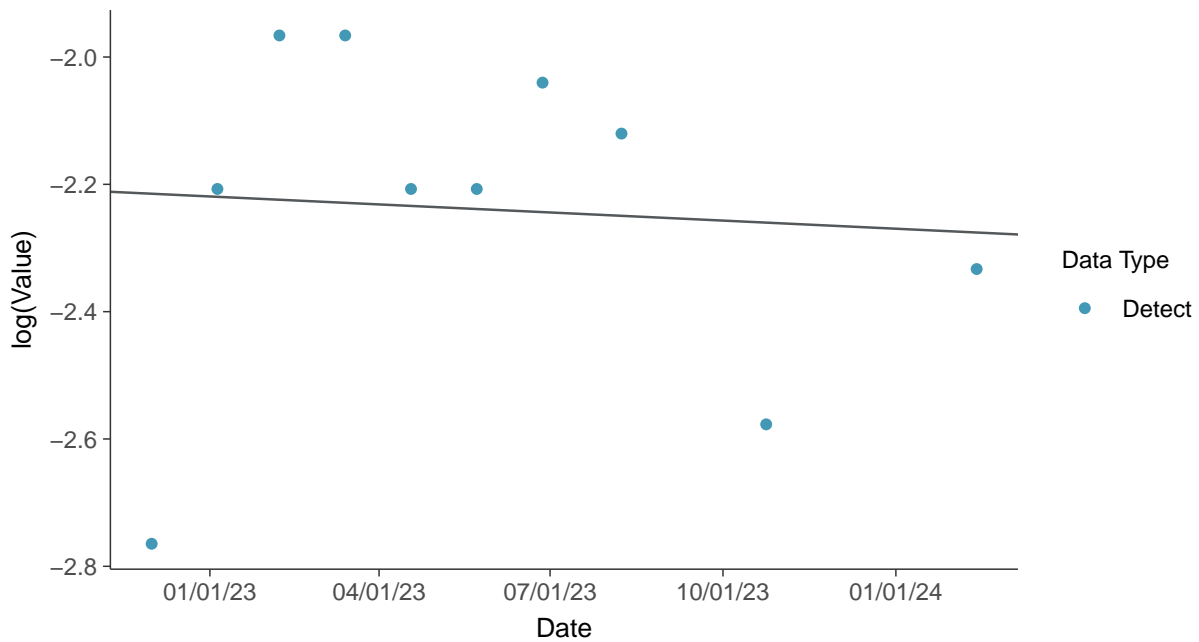
Gamma Q-Q plot

Lithium, MW-08 (mg/L)



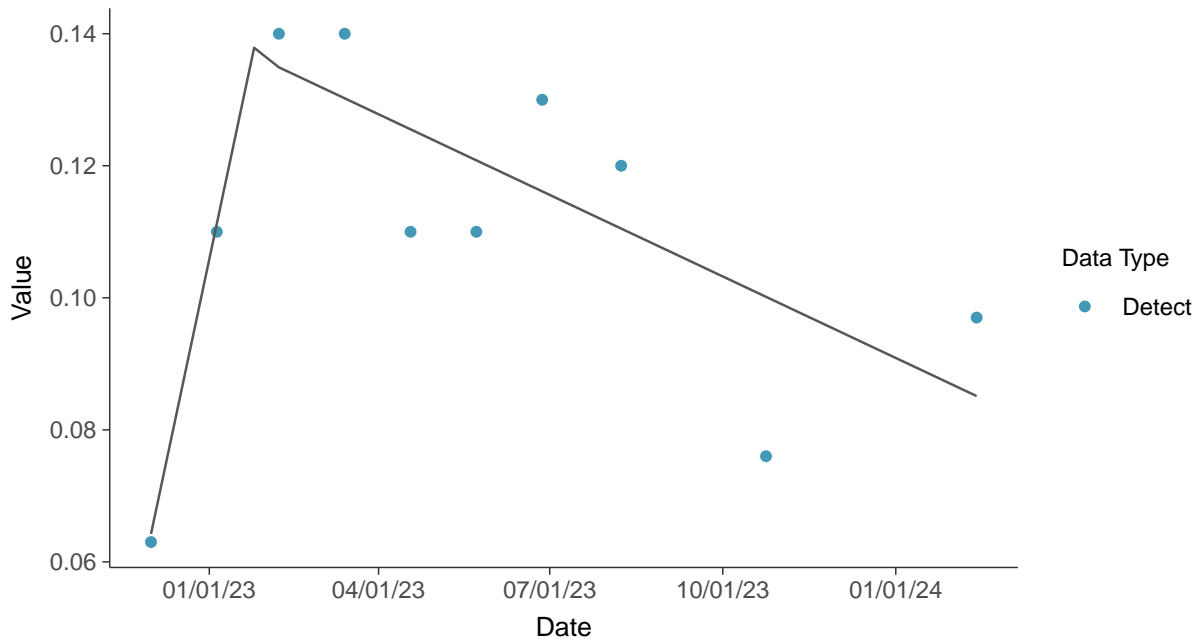
Trend Regression: Lognormal MLE

Lithium, MW-08 (mg/L)





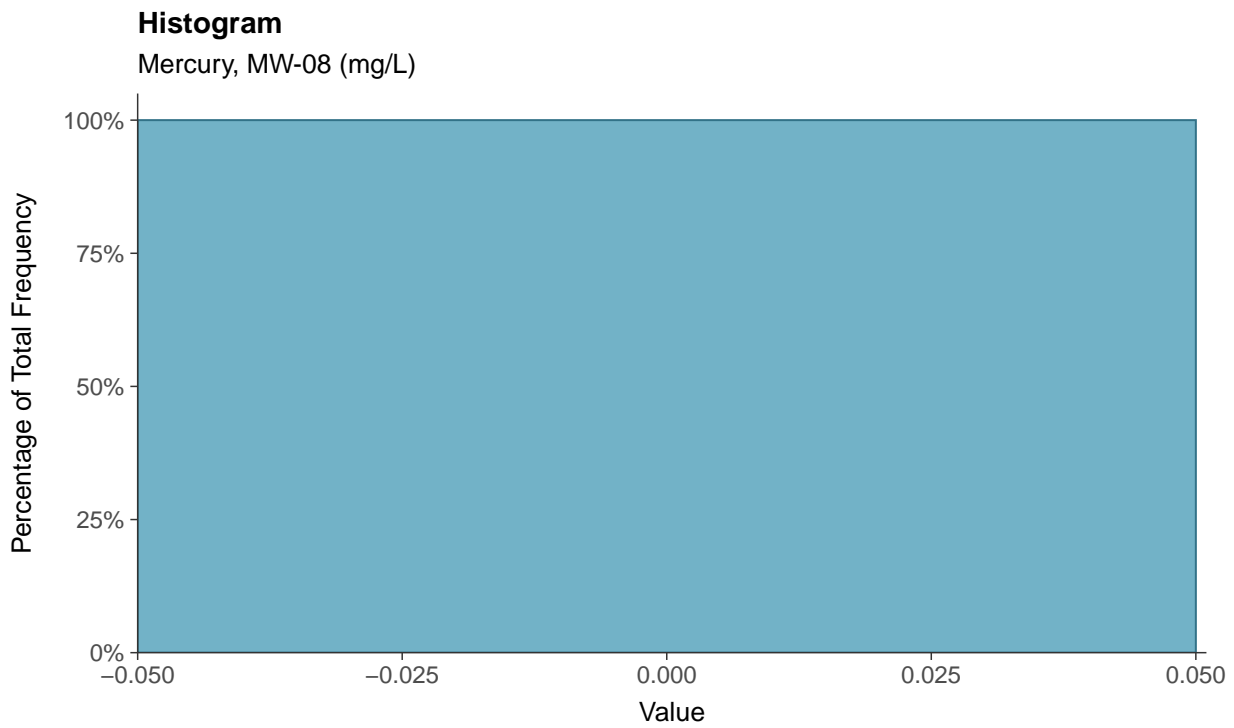
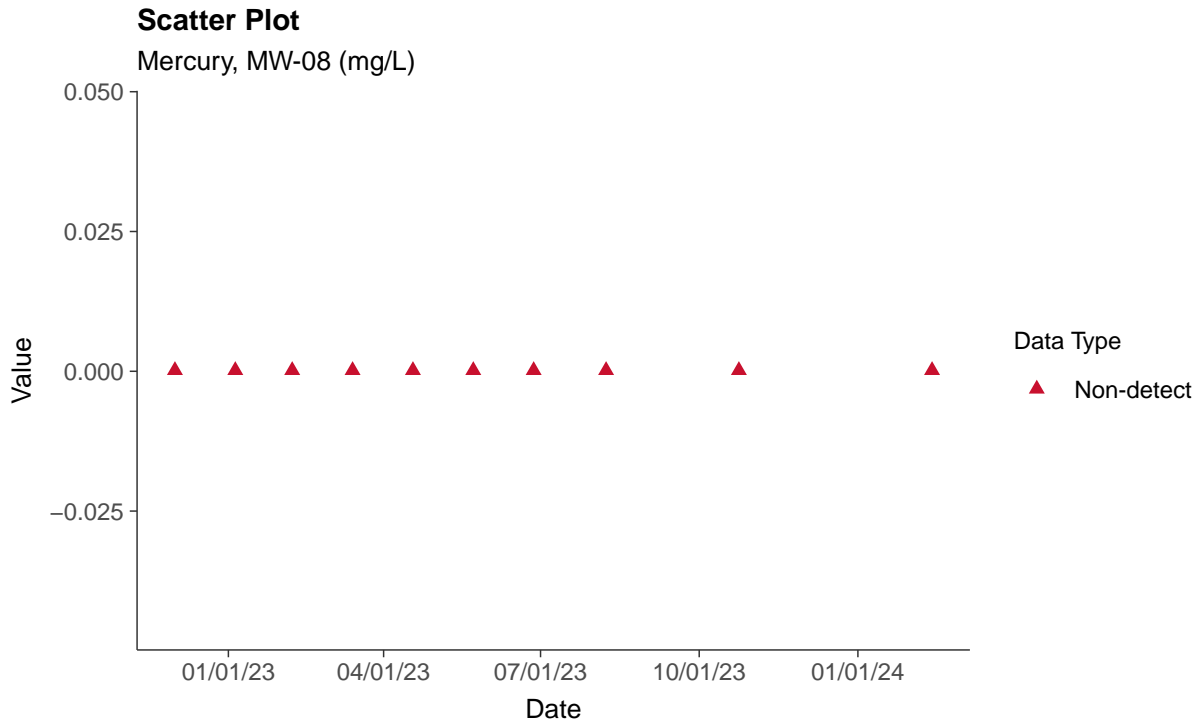
Trend Regression: Piecewise Linear-Linear
Lithium, MW-08 (mg/L)





Appendix IV: Mercury, MW-08

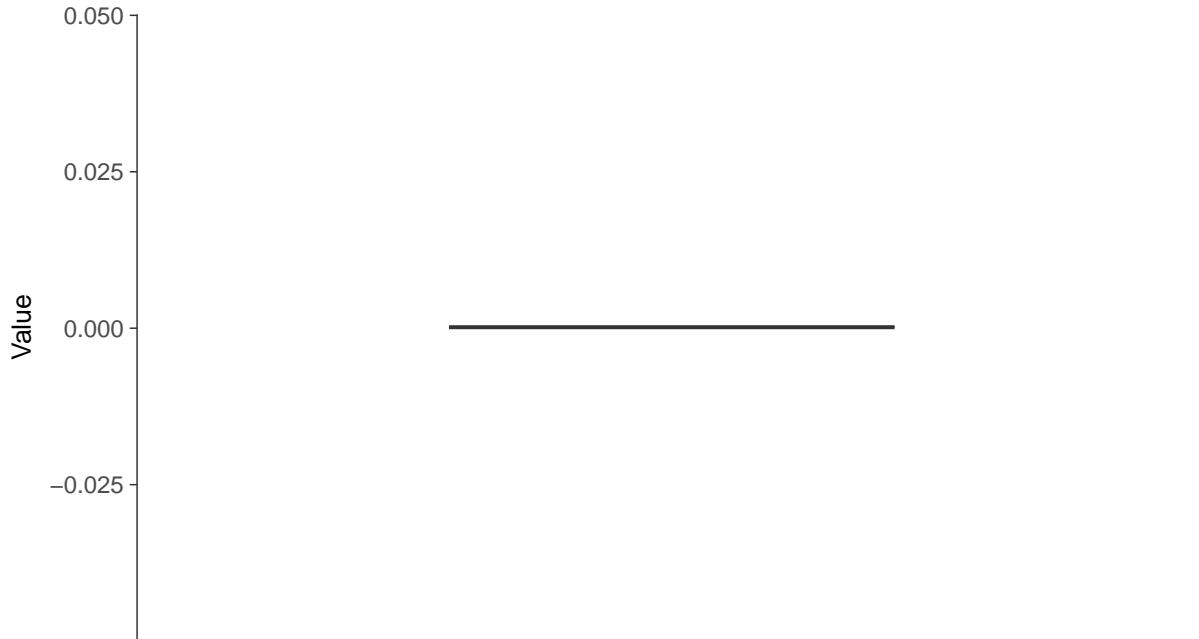
ID: 1_18_5_117





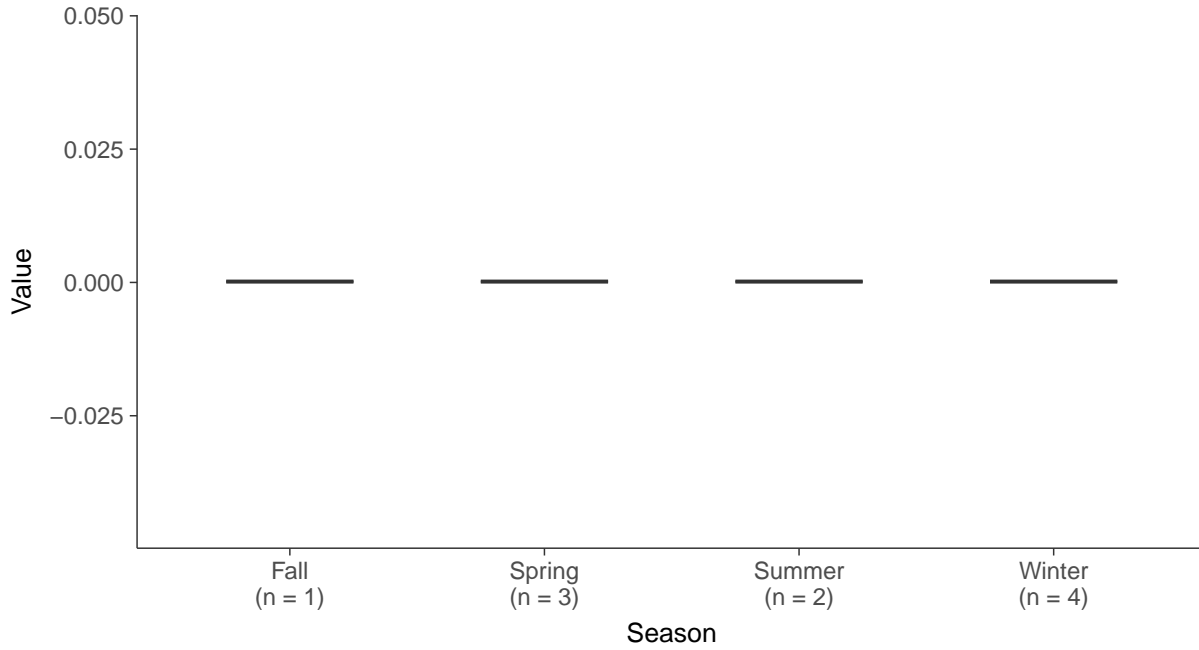
Boxplot

Mercury, MW-08 (mg/L)



Boxplot by Season

Mercury, MW-08 (mg/L)



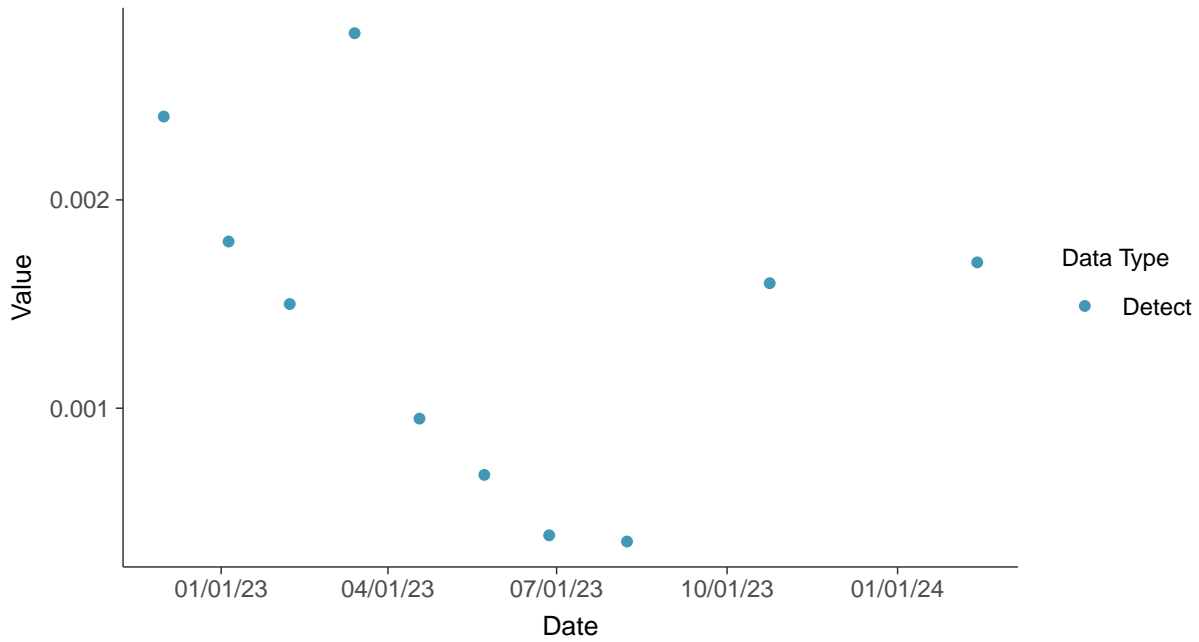


Appendix IV: Molybdenum, MW-08

ID: 1_18_5_118

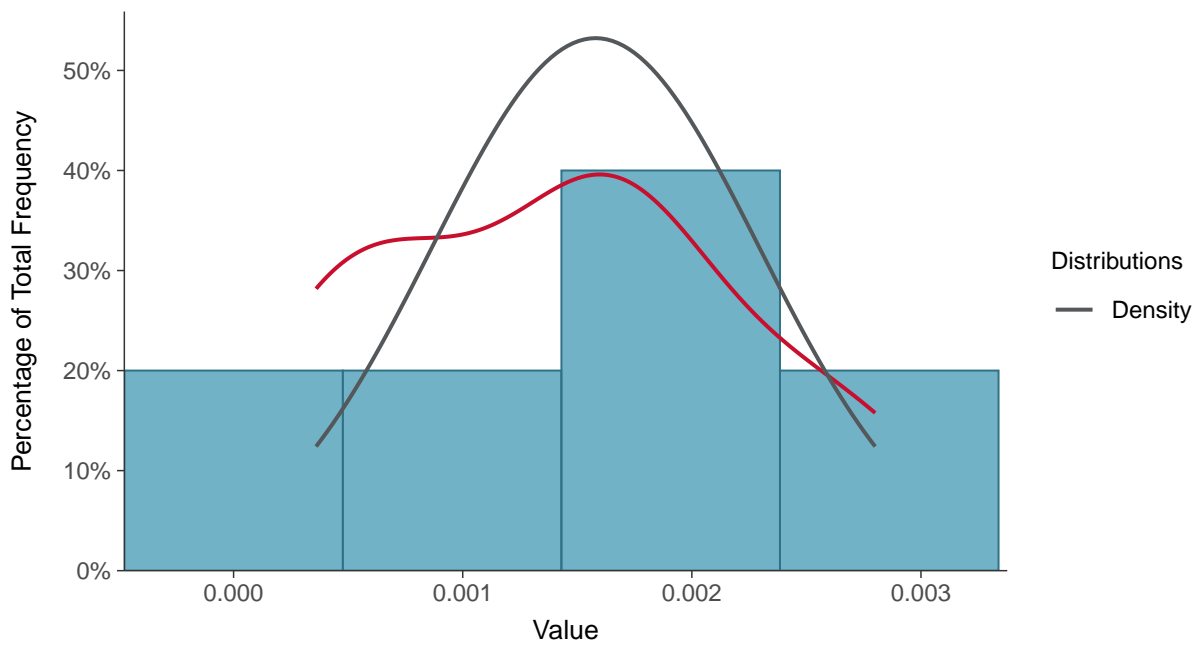
Scatter Plot

Molybdenum, MW-08 (mg/L)



Histogram

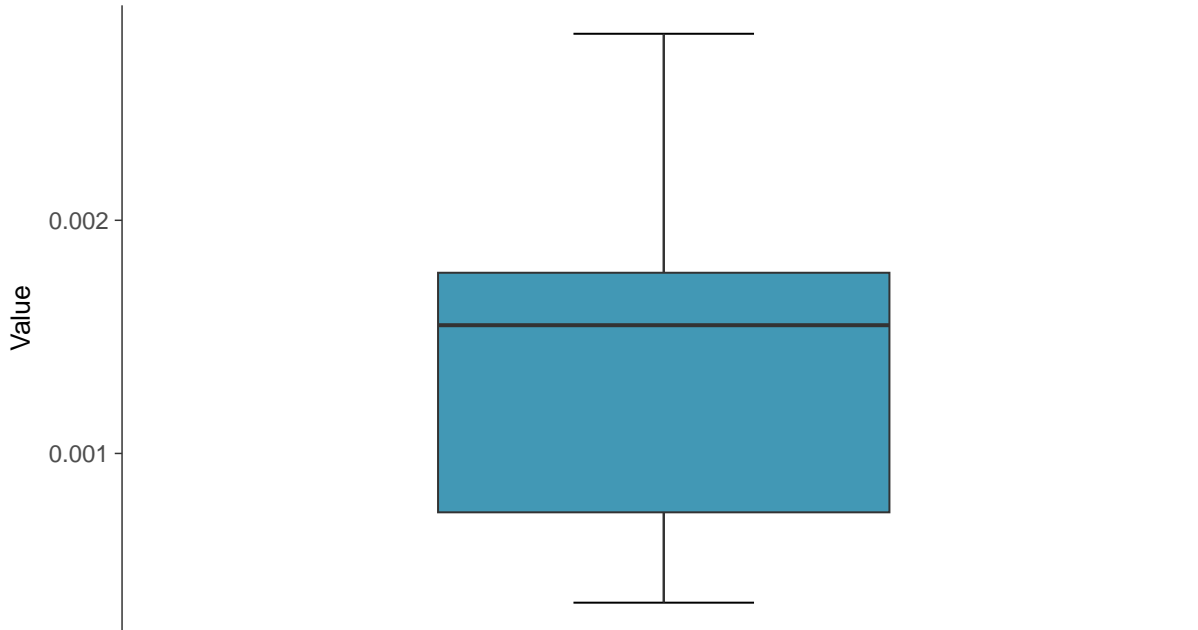
Molybdenum, MW-08 (mg/L)





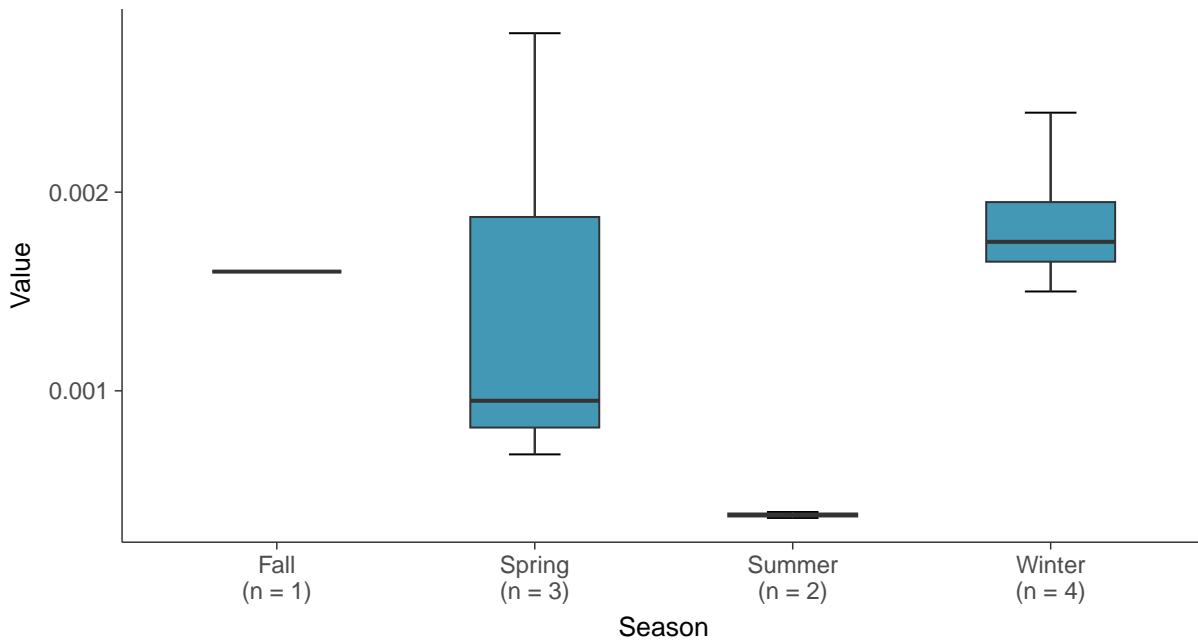
Boxplot

Molybdenum, MW-08 (mg/L)



Boxplot by Season

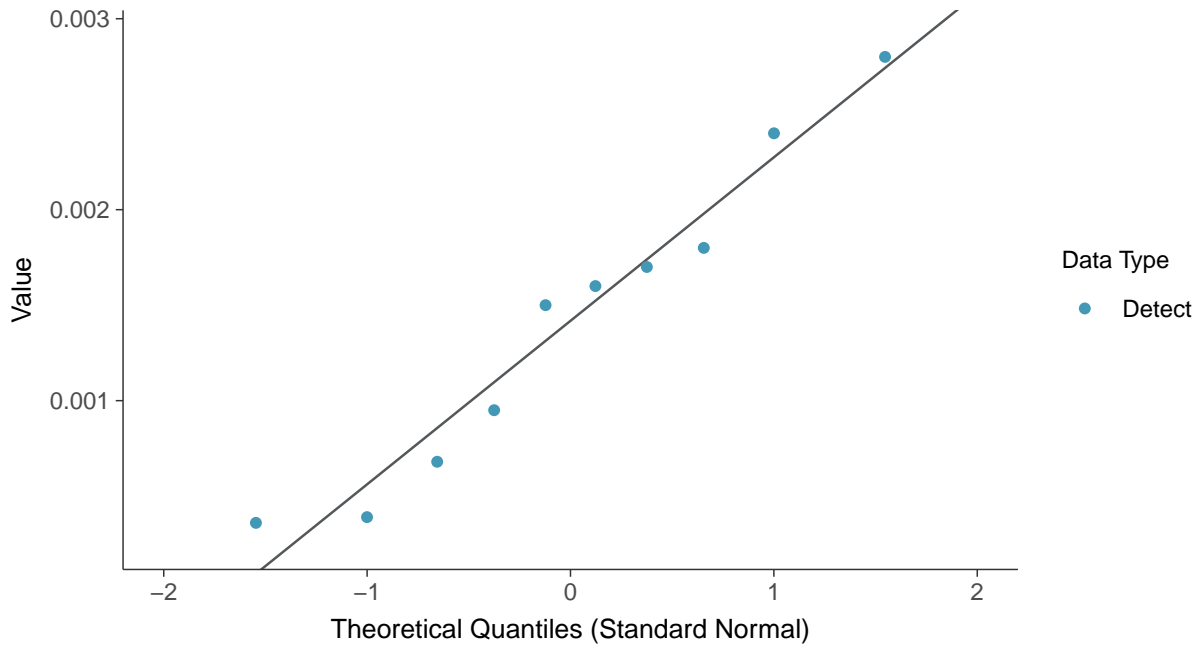
Molybdenum, MW-08 (mg/L)





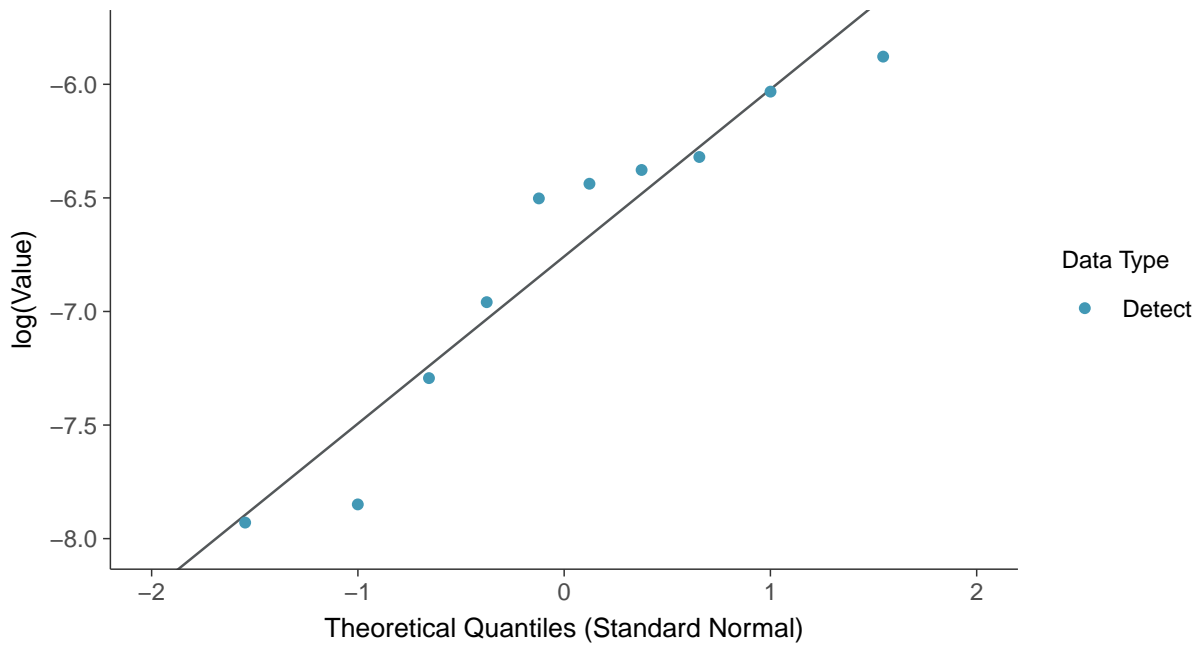
Normal Q-Q plot

Molybdenum, MW-08 (mg/L)



Lognormal Q-Q plot

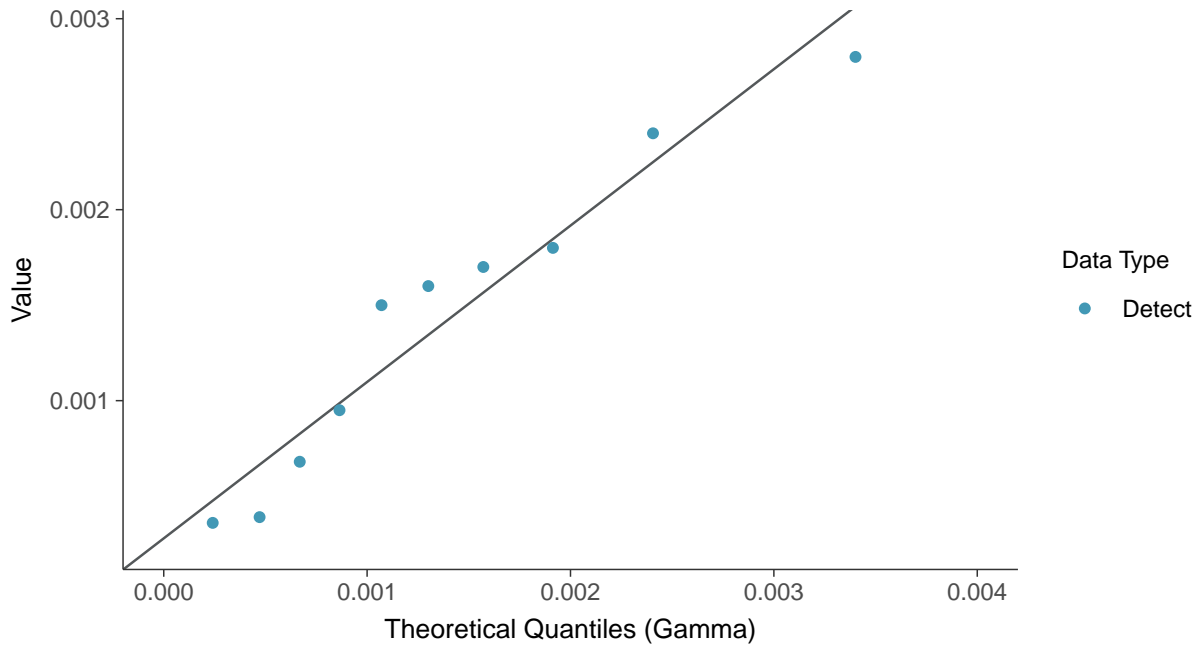
Molybdenum, MW-08 (mg/L)





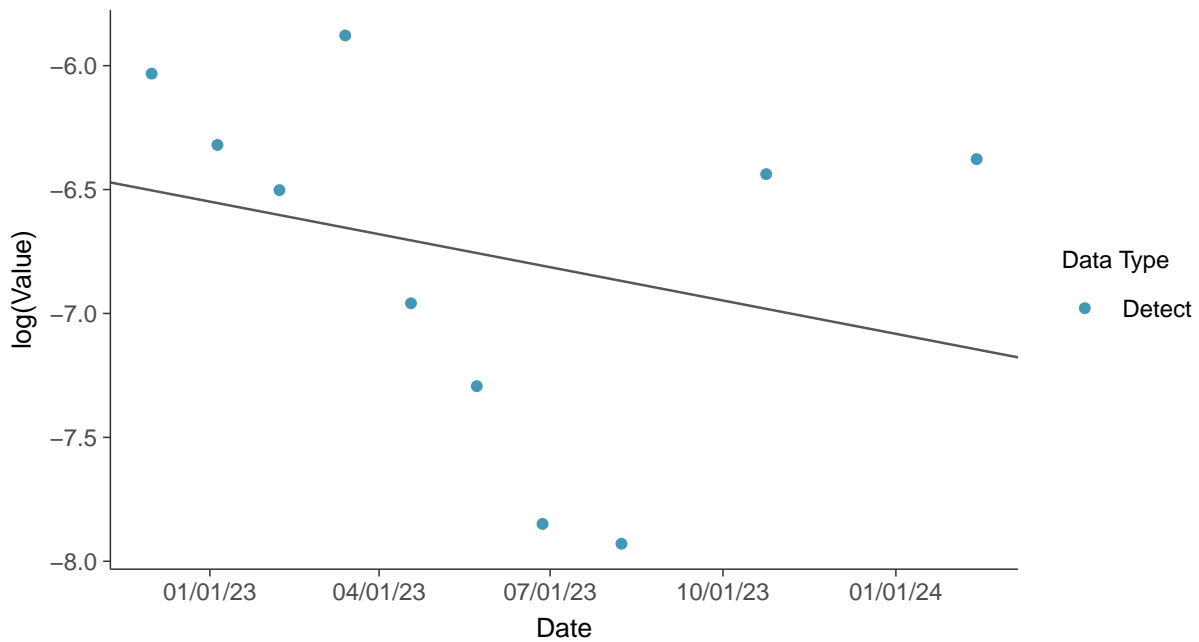
Gamma Q-Q plot

Molybdenum, MW-08 (mg/L)



Trend Regression: Lognormal MLE

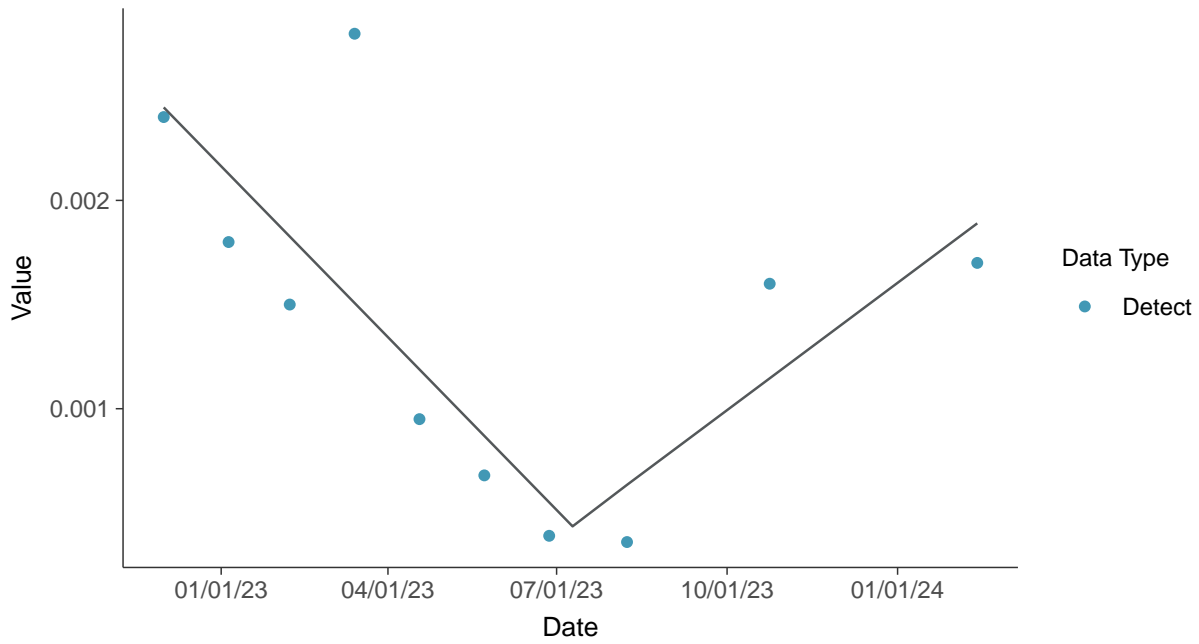
Molybdenum, MW-08 (mg/L)





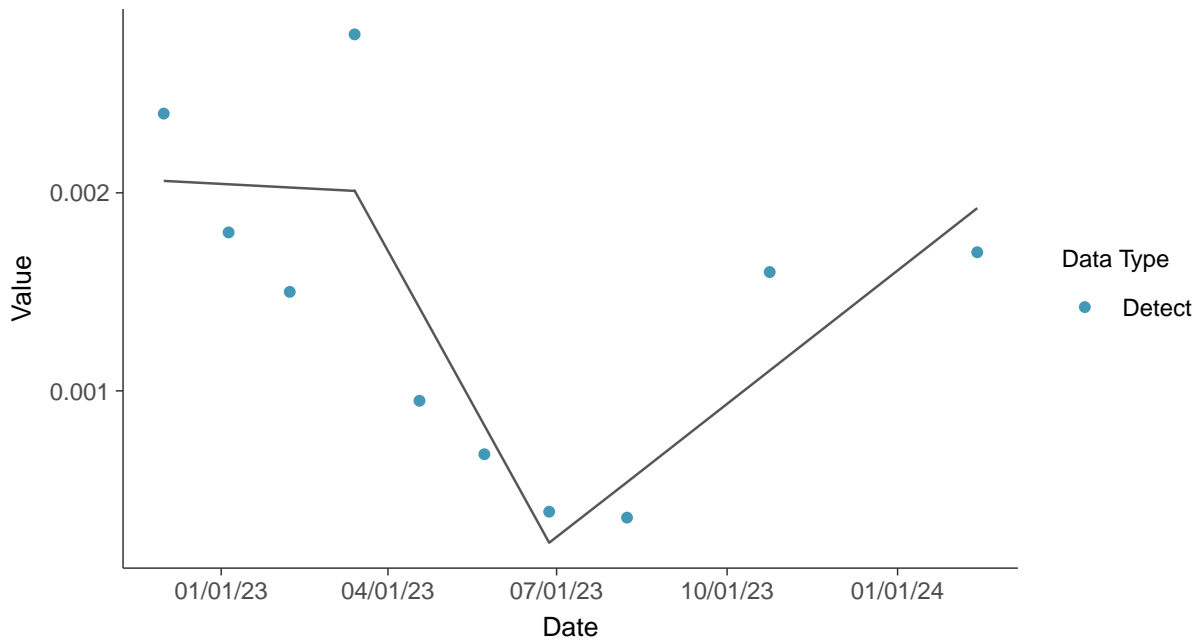
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-08 (mg/L)



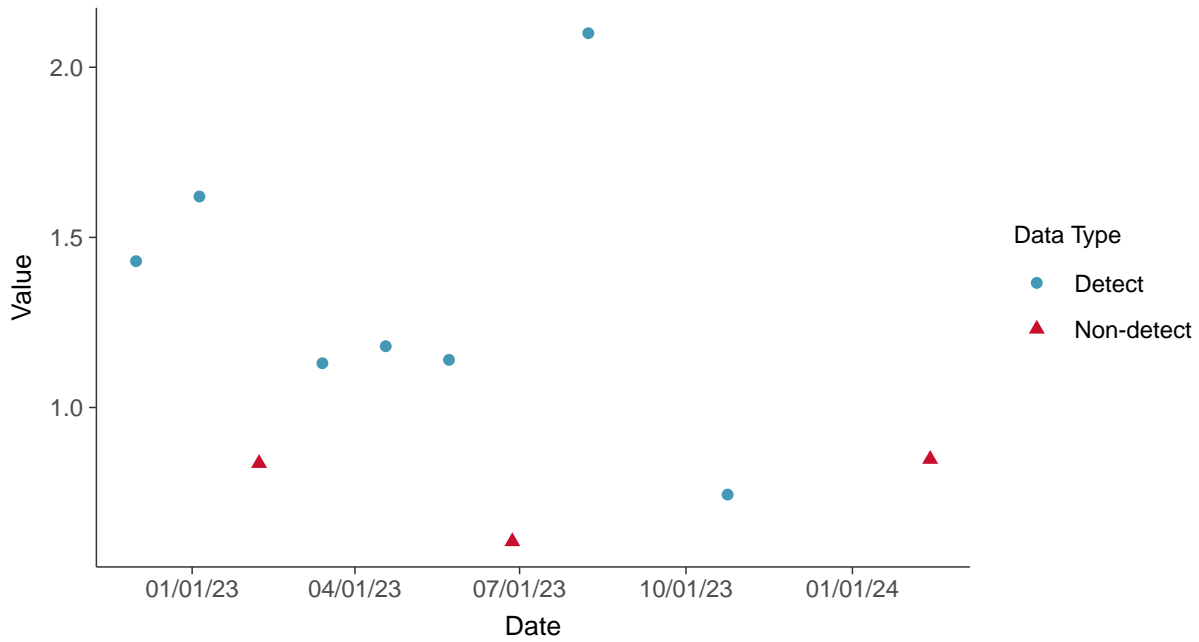


Appendix IV: Radium 226 and 228, MW-08

ID: 1_18_5_121

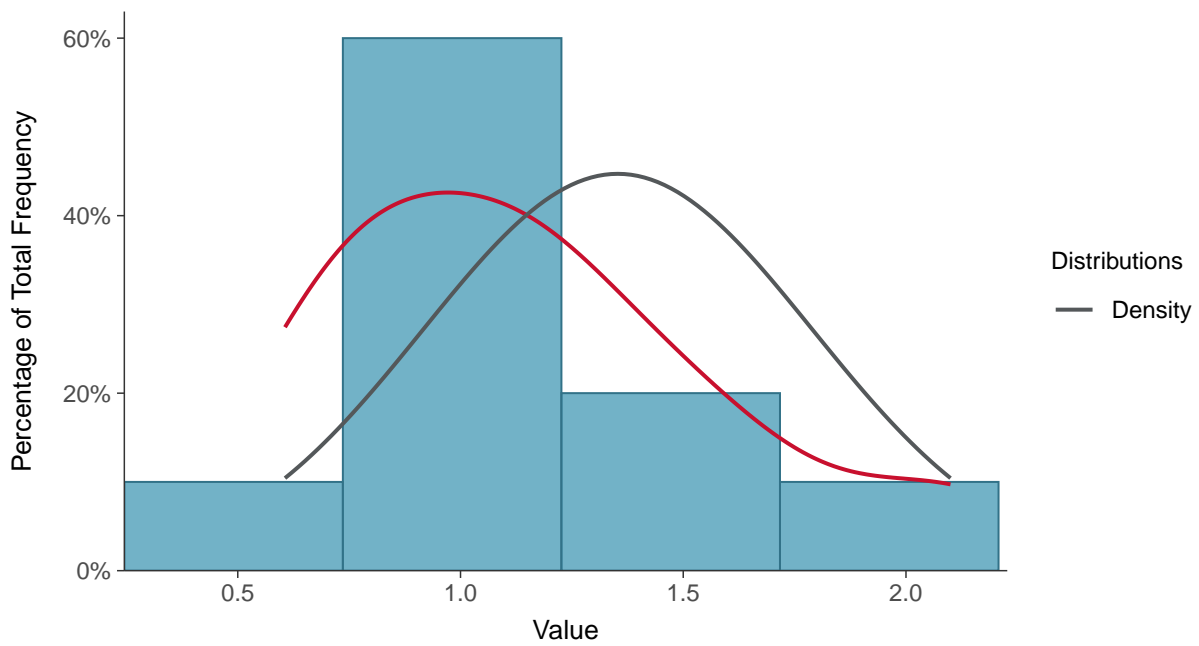
Scatter Plot

Radium 226 and 228, MW-08 (pCi/L)



Histogram

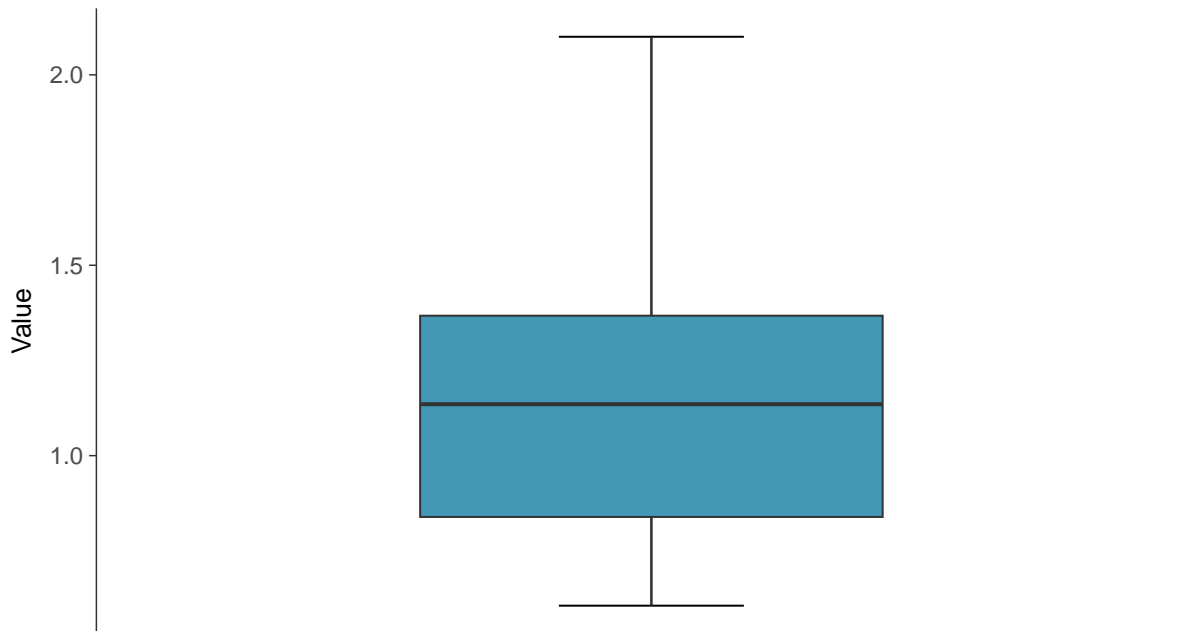
Radium 226 and 228, MW-08 (pCi/L)





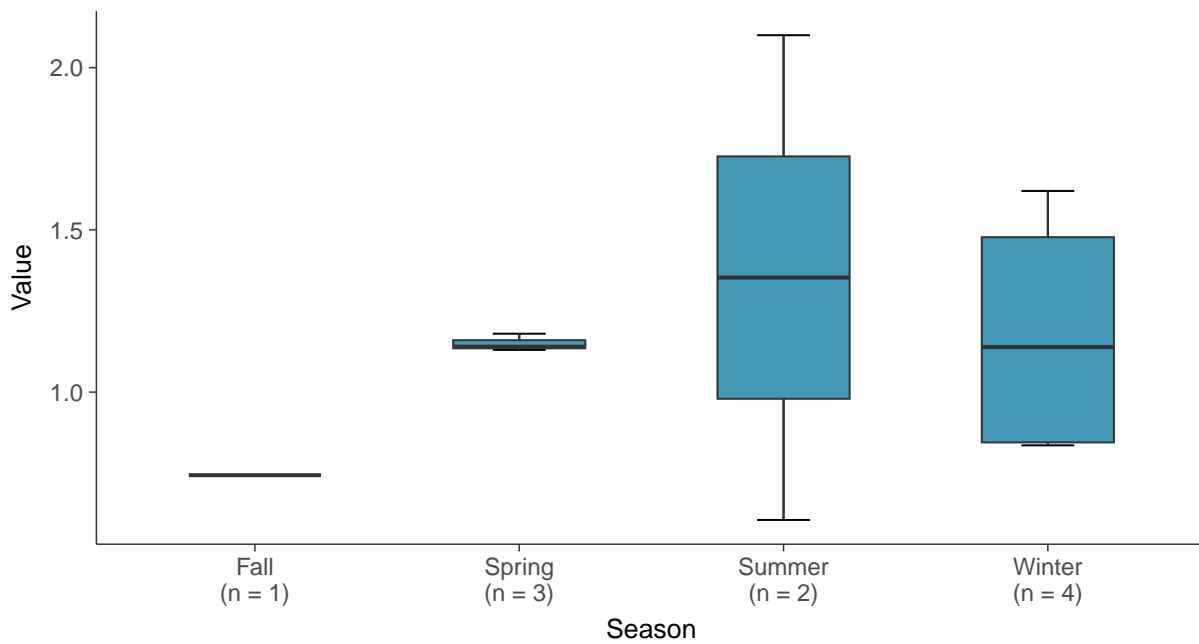
Boxplot

Radium 226 and 228, MW-08 (pCi/L)



Boxplot by Season

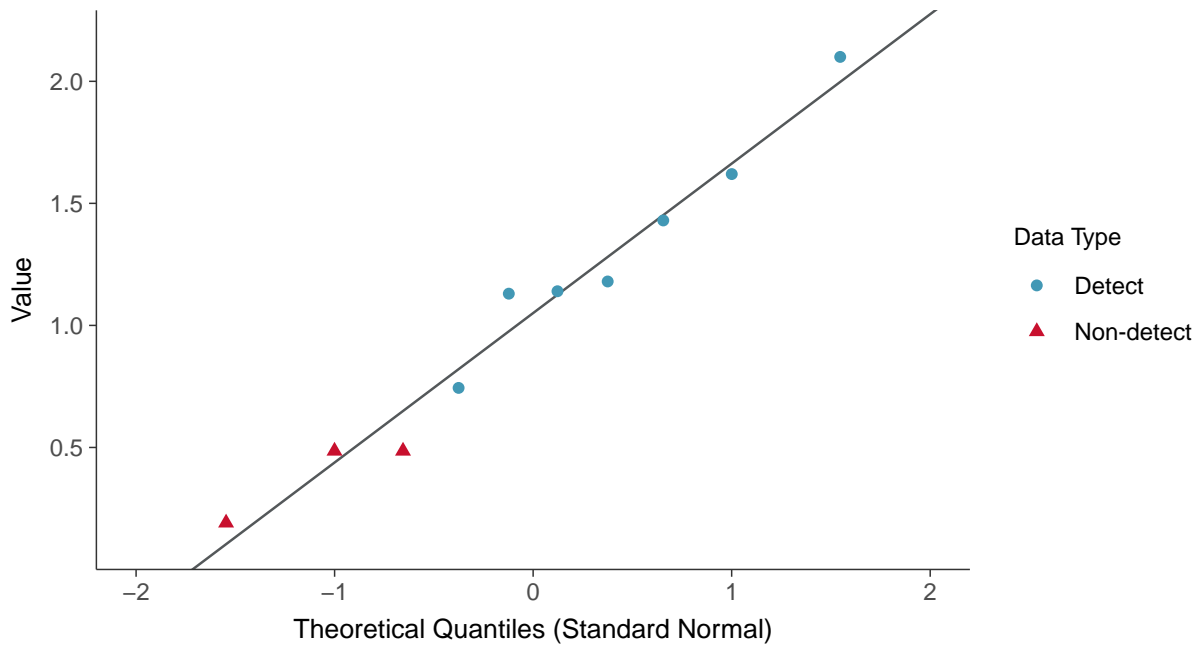
Radium 226 and 228, MW-08 (pCi/L)





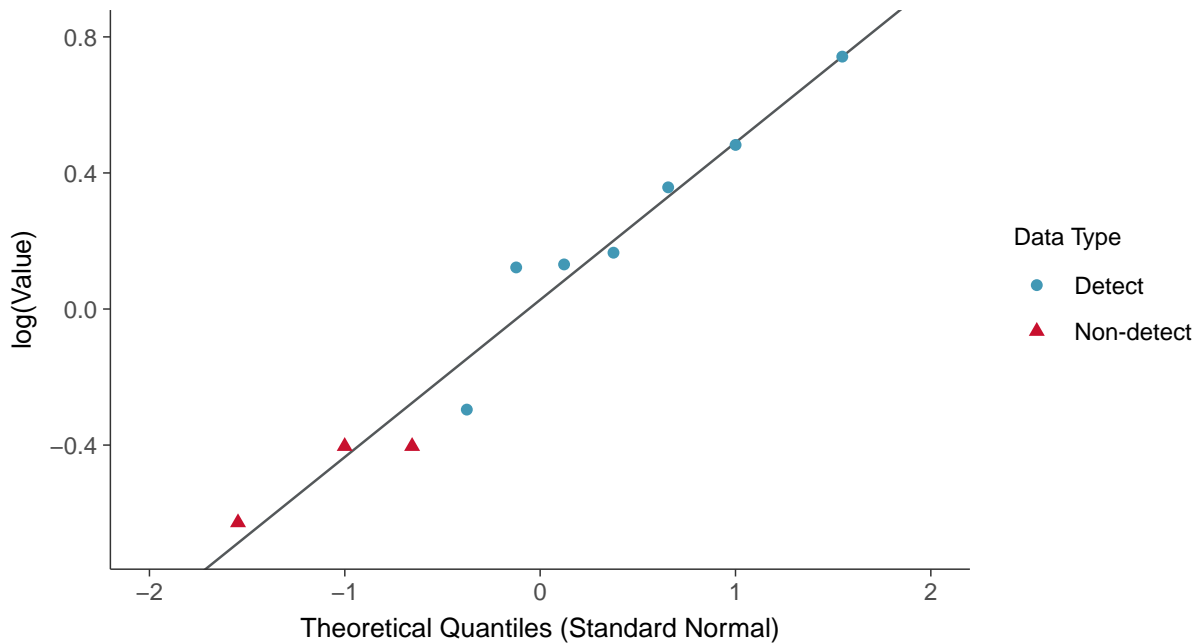
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-08 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

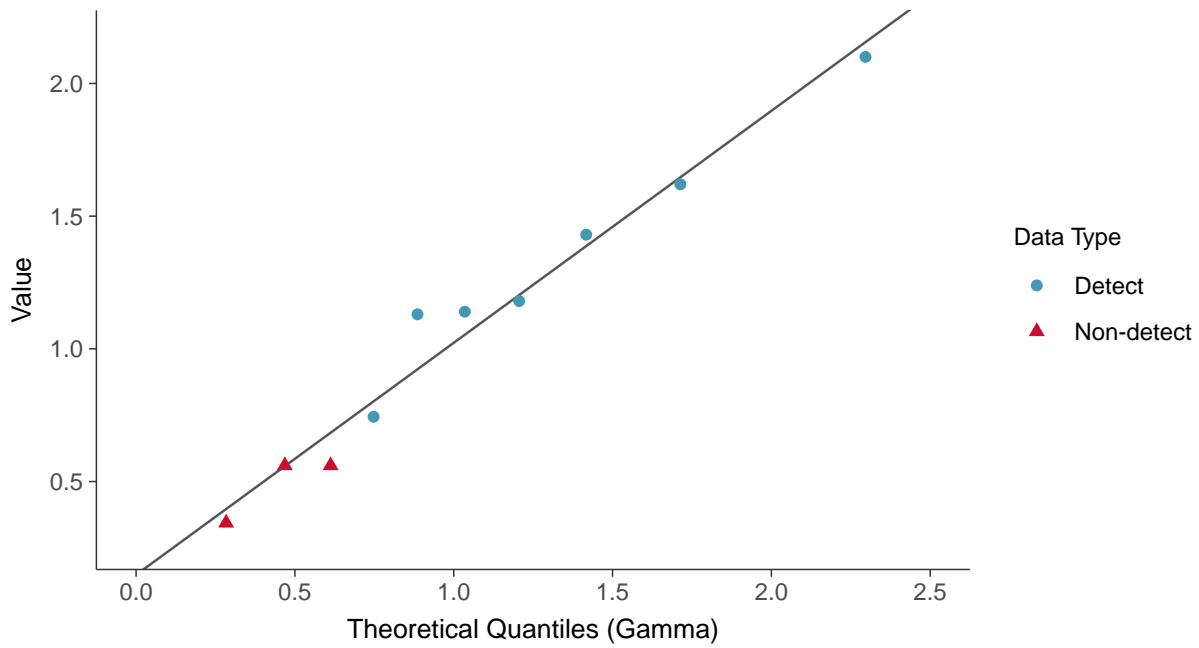
Radium 226 and 228, MW-08 (pCi/L)





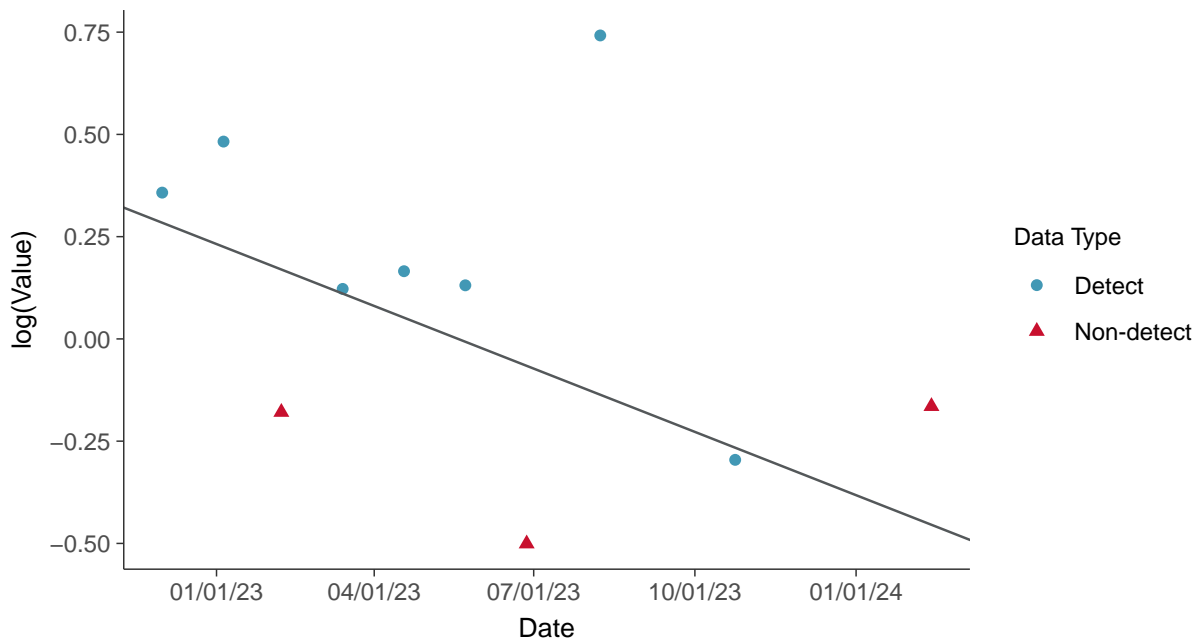
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-08 (pCi/L)



Trend Regression: Lognormal MLE

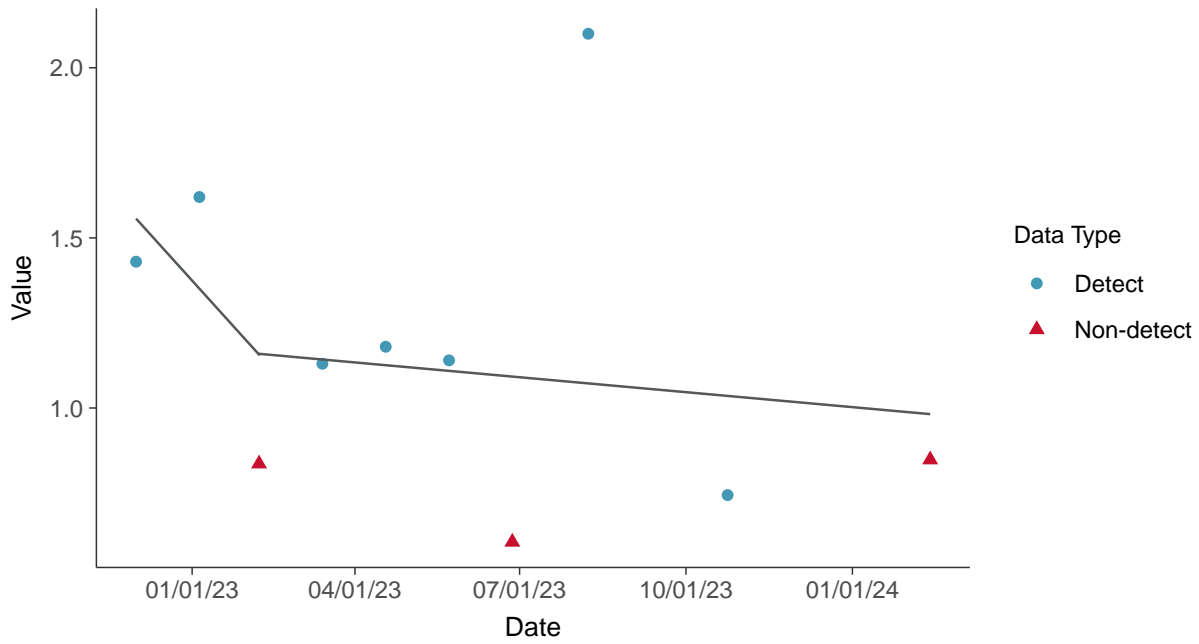
Radium 226 and 228, MW-08 (pCi/L)





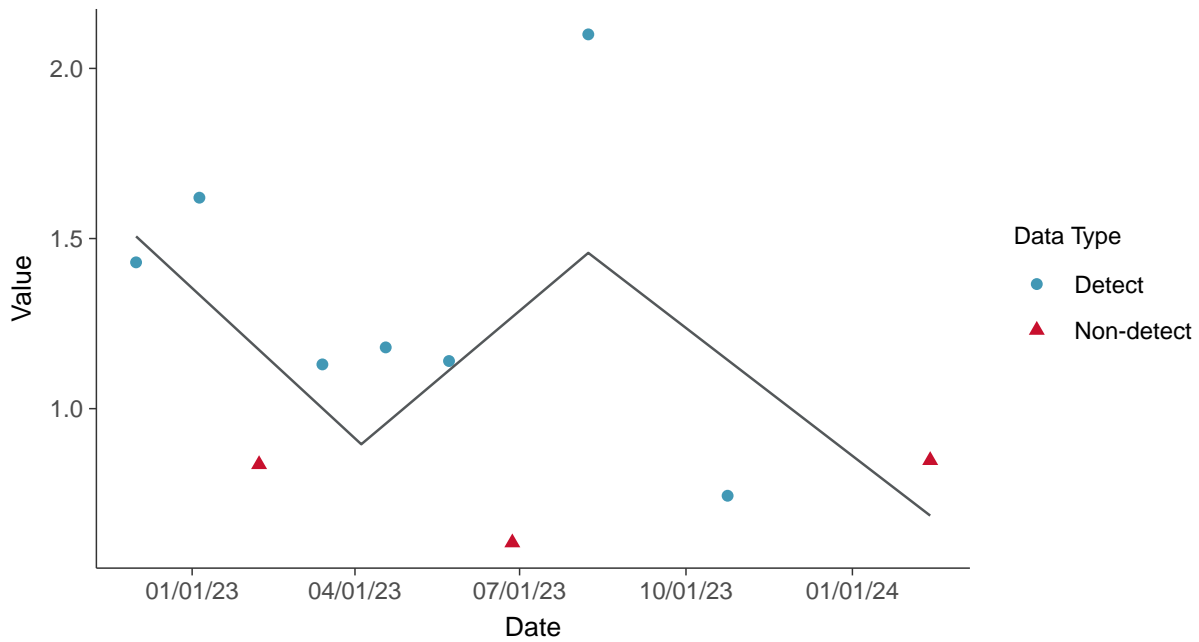
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-08 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-08 (pCi/L)



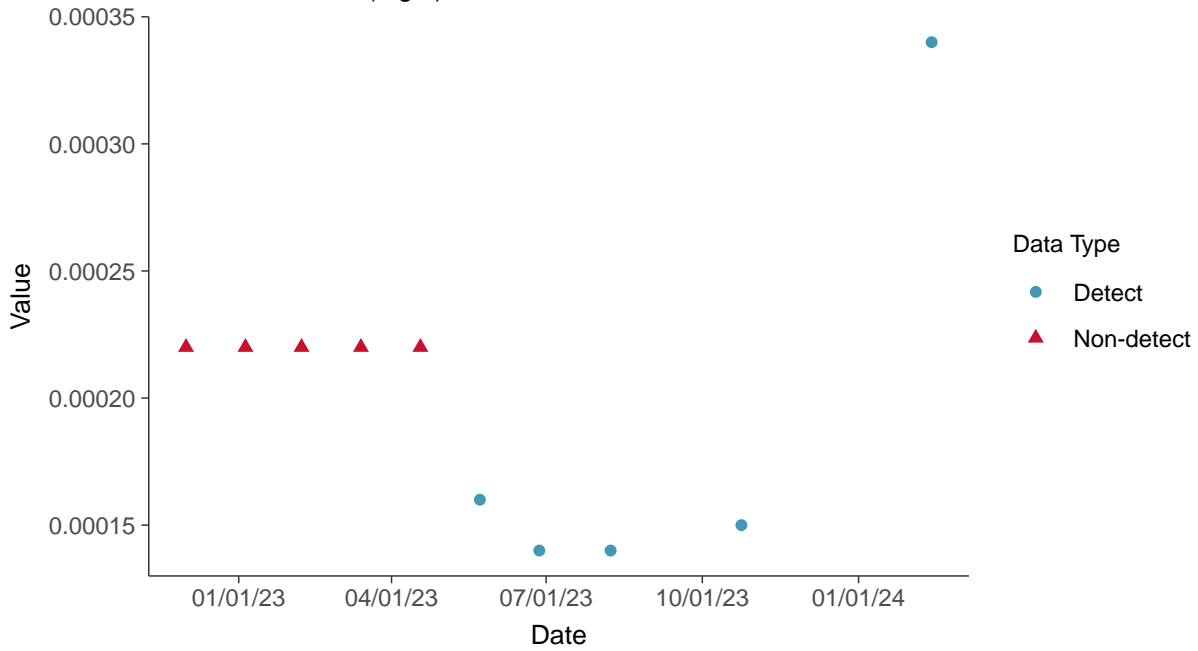


Appendix IV: Selenium, MW-08

ID: 1_18_5_122

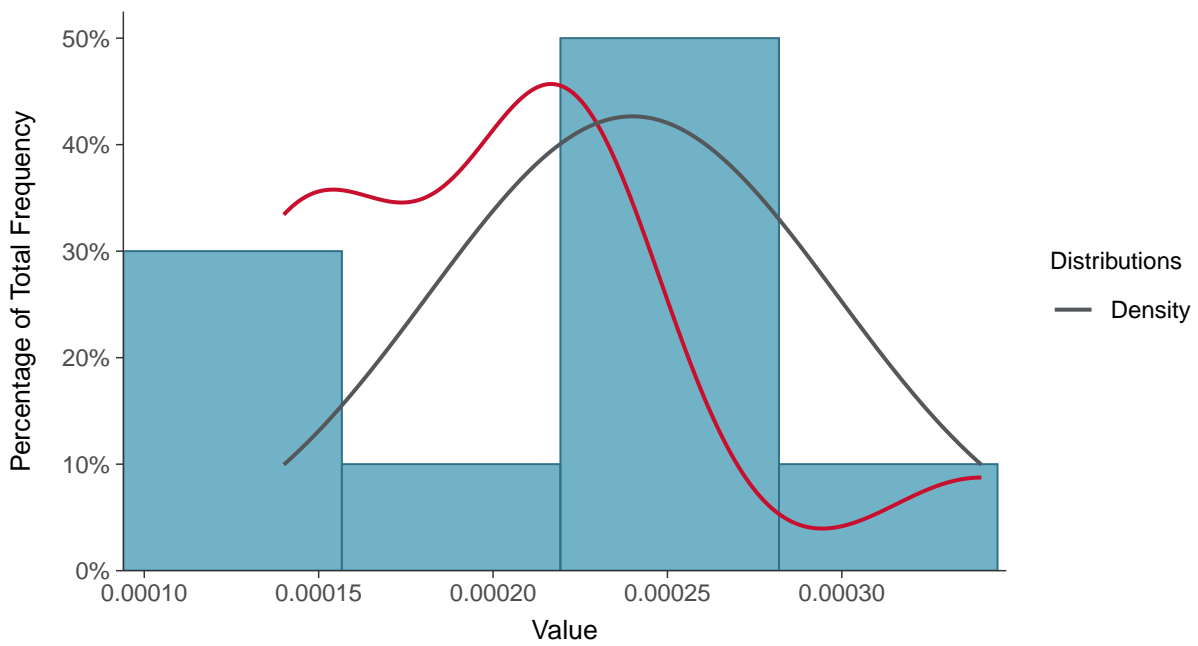
Scatter Plot

Selenium, MW-08 (mg/L)



Histogram

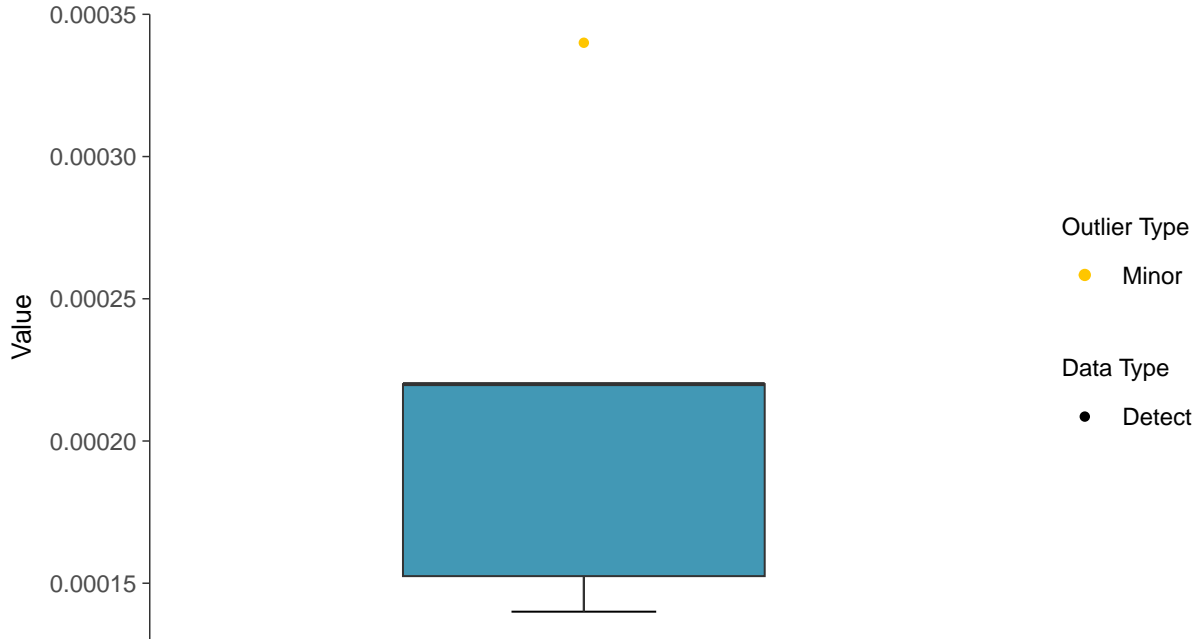
Selenium, MW-08 (mg/L)





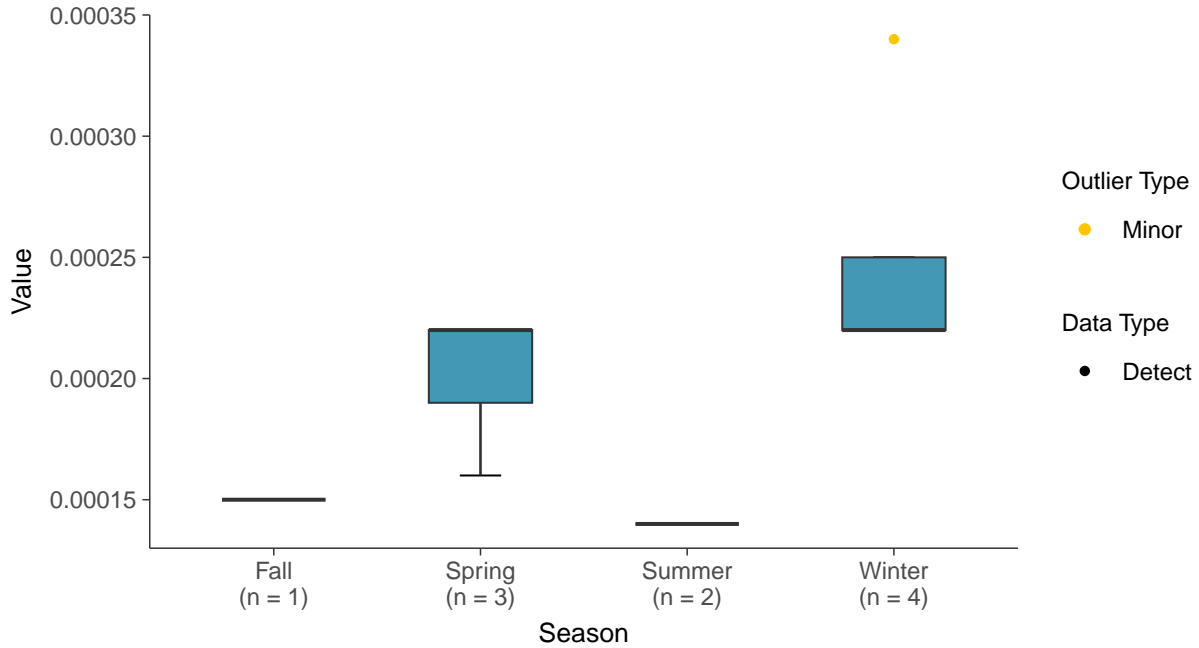
Boxplot

Selenium, MW-08 (mg/L)



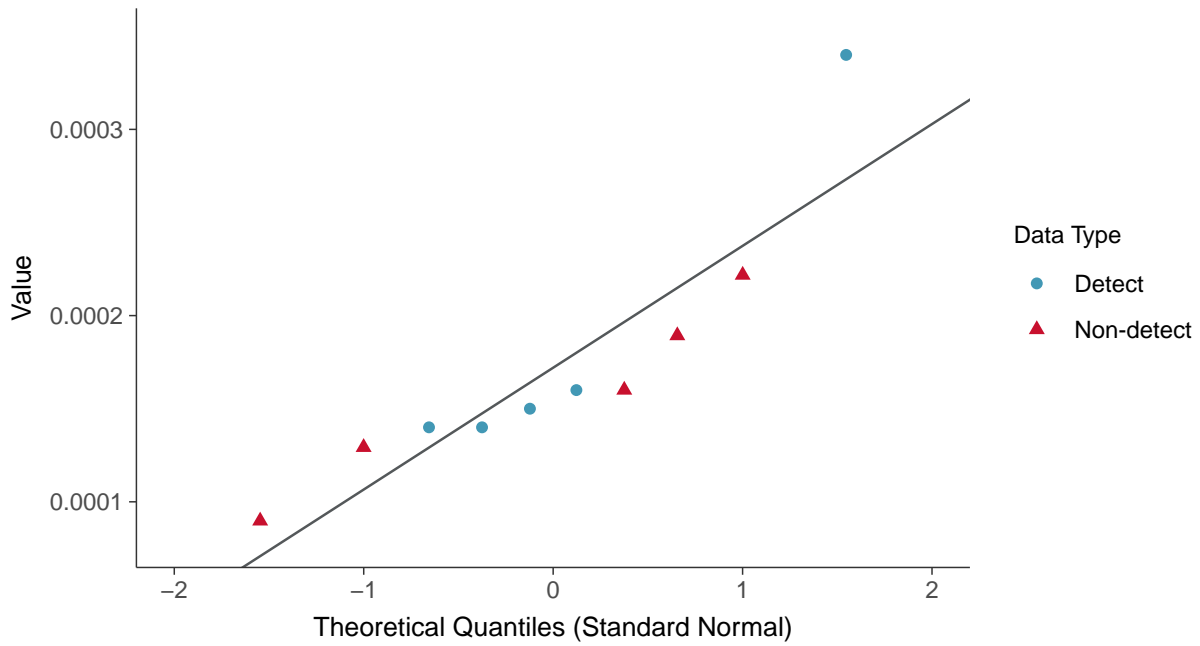
Boxplot by Season

Selenium, MW-08 (mg/L)

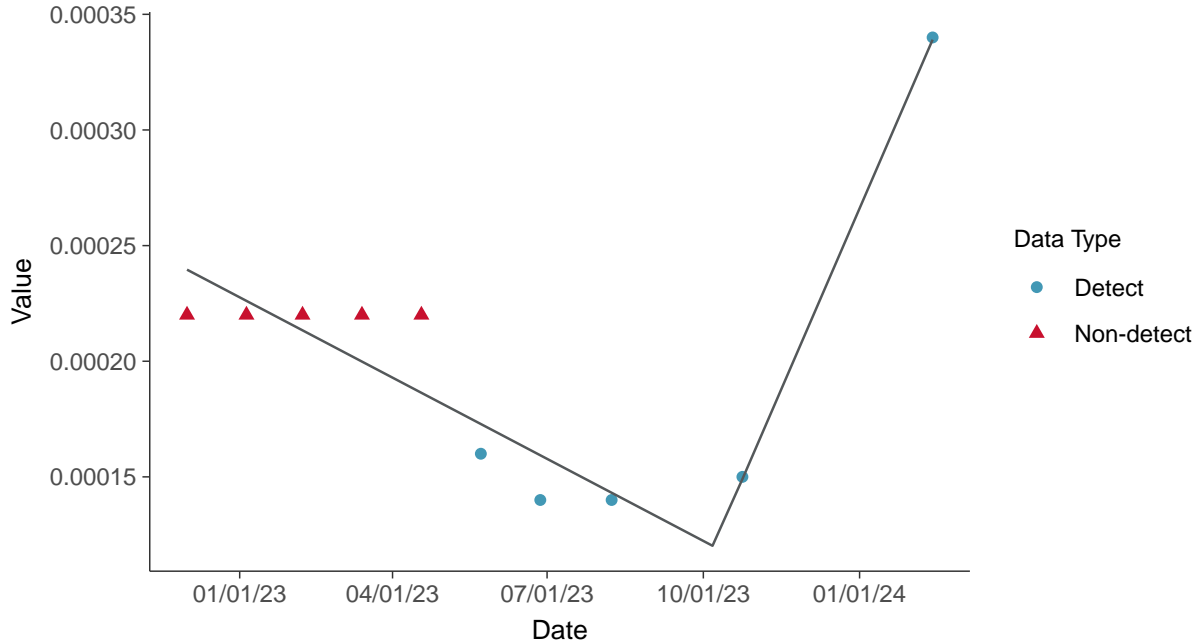




Normal Q-Q plot using ROS Imputed Estimates
Selenium, MW-08 (mg/L)



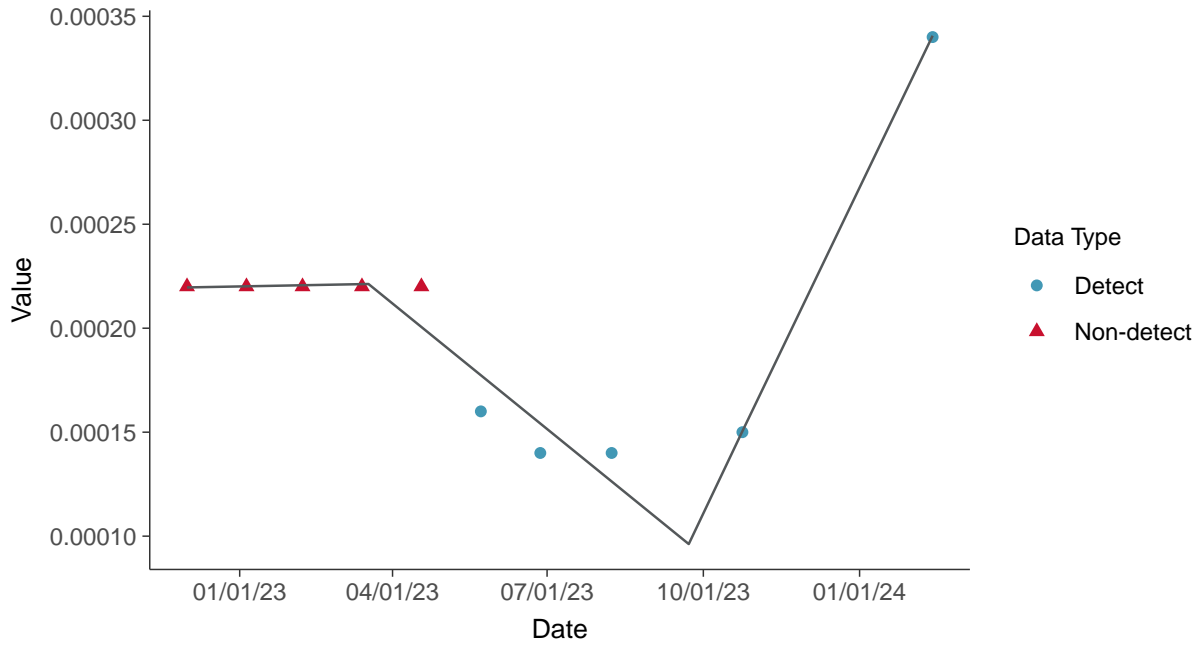
Trend Regression: Piecewise Linear-Linear
Selenium, MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-08 (mg/L)



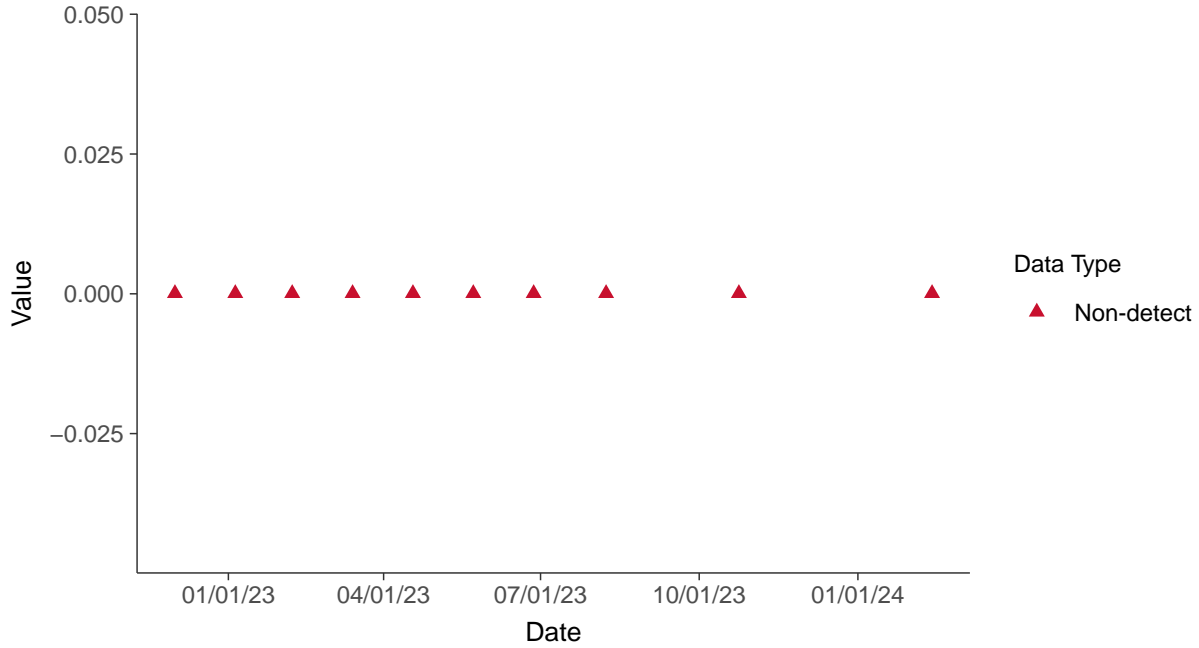


Appendix IV: Thallium, MW-08

ID: 1_18_5_125

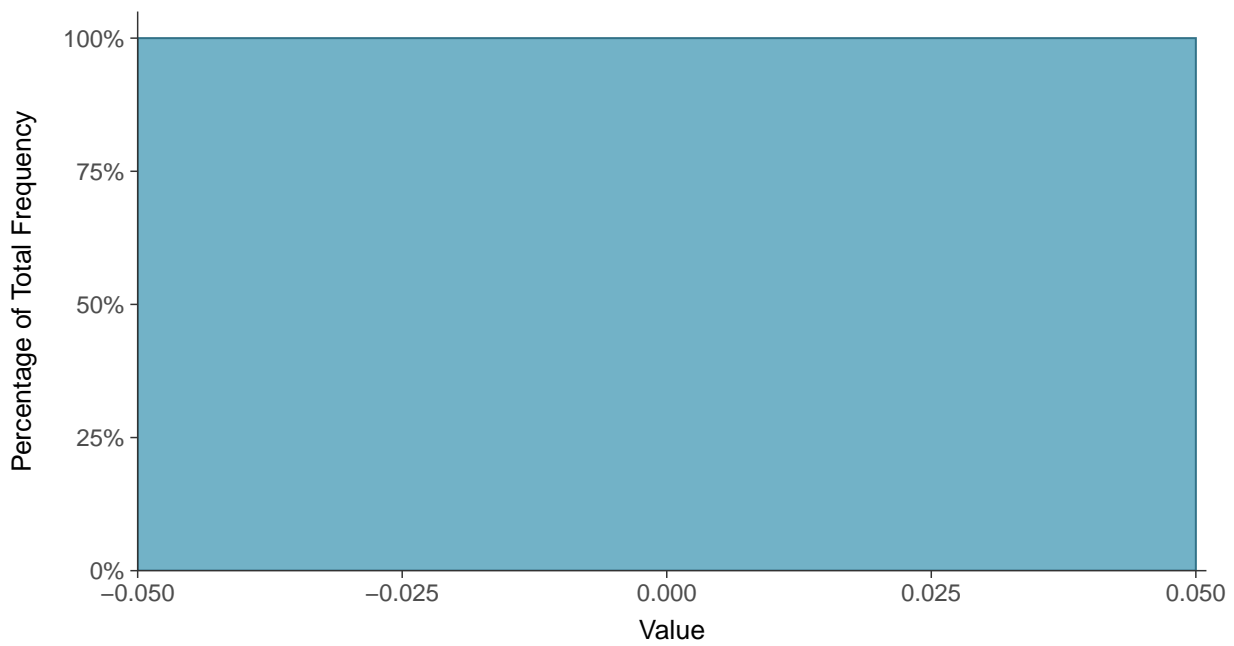
Scatter Plot

Thallium, MW-08 (mg/L)



Histogram

Thallium, MW-08 (mg/L)





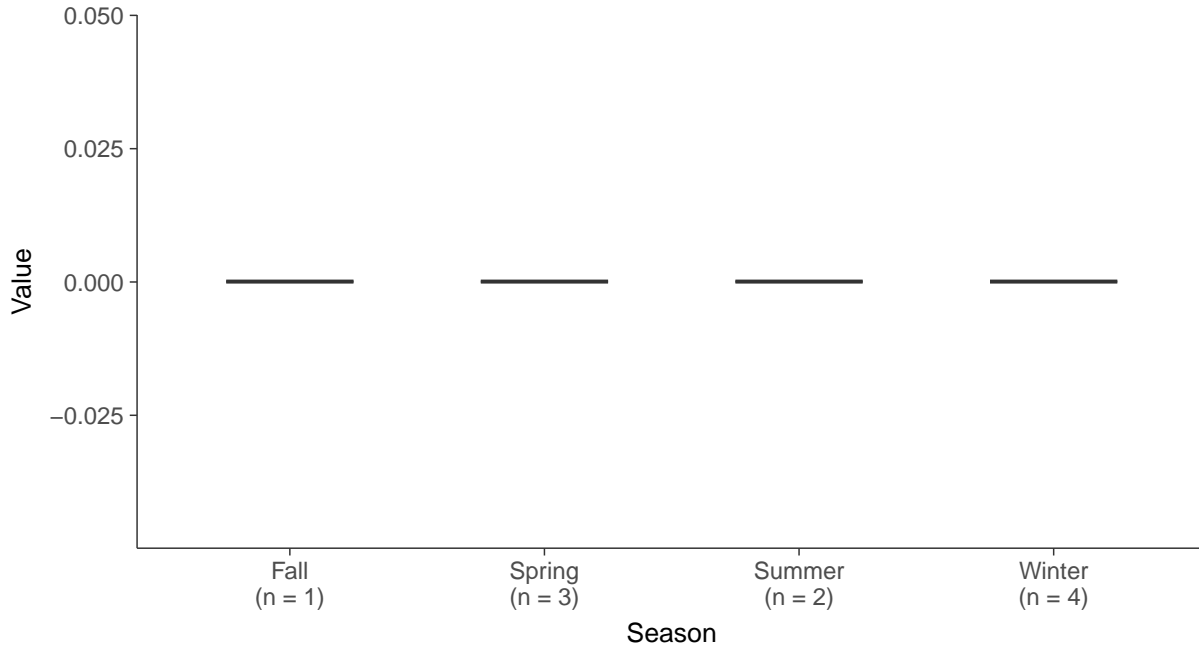
Boxplot

Thallium, MW-08 (mg/L)



Boxplot by Season

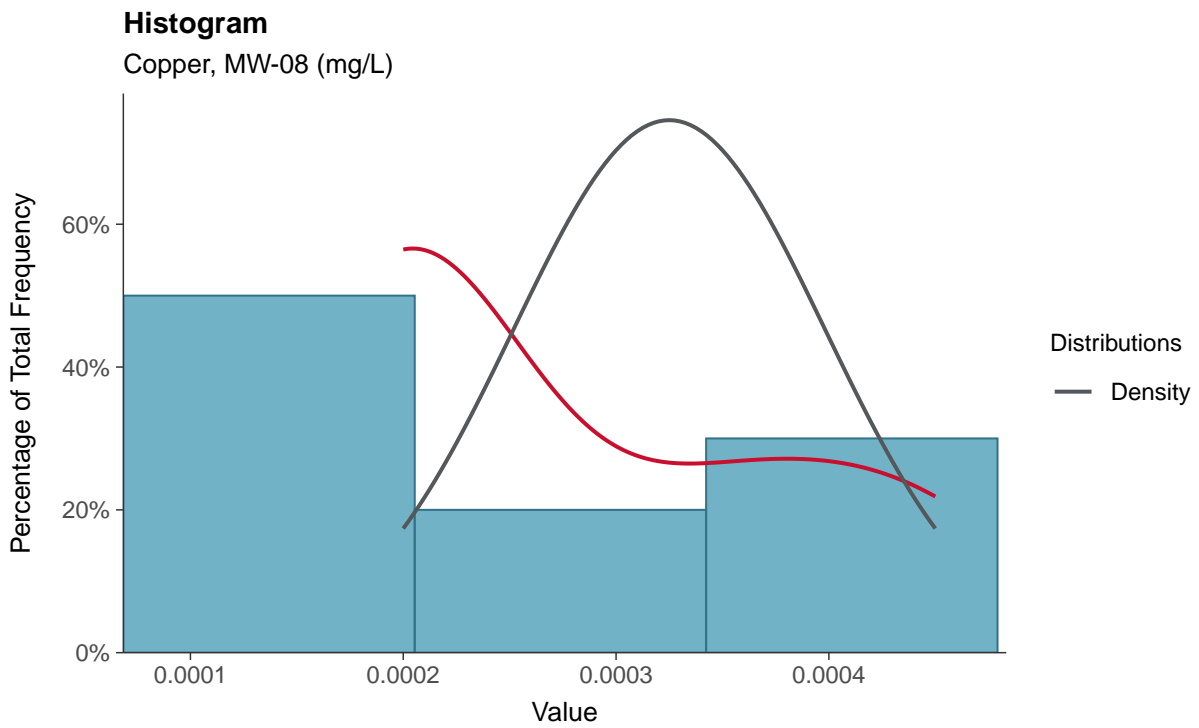
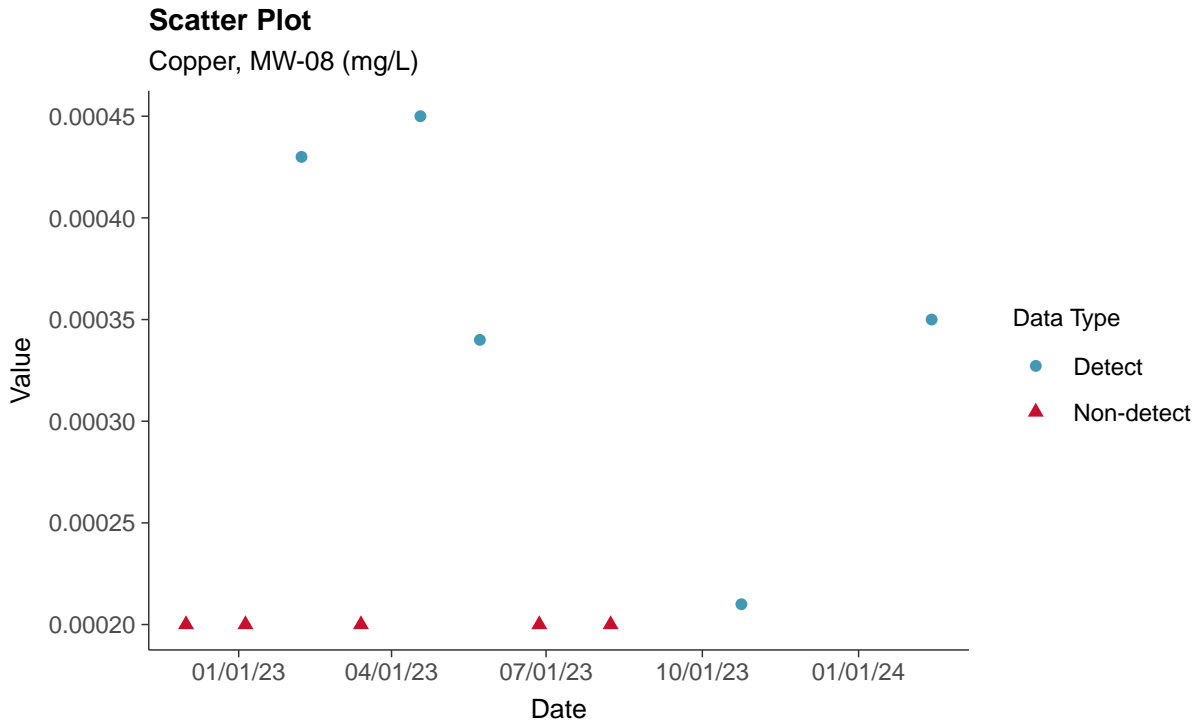
Thallium, MW-08 (mg/L)





Part 115: Copper, MW-08

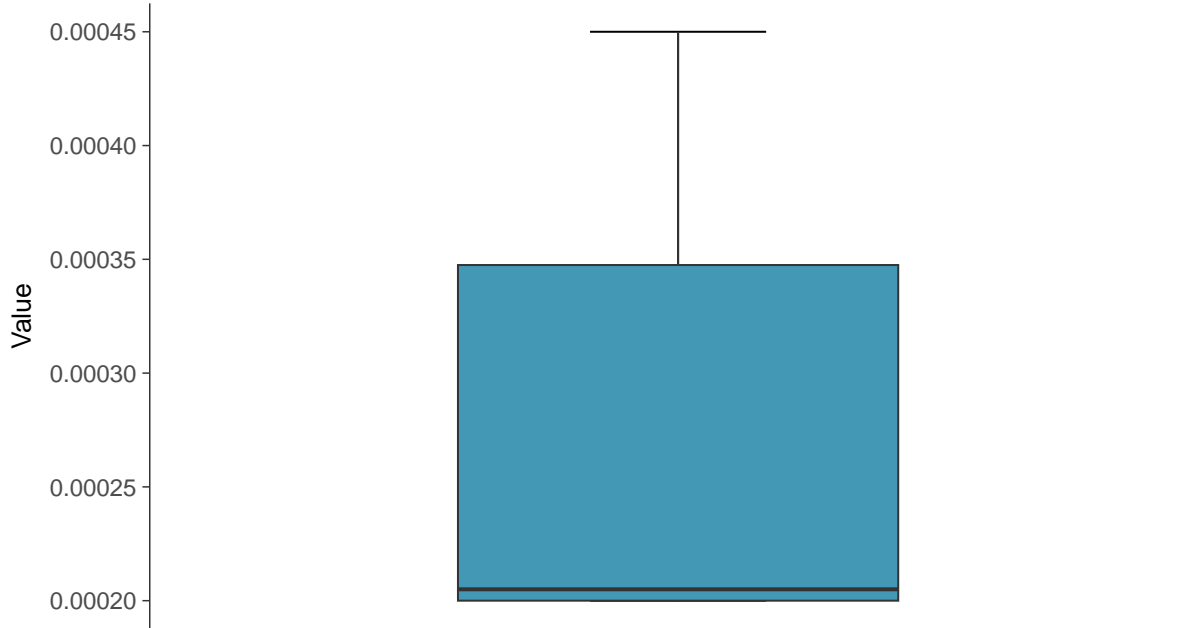
ID: 1_18_6_111





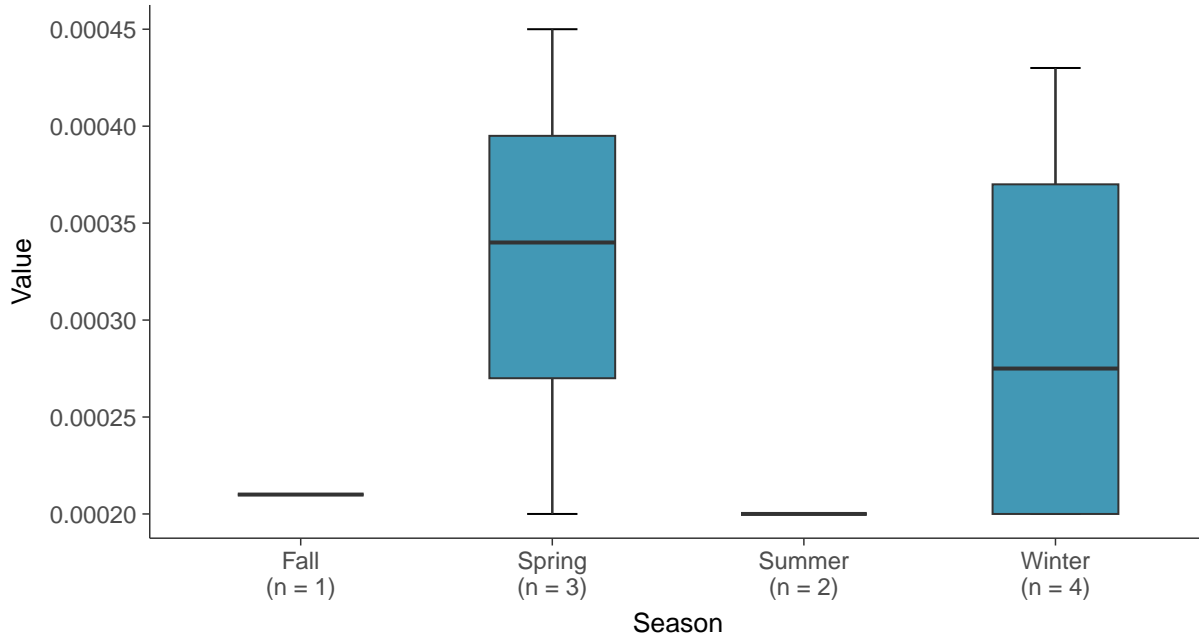
Boxplot

Copper, MW-08 (mg/L)



Boxplot by Season

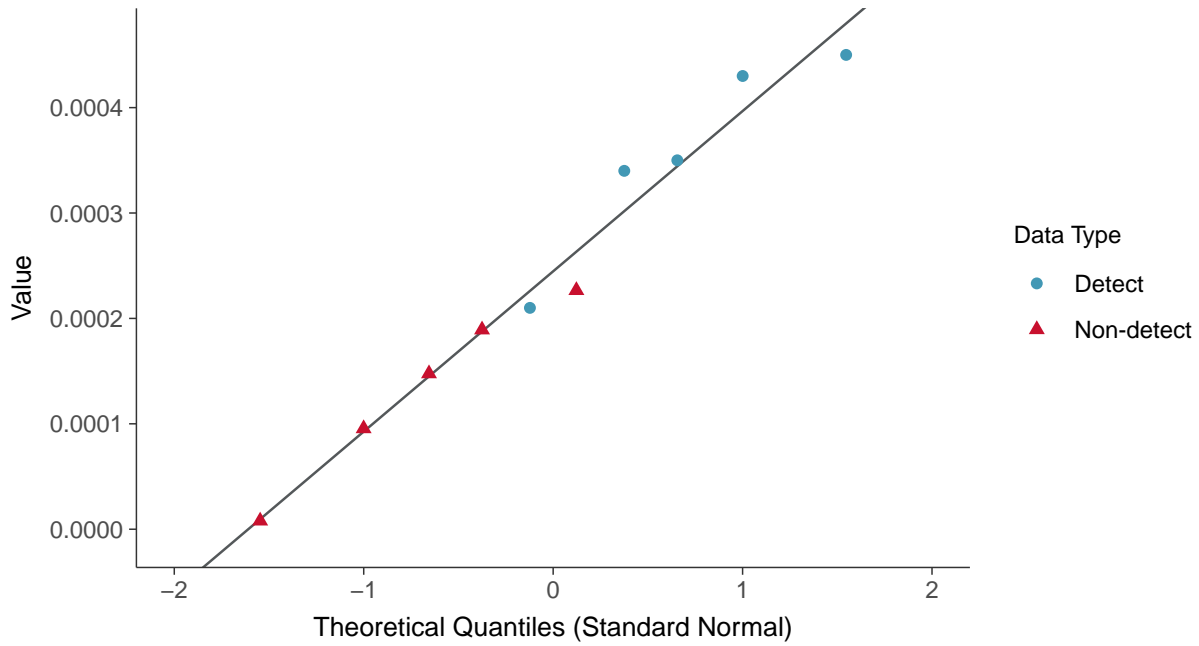
Copper, MW-08 (mg/L)





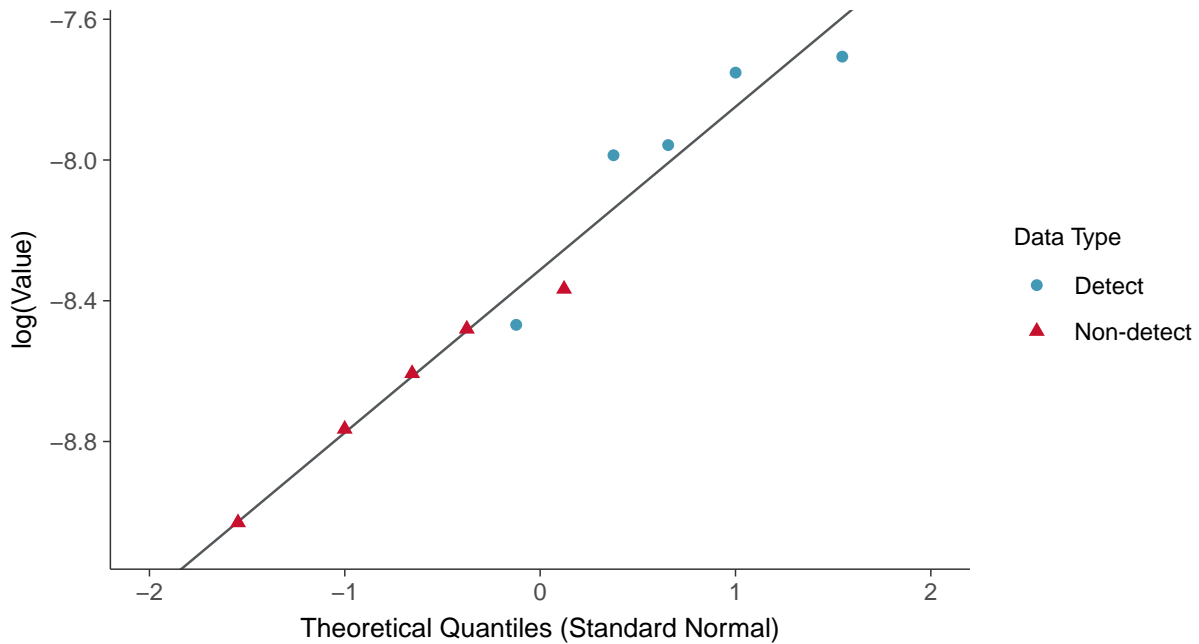
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-08 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

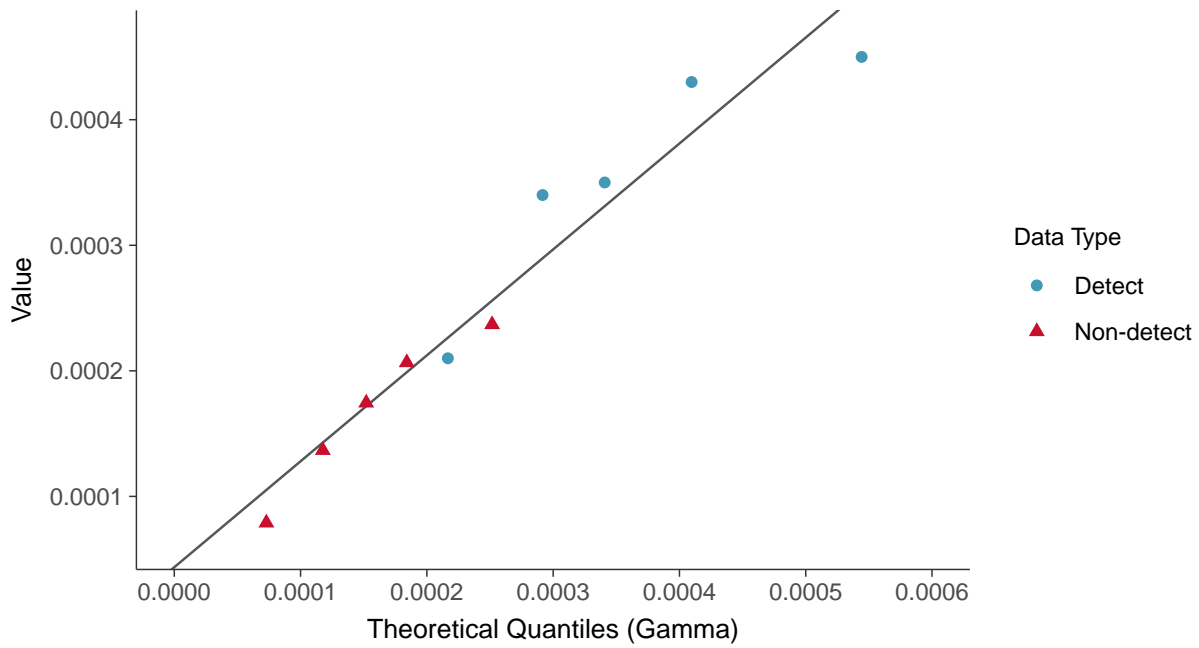
Copper, MW-08 (mg/L)





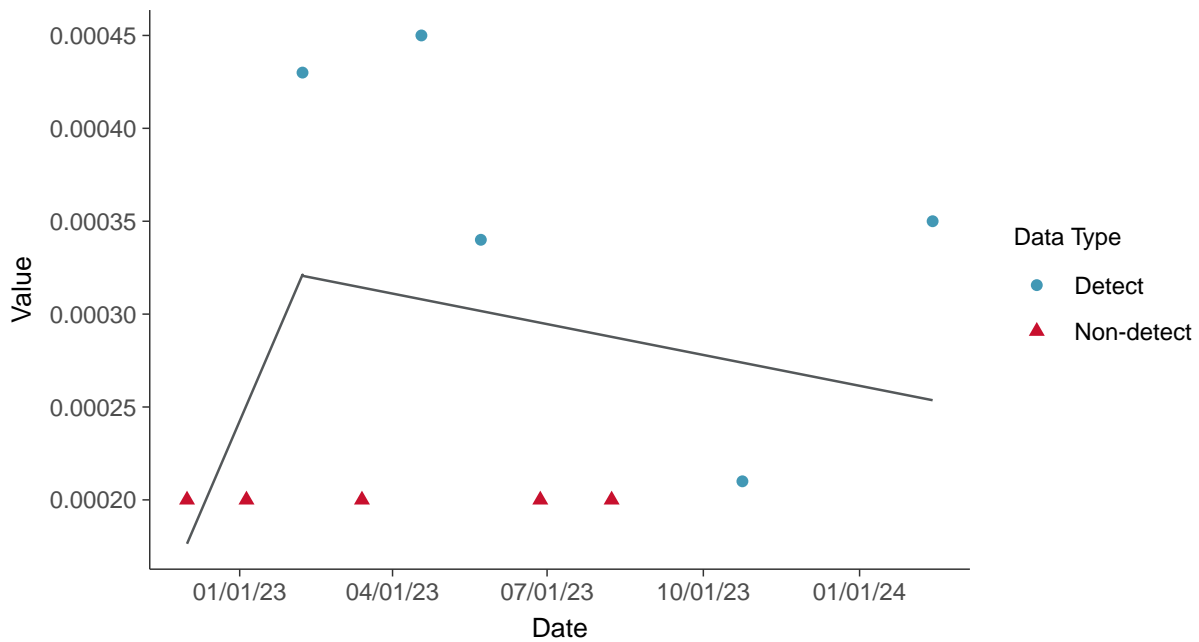
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-08 (mg/L)



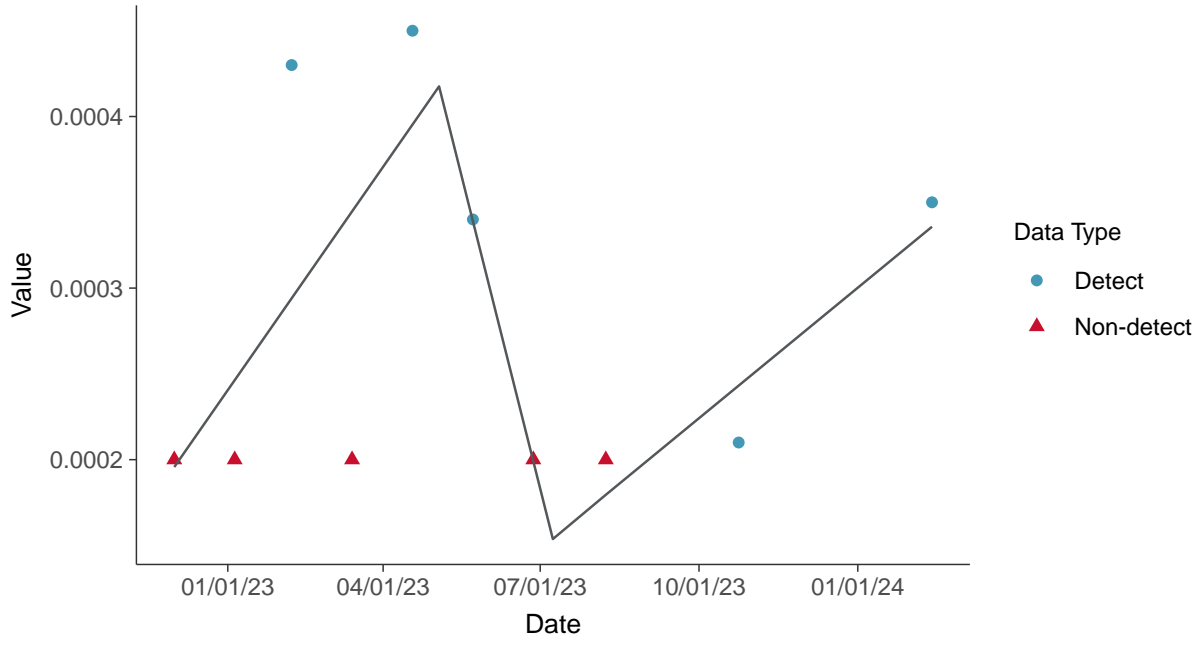
Trend Regression: Piecewise Linear-Linear

Copper, MW-08 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear
Copper, MW-08 (mg/L)



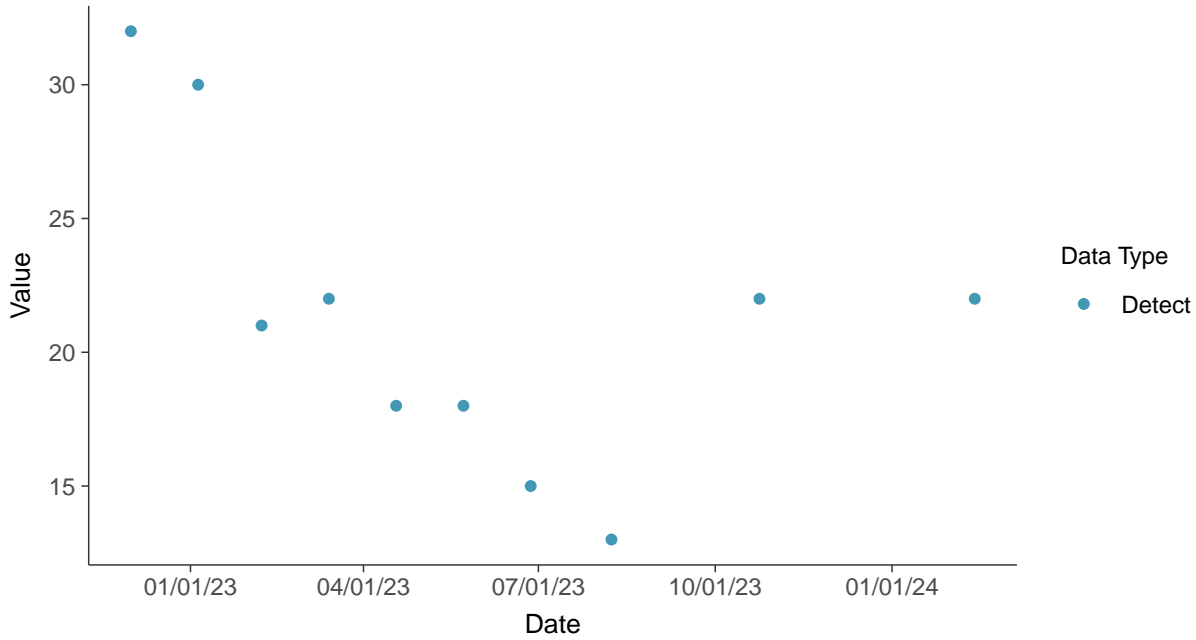


Part 115: Iron, MW-08

ID: 1_18_6_114

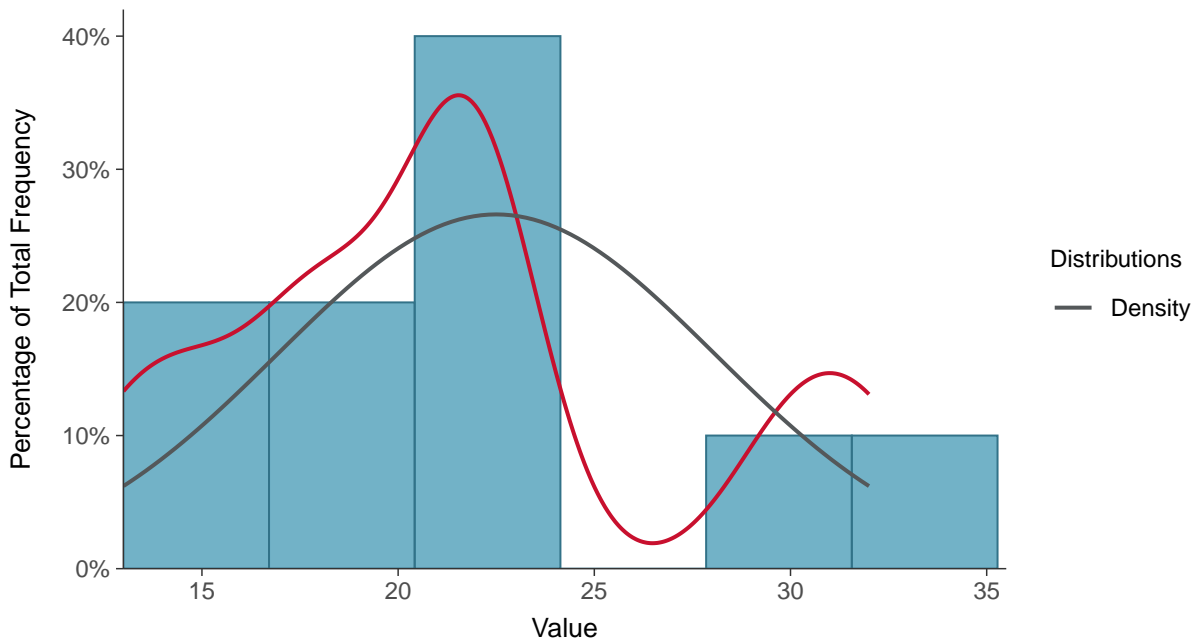
Scatter Plot

Iron, MW-08 (mg/L)



Histogram

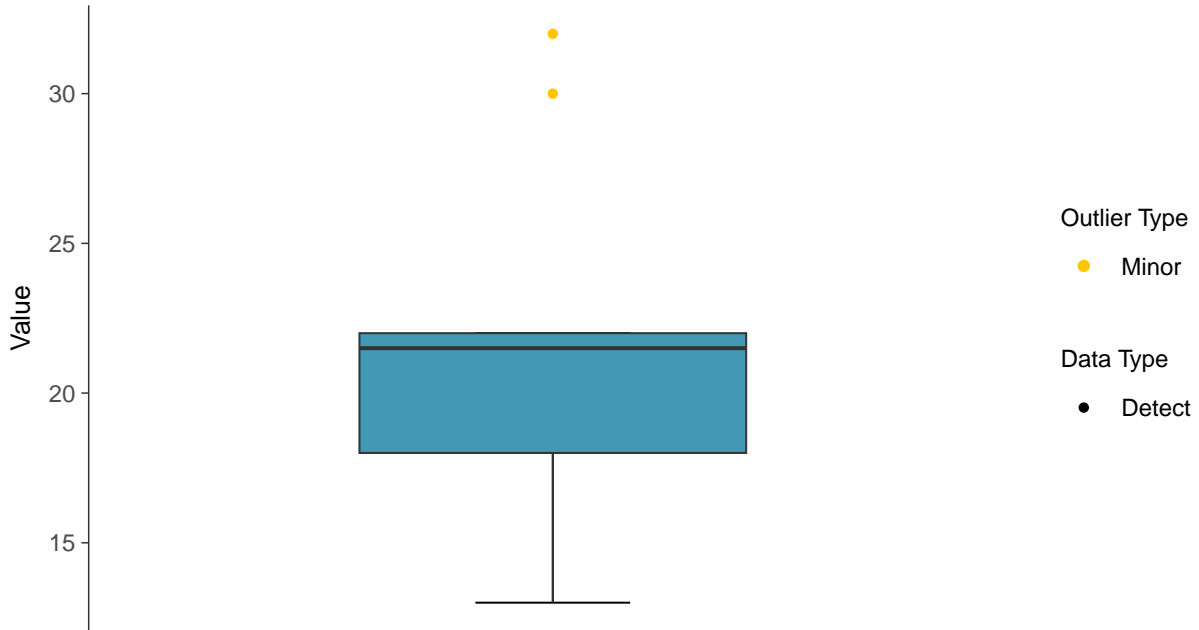
Iron, MW-08 (mg/L)





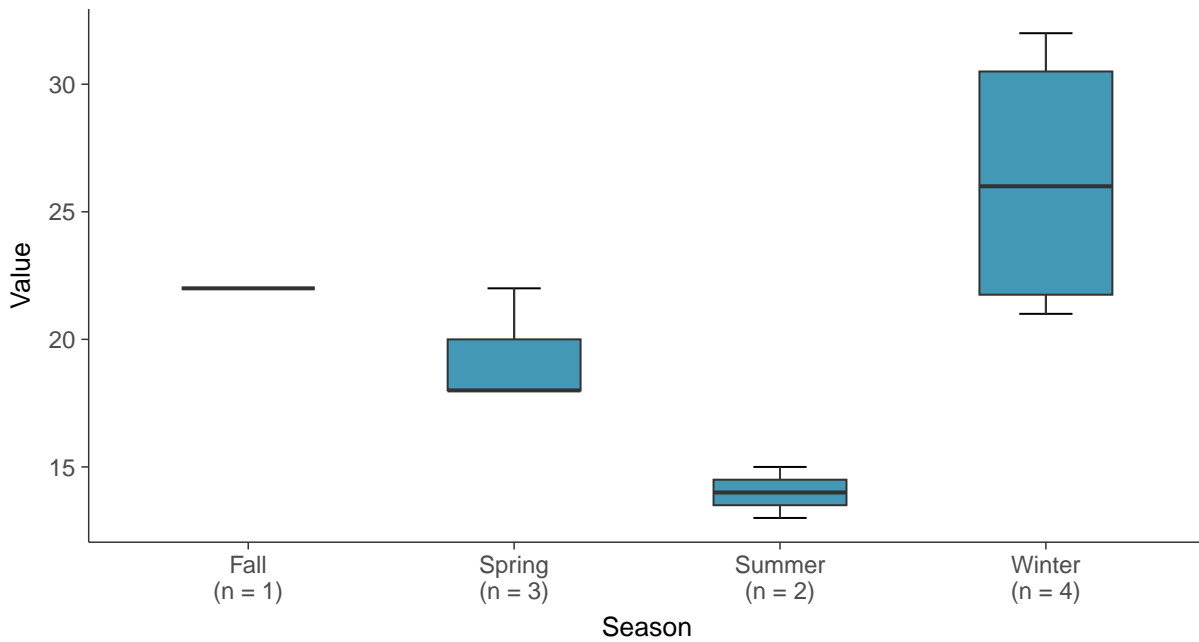
Boxplot

Iron, MW-08 (mg/L)



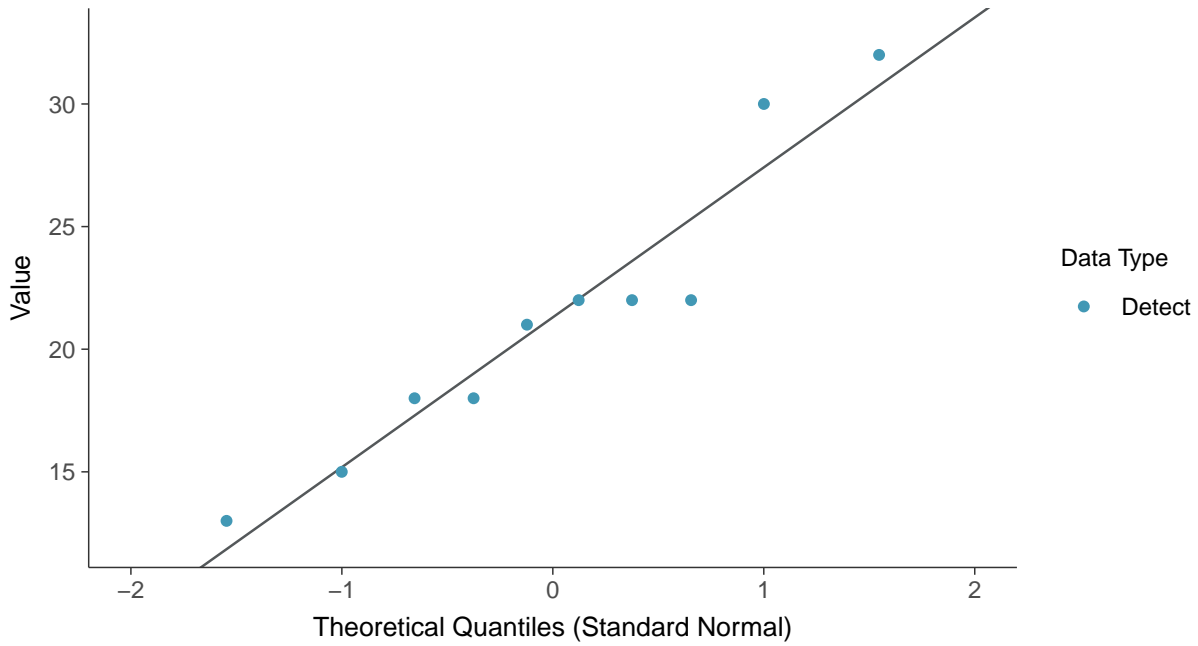
Boxplot by Season

Iron, MW-08 (mg/L)

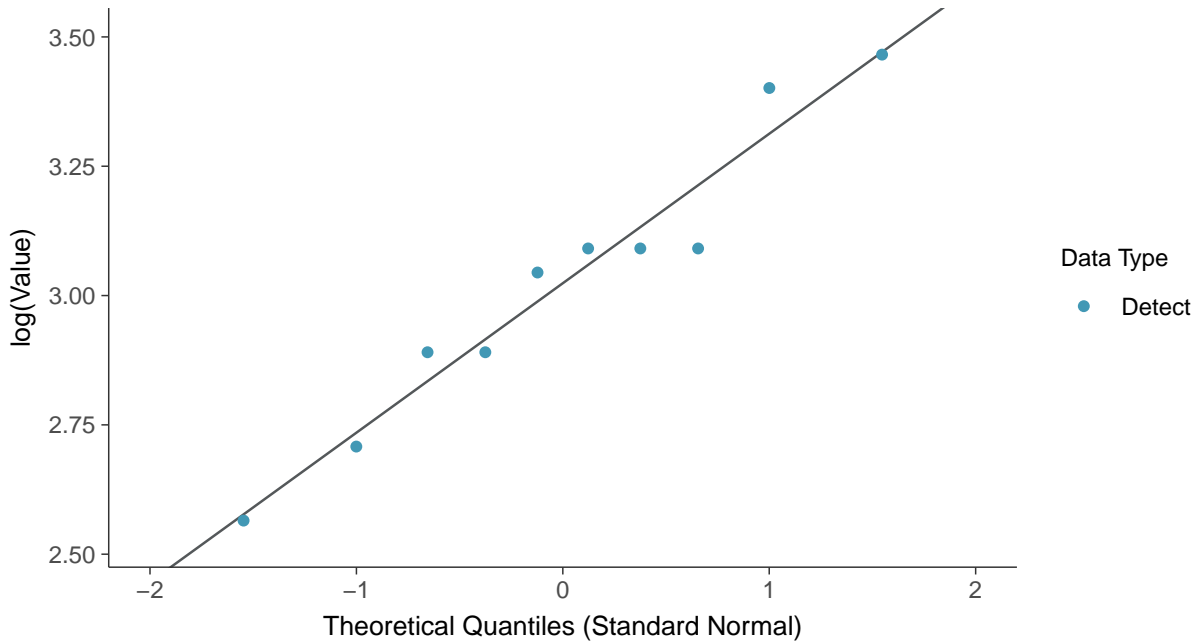




Normal Q-Q plot
Iron, MW-08 (mg/L)



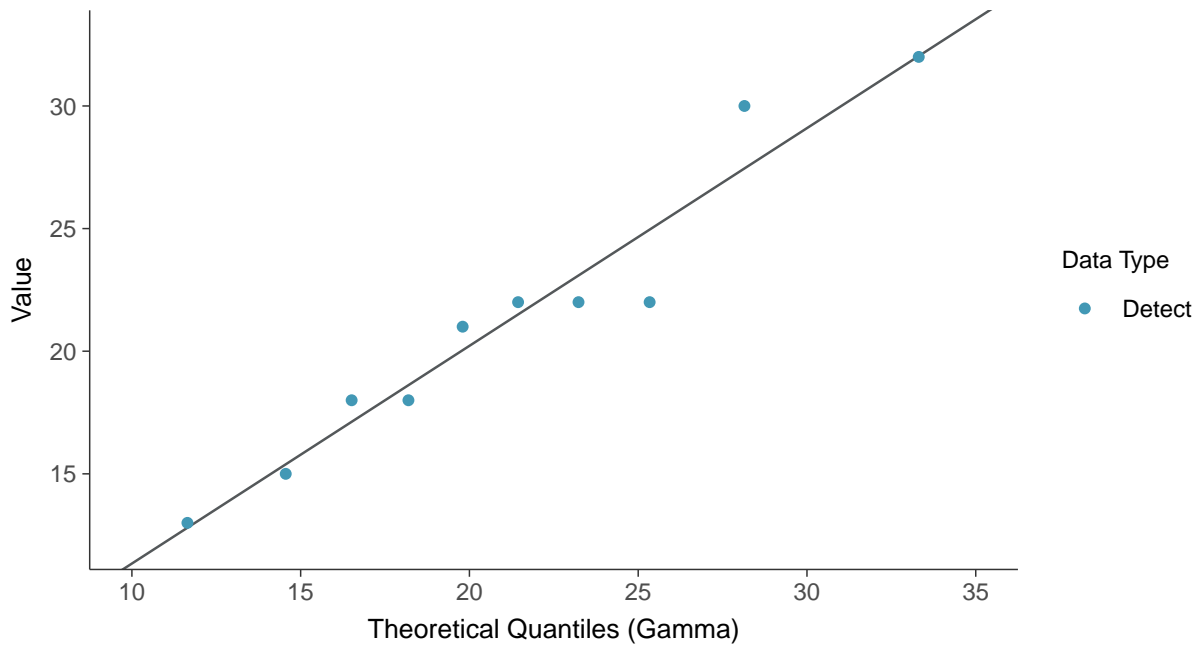
Lognormal Q-Q plot
Iron, MW-08 (mg/L)





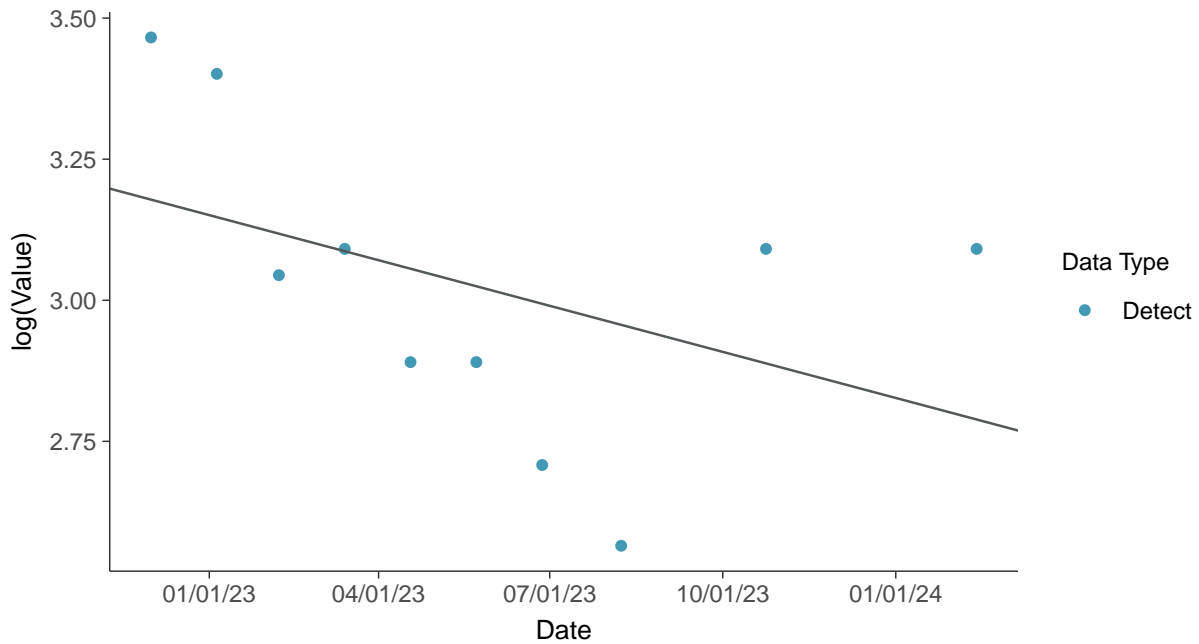
Gamma Q-Q plot

Iron, MW-08 (mg/L)



Trend Regression: Lognormal MLE

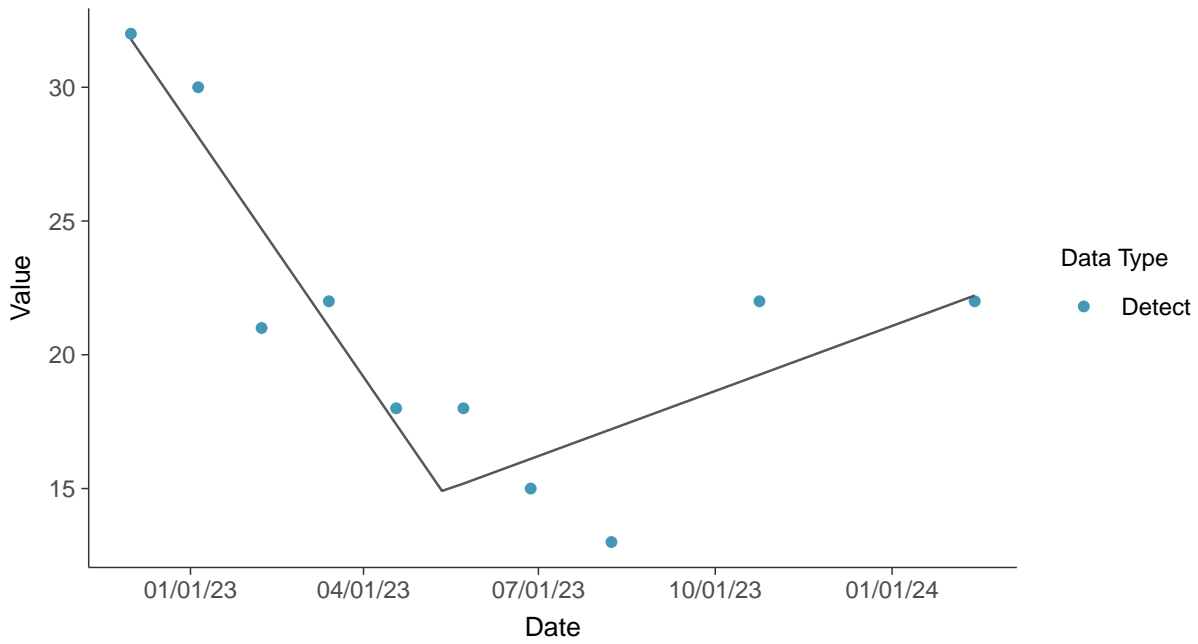
Iron, MW-08 (mg/L)





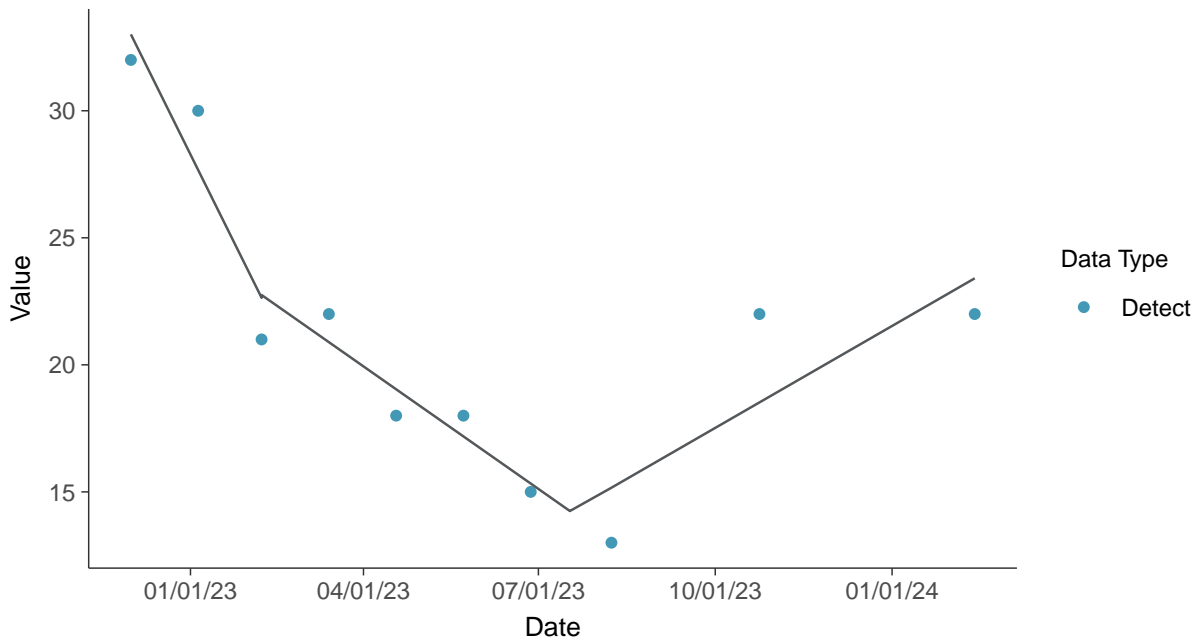
Trend Regression: Piecewise Linear-Linear

Iron, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-08 (mg/L)



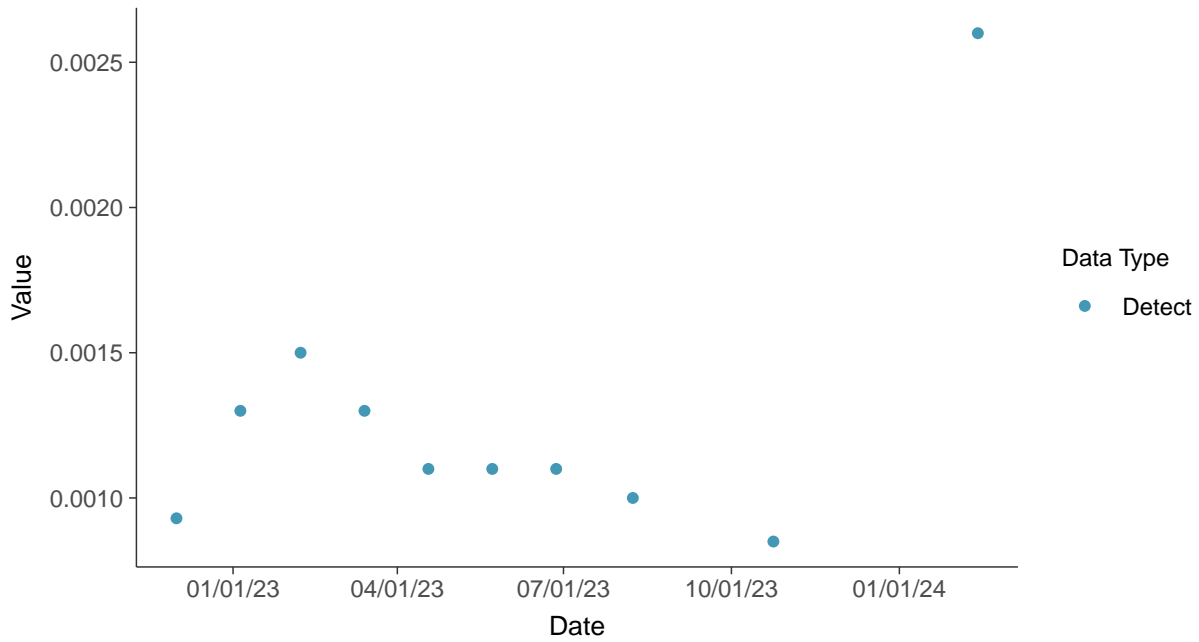


Part 115: Nickel, MW-08

ID: 1_18_6_119

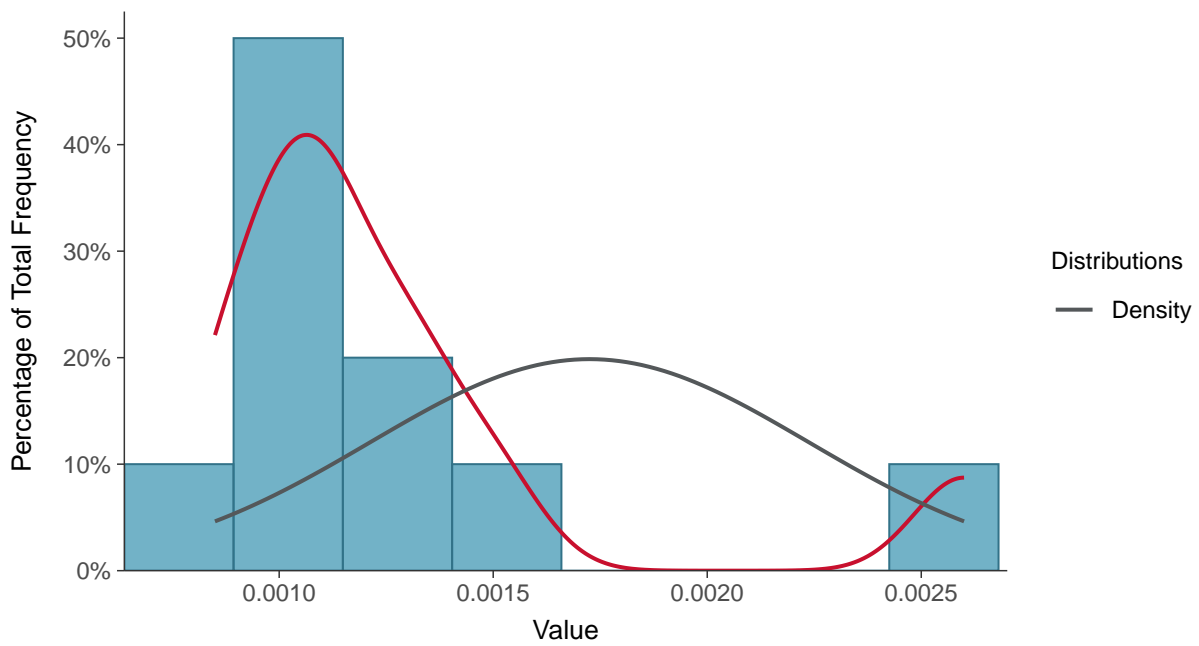
Scatter Plot

Nickel, MW-08 (mg/L)



Histogram

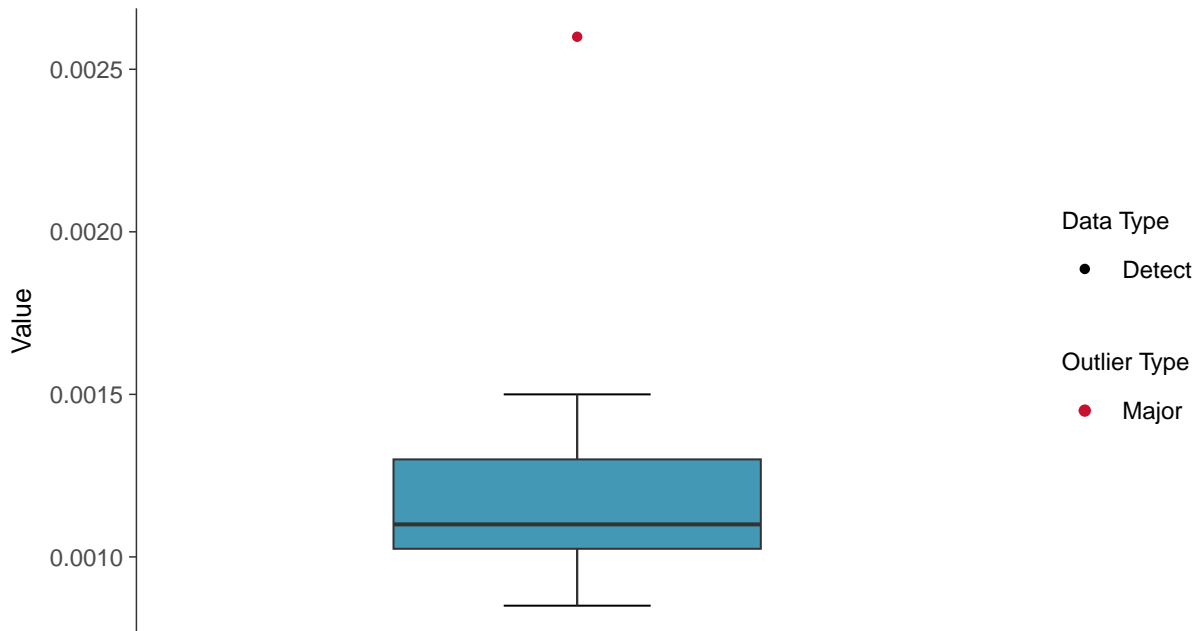
Nickel, MW-08 (mg/L)





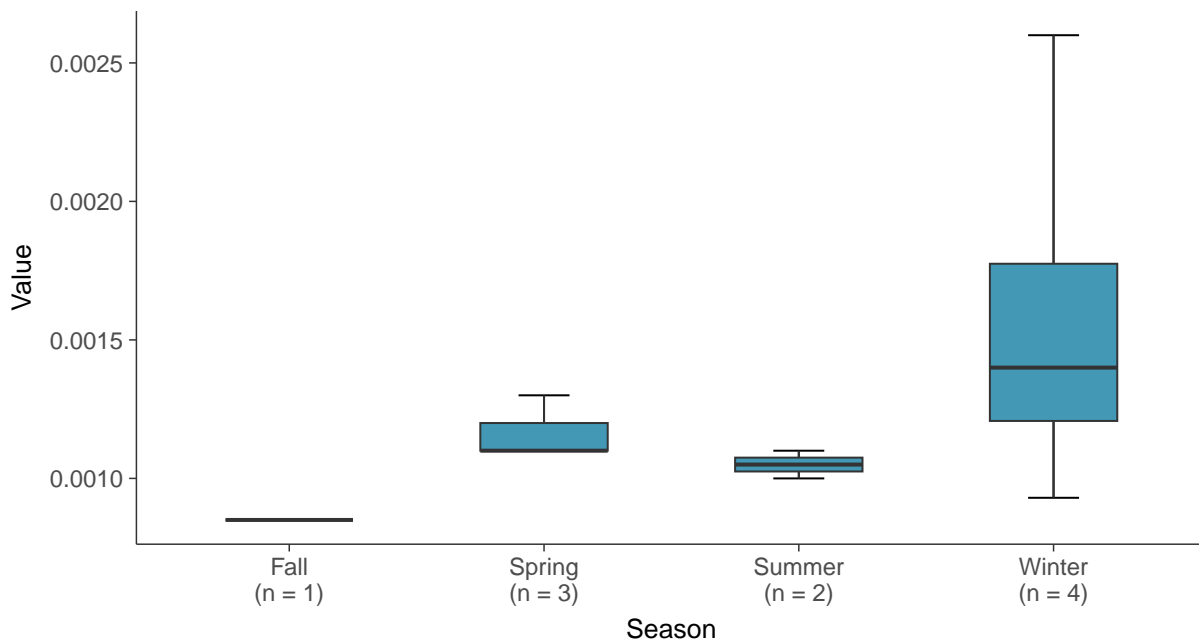
Boxplot

Nickel, MW-08 (mg/L)



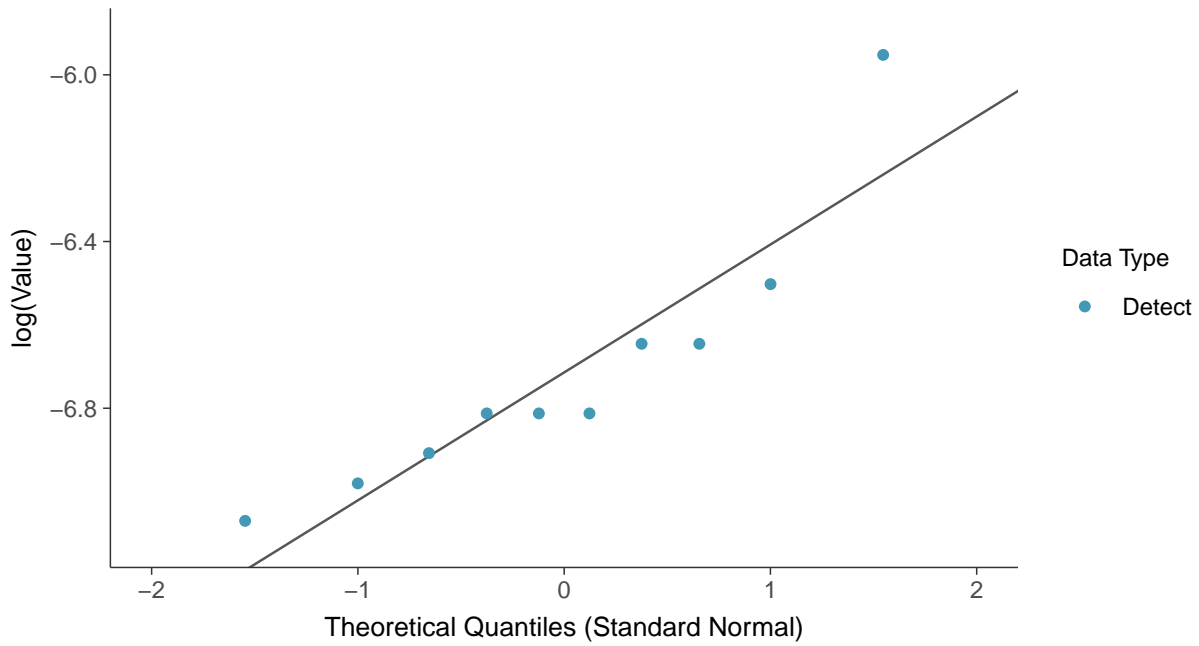
Boxplot by Season

Nickel, MW-08 (mg/L)

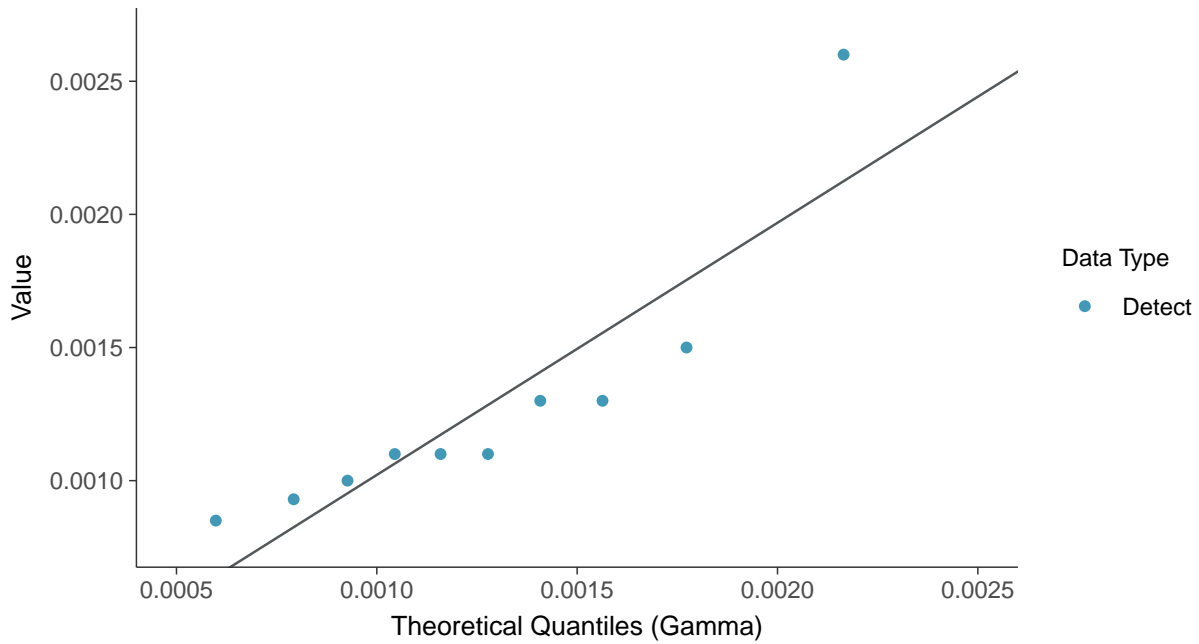




Lognormal Q-Q plot
Nickel, MW-08 (mg/L)



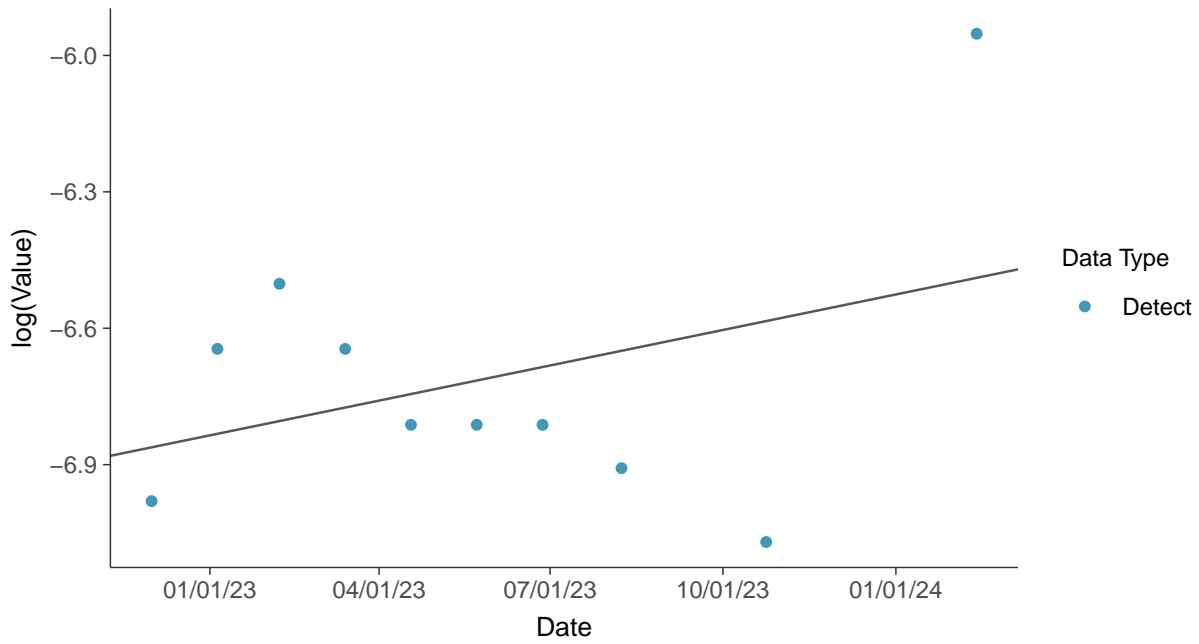
Gamma Q-Q plot
Nickel, MW-08 (mg/L)





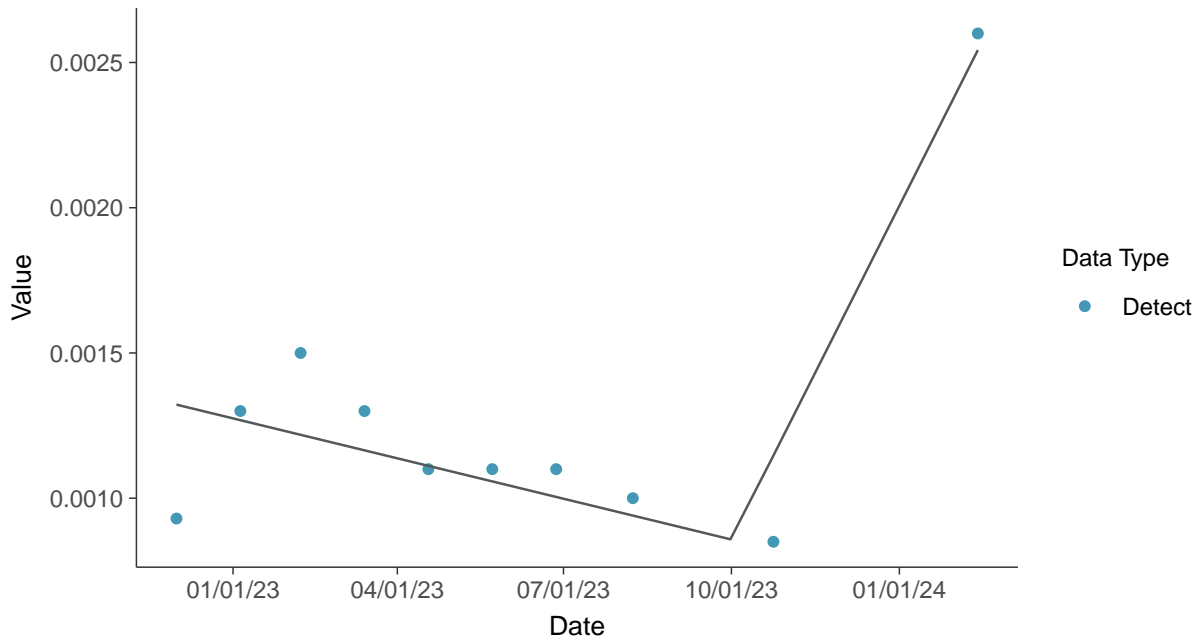
Trend Regression: Lognormal MLE

Nickel, MW-08 (mg/L)



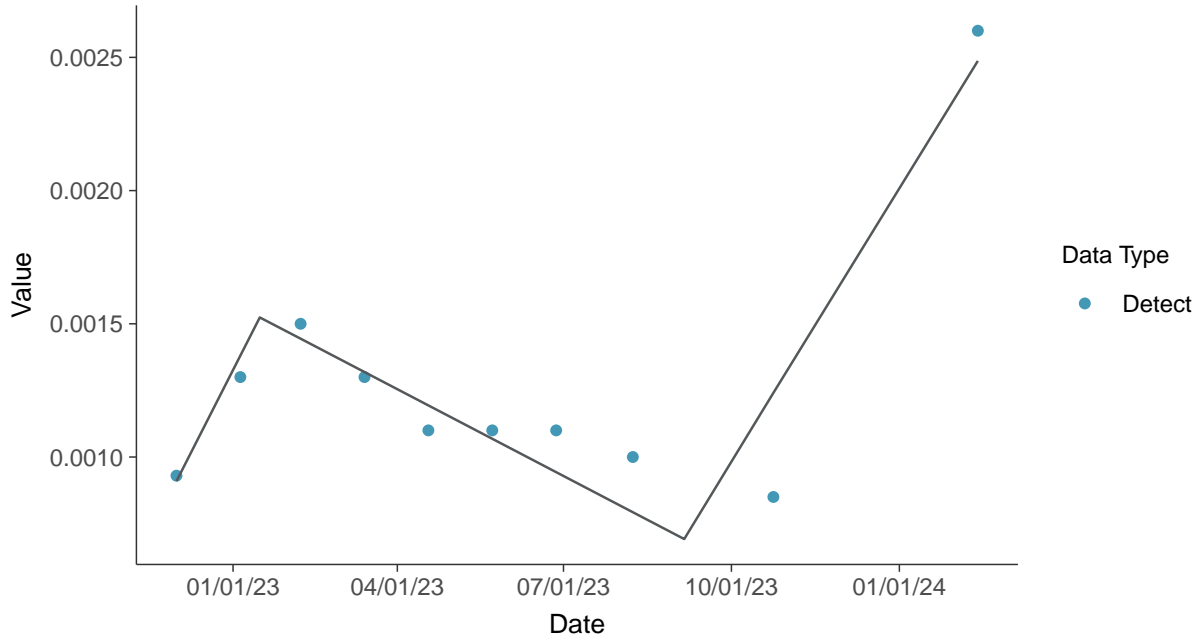
Trend Regression: Piecewise Linear-Linear

Nickel, MW-08 (mg/L)





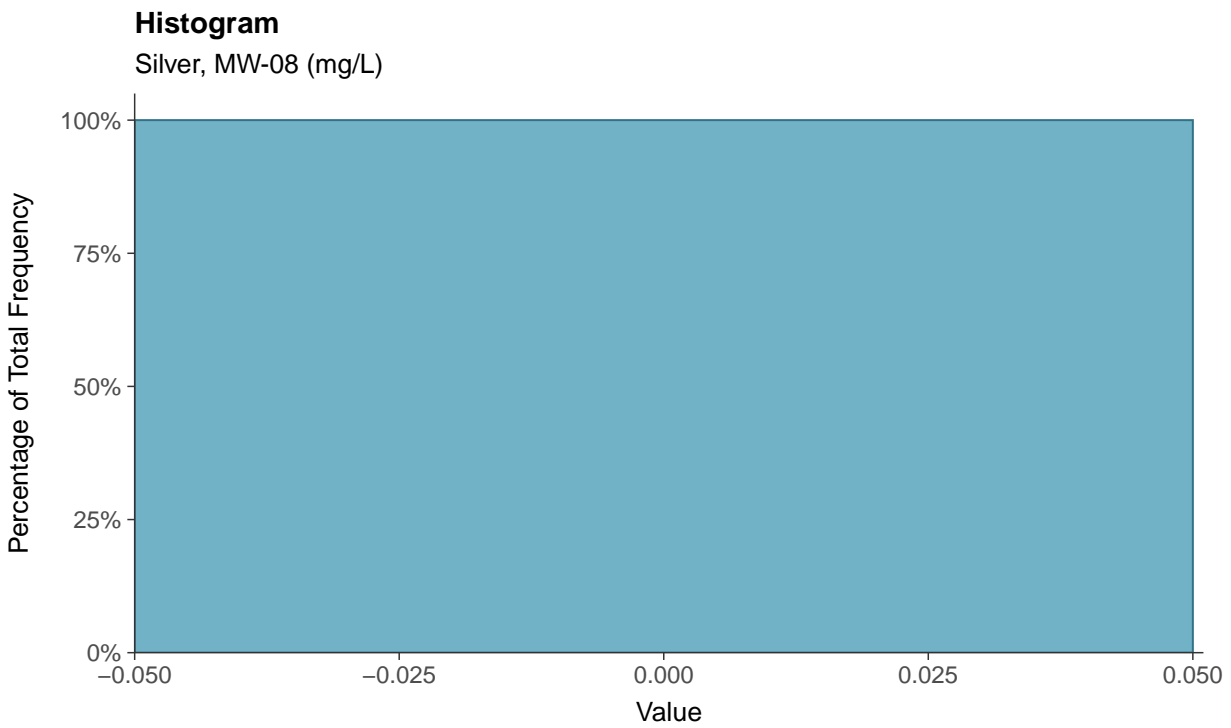
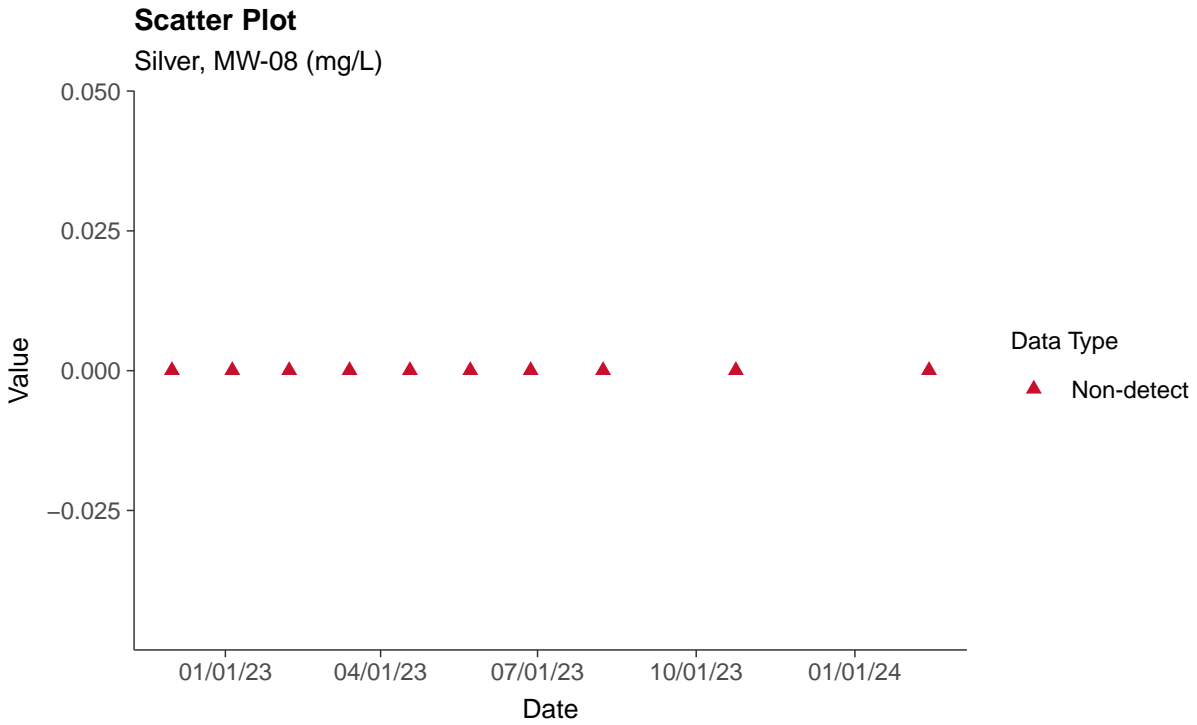
Trend Regression: Piecewise Linear-Linear-Linear
Nickel, MW-08 (mg/L)





Part 115: Silver, MW-08

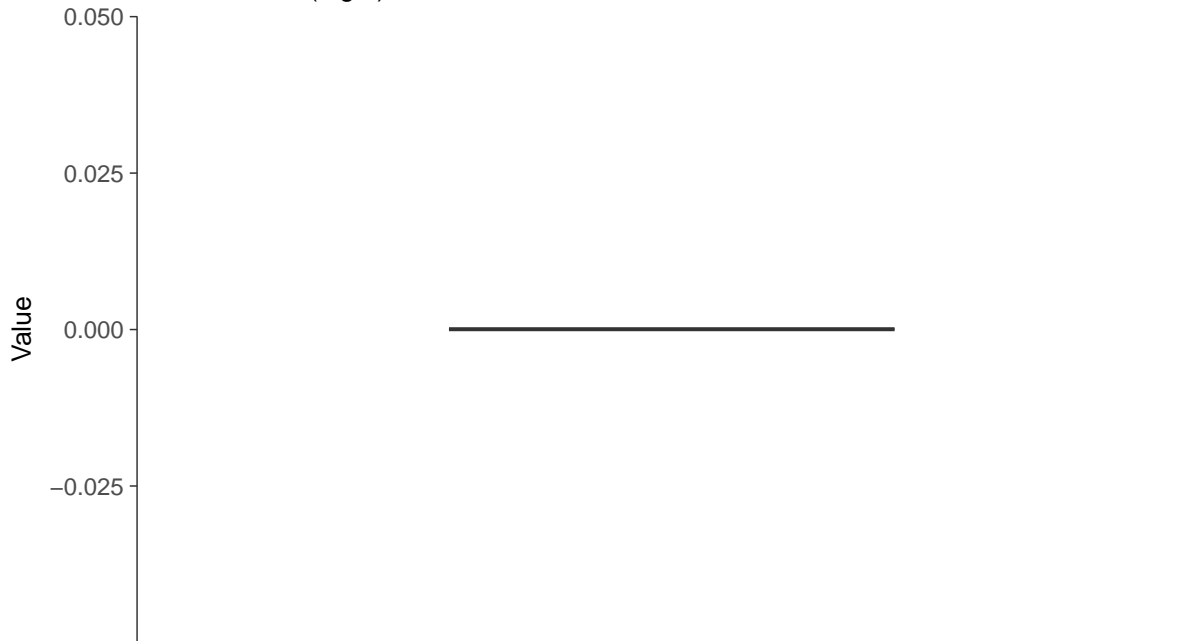
ID: 1_18_6_123





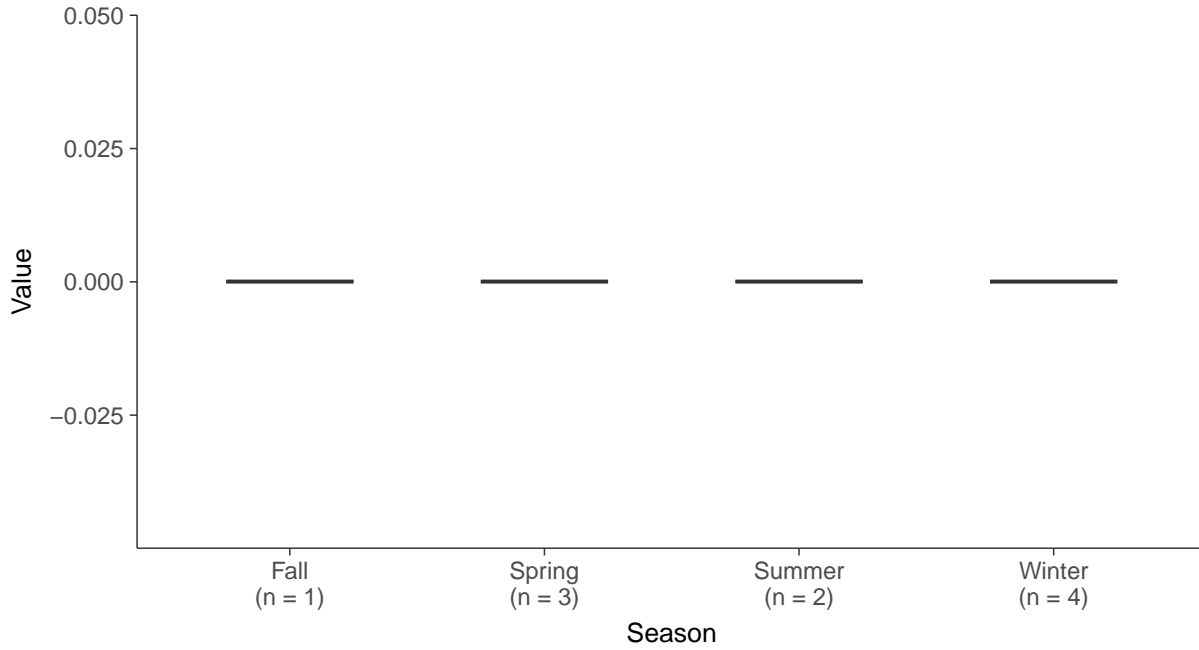
Boxplot

Silver, MW-08 (mg/L)



Boxplot by Season

Silver, MW-08 (mg/L)



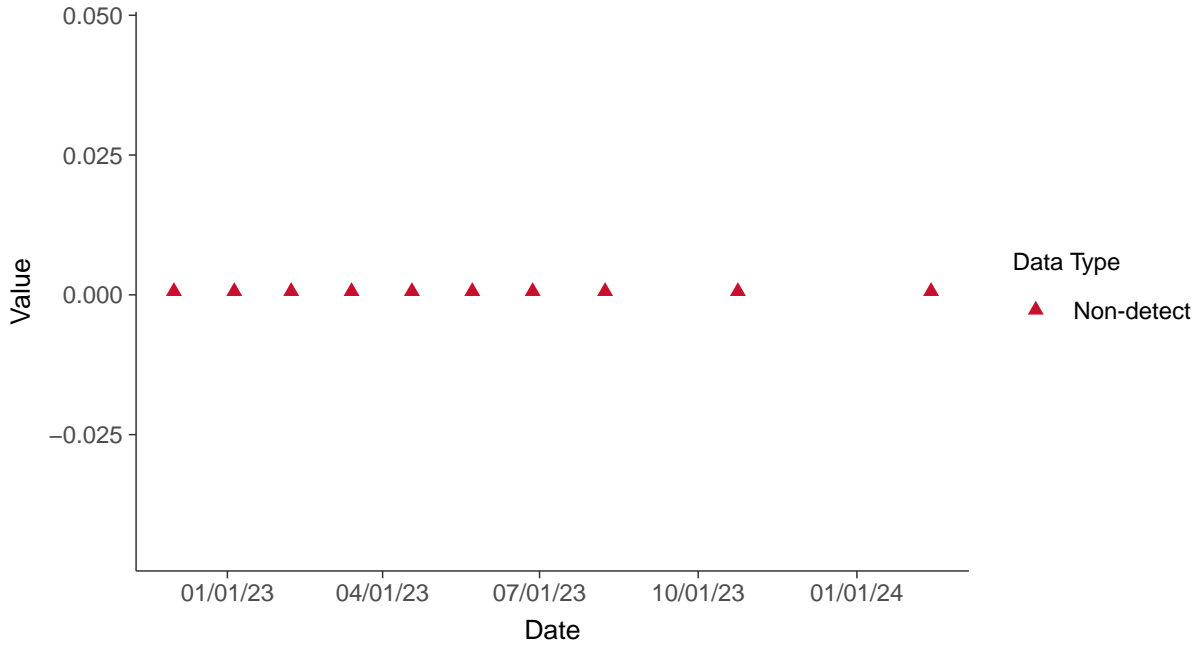


Part 115: Vanadium, MW-08

ID: 1_18_6_129

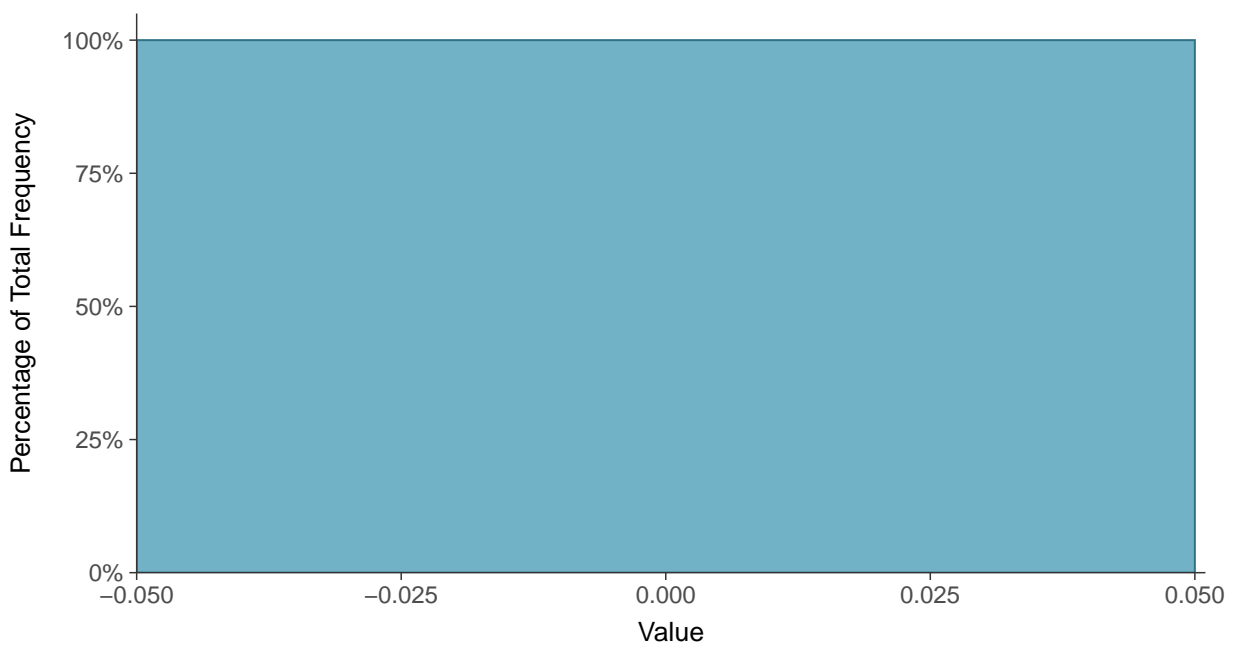
Scatter Plot

Vanadium, MW-08 (mg/L)



Histogram

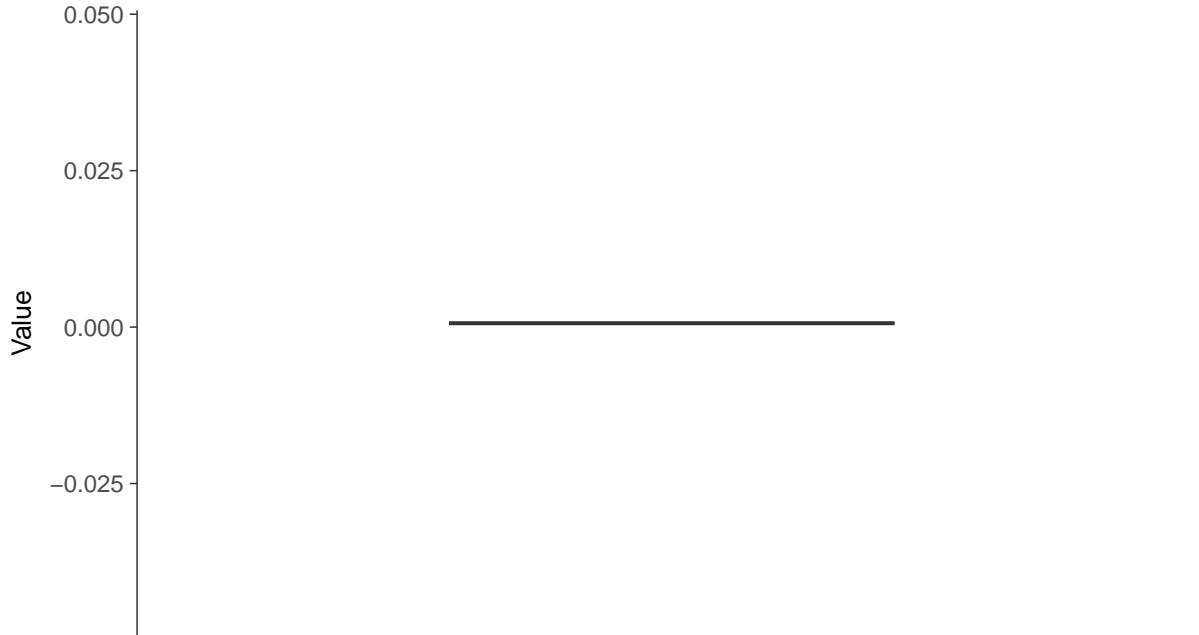
Vanadium, MW-08 (mg/L)





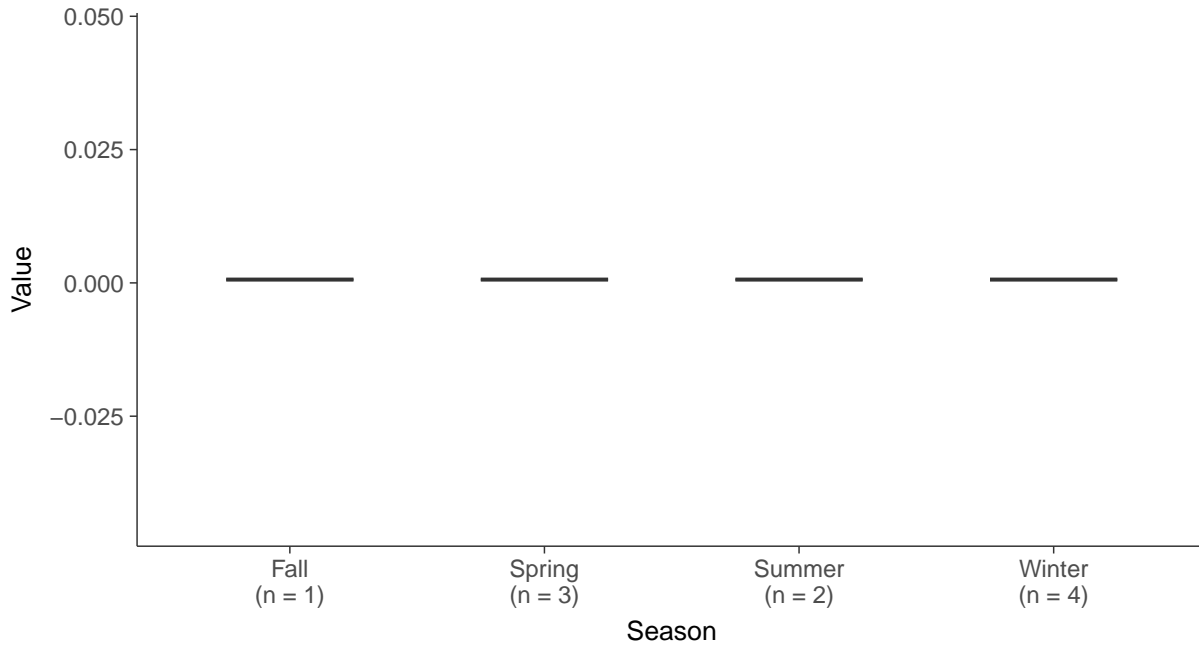
Boxplot

Vanadium, MW-08 (mg/L)



Boxplot by Season

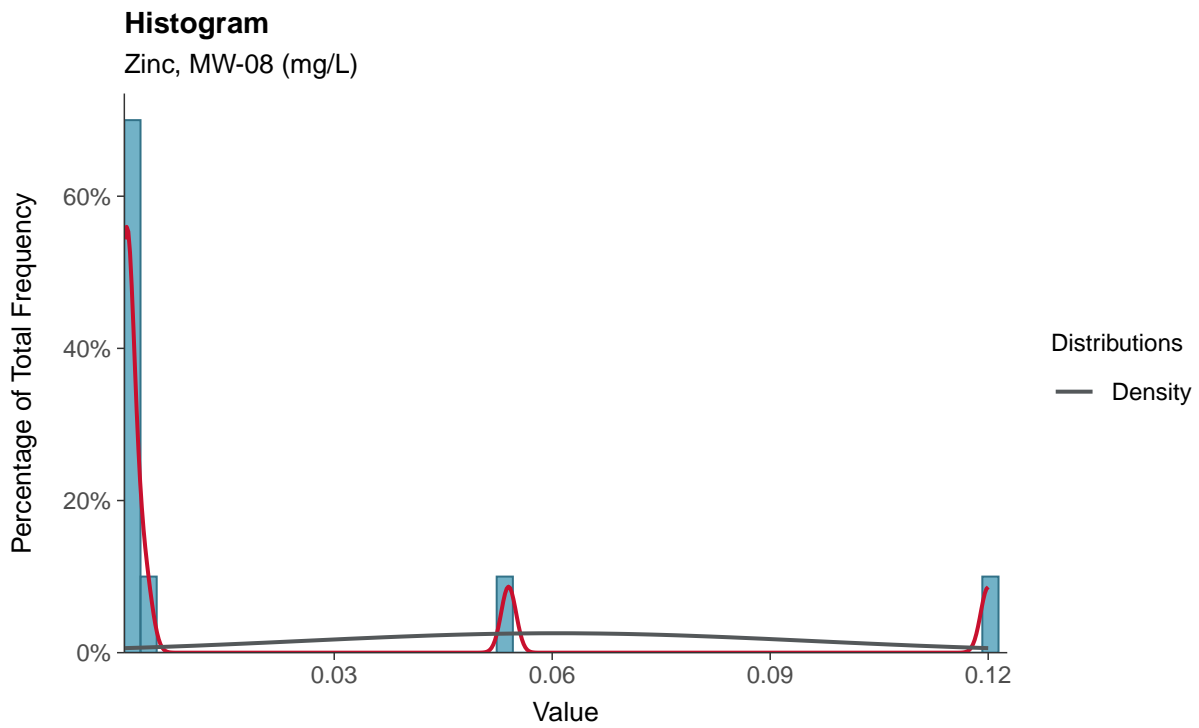
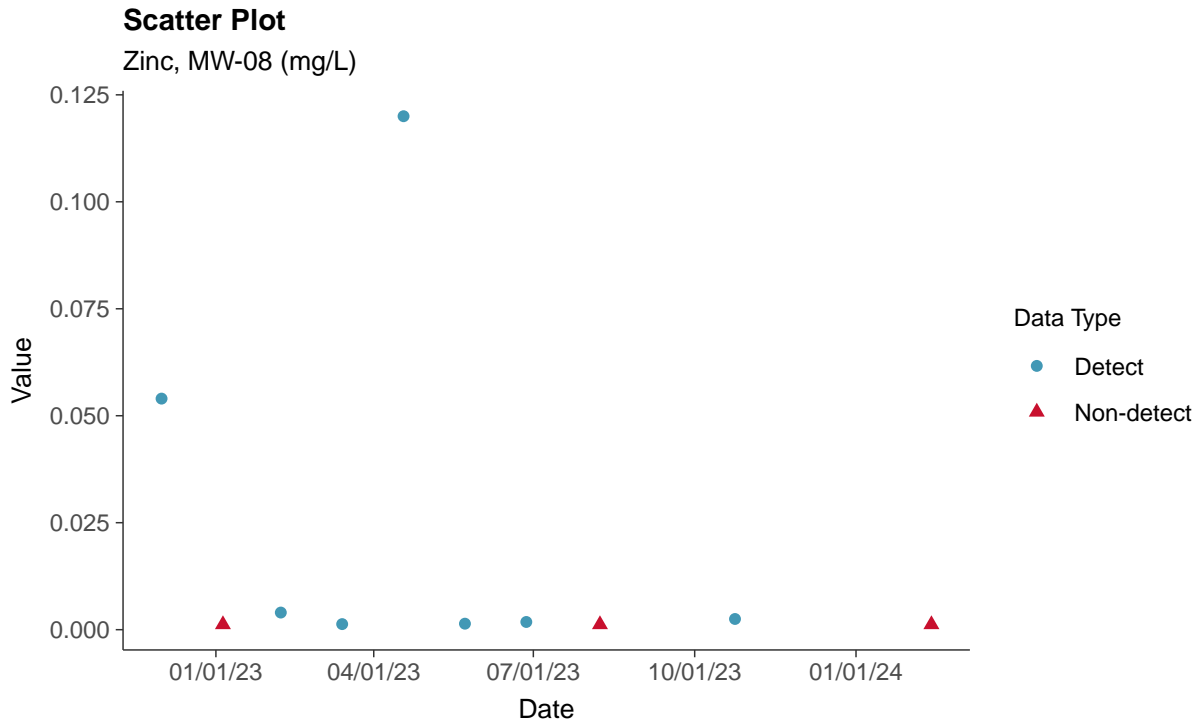
Vanadium, MW-08 (mg/L)





Part 115: Zinc, MW-08

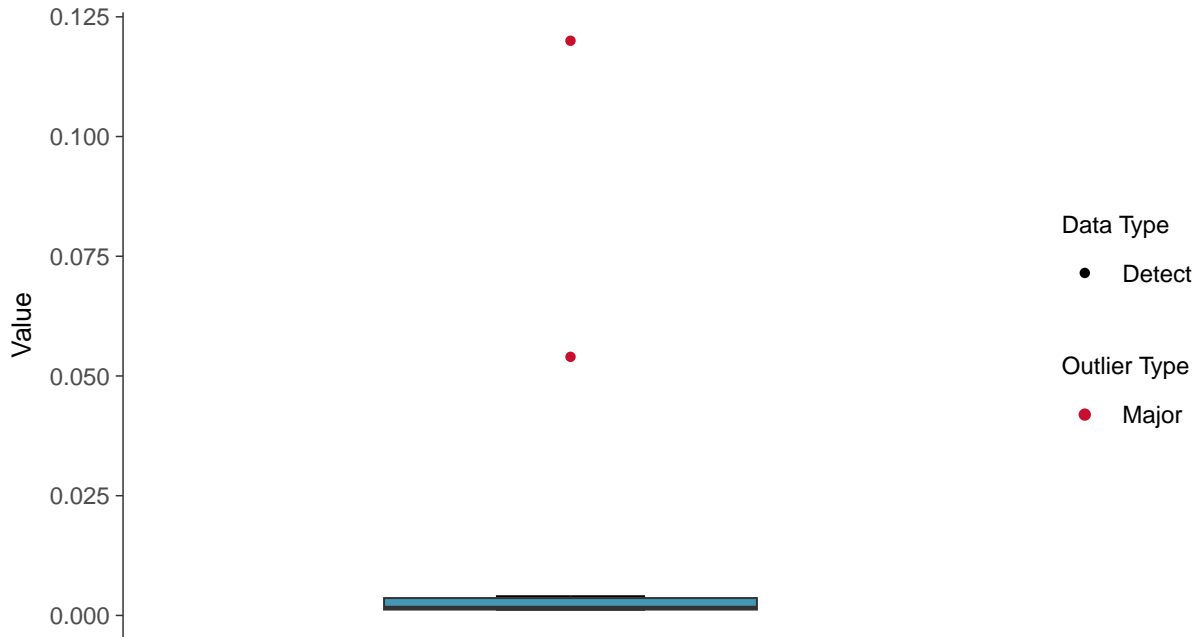
ID: 1_18_6_130





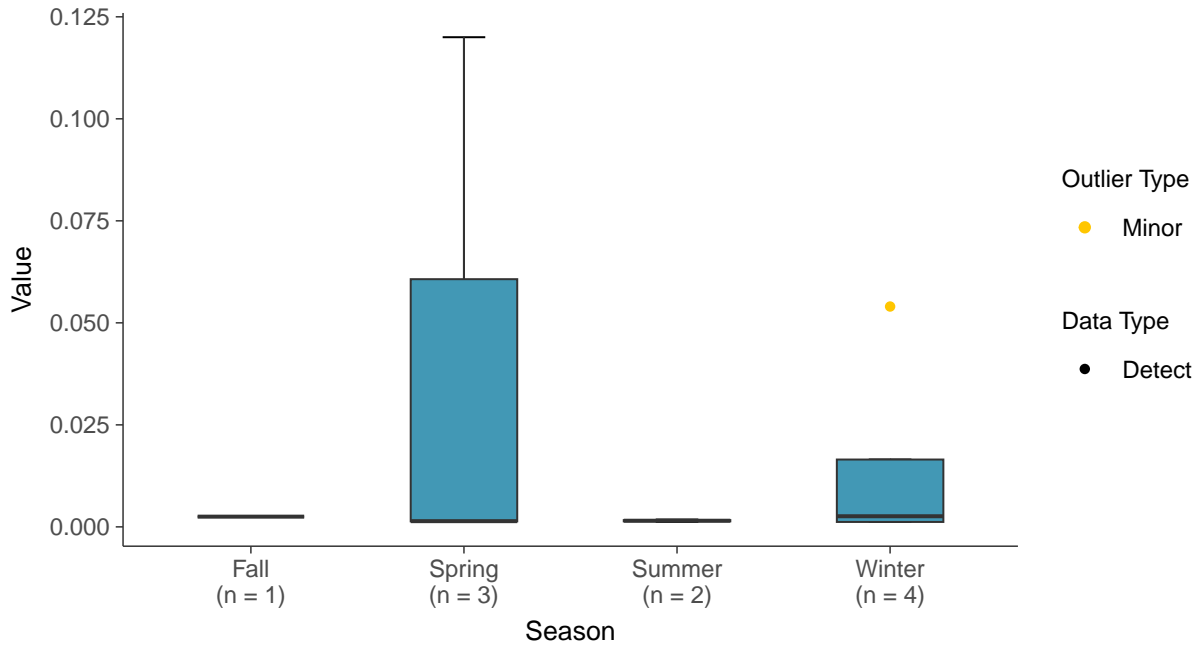
Boxplot

Zinc, MW-08 (mg/L)



Boxplot by Season

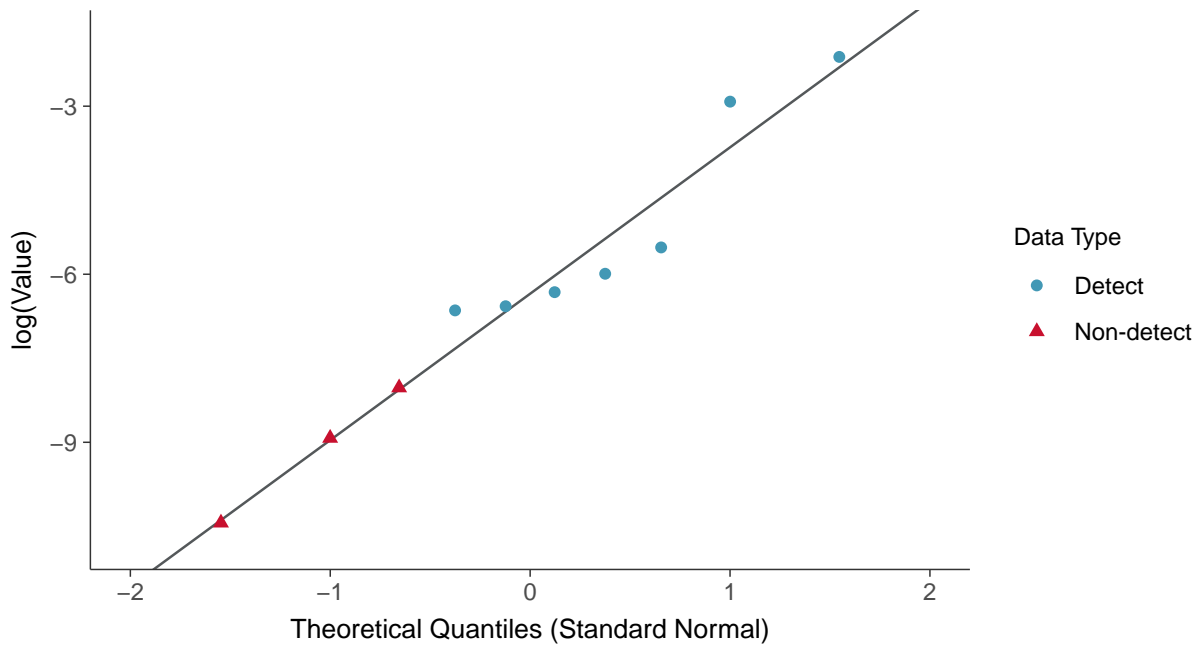
Zinc, MW-08 (mg/L)





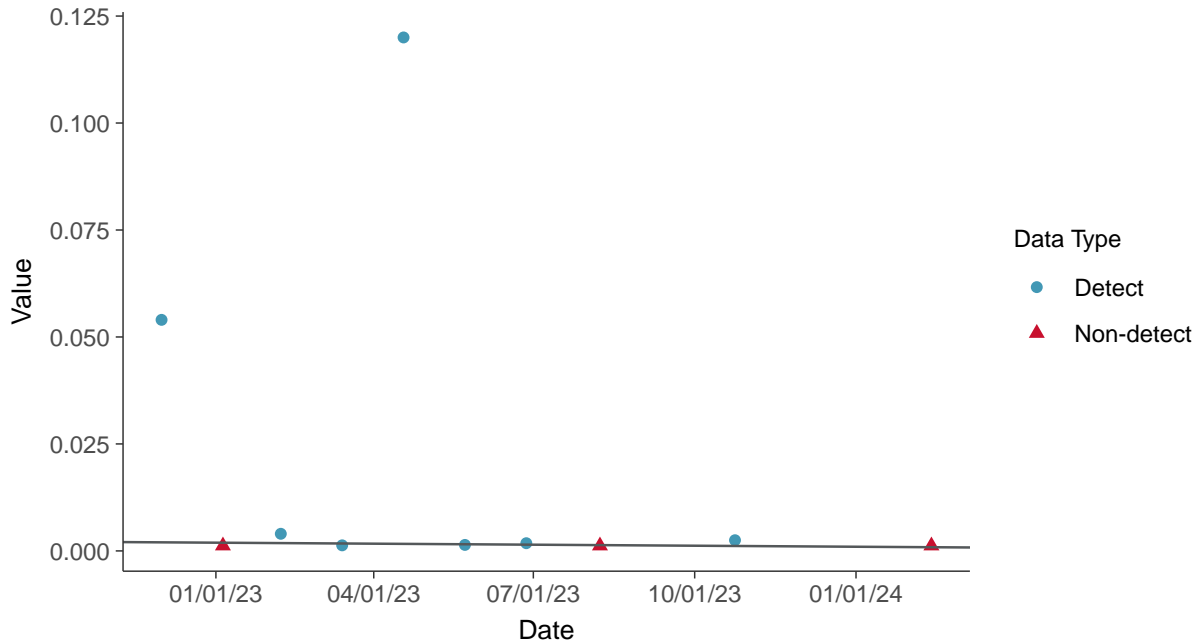
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-08 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

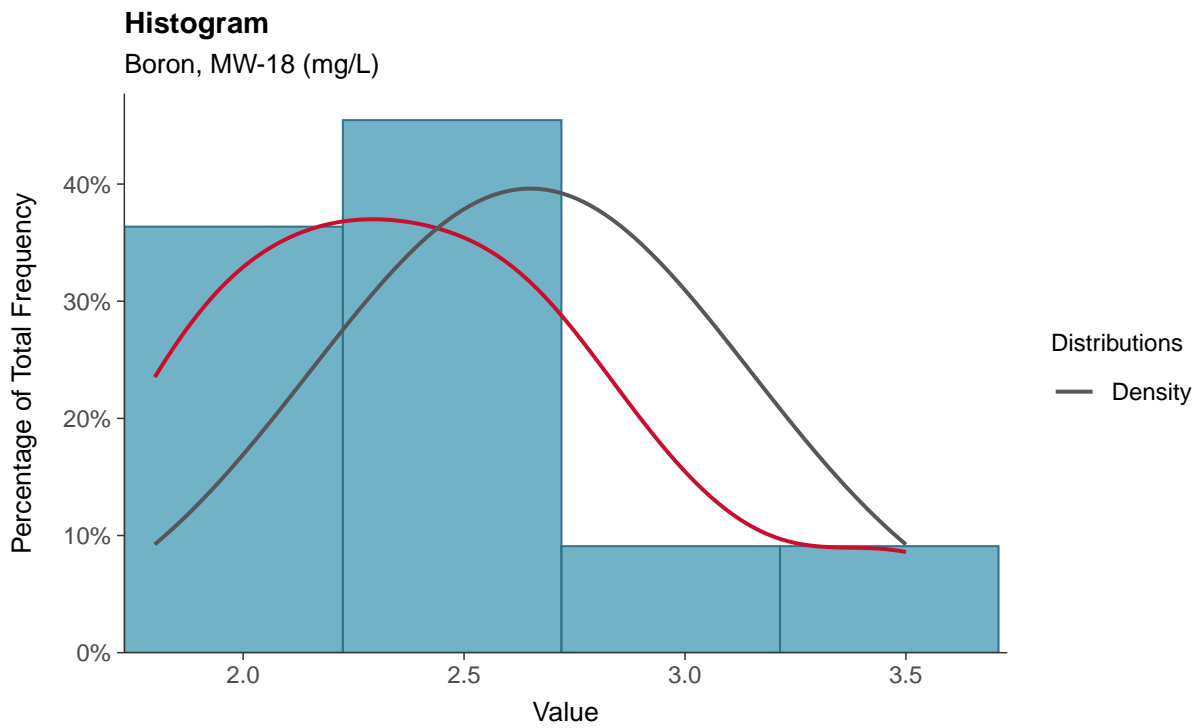
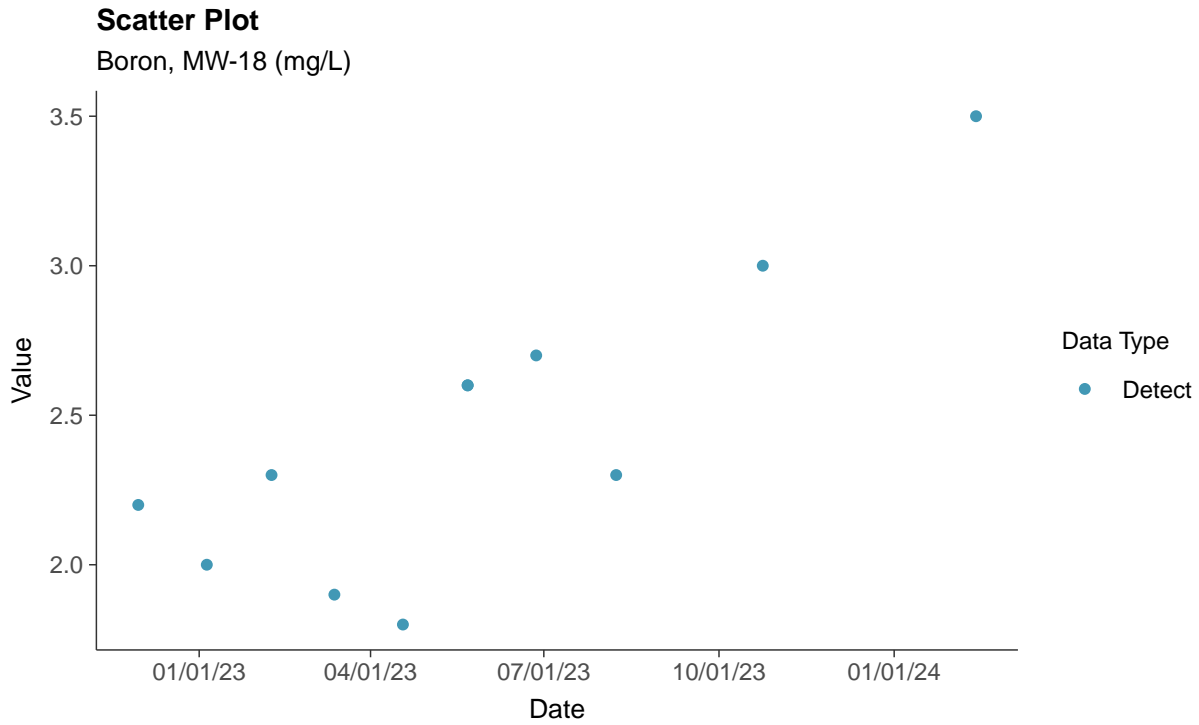
Zinc, MW-08 (mg/L)





Appendix III: Boron, MW-18

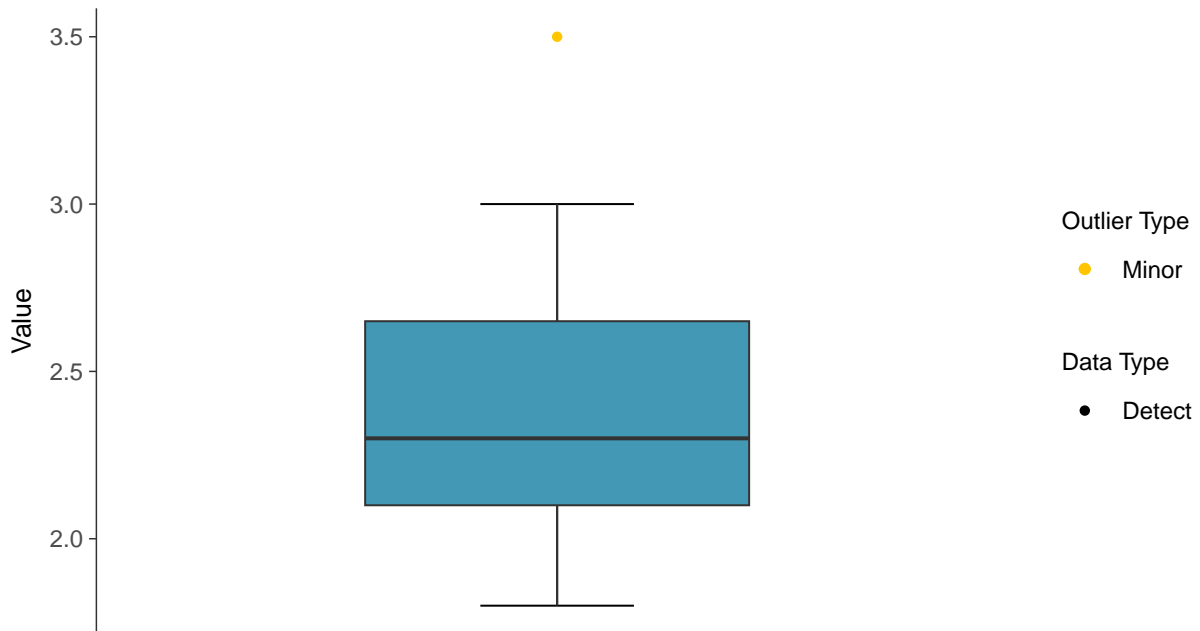
ID: 1_28_4_105





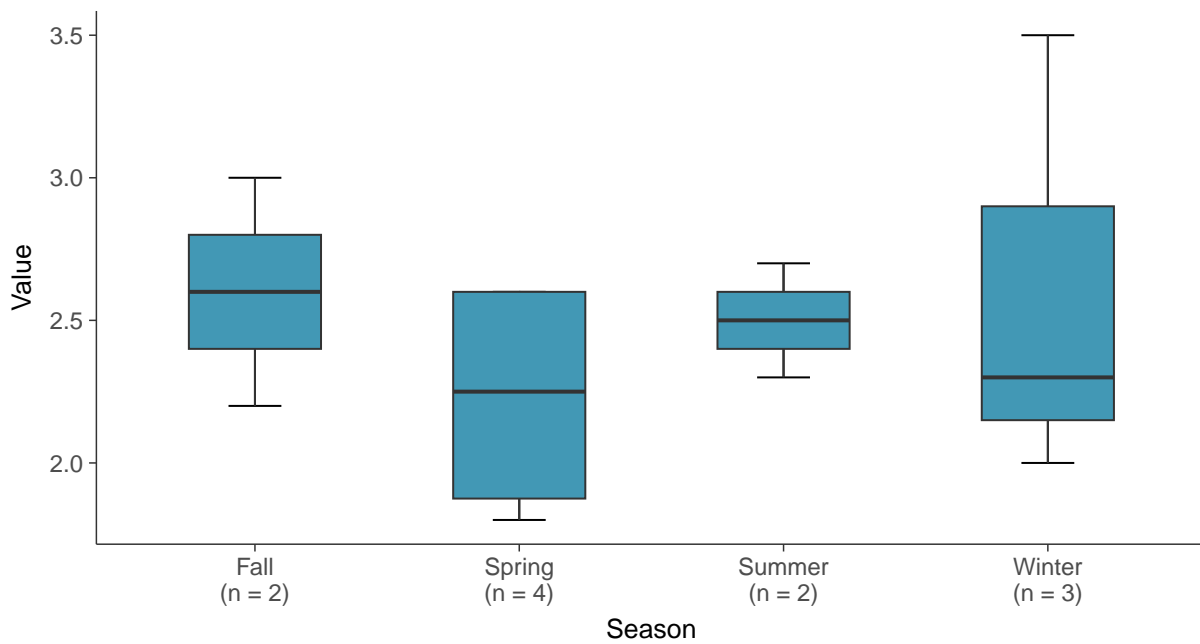
Boxplot

Boron, MW-18 (mg/L)



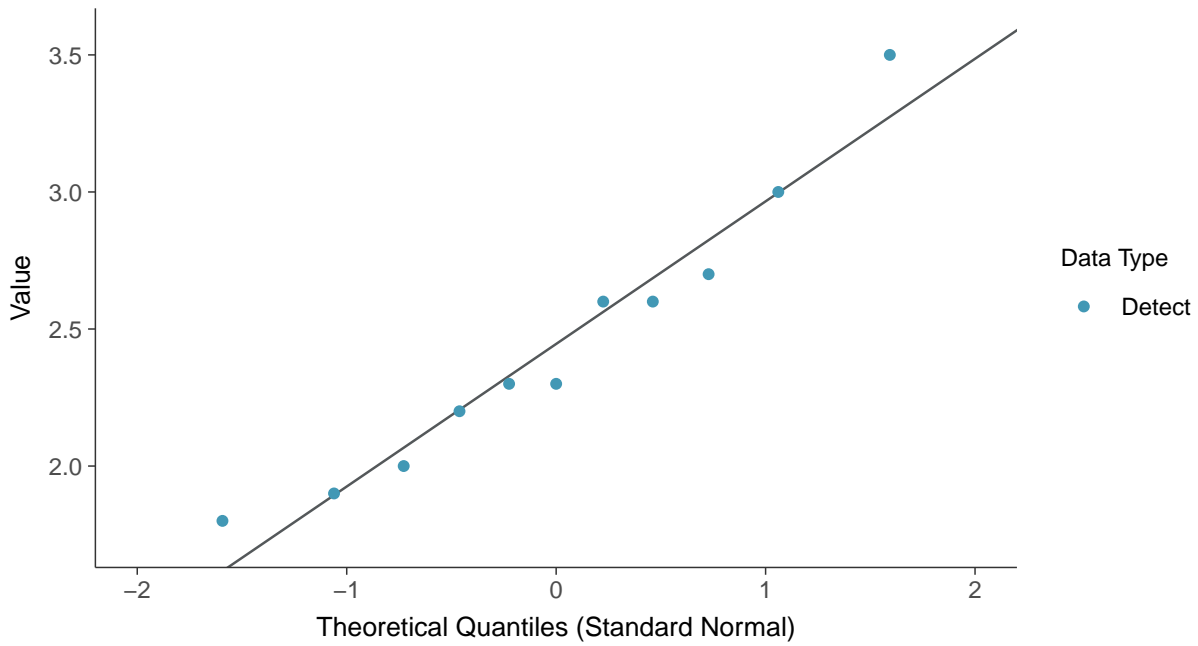
Boxplot by Season

Boron, MW-18 (mg/L)

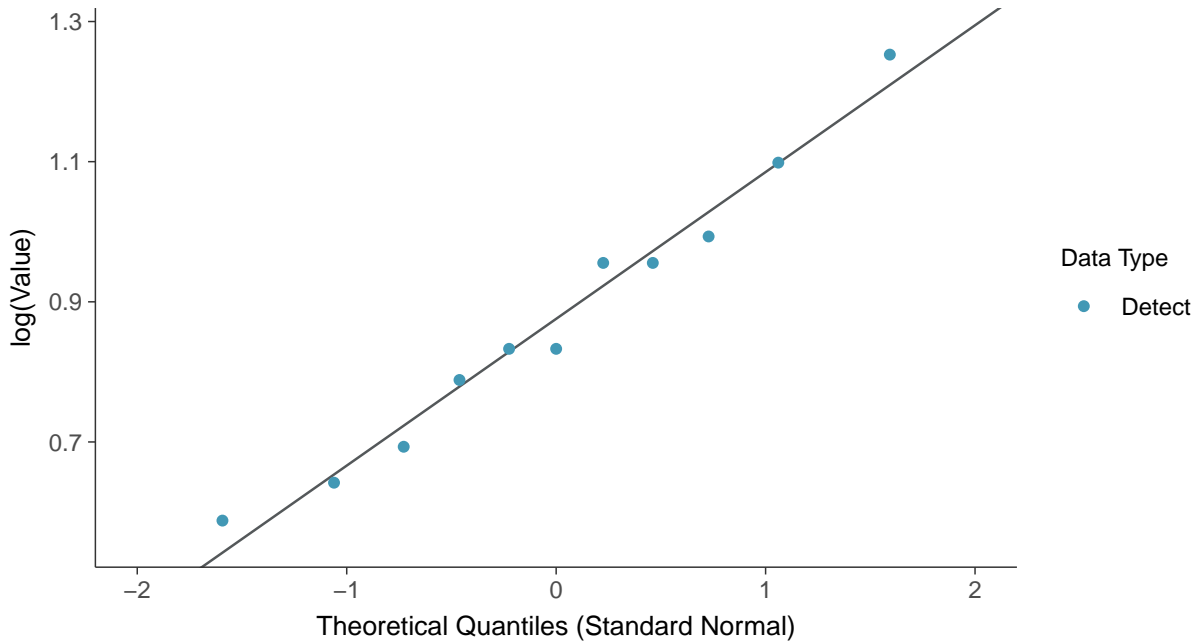




Normal Q-Q plot
Boron, MW-18 (mg/L)

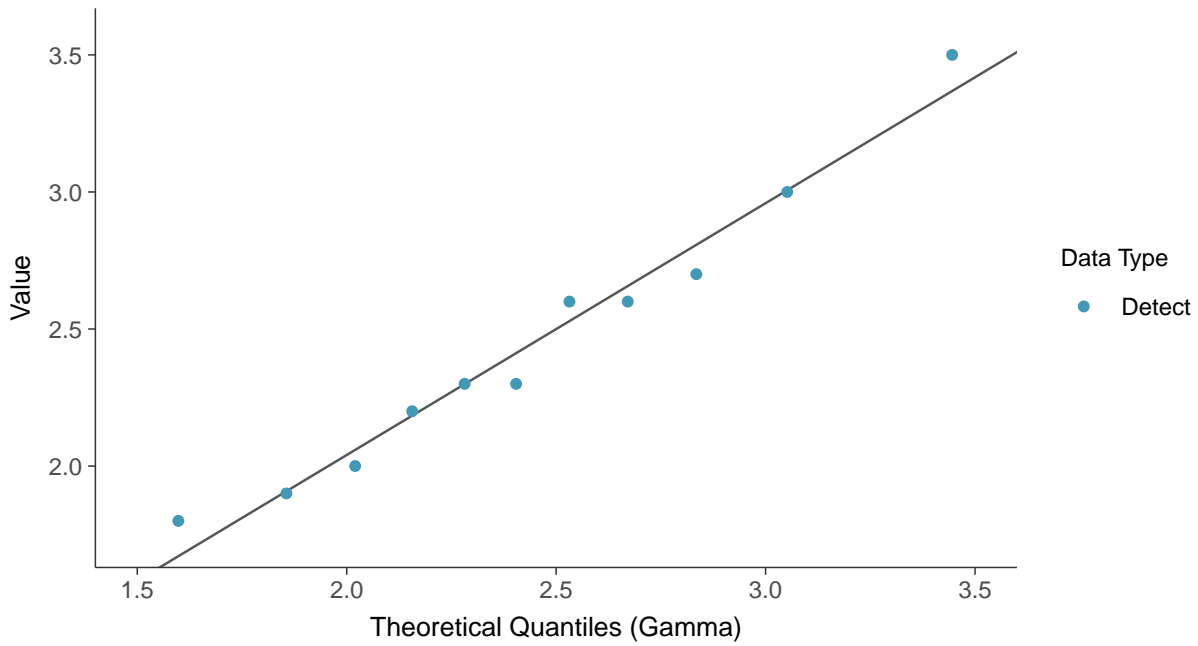


Lognormal Q-Q plot
Boron, MW-18 (mg/L)

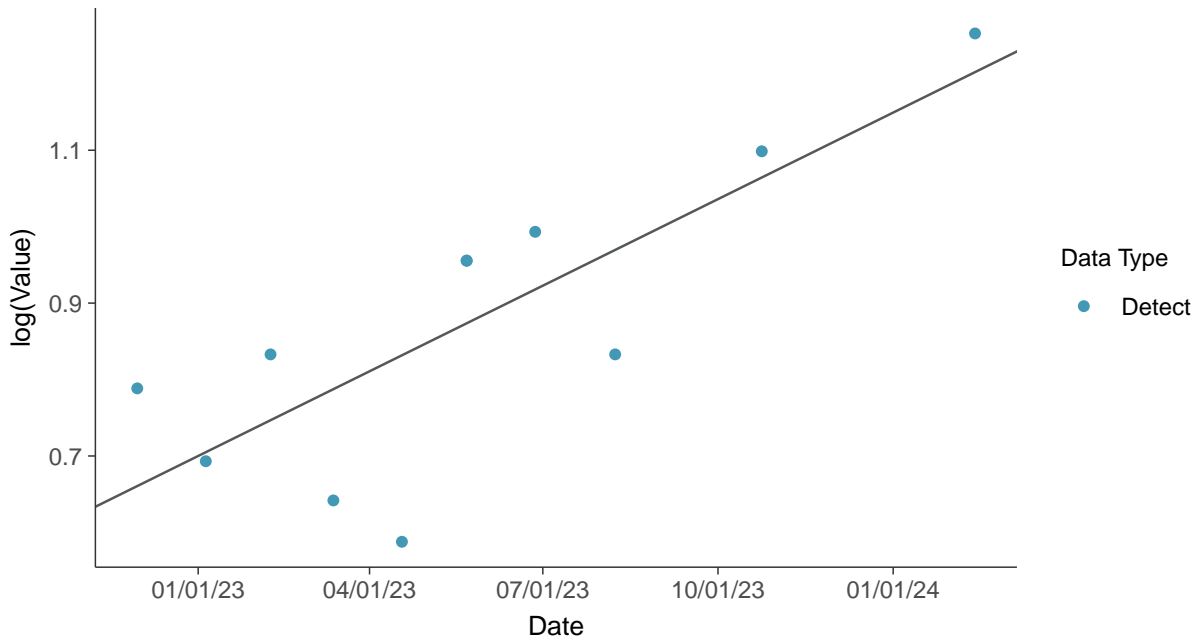




Gamma Q-Q plot
Boron, MW-18 (mg/L)

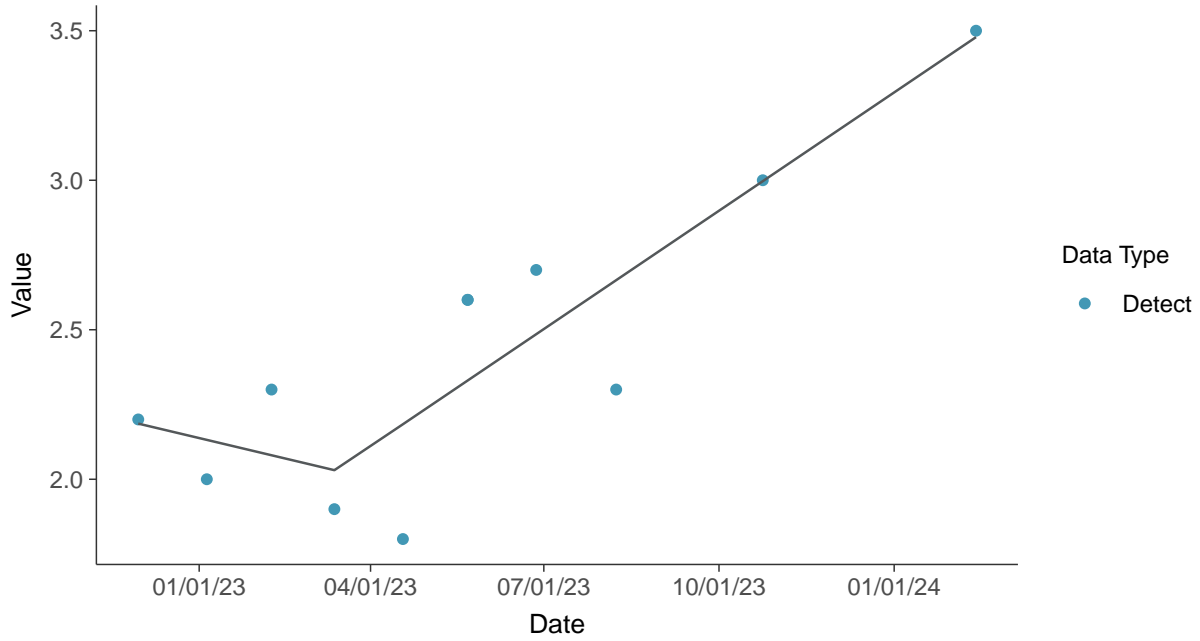


Trend Regression: Lognormal MLE
Boron, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear
Boron, MW-18 (mg/L)



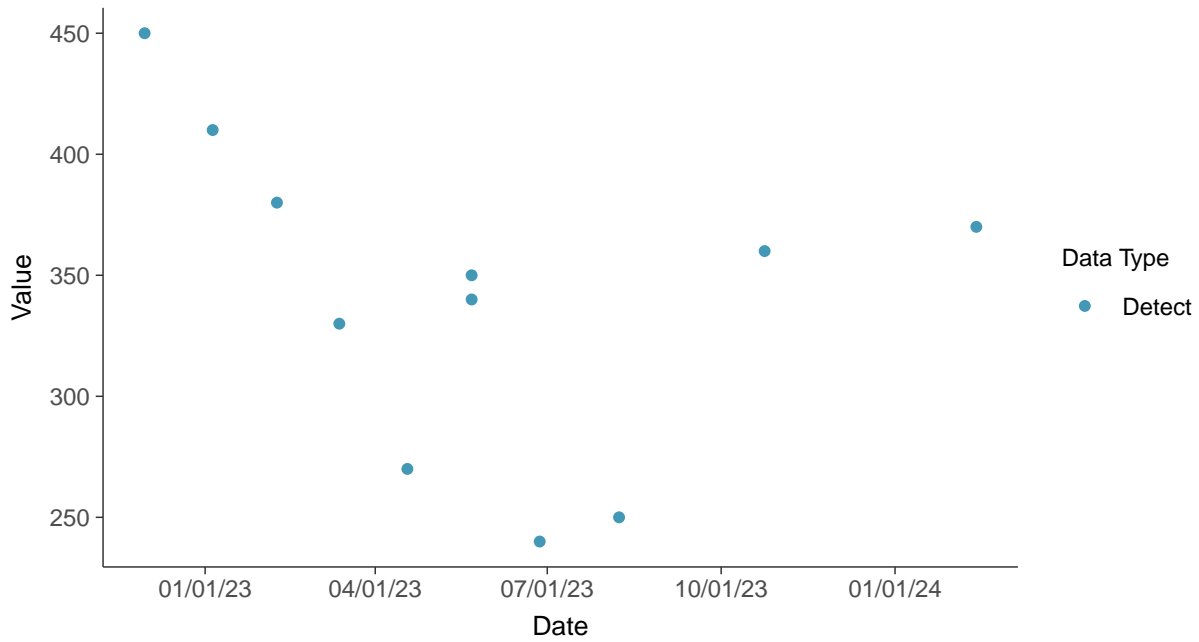


Appendix III: Calcium, MW-18

ID: 1_28_4_107

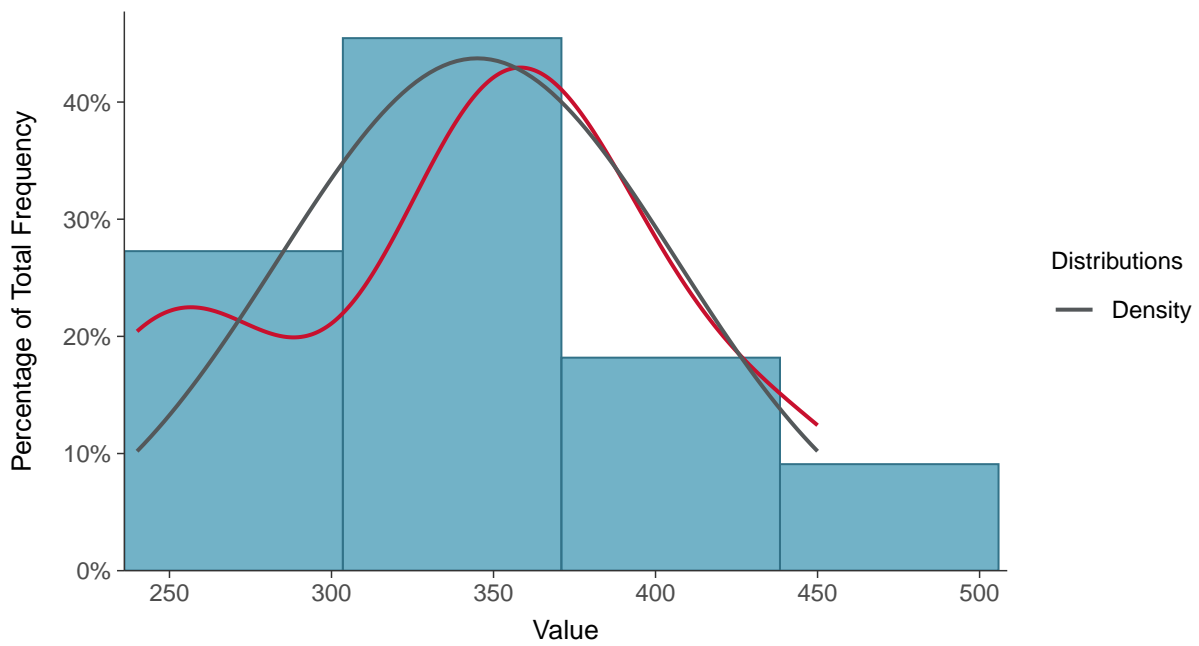
Scatter Plot

Calcium, MW-18 (mg/L)



Histogram

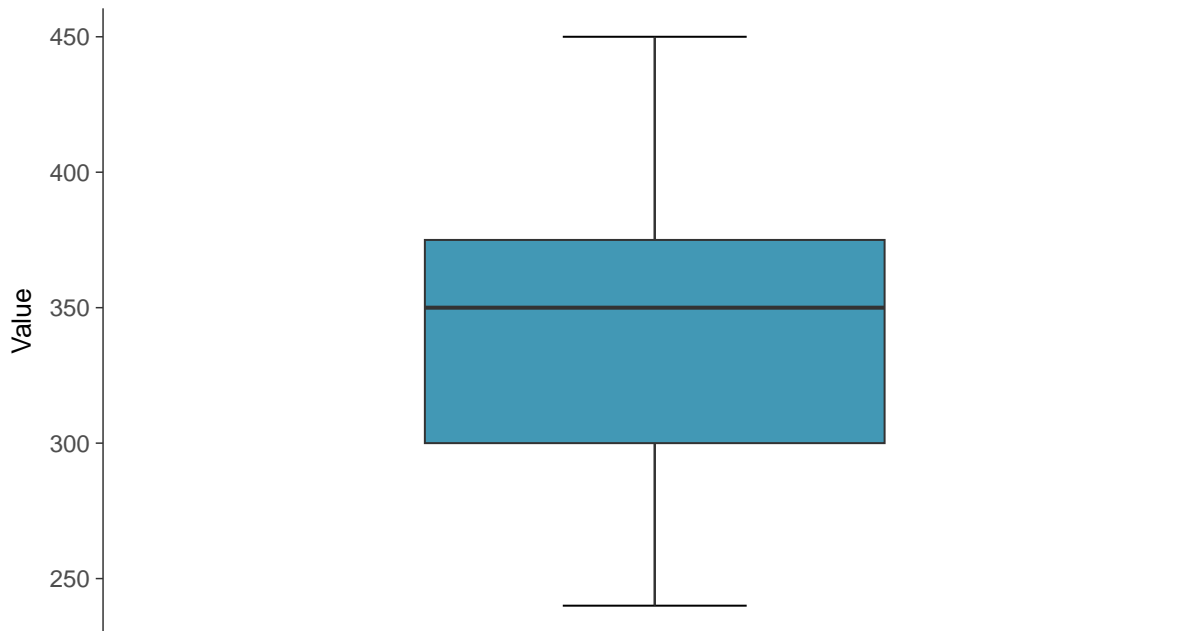
Calcium, MW-18 (mg/L)





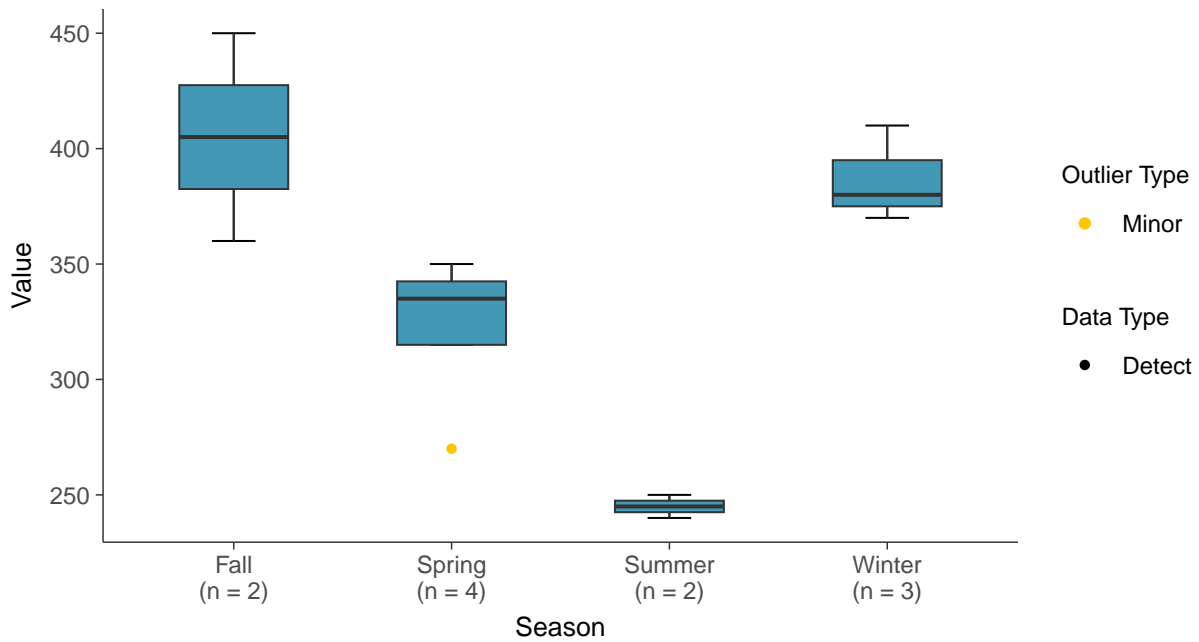
Boxplot

Calcium, MW-18 (mg/L)



Boxplot by Season

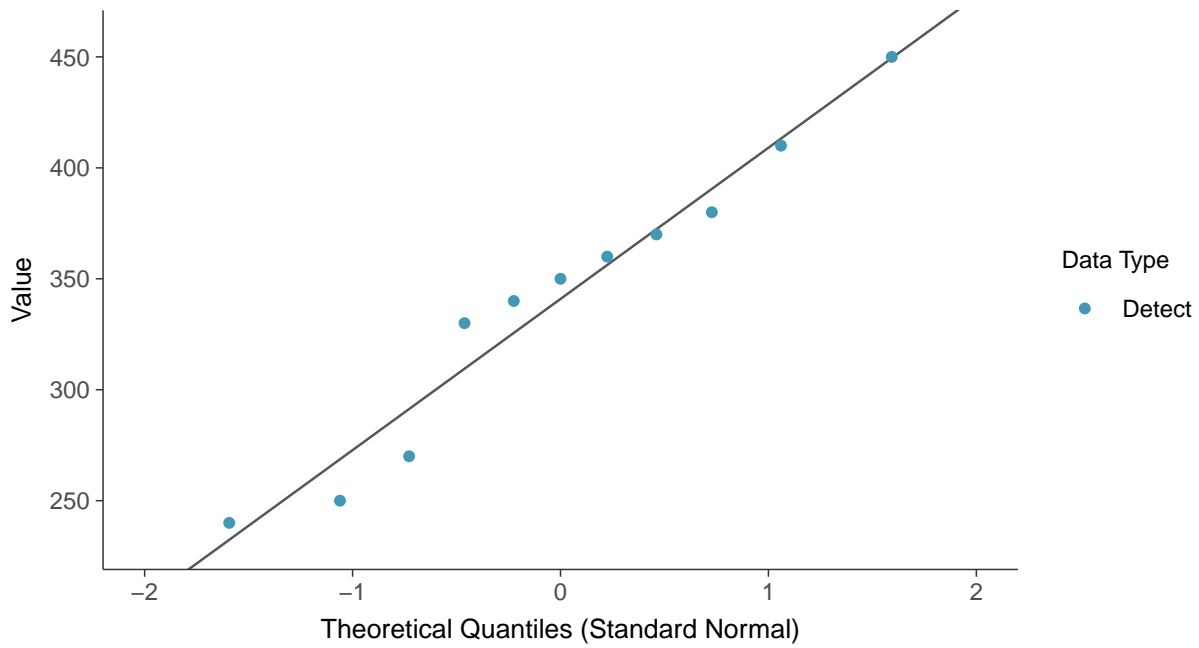
Calcium, MW-18 (mg/L)





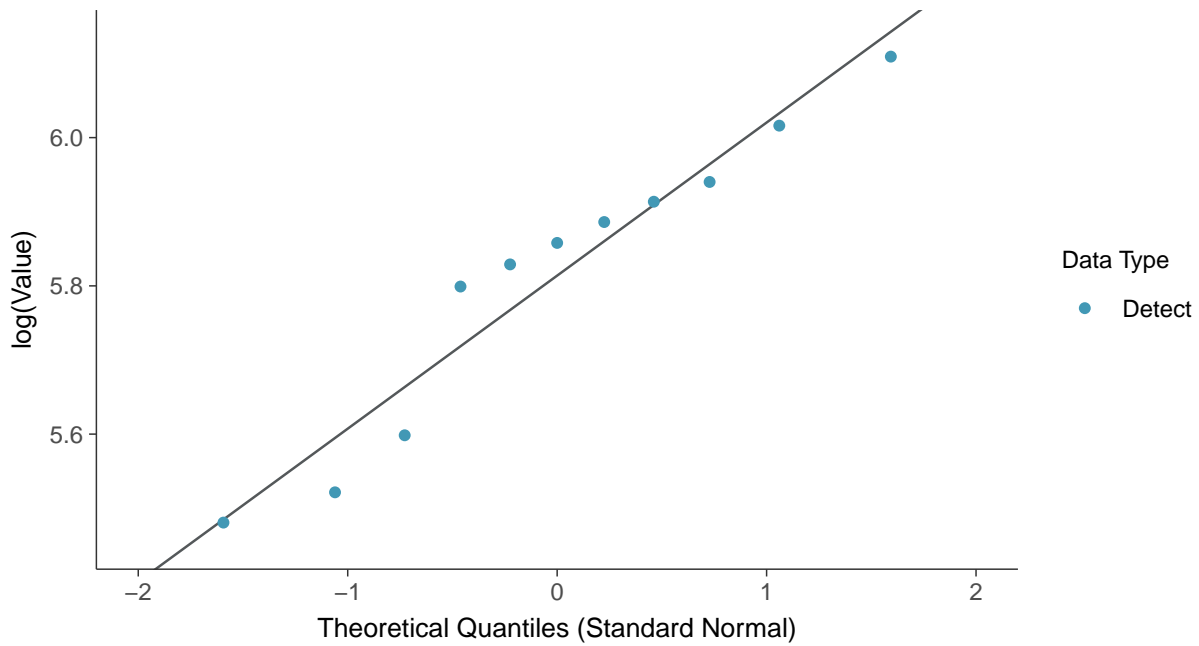
Normal Q-Q plot

Calcium, MW-18 (mg/L)



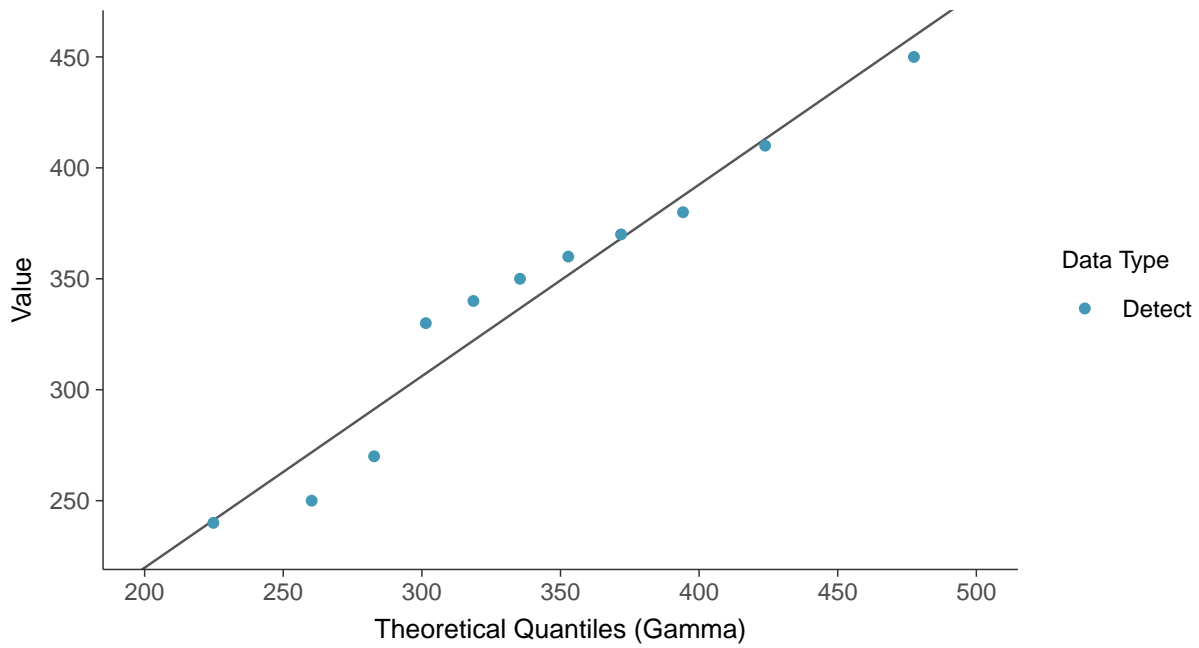
Lognormal Q-Q plot

Calcium, MW-18 (mg/L)

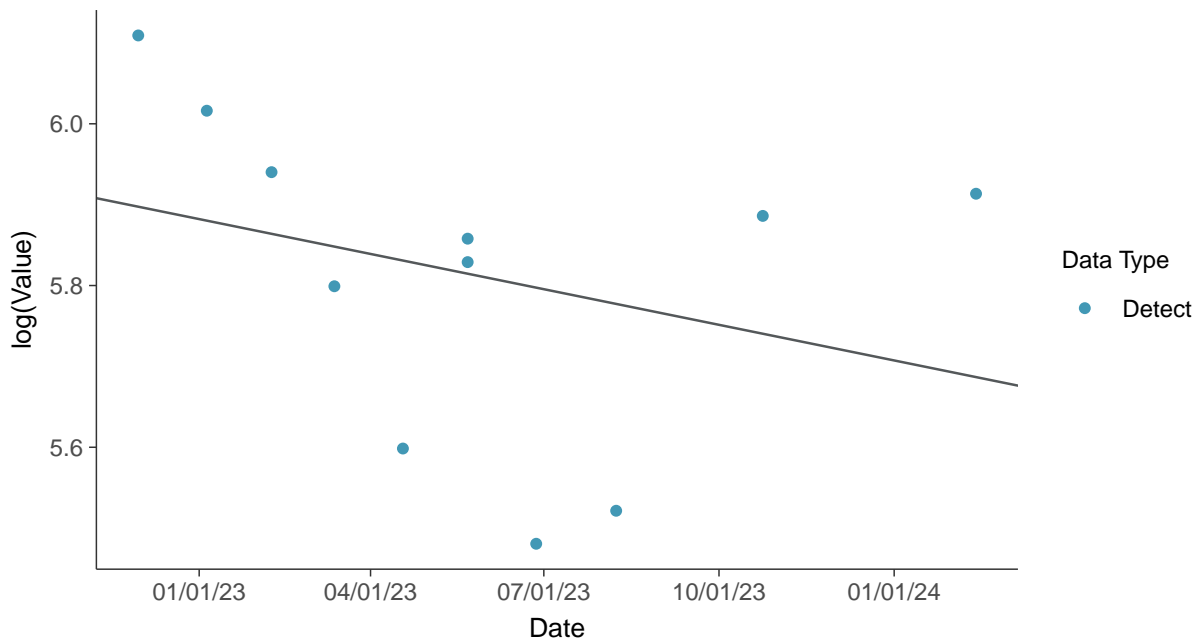




Gamma Q-Q plot
Calcium, MW-18 (mg/L)



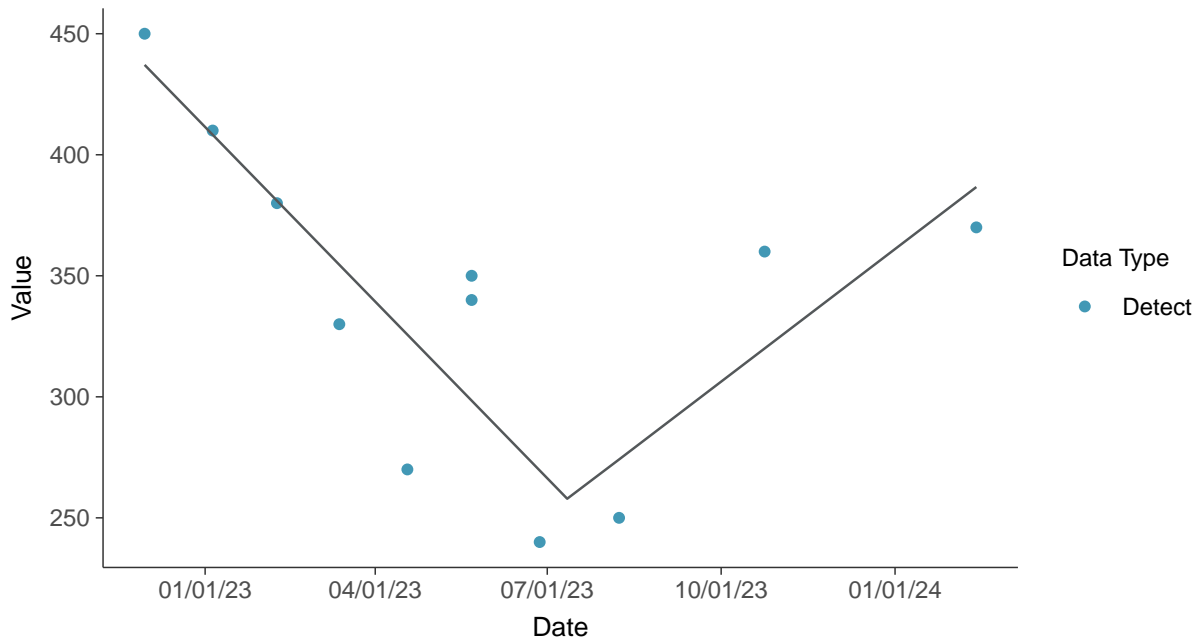
Trend Regression: Lognormal MLE
Calcium, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear

Calcium, MW-18 (mg/L)



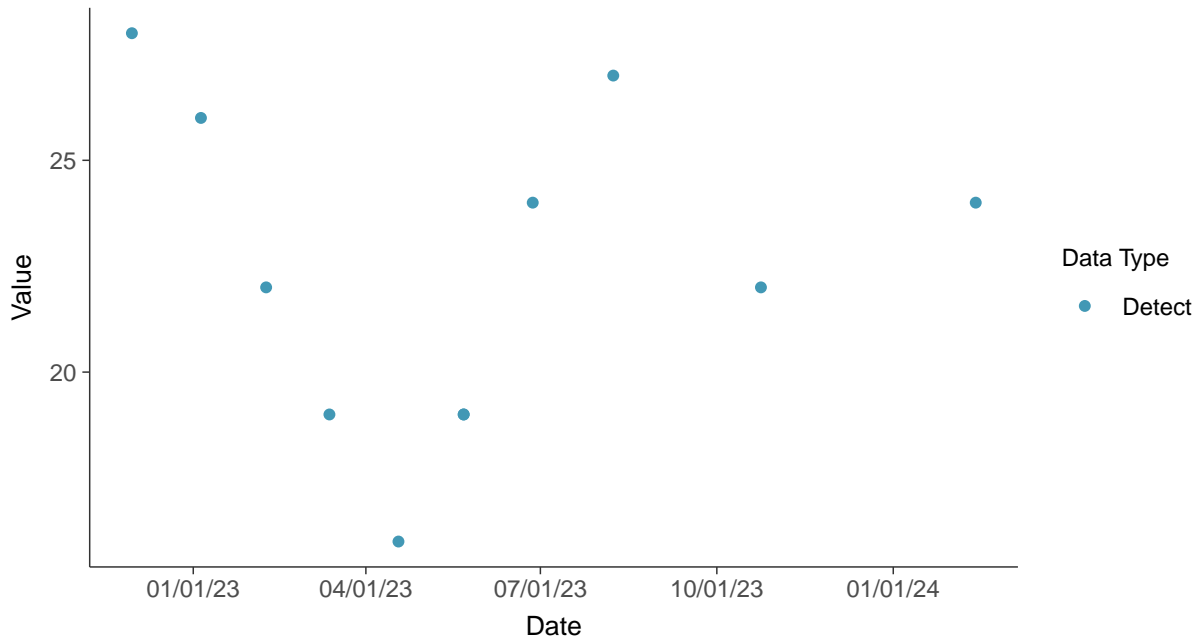


Appendix III: Chloride (as Cl), MW-18

ID: 1_28_4_108

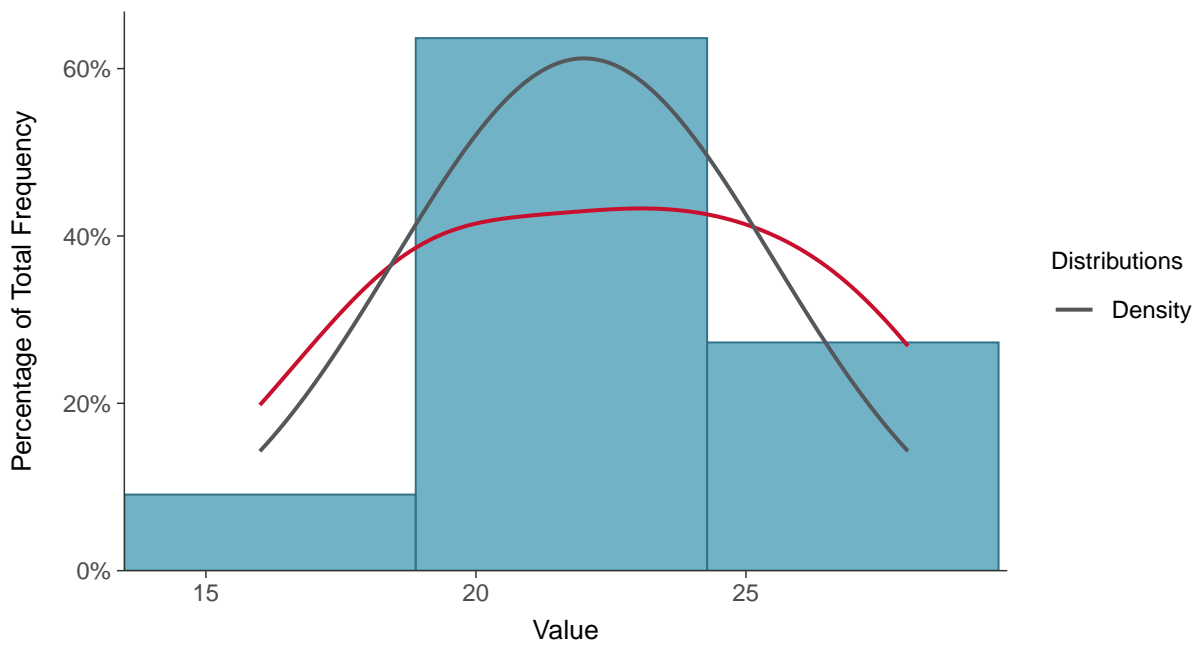
Scatter Plot

Chloride (as Cl), MW-18 (mg/L)



Histogram

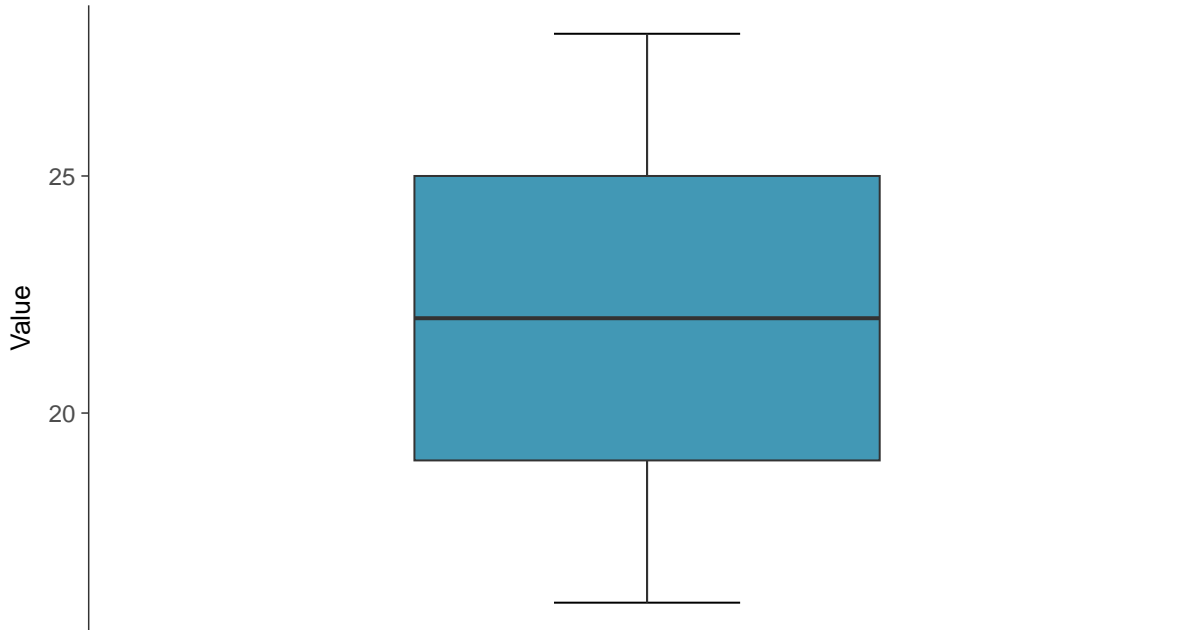
Chloride (as Cl), MW-18 (mg/L)





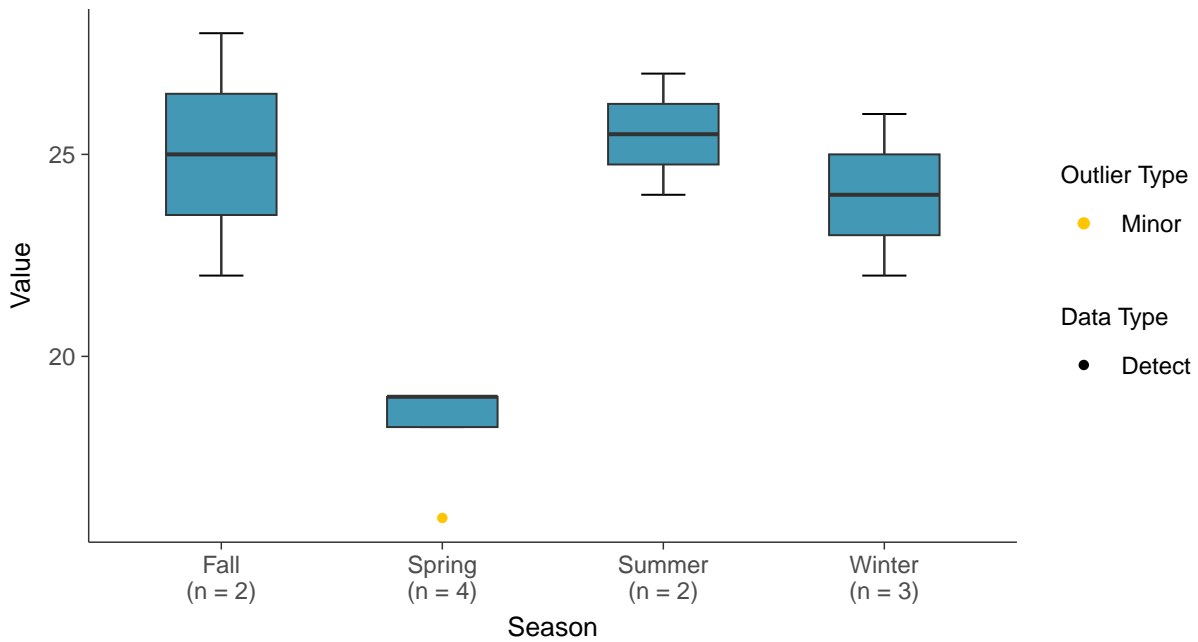
Boxplot

Chloride (as Cl), MW-18 (mg/L)



Boxplot by Season

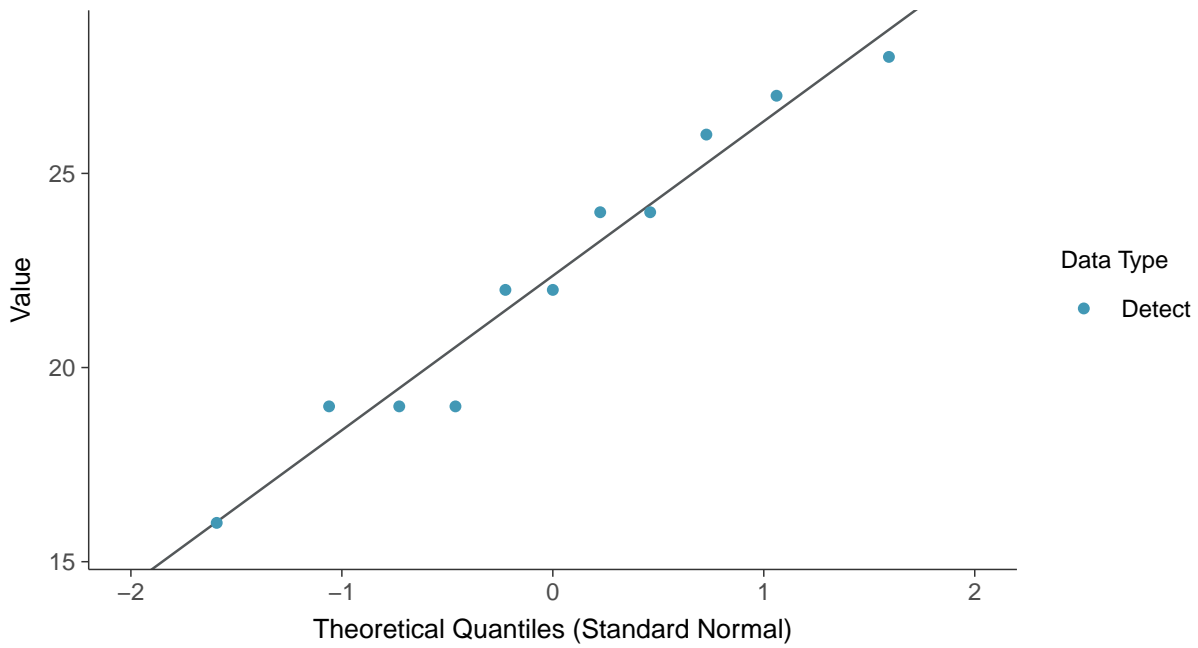
Chloride (as Cl), MW-18 (mg/L)





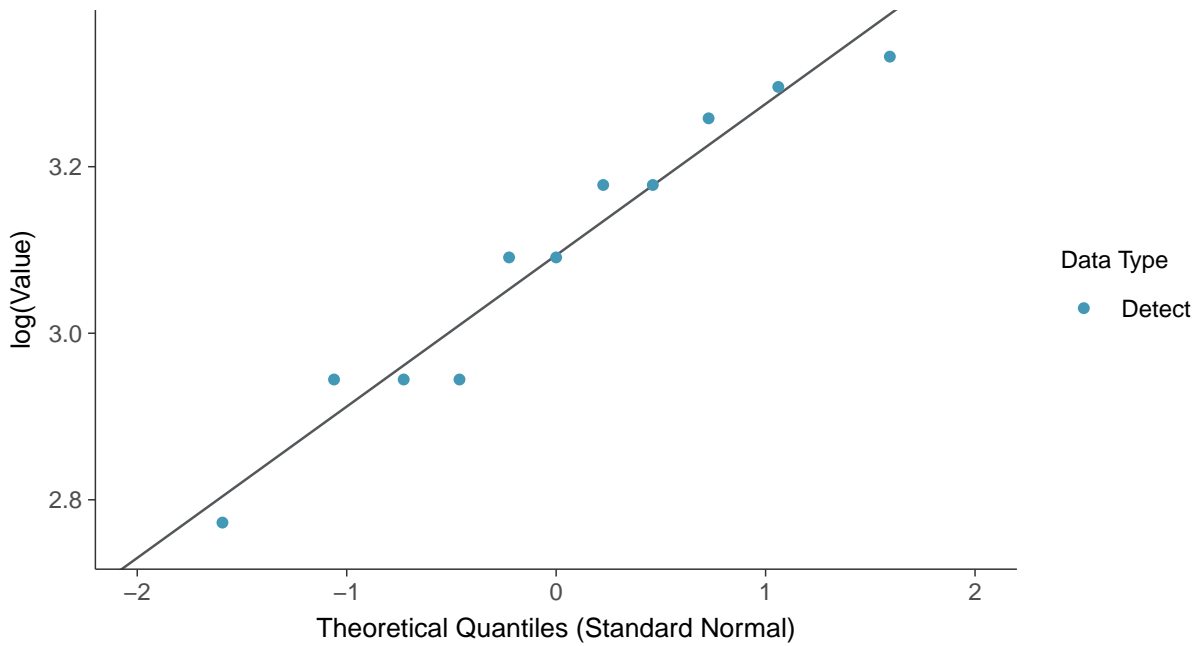
Normal Q-Q plot

Chloride (as Cl), MW-18 (mg/L)



Lognormal Q-Q plot

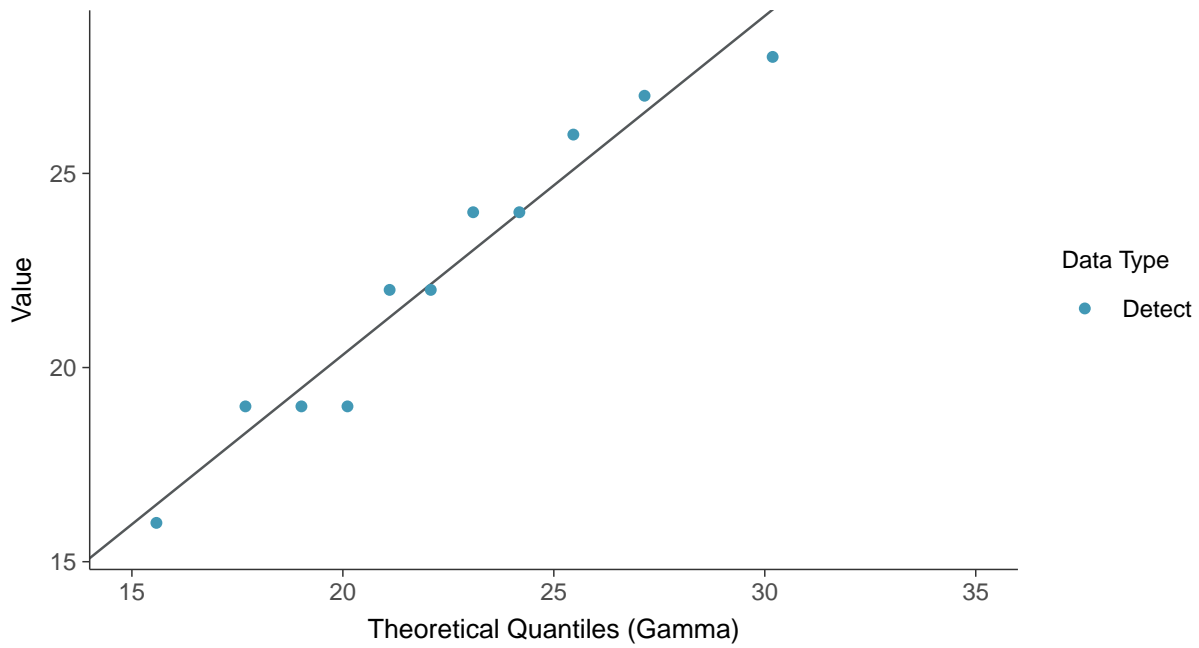
Chloride (as Cl), MW-18 (mg/L)





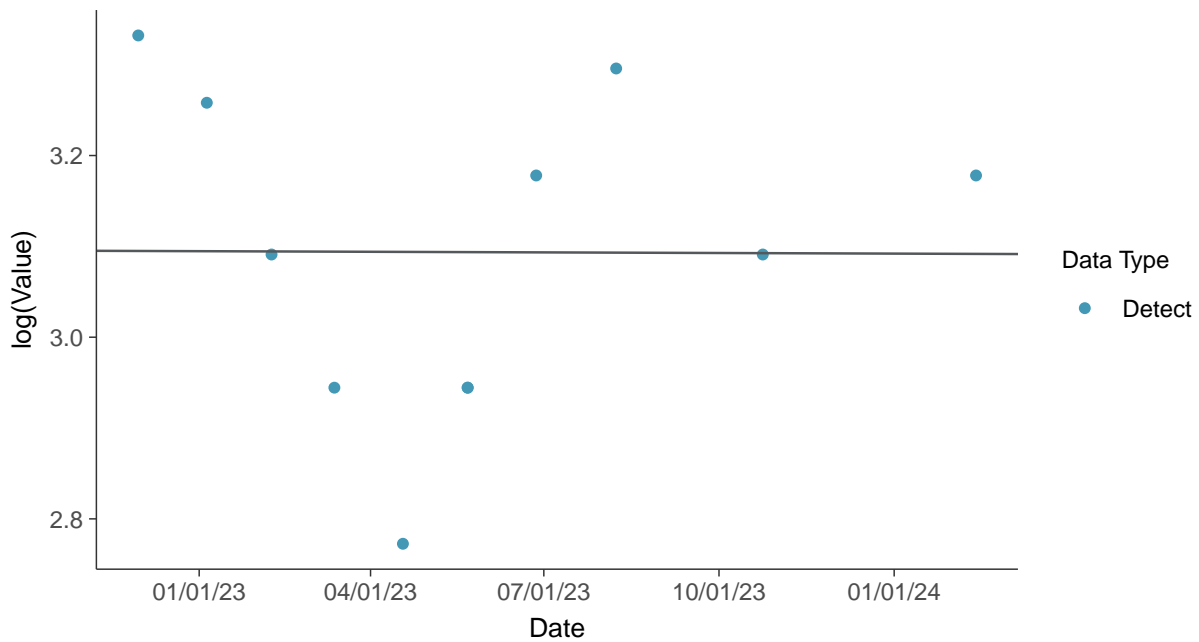
Gamma Q-Q plot

Chloride (as Cl), MW-18 (mg/L)



Trend Regression: Lognormal MLE

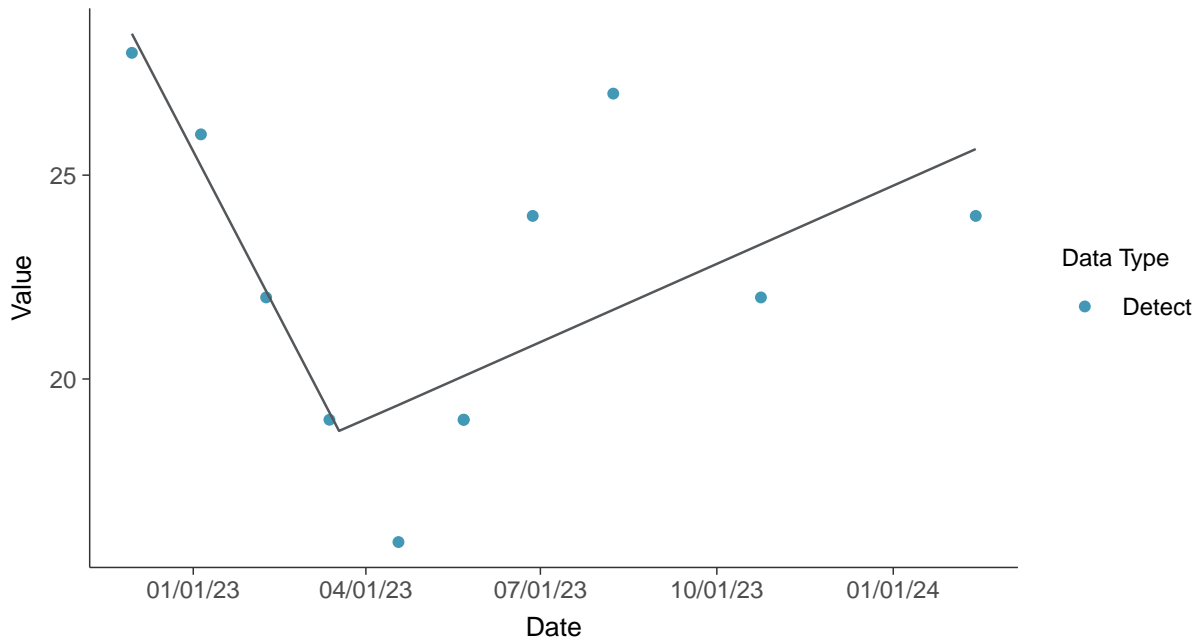
Chloride (as Cl), MW-18 (mg/L)





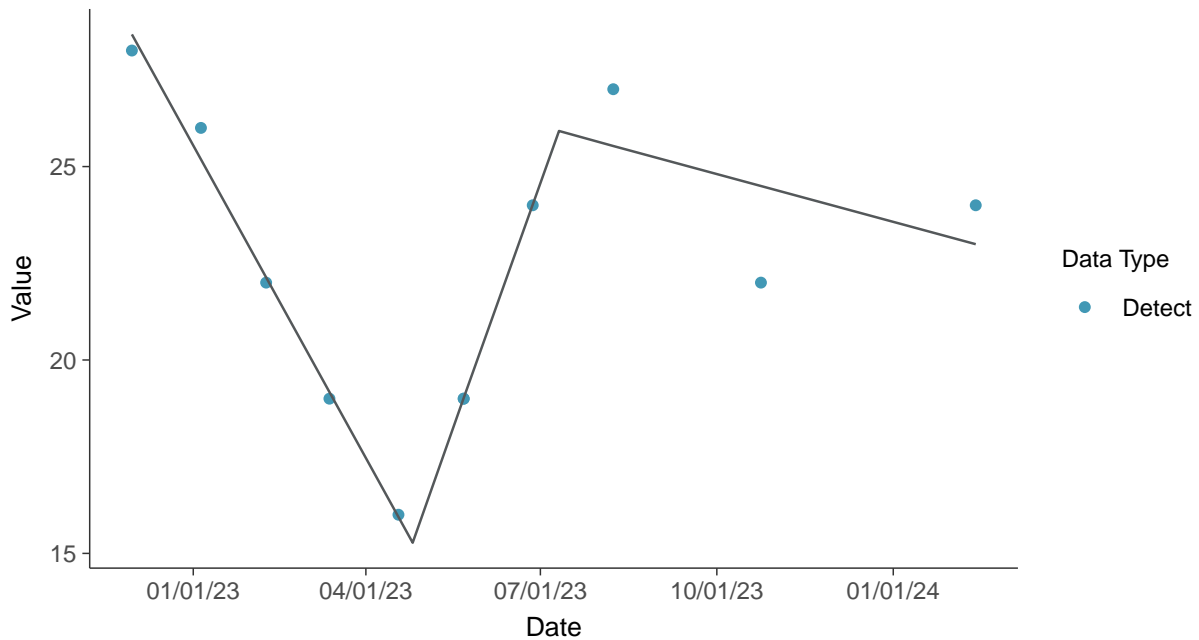
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-18 (mg/L)



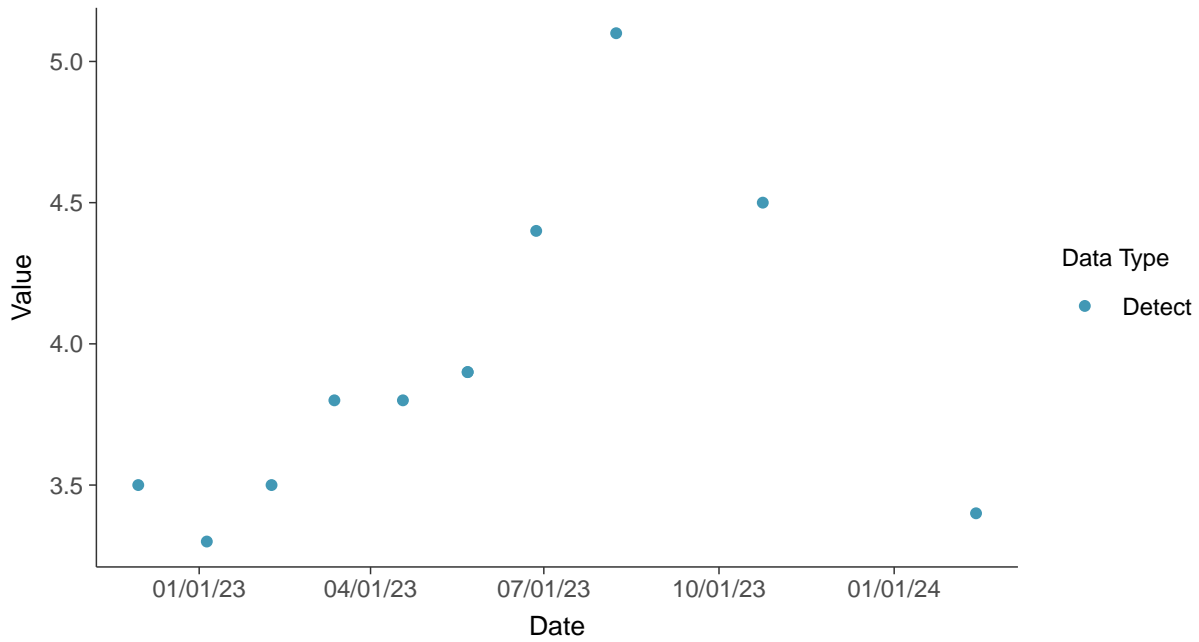


Appendix III: Fluoride, MW-18

ID: 1_28_4_112

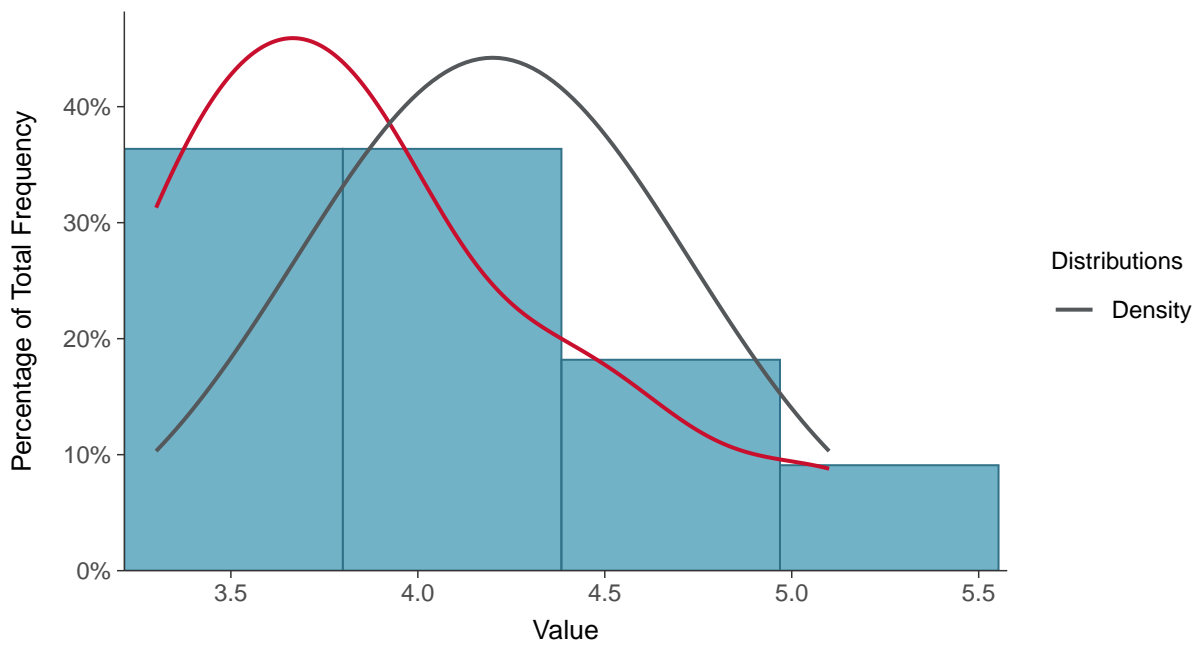
Scatter Plot

Fluoride, MW-18 (mg/L)



Histogram

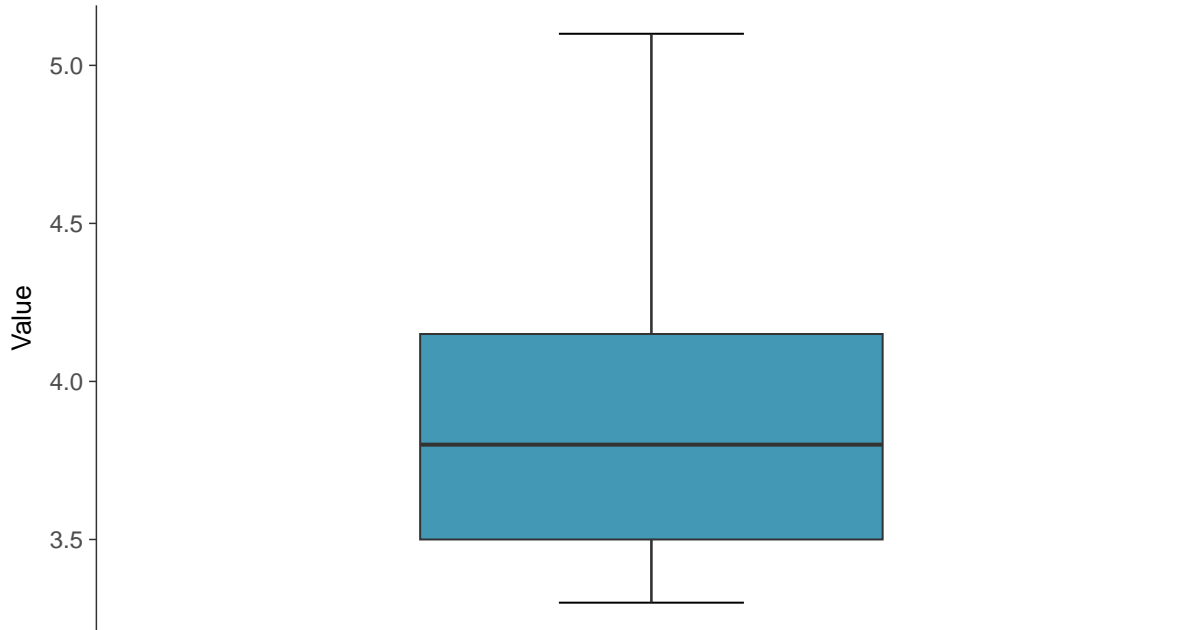
Fluoride, MW-18 (mg/L)





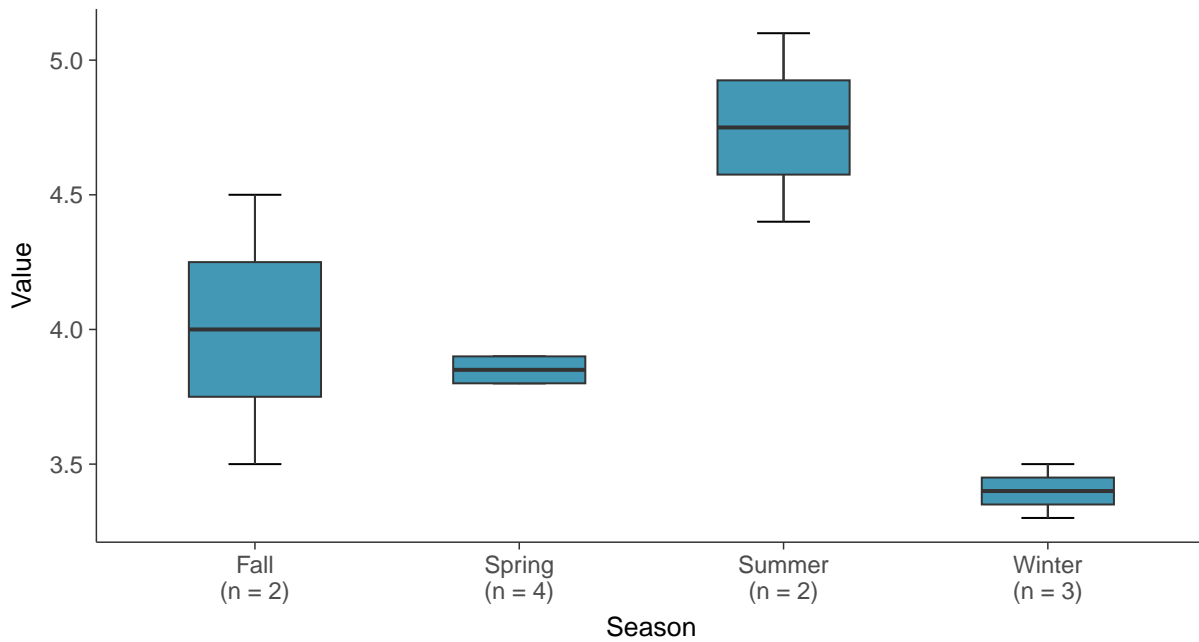
Boxplot

Fluoride, MW-18 (mg/L)



Boxplot by Season

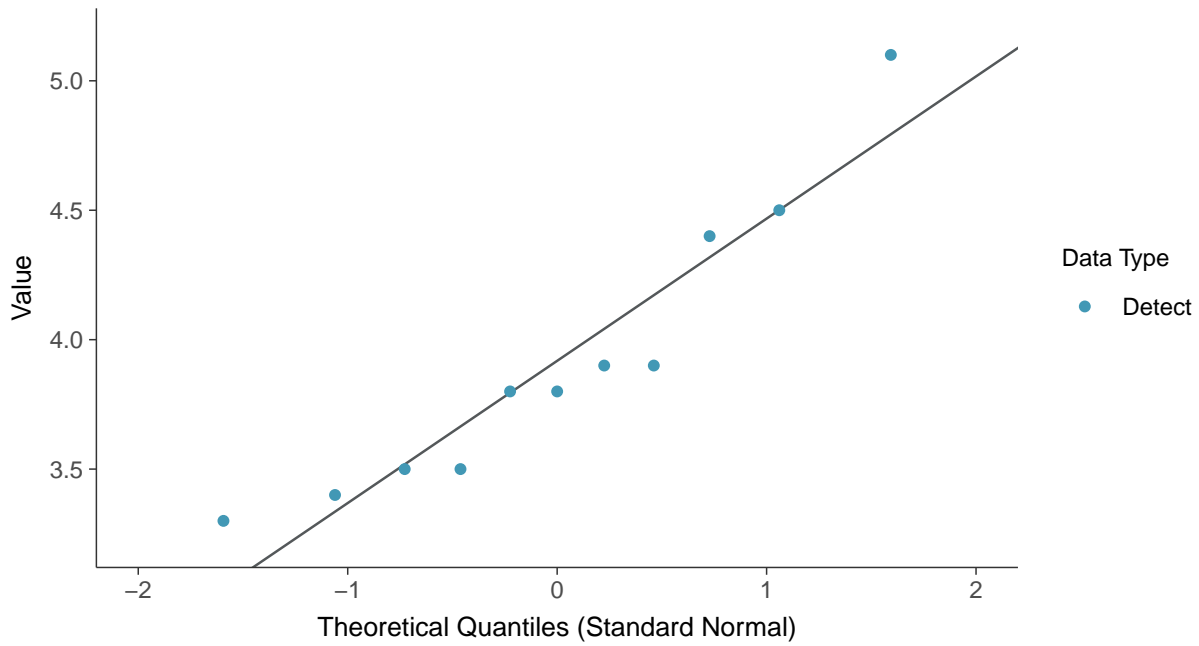
Fluoride, MW-18 (mg/L)





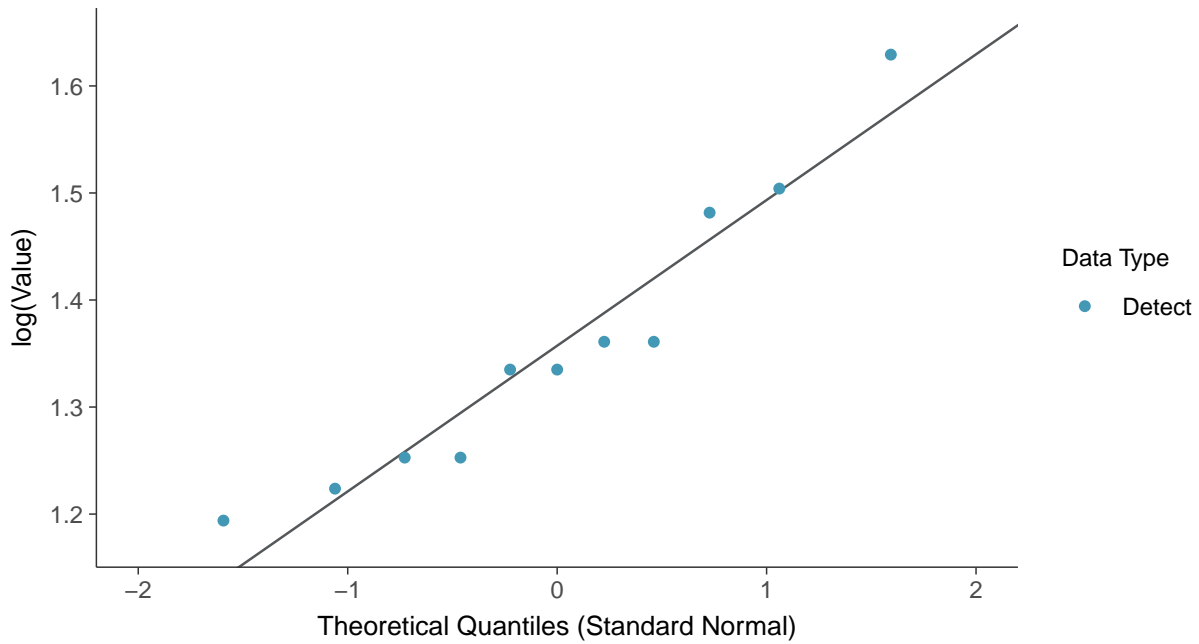
Normal Q-Q plot

Fluoride, MW-18 (mg/L)



Lognormal Q-Q plot

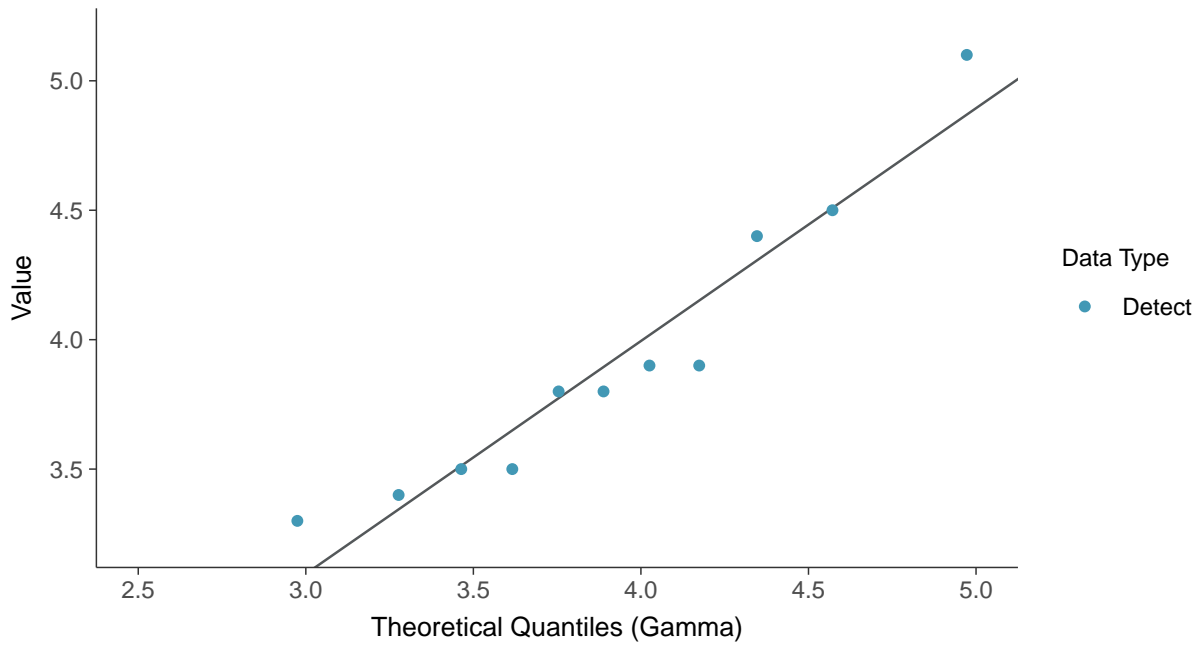
Fluoride, MW-18 (mg/L)





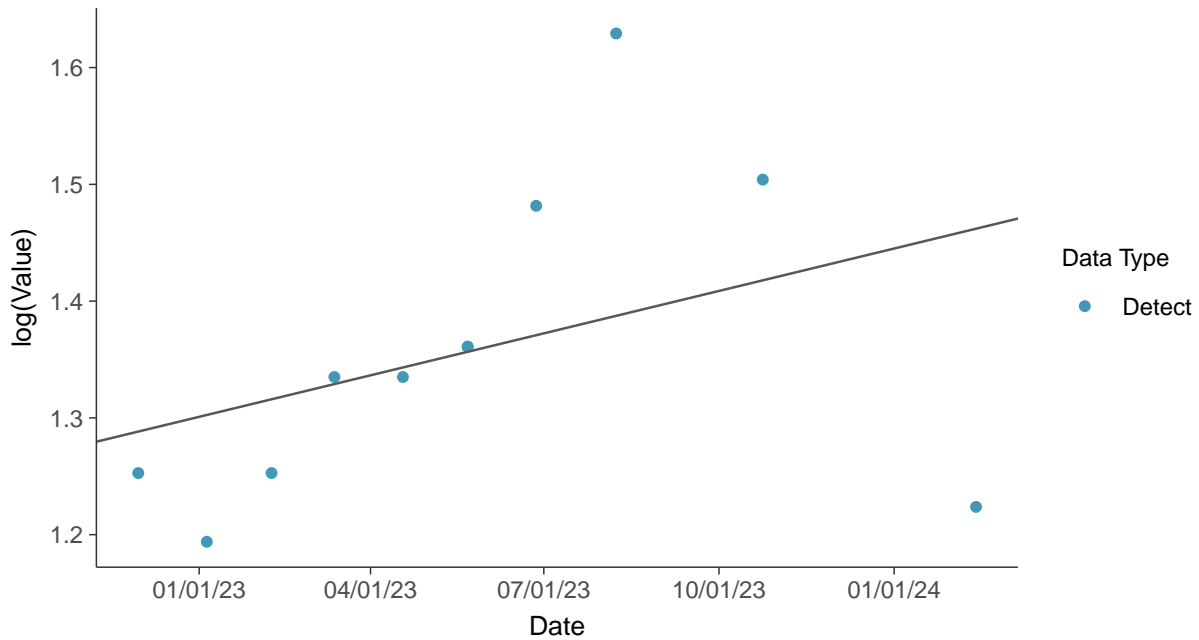
Gamma Q-Q plot

Fluoride, MW-18 (mg/L)



Trend Regression: Lognormal MLE

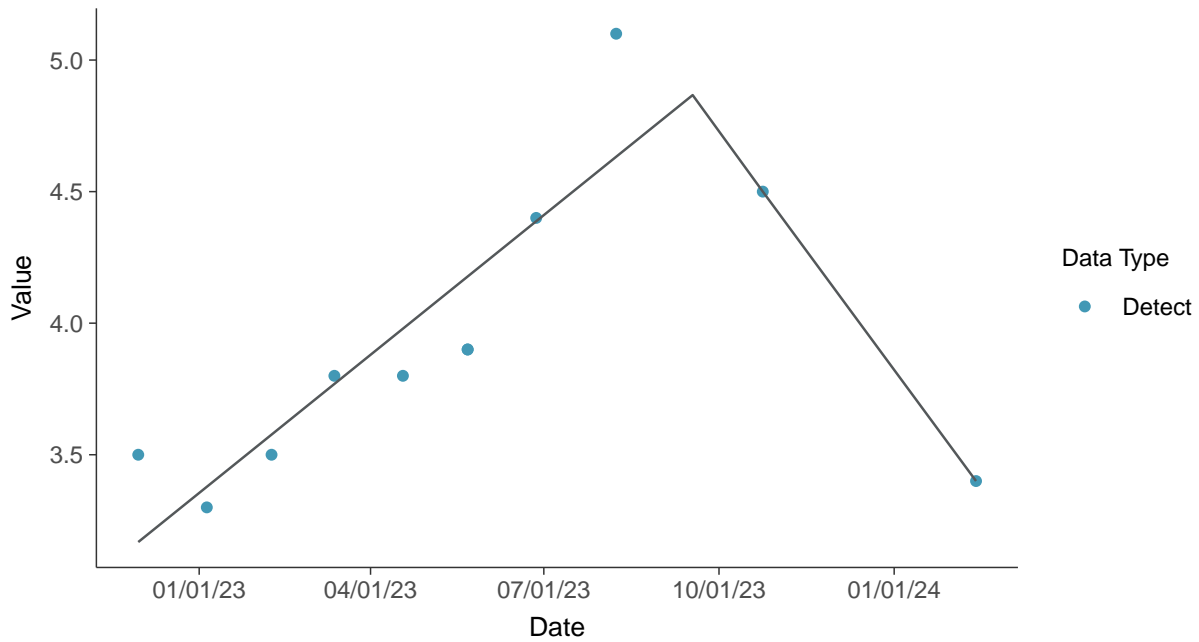
Fluoride, MW-18 (mg/L)





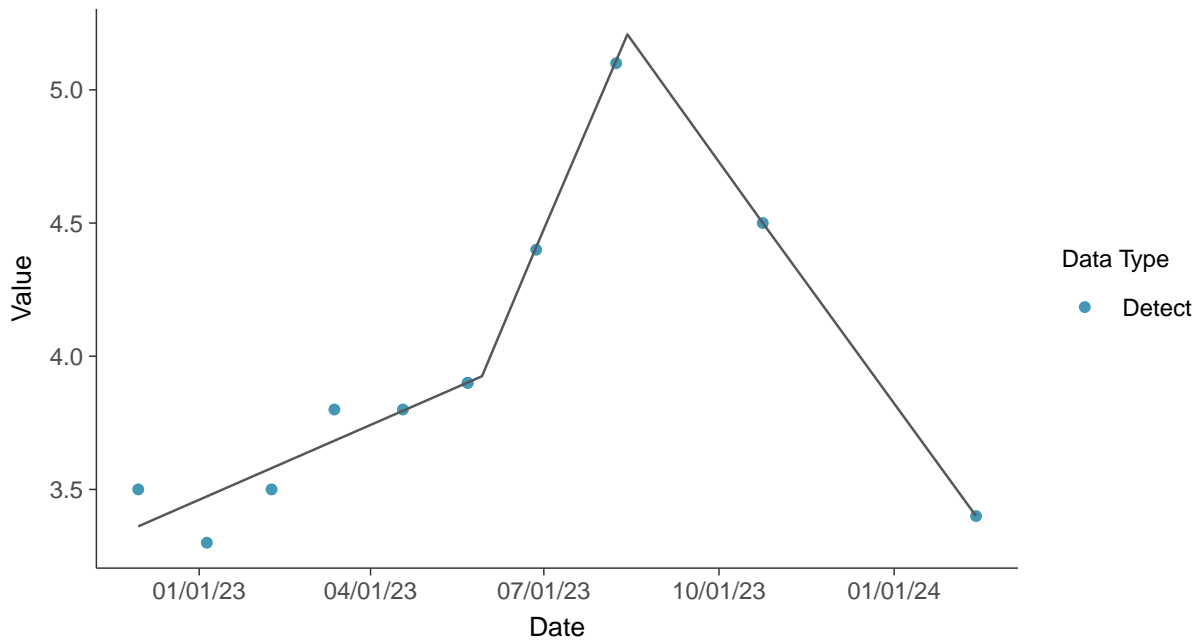
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-18 (mg/L)



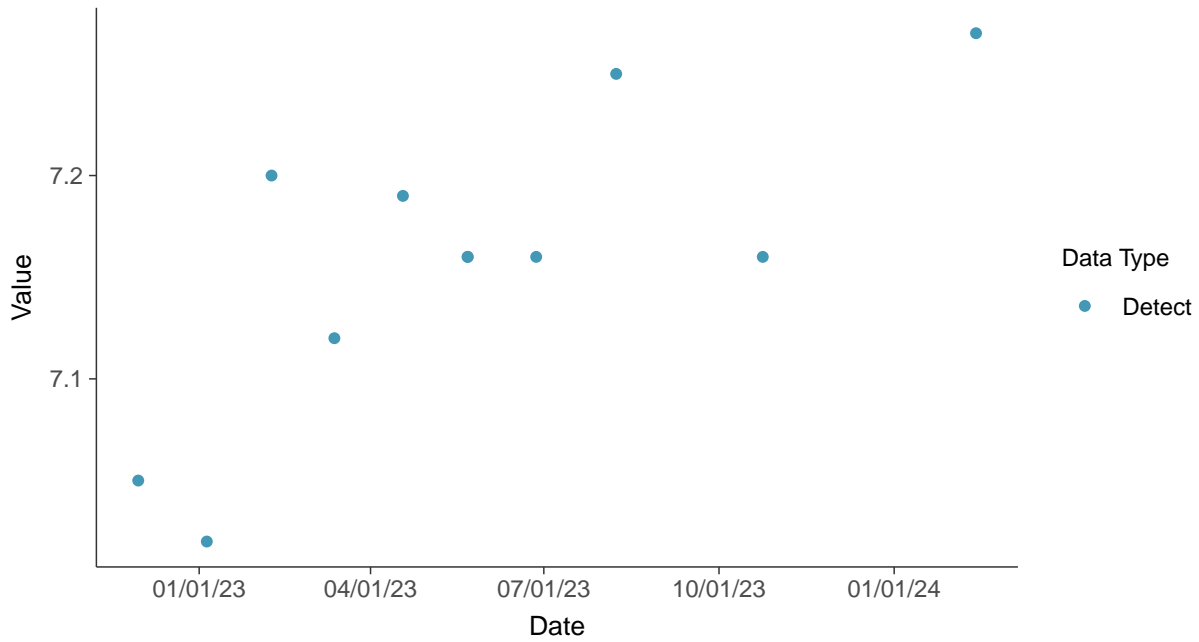


Appendix III: pH (field), MW-18

ID: 1_28_4_120

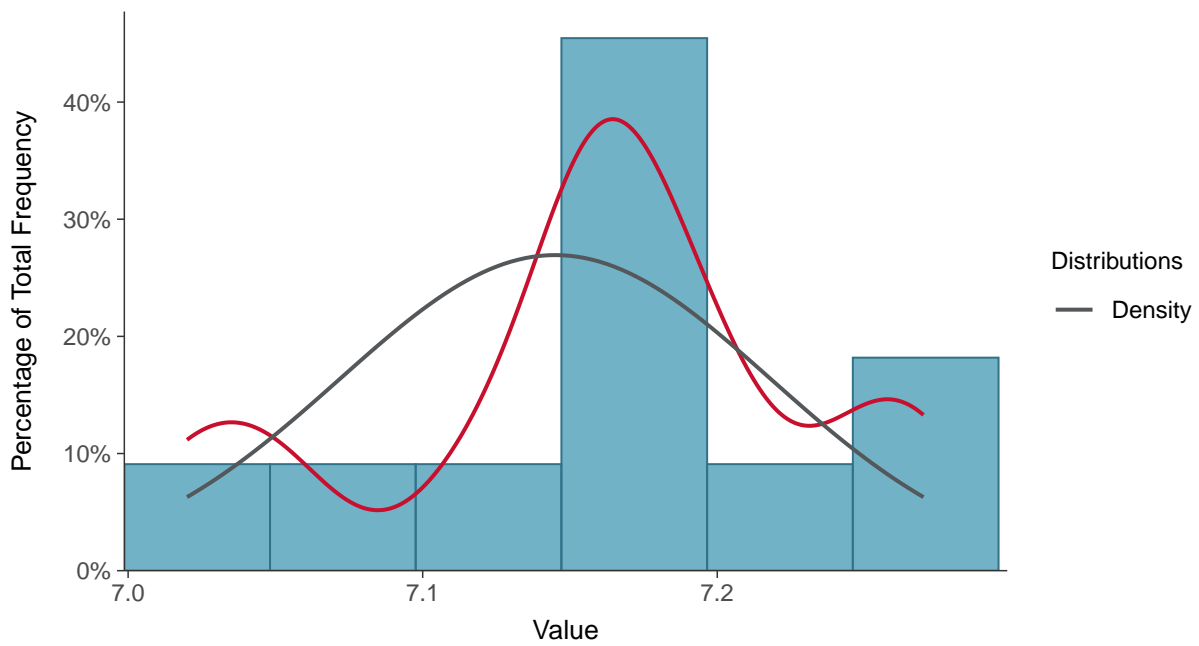
Scatter Plot

pH (field), MW-18 (su)



Histogram

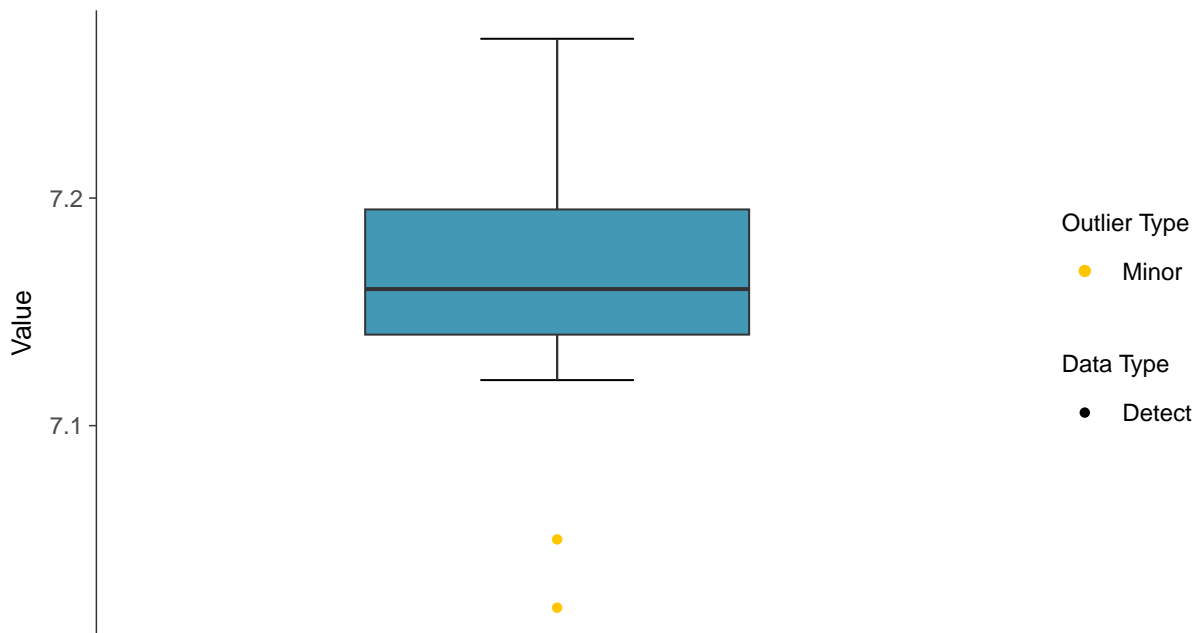
pH (field), MW-18 (su)





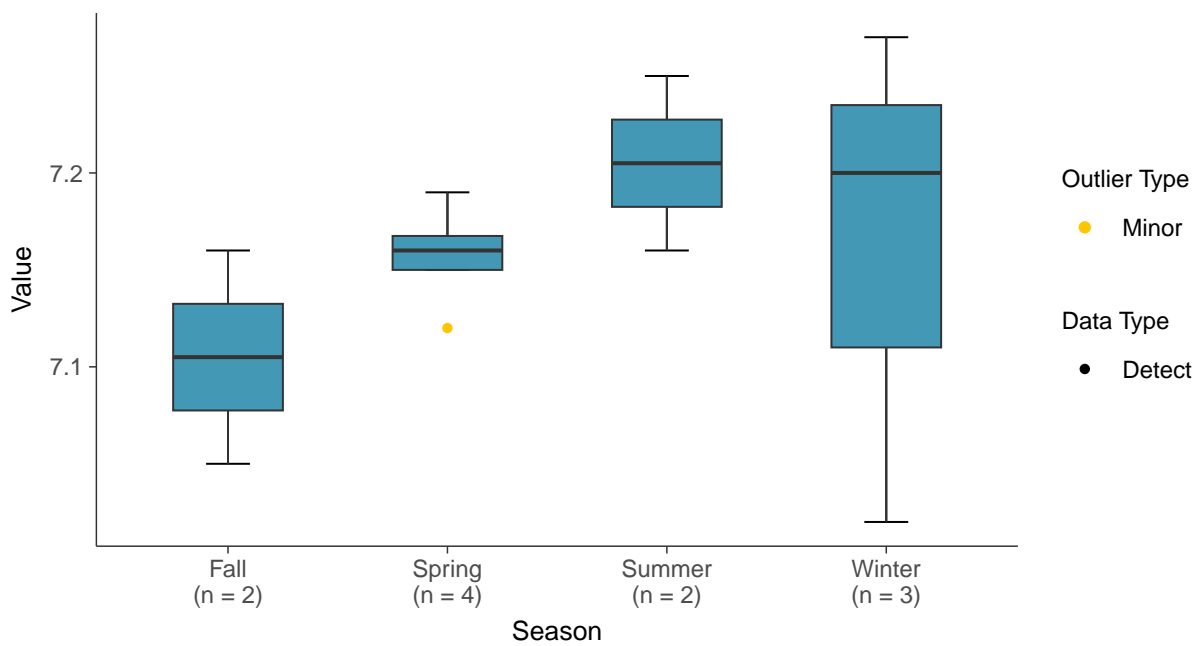
Boxplot

pH (field), MW-18 (su)



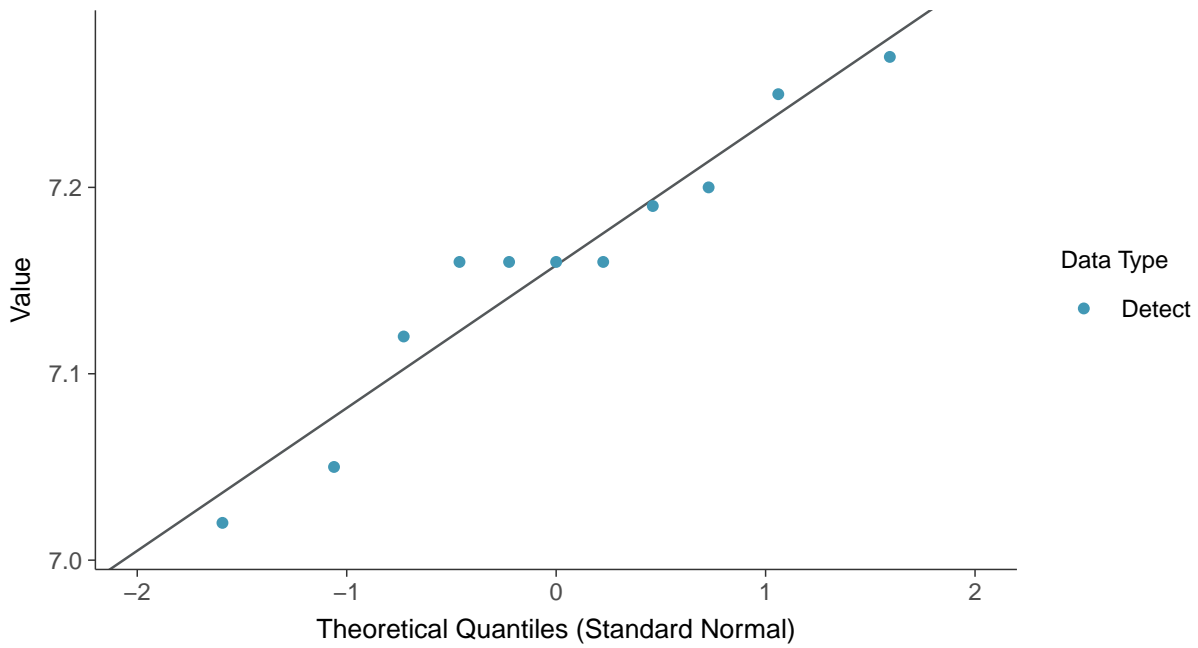
Boxplot by Season

pH (field), MW-18 (su)

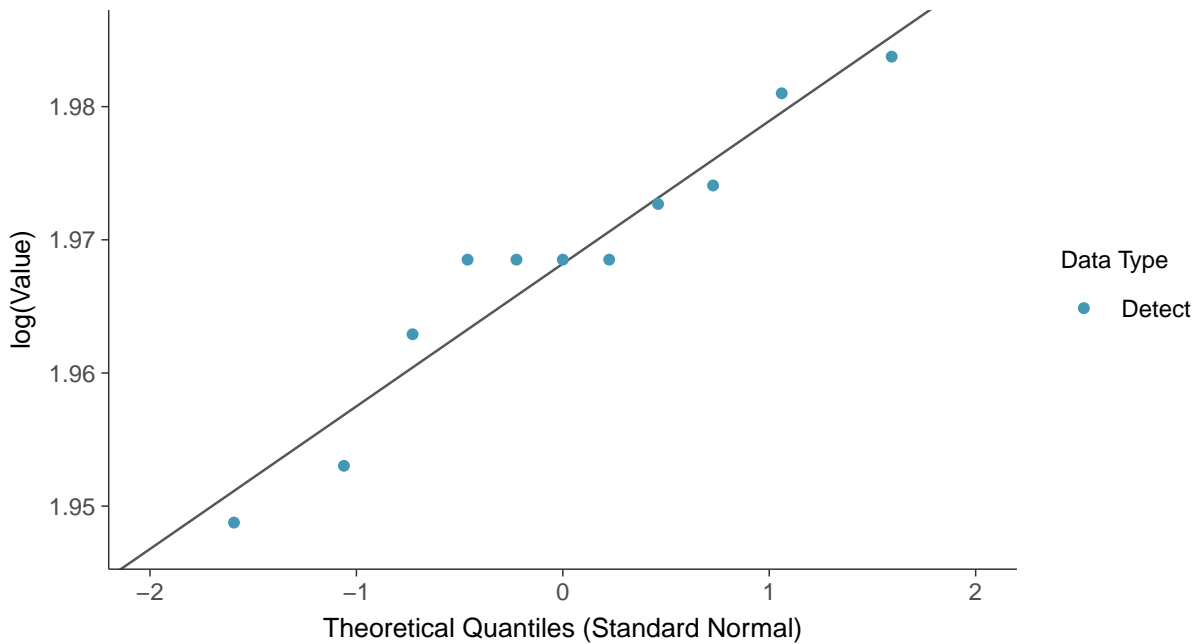




Normal Q-Q plot
pH (field), MW-18 (su)



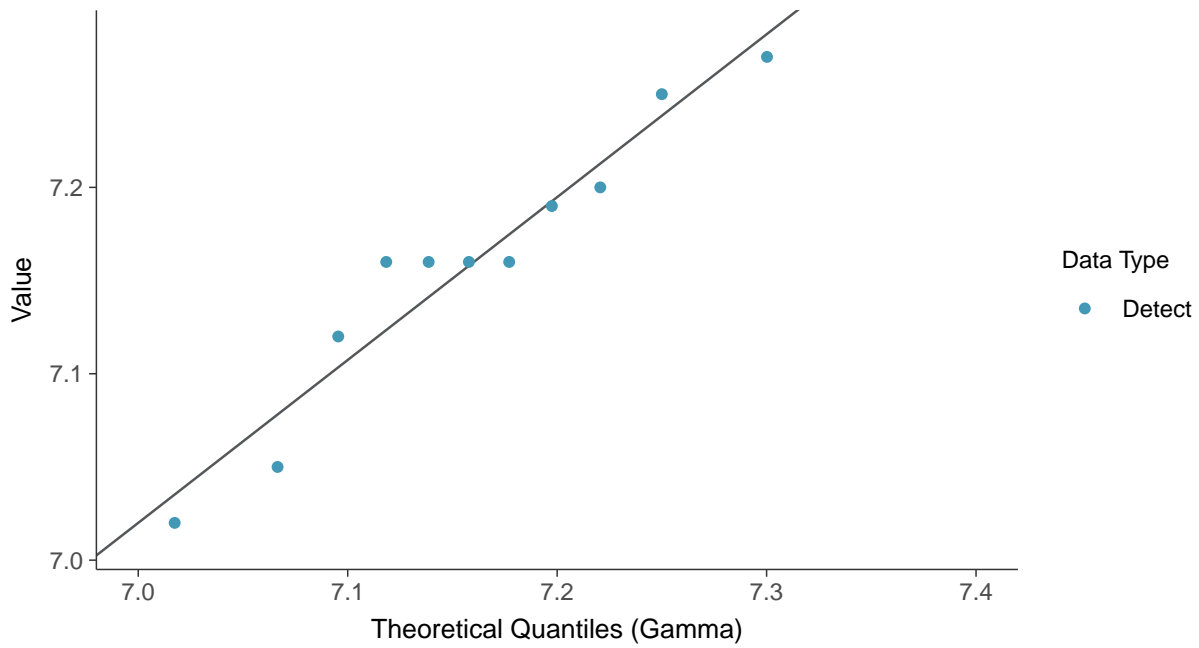
Lognormal Q-Q plot
pH (field), MW-18 (su)





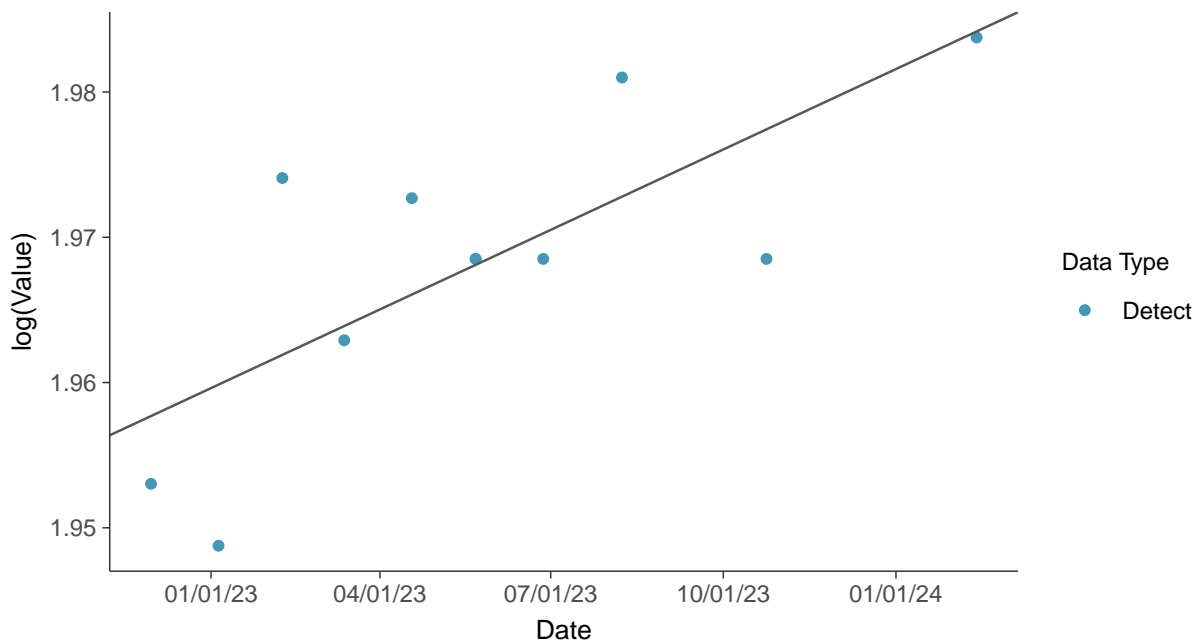
Gamma Q-Q plot

pH (field), MW-18 (su)



Trend Regression: Lognormal MLE

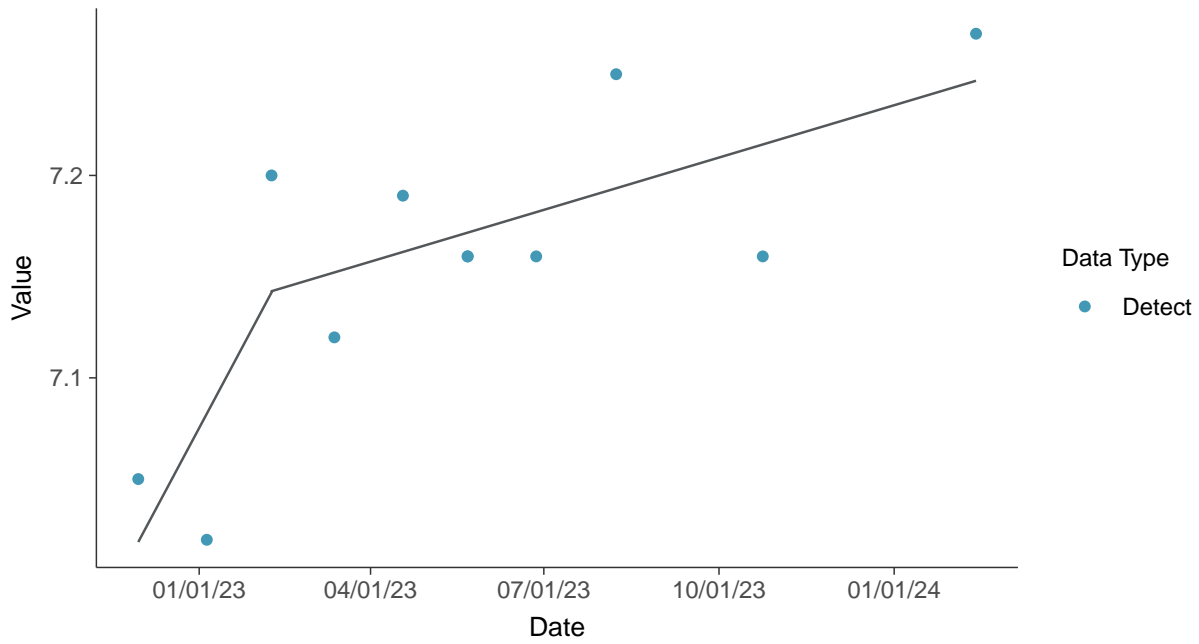
pH (field), MW-18 (su)





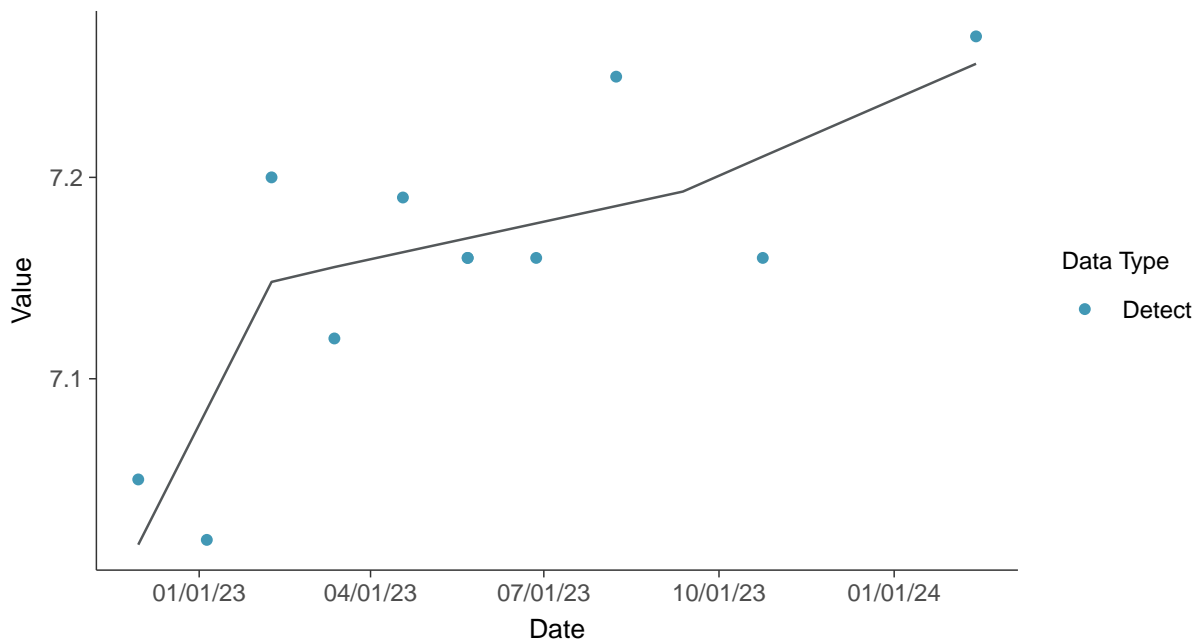
Trend Regression: Piecewise Linear-Linear

pH (field), MW-18 (su)



Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-18 (su)



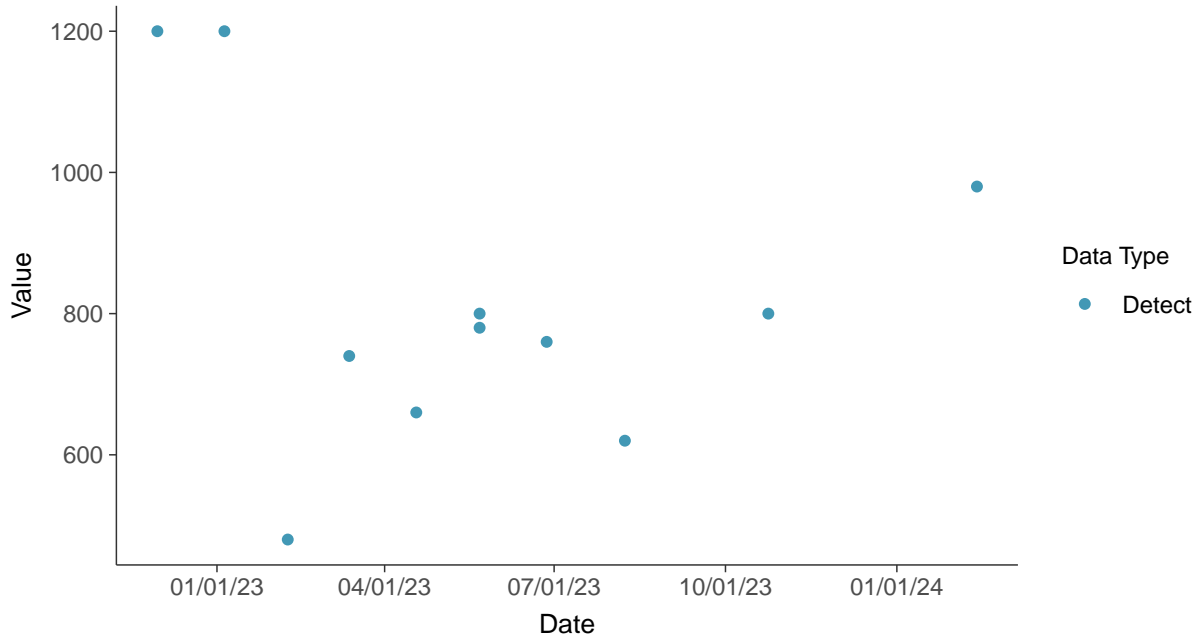


Appendix III: Sulfate (as SO₄), MW-18

ID: 1_28_4_124

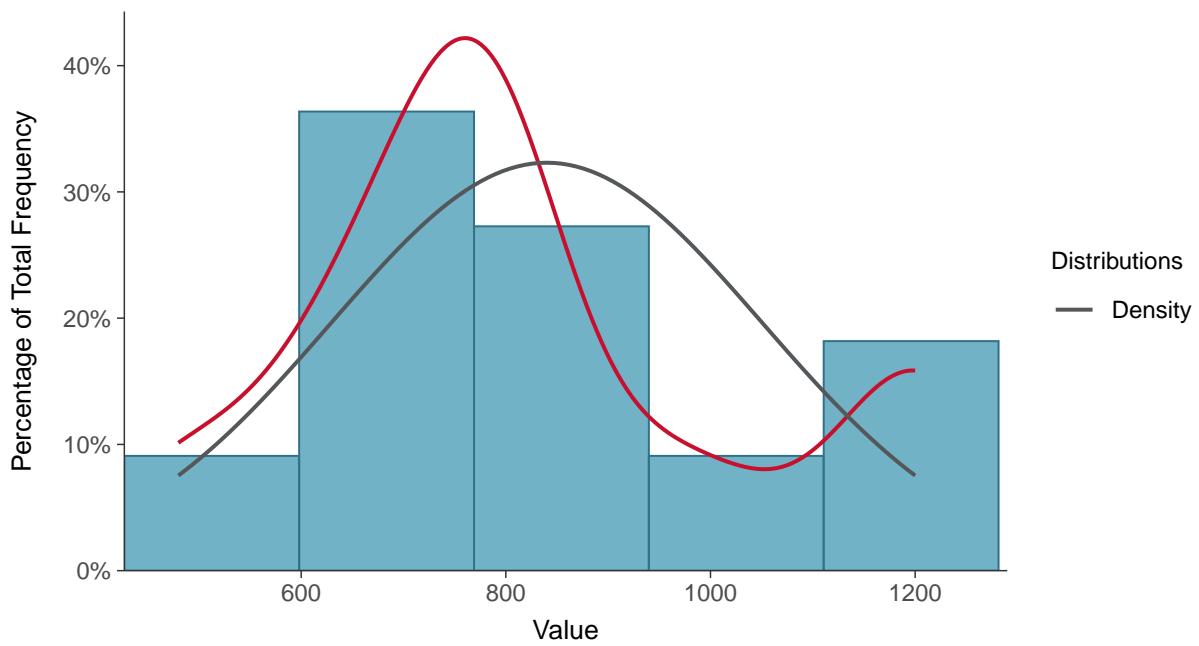
Scatter Plot

Sulfate (as SO₄), MW-18 (mg/L)



Histogram

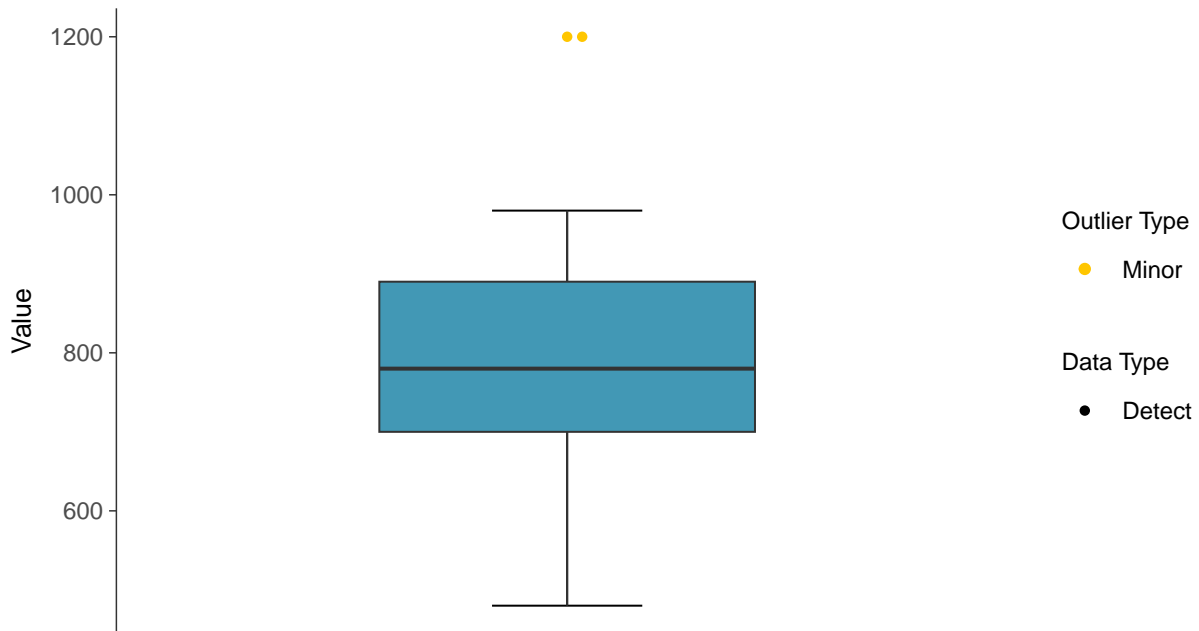
Sulfate (as SO₄), MW-18 (mg/L)





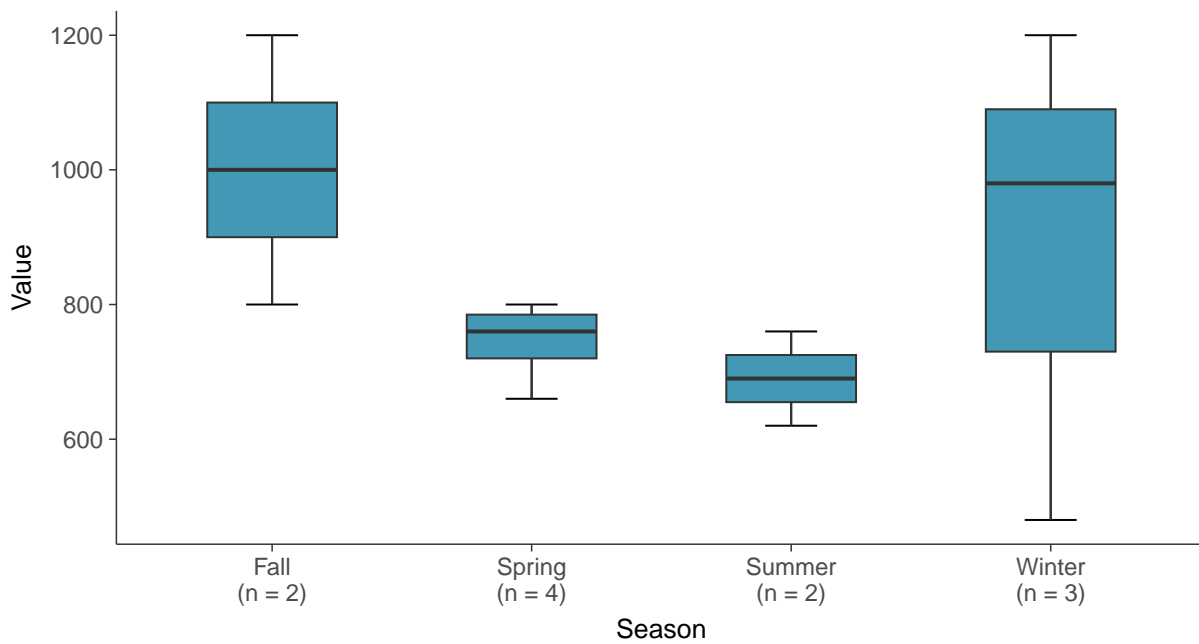
Boxplot

Sulfate (as SO₄), MW-18 (mg/L)



Boxplot by Season

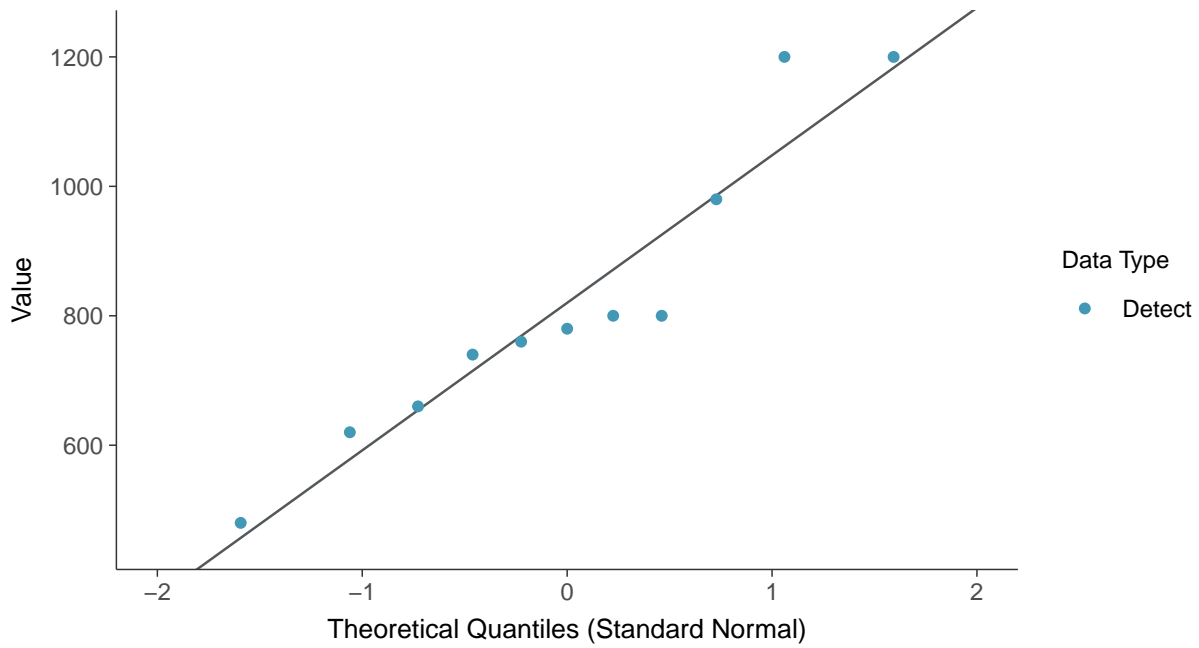
Sulfate (as SO₄), MW-18 (mg/L)





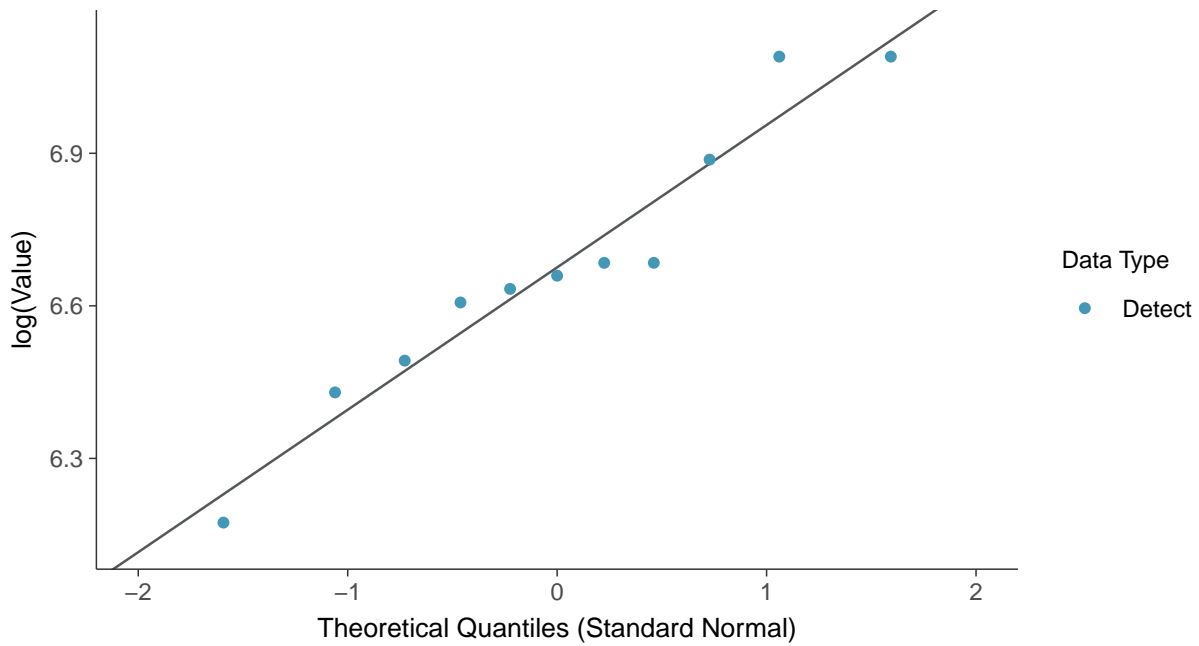
Normal Q-Q plot

Sulfate (as SO₄), MW-18 (mg/L)



Lognormal Q-Q plot

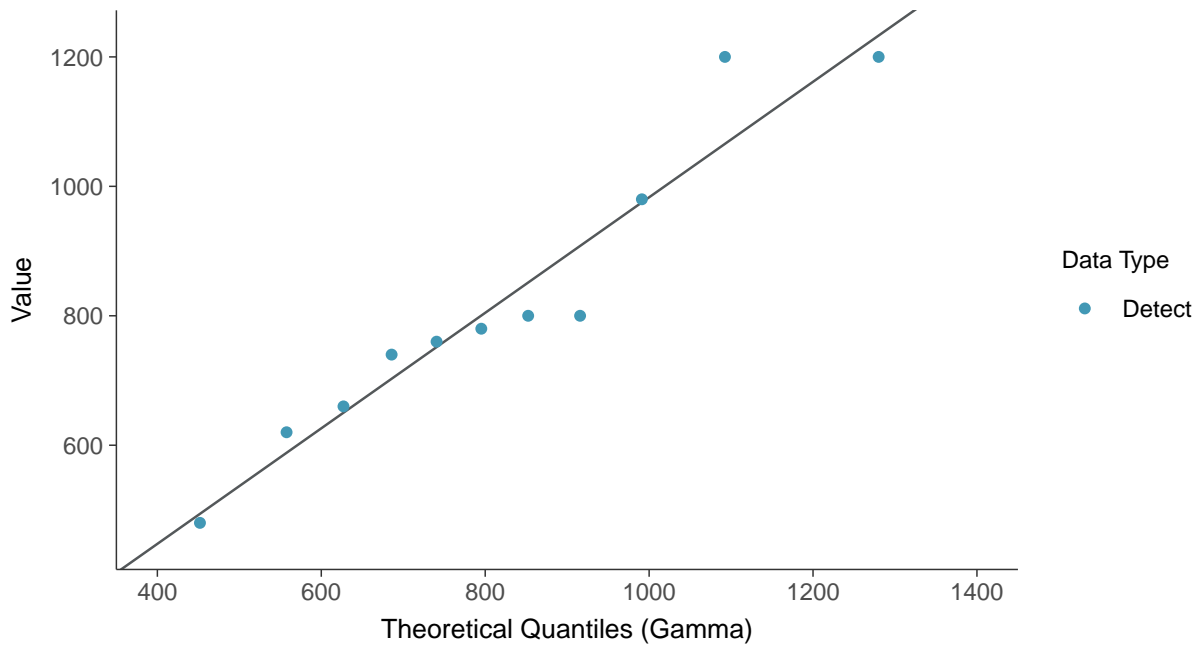
Sulfate (as SO₄), MW-18 (mg/L)





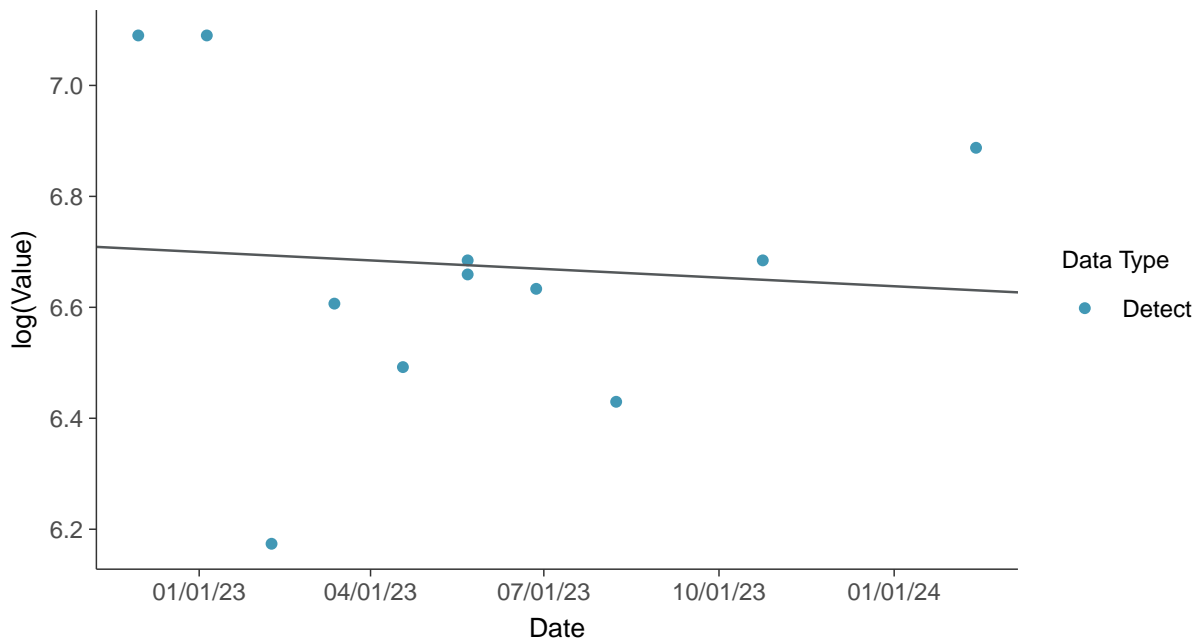
Gamma Q-Q plot

Sulfate (as SO₄), MW-18 (mg/L)



Trend Regression: Lognormal MLE

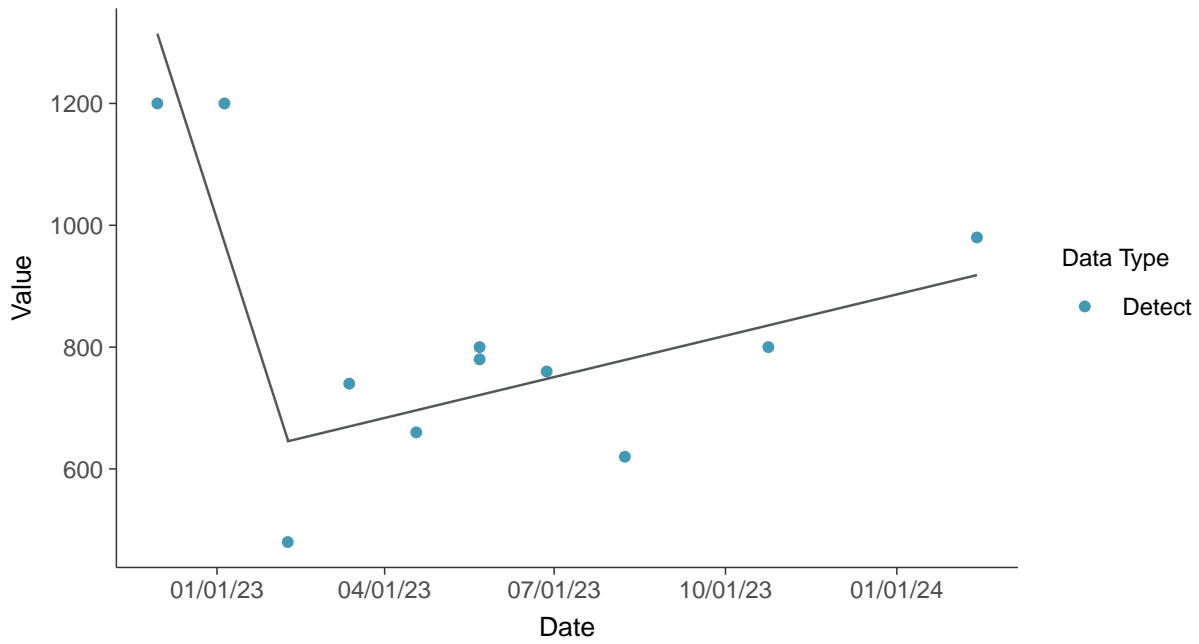
Sulfate (as SO₄), MW-18 (mg/L)





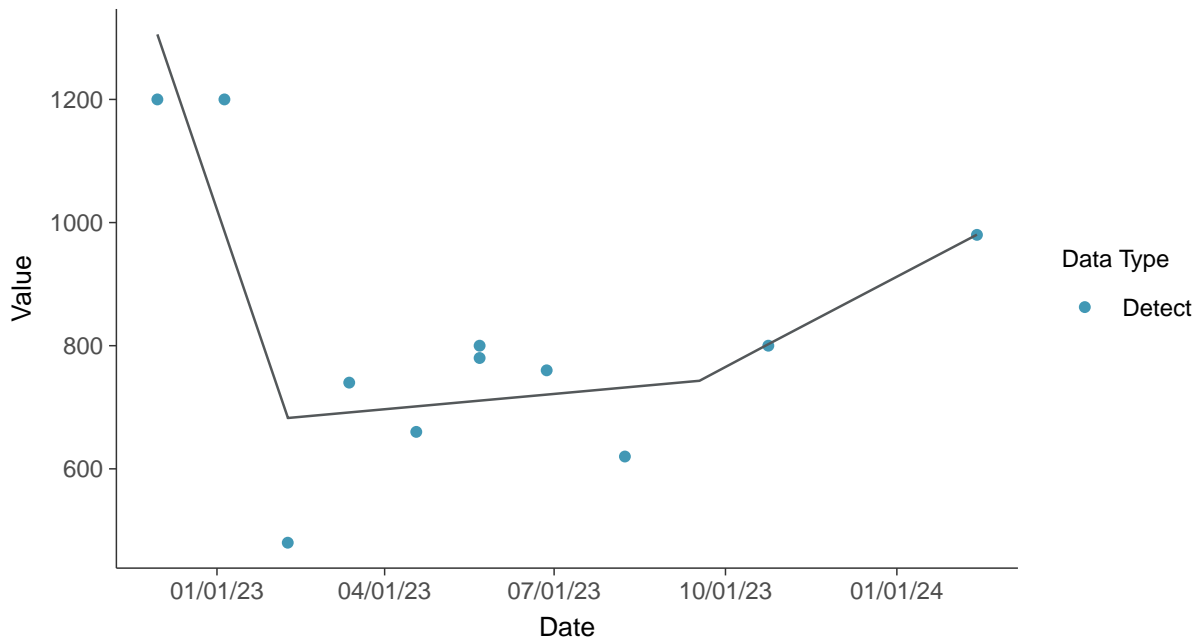
Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO₄), MW-18 (mg/L)



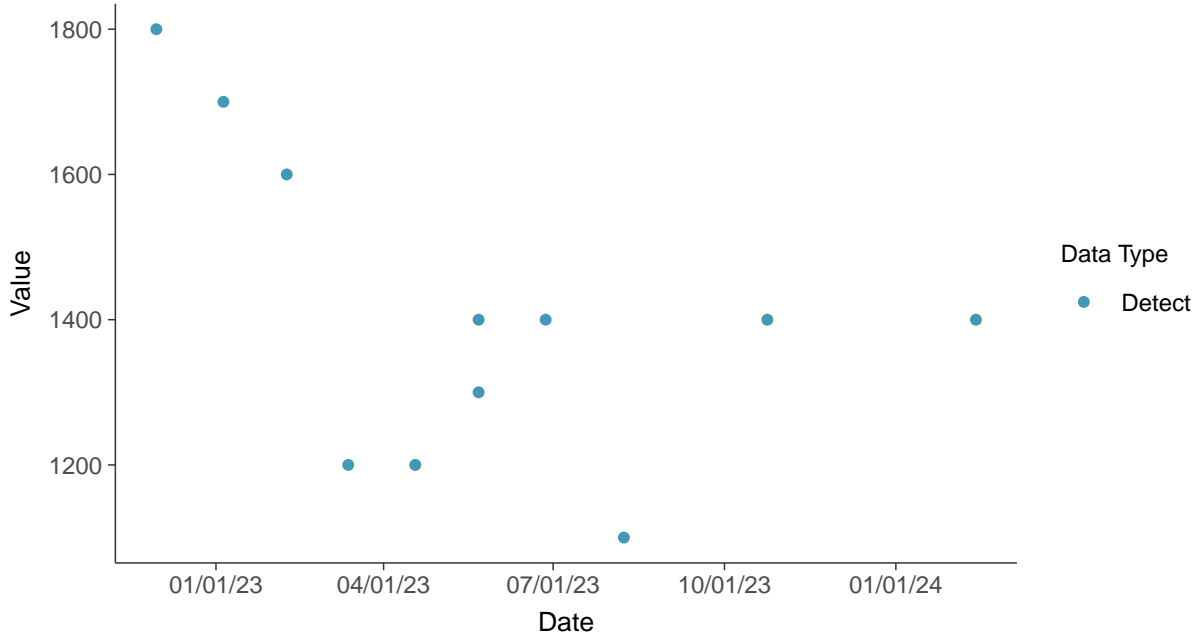


Appendix III: Total Dissolved Solids, MW-18

ID: 1_28_4_126

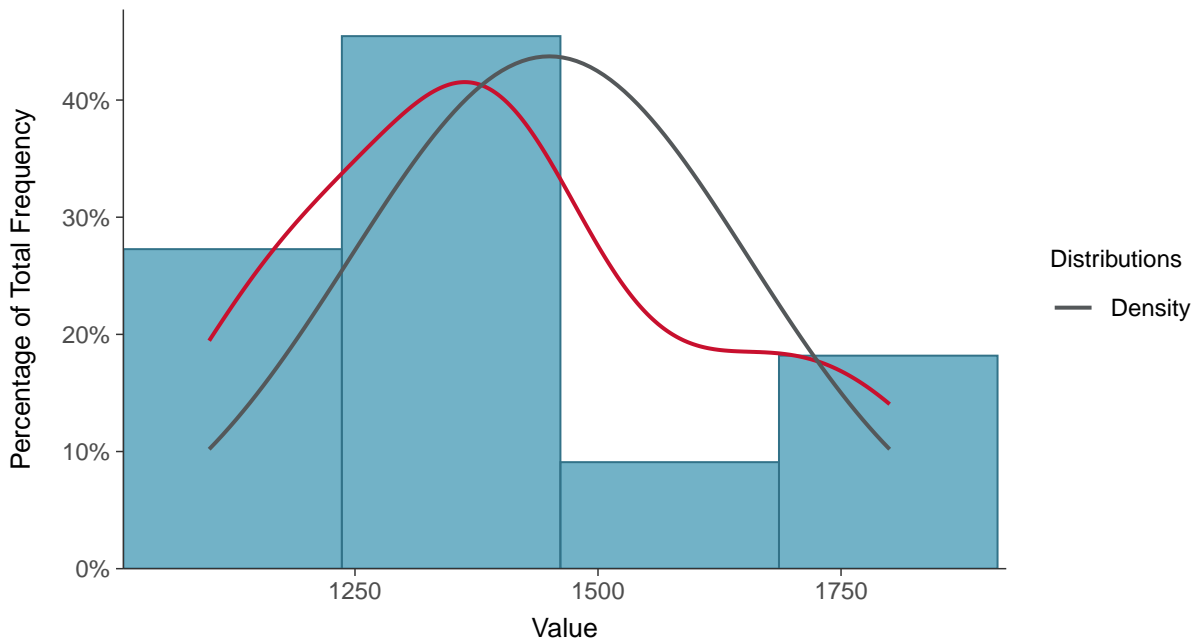
Scatter Plot

Total Dissolved Solids, MW-18 (mg/L)



Histogram

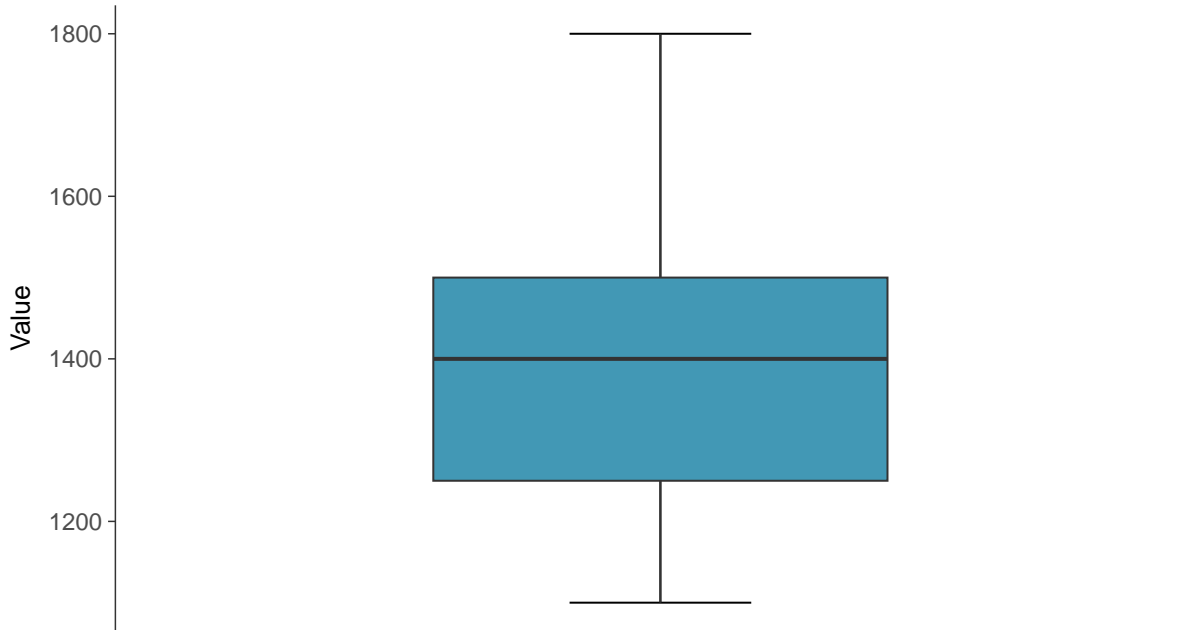
Total Dissolved Solids, MW-18 (mg/L)





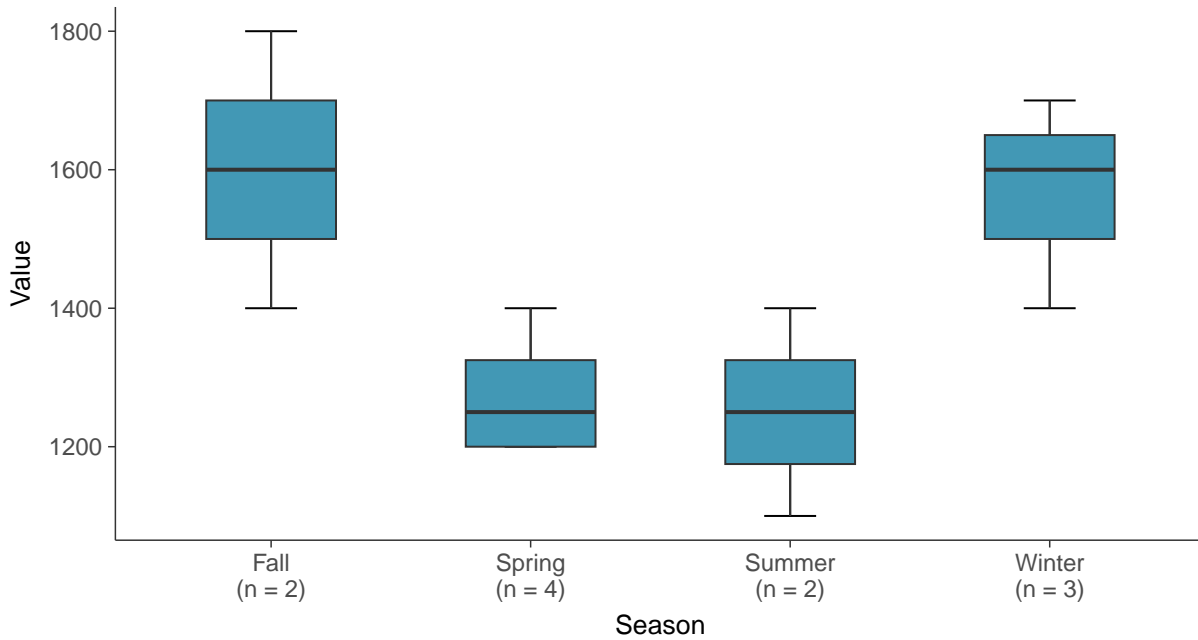
Boxplot

Total Dissolved Solids, MW-18 (mg/L)



Boxplot by Season

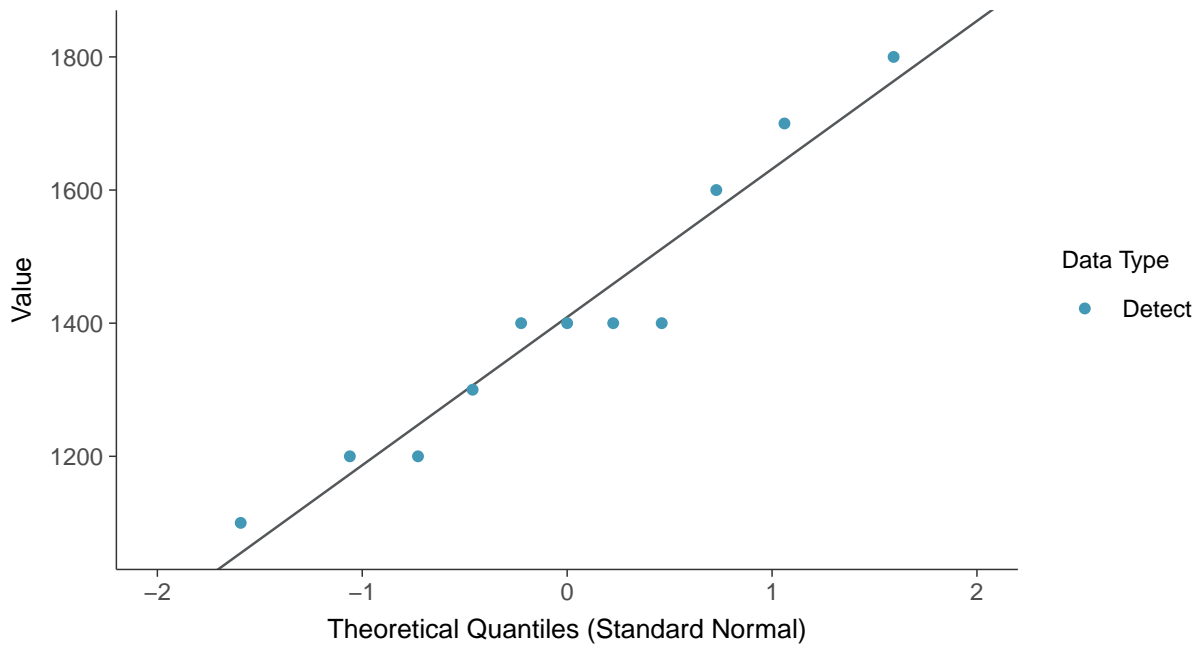
Total Dissolved Solids, MW-18 (mg/L)





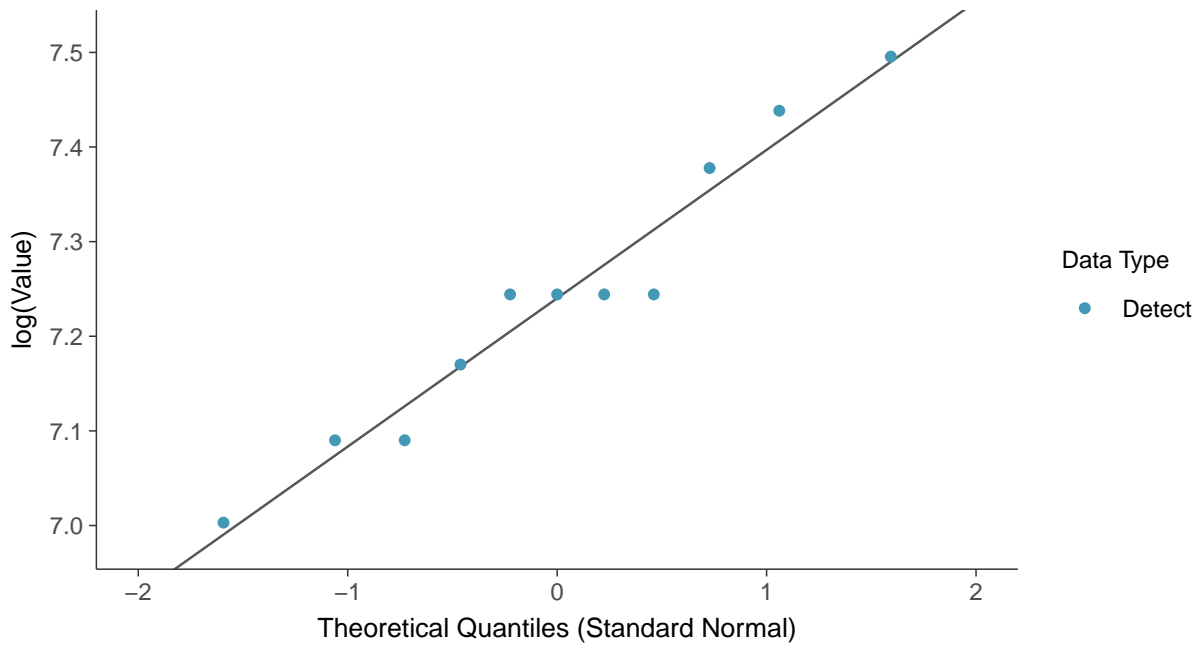
Normal Q-Q plot

Total Dissolved Solids, MW-18 (mg/L)



Lognormal Q-Q plot

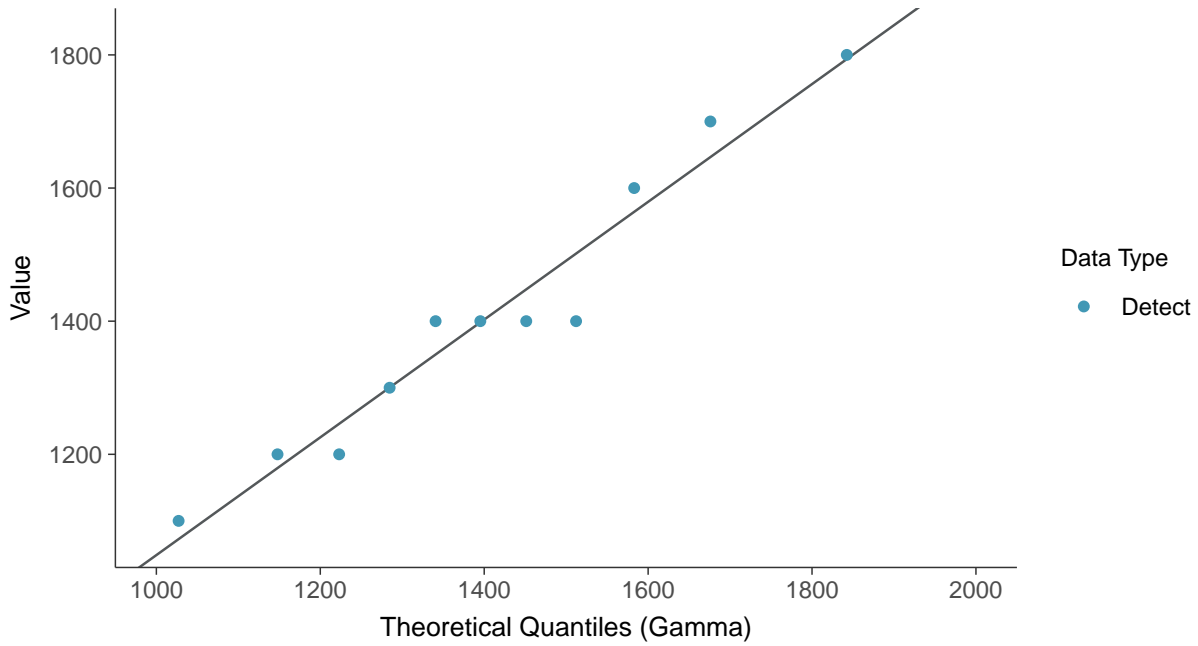
Total Dissolved Solids, MW-18 (mg/L)





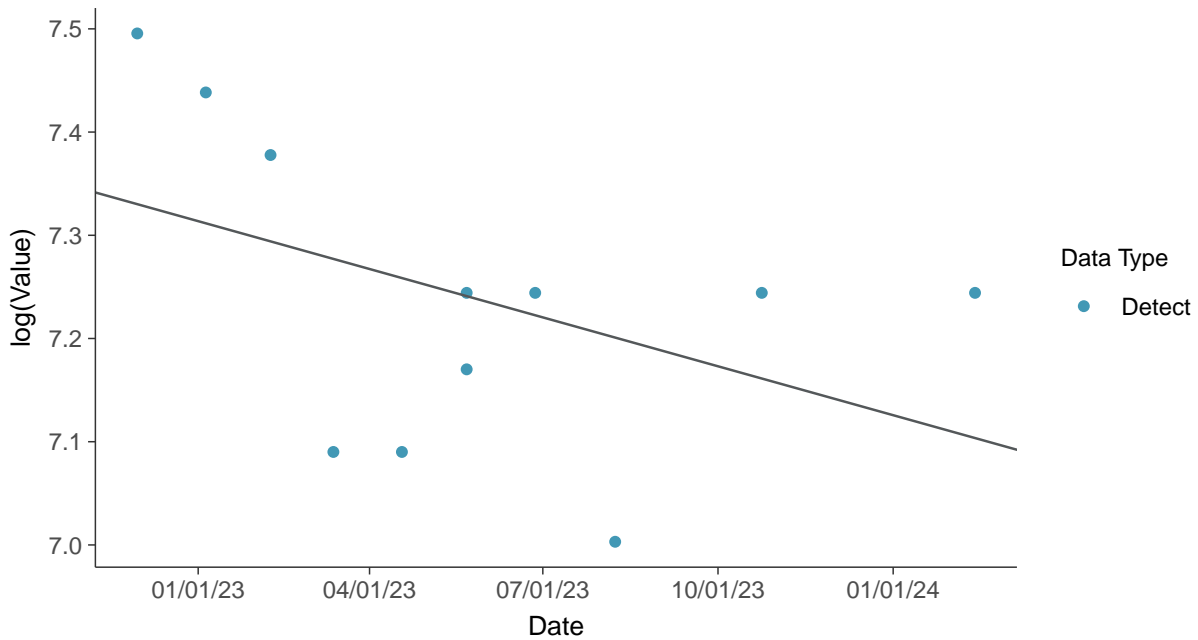
Gamma Q-Q plot

Total Dissolved Solids, MW-18 (mg/L)



Trend Regression: Lognormal MLE

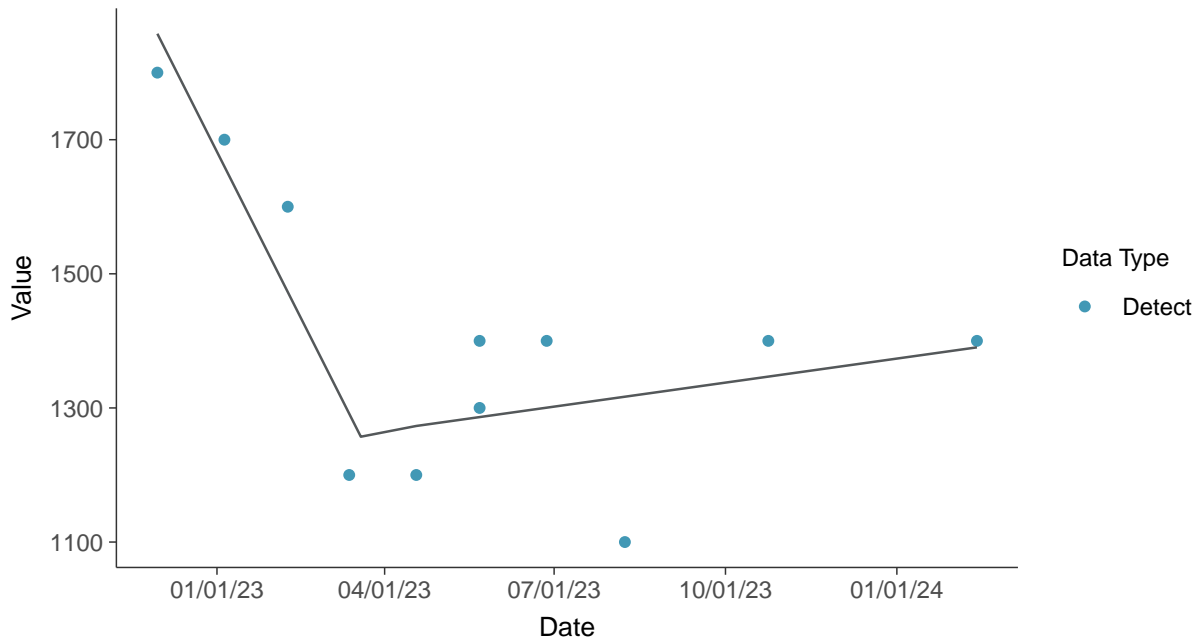
Total Dissolved Solids, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear

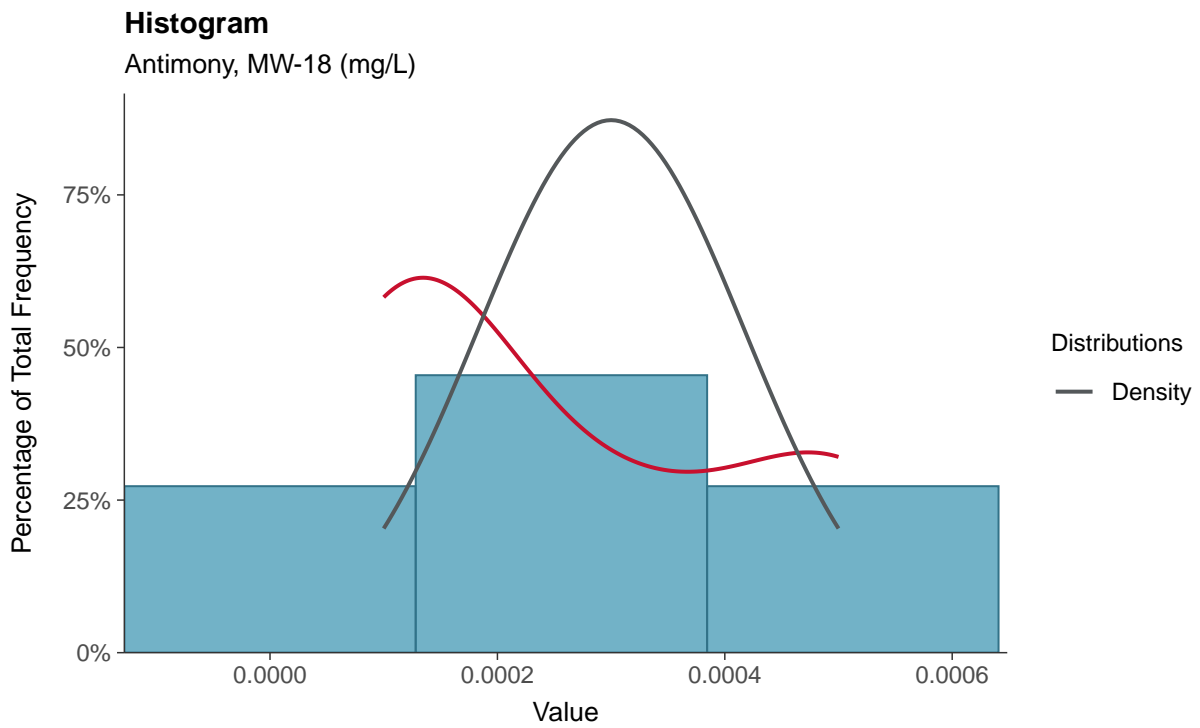
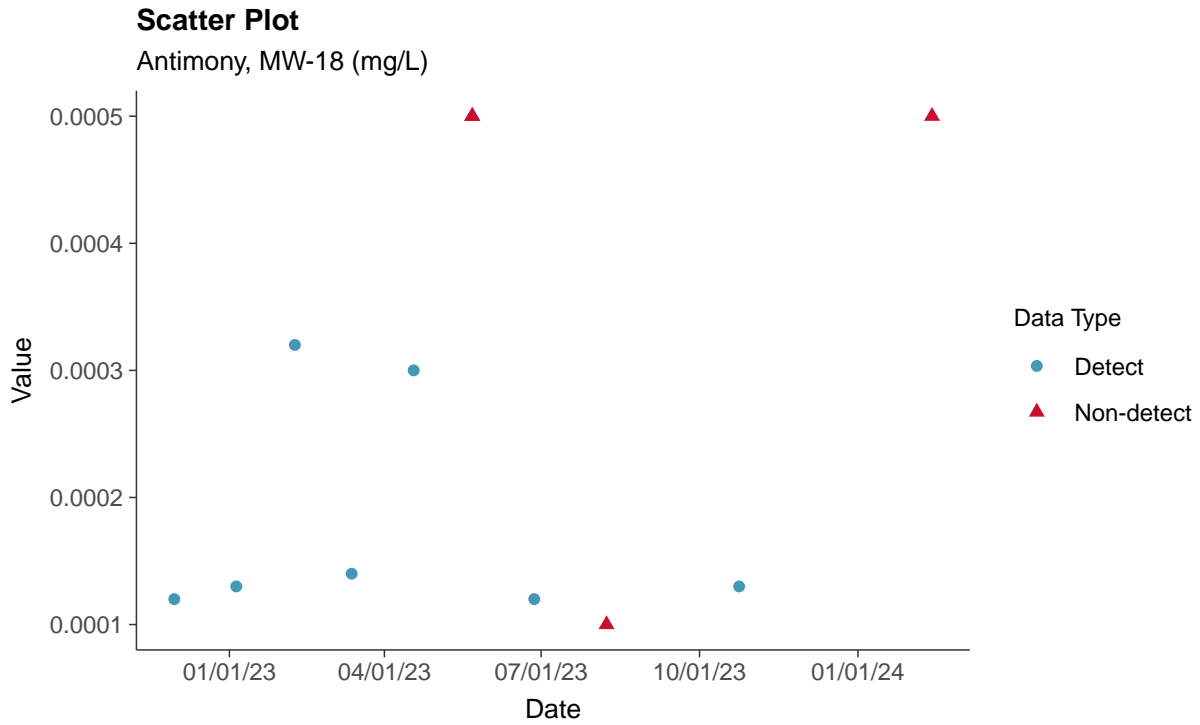
Total Dissolved Solids, MW-18 (mg/L)





Appendix IV: Antimony, MW-18

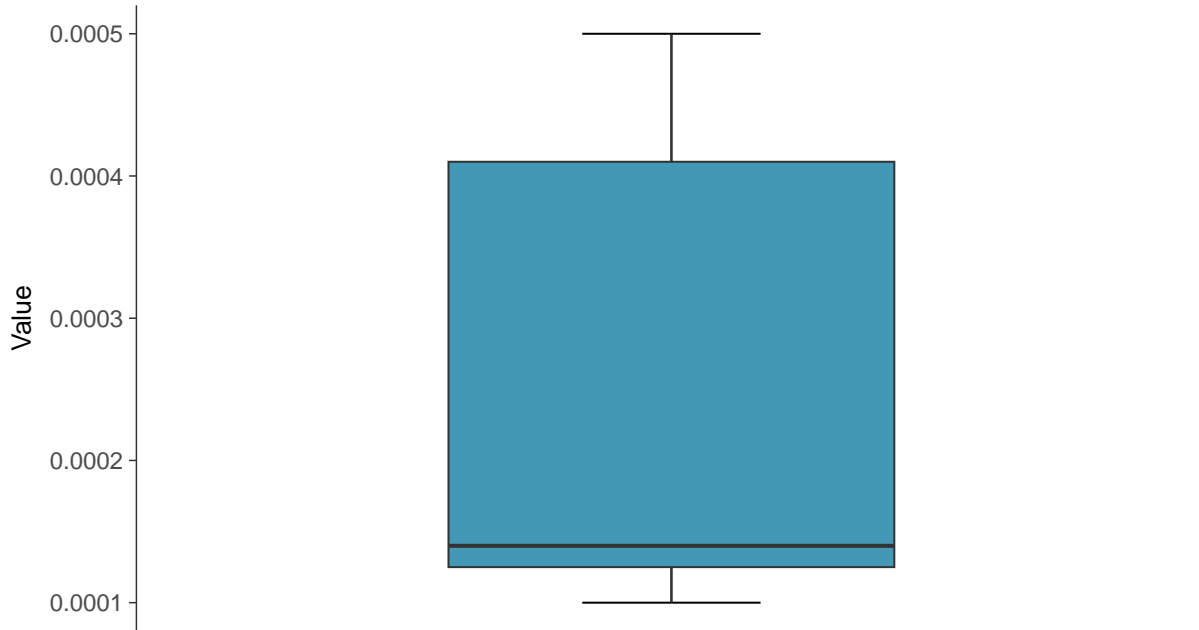
ID: 1_28_5_101





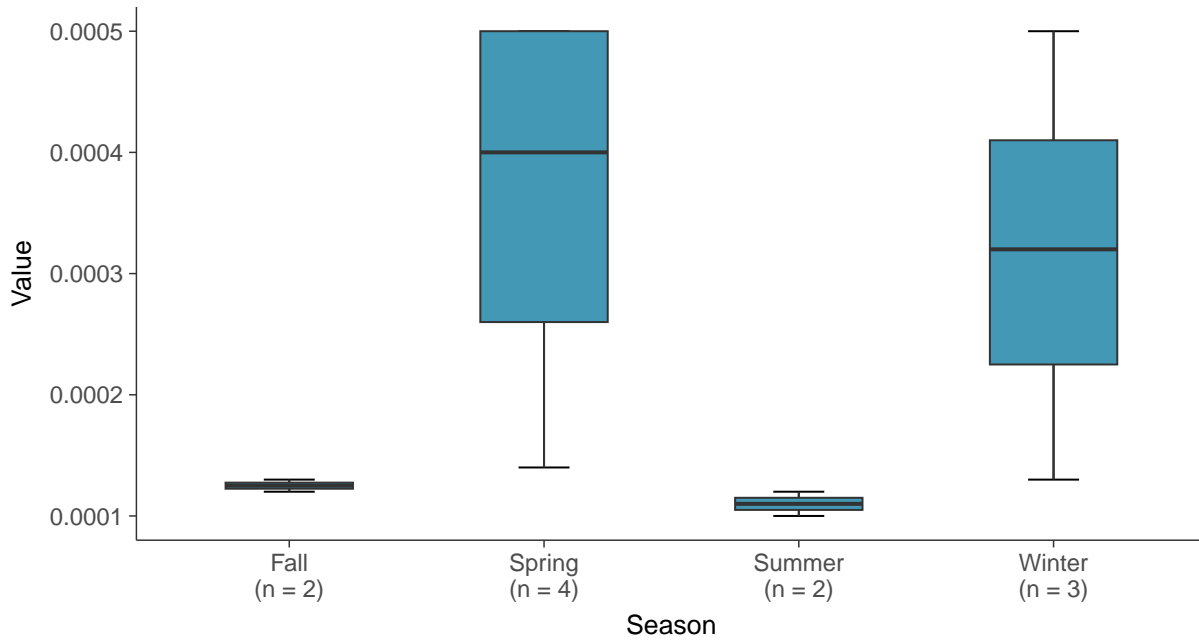
Boxplot

Antimony, MW-18 (mg/L)



Boxplot by Season

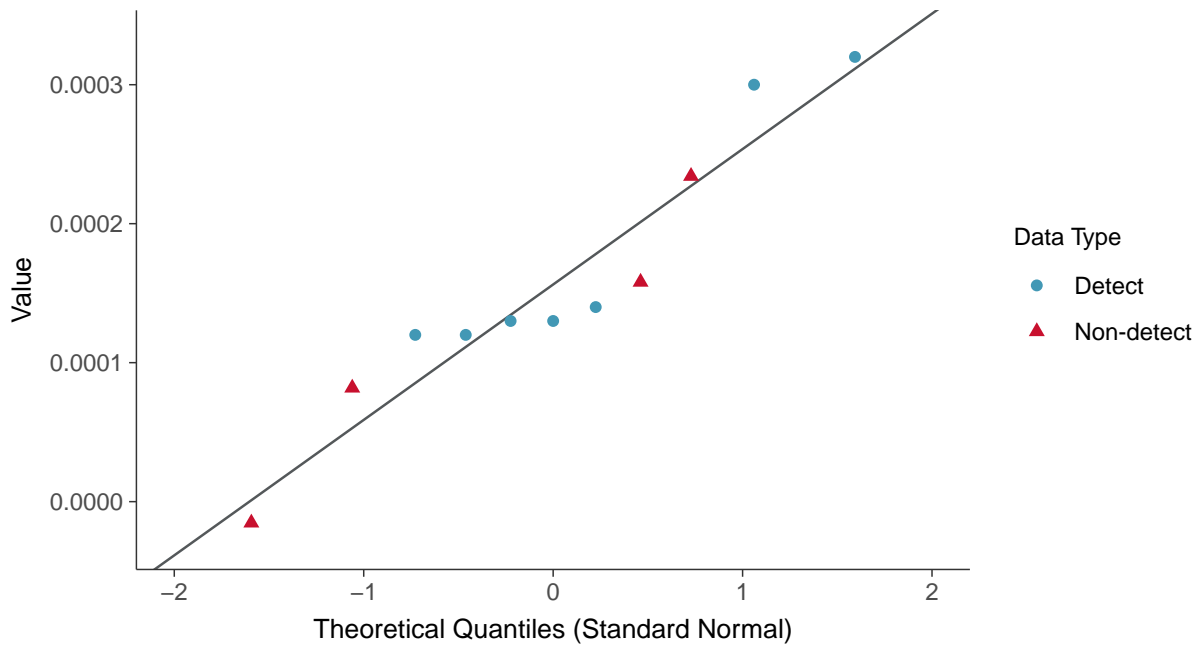
Antimony, MW-18 (mg/L)





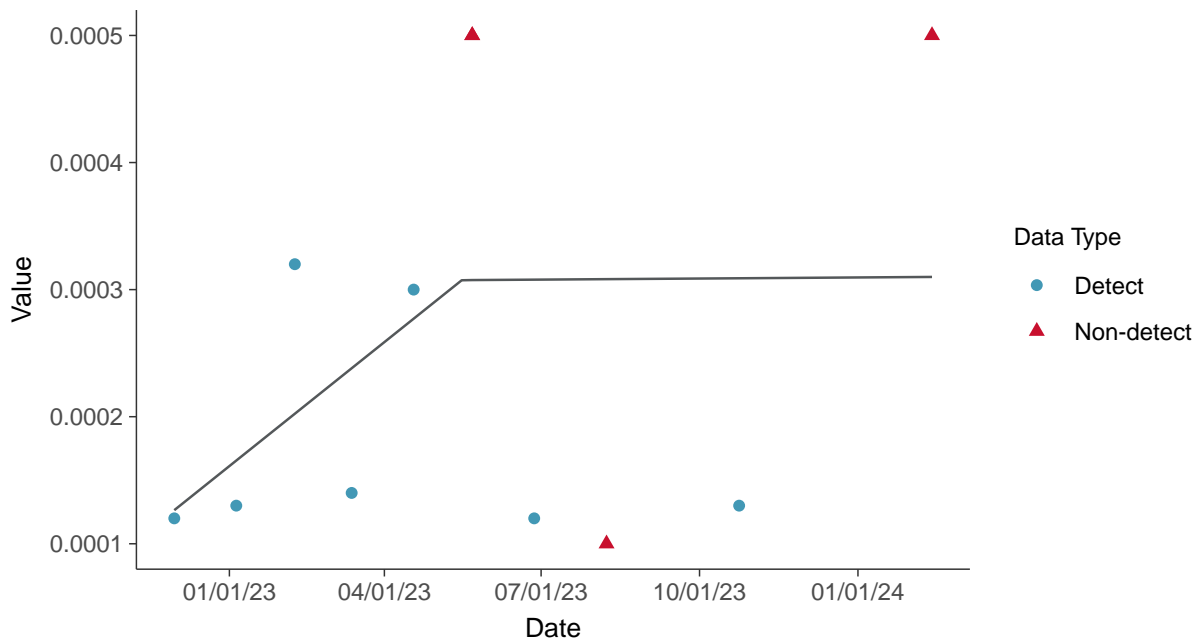
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-18 (mg/L)



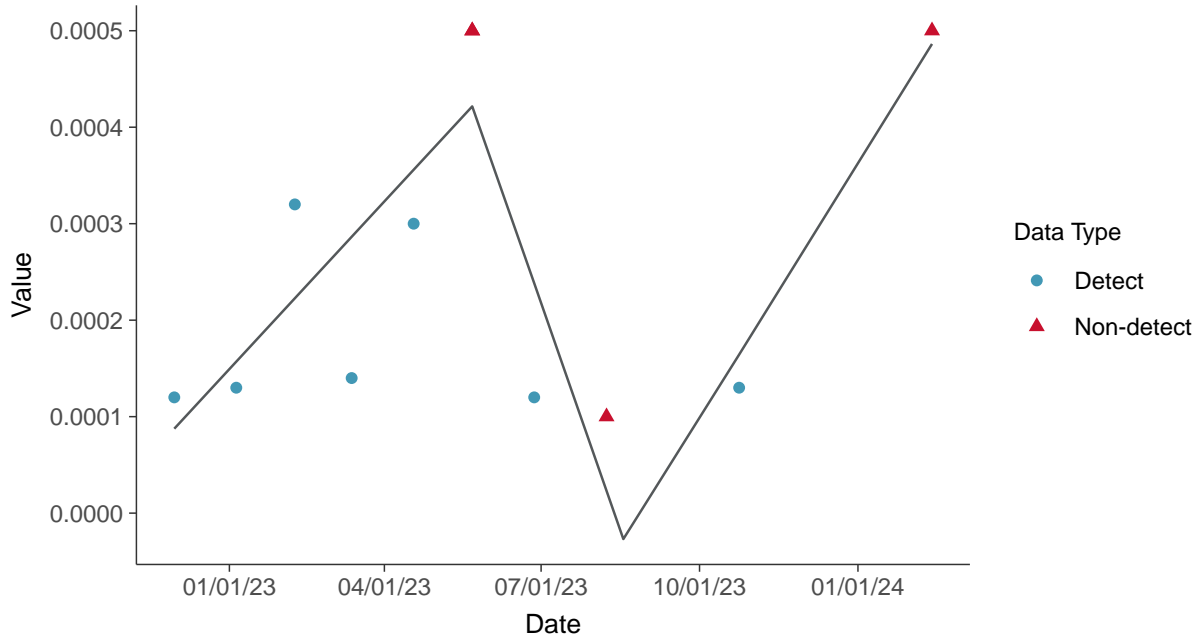
Trend Regression: Piecewise Linear-Linear

Antimony, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear
Antimony, MW-18 (mg/L)



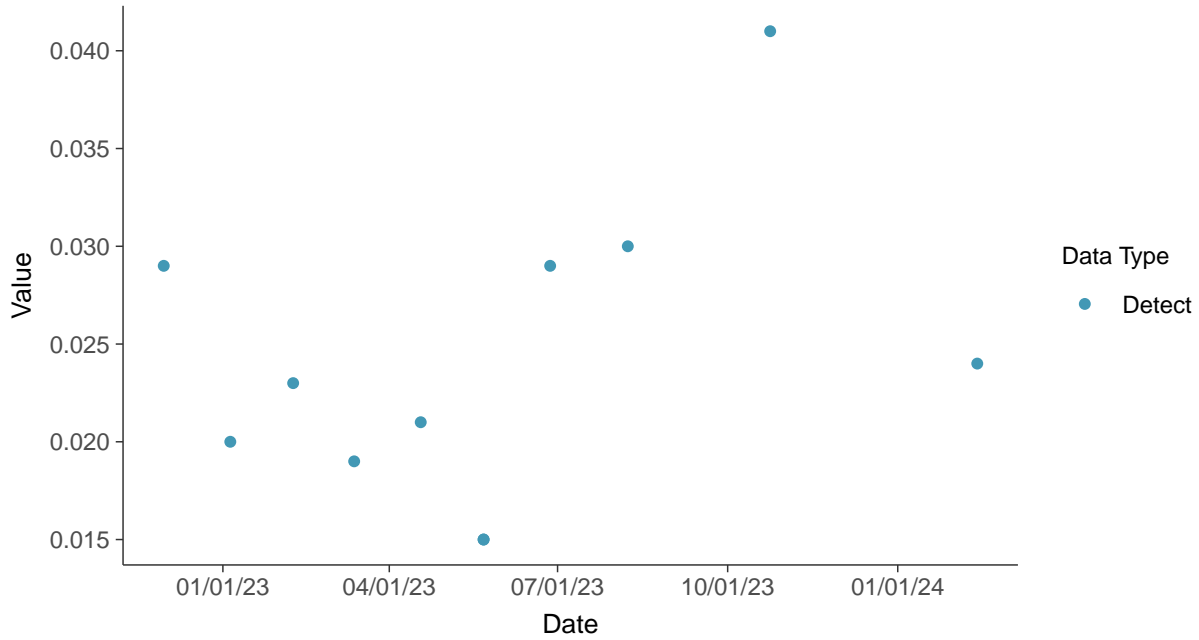


Appendix IV: Arsenic, MW-18

ID: 1_28_5_102

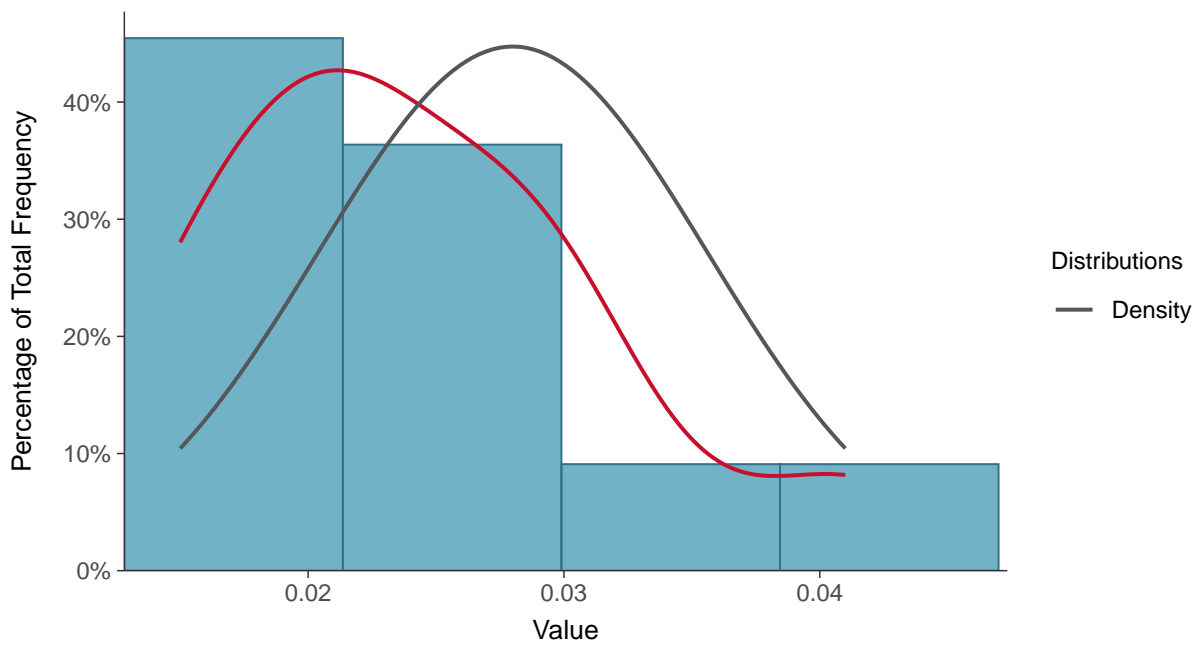
Scatter Plot

Arsenic, MW-18 (mg/L)



Histogram

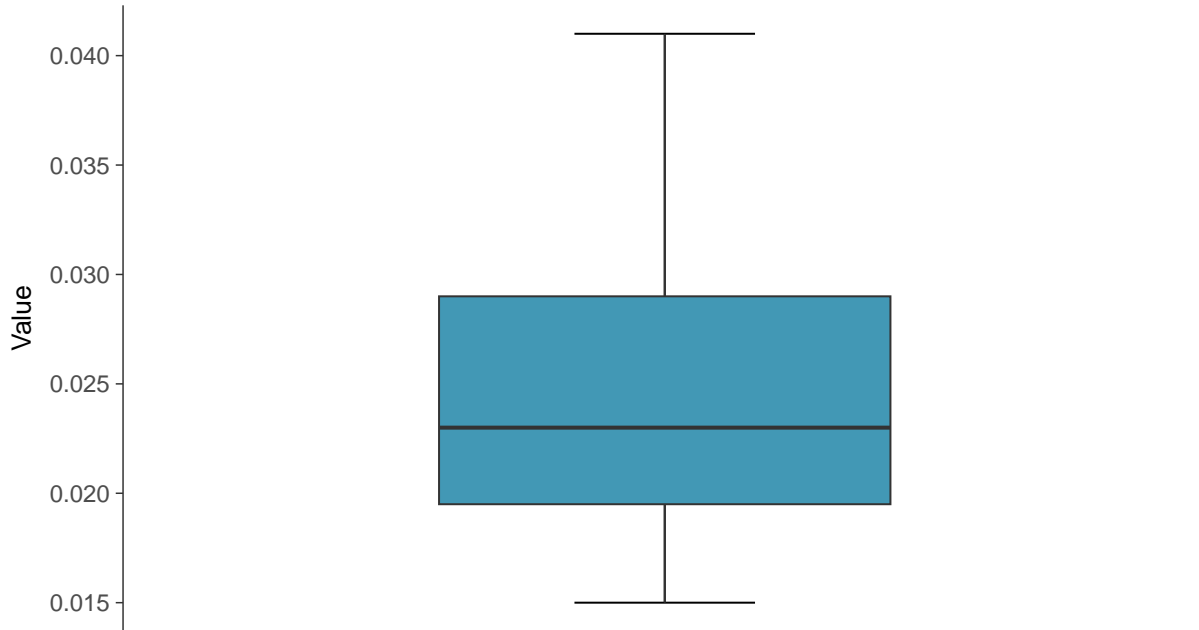
Arsenic, MW-18 (mg/L)





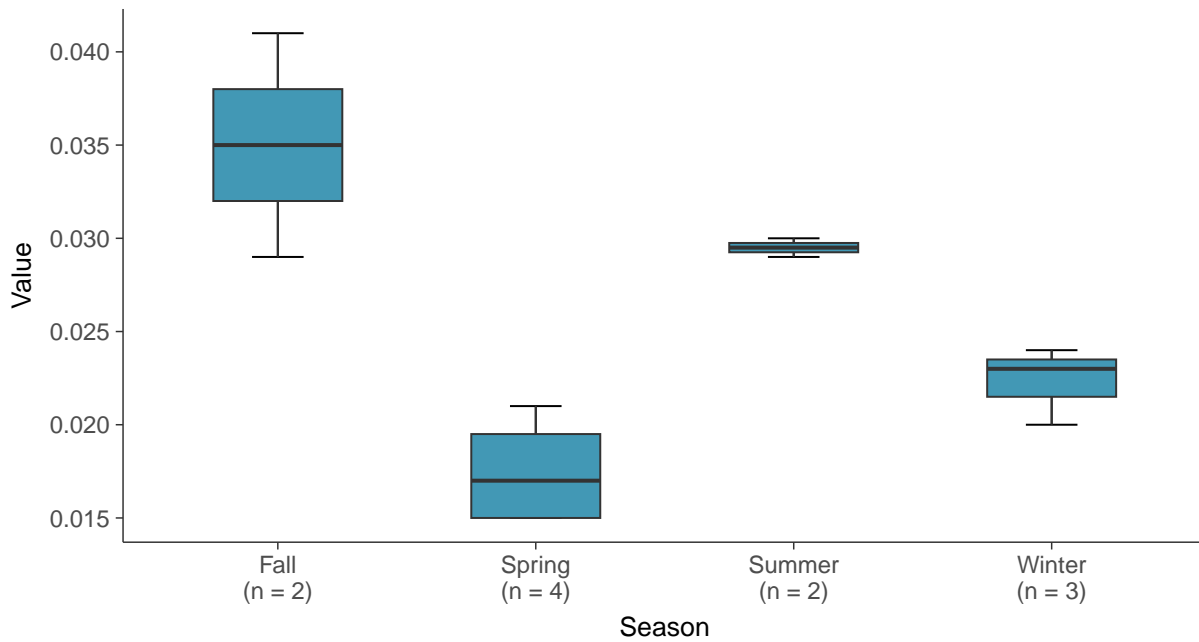
Boxplot

Arsenic, MW-18 (mg/L)



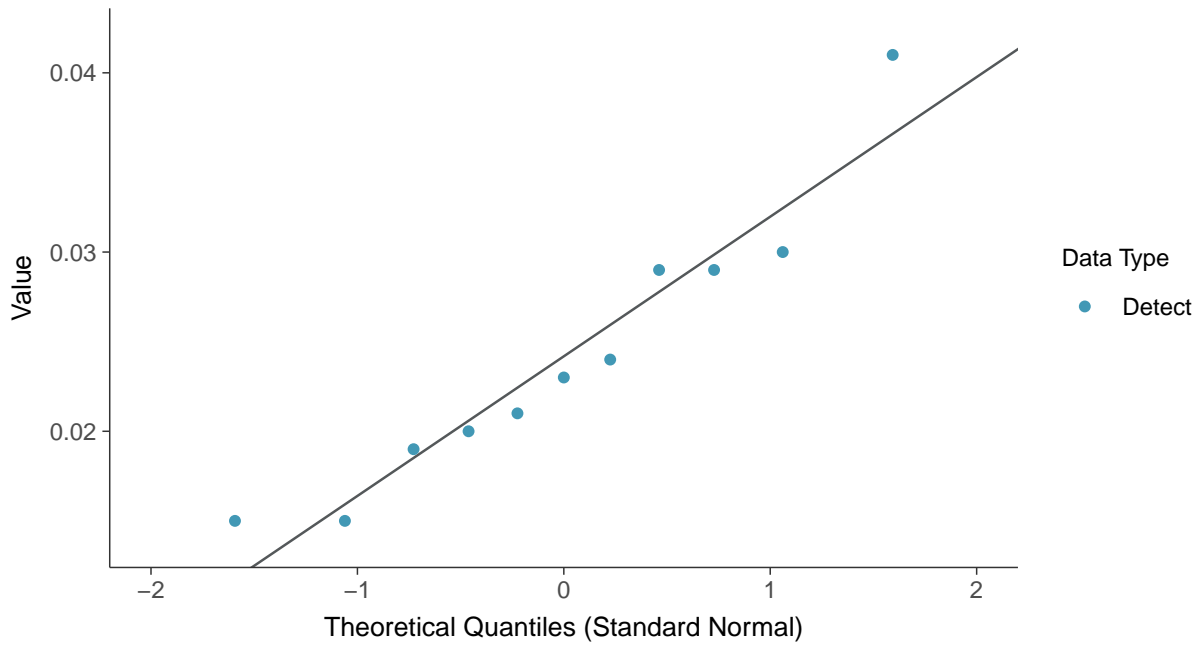
Boxplot by Season

Arsenic, MW-18 (mg/L)

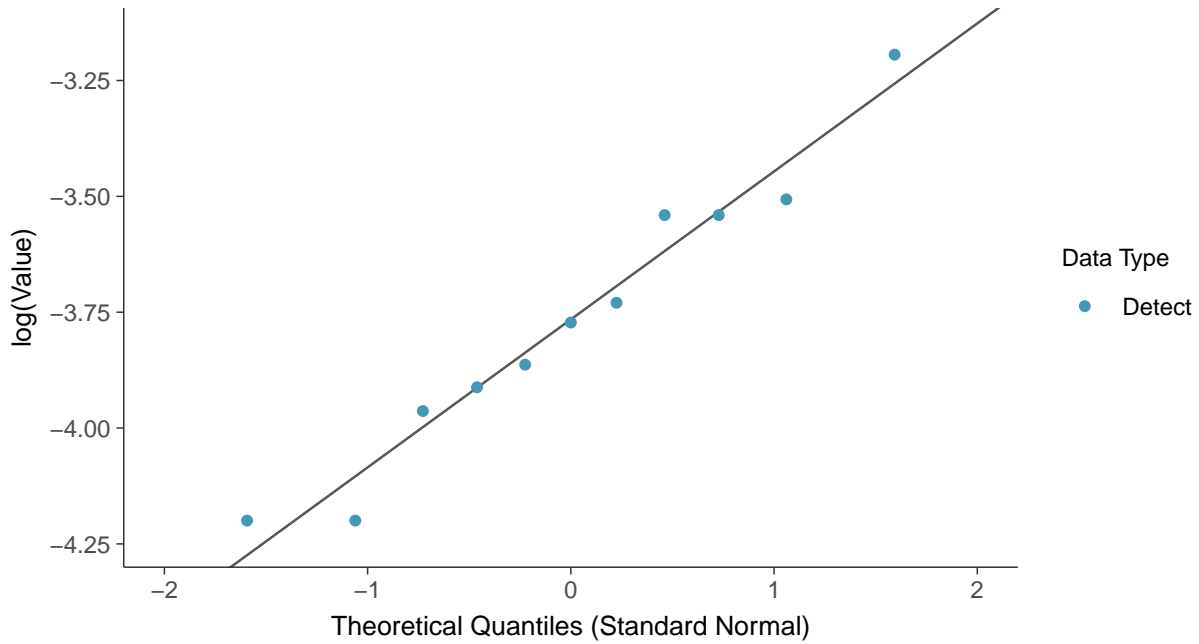




Normal Q-Q plot
Arsenic, MW-18 (mg/L)



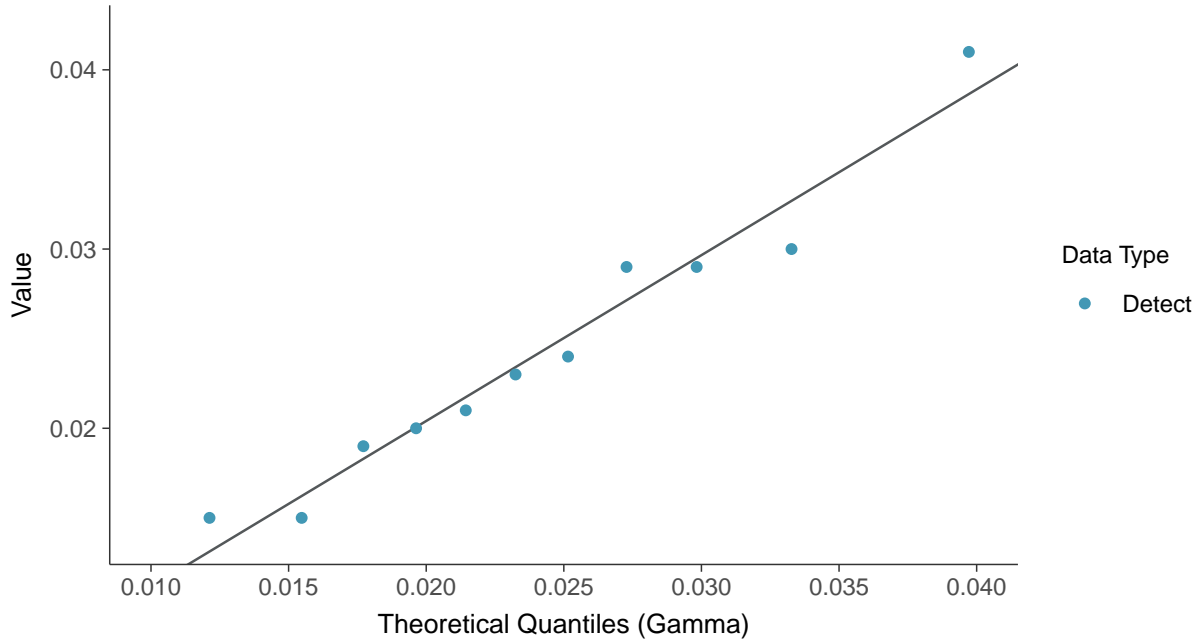
Lognormal Q-Q plot
Arsenic, MW-18 (mg/L)





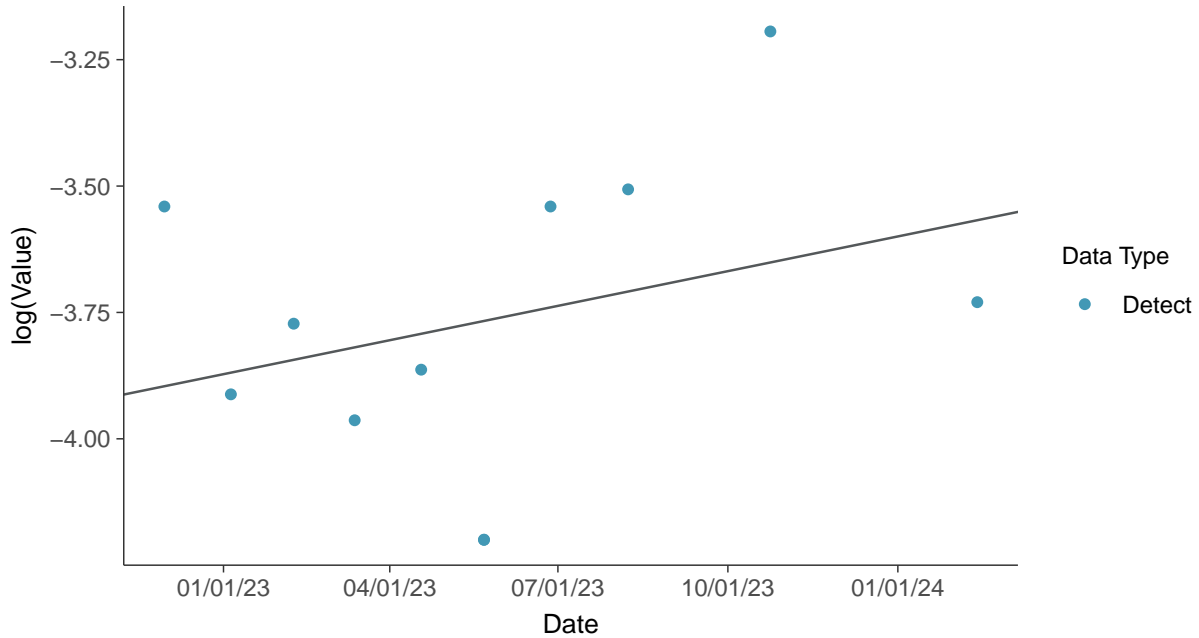
Gamma Q-Q plot

Arsenic, MW-18 (mg/L)



Trend Regression: Lognormal MLE

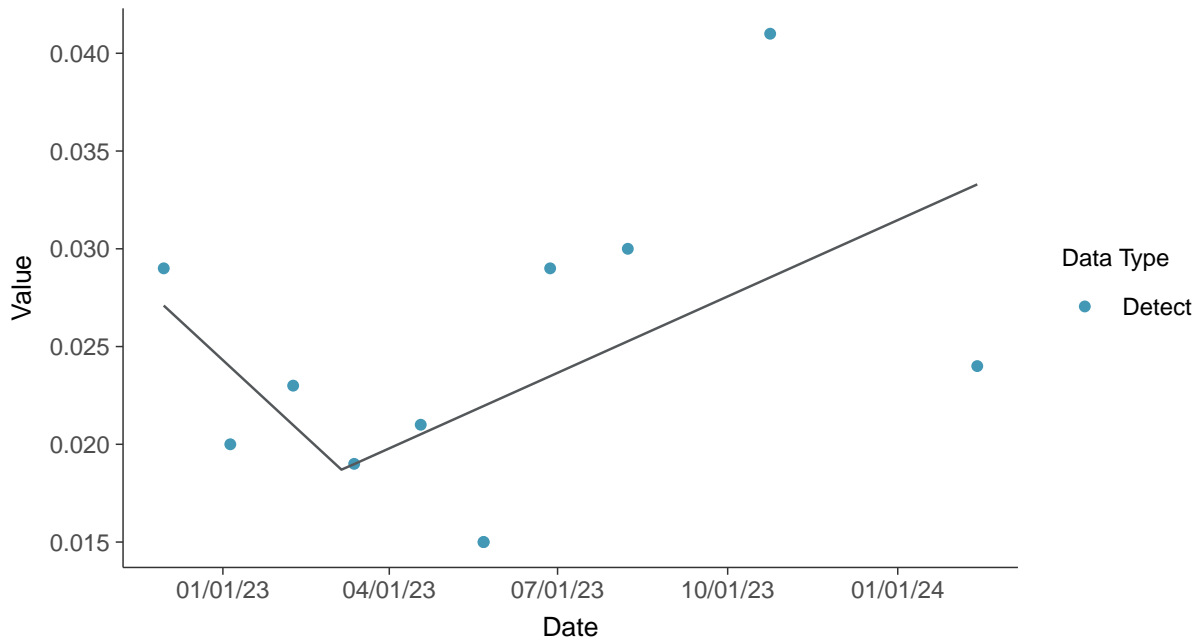
Arsenic, MW-18 (mg/L)





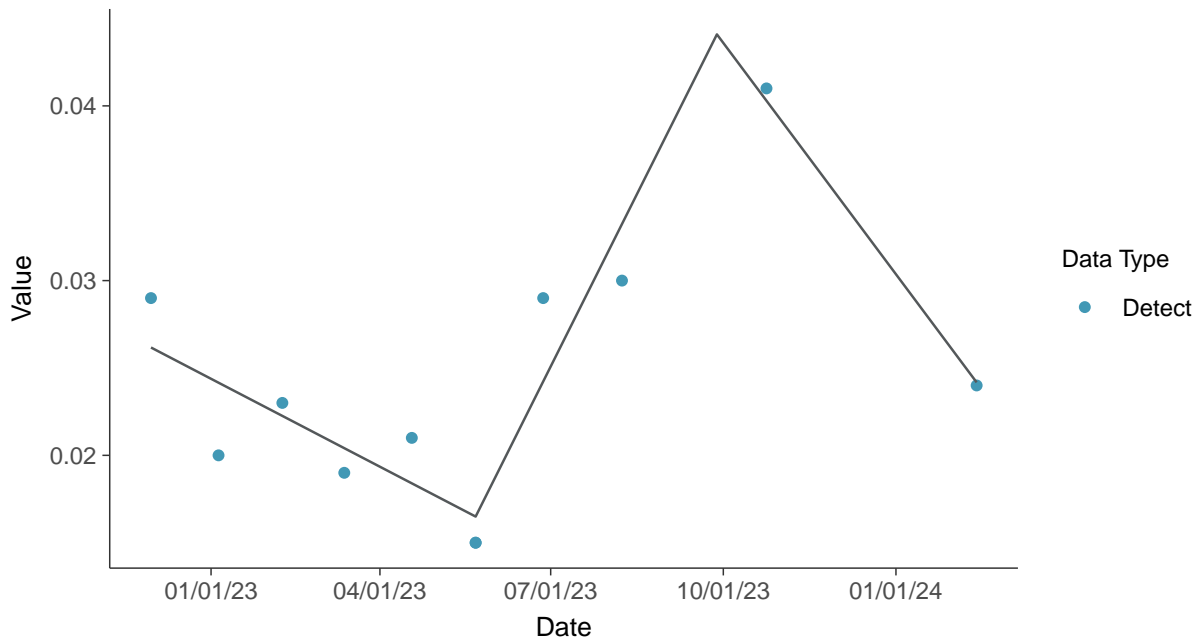
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-18 (mg/L)



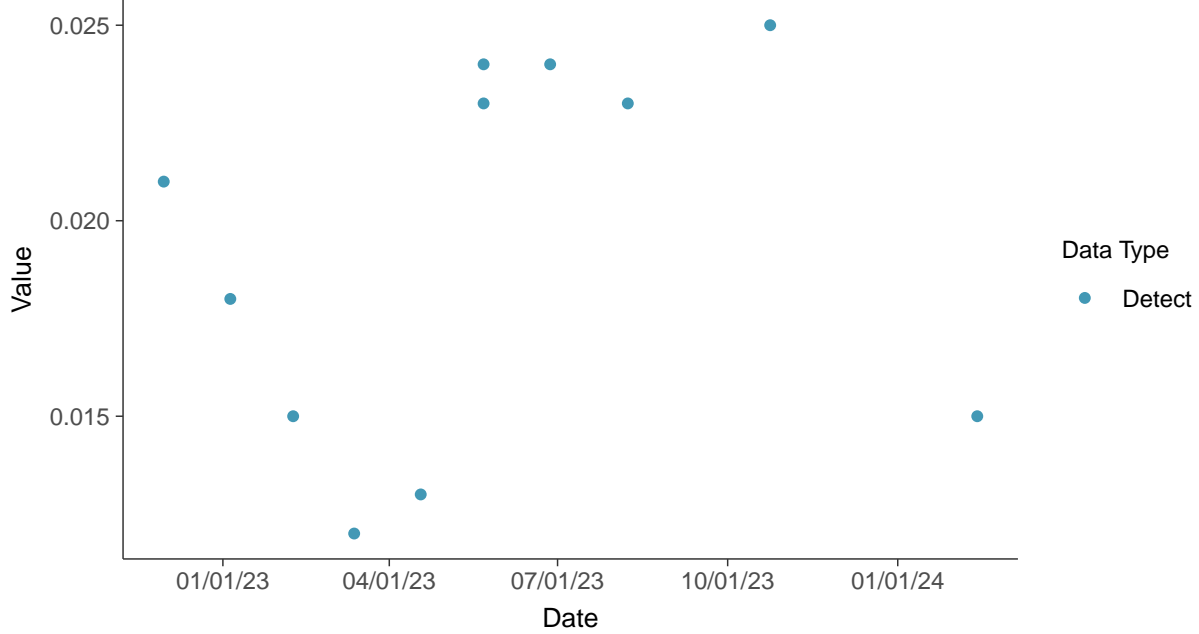


Appendix IV: Barium, MW-18

ID: 1_28_5_103

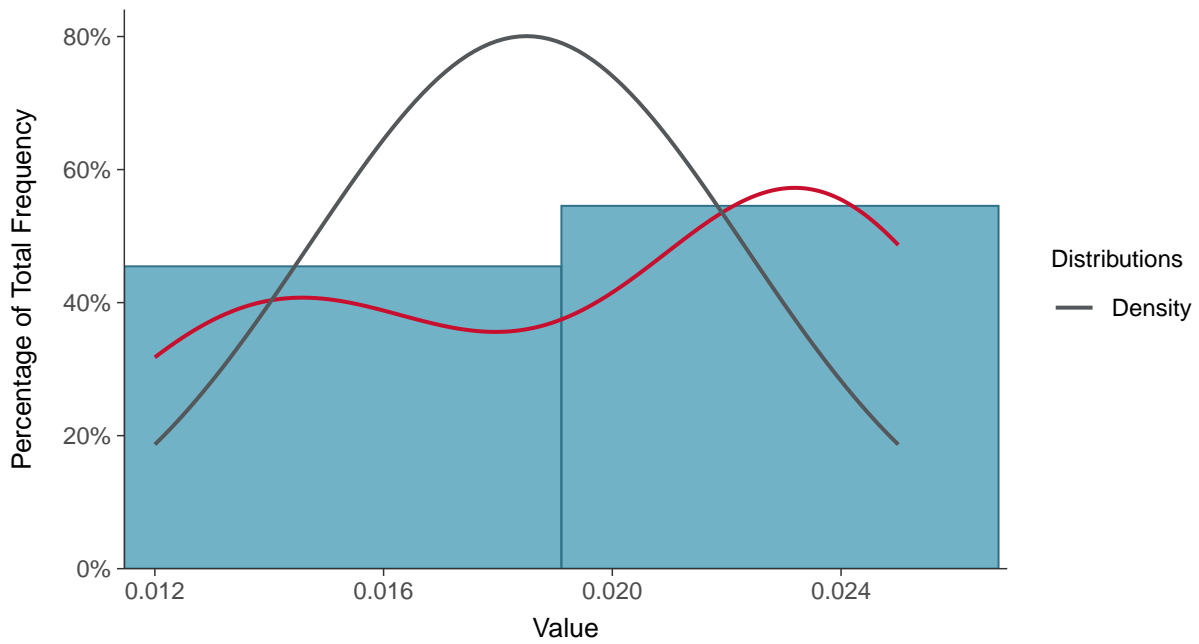
Scatter Plot

Barium, MW-18 (mg/L)



Histogram

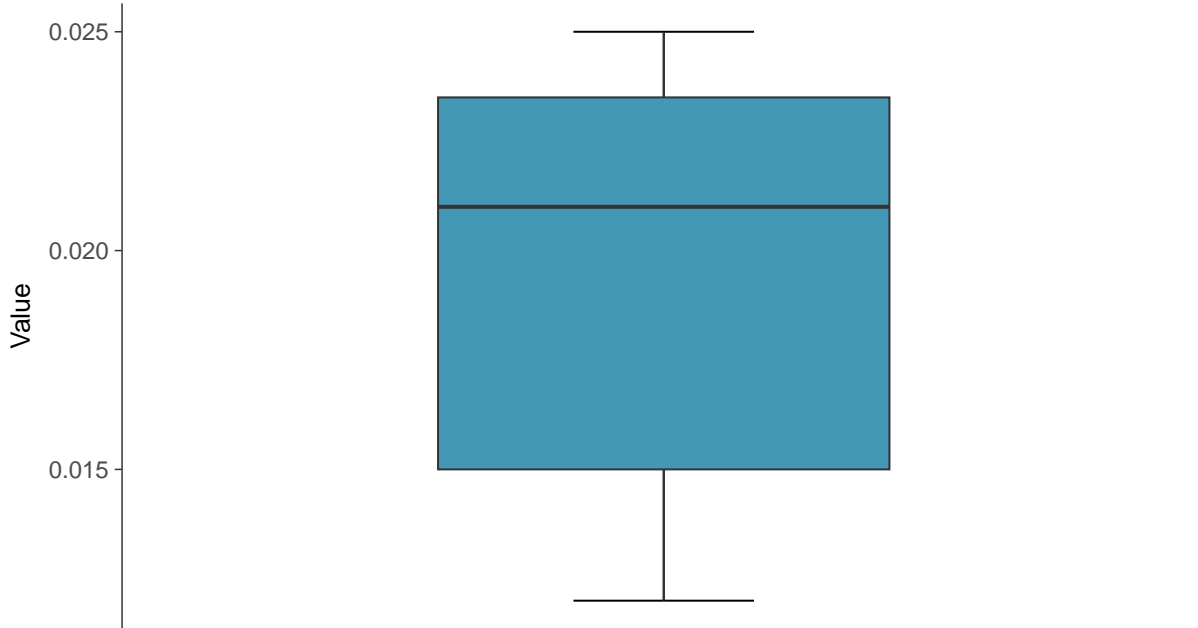
Barium, MW-18 (mg/L)





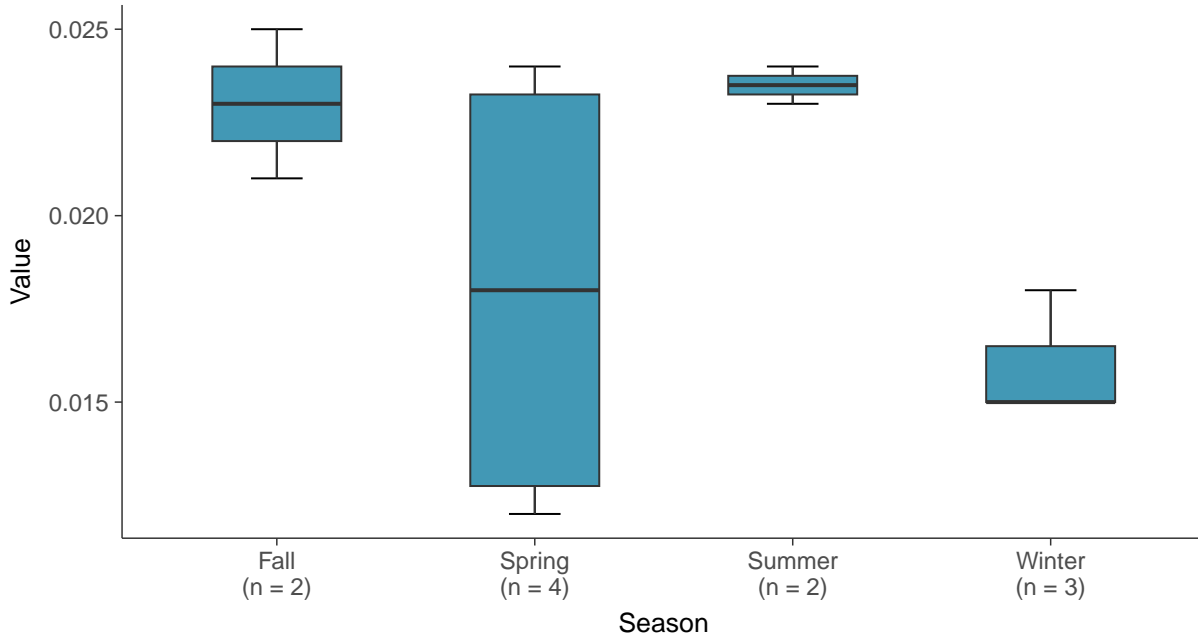
Boxplot

Barium, MW-18 (mg/L)



Boxplot by Season

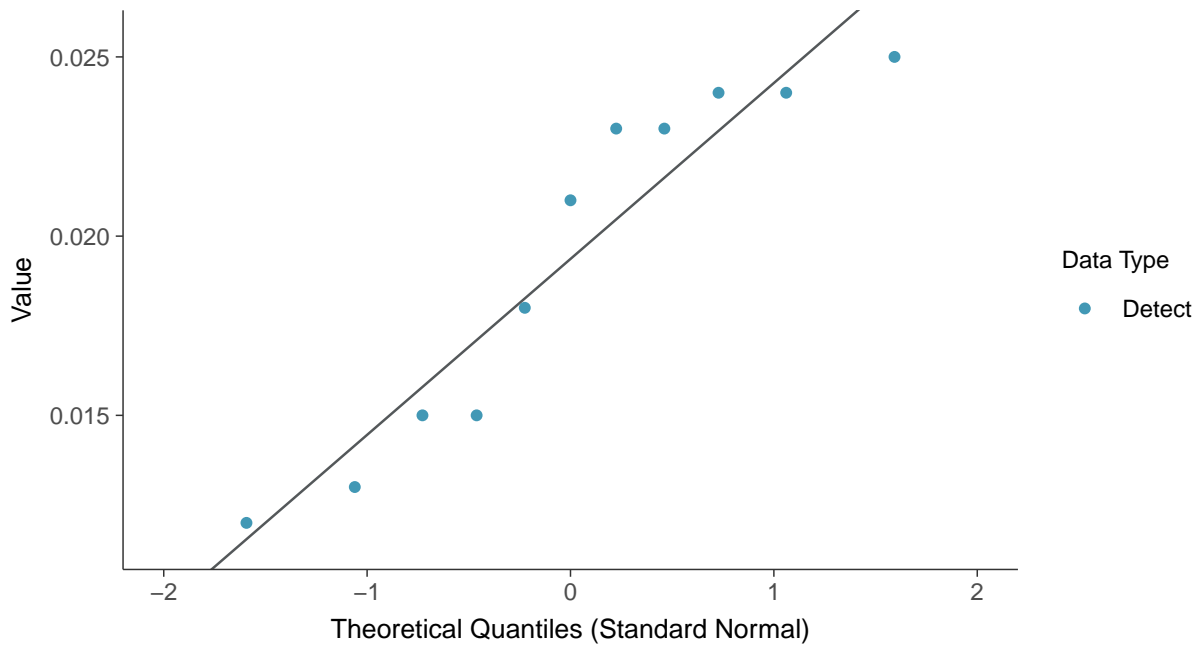
Barium, MW-18 (mg/L)





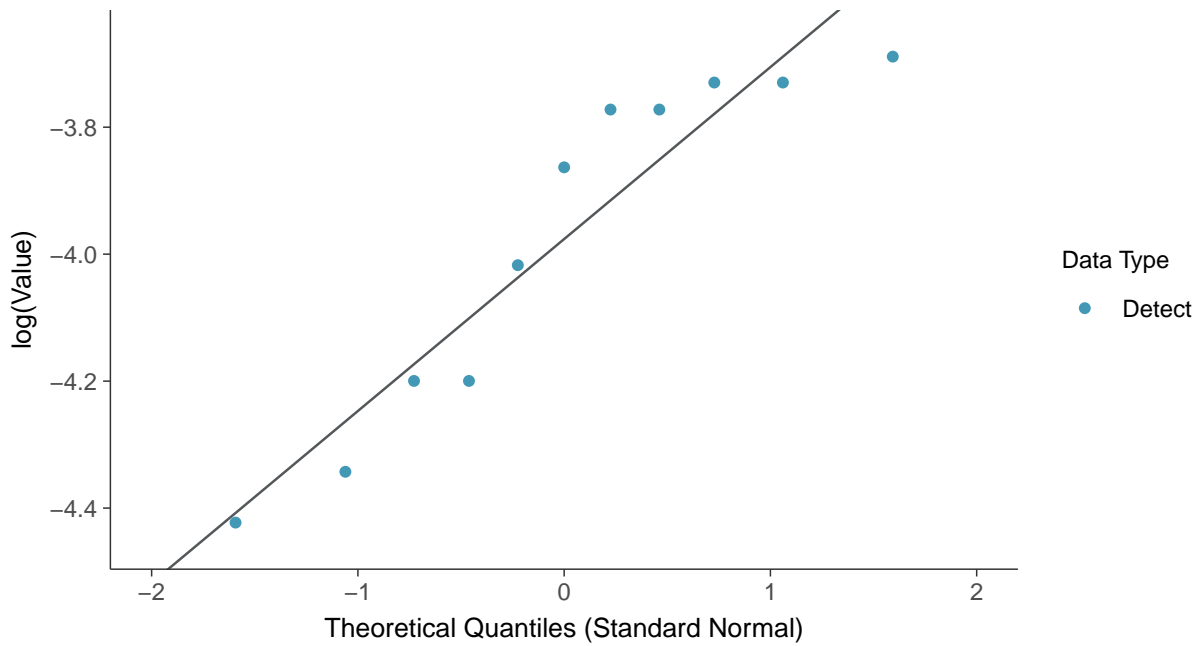
Normal Q-Q plot

Barium, MW-18 (mg/L)



Lognormal Q-Q plot

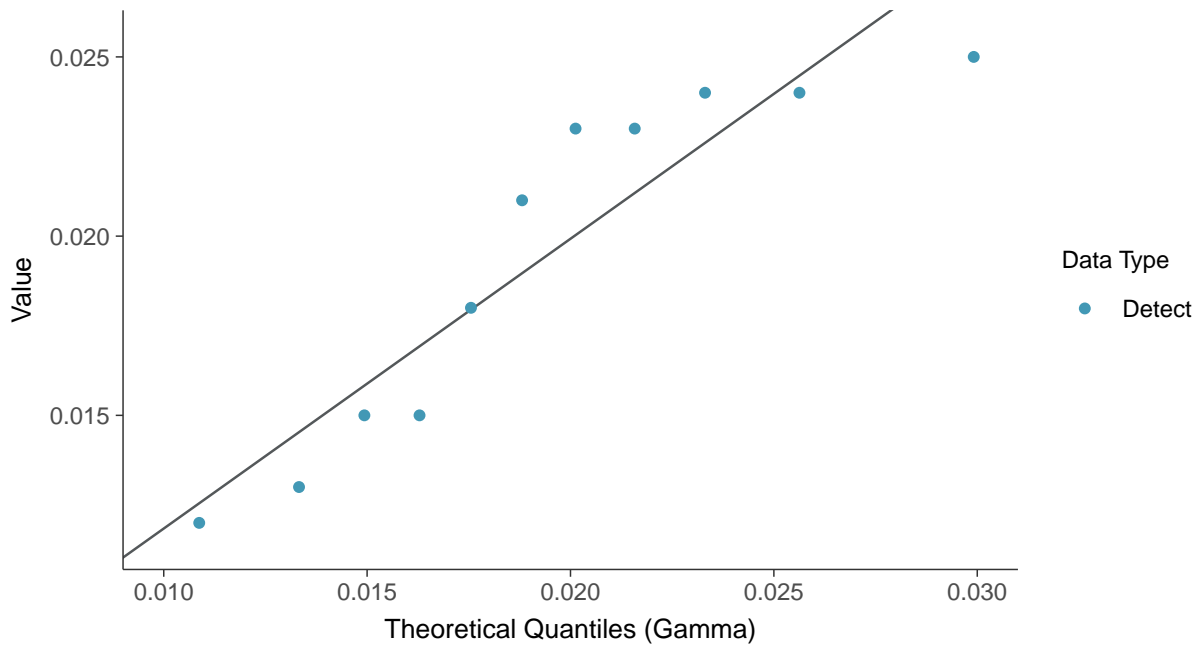
Barium, MW-18 (mg/L)





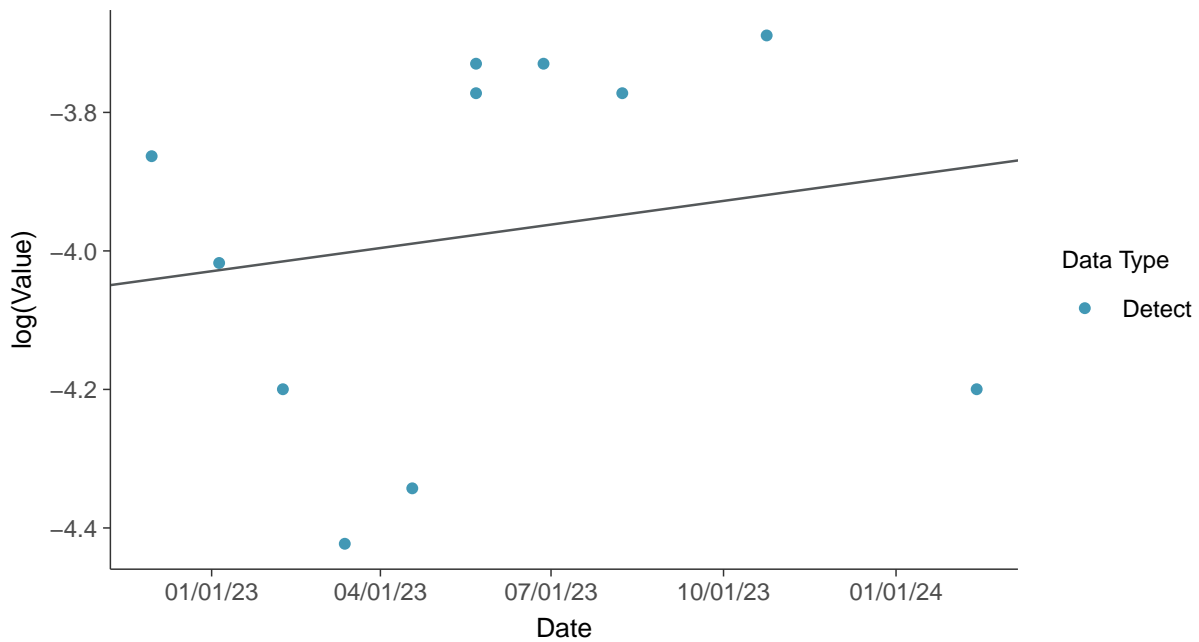
Gamma Q-Q plot

Barium, MW-18 (mg/L)



Trend Regression: Lognormal MLE

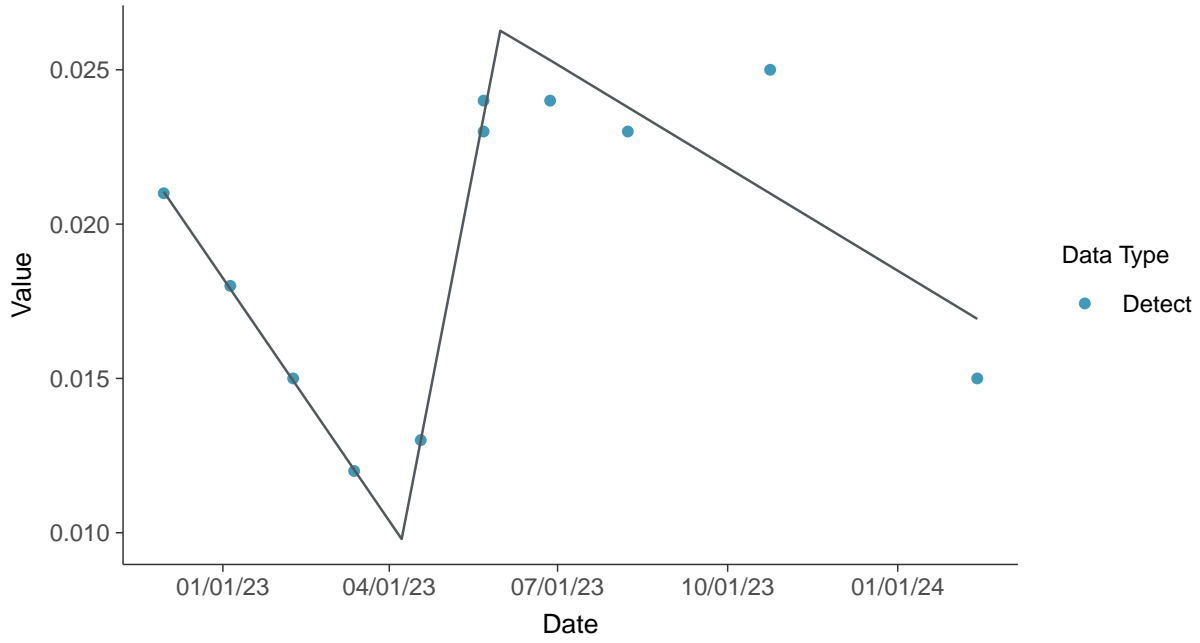
Barium, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

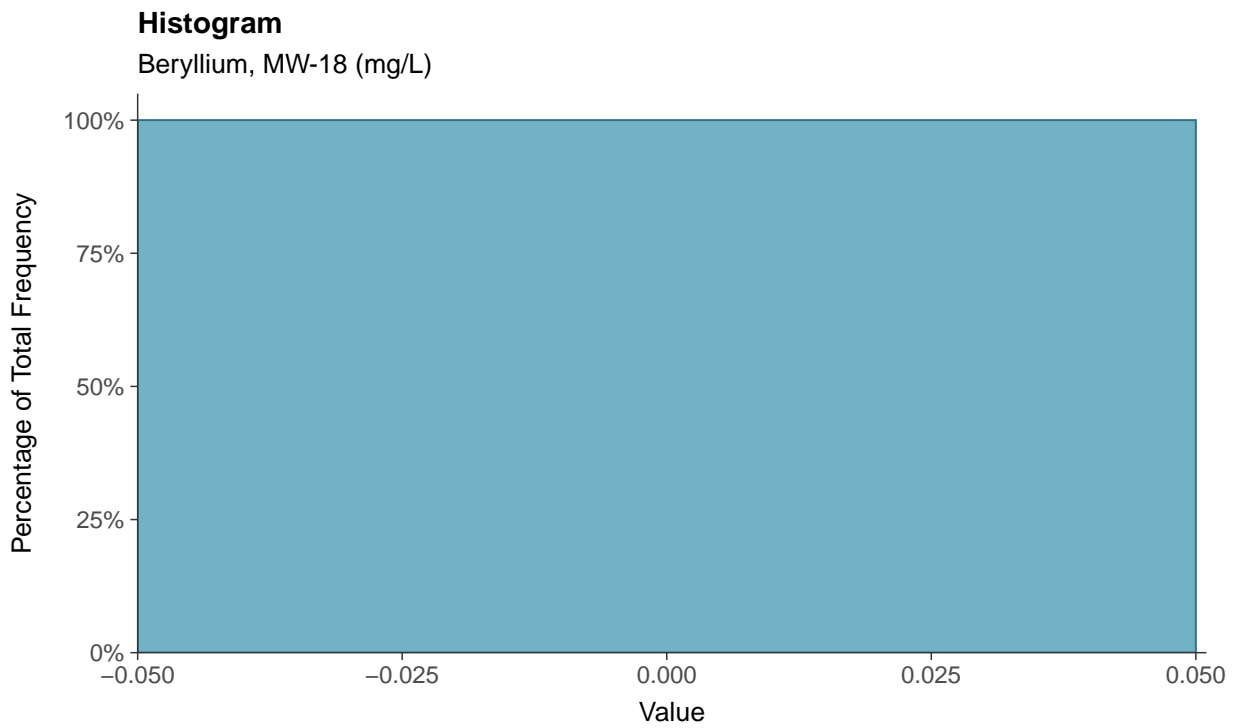
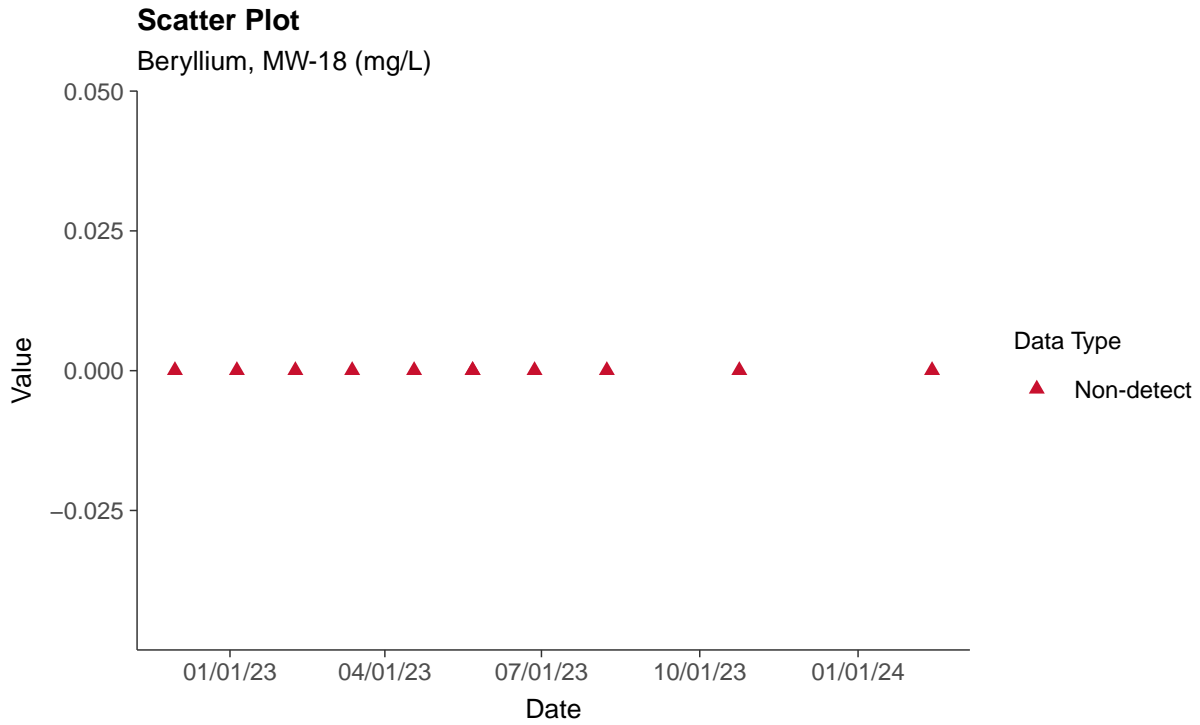
Barium, MW-18 (mg/L)





Appendix IV: Beryllium, MW-18

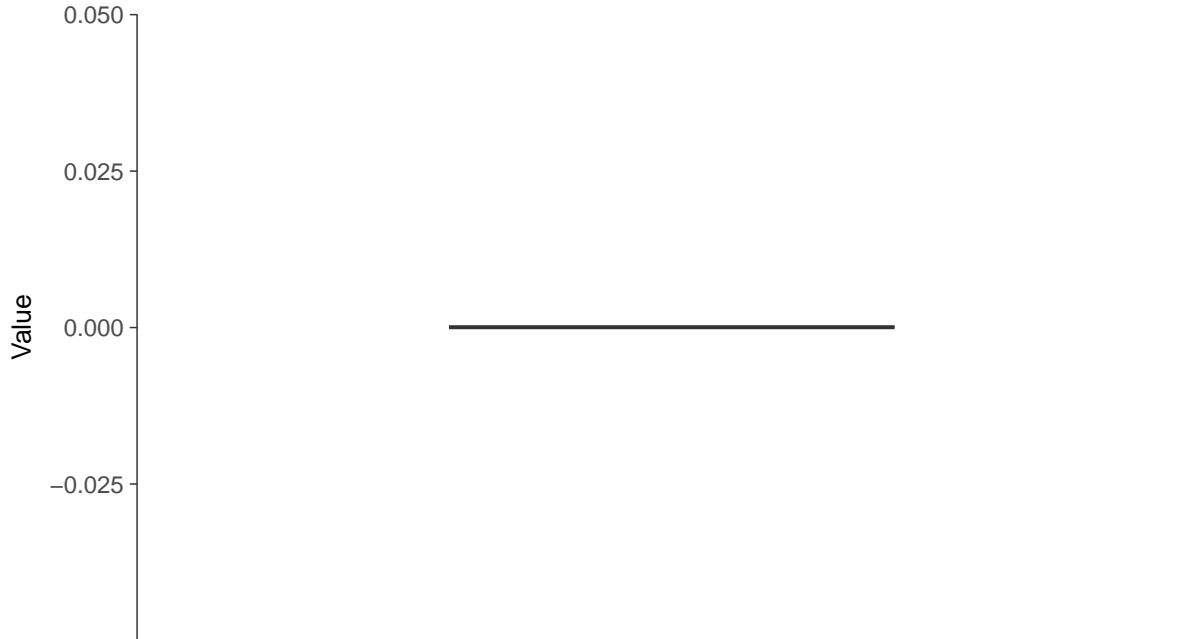
ID: 1_28_5_104





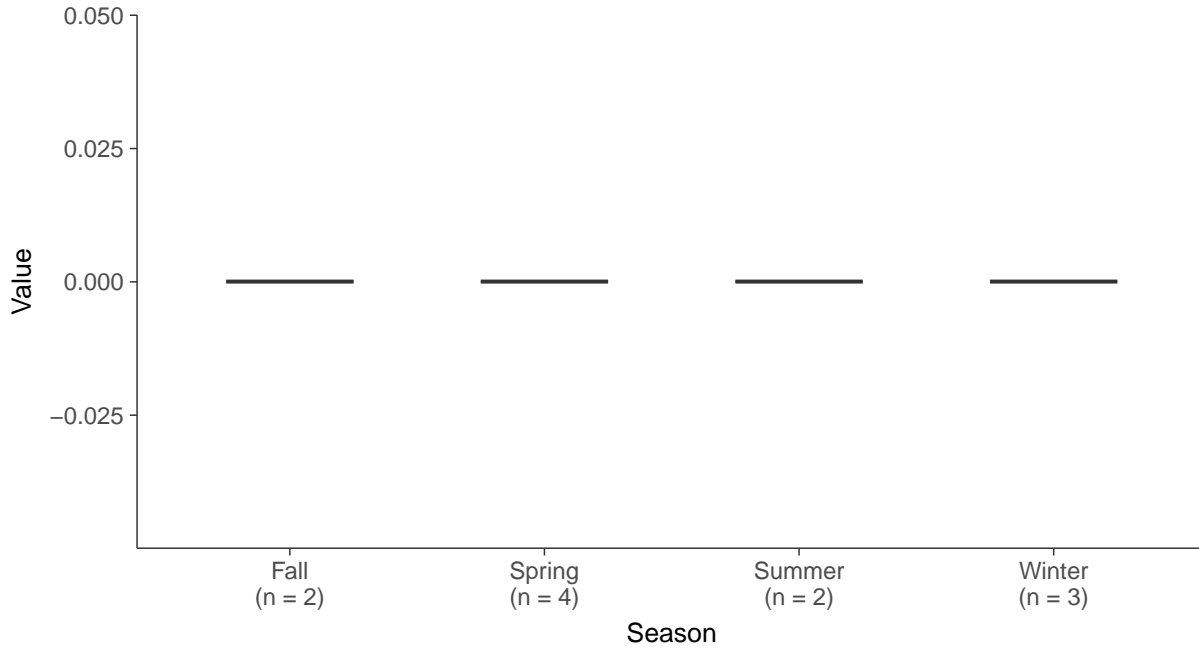
Boxplot

Beryllium, MW-18 (mg/L)



Boxplot by Season

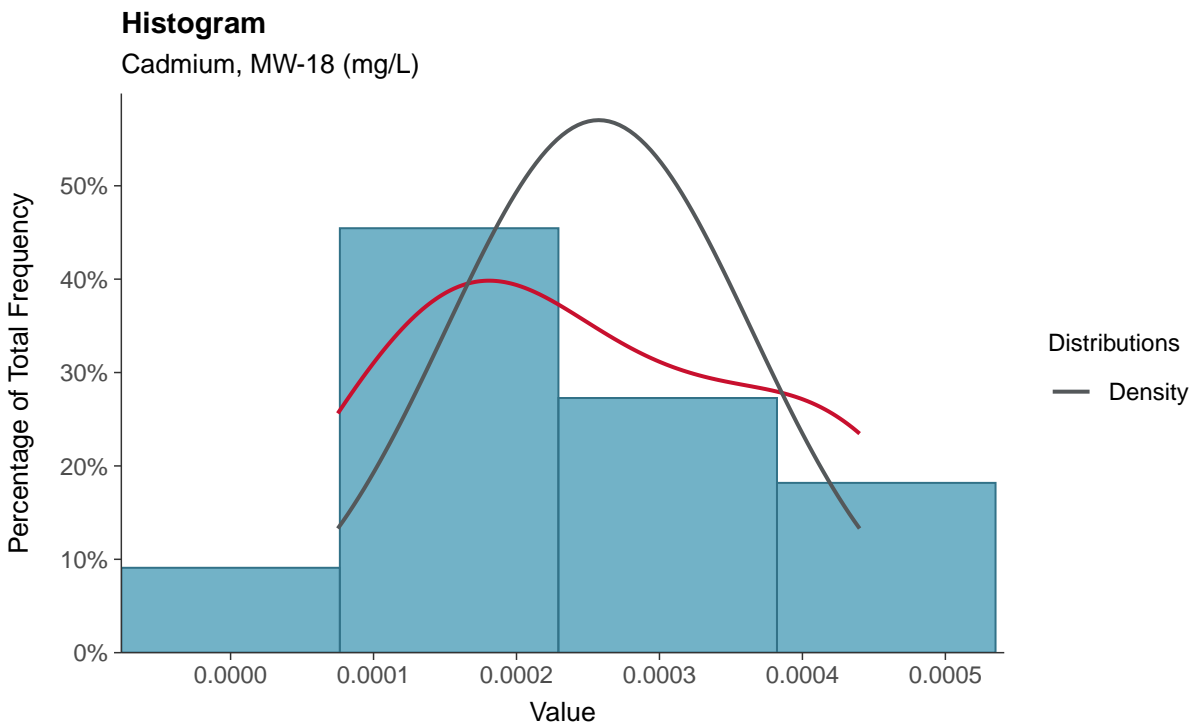
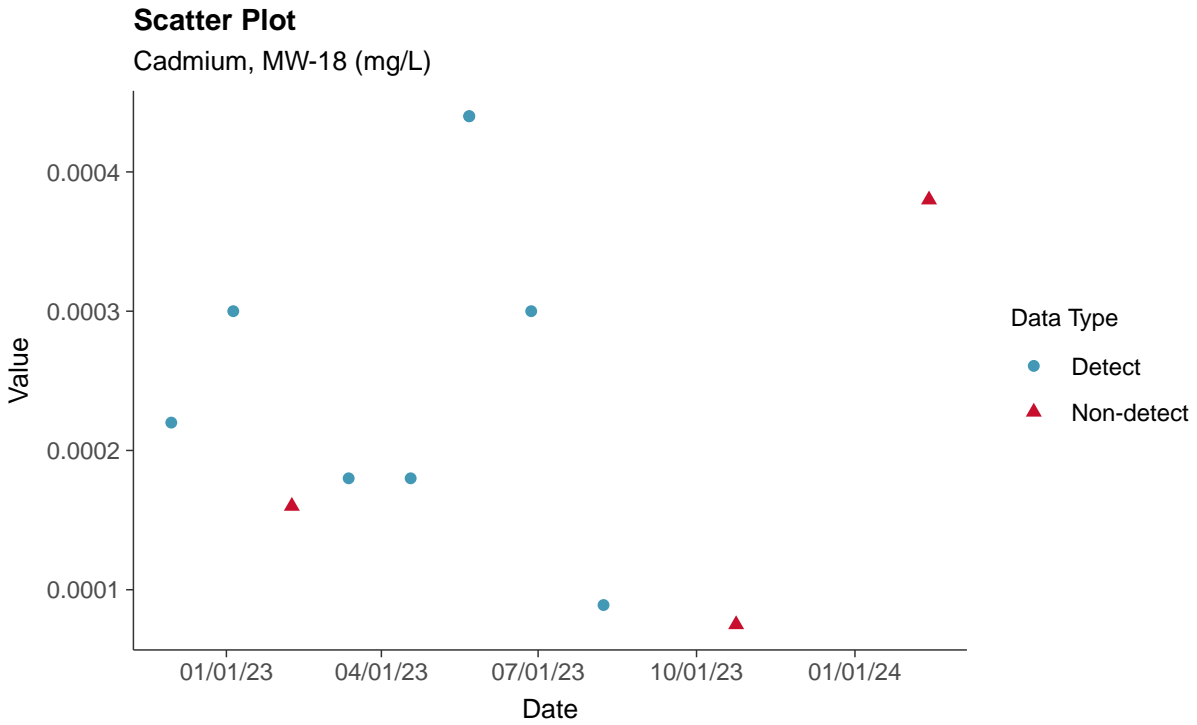
Beryllium, MW-18 (mg/L)





Appendix IV: Cadmium, MW-18

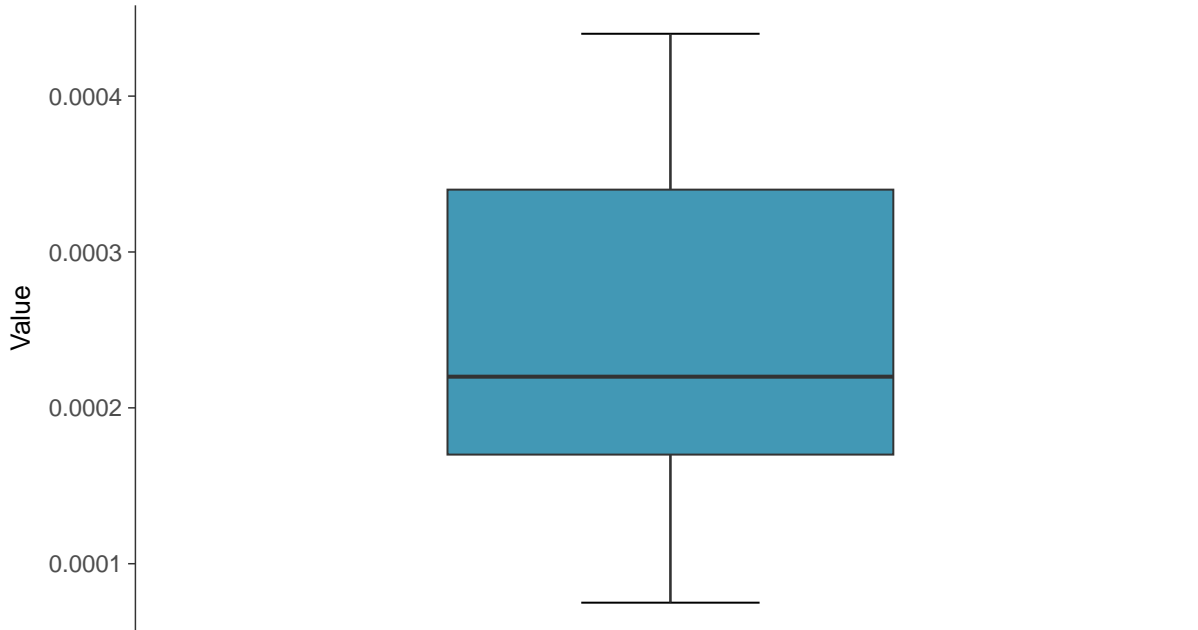
ID: 1_28_5_106





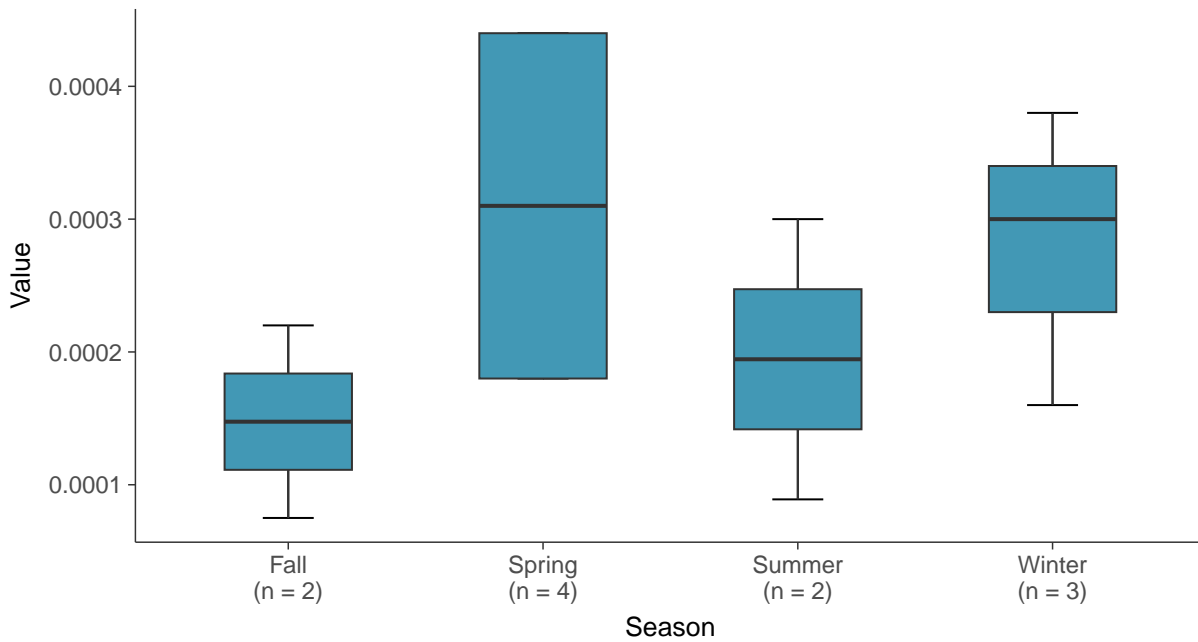
Boxplot

Cadmium, MW-18 (mg/L)



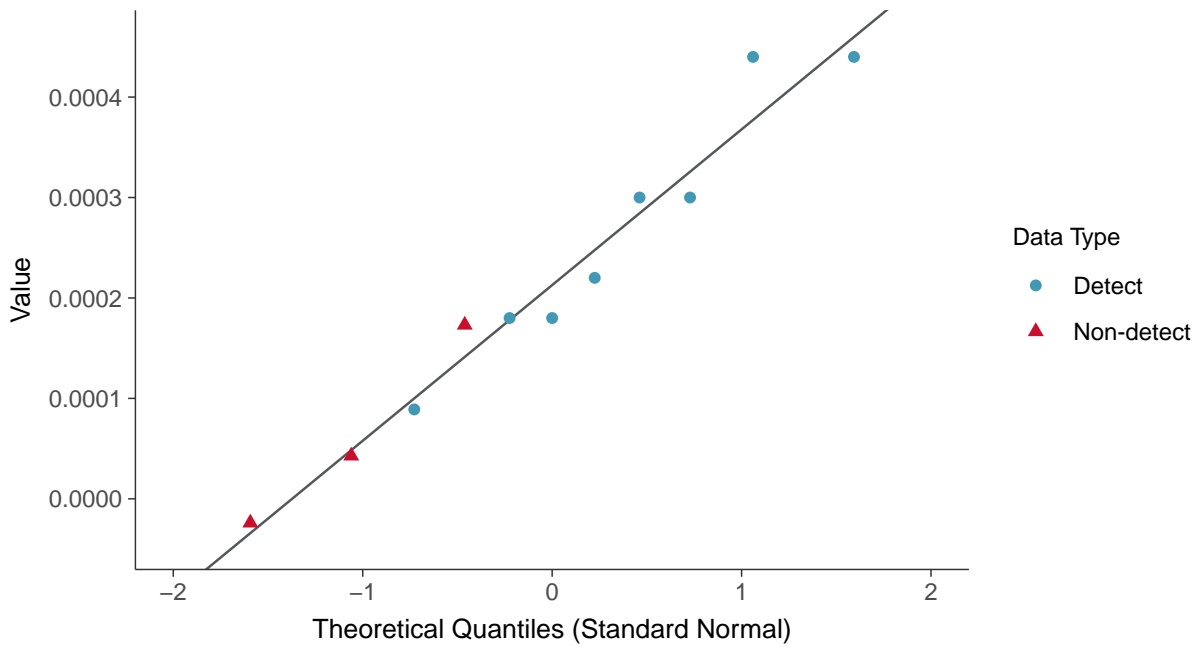
Boxplot by Season

Cadmium, MW-18 (mg/L)

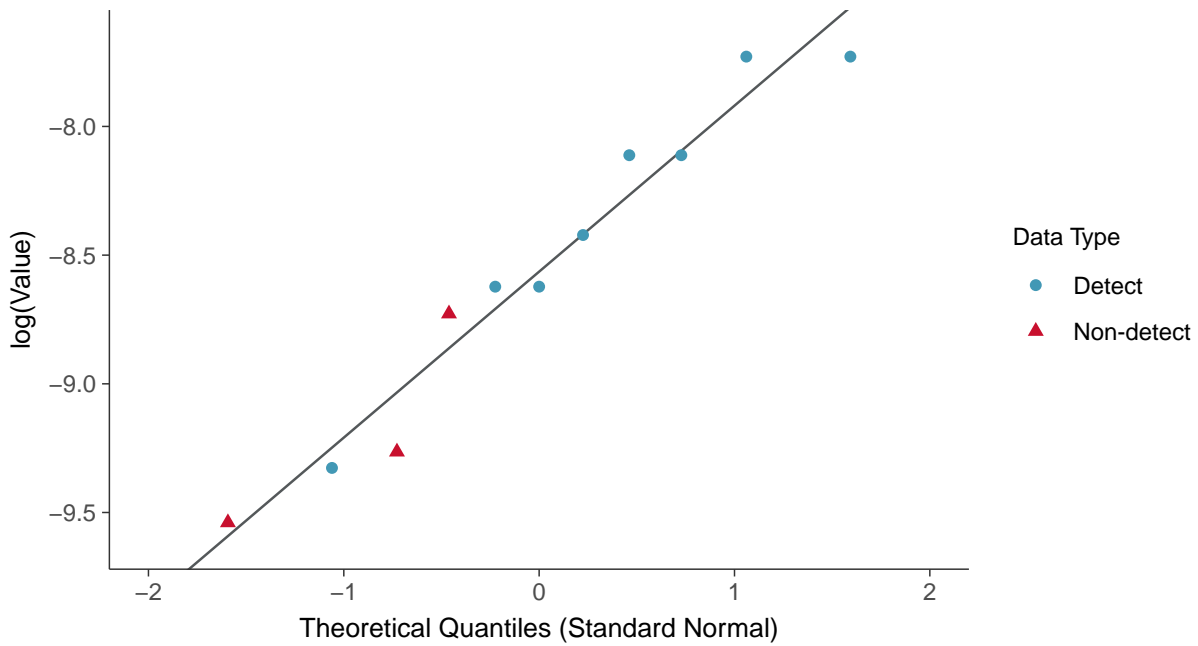




Normal Q-Q plot using ROS Imputed Estimates
Cadmium, MW-18 (mg/L)

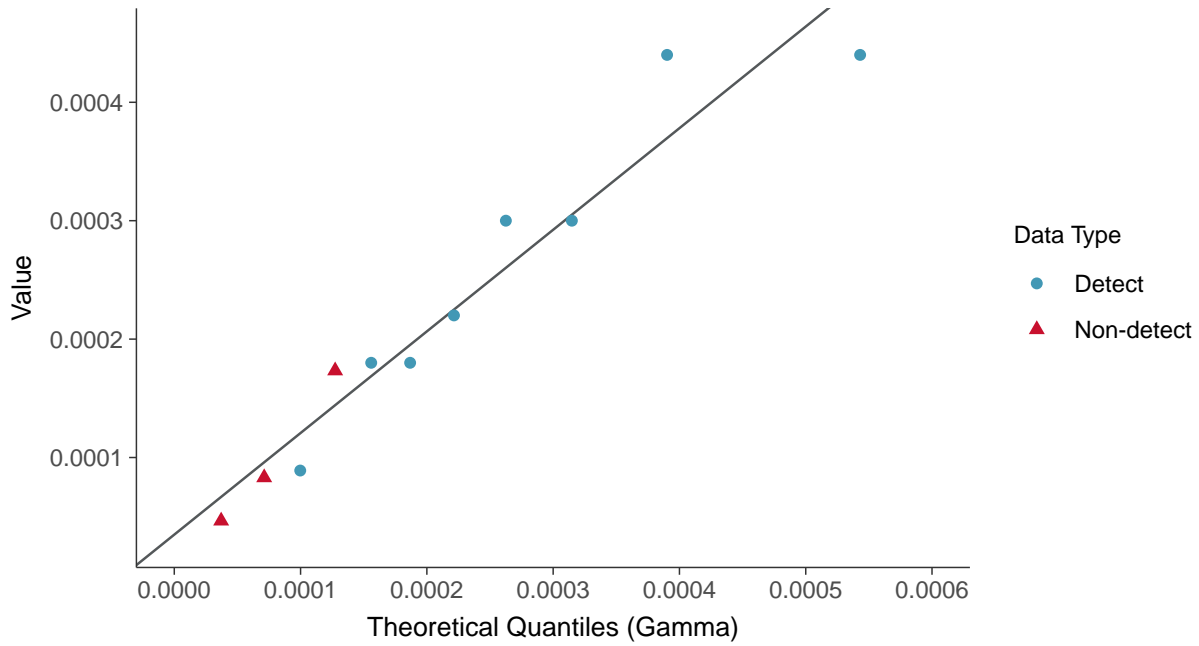


Lognormal Q-Q plot using ROS Imputed Estimates
Cadmium, MW-18 (mg/L)

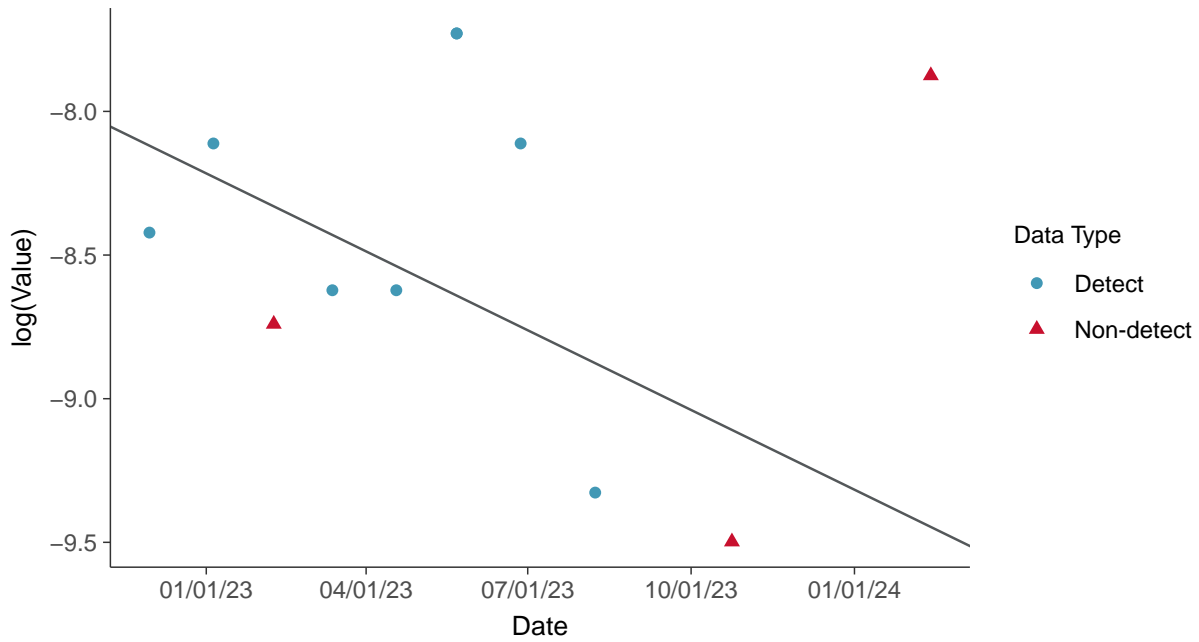




Gamma Q-Q plot using ROS Imputed Estimates
Cadmium, MW-18 (mg/L)

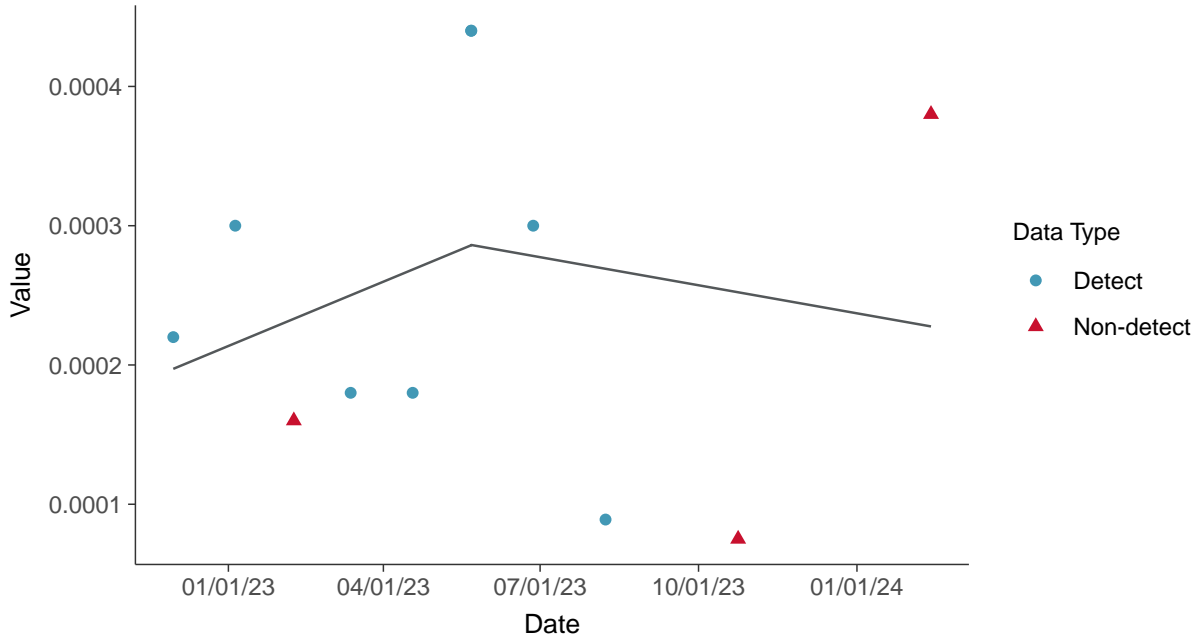


Trend Regression: Lognormal MLE
Cadmium, MW-18 (mg/L)

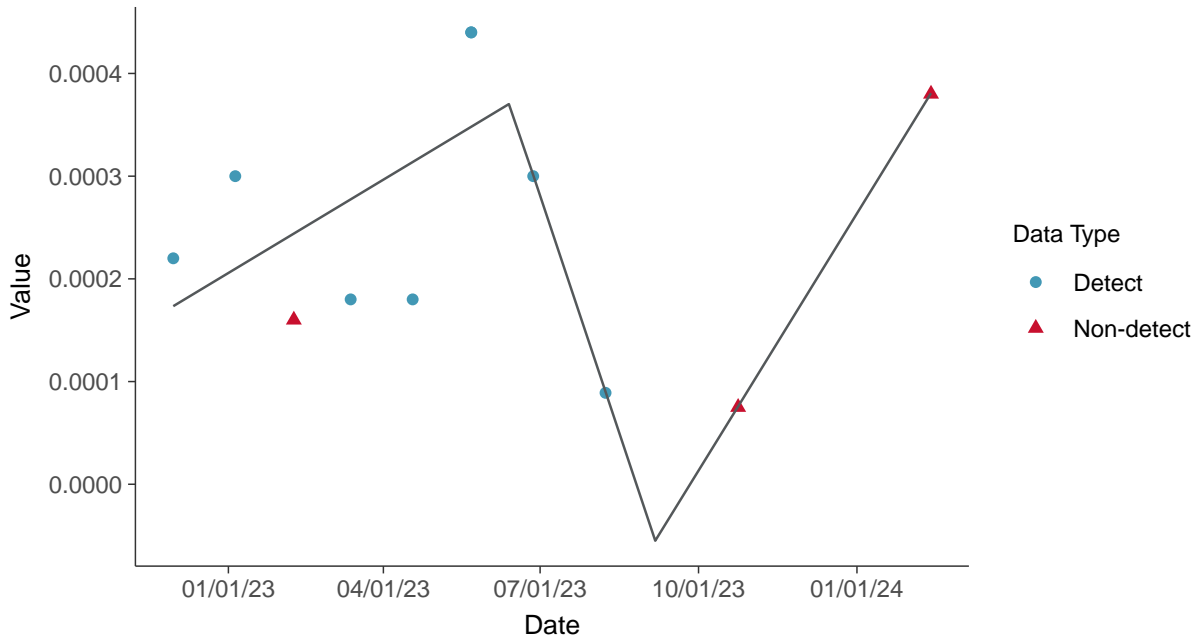




Trend Regression: Piecewise Linear-Linear
Cadmium, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cadmium, MW-18 (mg/L)



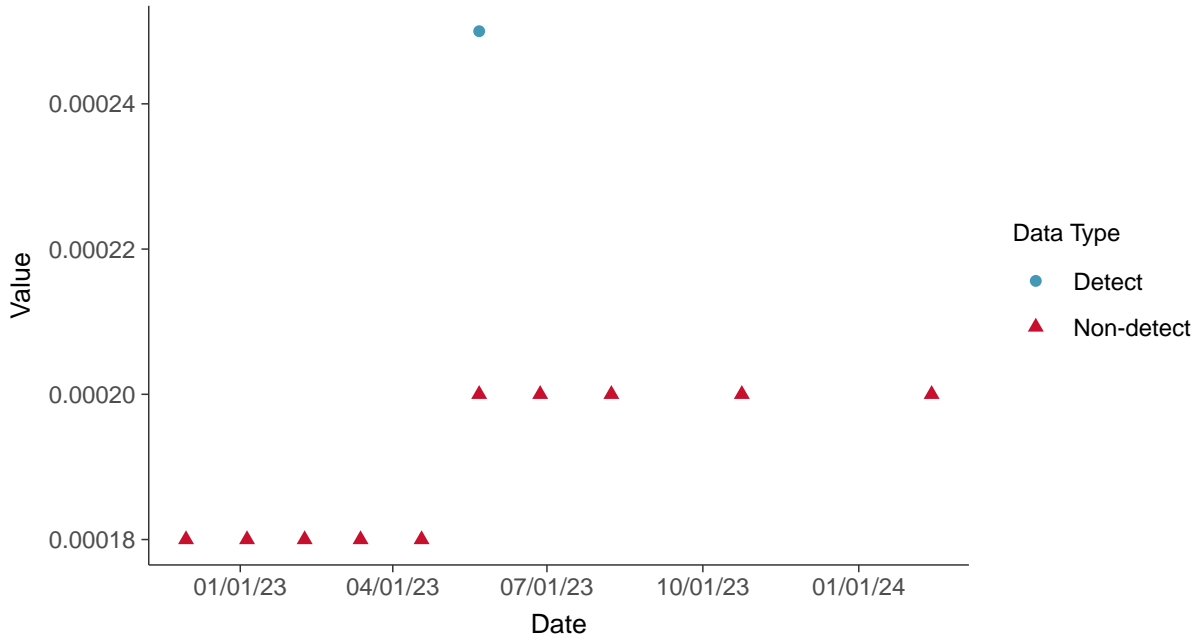


Appendix IV: Chromium, Total, MW-18

ID: 1_28_5_109

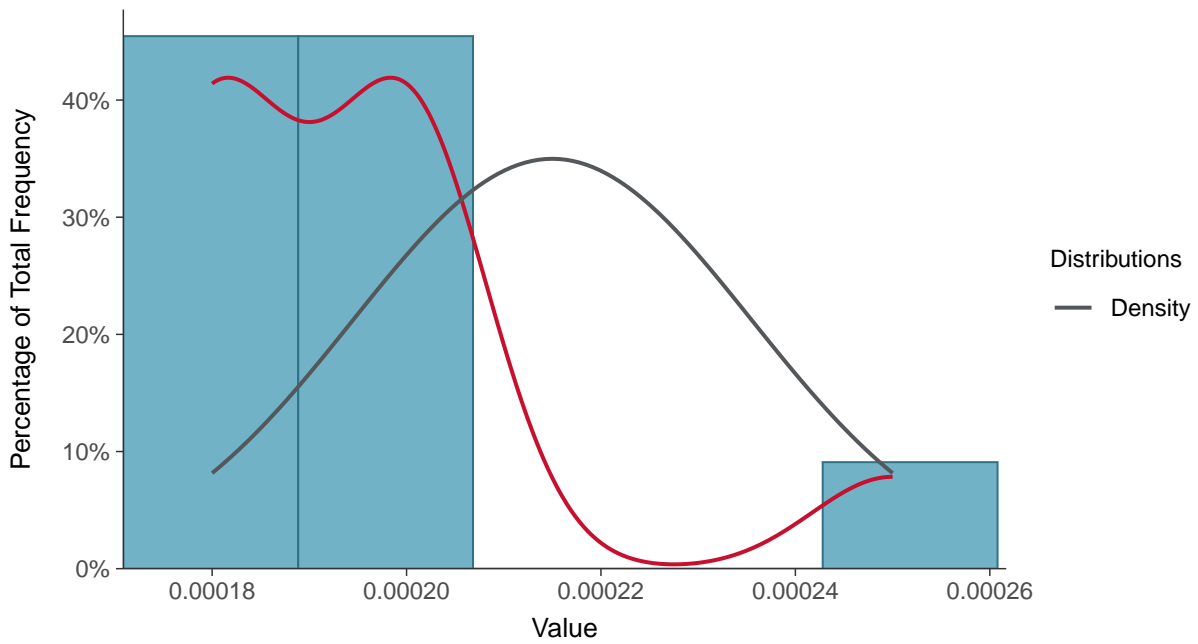
Scatter Plot

Chromium, Total, MW-18 (mg/L)



Histogram

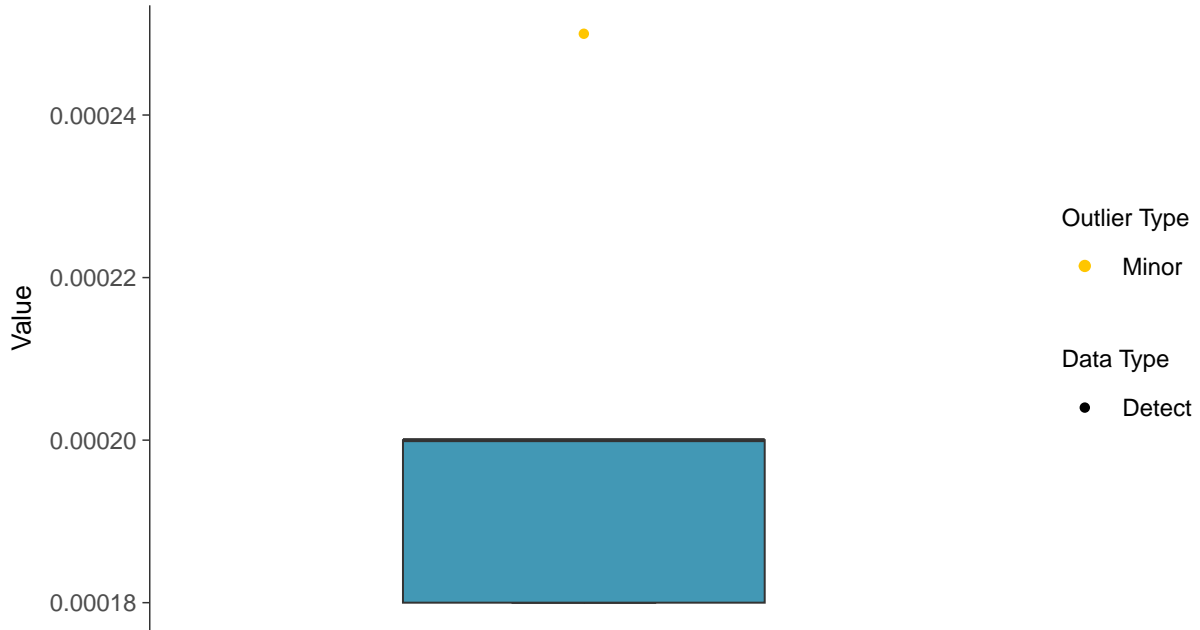
Chromium, Total, MW-18 (mg/L)





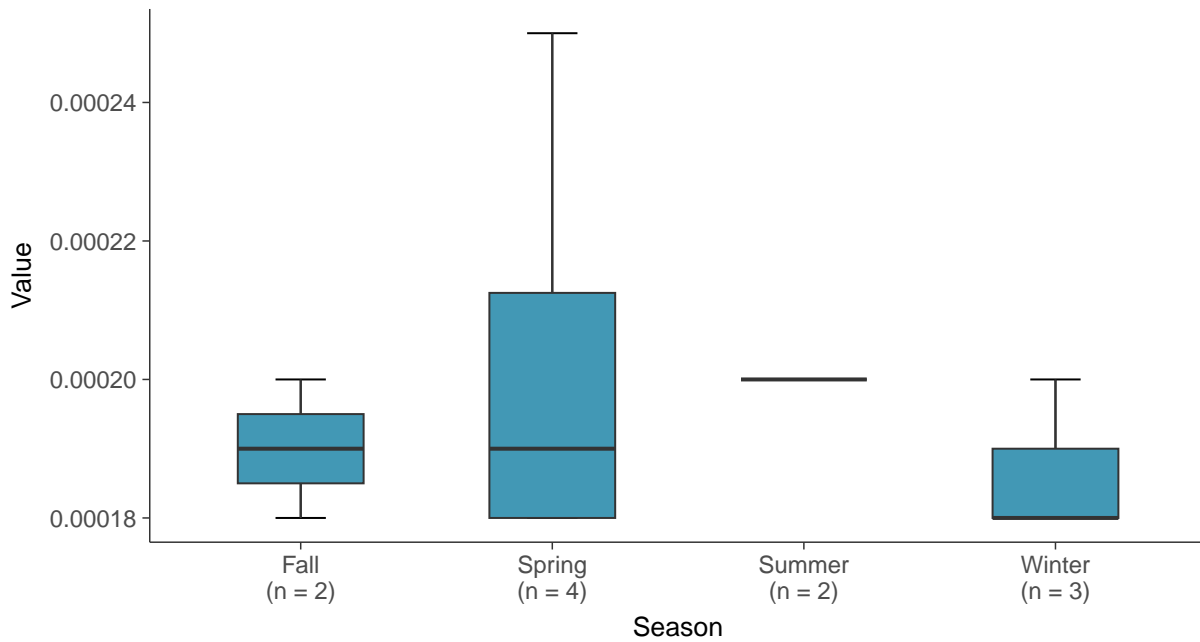
Boxplot

Chromium, Total, MW-18 (mg/L)



Boxplot by Season

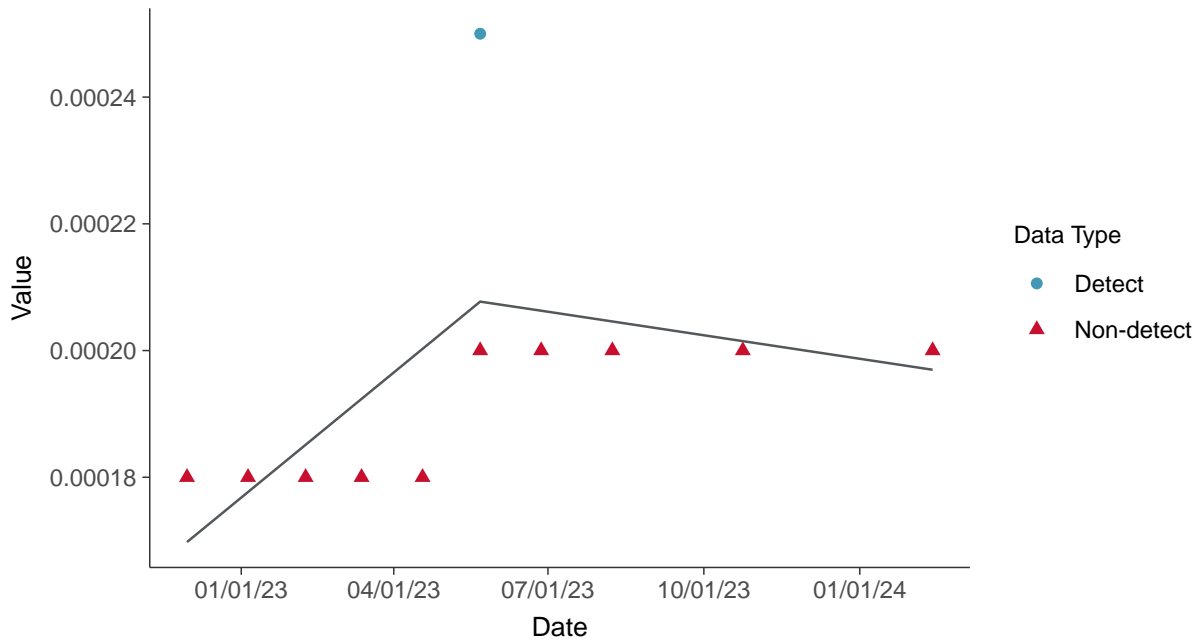
Chromium, Total, MW-18 (mg/L)





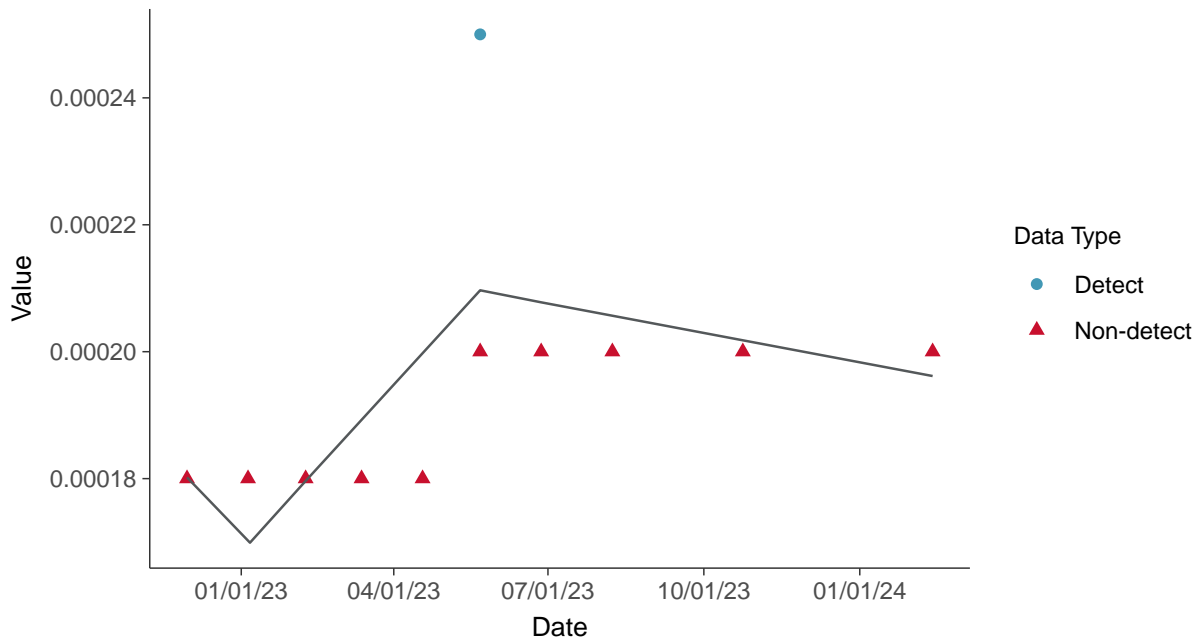
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

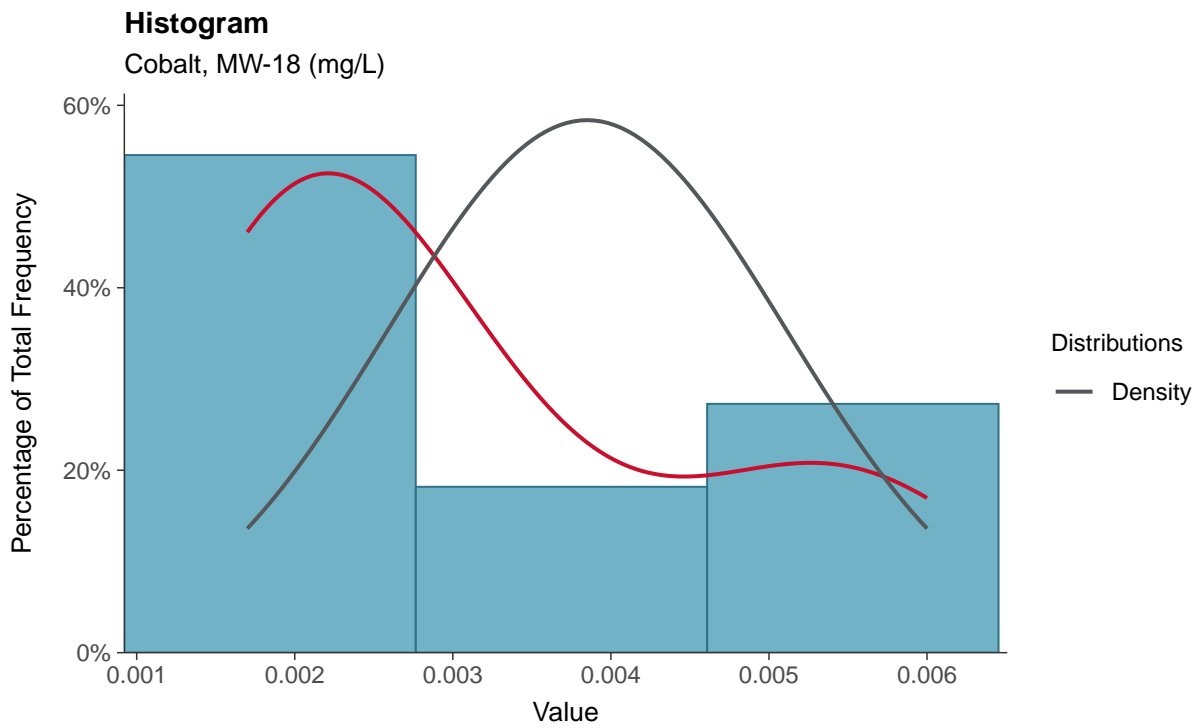
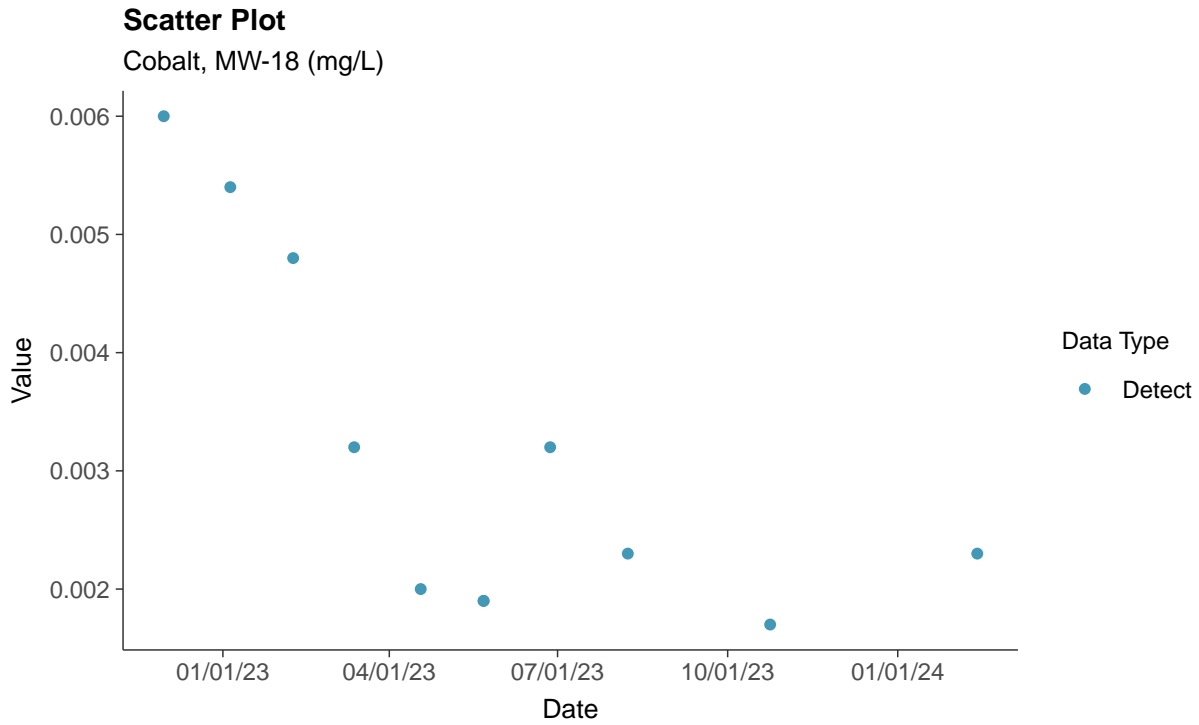
Chromium, Total, MW-18 (mg/L)





Appendix IV: Cobalt, MW-18

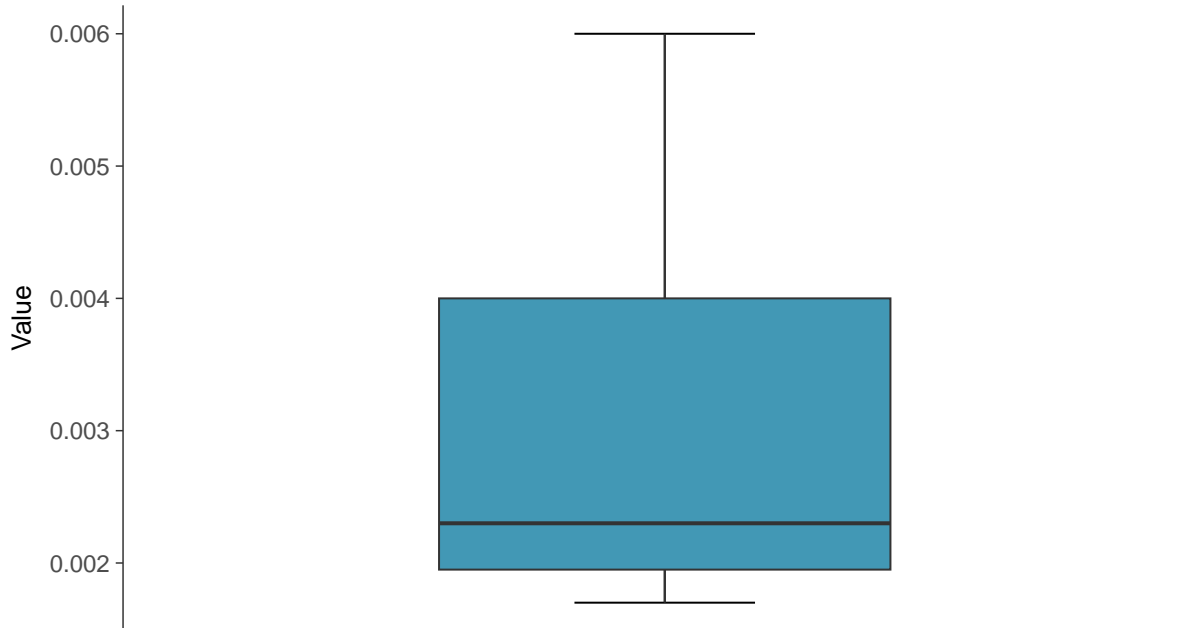
ID: 1_28_5_110





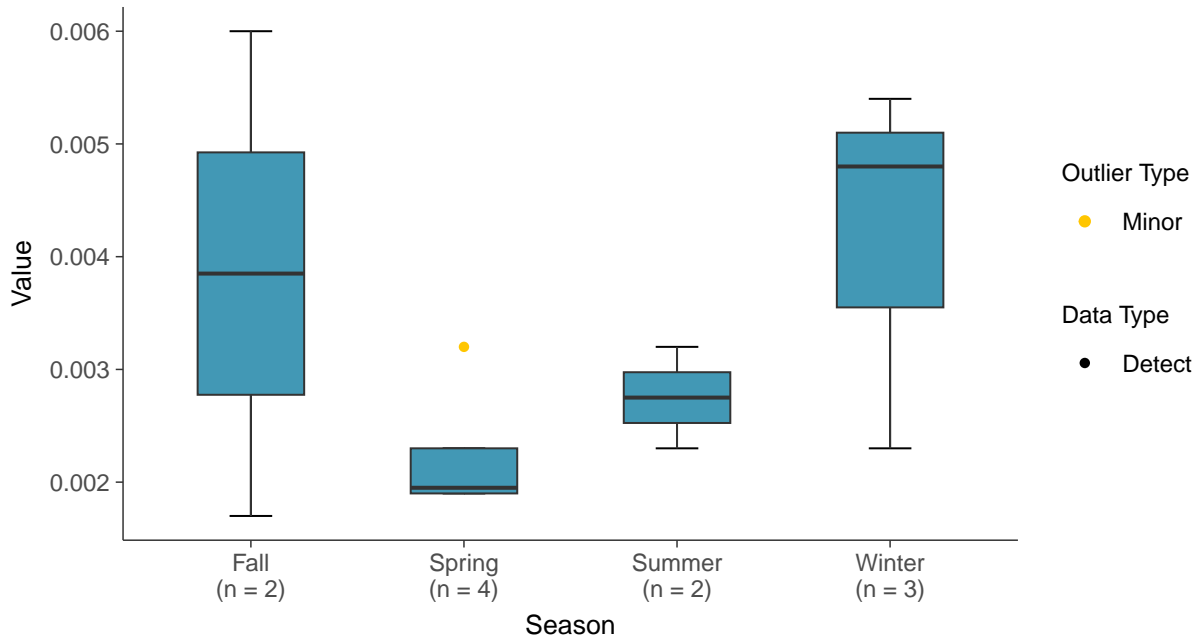
Boxplot

Cobalt, MW-18 (mg/L)



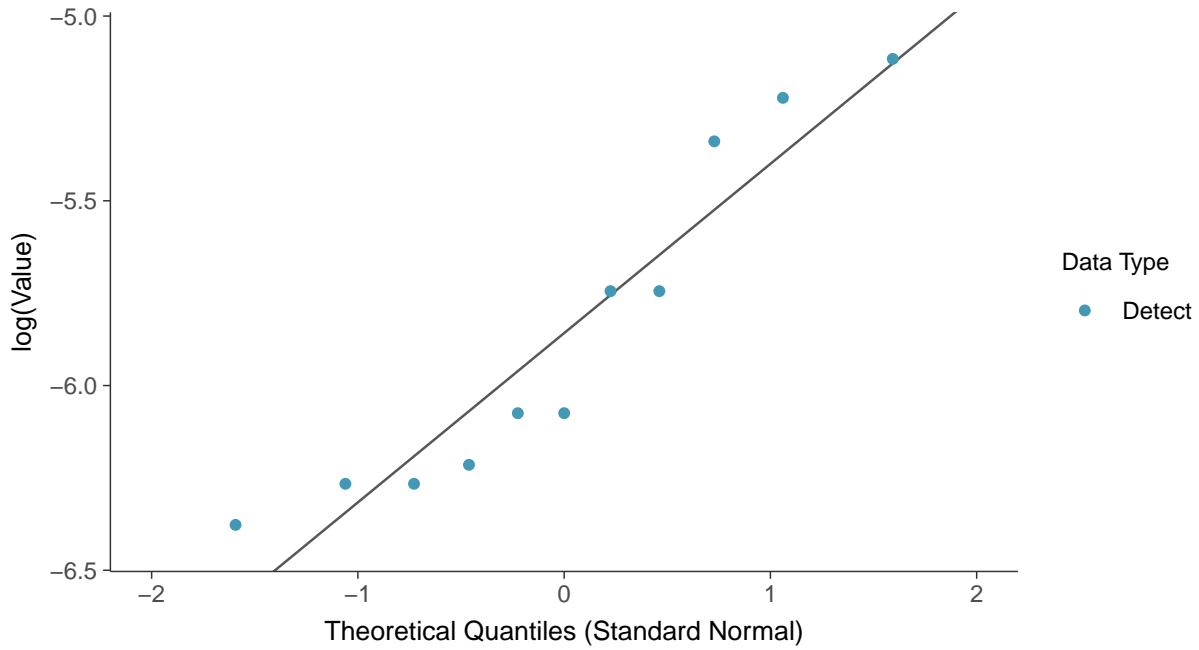
Boxplot by Season

Cobalt, MW-18 (mg/L)

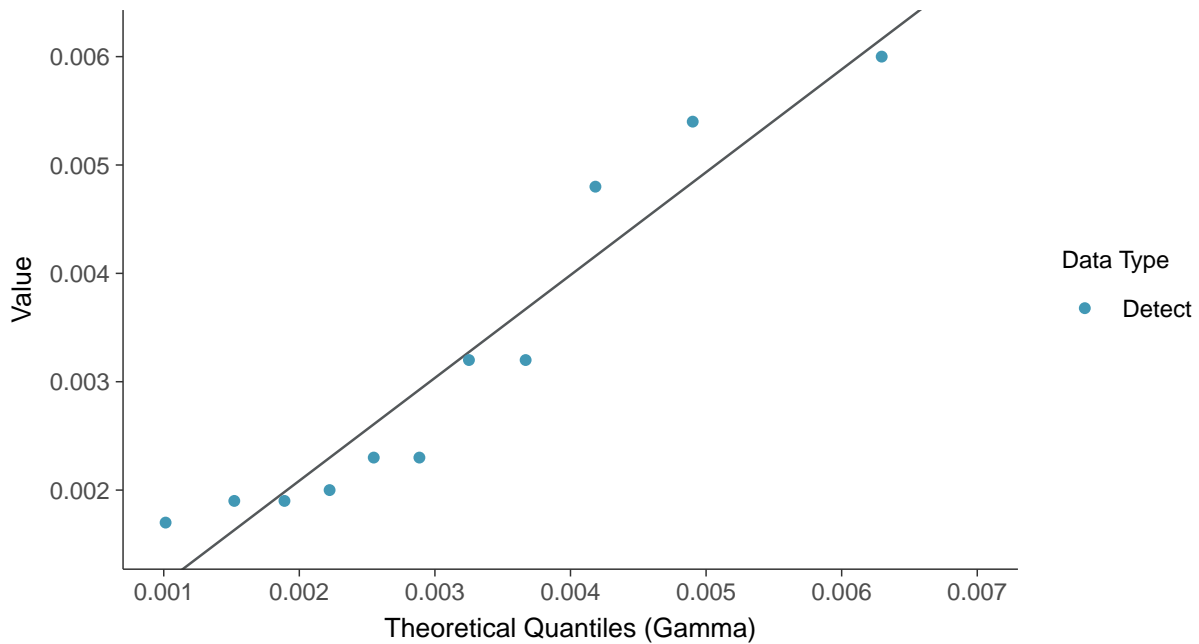




Lognormal Q-Q plot
Cobalt, MW-18 (mg/L)



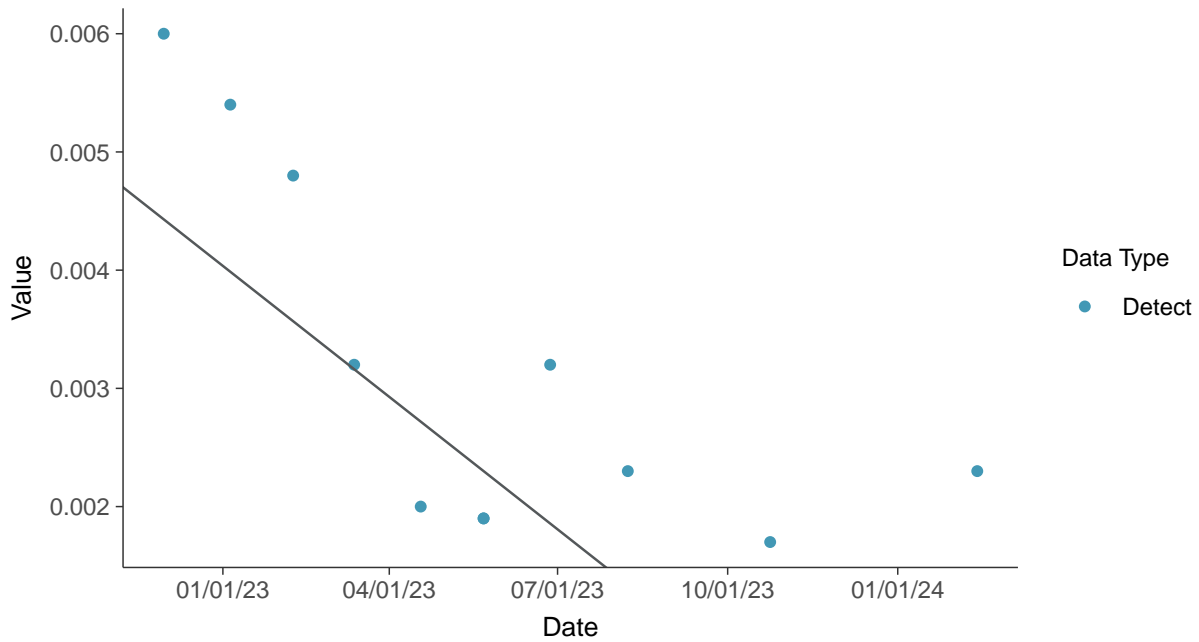
Gamma Q-Q plot
Cobalt, MW-18 (mg/L)





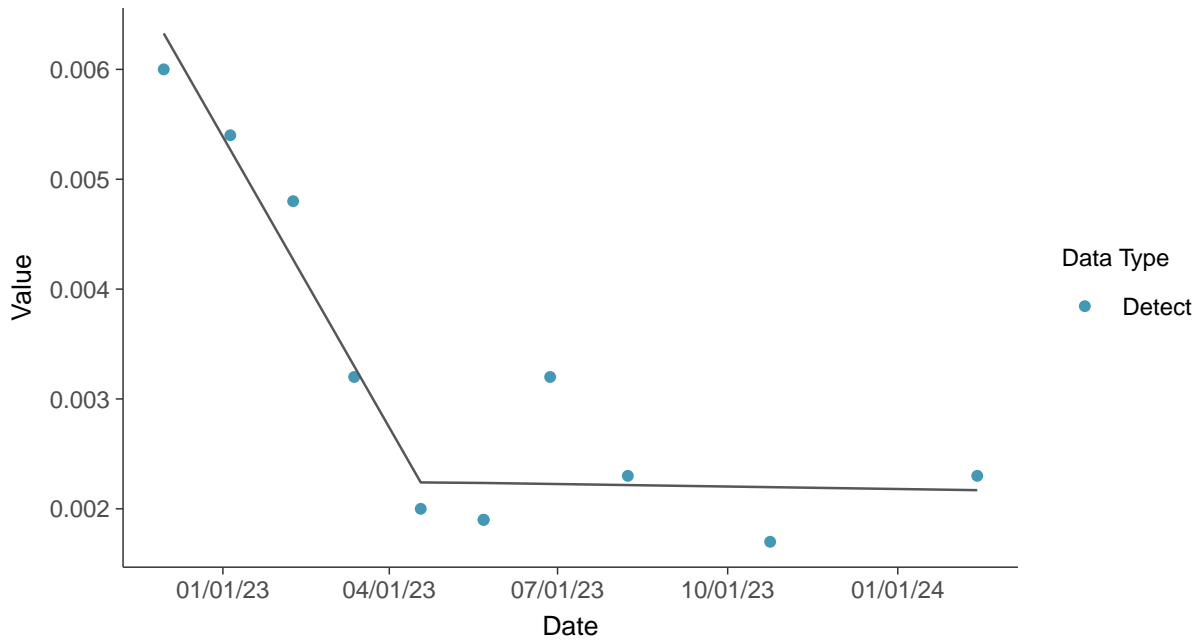
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Cobalt, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, MW-18 (mg/L)



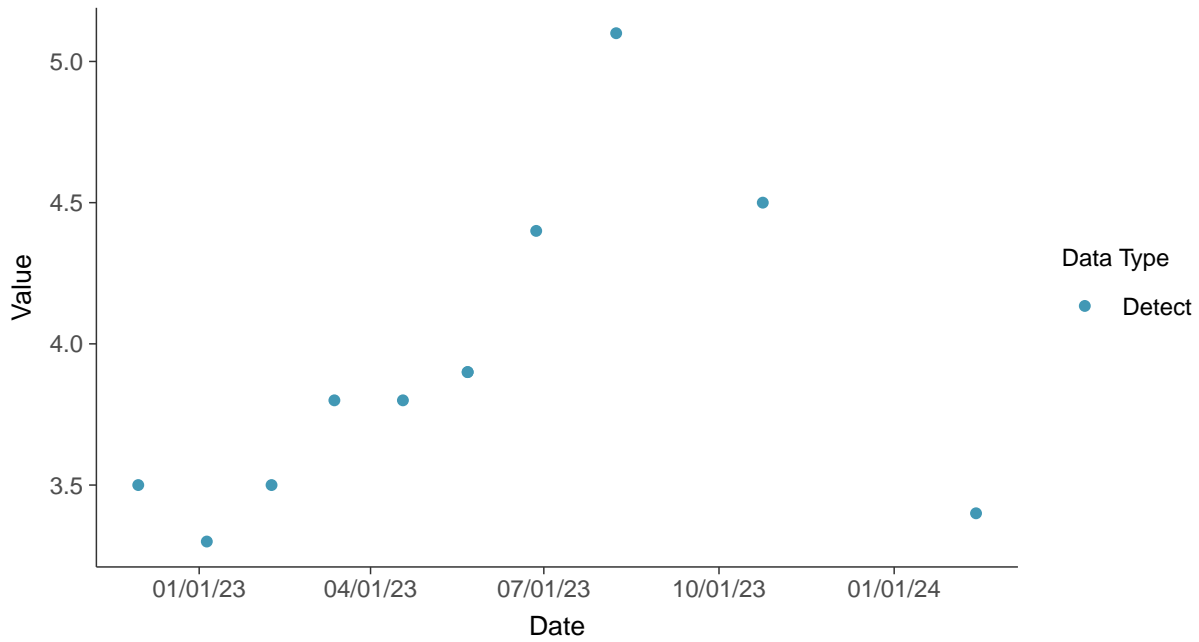


Appendix IV: Fluoride (App IV), MW-18

ID: 1_28_5_113

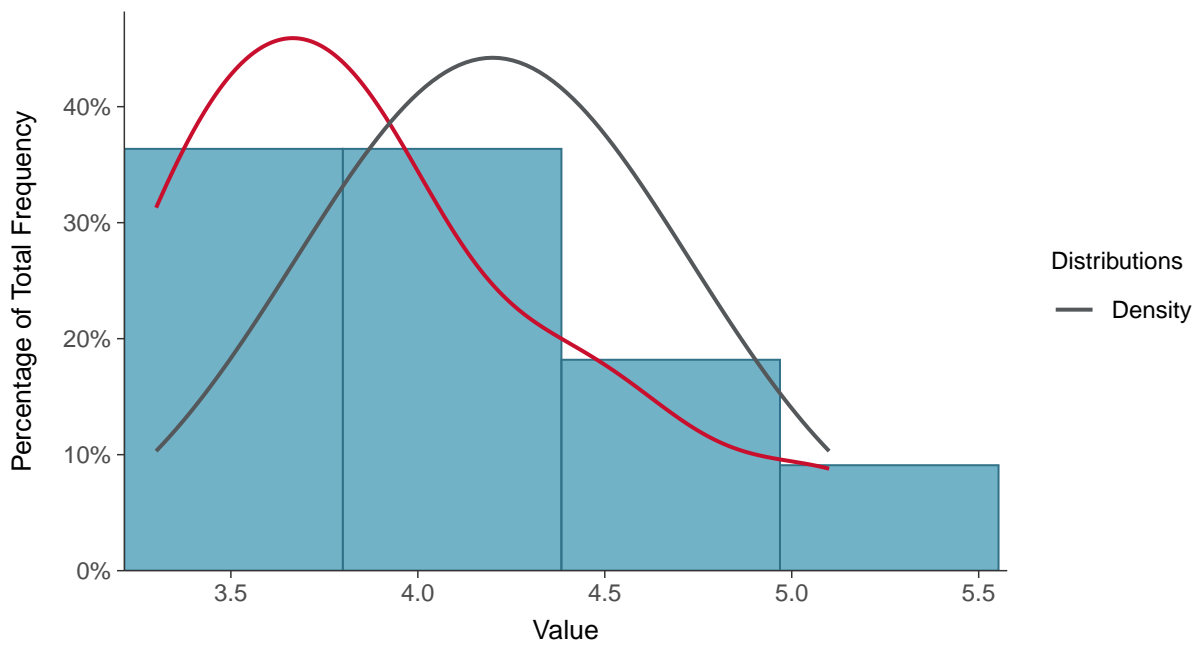
Scatter Plot

Fluoride (App IV), MW-18 (mg/L)



Histogram

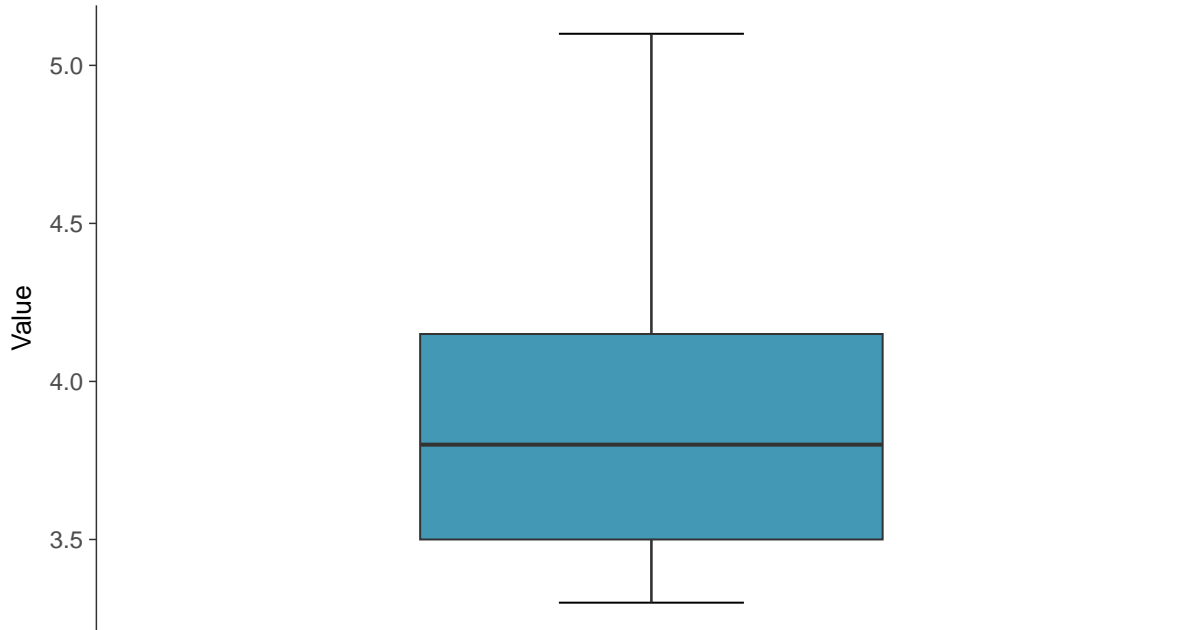
Fluoride (App IV), MW-18 (mg/L)





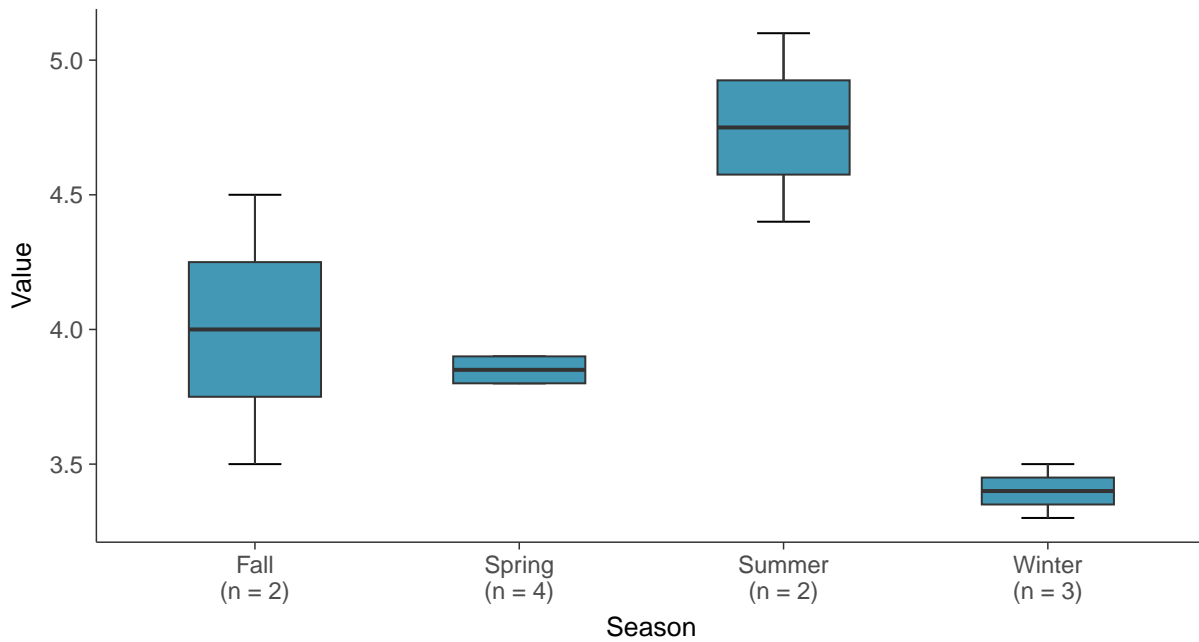
Boxplot

Fluoride (App IV), MW-18 (mg/L)



Boxplot by Season

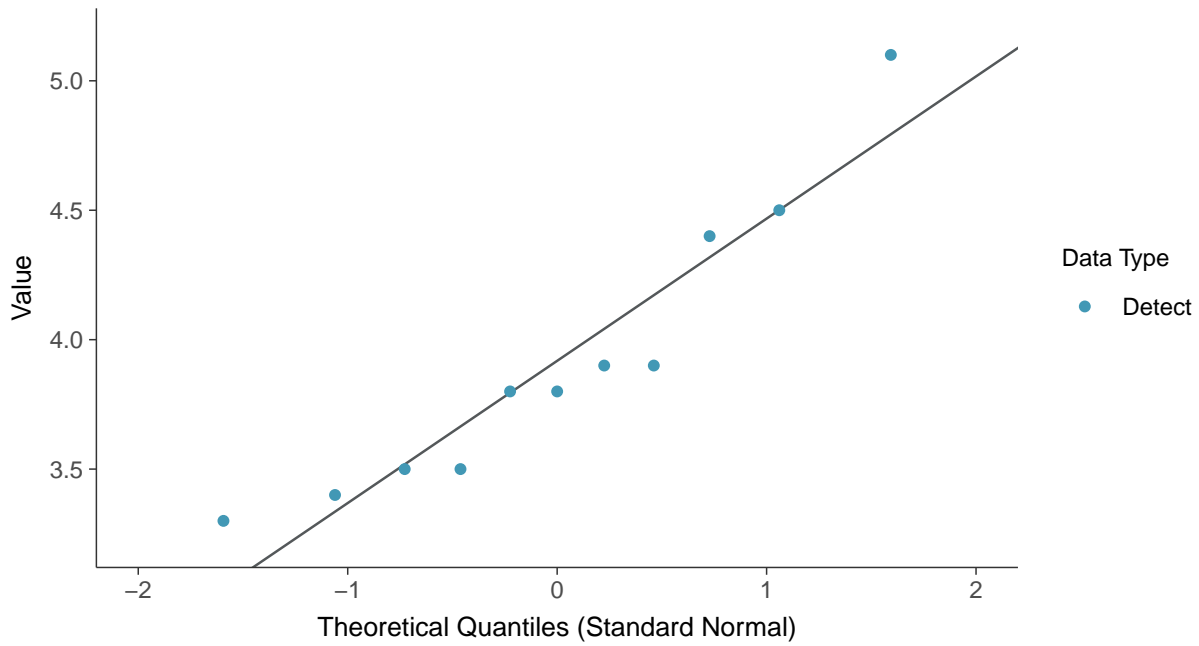
Fluoride (App IV), MW-18 (mg/L)





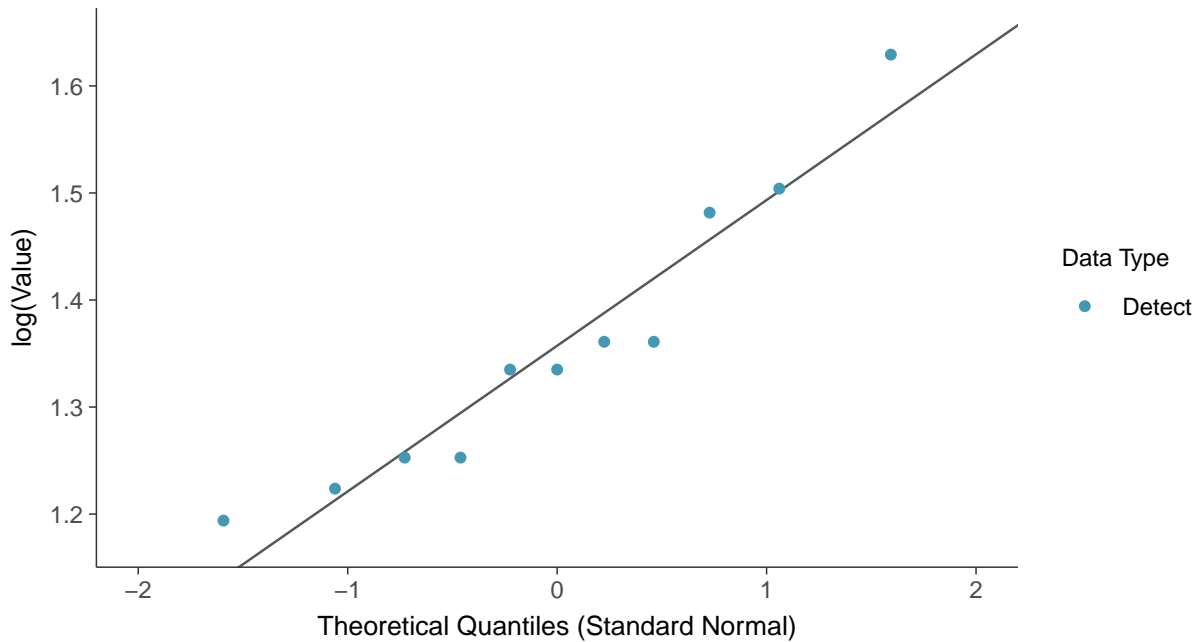
Normal Q-Q plot

Fluoride (App IV), MW-18 (mg/L)



Lognormal Q-Q plot

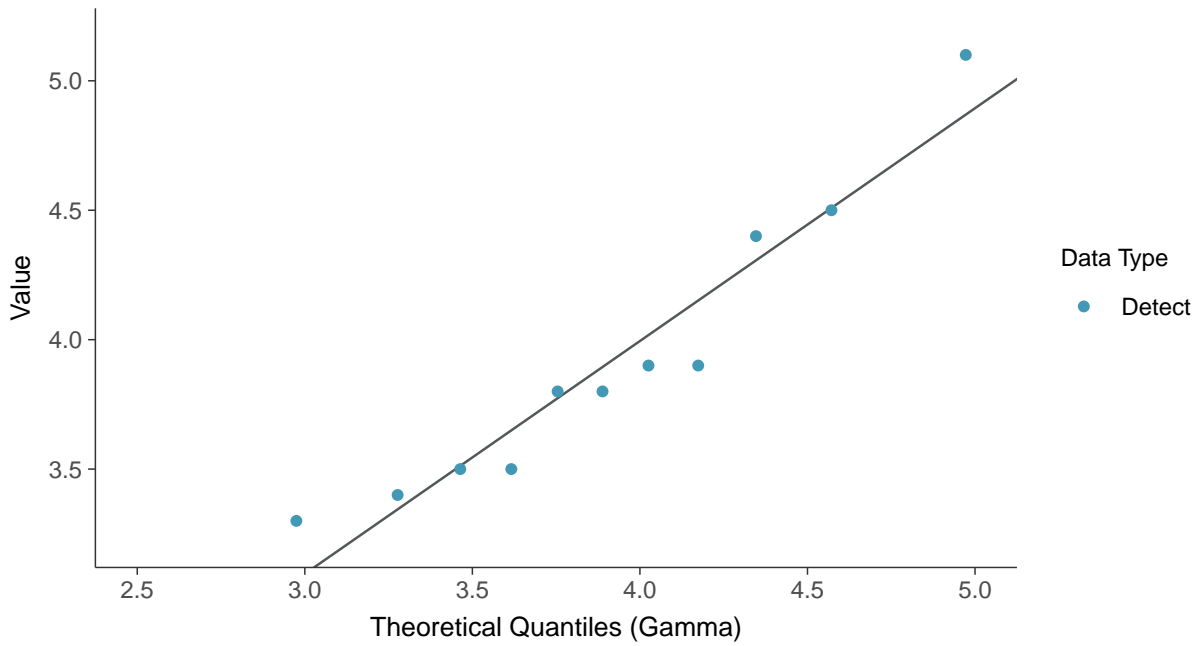
Fluoride (App IV), MW-18 (mg/L)





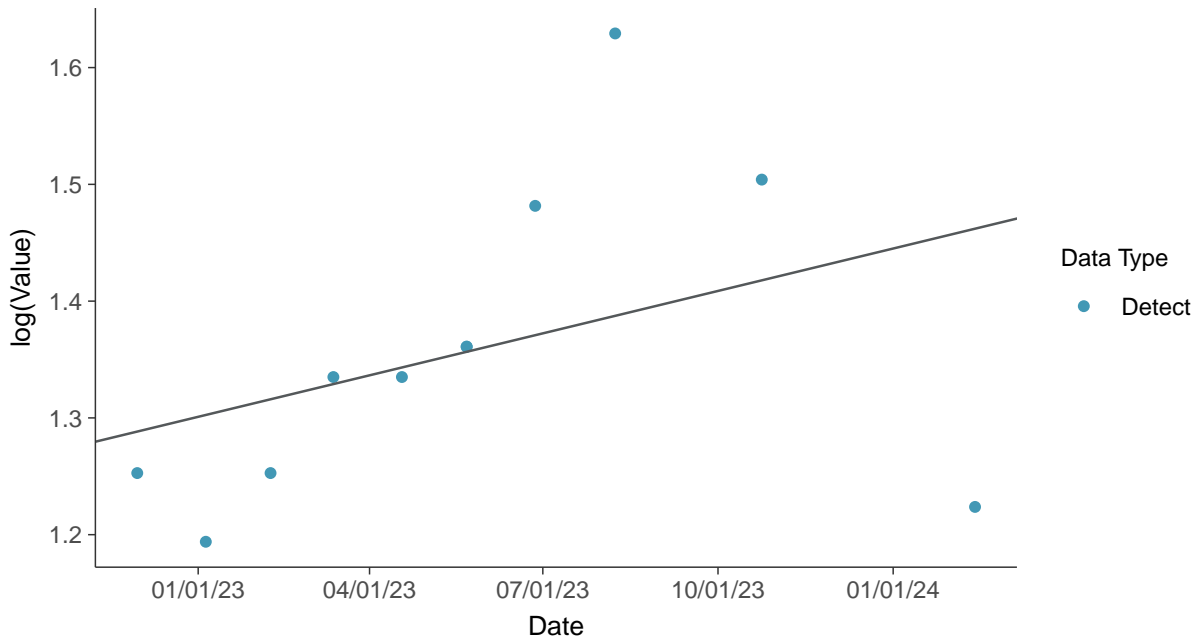
Gamma Q-Q plot

Fluoride (App IV), MW-18 (mg/L)



Trend Regression: Lognormal MLE

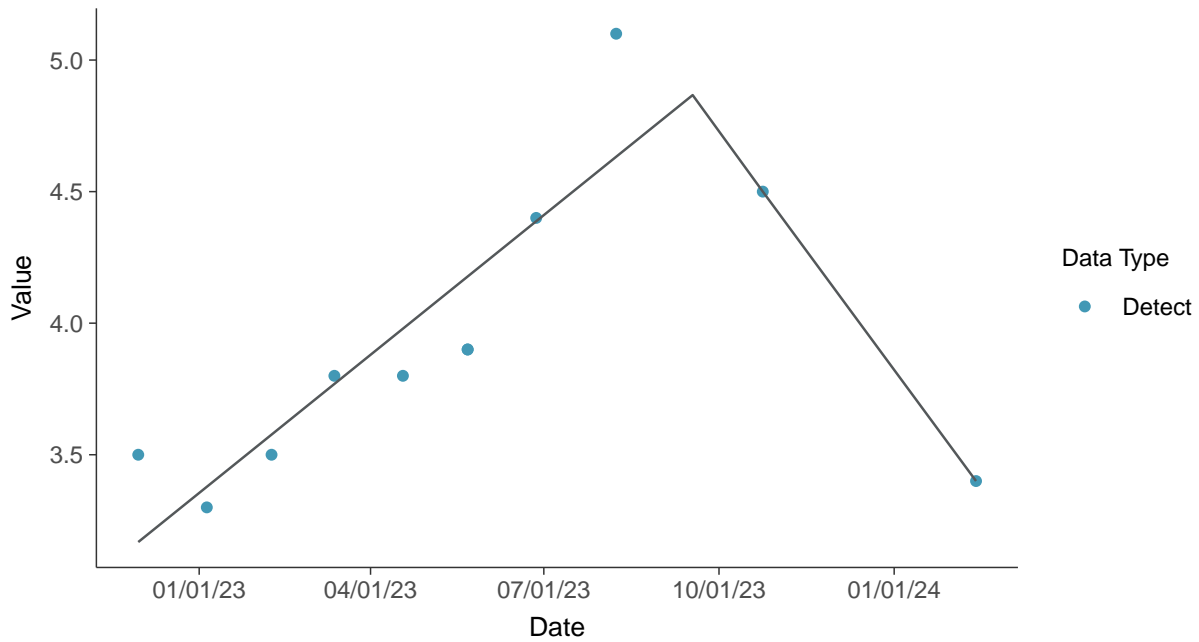
Fluoride (App IV), MW-18 (mg/L)





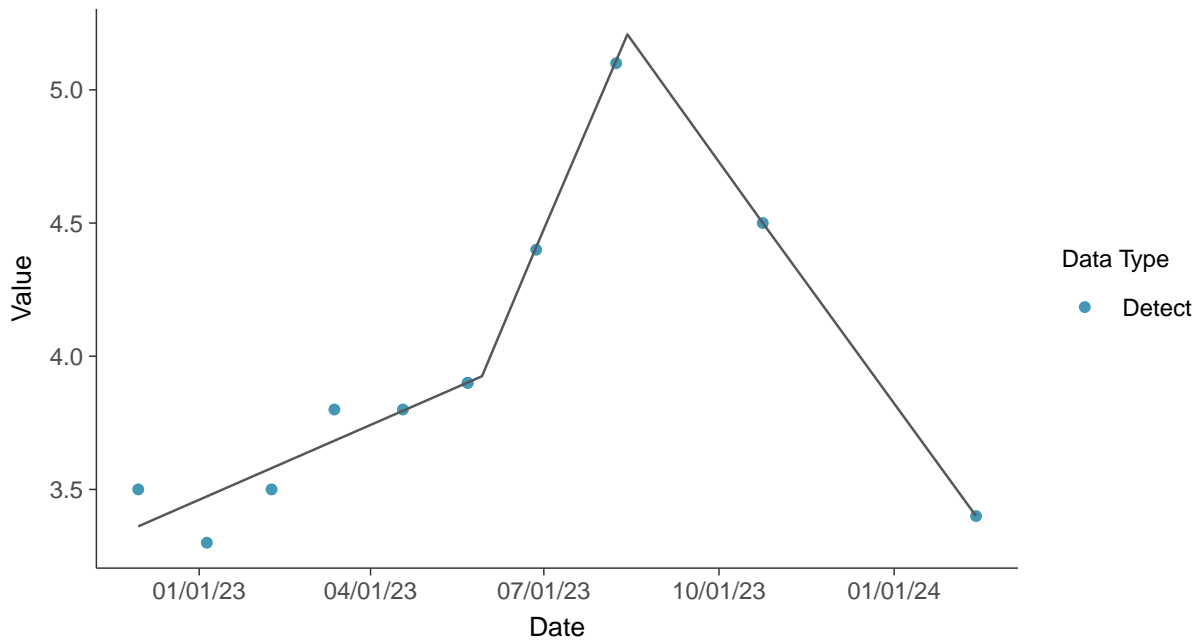
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

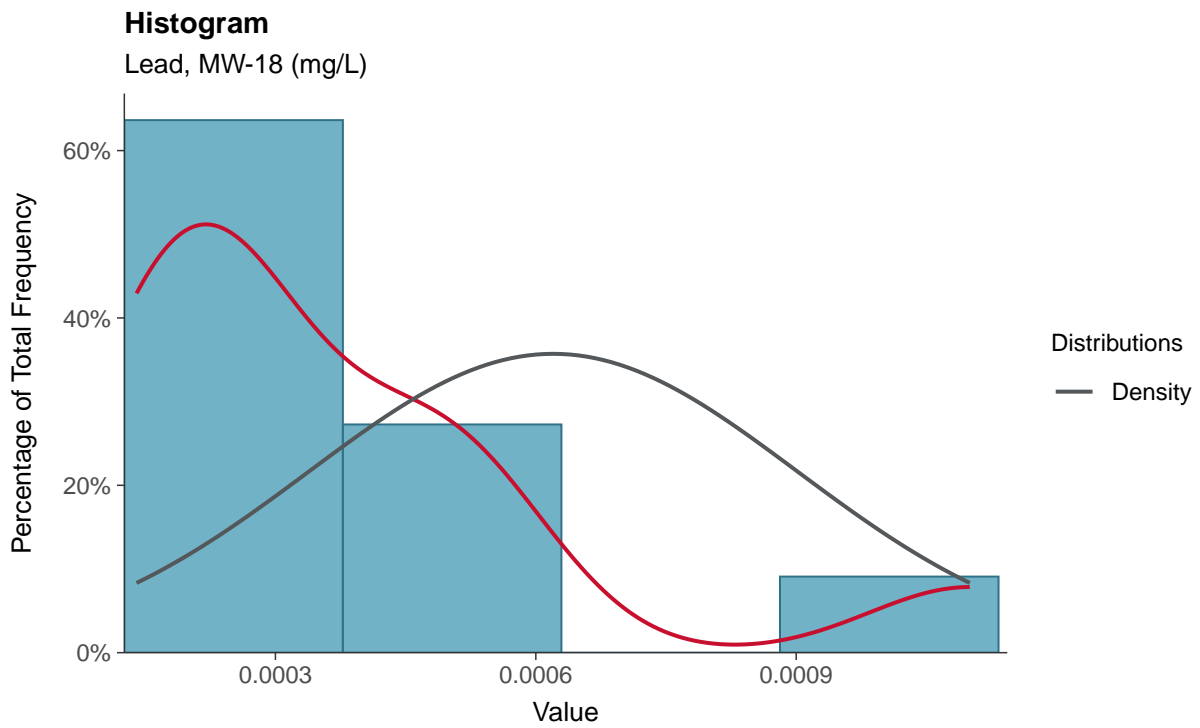
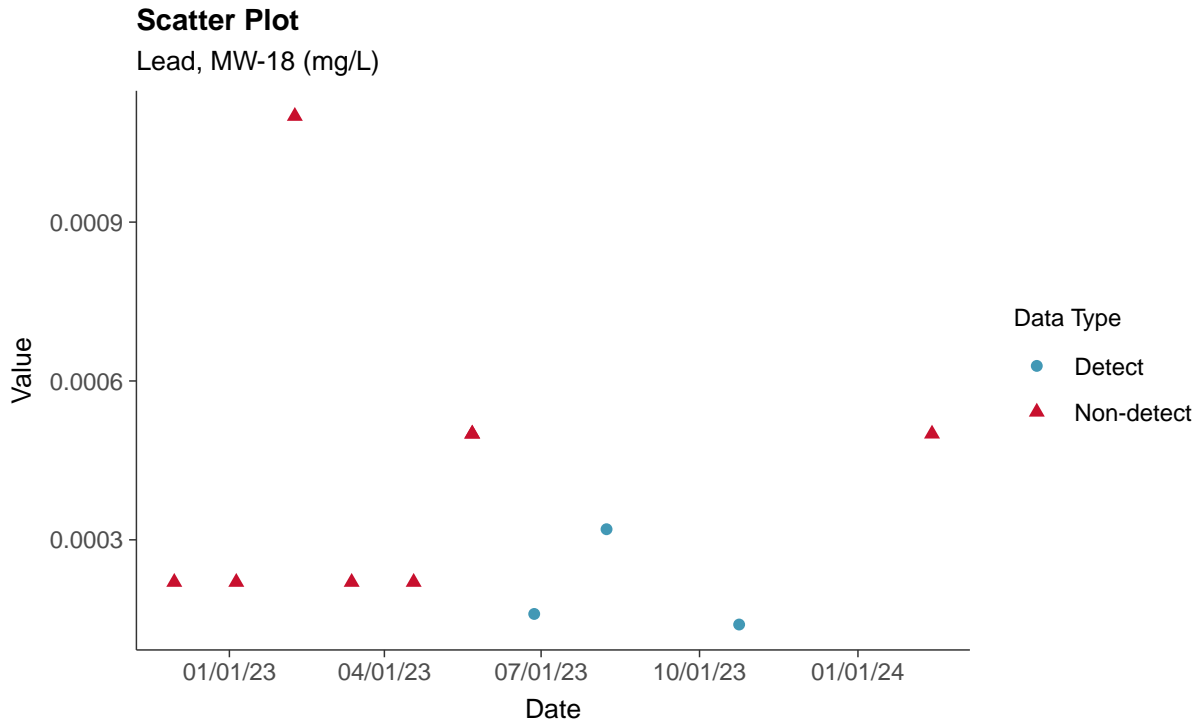
Fluoride (App IV), MW-18 (mg/L)





Appendix IV: Lead, MW-18

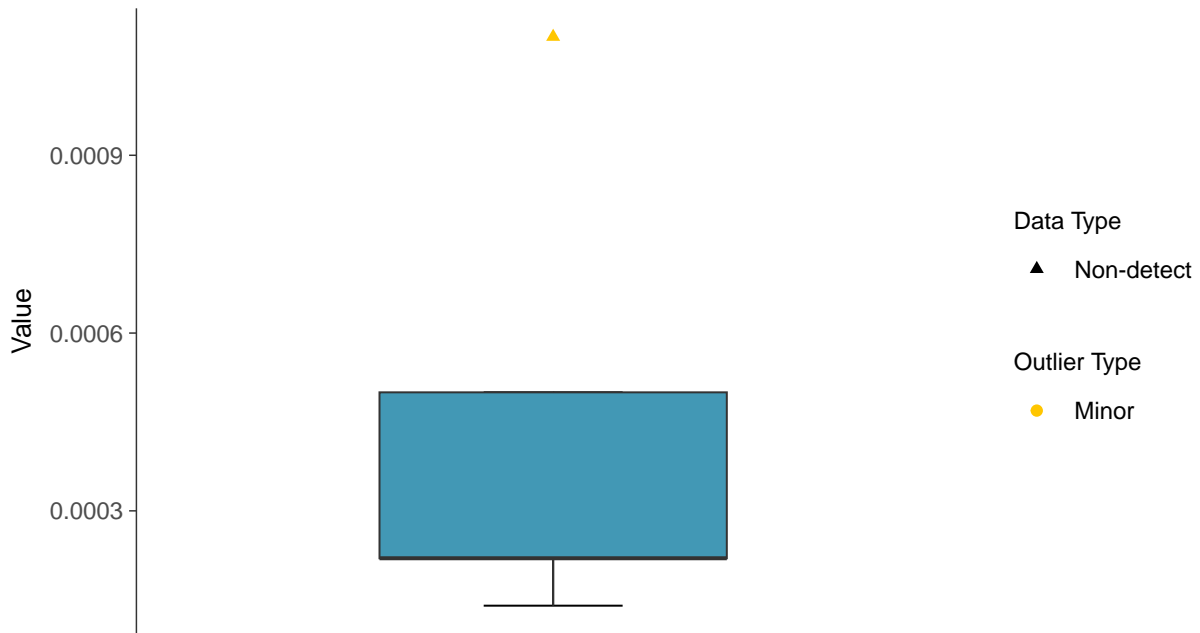
ID: 1_28_5_115





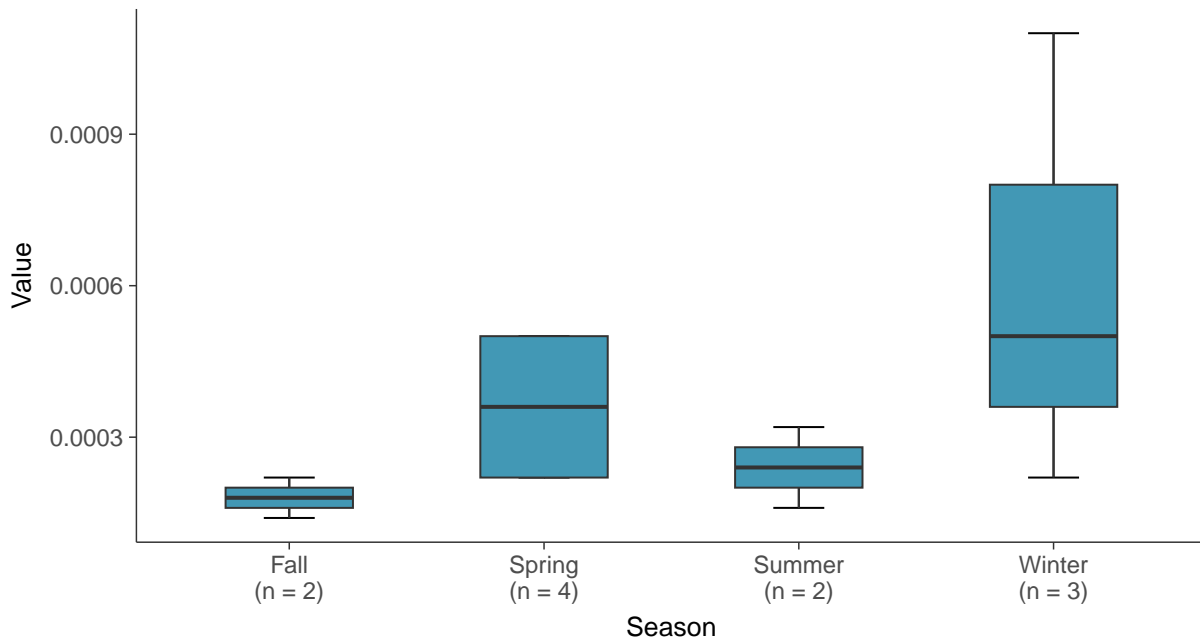
Boxplot

Lead, MW-18 (mg/L)



Boxplot by Season

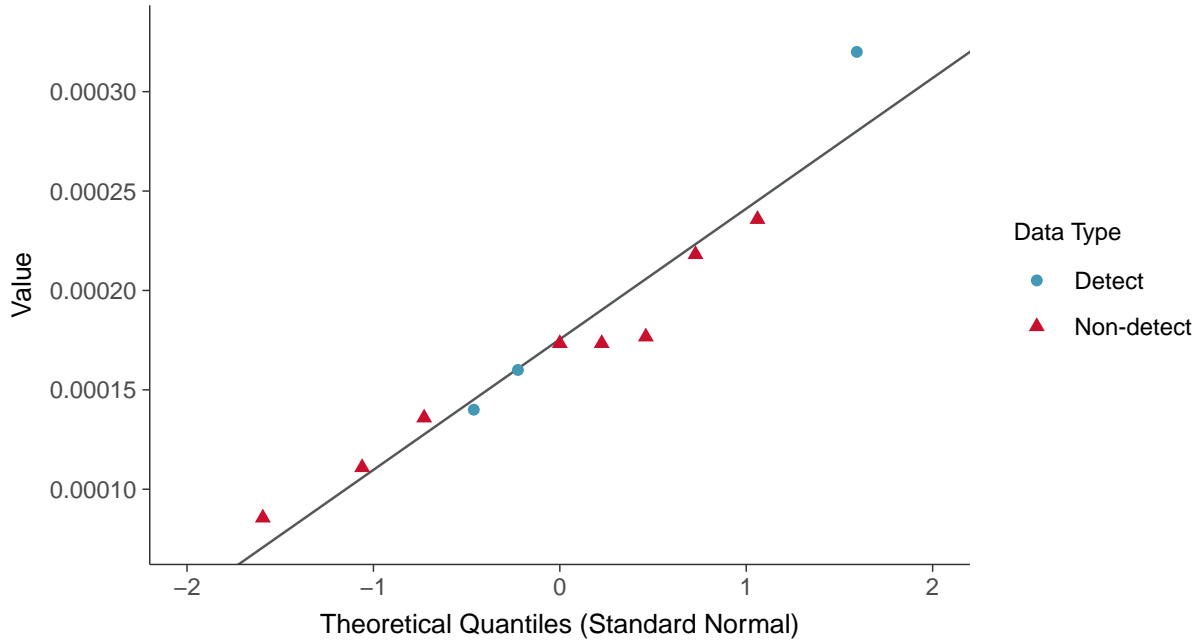
Lead, MW-18 (mg/L)





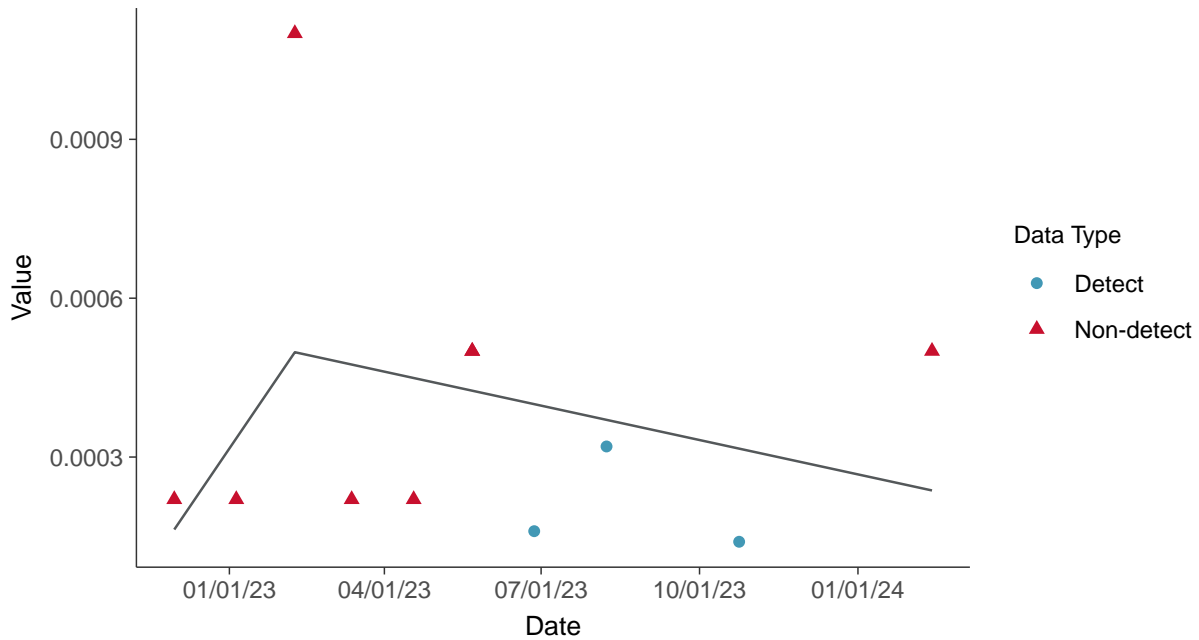
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear

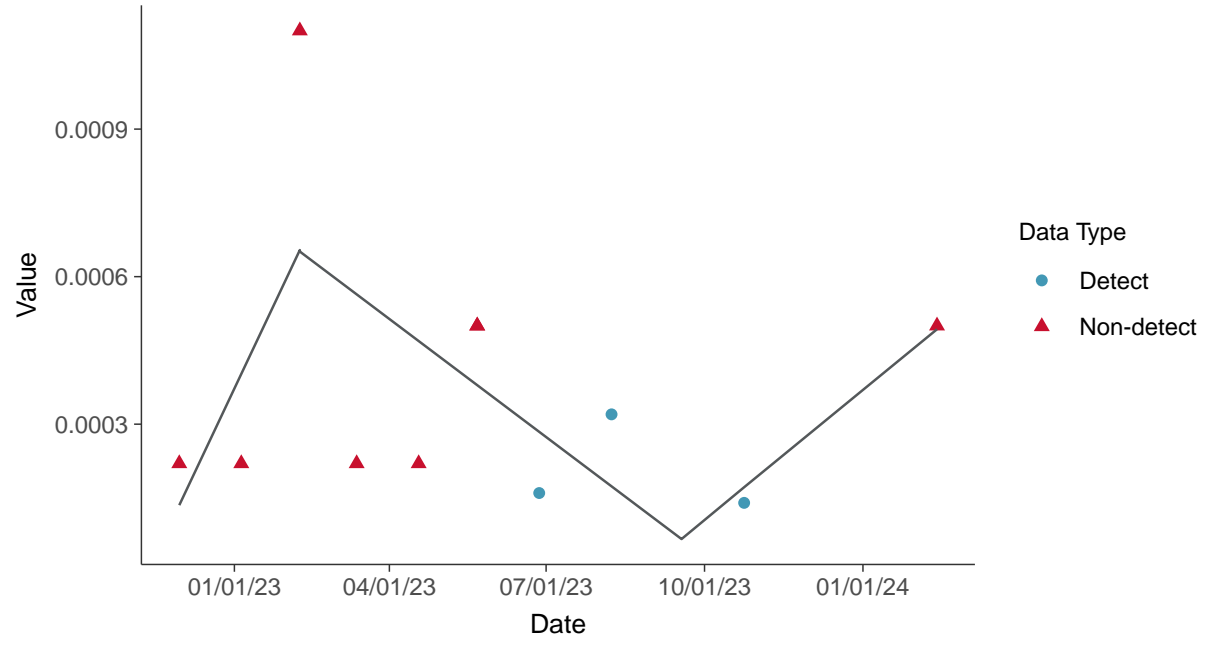
Lead, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-18 (mg/L)



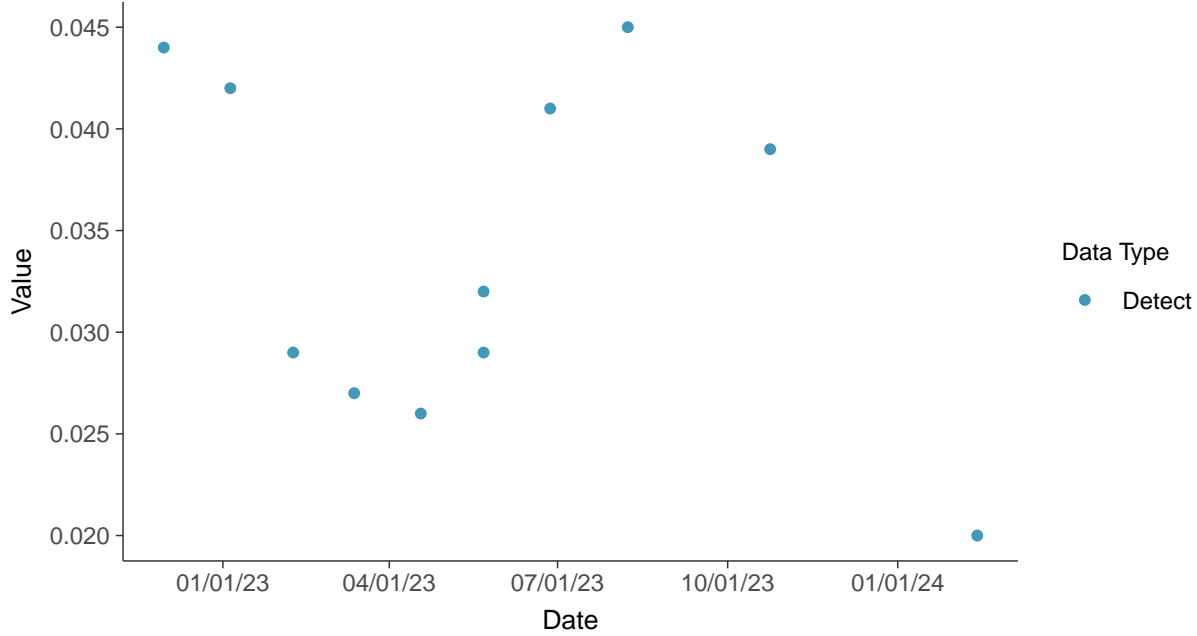


Appendix IV: Lithium, MW-18

ID: 1_28_5_116

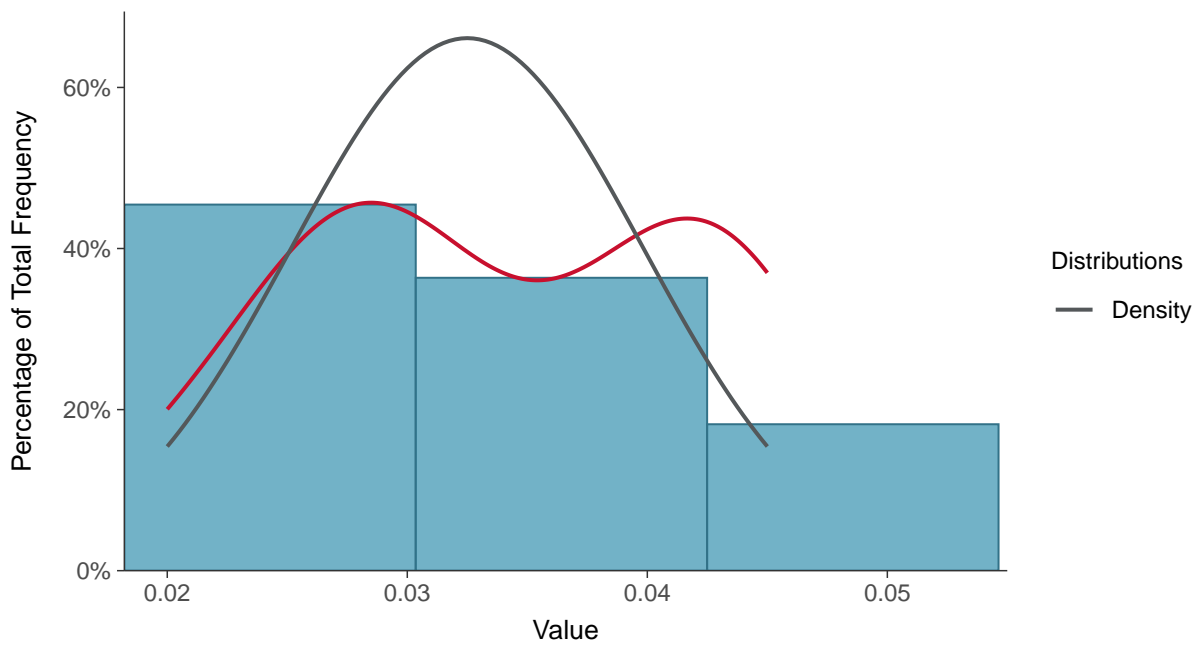
Scatter Plot

Lithium, MW-18 (mg/L)



Histogram

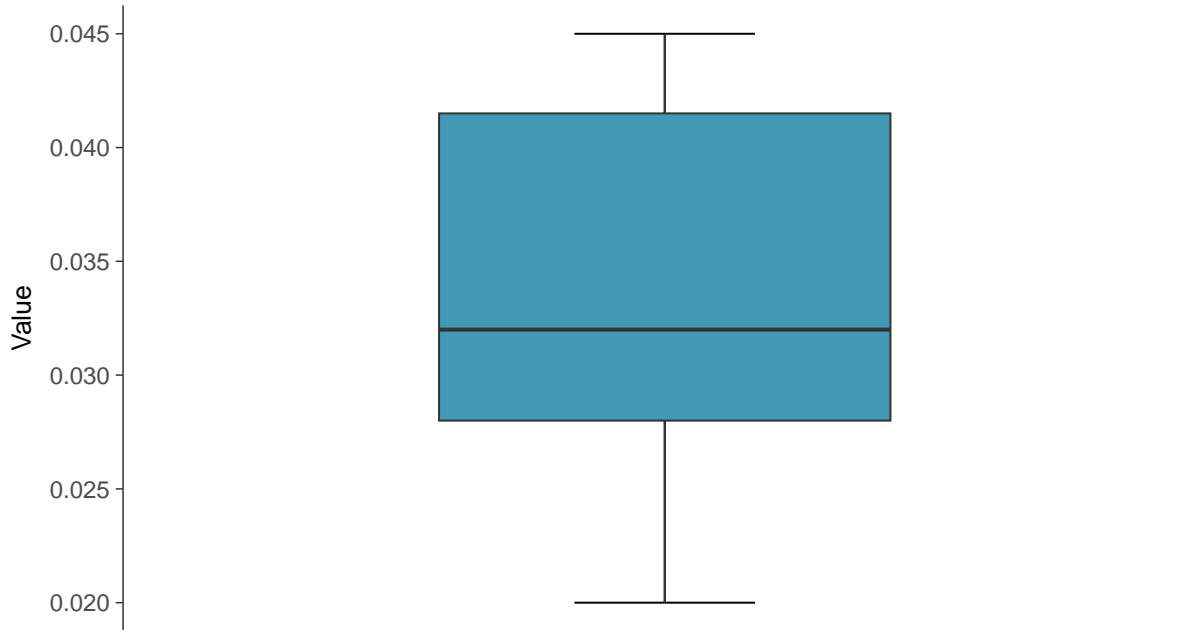
Lithium, MW-18 (mg/L)





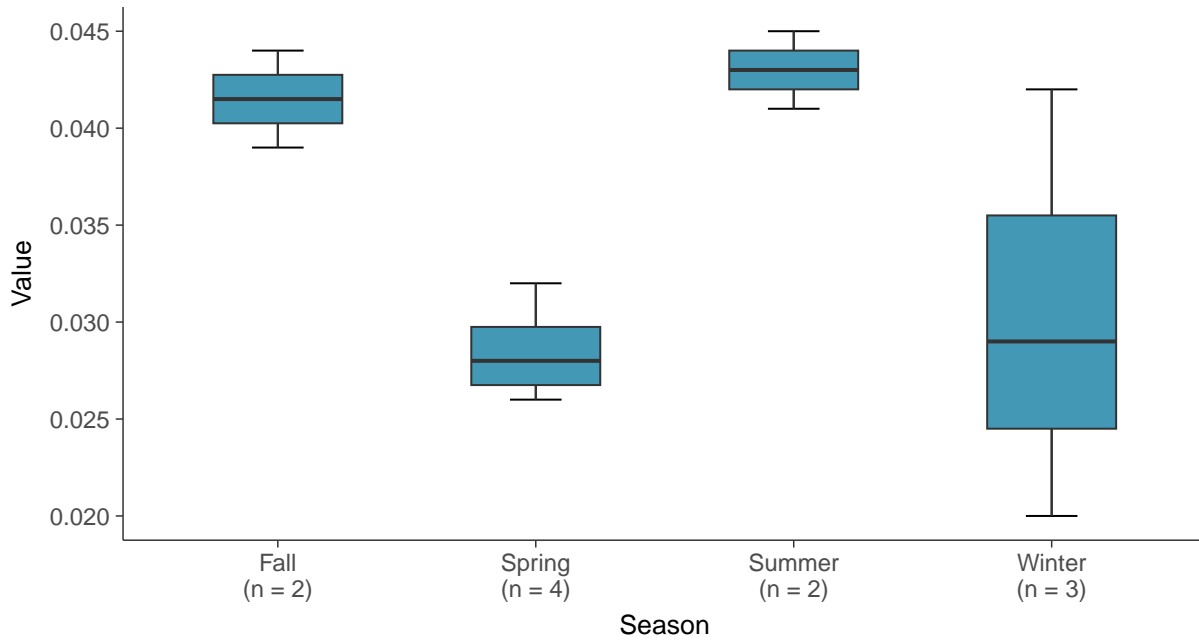
Boxplot

Lithium, MW-18 (mg/L)



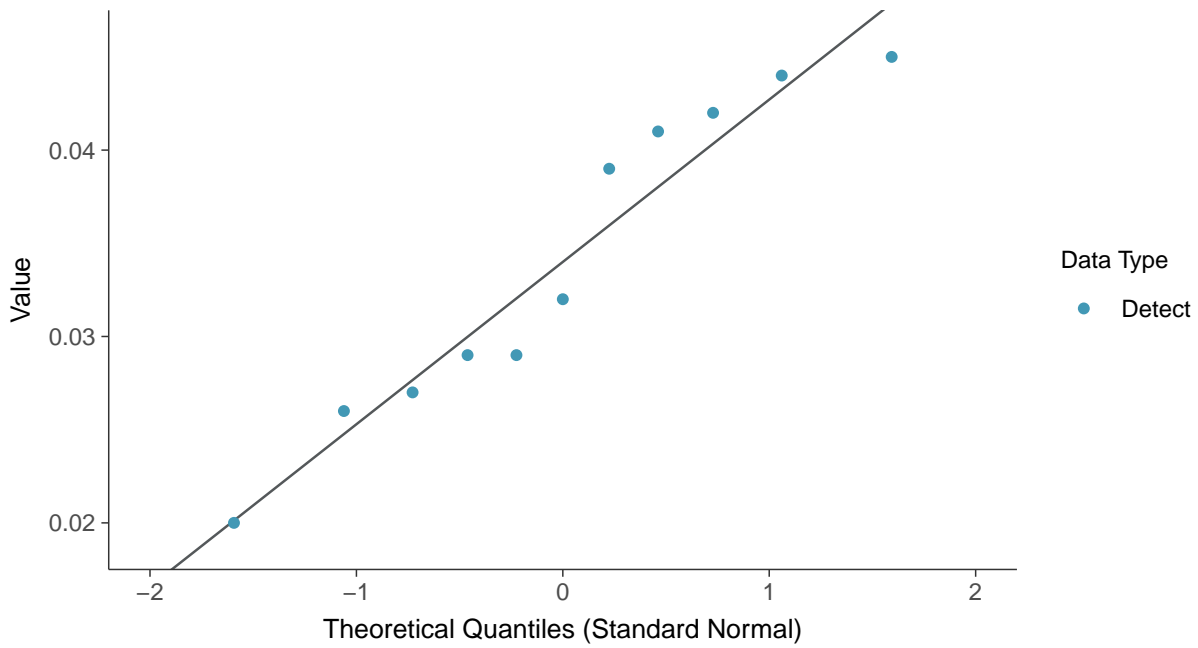
Boxplot by Season

Lithium, MW-18 (mg/L)

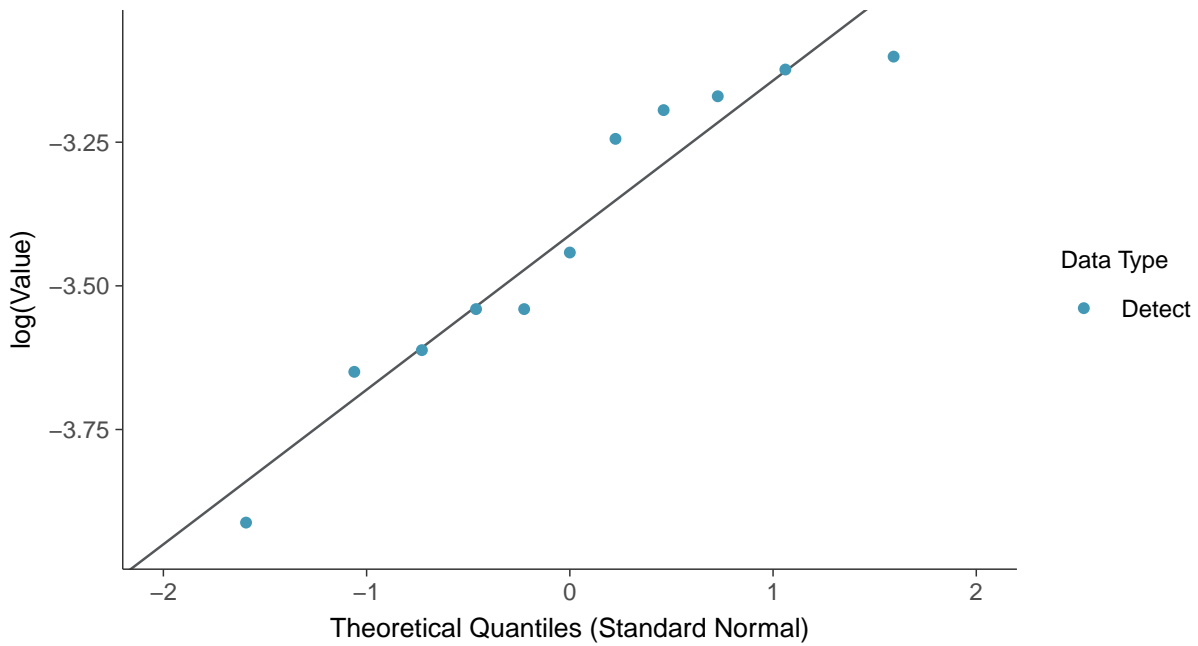




Normal Q-Q plot
Lithium, MW-18 (mg/L)

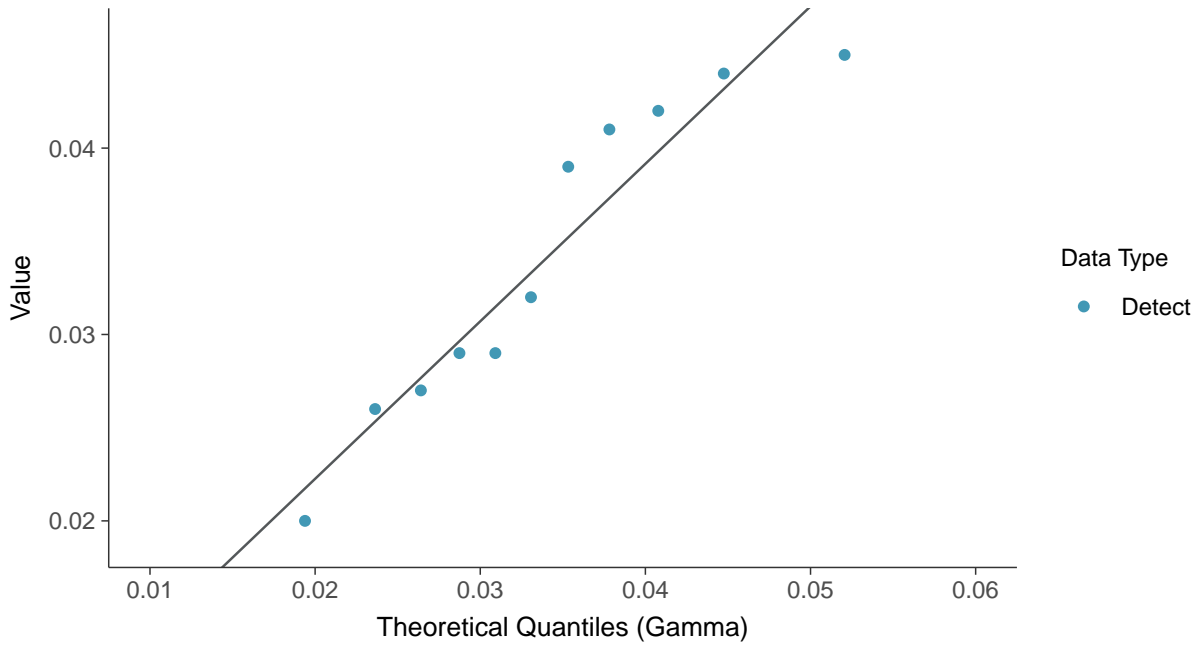


Lognormal Q-Q plot
Lithium, MW-18 (mg/L)

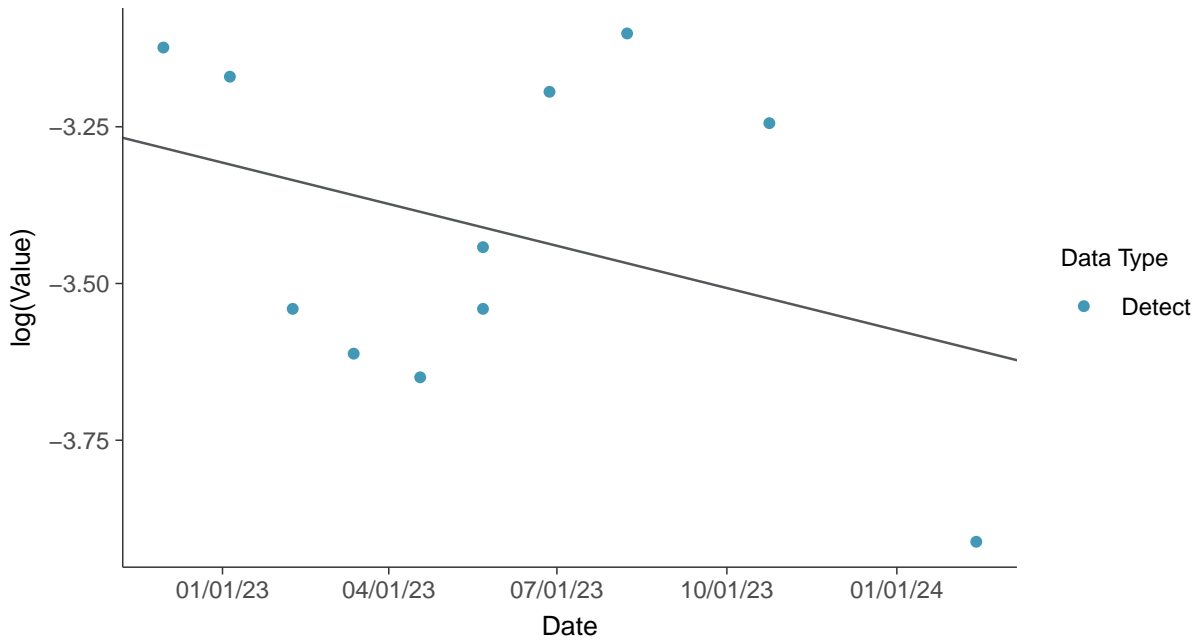




Gamma Q-Q plot
Lithium, MW-18 (mg/L)



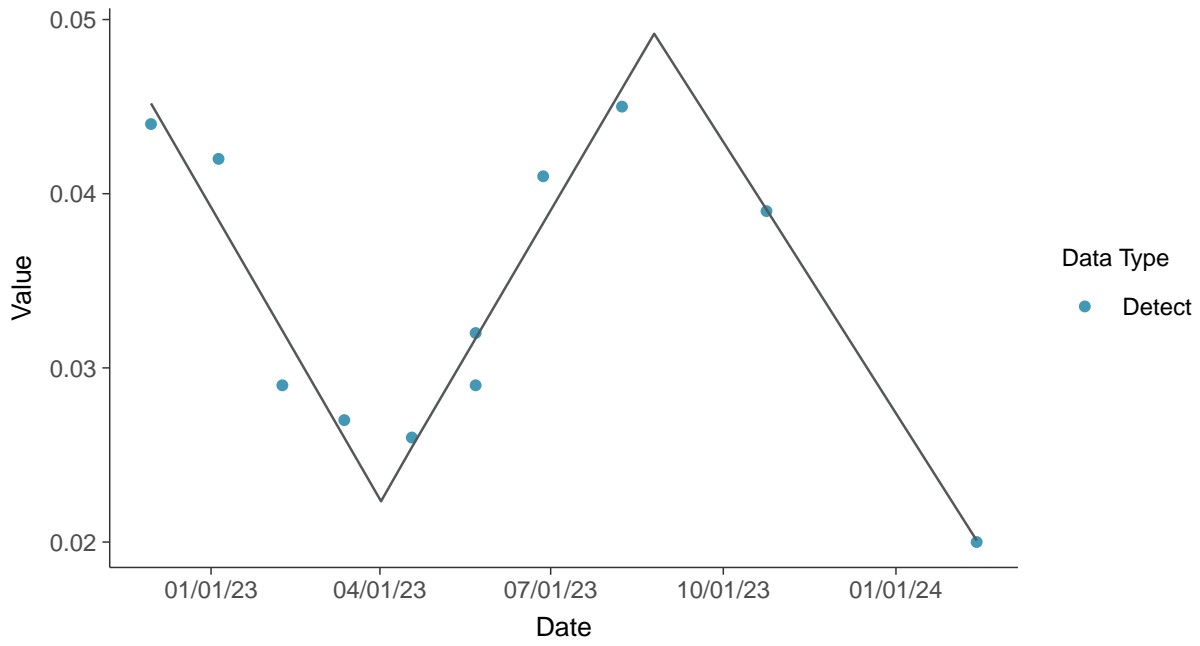
Trend Regression: Lognormal MLE
Lithium, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

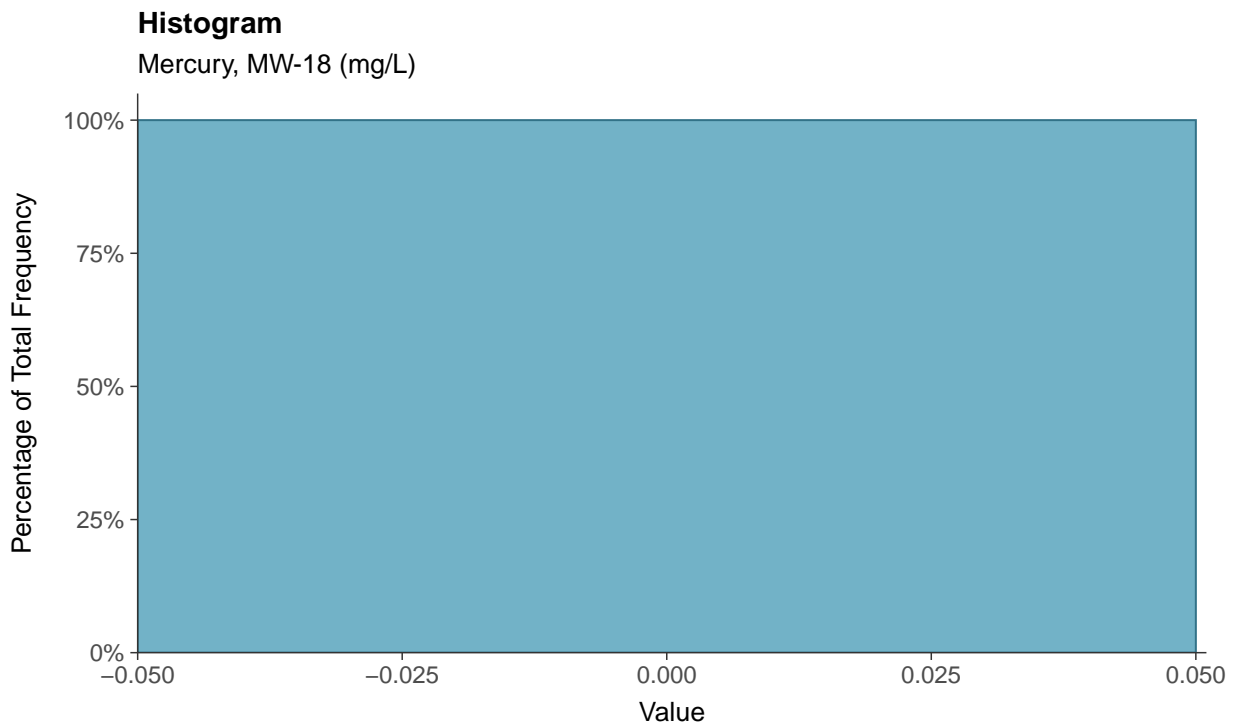
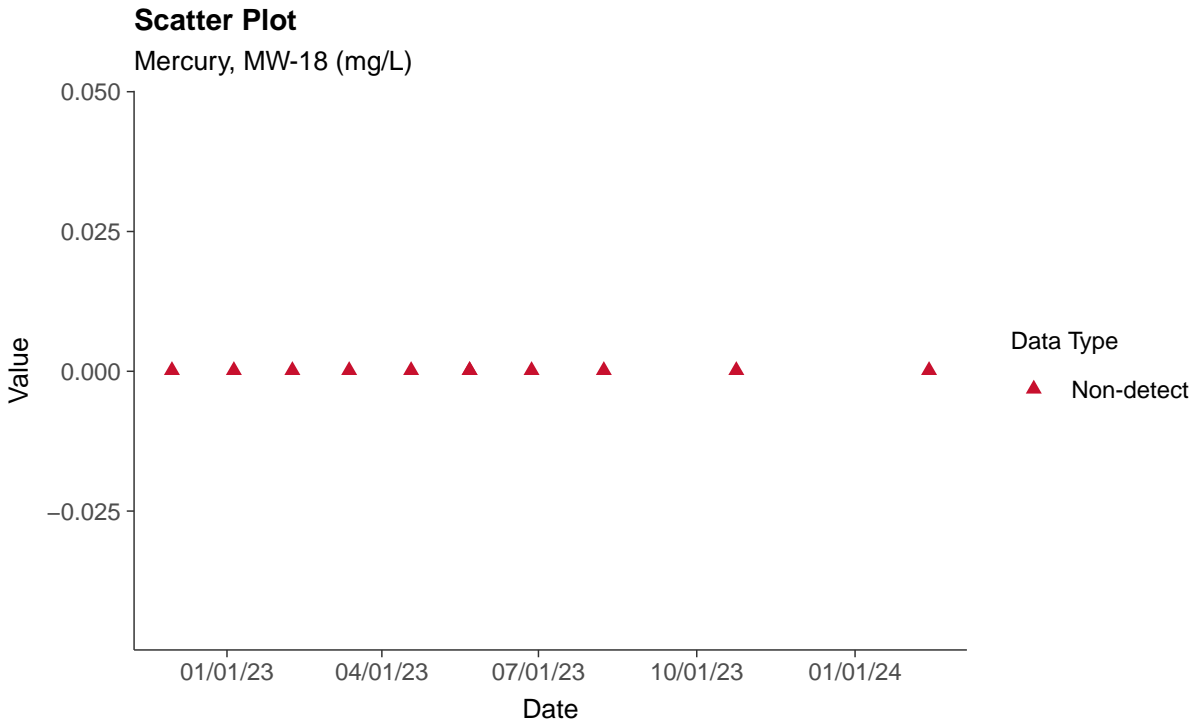
Lithium, MW-18 (mg/L)





Appendix IV: Mercury, MW-18

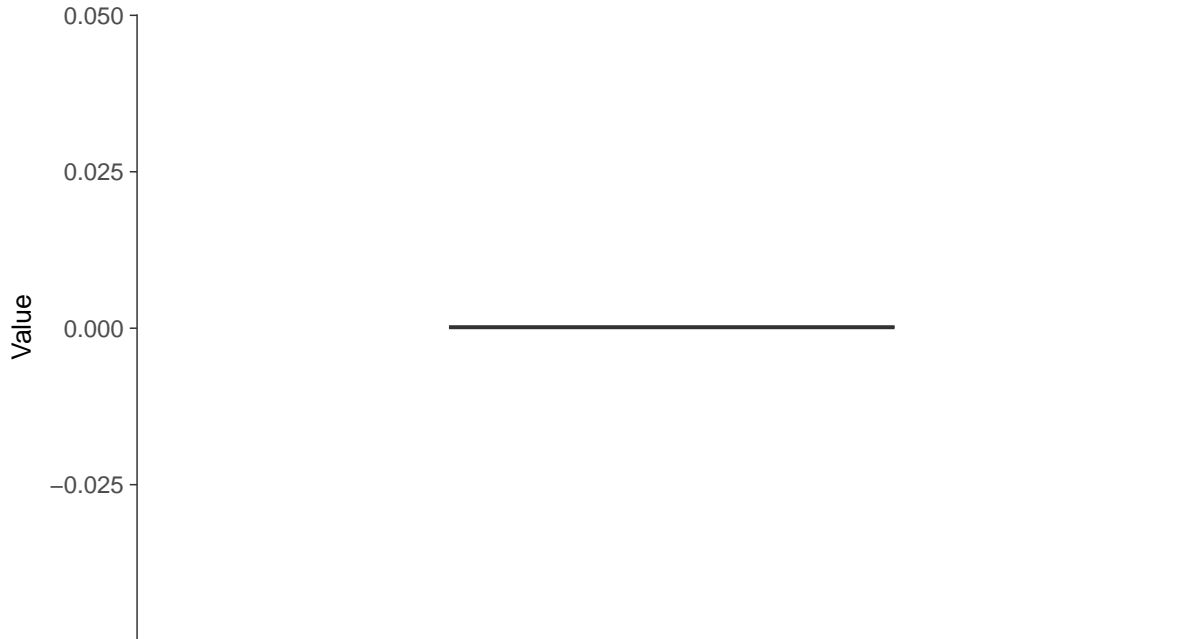
ID: 1_28_5_117





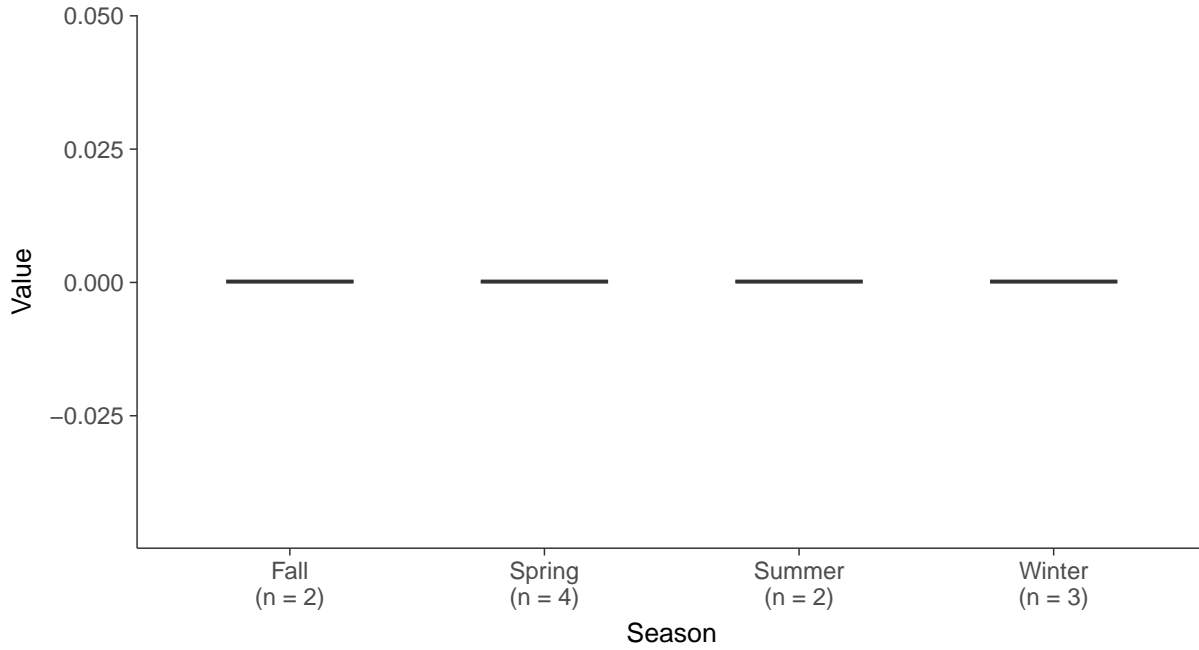
Boxplot

Mercury, MW-18 (mg/L)



Boxplot by Season

Mercury, MW-18 (mg/L)



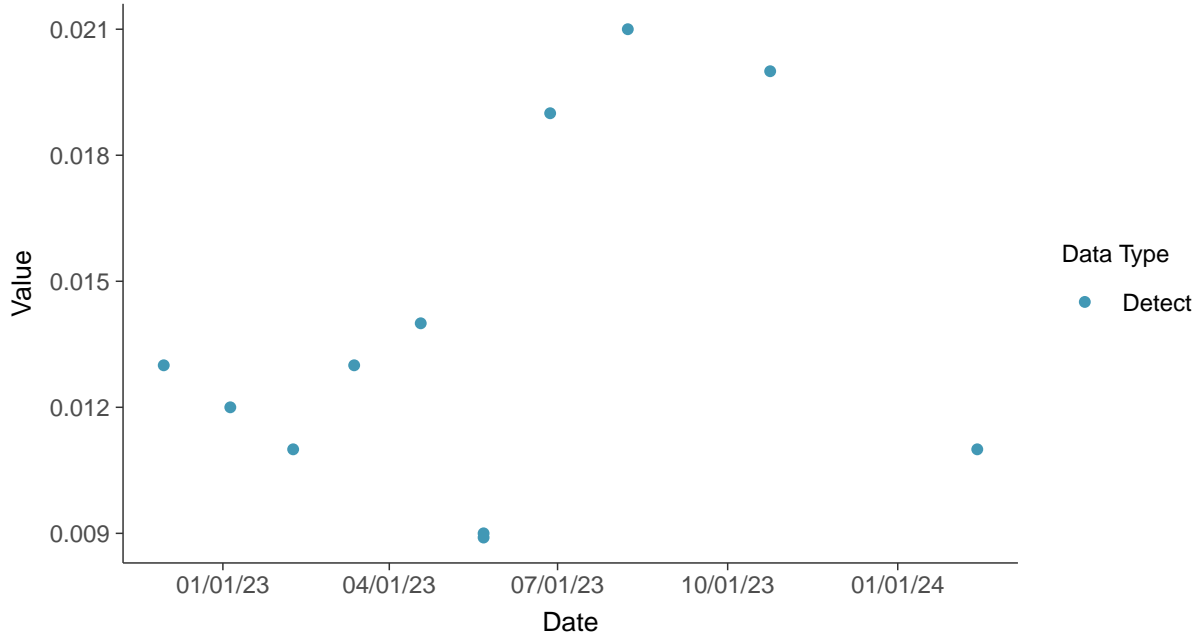


Appendix IV: Molybdenum, MW-18

ID: 1_28_5_118

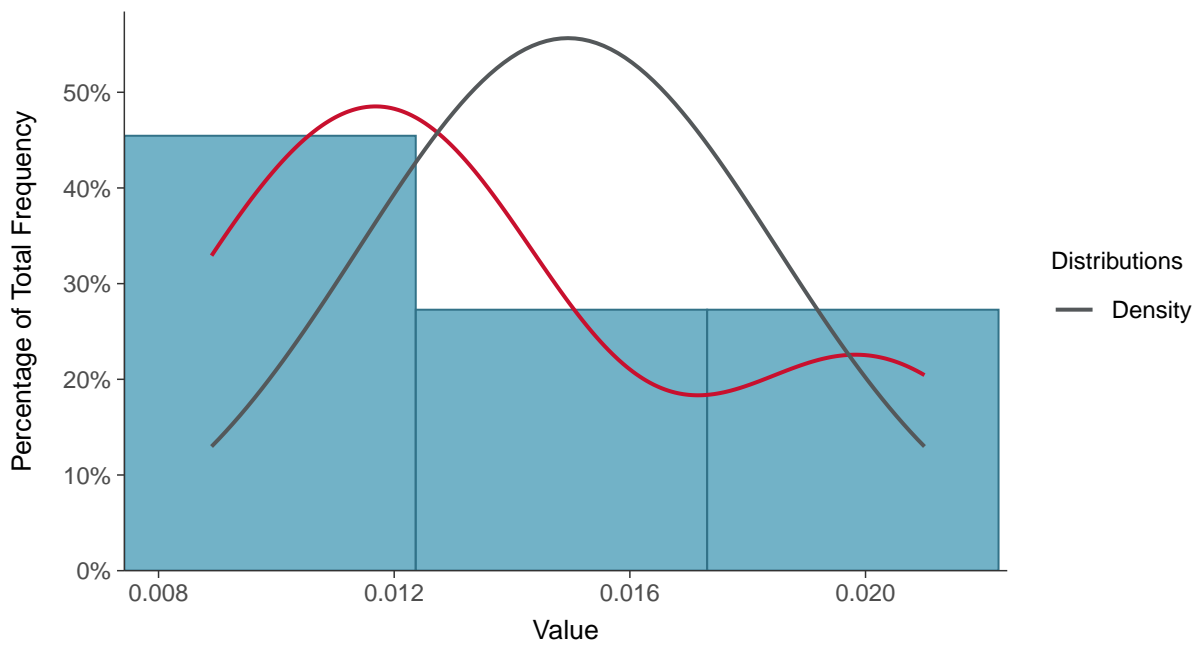
Scatter Plot

Molybdenum, MW-18 (mg/L)



Histogram

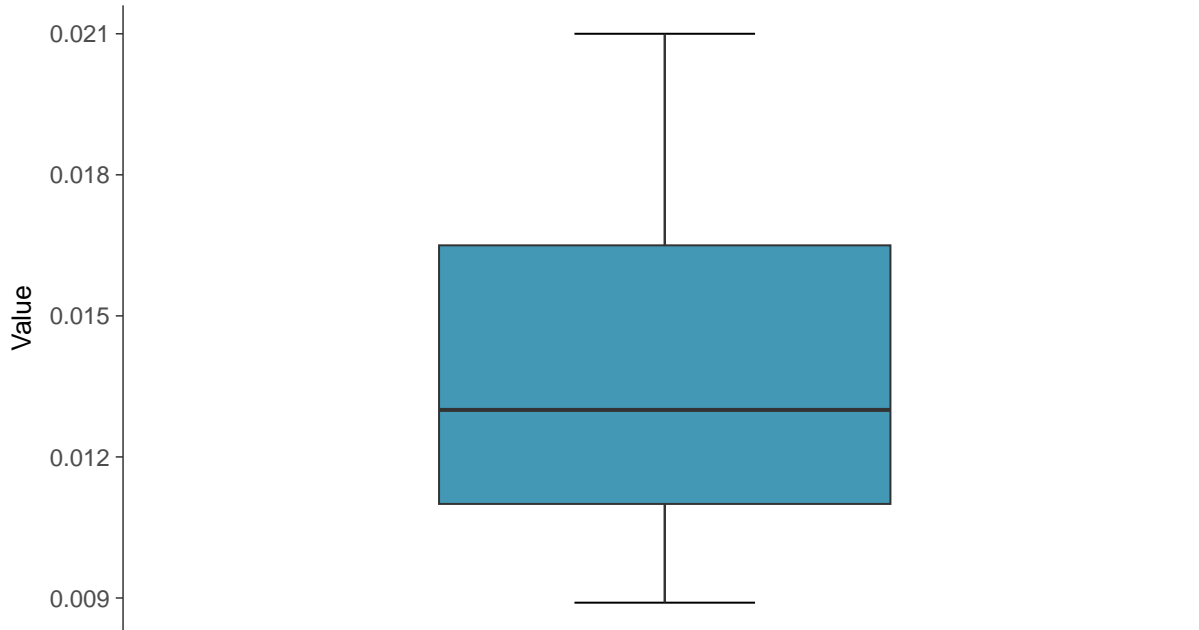
Molybdenum, MW-18 (mg/L)





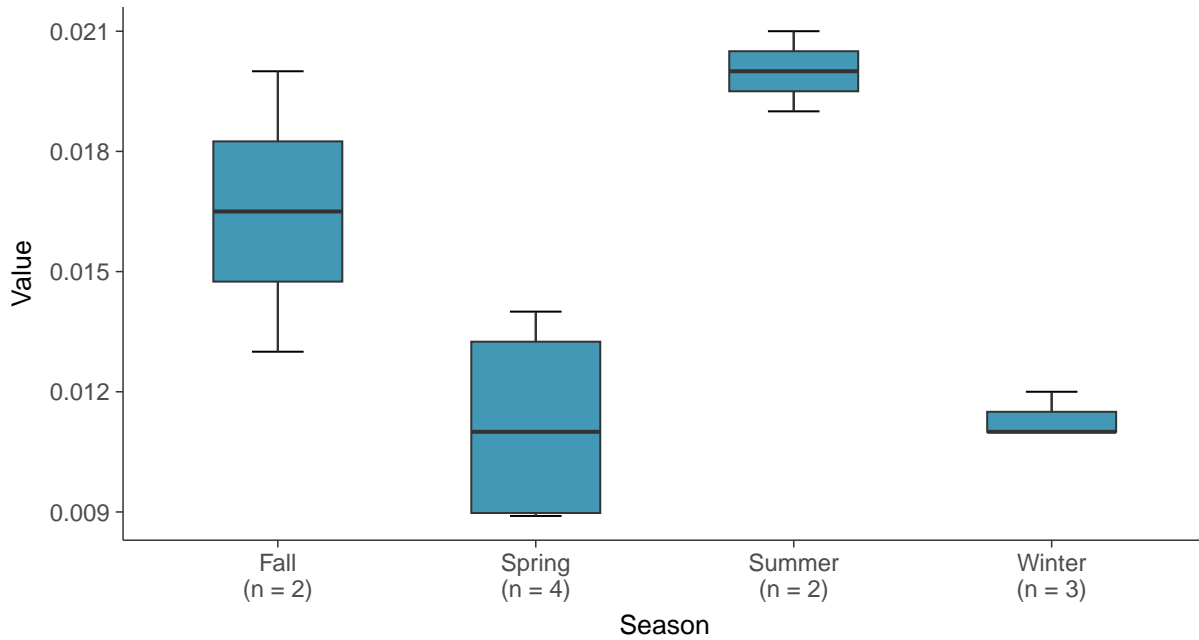
Boxplot

Molybdenum, MW-18 (mg/L)



Boxplot by Season

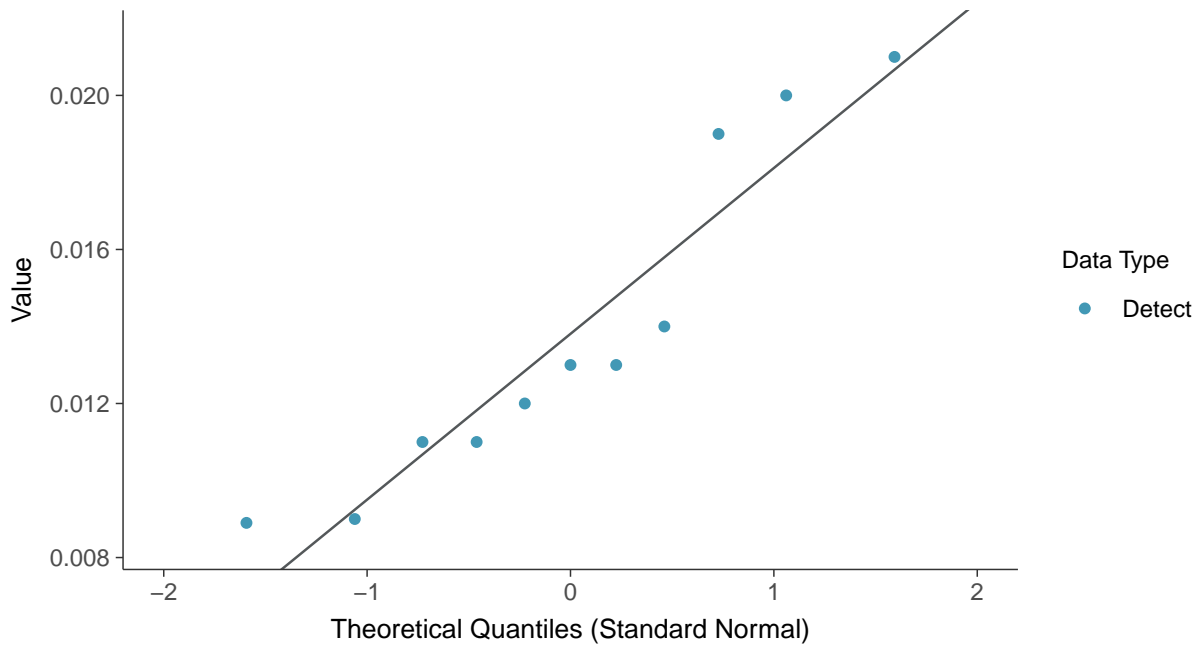
Molybdenum, MW-18 (mg/L)





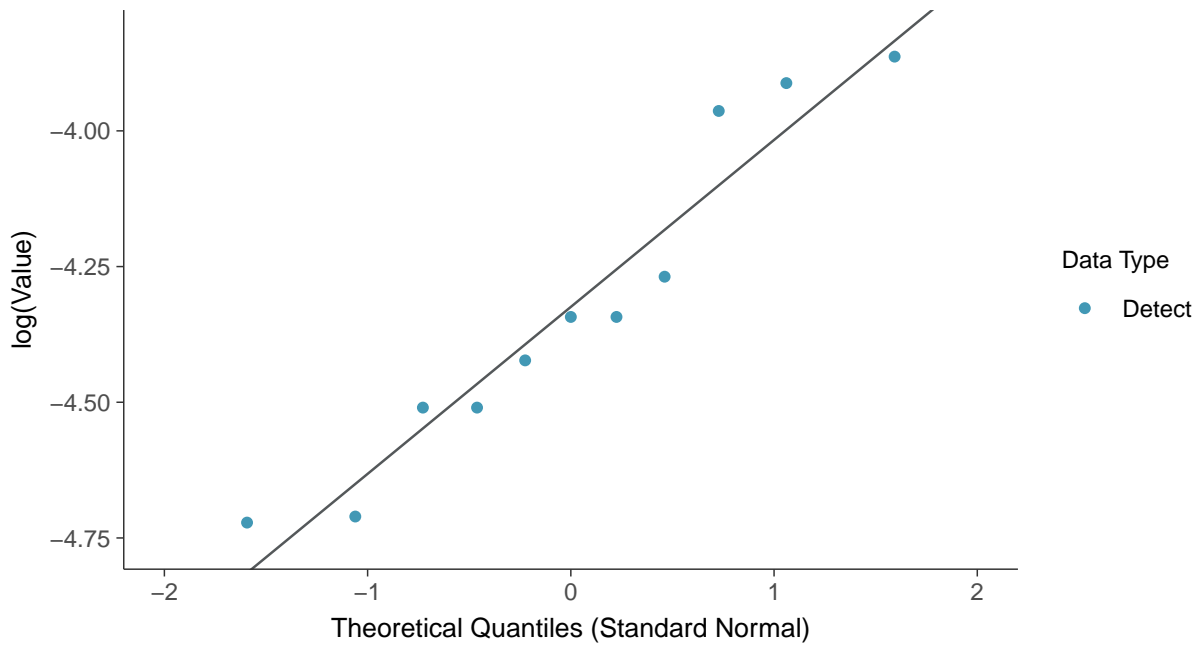
Normal Q-Q plot

Molybdenum, MW-18 (mg/L)



Lognormal Q-Q plot

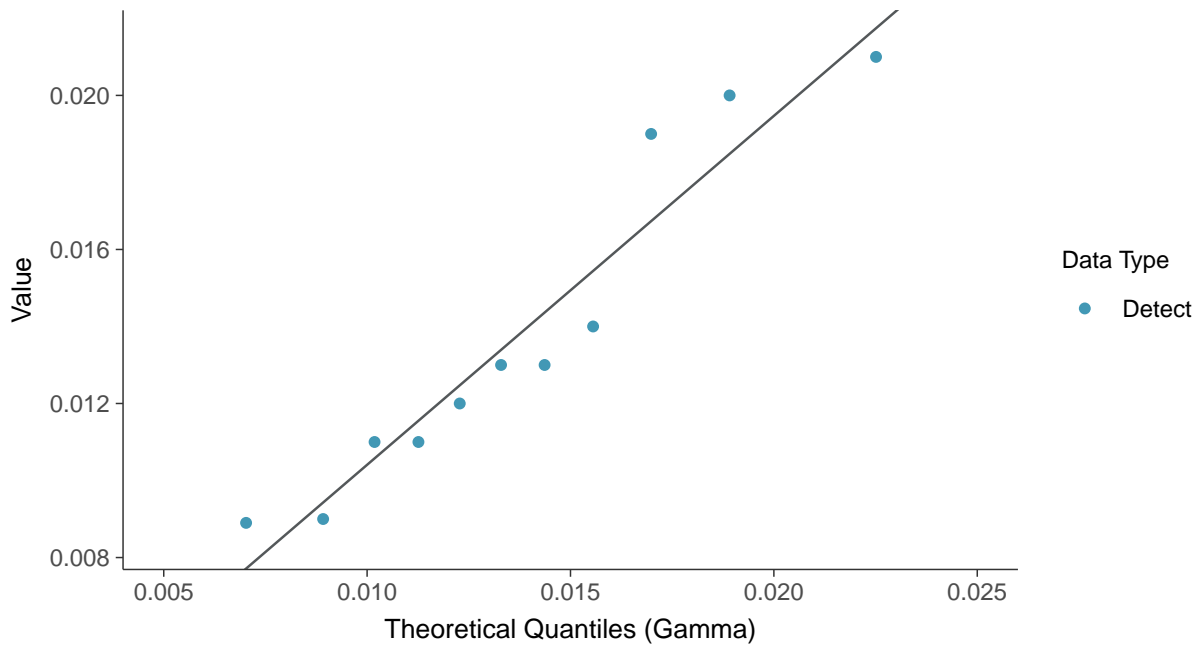
Molybdenum, MW-18 (mg/L)





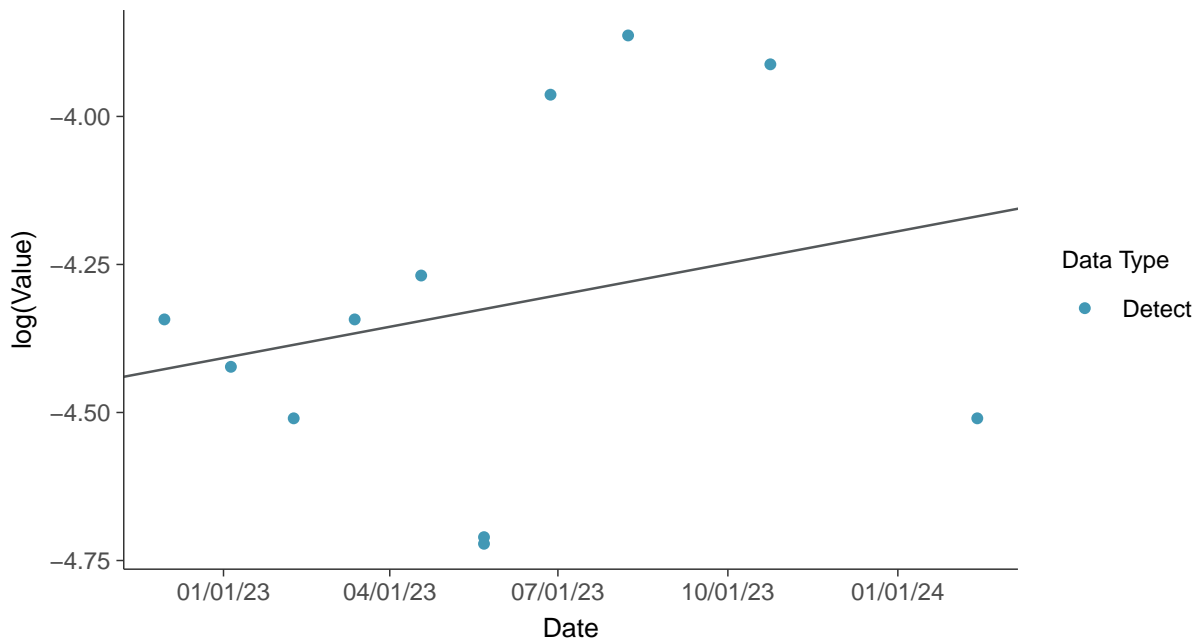
Gamma Q-Q plot

Molybdenum, MW-18 (mg/L)



Trend Regression: Lognormal MLE

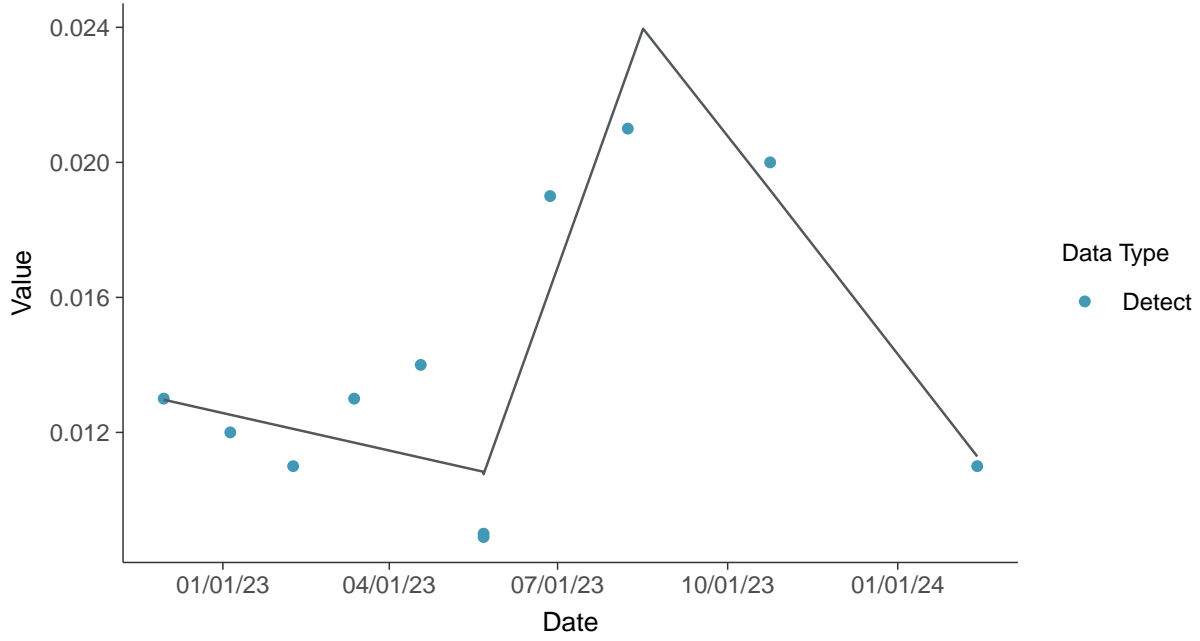
Molybdenum, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-18 (mg/L)



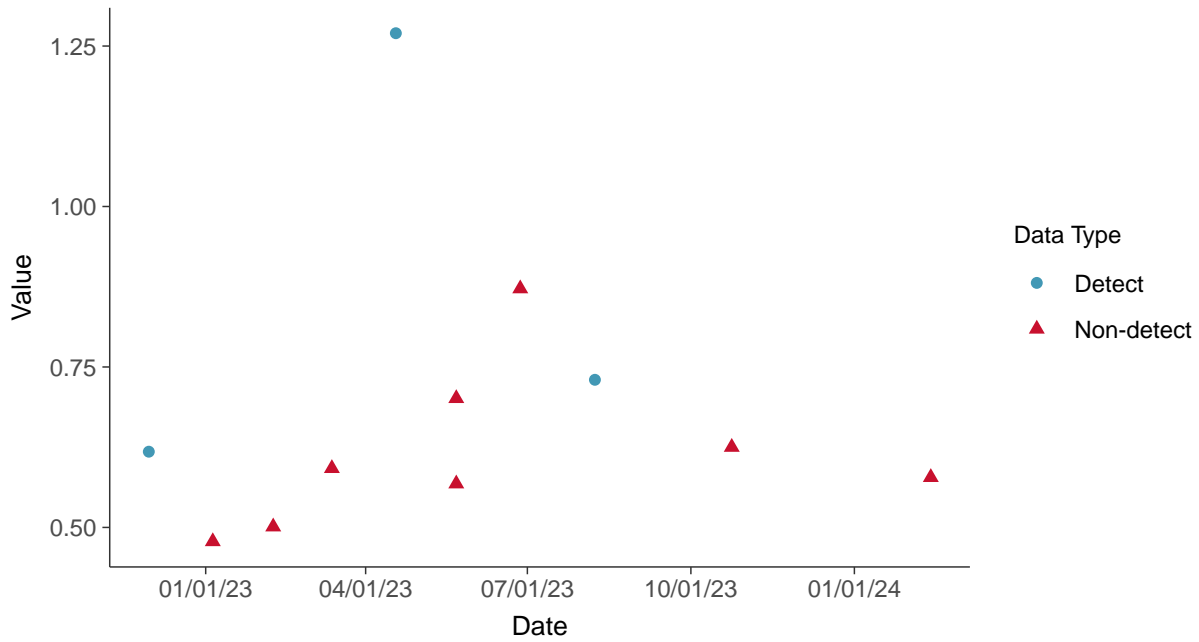


Appendix IV: Radium 226 and 228, MW-18

ID: 1_28_5_121

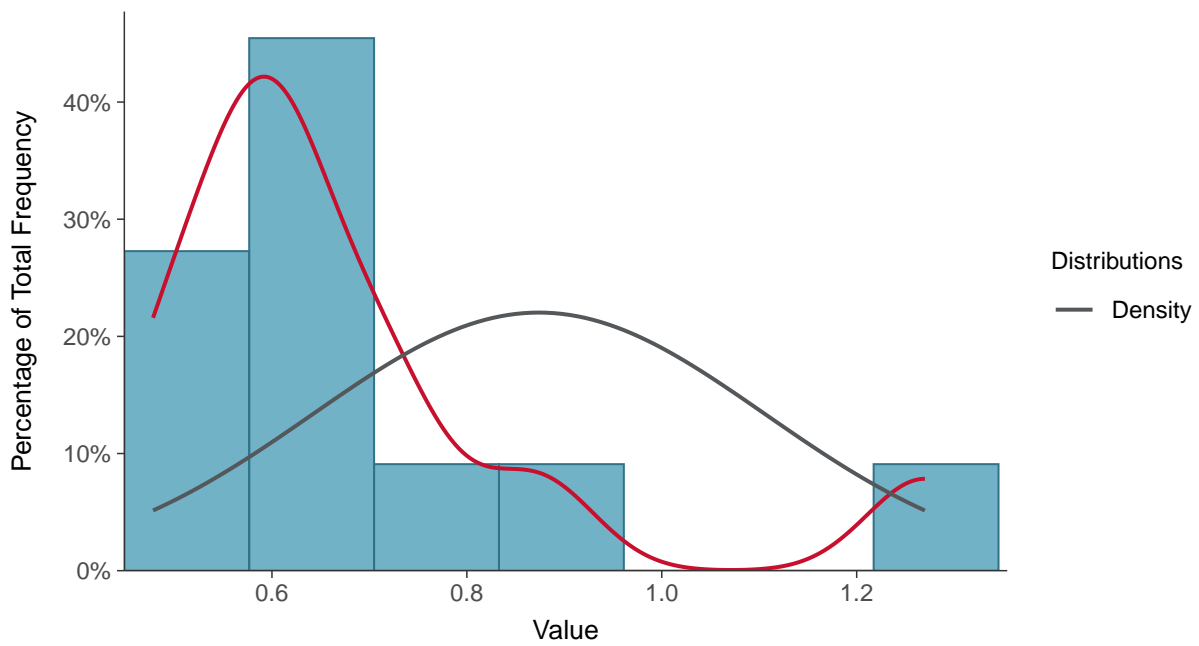
Scatter Plot

Radium 226 and 228, MW-18 (pCi/L)



Histogram

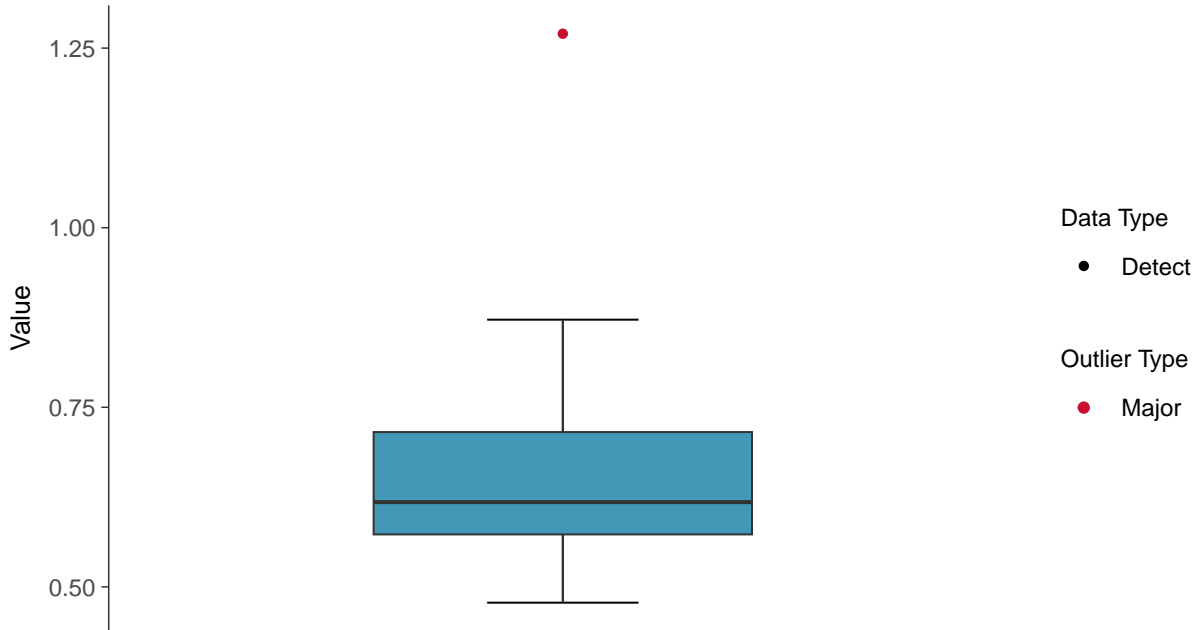
Radium 226 and 228, MW-18 (pCi/L)





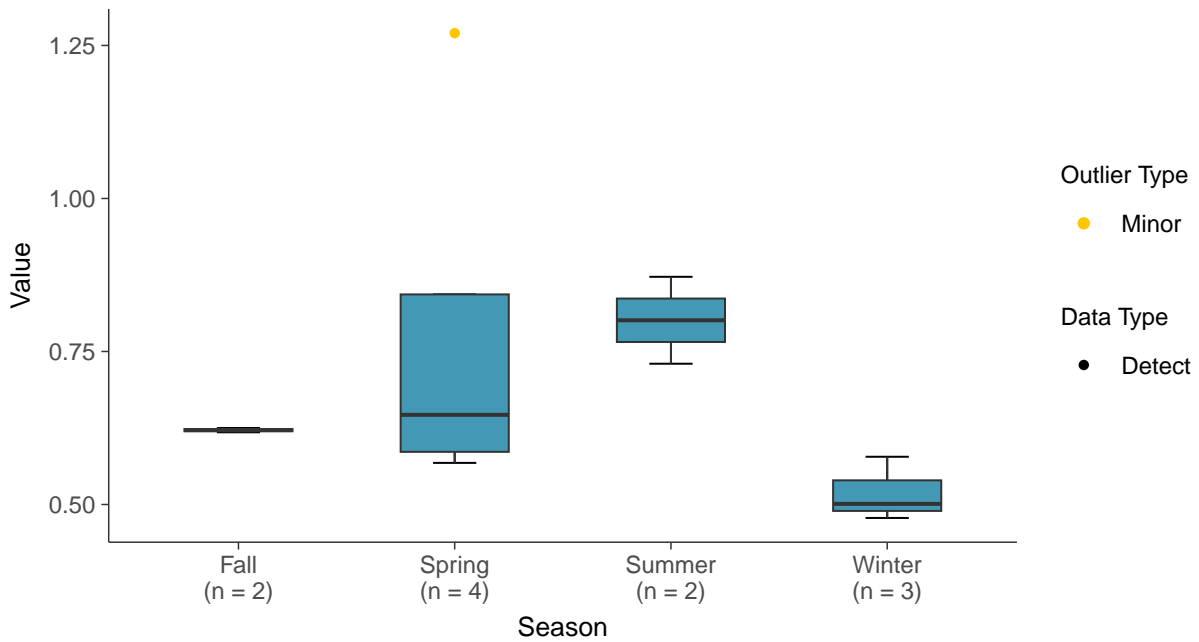
Boxplot

Radium 226 and 228, MW-18 (pCi/L)



Boxplot by Season

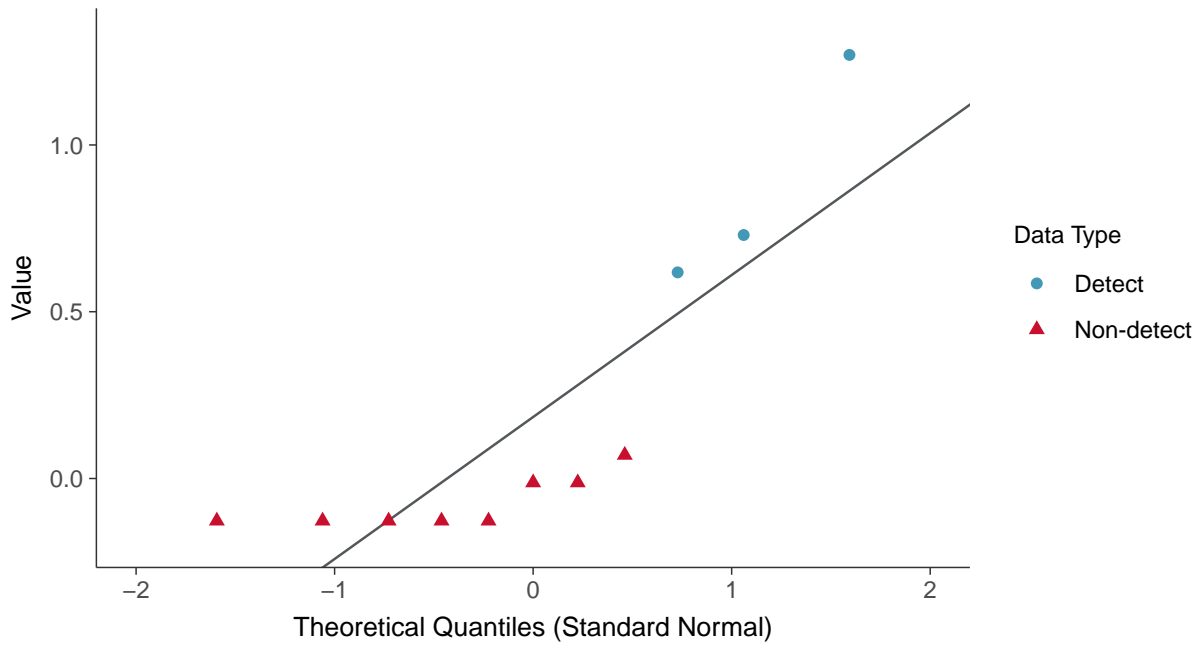
Radium 226 and 228, MW-18 (pCi/L)





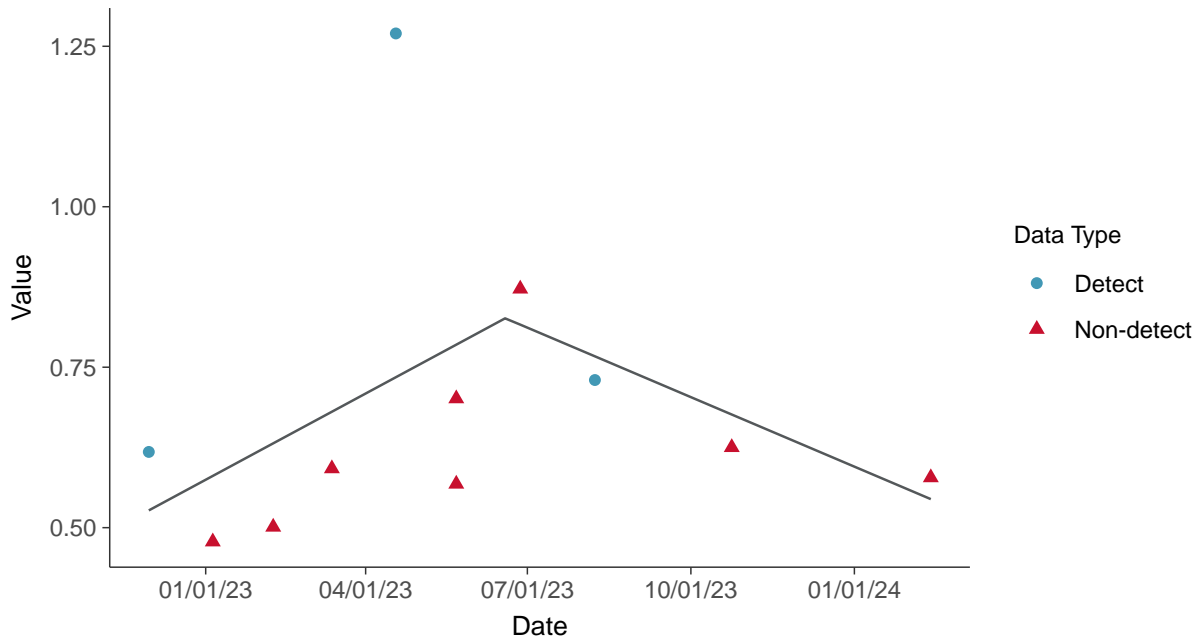
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-18 (pCi/L)



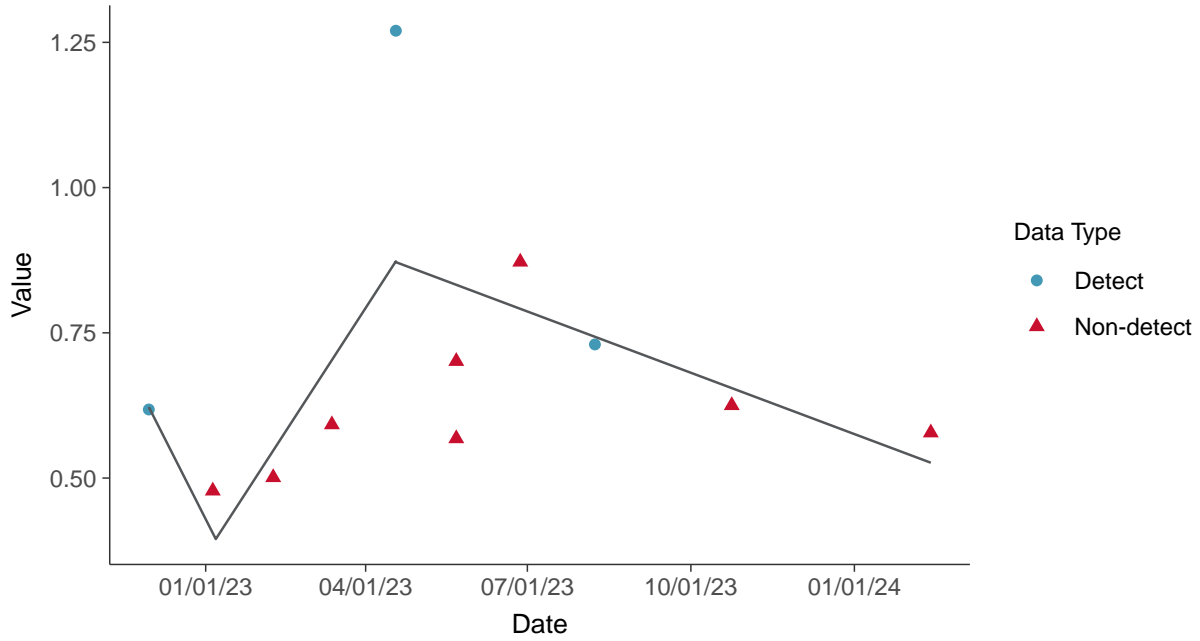
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-18 (pCi/L)





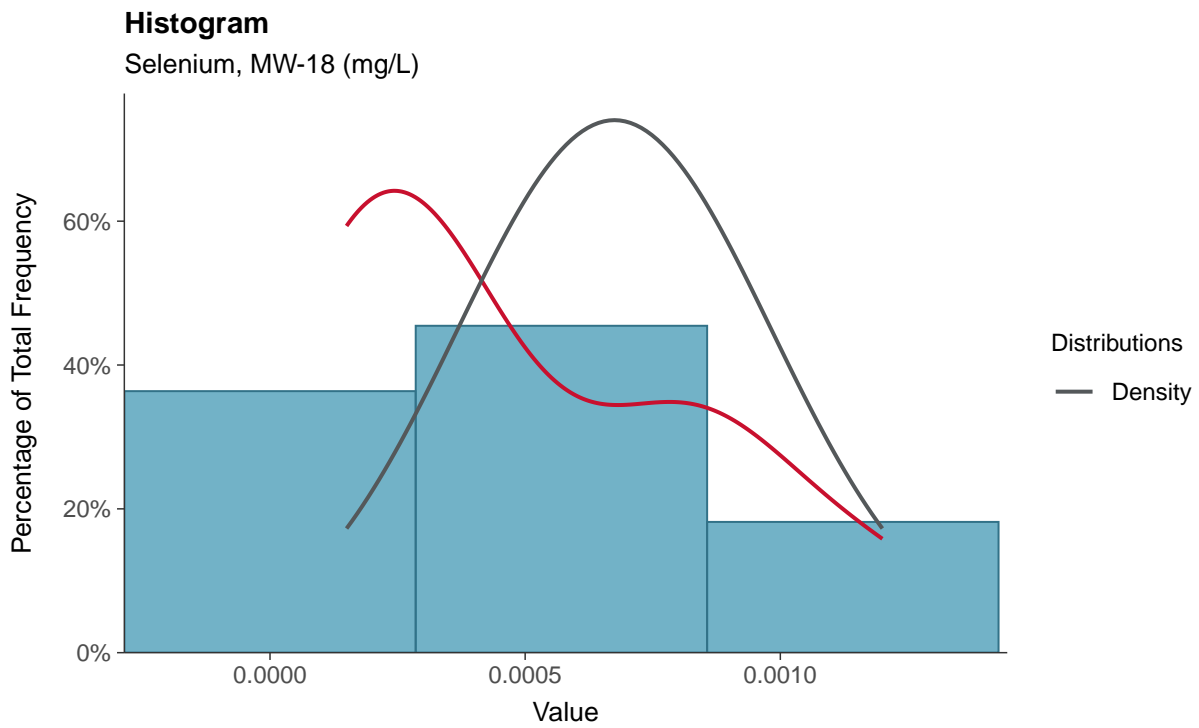
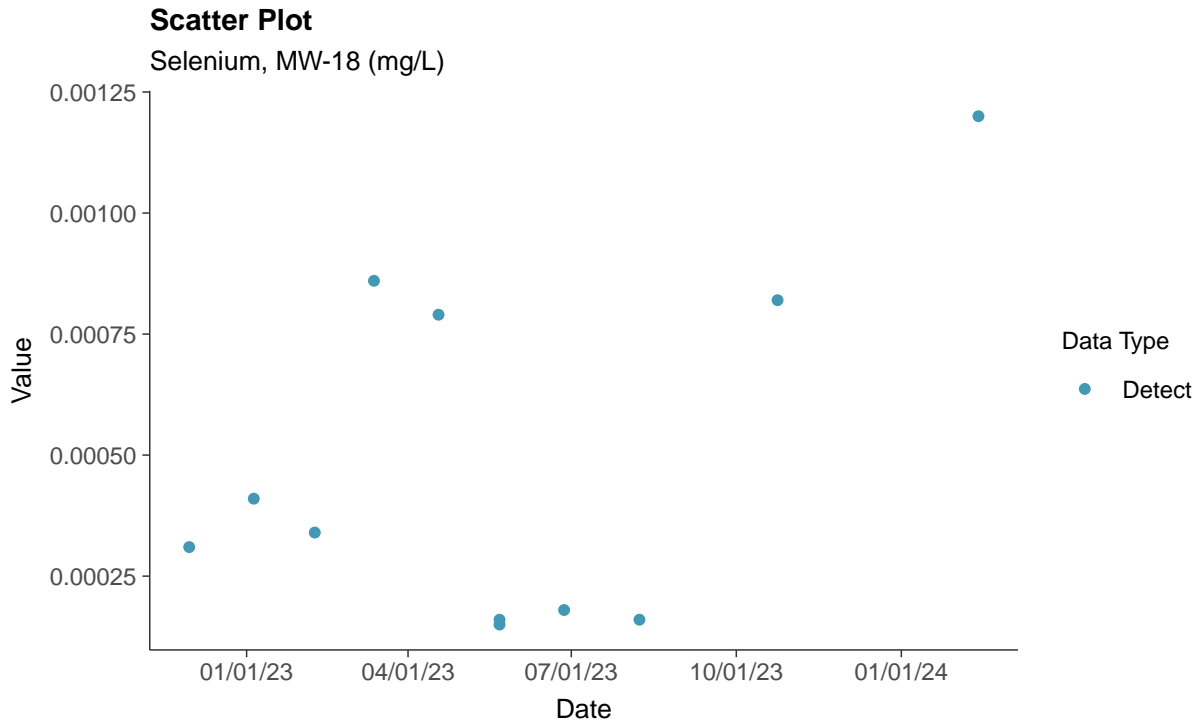
Trend Regression: Piecewise Linear-Linear-Linear
Radium 226 and 228, MW-18 (pCi/L)





Appendix IV: Selenium, MW-18

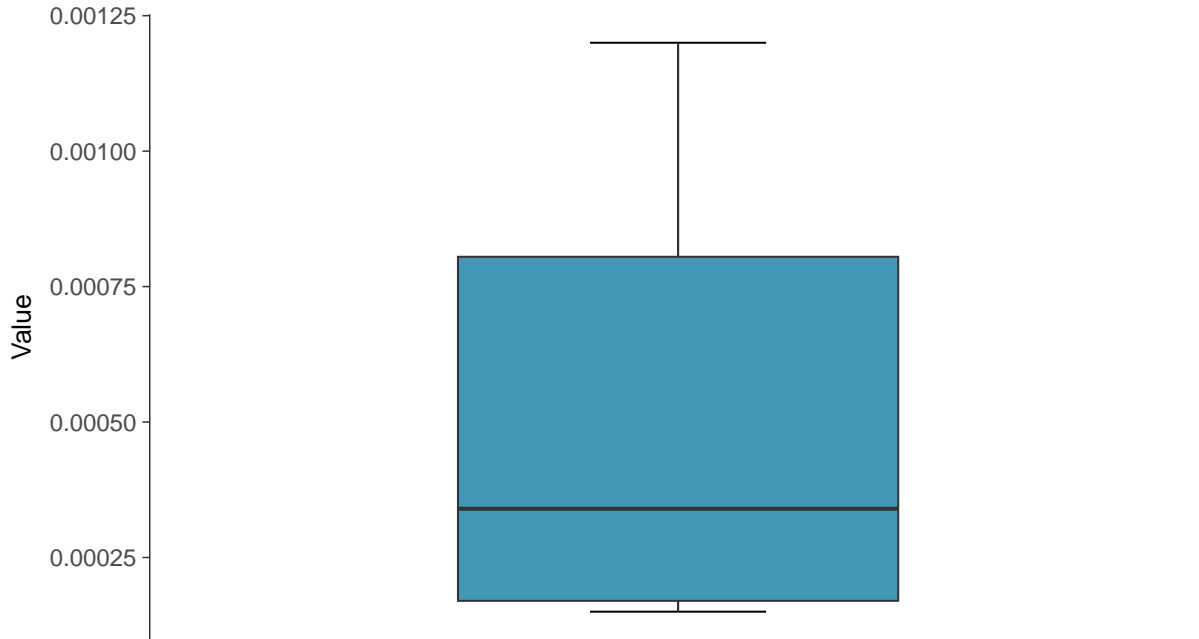
ID: 1_28_5_122





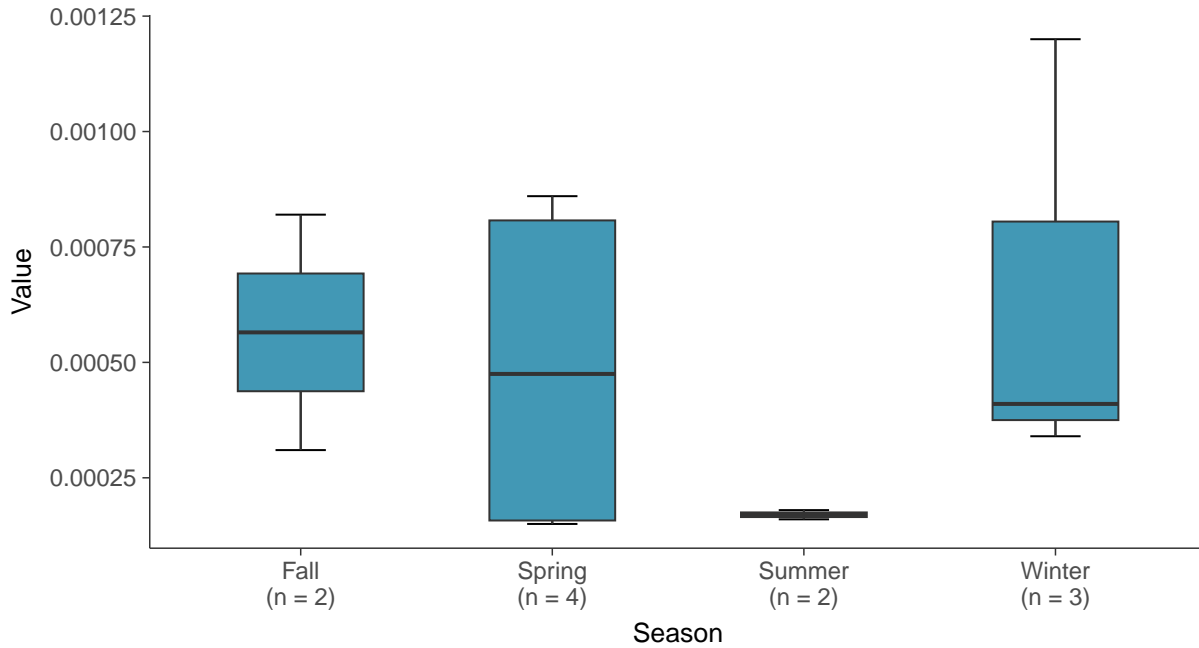
Boxplot

Selenium, MW-18 (mg/L)



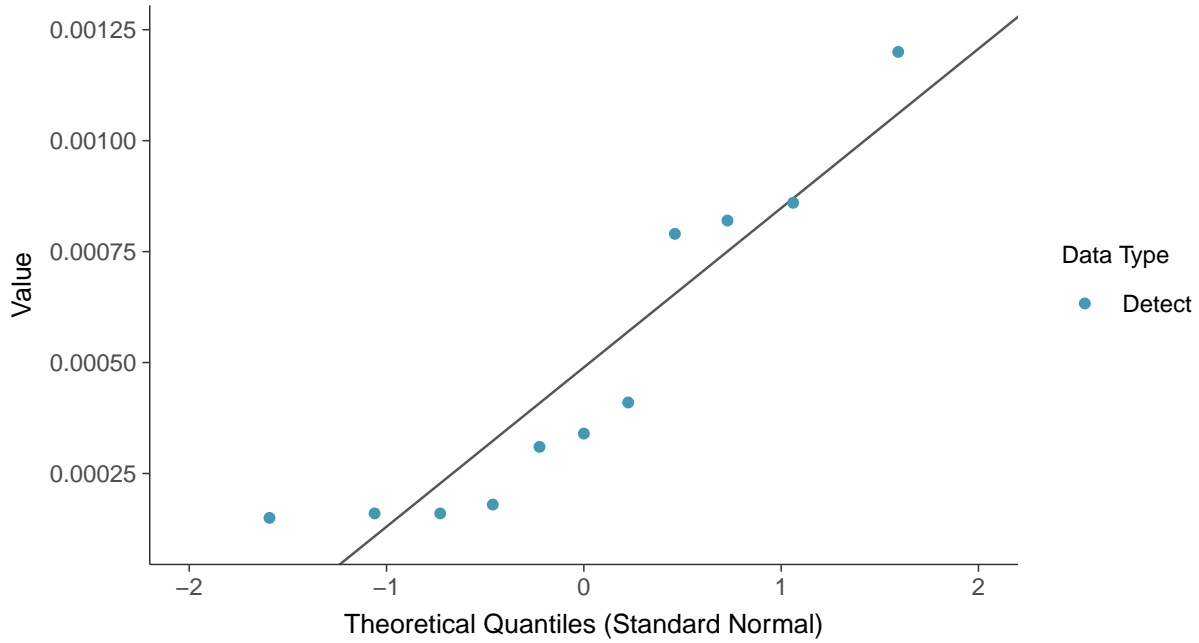
Boxplot by Season

Selenium, MW-18 (mg/L)

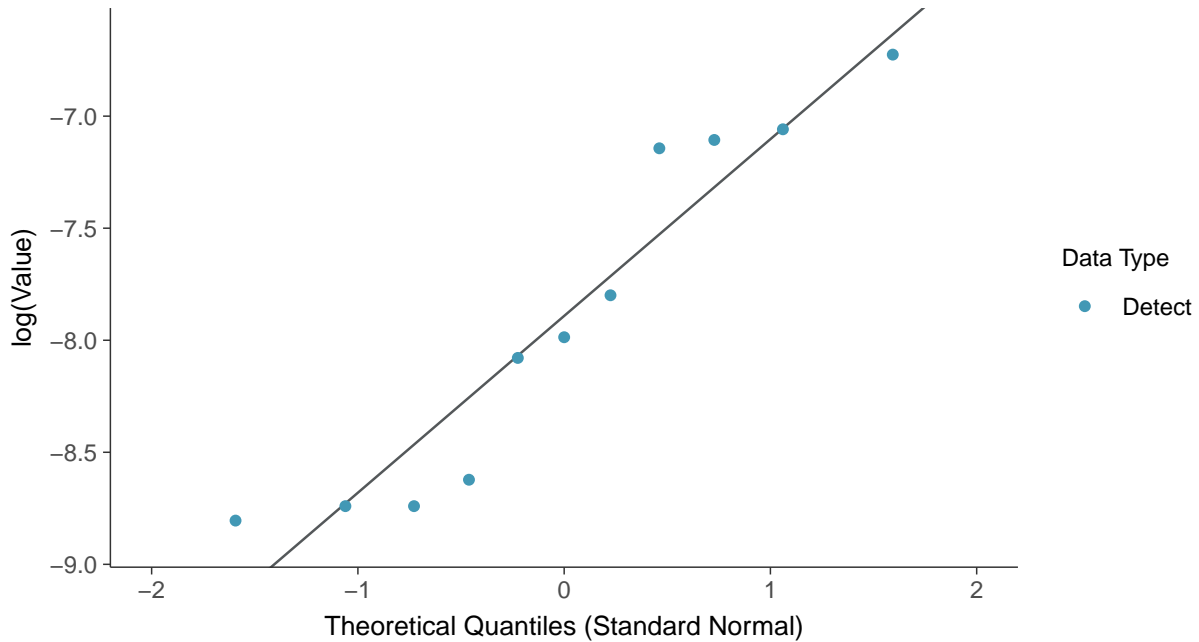




Normal Q-Q plot
Selenium, MW-18 (mg/L)



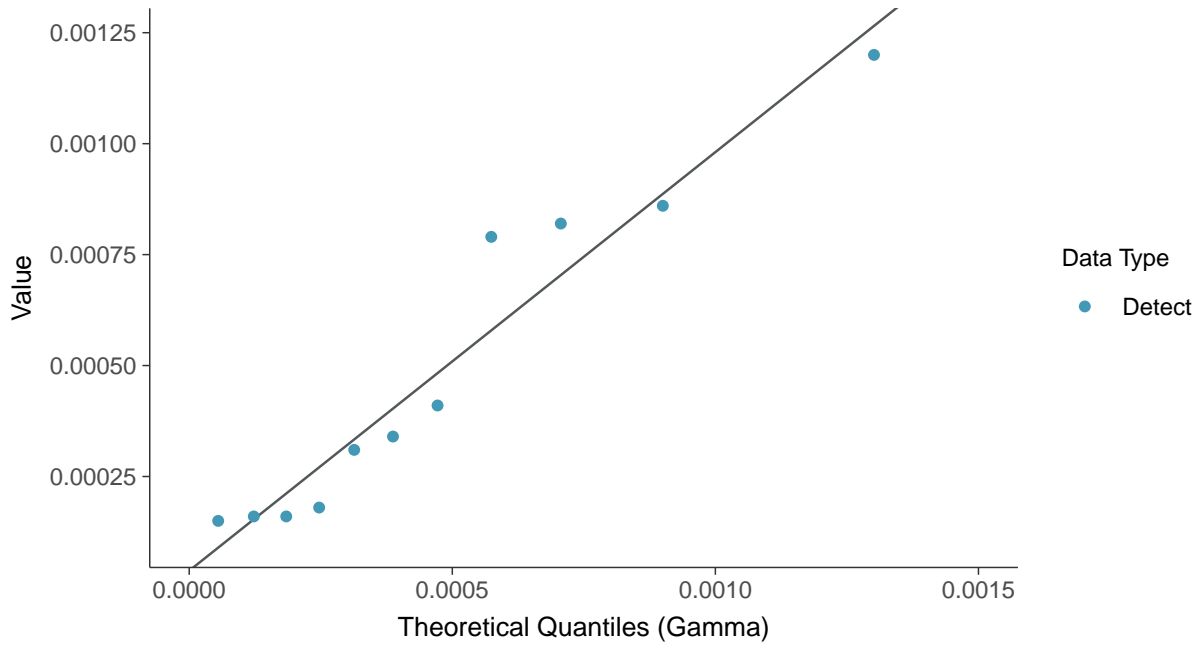
Lognormal Q-Q plot
Selenium, MW-18 (mg/L)





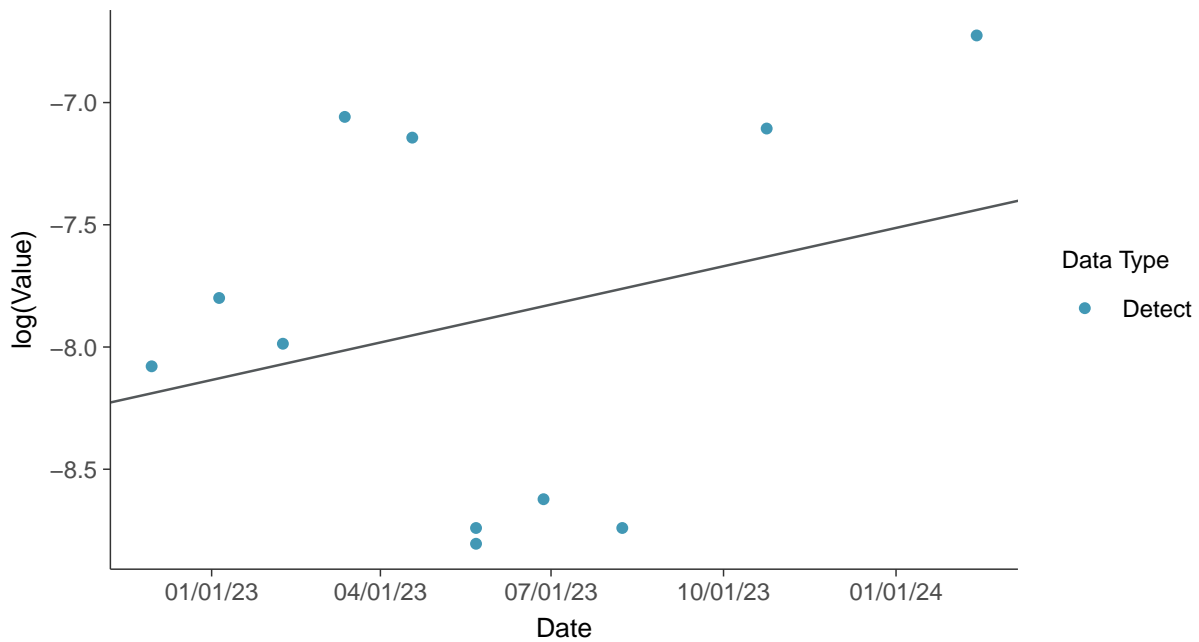
Gamma Q-Q plot

Selenium, MW-18 (mg/L)



Trend Regression: Lognormal MLE

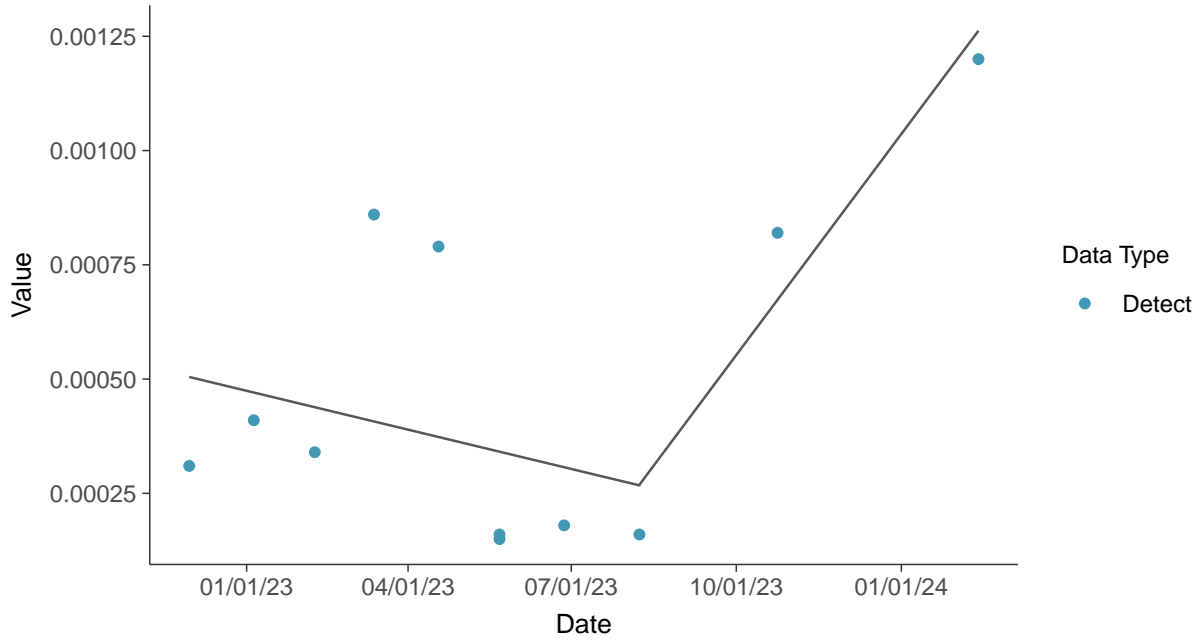
Selenium, MW-18 (mg/L)





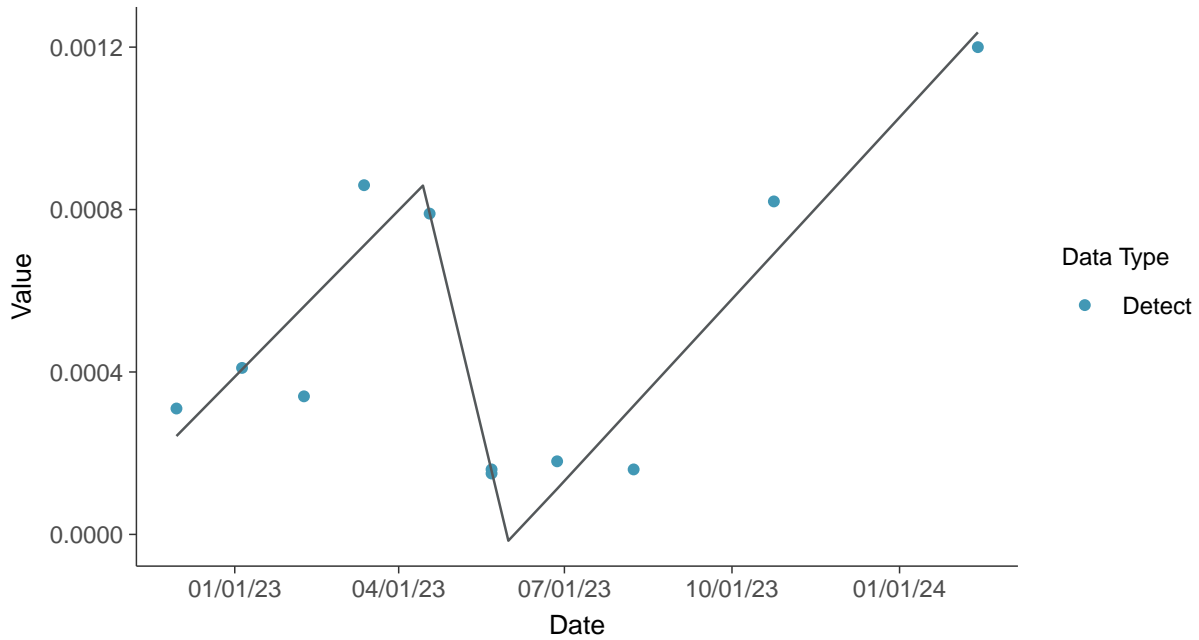
Trend Regression: Piecewise Linear-Linear

Selenium, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-18 (mg/L)



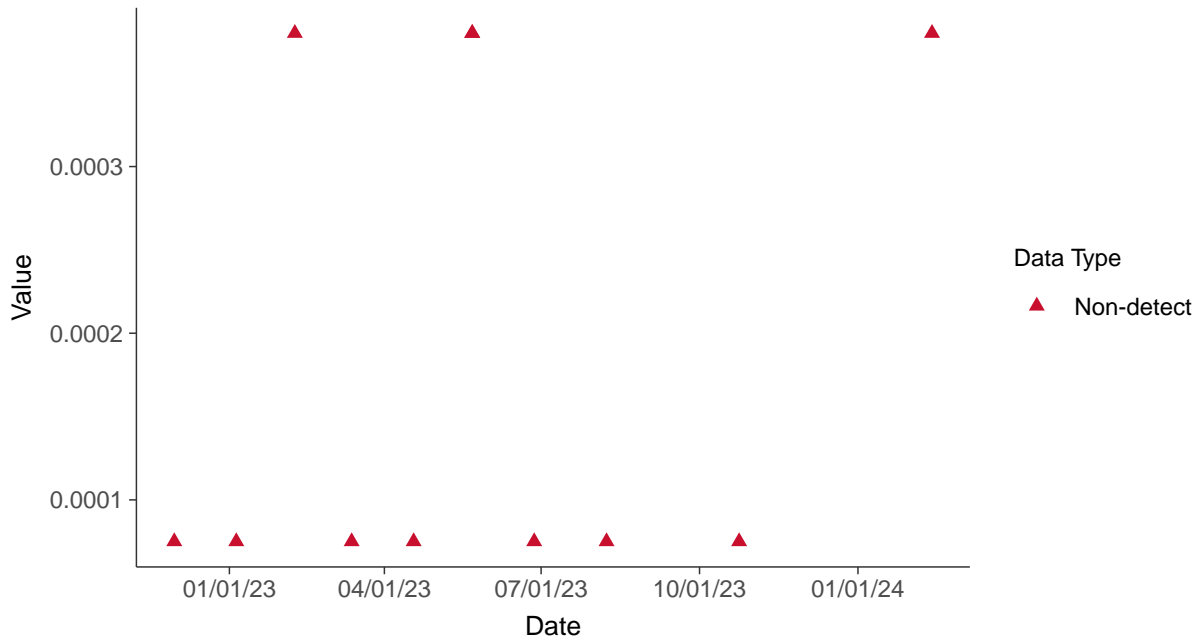


Appendix IV: Thallium, MW-18

ID: 1_28_5_125

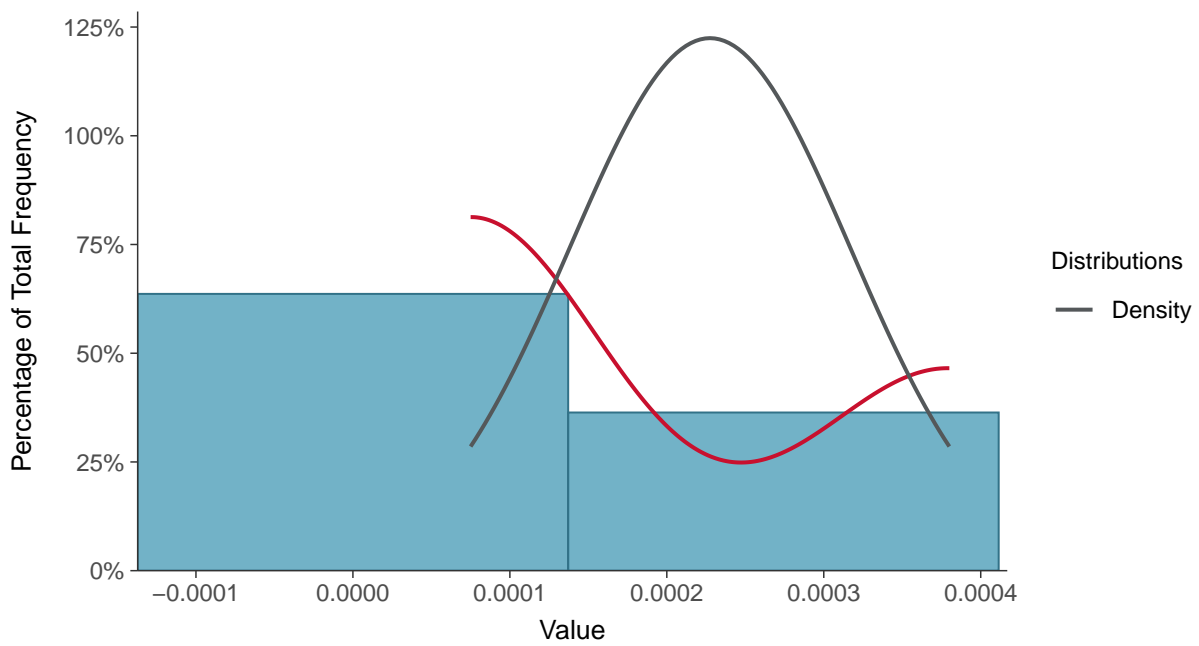
Scatter Plot

Thallium, MW-18 (mg/L)



Histogram

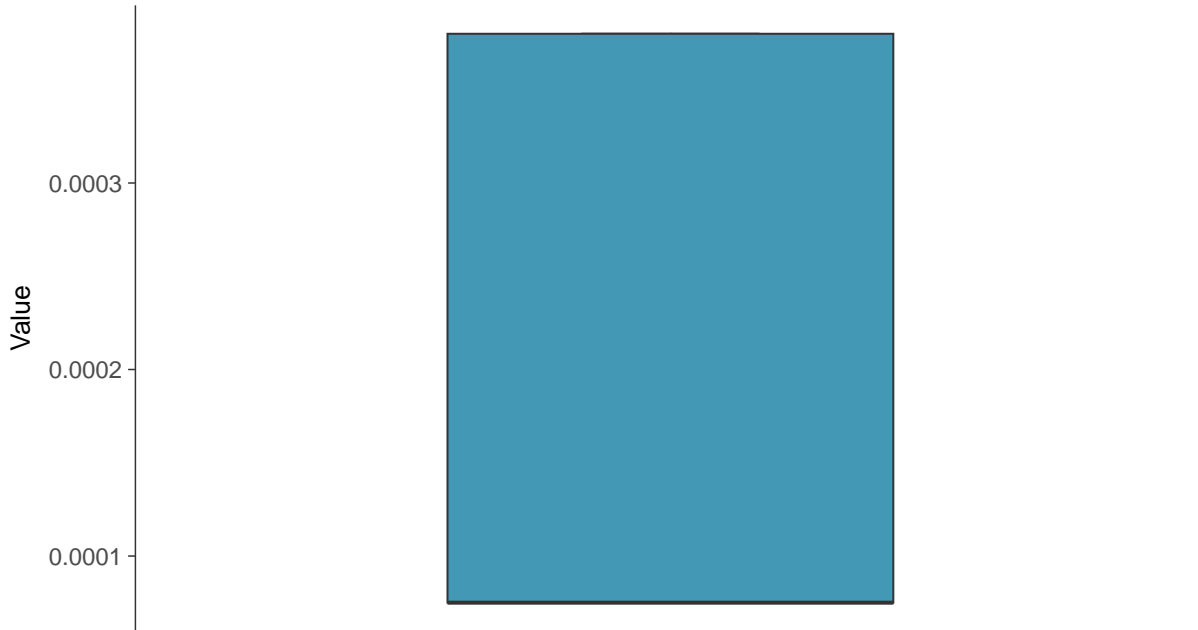
Thallium, MW-18 (mg/L)





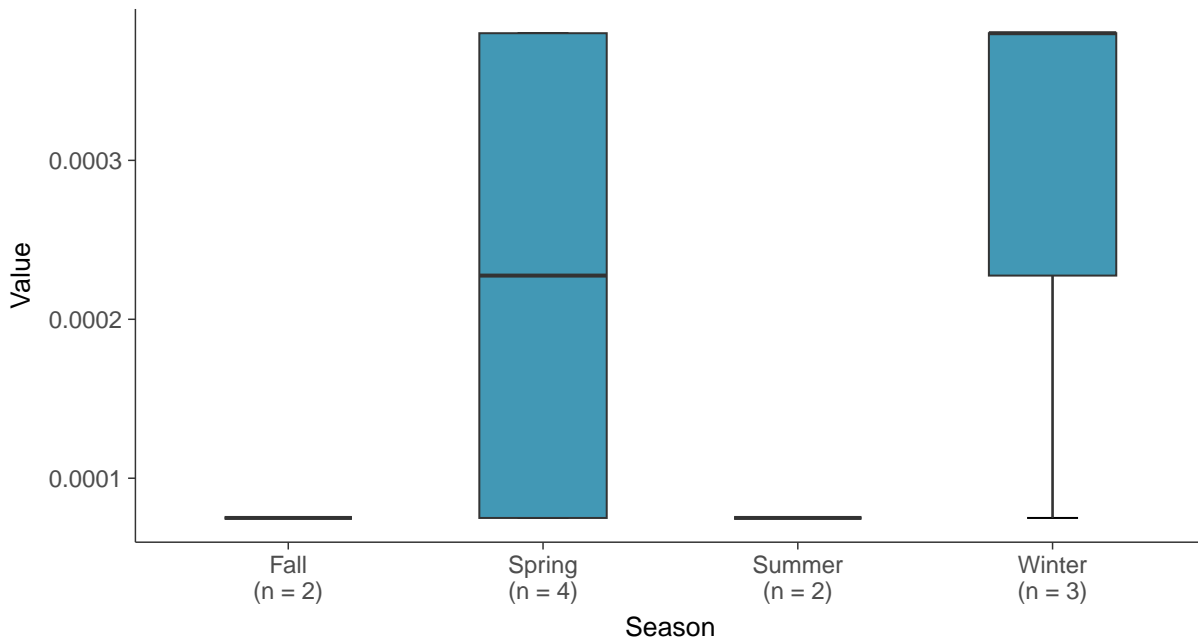
Boxplot

Thallium, MW-18 (mg/L)



Boxplot by Season

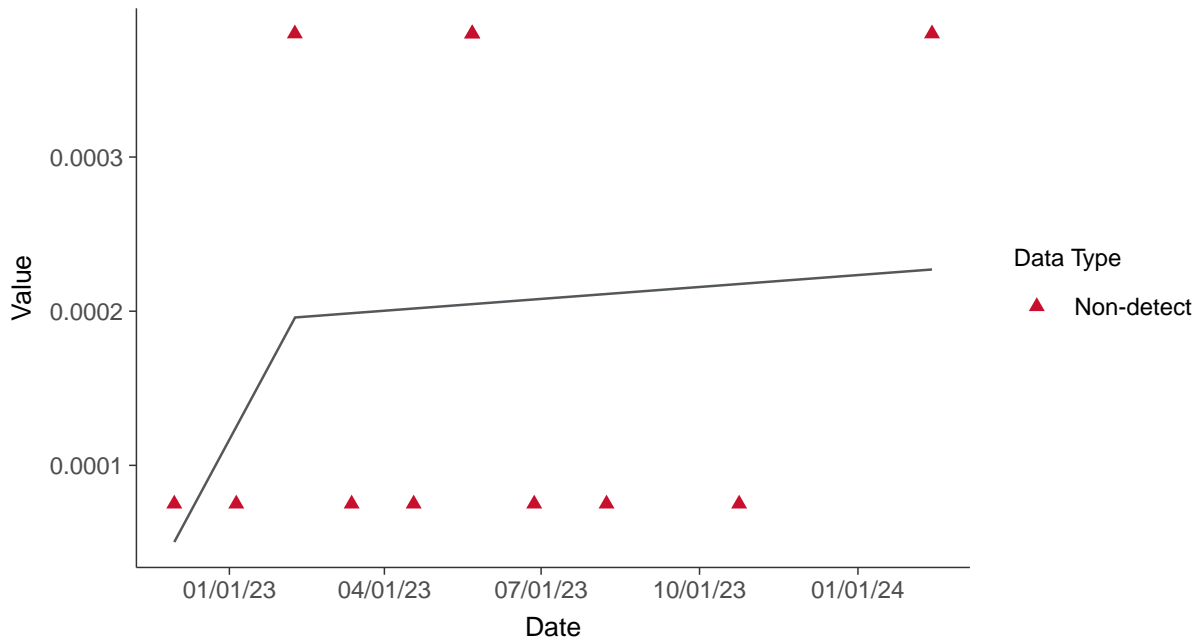
Thallium, MW-18 (mg/L)





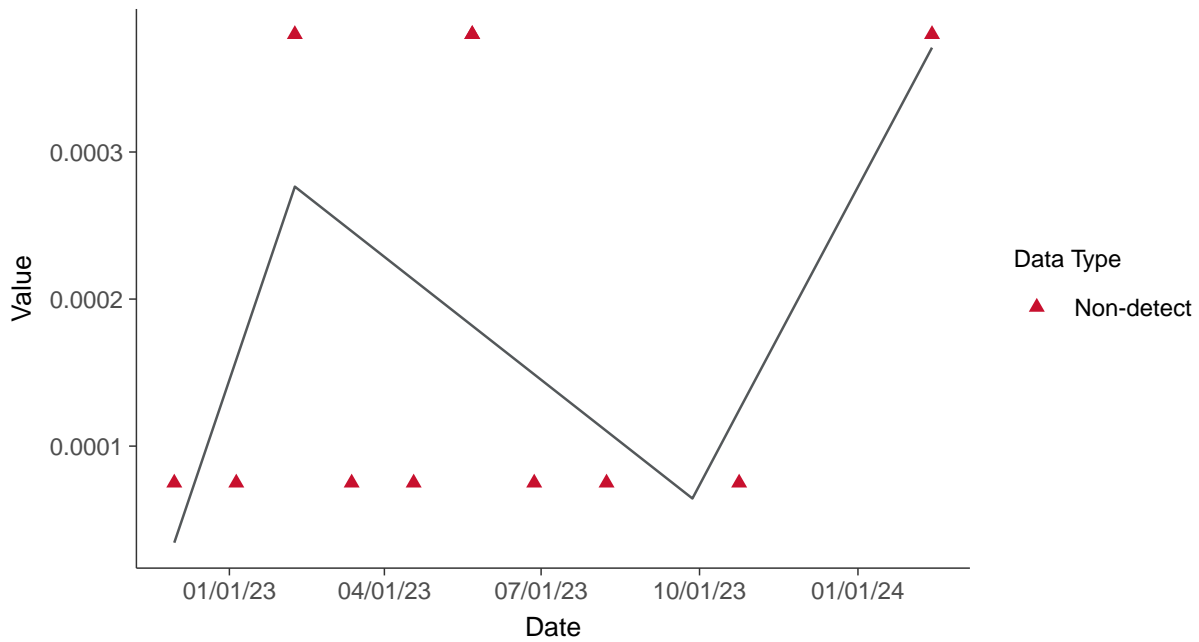
Trend Regression: Piecewise Linear-Linear

Thallium, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-18 (mg/L)



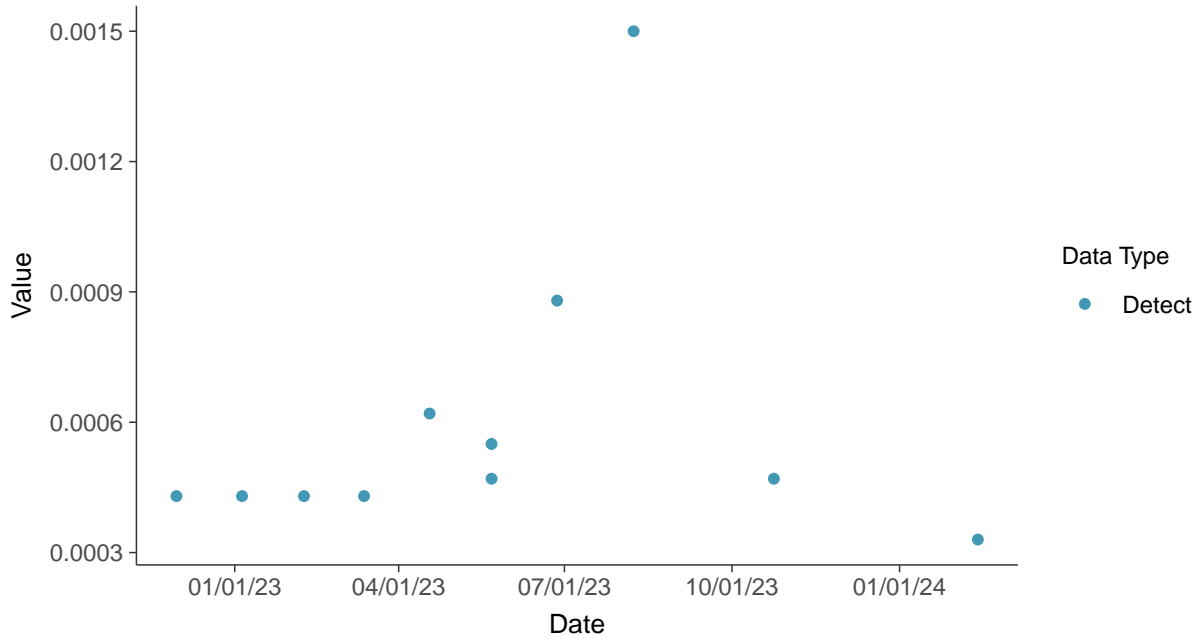


Part 115: Copper, MW-18

ID: 1_28_6_111

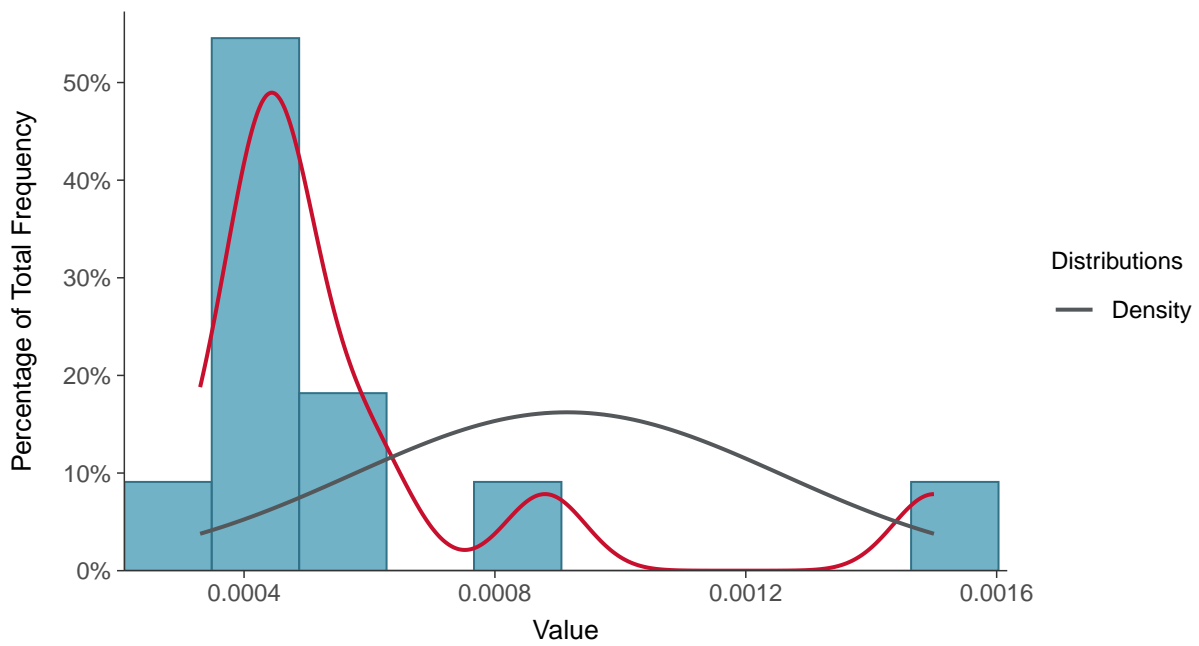
Scatter Plot

Copper, MW-18 (mg/L)



Histogram

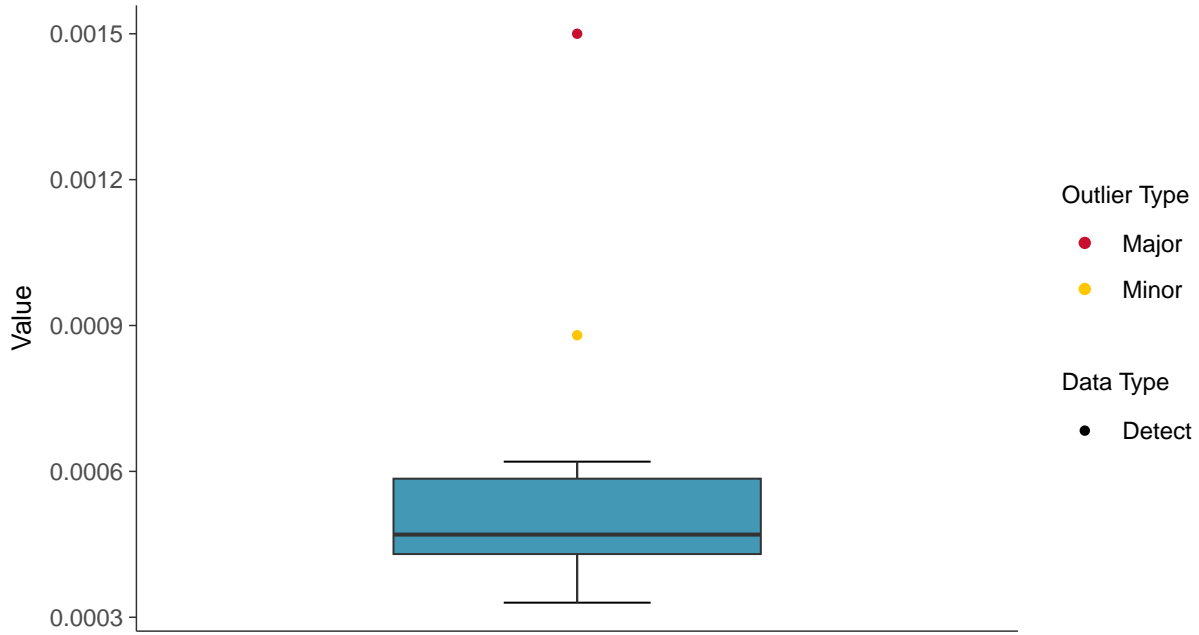
Copper, MW-18 (mg/L)





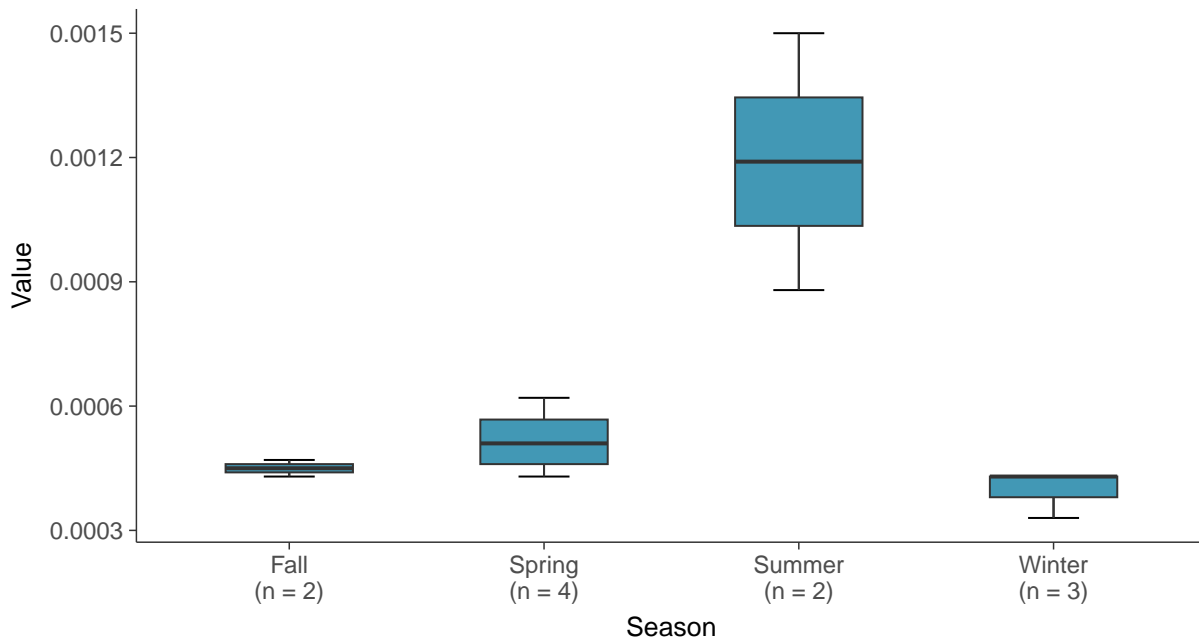
Boxplot

Copper, MW-18 (mg/L)



Boxplot by Season

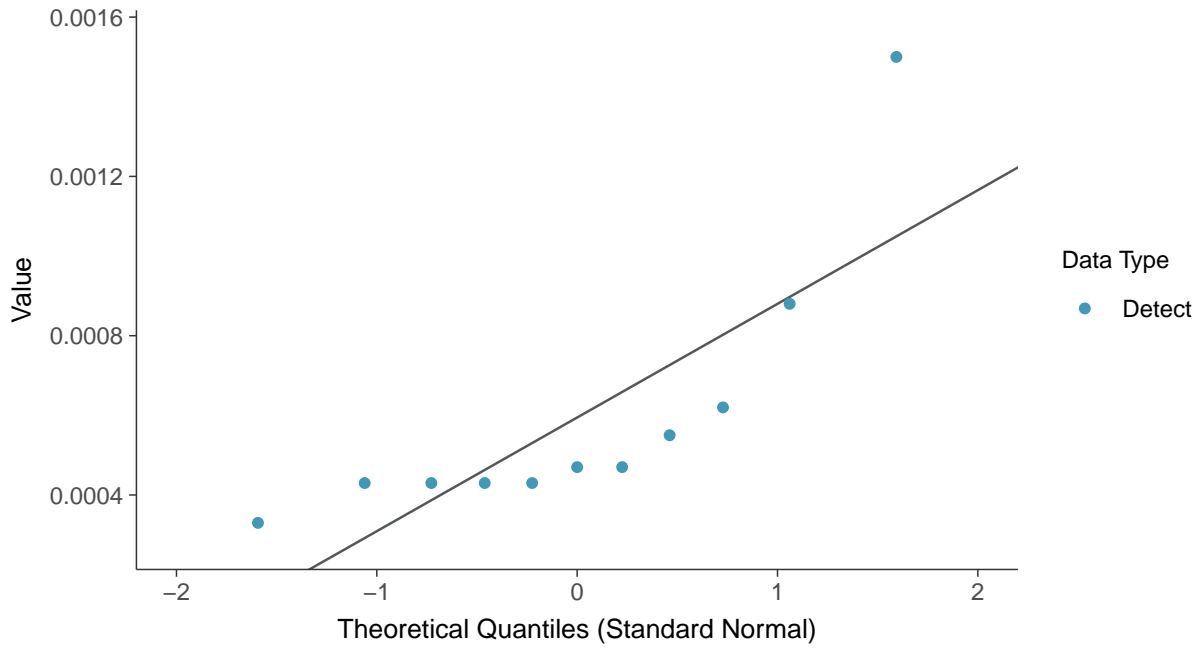
Copper, MW-18 (mg/L)





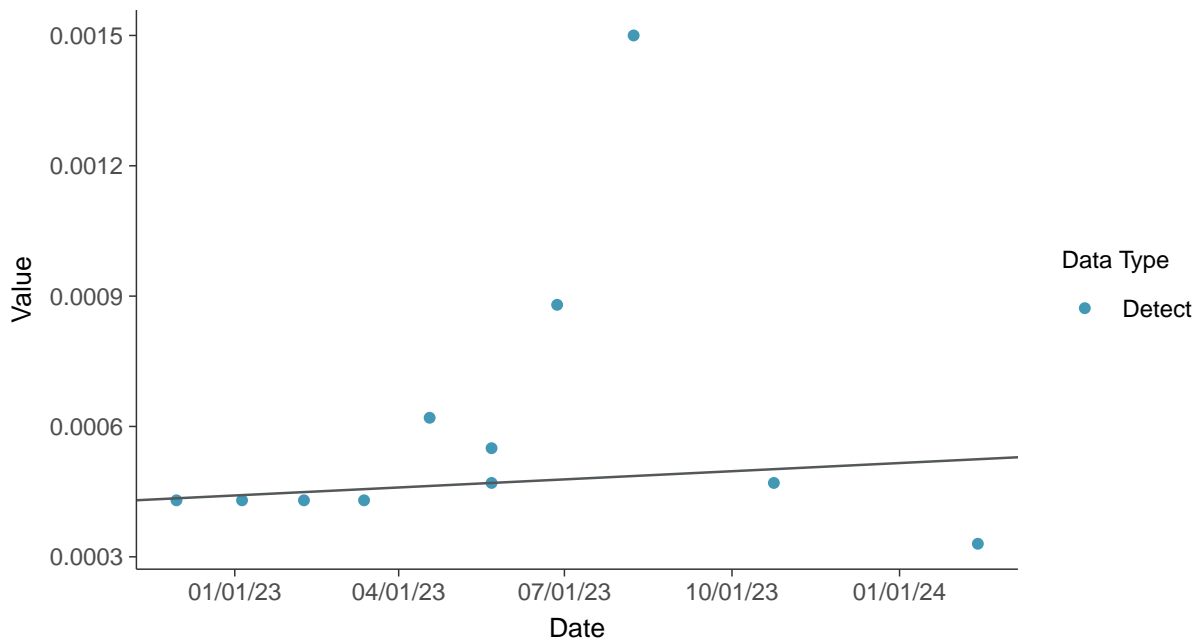
Normal Q-Q plot

Copper, MW-18 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

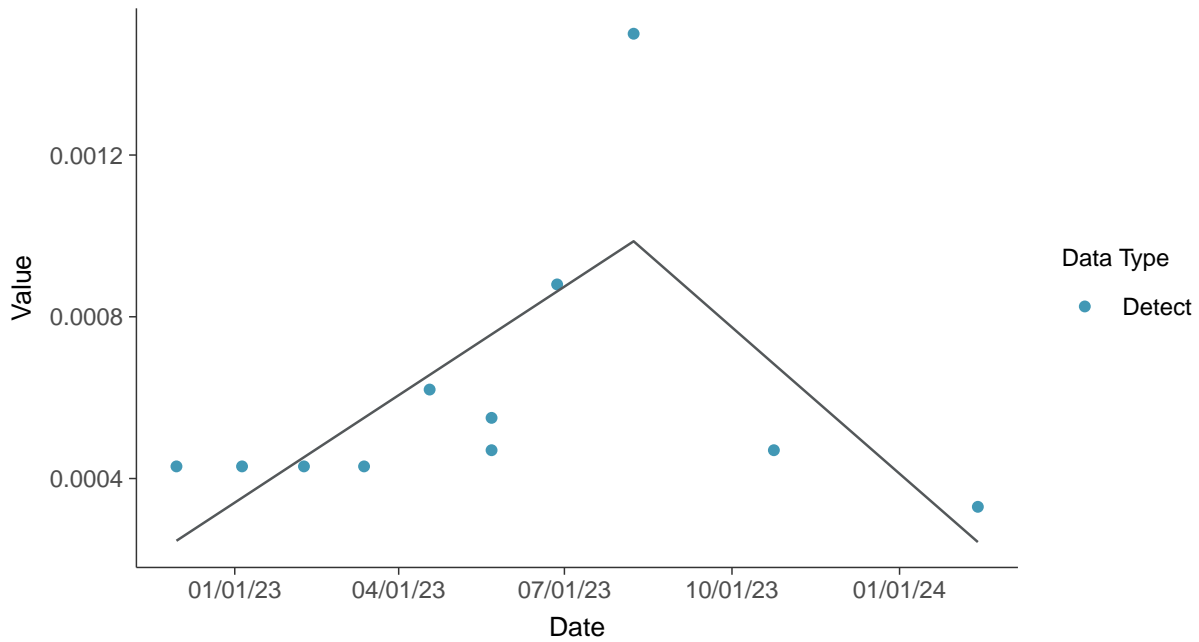
Copper, MW-18 (mg/L)





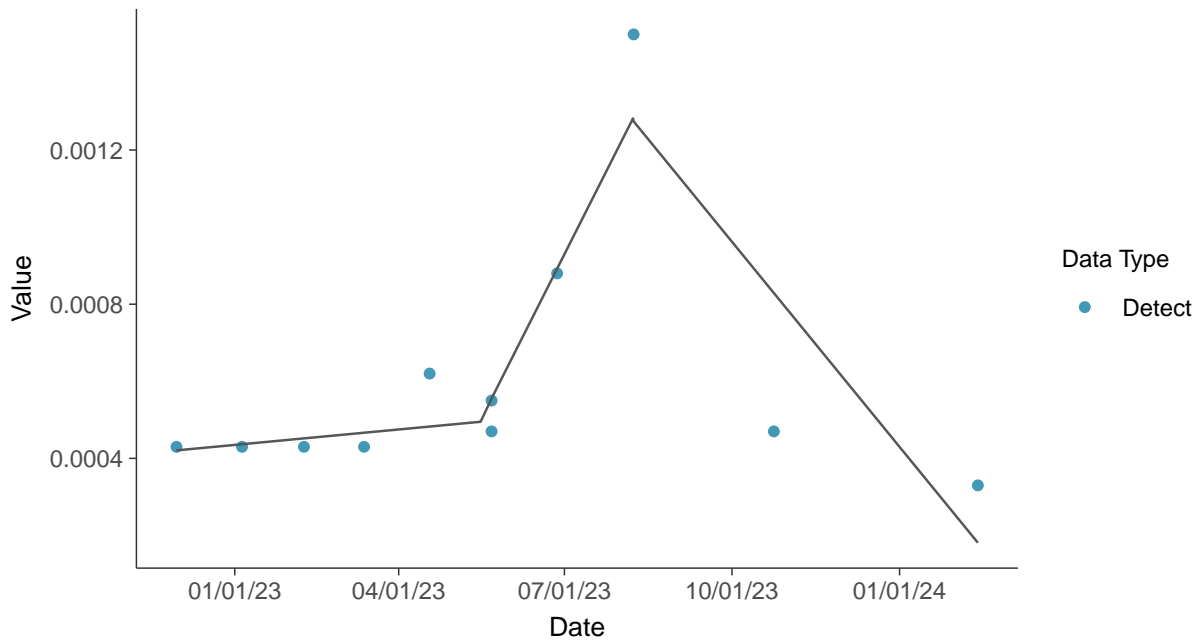
Trend Regression: Piecewise Linear-Linear

Copper, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-18 (mg/L)



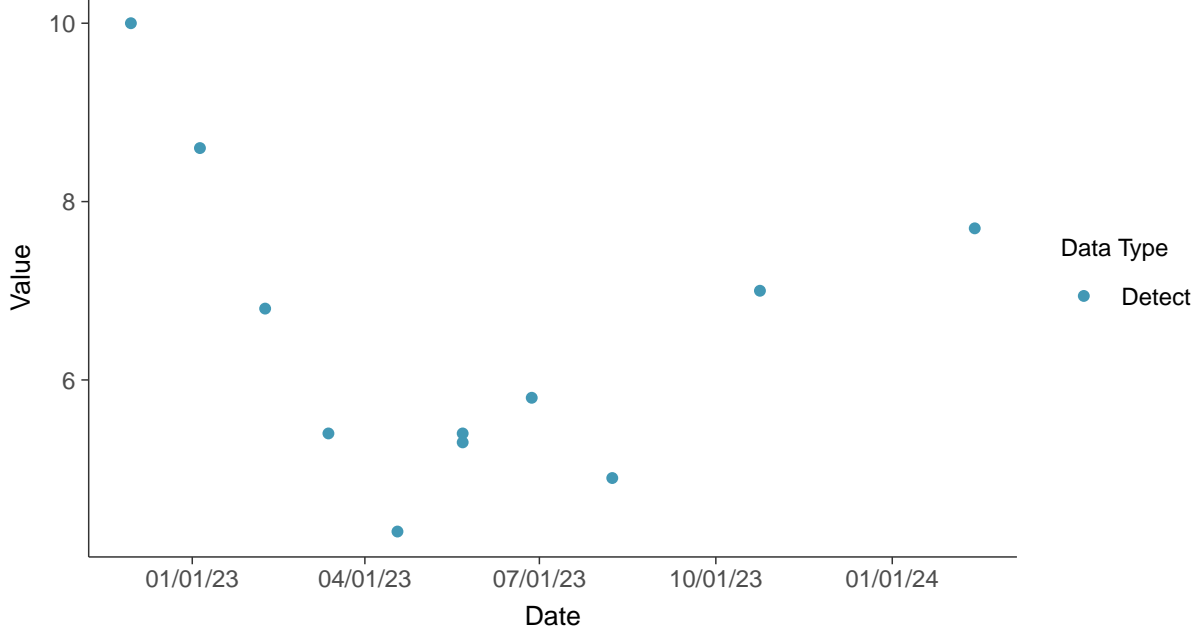


Part 115: Iron, MW-18

ID: 1_28_6_114

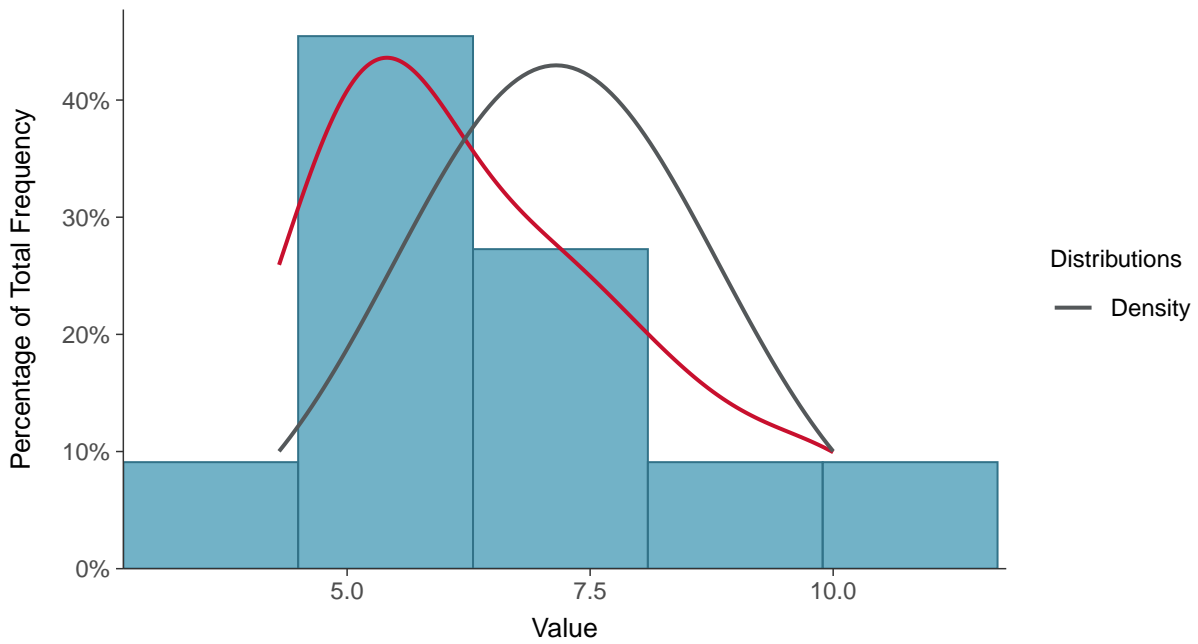
Scatter Plot

Iron, MW-18 (mg/L)



Histogram

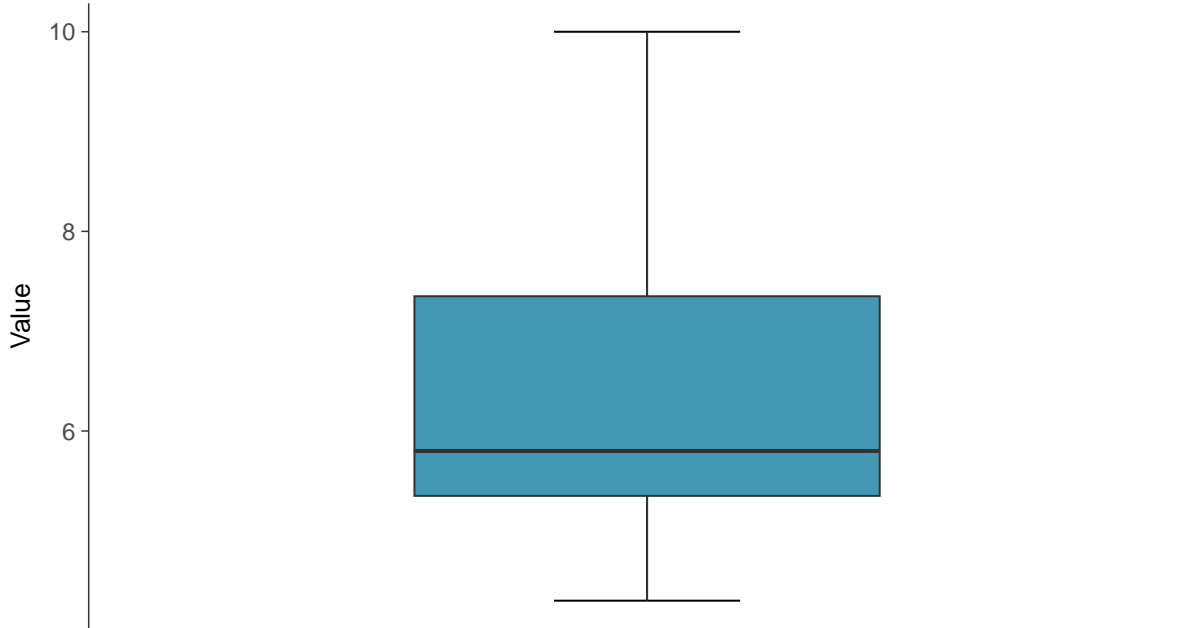
Iron, MW-18 (mg/L)





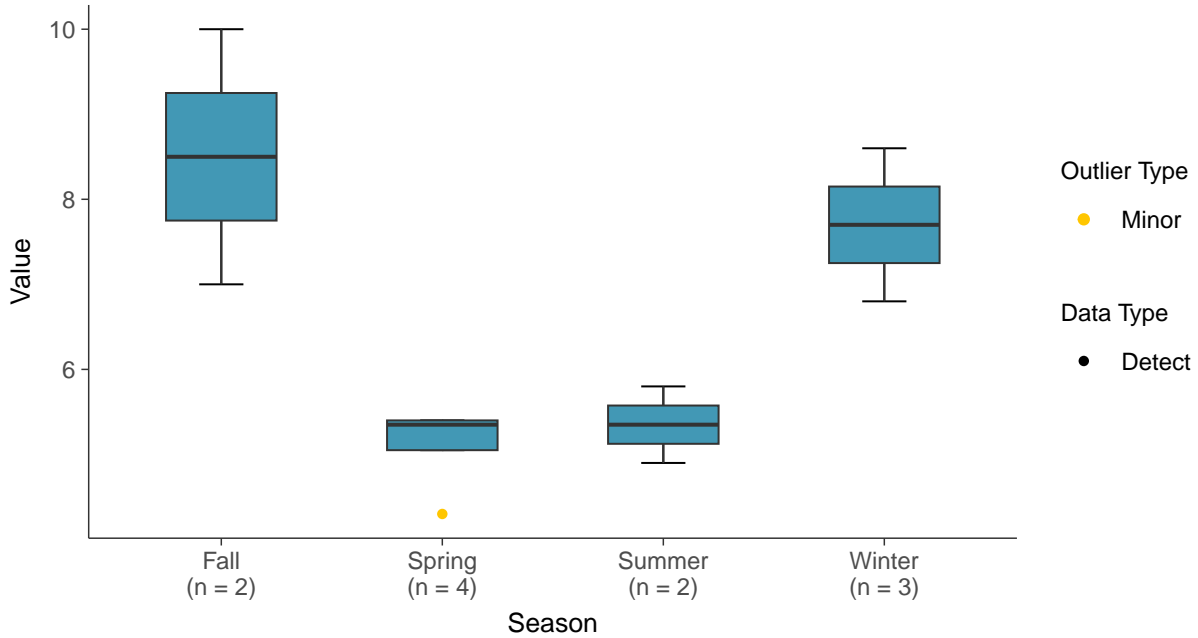
Boxplot

Iron, MW-18 (mg/L)



Boxplot by Season

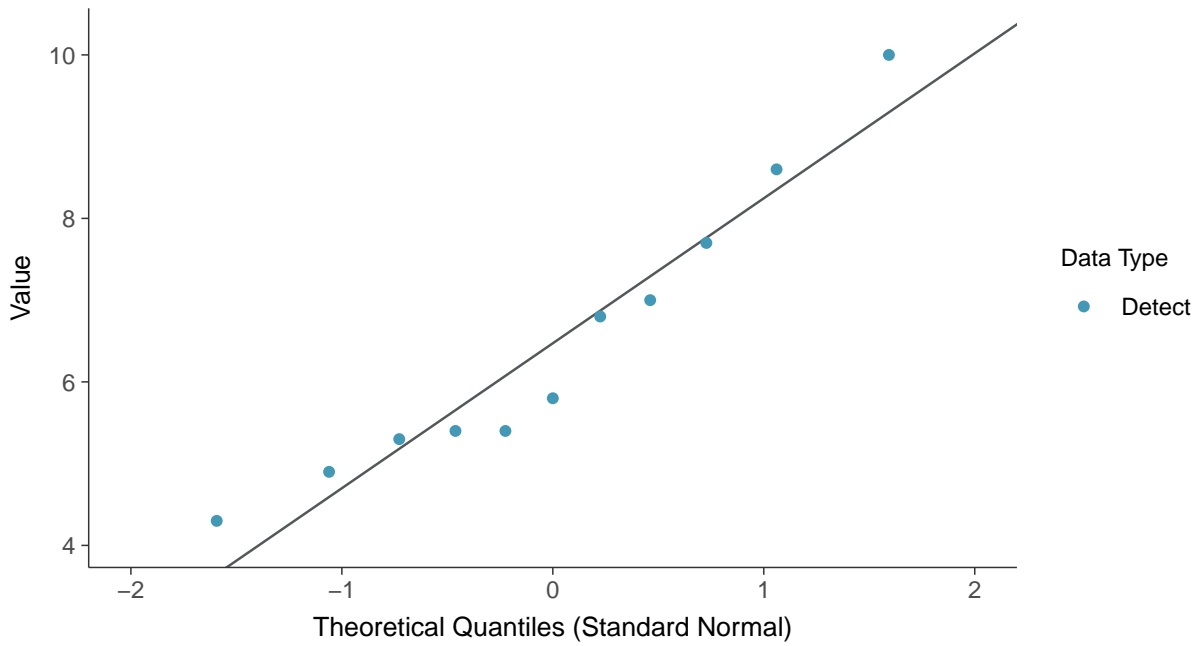
Iron, MW-18 (mg/L)





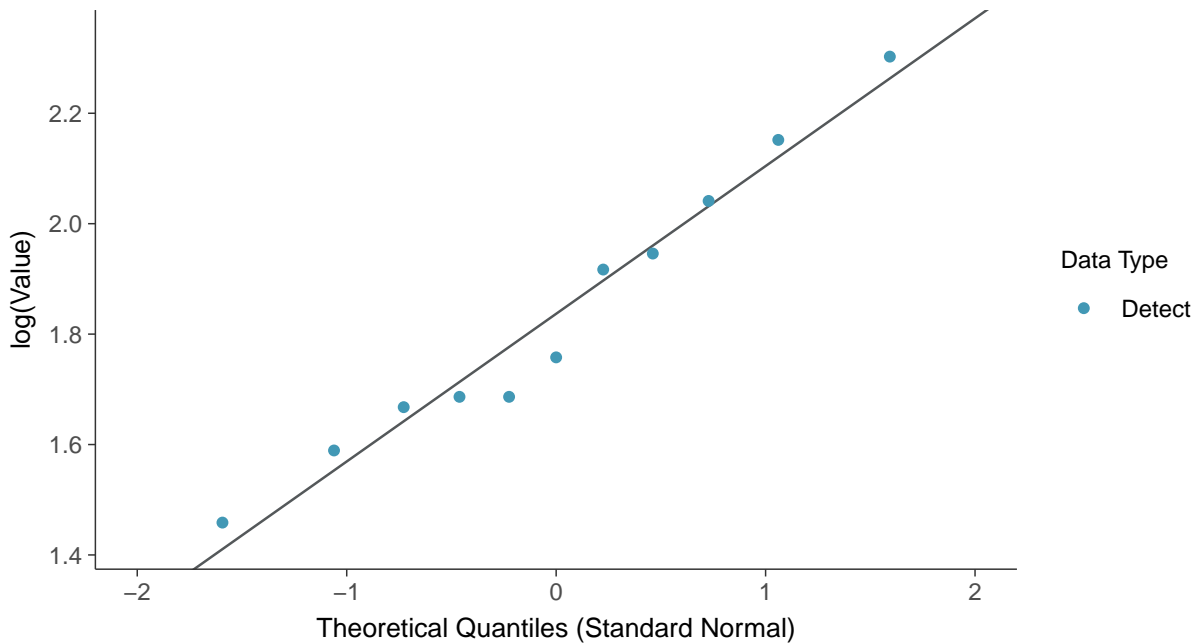
Normal Q-Q plot

Iron, MW-18 (mg/L)



Lognormal Q-Q plot

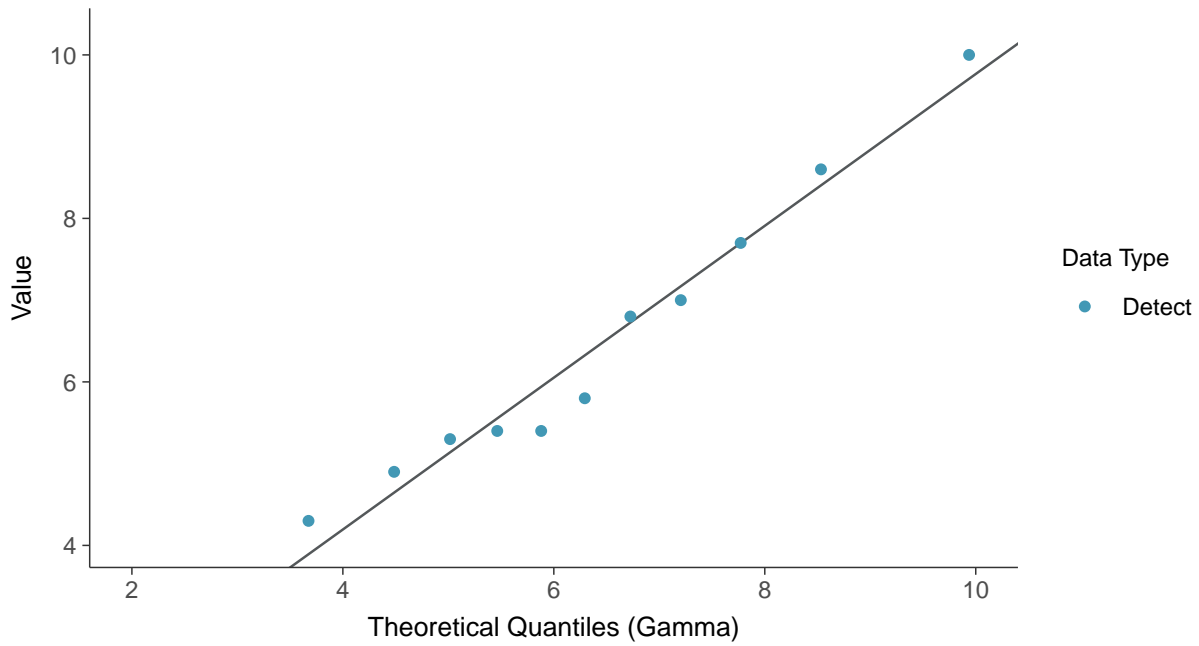
Iron, MW-18 (mg/L)





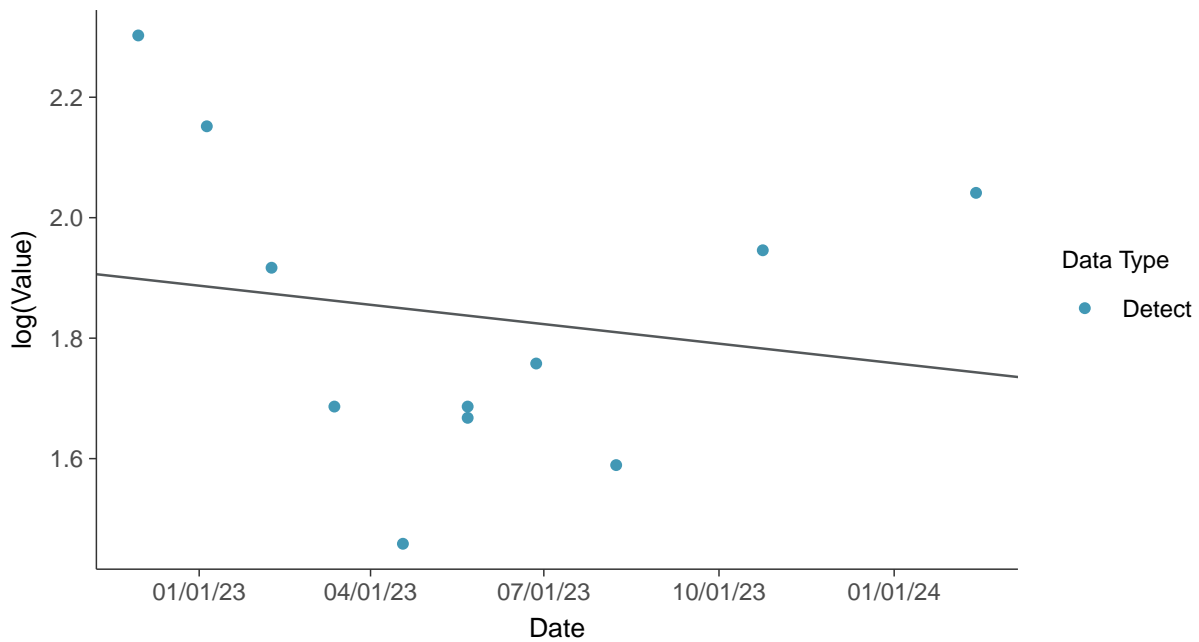
Gamma Q-Q plot

Iron, MW-18 (mg/L)



Trend Regression: Lognormal MLE

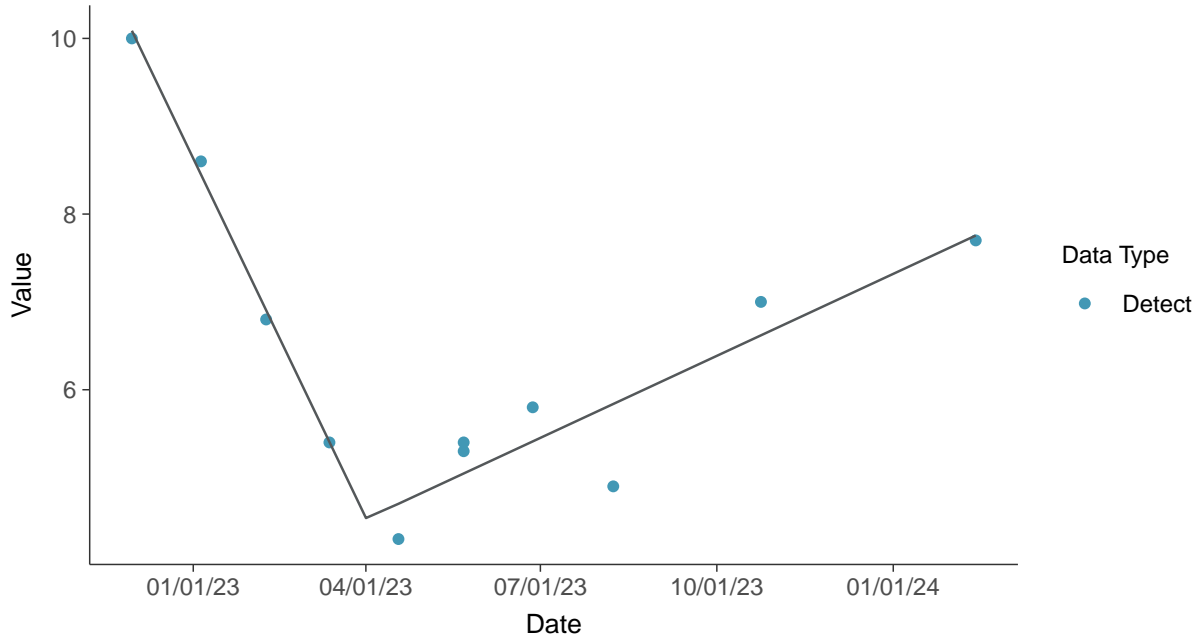
Iron, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear

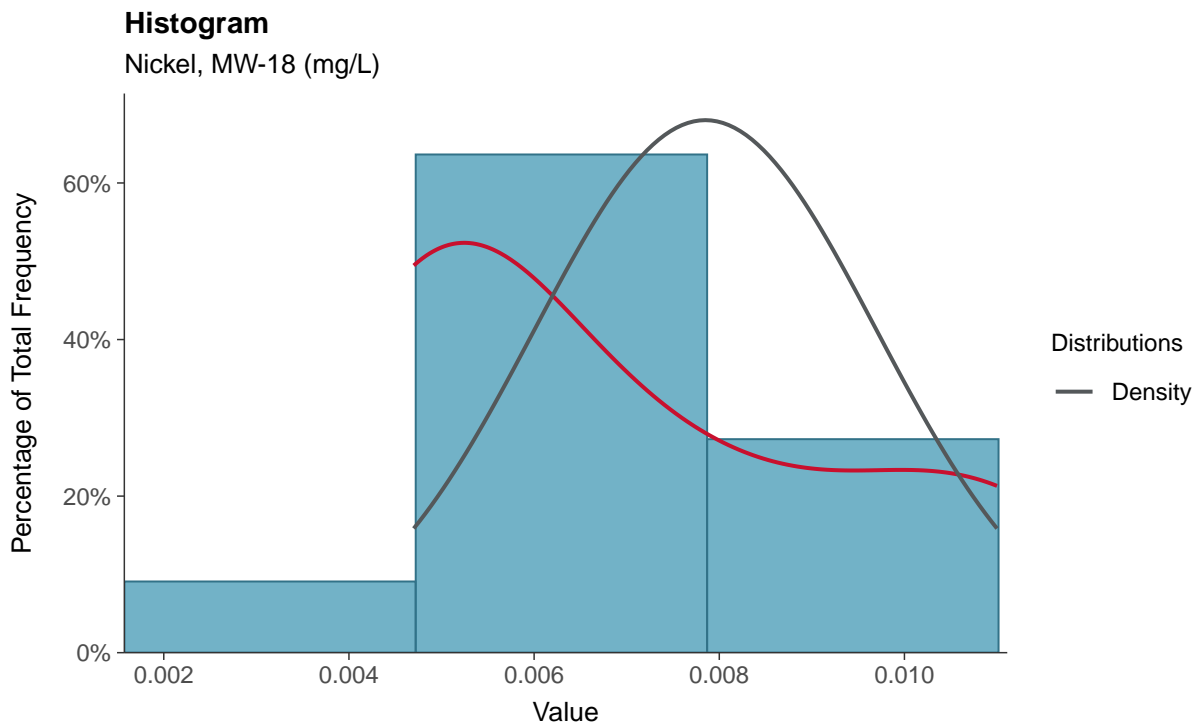
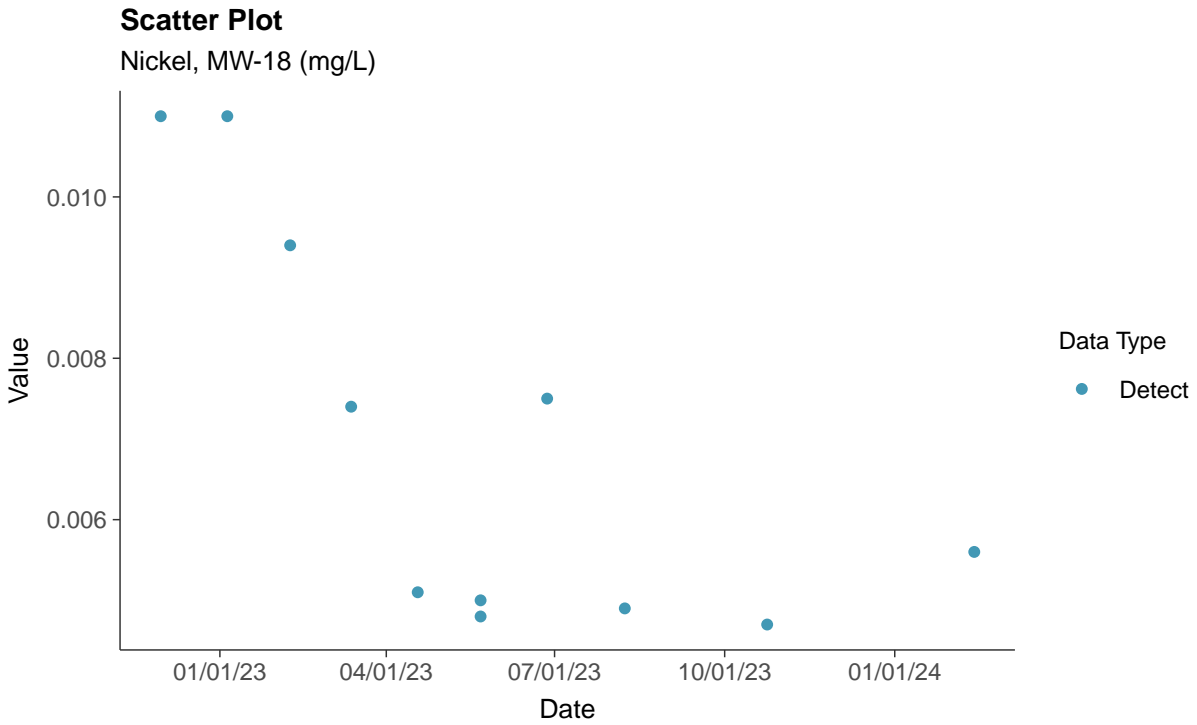
Iron, MW-18 (mg/L)





Part 115: Nickel, MW-18

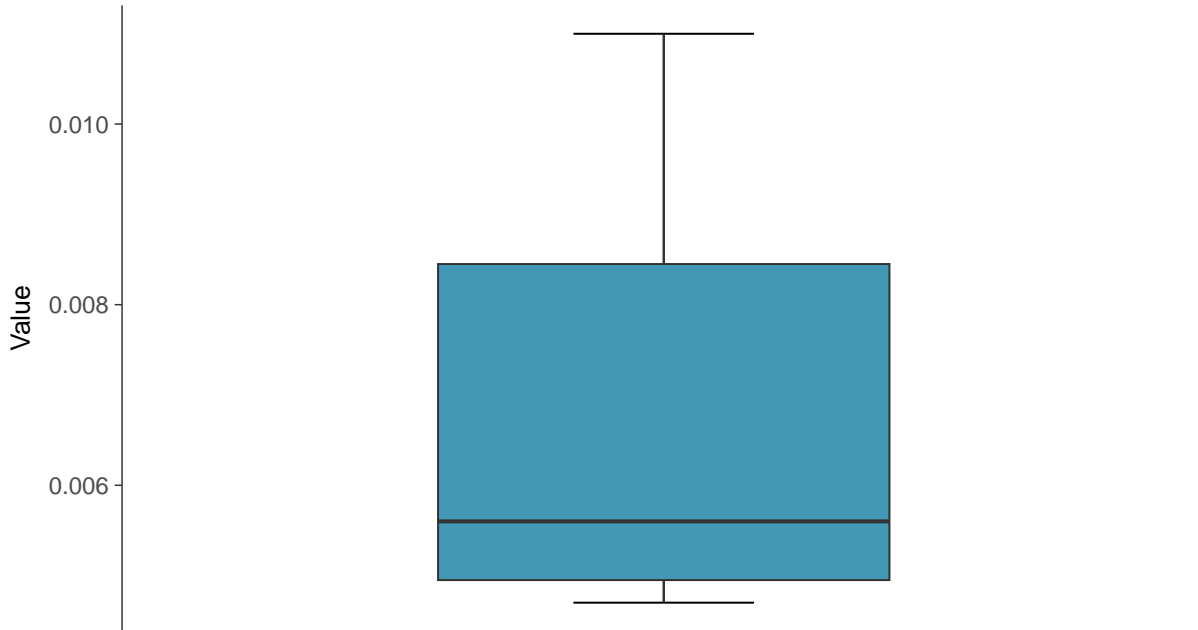
ID: 1_28_6_119





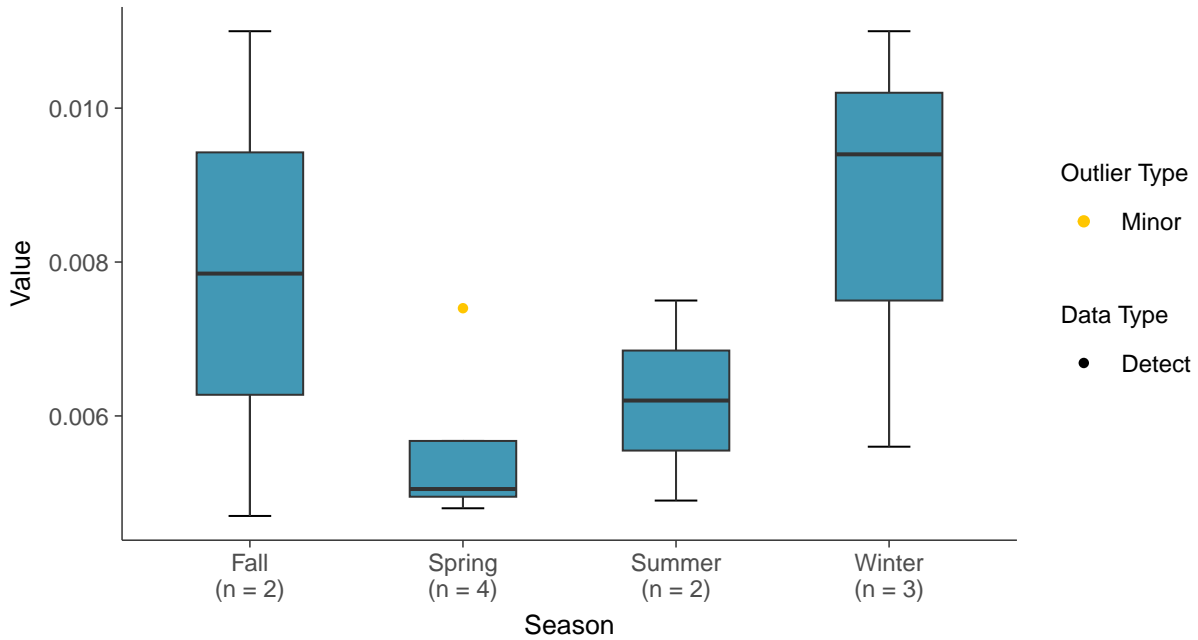
Boxplot

Nickel, MW-18 (mg/L)



Boxplot by Season

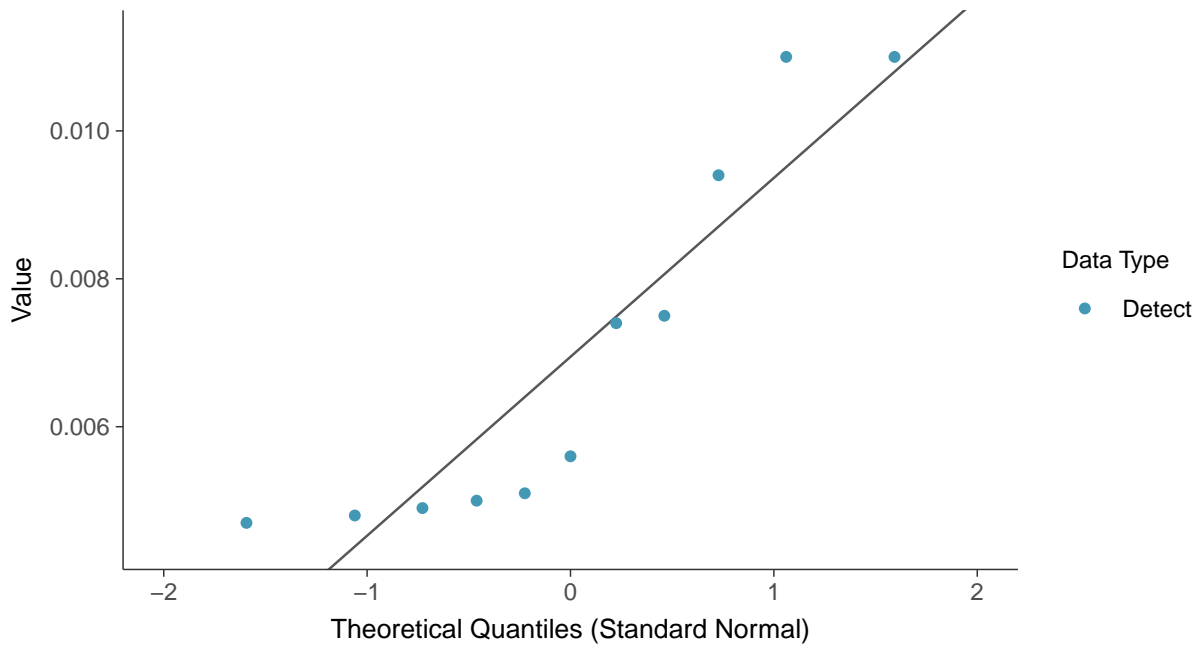
Nickel, MW-18 (mg/L)





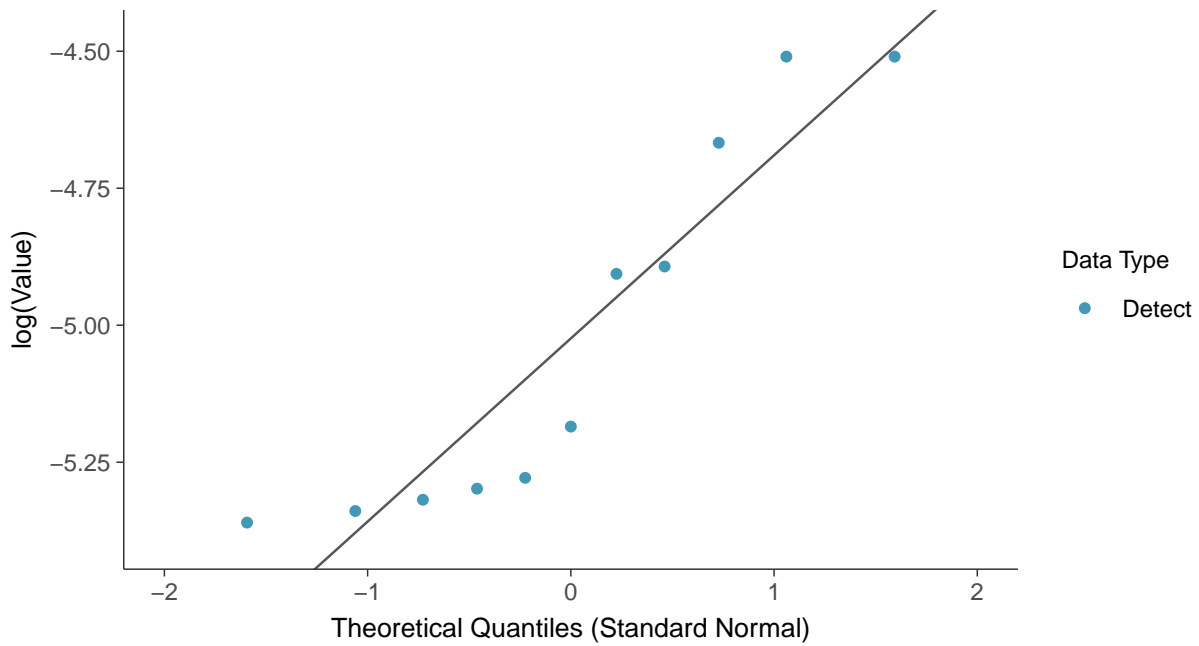
Normal Q-Q plot

Nickel, MW-18 (mg/L)



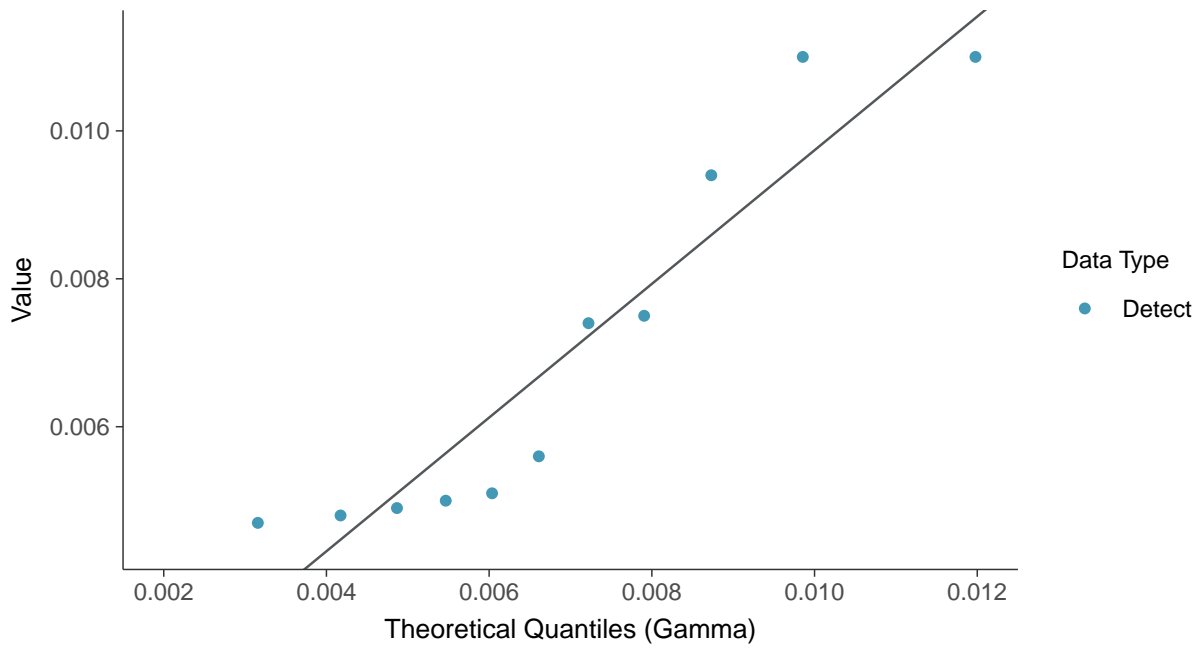
Lognormal Q-Q plot

Nickel, MW-18 (mg/L)

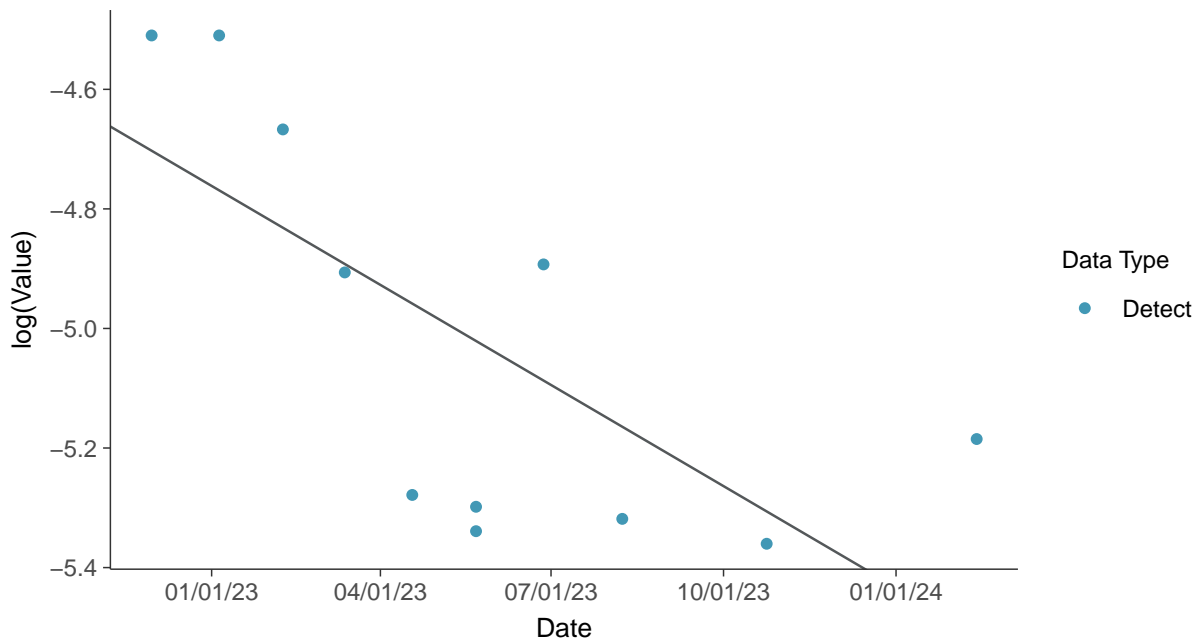




Gamma Q-Q plot
Nickel, MW-18 (mg/L)



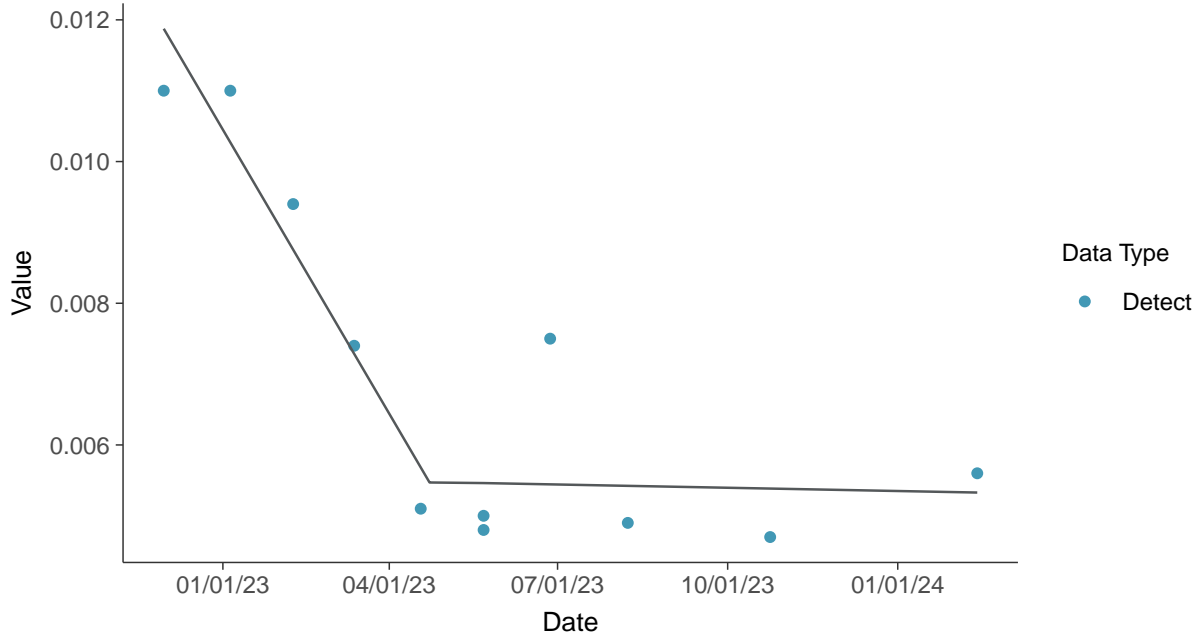
Trend Regression: Lognormal MLE
Nickel, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear

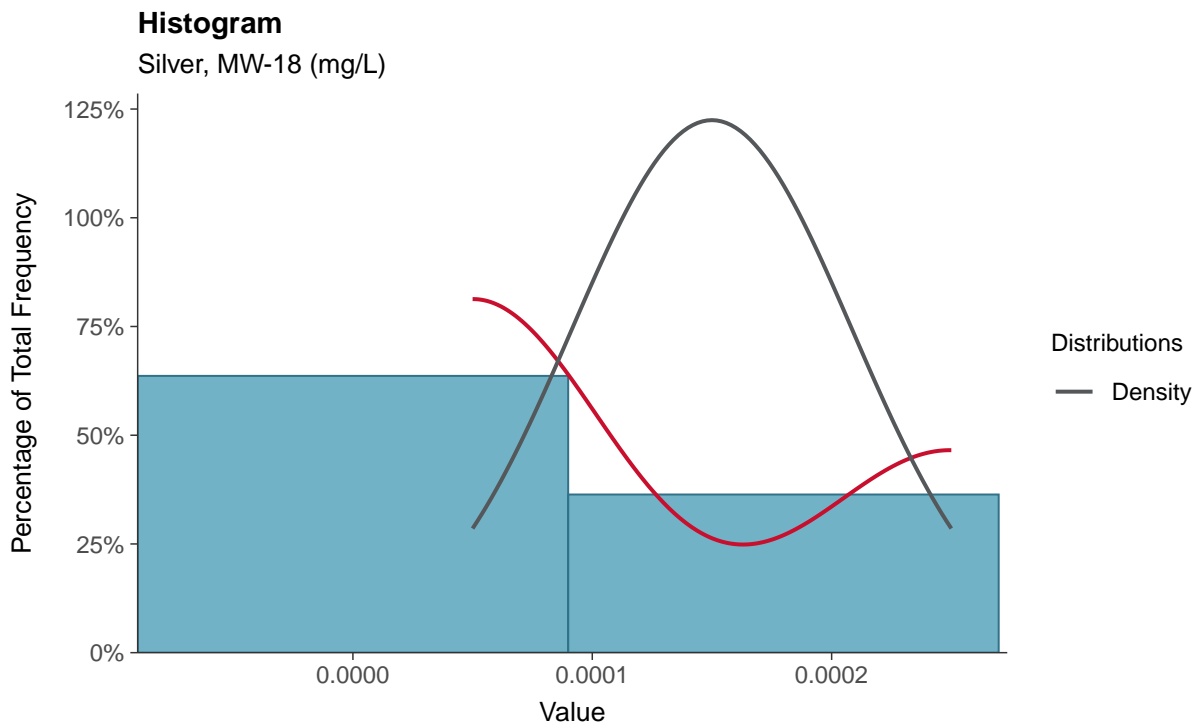
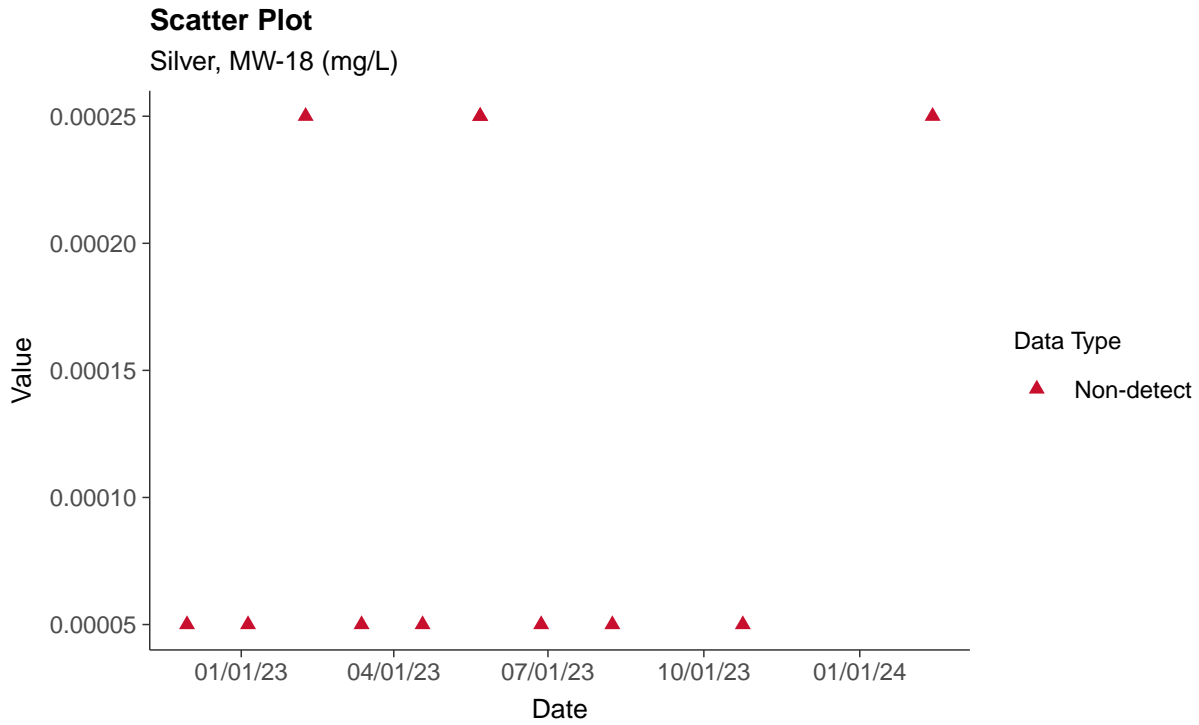
Nickel, MW-18 (mg/L)





Part 115: Silver, MW-18

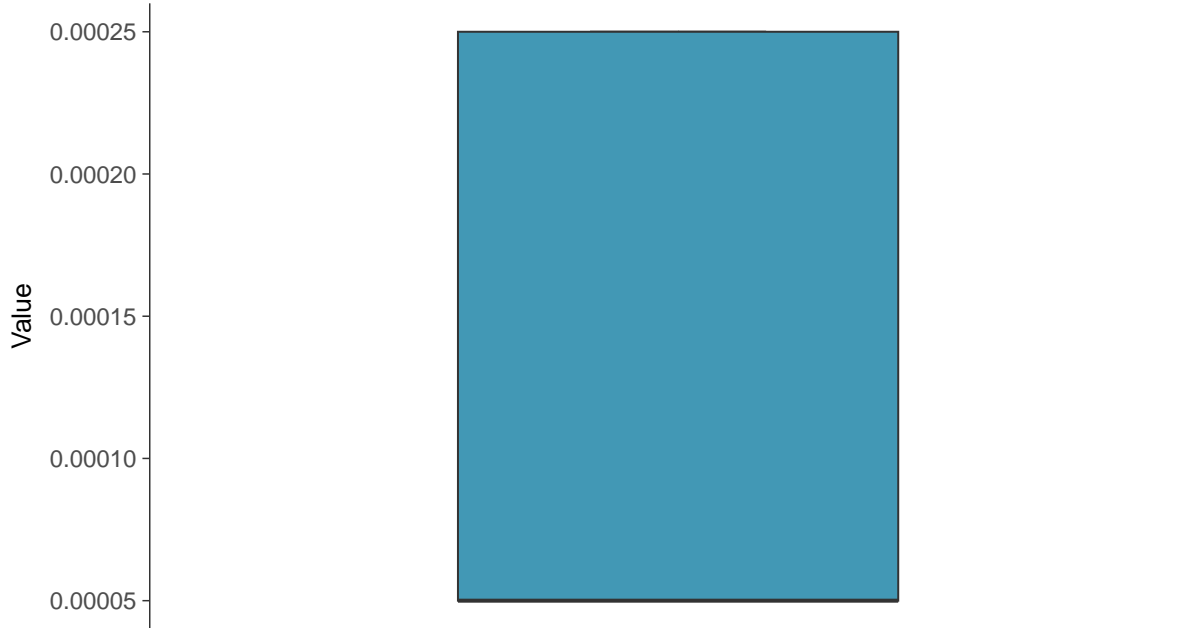
ID: 1_28_6_123





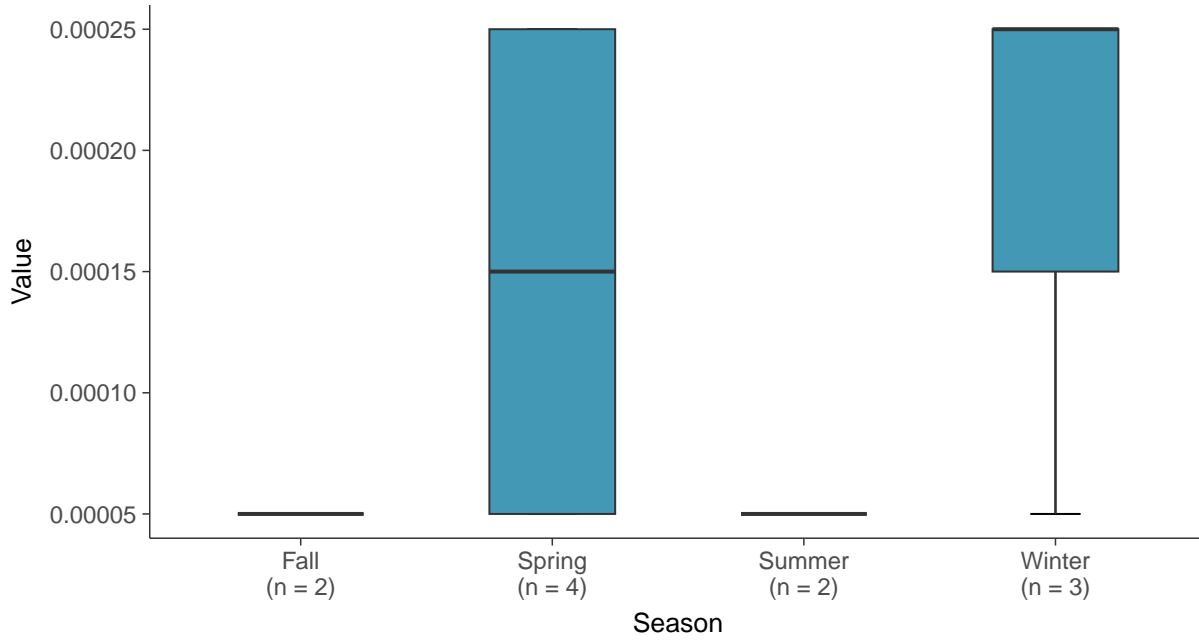
Boxplot

Silver, MW-18 (mg/L)



Boxplot by Season

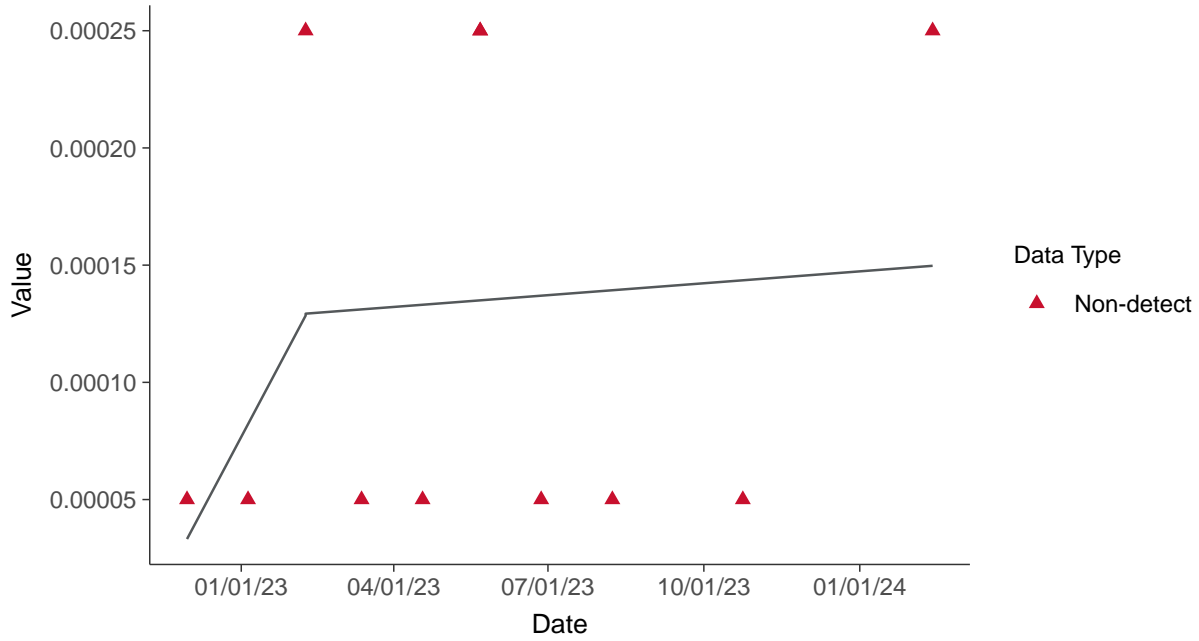
Silver, MW-18 (mg/L)





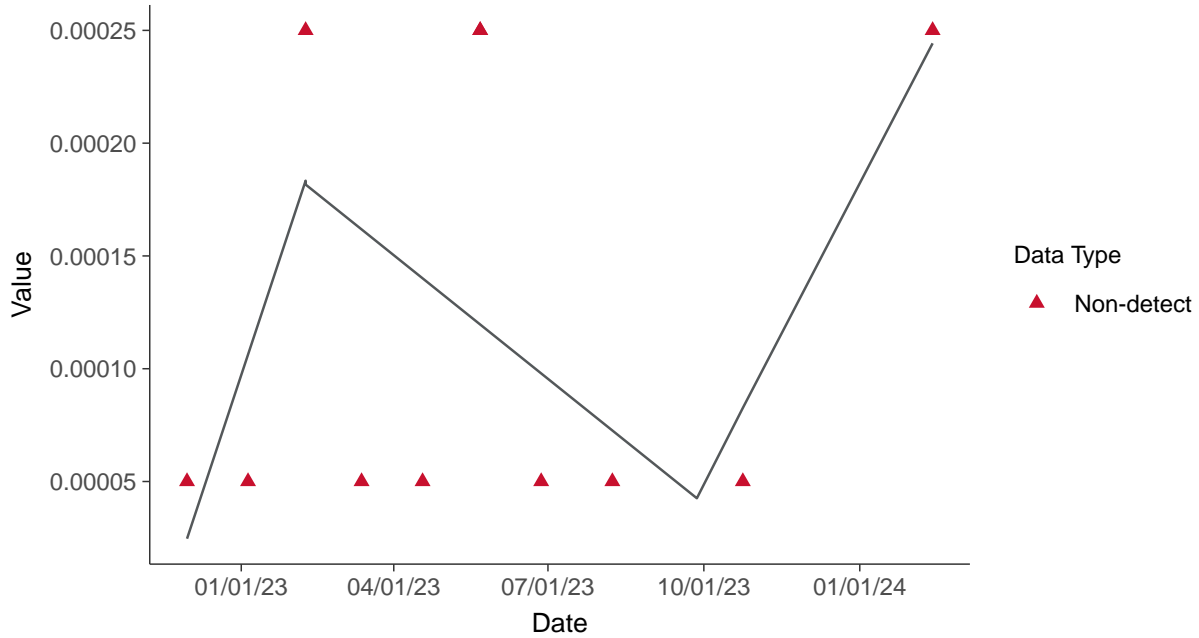
Trend Regression: Piecewise Linear-Linear

Silver, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-18 (mg/L)



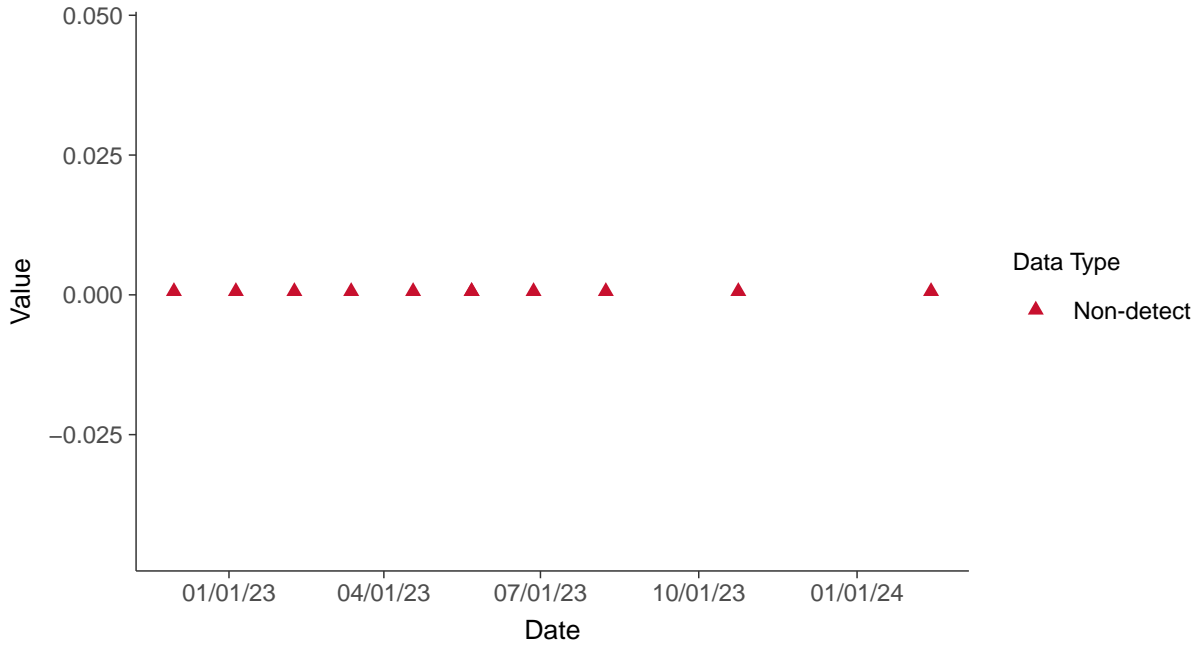


Part 115: Vanadium, MW-18

ID: 1_28_6_129

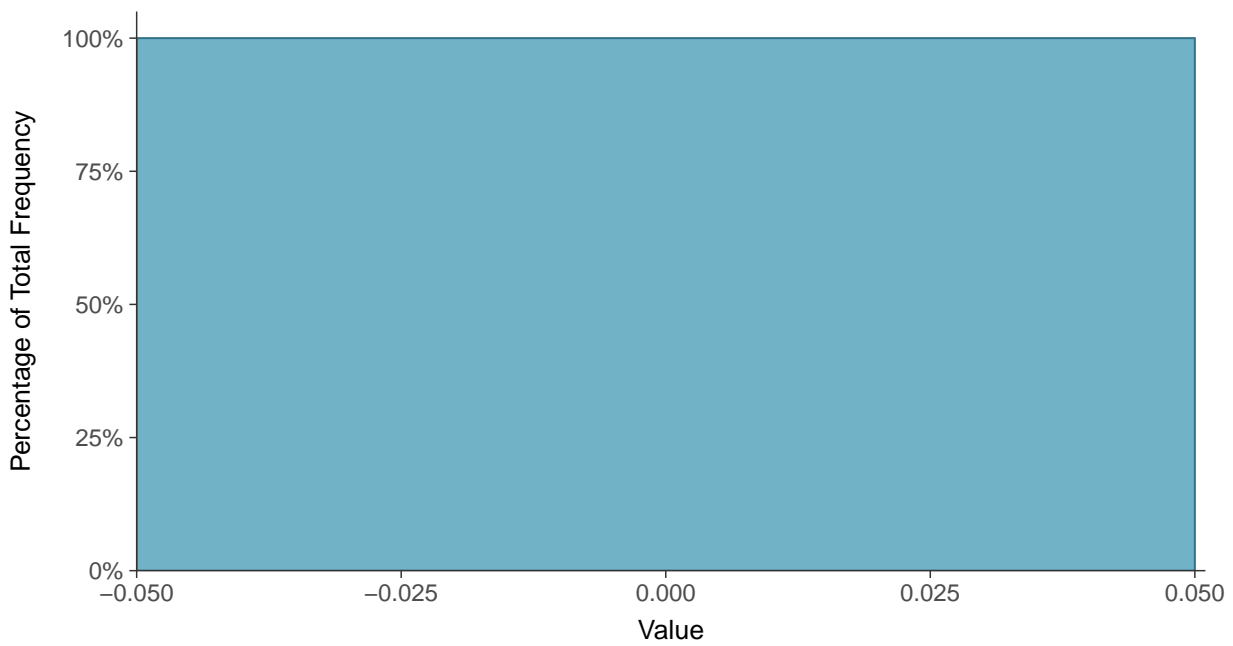
Scatter Plot

Vanadium, MW-18 (mg/L)



Histogram

Vanadium, MW-18 (mg/L)





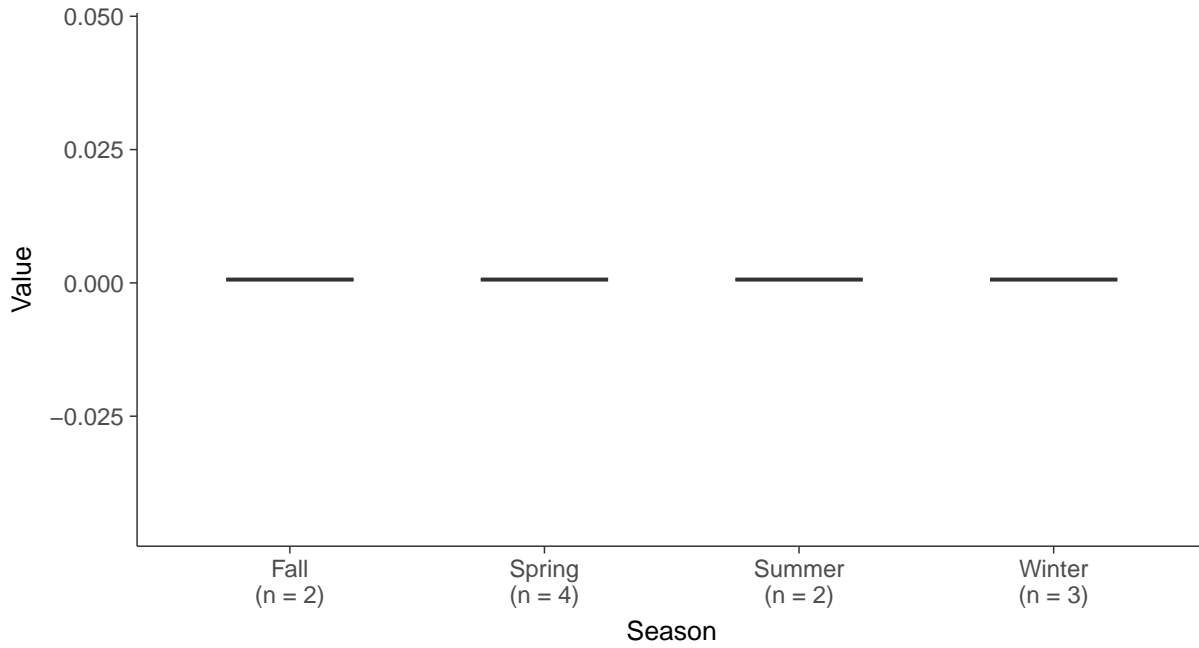
Boxplot

Vanadium, MW-18 (mg/L)



Boxplot by Season

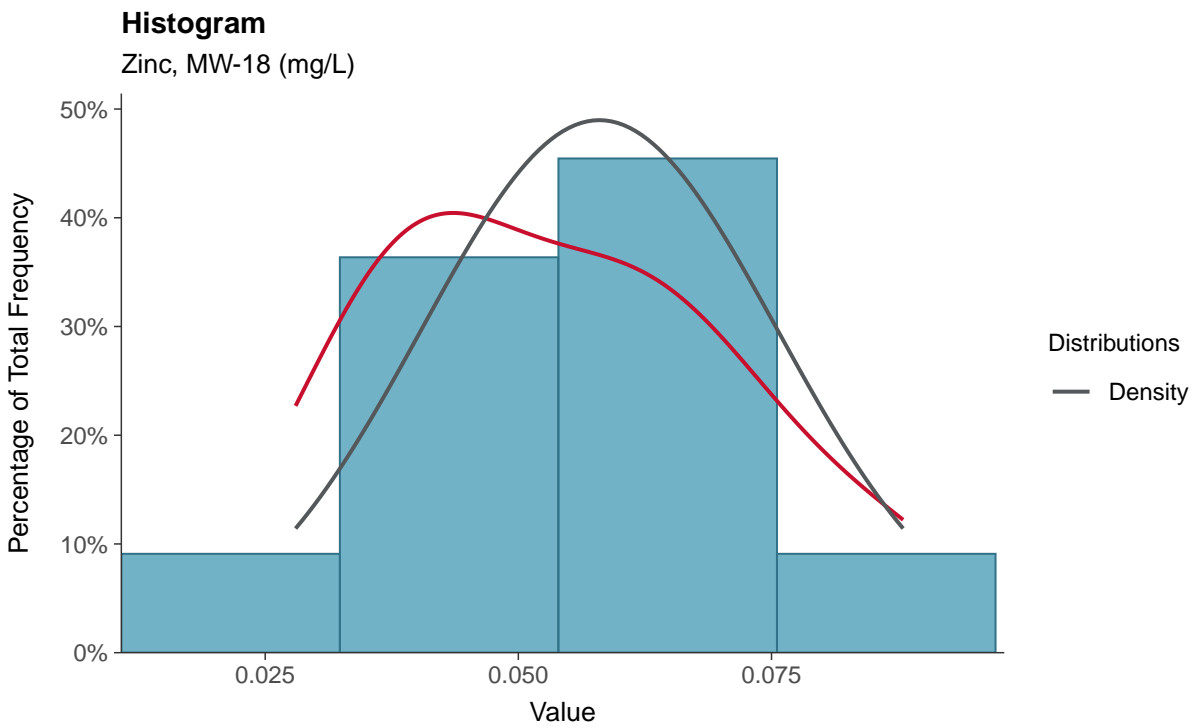
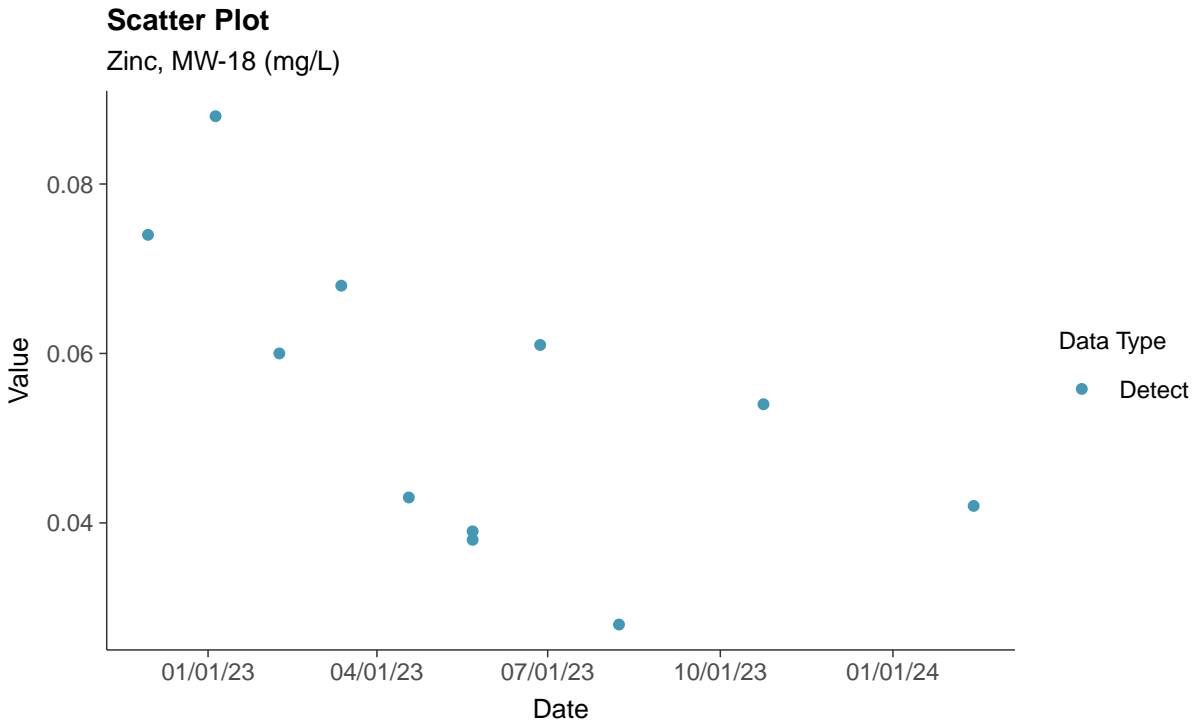
Vanadium, MW-18 (mg/L)





Part 115: Zinc, MW-18

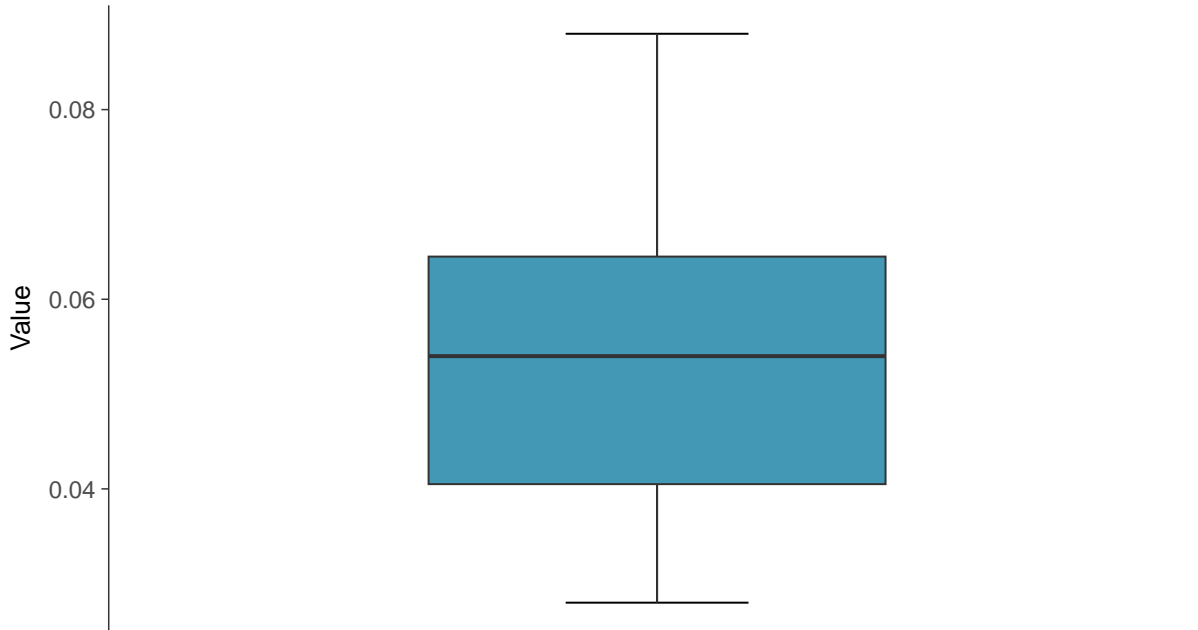
ID: 1_28_6_130





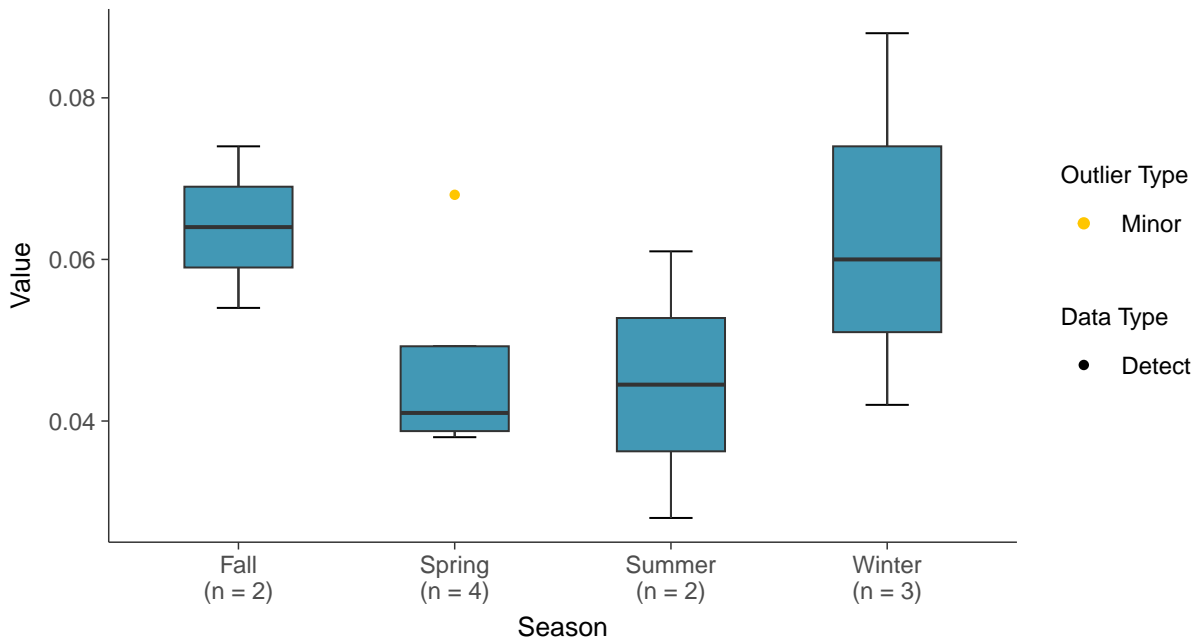
Boxplot

Zinc, MW-18 (mg/L)



Boxplot by Season

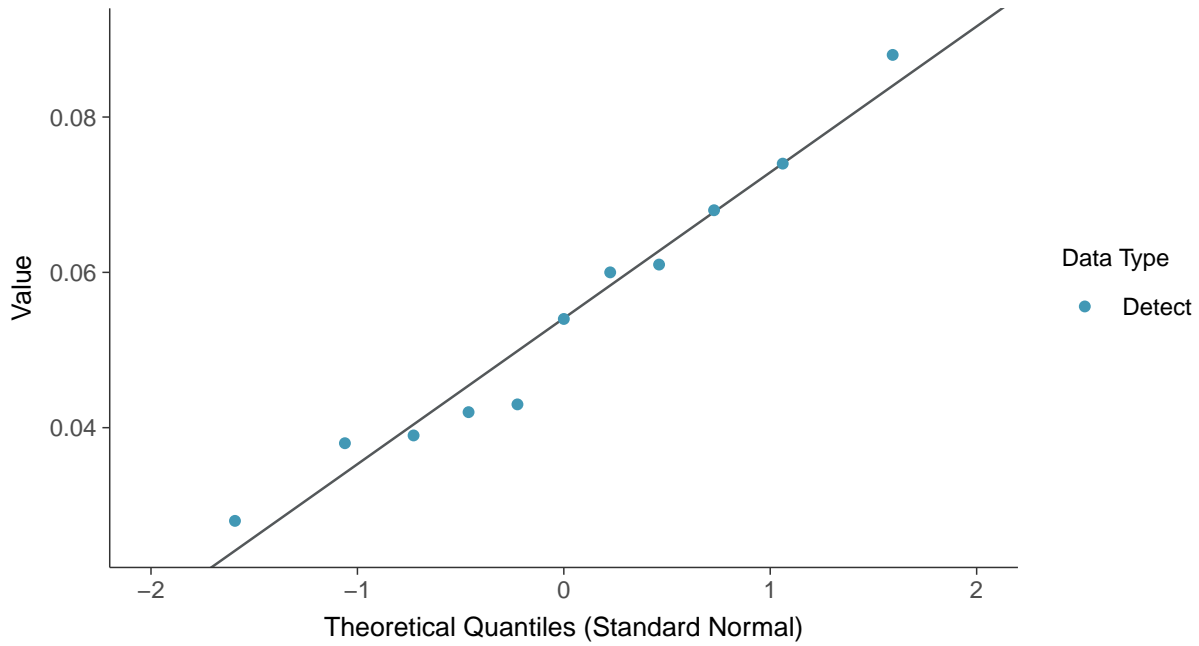
Zinc, MW-18 (mg/L)





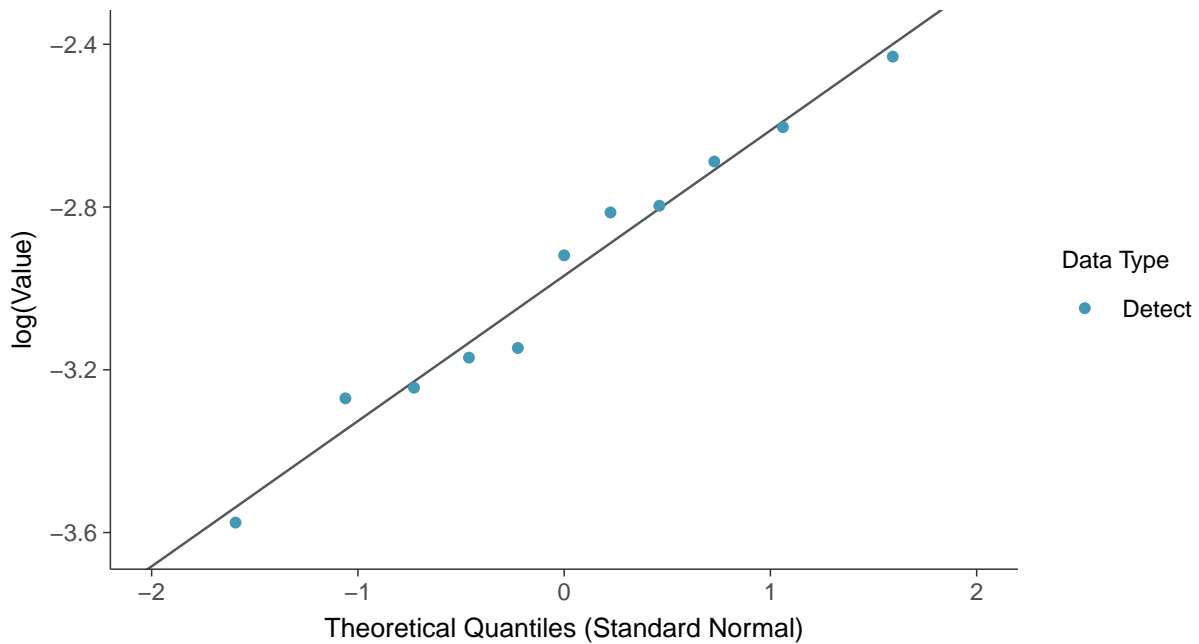
Normal Q-Q plot

Zinc, MW-18 (mg/L)



Lognormal Q-Q plot

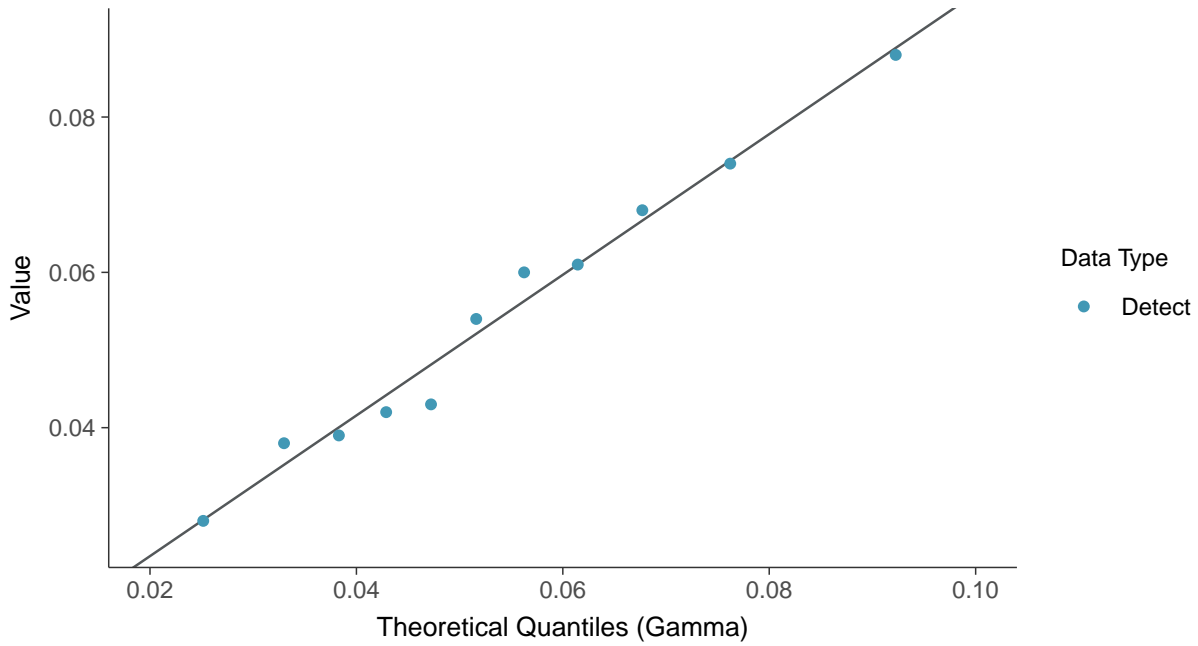
Zinc, MW-18 (mg/L)





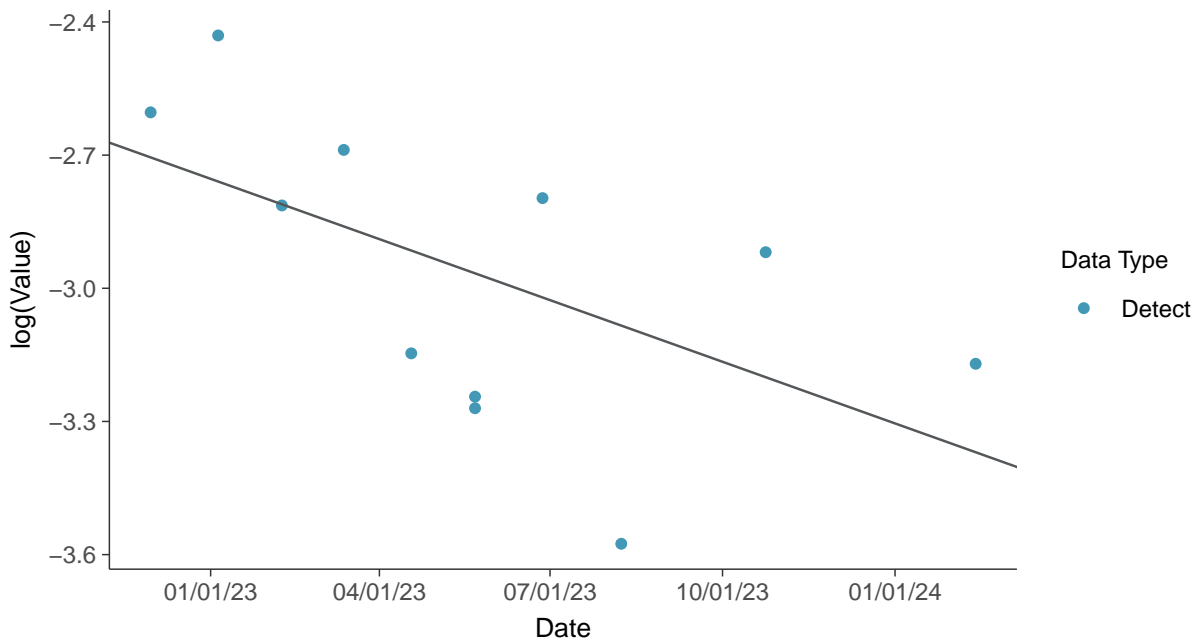
Gamma Q-Q plot

Zinc, MW-18 (mg/L)



Trend Regression: Lognormal MLE

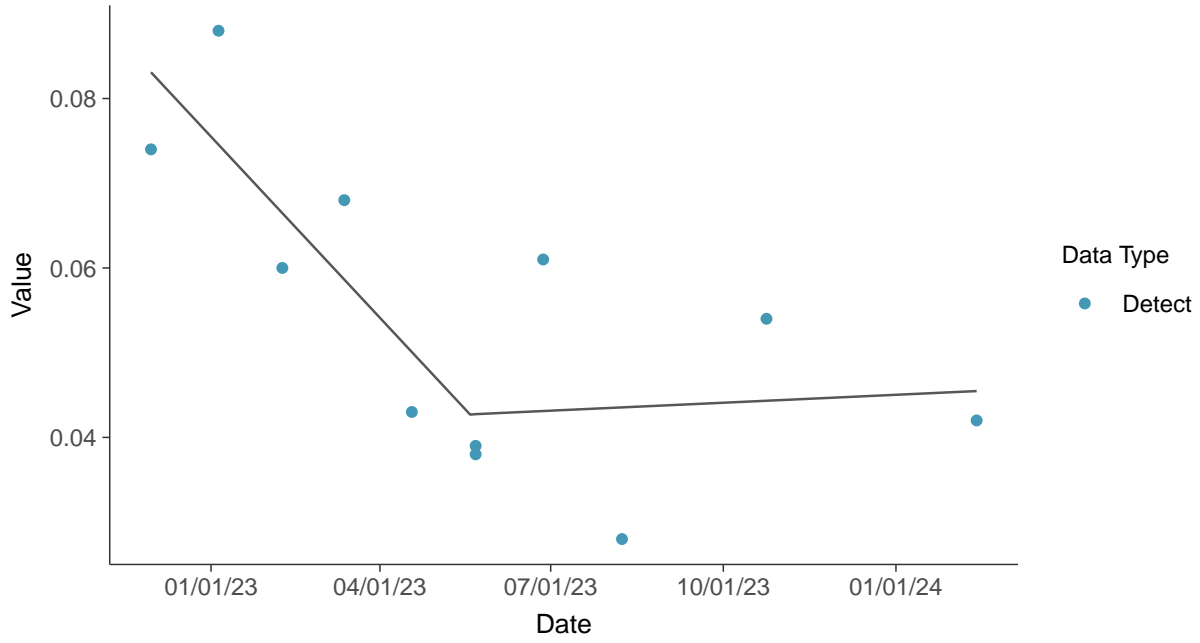
Zinc, MW-18 (mg/L)





Trend Regression: Piecewise Linear-Linear

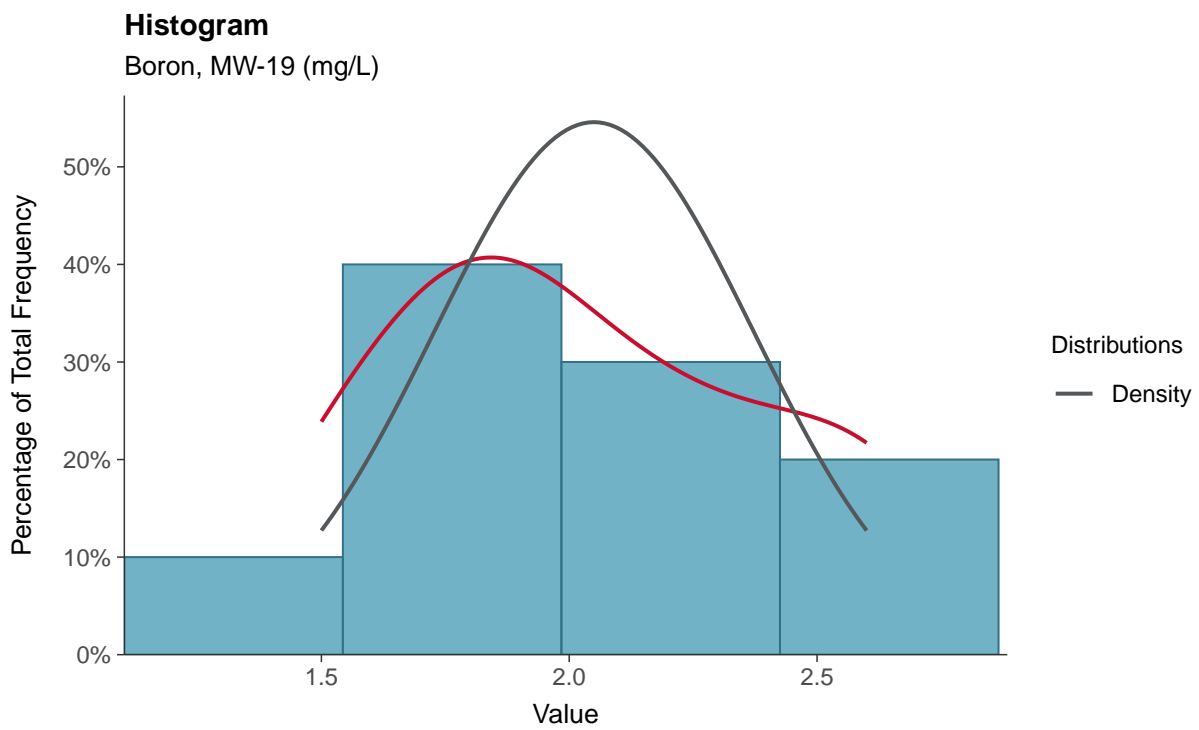
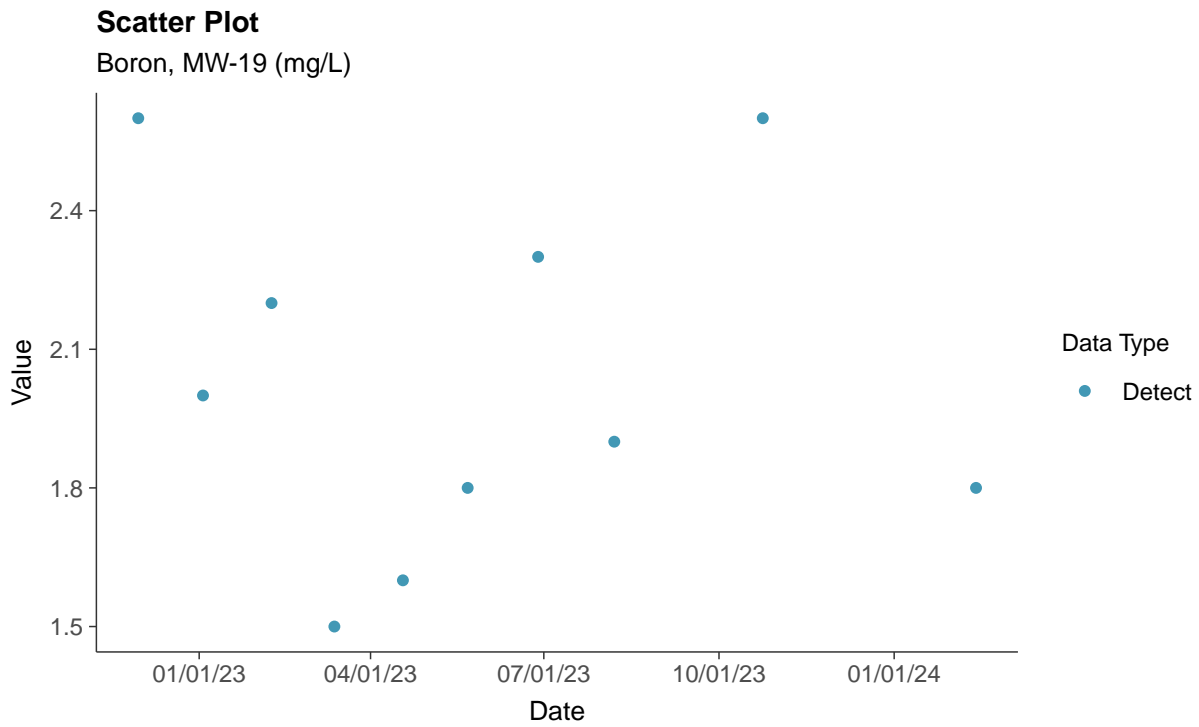
Zinc, MW-18 (mg/L)





Appendix III: Boron, MW-19

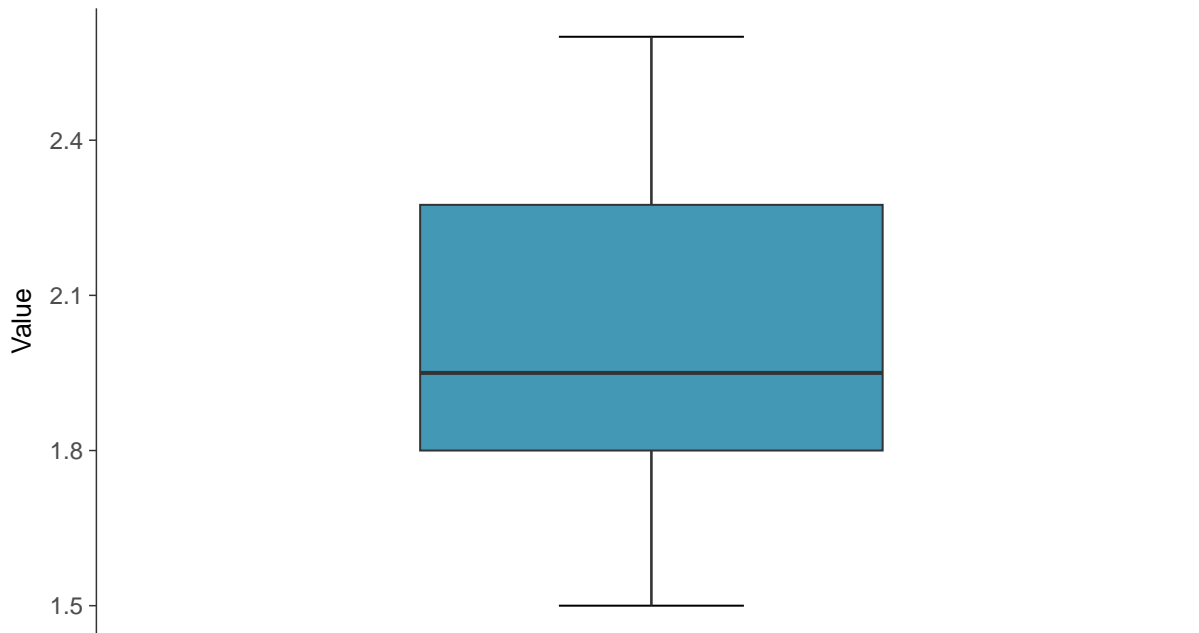
ID: 1_29_4_105





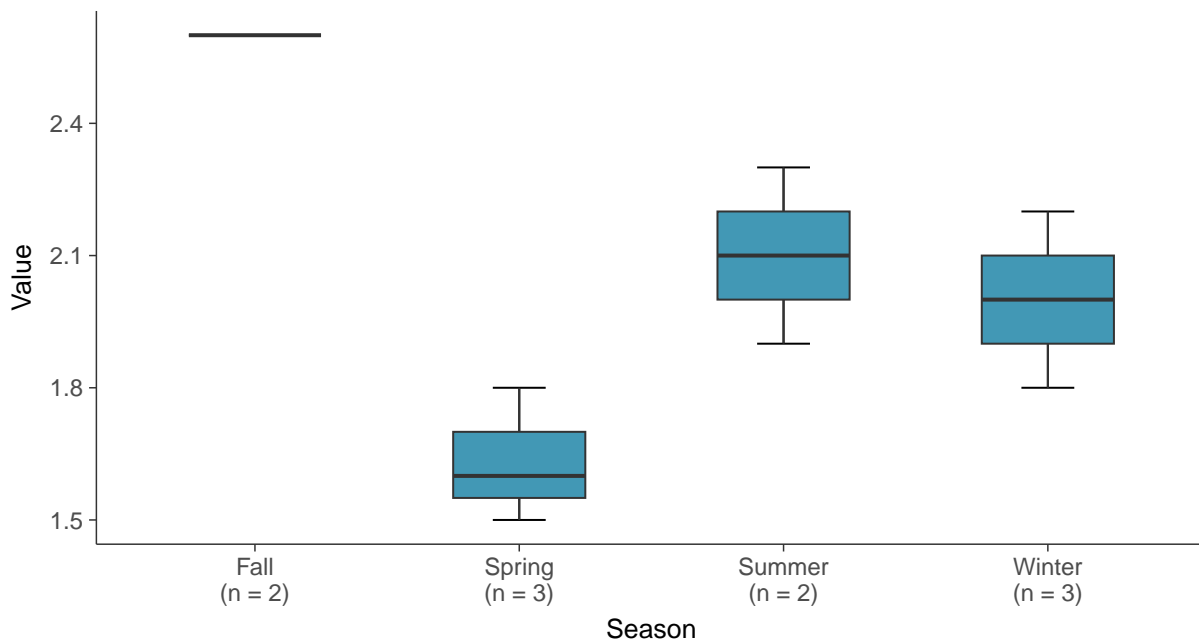
Boxplot

Boron, MW-19 (mg/L)



Boxplot by Season

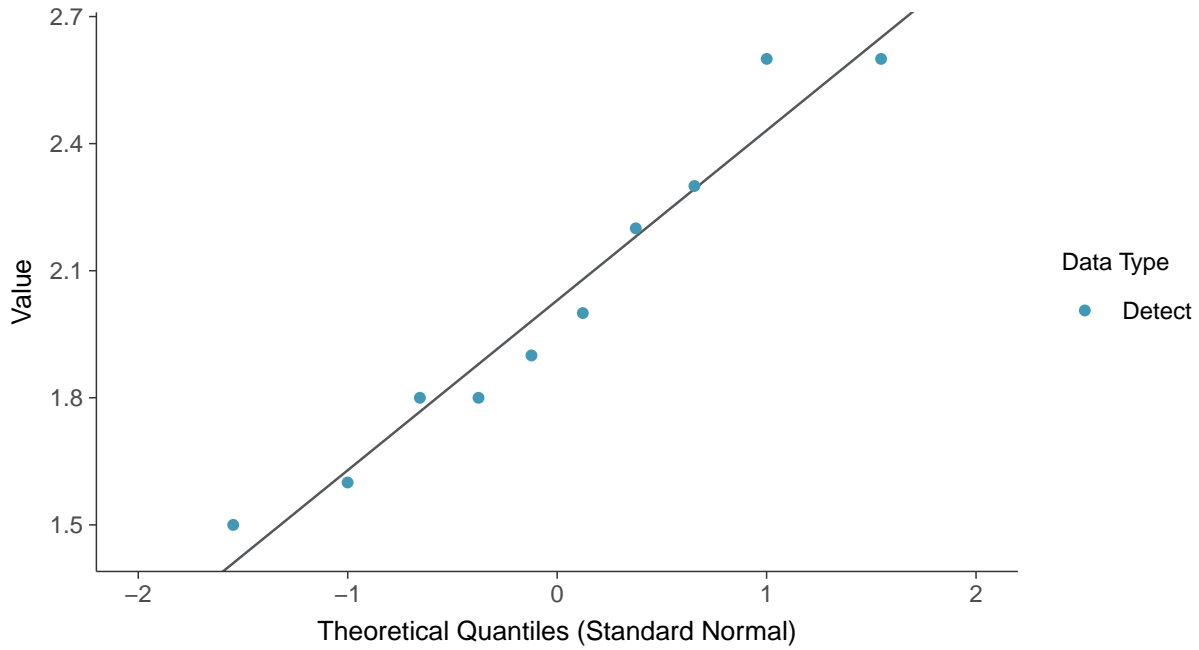
Boron, MW-19 (mg/L)





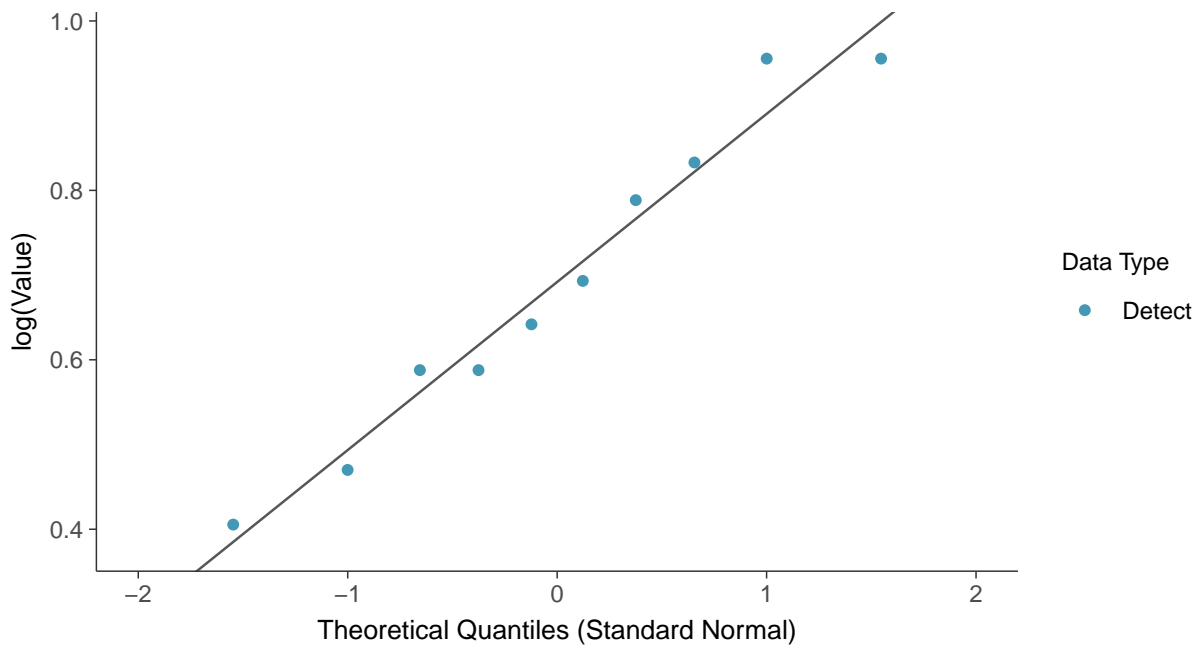
Normal Q-Q plot

Boron, MW-19 (mg/L)



Lognormal Q-Q plot

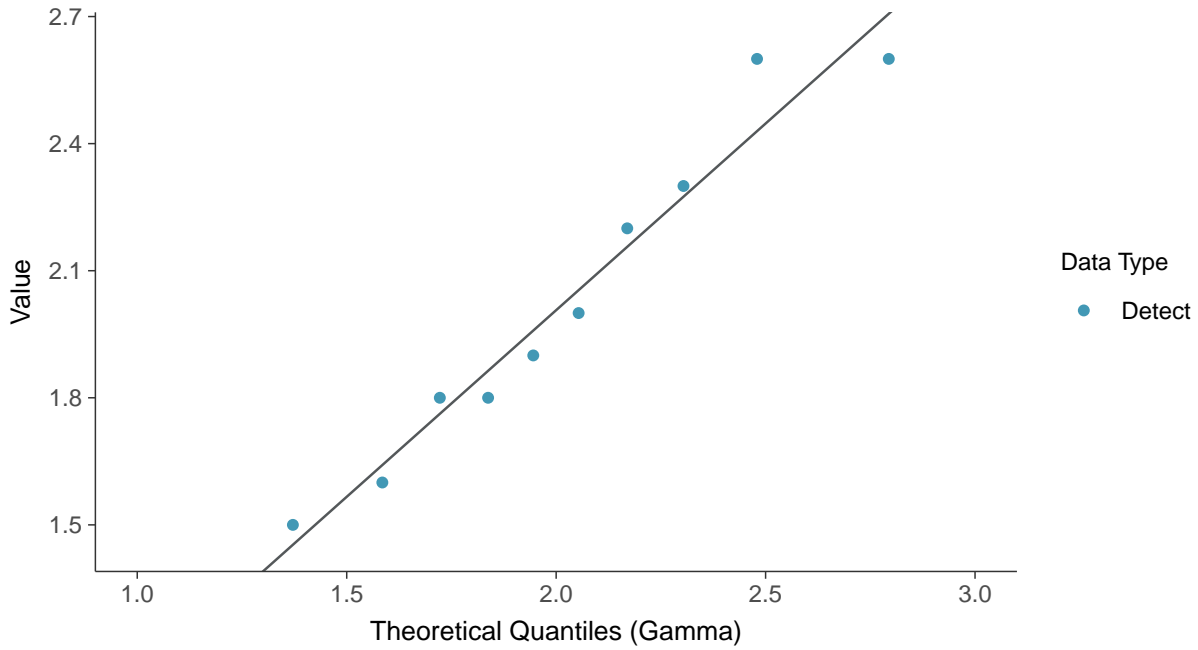
Boron, MW-19 (mg/L)





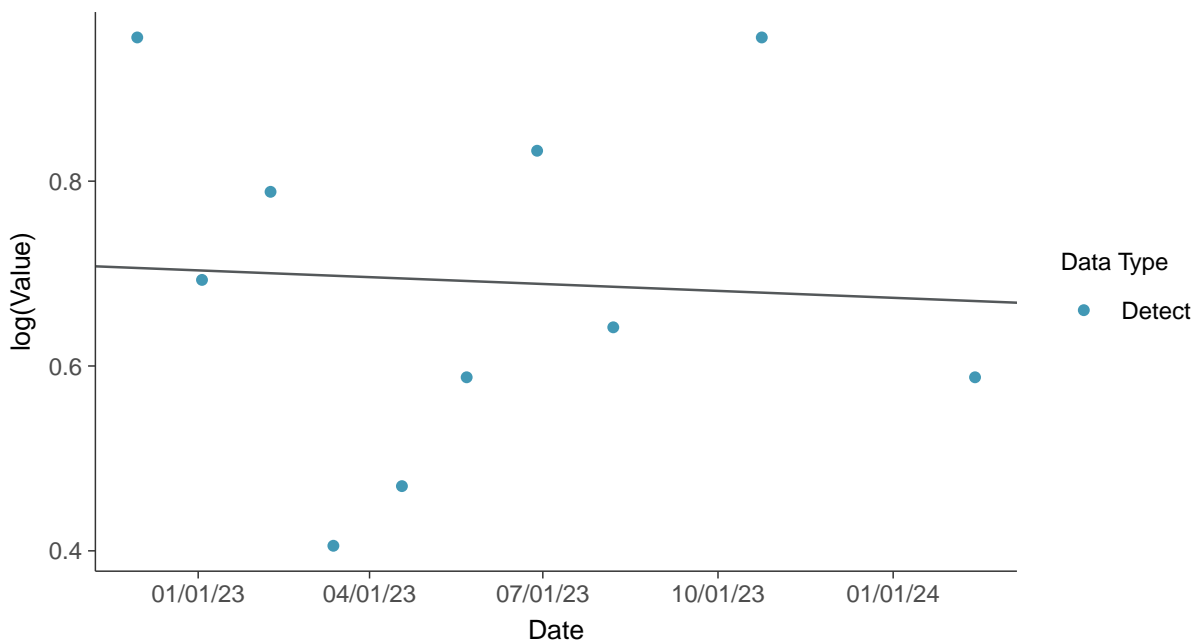
Gamma Q-Q plot

Boron, MW-19 (mg/L)



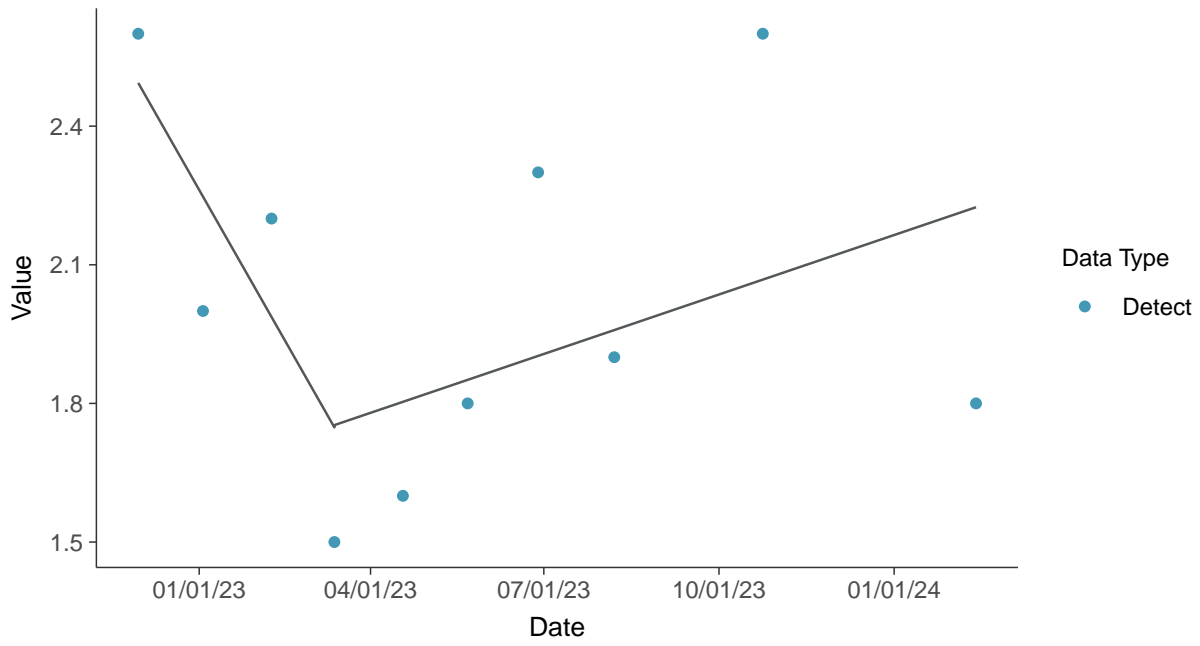
Trend Regression: Lognormal MLE

Boron, MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear
Boron, MW-19 (mg/L)



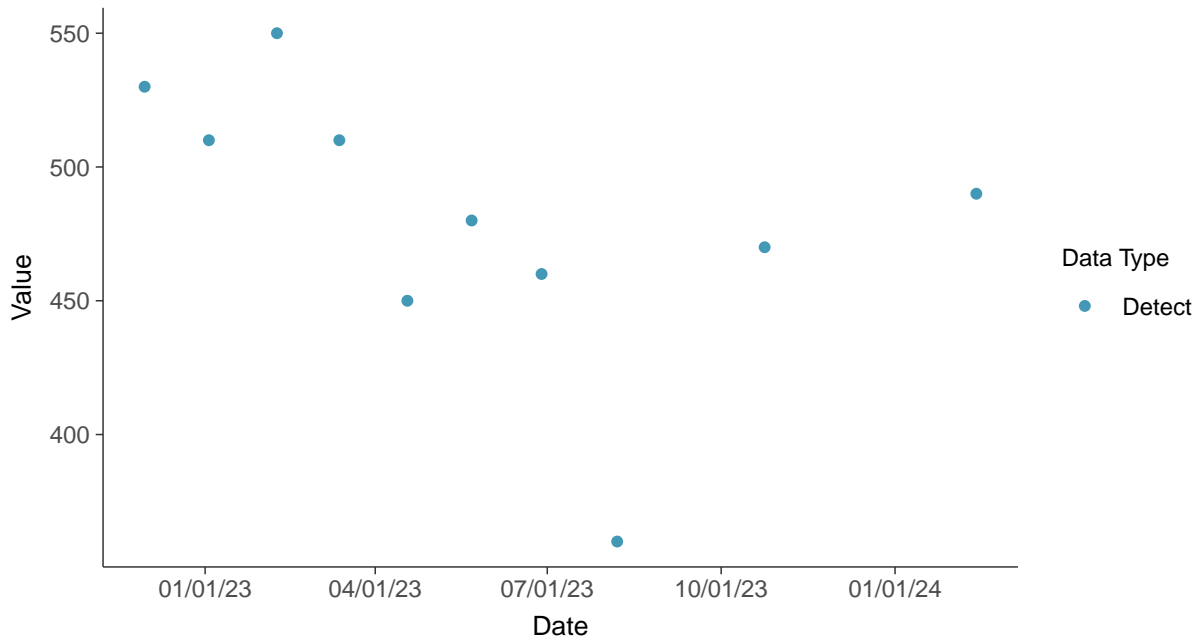


Appendix III: Calcium, MW-19

ID: 1_29_4_107

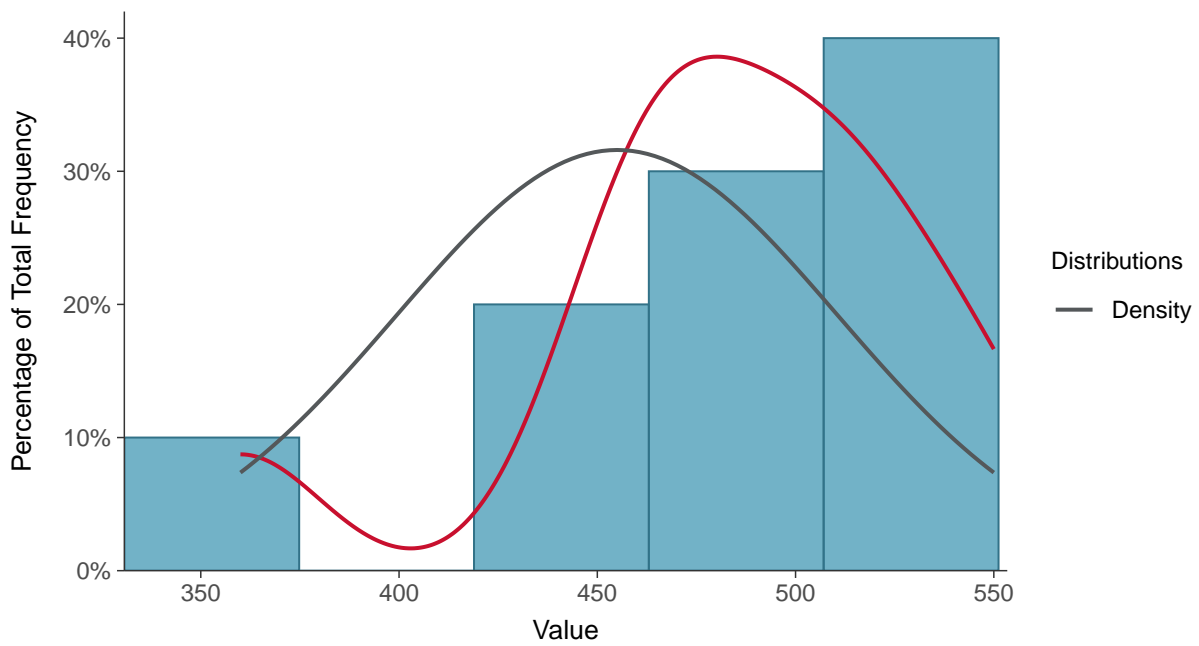
Scatter Plot

Calcium, MW-19 (mg/L)



Histogram

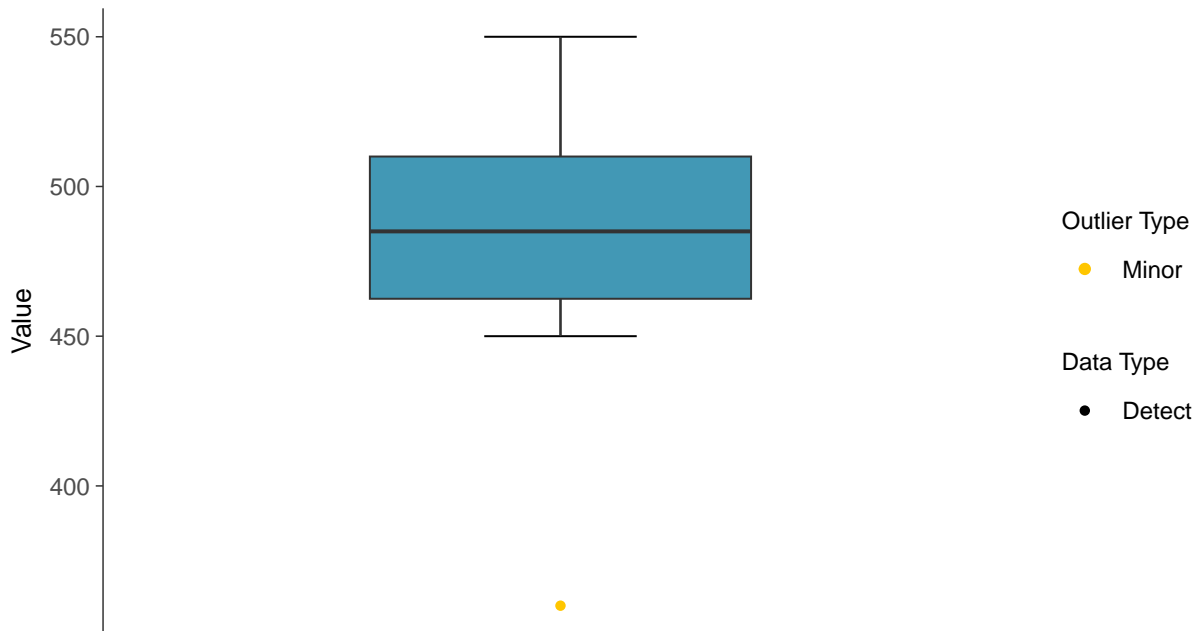
Calcium, MW-19 (mg/L)





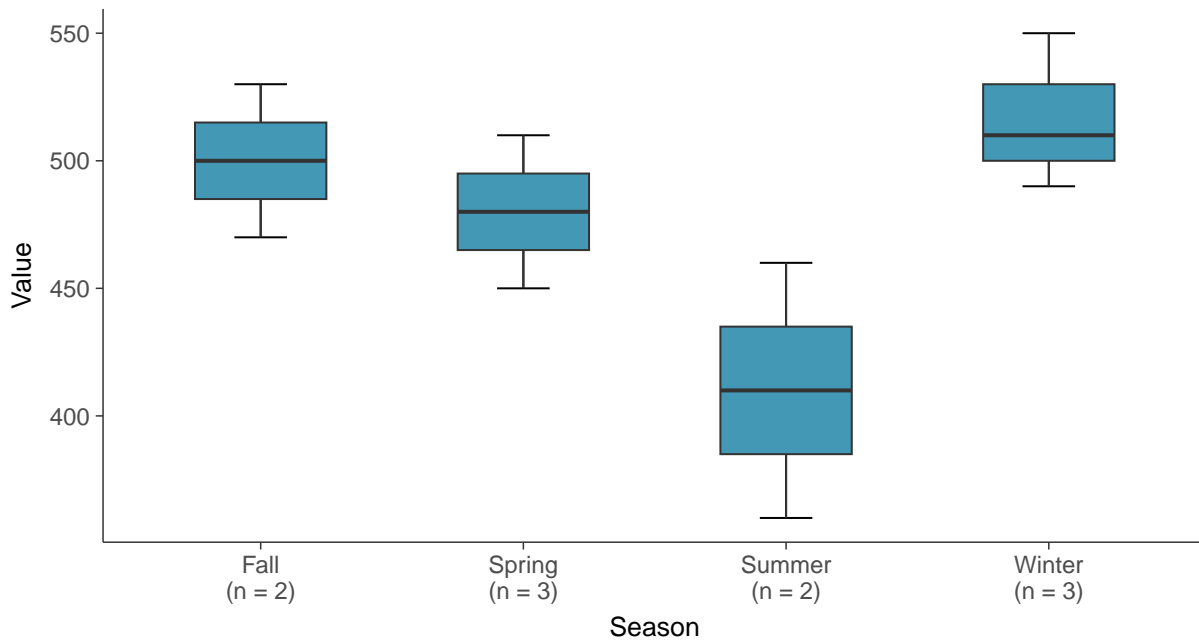
Boxplot

Calcium, MW-19 (mg/L)



Boxplot by Season

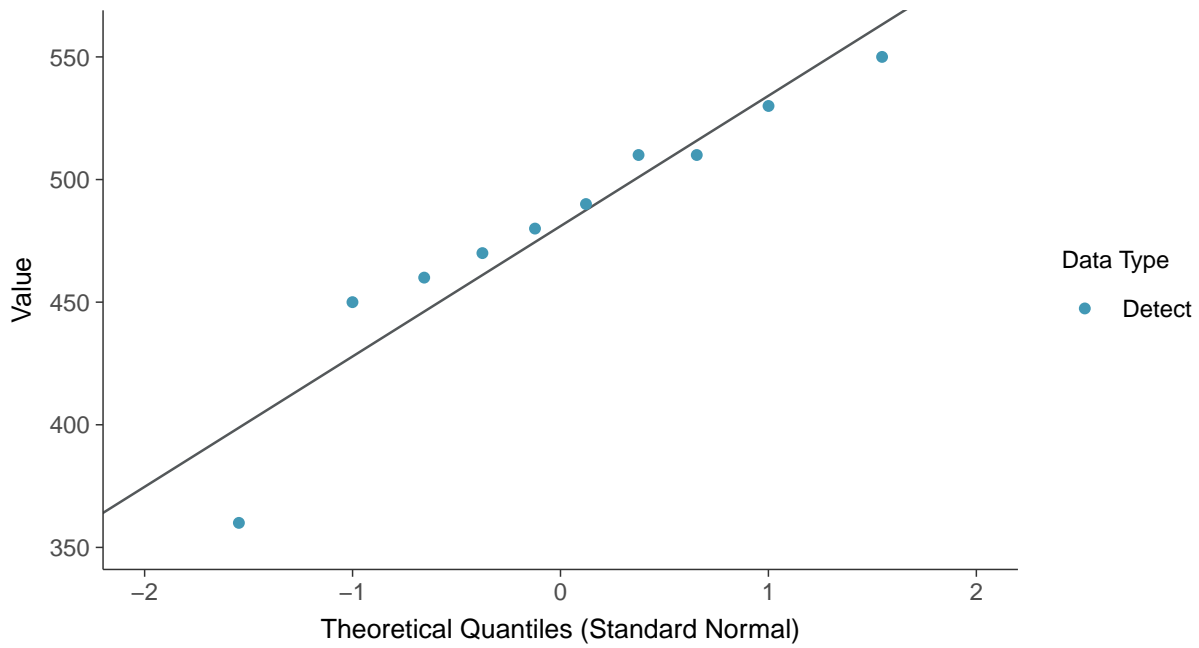
Calcium, MW-19 (mg/L)





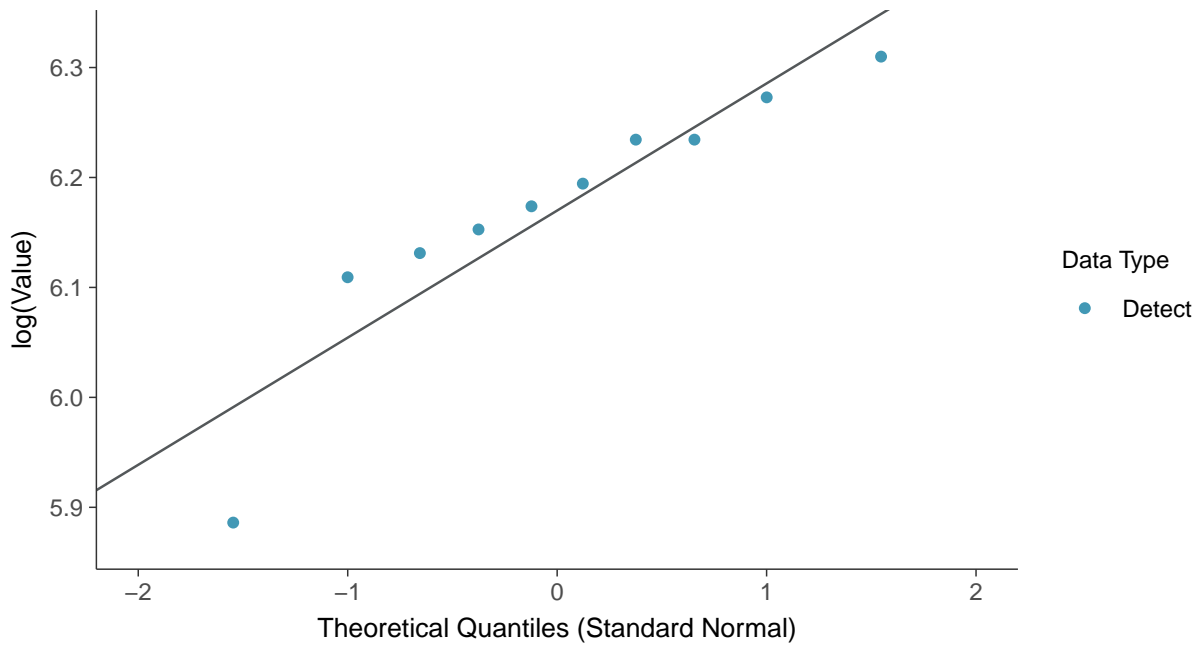
Normal Q-Q plot

Calcium, MW-19 (mg/L)



Lognormal Q-Q plot

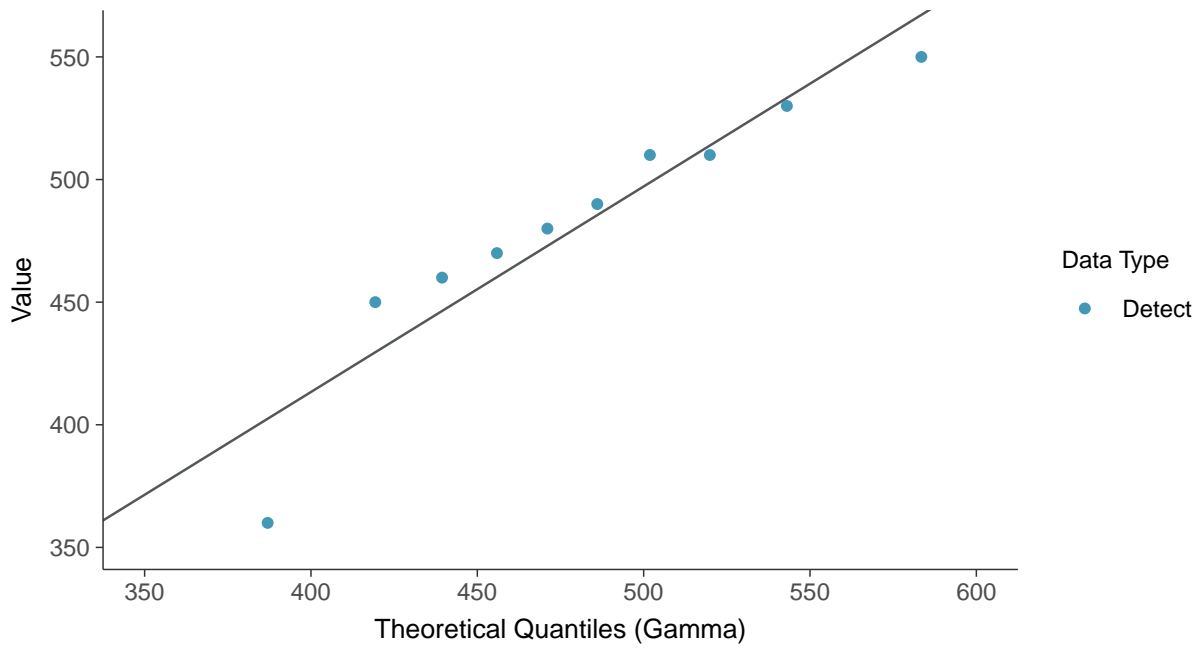
Calcium, MW-19 (mg/L)





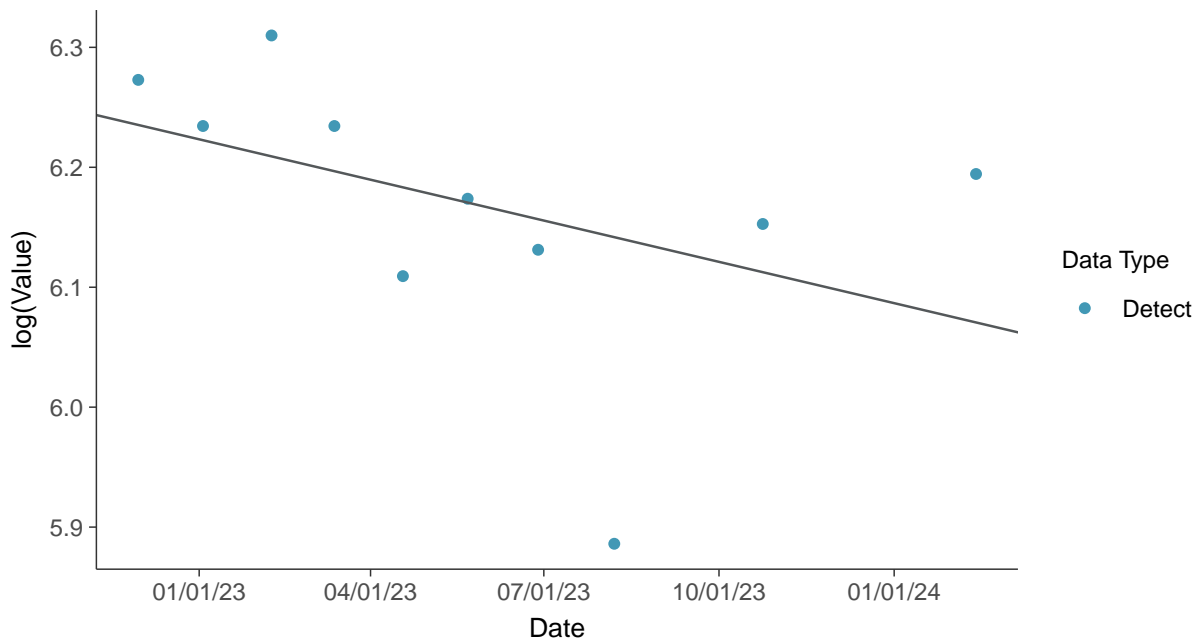
Gamma Q-Q plot

Calcium, MW-19 (mg/L)



Trend Regression: Lognormal MLE

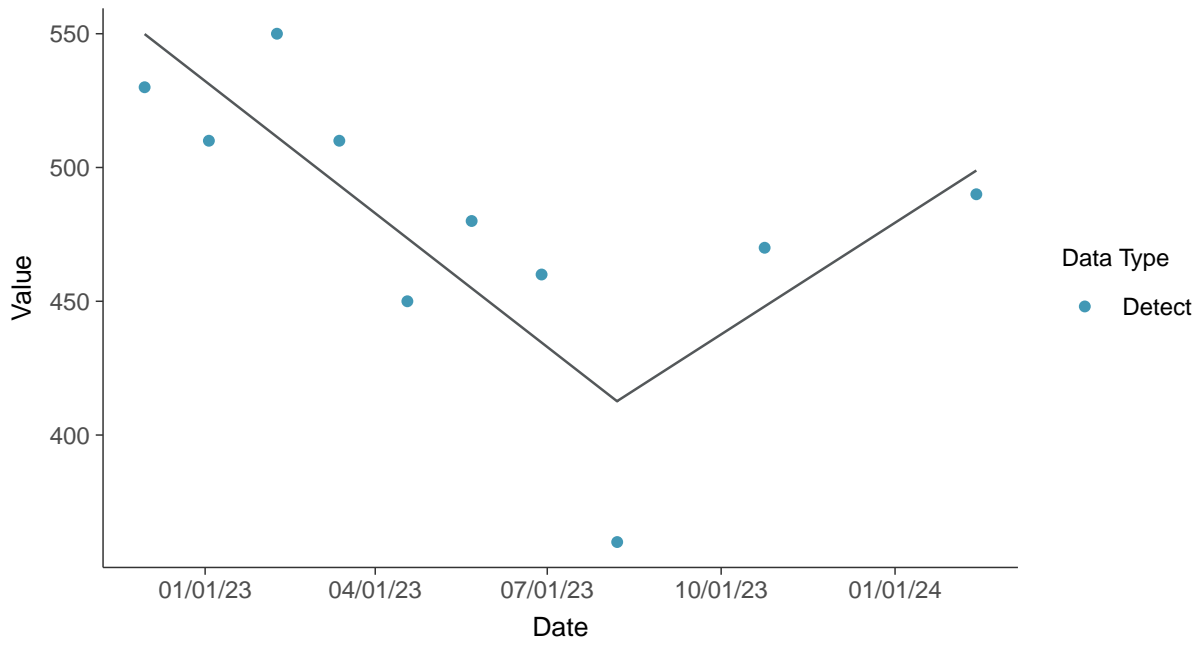
Calcium, MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear

Calcium, MW-19 (mg/L)



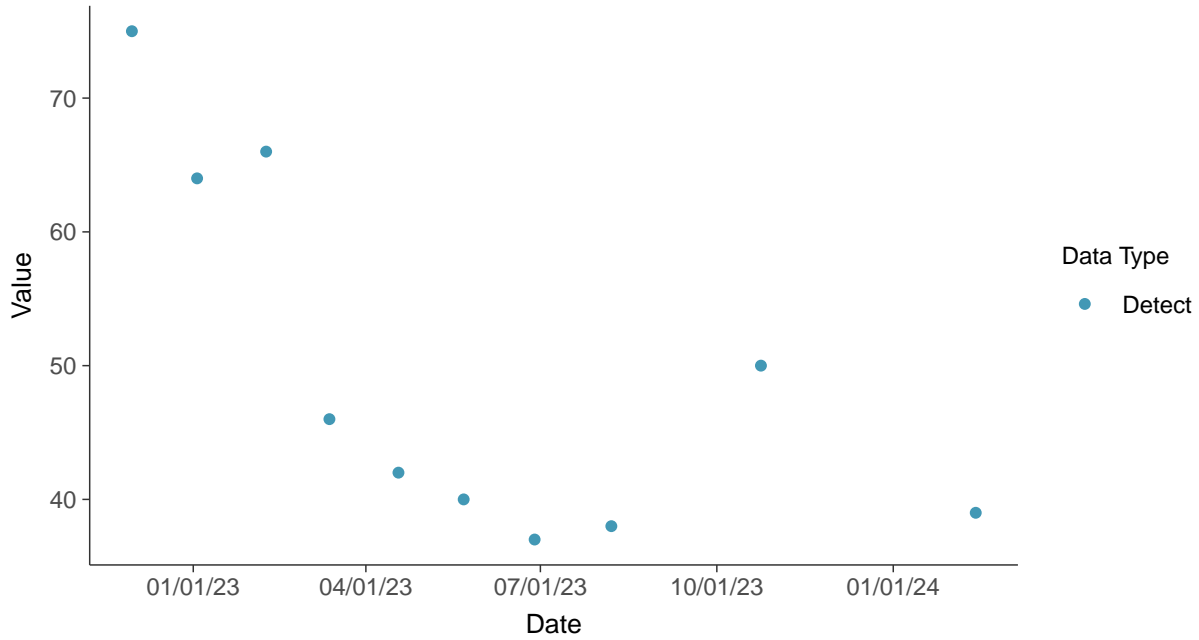


Appendix III: Chloride (as Cl), MW-19

ID: 1_29_4_108

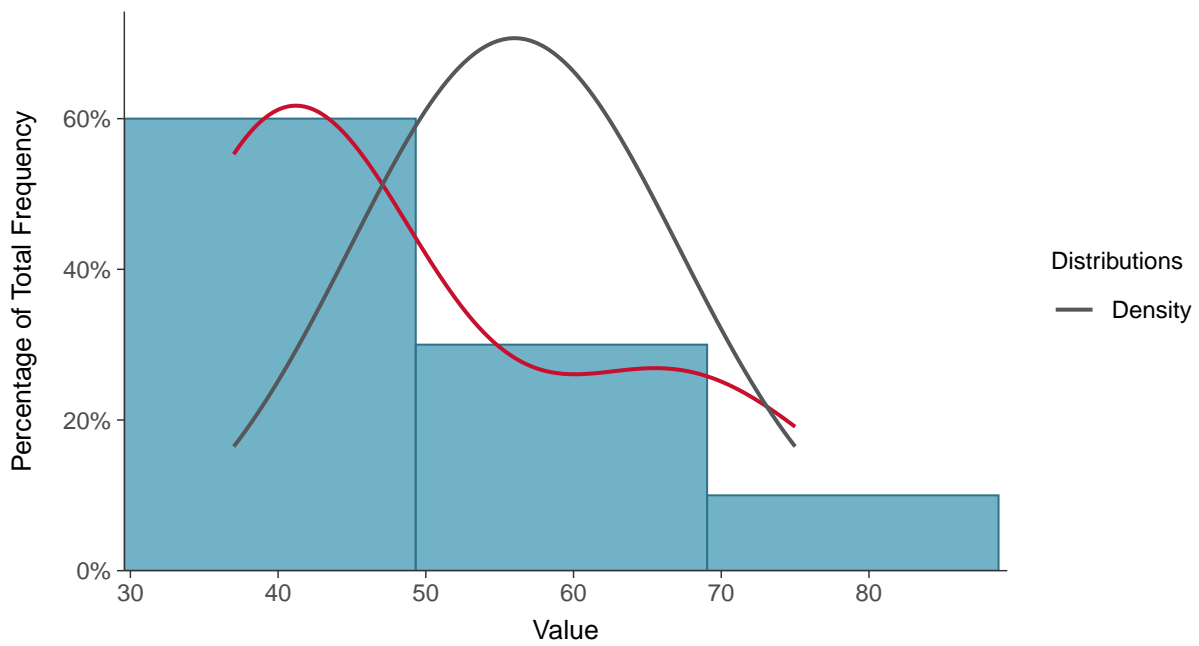
Scatter Plot

Chloride (as Cl), MW-19 (mg/L)



Histogram

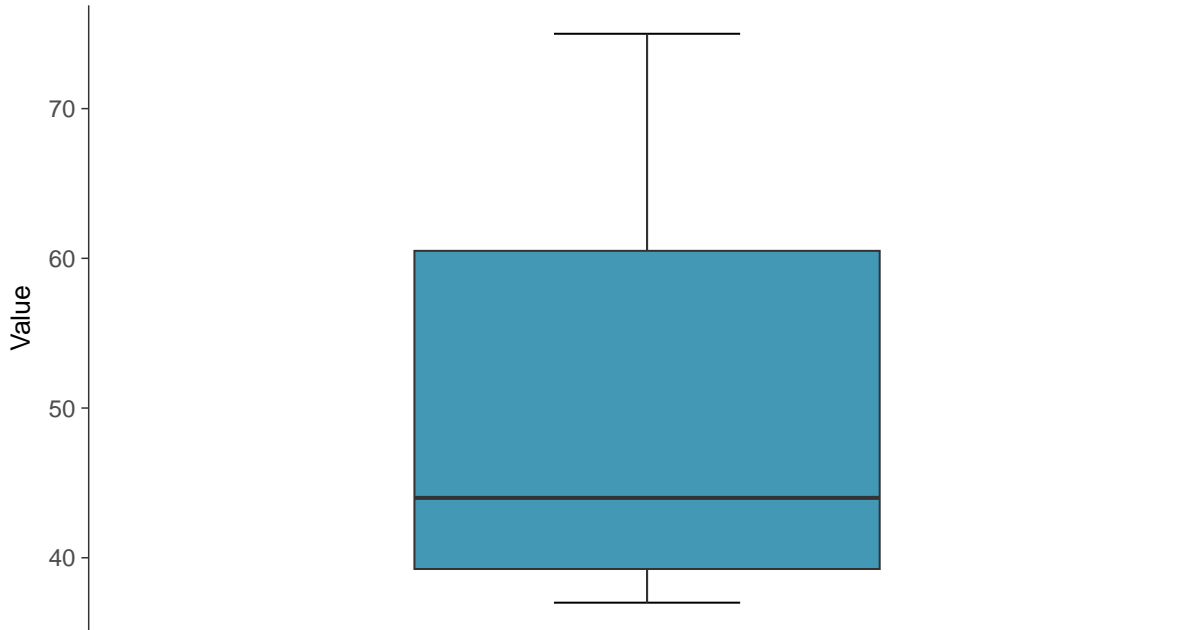
Chloride (as Cl), MW-19 (mg/L)





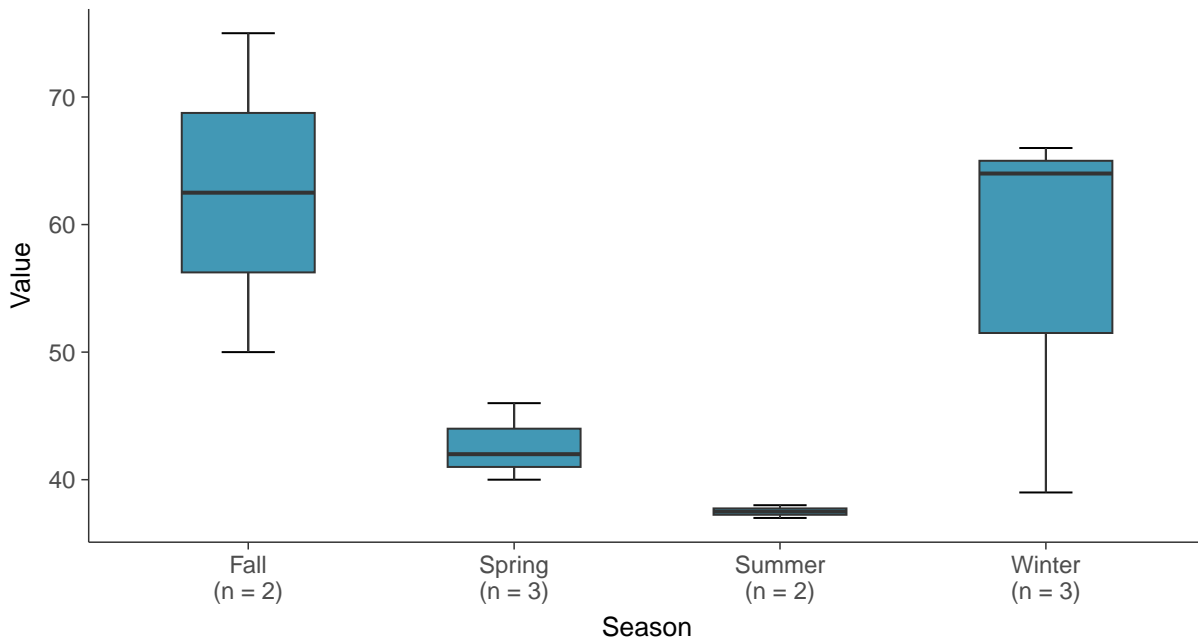
Boxplot

Chloride (as Cl), MW-19 (mg/L)



Boxplot by Season

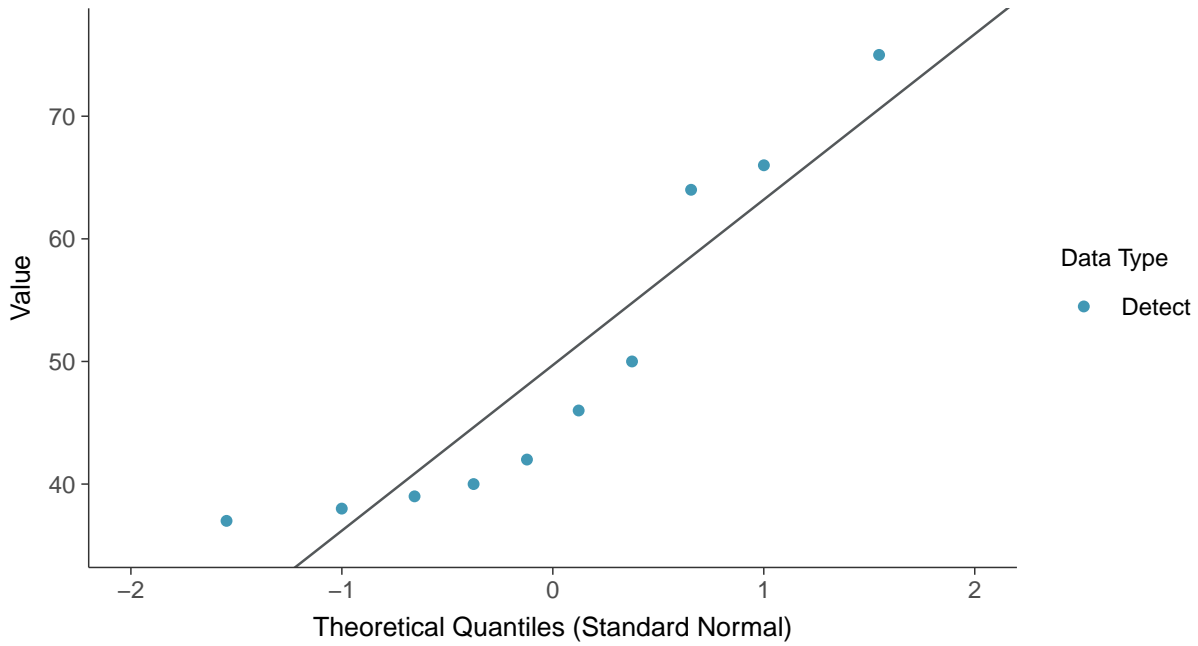
Chloride (as Cl), MW-19 (mg/L)





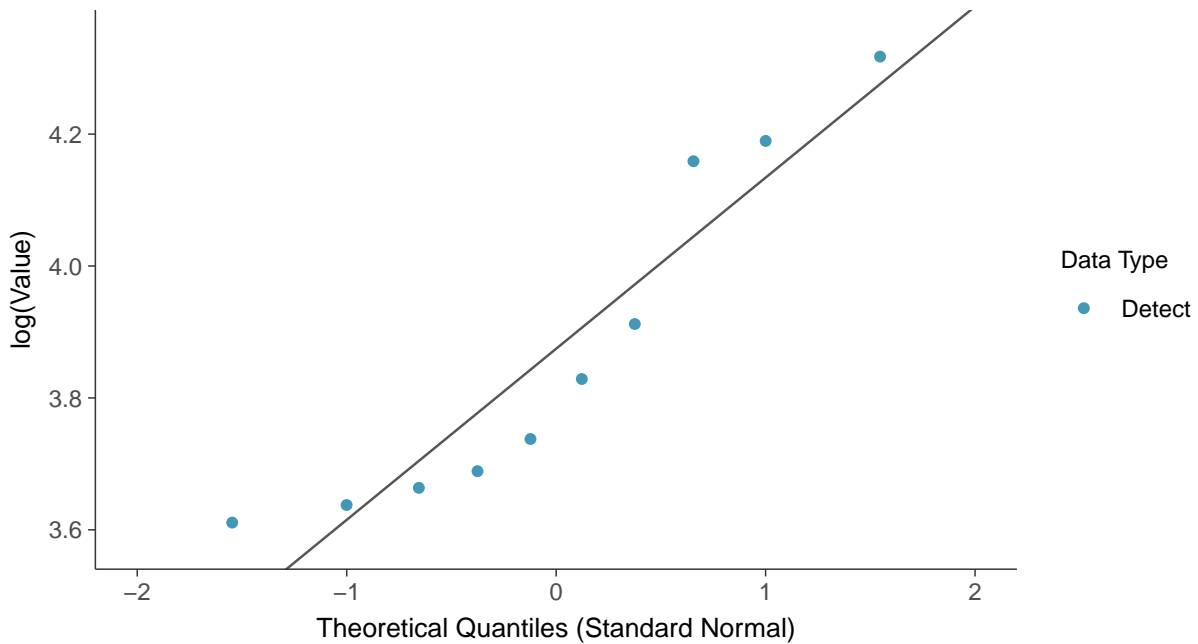
Normal Q-Q plot

Chloride (as Cl), MW-19 (mg/L)



Lognormal Q-Q plot

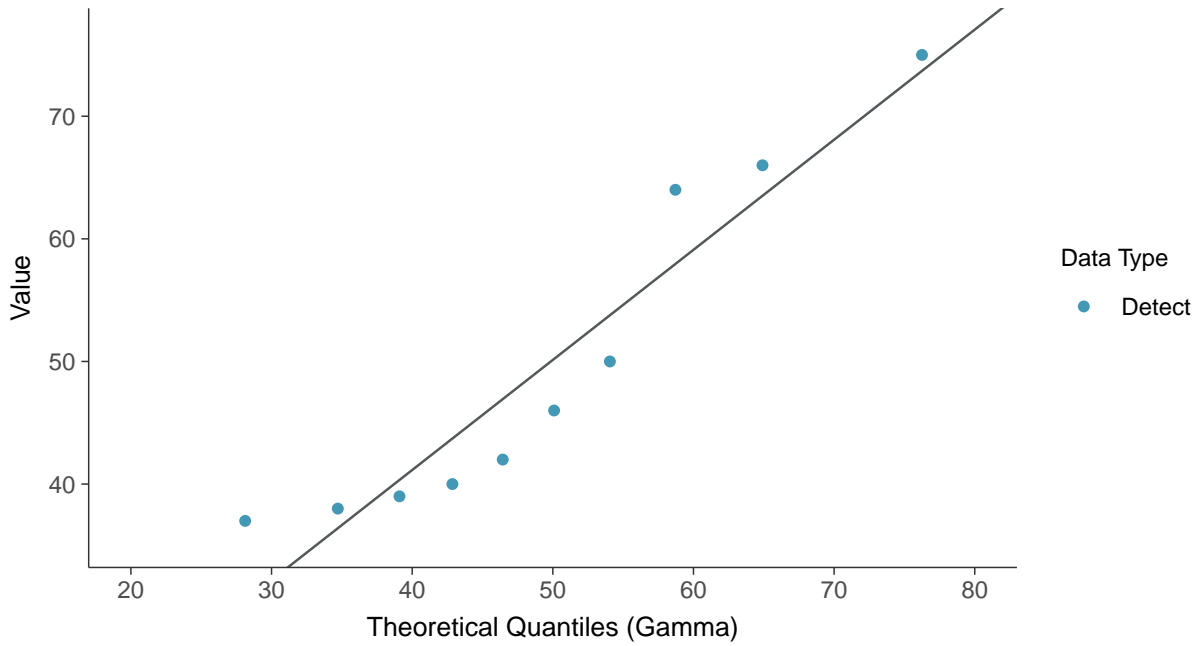
Chloride (as Cl), MW-19 (mg/L)





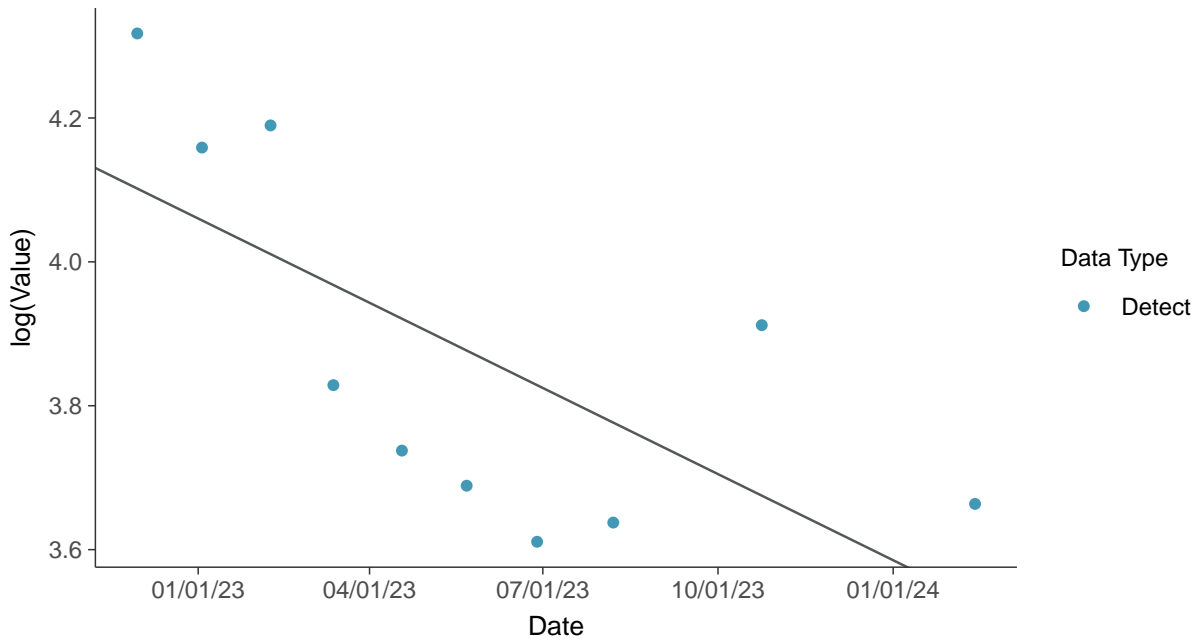
Gamma Q-Q plot

Chloride (as Cl), MW-19 (mg/L)



Trend Regression: Lognormal MLE

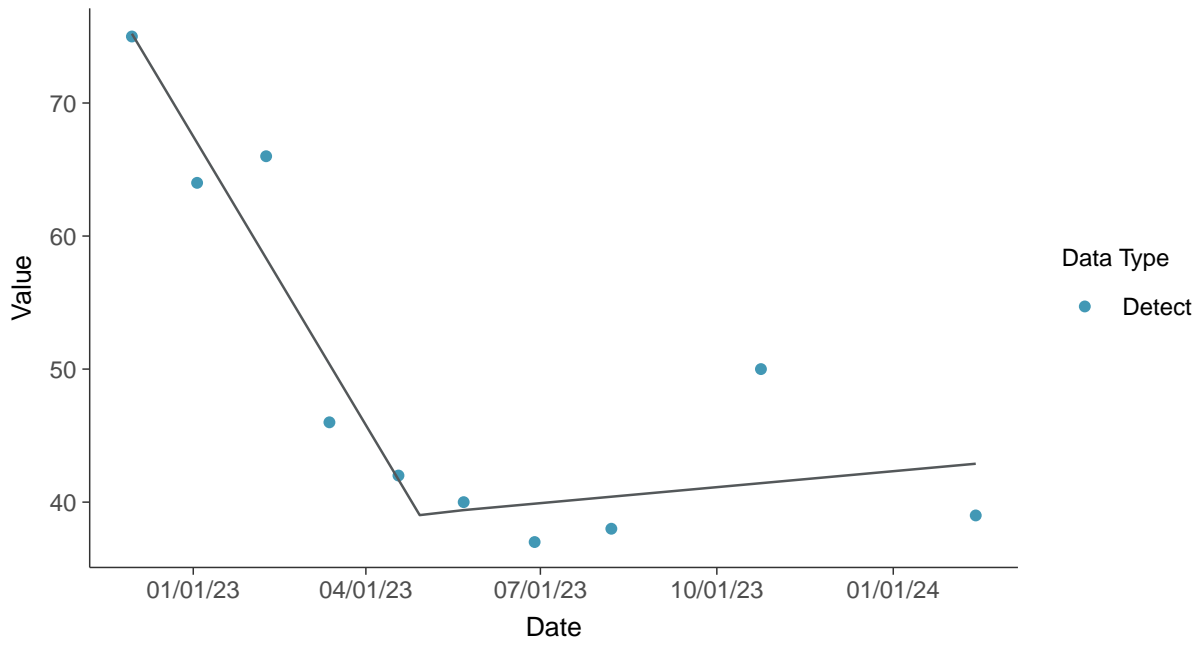
Chloride (as Cl), MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear

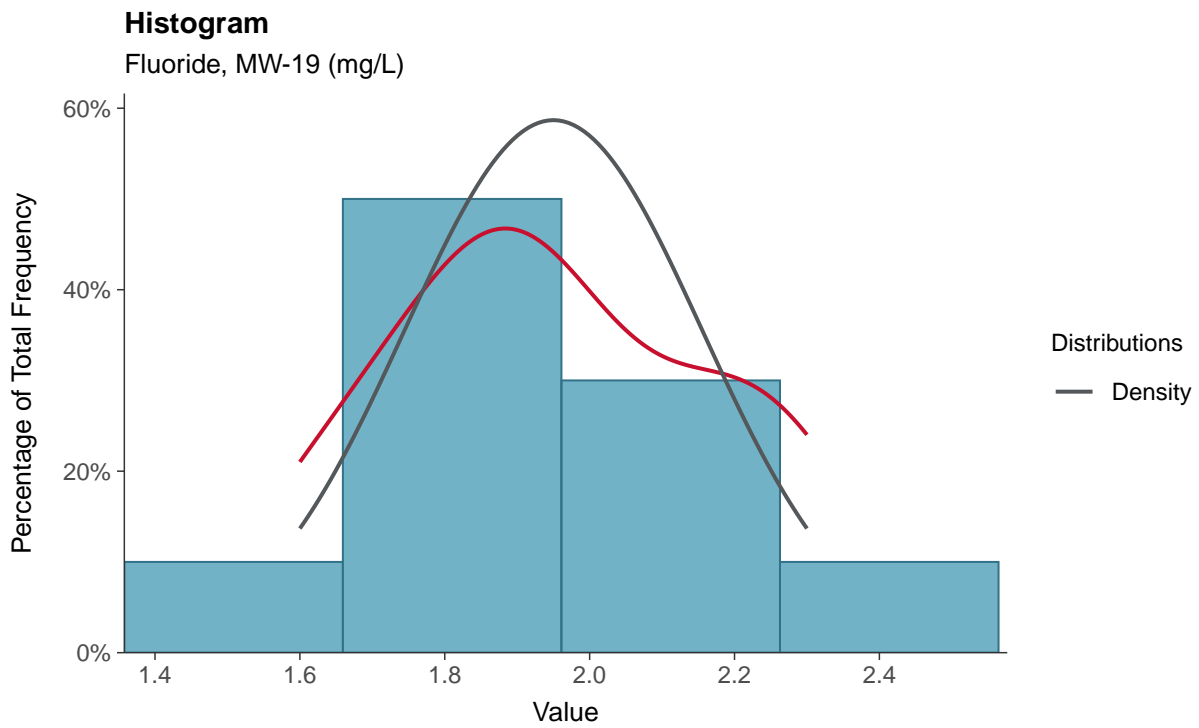
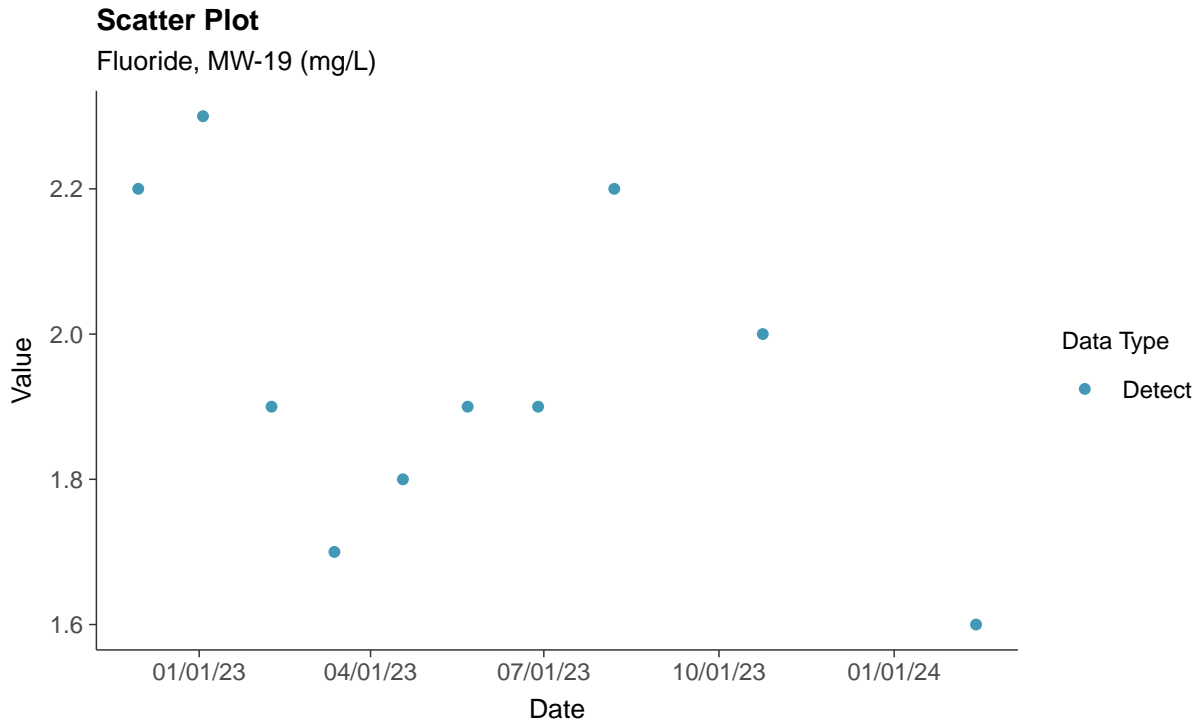
Chloride (as Cl), MW-19 (mg/L)





Appendix III: Fluoride, MW-19

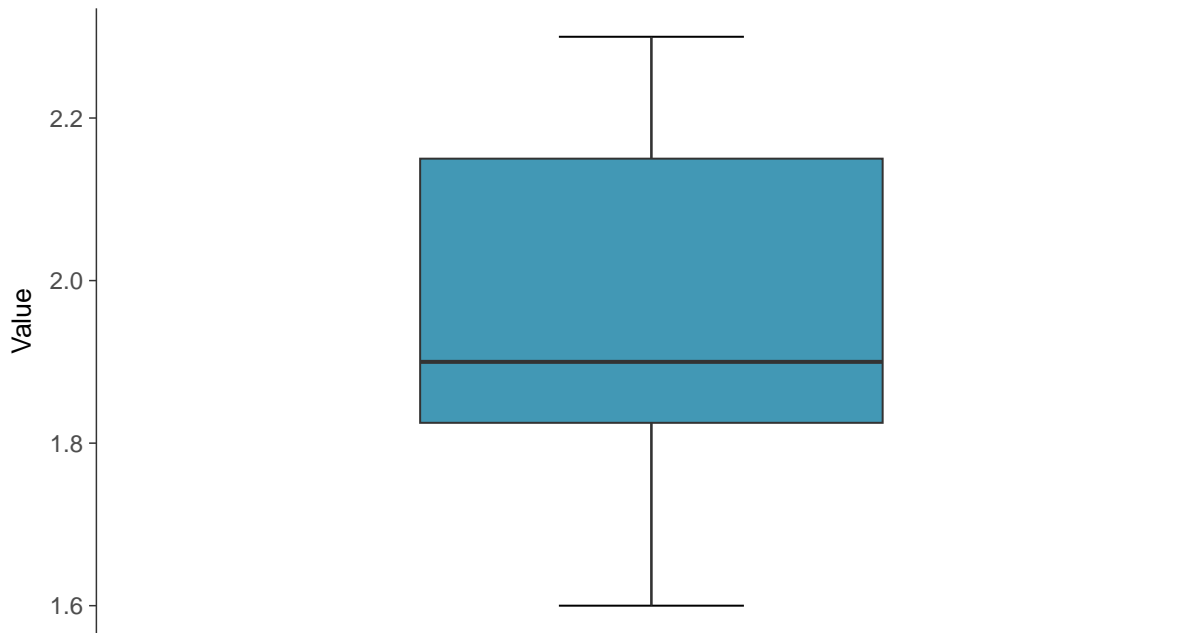
ID: 1_29_4_112





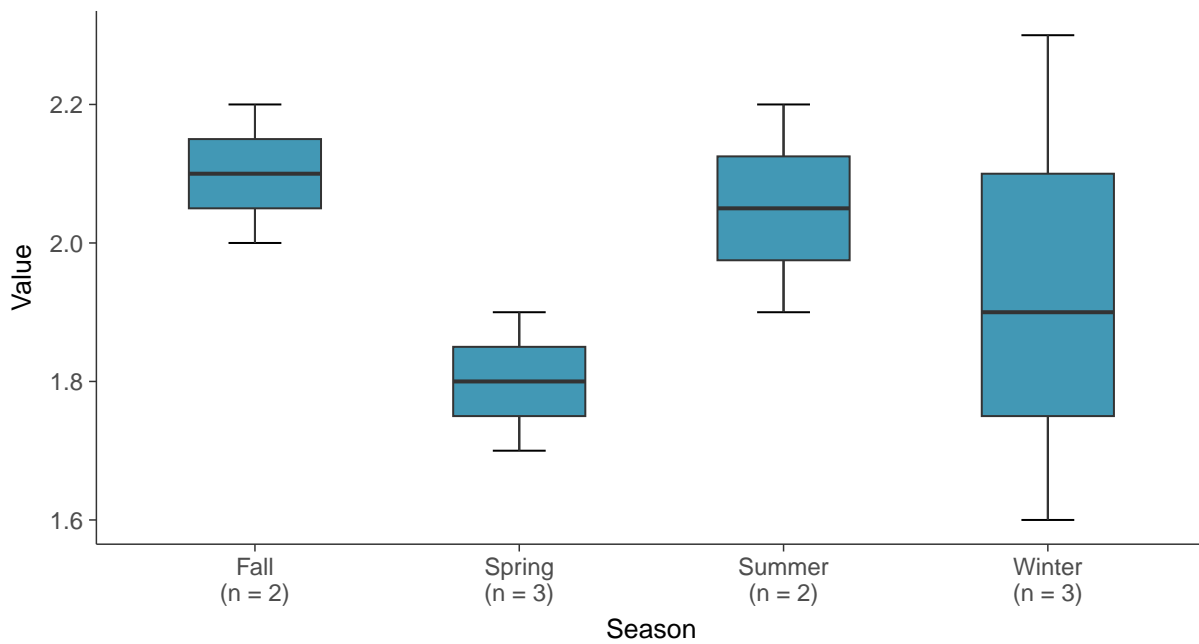
Boxplot

Fluoride, MW-19 (mg/L)



Boxplot by Season

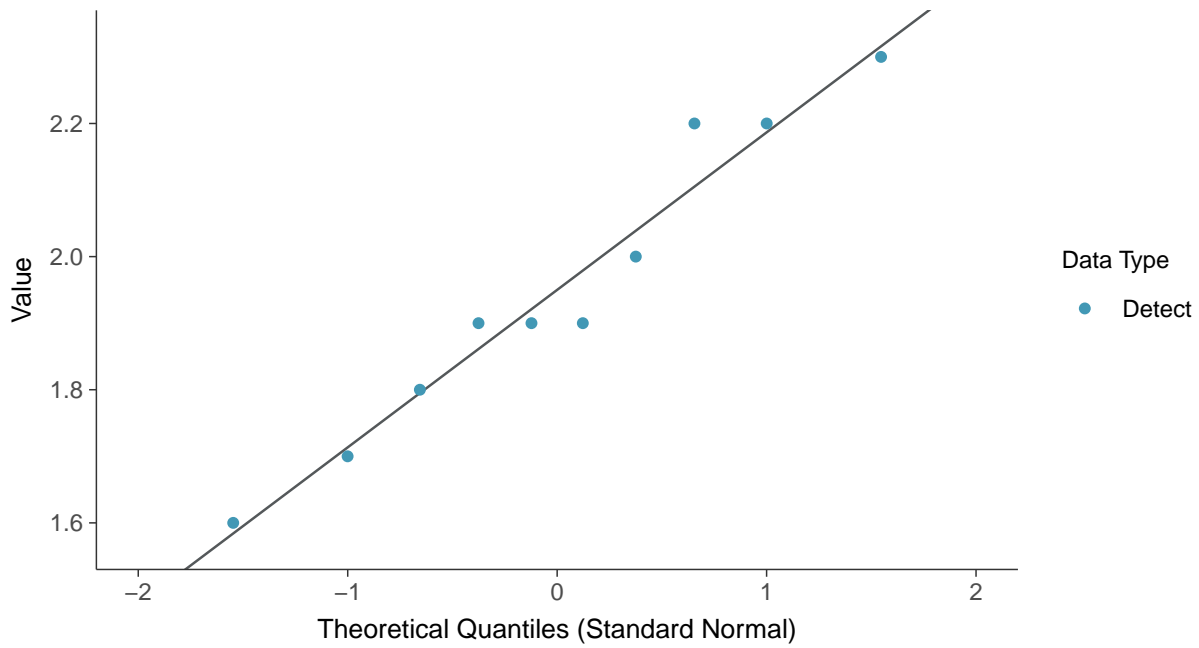
Fluoride, MW-19 (mg/L)





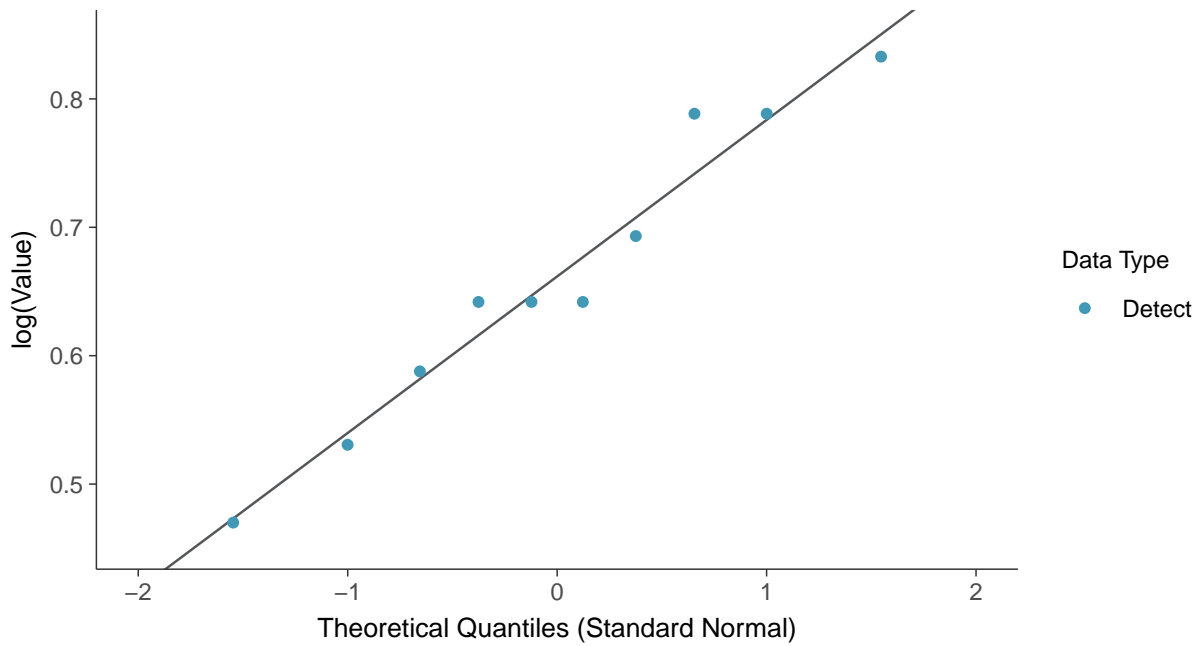
Normal Q-Q plot

Fluoride, MW-19 (mg/L)



Lognormal Q-Q plot

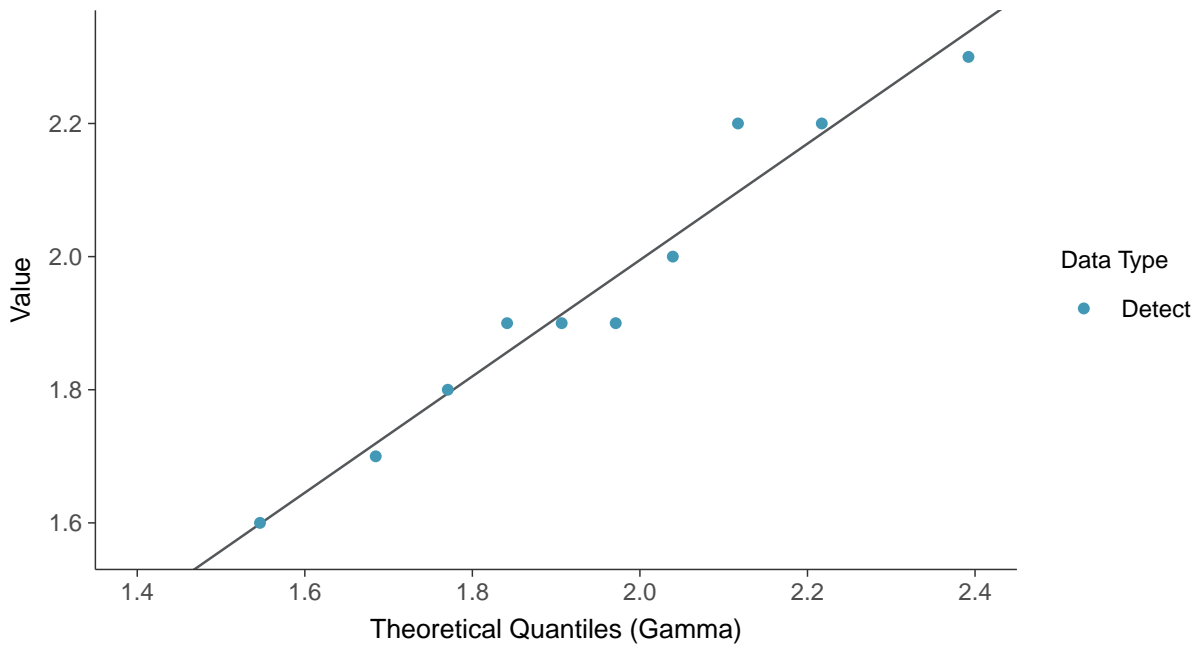
Fluoride, MW-19 (mg/L)





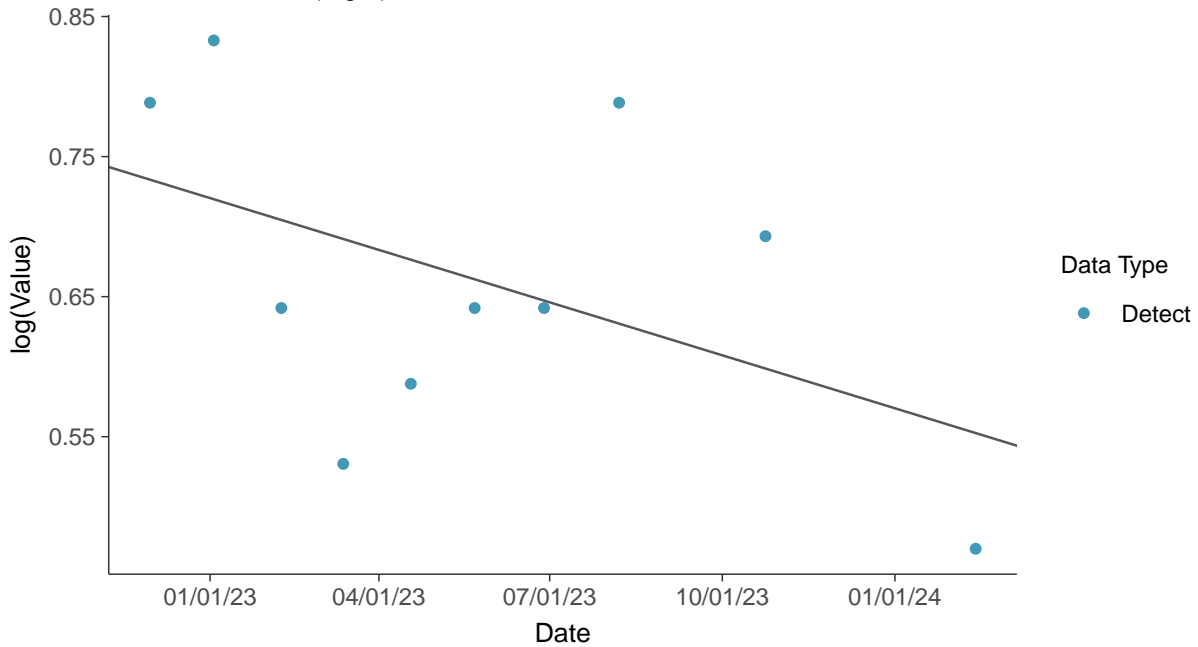
Gamma Q-Q plot

Fluoride, MW-19 (mg/L)



Trend Regression: Lognormal MLE

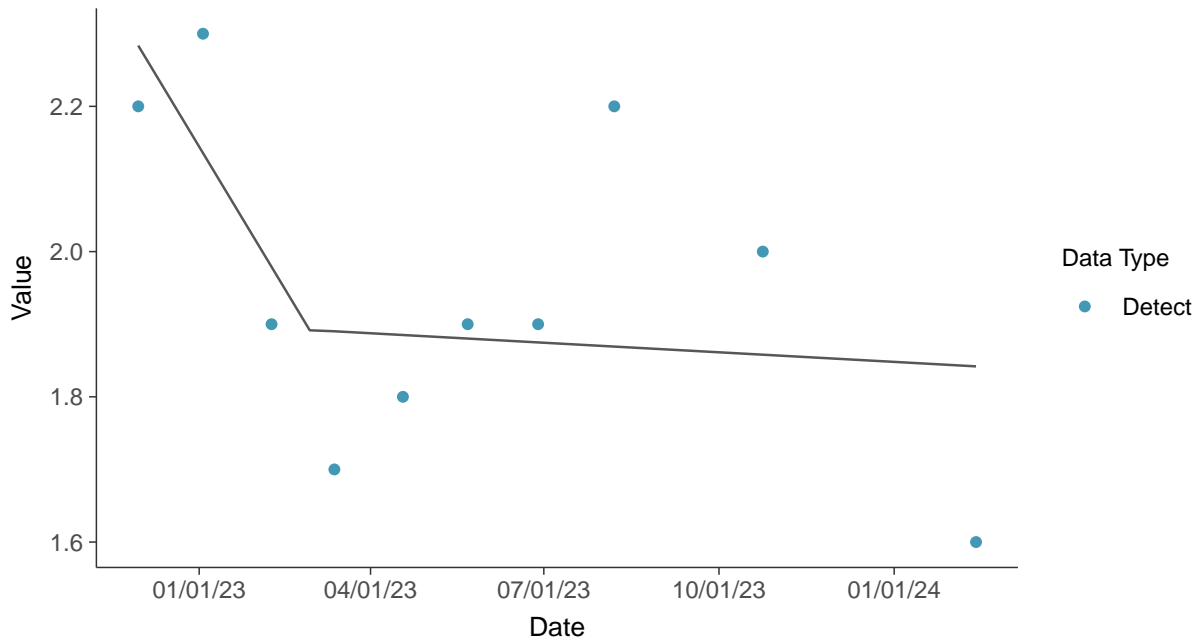
Fluoride, MW-19 (mg/L)





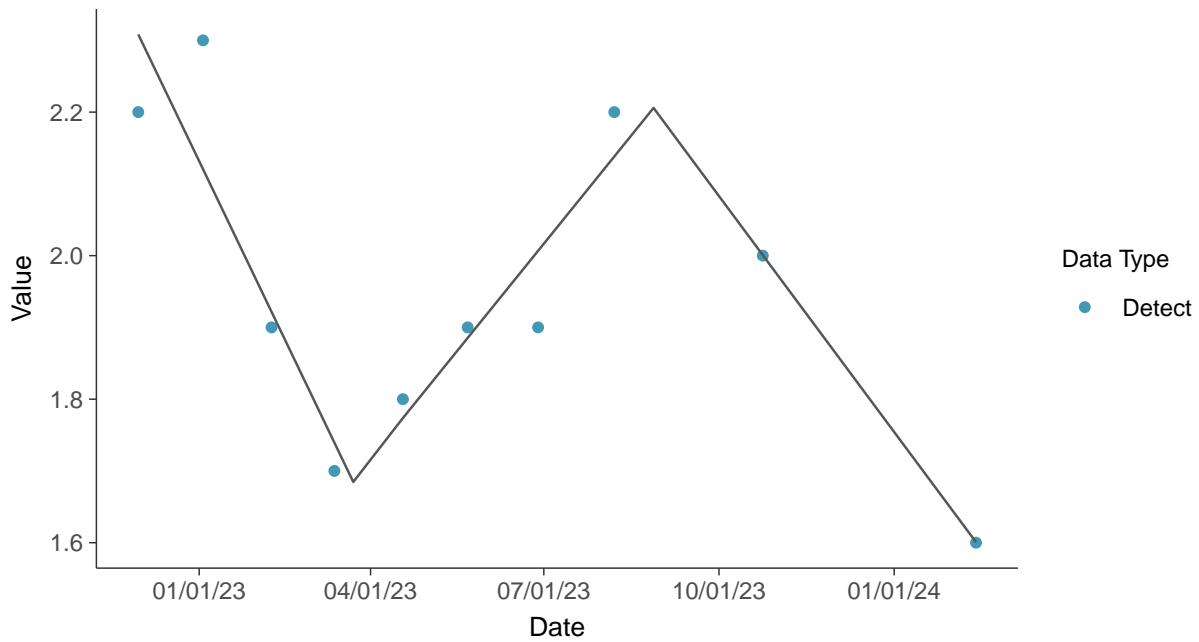
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

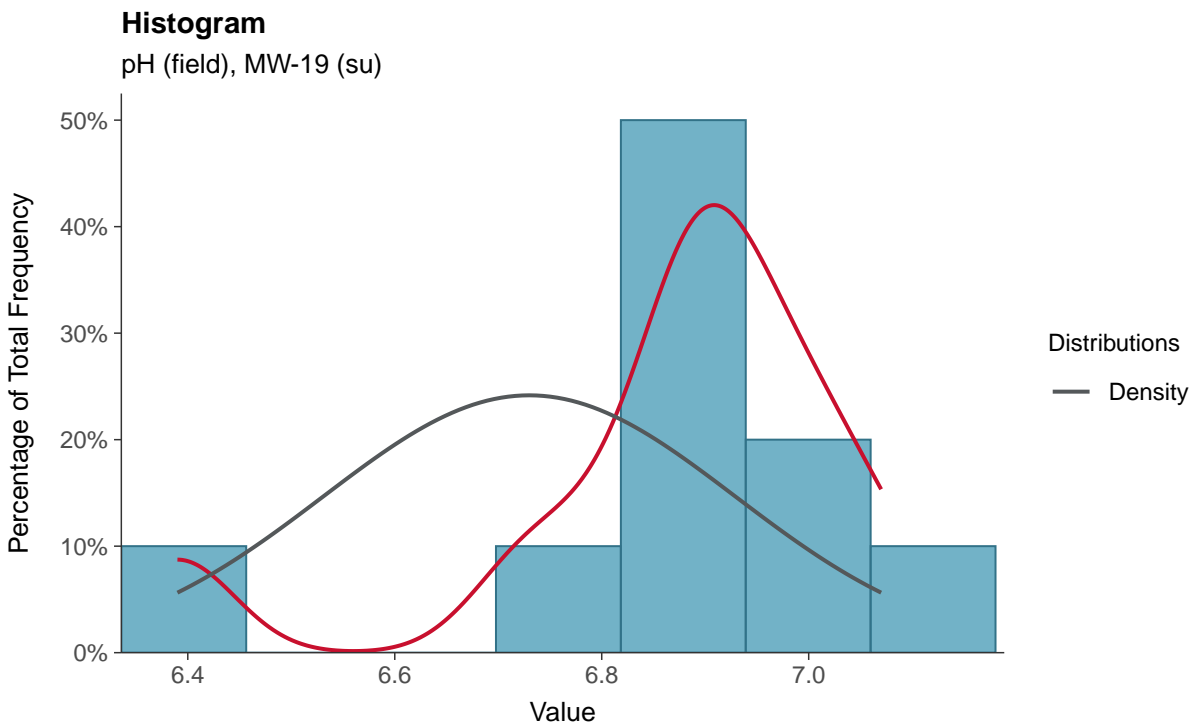
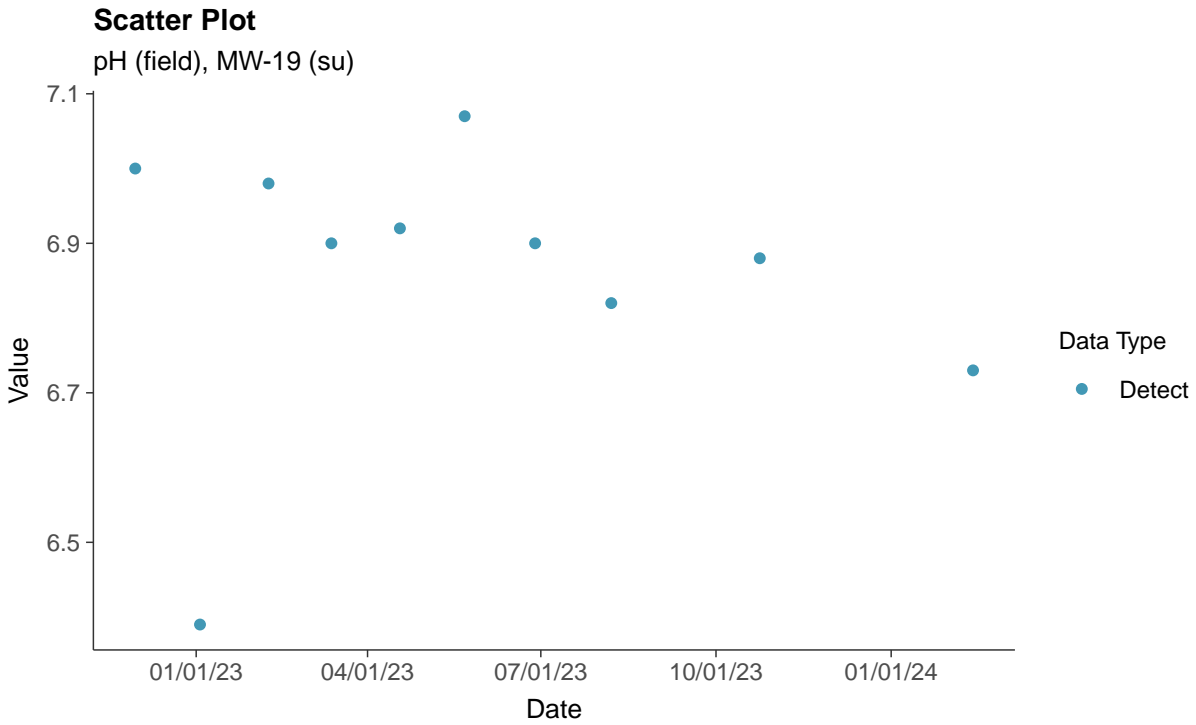
Fluoride, MW-19 (mg/L)





Appendix III: pH (field), MW-19

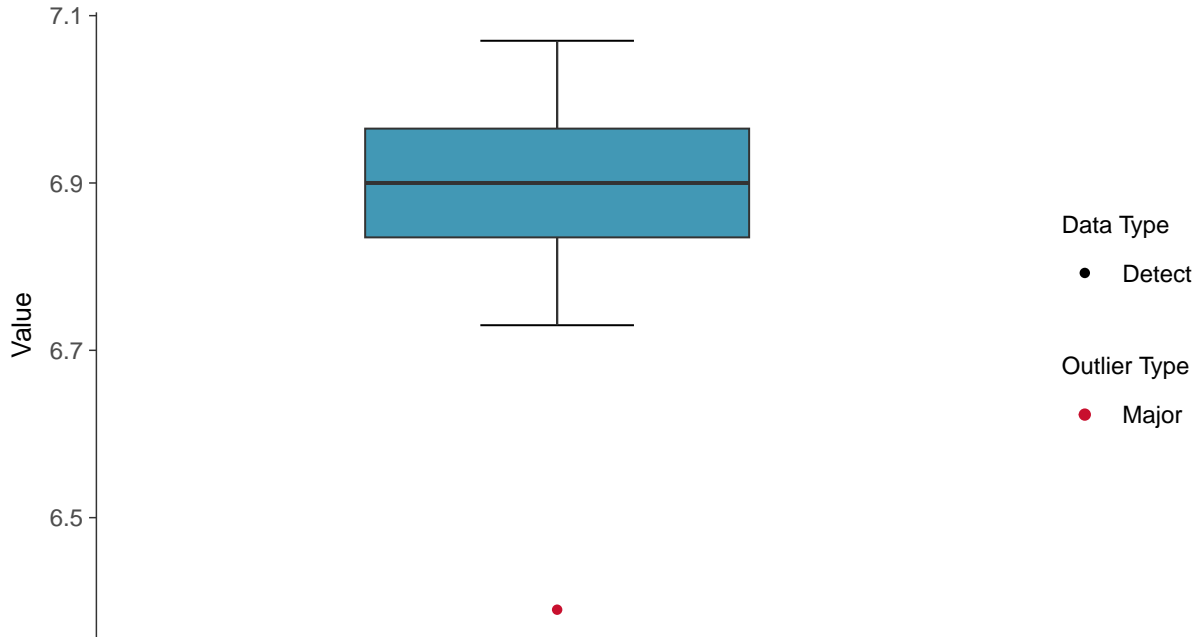
ID: 1_29_4_120





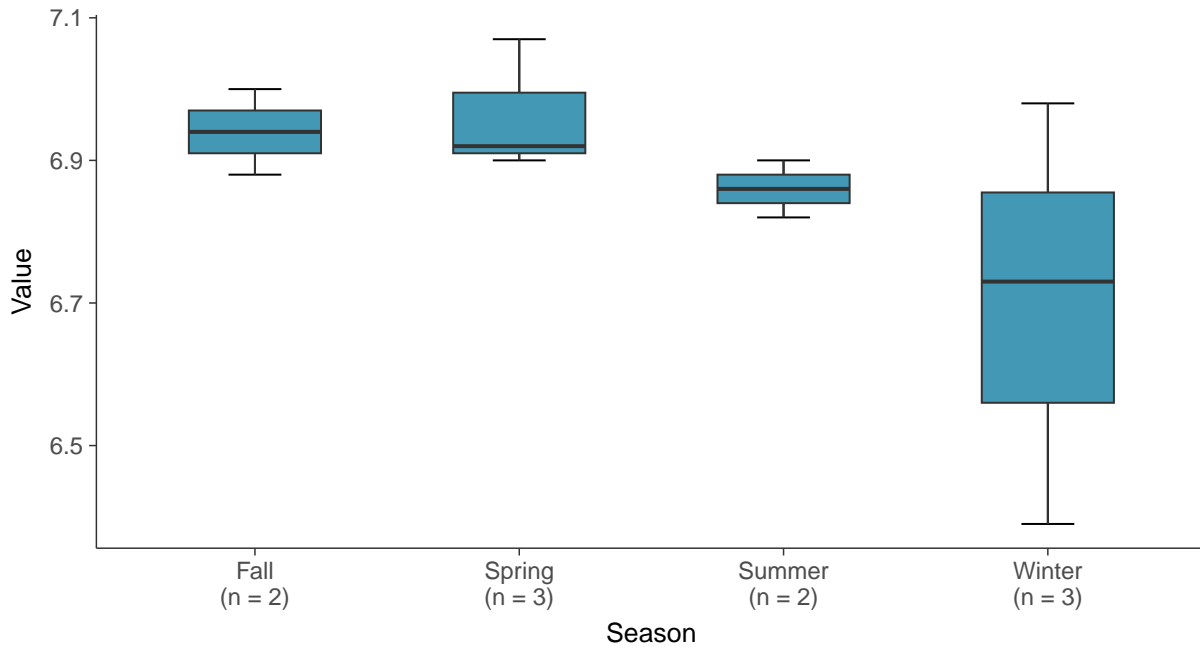
Boxplot

pH (field), MW-19 (su)



Boxplot by Season

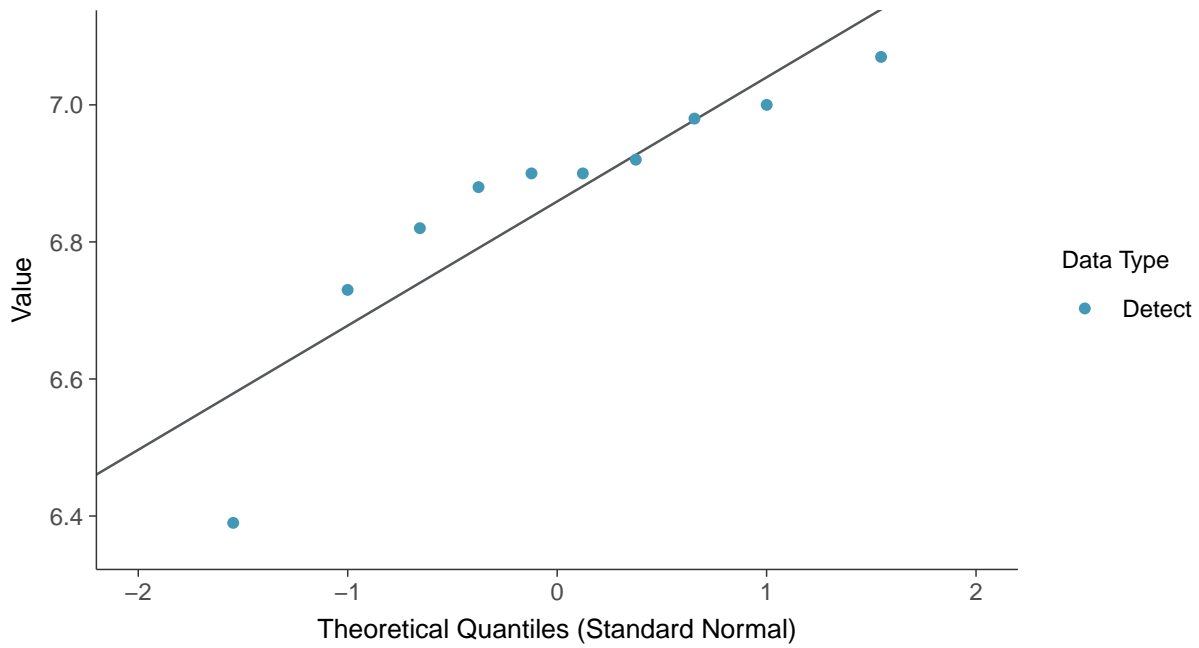
pH (field), MW-19 (su)





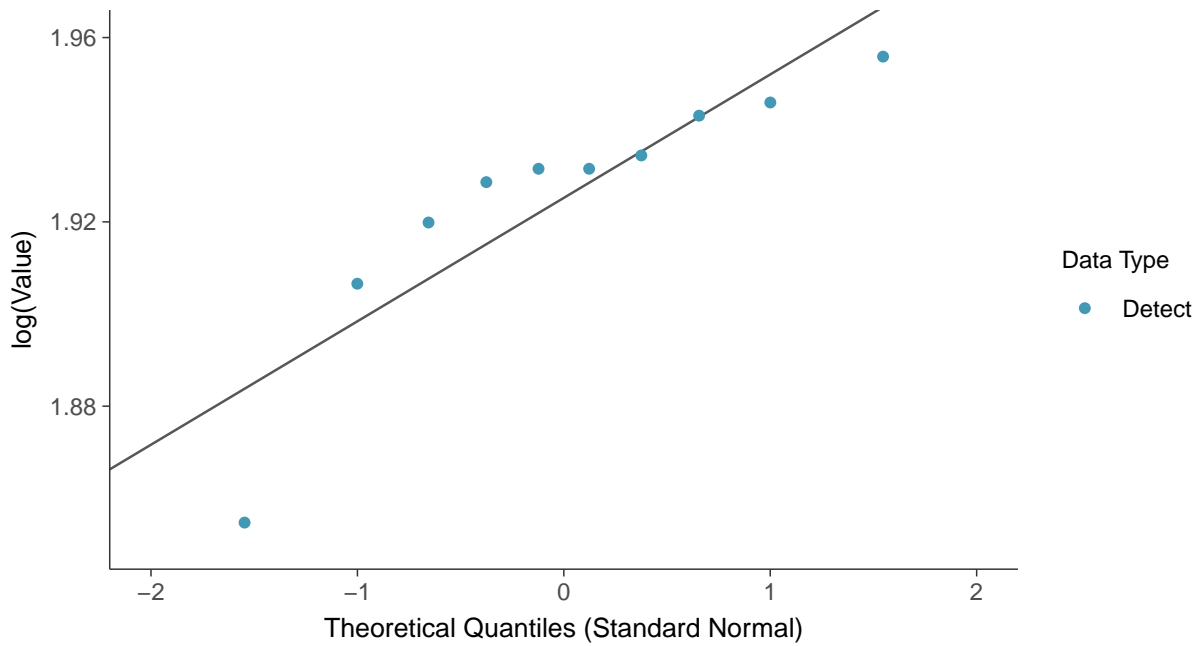
Normal Q-Q plot

pH (field), MW-19 (su)



Lognormal Q-Q plot

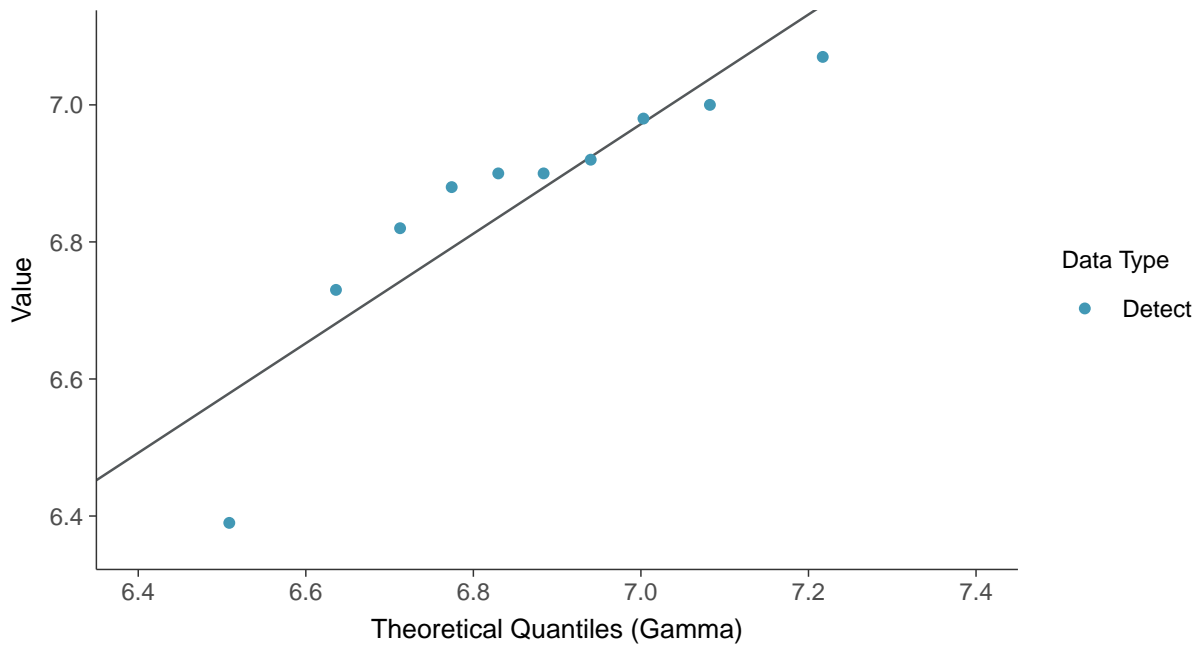
pH (field), MW-19 (su)





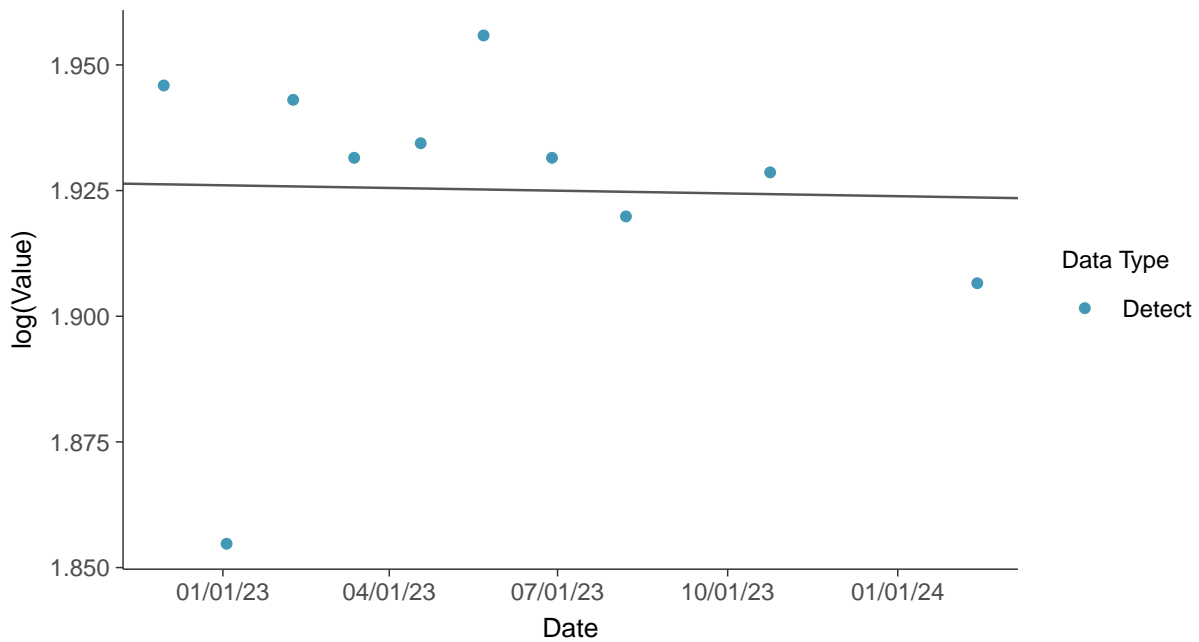
Gamma Q-Q plot

pH (field), MW-19 (su)



Trend Regression: Lognormal MLE

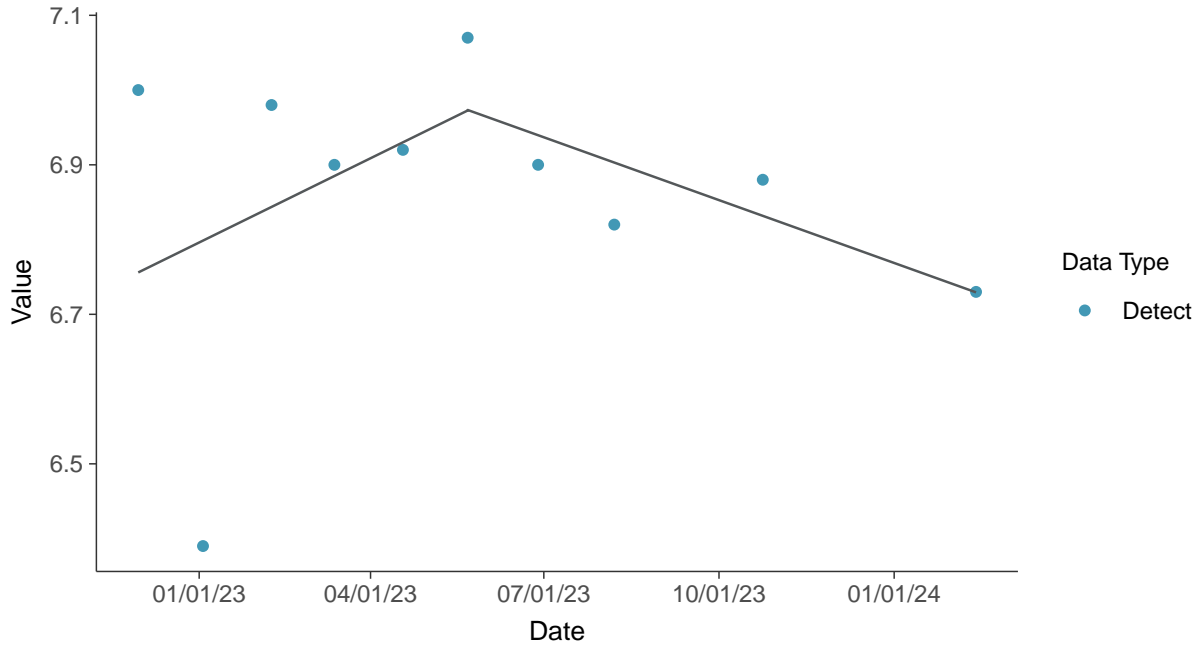
pH (field), MW-19 (su)





Trend Regression: Piecewise Linear-Linear

pH (field), MW-19 (su)



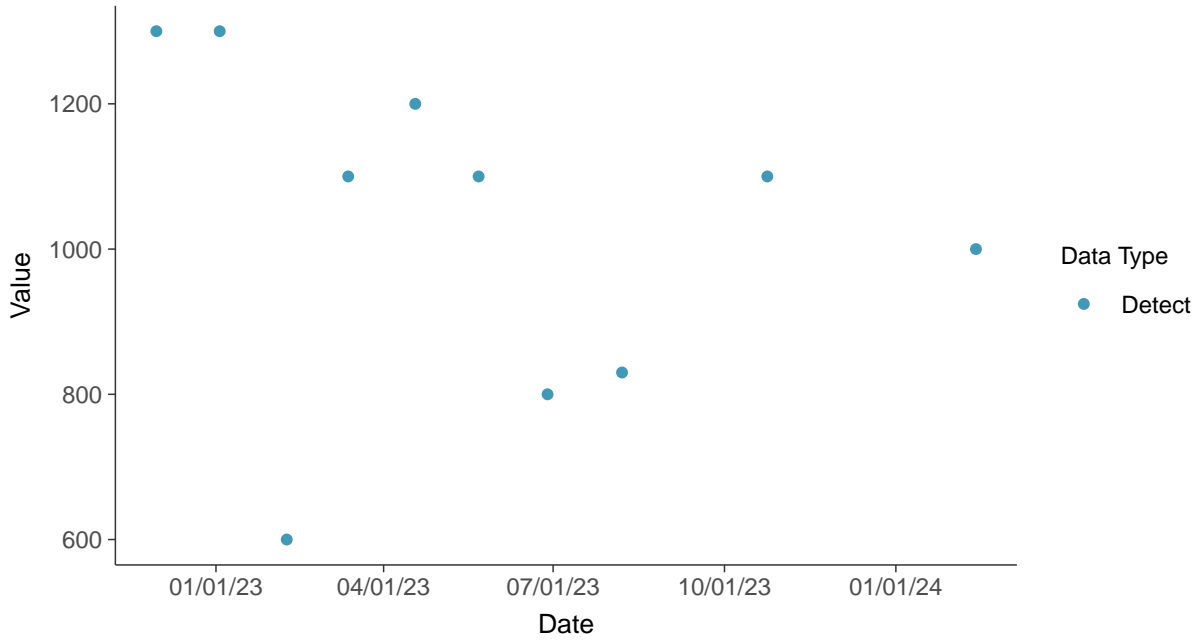


Appendix III: Sulfate (as SO₄), MW-19

ID: 1_29_4_124

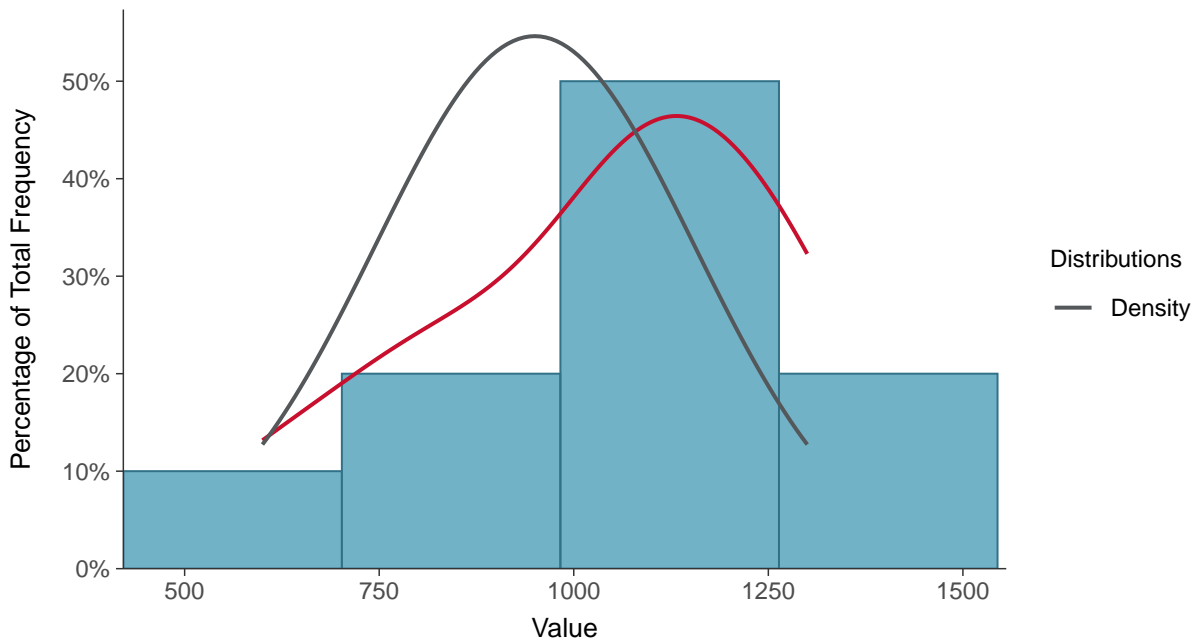
Scatter Plot

Sulfate (as SO₄), MW-19 (mg/L)



Histogram

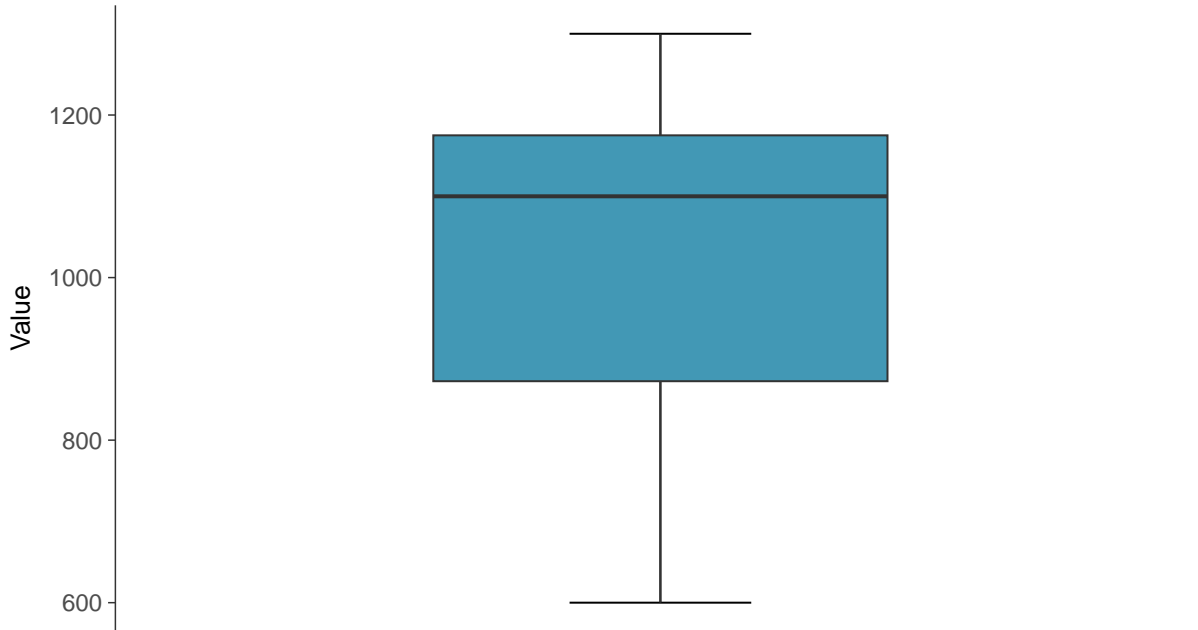
Sulfate (as SO₄), MW-19 (mg/L)





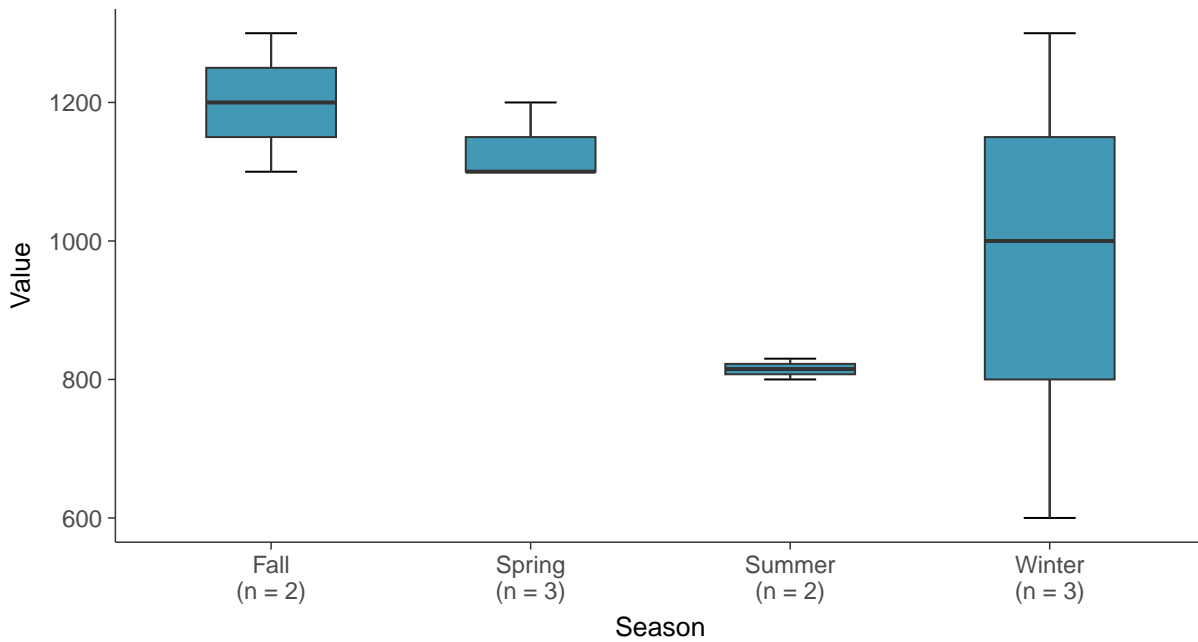
Boxplot

Sulfate (as SO₄), MW-19 (mg/L)



Boxplot by Season

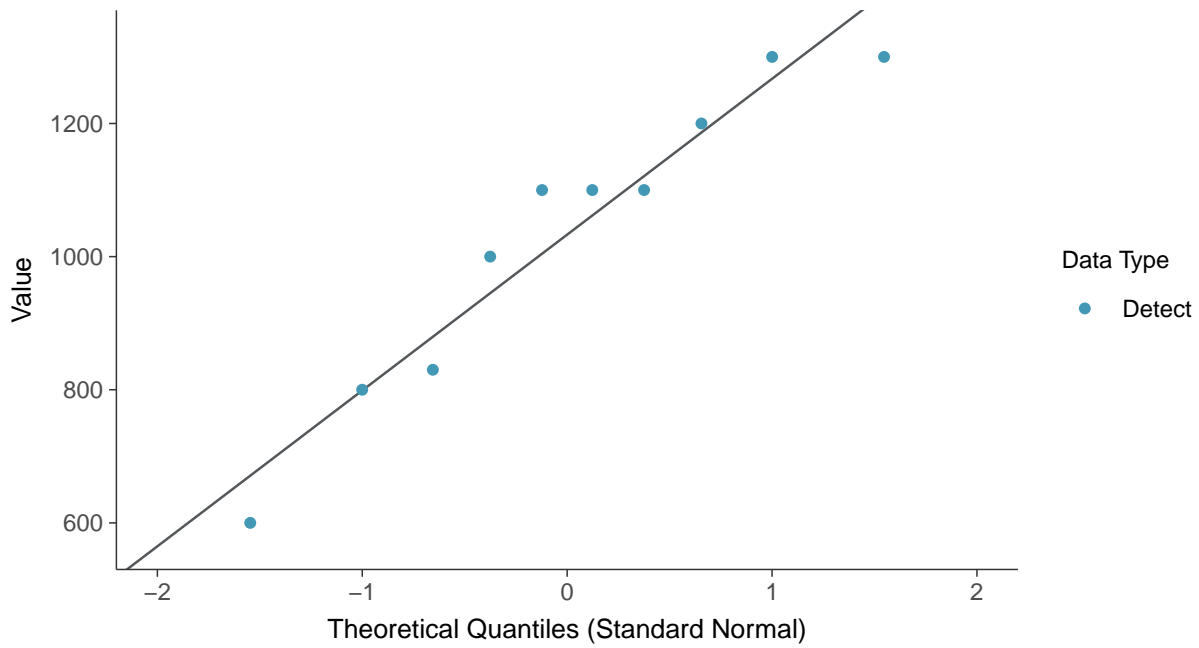
Sulfate (as SO₄), MW-19 (mg/L)





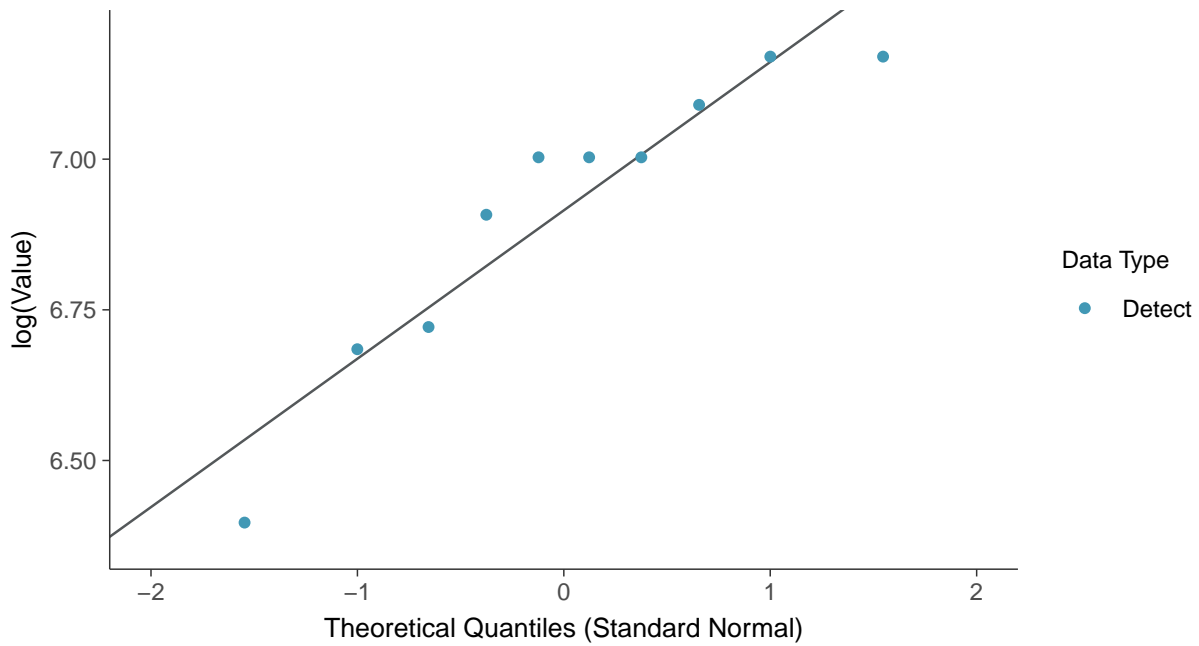
Normal Q-Q plot

Sulfate (as SO₄), MW-19 (mg/L)



Lognormal Q-Q plot

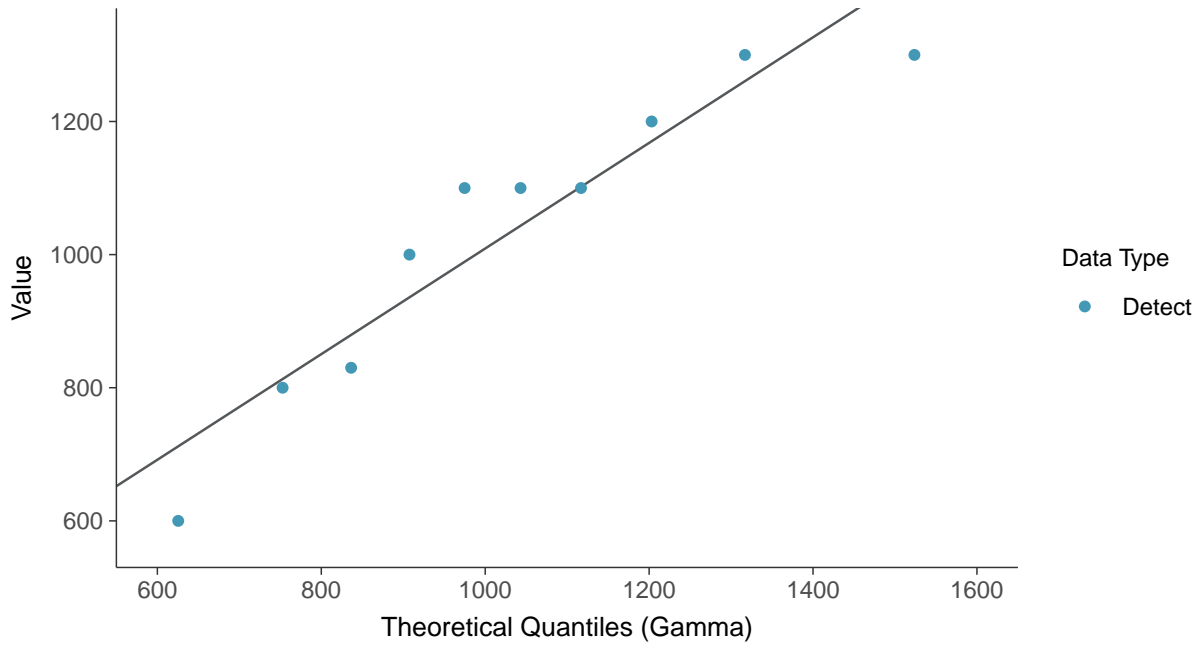
Sulfate (as SO₄), MW-19 (mg/L)





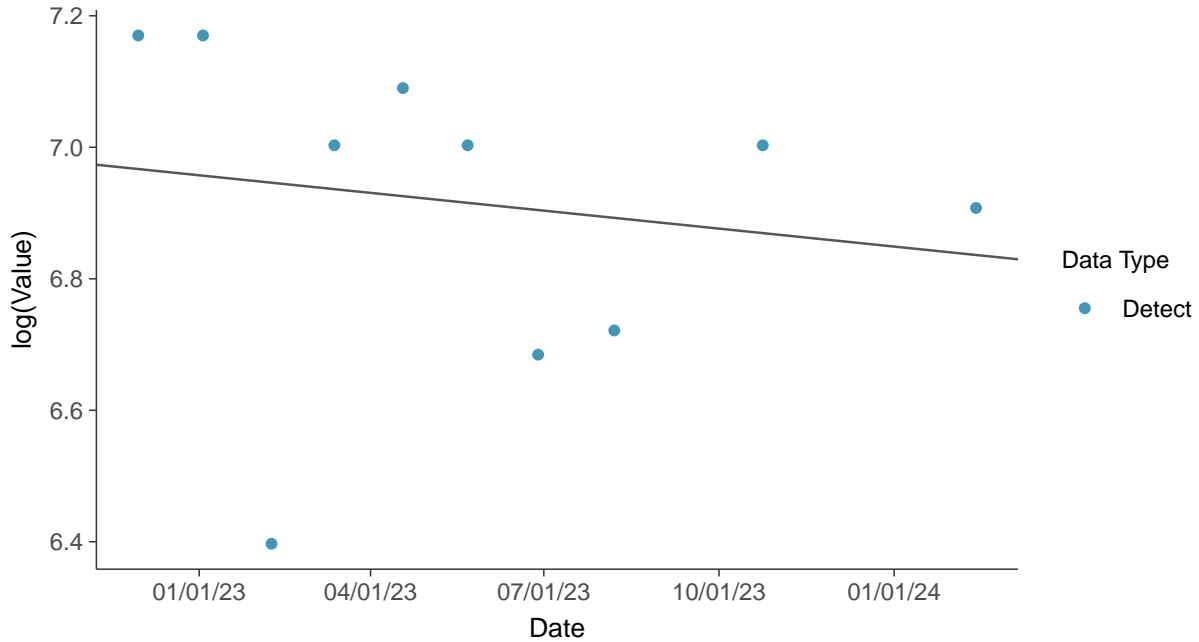
Gamma Q-Q plot

Sulfate (as SO₄), MW-19 (mg/L)



Trend Regression: Lognormal MLE

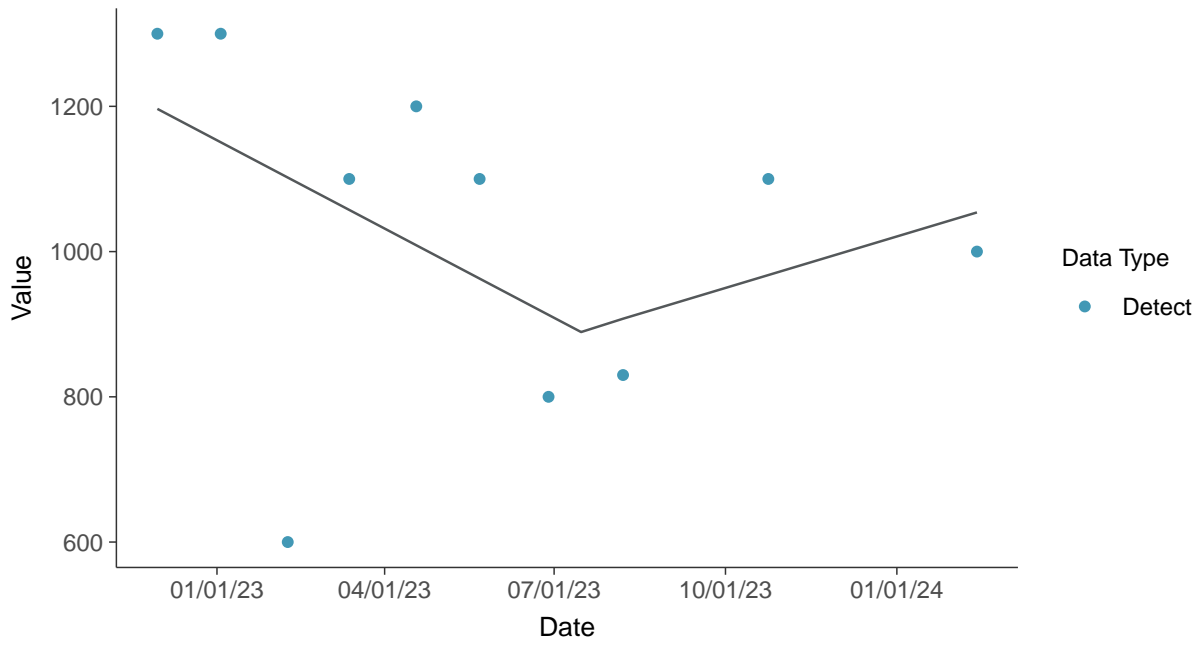
Sulfate (as SO₄), MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-19 (mg/L)



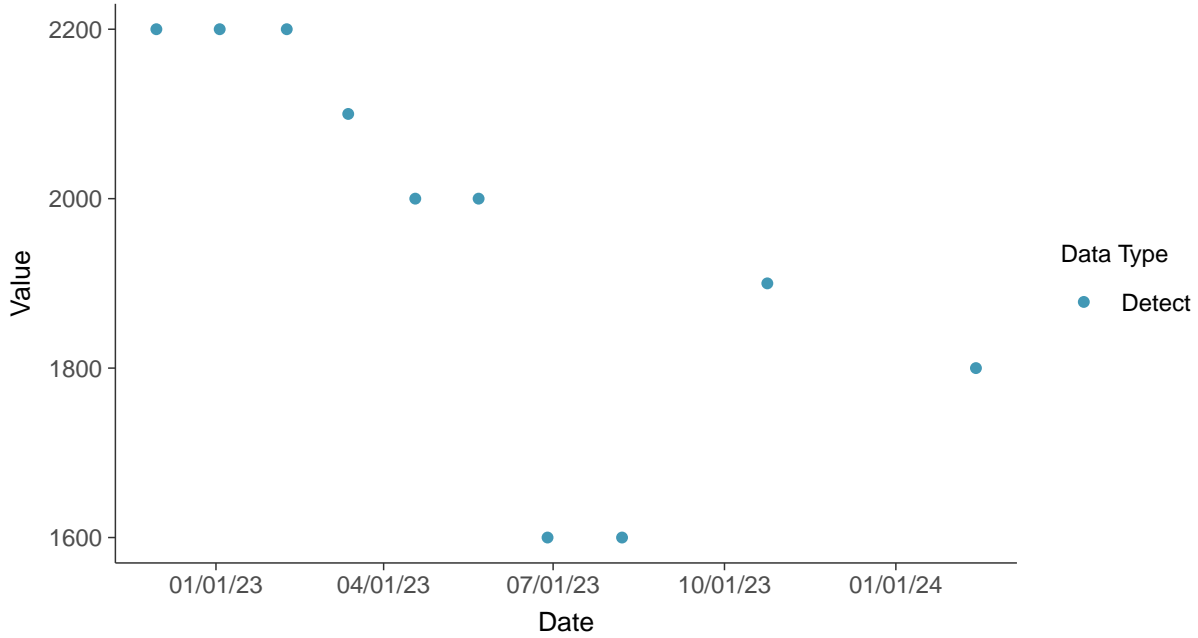


Appendix III: Total Dissolved Solids, MW-19

ID: 1_29_4_126

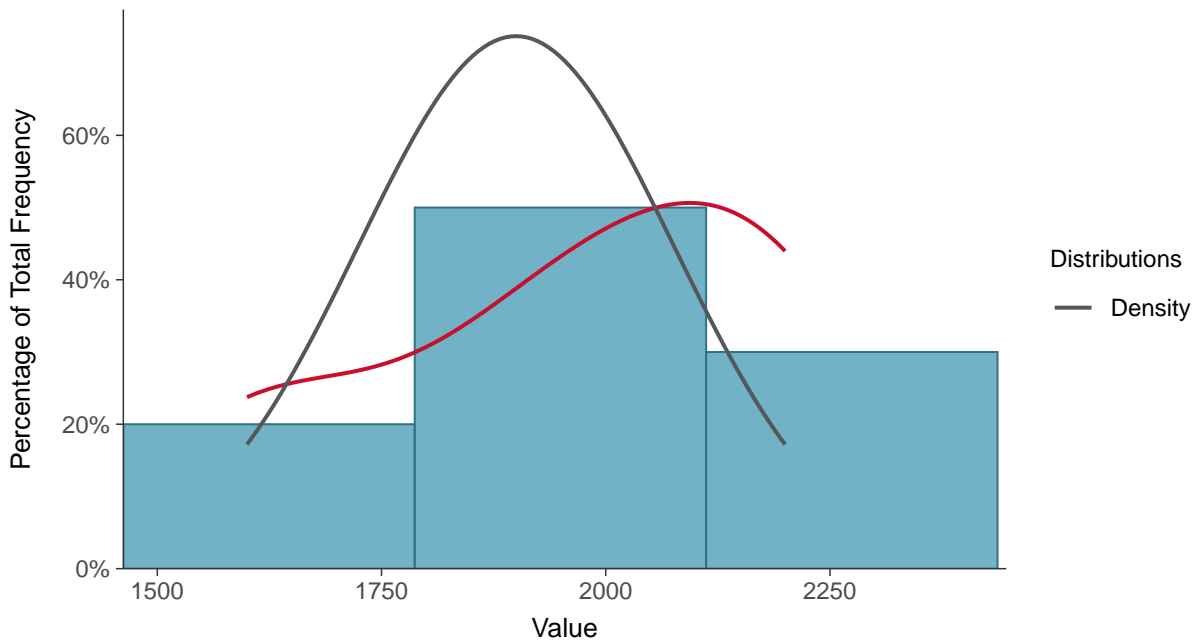
Scatter Plot

Total Dissolved Solids, MW-19 (mg/L)



Histogram

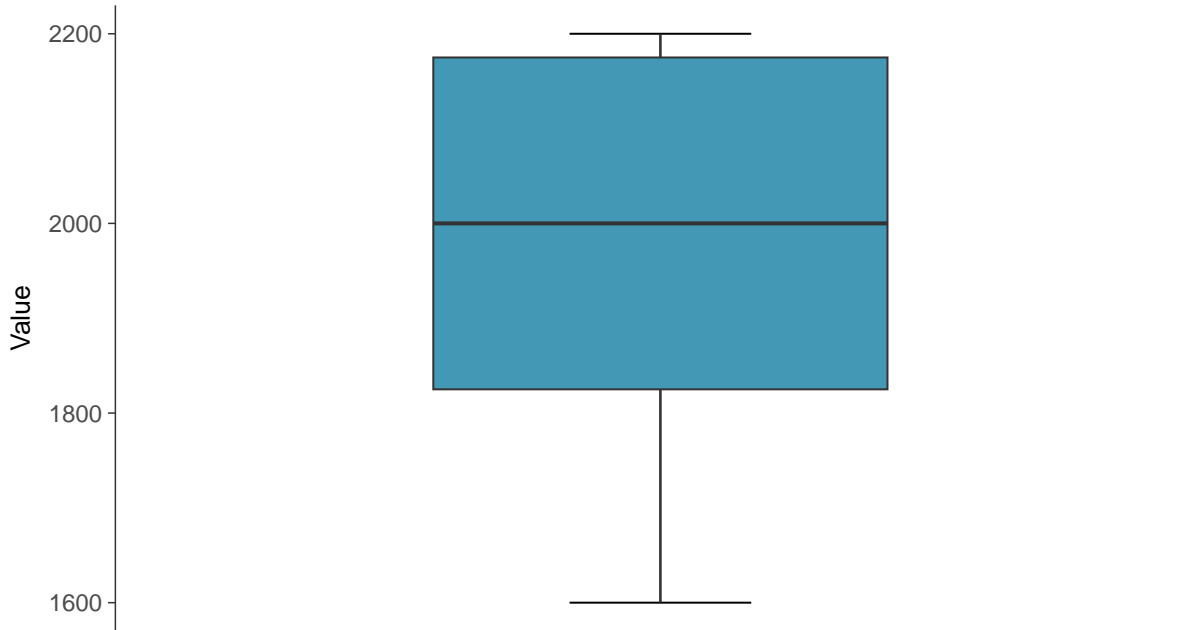
Total Dissolved Solids, MW-19 (mg/L)





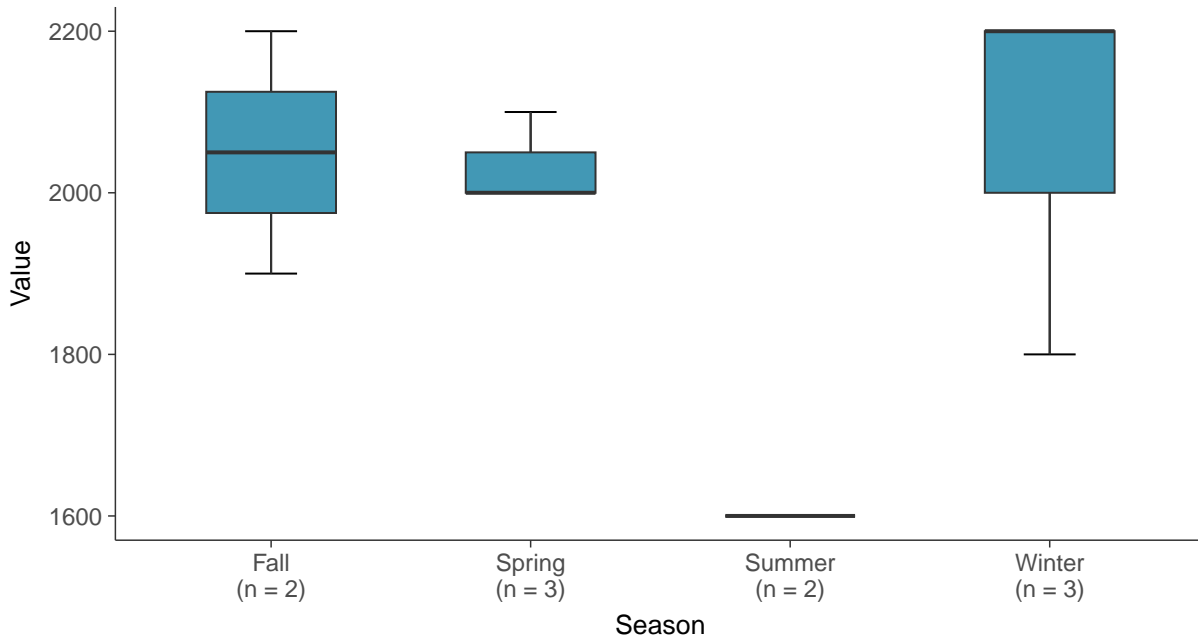
Boxplot

Total Dissolved Solids, MW-19 (mg/L)



Boxplot by Season

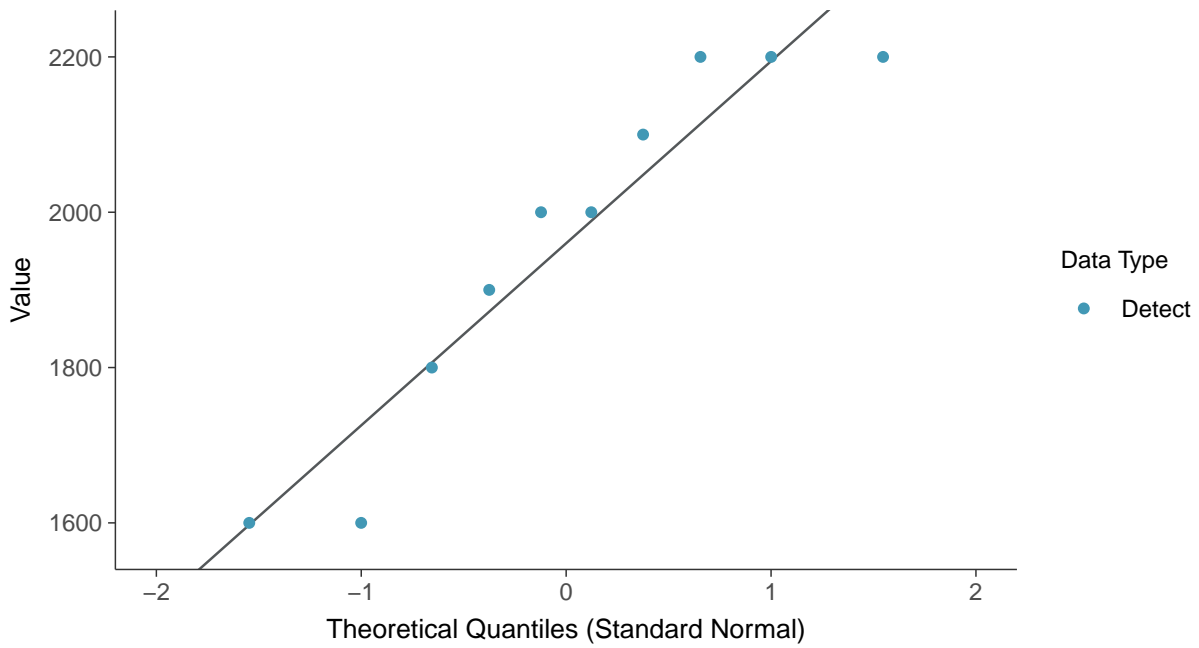
Total Dissolved Solids, MW-19 (mg/L)





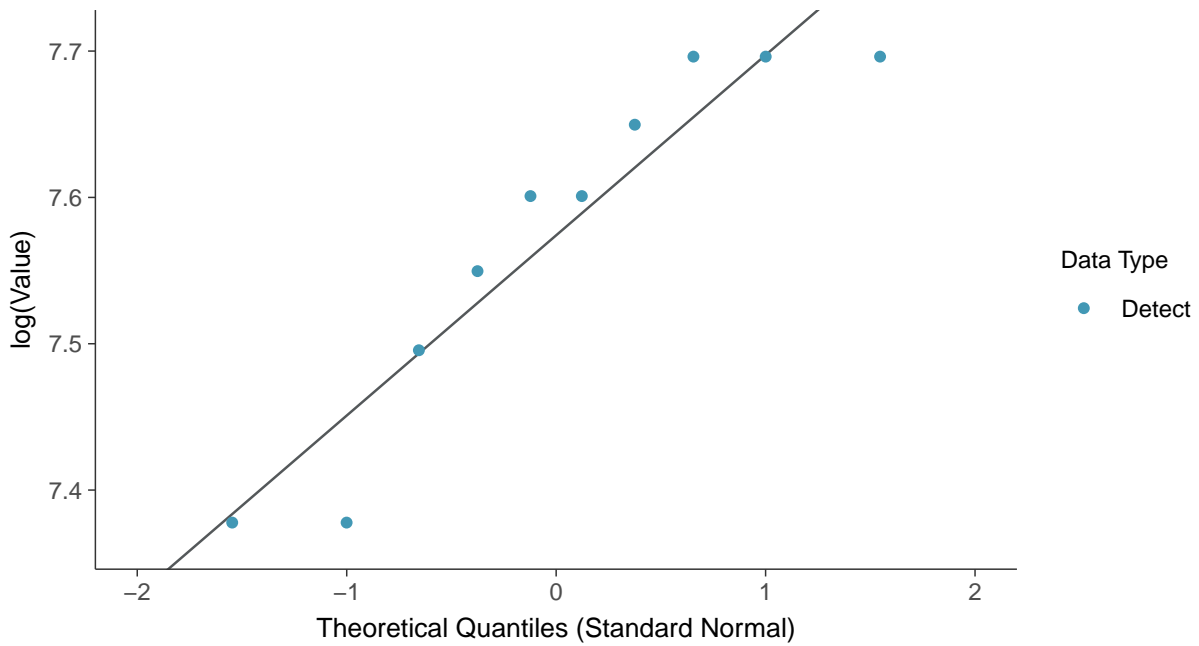
Normal Q-Q plot

Total Dissolved Solids, MW-19 (mg/L)



Lognormal Q-Q plot

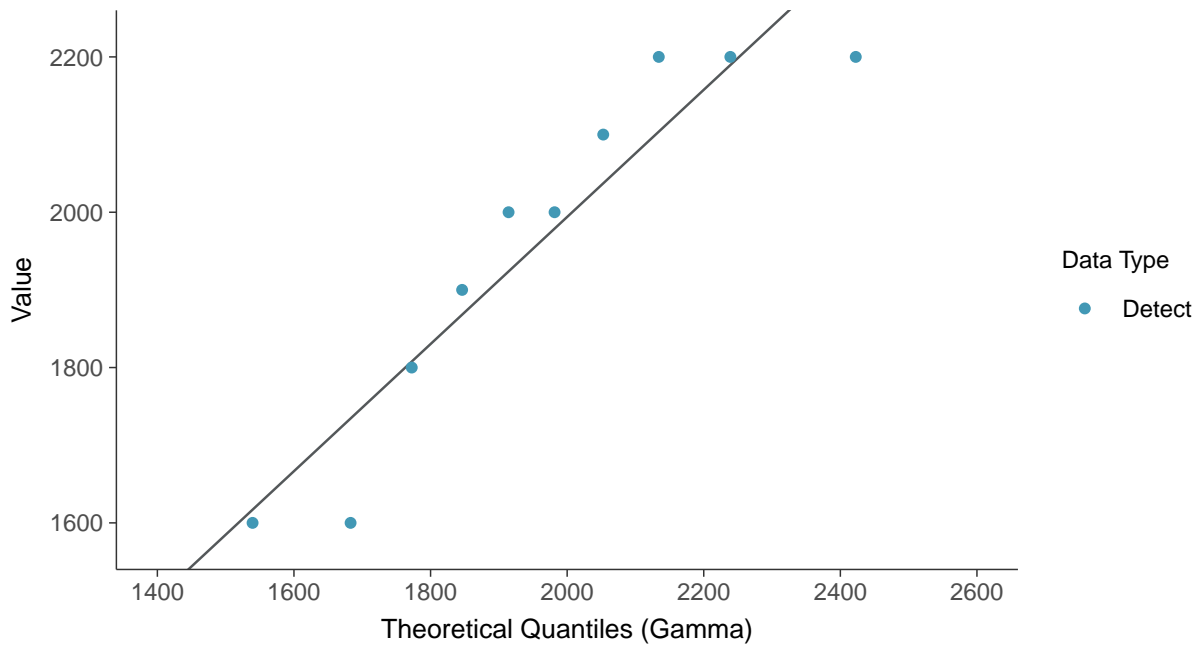
Total Dissolved Solids, MW-19 (mg/L)





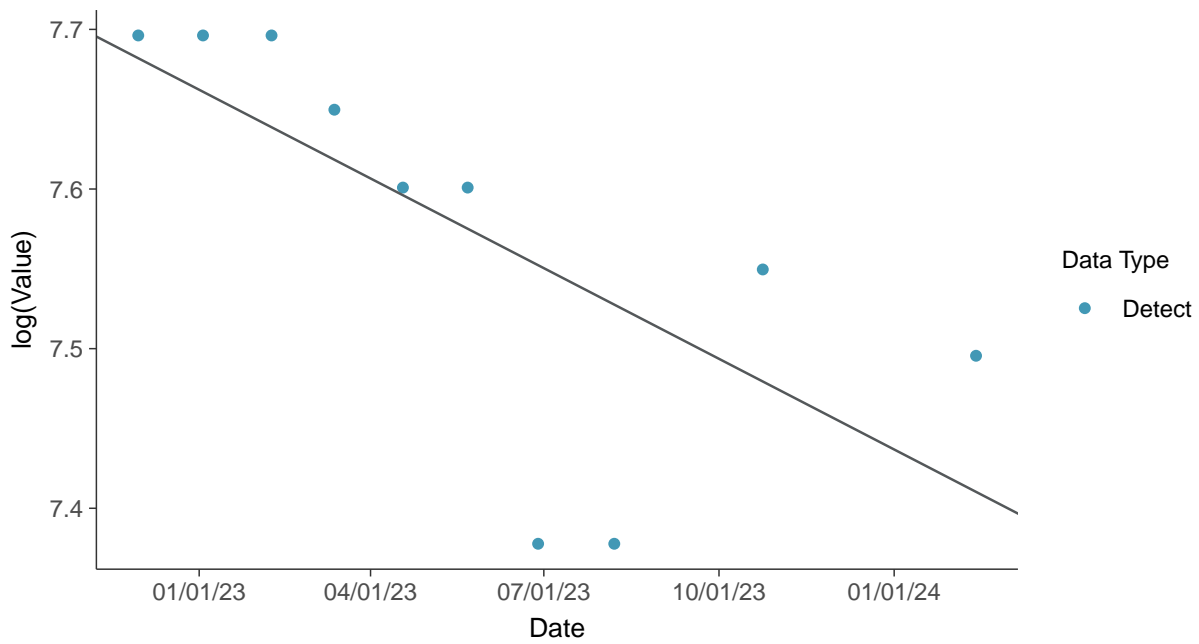
Gamma Q-Q plot

Total Dissolved Solids, MW-19 (mg/L)



Trend Regression: Lognormal MLE

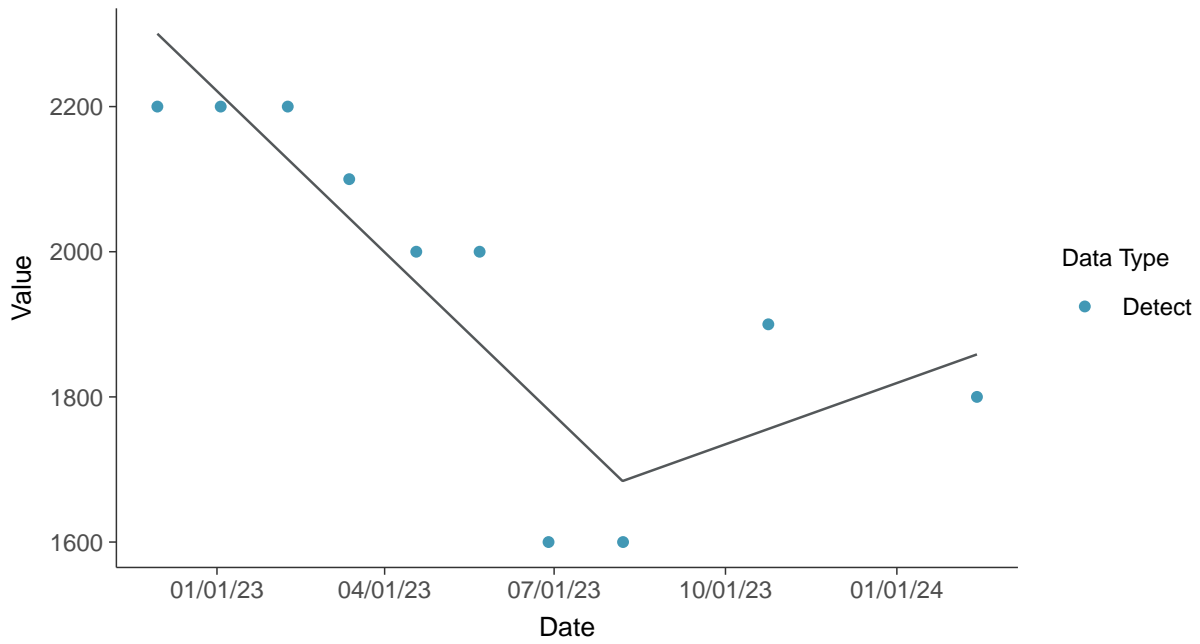
Total Dissolved Solids, MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-19 (mg/L)



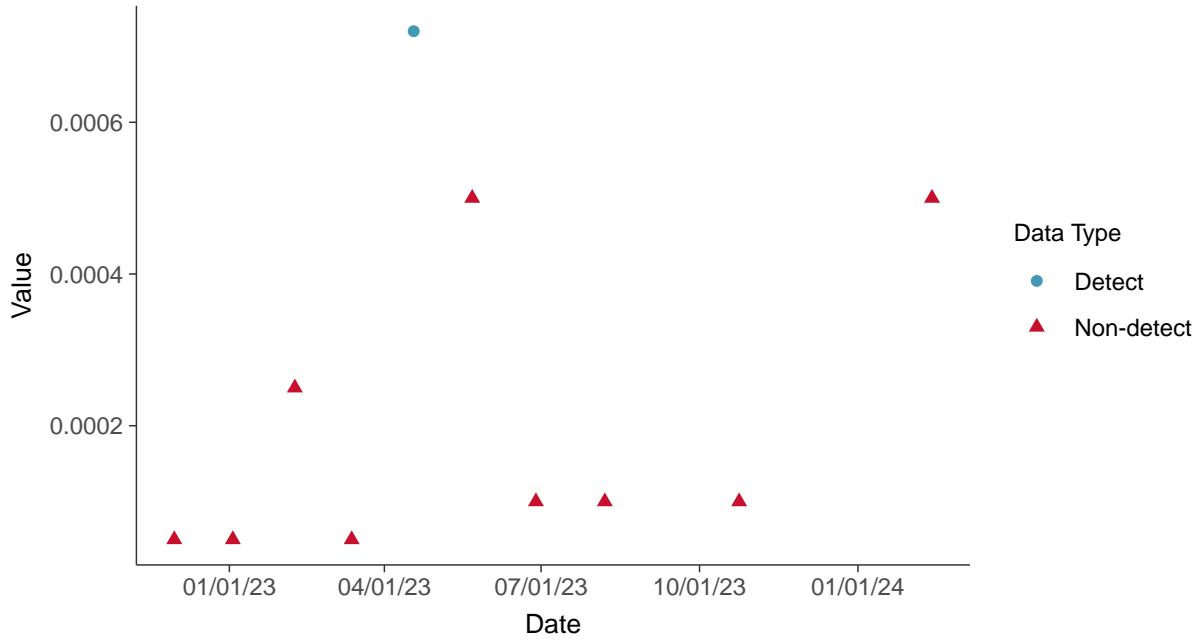


Appendix IV: Antimony, MW-19

ID: 1_29_5_101

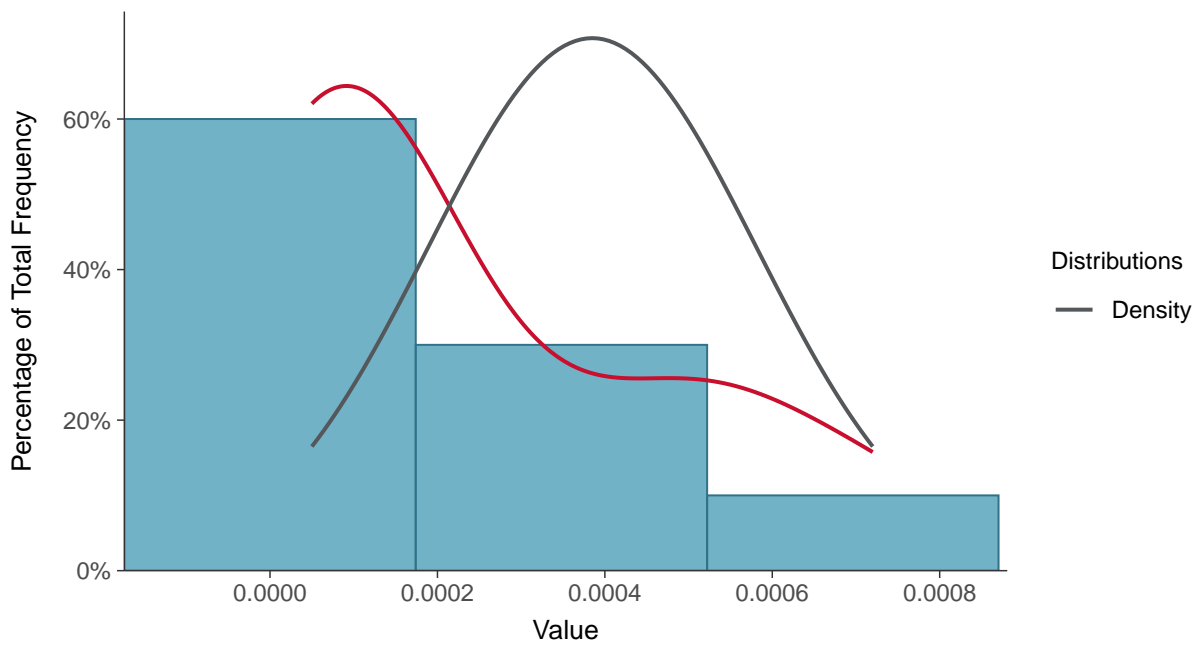
Scatter Plot

Antimony, MW-19 (mg/L)



Histogram

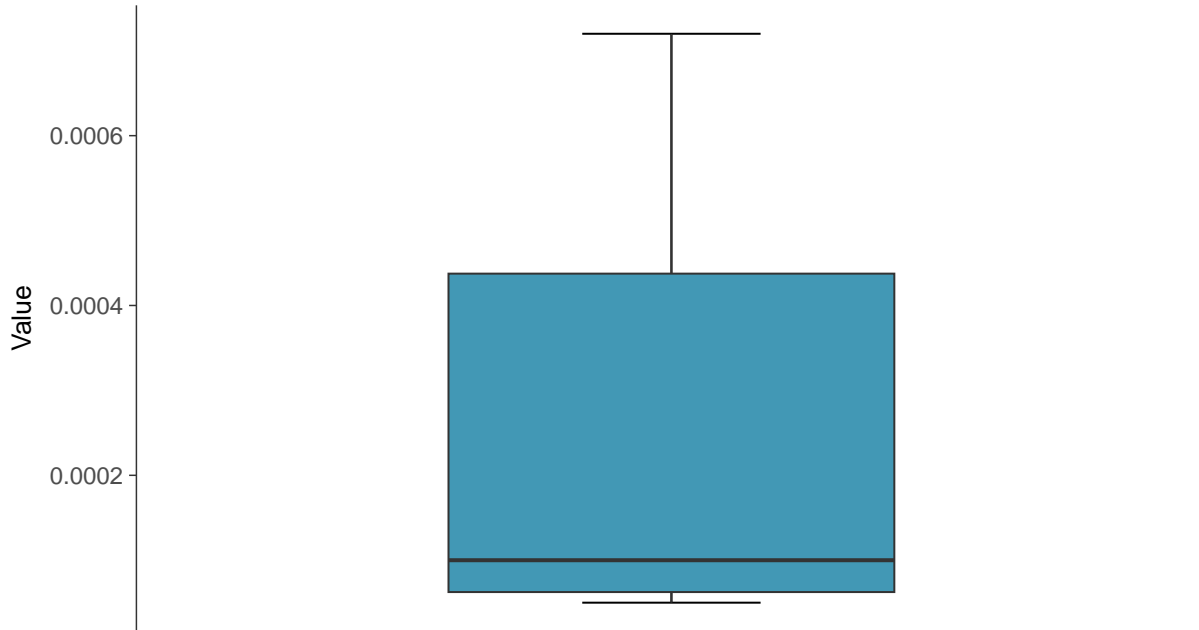
Antimony, MW-19 (mg/L)





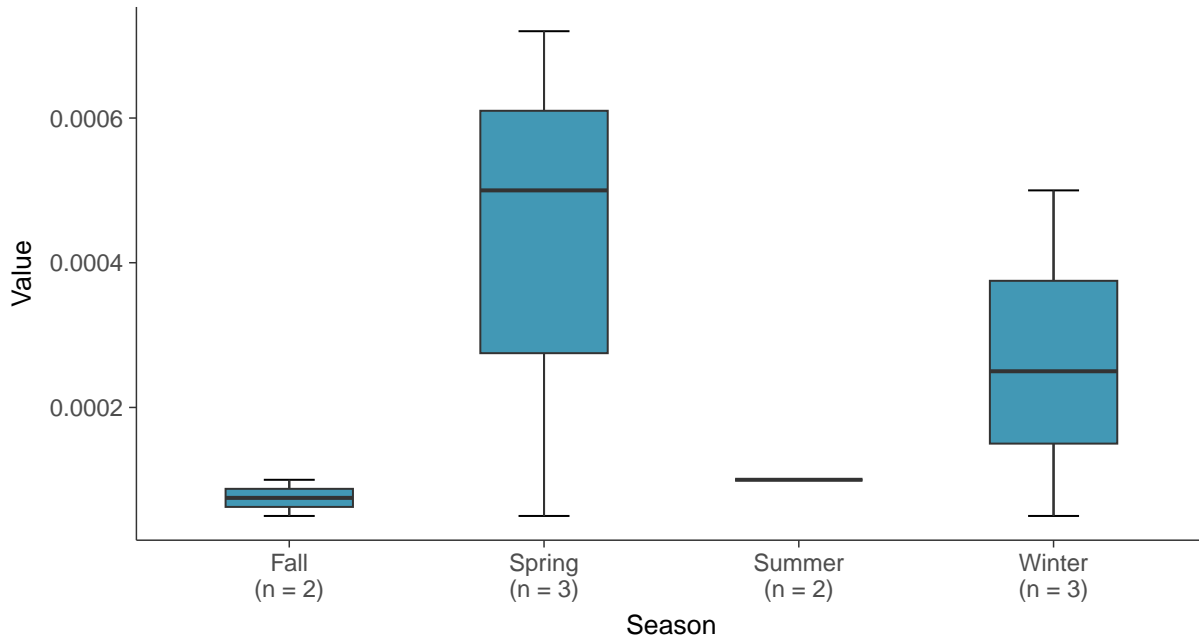
Boxplot

Antimony, MW-19 (mg/L)



Boxplot by Season

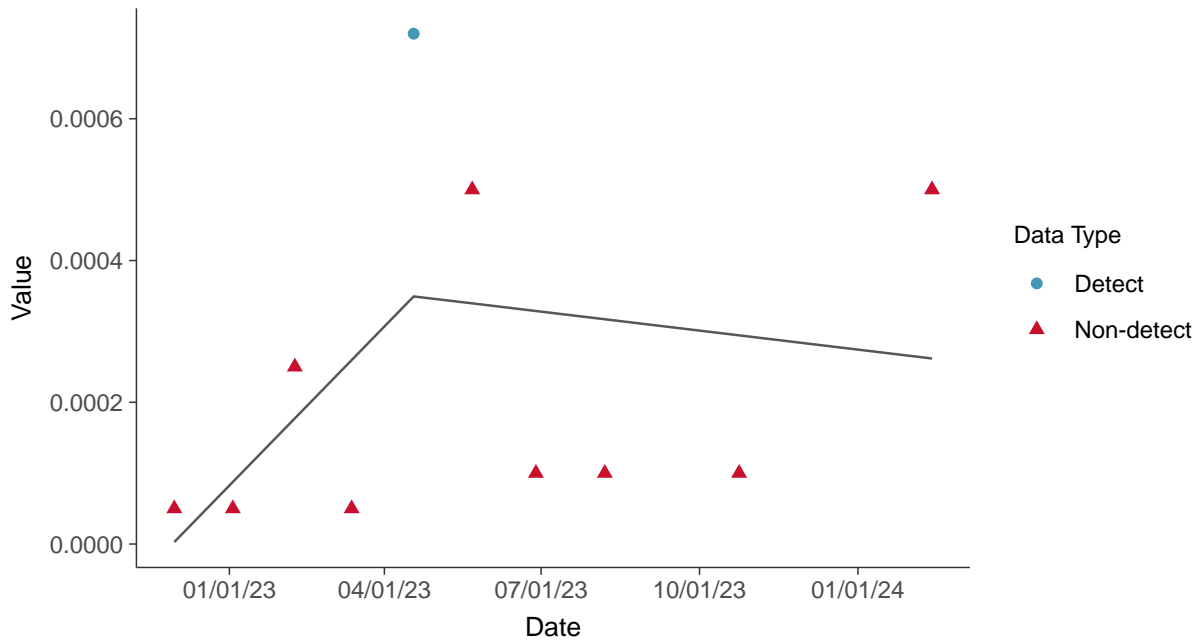
Antimony, MW-19 (mg/L)





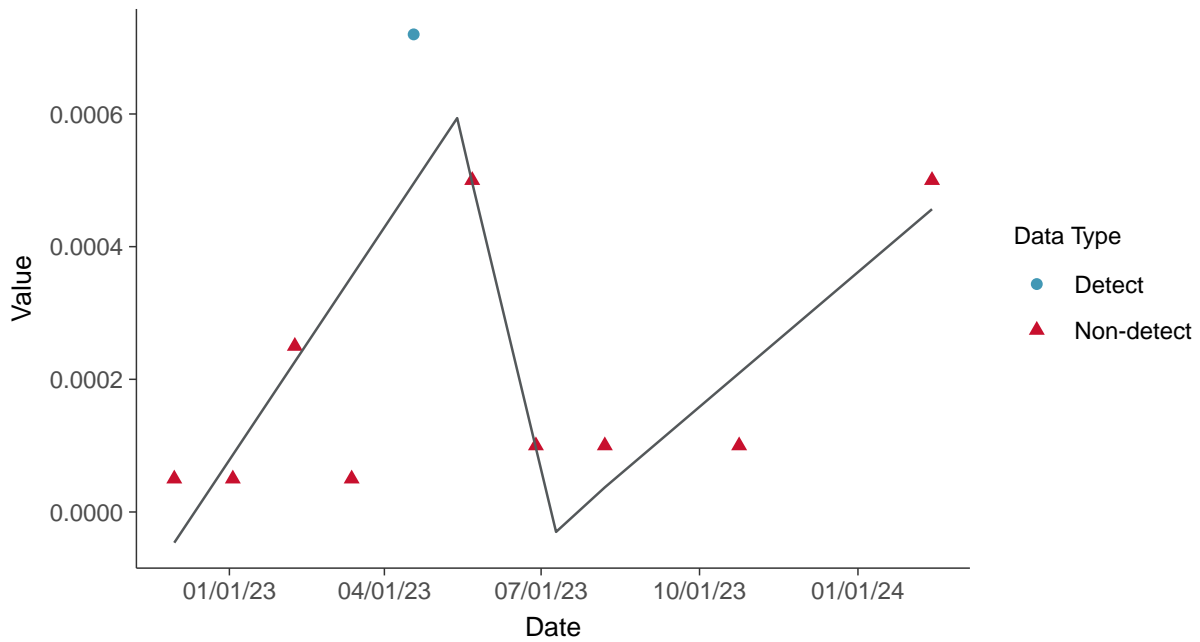
Trend Regression: Piecewise Linear-Linear

Antimony, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-19 (mg/L)



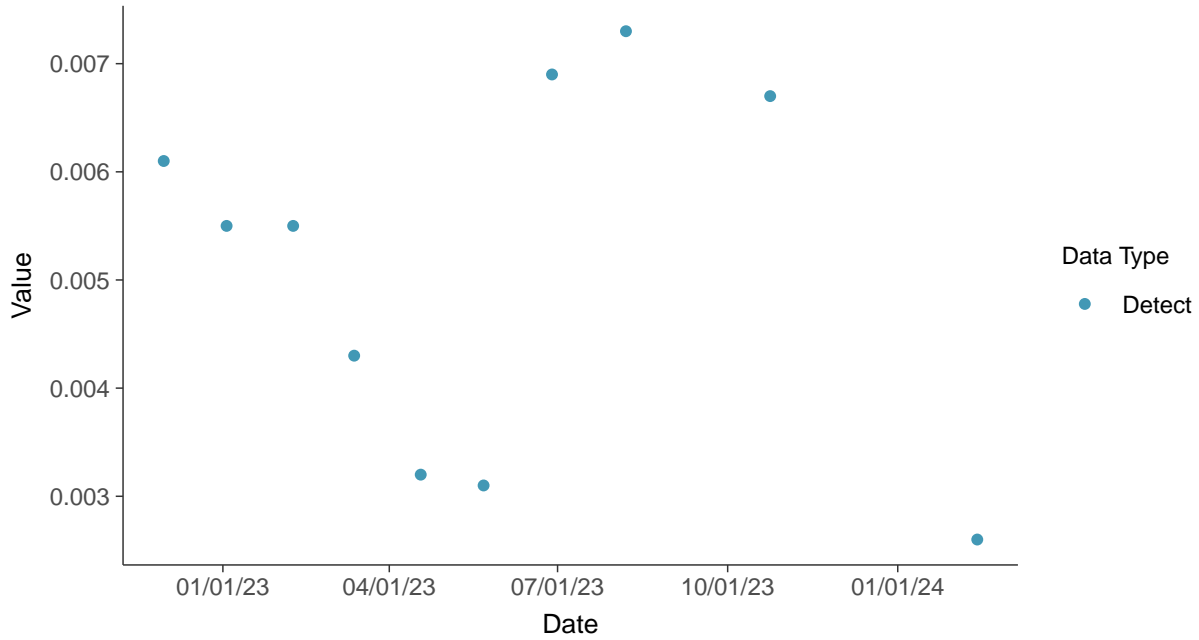


Appendix IV: Arsenic, MW-19

ID: 1_29_5_102

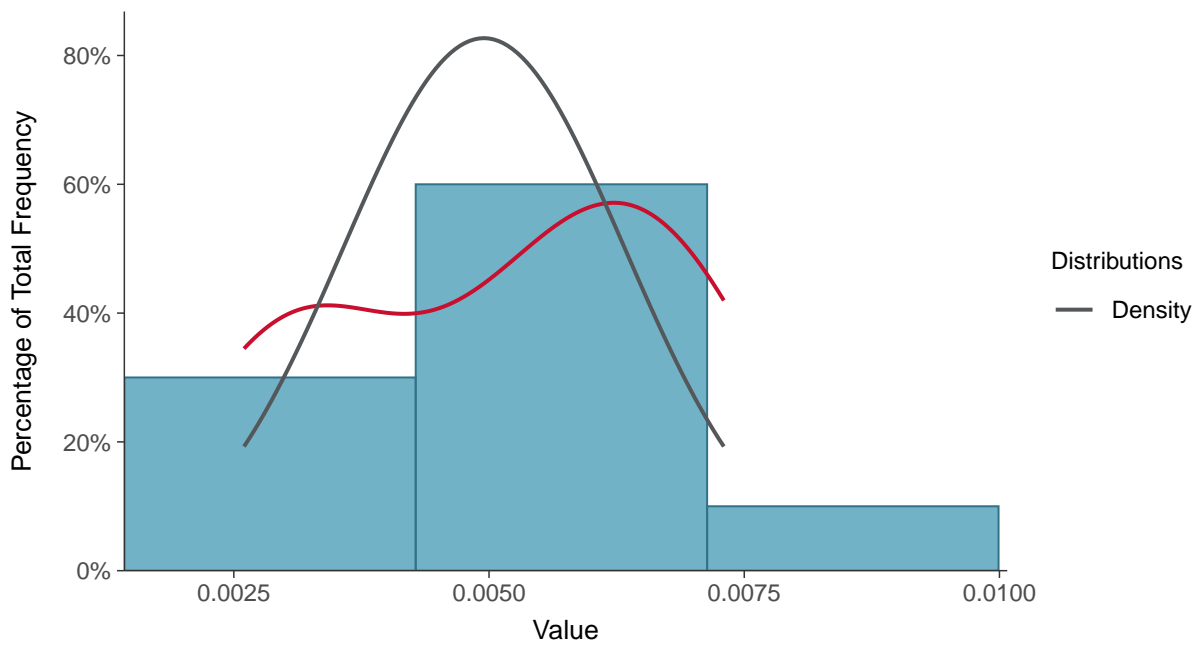
Scatter Plot

Arsenic, MW-19 (mg/L)



Histogram

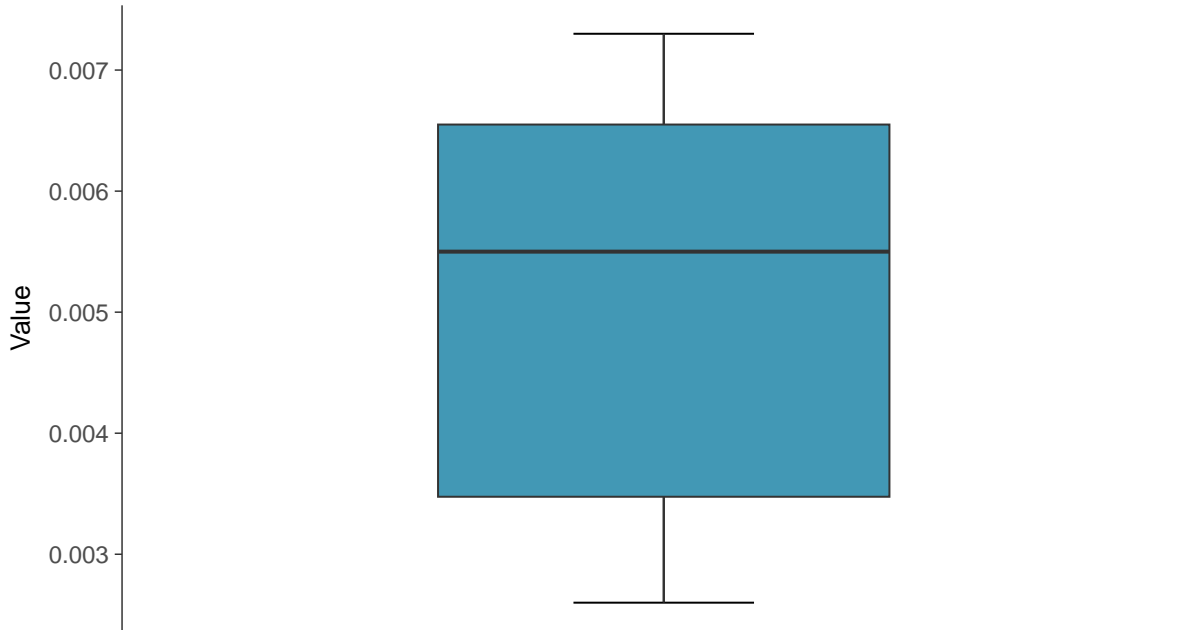
Arsenic, MW-19 (mg/L)





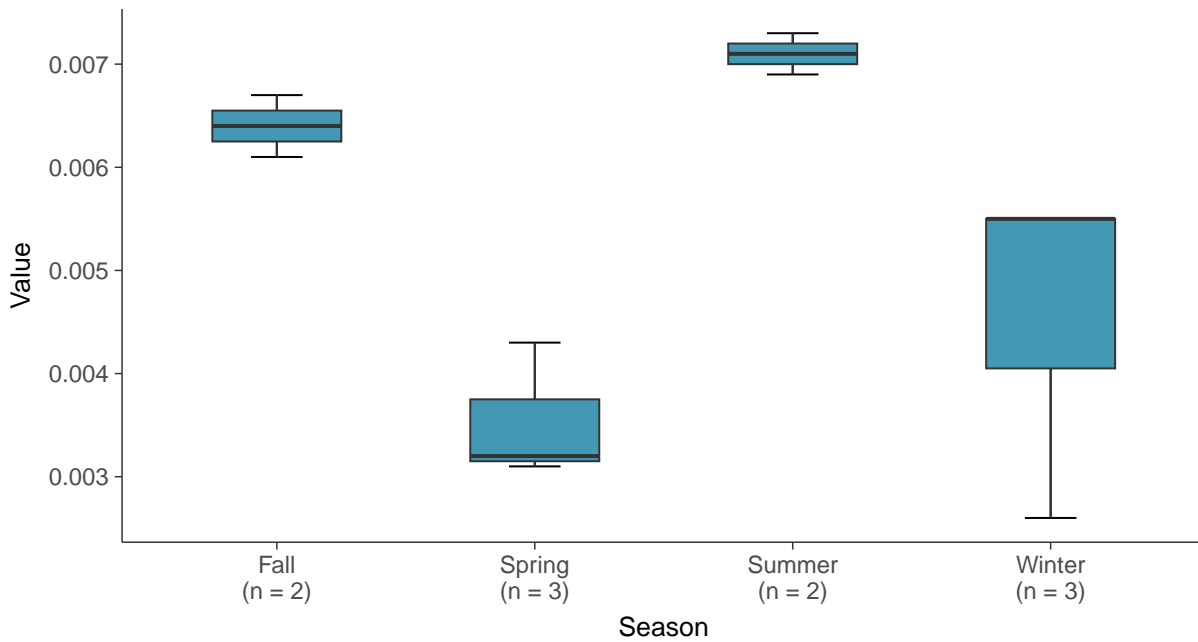
Boxplot

Arsenic, MW-19 (mg/L)



Boxplot by Season

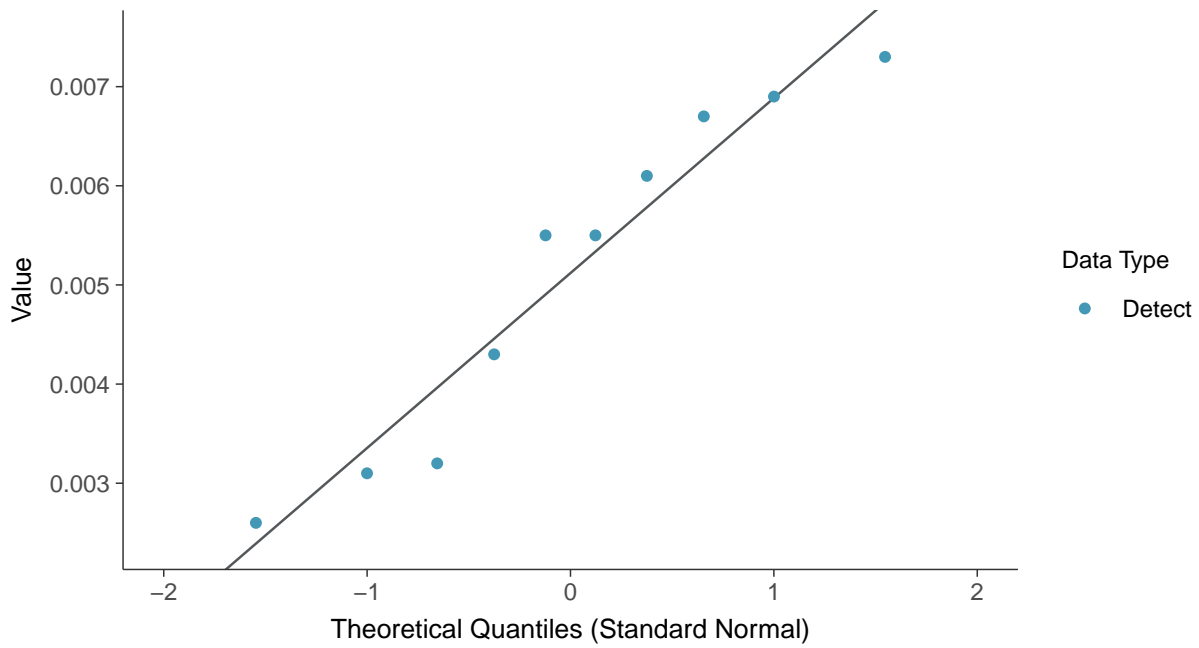
Arsenic, MW-19 (mg/L)





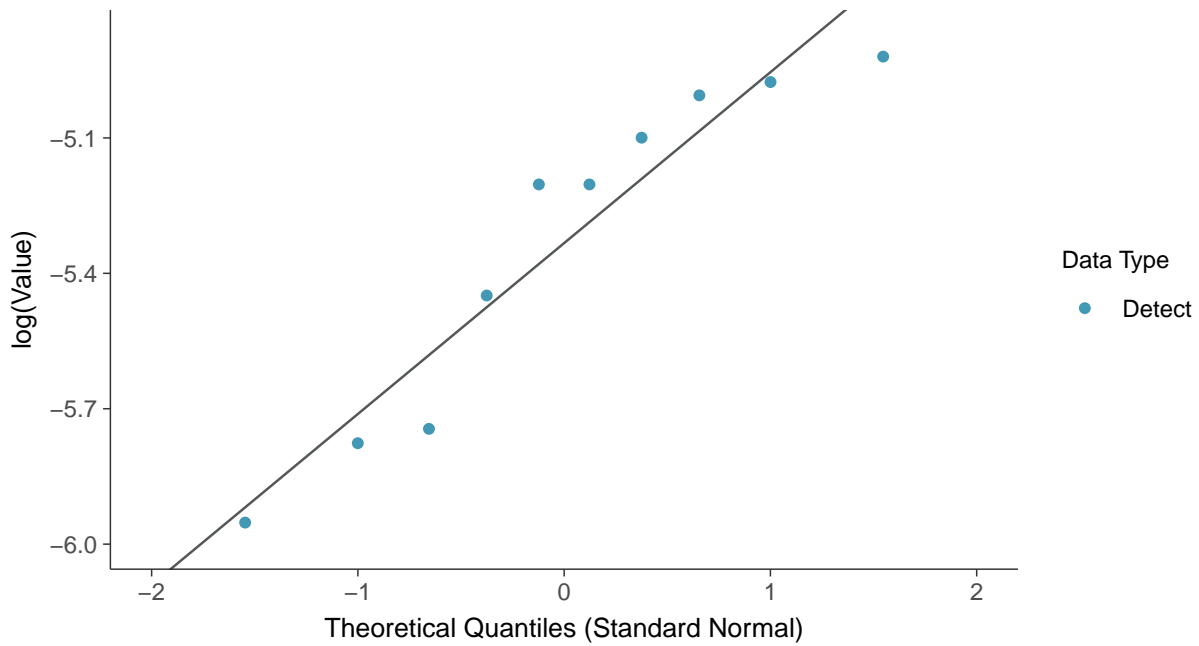
Normal Q-Q plot

Arsenic, MW-19 (mg/L)



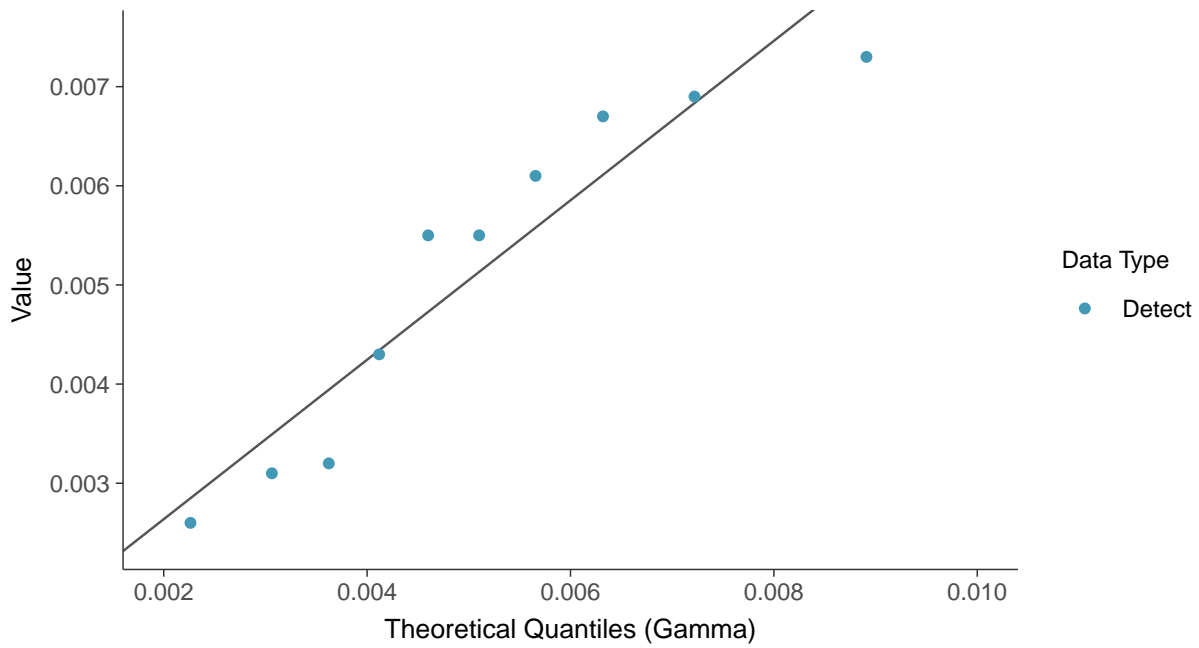
Lognormal Q-Q plot

Arsenic, MW-19 (mg/L)

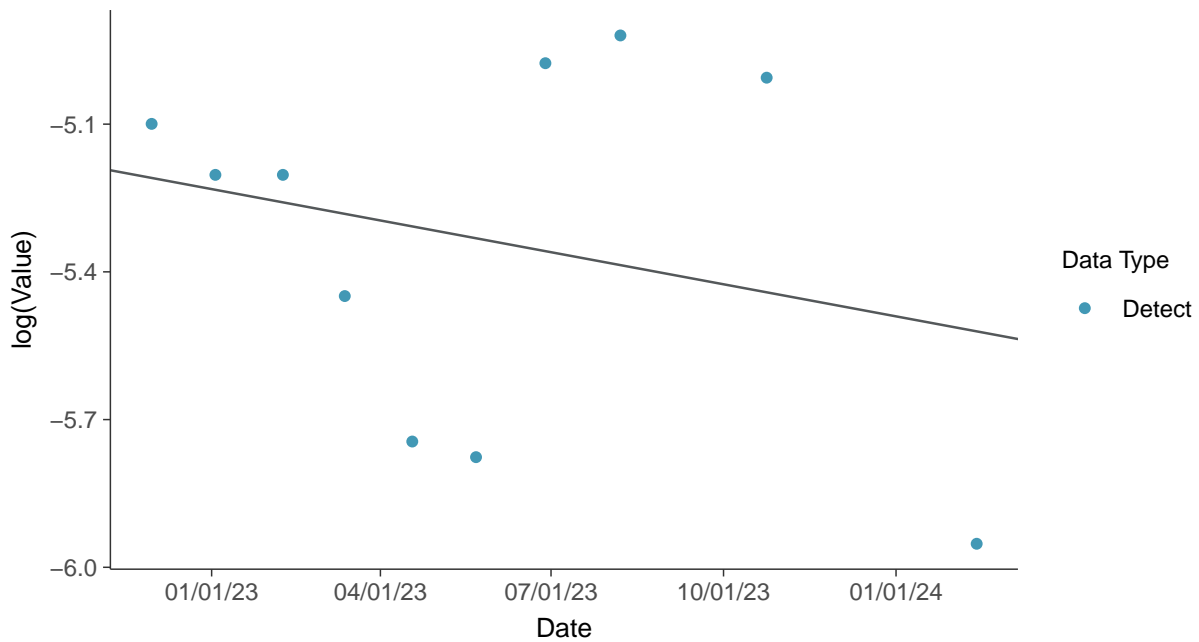




Gamma Q-Q plot
Arsenic, MW-19 (mg/L)



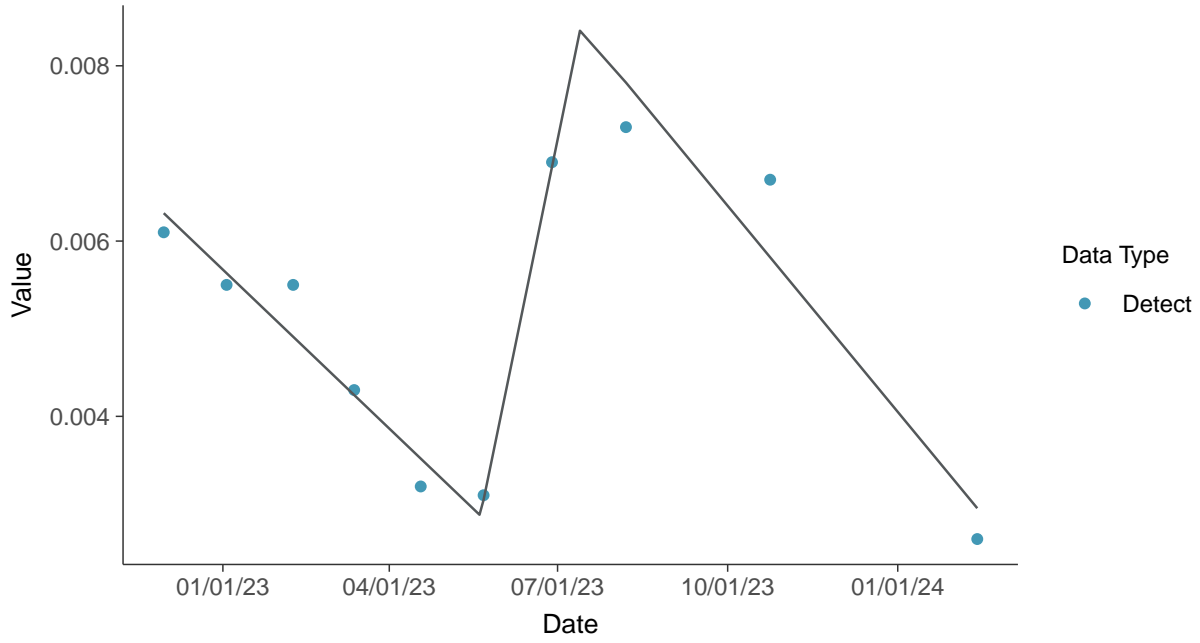
Trend Regression: Lognormal MLE
Arsenic, MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-19 (mg/L)



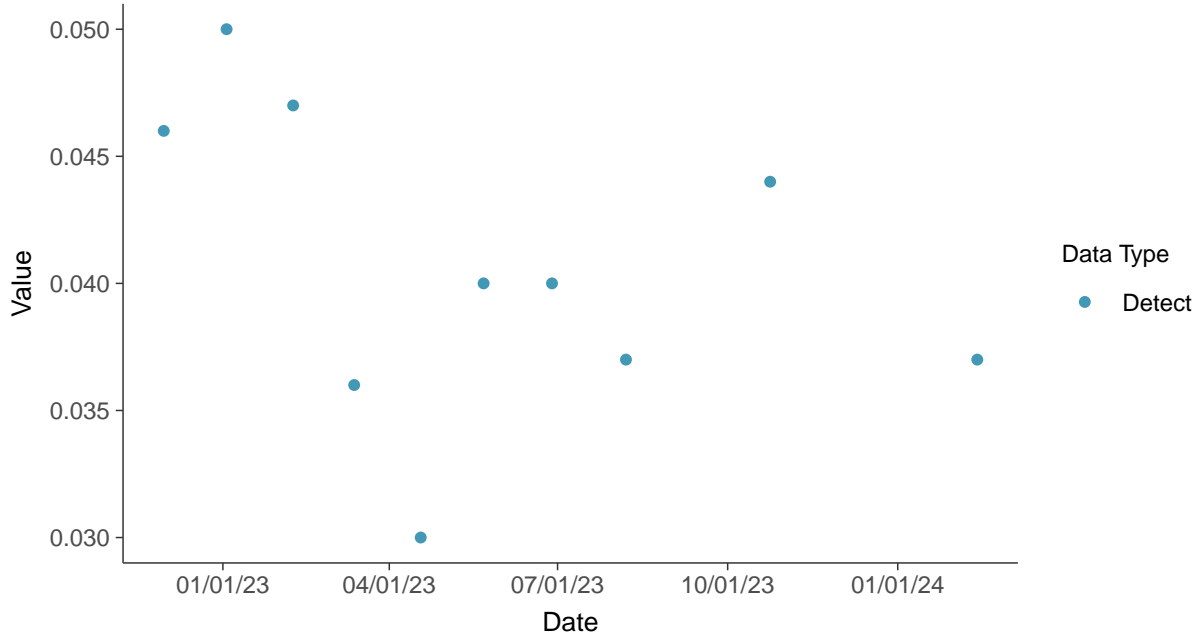


Appendix IV: Barium, MW-19

ID: 1_29_5_103

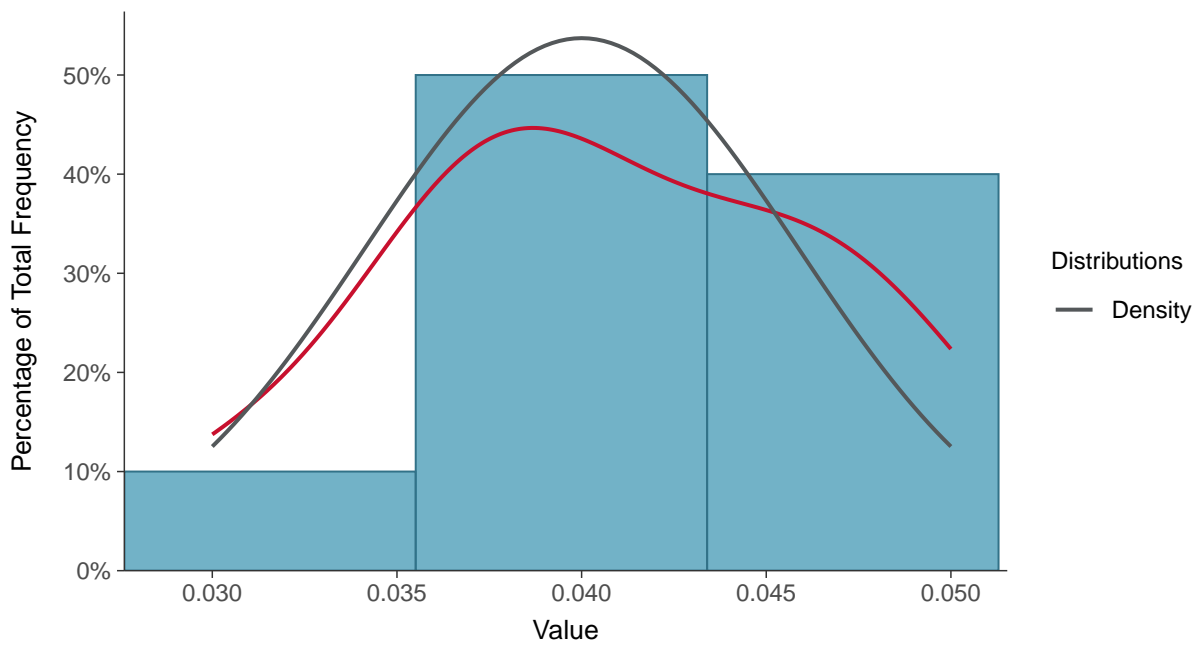
Scatter Plot

Barium, MW-19 (mg/L)



Histogram

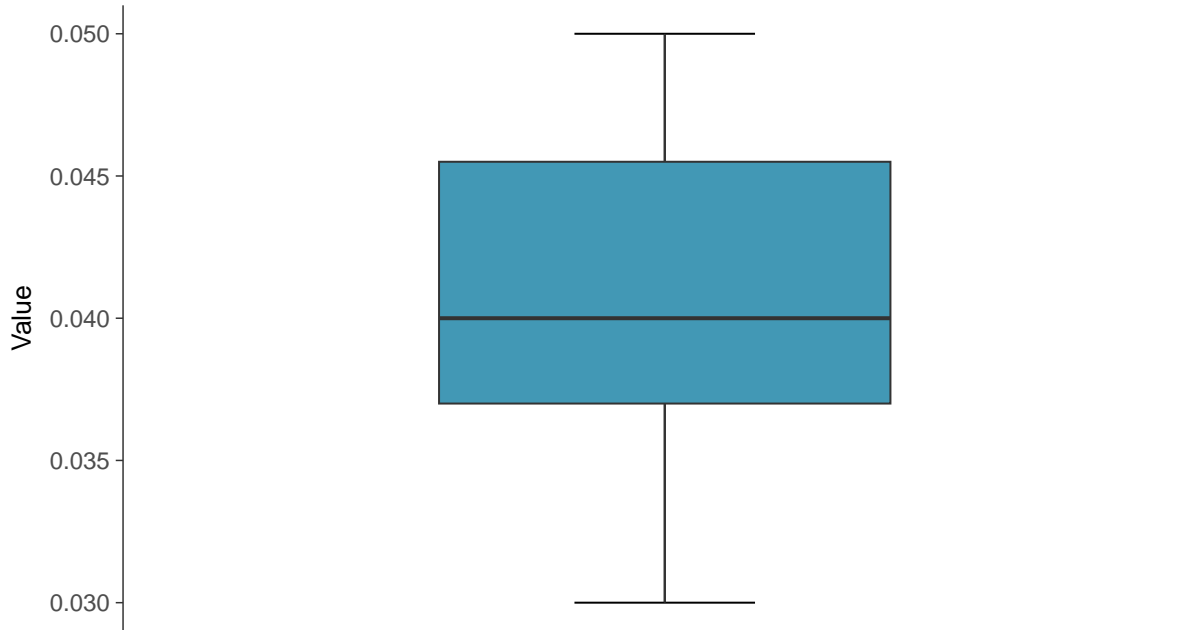
Barium, MW-19 (mg/L)





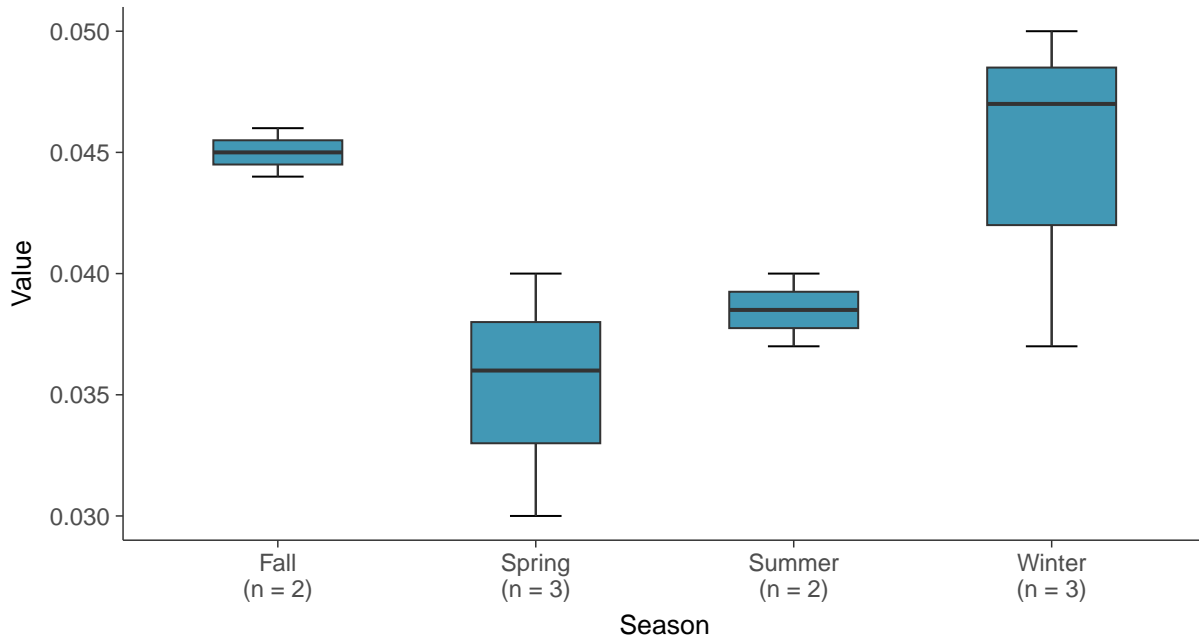
Boxplot

Barium, MW-19 (mg/L)



Boxplot by Season

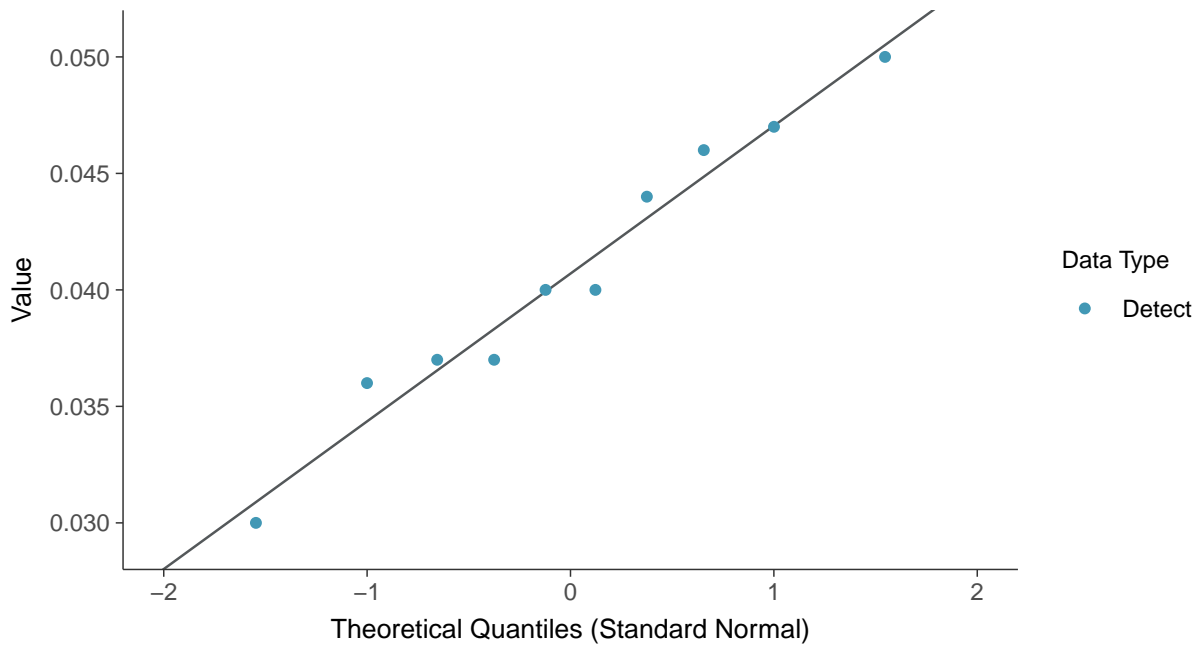
Barium, MW-19 (mg/L)





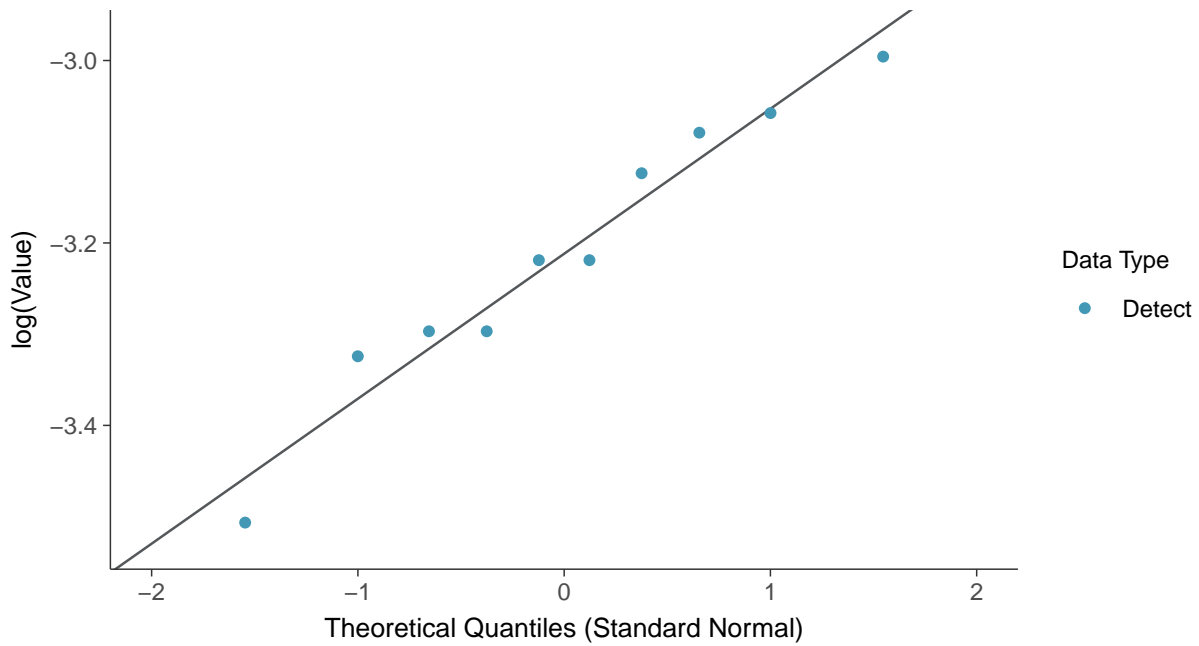
Normal Q-Q plot

Barium, MW-19 (mg/L)



Lognormal Q-Q plot

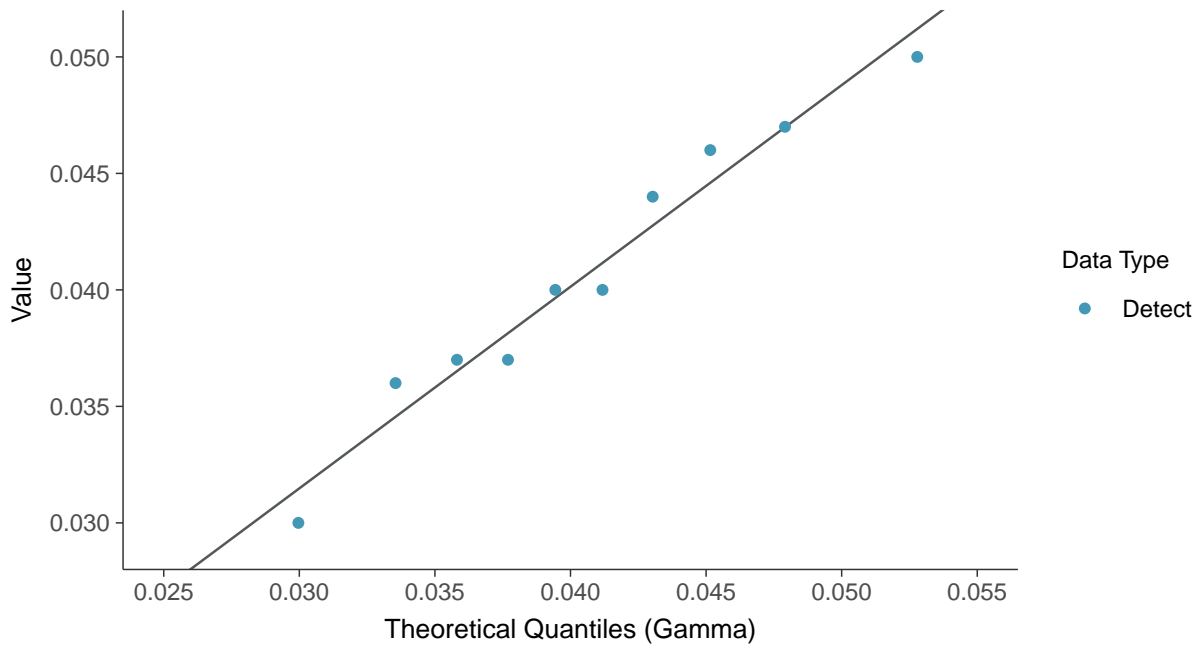
Barium, MW-19 (mg/L)





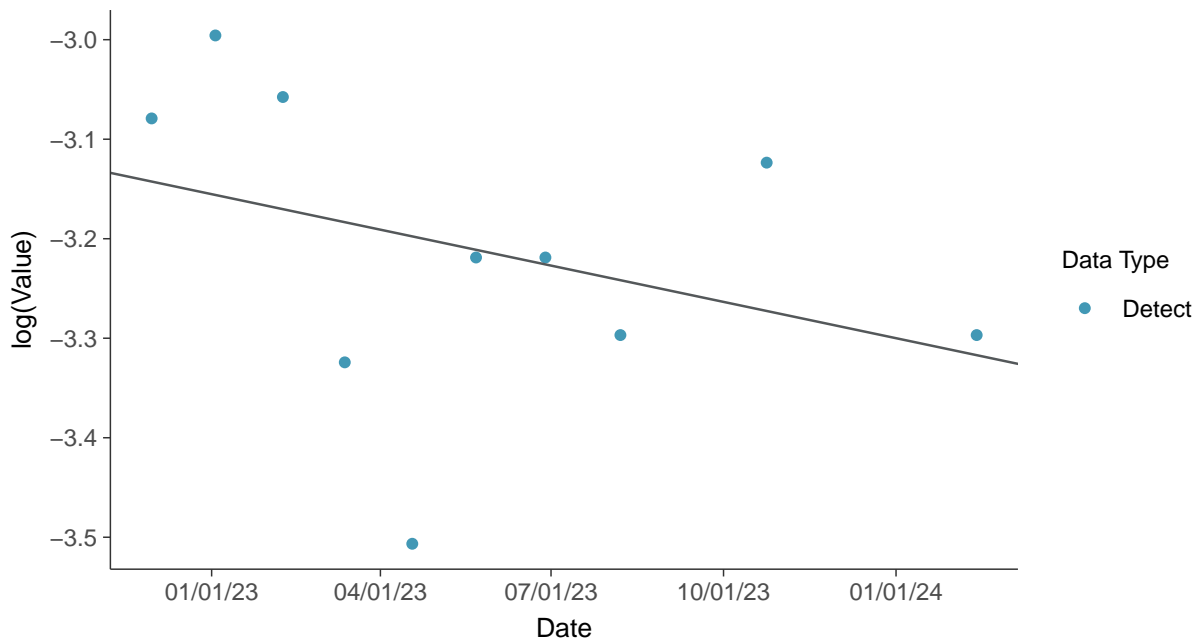
Gamma Q-Q plot

Barium, MW-19 (mg/L)



Trend Regression: Lognormal MLE

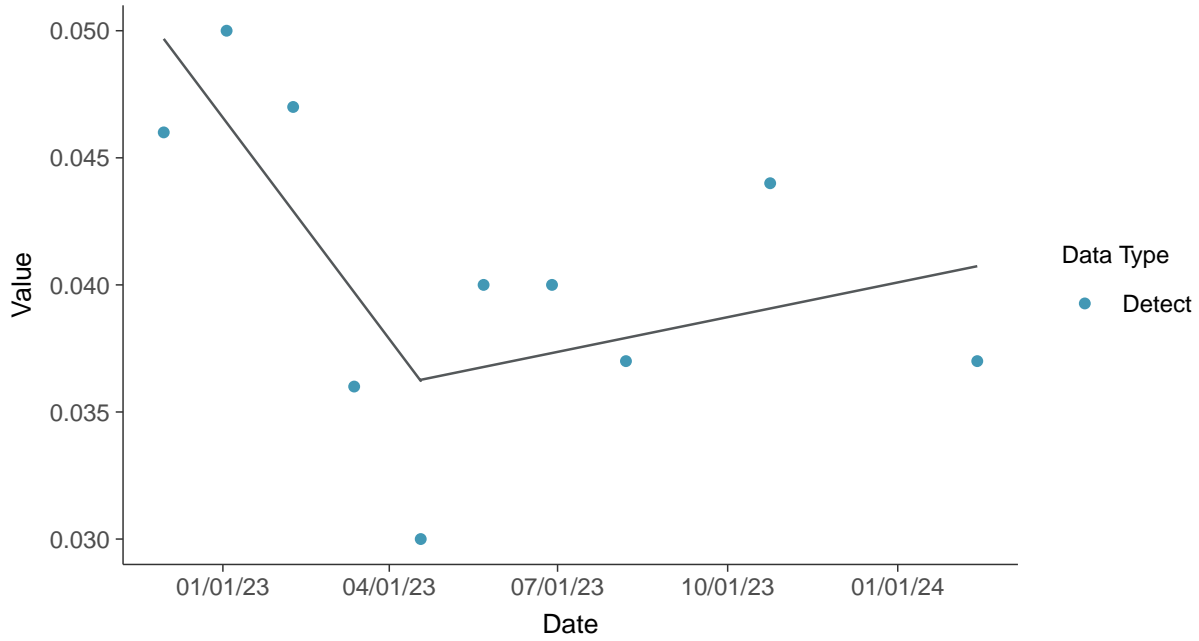
Barium, MW-19 (mg/L)





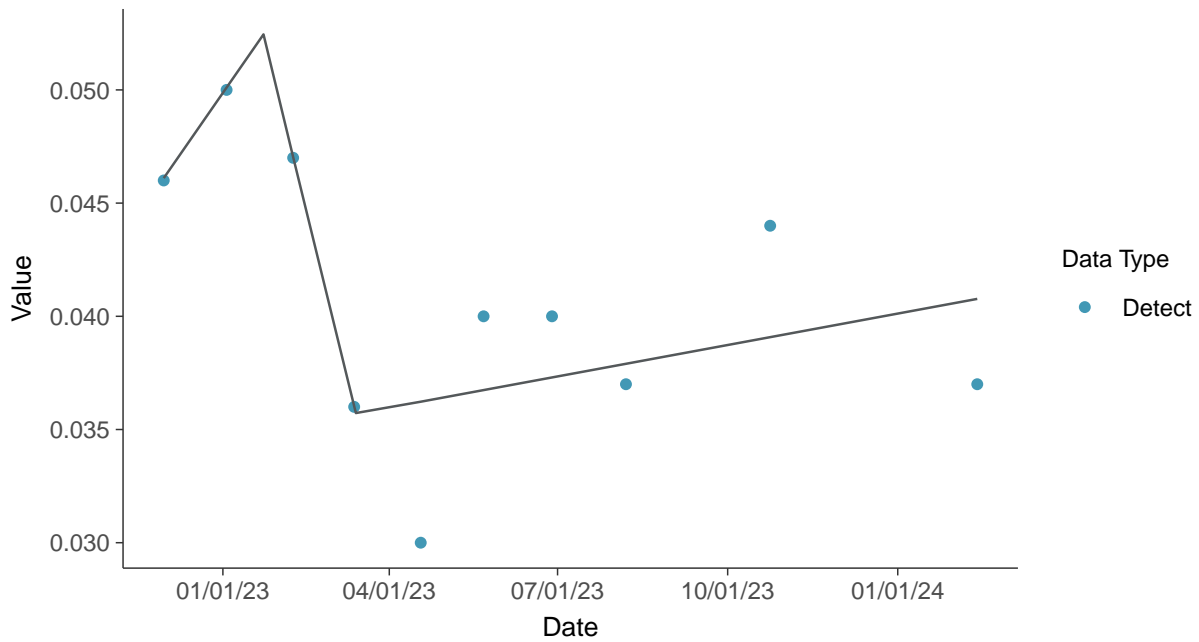
Trend Regression: Piecewise Linear-Linear

Barium, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

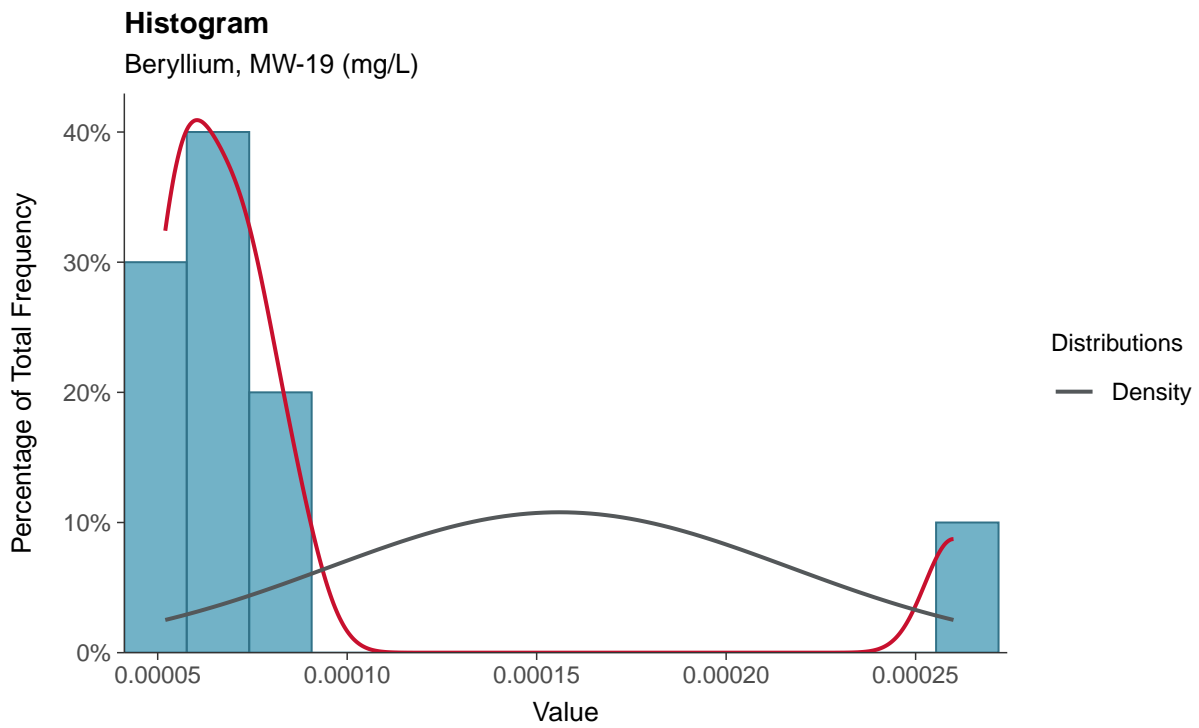
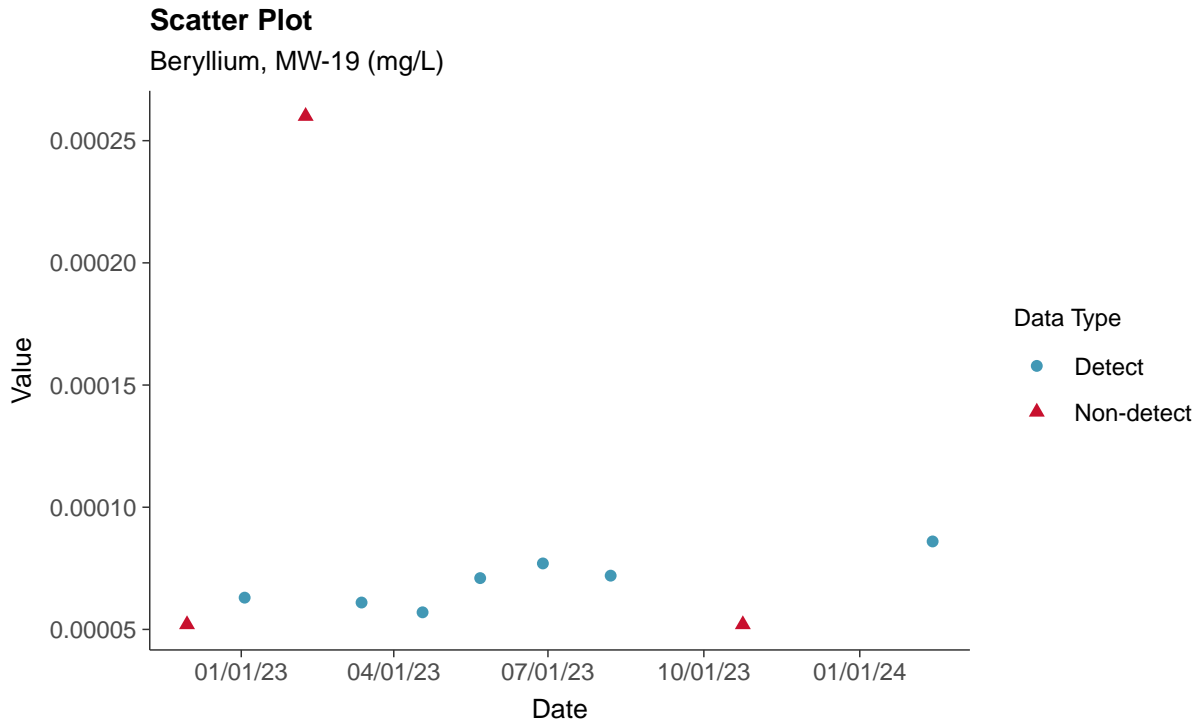
Barium, MW-19 (mg/L)





Appendix IV: Beryllium, MW-19

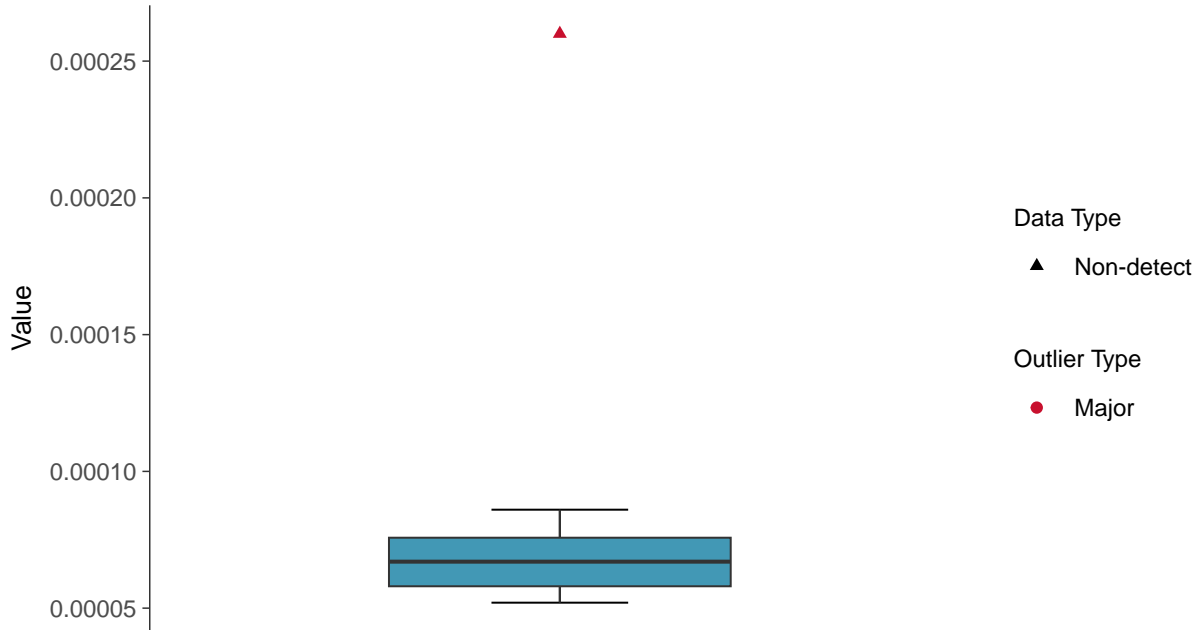
ID: 1_29_5_104





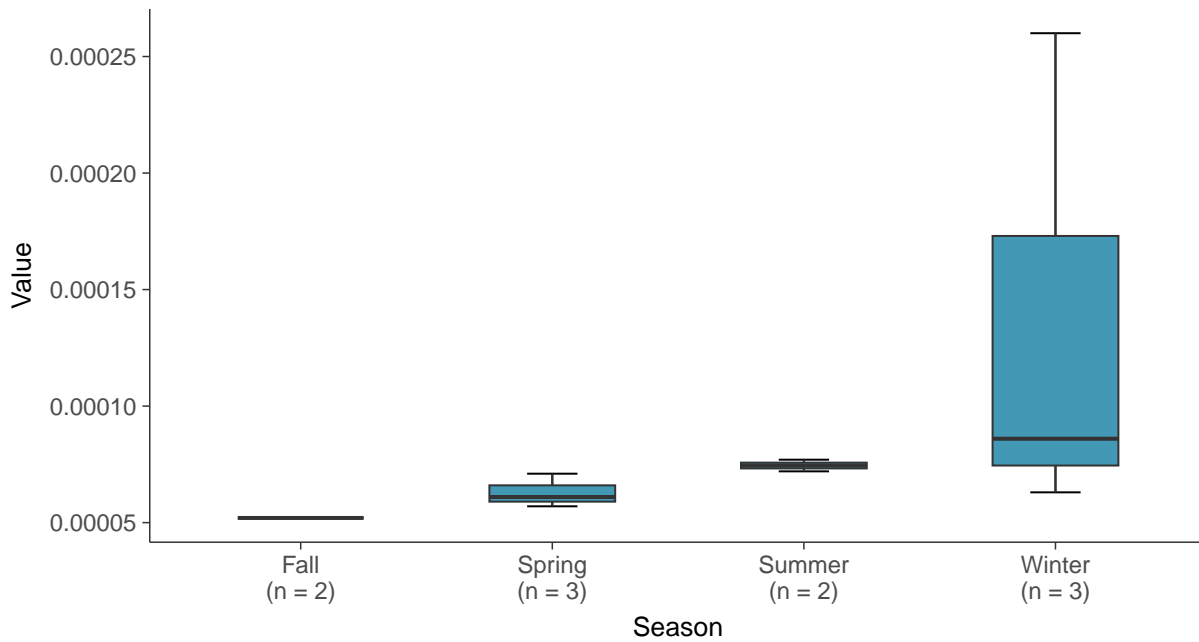
Boxplot

Beryllium, MW-19 (mg/L)



Boxplot by Season

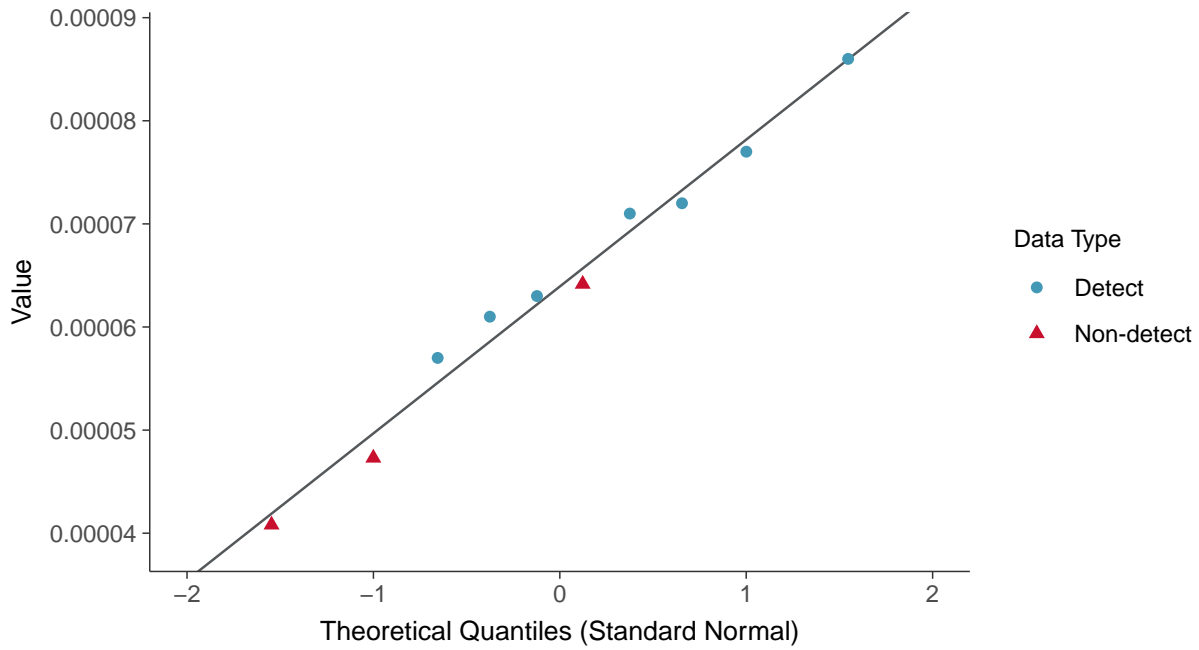
Beryllium, MW-19 (mg/L)





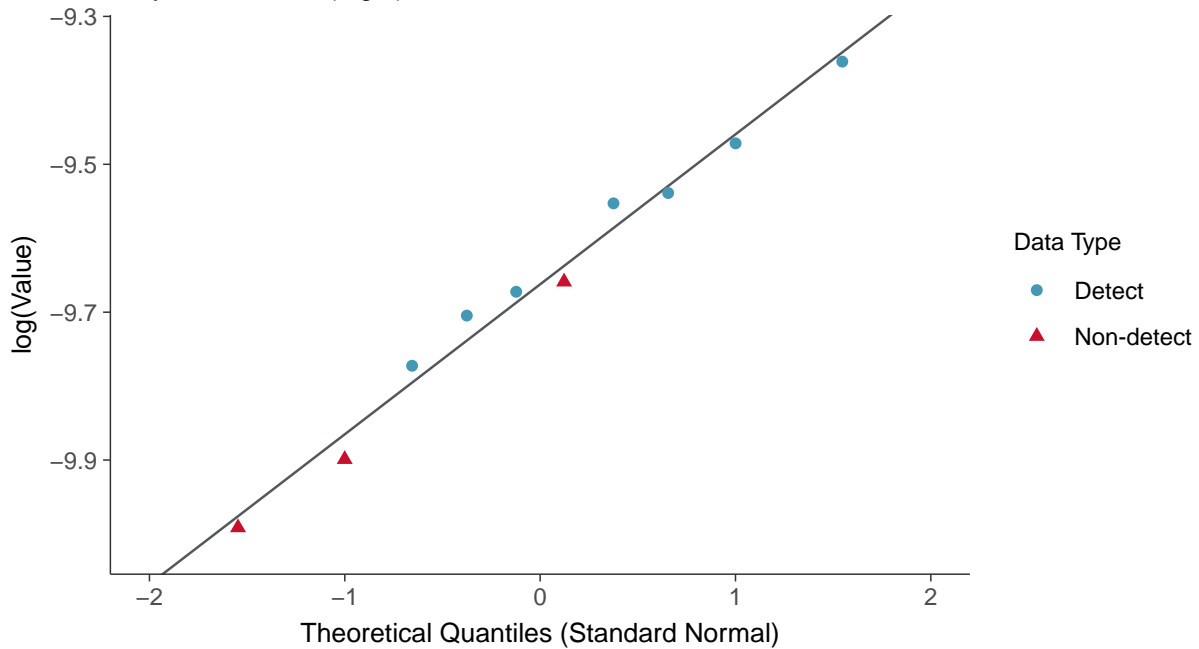
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-19 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

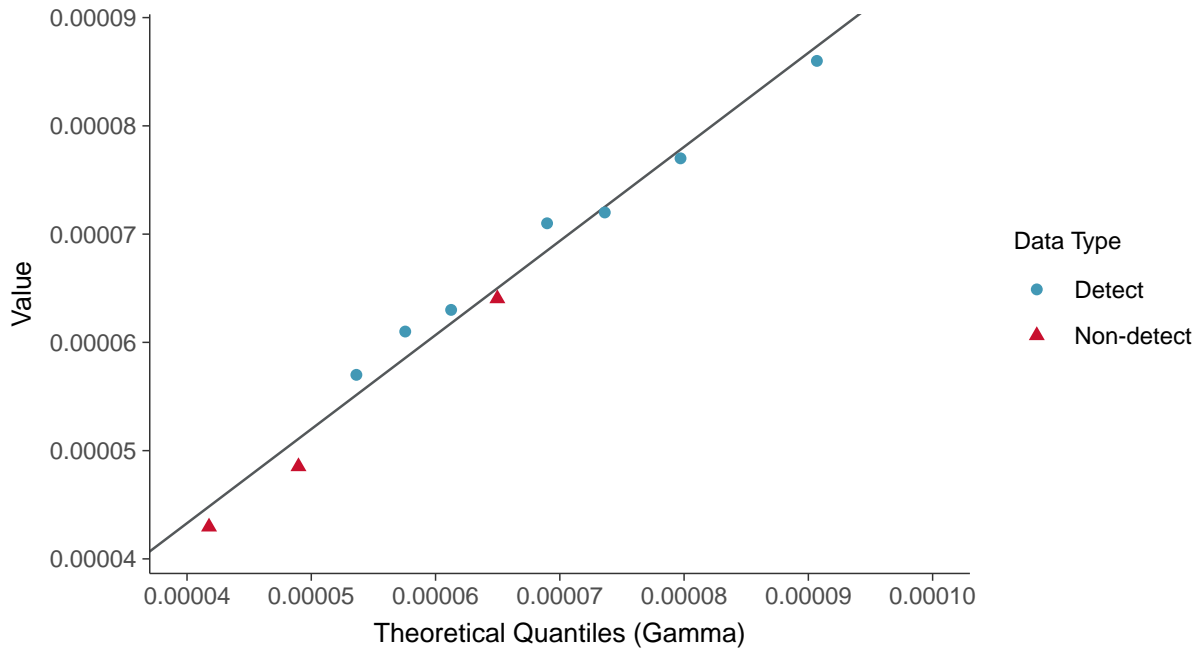
Beryllium, MW-19 (mg/L)





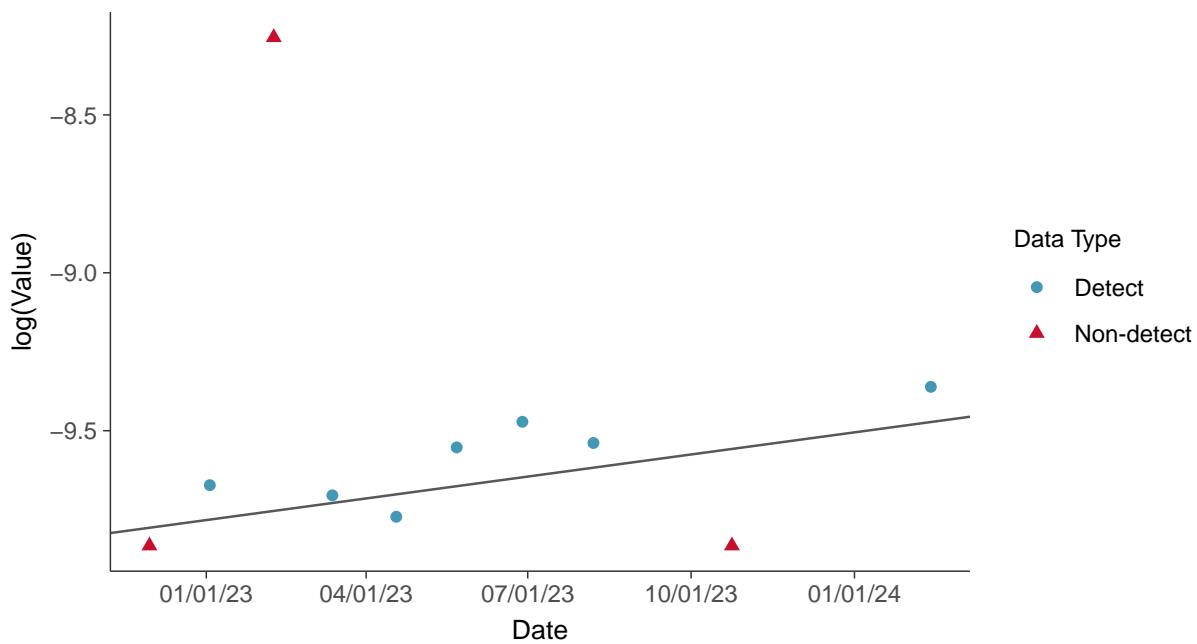
Gamma Q-Q plot using ROS Imputed Estimates

Beryllium, MW-19 (mg/L)



Trend Regression: Lognormal MLE

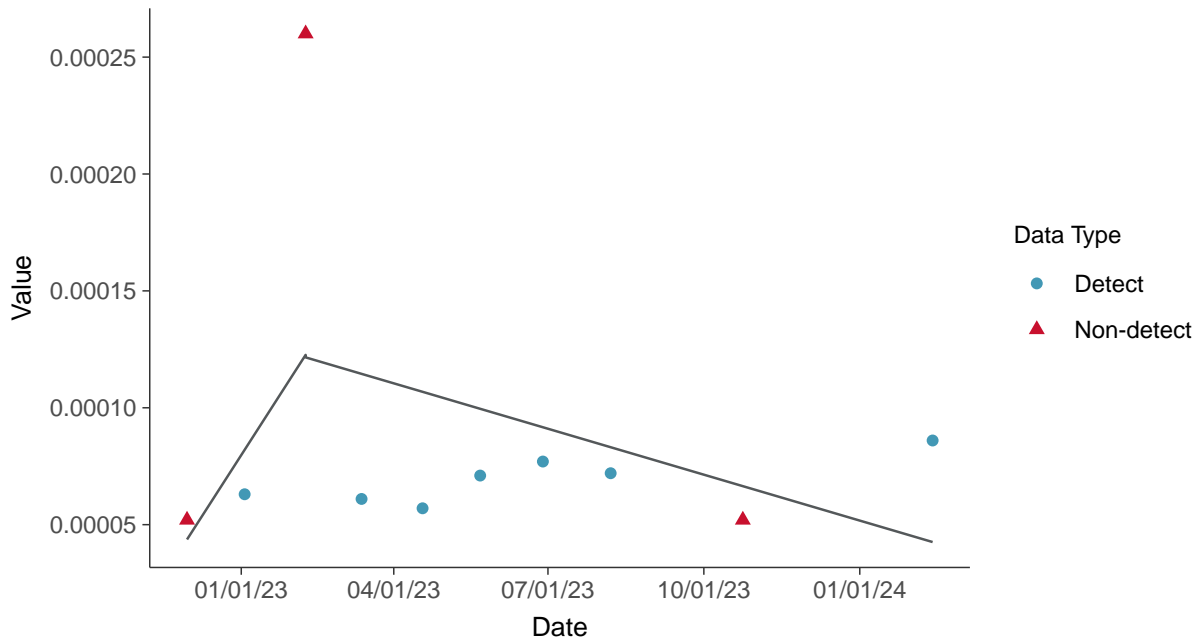
Beryllium, MW-19 (mg/L)





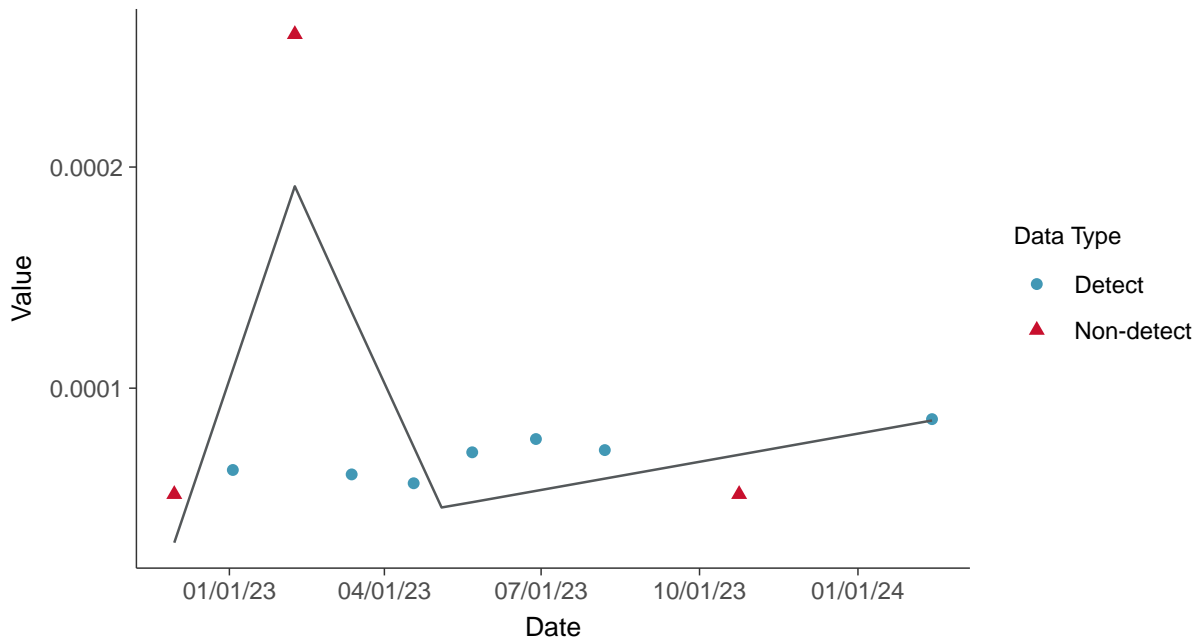
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

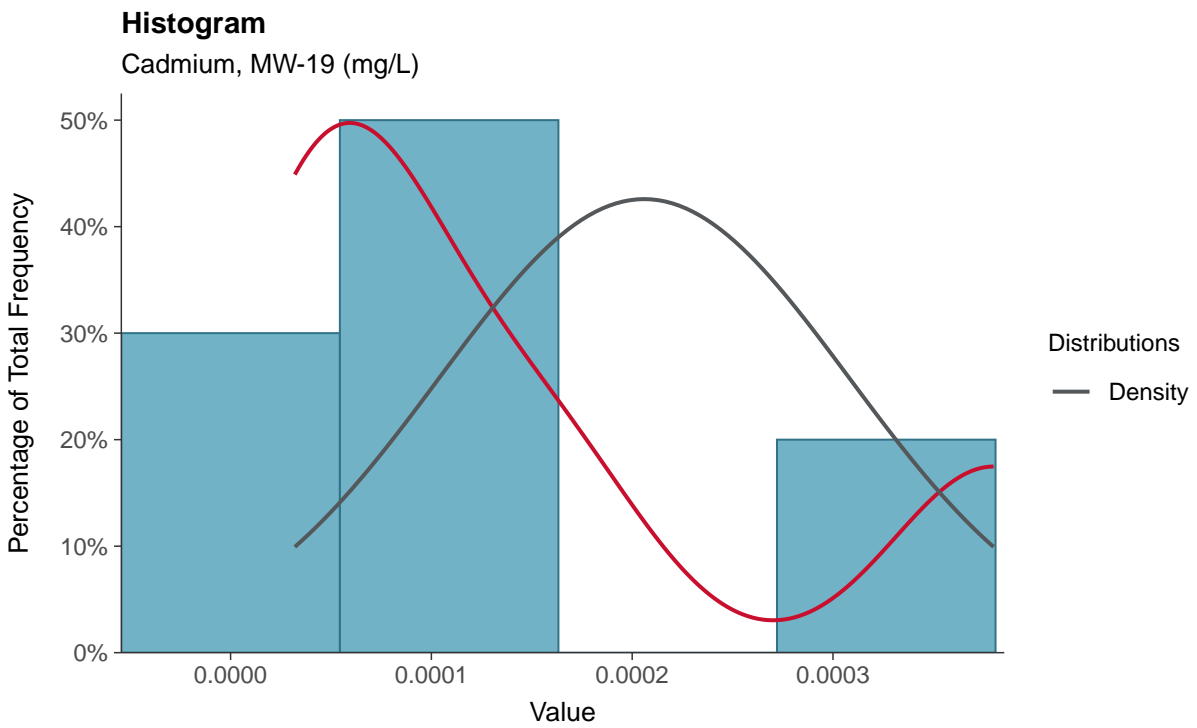
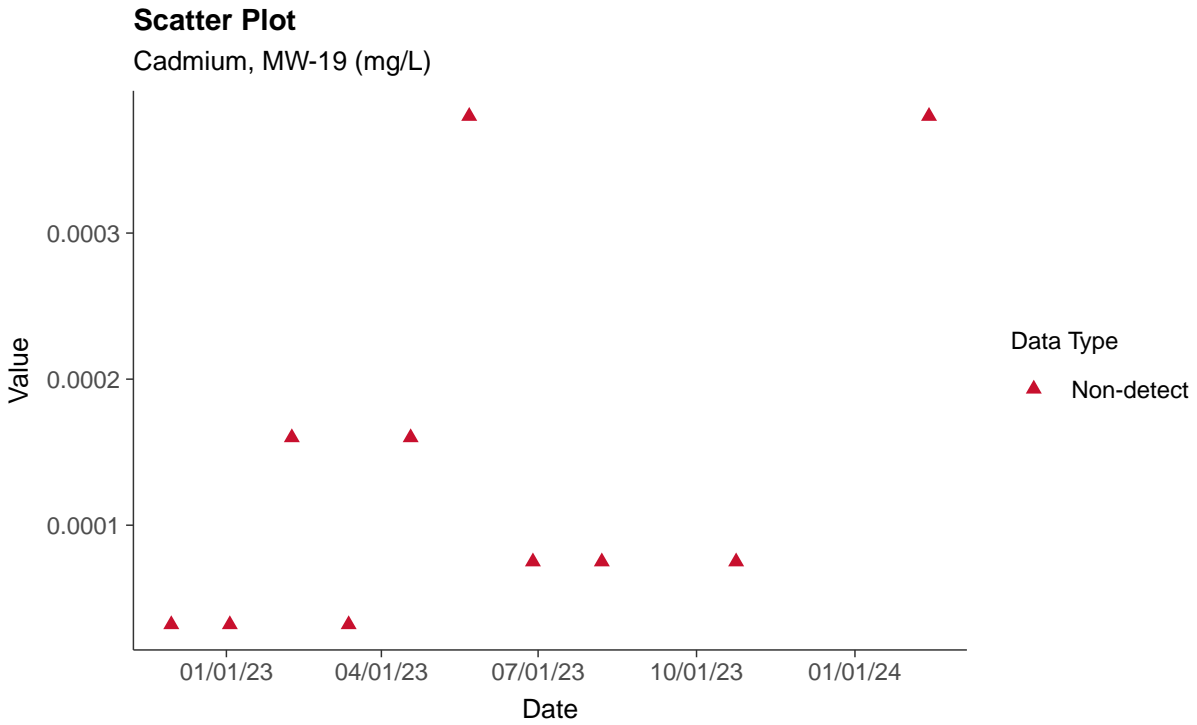
Beryllium, MW-19 (mg/L)





Appendix IV: Cadmium, MW-19

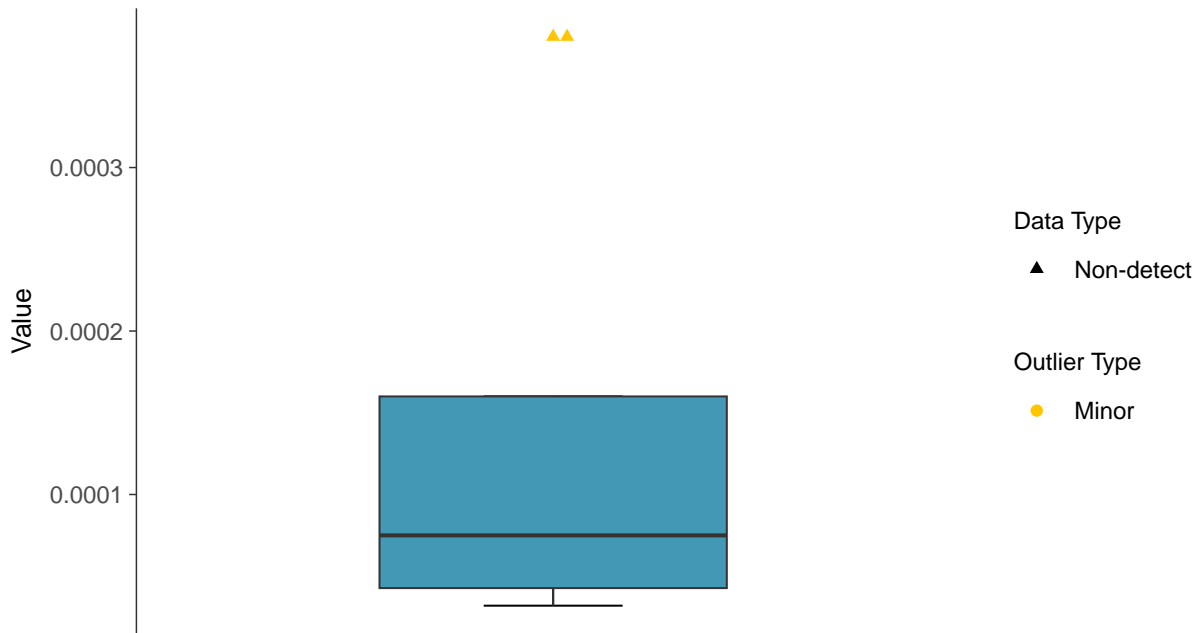
ID: 1_29_5_106





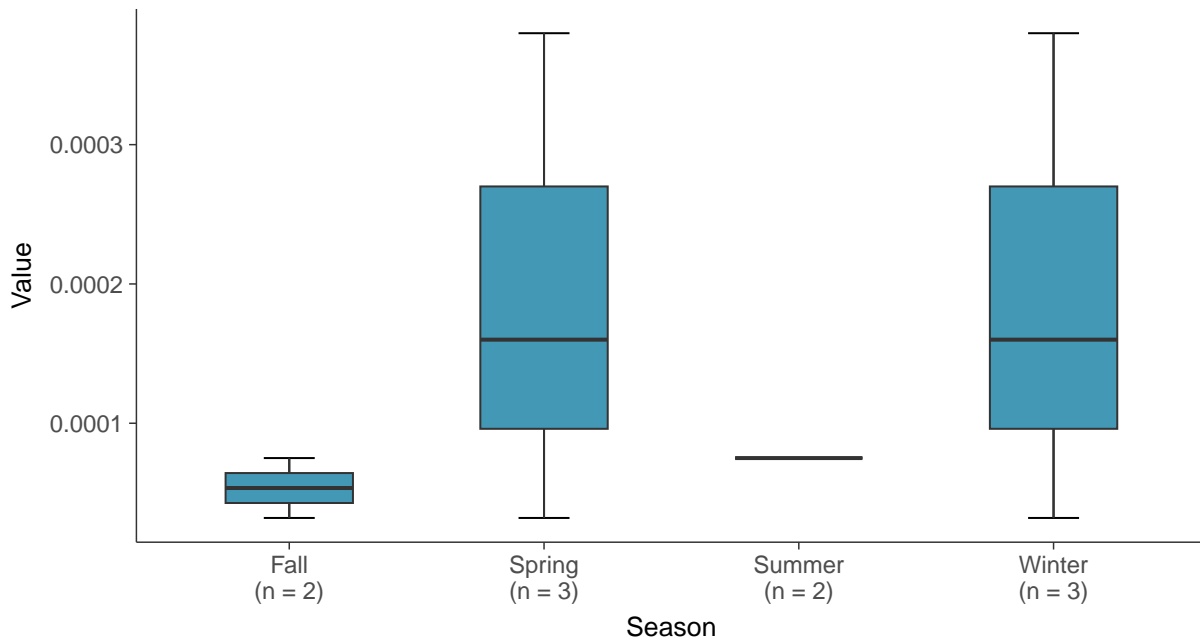
Boxplot

Cadmium, MW-19 (mg/L)



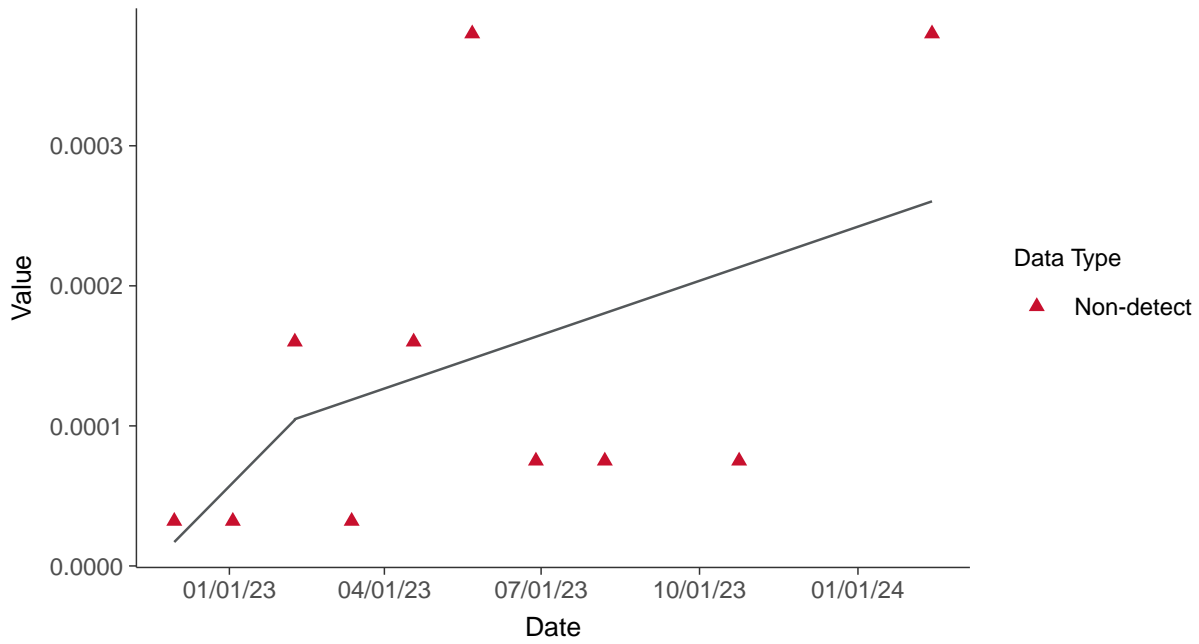
Boxplot by Season

Cadmium, MW-19 (mg/L)

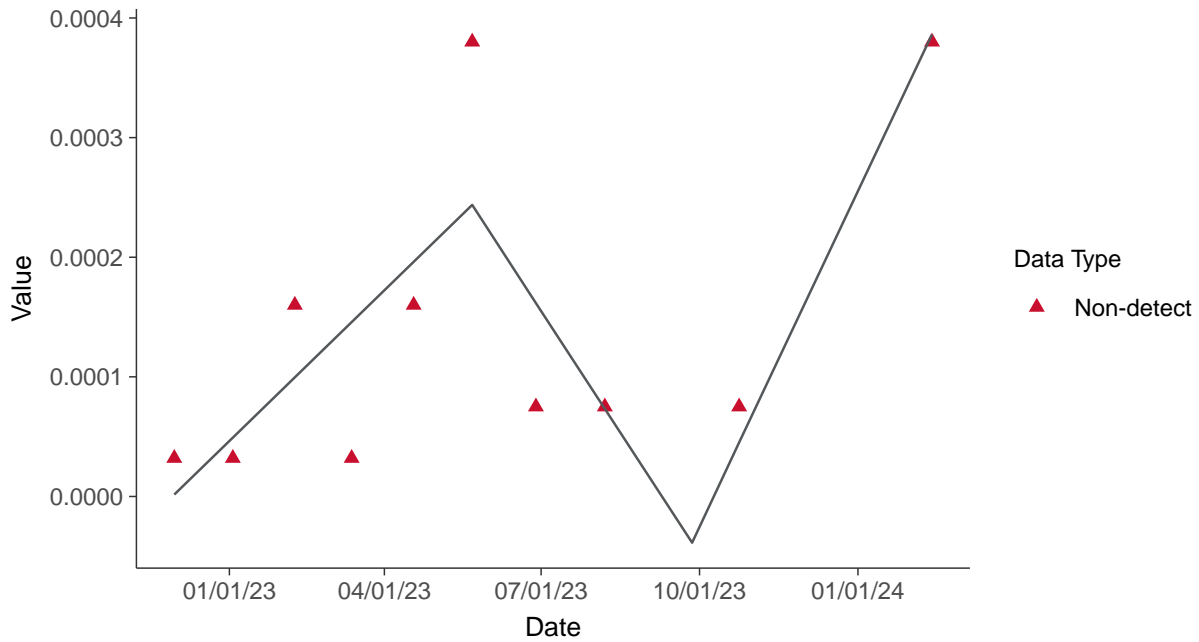




Trend Regression: Piecewise Linear-Linear
Cadmium, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cadmium, MW-19 (mg/L)



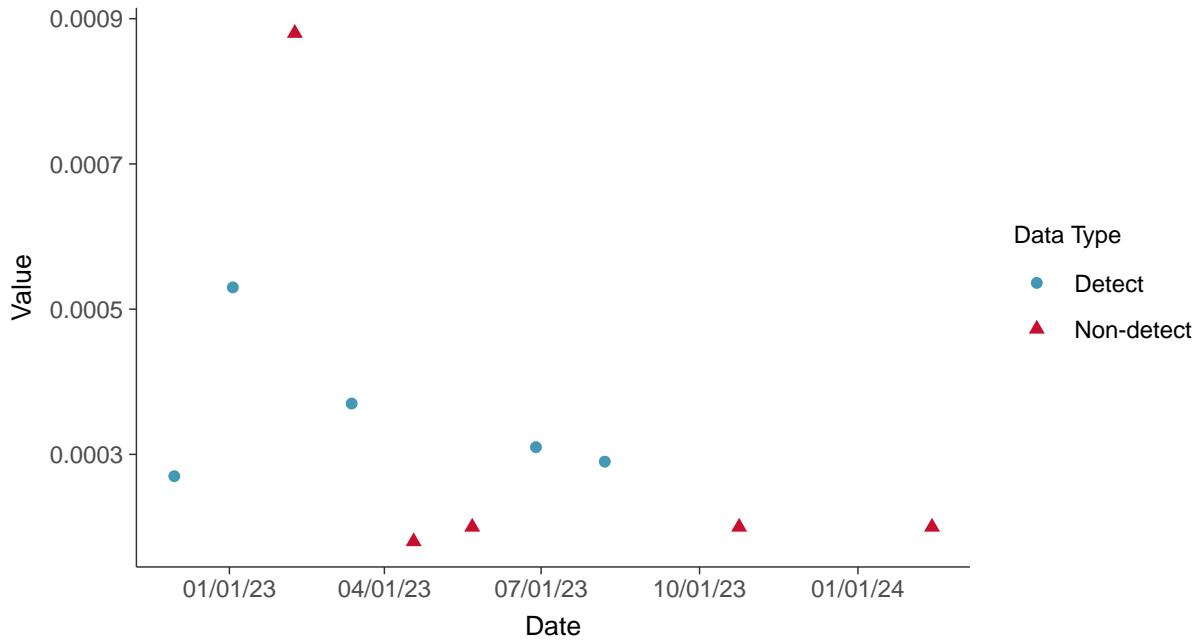


Appendix IV: Chromium, Total, MW-19

ID: 1_29_5_109

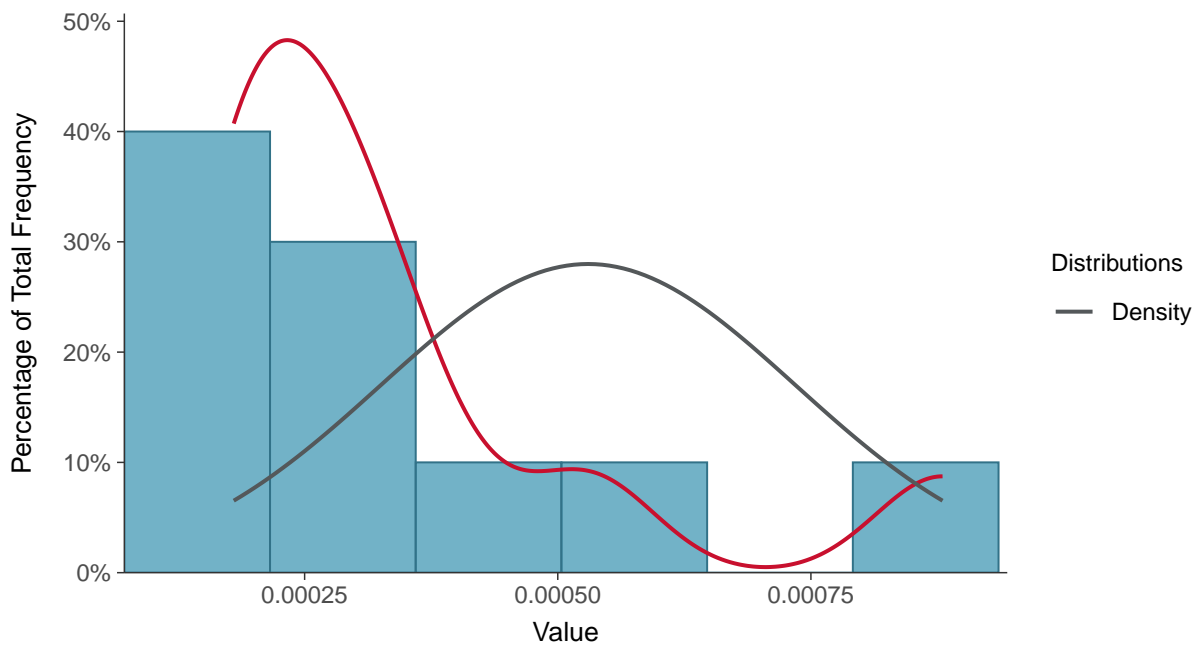
Scatter Plot

Chromium, Total, MW-19 (mg/L)



Histogram

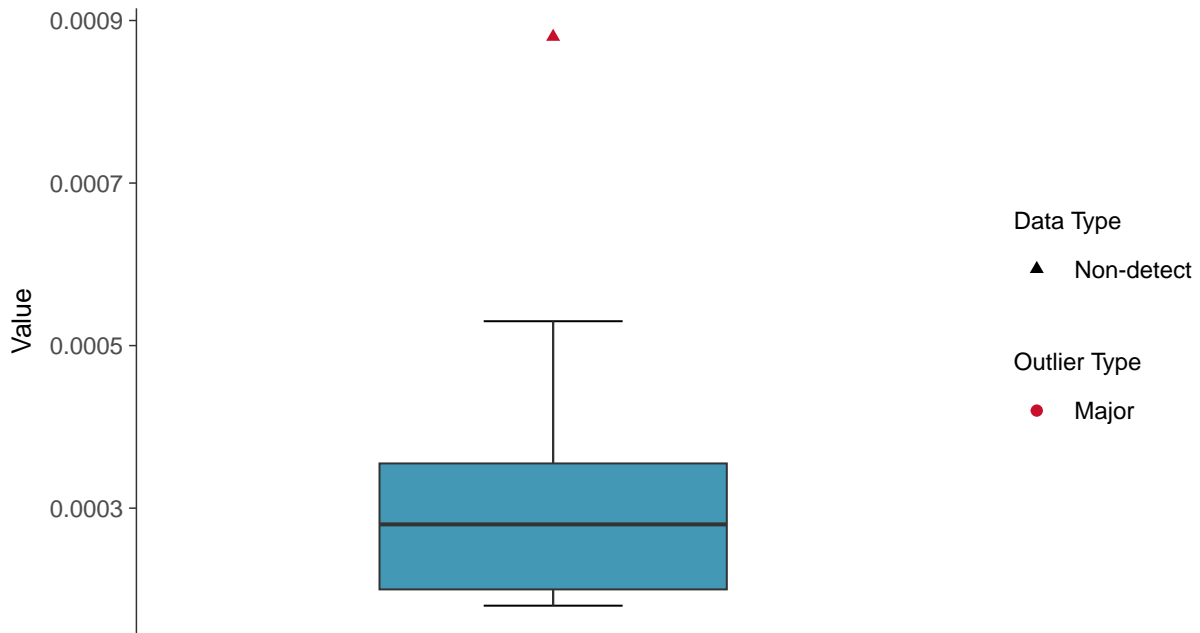
Chromium, Total, MW-19 (mg/L)





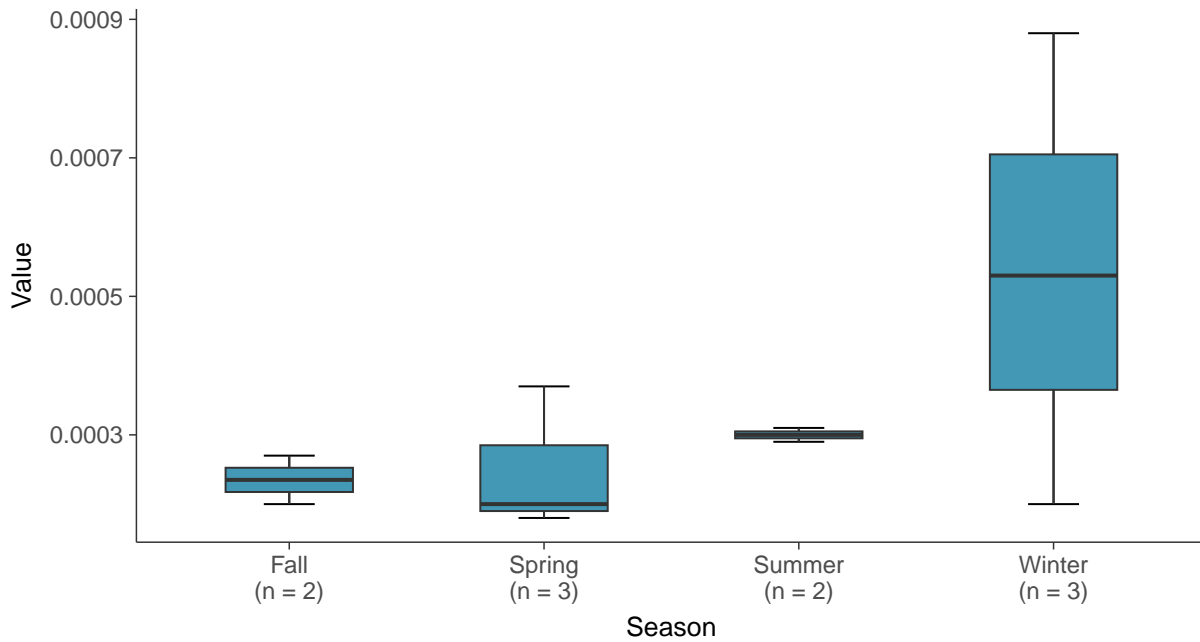
Boxplot

Chromium, Total, MW-19 (mg/L)



Boxplot by Season

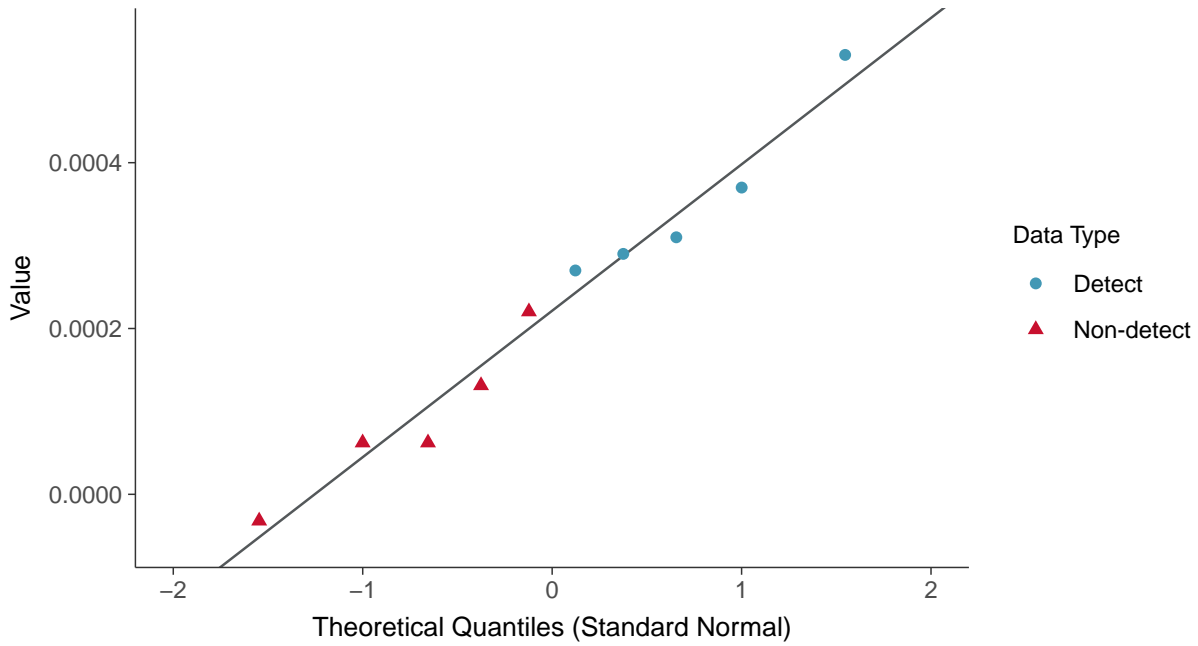
Chromium, Total, MW-19 (mg/L)





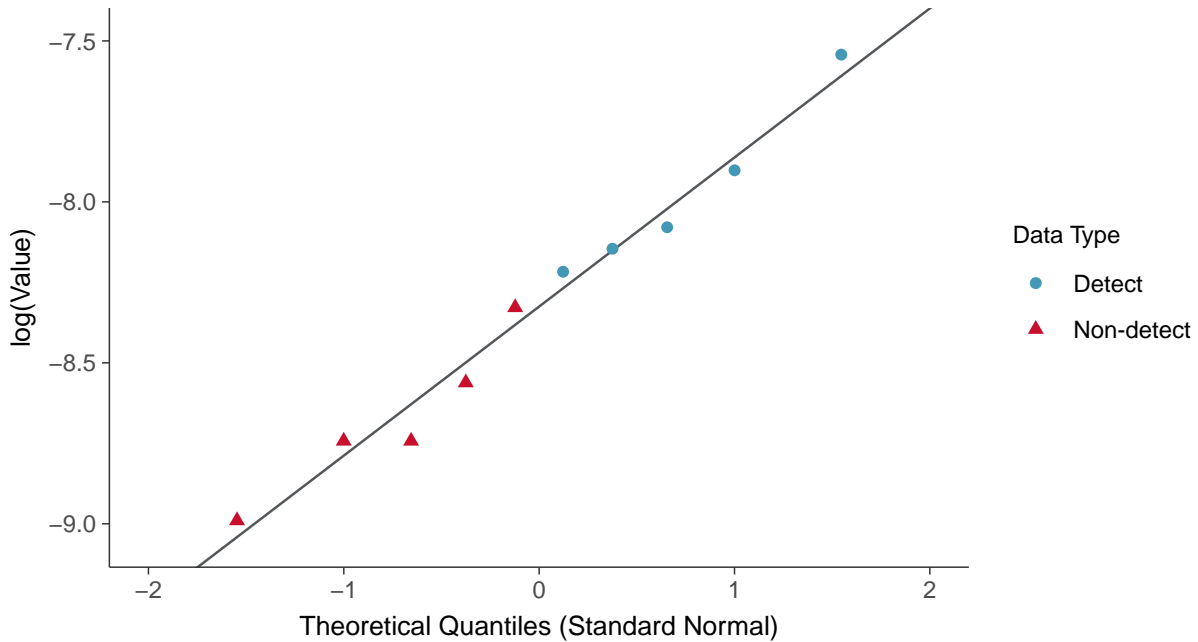
Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-19 (mg/L)



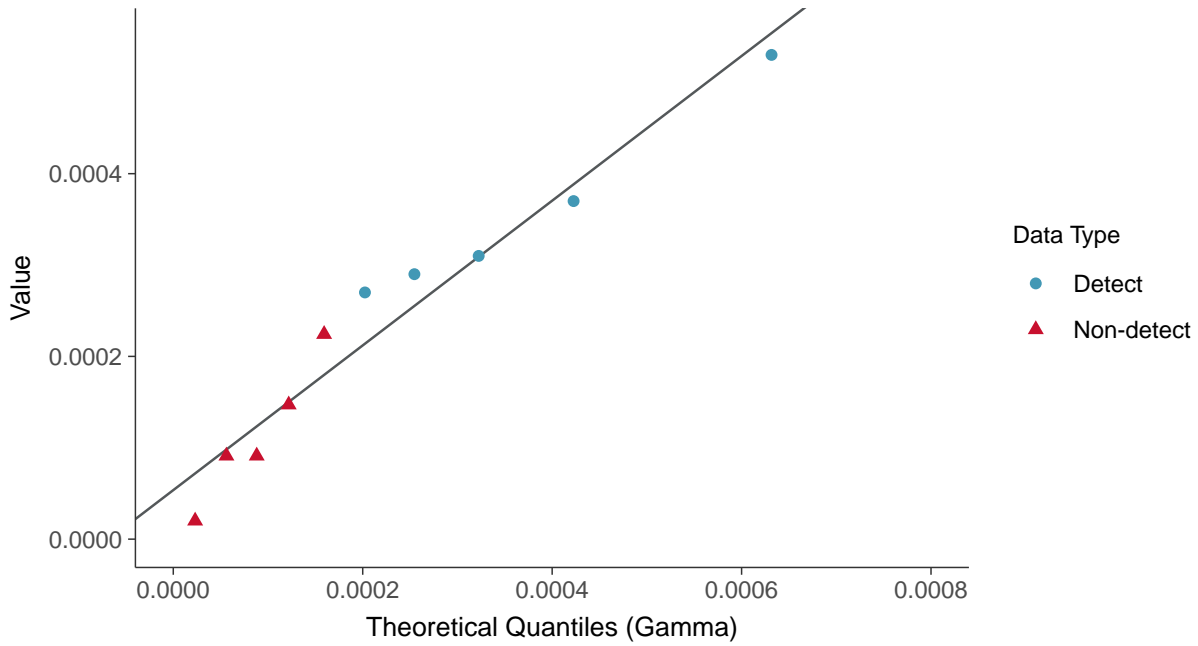
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-19 (mg/L)

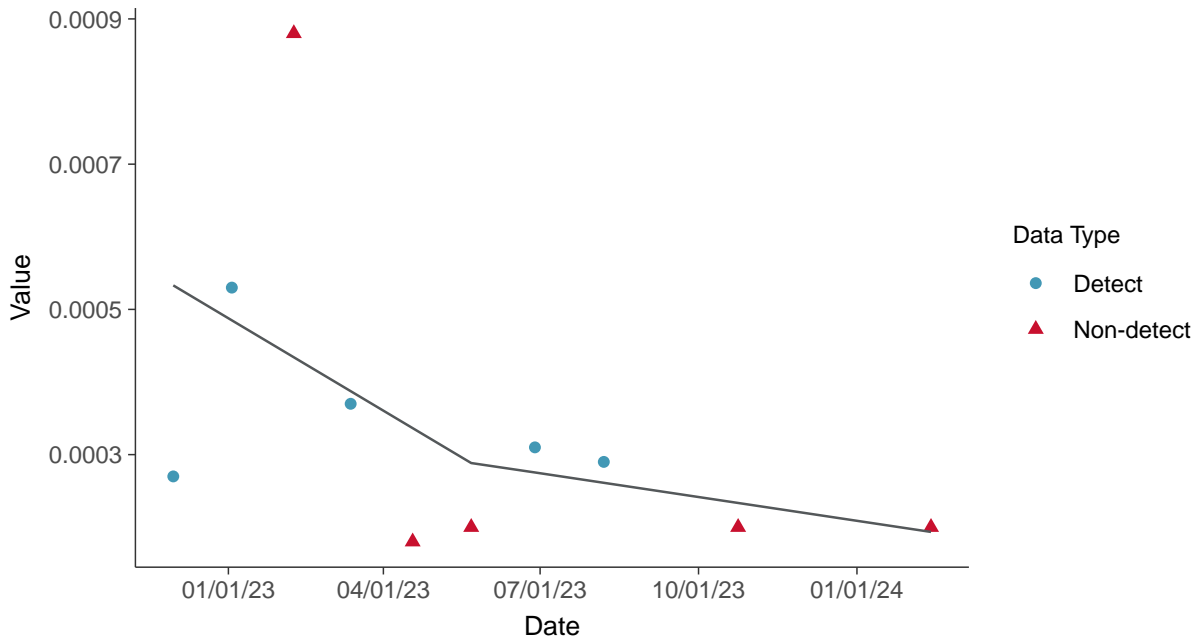




Gamma Q-Q plot using ROS Imputed Estimates
Chromium, Total, MW-19 (mg/L)



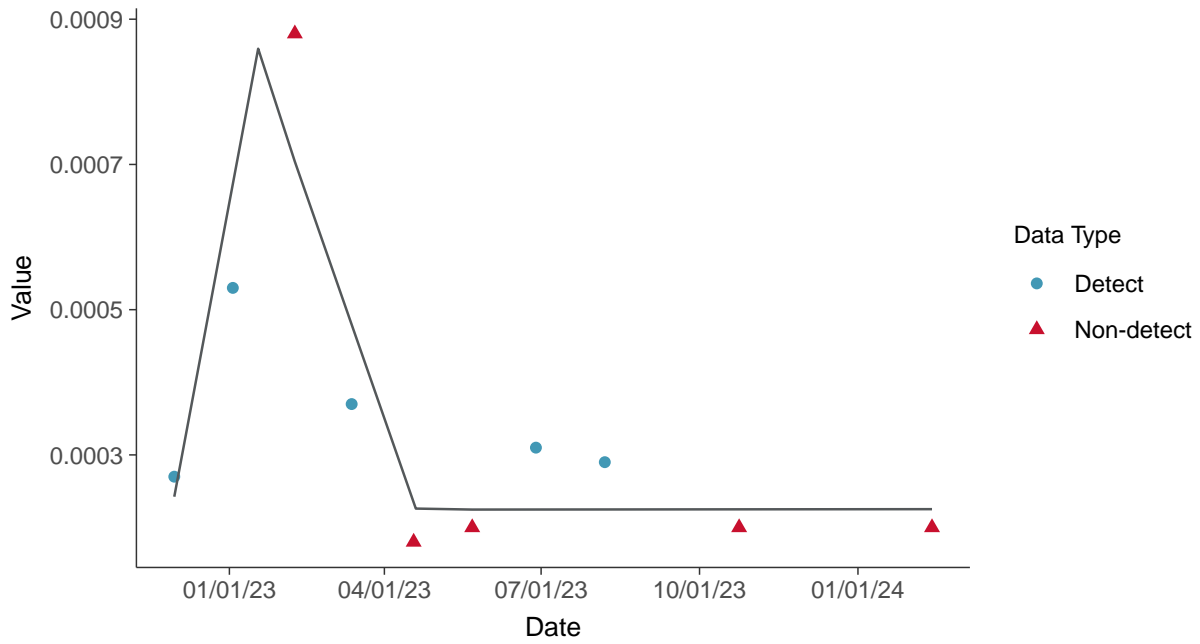
Trend Regression: Piecewise Linear-Linear
Chromium, Total, MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

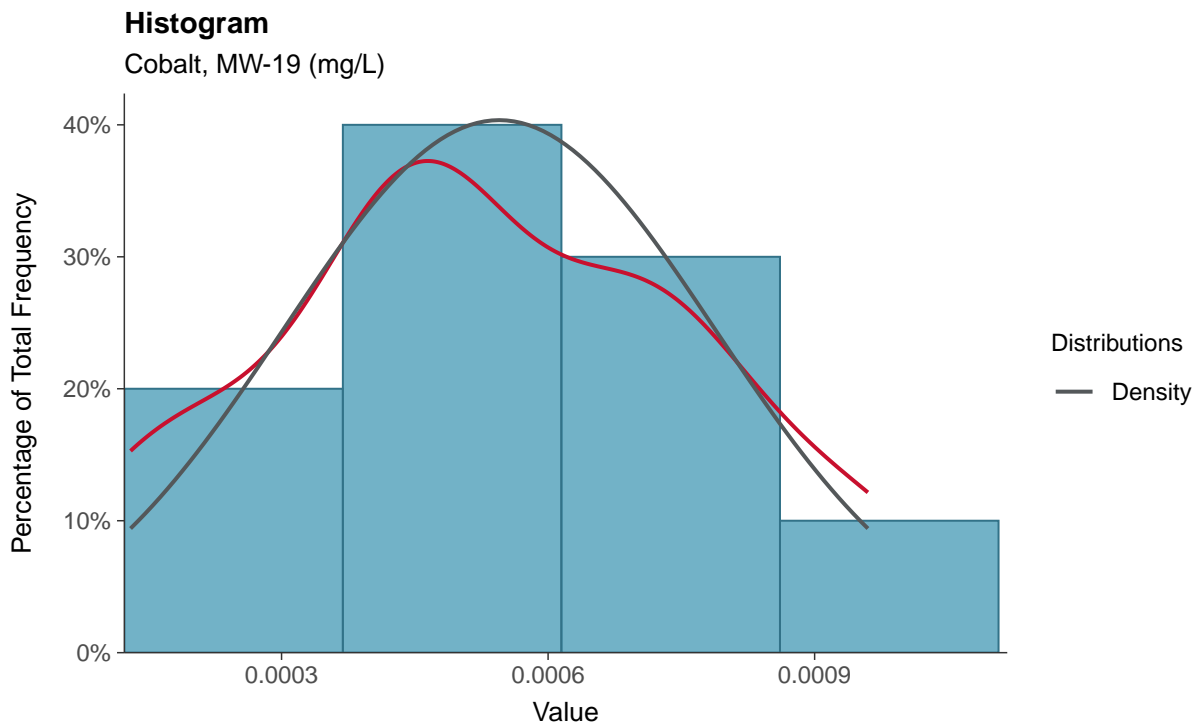
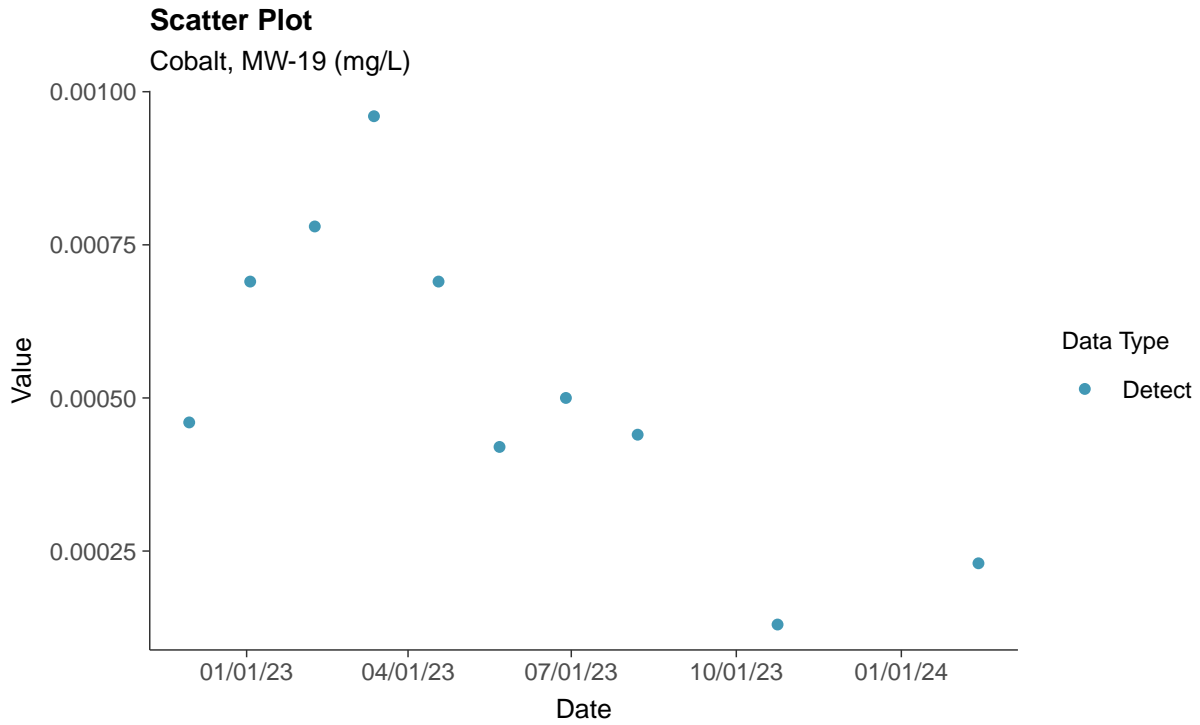
Chromium, Total, MW-19 (mg/L)





Appendix IV: Cobalt, MW-19

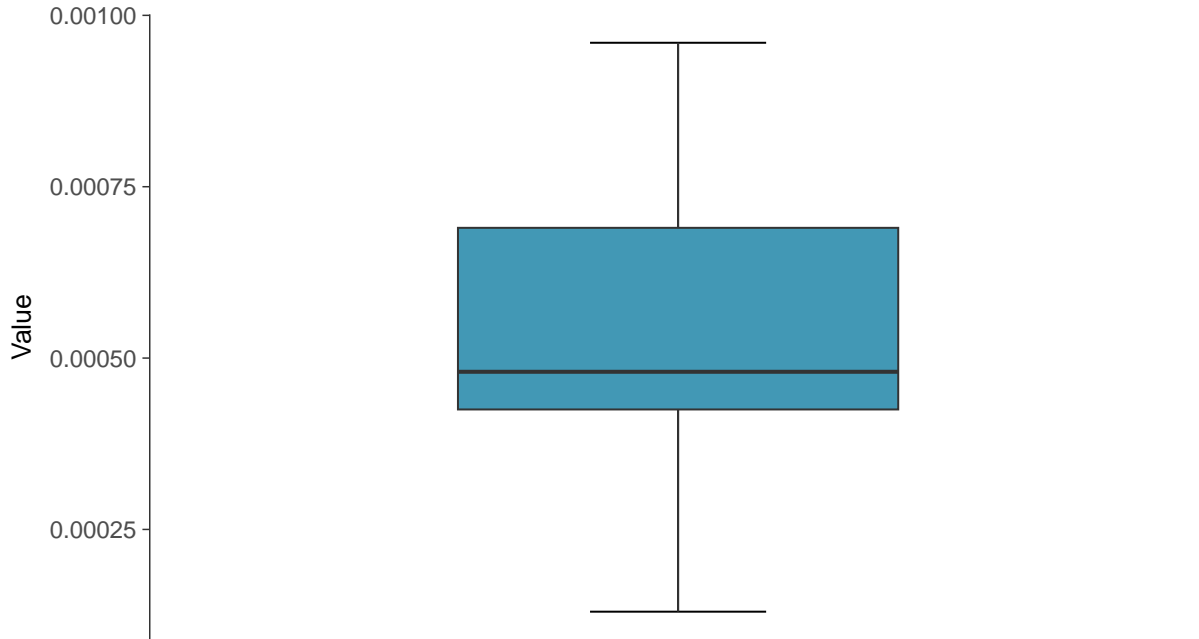
ID: 1_29_5_110





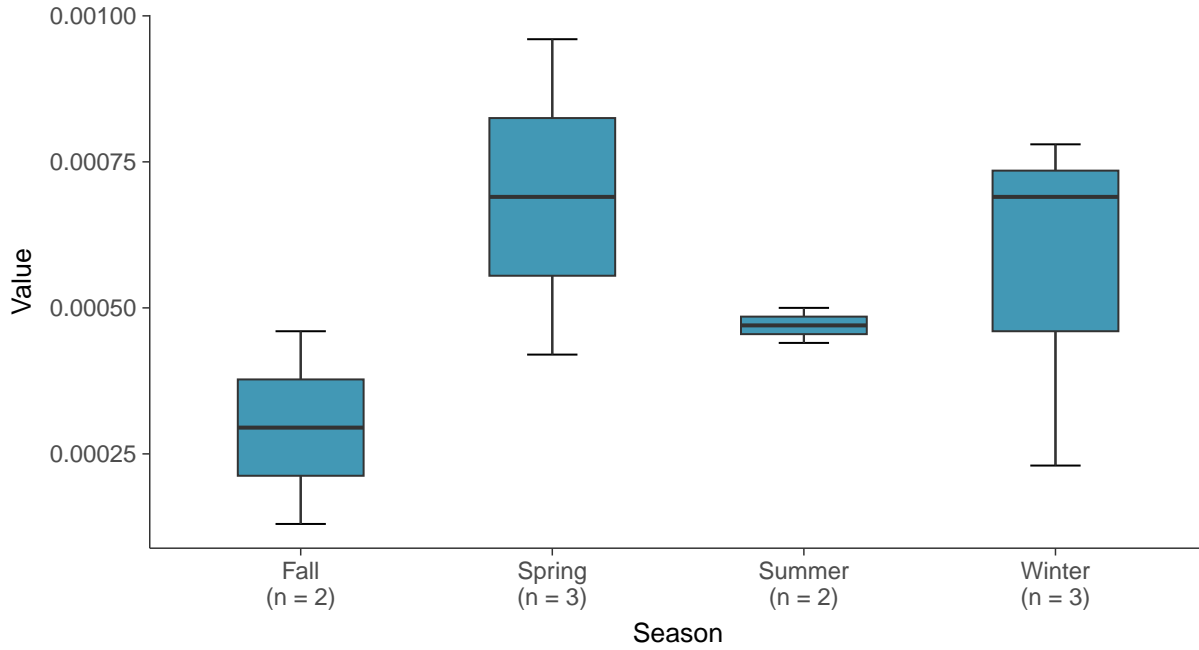
Boxplot

Cobalt, MW-19 (mg/L)



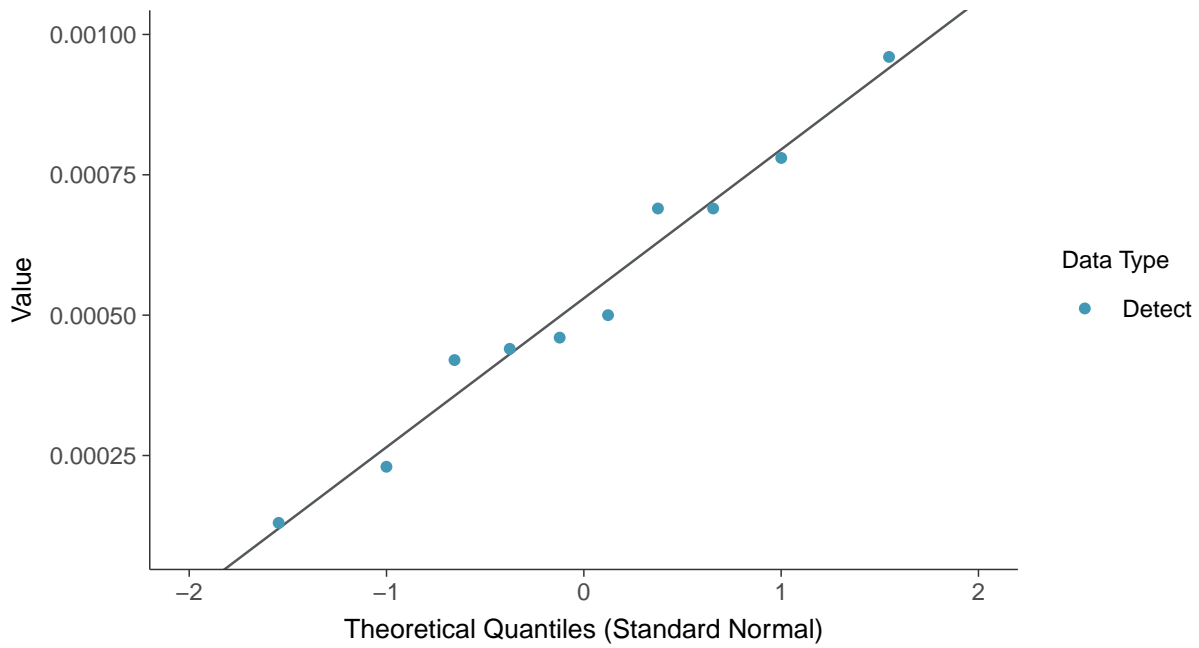
Boxplot by Season

Cobalt, MW-19 (mg/L)

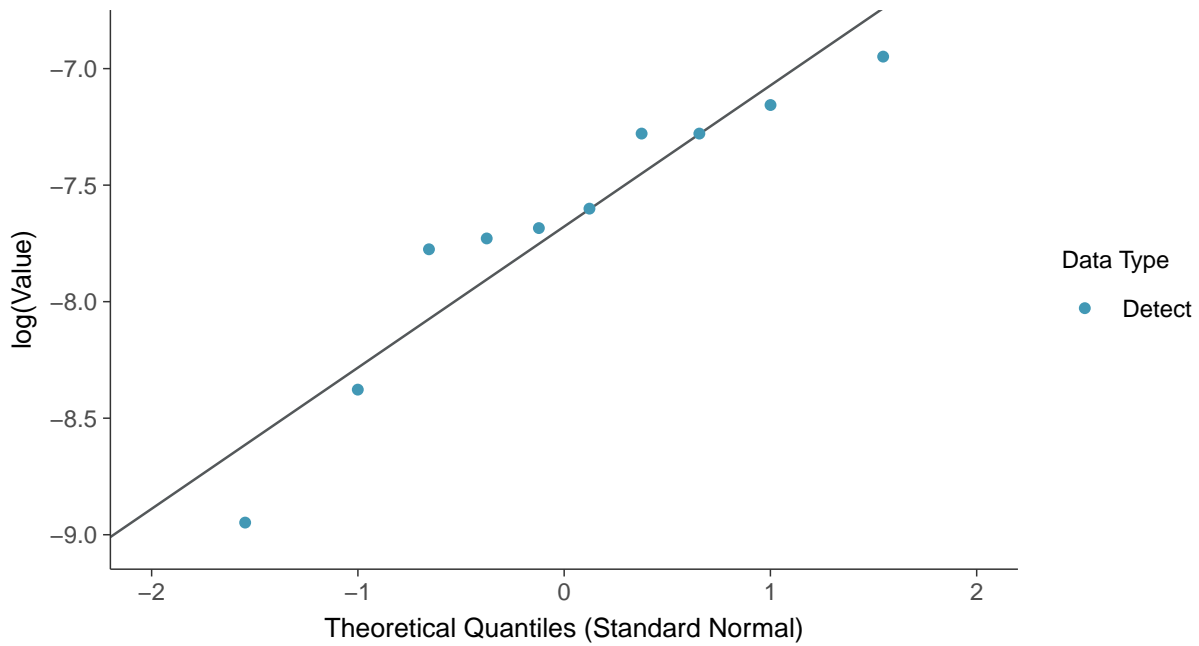




Normal Q-Q plot
Cobalt, MW-19 (mg/L)

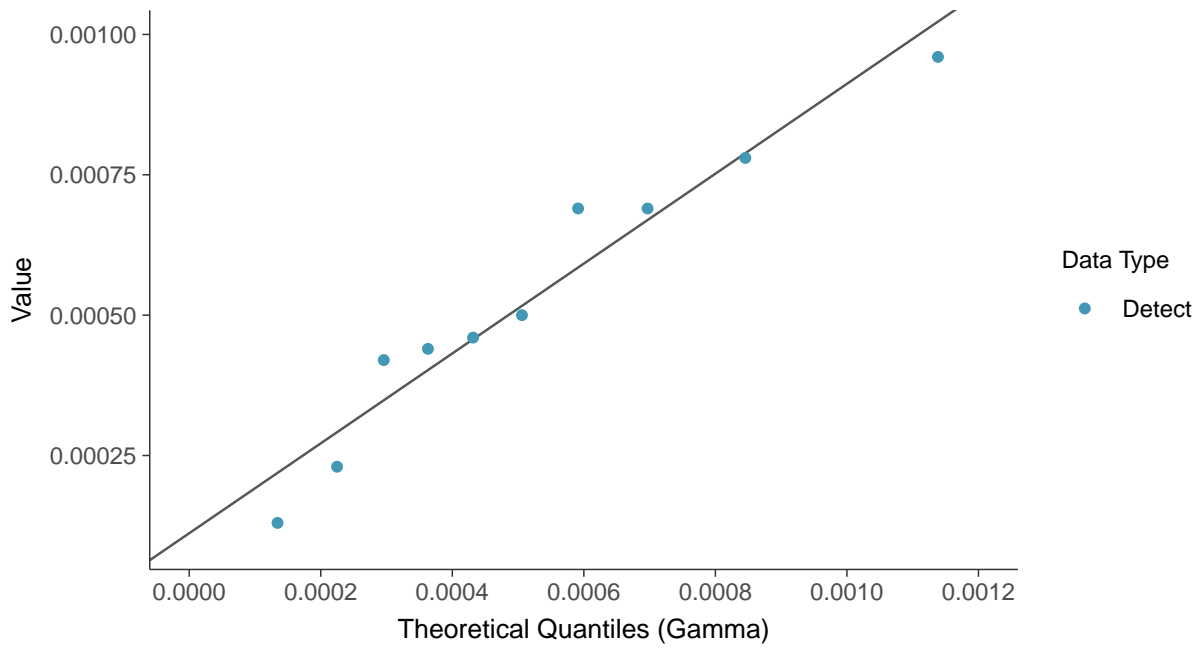


Lognormal Q-Q plot
Cobalt, MW-19 (mg/L)

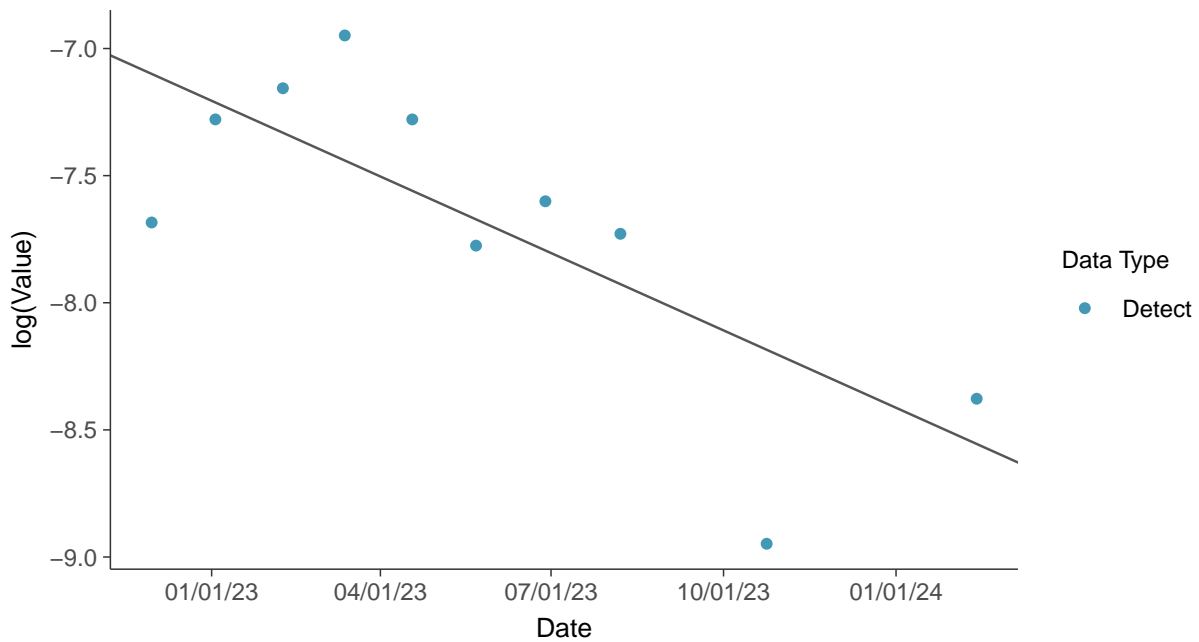




Gamma Q-Q plot
Cobalt, MW-19 (mg/L)



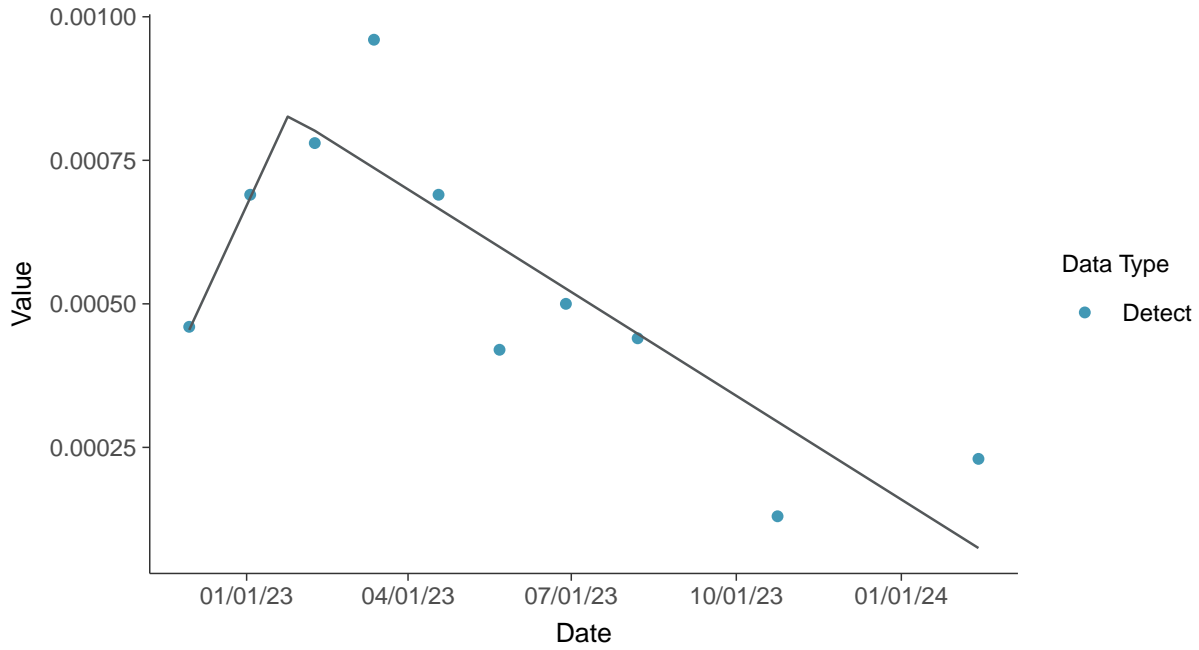
Trend Regression: Lognormal MLE
Cobalt, MW-19 (mg/L)





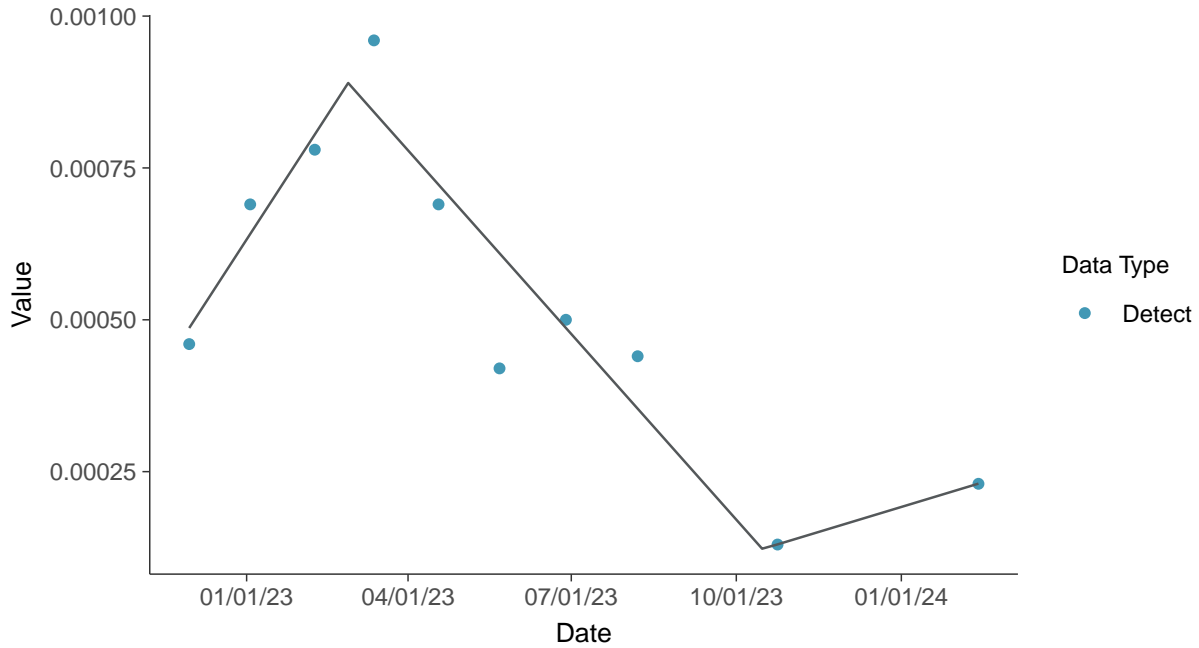
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-19 (mg/L)



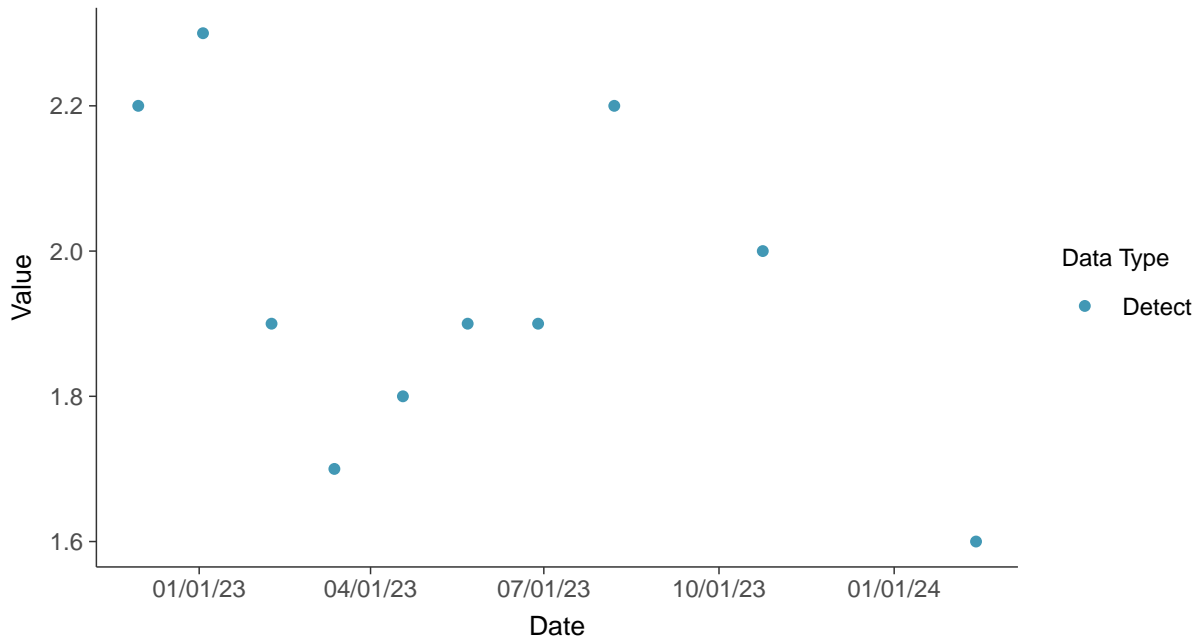


Appendix IV: Fluoride (App IV), MW-19

ID: 1_29_5_113

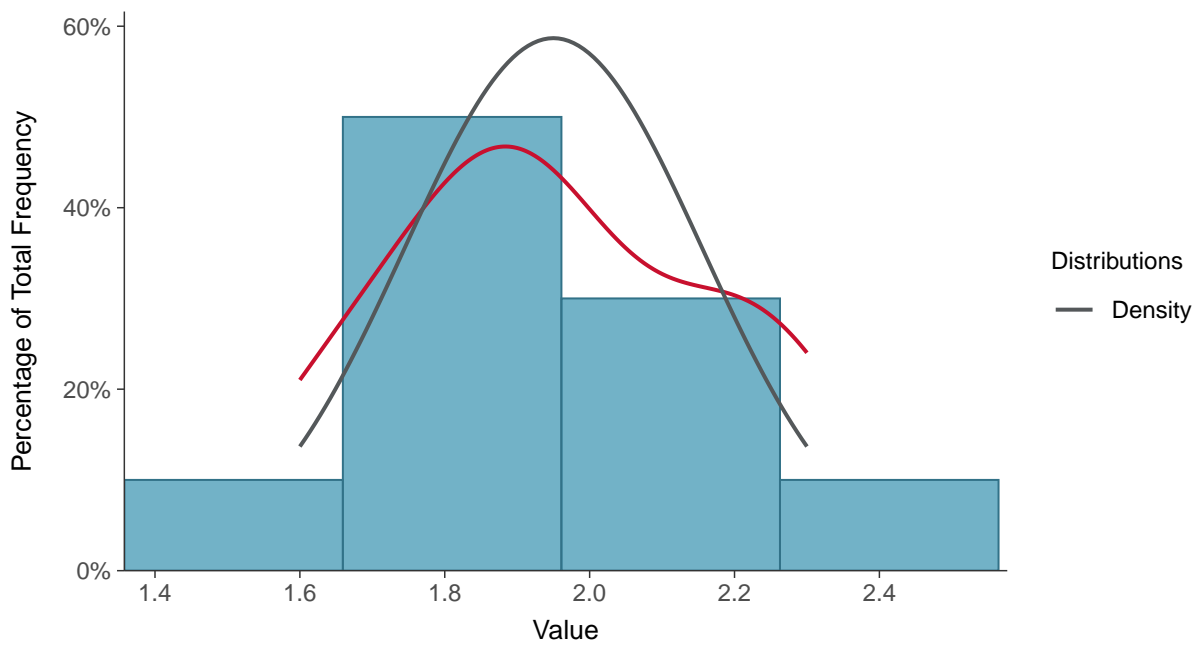
Scatter Plot

Fluoride (App IV), MW-19 (mg/L)



Histogram

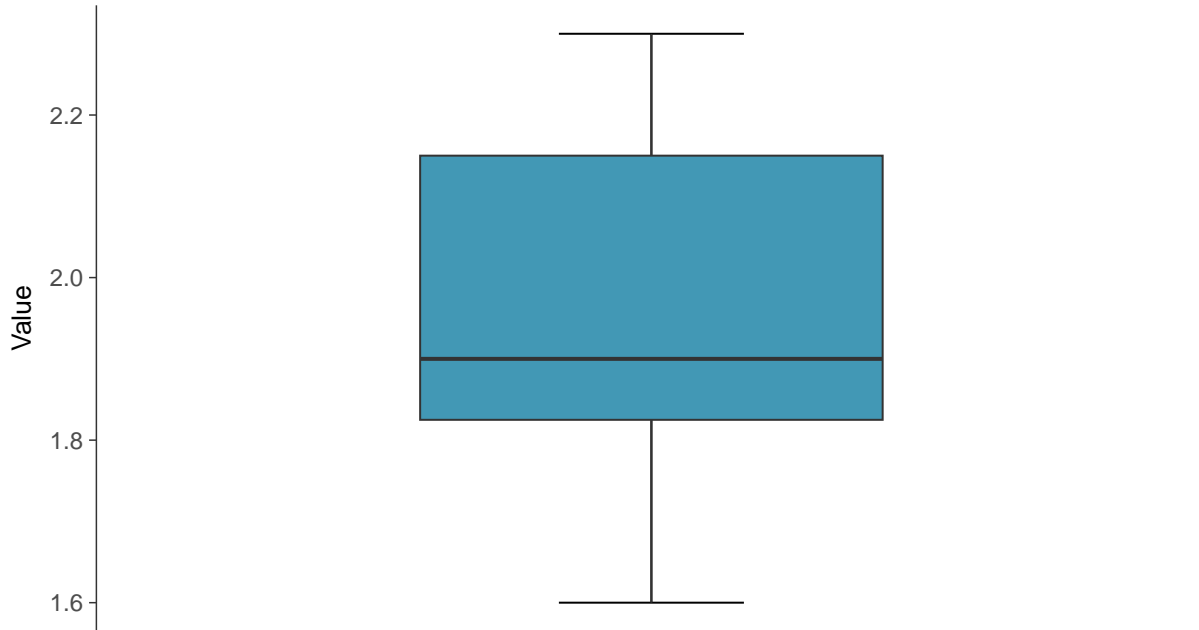
Fluoride (App IV), MW-19 (mg/L)





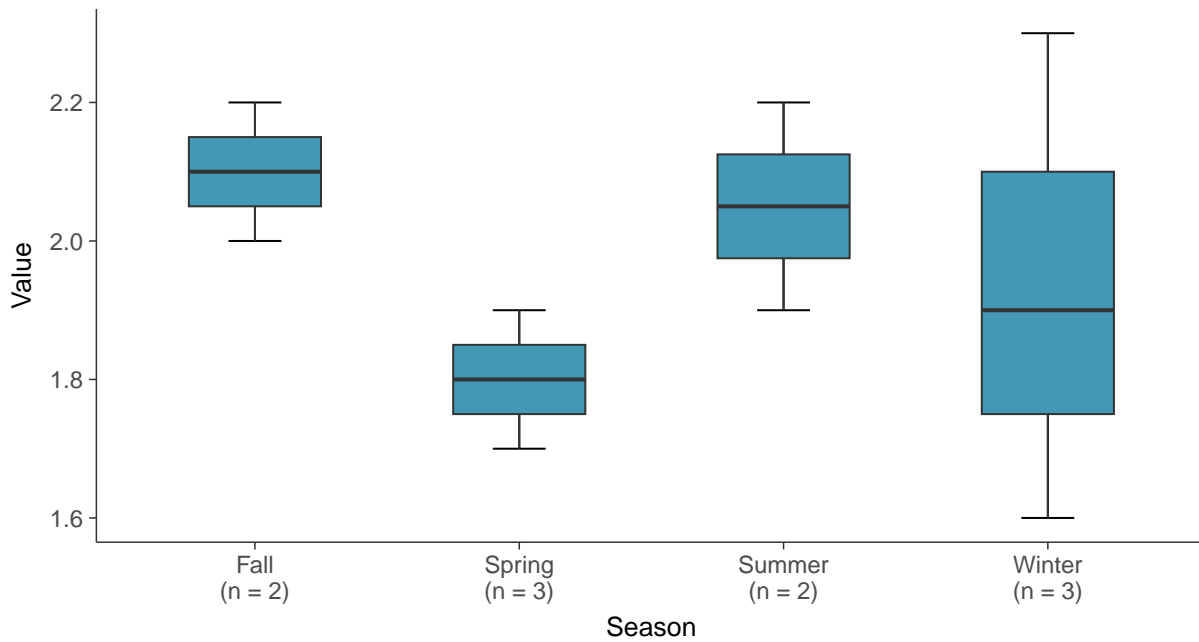
Boxplot

Fluoride (App IV), MW-19 (mg/L)



Boxplot by Season

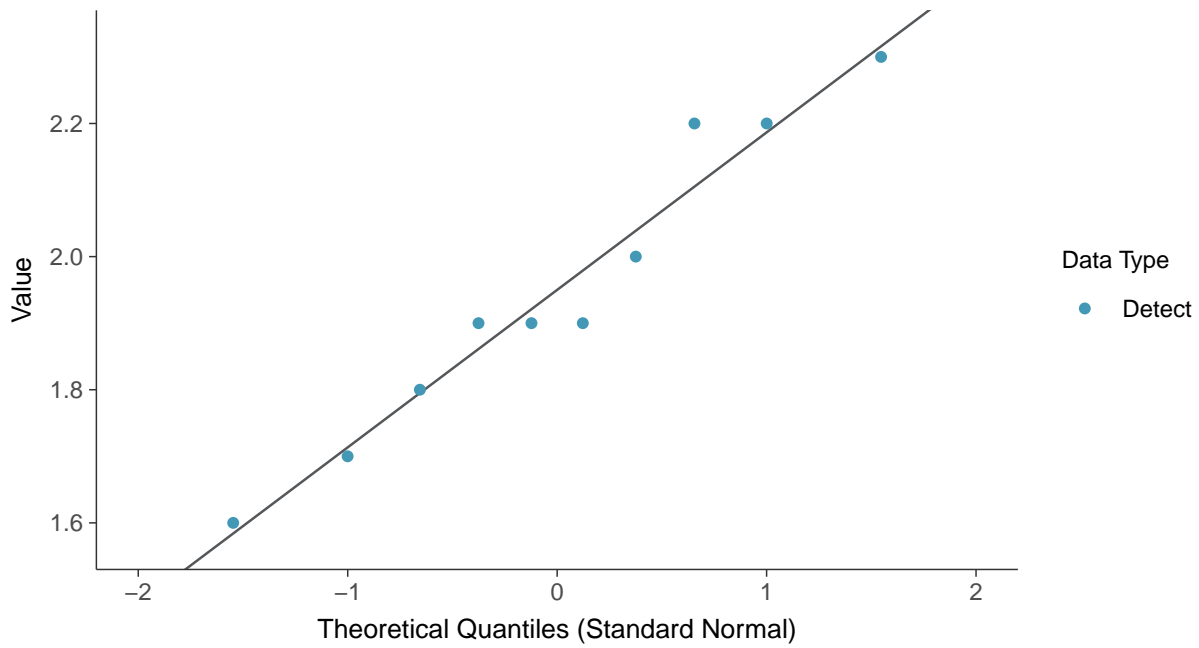
Fluoride (App IV), MW-19 (mg/L)





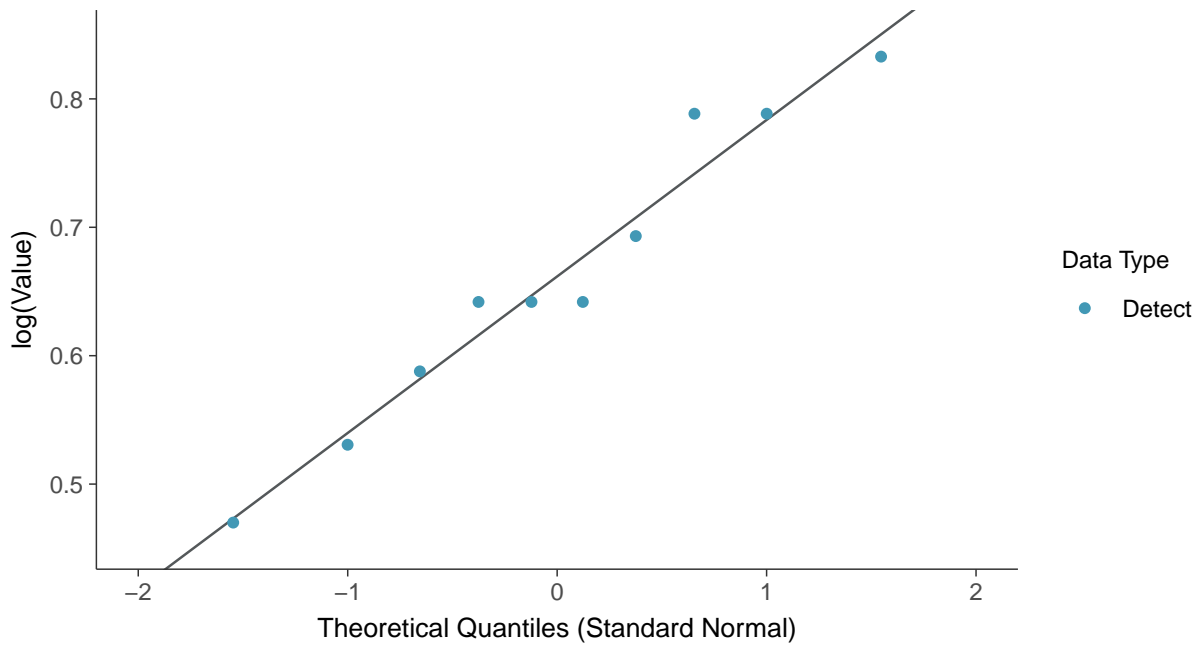
Normal Q-Q plot

Fluoride (App IV), MW-19 (mg/L)



Lognormal Q-Q plot

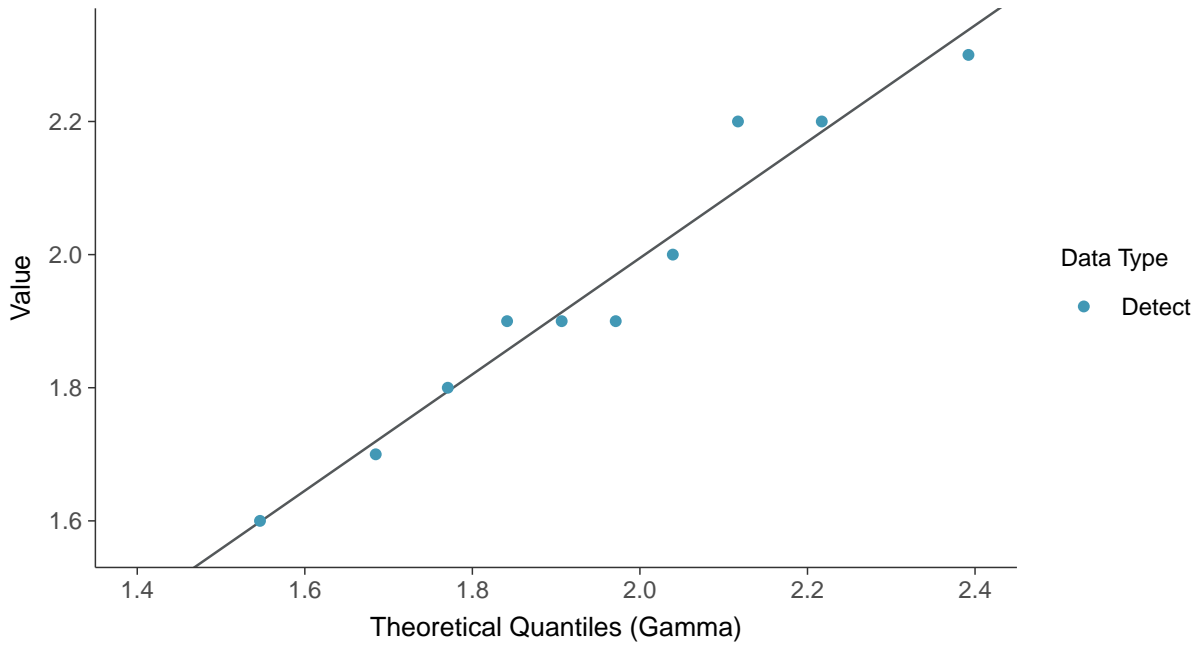
Fluoride (App IV), MW-19 (mg/L)





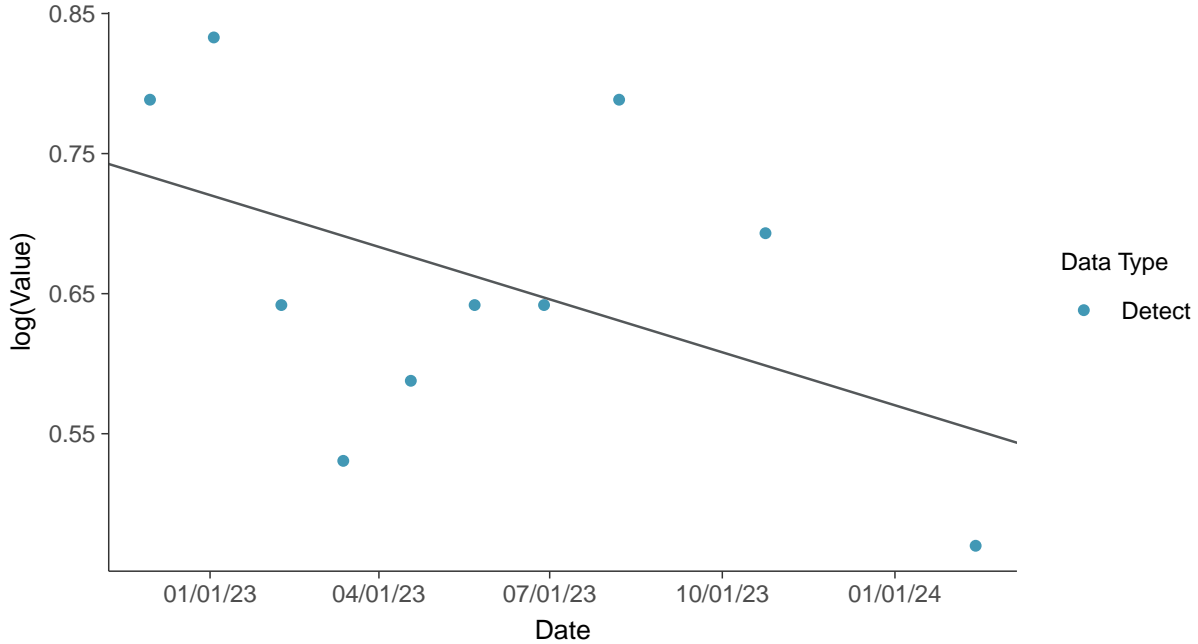
Gamma Q-Q plot

Fluoride (App IV), MW-19 (mg/L)



Trend Regression: Lognormal MLE

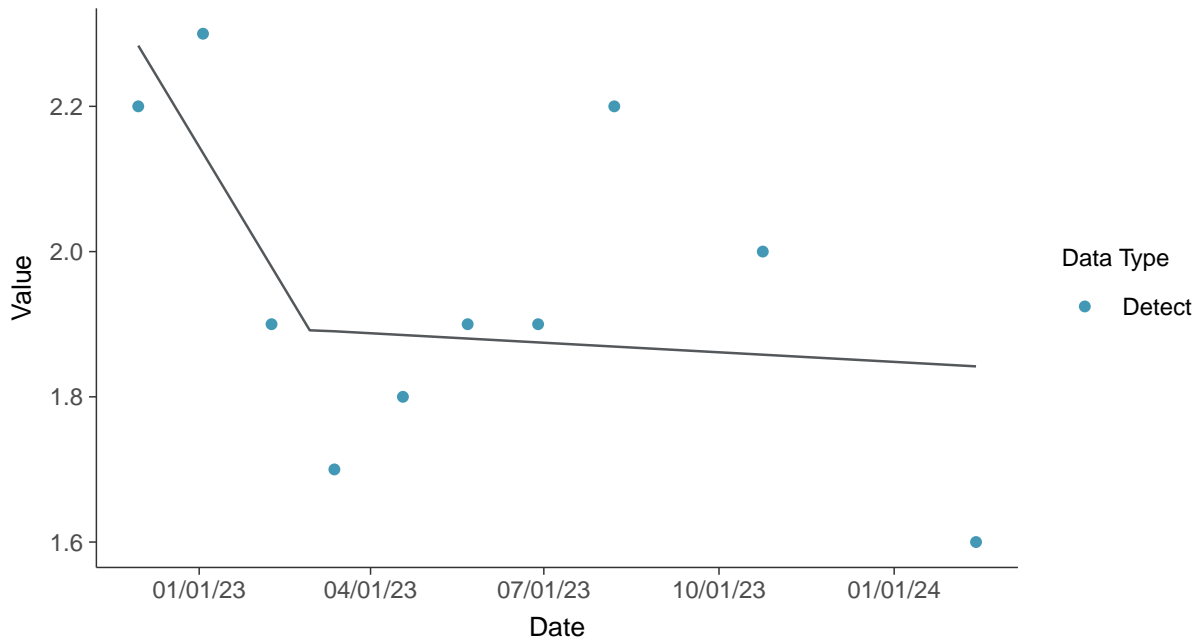
Fluoride (App IV), MW-19 (mg/L)





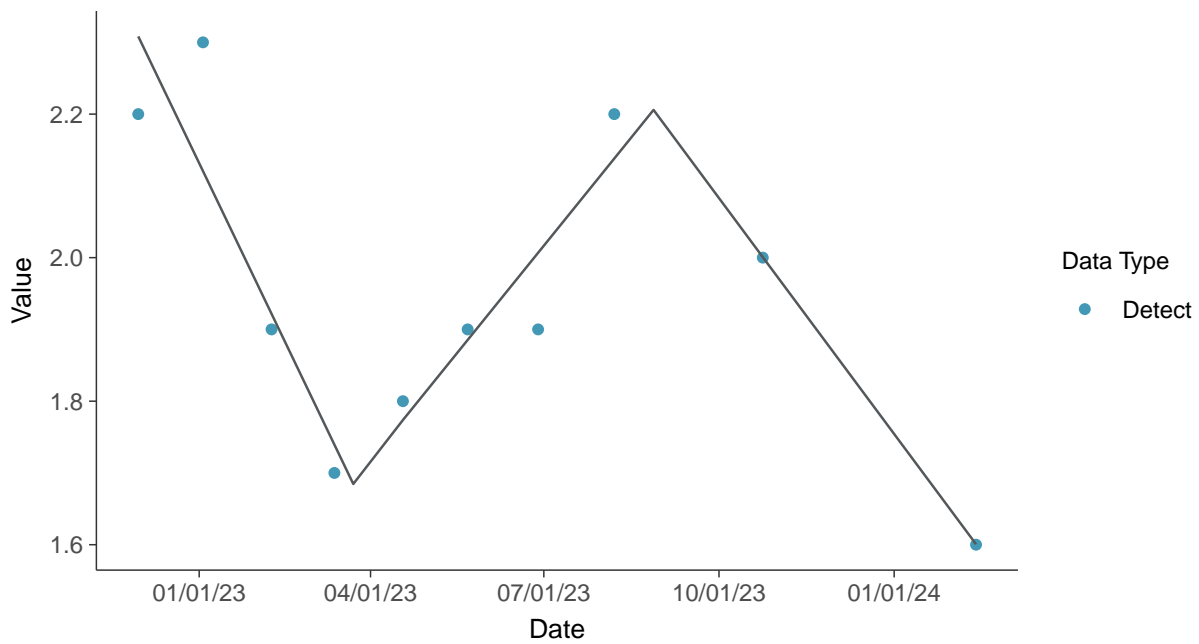
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride (App IV), MW-19 (mg/L)



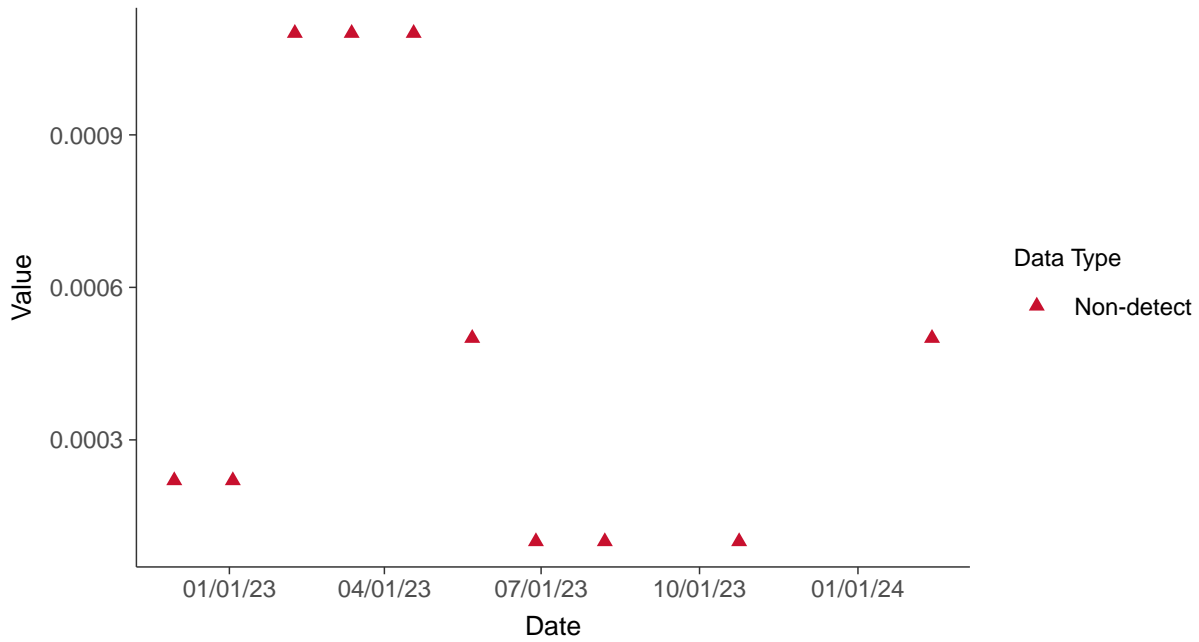


Appendix IV: Lead, MW-19

ID: 1_29_5_115

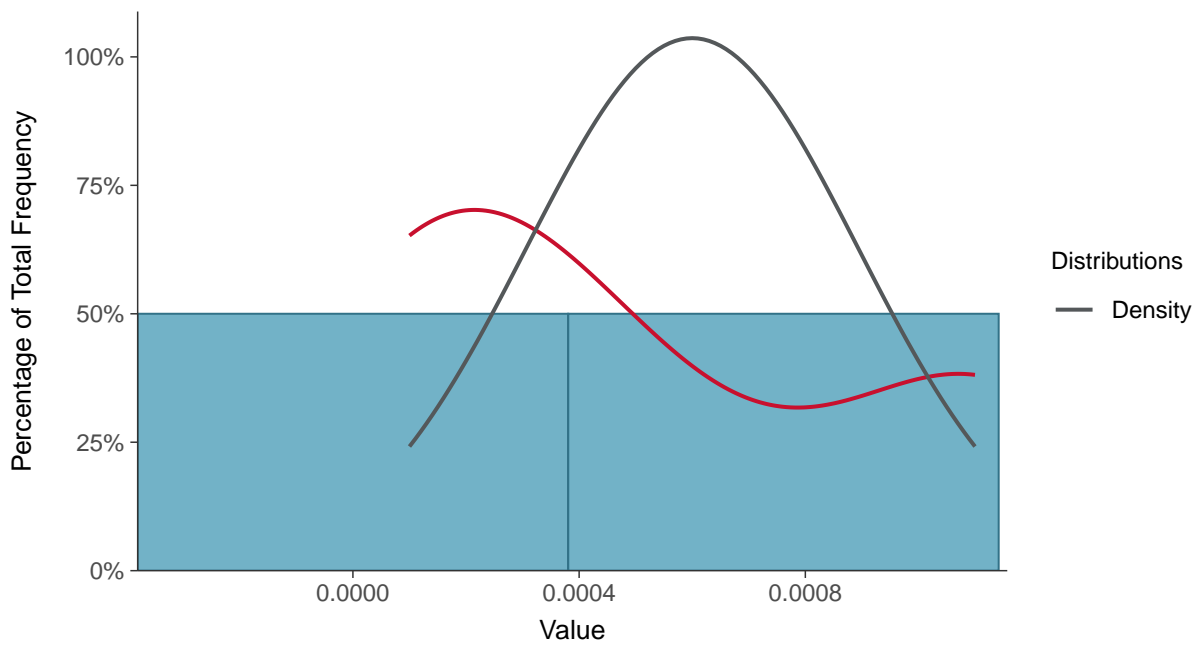
Scatter Plot

Lead, MW-19 (mg/L)



Histogram

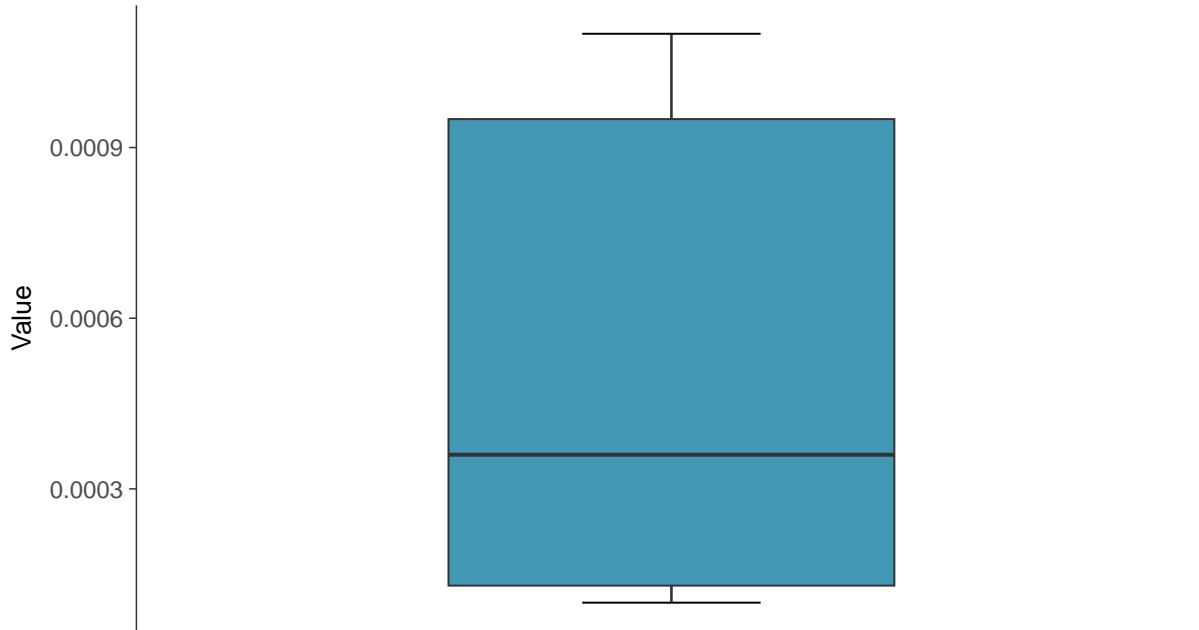
Lead, MW-19 (mg/L)





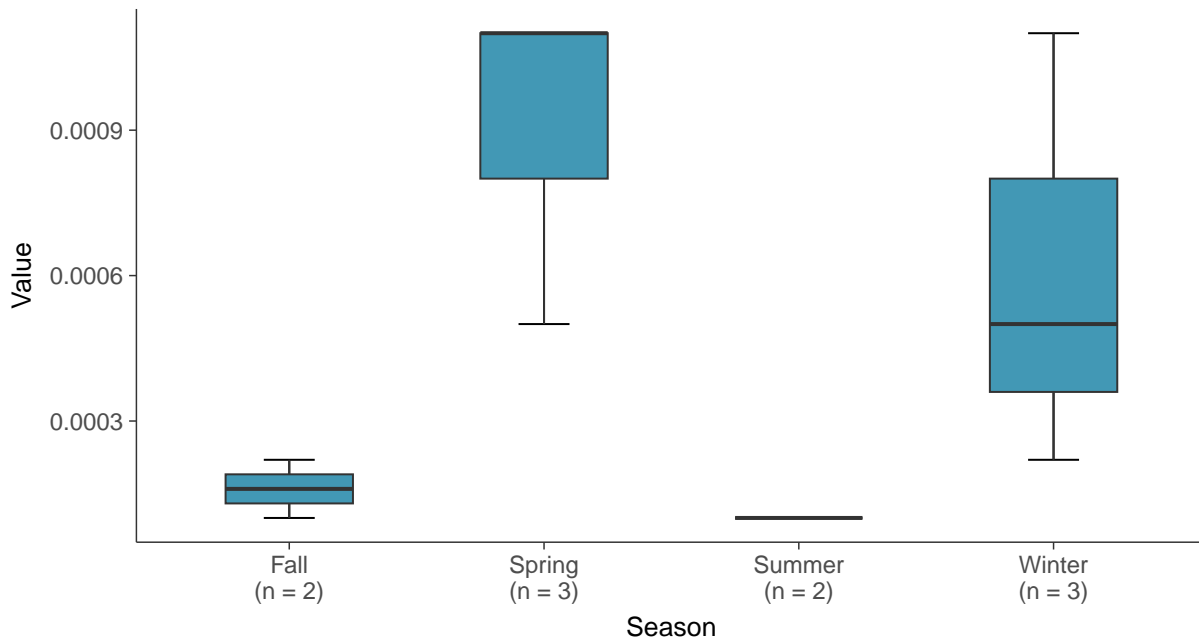
Boxplot

Lead, MW-19 (mg/L)



Boxplot by Season

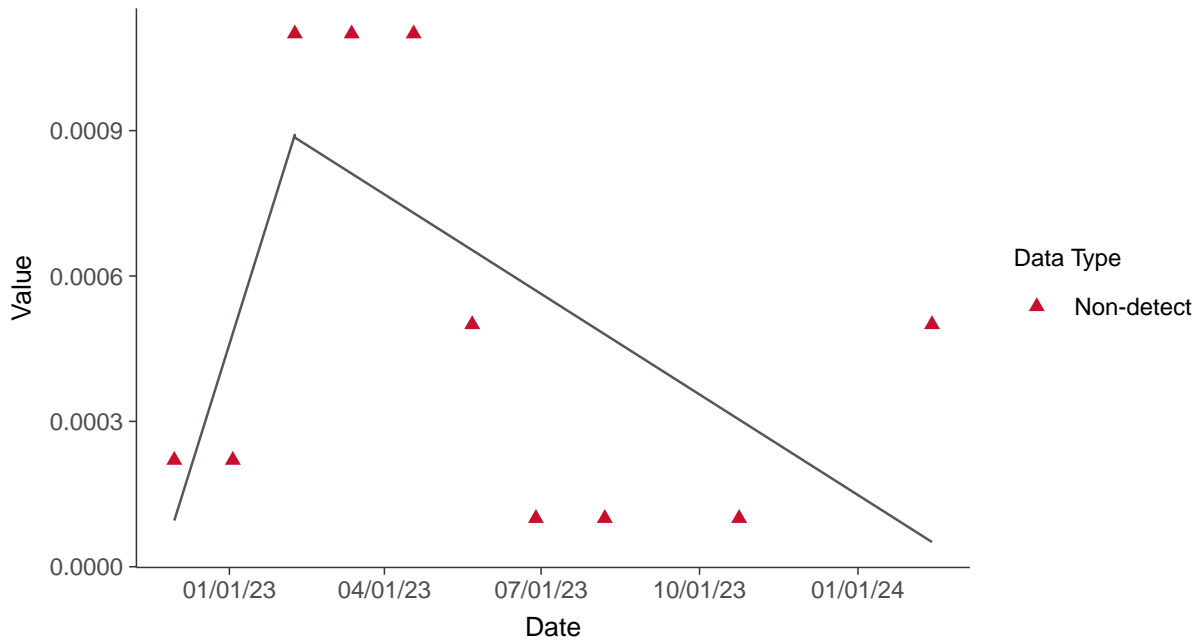
Lead, MW-19 (mg/L)





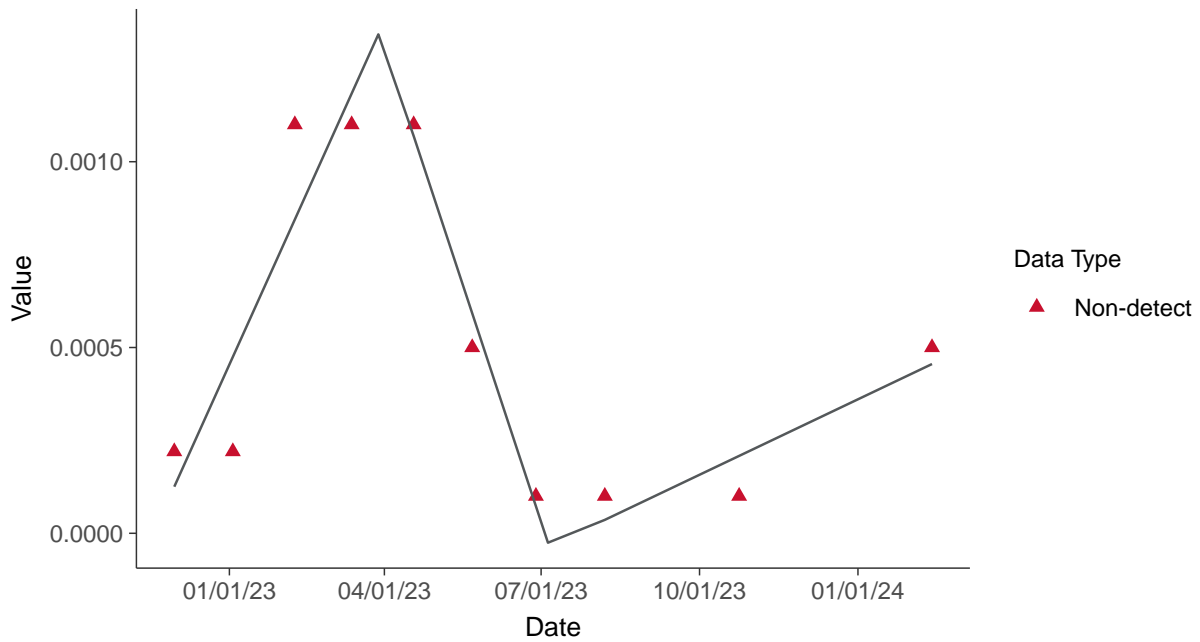
Trend Regression: Piecewise Linear-Linear

Lead, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

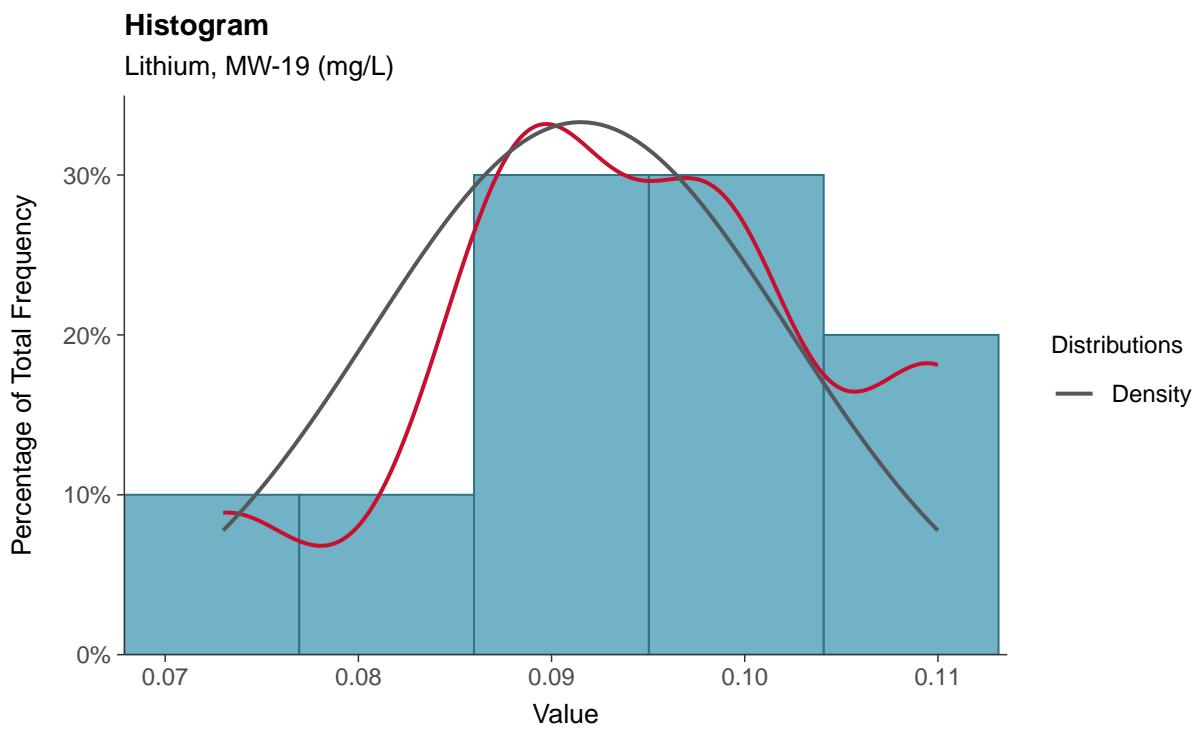
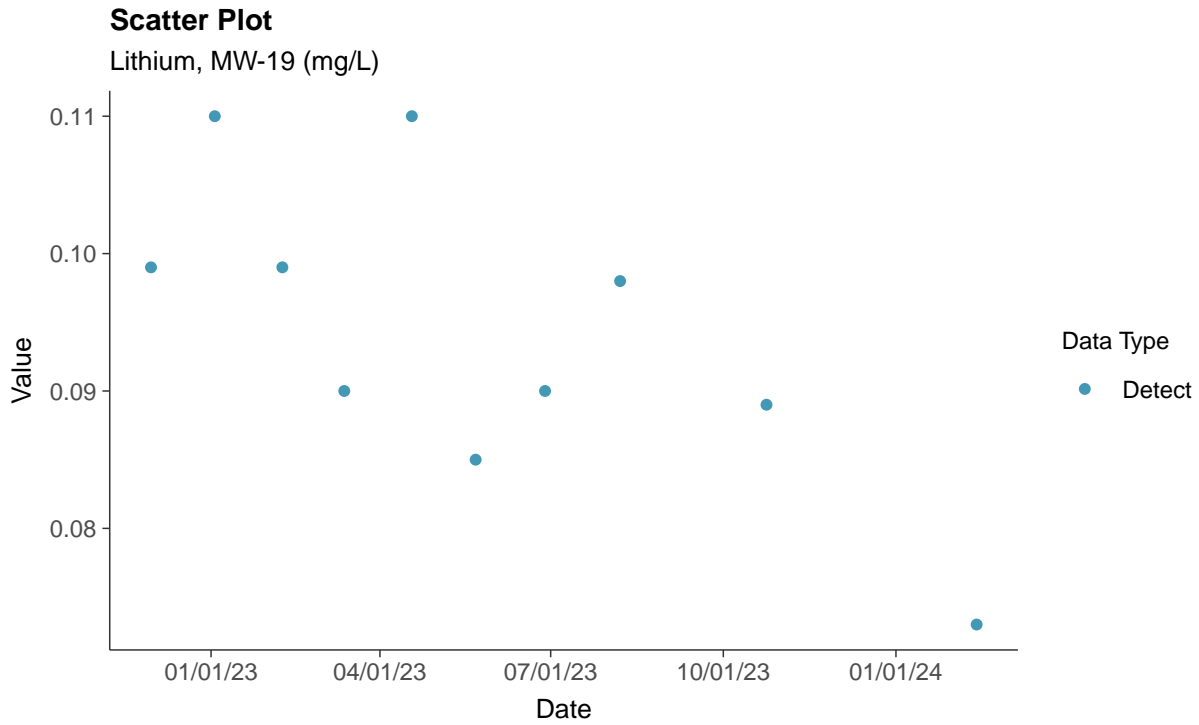
Lead, MW-19 (mg/L)





Appendix IV: Lithium, MW-19

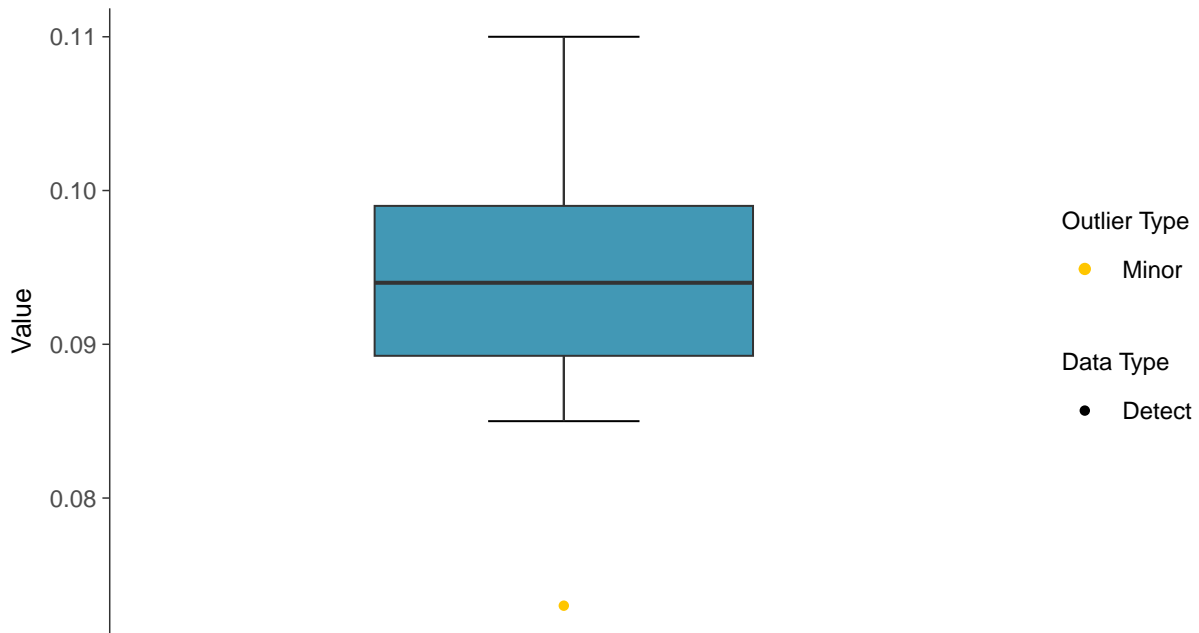
ID: 1_29_5_116





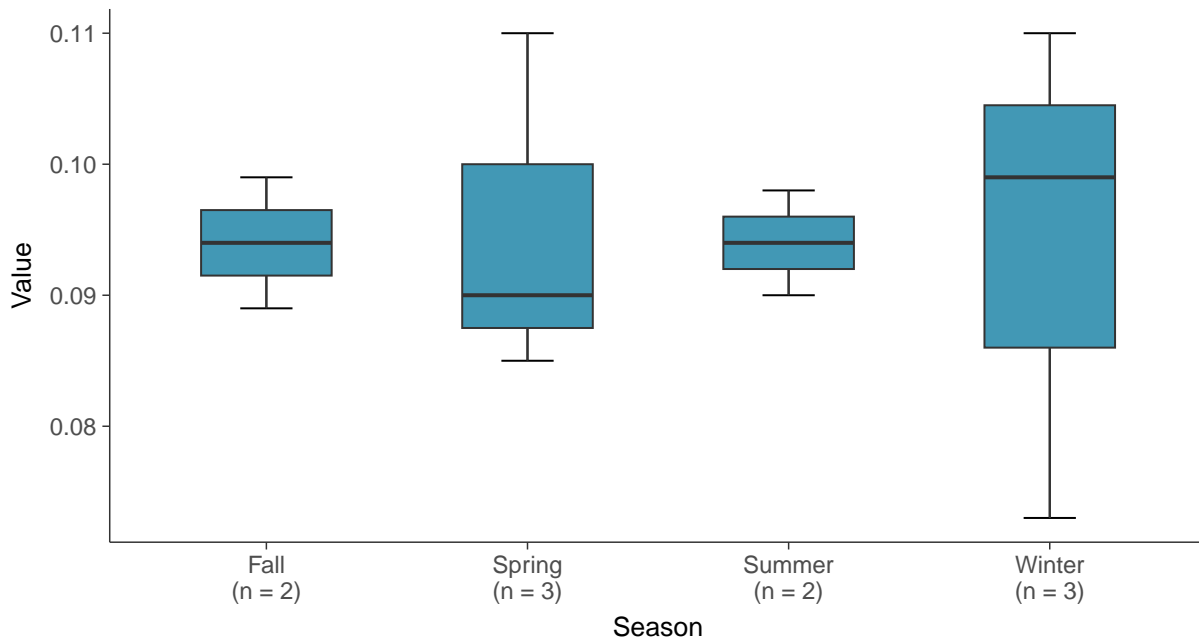
Boxplot

Lithium, MW-19 (mg/L)



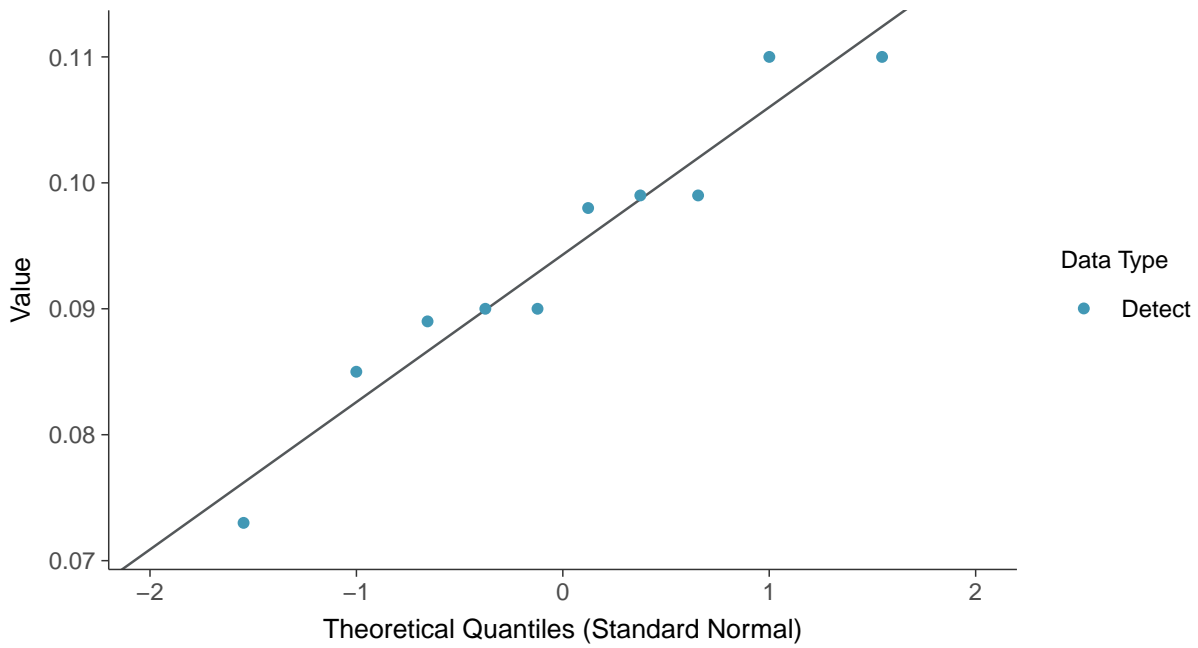
Boxplot by Season

Lithium, MW-19 (mg/L)

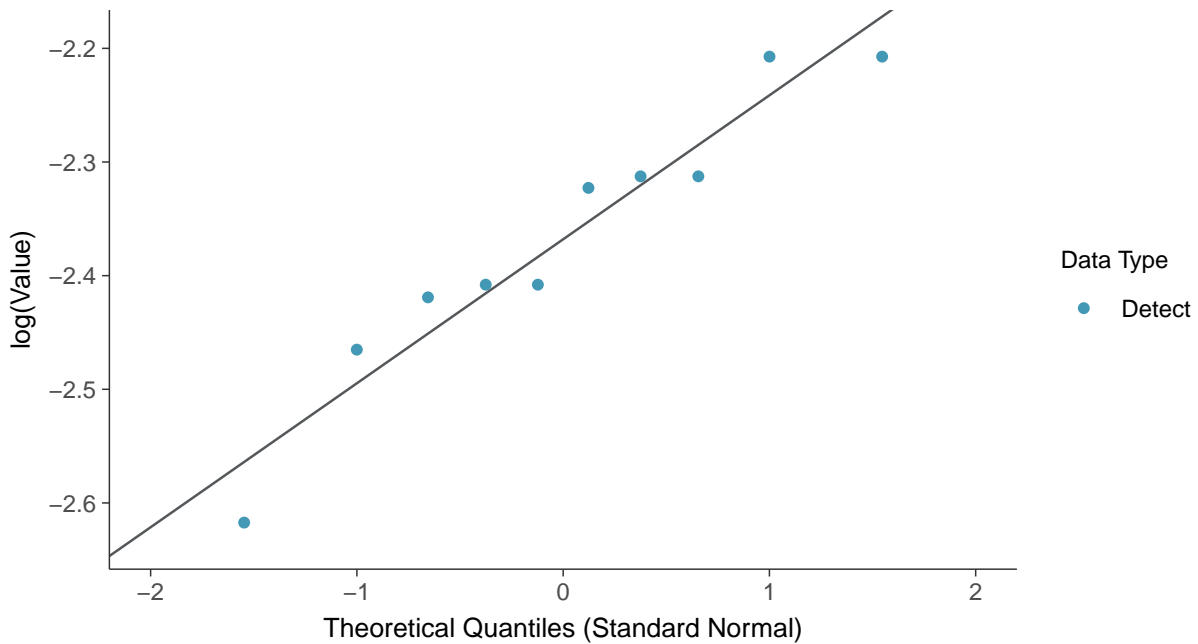




Normal Q-Q plot
Lithium, MW-19 (mg/L)

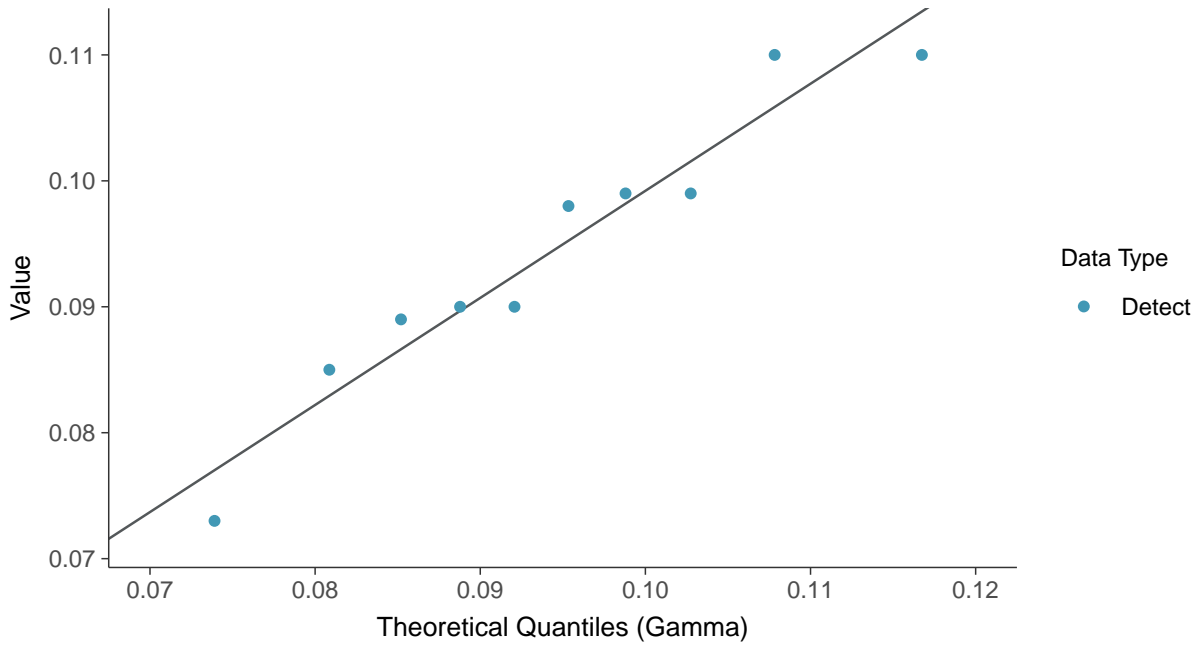


Lognormal Q-Q plot
Lithium, MW-19 (mg/L)

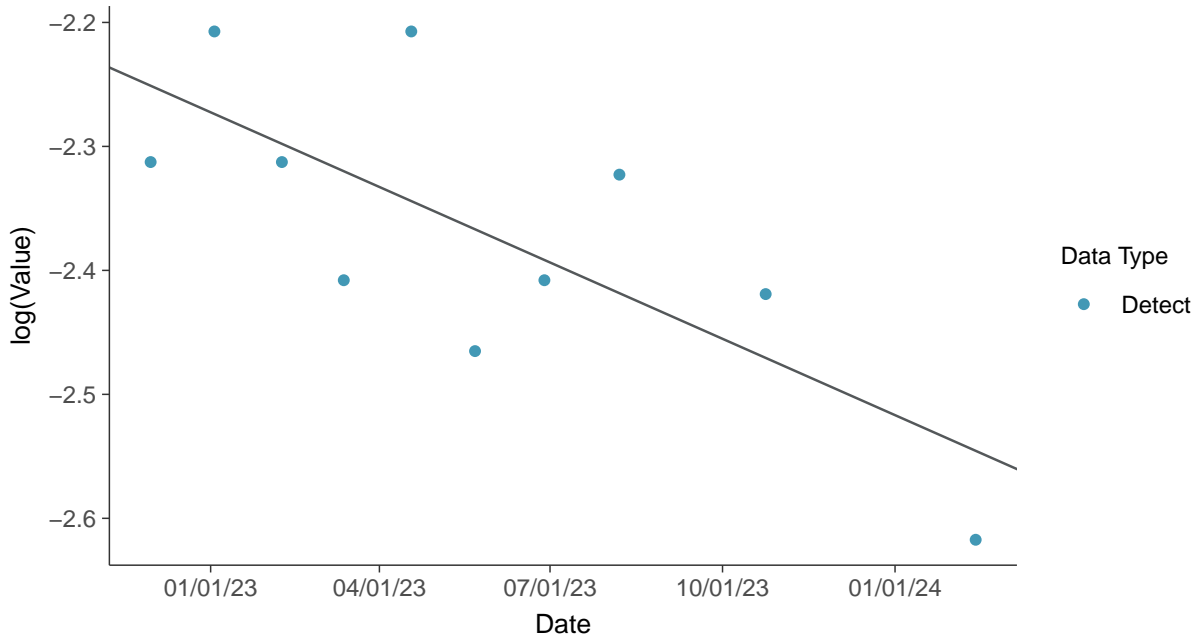




Gamma Q-Q plot
Lithium, MW-19 (mg/L)



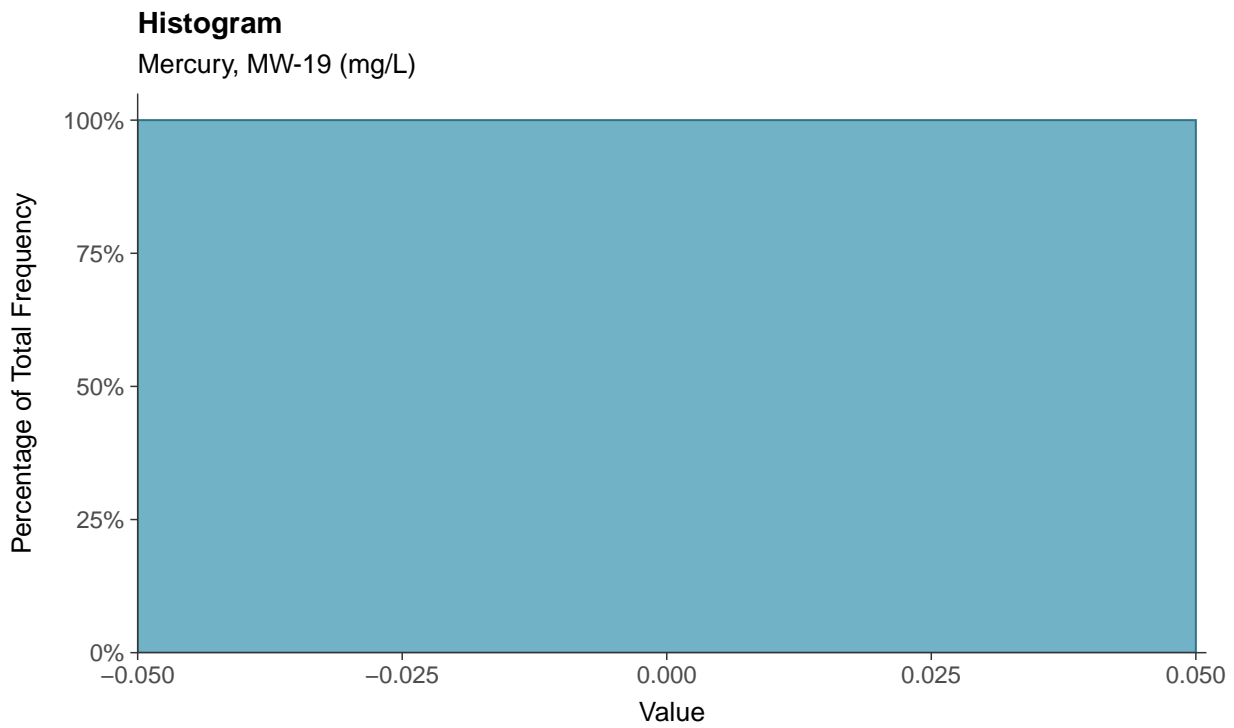
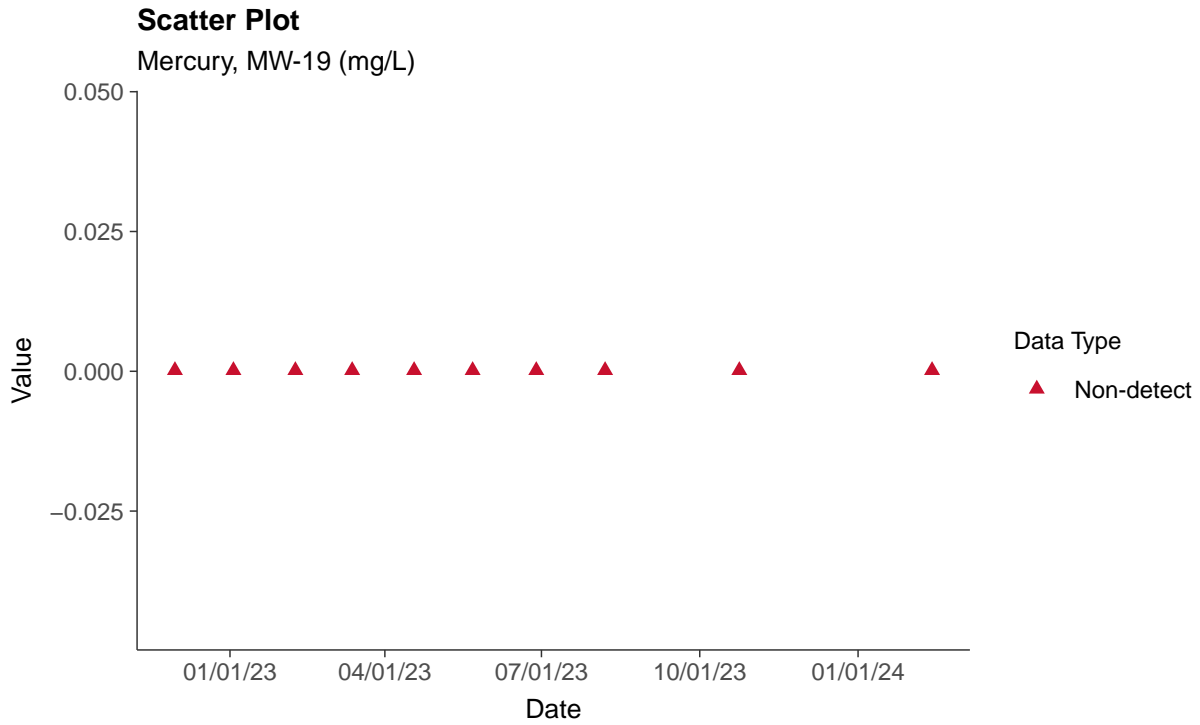
Trend Regression: Lognormal MLE
Lithium, MW-19 (mg/L)





Appendix IV: Mercury, MW-19

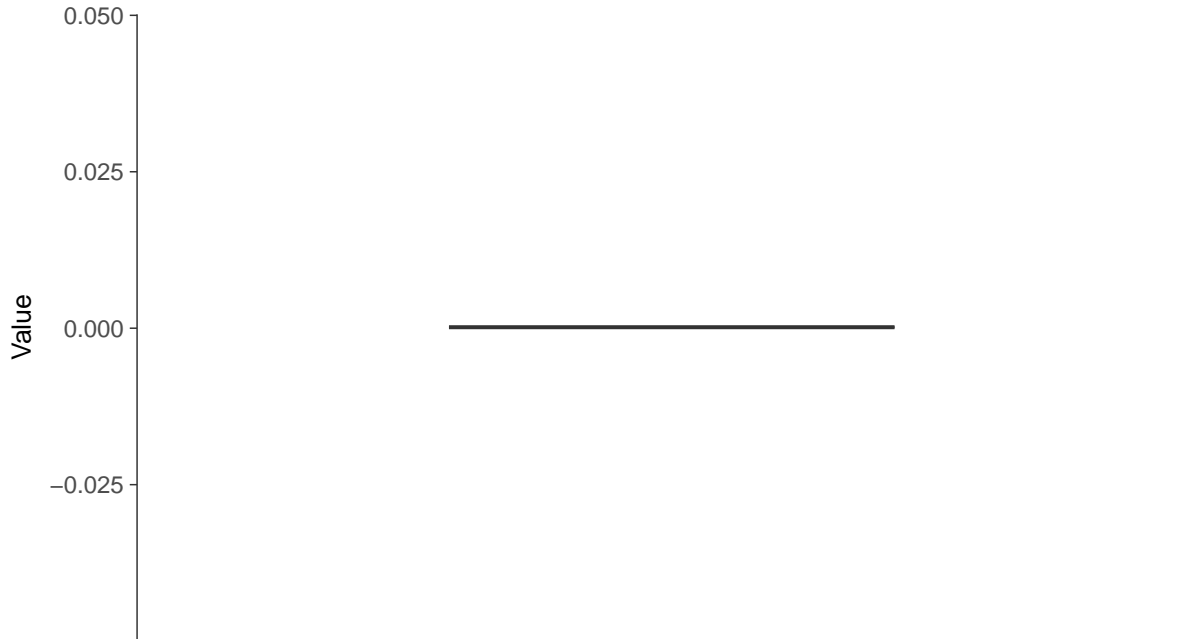
ID: 1_29_5_117





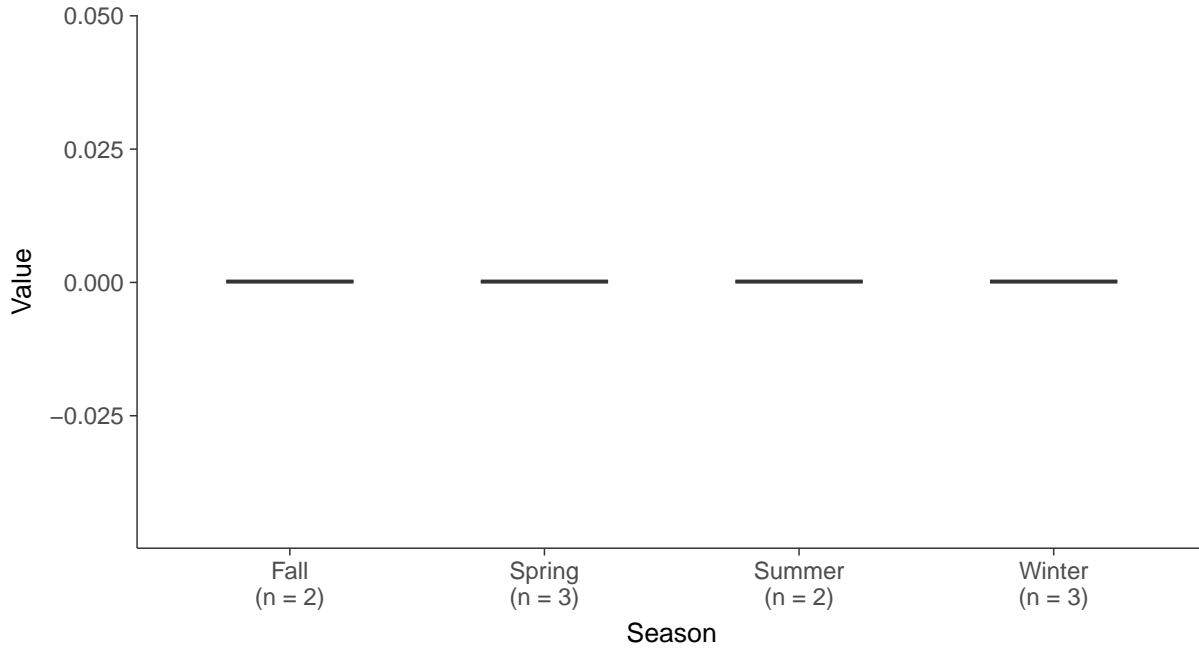
Boxplot

Mercury, MW-19 (mg/L)



Boxplot by Season

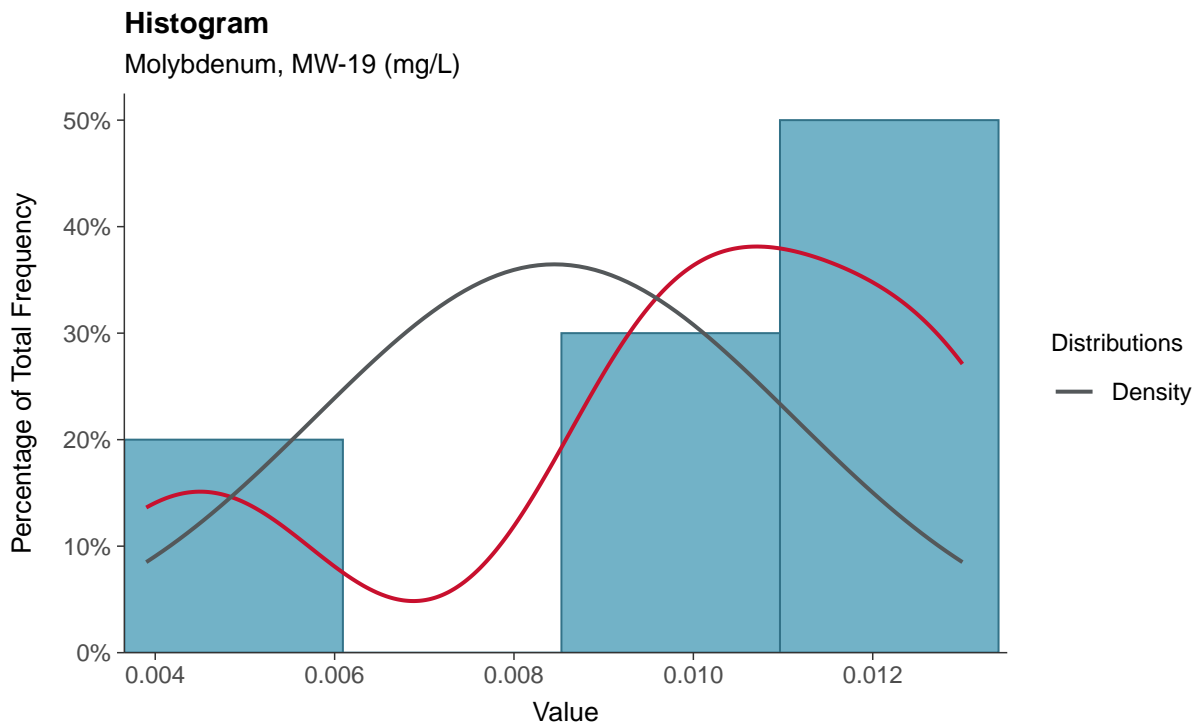
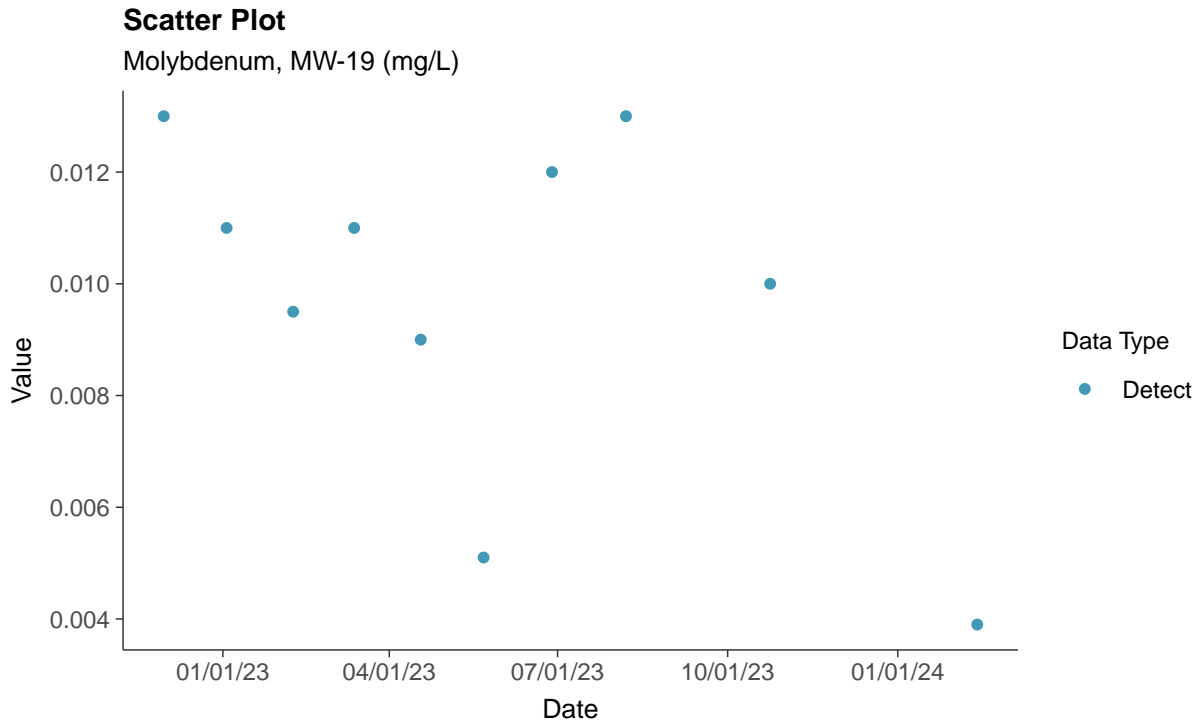
Mercury, MW-19 (mg/L)





Appendix IV: Molybdenum, MW-19

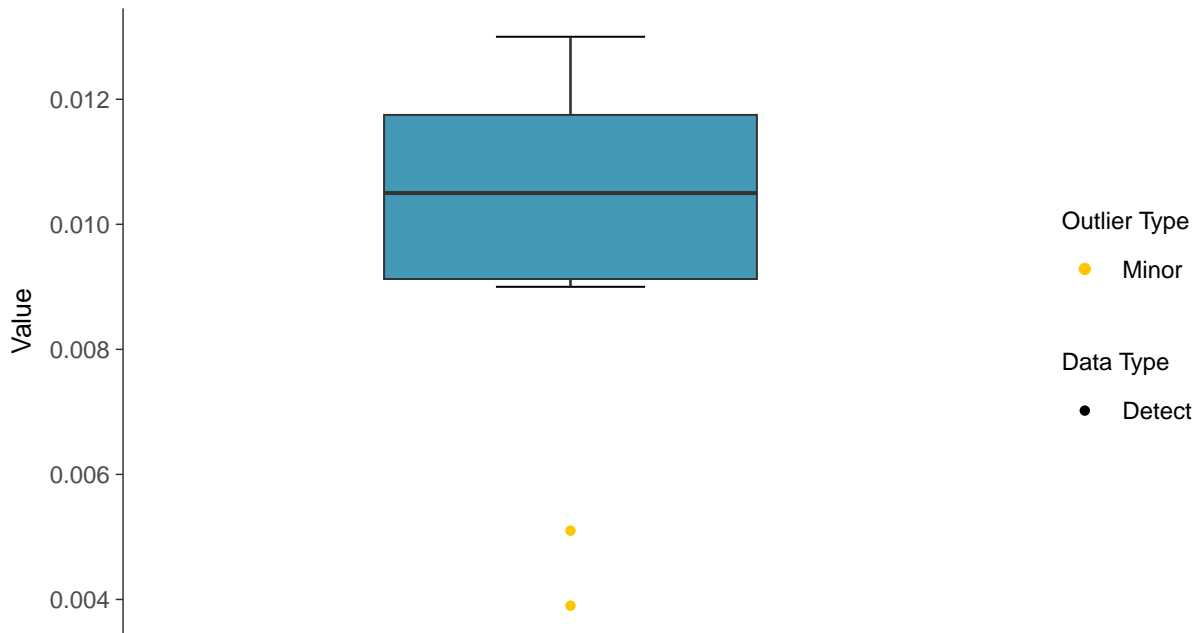
ID: 1_29_5_118





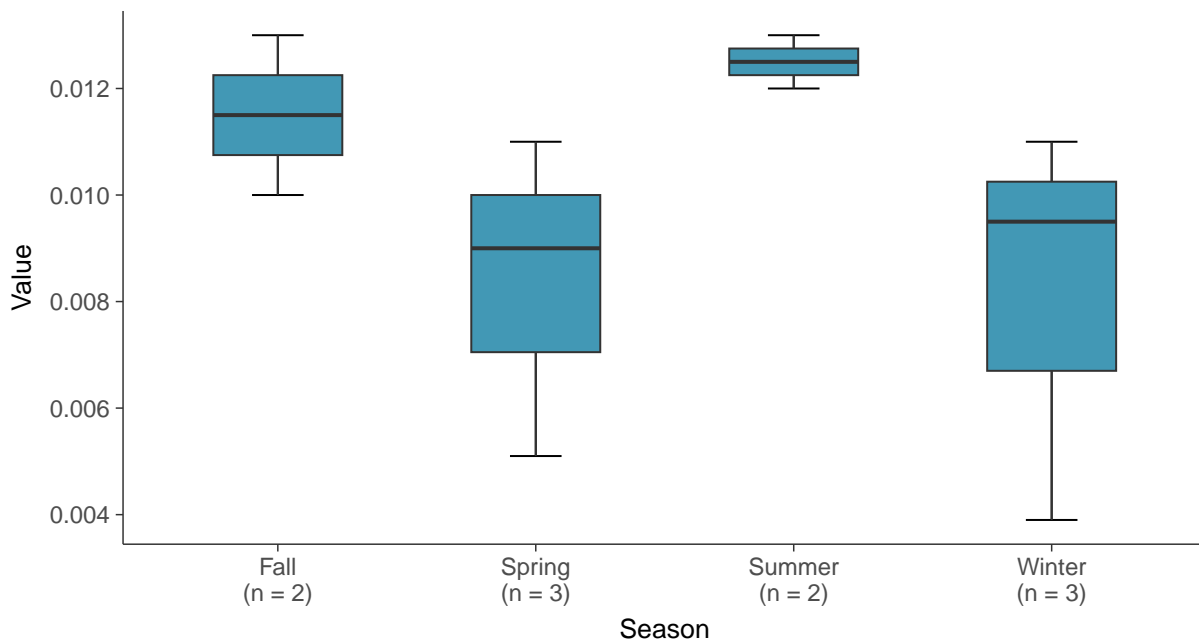
Boxplot

Molybdenum, MW-19 (mg/L)



Boxplot by Season

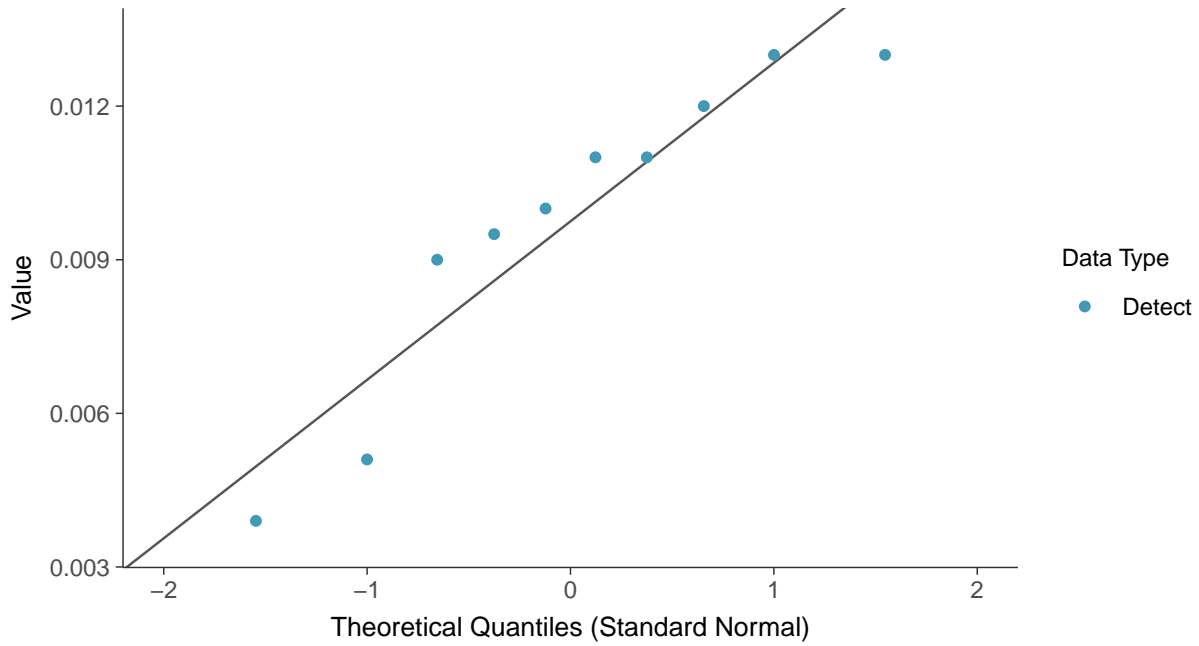
Molybdenum, MW-19 (mg/L)





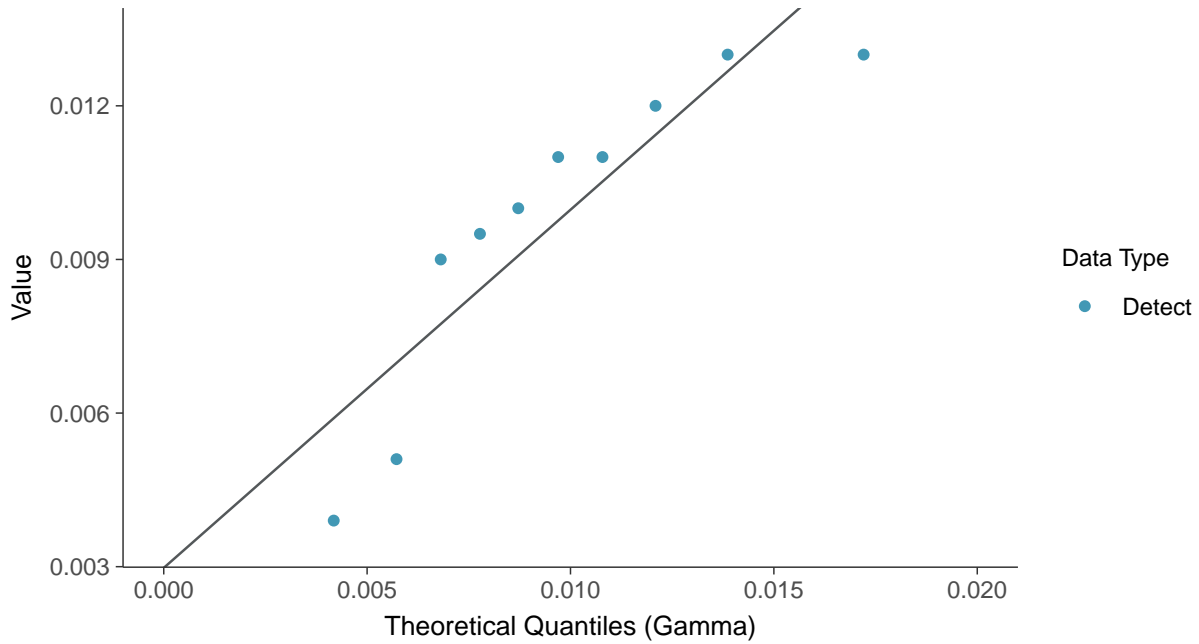
Normal Q-Q plot

Molybdenum, MW-19 (mg/L)



Gamma Q-Q plot

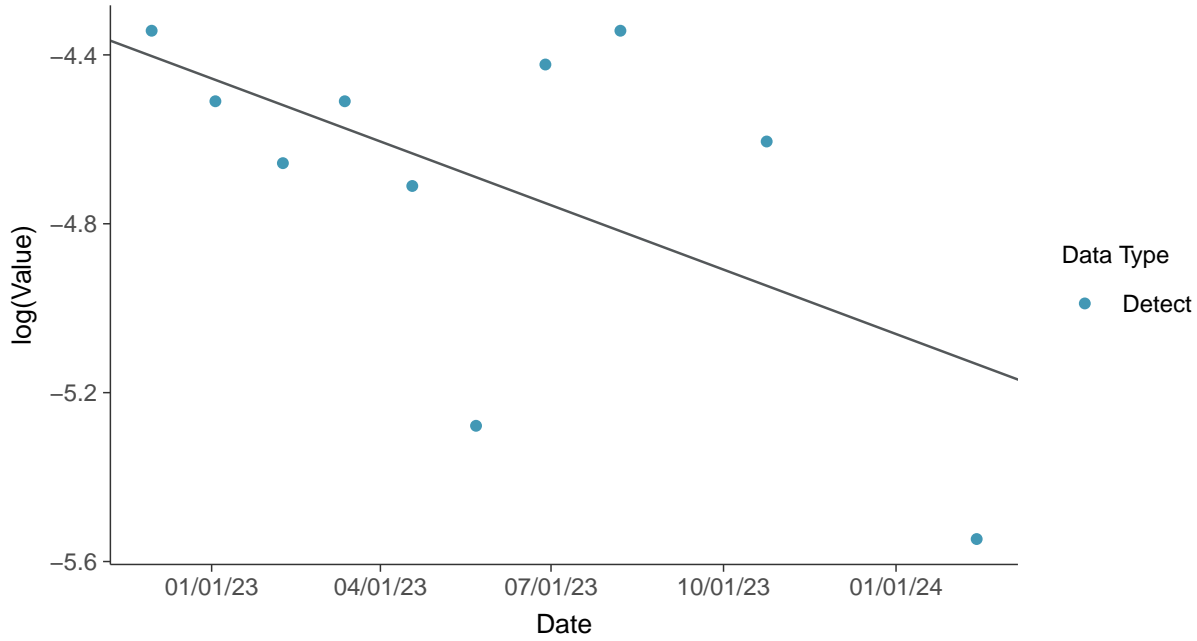
Molybdenum, MW-19 (mg/L)





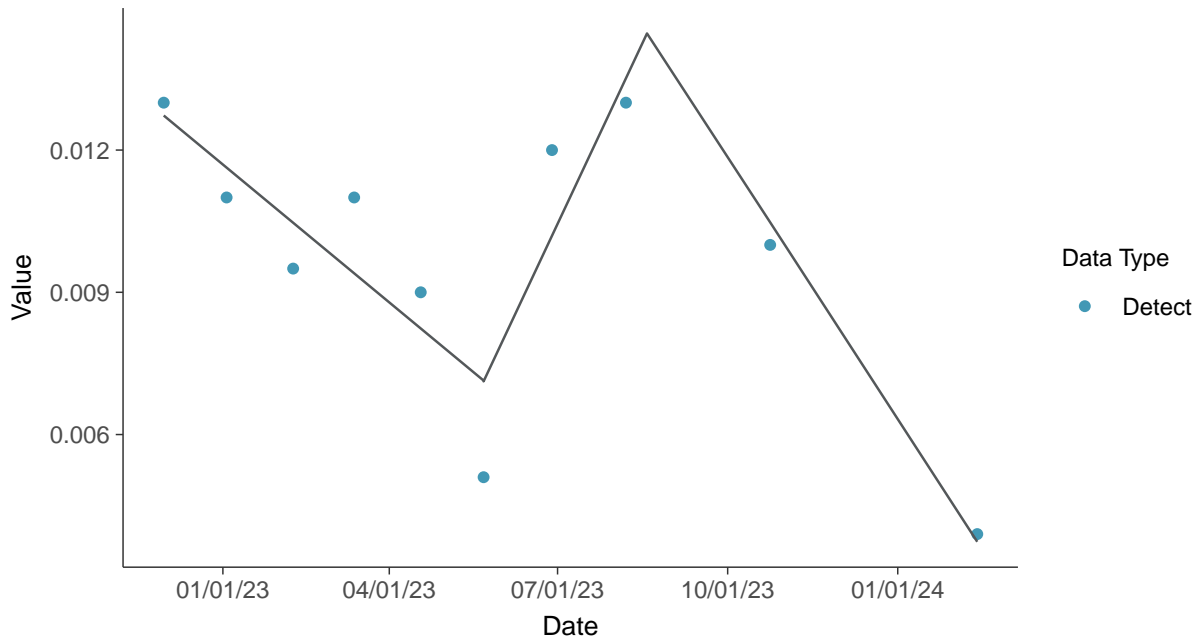
Trend Regression: Lognormal MLE

Molybdenum, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-19 (mg/L)



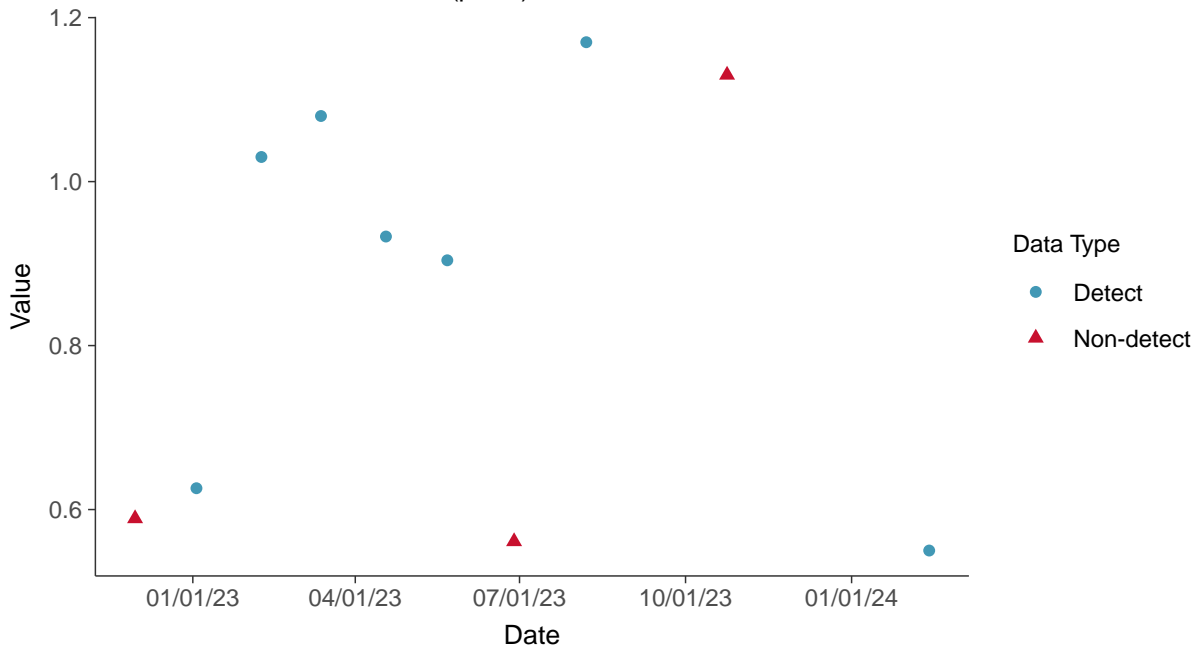


Appendix IV: Radium 226 and 228, MW-19

ID: 1_29_5_121

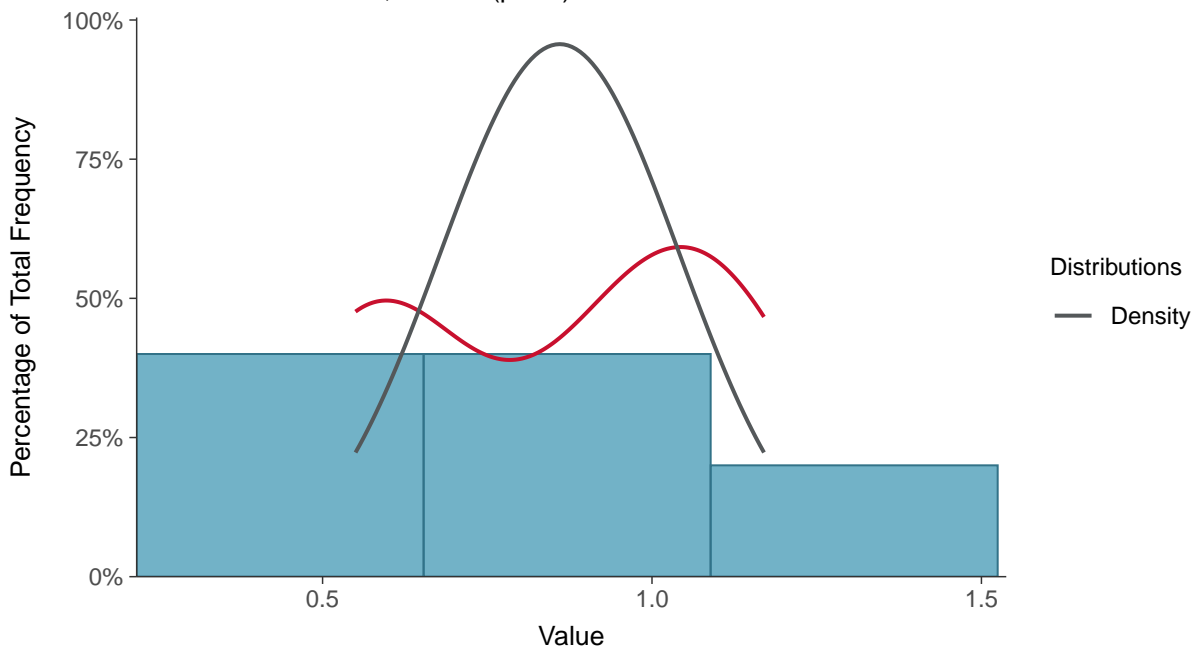
Scatter Plot

Radium 226 and 228, MW-19 (pCi/L)



Histogram

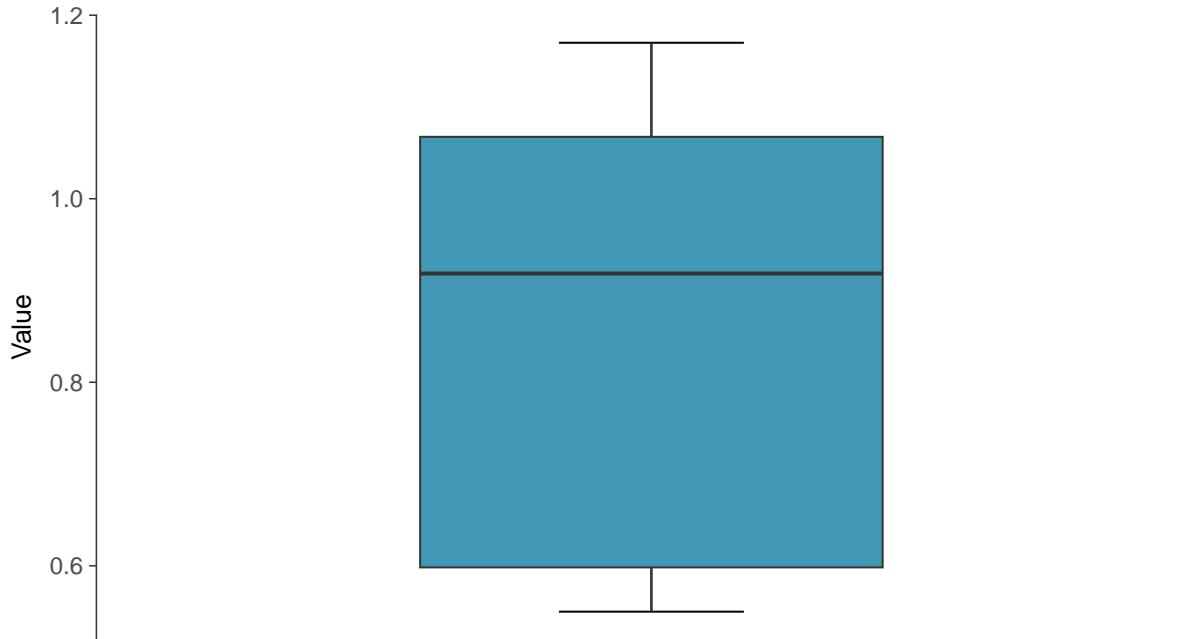
Radium 226 and 228, MW-19 (pCi/L)





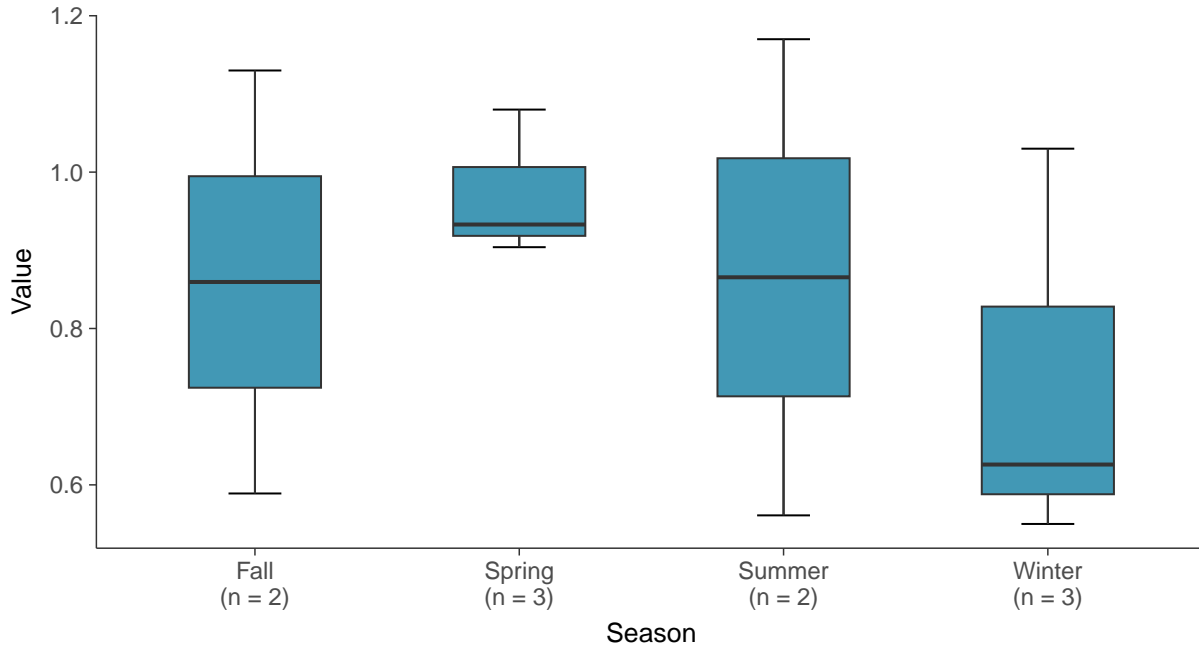
Boxplot

Radium 226 and 228, MW-19 (pCi/L)



Boxplot by Season

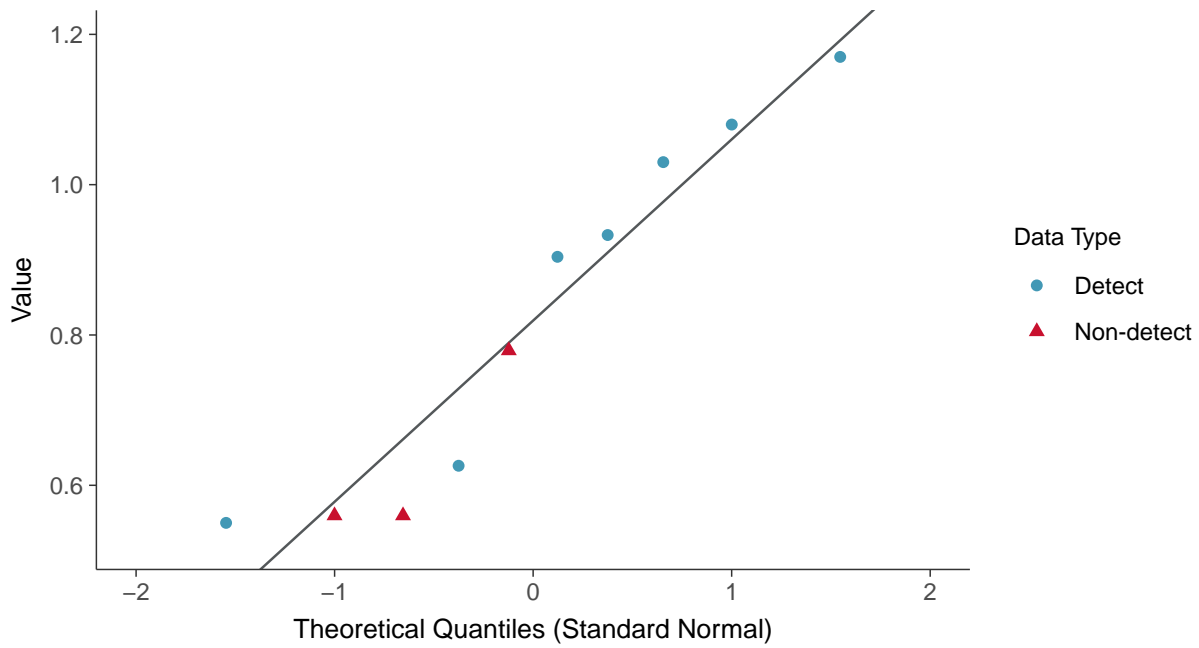
Radium 226 and 228, MW-19 (pCi/L)





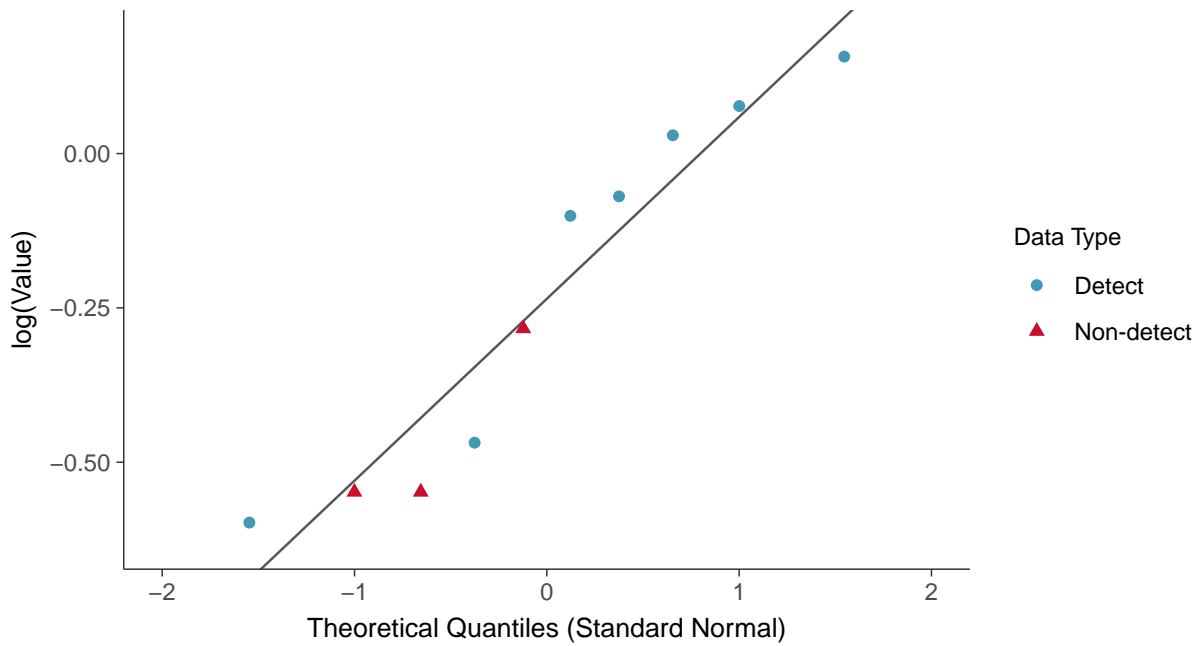
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-19 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

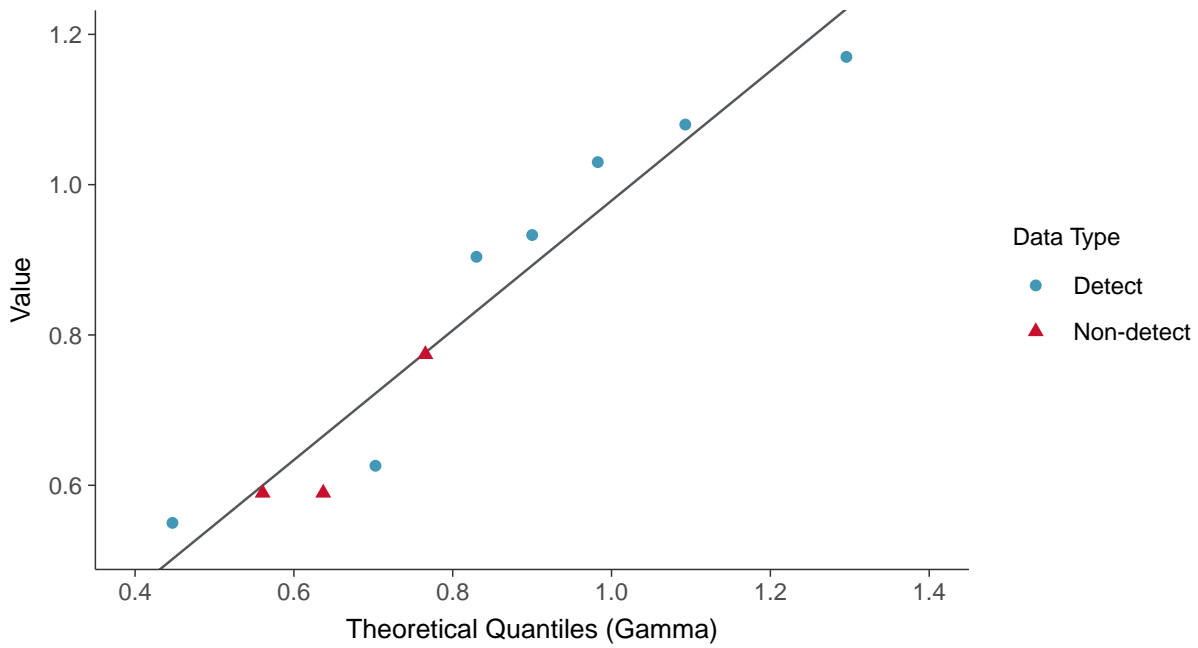
Radium 226 and 228, MW-19 (pCi/L)





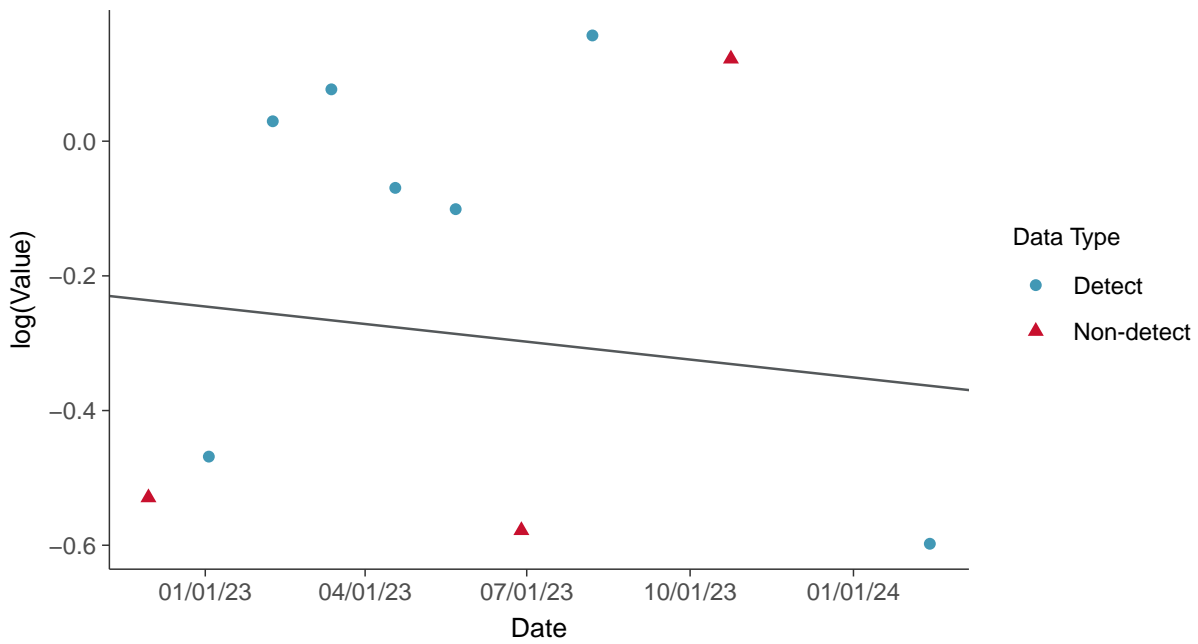
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-19 (pCi/L)



Trend Regression: Lognormal MLE

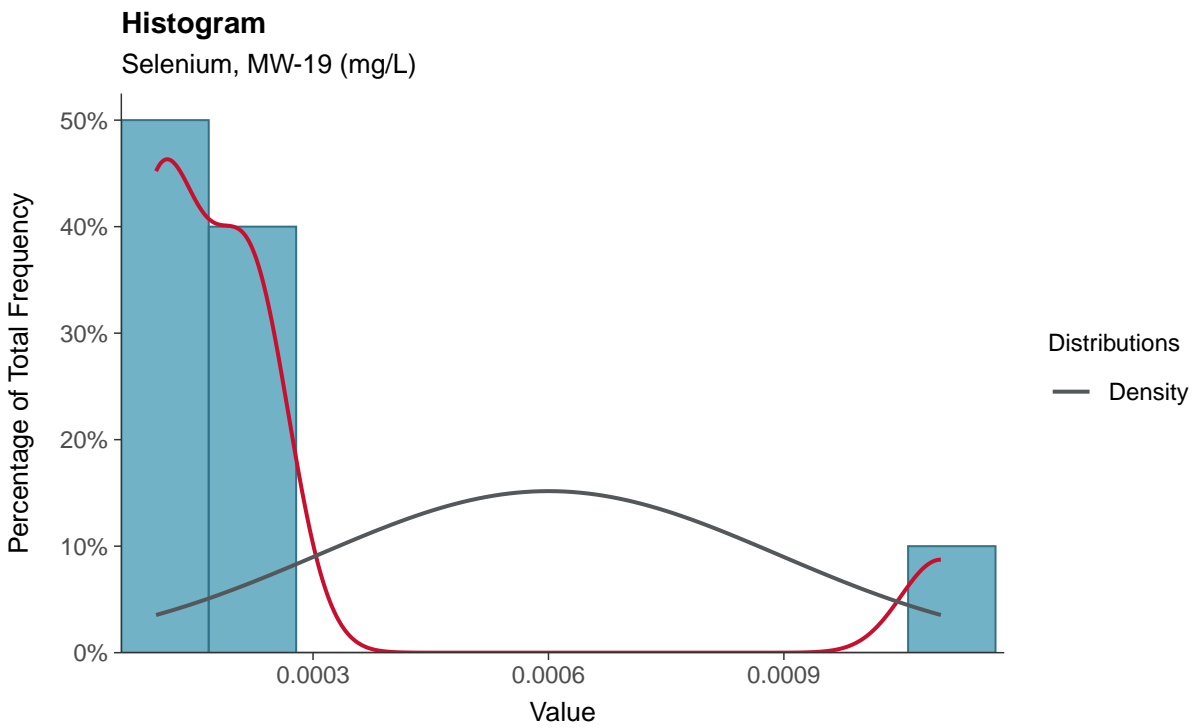
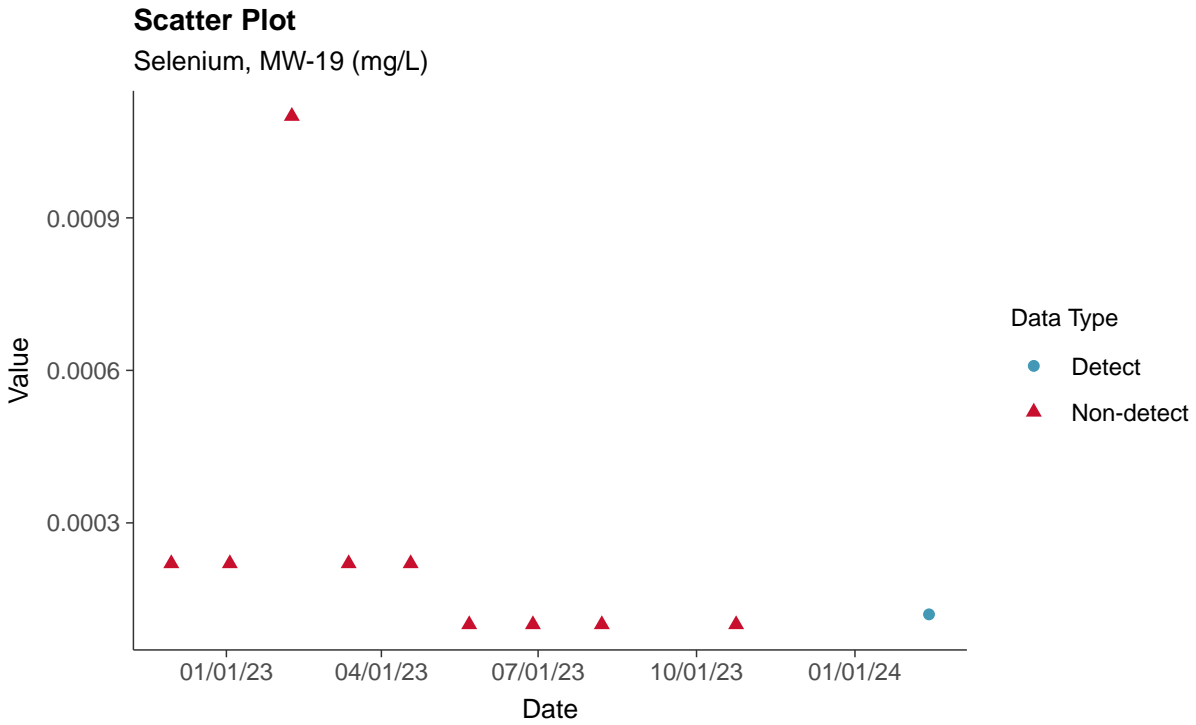
Radium 226 and 228, MW-19 (pCi/L)





Appendix IV: Selenium, MW-19

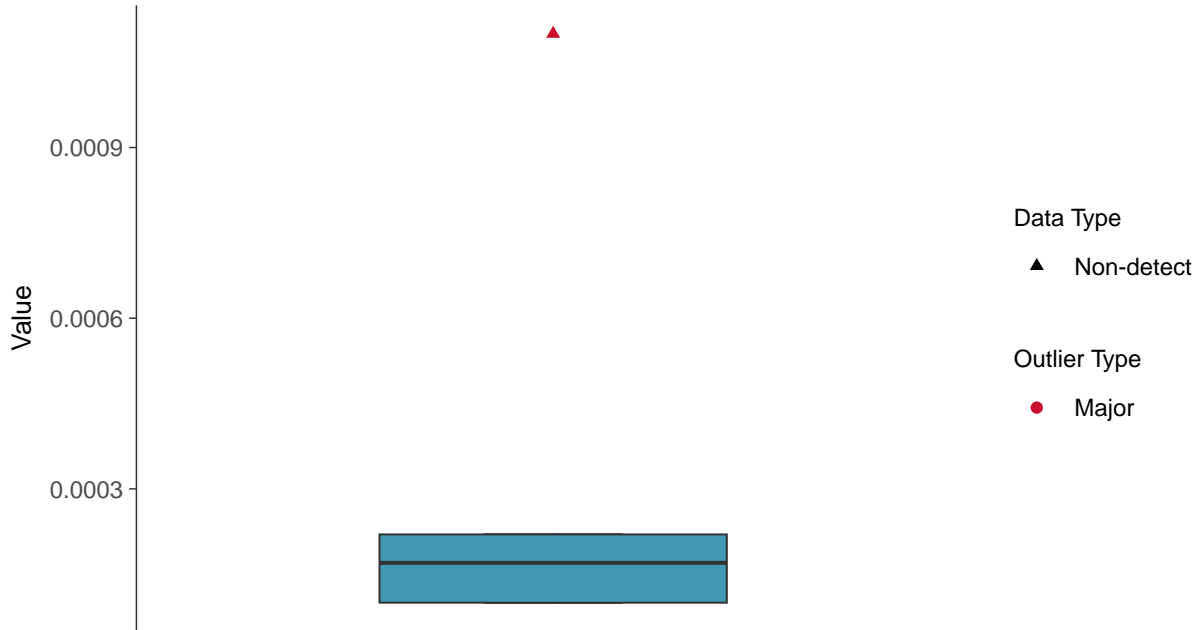
ID: 1_29_5_122





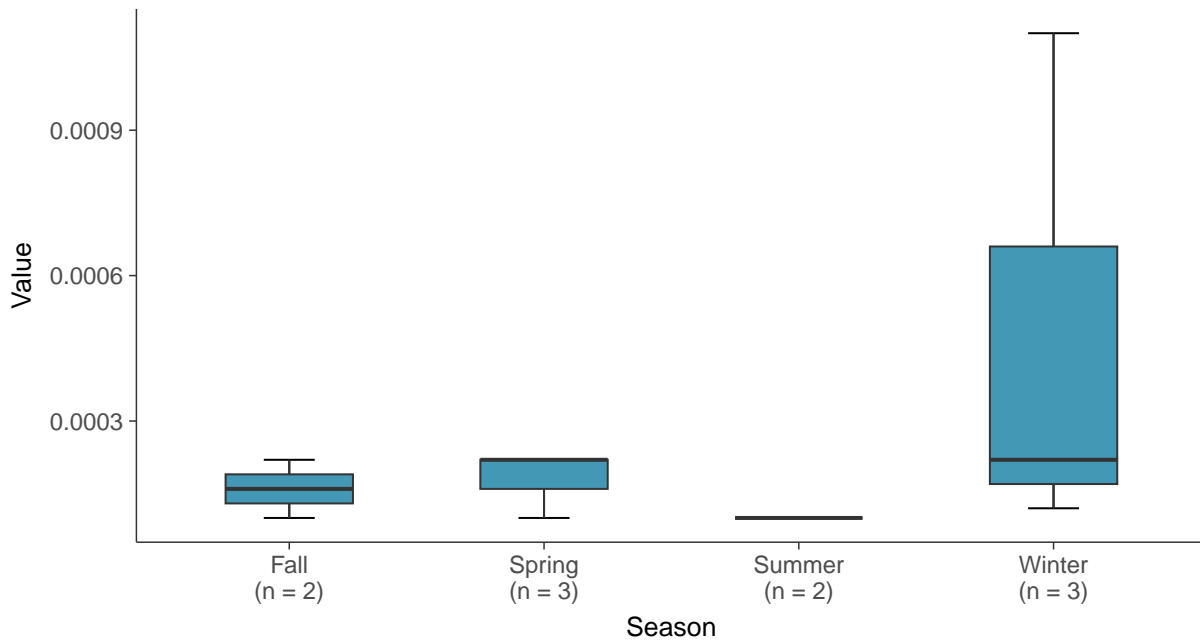
Boxplot

Selenium, MW-19 (mg/L)



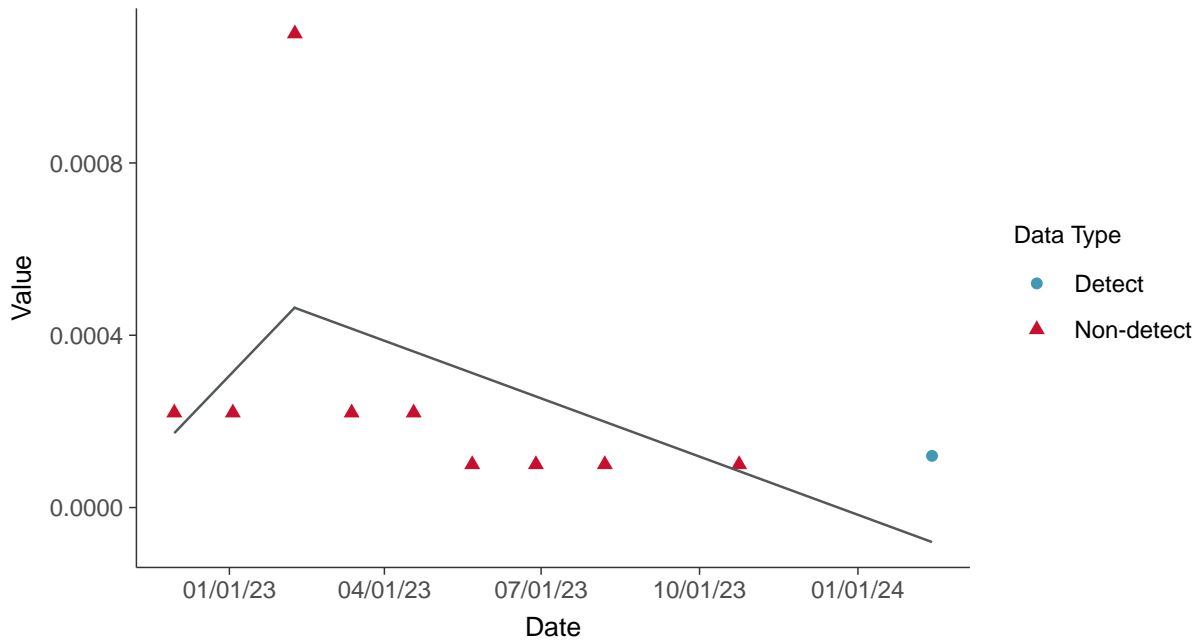
Boxplot by Season

Selenium, MW-19 (mg/L)

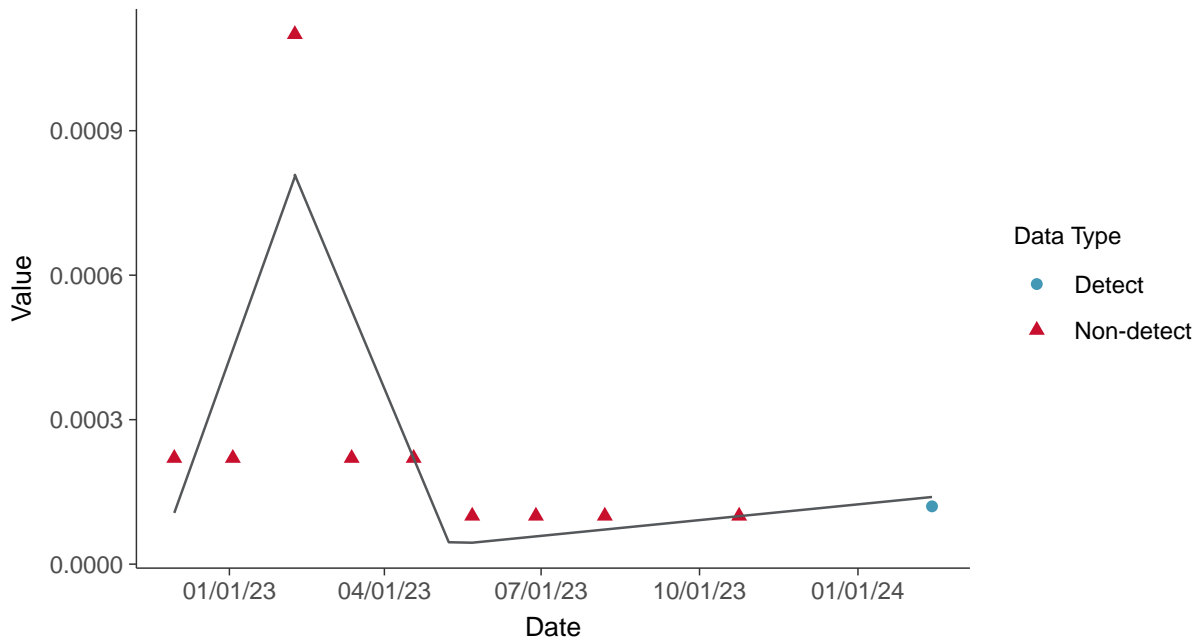




Trend Regression: Piecewise Linear-Linear
Selenium, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-19 (mg/L)



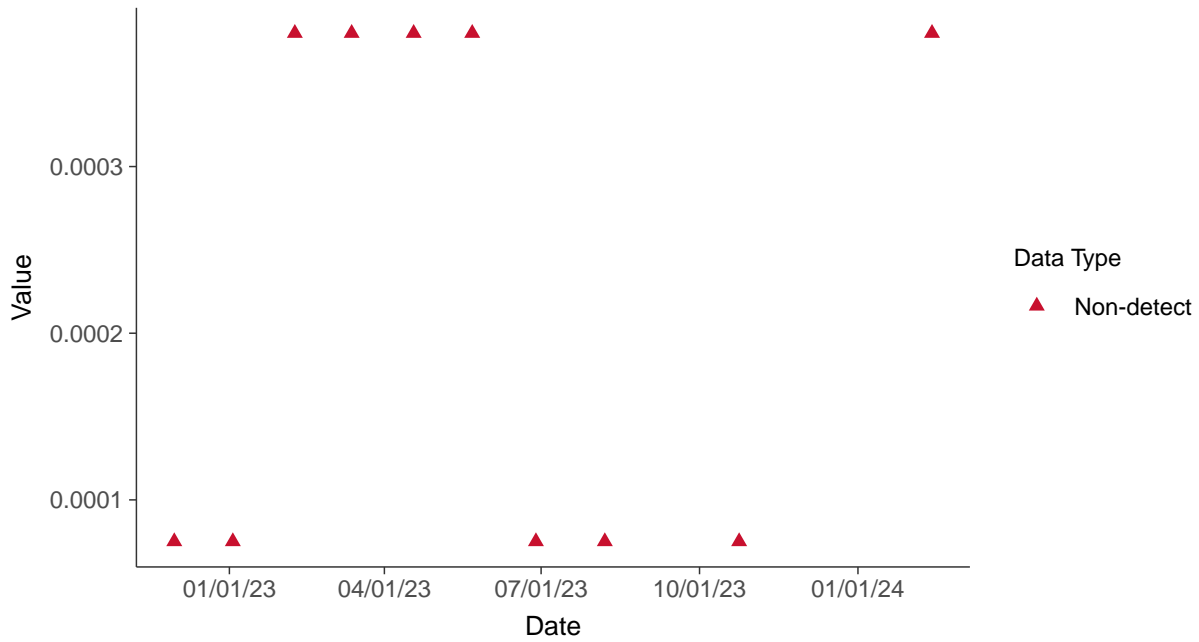


Appendix IV: Thallium, MW-19

ID: 1_29_5_125

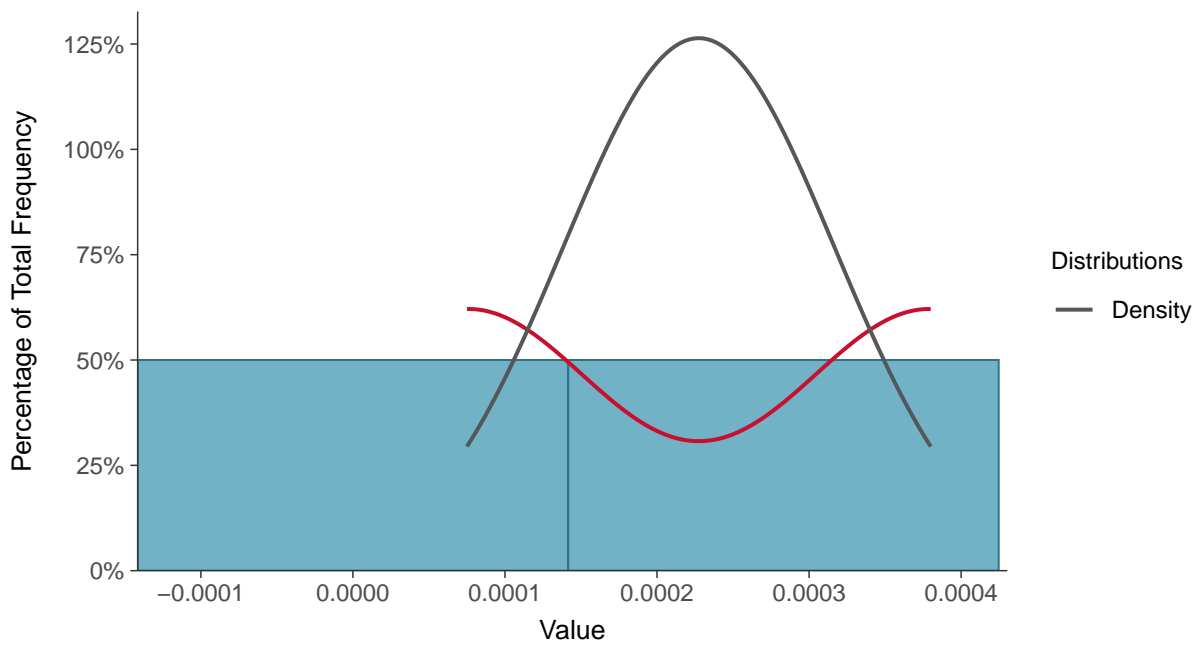
Scatter Plot

Thallium, MW-19 (mg/L)



Histogram

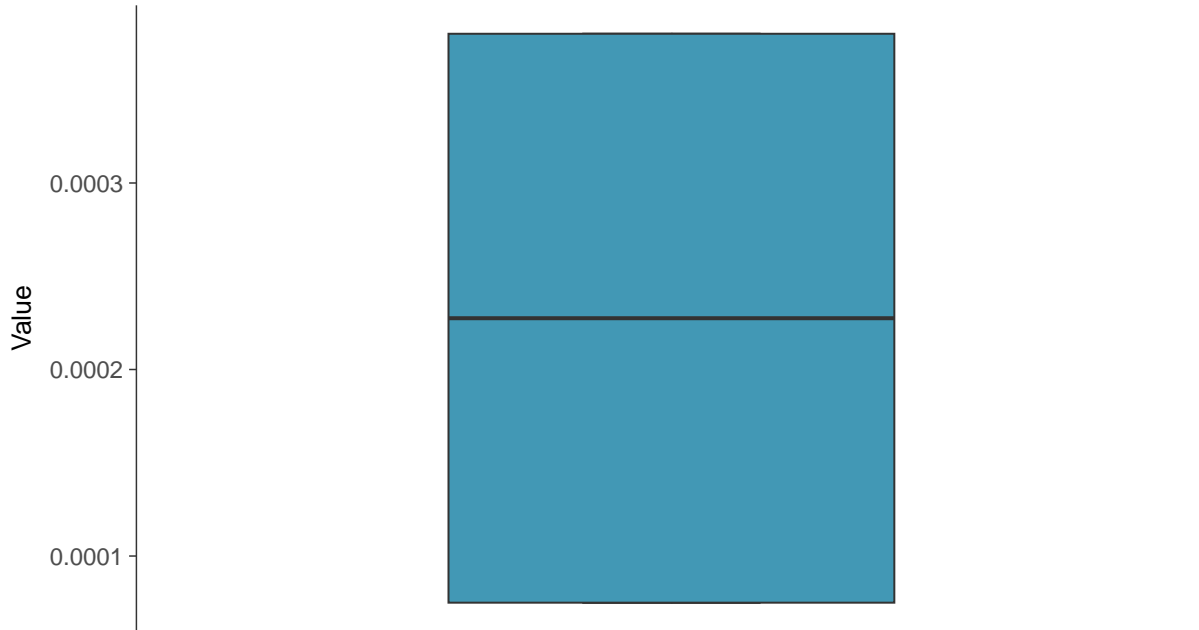
Thallium, MW-19 (mg/L)





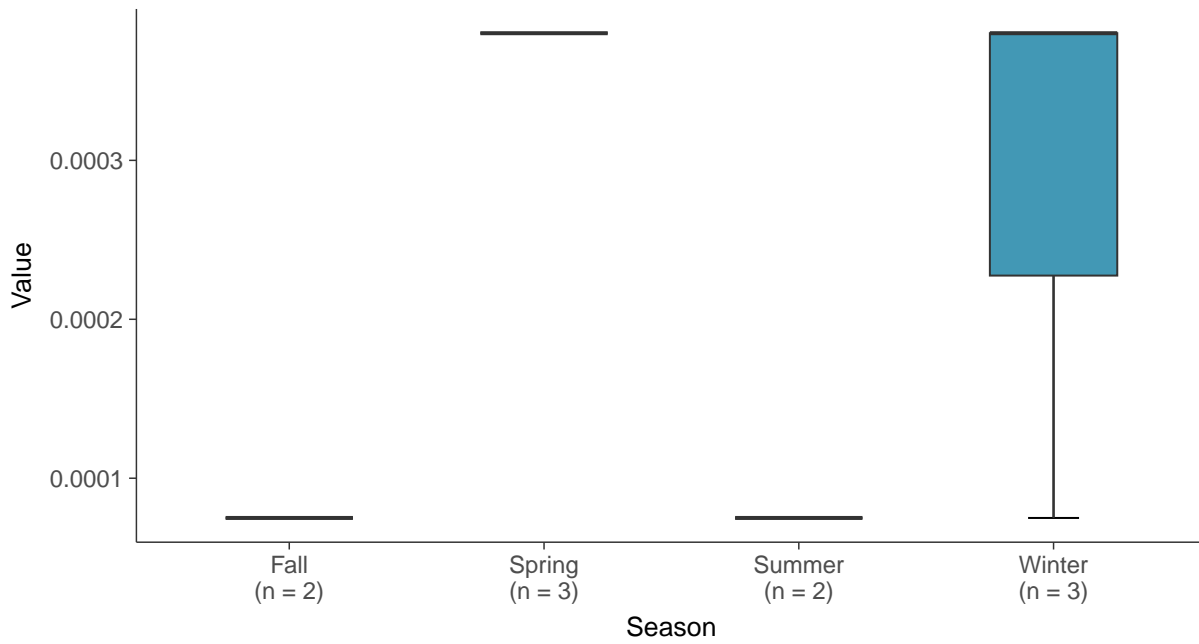
Boxplot

Thallium, MW-19 (mg/L)



Boxplot by Season

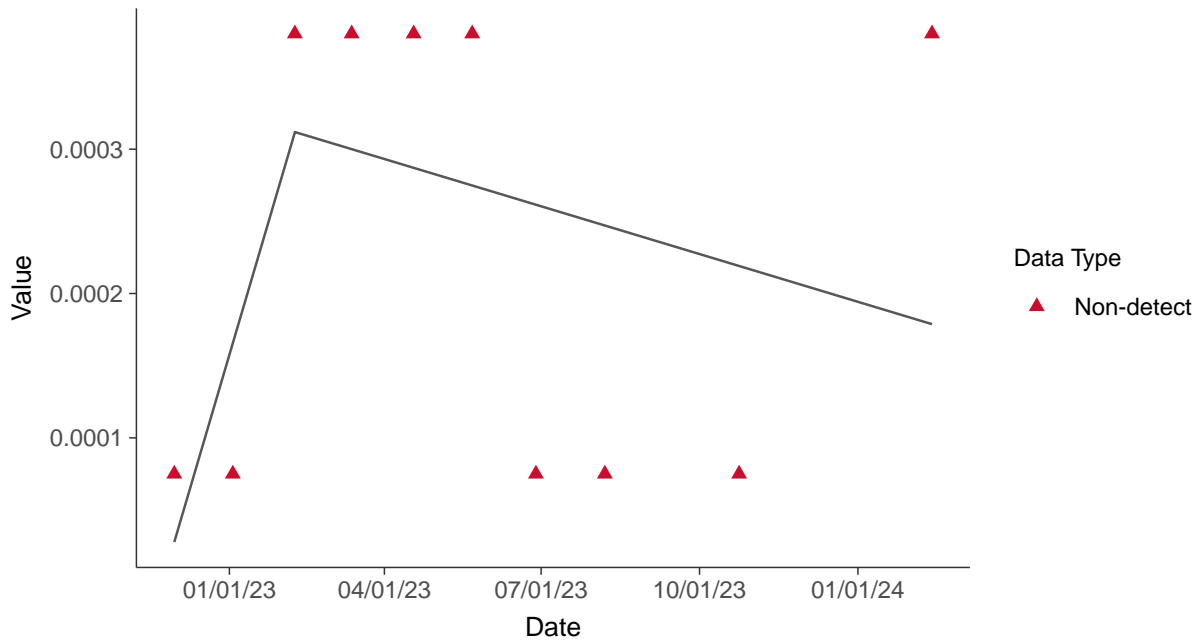
Thallium, MW-19 (mg/L)





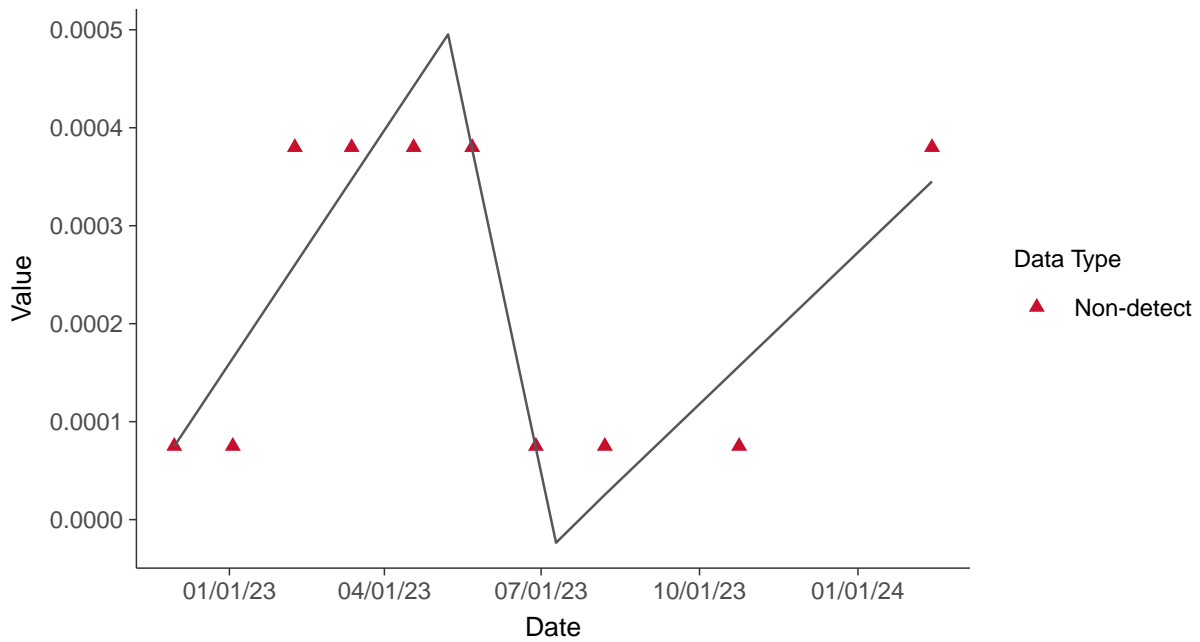
Trend Regression: Piecewise Linear-Linear

Thallium, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-19 (mg/L)



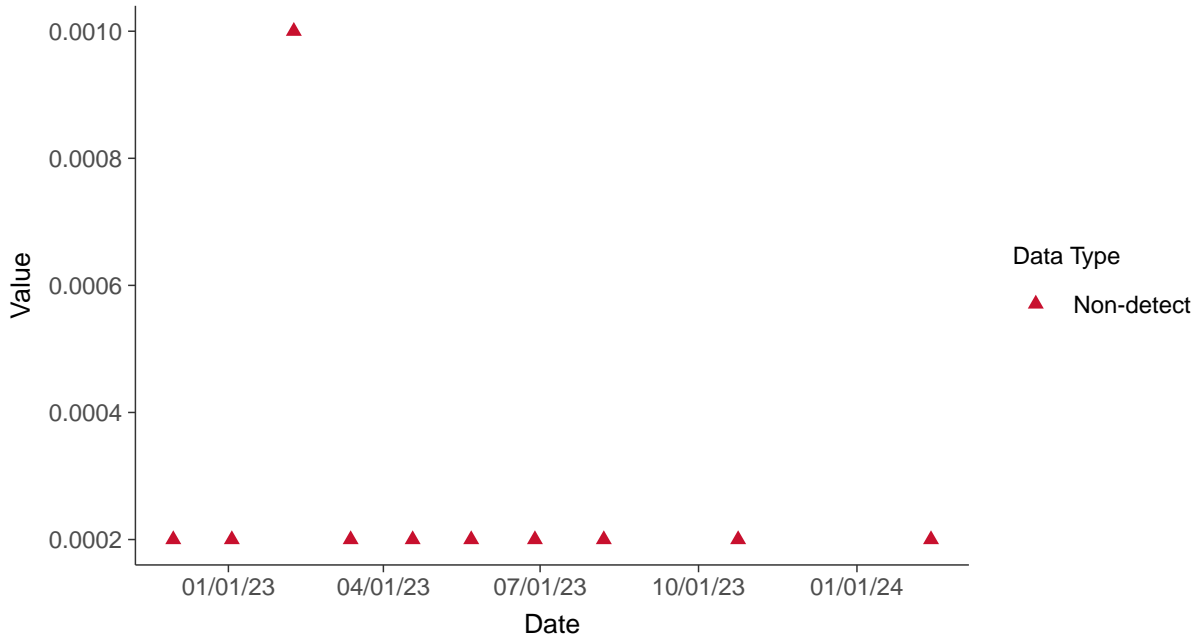


Part 115: Copper, MW-19

ID: 1_29_6_111

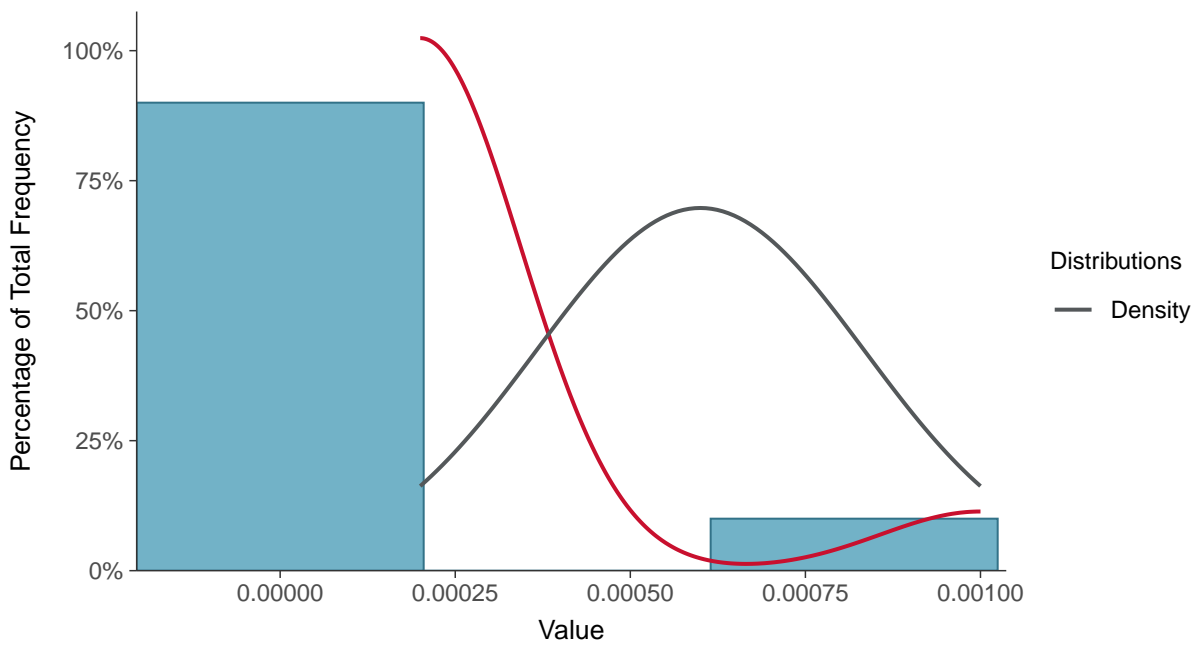
Scatter Plot

Copper, MW-19 (mg/L)



Histogram

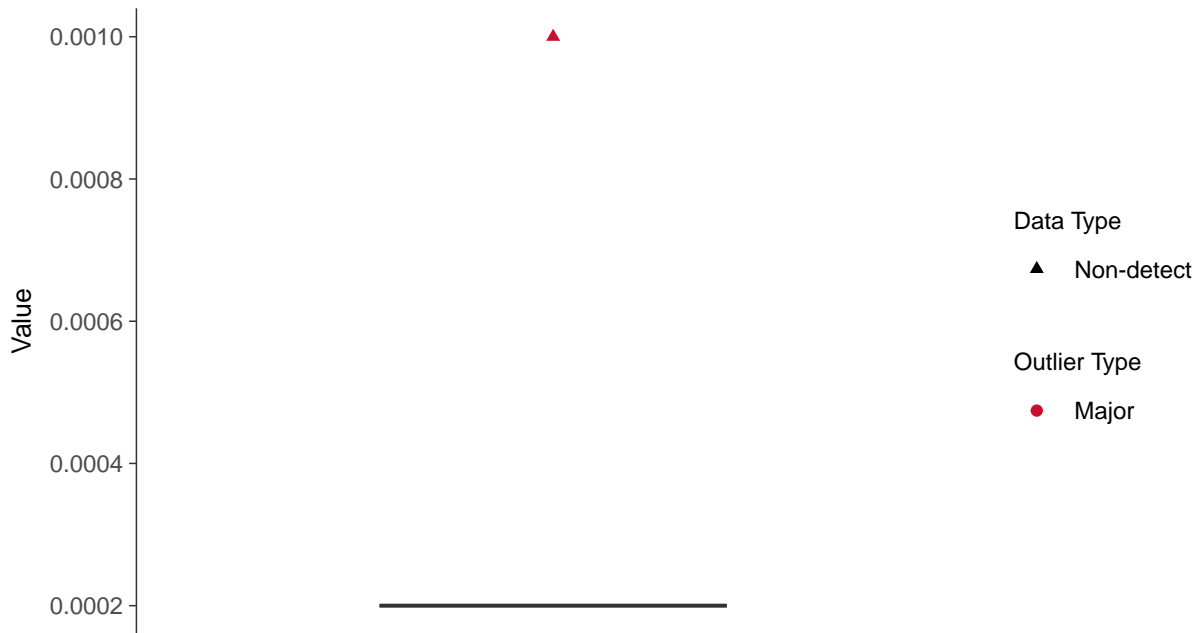
Copper, MW-19 (mg/L)





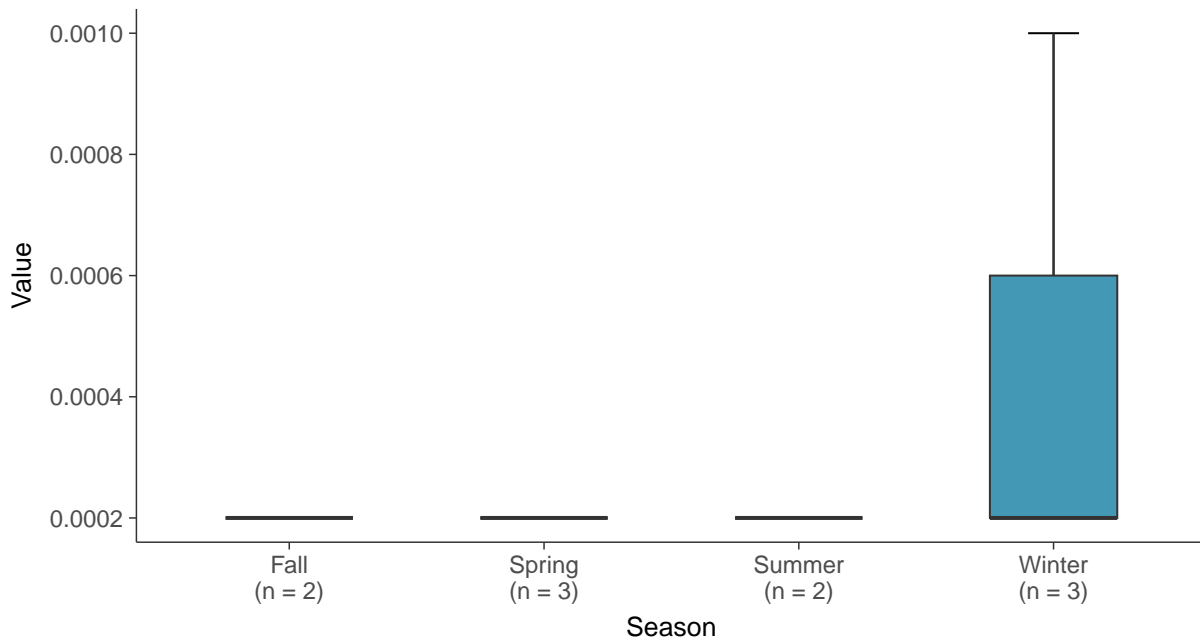
Boxplot

Copper, MW-19 (mg/L)



Boxplot by Season

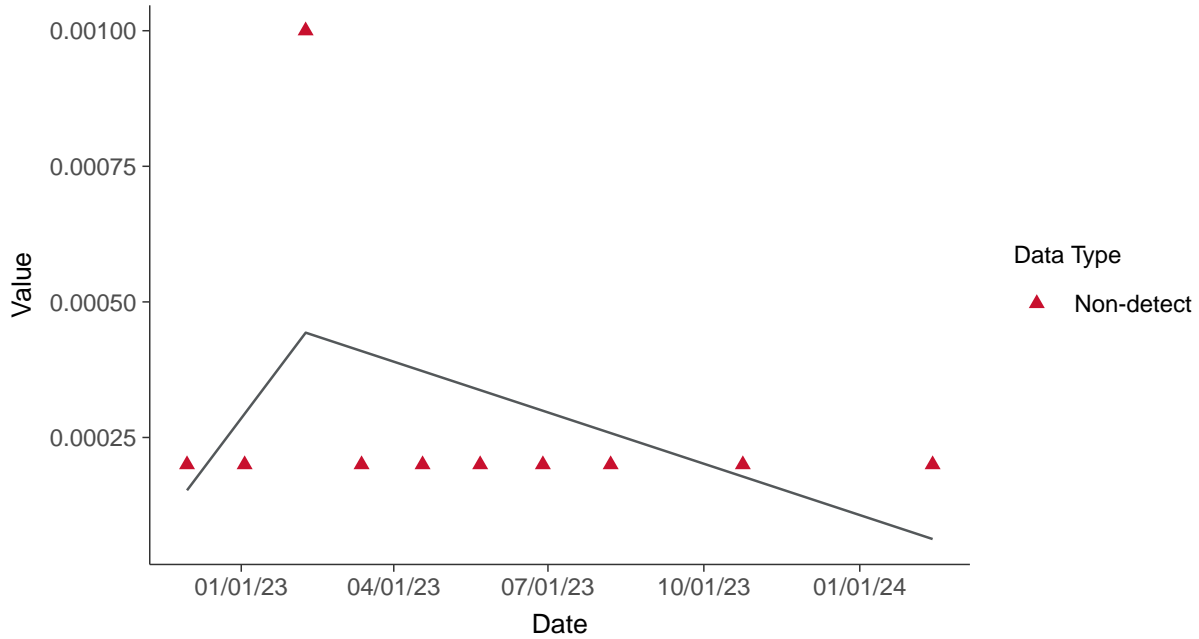
Copper, MW-19 (mg/L)





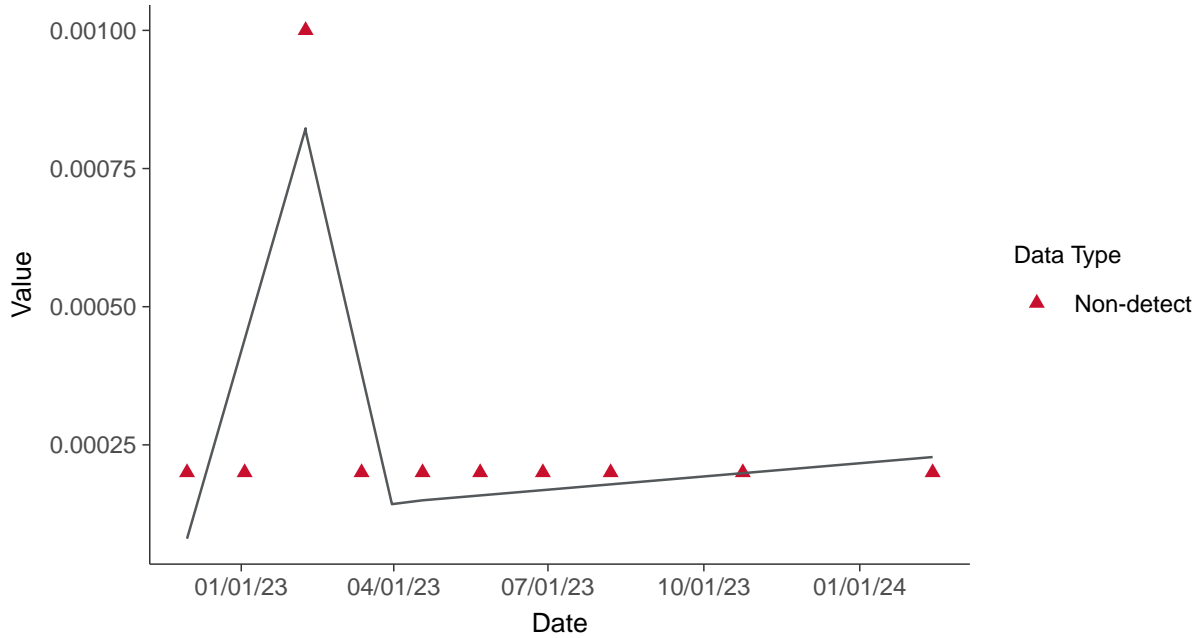
Trend Regression: Piecewise Linear-Linear

Copper, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-19 (mg/L)



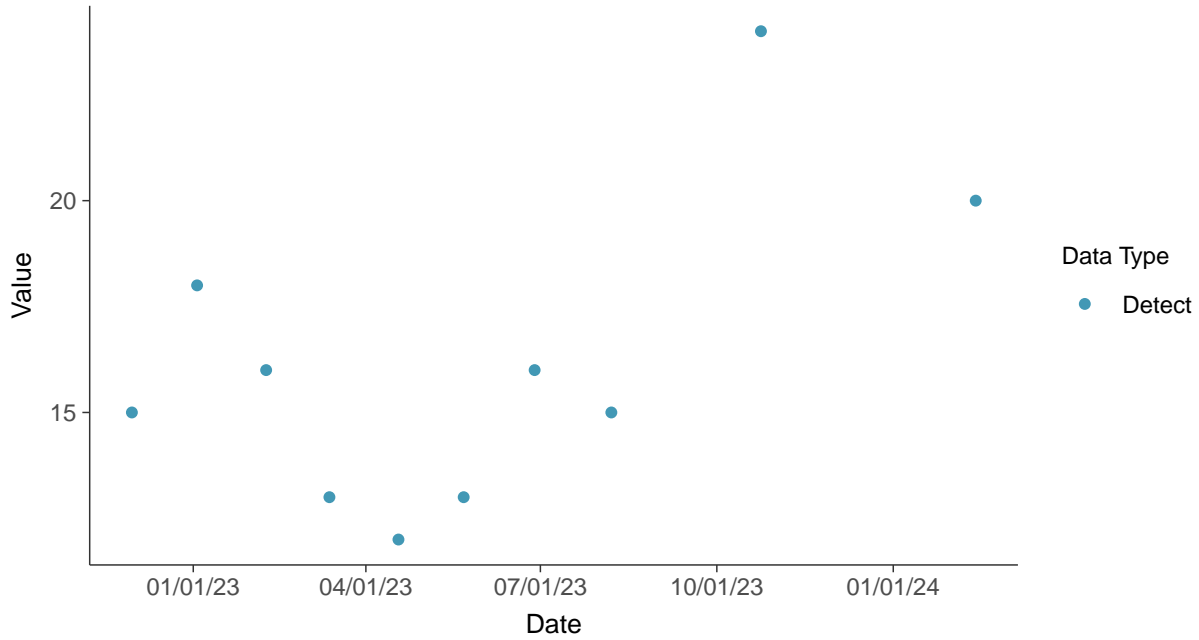


Part 115: Iron, MW-19

ID: 1_29_6_114

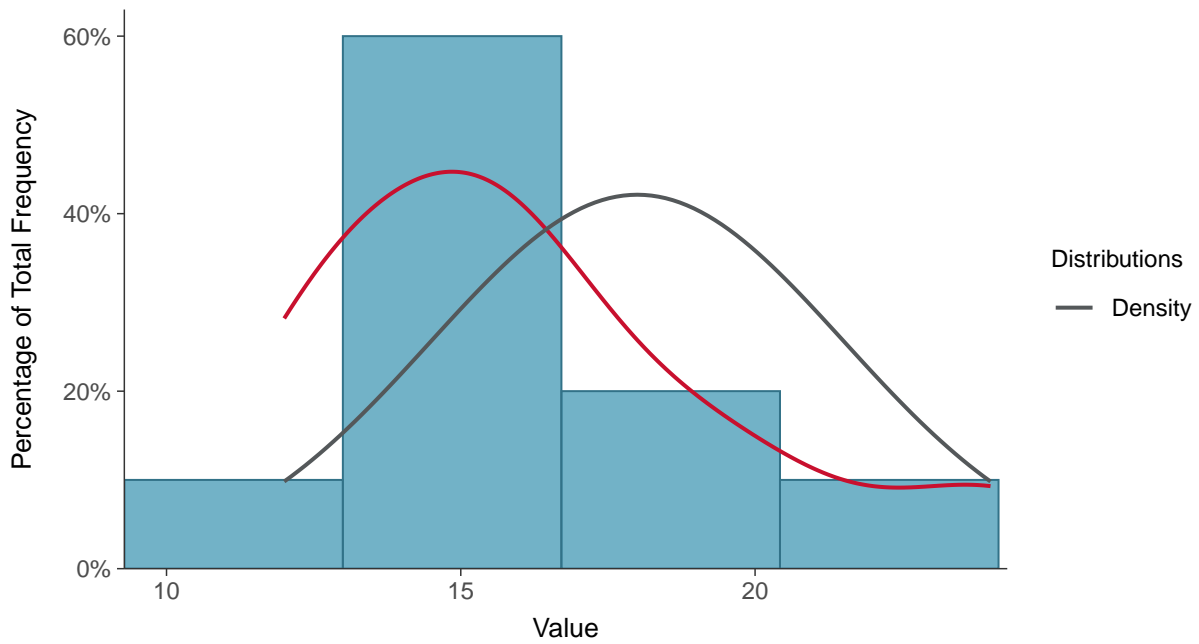
Scatter Plot

Iron, MW-19 (mg/L)



Histogram

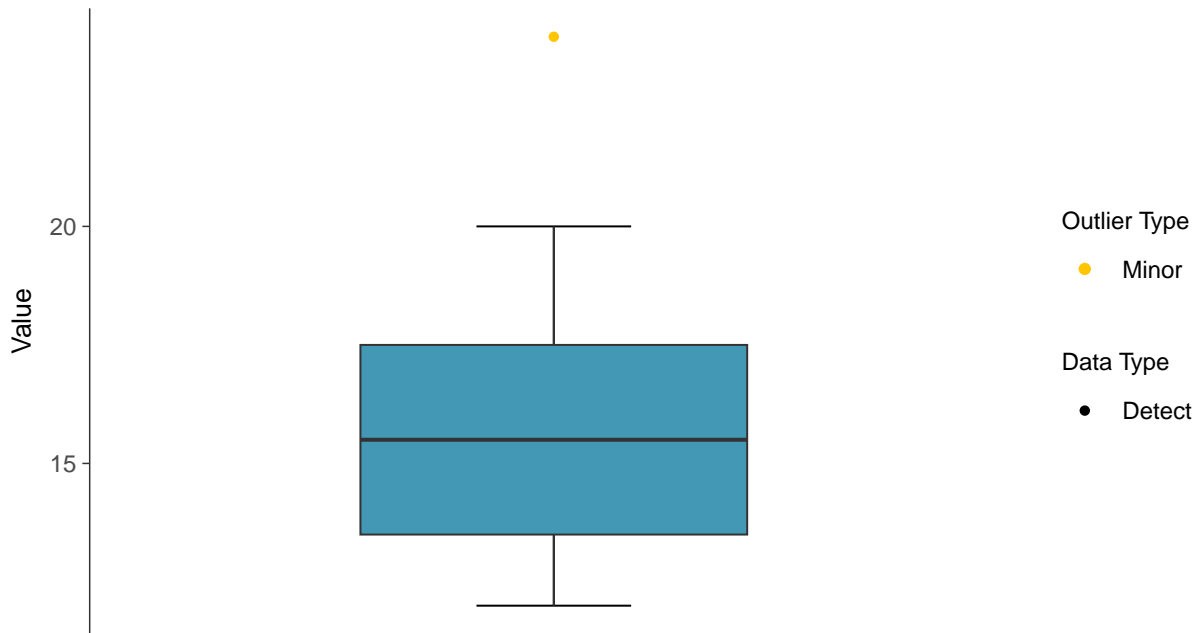
Iron, MW-19 (mg/L)





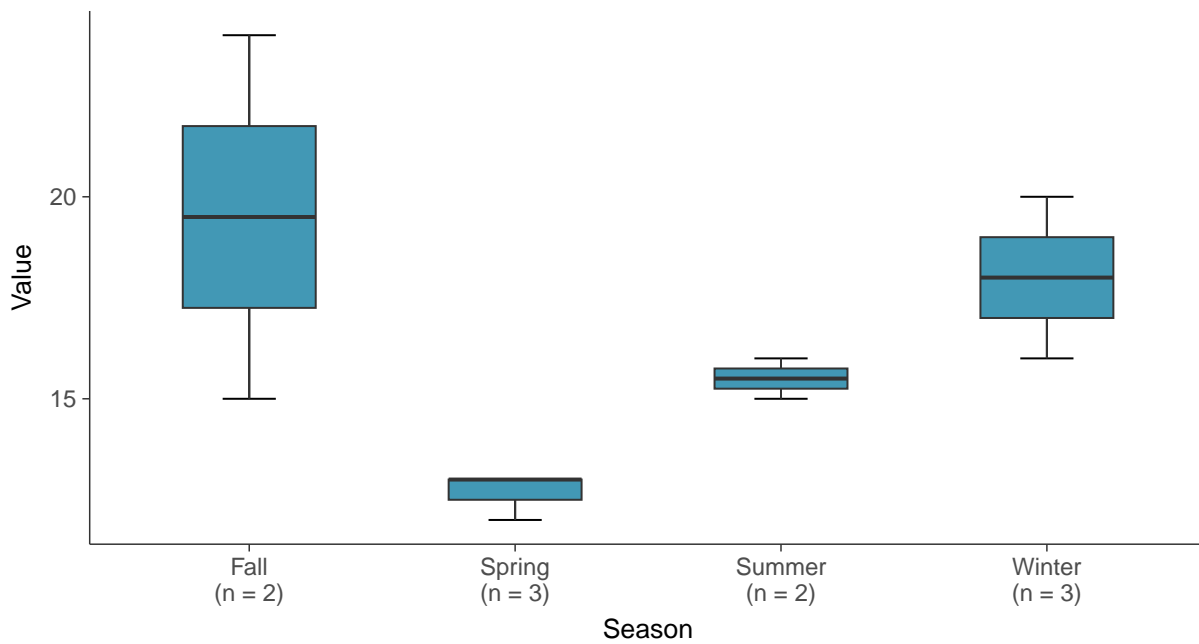
Boxplot

Iron, MW-19 (mg/L)



Boxplot by Season

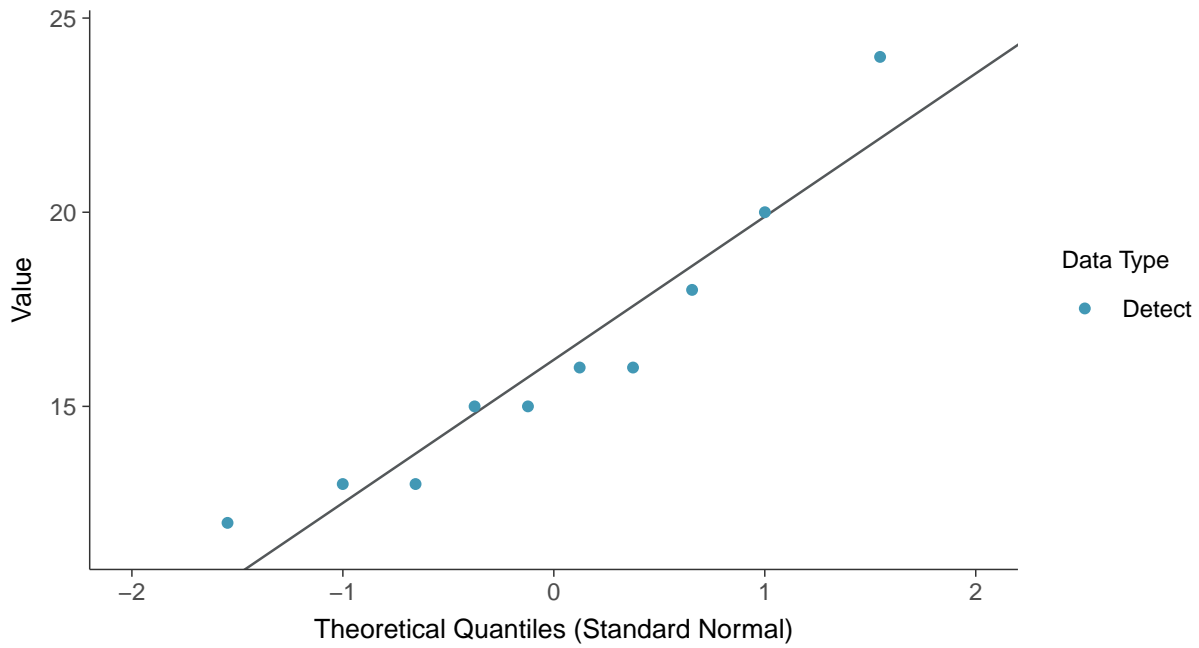
Iron, MW-19 (mg/L)





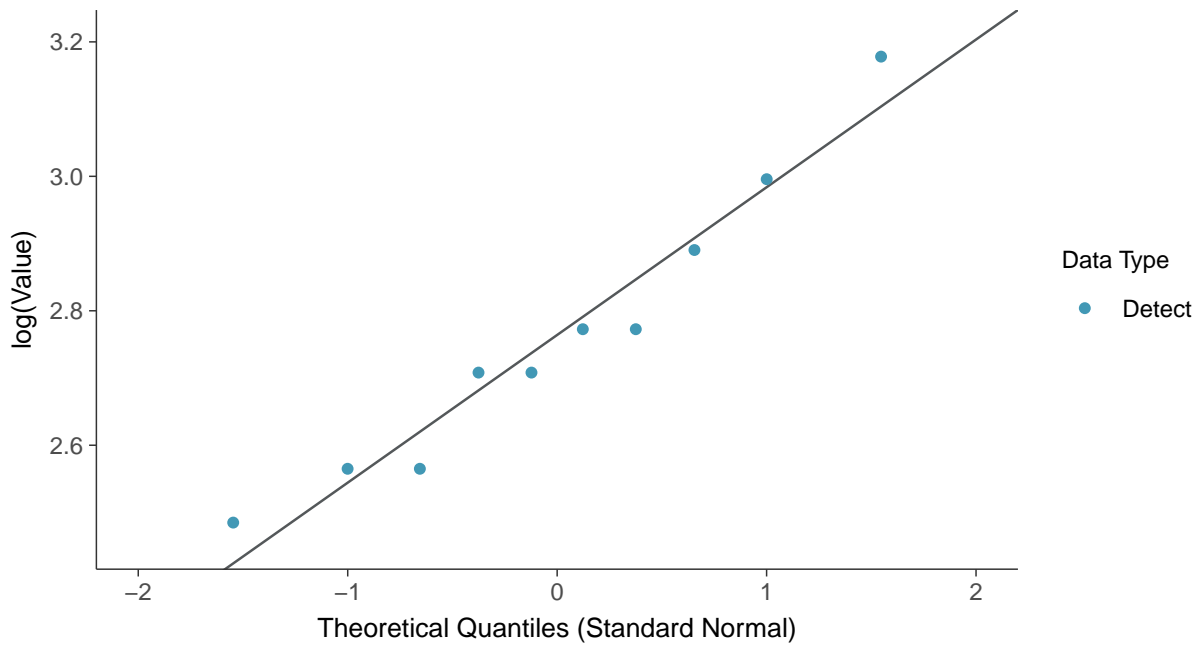
Normal Q-Q plot

Iron, MW-19 (mg/L)



Lognormal Q-Q plot

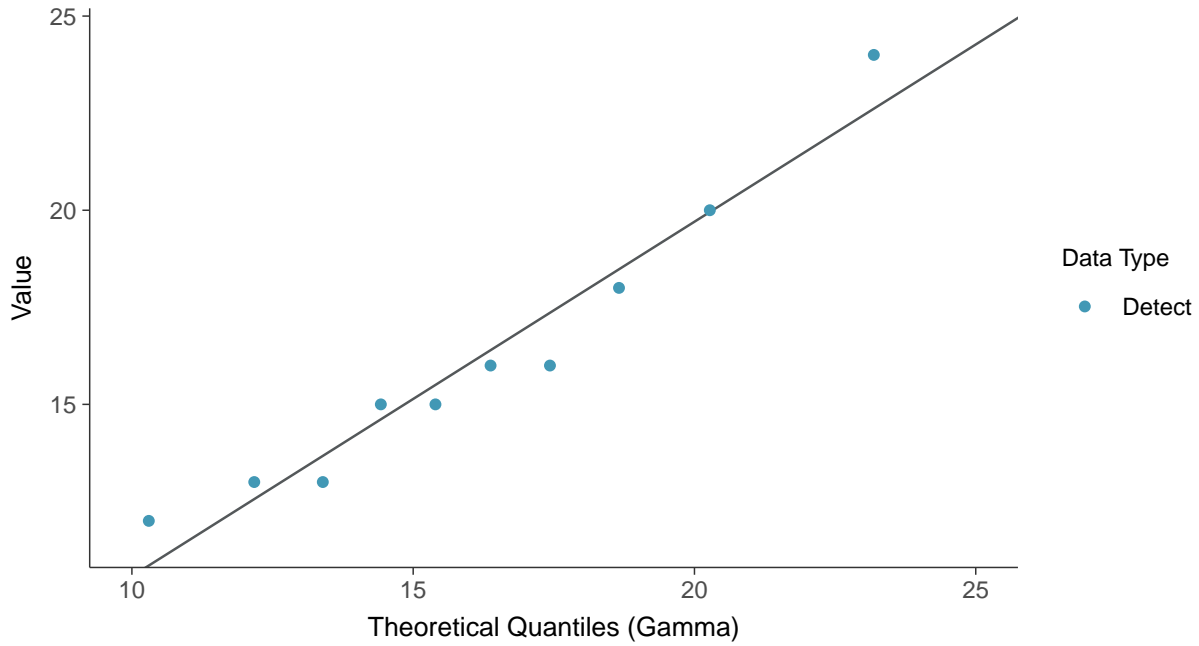
Iron, MW-19 (mg/L)





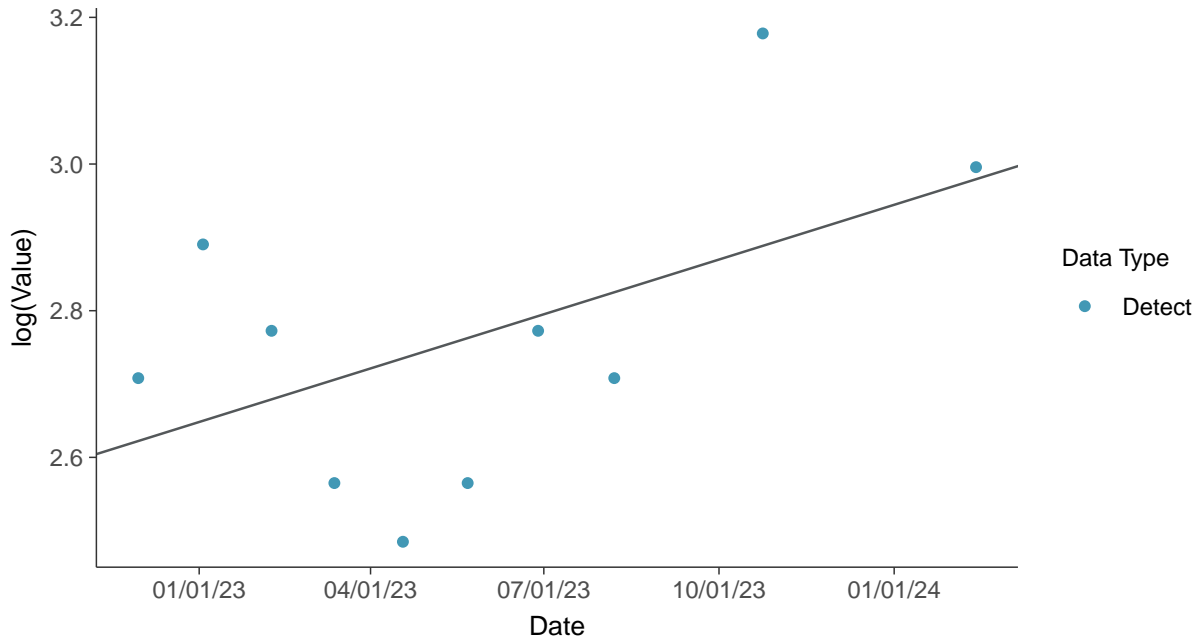
Gamma Q-Q plot

Iron, MW-19 (mg/L)



Trend Regression: Lognormal MLE

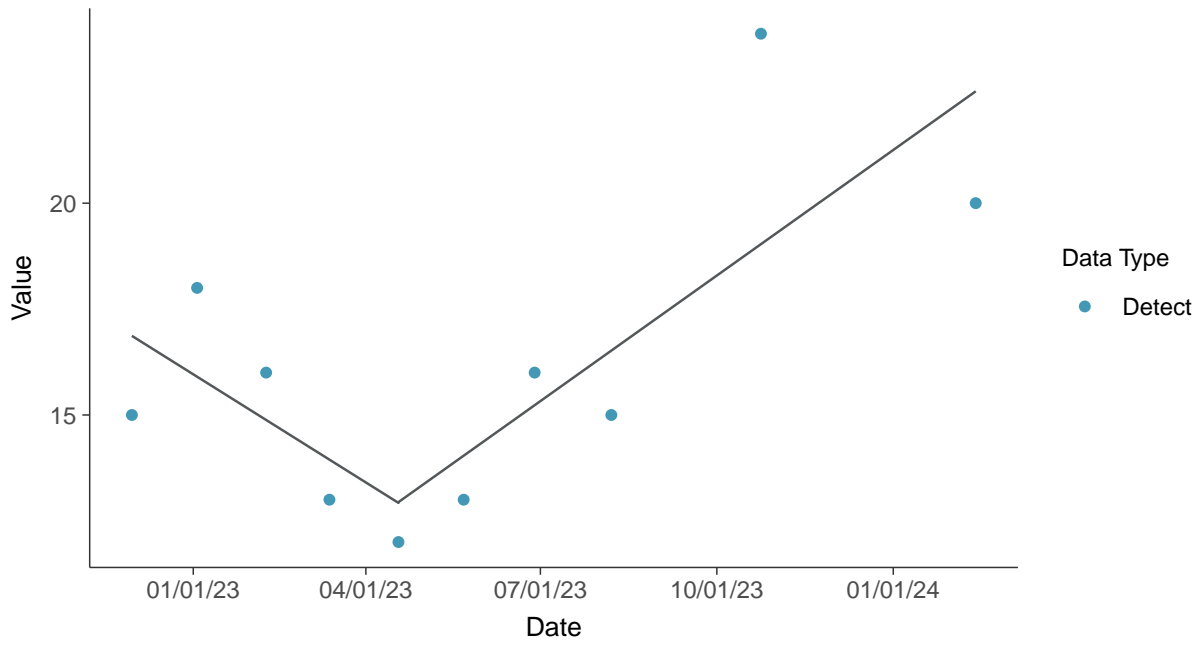
Iron, MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear

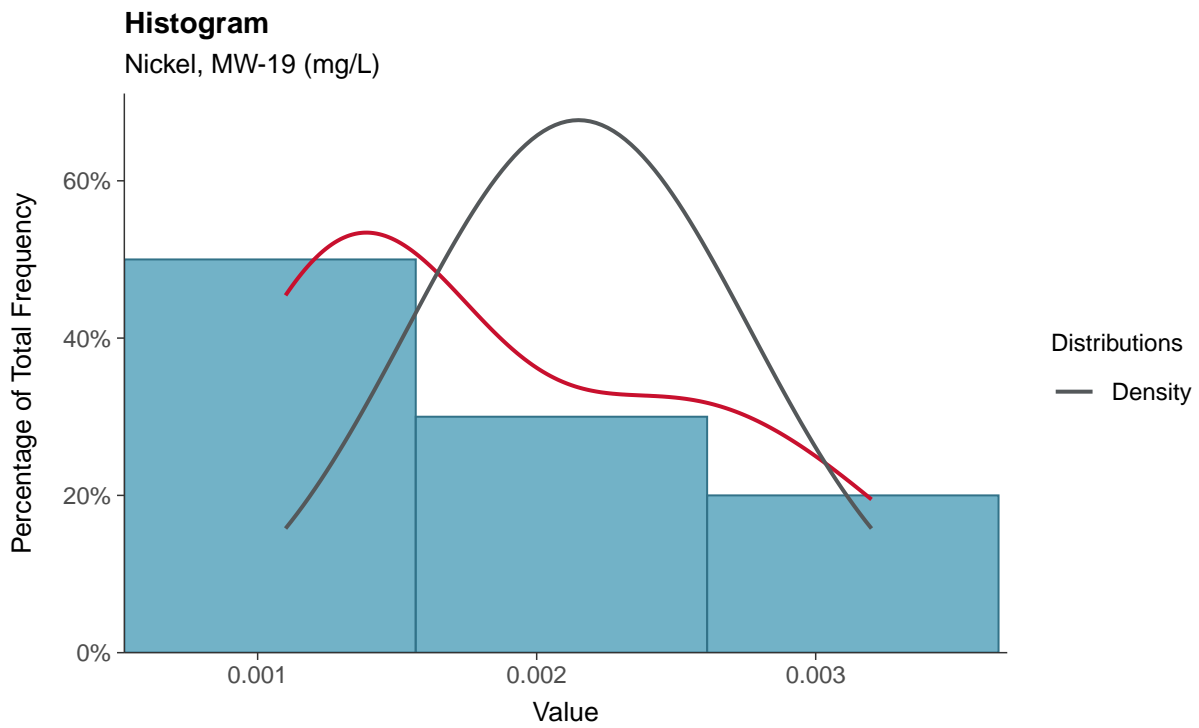
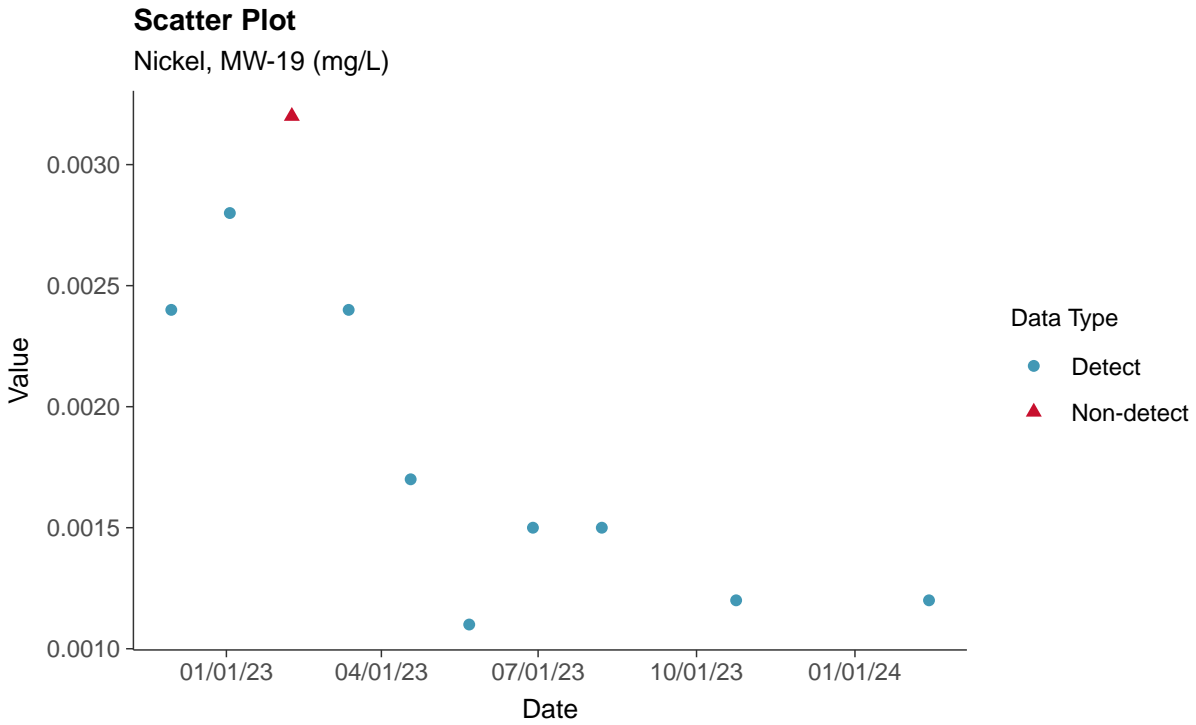
Iron, MW-19 (mg/L)





Part 115: Nickel, MW-19

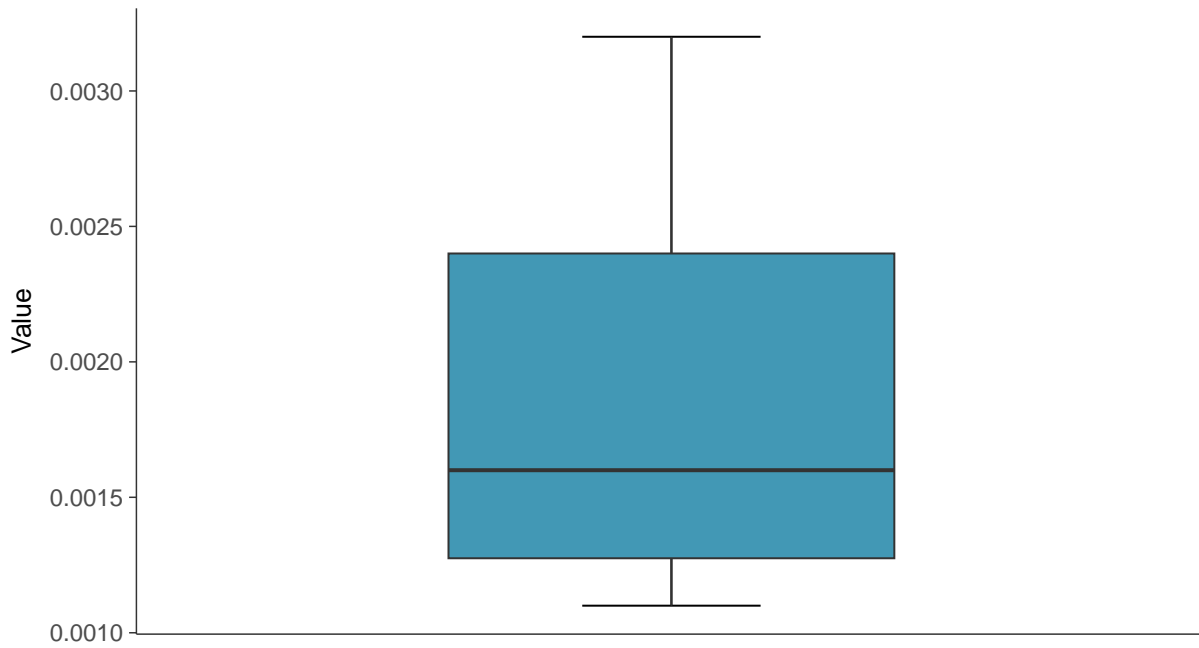
ID: 1_29_6_119





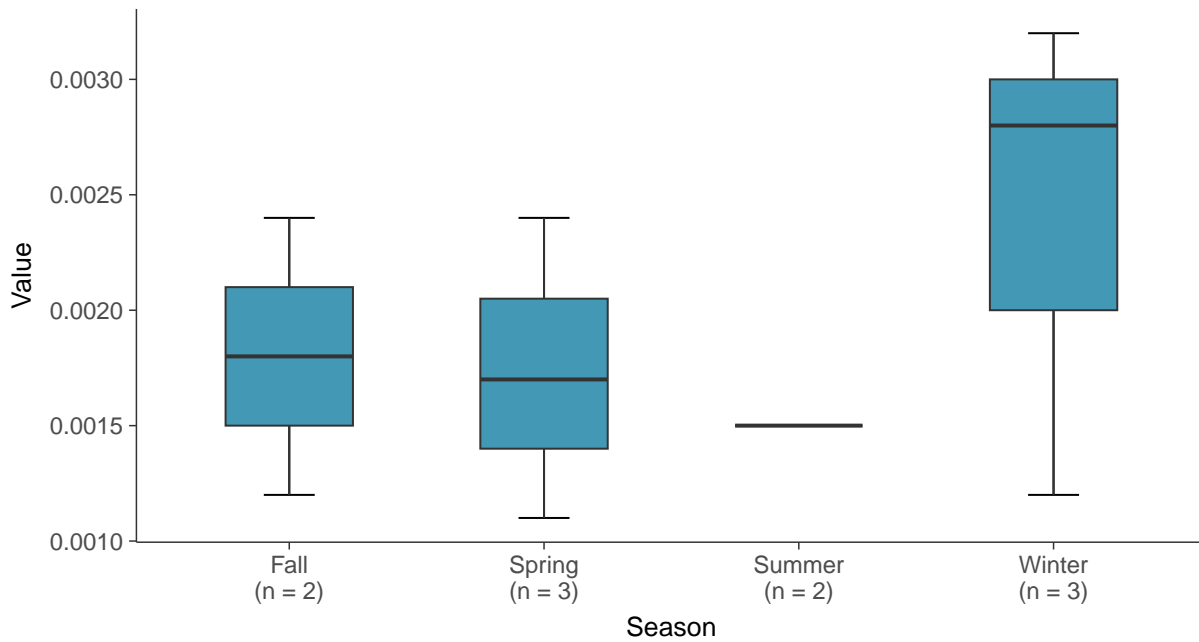
Boxplot

Nickel, MW-19 (mg/L)



Boxplot by Season

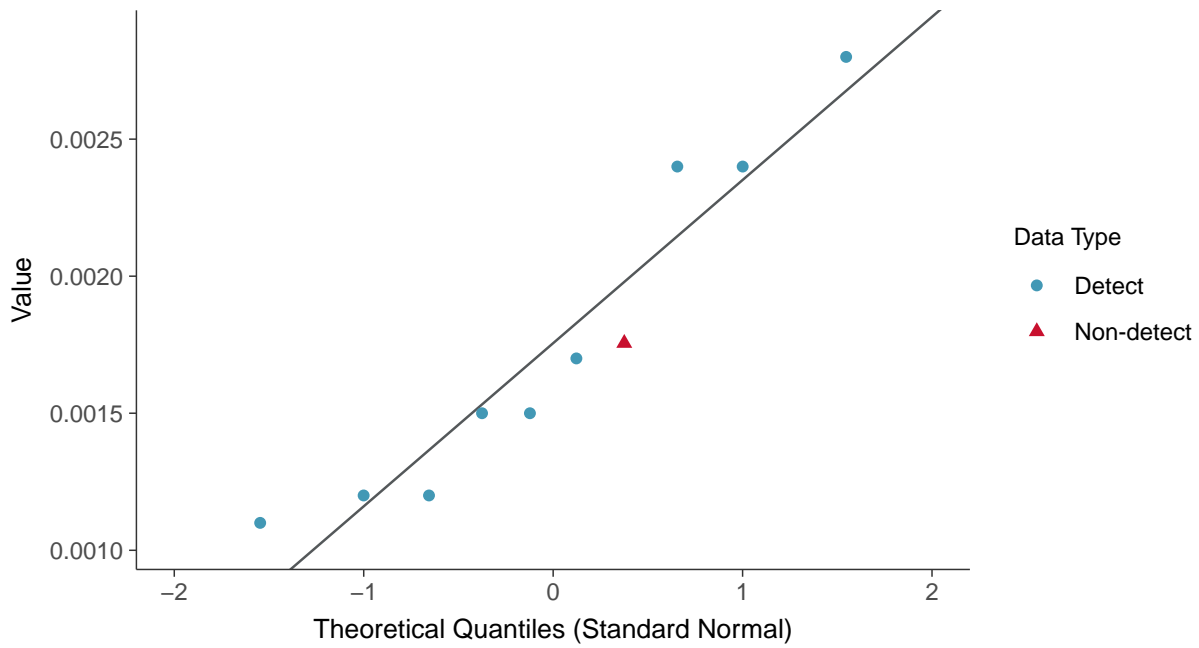
Nickel, MW-19 (mg/L)





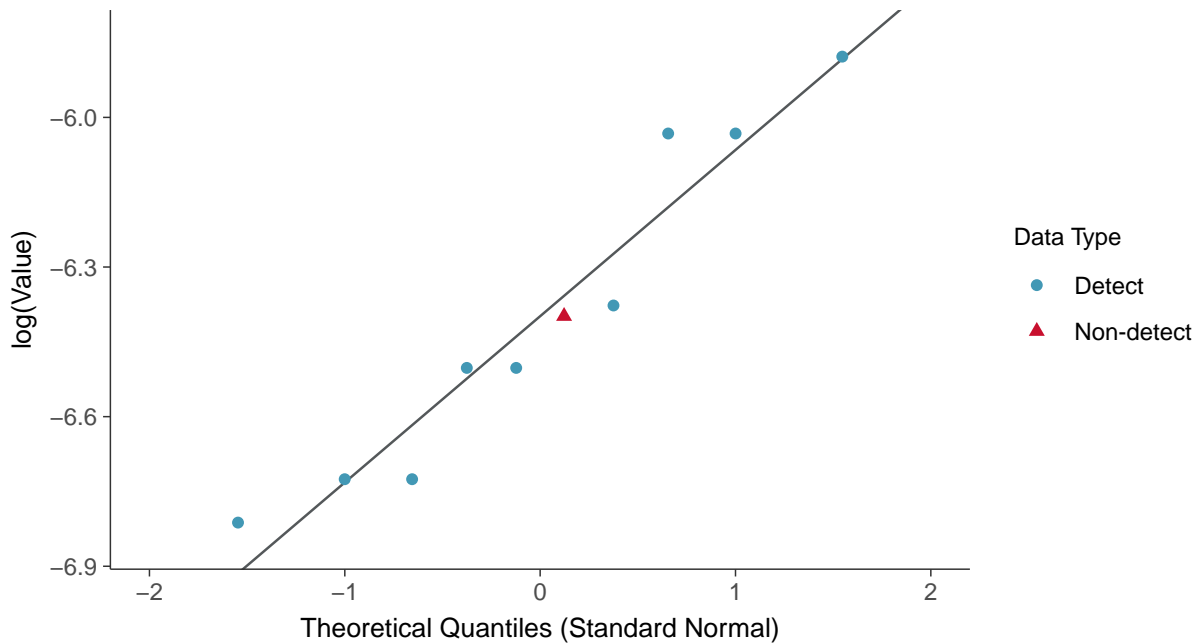
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-19 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

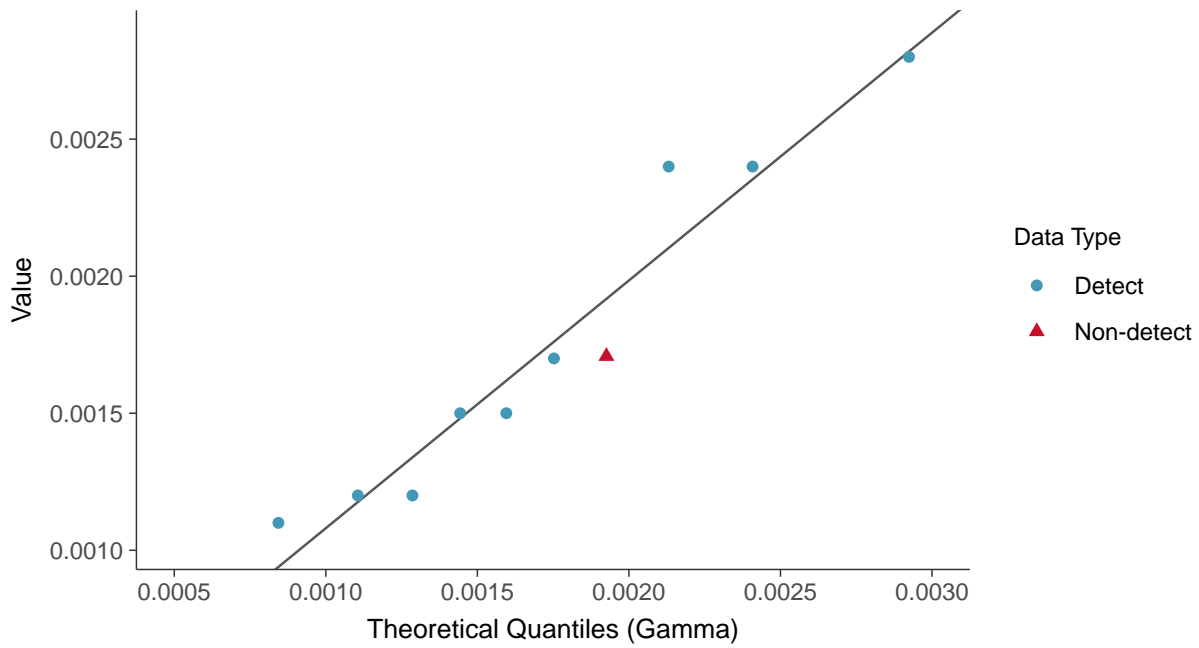
Nickel, MW-19 (mg/L)





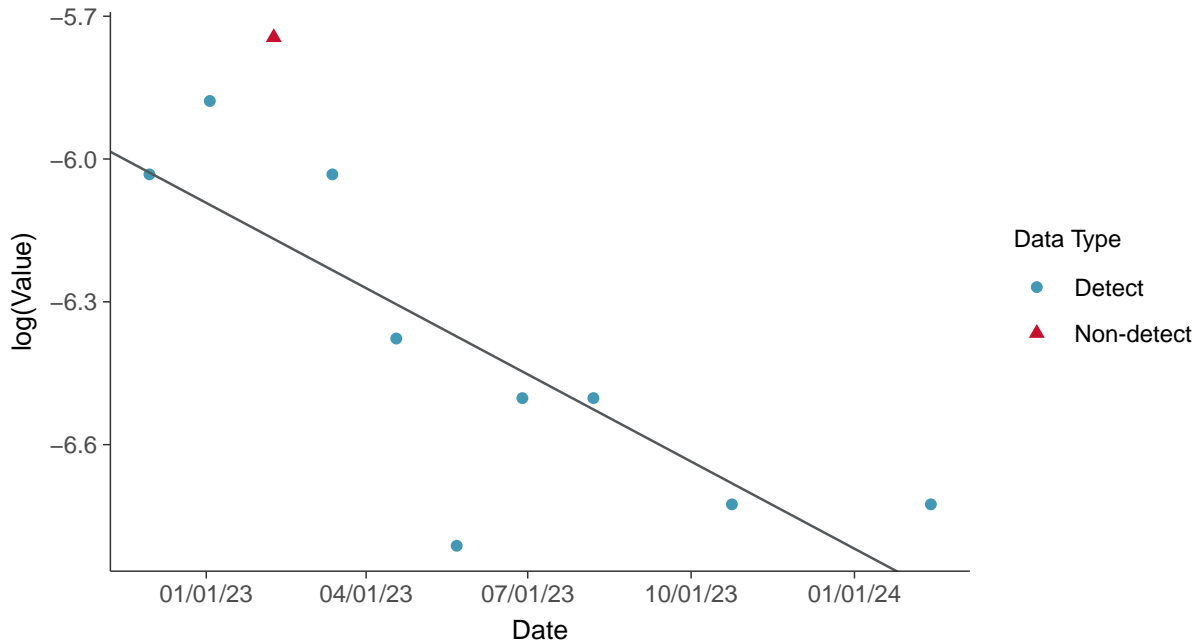
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-19 (mg/L)



Trend Regression: Lognormal MLE

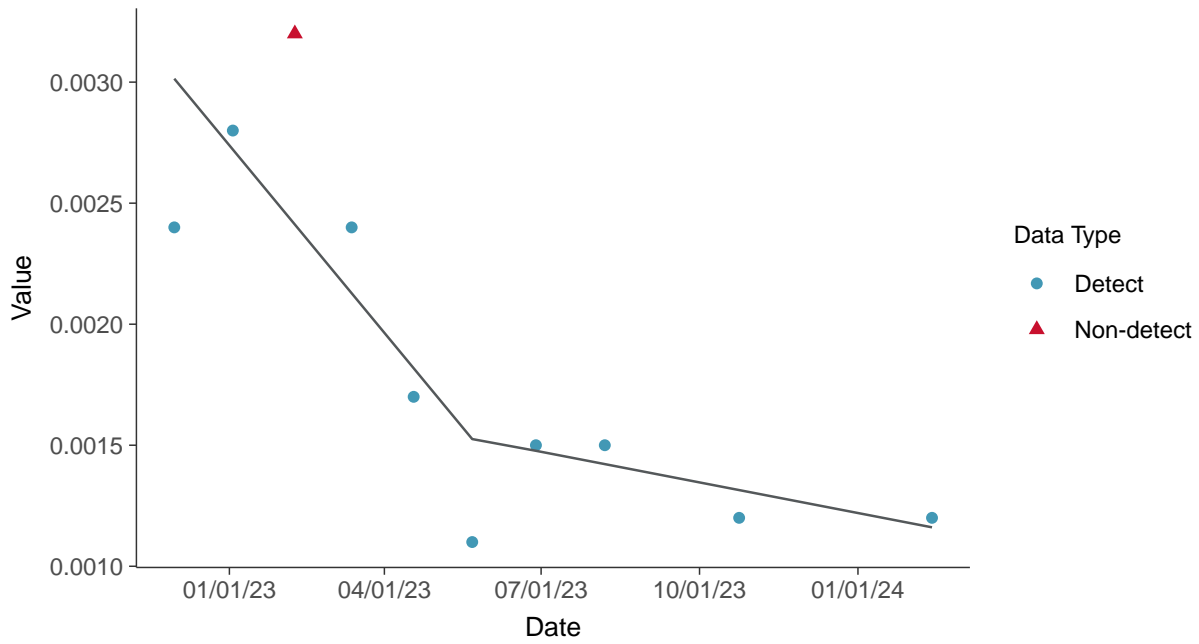
Nickel, MW-19 (mg/L)





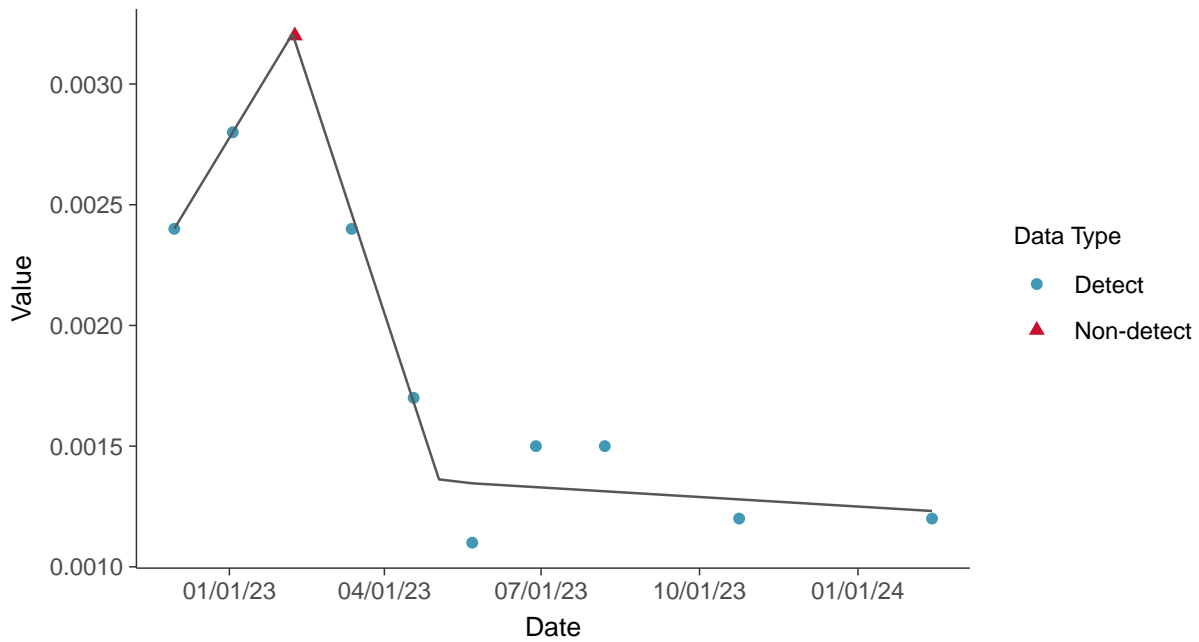
Trend Regression: Piecewise Linear-Linear

Nickel, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

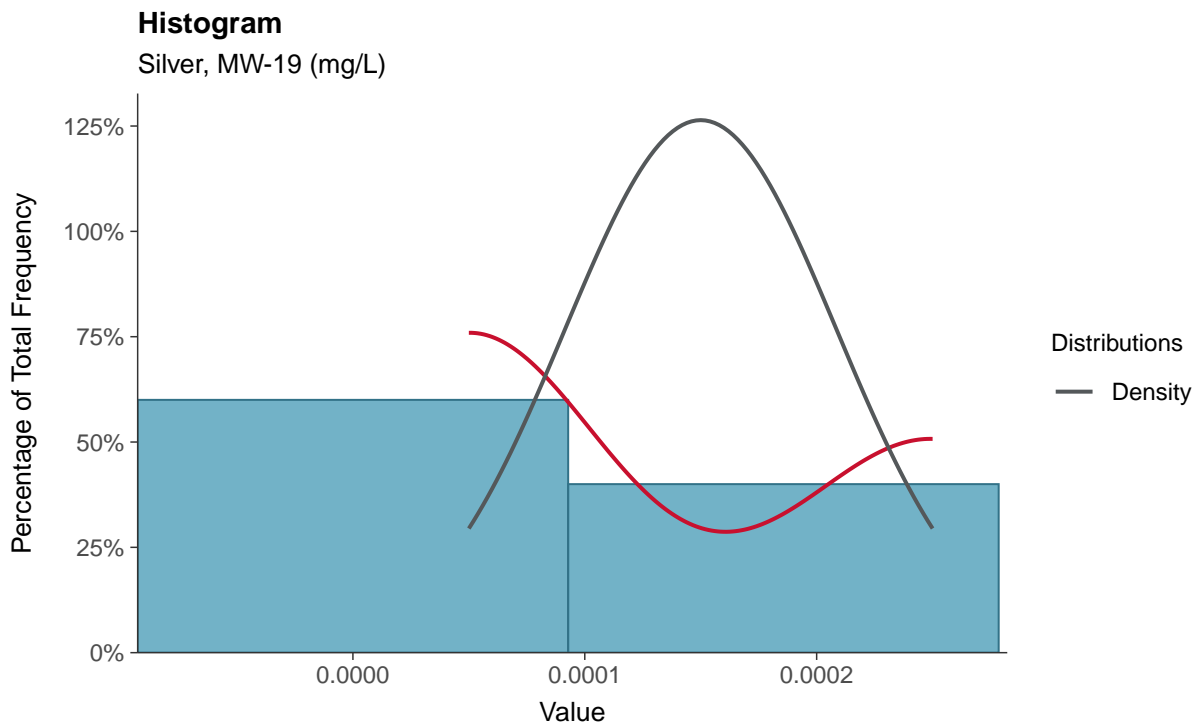
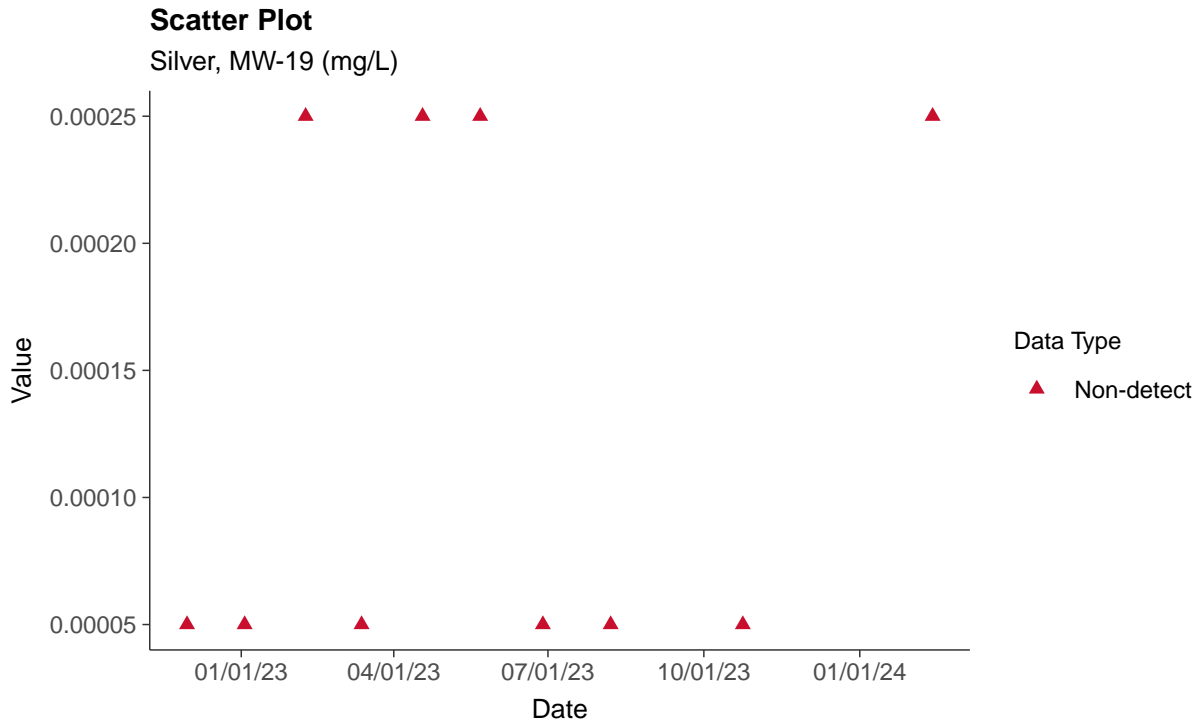
Nickel, MW-19 (mg/L)





Part 115: Silver, MW-19

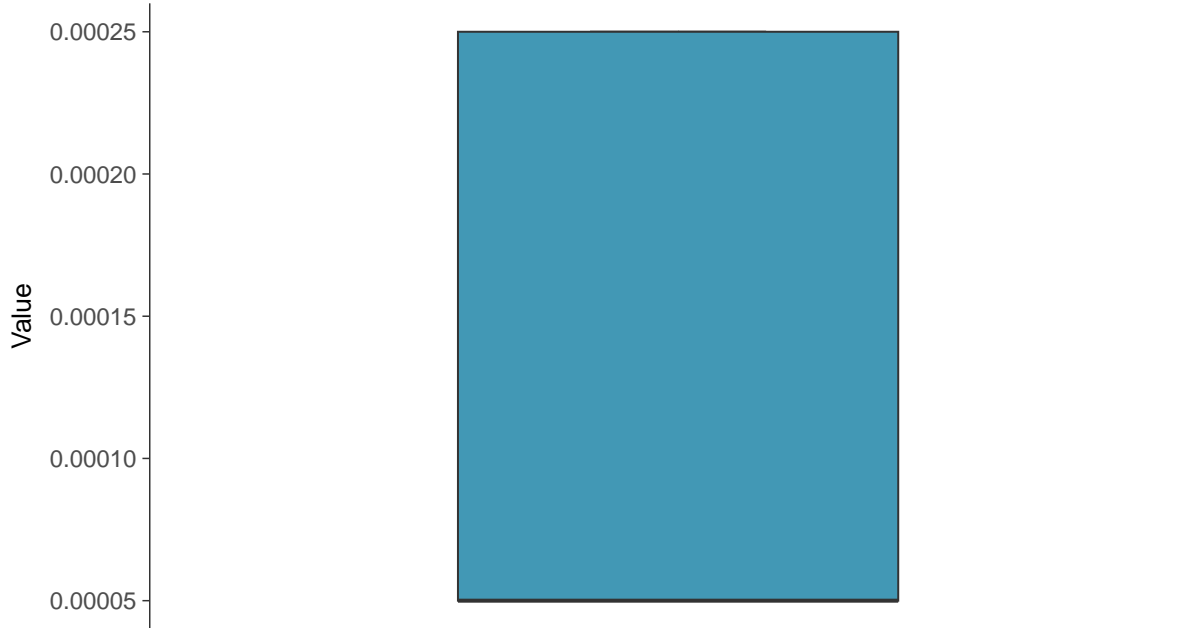
ID: 1_29_6_123





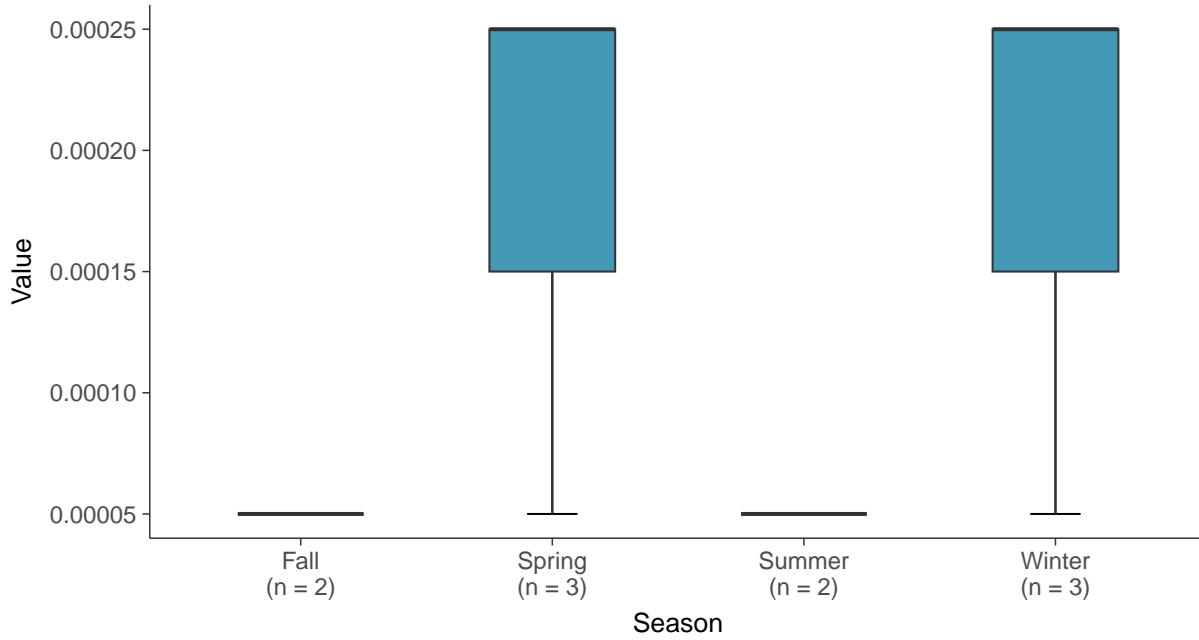
Boxplot

Silver, MW-19 (mg/L)



Boxplot by Season

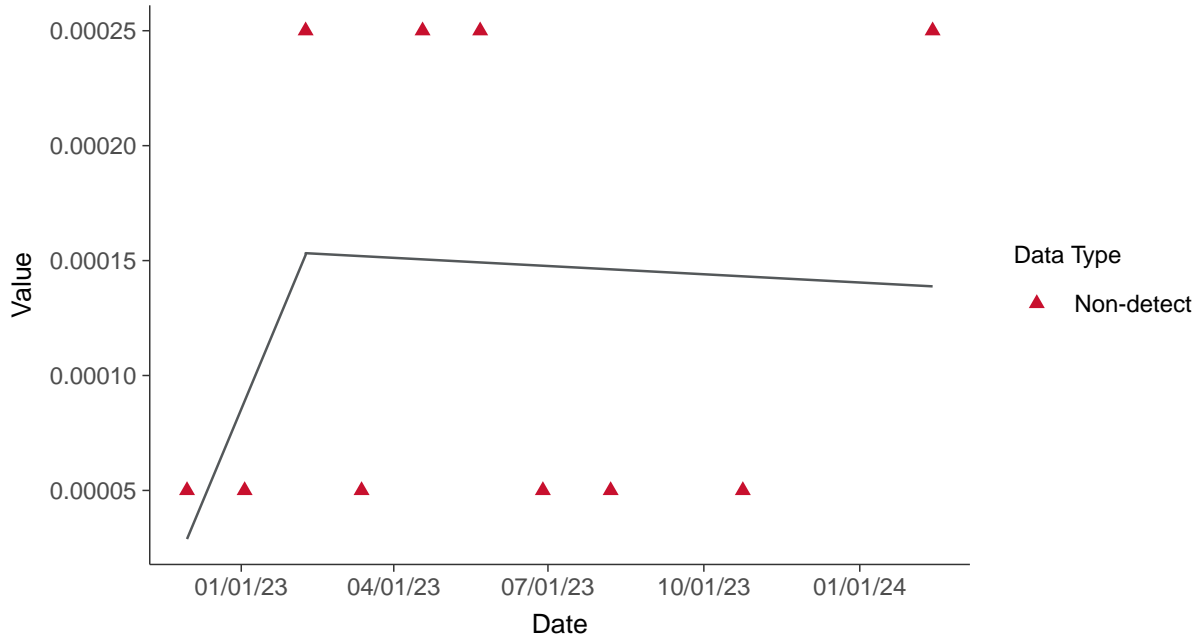
Silver, MW-19 (mg/L)





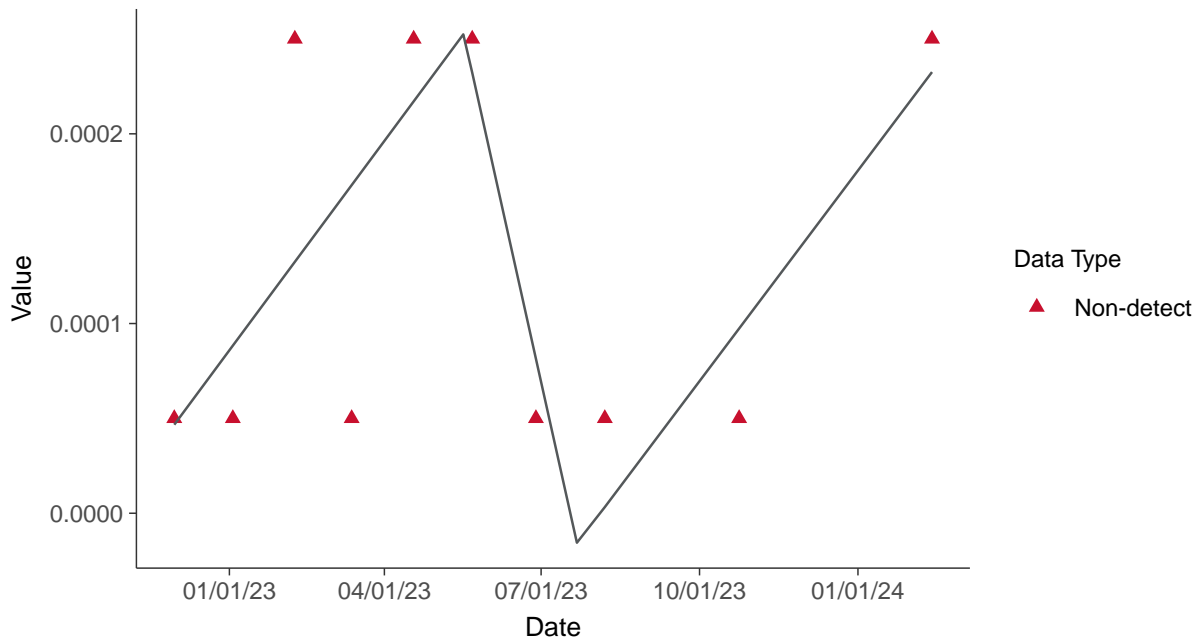
Trend Regression: Piecewise Linear-Linear

Silver, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-19 (mg/L)



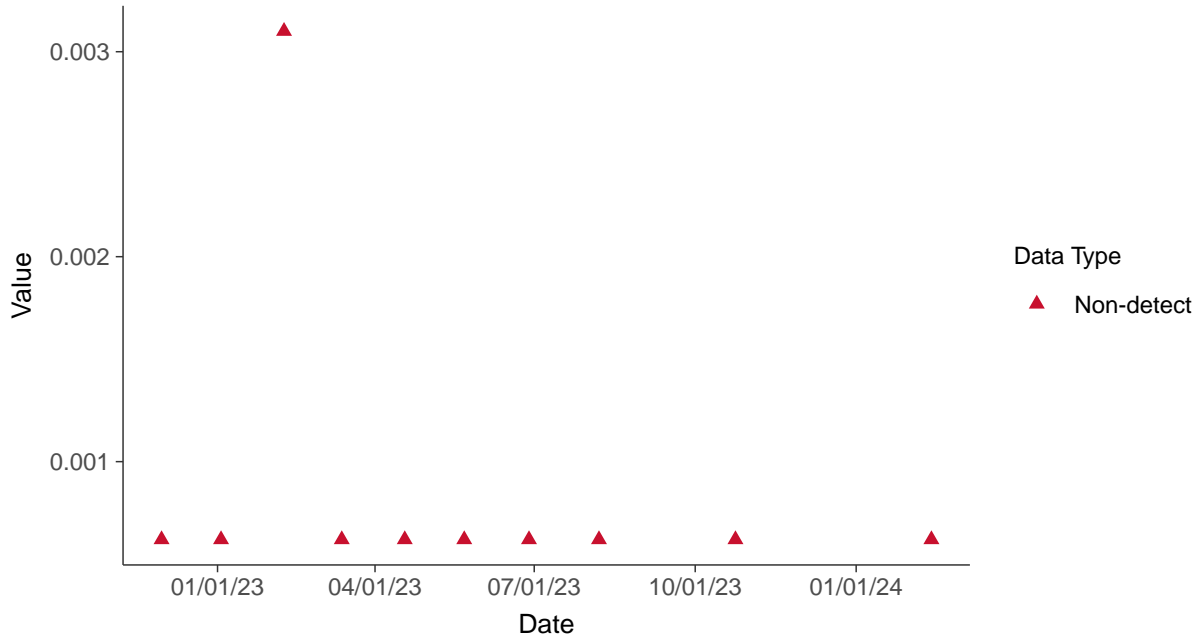


Part 115: Vanadium, MW-19

ID: 1_29_6_129

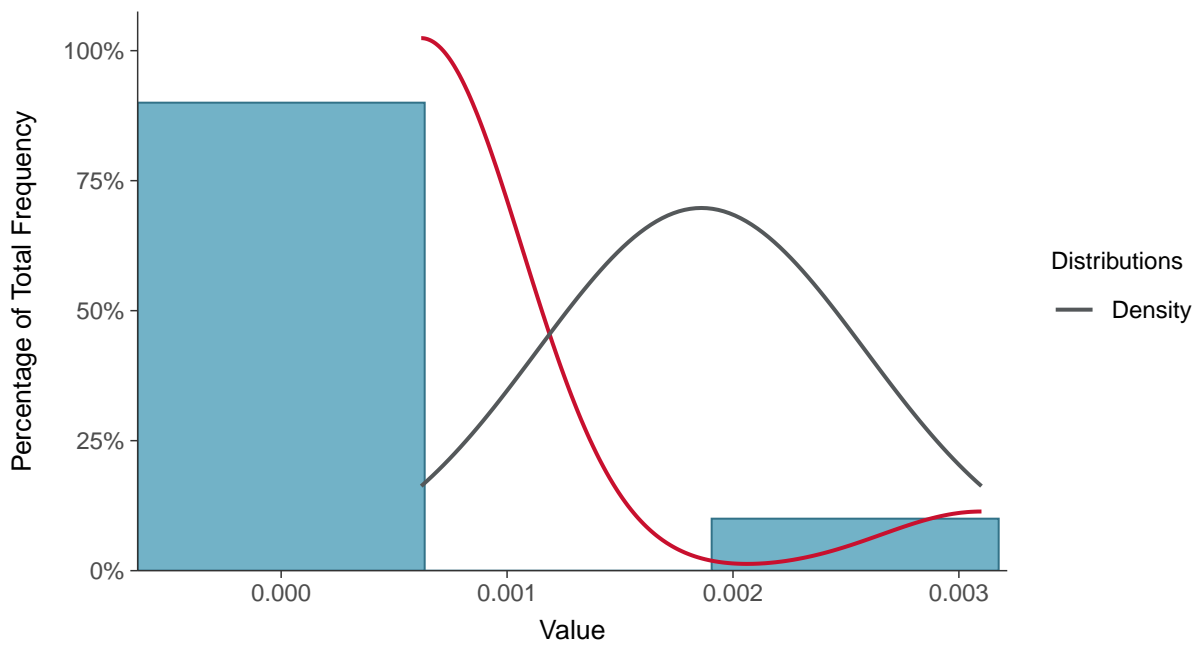
Scatter Plot

Vanadium, MW-19 (mg/L)



Histogram

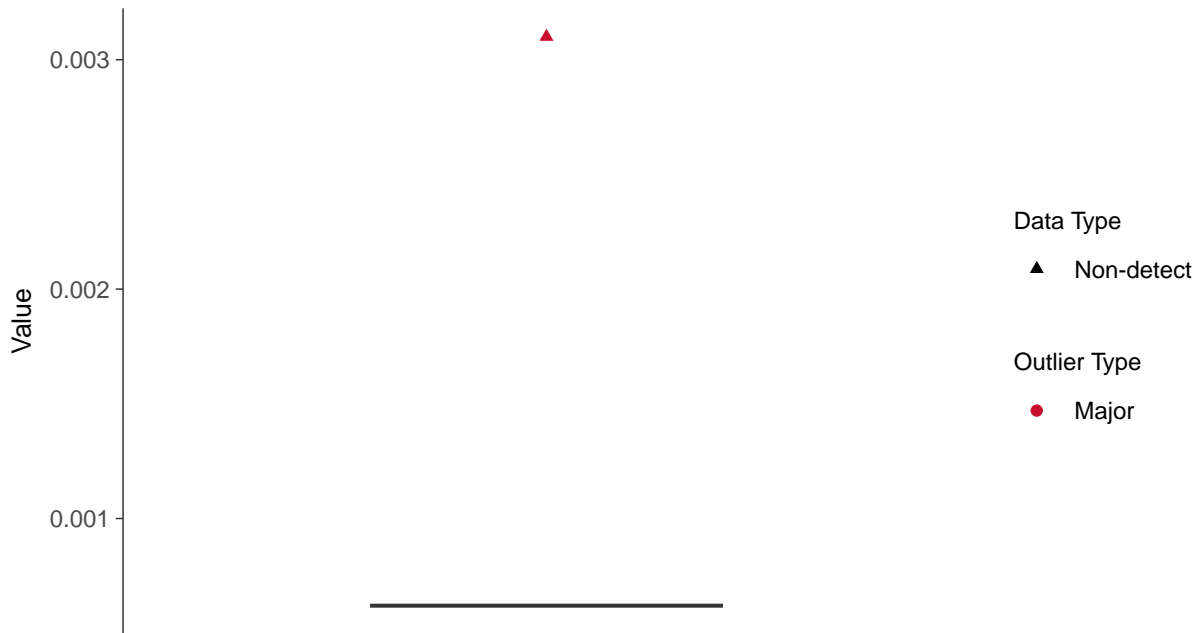
Vanadium, MW-19 (mg/L)





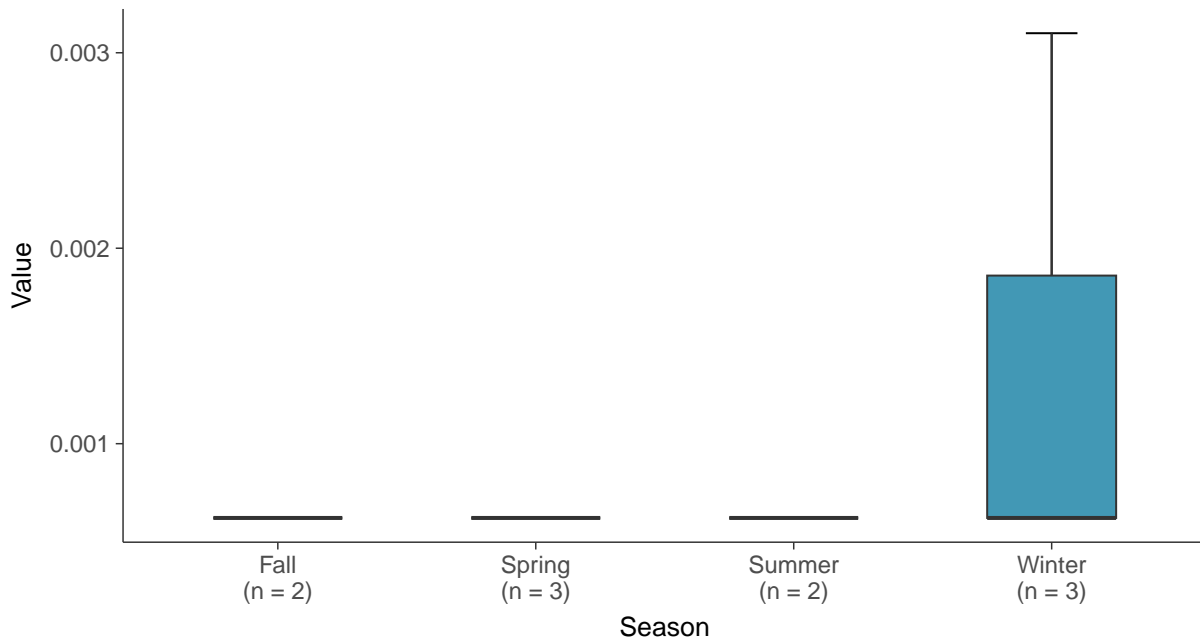
Boxplot

Vanadium, MW-19 (mg/L)



Boxplot by Season

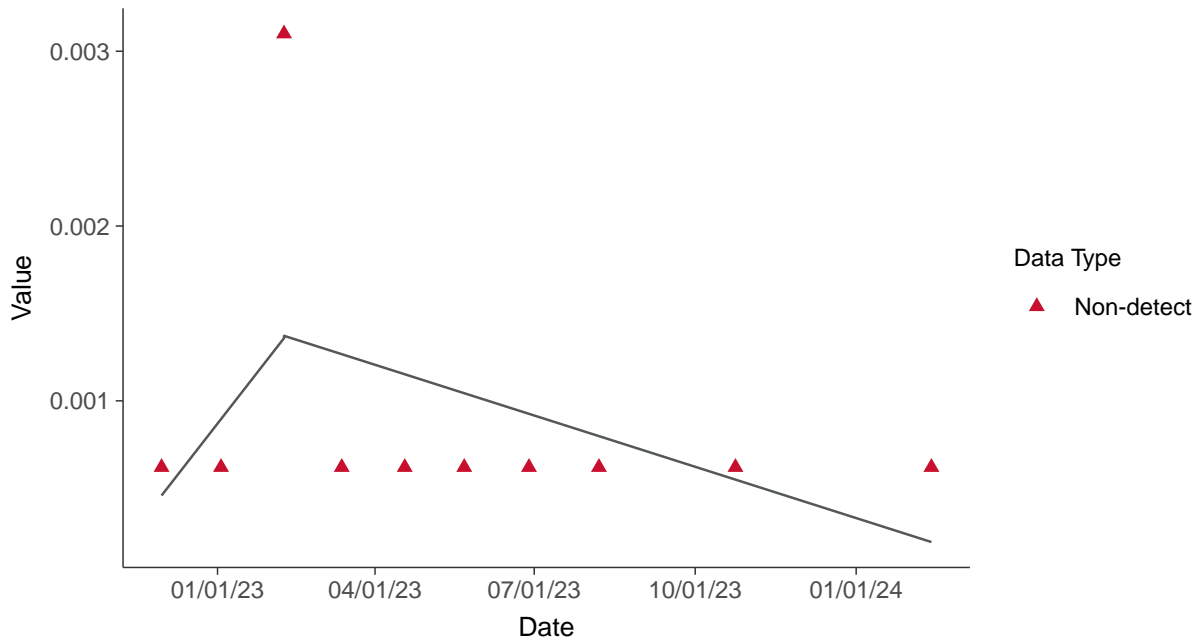
Vanadium, MW-19 (mg/L)





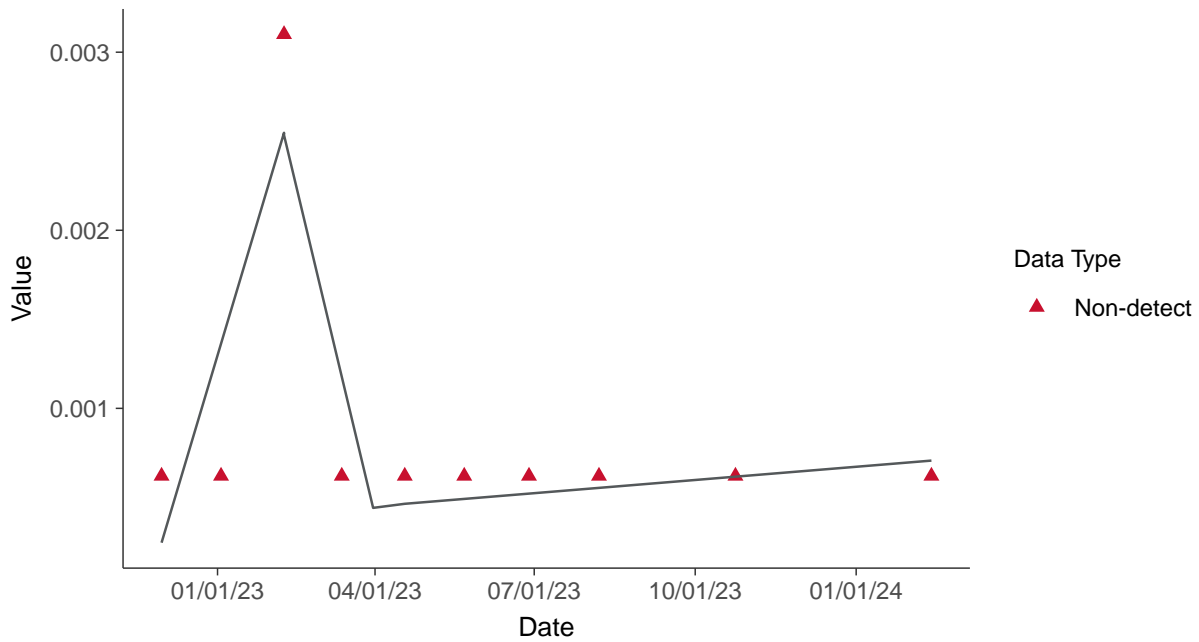
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

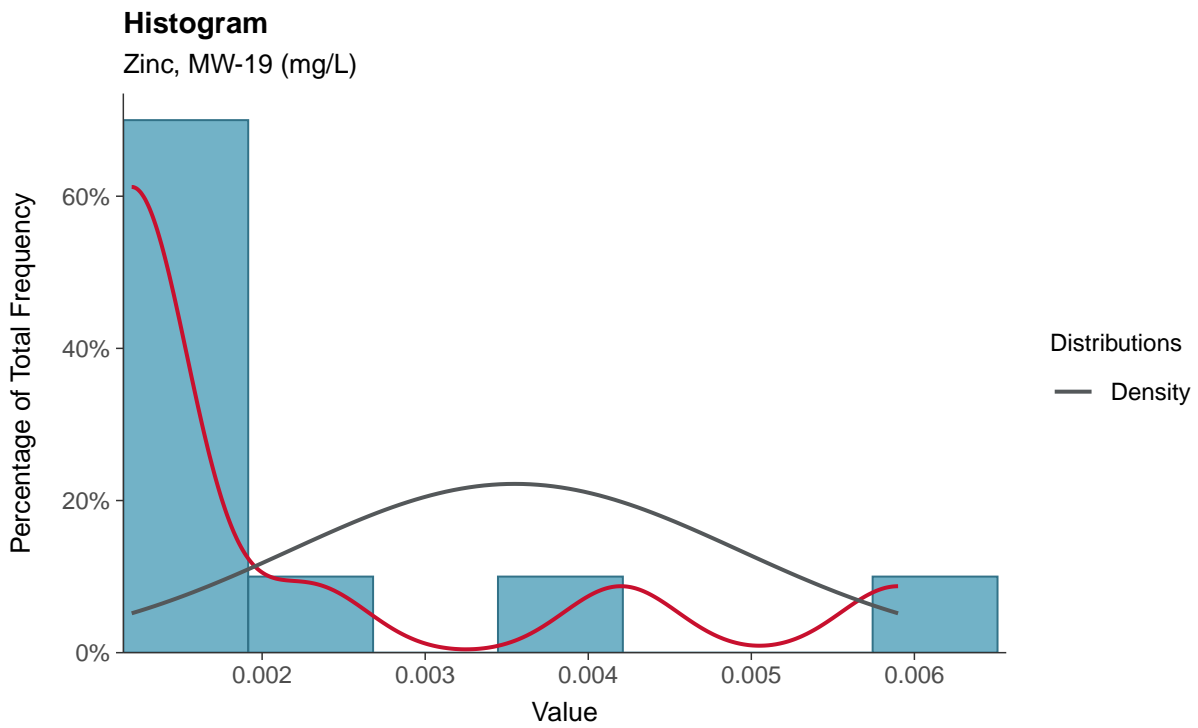
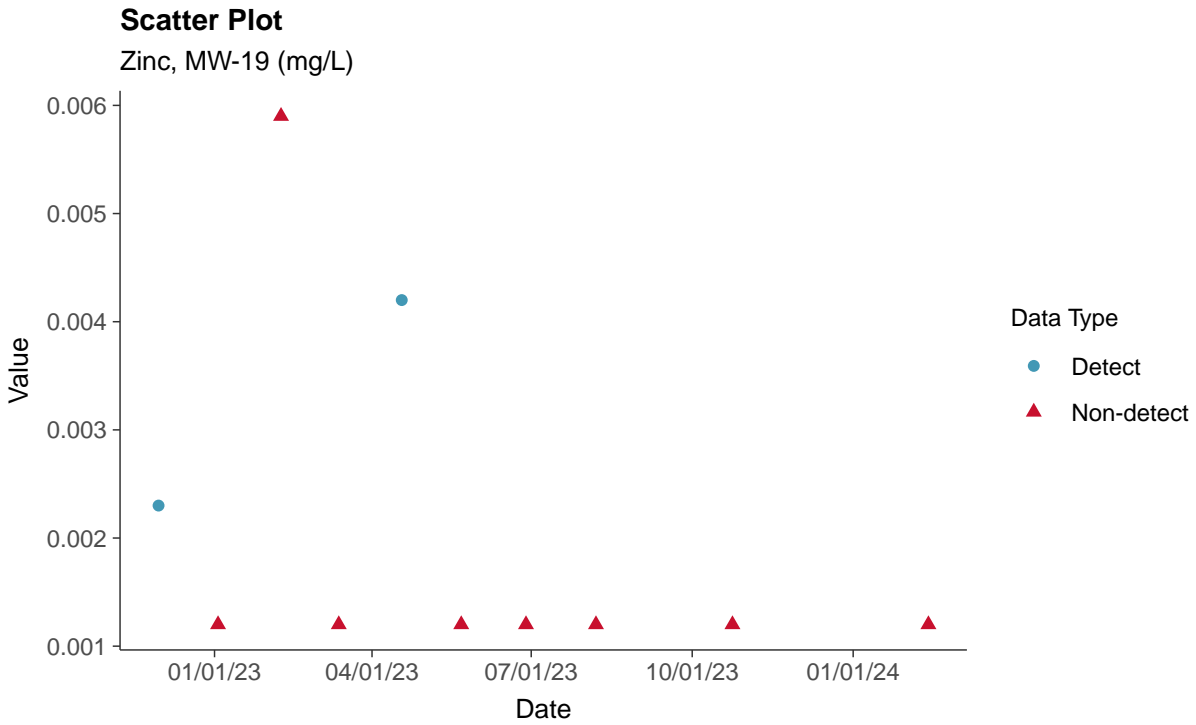
Vanadium, MW-19 (mg/L)





Part 115: Zinc, MW-19

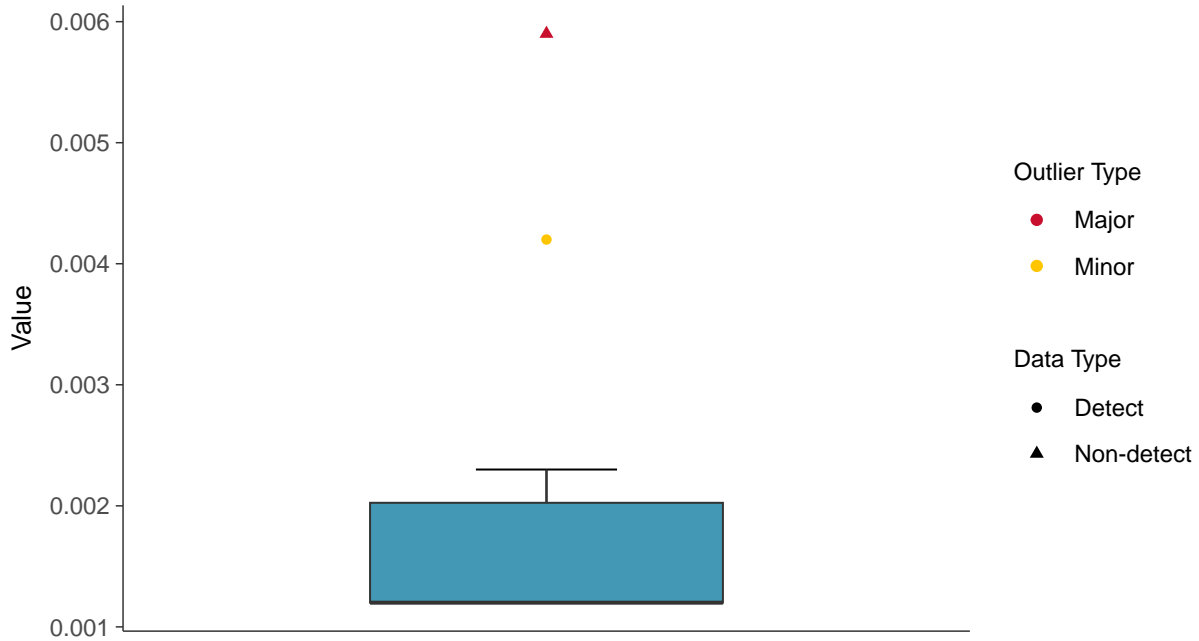
ID: 1_29_6_130





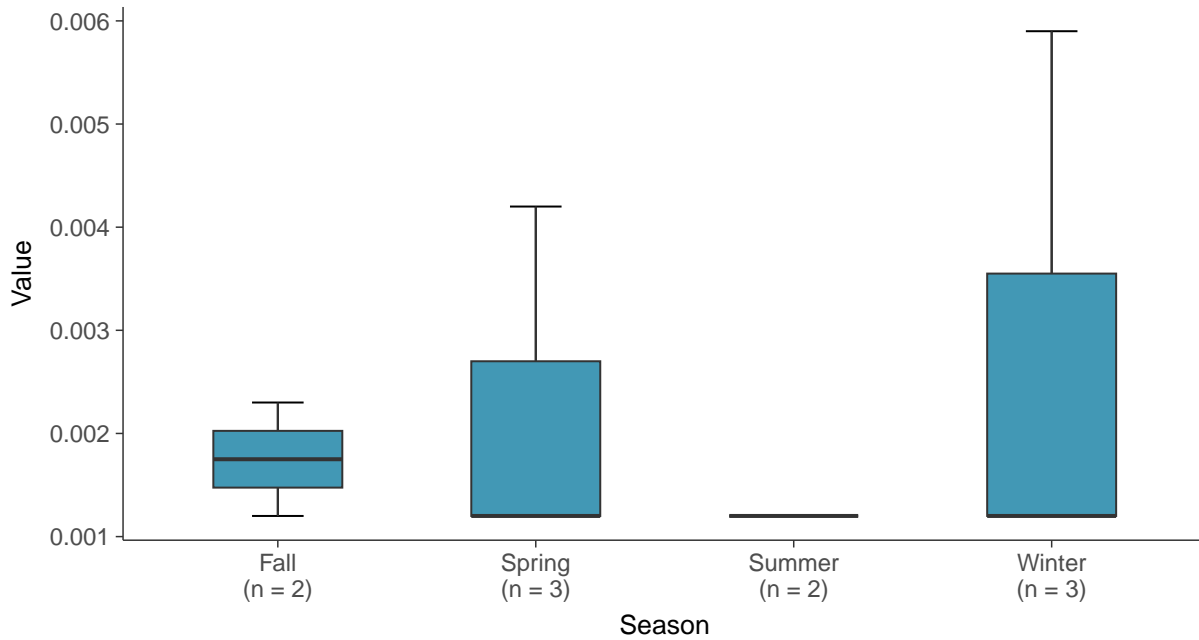
Boxplot

Zinc, MW-19 (mg/L)



Boxplot by Season

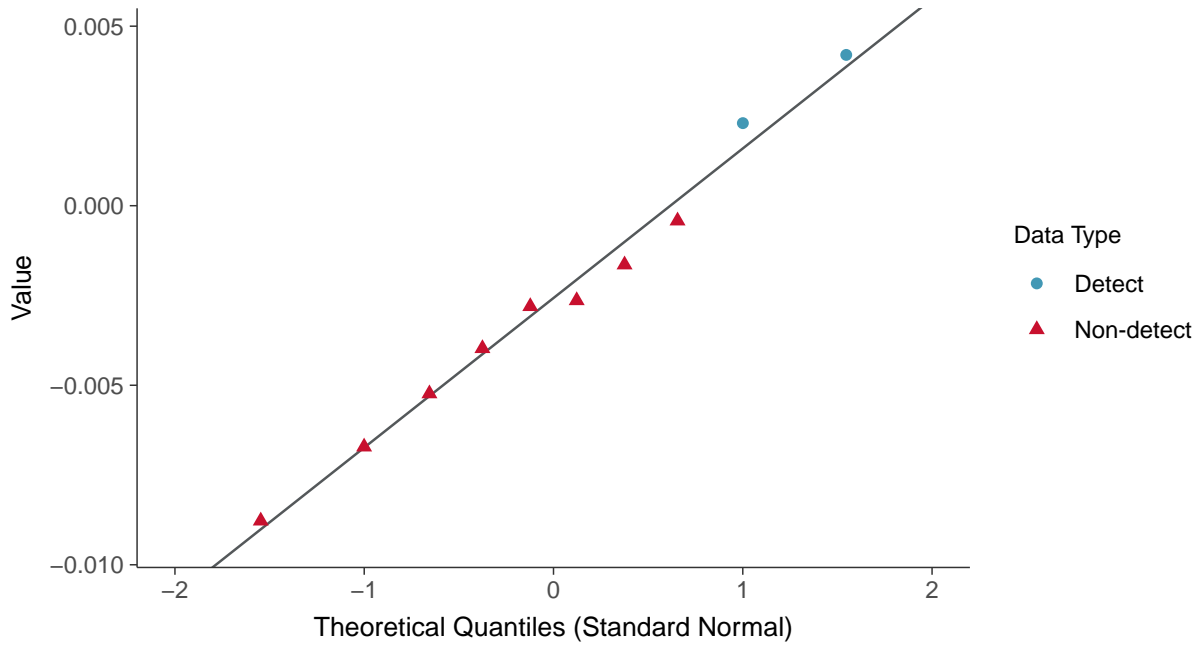
Zinc, MW-19 (mg/L)





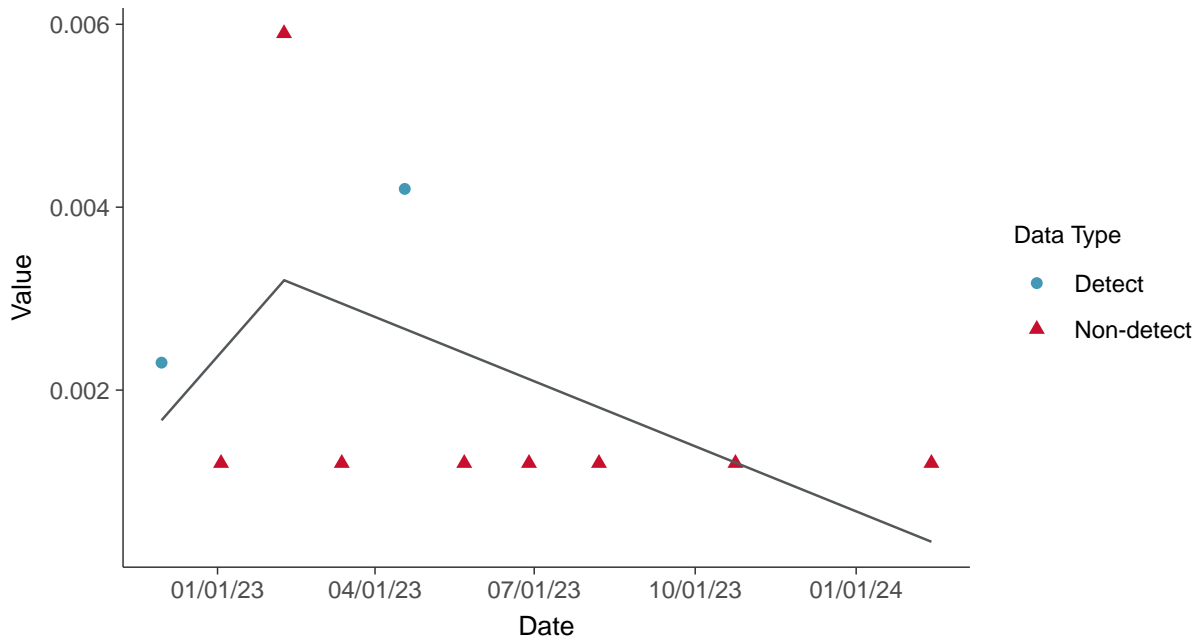
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear

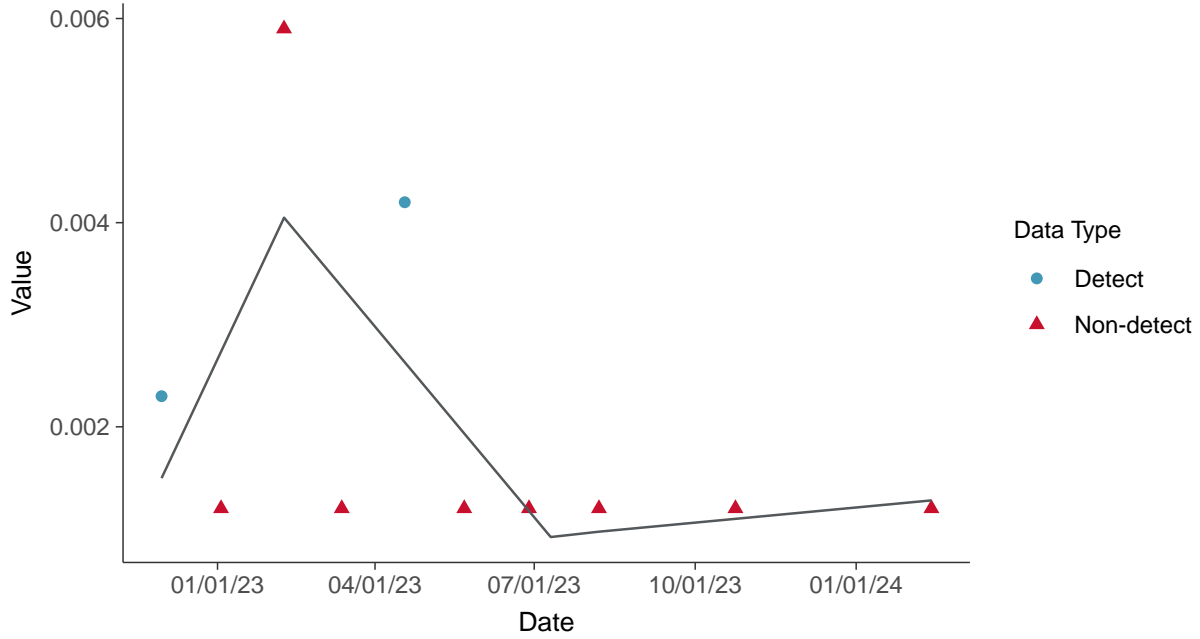
Zinc, MW-19 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

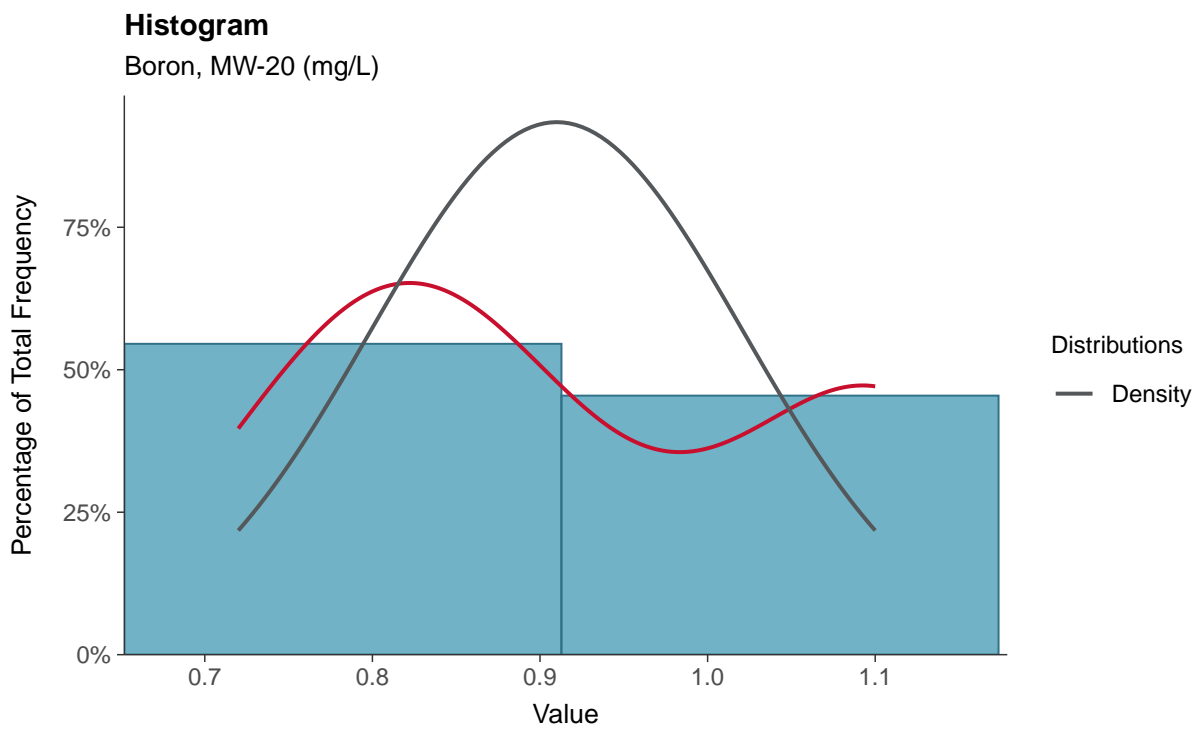
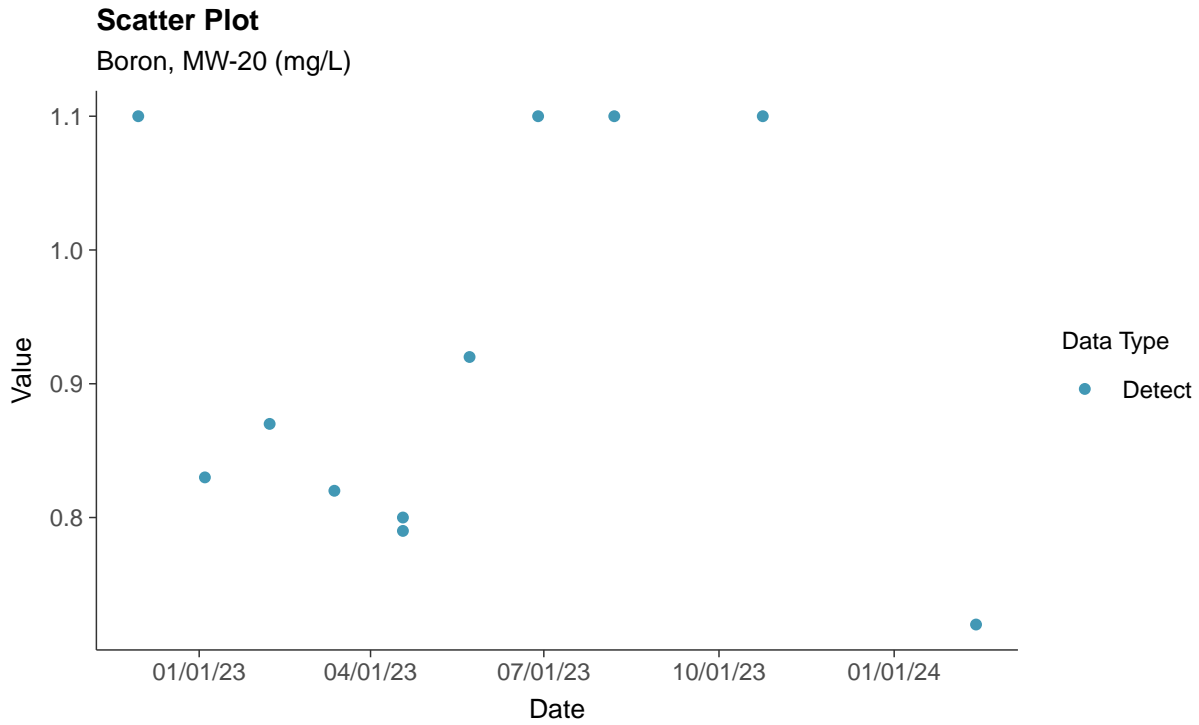
Zinc, MW-19 (mg/L)





Appendix III: Boron, MW-20

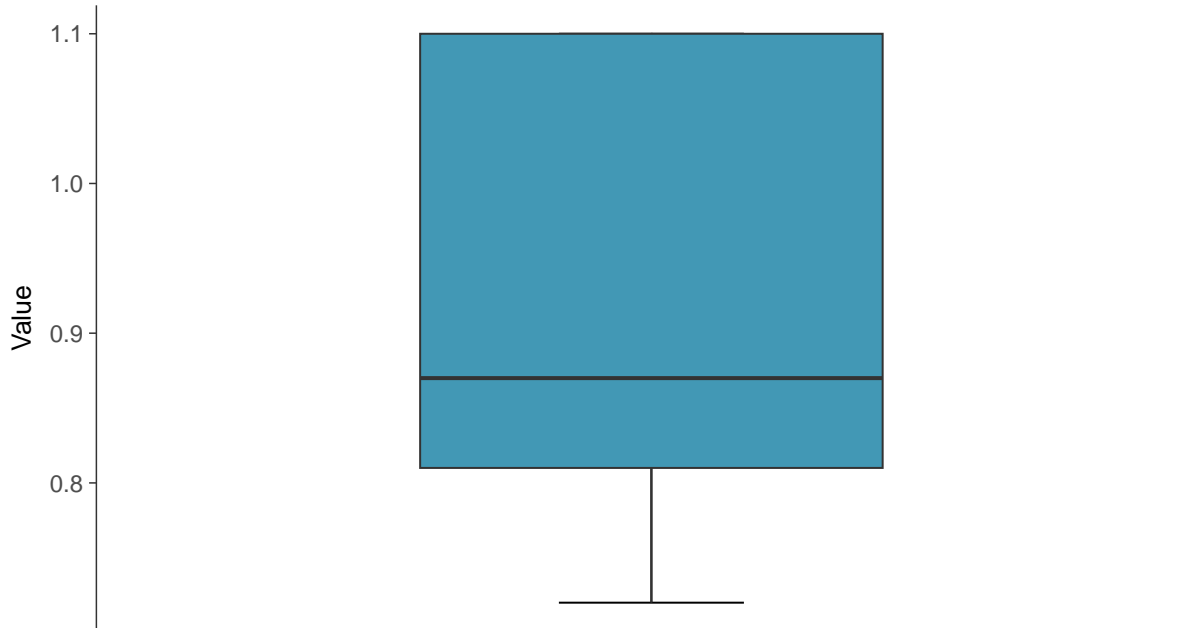
ID: 1_30_4_105





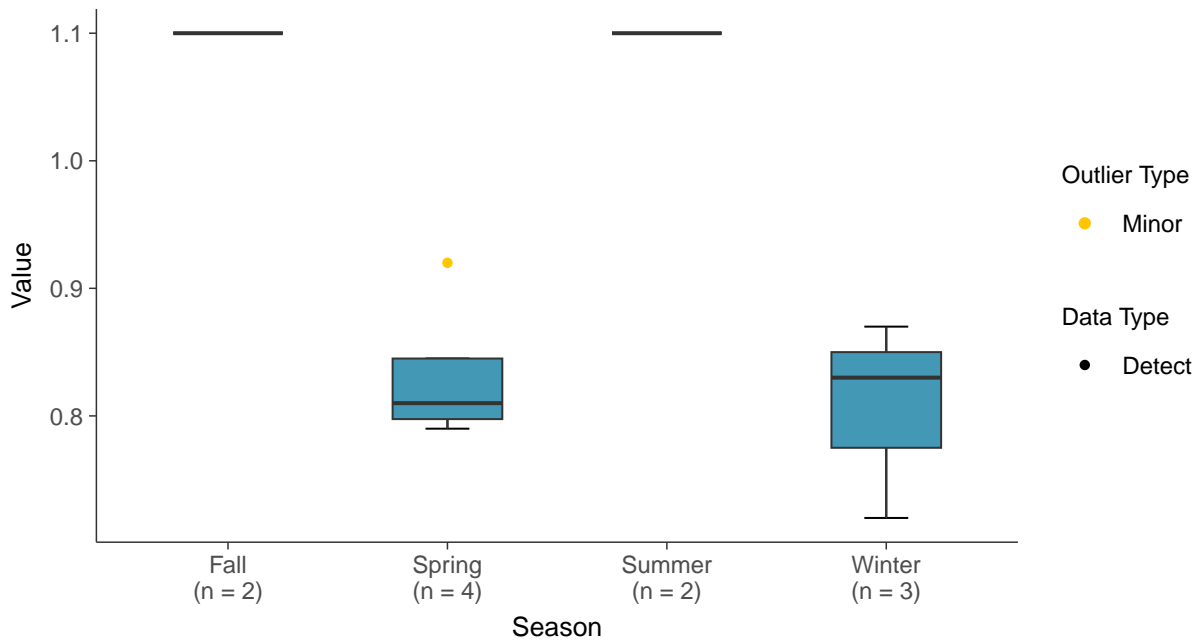
Boxplot

Boron, MW-20 (mg/L)



Boxplot by Season

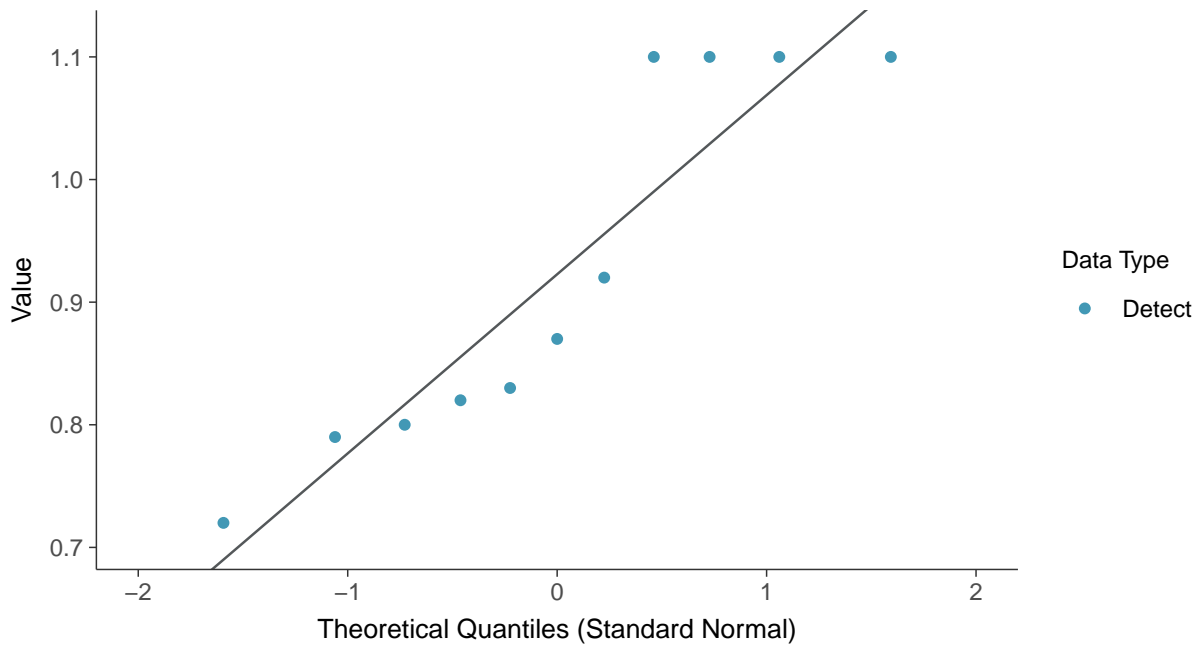
Boron, MW-20 (mg/L)





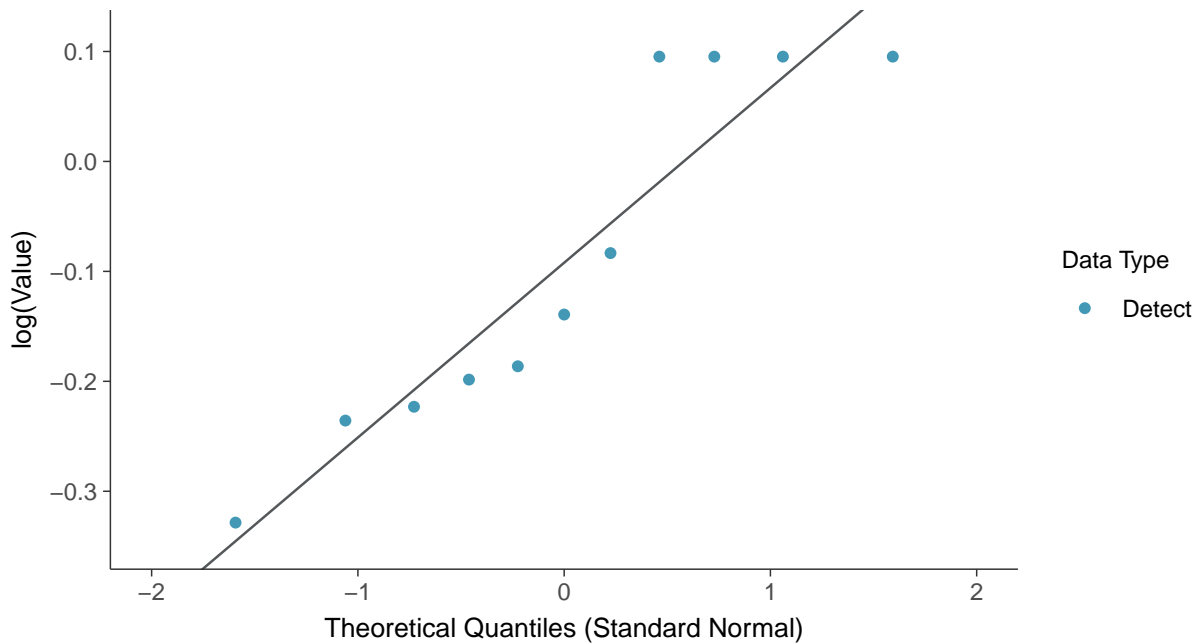
Normal Q-Q plot

Boron, MW-20 (mg/L)



Lognormal Q-Q plot

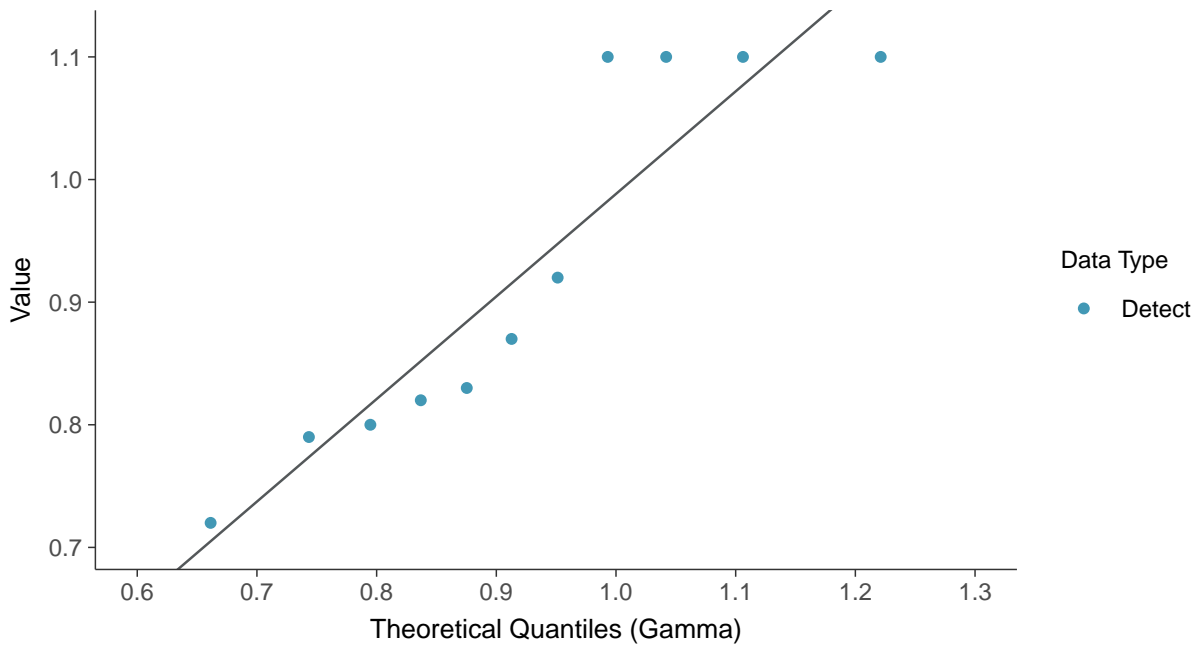
Boron, MW-20 (mg/L)





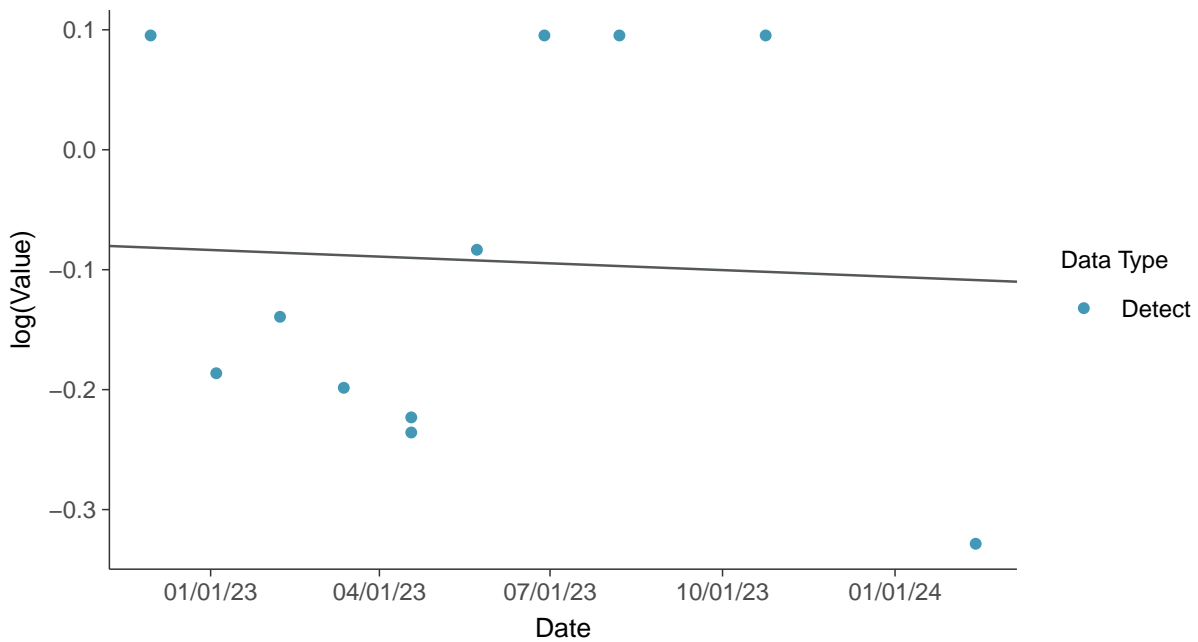
Gamma Q-Q plot

Boron, MW-20 (mg/L)



Trend Regression: Lognormal MLE

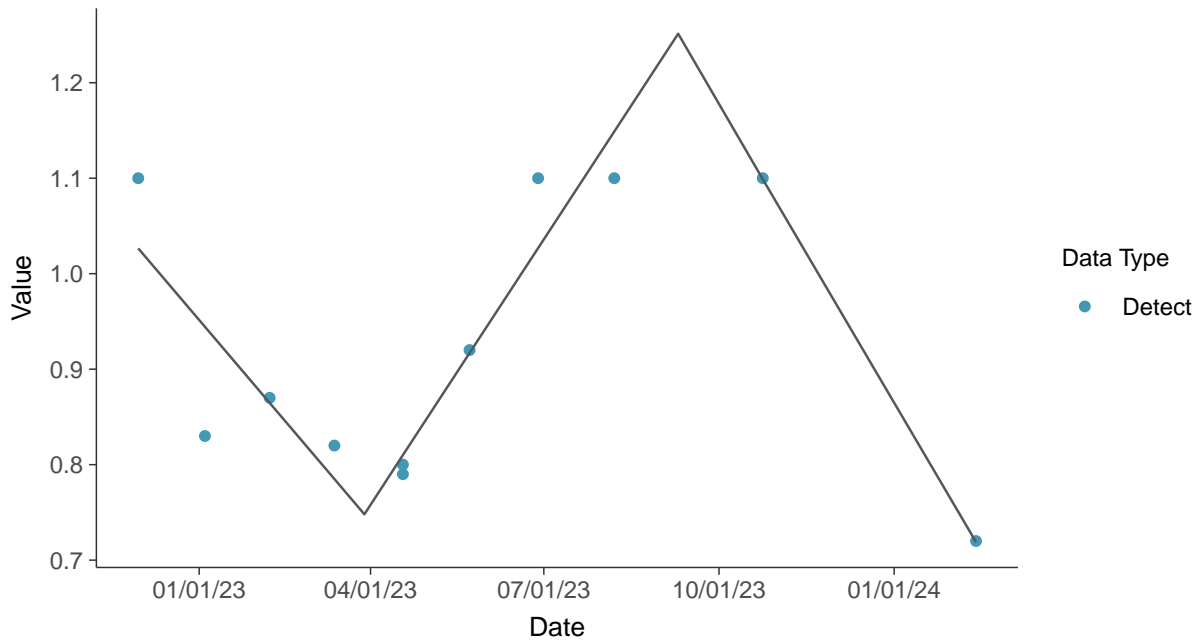
Boron, MW-20 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

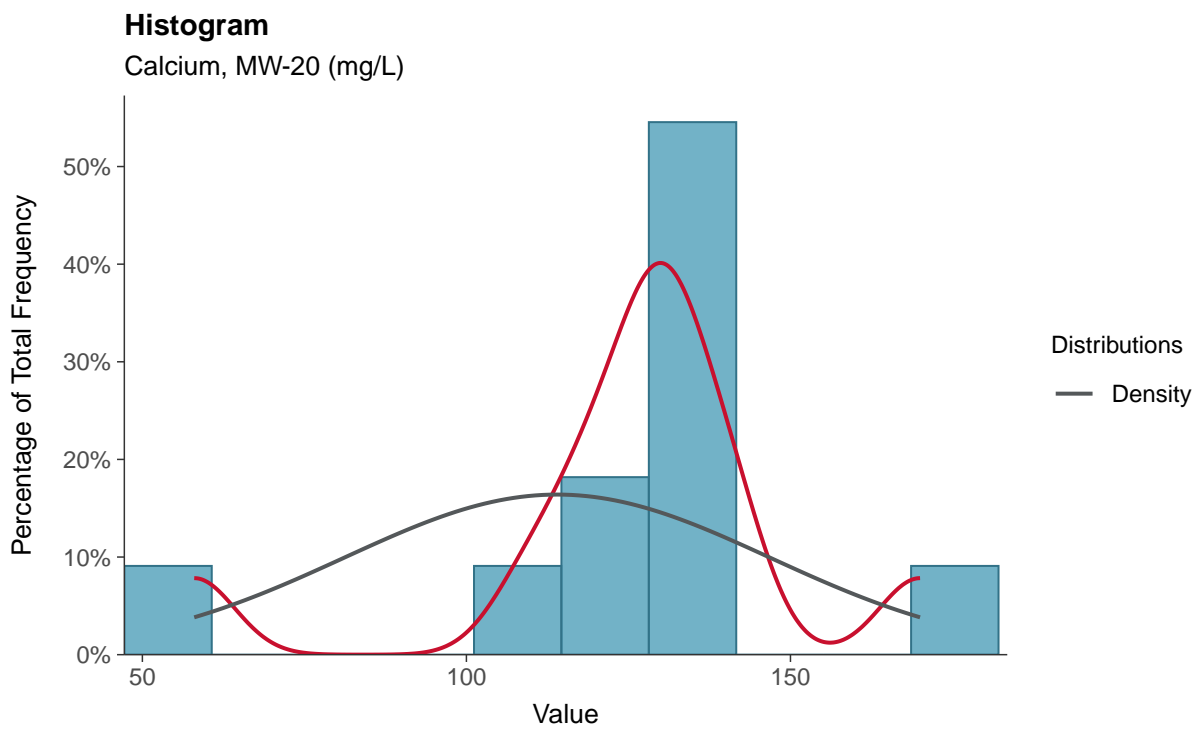
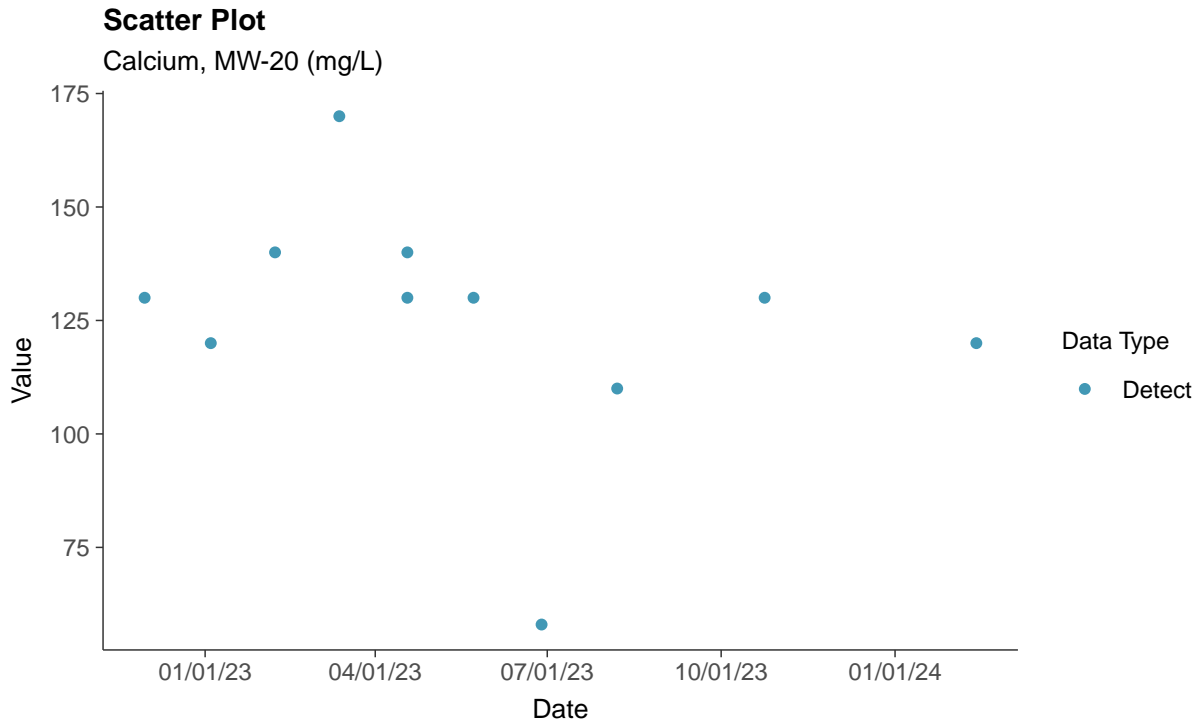
Boron, MW-20 (mg/L)





Appendix III: Calcium, MW-20

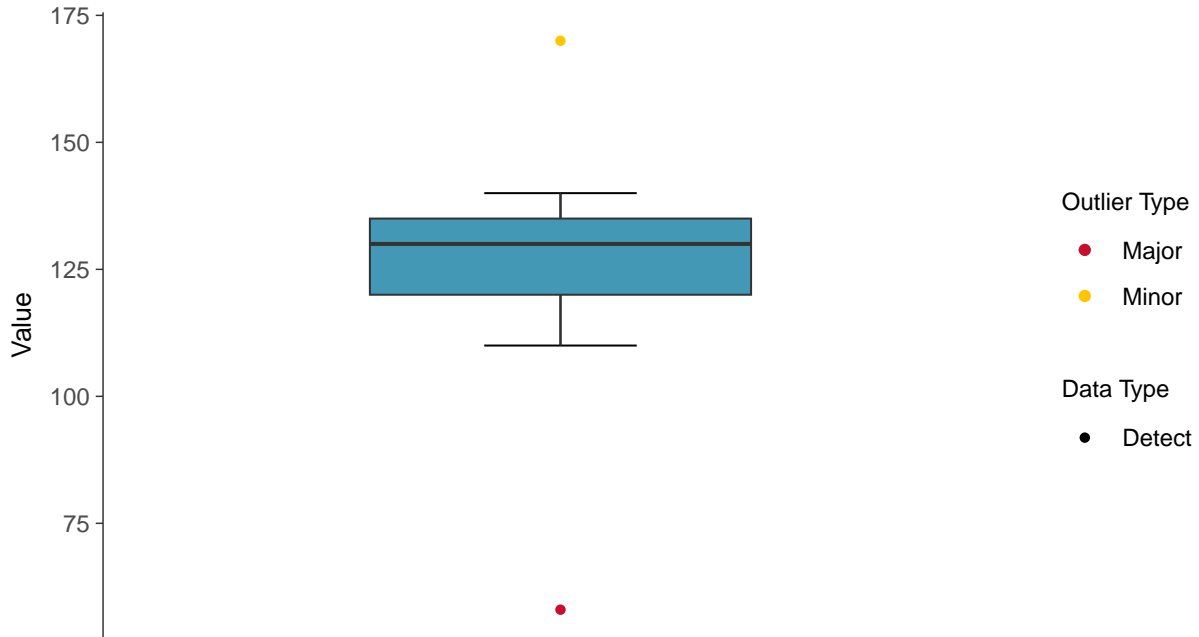
ID: 1_30_4_107





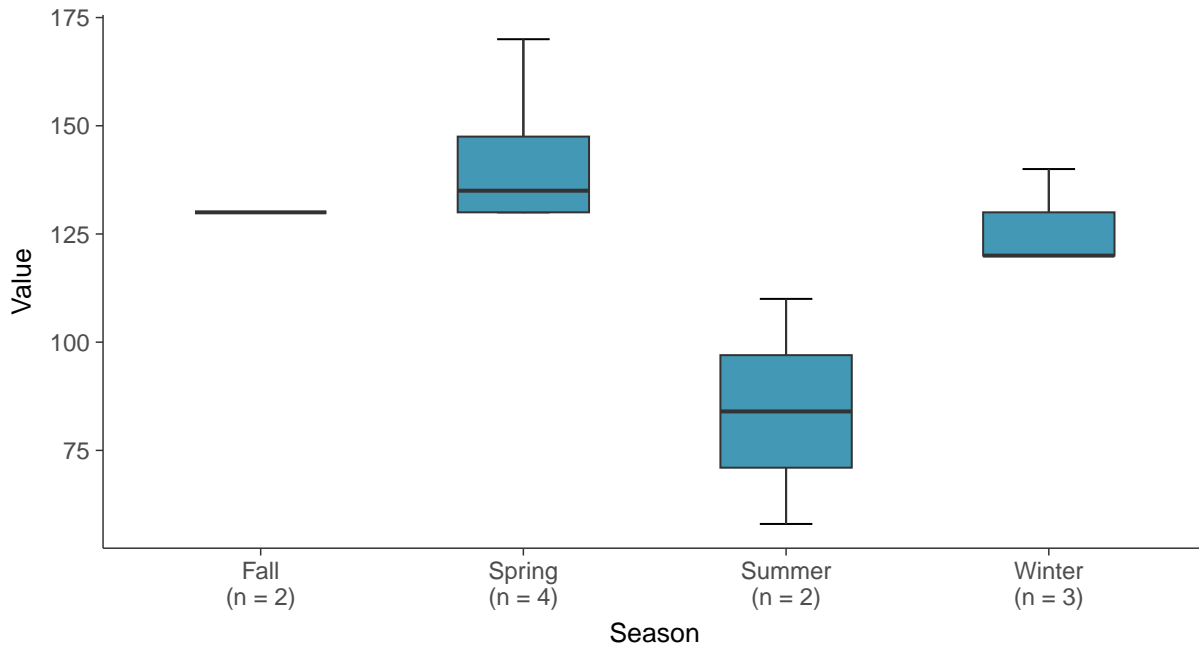
Boxplot

Calcium, MW-20 (mg/L)



Boxplot by Season

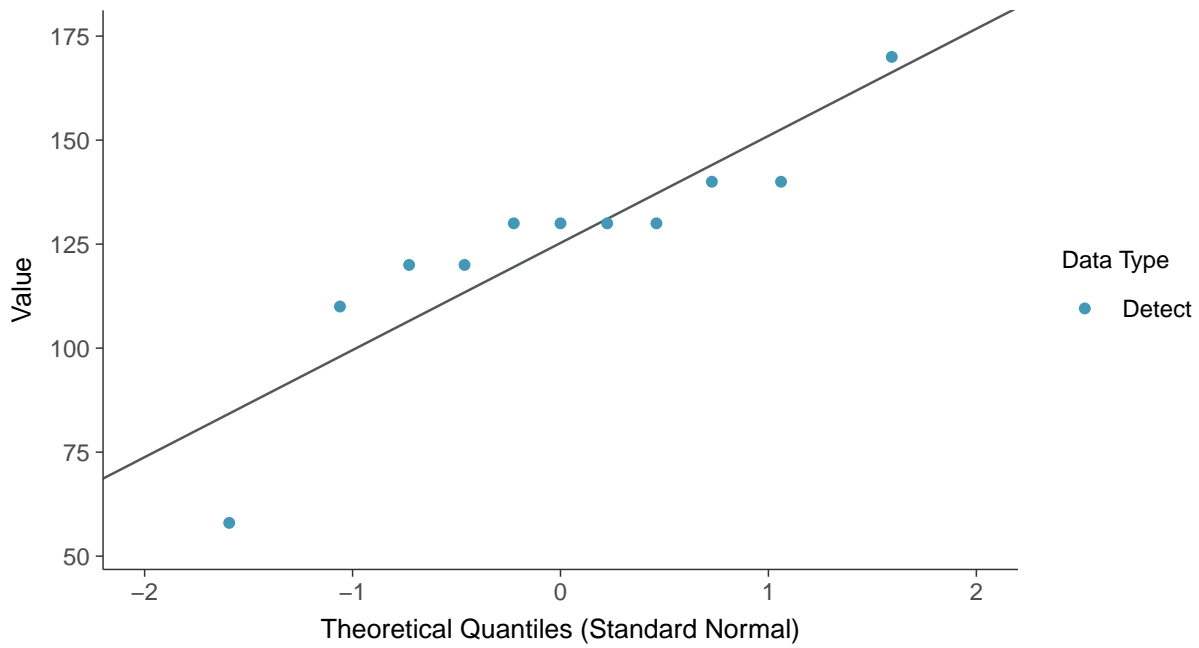
Calcium, MW-20 (mg/L)





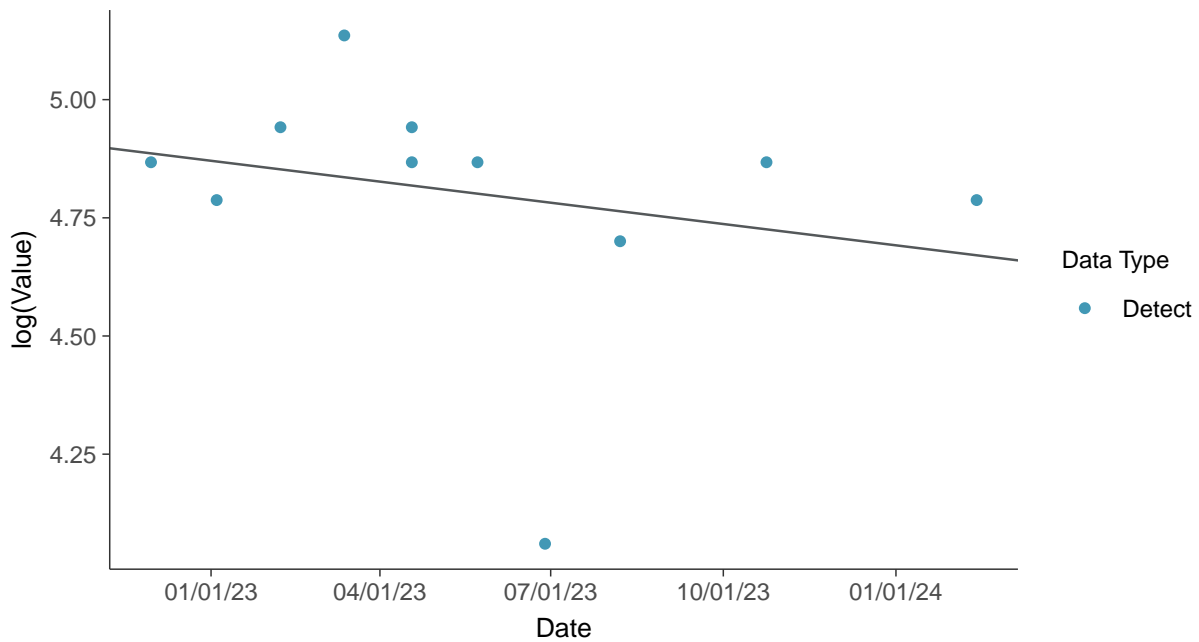
Normal Q-Q plot

Calcium, MW-20 (mg/L)



Trend Regression: Lognormal MLE

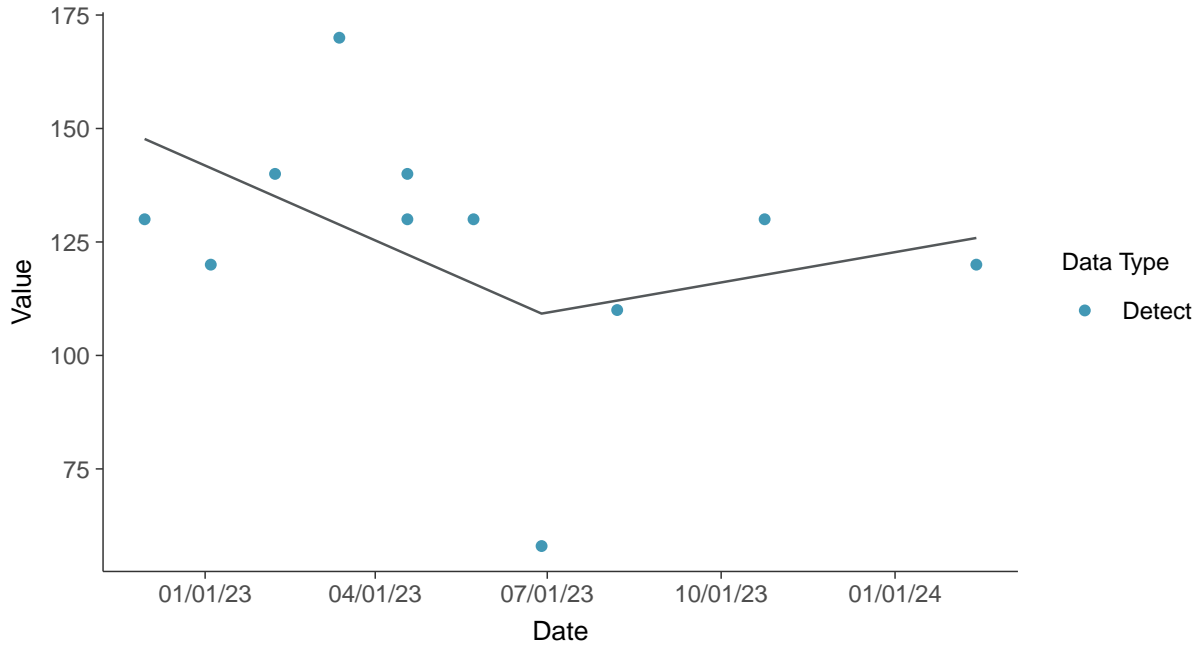
Calcium, MW-20 (mg/L)





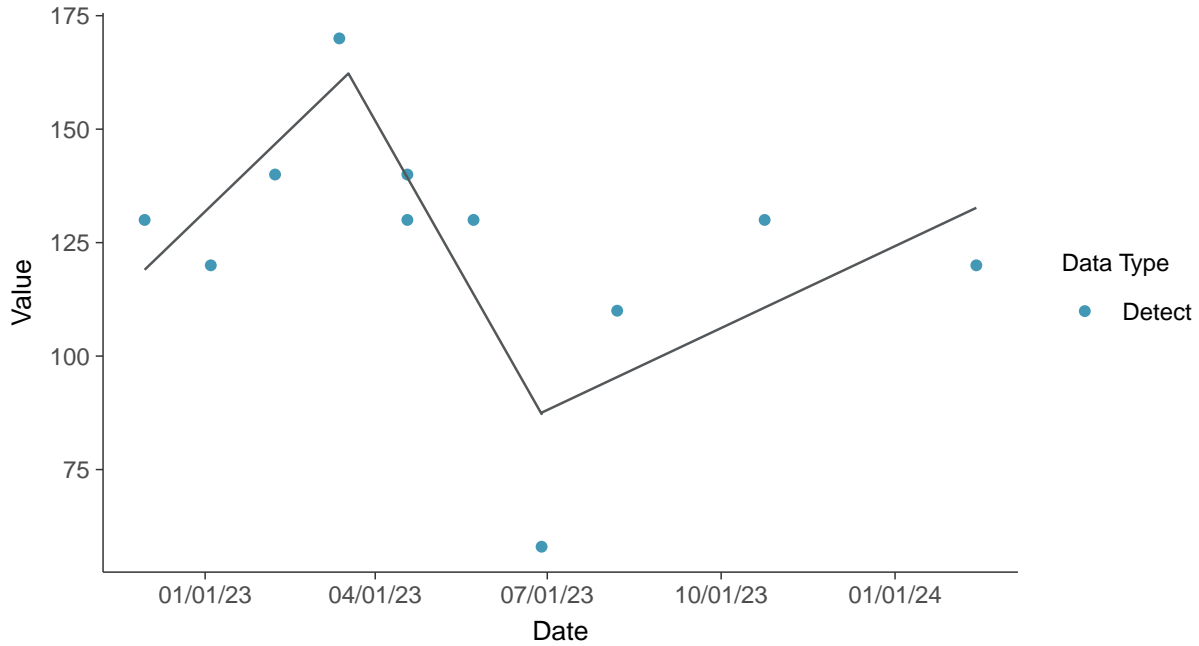
Trend Regression: Piecewise Linear-Linear

Calcium, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-20 (mg/L)



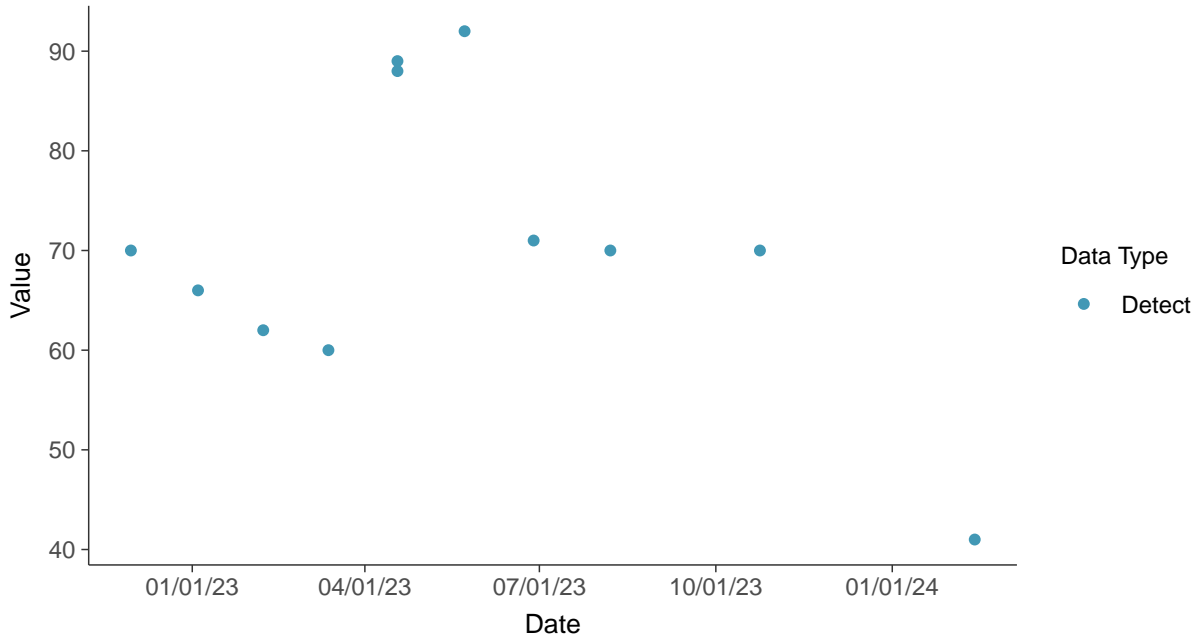


Appendix III: Chloride (as Cl), MW-20

ID: 1_30_4_108

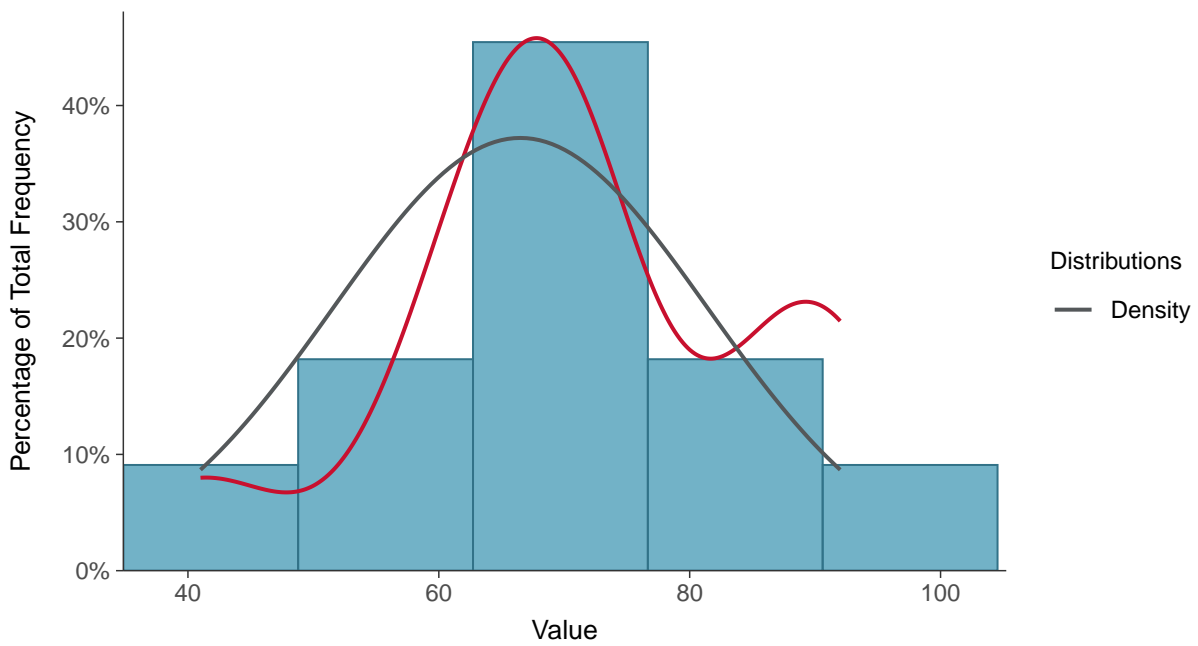
Scatter Plot

Chloride (as Cl), MW-20 (mg/L)



Histogram

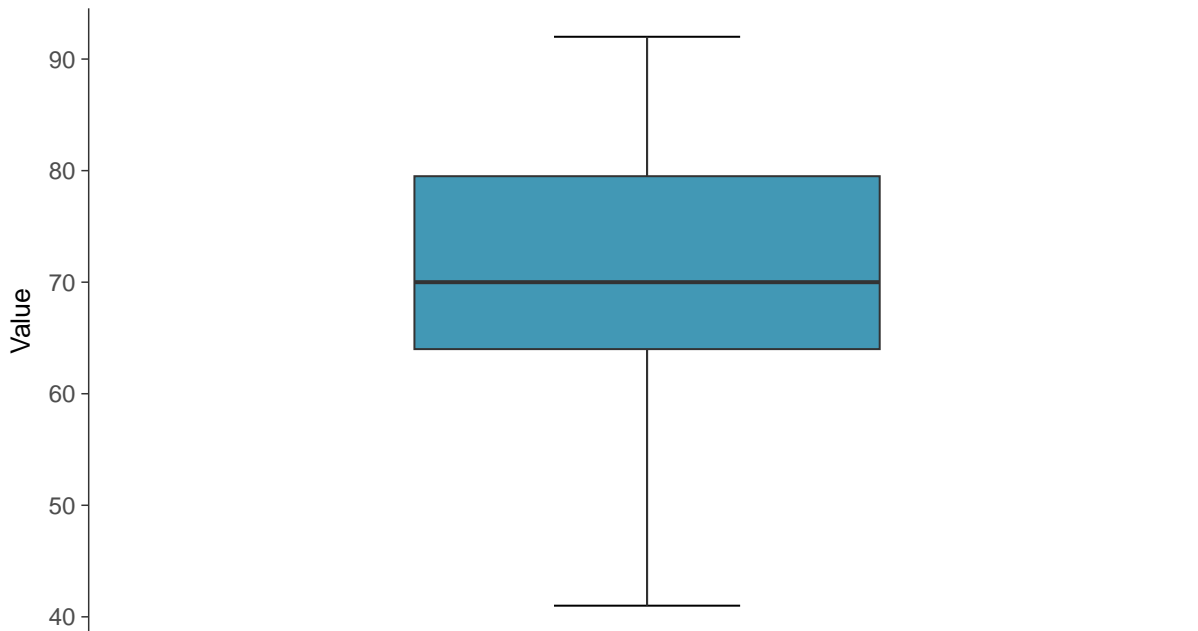
Chloride (as Cl), MW-20 (mg/L)





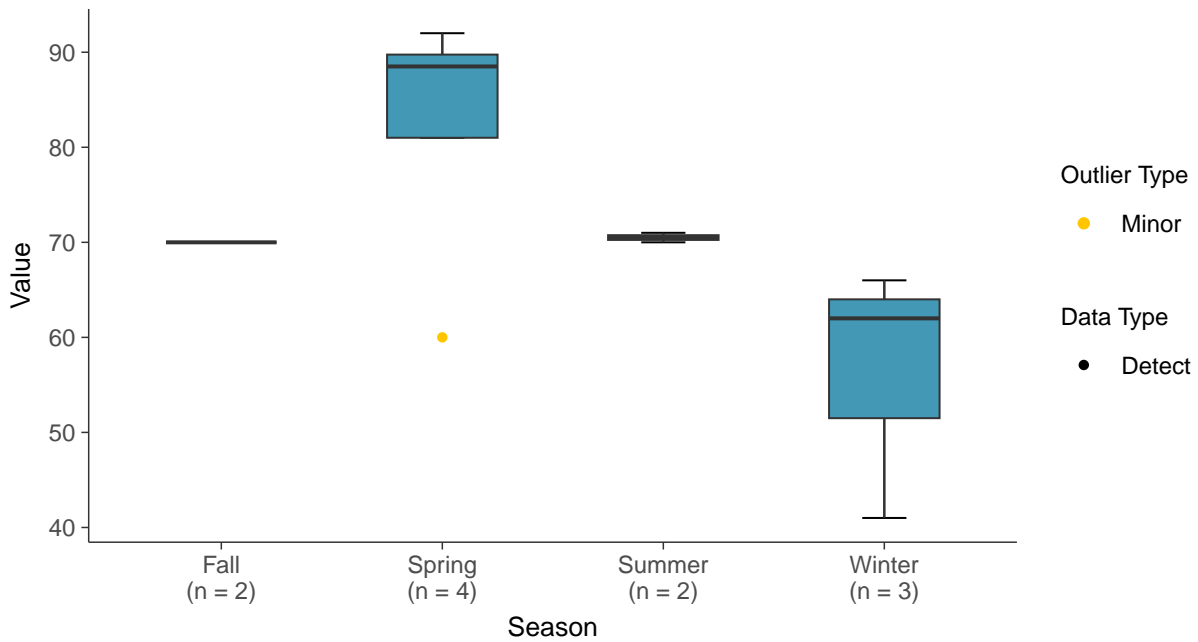
Boxplot

Chloride (as Cl), MW-20 (mg/L)



Boxplot by Season

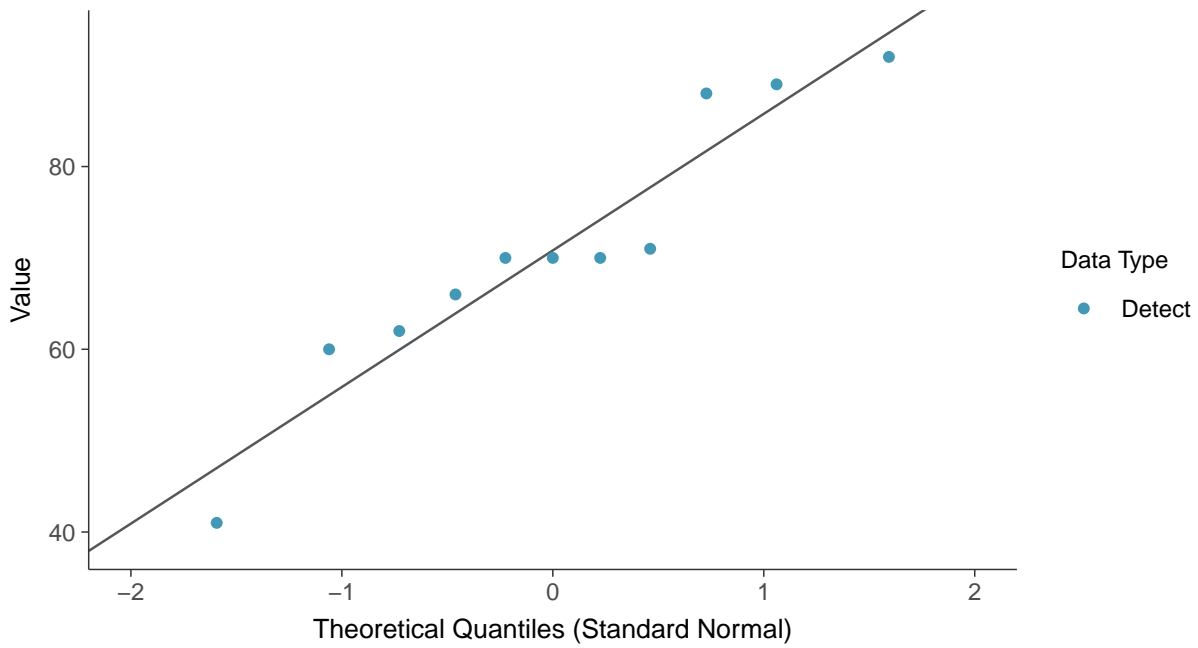
Chloride (as Cl), MW-20 (mg/L)





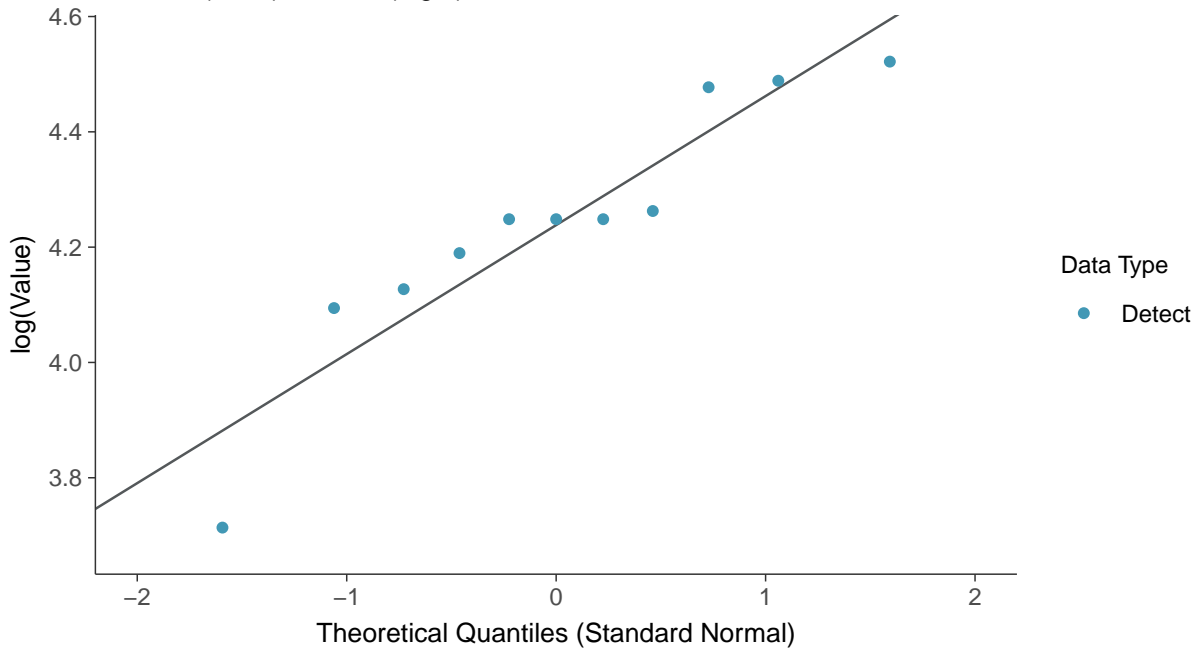
Normal Q-Q plot

Chloride (as Cl), MW-20 (mg/L)



Lognormal Q-Q plot

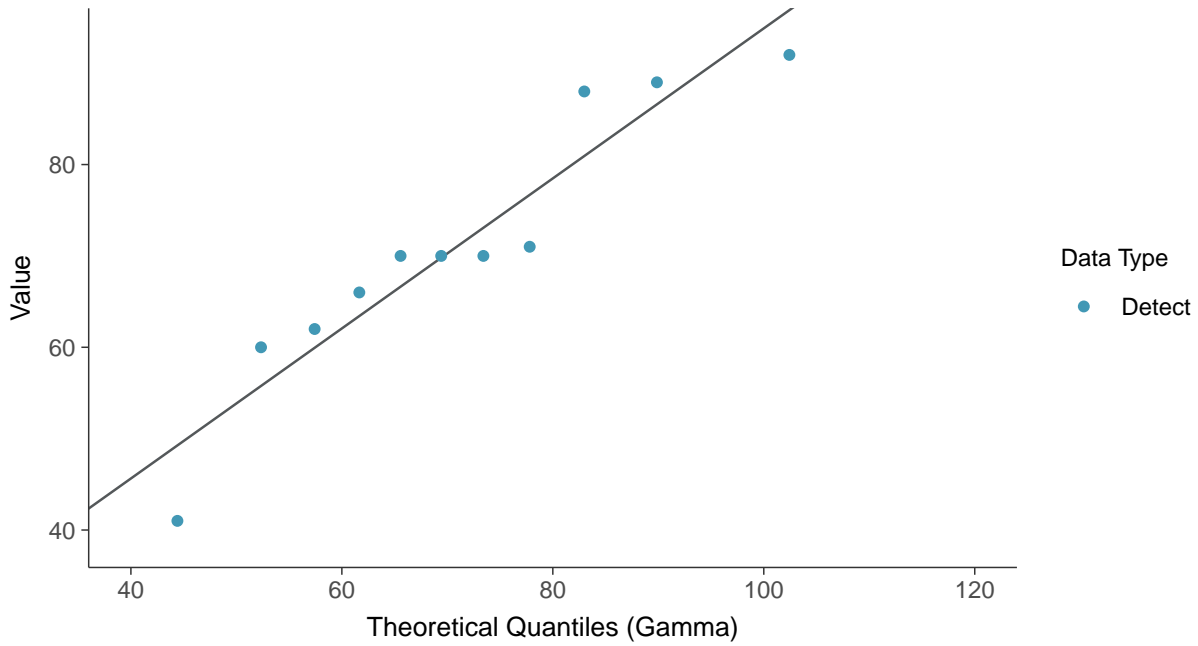
Chloride (as Cl), MW-20 (mg/L)





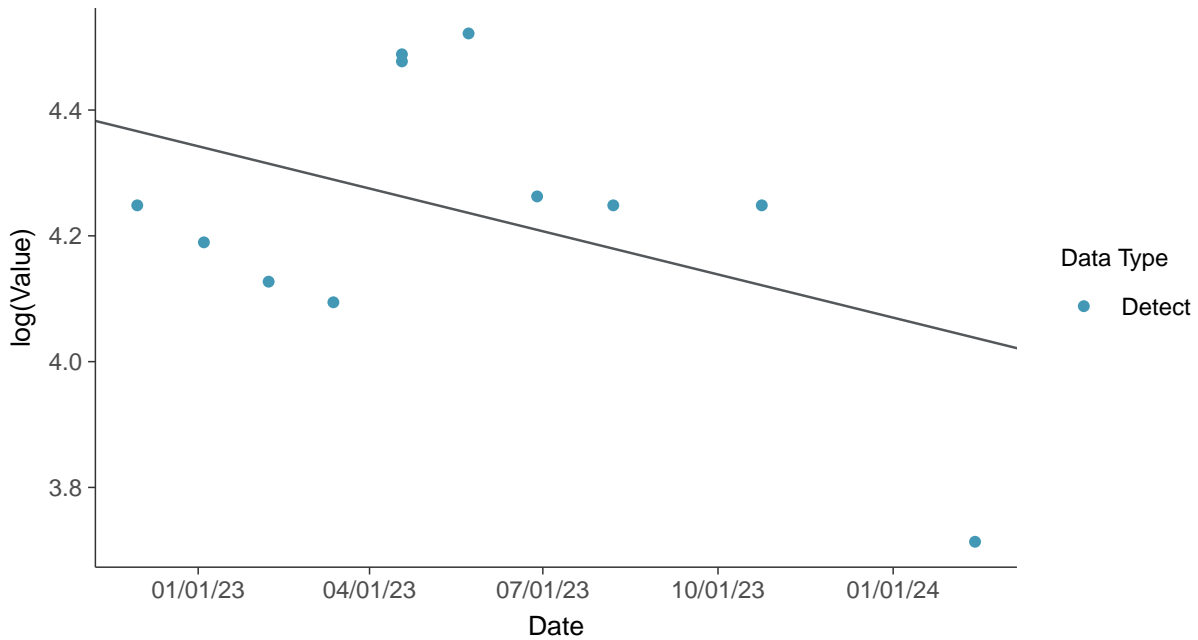
Gamma Q-Q plot

Chloride (as Cl), MW-20 (mg/L)



Trend Regression: Lognormal MLE

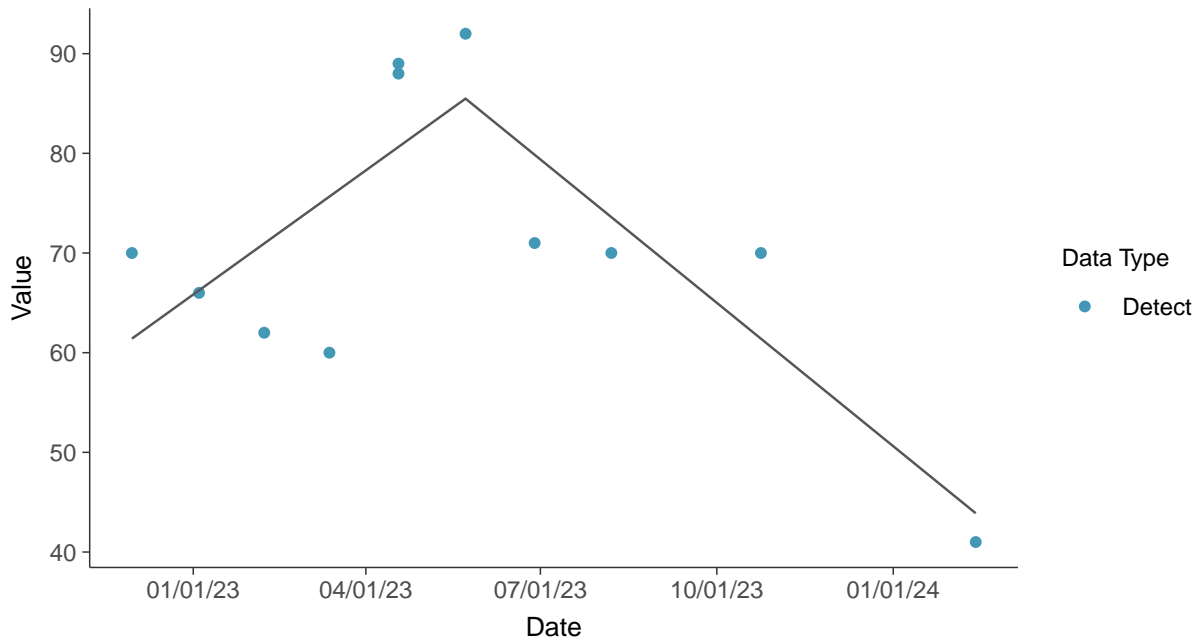
Chloride (as Cl), MW-20 (mg/L)





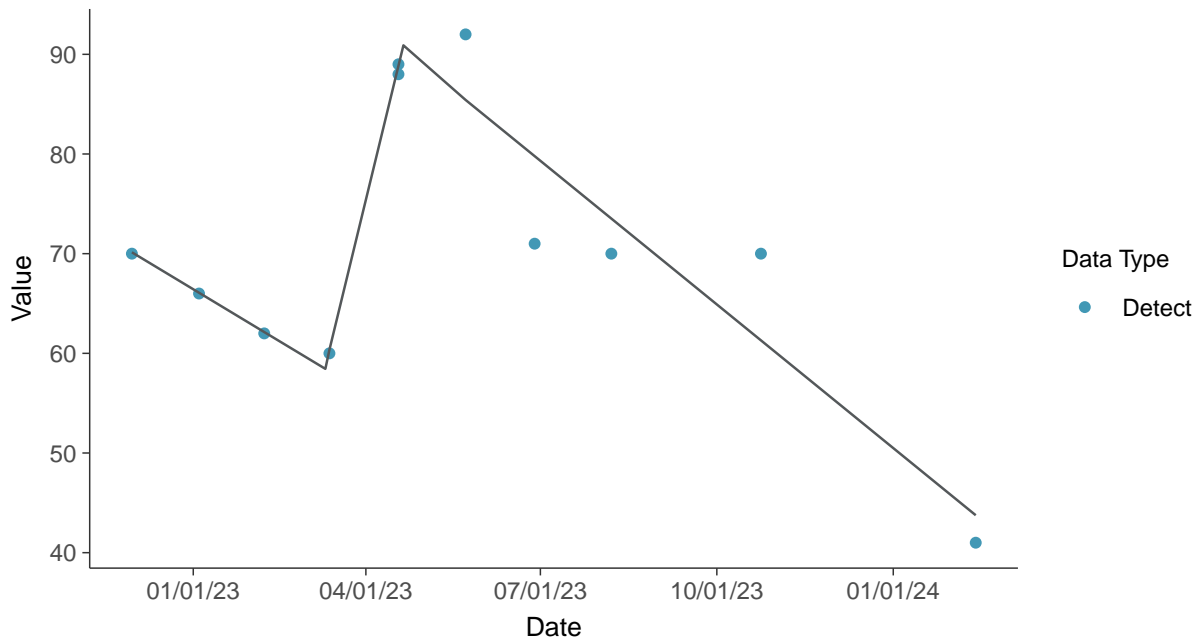
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-20 (mg/L)



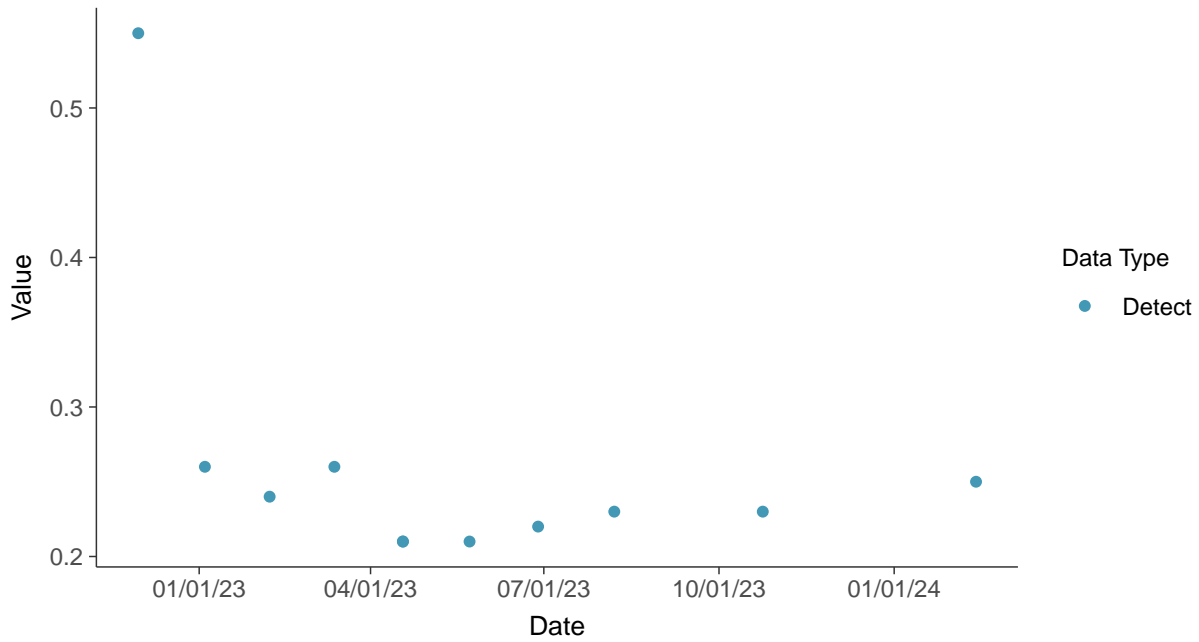


Appendix III: Fluoride, MW-20

ID: 1_30_4_112

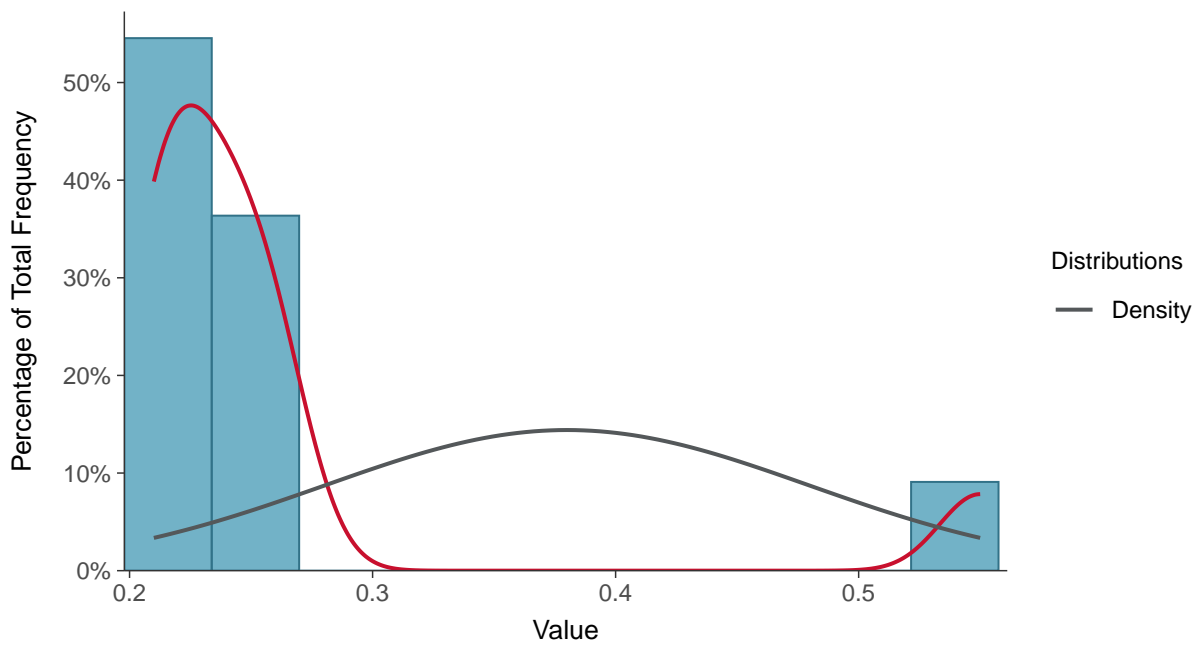
Scatter Plot

Fluoride, MW-20 (mg/L)



Histogram

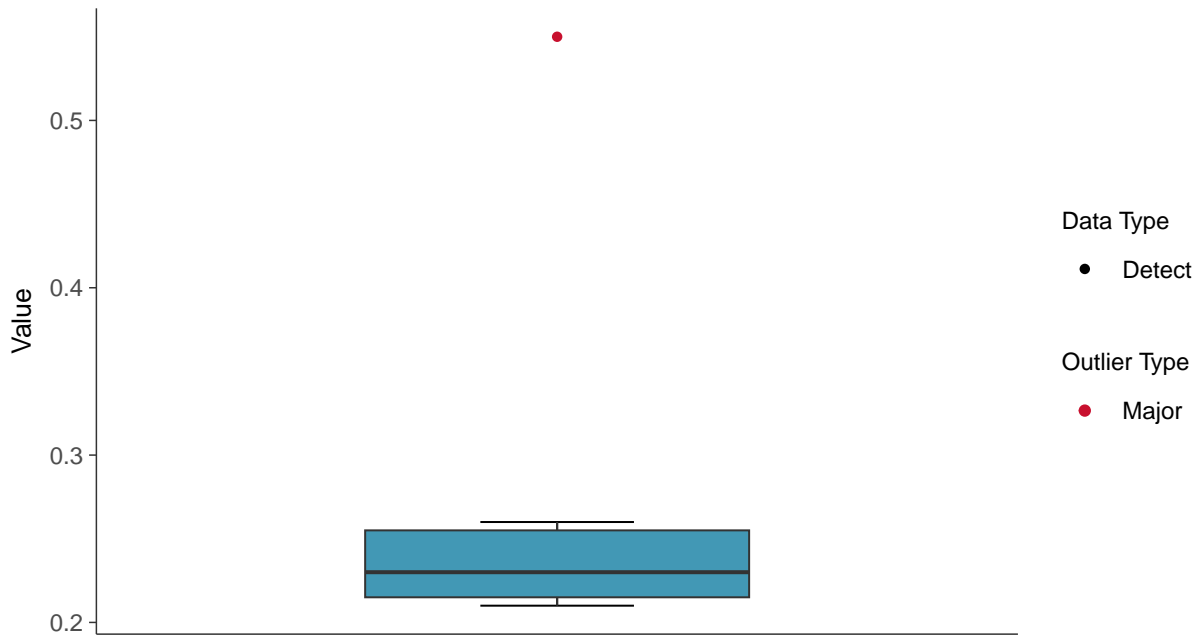
Fluoride, MW-20 (mg/L)





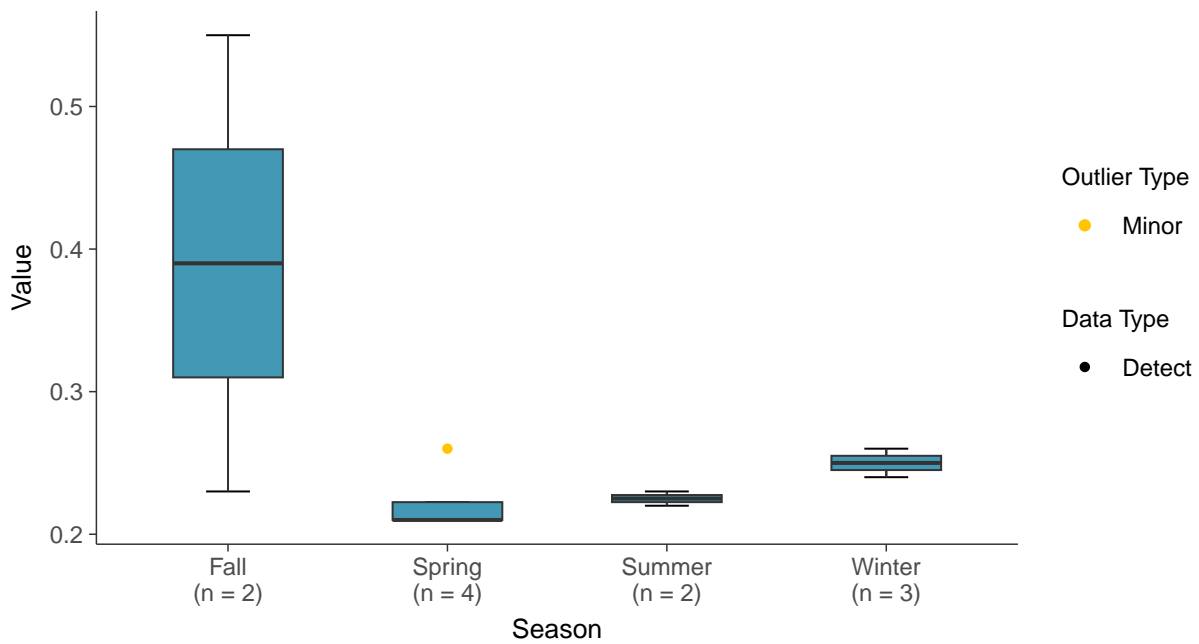
Boxplot

Fluoride, MW-20 (mg/L)



Boxplot by Season

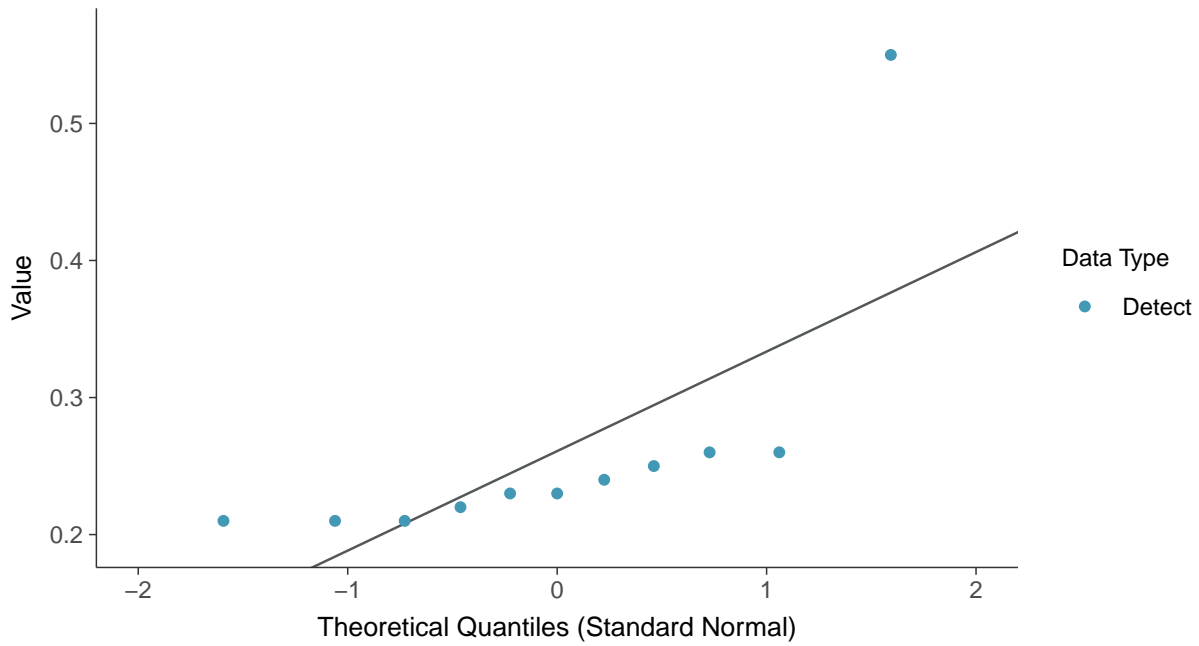
Fluoride, MW-20 (mg/L)





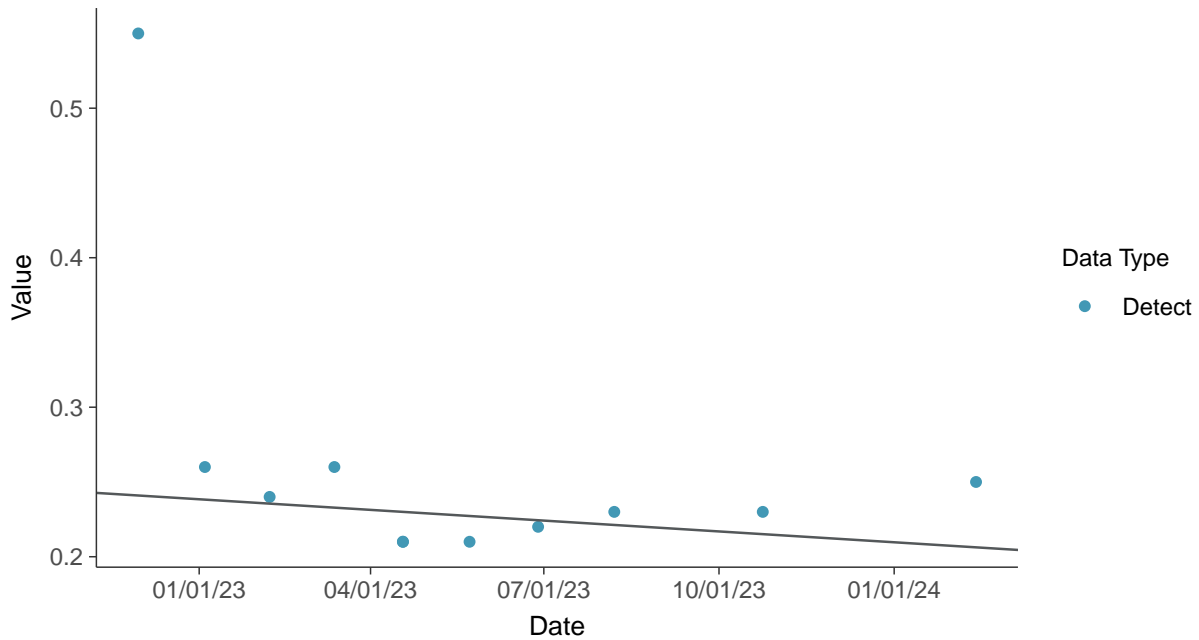
Normal Q-Q plot

Fluoride, MW-20 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

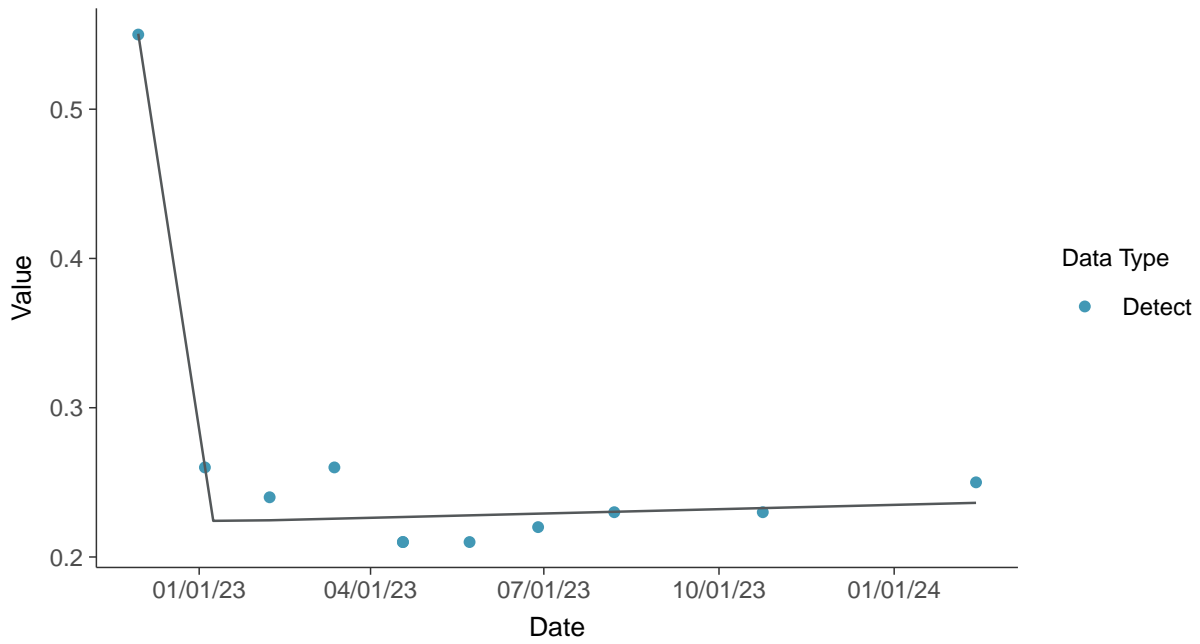
Fluoride, MW-20 (mg/L)





Trend Regression: Piecewise Linear-Linear

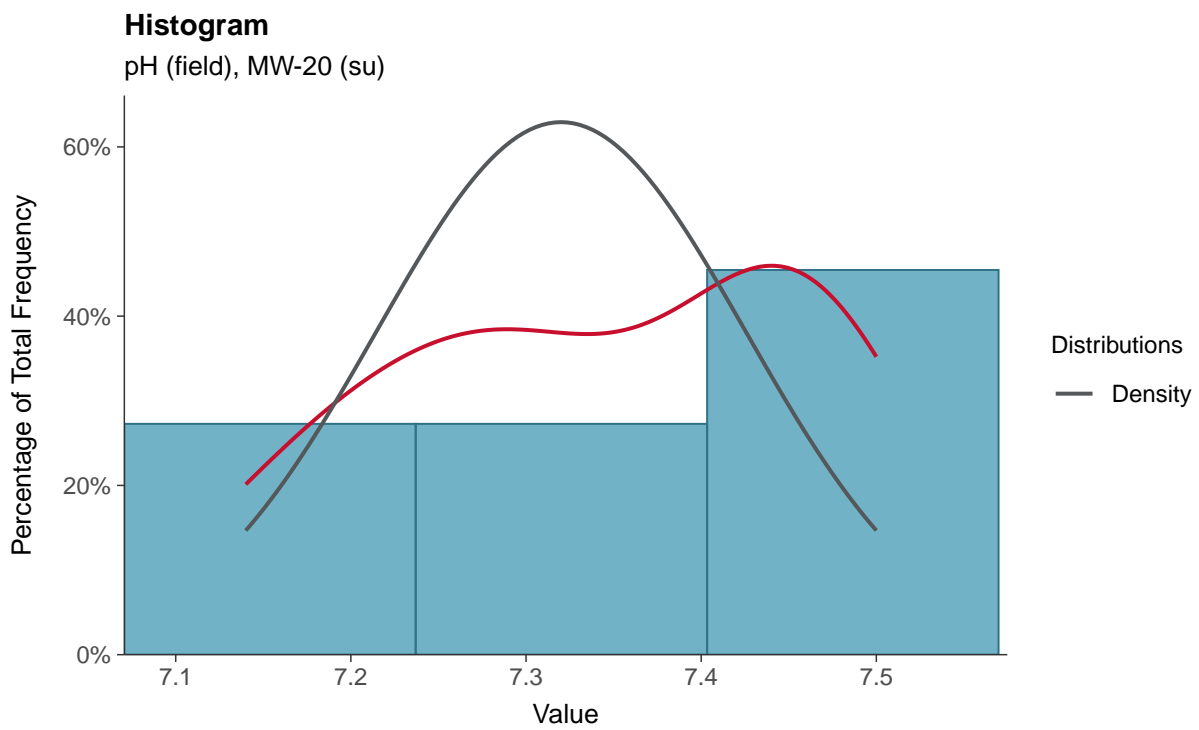
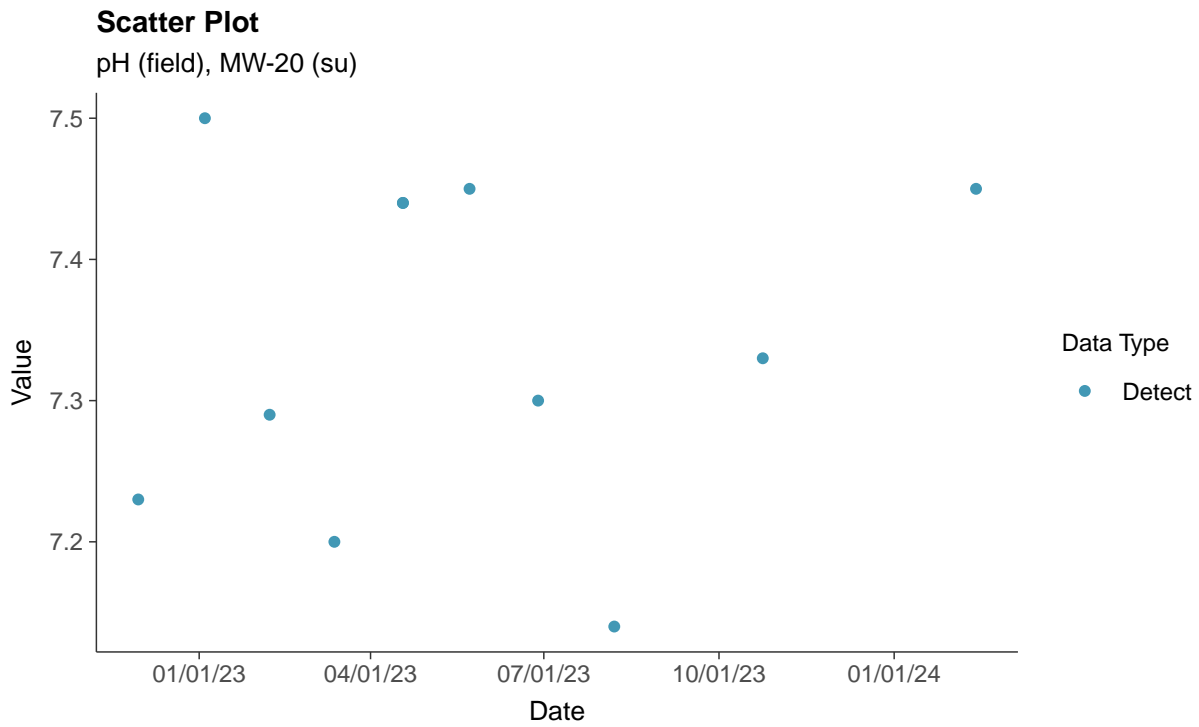
Fluoride, MW-20 (mg/L)





Appendix III: pH (field), MW-20

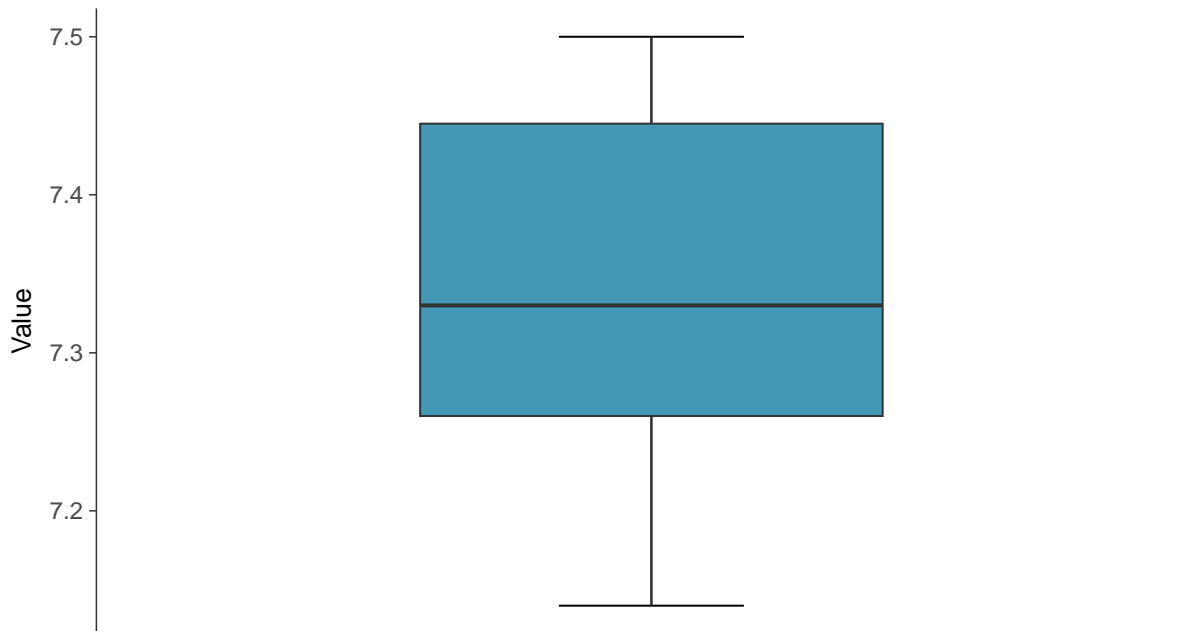
ID: 1_30_4_120





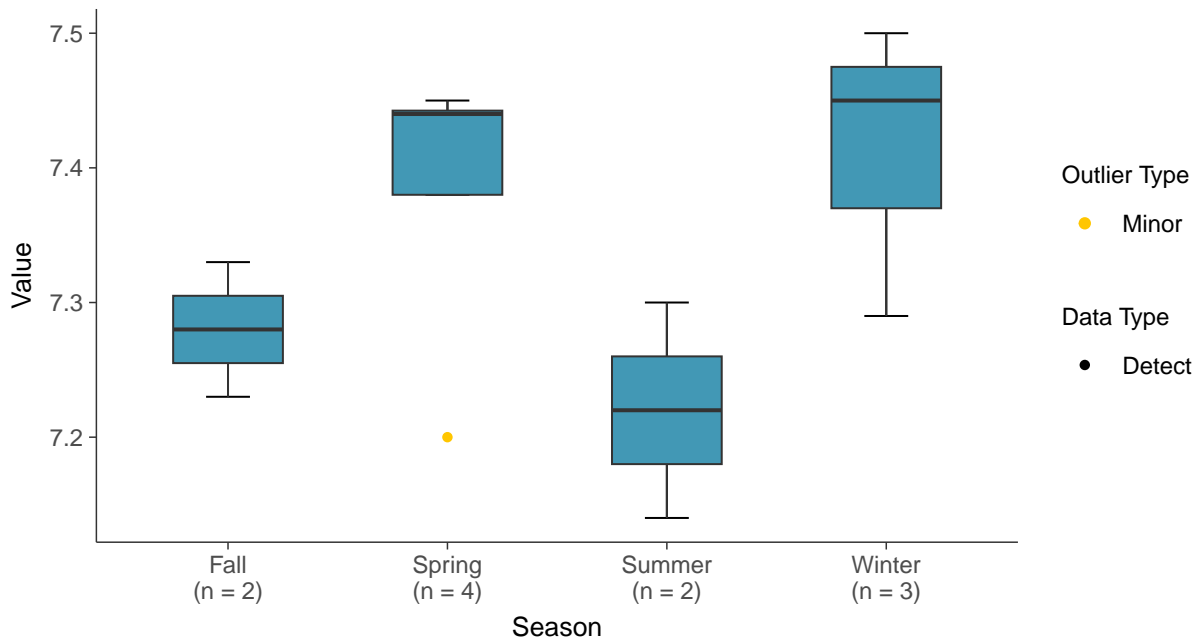
Boxplot

pH (field), MW-20 (su)



Boxplot by Season

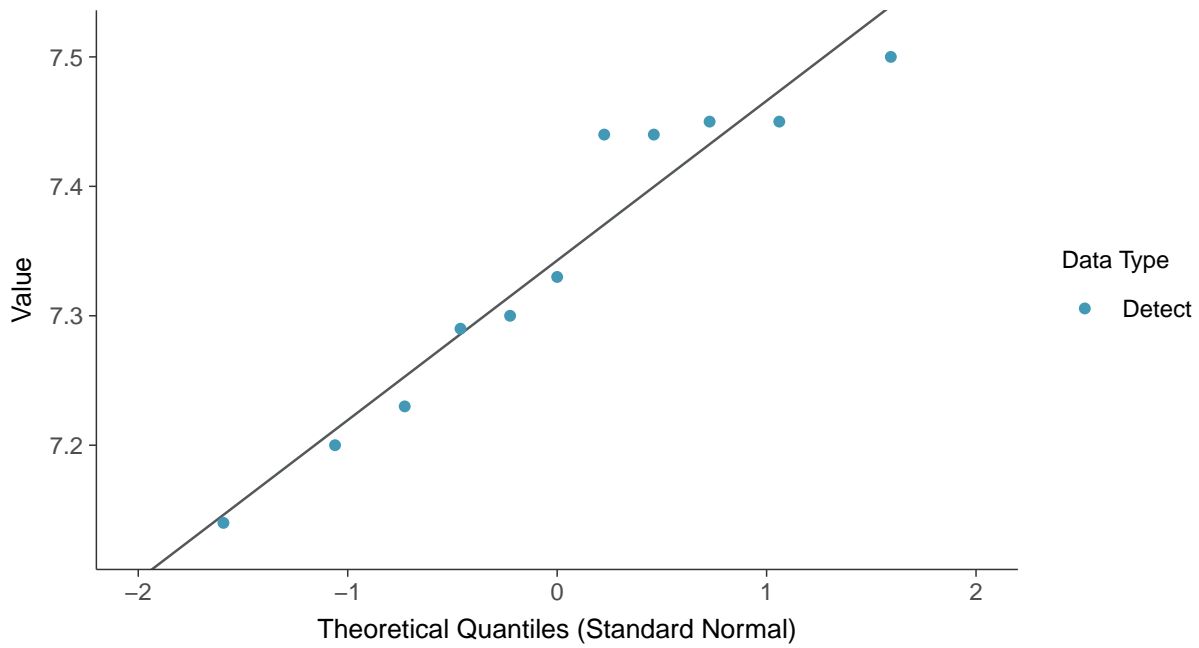
pH (field), MW-20 (su)





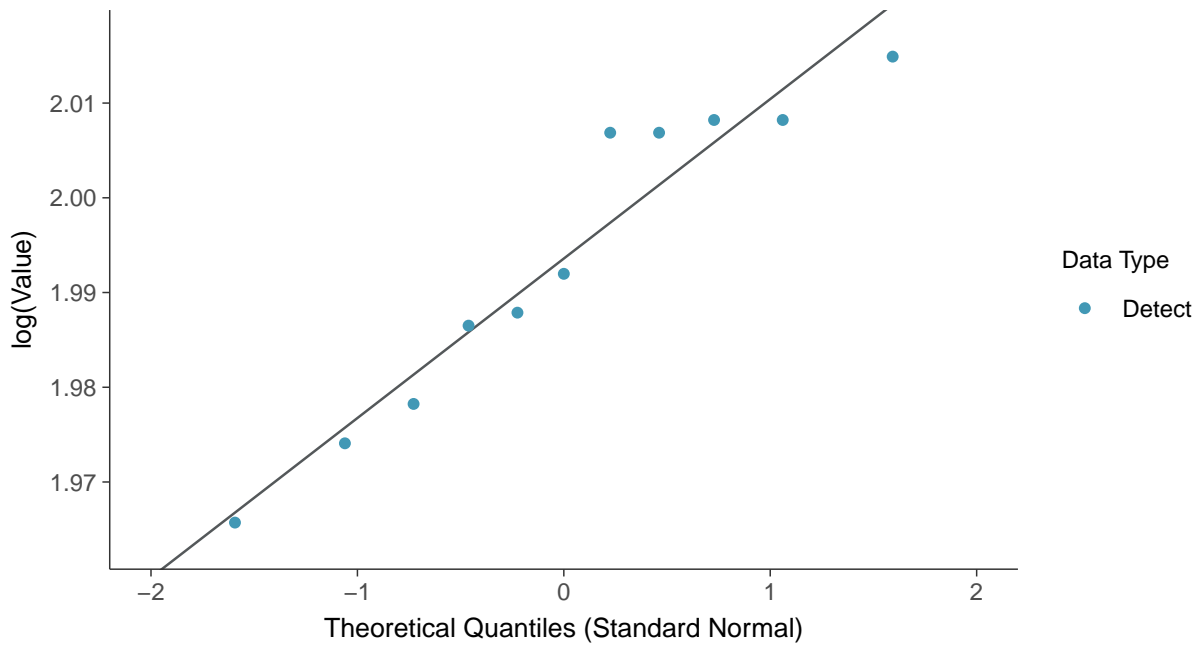
Normal Q-Q plot

pH (field), MW-20 (su)



Lognormal Q-Q plot

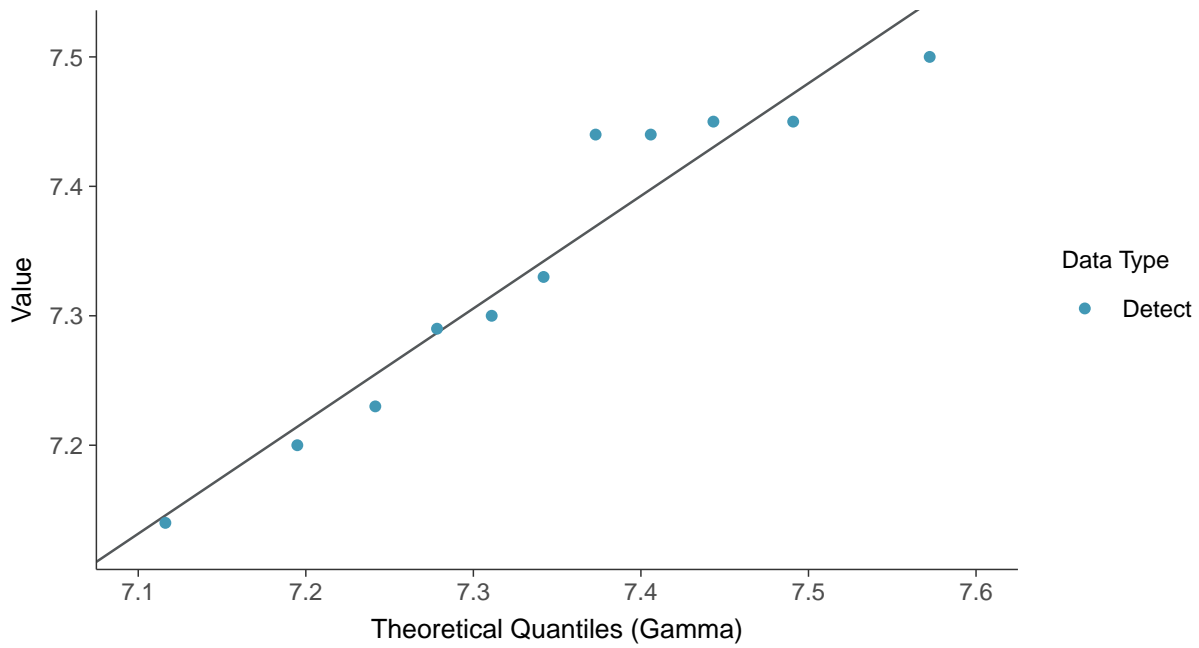
pH (field), MW-20 (su)





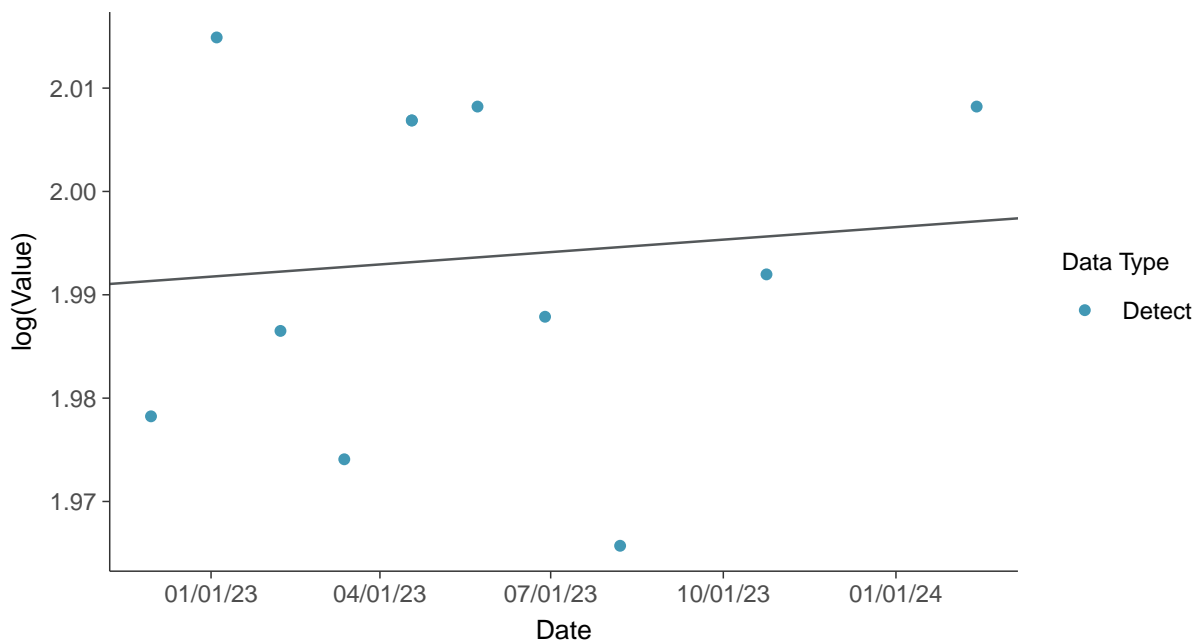
Gamma Q-Q plot

pH (field), MW-20 (su)



Trend Regression: Lognormal MLE

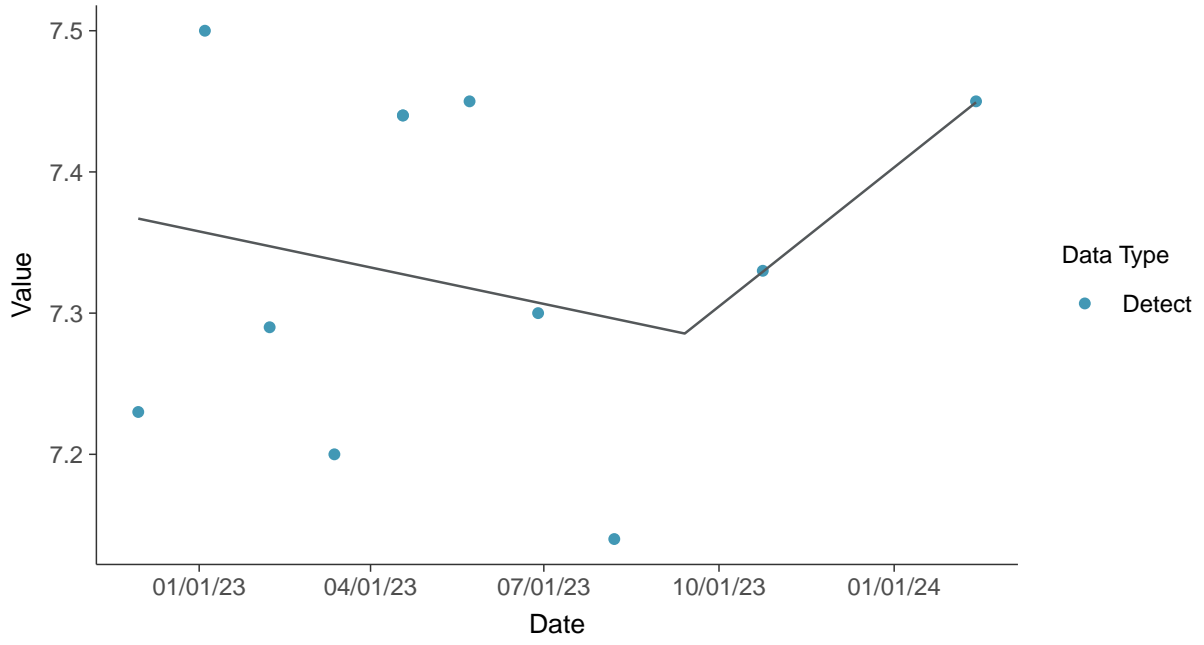
pH (field), MW-20 (su)





Trend Regression: Piecewise Linear-Linear

pH (field), MW-20 (su)



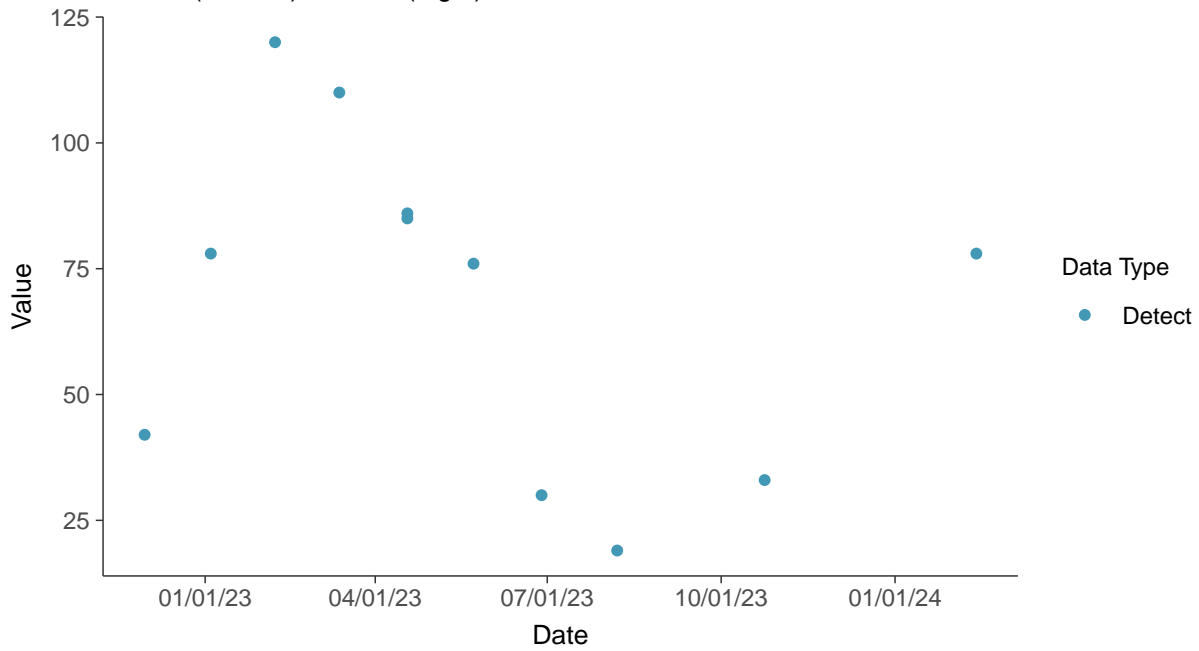


Appendix III: Sulfate (as SO₄), MW-20

ID: 1_30_4_124

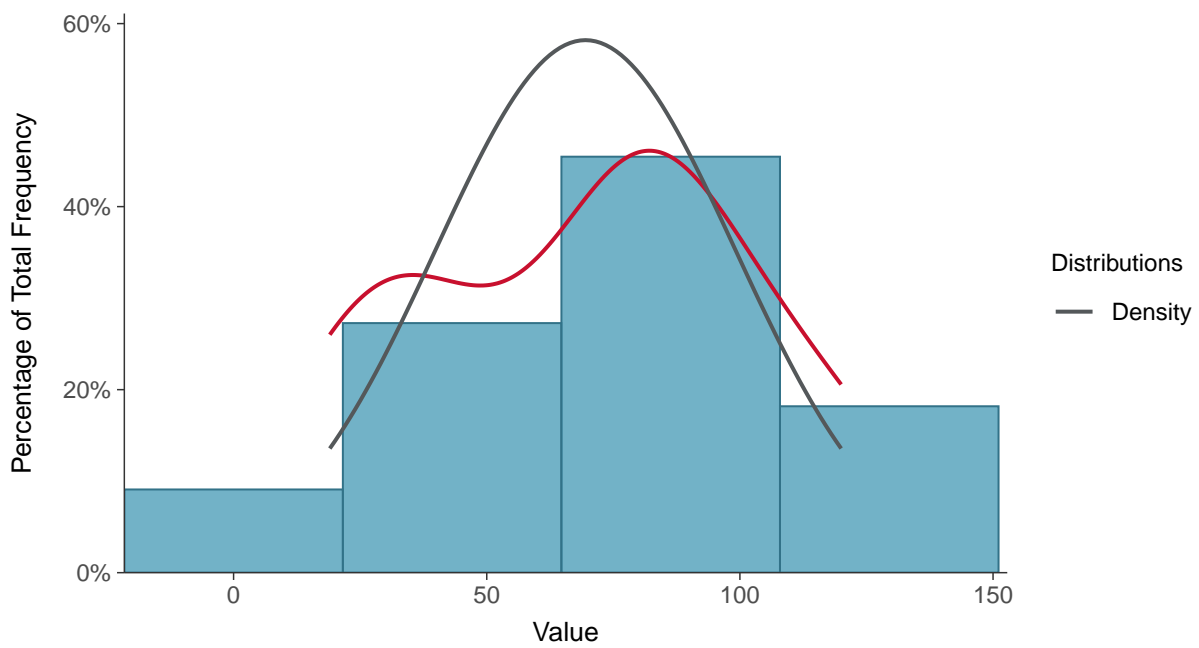
Scatter Plot

Sulfate (as SO₄), MW-20 (mg/L)



Histogram

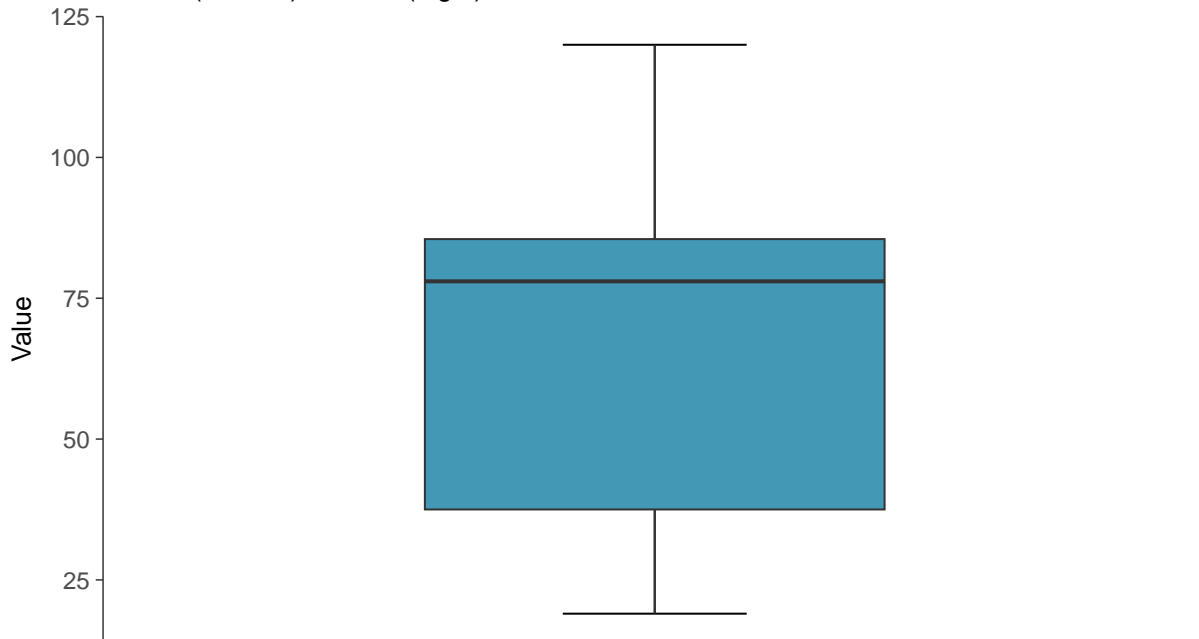
Sulfate (as SO₄), MW-20 (mg/L)





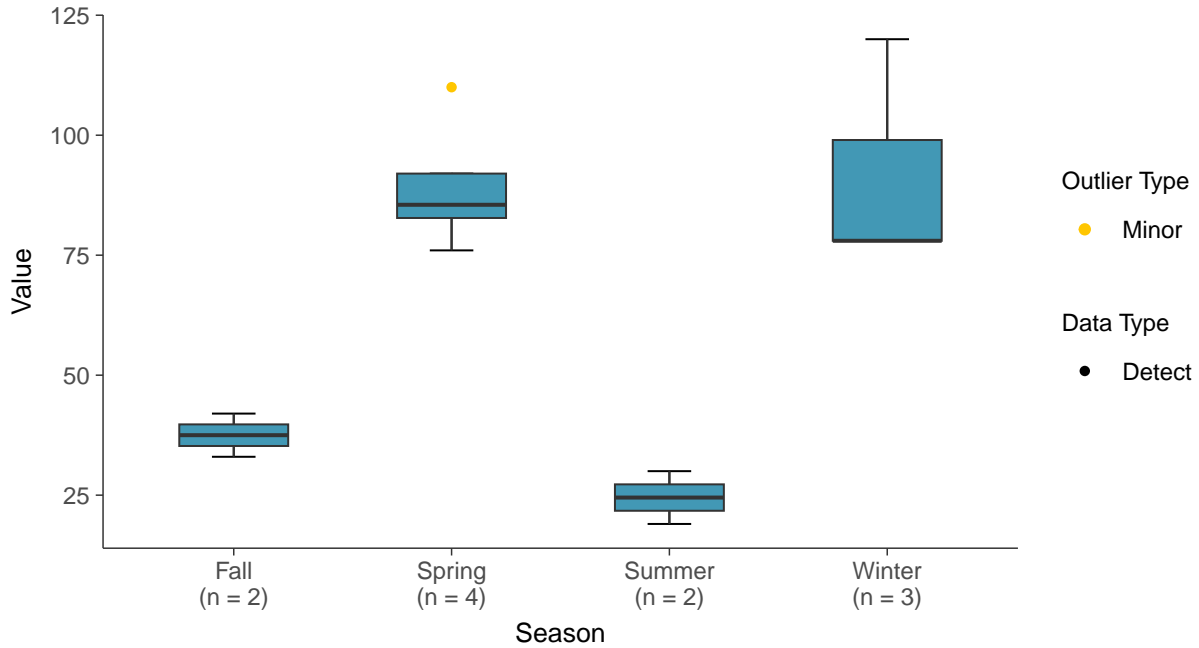
Boxplot

Sulfate (as SO₄), MW-20 (mg/L)



Boxplot by Season

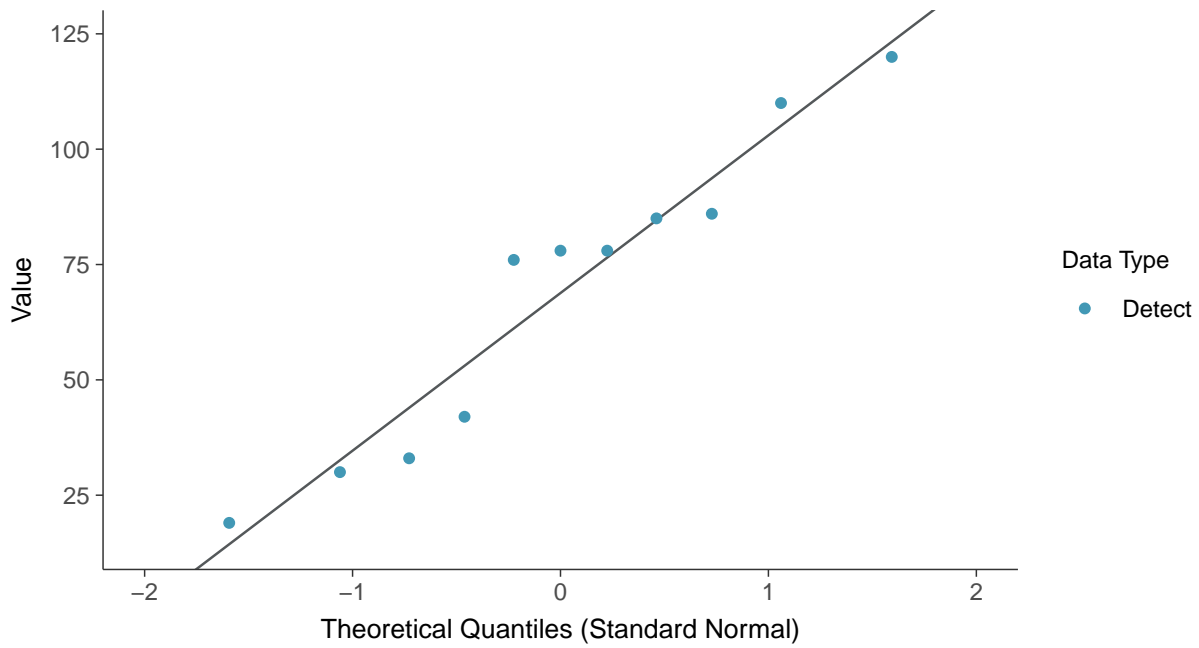
Sulfate (as SO₄), MW-20 (mg/L)





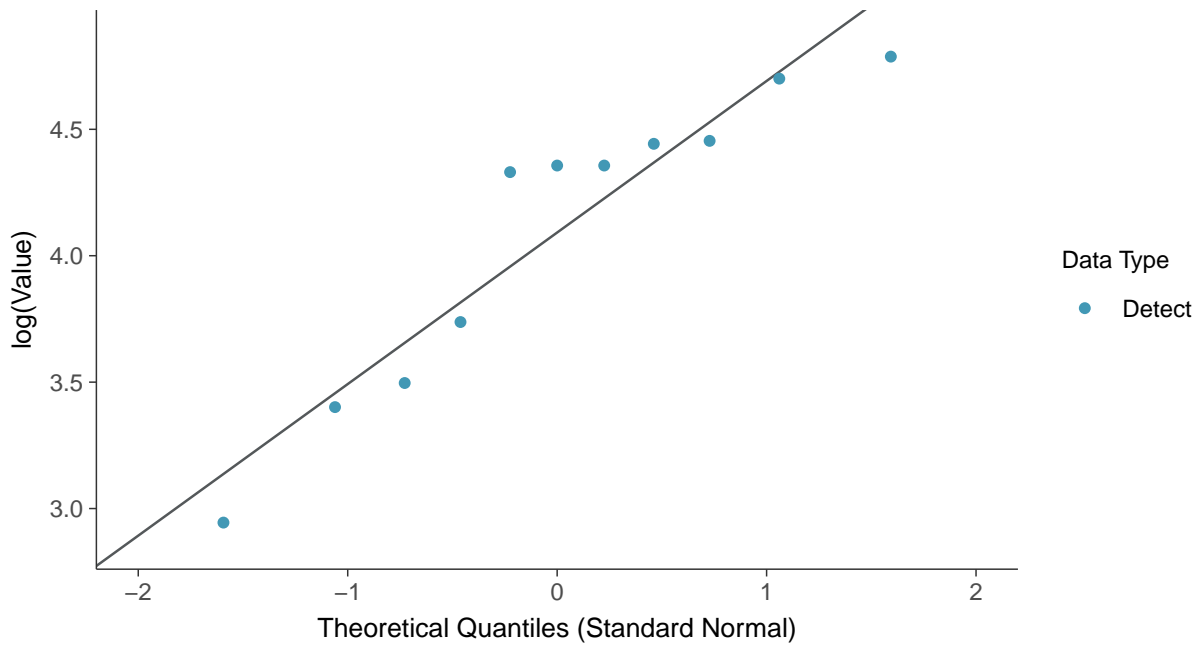
Normal Q-Q plot

Sulfate (as SO₄), MW-20 (mg/L)



Lognormal Q-Q plot

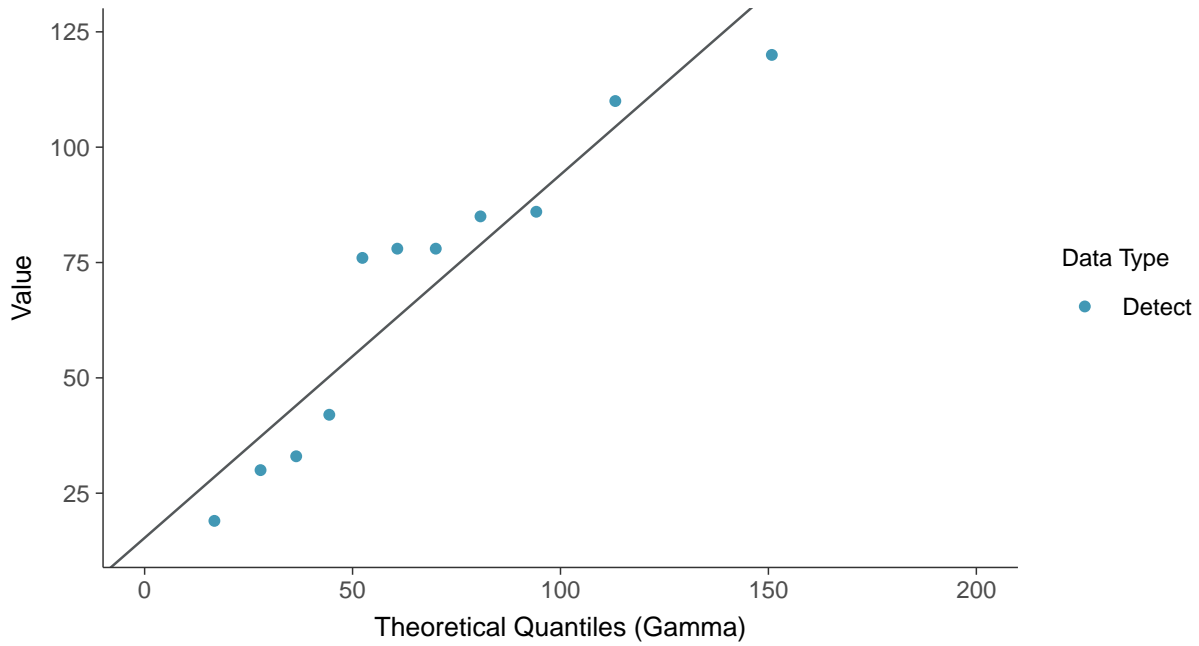
Sulfate (as SO₄), MW-20 (mg/L)





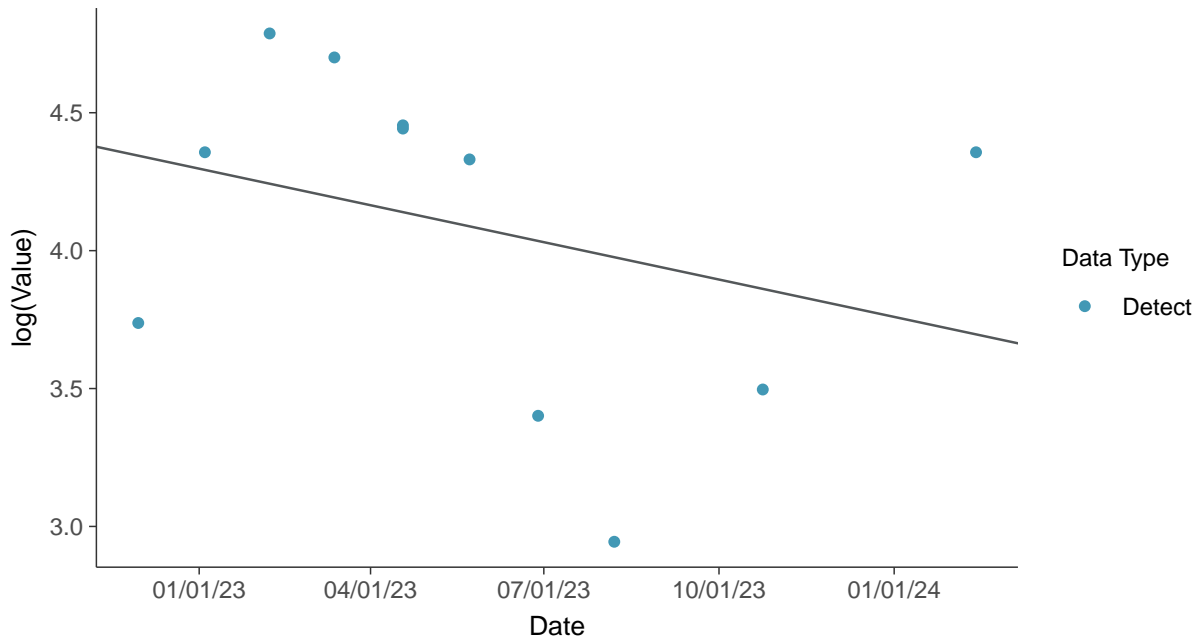
Gamma Q-Q plot

Sulfate (as SO₄), MW-20 (mg/L)



Trend Regression: Lognormal MLE

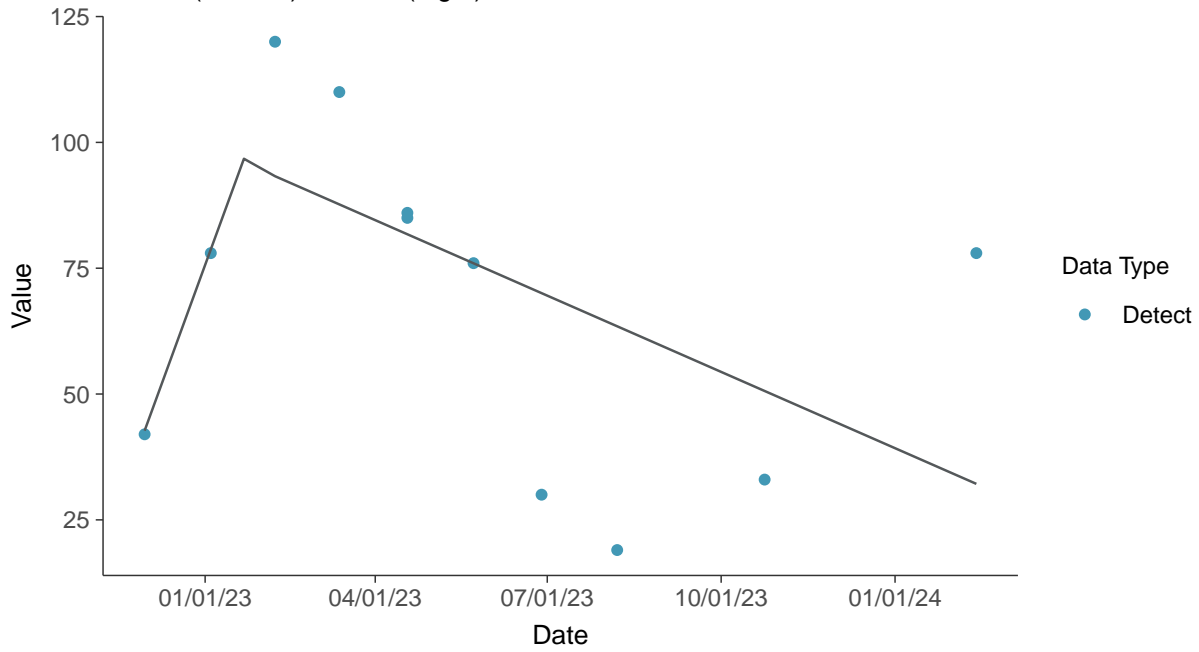
Sulfate (as SO₄), MW-20 (mg/L)





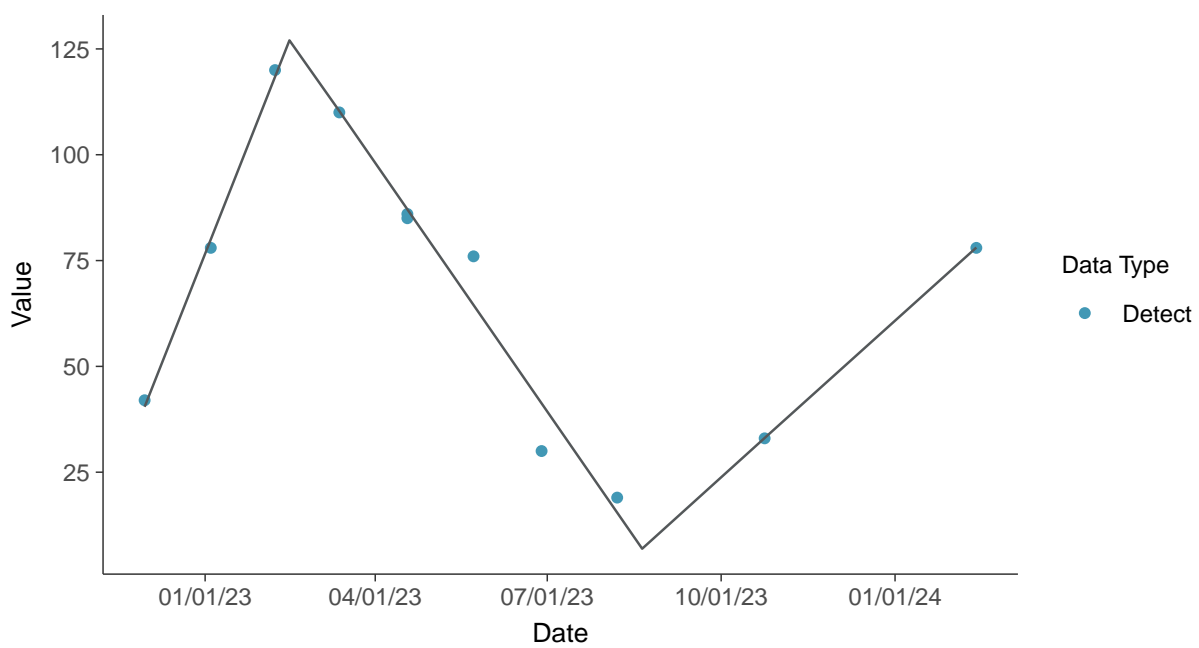
Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO₄), MW-20 (mg/L)



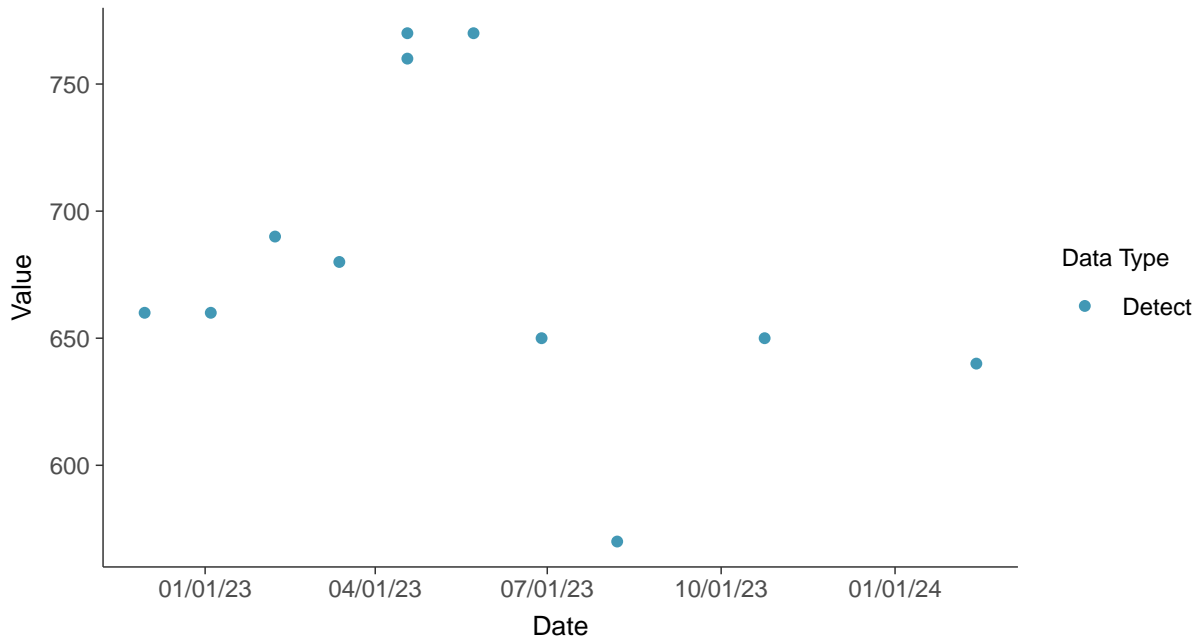


Appendix III: Total Dissolved Solids, MW-20

ID: 1_30_4_126

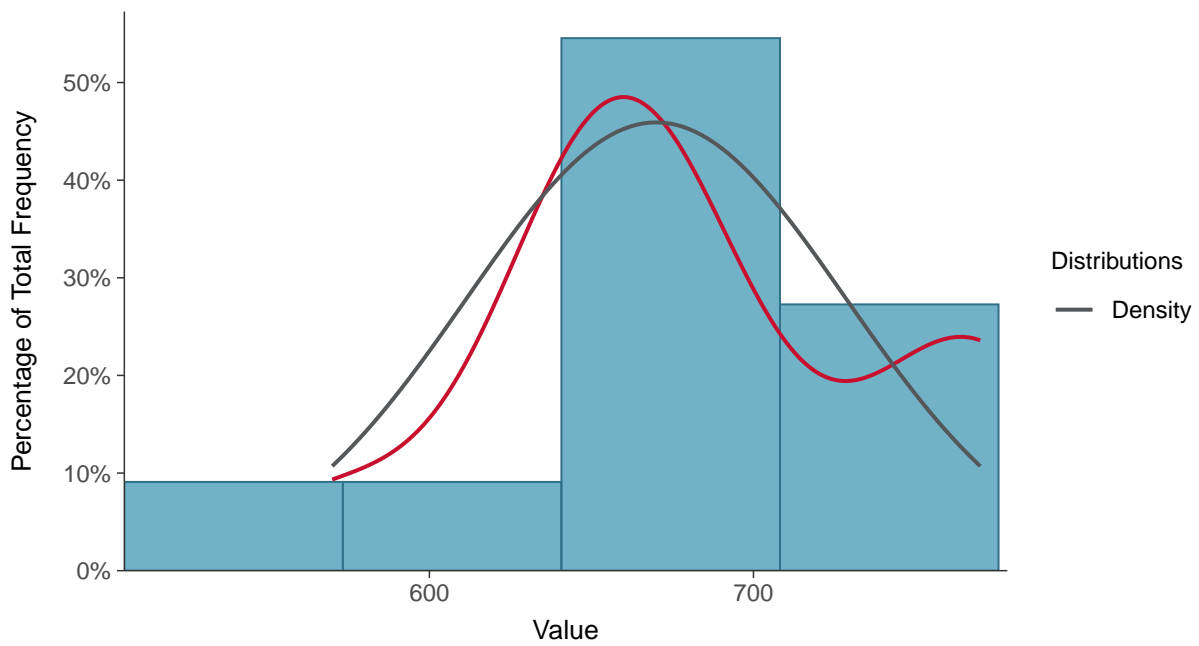
Scatter Plot

Total Dissolved Solids, MW-20 (mg/L)



Histogram

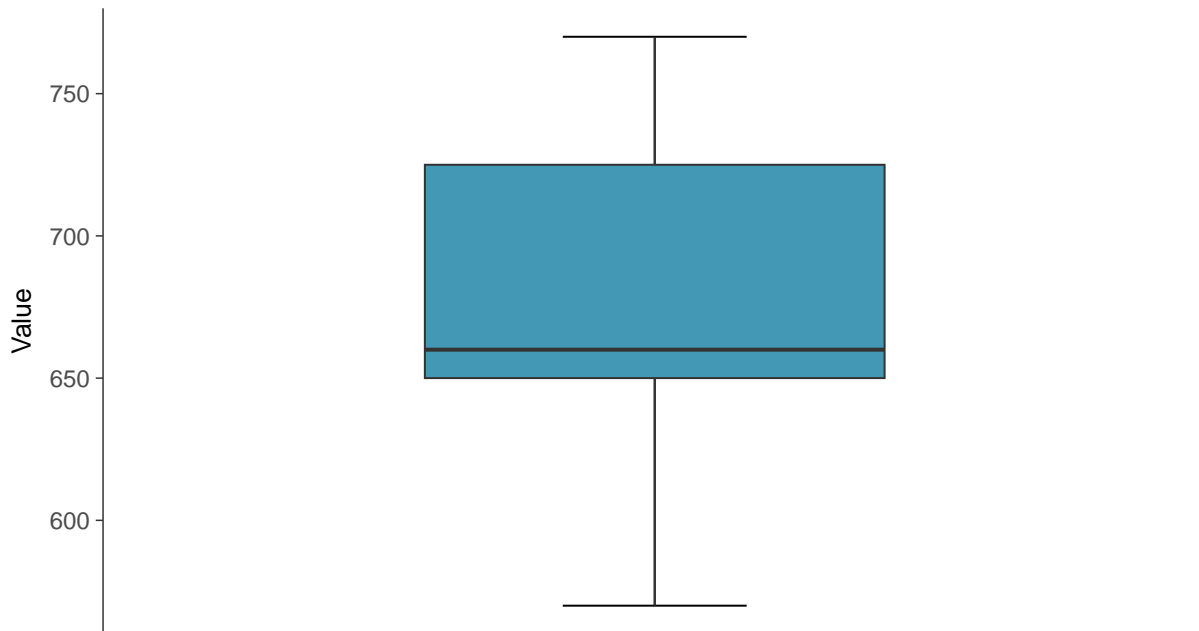
Total Dissolved Solids, MW-20 (mg/L)





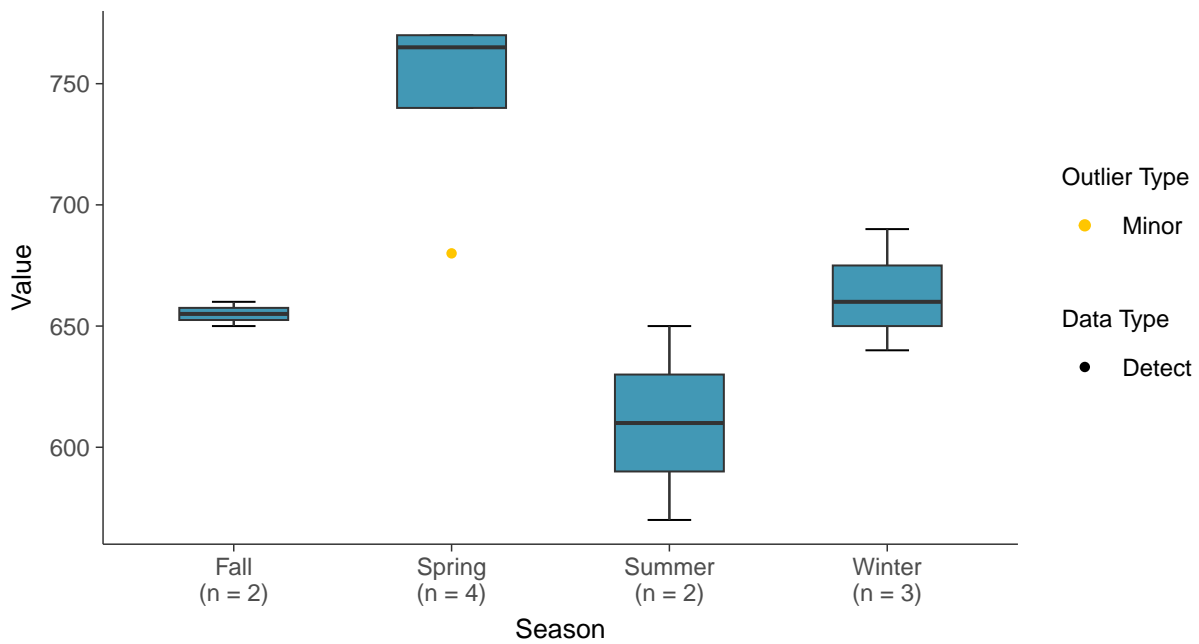
Boxplot

Total Dissolved Solids, MW-20 (mg/L)



Boxplot by Season

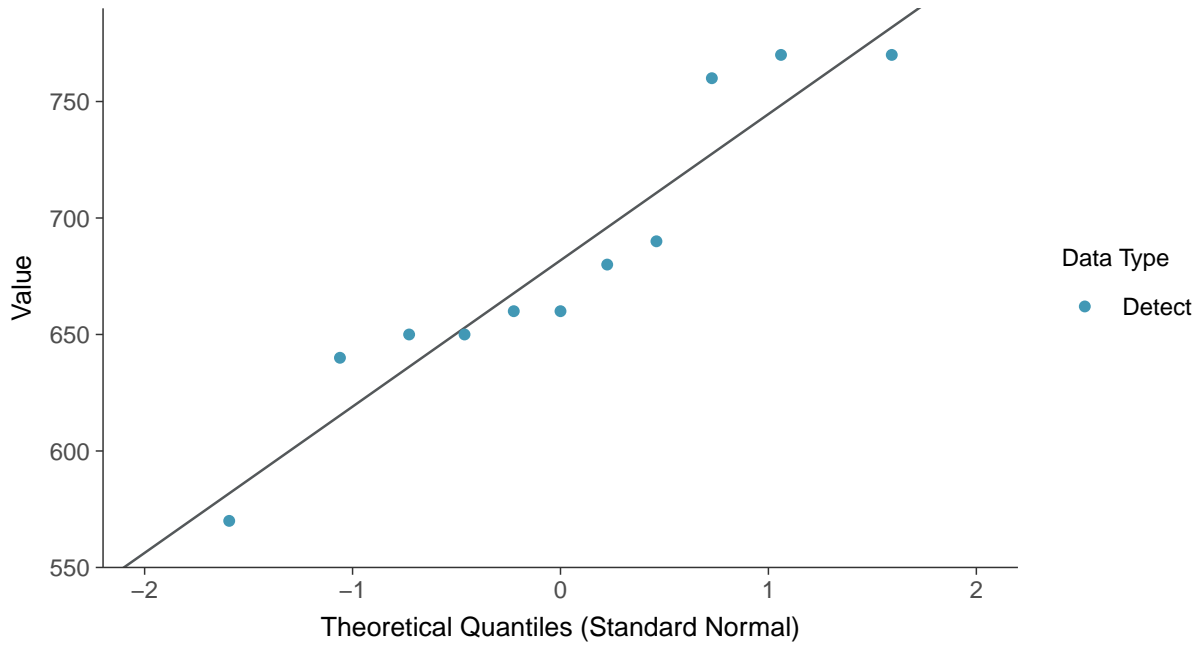
Total Dissolved Solids, MW-20 (mg/L)





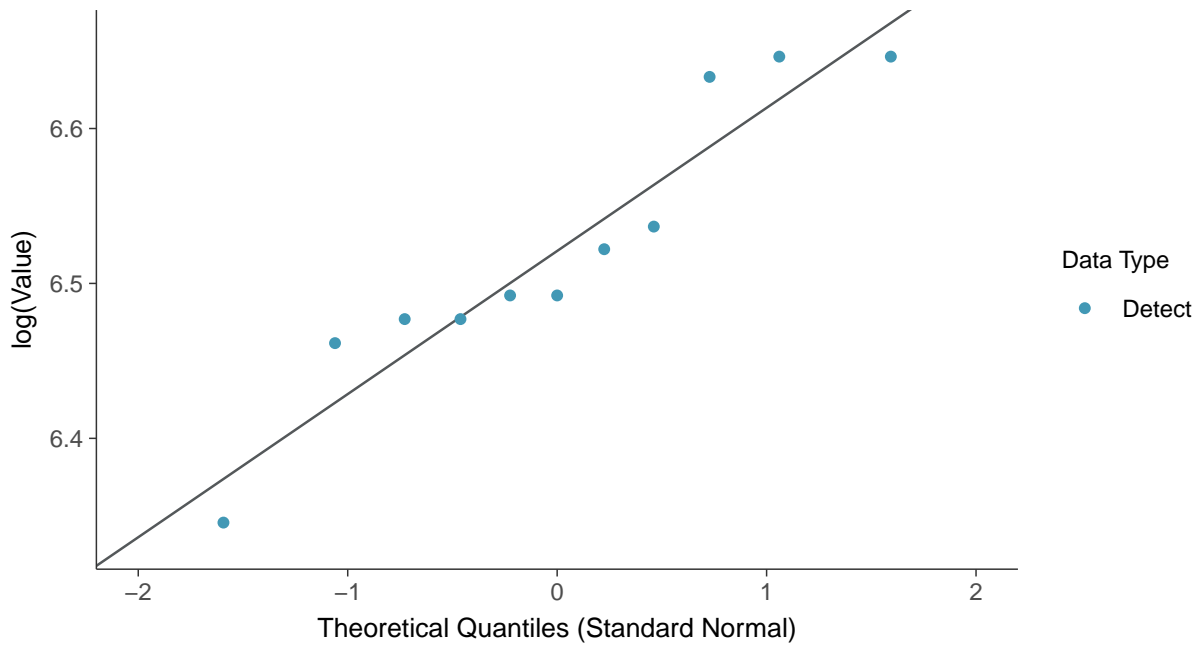
Normal Q-Q plot

Total Dissolved Solids, MW-20 (mg/L)



Lognormal Q-Q plot

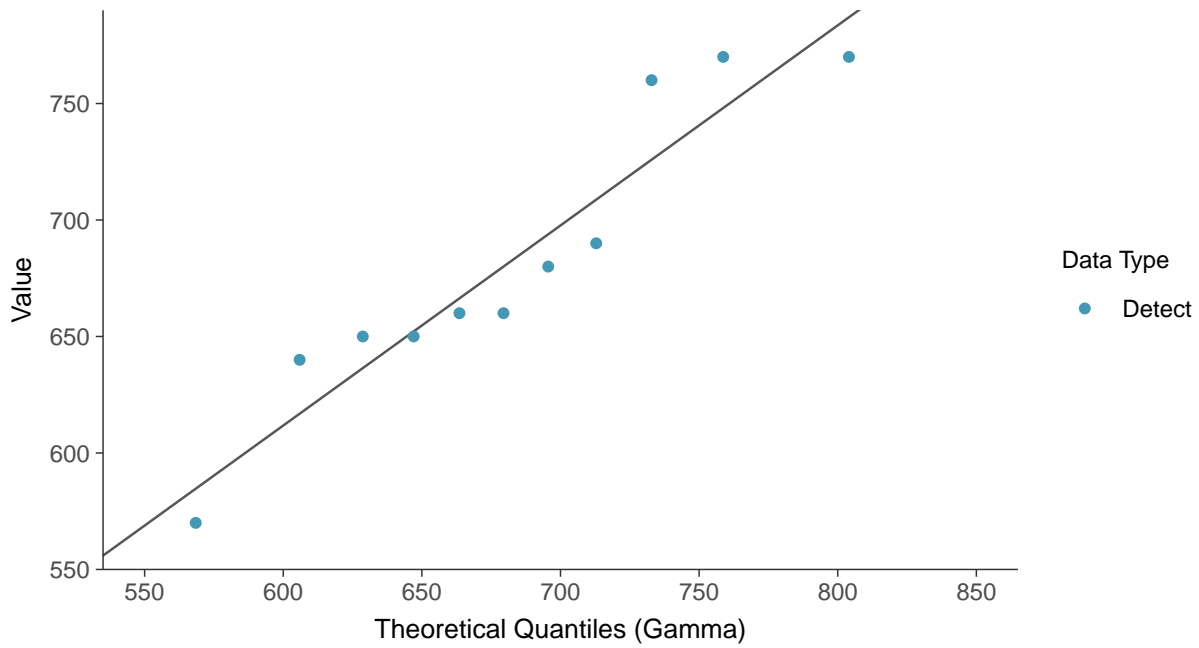
Total Dissolved Solids, MW-20 (mg/L)





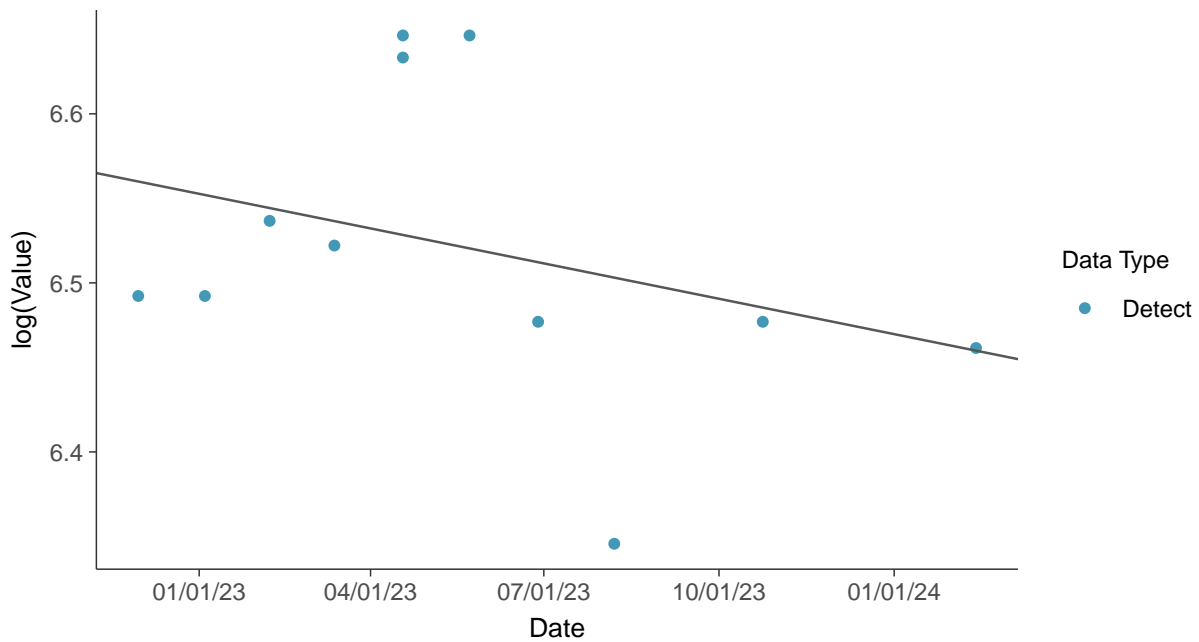
Gamma Q-Q plot

Total Dissolved Solids, MW-20 (mg/L)



Trend Regression: Lognormal MLE

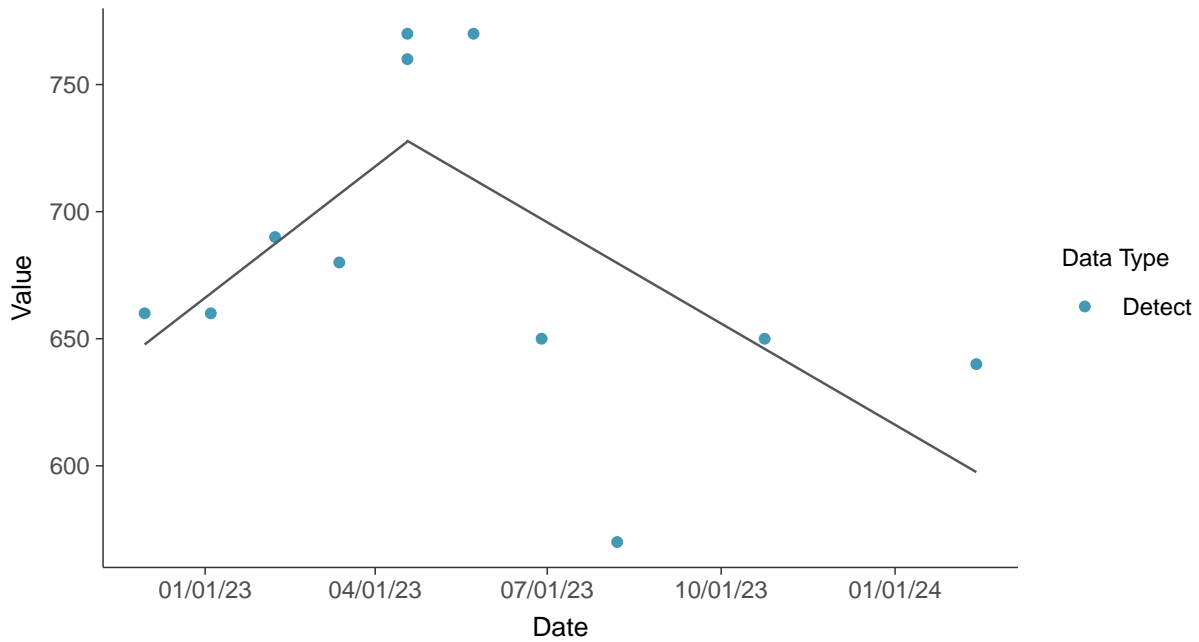
Total Dissolved Solids, MW-20 (mg/L)





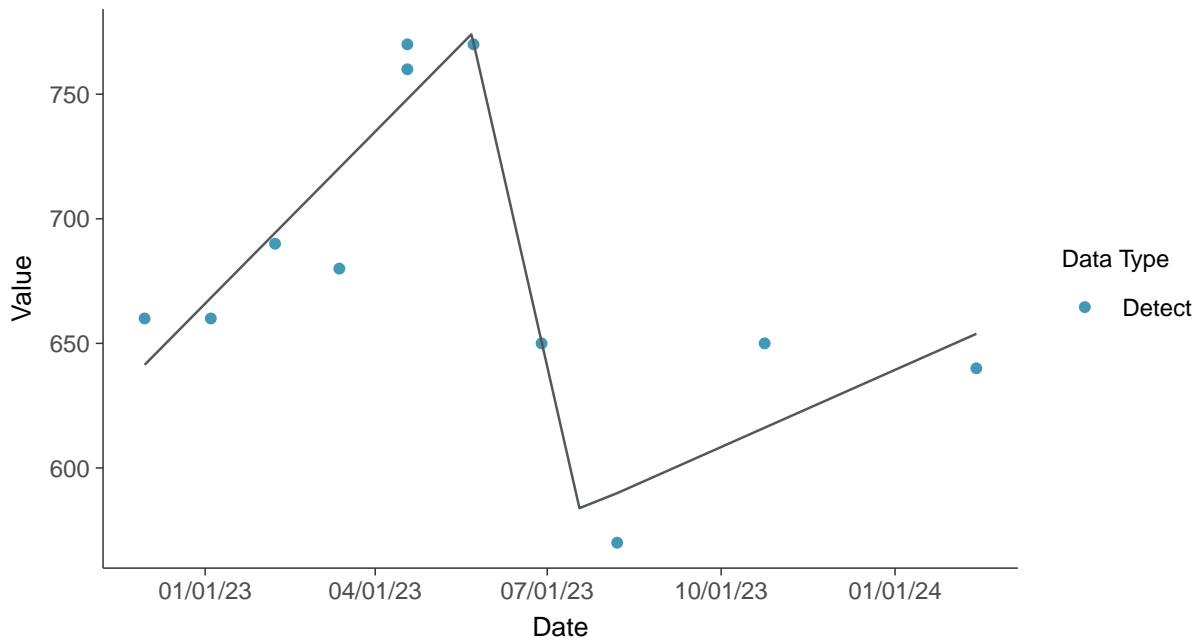
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

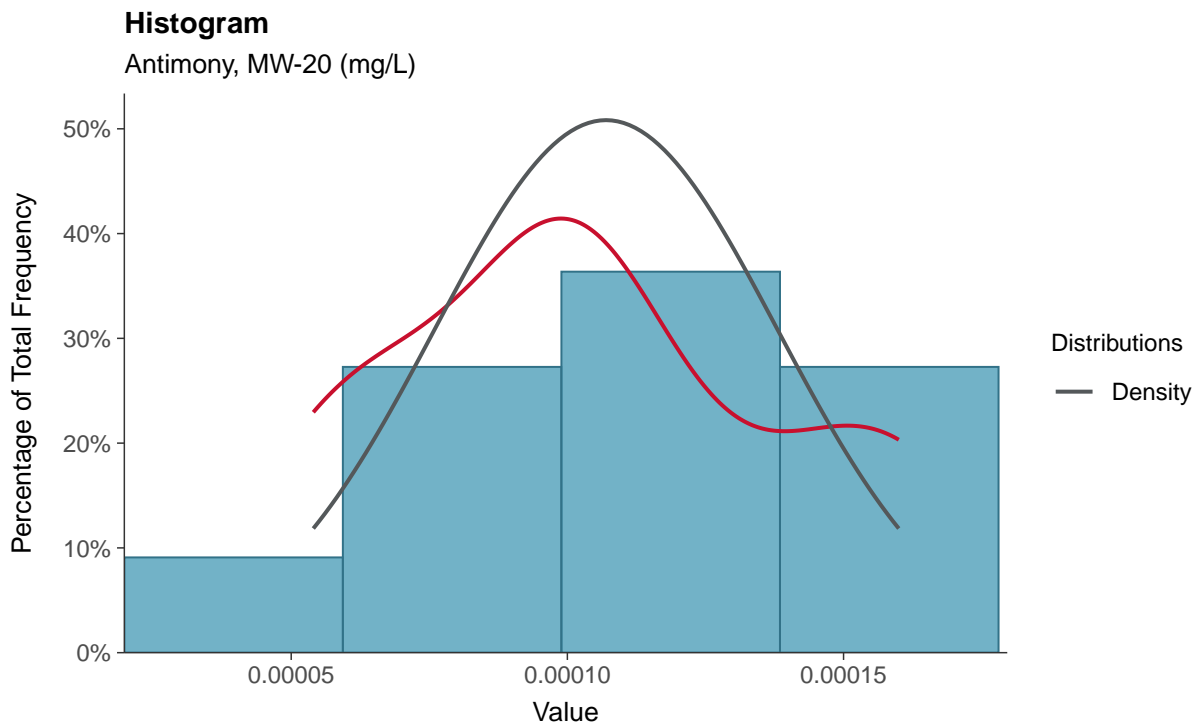
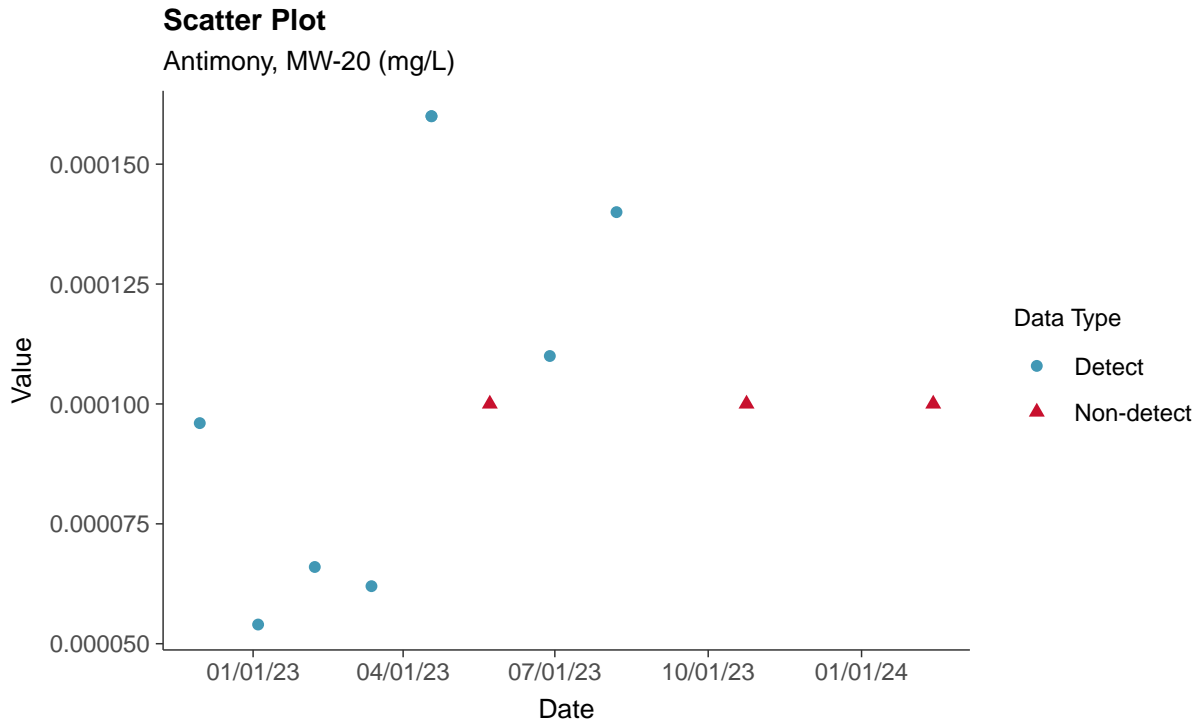
Total Dissolved Solids, MW-20 (mg/L)





Appendix IV: Antimony, MW-20

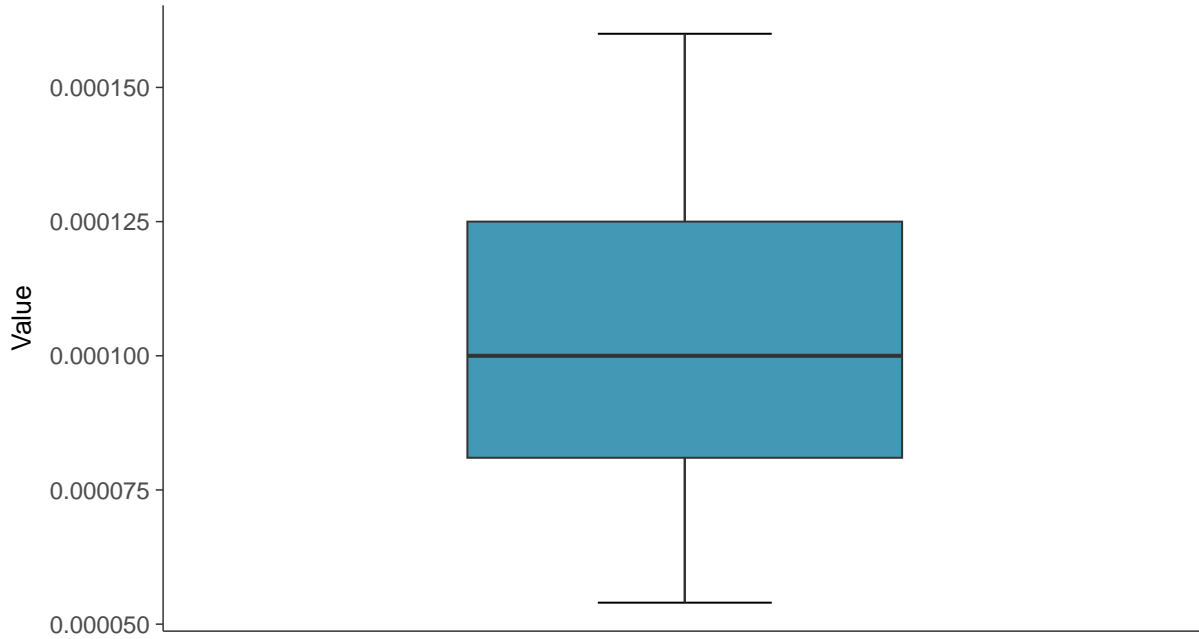
ID: 1_30_5_101





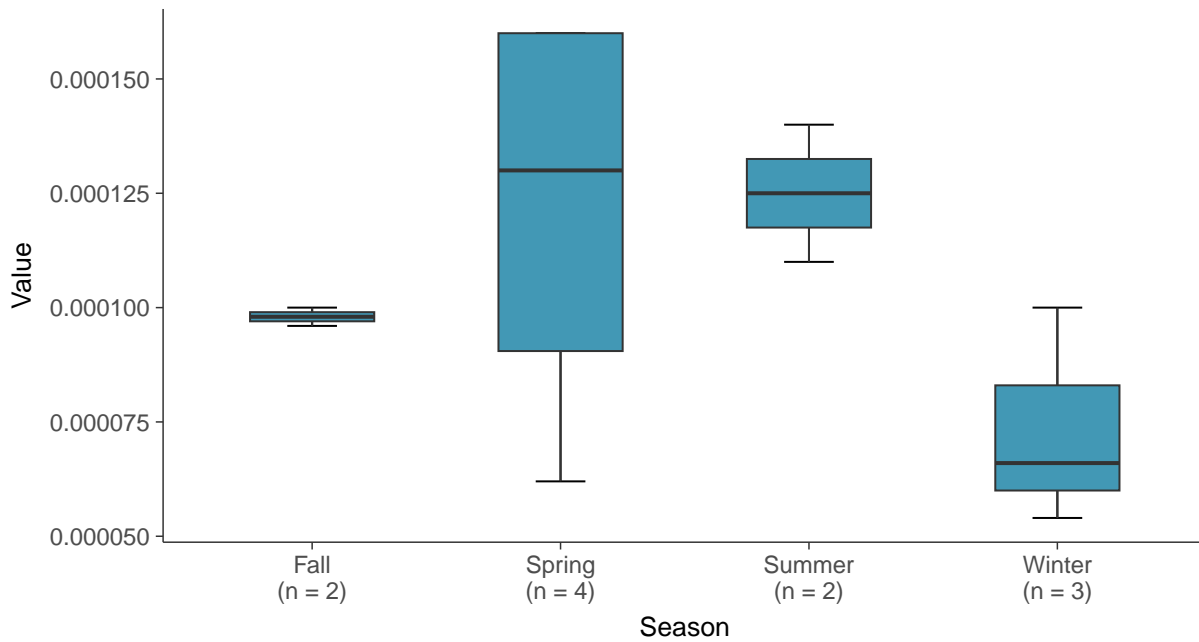
Boxplot

Antimony, MW-20 (mg/L)



Boxplot by Season

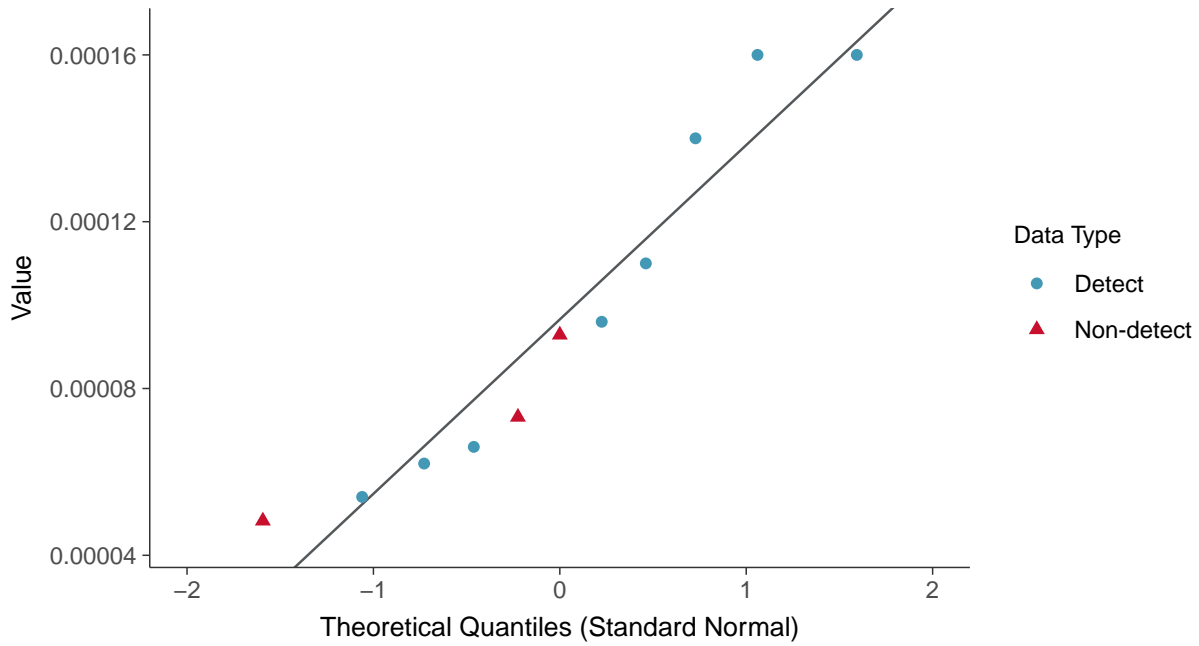
Antimony, MW-20 (mg/L)





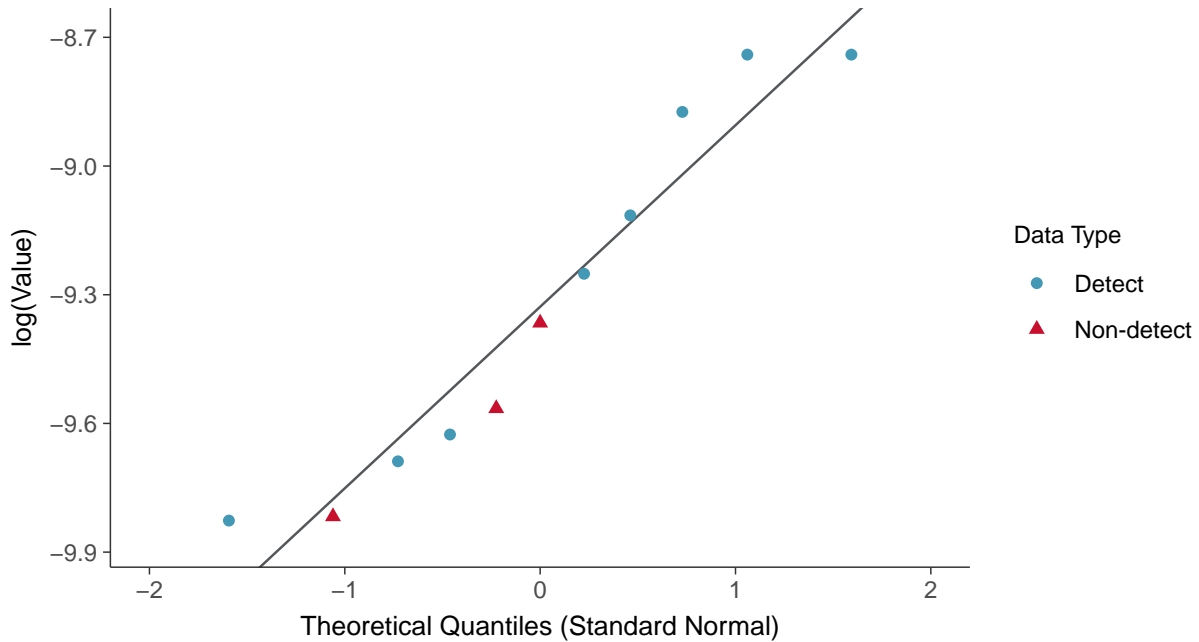
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-20 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

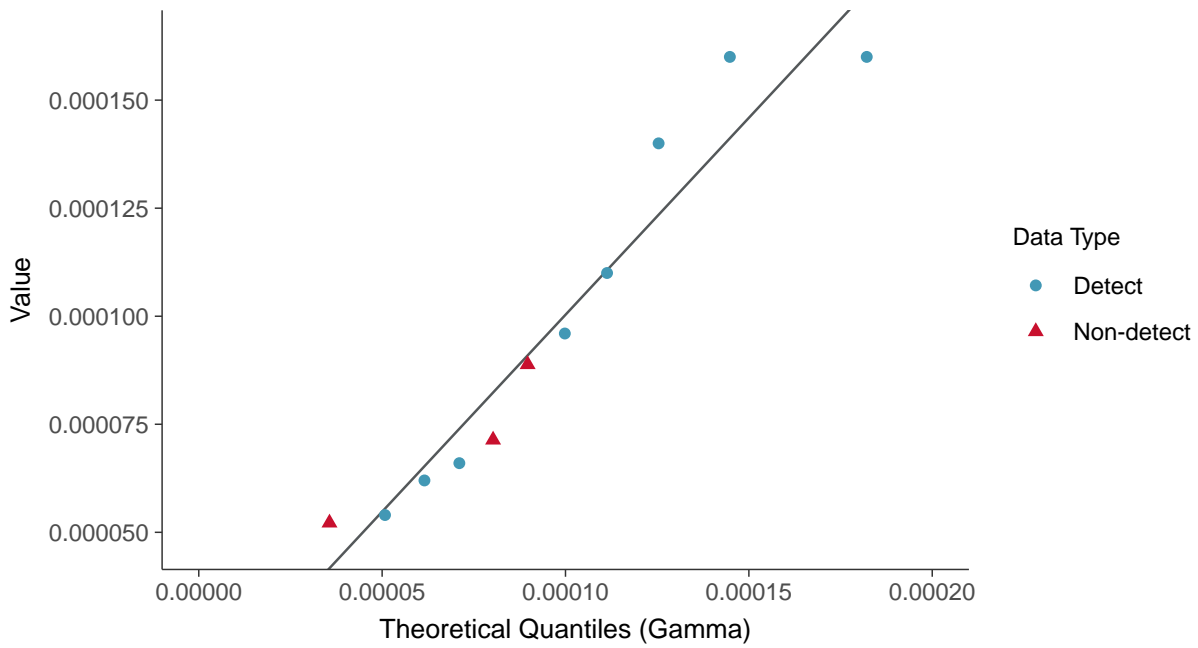
Antimony, MW-20 (mg/L)





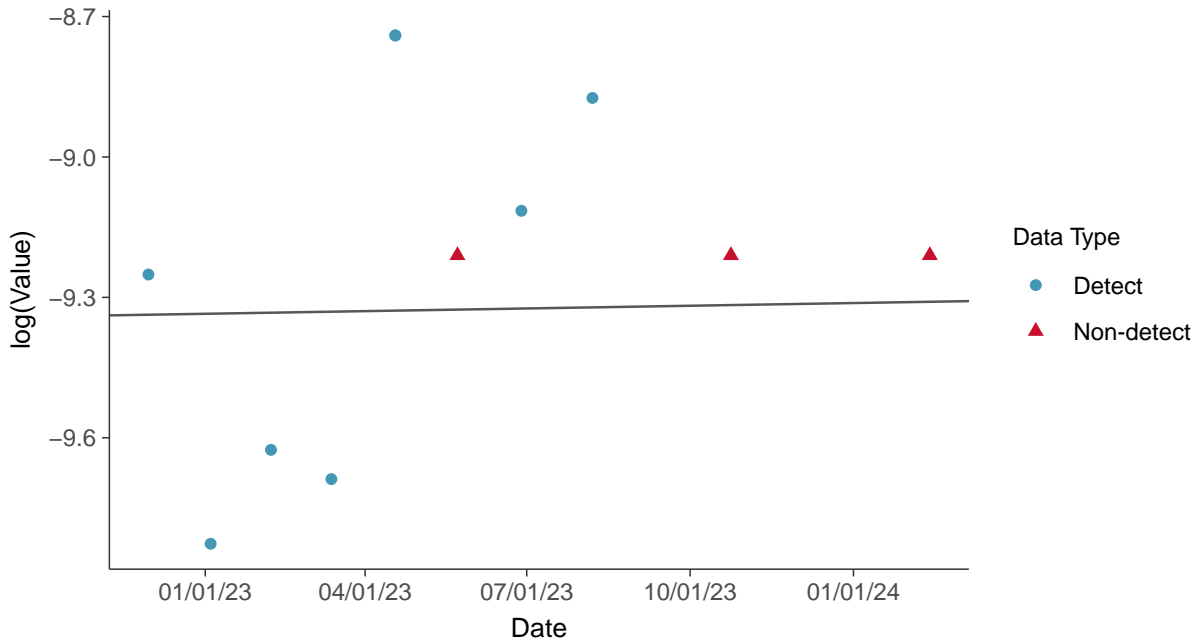
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-20 (mg/L)



Trend Regression: Lognormal MLE

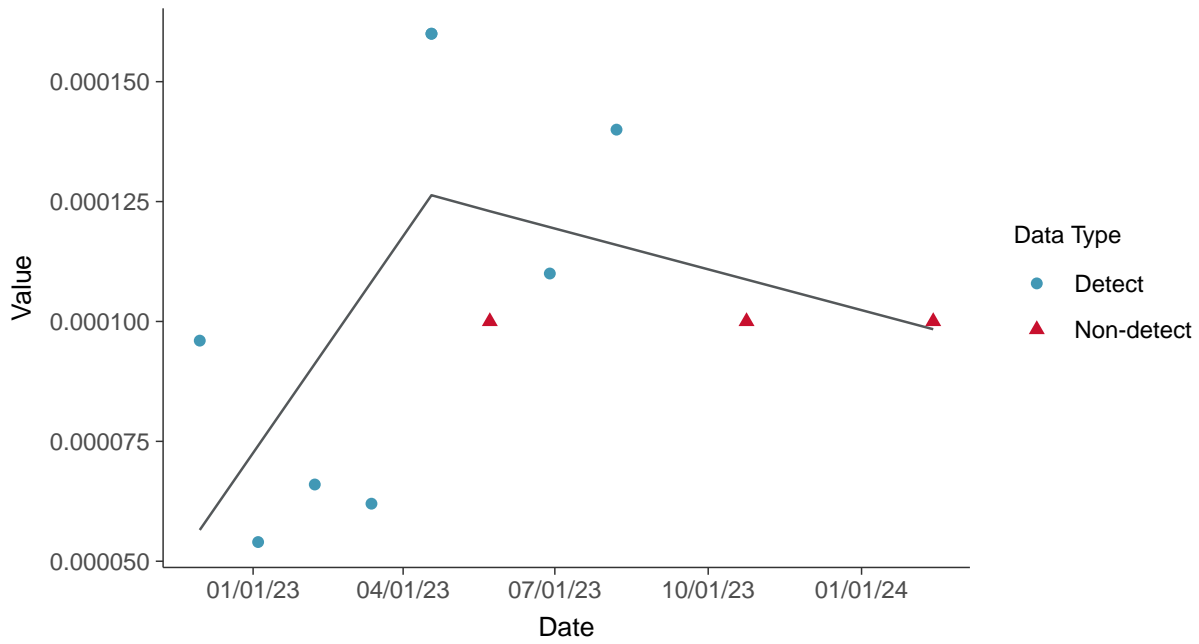
Antimony, MW-20 (mg/L)





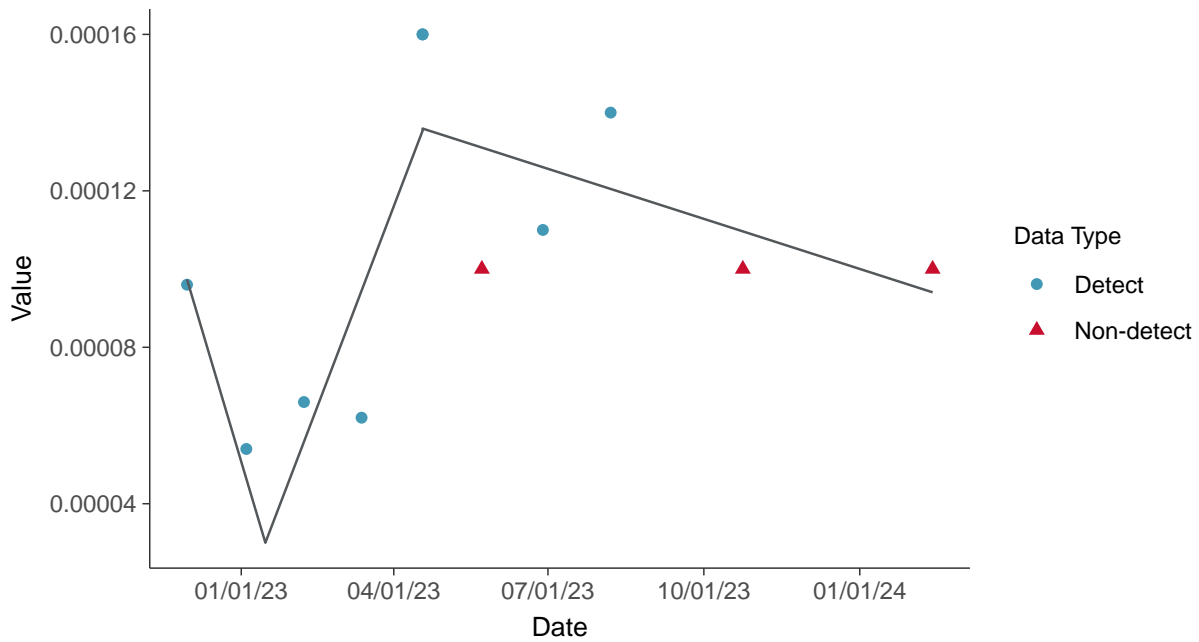
Trend Regression: Piecewise Linear-Linear

Antimony, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-20 (mg/L)



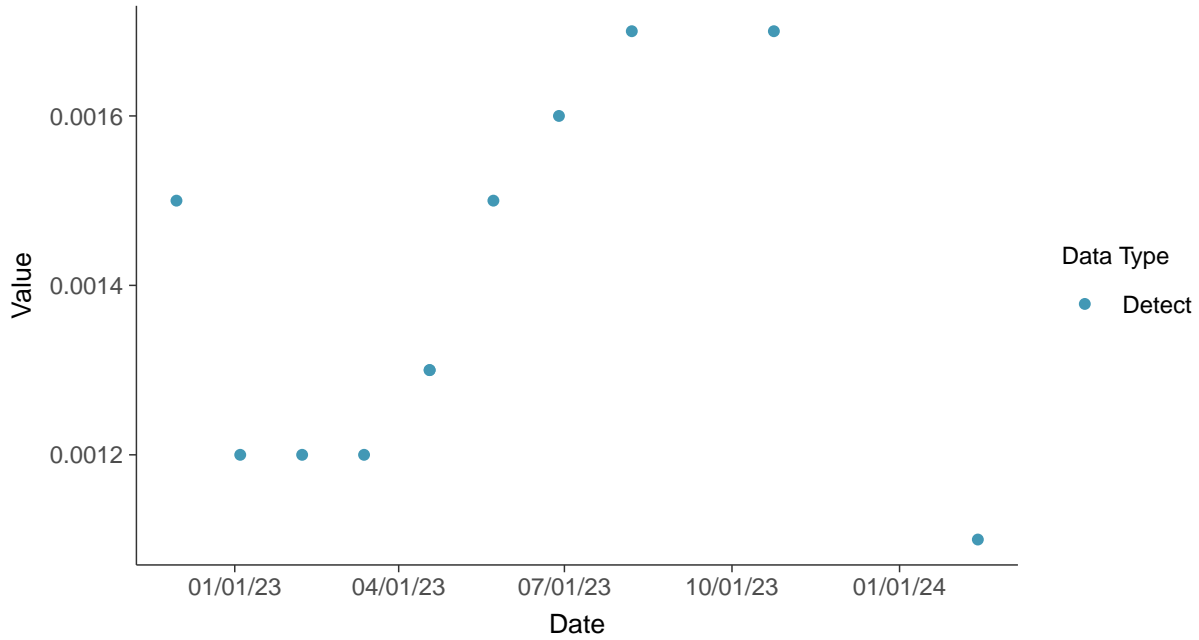


Appendix IV: Arsenic, MW-20

ID: 1_30_5_102

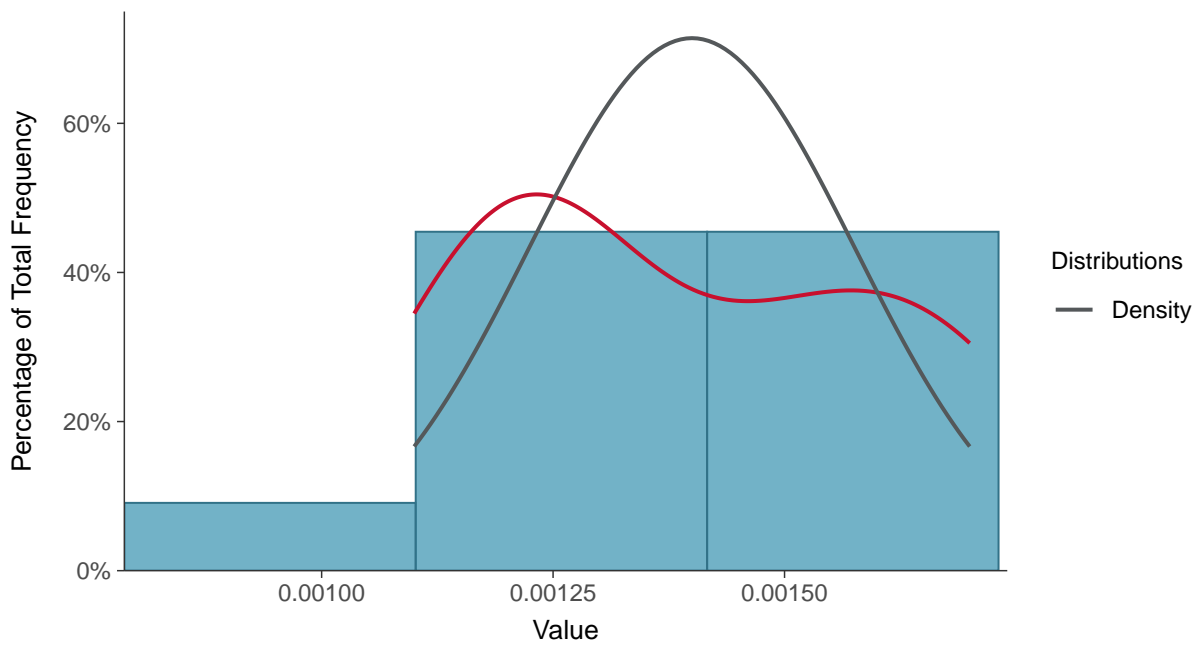
Scatter Plot

Arsenic, MW-20 (mg/L)



Histogram

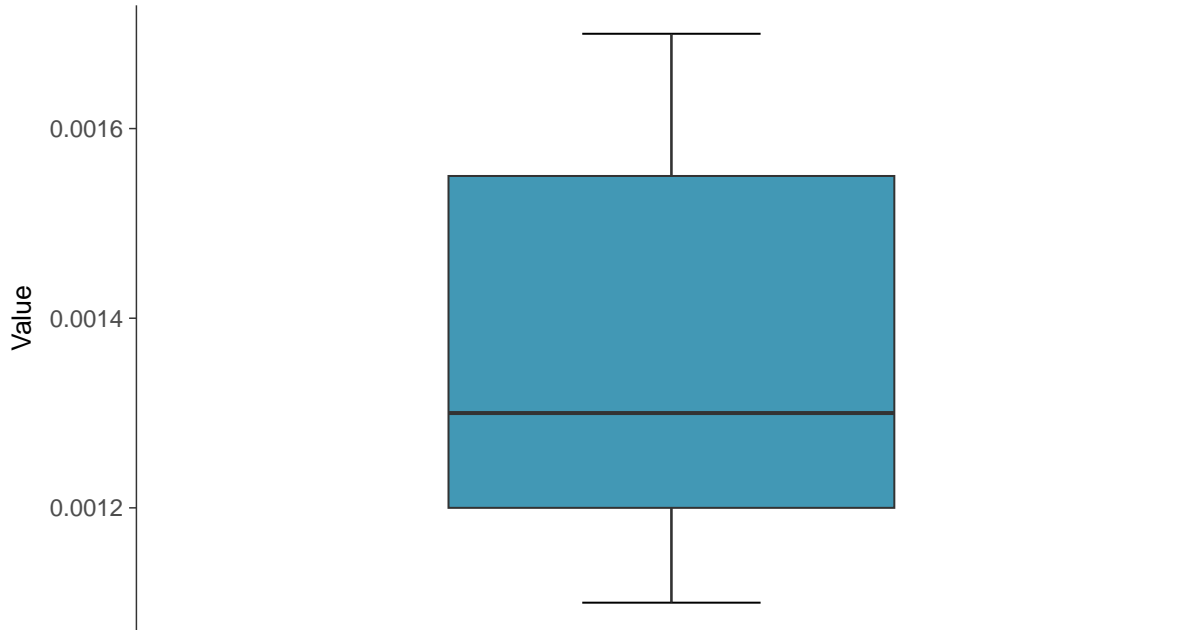
Arsenic, MW-20 (mg/L)





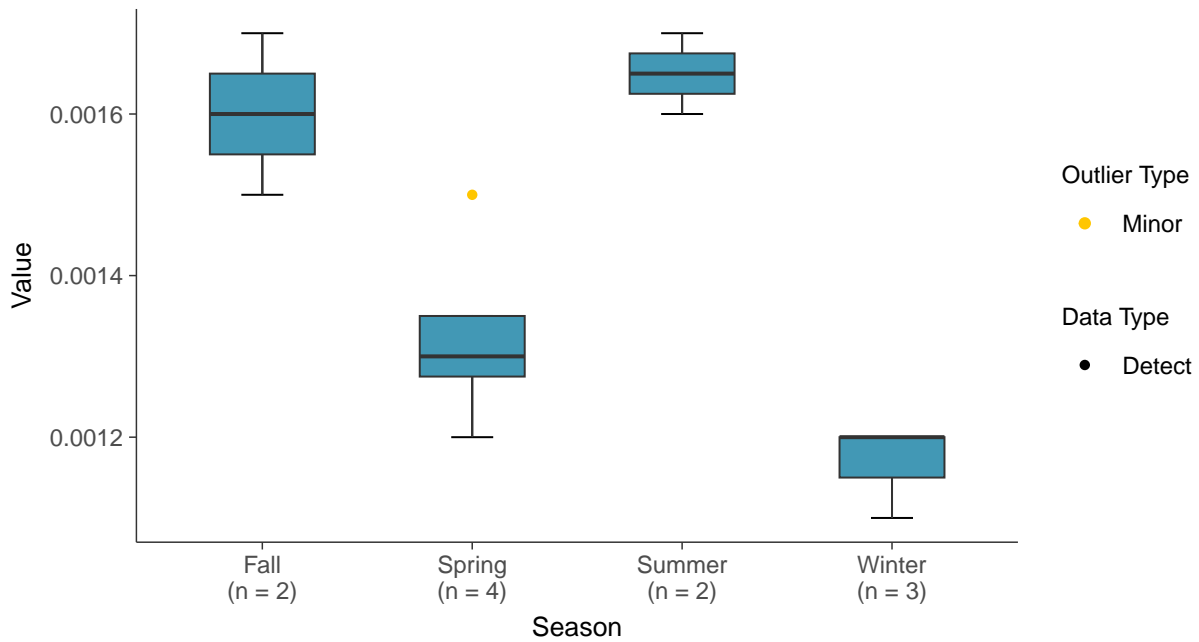
Boxplot

Arsenic, MW-20 (mg/L)



Boxplot by Season

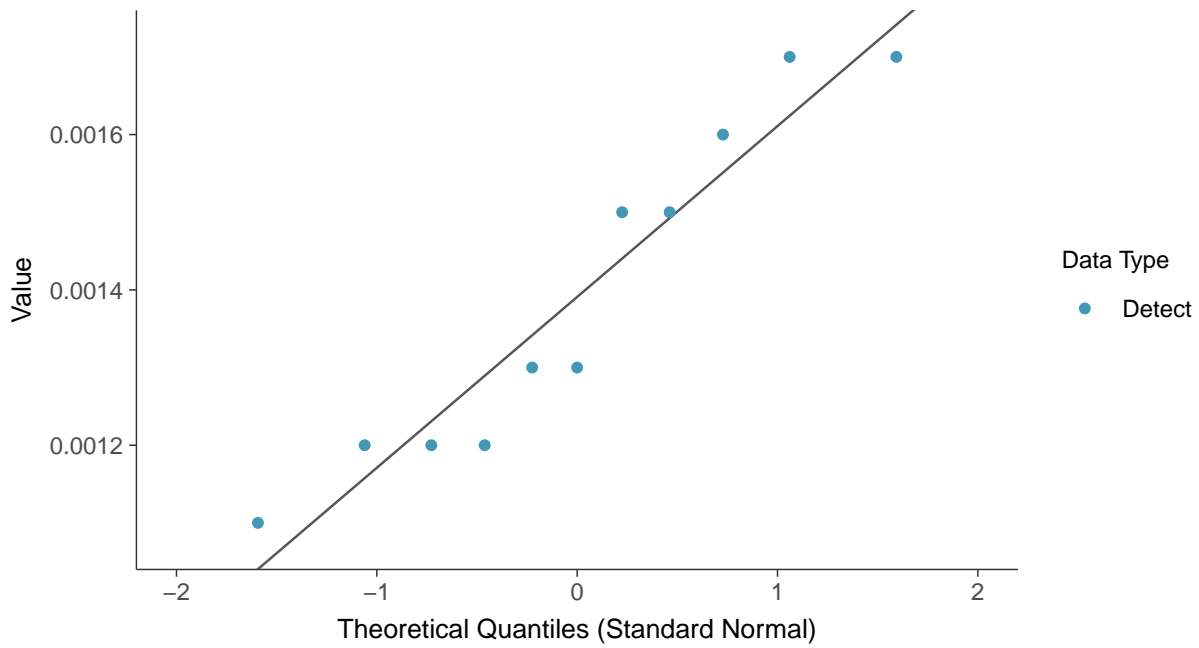
Arsenic, MW-20 (mg/L)





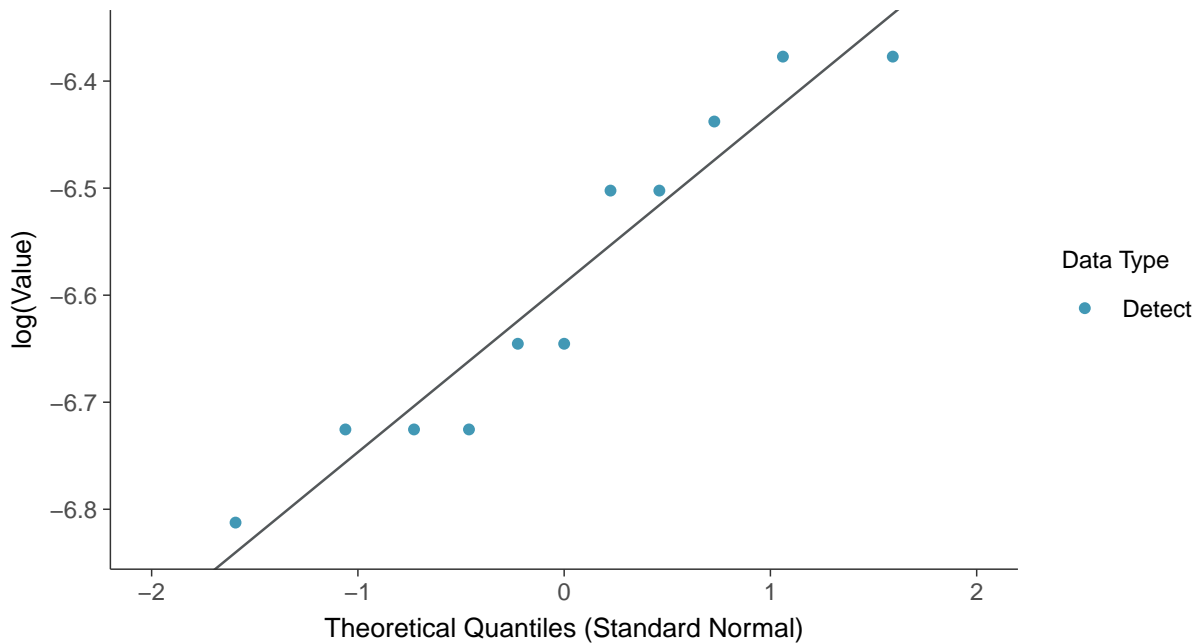
Normal Q-Q plot

Arsenic, MW-20 (mg/L)



Lognormal Q-Q plot

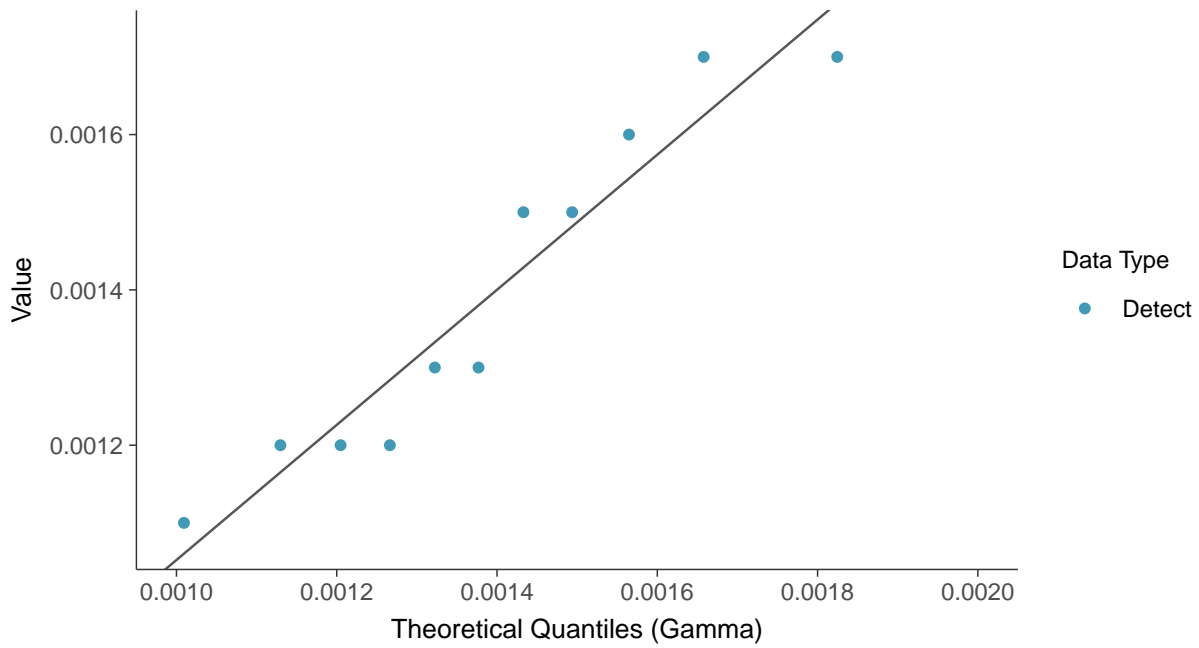
Arsenic, MW-20 (mg/L)





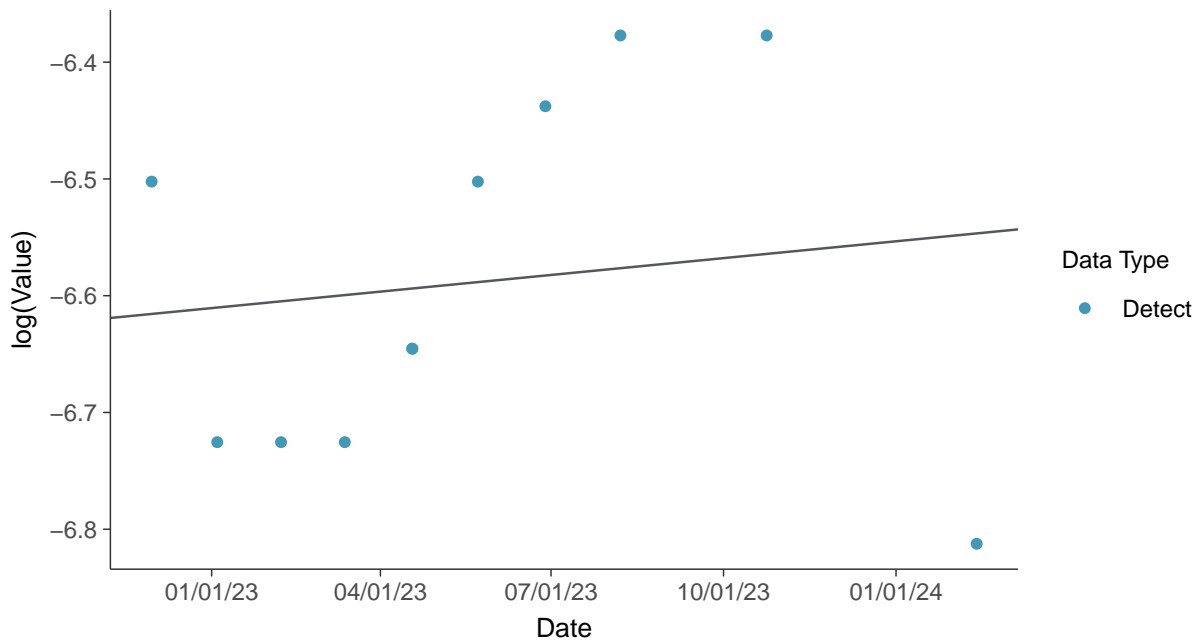
Gamma Q-Q plot

Arsenic, MW-20 (mg/L)



Trend Regression: Lognormal MLE

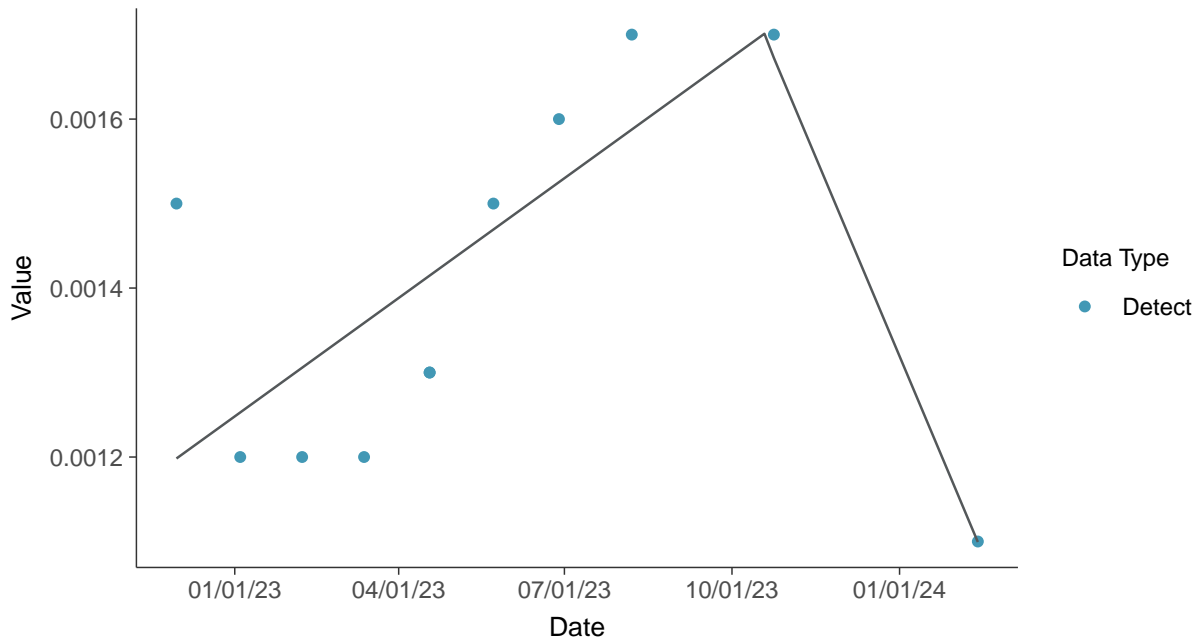
Arsenic, MW-20 (mg/L)





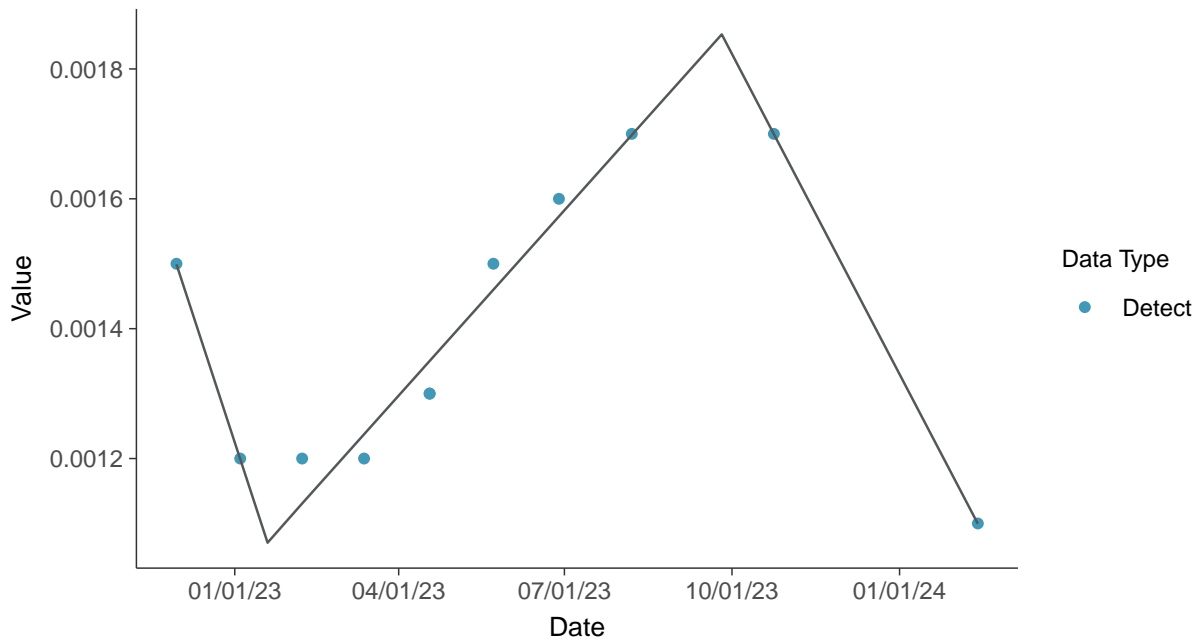
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-20 (mg/L)



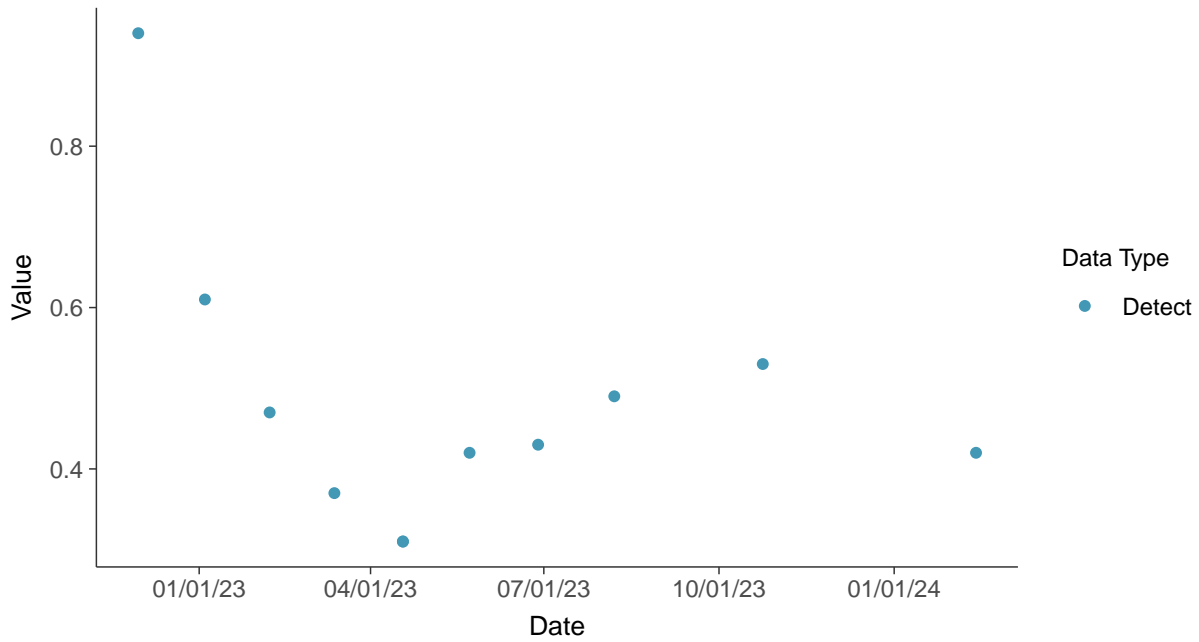


Appendix IV: Barium, MW-20

ID: 1_30_5_103

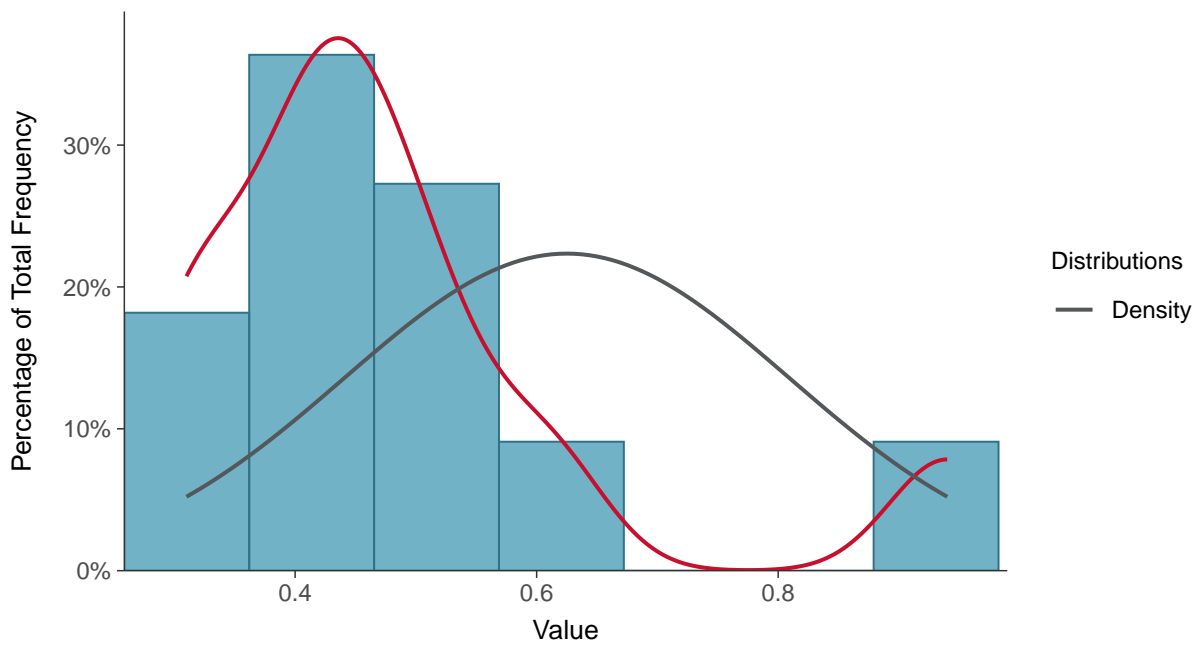
Scatter Plot

Barium, MW-20 (mg/L)



Histogram

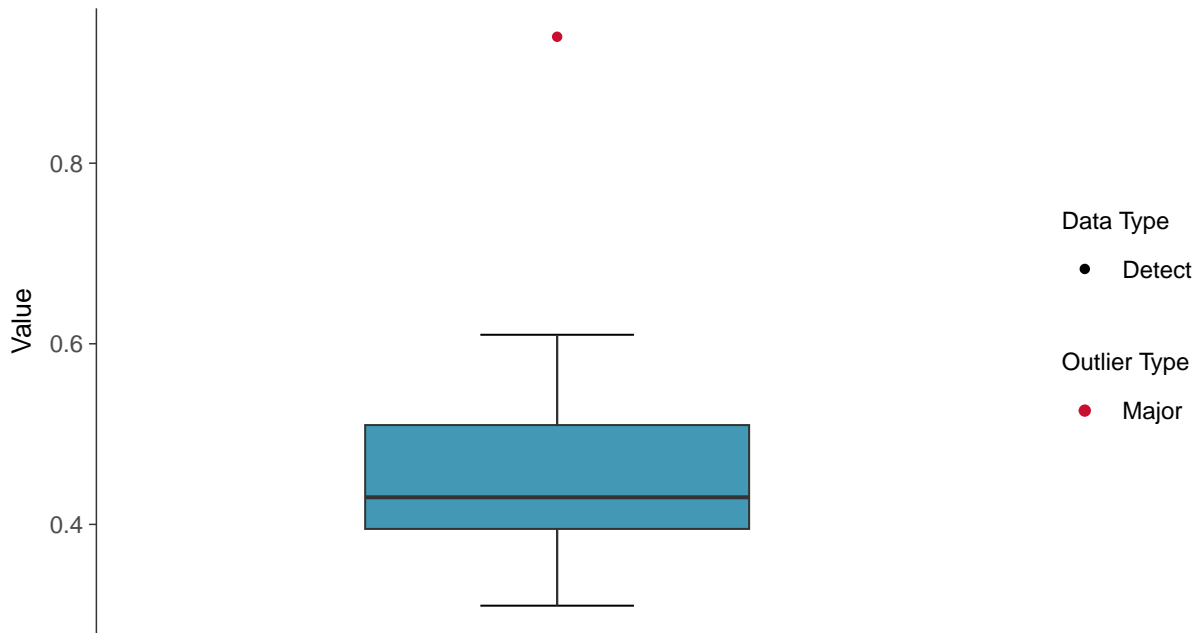
Barium, MW-20 (mg/L)





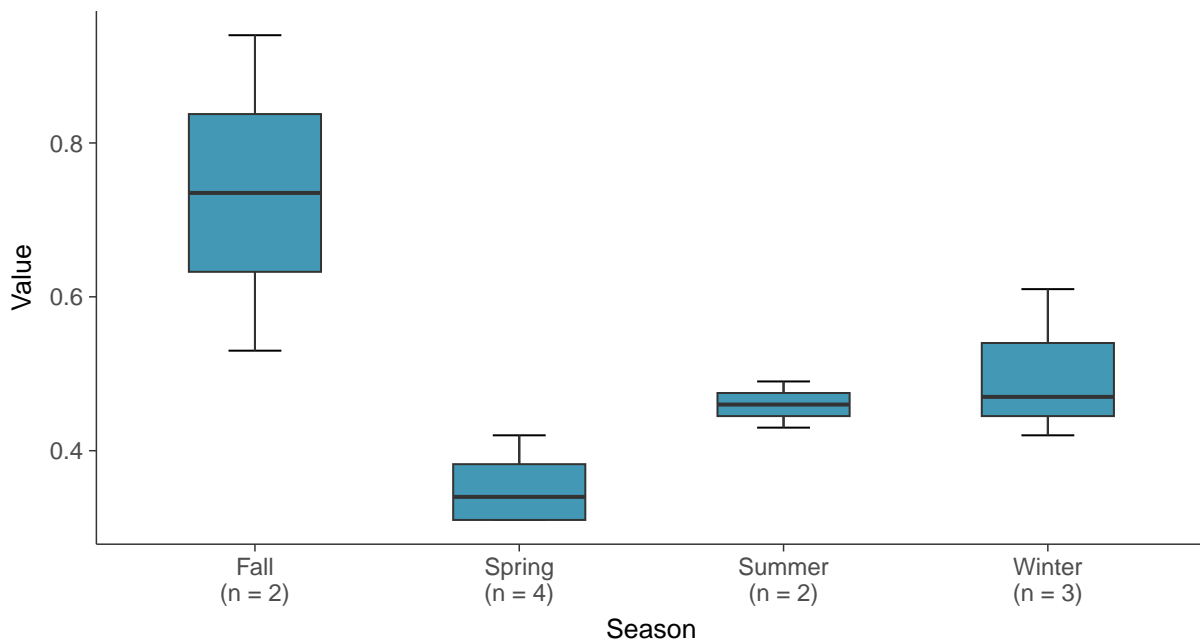
Boxplot

Barium, MW-20 (mg/L)



Boxplot by Season

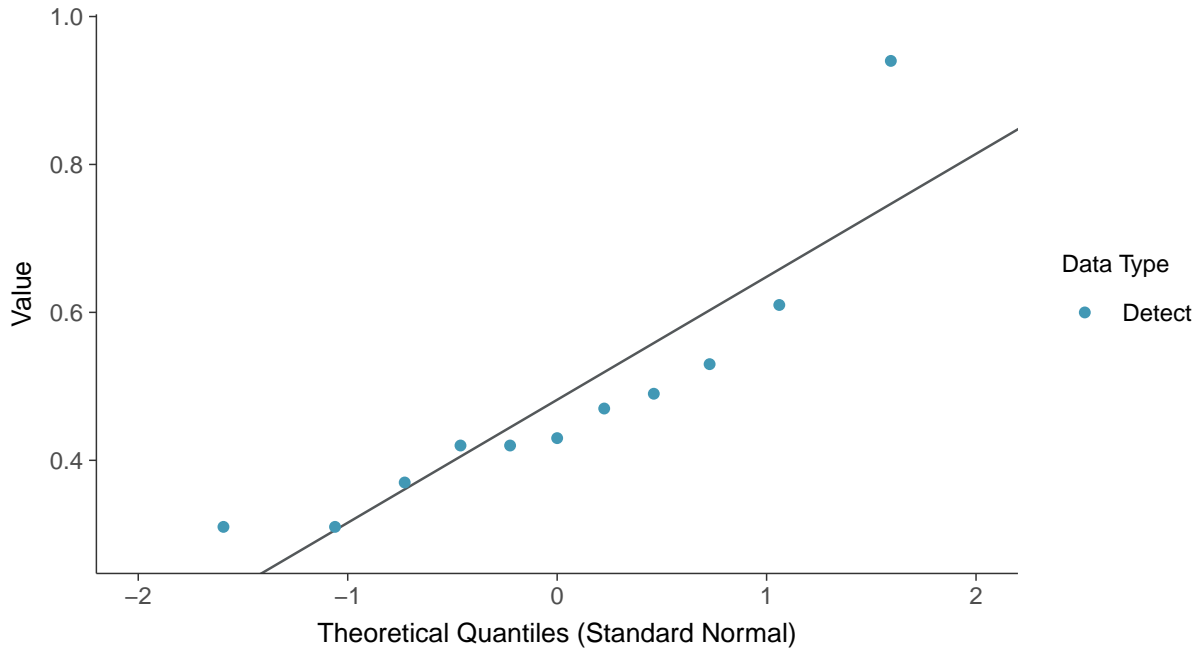
Barium, MW-20 (mg/L)





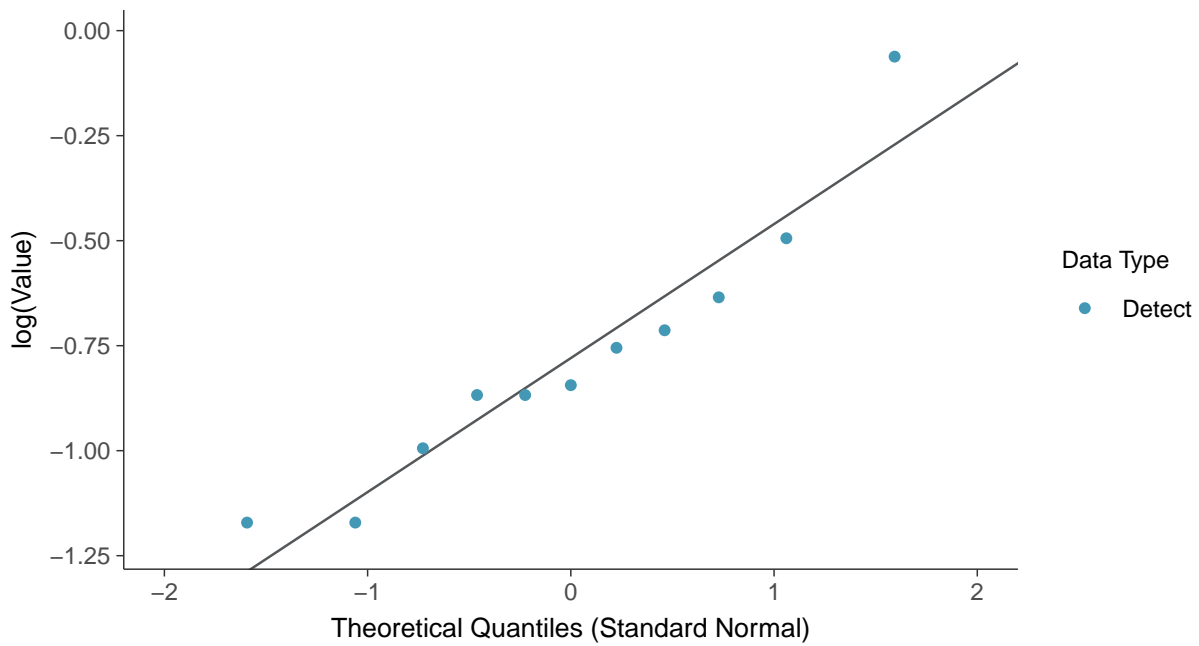
Normal Q-Q plot

Barium, MW-20 (mg/L)



Lognormal Q-Q plot

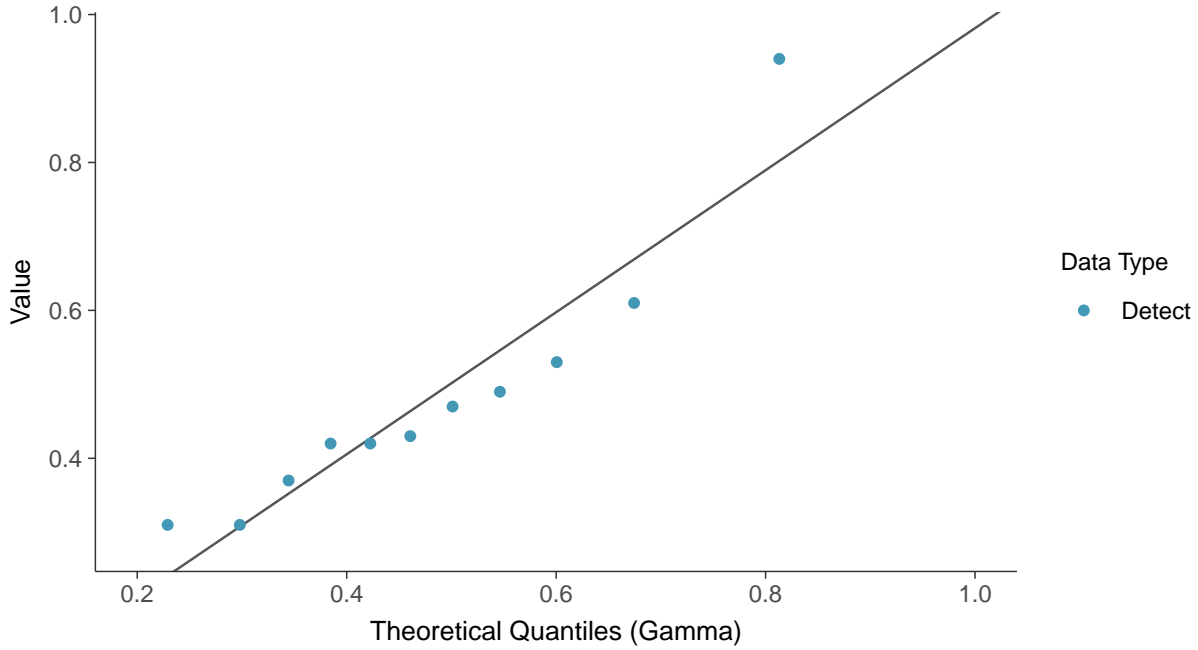
Barium, MW-20 (mg/L)





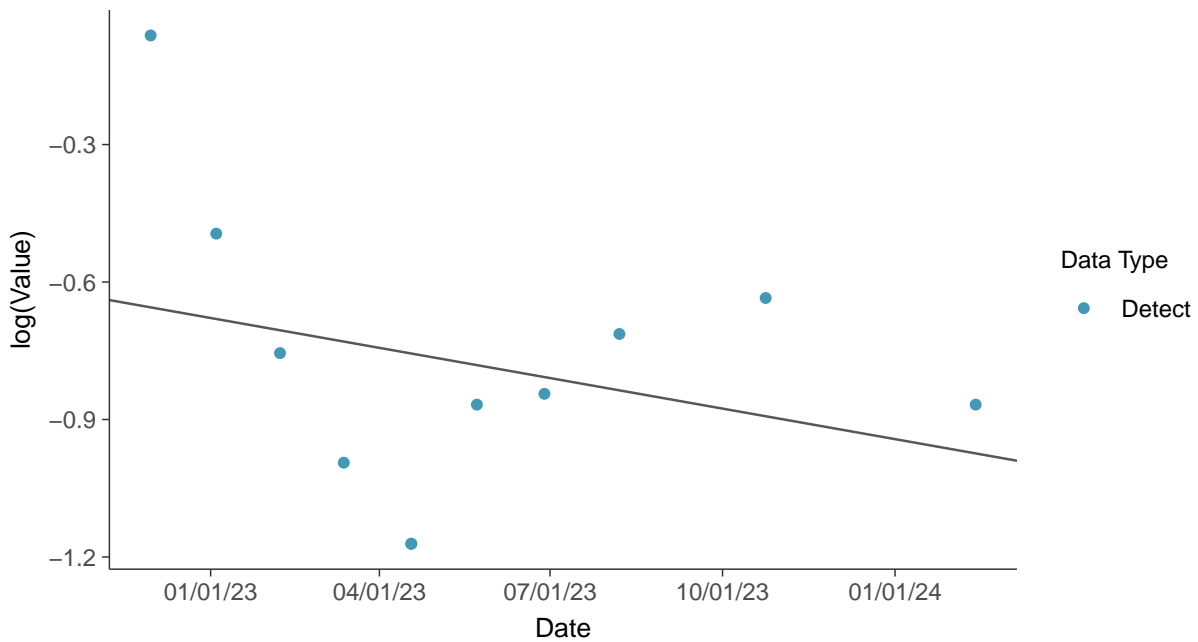
Gamma Q-Q plot

Barium, MW-20 (mg/L)



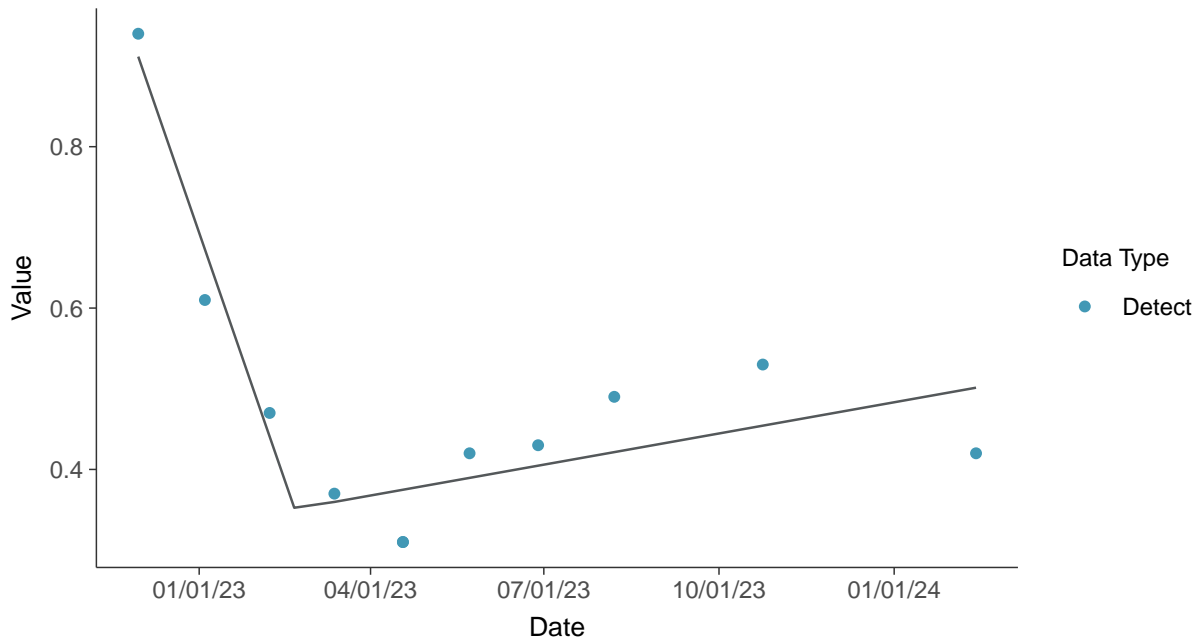
Trend Regression: Lognormal MLE

Barium, MW-20 (mg/L)

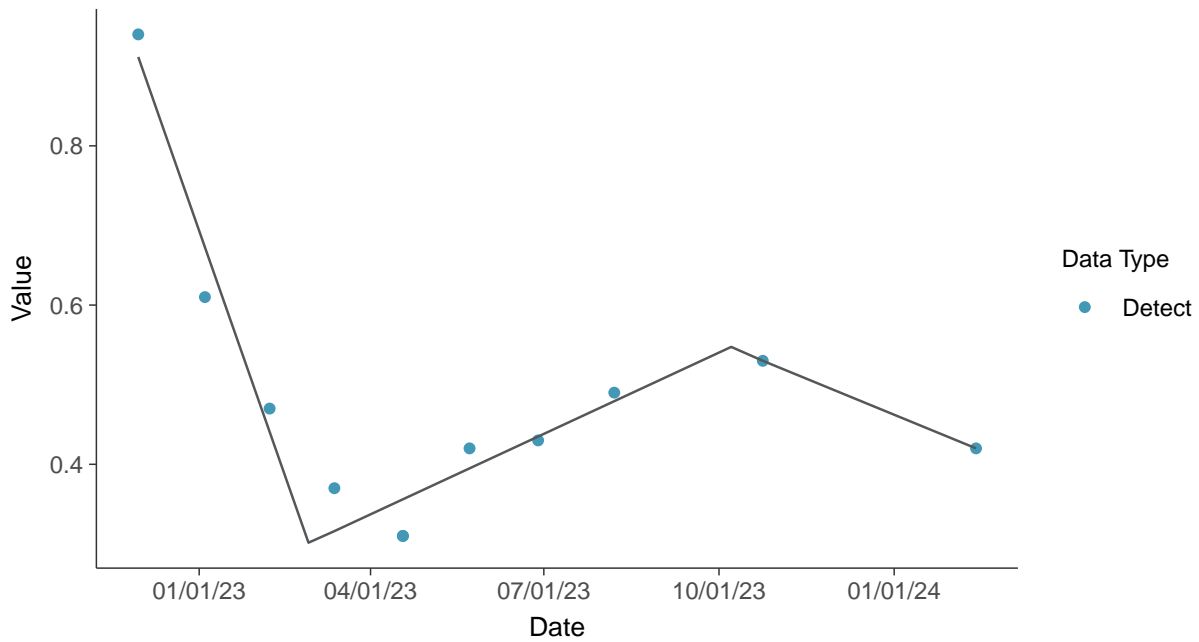




Trend Regression: Piecewise Linear-Linear
Barium, MW-20 (mg/L)



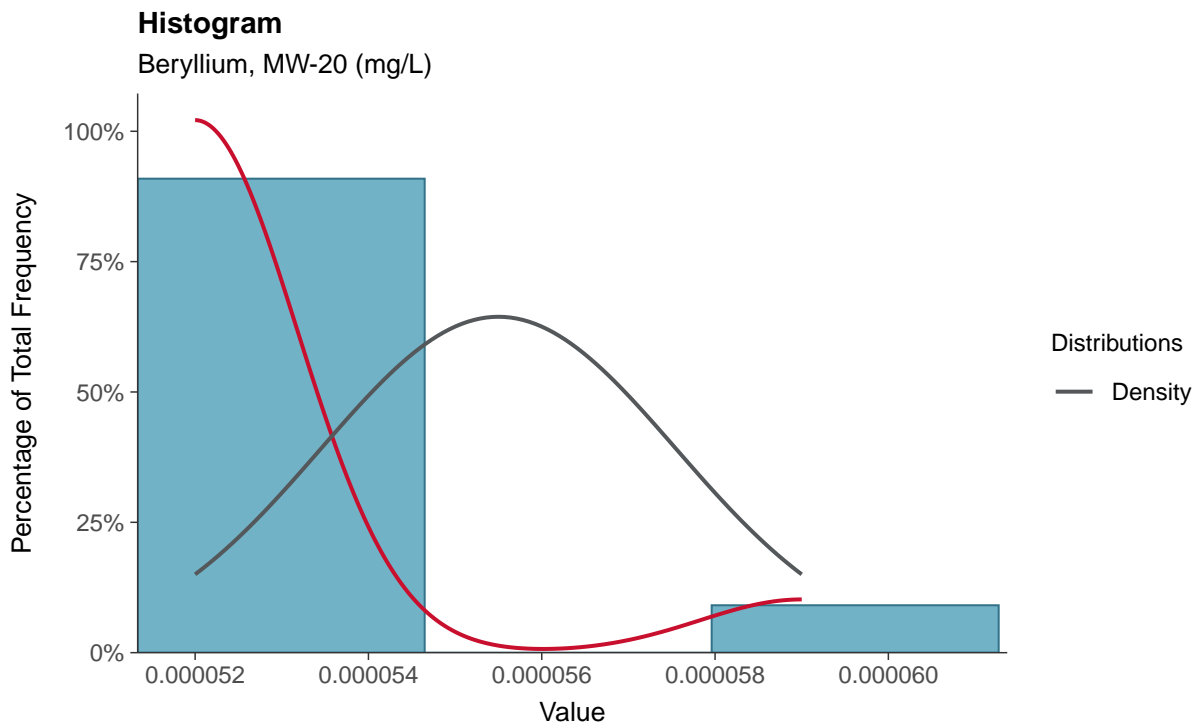
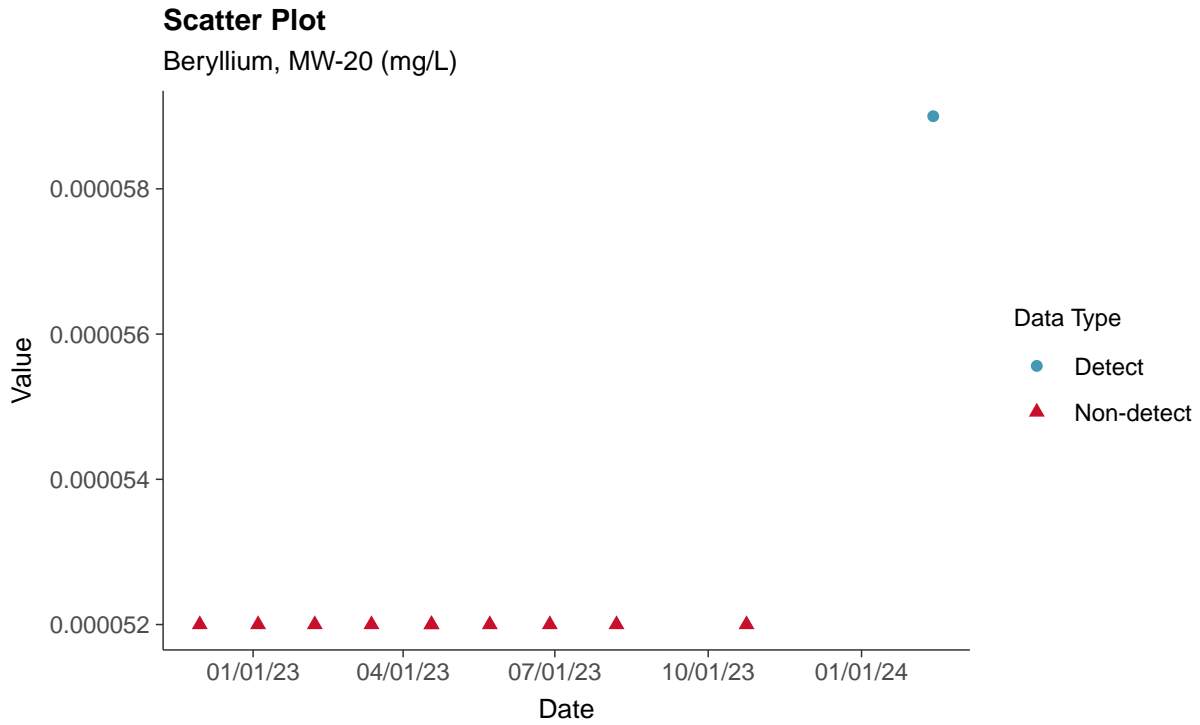
Trend Regression: Piecewise Linear-Linear-Linear
Barium, MW-20 (mg/L)





Appendix IV: Beryllium, MW-20

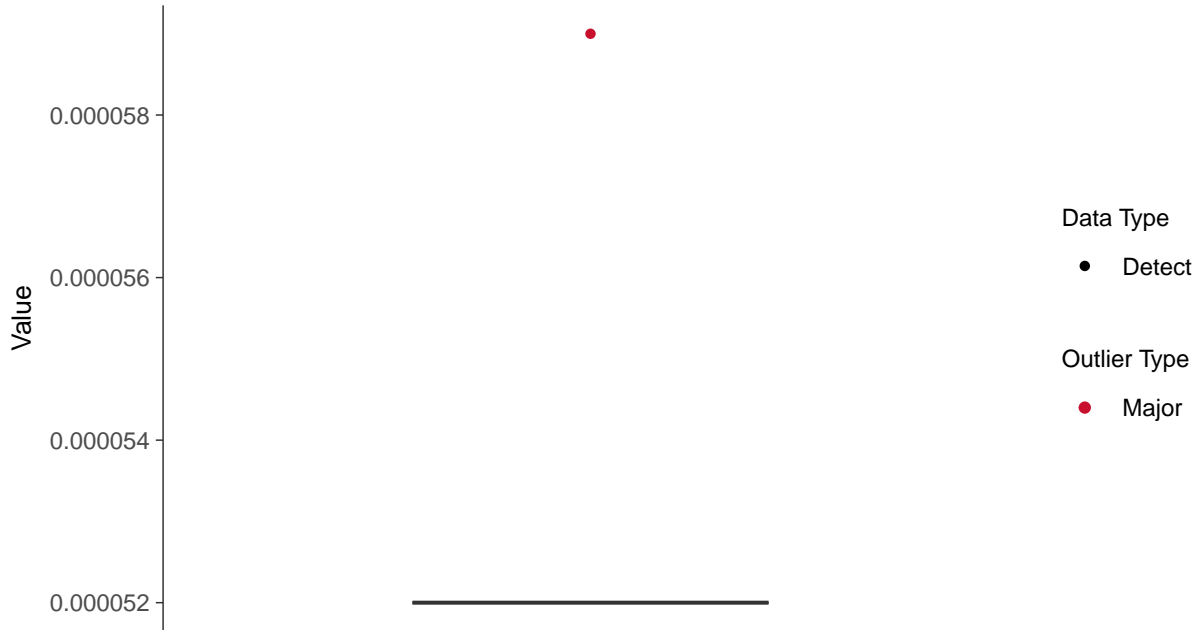
ID: 1_30_5_104





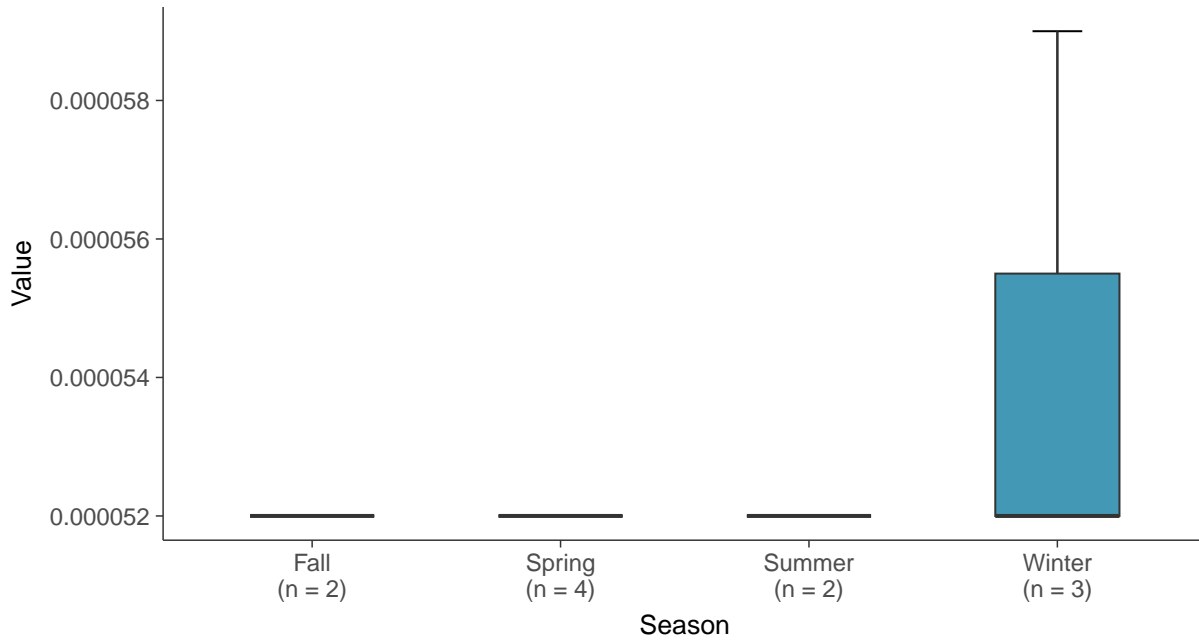
Boxplot

Beryllium, MW-20 (mg/L)



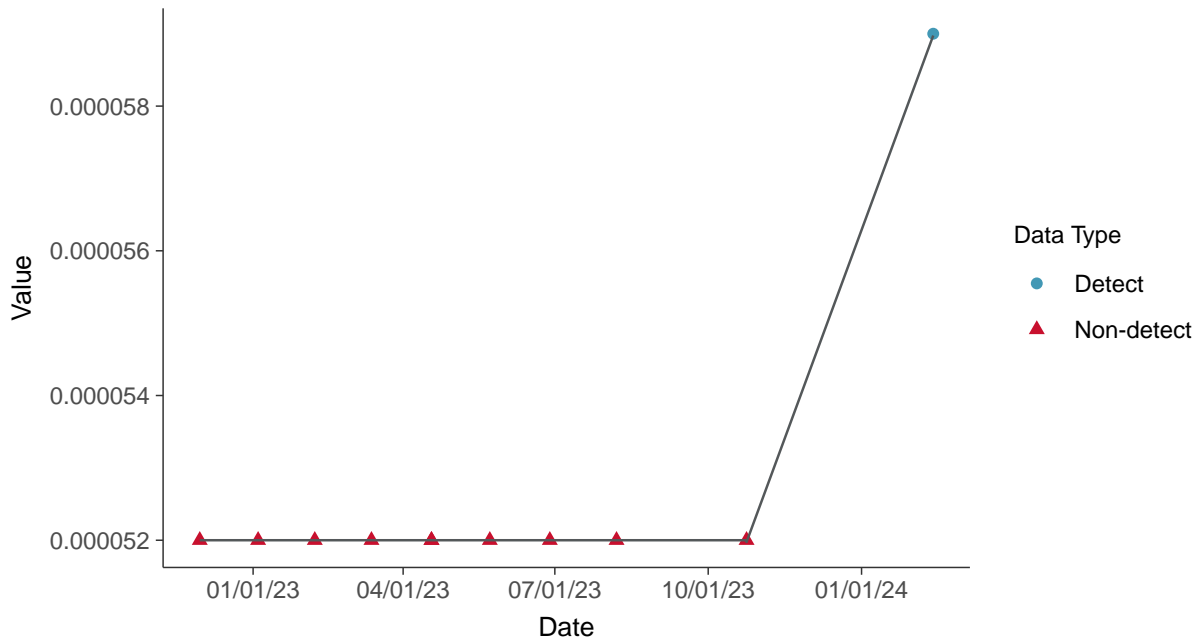
Boxplot by Season

Beryllium, MW-20 (mg/L)

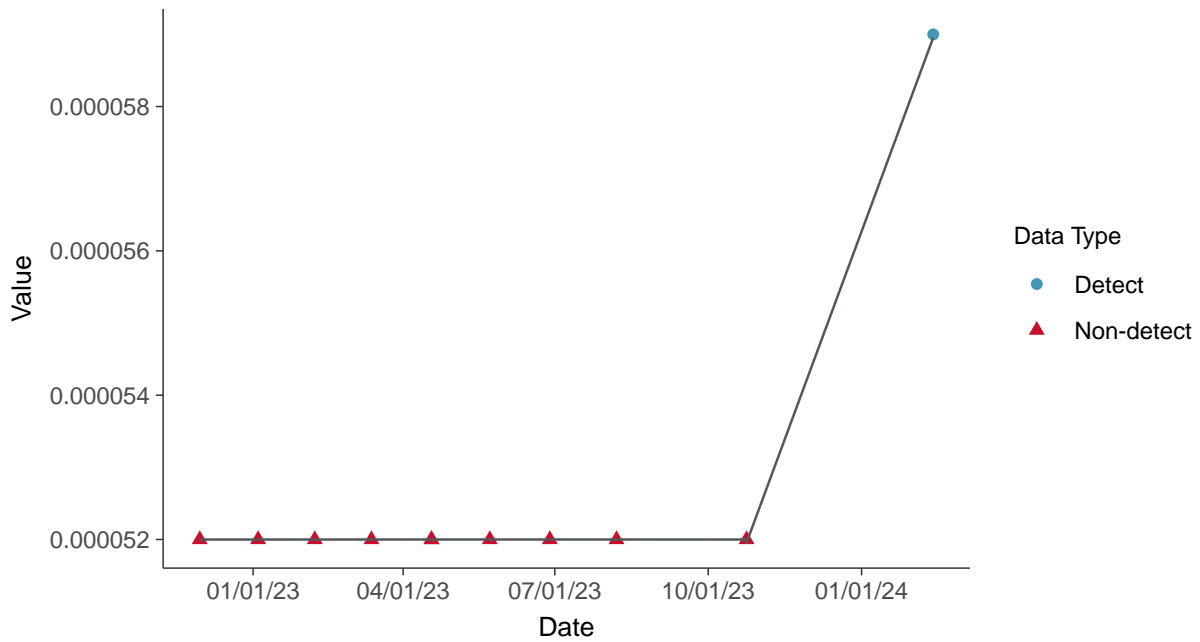




Trend Regression: Piecewise Linear-Linear
Beryllium, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Beryllium, MW-20 (mg/L)



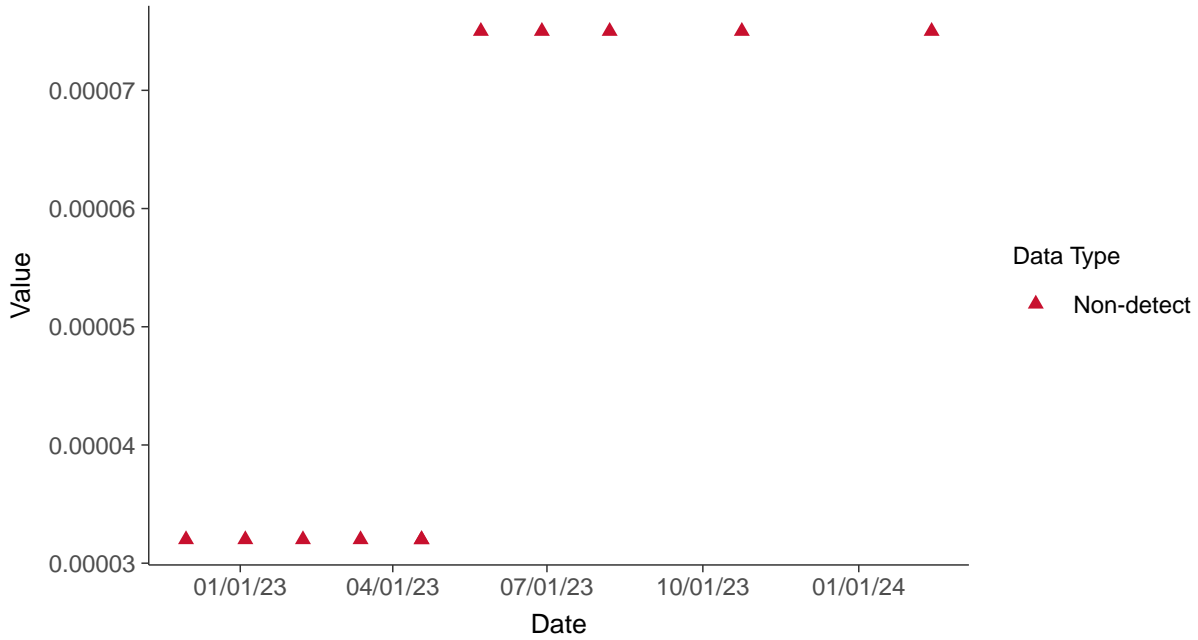


Appendix IV: Cadmium, MW-20

ID: 1_30_5_106

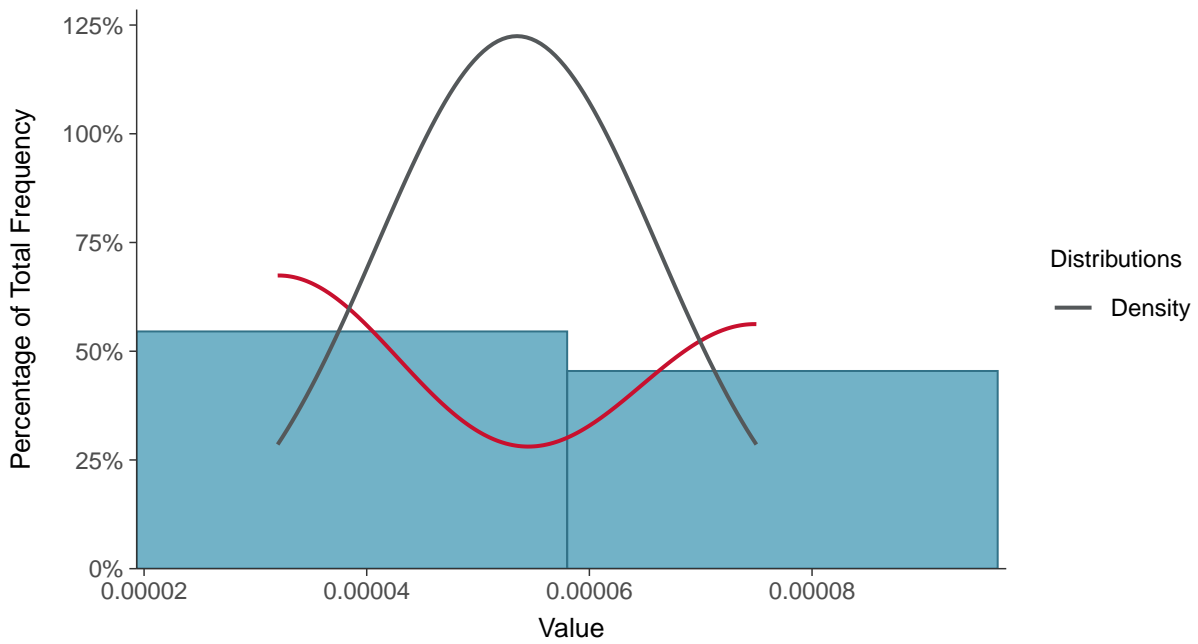
Scatter Plot

Cadmium, MW-20 (mg/L)



Histogram

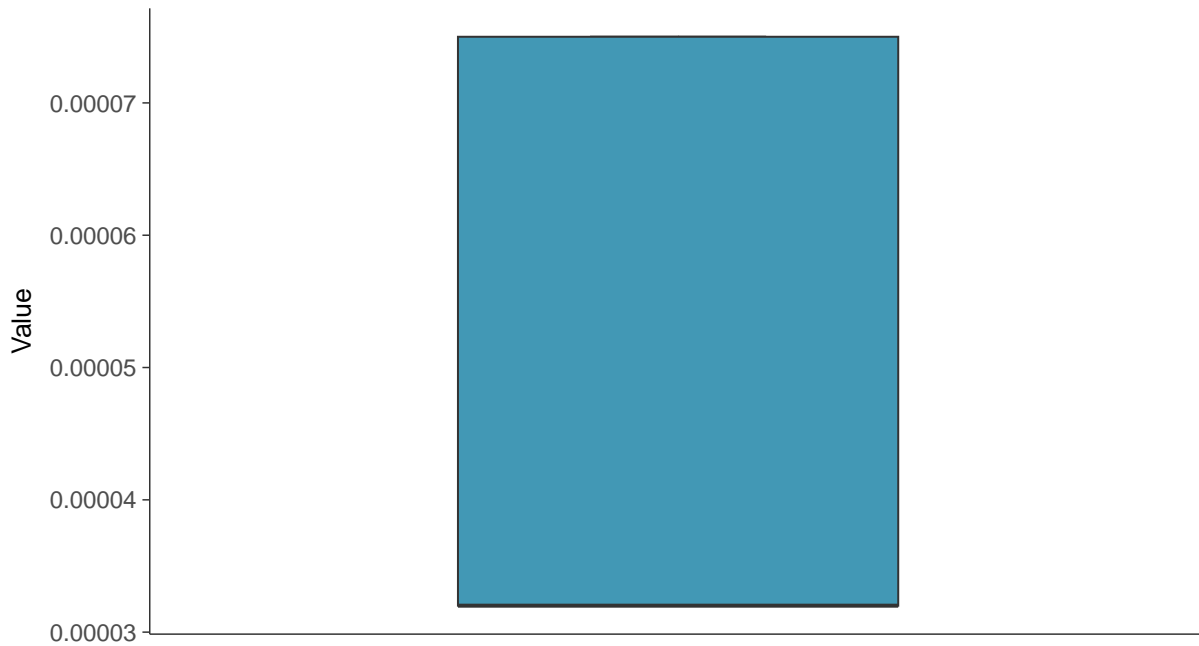
Cadmium, MW-20 (mg/L)





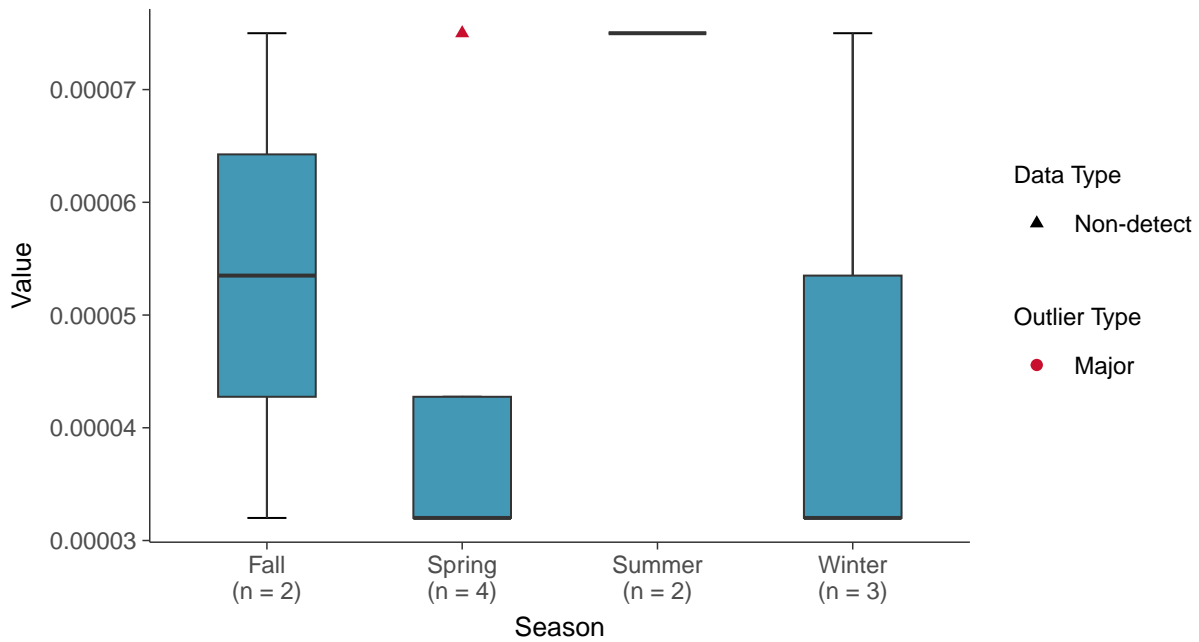
Boxplot

Cadmium, MW-20 (mg/L)



Boxplot by Season

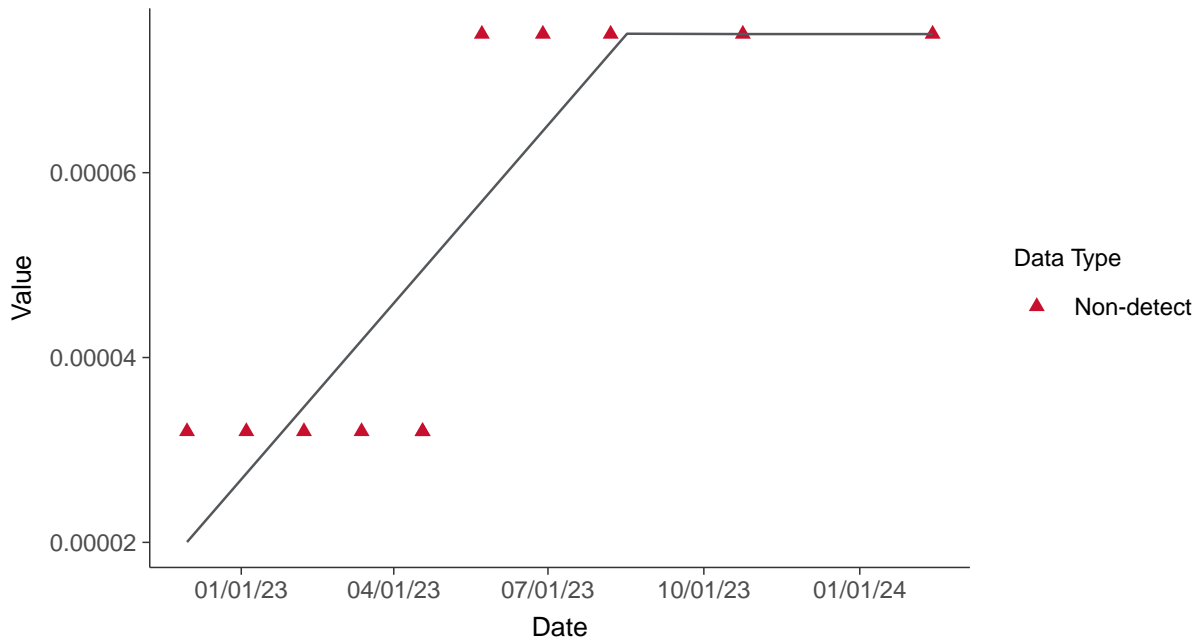
Cadmium, MW-20 (mg/L)





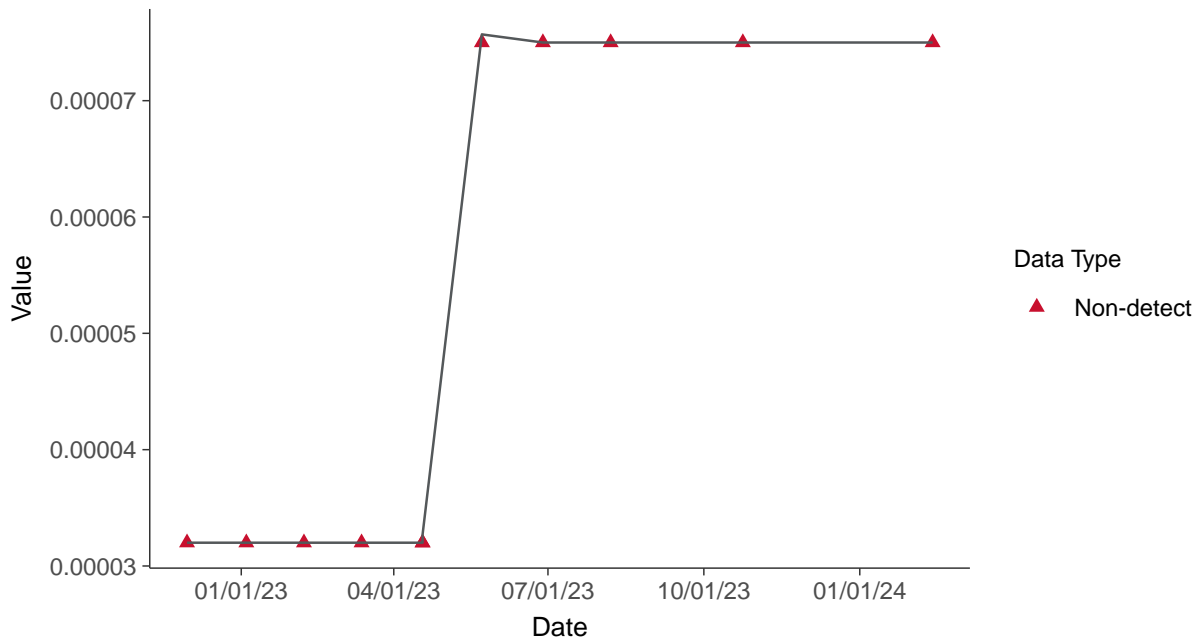
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-20 (mg/L)



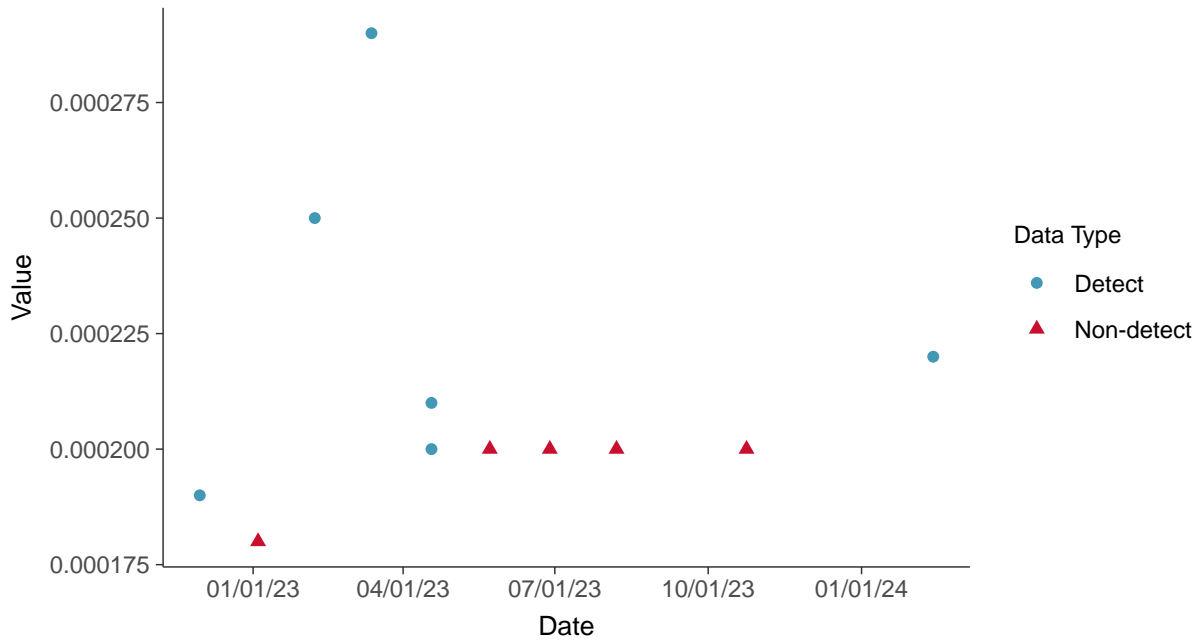


Appendix IV: Chromium, Total, MW-20

ID: 1_30_5_109

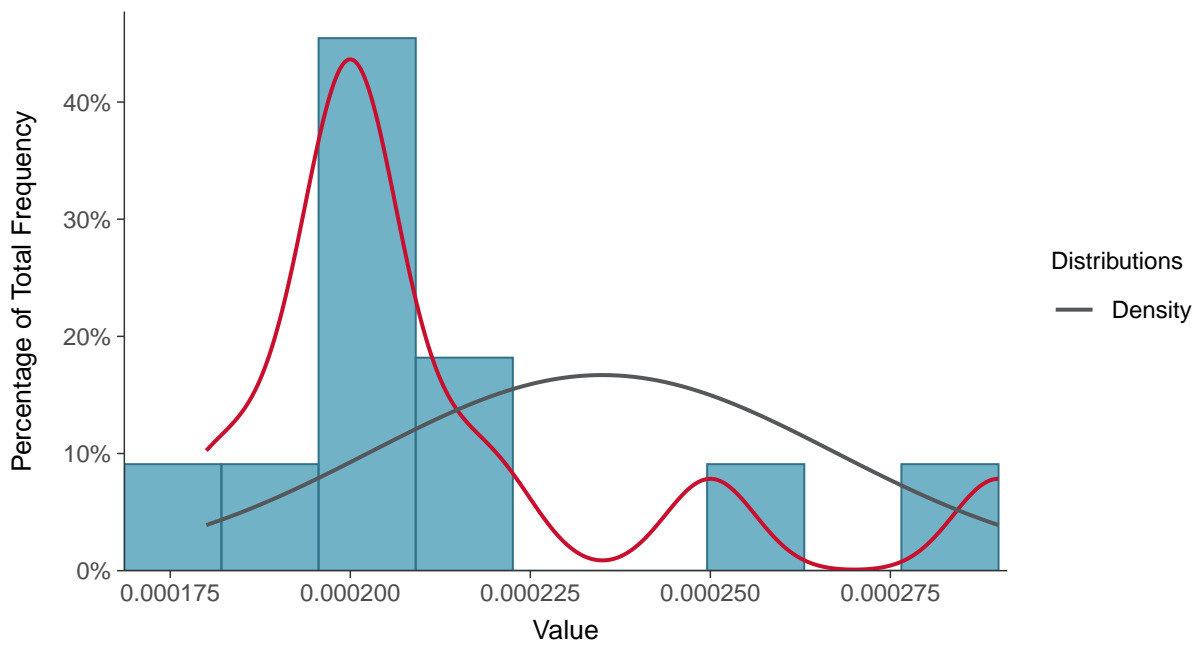
Scatter Plot

Chromium, Total, MW-20 (mg/L)



Histogram

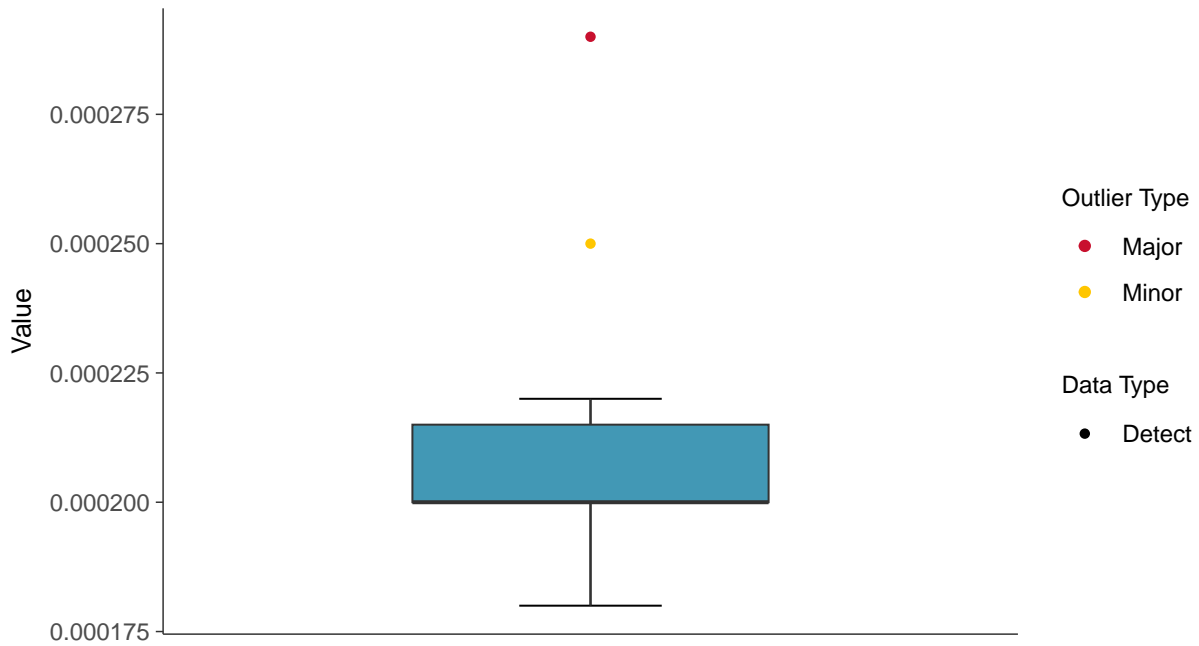
Chromium, Total, MW-20 (mg/L)





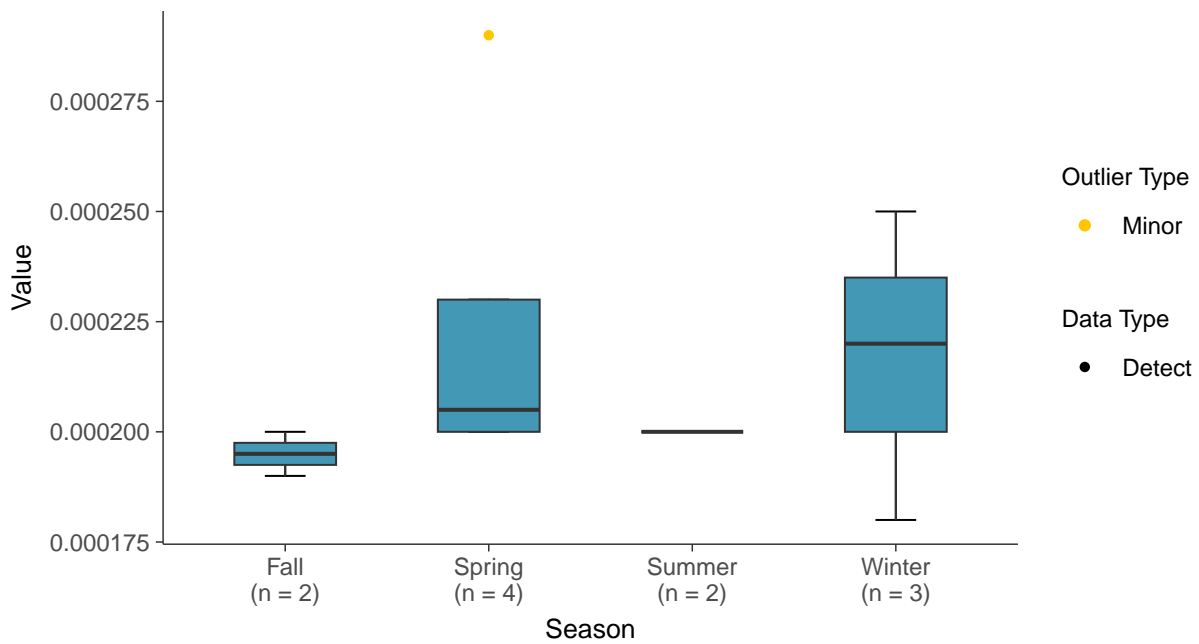
Boxplot

Chromium, Total, MW-20 (mg/L)



Boxplot by Season

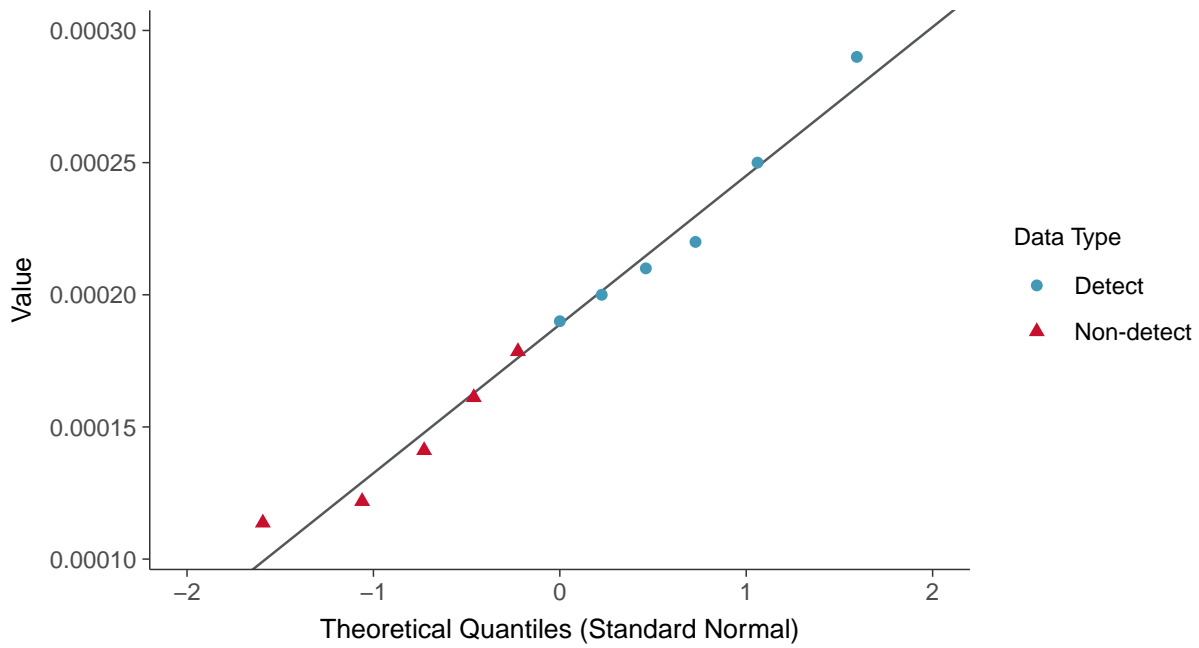
Chromium, Total, MW-20 (mg/L)





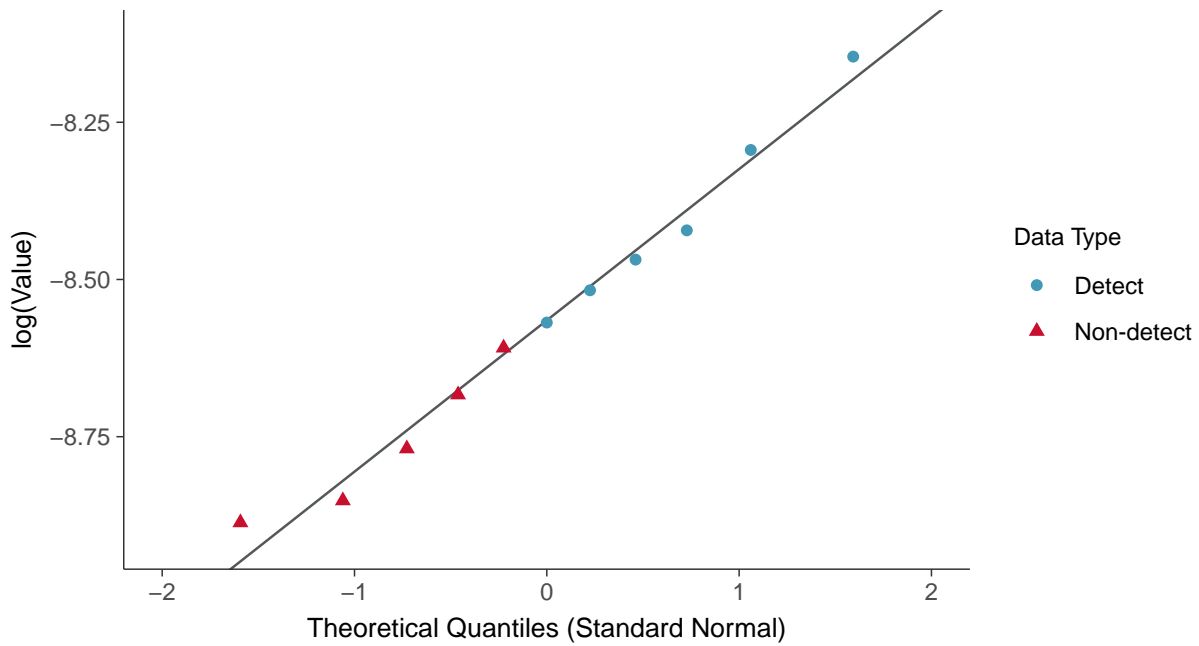
Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-20 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

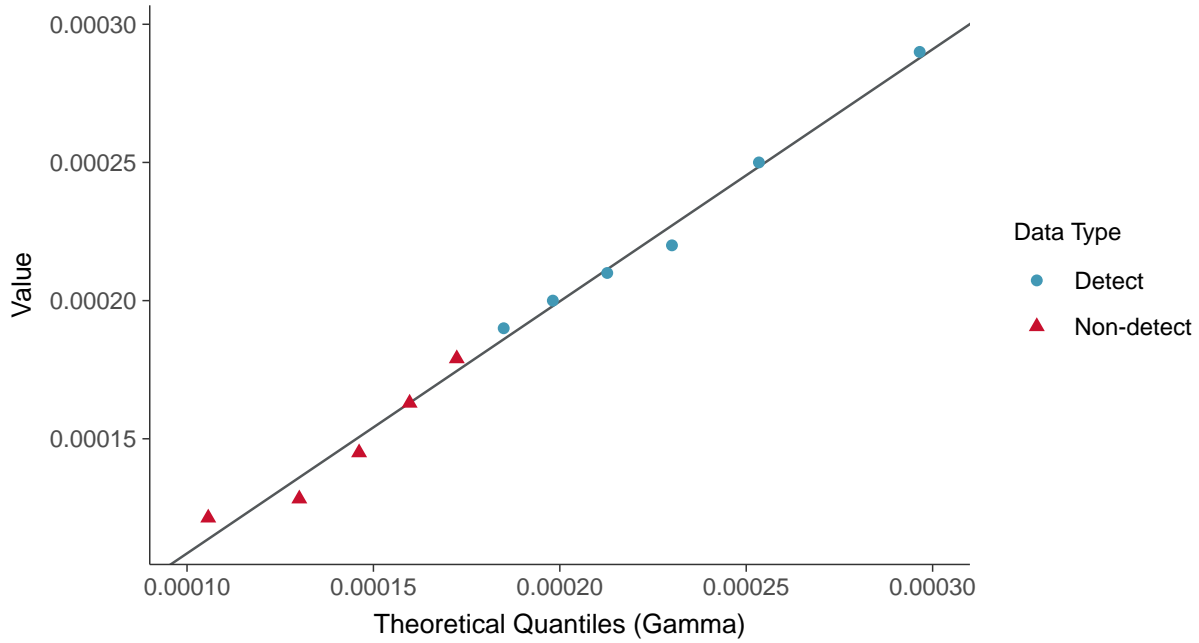
Chromium, Total, MW-20 (mg/L)





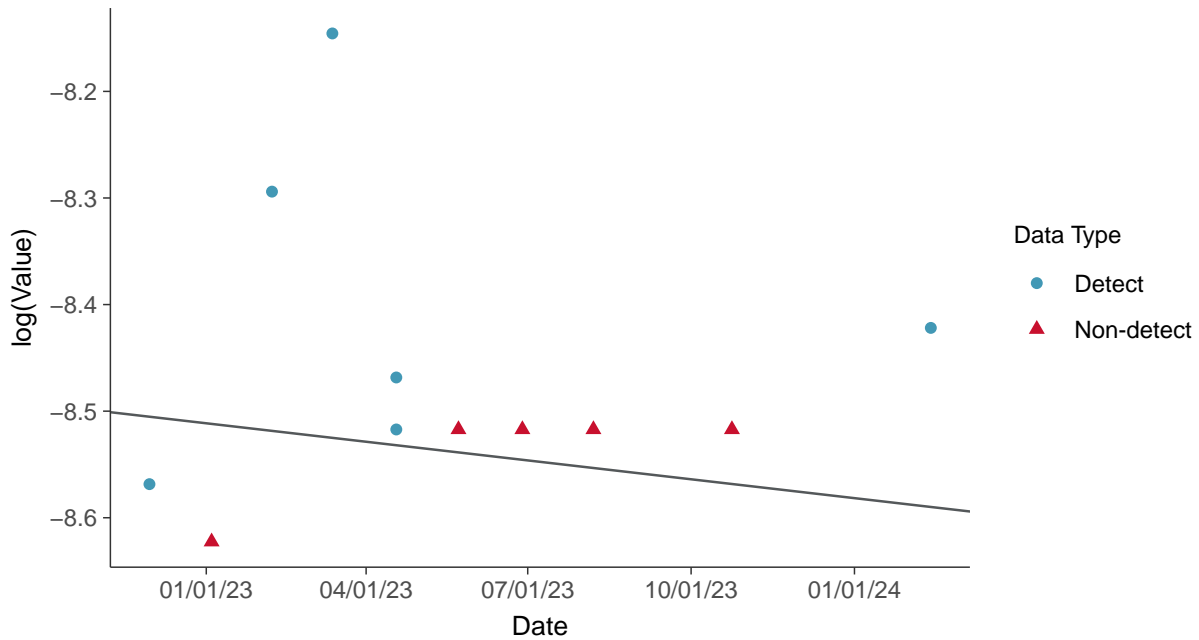
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-20 (mg/L)



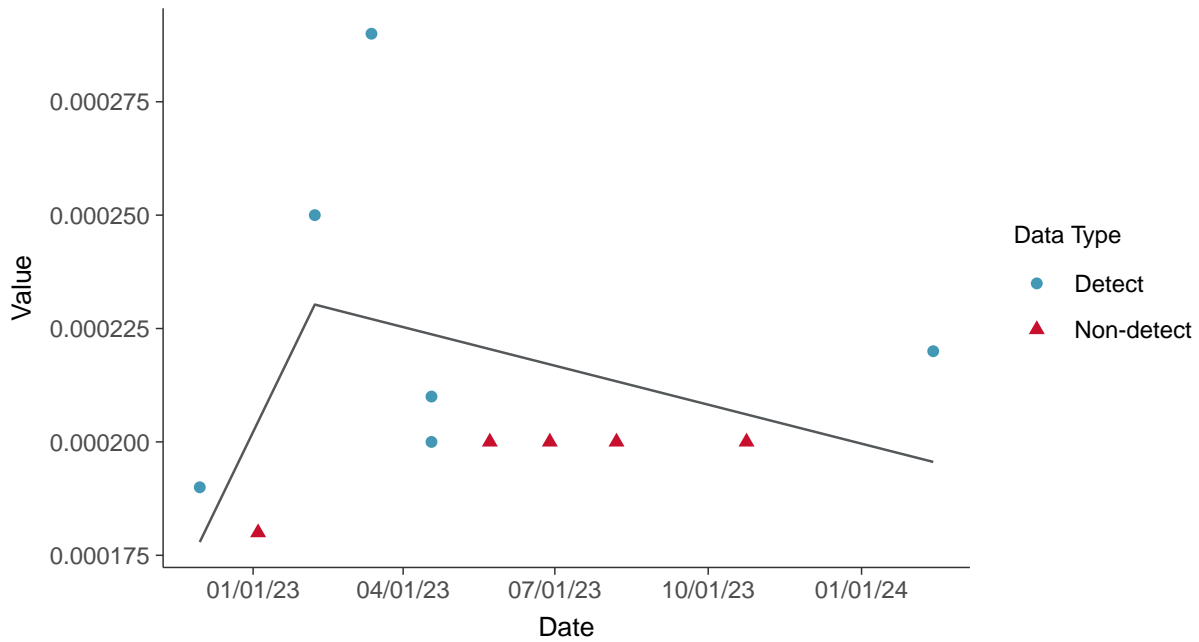
Trend Regression: Lognormal MLE

Chromium, Total, MW-20 (mg/L)

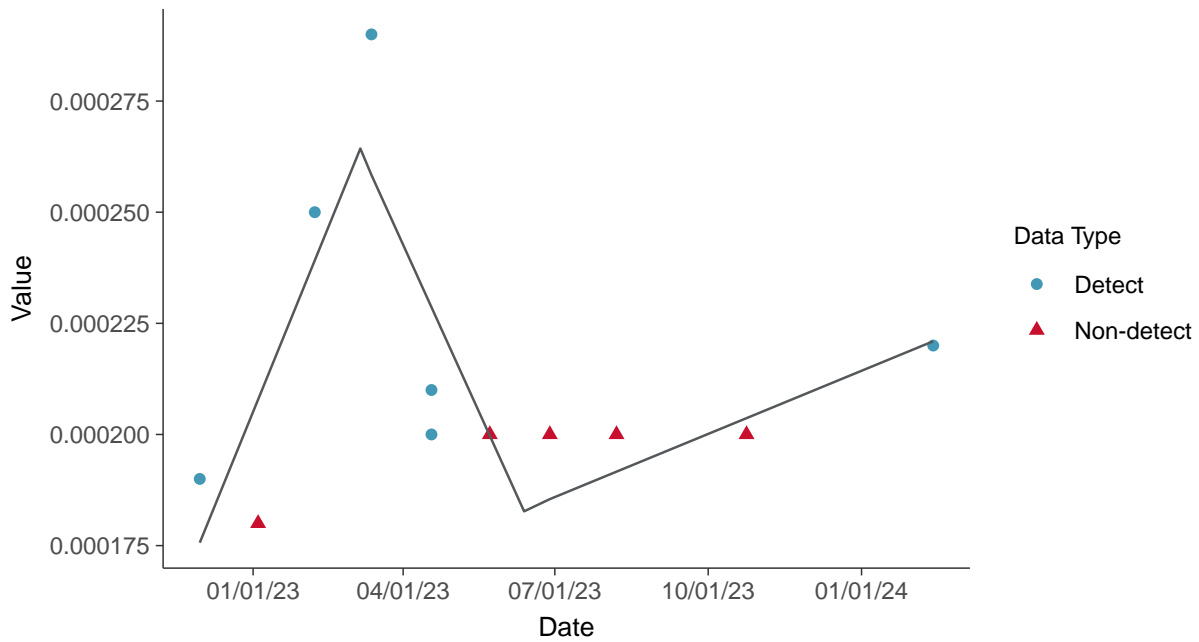




Trend Regression: Piecewise Linear-Linear
Chromium, Total, MW-20 (mg/L)



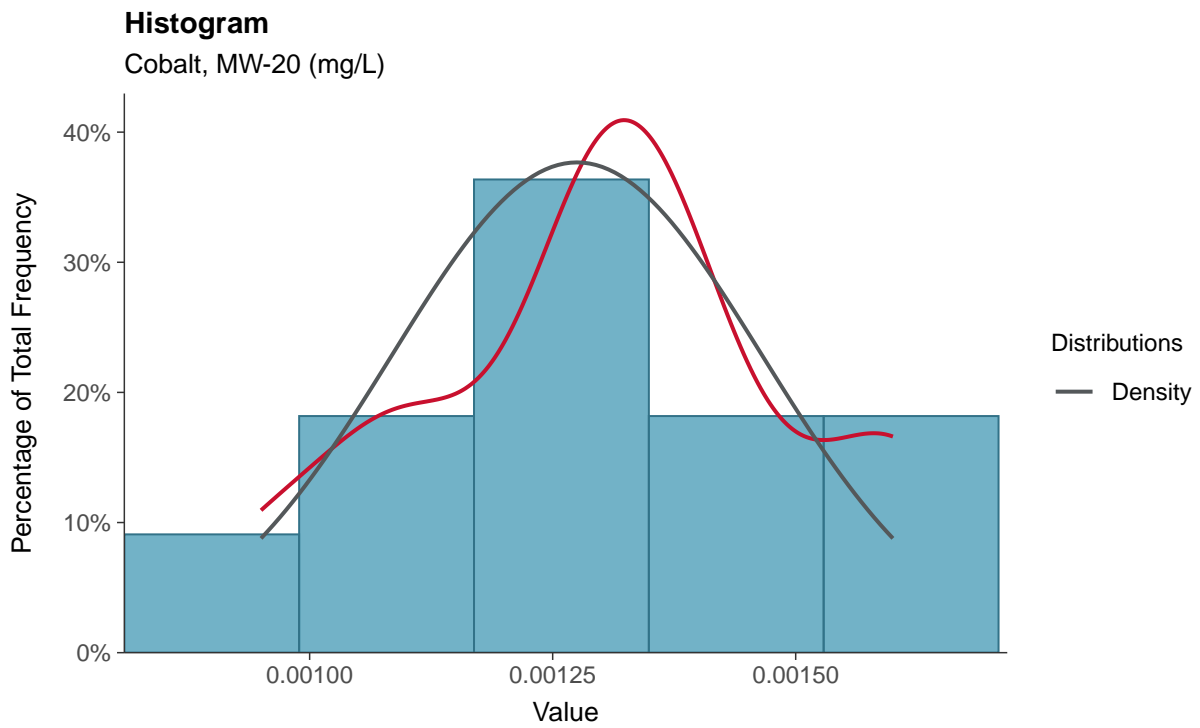
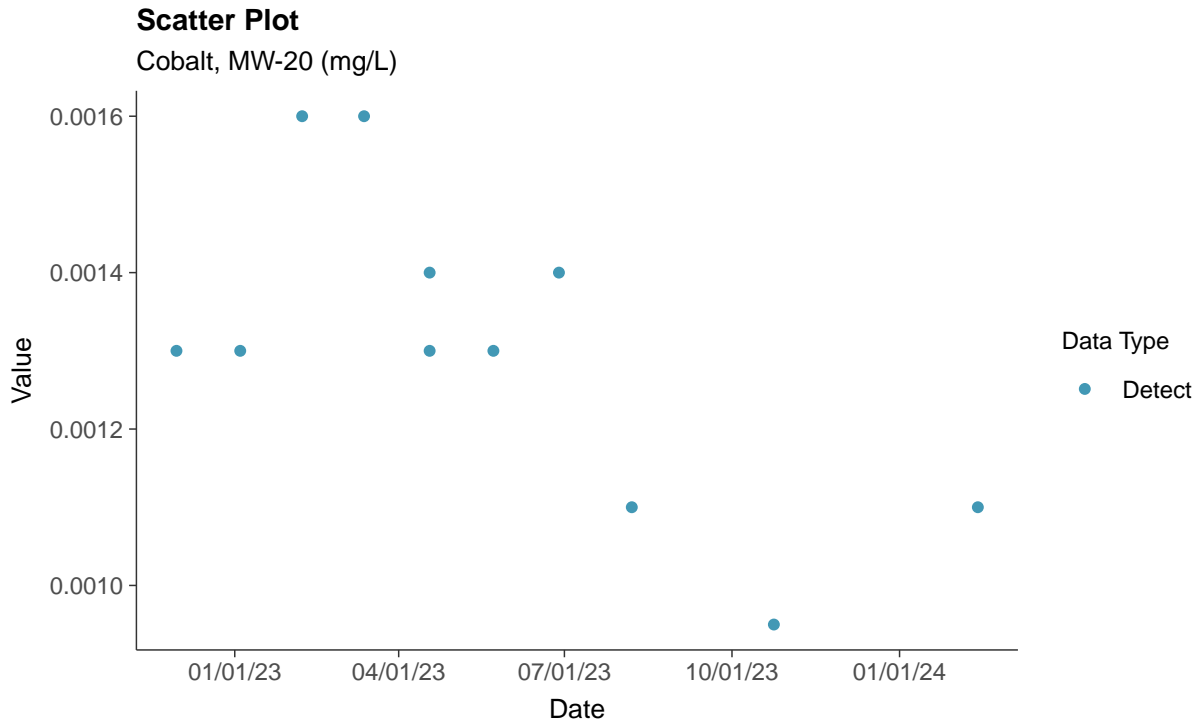
Trend Regression: Piecewise Linear-Linear-Linear
Chromium, Total, MW-20 (mg/L)





Appendix IV: Cobalt, MW-20

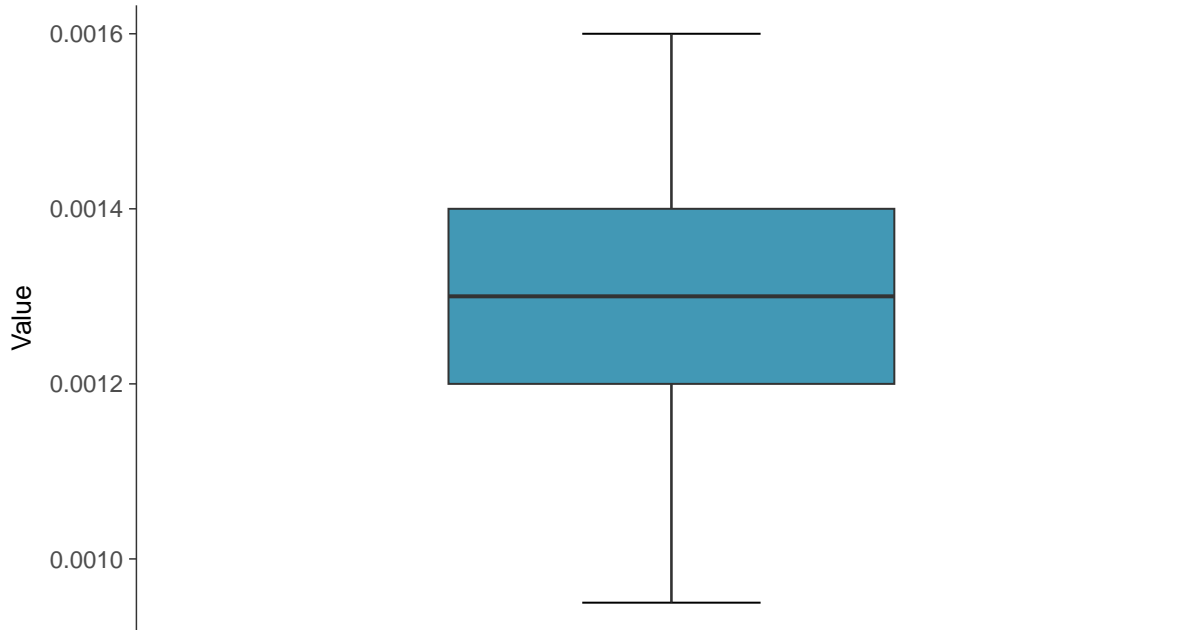
ID: 1_30_5_110





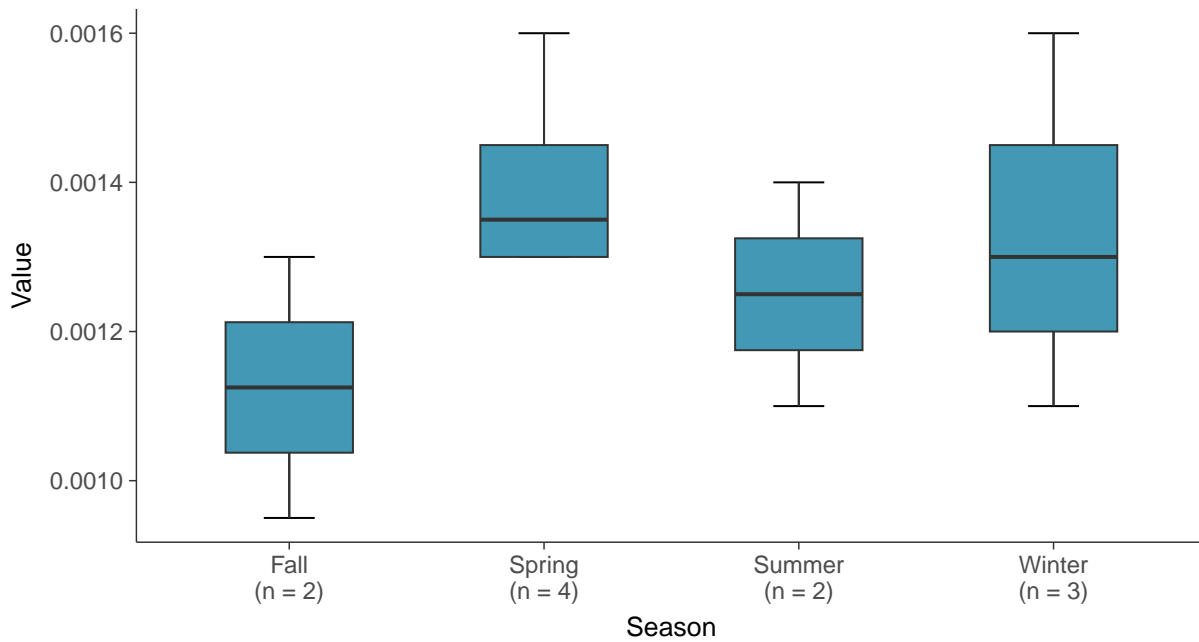
Boxplot

Cobalt, MW-20 (mg/L)



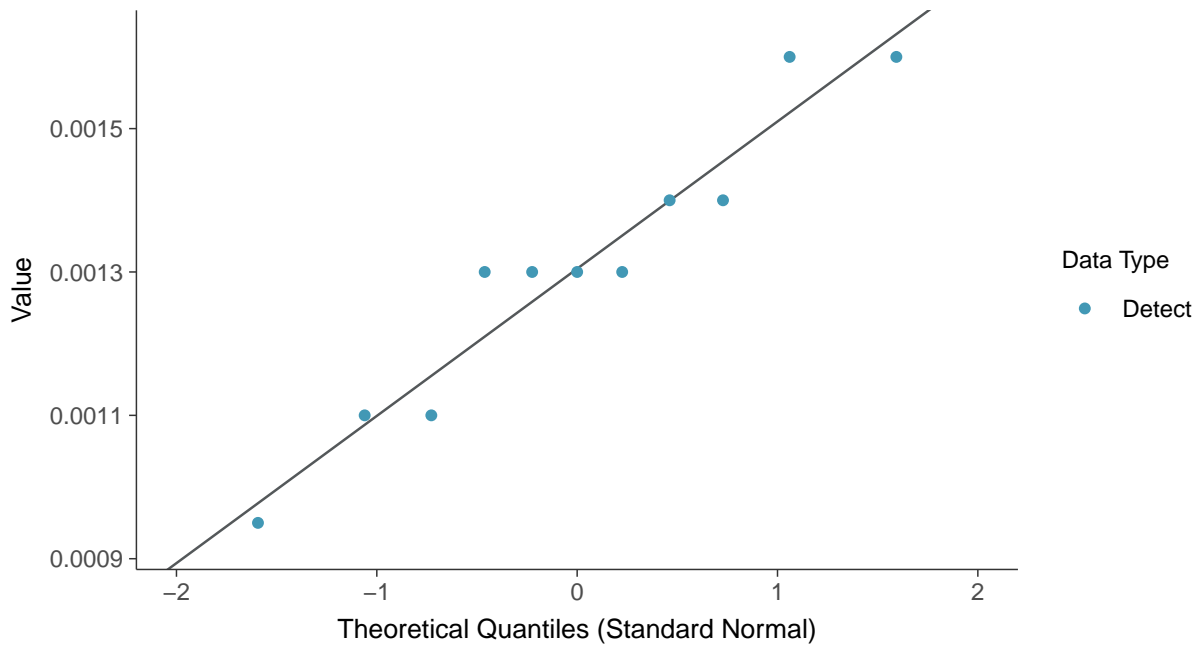
Boxplot by Season

Cobalt, MW-20 (mg/L)

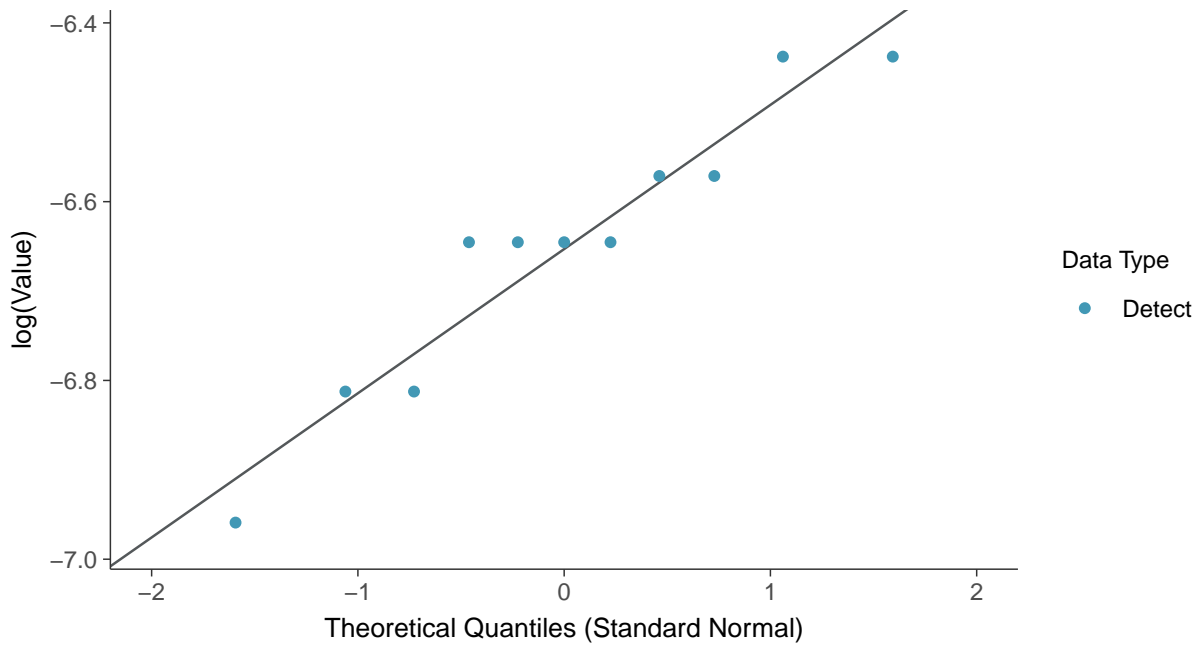




Normal Q-Q plot
Cobalt, MW-20 (mg/L)

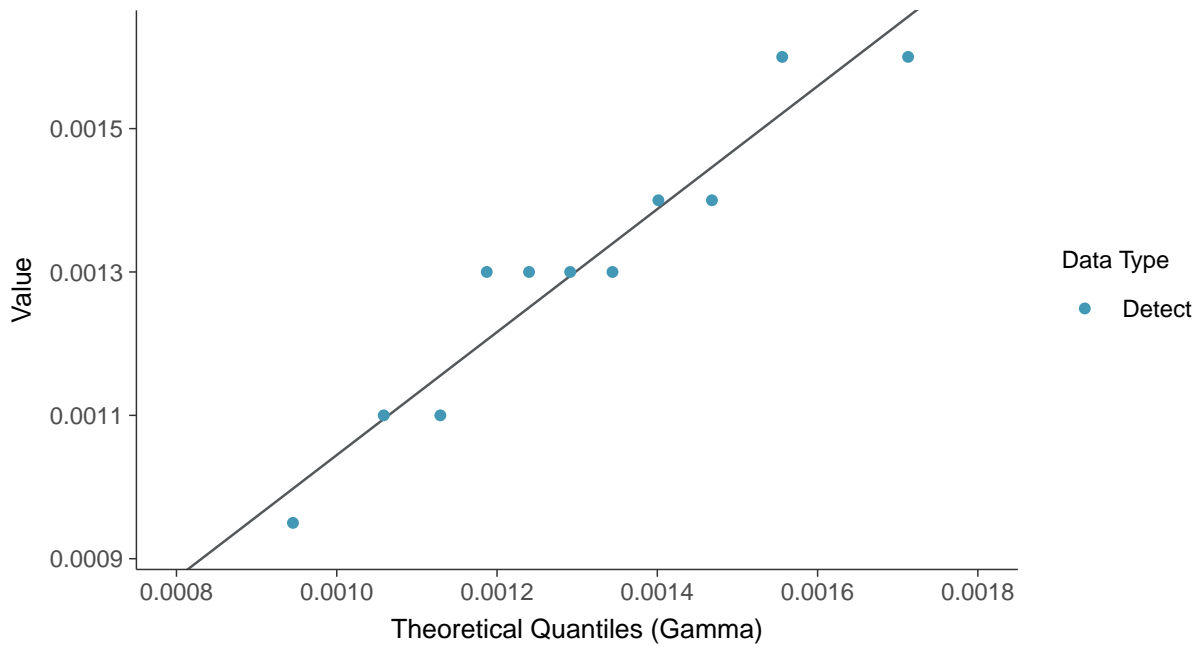


Lognormal Q-Q plot
Cobalt, MW-20 (mg/L)

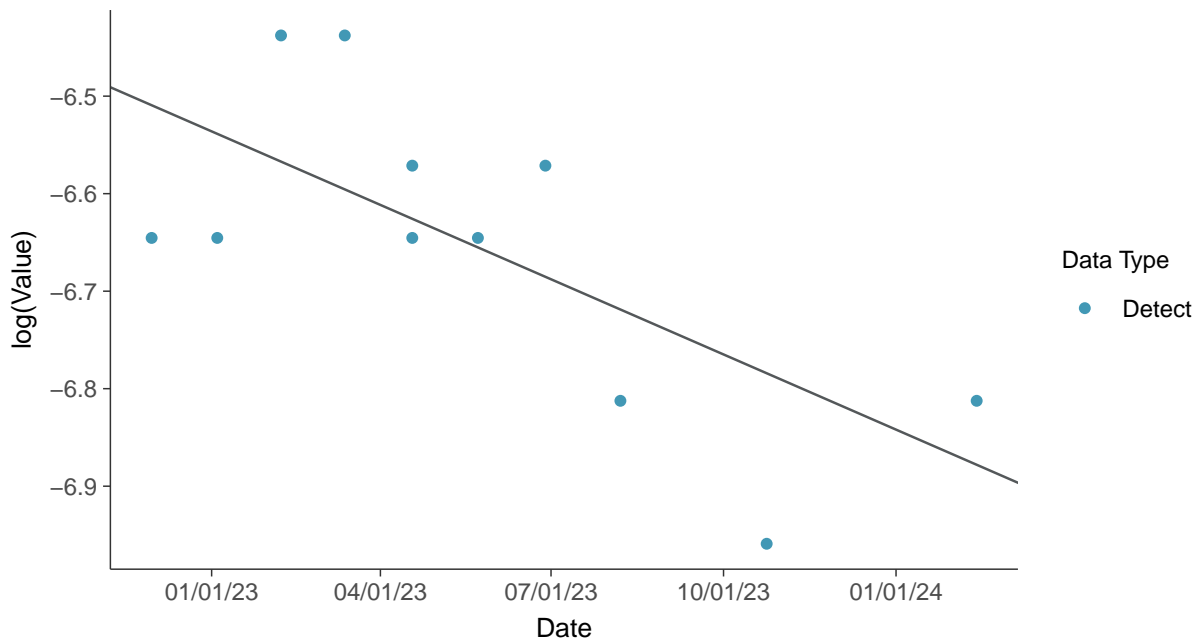




Gamma Q-Q plot
Cobalt, MW-20 (mg/L)



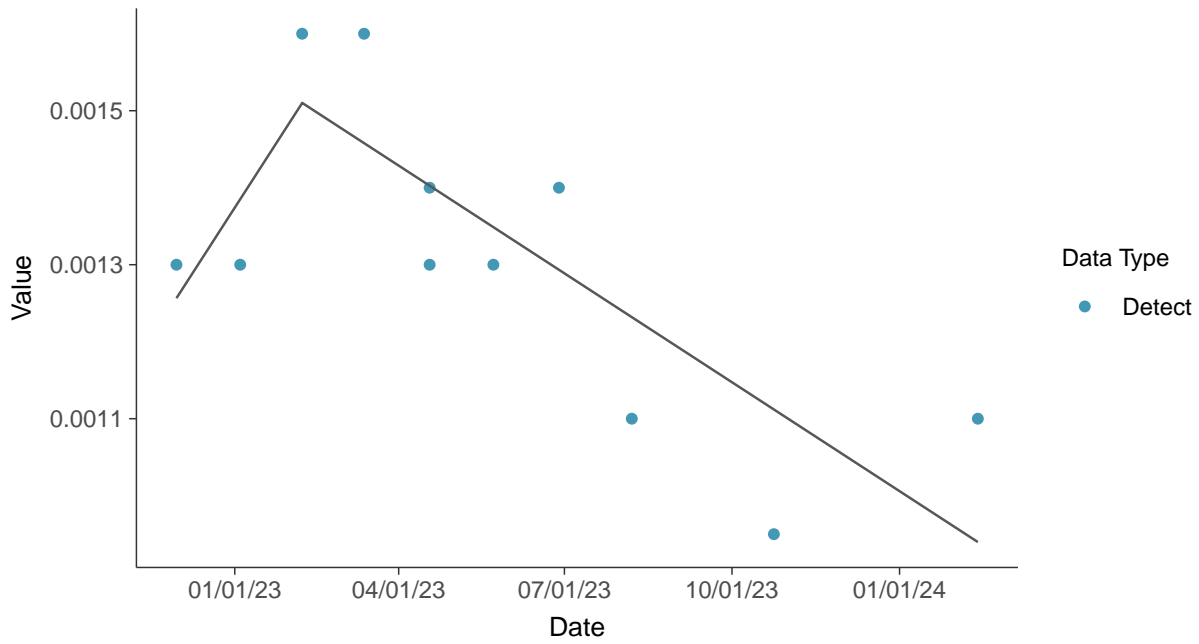
Trend Regression: Lognormal MLE
Cobalt, MW-20 (mg/L)





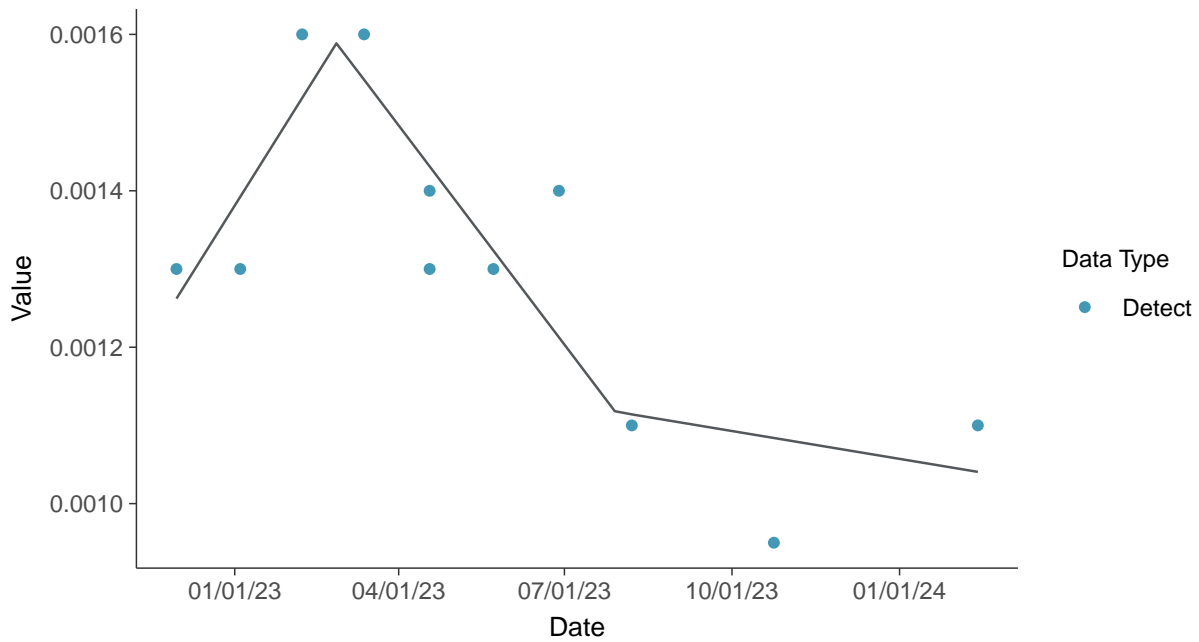
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-20 (mg/L)



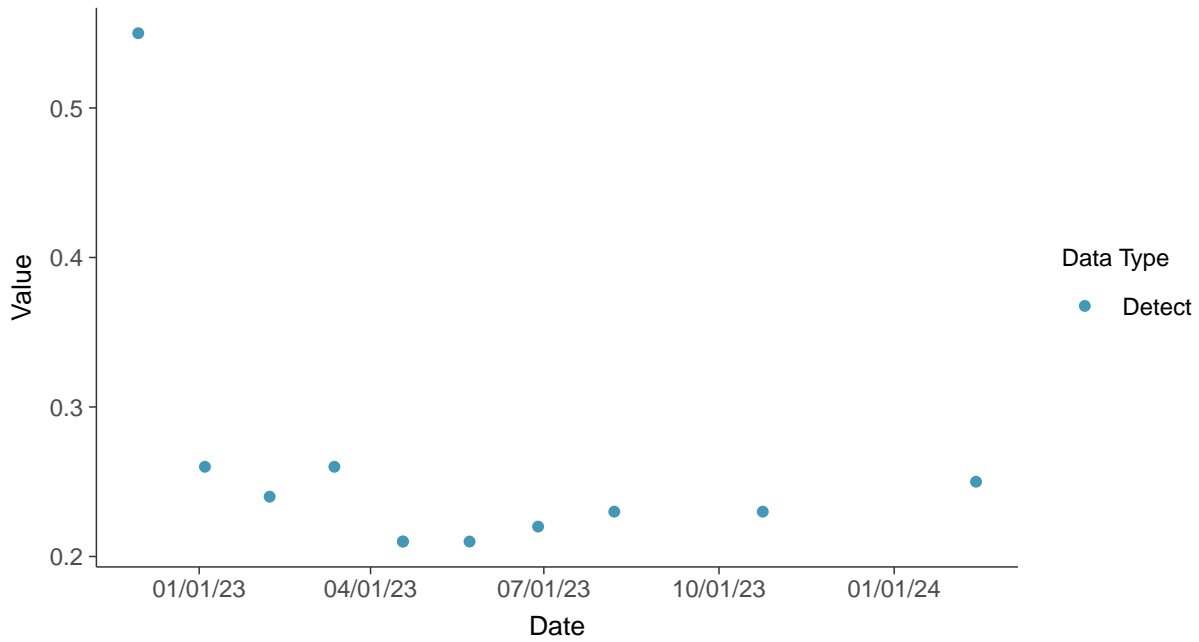


Appendix IV: Fluoride (App IV), MW-20

ID: 1_30_5_113

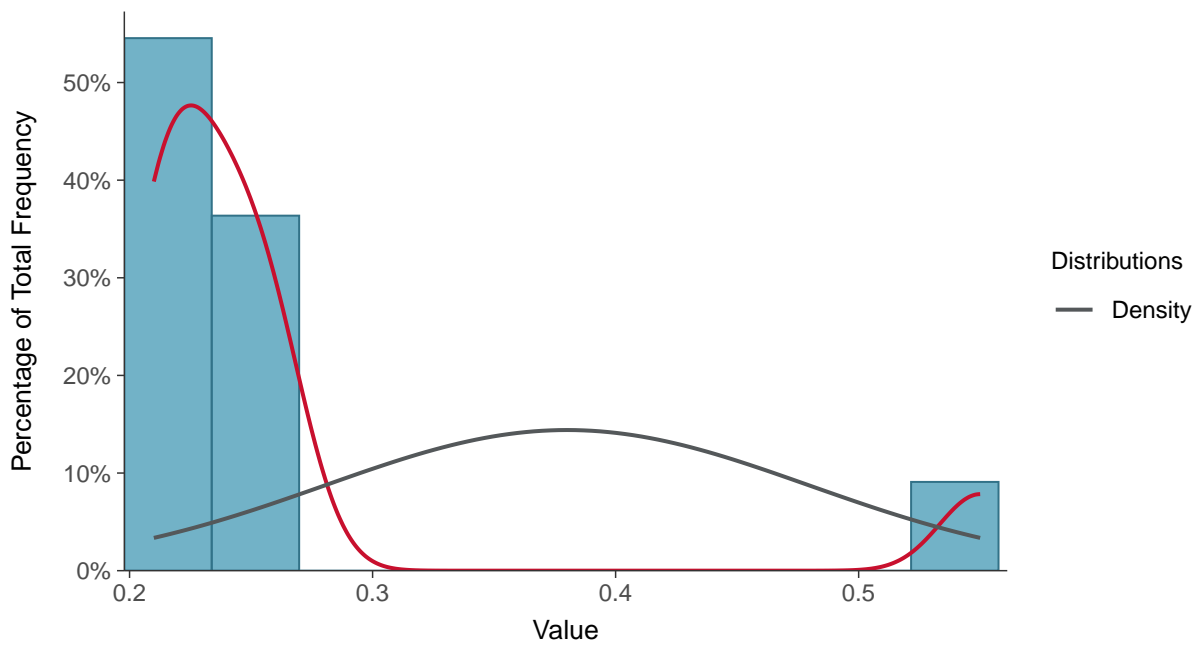
Scatter Plot

Fluoride (App IV), MW-20 (mg/L)



Histogram

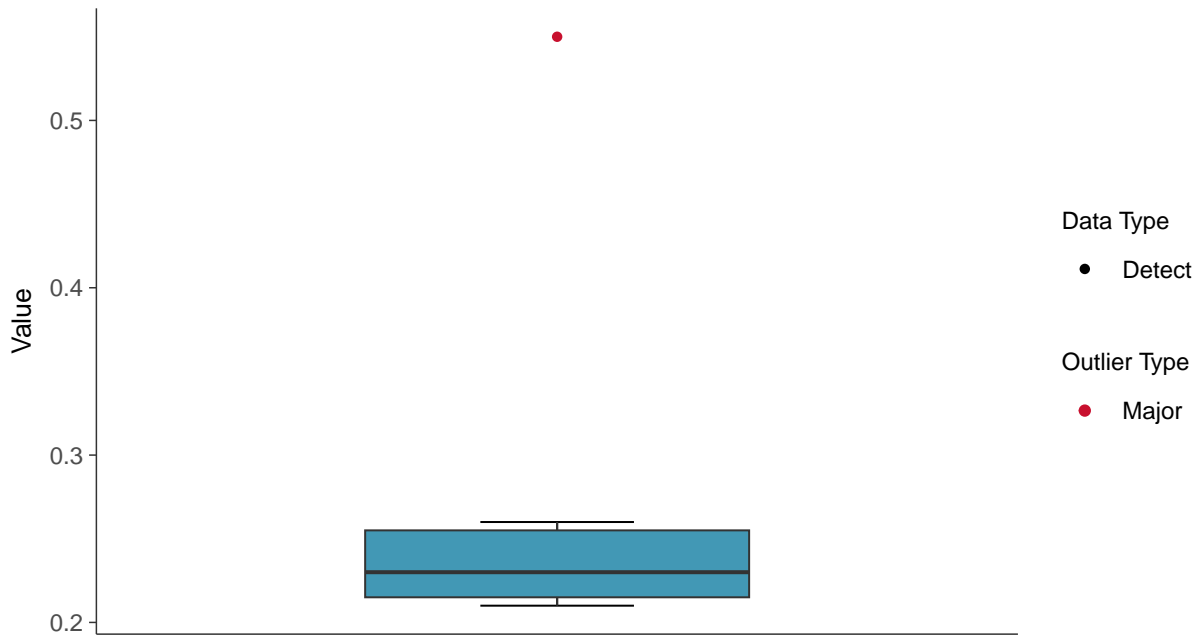
Fluoride (App IV), MW-20 (mg/L)





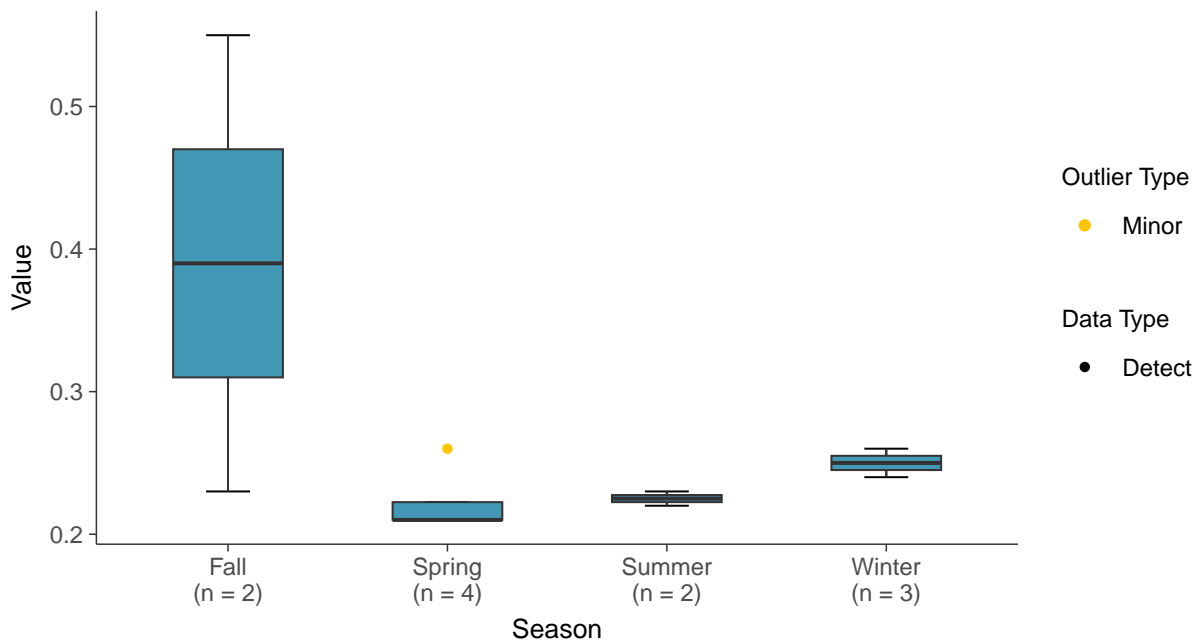
Boxplot

Fluoride (App IV), MW-20 (mg/L)



Boxplot by Season

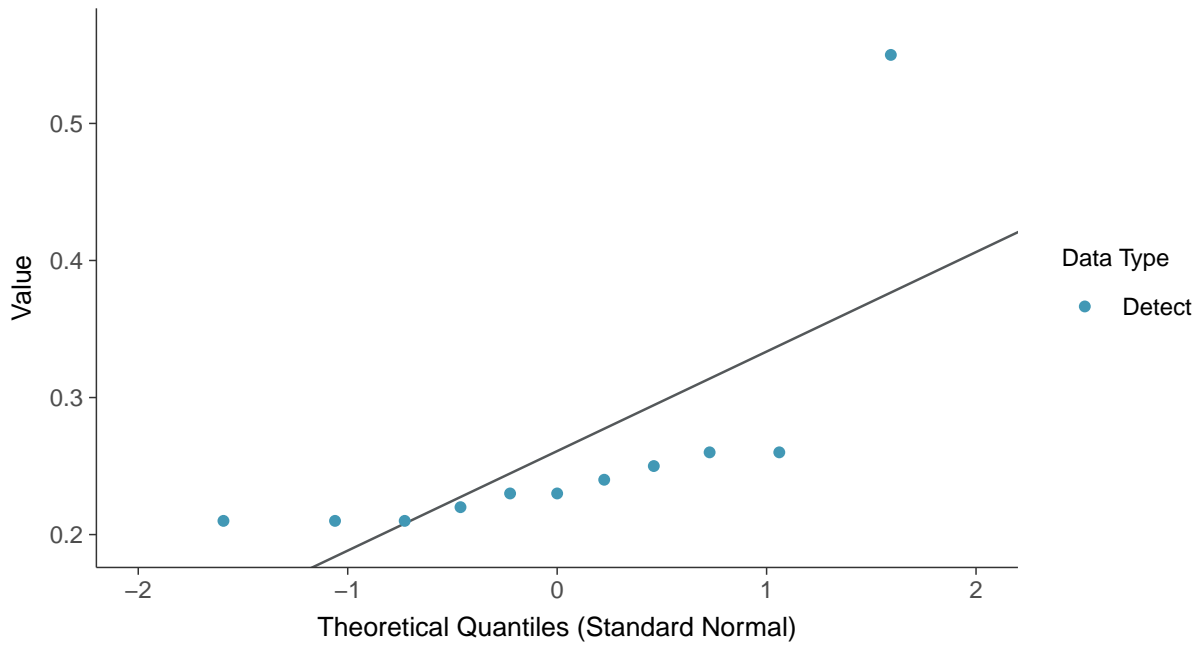
Fluoride (App IV), MW-20 (mg/L)





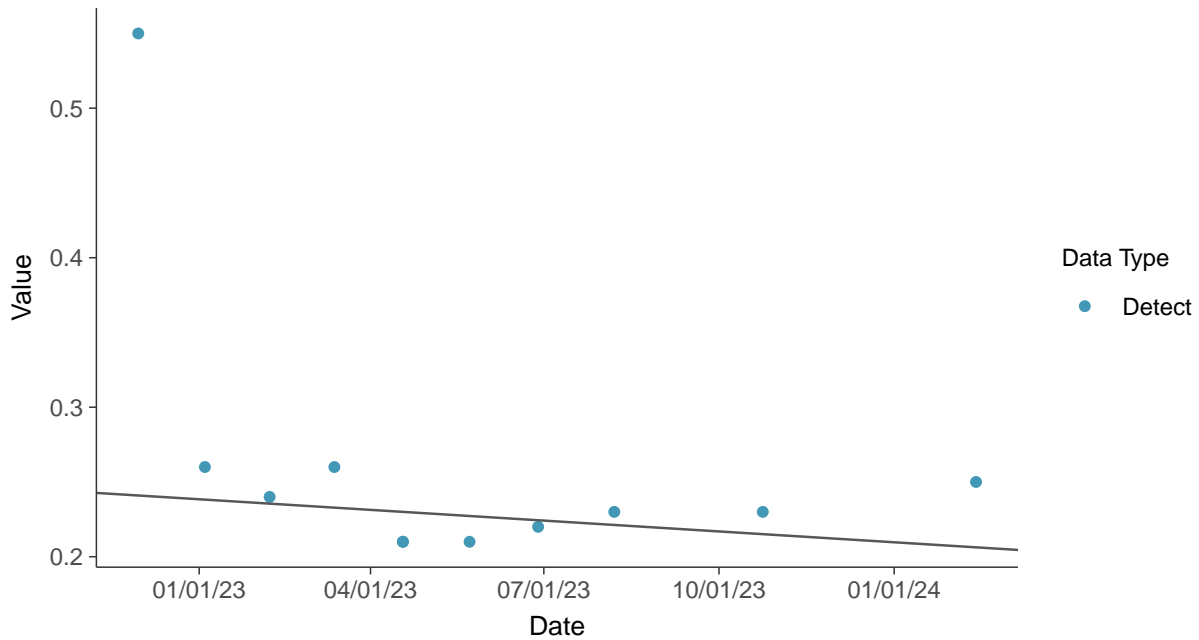
Normal Q-Q plot

Fluoride (App IV), MW-20 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

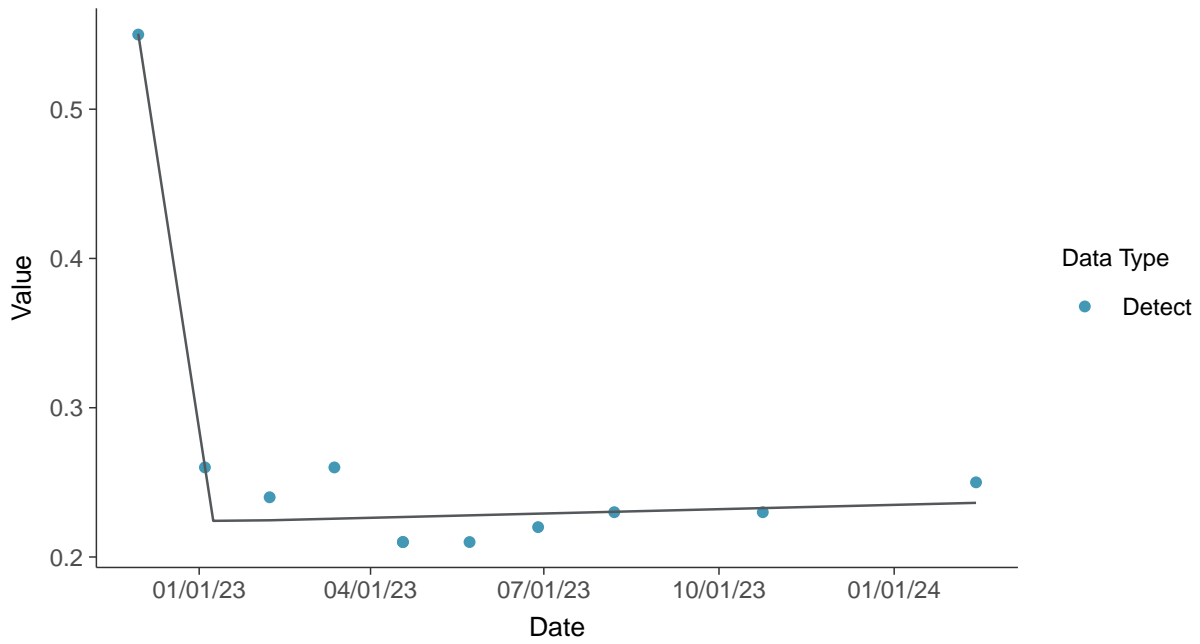
Fluoride (App IV), MW-20 (mg/L)





Trend Regression: Piecewise Linear-Linear

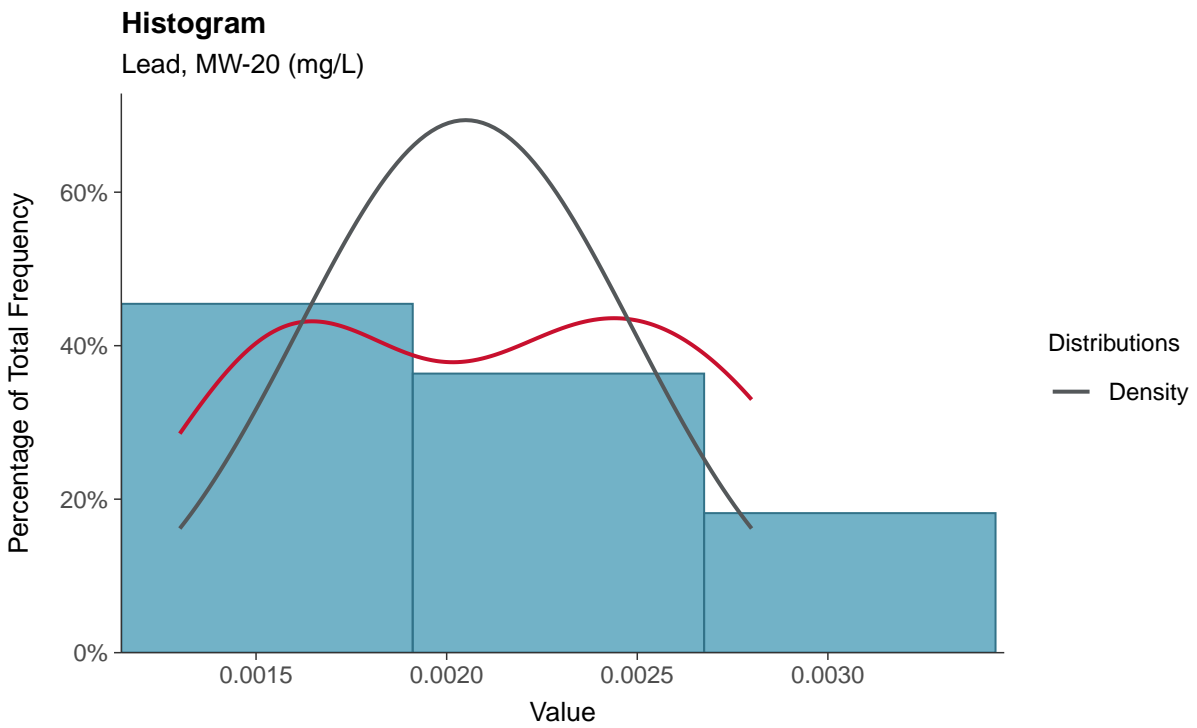
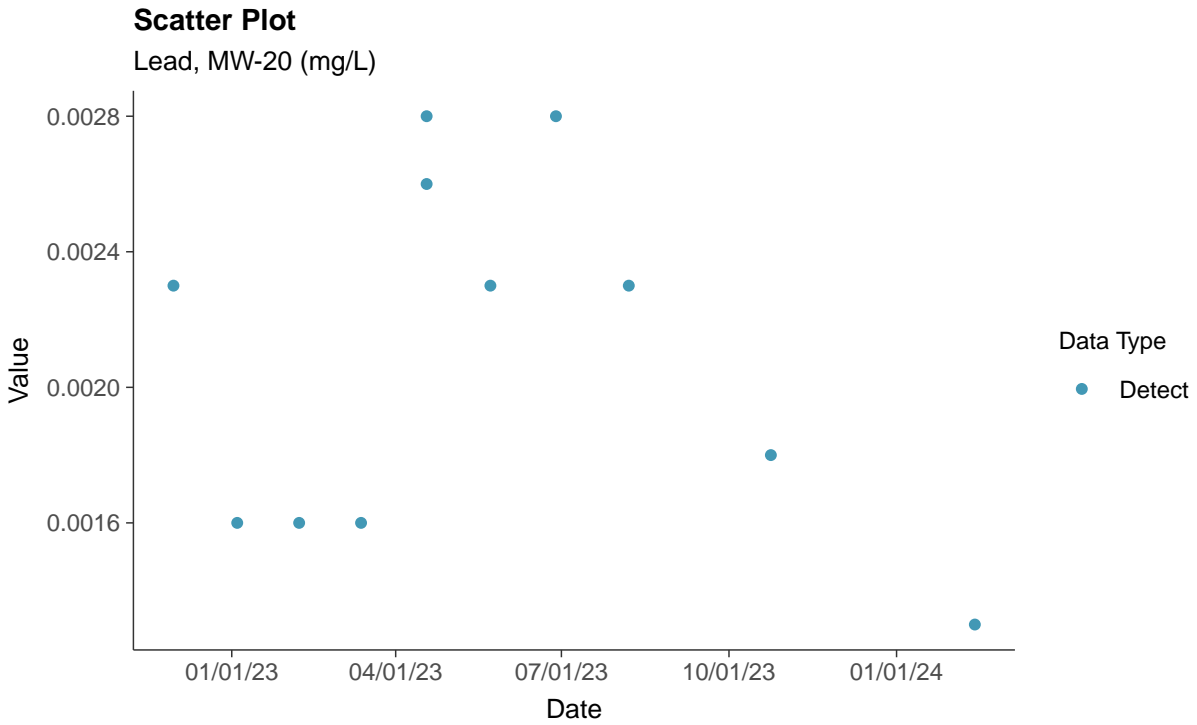
Fluoride (App IV), MW-20 (mg/L)





Appendix IV: Lead, MW-20

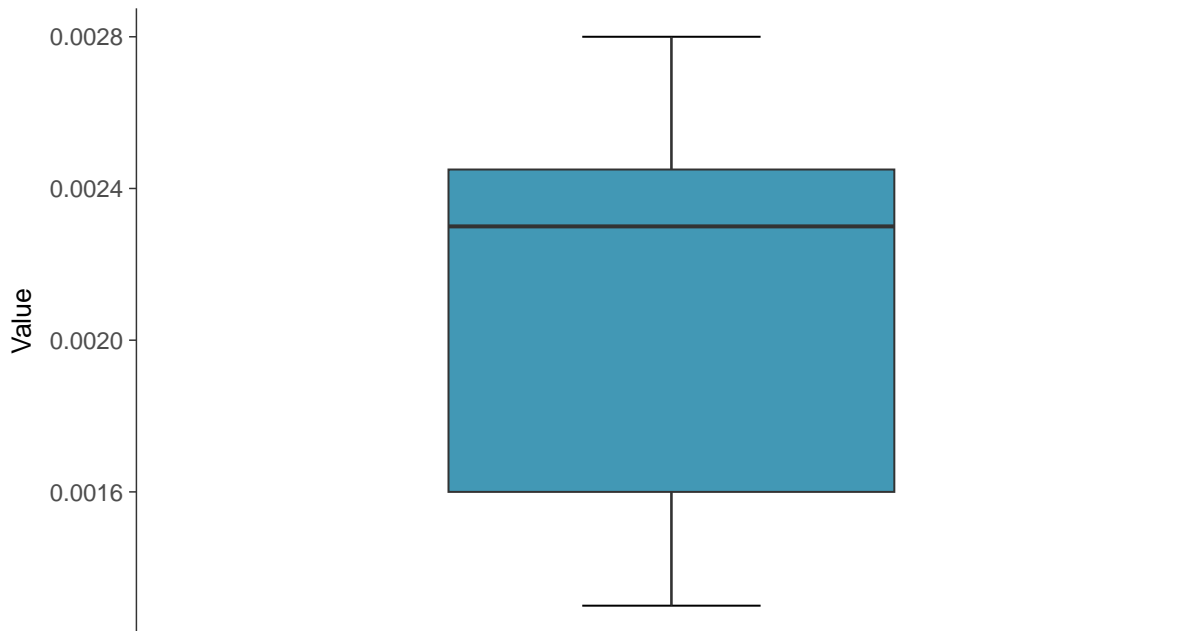
ID: 1_30_5_115





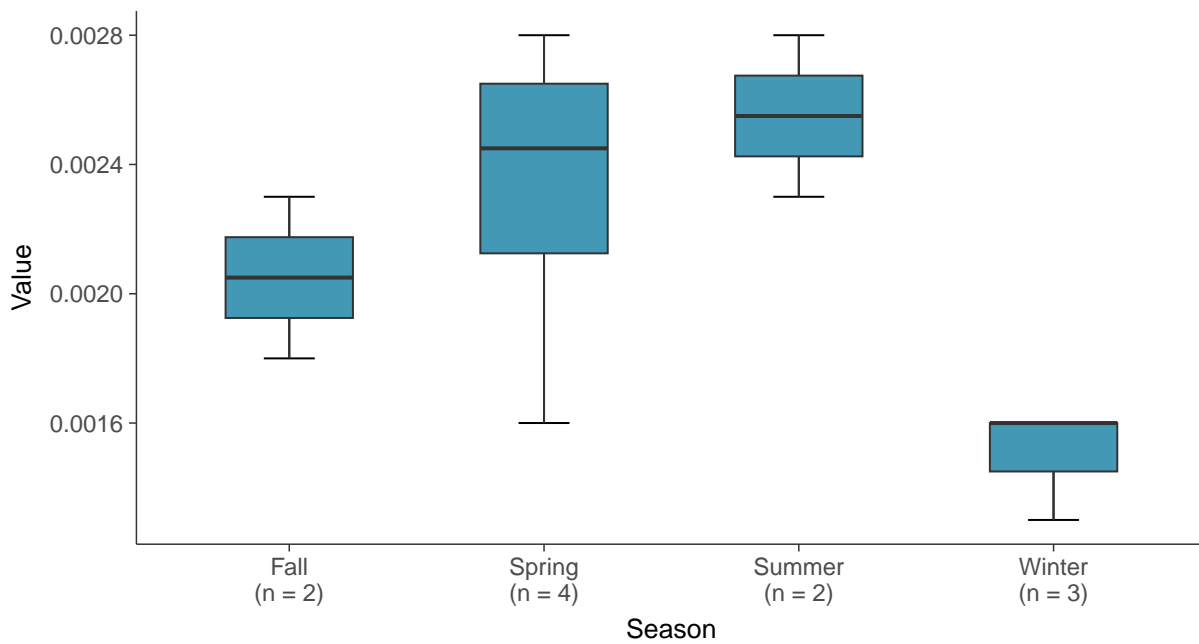
Boxplot

Lead, MW-20 (mg/L)



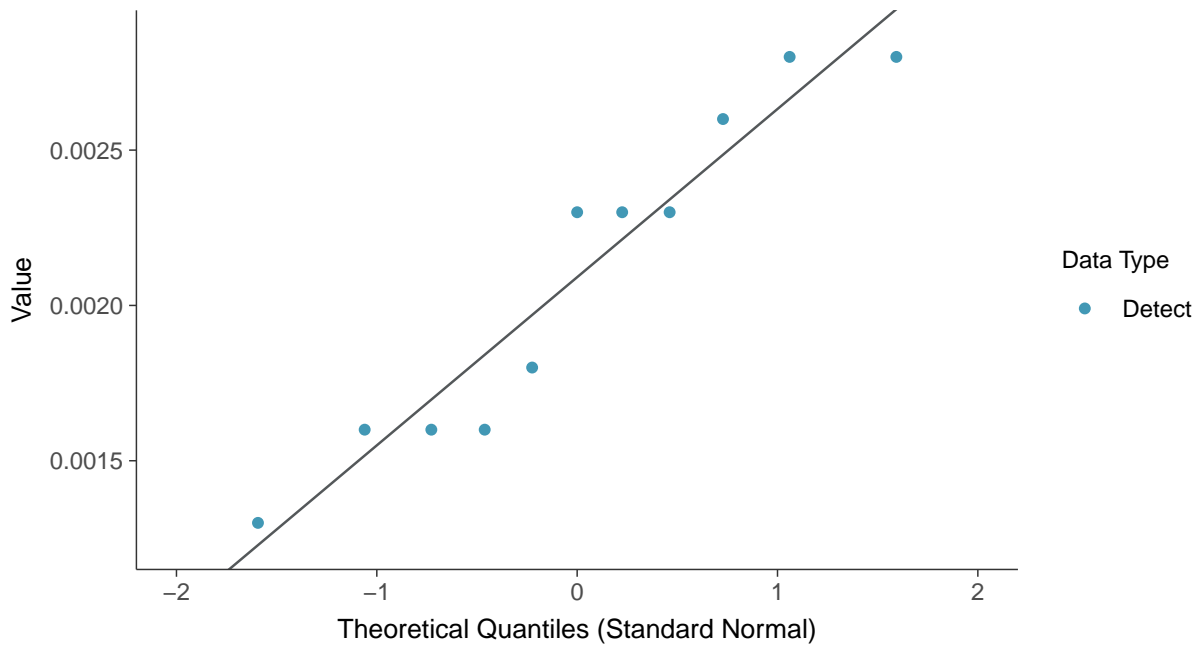
Boxplot by Season

Lead, MW-20 (mg/L)

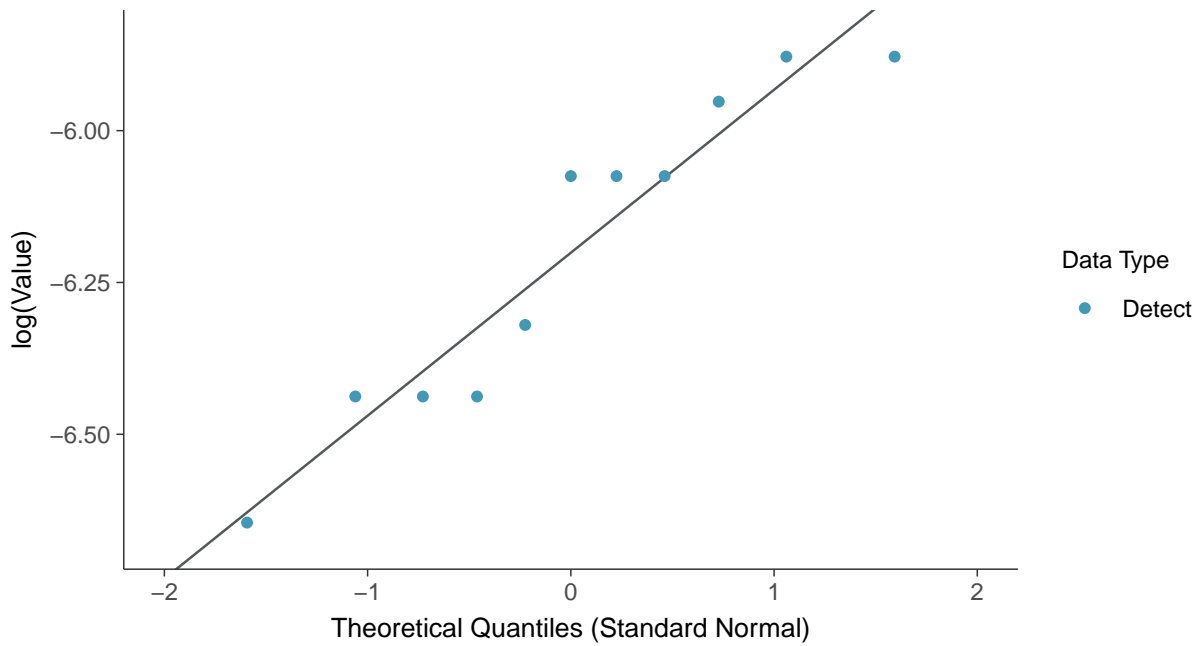




Normal Q-Q plot
Lead, MW-20 (mg/L)

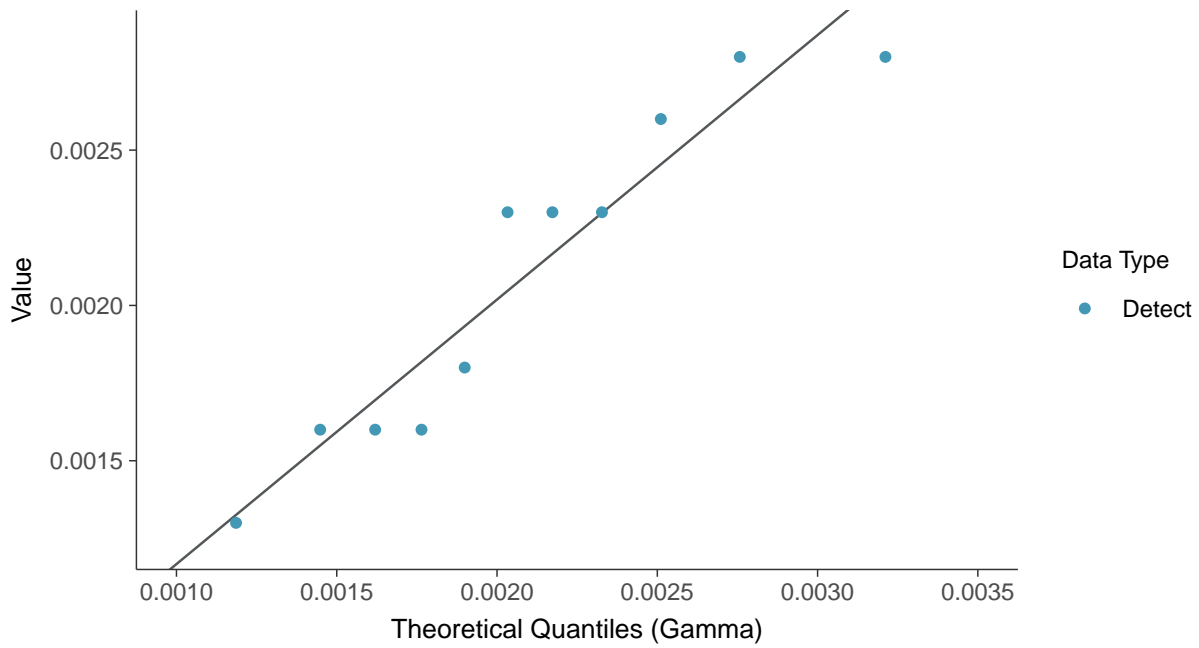


Lognormal Q-Q plot
Lead, MW-20 (mg/L)

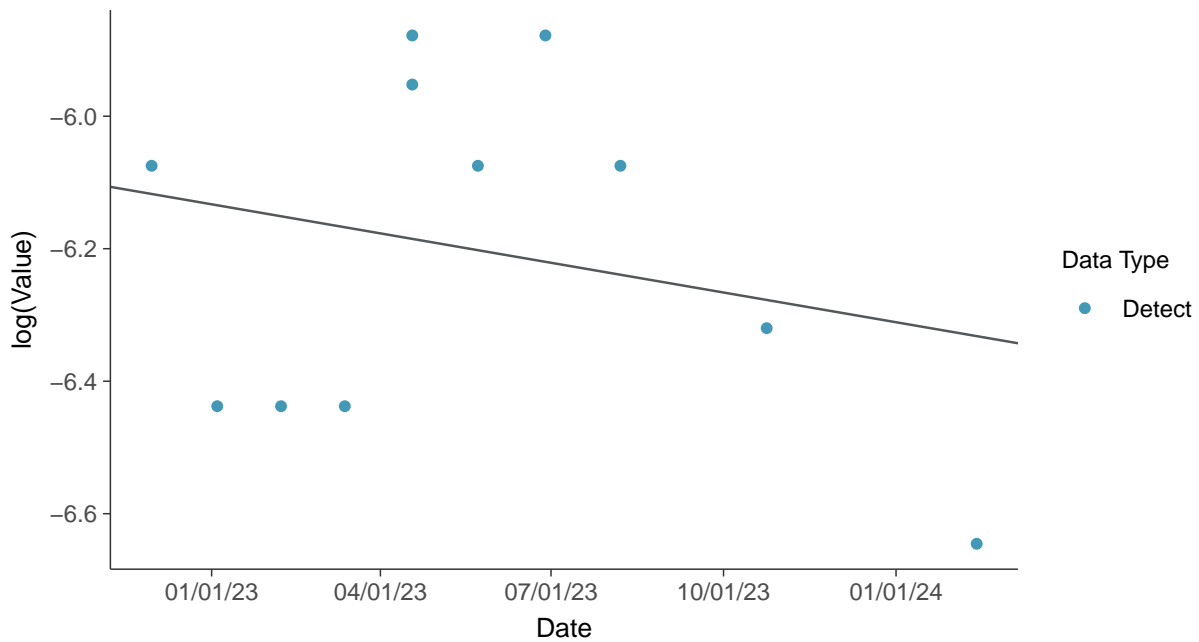




Gamma Q-Q plot
Lead, MW-20 (mg/L)



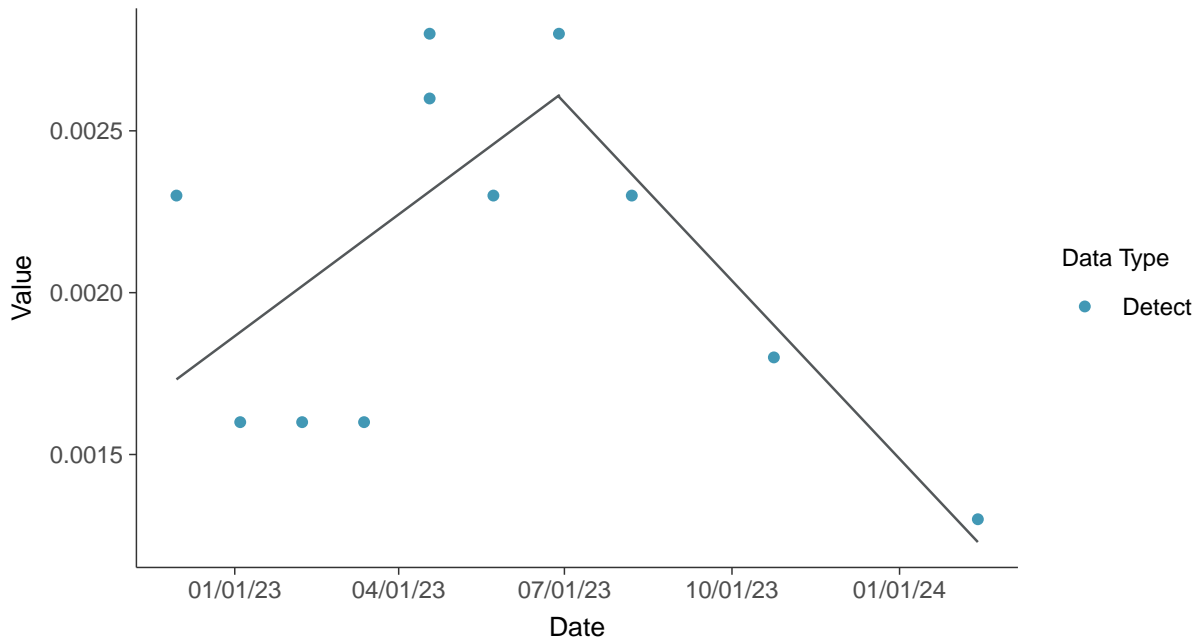
Trend Regression: Lognormal MLE
Lead, MW-20 (mg/L)





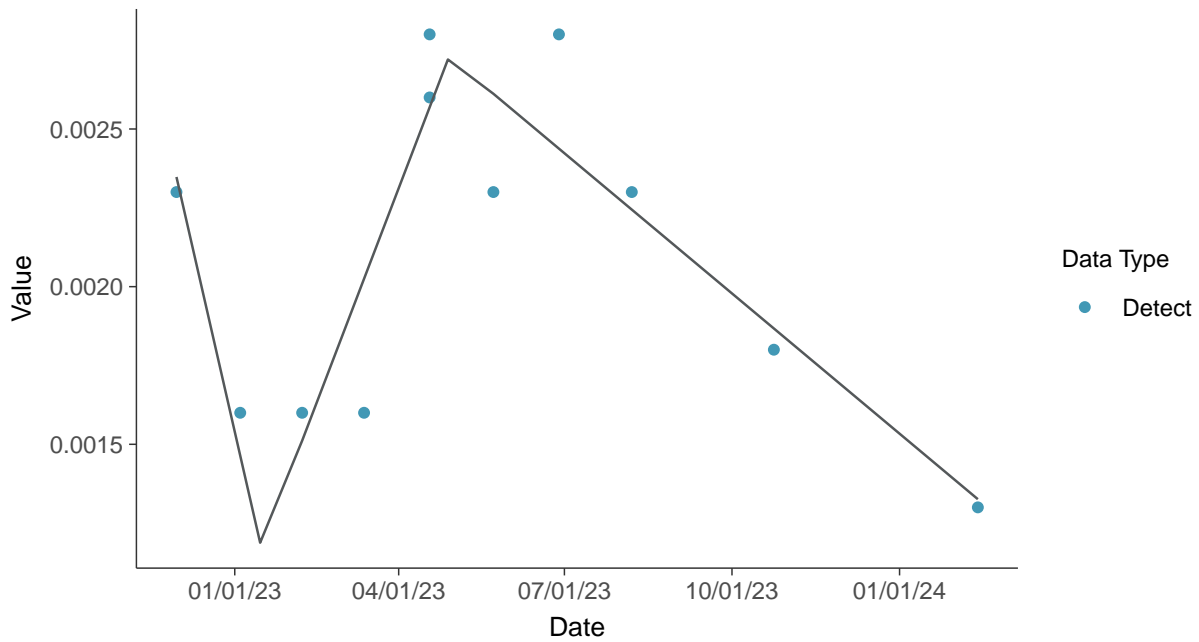
Trend Regression: Piecewise Linear-Linear

Lead, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

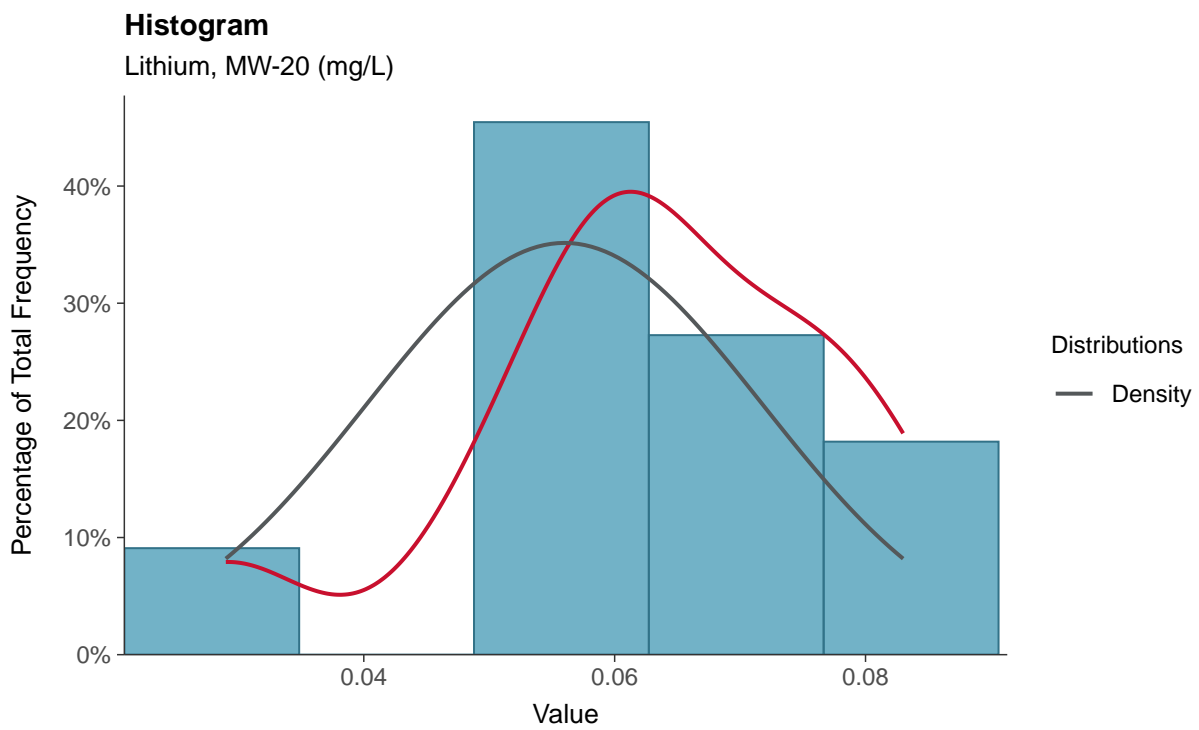
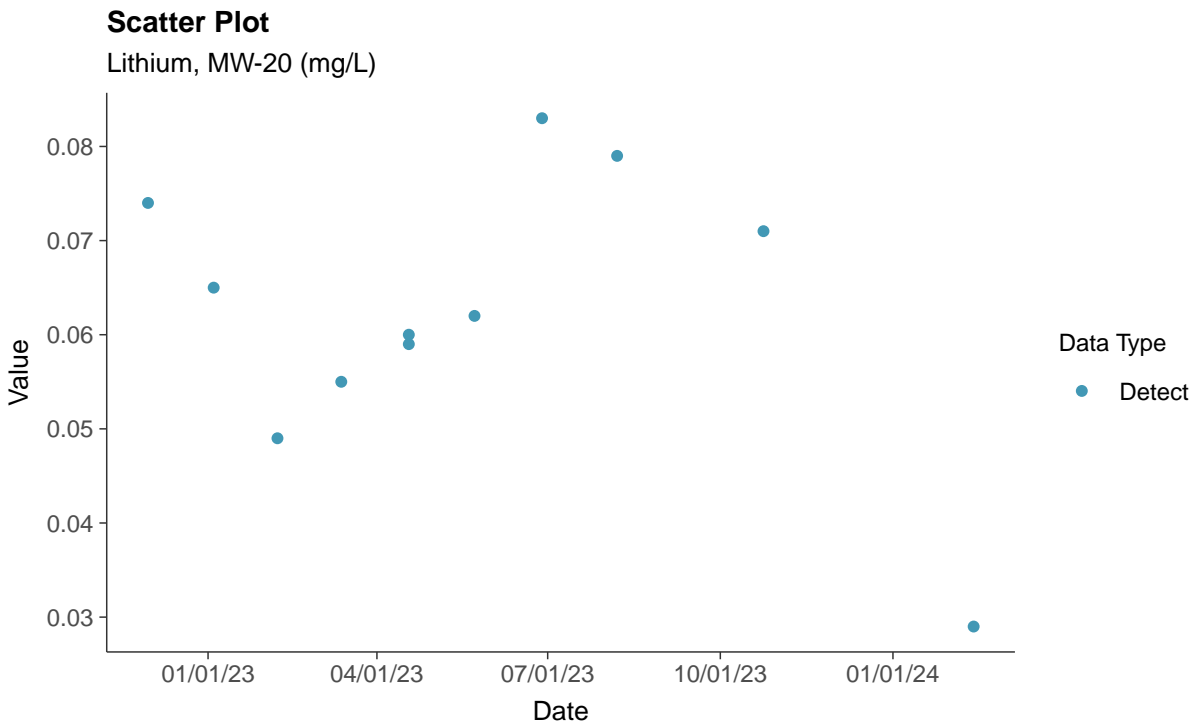
Lead, MW-20 (mg/L)





Appendix IV: Lithium, MW-20

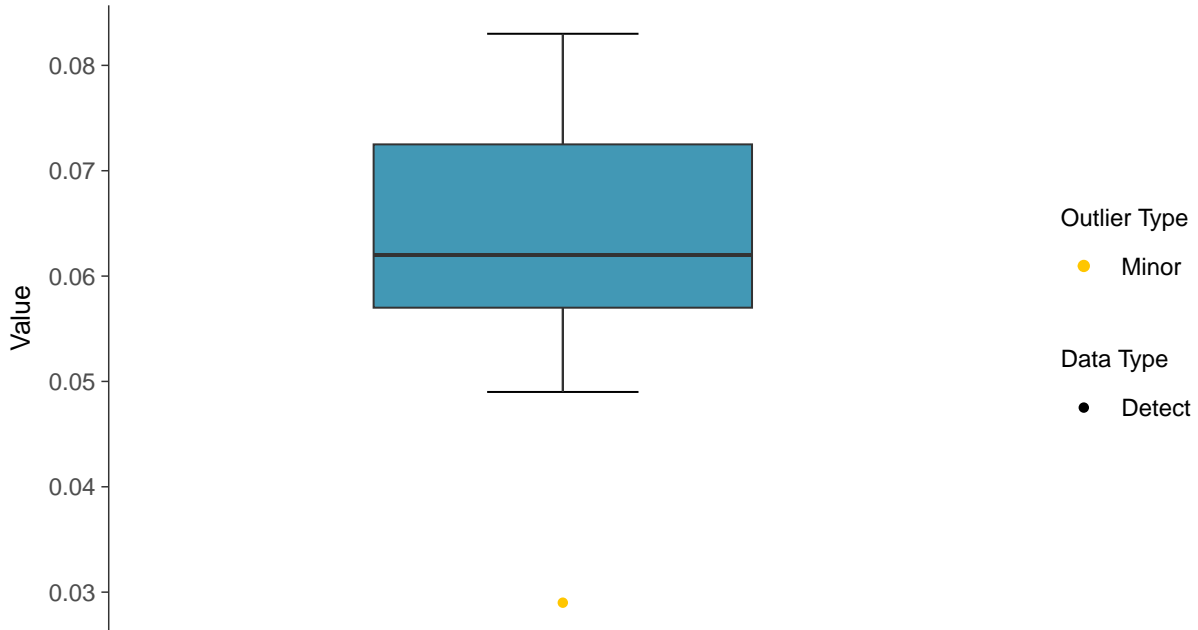
ID: 1_30_5_116





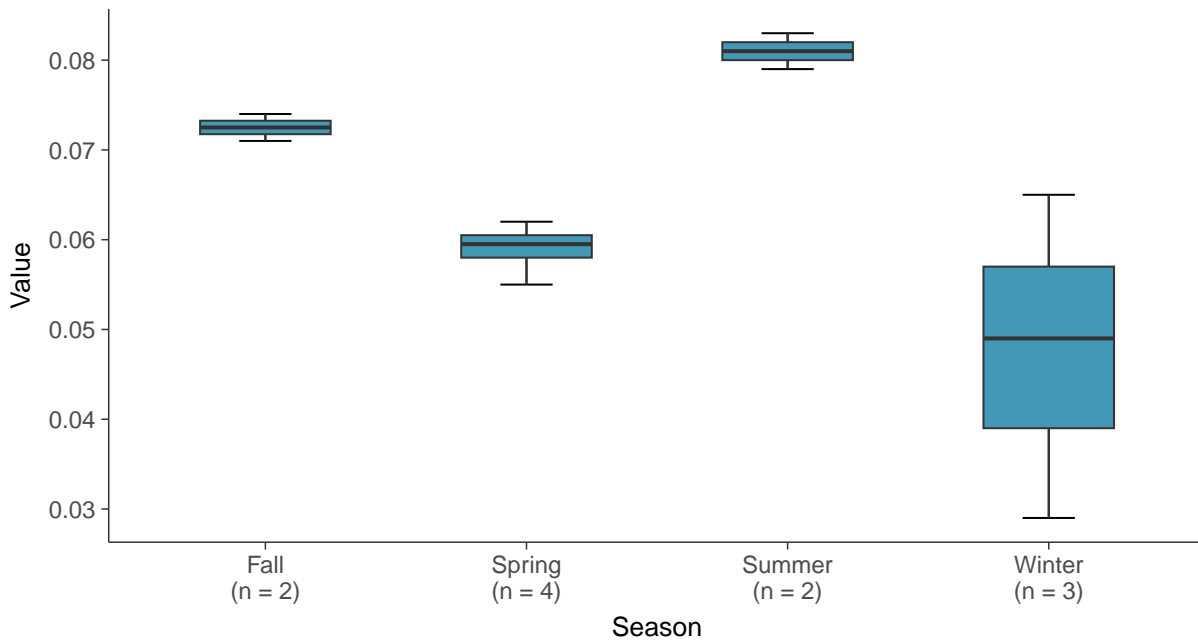
Boxplot

Lithium, MW-20 (mg/L)



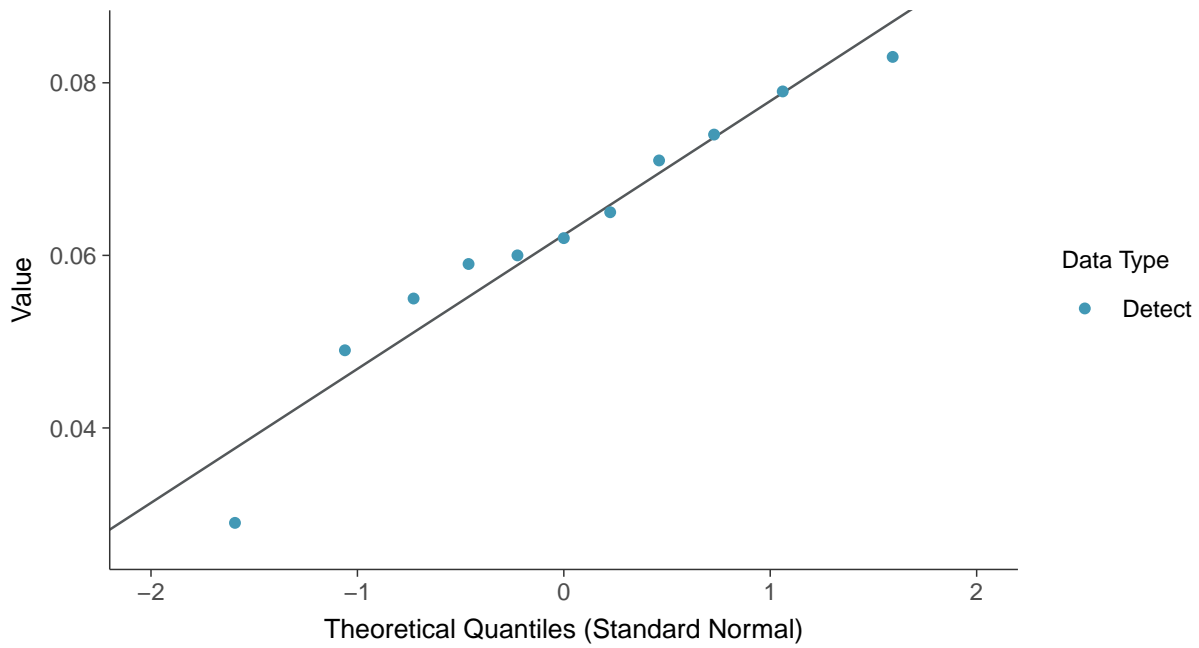
Boxplot by Season

Lithium, MW-20 (mg/L)

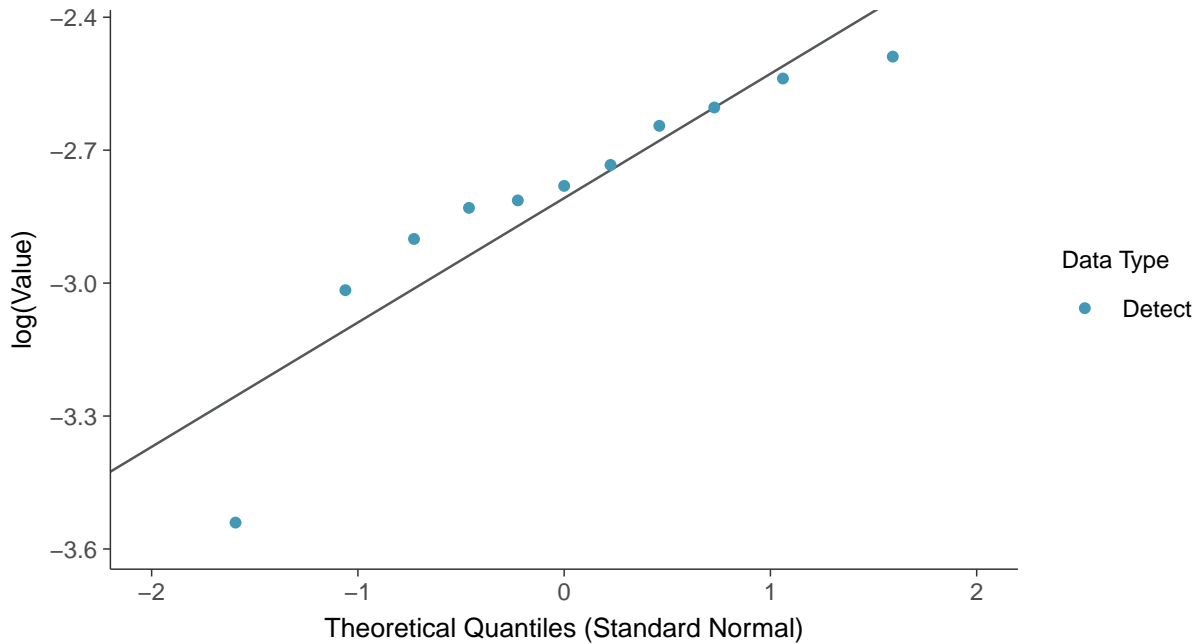




Normal Q-Q plot
Lithium, MW-20 (mg/L)



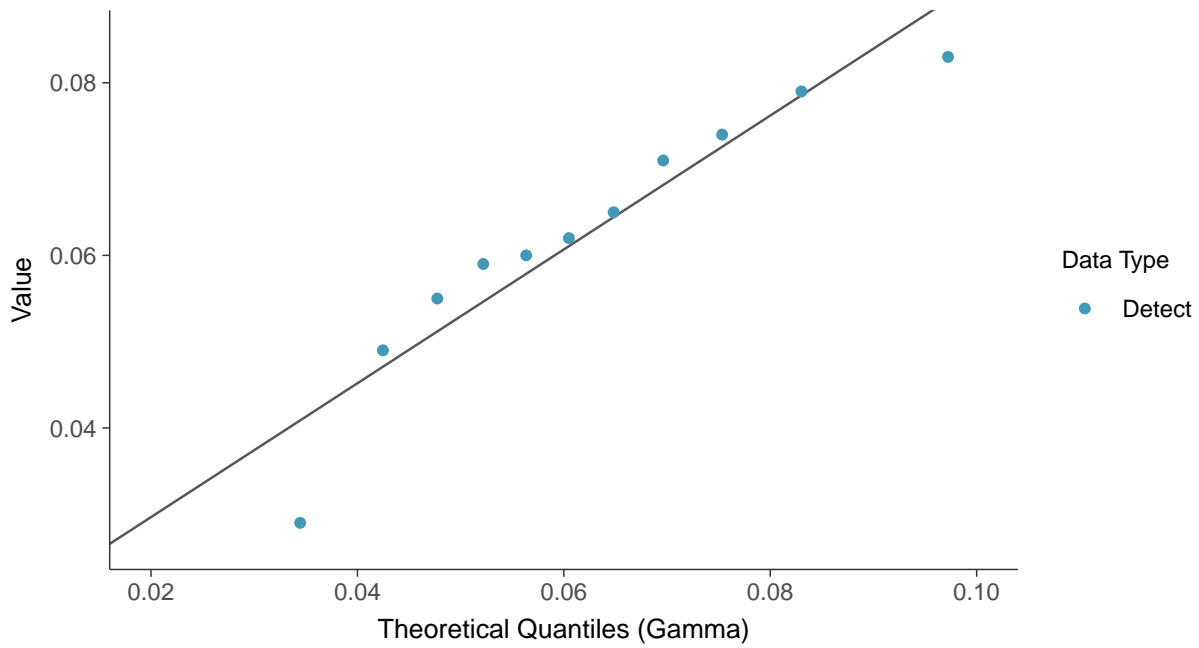
Lognormal Q-Q plot
Lithium, MW-20 (mg/L)





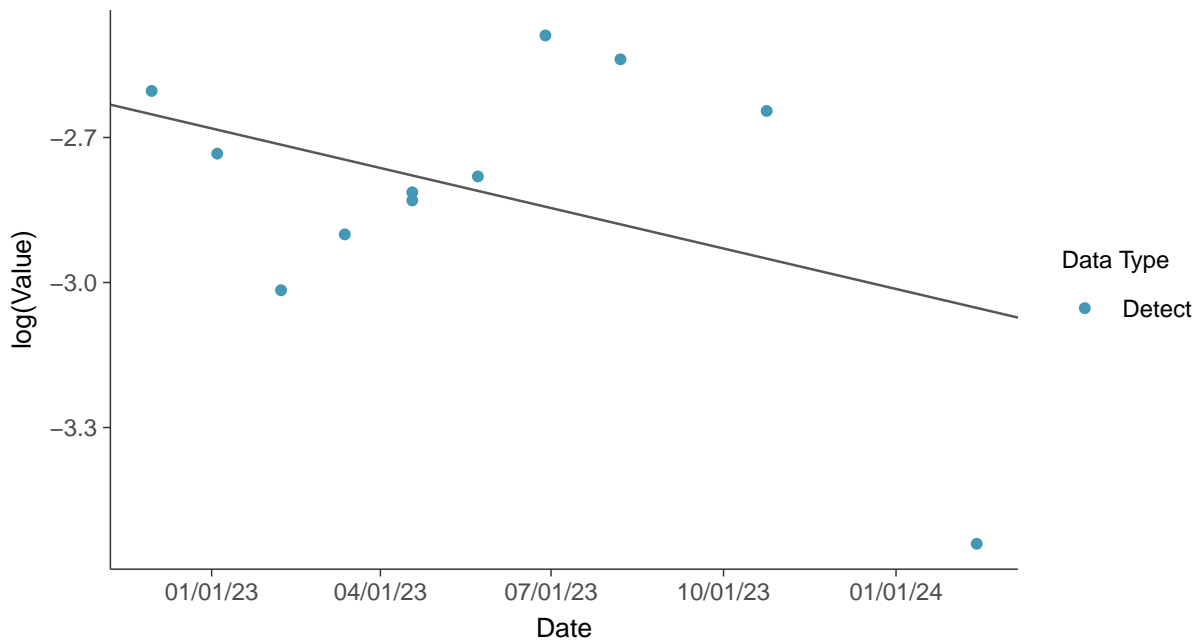
Gamma Q-Q plot

Lithium, MW-20 (mg/L)



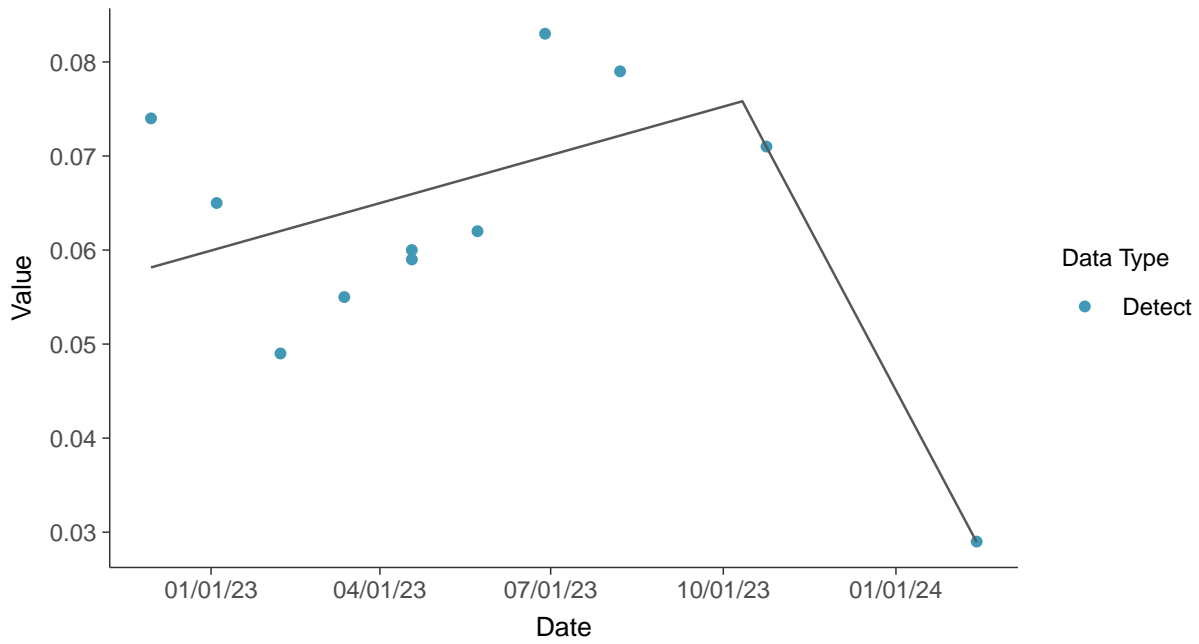
Trend Regression: Lognormal MLE

Lithium, MW-20 (mg/L)

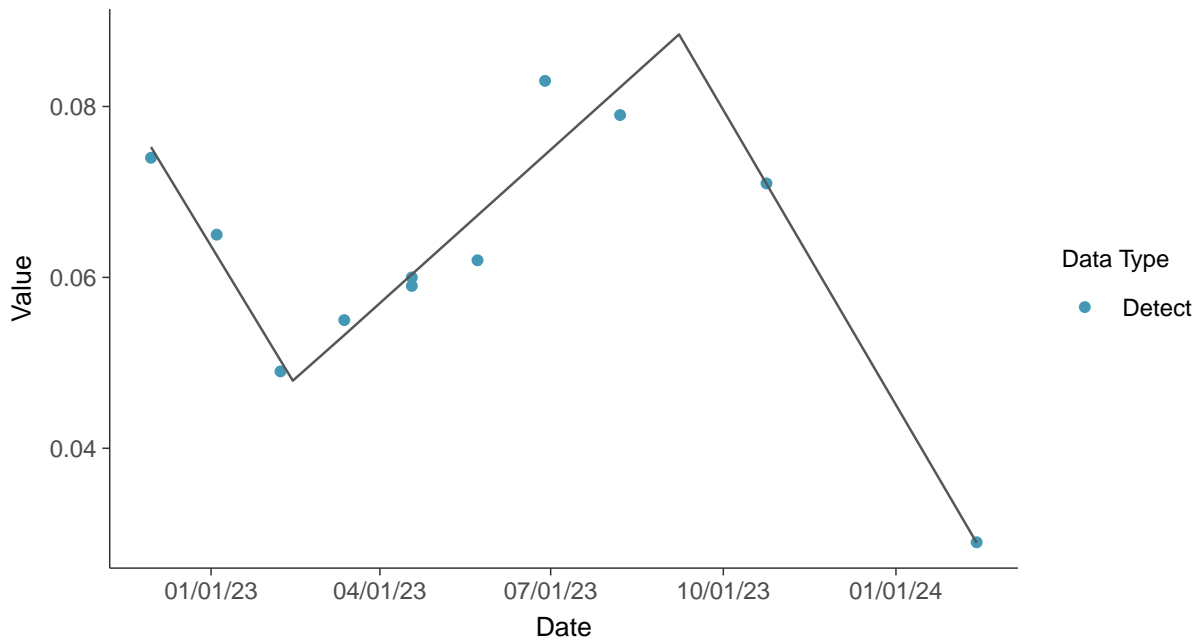




Trend Regression: Piecewise Linear-Linear
Lithium, MW-20 (mg/L)



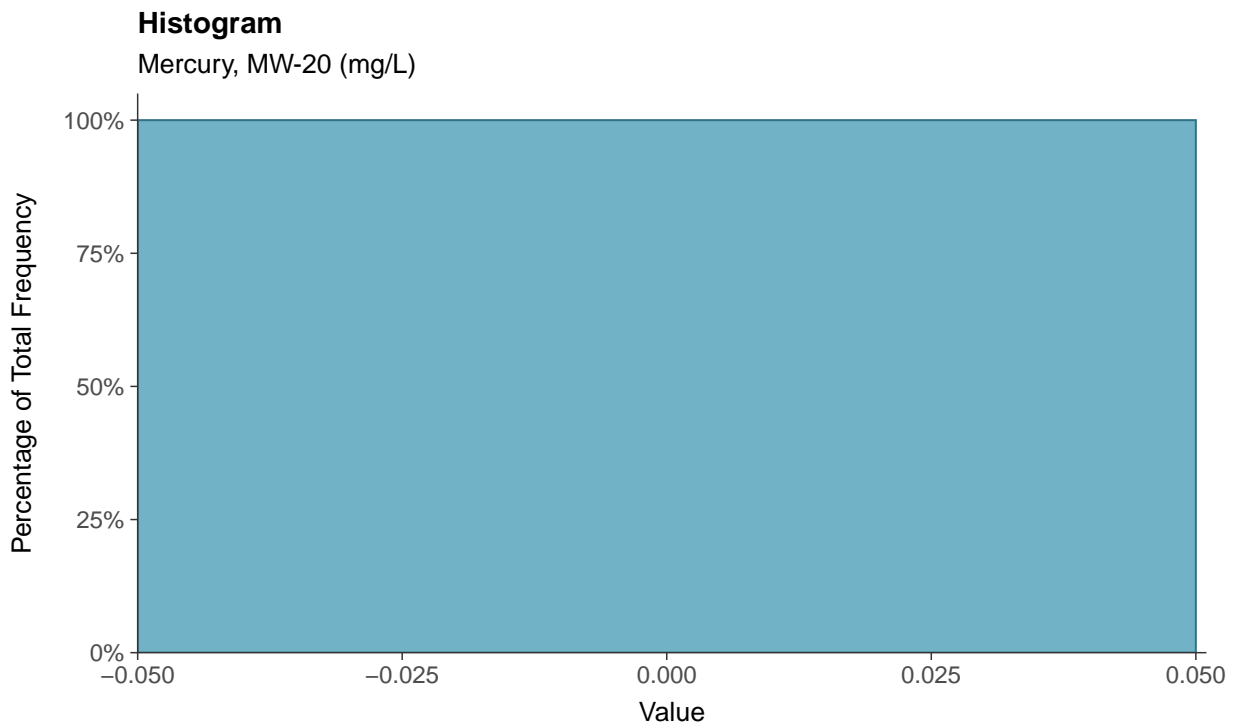
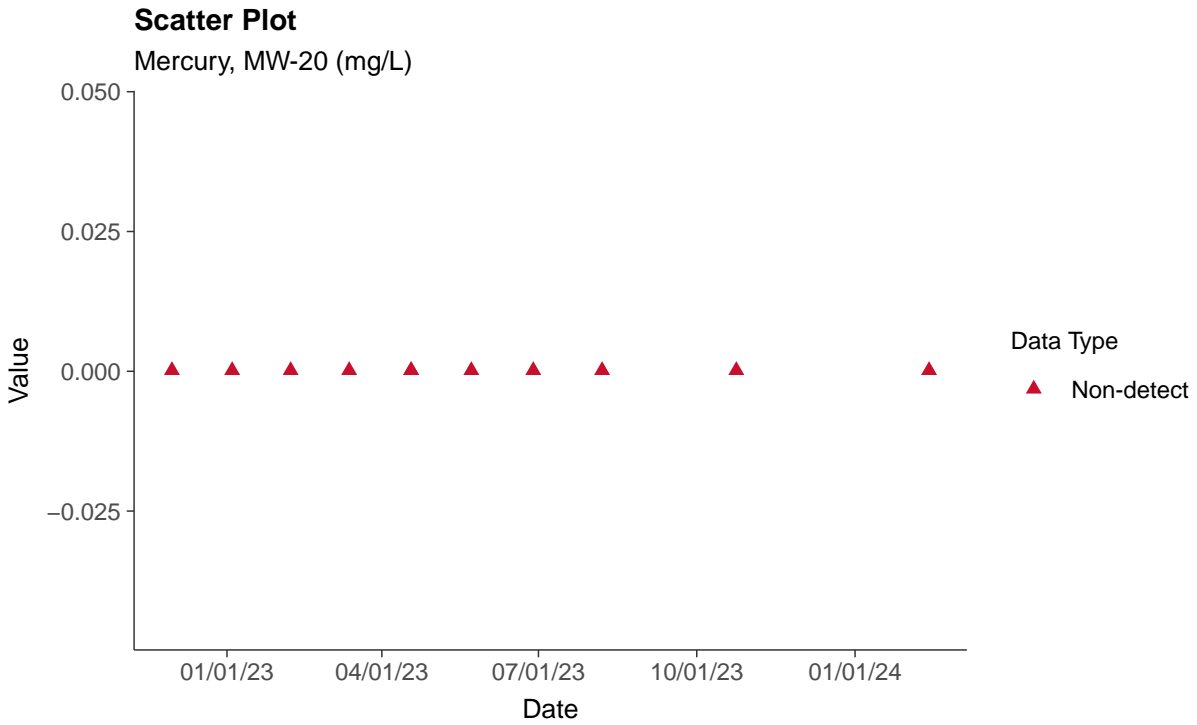
Trend Regression: Piecewise Linear-Linear-Linear
Lithium, MW-20 (mg/L)





Appendix IV: Mercury, MW-20

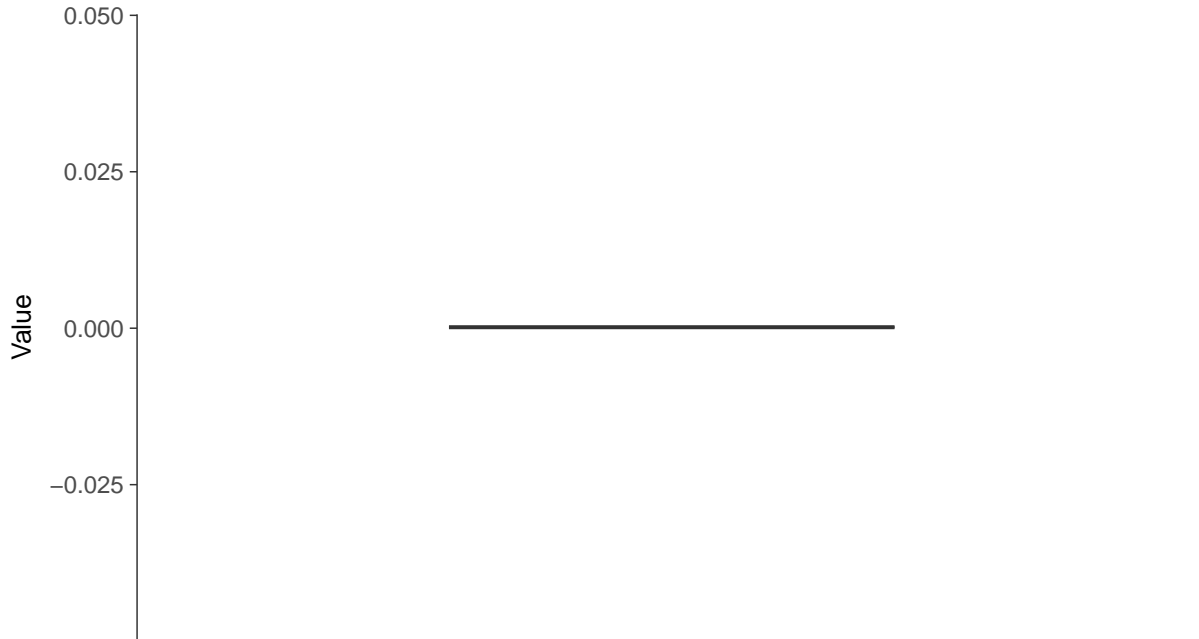
ID: 1_30_5_117





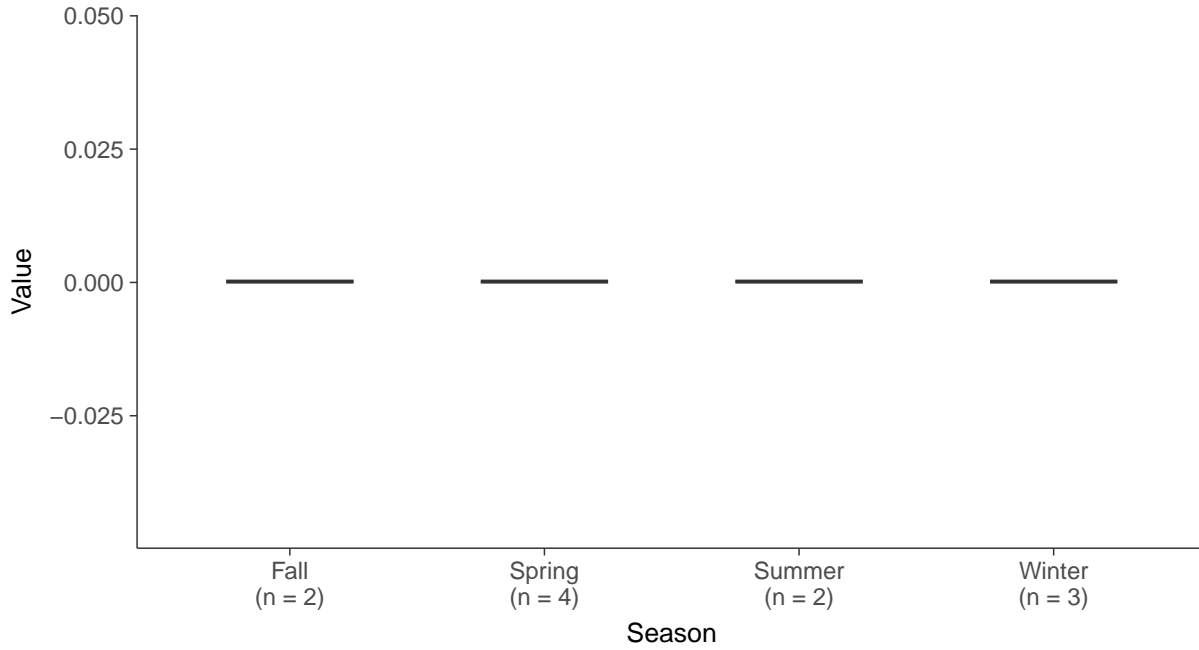
Boxplot

Mercury, MW-20 (mg/L)



Boxplot by Season

Mercury, MW-20 (mg/L)



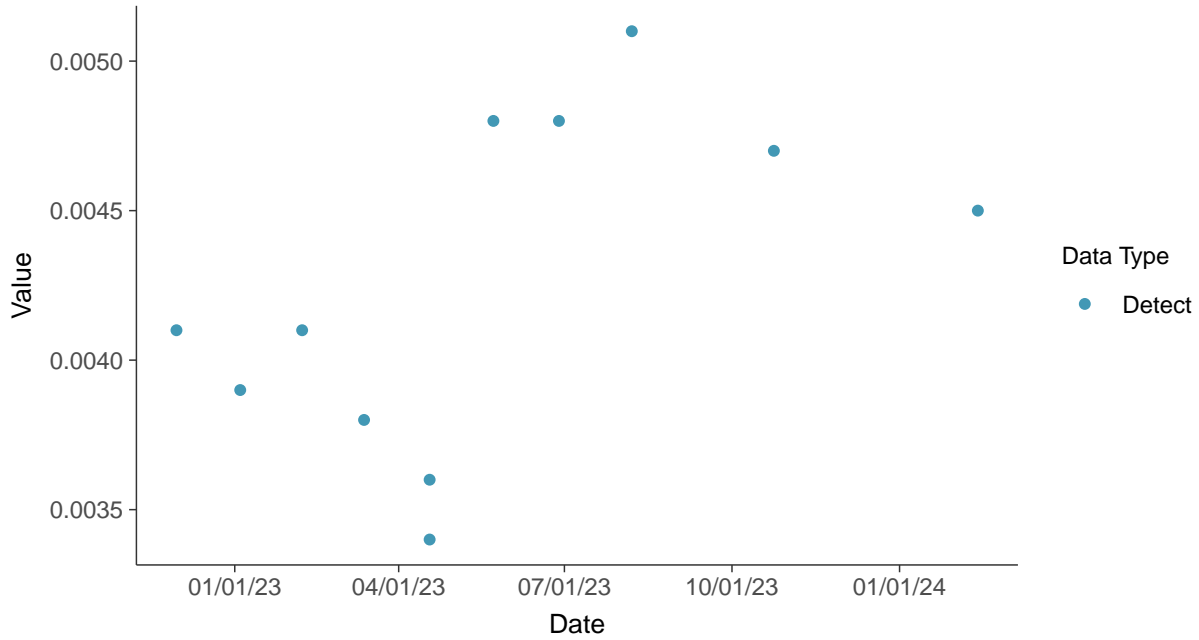


Appendix IV: Molybdenum, MW-20

ID: 1_30_5_118

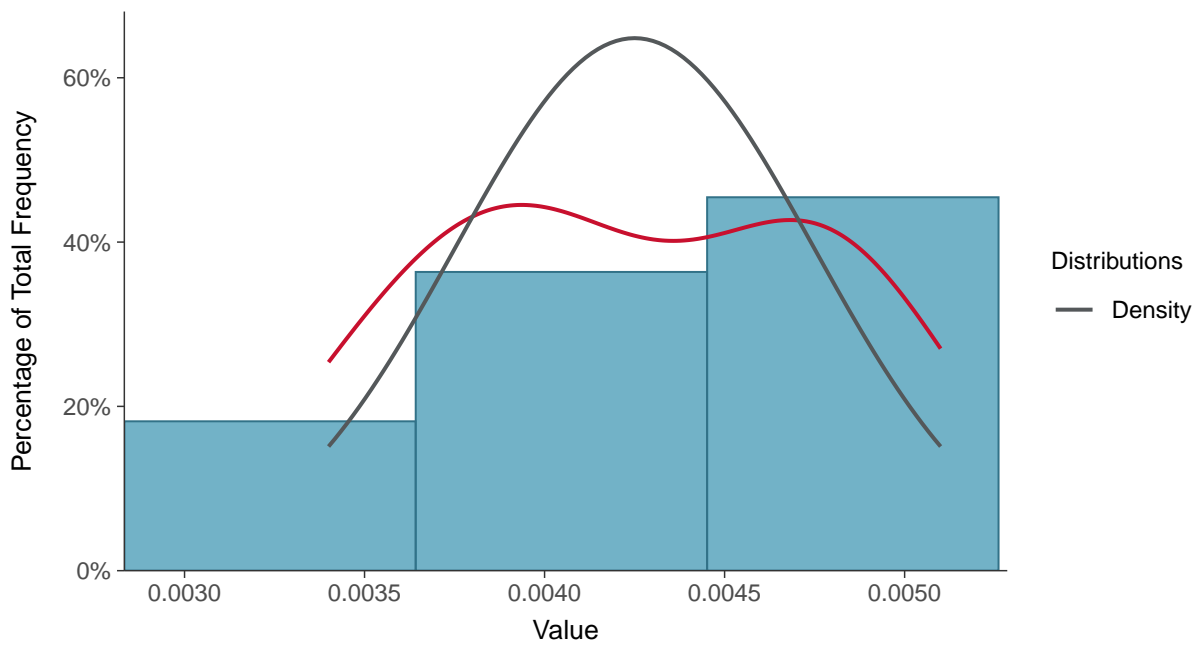
Scatter Plot

Molybdenum, MW-20 (mg/L)



Histogram

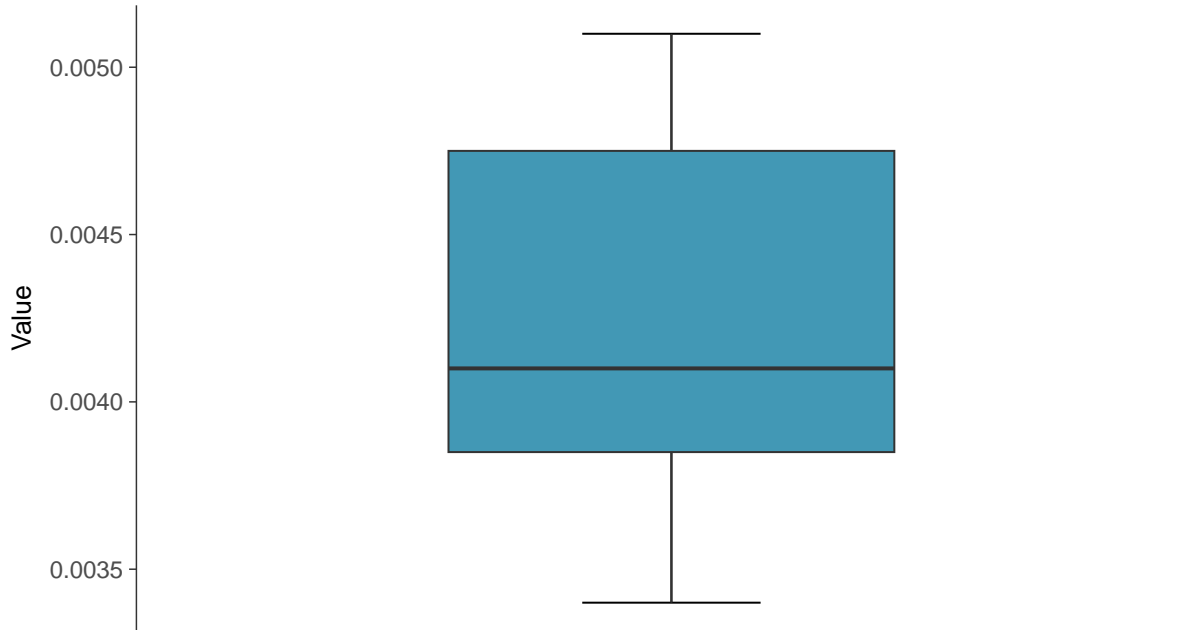
Molybdenum, MW-20 (mg/L)





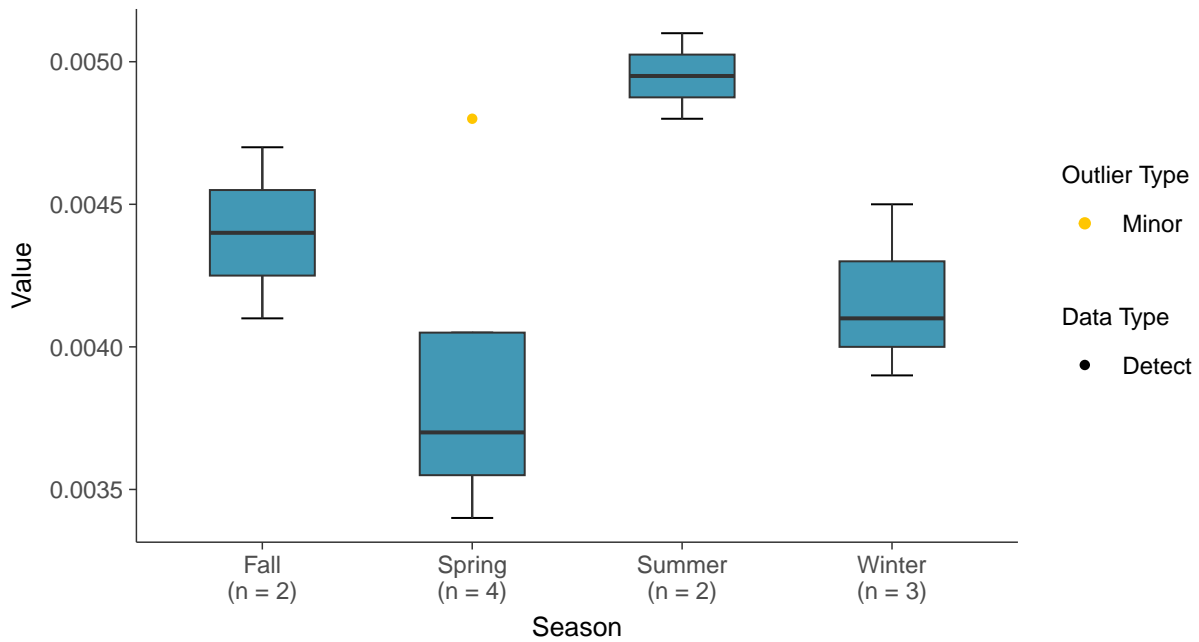
Boxplot

Molybdenum, MW-20 (mg/L)



Boxplot by Season

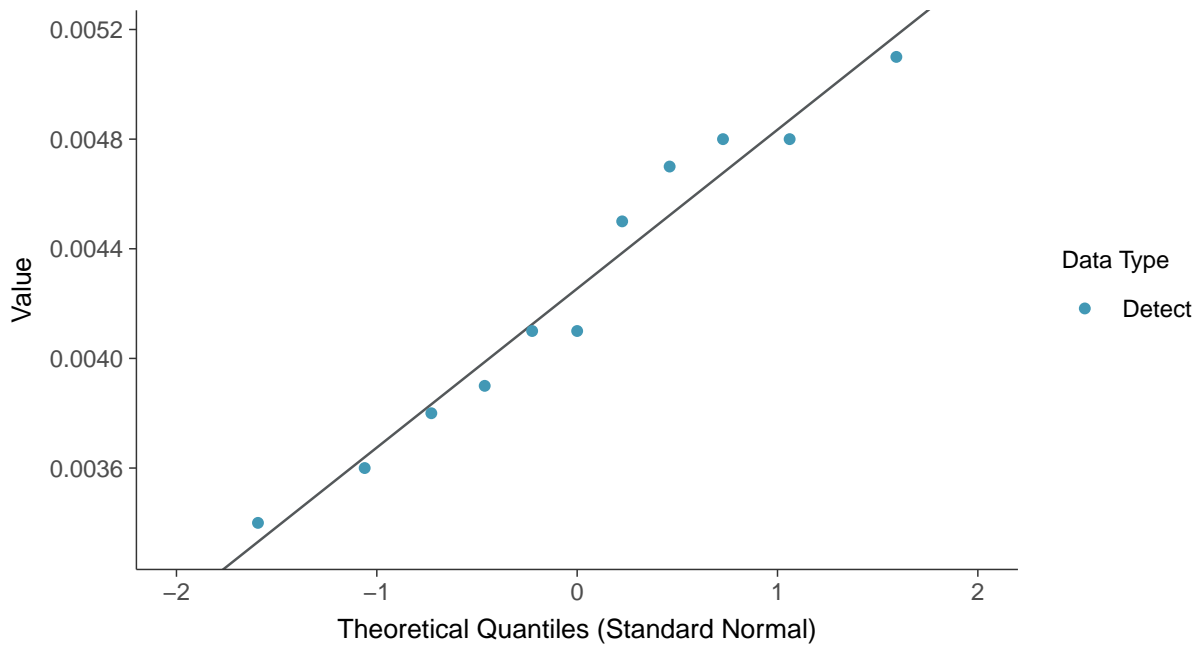
Molybdenum, MW-20 (mg/L)





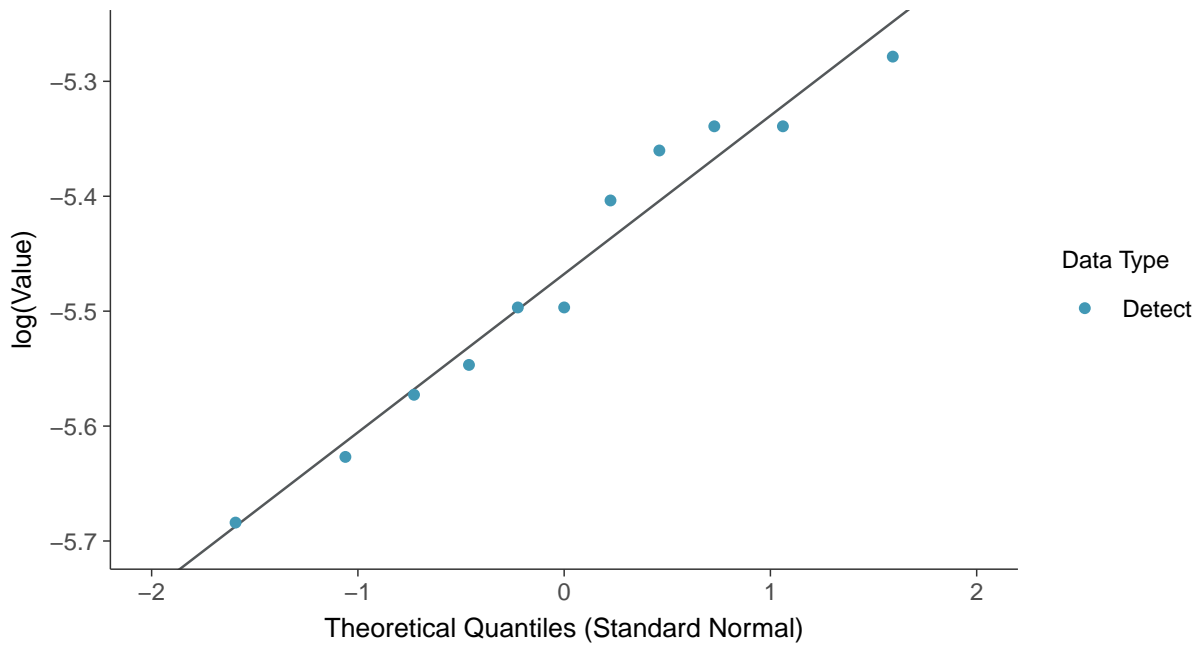
Normal Q-Q plot

Molybdenum, MW-20 (mg/L)



Lognormal Q-Q plot

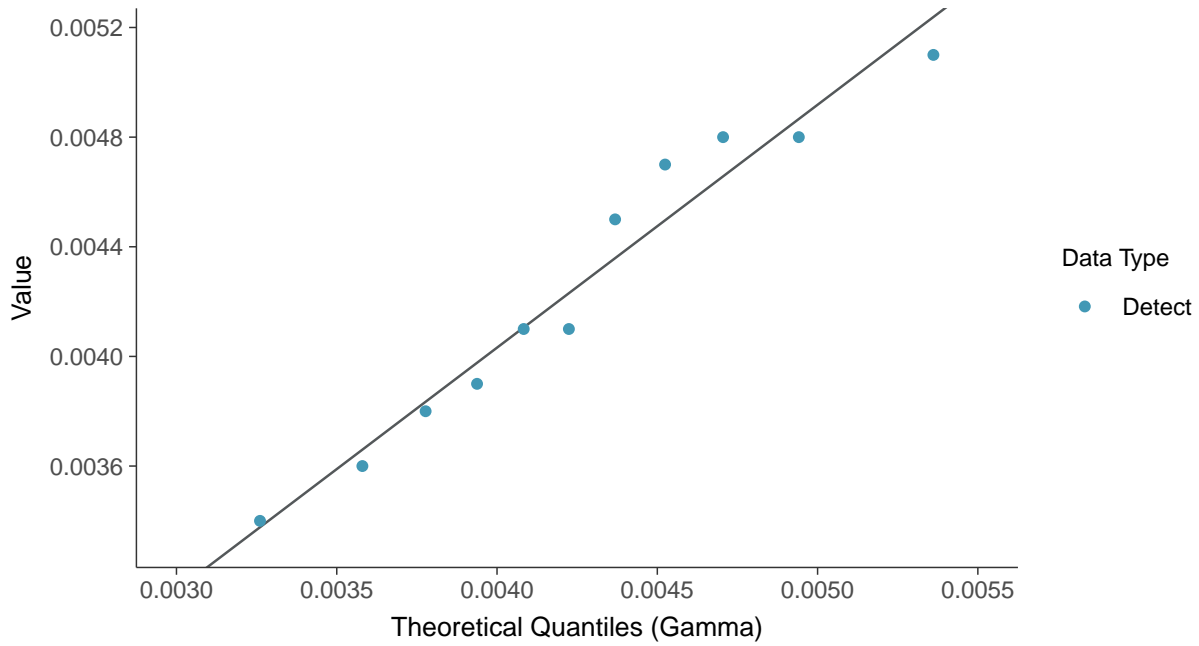
Molybdenum, MW-20 (mg/L)





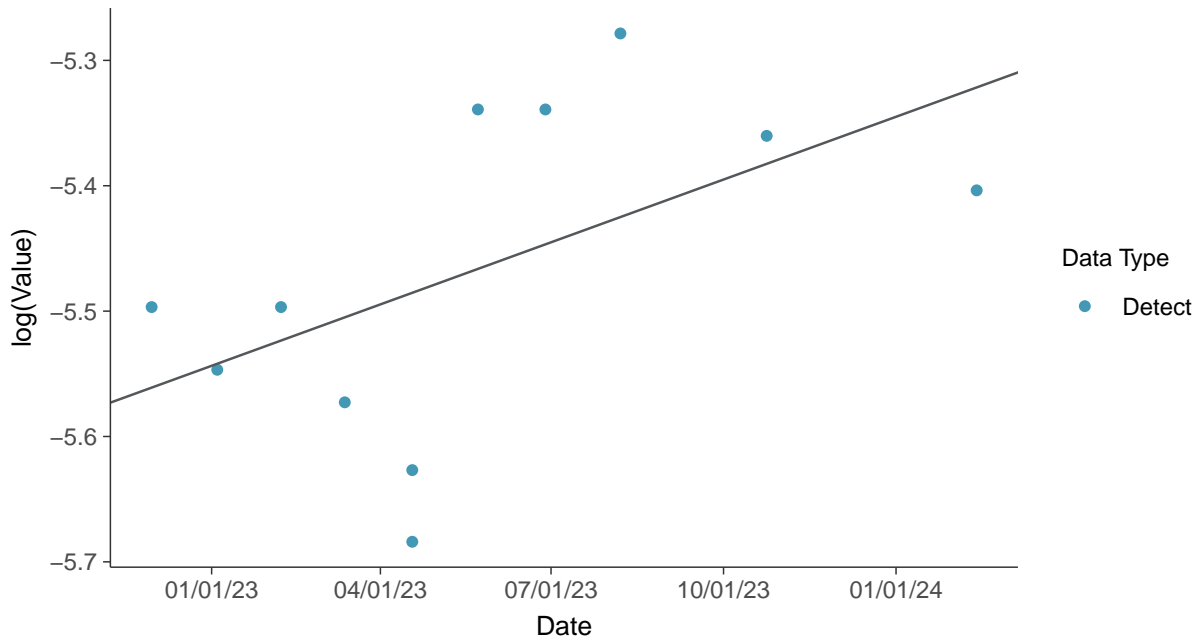
Gamma Q-Q plot

Molybdenum, MW-20 (mg/L)



Trend Regression: Lognormal MLE

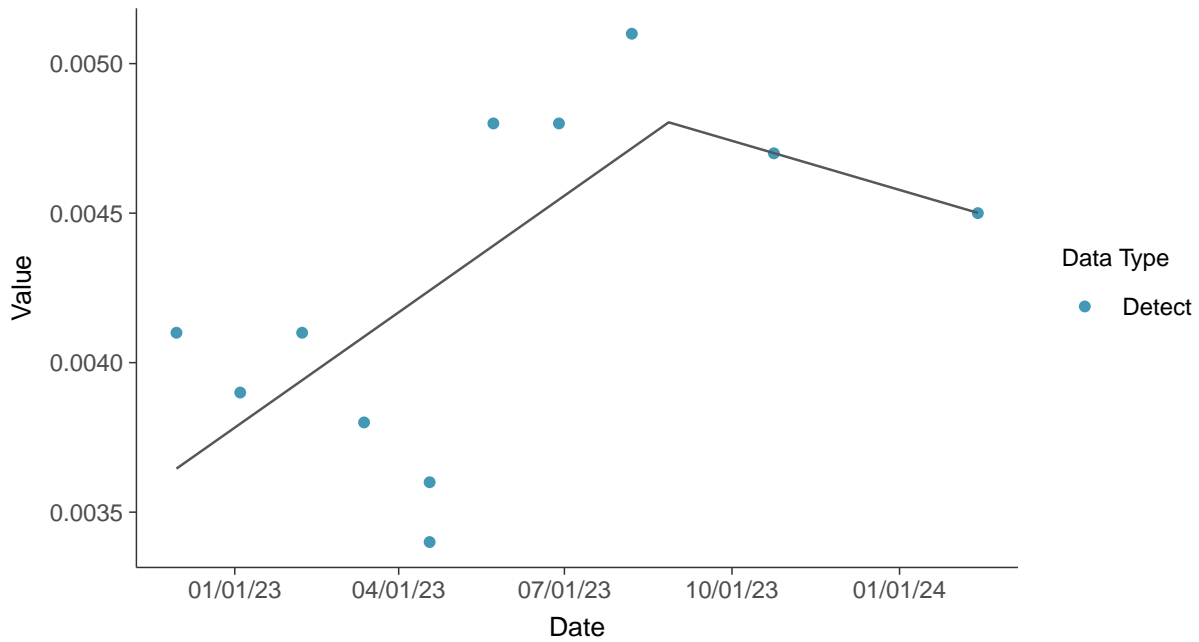
Molybdenum, MW-20 (mg/L)





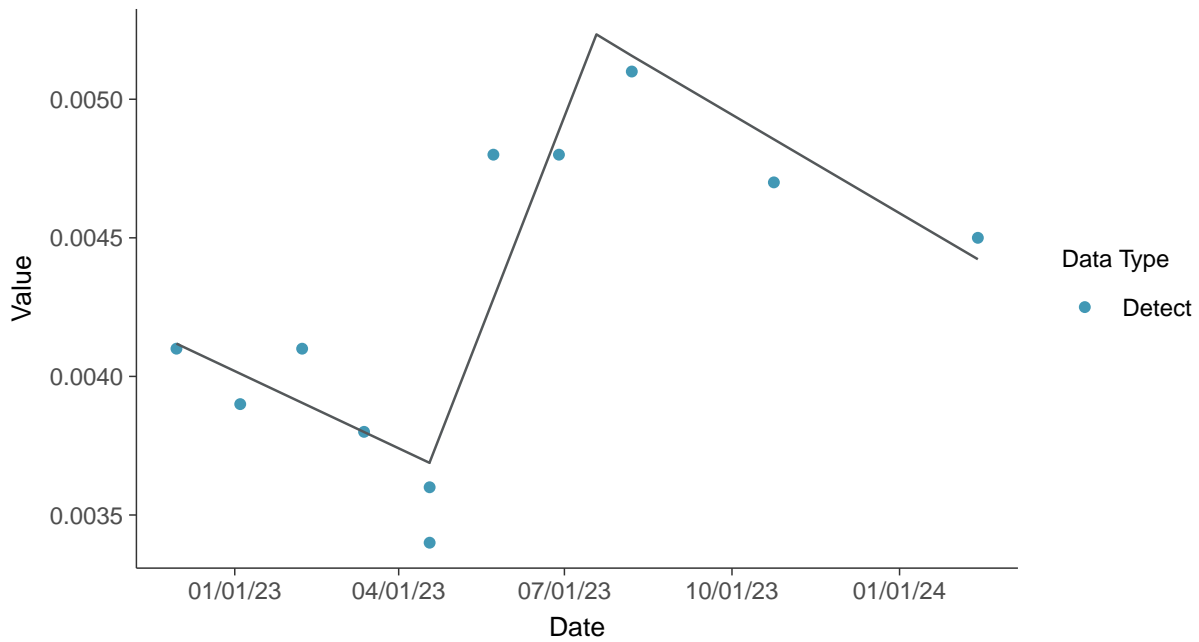
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-20 (mg/L)



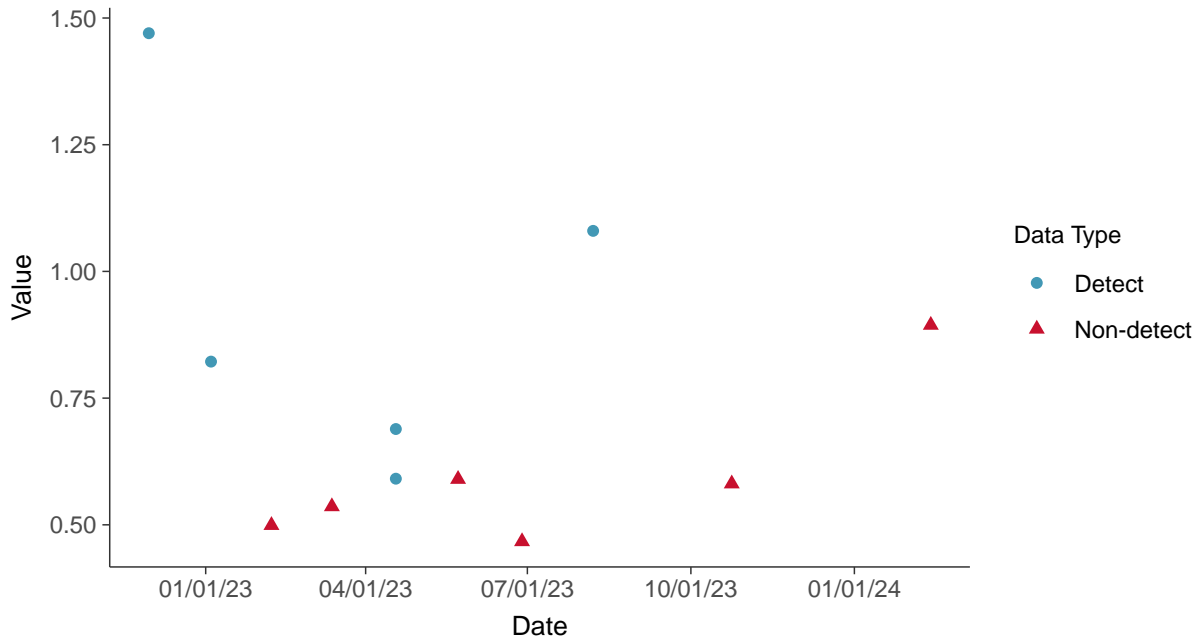


Appendix IV: Radium 226 and 228, MW-20

ID: 1_30_5_121

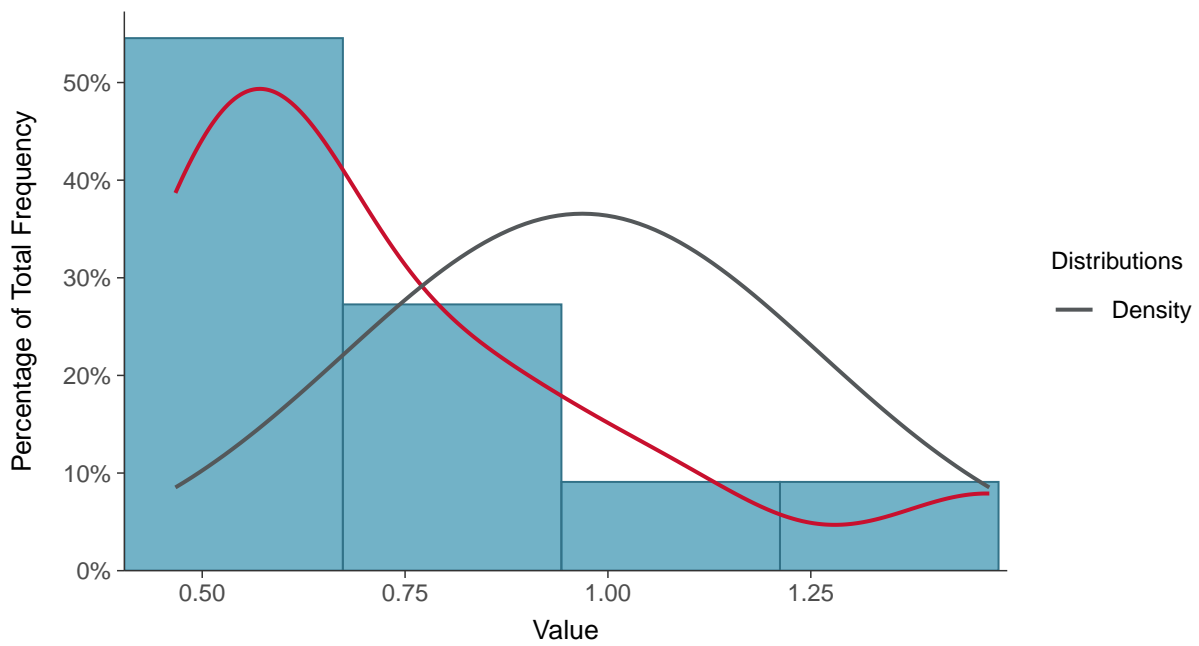
Scatter Plot

Radium 226 and 228, MW-20 (pCi/L)



Histogram

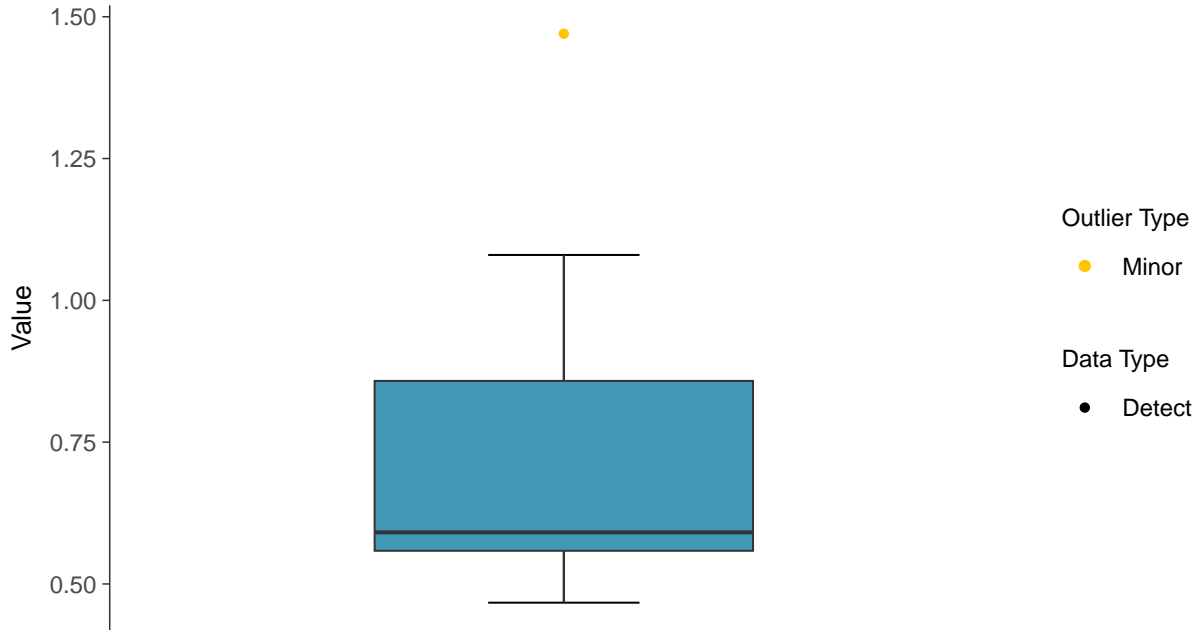
Radium 226 and 228, MW-20 (pCi/L)





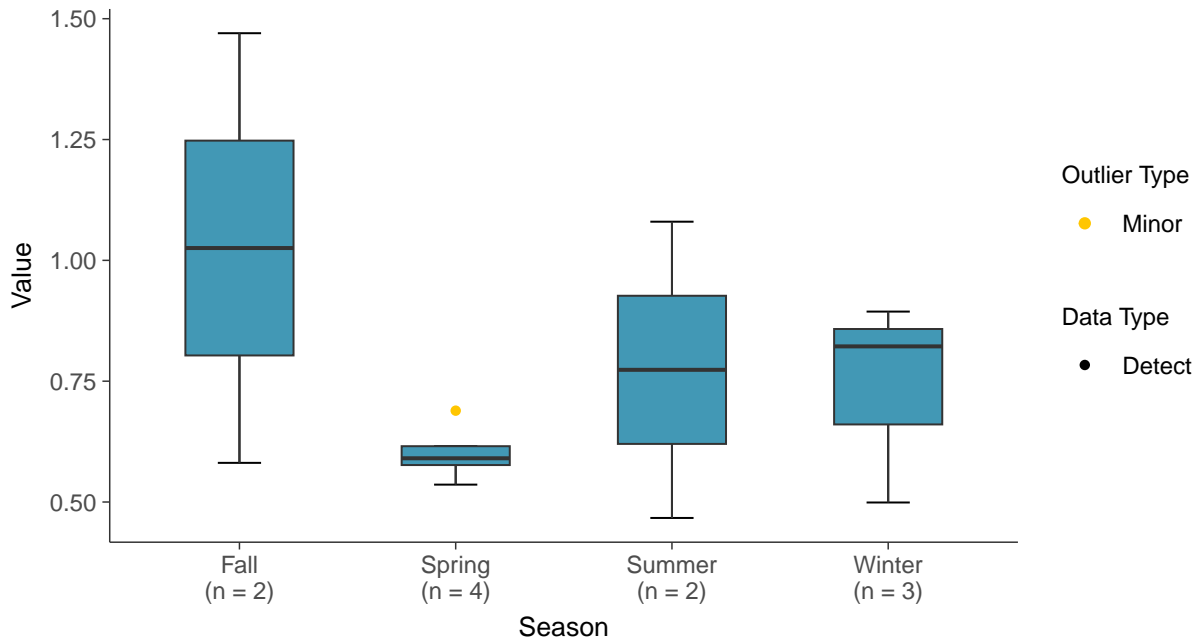
Boxplot

Radium 226 and 228, MW-20 (pCi/L)



Boxplot by Season

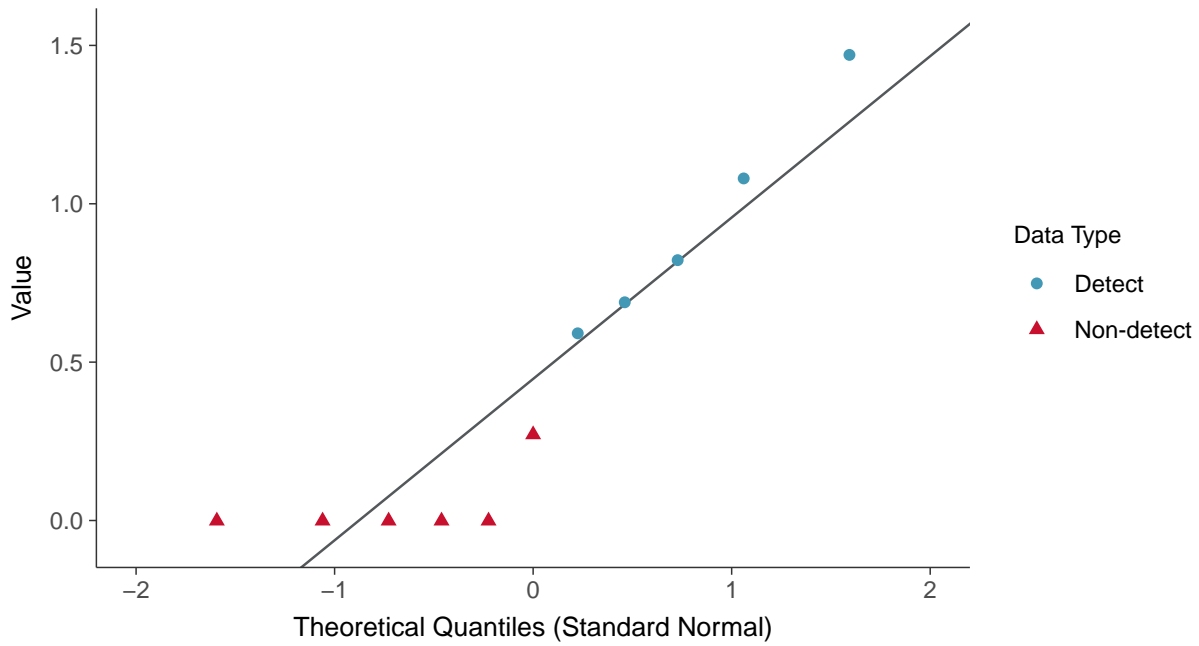
Radium 226 and 228, MW-20 (pCi/L)





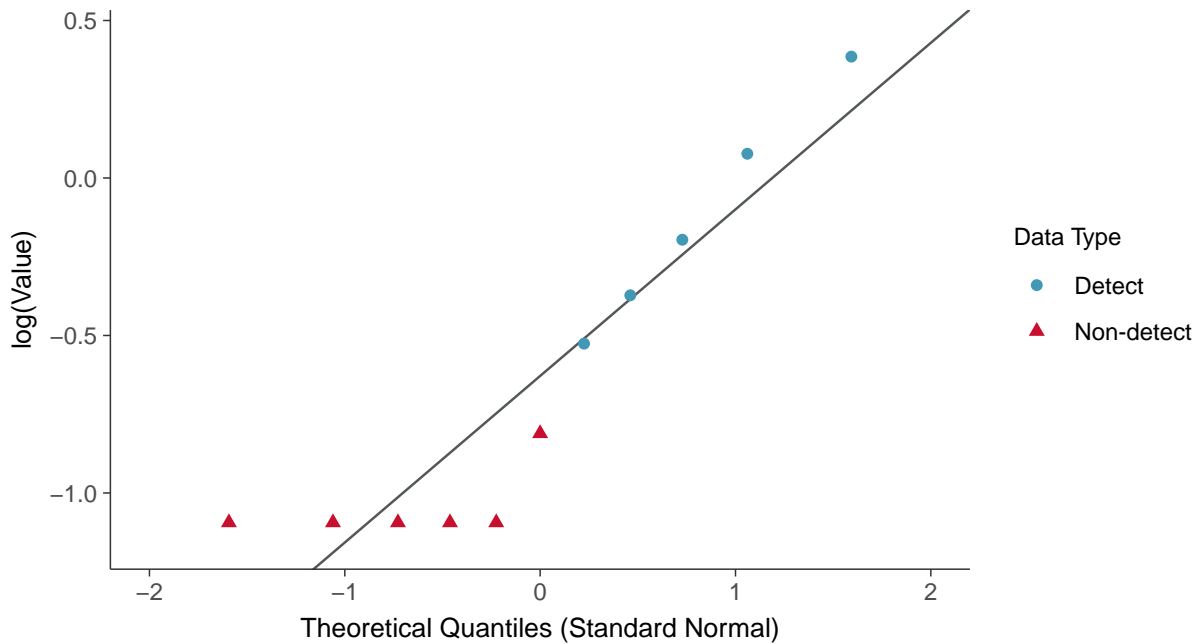
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-20 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

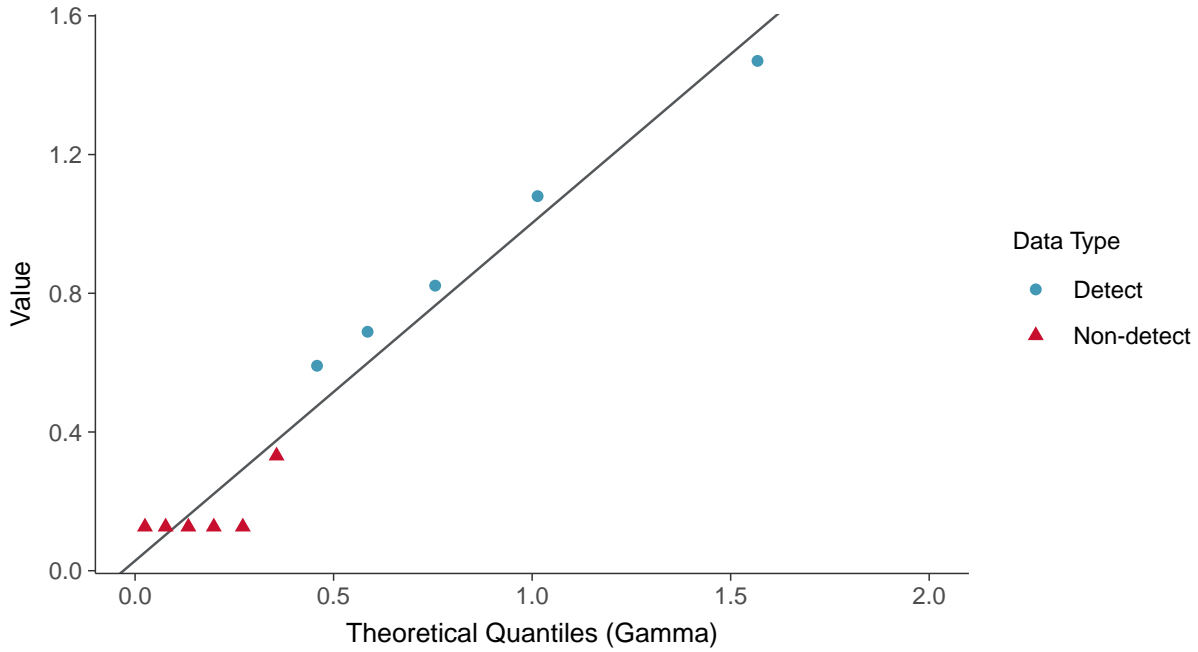
Radium 226 and 228, MW-20 (pCi/L)





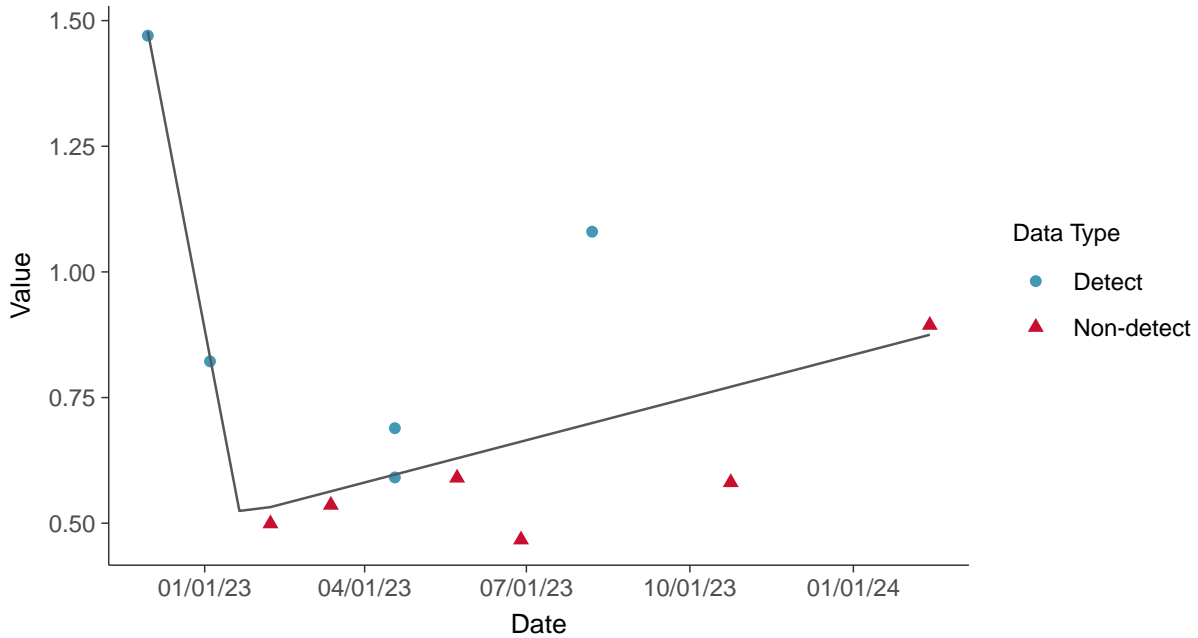
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-20 (pCi/L)



Trend Regression: Piecewise Linear-Linear

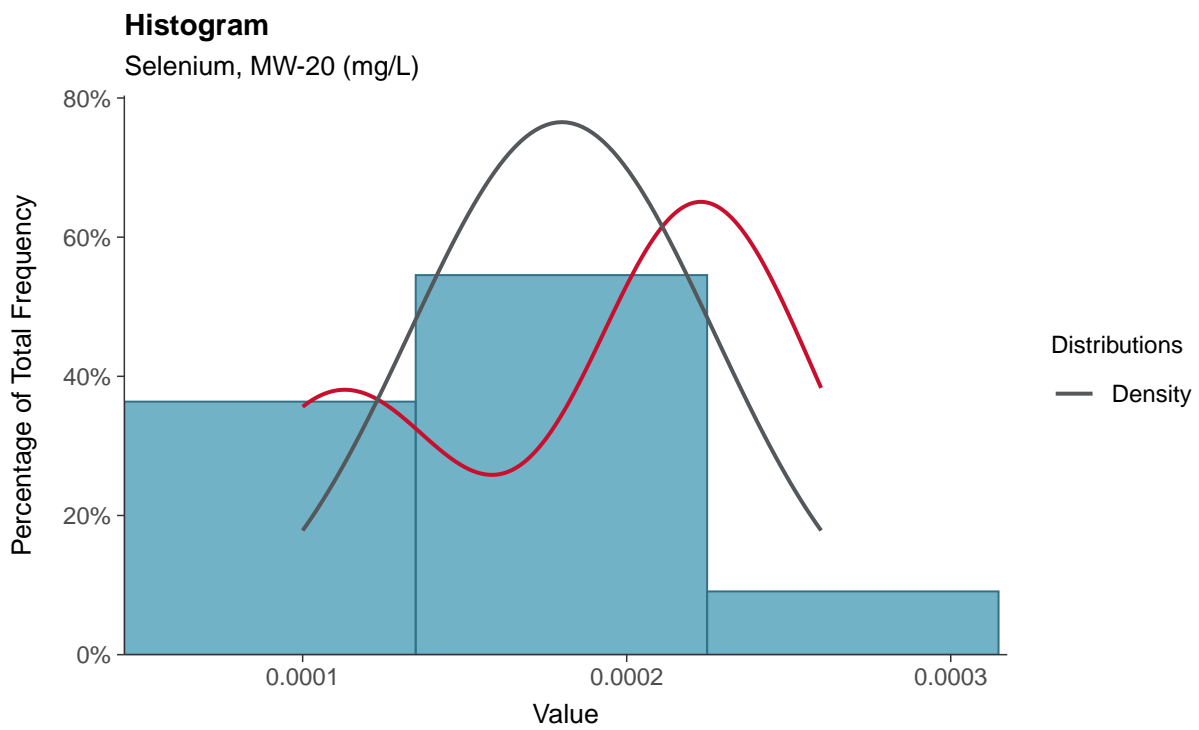
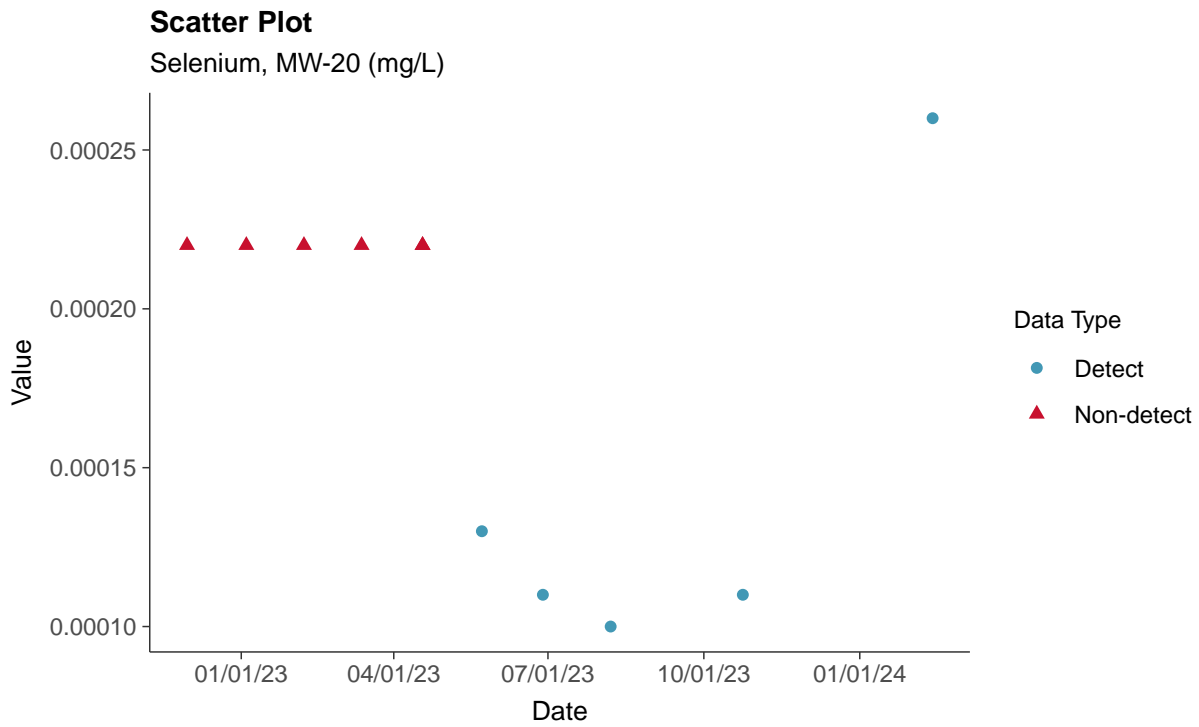
Radium 226 and 228, MW-20 (pCi/L)





Appendix IV: Selenium, MW-20

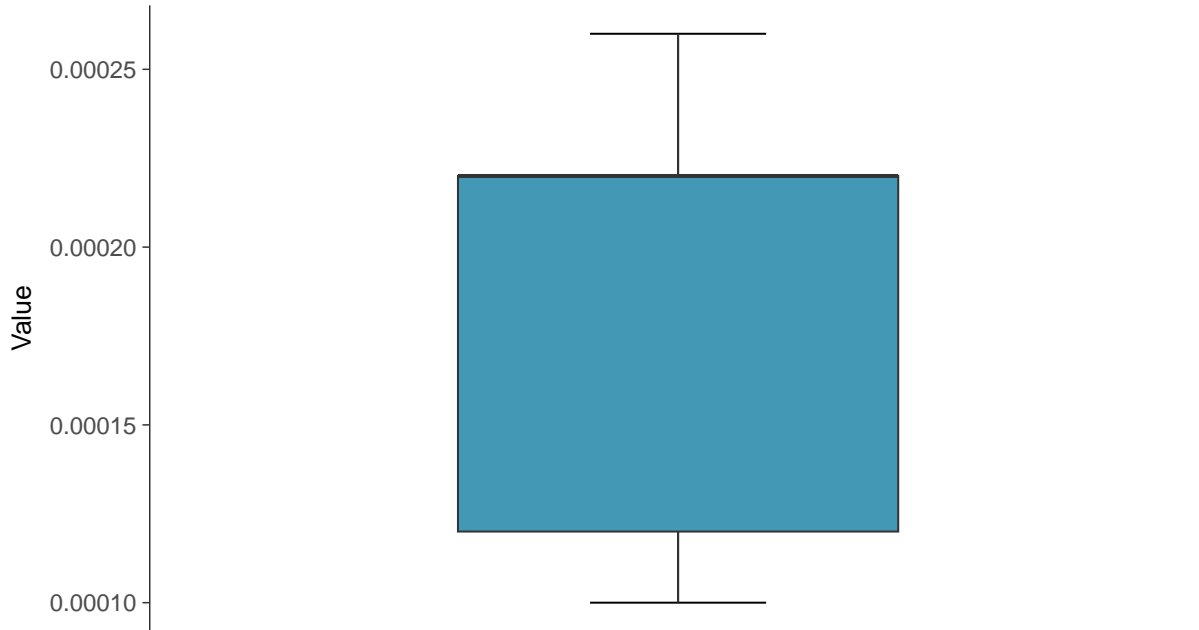
ID: 1_30_5_122





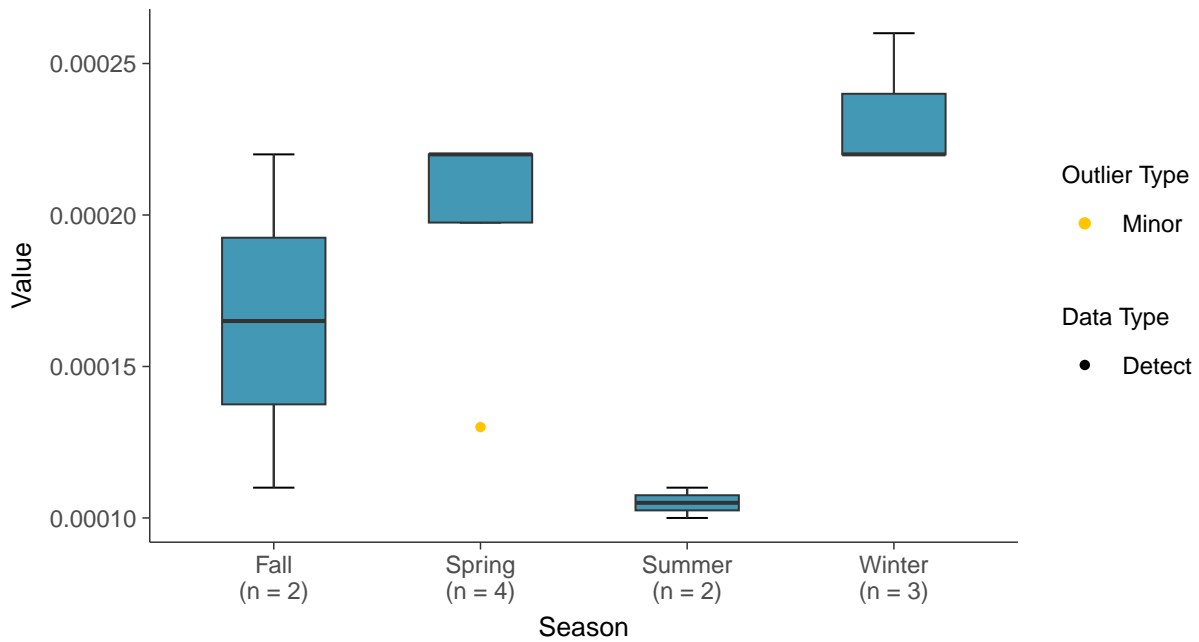
Boxplot

Selenium, MW-20 (mg/L)



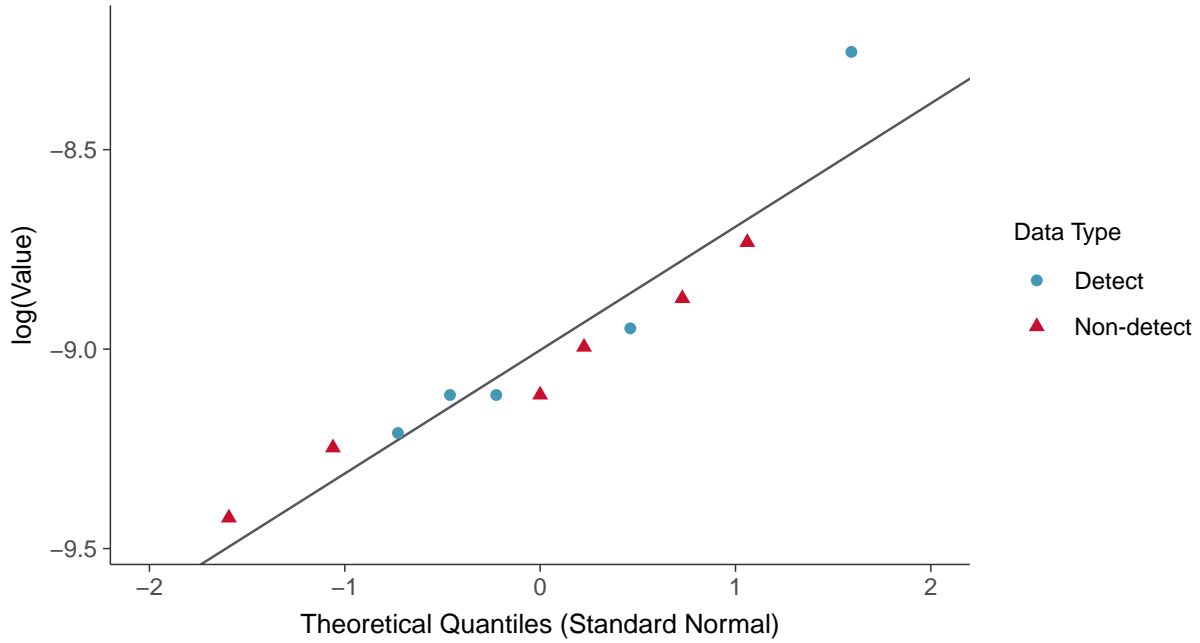
Boxplot by Season

Selenium, MW-20 (mg/L)

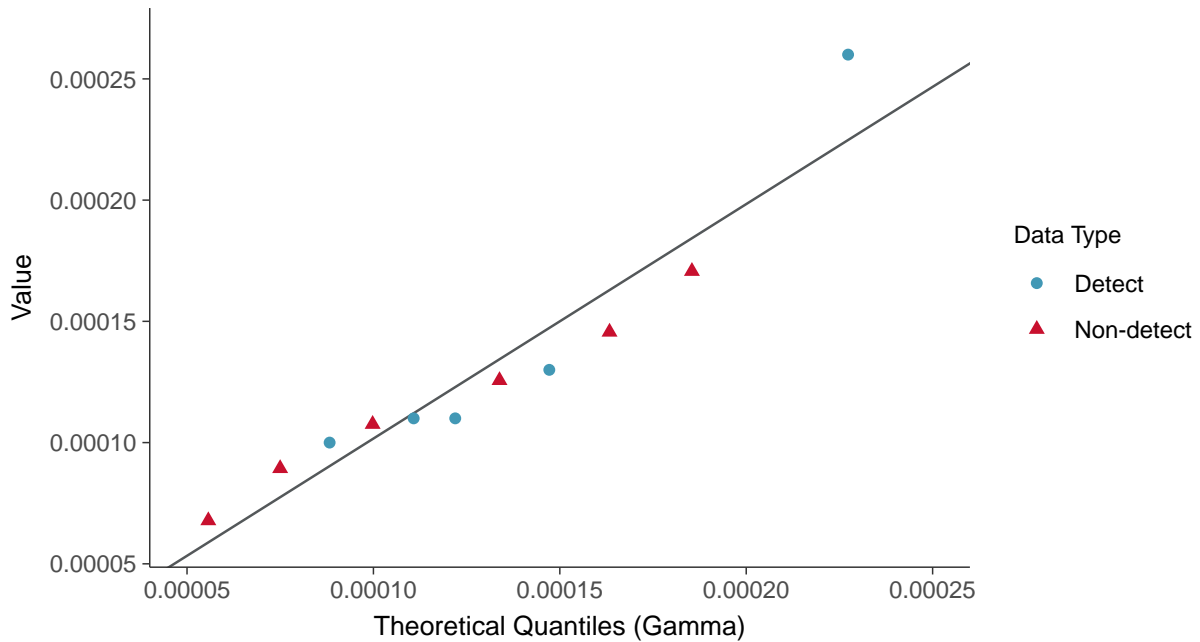




Lognormal Q-Q plot using ROS Imputed Estimates Selenium, MW-20 (mg/L)



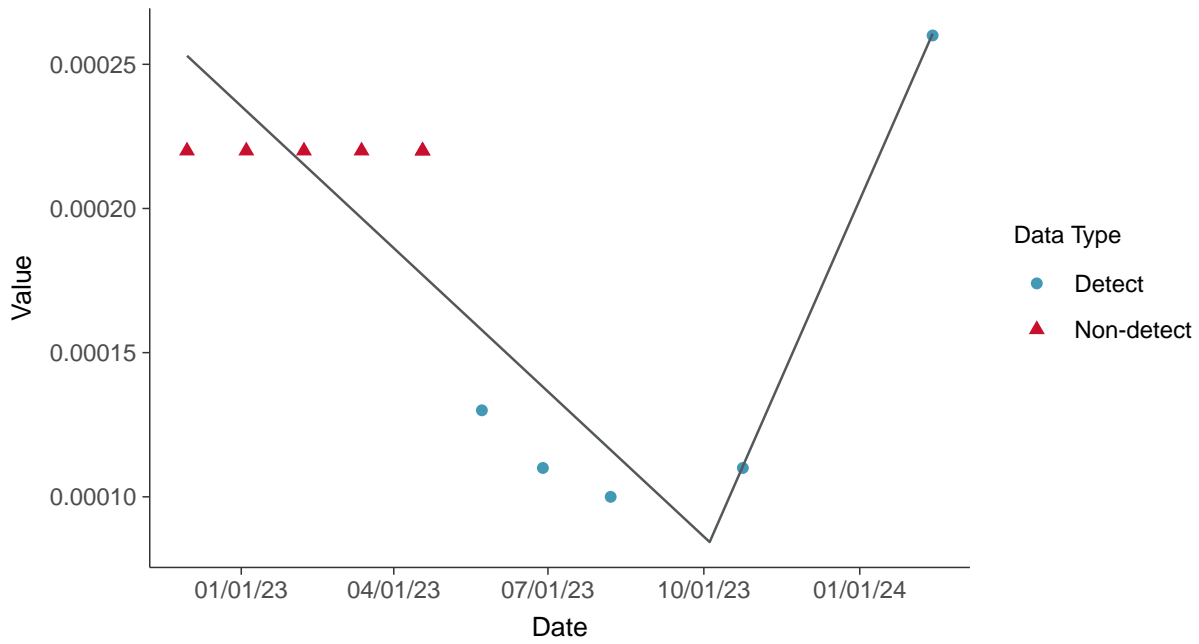
Gamma Q-Q plot using ROS Imputed Estimates Selenium, MW-20 (mg/L)





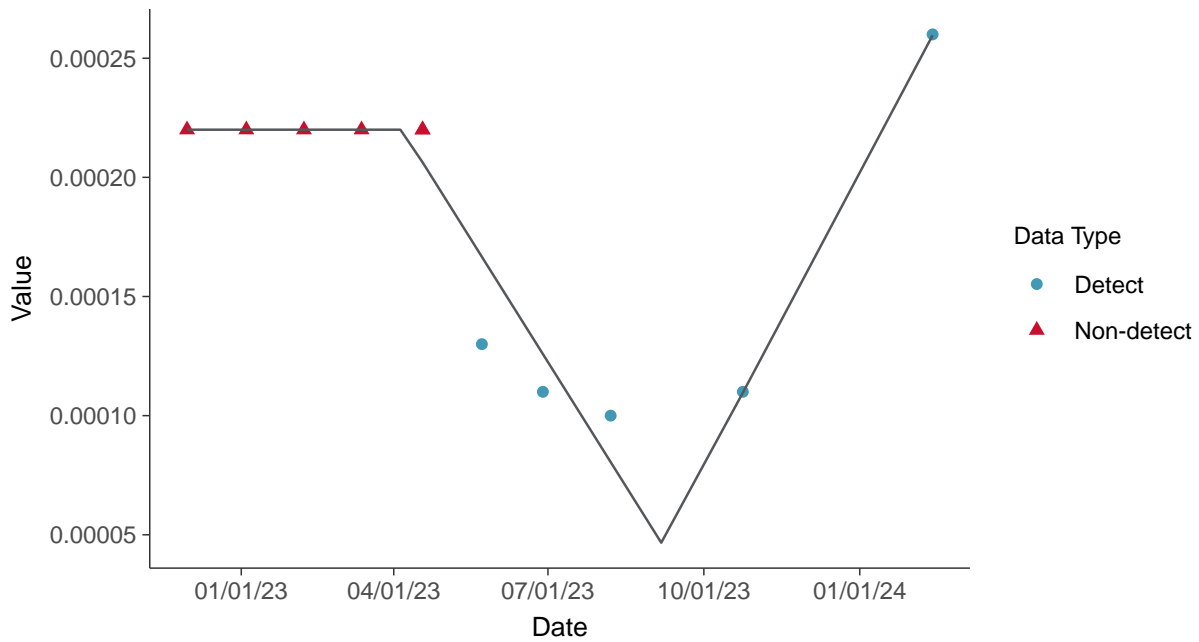
Trend Regression: Piecewise Linear-Linear

Selenium, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

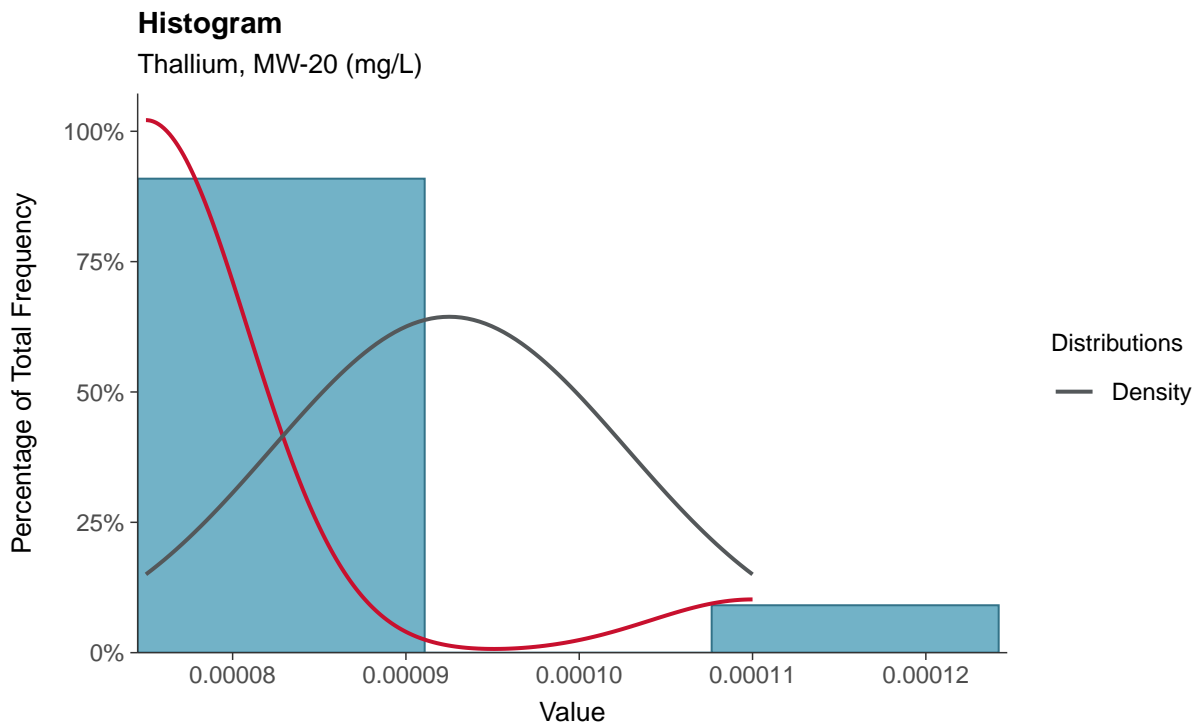
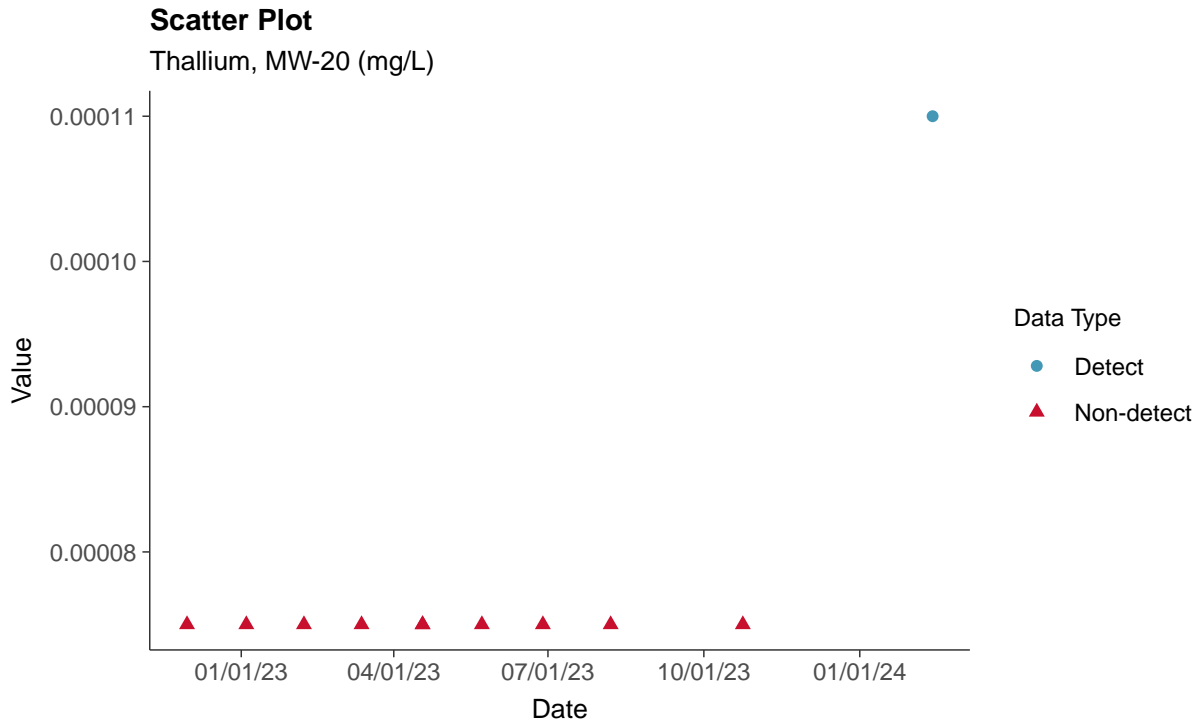
Selenium, MW-20 (mg/L)





Appendix IV: Thallium, MW-20

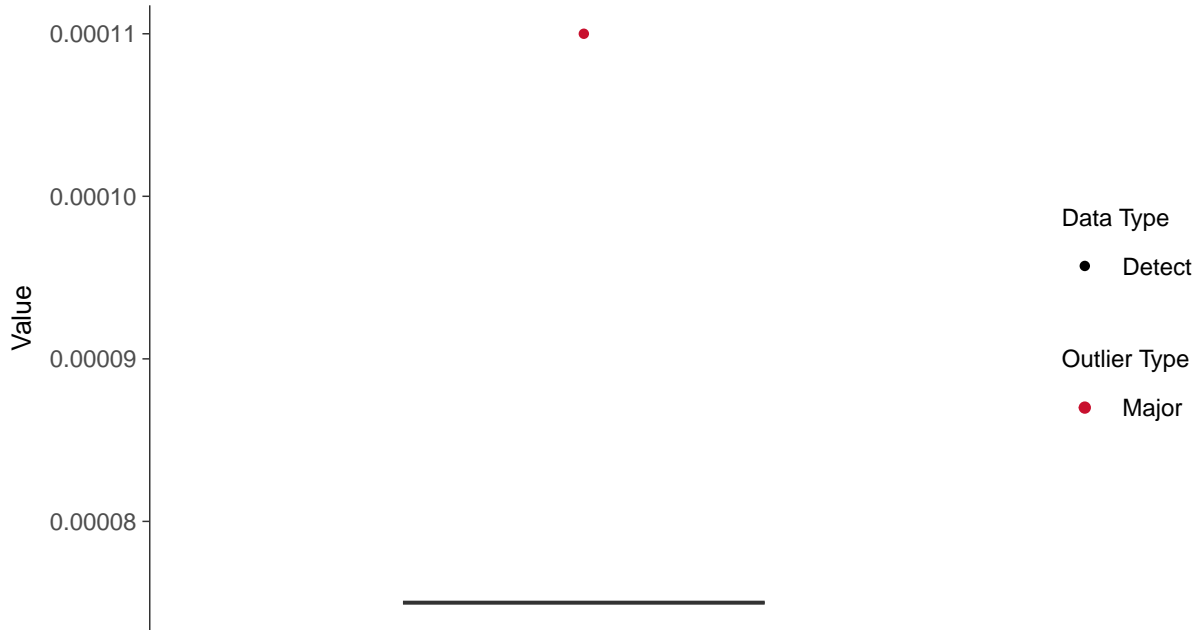
ID: 1_30_5_125





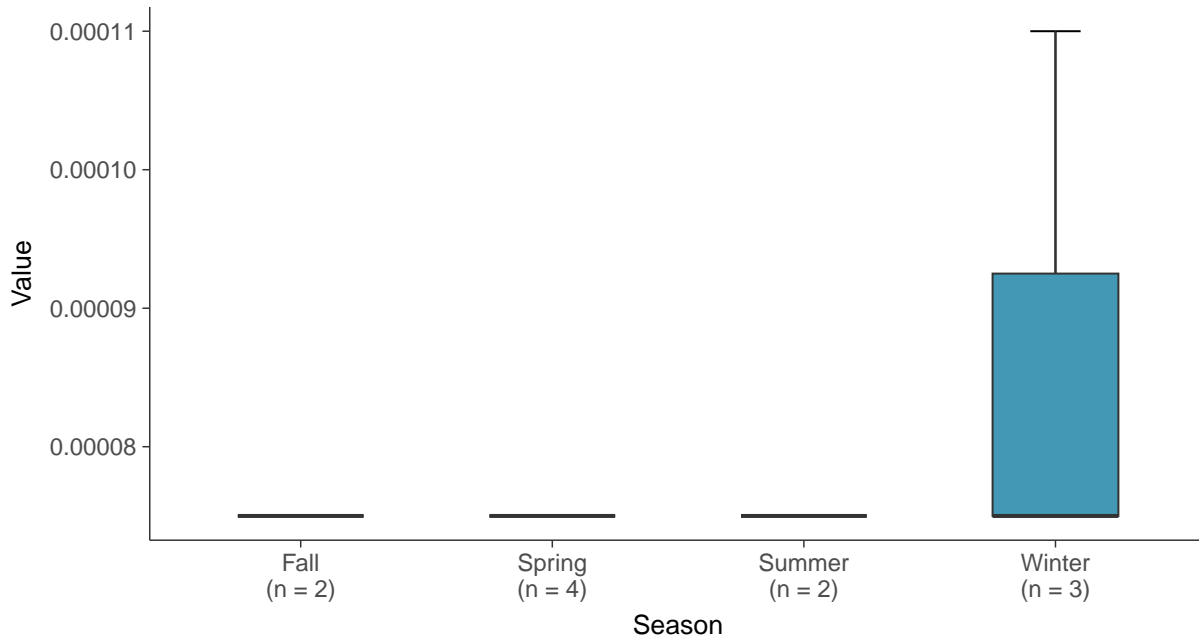
Boxplot

Thallium, MW-20 (mg/L)



Boxplot by Season

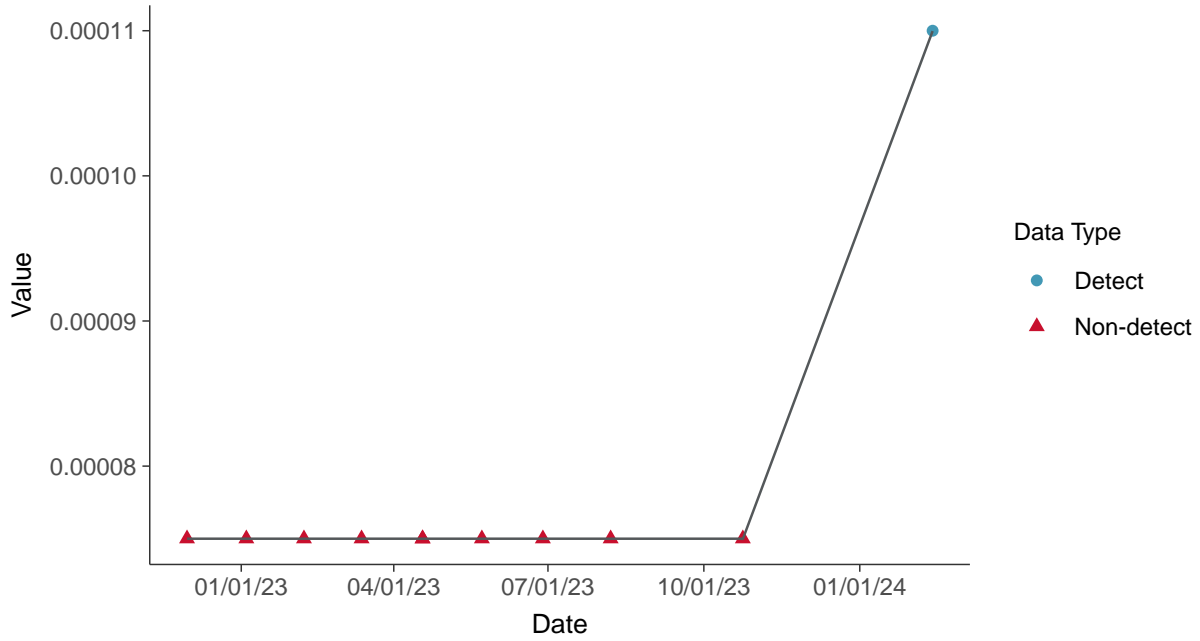
Thallium, MW-20 (mg/L)





Trend Regression: Piecewise Linear-Linear

Thallium, MW-20 (mg/L)



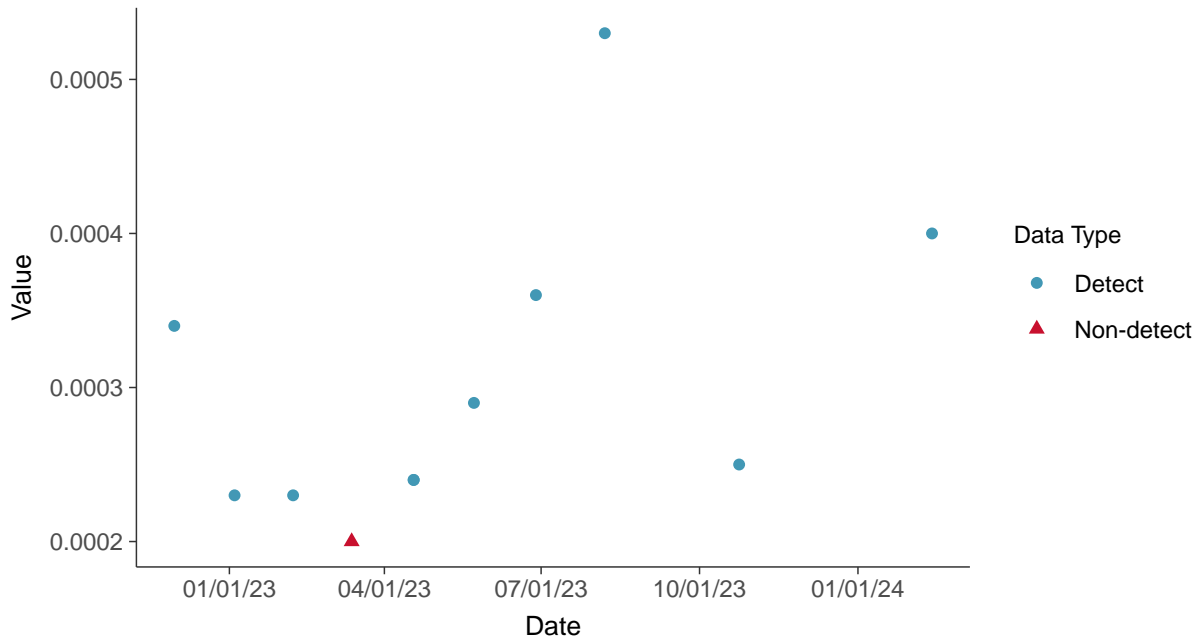


Part 115: Copper, MW-20

ID: 1_30_6_111

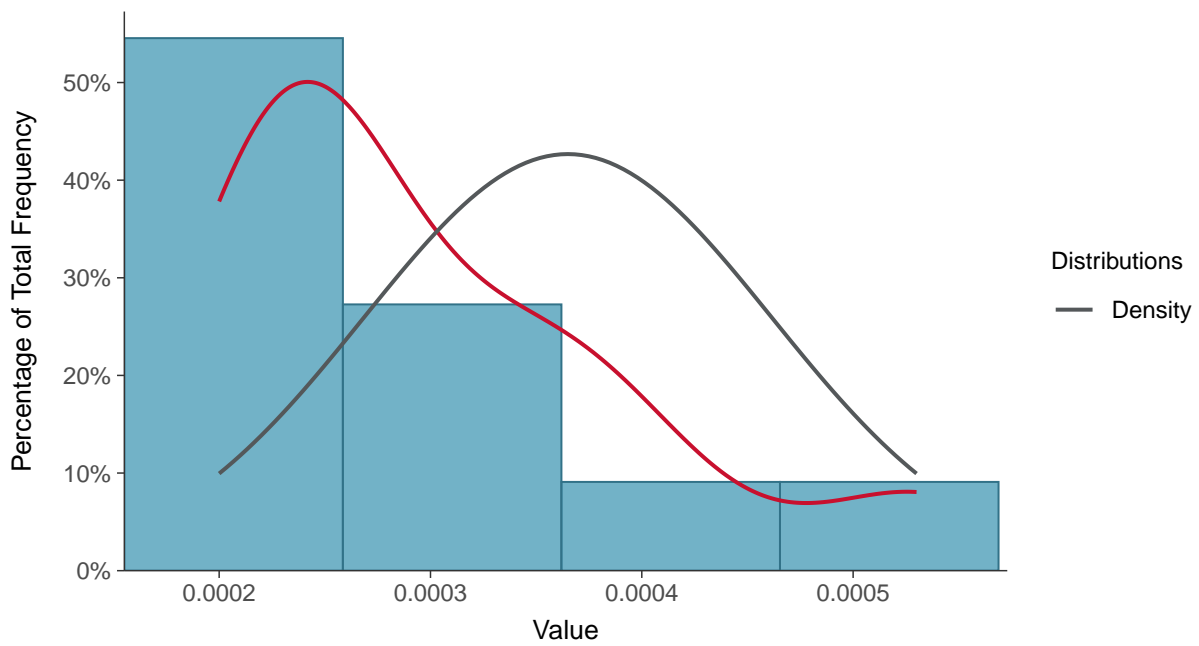
Scatter Plot

Copper, MW-20 (mg/L)



Histogram

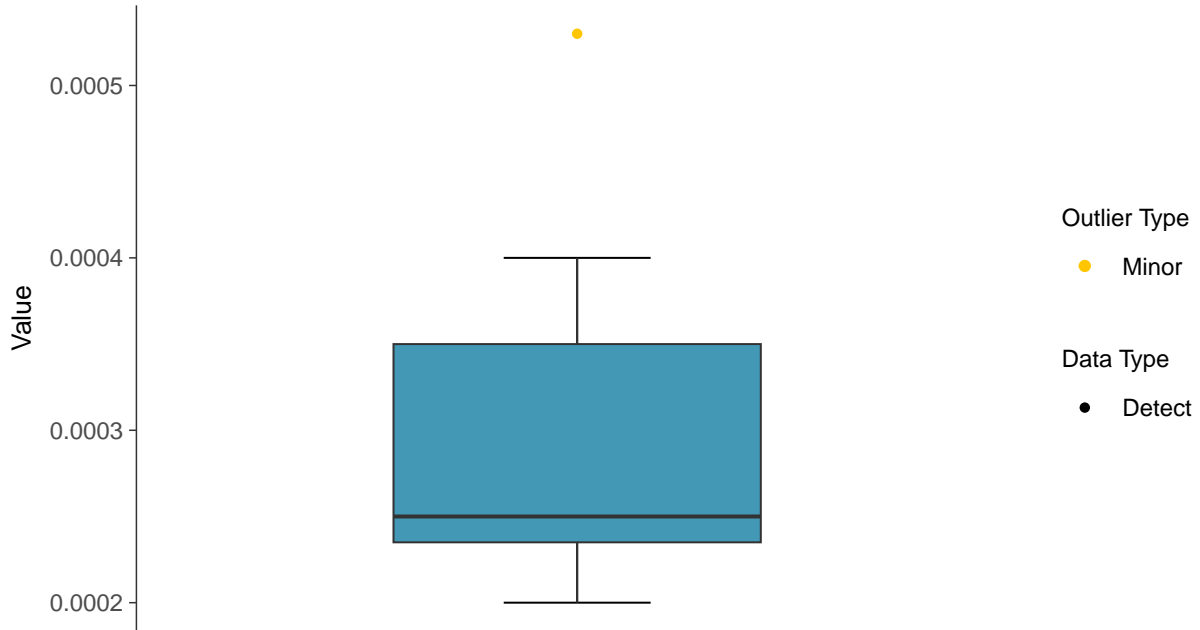
Copper, MW-20 (mg/L)





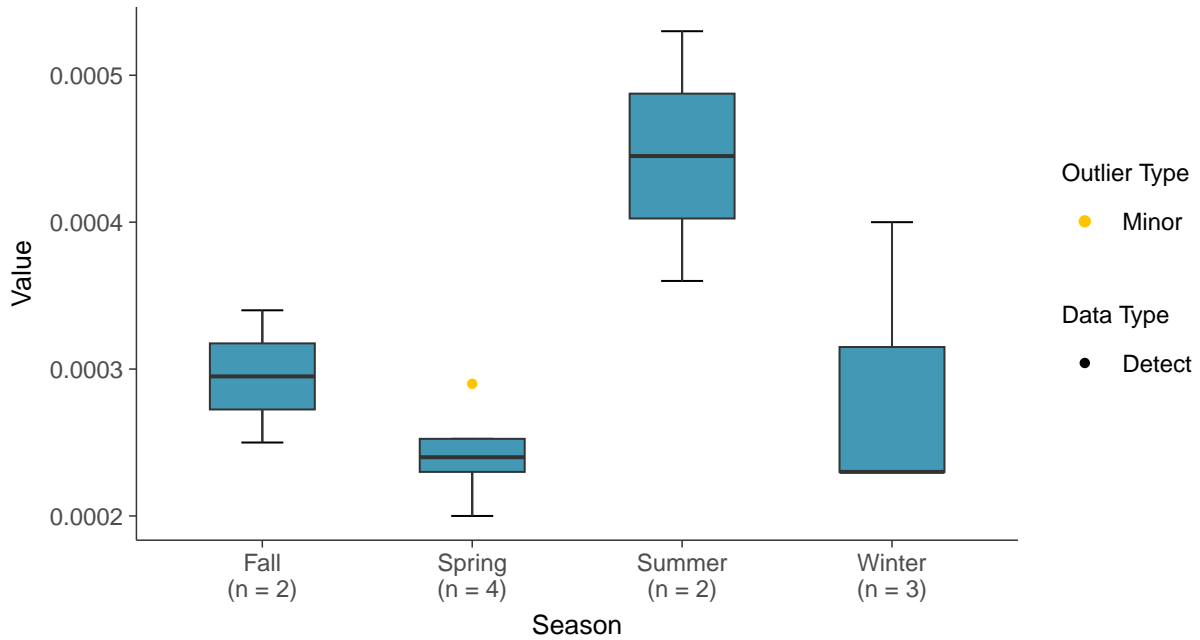
Boxplot

Copper, MW-20 (mg/L)



Boxplot by Season

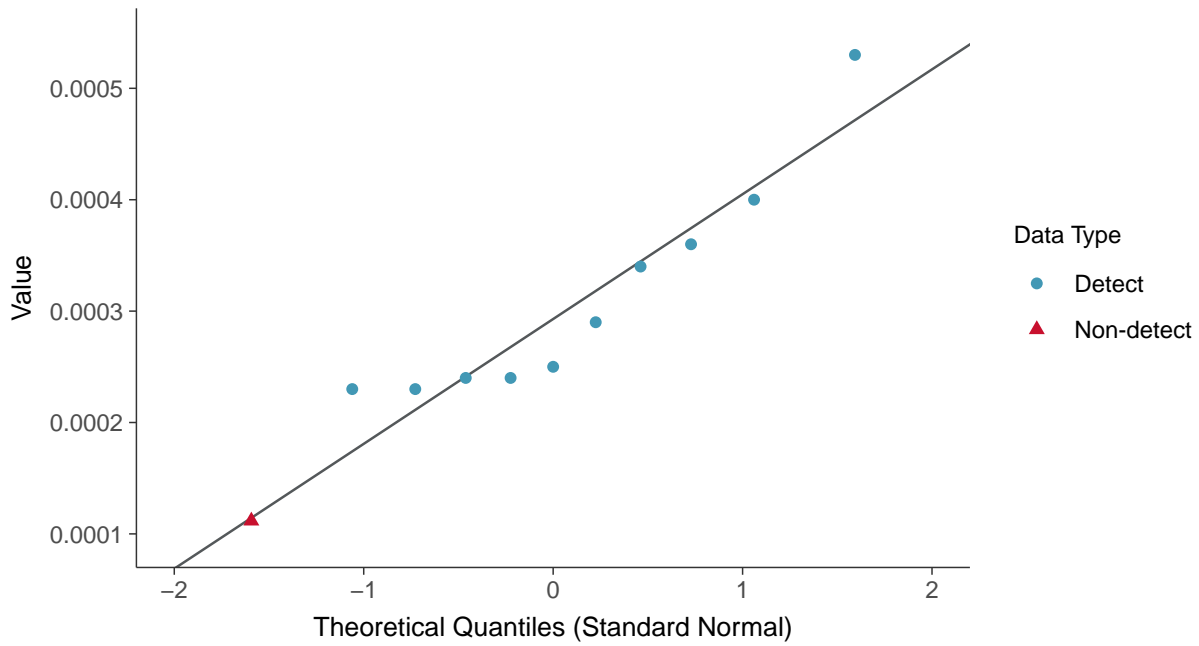
Copper, MW-20 (mg/L)





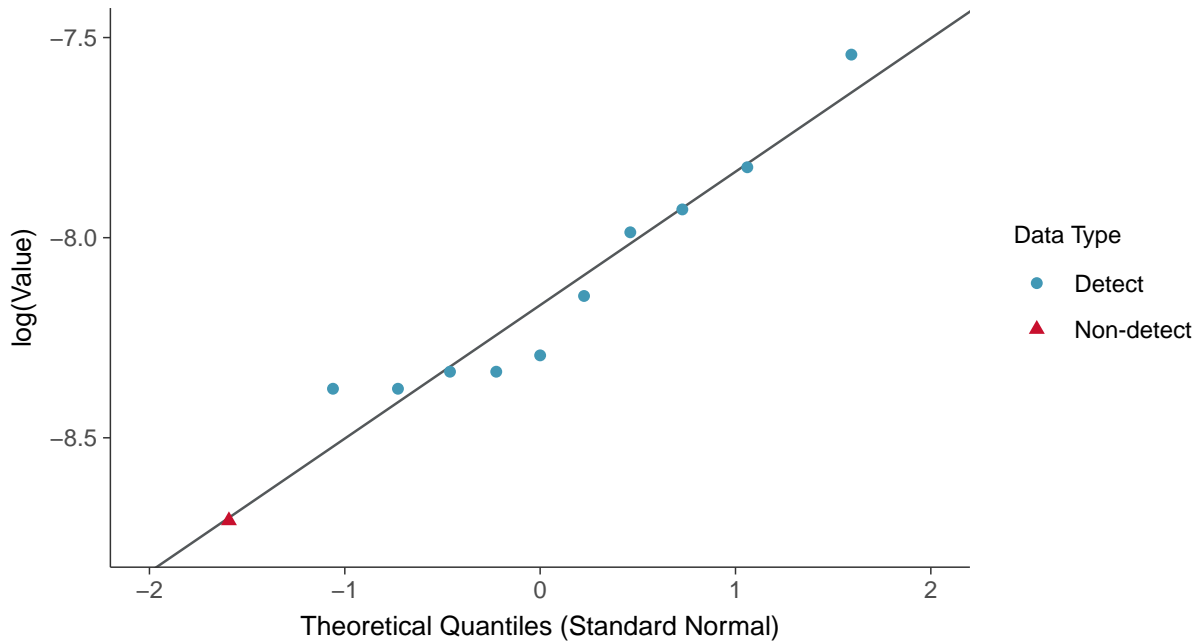
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-20 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

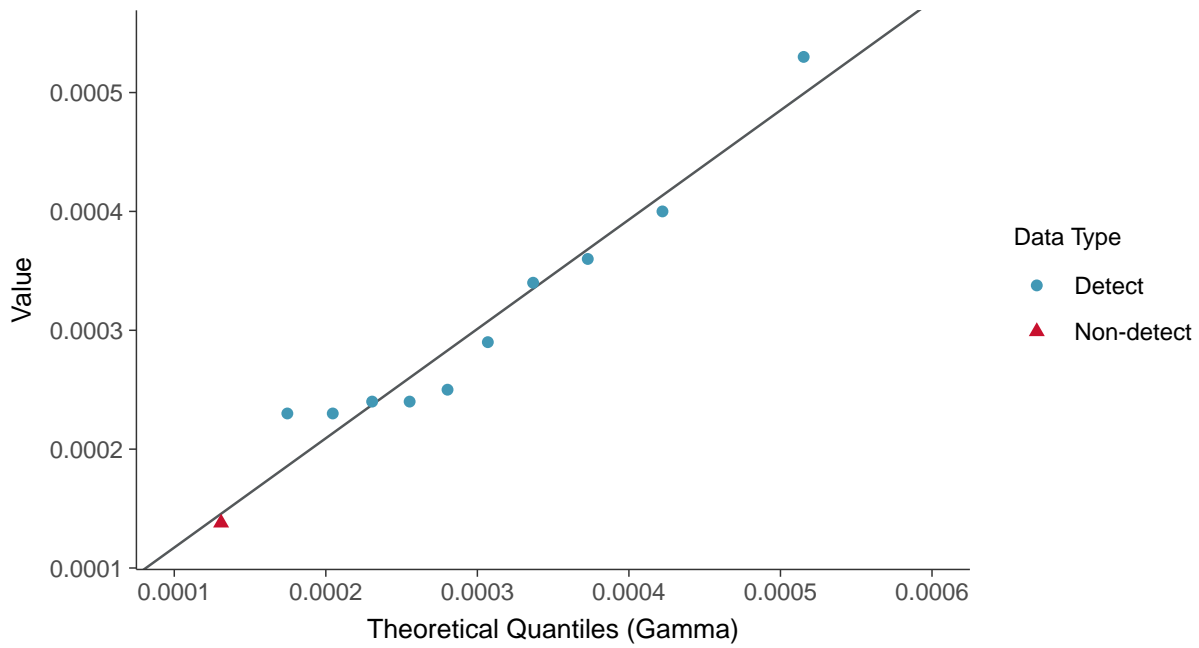
Copper, MW-20 (mg/L)





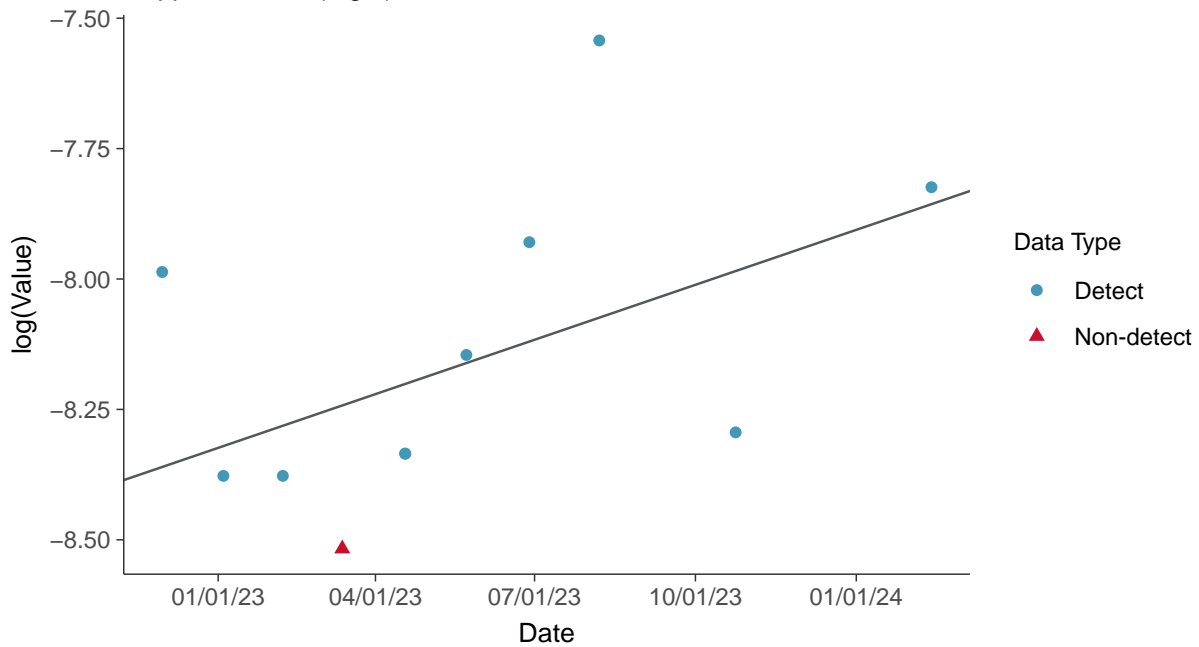
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-20 (mg/L)



Trend Regression: Lognormal MLE

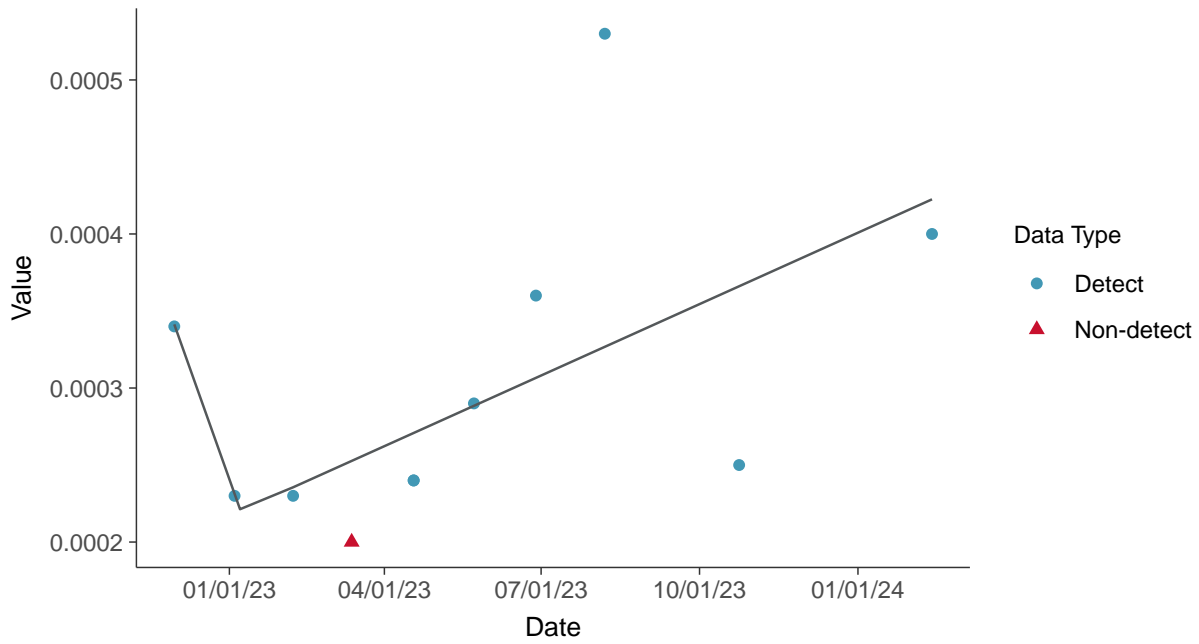
Copper, MW-20 (mg/L)





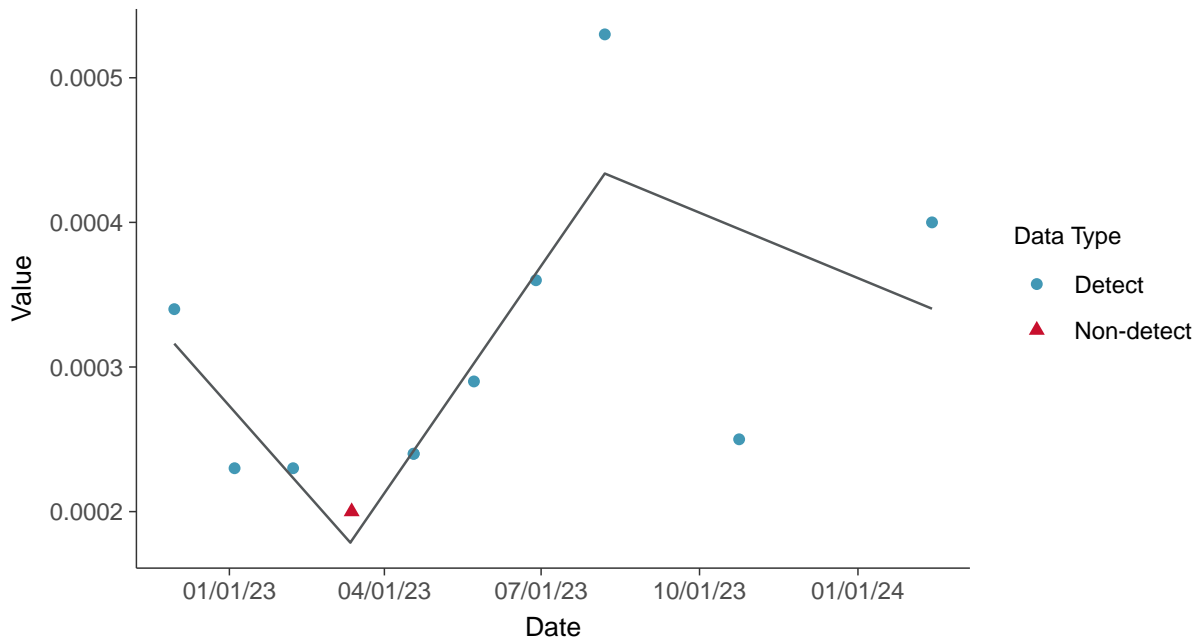
Trend Regression: Piecewise Linear-Linear

Copper, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-20 (mg/L)



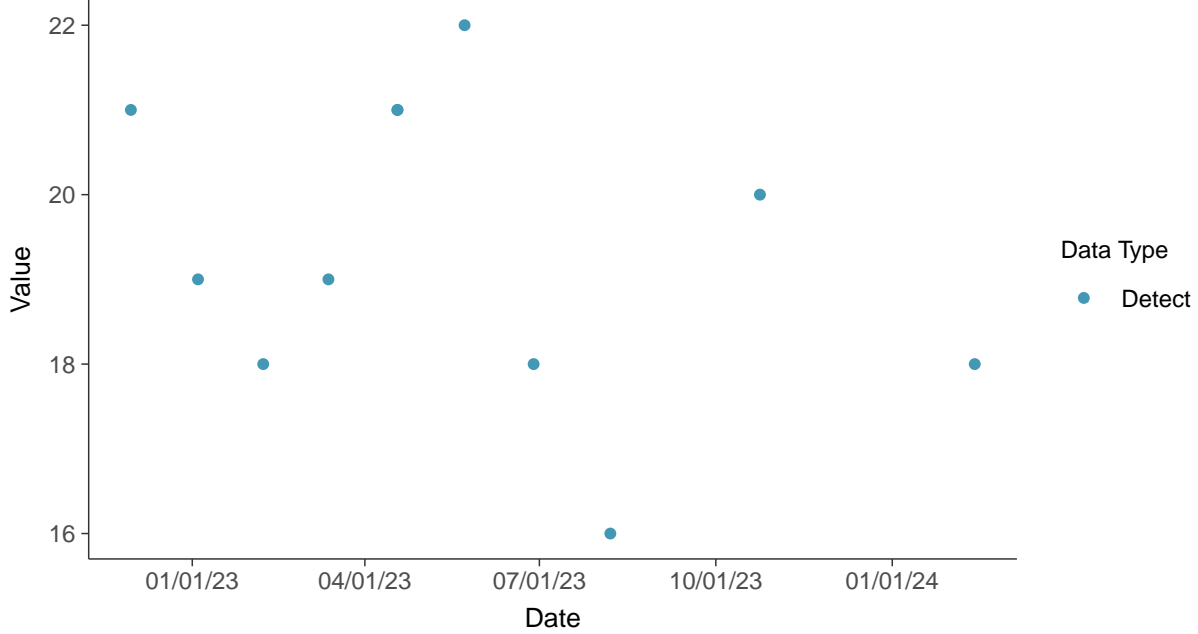


Part 115: Iron, MW-20

ID: 1_30_6_114

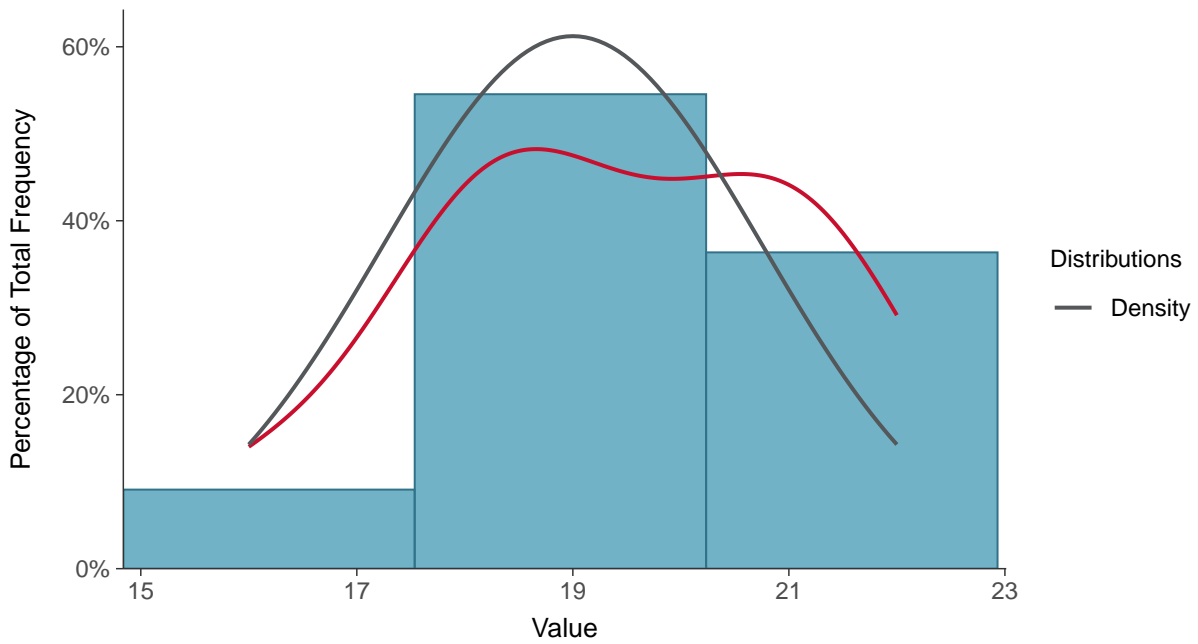
Scatter Plot

Iron, MW-20 (mg/L)



Histogram

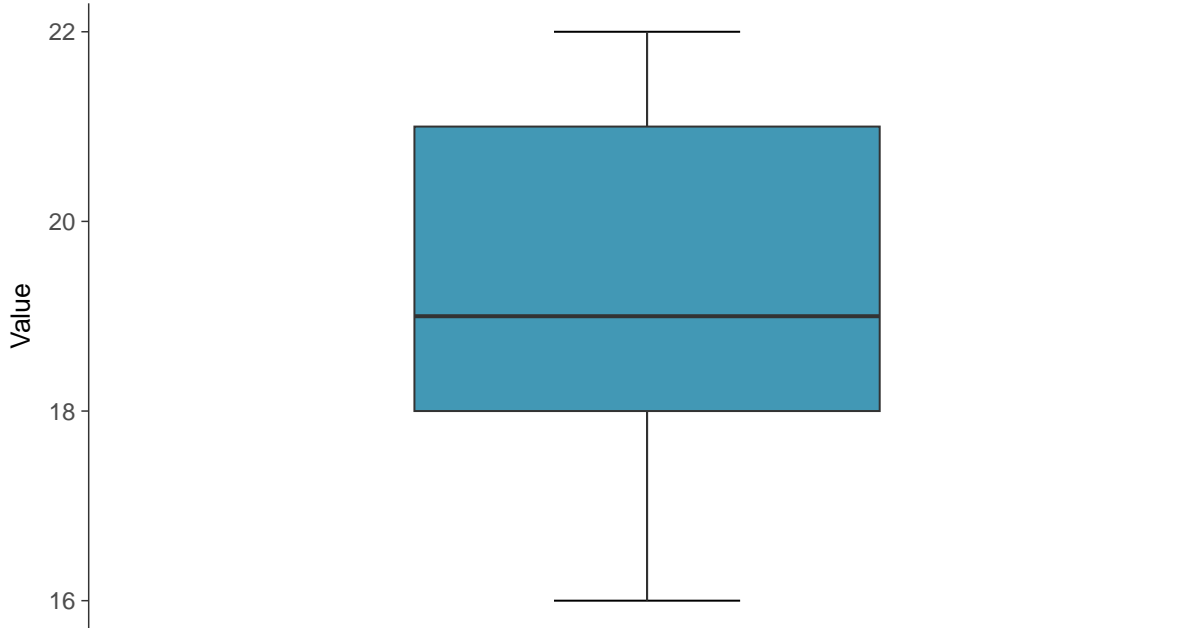
Iron, MW-20 (mg/L)





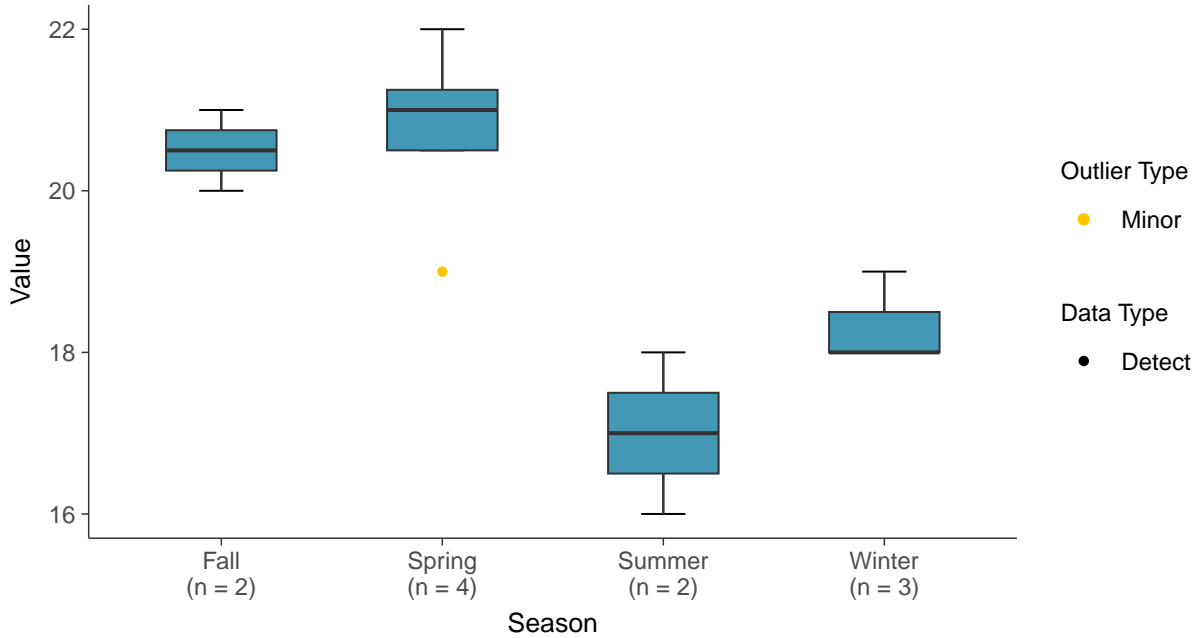
Boxplot

Iron, MW-20 (mg/L)



Boxplot by Season

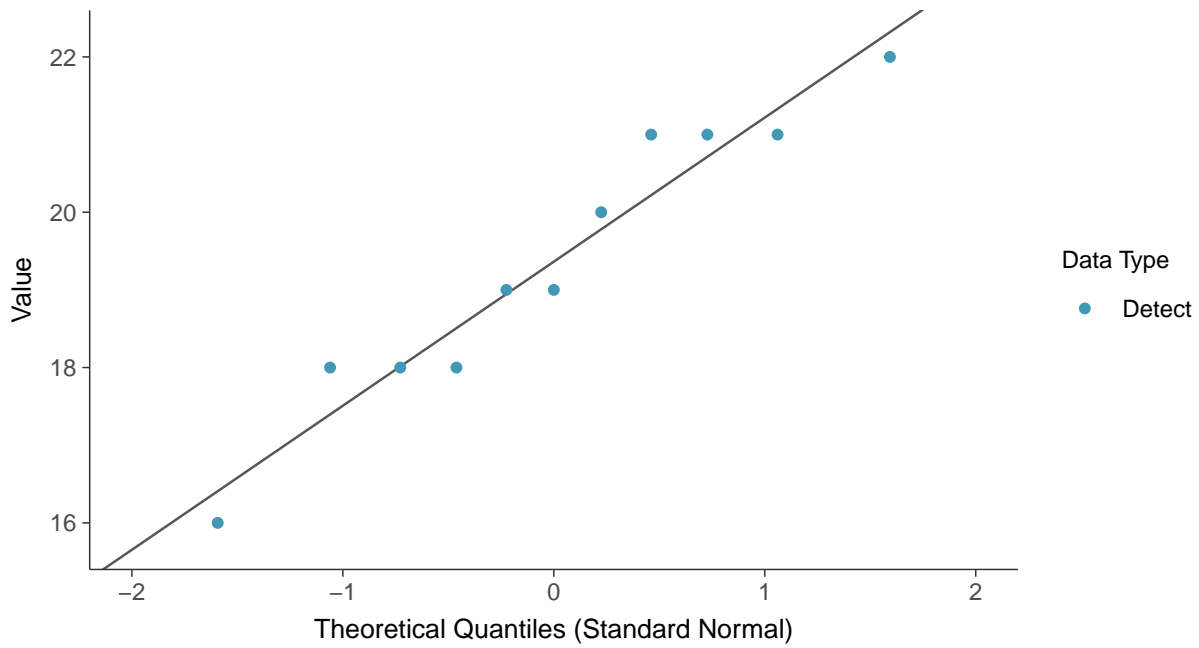
Iron, MW-20 (mg/L)





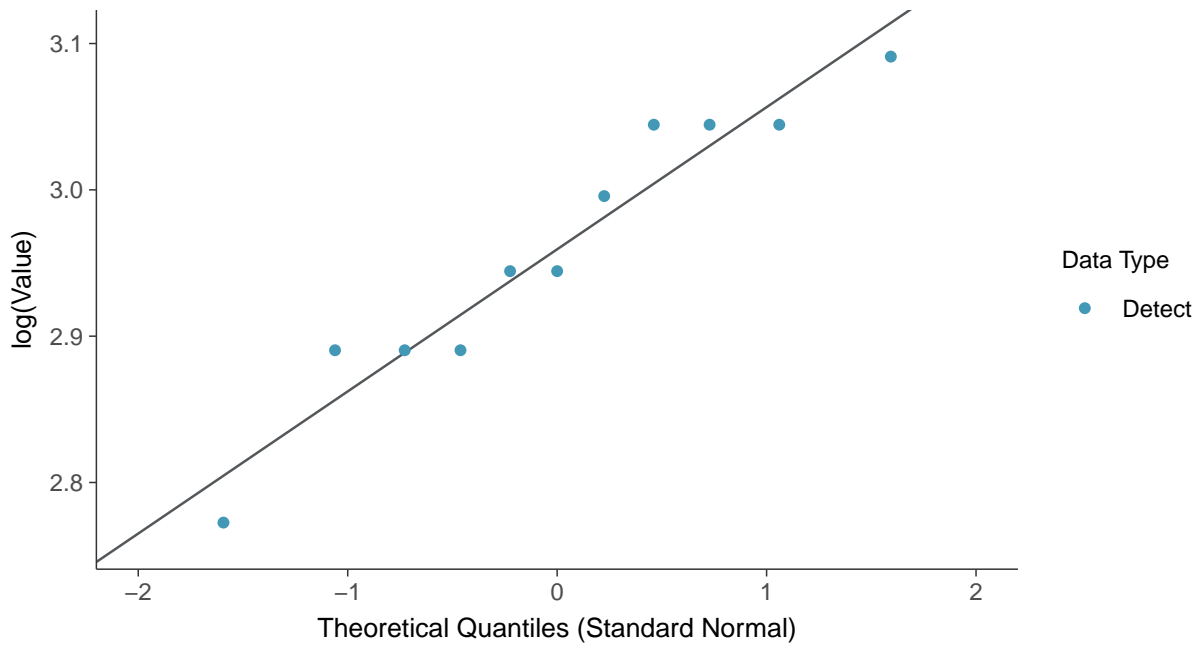
Normal Q-Q plot

Iron, MW-20 (mg/L)



Lognormal Q-Q plot

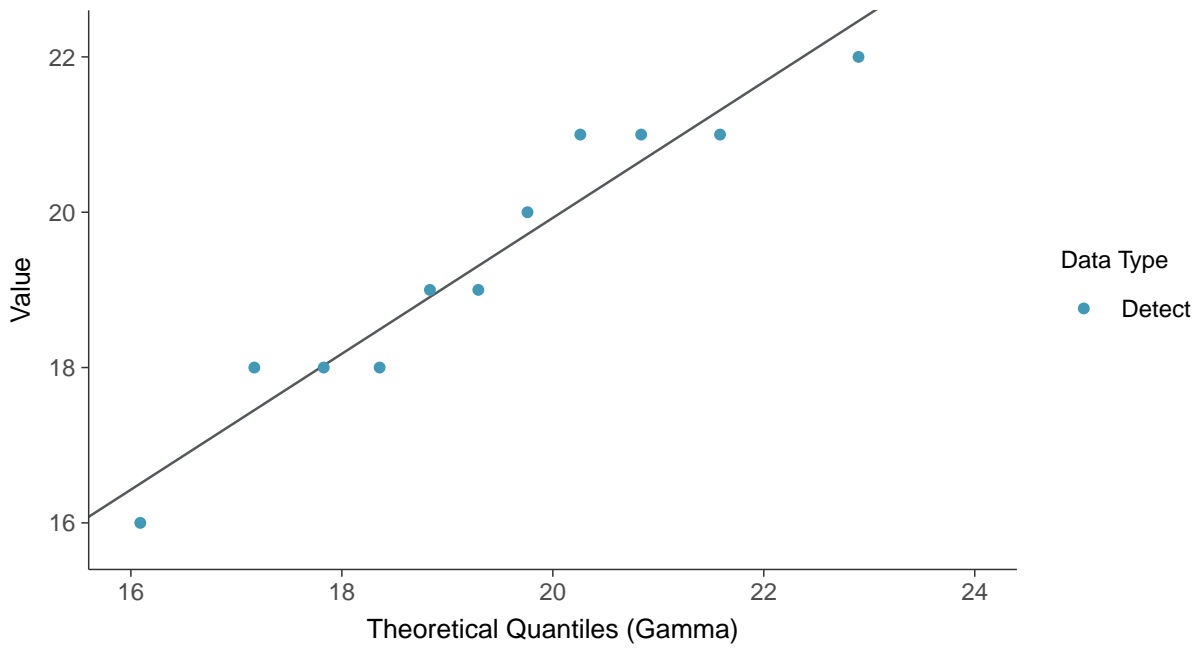
Iron, MW-20 (mg/L)





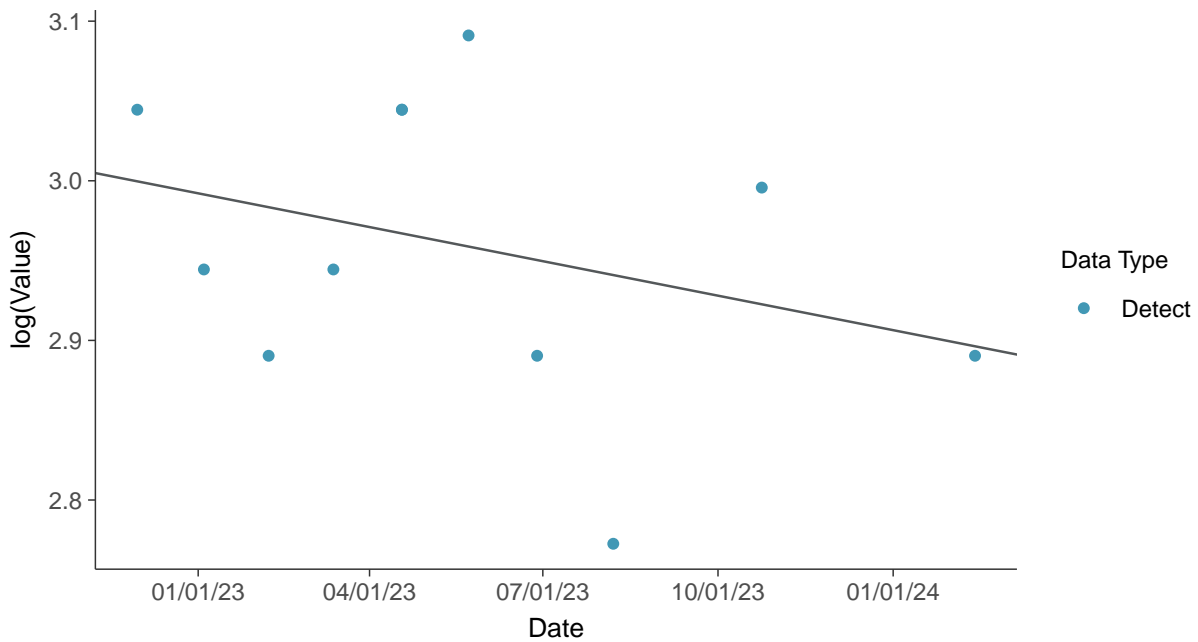
Gamma Q-Q plot

Iron, MW-20 (mg/L)



Trend Regression: Lognormal MLE

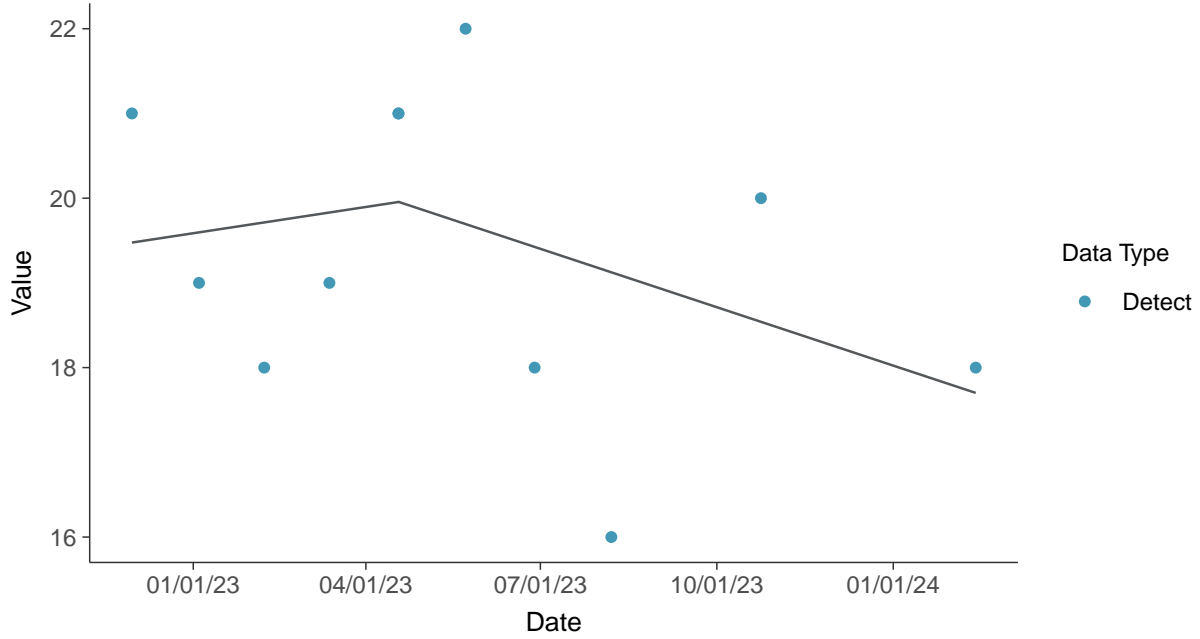
Iron, MW-20 (mg/L)





Trend Regression: Piecewise Linear-Linear

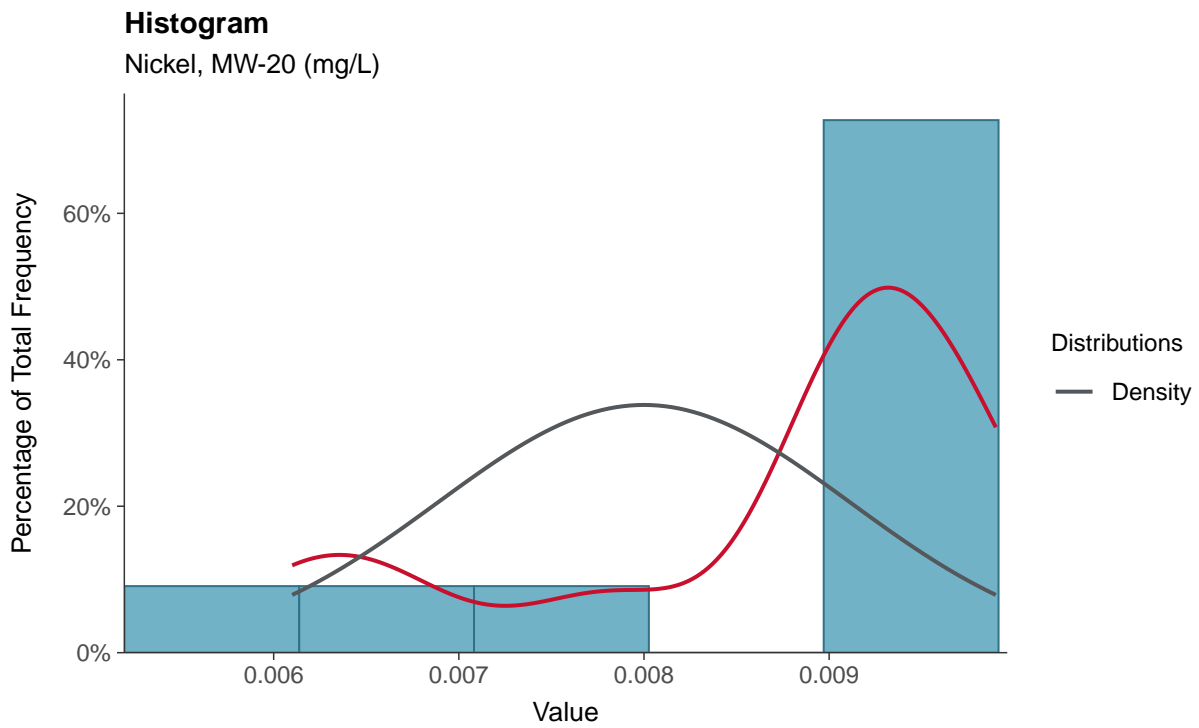
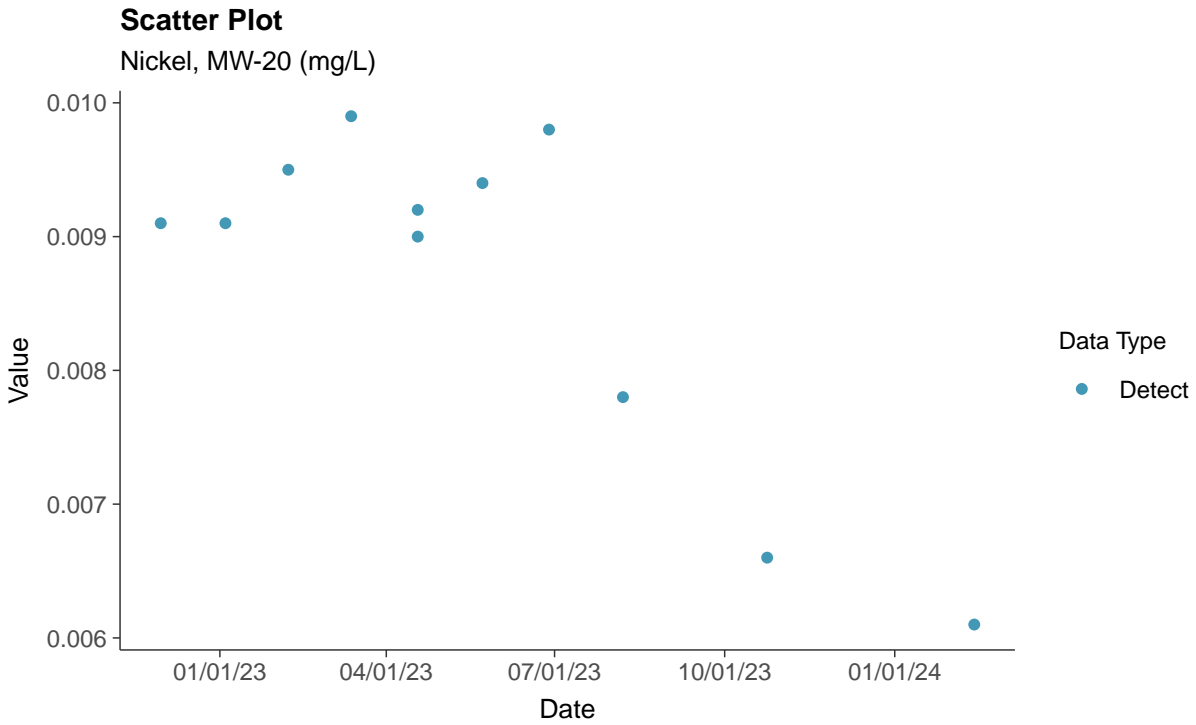
Iron, MW-20 (mg/L)





Part 115: Nickel, MW-20

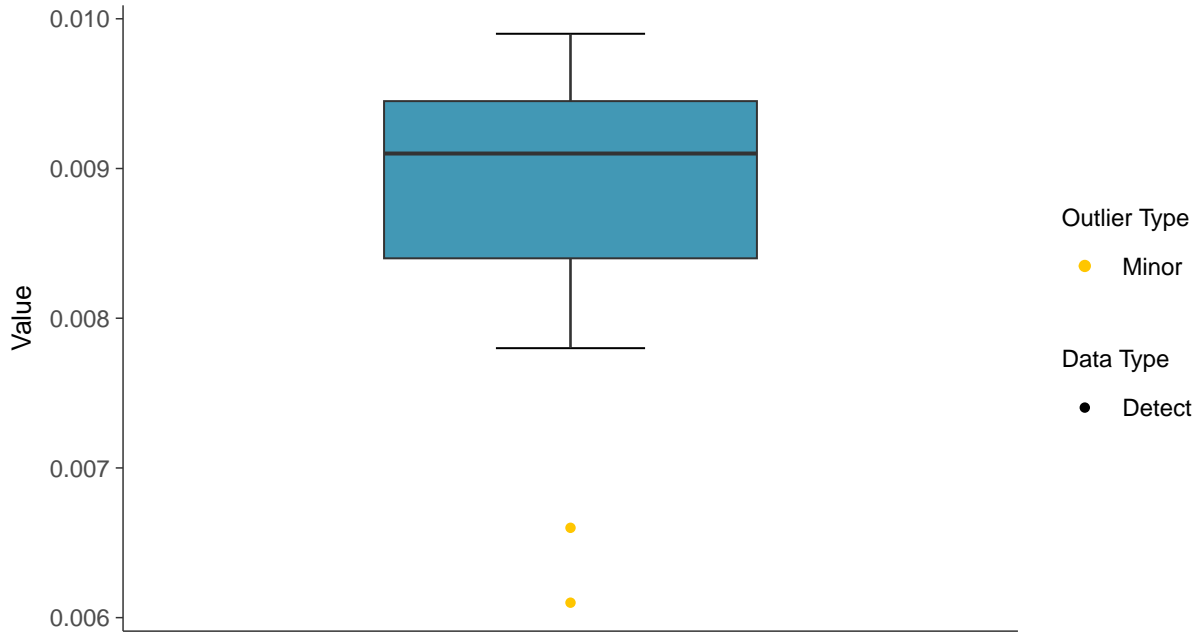
ID: 1_30_6_119





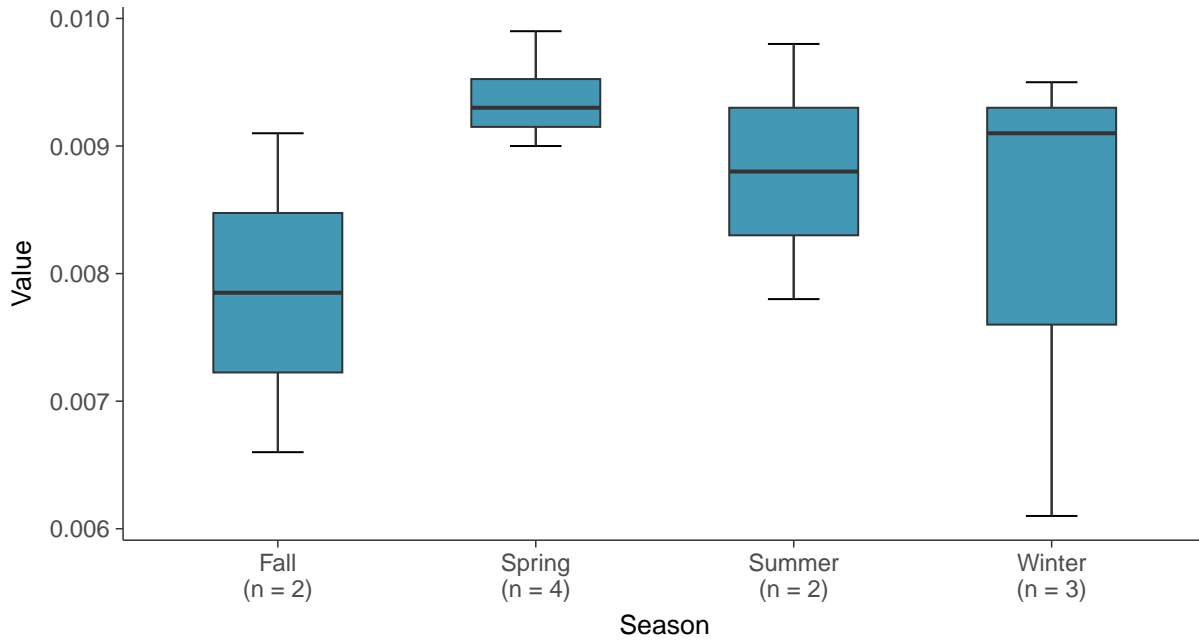
Boxplot

Nickel, MW-20 (mg/L)



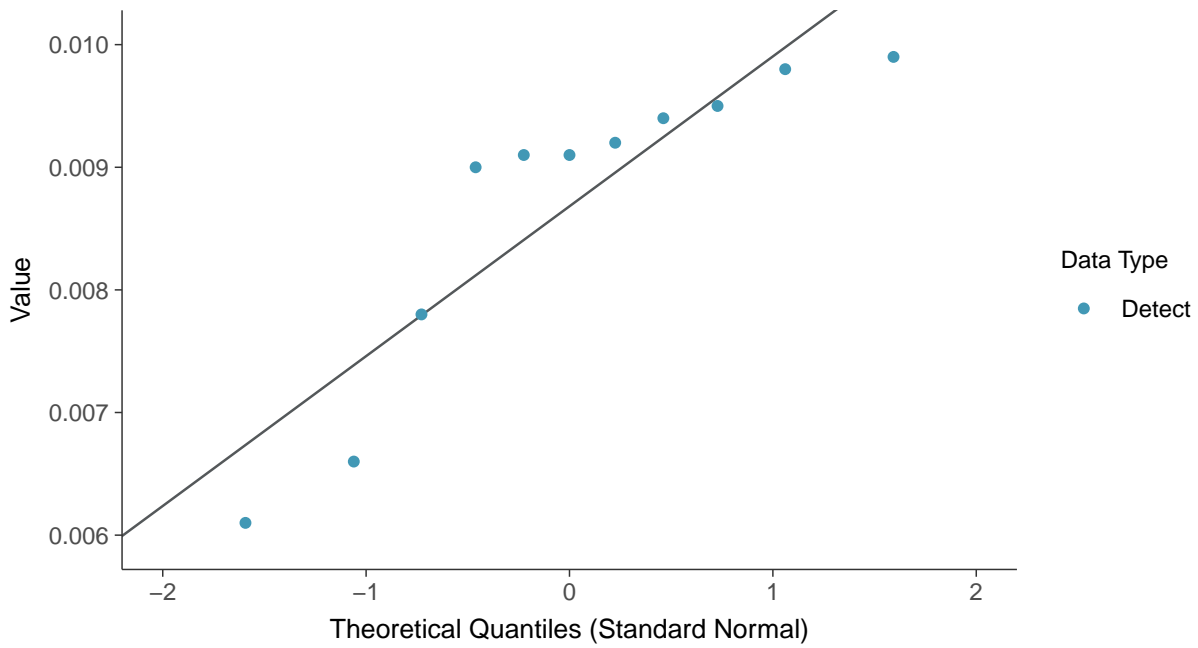
Boxplot by Season

Nickel, MW-20 (mg/L)

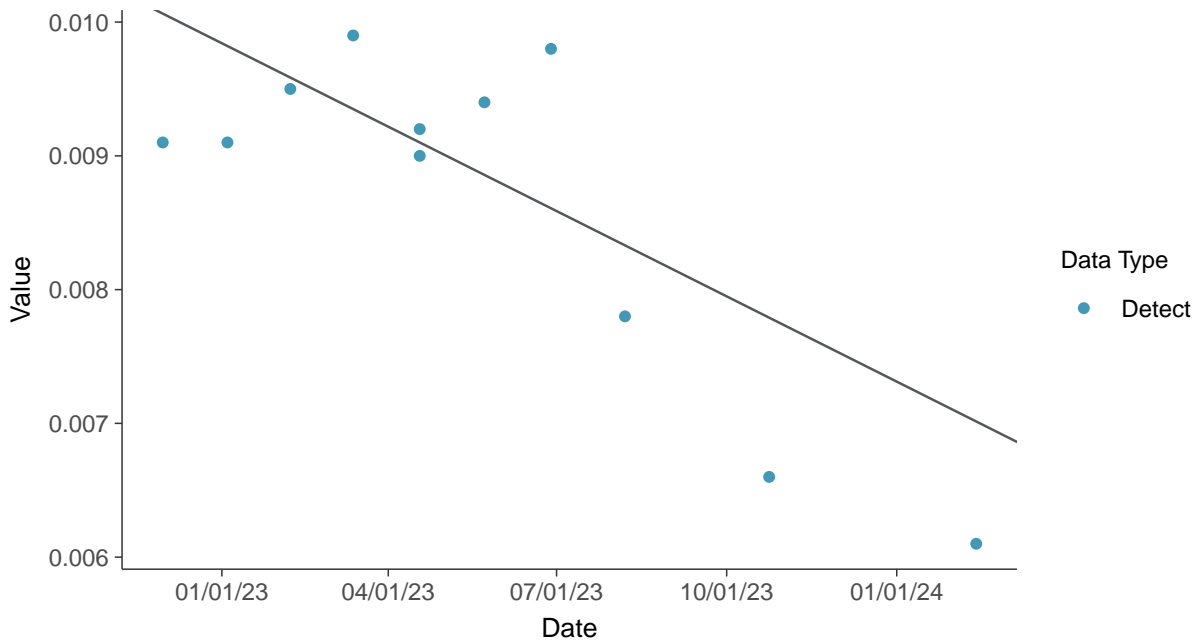




Normal Q-Q plot
Nickel, MW-20 (mg/L)



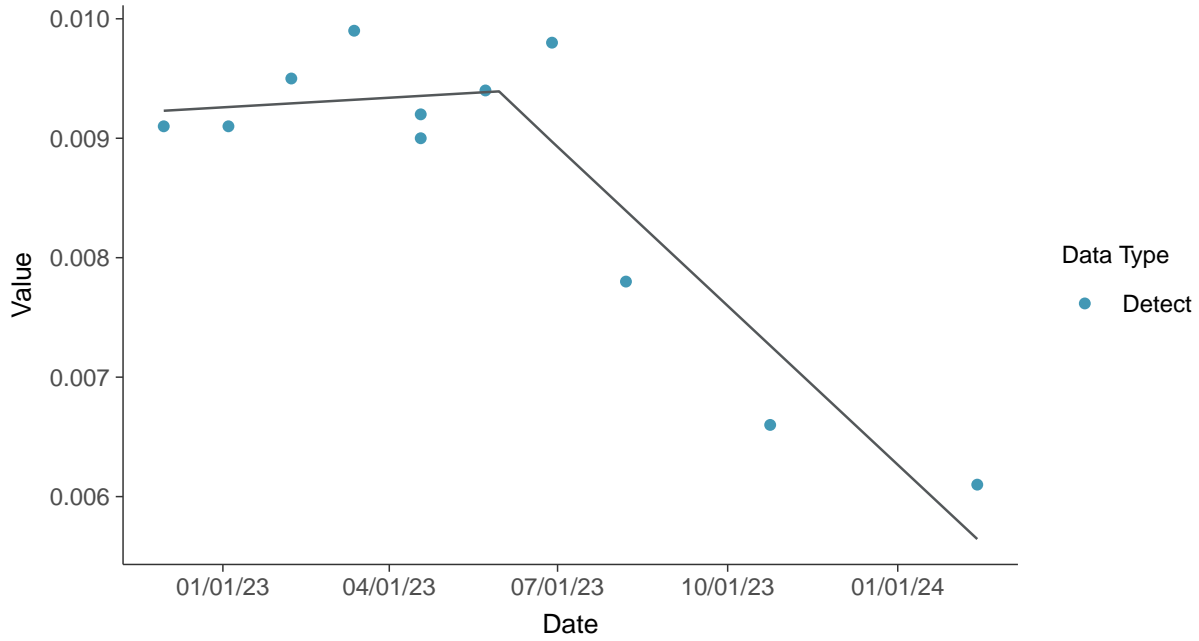
Trend Regression: Mann-Kendall/Theil-Sen Estimate
Nickel, MW-20 (mg/L)





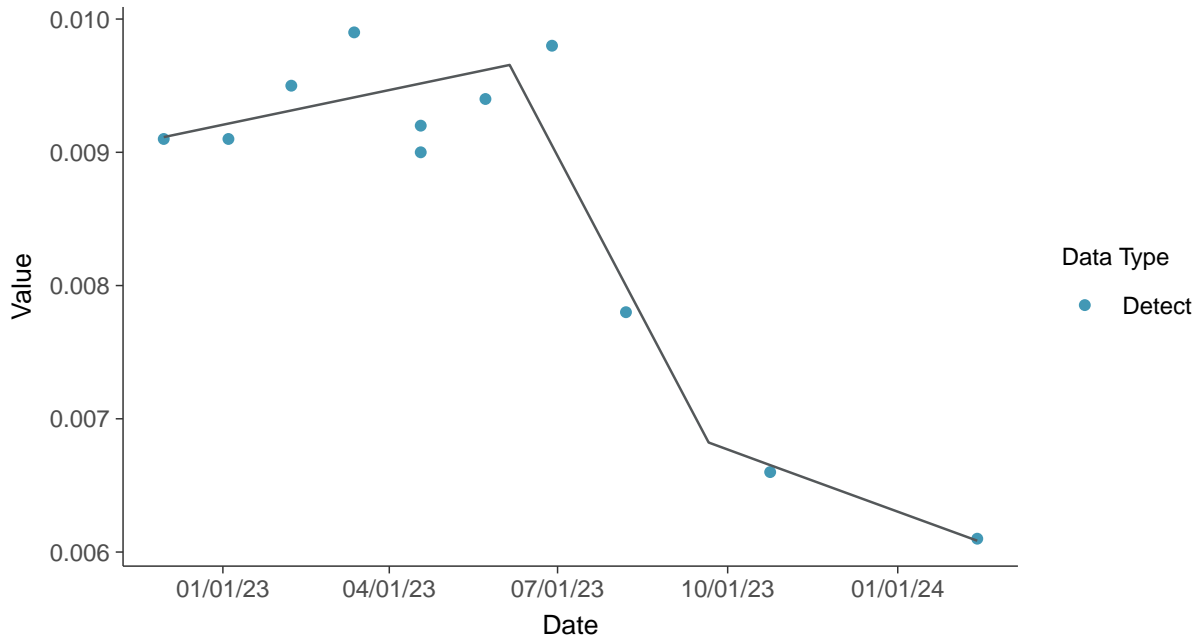
Trend Regression: Piecewise Linear-Linear

Nickel, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

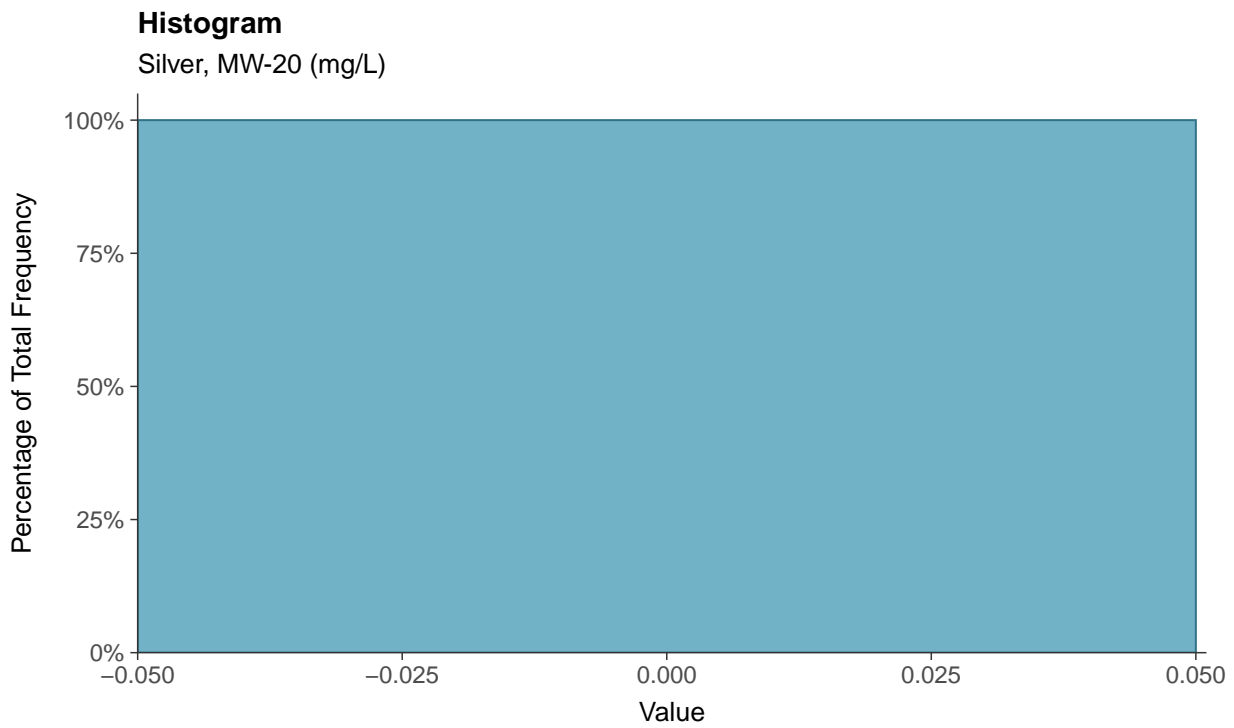
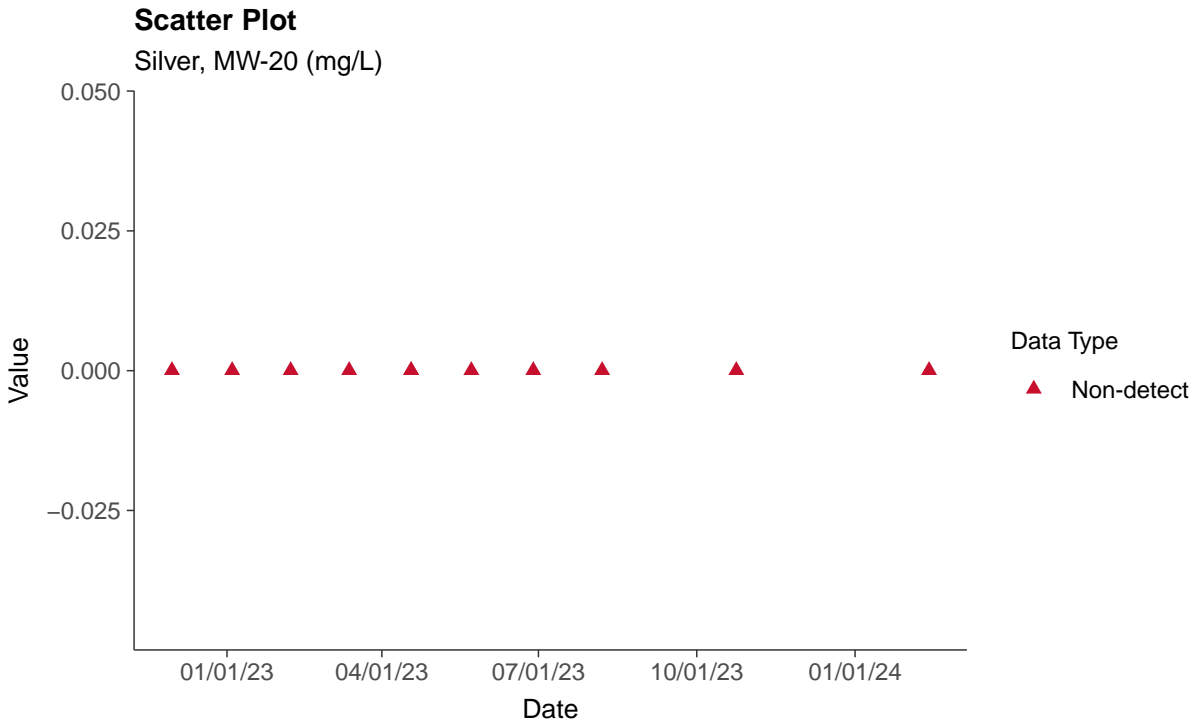
Nickel, MW-20 (mg/L)





Part 115: Silver, MW-20

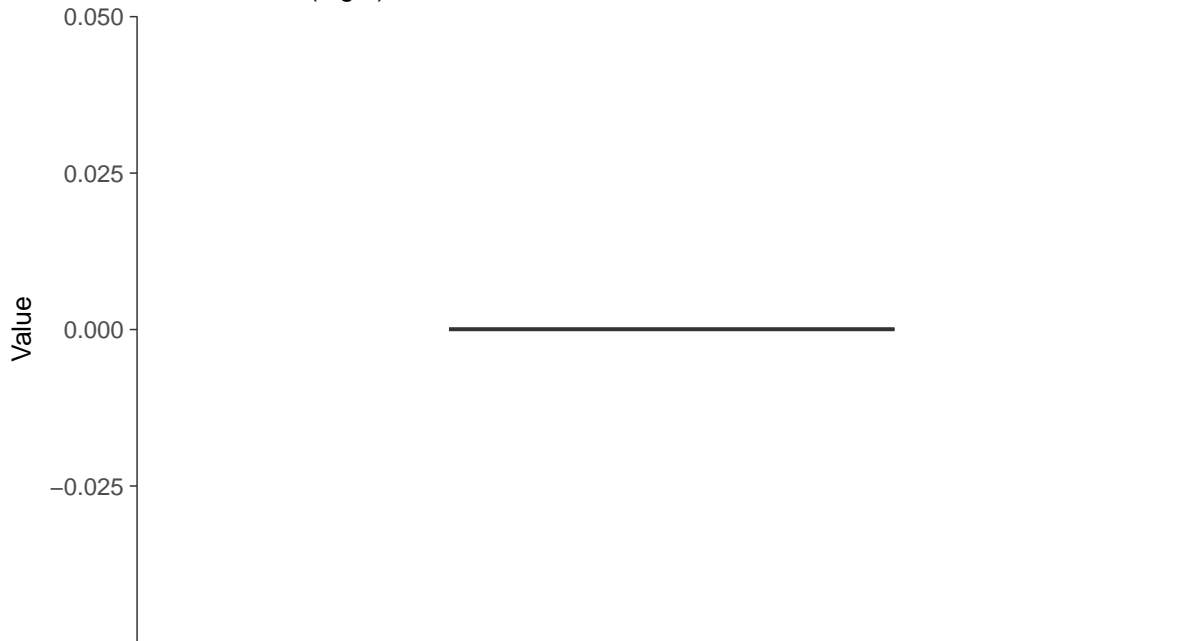
ID: 1_30_6_123





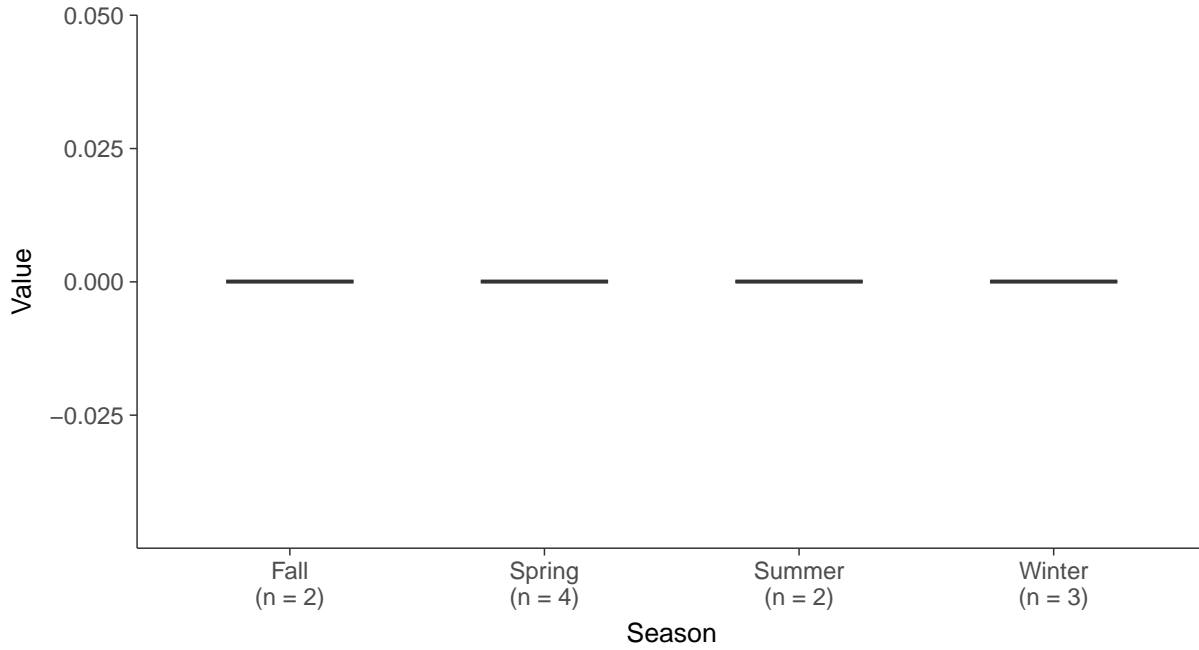
Boxplot

Silver, MW-20 (mg/L)



Boxplot by Season

Silver, MW-20 (mg/L)



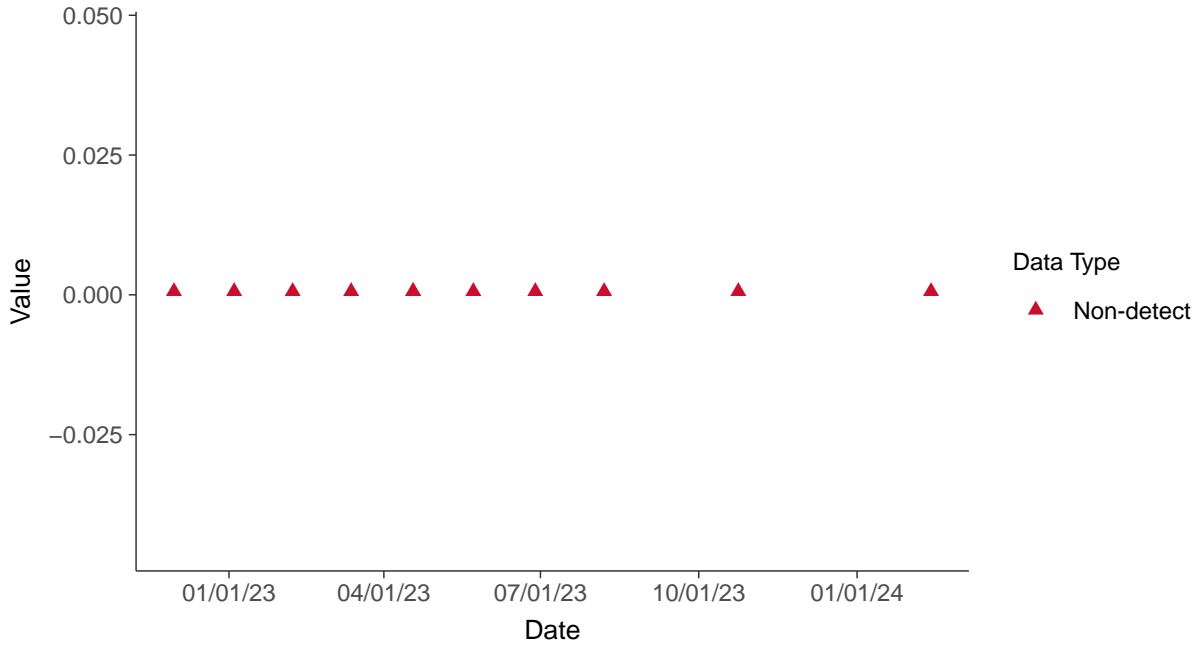


Part 115: Vanadium, MW-20

ID: 1_30_6_129

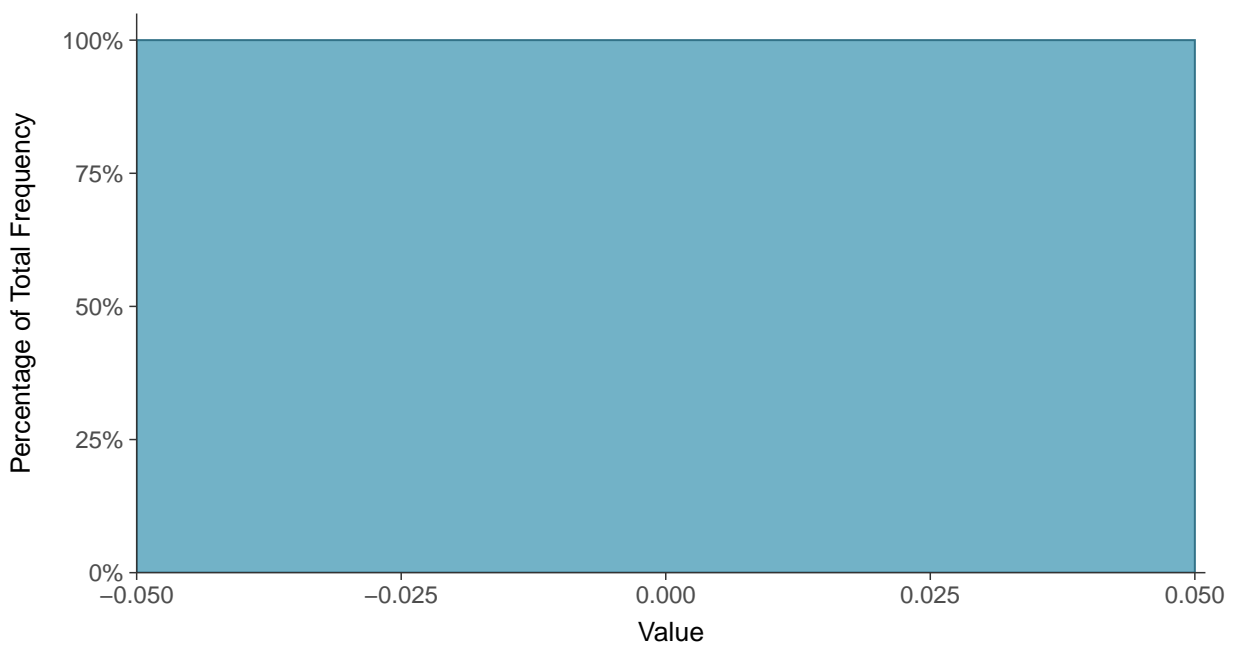
Scatter Plot

Vanadium, MW-20 (mg/L)



Histogram

Vanadium, MW-20 (mg/L)





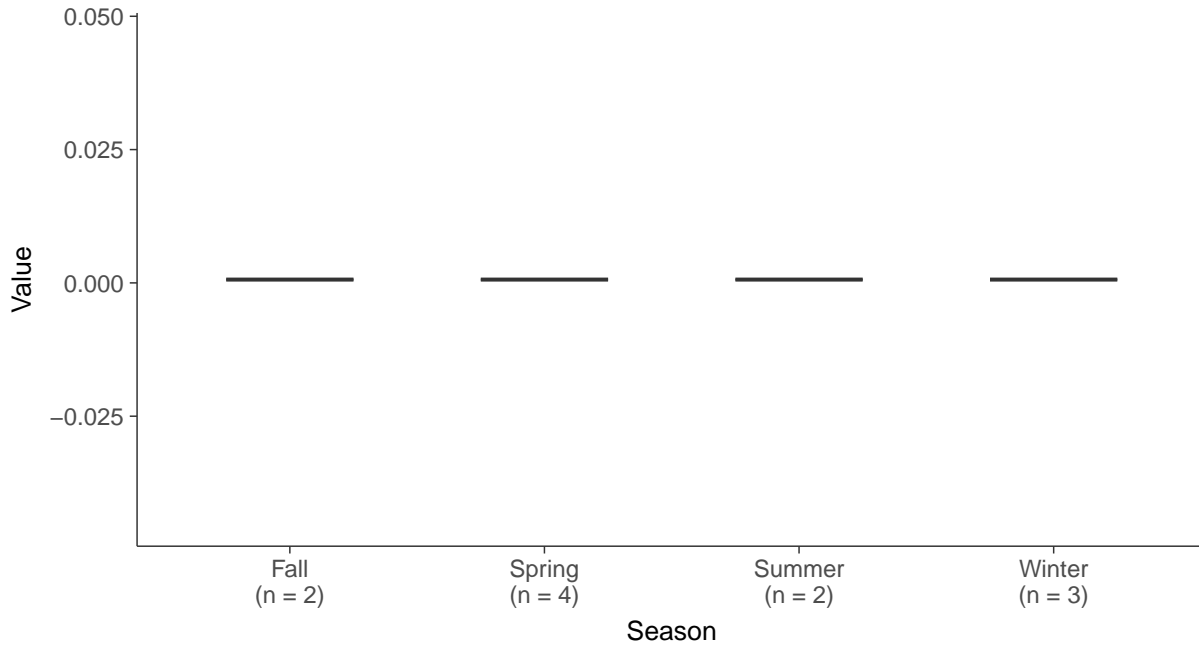
Boxplot

Vanadium, MW-20 (mg/L)



Boxplot by Season

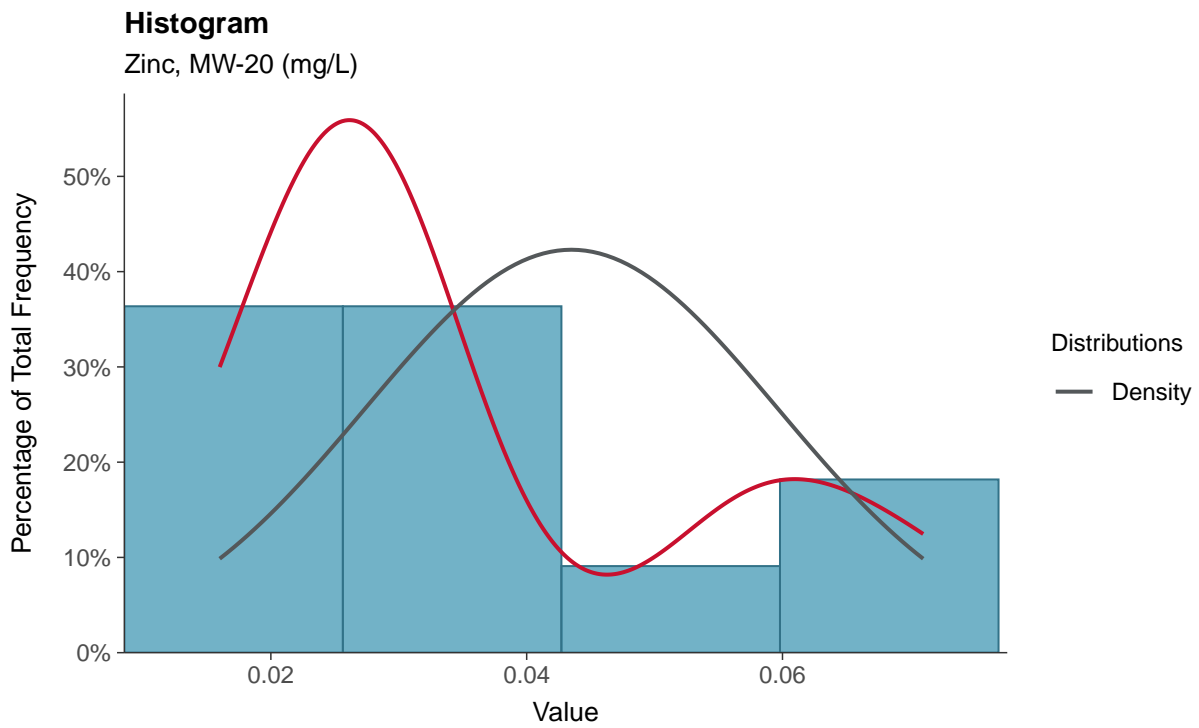
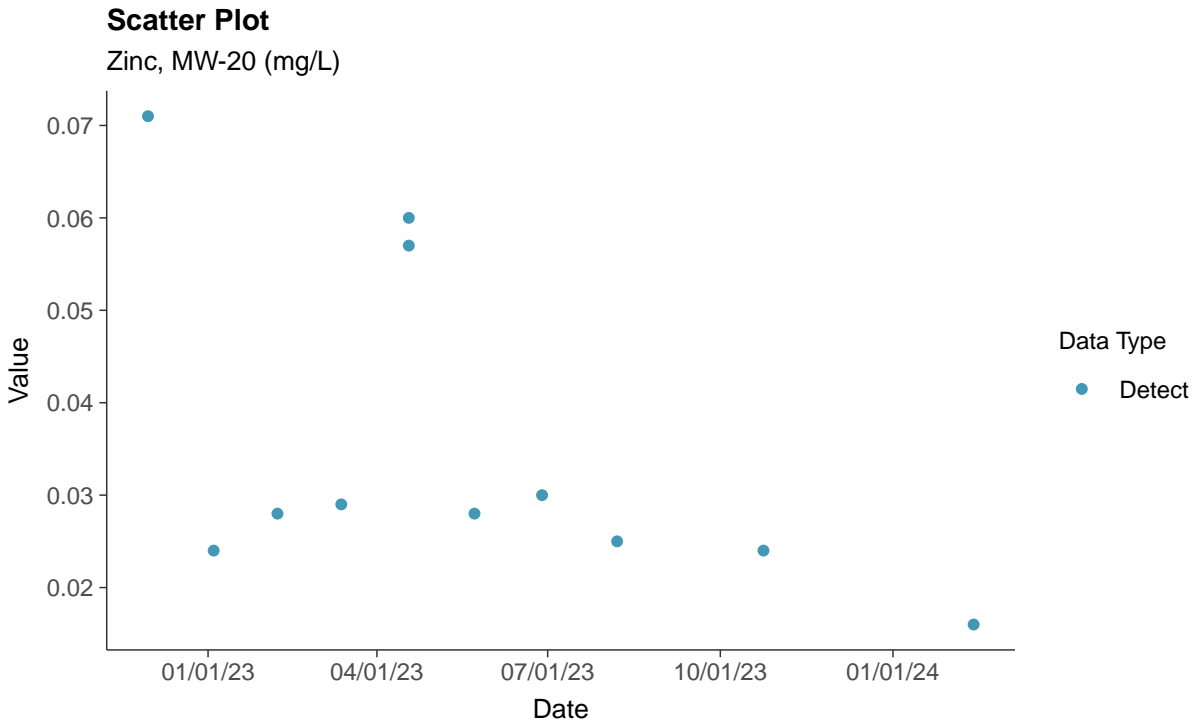
Vanadium, MW-20 (mg/L)





Part 115: Zinc, MW-20

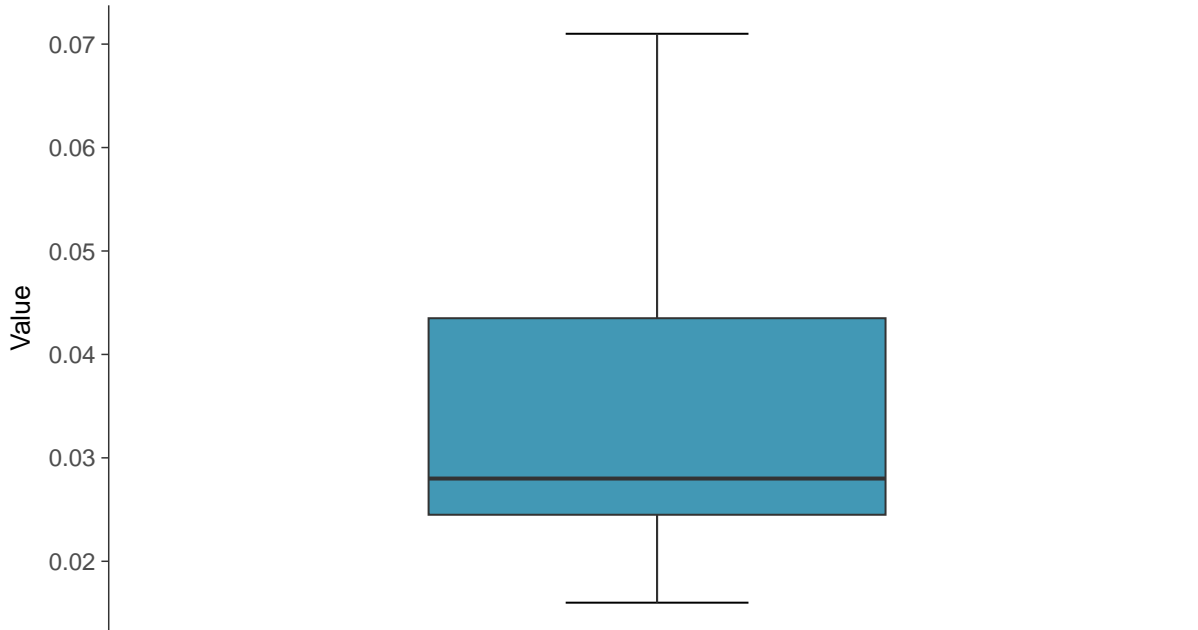
ID: 1_30_6_130





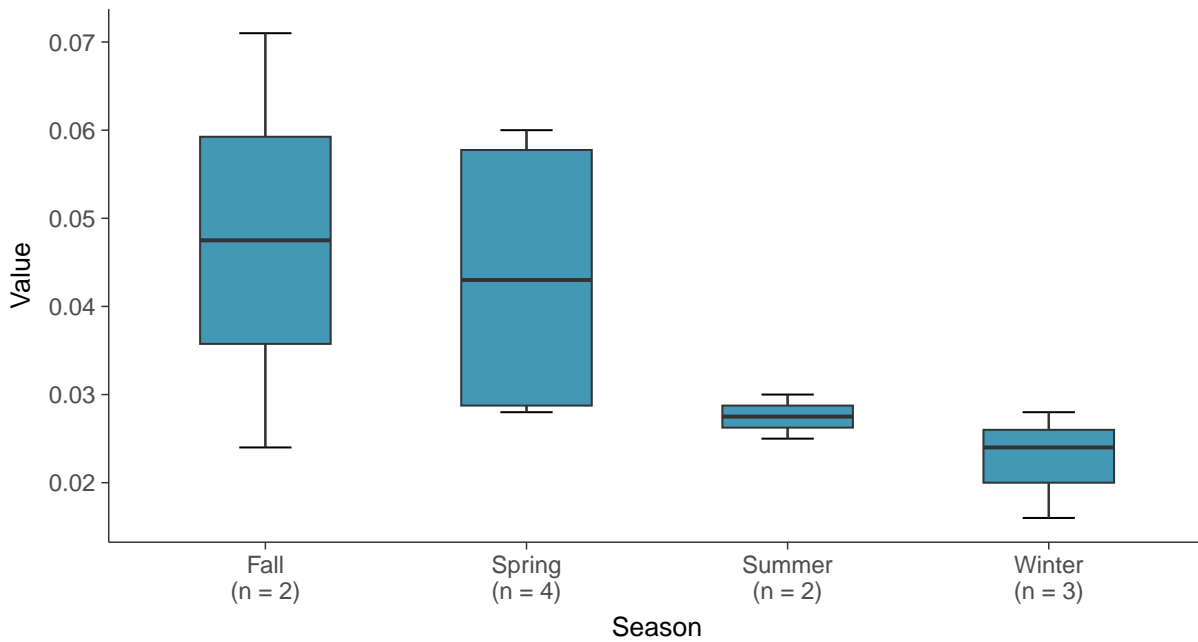
Boxplot

Zinc, MW-20 (mg/L)



Boxplot by Season

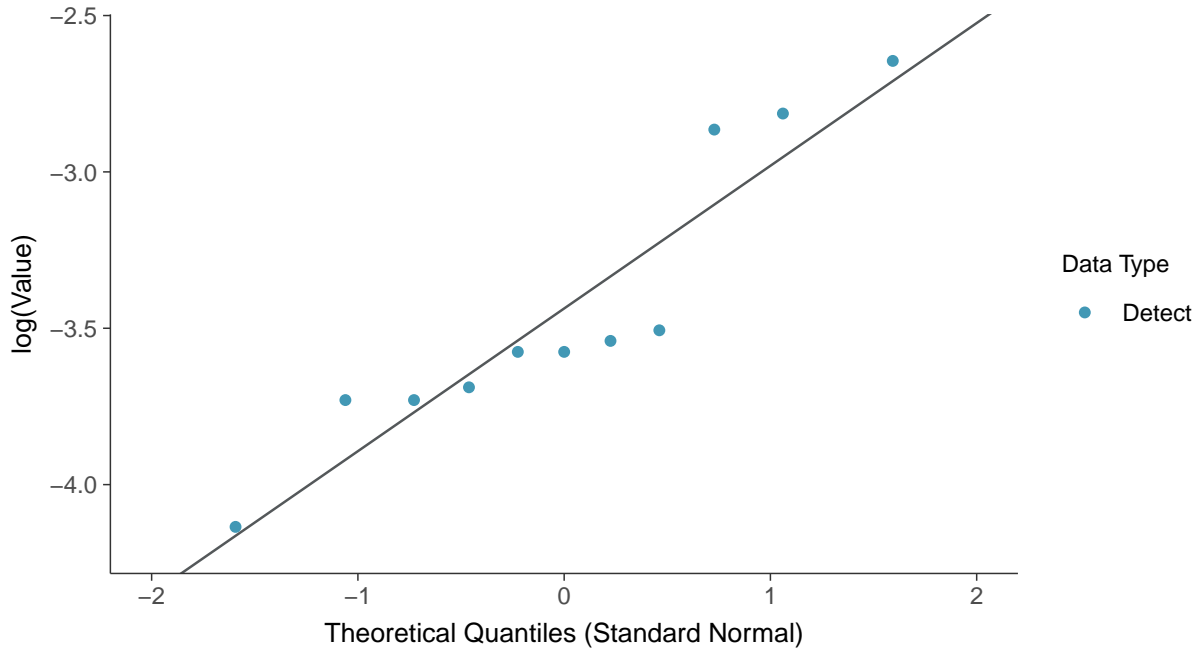
Zinc, MW-20 (mg/L)





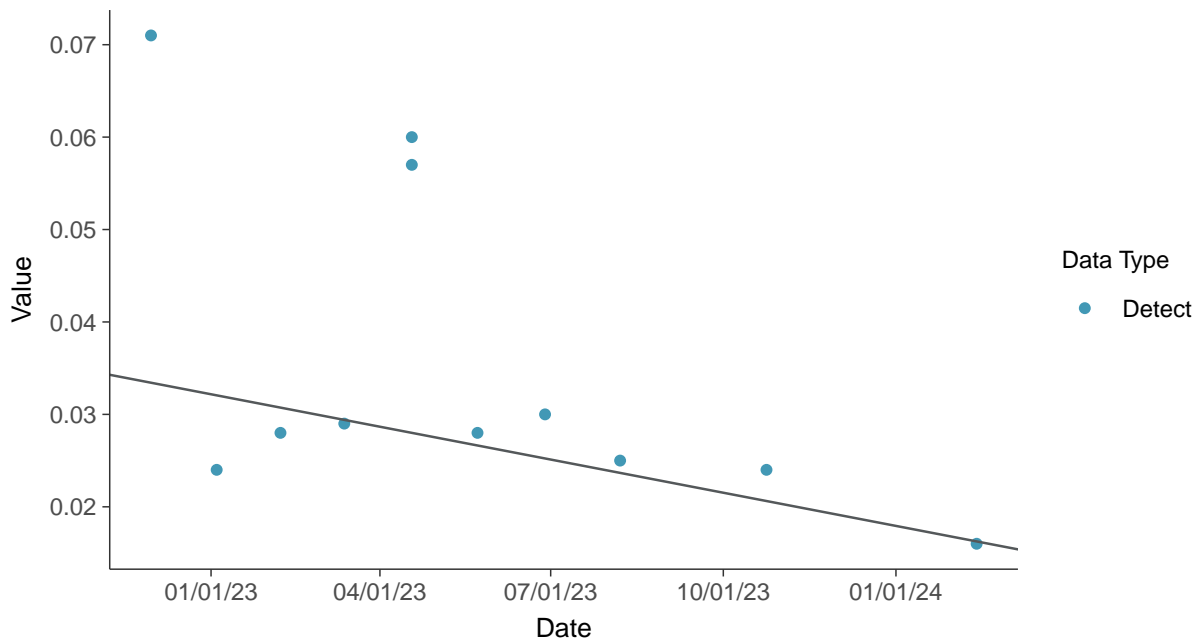
Lognormal Q-Q plot

Zinc, MW-20 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

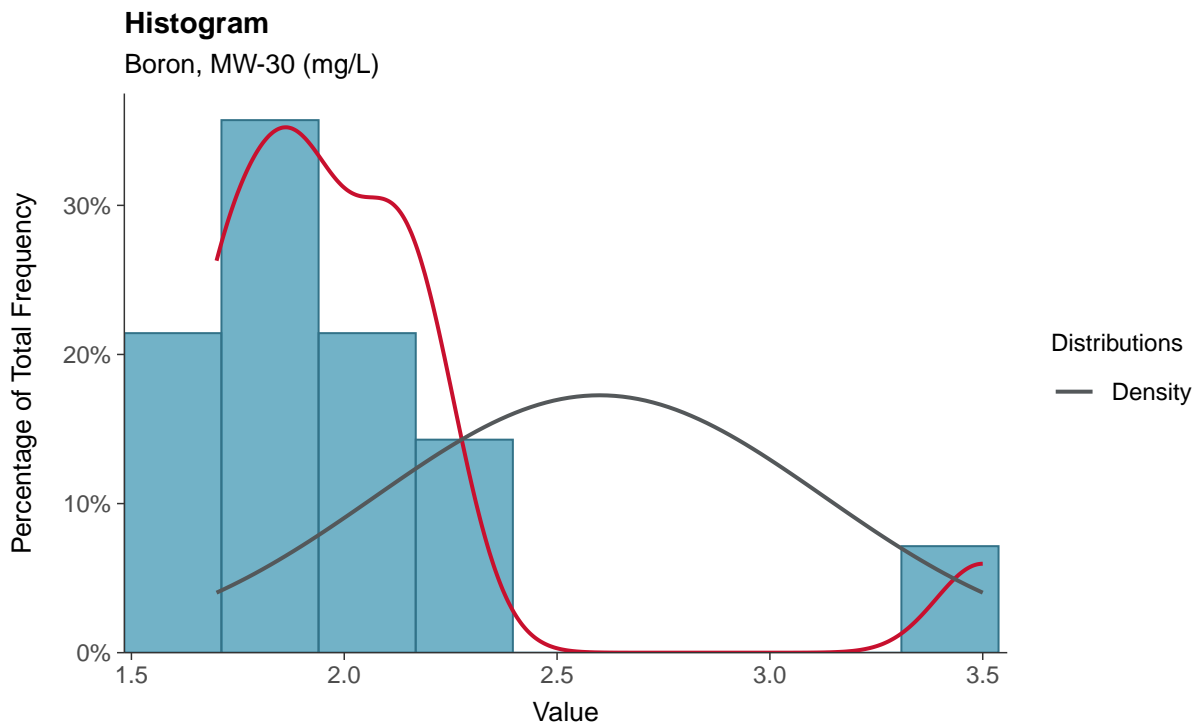
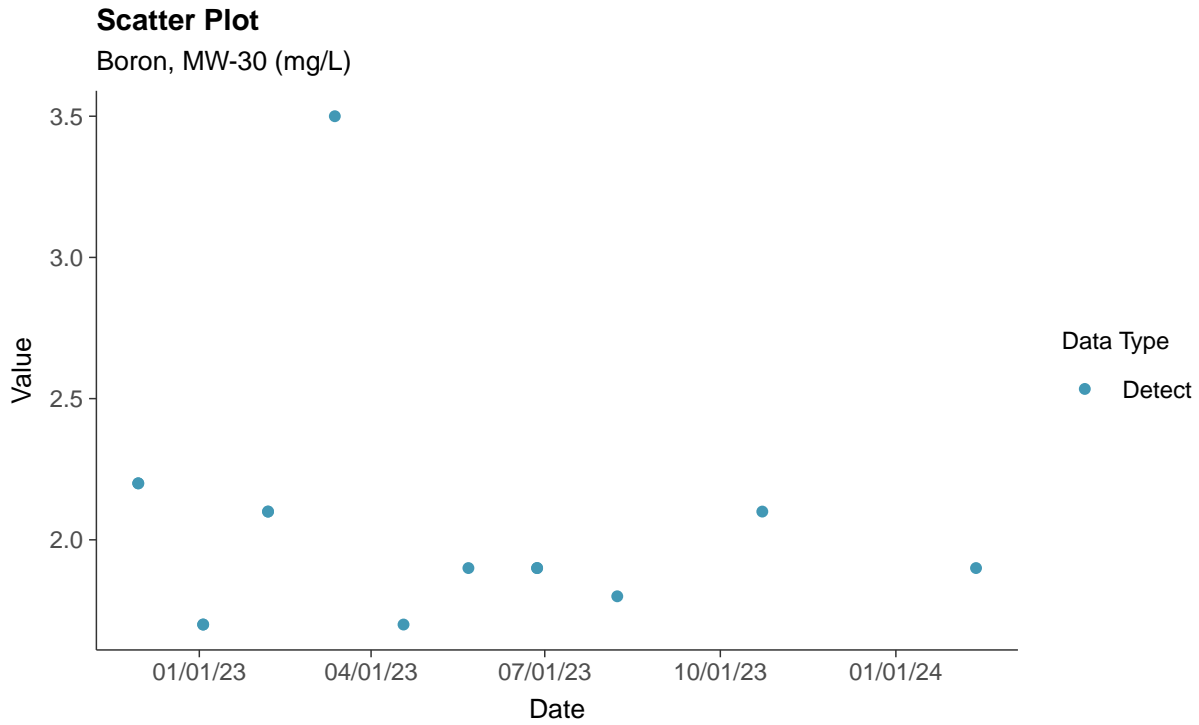
Zinc, MW-20 (mg/L)





Appendix III: Boron, MW-30

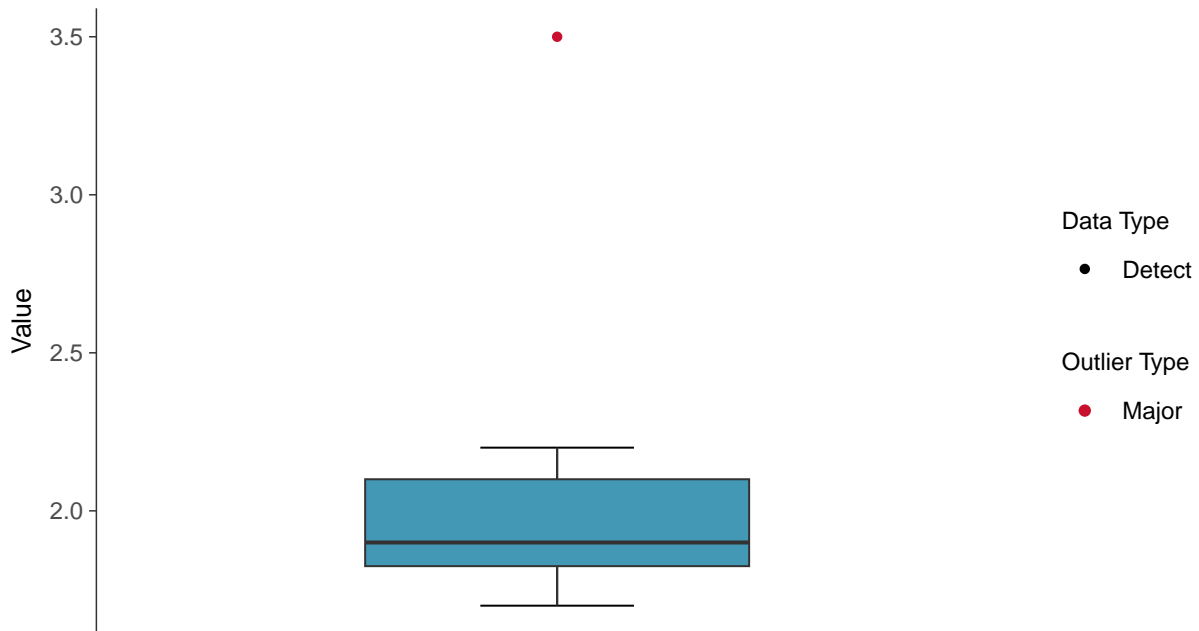
ID: 1_40_4_105





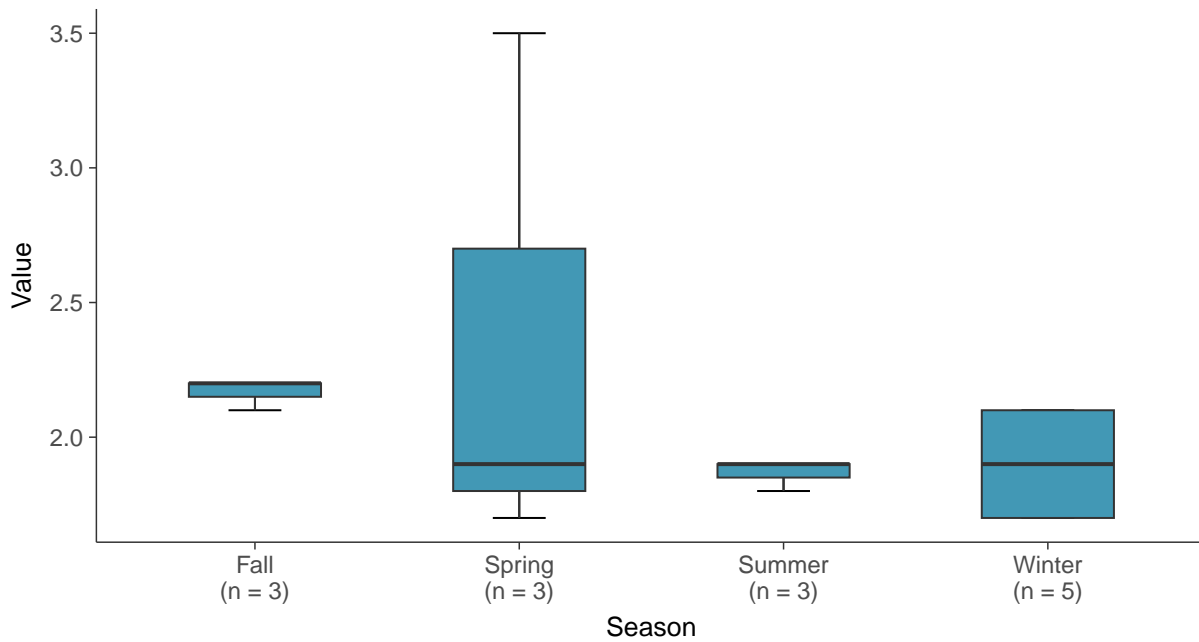
Boxplot

Boron, MW-30 (mg/L)



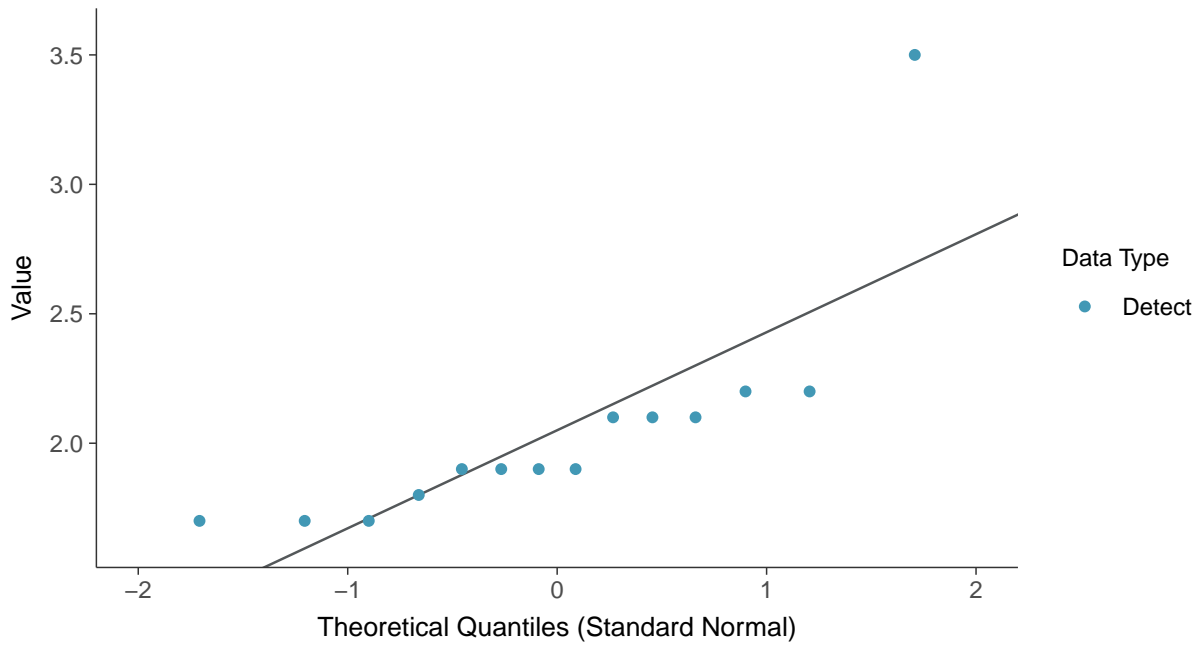
Boxplot by Season

Boron, MW-30 (mg/L)

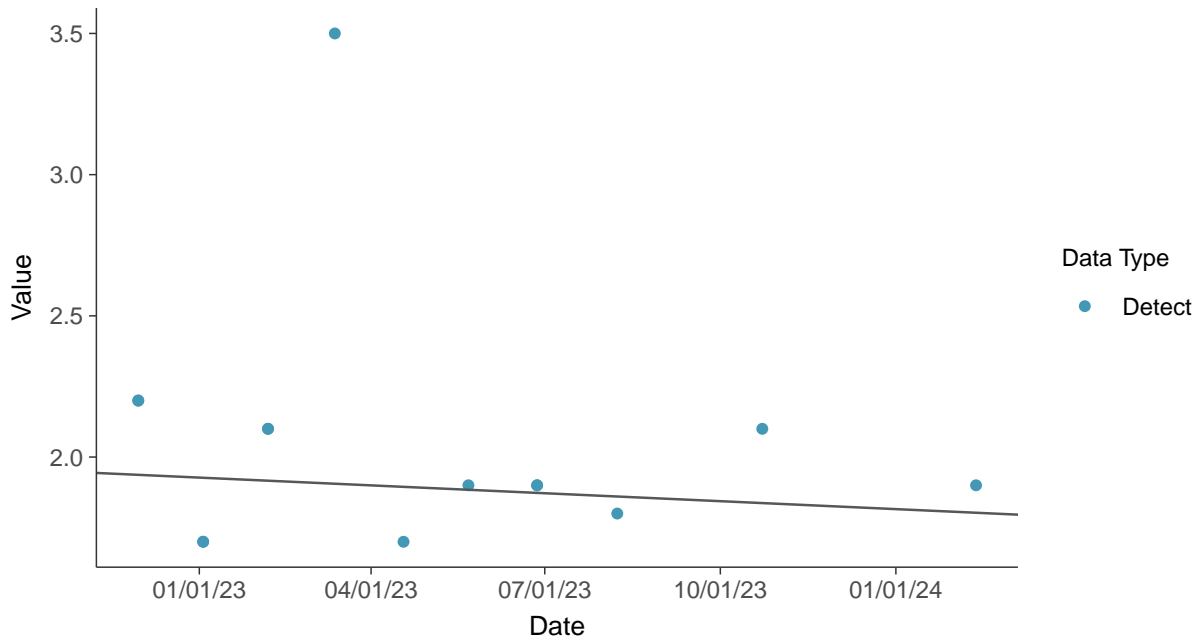




Normal Q-Q plot
Boron, MW-30 (mg/L)



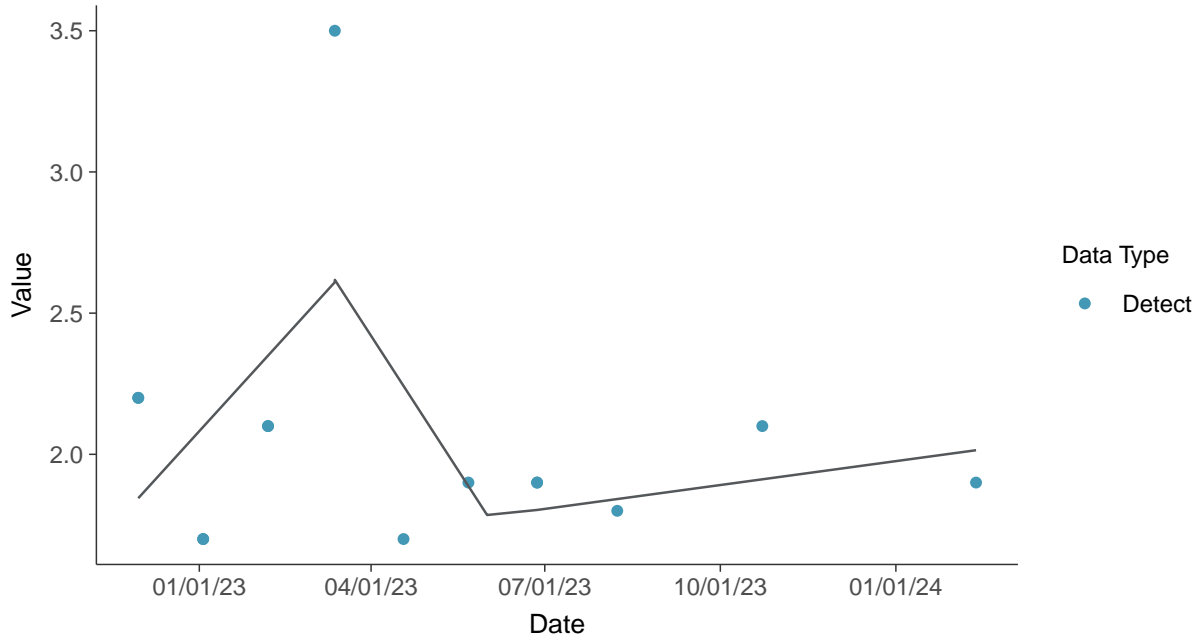
Trend Regression: Mann-Kendall/Theil-Sen Estimate
Boron, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-30 (mg/L)



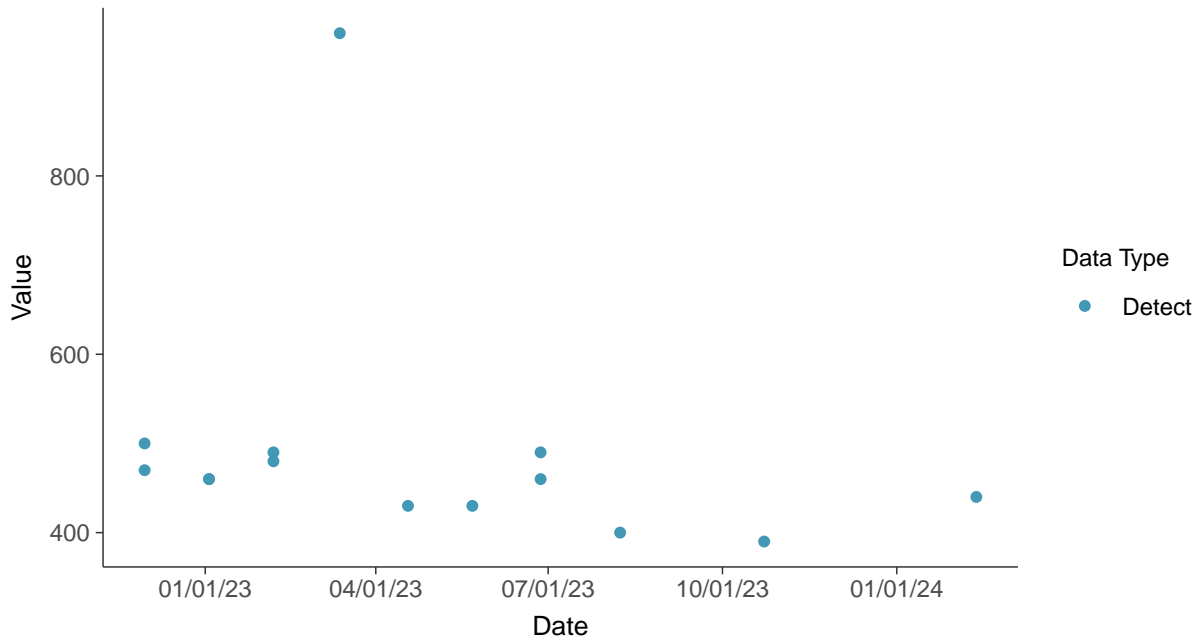


Appendix III: Calcium, MW-30

ID: 1_40_4_107

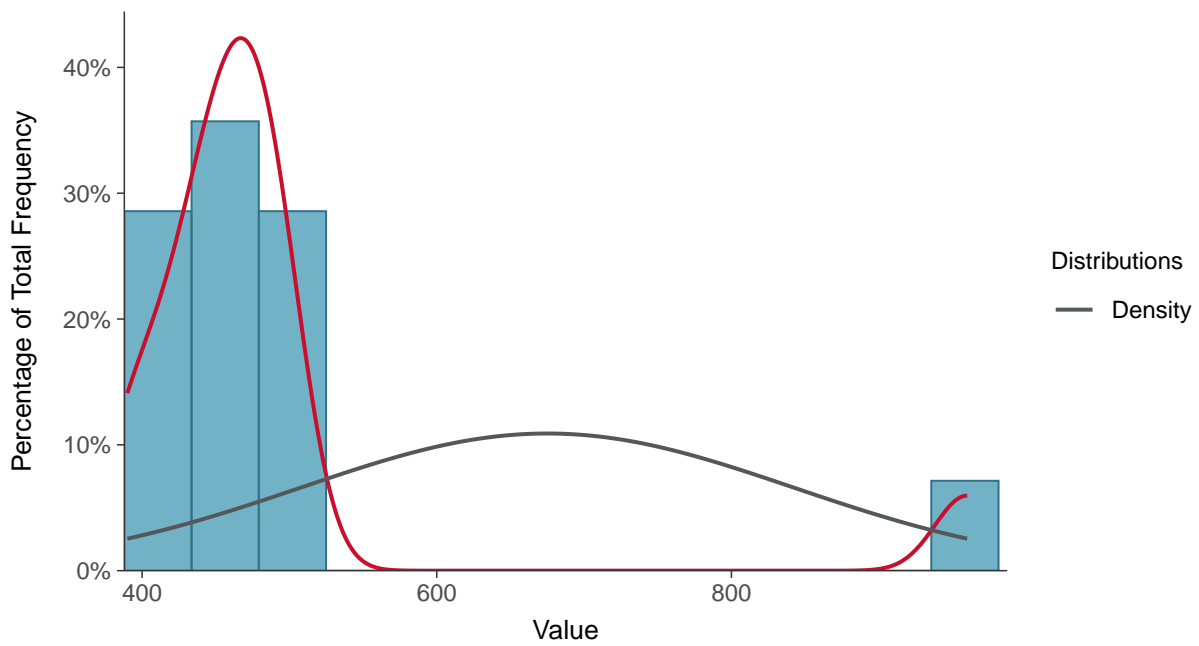
Scatter Plot

Calcium, MW-30 (mg/L)



Histogram

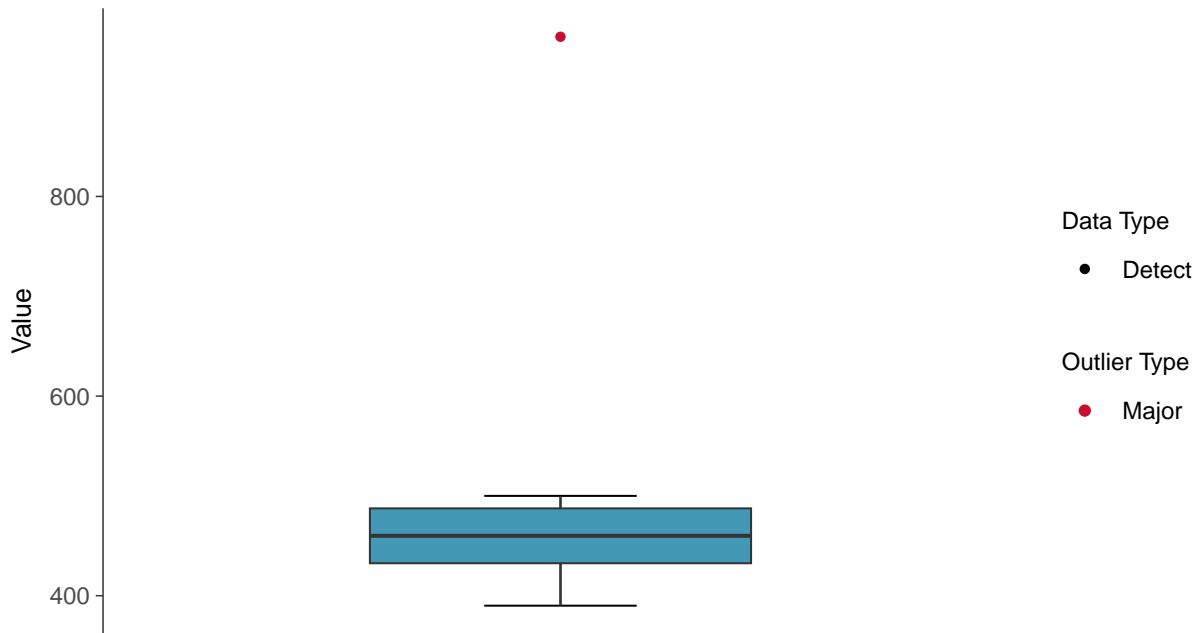
Calcium, MW-30 (mg/L)





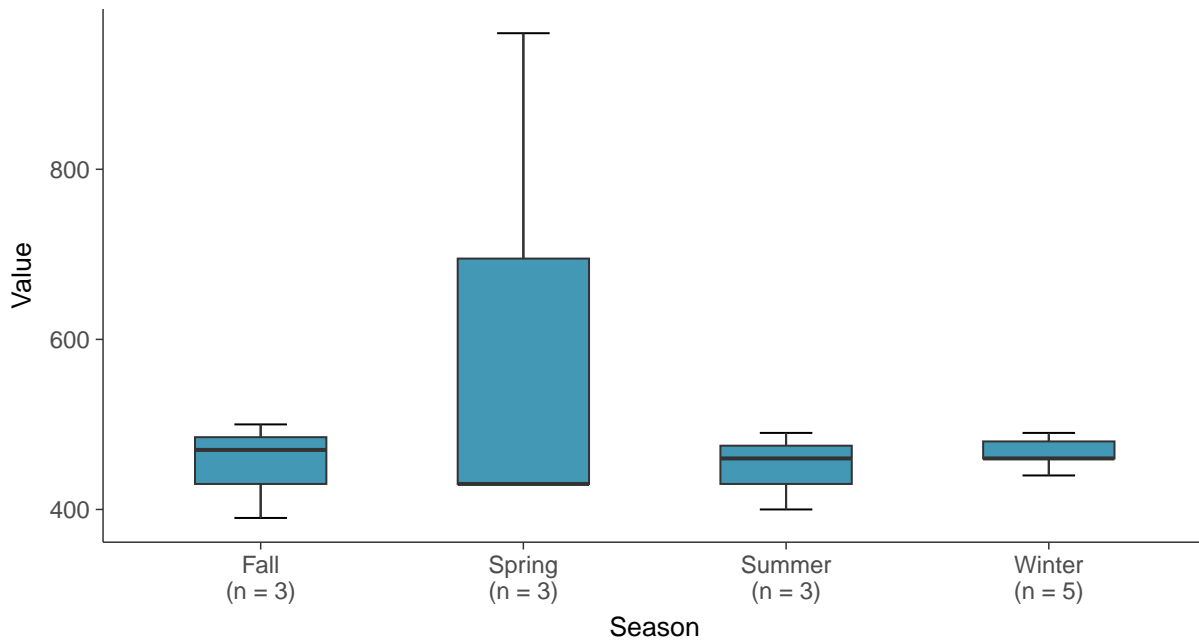
Boxplot

Calcium, MW-30 (mg/L)



Boxplot by Season

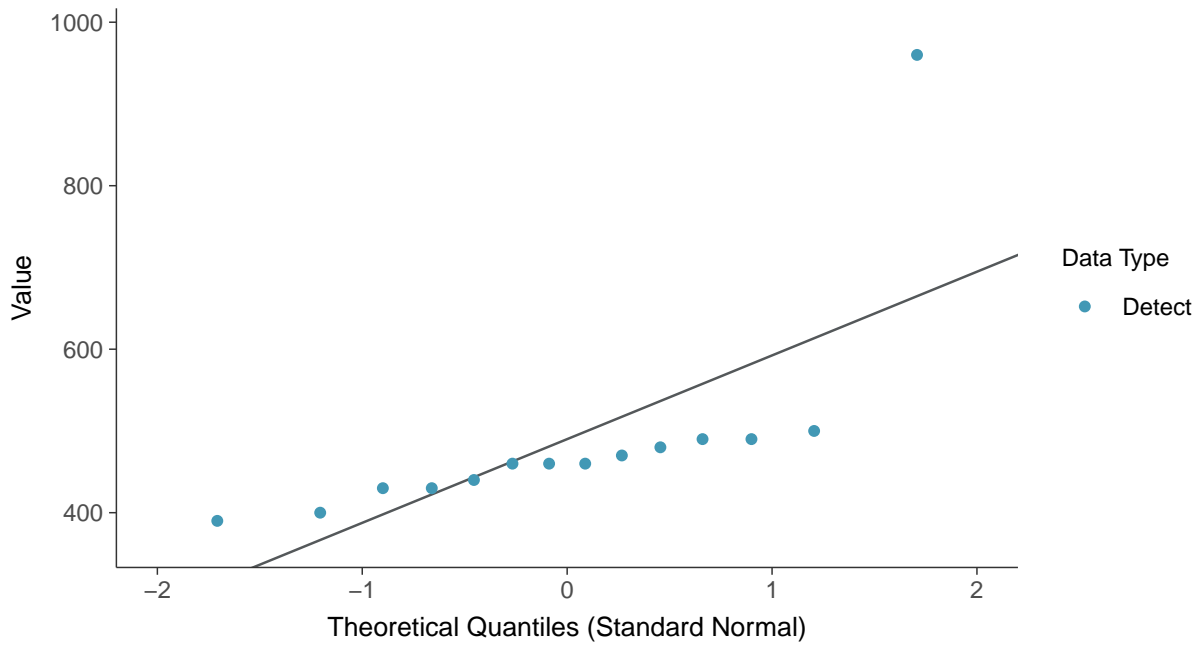
Calcium, MW-30 (mg/L)





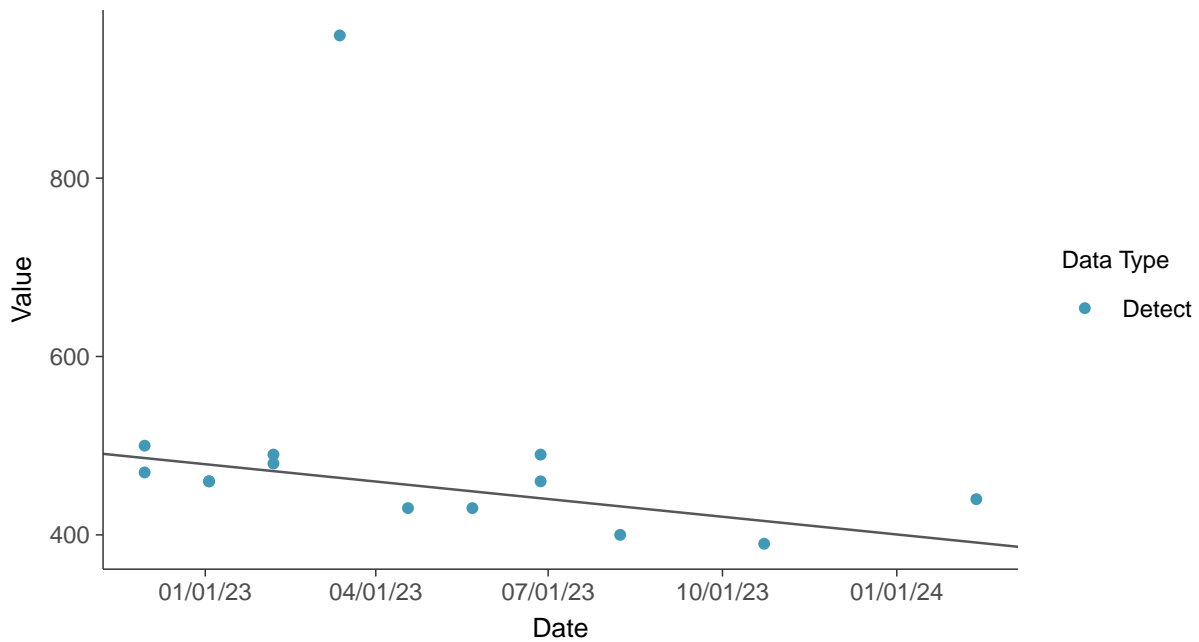
Normal Q-Q plot

Calcium, MW-30 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

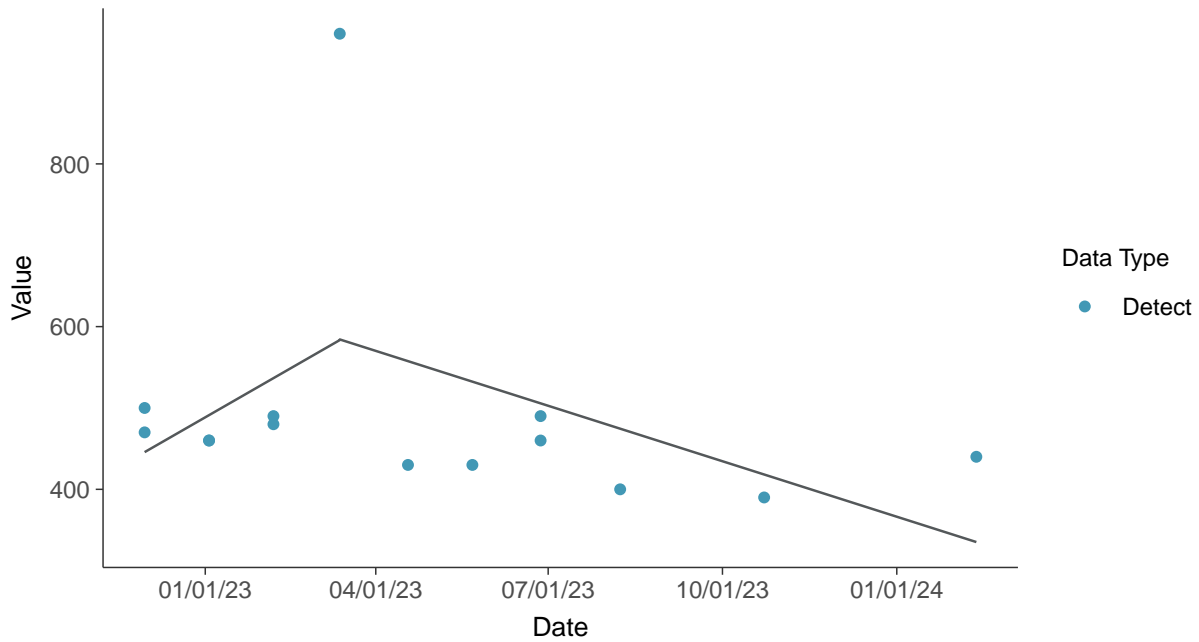
Calcium, MW-30 (mg/L)





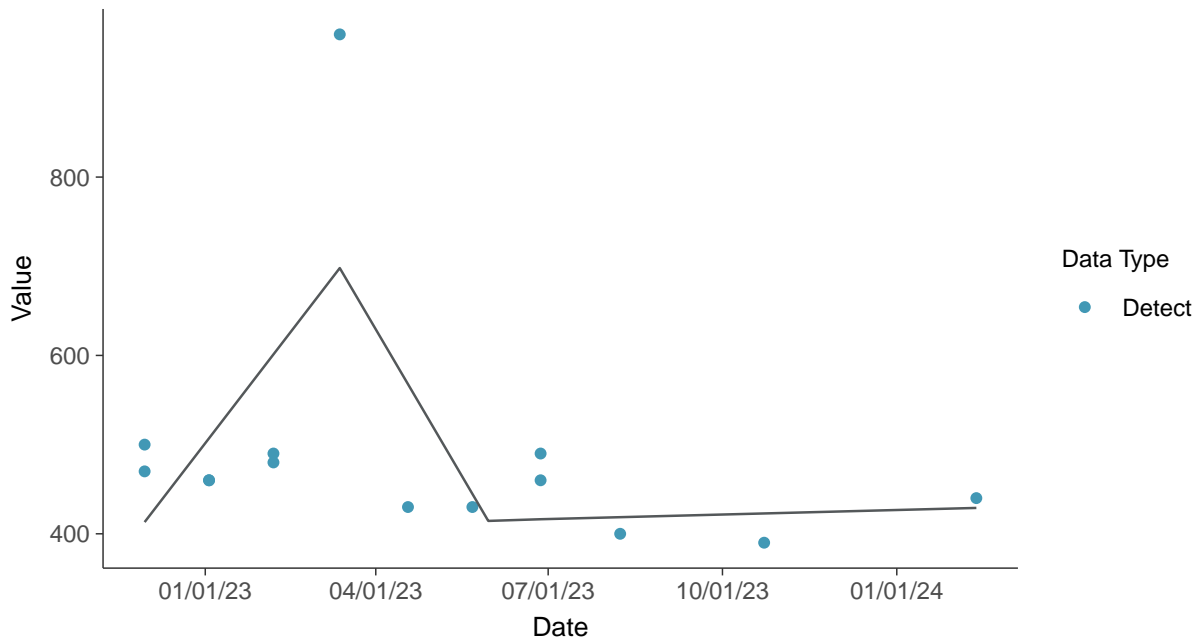
Trend Regression: Piecewise Linear-Linear

Calcium, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-30 (mg/L)



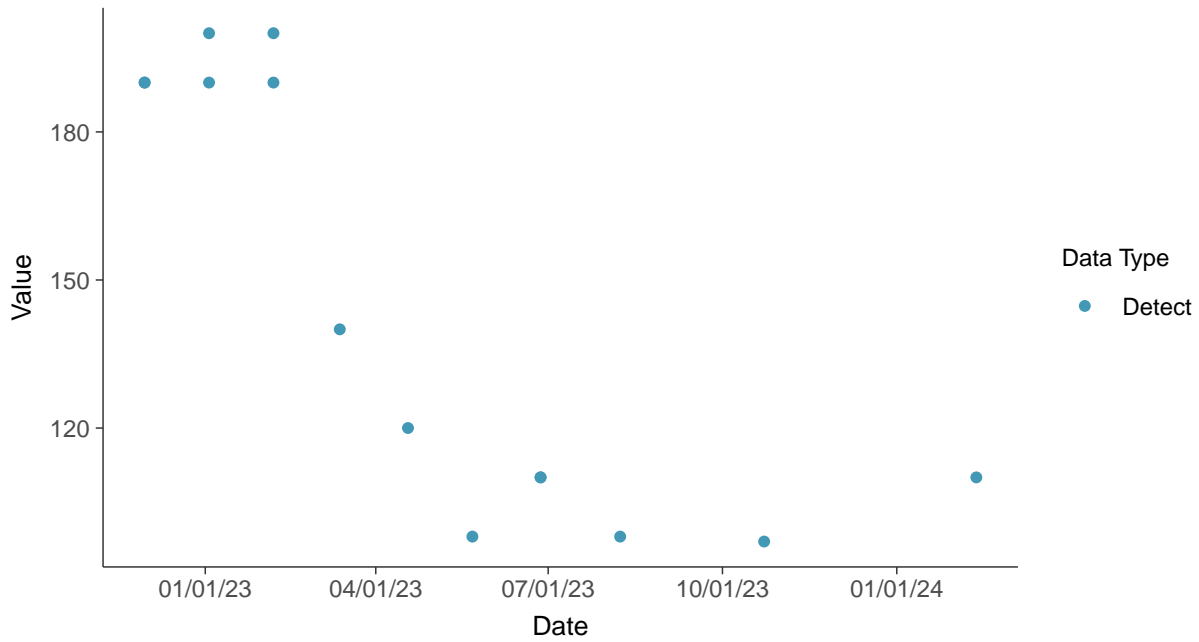


Appendix III: Chloride (as Cl), MW-30

ID: 1_40_4_108

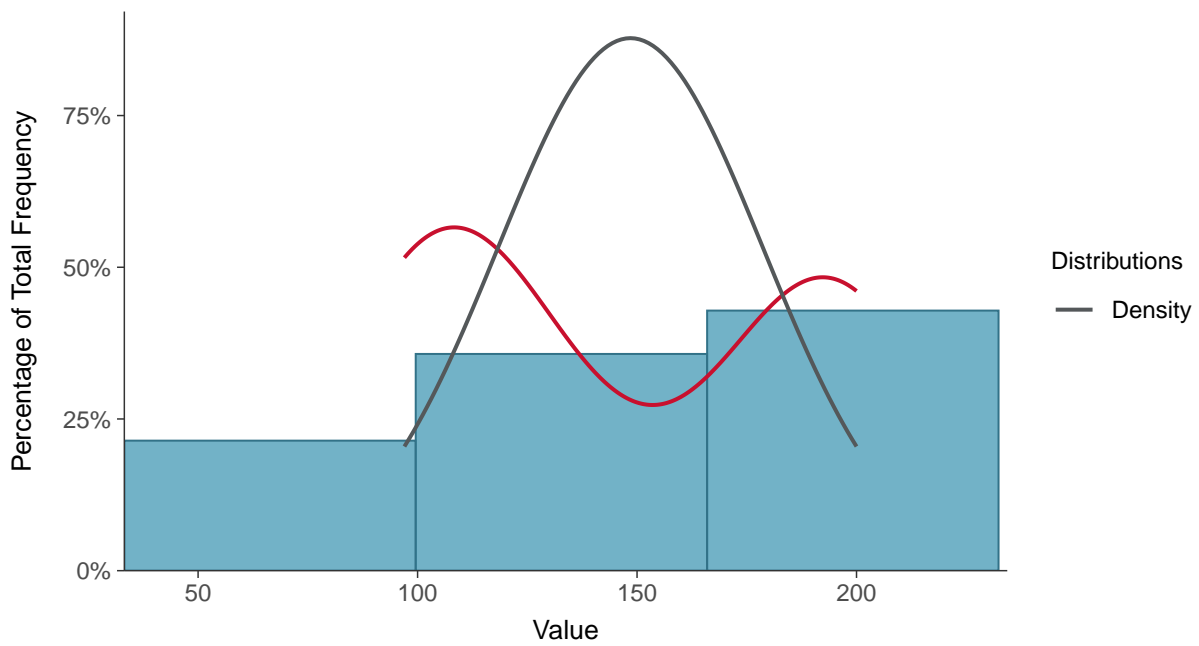
Scatter Plot

Chloride (as Cl), MW-30 (mg/L)



Histogram

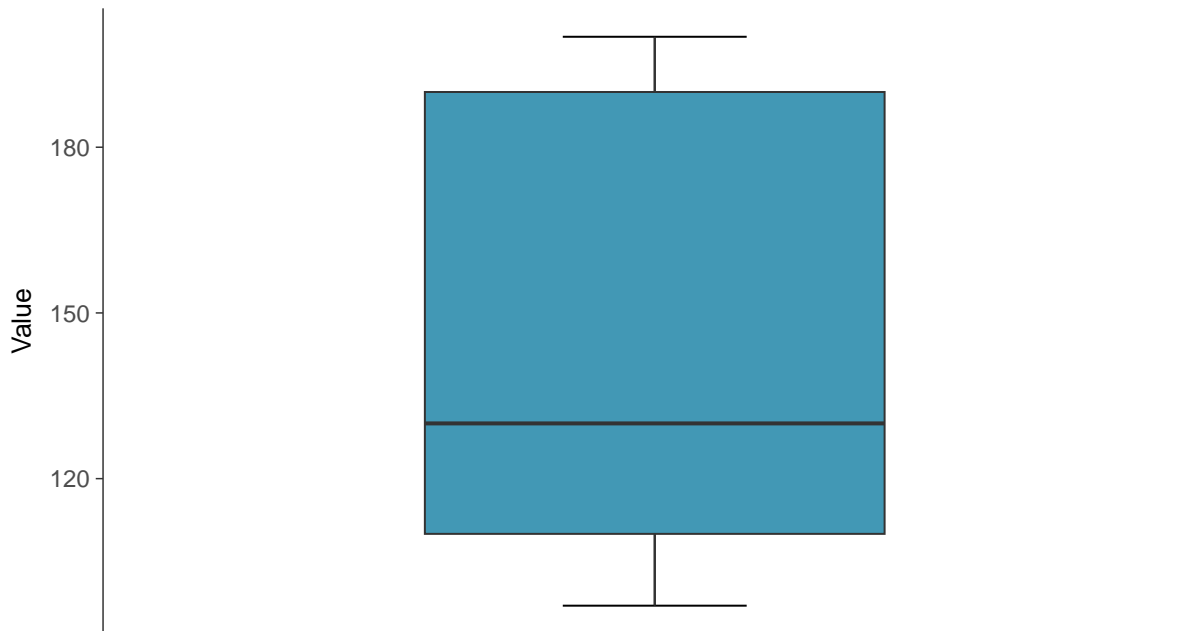
Chloride (as Cl), MW-30 (mg/L)





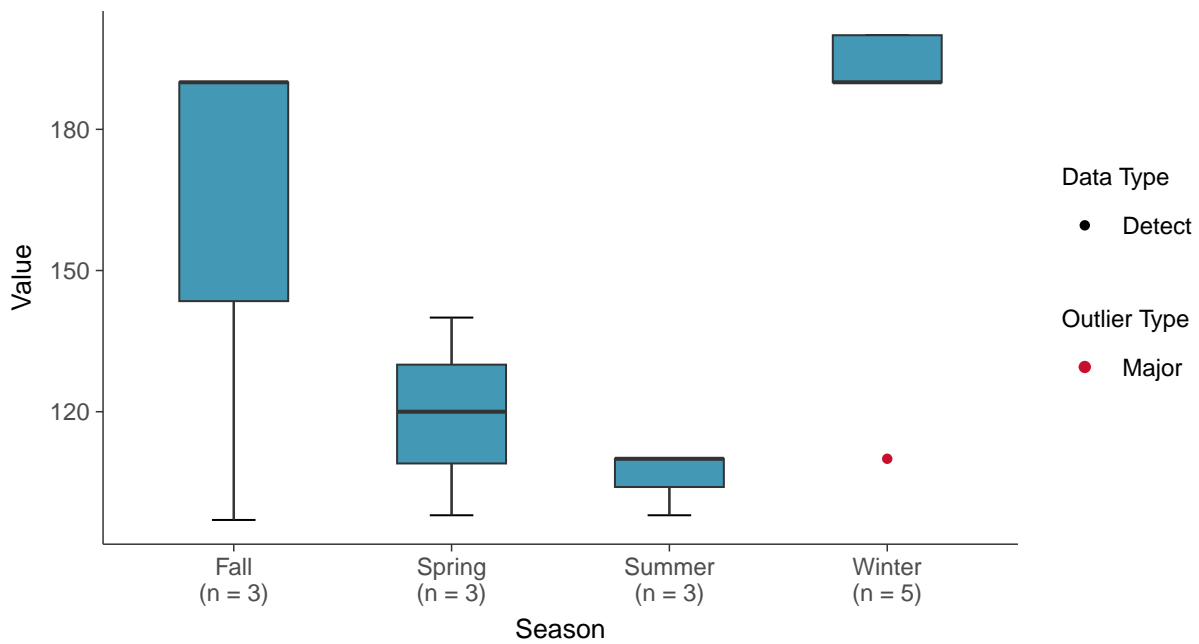
Boxplot

Chloride (as Cl), MW-30 (mg/L)



Boxplot by Season

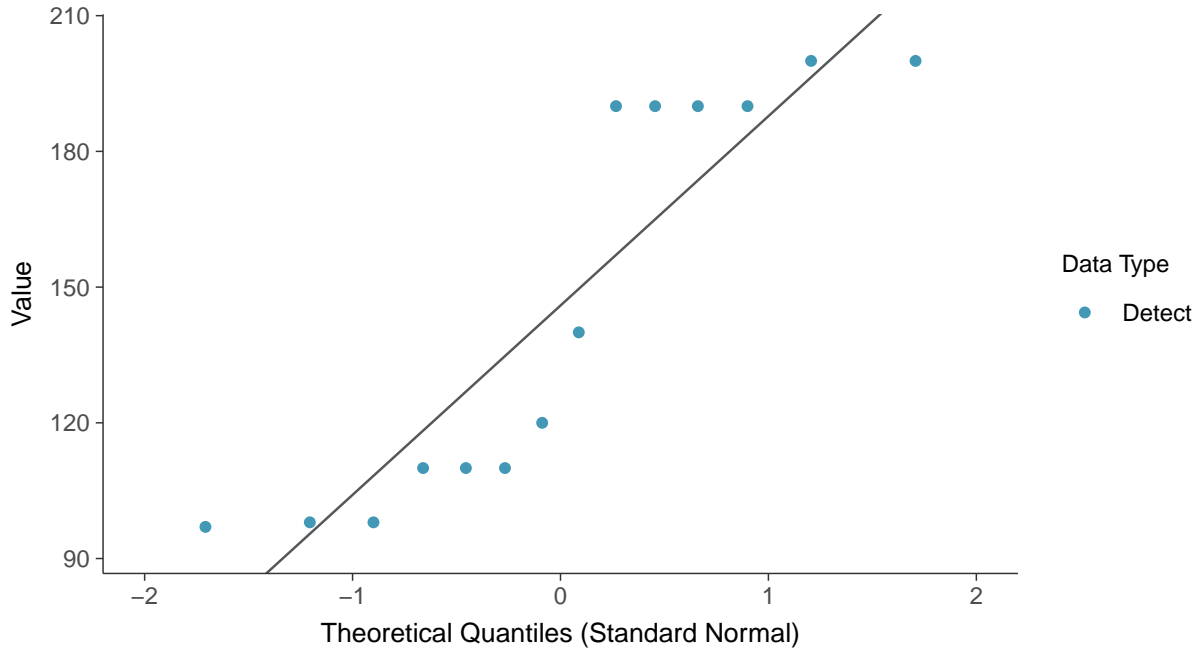
Chloride (as Cl), MW-30 (mg/L)





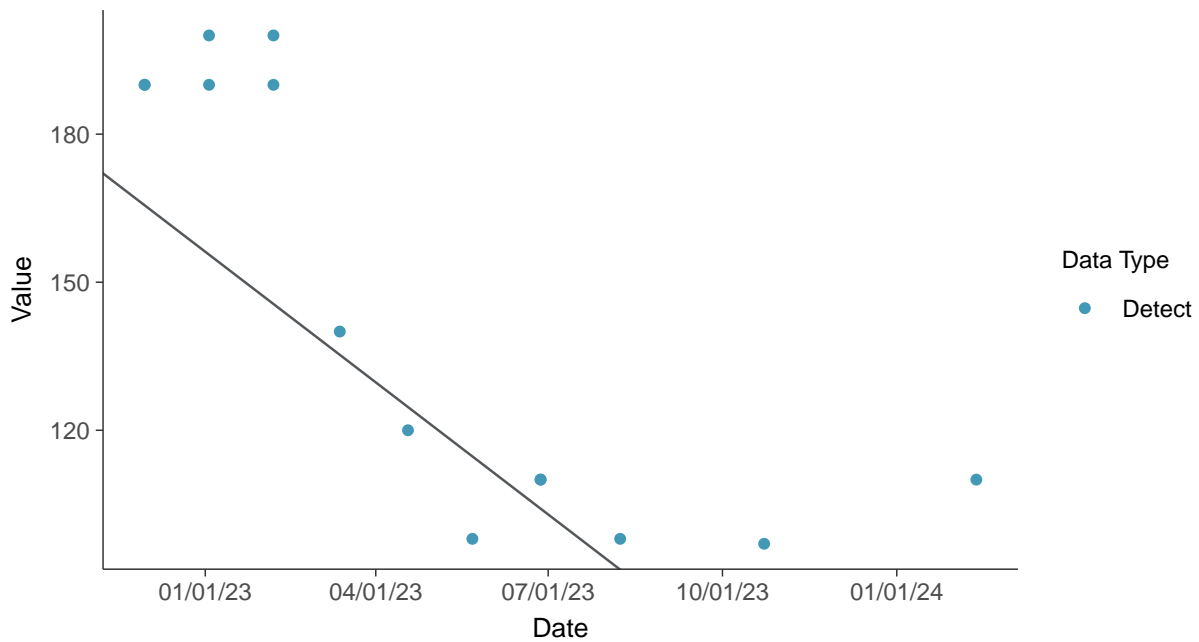
Normal Q-Q plot

Chloride (as Cl), MW-30 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

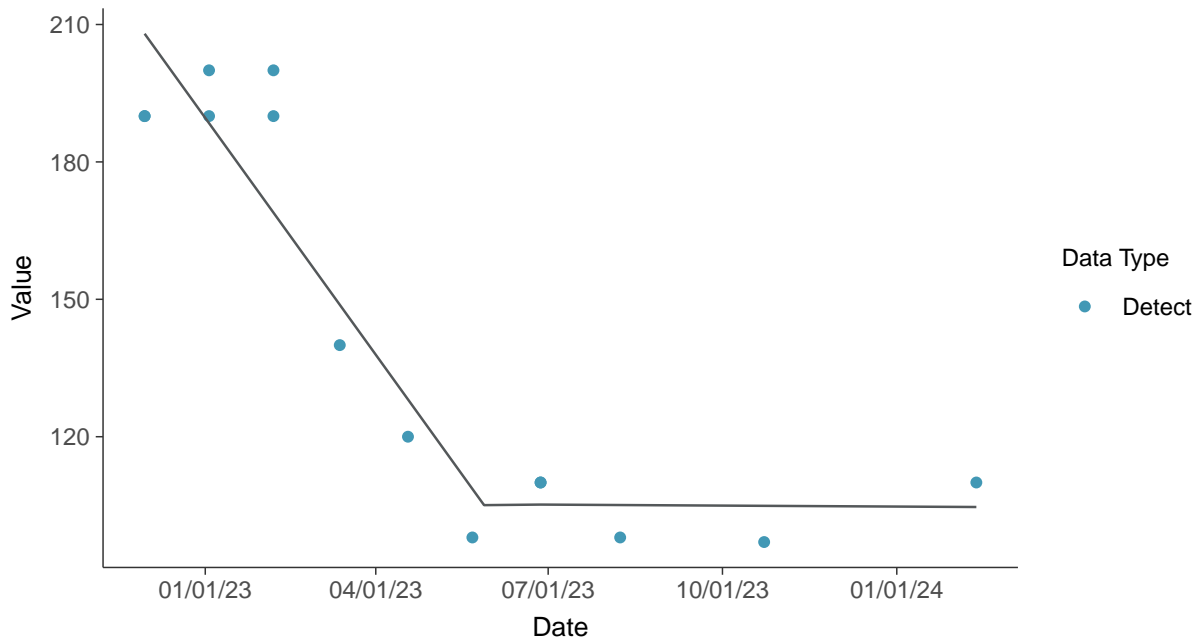
Chloride (as Cl), MW-30 (mg/L)





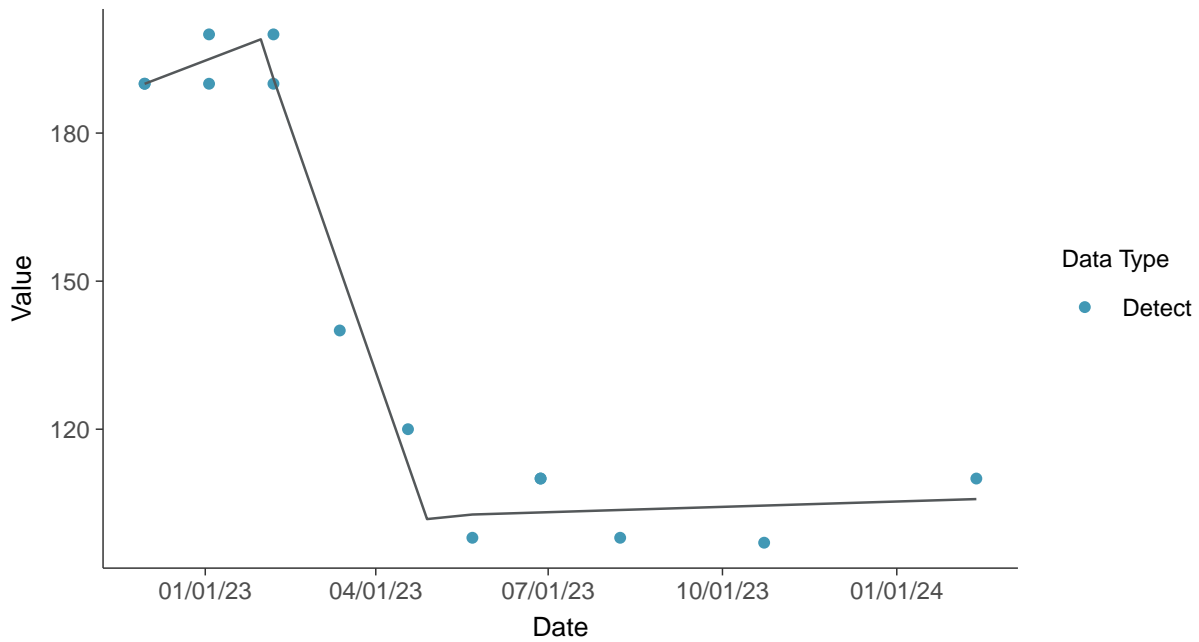
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-30 (mg/L)



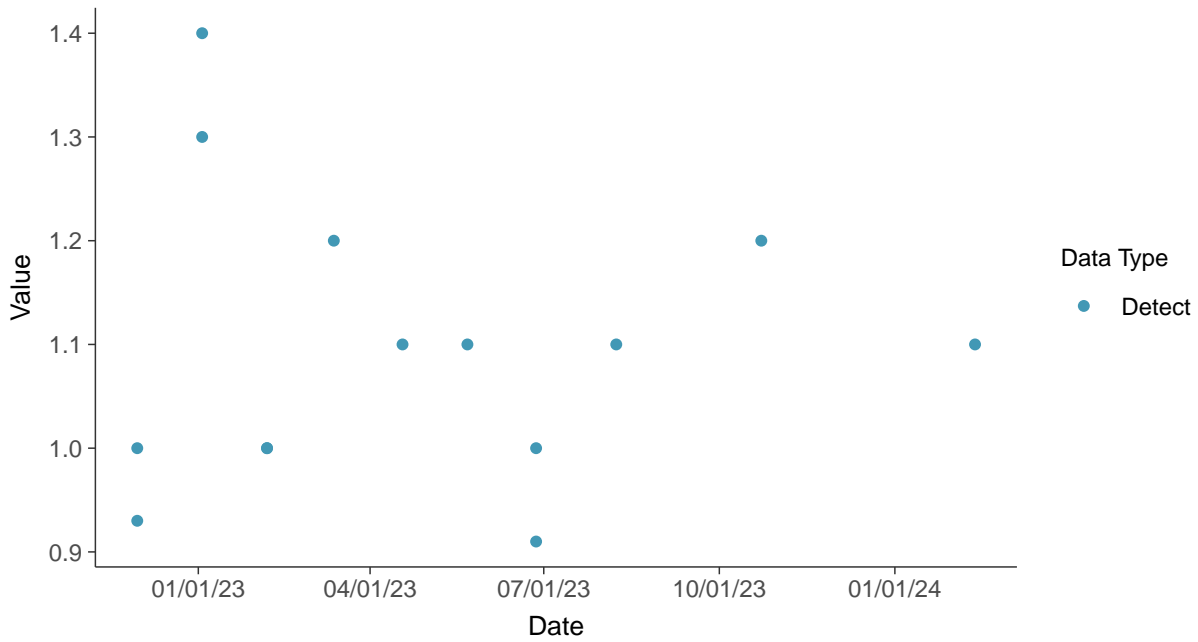


Appendix III: Fluoride, MW-30

ID: 1_40_4_112

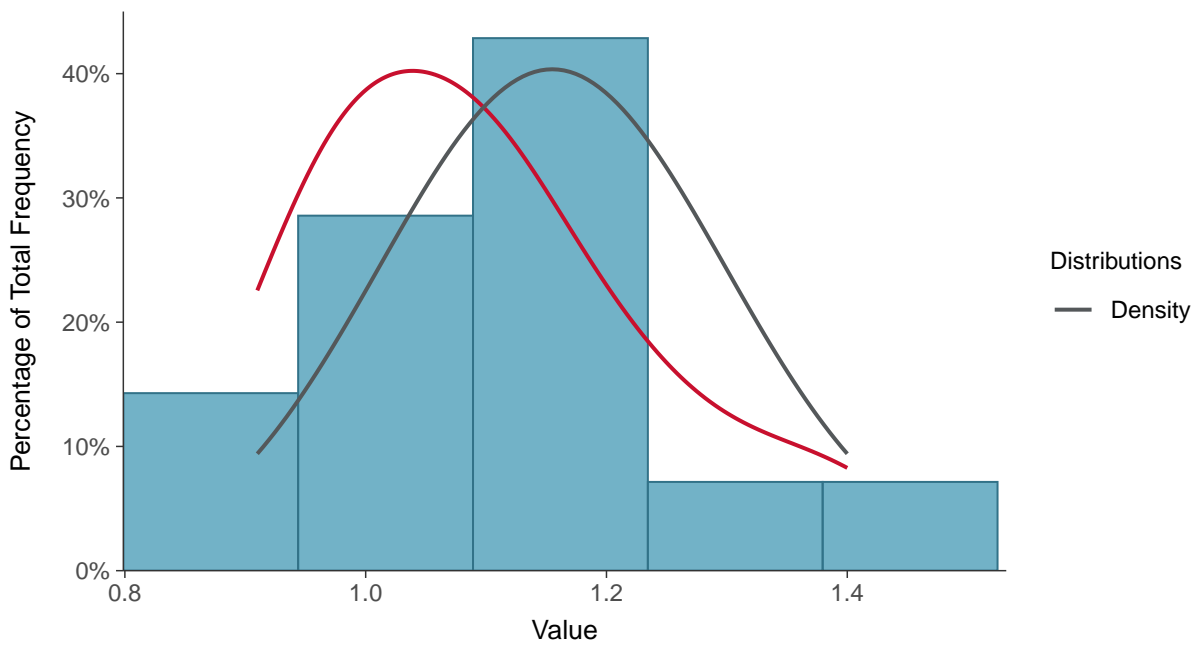
Scatter Plot

Fluoride, MW-30 (mg/L)



Histogram

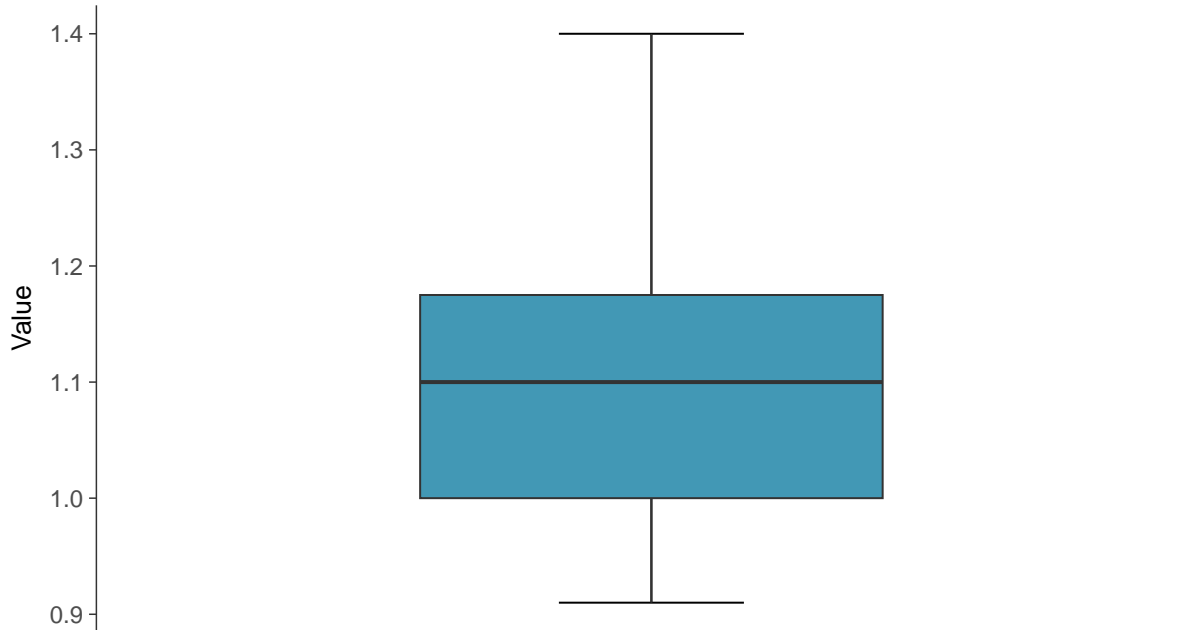
Fluoride, MW-30 (mg/L)





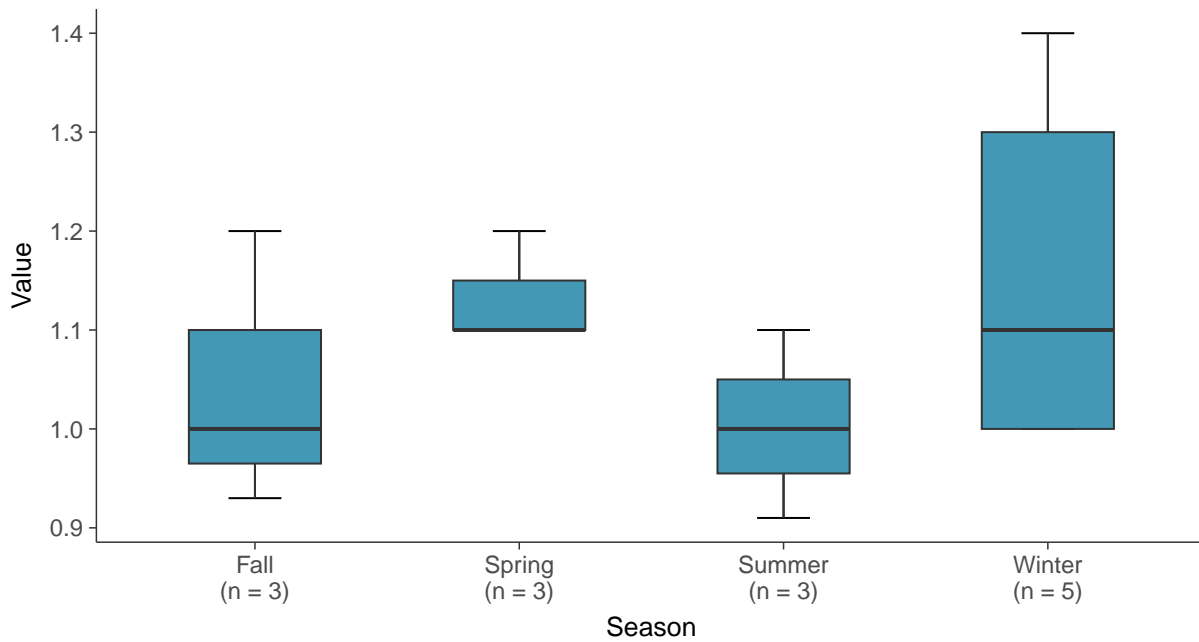
Boxplot

Fluoride, MW-30 (mg/L)



Boxplot by Season

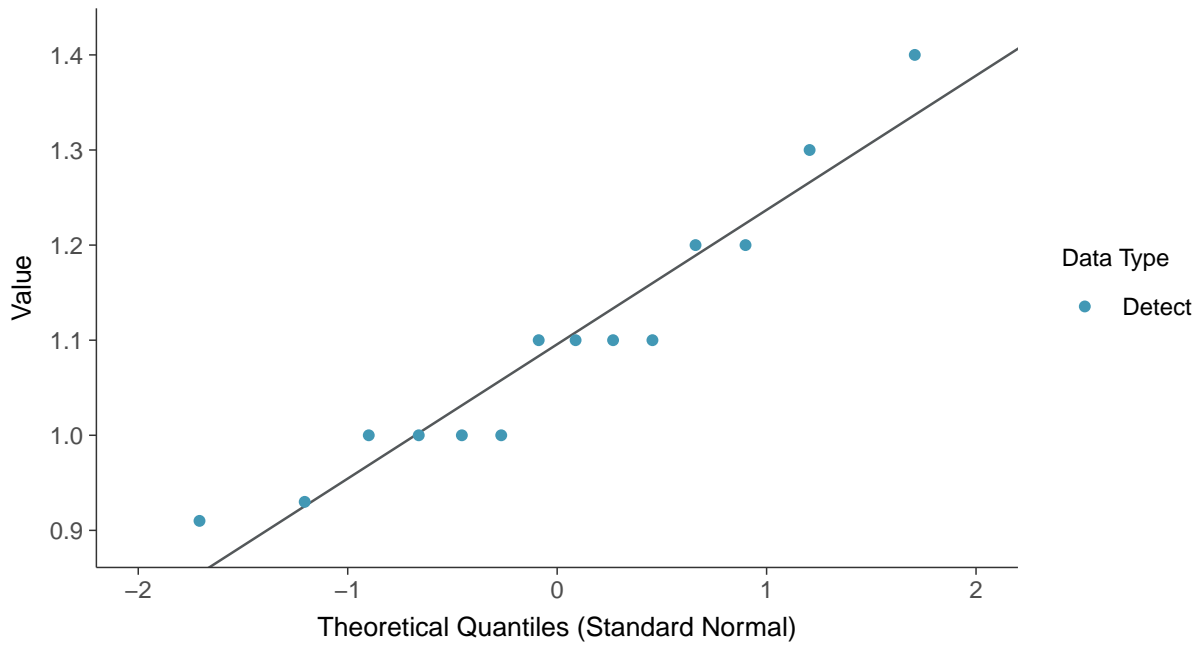
Fluoride, MW-30 (mg/L)





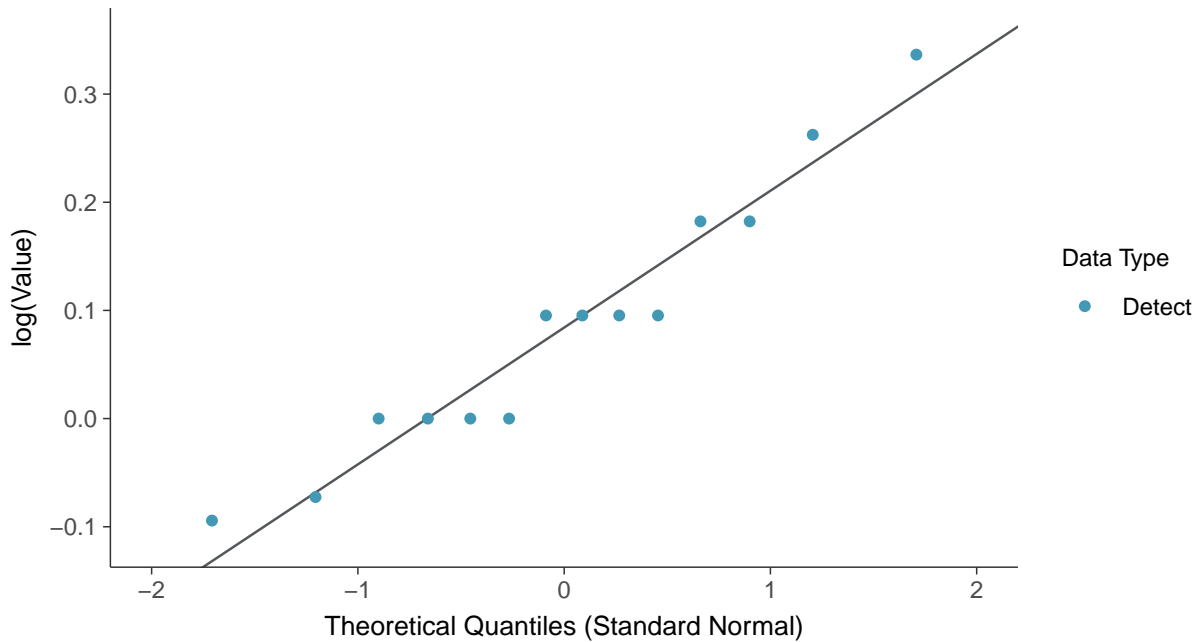
Normal Q-Q plot

Fluoride, MW-30 (mg/L)



Lognormal Q-Q plot

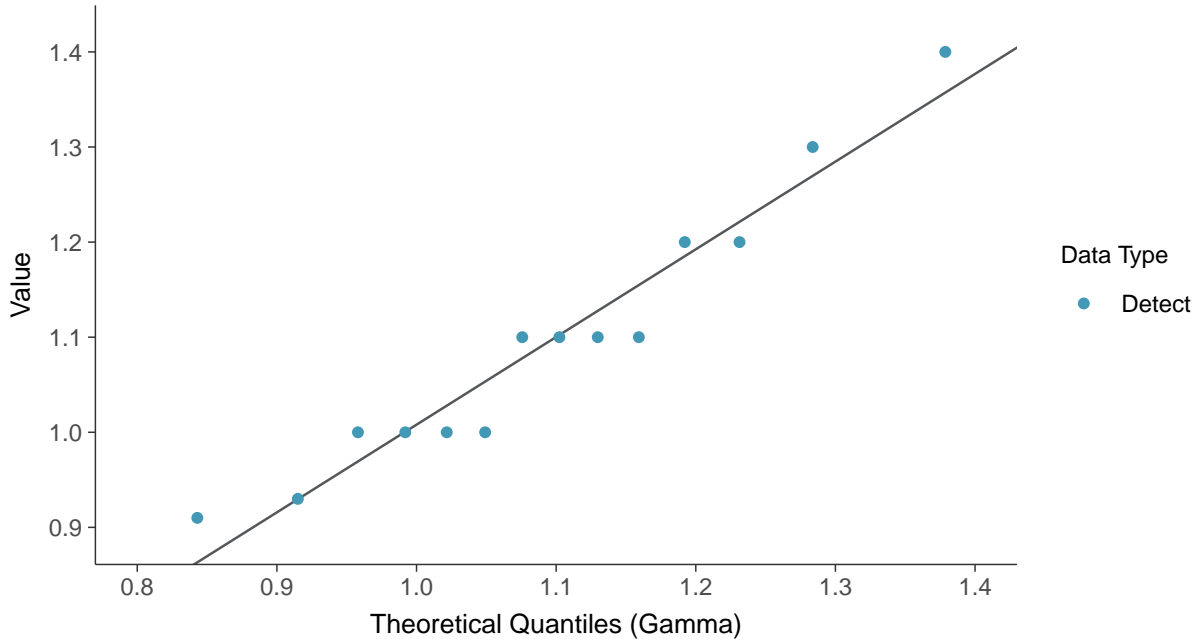
Fluoride, MW-30 (mg/L)





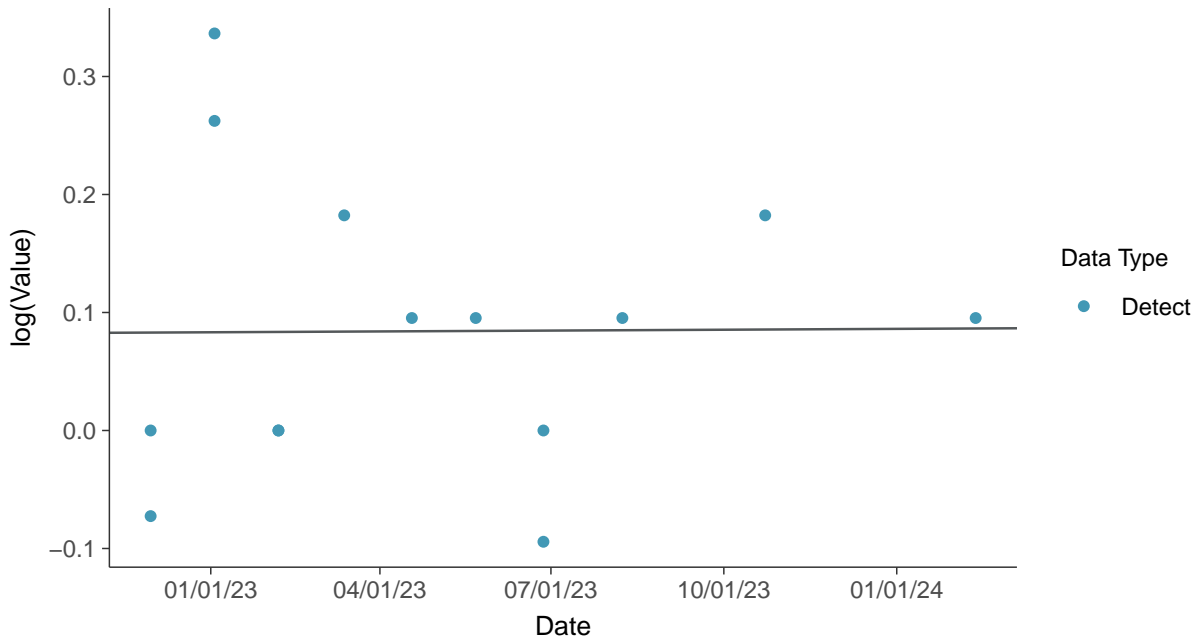
Gamma Q-Q plot

Fluoride, MW-30 (mg/L)



Trend Regression: Lognormal MLE

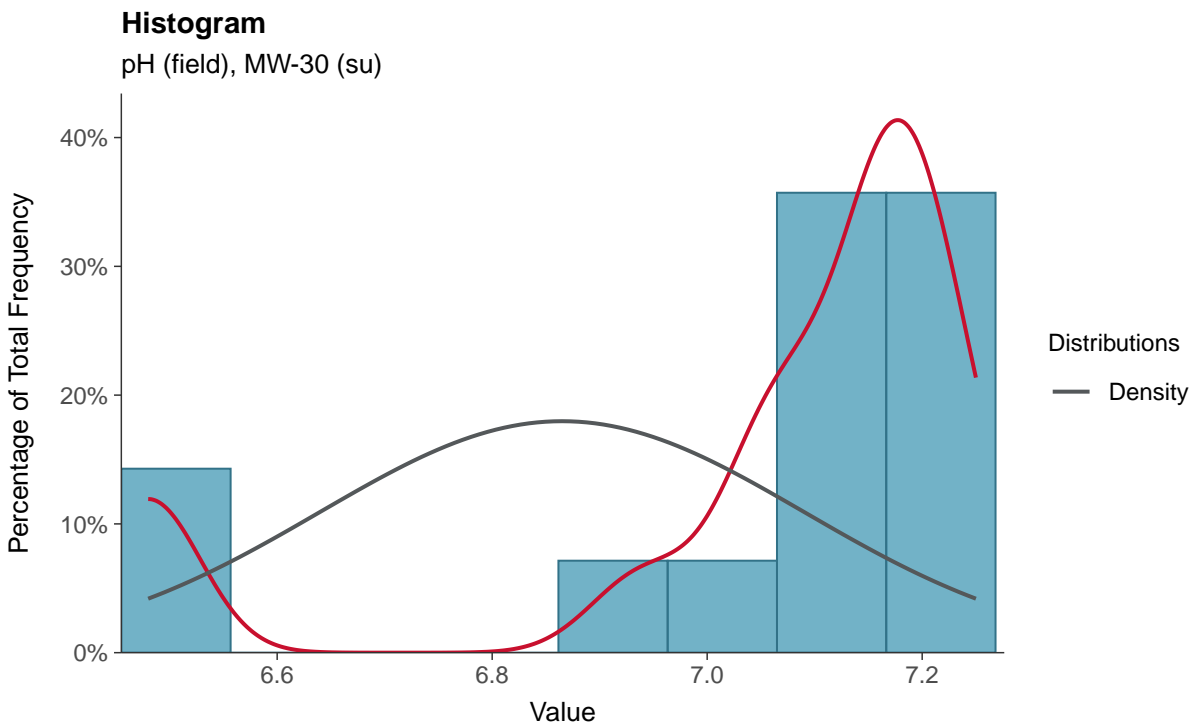
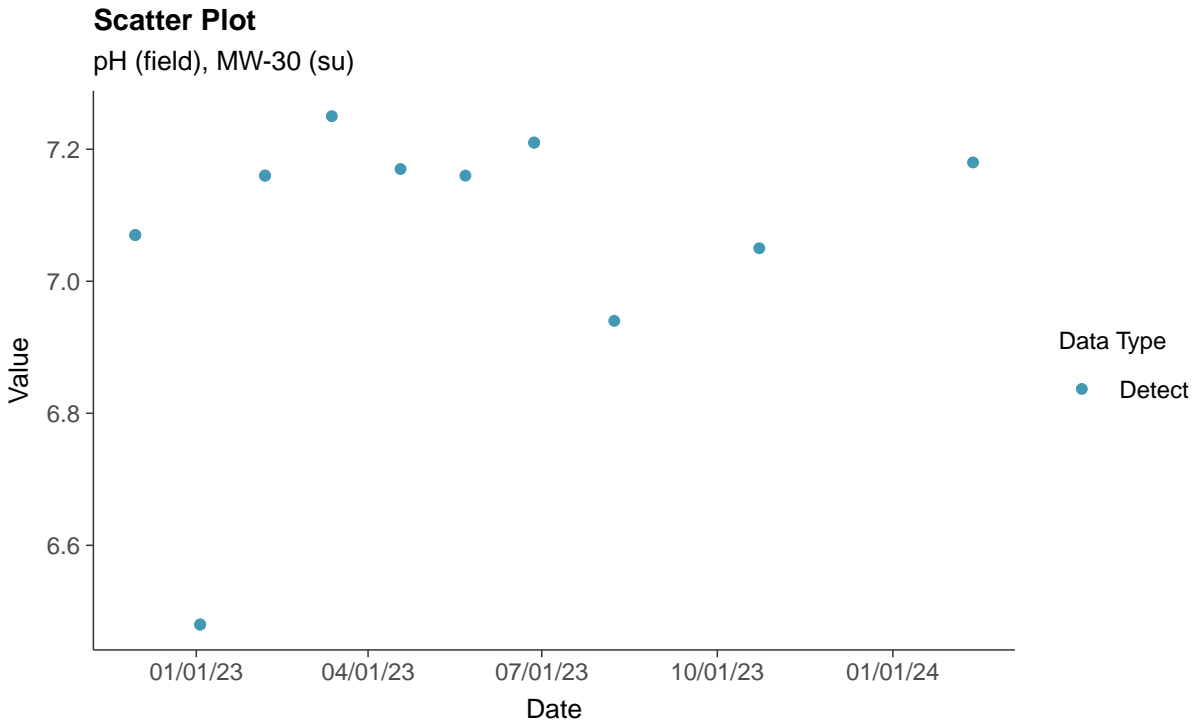
Fluoride, MW-30 (mg/L)





Appendix III: pH (field), MW-30

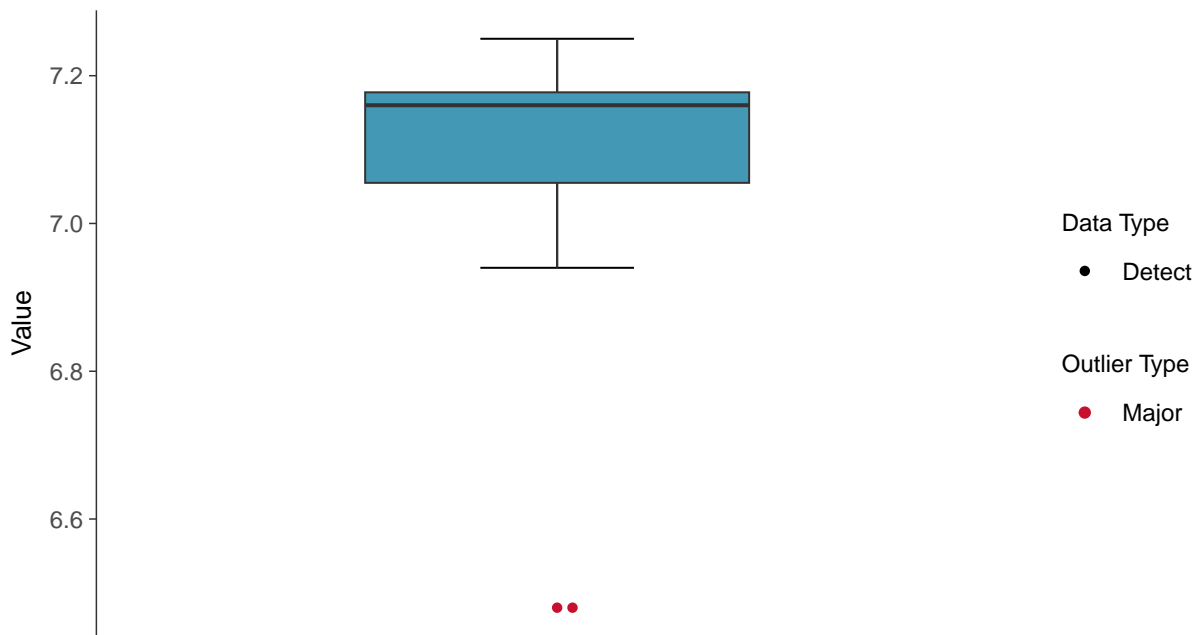
ID: 1_40_4_120





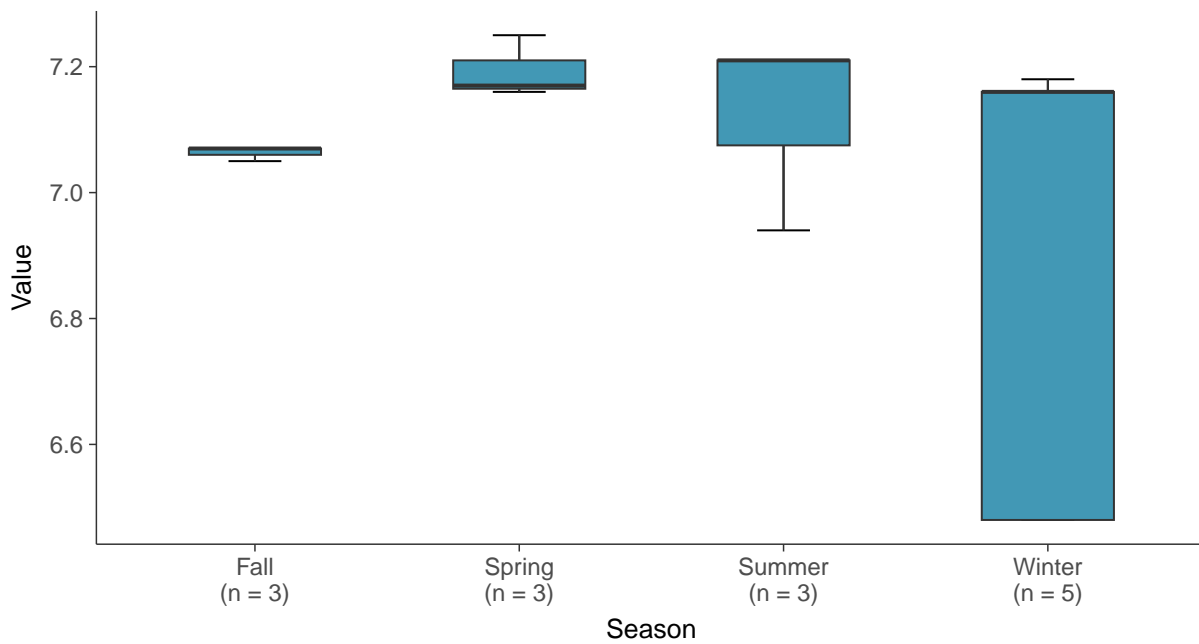
Boxplot

pH (field), MW-30 (su)



Boxplot by Season

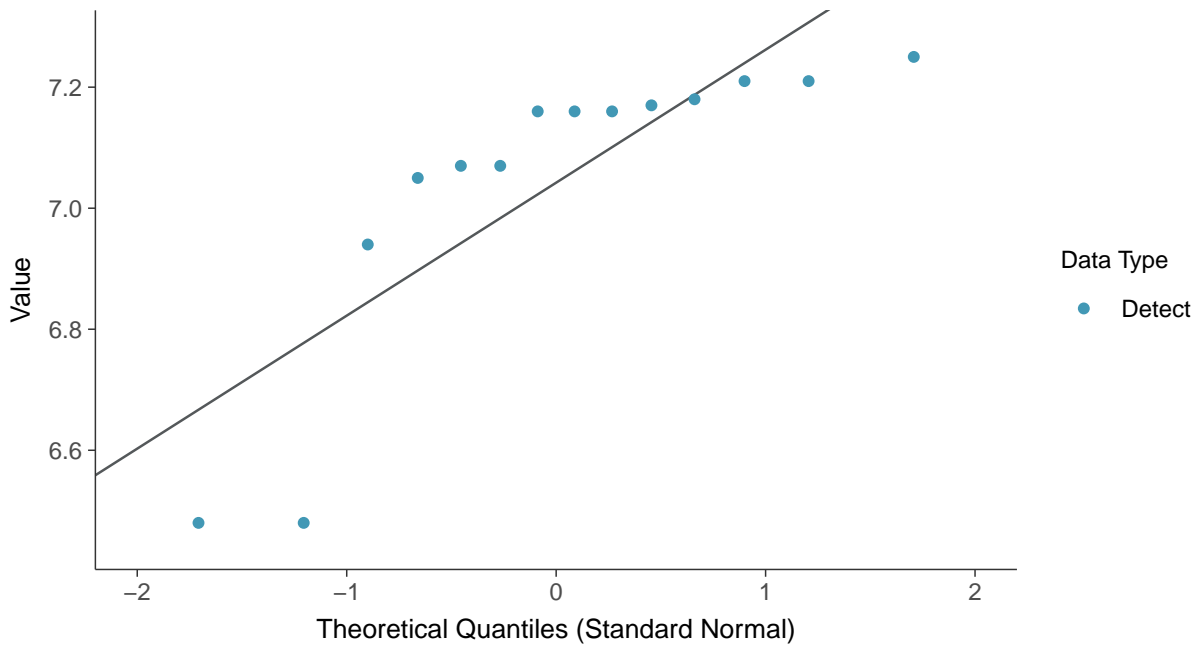
pH (field), MW-30 (su)





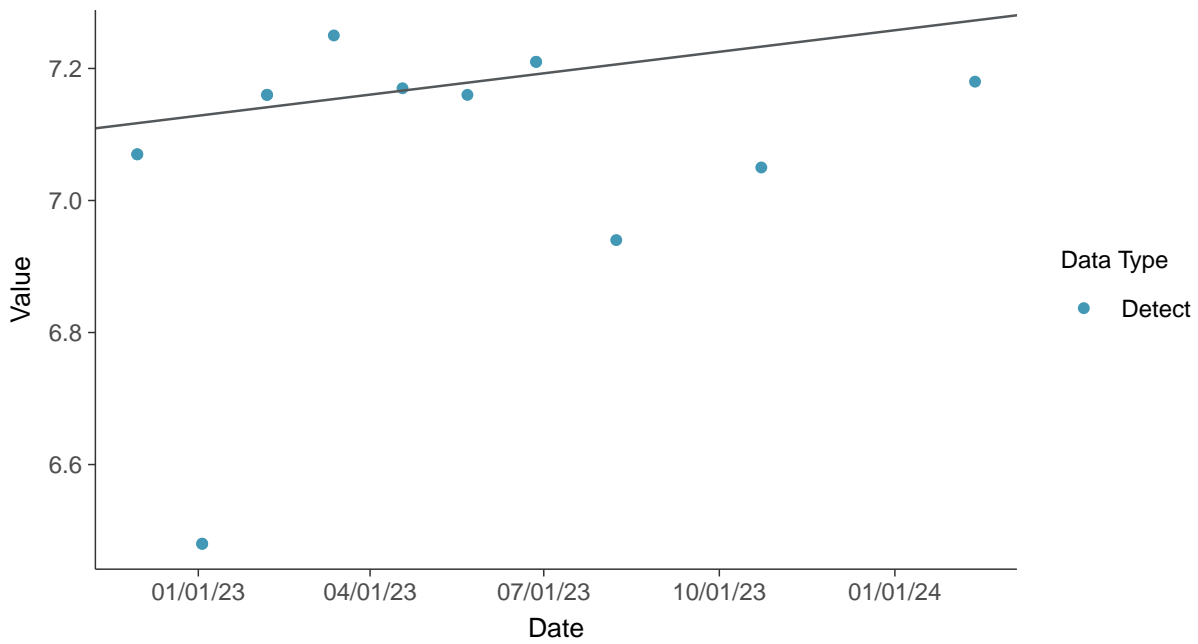
Normal Q-Q plot

pH (field), MW-30 (su)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

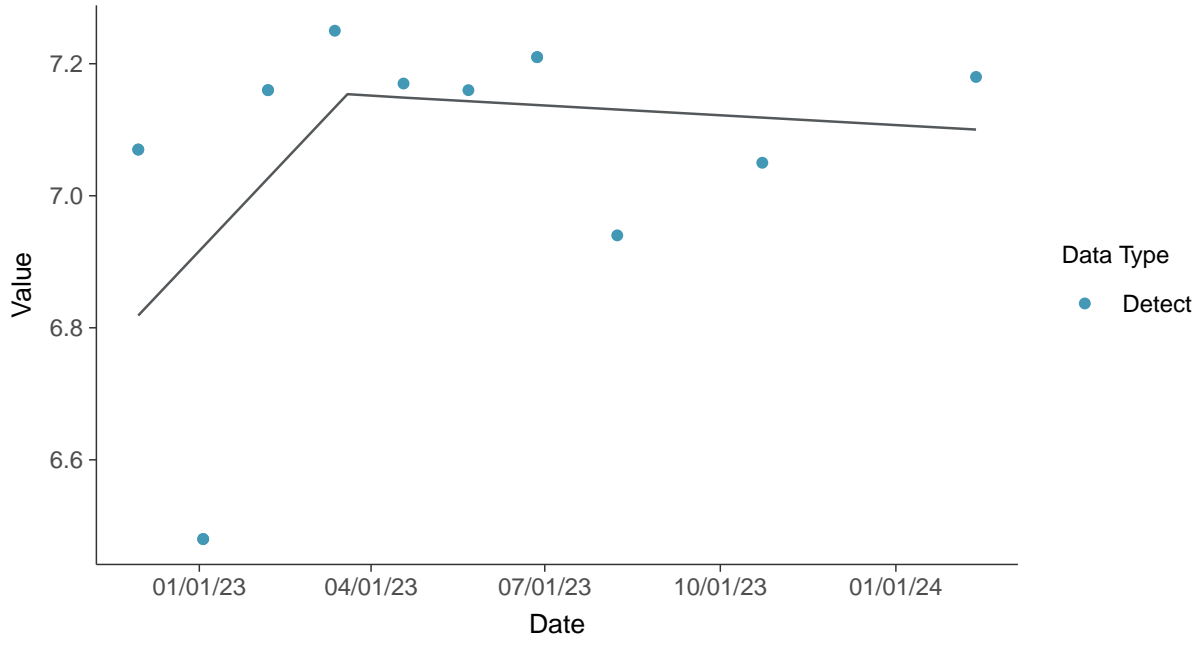
pH (field), MW-30 (su)





Trend Regression: Piecewise Linear-Linear

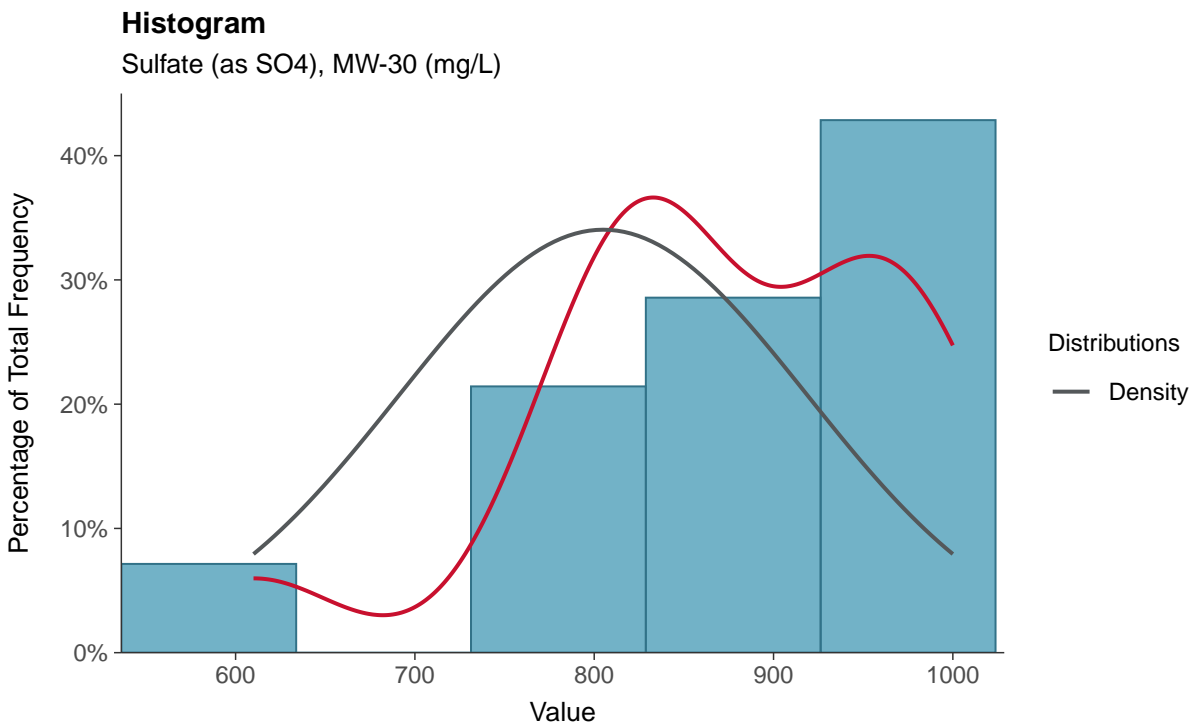
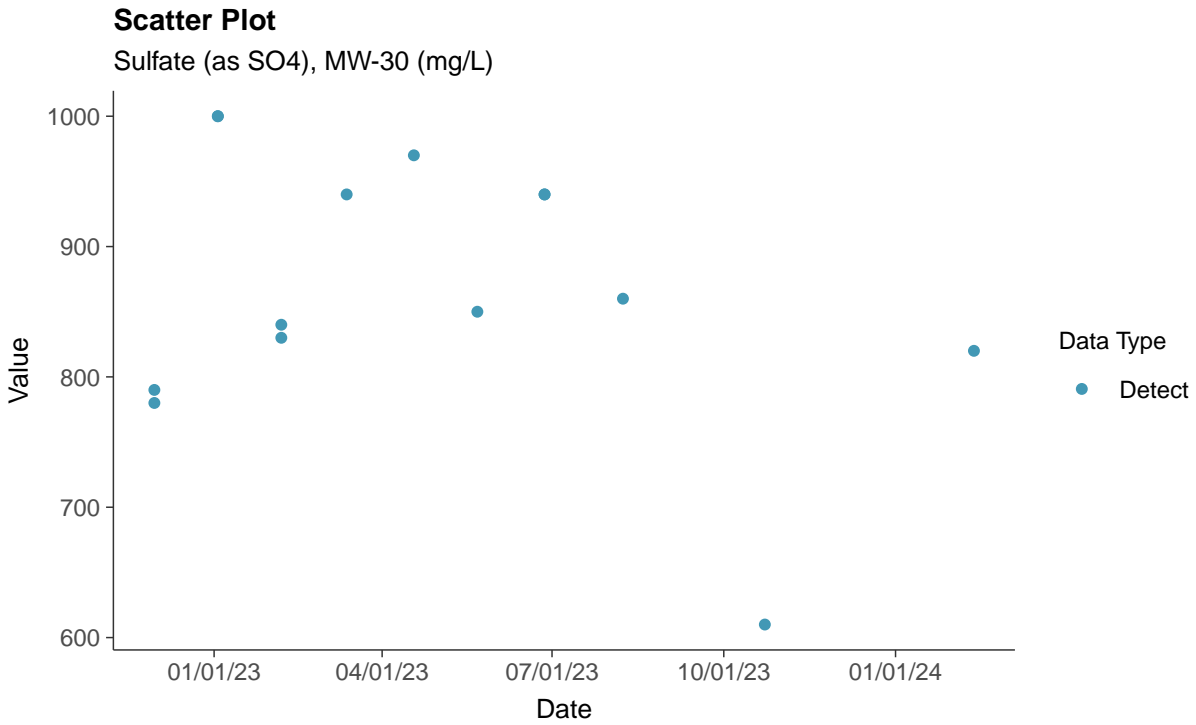
pH (field), MW-30 (su)





Appendix III: Sulfate (as SO₄), MW-30

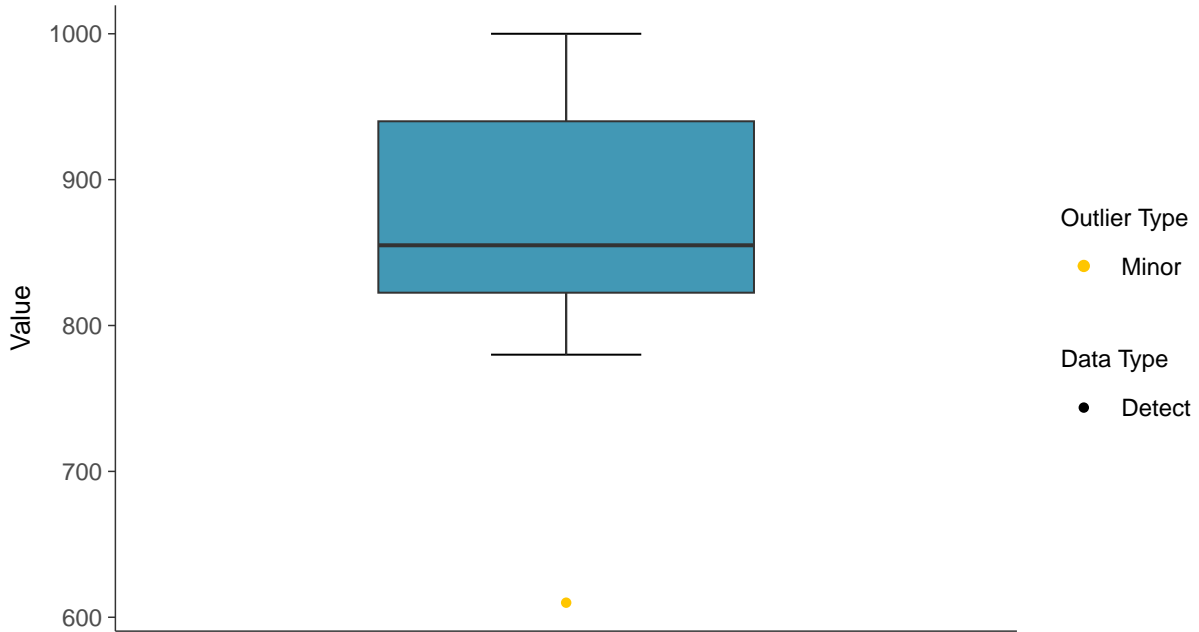
ID: 1_40_4_124





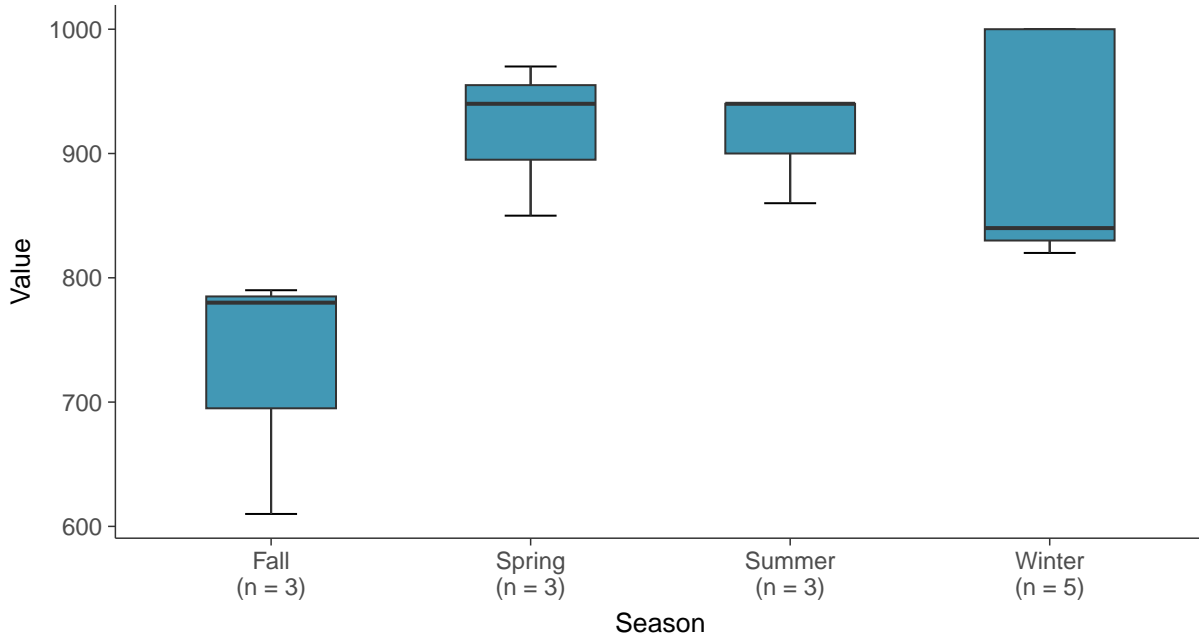
Boxplot

Sulfate (as SO₄), MW-30 (mg/L)



Boxplot by Season

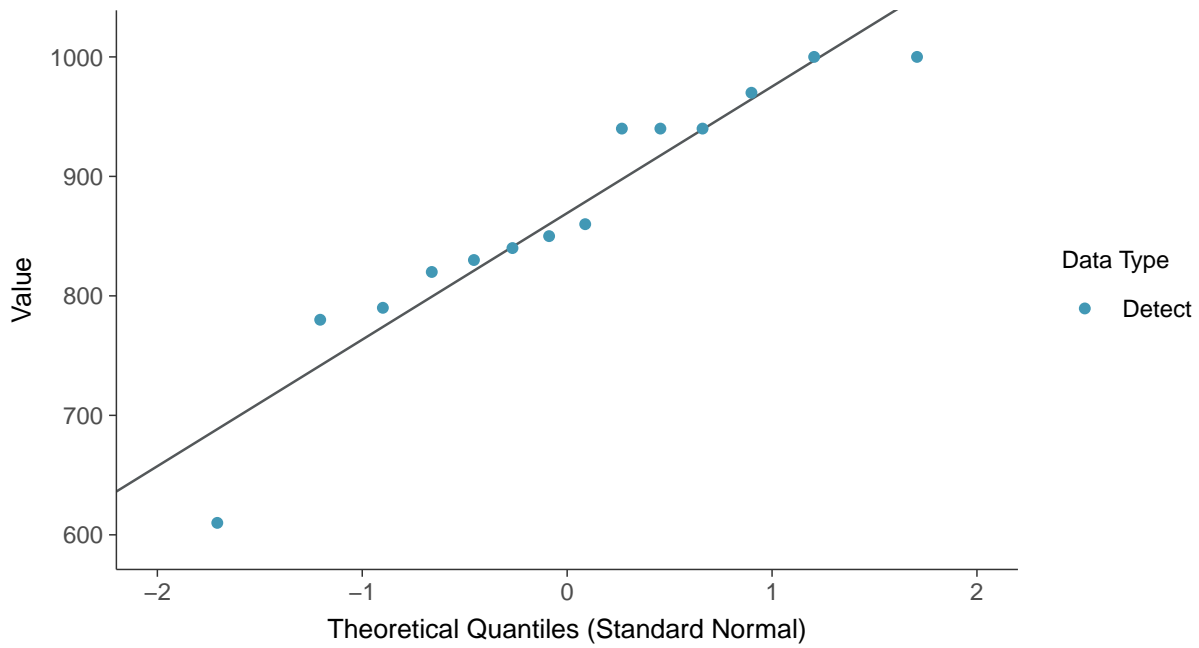
Sulfate (as SO₄), MW-30 (mg/L)





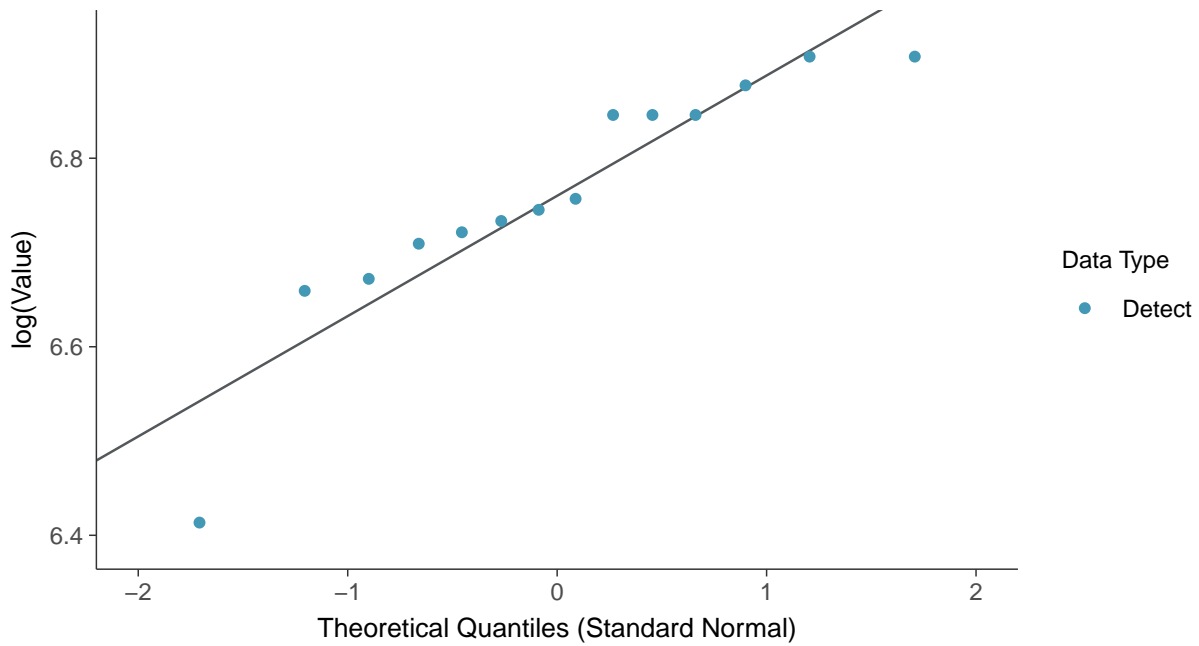
Normal Q-Q plot

Sulfate (as SO₄), MW-30 (mg/L)



Lognormal Q-Q plot

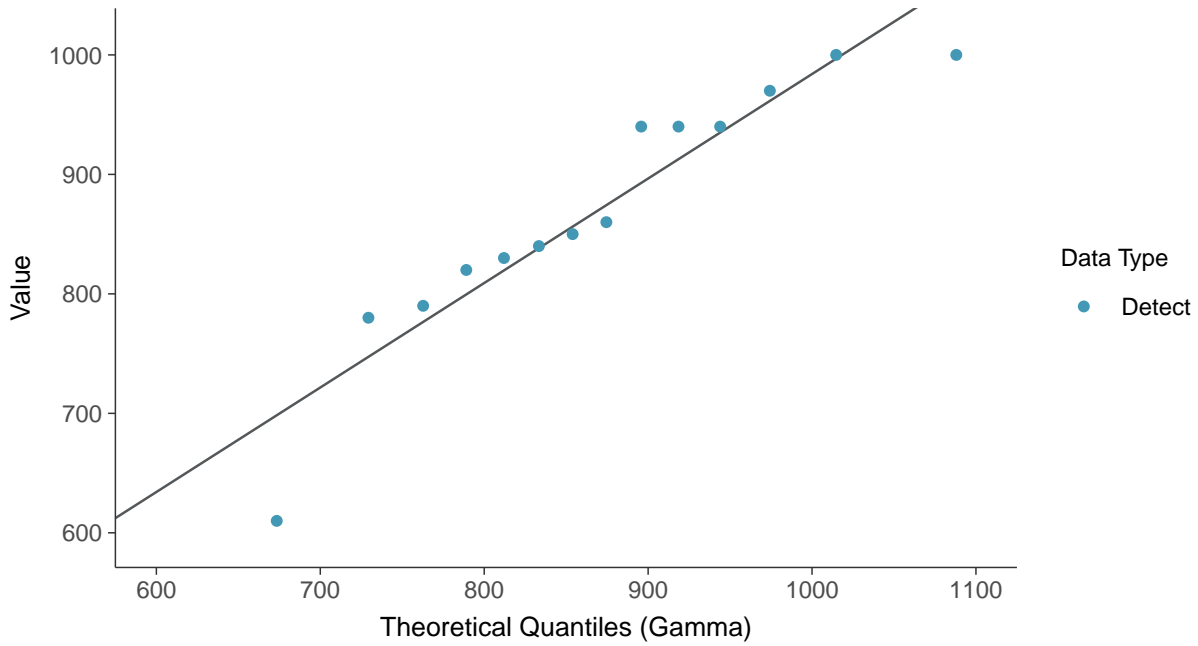
Sulfate (as SO₄), MW-30 (mg/L)





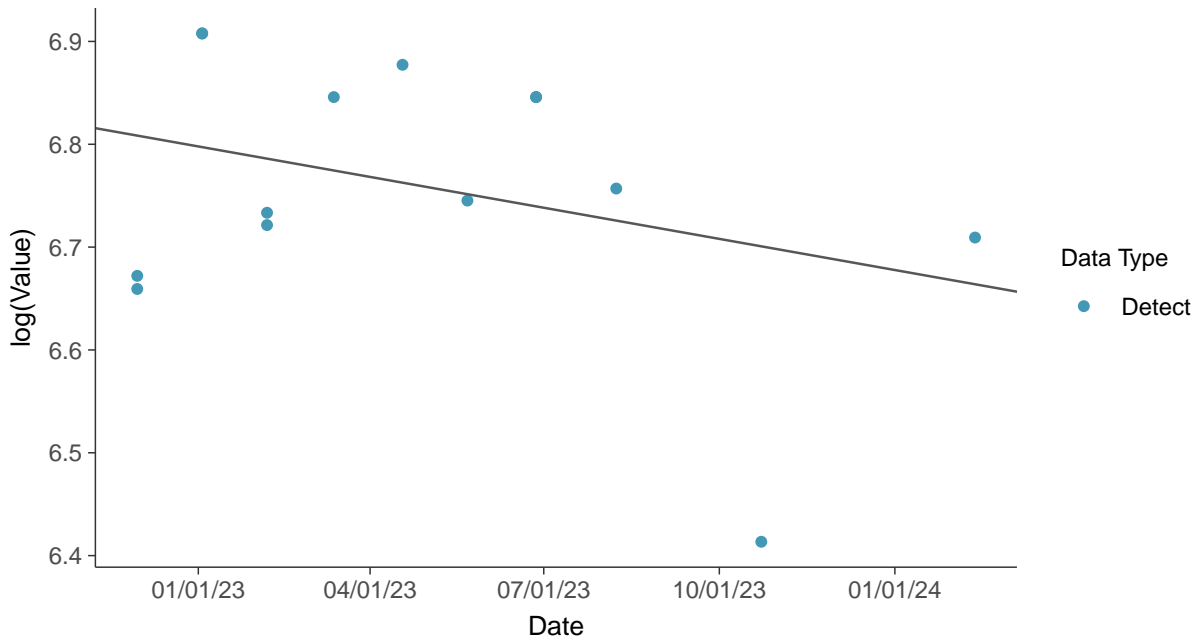
Gamma Q-Q plot

Sulfate (as SO₄), MW-30 (mg/L)



Trend Regression: Lognormal MLE

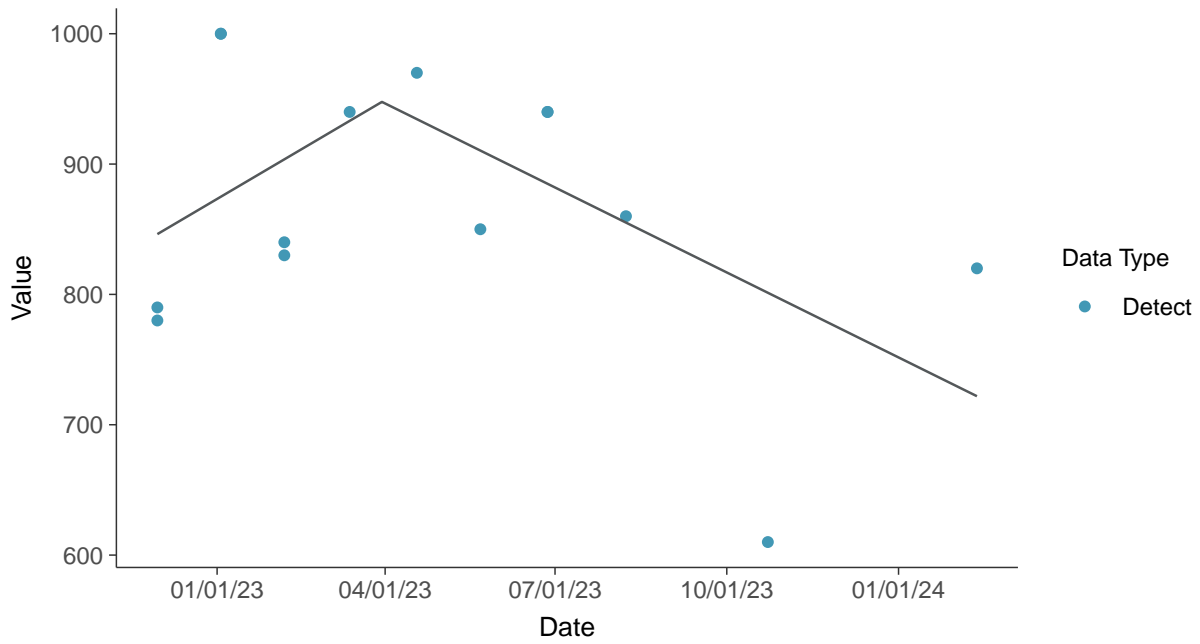
Sulfate (as SO₄), MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-30 (mg/L)



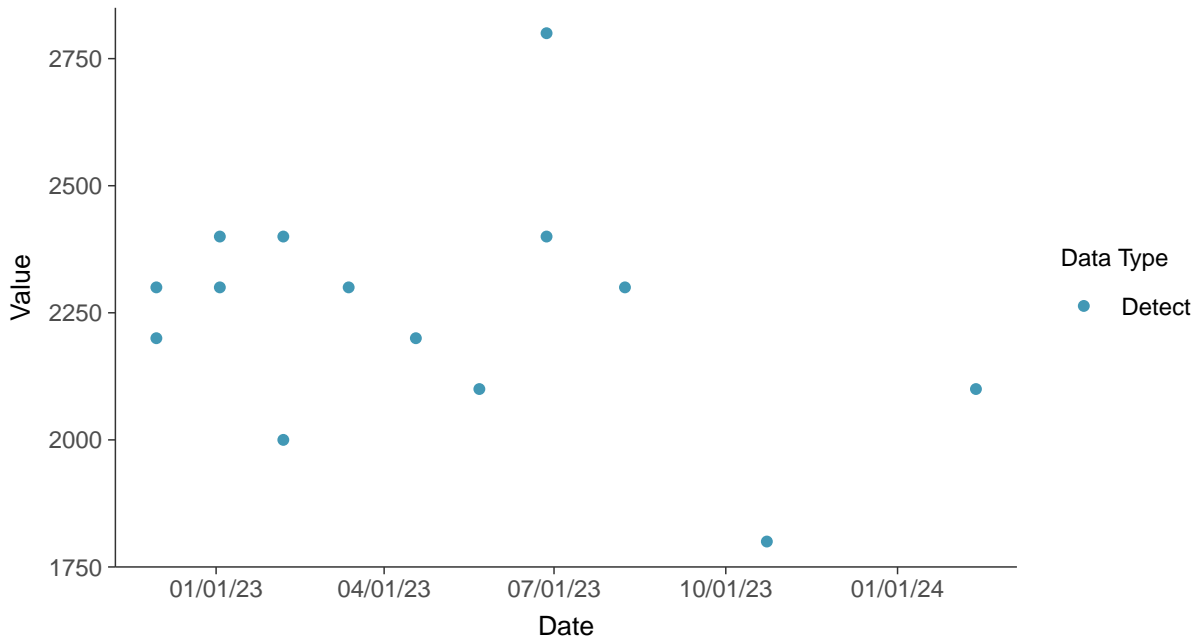


Appendix III: Total Dissolved Solids, MW-30

ID: 1_40_4_126

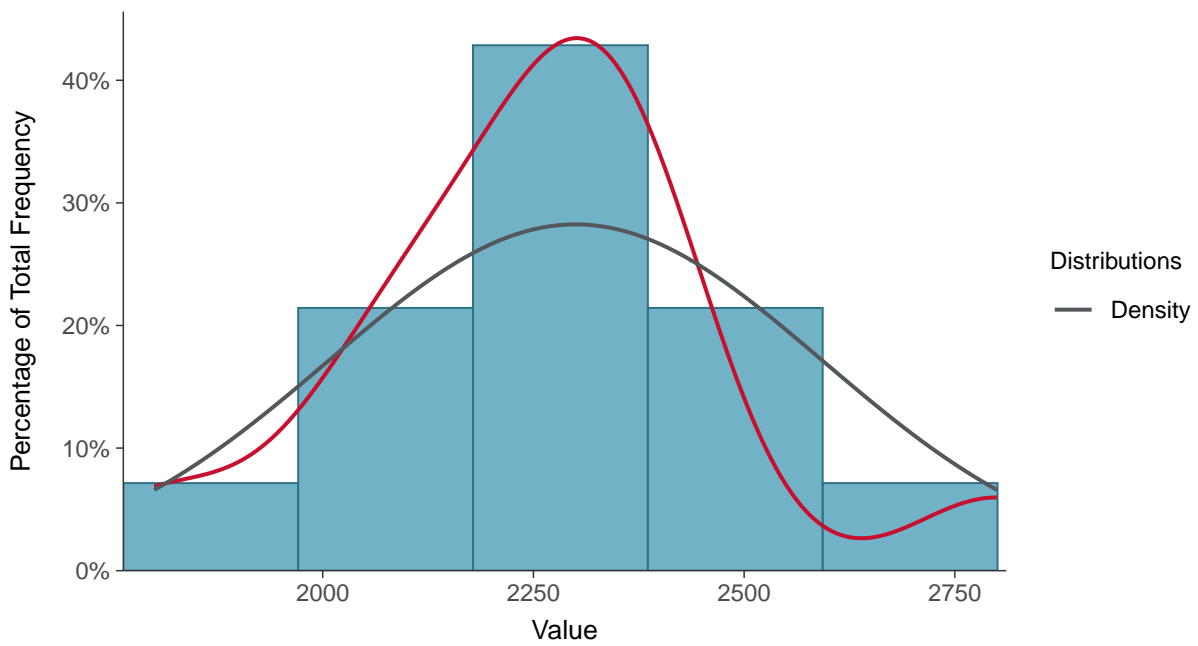
Scatter Plot

Total Dissolved Solids, MW-30 (mg/L)



Histogram

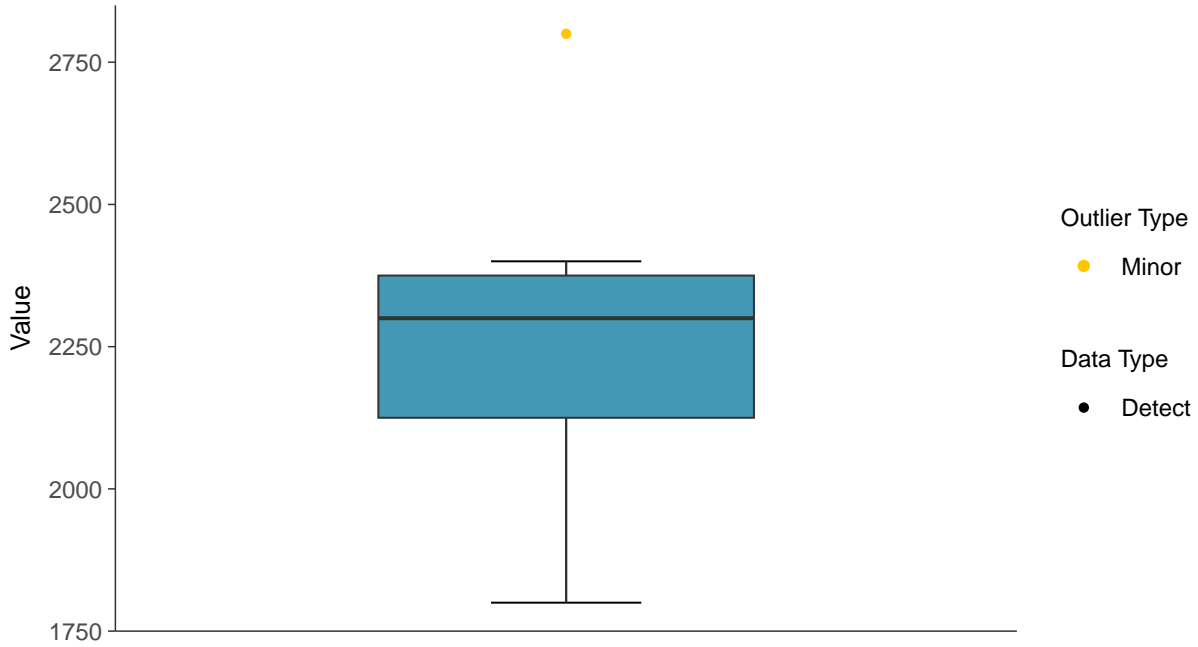
Total Dissolved Solids, MW-30 (mg/L)





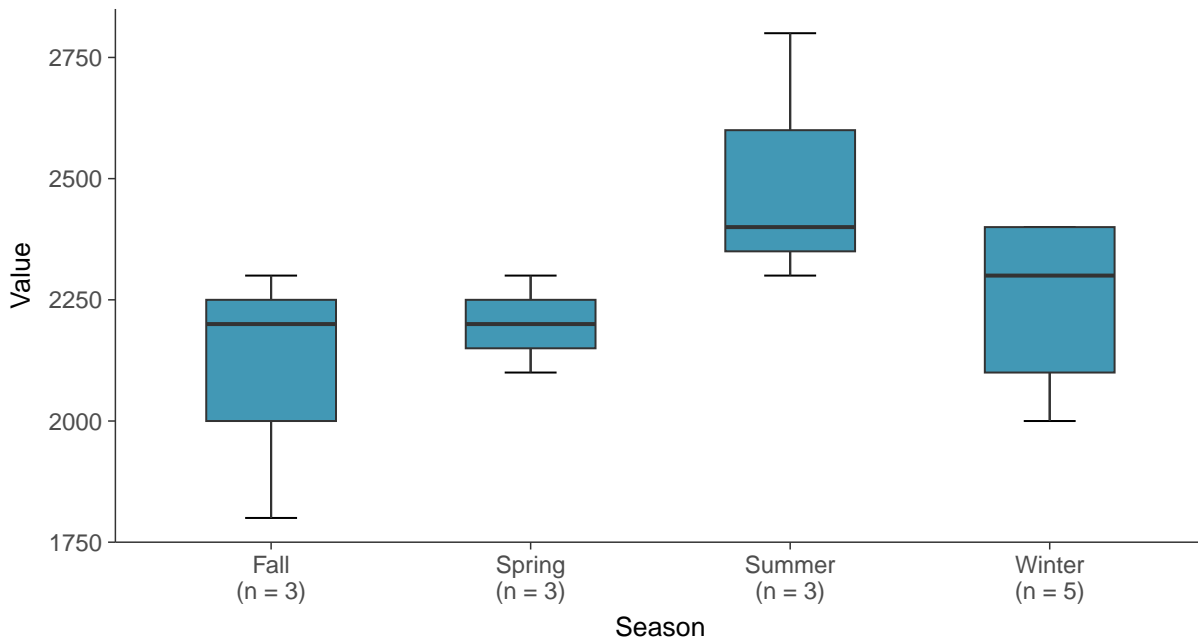
Boxplot

Total Dissolved Solids, MW-30 (mg/L)



Boxplot by Season

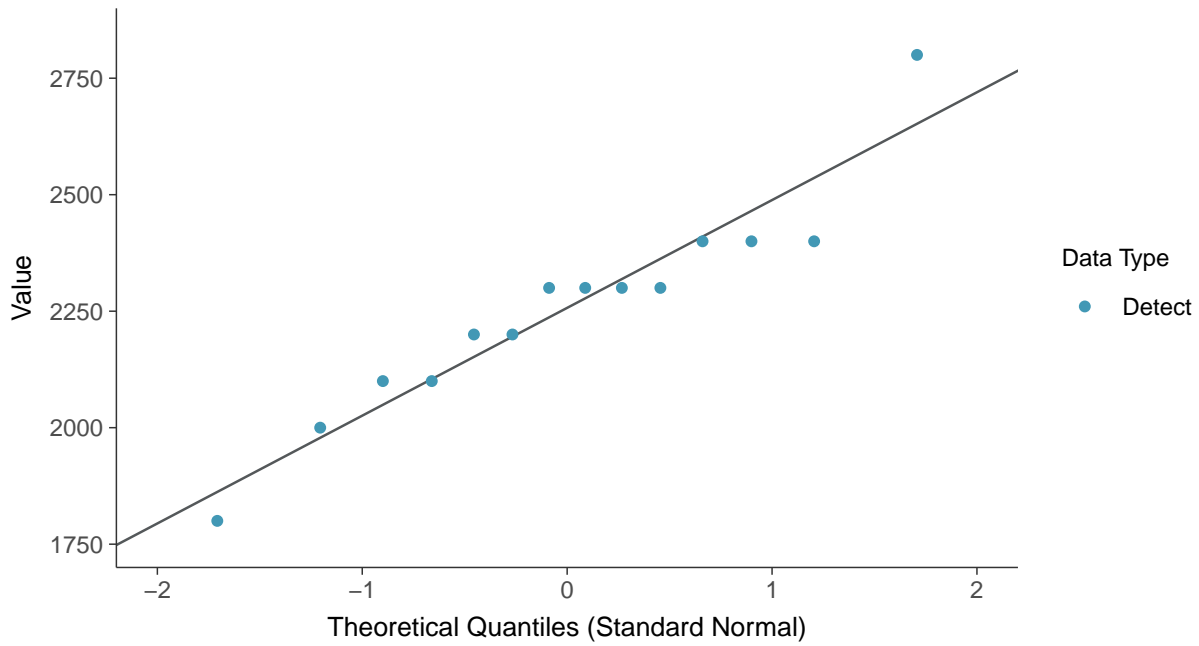
Total Dissolved Solids, MW-30 (mg/L)





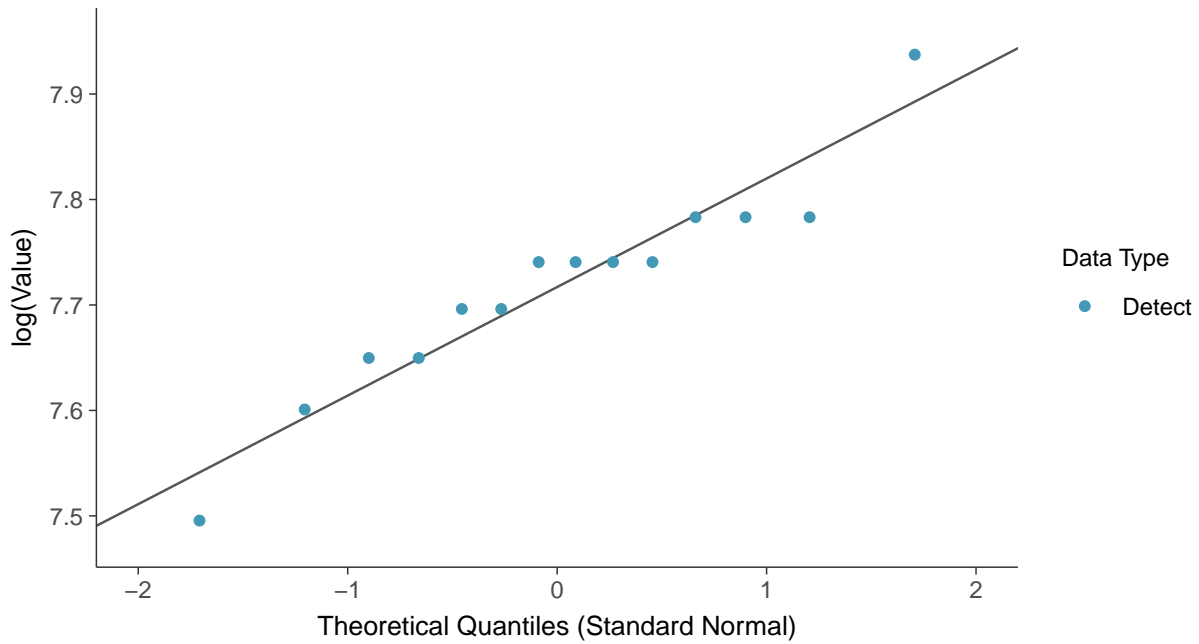
Normal Q-Q plot

Total Dissolved Solids, MW-30 (mg/L)



Lognormal Q-Q plot

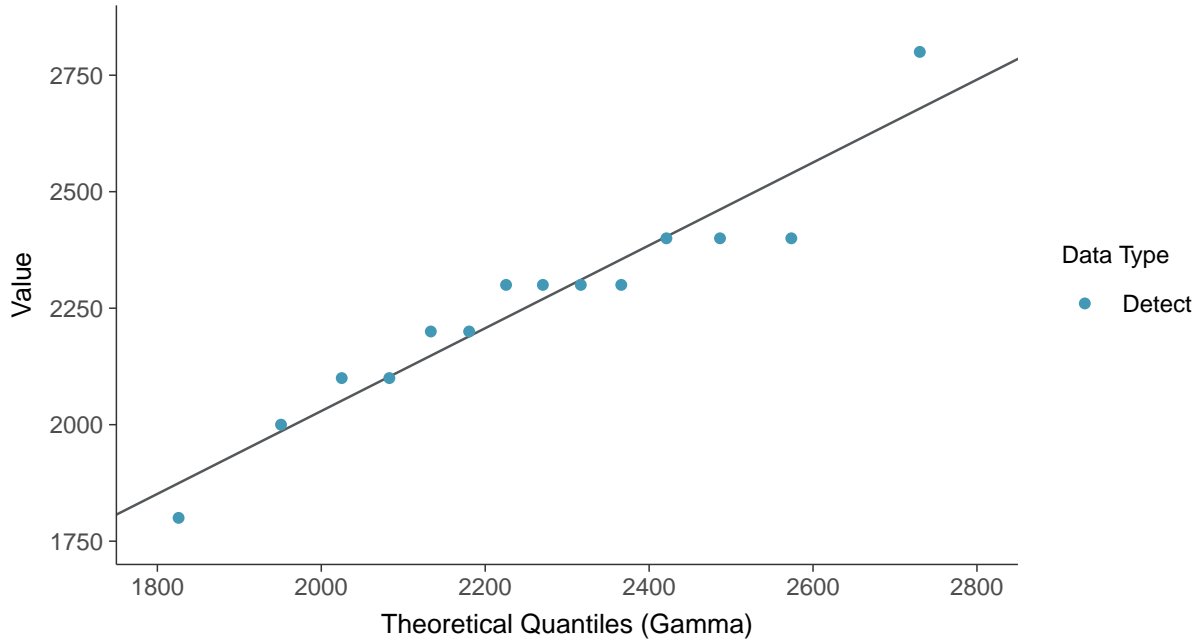
Total Dissolved Solids, MW-30 (mg/L)





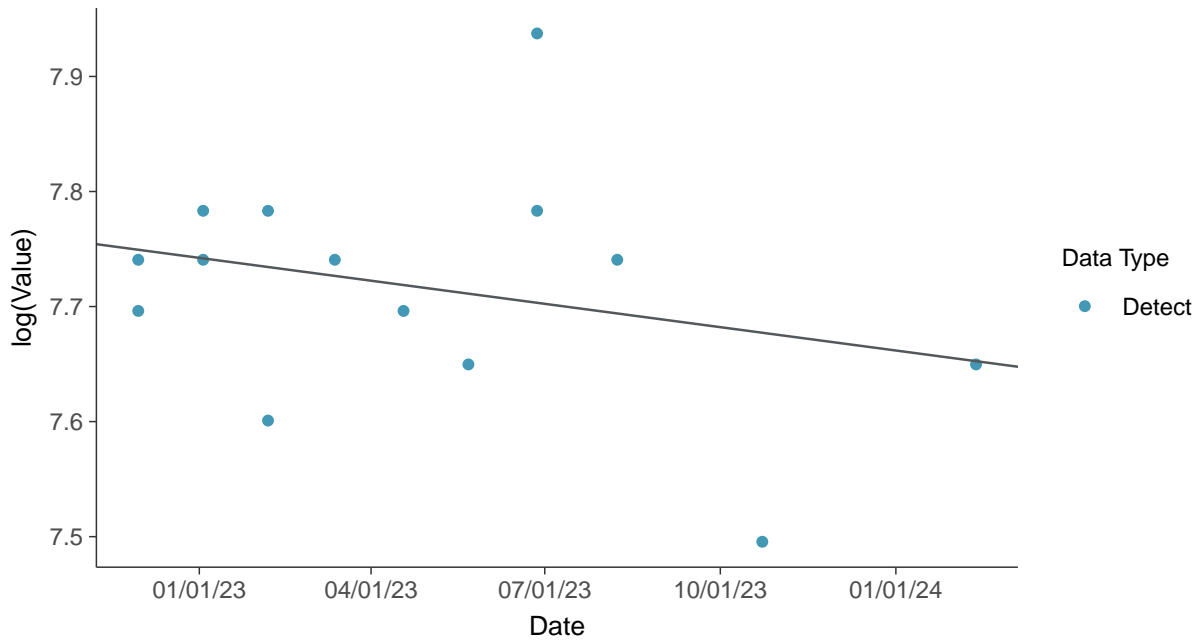
Gamma Q-Q plot

Total Dissolved Solids, MW-30 (mg/L)



Trend Regression: Lognormal MLE

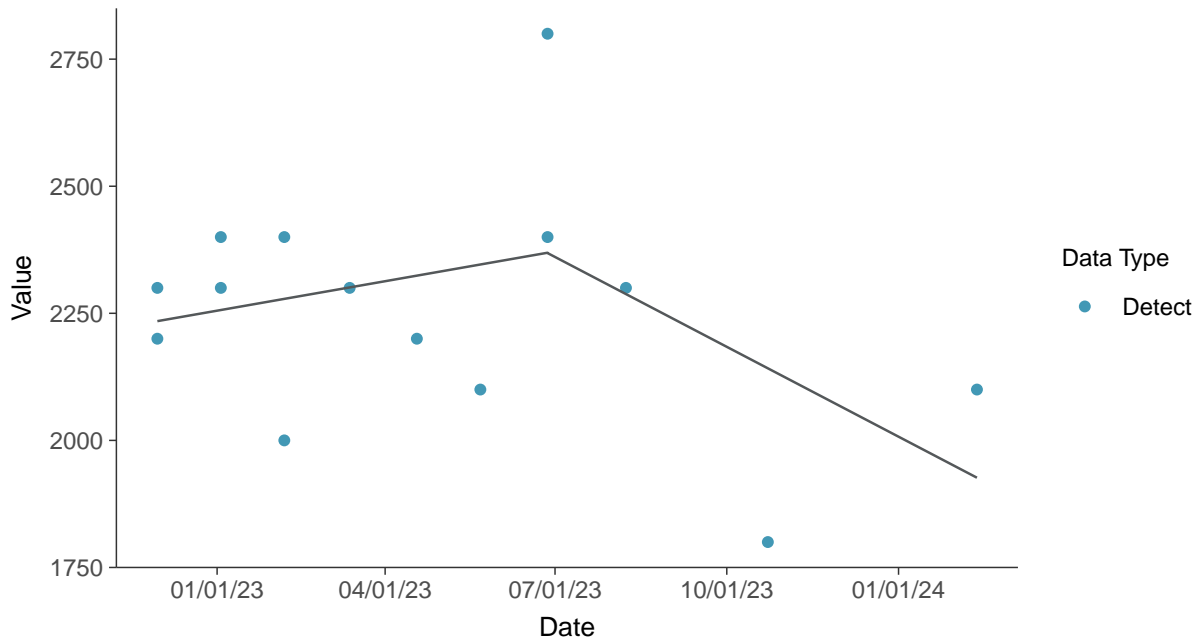
Total Dissolved Solids, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-30 (mg/L)



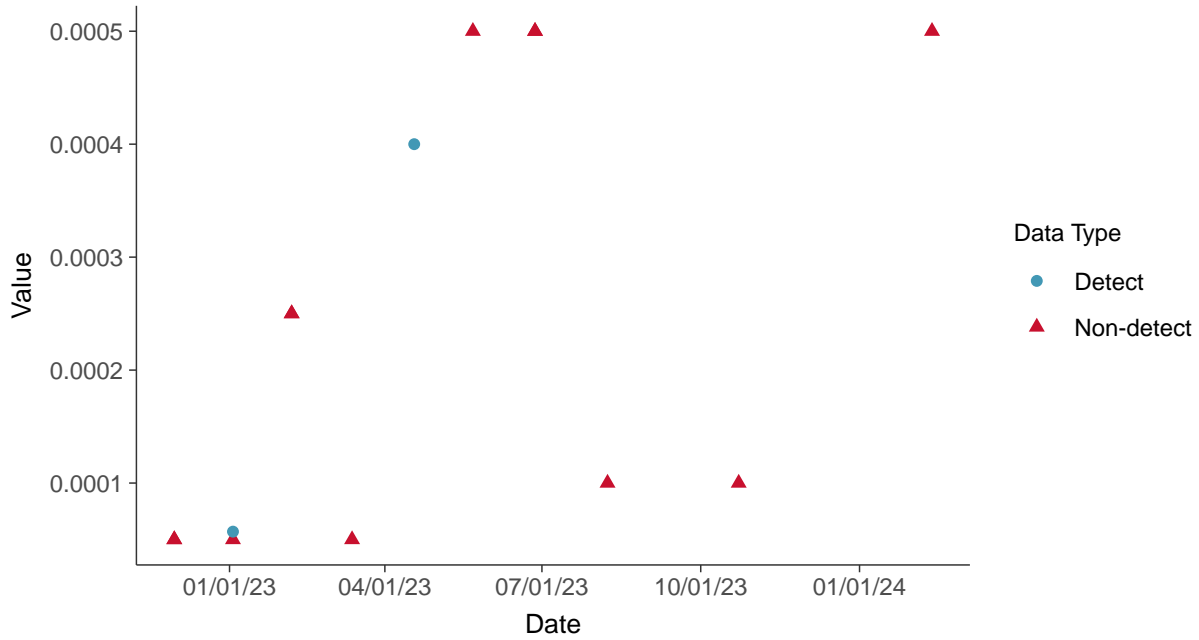


Appendix IV: Antimony, MW-30

ID: 1_40_5_101

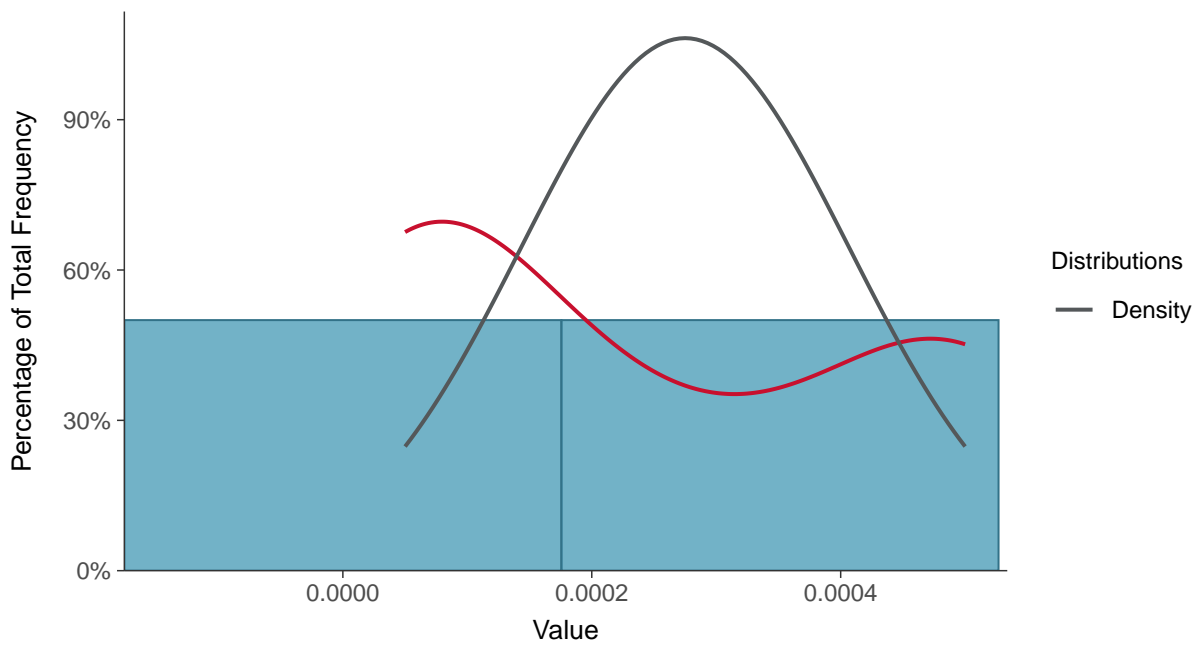
Scatter Plot

Antimony, MW-30 (mg/L)



Histogram

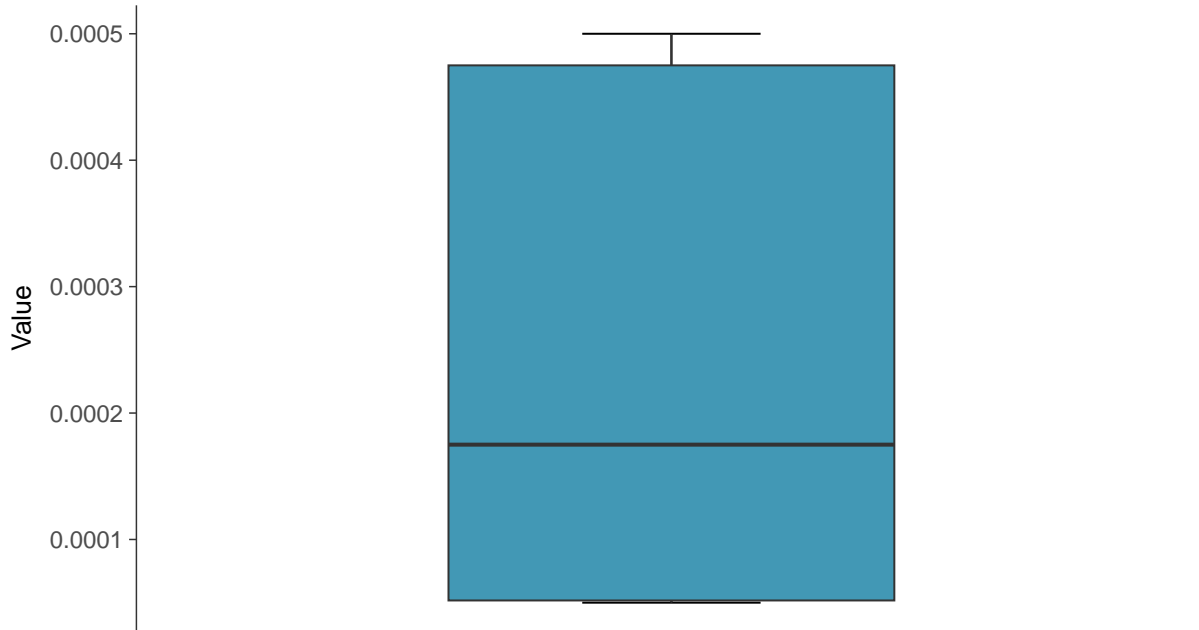
Antimony, MW-30 (mg/L)





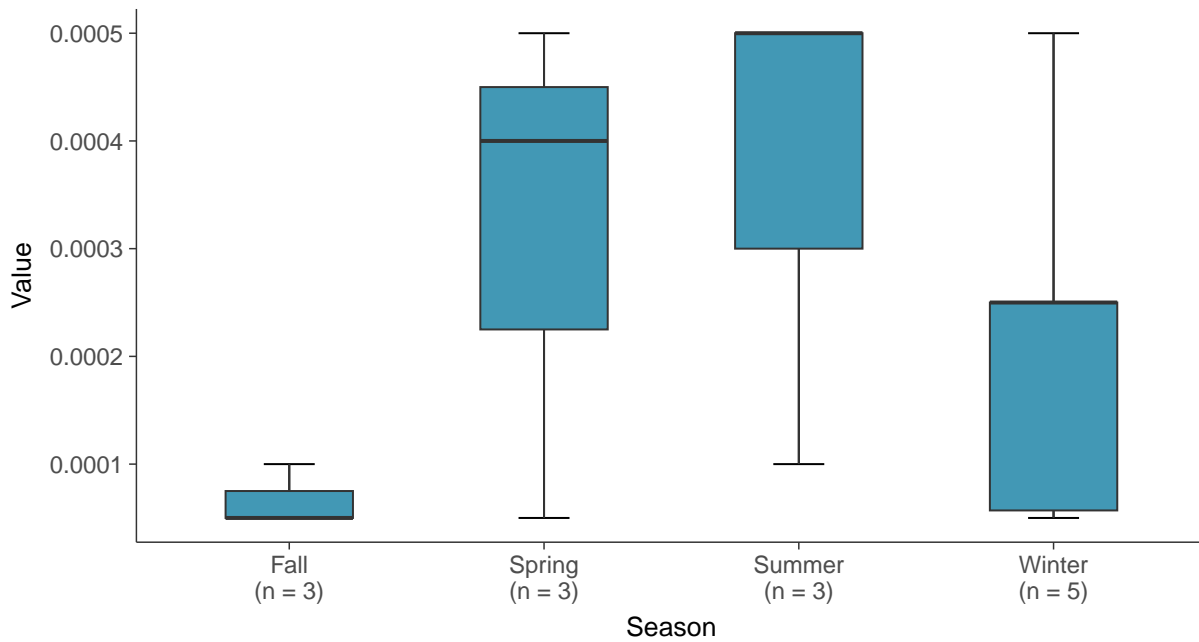
Boxplot

Antimony, MW-30 (mg/L)



Boxplot by Season

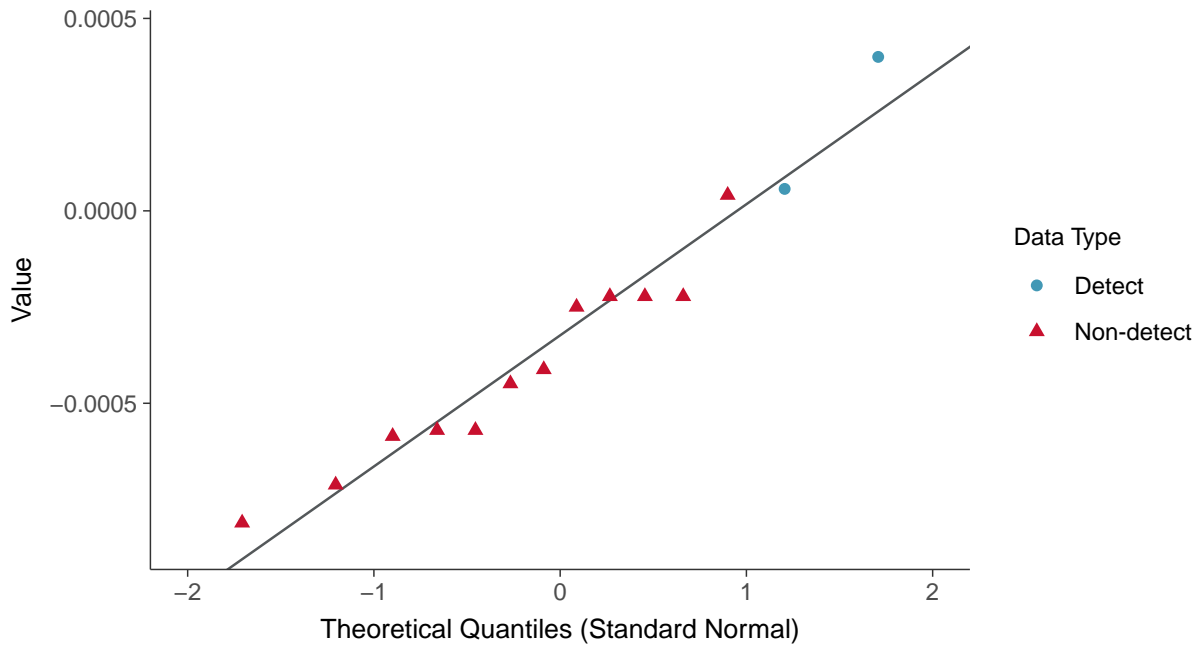
Antimony, MW-30 (mg/L)





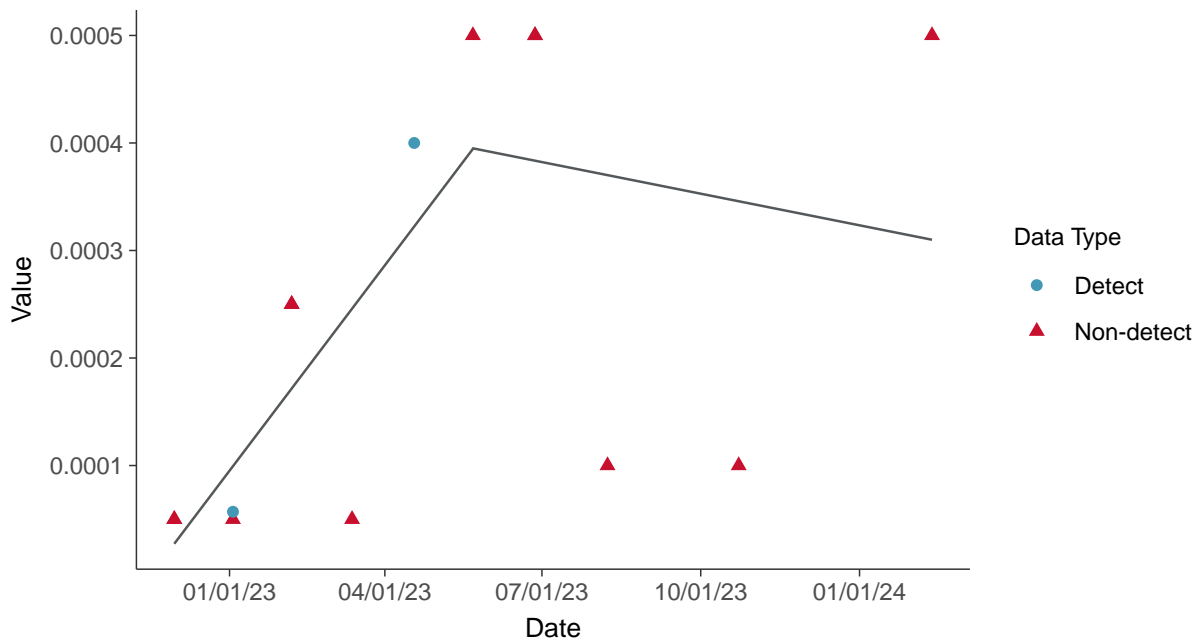
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-30 (mg/L)



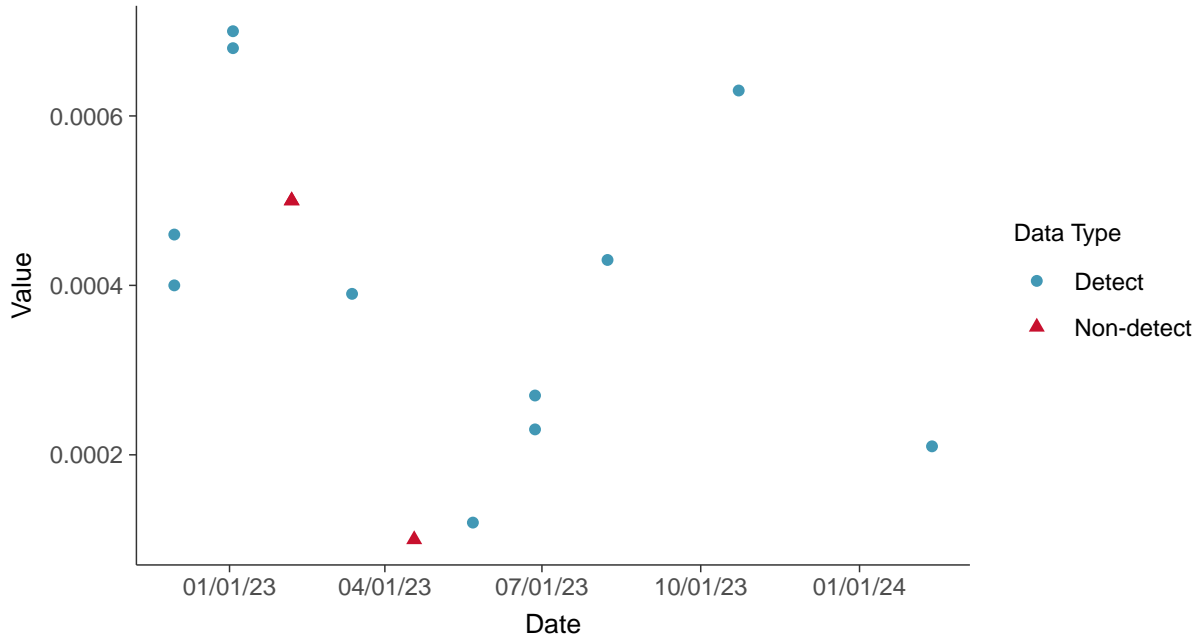


Appendix IV: Arsenic, MW-30

ID: 1_40_5_102

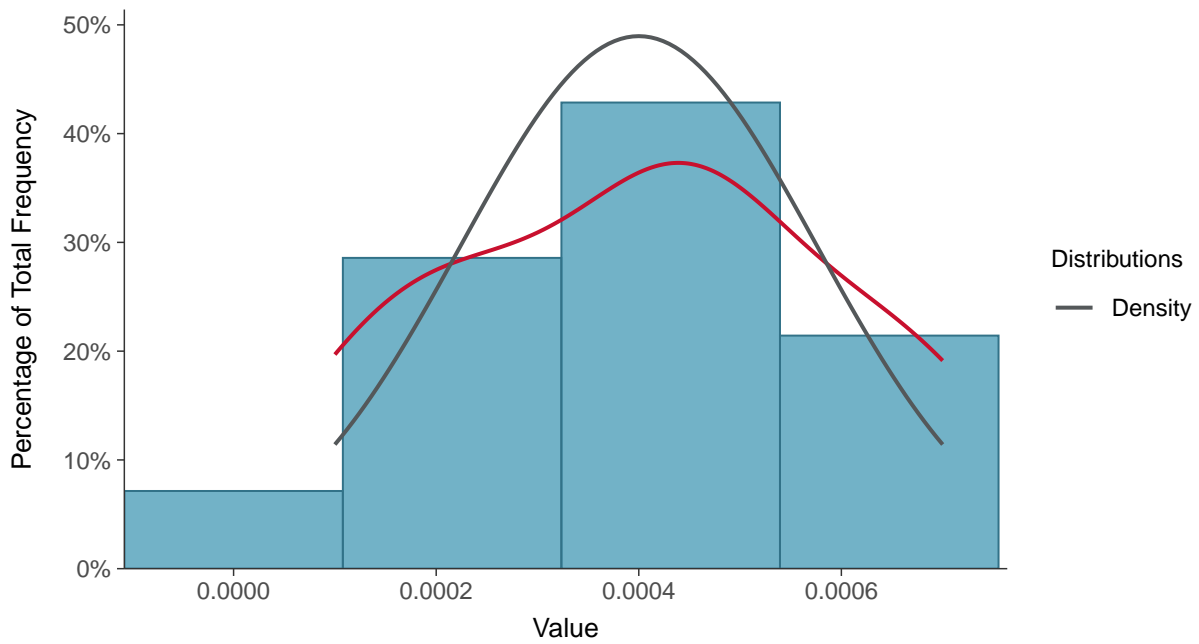
Scatter Plot

Arsenic, MW-30 (mg/L)



Histogram

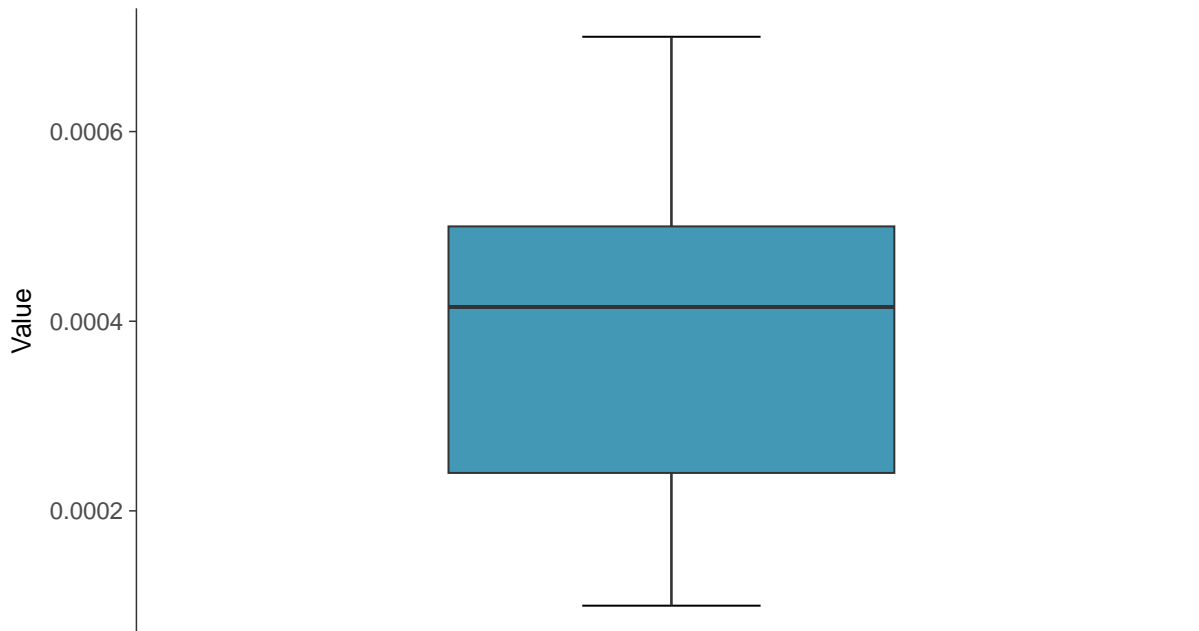
Arsenic, MW-30 (mg/L)





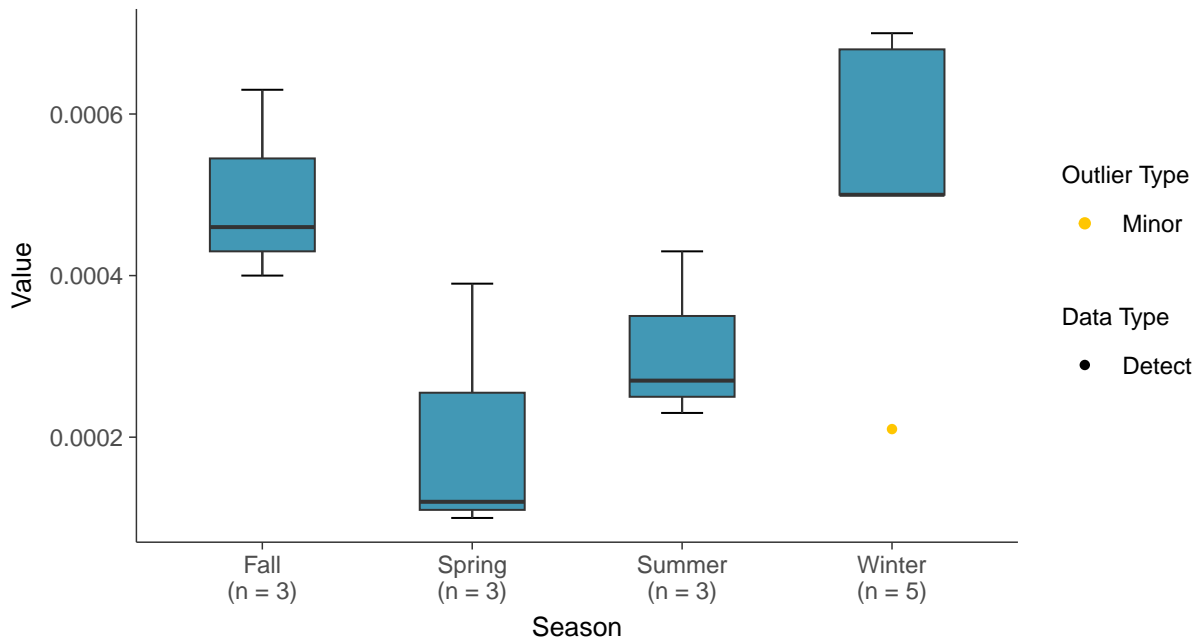
Boxplot

Arsenic, MW-30 (mg/L)



Boxplot by Season

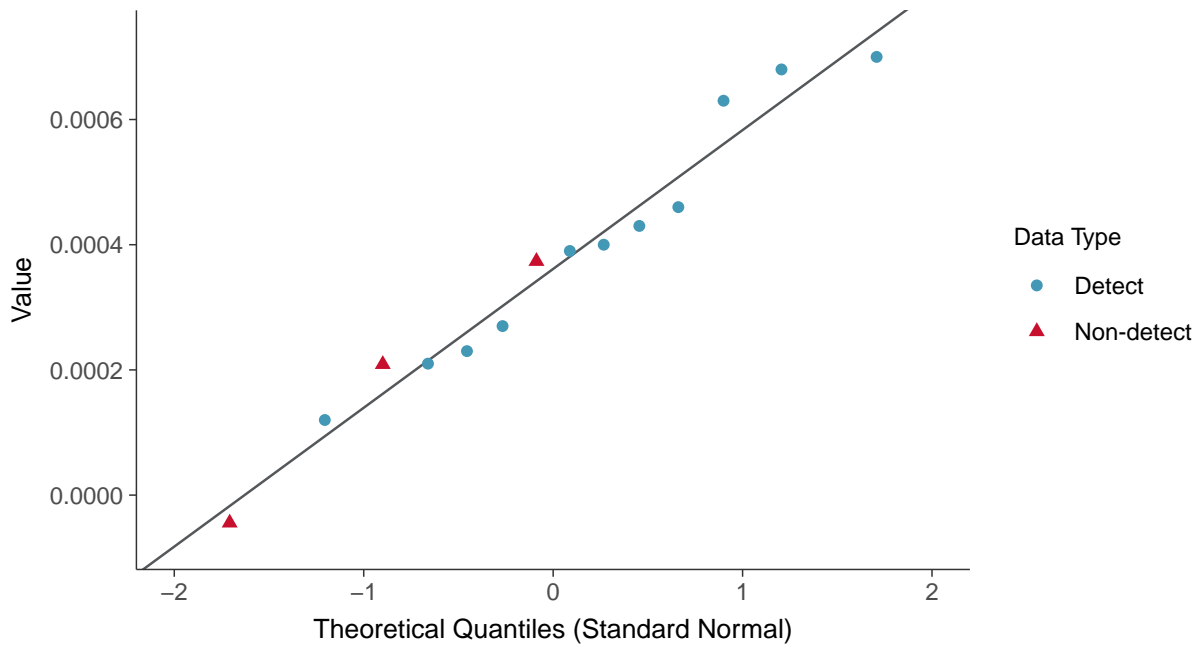
Arsenic, MW-30 (mg/L)





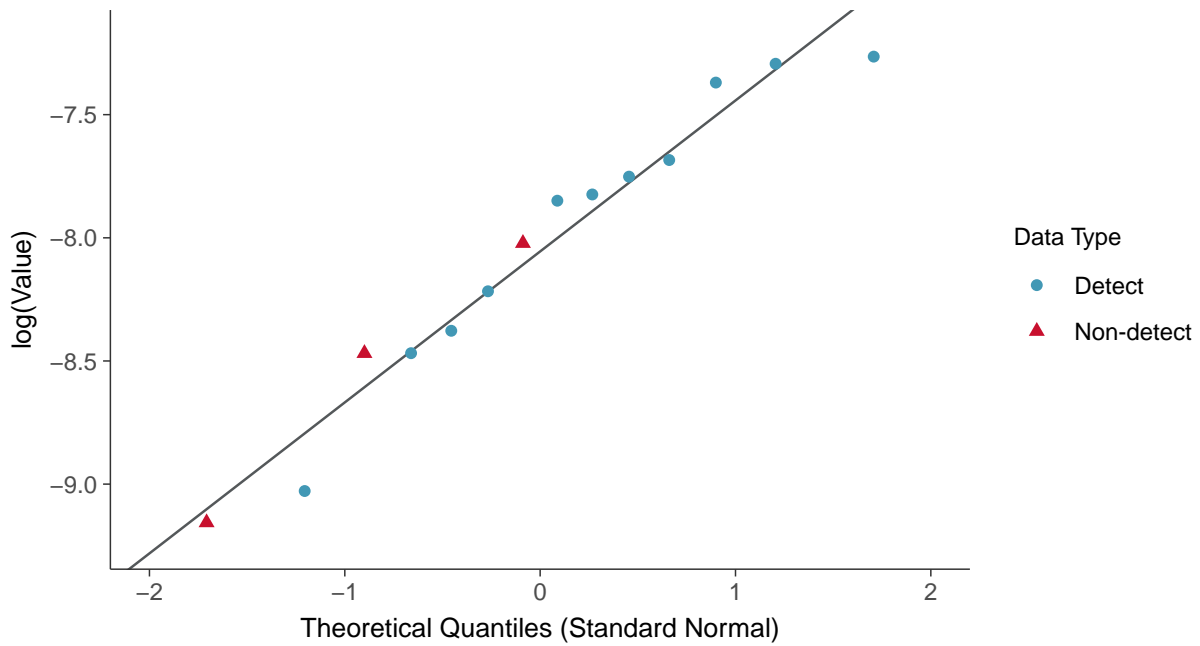
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-30 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

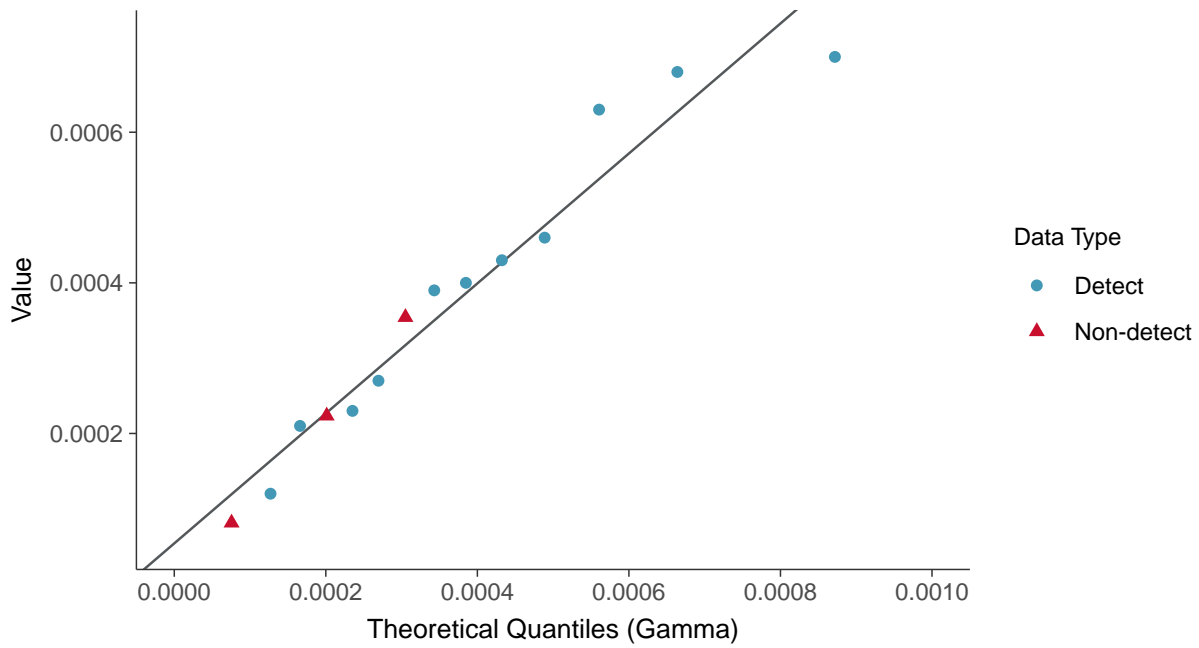
Arsenic, MW-30 (mg/L)





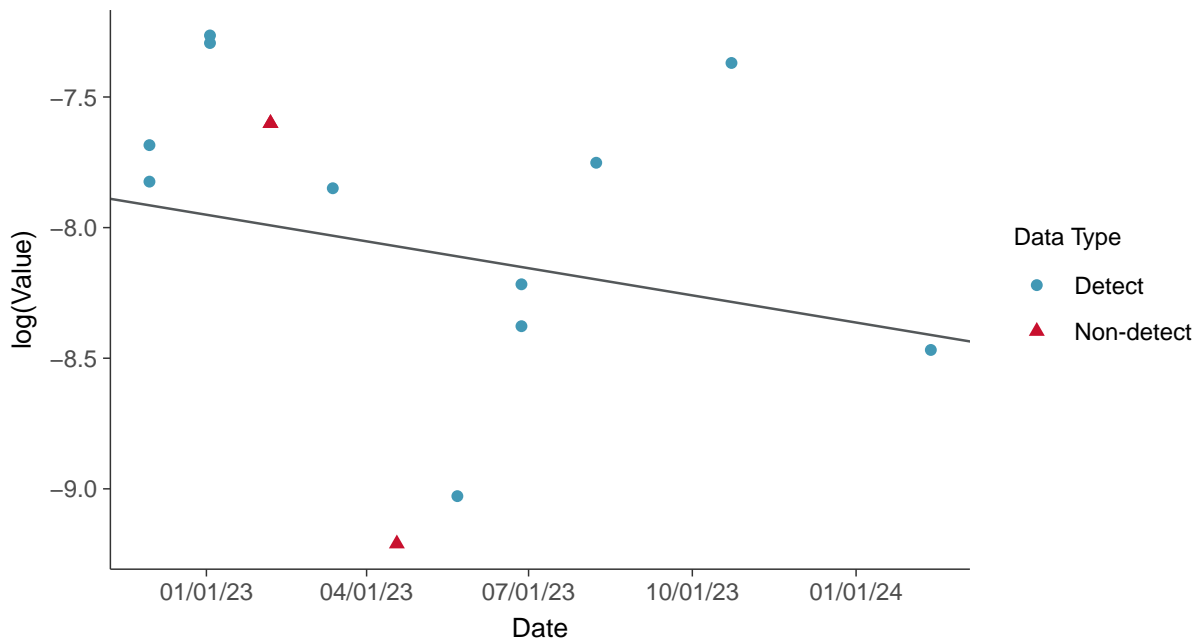
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-30 (mg/L)



Trend Regression: Lognormal MLE

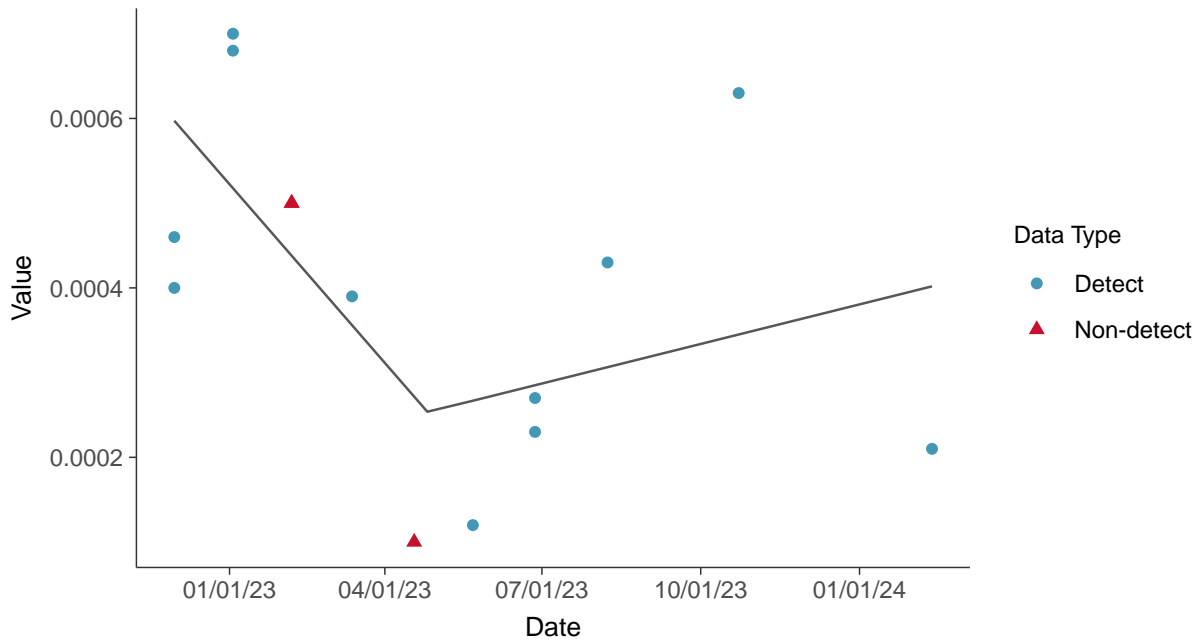
Arsenic, MW-30 (mg/L)





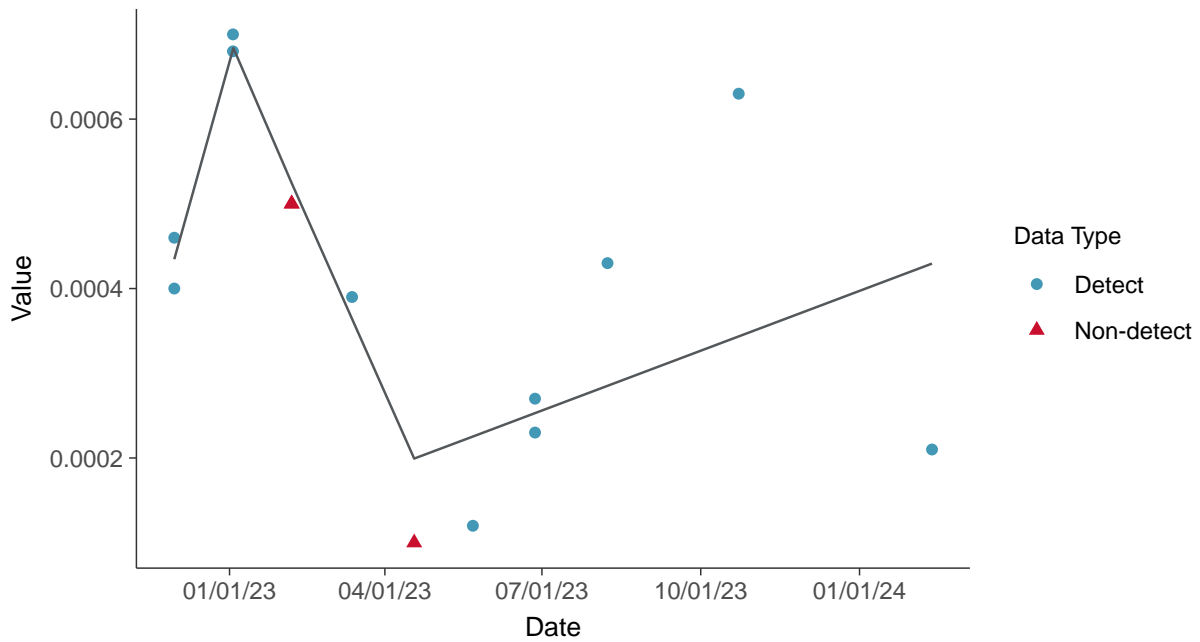
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

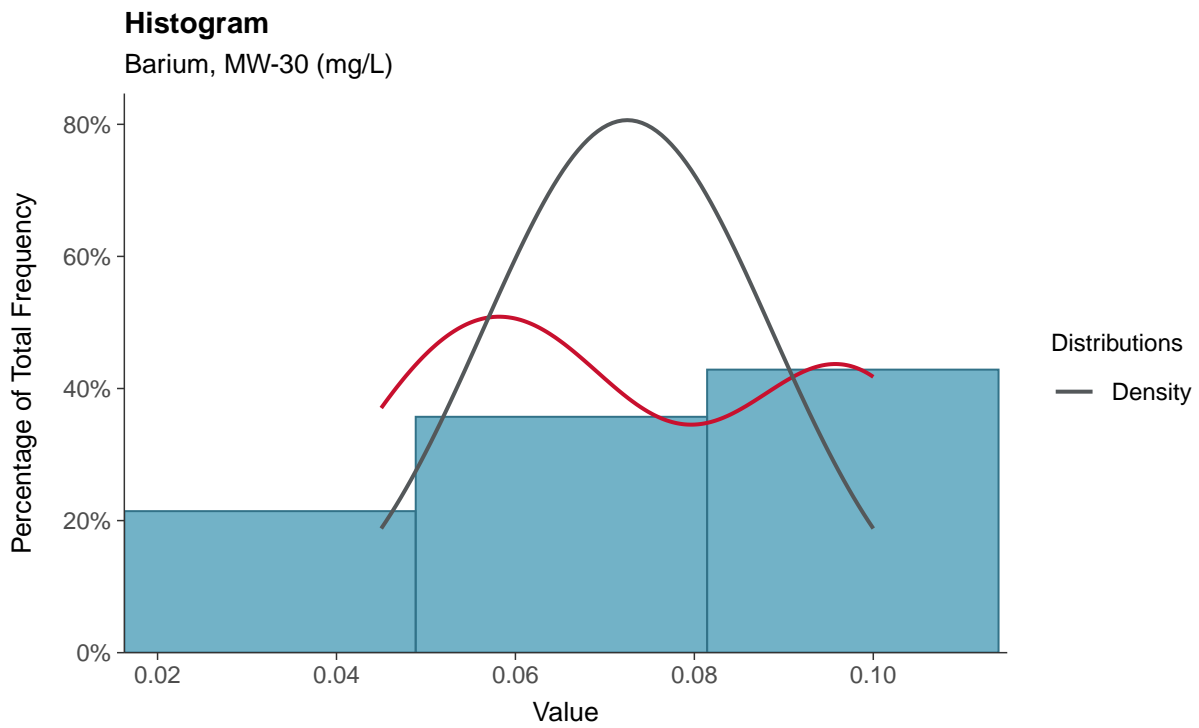
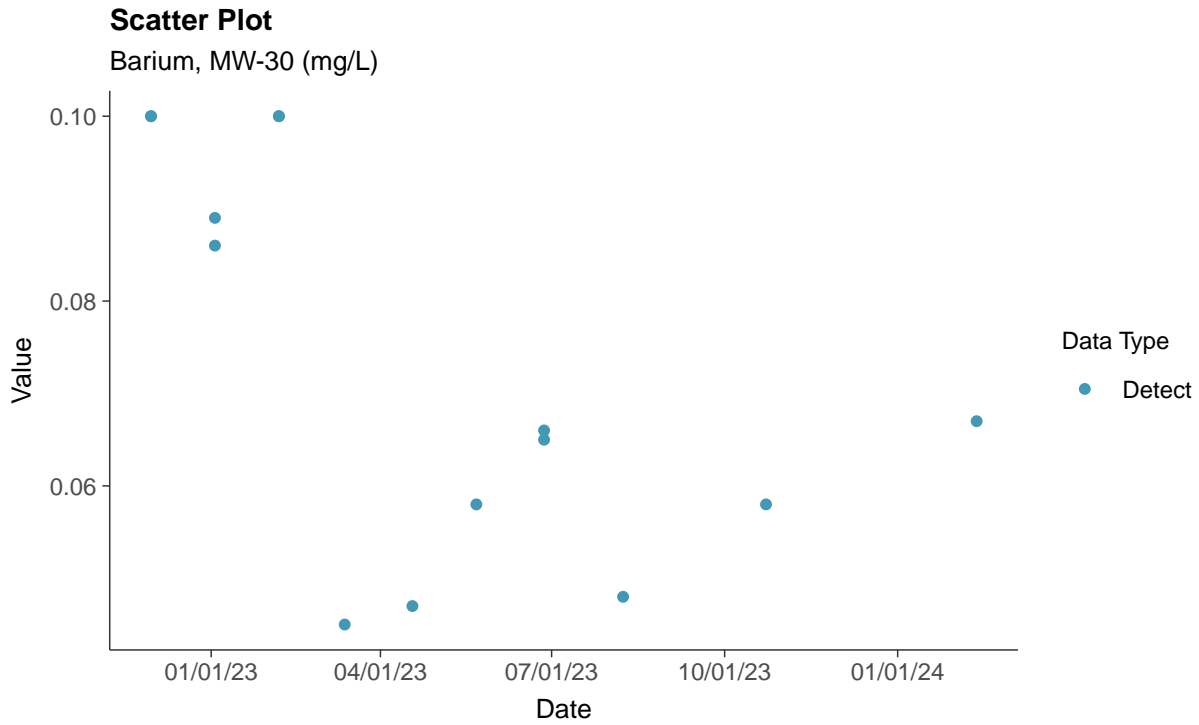
Arsenic, MW-30 (mg/L)





Appendix IV: Barium, MW-30

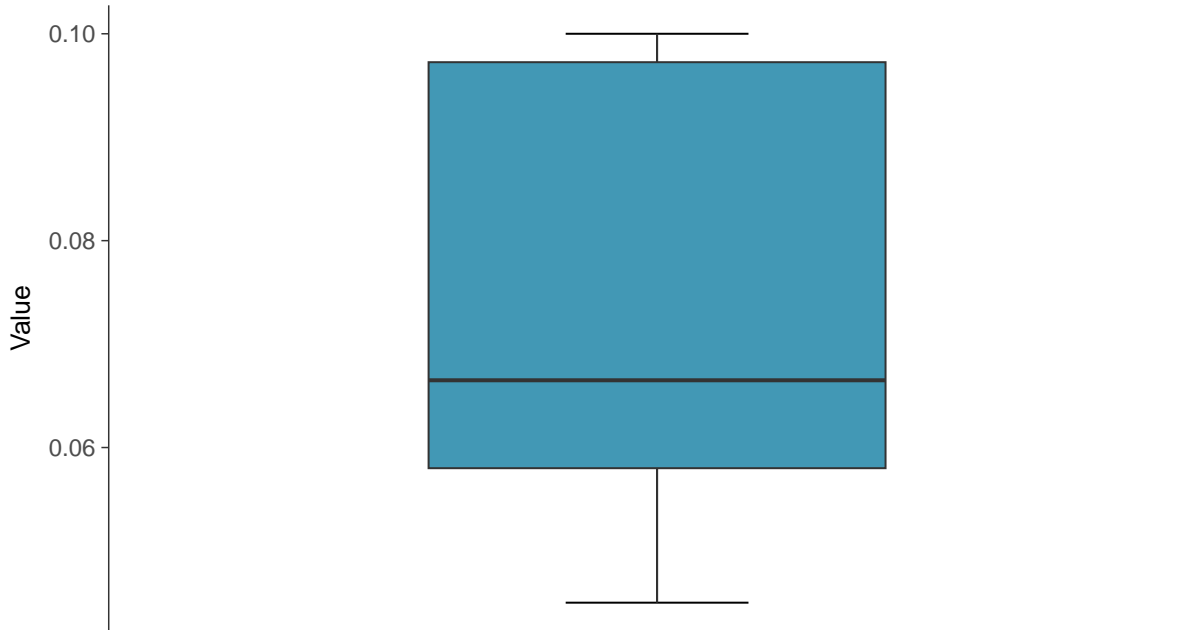
ID: 1_40_5_103





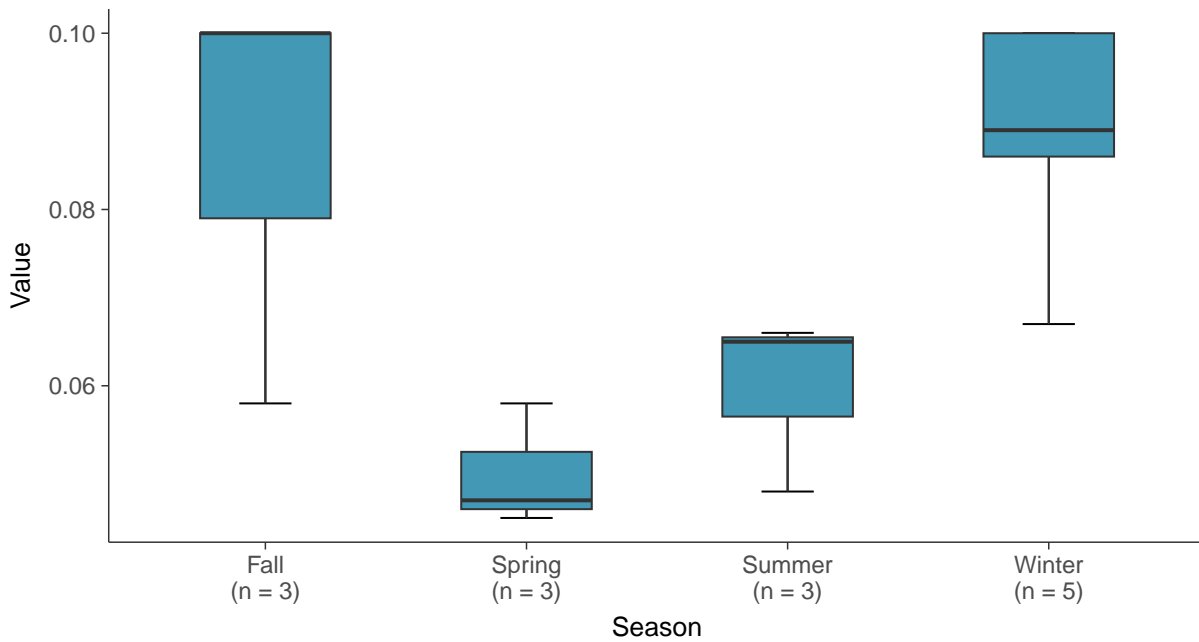
Boxplot

Barium, MW-30 (mg/L)



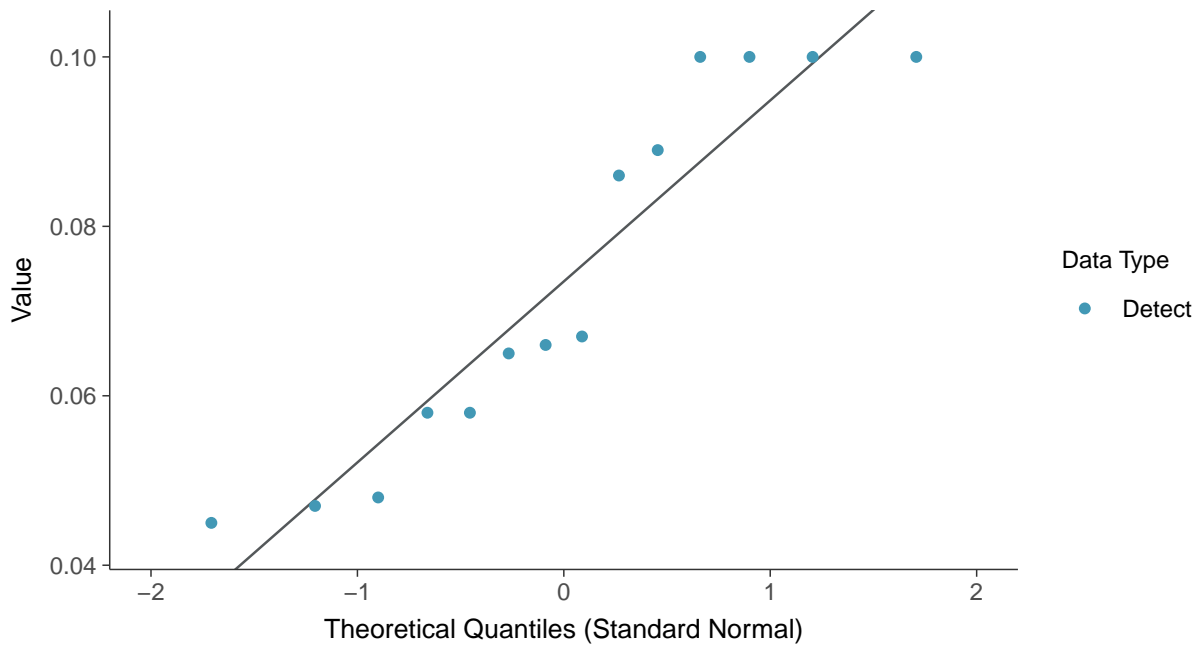
Boxplot by Season

Barium, MW-30 (mg/L)

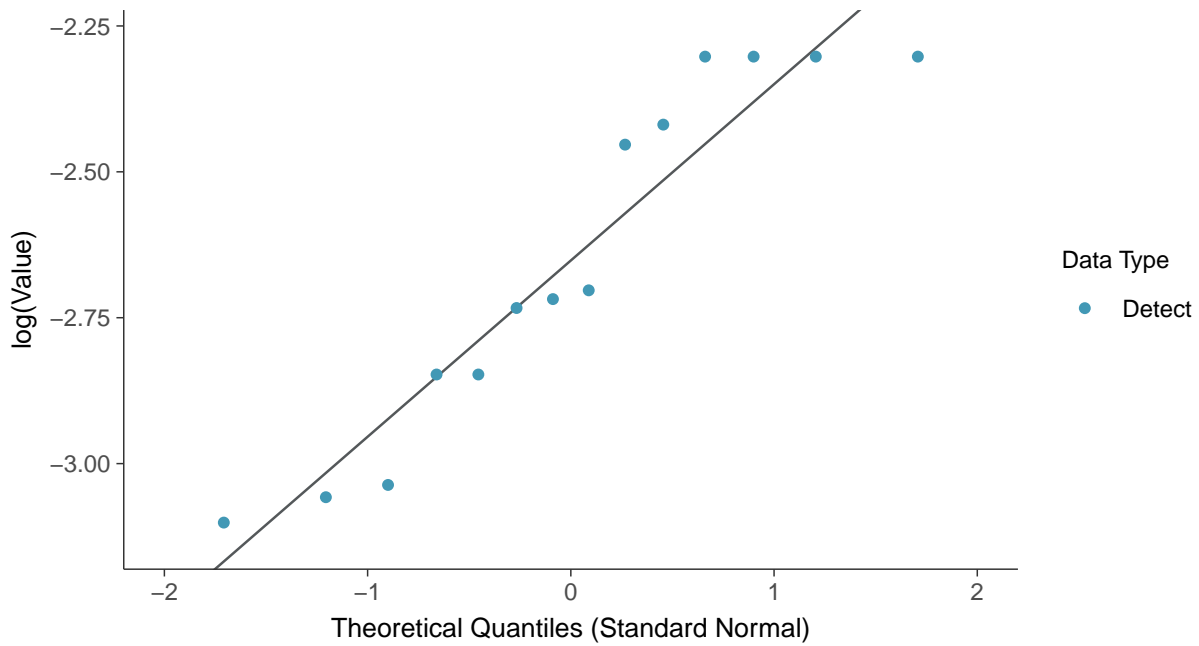




Normal Q-Q plot
Barium, MW-30 (mg/L)



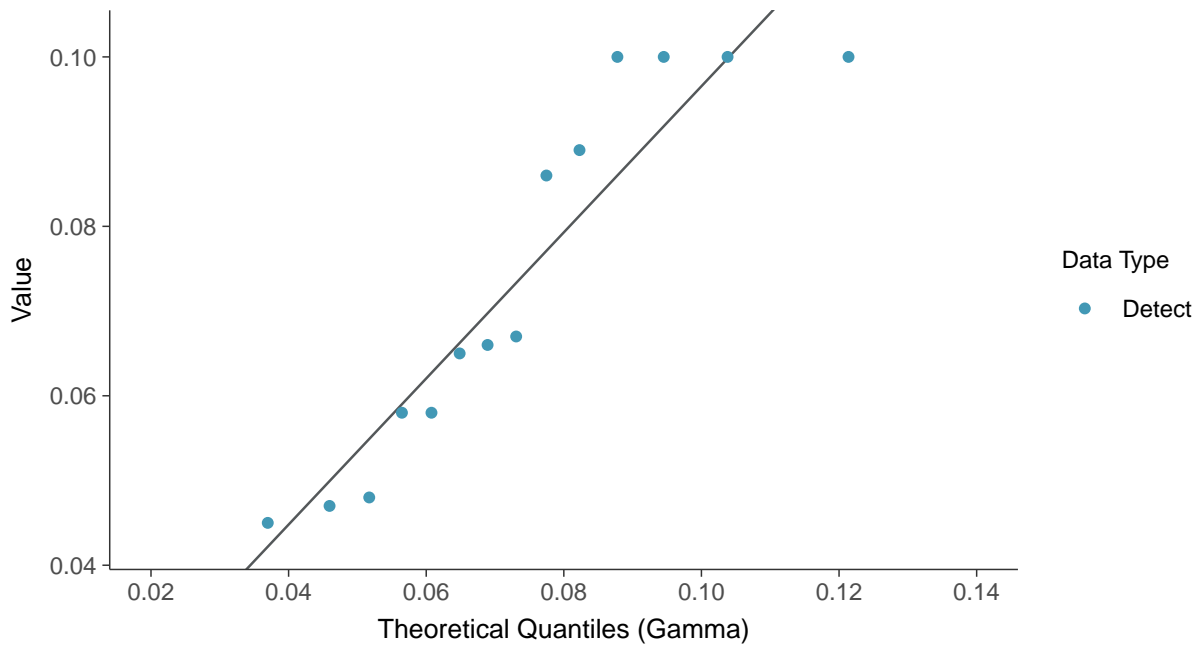
Lognormal Q-Q plot
Barium, MW-30 (mg/L)





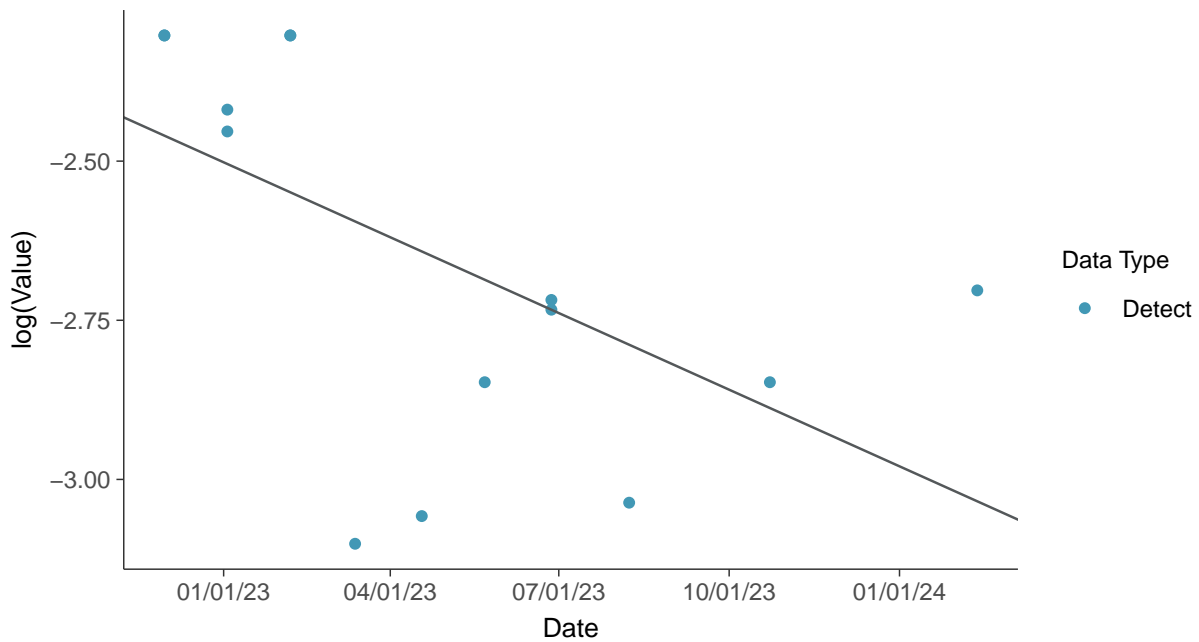
Gamma Q-Q plot

Barium, MW-30 (mg/L)



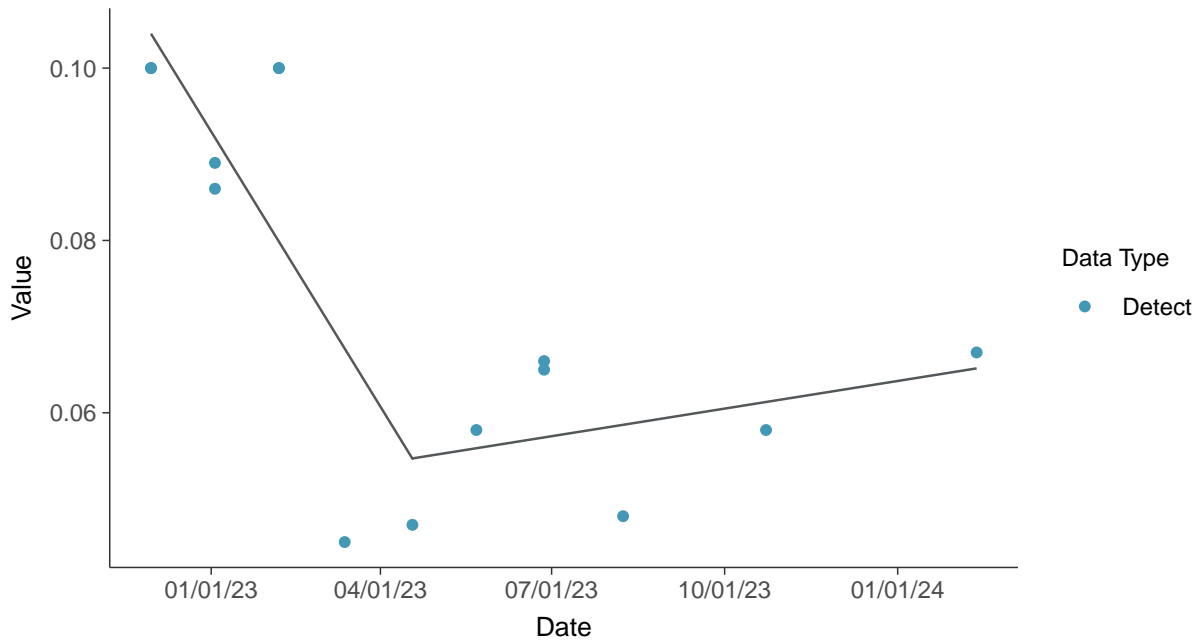
Trend Regression: Lognormal MLE

Barium, MW-30 (mg/L)





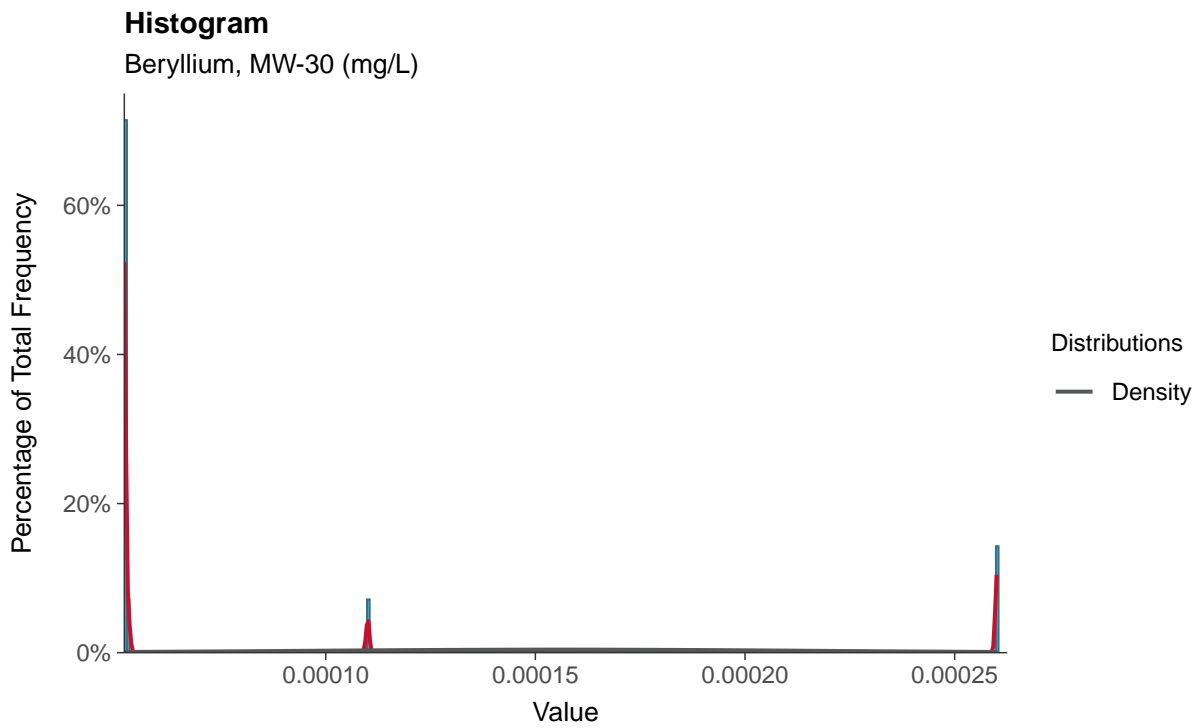
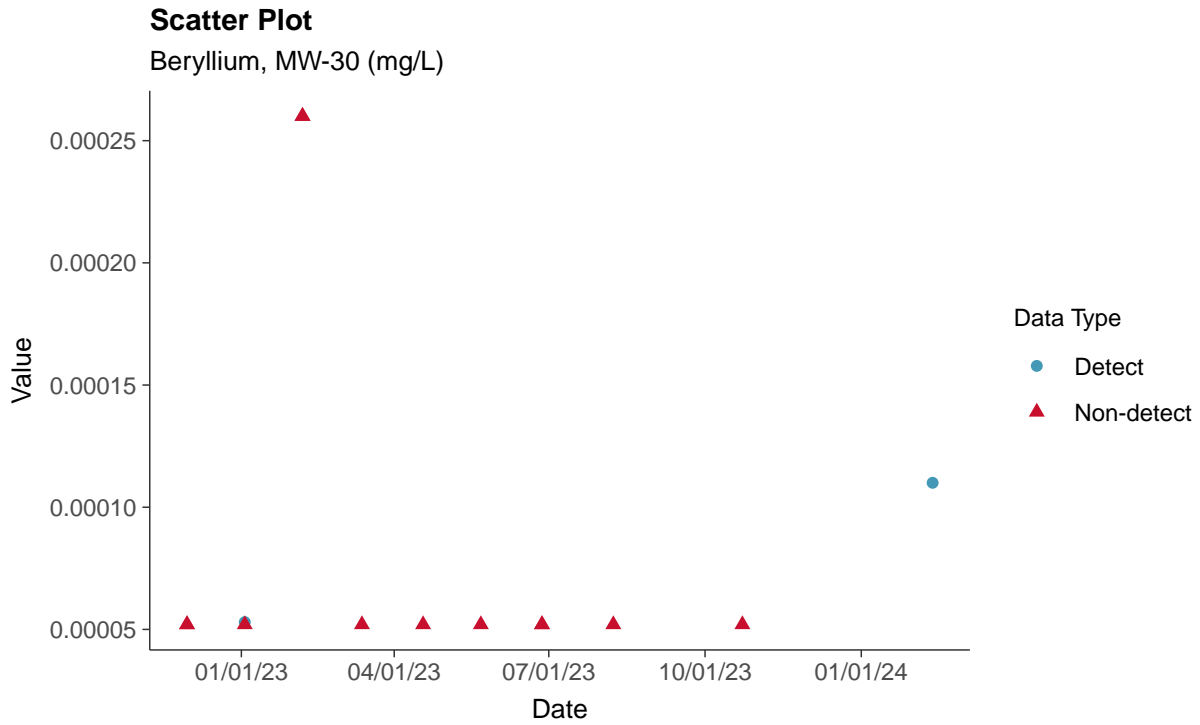
Trend Regression: Piecewise Linear-Linear
Barium, MW-30 (mg/L)





Appendix IV: Beryllium, MW-30

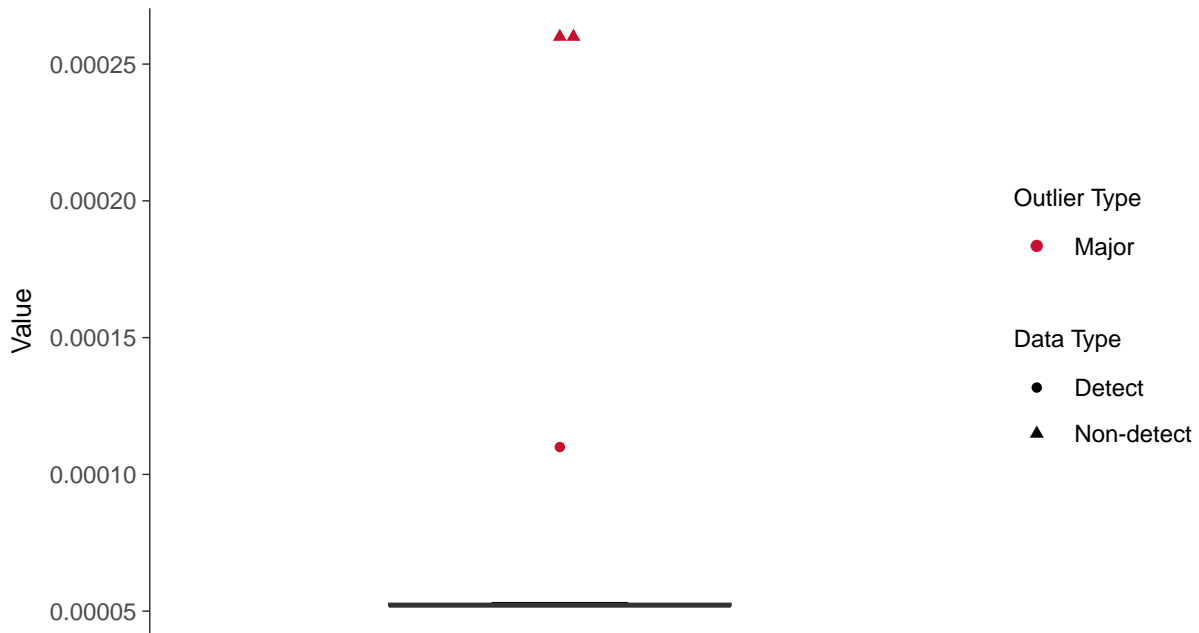
ID: 1_40_5_104





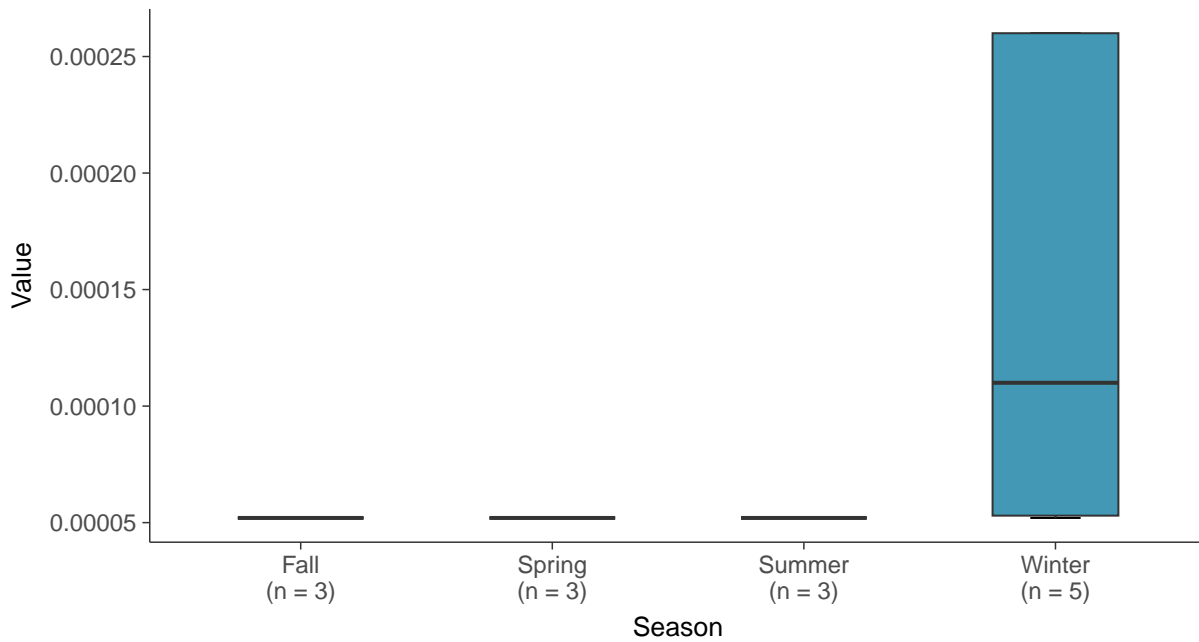
Boxplot

Beryllium, MW-30 (mg/L)



Boxplot by Season

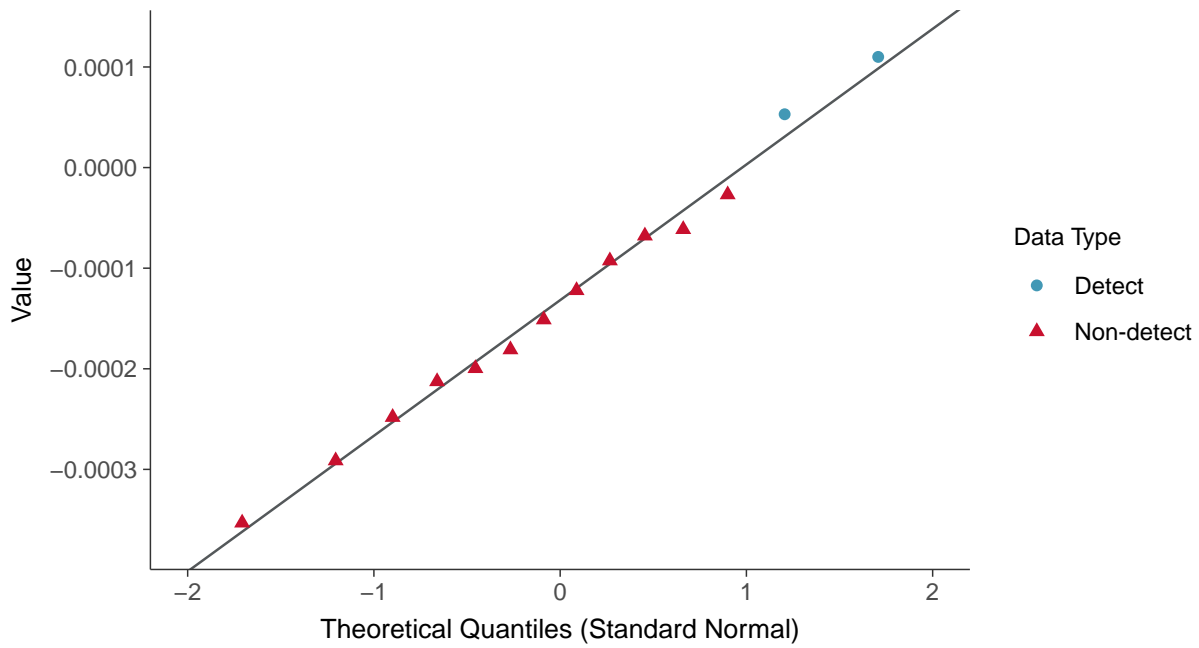
Beryllium, MW-30 (mg/L)





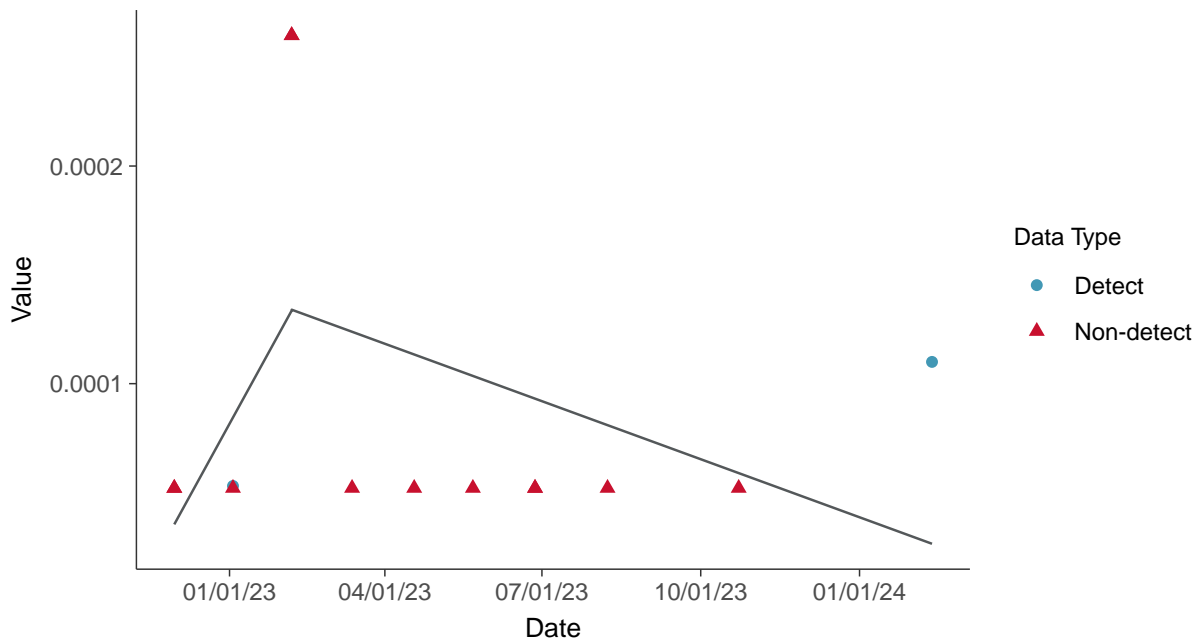
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear

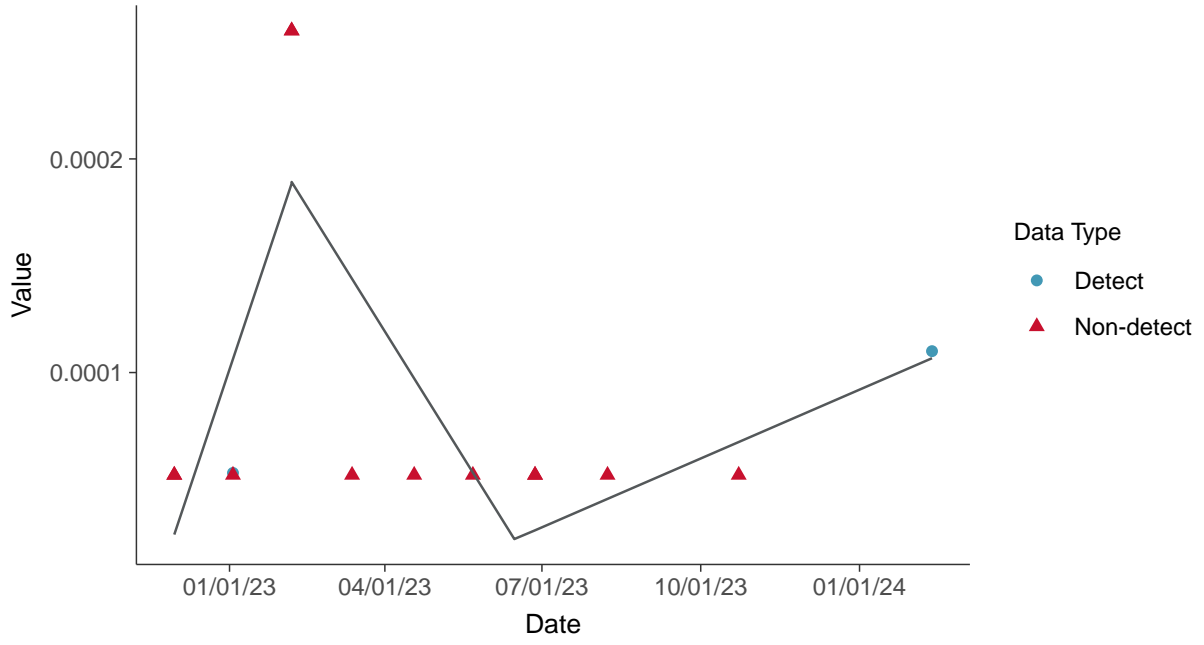
Beryllium, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-30 (mg/L)



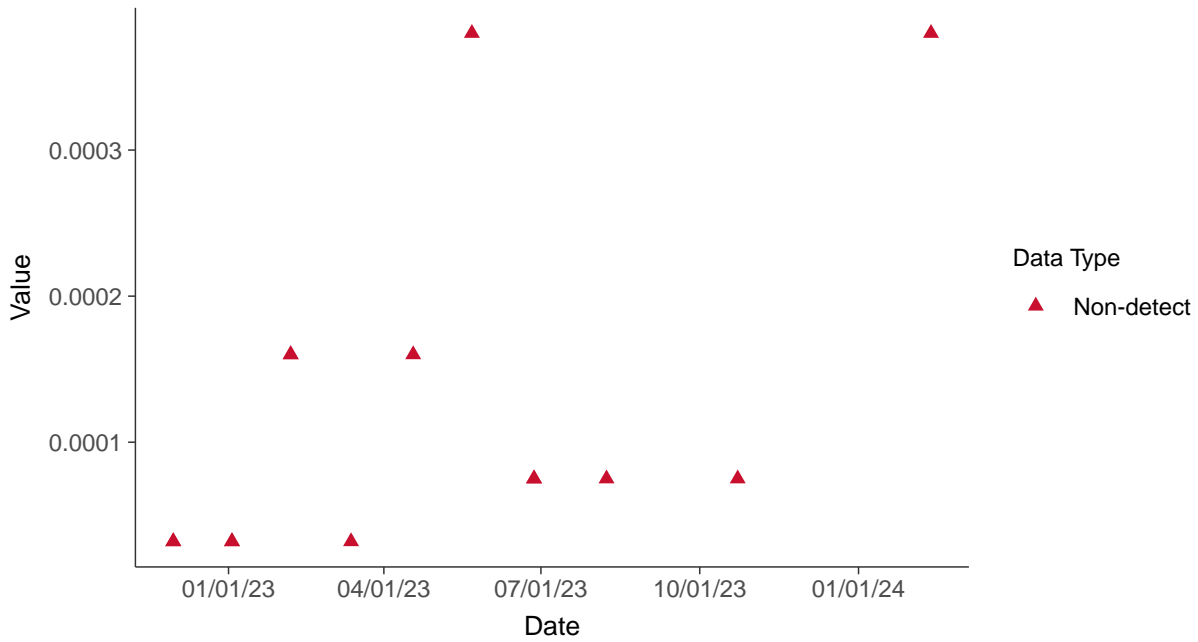


Appendix IV: Cadmium, MW-30

ID: 1_40_5_106

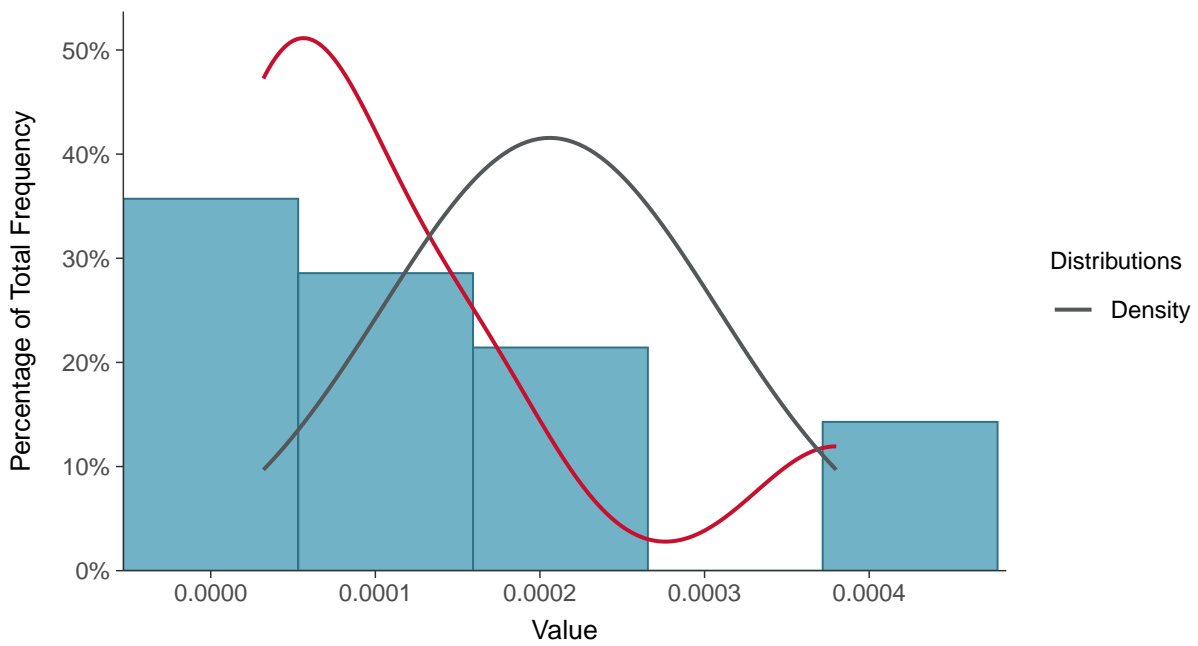
Scatter Plot

Cadmium, MW-30 (mg/L)



Histogram

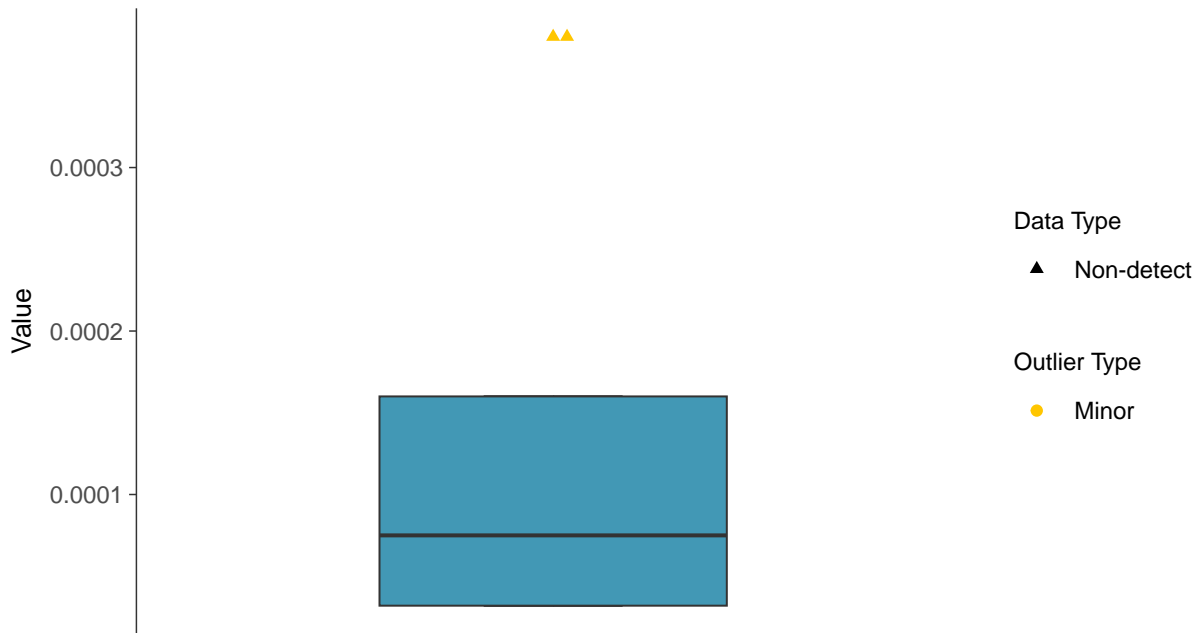
Cadmium, MW-30 (mg/L)





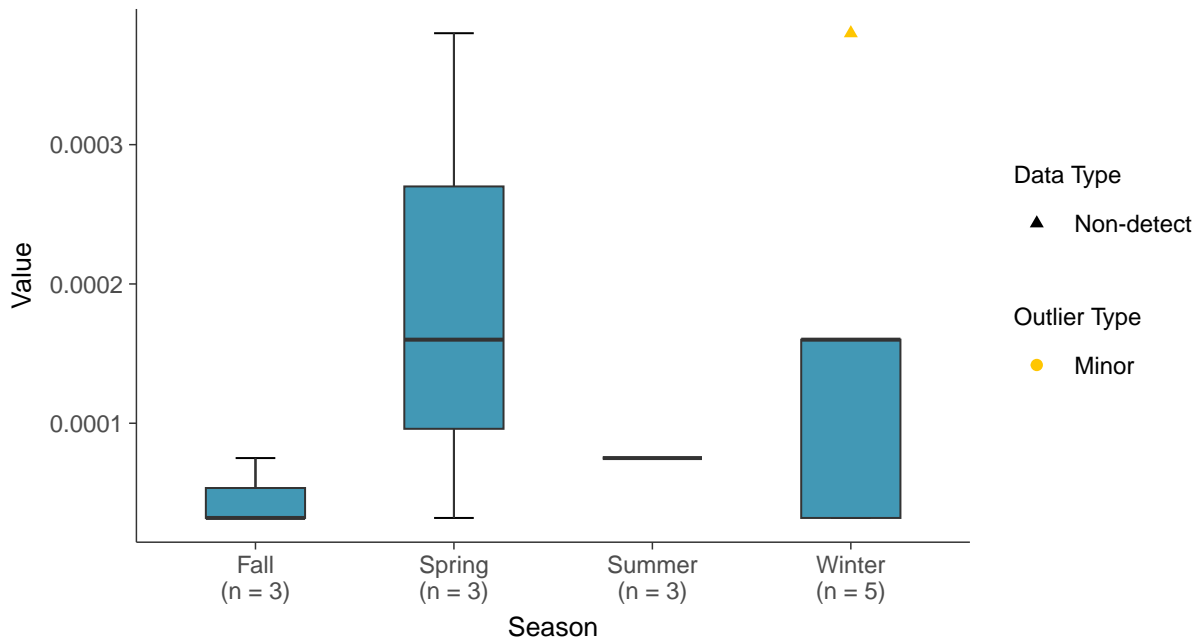
Boxplot

Cadmium, MW-30 (mg/L)



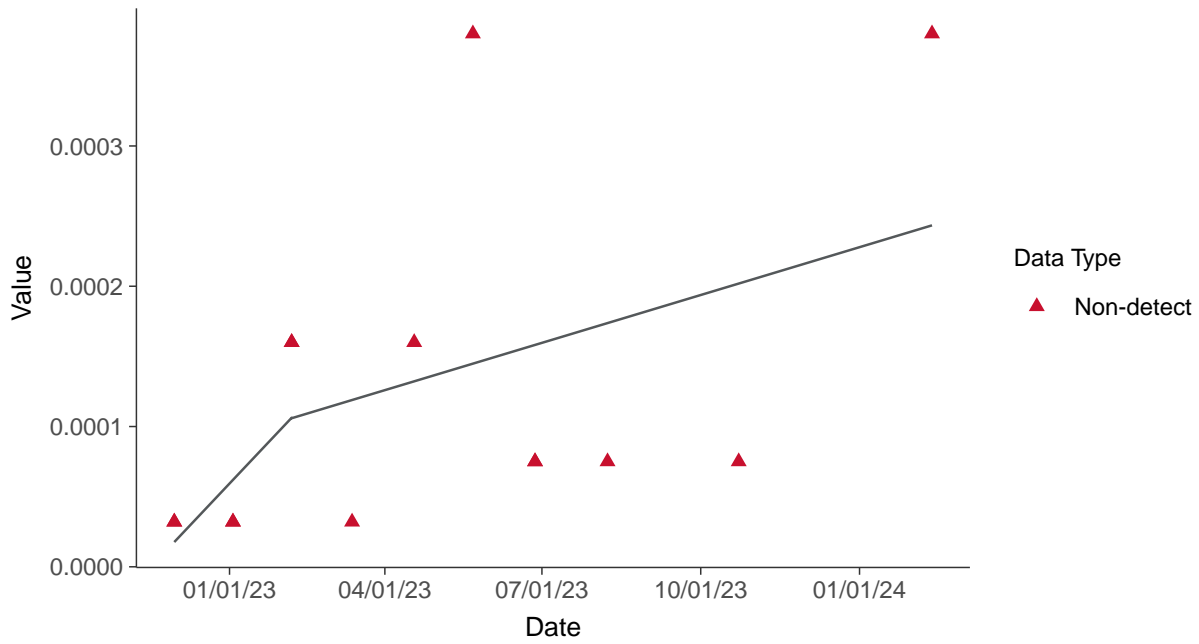
Boxplot by Season

Cadmium, MW-30 (mg/L)

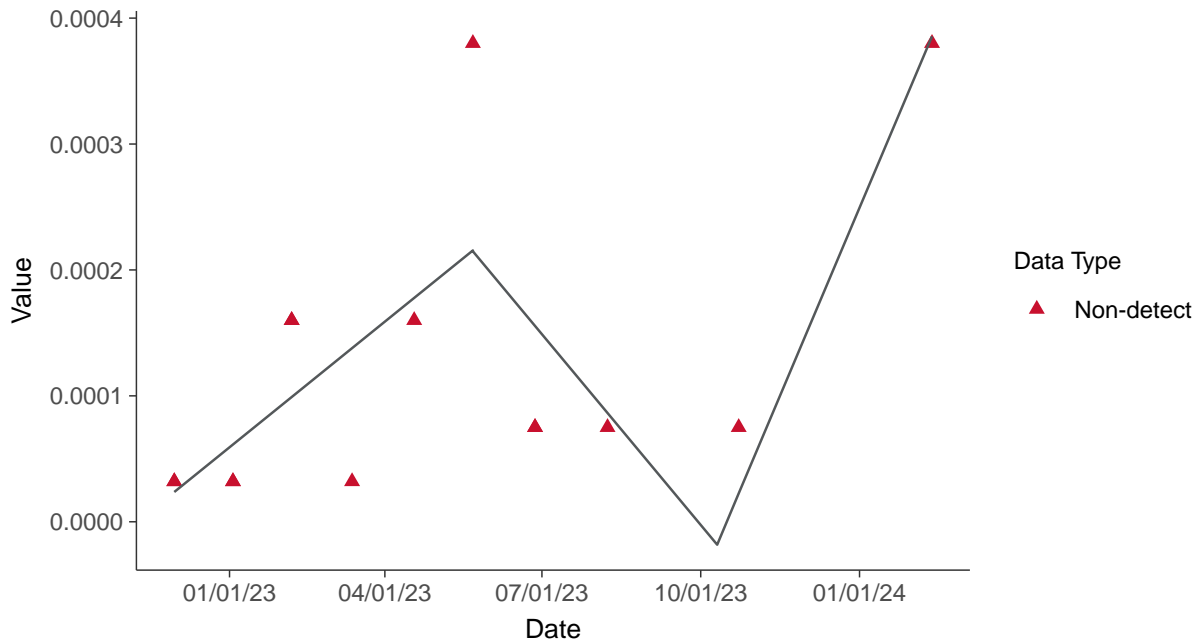




Trend Regression: Piecewise Linear-Linear
Cadmium, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cadmium, MW-30 (mg/L)



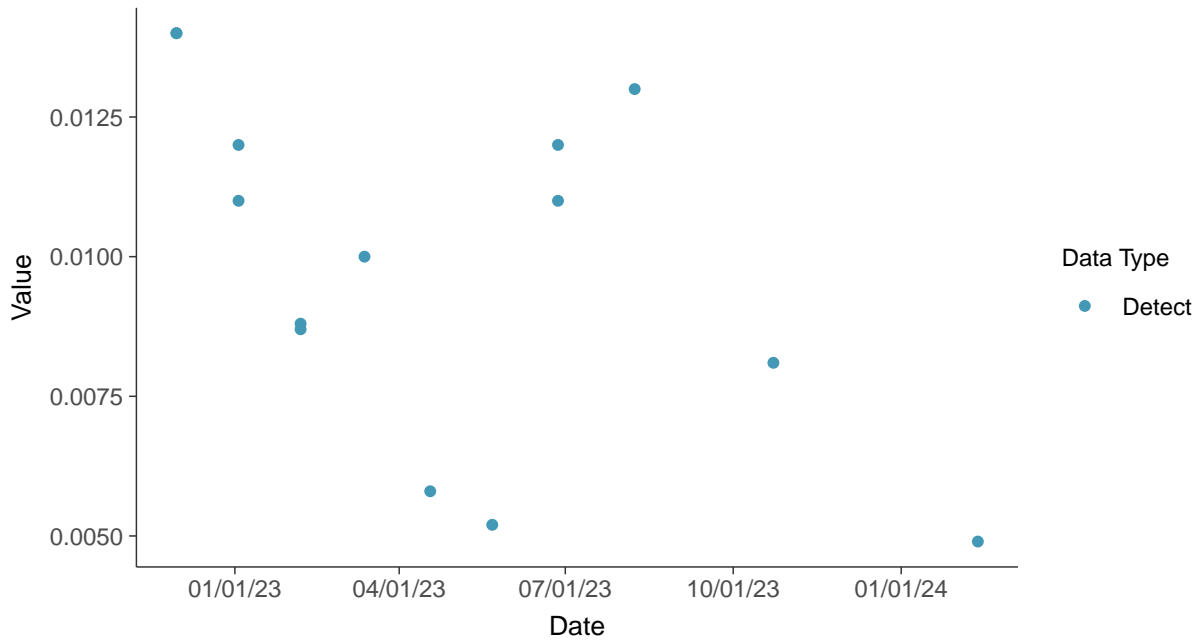


Appendix IV: Chromium, Total, MW-30

ID: 1_40_5_109

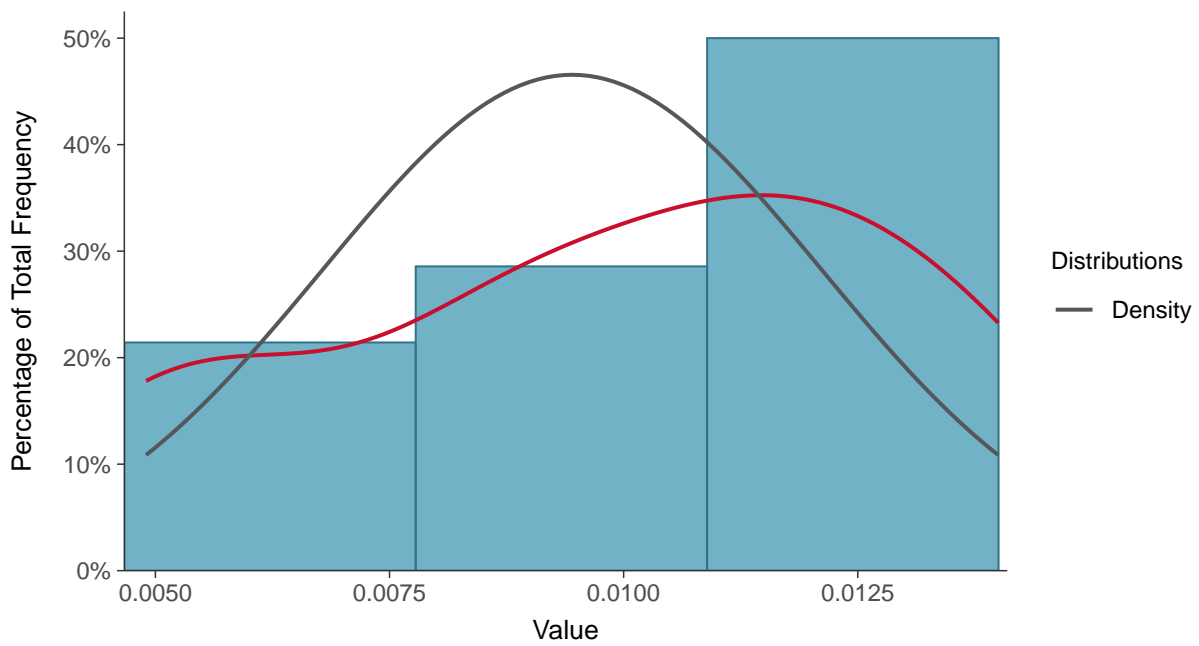
Scatter Plot

Chromium, Total, MW-30 (mg/L)



Histogram

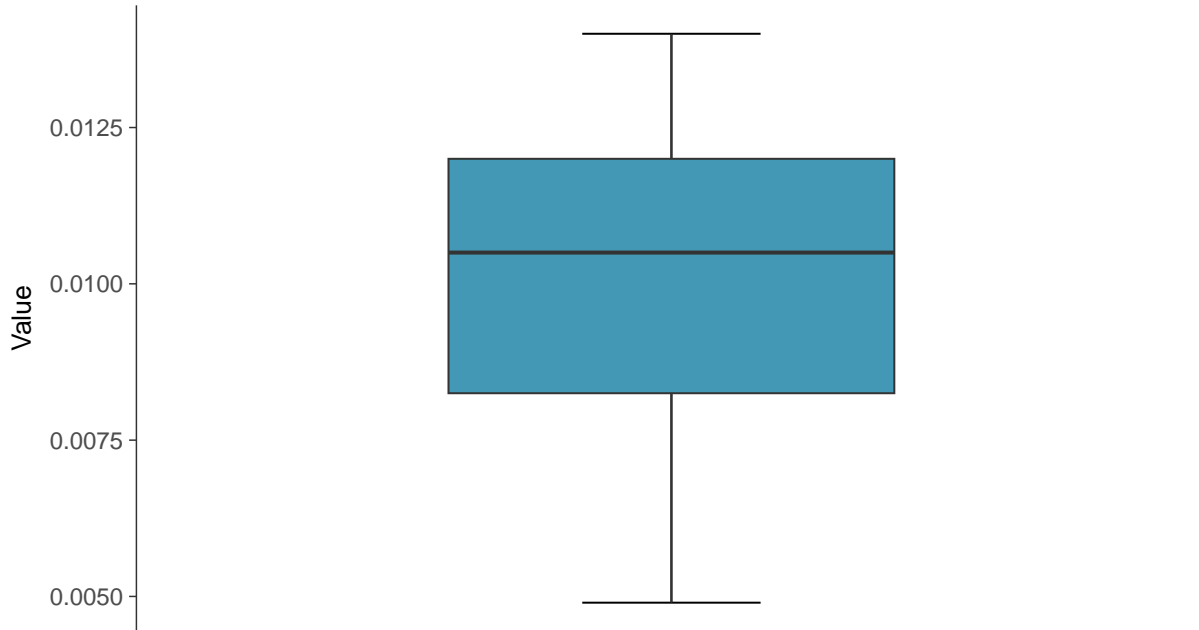
Chromium, Total, MW-30 (mg/L)





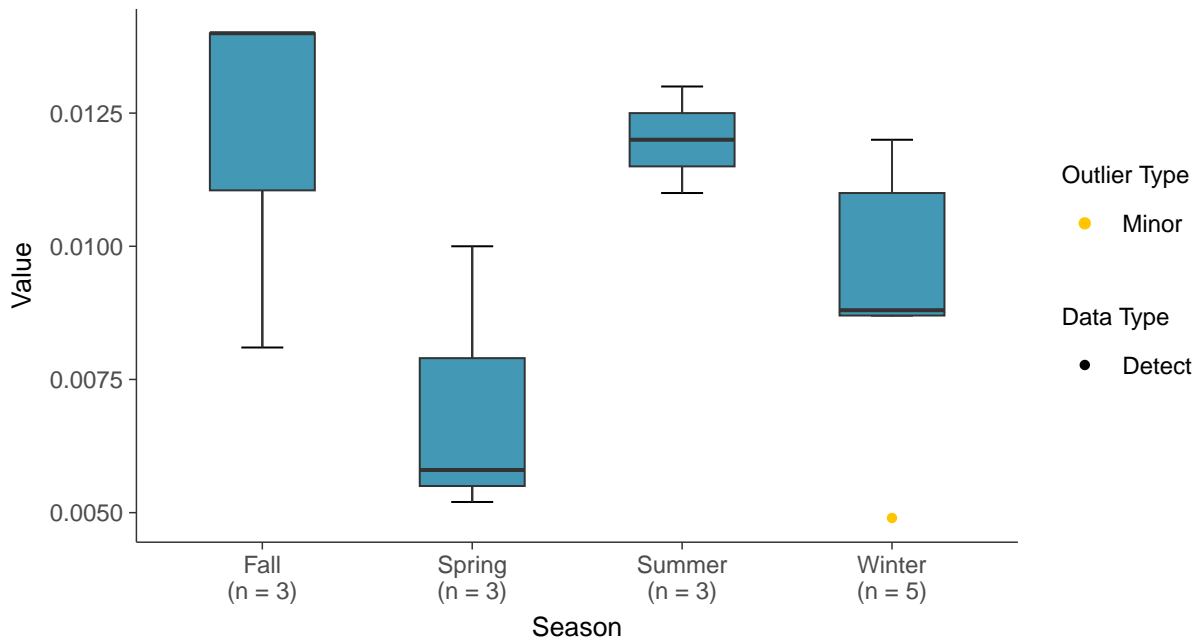
Boxplot

Chromium, Total, MW-30 (mg/L)



Boxplot by Season

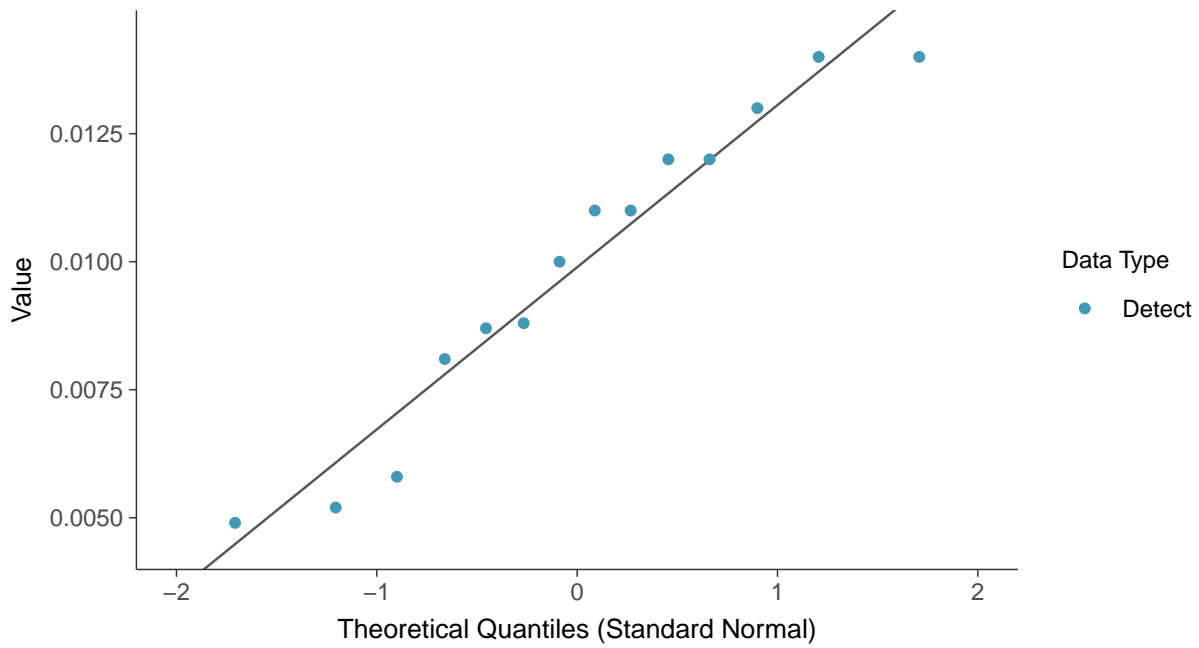
Chromium, Total, MW-30 (mg/L)





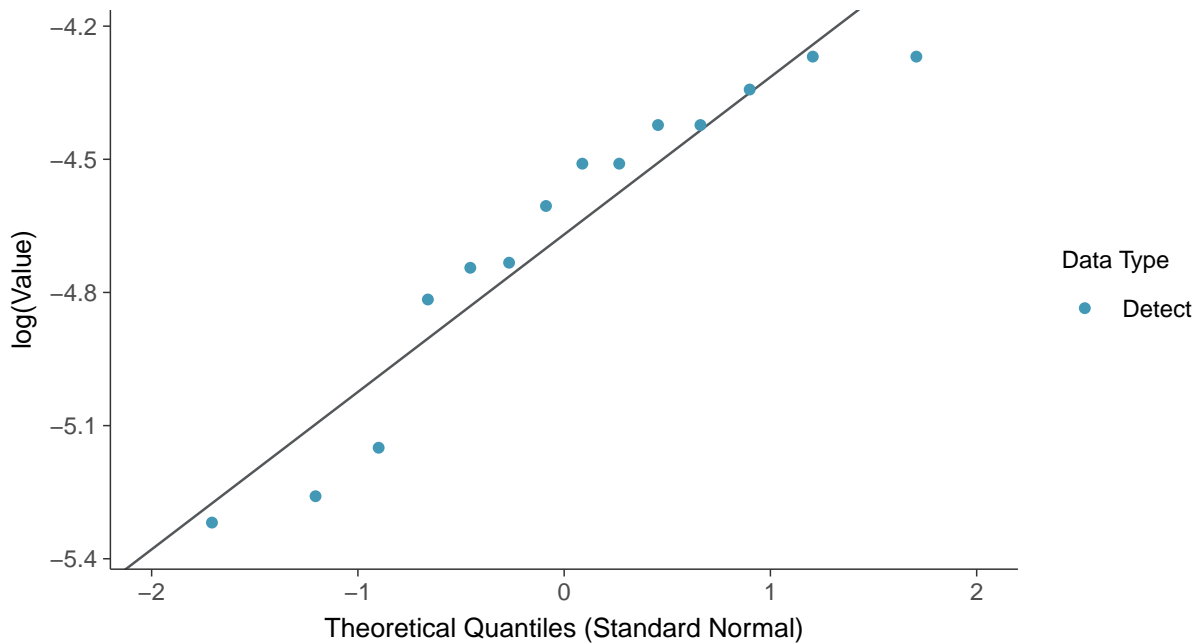
Normal Q-Q plot

Chromium, Total, MW-30 (mg/L)



Lognormal Q-Q plot

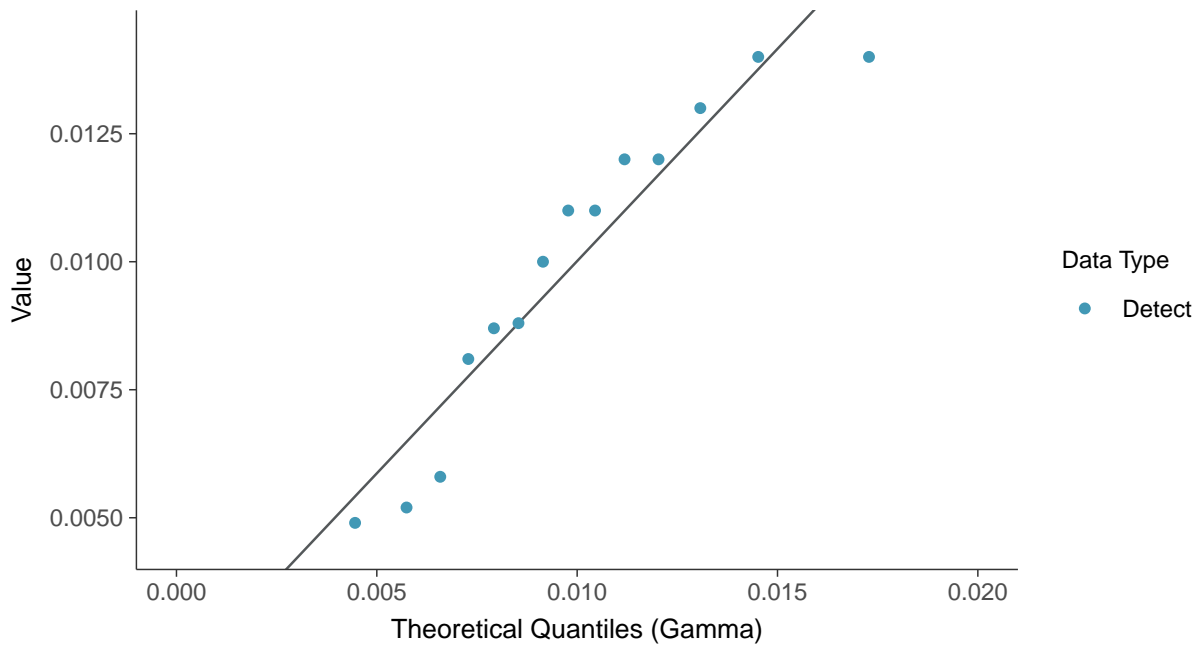
Chromium, Total, MW-30 (mg/L)





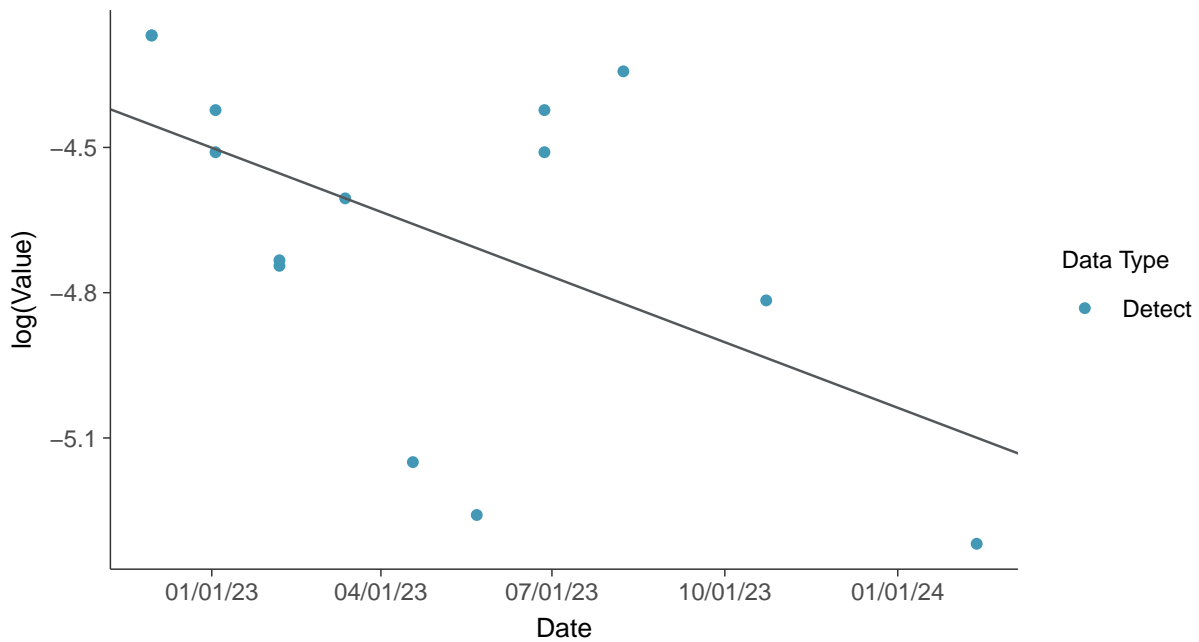
Gamma Q-Q plot

Chromium, Total, MW-30 (mg/L)



Trend Regression: Lognormal MLE

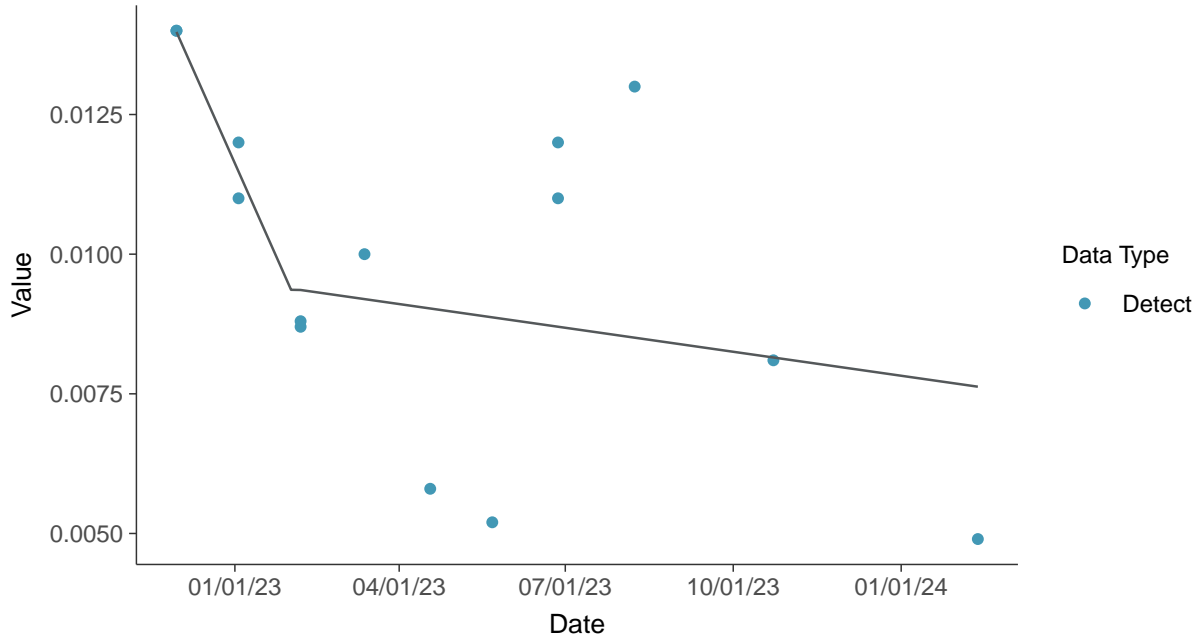
Chromium, Total, MW-30 (mg/L)





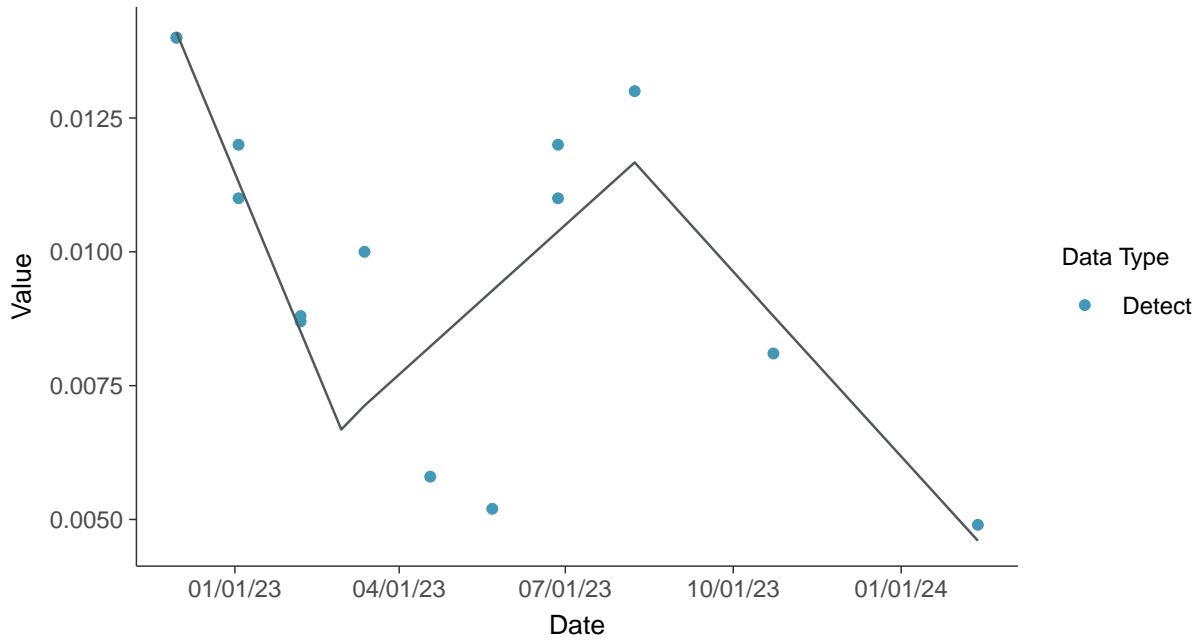
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-30 (mg/L)



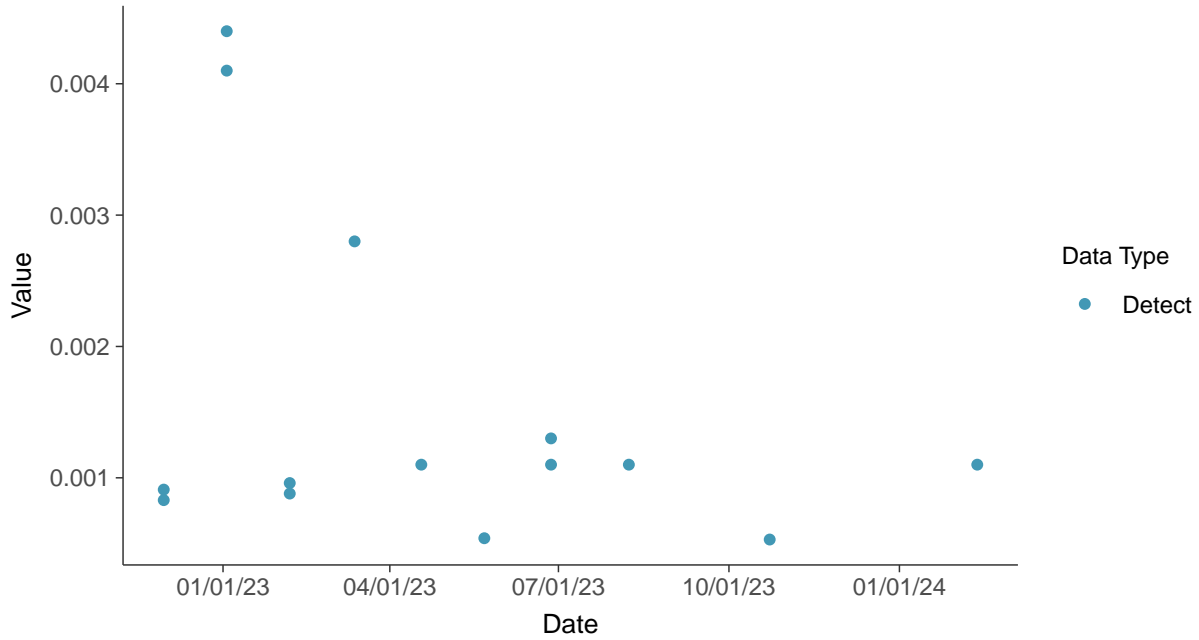


Appendix IV: Cobalt, MW-30

ID: 1_40_5_110

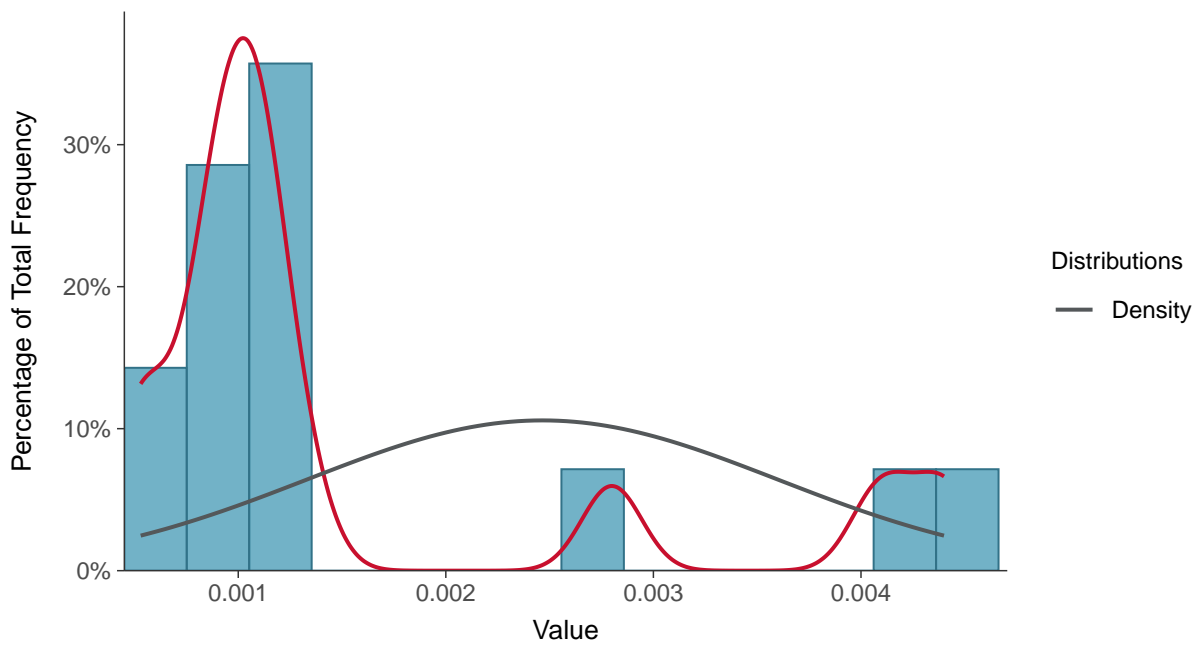
Scatter Plot

Cobalt, MW-30 (mg/L)



Histogram

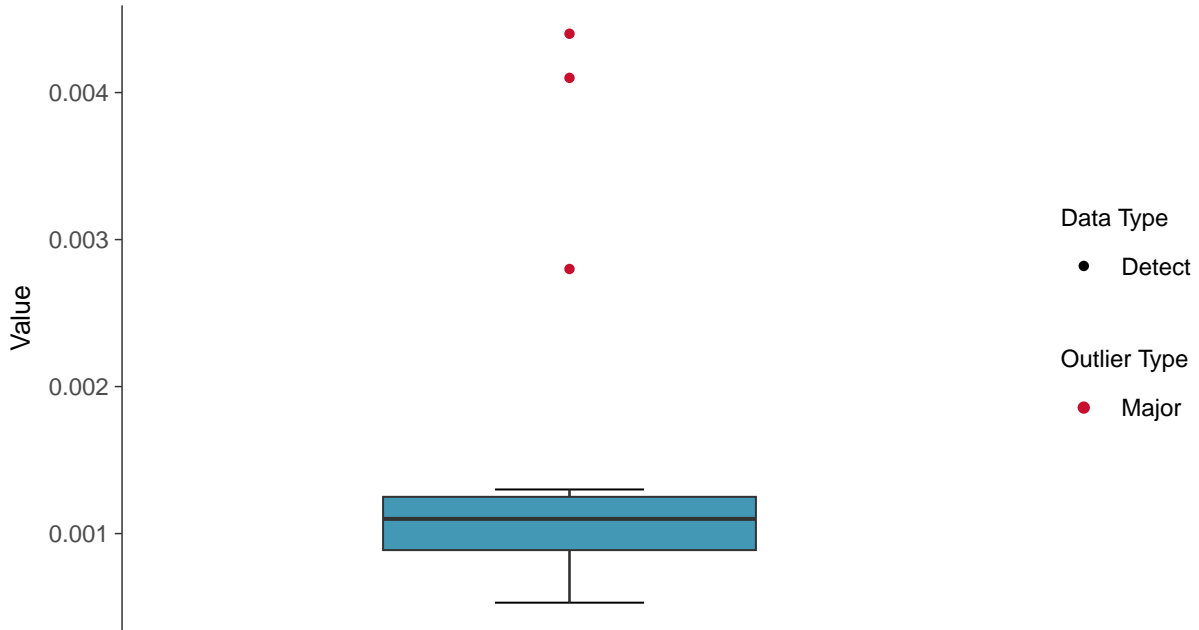
Cobalt, MW-30 (mg/L)





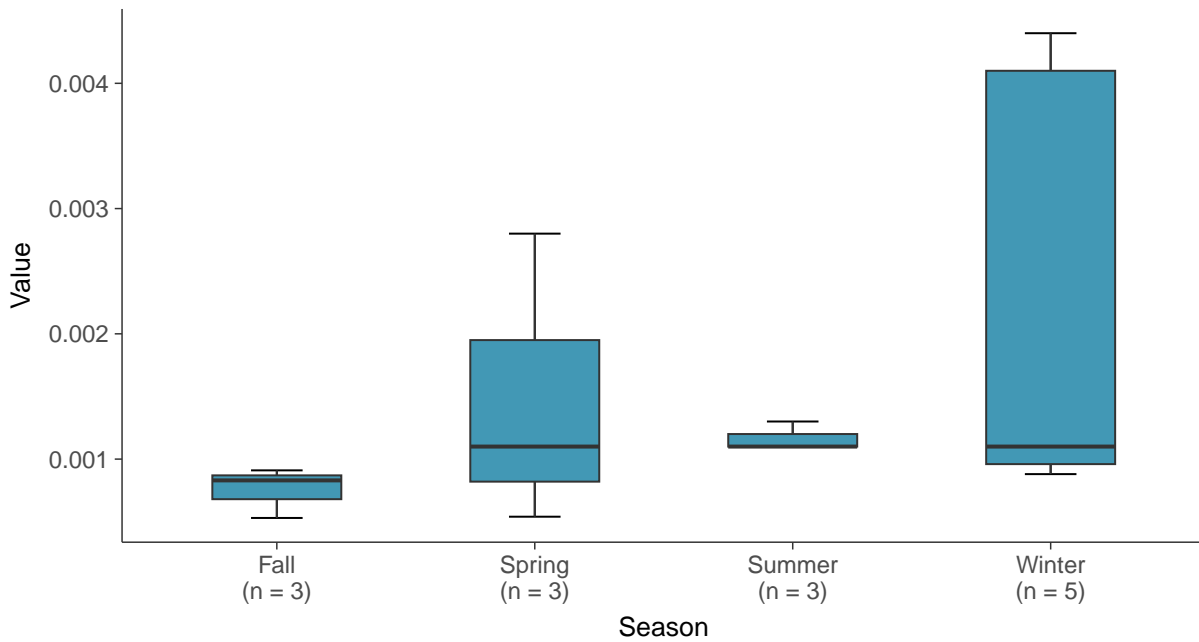
Boxplot

Cobalt, MW-30 (mg/L)



Boxplot by Season

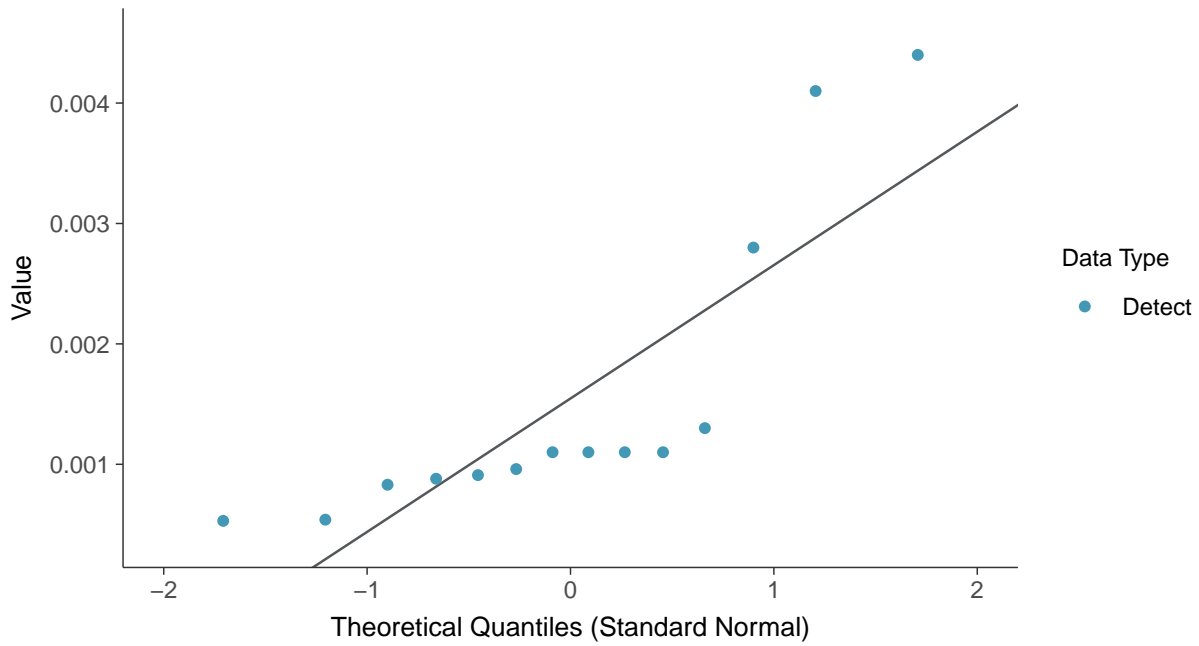
Cobalt, MW-30 (mg/L)





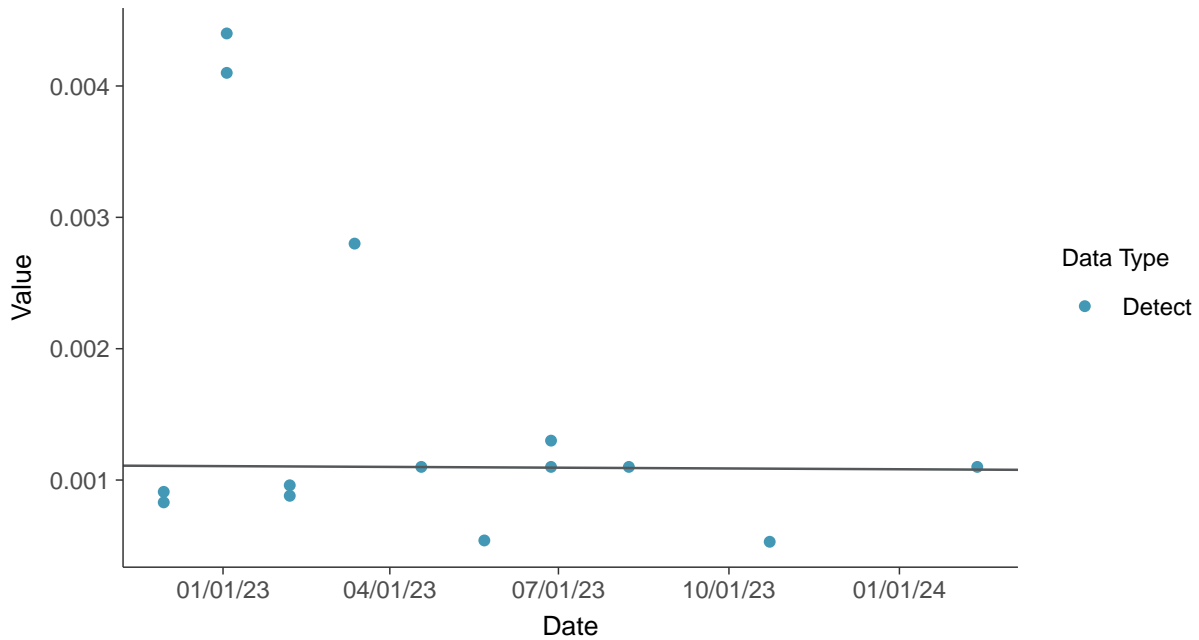
Normal Q-Q plot

Cobalt, MW-30 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Cobalt, MW-30 (mg/L)



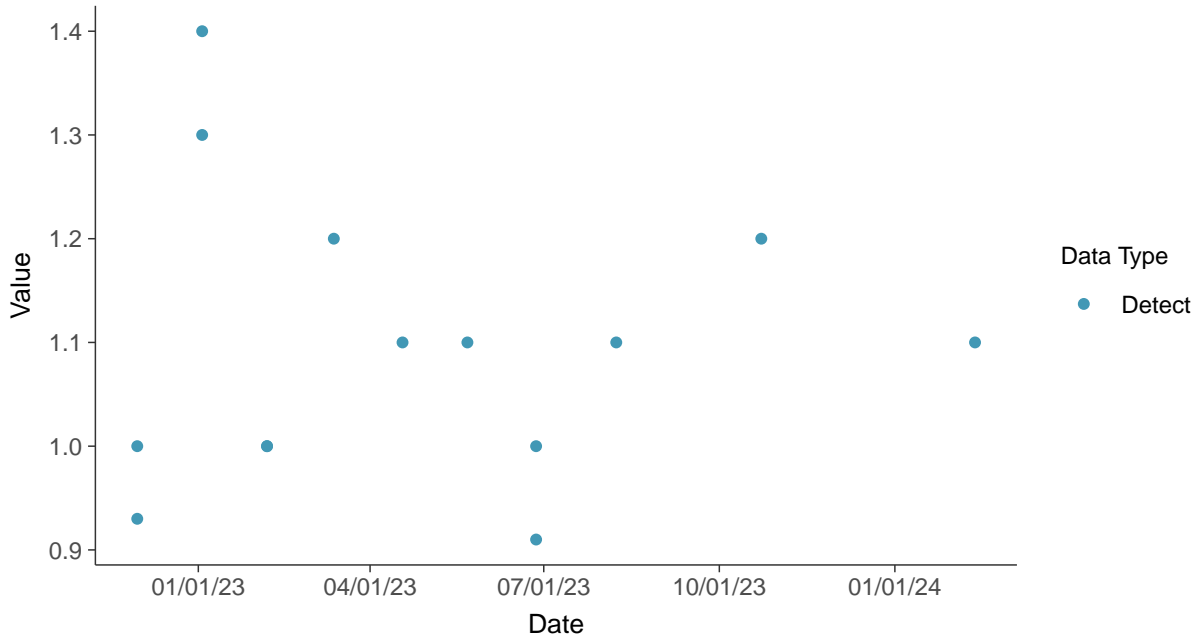


Appendix IV: Fluoride (App IV), MW-30

ID: 1_40_5_113

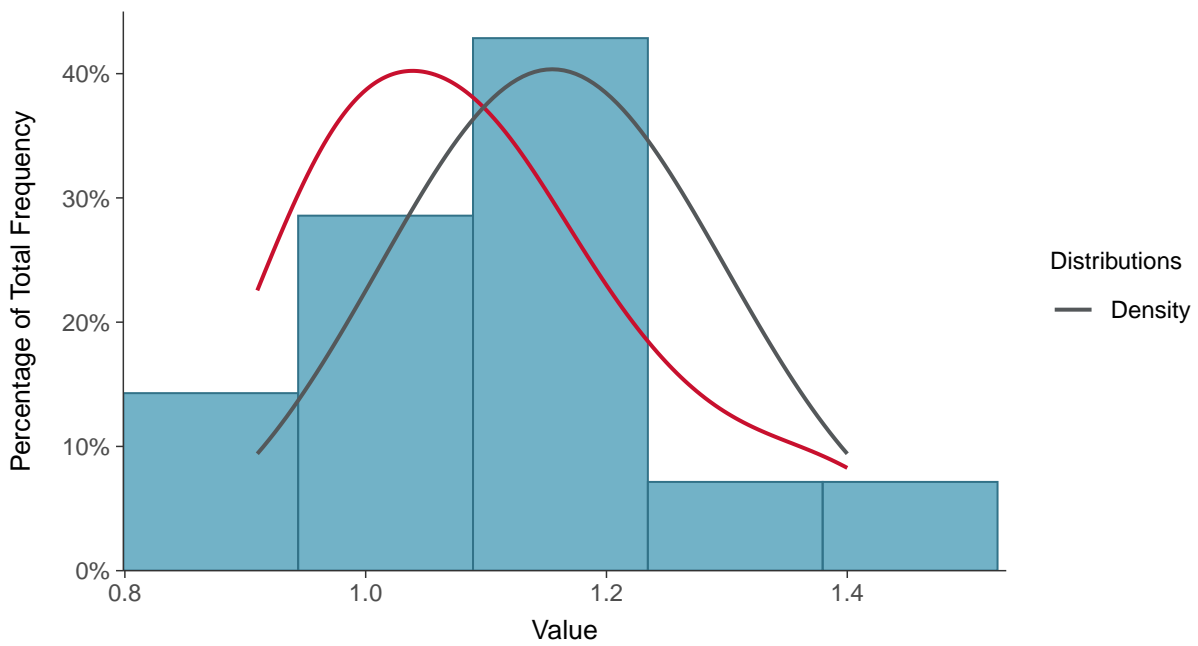
Scatter Plot

Fluoride (App IV), MW-30 (mg/L)



Histogram

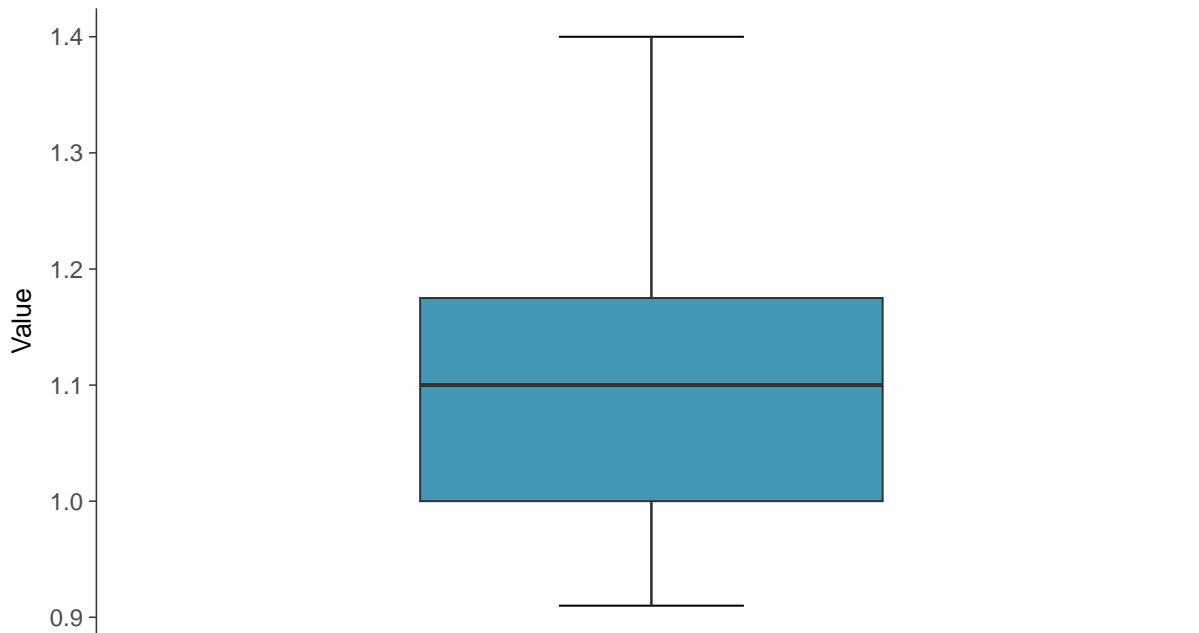
Fluoride (App IV), MW-30 (mg/L)





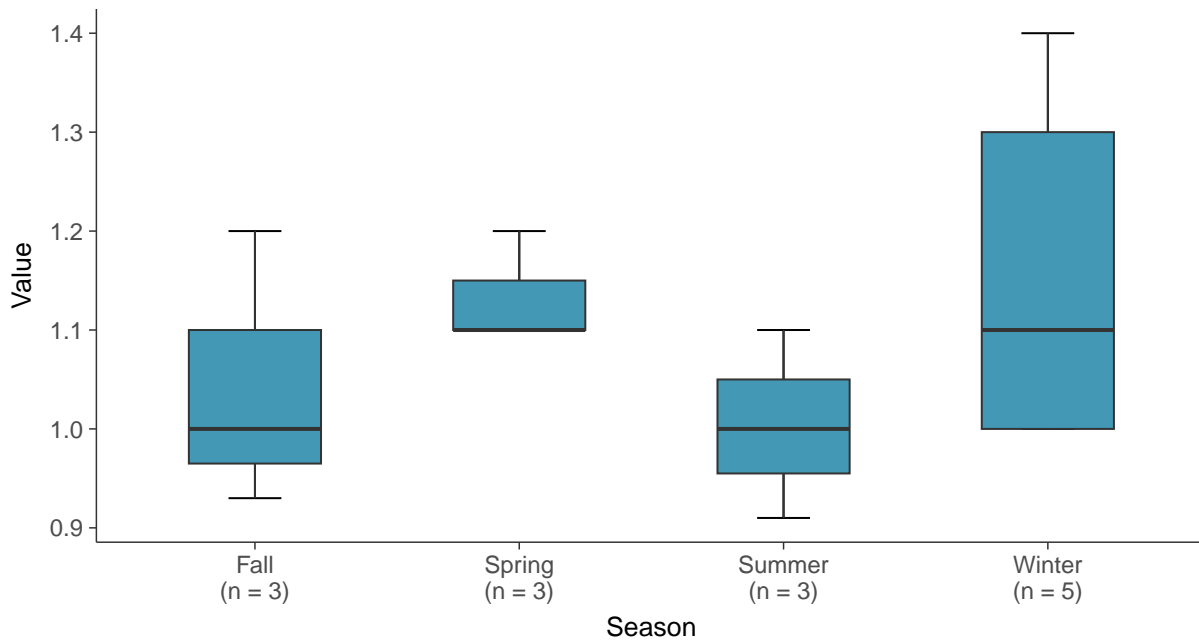
Boxplot

Fluoride (App IV), MW-30 (mg/L)



Boxplot by Season

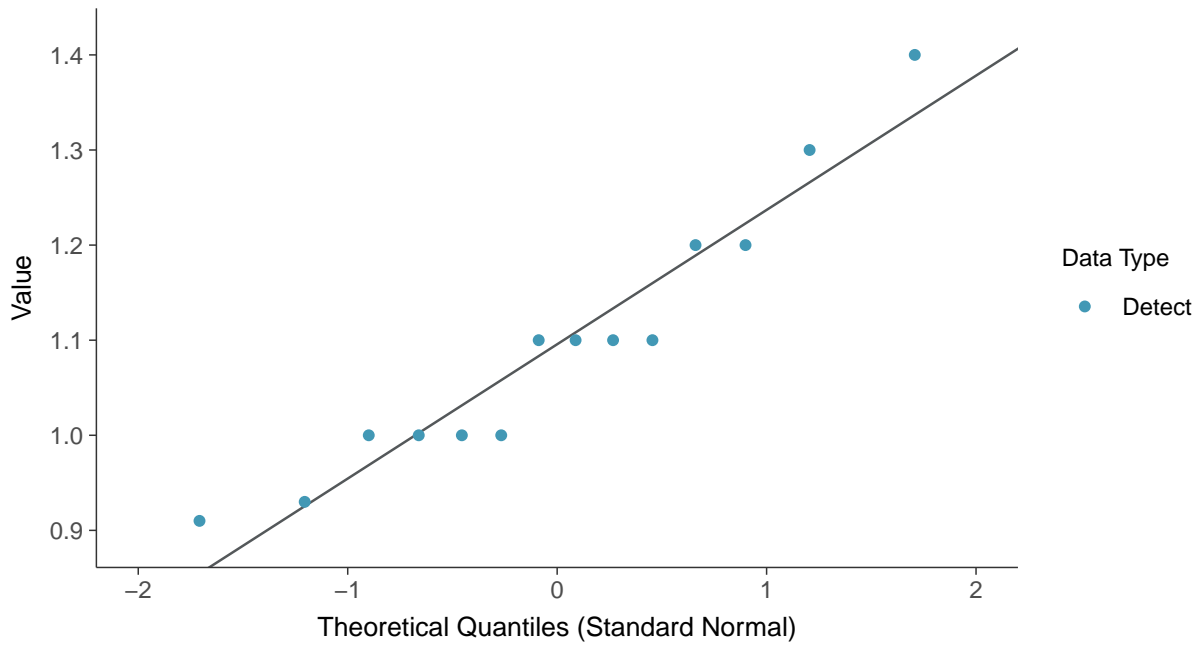
Fluoride (App IV), MW-30 (mg/L)





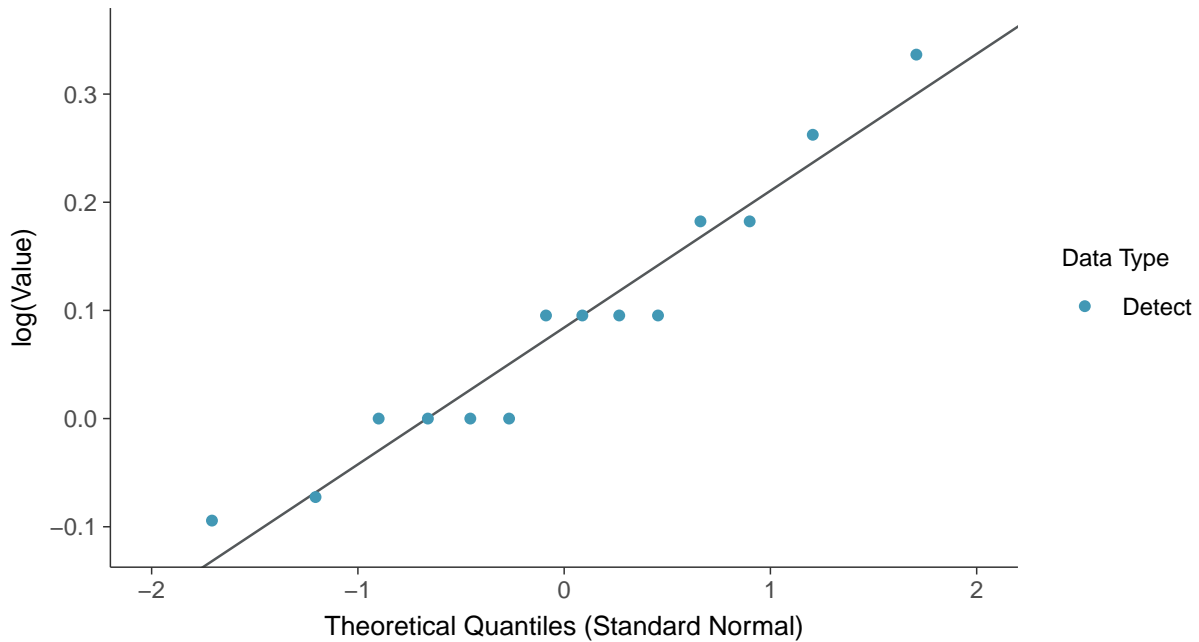
Normal Q-Q plot

Fluoride (App IV), MW-30 (mg/L)



Lognormal Q-Q plot

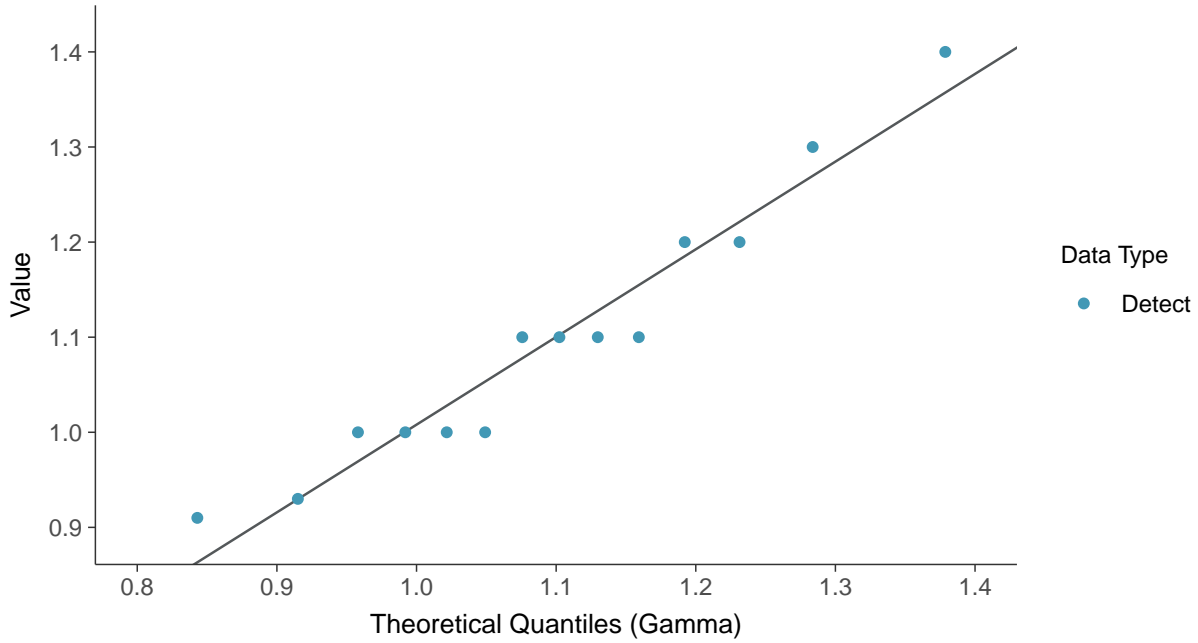
Fluoride (App IV), MW-30 (mg/L)





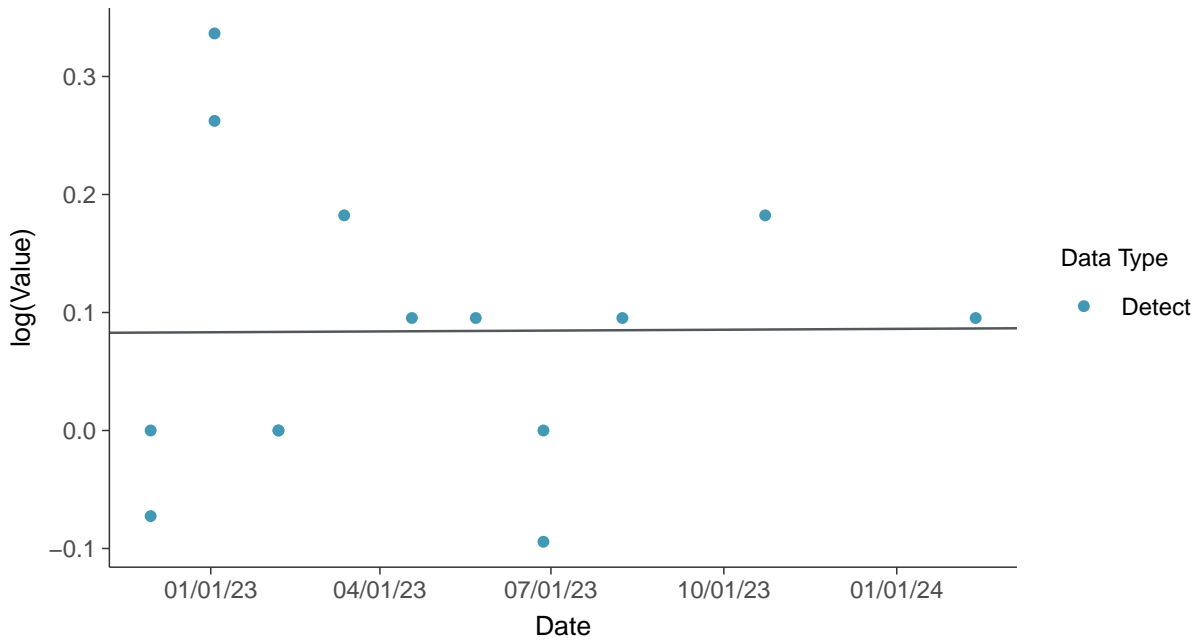
Gamma Q-Q plot

Fluoride (App IV), MW-30 (mg/L)



Trend Regression: Lognormal MLE

Fluoride (App IV), MW-30 (mg/L)



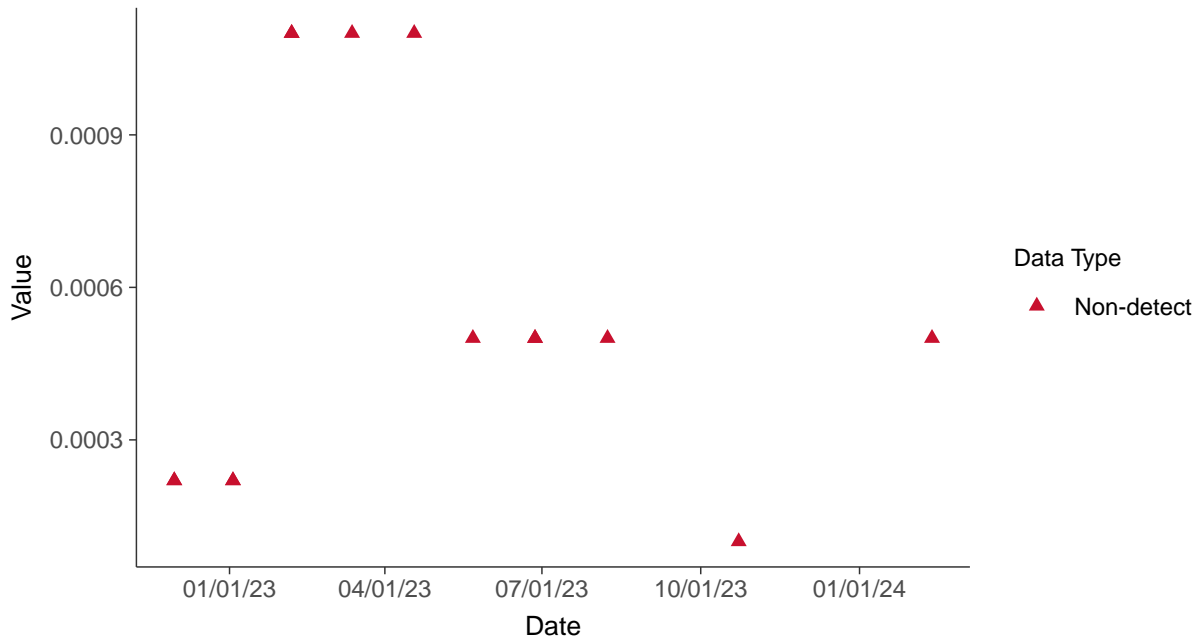


Appendix IV: Lead, MW-30

ID: 1_40_5_115

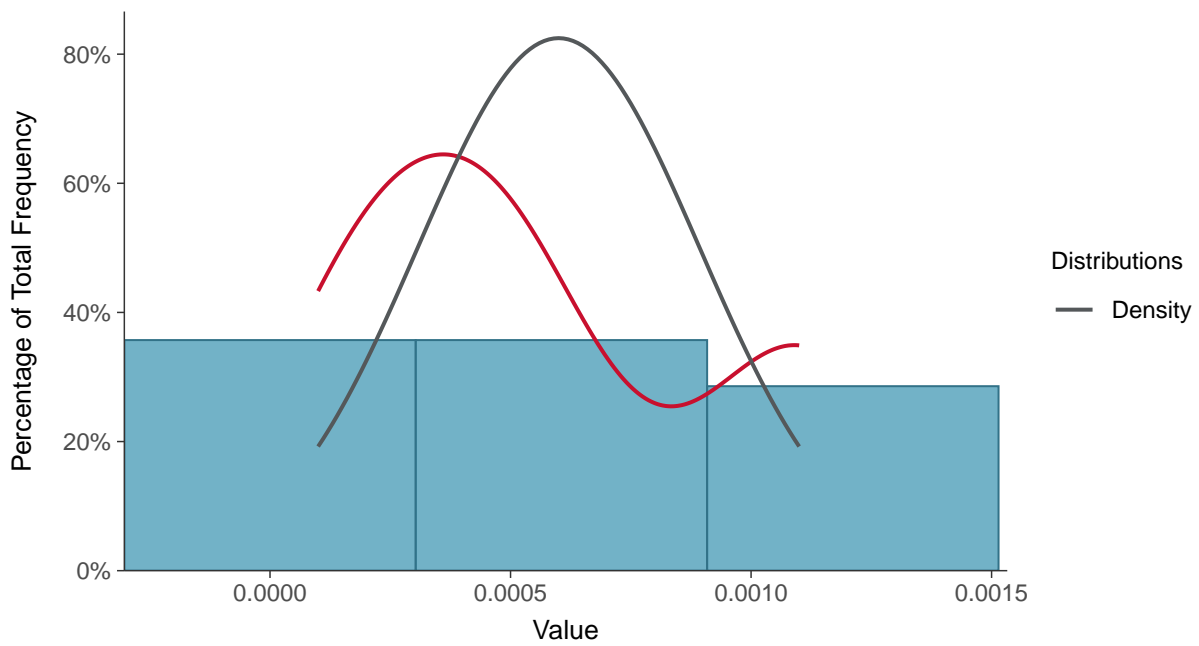
Scatter Plot

Lead, MW-30 (mg/L)



Histogram

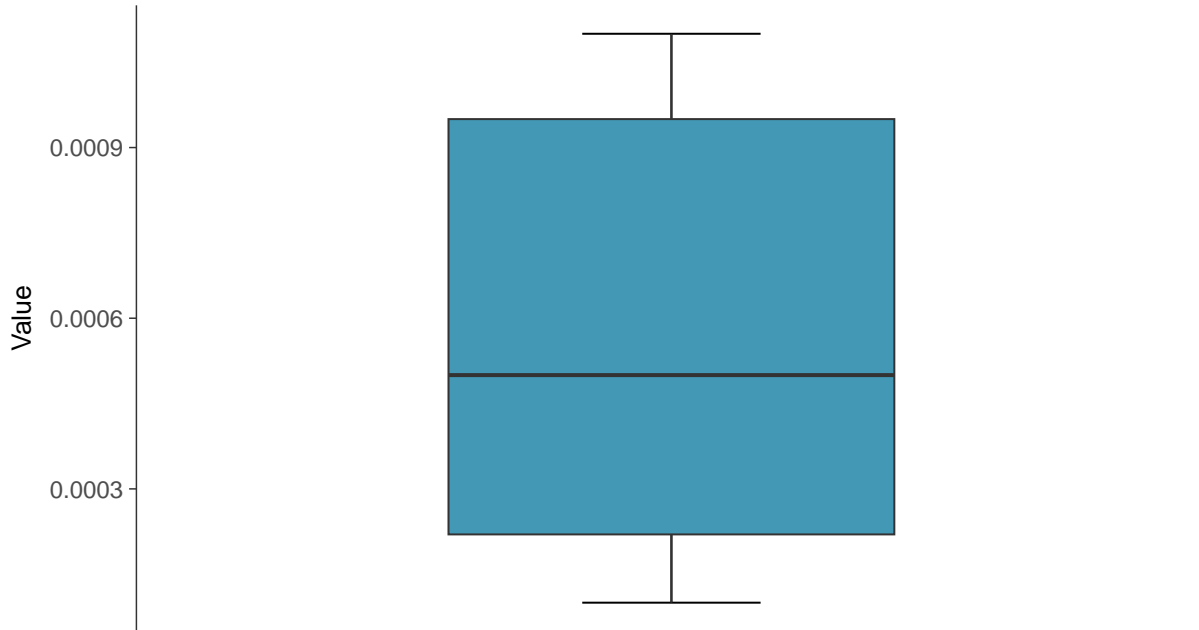
Lead, MW-30 (mg/L)





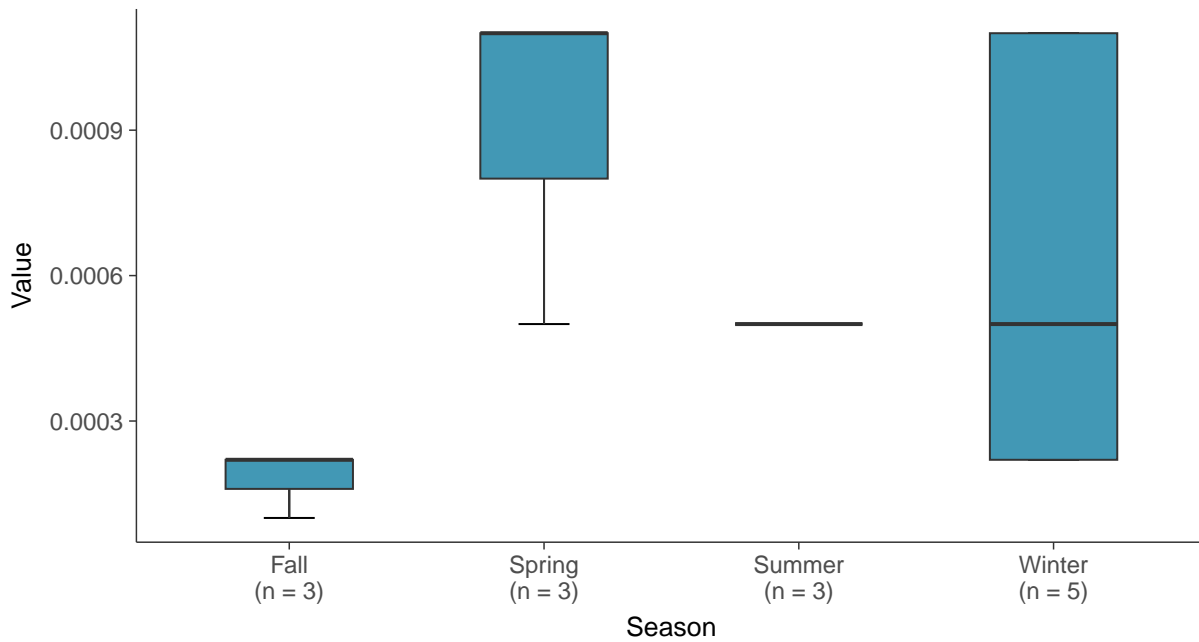
Boxplot

Lead, MW-30 (mg/L)



Boxplot by Season

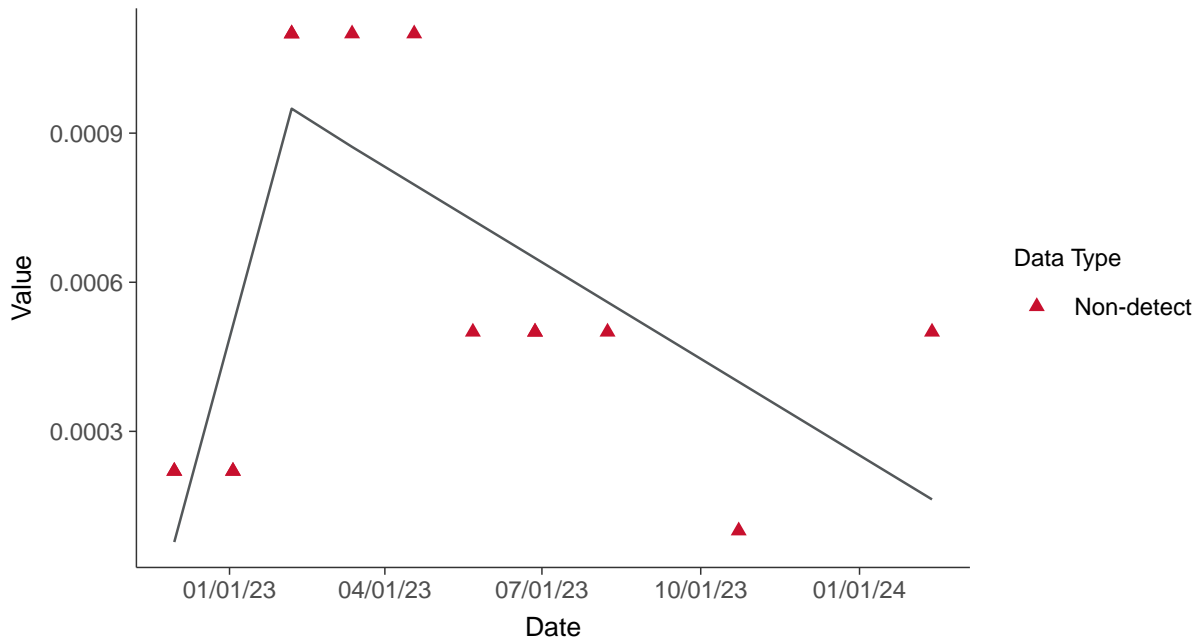
Lead, MW-30 (mg/L)





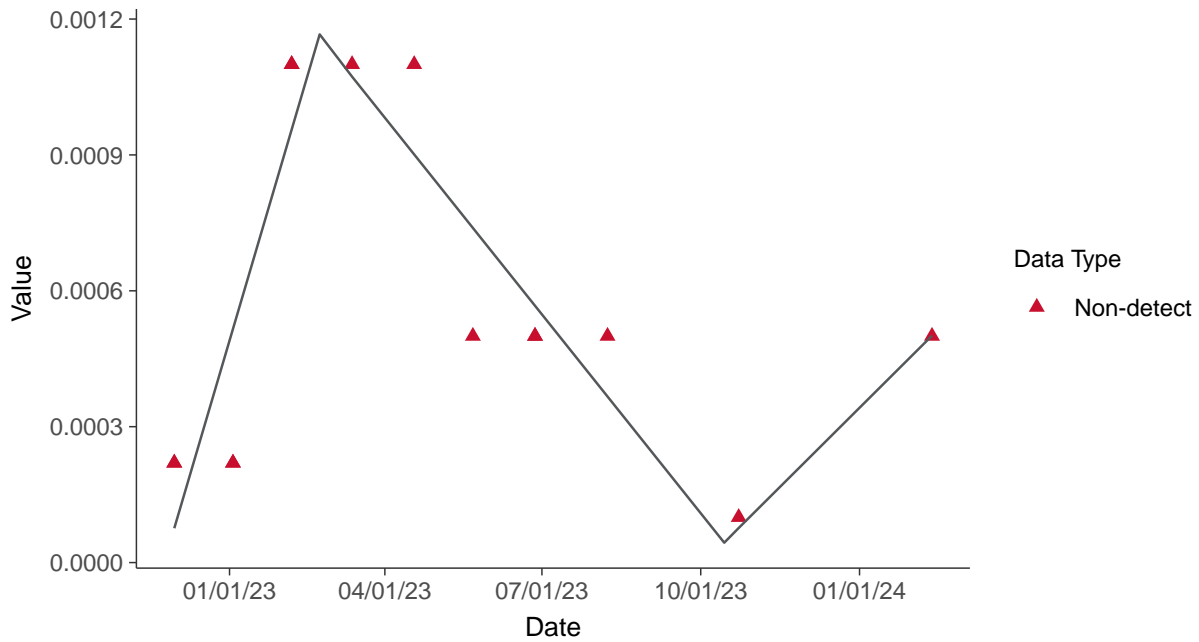
Trend Regression: Piecewise Linear-Linear

Lead, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

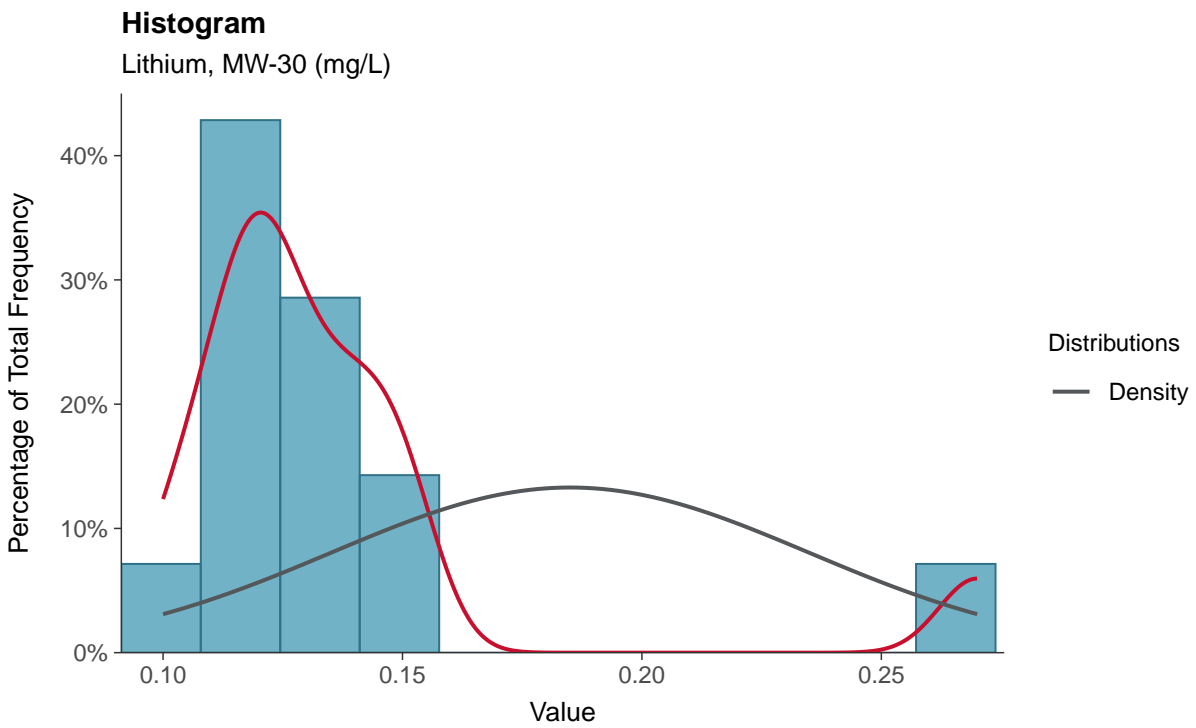
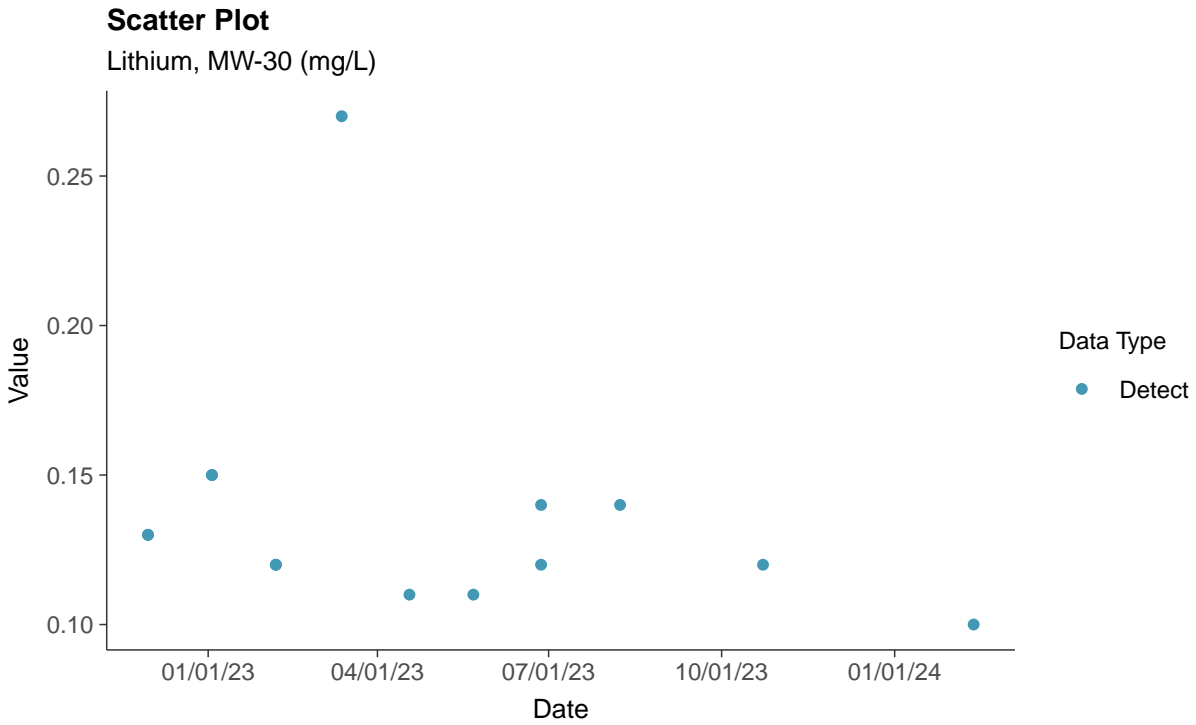
Lead, MW-30 (mg/L)





Appendix IV: Lithium, MW-30

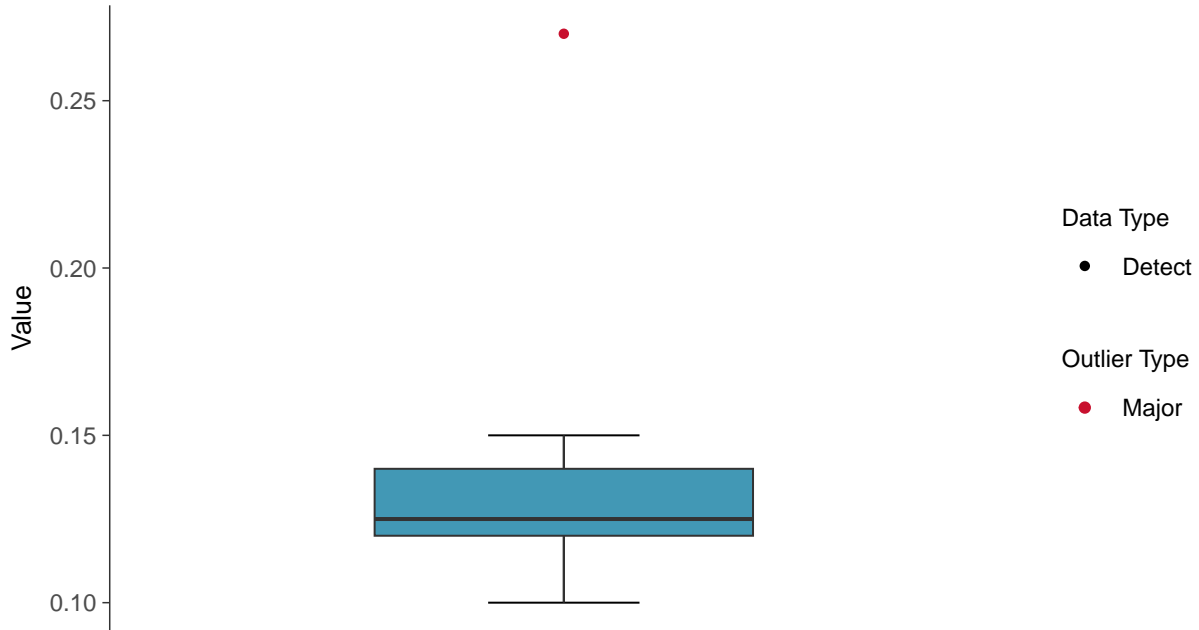
ID: 1_40_5_116





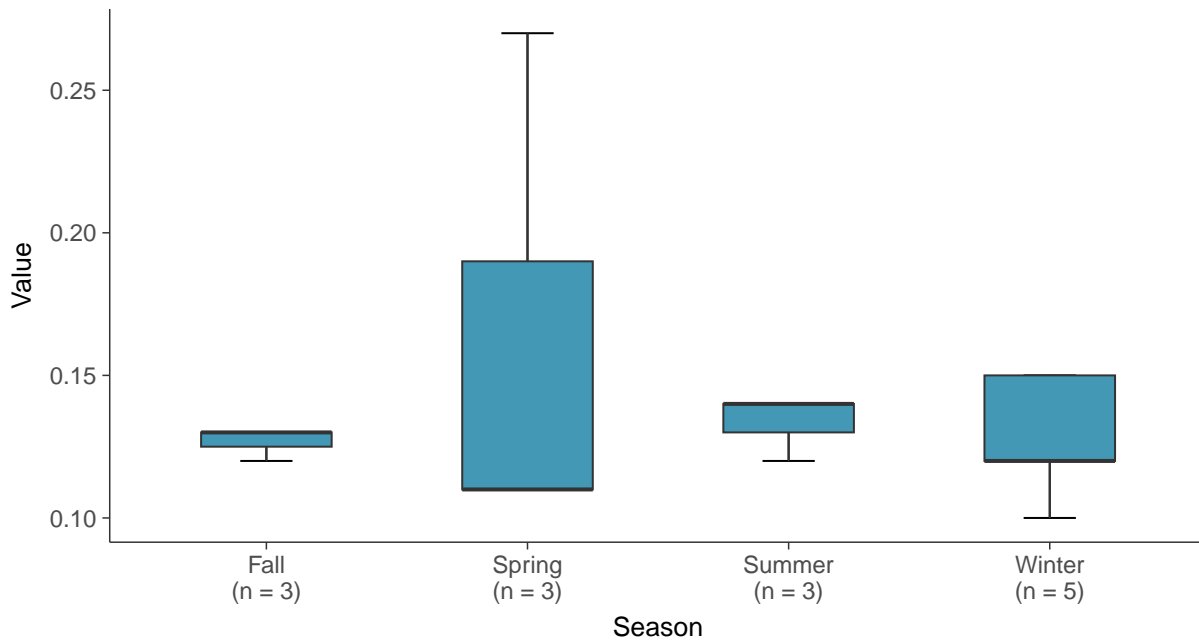
Boxplot

Lithium, MW-30 (mg/L)



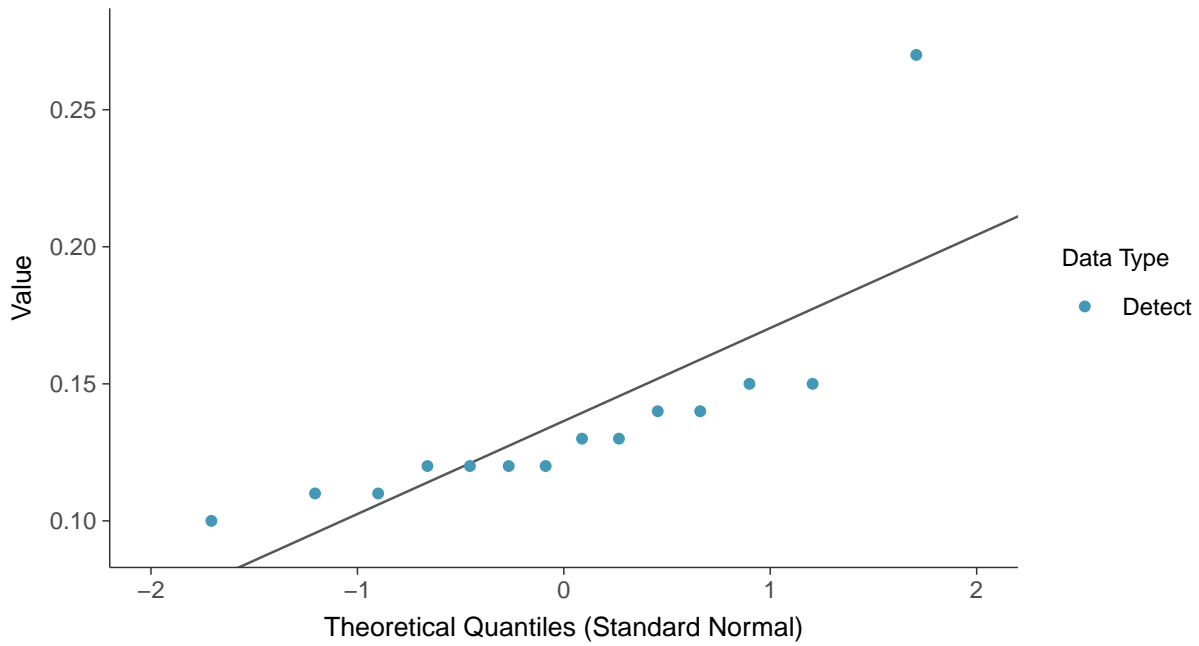
Boxplot by Season

Lithium, MW-30 (mg/L)

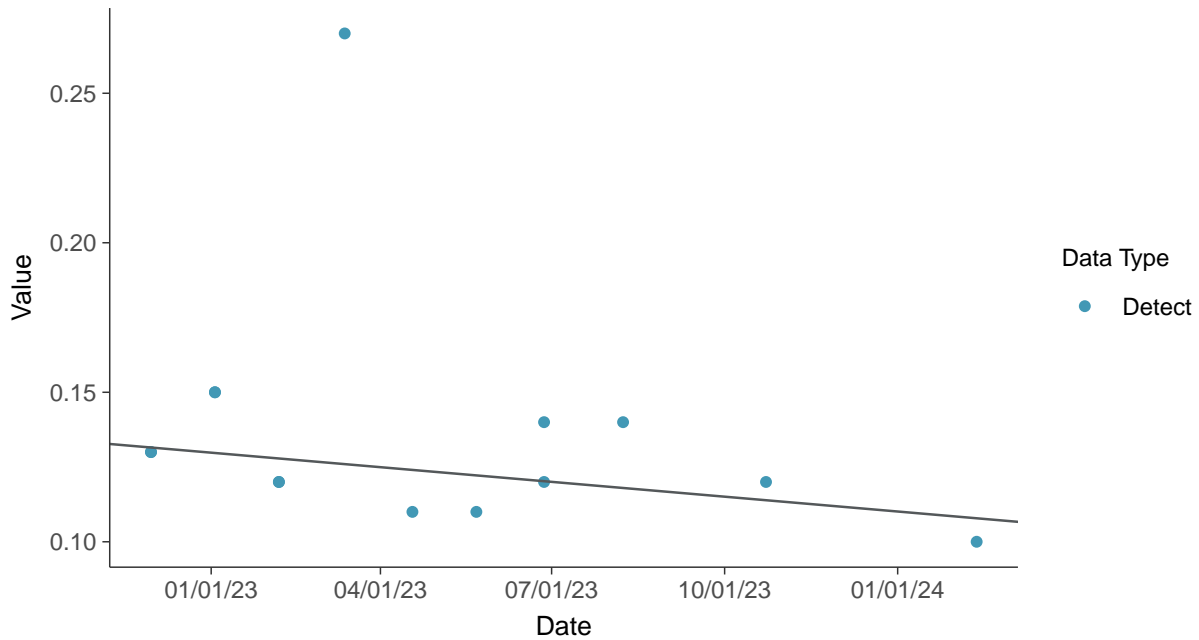




Normal Q-Q plot
Lithium, MW-30 (mg/L)



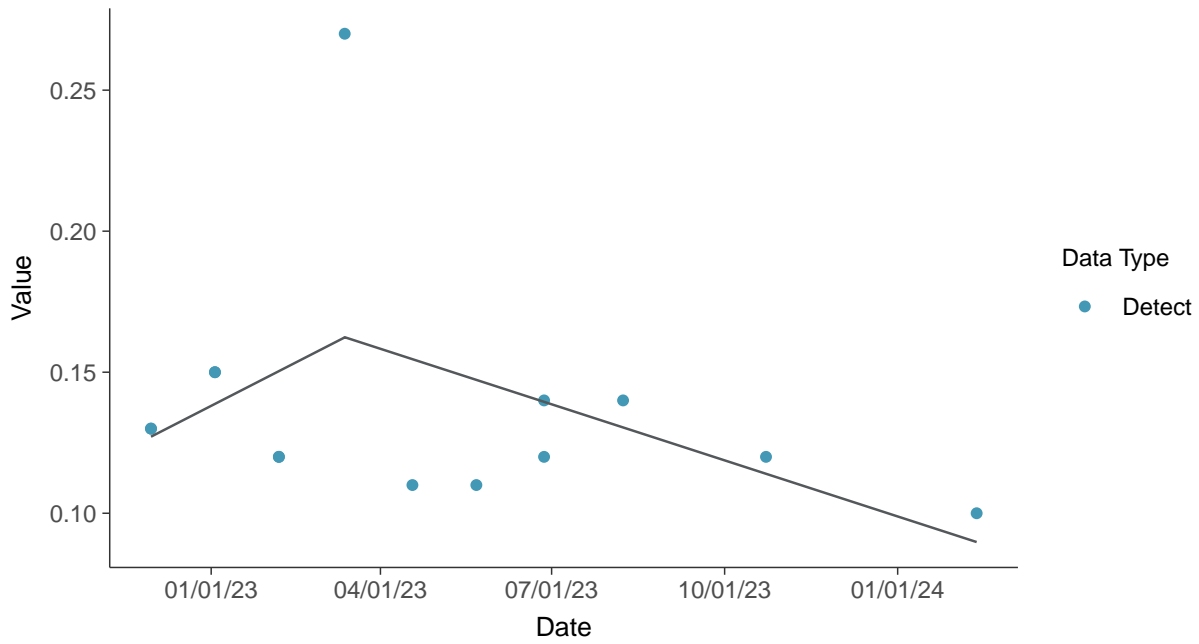
Trend Regression: Mann-Kendall/Theil-Sen Estimate
Lithium, MW-30 (mg/L)





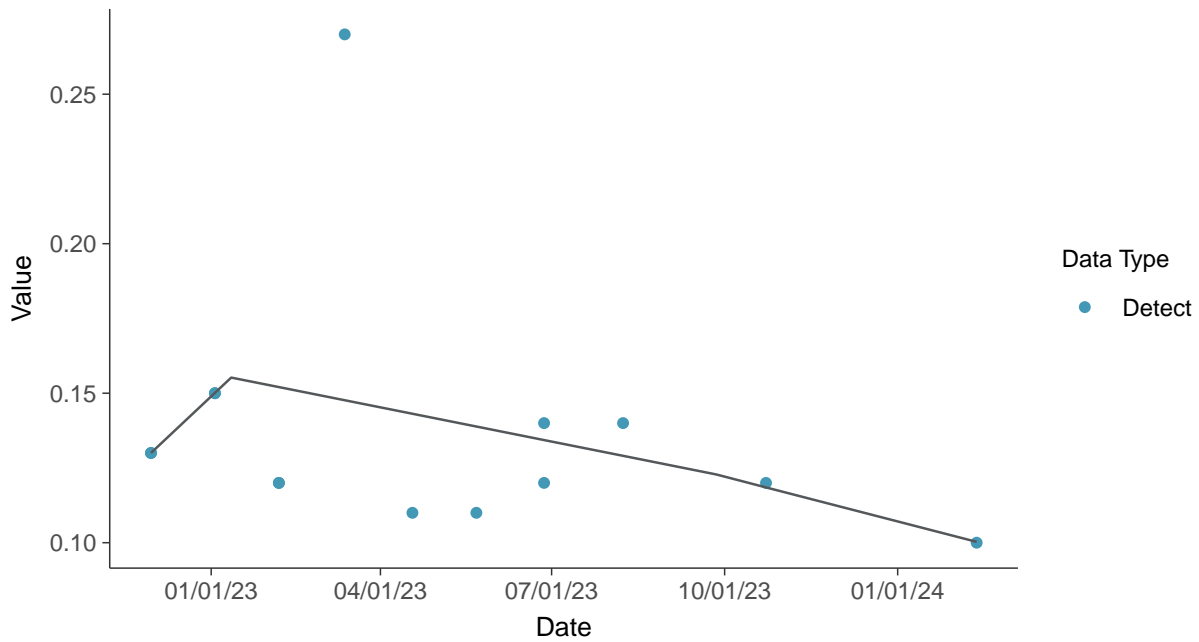
Trend Regression: Piecewise Linear-Linear

Lithium, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

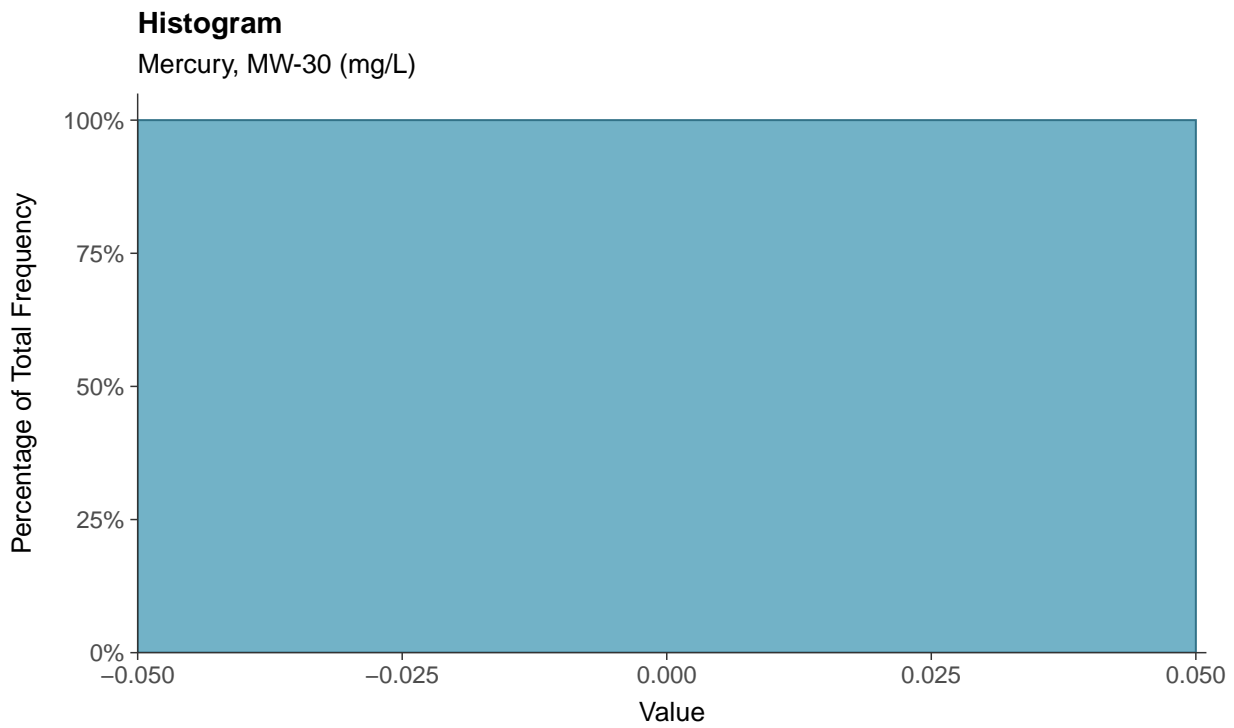
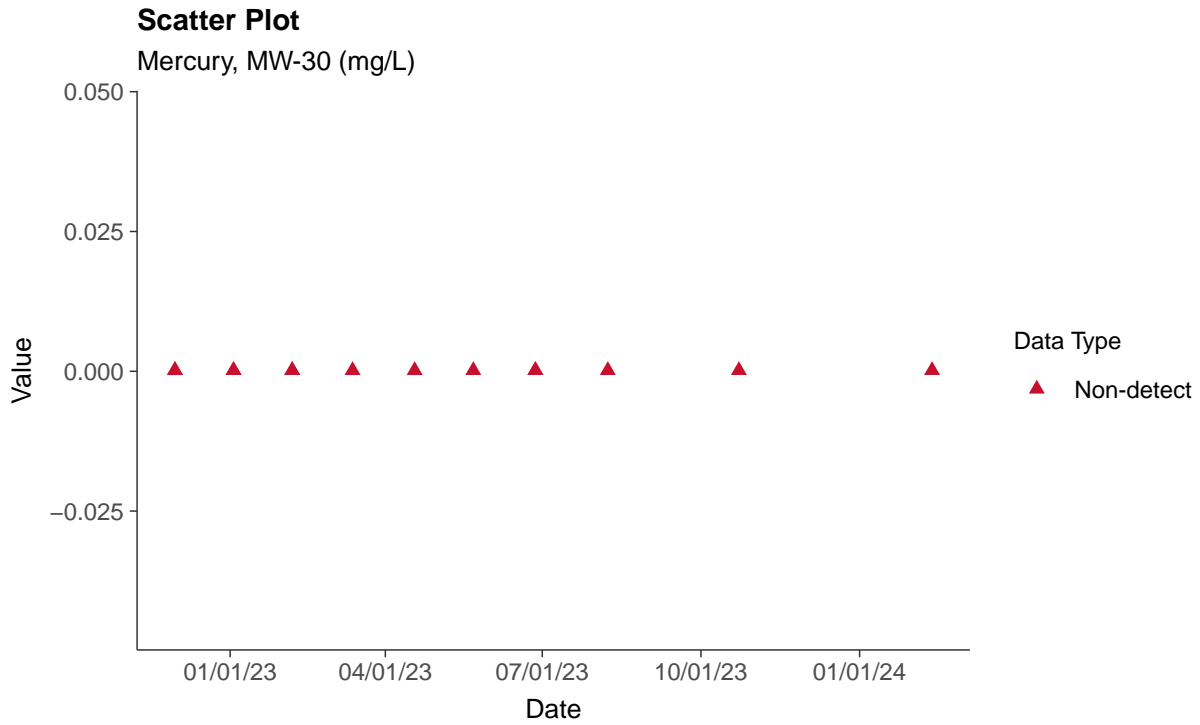
Lithium, MW-30 (mg/L)





Appendix IV: Mercury, MW-30

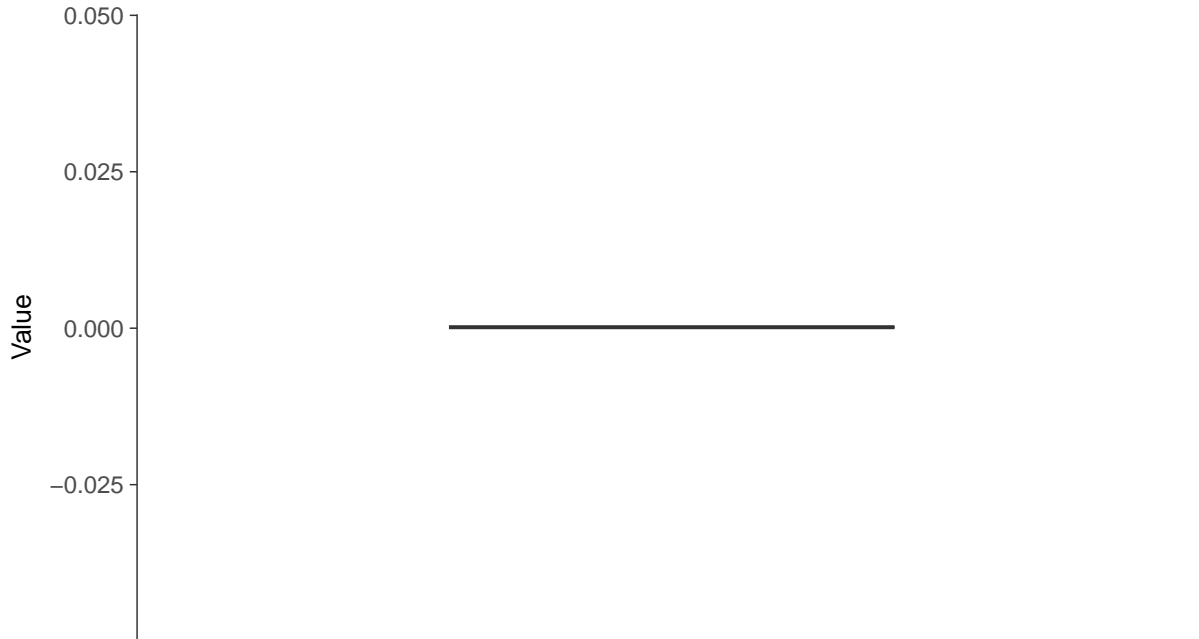
ID: 1_40_5_117





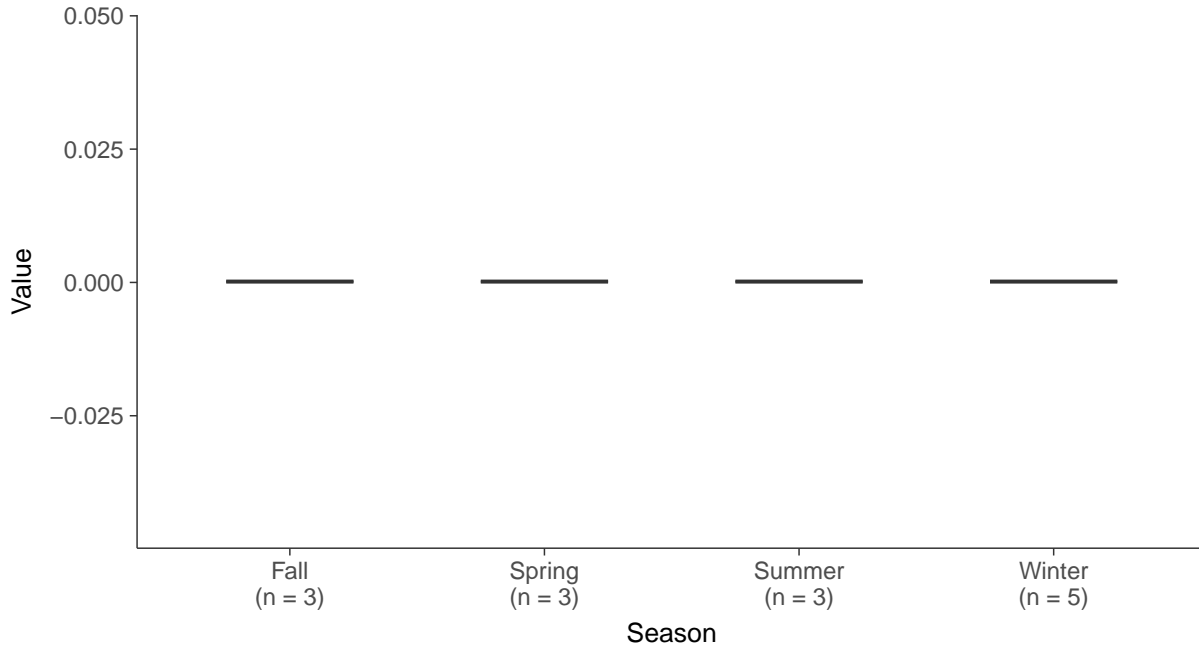
Boxplot

Mercury, MW-30 (mg/L)



Boxplot by Season

Mercury, MW-30 (mg/L)



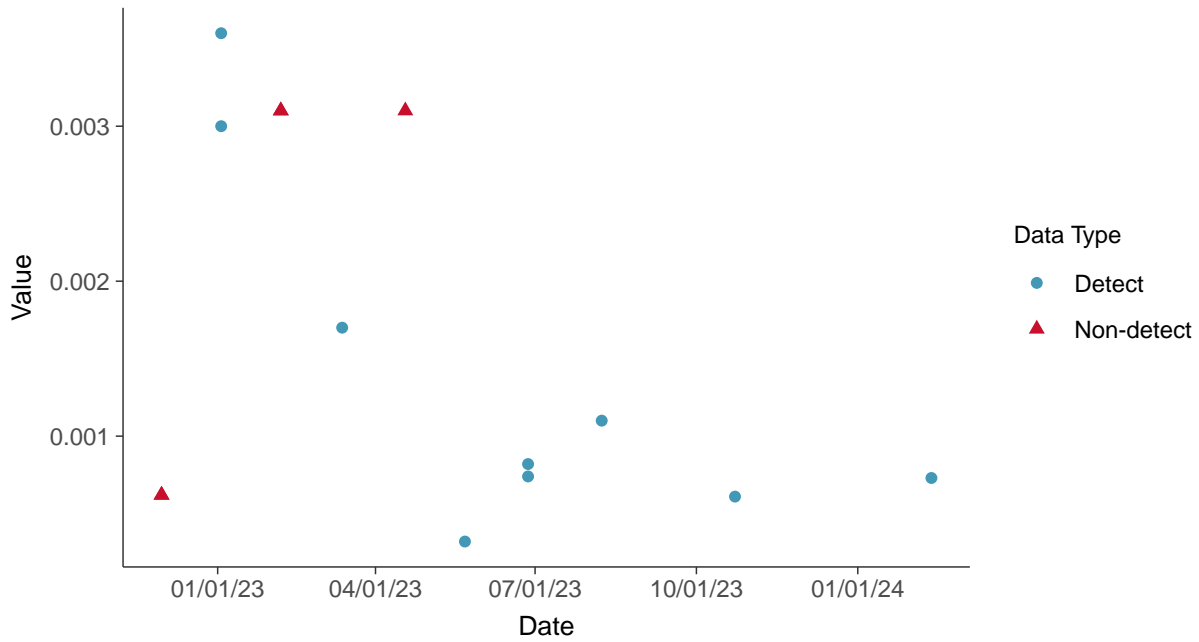


Appendix IV: Molybdenum, MW-30

ID: 1_40_5_118

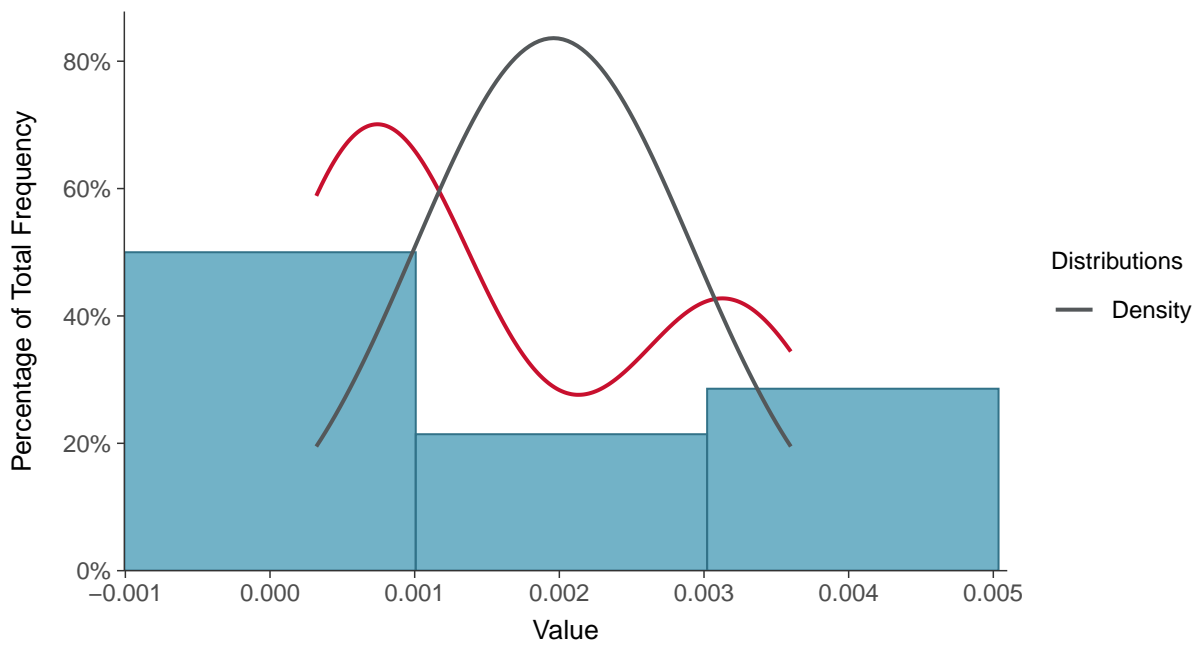
Scatter Plot

Molybdenum, MW-30 (mg/L)



Histogram

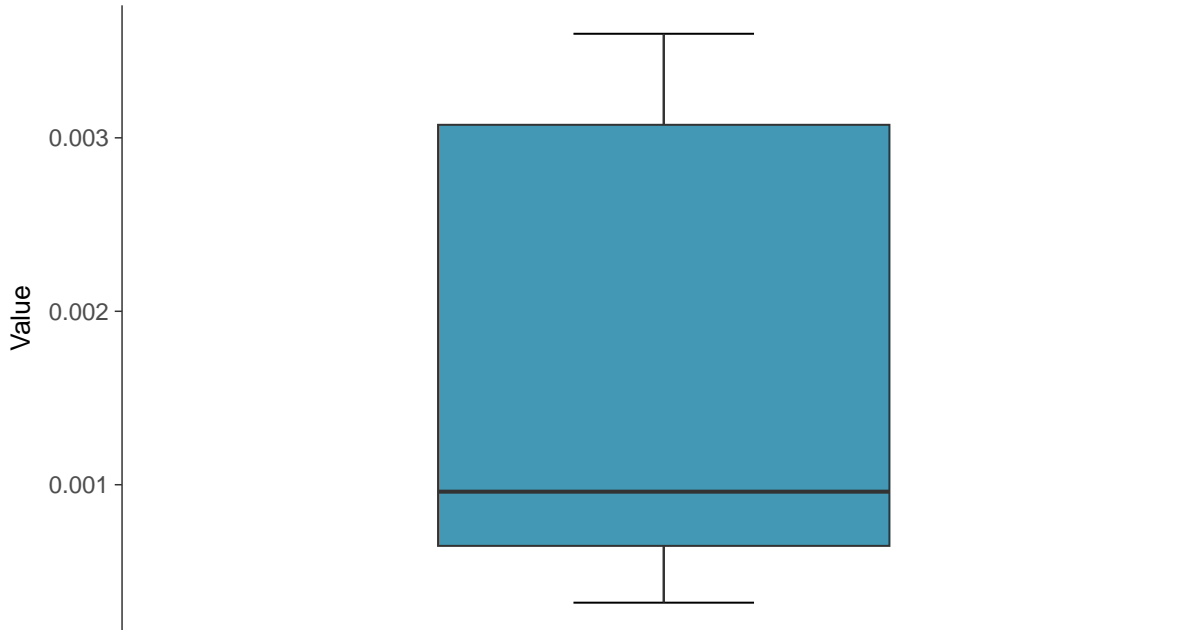
Molybdenum, MW-30 (mg/L)





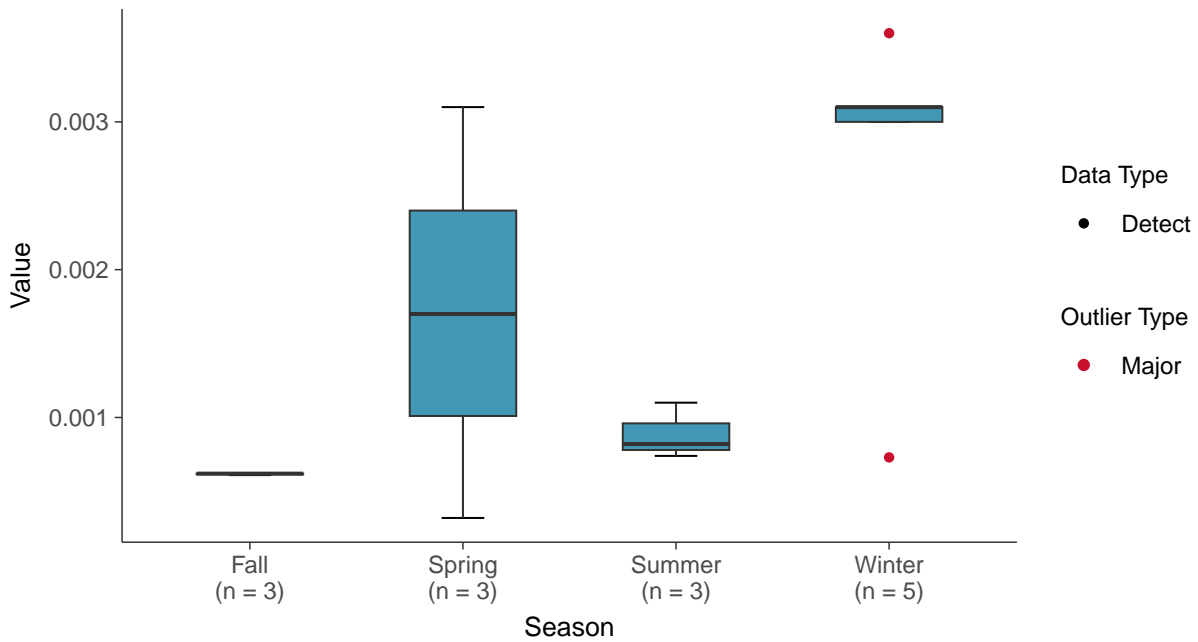
Boxplot

Molybdenum, MW-30 (mg/L)



Boxplot by Season

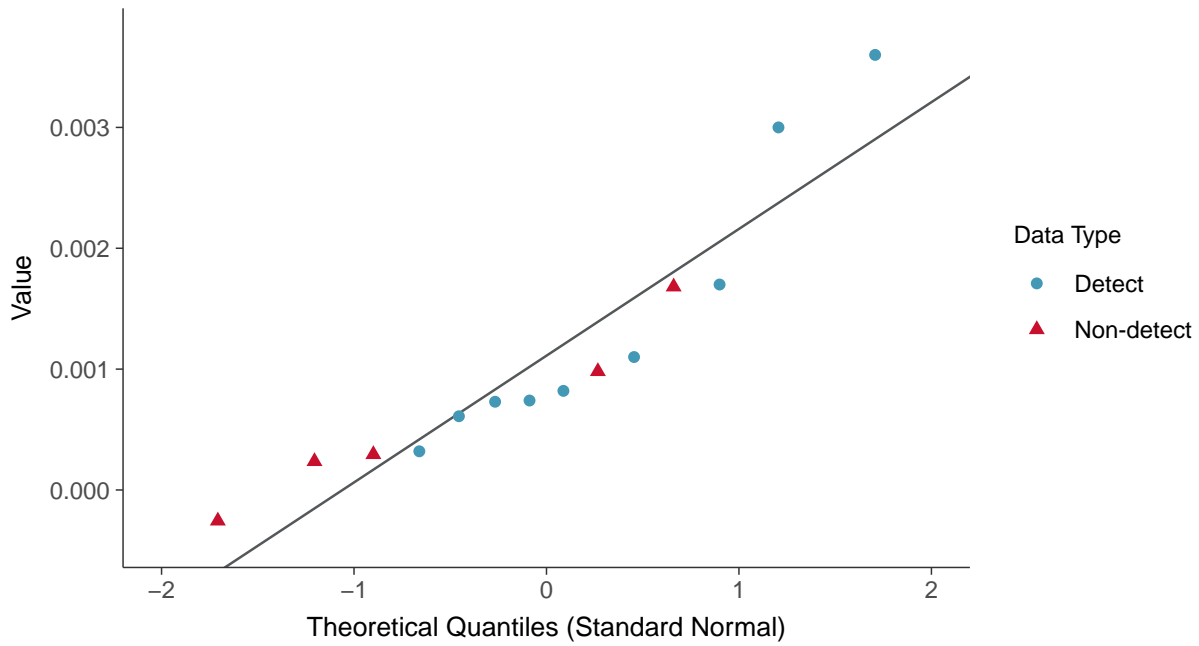
Molybdenum, MW-30 (mg/L)





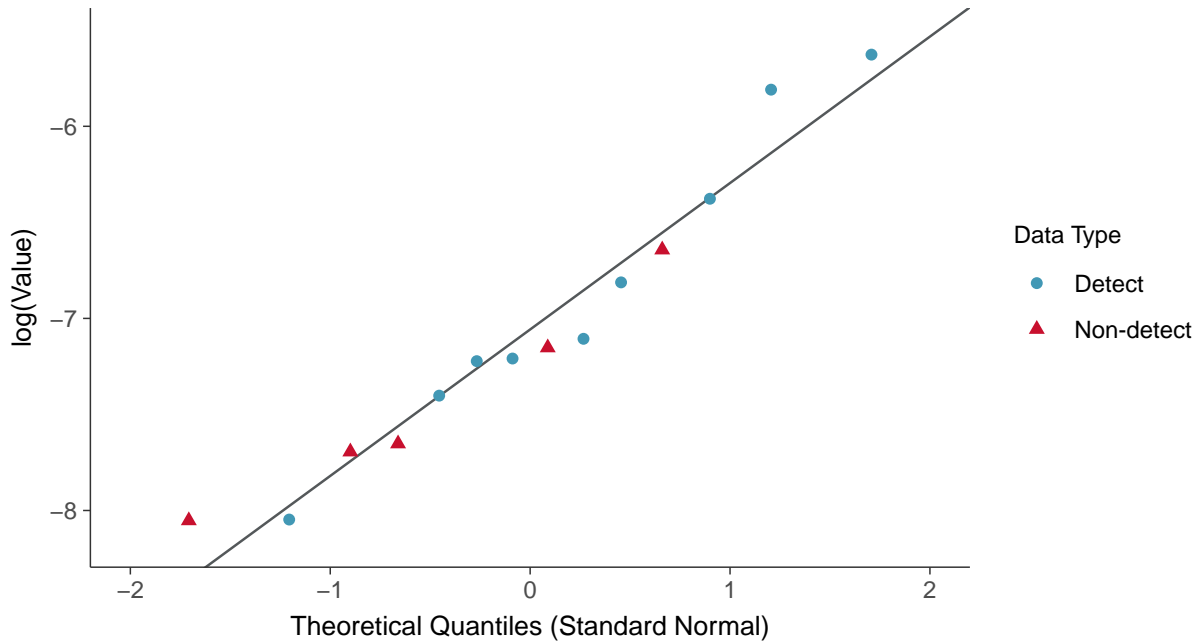
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-30 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

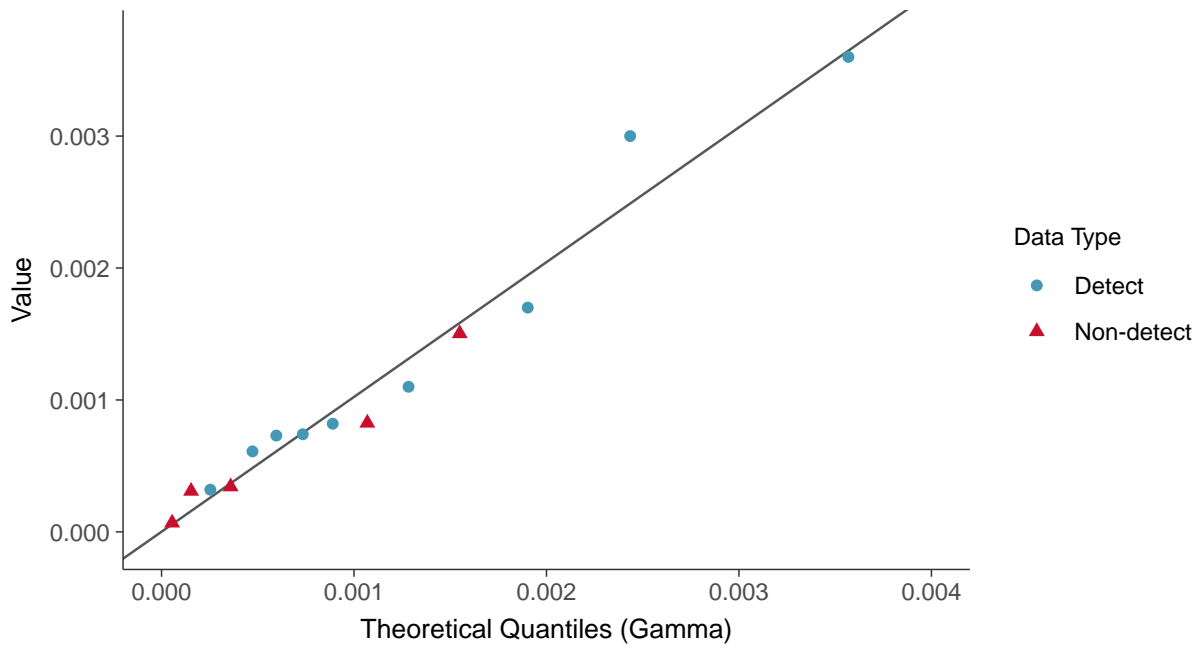
Molybdenum, MW-30 (mg/L)





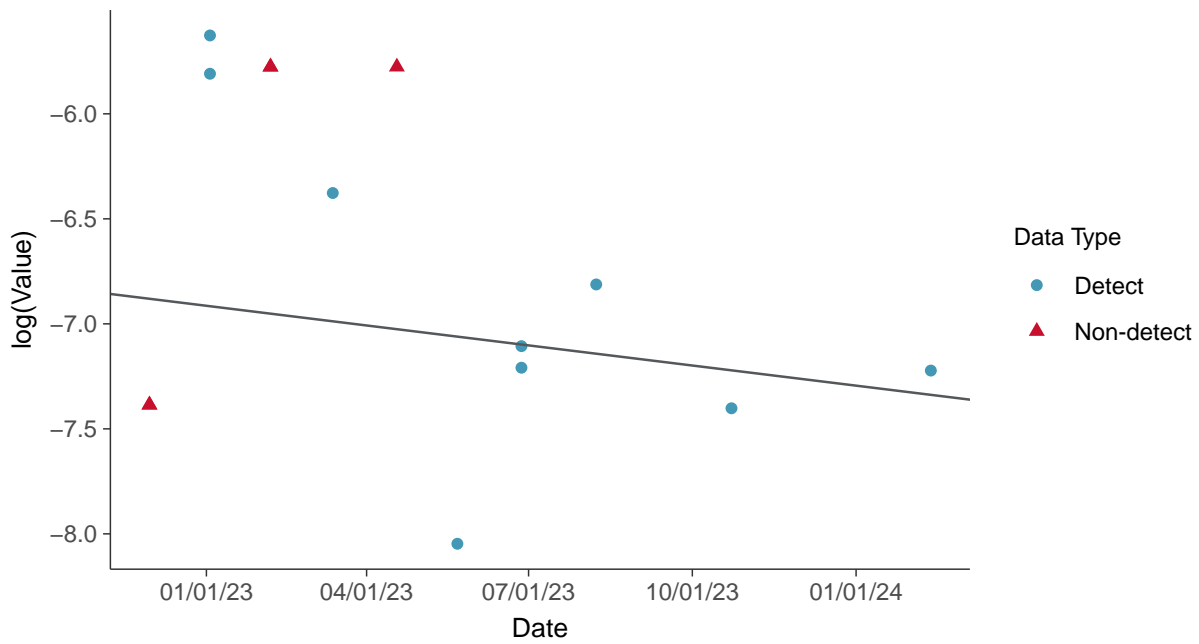
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-30 (mg/L)



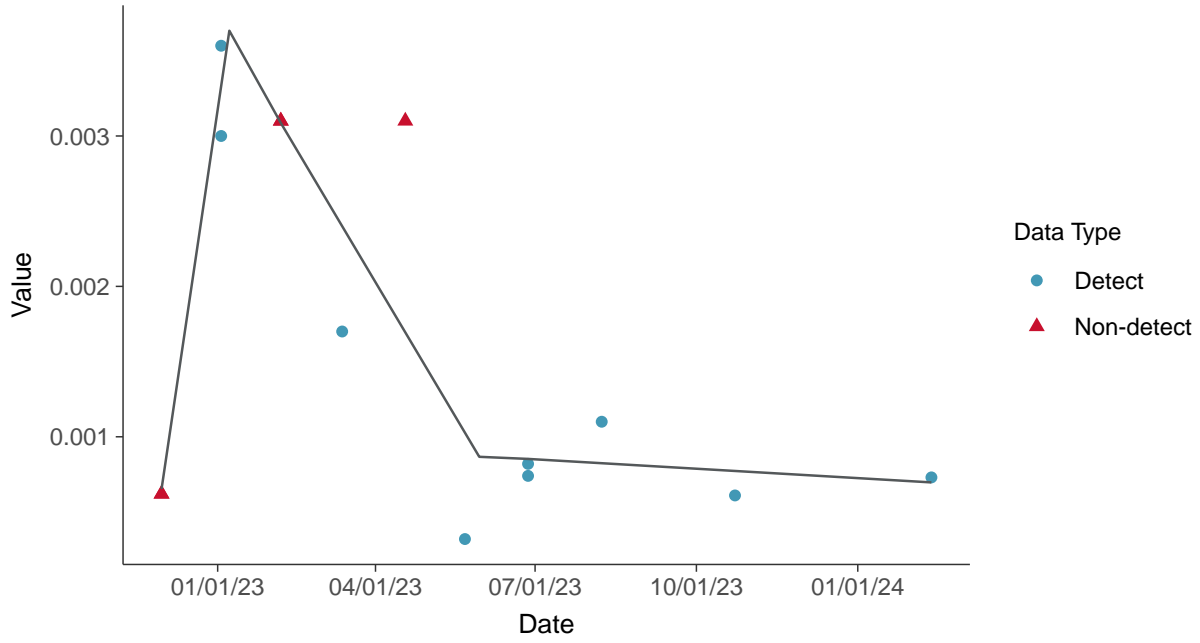
Trend Regression: Lognormal MLE

Molybdenum, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear
Molybdenum, MW-30 (mg/L)



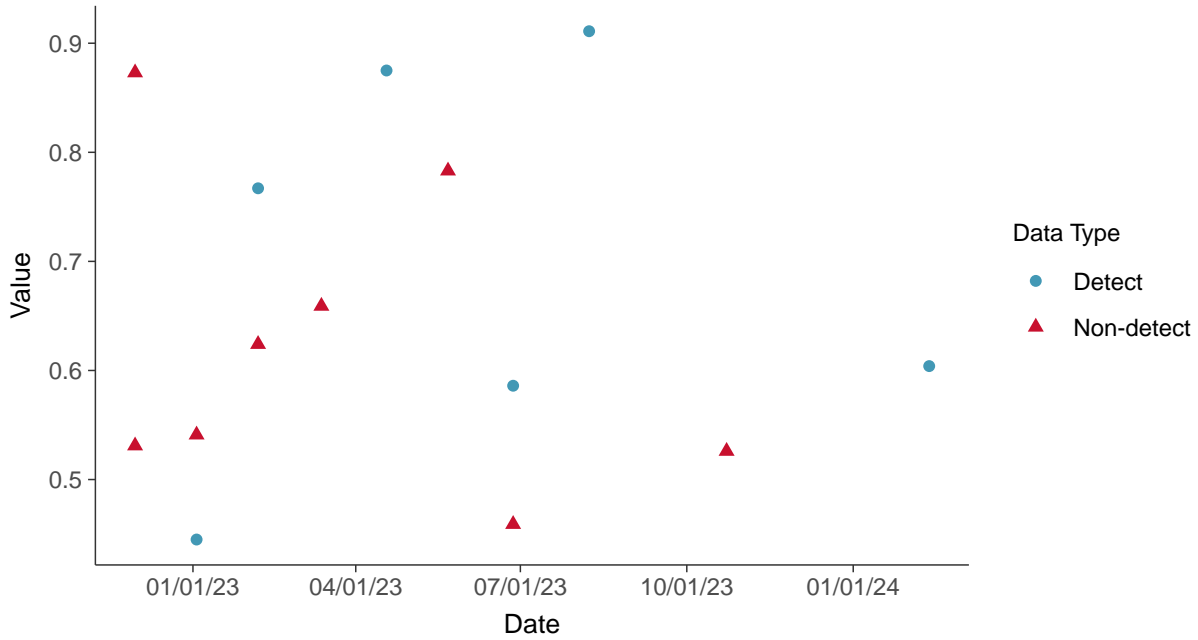


Appendix IV: Radium 226 and 228, MW-30

ID: 1_40_5_121

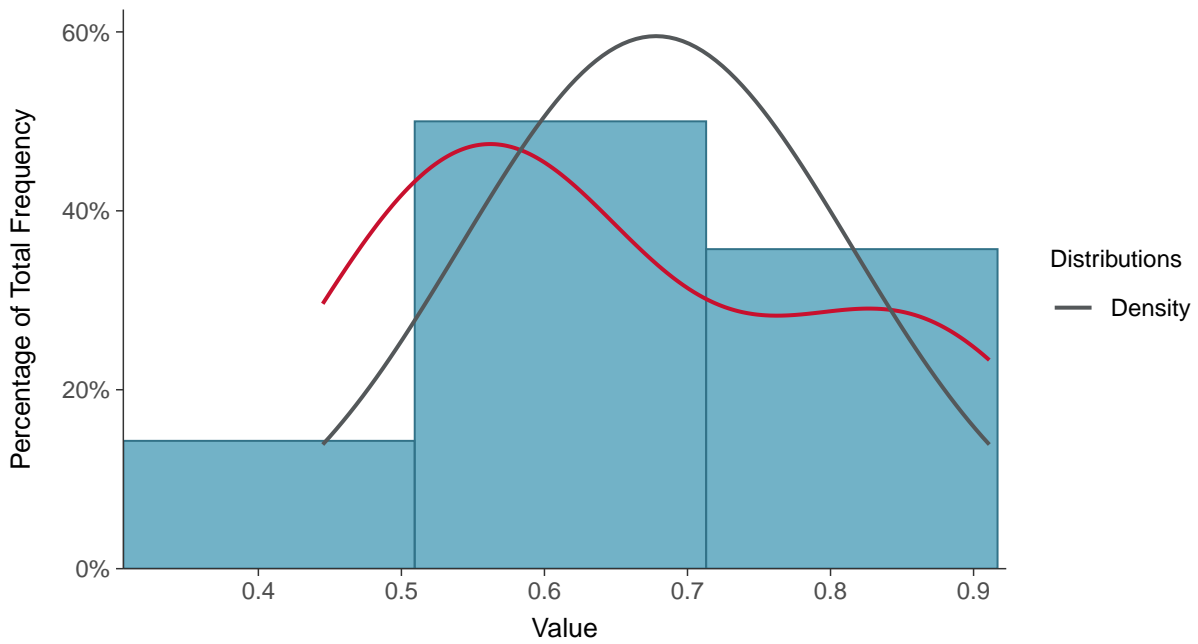
Scatter Plot

Radium 226 and 228, MW-30 (pCi/L)



Histogram

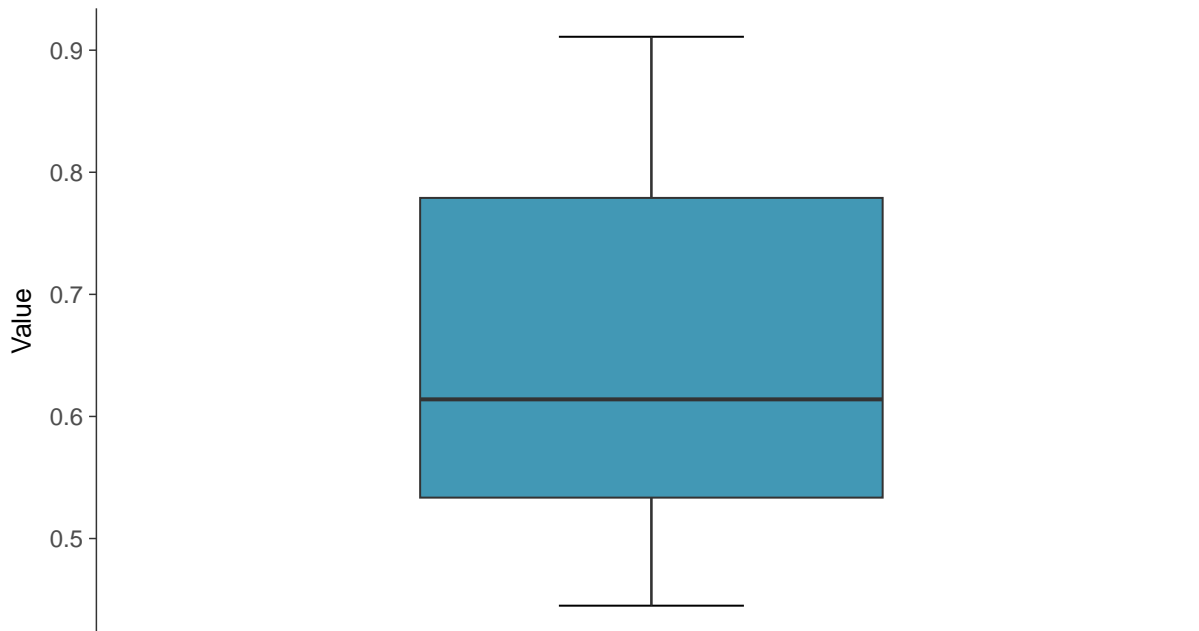
Radium 226 and 228, MW-30 (pCi/L)





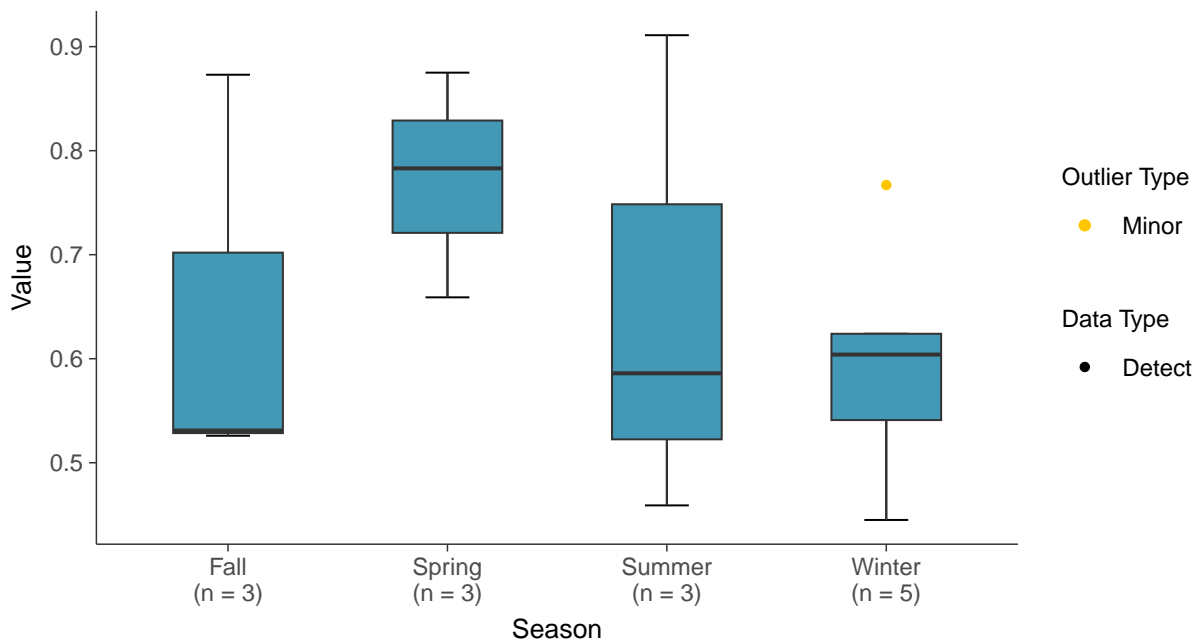
Boxplot

Radium 226 and 228, MW-30 (pCi/L)



Boxplot by Season

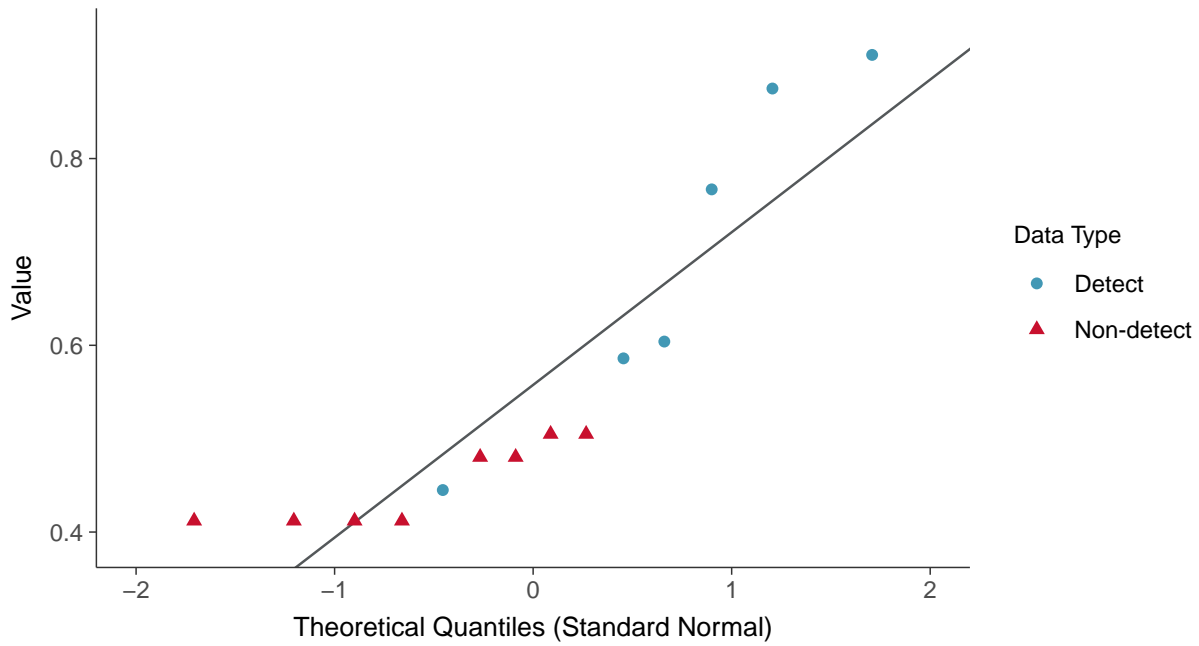
Radium 226 and 228, MW-30 (pCi/L)





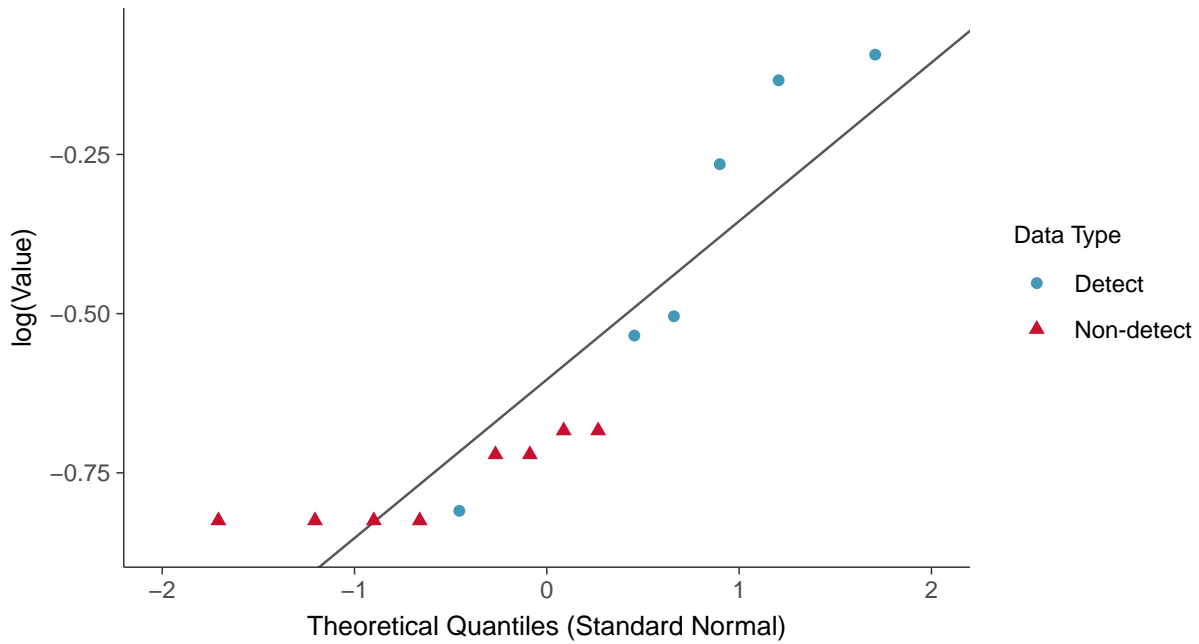
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-30 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

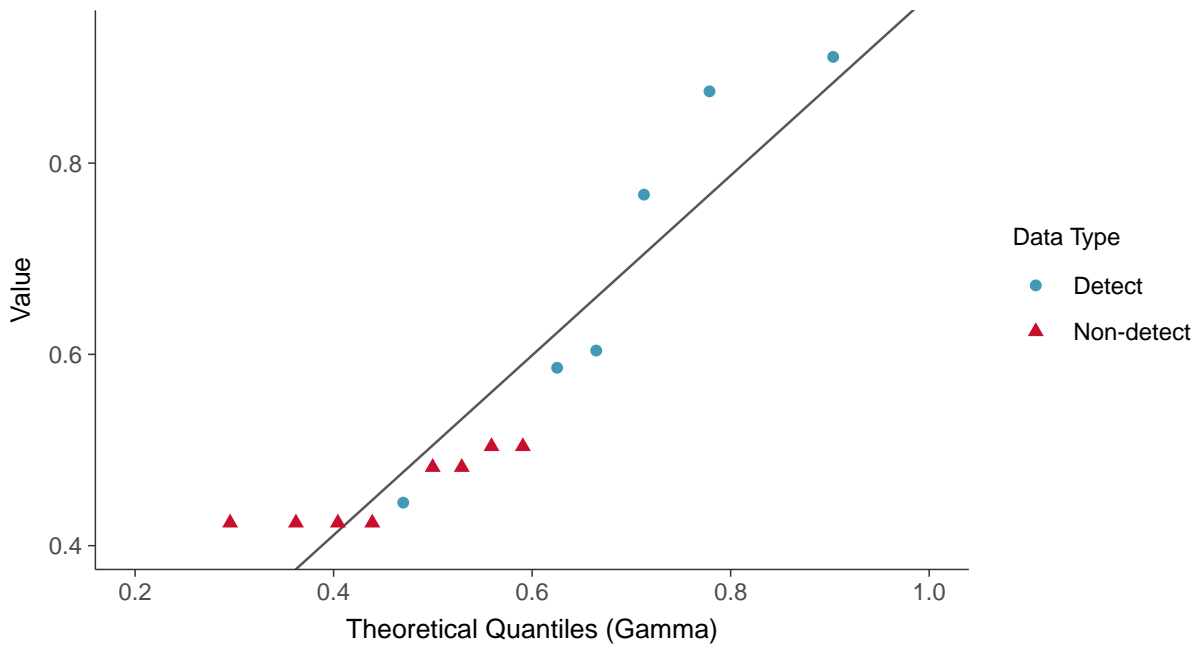
Radium 226 and 228, MW-30 (pCi/L)





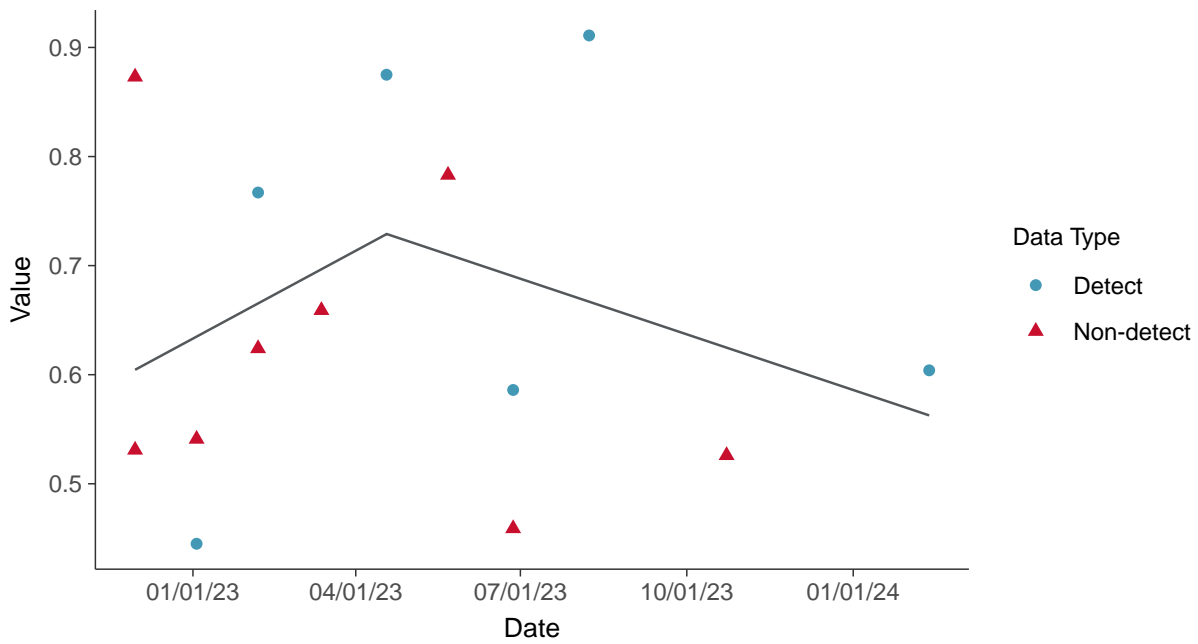
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-30 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-30 (pCi/L)



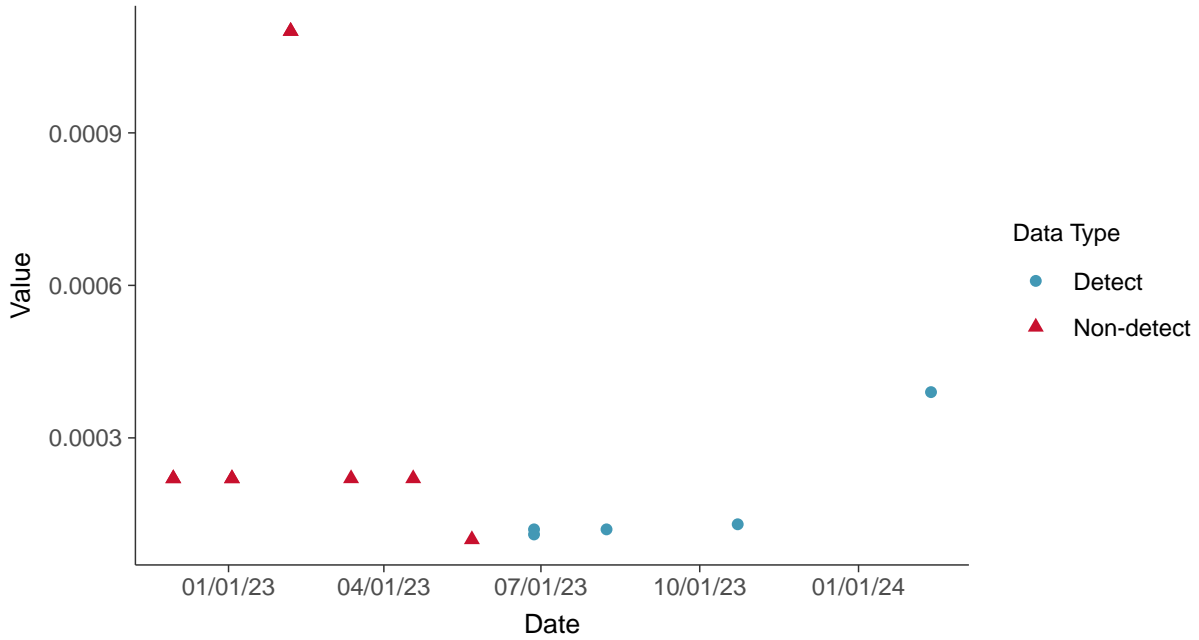


Appendix IV: Selenium, MW-30

ID: 1_40_5_122

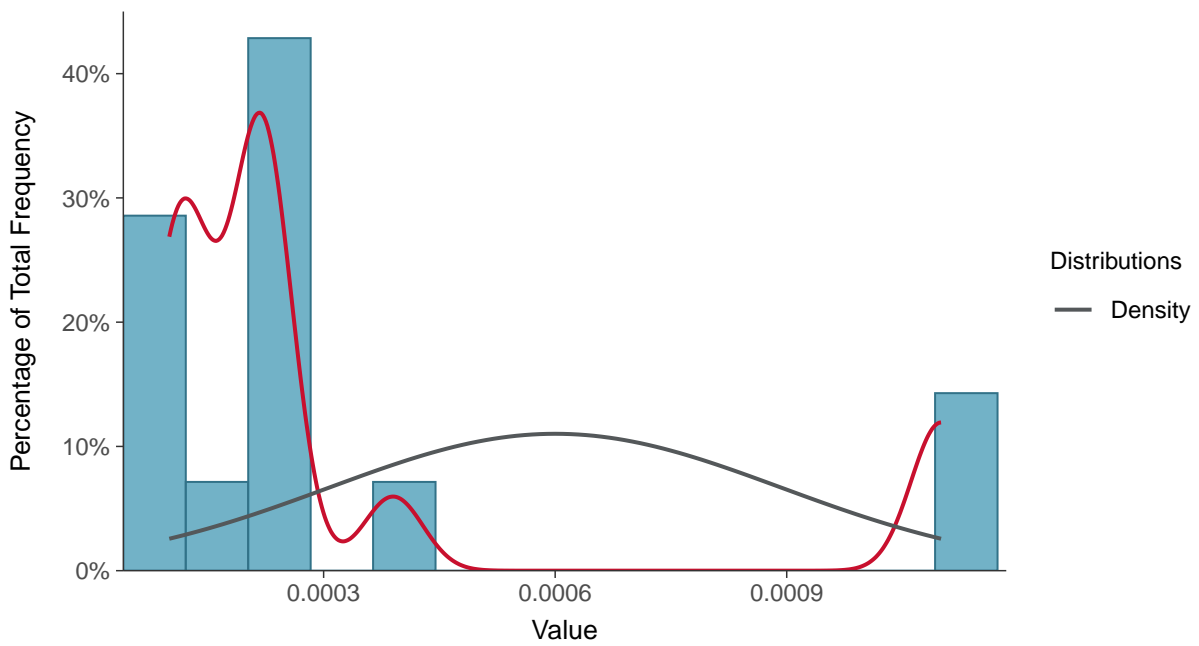
Scatter Plot

Selenium, MW-30 (mg/L)



Histogram

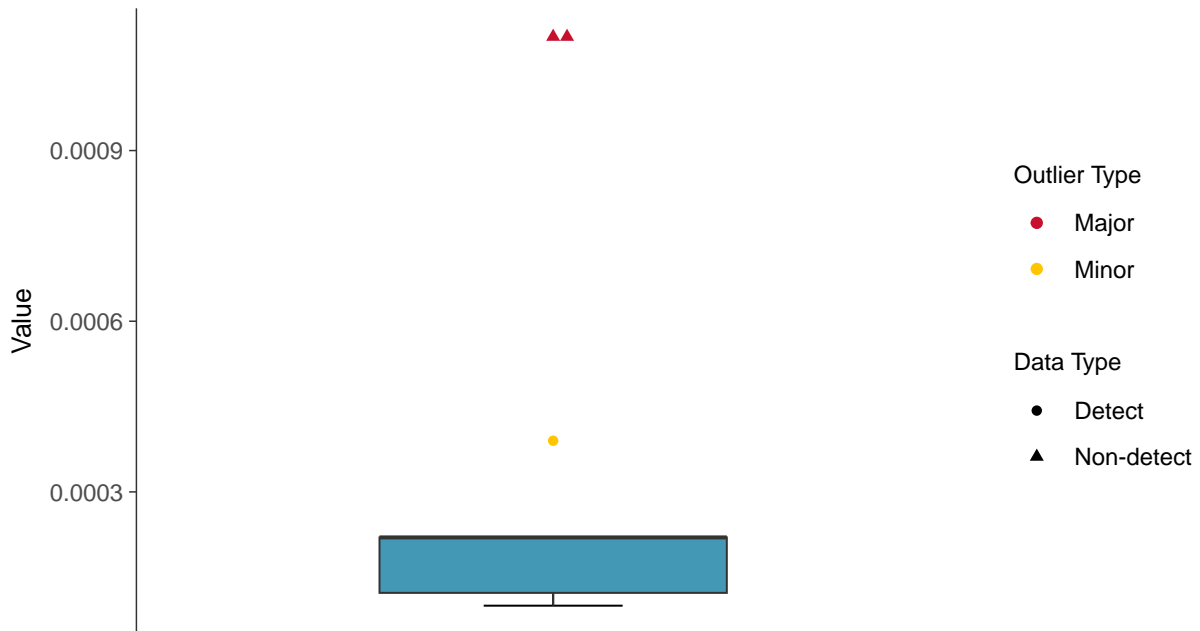
Selenium, MW-30 (mg/L)





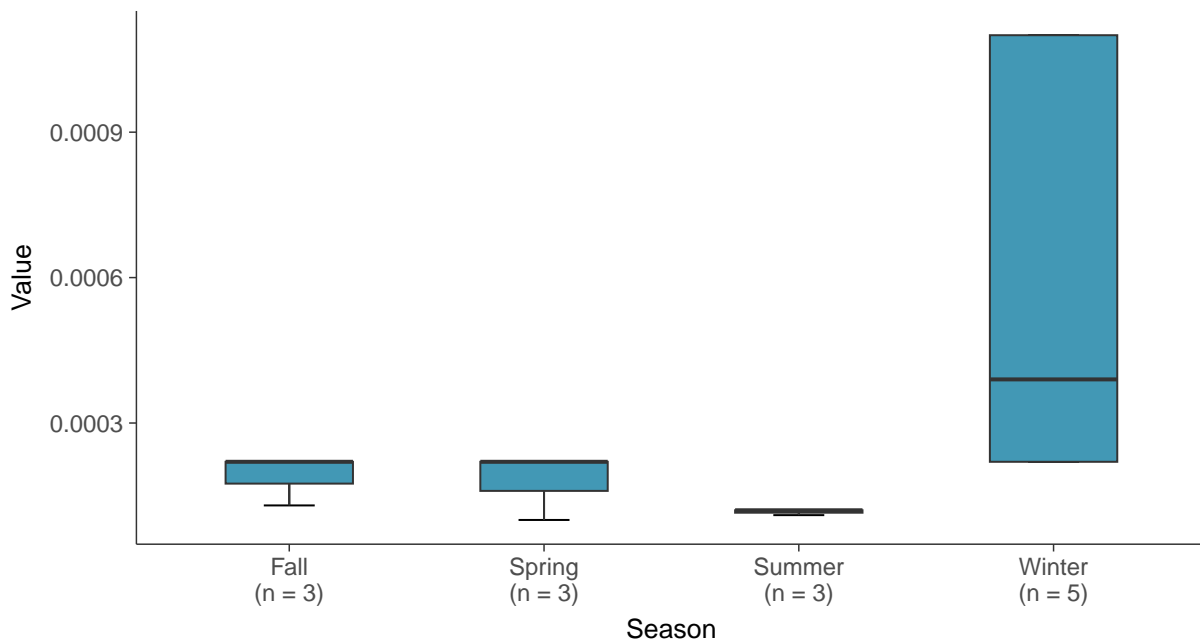
Boxplot

Selenium, MW-30 (mg/L)



Boxplot by Season

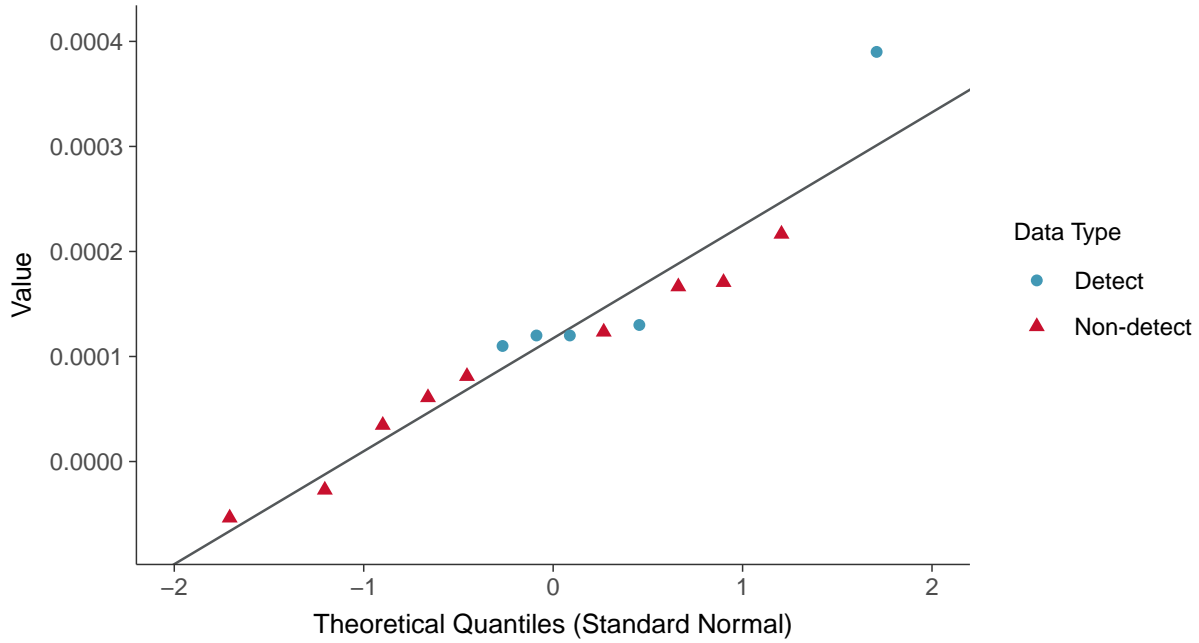
Selenium, MW-30 (mg/L)





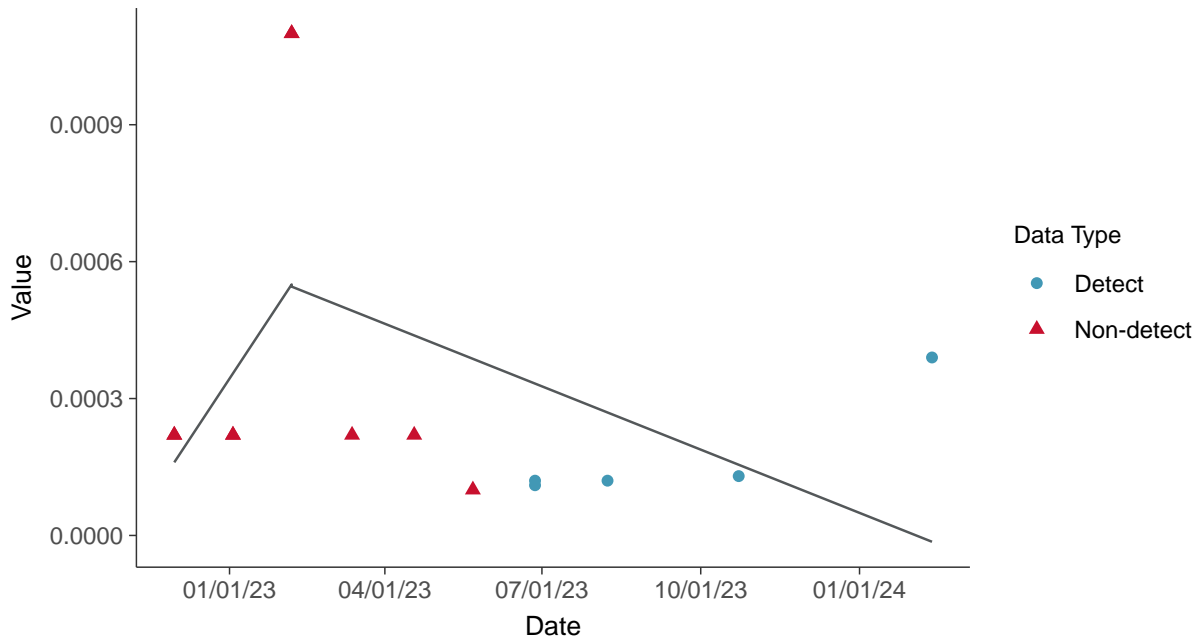
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-30 (mg/L)



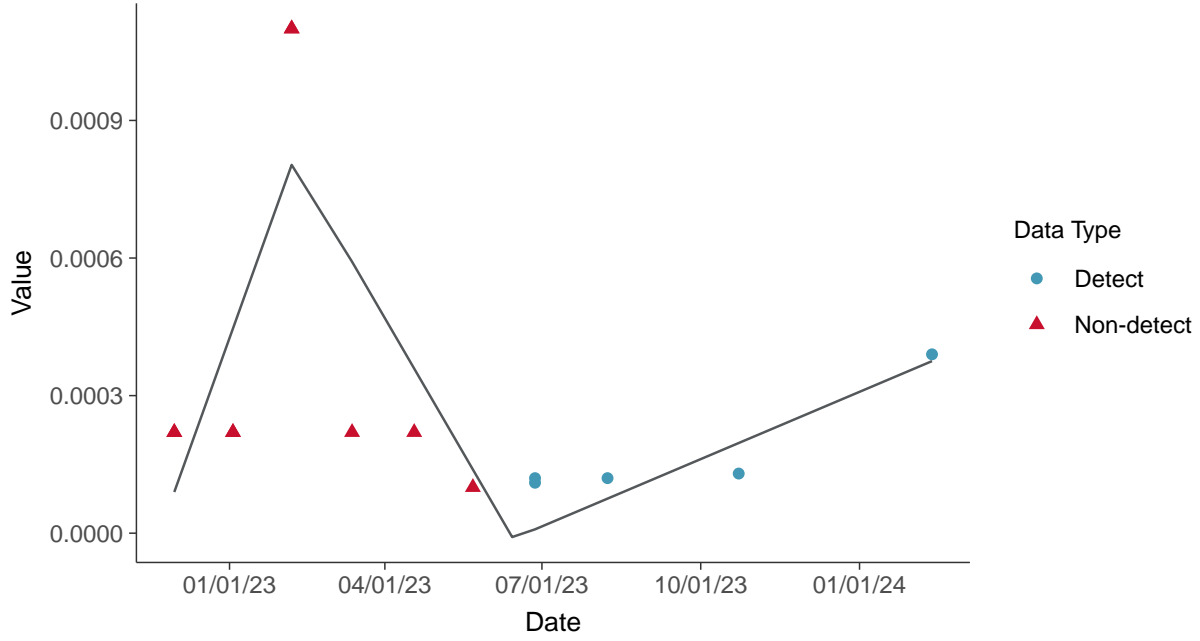
Trend Regression: Piecewise Linear-Linear

Selenium, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-30 (mg/L)



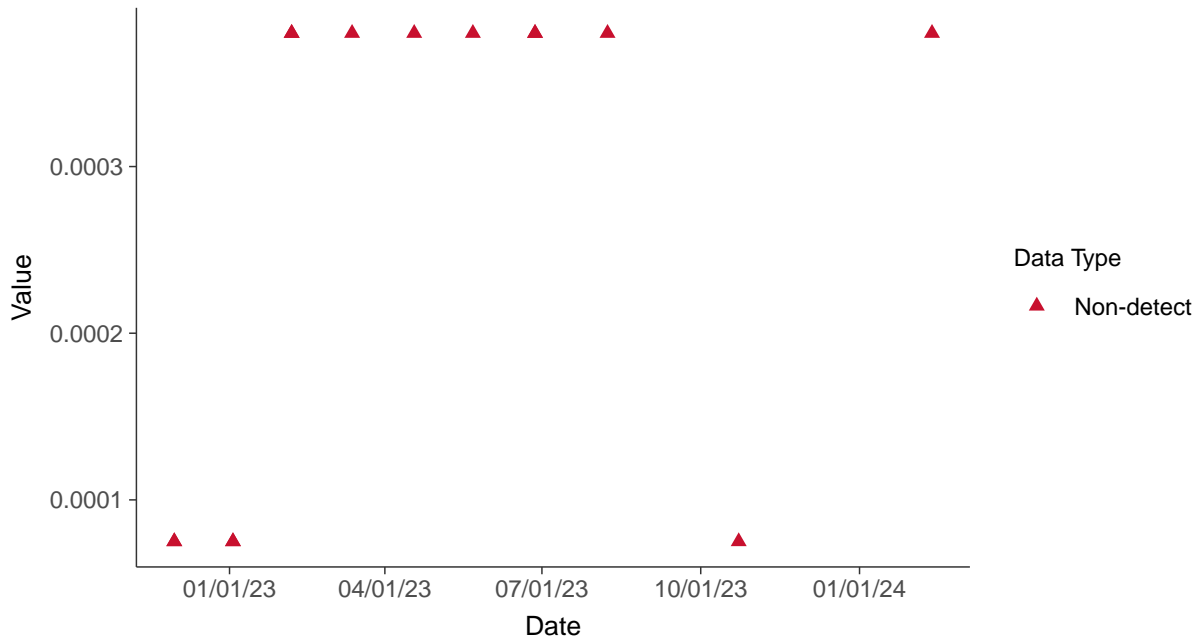


Appendix IV: Thallium, MW-30

ID: 1_40_5_125

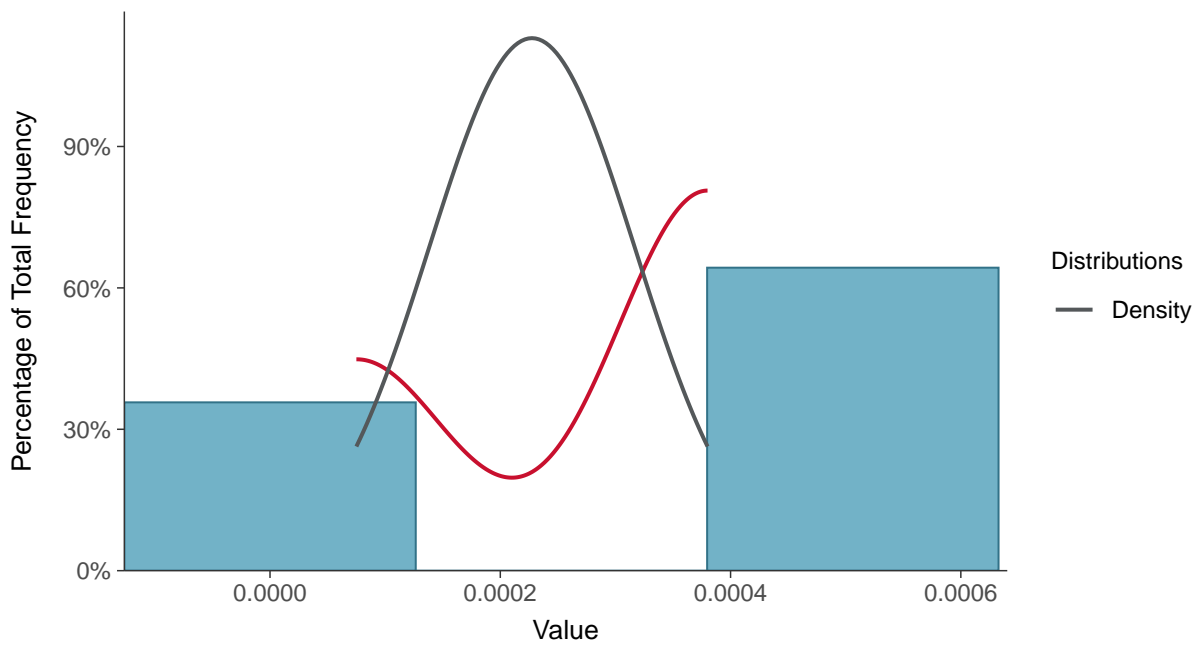
Scatter Plot

Thallium, MW-30 (mg/L)



Histogram

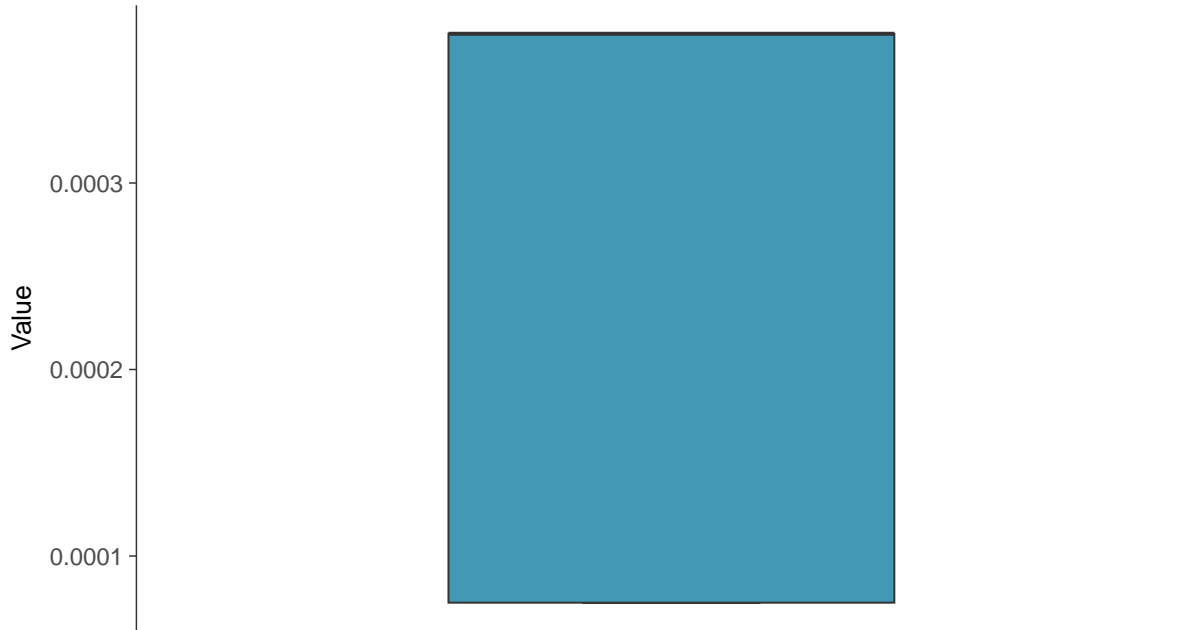
Thallium, MW-30 (mg/L)





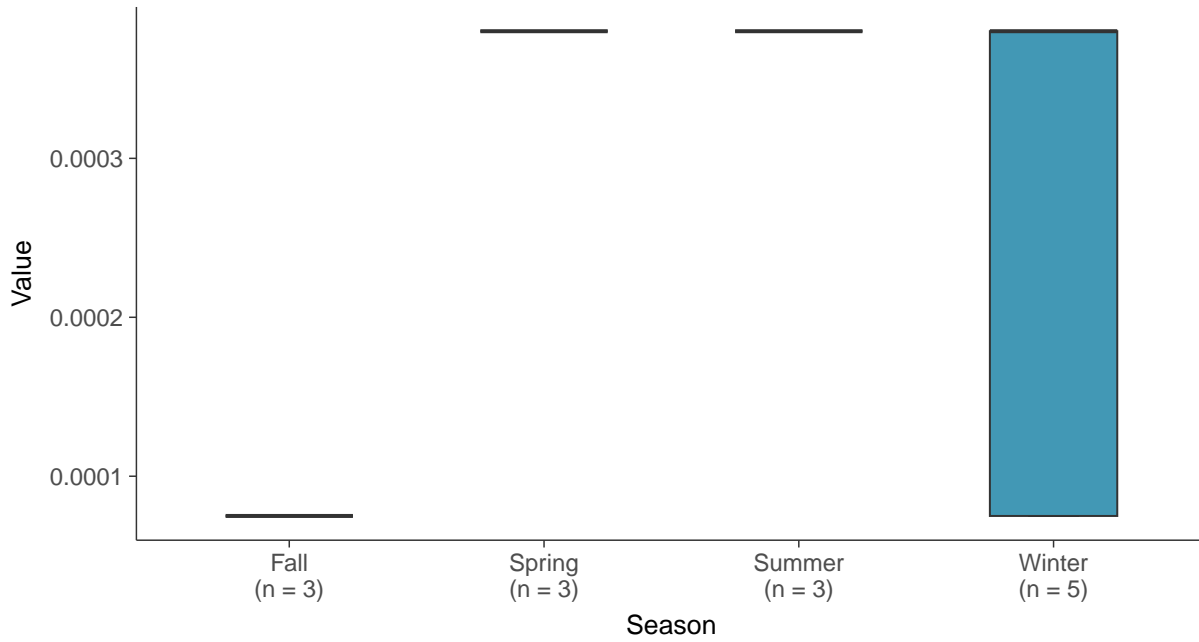
Boxplot

Thallium, MW-30 (mg/L)



Boxplot by Season

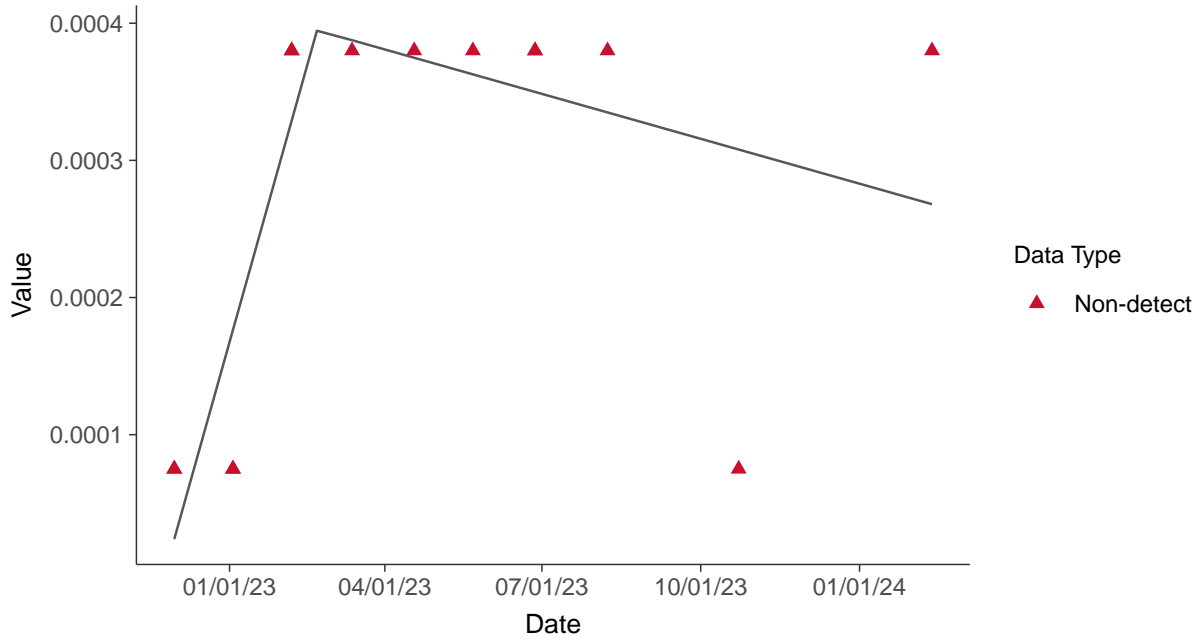
Thallium, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear

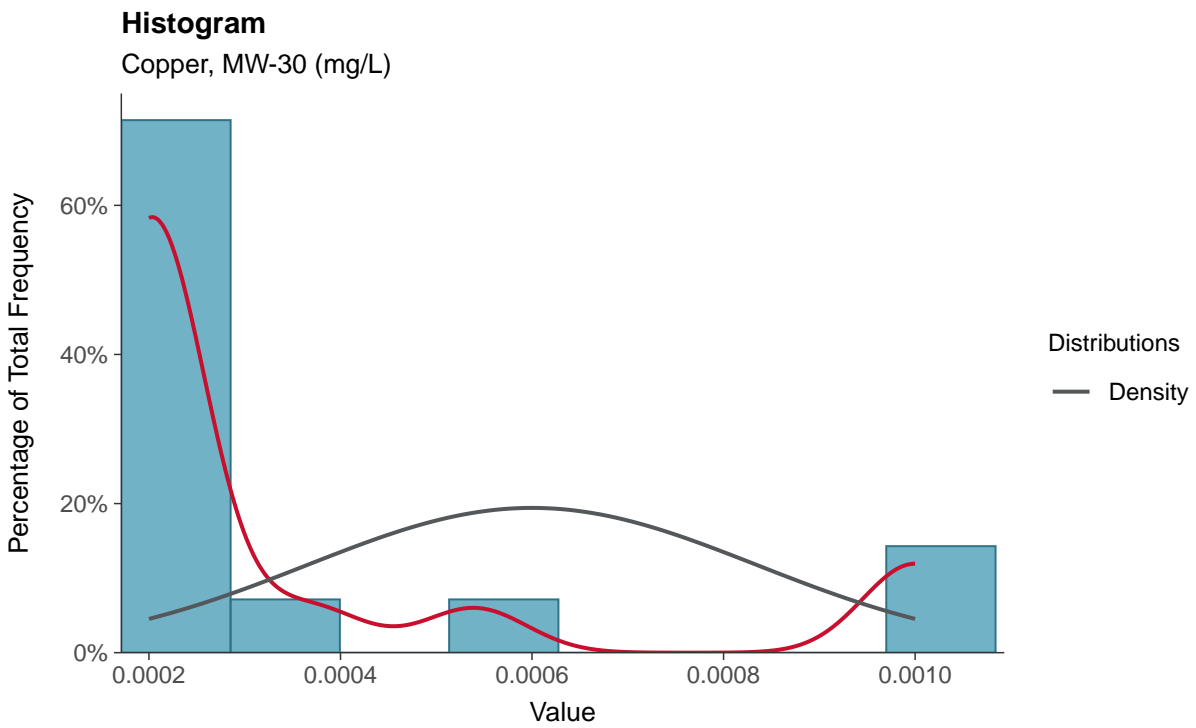
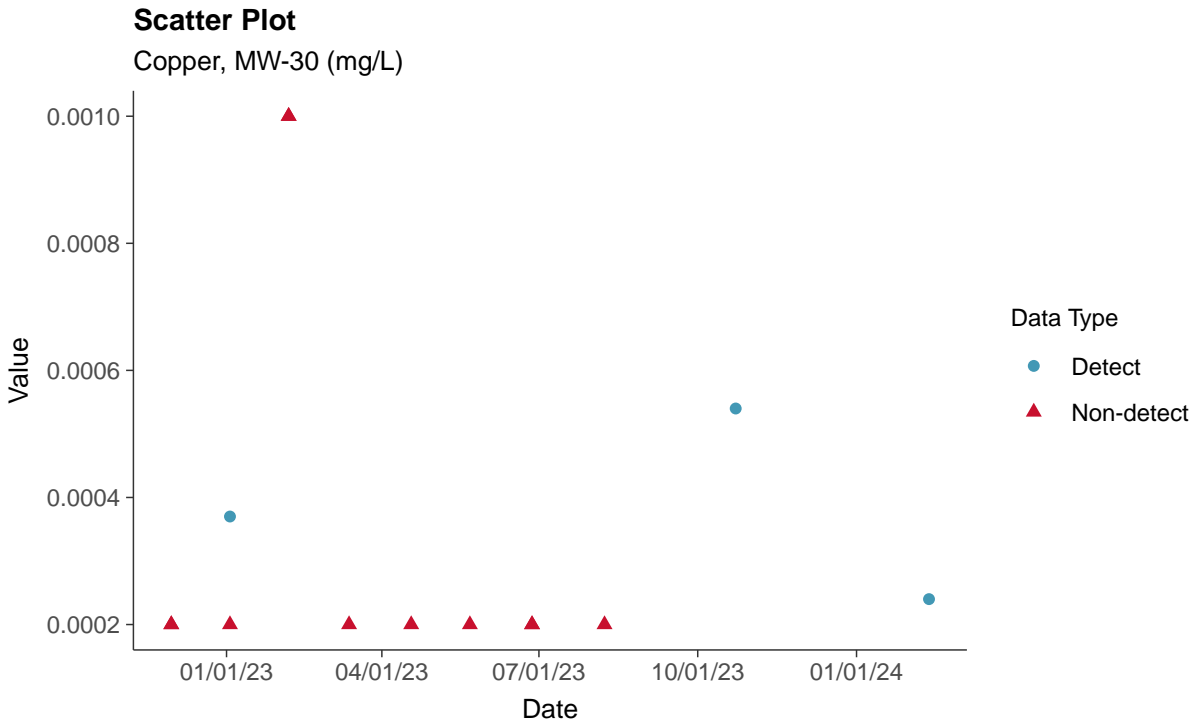
Thallium, MW-30 (mg/L)





Part 115: Copper, MW-30

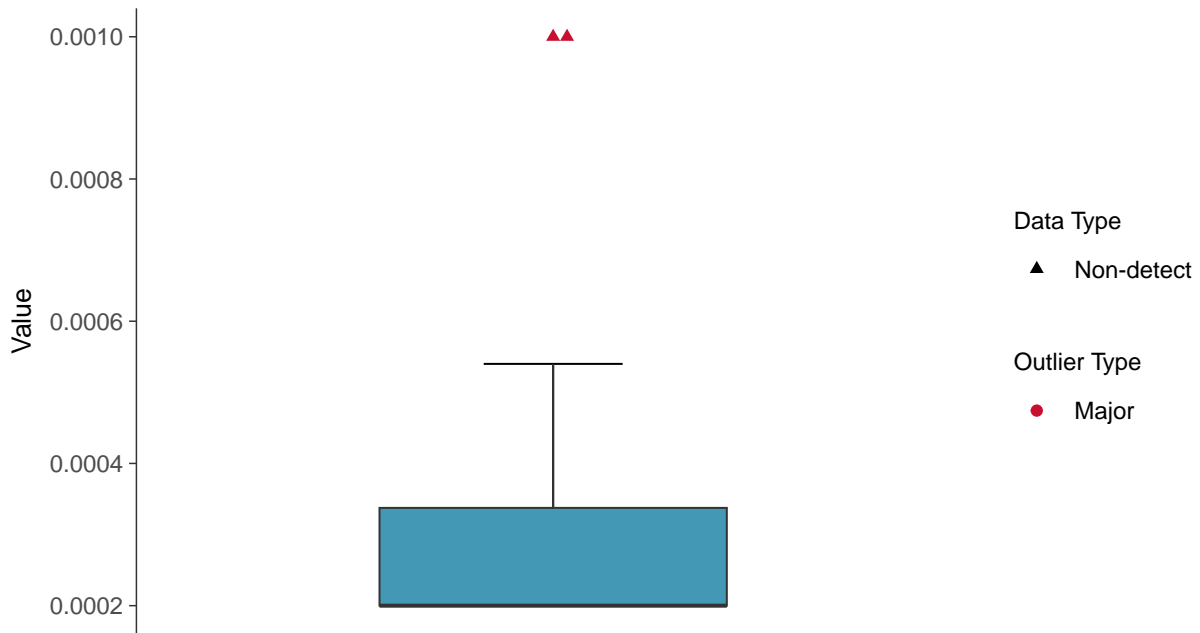
ID: 1_40_6_111





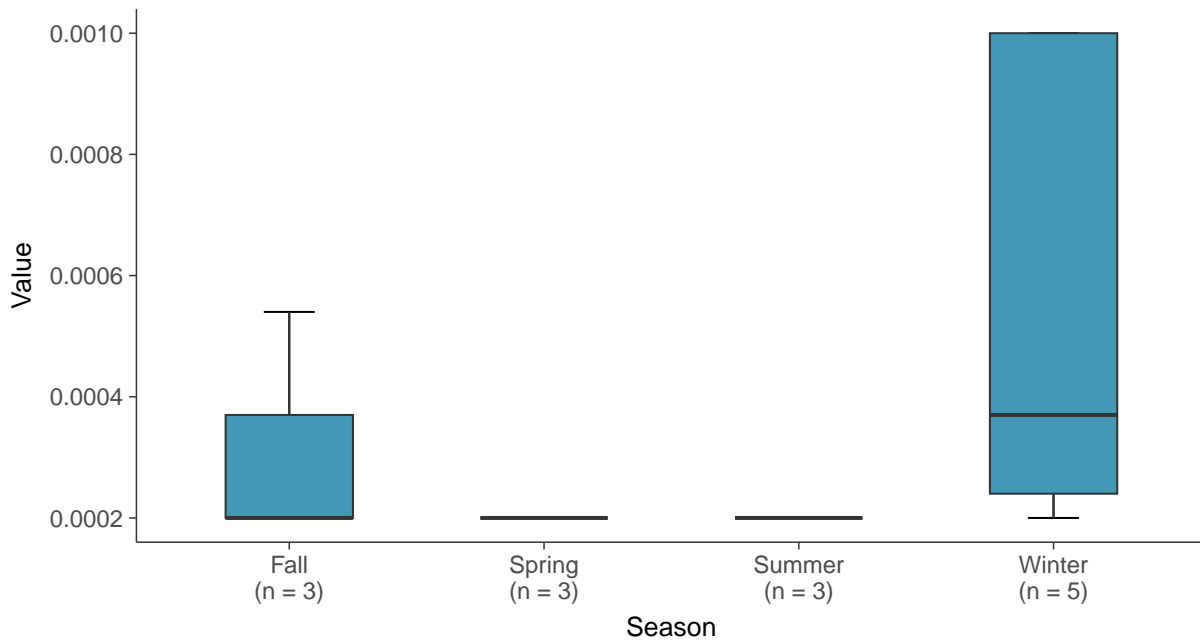
Boxplot

Copper, MW-30 (mg/L)



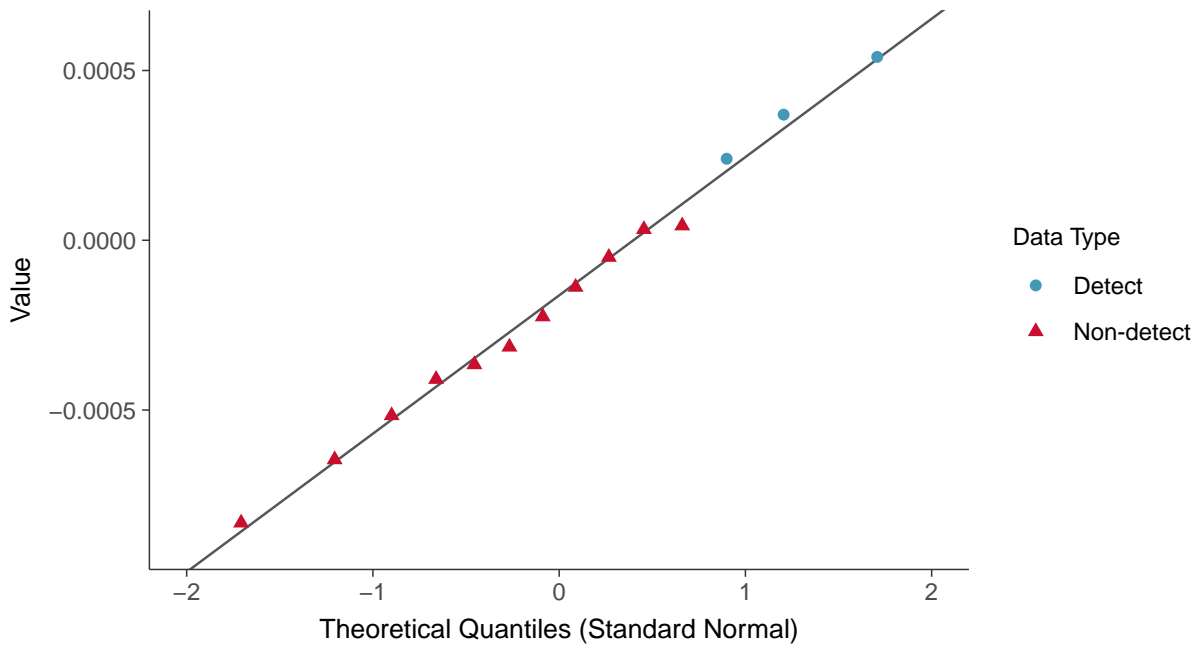
Boxplot by Season

Copper, MW-30 (mg/L)

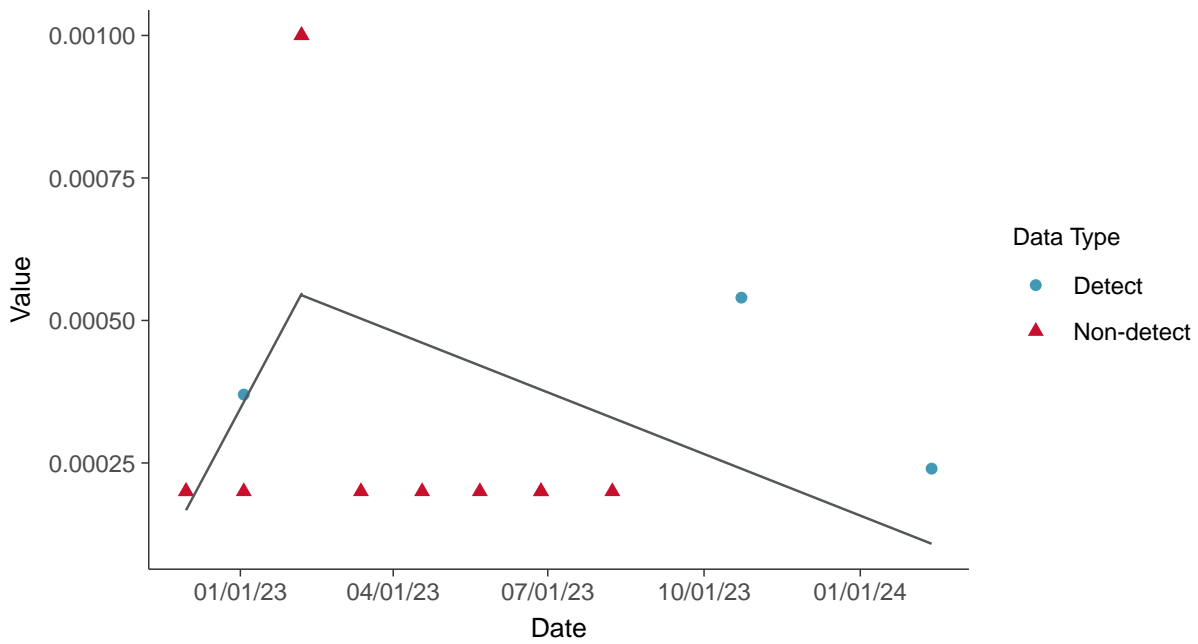




Normal Q-Q plot using ROS Imputed Estimates
Copper, MW-30 (mg/L)



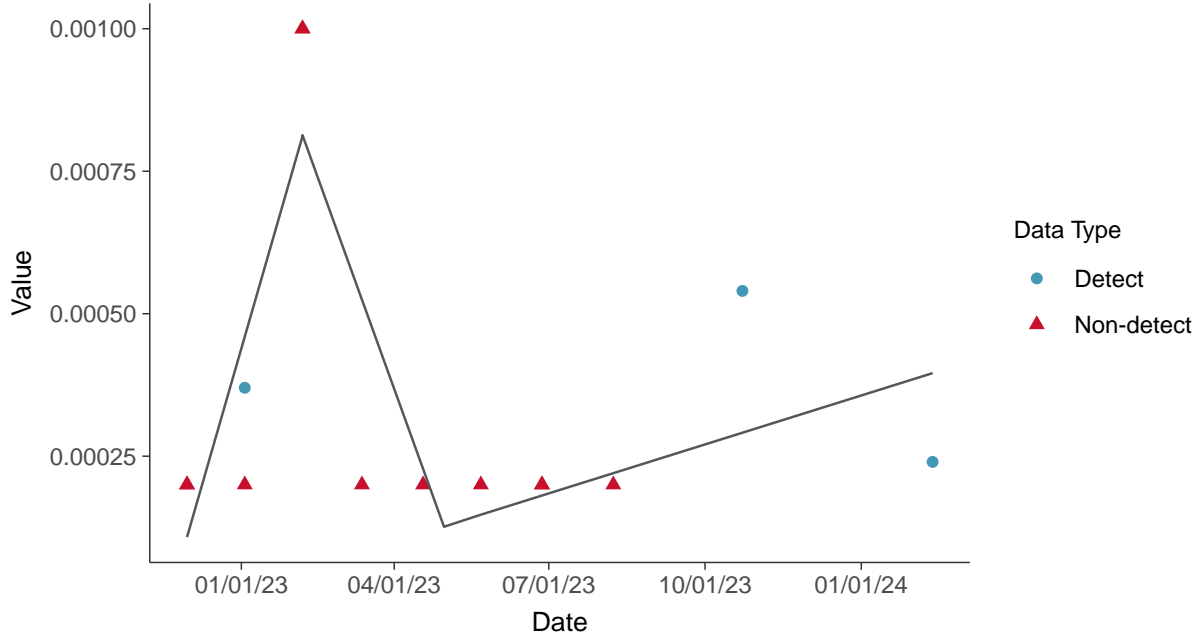
Trend Regression: Piecewise Linear-Linear
Copper, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-30 (mg/L)



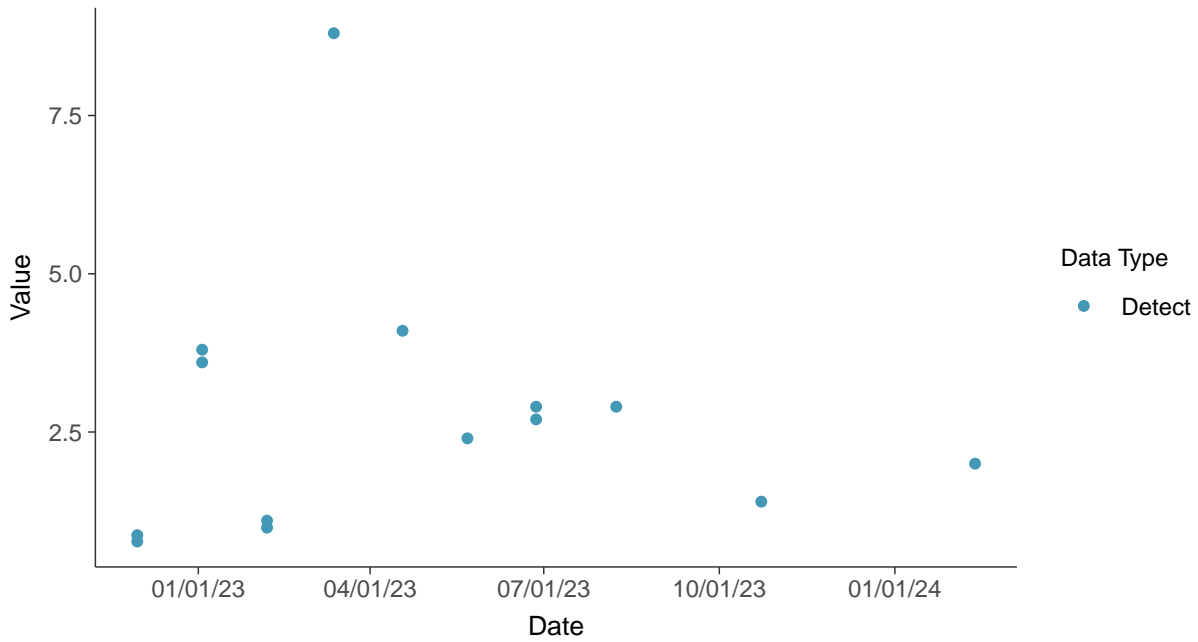


Part 115: Iron, MW-30

ID: 1_40_6_114

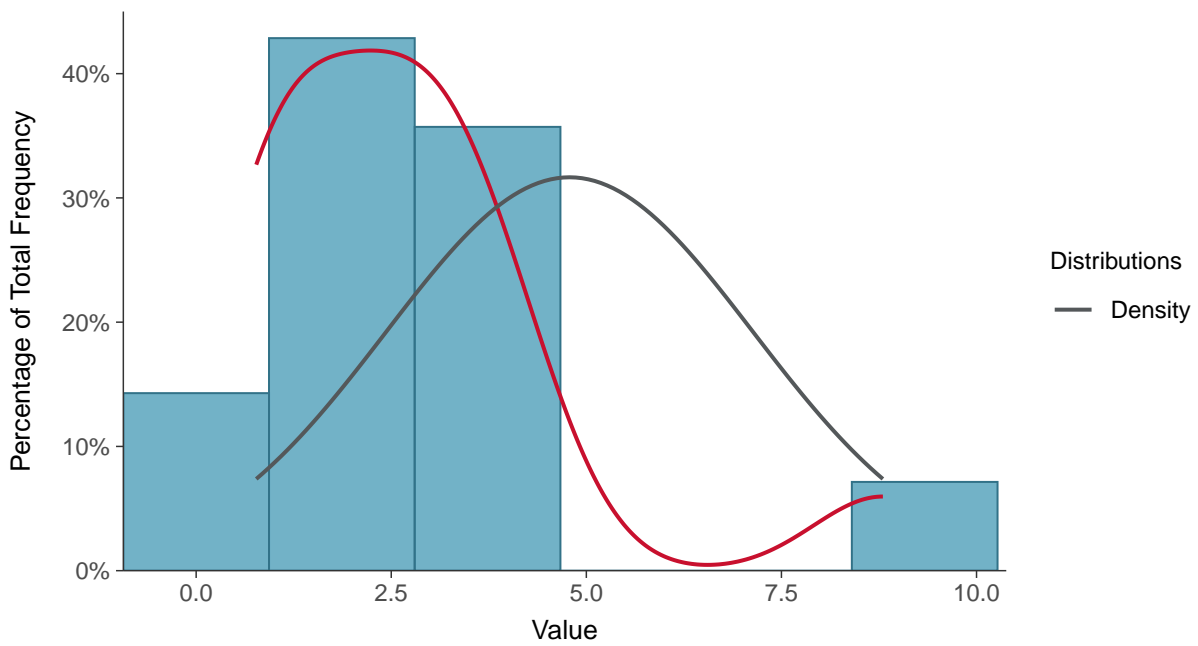
Scatter Plot

Iron, MW-30 (mg/L)



Histogram

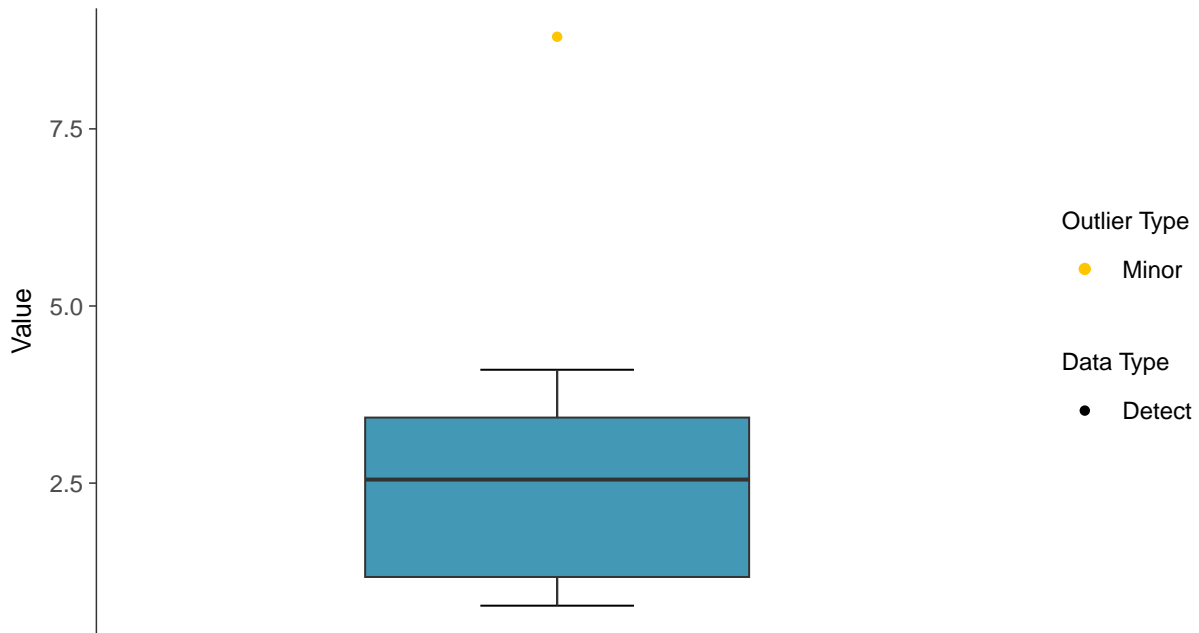
Iron, MW-30 (mg/L)





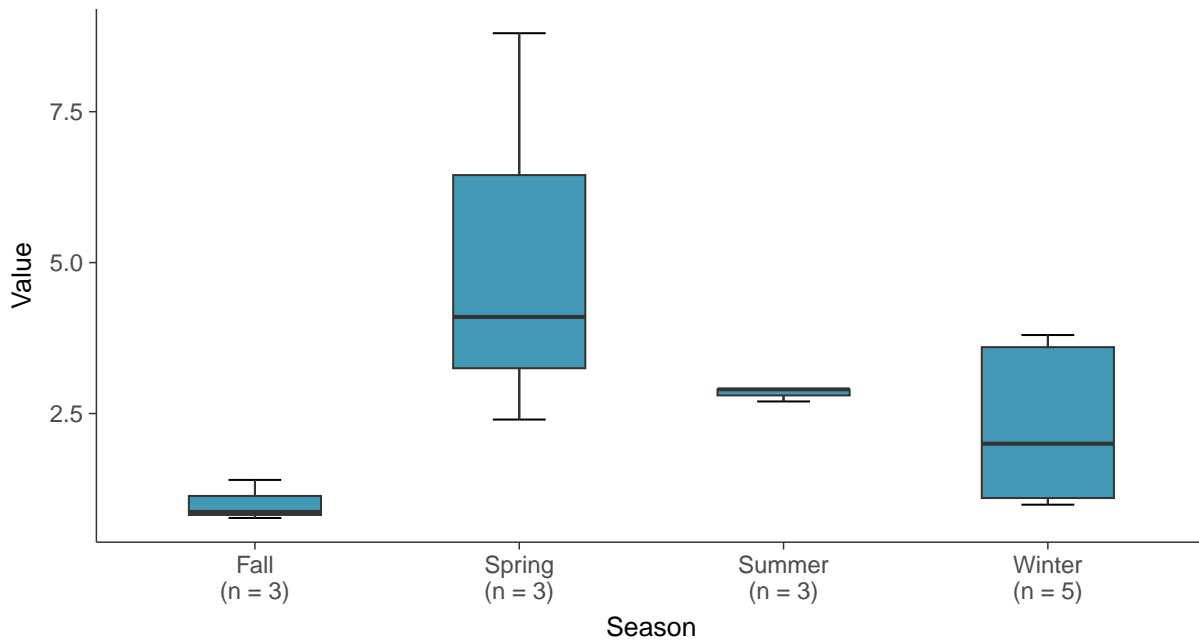
Boxplot

Iron, MW-30 (mg/L)



Boxplot by Season

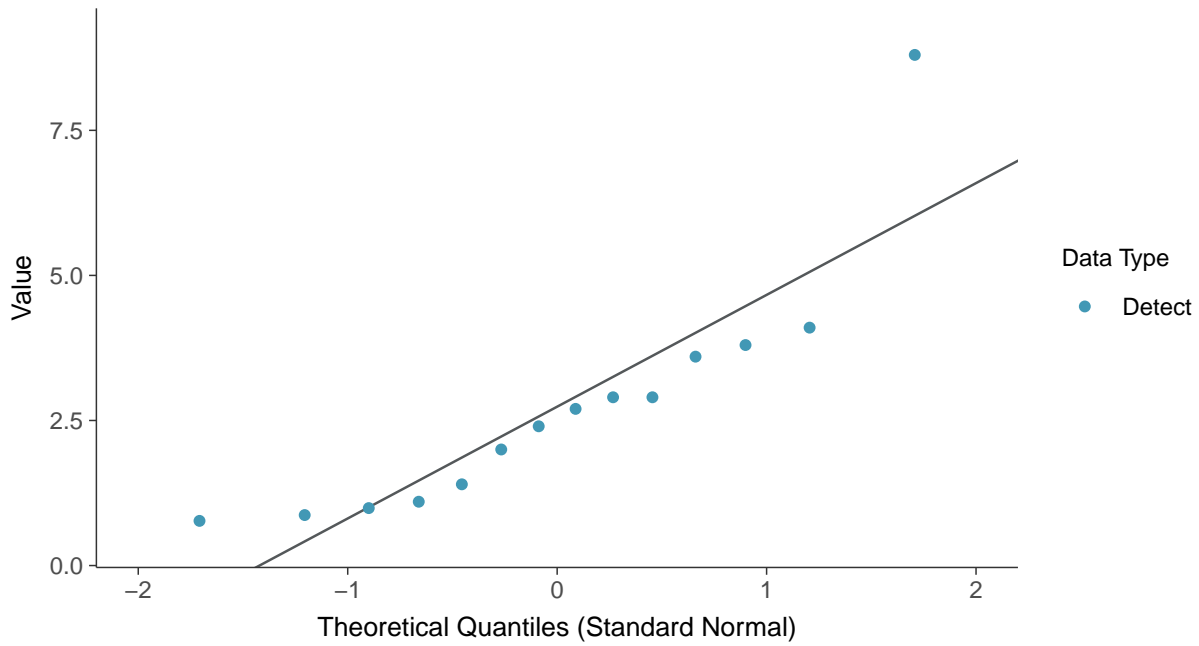
Iron, MW-30 (mg/L)





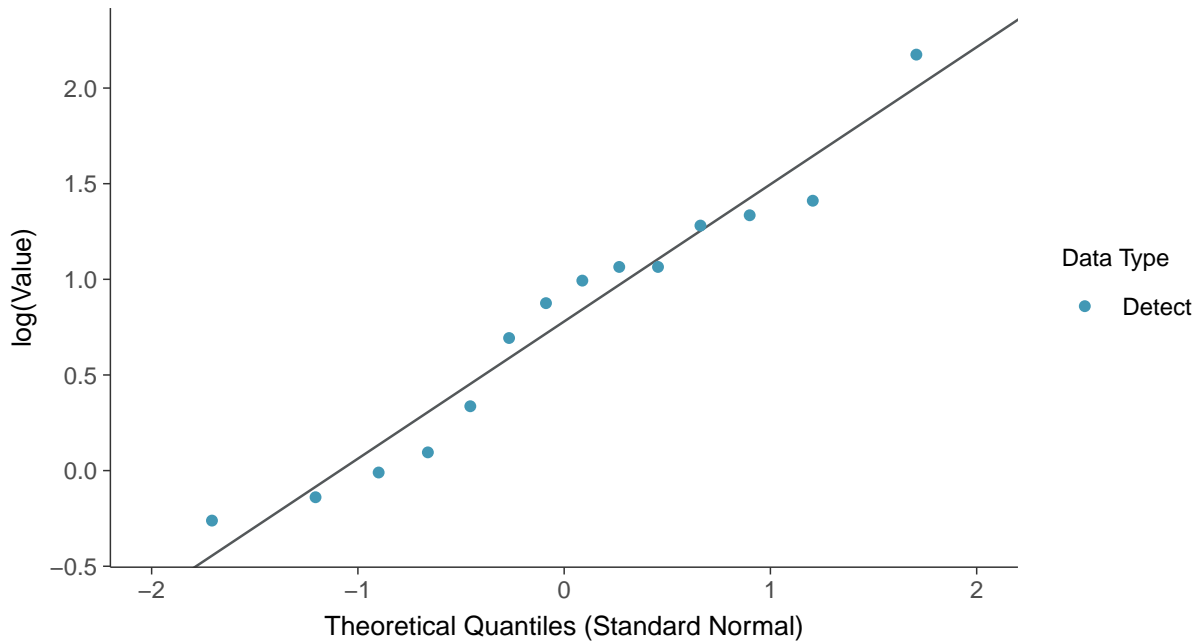
Normal Q-Q plot

Iron, MW-30 (mg/L)



Lognormal Q-Q plot

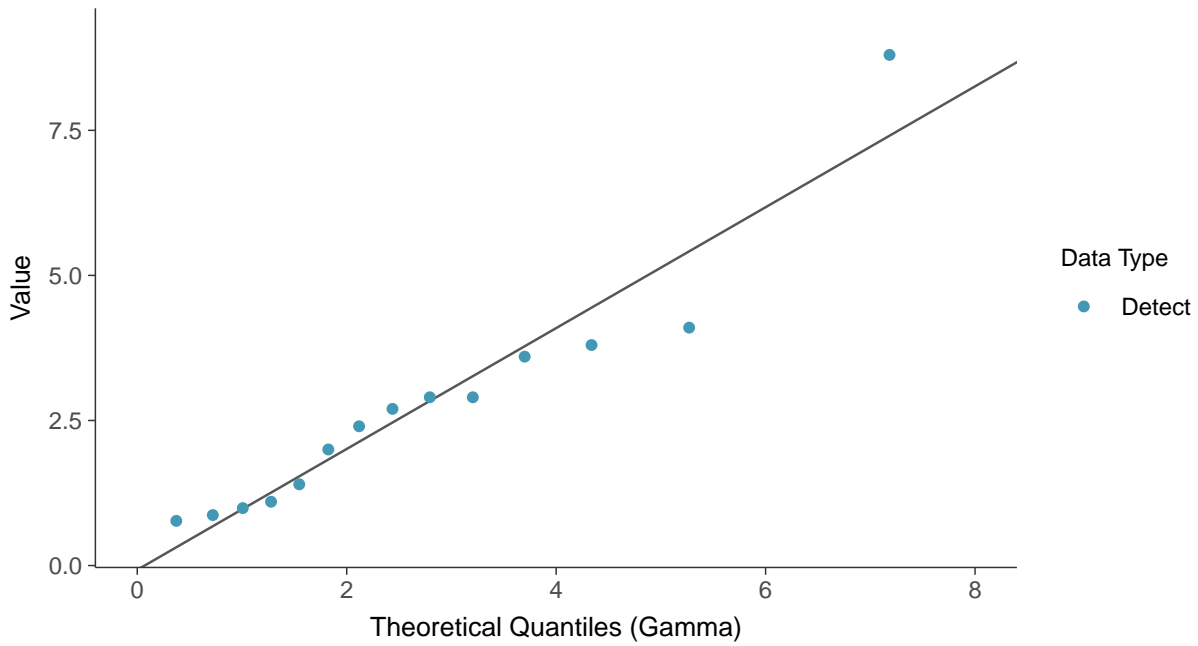
Iron, MW-30 (mg/L)





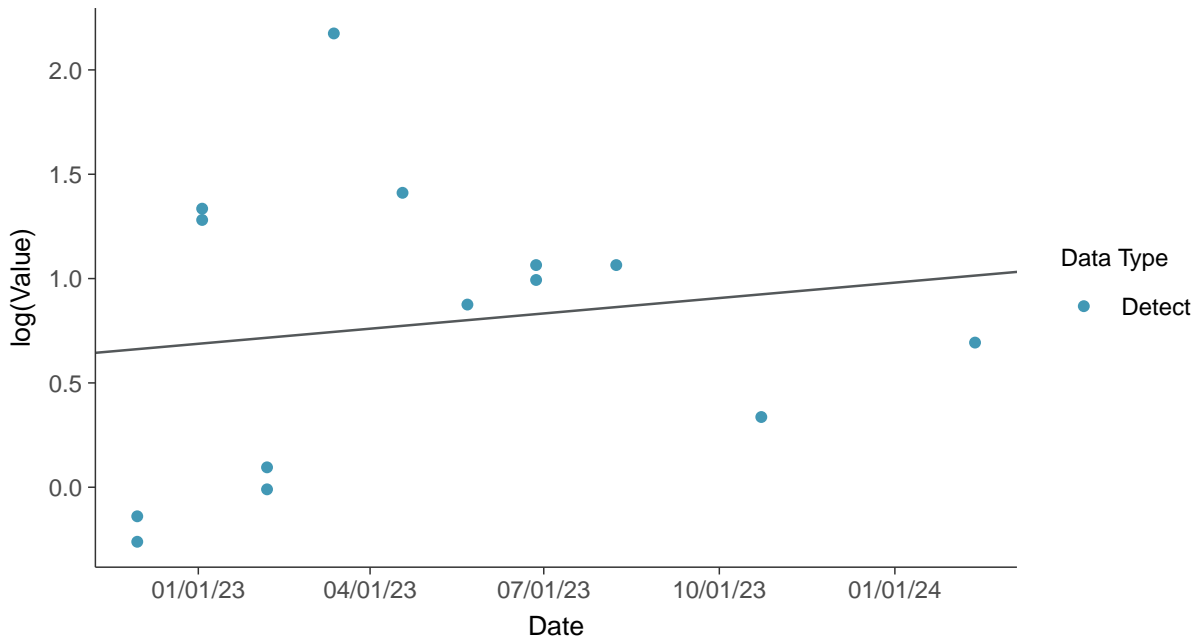
Gamma Q-Q plot

Iron, MW-30 (mg/L)



Trend Regression: Lognormal MLE

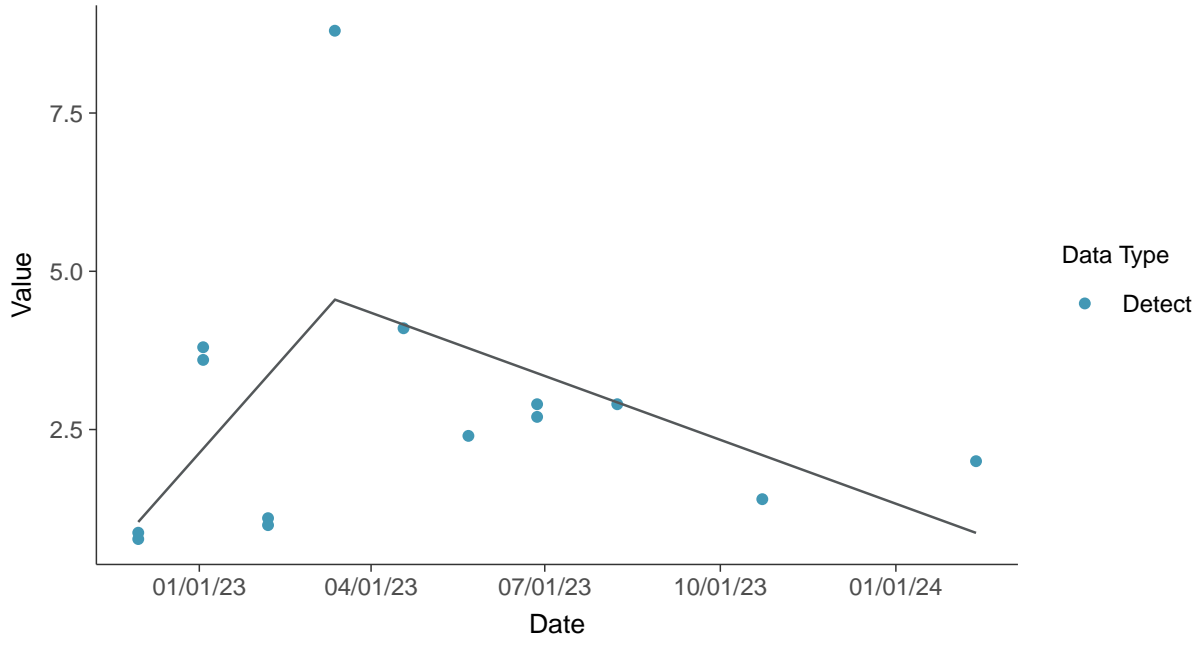
Iron, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear

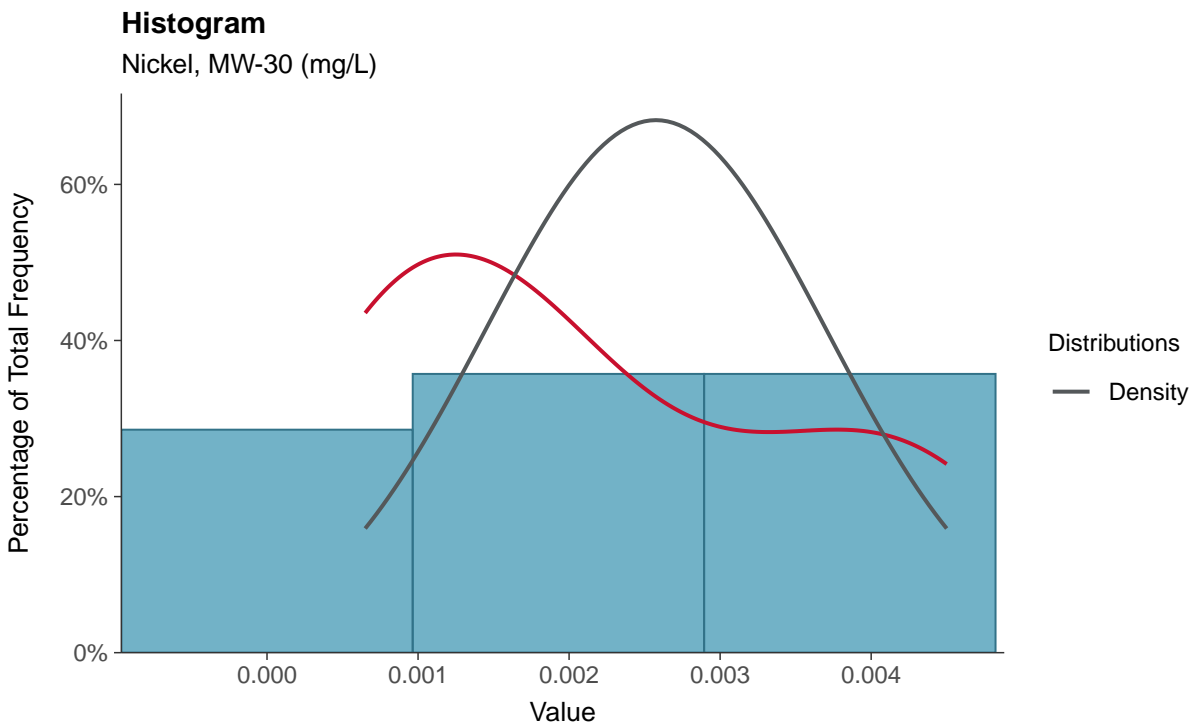
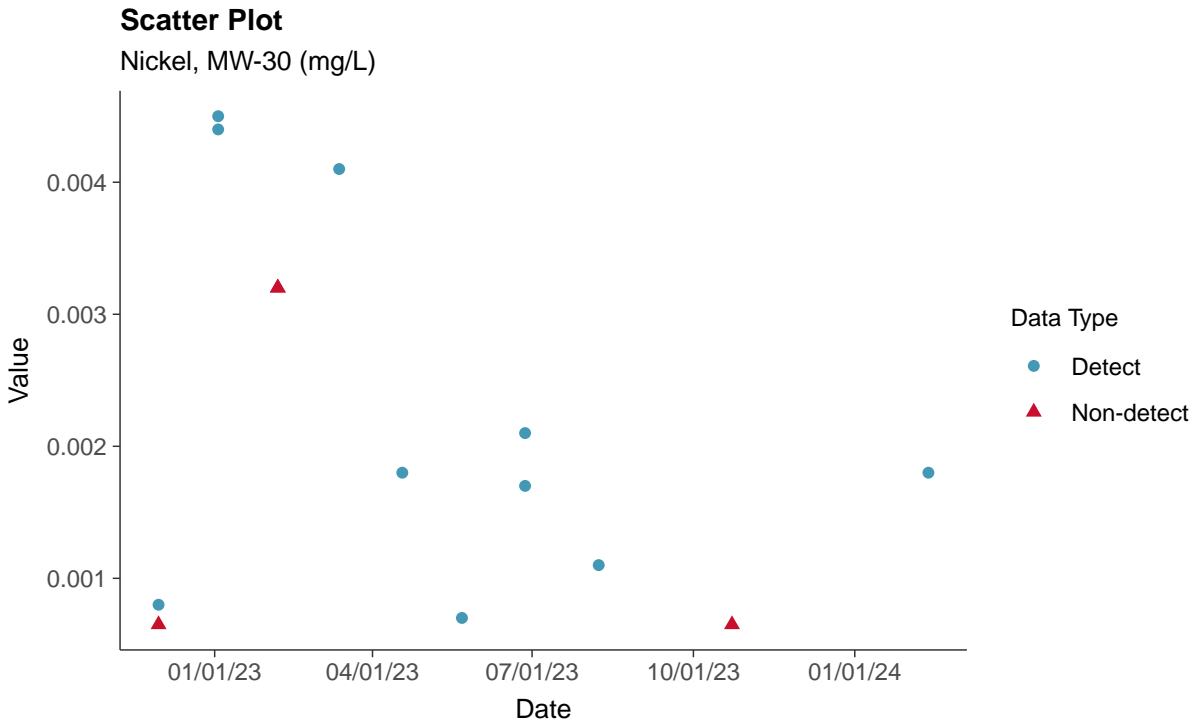
Iron, MW-30 (mg/L)





Part 115: Nickel, MW-30

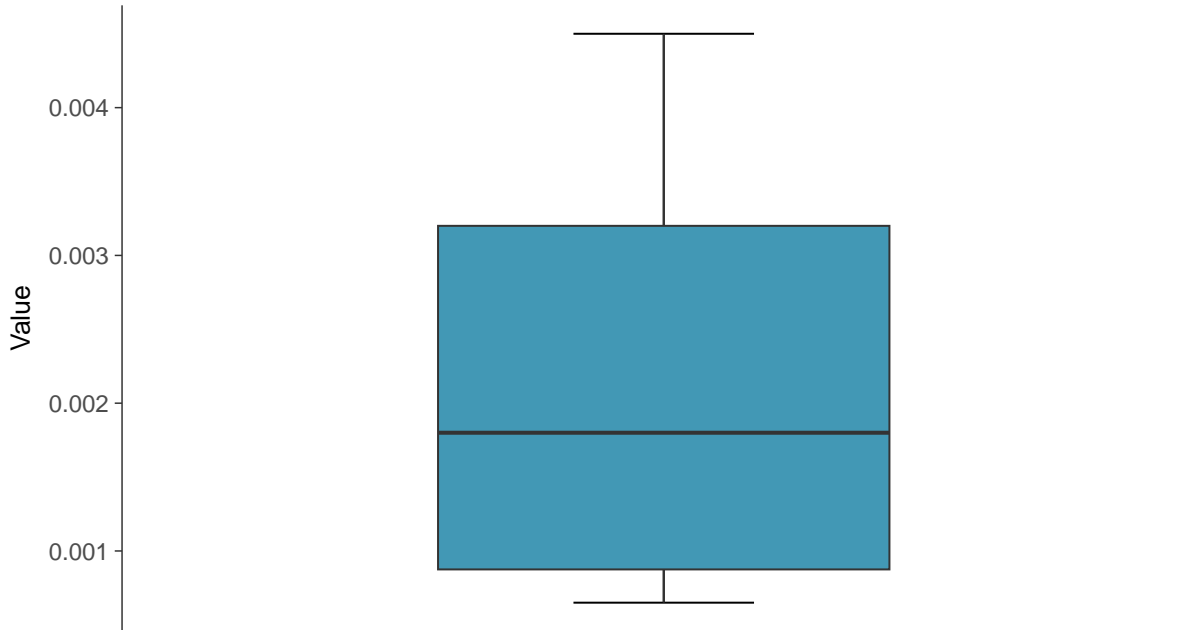
ID: 1_40_6_119





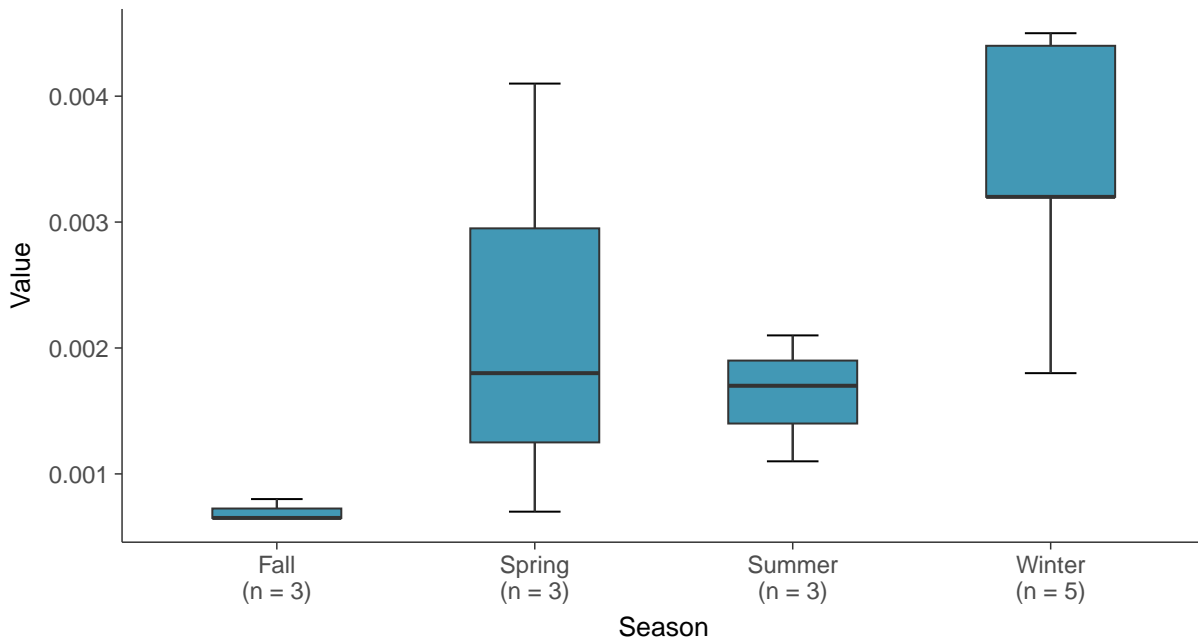
Boxplot

Nickel, MW-30 (mg/L)



Boxplot by Season

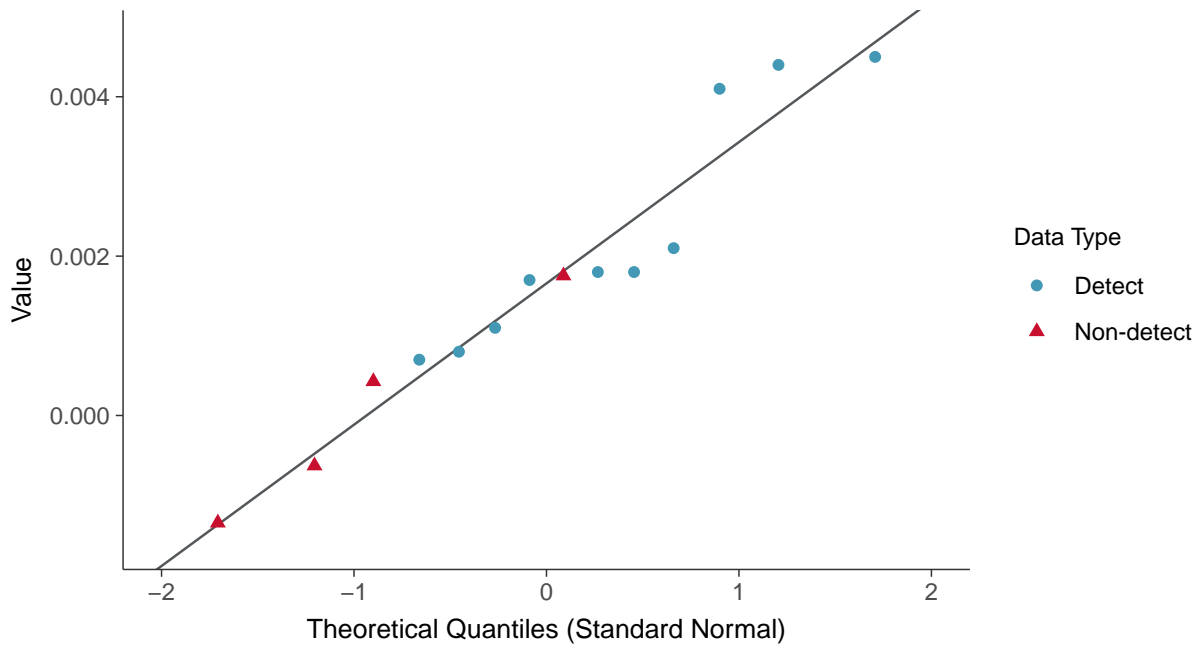
Nickel, MW-30 (mg/L)





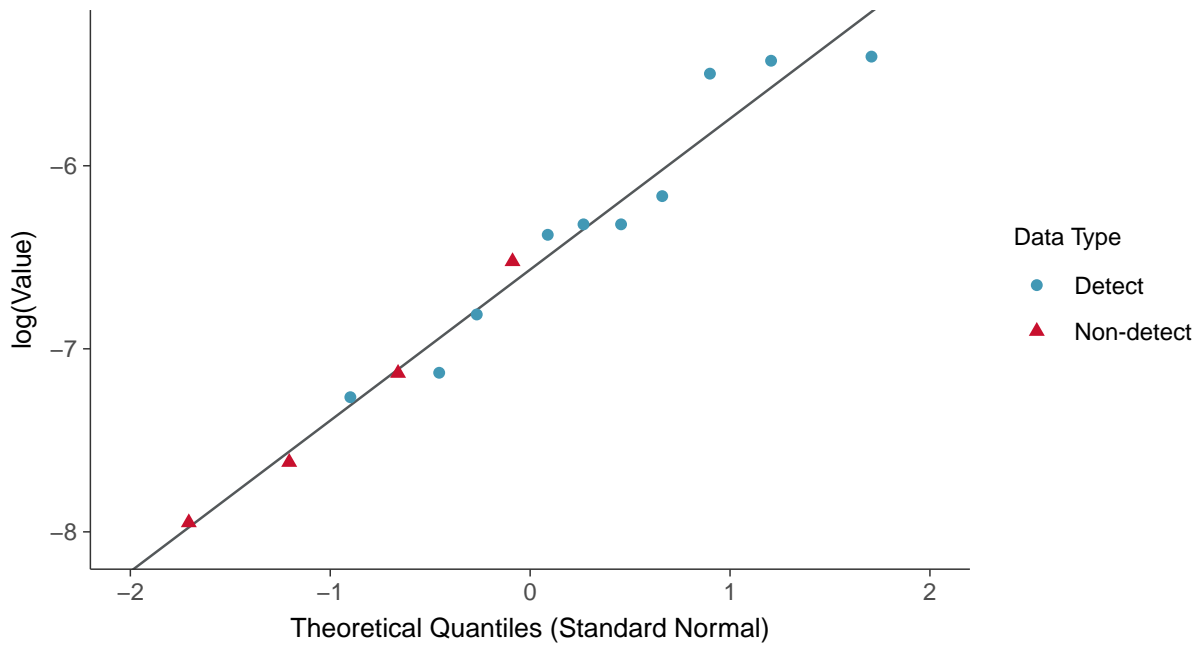
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-30 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

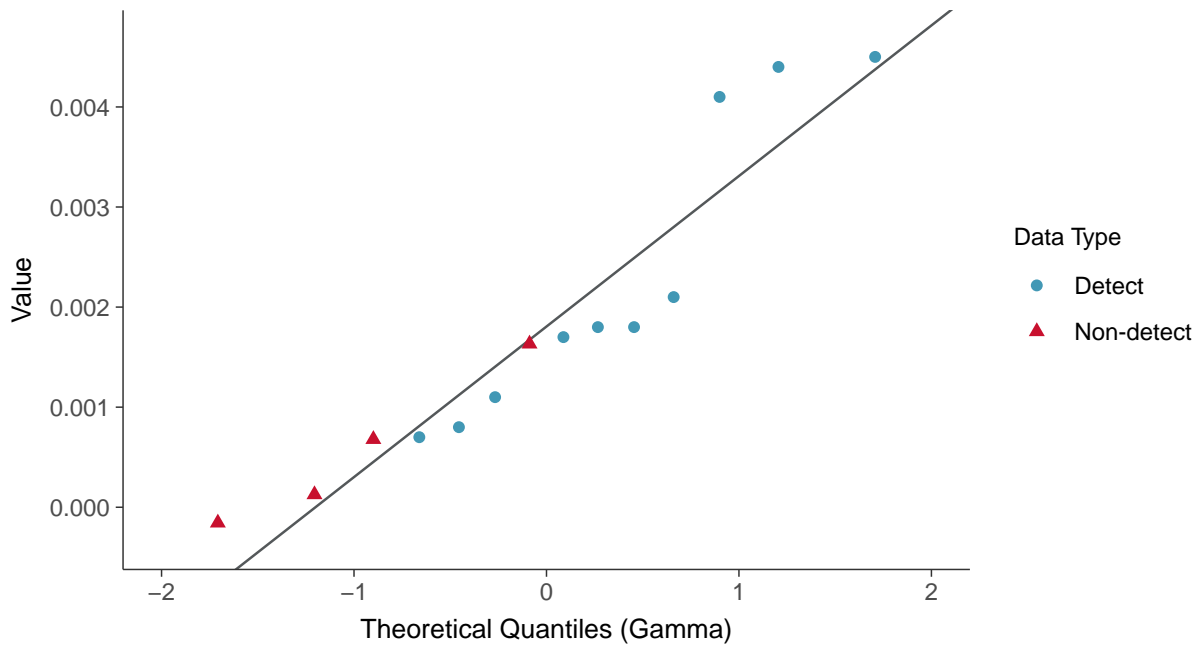
Nickel, MW-30 (mg/L)





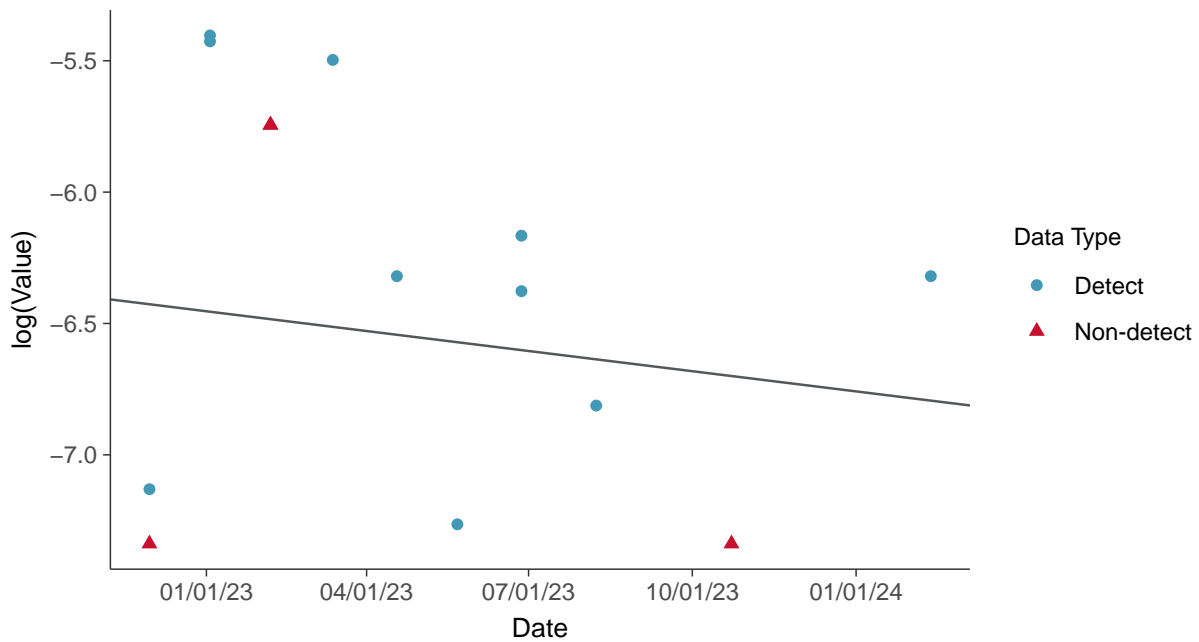
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-30 (mg/L)



Trend Regression: Lognormal MLE

Nickel, MW-30 (mg/L)



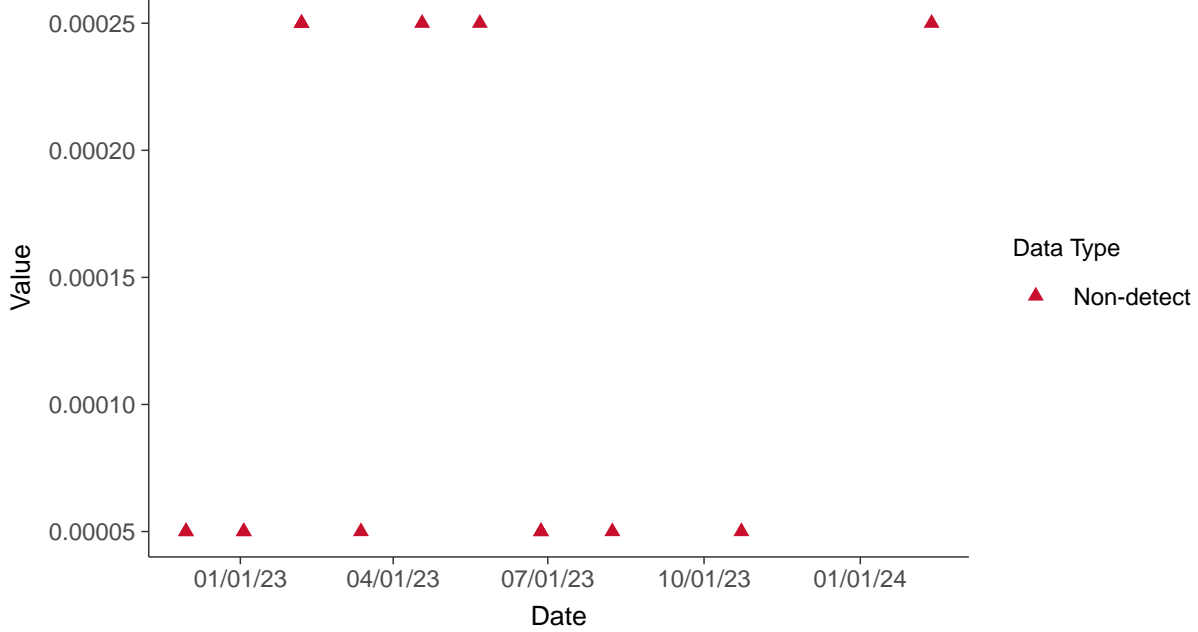


Part 115: Silver, MW-30

ID: 1_40_6_123

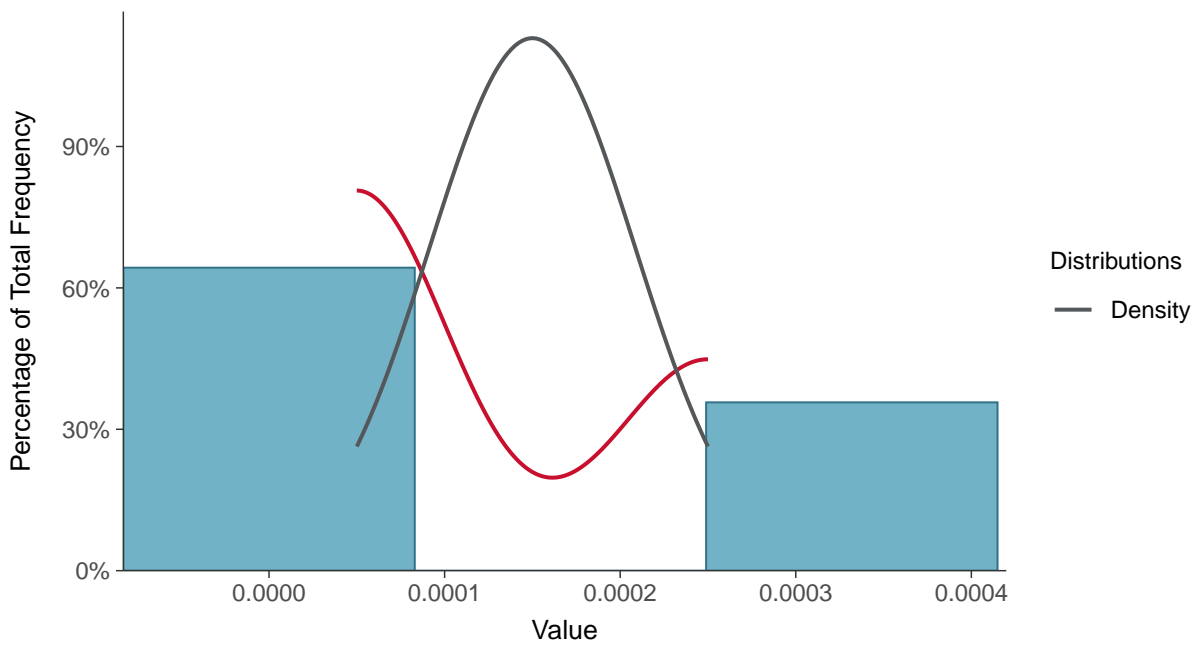
Scatter Plot

Silver, MW-30 (mg/L)



Histogram

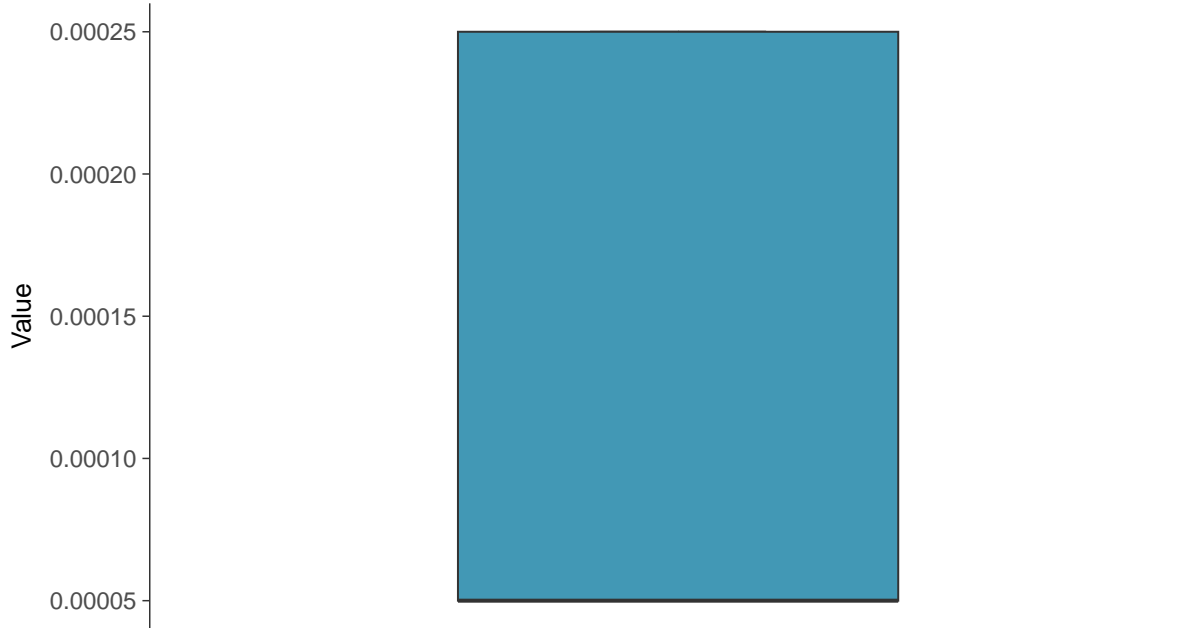
Silver, MW-30 (mg/L)





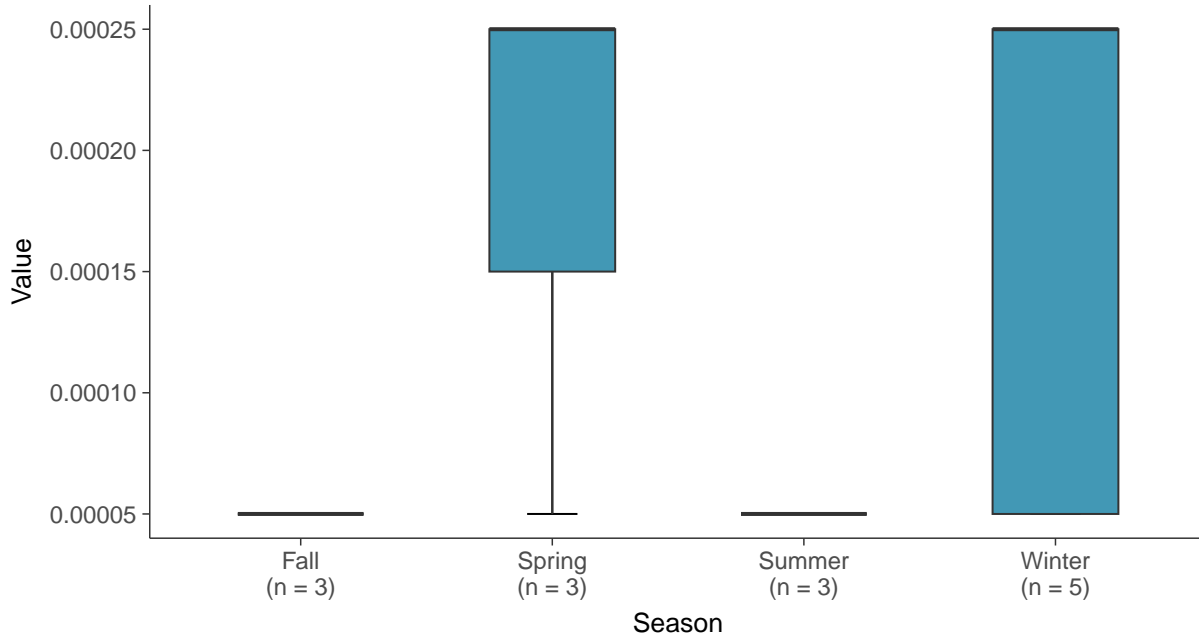
Boxplot

Silver, MW-30 (mg/L)



Boxplot by Season

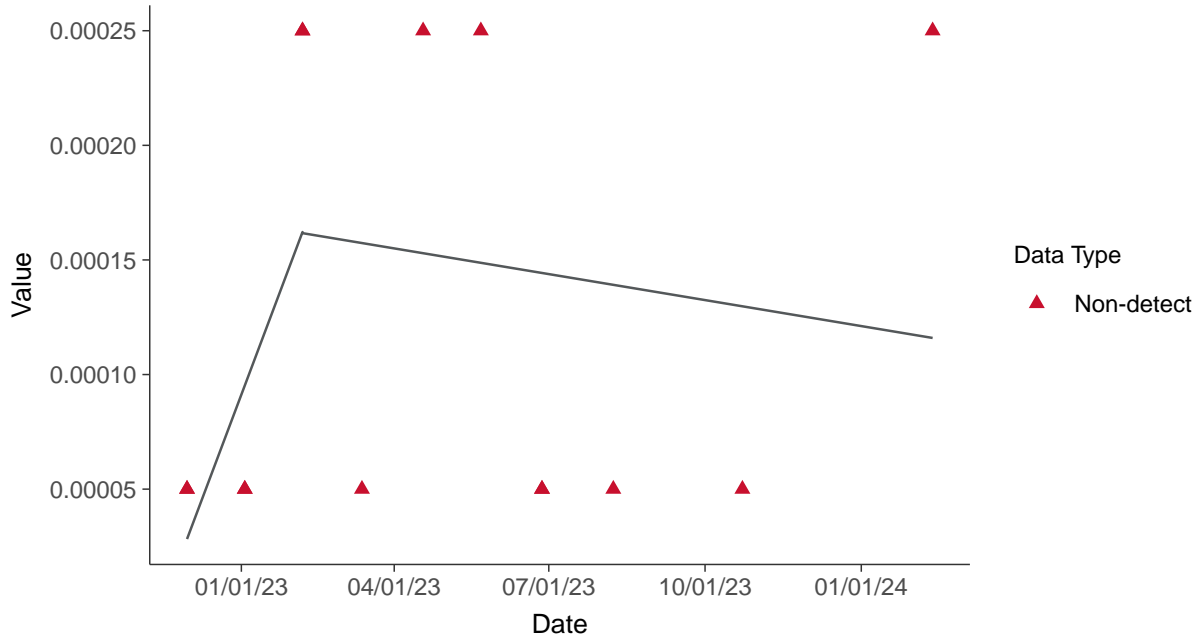
Silver, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear

Silver, MW-30 (mg/L)



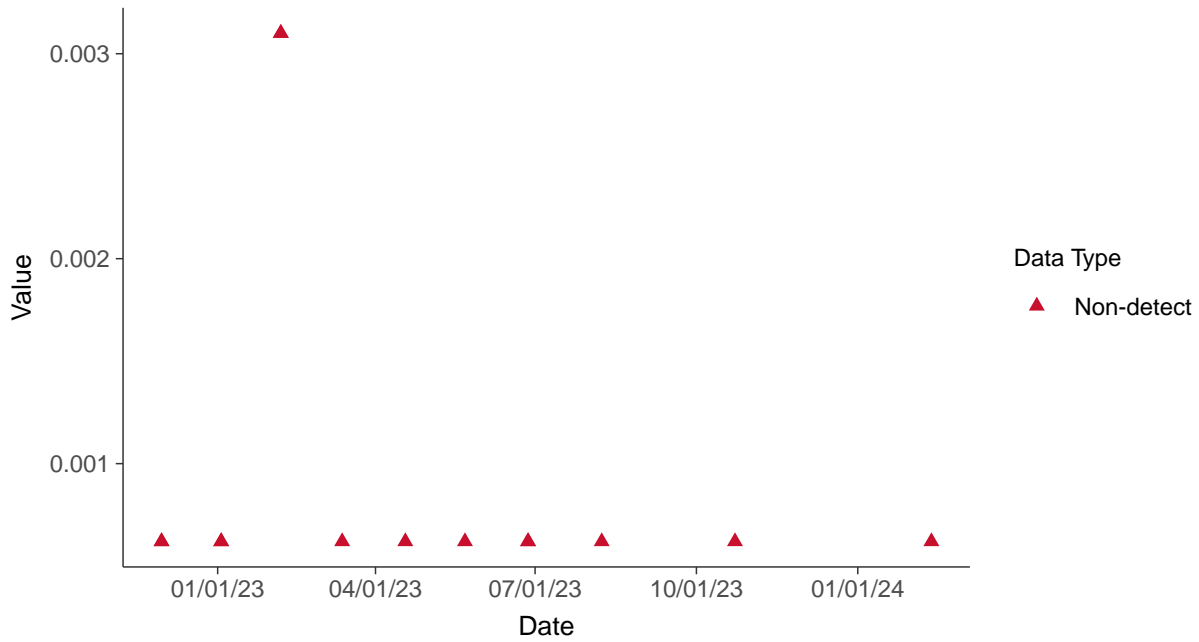


Part 115: Vanadium, MW-30

ID: 1_40_6_129

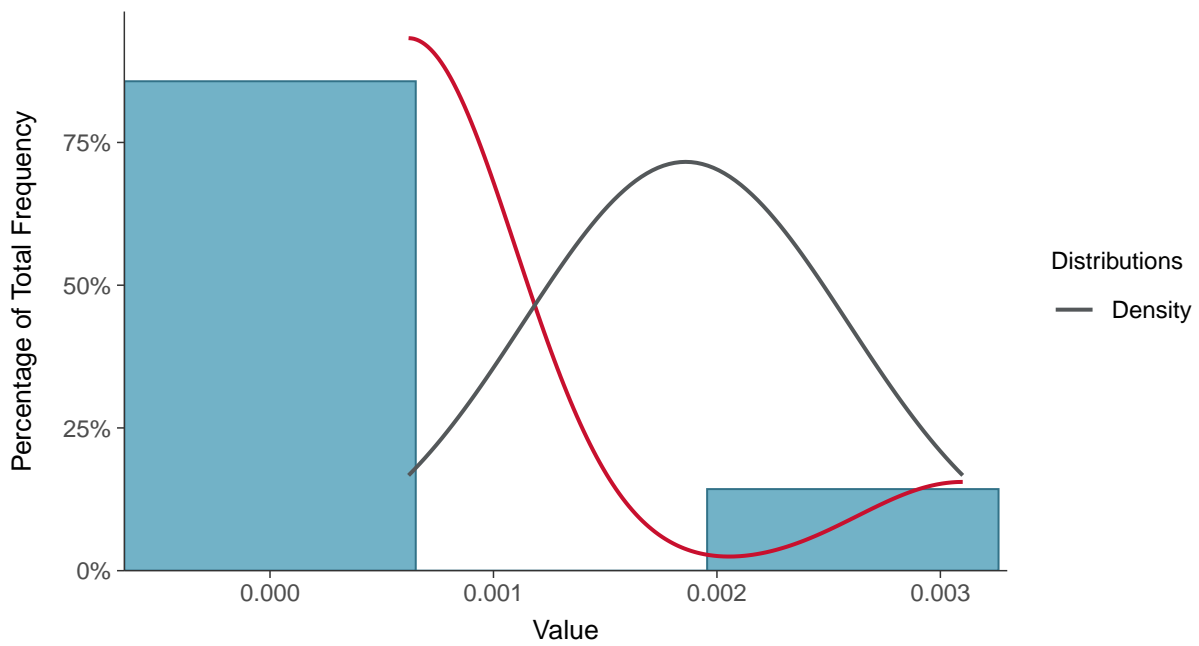
Scatter Plot

Vanadium, MW-30 (mg/L)



Histogram

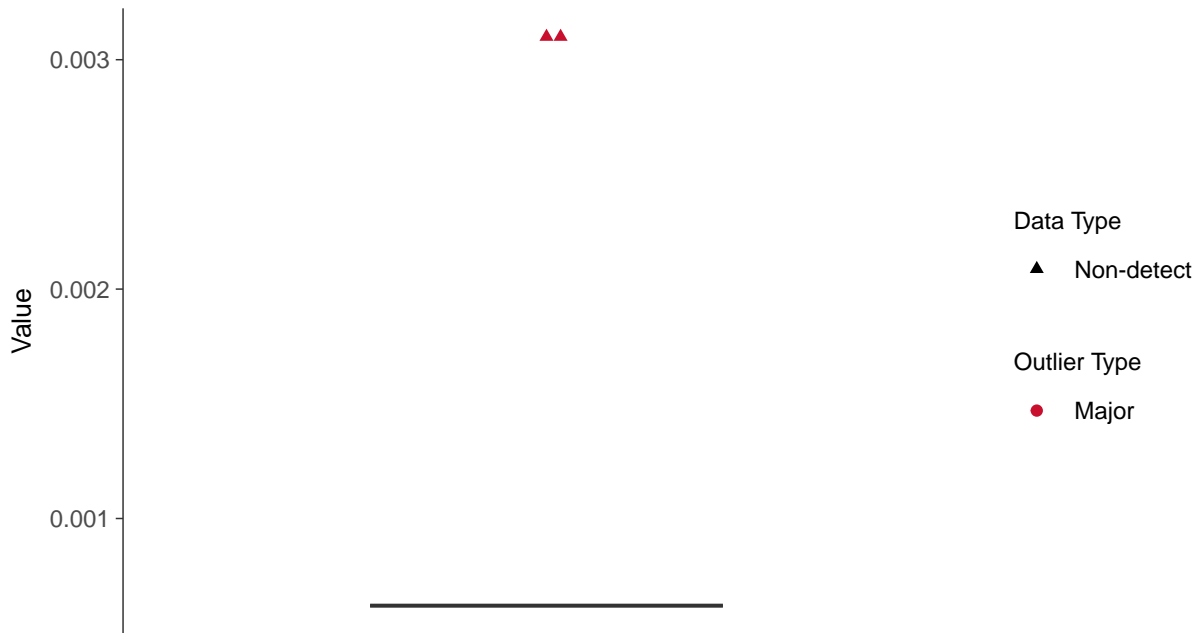
Vanadium, MW-30 (mg/L)





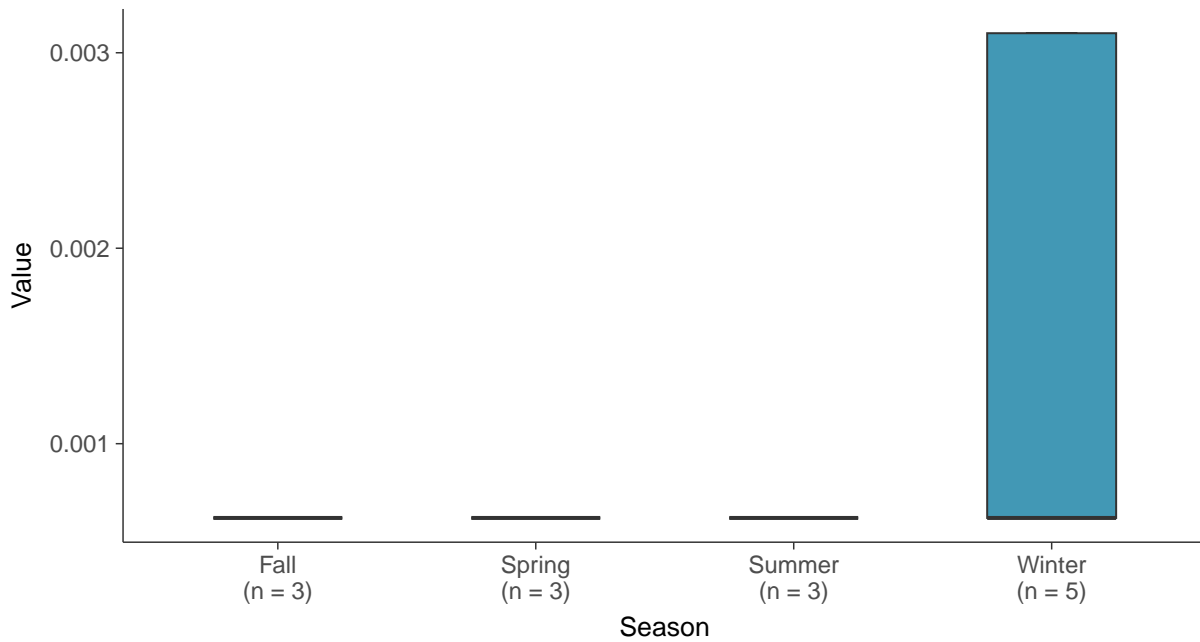
Boxplot

Vanadium, MW-30 (mg/L)



Boxplot by Season

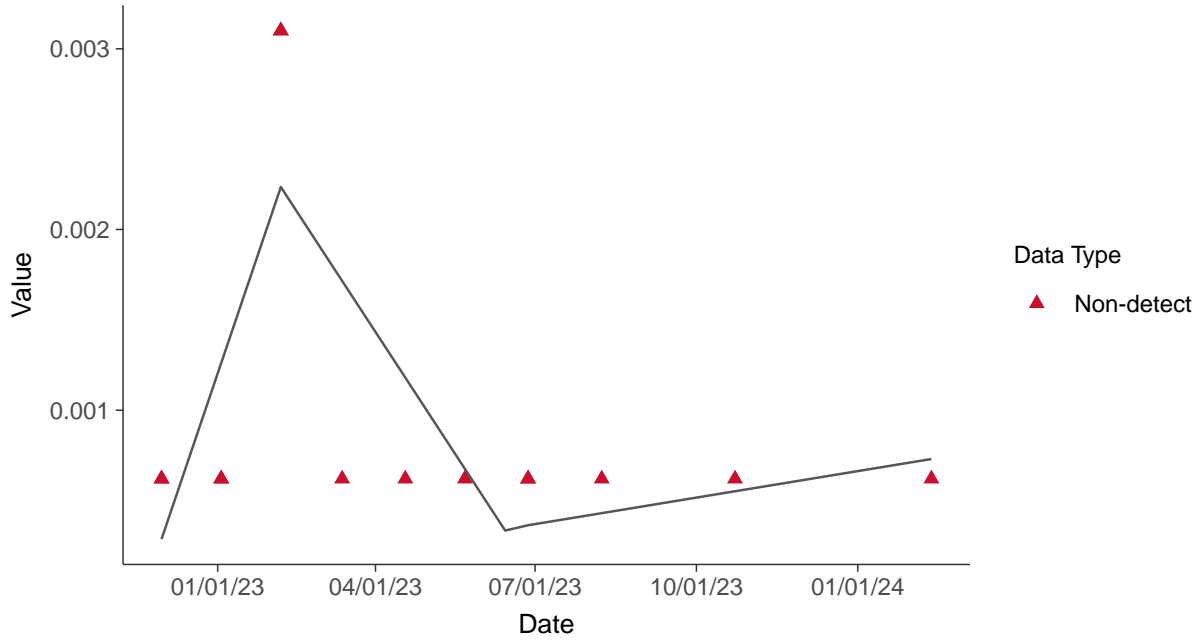
Vanadium, MW-30 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

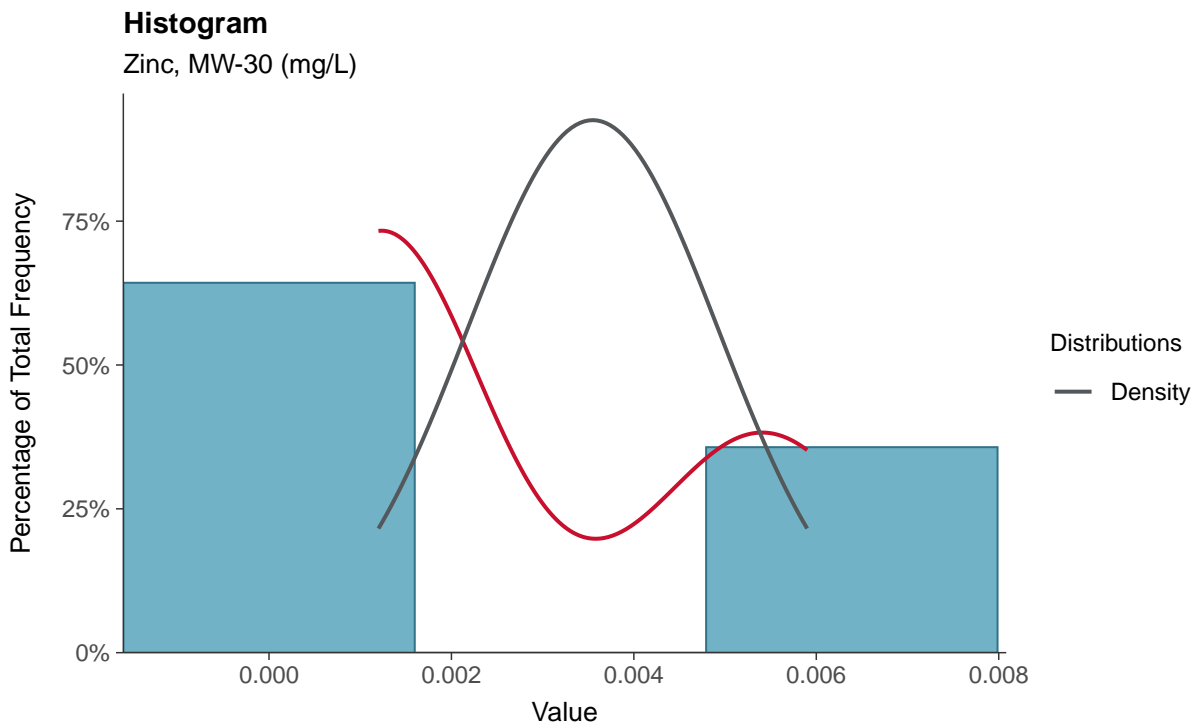
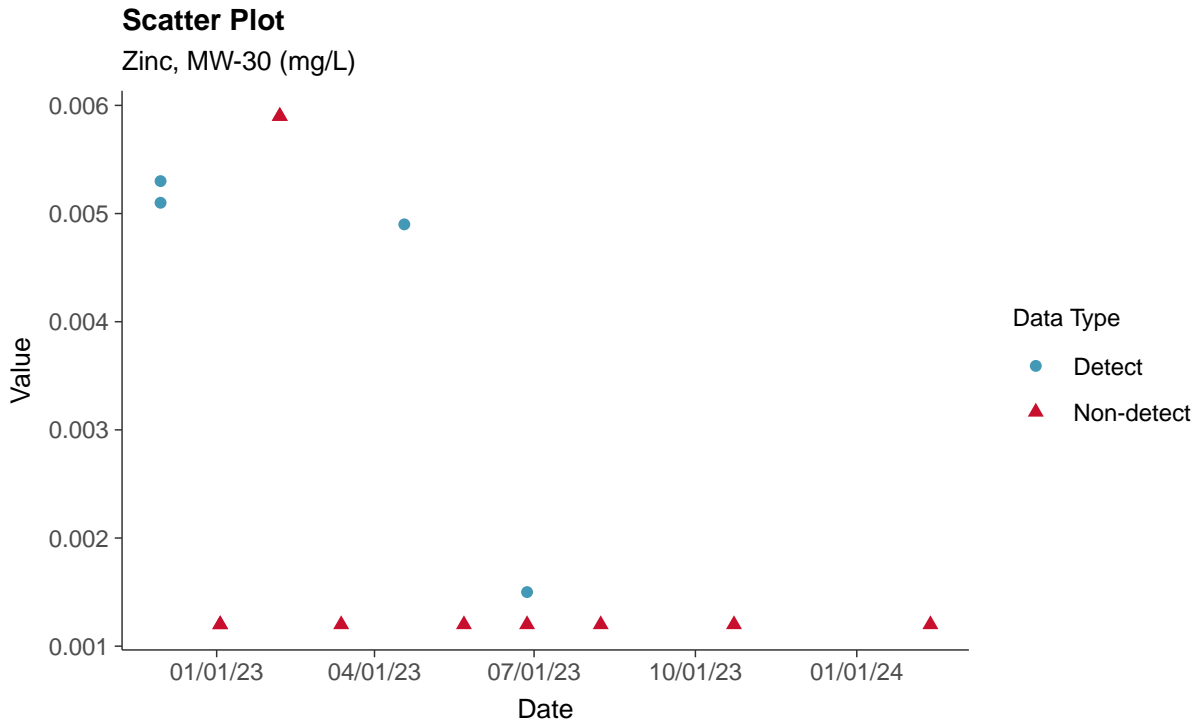
Vanadium, MW-30 (mg/L)





Part 115: Zinc, MW-30

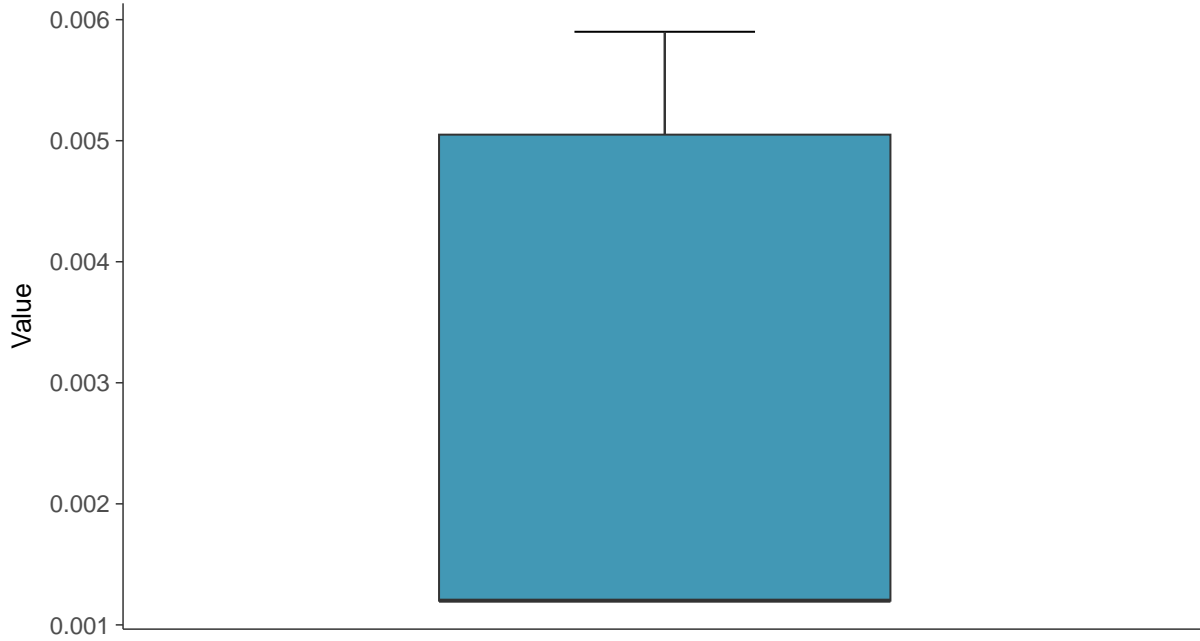
ID: 1_40_6_130





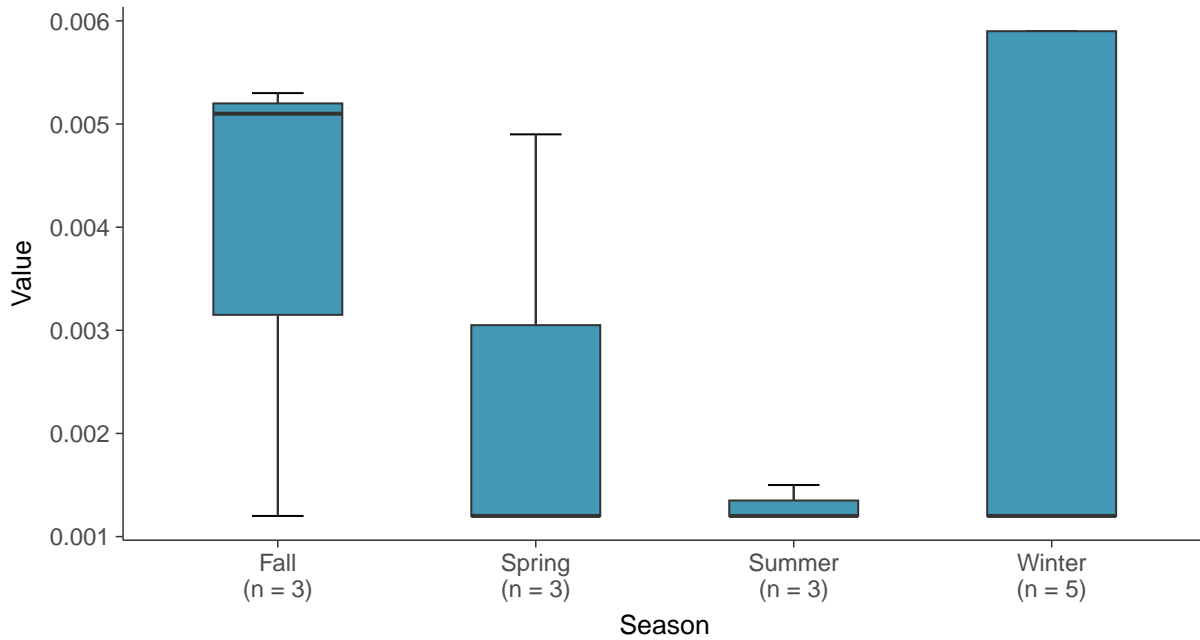
Boxplot

Zinc, MW-30 (mg/L)



Boxplot by Season

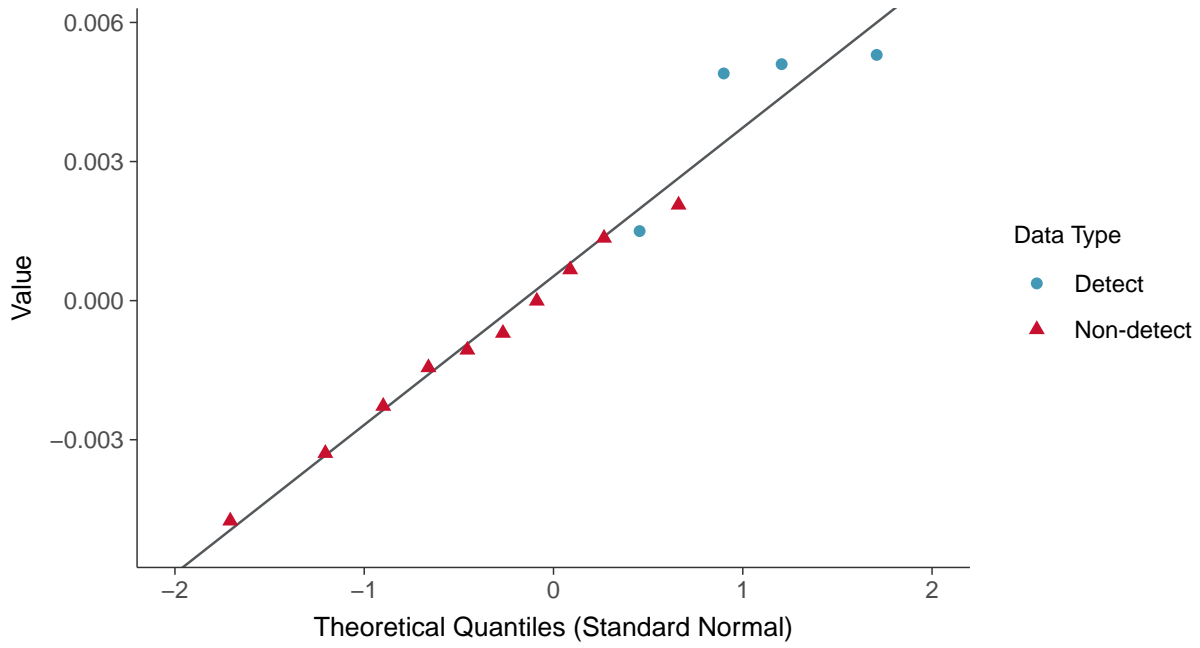
Zinc, MW-30 (mg/L)





Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-30 (mg/L)



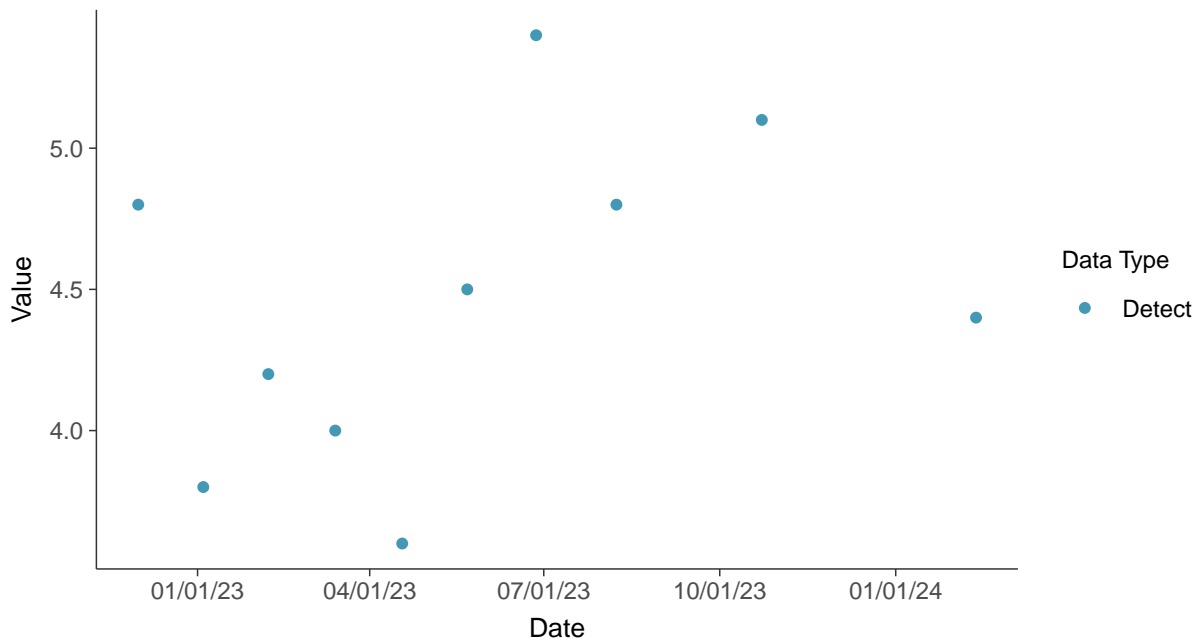


Appendix III: Boron, MW-31

ID: 1_41_4_105

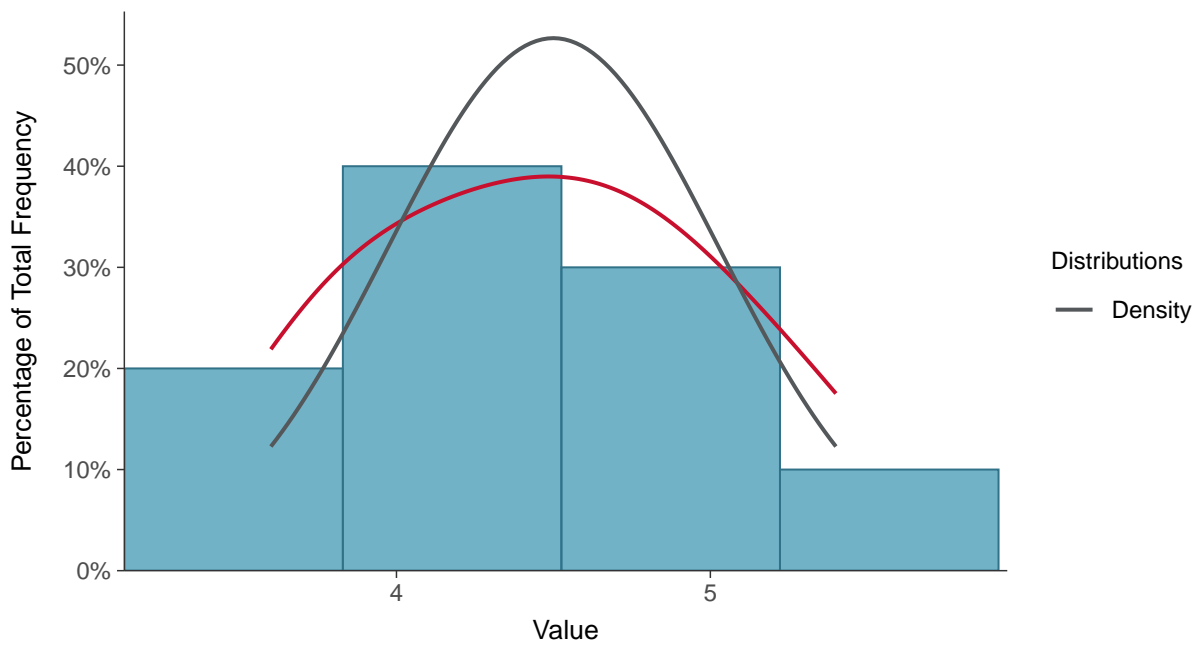
Scatter Plot

Boron, MW-31 (mg/L)



Histogram

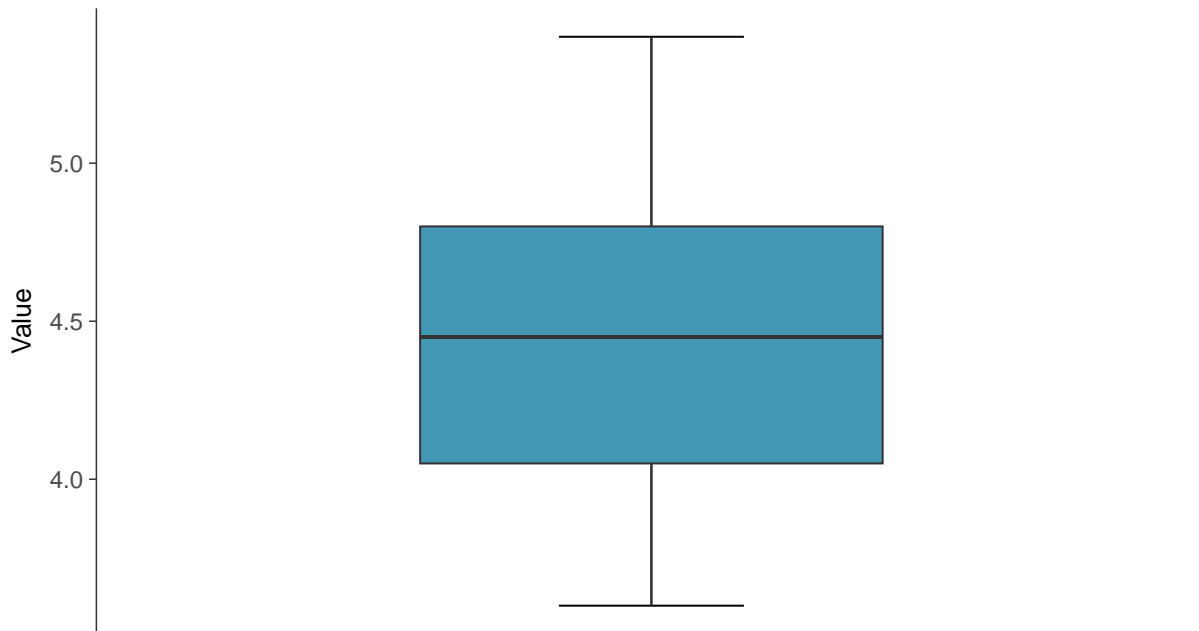
Boron, MW-31 (mg/L)





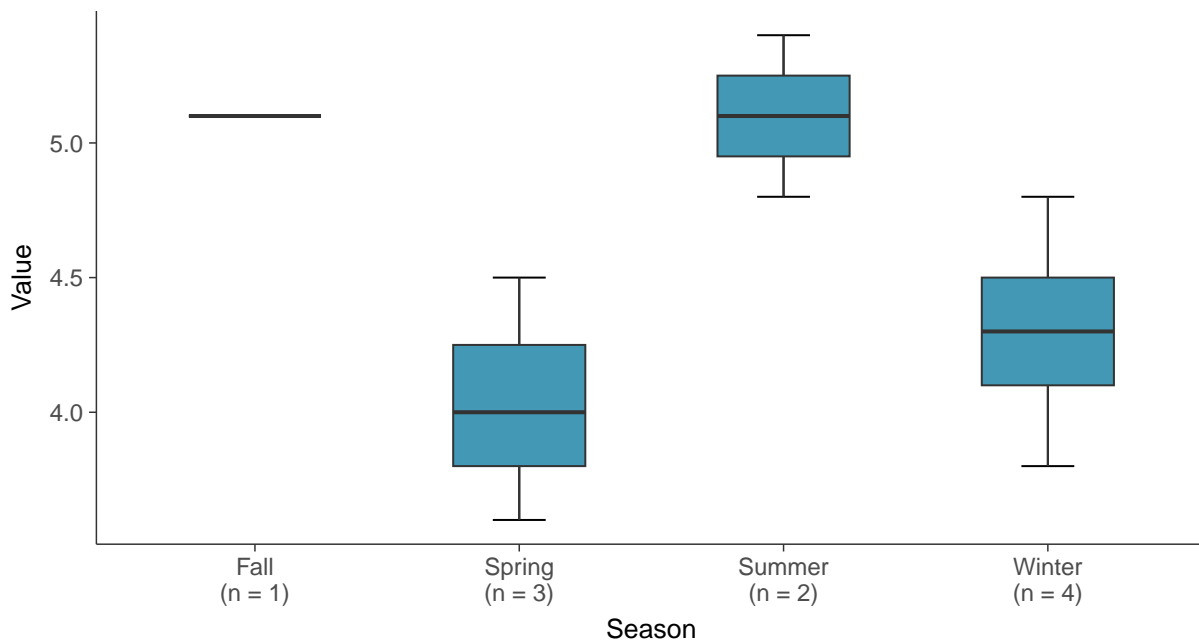
Boxplot

Boron, MW-31 (mg/L)



Boxplot by Season

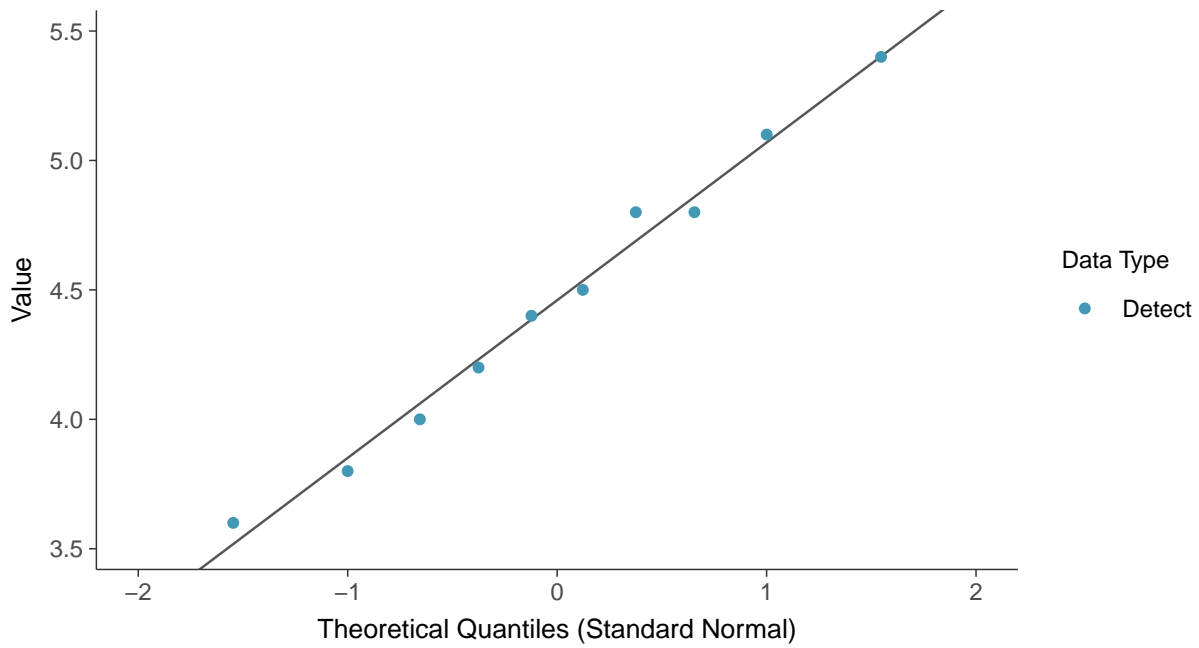
Boron, MW-31 (mg/L)





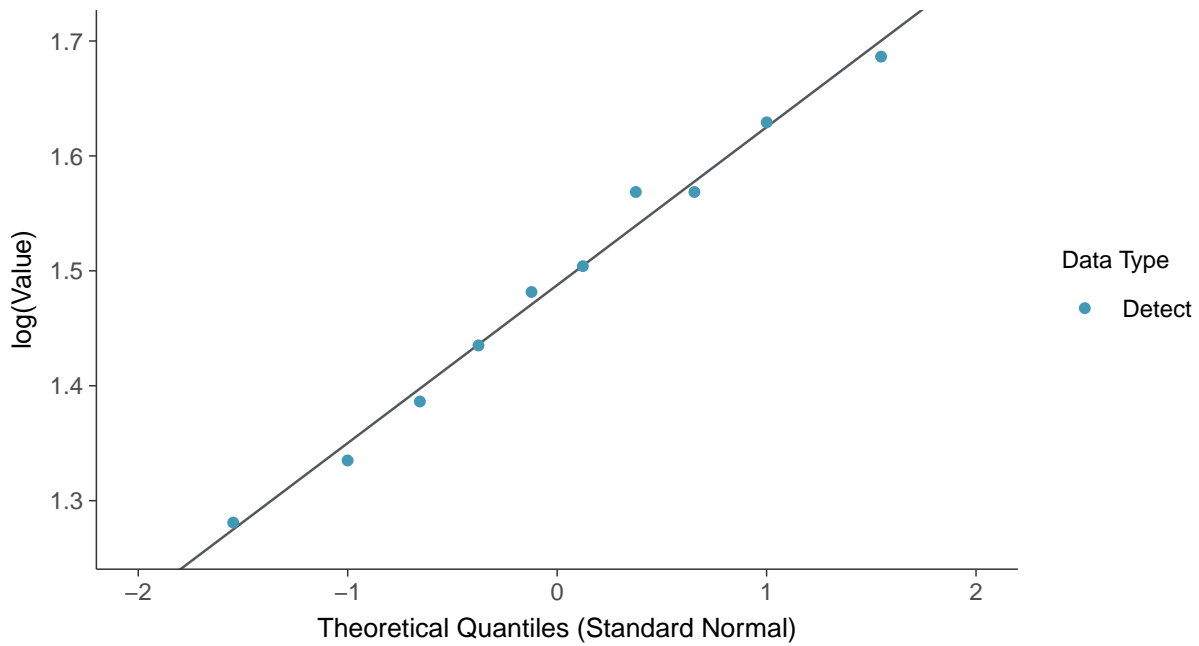
Normal Q-Q plot

Boron, MW-31 (mg/L)



Lognormal Q-Q plot

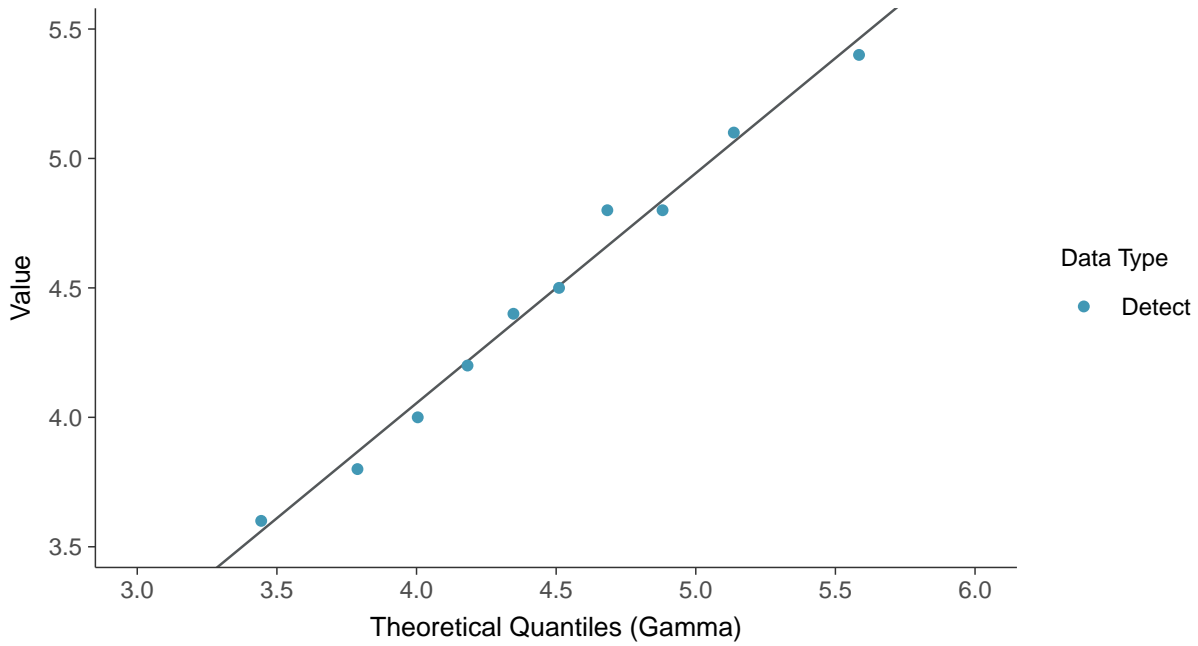
Boron, MW-31 (mg/L)





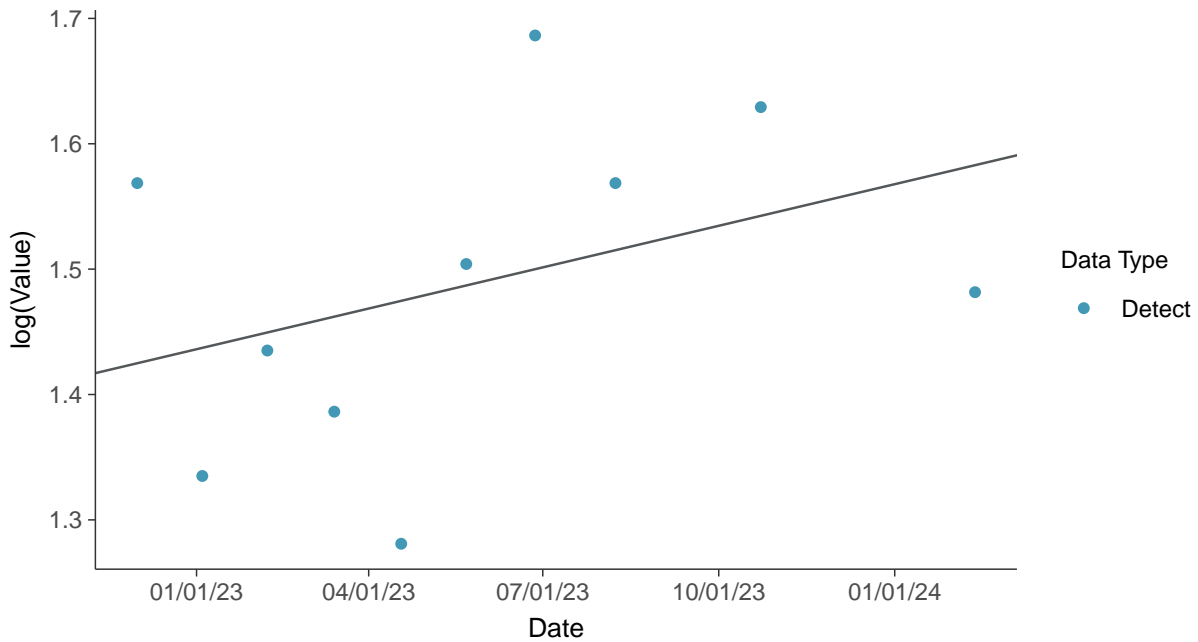
Gamma Q-Q plot

Boron, MW-31 (mg/L)



Trend Regression: Lognormal MLE

Boron, MW-31 (mg/L)



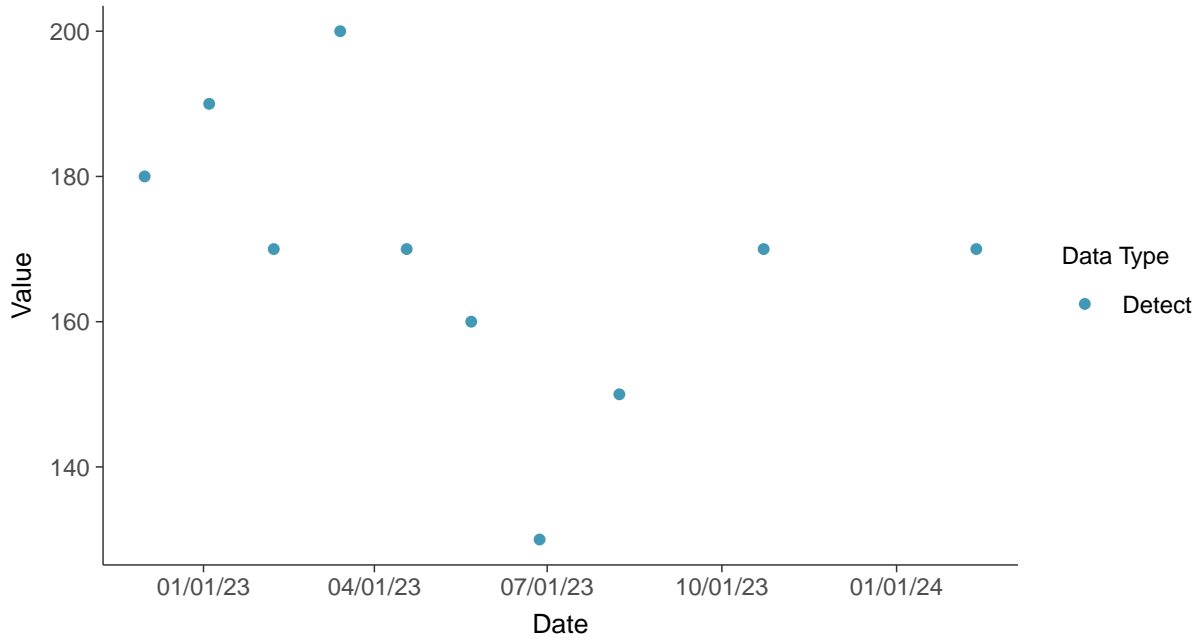


Appendix III: Calcium, MW-31

ID: 1_41_4_107

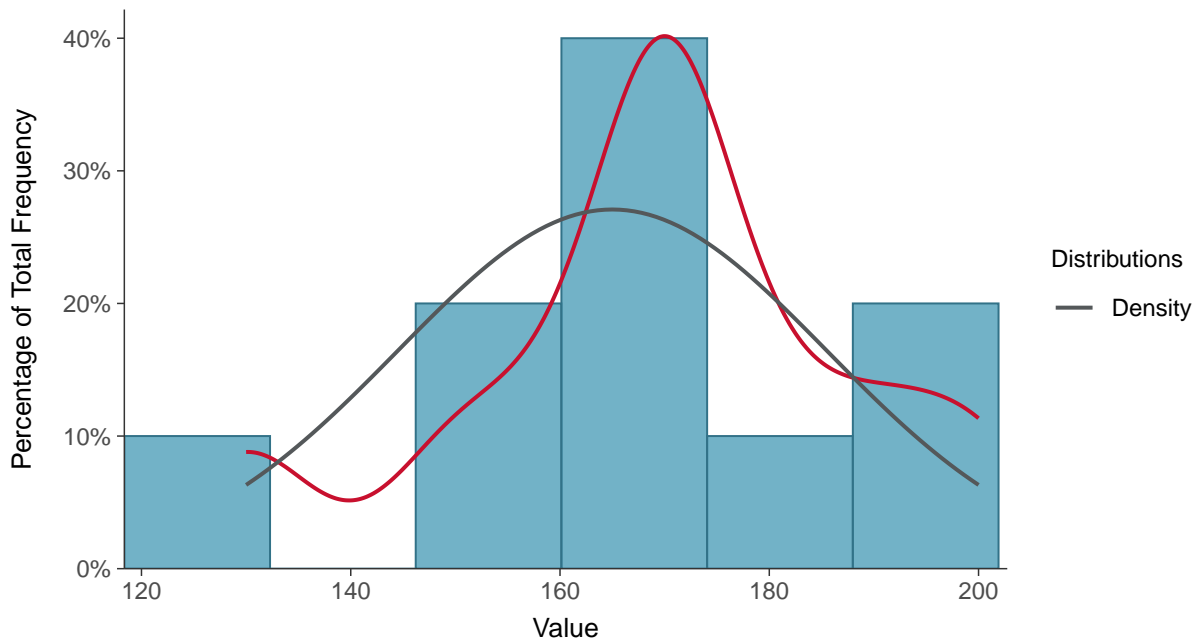
Scatter Plot

Calcium, MW-31 (mg/L)



Histogram

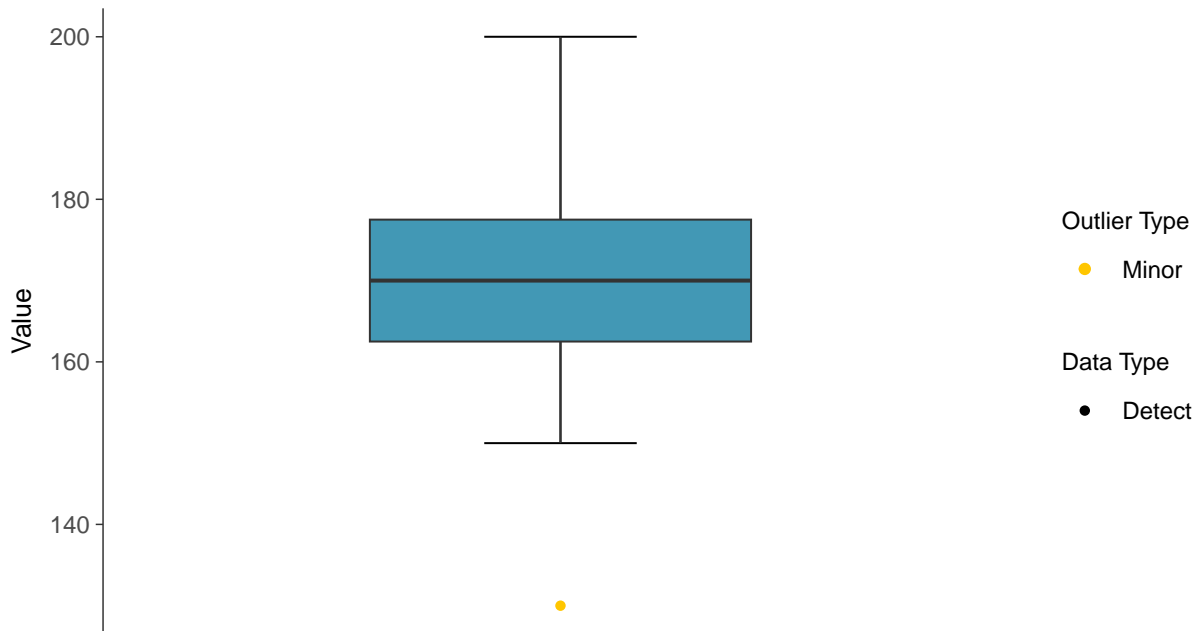
Calcium, MW-31 (mg/L)





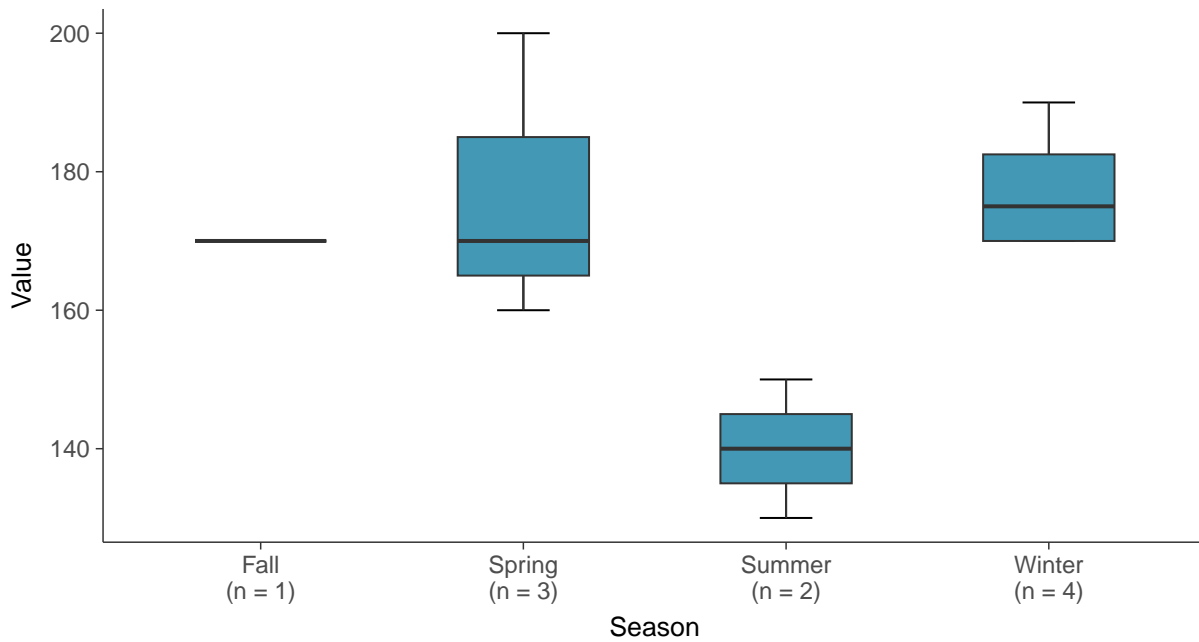
Boxplot

Calcium, MW-31 (mg/L)



Boxplot by Season

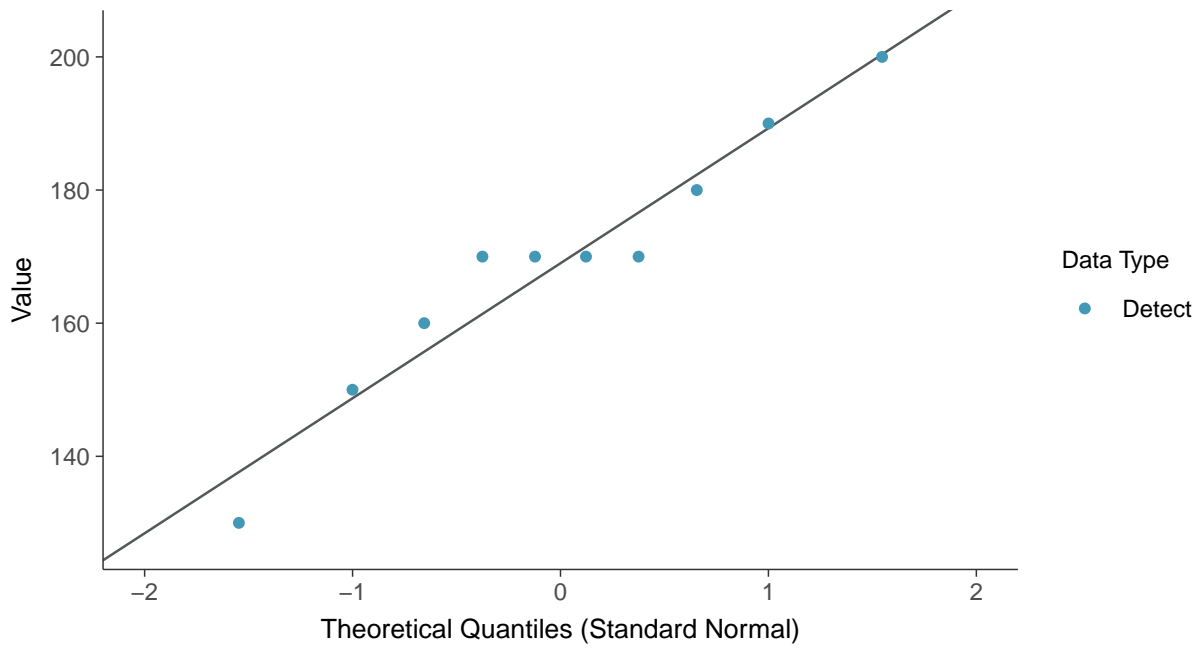
Calcium, MW-31 (mg/L)





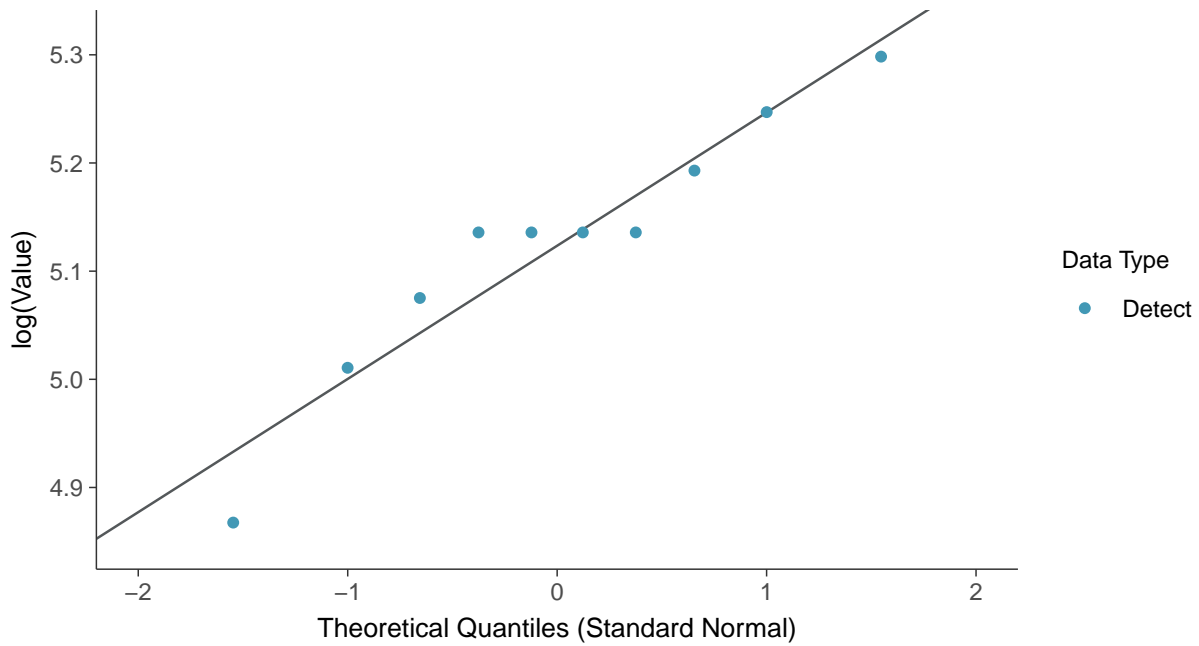
Normal Q-Q plot

Calcium, MW-31 (mg/L)



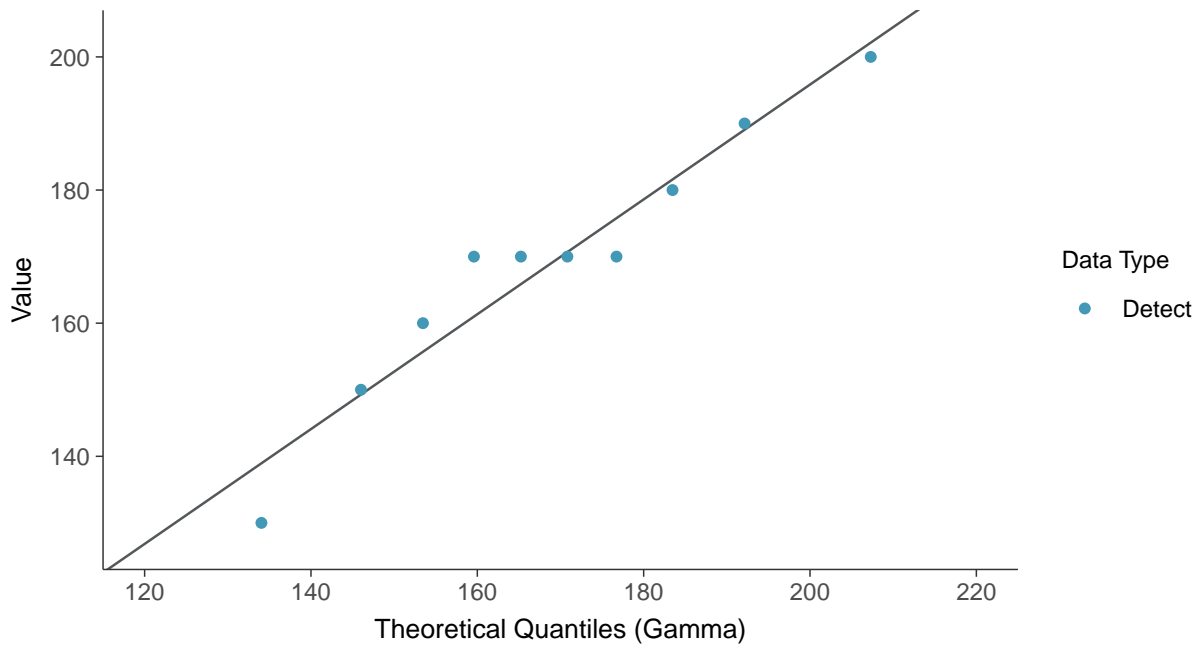
Lognormal Q-Q plot

Calcium, MW-31 (mg/L)

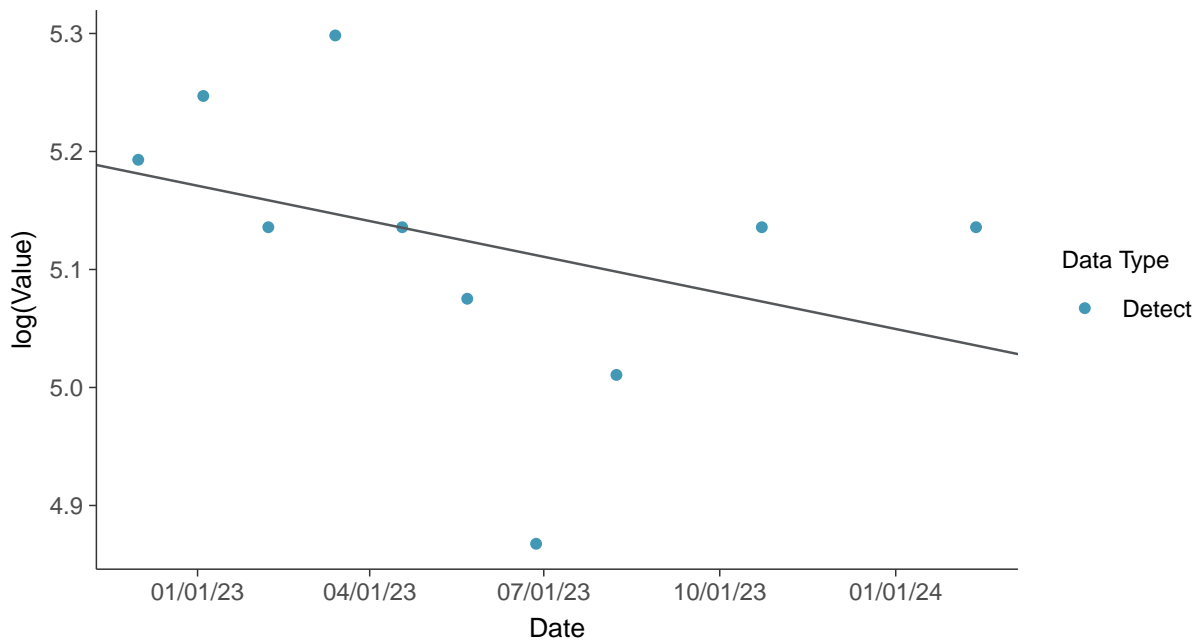




Gamma Q-Q plot
Calcium, MW-31 (mg/L)



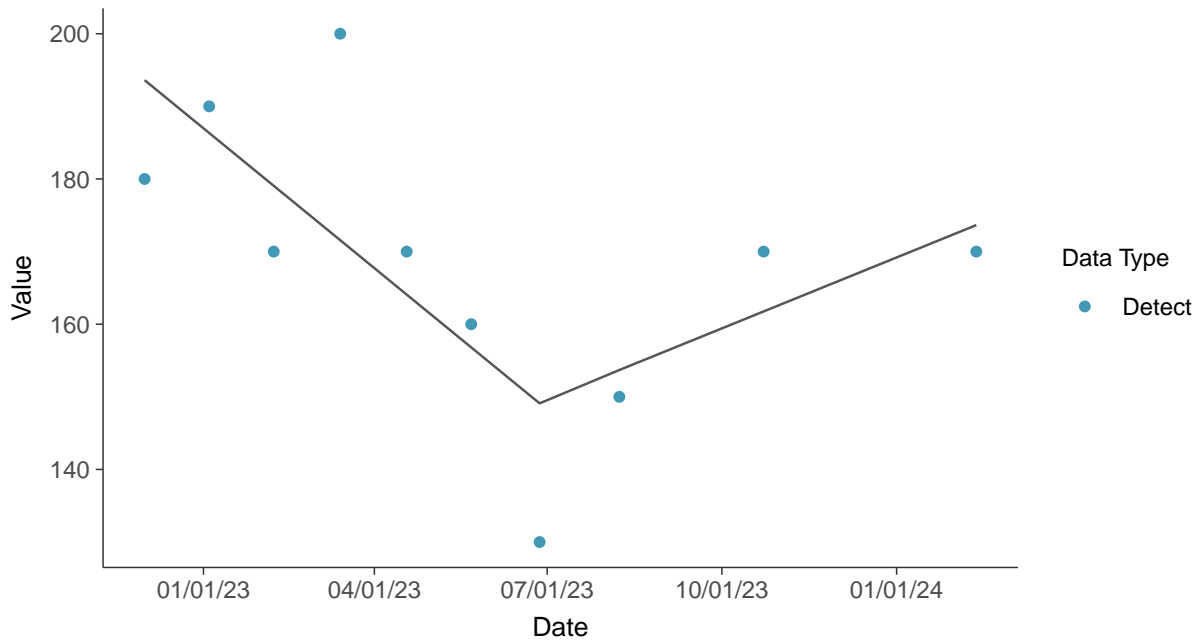
Trend Regression: Lognormal MLE
Calcium, MW-31 (mg/L)





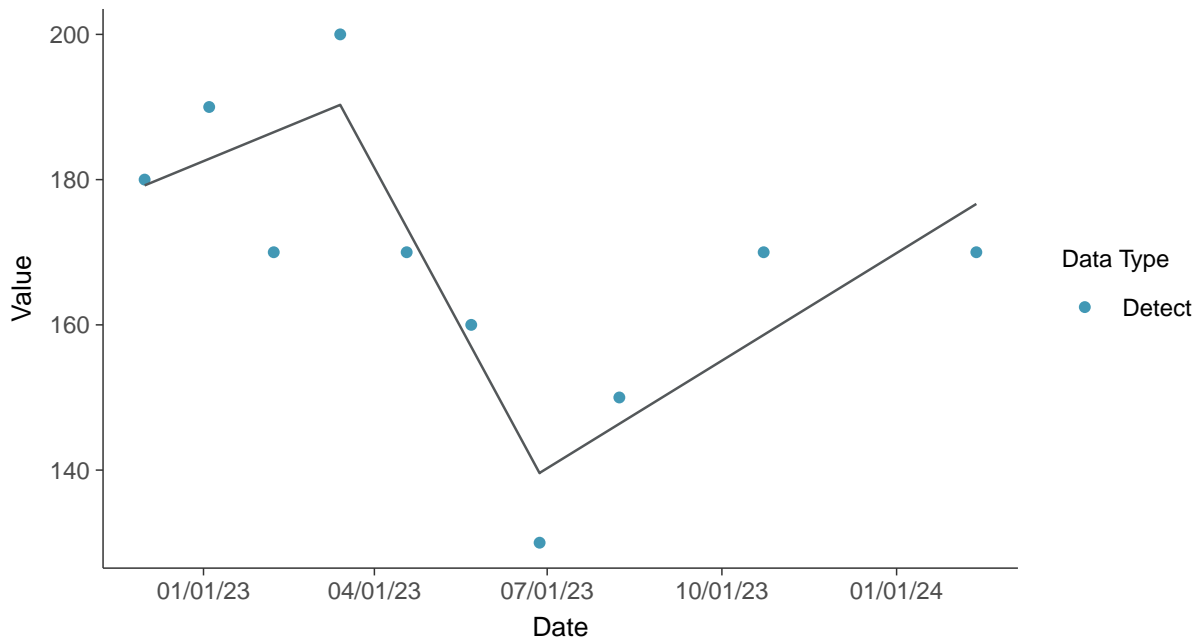
Trend Regression: Piecewise Linear-Linear

Calcium, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-31 (mg/L)



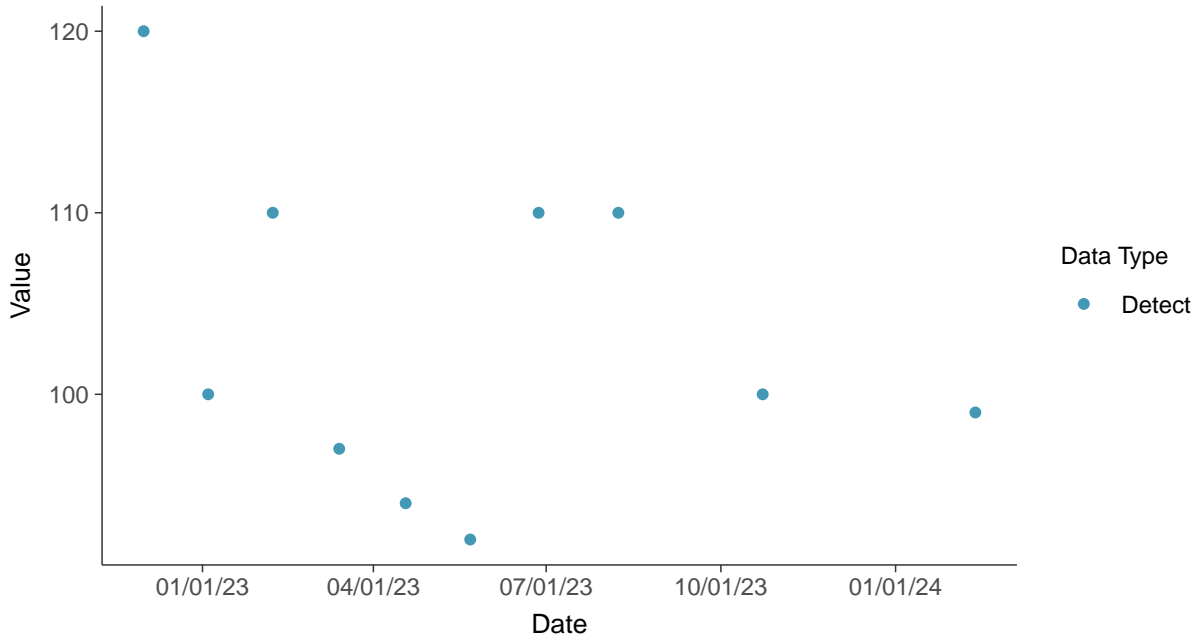


Appendix III: Chloride (as Cl), MW-31

ID: 1_41_4_108

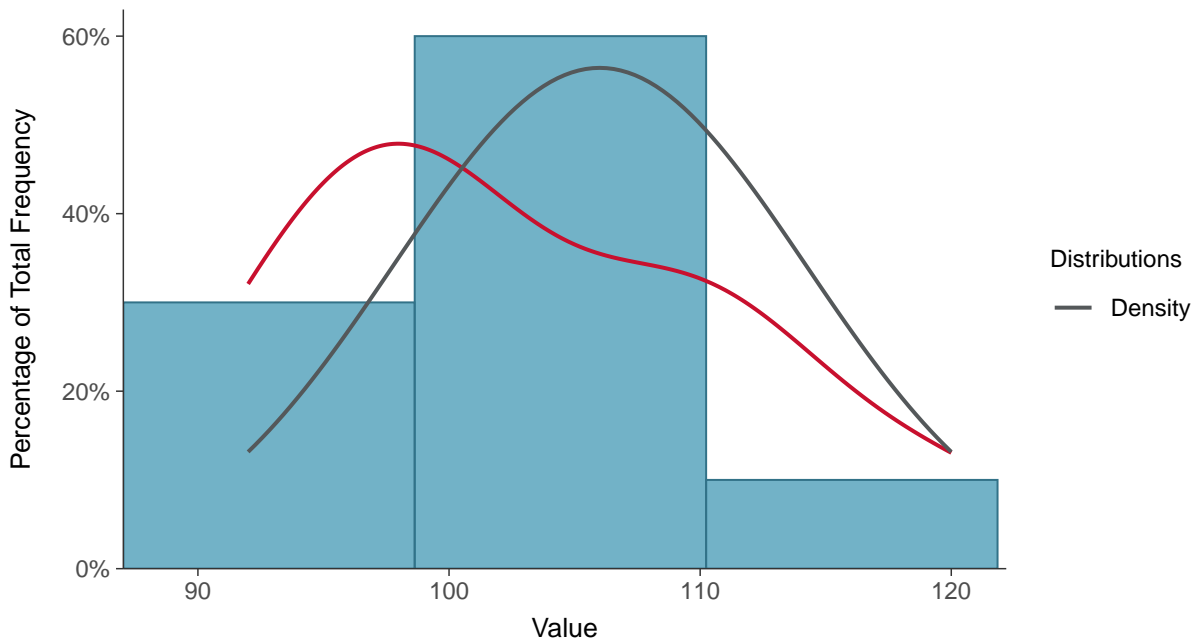
Scatter Plot

Chloride (as Cl), MW-31 (mg/L)



Histogram

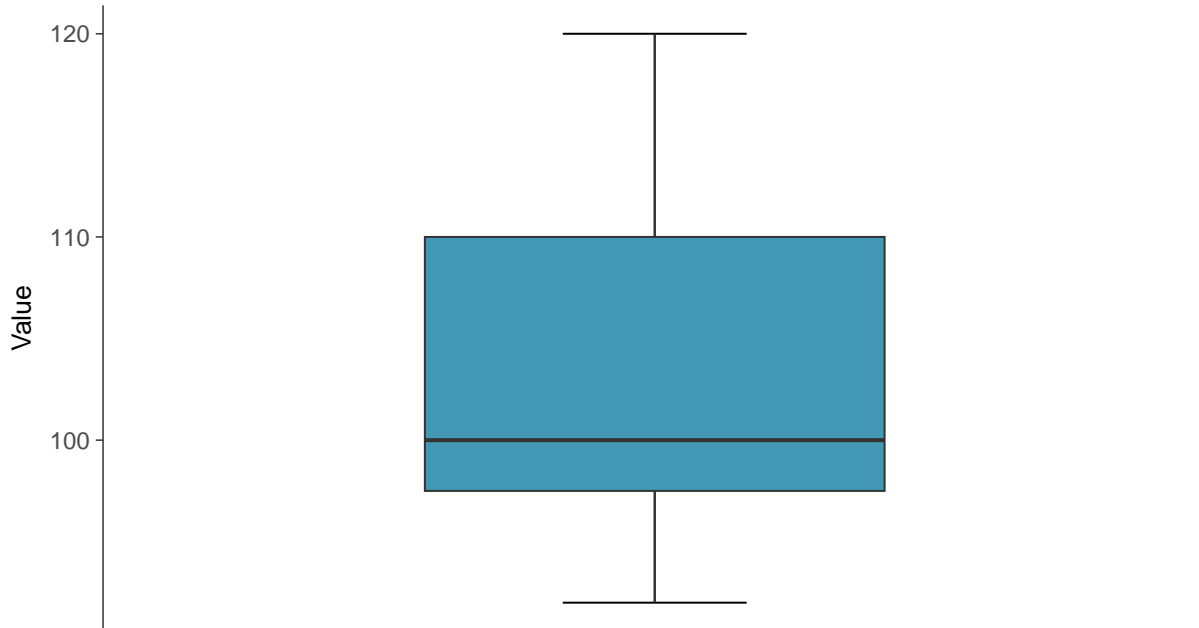
Chloride (as Cl), MW-31 (mg/L)





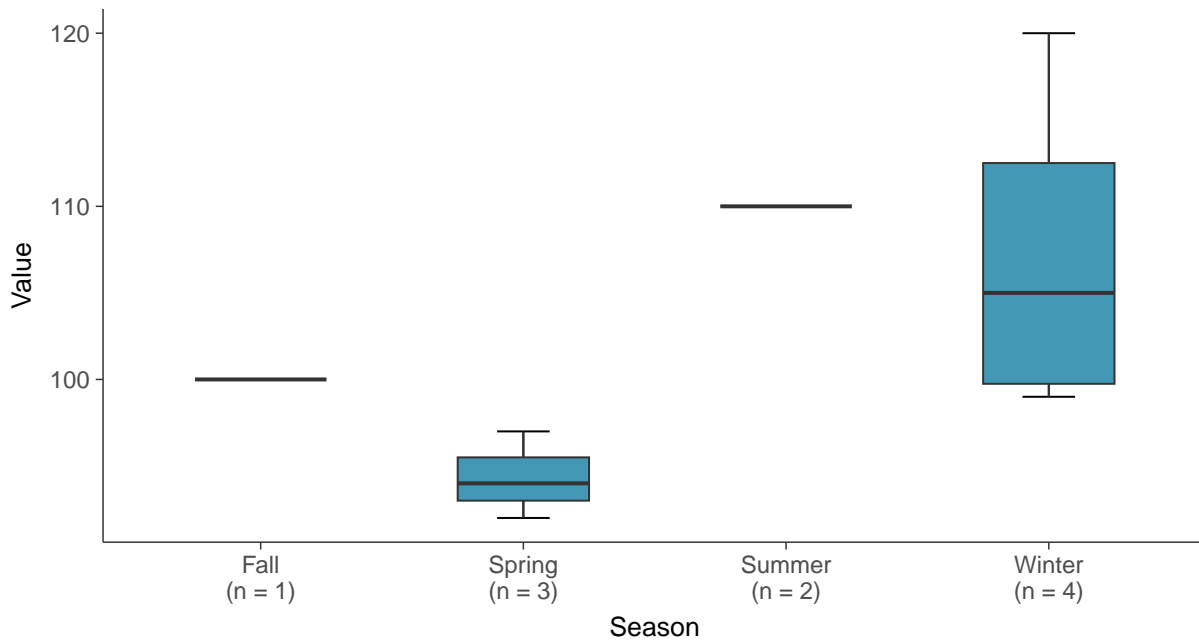
Boxplot

Chloride (as Cl), MW-31 (mg/L)



Boxplot by Season

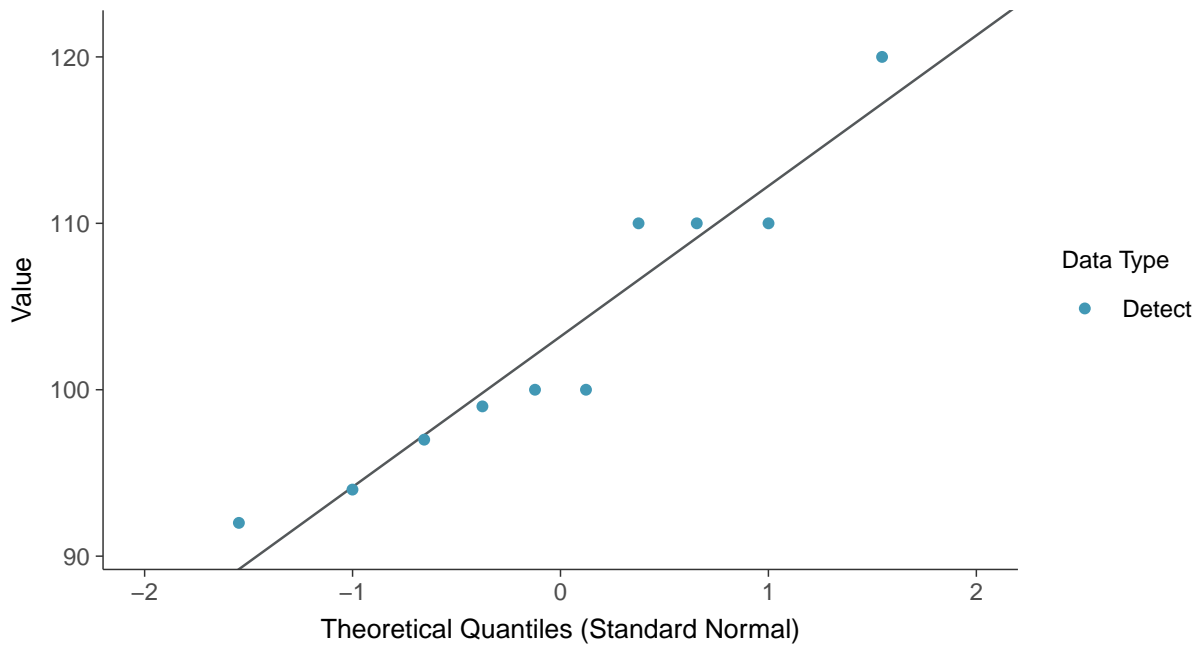
Chloride (as Cl), MW-31 (mg/L)





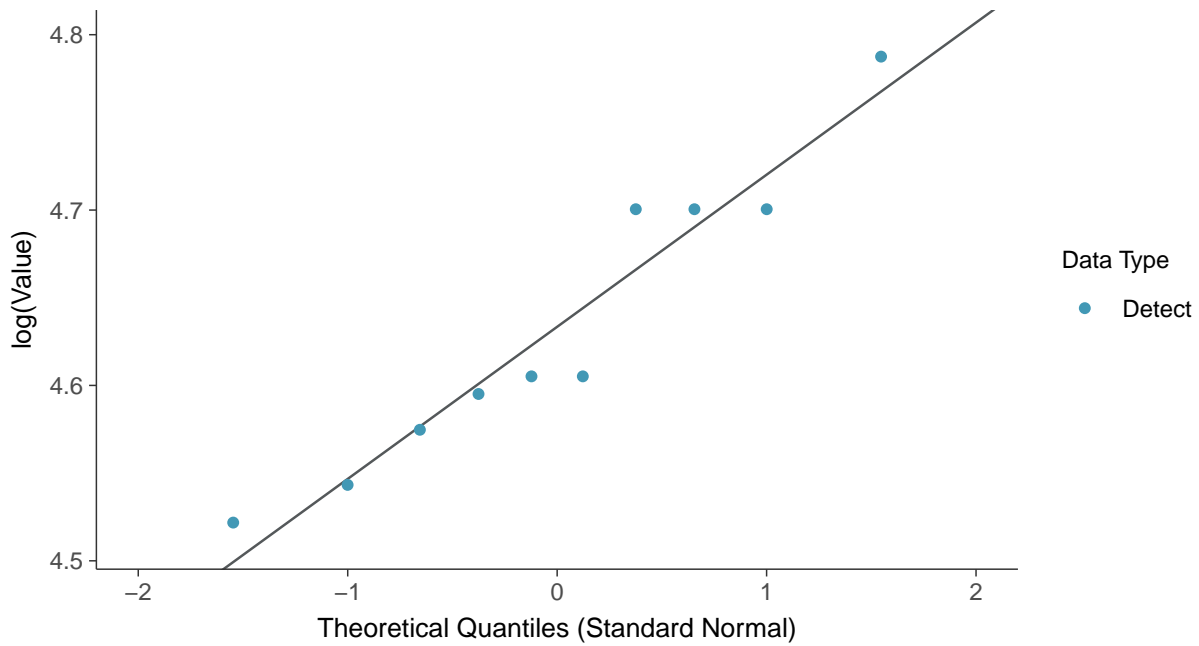
Normal Q-Q plot

Chloride (as Cl), MW-31 (mg/L)



Lognormal Q-Q plot

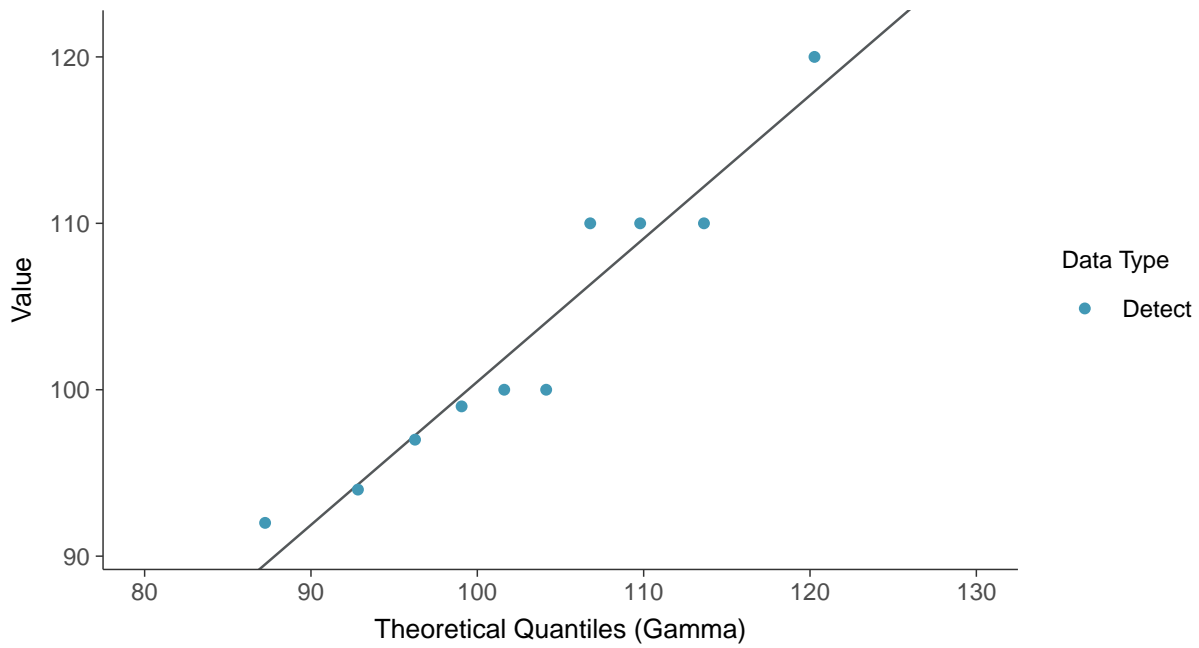
Chloride (as Cl), MW-31 (mg/L)





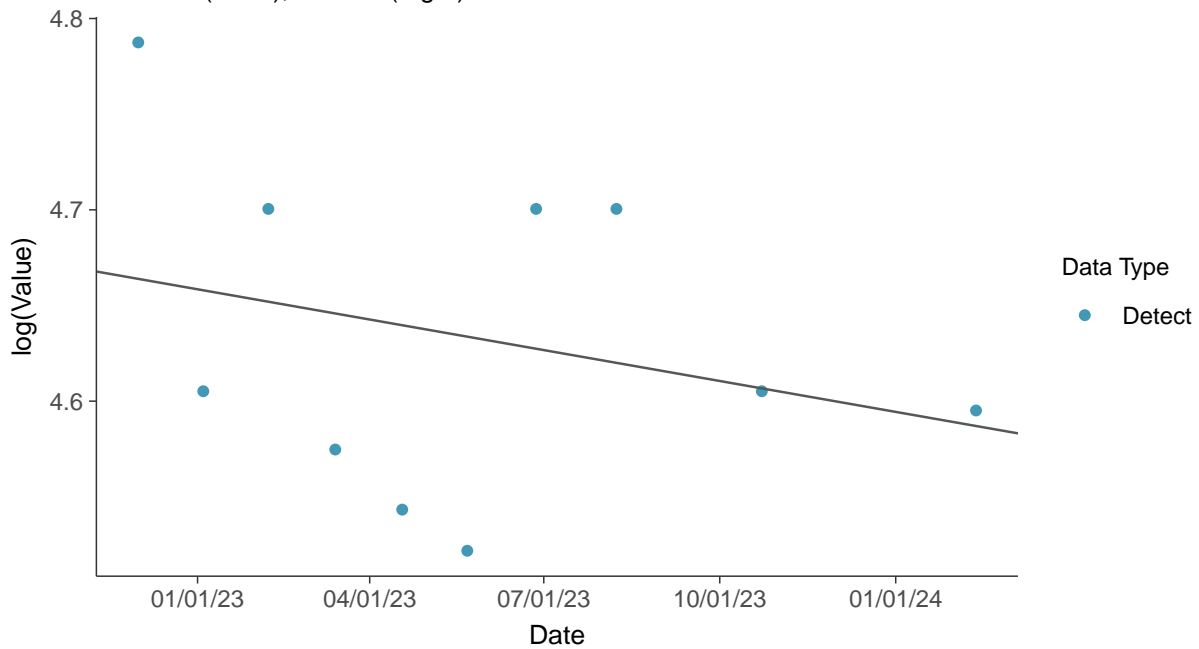
Gamma Q-Q plot

Chloride (as Cl), MW-31 (mg/L)



Trend Regression: Lognormal MLE

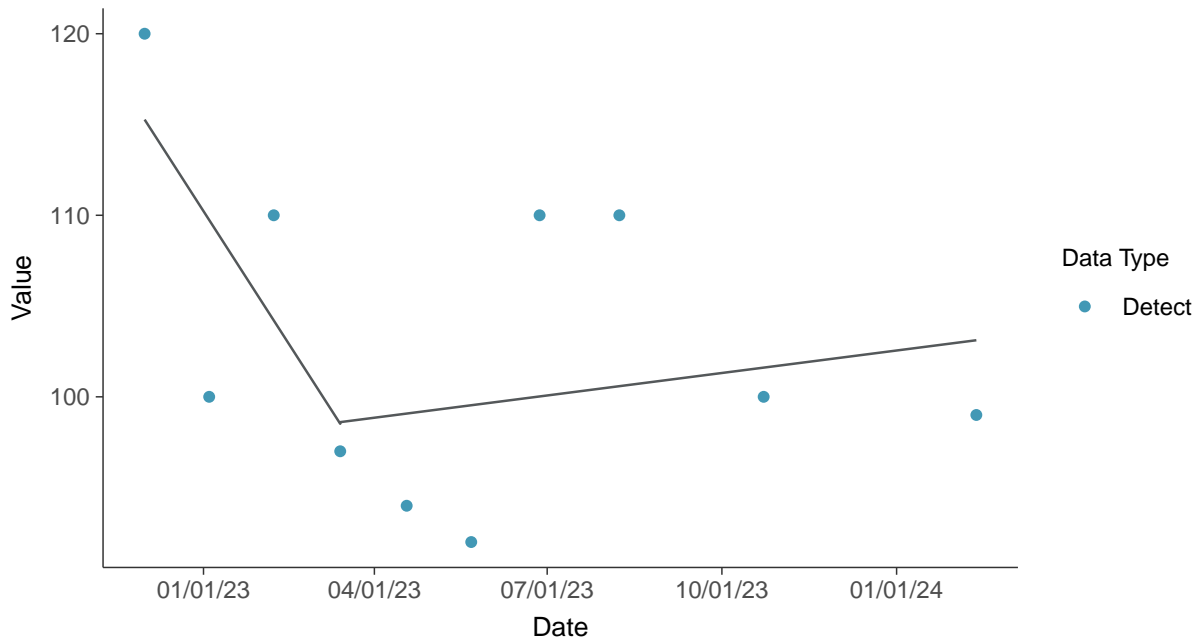
Chloride (as Cl), MW-31 (mg/L)





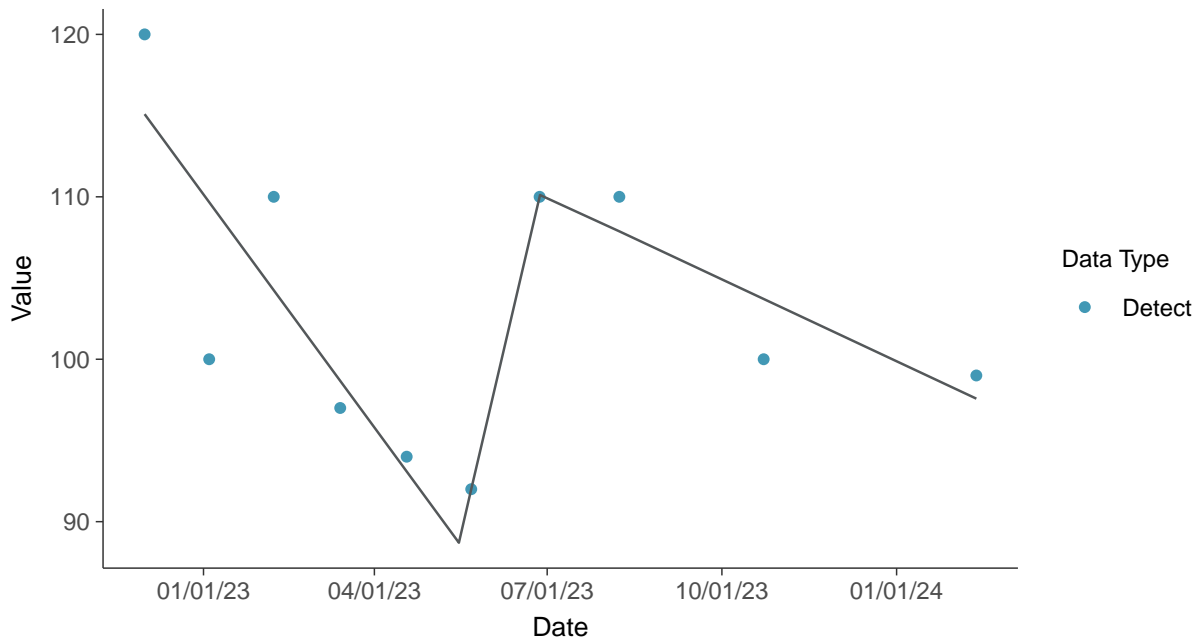
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-31 (mg/L)



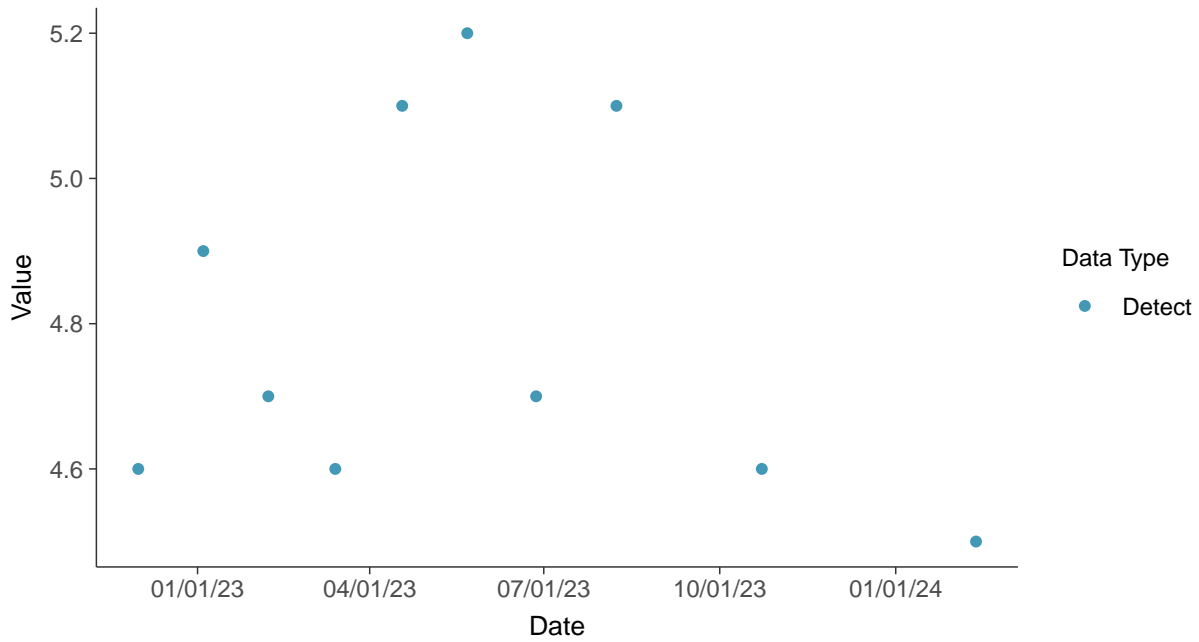


Appendix III: Fluoride, MW-31

ID: 1_41_4_112

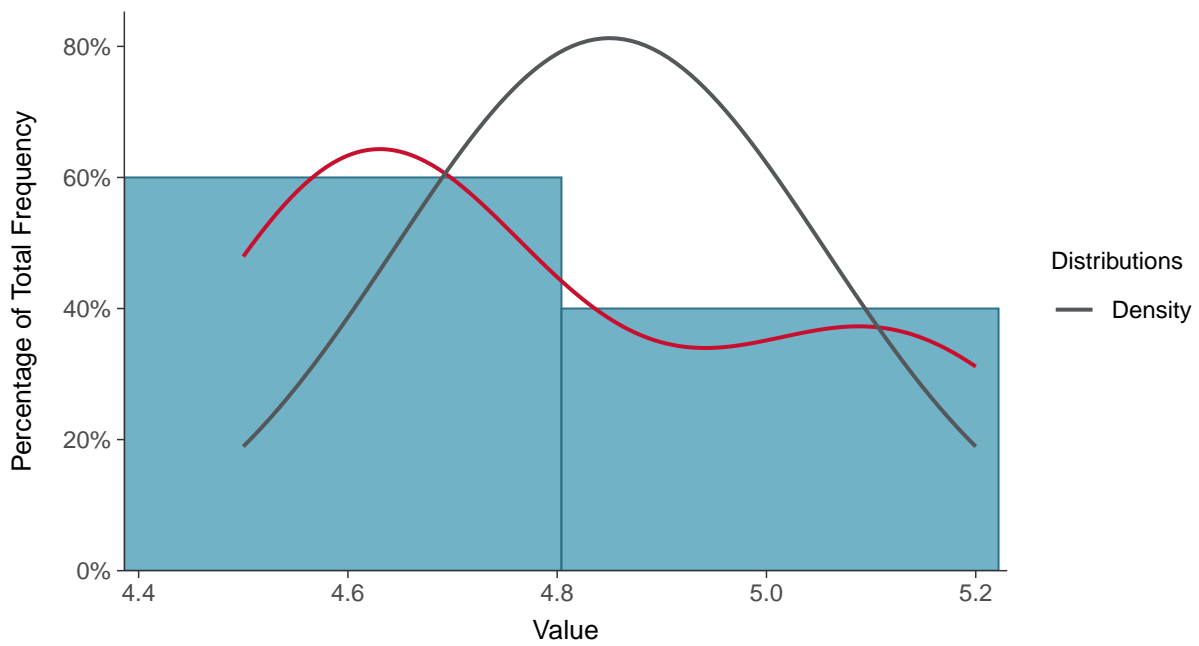
Scatter Plot

Fluoride, MW-31 (mg/L)



Histogram

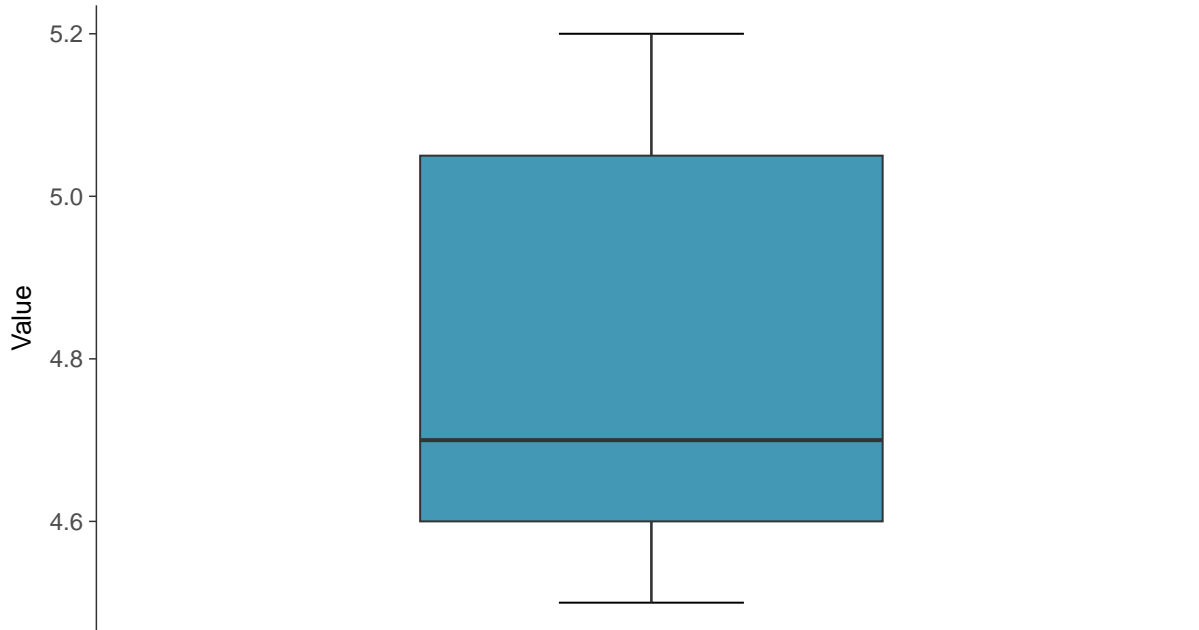
Fluoride, MW-31 (mg/L)





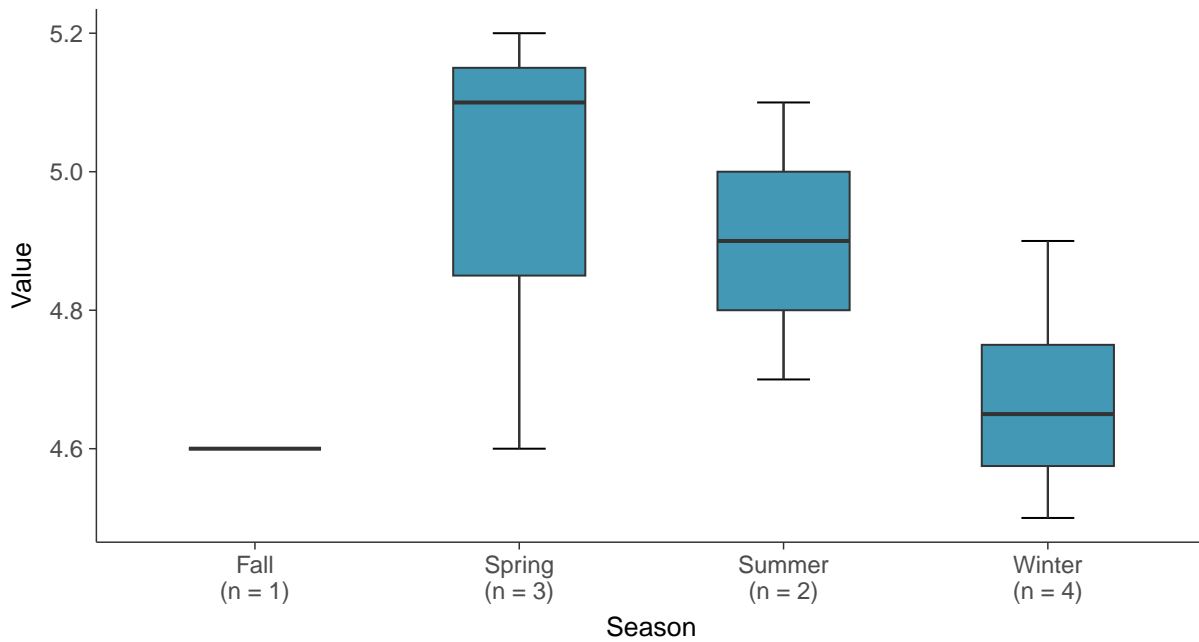
Boxplot

Fluoride, MW-31 (mg/L)



Boxplot by Season

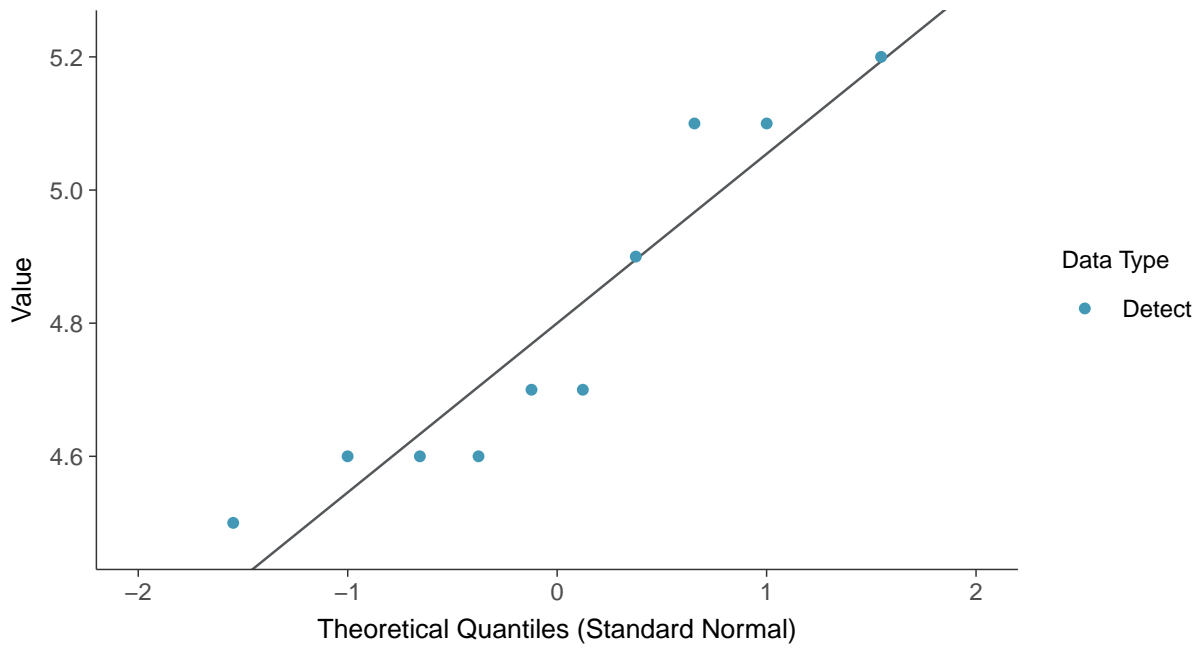
Fluoride, MW-31 (mg/L)





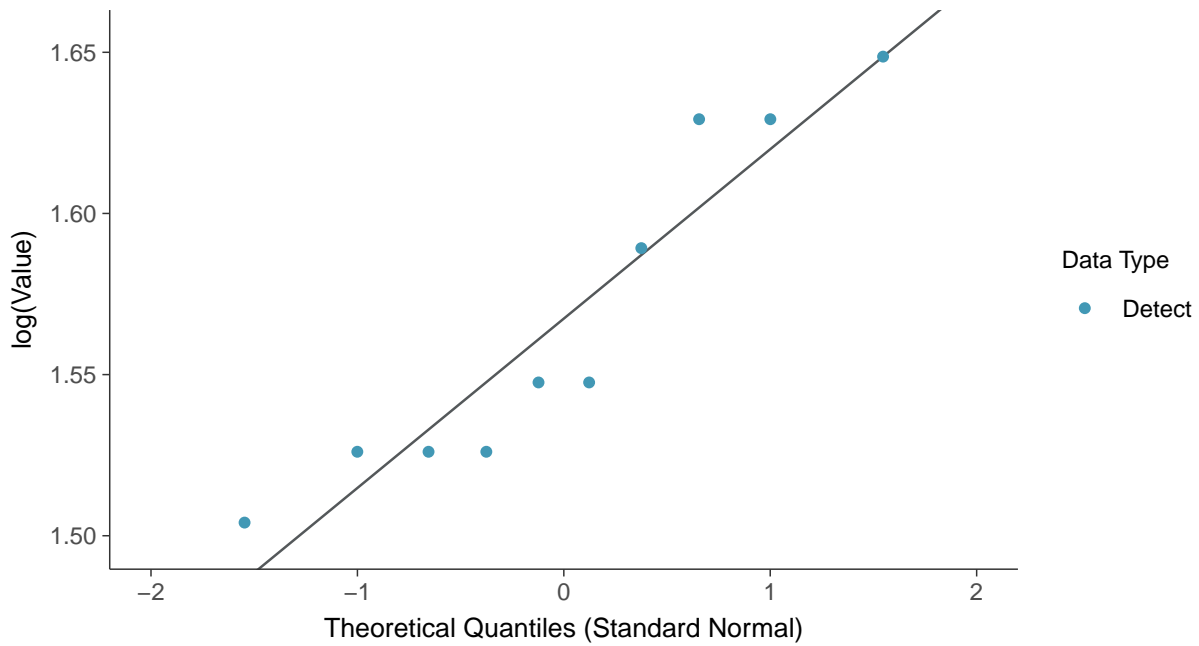
Normal Q-Q plot

Fluoride, MW-31 (mg/L)



Lognormal Q-Q plot

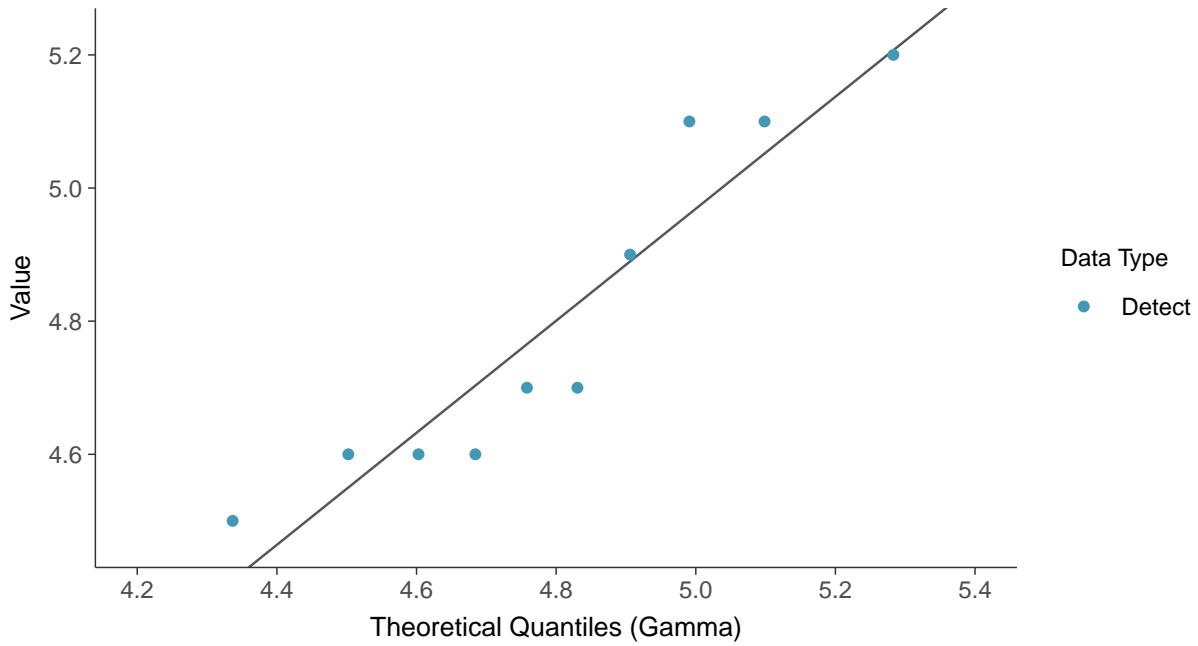
Fluoride, MW-31 (mg/L)





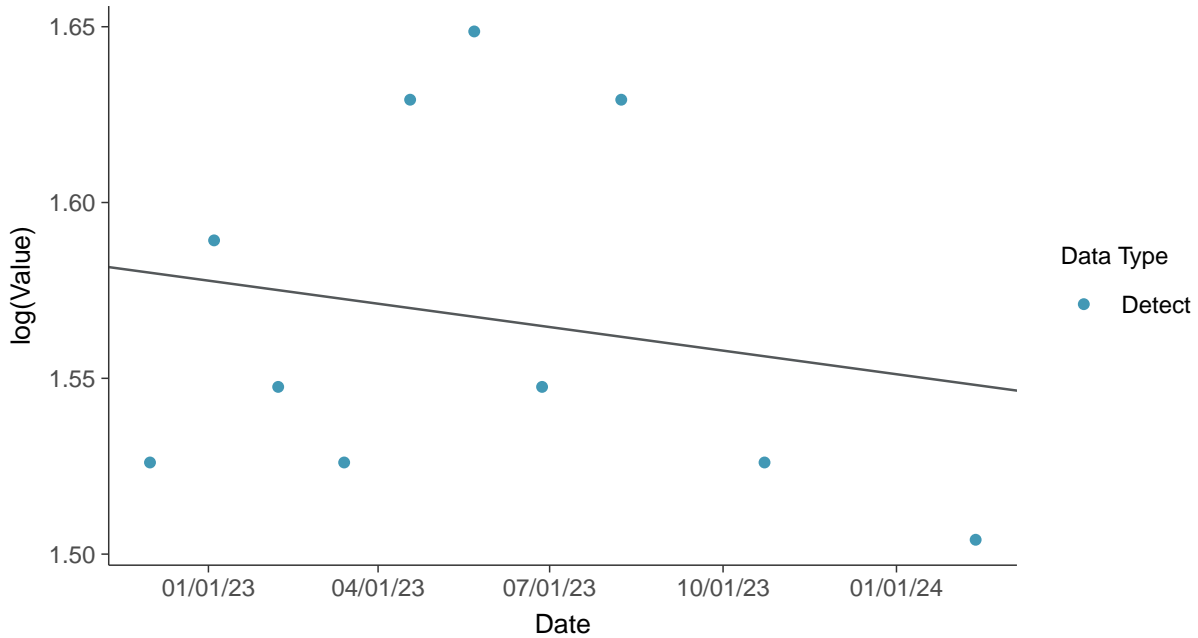
Gamma Q-Q plot

Fluoride, MW-31 (mg/L)



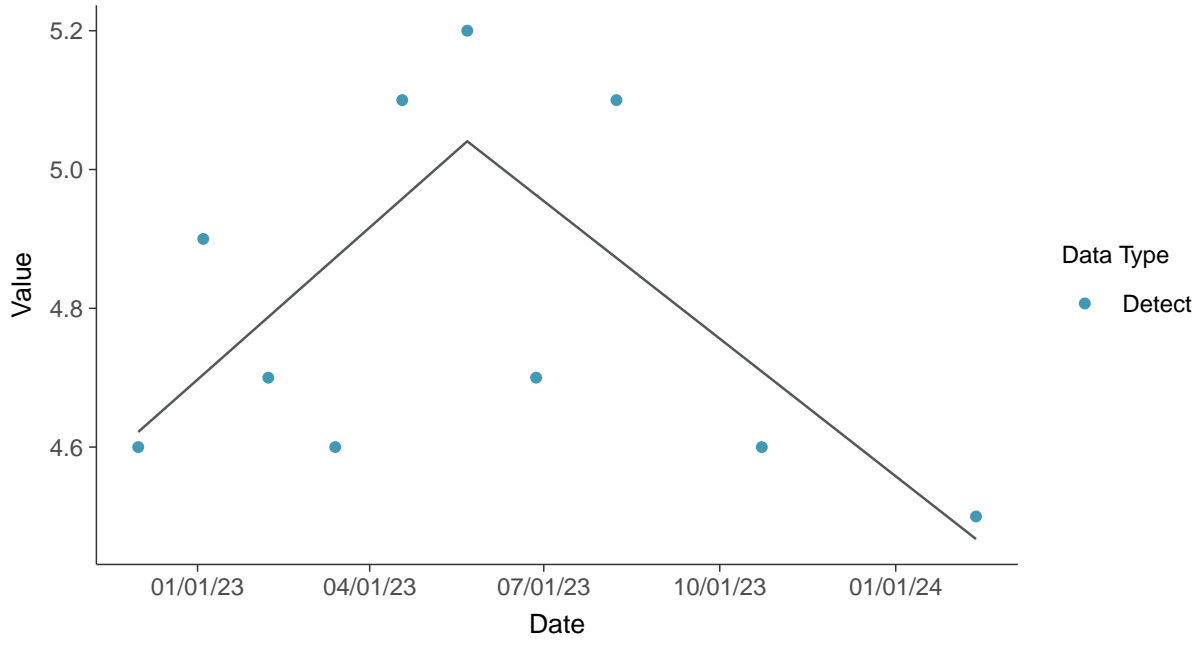
Trend Regression: Lognormal MLE

Fluoride, MW-31 (mg/L)





Trend Regression: Piecewise Linear-Linear
Fluoride, MW-31 (mg/L)



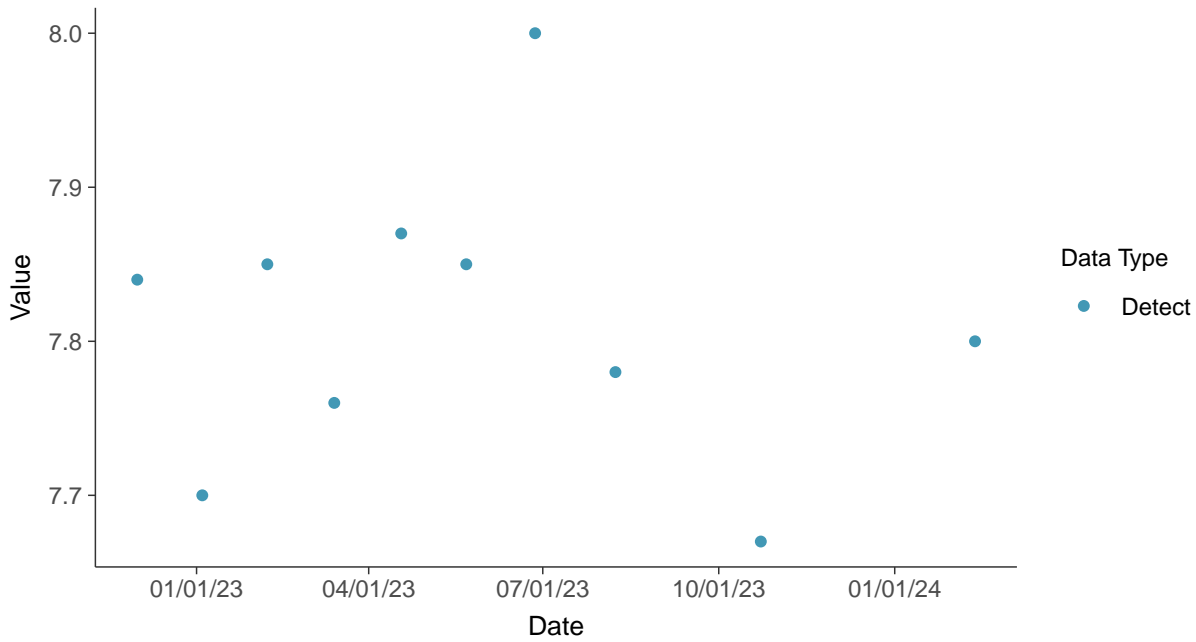


Appendix III: pH (field), MW-31

ID: 1_41_4_120

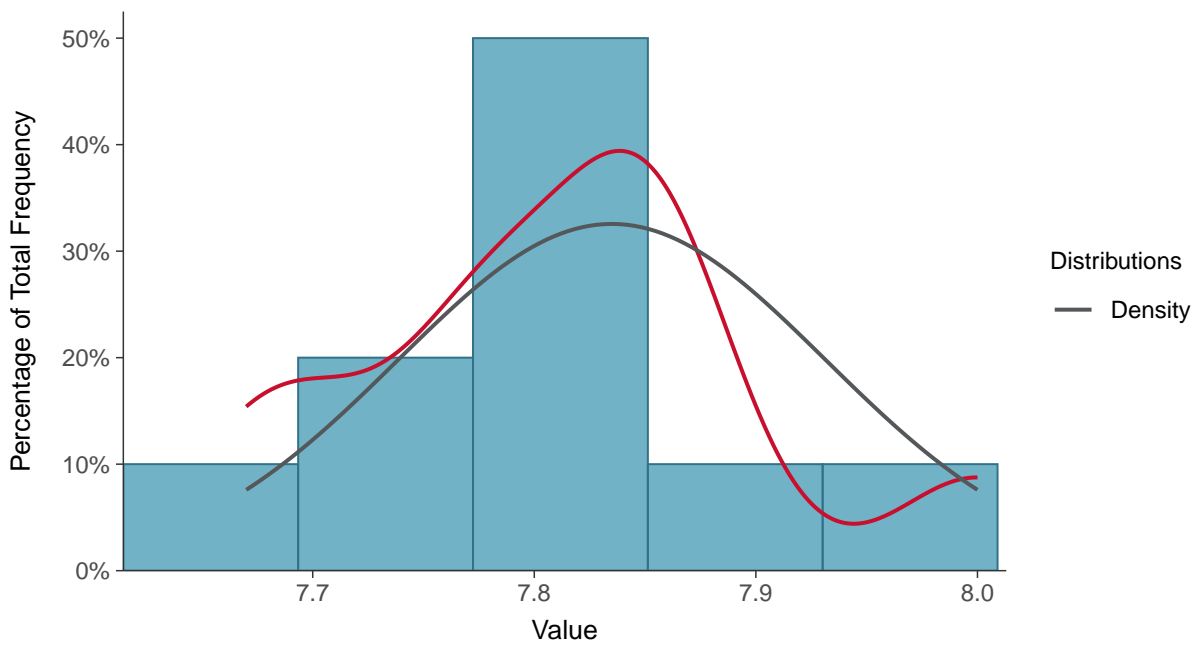
Scatter Plot

pH (field), MW-31 (su)



Histogram

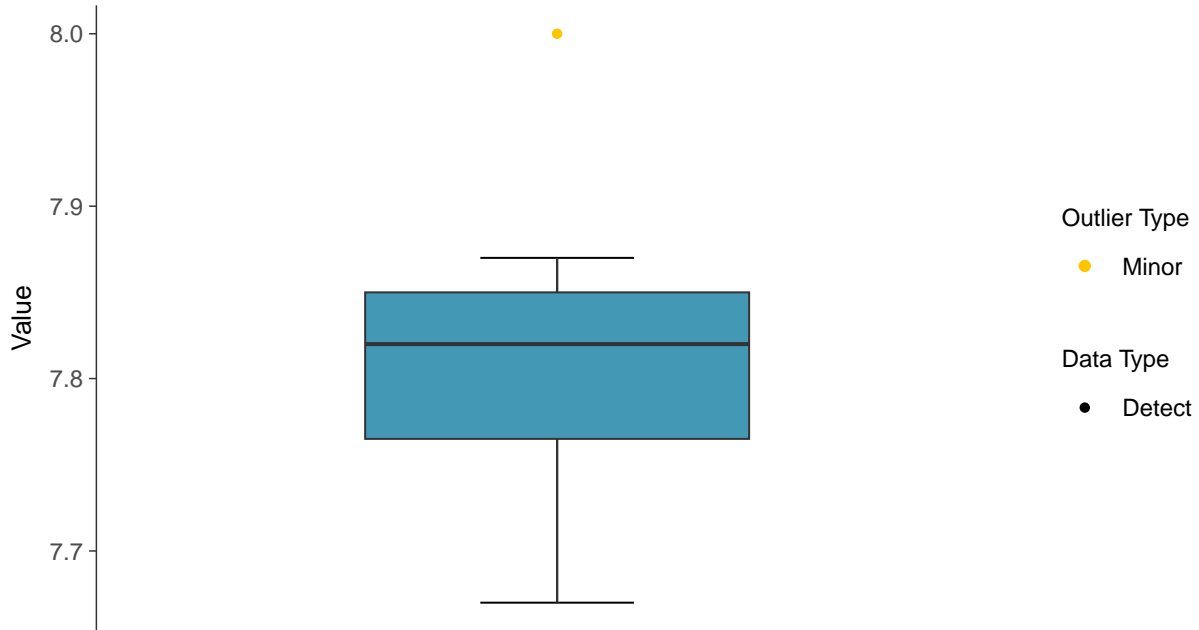
pH (field), MW-31 (su)





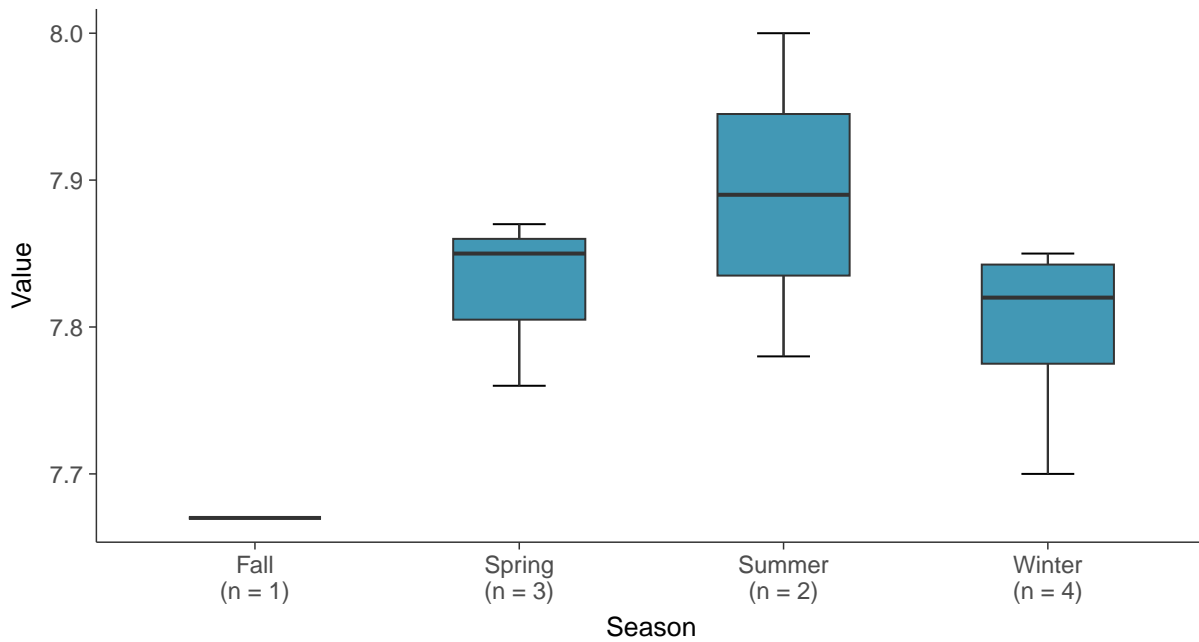
Boxplot

pH (field), MW-31 (su)



Boxplot by Season

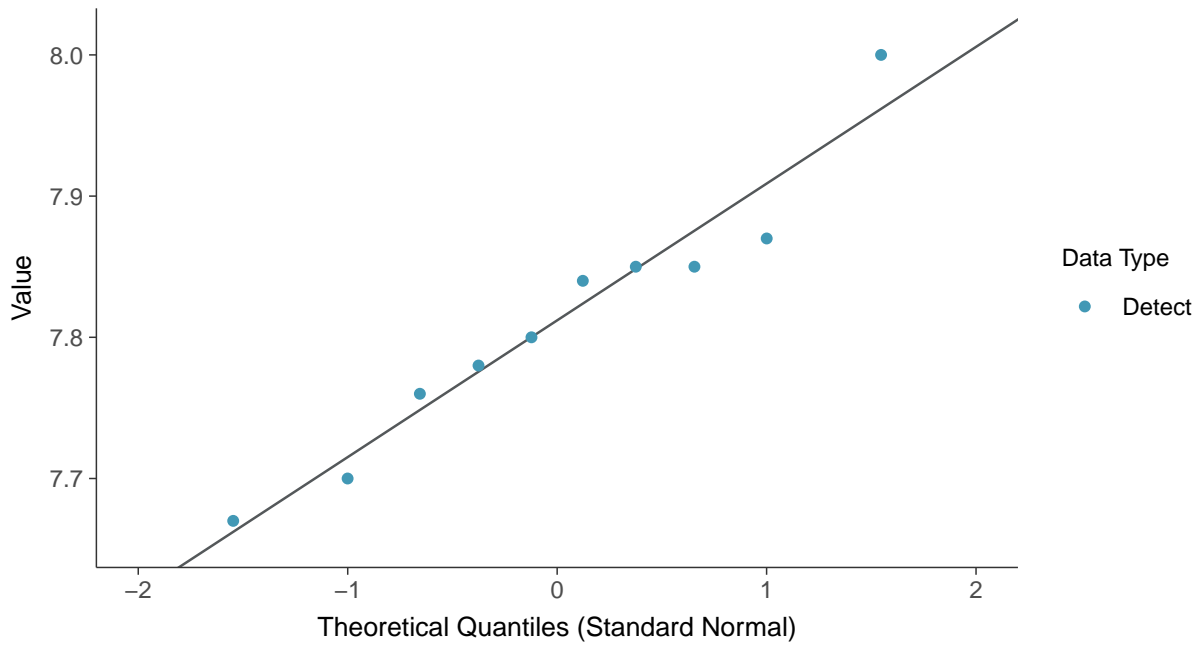
pH (field), MW-31 (su)





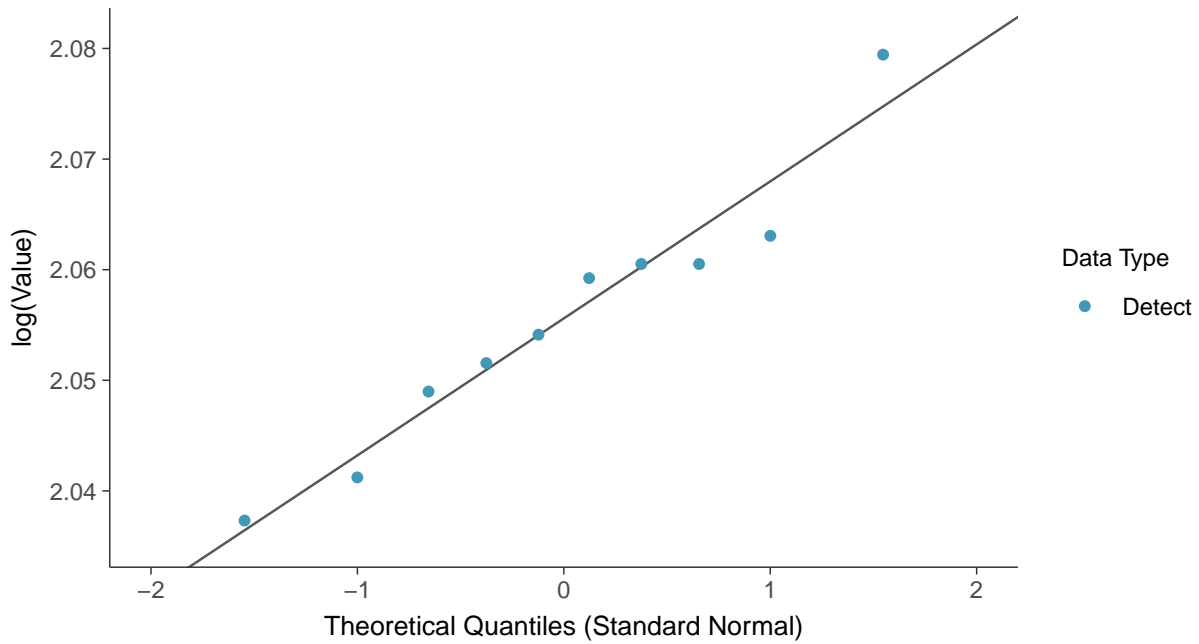
Normal Q-Q plot

pH (field), MW-31 (su)



Lognormal Q-Q plot

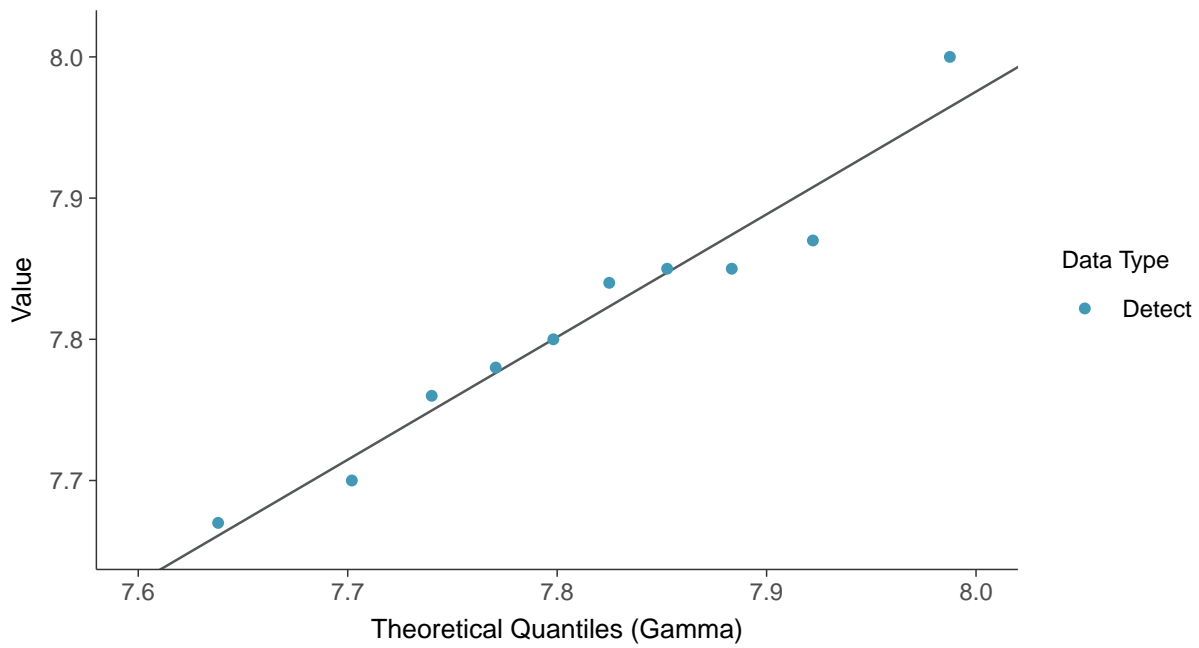
pH (field), MW-31 (su)





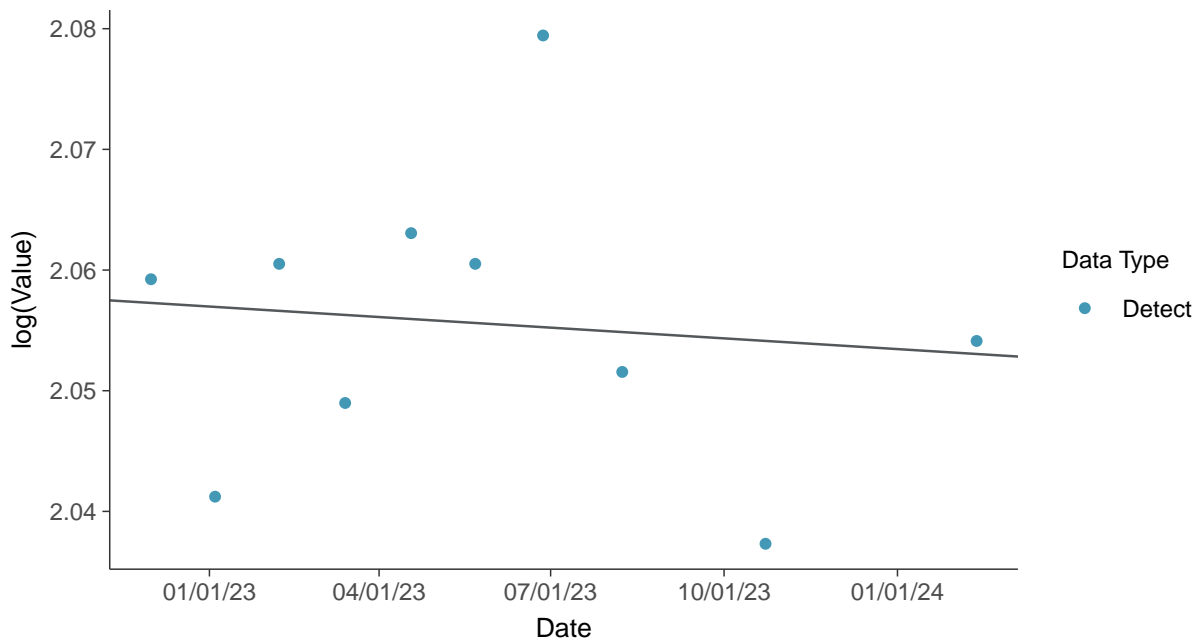
Gamma Q-Q plot

pH (field), MW-31 (su)



Trend Regression: Lognormal MLE

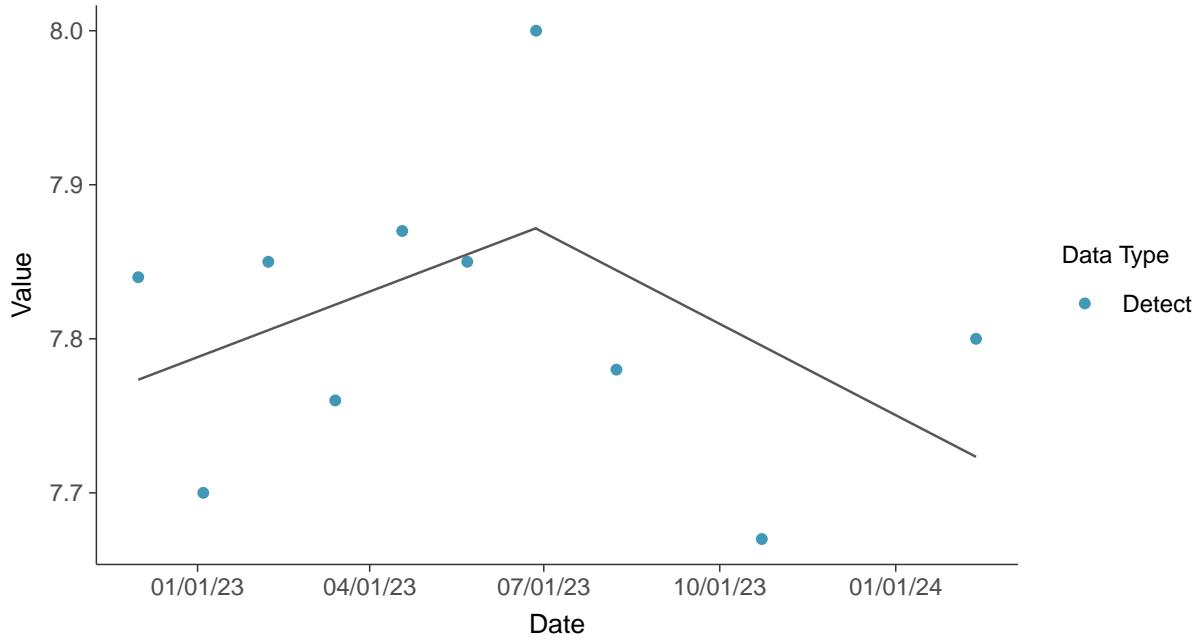
pH (field), MW-31 (su)





Trend Regression: Piecewise Linear-Linear

pH (field), MW-31 (su)



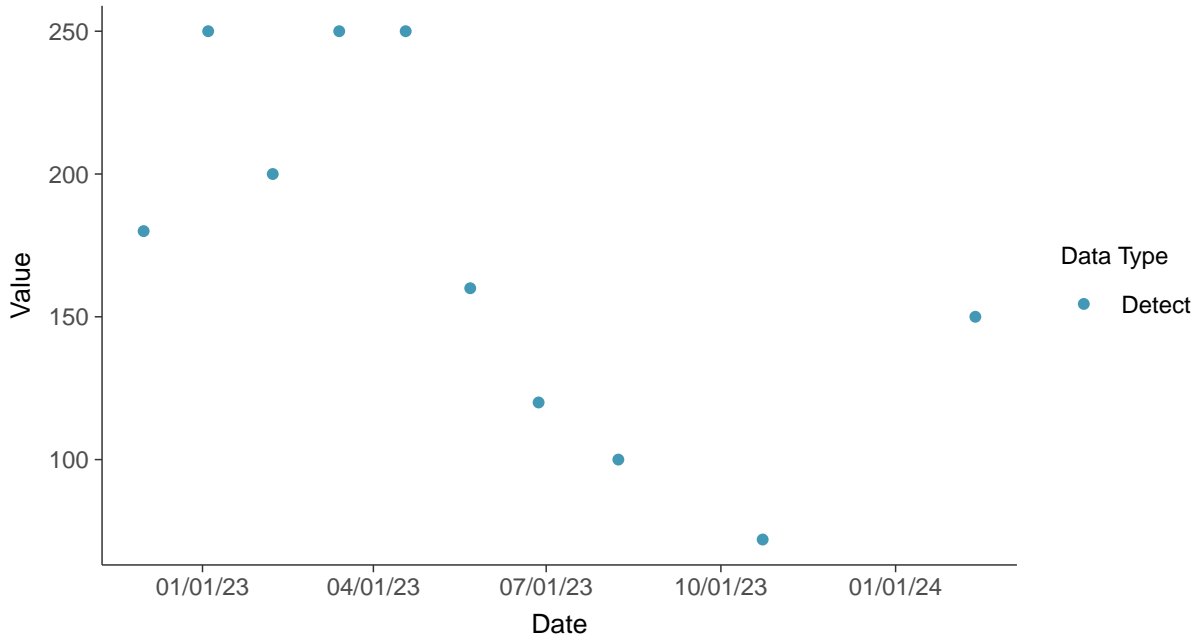


Appendix III: Sulfate (as SO₄), MW-31

ID: 1_41_4_124

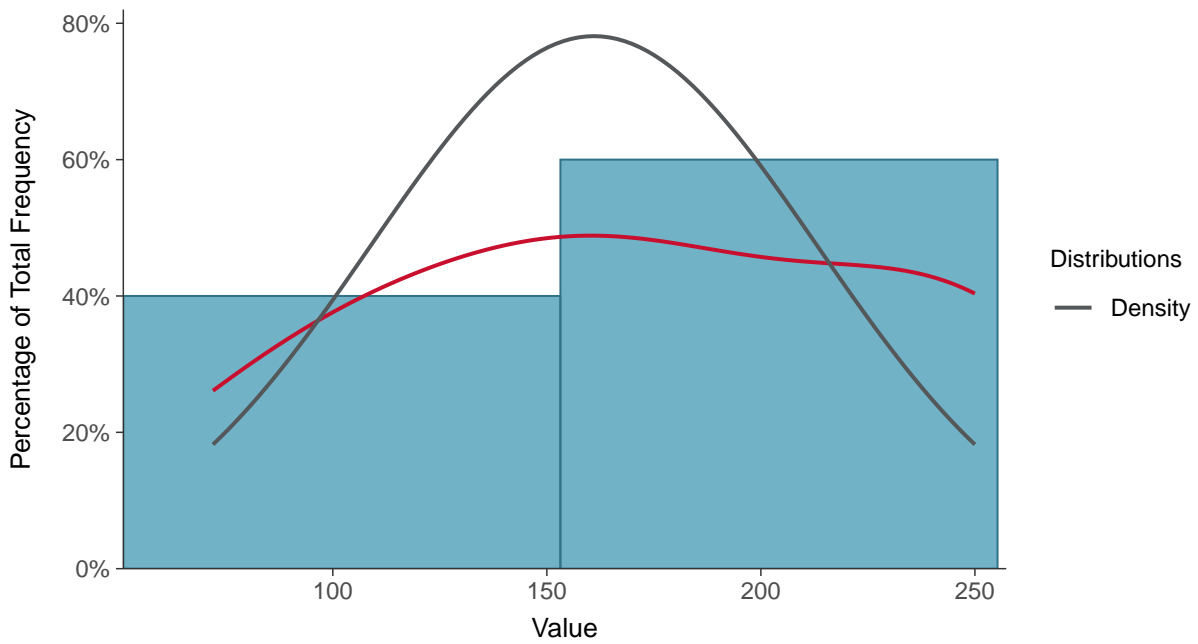
Scatter Plot

Sulfate (as SO₄), MW-31 (mg/L)



Histogram

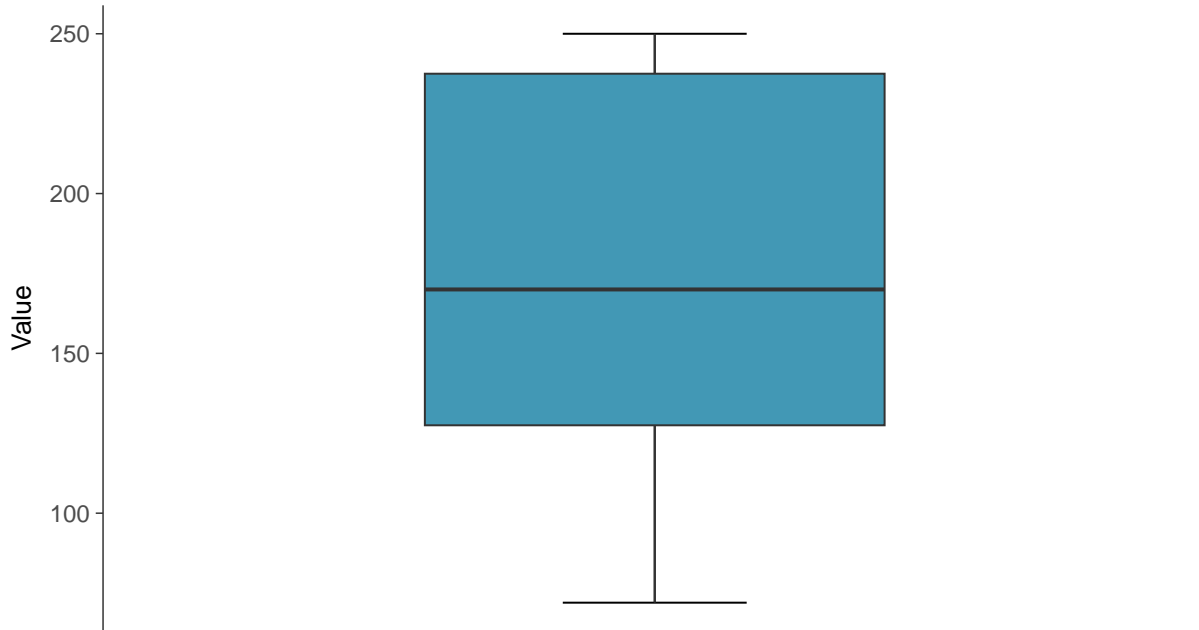
Sulfate (as SO₄), MW-31 (mg/L)





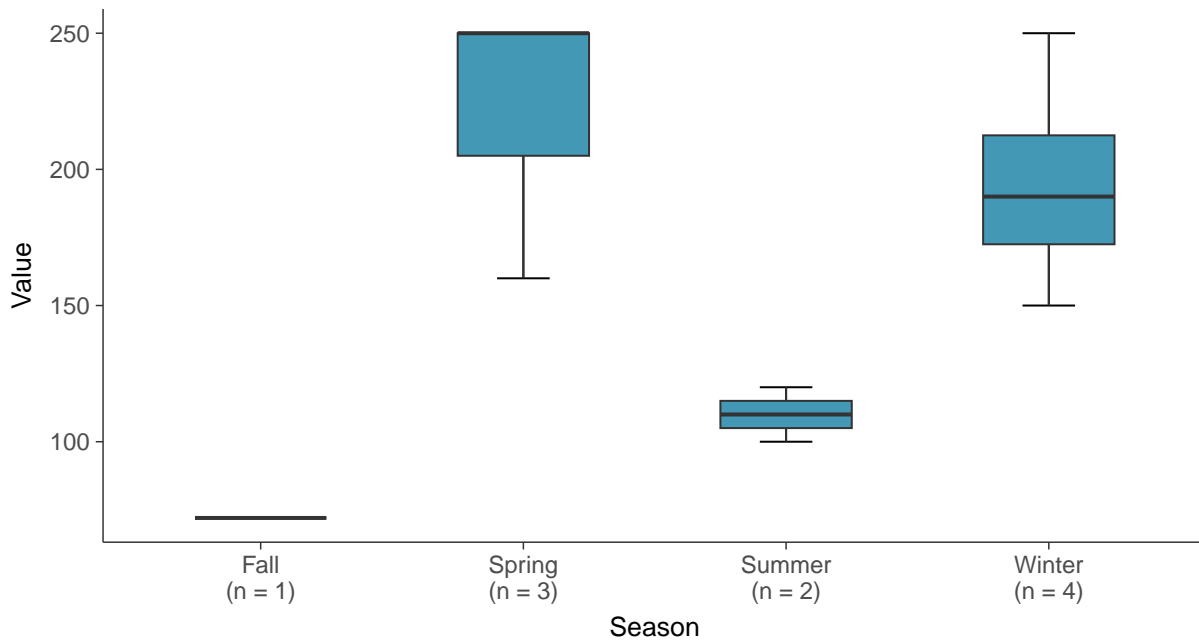
Boxplot

Sulfate (as SO₄), MW-31 (mg/L)



Boxplot by Season

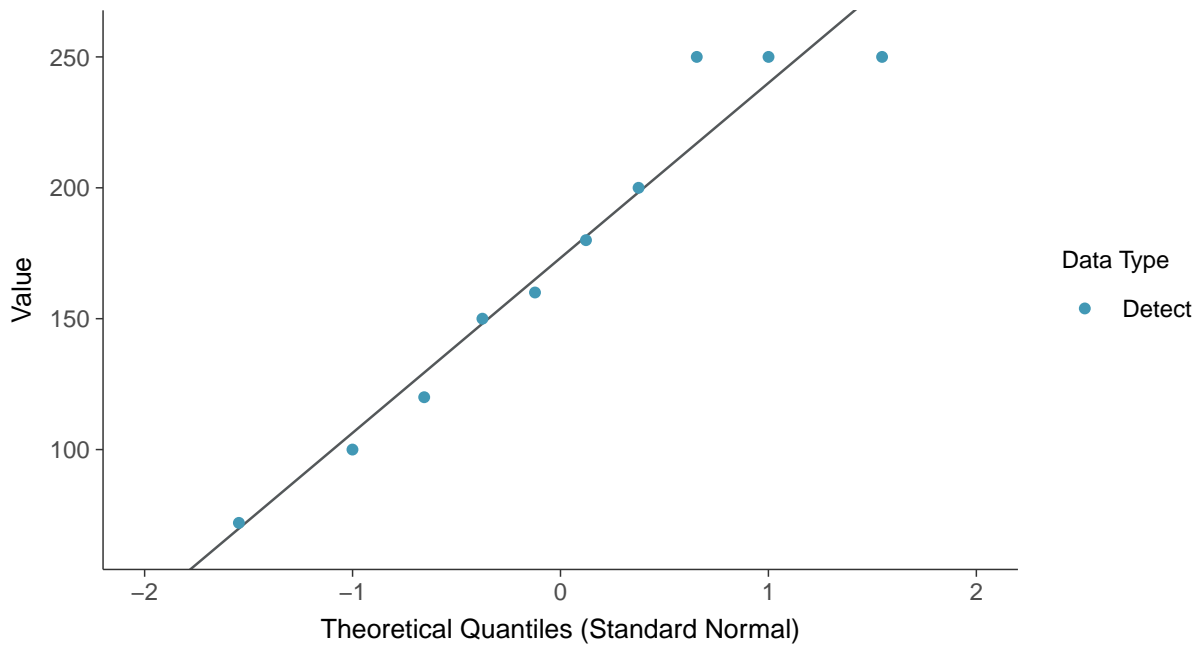
Sulfate (as SO₄), MW-31 (mg/L)





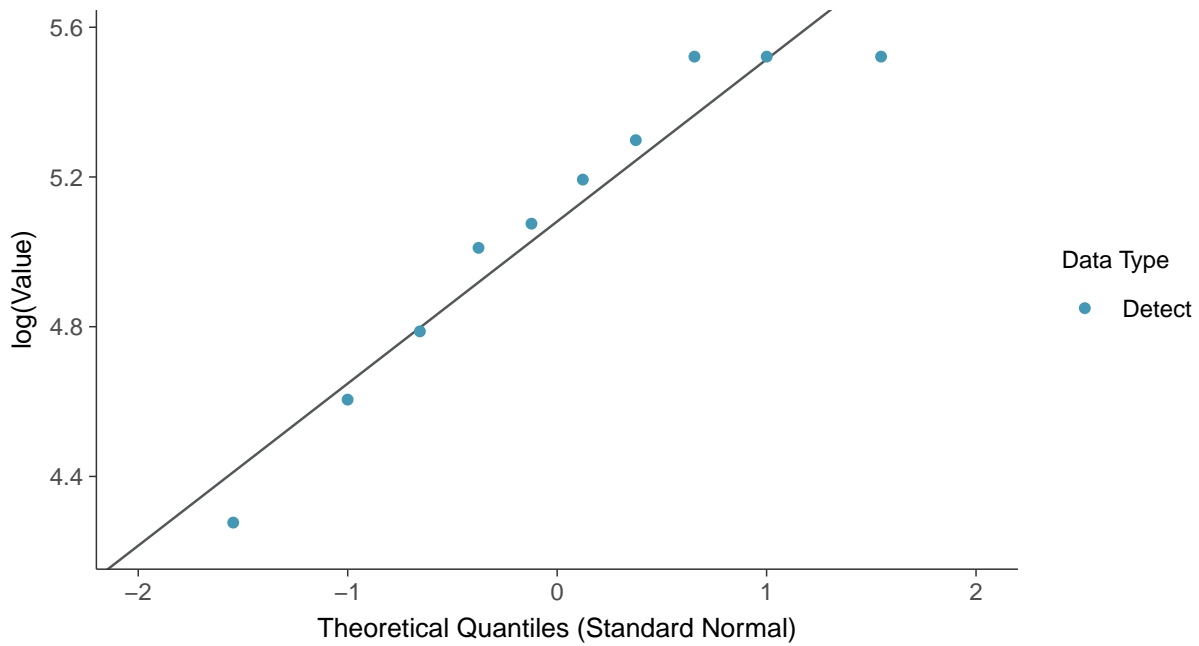
Normal Q-Q plot

Sulfate (as SO₄), MW-31 (mg/L)



Lognormal Q-Q plot

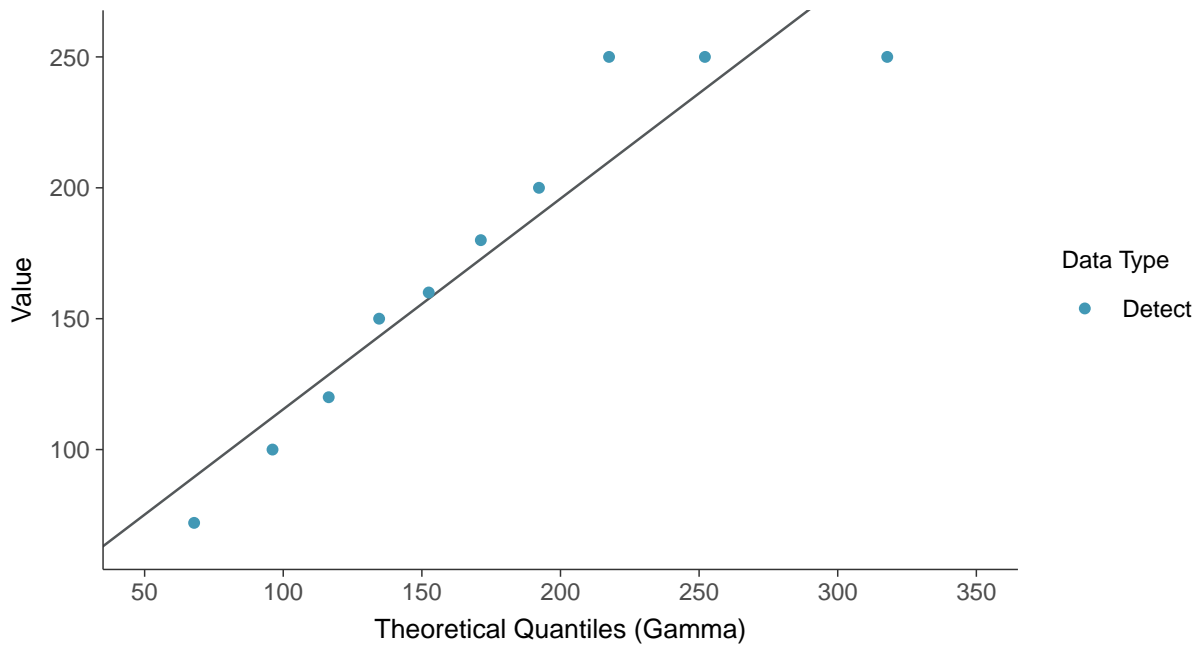
Sulfate (as SO₄), MW-31 (mg/L)





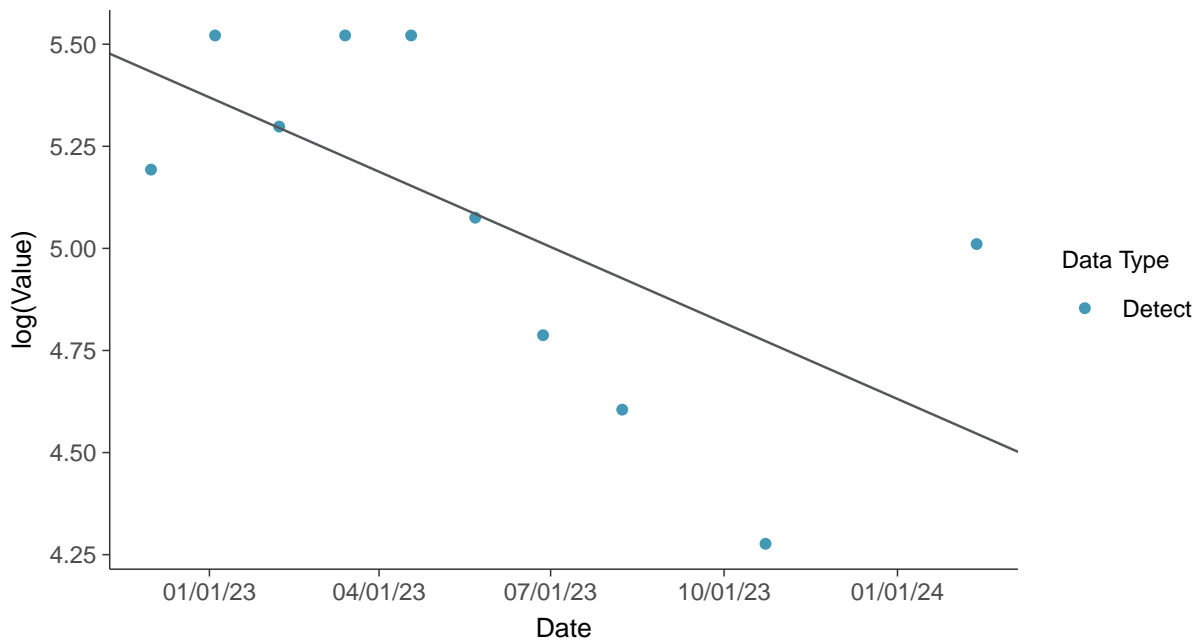
Gamma Q-Q plot

Sulfate (as SO₄), MW-31 (mg/L)



Trend Regression: Lognormal MLE

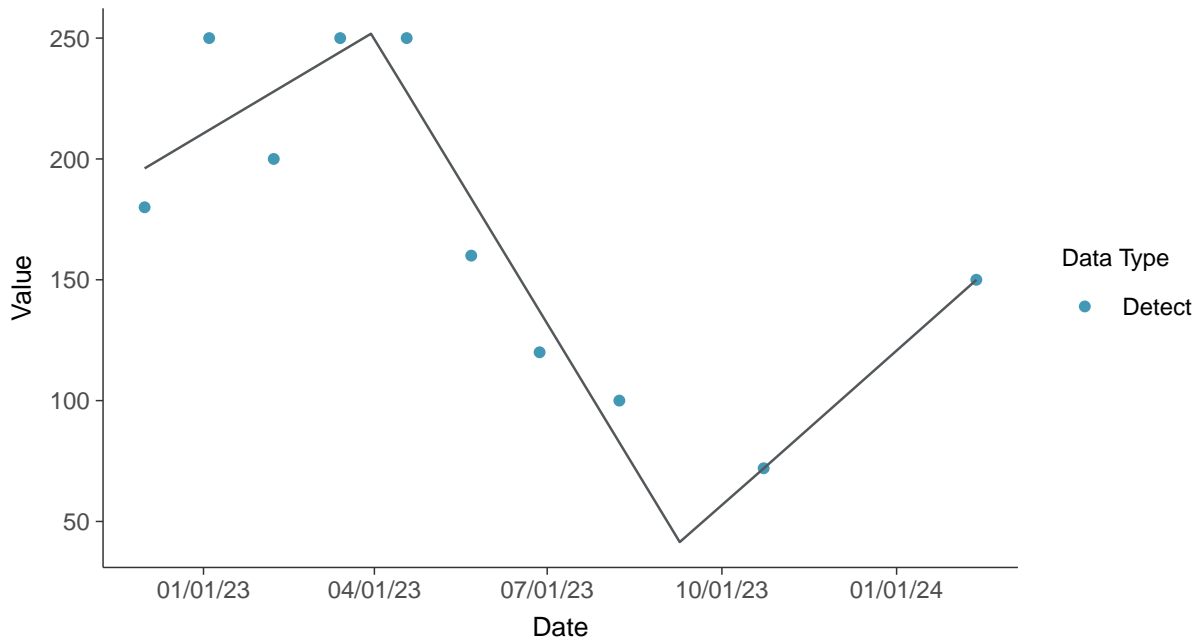
Sulfate (as SO₄), MW-31 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO₄), MW-31 (mg/L)



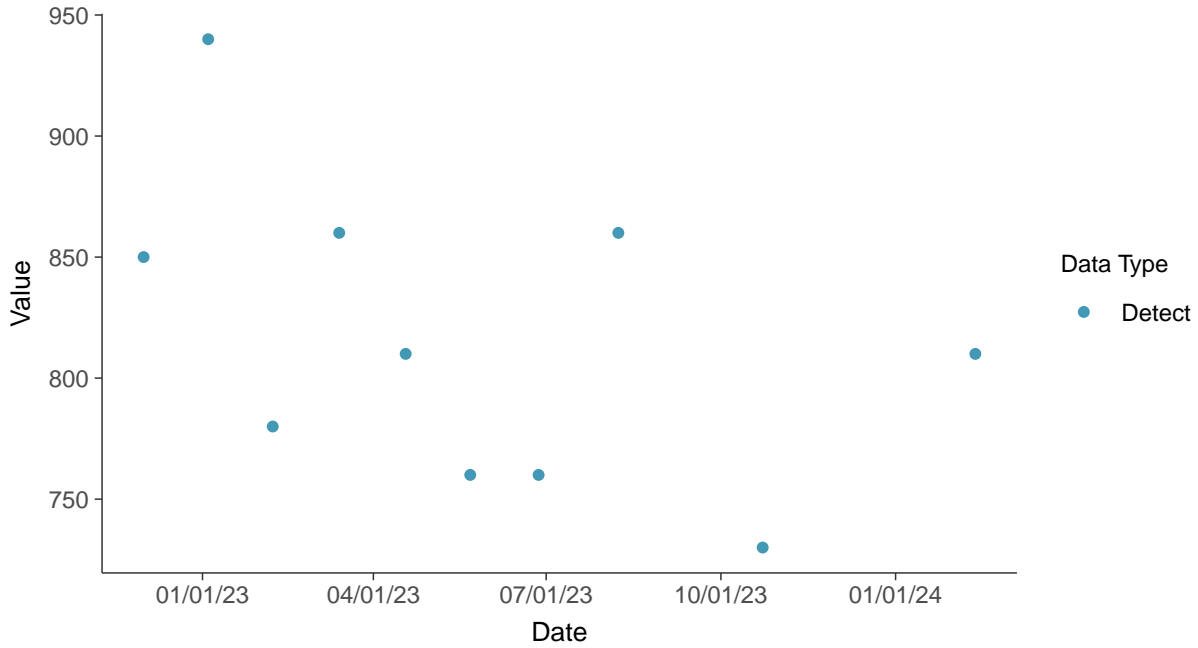


Appendix III: Total Dissolved Solids, MW-31

ID: 1_41_4_126

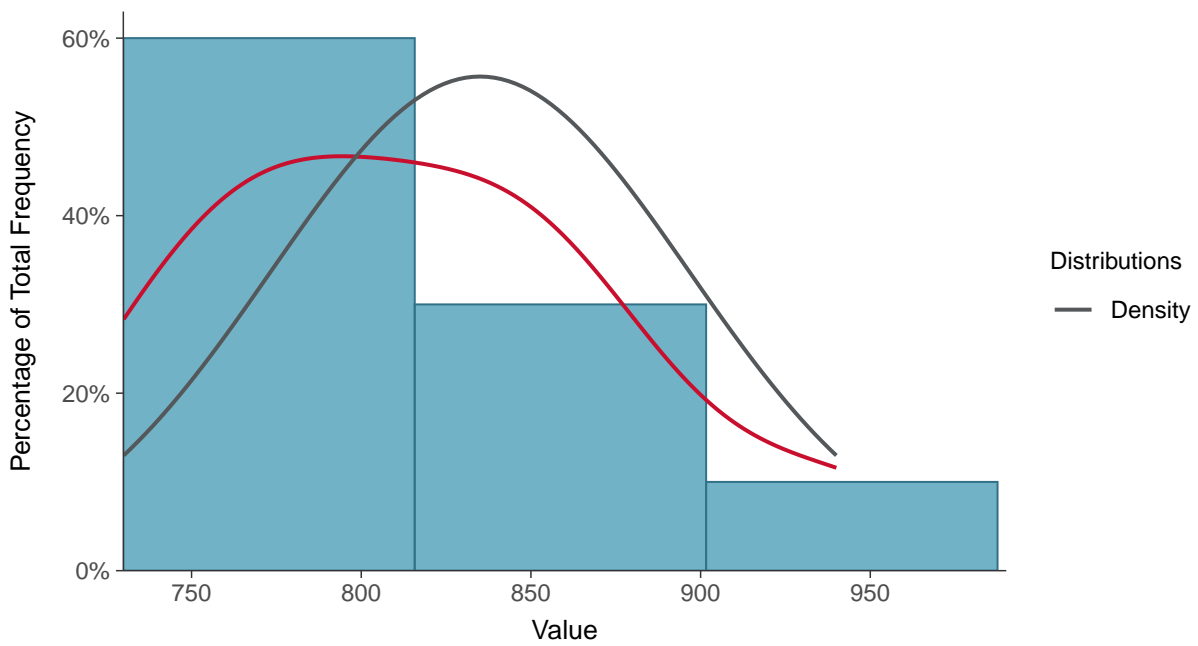
Scatter Plot

Total Dissolved Solids, MW-31 (mg/L)



Histogram

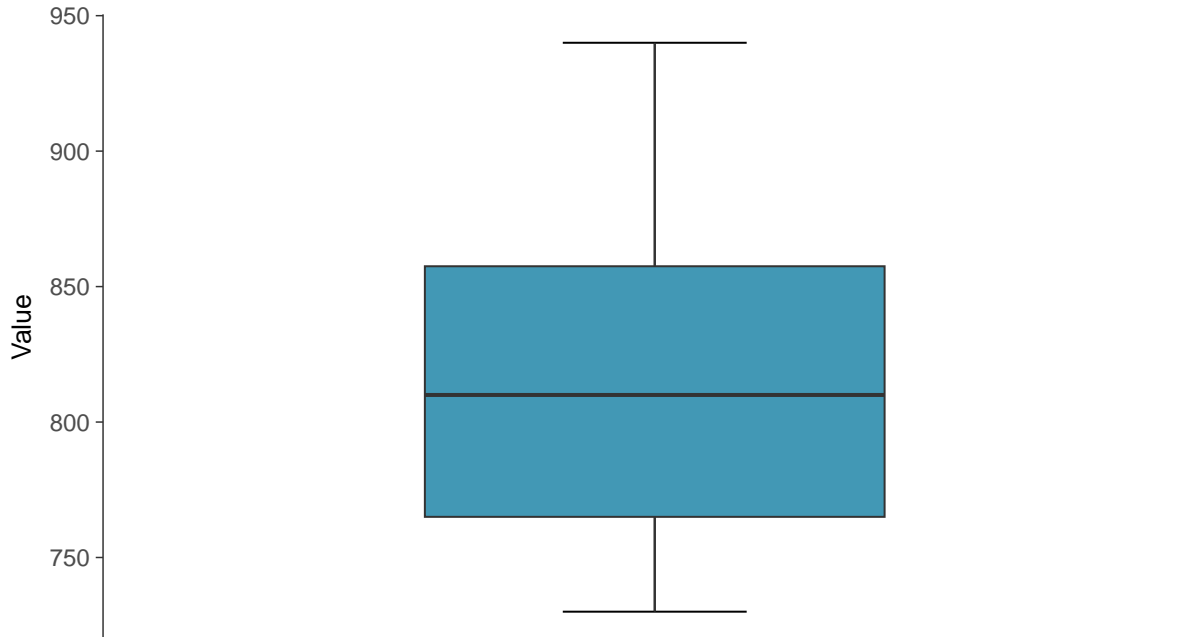
Total Dissolved Solids, MW-31 (mg/L)





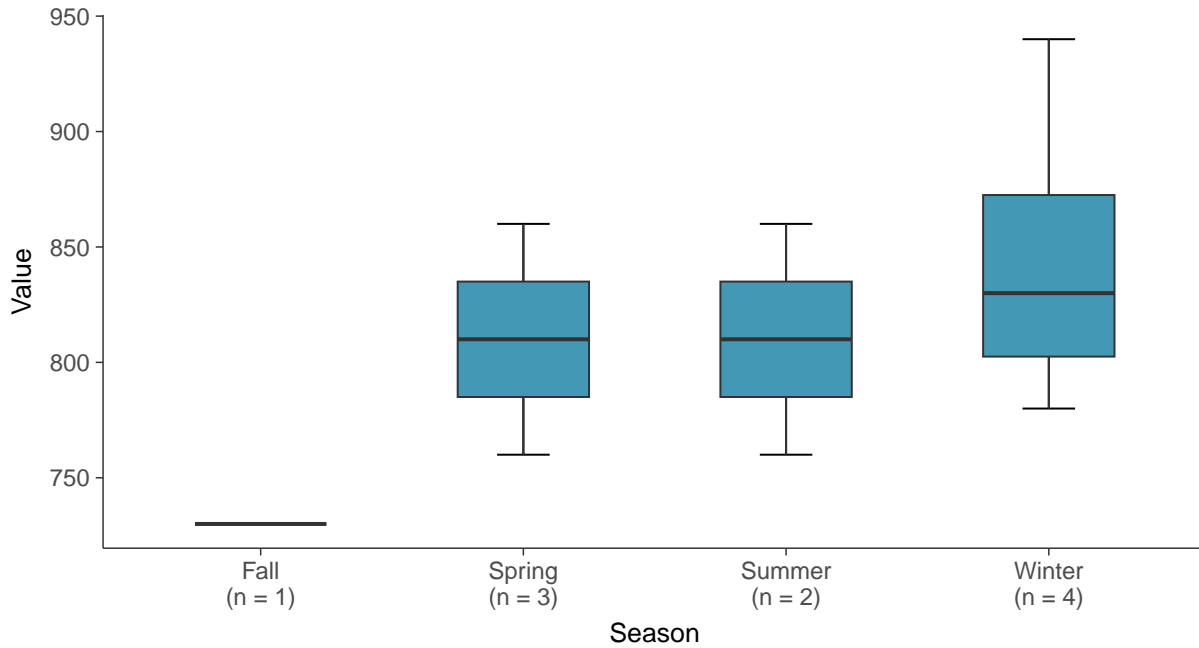
Boxplot

Total Dissolved Solids, MW-31 (mg/L)



Boxplot by Season

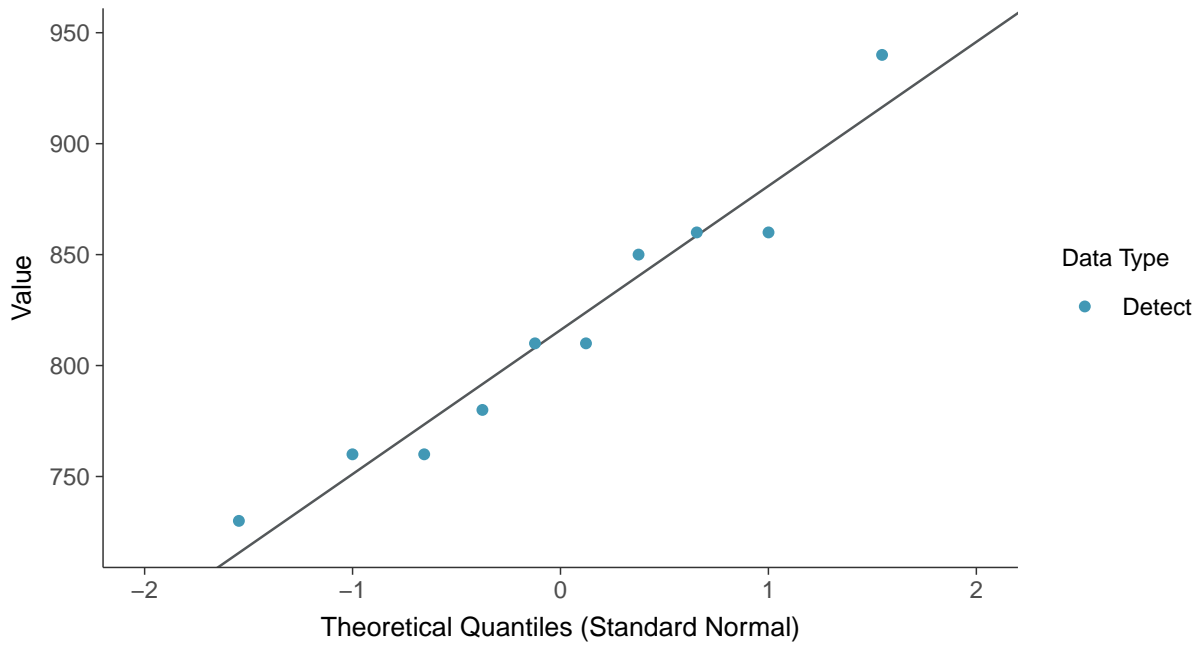
Total Dissolved Solids, MW-31 (mg/L)





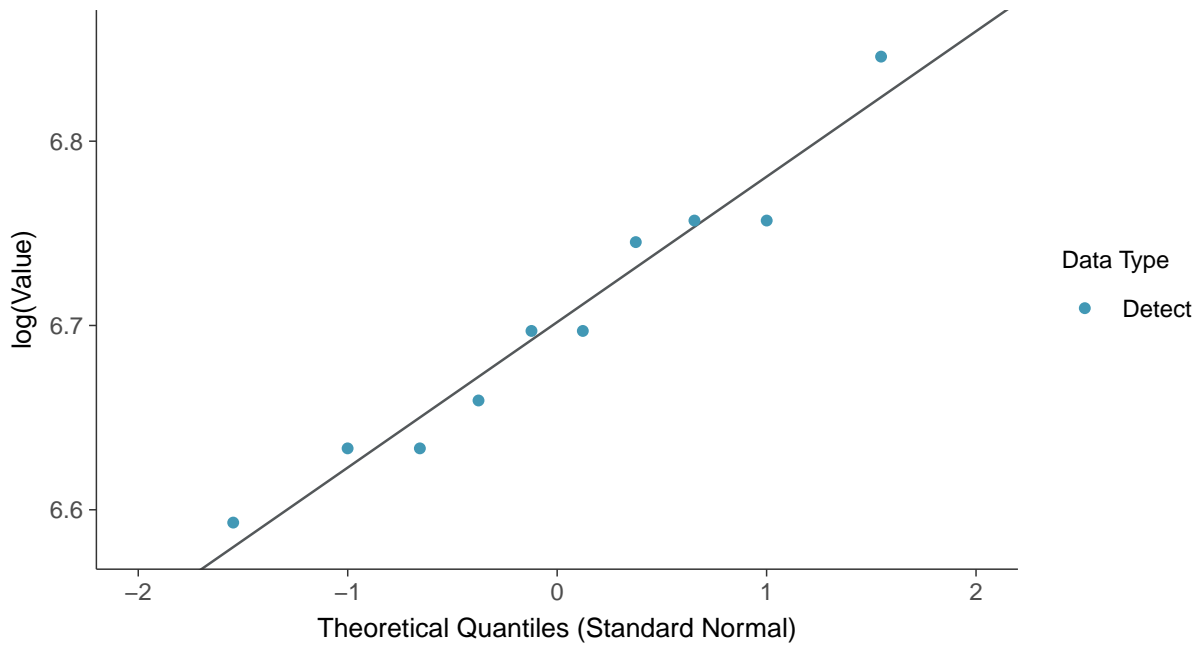
Normal Q-Q plot

Total Dissolved Solids, MW-31 (mg/L)



Lognormal Q-Q plot

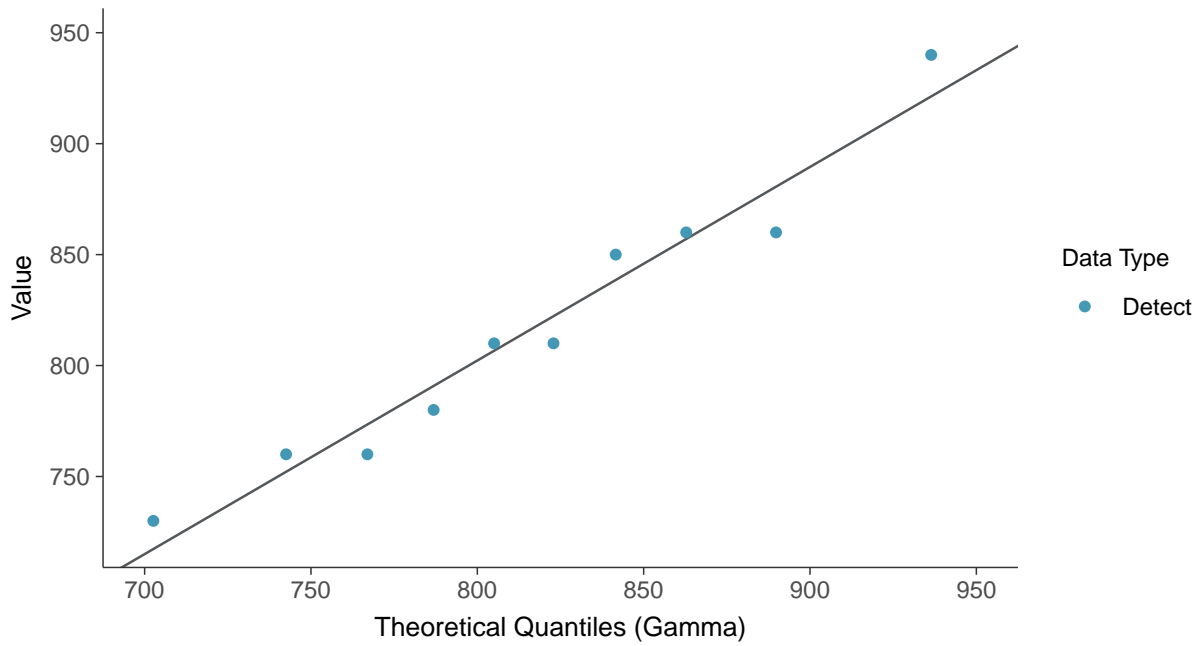
Total Dissolved Solids, MW-31 (mg/L)





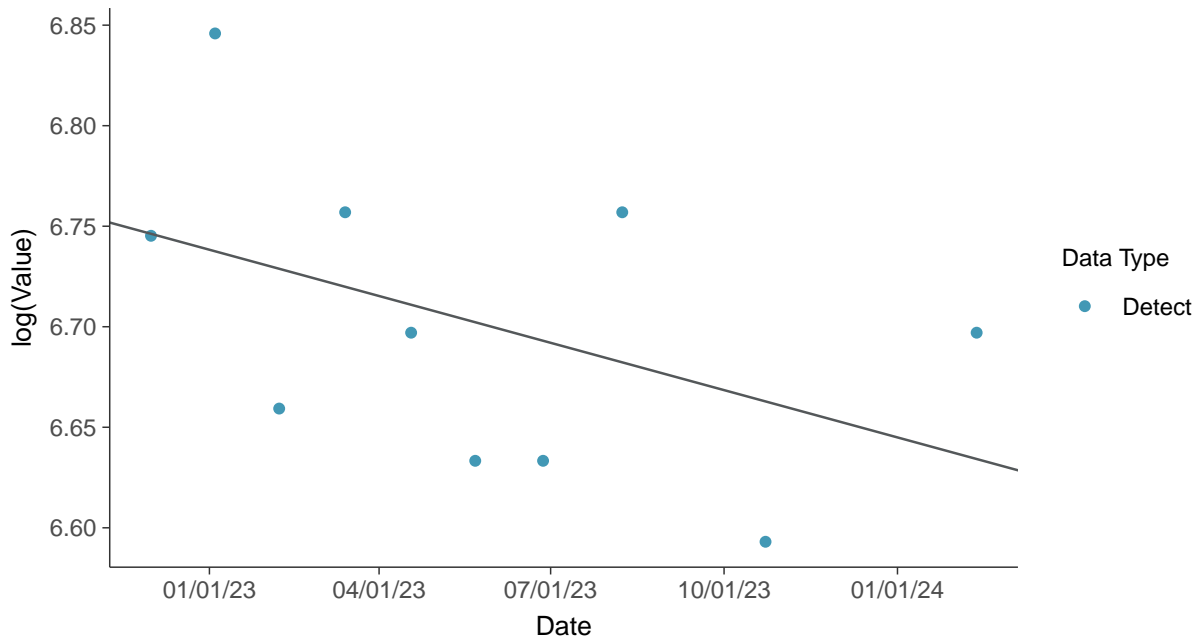
Gamma Q-Q plot

Total Dissolved Solids, MW-31 (mg/L)



Trend Regression: Lognormal MLE

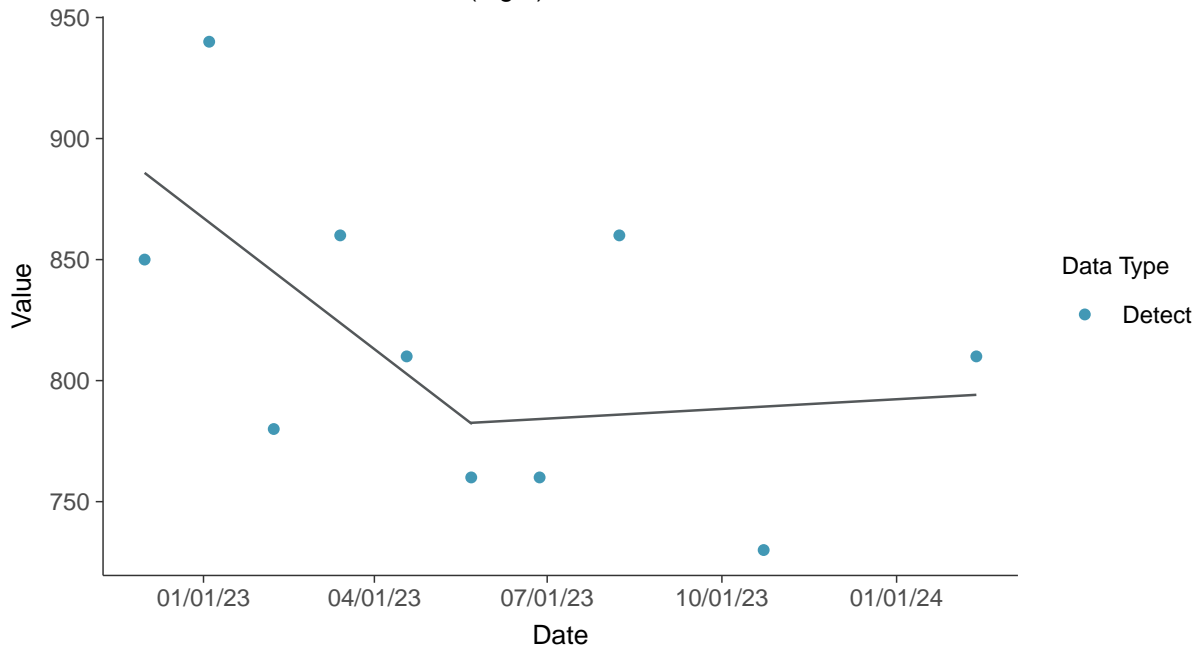
Total Dissolved Solids, MW-31 (mg/L)





Trend Regression: Piecewise Linear-Linear

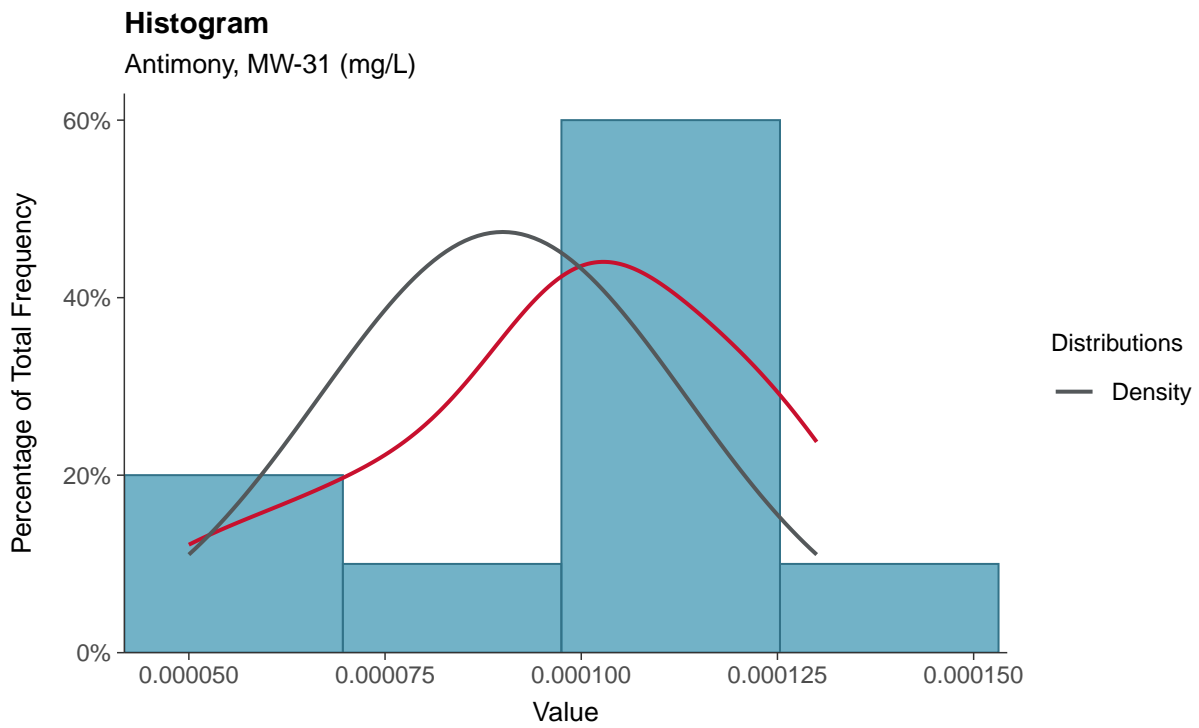
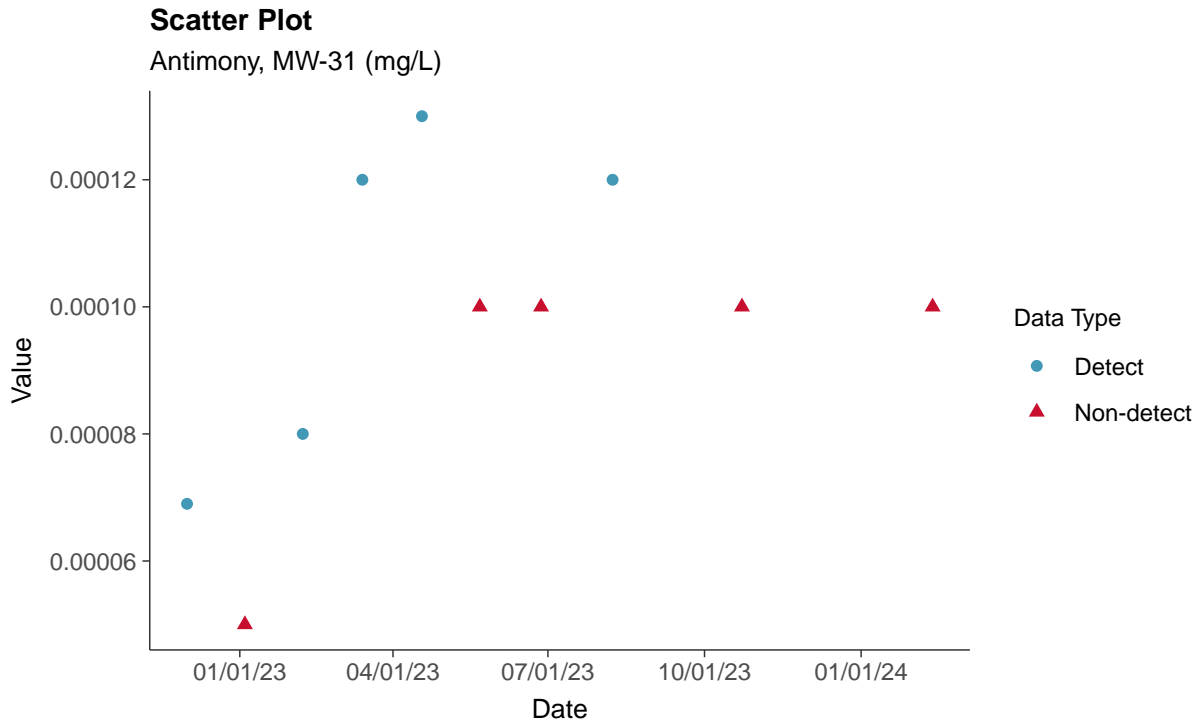
Total Dissolved Solids, MW-31 (mg/L)





Appendix IV: Antimony, MW-31

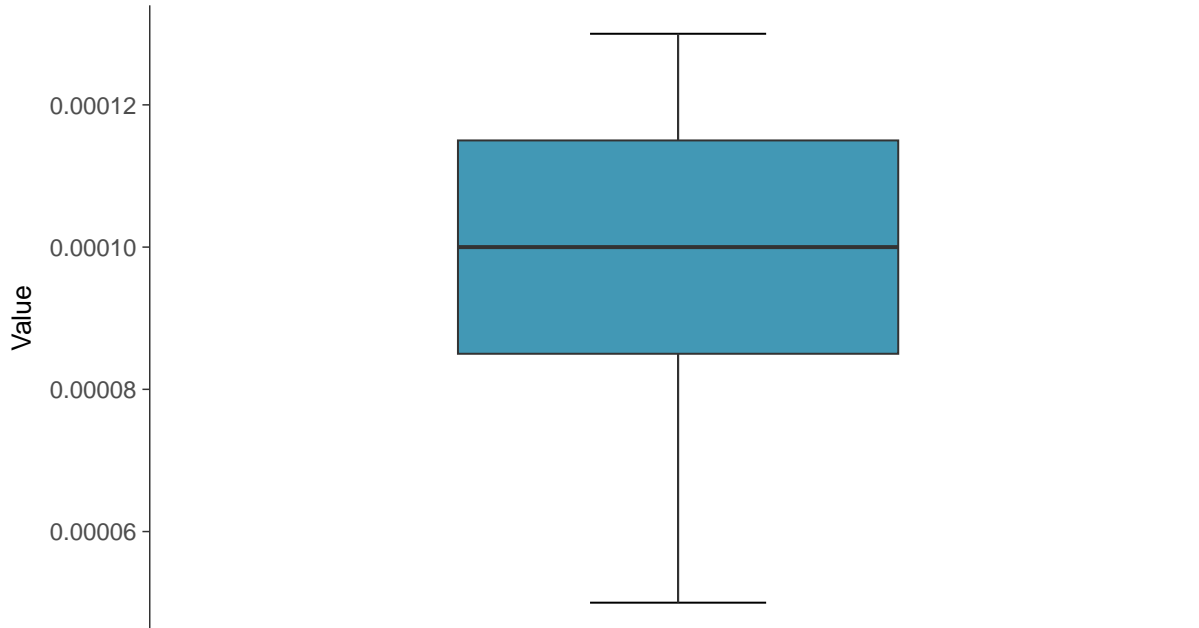
ID: 1_41_5_101





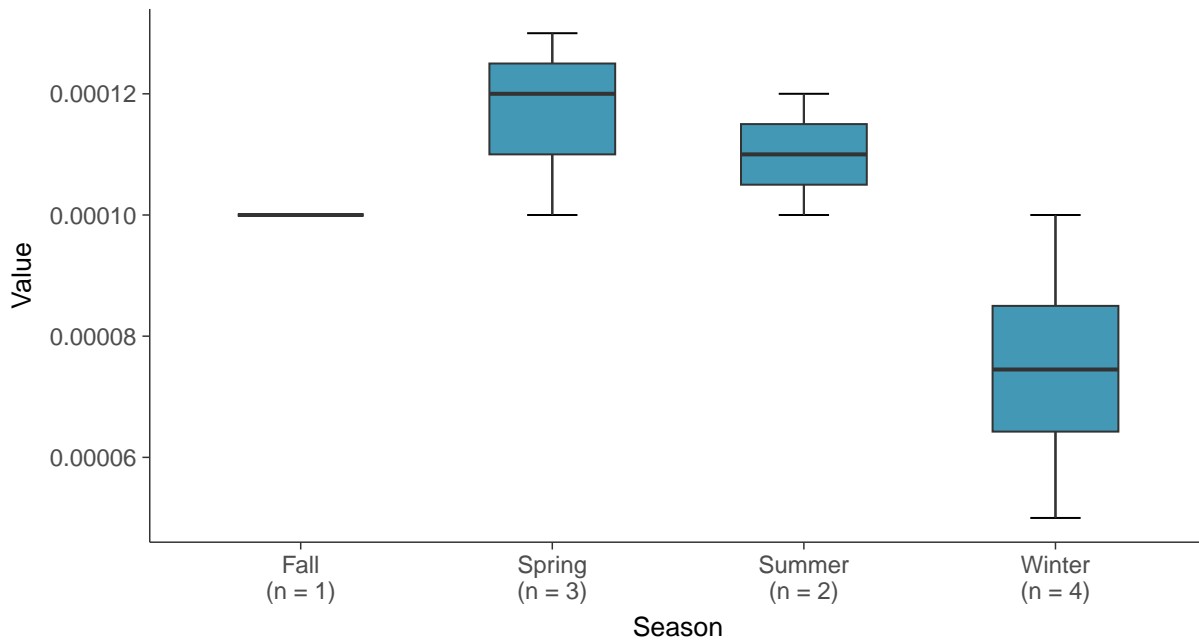
Boxplot

Antimony, MW-31 (mg/L)



Boxplot by Season

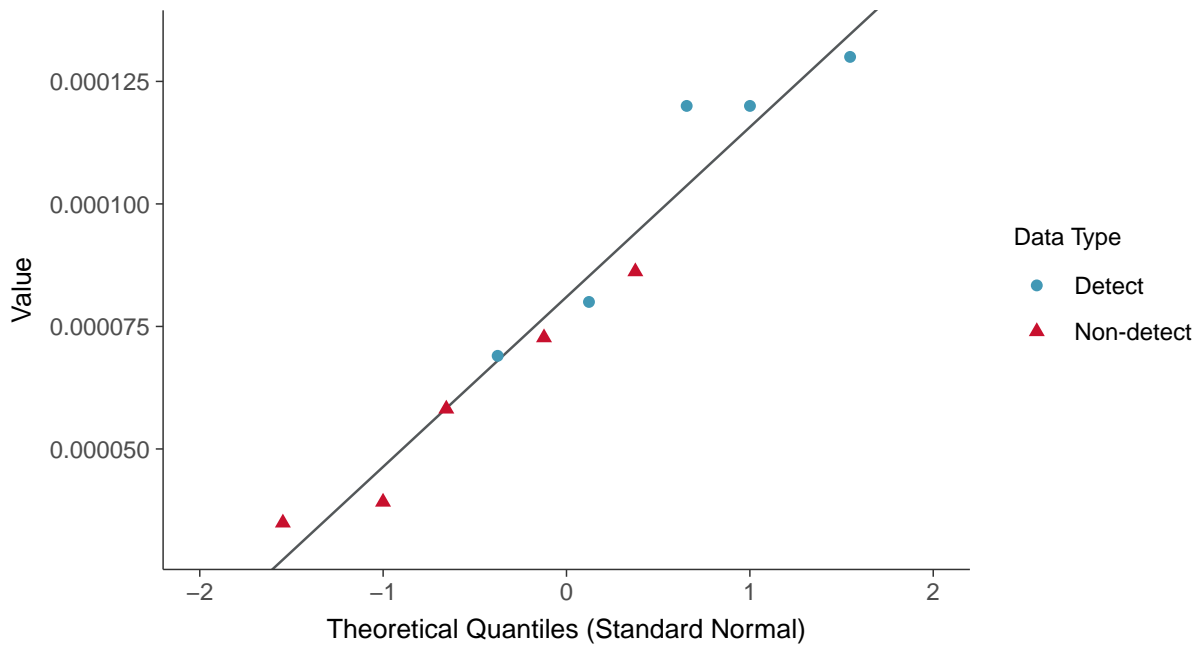
Antimony, MW-31 (mg/L)





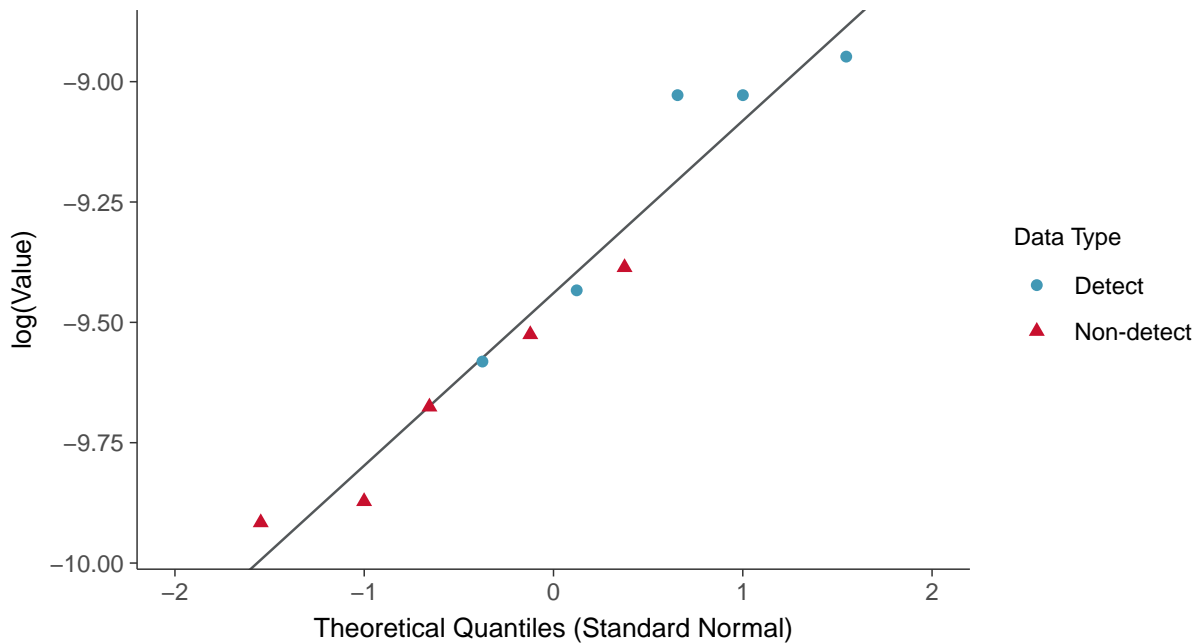
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-31 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

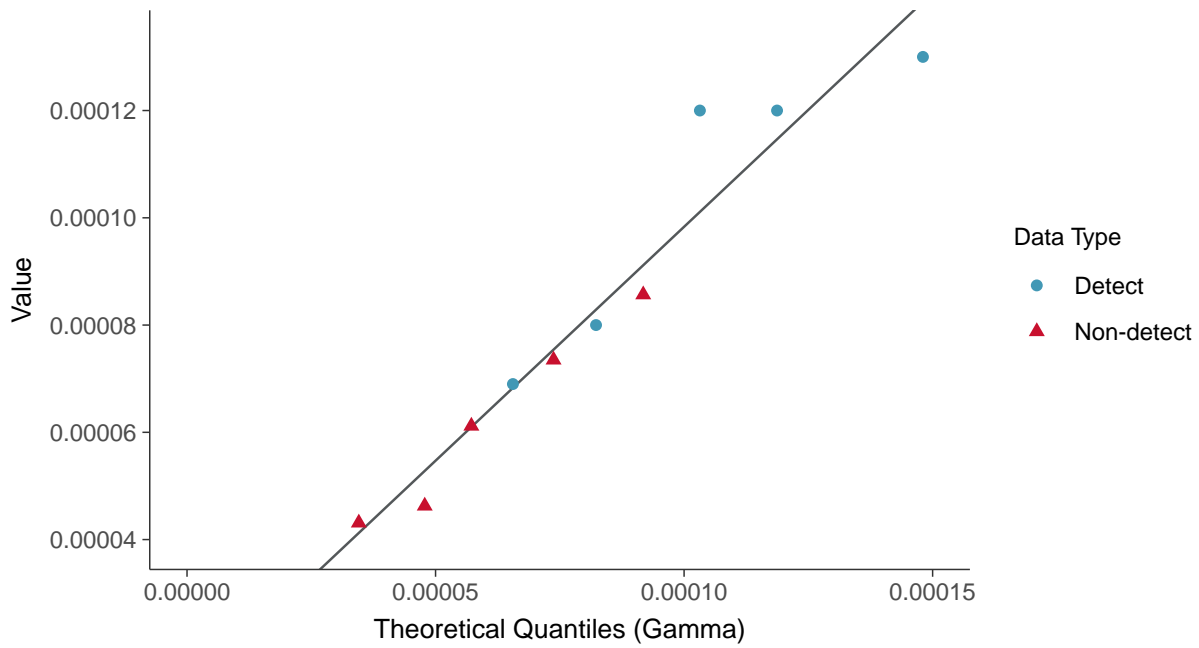
Antimony, MW-31 (mg/L)





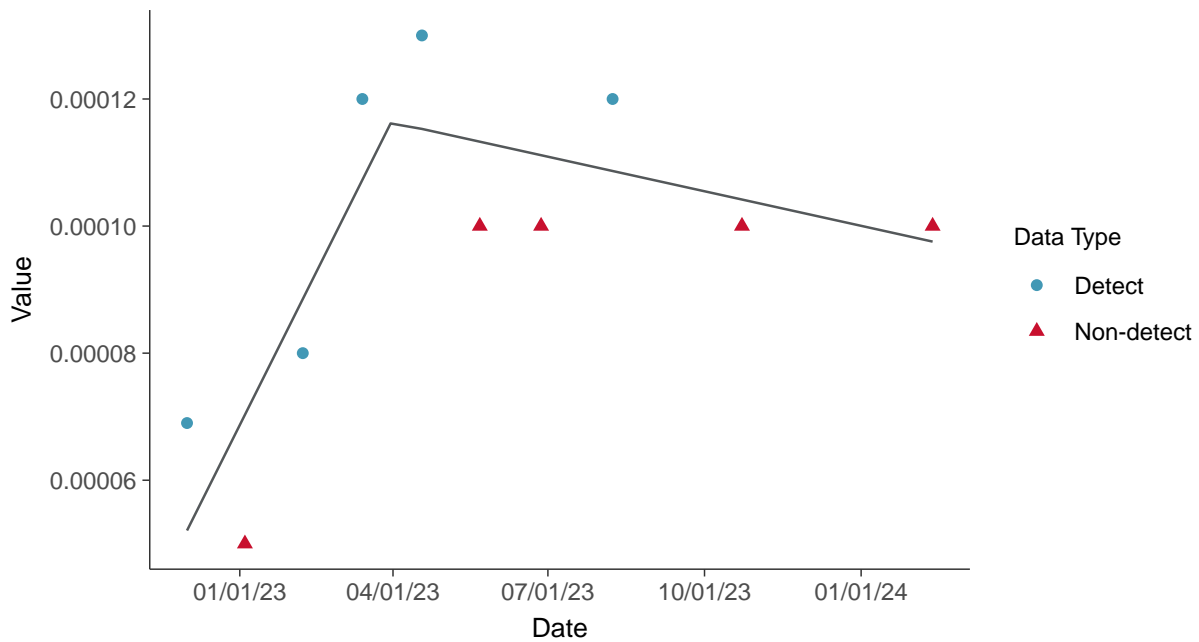
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-31 (mg/L)



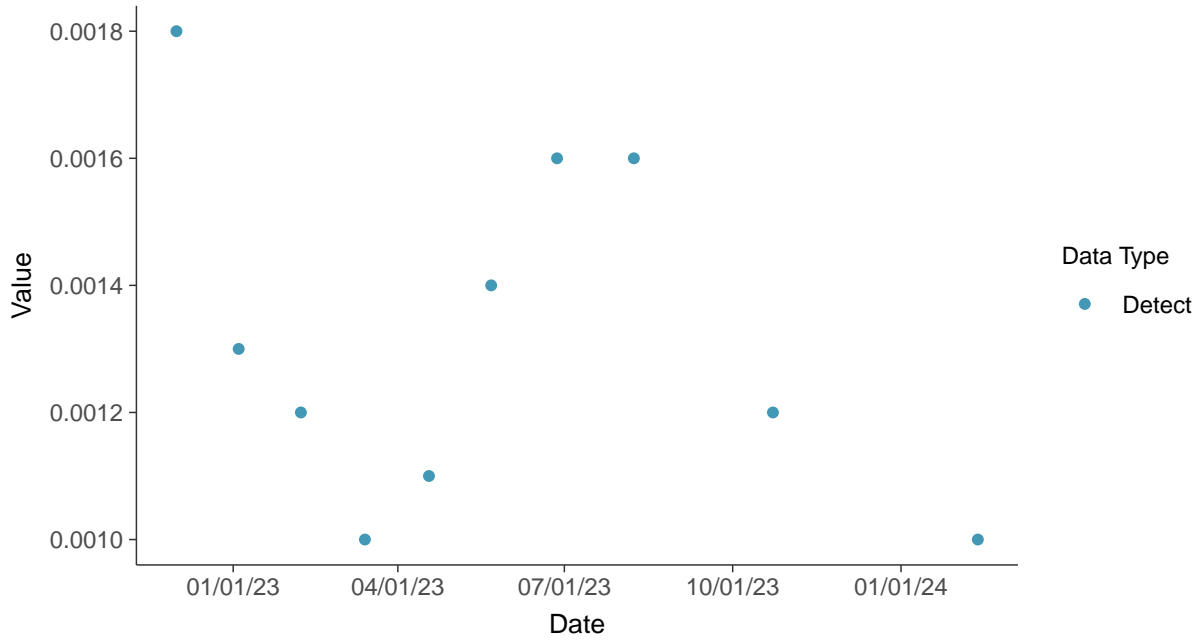


Appendix IV: Arsenic, MW-31

ID: 1_41_5_102

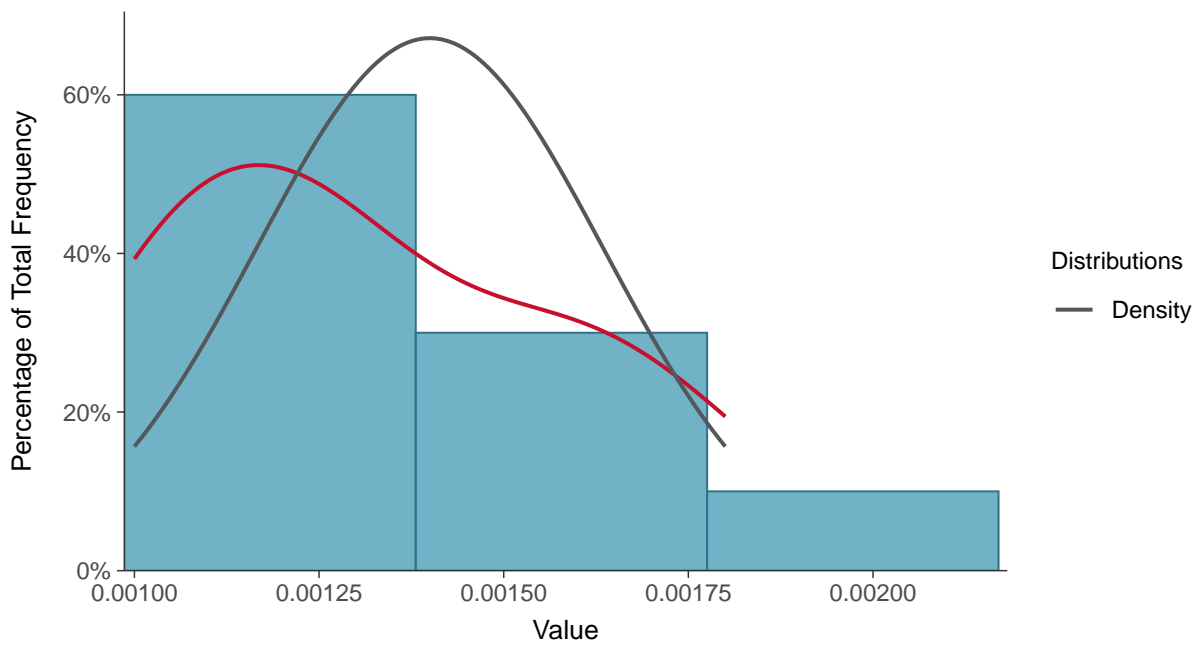
Scatter Plot

Arsenic, MW-31 (mg/L)



Histogram

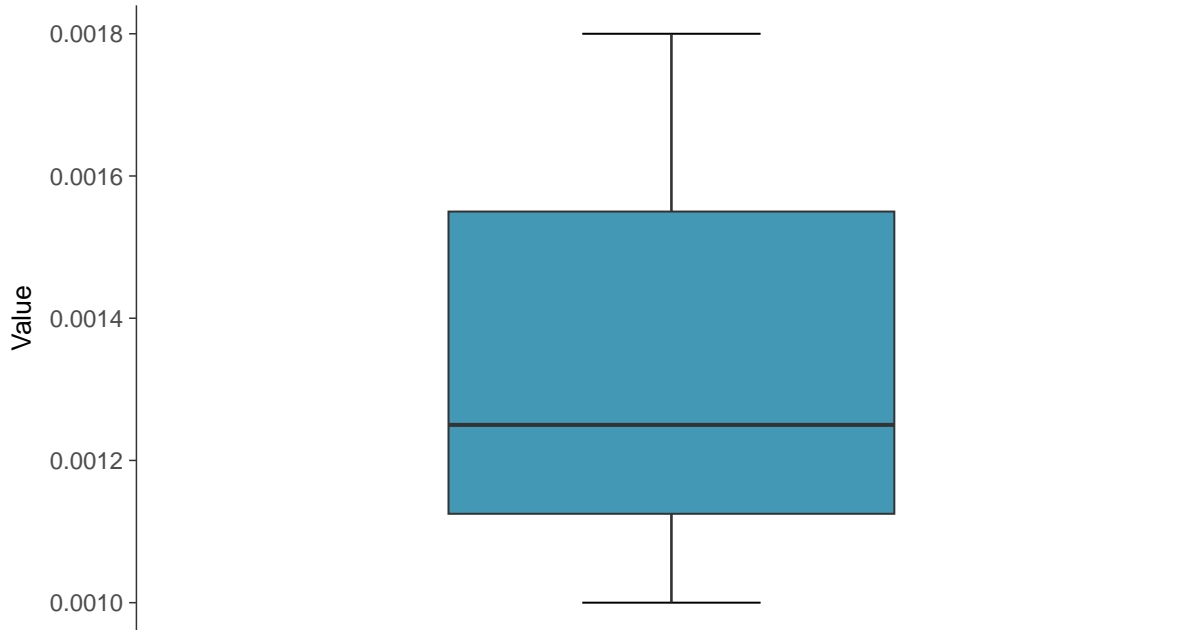
Arsenic, MW-31 (mg/L)





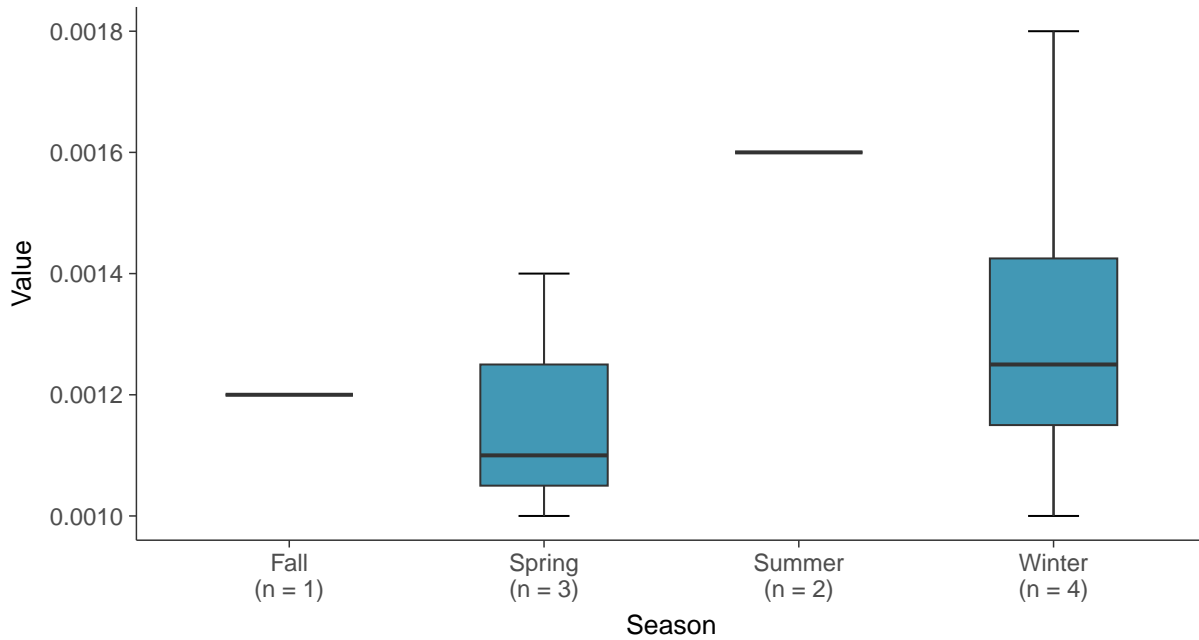
Boxplot

Arsenic, MW-31 (mg/L)



Boxplot by Season

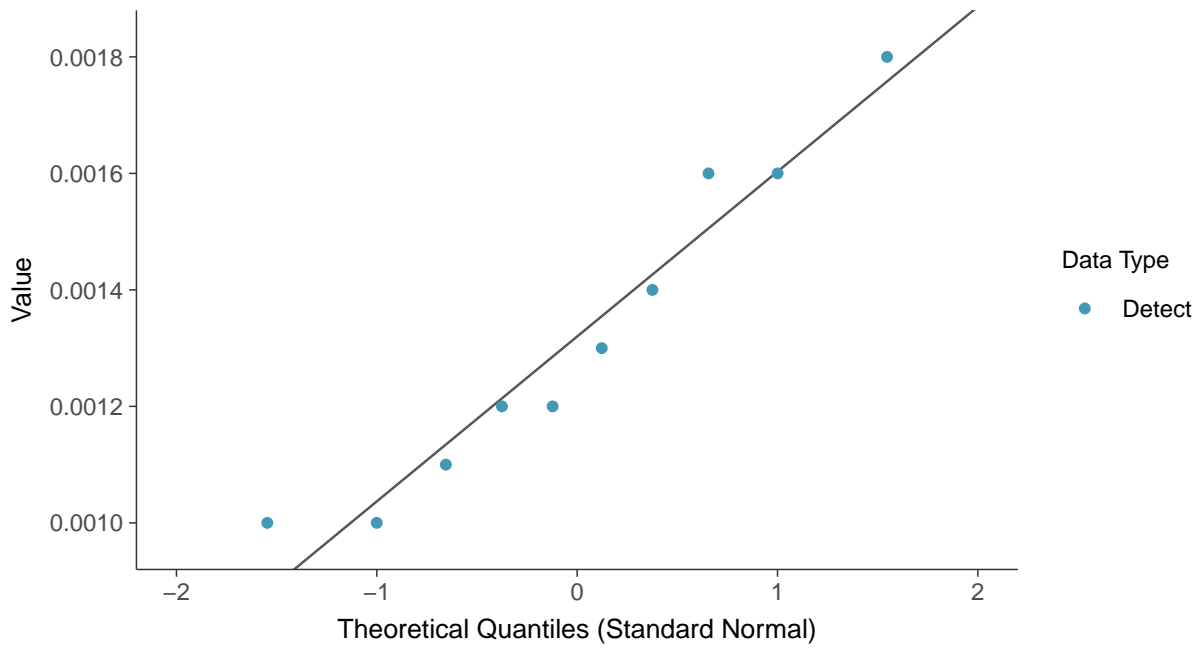
Arsenic, MW-31 (mg/L)





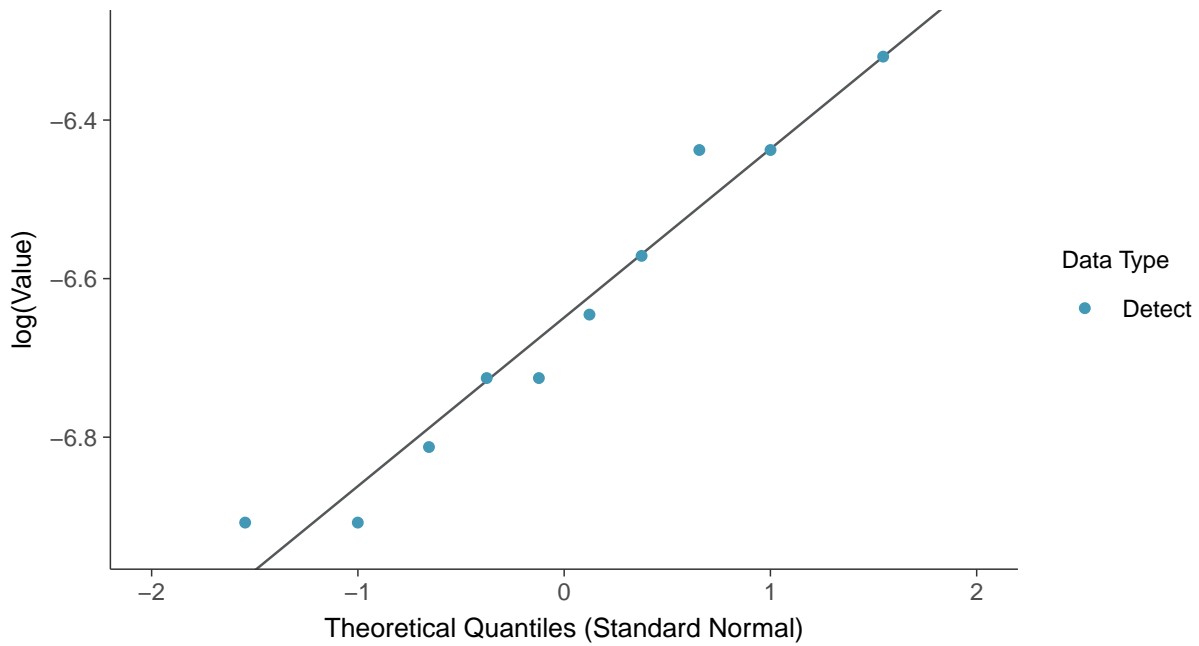
Normal Q-Q plot

Arsenic, MW-31 (mg/L)



Lognormal Q-Q plot

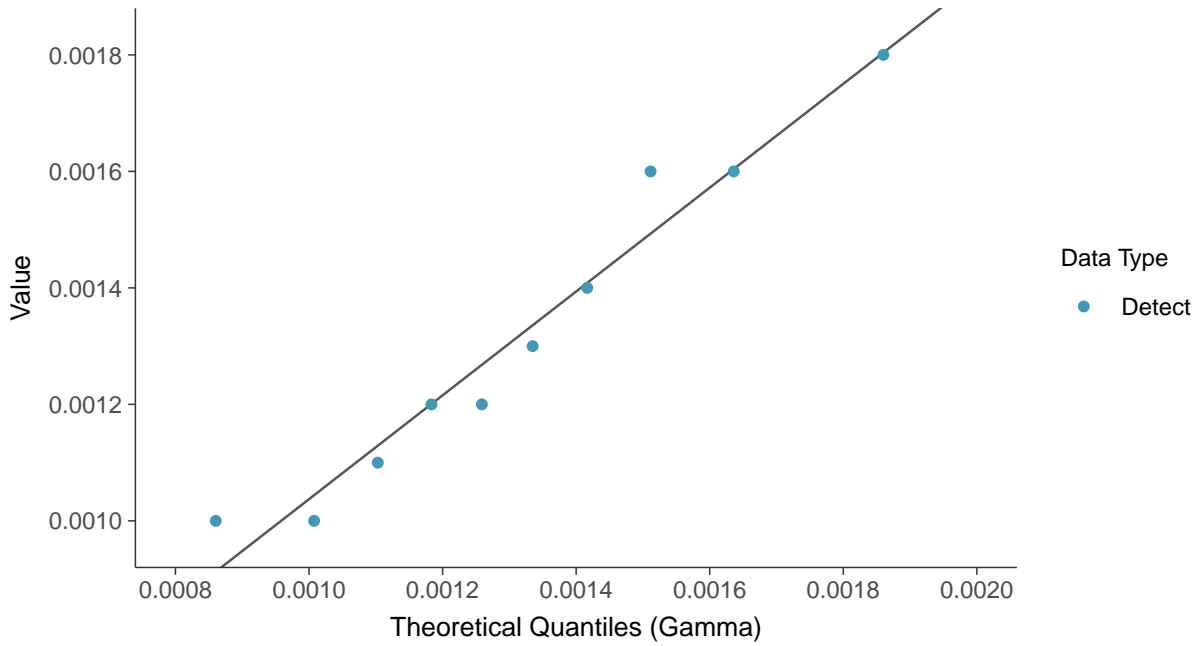
Arsenic, MW-31 (mg/L)





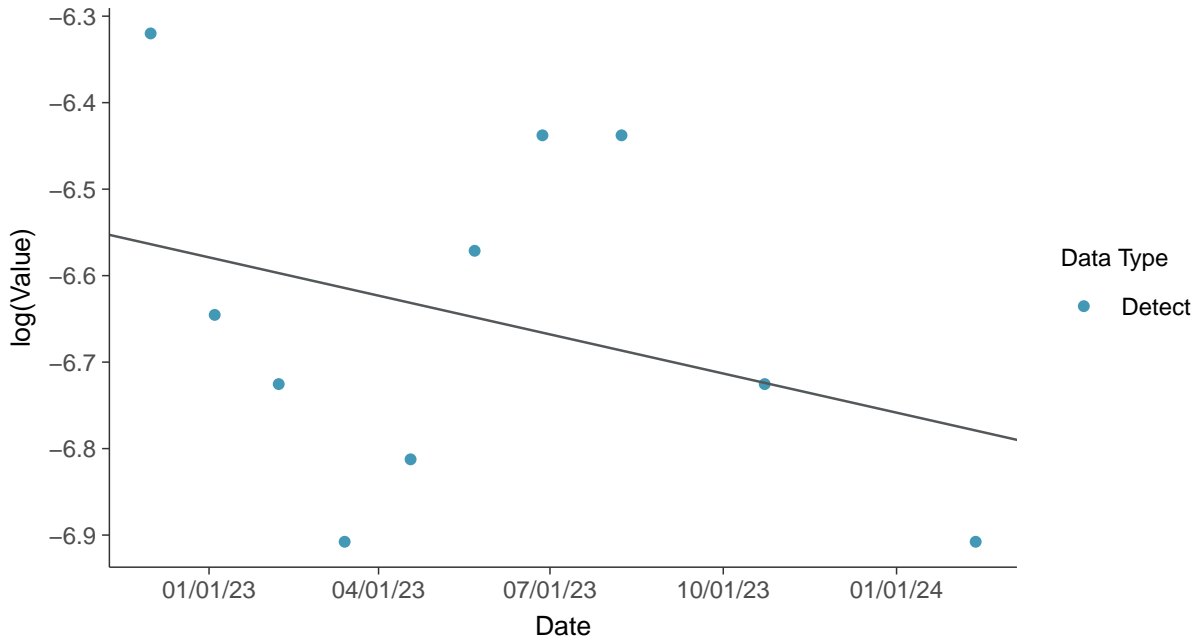
Gamma Q-Q plot

Arsenic, MW-31 (mg/L)



Trend Regression: Lognormal MLE

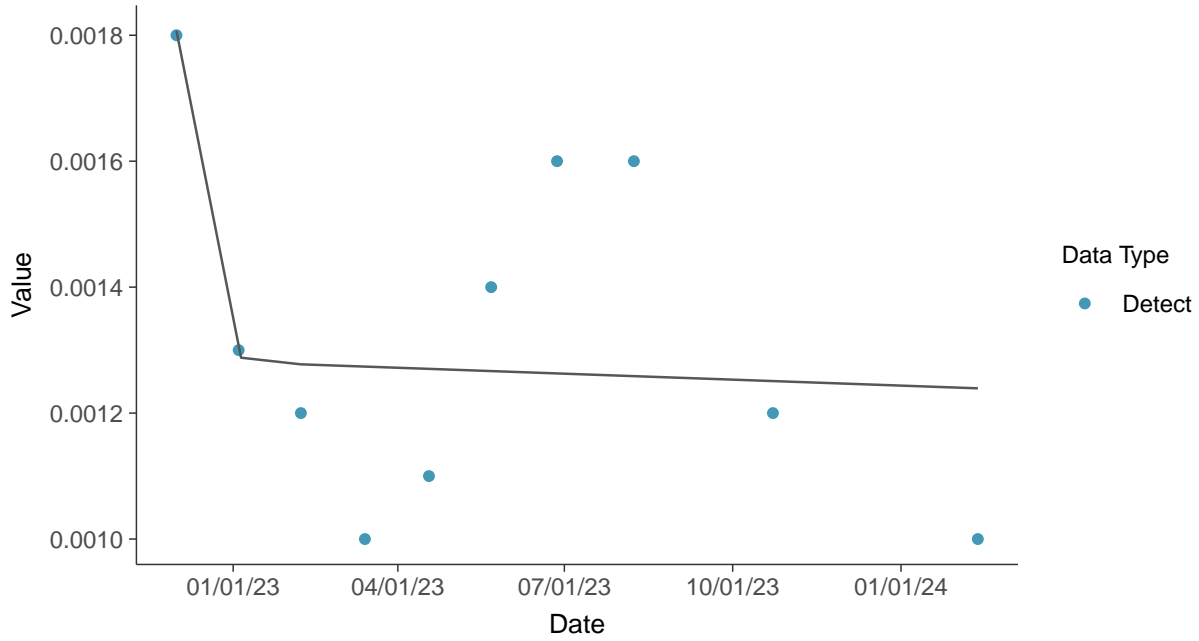
Arsenic, MW-31 (mg/L)





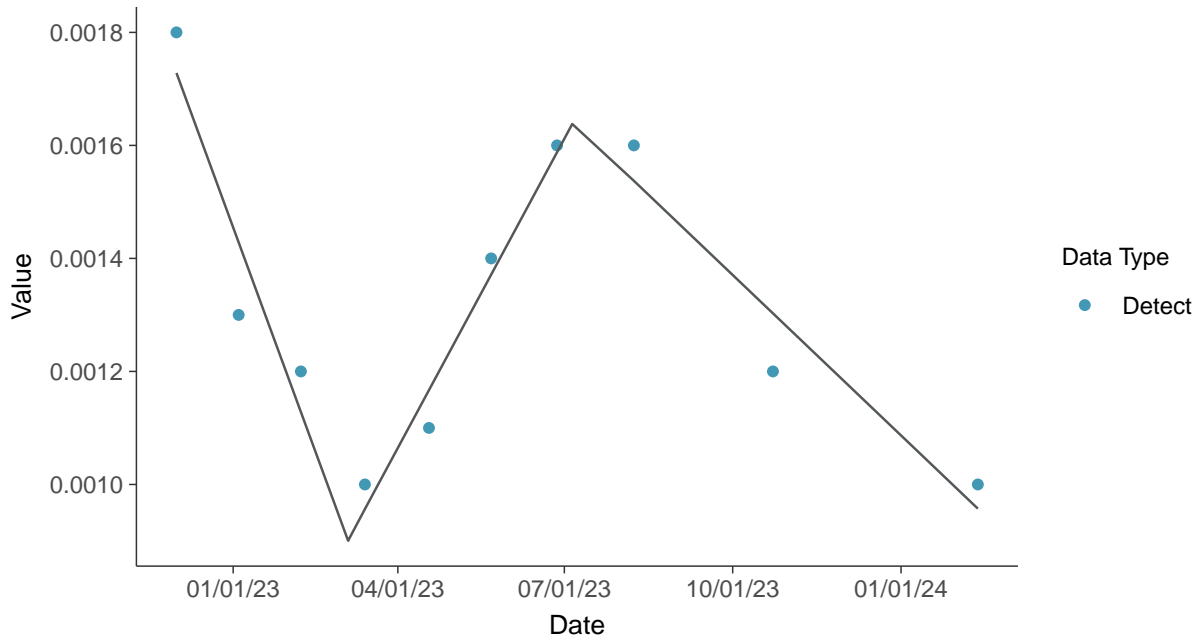
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

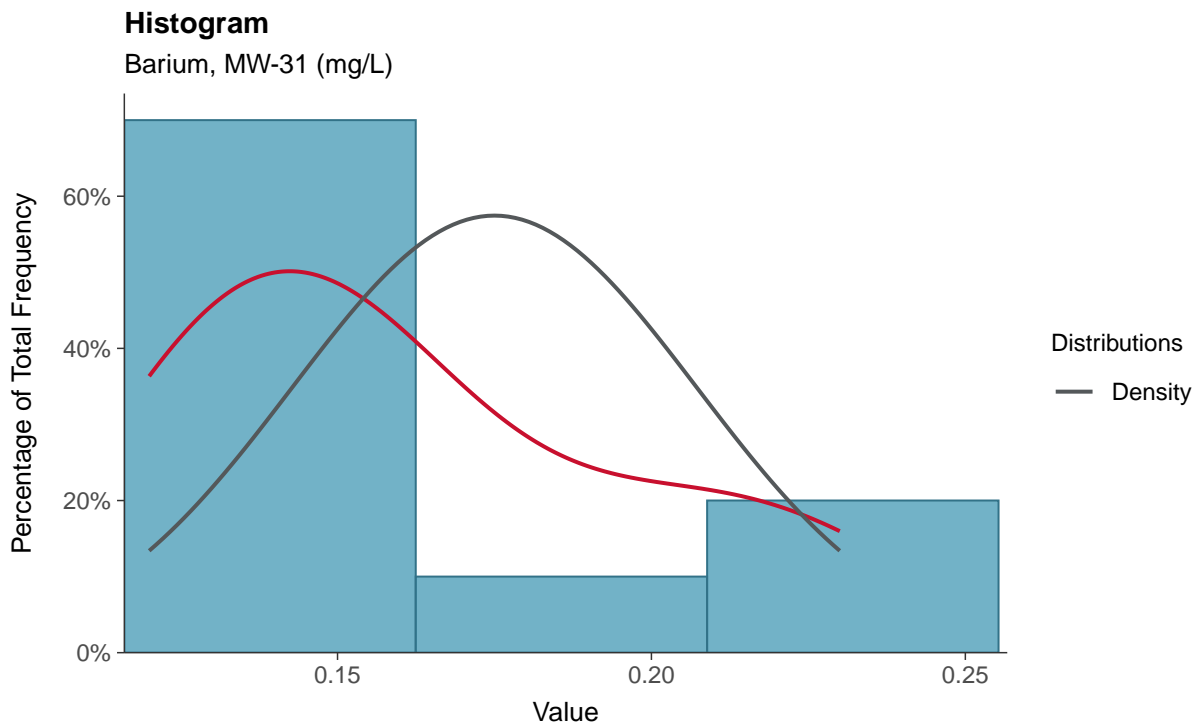
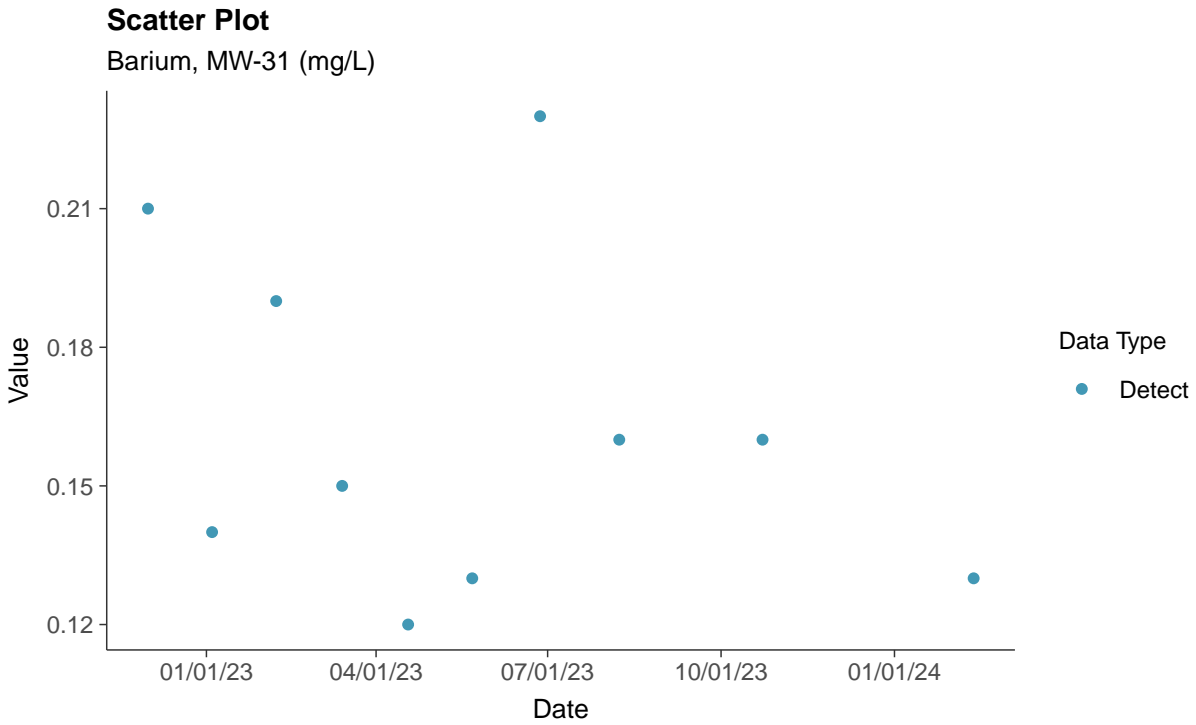
Arsenic, MW-31 (mg/L)





Appendix IV: Barium, MW-31

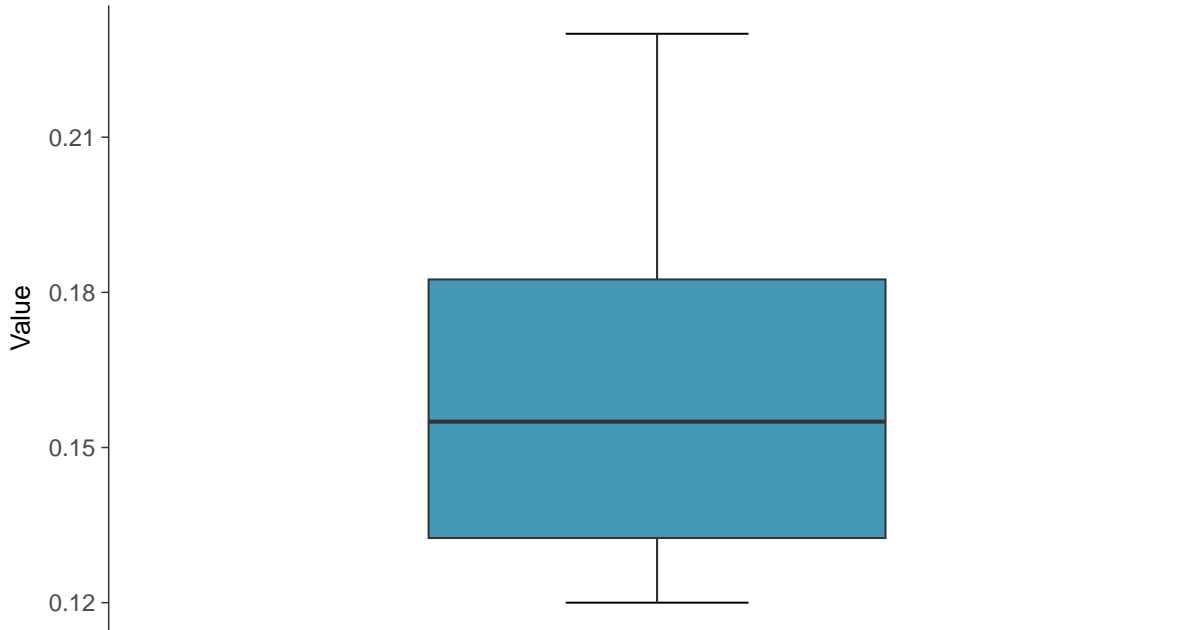
ID: 1_41_5_103





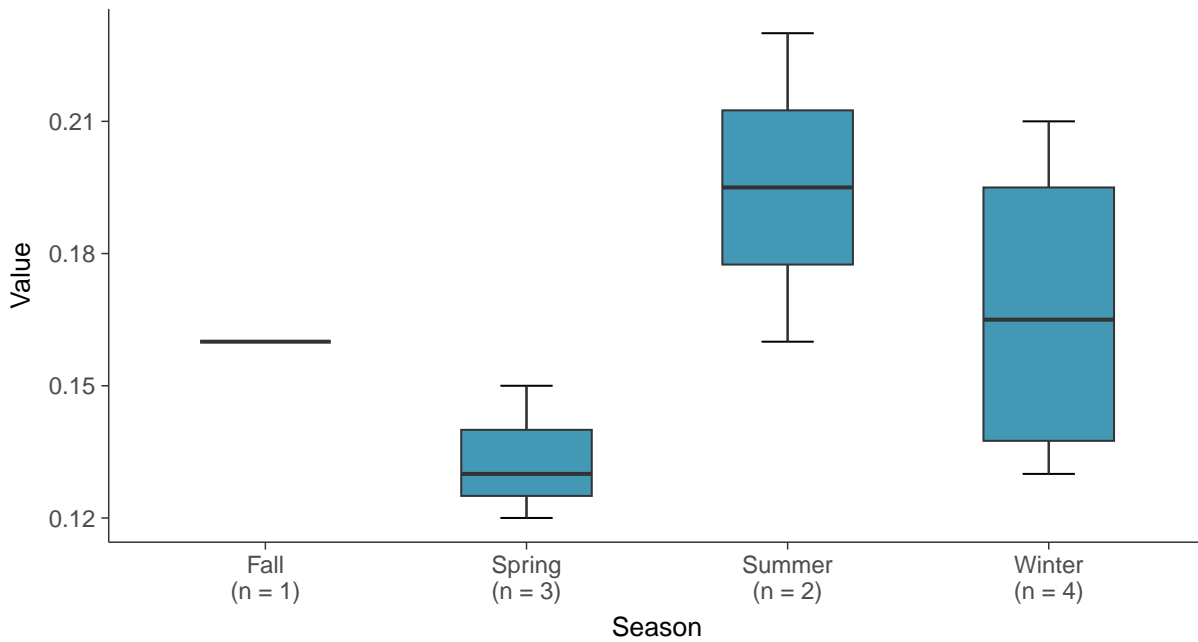
Boxplot

Barium, MW-31 (mg/L)



Boxplot by Season

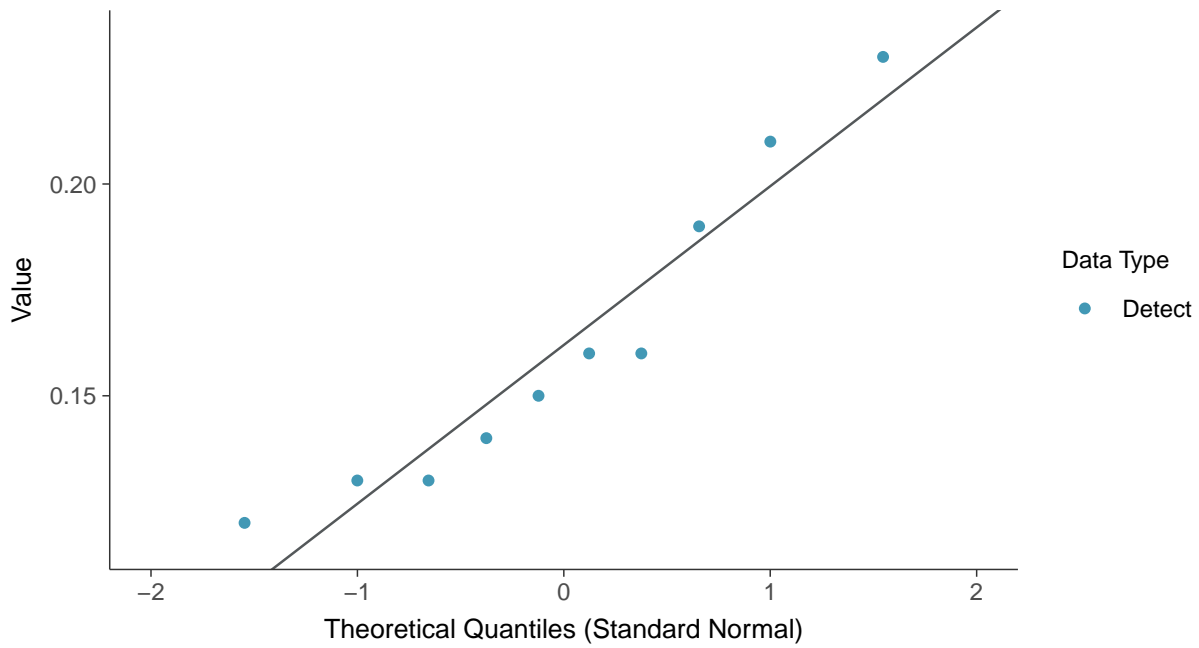
Barium, MW-31 (mg/L)





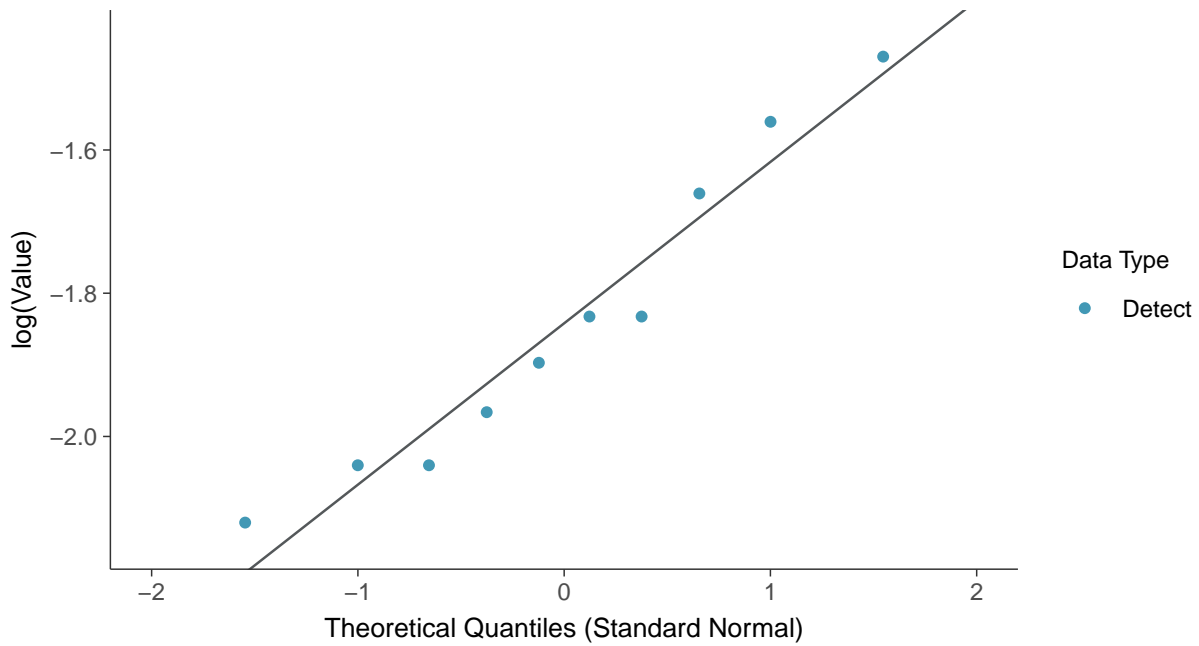
Normal Q-Q plot

Barium, MW-31 (mg/L)



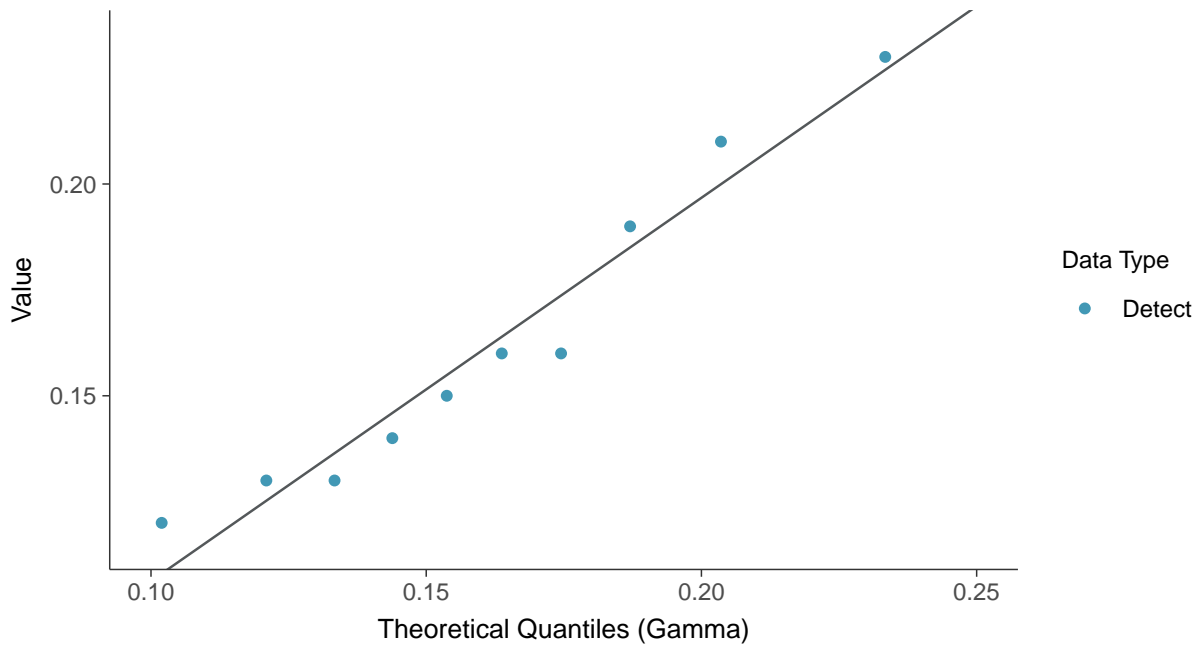
Lognormal Q-Q plot

Barium, MW-31 (mg/L)

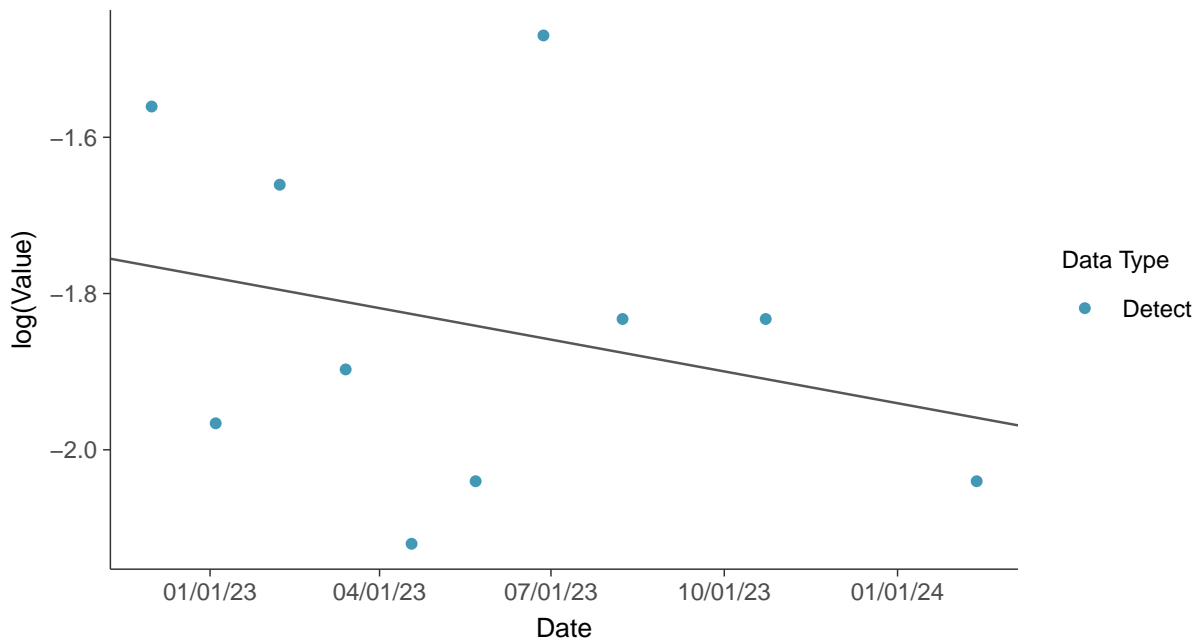




Gamma Q-Q plot
Barium, MW-31 (mg/L)



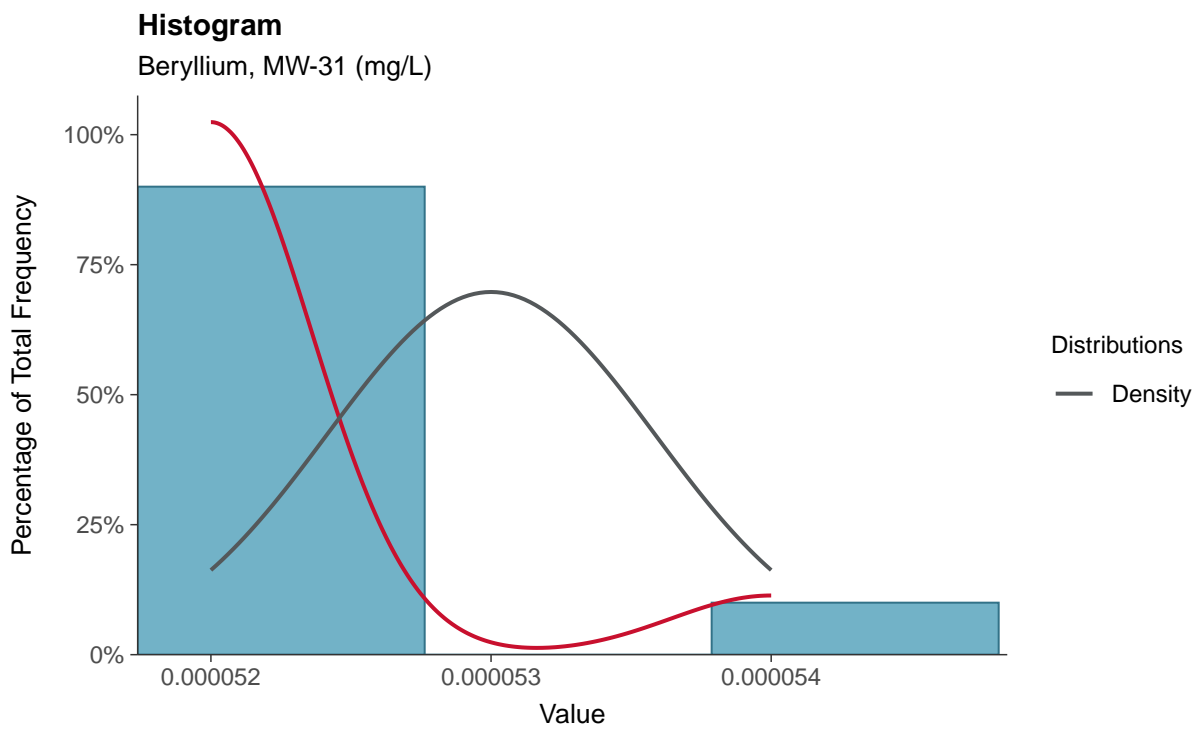
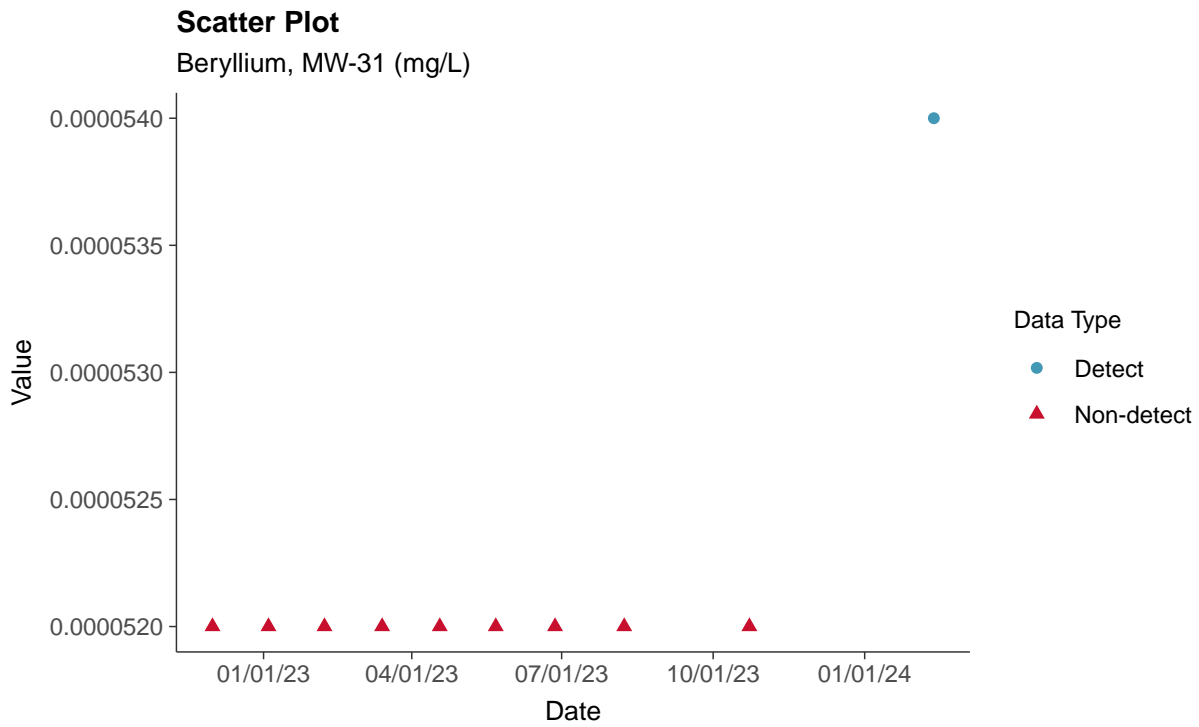
Trend Regression: Lognormal MLE
Barium, MW-31 (mg/L)

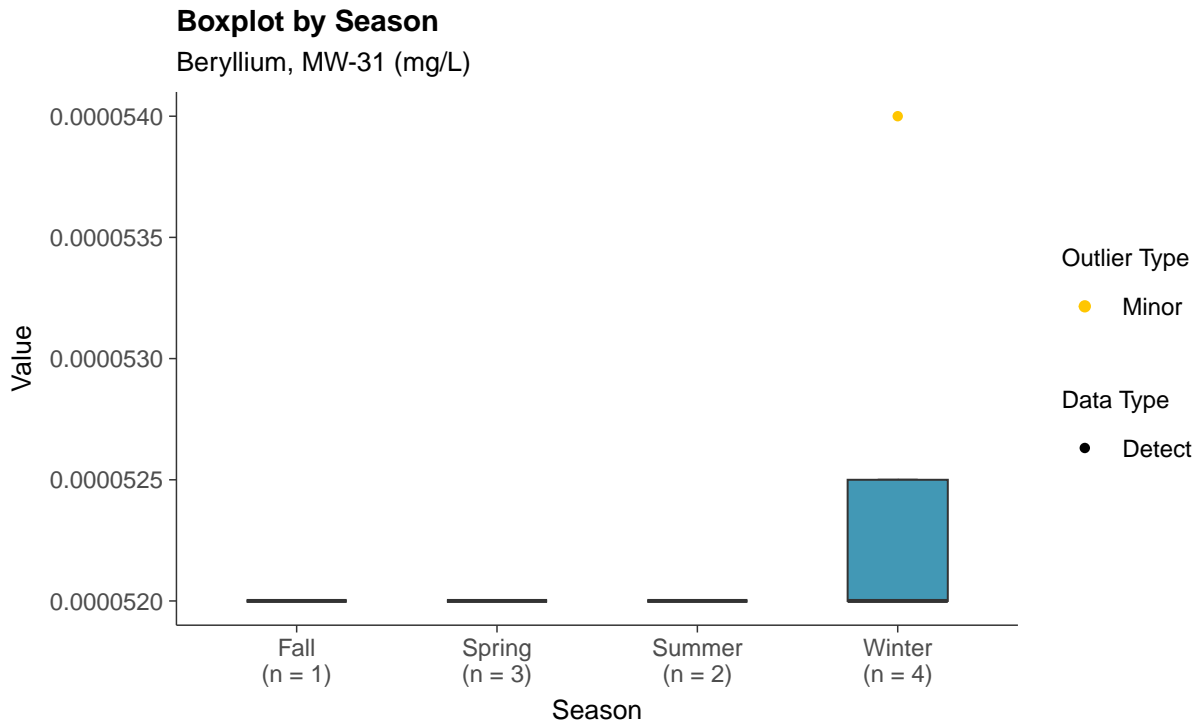
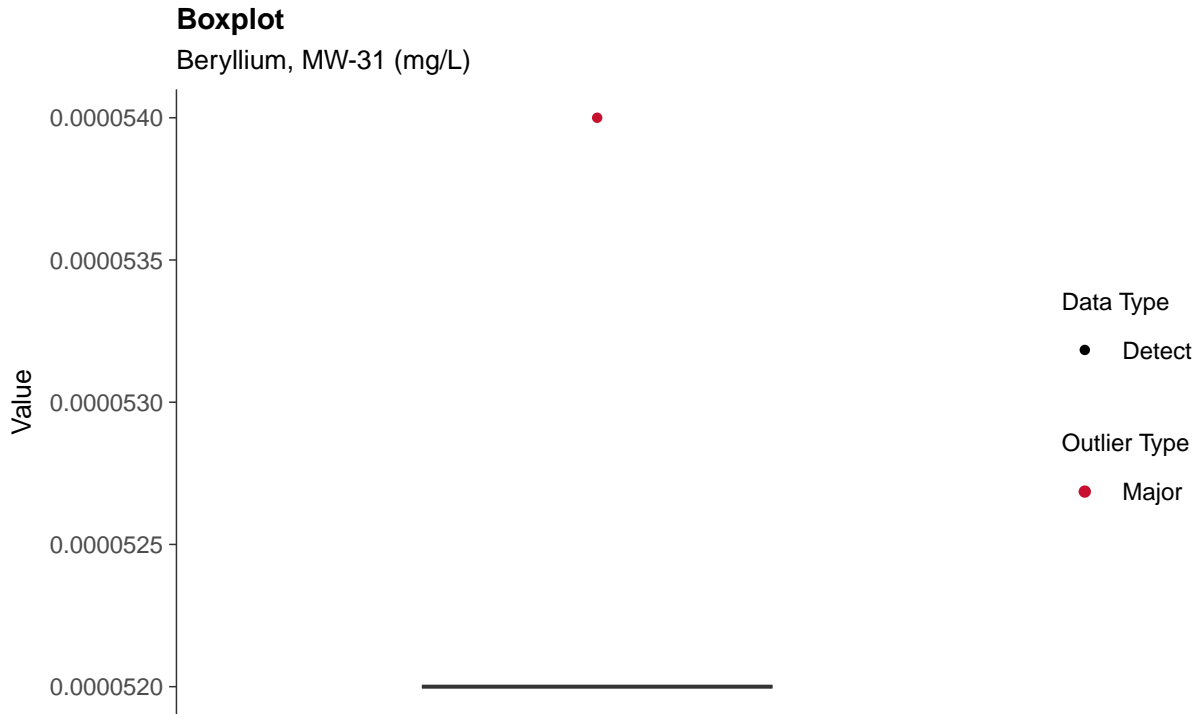




Appendix IV: Beryllium, MW-31

ID: 1_41_5_104

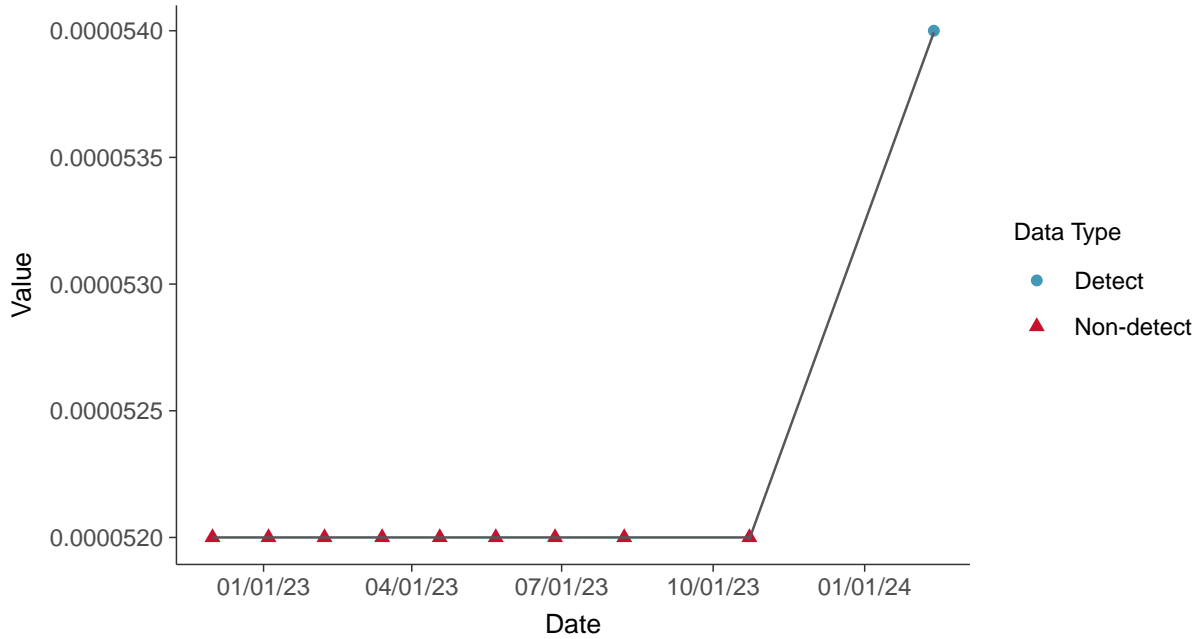






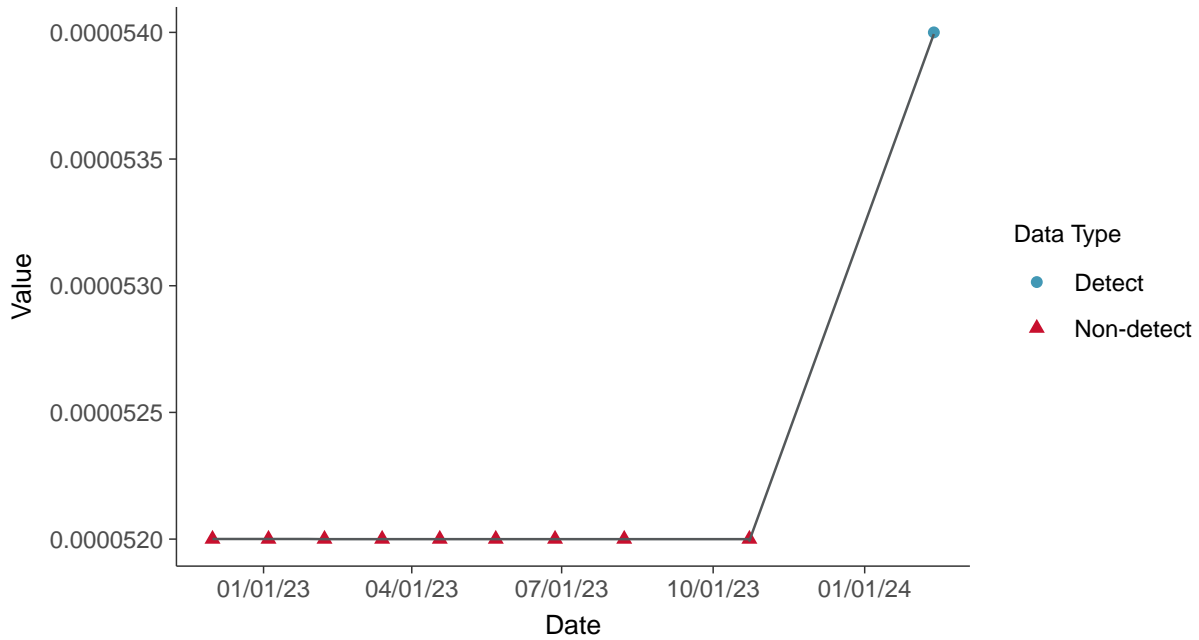
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

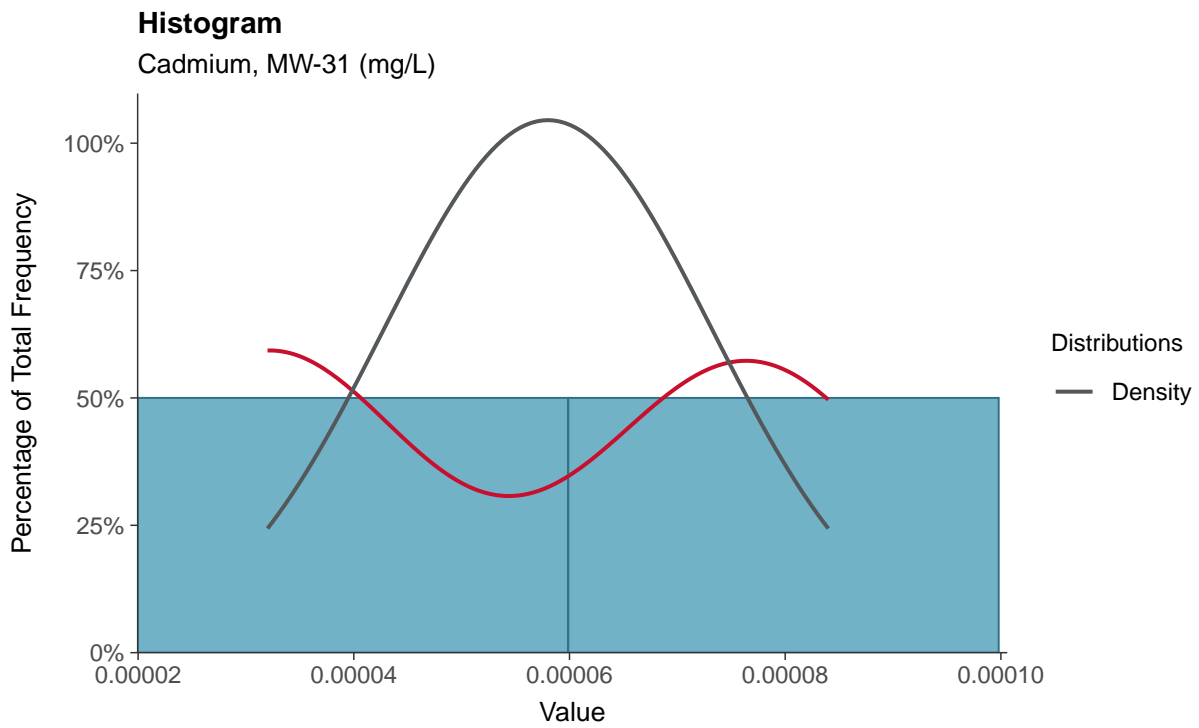
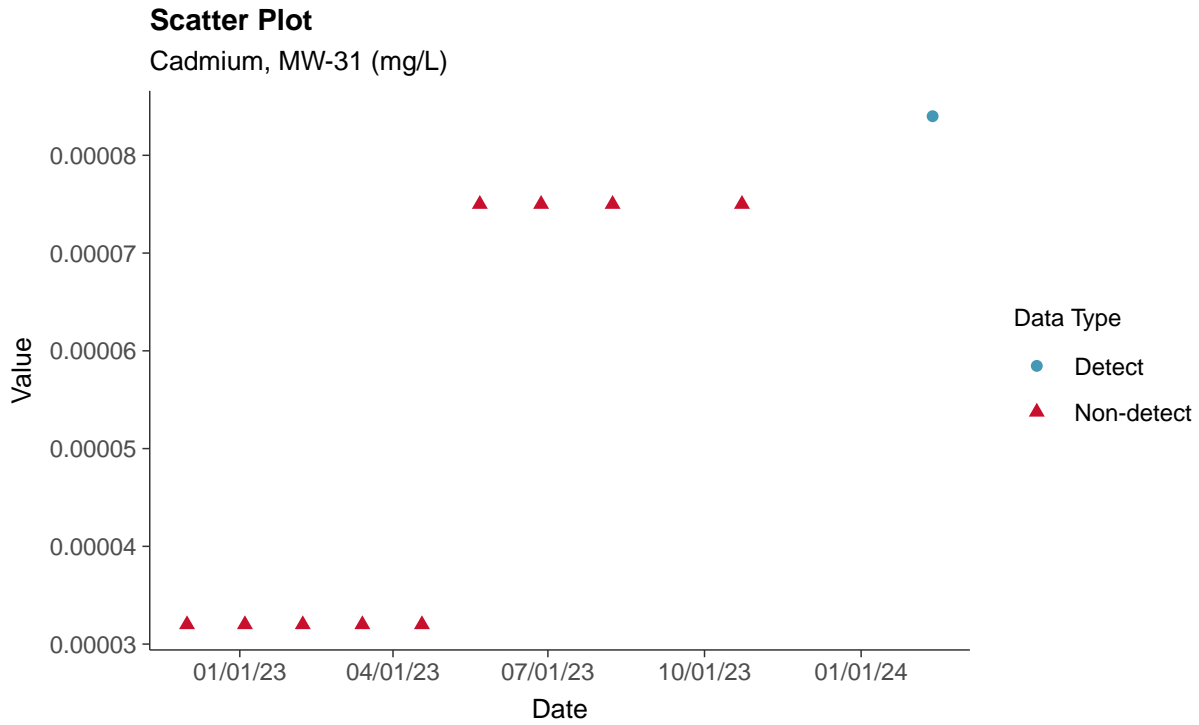
Beryllium, MW-31 (mg/L)





Appendix IV: Cadmium, MW-31

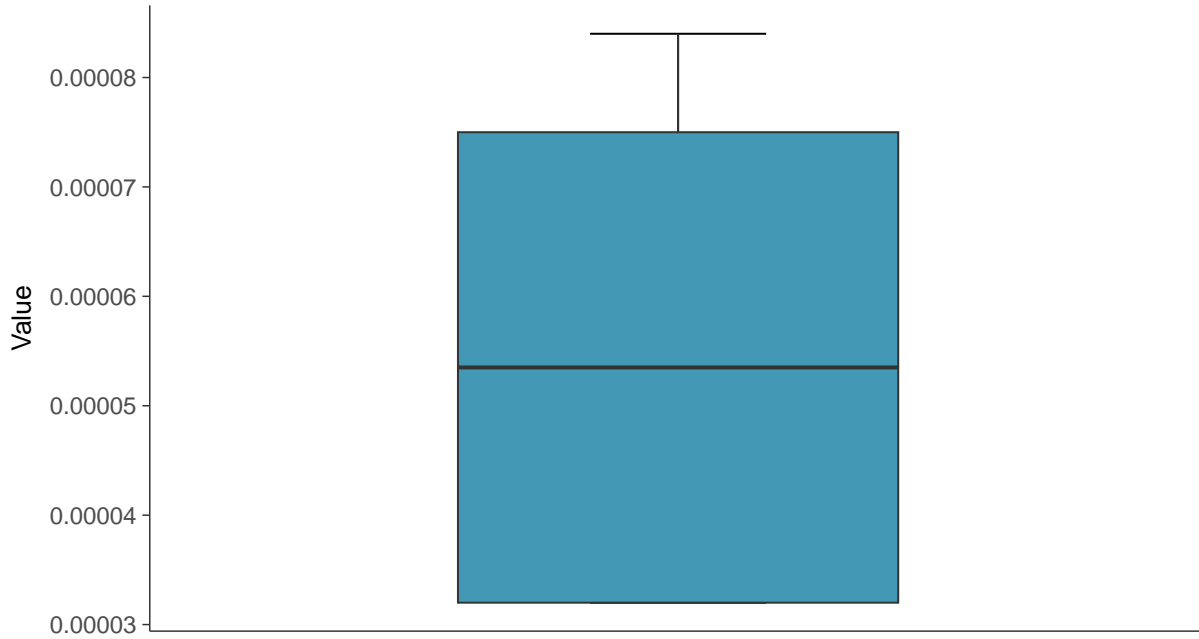
ID: 1_41_5_106





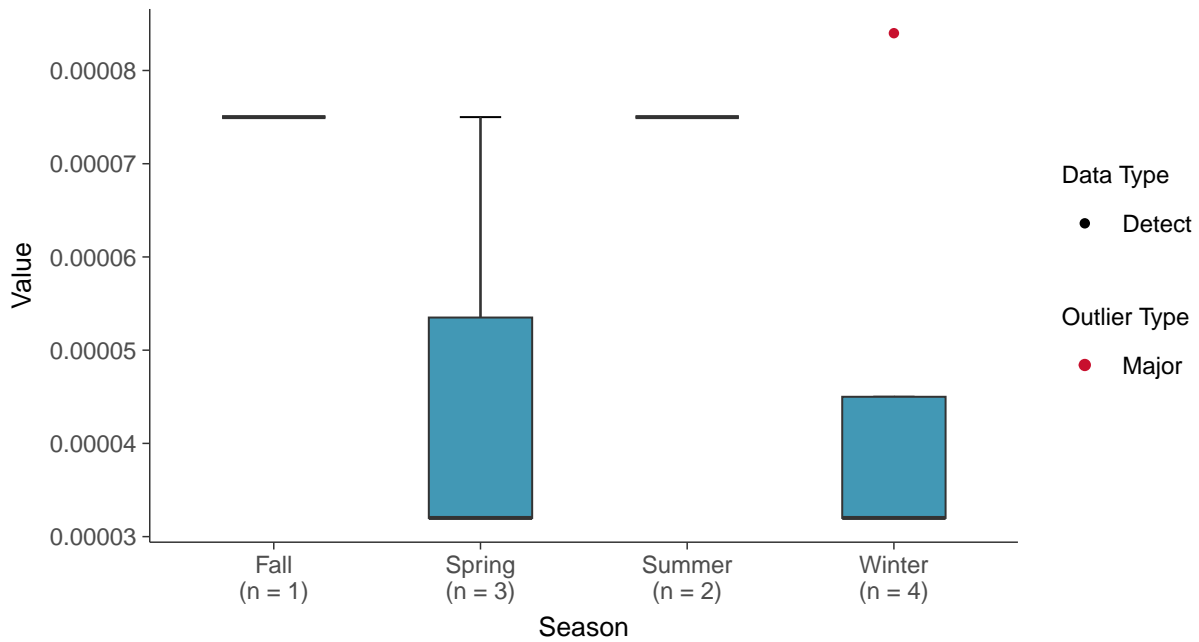
Boxplot

Cadmium, MW-31 (mg/L)



Boxplot by Season

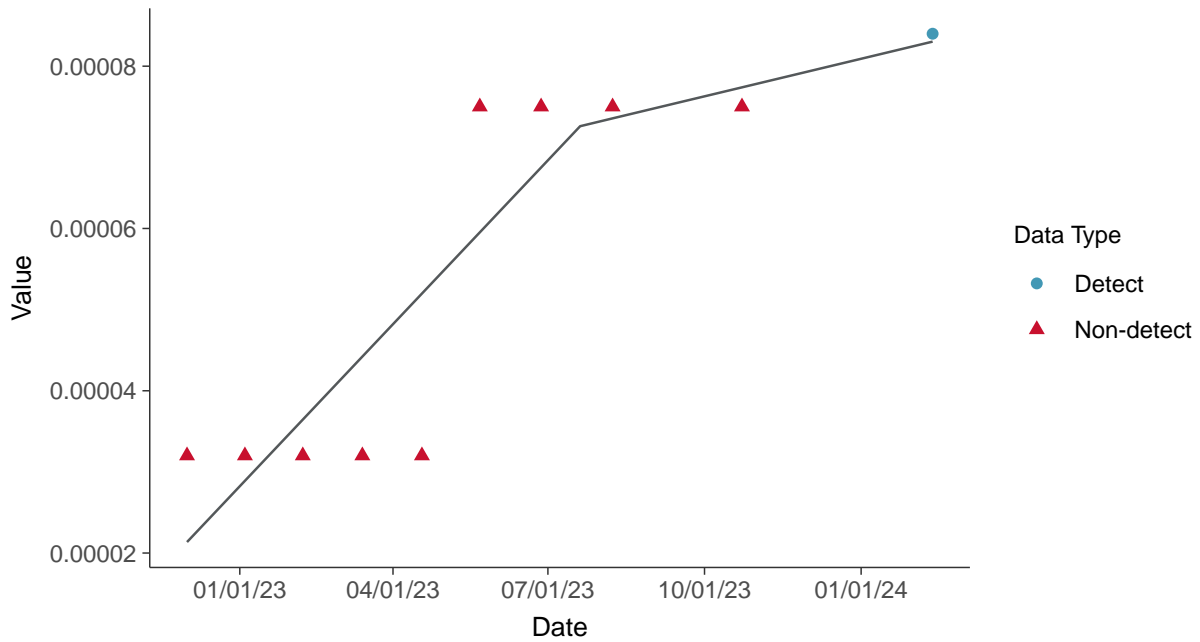
Cadmium, MW-31 (mg/L)





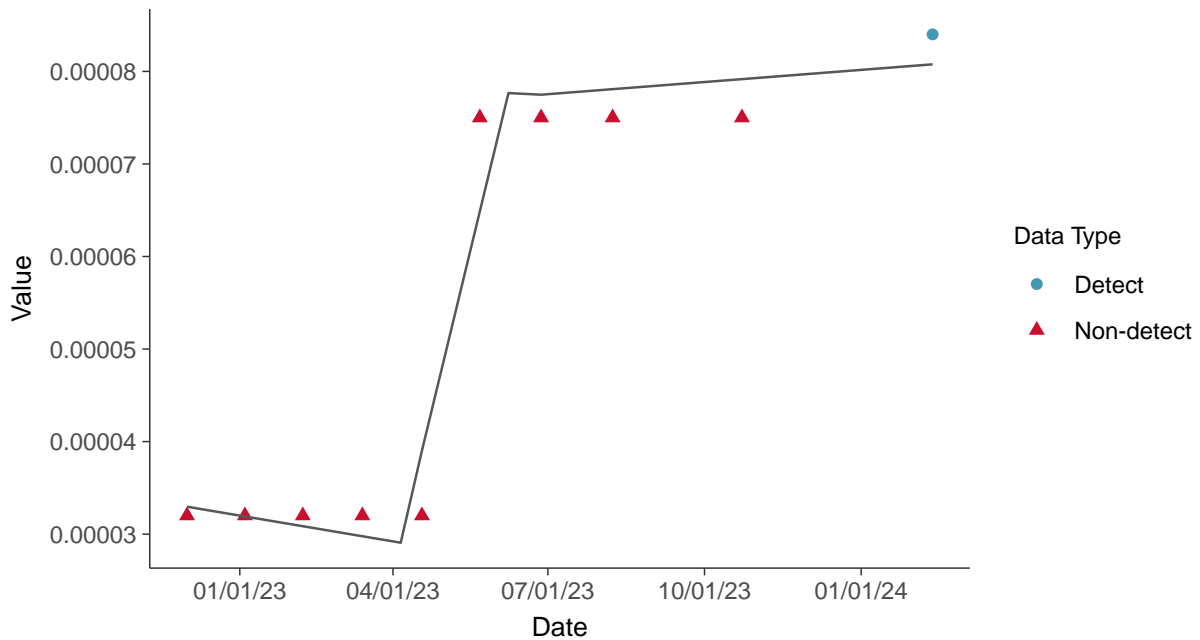
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-31 (mg/L)



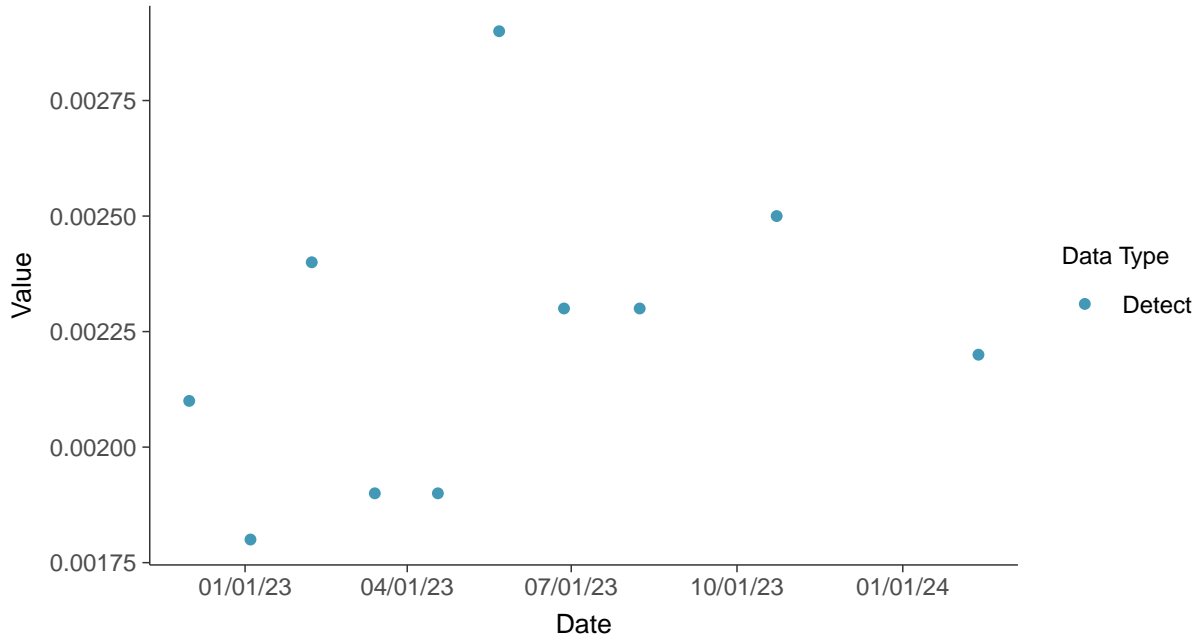


Appendix IV: Chromium, Total, MW-31

ID: 1_41_5_109

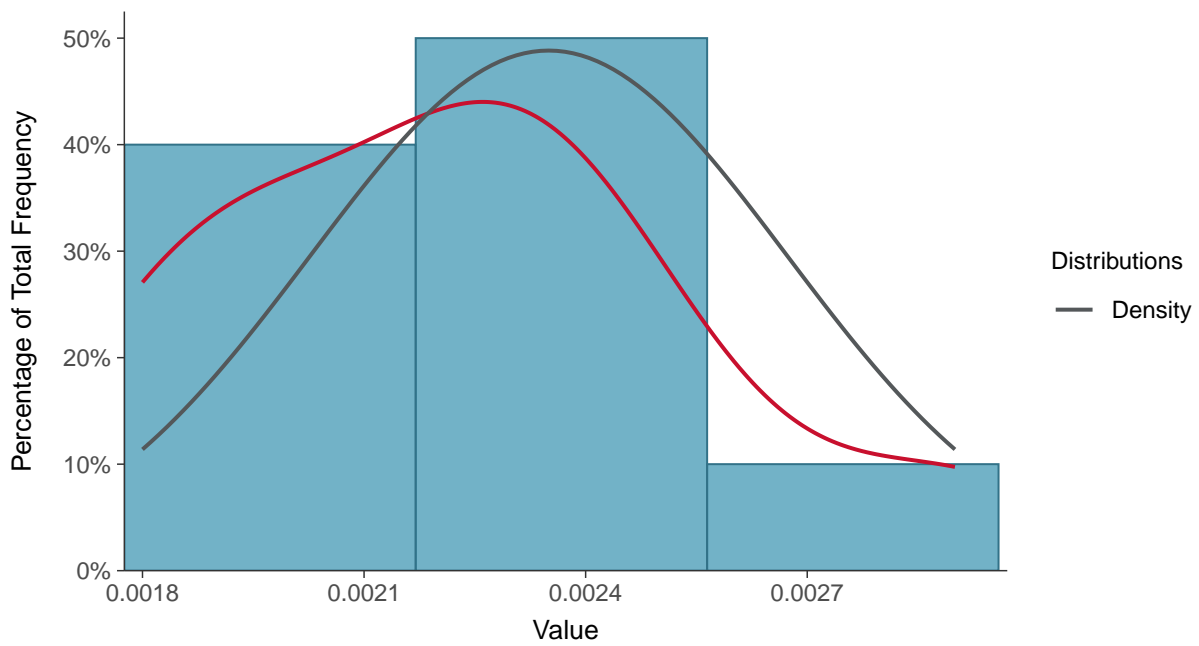
Scatter Plot

Chromium, Total, MW-31 (mg/L)



Histogram

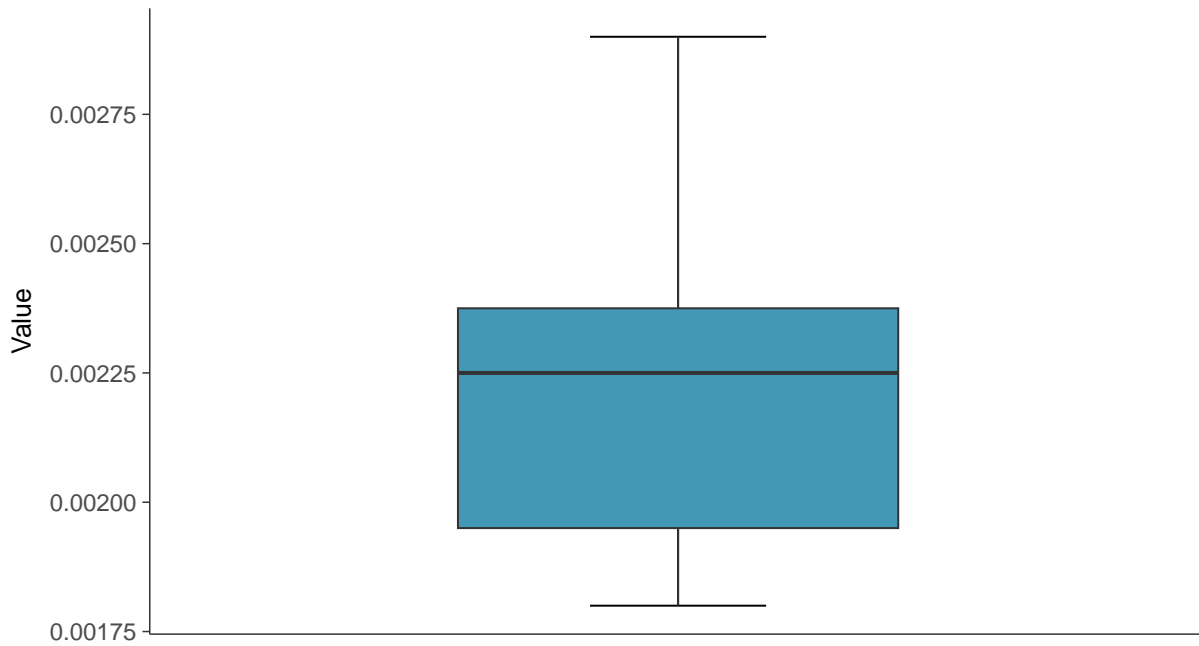
Chromium, Total, MW-31 (mg/L)





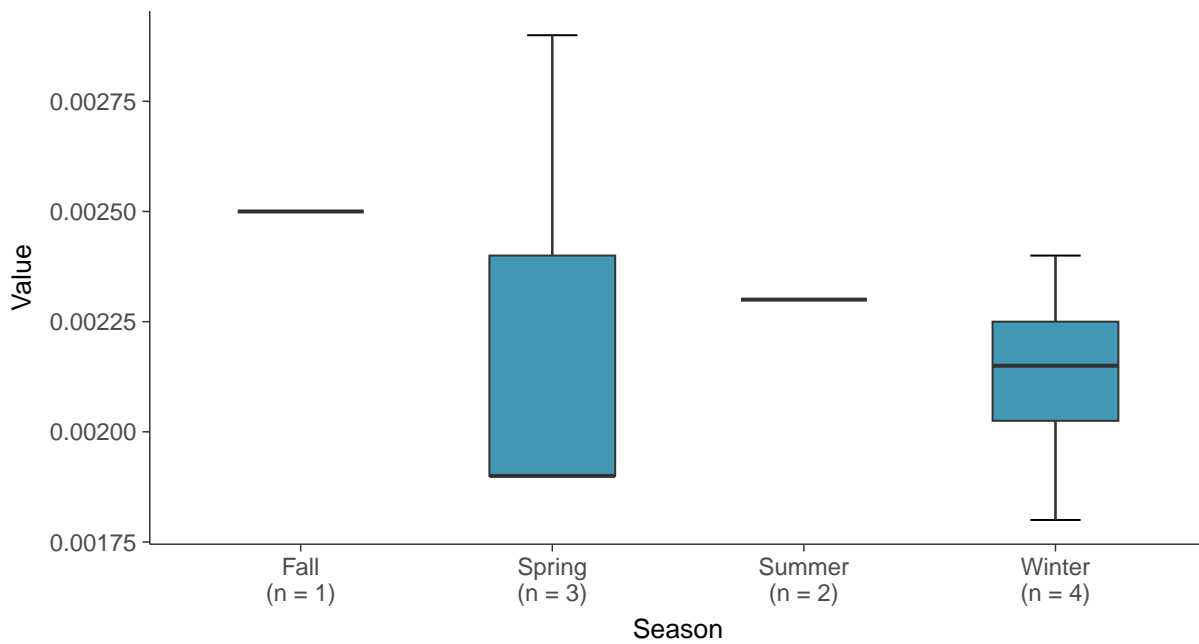
Boxplot

Chromium, Total, MW-31 (mg/L)



Boxplot by Season

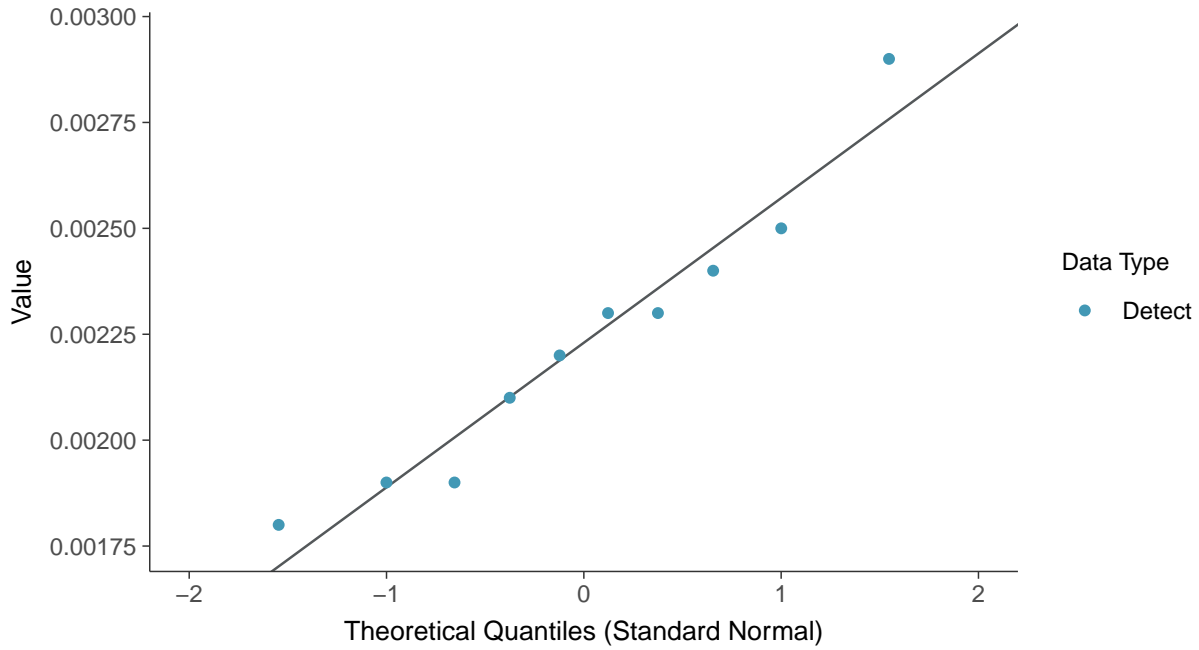
Chromium, Total, MW-31 (mg/L)





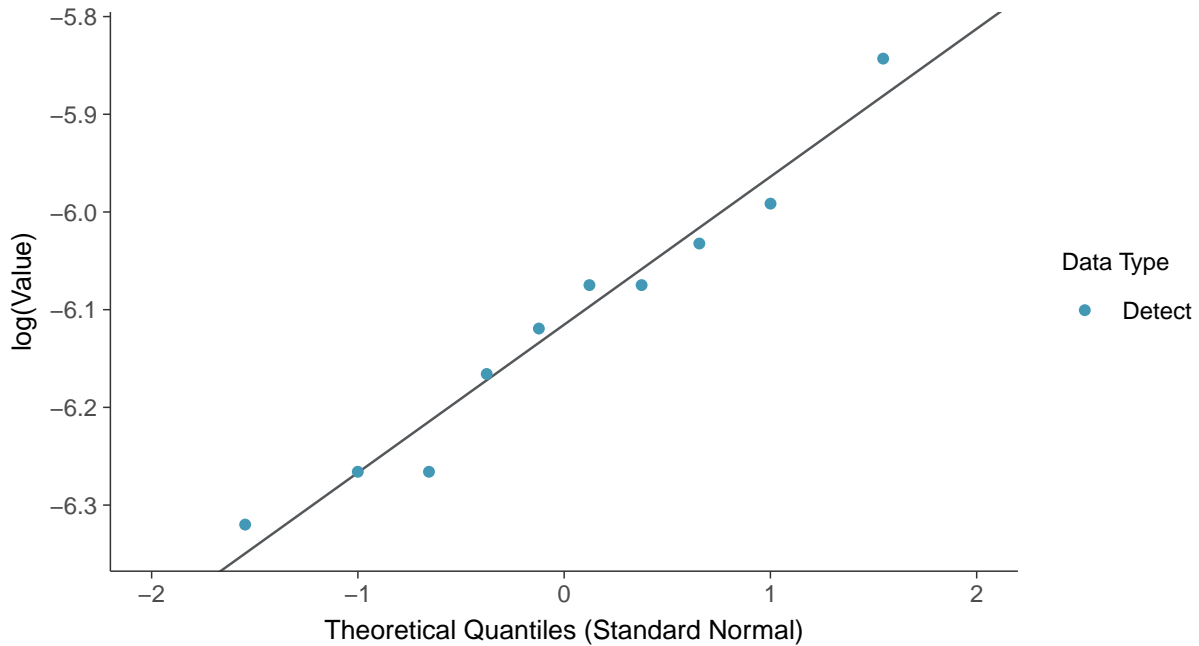
Normal Q-Q plot

Chromium, Total, MW-31 (mg/L)



Lognormal Q-Q plot

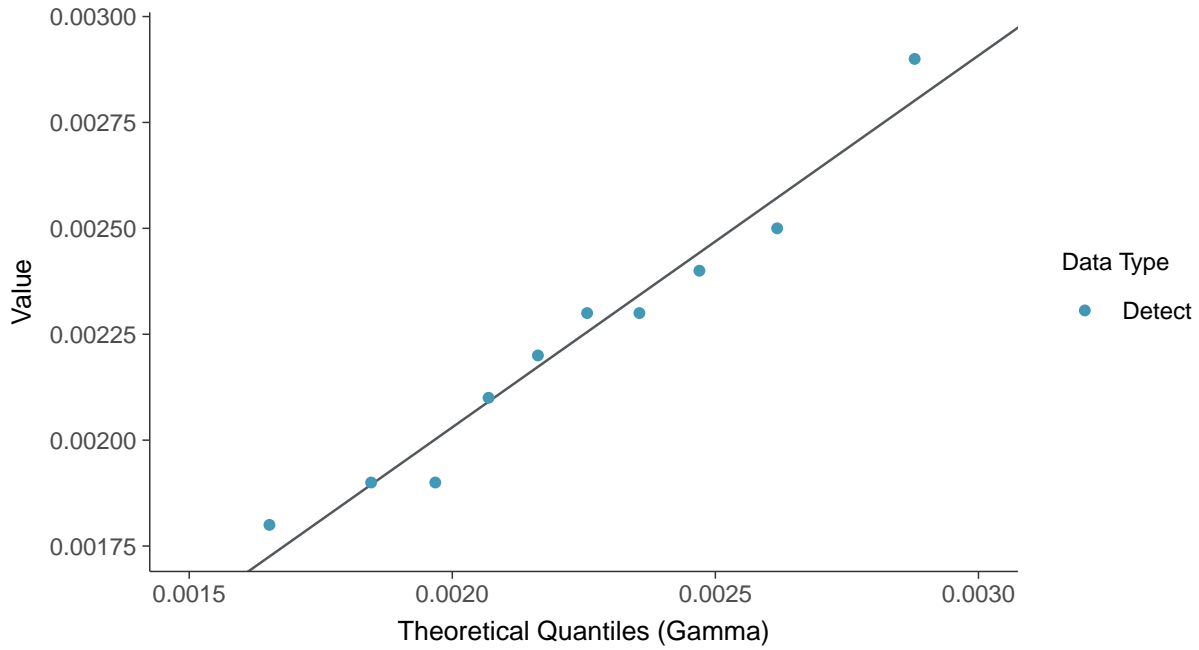
Chromium, Total, MW-31 (mg/L)





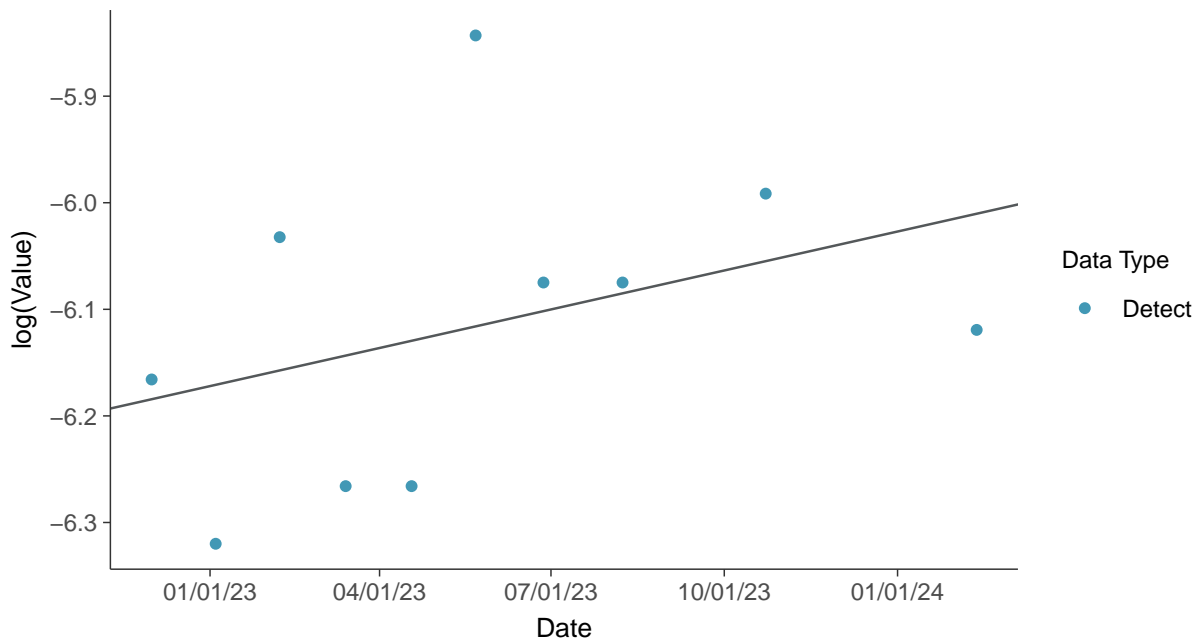
Gamma Q-Q plot

Chromium, Total, MW-31 (mg/L)



Trend Regression: Lognormal MLE

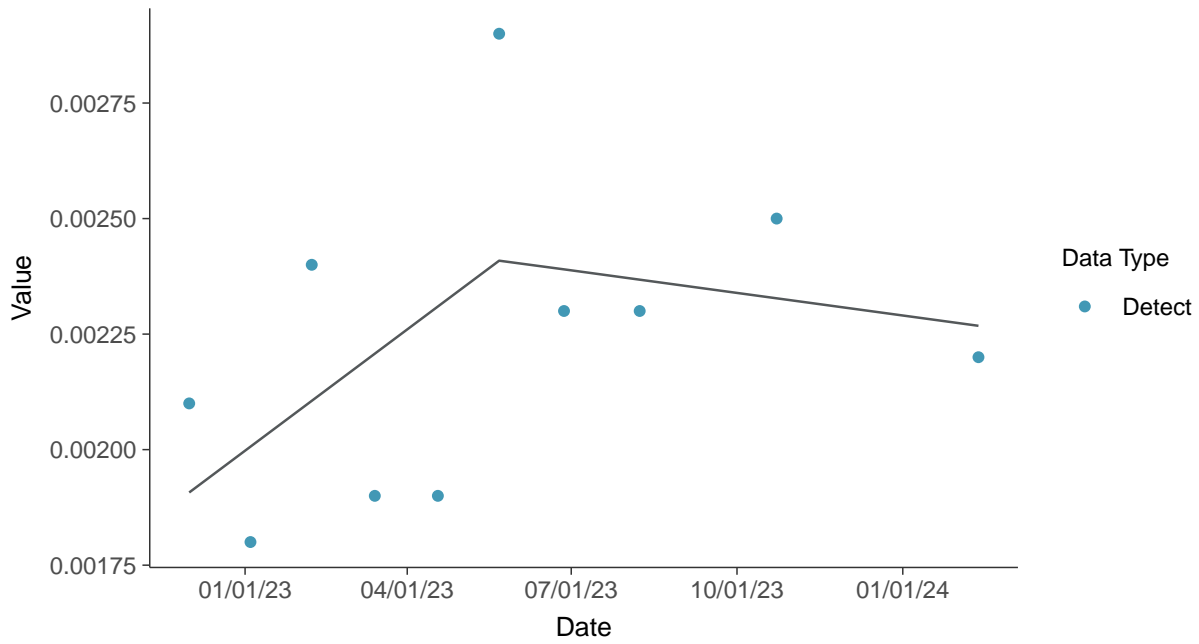
Chromium, Total, MW-31 (mg/L)





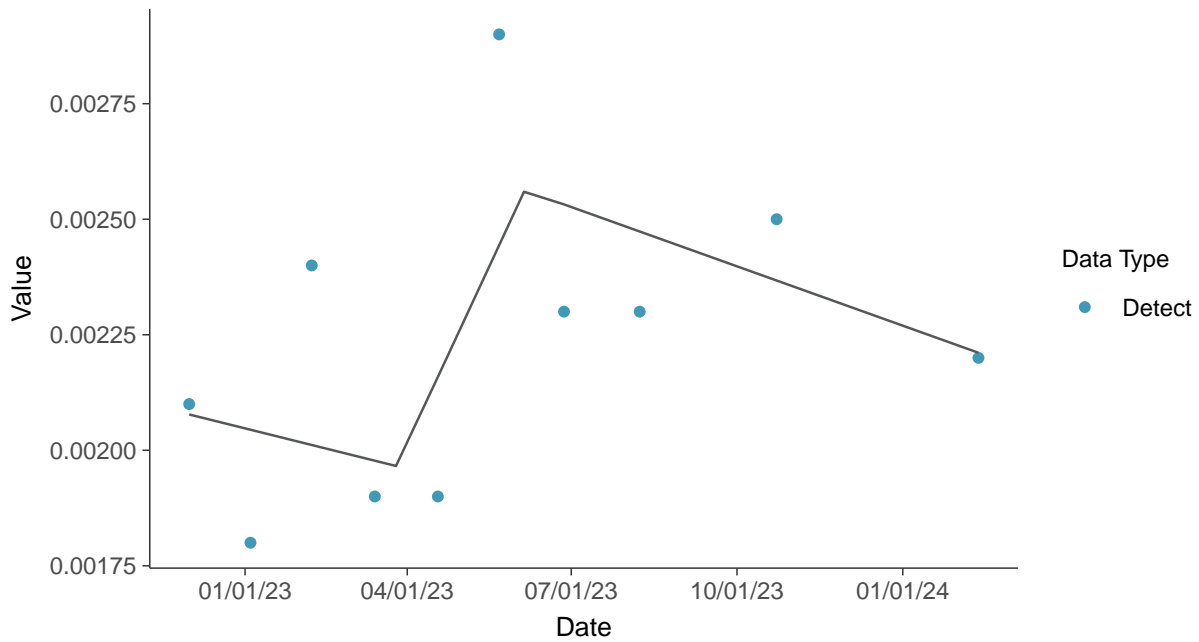
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-31 (mg/L)



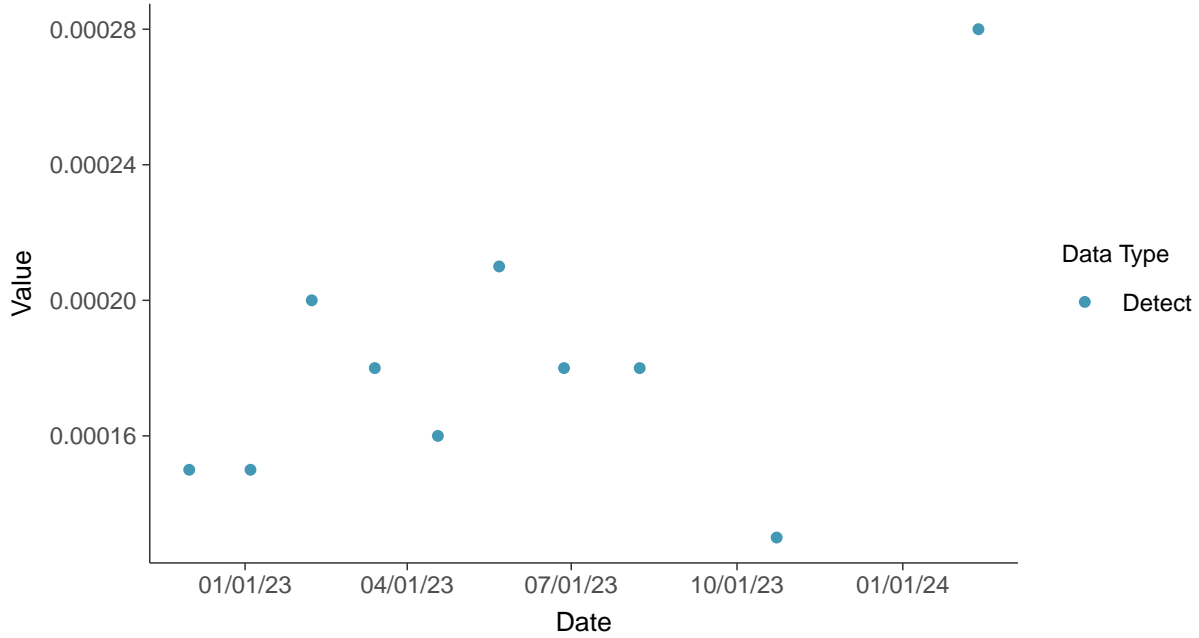


Appendix IV: Cobalt, MW-31

ID: 1_41_5_110

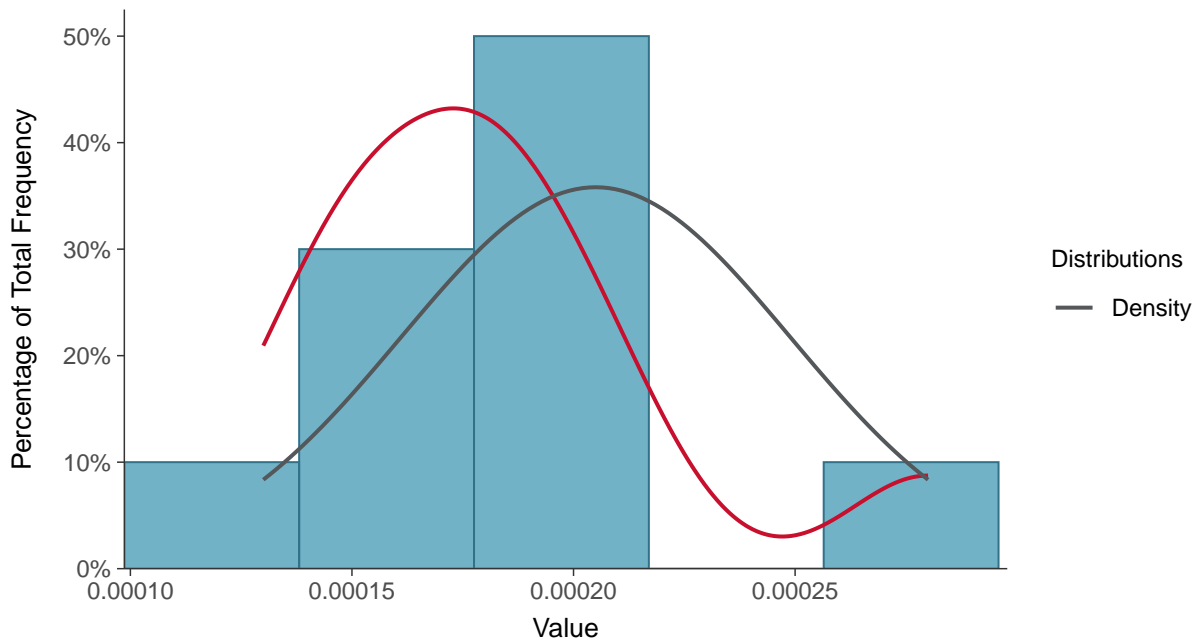
Scatter Plot

Cobalt, MW-31 (mg/L)



Histogram

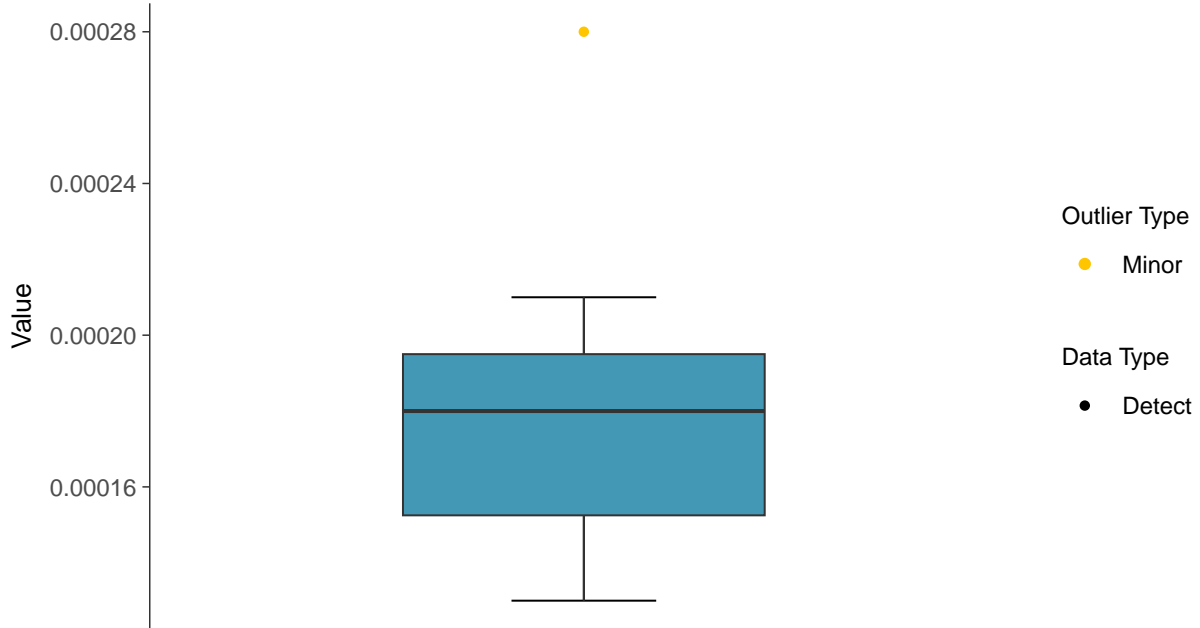
Cobalt, MW-31 (mg/L)





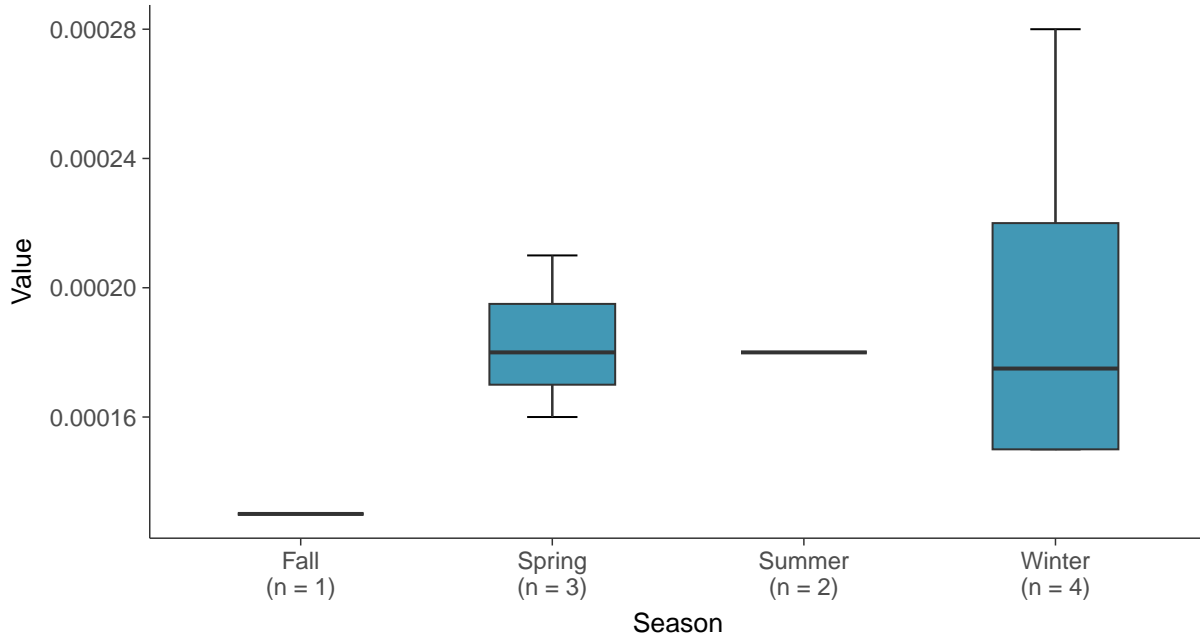
Boxplot

Cobalt, MW-31 (mg/L)



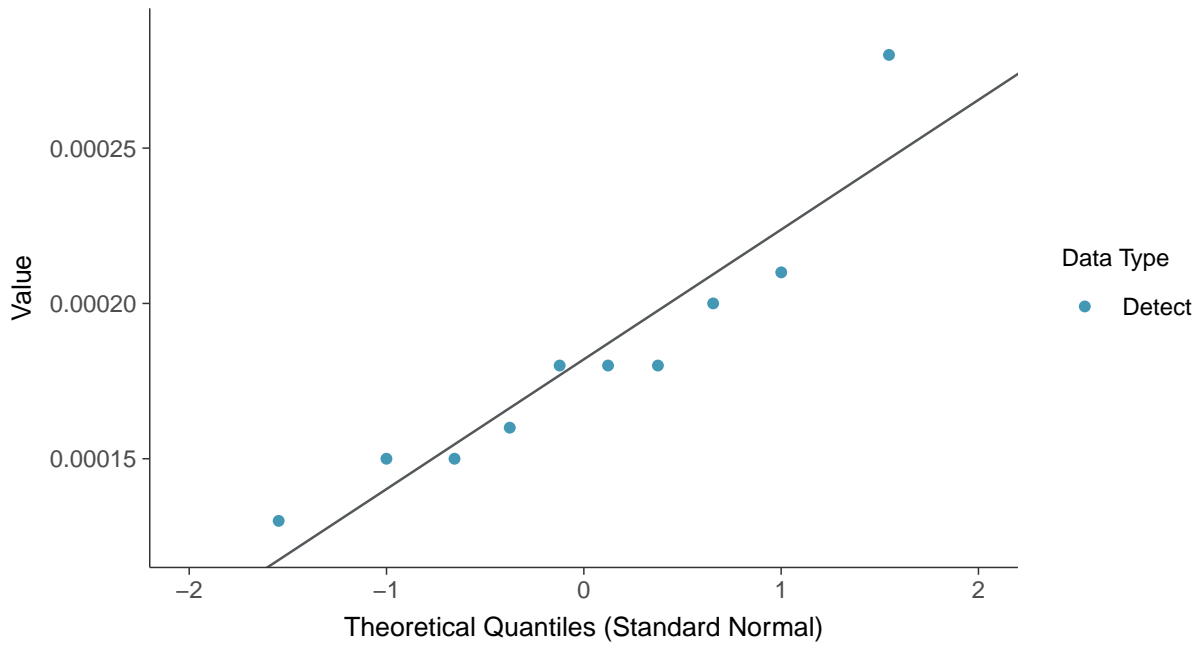
Boxplot by Season

Cobalt, MW-31 (mg/L)

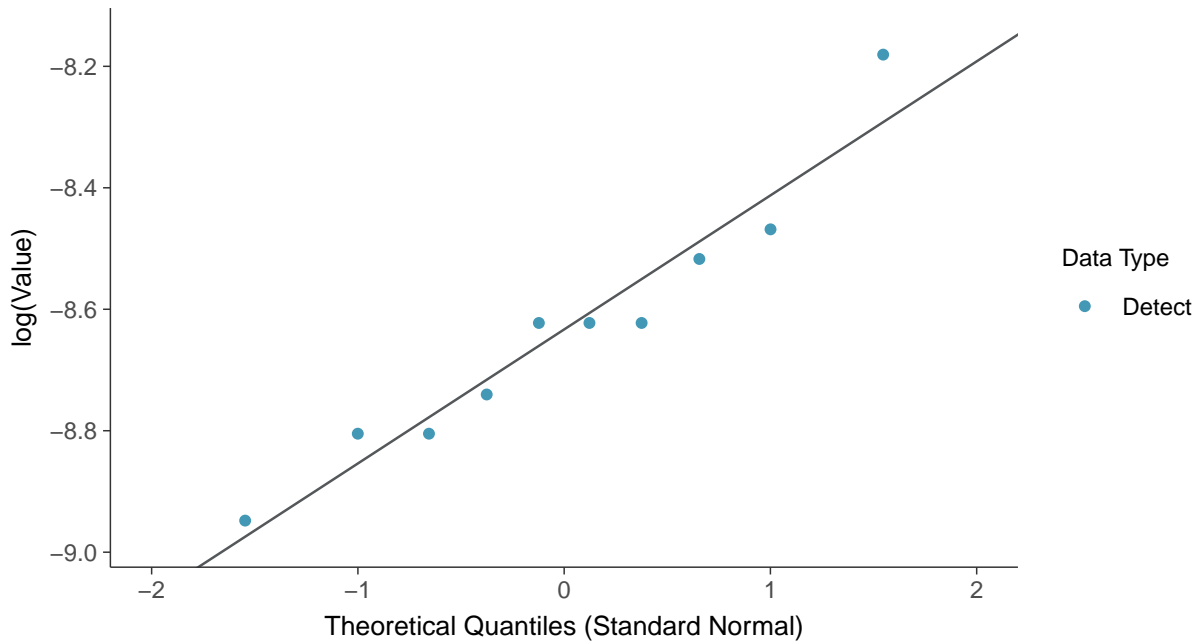




Normal Q-Q plot
Cobalt, MW-31 (mg/L)

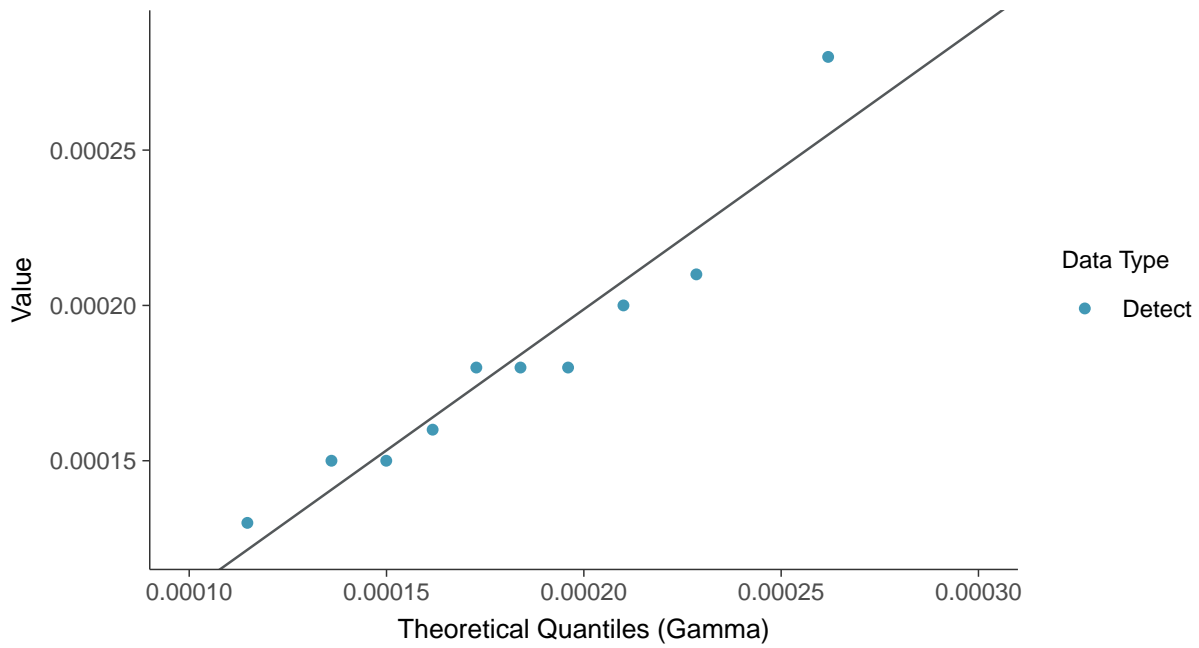


Lognormal Q-Q plot
Cobalt, MW-31 (mg/L)

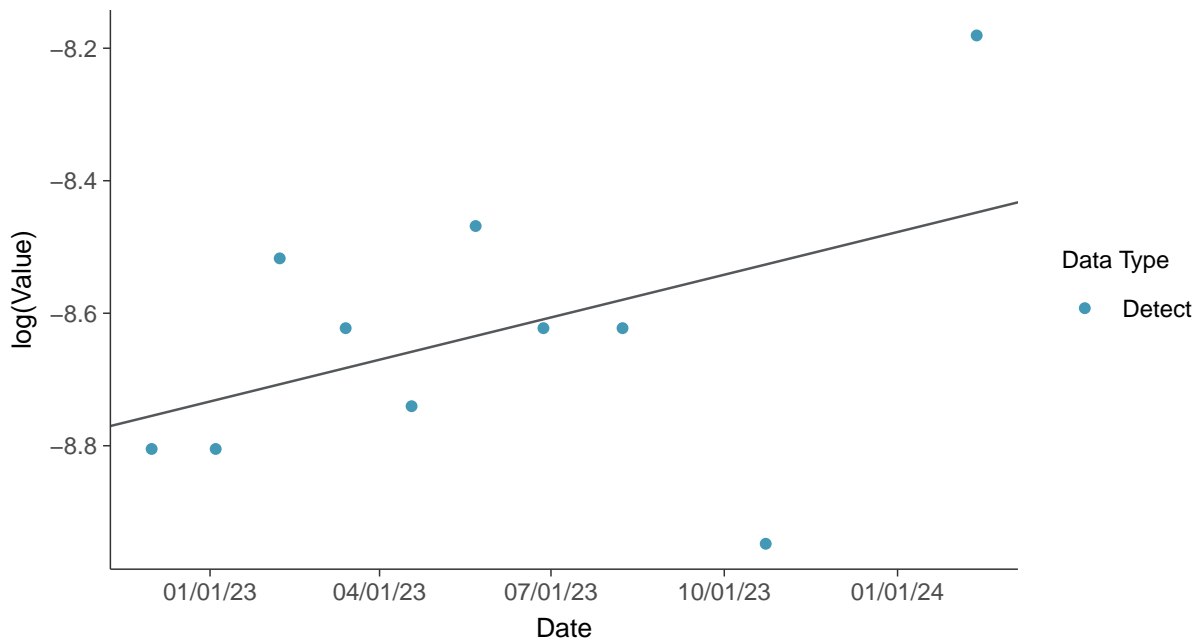




Gamma Q-Q plot
Cobalt, MW-31 (mg/L)



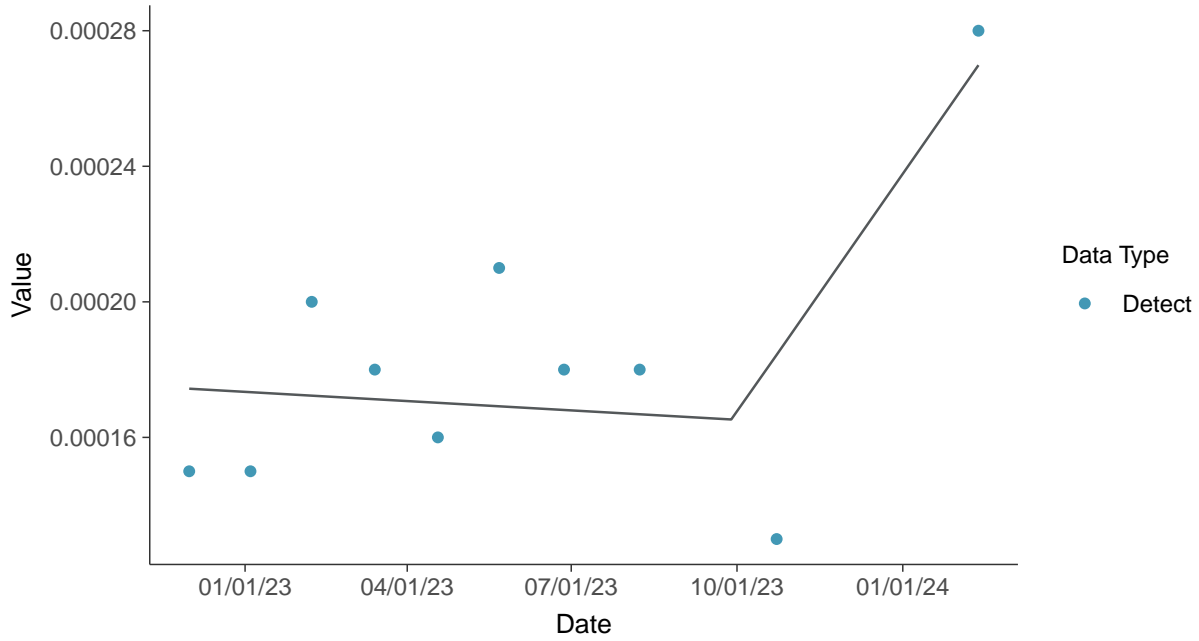
Trend Regression: Lognormal MLE
Cobalt, MW-31 (mg/L)





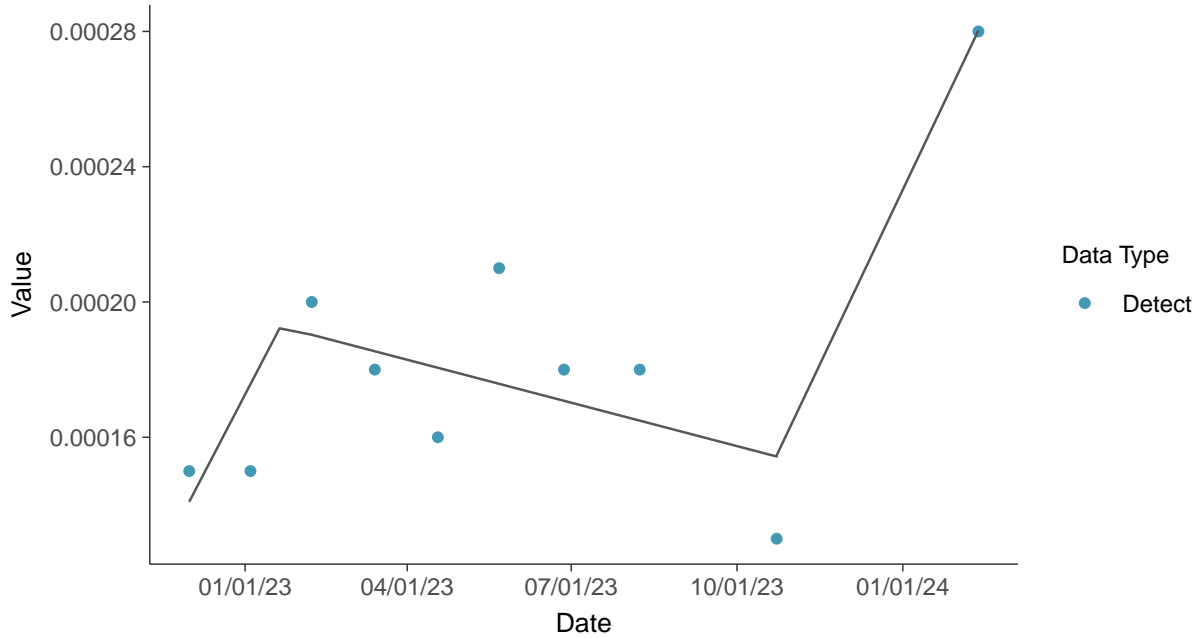
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-31 (mg/L)



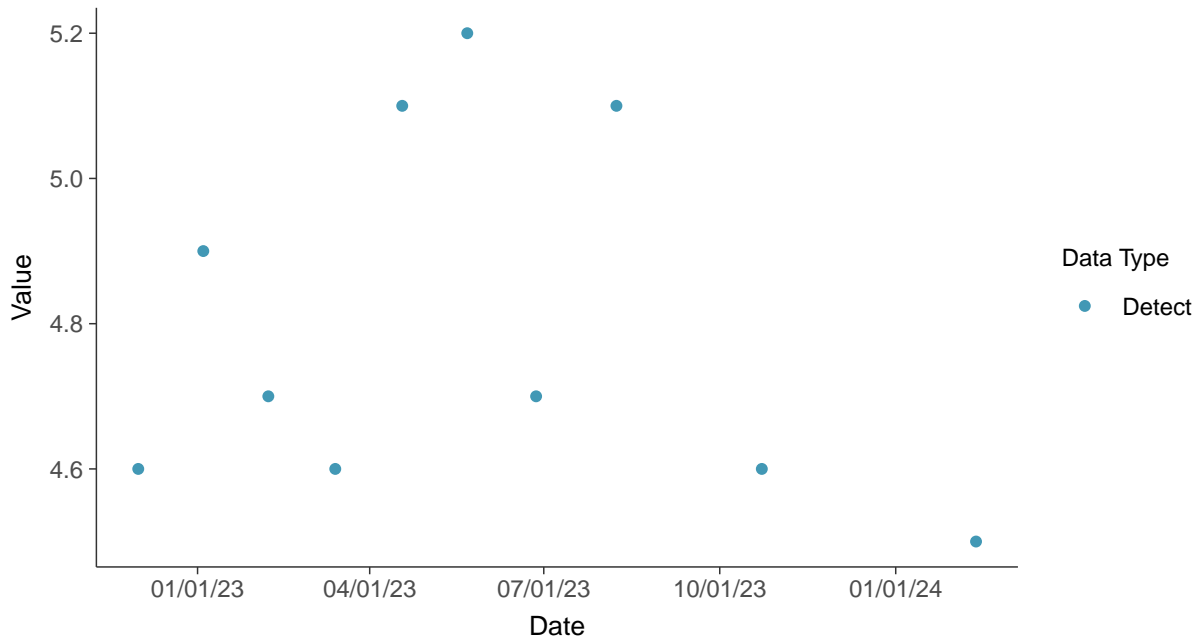


Appendix IV: Fluoride (App IV), MW-31

ID: 1_41_5_113

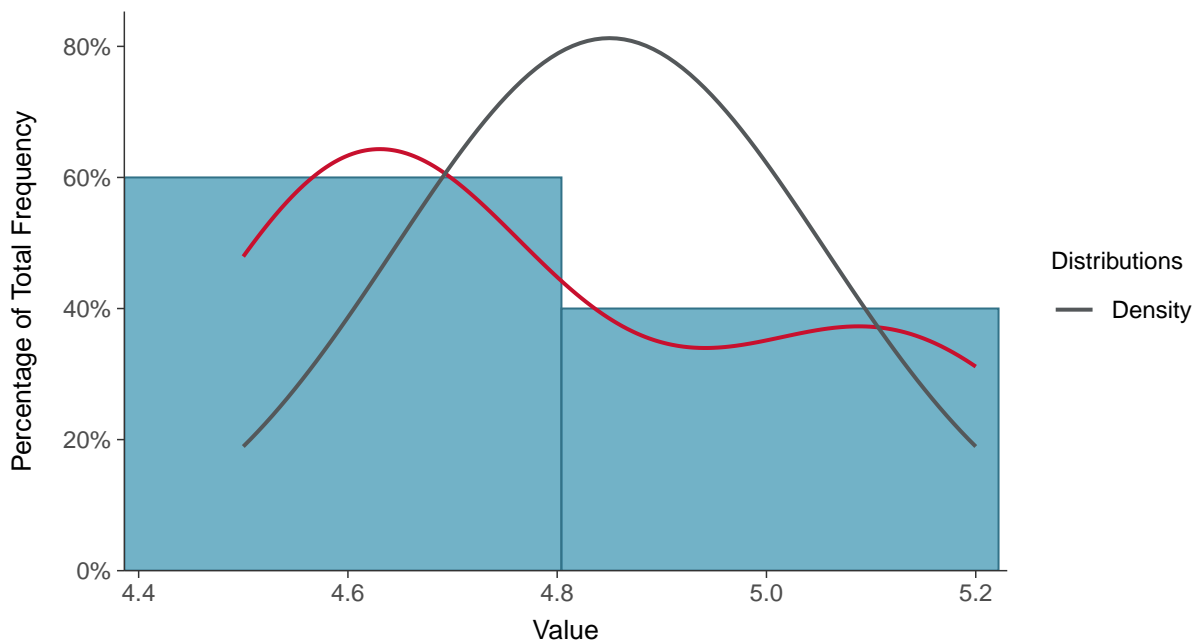
Scatter Plot

Fluoride (App IV), MW-31 (mg/L)



Histogram

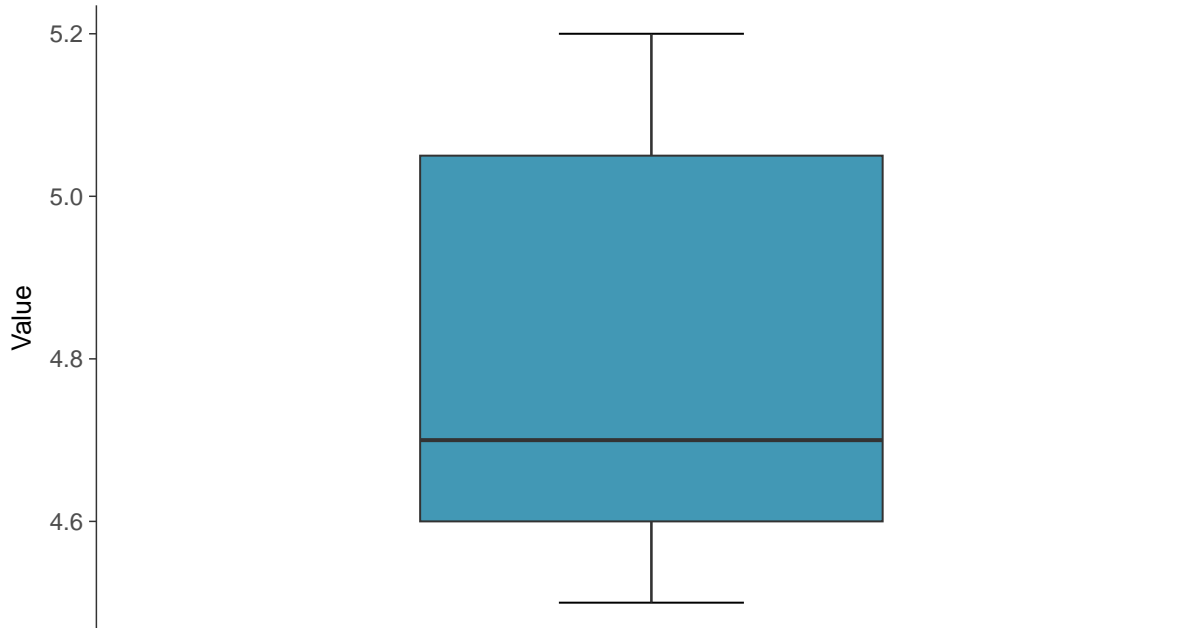
Fluoride (App IV), MW-31 (mg/L)





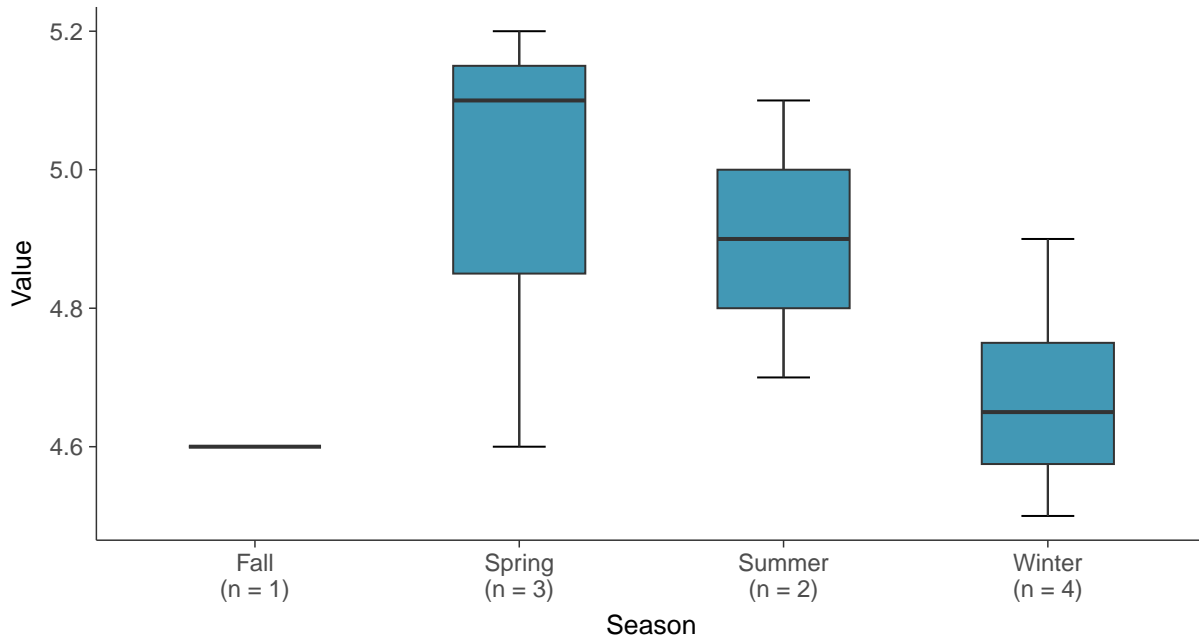
Boxplot

Fluoride (App IV), MW-31 (mg/L)



Boxplot by Season

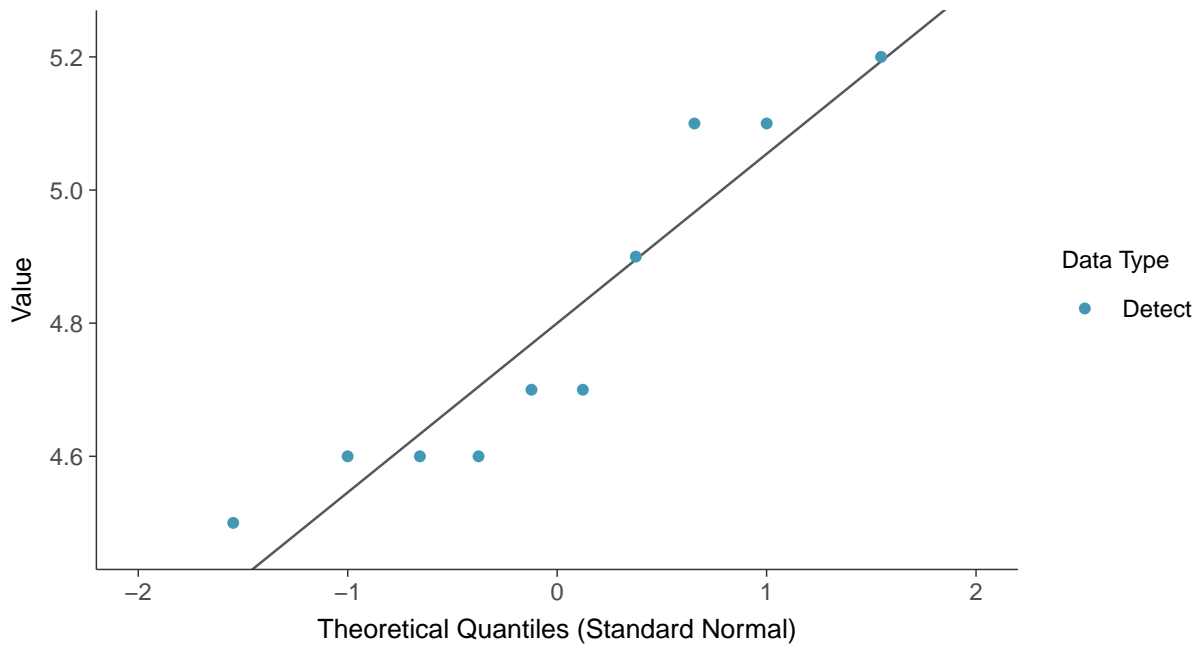
Fluoride (App IV), MW-31 (mg/L)





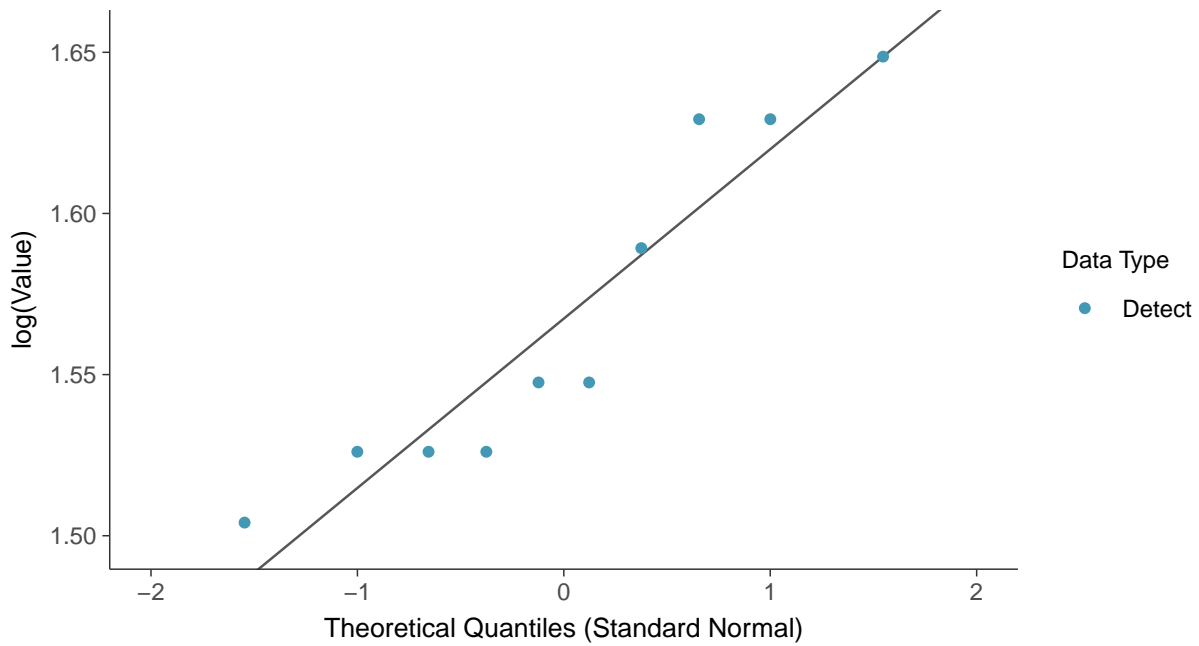
Normal Q-Q plot

Fluoride (App IV), MW-31 (mg/L)



Lognormal Q-Q plot

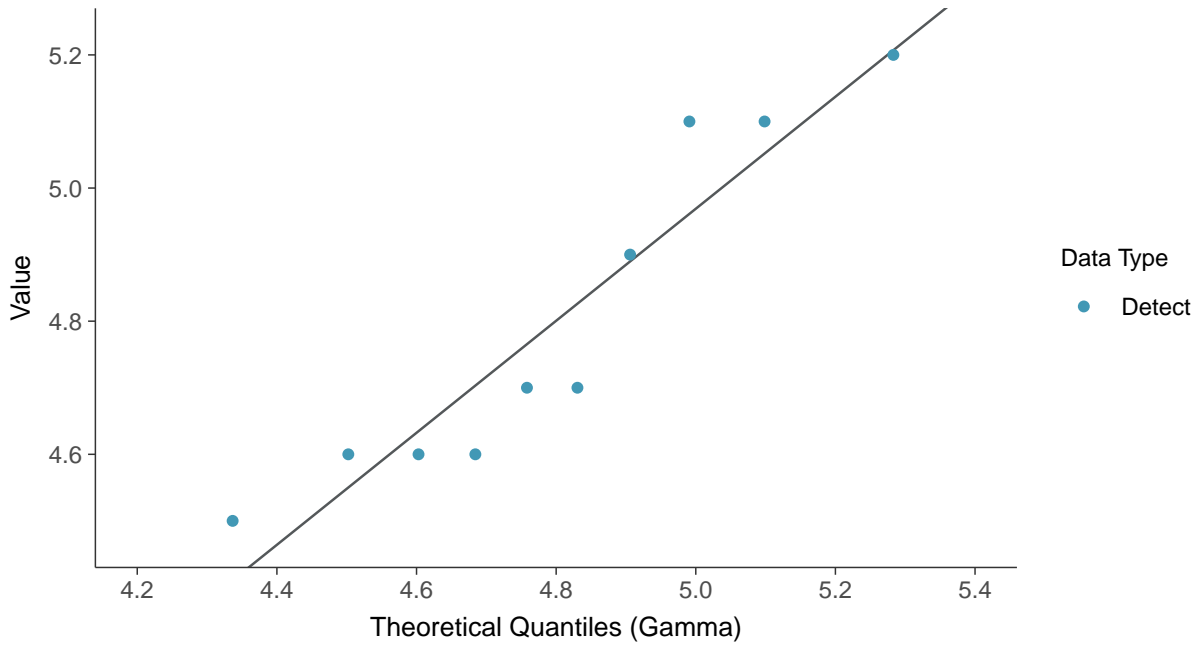
Fluoride (App IV), MW-31 (mg/L)





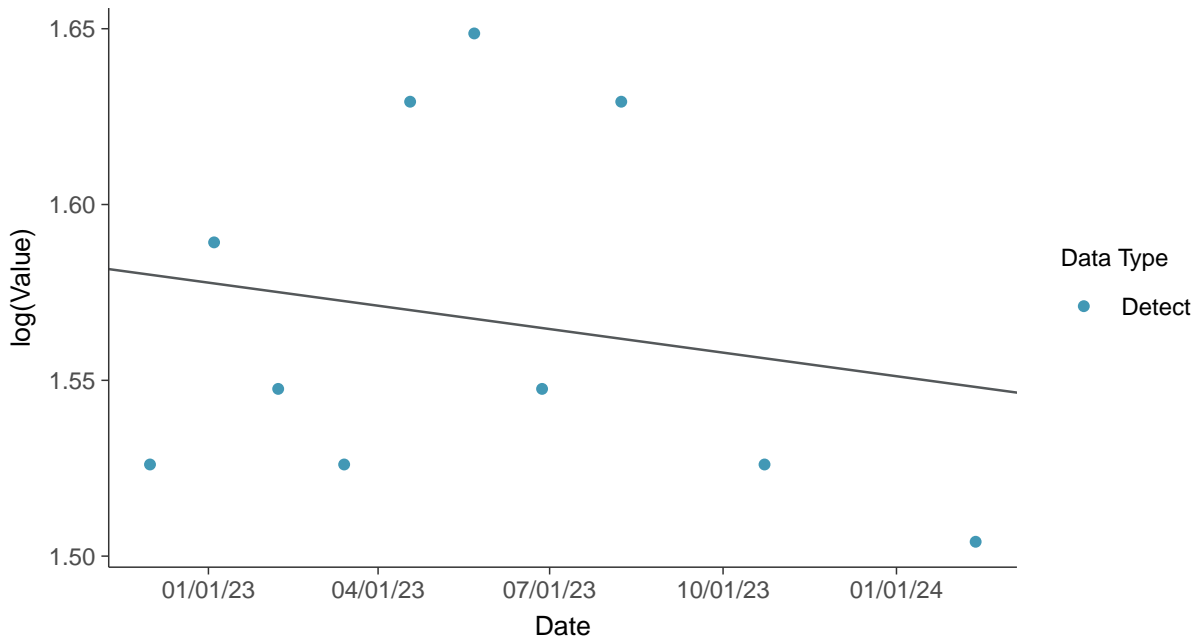
Gamma Q-Q plot

Fluoride (App IV), MW-31 (mg/L)



Trend Regression: Lognormal MLE

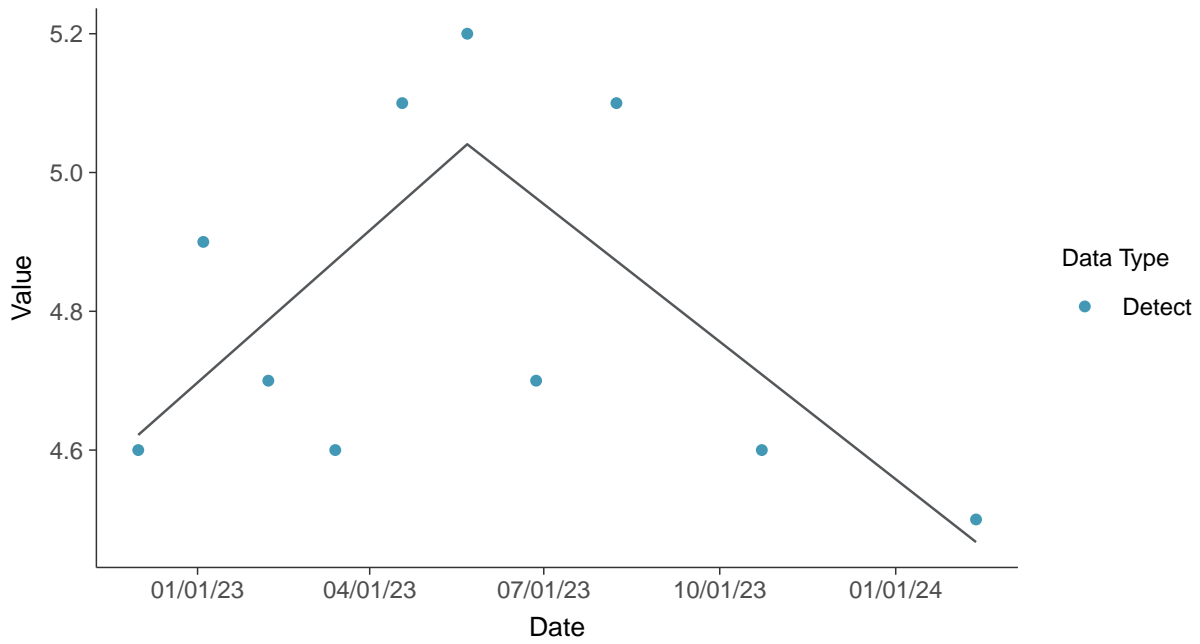
Fluoride (App IV), MW-31 (mg/L)





Trend Regression: Piecewise Linear-Linear

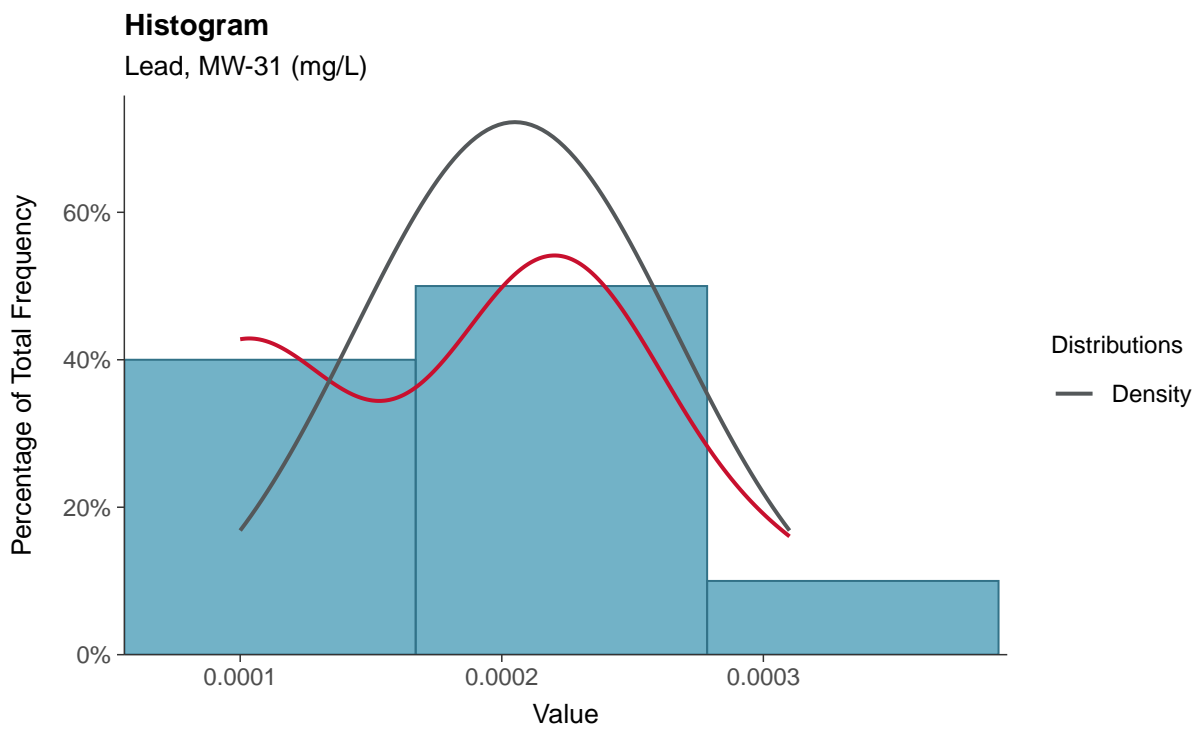
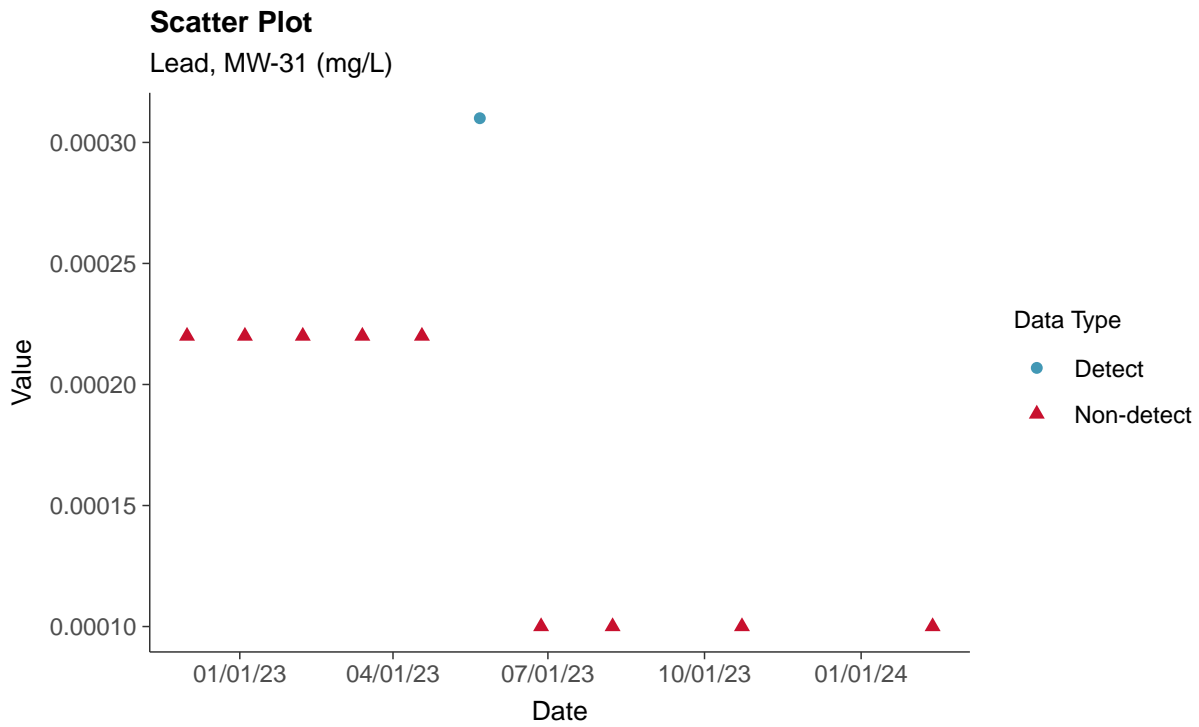
Fluoride (App IV), MW-31 (mg/L)





Appendix IV: Lead, MW-31

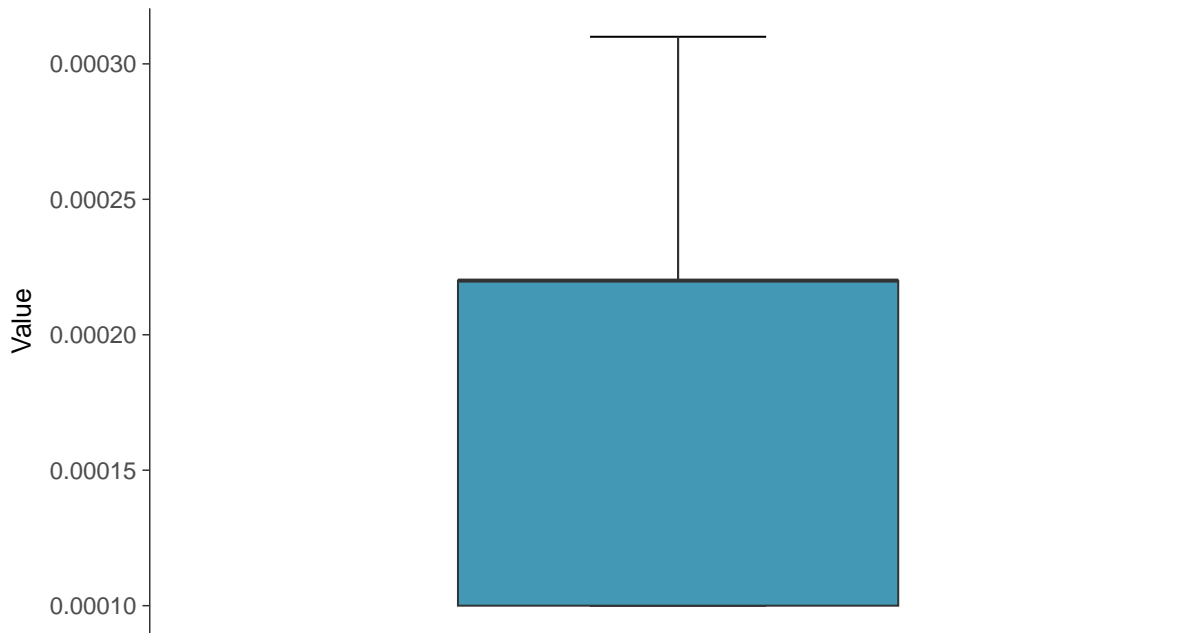
ID: 1_41_5_115





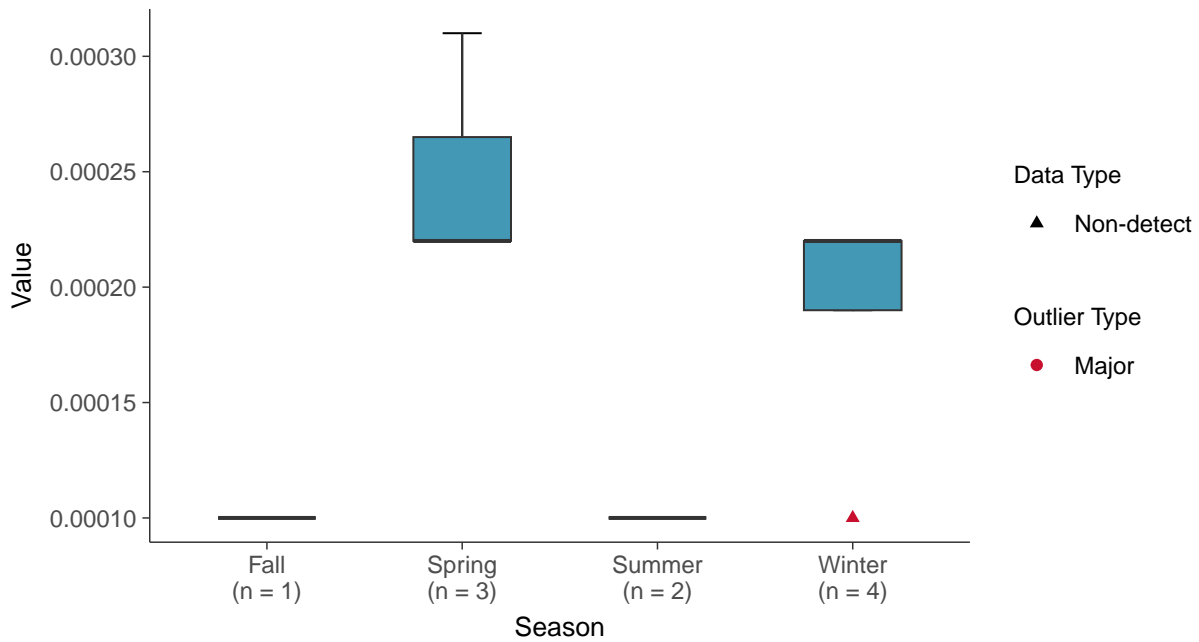
Boxplot

Lead, MW-31 (mg/L)



Boxplot by Season

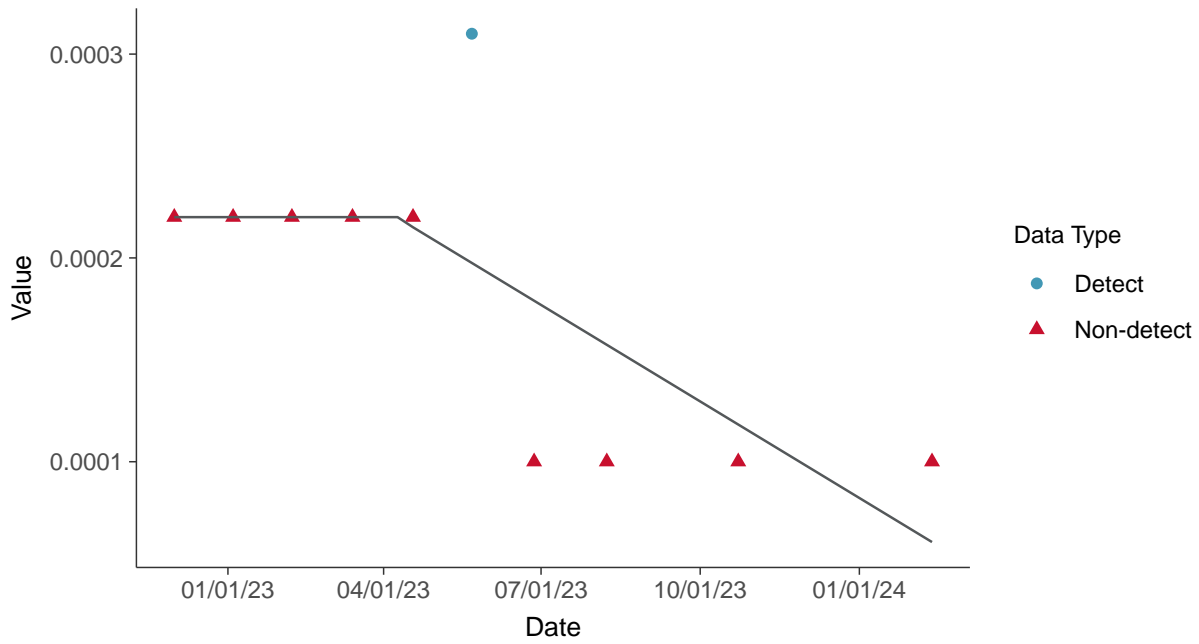
Lead, MW-31 (mg/L)





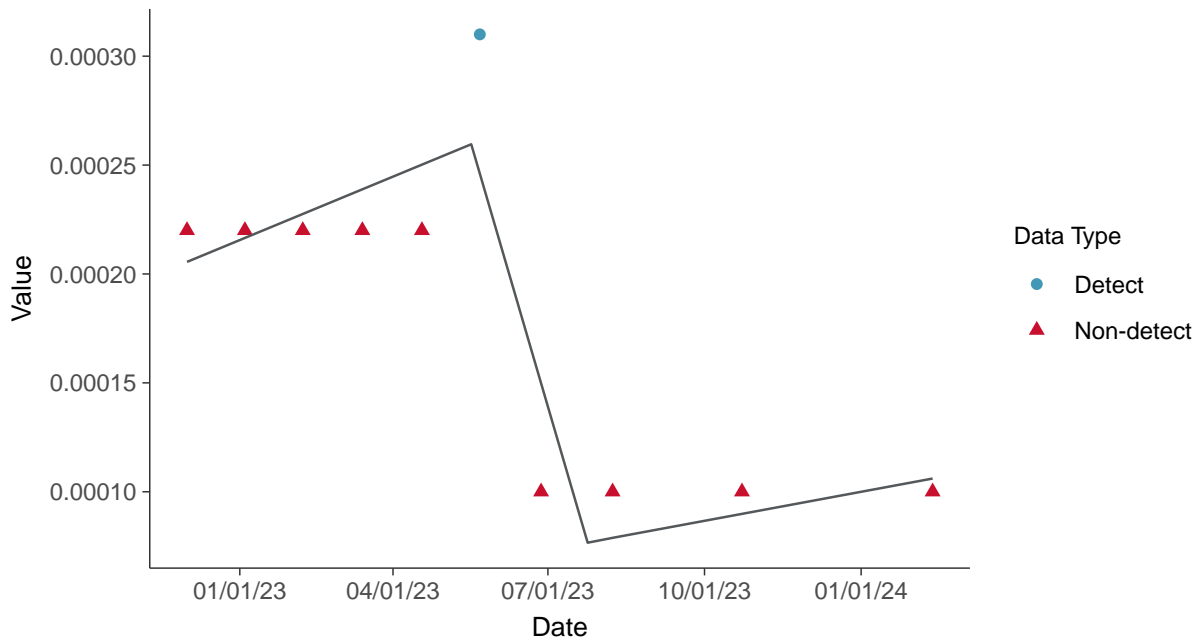
Trend Regression: Piecewise Linear-Linear

Lead, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-31 (mg/L)



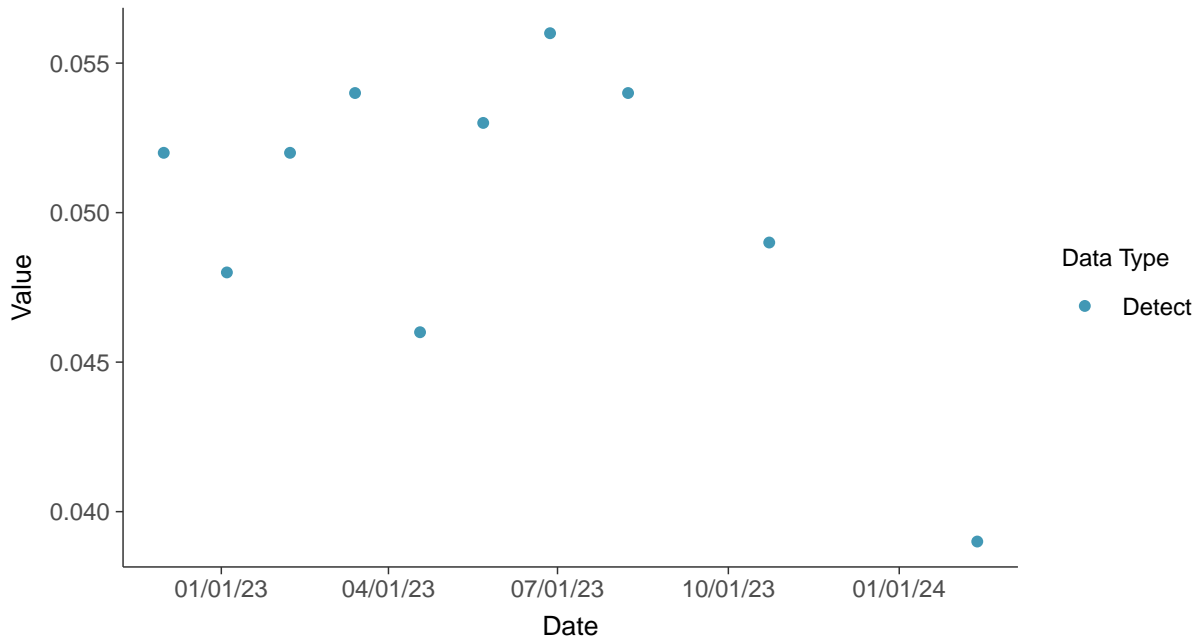


Appendix IV: Lithium, MW-31

ID: 1_41_5_116

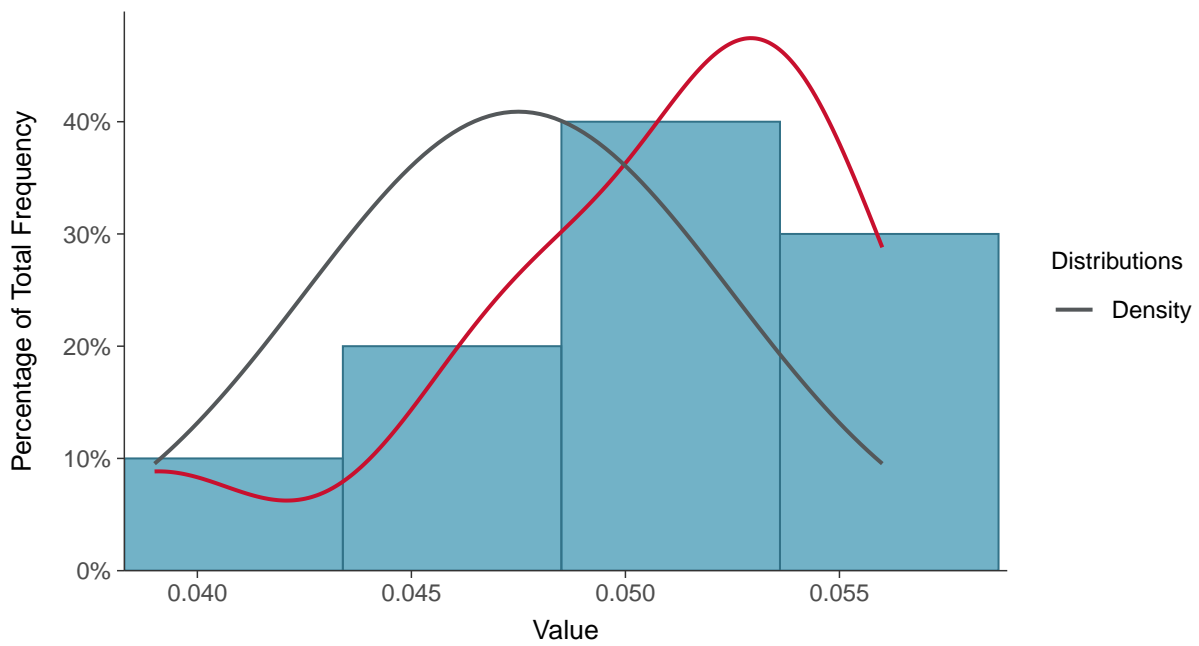
Scatter Plot

Lithium, MW-31 (mg/L)



Histogram

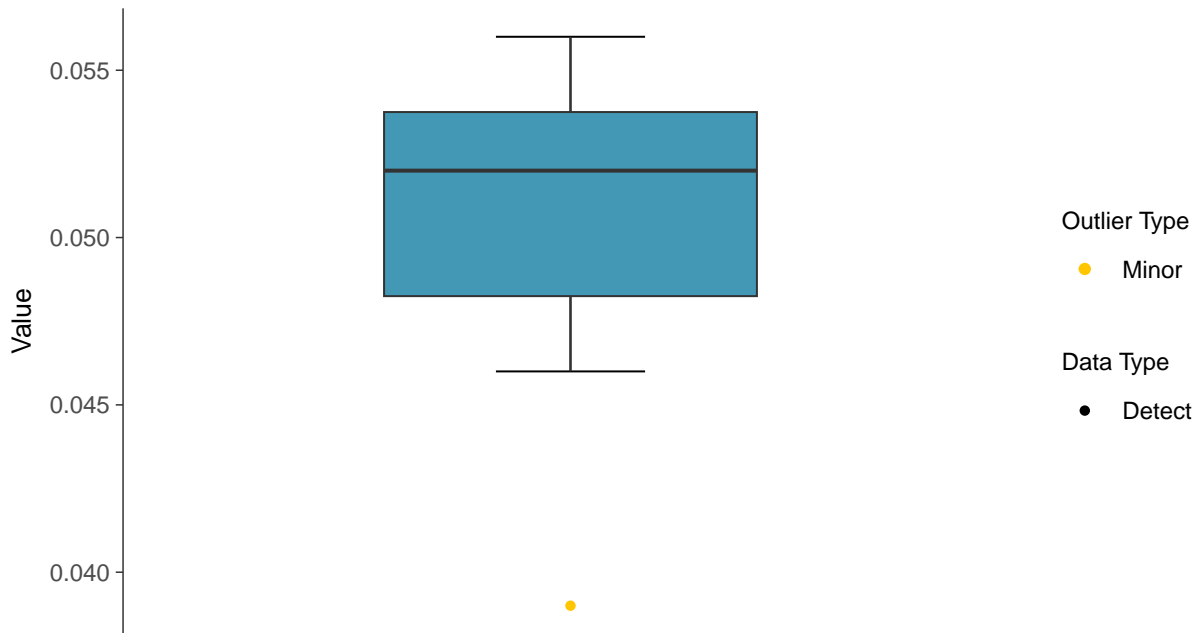
Lithium, MW-31 (mg/L)





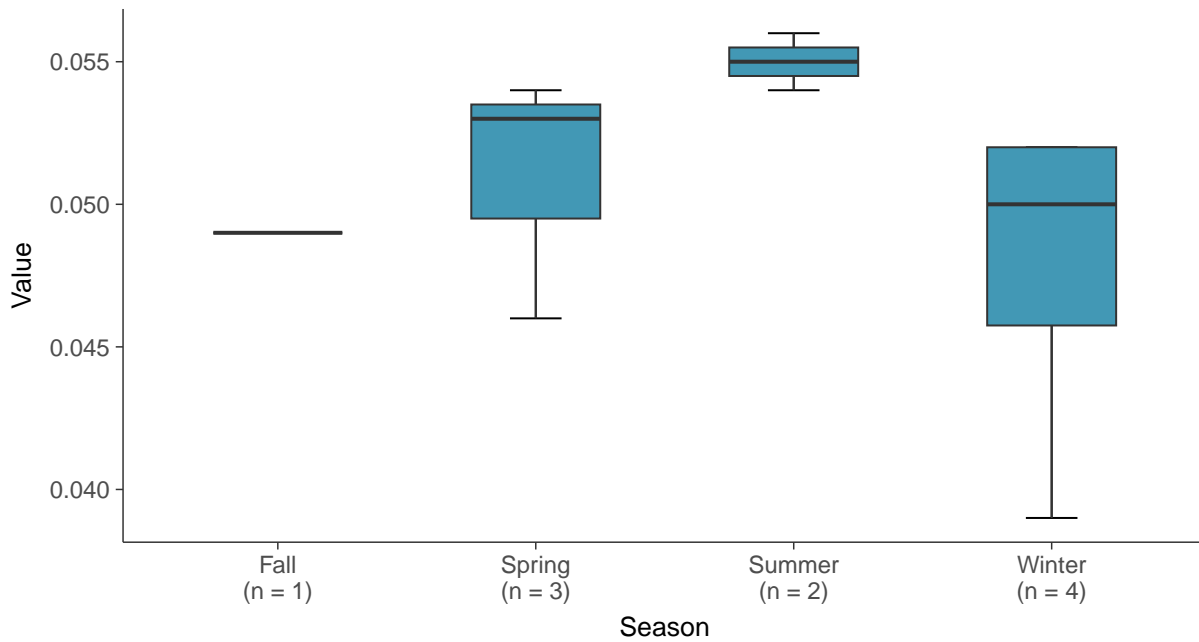
Boxplot

Lithium, MW-31 (mg/L)



Boxplot by Season

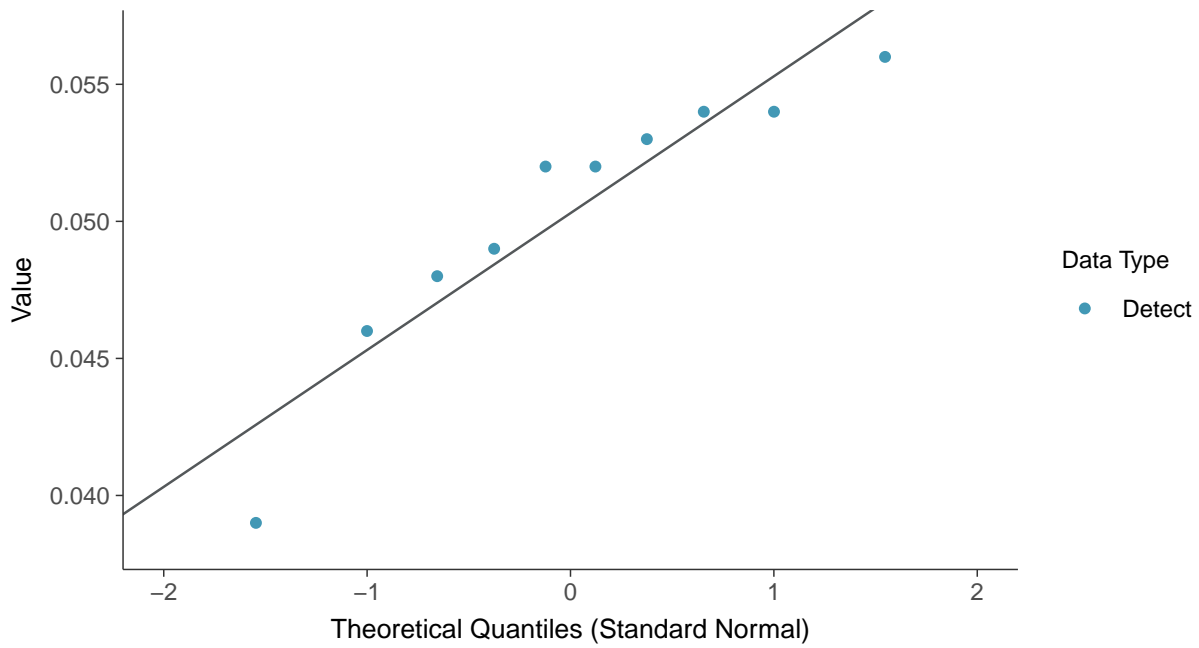
Lithium, MW-31 (mg/L)





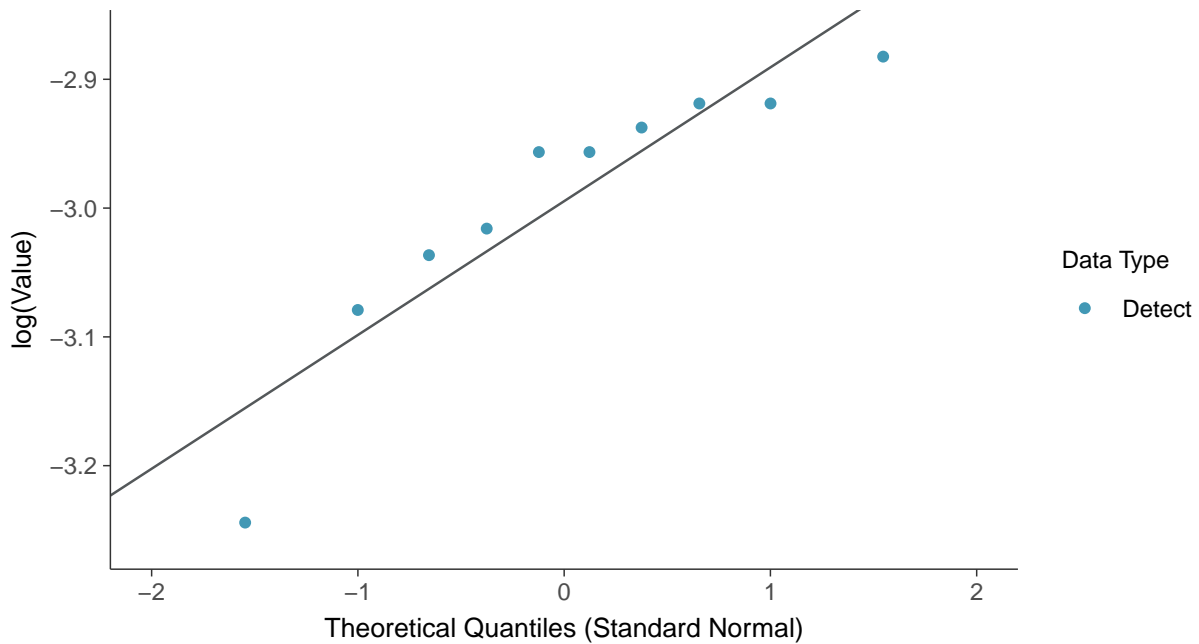
Normal Q-Q plot

Lithium, MW-31 (mg/L)



Lognormal Q-Q plot

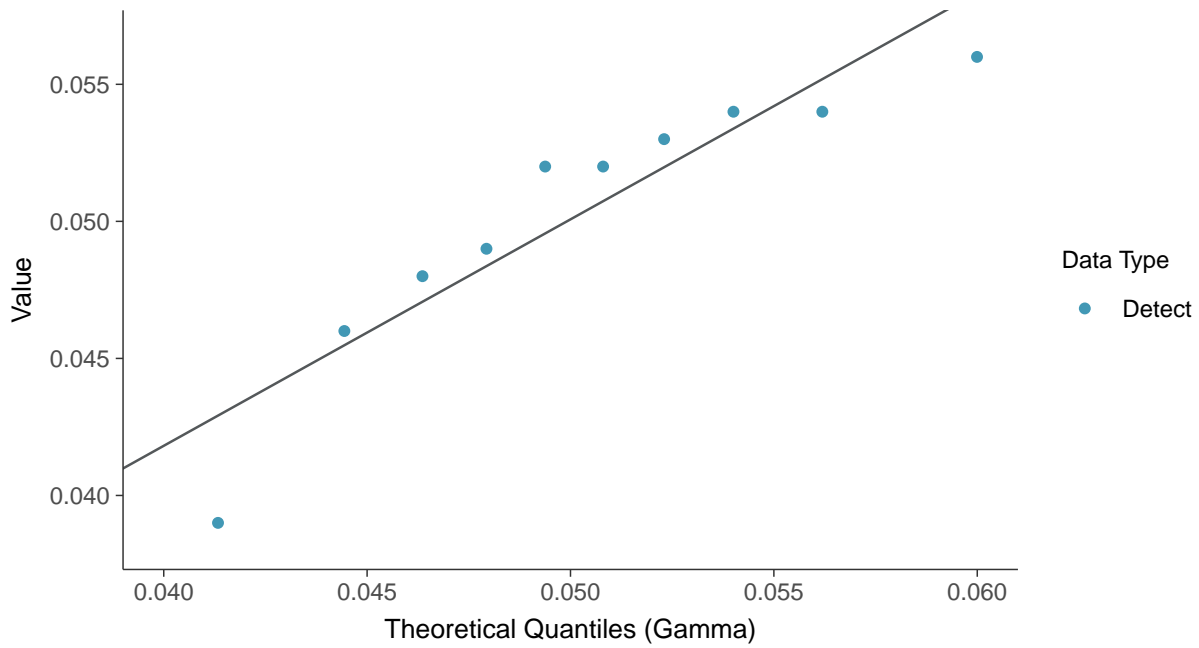
Lithium, MW-31 (mg/L)





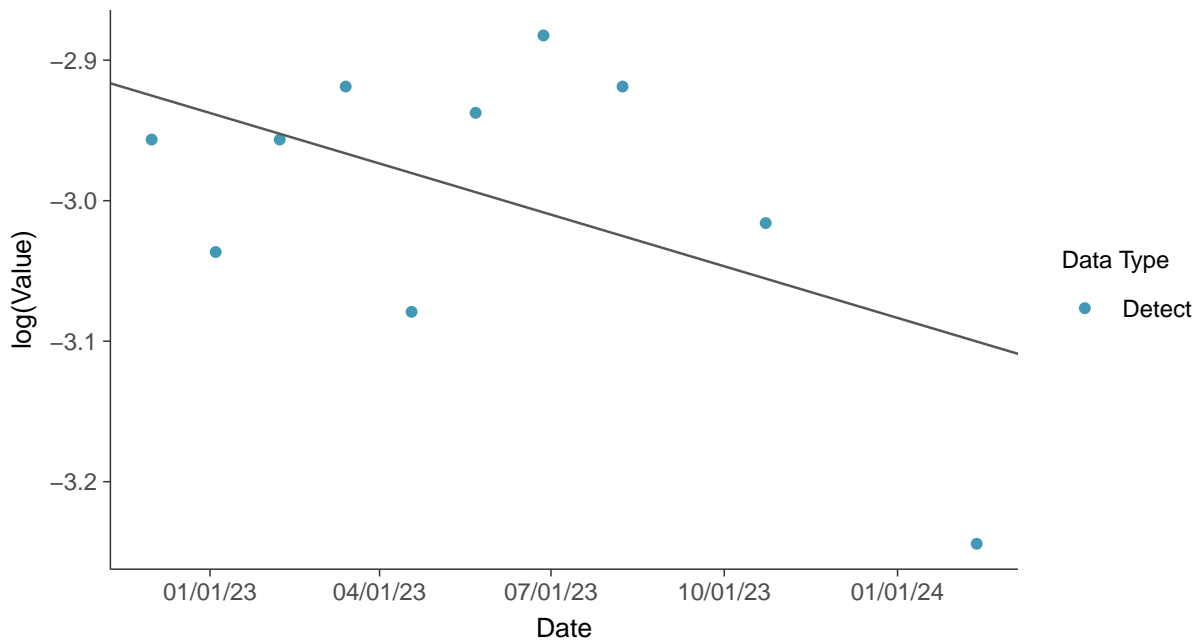
Gamma Q-Q plot

Lithium, MW-31 (mg/L)



Trend Regression: Lognormal MLE

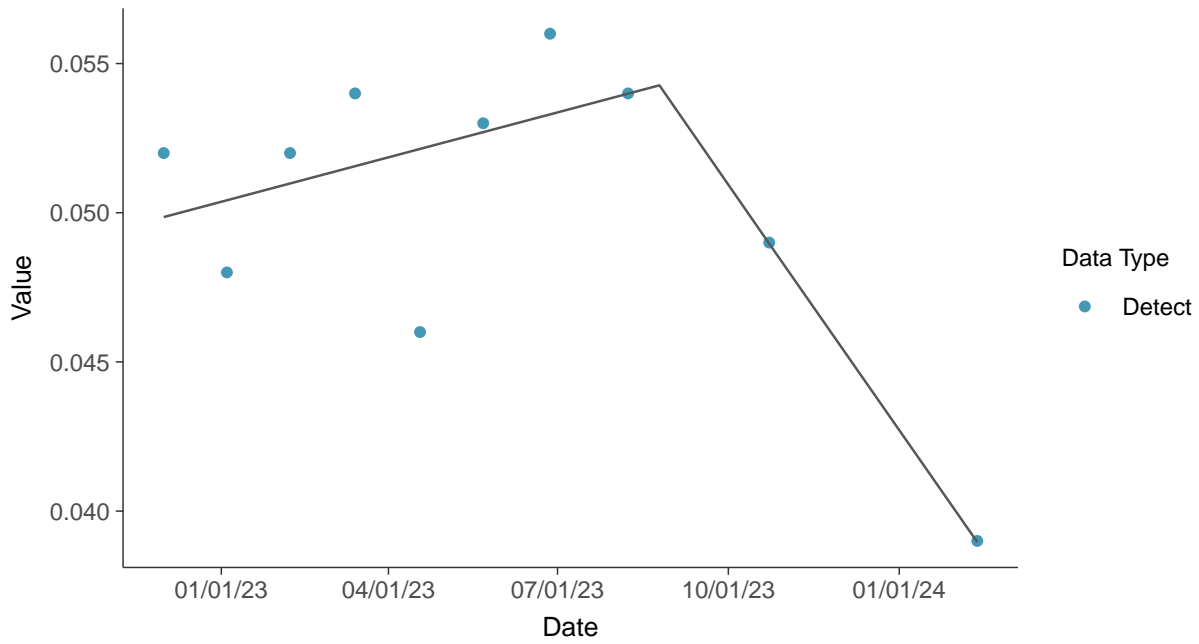
Lithium, MW-31 (mg/L)





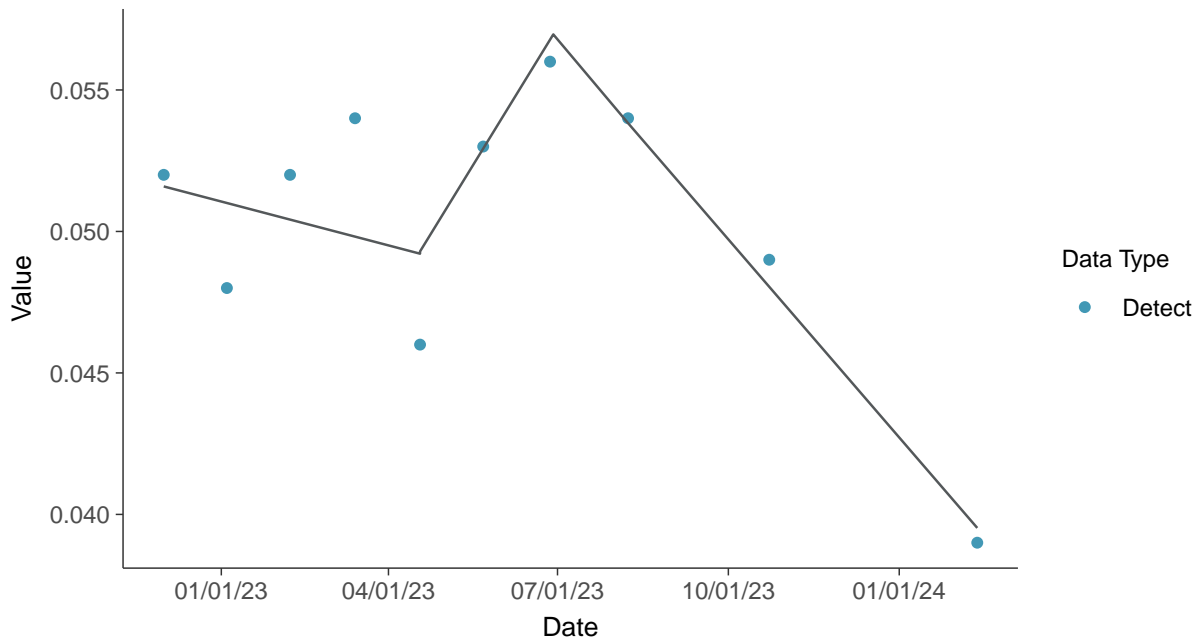
Trend Regression: Piecewise Linear-Linear

Lithium, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

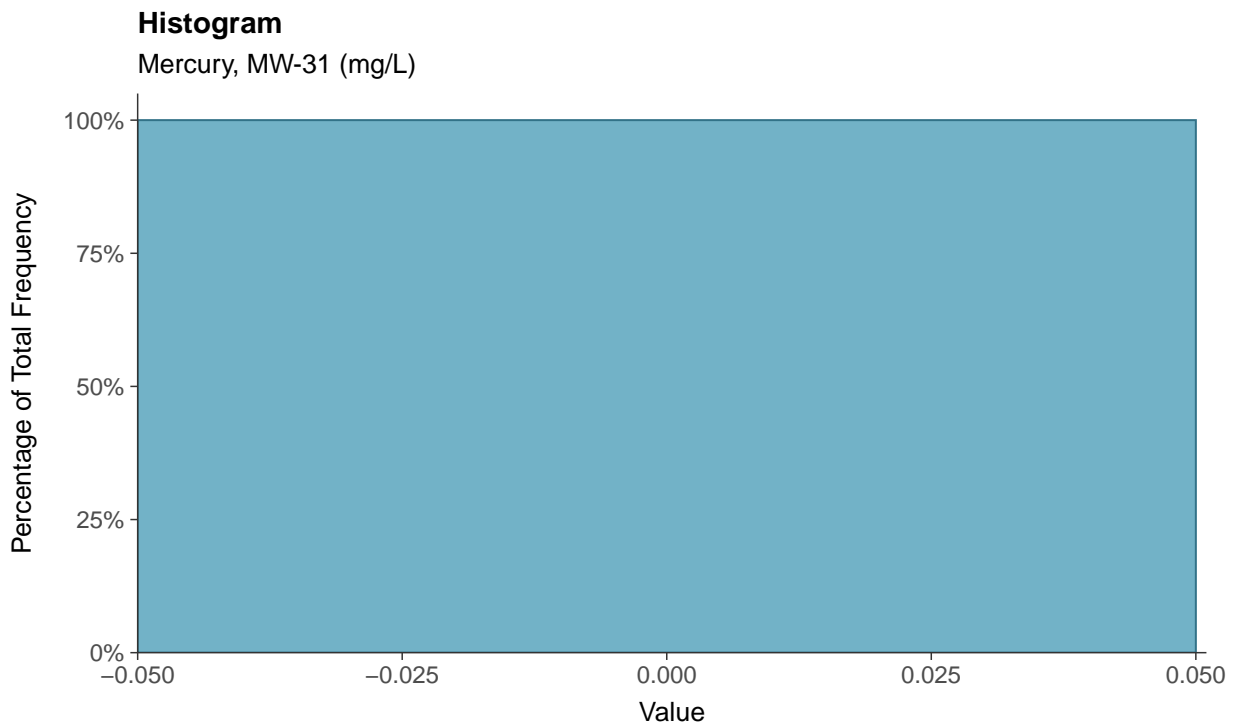
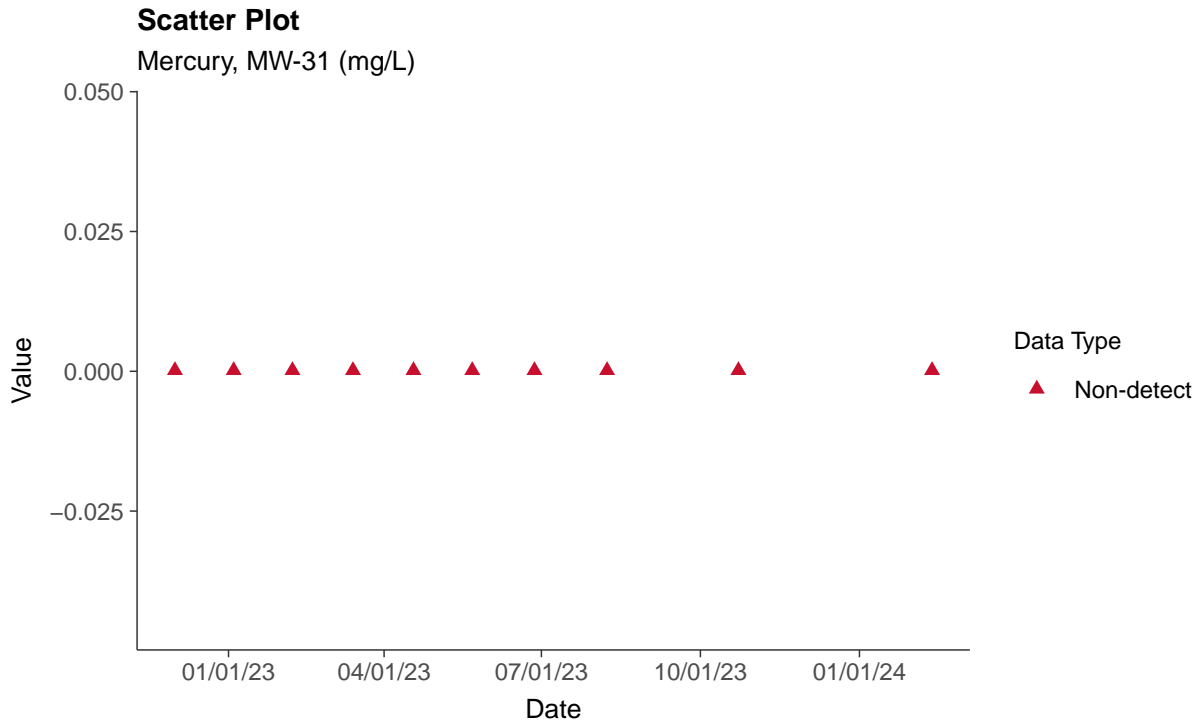
Lithium, MW-31 (mg/L)





Appendix IV: Mercury, MW-31

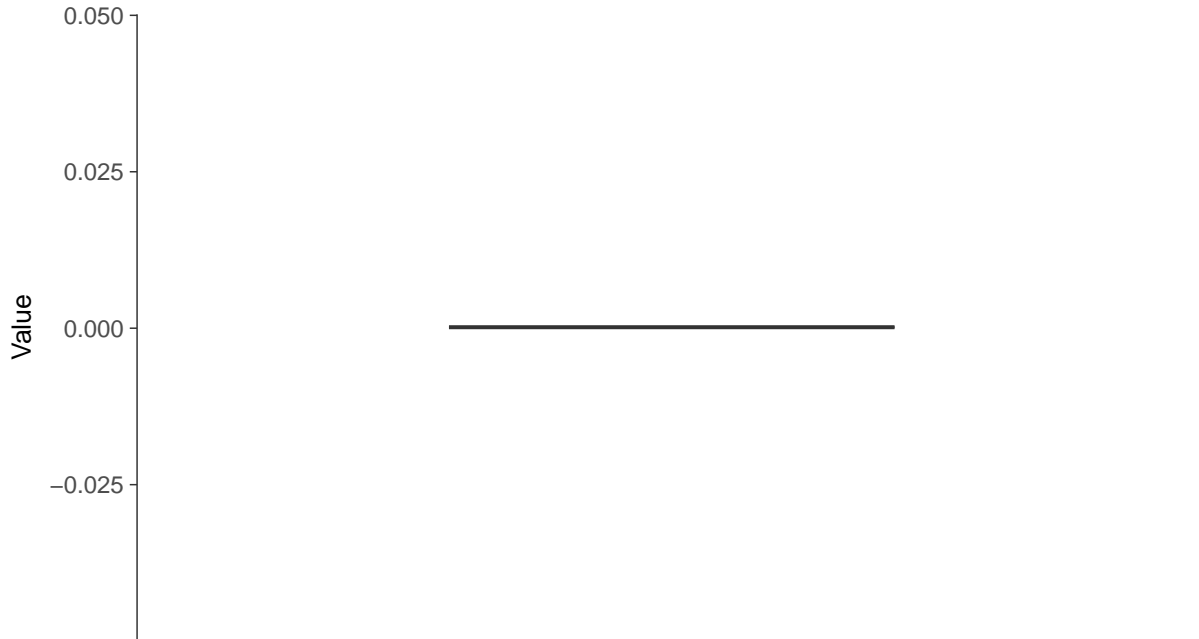
ID: 1_41_5_117





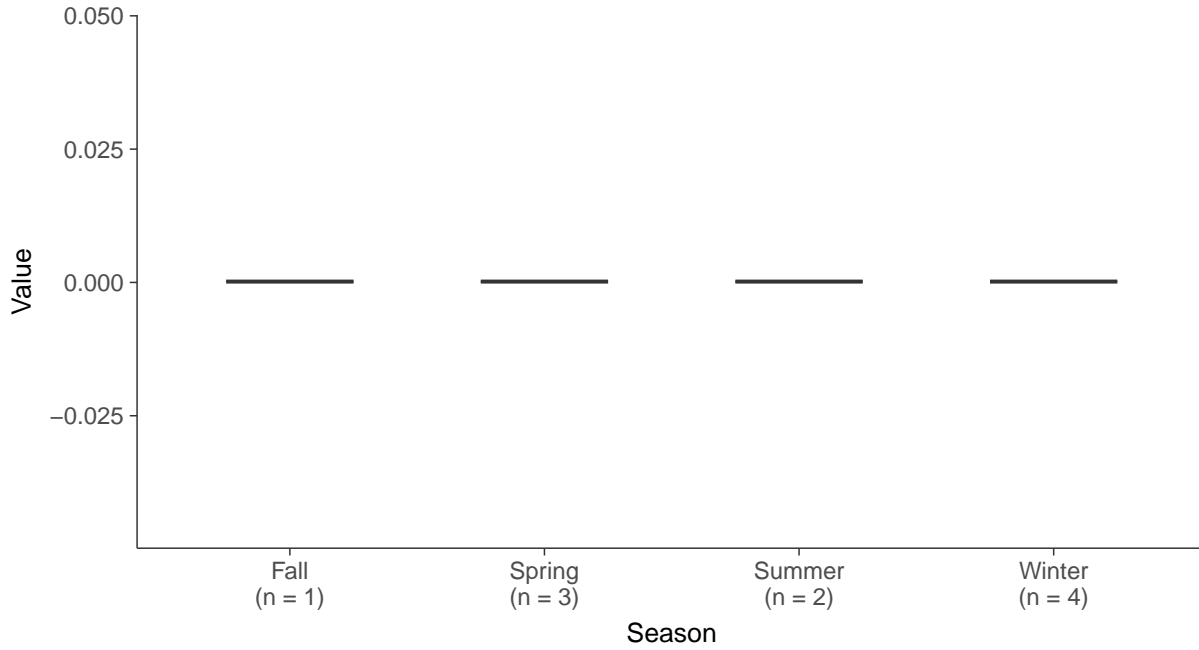
Boxplot

Mercury, MW-31 (mg/L)



Boxplot by Season

Mercury, MW-31 (mg/L)



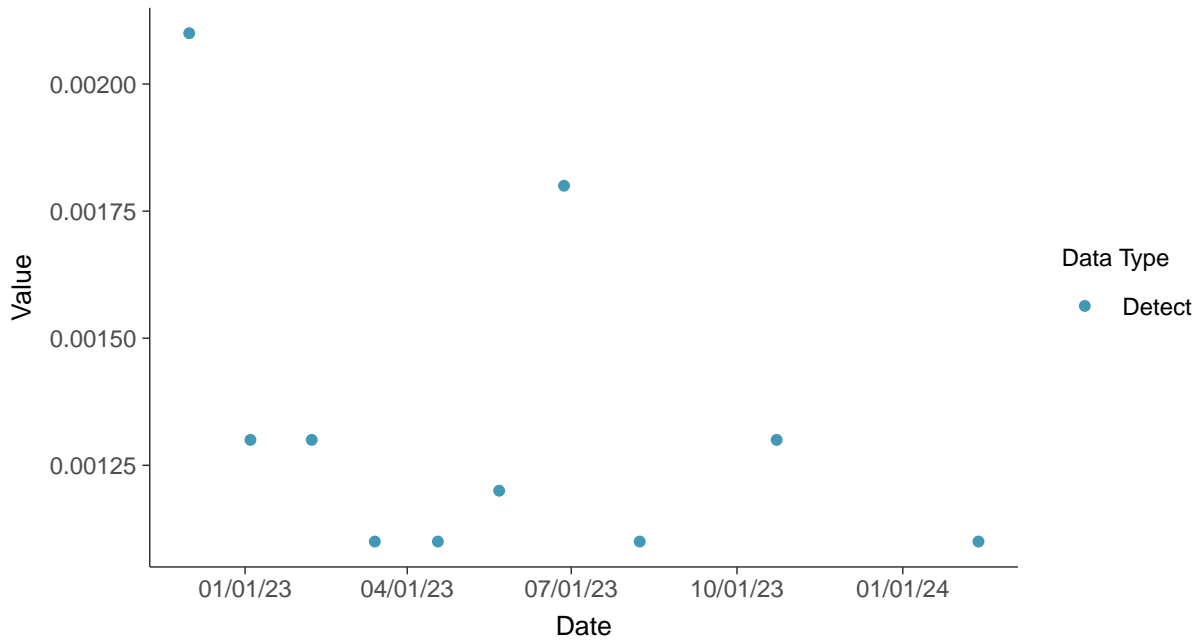


Appendix IV: Molybdenum, MW-31

ID: 1_41_5_118

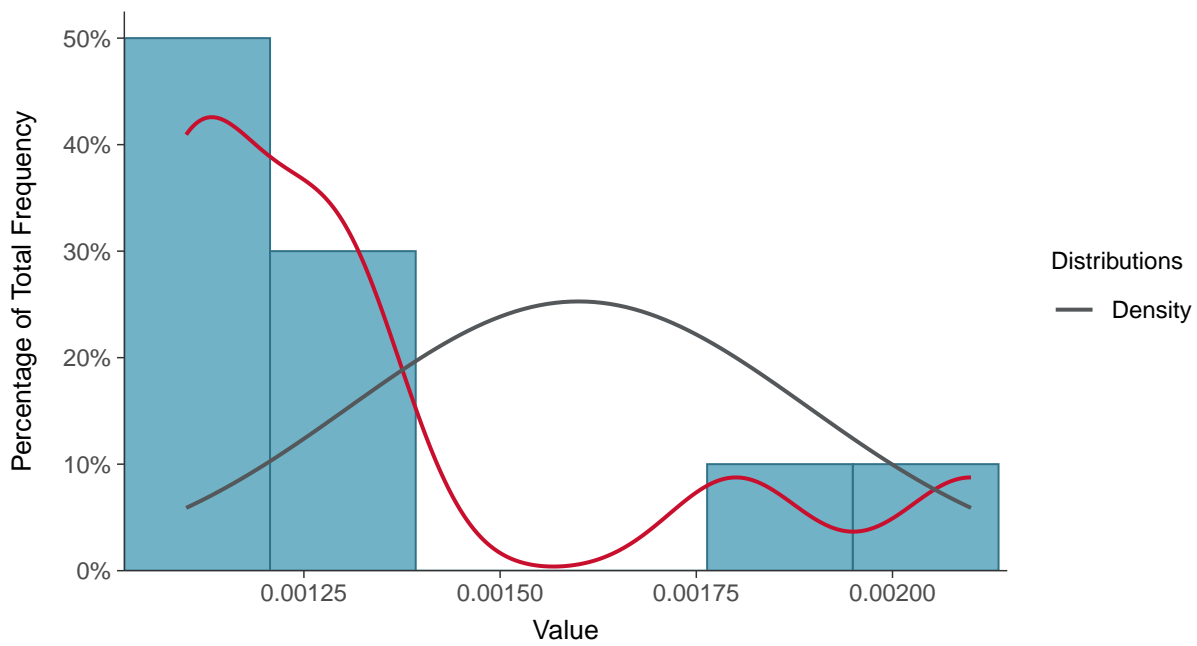
Scatter Plot

Molybdenum, MW-31 (mg/L)



Histogram

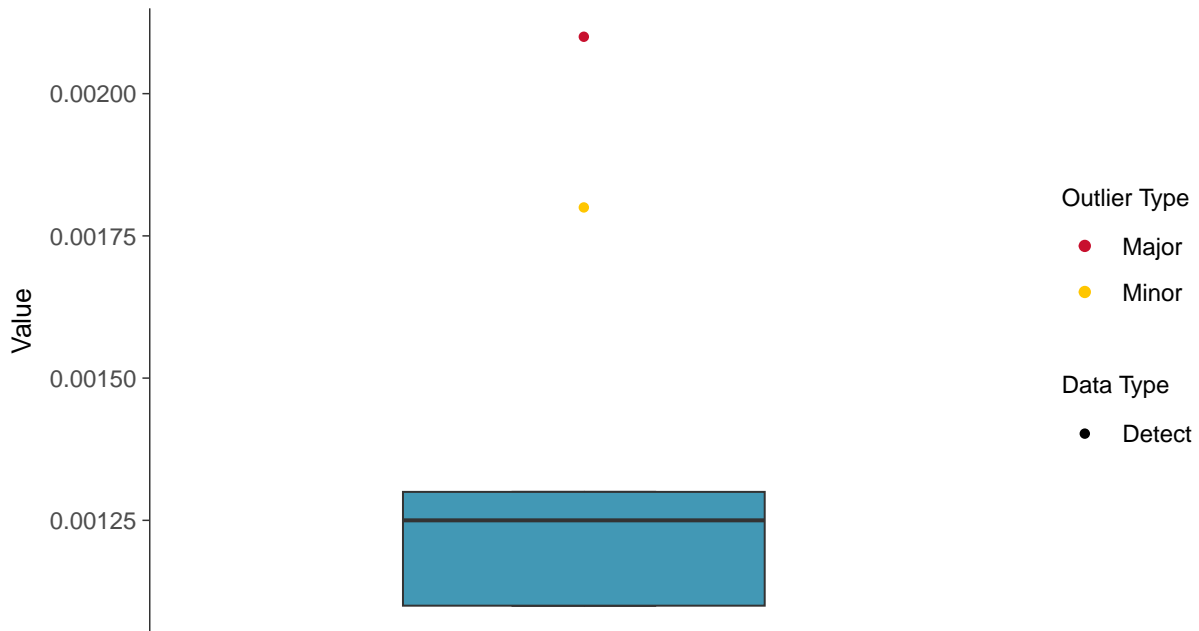
Molybdenum, MW-31 (mg/L)





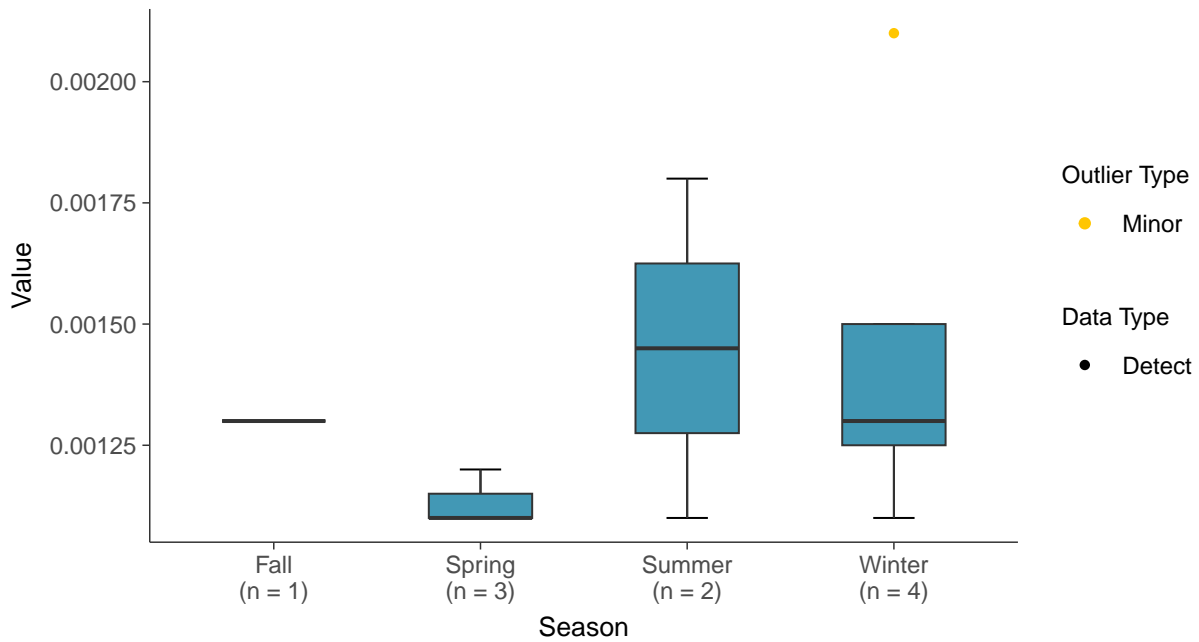
Boxplot

Molybdenum, MW-31 (mg/L)



Boxplot by Season

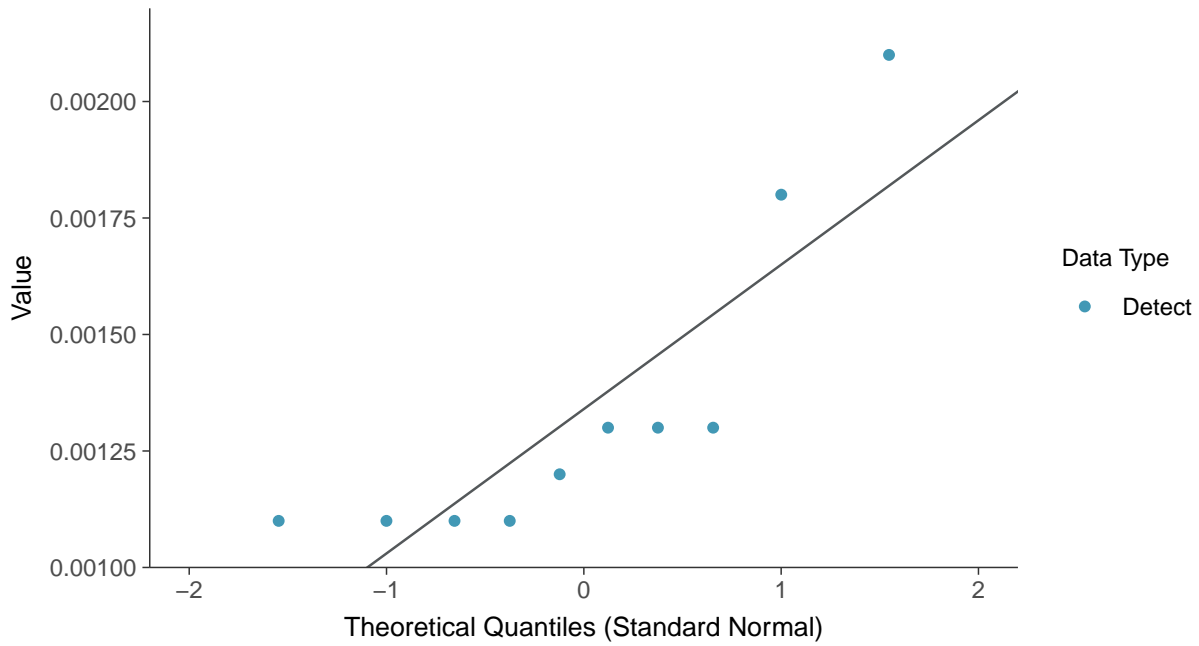
Molybdenum, MW-31 (mg/L)





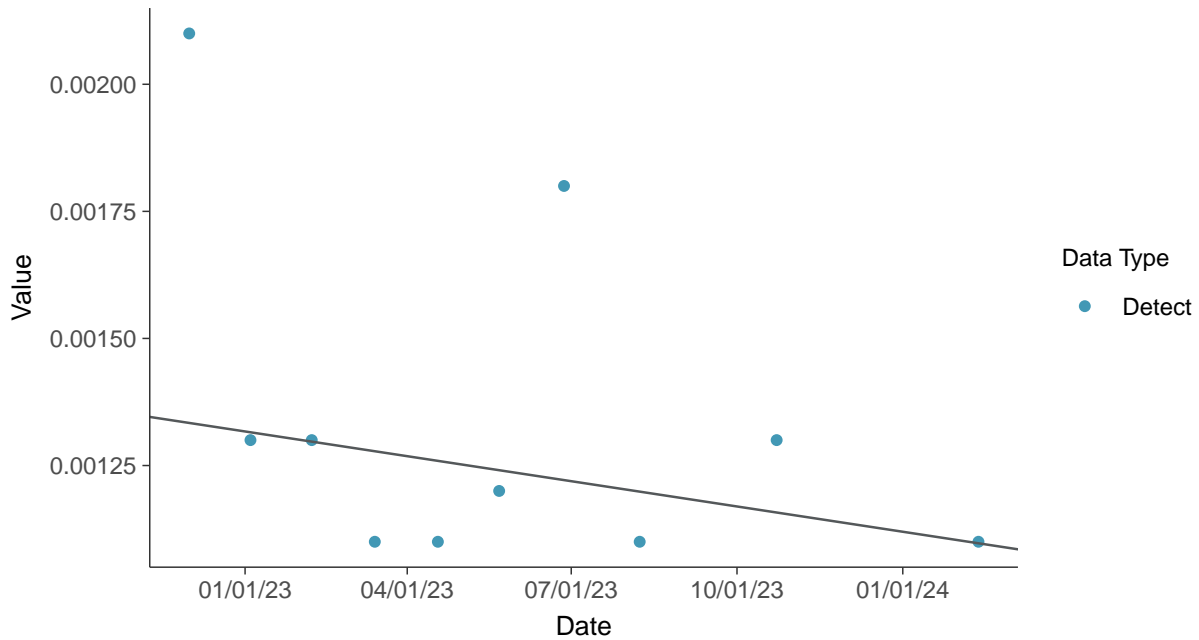
Normal Q-Q plot

Molybdenum, MW-31 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

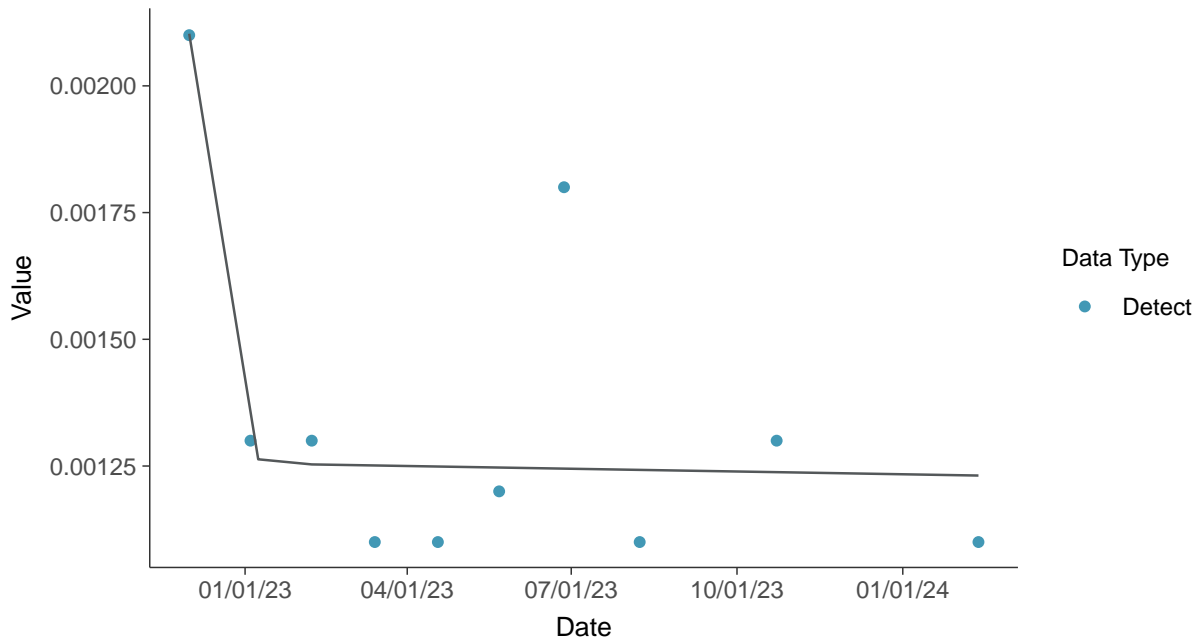
Molybdenum, MW-31 (mg/L)





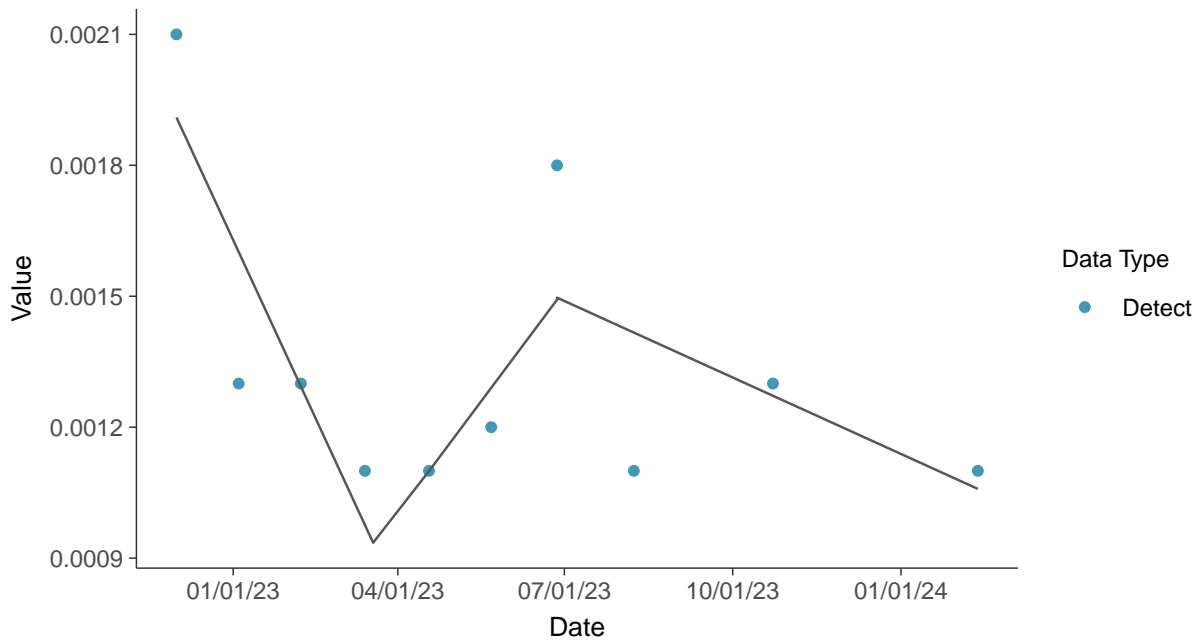
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-31 (mg/L)



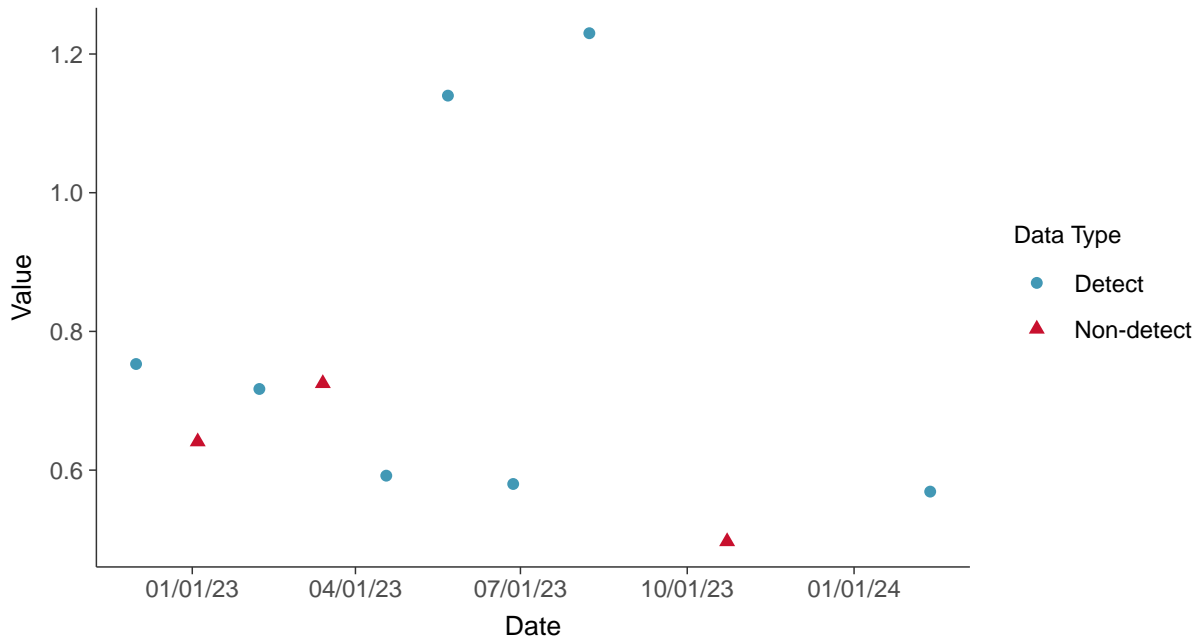


Appendix IV: Radium 226 and 228, MW-31

ID: 1_41_5_121

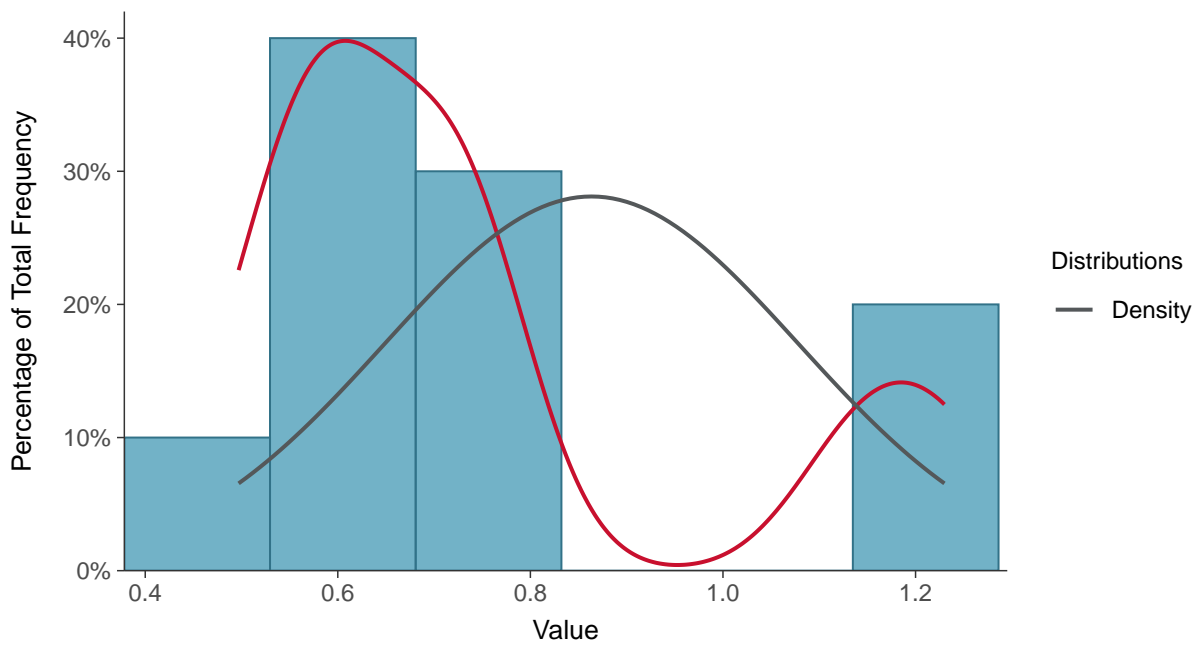
Scatter Plot

Radium 226 and 228, MW-31 (pCi/L)



Histogram

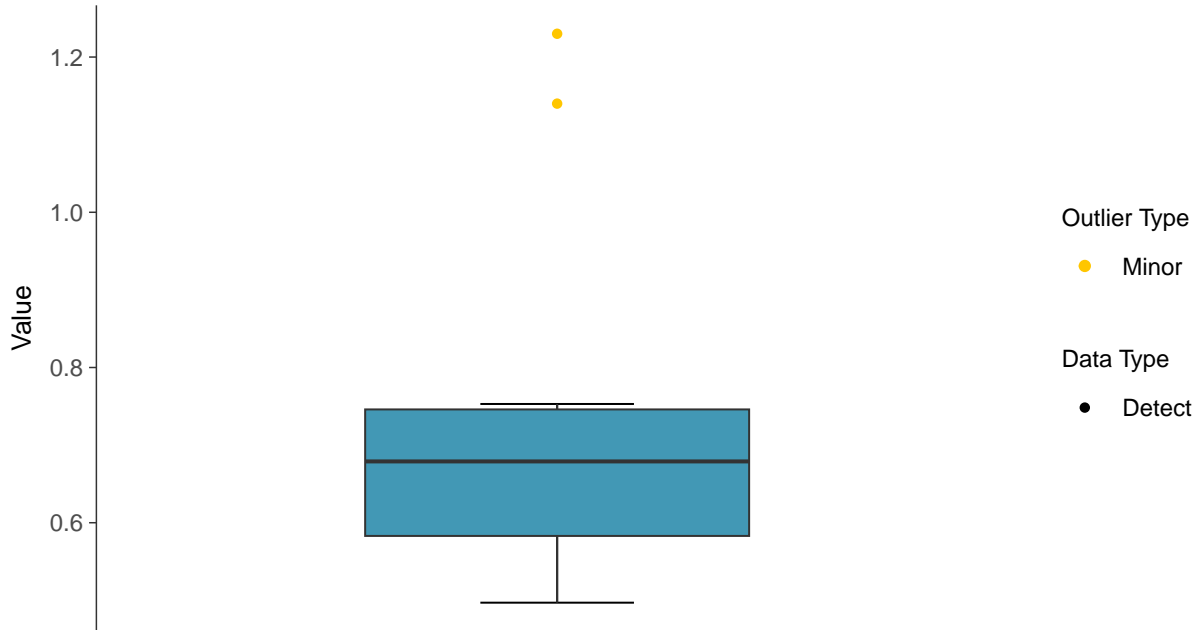
Radium 226 and 228, MW-31 (pCi/L)





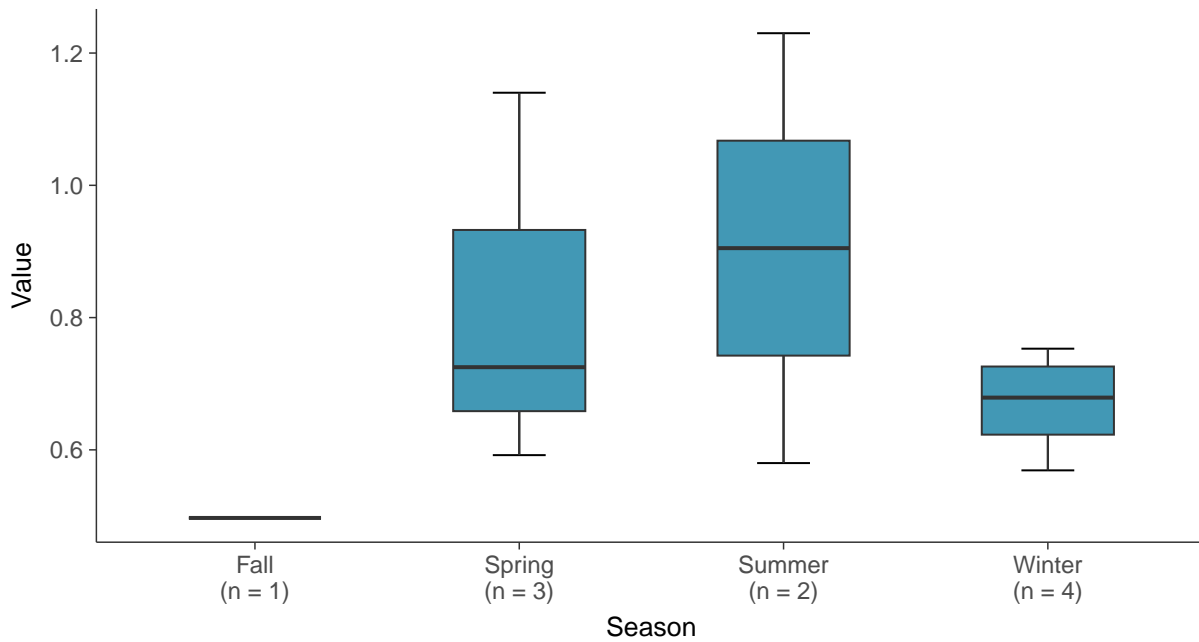
Boxplot

Radium 226 and 228, MW-31 (pCi/L)



Boxplot by Season

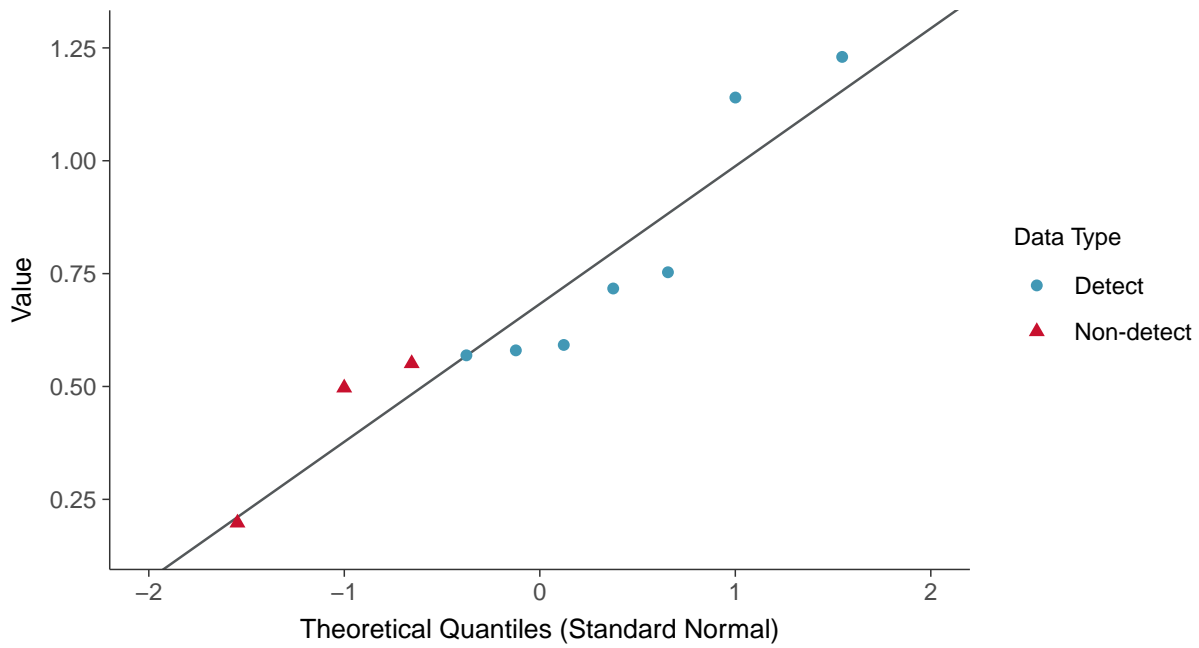
Radium 226 and 228, MW-31 (pCi/L)





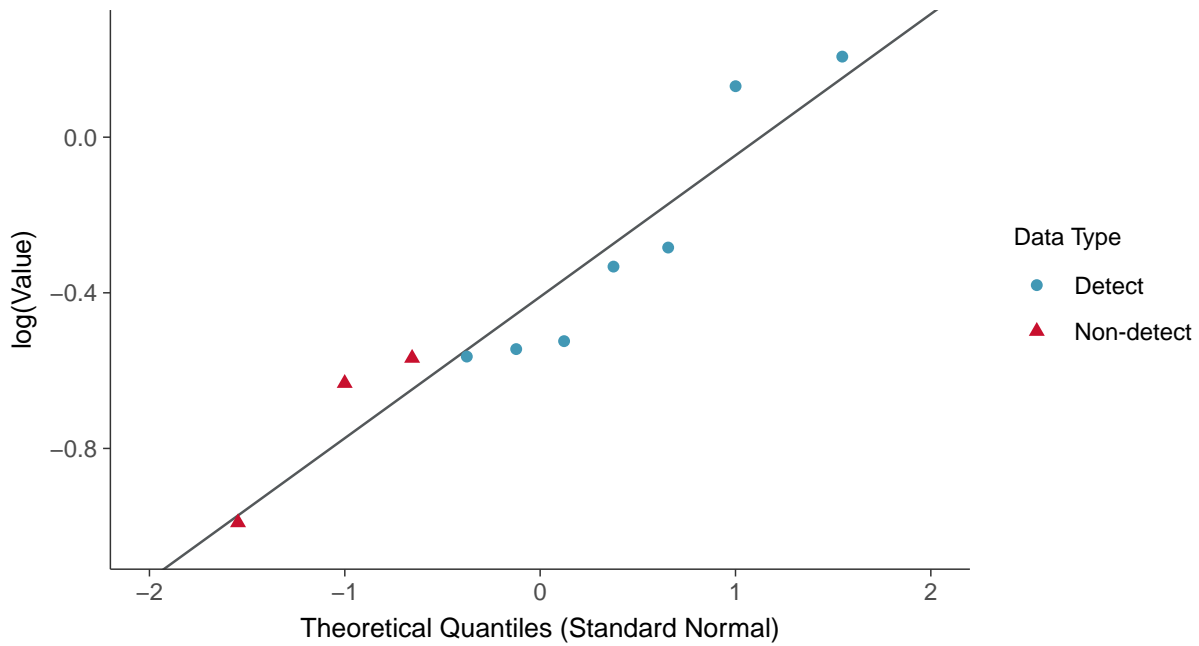
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-31 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

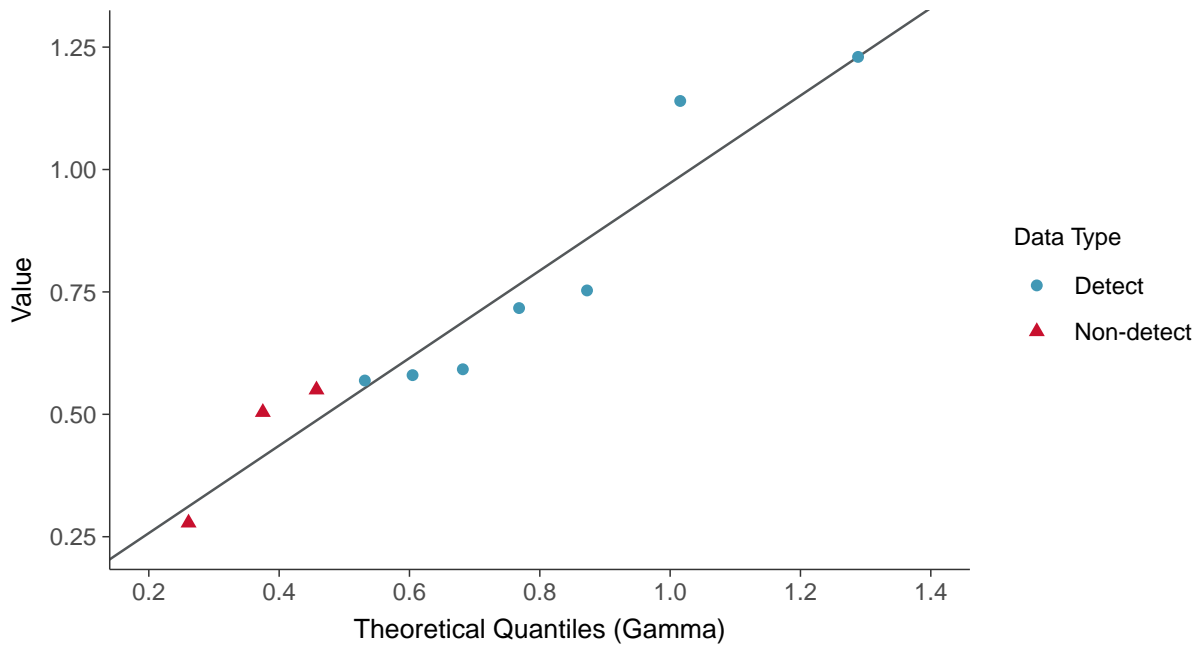
Radium 226 and 228, MW-31 (pCi/L)





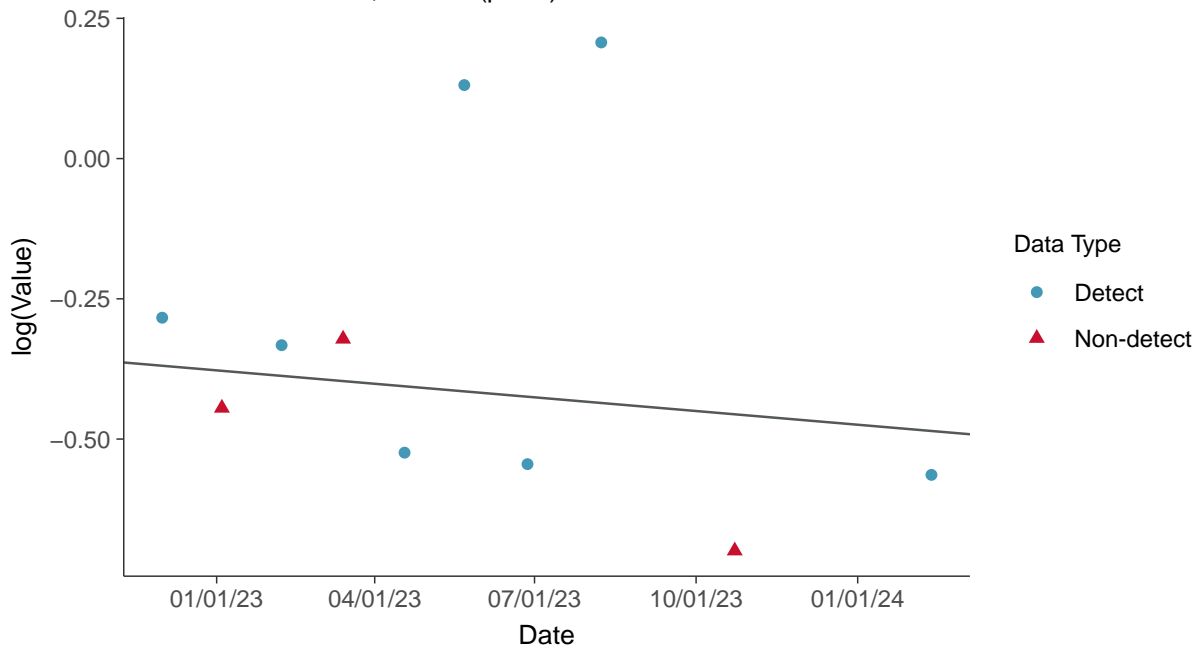
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-31 (pCi/L)



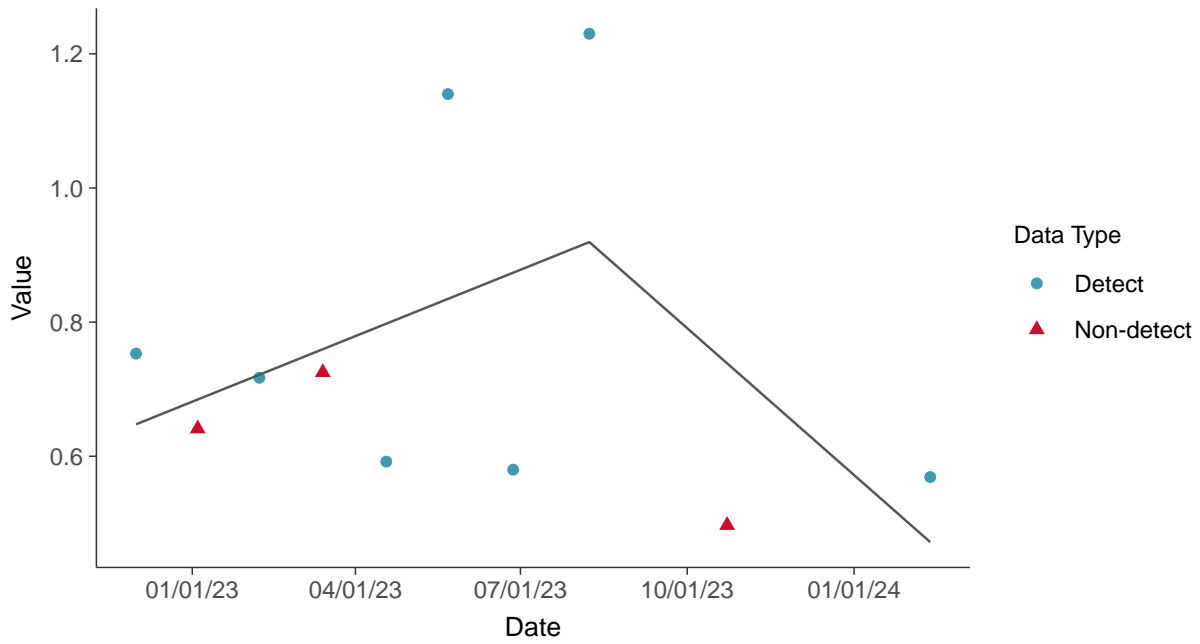
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-31 (pCi/L)





Trend Regression: Piecewise Linear-Linear
Radium 226 and 228, MW-31 (pCi/L)



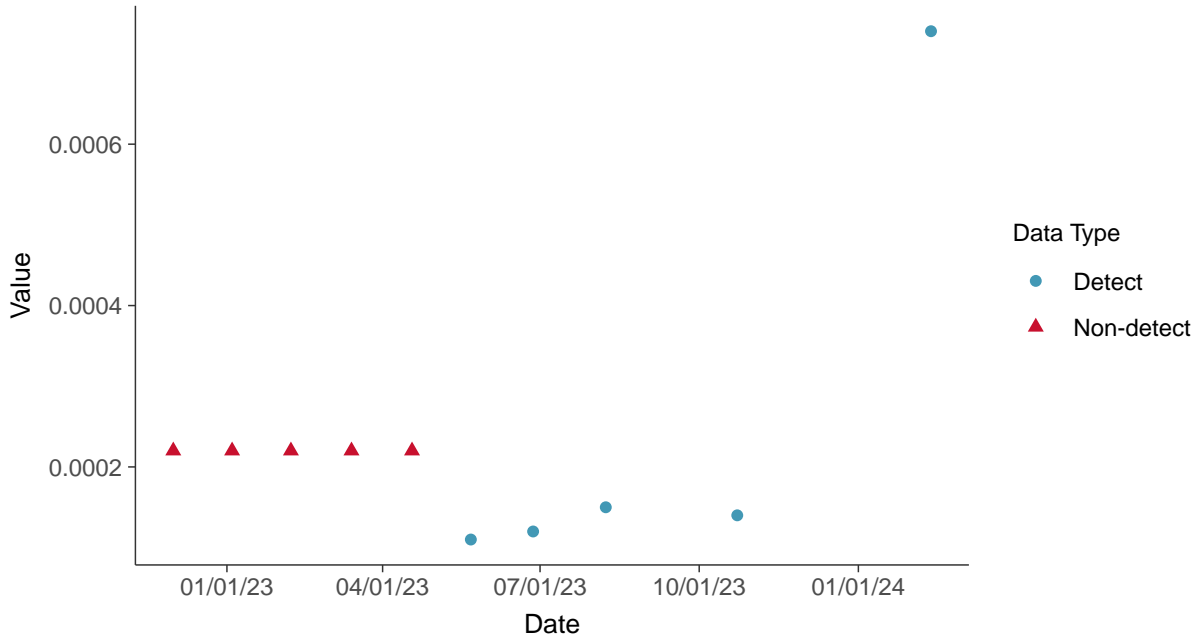


Appendix IV: Selenium, MW-31

ID: 1_41_5_122

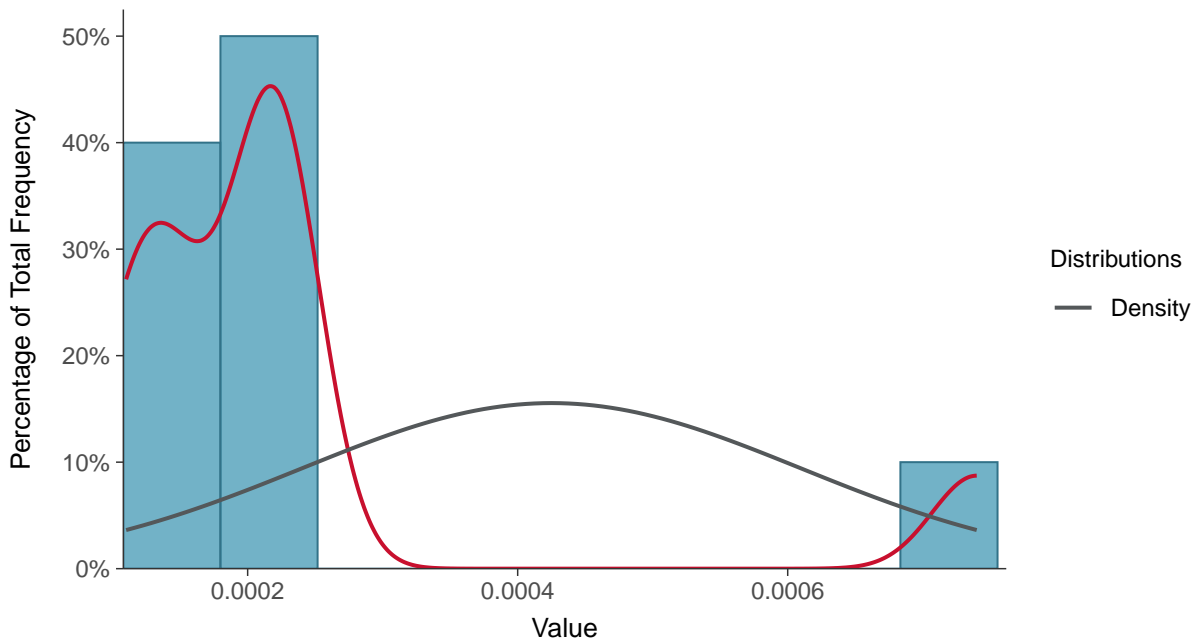
Scatter Plot

Selenium, MW-31 (mg/L)



Histogram

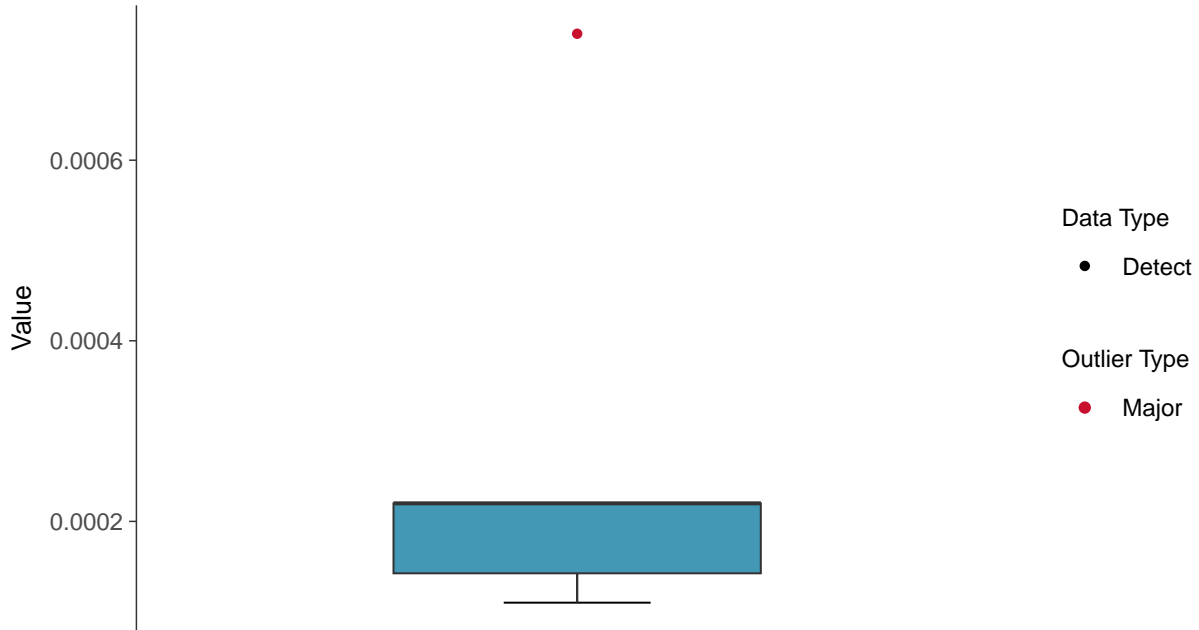
Selenium, MW-31 (mg/L)





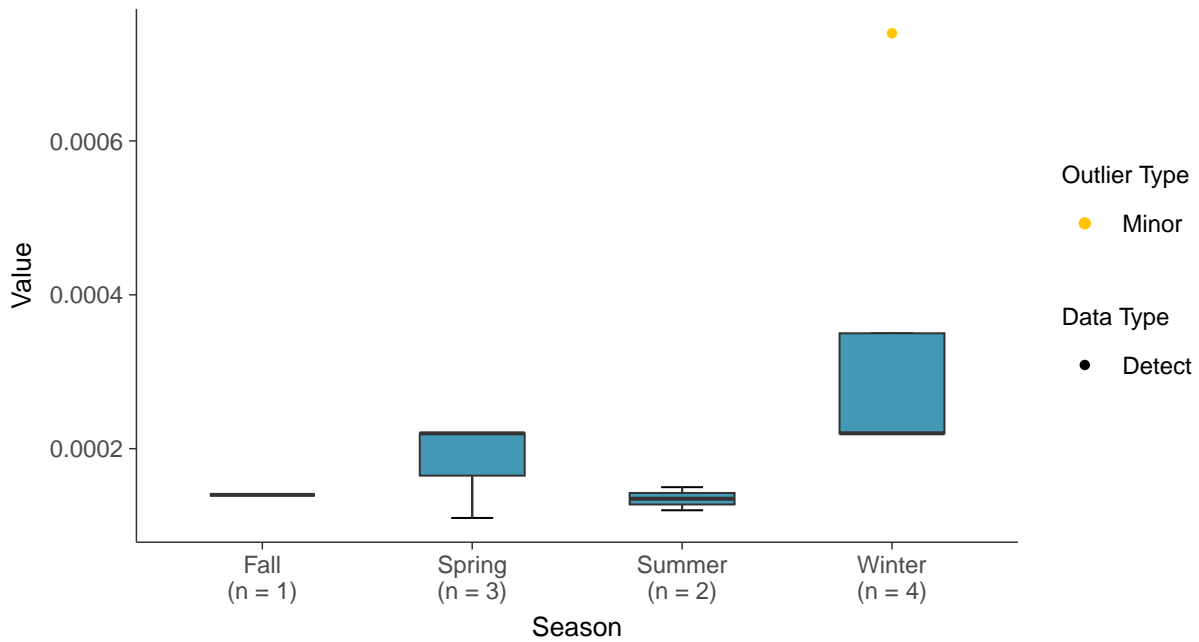
Boxplot

Selenium, MW-31 (mg/L)



Boxplot by Season

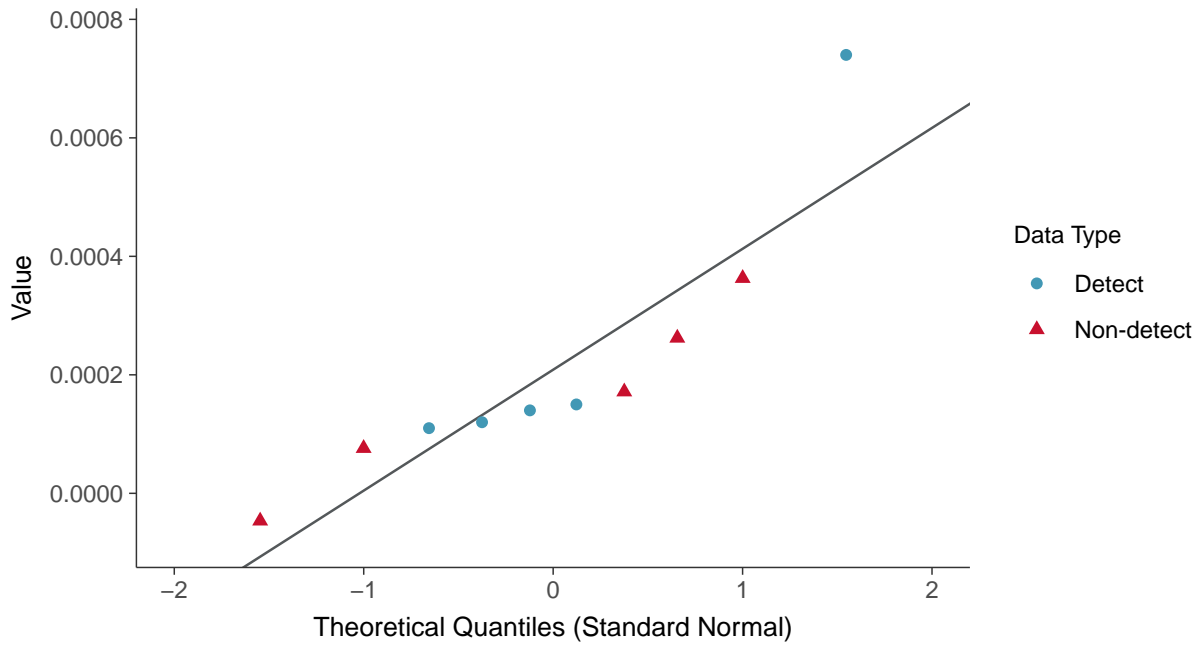
Selenium, MW-31 (mg/L)





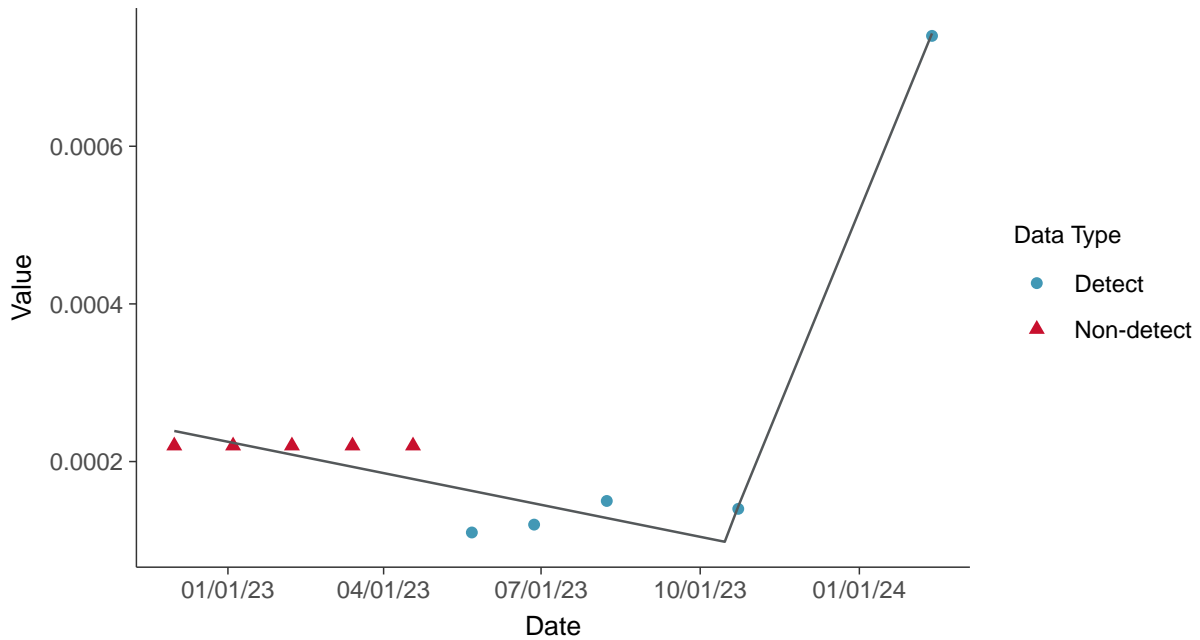
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-31 (mg/L)



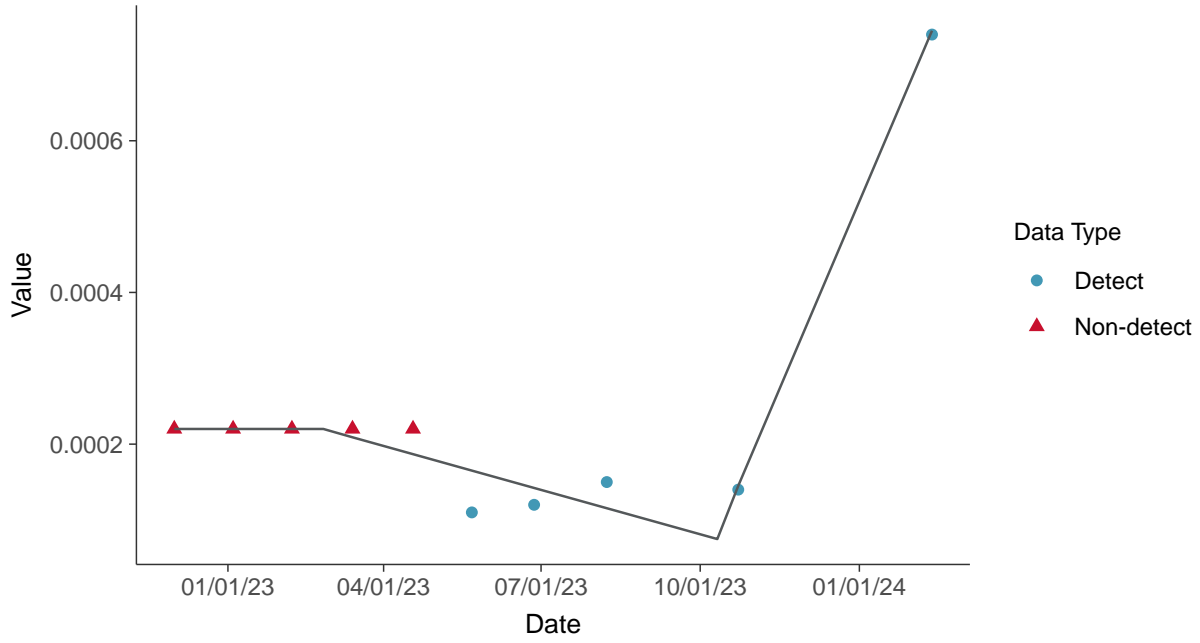
Trend Regression: Piecewise Linear-Linear

Selenium, MW-31 (mg/L)





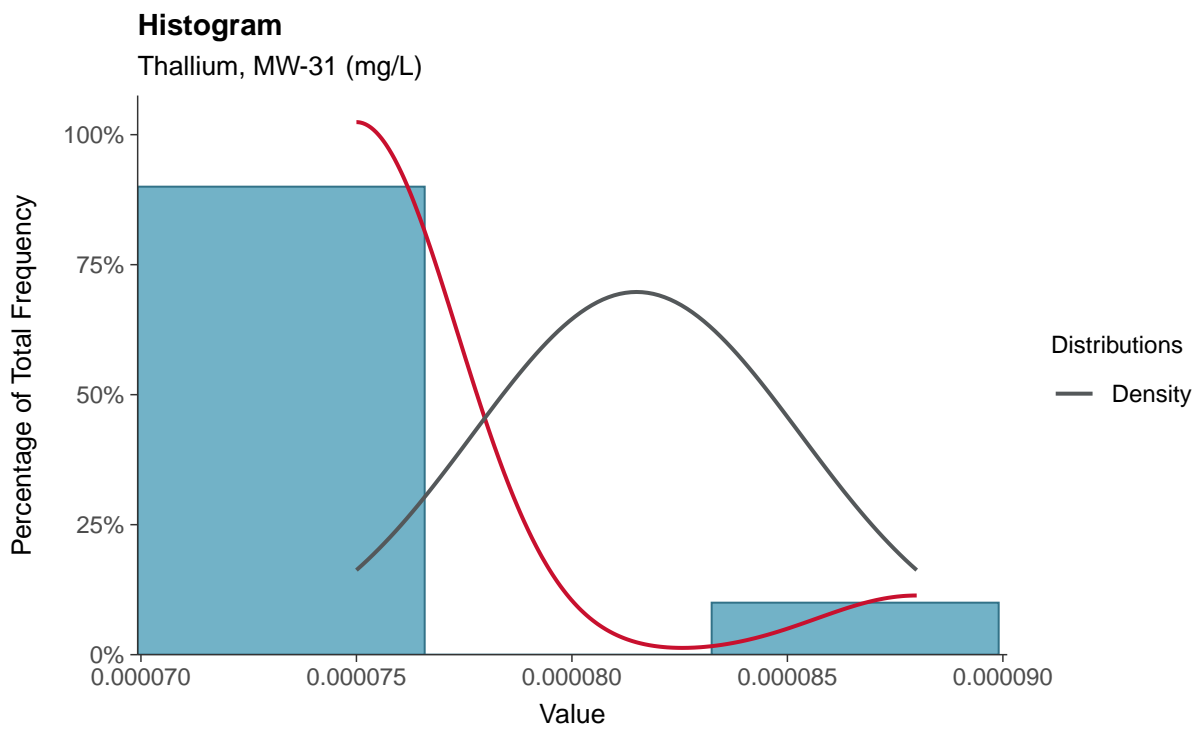
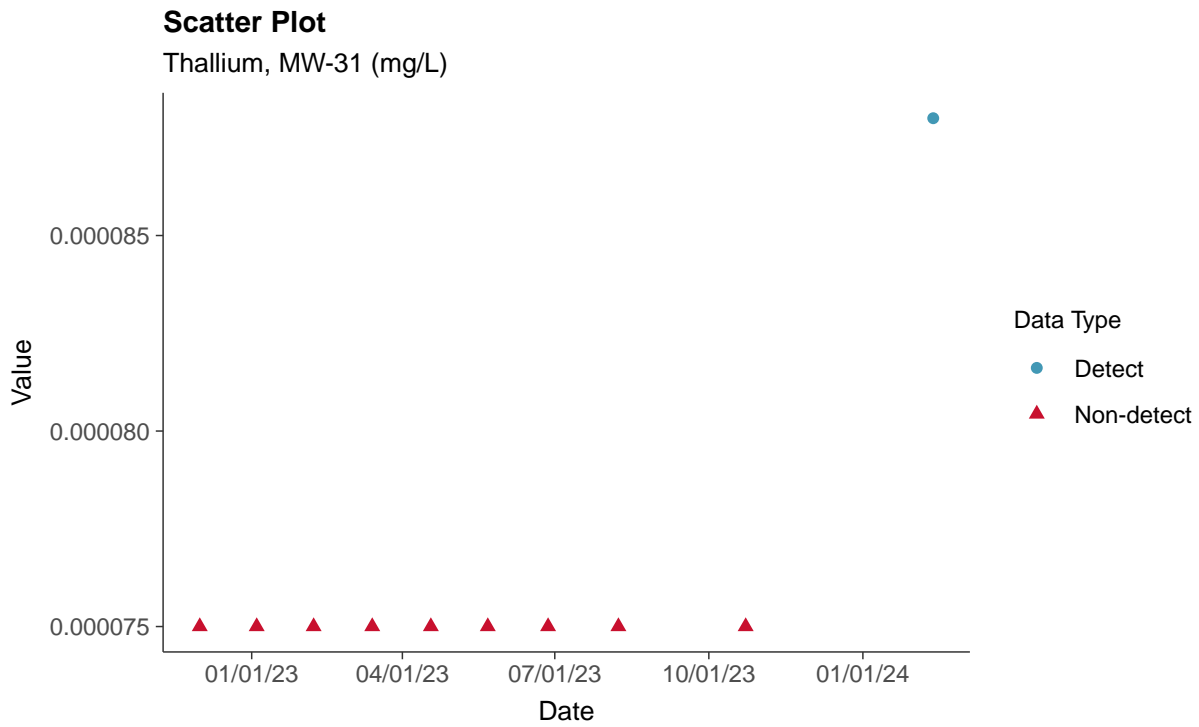
Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-31 (mg/L)





Appendix IV: Thallium, MW-31

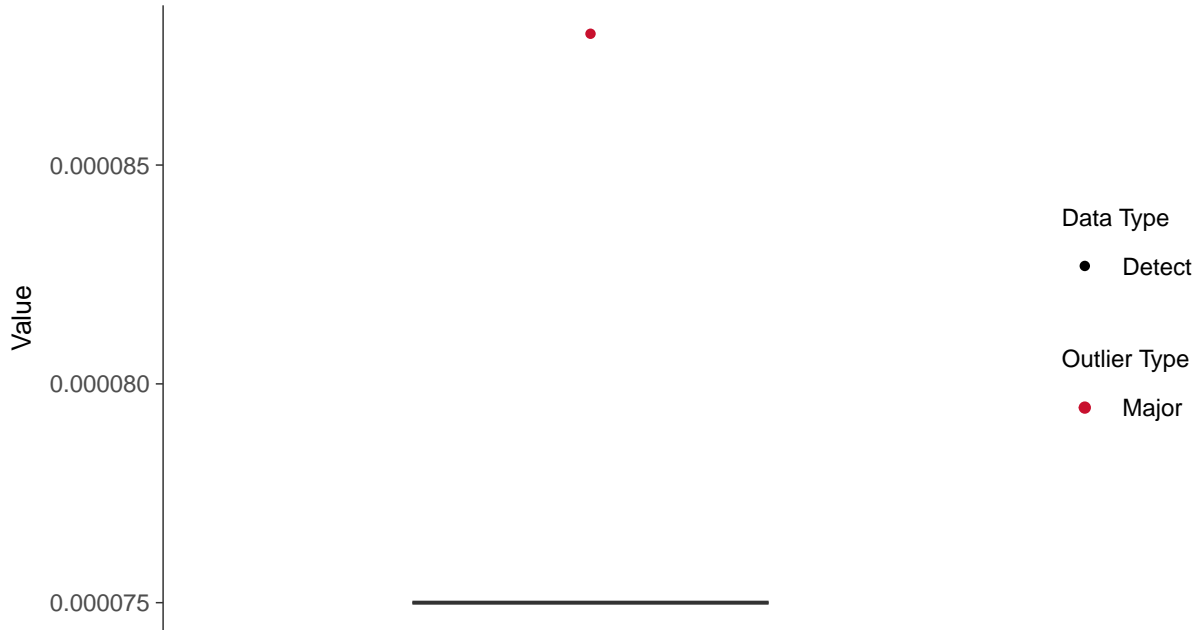
ID: 1_41_5_125





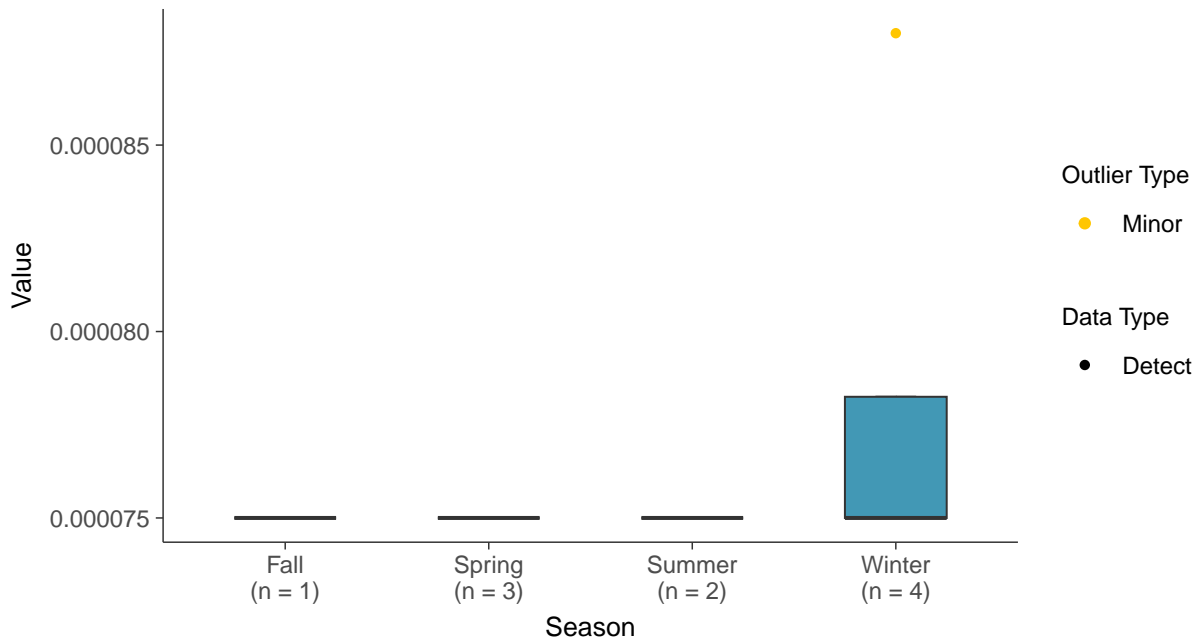
Boxplot

Thallium, MW-31 (mg/L)



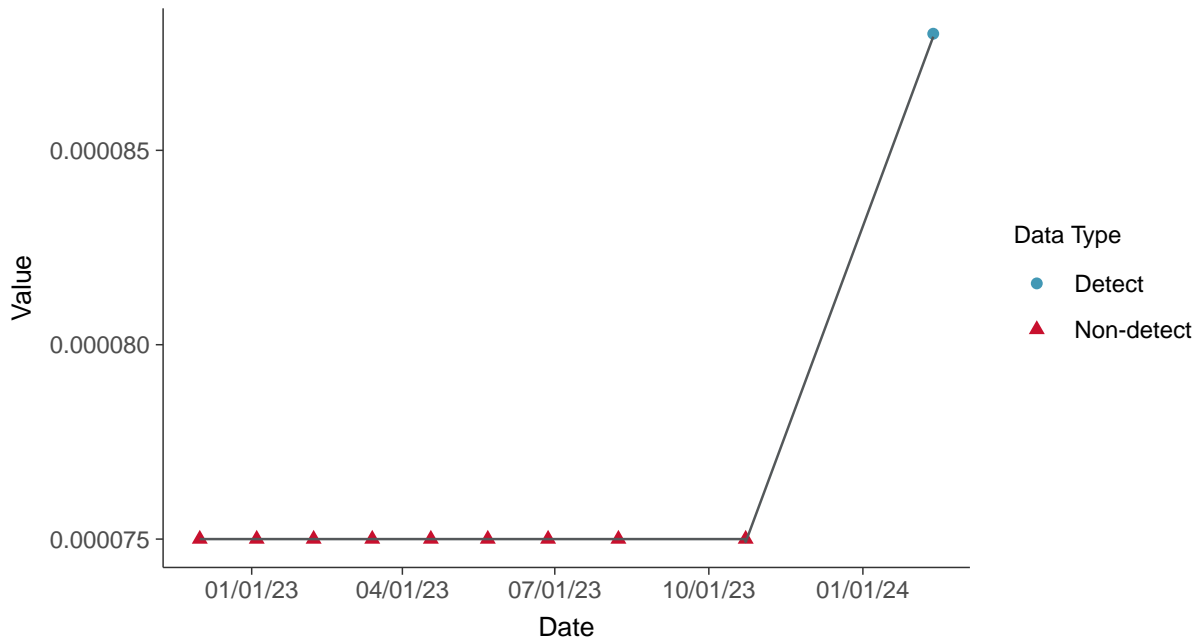
Boxplot by Season

Thallium, MW-31 (mg/L)

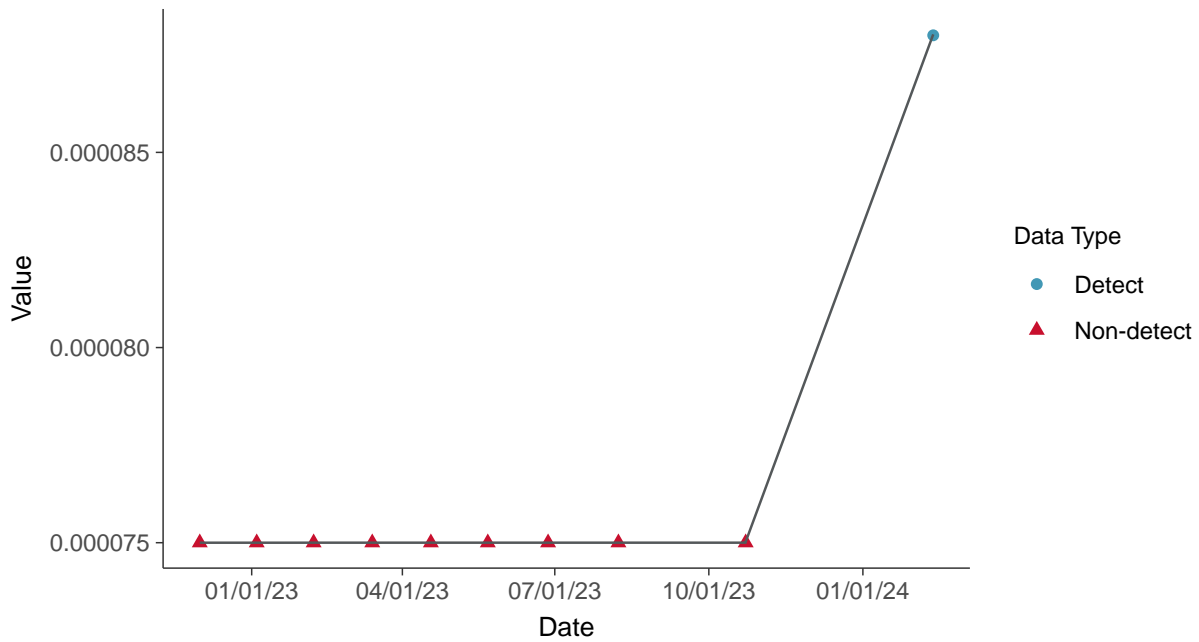




Trend Regression: Piecewise Linear-Linear
Thallium, MW-31 (mg/L)



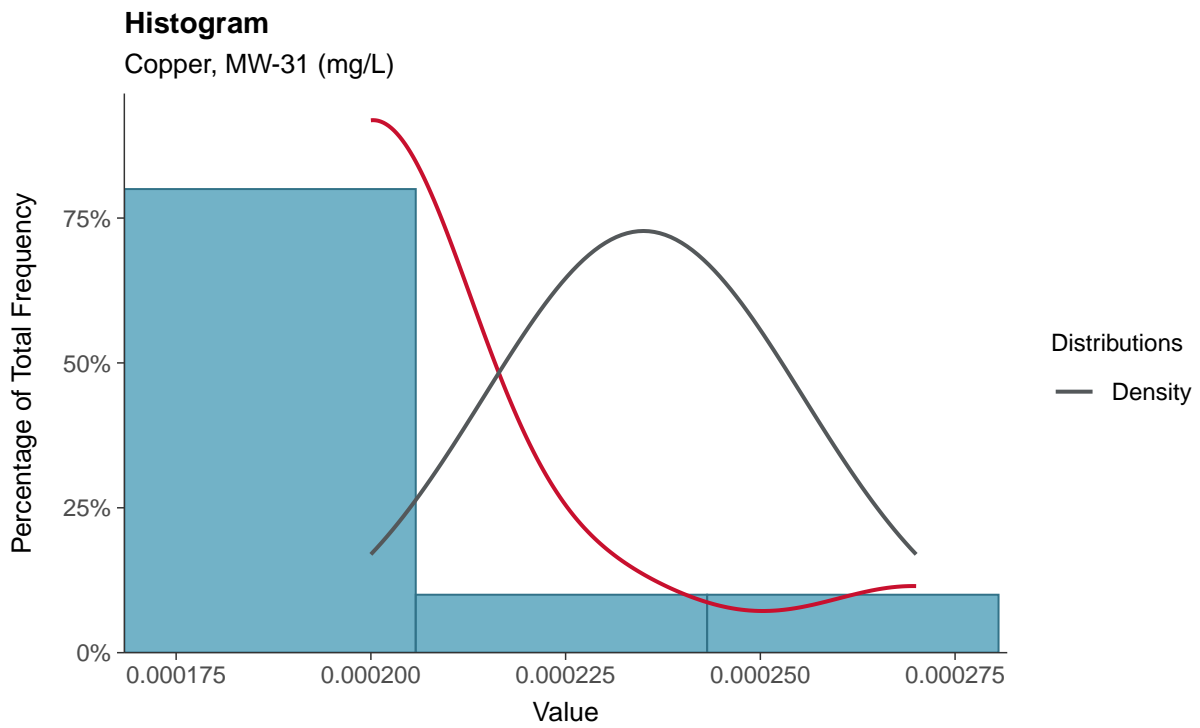
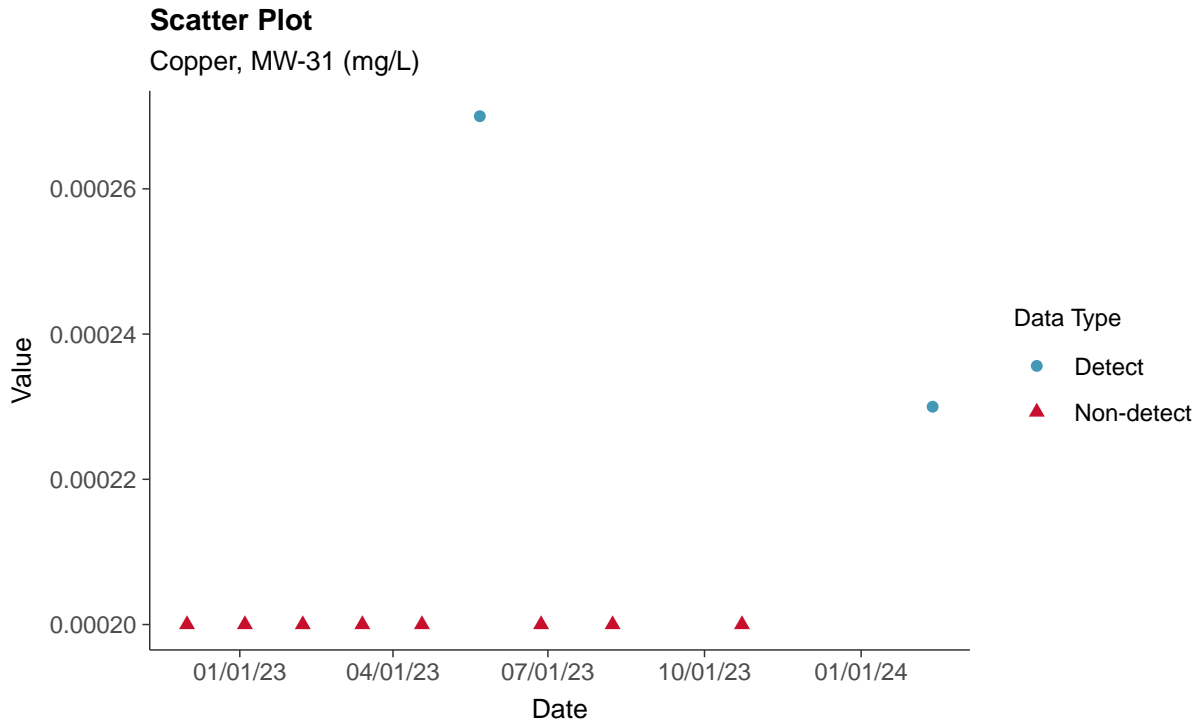
Trend Regression: Piecewise Linear-Linear-Linear
Thallium, MW-31 (mg/L)





Part 115: Copper, MW-31

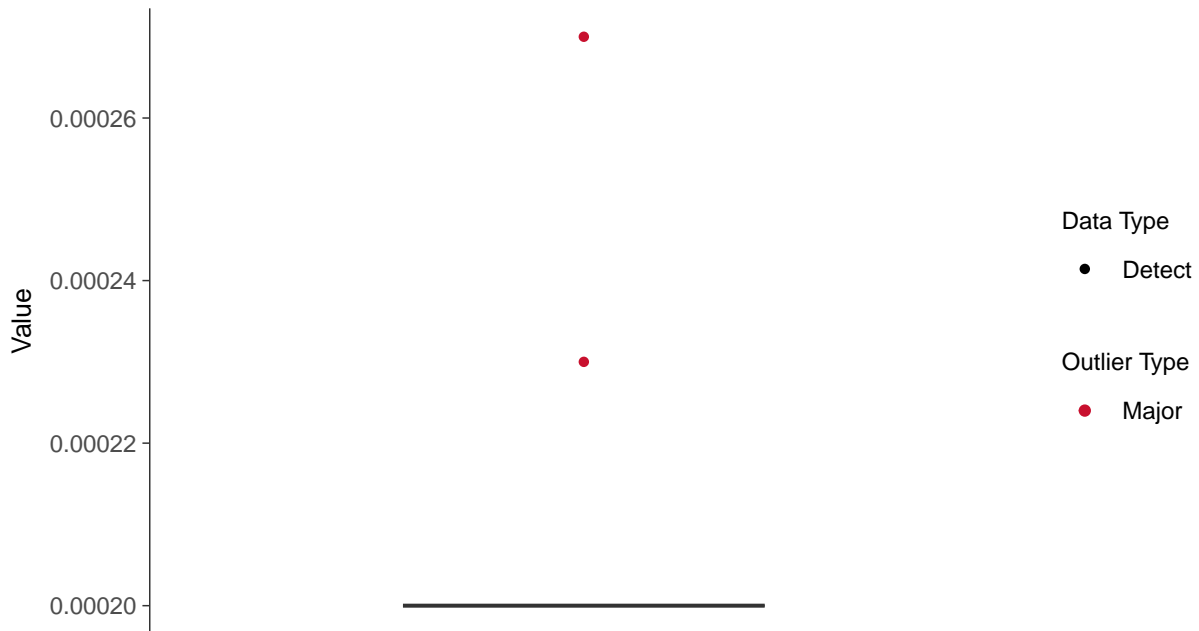
ID: 1_41_6_111





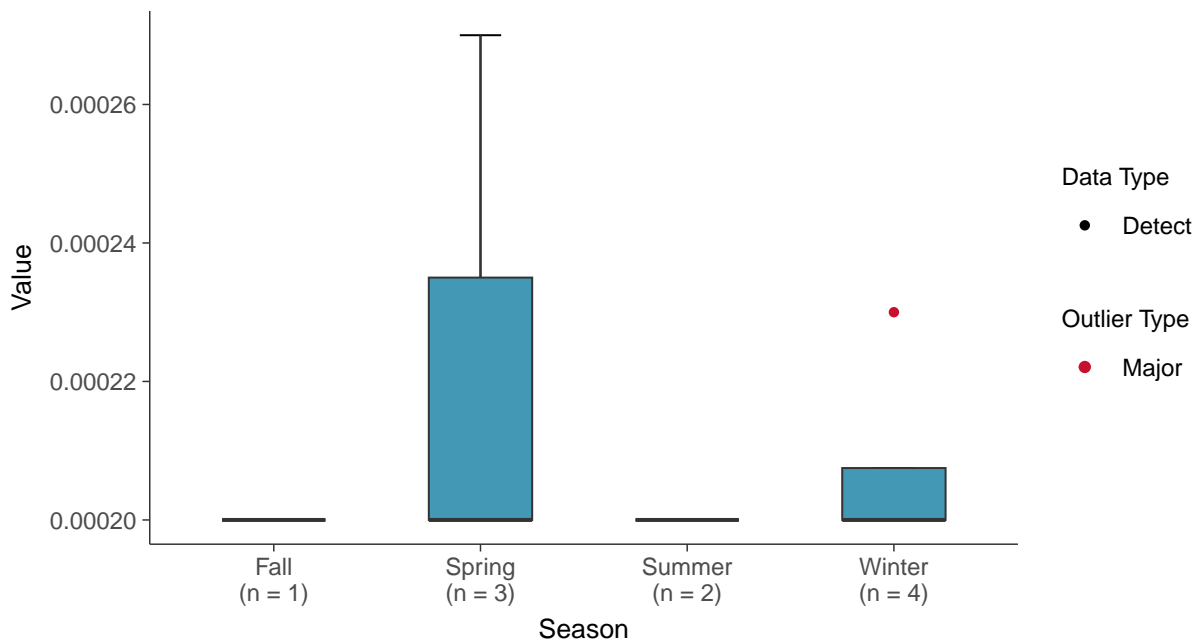
Boxplot

Copper, MW-31 (mg/L)



Boxplot by Season

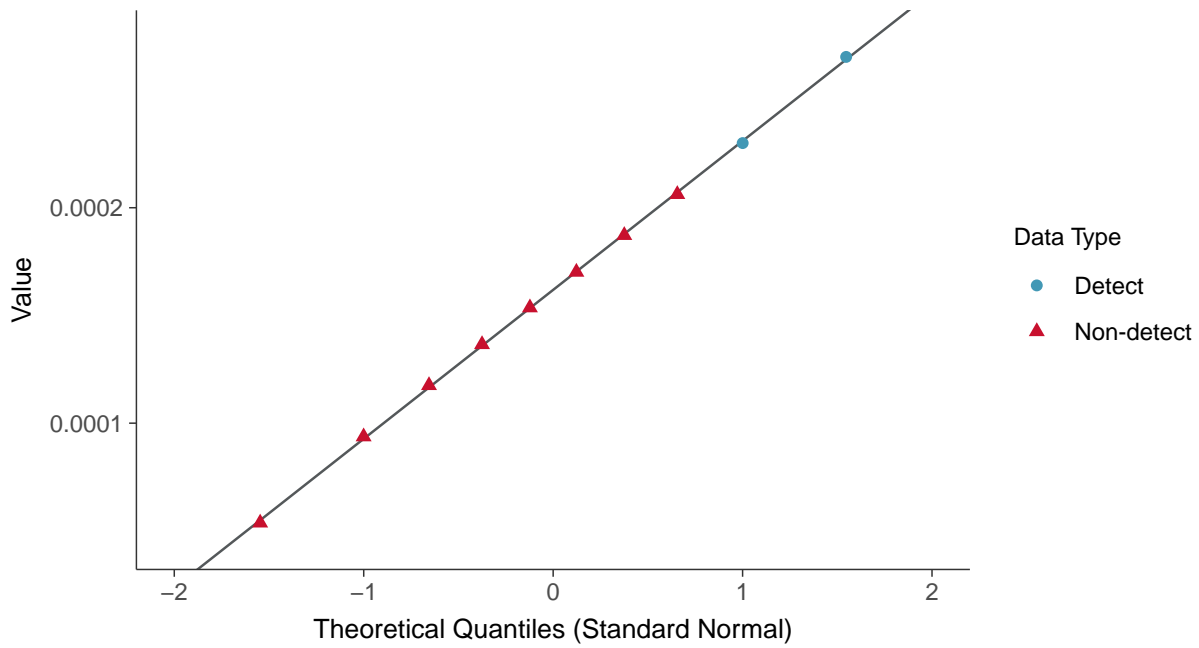
Copper, MW-31 (mg/L)





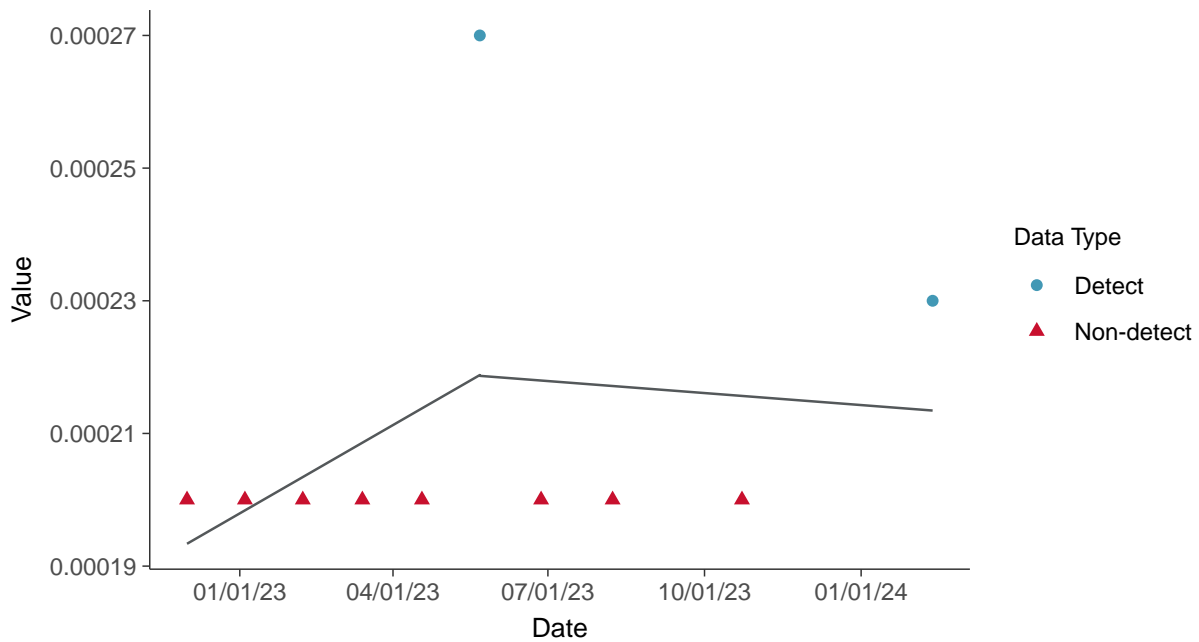
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear

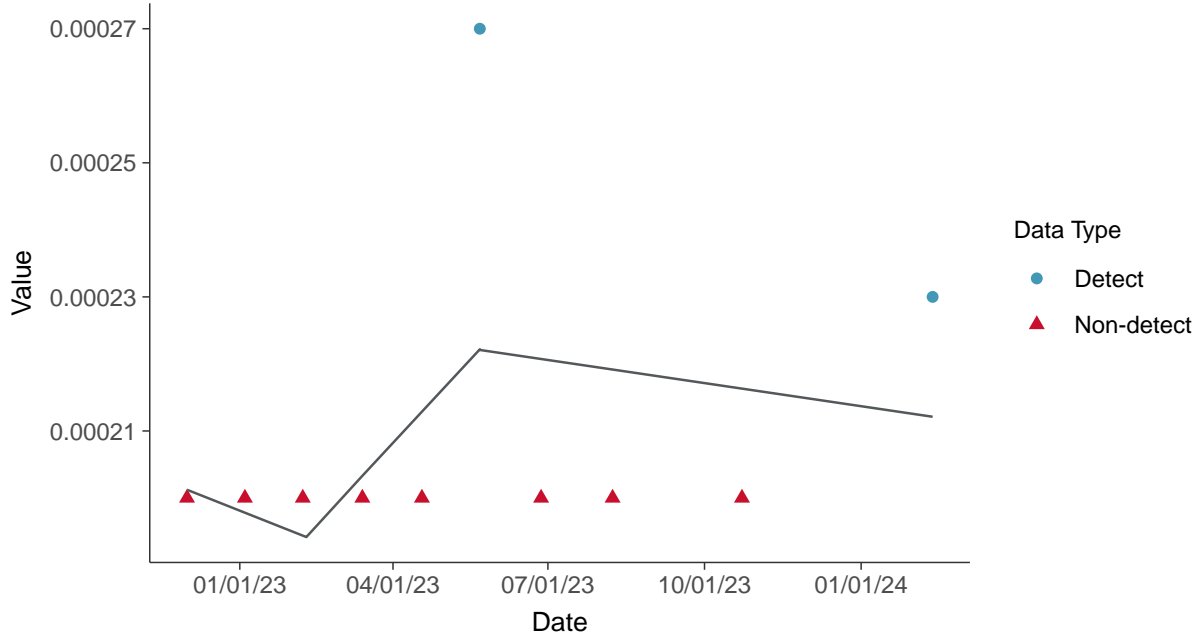
Copper, MW-31 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-31 (mg/L)



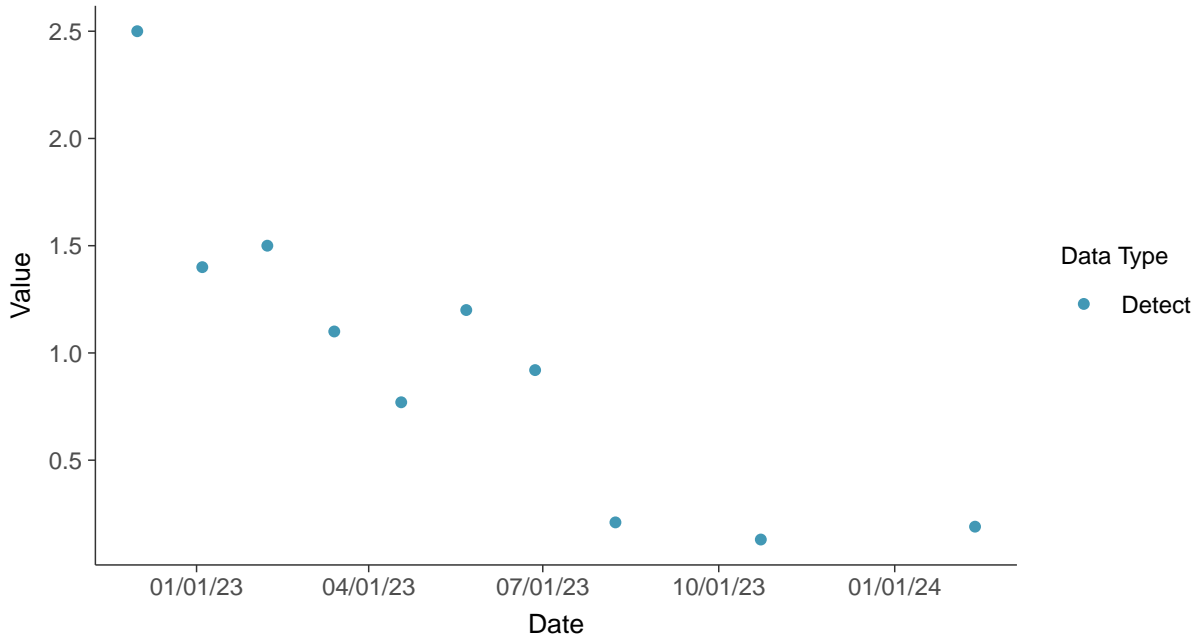


Part 115: Iron, MW-31

ID: 1_41_6_114

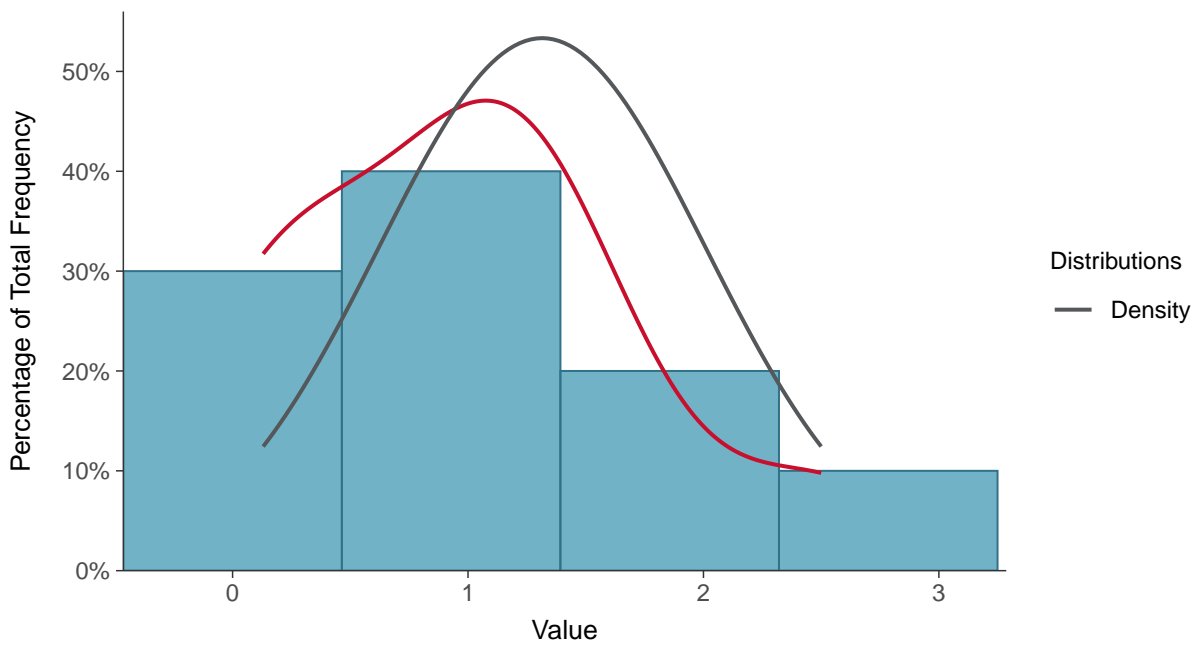
Scatter Plot

Iron, MW-31 (mg/L)



Histogram

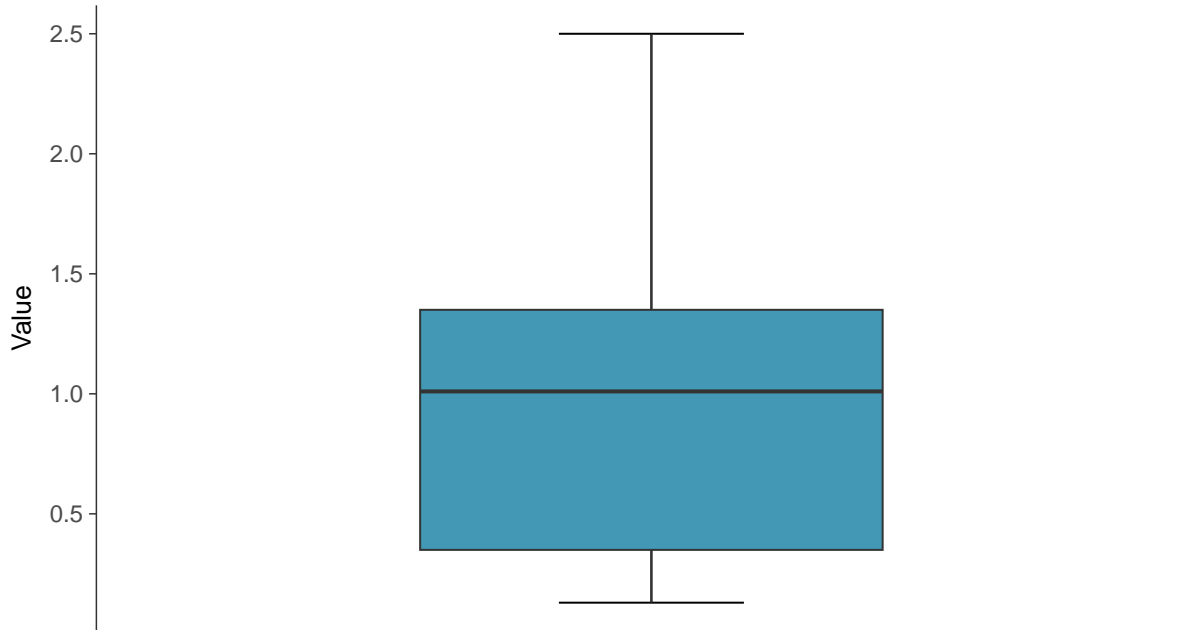
Iron, MW-31 (mg/L)





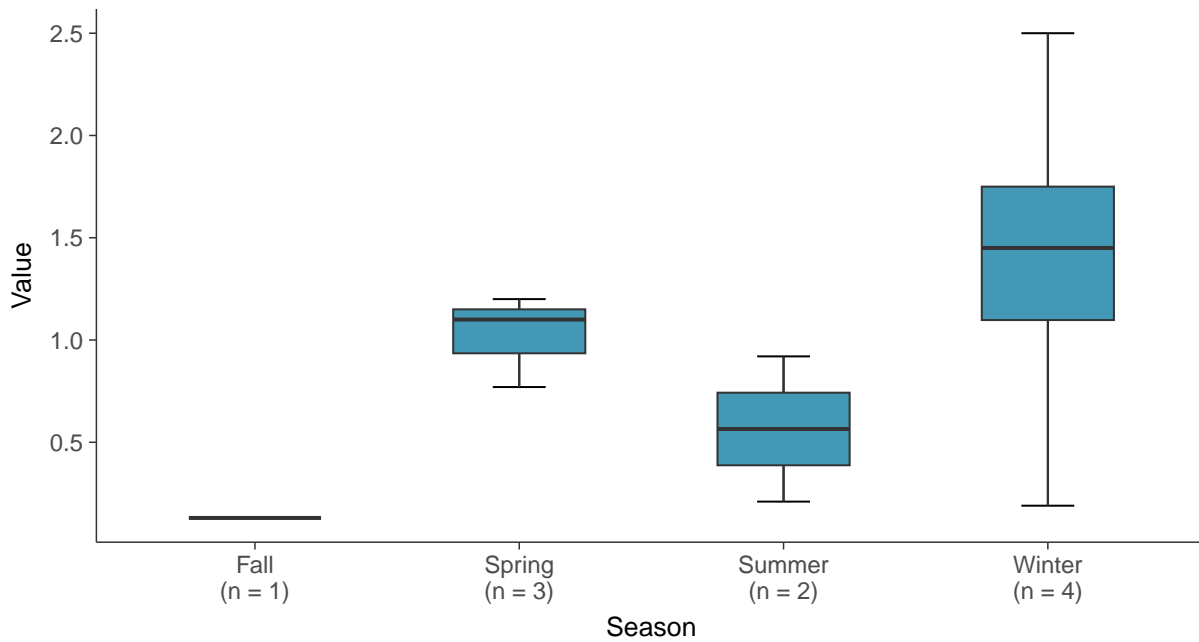
Boxplot

Iron, MW-31 (mg/L)



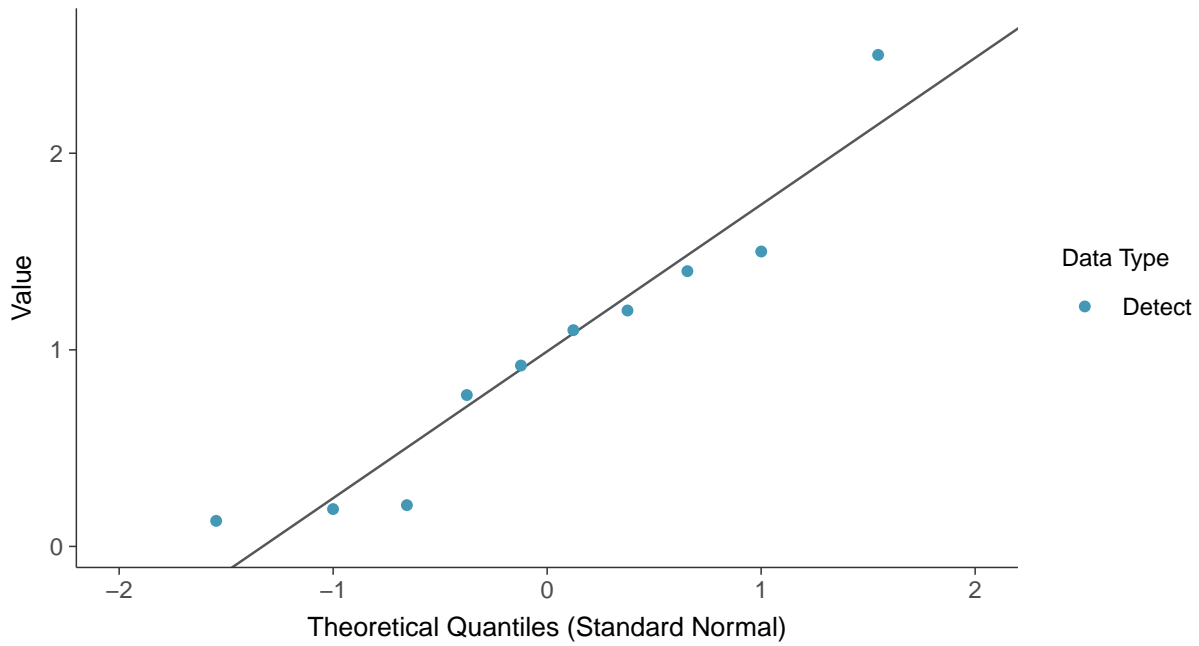
Boxplot by Season

Iron, MW-31 (mg/L)

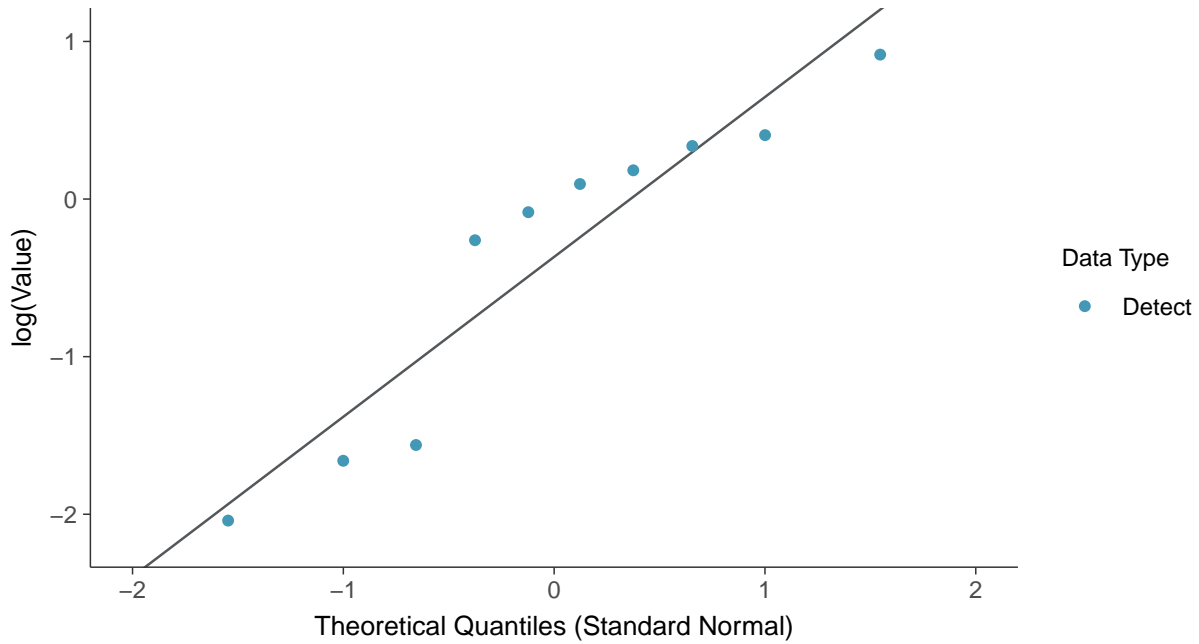




Normal Q-Q plot
Iron, MW-31 (mg/L)

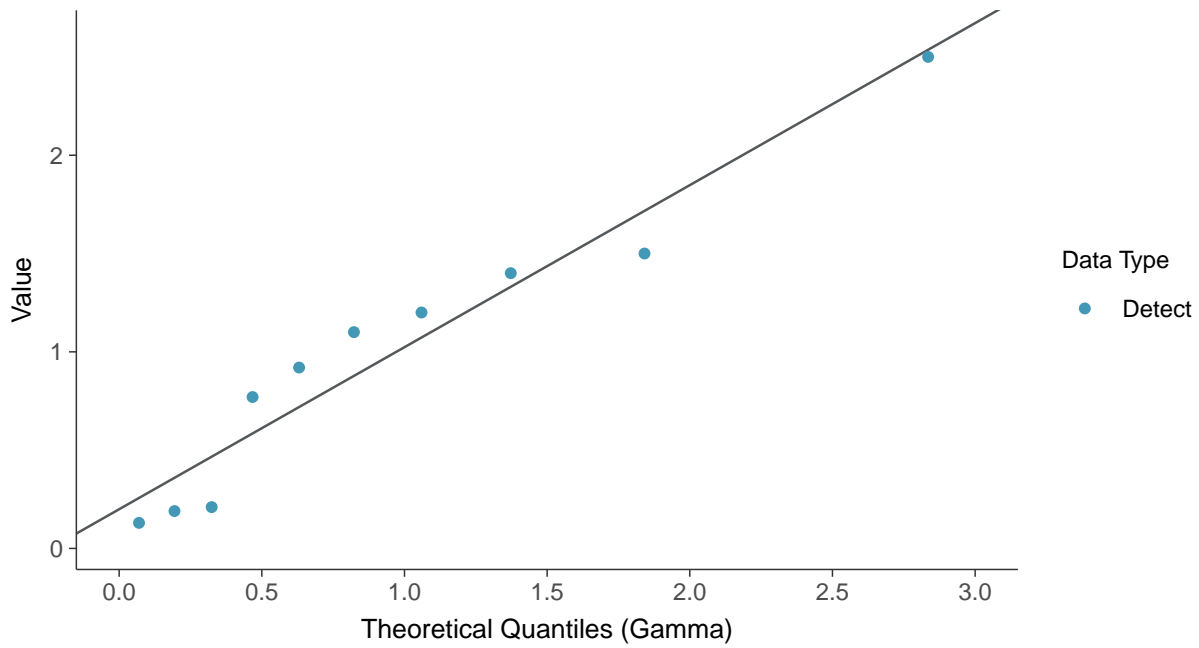


Lognormal Q-Q plot
Iron, MW-31 (mg/L)

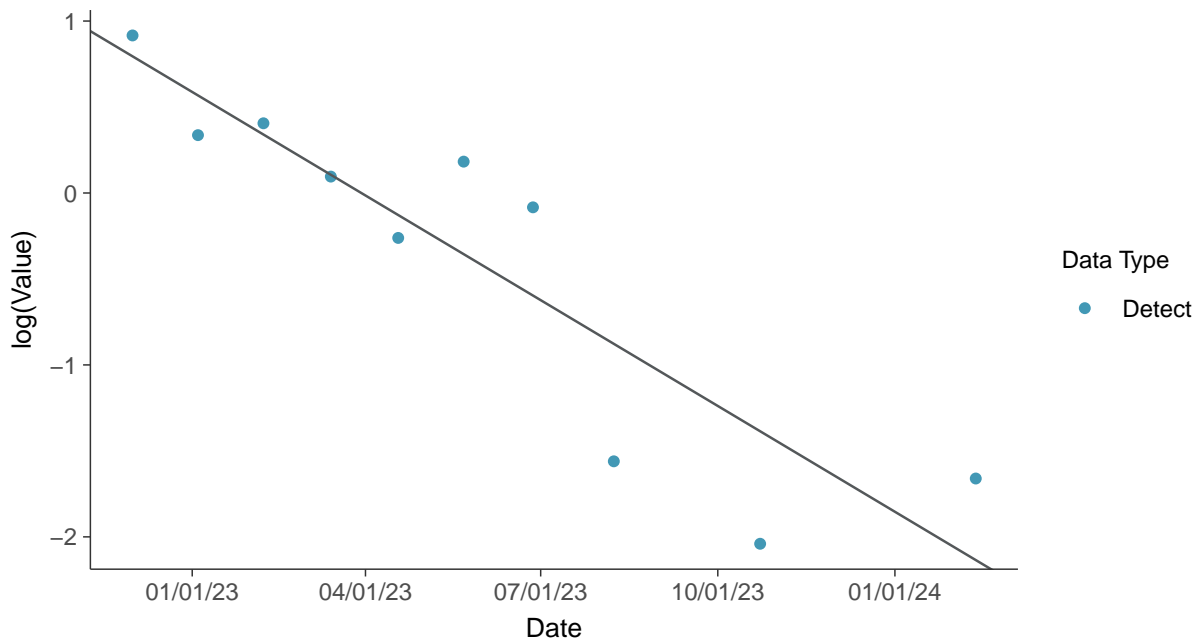




Gamma Q-Q plot
Iron, MW-31 (mg/L)



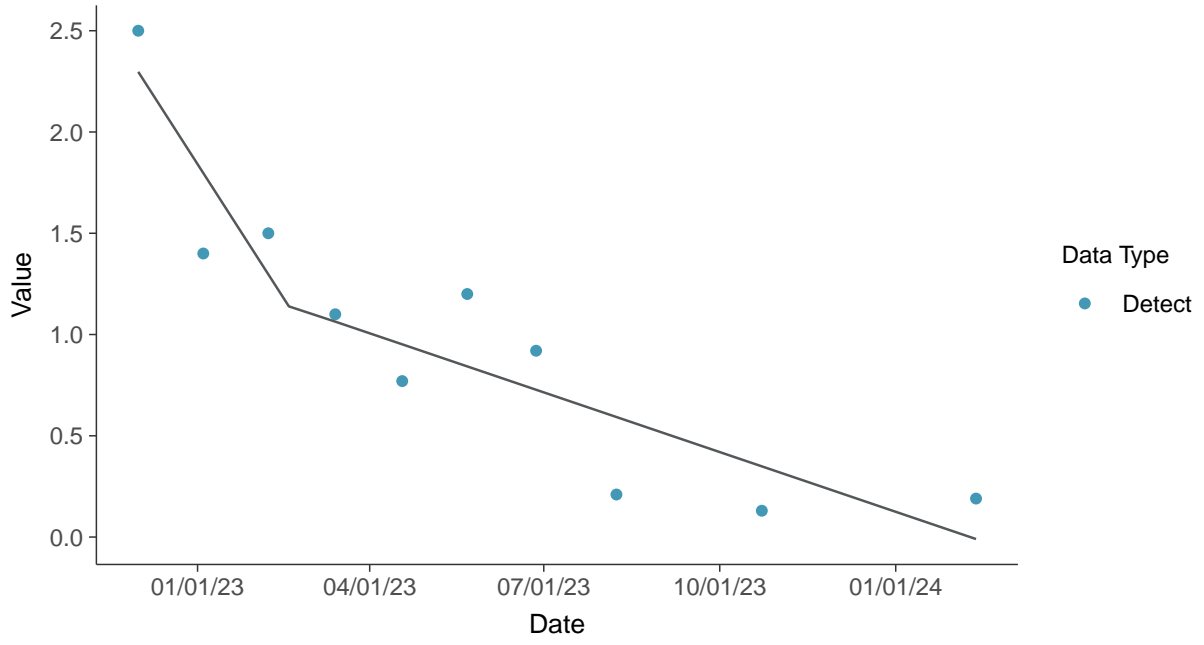
Trend Regression: Lognormal MLE
Iron, MW-31 (mg/L)





Trend Regression: Piecewise Linear-Linear

Iron, MW-31 (mg/L)



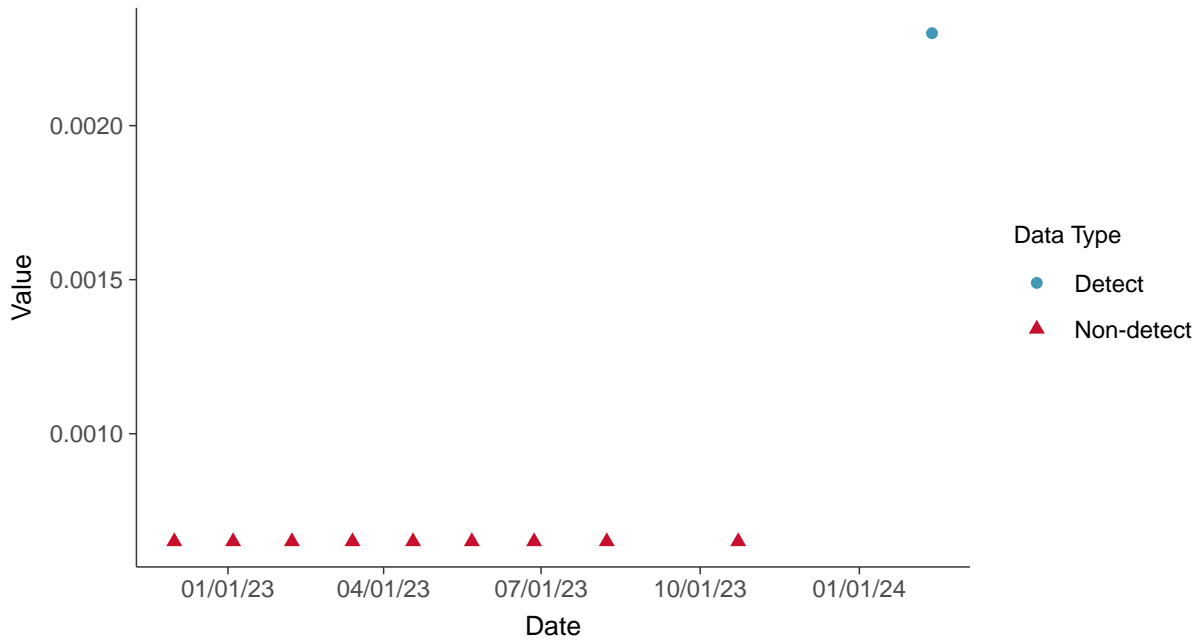


Part 115: Nickel, MW-31

ID: 1_41_6_119

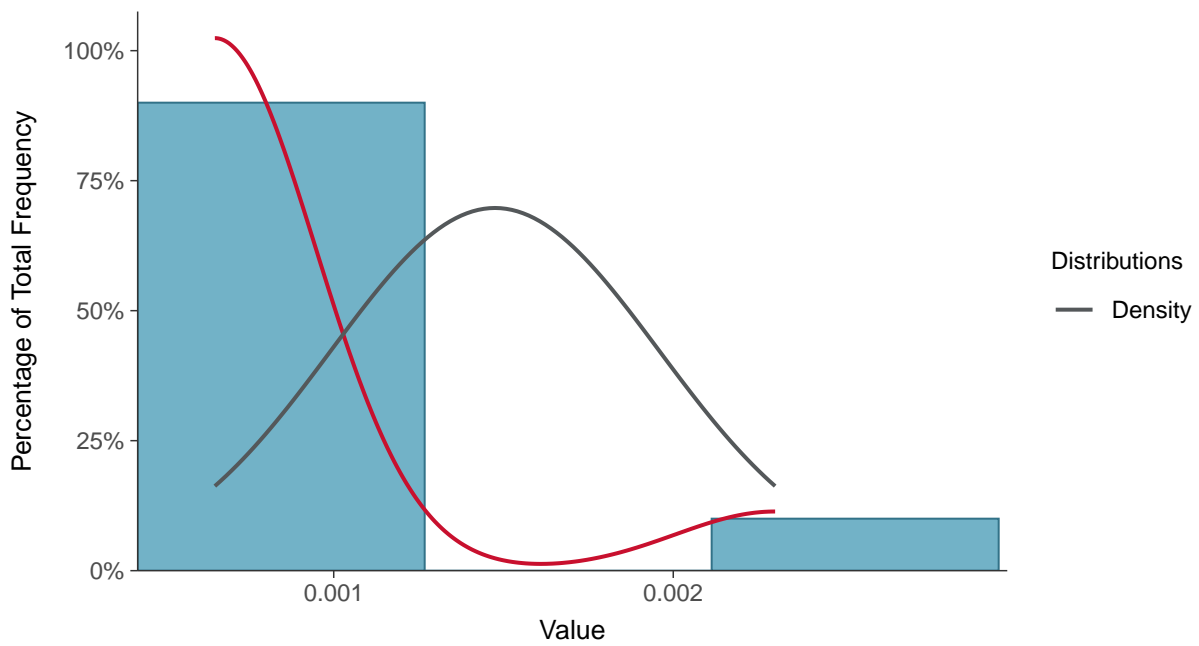
Scatter Plot

Nickel, MW-31 (mg/L)



Histogram

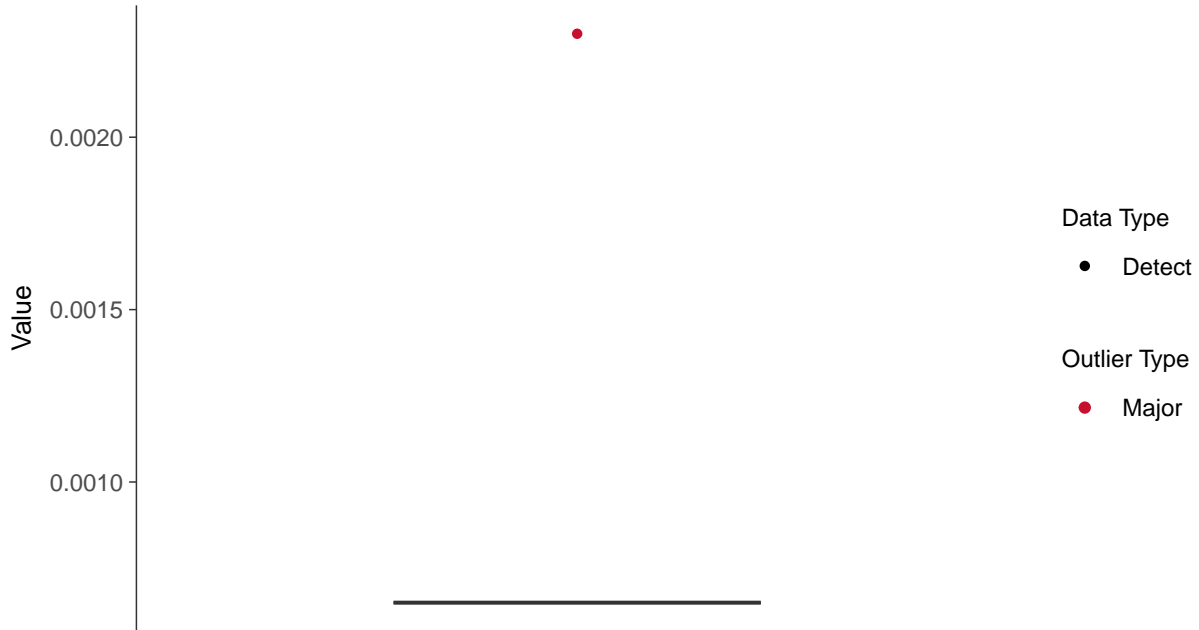
Nickel, MW-31 (mg/L)





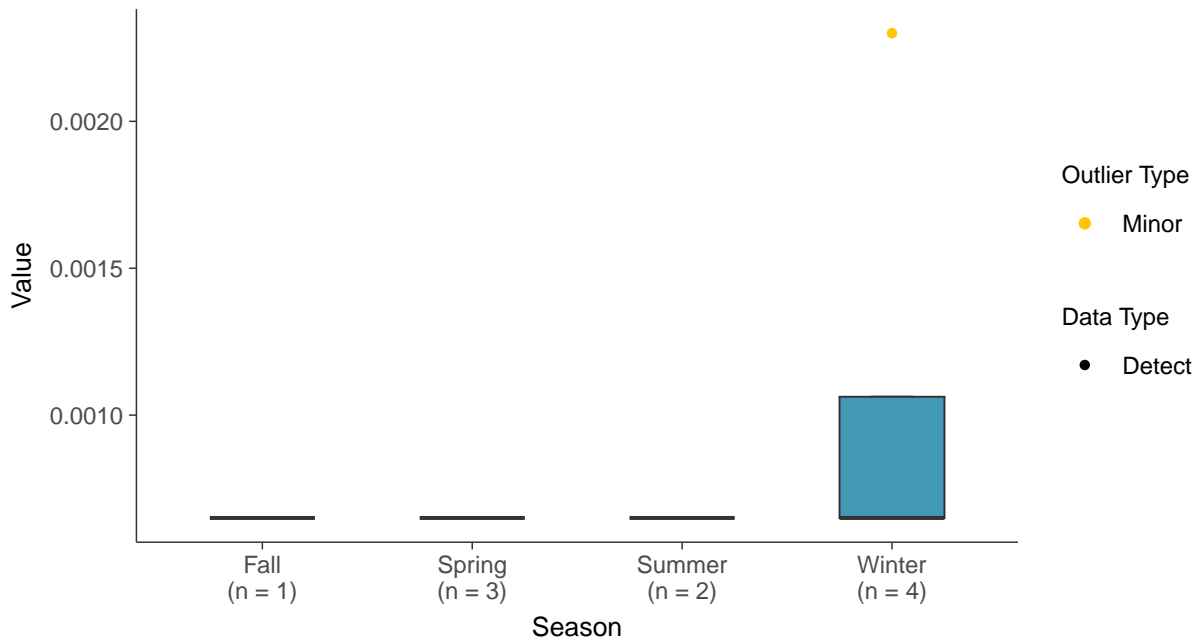
Boxplot

Nickel, MW-31 (mg/L)



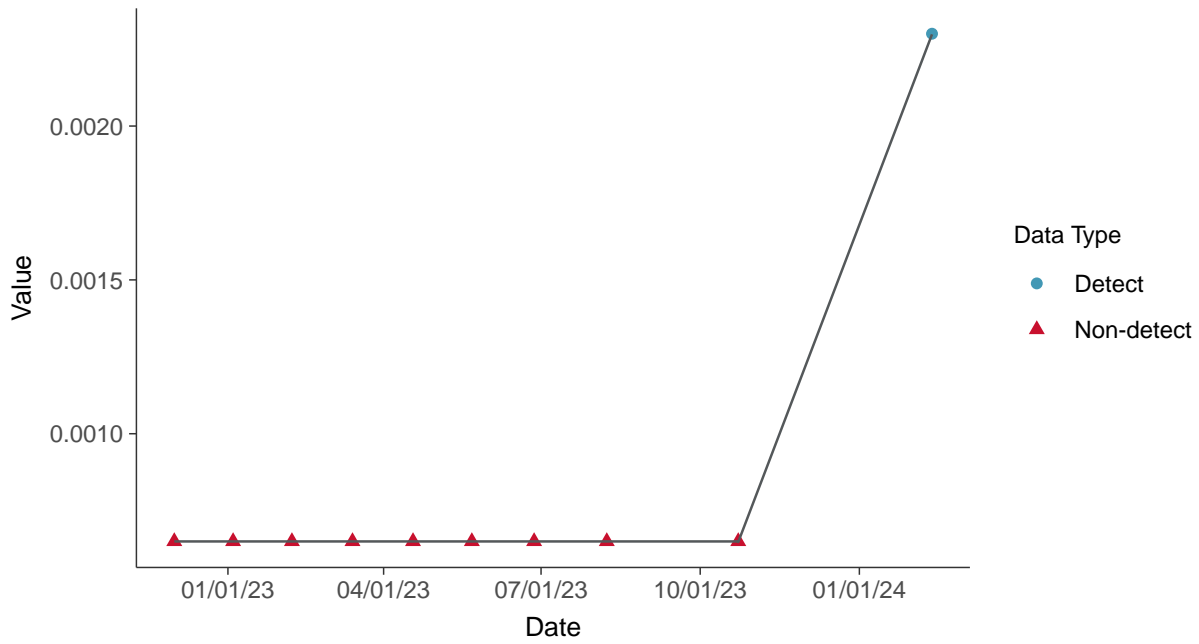
Boxplot by Season

Nickel, MW-31 (mg/L)

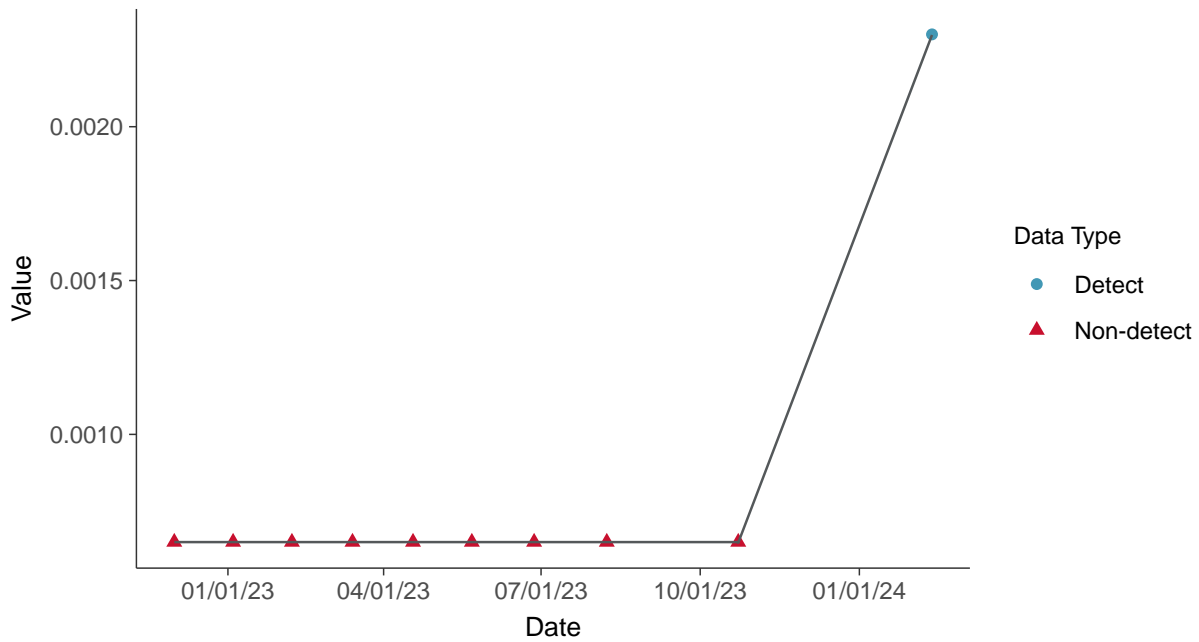




Trend Regression: Piecewise Linear-Linear
Nickel, MW-31 (mg/L)



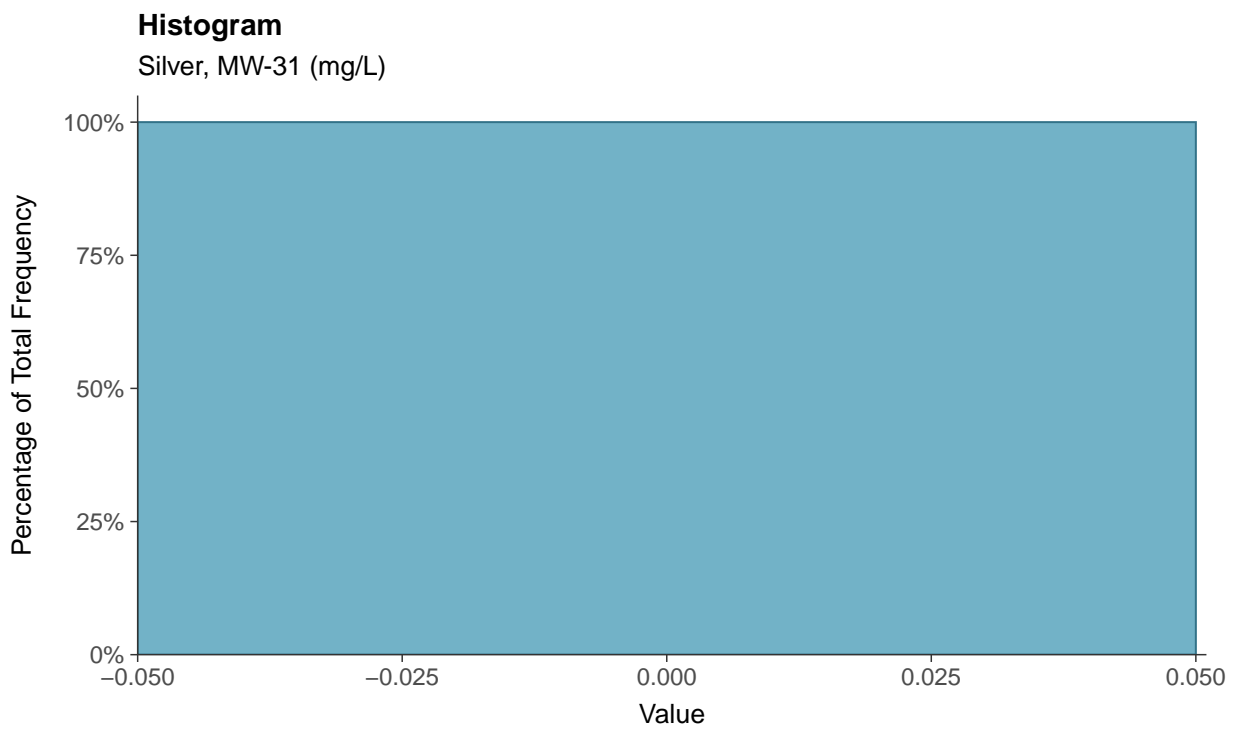
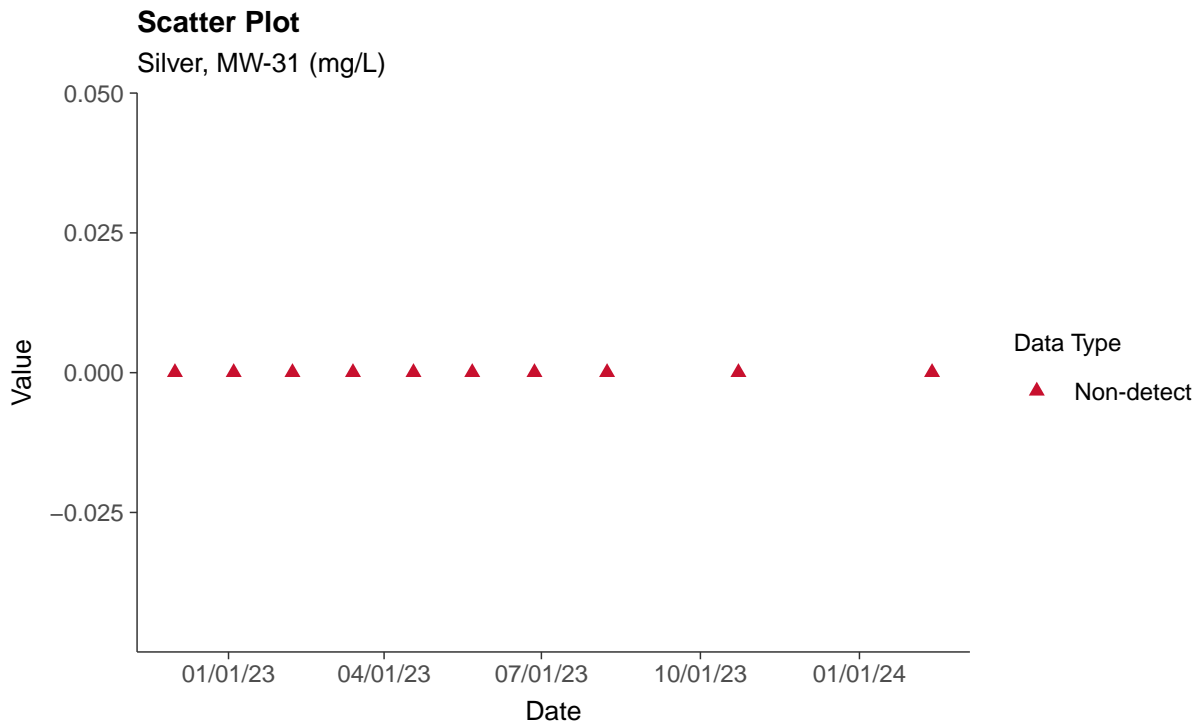
Trend Regression: Piecewise Linear-Linear-Linear
Nickel, MW-31 (mg/L)





Part 115: Silver, MW-31

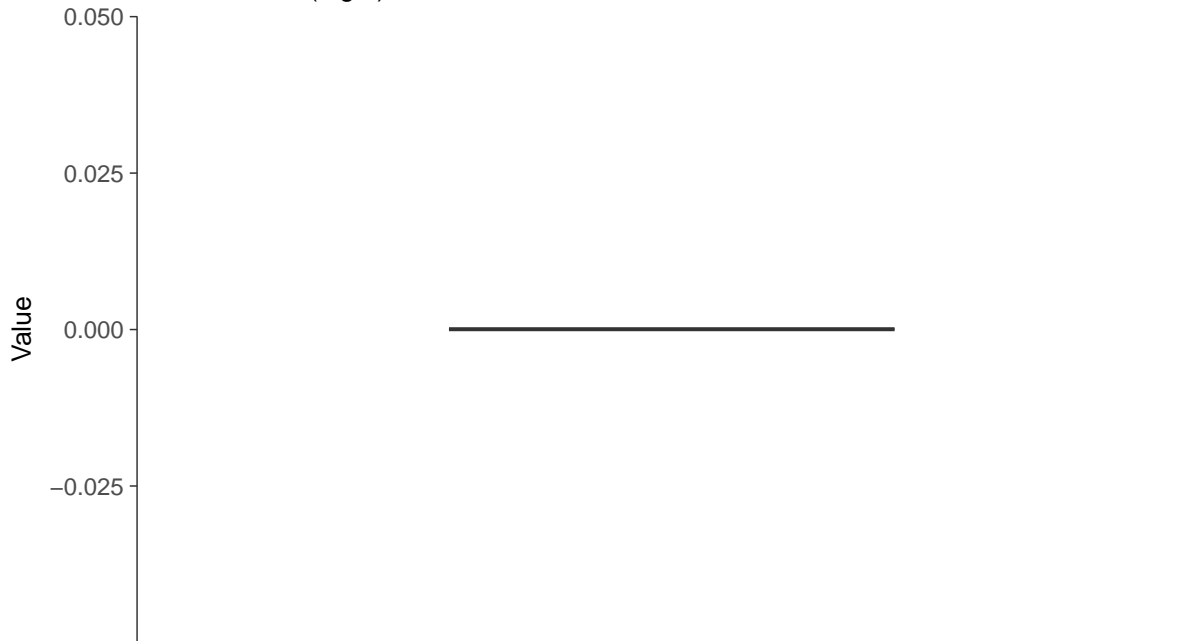
ID: 1_41_6_123





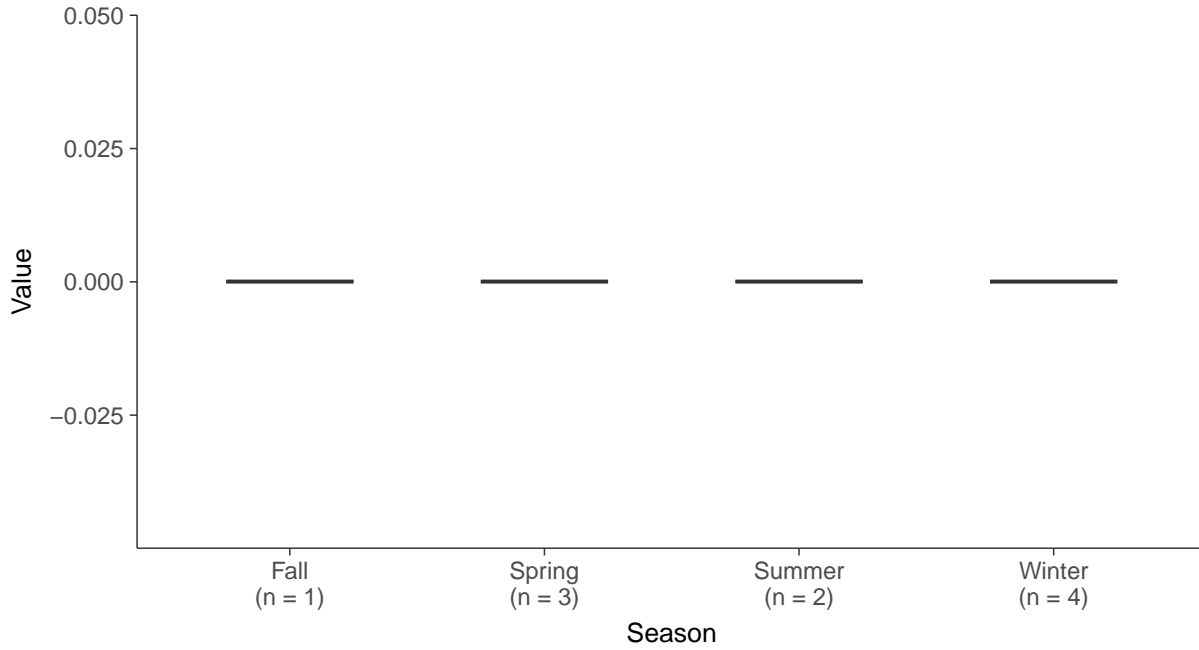
Boxplot

Silver, MW-31 (mg/L)



Boxplot by Season

Silver, MW-31 (mg/L)



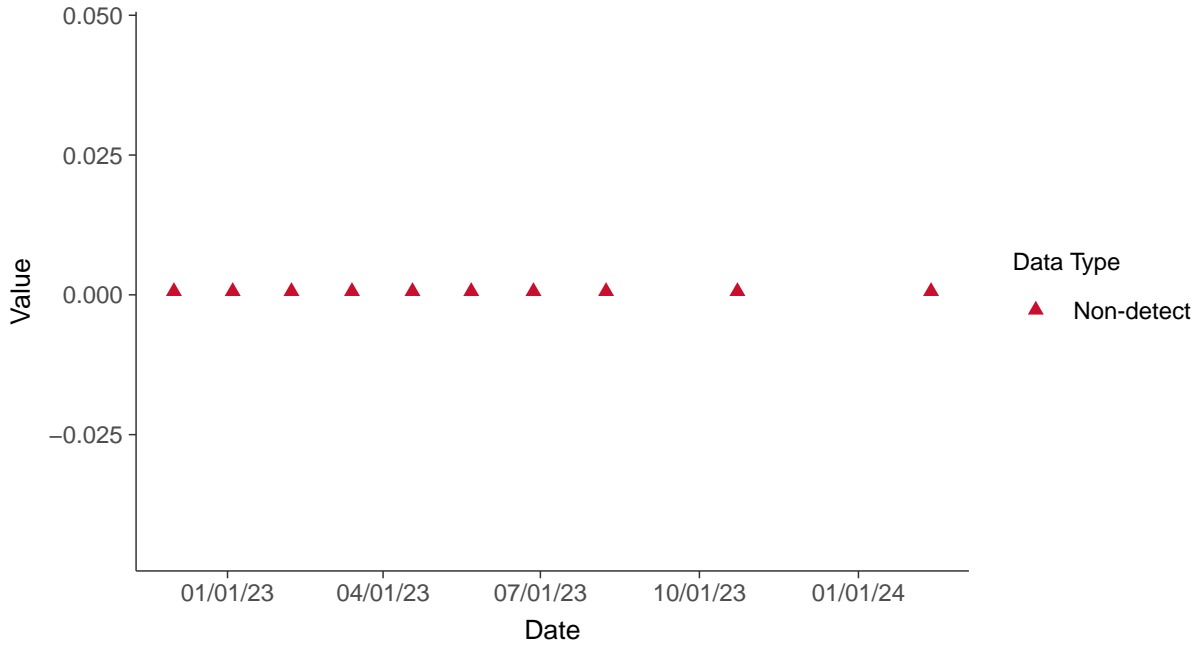


Part 115: Vanadium, MW-31

ID: 1_41_6_129

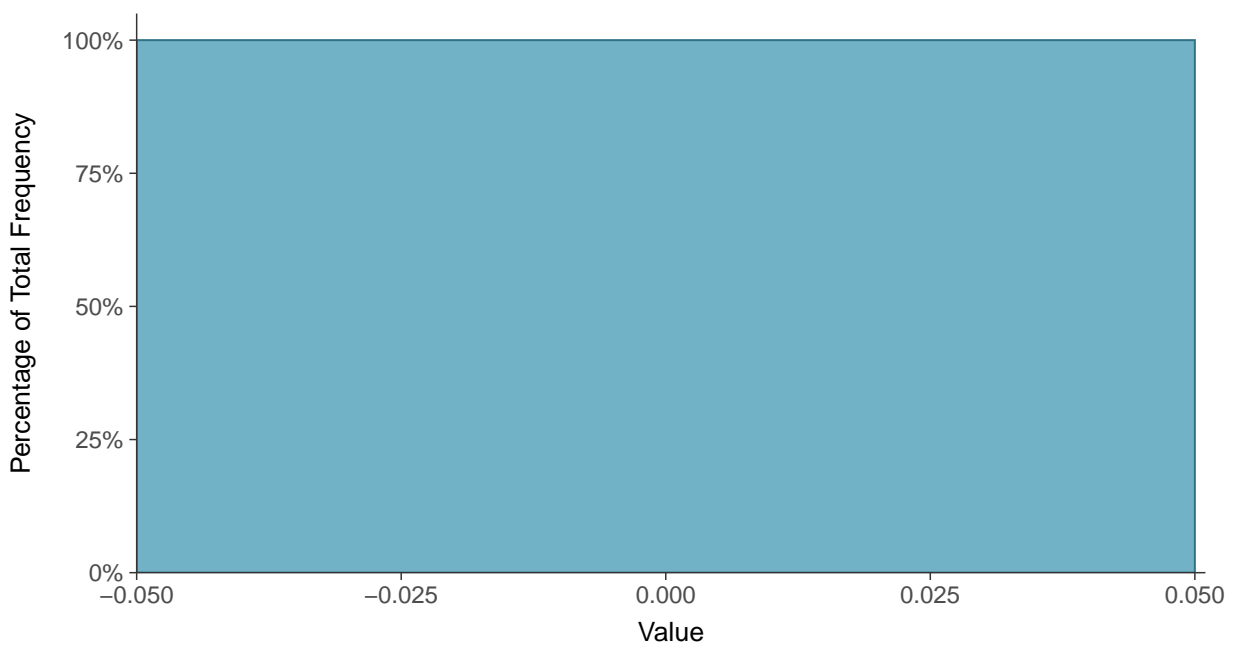
Scatter Plot

Vanadium, MW-31 (mg/L)



Histogram

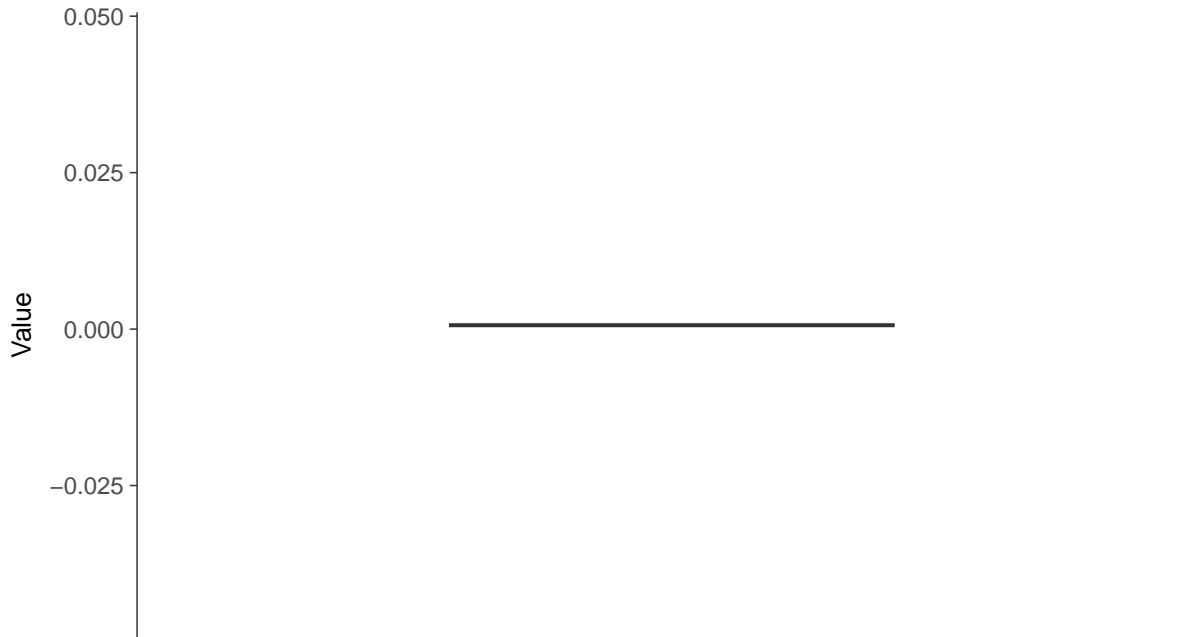
Vanadium, MW-31 (mg/L)





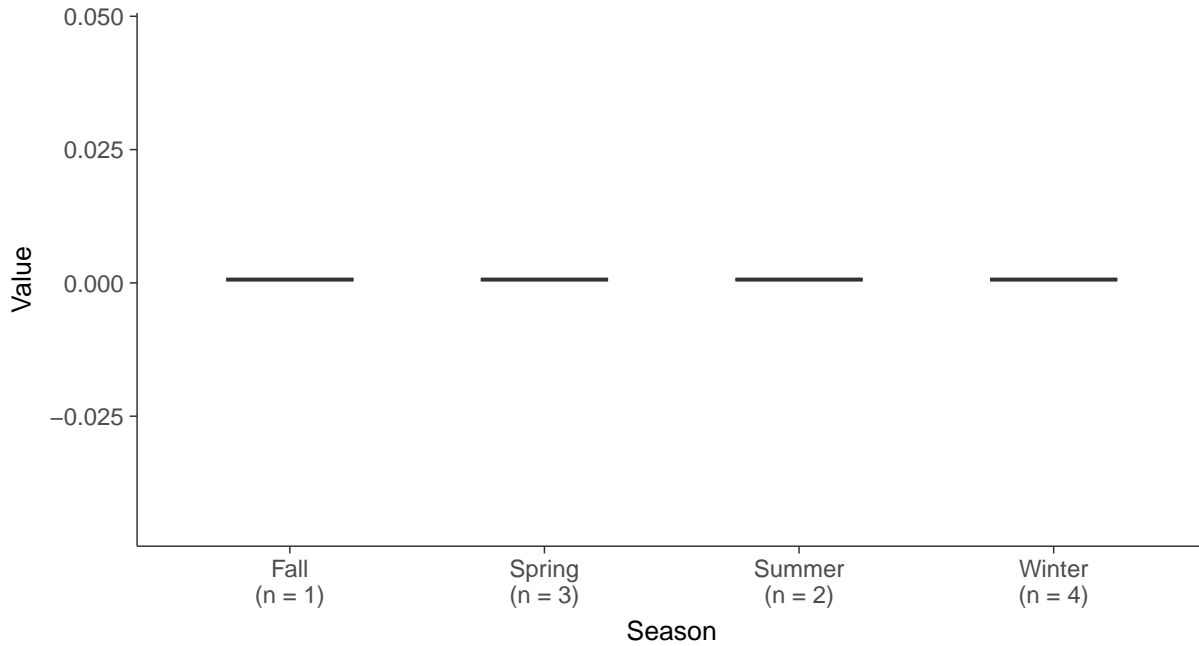
Boxplot

Vanadium, MW-31 (mg/L)



Boxplot by Season

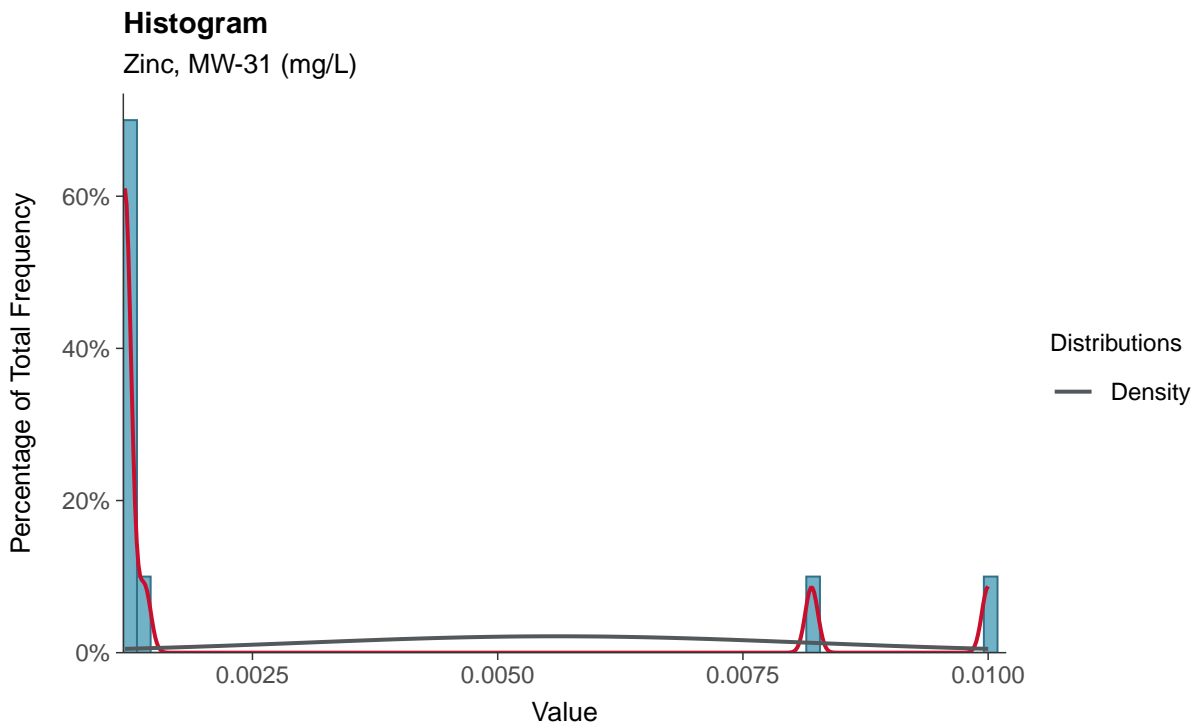
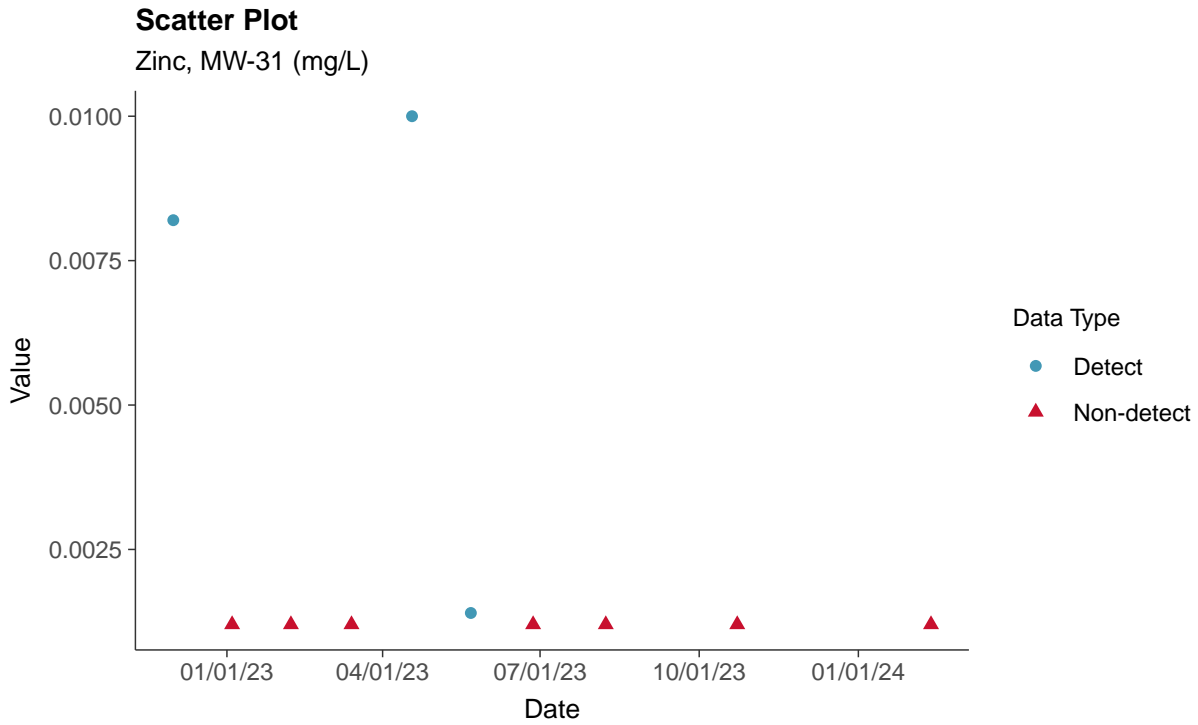
Vanadium, MW-31 (mg/L)





Part 115: Zinc, MW-31

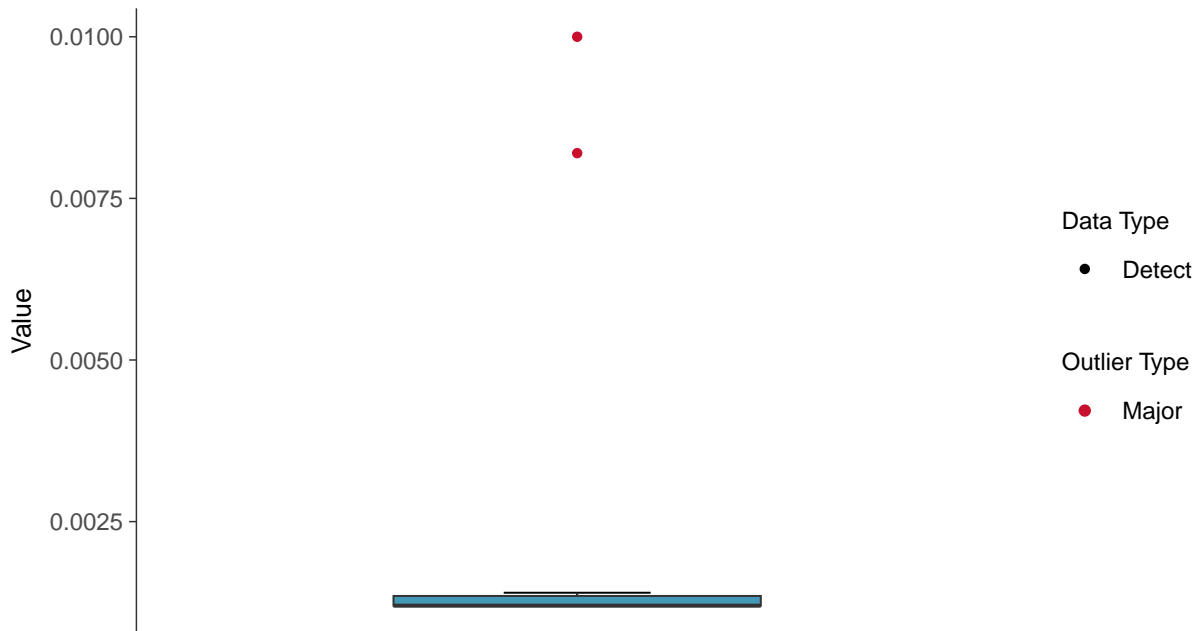
ID: 1_41_6_130





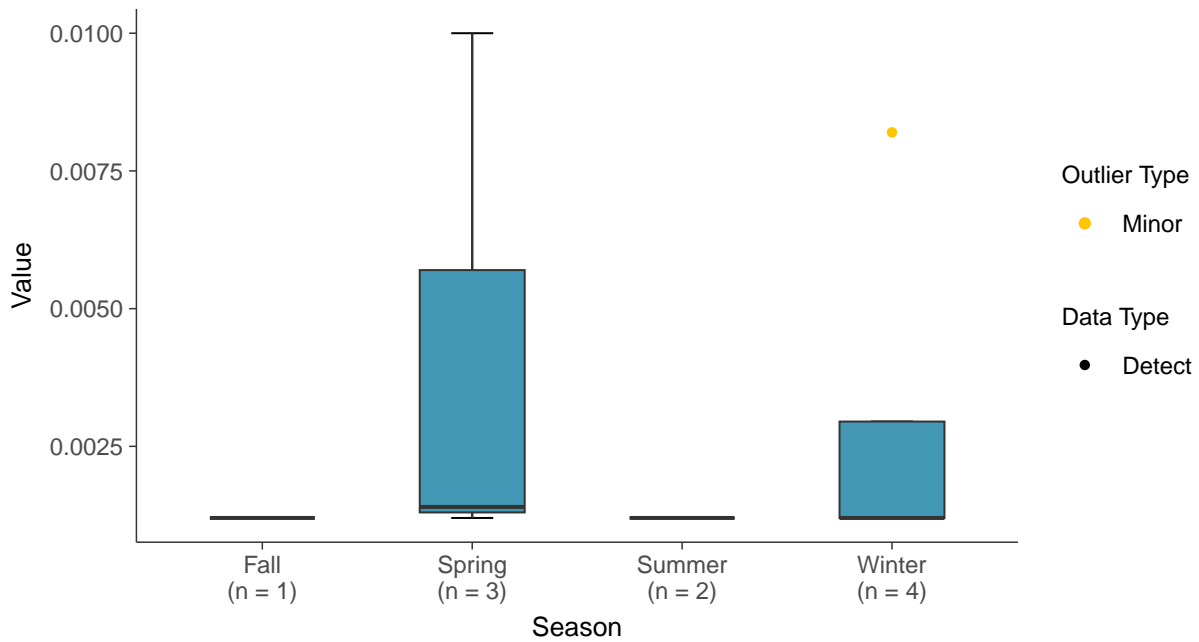
Boxplot

Zinc, MW-31 (mg/L)



Boxplot by Season

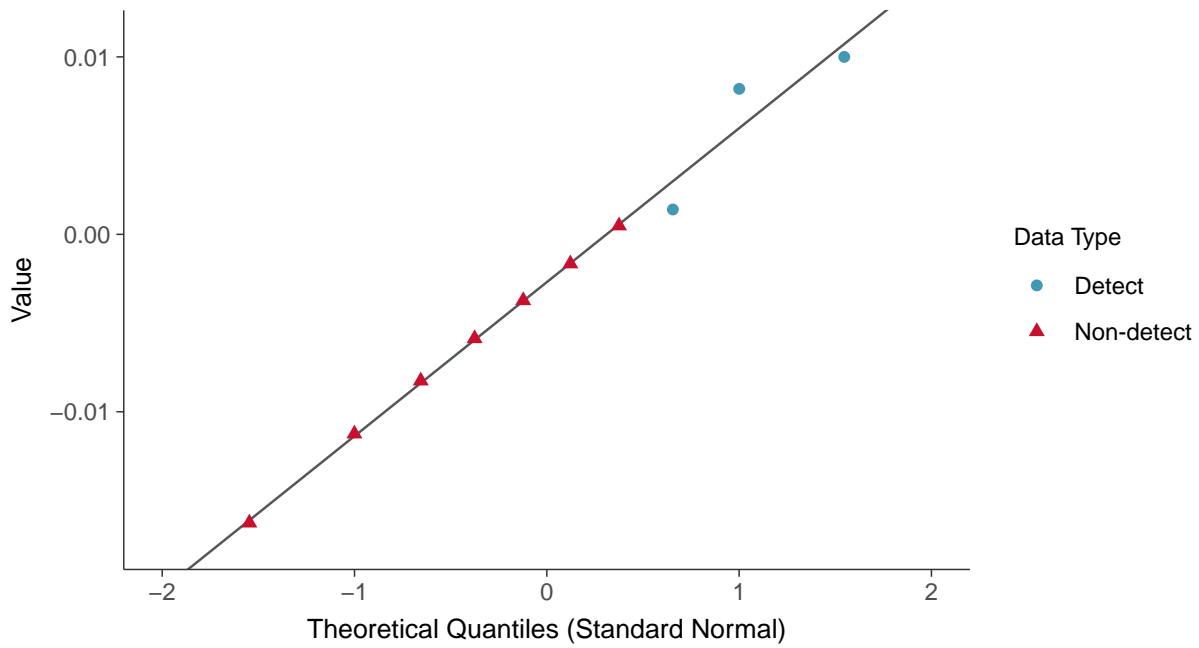
Zinc, MW-31 (mg/L)





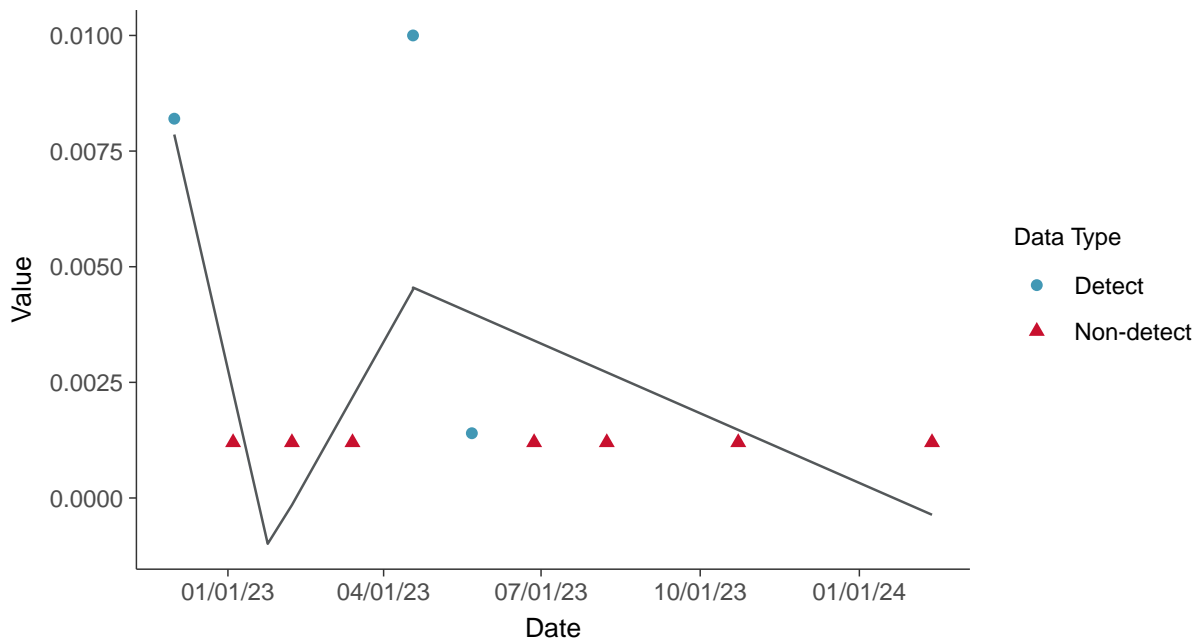
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-31 (mg/L)



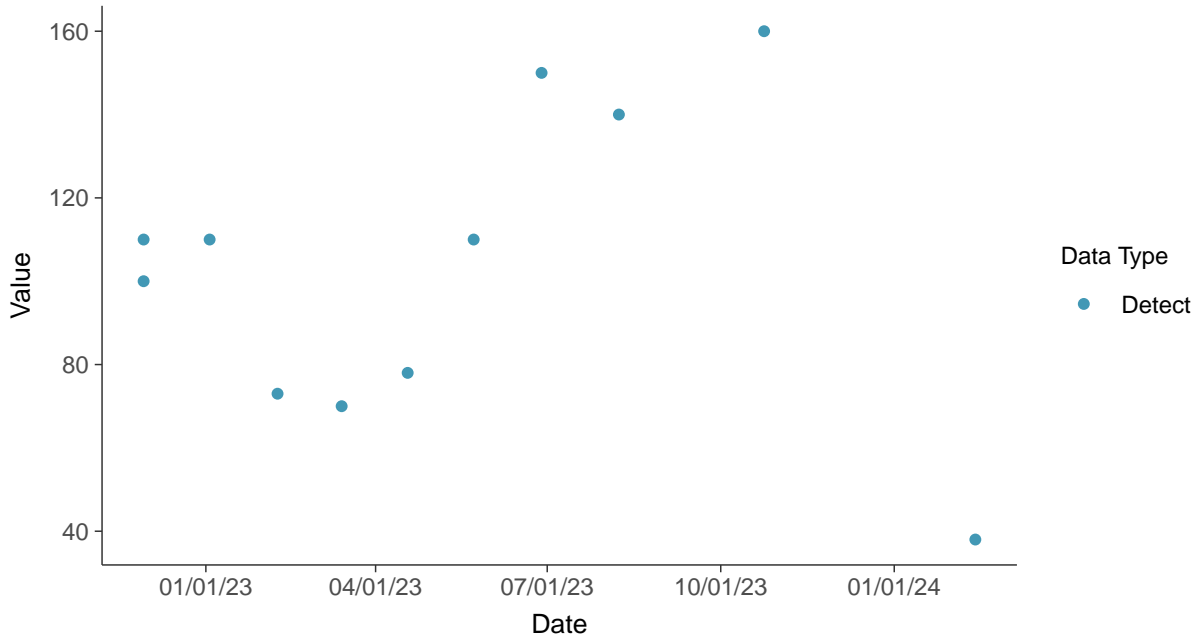


Appendix III: Boron, MW-01R

ID: 2_11_4_105

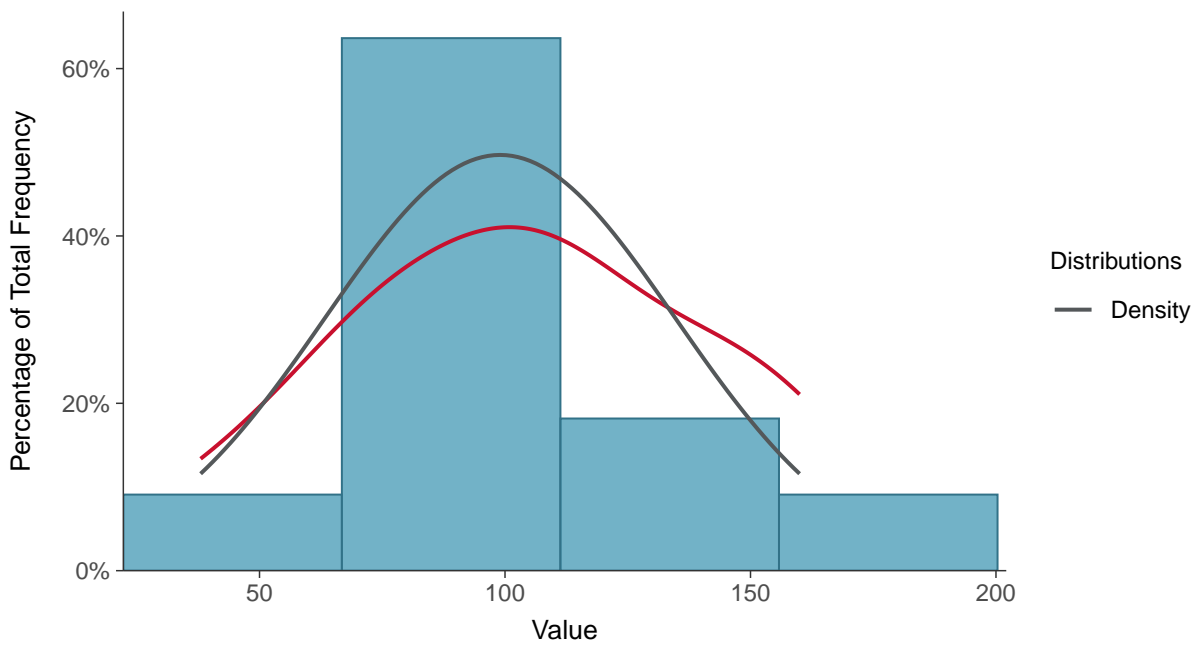
Scatter Plot

Boron, MW-01R (mg/L)



Histogram

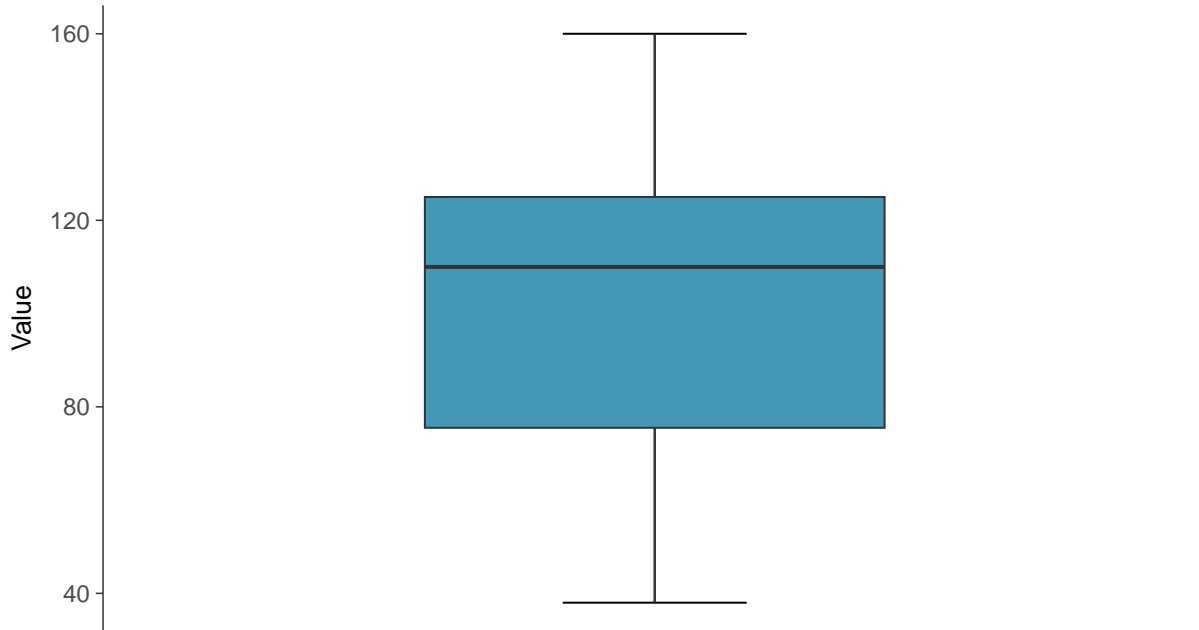
Boron, MW-01R (mg/L)





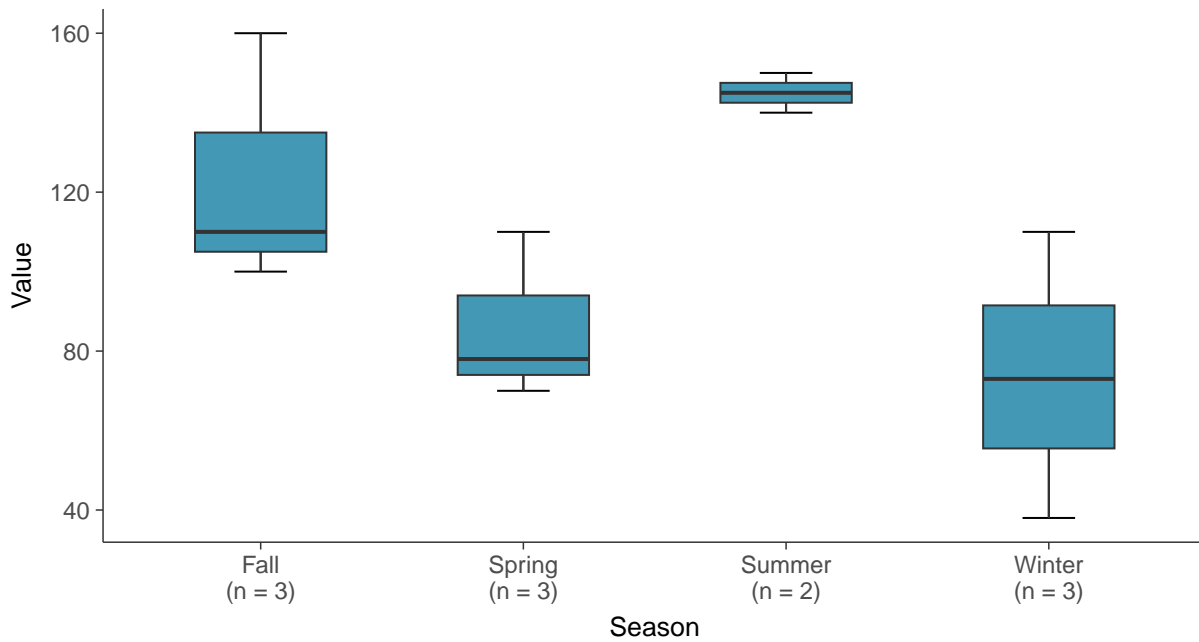
Boxplot

Boron, MW-01R (mg/L)



Boxplot by Season

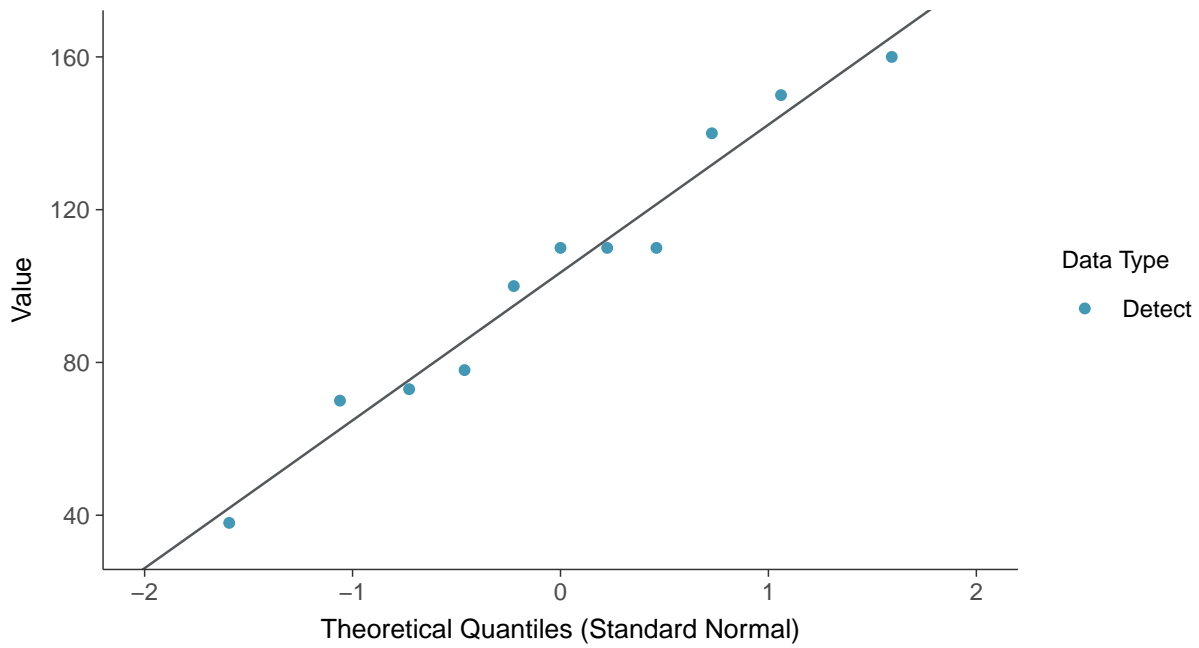
Boron, MW-01R (mg/L)





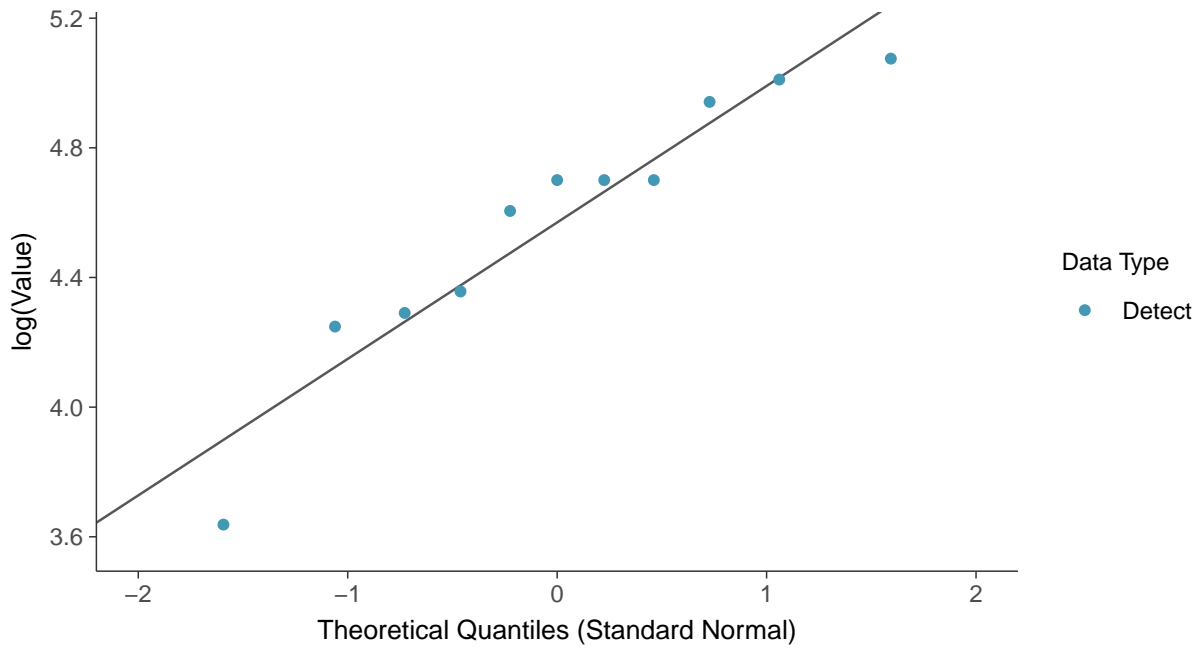
Normal Q-Q plot

Boron, MW-01R (mg/L)



Lognormal Q-Q plot

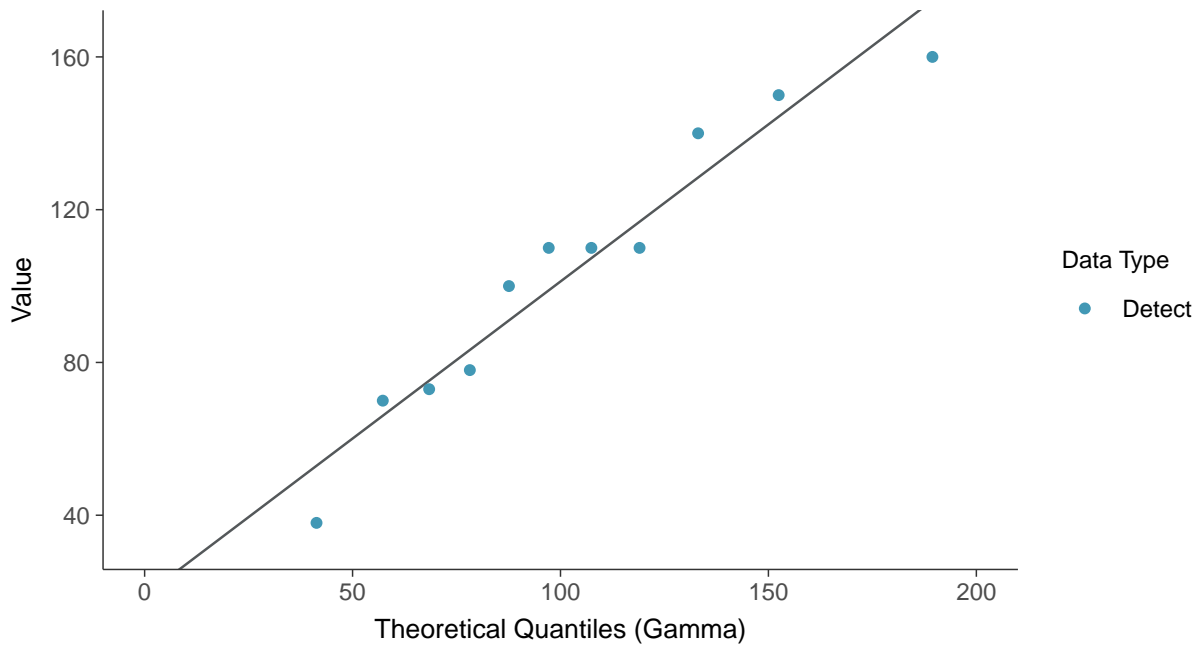
Boron, MW-01R (mg/L)





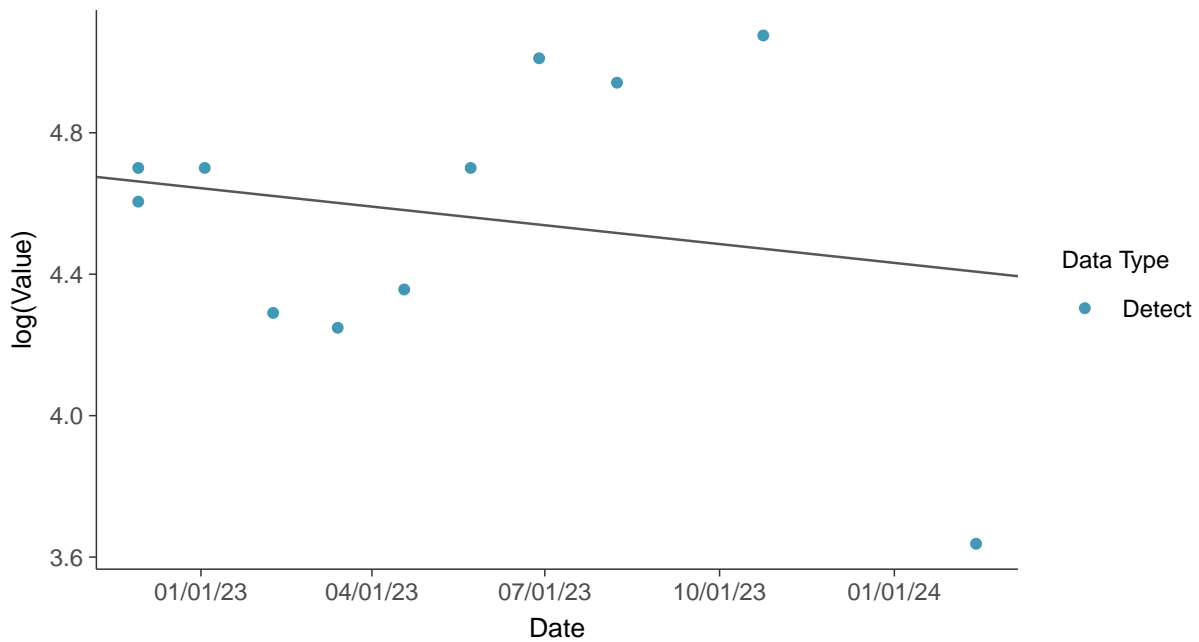
Gamma Q-Q plot

Boron, MW-01R (mg/L)



Trend Regression: Lognormal MLE

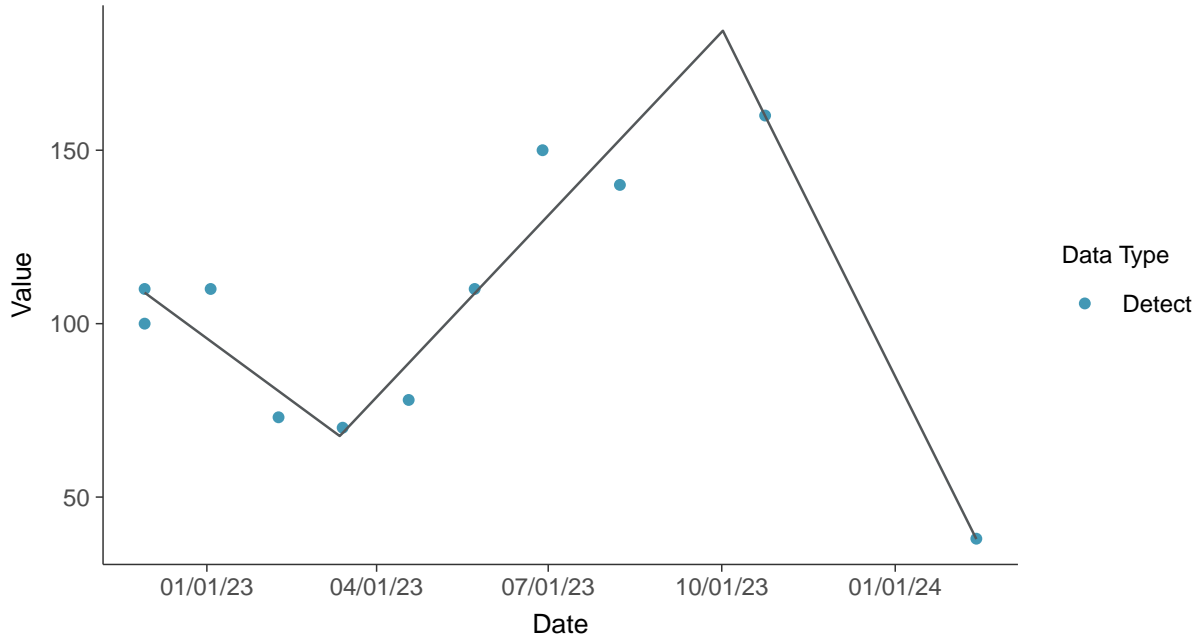
Boron, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-01R (mg/L)



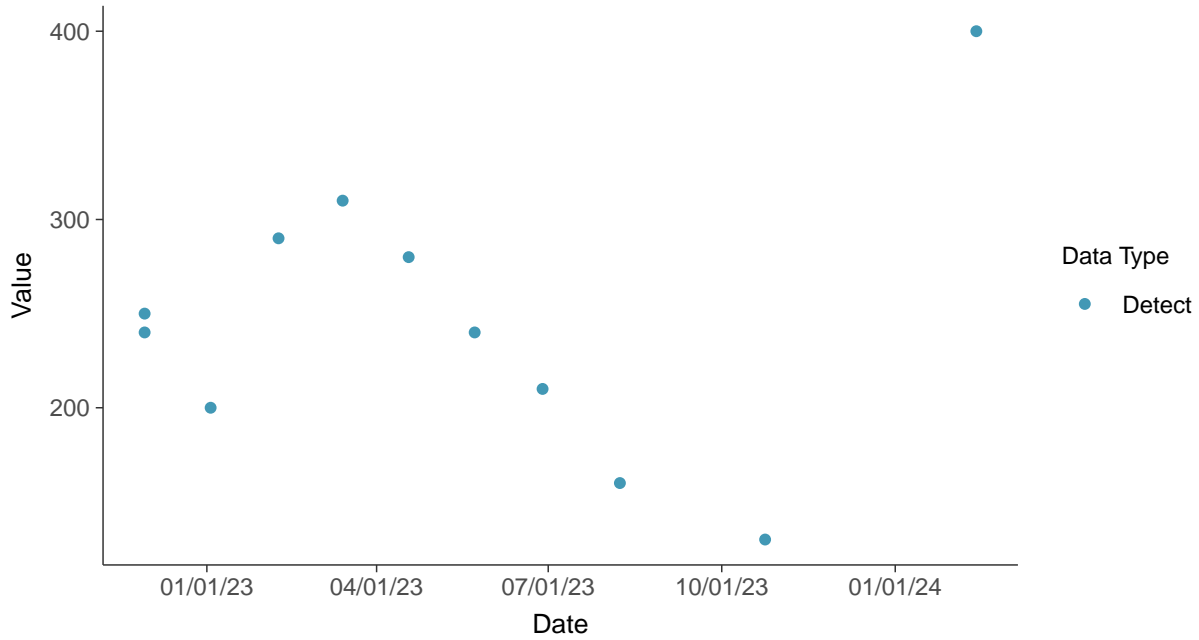


Appendix III: Calcium, MW-01R

ID: 2_11_4_107

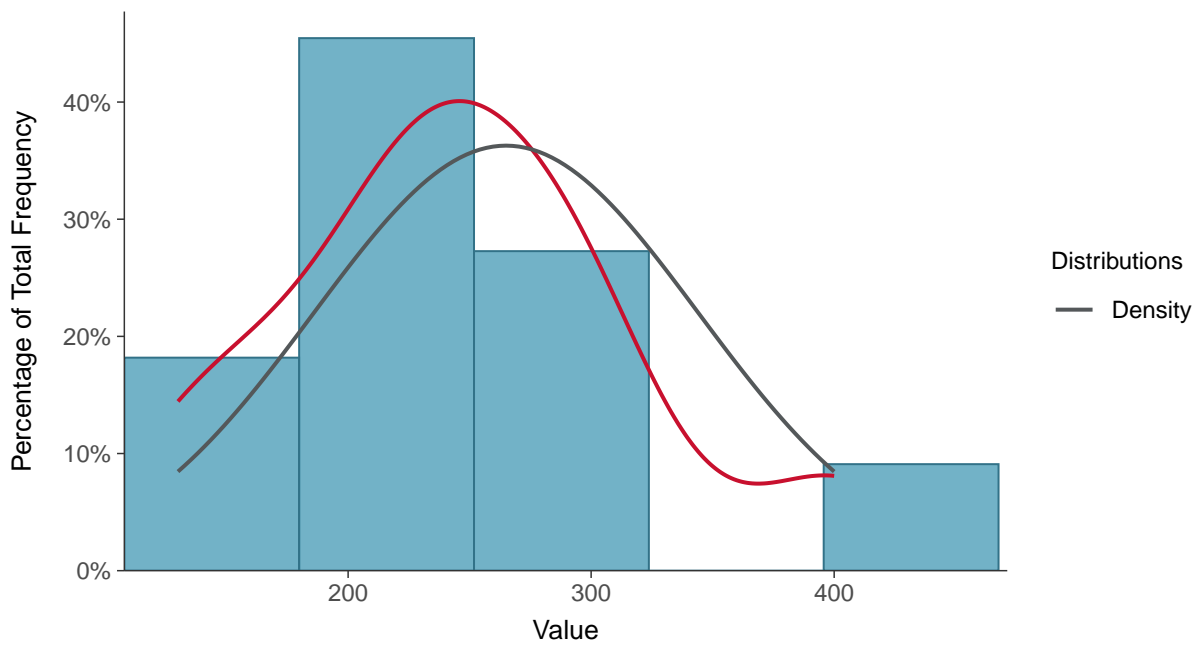
Scatter Plot

Calcium, MW-01R (mg/L)



Histogram

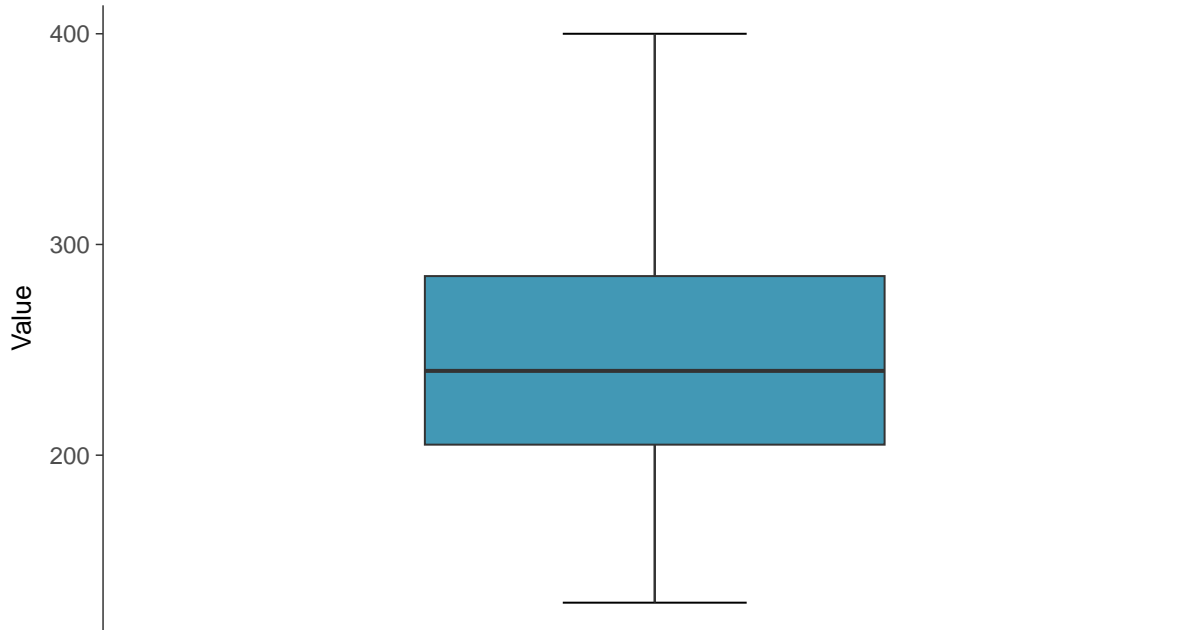
Calcium, MW-01R (mg/L)





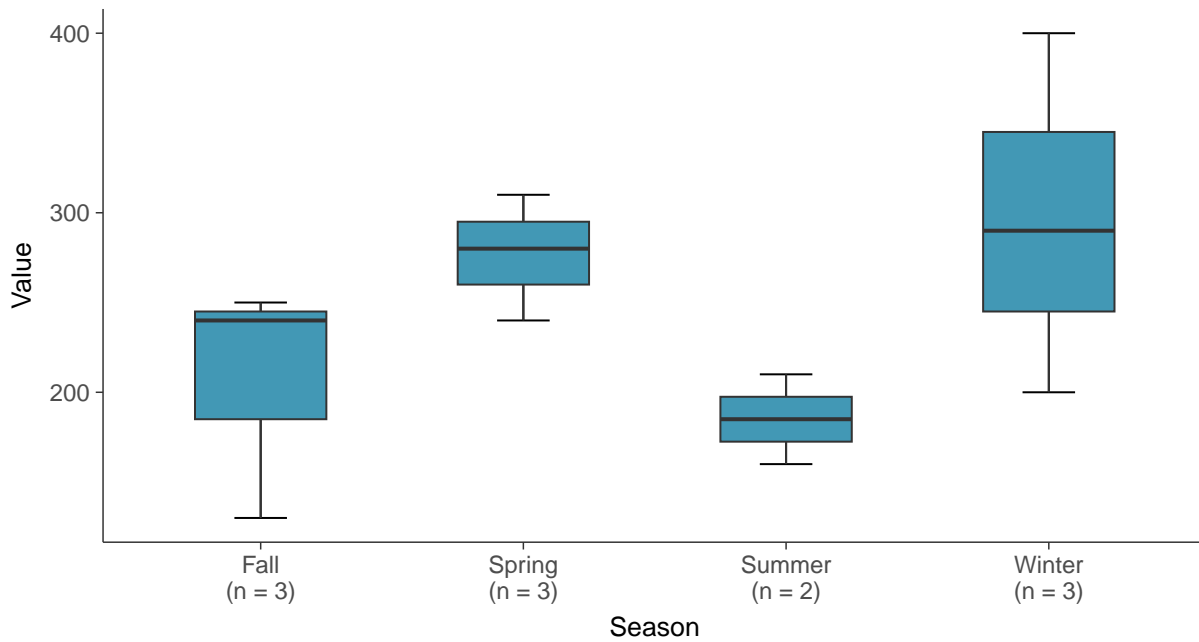
Boxplot

Calcium, MW-01R (mg/L)



Boxplot by Season

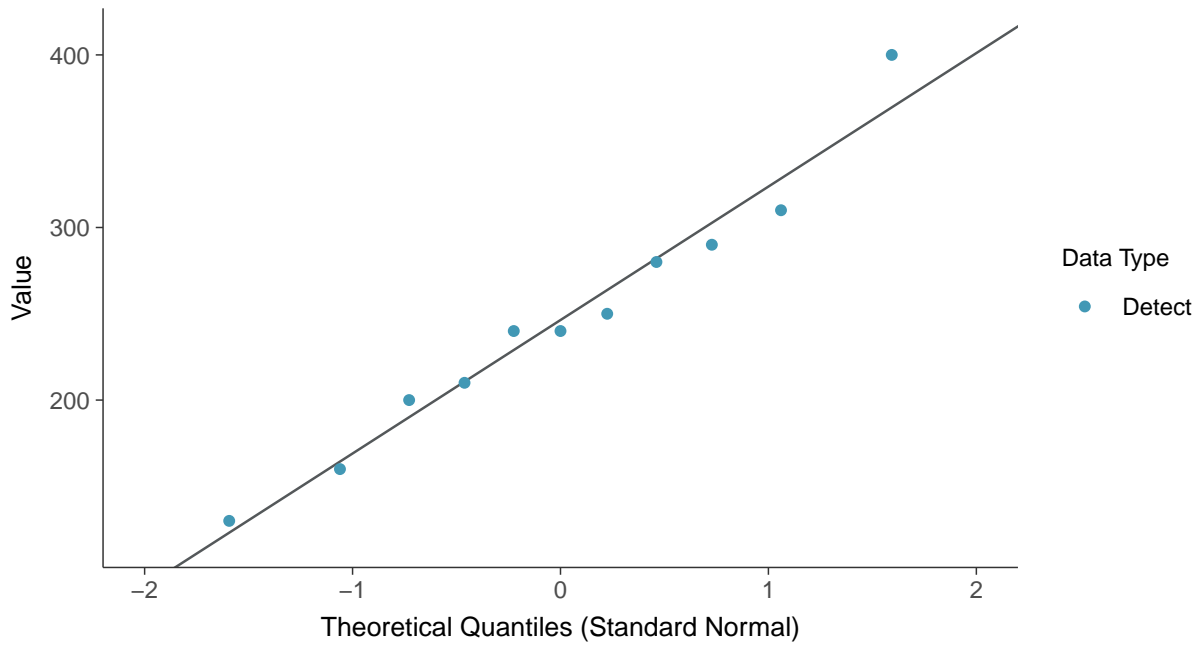
Calcium, MW-01R (mg/L)





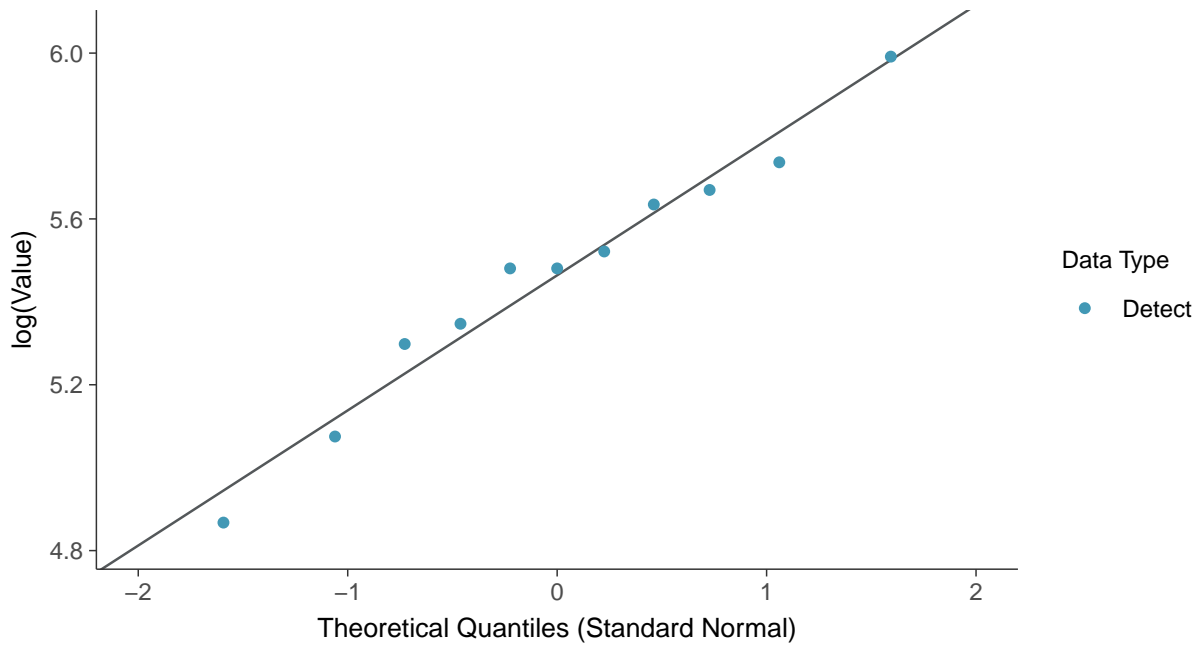
Normal Q-Q plot

Calcium, MW-01R (mg/L)



Lognormal Q-Q plot

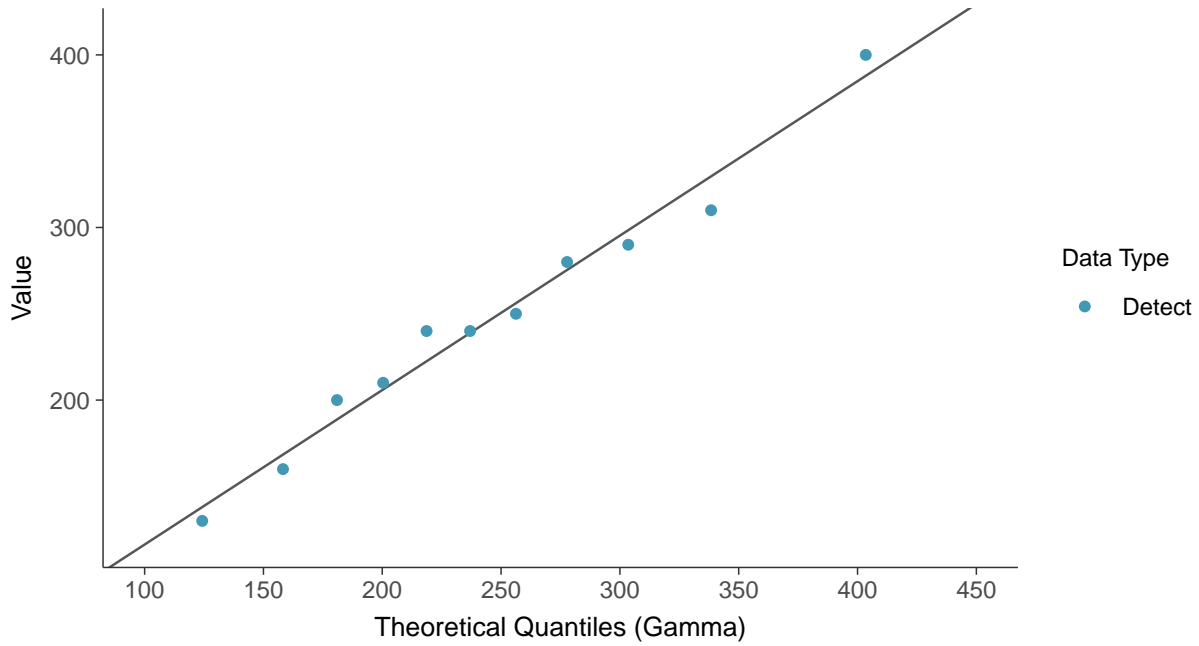
Calcium, MW-01R (mg/L)





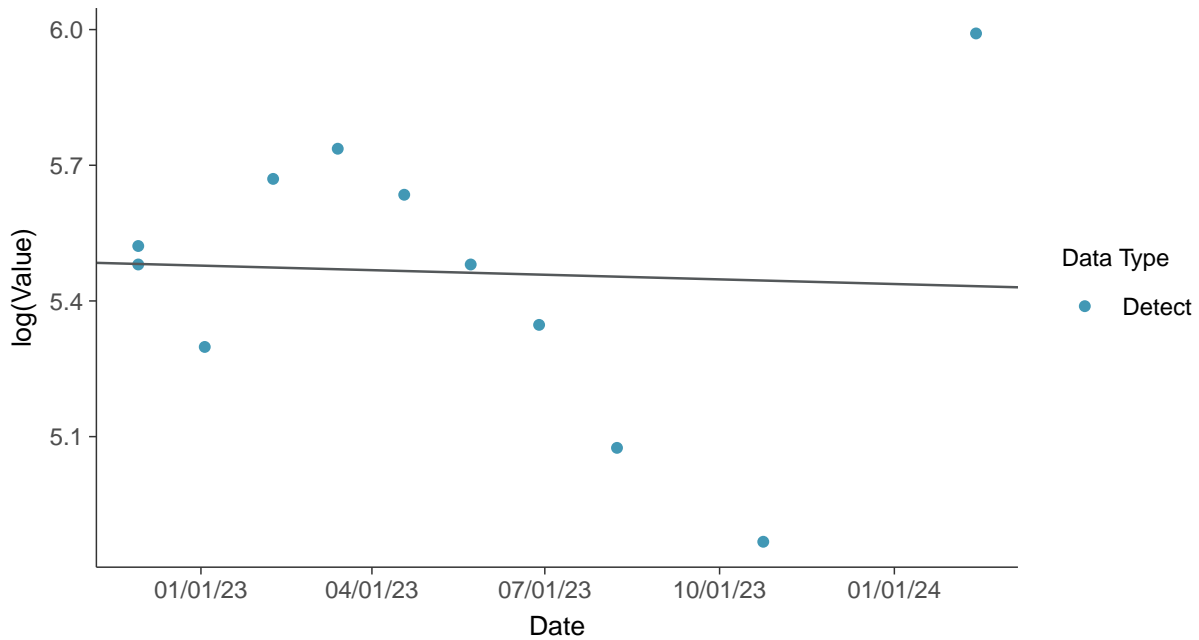
Gamma Q-Q plot

Calcium, MW-01R (mg/L)



Trend Regression: Lognormal MLE

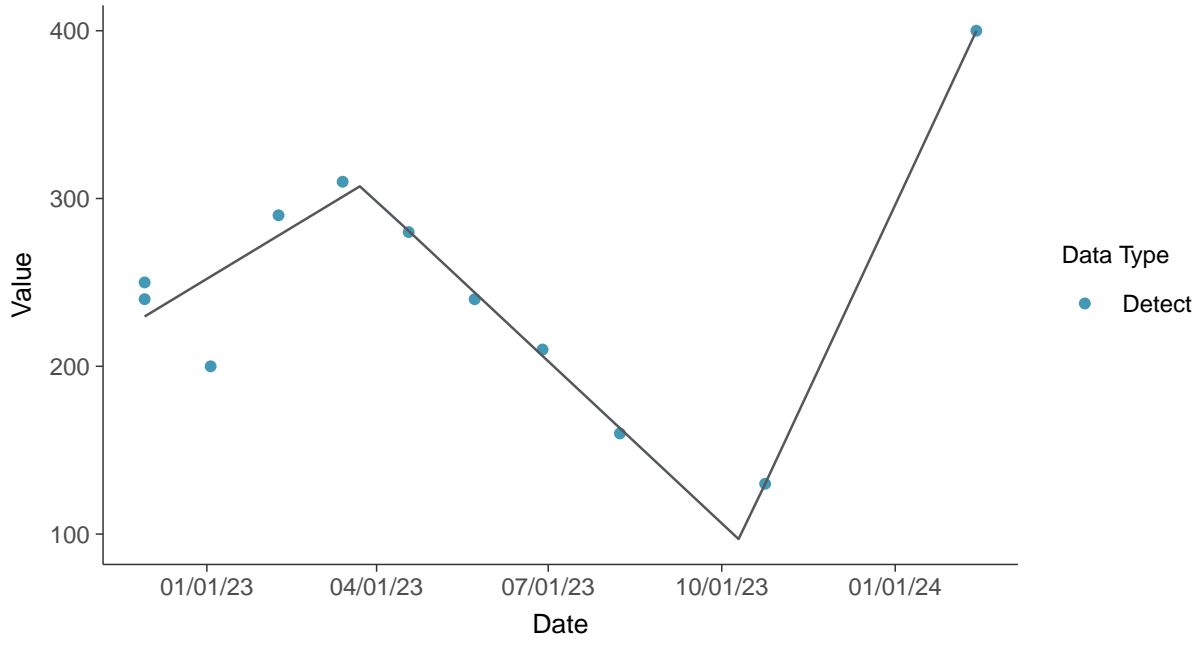
Calcium, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-01R (mg/L)



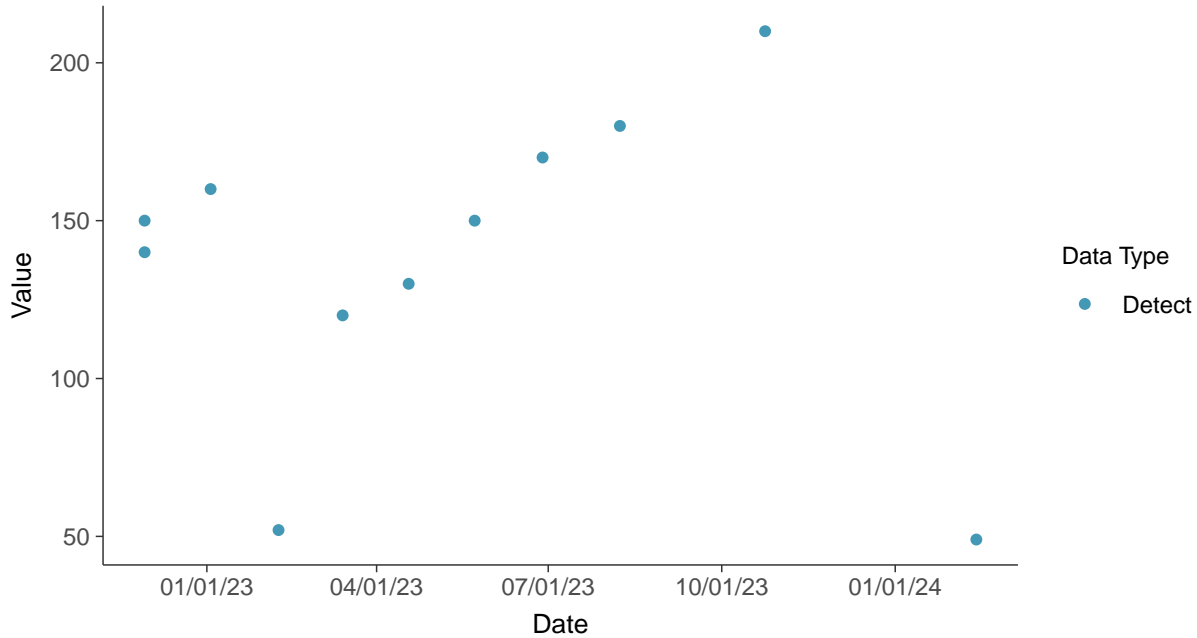


Appendix III: Chloride (as Cl), MW-01R

ID: 2_11_4_108

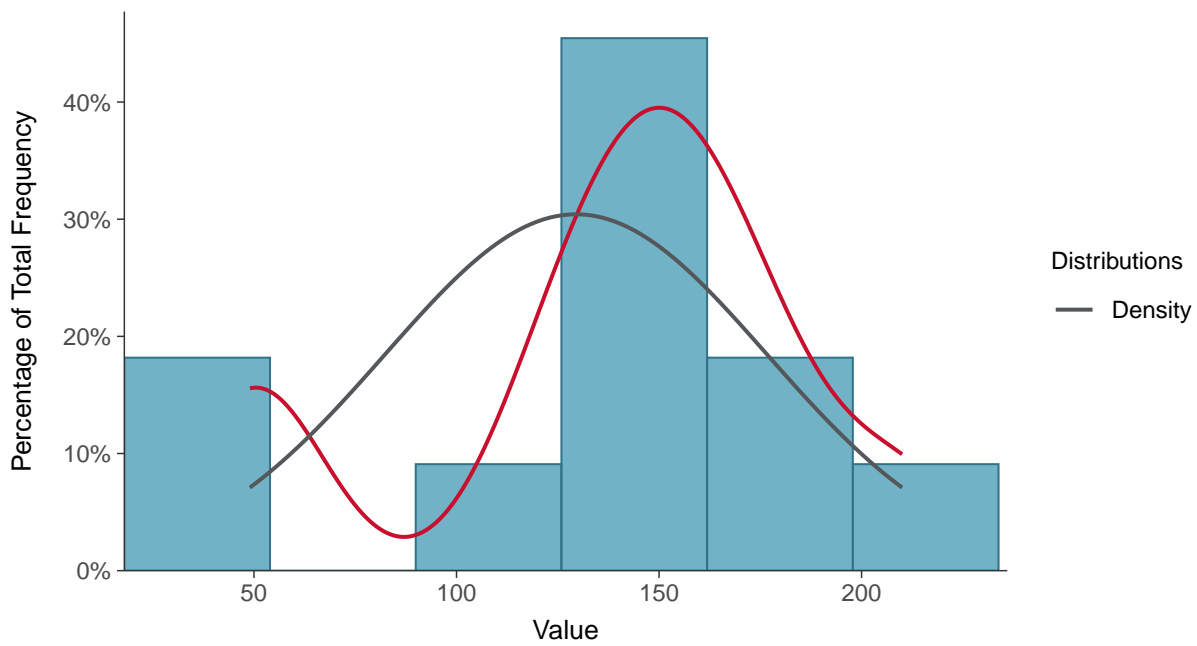
Scatter Plot

Chloride (as Cl), MW-01R (mg/L)



Histogram

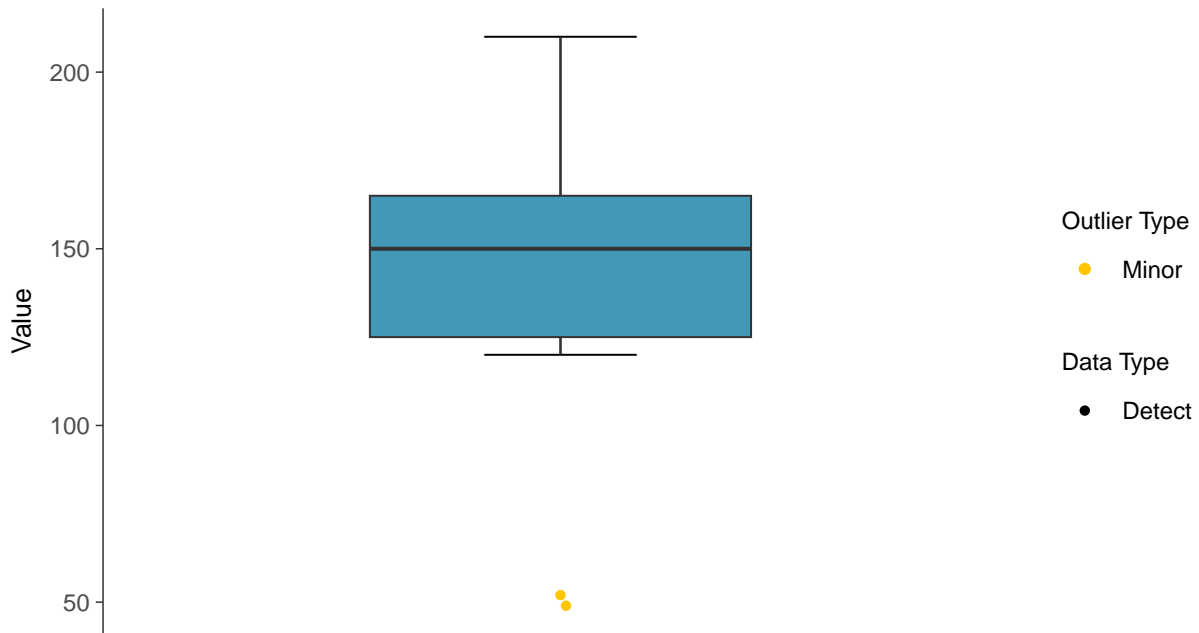
Chloride (as Cl), MW-01R (mg/L)





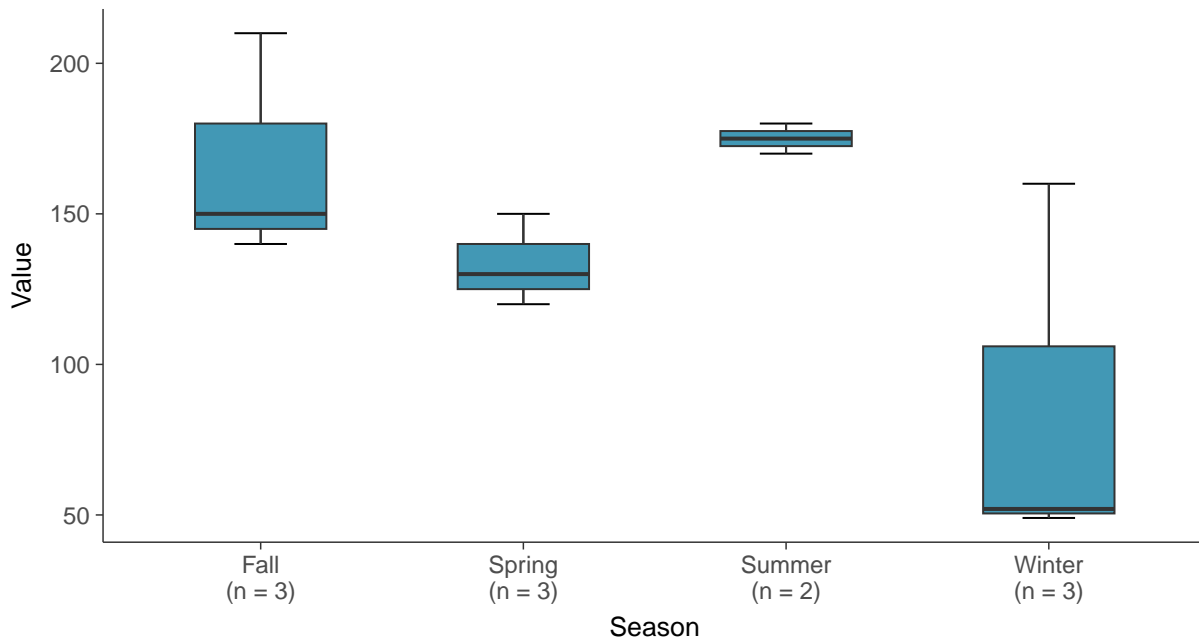
Boxplot

Chloride (as Cl), MW-01R (mg/L)



Boxplot by Season

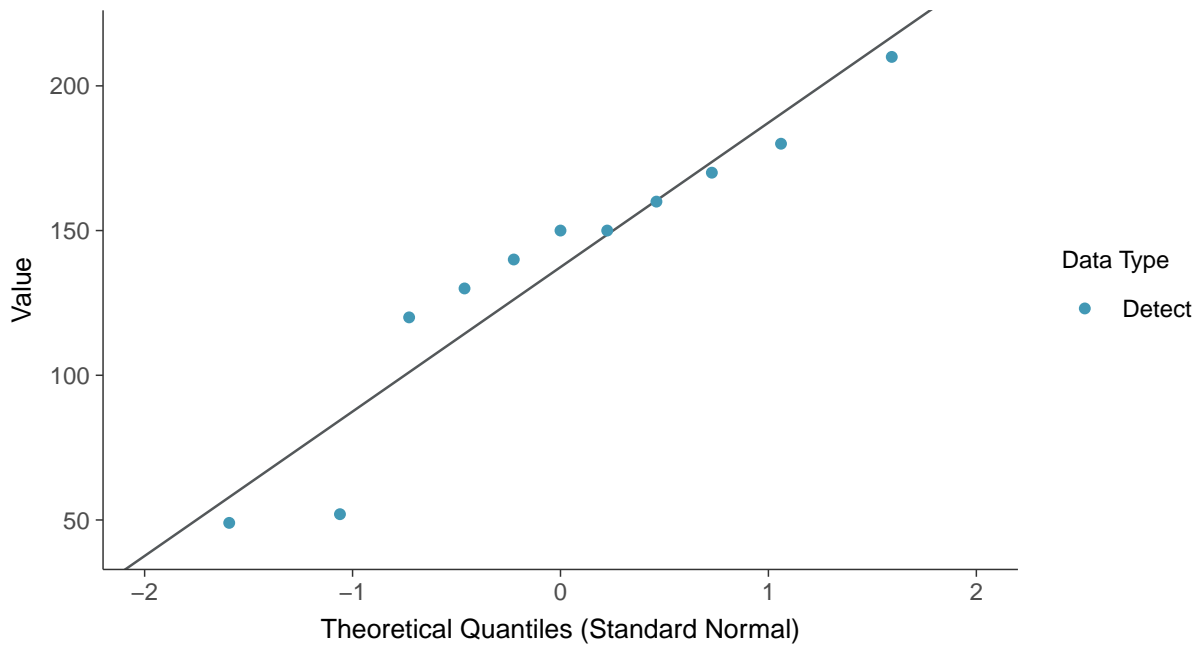
Chloride (as Cl), MW-01R (mg/L)





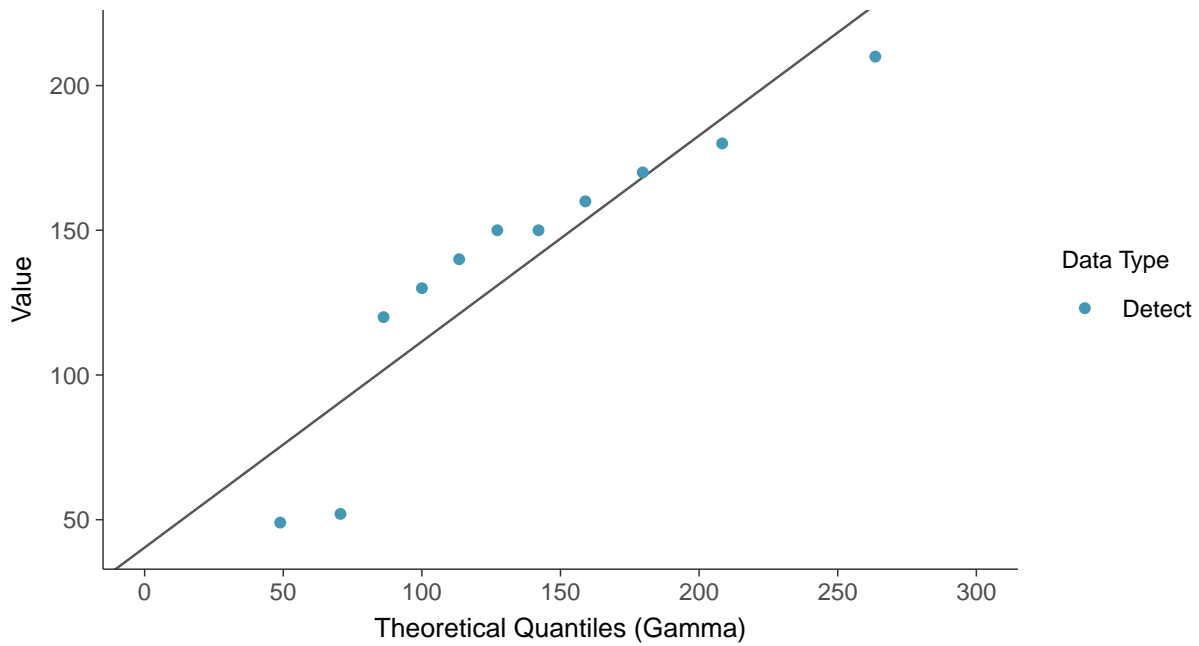
Normal Q-Q plot

Chloride (as Cl), MW-01R (mg/L)



Gamma Q-Q plot

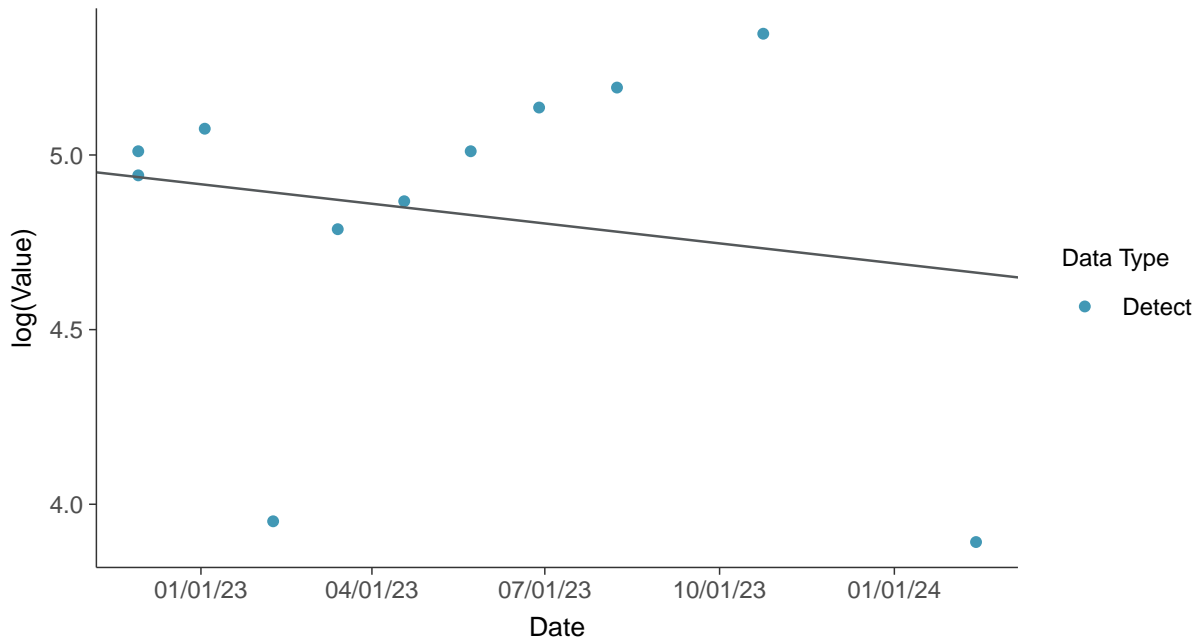
Chloride (as Cl), MW-01R (mg/L)





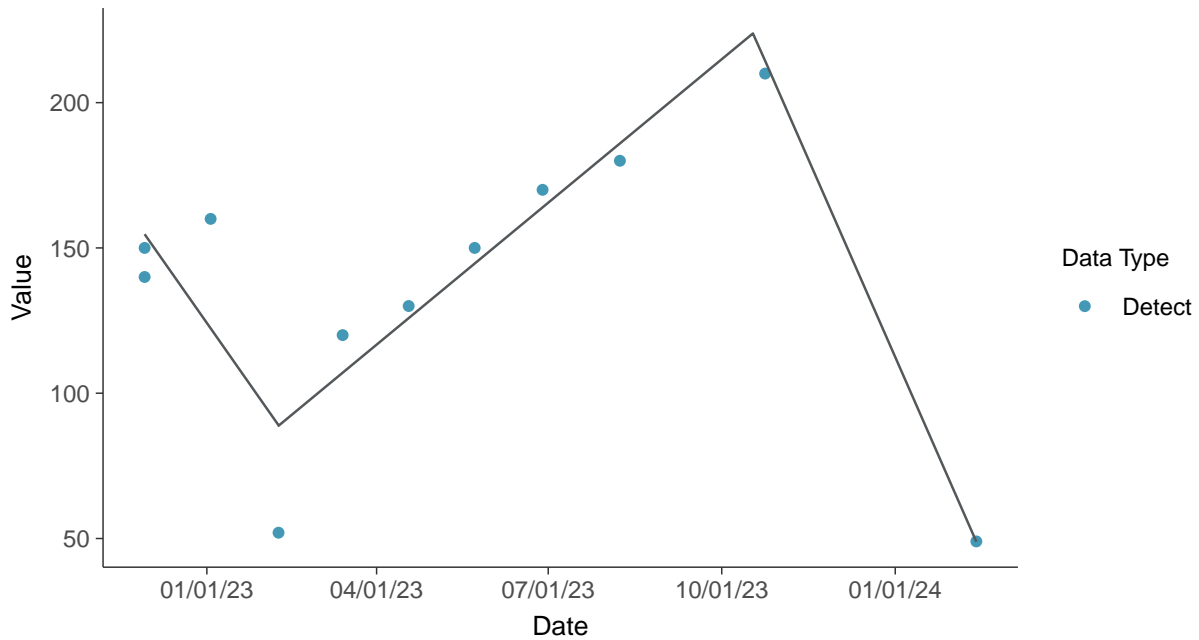
Trend Regression: Lognormal MLE

Chloride (as Cl), MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

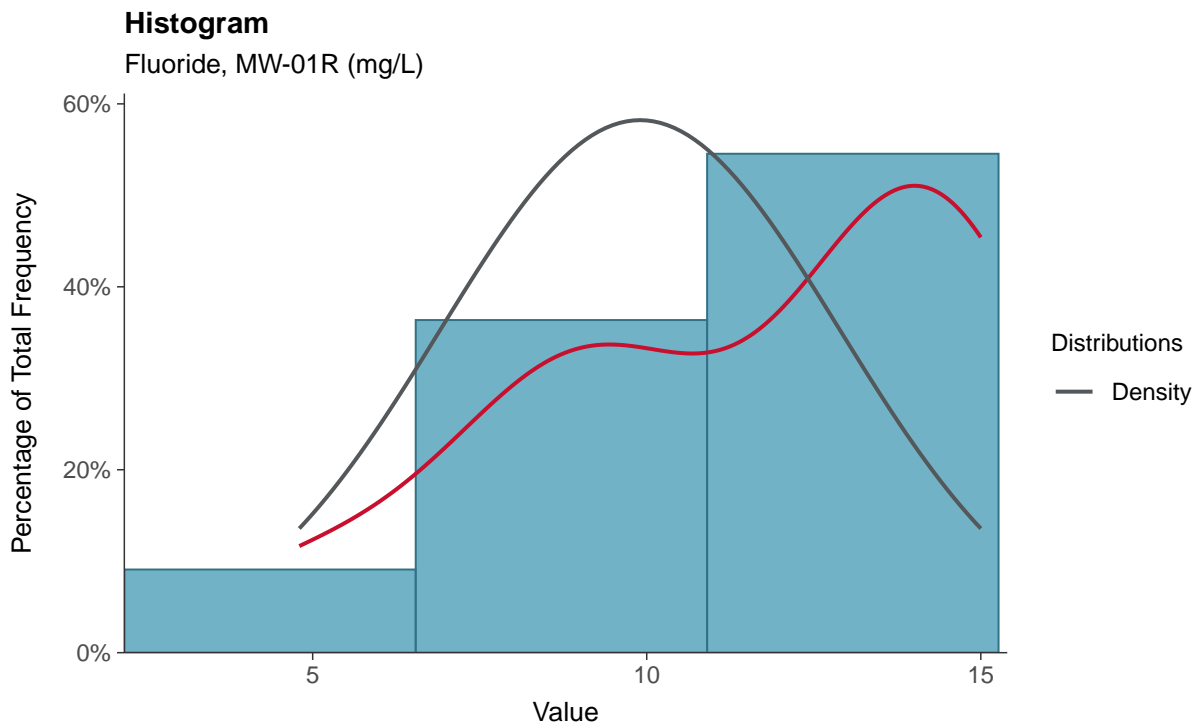
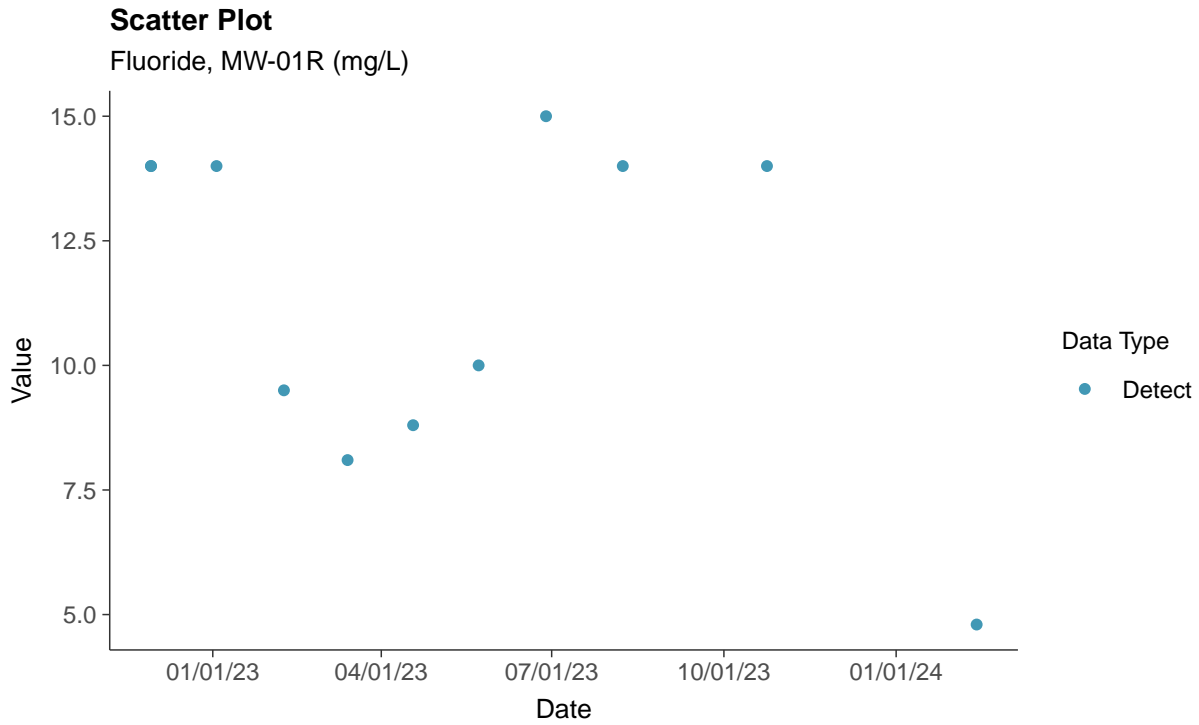
Chloride (as Cl), MW-01R (mg/L)





Appendix III: Fluoride, MW-01R

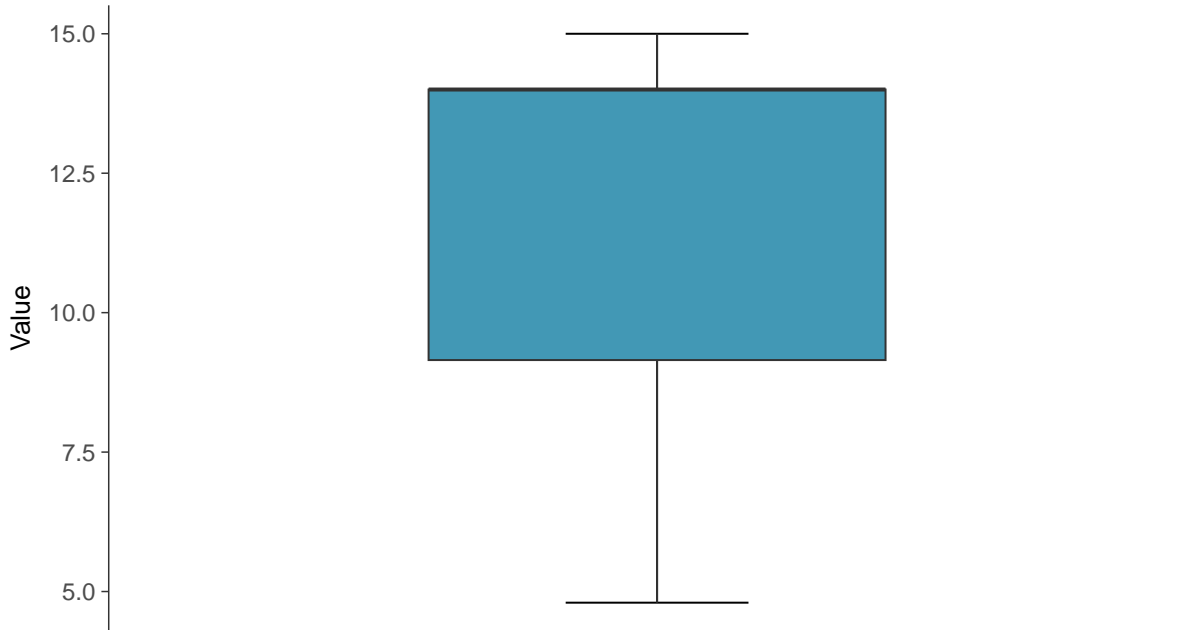
ID: 2_11_4_112





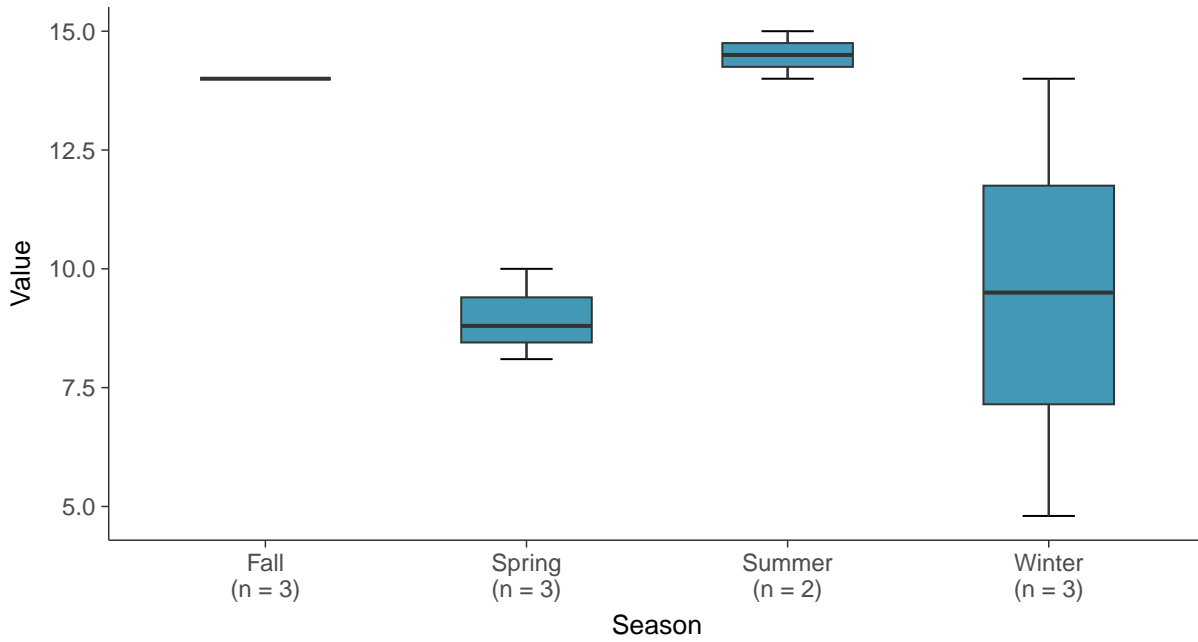
Boxplot

Fluoride, MW-01R (mg/L)



Boxplot by Season

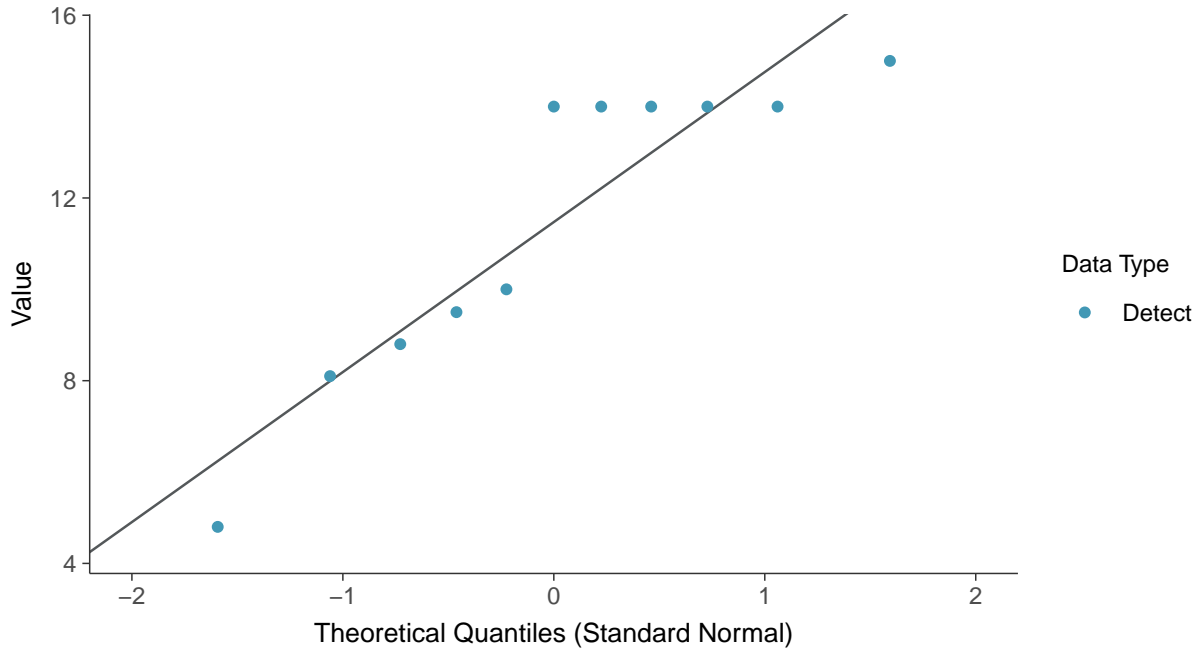
Fluoride, MW-01R (mg/L)





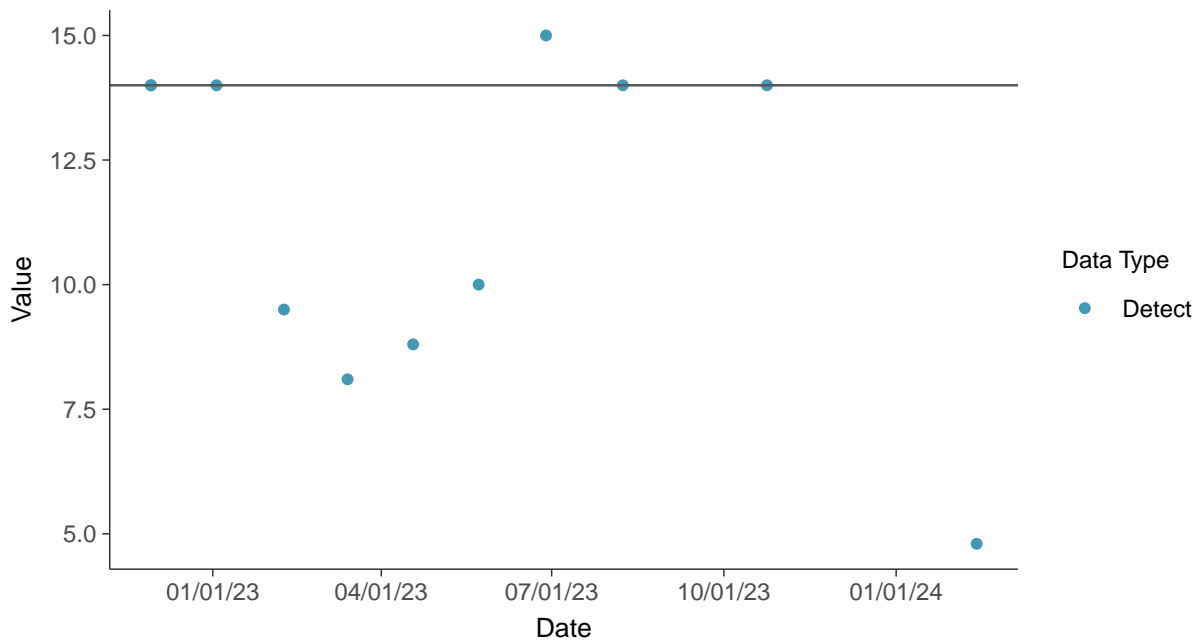
Normal Q-Q plot

Fluoride, MW-01R (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

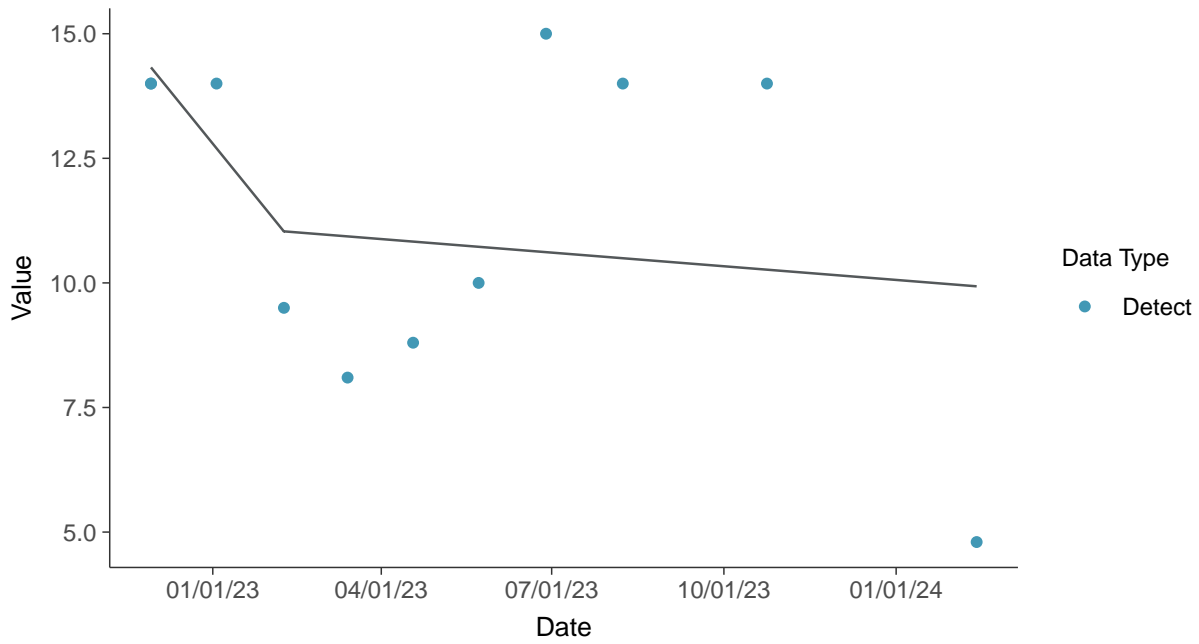
Fluoride, MW-01R (mg/L)





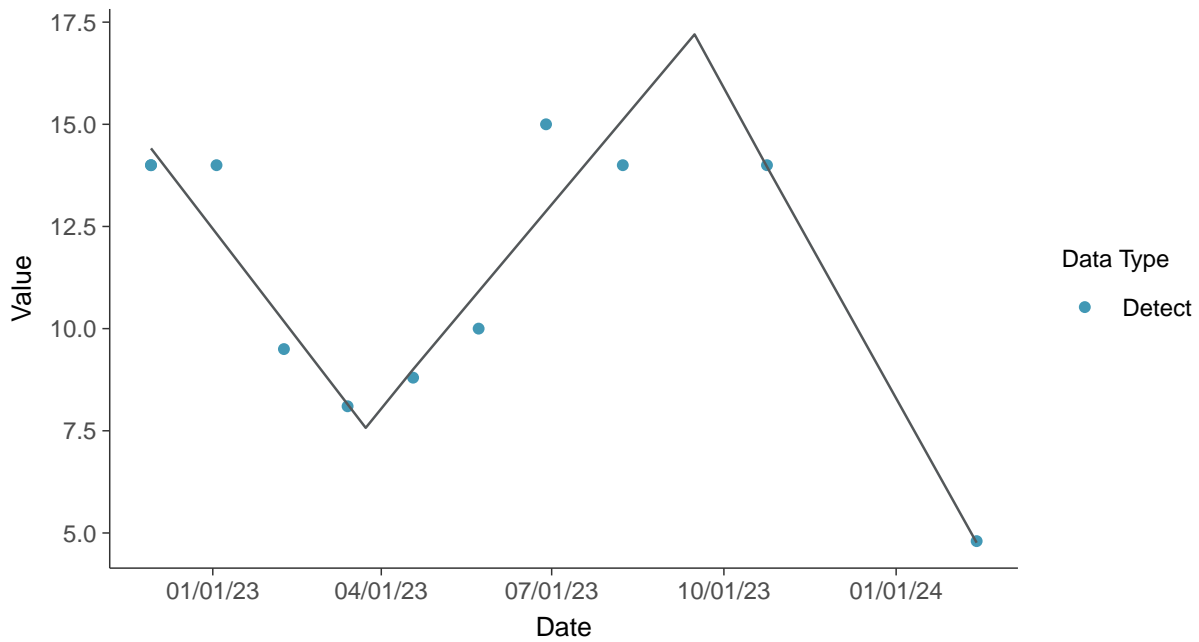
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-01R (mg/L)



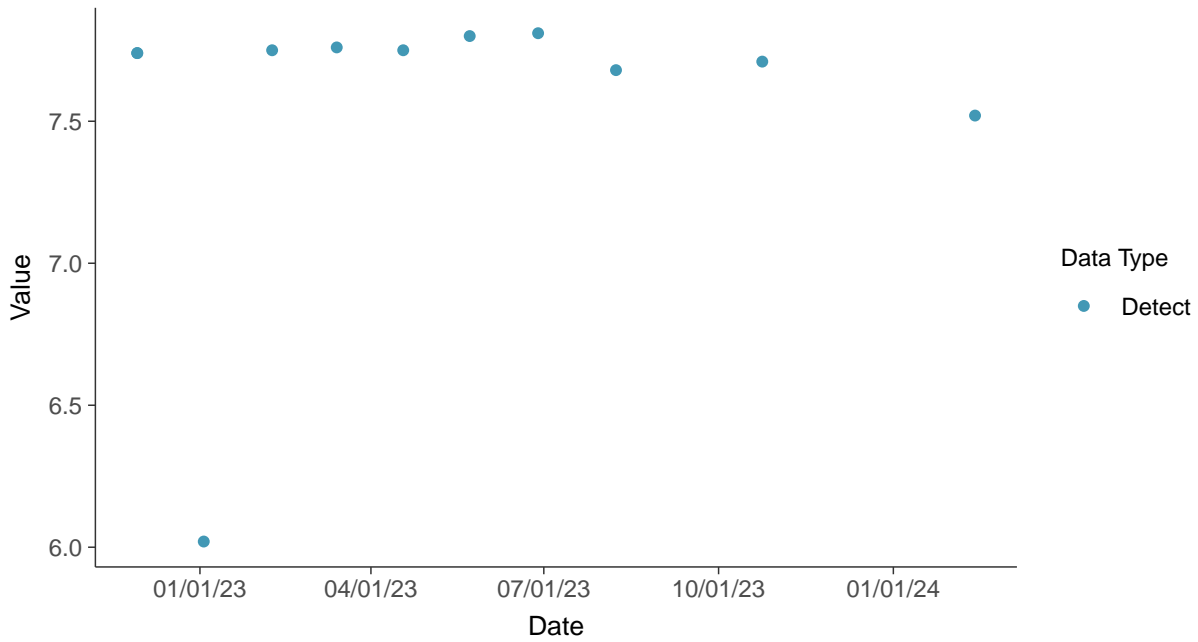


Appendix III: pH (field), MW-01R

ID: 2_11_4_120

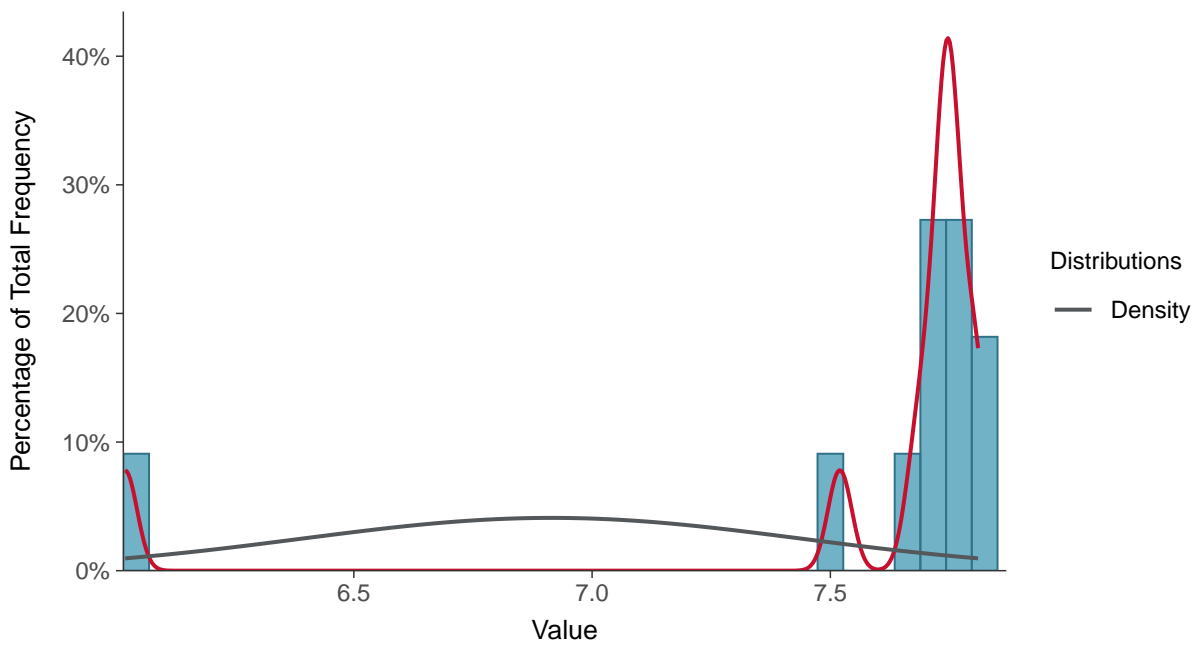
Scatter Plot

pH (field), MW-01R (su)



Histogram

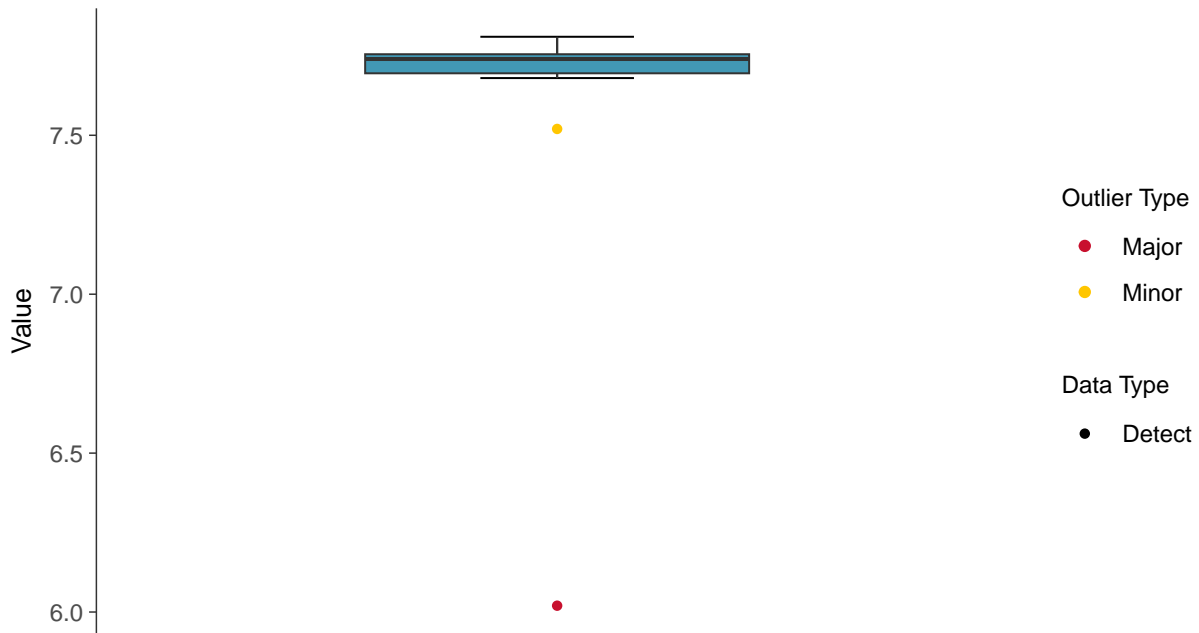
pH (field), MW-01R (su)





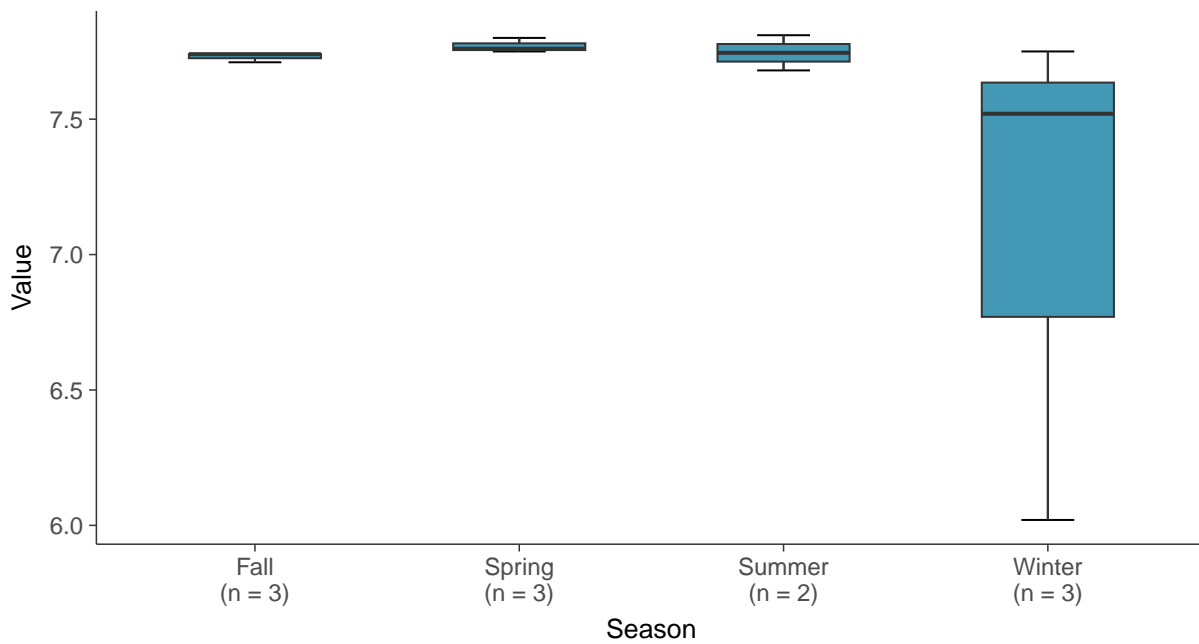
Boxplot

pH (field), MW-01R (su)



Boxplot by Season

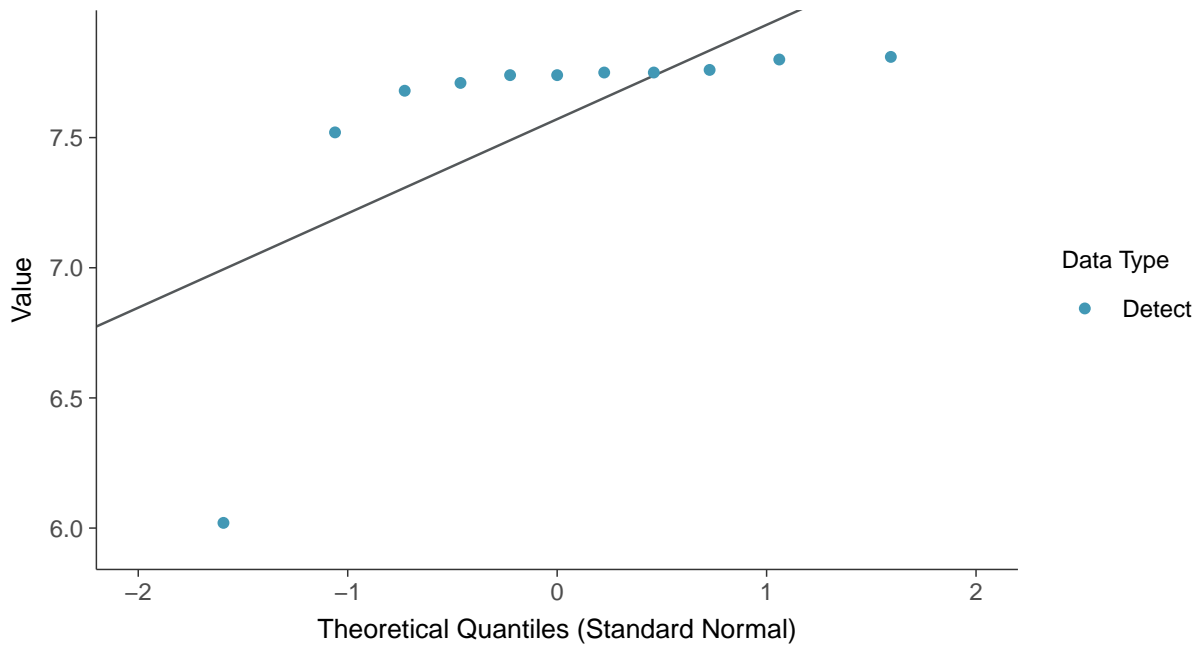
pH (field), MW-01R (su)





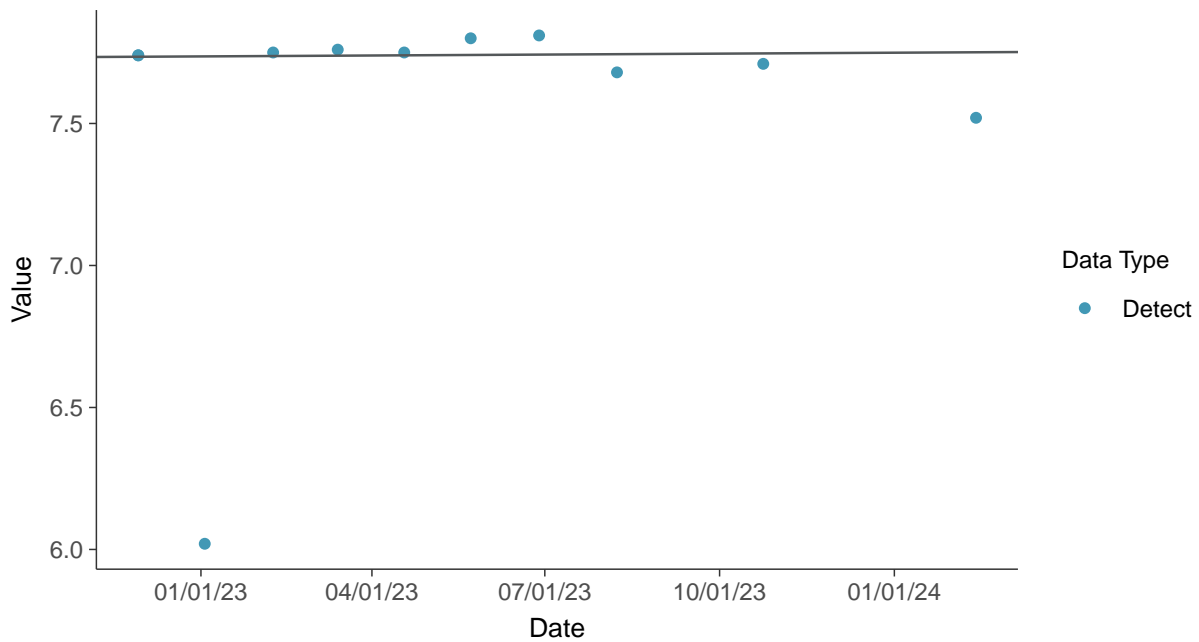
Normal Q-Q plot

pH (field), MW-01R (su)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (field), MW-01R (su)



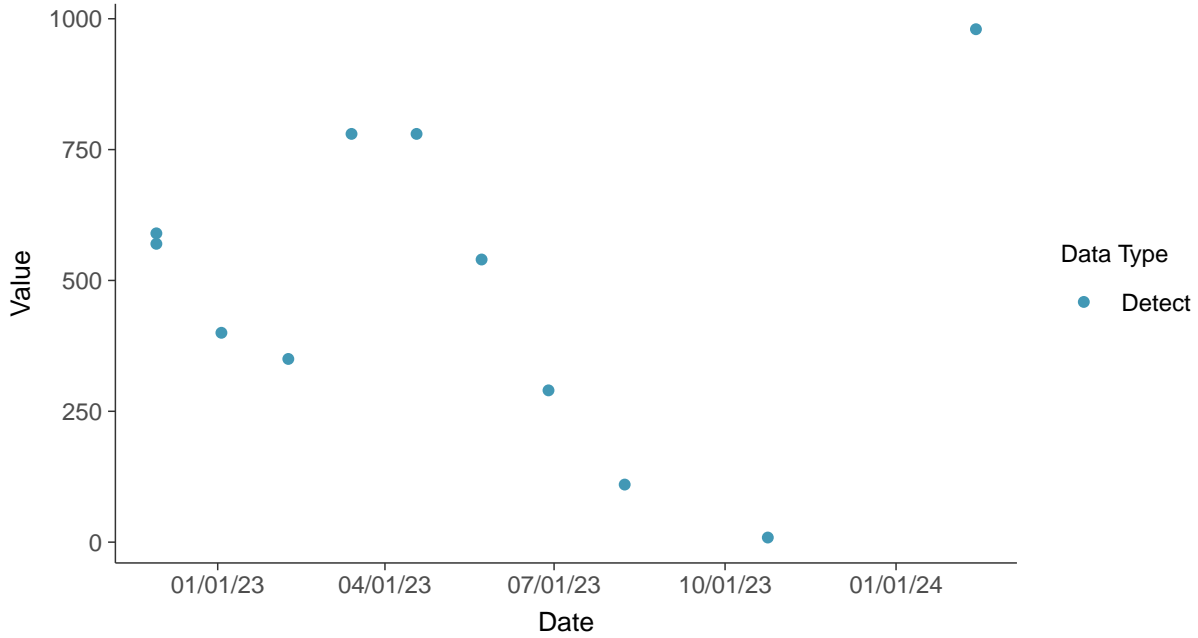


Appendix III: Sulfate (as SO₄), MW-01R

ID: 2_11_4_124

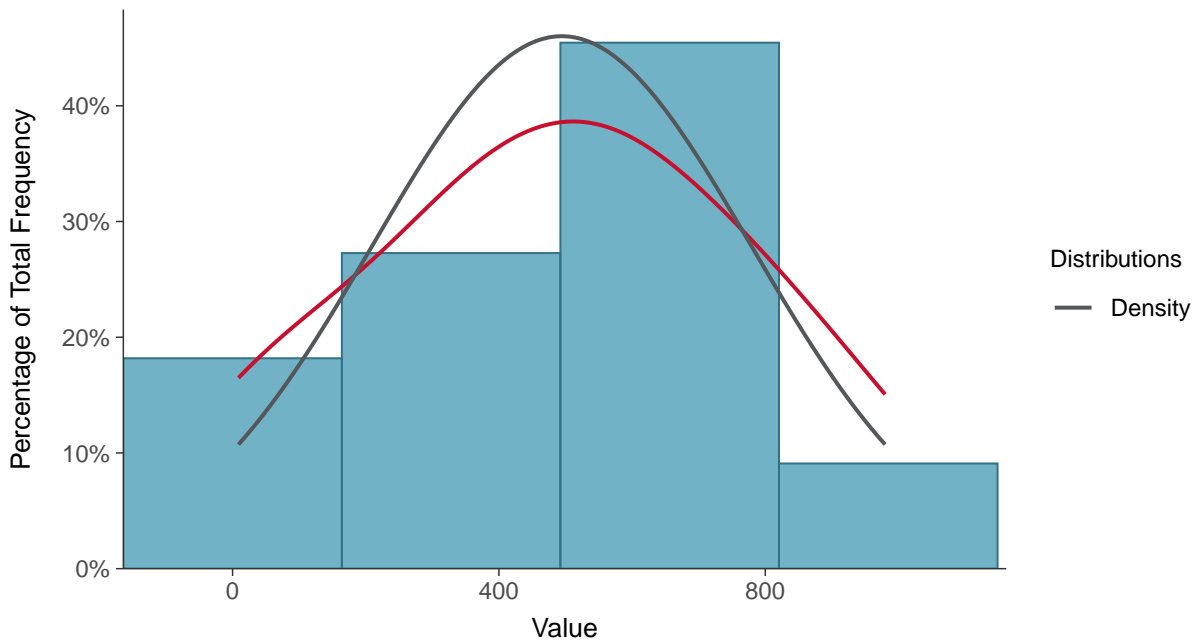
Scatter Plot

Sulfate (as SO₄), MW-01R (mg/L)



Histogram

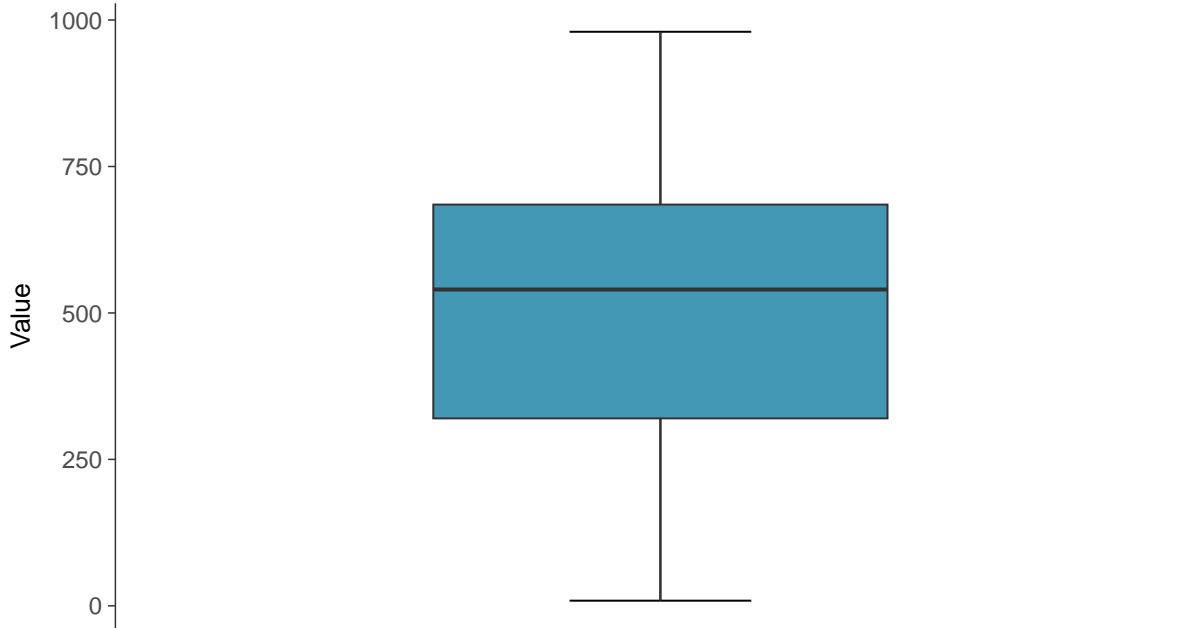
Sulfate (as SO₄), MW-01R (mg/L)





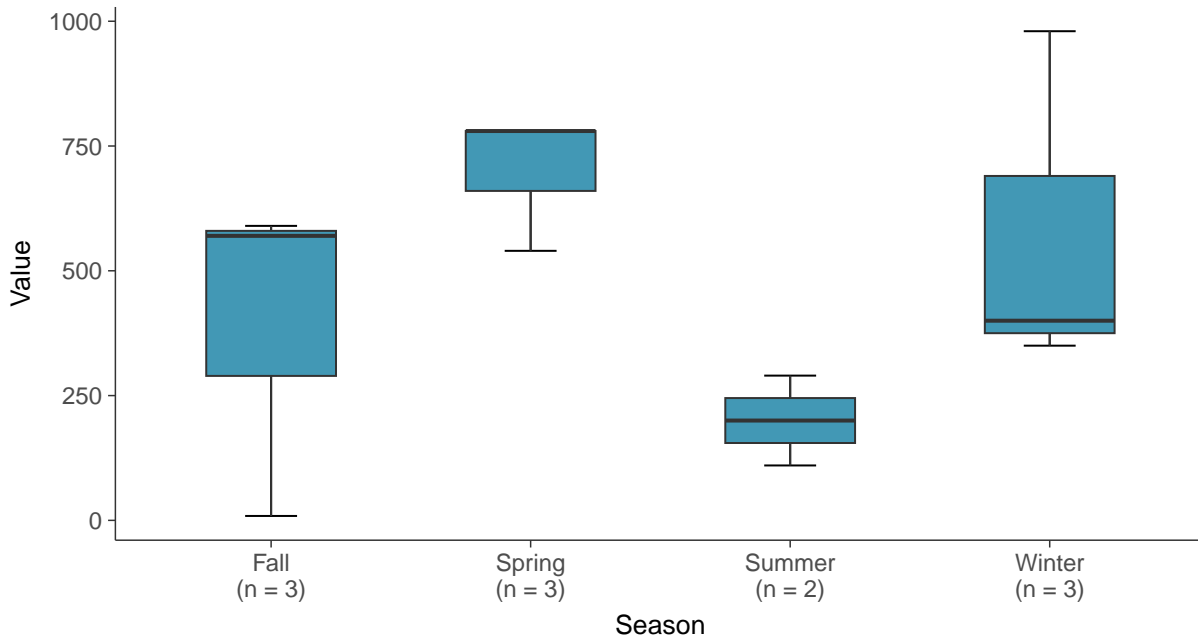
Boxplot

Sulfate (as SO₄), MW-01R (mg/L)



Boxplot by Season

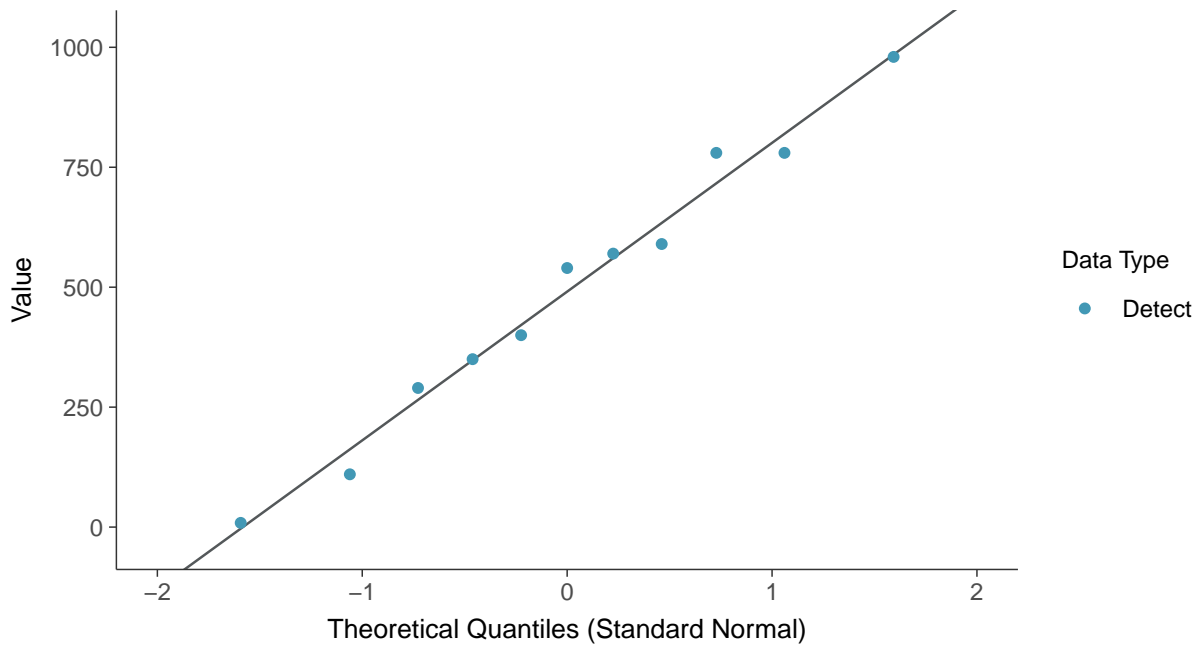
Sulfate (as SO₄), MW-01R (mg/L)





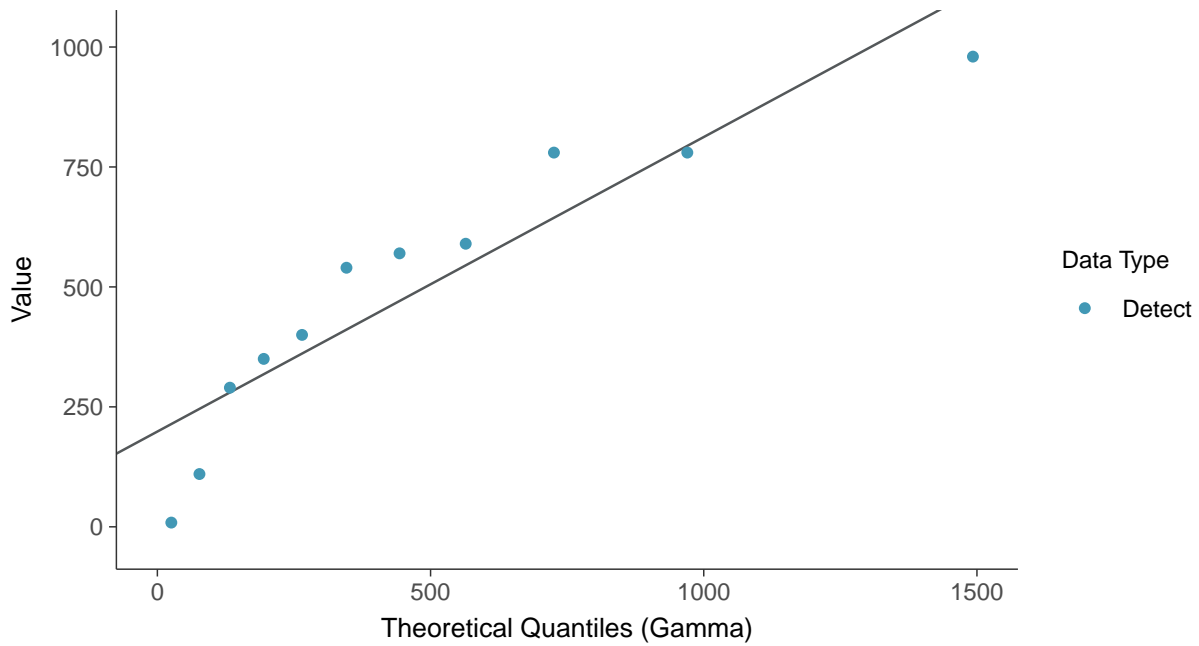
Normal Q-Q plot

Sulfate (as SO₄), MW-01R (mg/L)



Gamma Q-Q plot

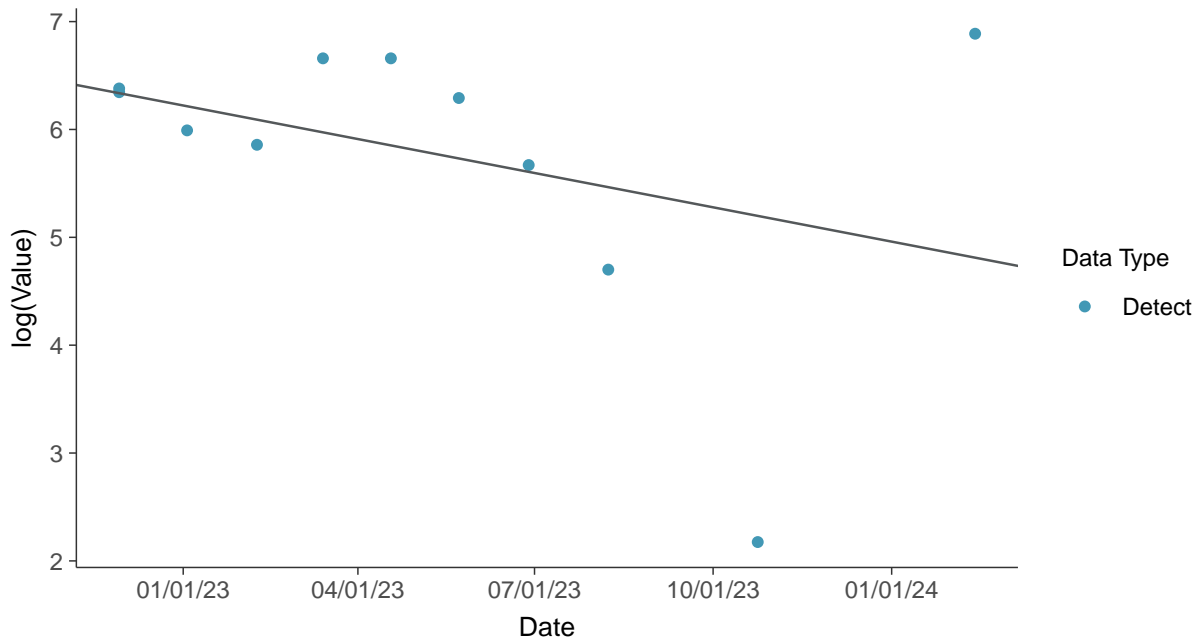
Sulfate (as SO₄), MW-01R (mg/L)





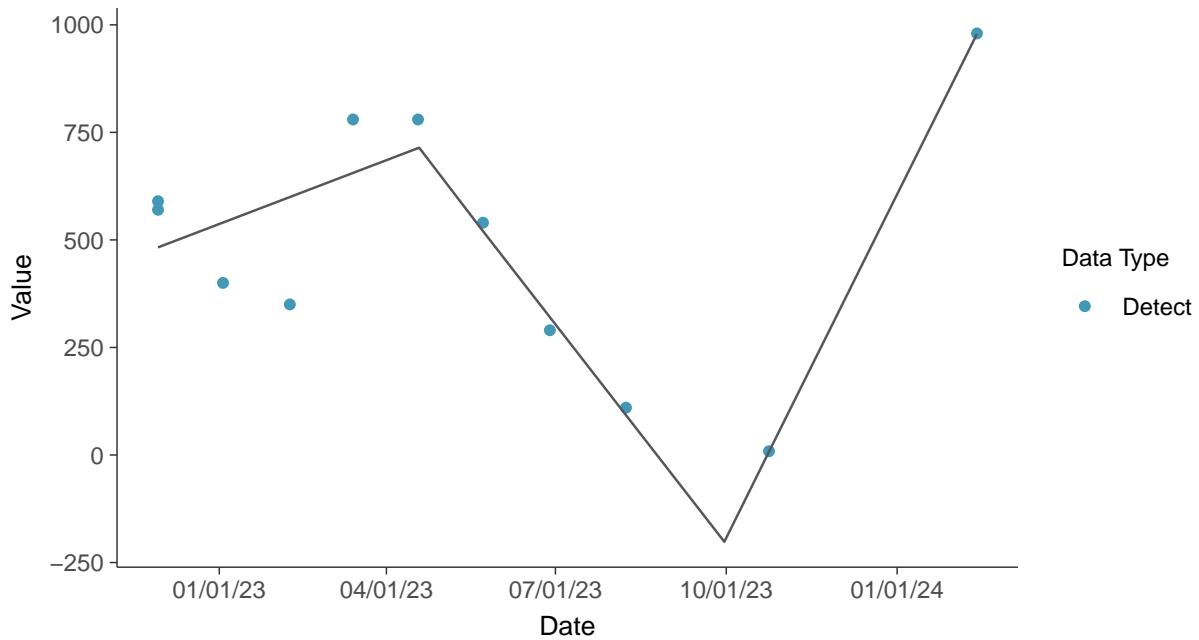
Trend Regression: Lognormal MLE

Sulfate (as SO₄), MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO₄), MW-01R (mg/L)



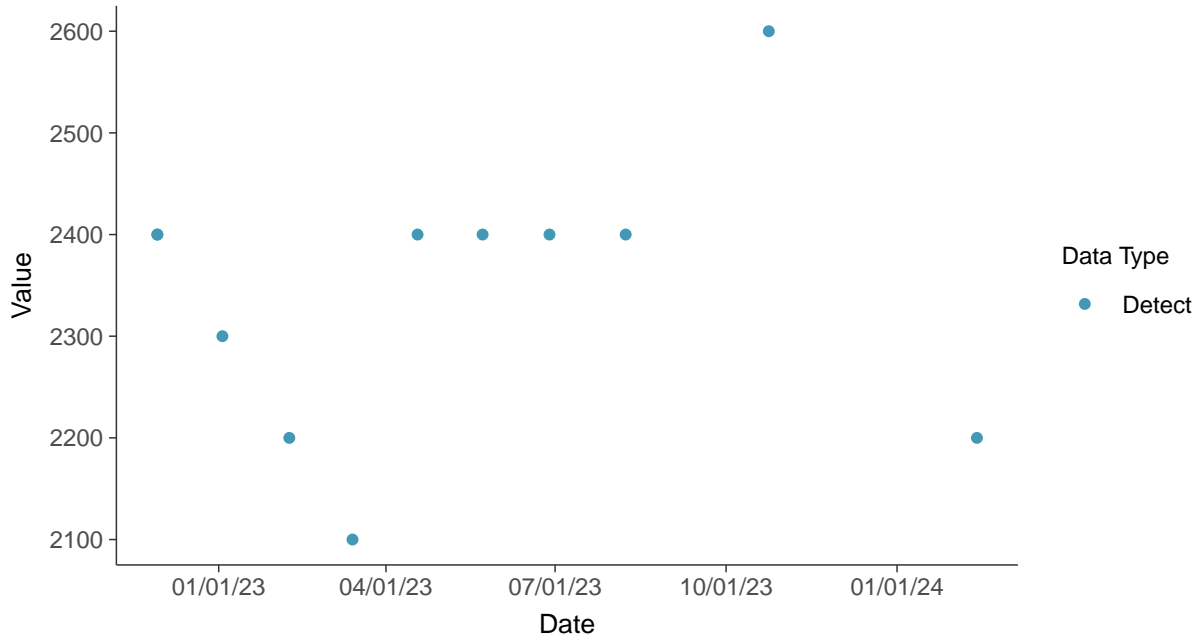


Appendix III: Total Dissolved Solids, MW-01R

ID: 2_11_4_126

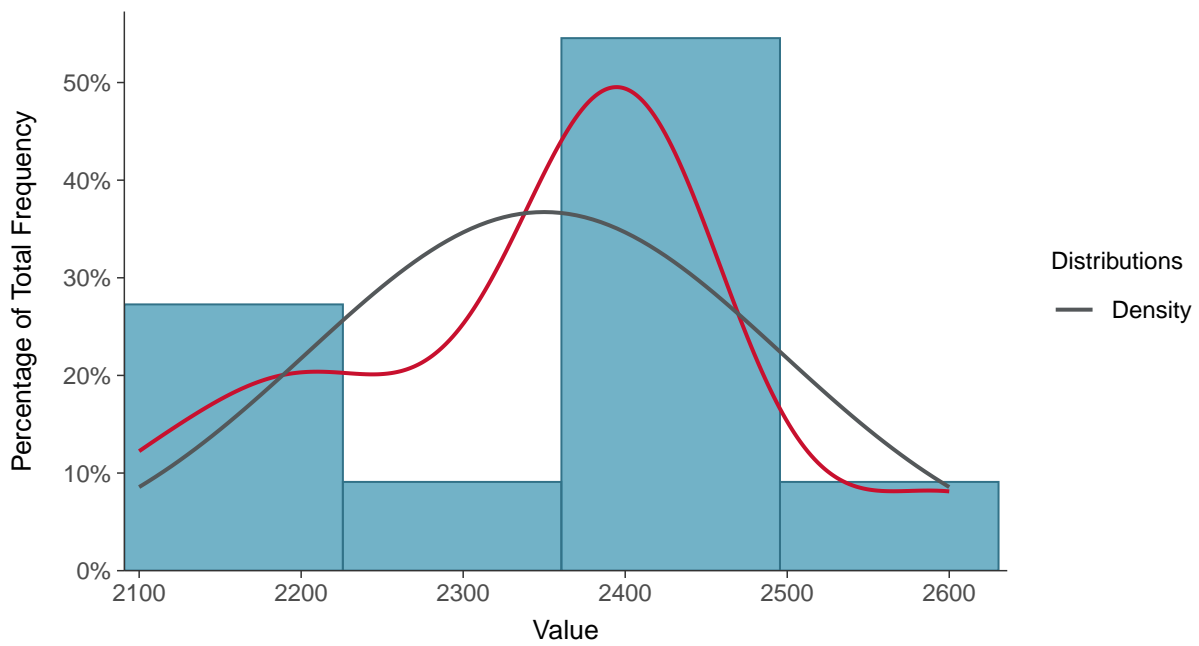
Scatter Plot

Total Dissolved Solids, MW-01R (mg/L)



Histogram

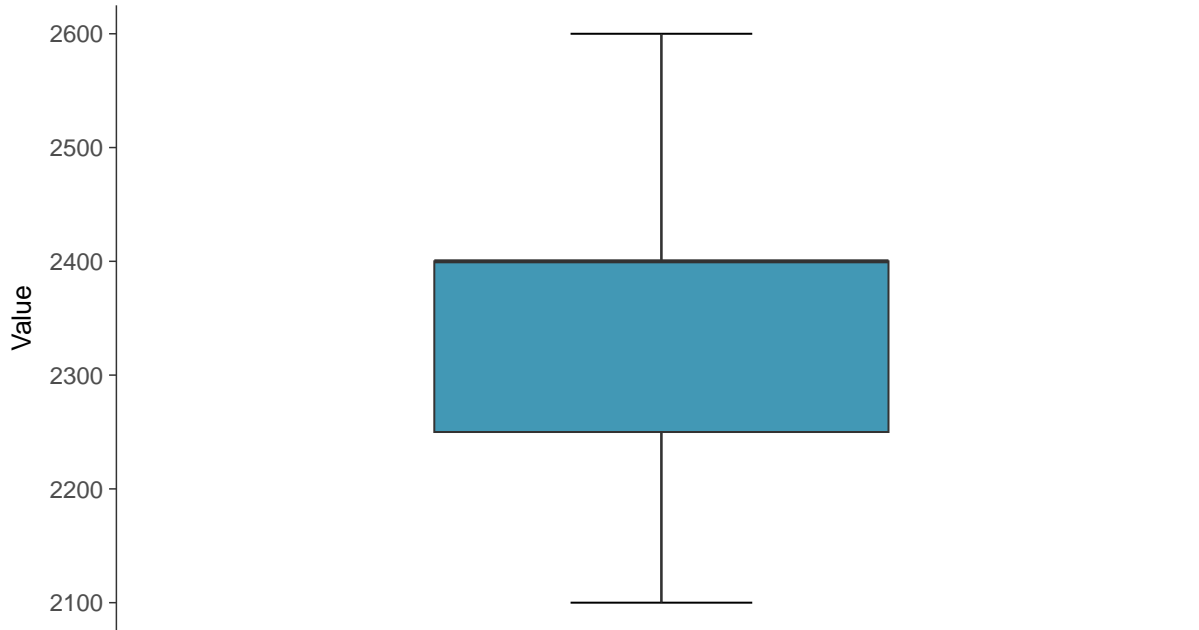
Total Dissolved Solids, MW-01R (mg/L)





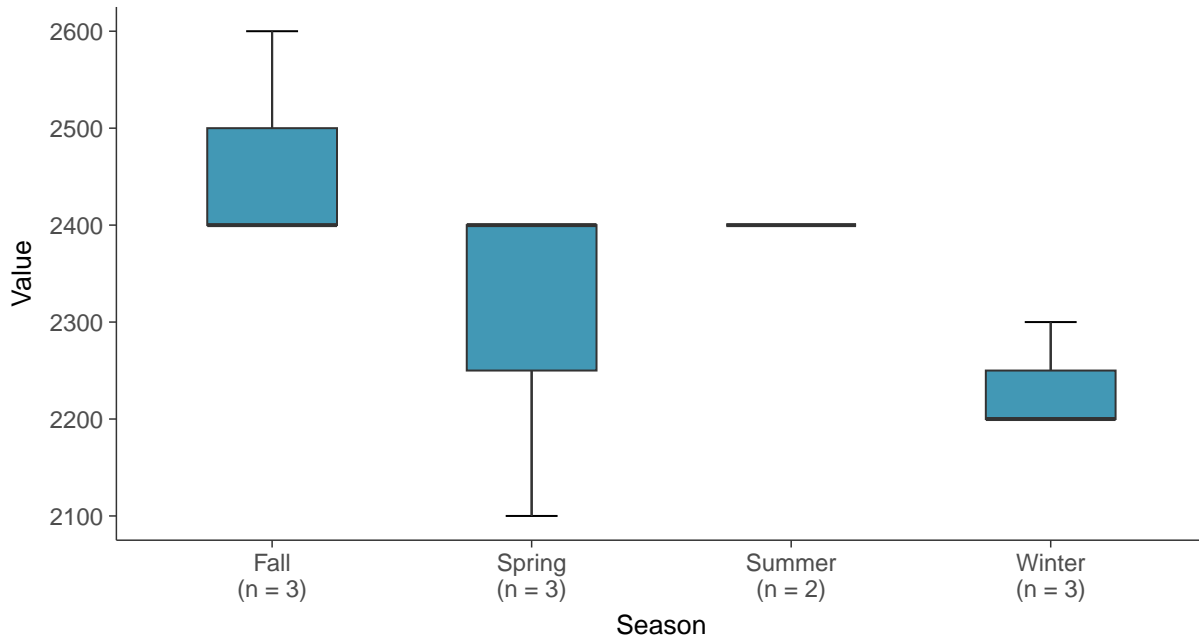
Boxplot

Total Dissolved Solids, MW-01R (mg/L)



Boxplot by Season

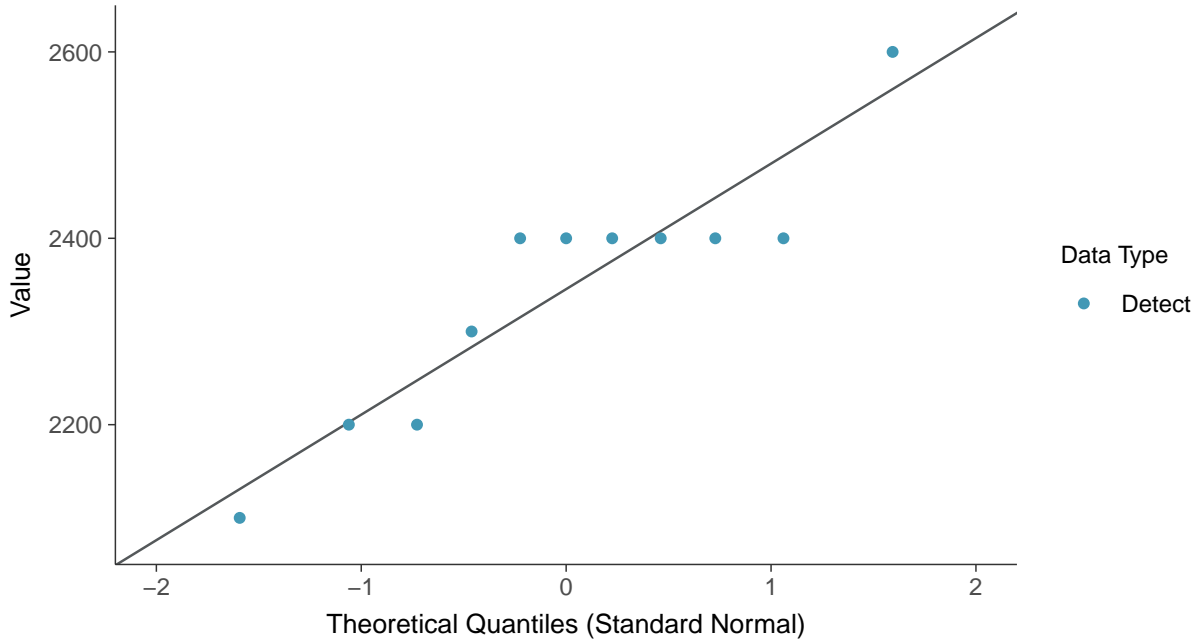
Total Dissolved Solids, MW-01R (mg/L)





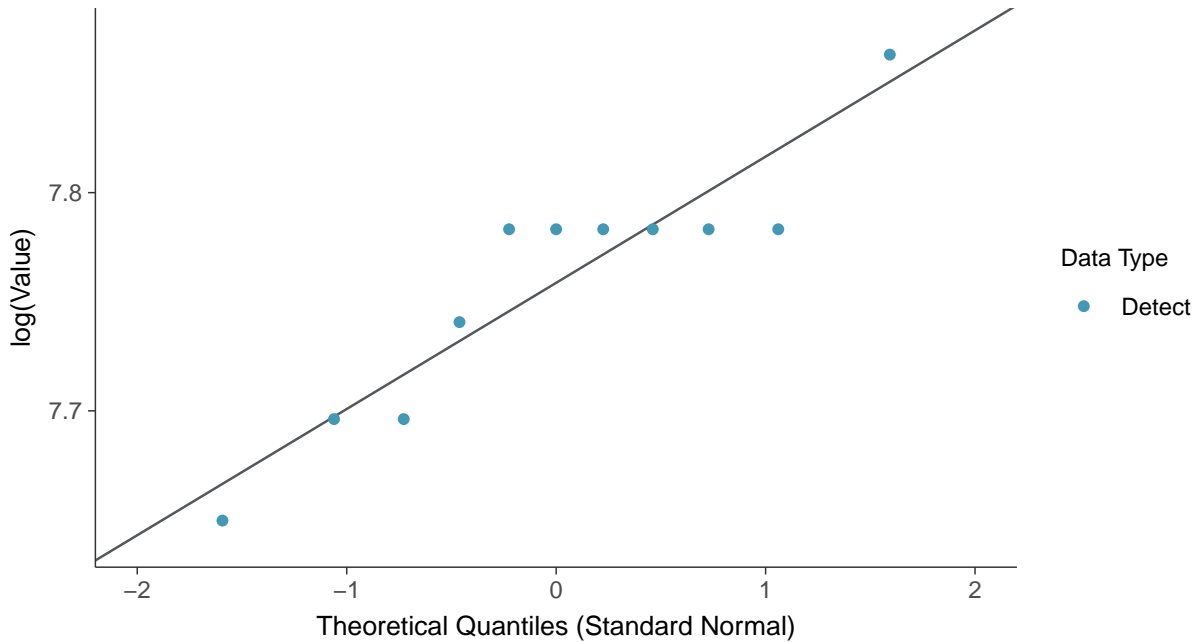
Normal Q-Q plot

Total Dissolved Solids, MW-01R (mg/L)



Lognormal Q-Q plot

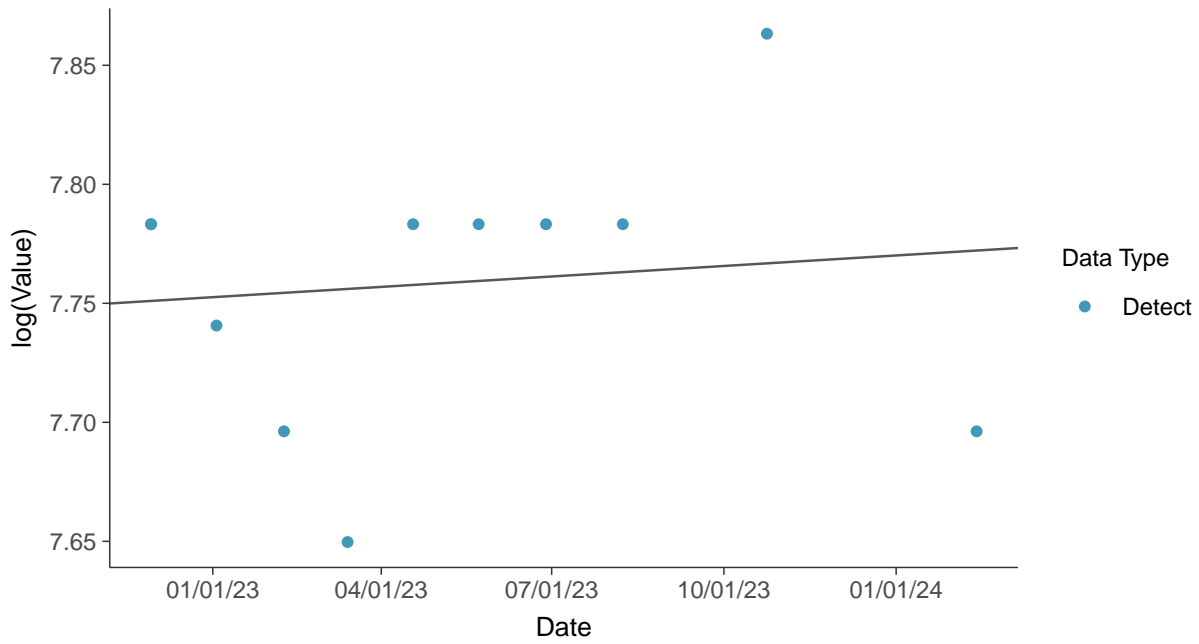
Total Dissolved Solids, MW-01R (mg/L)





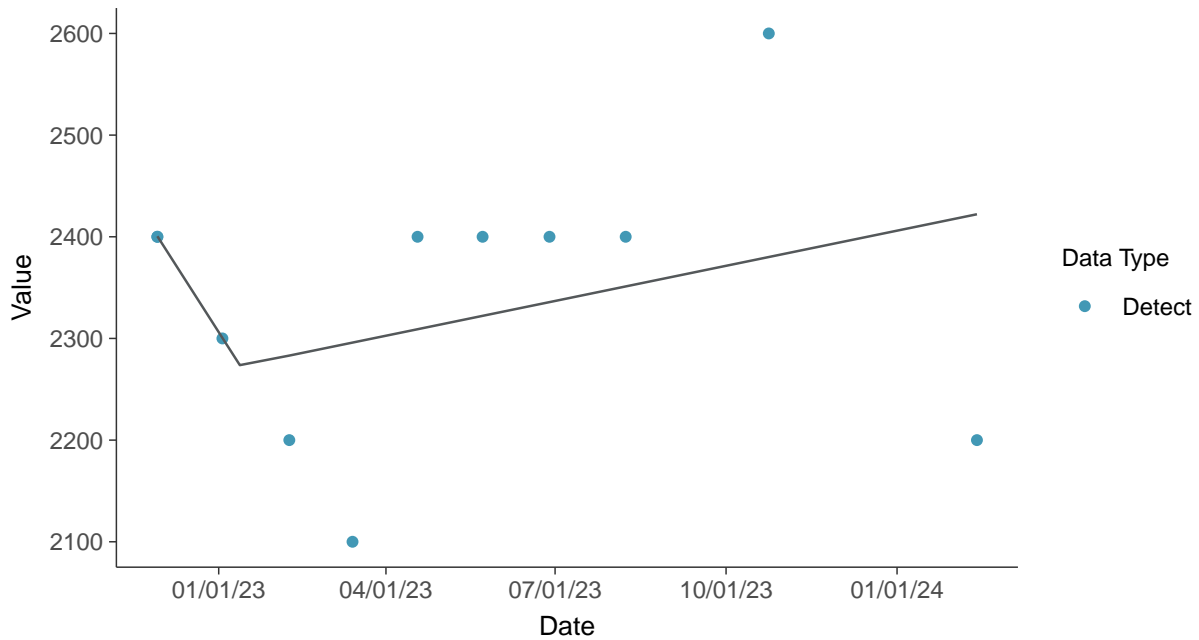
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-01R (mg/L)



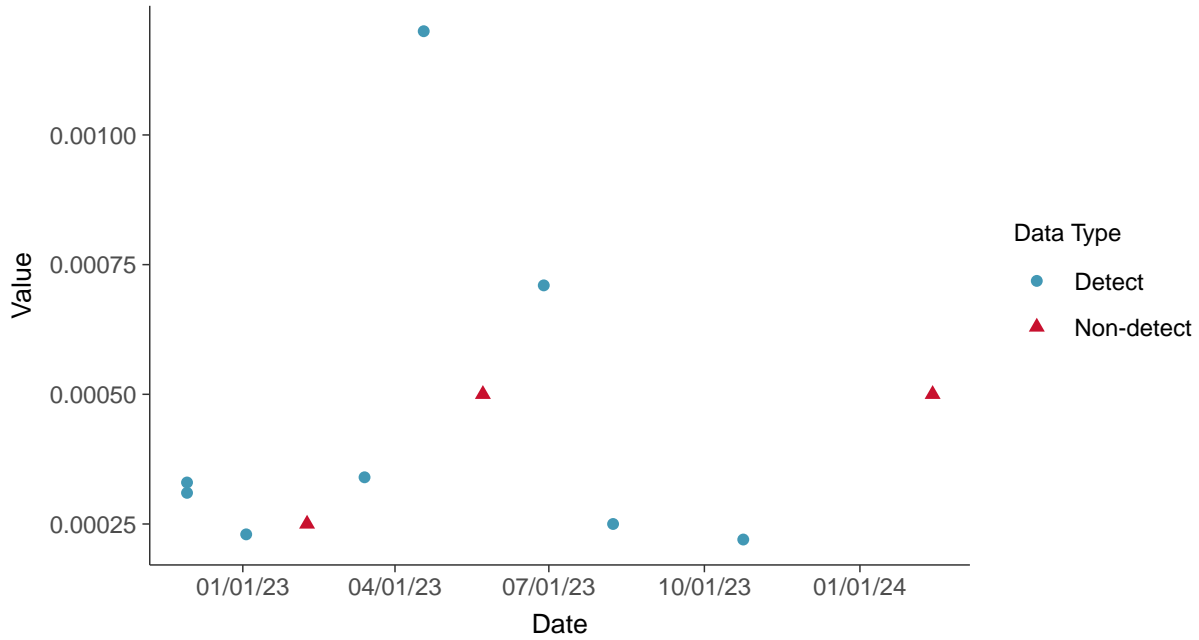


Appendix IV: Antimony, MW-01R

ID: 2_11_5_101

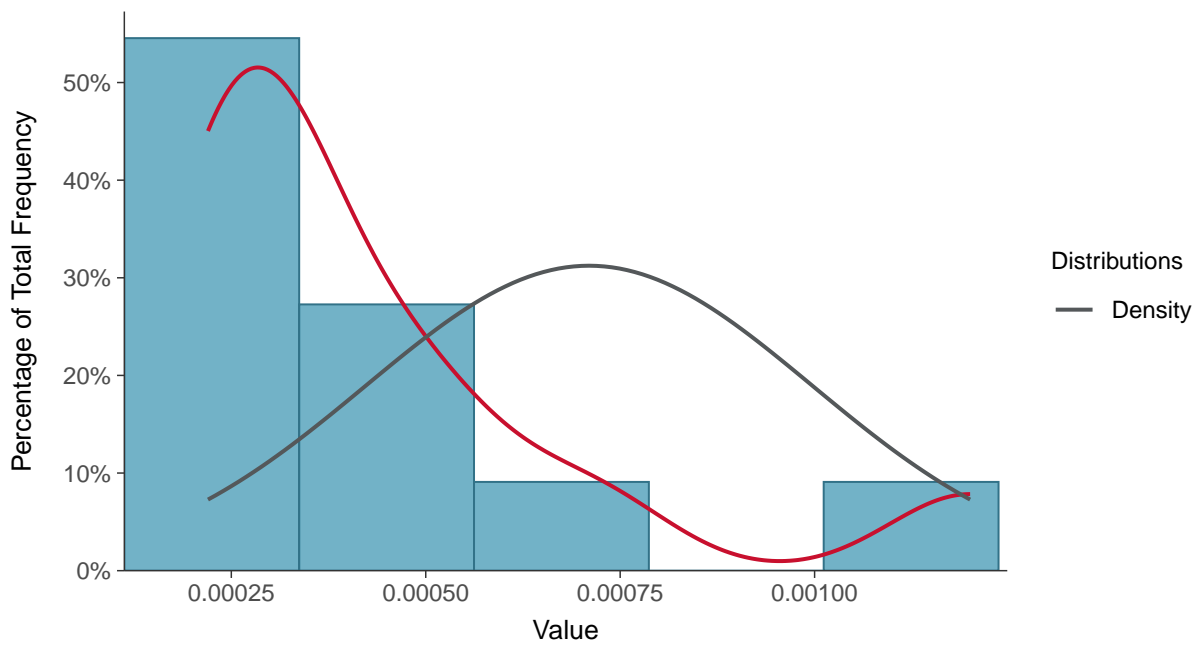
Scatter Plot

Antimony, MW-01R (mg/L)



Histogram

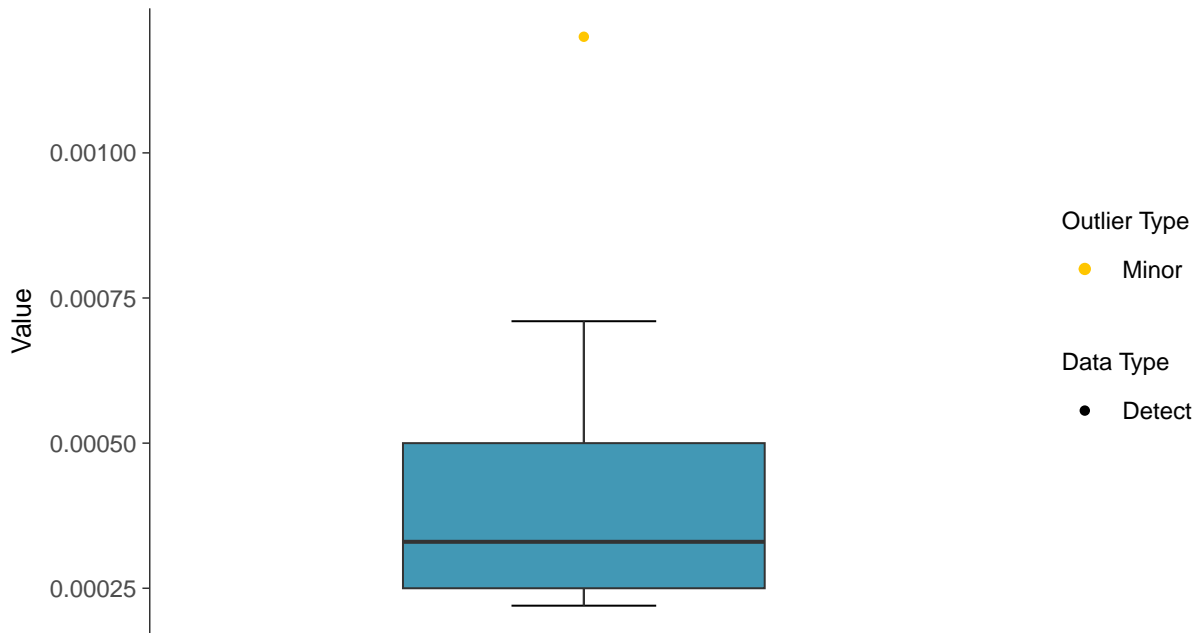
Antimony, MW-01R (mg/L)





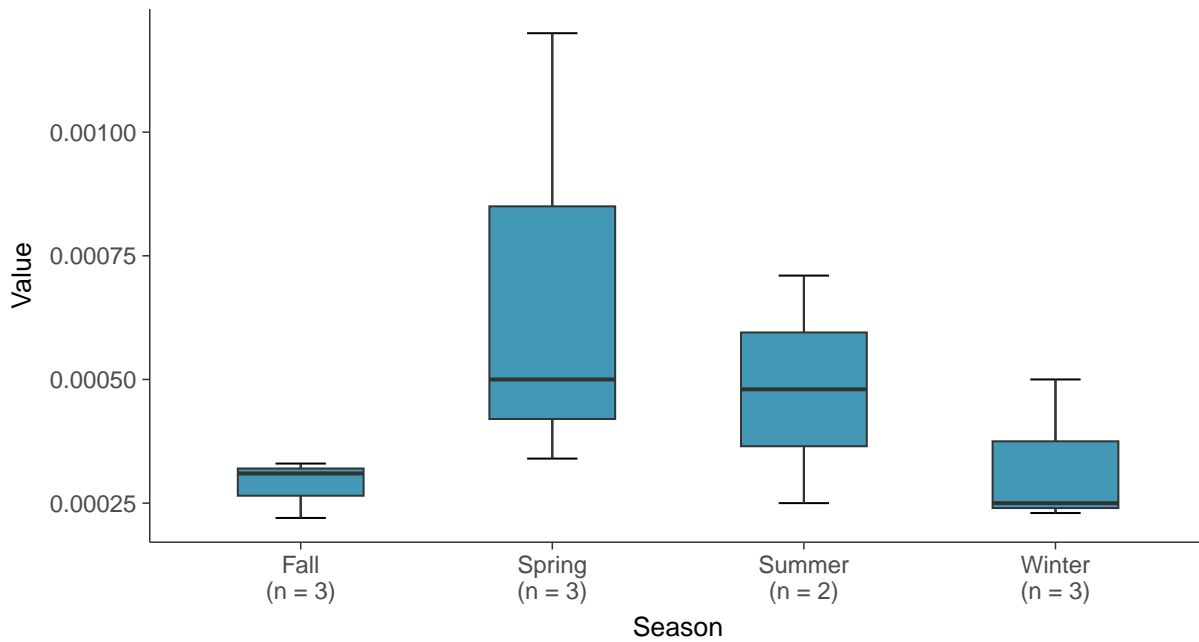
Boxplot

Antimony, MW-01R (mg/L)



Boxplot by Season

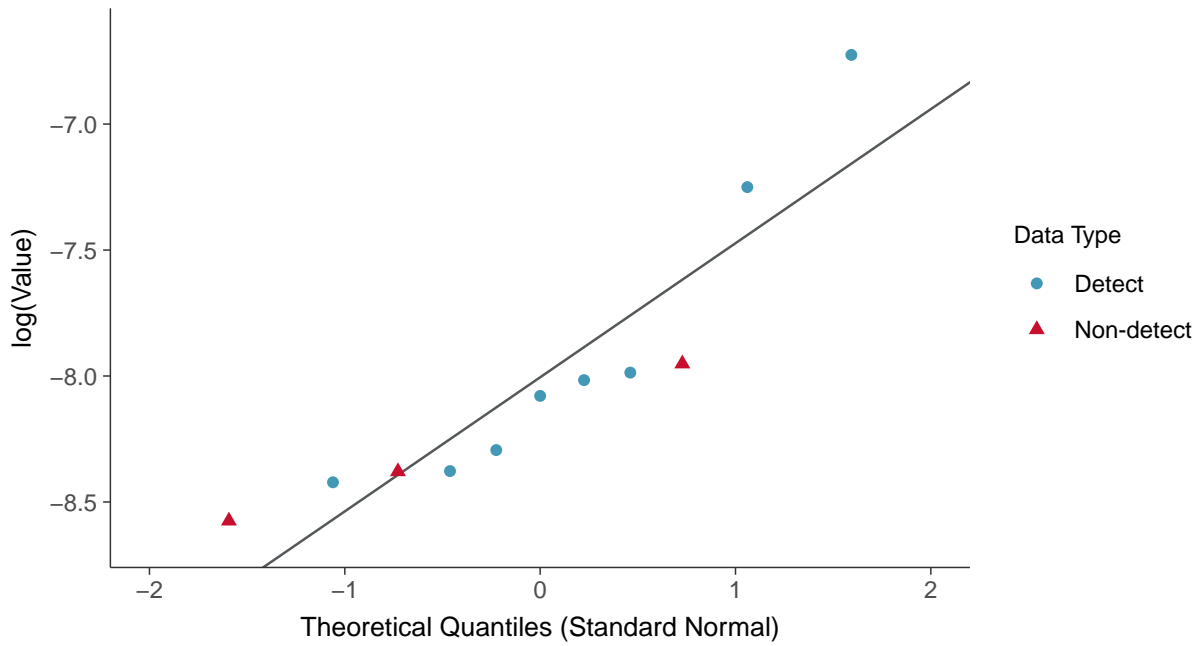
Antimony, MW-01R (mg/L)





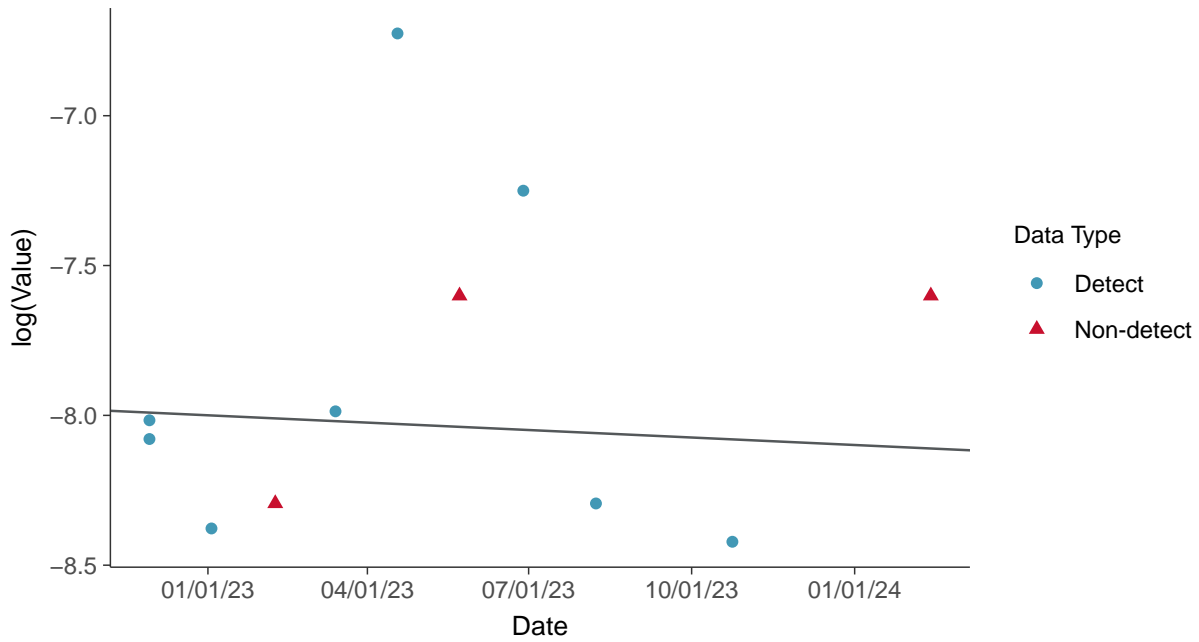
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-01R (mg/L)



Trend Regression: Lognormal MLE

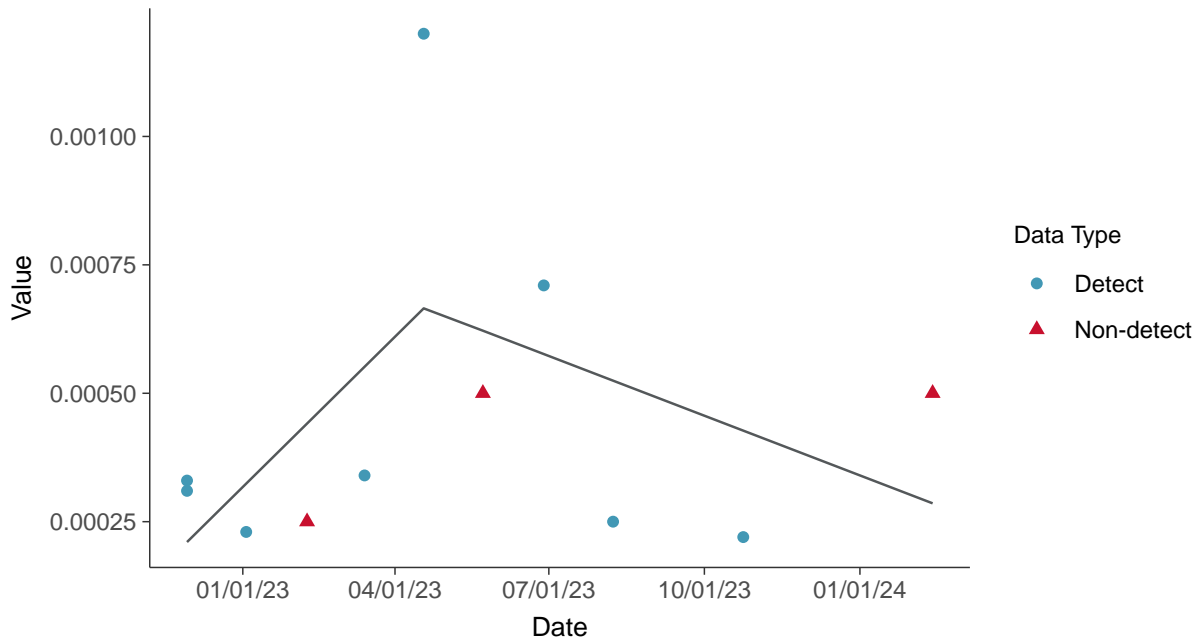
Antimony, MW-01R (mg/L)





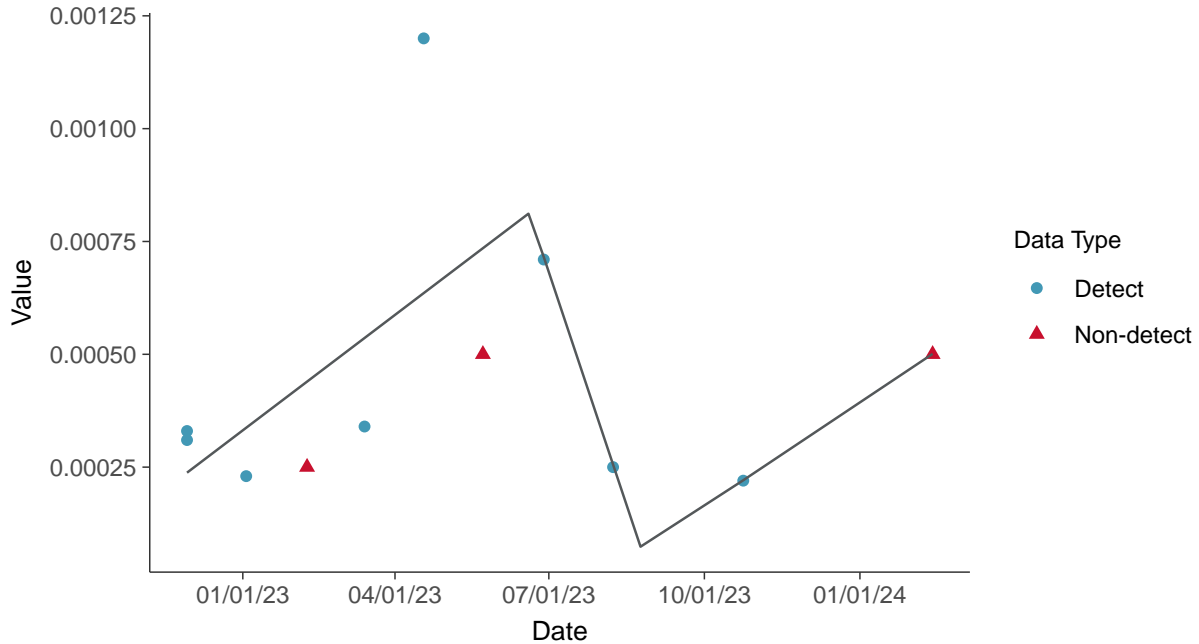
Trend Regression: Piecewise Linear-Linear

Antimony, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-01R (mg/L)



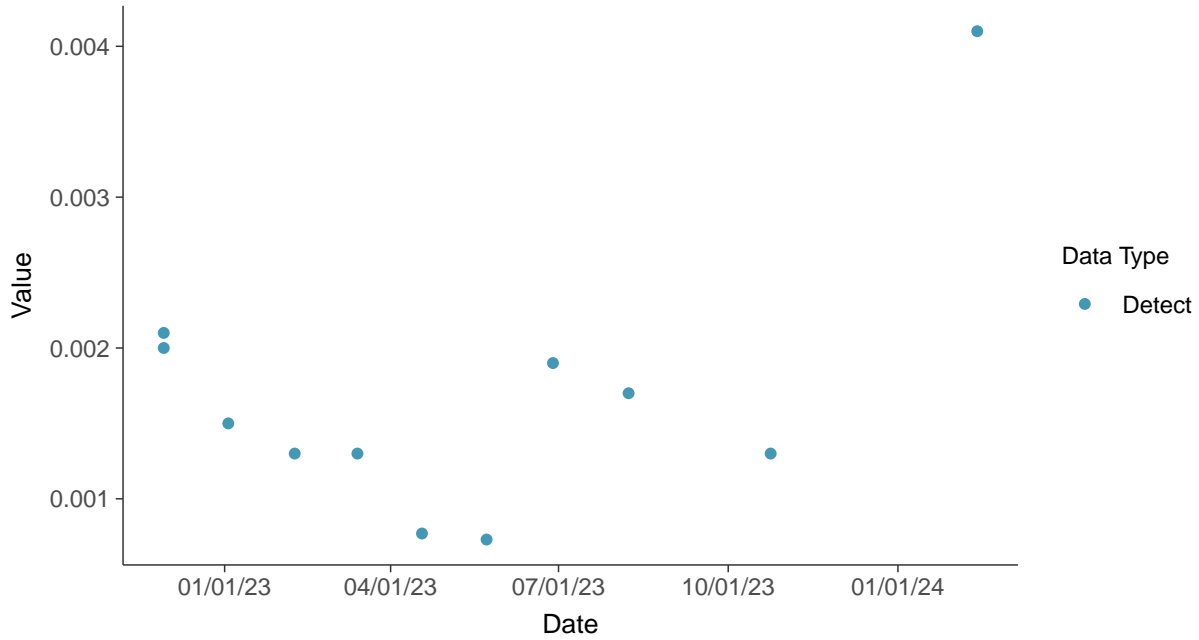


Appendix IV: Arsenic, MW-01R

ID: 2_11_5_102

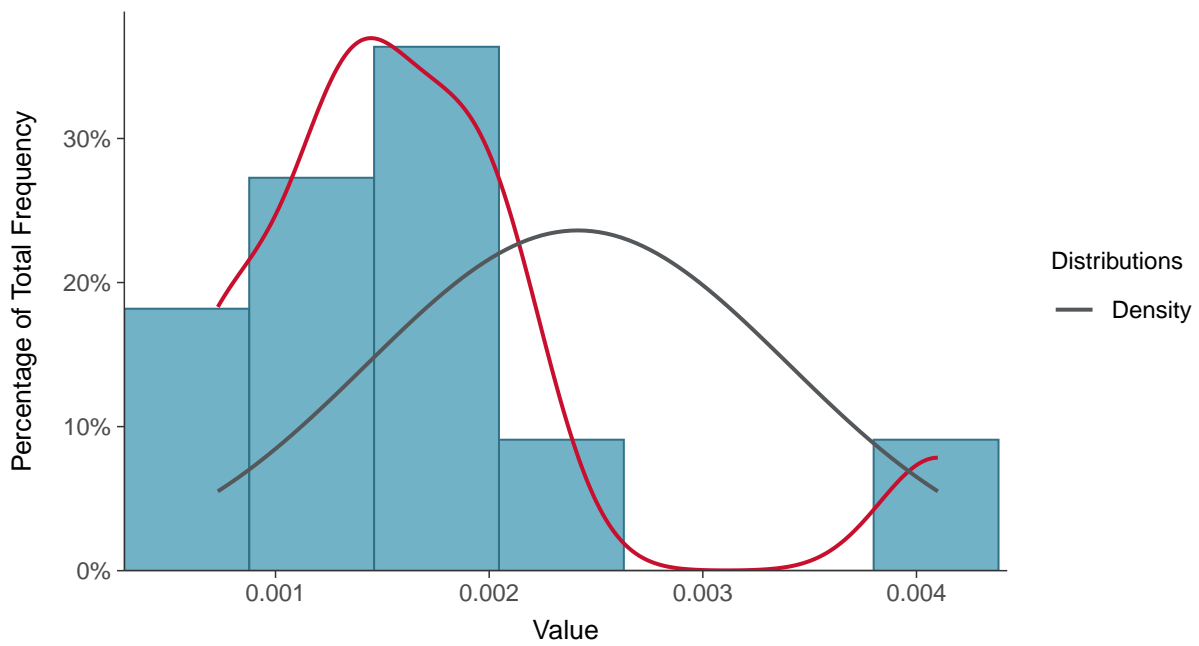
Scatter Plot

Arsenic, MW-01R (mg/L)



Histogram

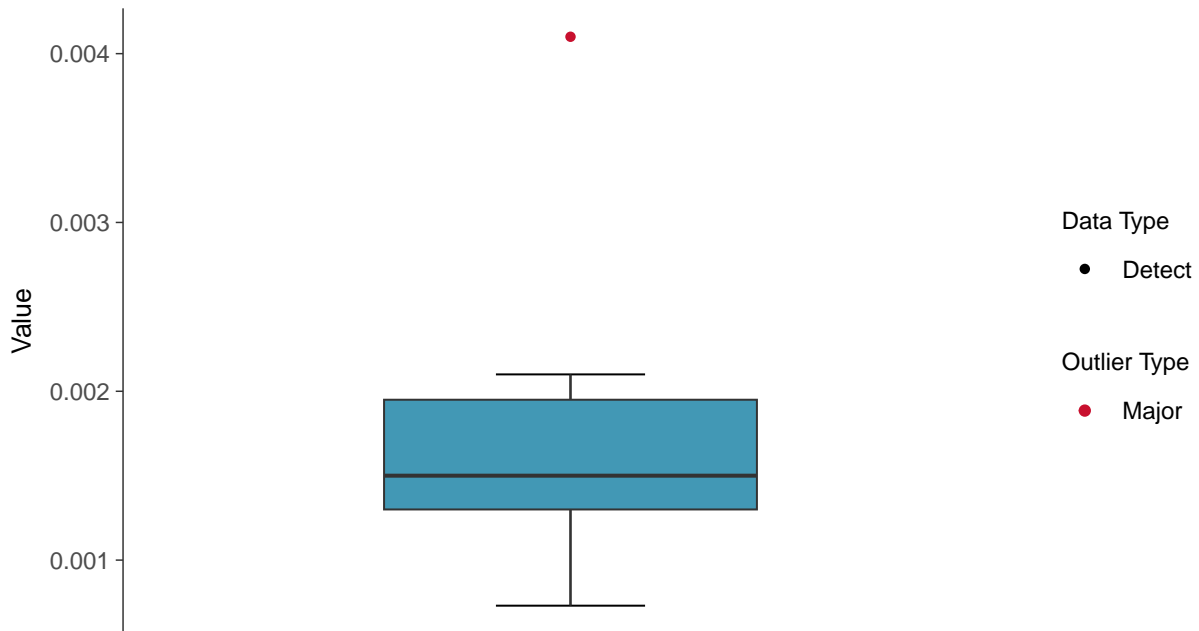
Arsenic, MW-01R (mg/L)





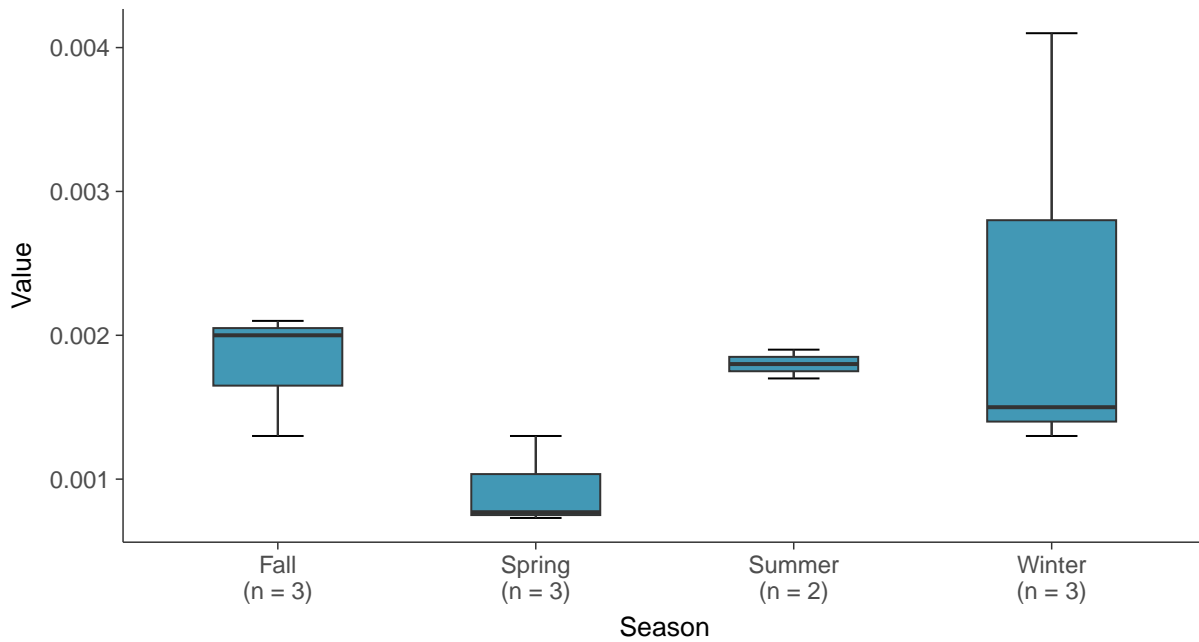
Boxplot

Arsenic, MW-01R (mg/L)



Boxplot by Season

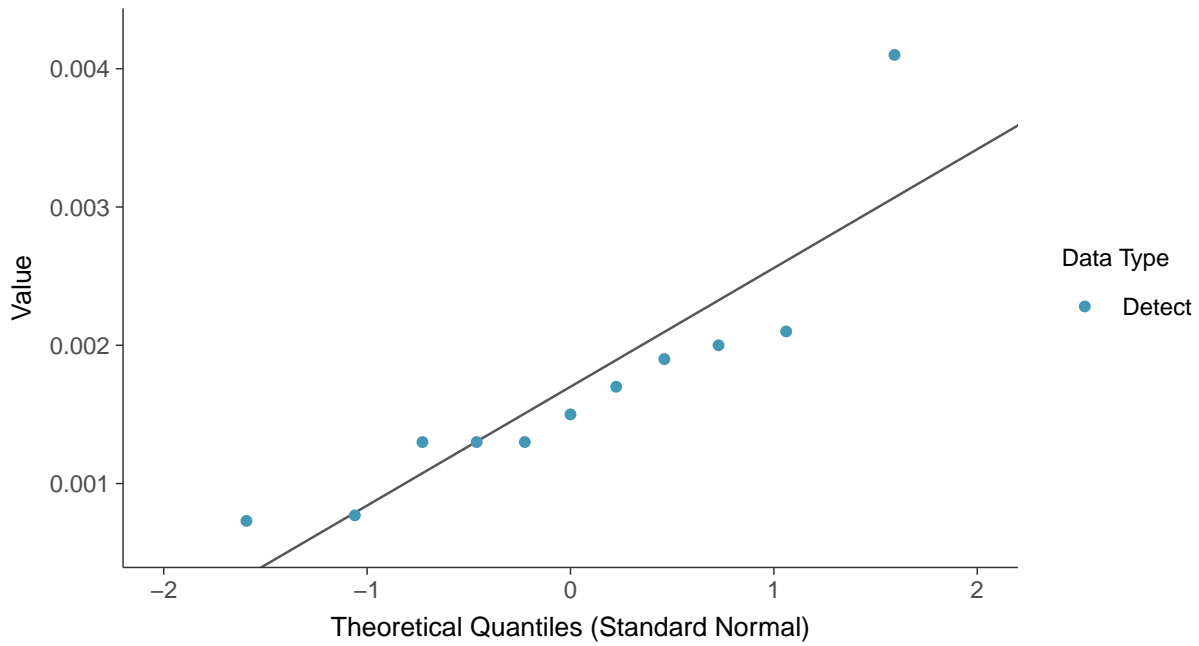
Arsenic, MW-01R (mg/L)





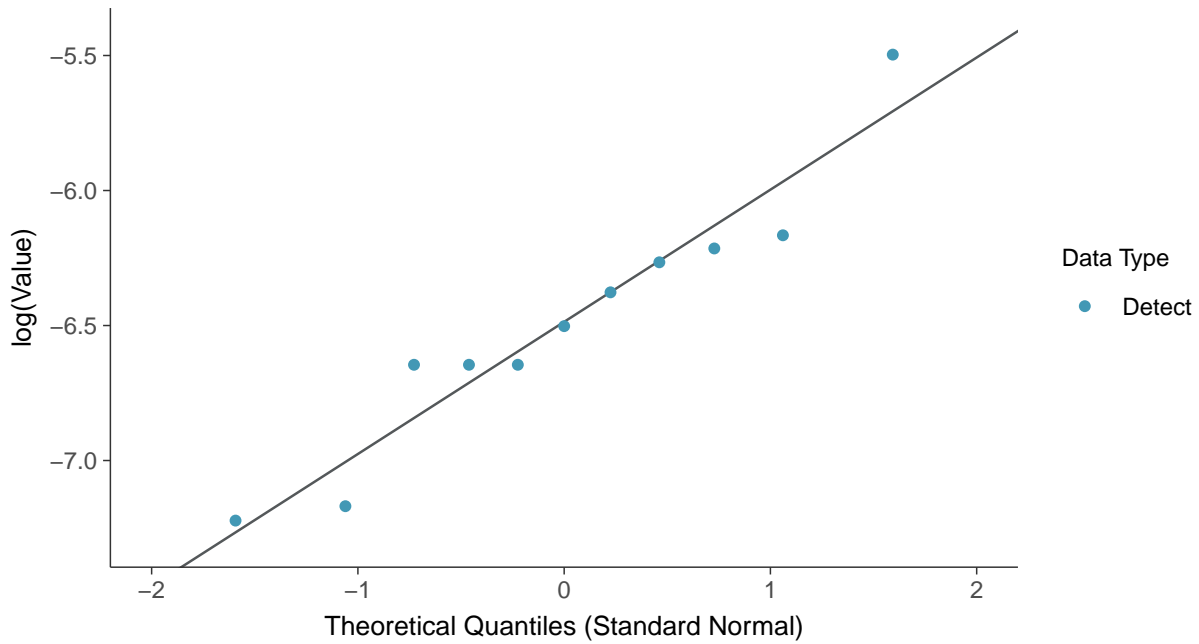
Normal Q-Q plot

Arsenic, MW-01R (mg/L)



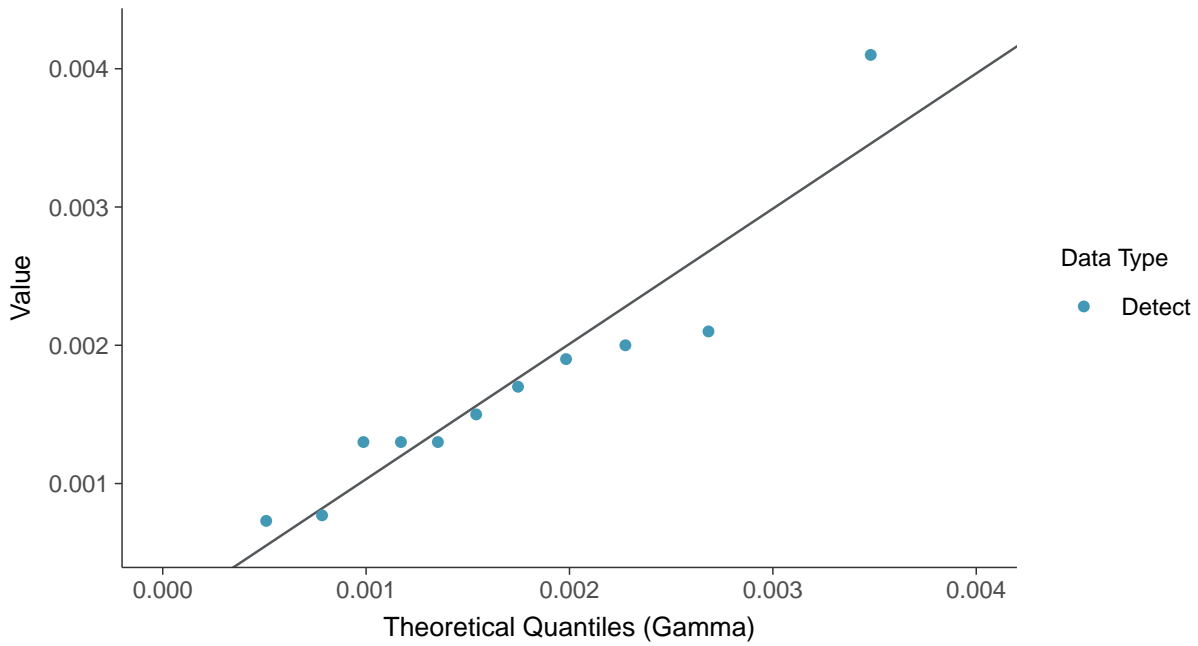
Lognormal Q-Q plot

Arsenic, MW-01R (mg/L)

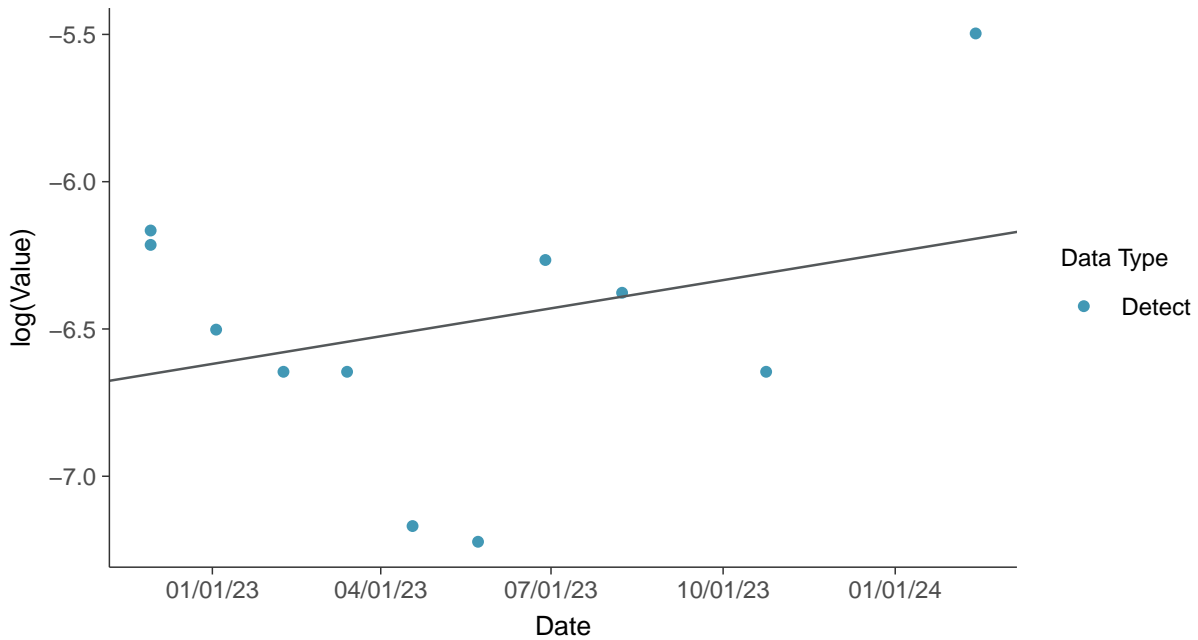




Gamma Q-Q plot
Arsenic, MW-01R (mg/L)



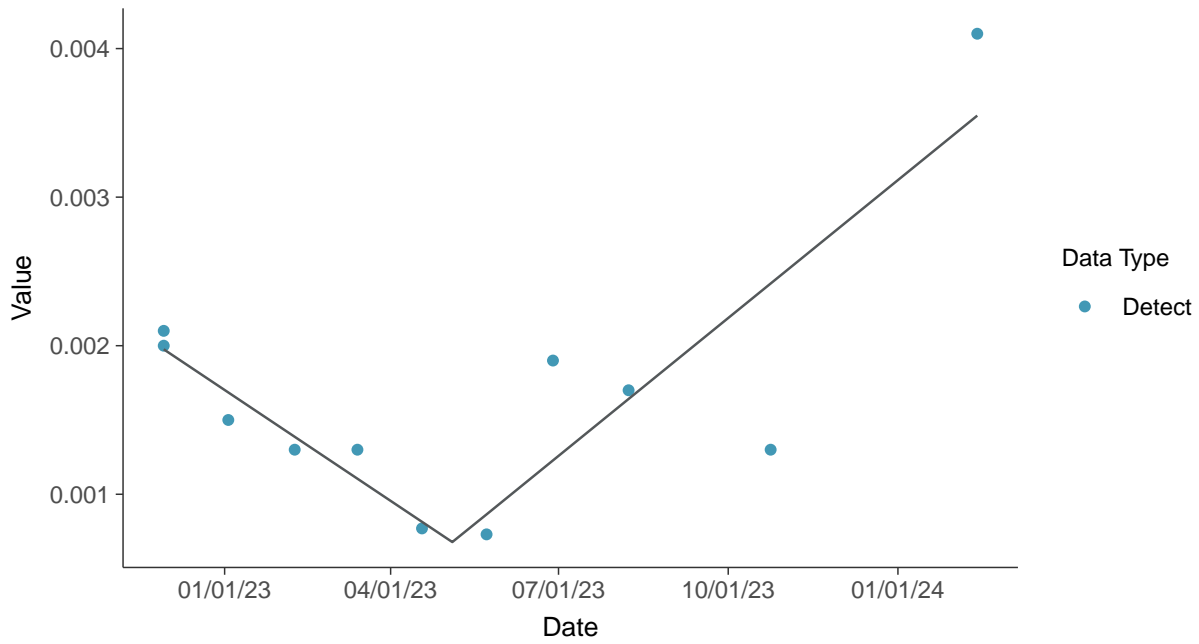
Trend Regression: Lognormal MLE
Arsenic, MW-01R (mg/L)





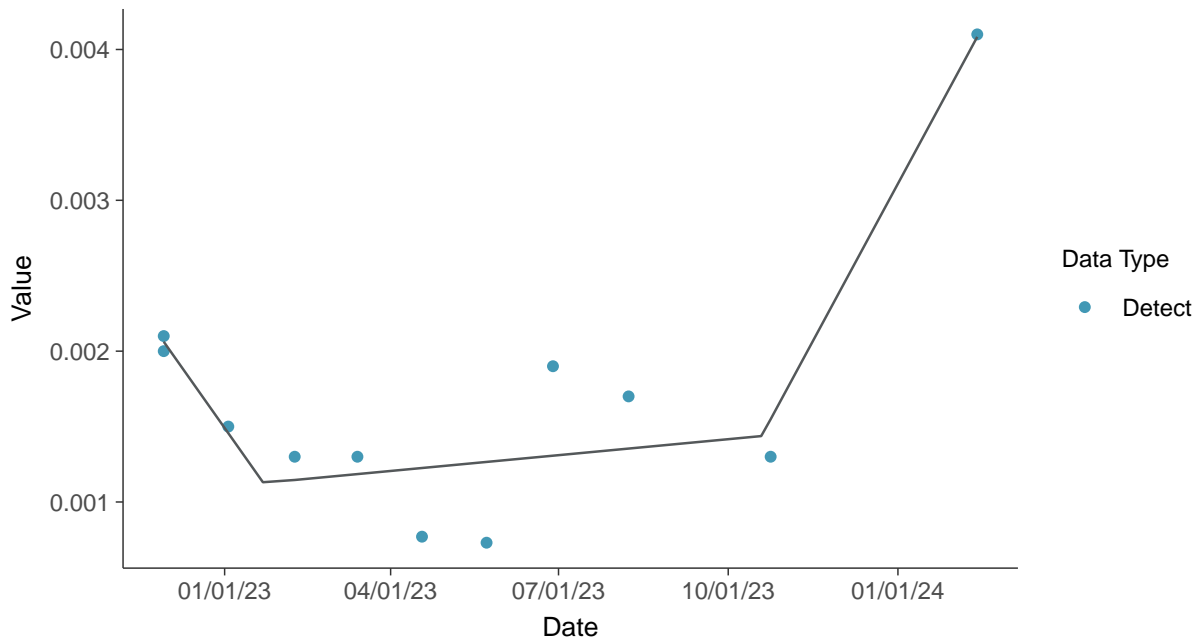
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-01R (mg/L)



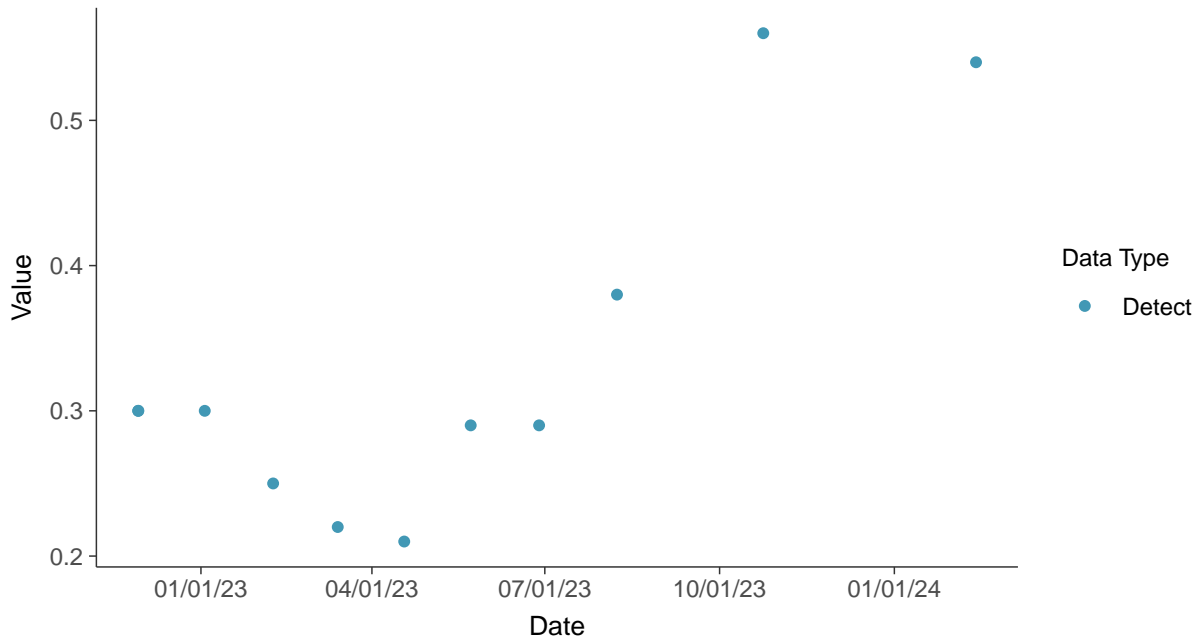


Appendix IV: Barium, MW-01R

ID: 2_11_5_103

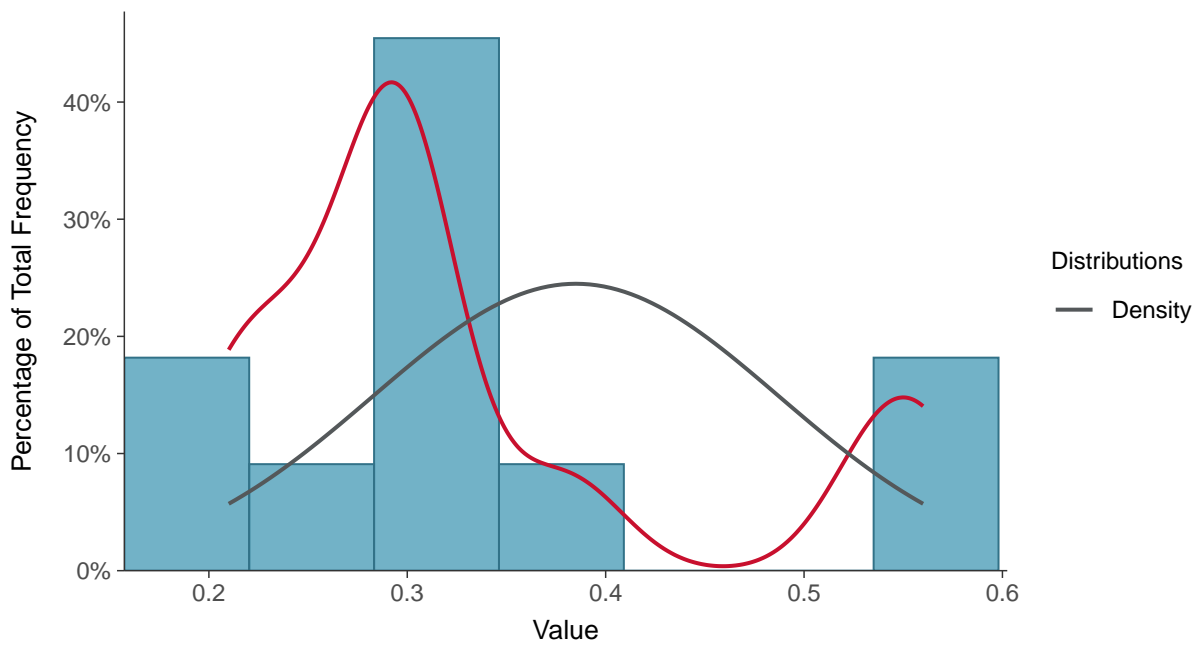
Scatter Plot

Barium, MW-01R (mg/L)



Histogram

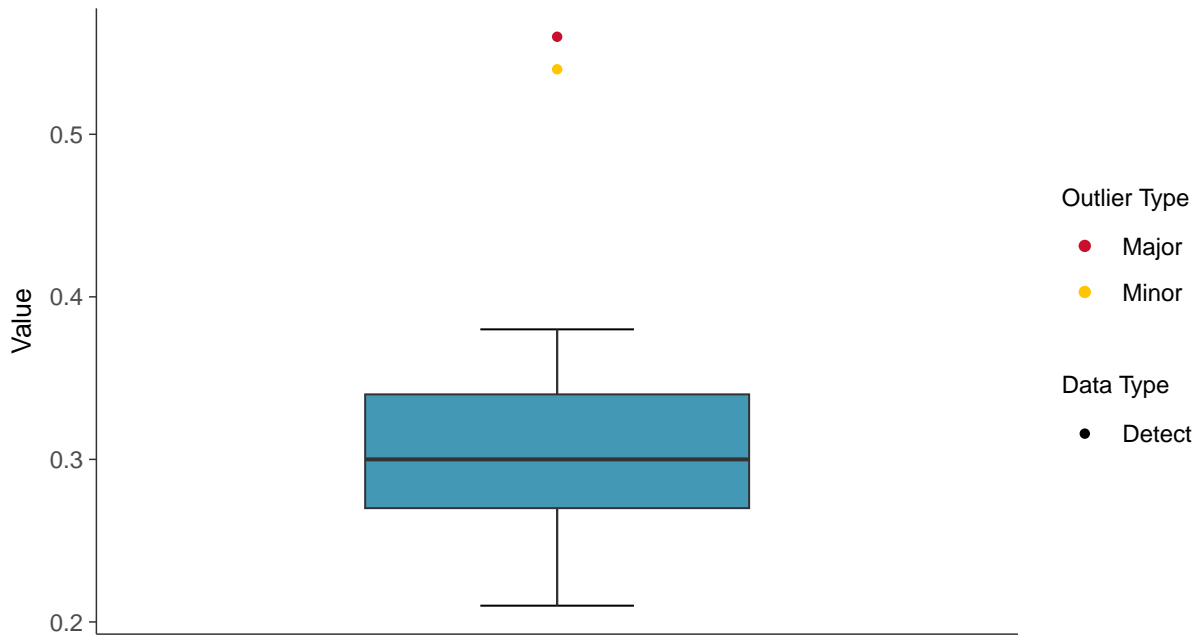
Barium, MW-01R (mg/L)





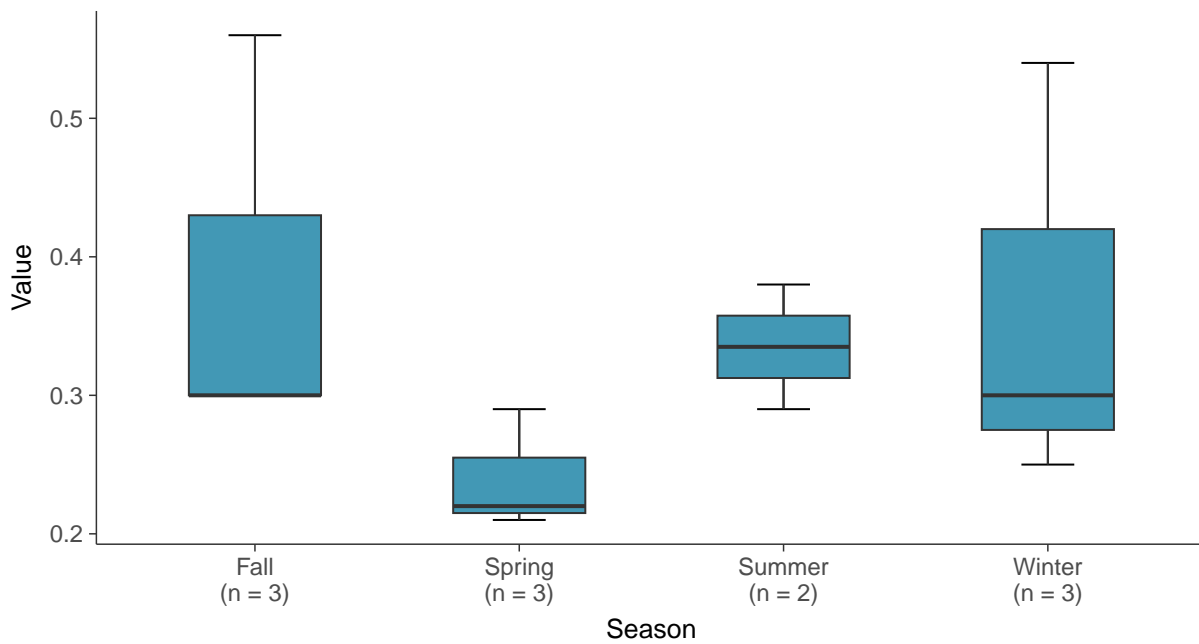
Boxplot

Barium, MW-01R (mg/L)



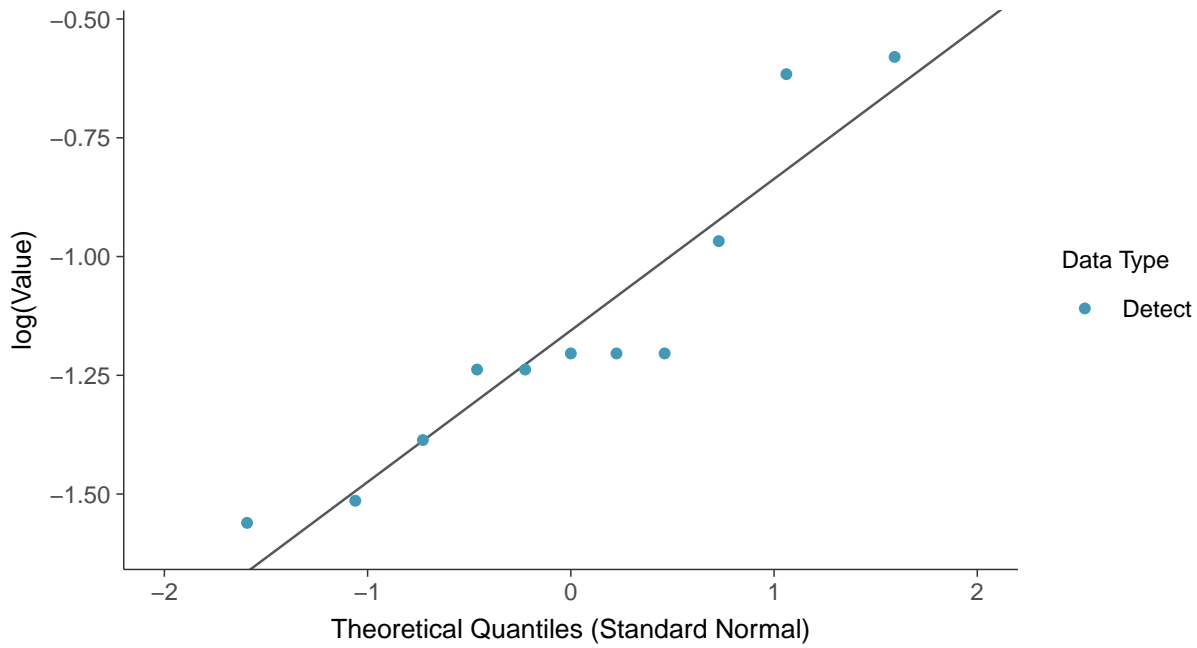
Boxplot by Season

Barium, MW-01R (mg/L)

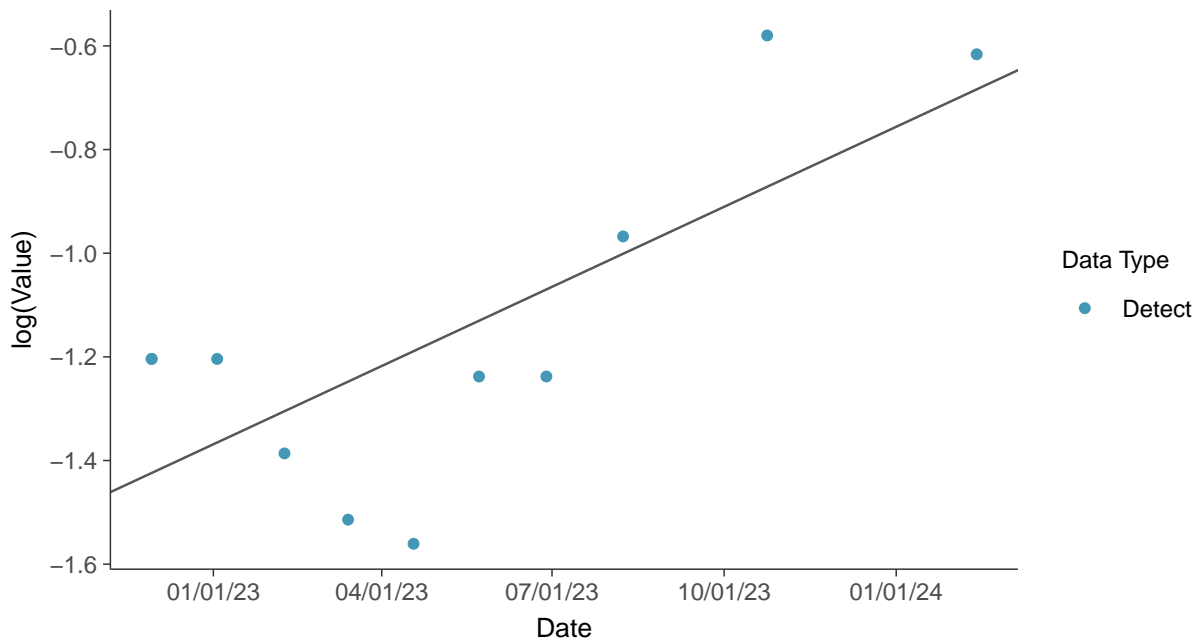




Lognormal Q-Q plot
Barium, MW-01R (mg/L)

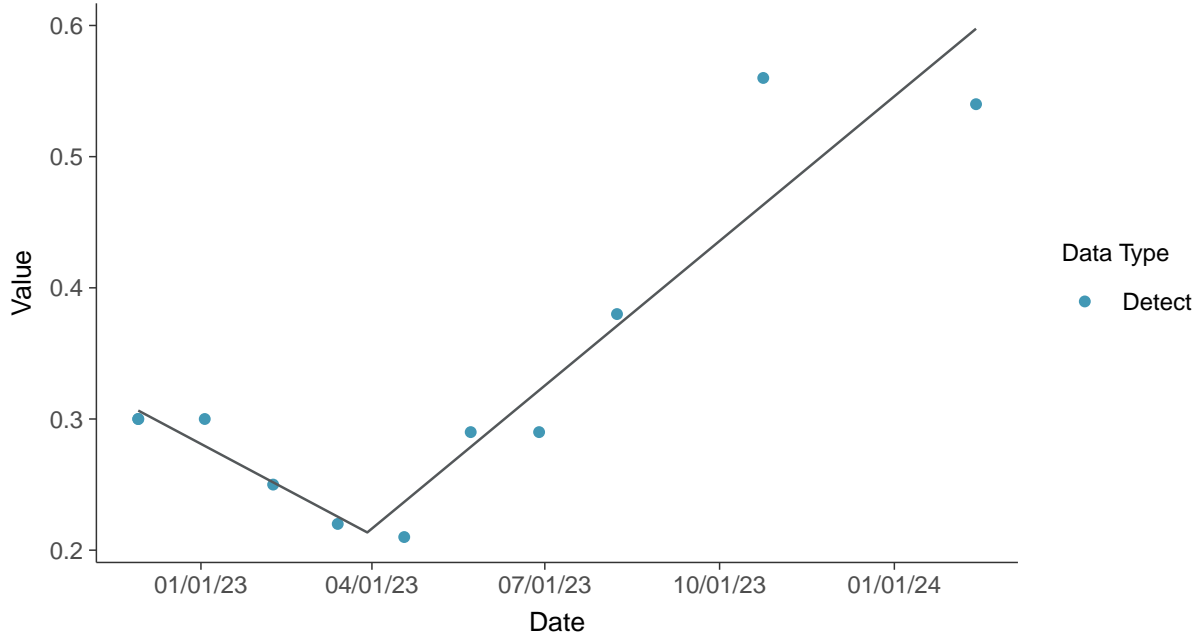


Trend Regression: Lognormal MLE
Barium, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear
Barium, MW-01R (mg/L)



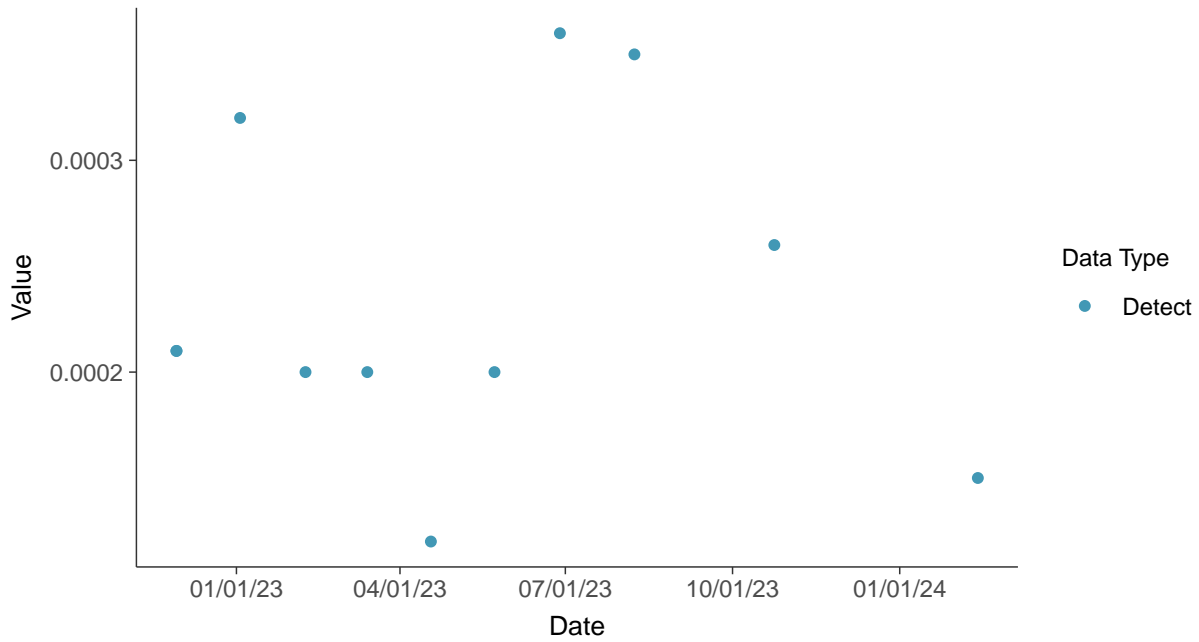


Appendix IV: Beryllium, MW-01R

ID: 2_11_5_104

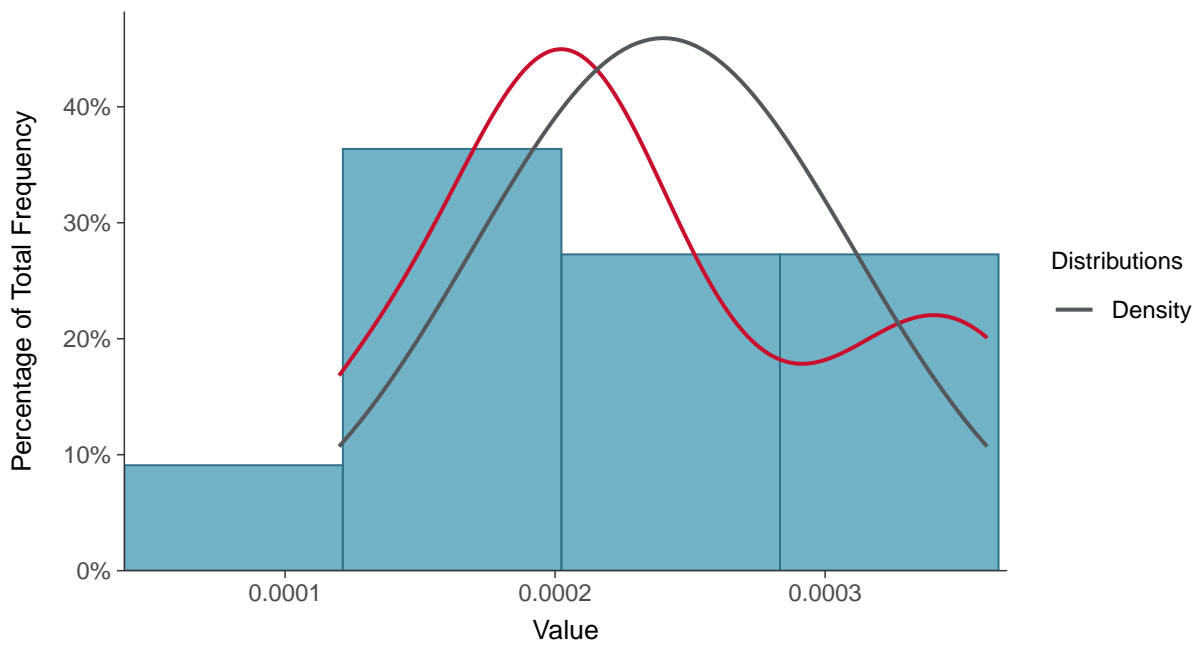
Scatter Plot

Beryllium, MW-01R (mg/L)



Histogram

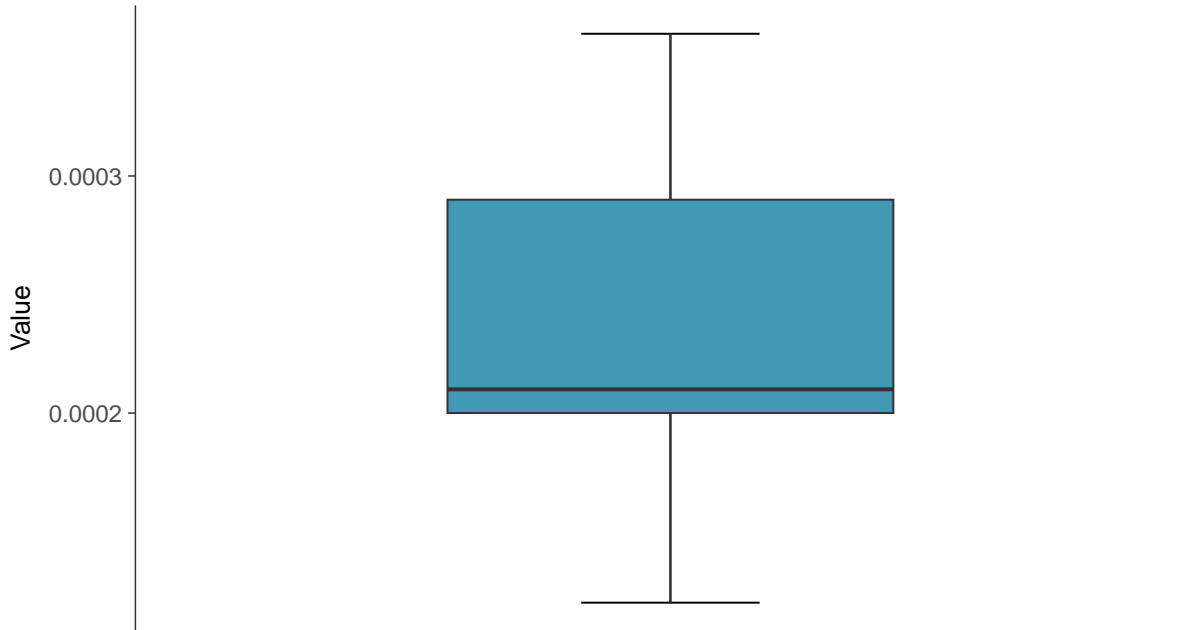
Beryllium, MW-01R (mg/L)





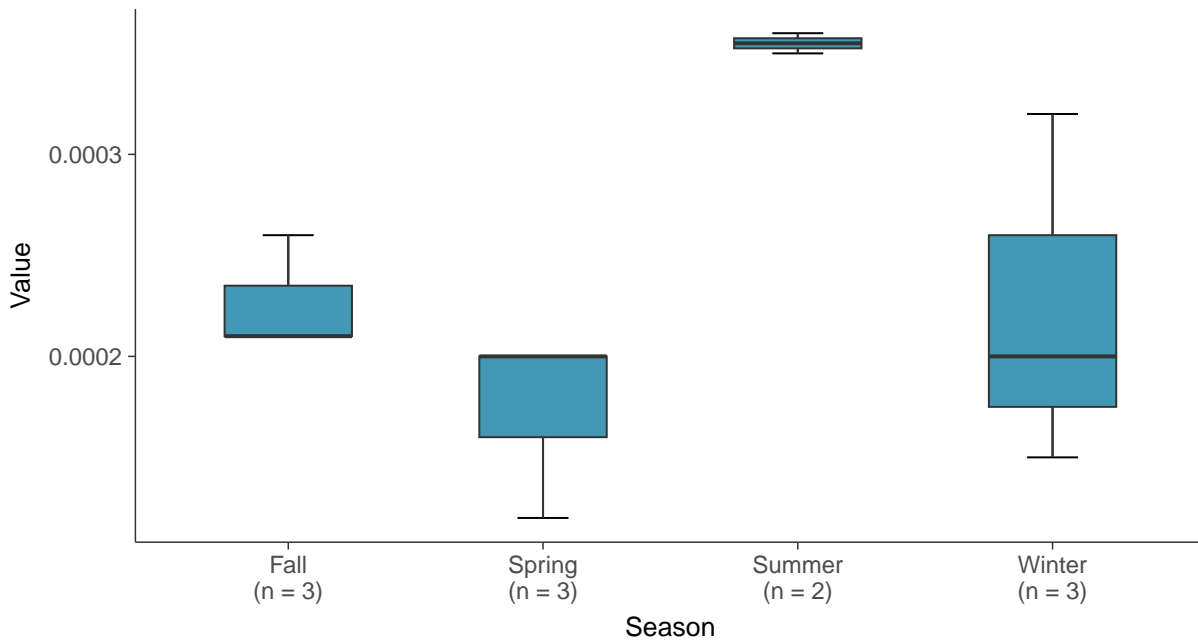
Boxplot

Beryllium, MW-01R (mg/L)



Boxplot by Season

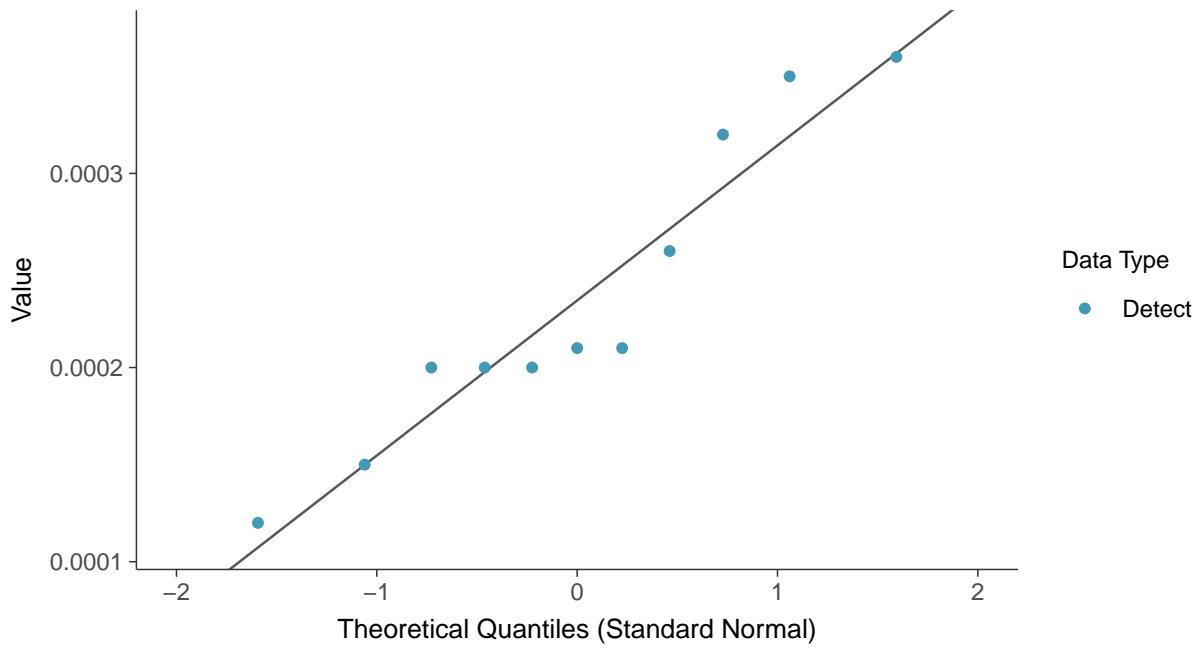
Beryllium, MW-01R (mg/L)





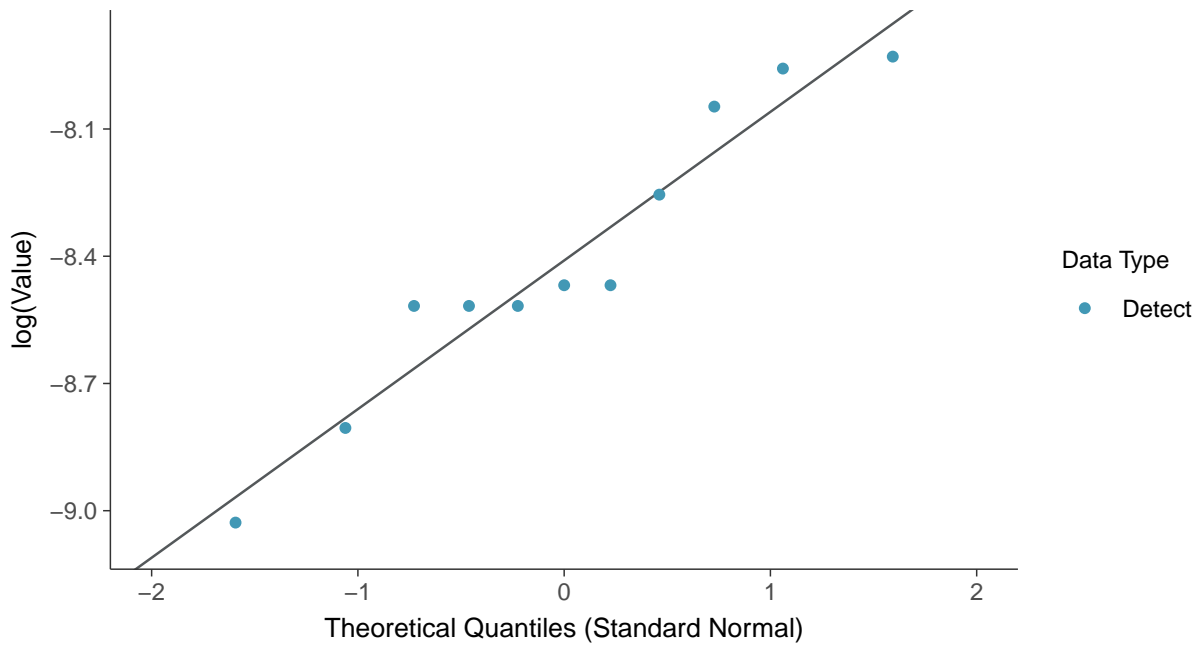
Normal Q-Q plot

Beryllium, MW-01R (mg/L)



Lognormal Q-Q plot

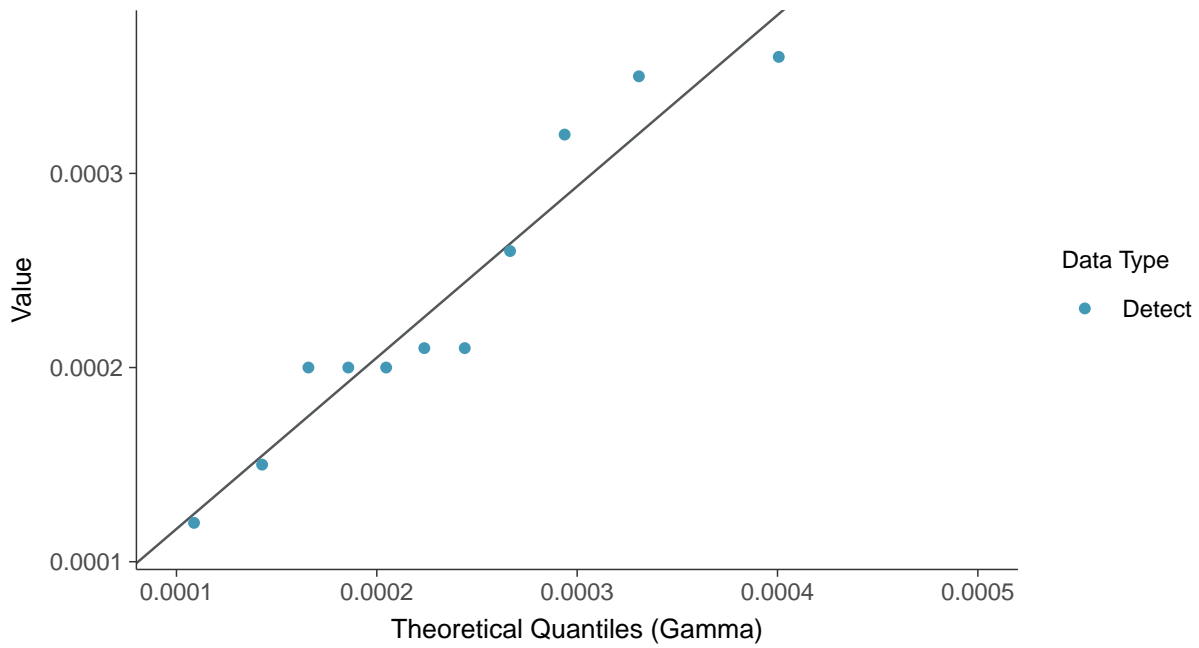
Beryllium, MW-01R (mg/L)





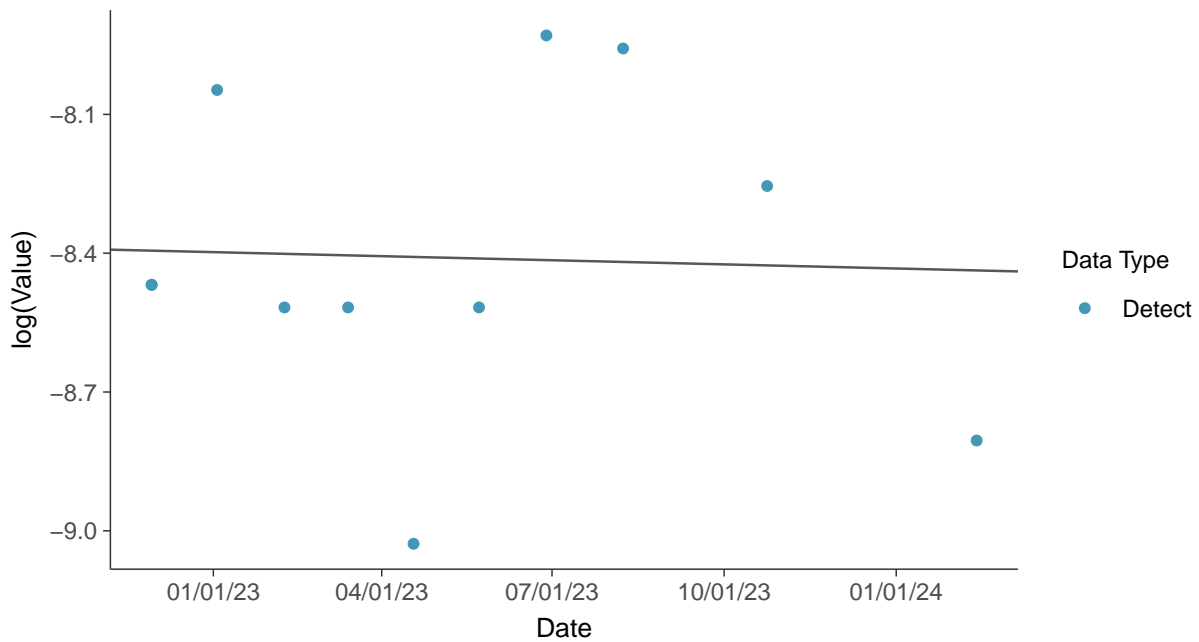
Gamma Q-Q plot

Beryllium, MW-01R (mg/L)



Trend Regression: Lognormal MLE

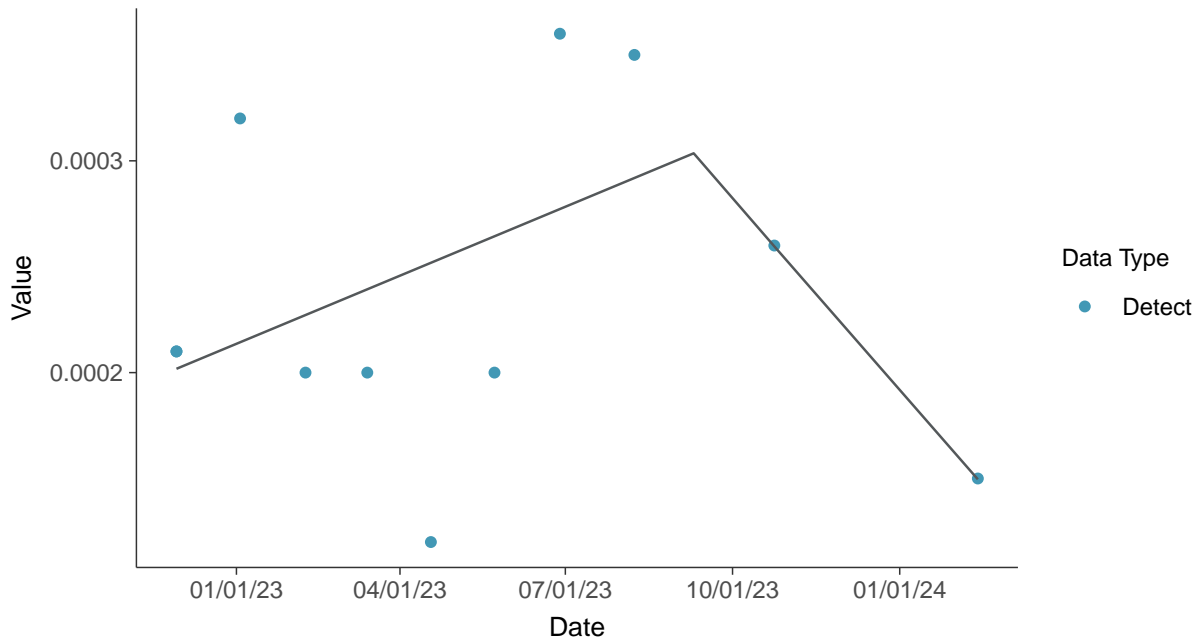
Beryllium, MW-01R (mg/L)





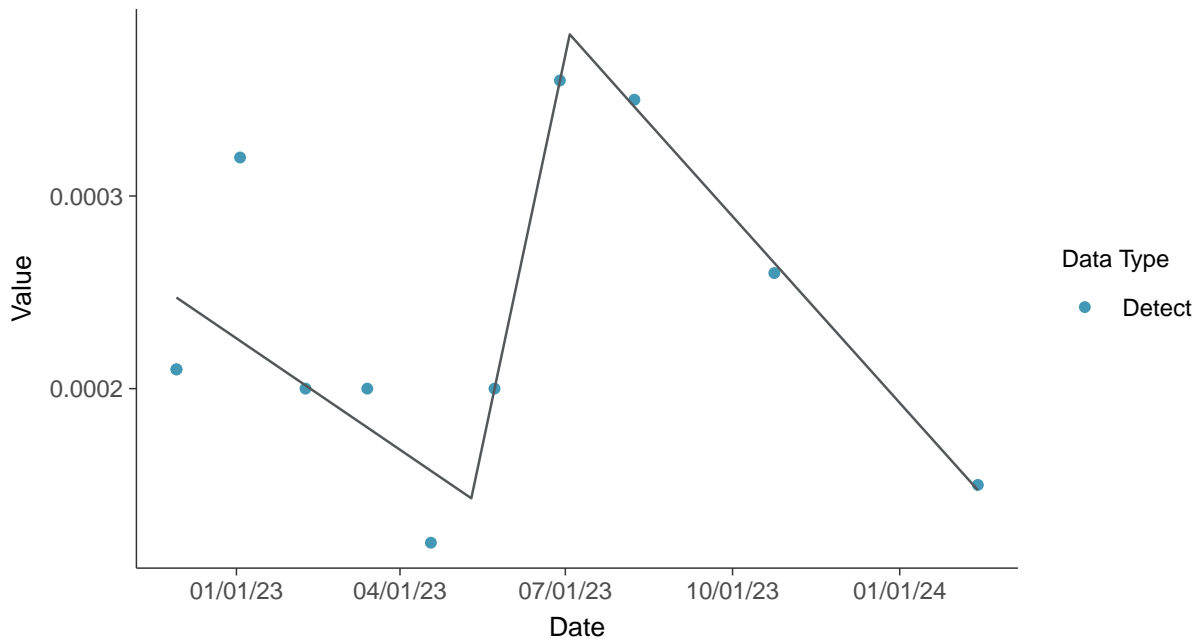
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-01R (mg/L)



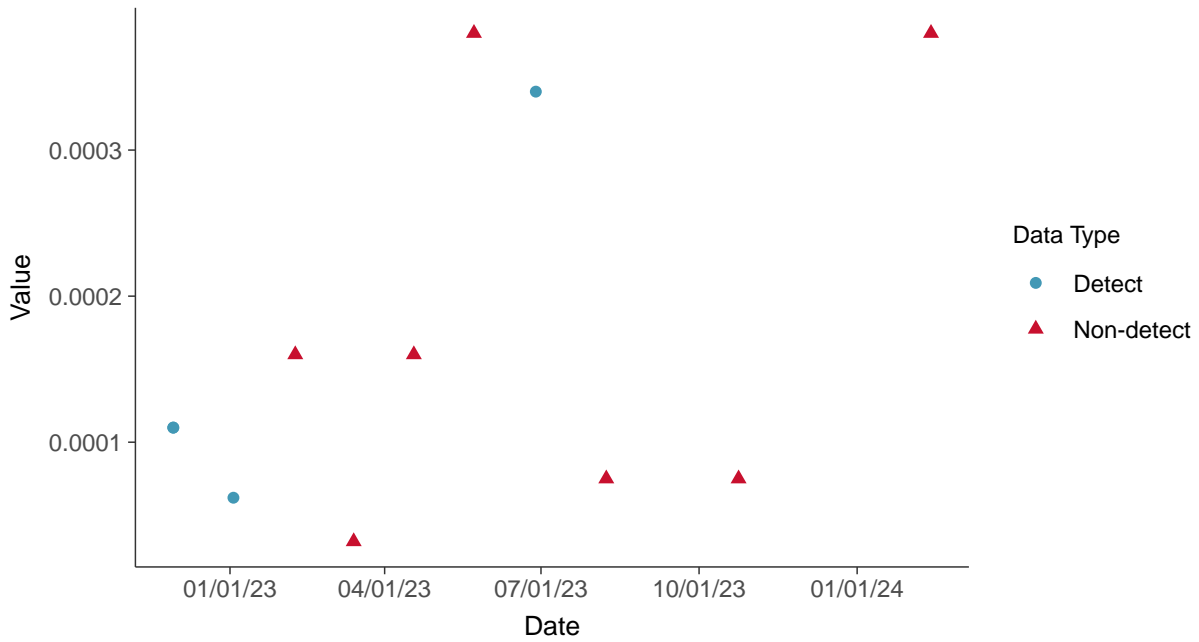


Appendix IV: Cadmium, MW-01R

ID: 2_11_5_106

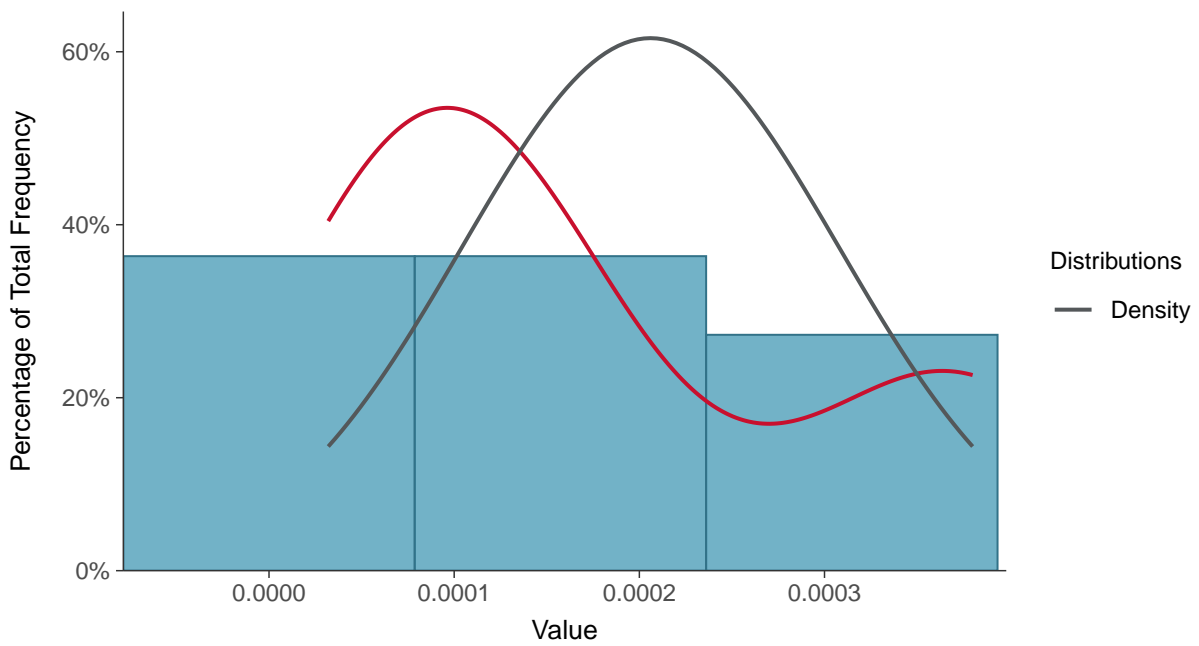
Scatter Plot

Cadmium, MW-01R (mg/L)



Histogram

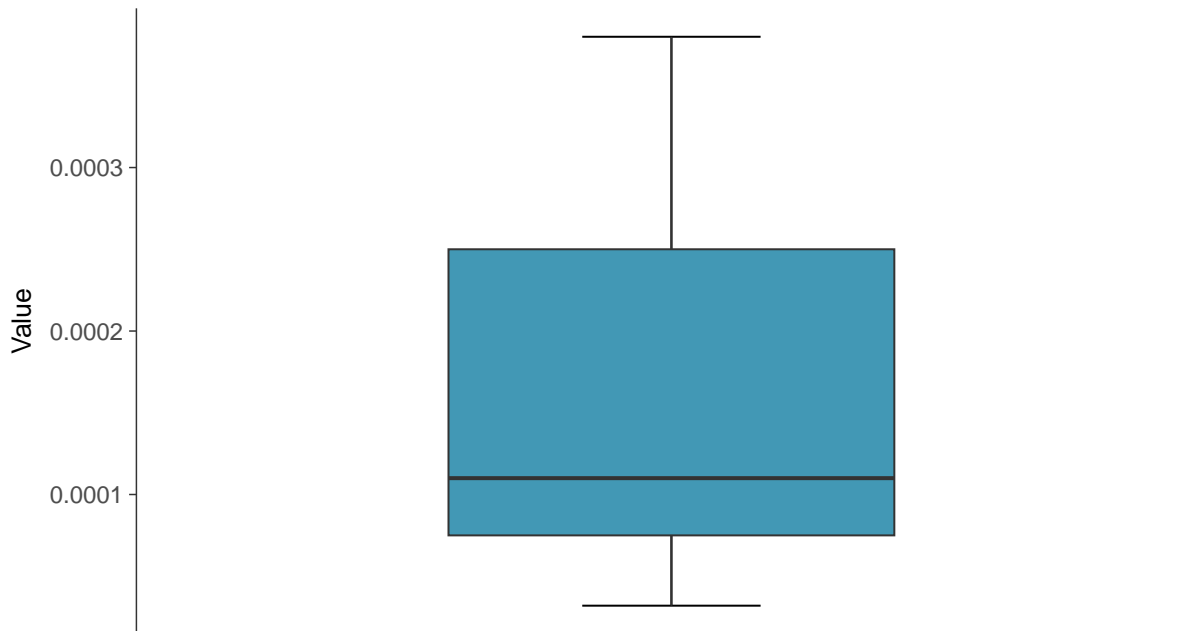
Cadmium, MW-01R (mg/L)





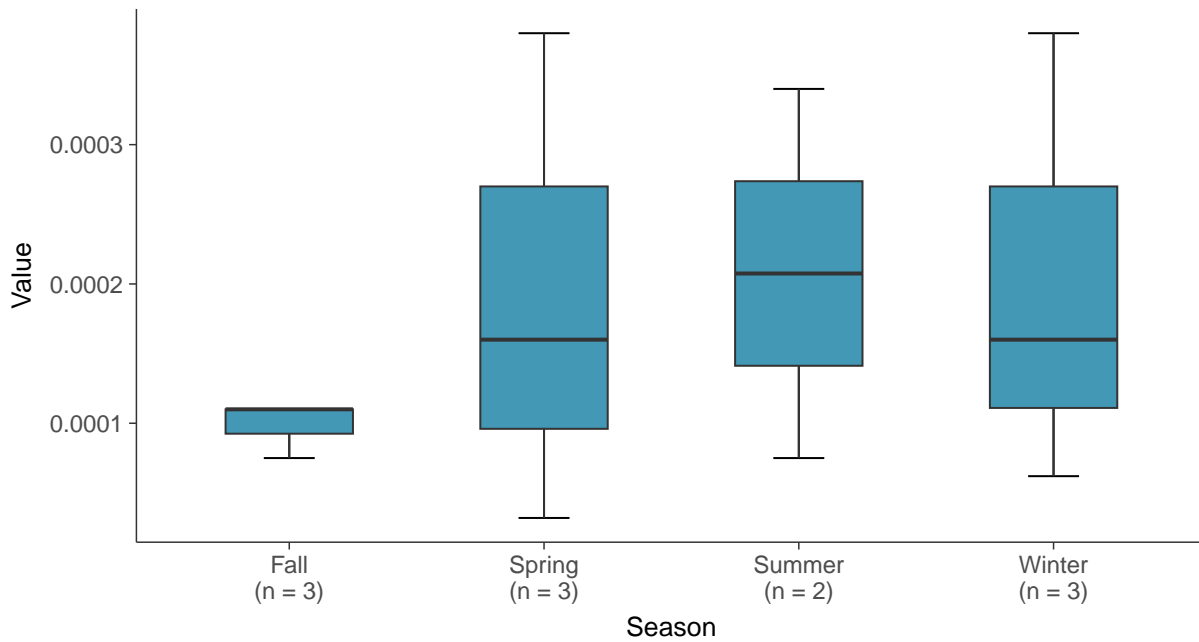
Boxplot

Cadmium, MW-01R (mg/L)



Boxplot by Season

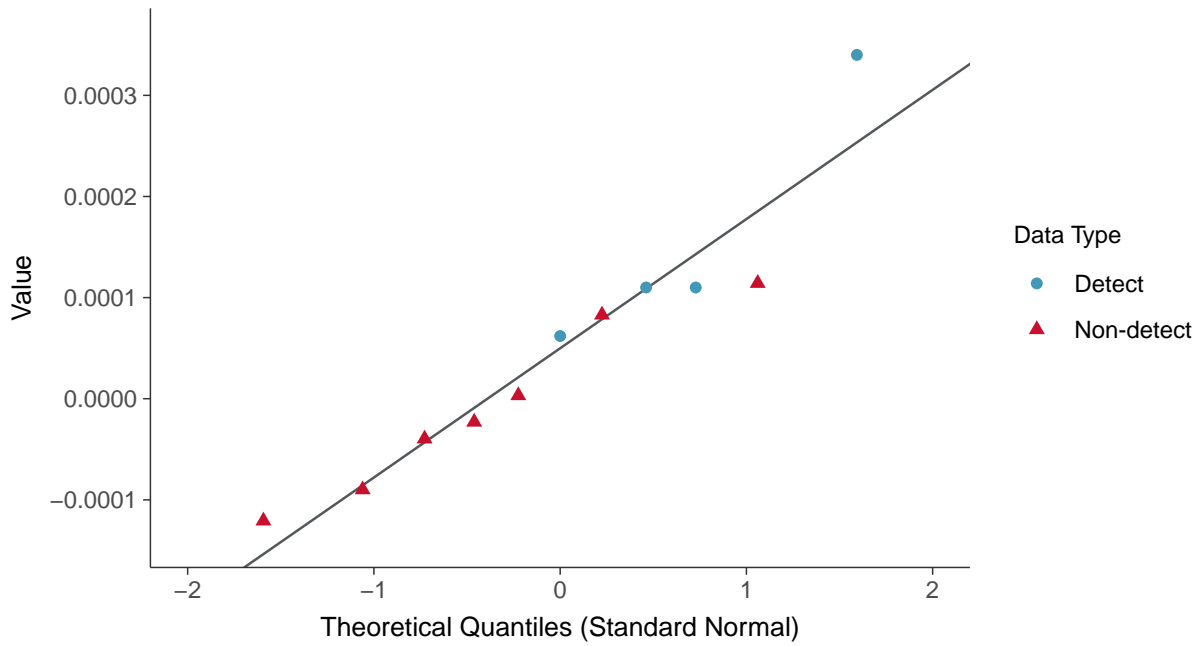
Cadmium, MW-01R (mg/L)





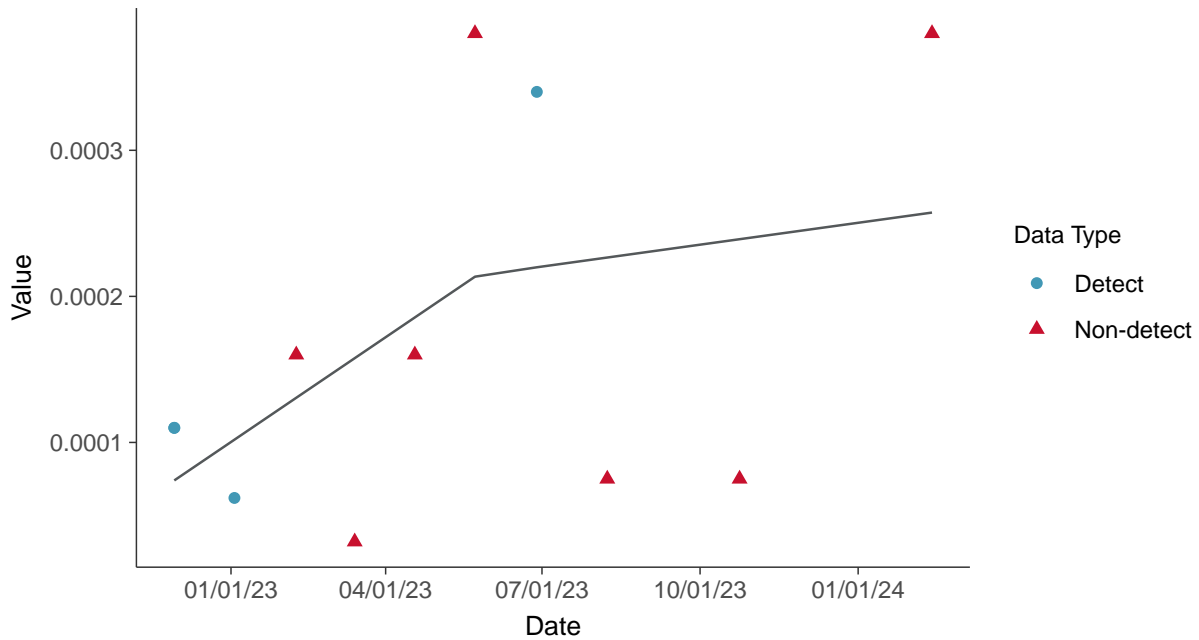
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

Cadmium, MW-01R (mg/L)



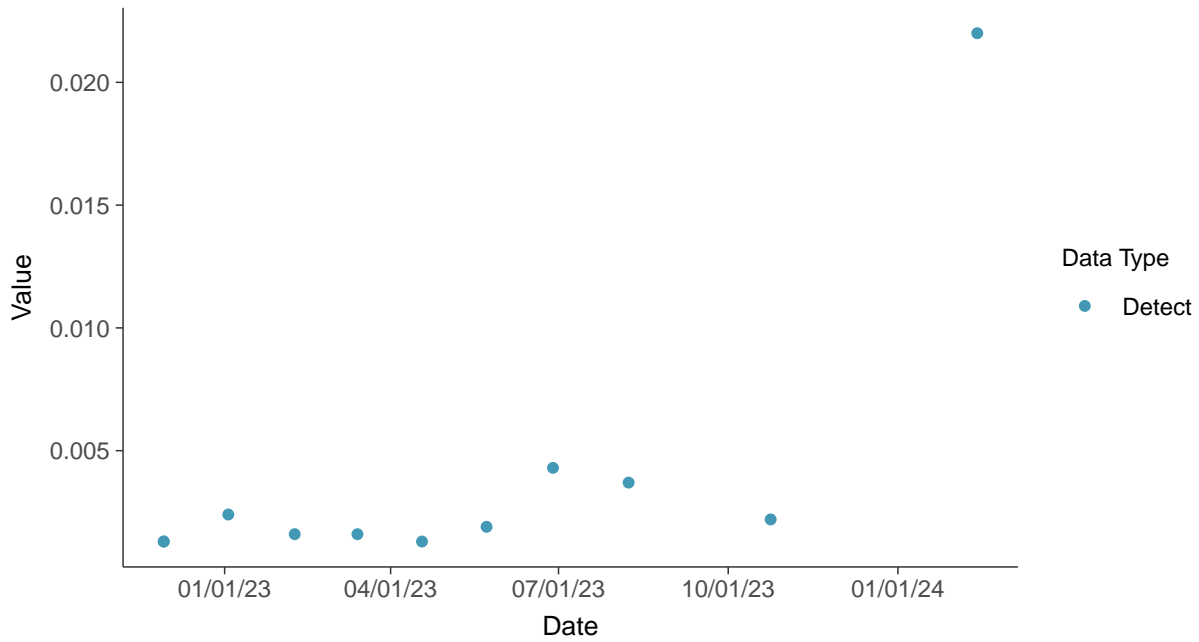


Appendix IV: Chromium, Total, MW-01R

ID: 2_11_5_109

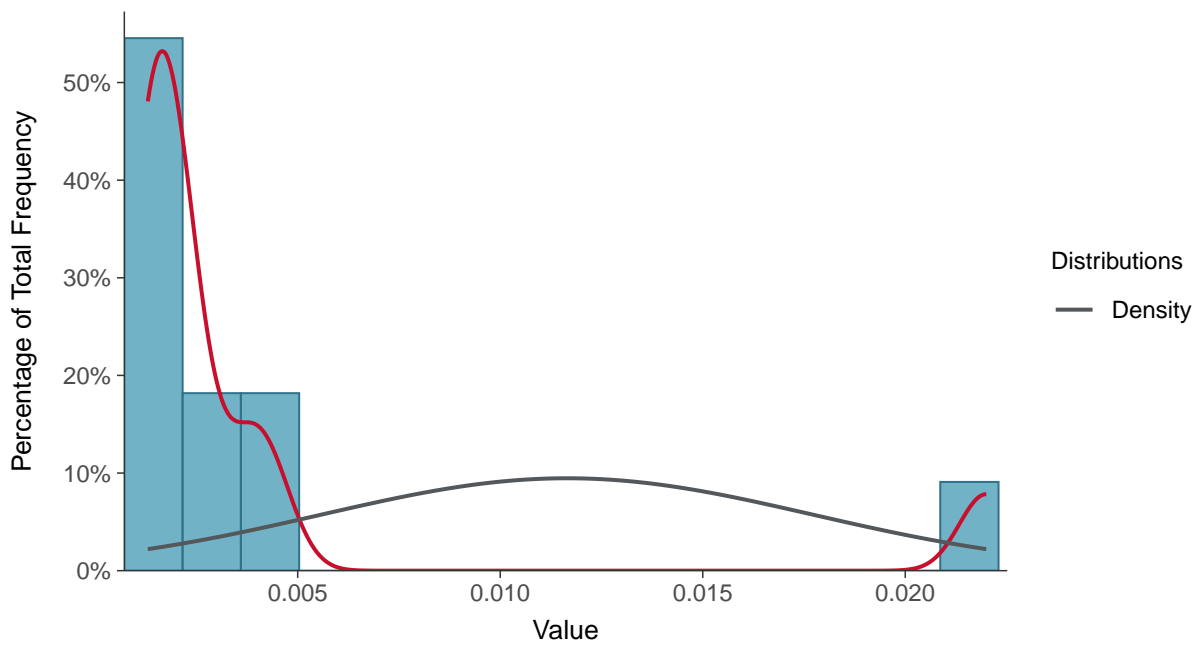
Scatter Plot

Chromium, Total, MW-01R (mg/L)



Histogram

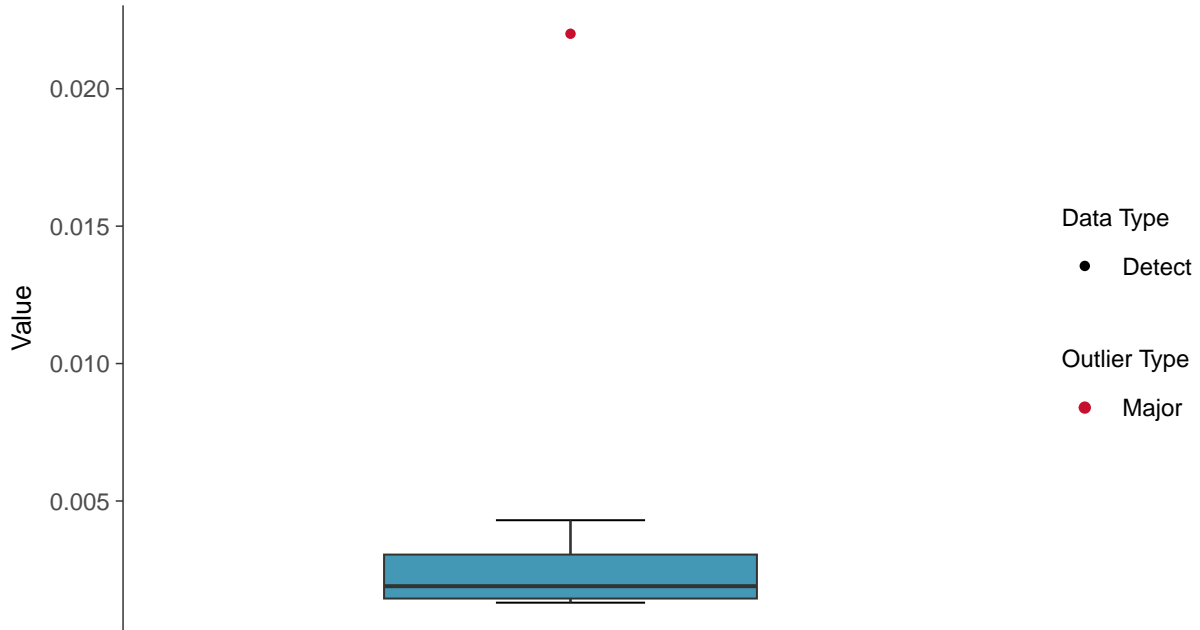
Chromium, Total, MW-01R (mg/L)





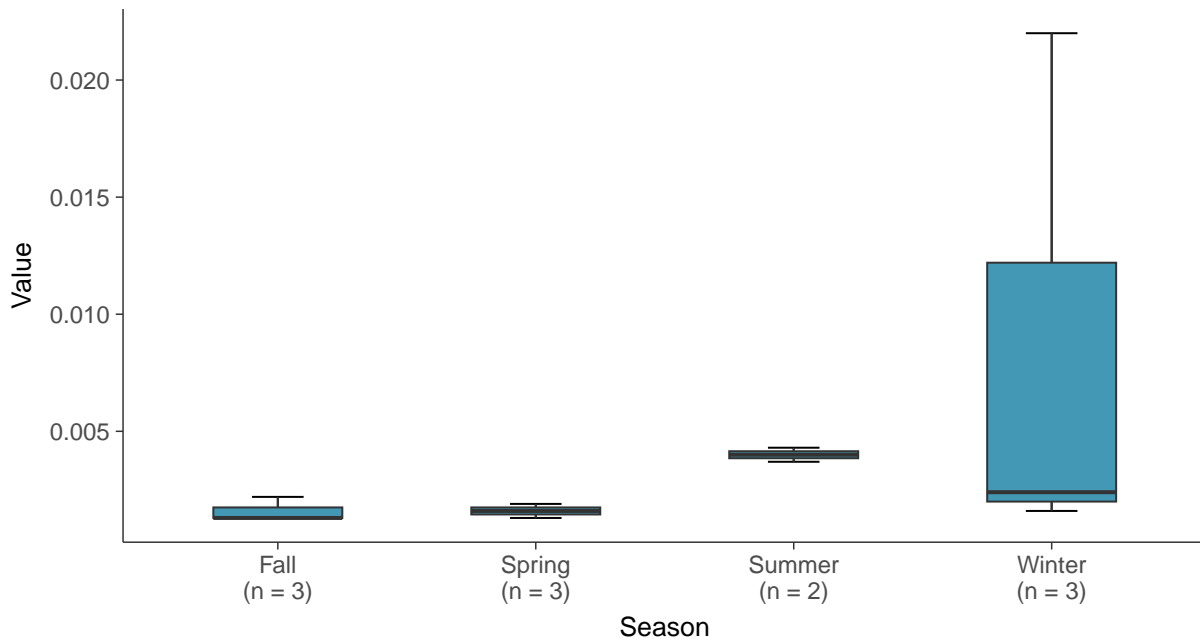
Boxplot

Chromium, Total, MW-01R (mg/L)



Boxplot by Season

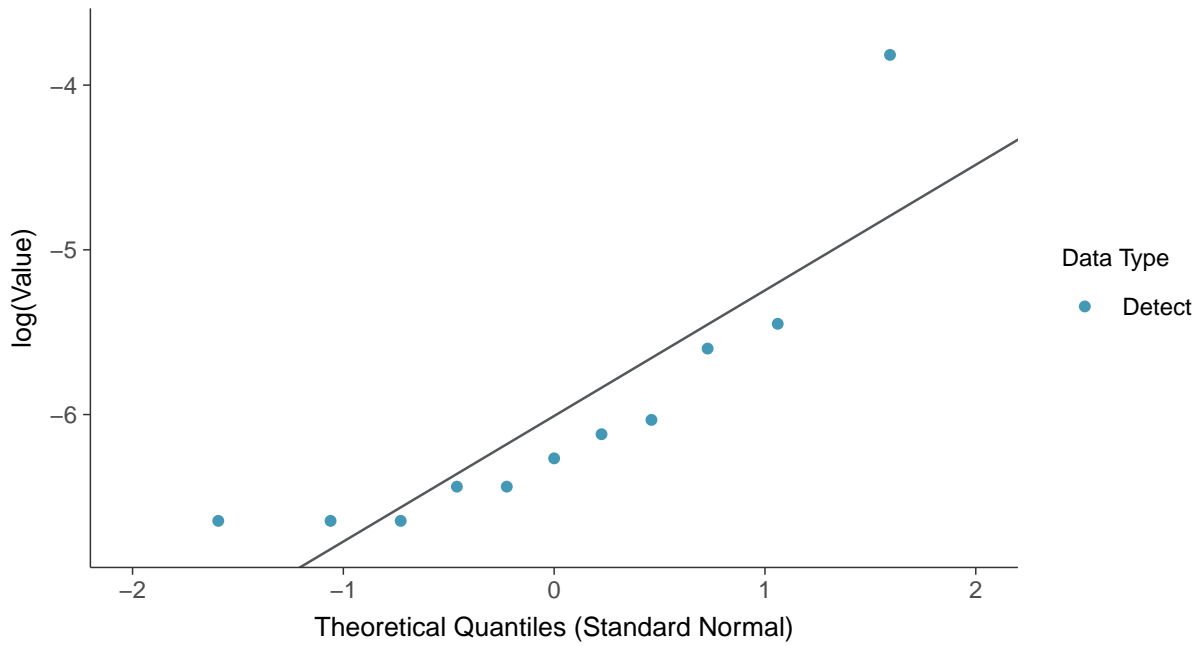
Chromium, Total, MW-01R (mg/L)





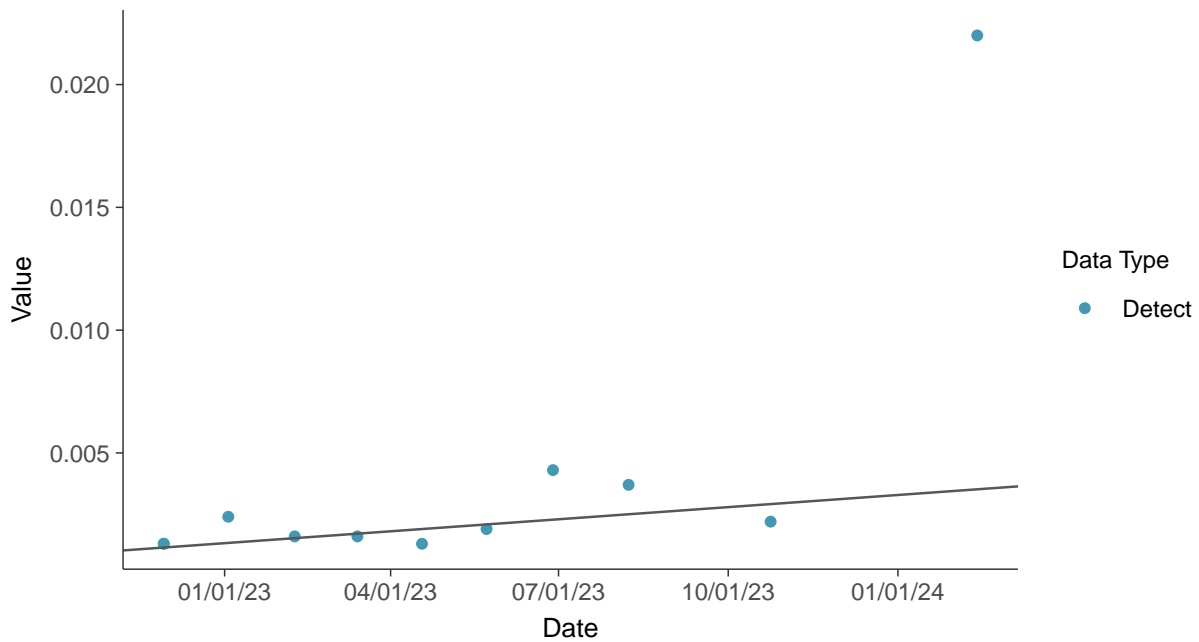
Lognormal Q-Q plot

Chromium, Total, MW-01R (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chromium, Total, MW-01R (mg/L)



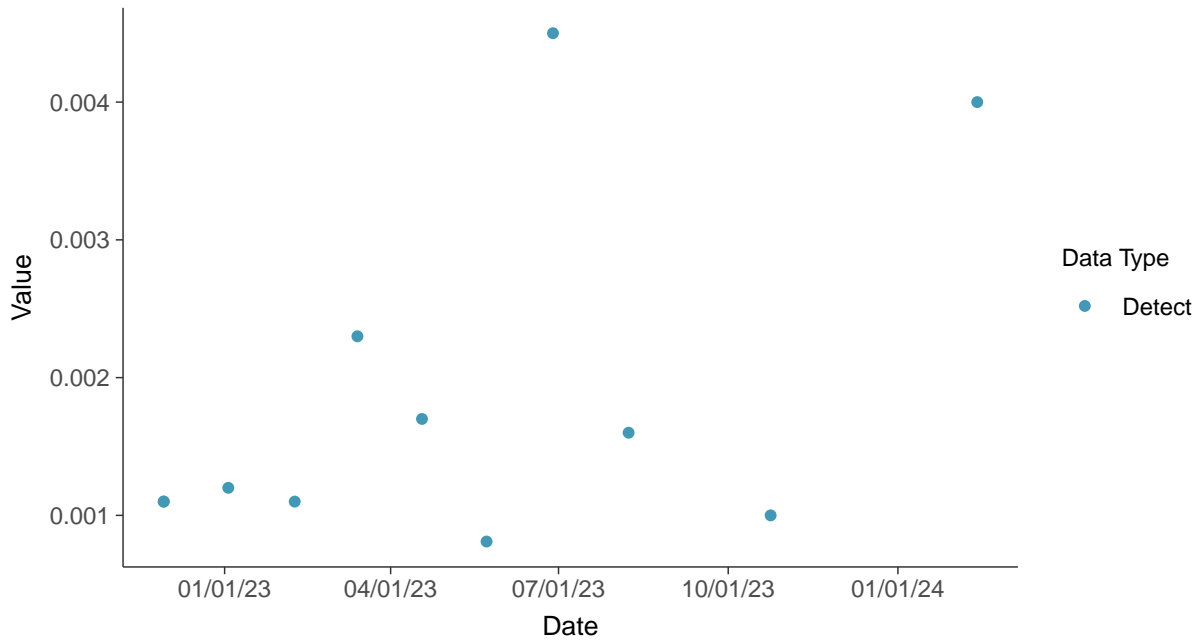


Appendix IV: Cobalt, MW-01R

ID: 2_11_5_110

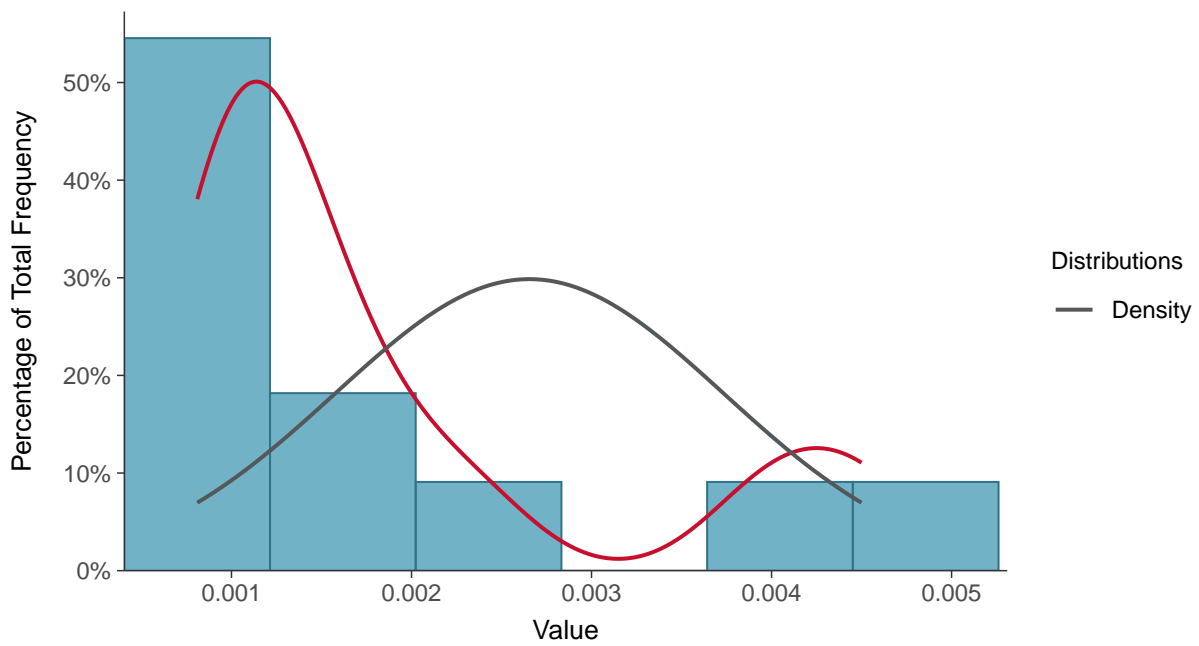
Scatter Plot

Cobalt, MW-01R (mg/L)



Histogram

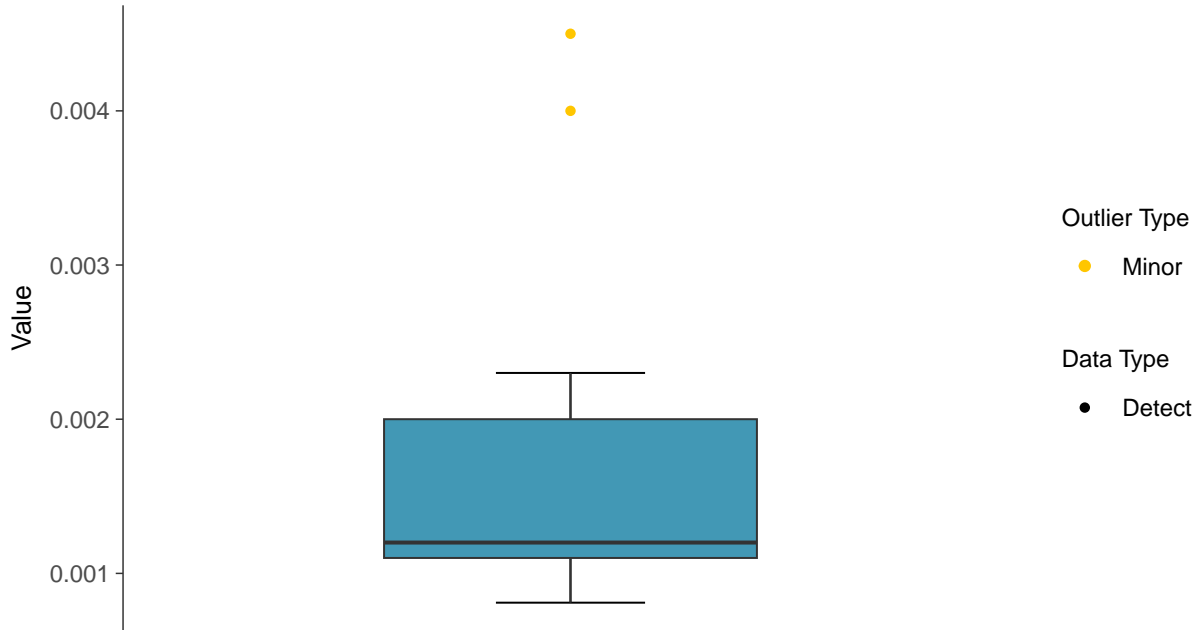
Cobalt, MW-01R (mg/L)





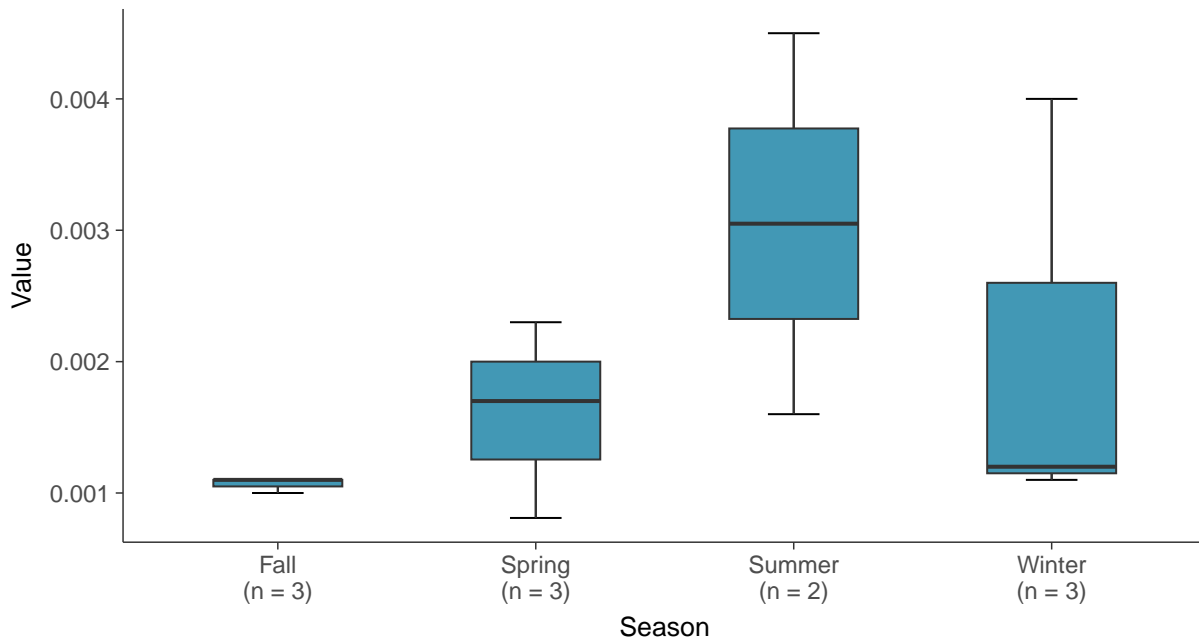
Boxplot

Cobalt, MW-01R (mg/L)



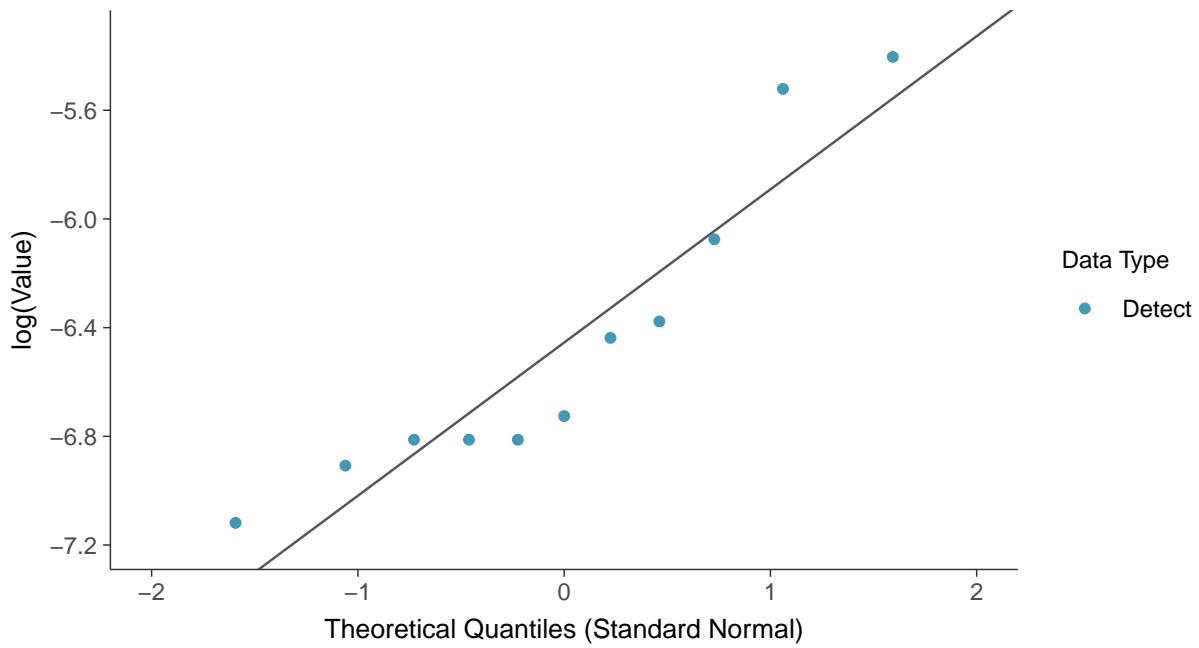
Boxplot by Season

Cobalt, MW-01R (mg/L)

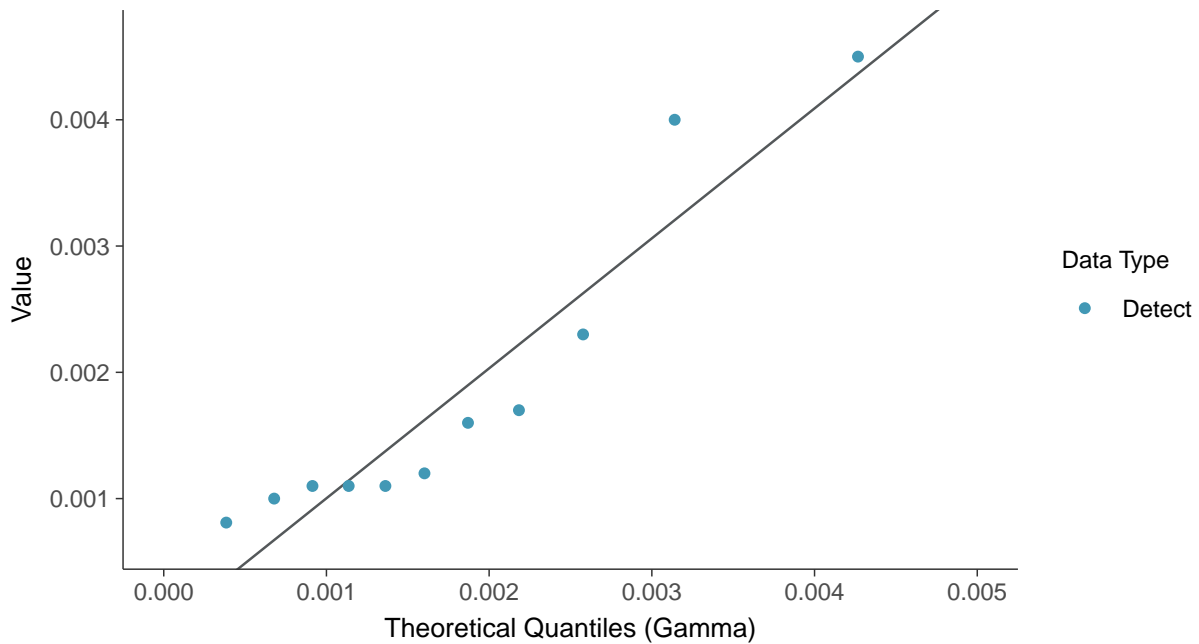




Lognormal Q-Q plot
Cobalt, MW-01R (mg/L)



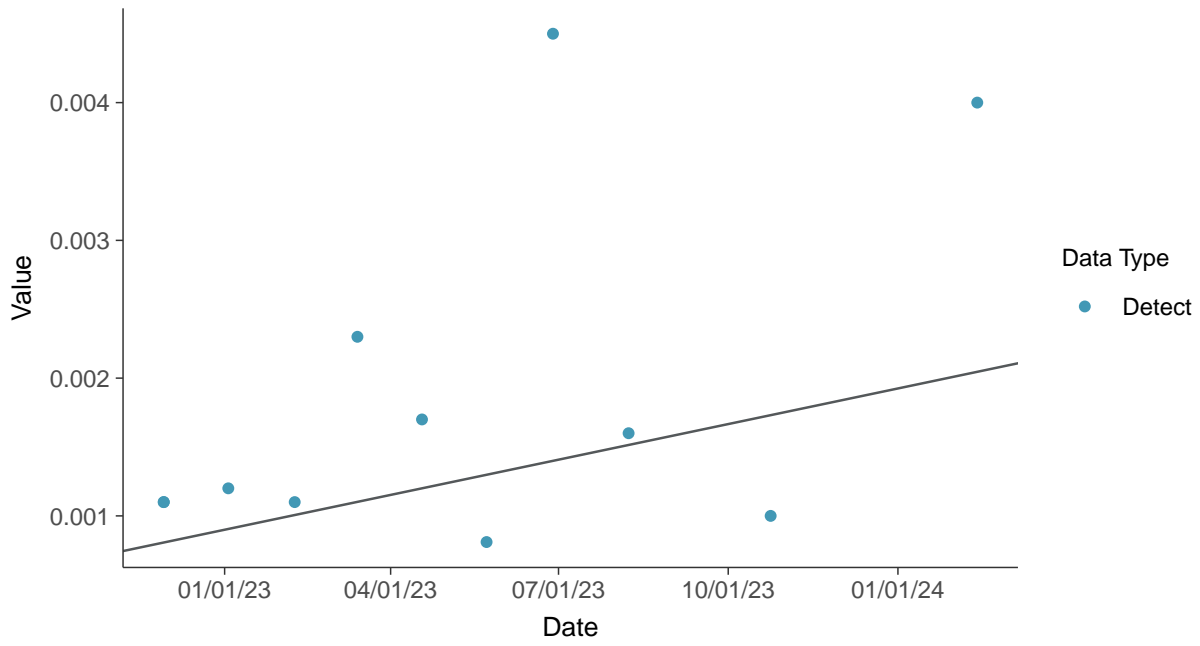
Gamma Q-Q plot
Cobalt, MW-01R (mg/L)





Trend Regression: Mann-Kendall/Theil-Sen Estimate

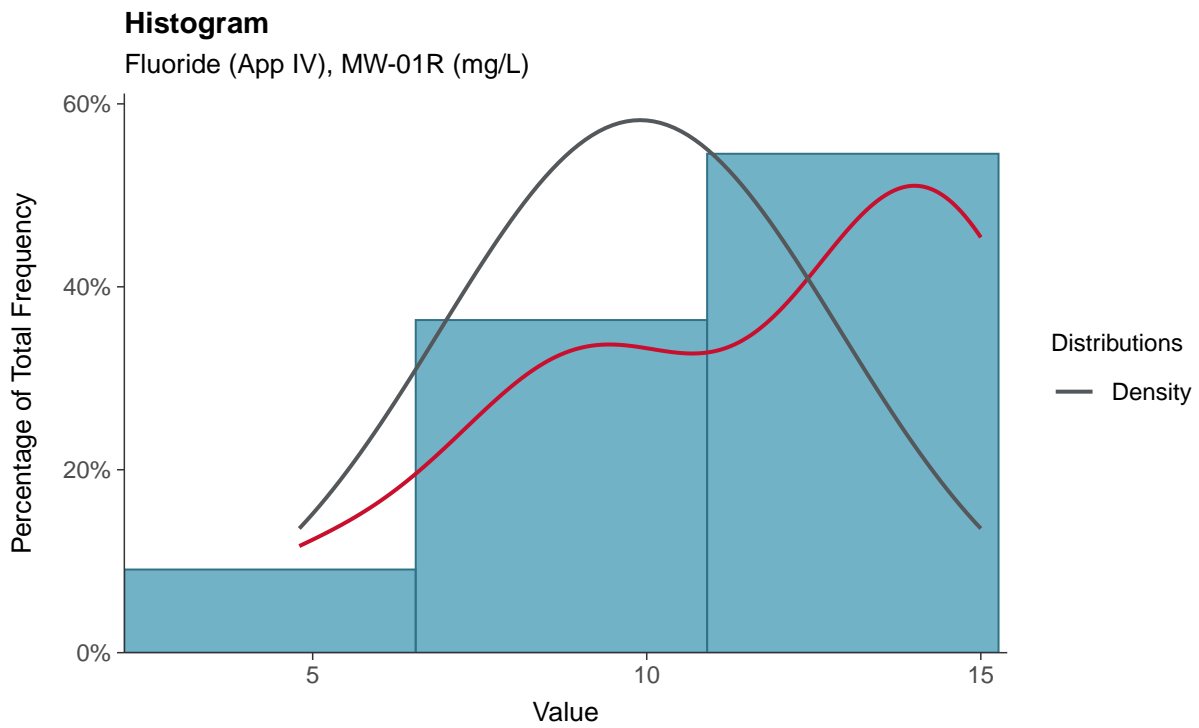
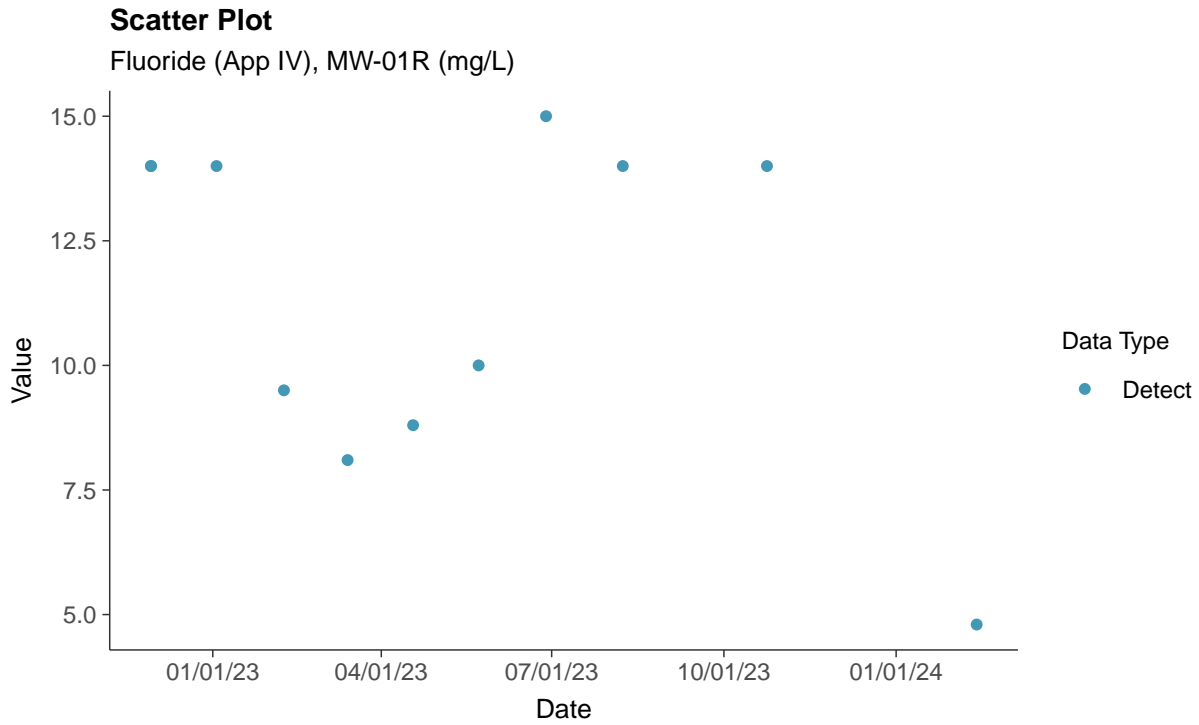
Cobalt, MW-01R (mg/L)





Appendix IV: Fluoride (App IV), MW-01R

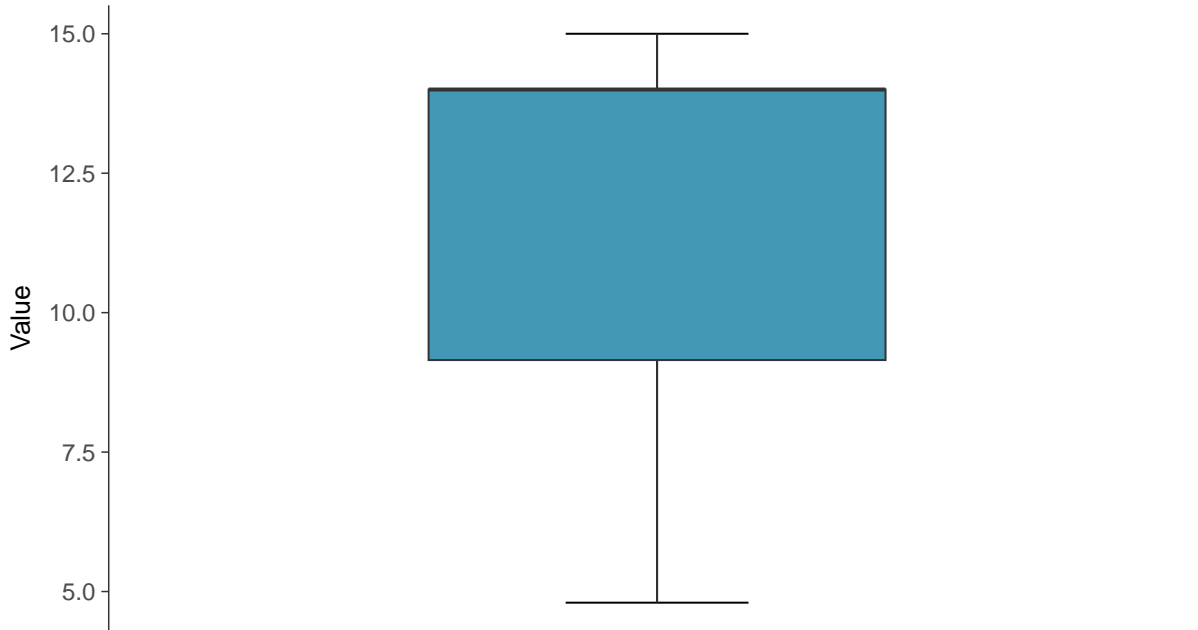
ID: 2_11_5_113





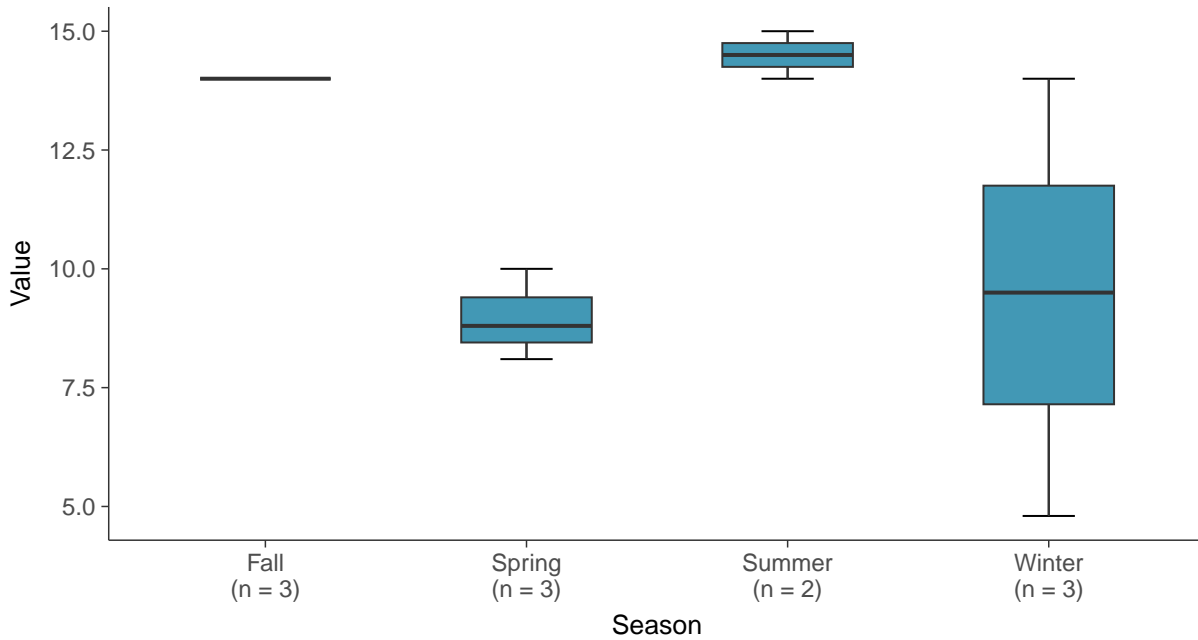
Boxplot

Fluoride (App IV), MW-01R (mg/L)



Boxplot by Season

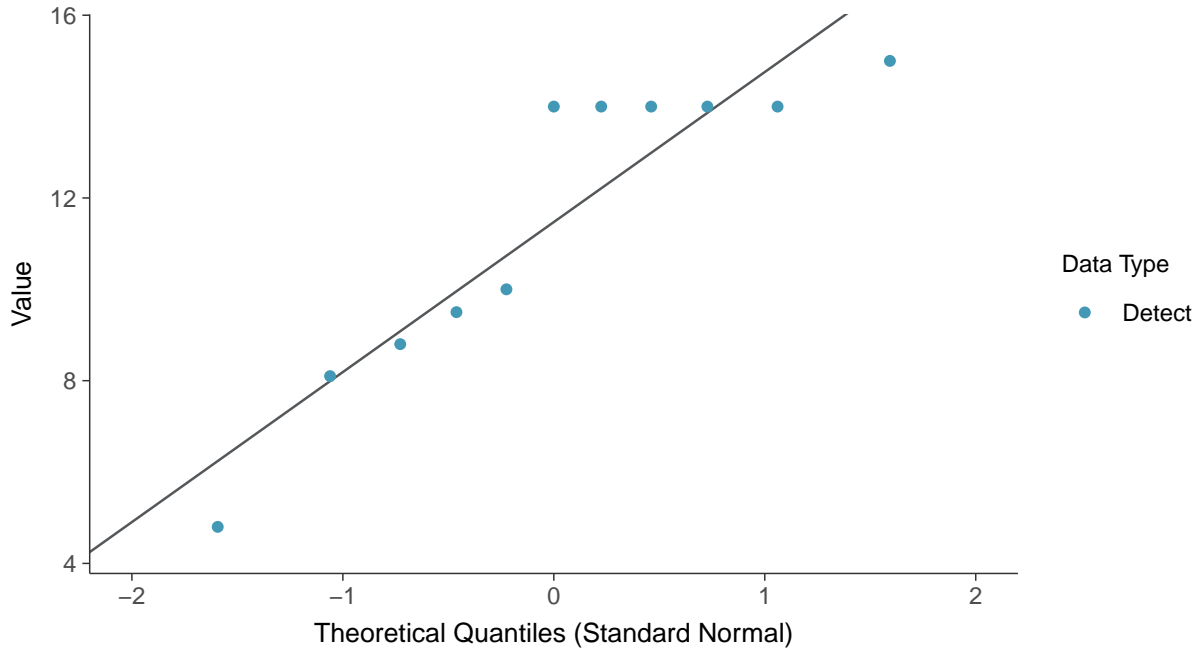
Fluoride (App IV), MW-01R (mg/L)





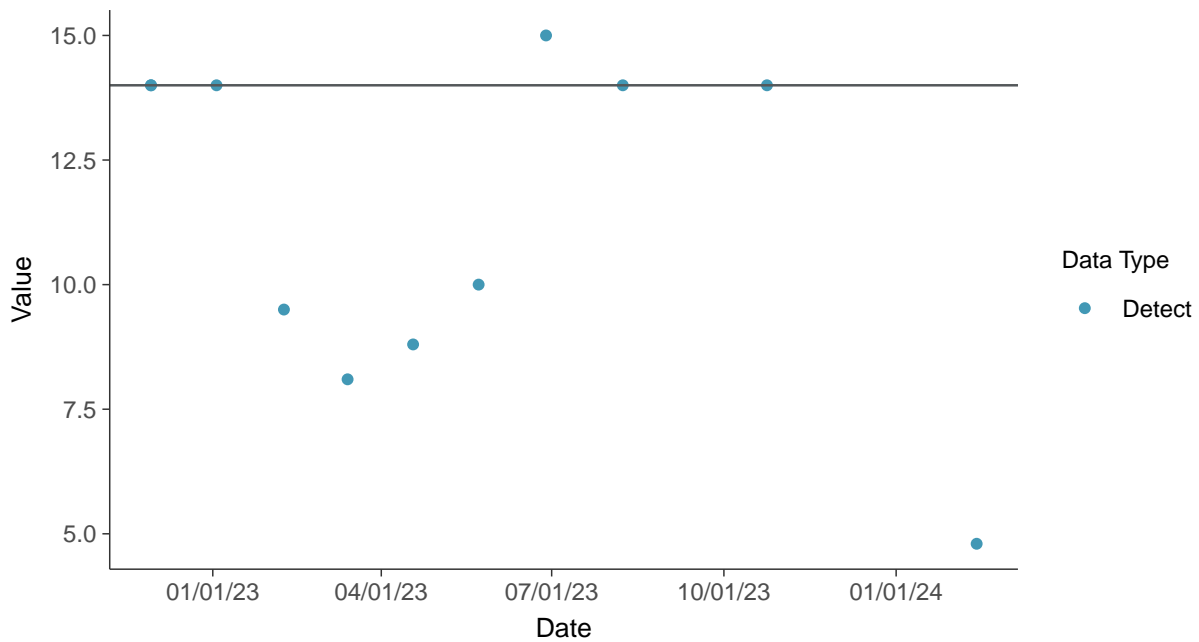
Normal Q-Q plot

Fluoride (App IV), MW-01R (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

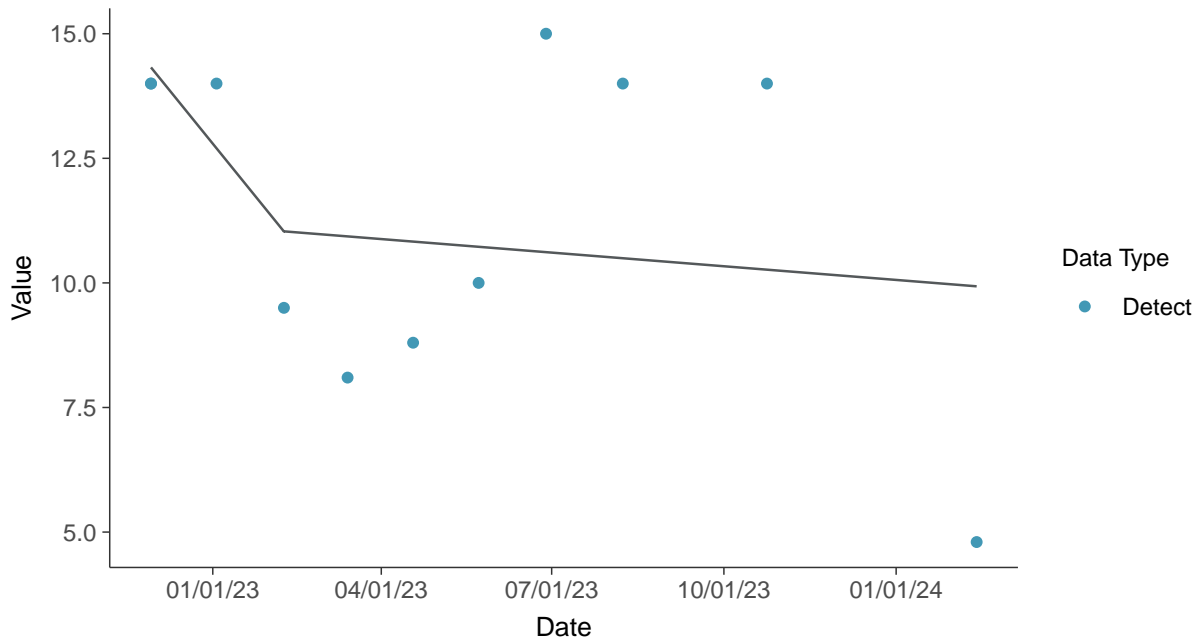
Fluoride (App IV), MW-01R (mg/L)





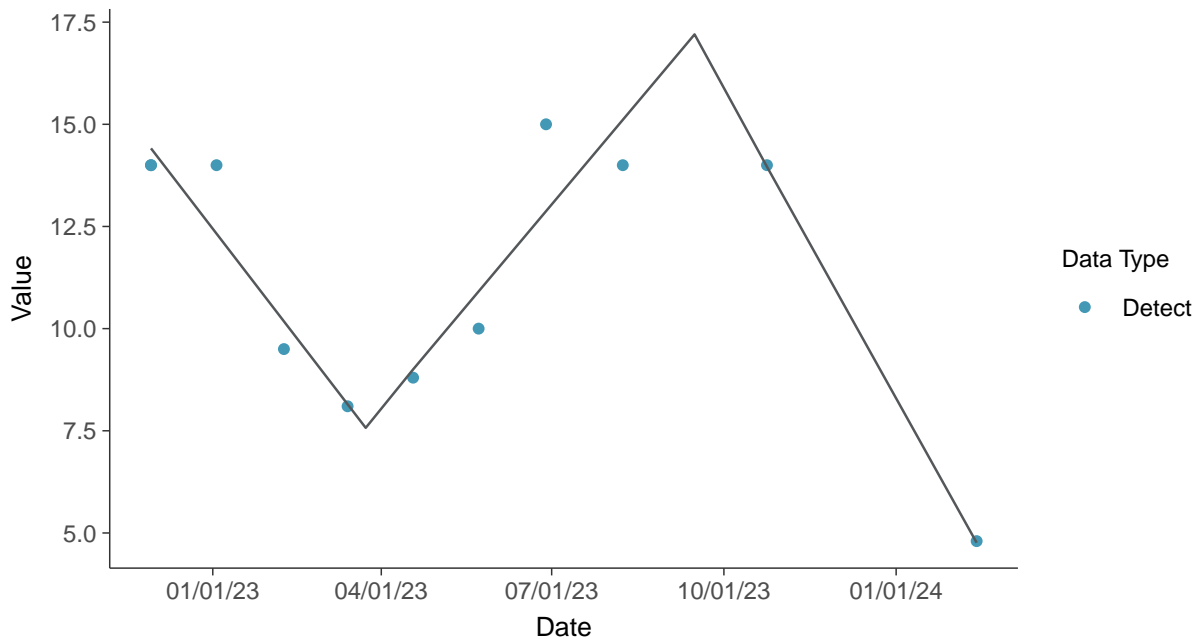
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride (App IV), MW-01R (mg/L)



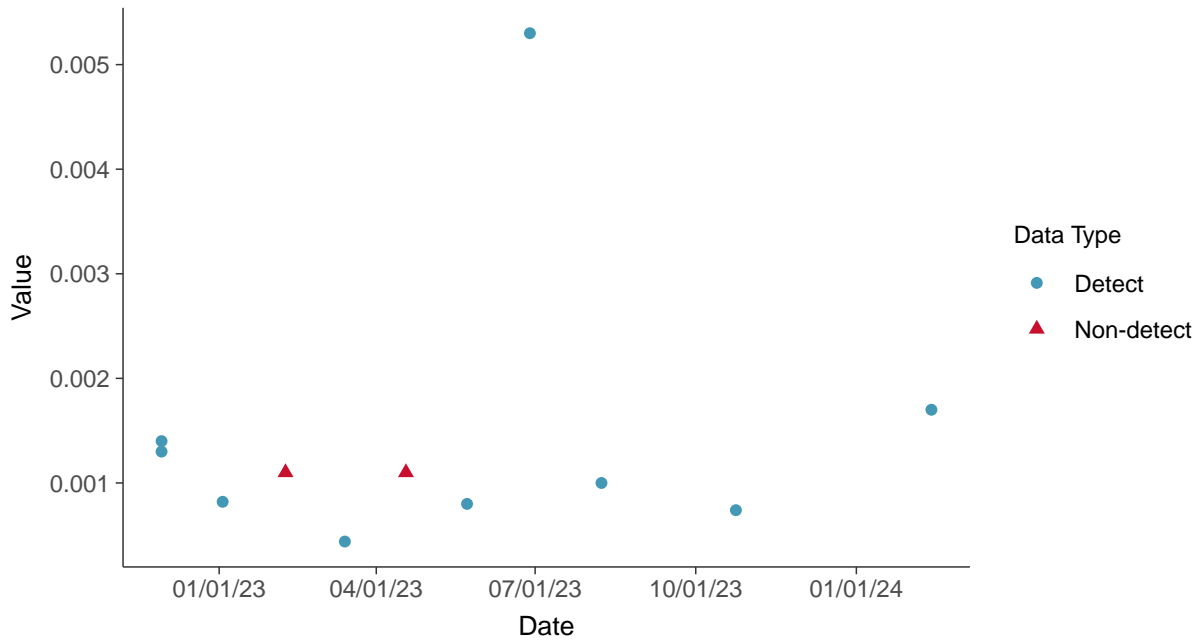


Appendix IV: Lead, MW-01R

ID: 2_11_5_115

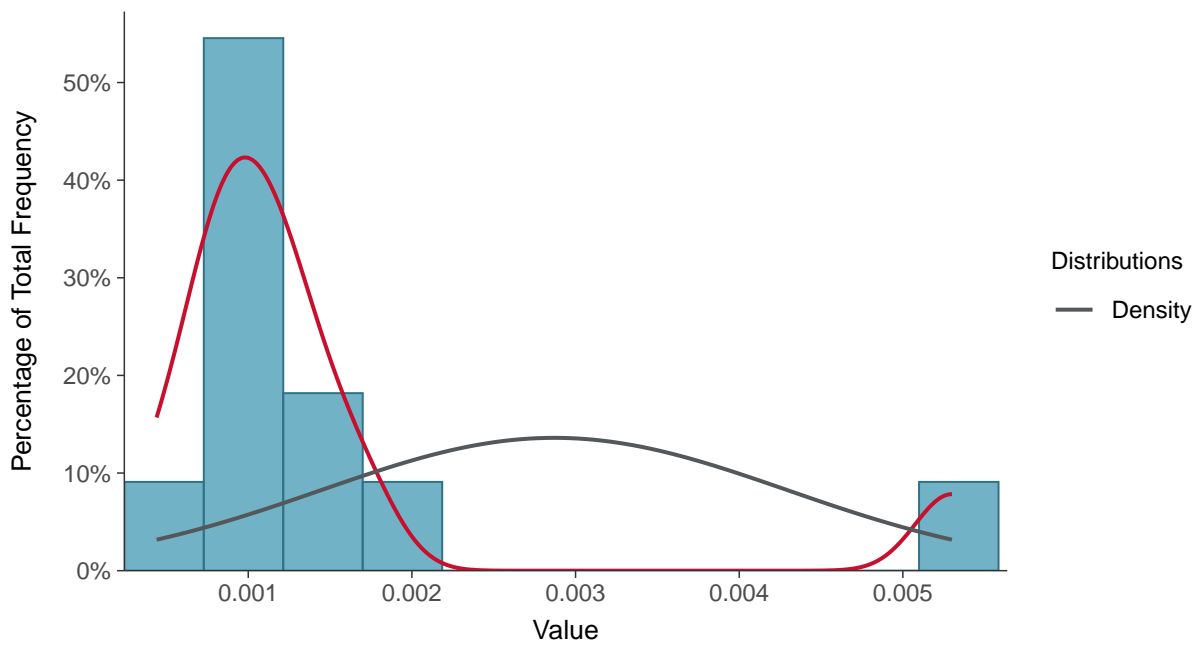
Scatter Plot

Lead, MW-01R (mg/L)



Histogram

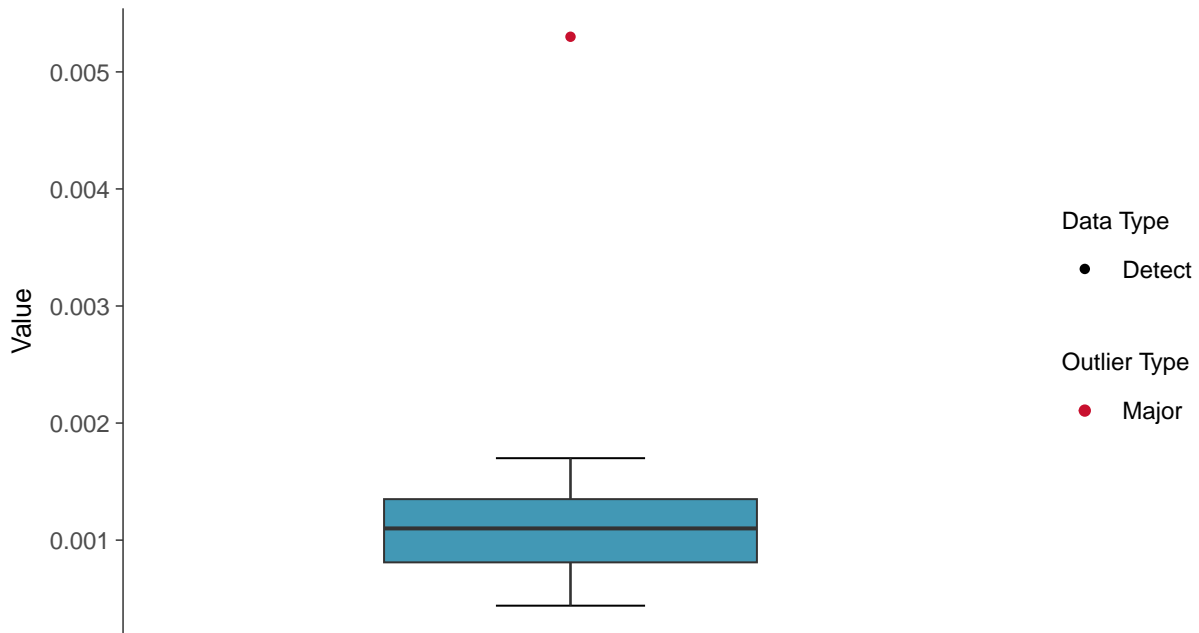
Lead, MW-01R (mg/L)





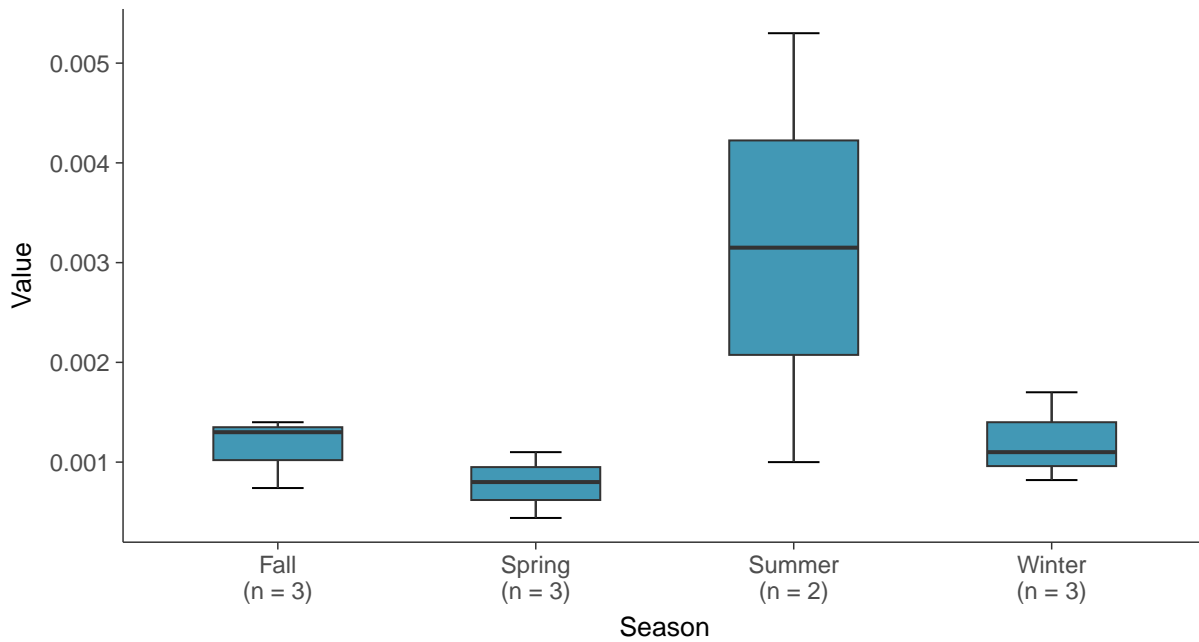
Boxplot

Lead, MW-01R (mg/L)



Boxplot by Season

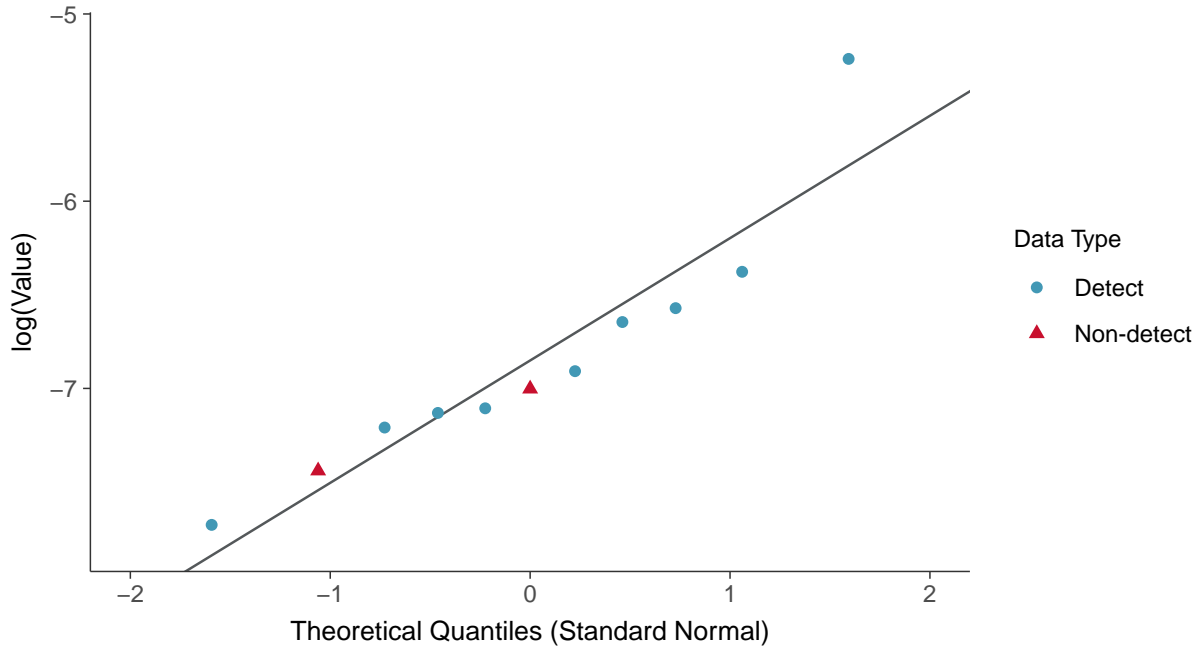
Lead, MW-01R (mg/L)





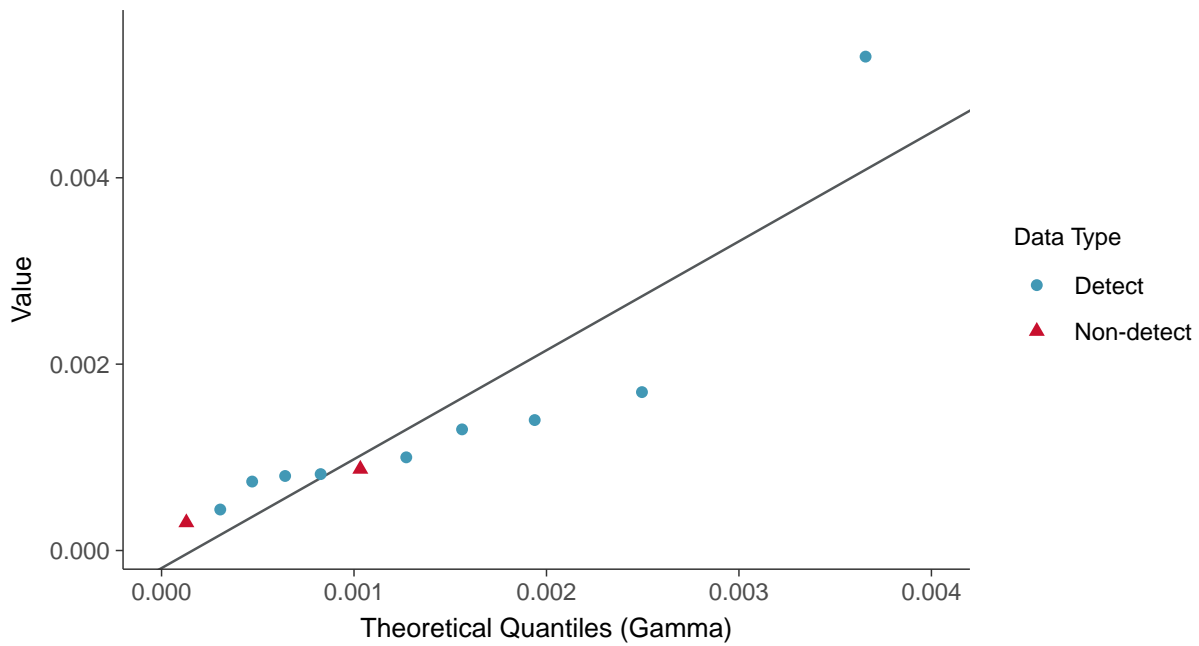
Lognormal Q-Q plot using ROS Imputed Estimates

Lead, MW-01R (mg/L)



Gamma Q-Q plot using ROS Imputed Estimates

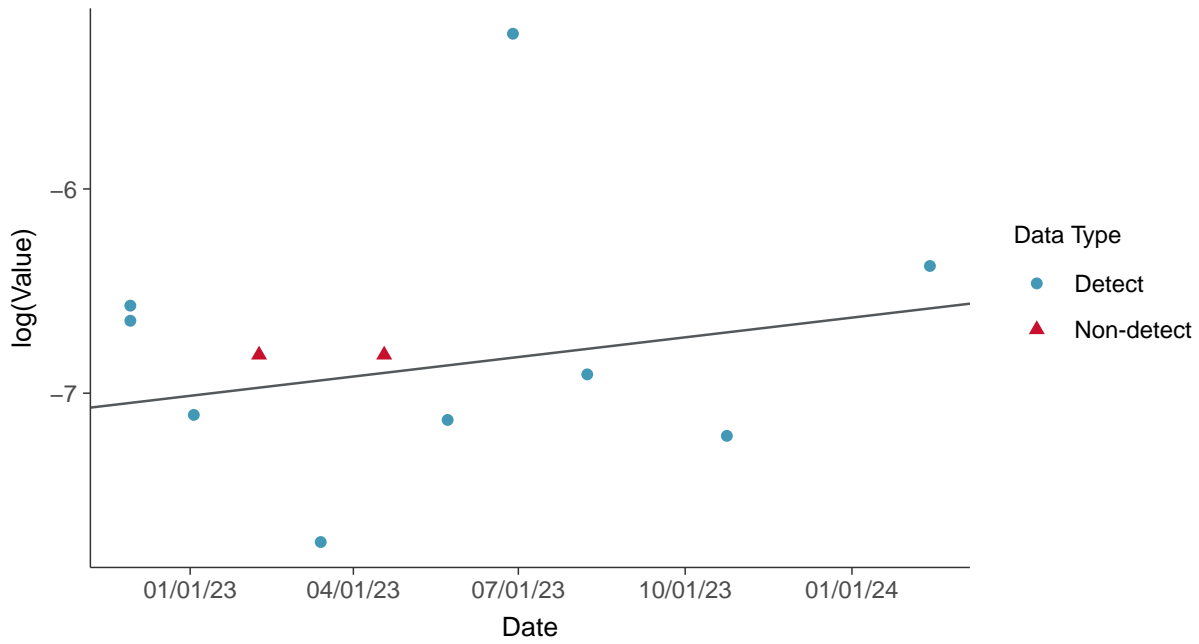
Lead, MW-01R (mg/L)





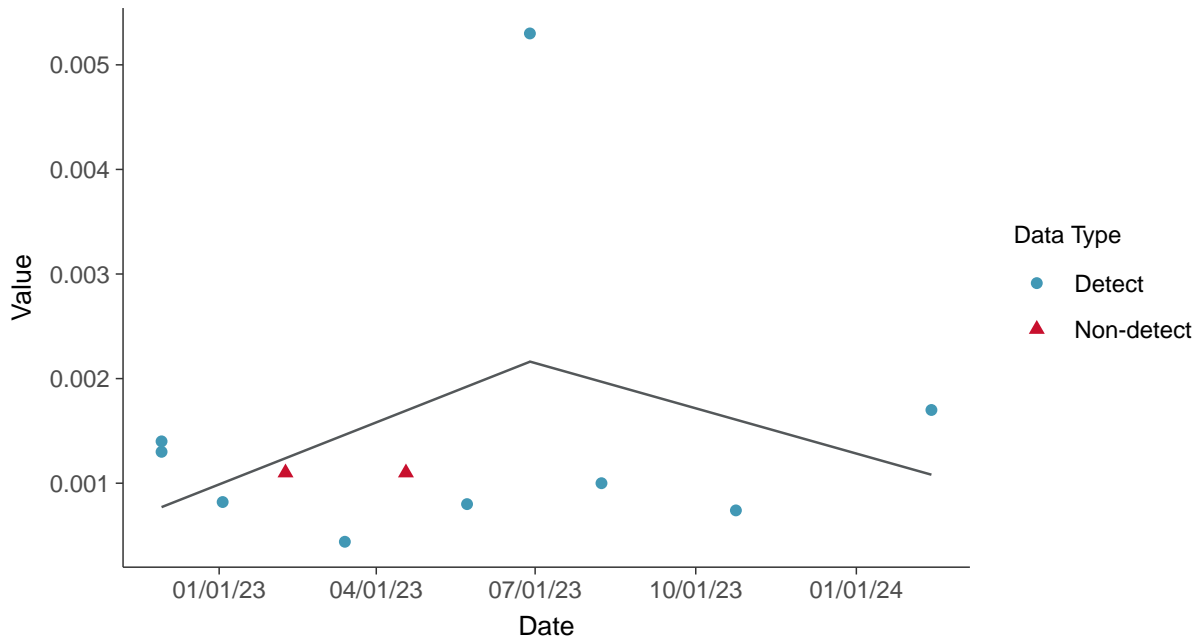
Trend Regression: Lognormal MLE

Lead, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

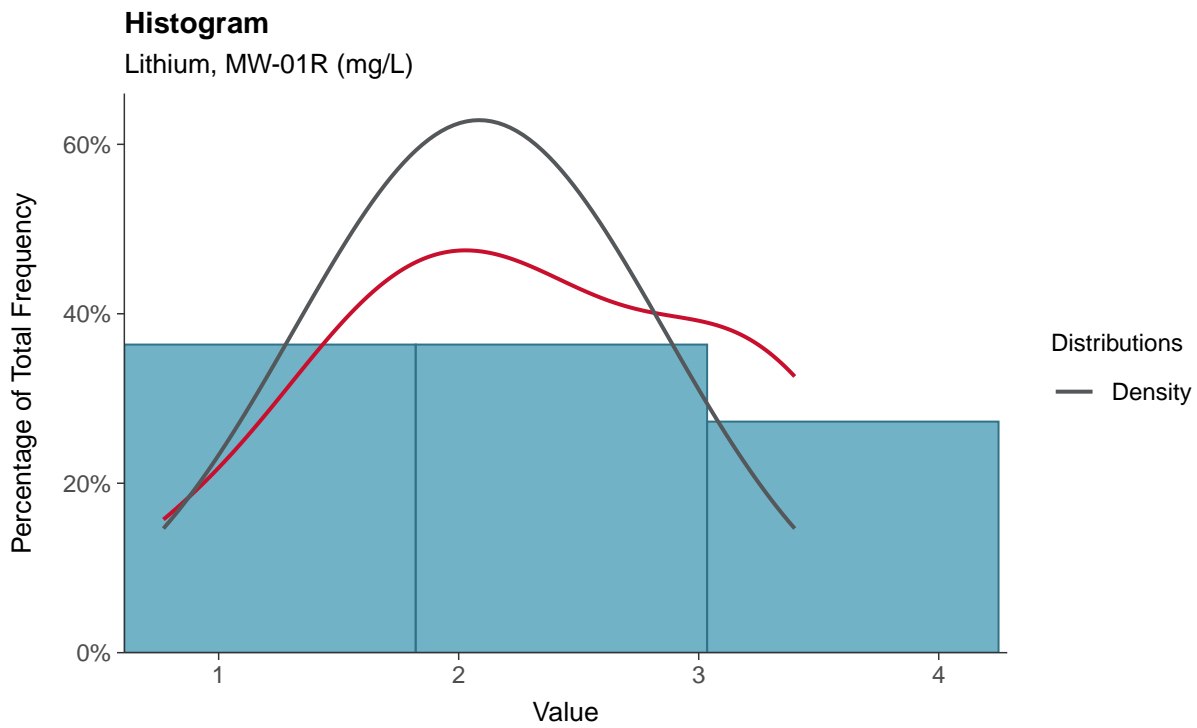
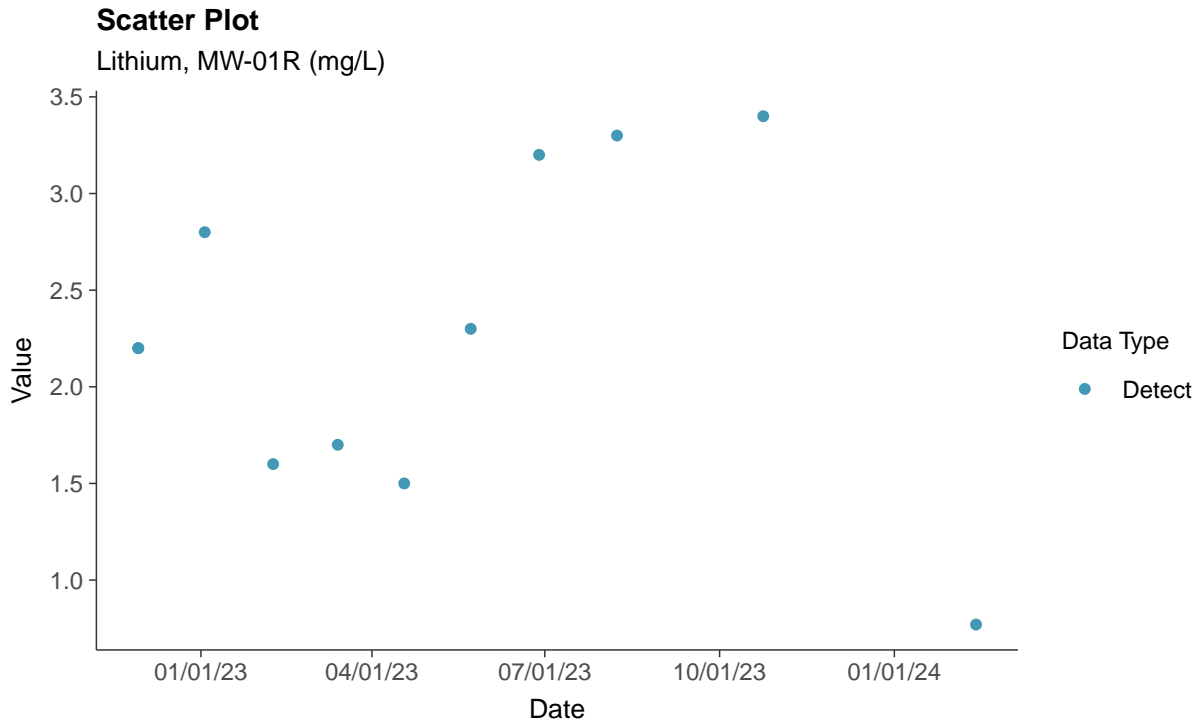
Lead, MW-01R (mg/L)





Appendix IV: Lithium, MW-01R

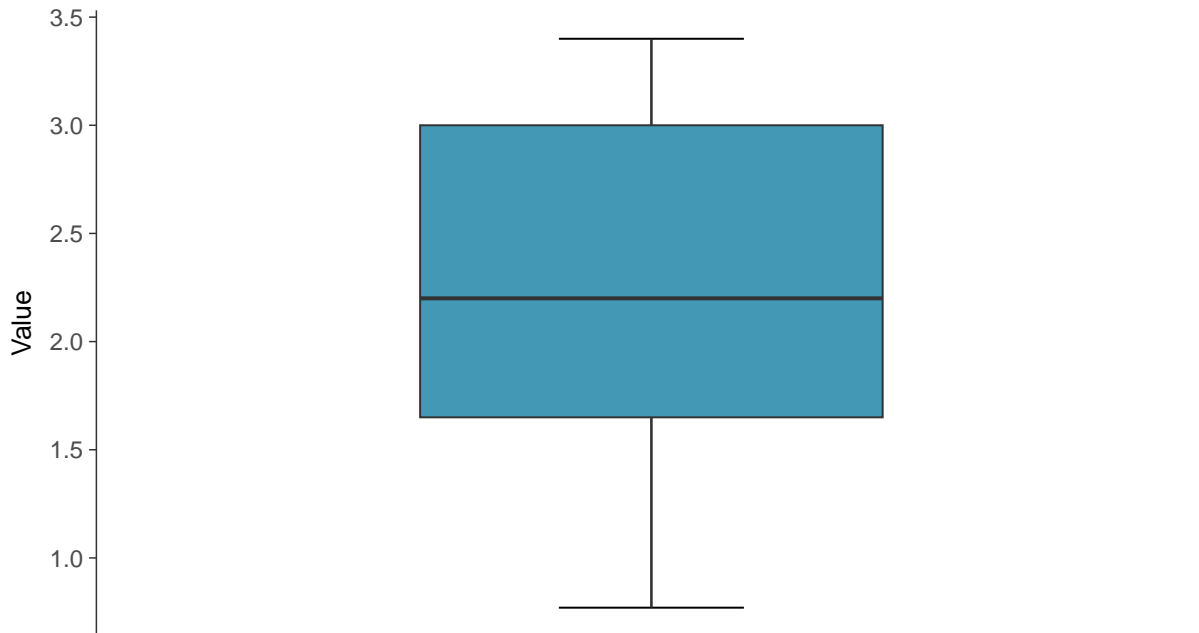
ID: 2_11_5_116





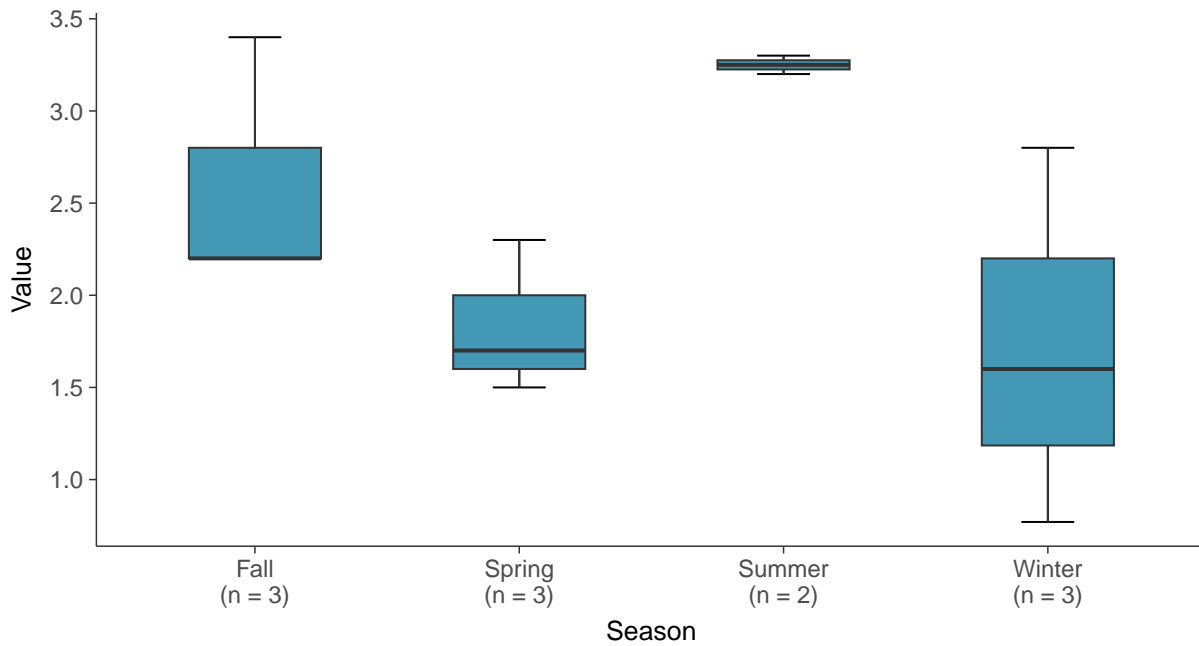
Boxplot

Lithium, MW-01R (mg/L)



Boxplot by Season

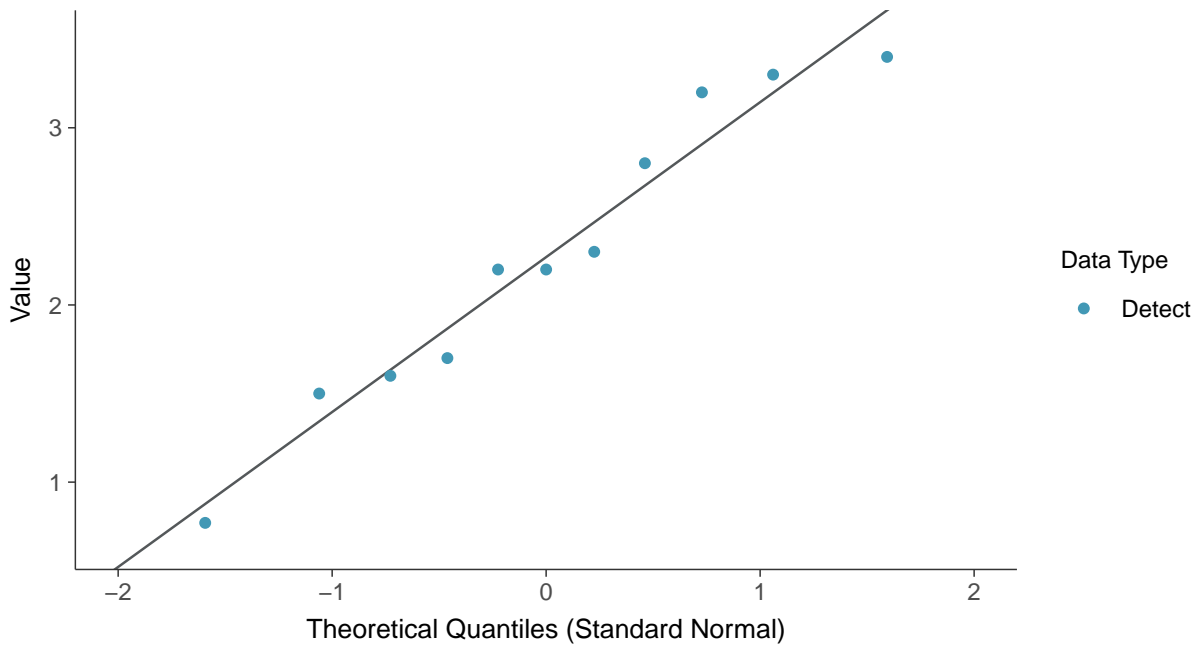
Lithium, MW-01R (mg/L)





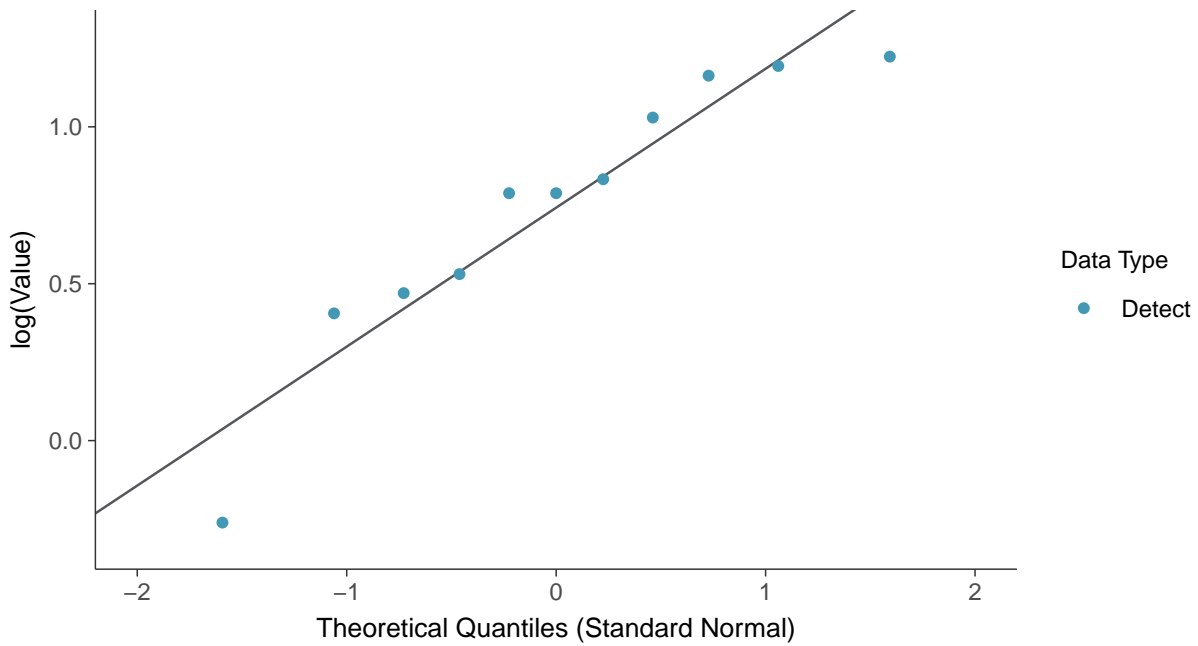
Normal Q-Q plot

Lithium, MW-01R (mg/L)



Lognormal Q-Q plot

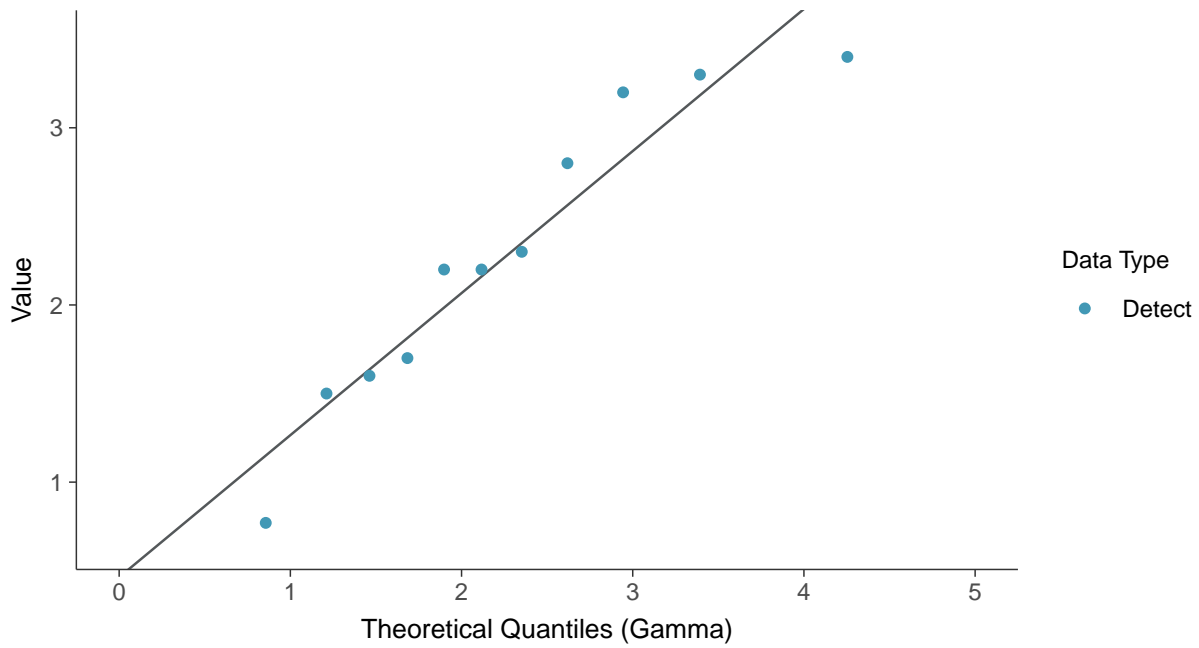
Lithium, MW-01R (mg/L)





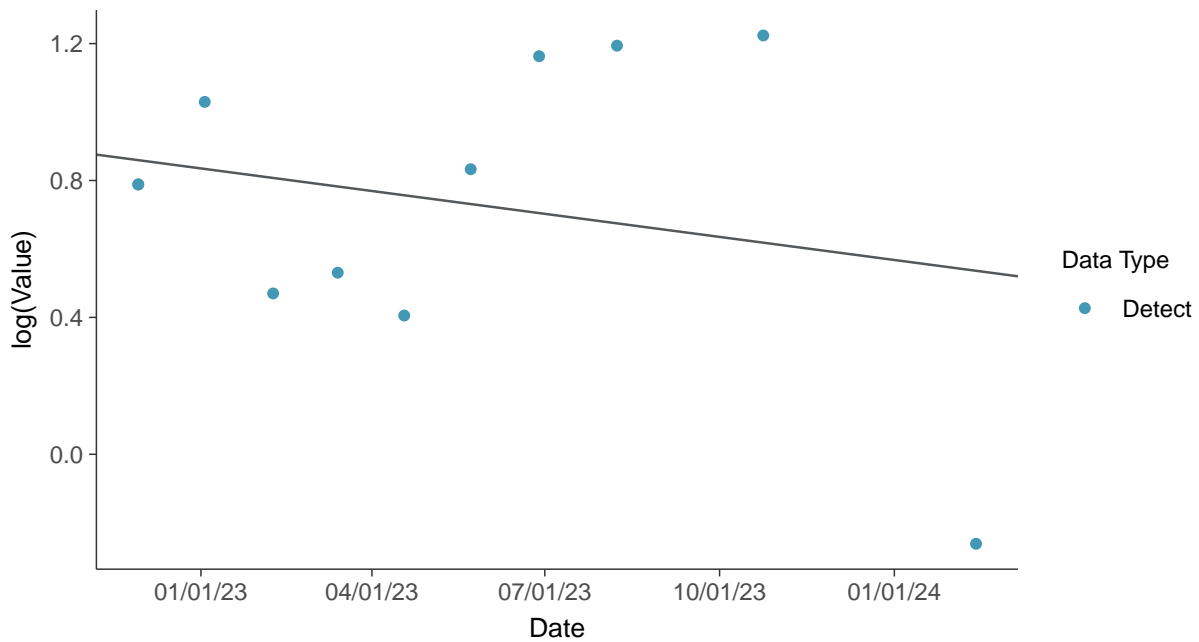
Gamma Q-Q plot

Lithium, MW-01R (mg/L)



Trend Regression: Lognormal MLE

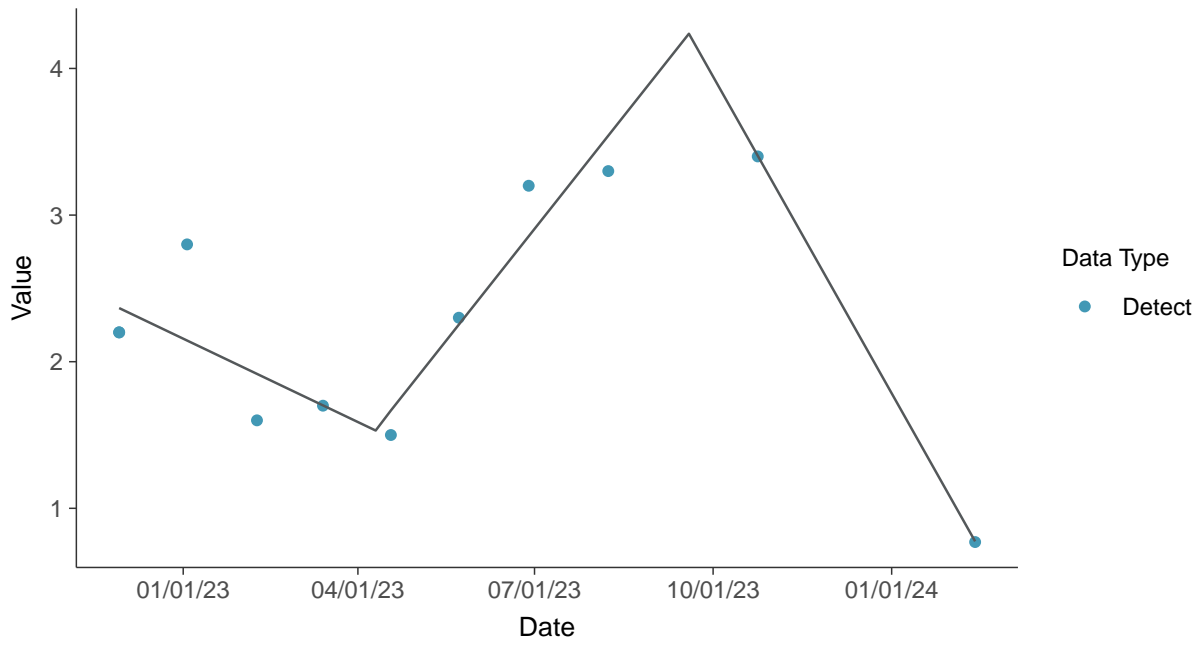
Lithium, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

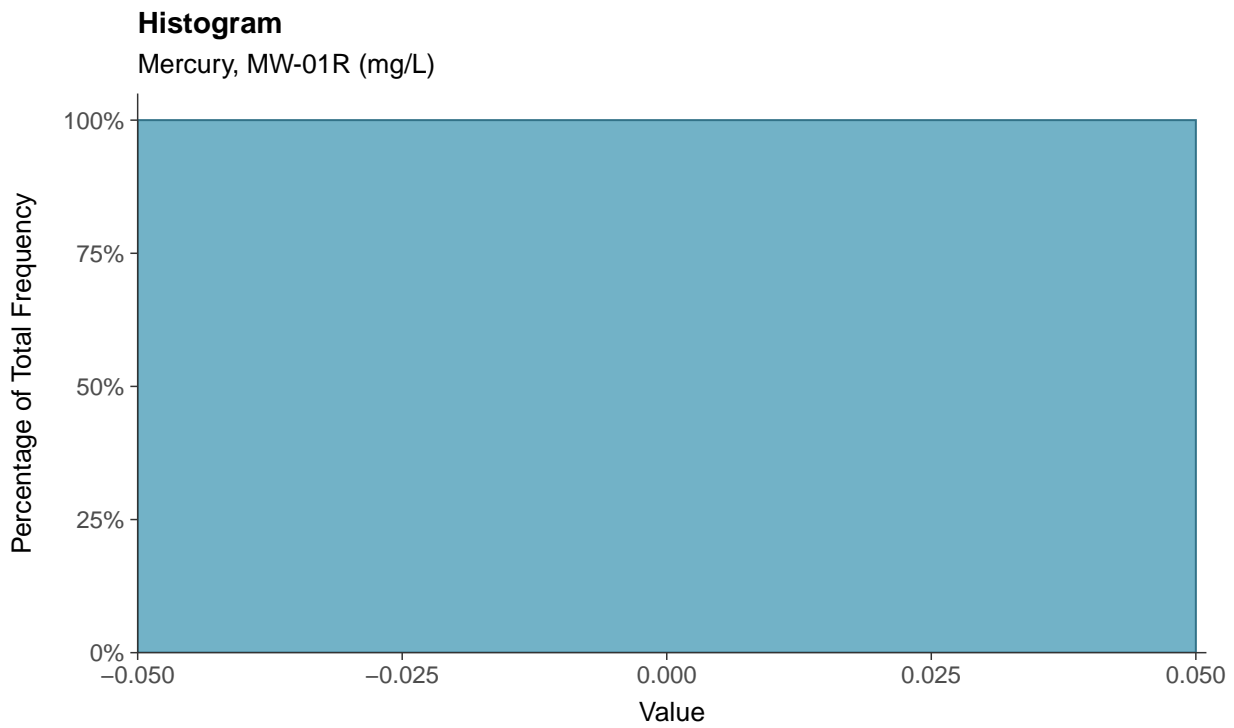
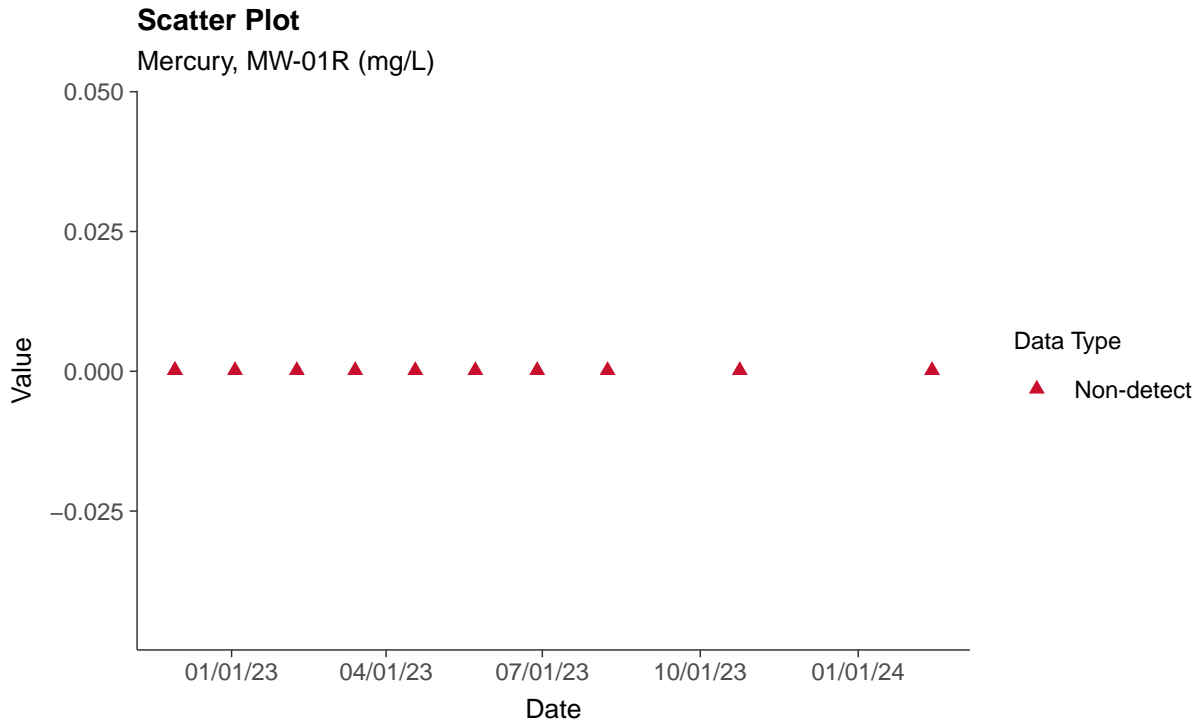
Lithium, MW-01R (mg/L)





Appendix IV: Mercury, MW-01R

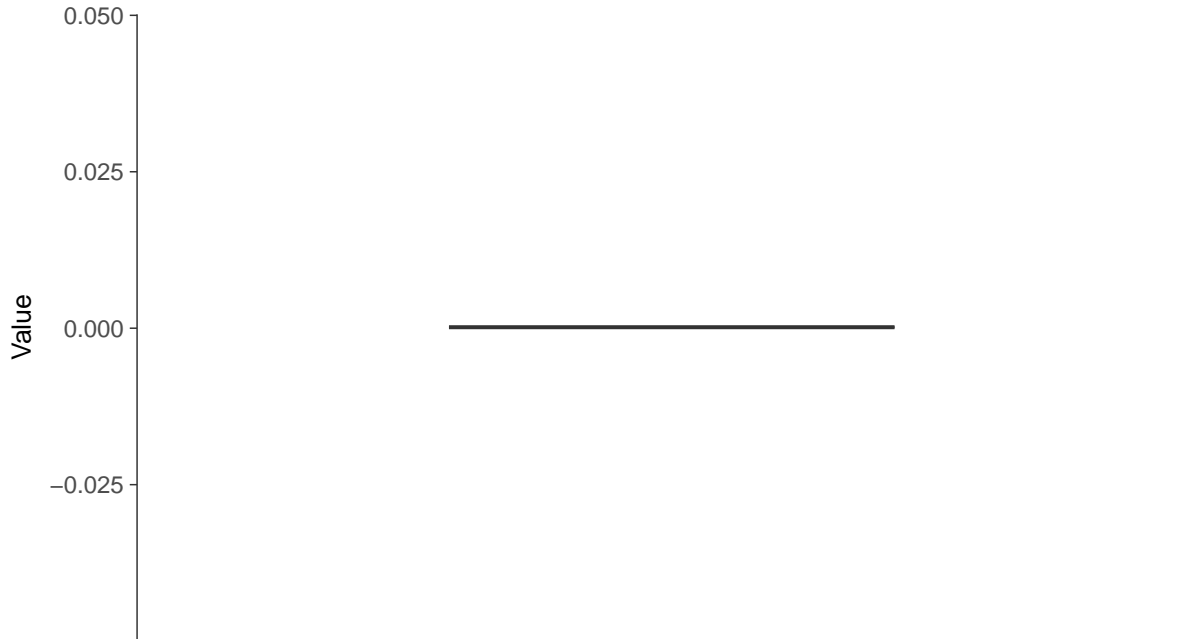
ID: 2_11_5_117





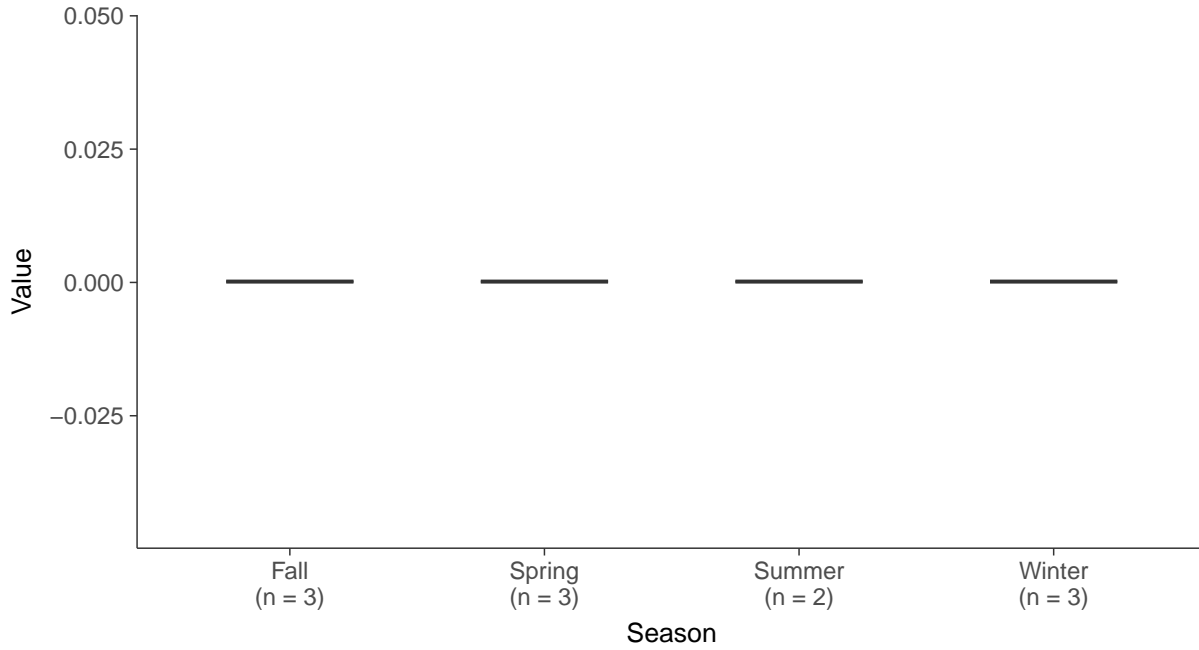
Boxplot

Mercury, MW-01R (mg/L)



Boxplot by Season

Mercury, MW-01R (mg/L)



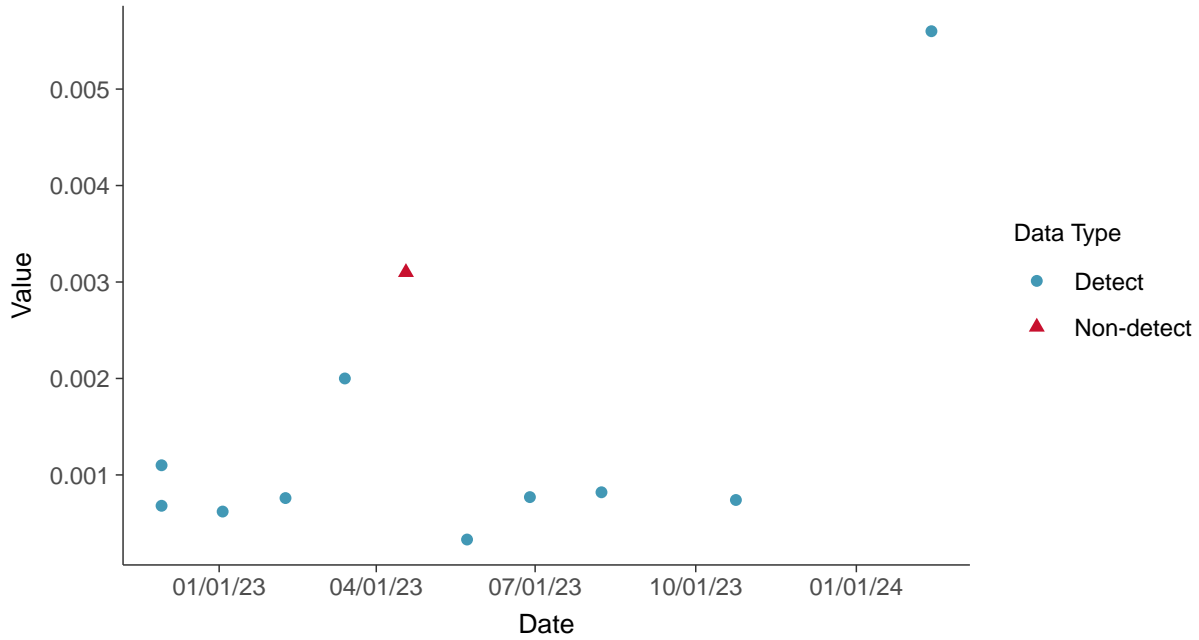


Appendix IV: Molybdenum, MW-01R

ID: 2_11_5_118

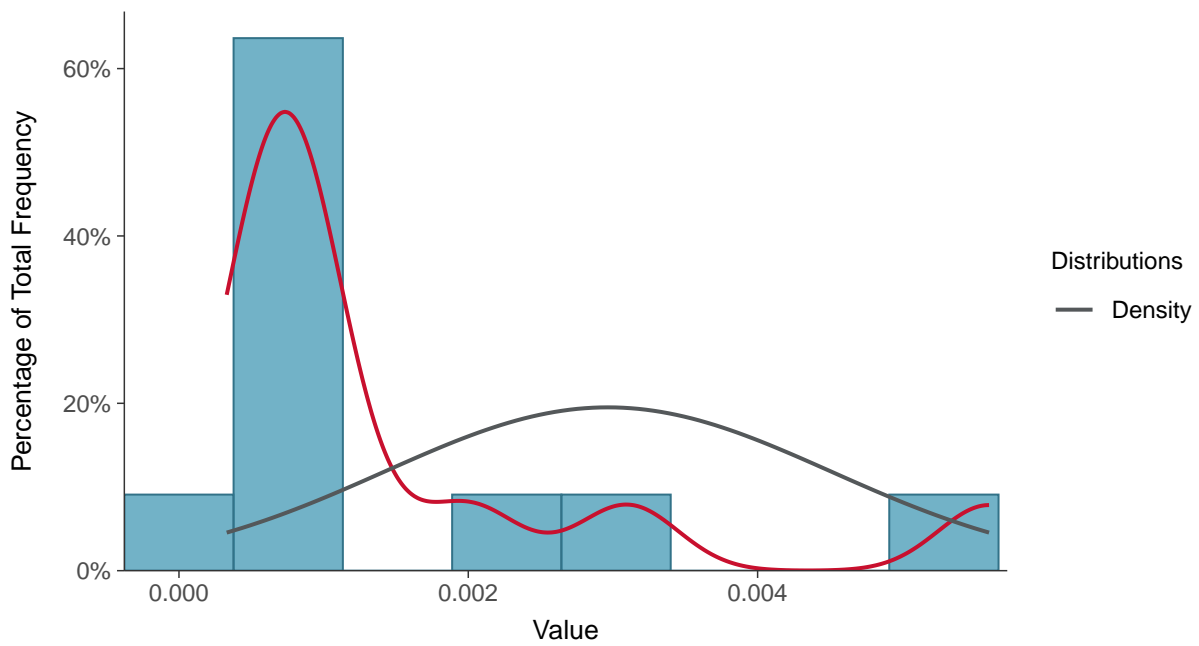
Scatter Plot

Molybdenum, MW-01R (mg/L)



Histogram

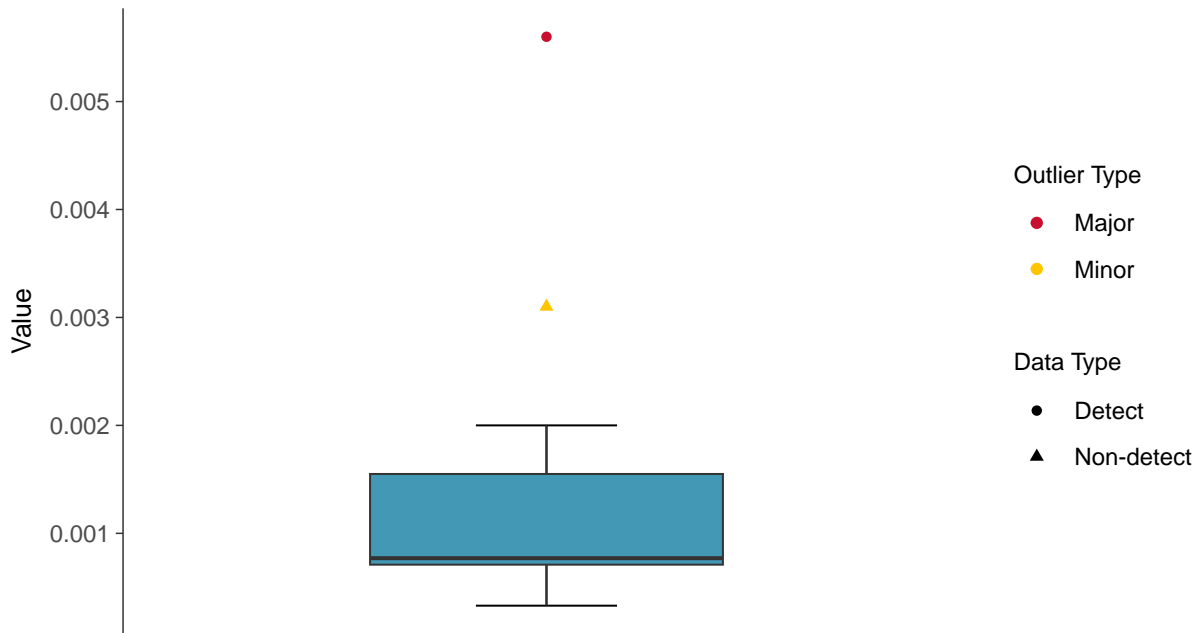
Molybdenum, MW-01R (mg/L)





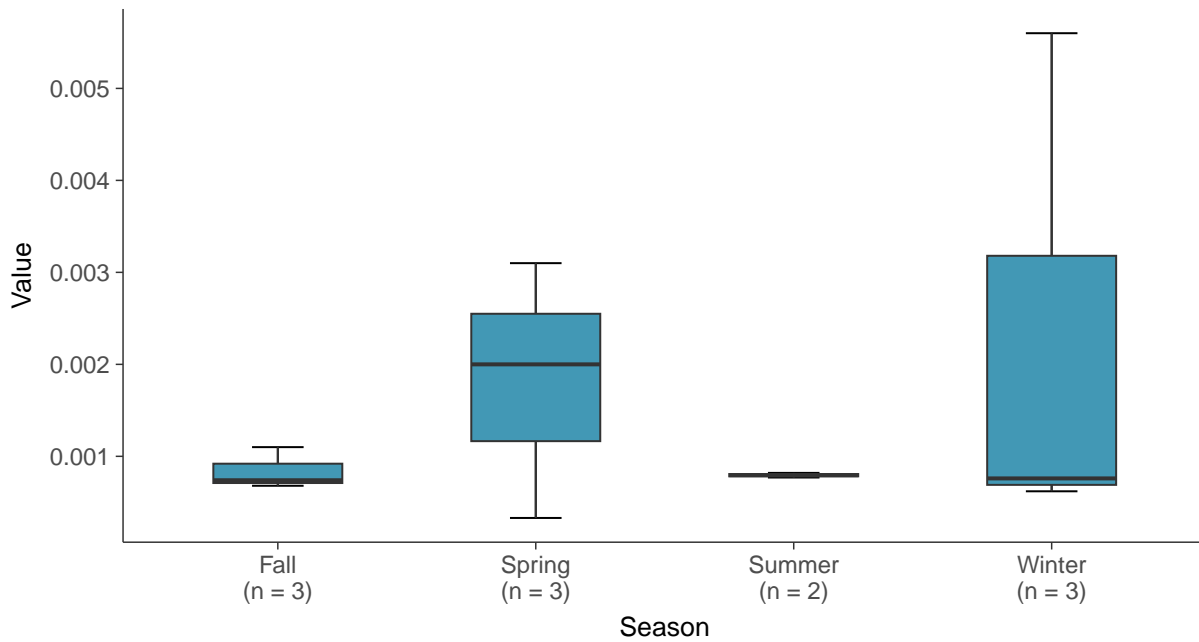
Boxplot

Molybdenum, MW-01R (mg/L)



Boxplot by Season

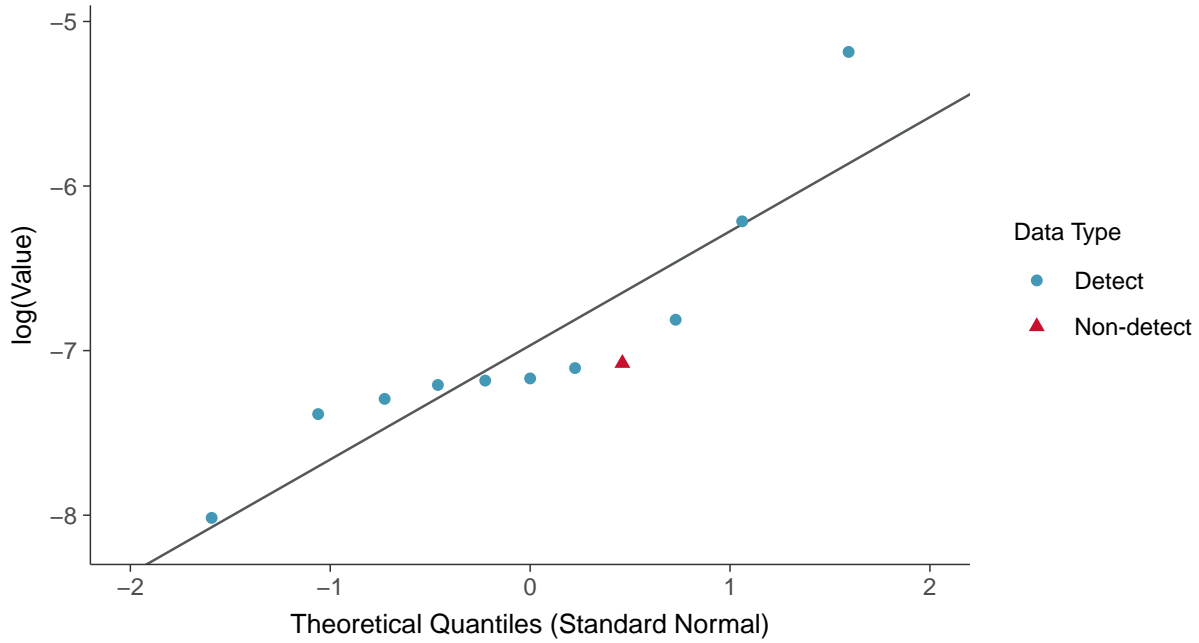
Molybdenum, MW-01R (mg/L)





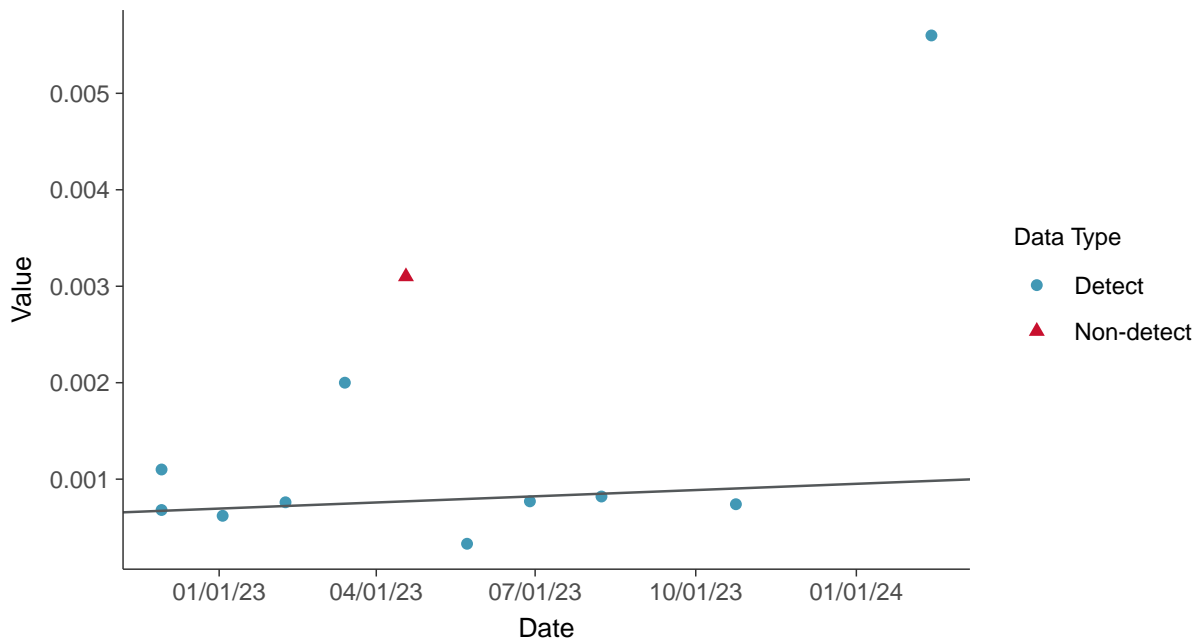
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-01R (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

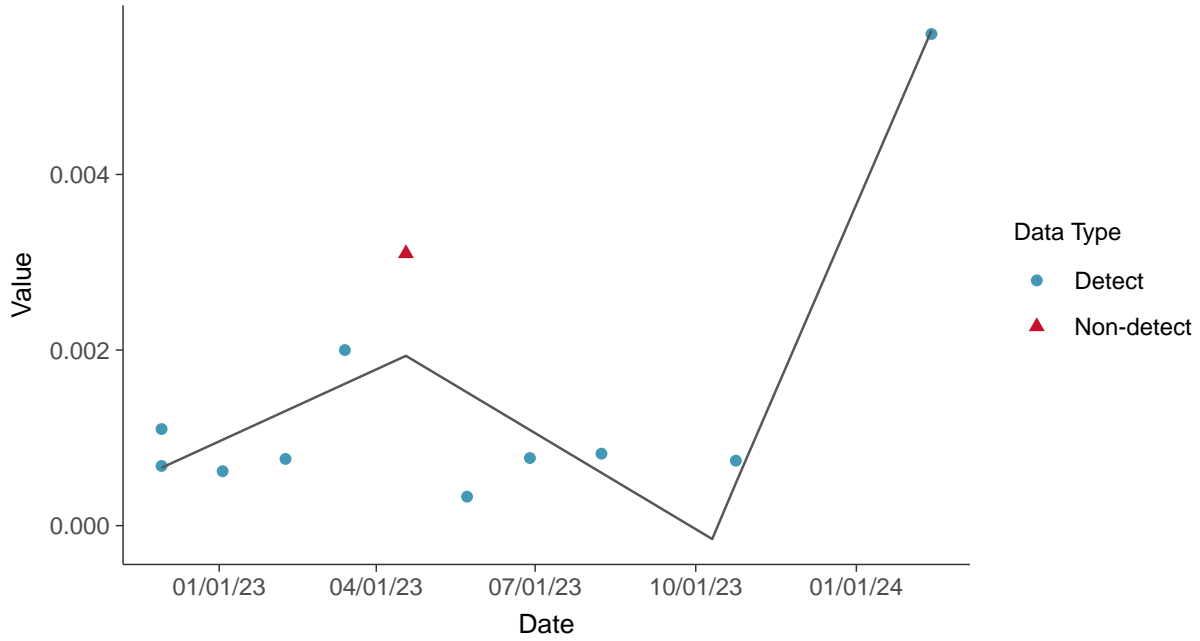
Molybdenum, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-01R (mg/L)



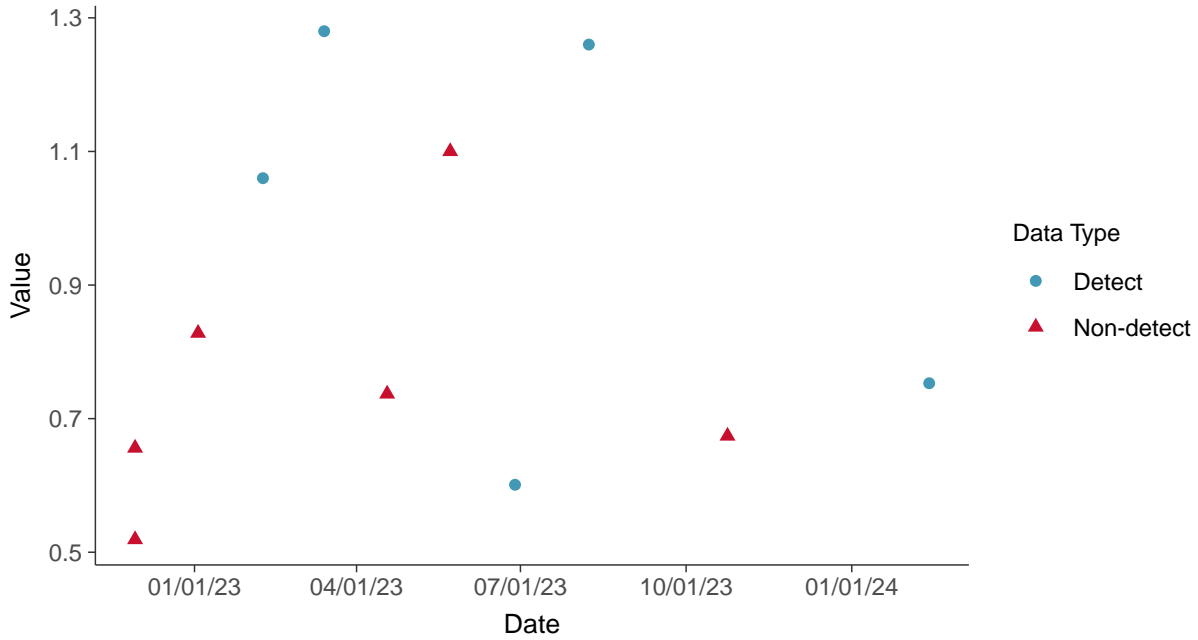


Appendix IV: Radium 226 and 228, MW-01R

ID: 2_11_5_121

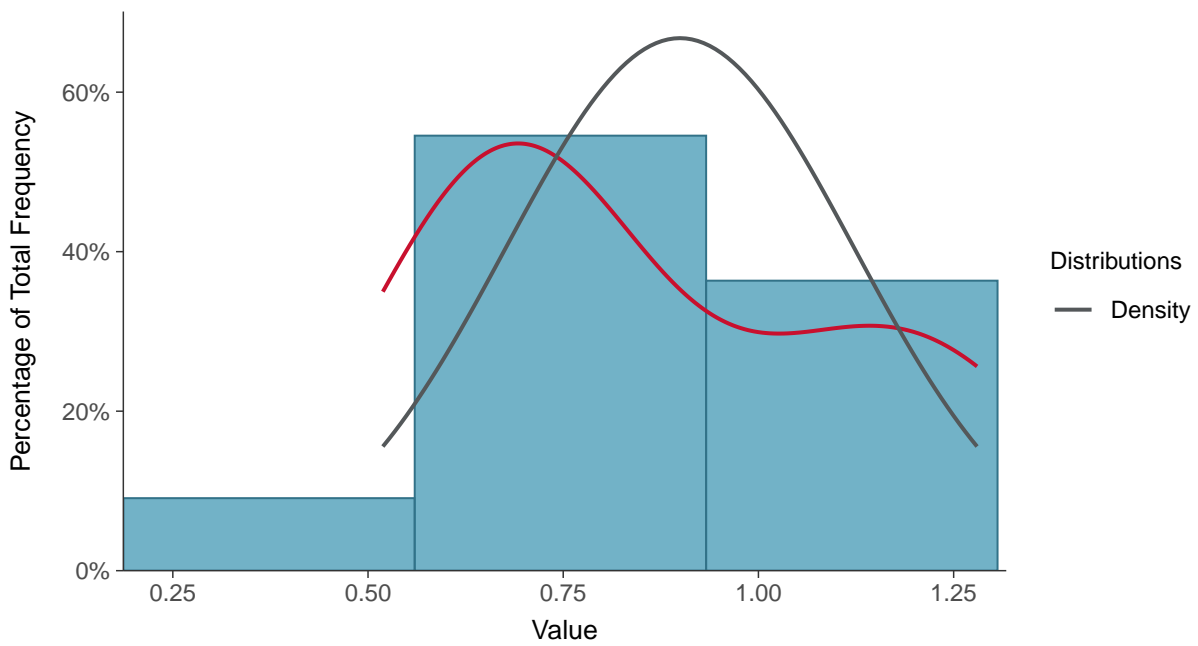
Scatter Plot

Radium 226 and 228, MW-01R (pCi/L)



Histogram

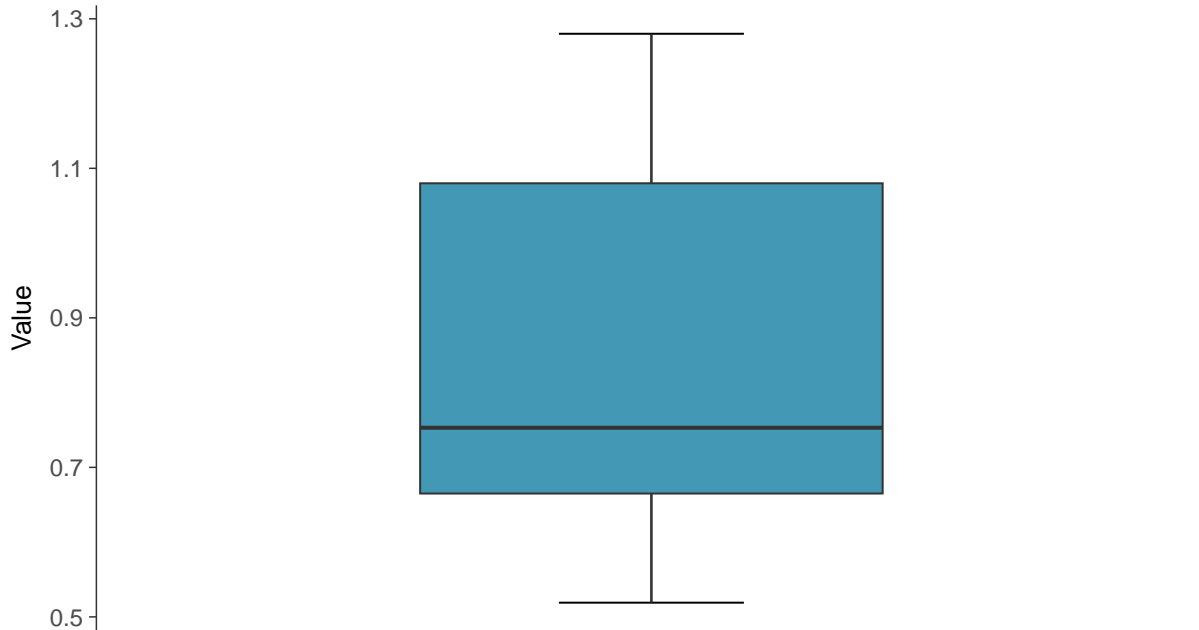
Radium 226 and 228, MW-01R (pCi/L)





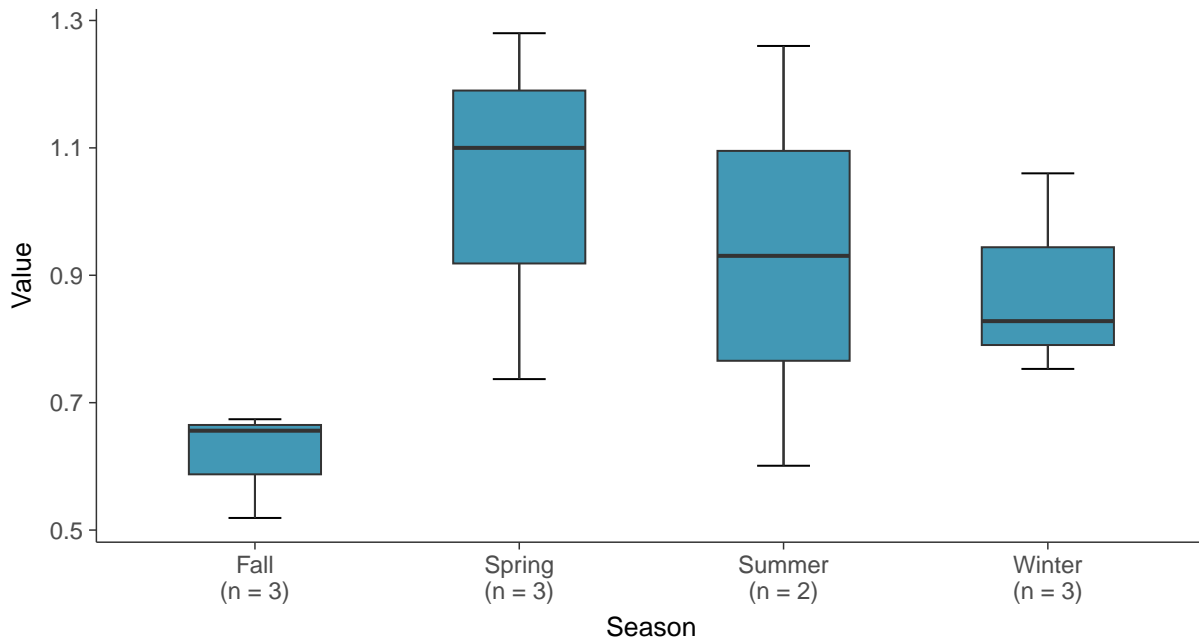
Boxplot

Radium 226 and 228, MW-01R (pCi/L)



Boxplot by Season

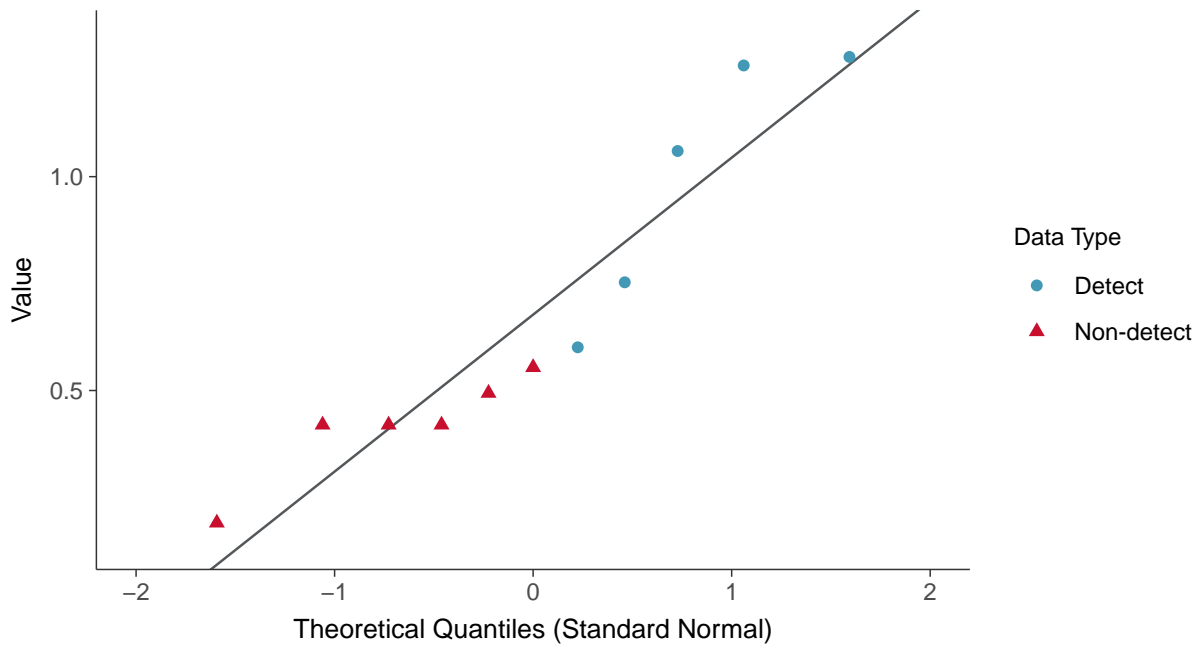
Radium 226 and 228, MW-01R (pCi/L)





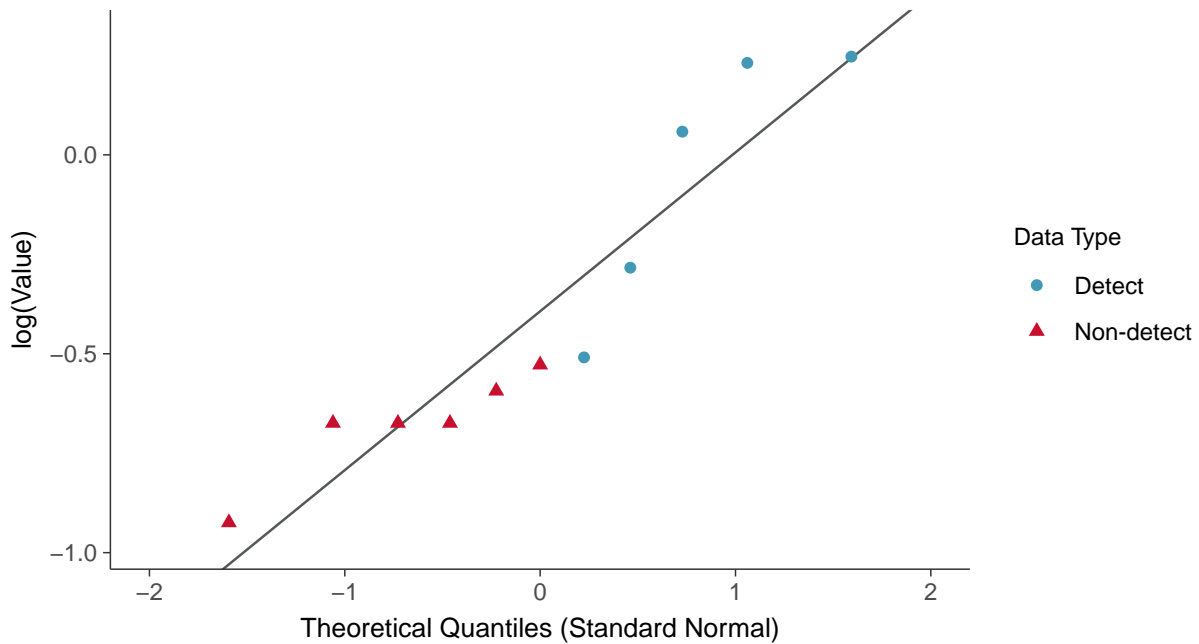
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-01R (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

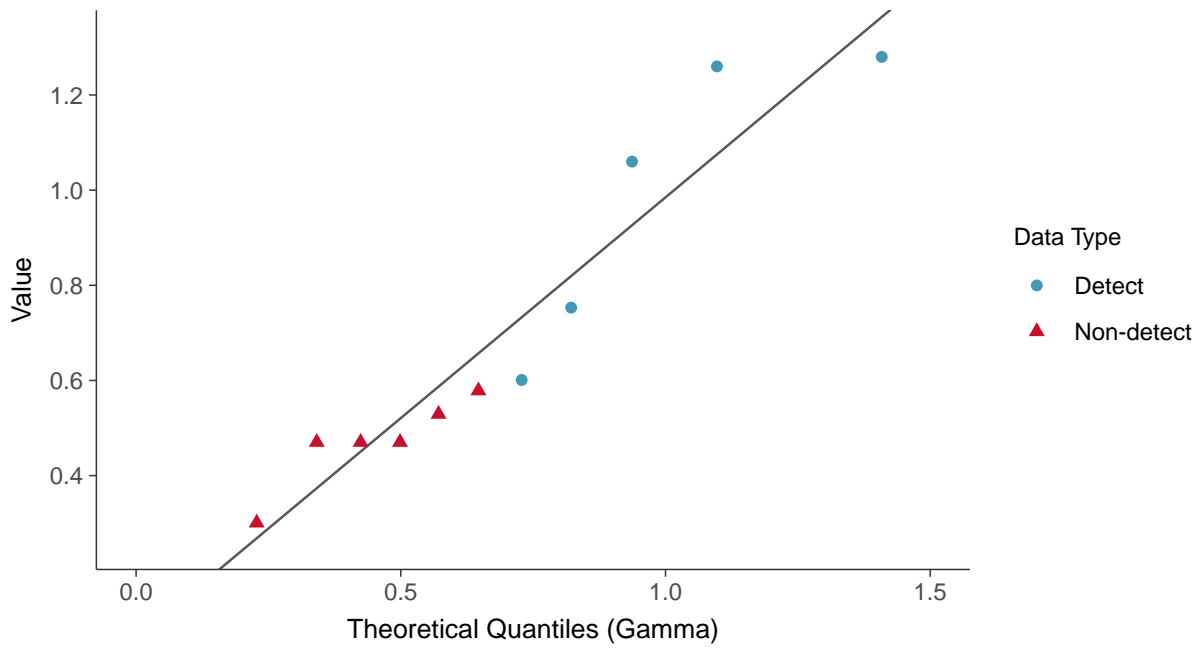
Radium 226 and 228, MW-01R (pCi/L)





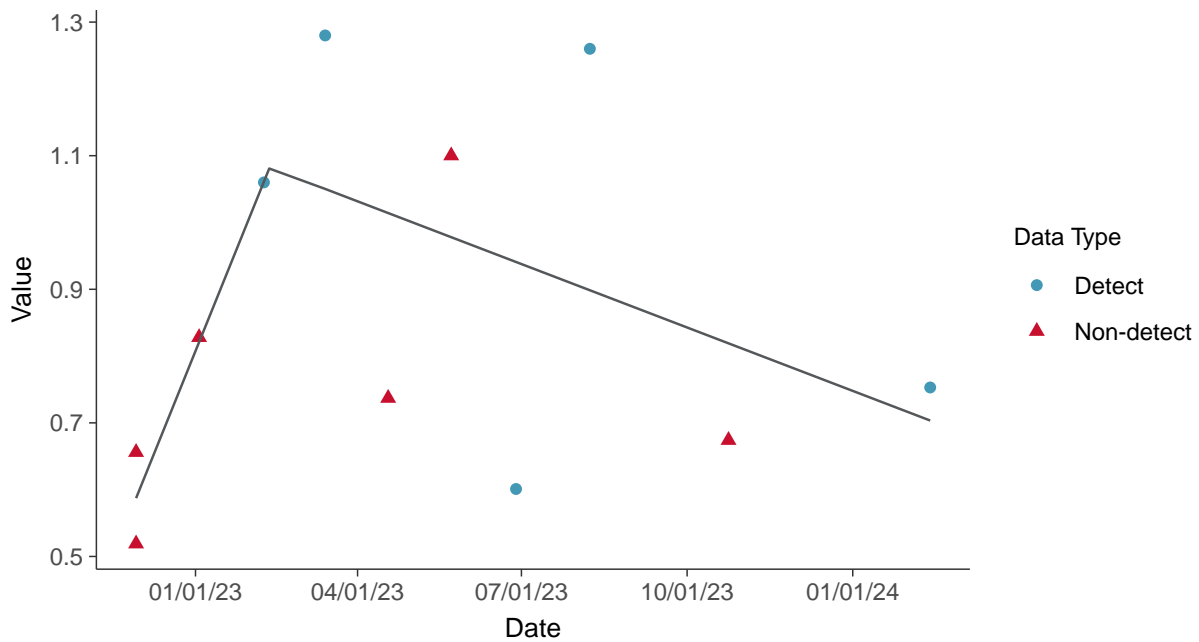
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-01R (pCi/L)



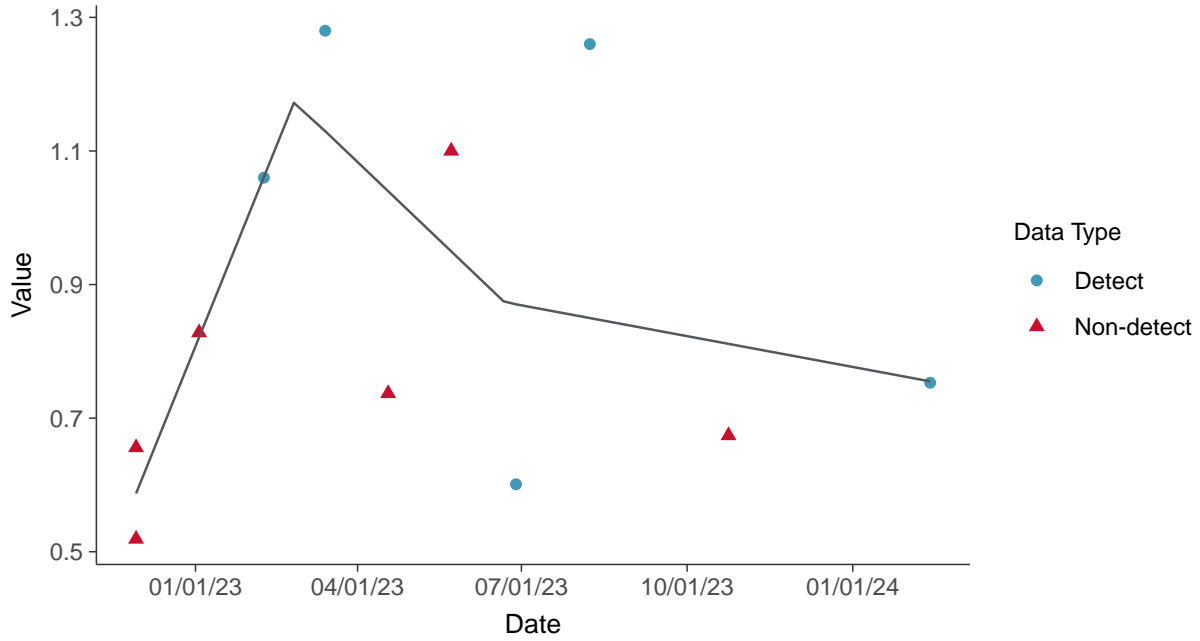
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-01R (pCi/L)





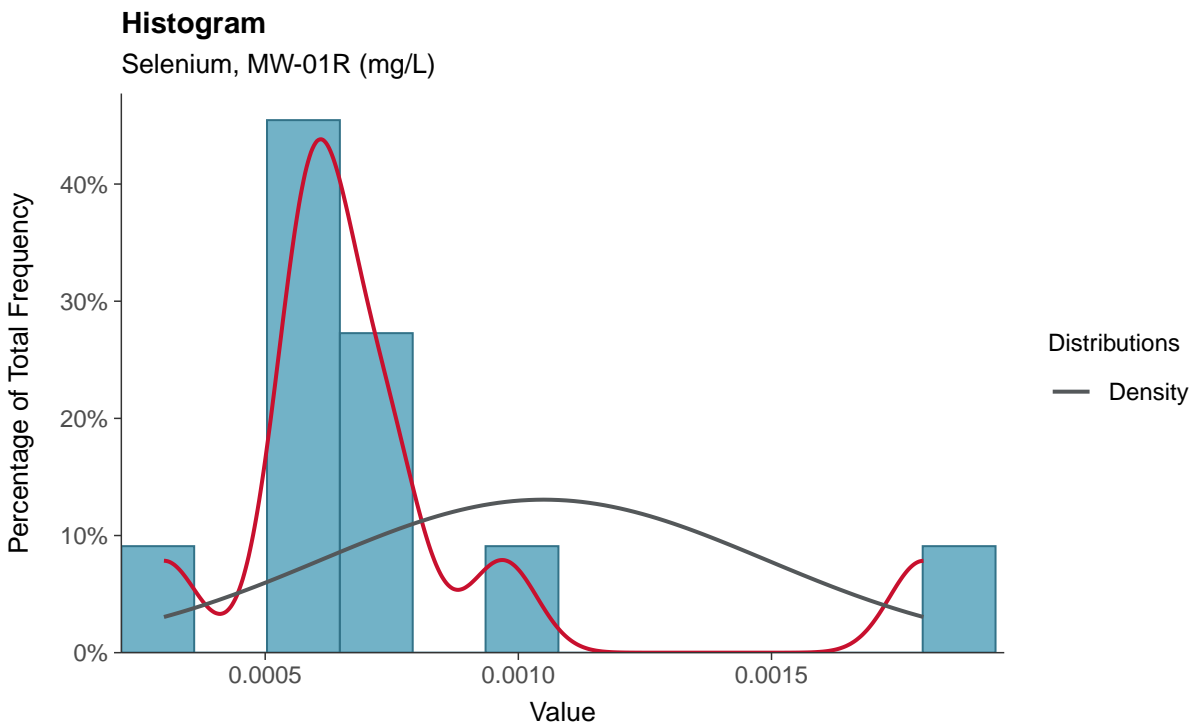
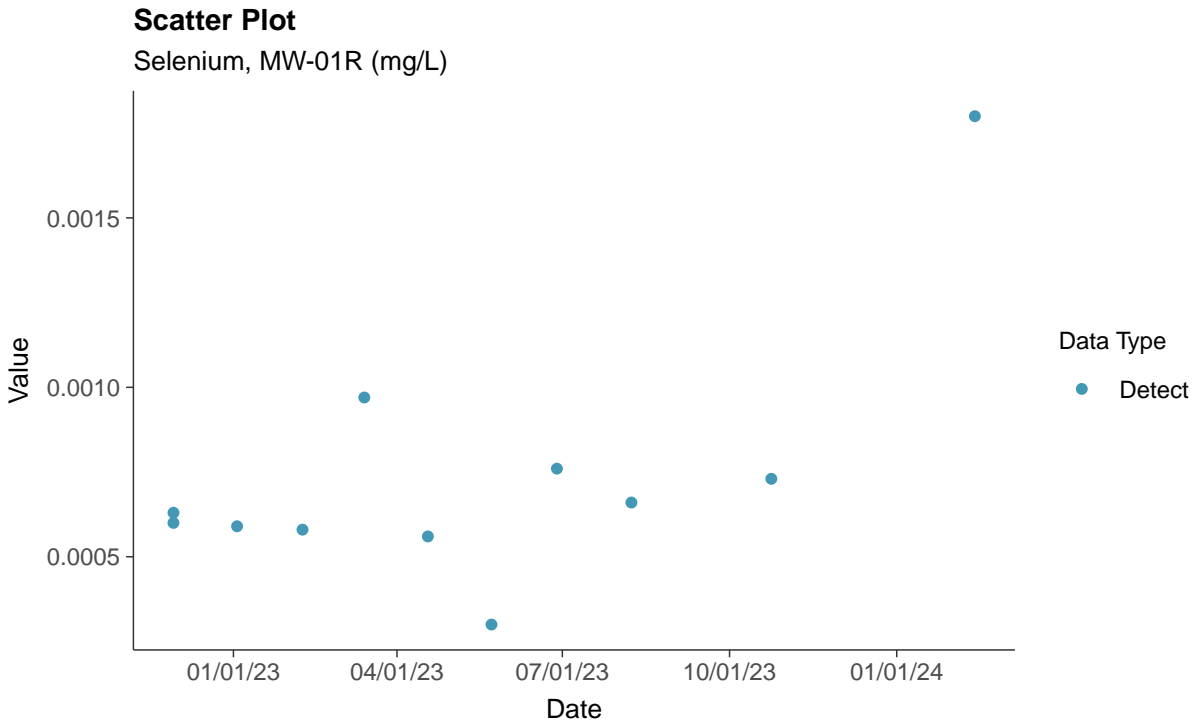
Trend Regression: Piecewise Linear-Linear-Linear
Radium 226 and 228, MW-01R (pCi/L)





Appendix IV: Selenium, MW-01R

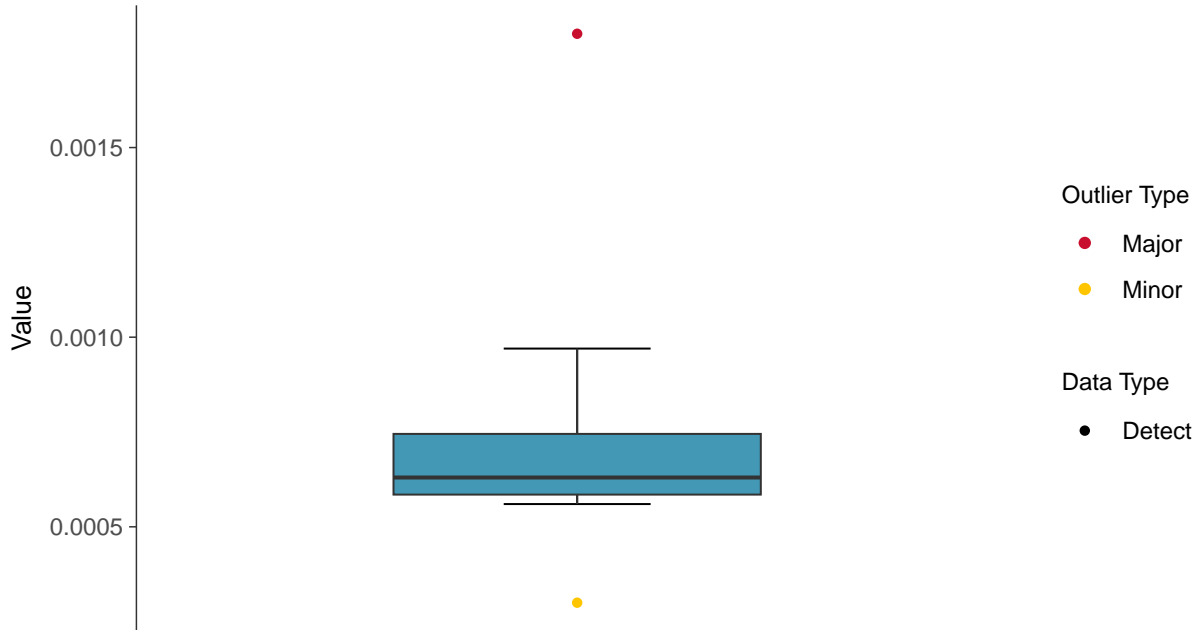
ID: 2_11_5_122





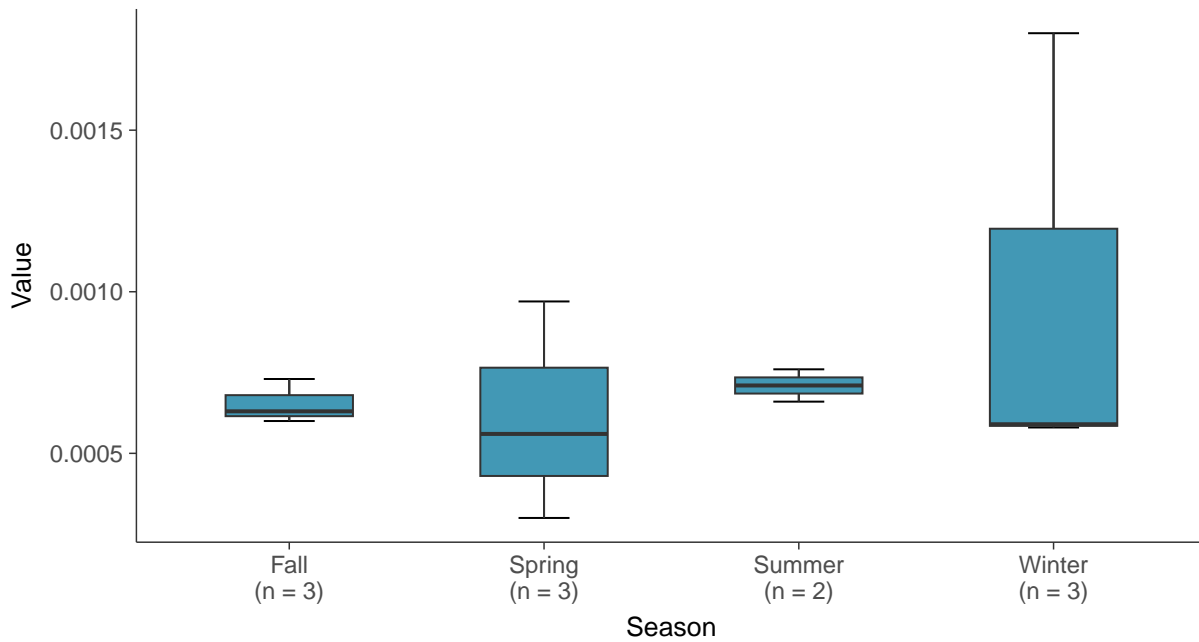
Boxplot

Selenium, MW-01R (mg/L)



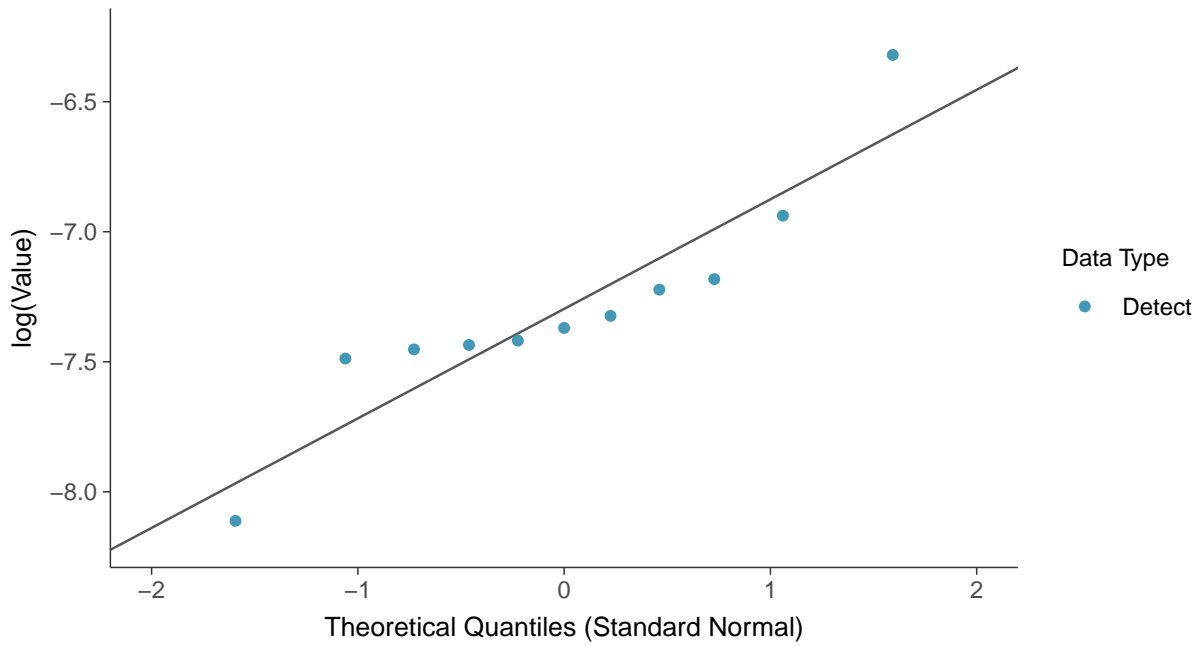
Boxplot by Season

Selenium, MW-01R (mg/L)

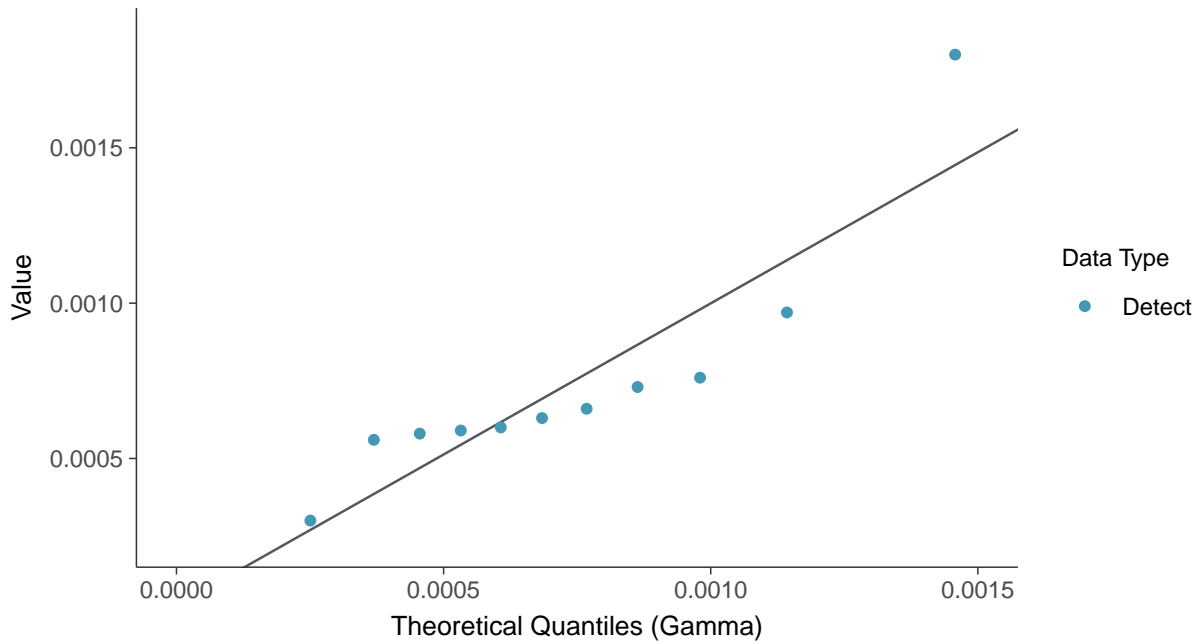




Lognormal Q-Q plot
Selenium, MW-01R (mg/L)



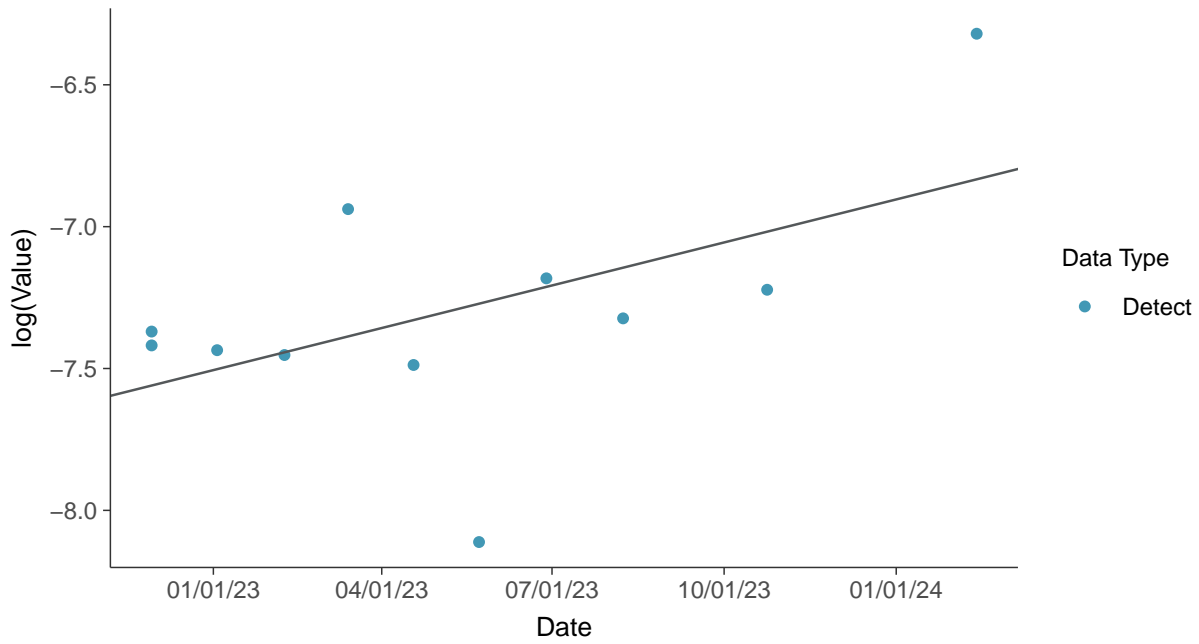
Gamma Q-Q plot
Selenium, MW-01R (mg/L)





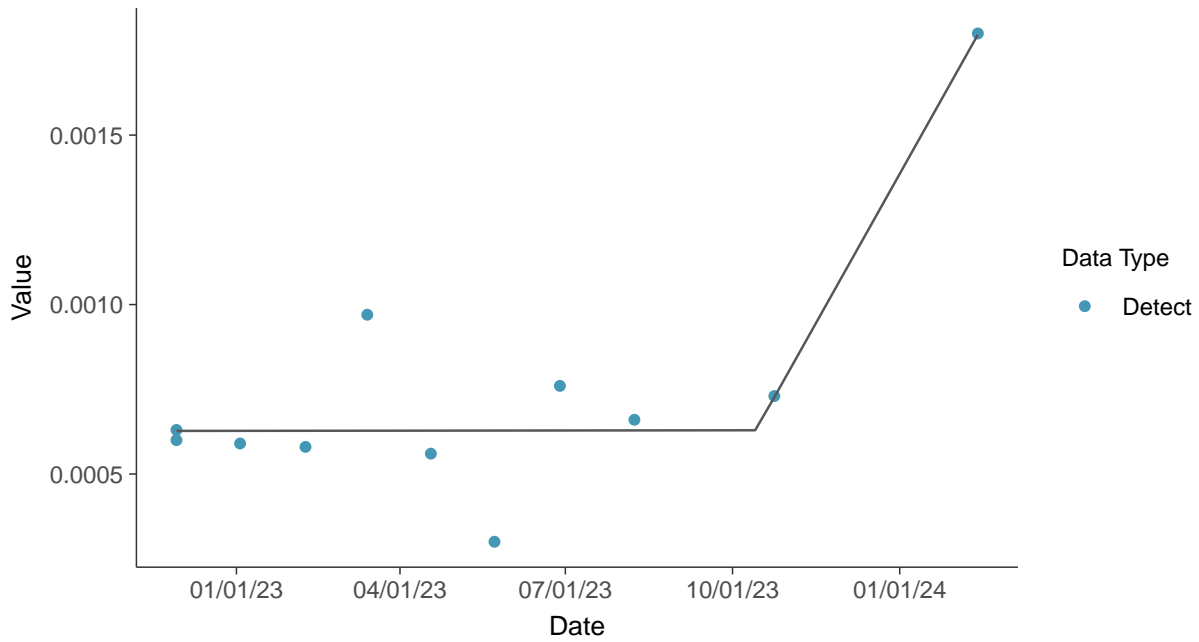
Trend Regression: Lognormal MLE

Selenium, MW-01R (mg/L)



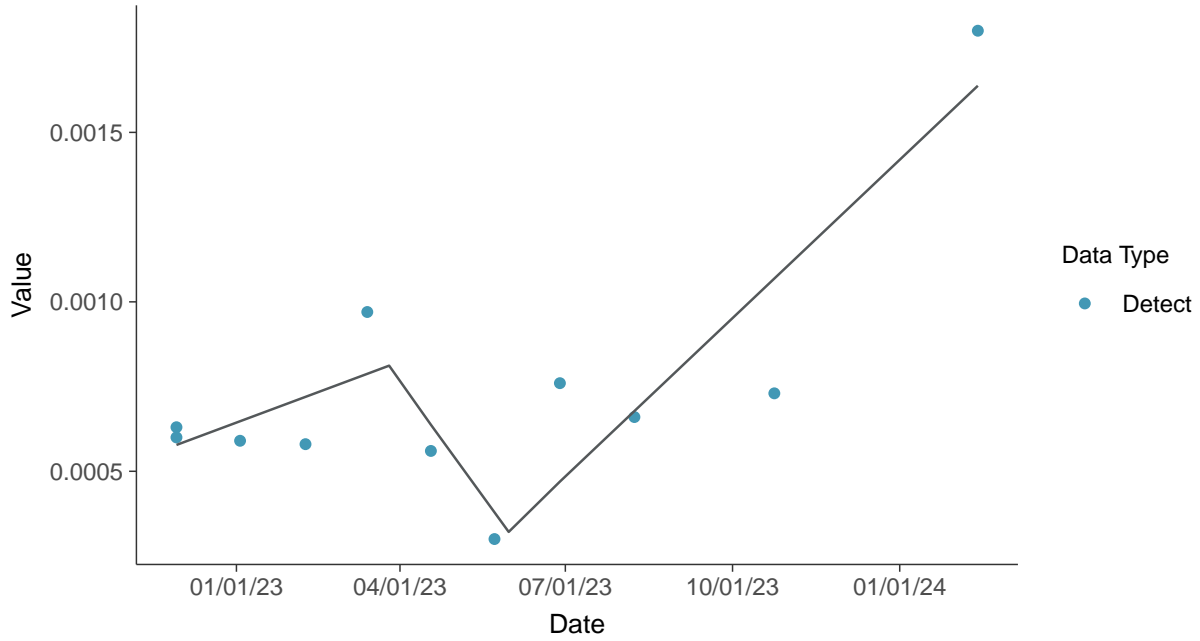
Trend Regression: Piecewise Linear-Linear

Selenium, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-01R (mg/L)



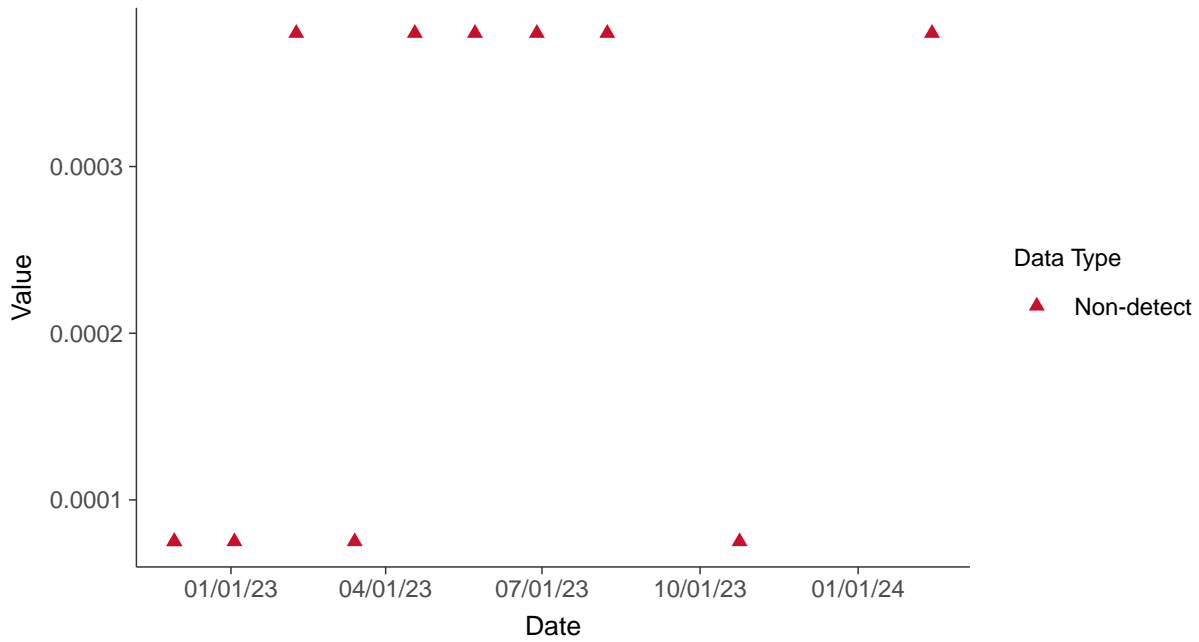


Appendix IV: Thallium, MW-01R

ID: 2_11_5_125

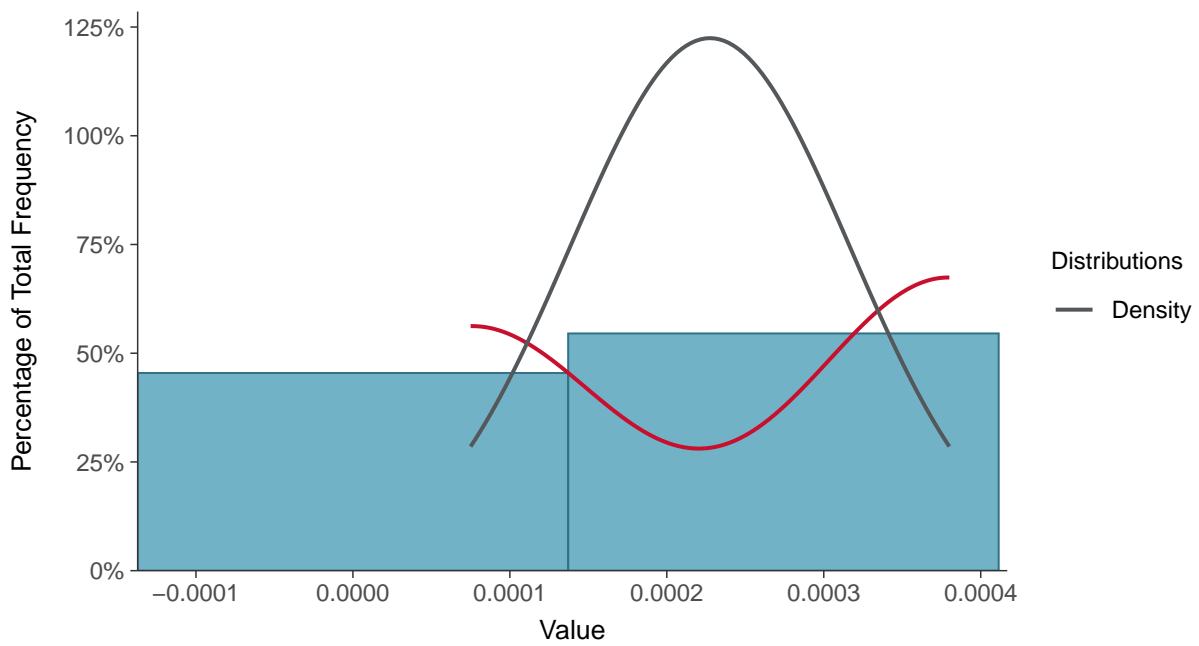
Scatter Plot

Thallium, MW-01R (mg/L)



Histogram

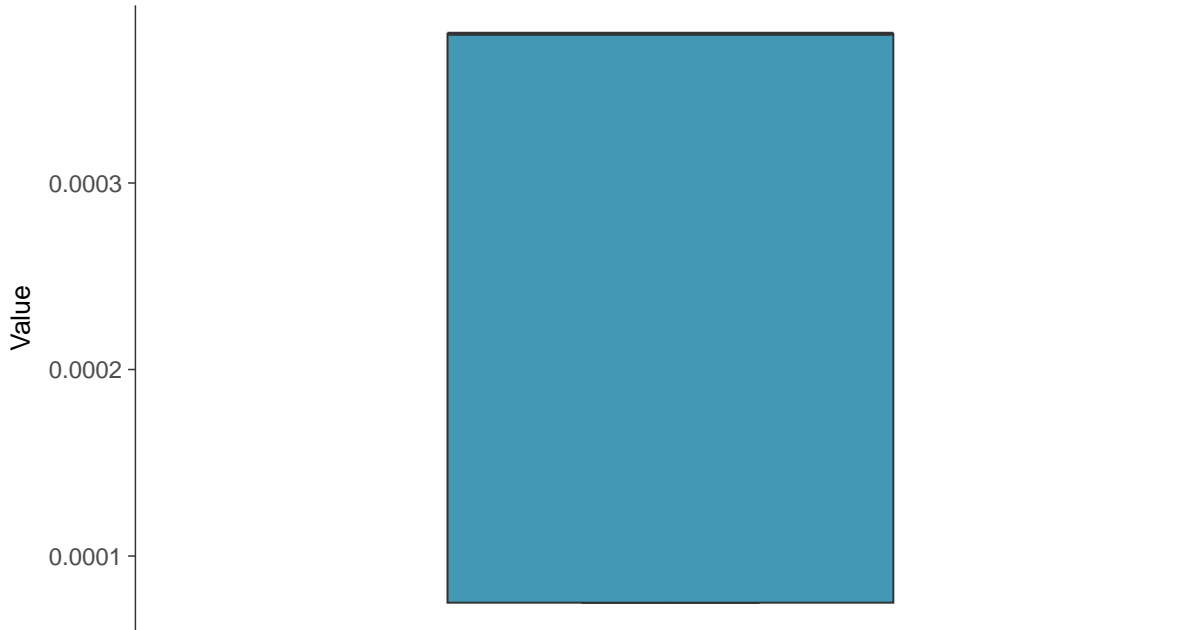
Thallium, MW-01R (mg/L)





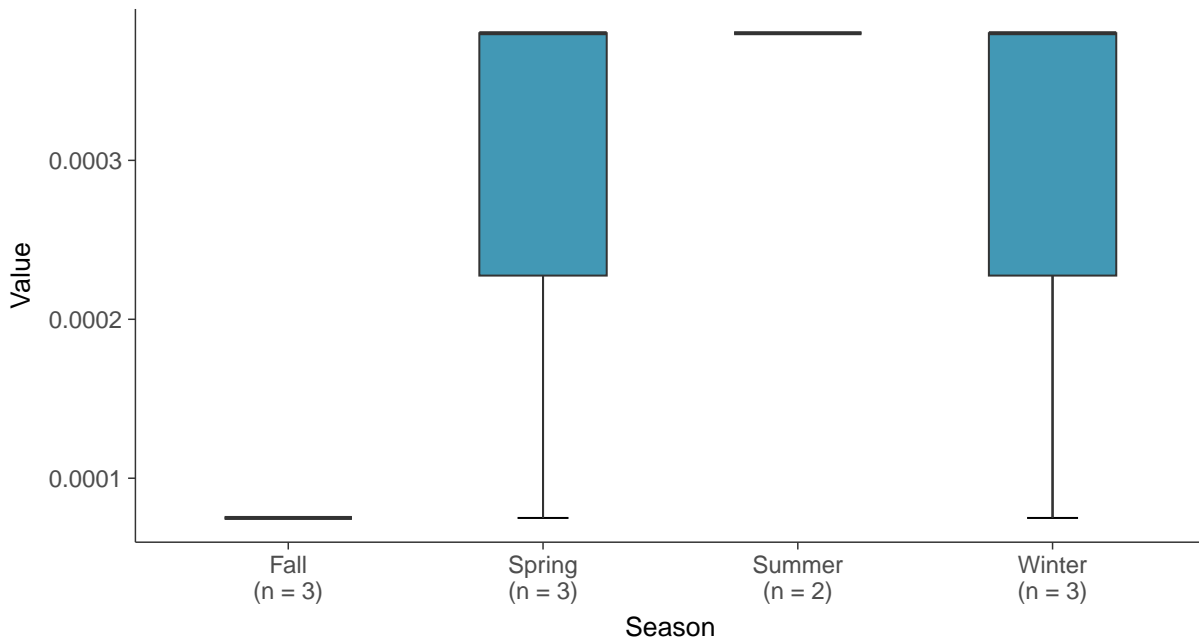
Boxplot

Thallium, MW-01R (mg/L)



Boxplot by Season

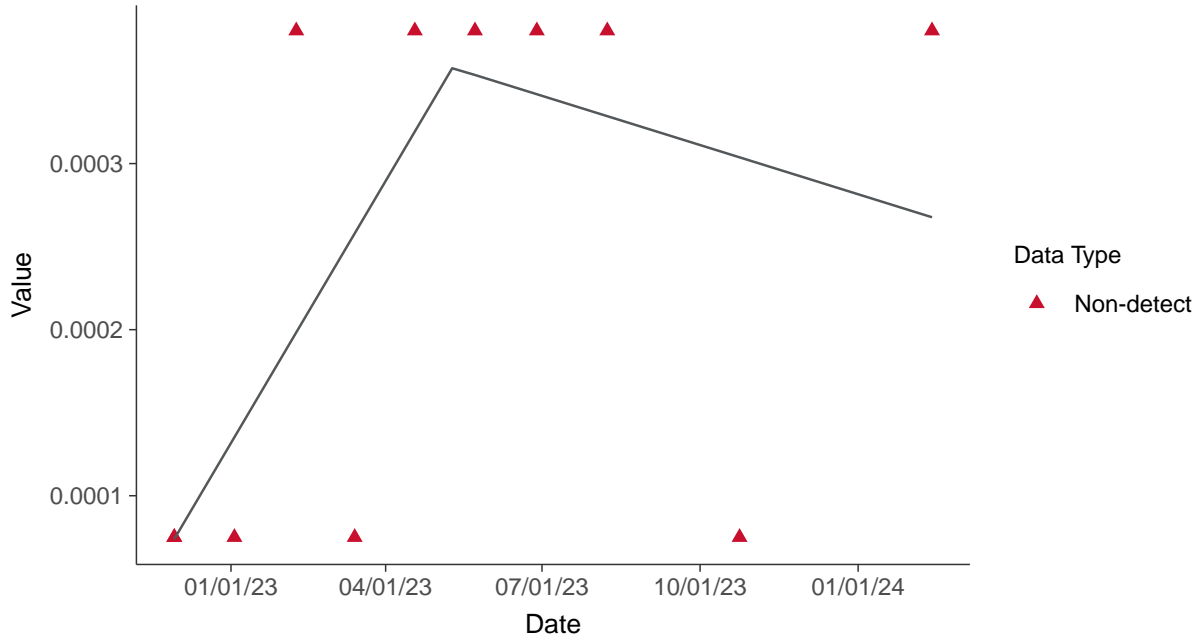
Thallium, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear

Thallium, MW-01R (mg/L)



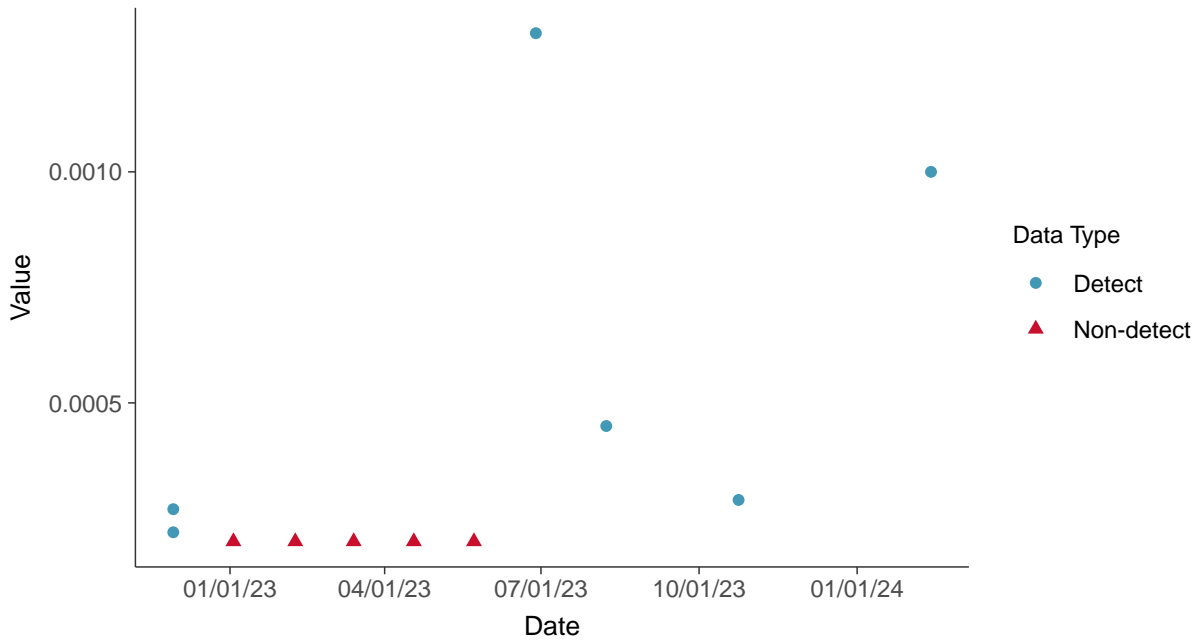


Part 115: Copper, MW-01R

ID: 2_11_6_111

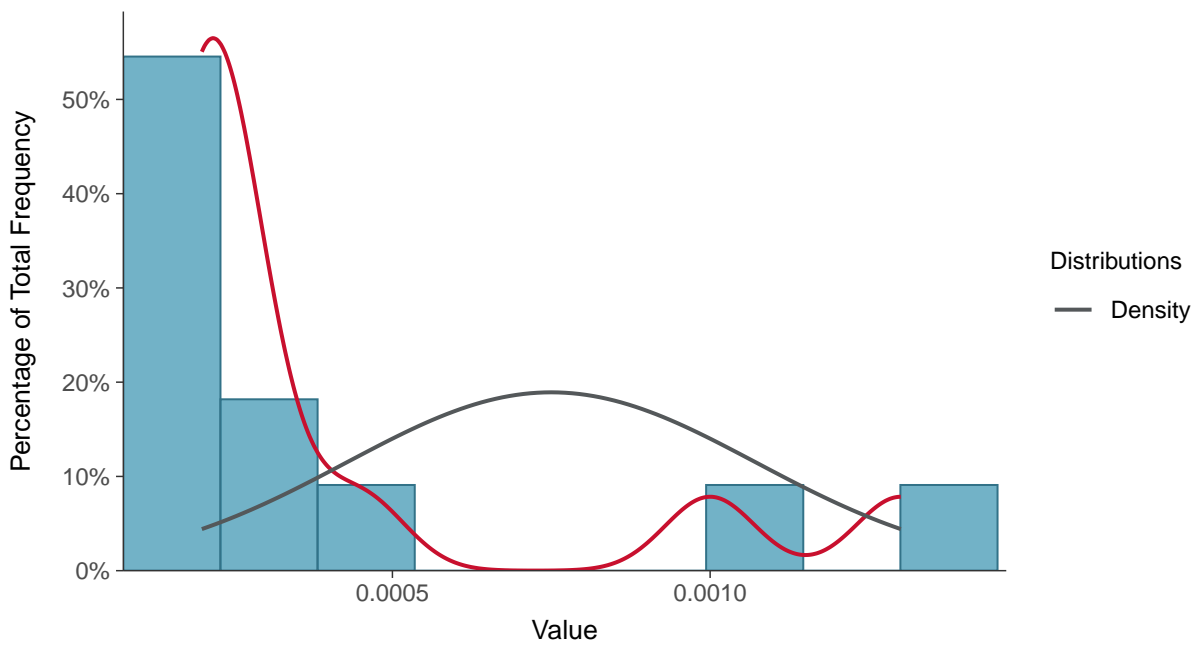
Scatter Plot

Copper, MW-01R (mg/L)



Histogram

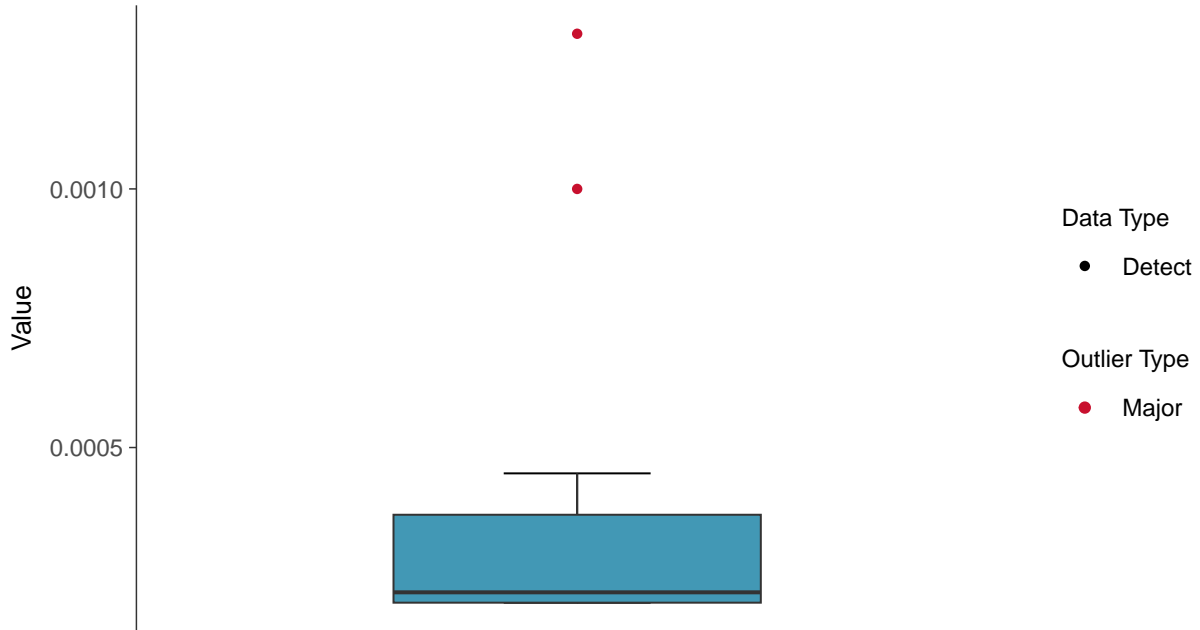
Copper, MW-01R (mg/L)





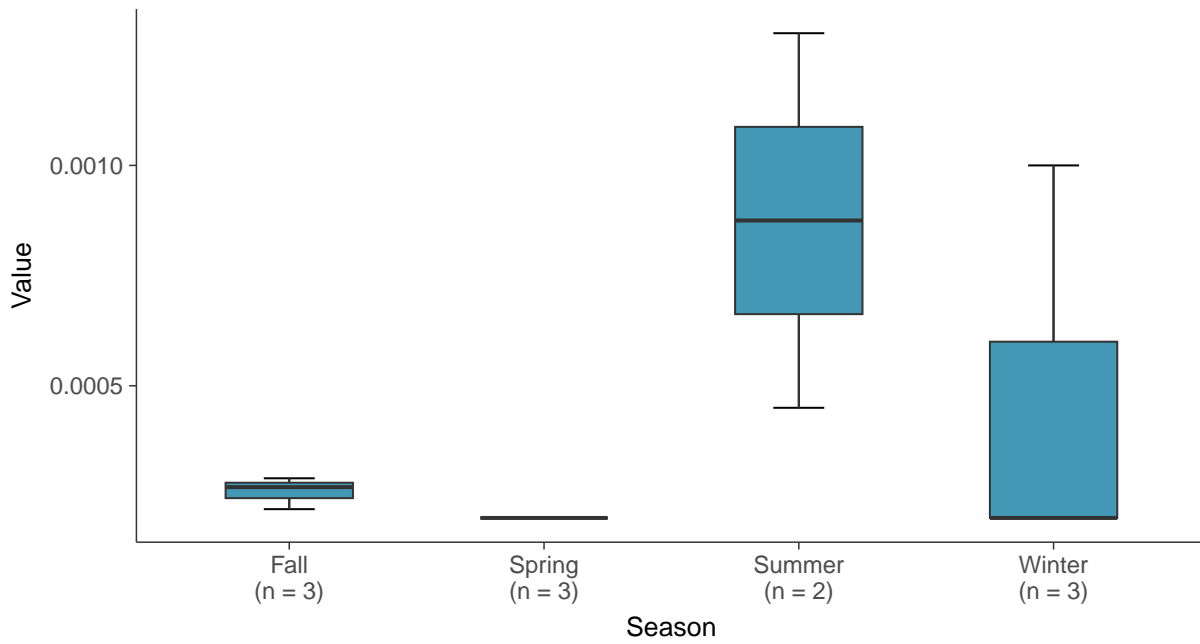
Boxplot

Copper, MW-01R (mg/L)



Boxplot by Season

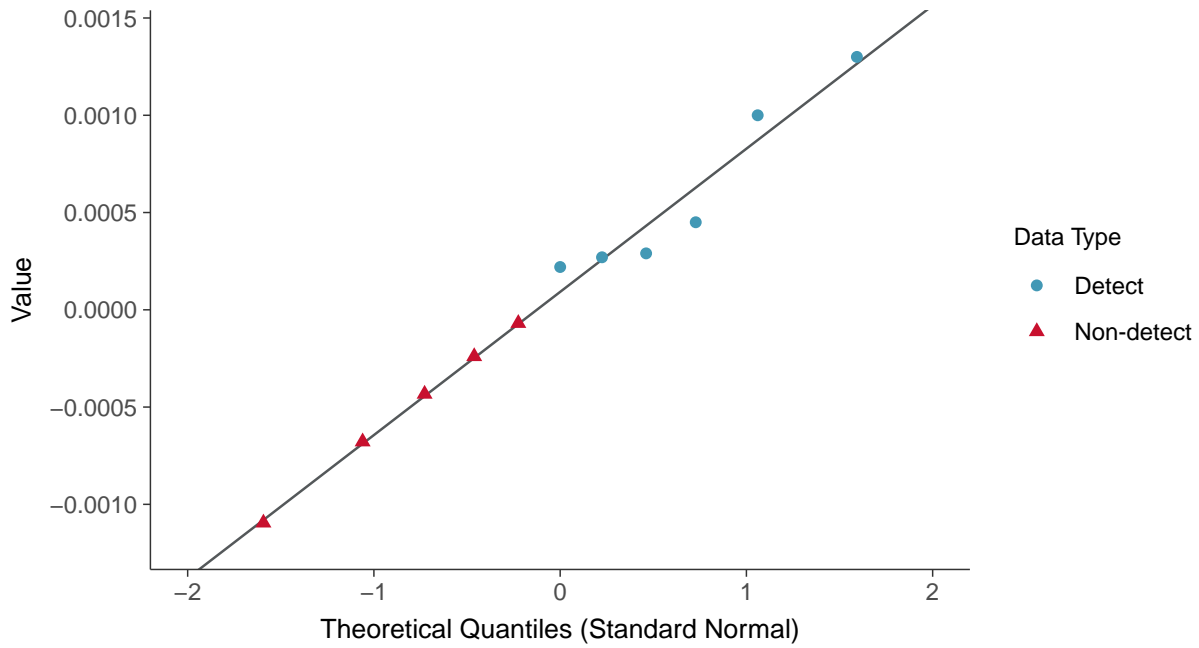
Copper, MW-01R (mg/L)





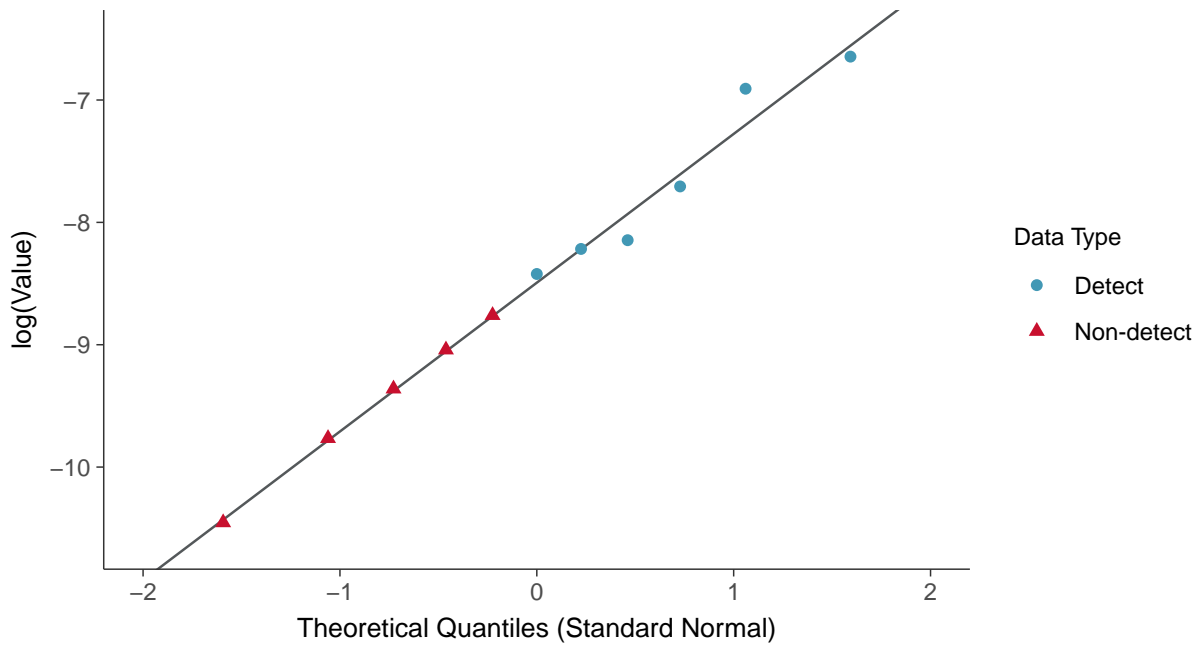
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-01R (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

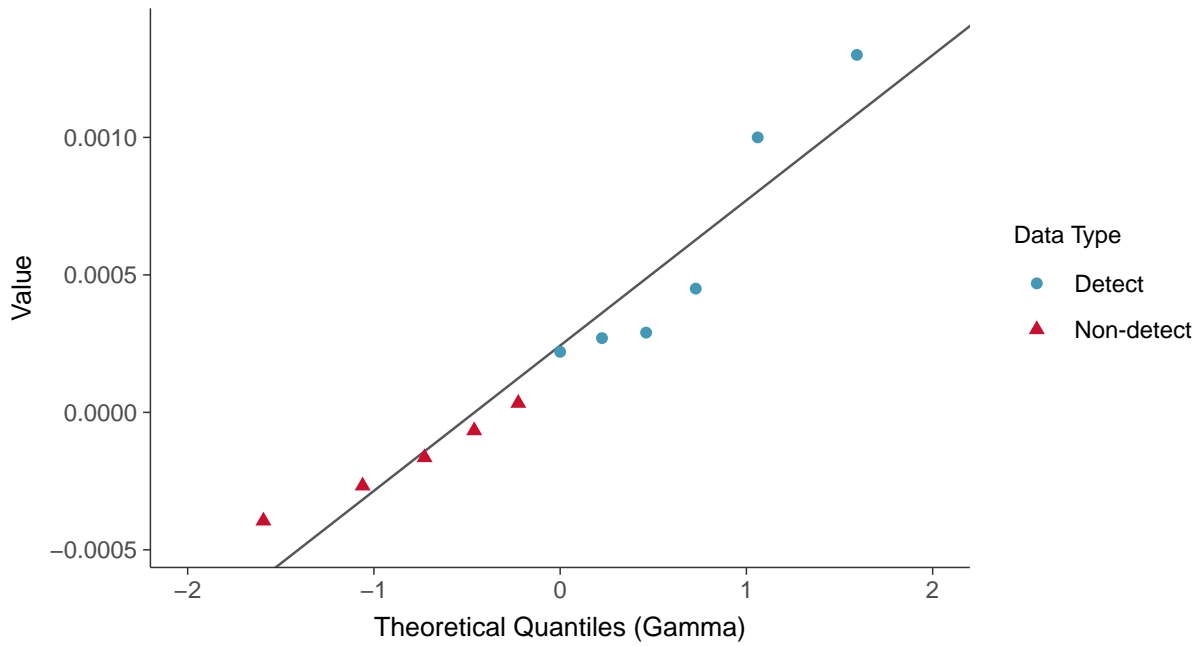
Copper, MW-01R (mg/L)





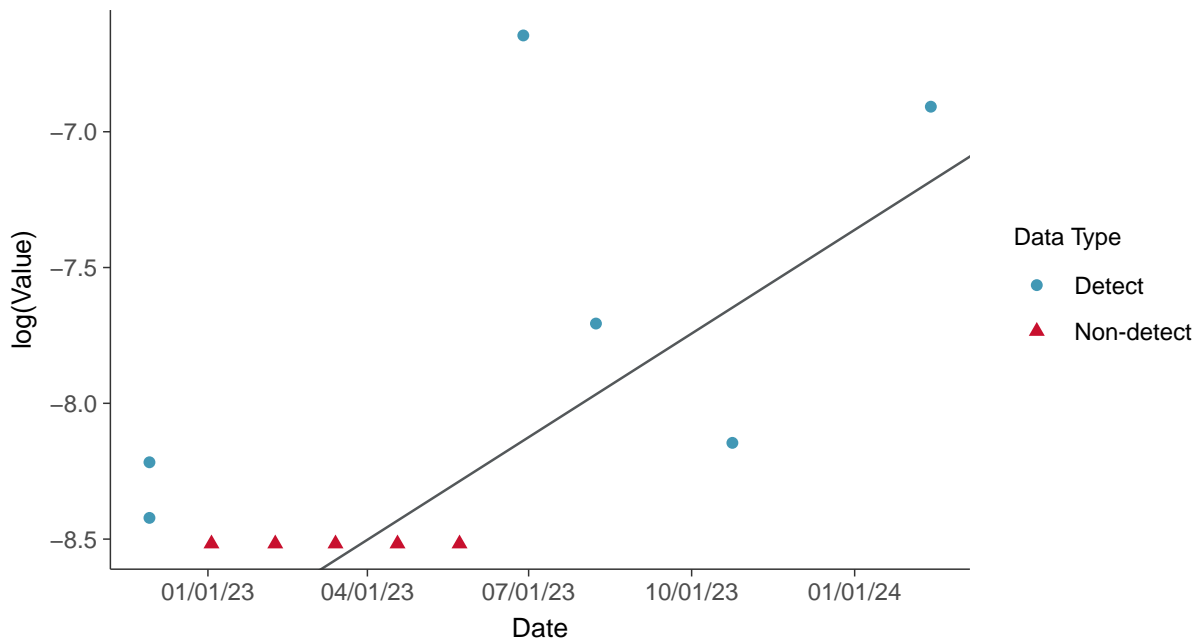
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-01R (mg/L)



Trend Regression: Lognormal MLE

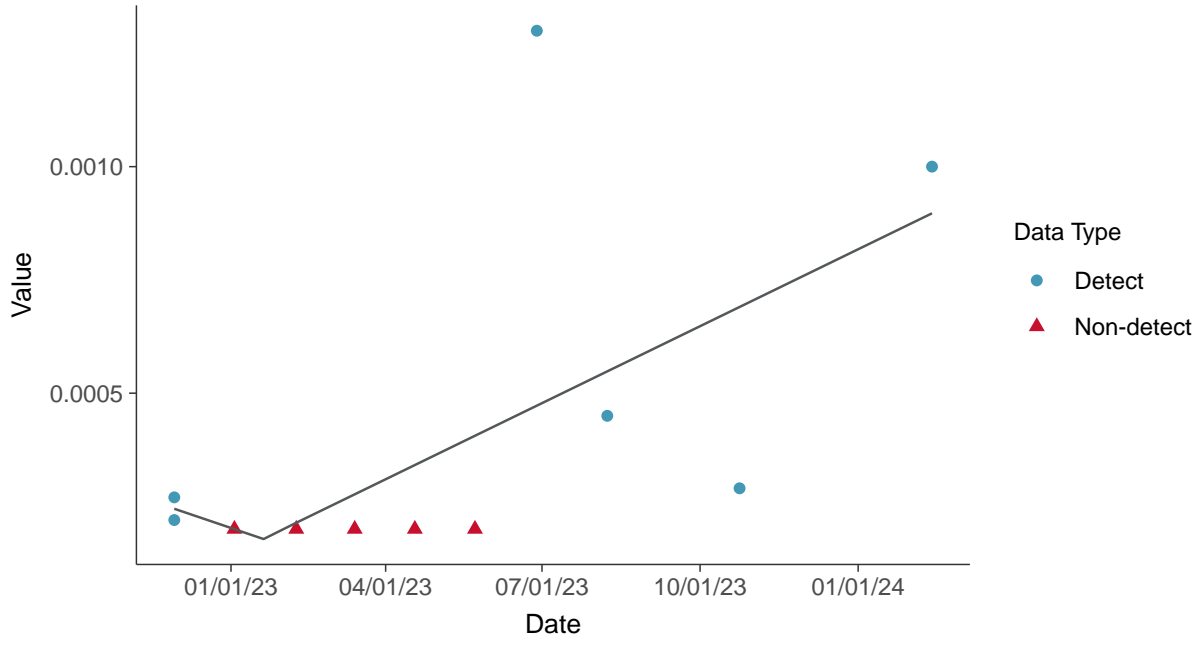
Copper, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear

Copper, MW-01R (mg/L)



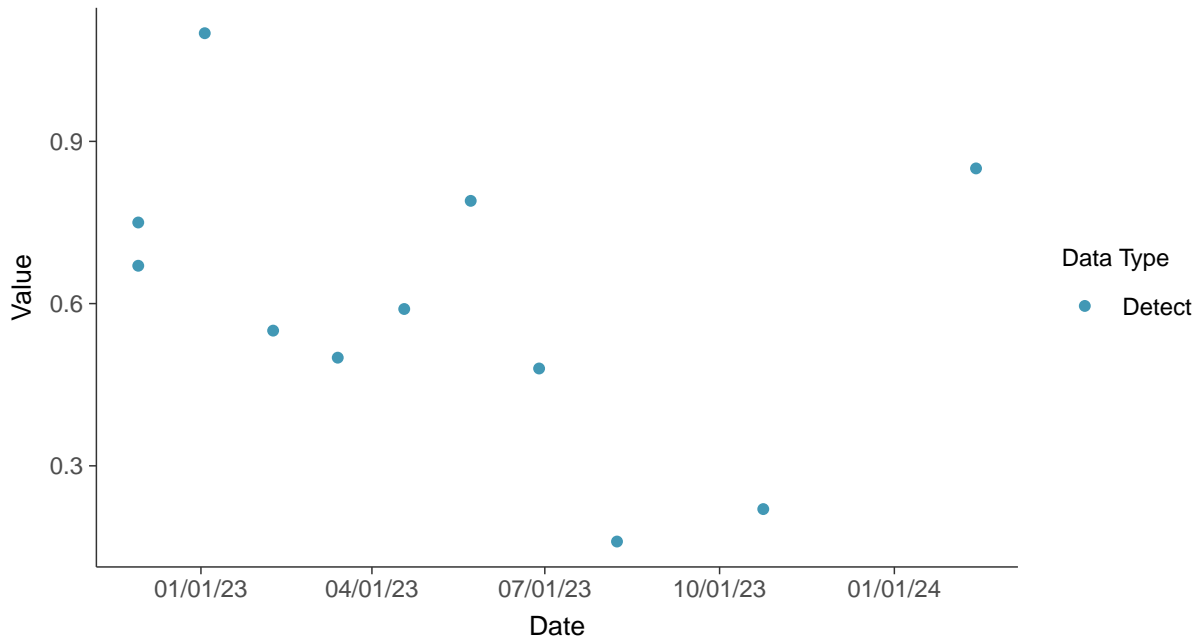


Part 115: Iron, MW-01R

ID: 2_11_6_114

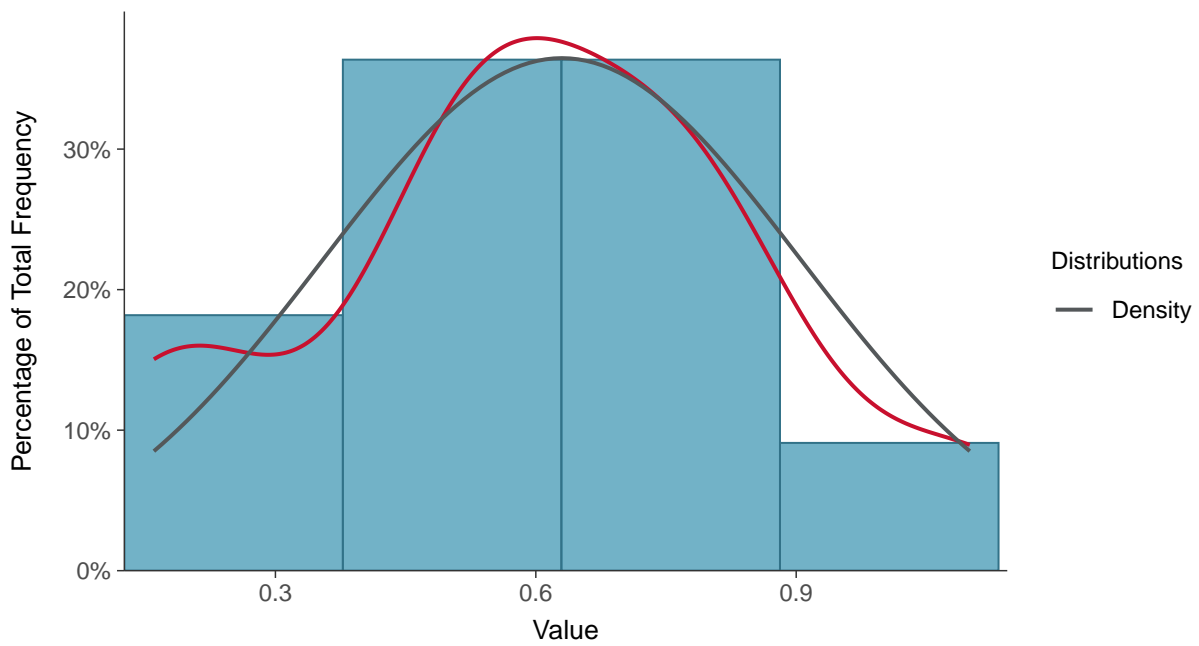
Scatter Plot

Iron, MW-01R (mg/L)



Histogram

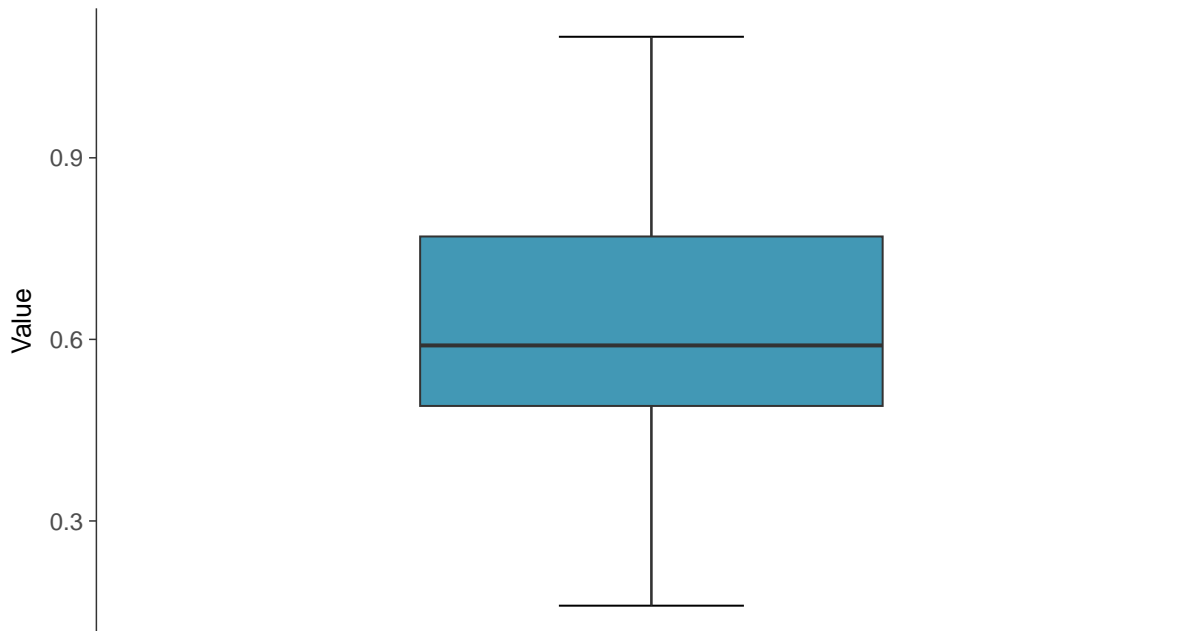
Iron, MW-01R (mg/L)





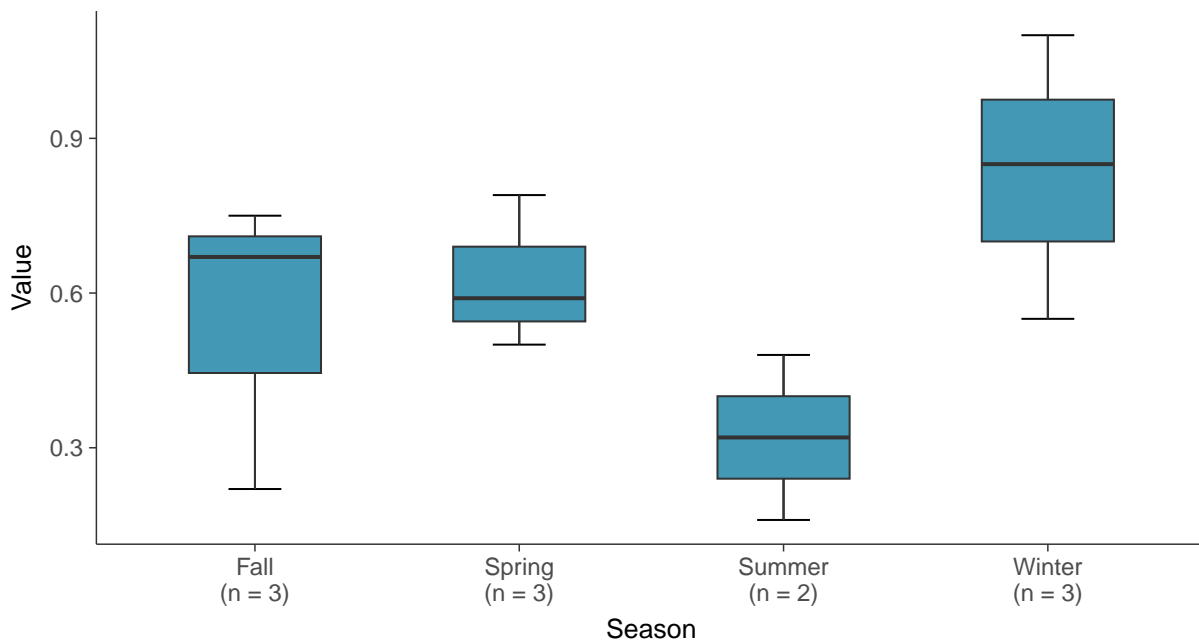
Boxplot

Iron, MW-01R (mg/L)



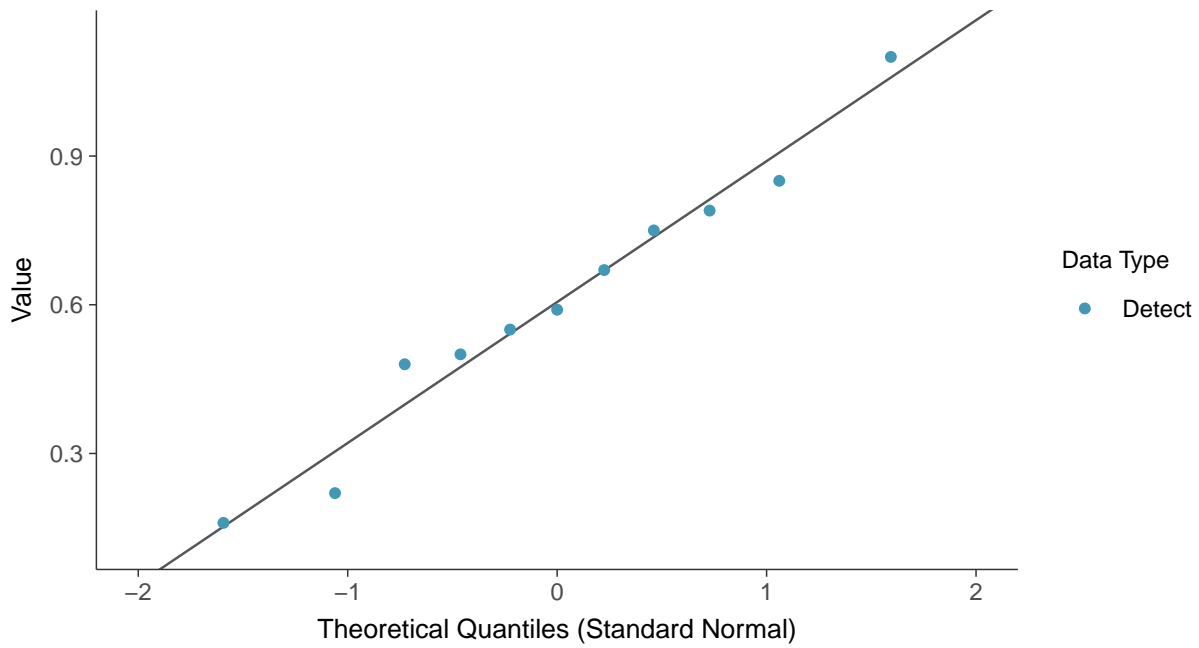
Boxplot by Season

Iron, MW-01R (mg/L)

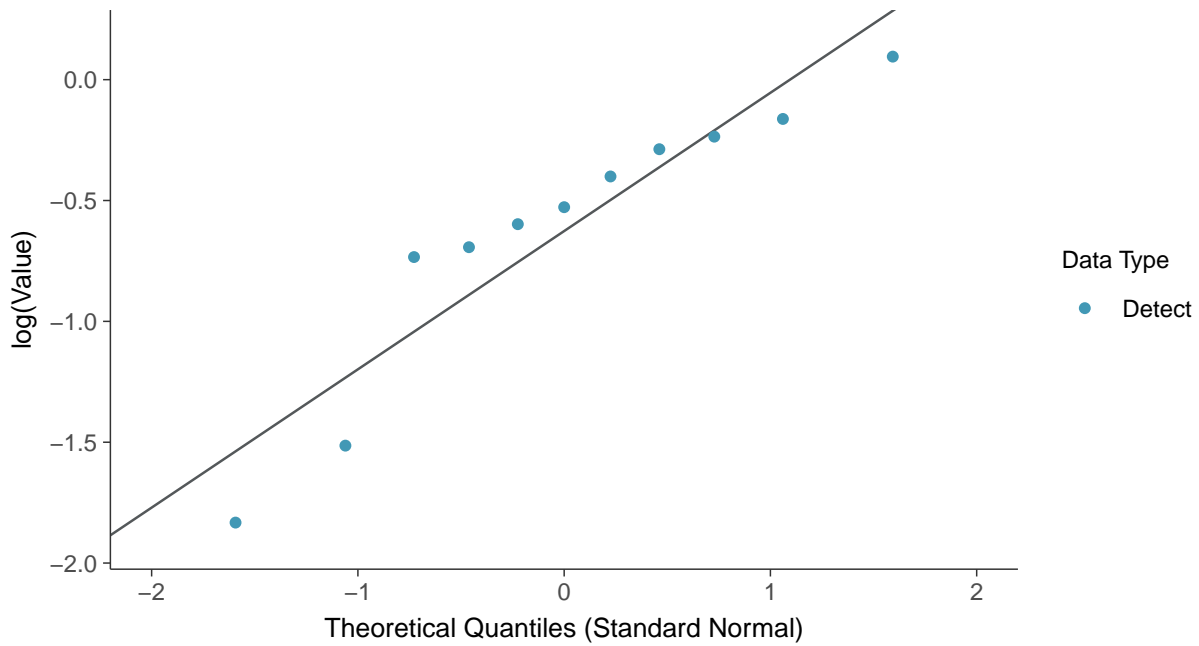




Normal Q-Q plot
Iron, MW-01R (mg/L)



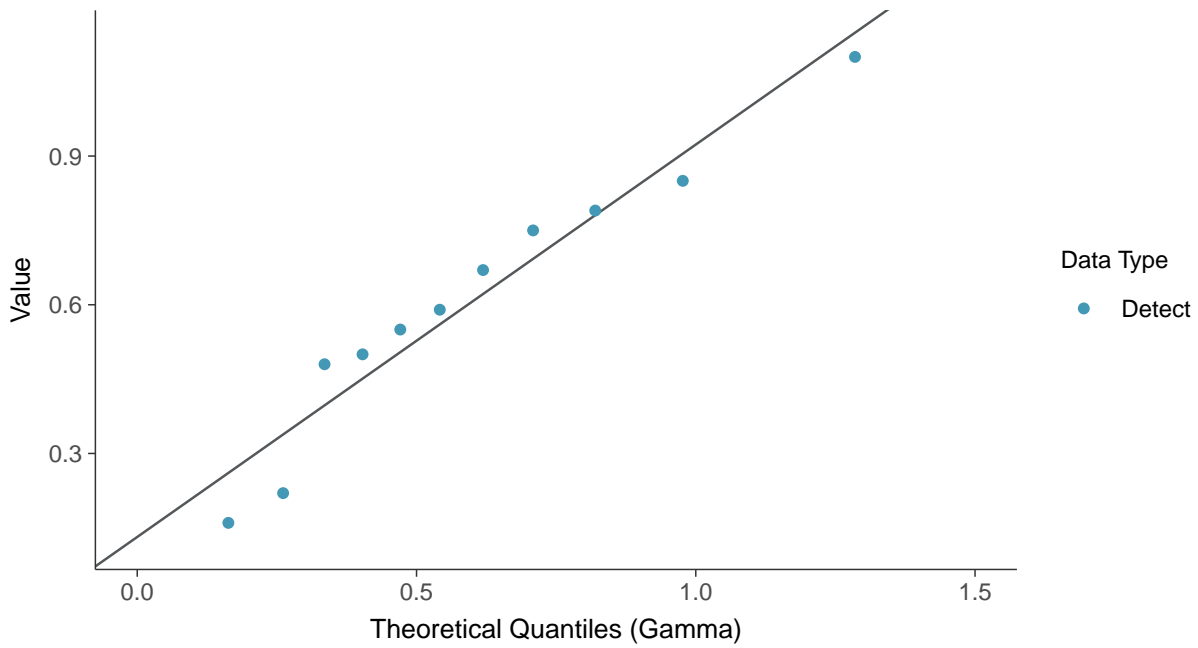
Lognormal Q-Q plot
Iron, MW-01R (mg/L)





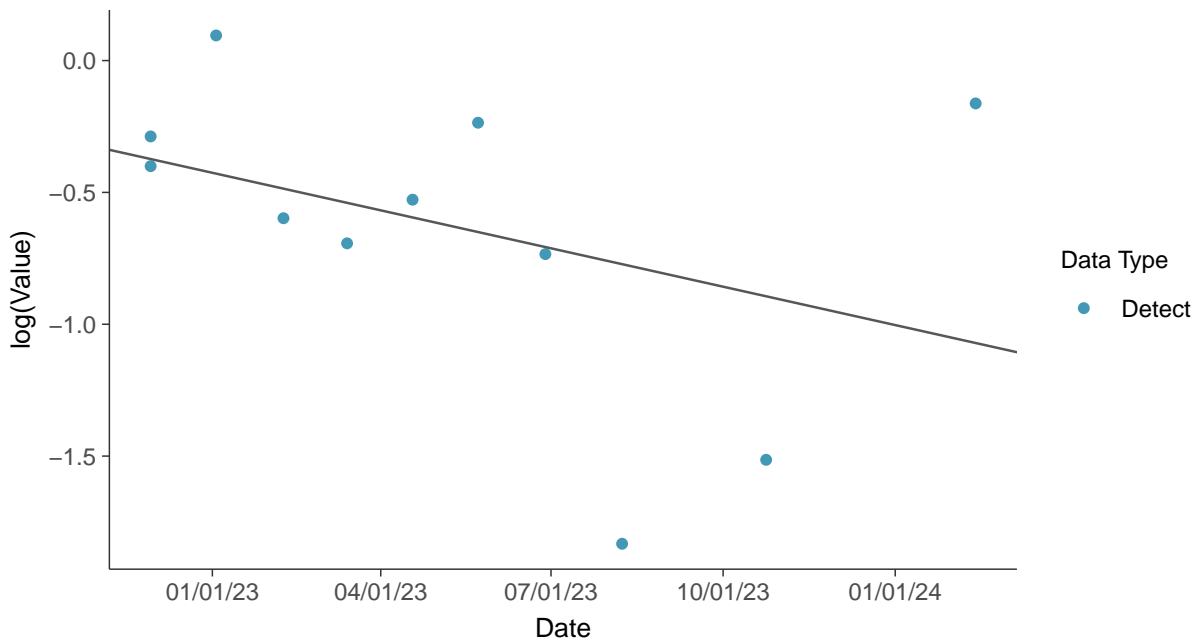
Gamma Q-Q plot

Iron, MW-01R (mg/L)



Trend Regression: Lognormal MLE

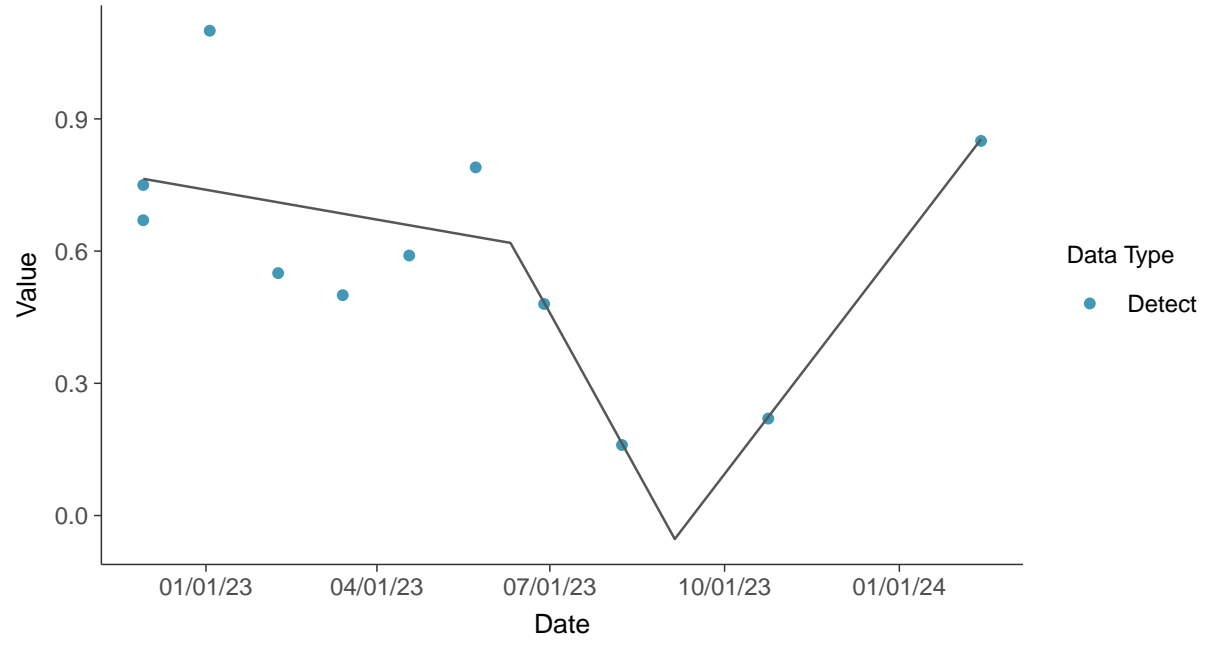
Iron, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-01R (mg/L)



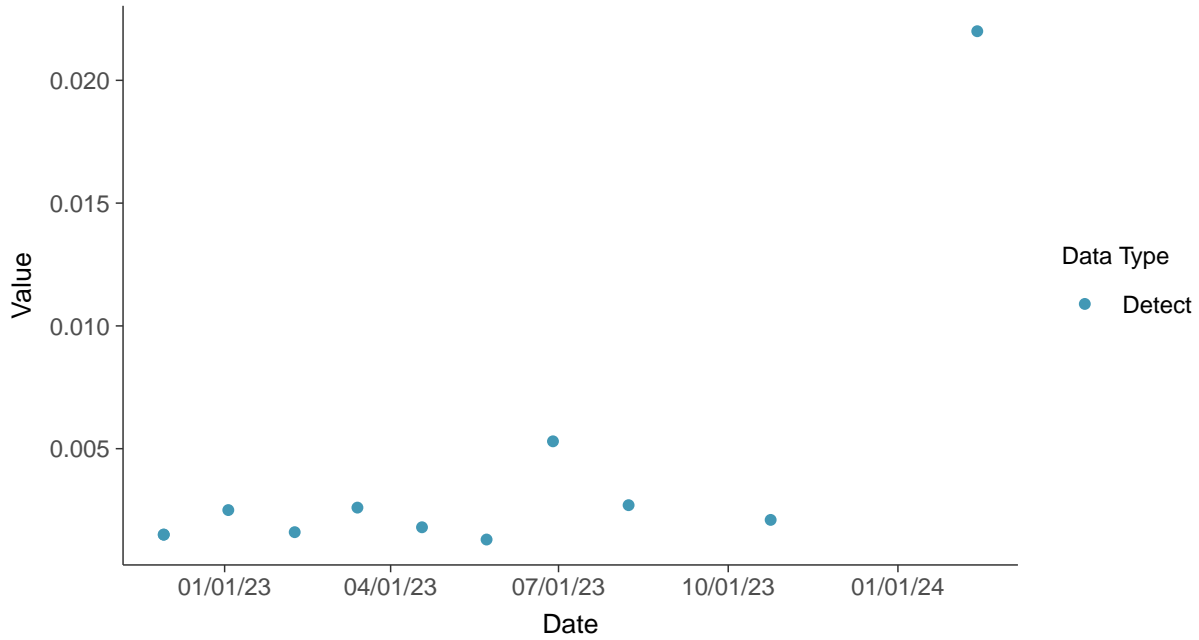


Part 115: Nickel, MW-01R

ID: 2_11_6_119

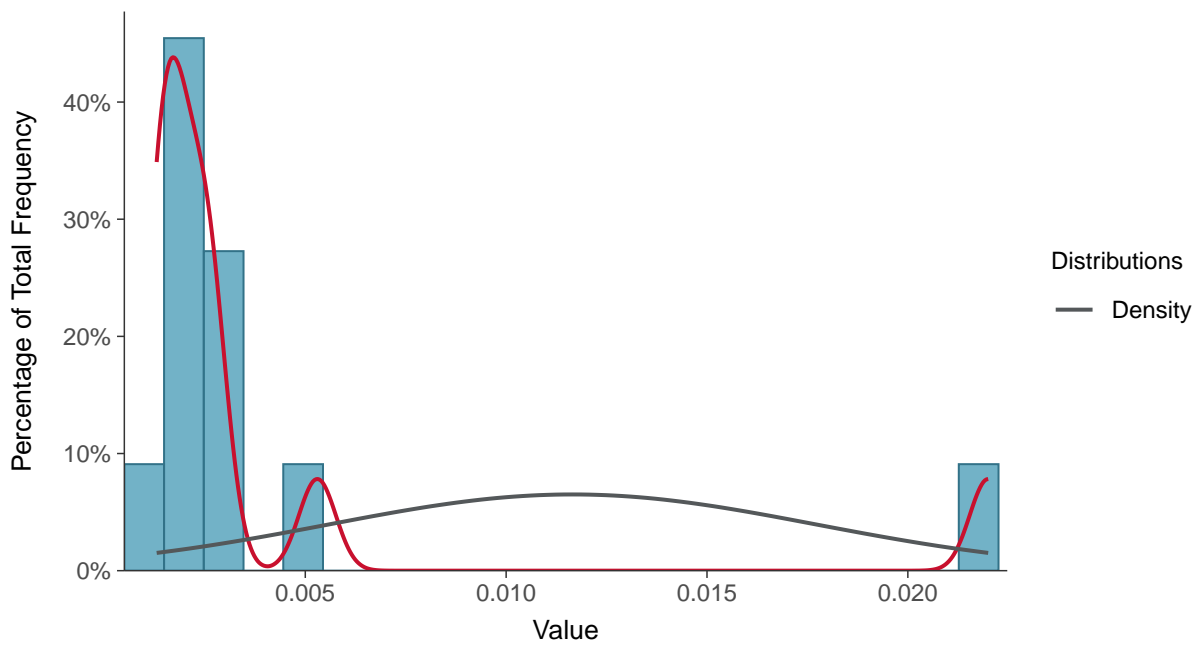
Scatter Plot

Nickel, MW-01R (mg/L)



Histogram

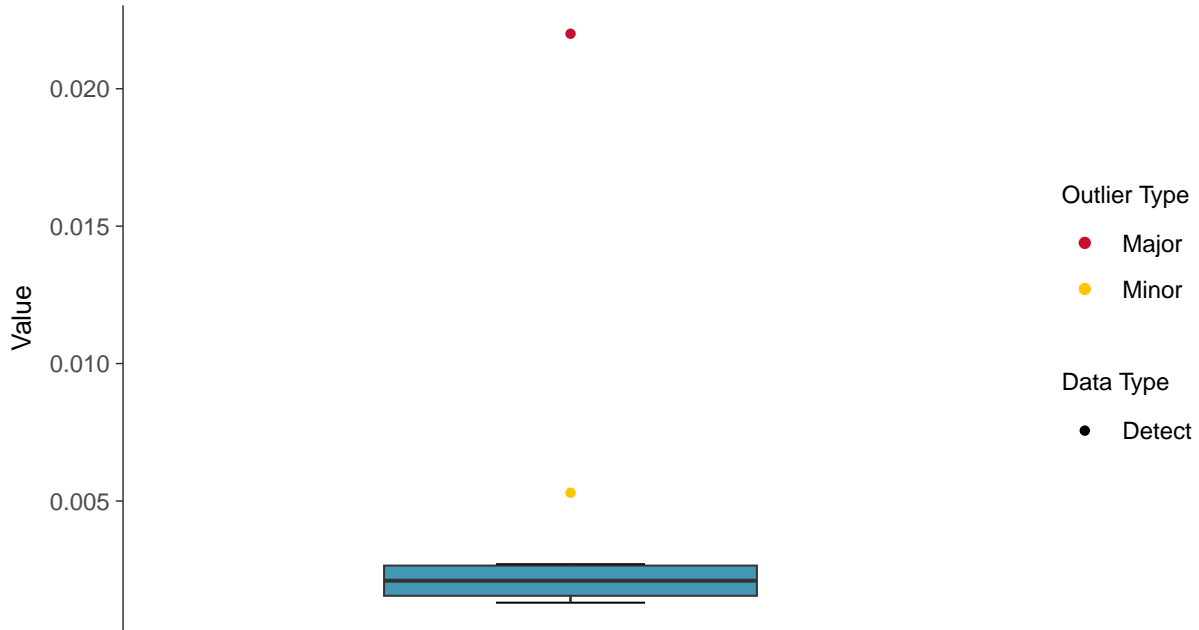
Nickel, MW-01R (mg/L)





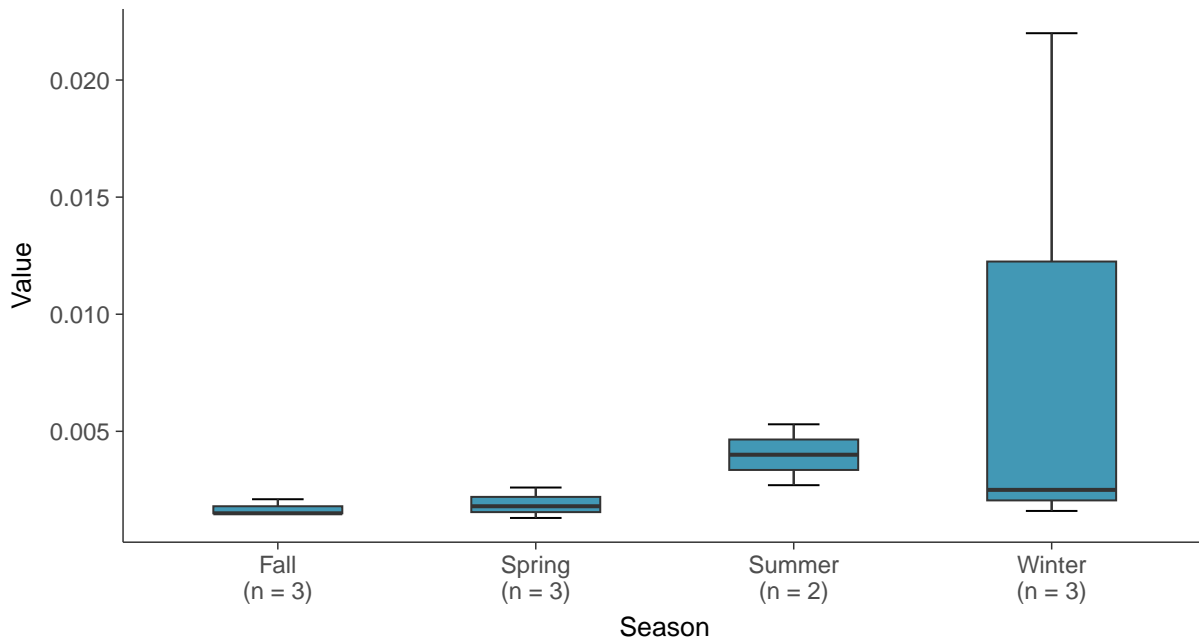
Boxplot

Nickel, MW-01R (mg/L)



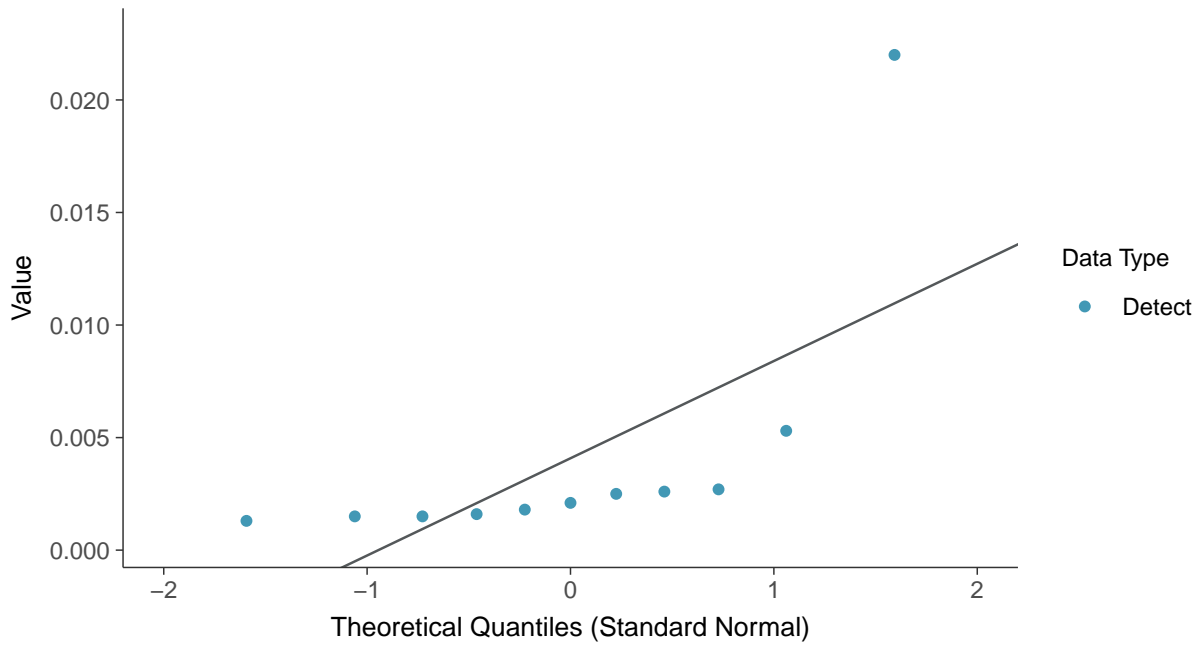
Boxplot by Season

Nickel, MW-01R (mg/L)

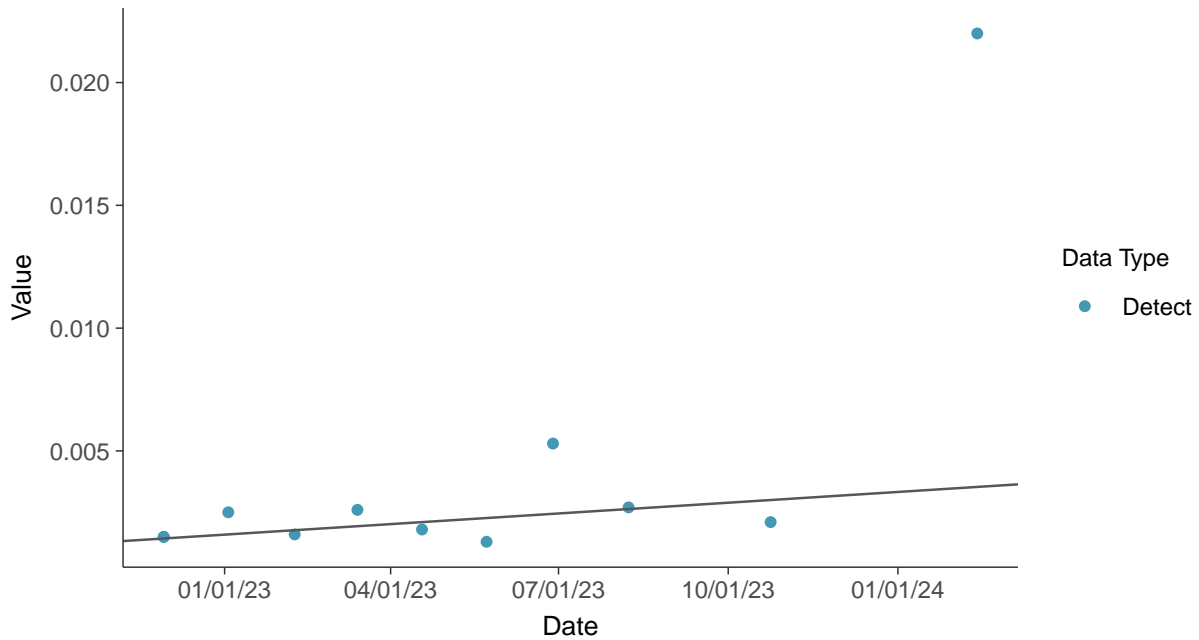




Normal Q-Q plot
Nickel, MW-01R (mg/L)



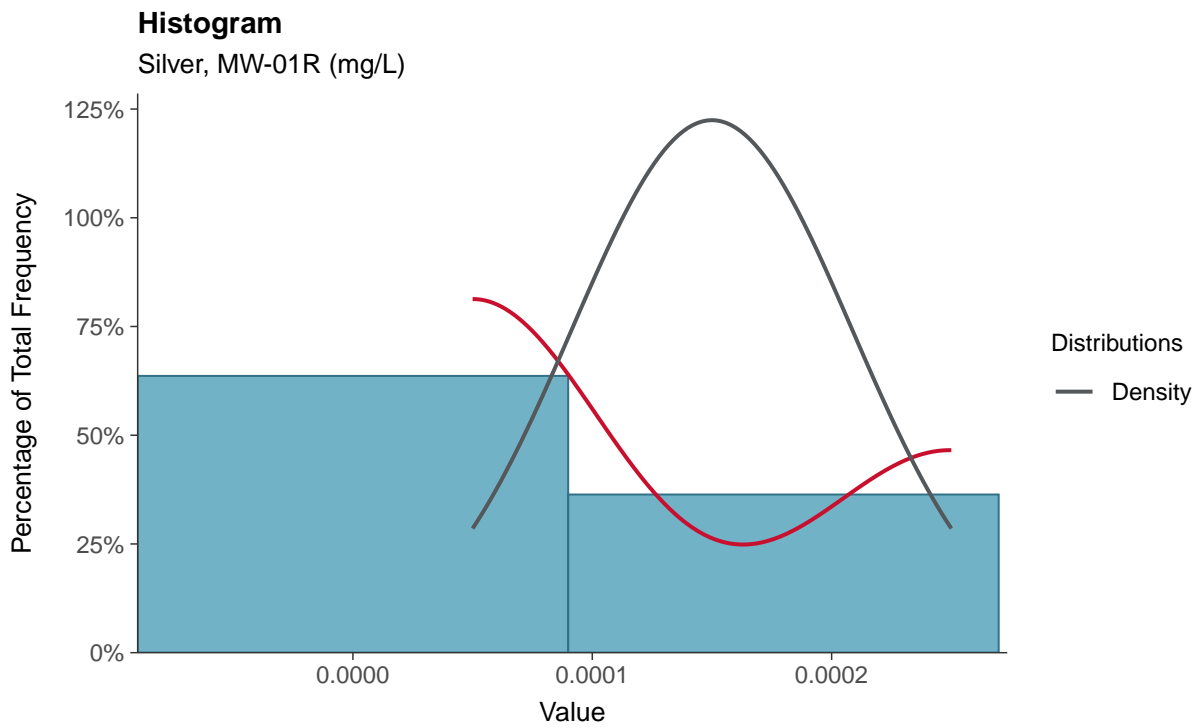
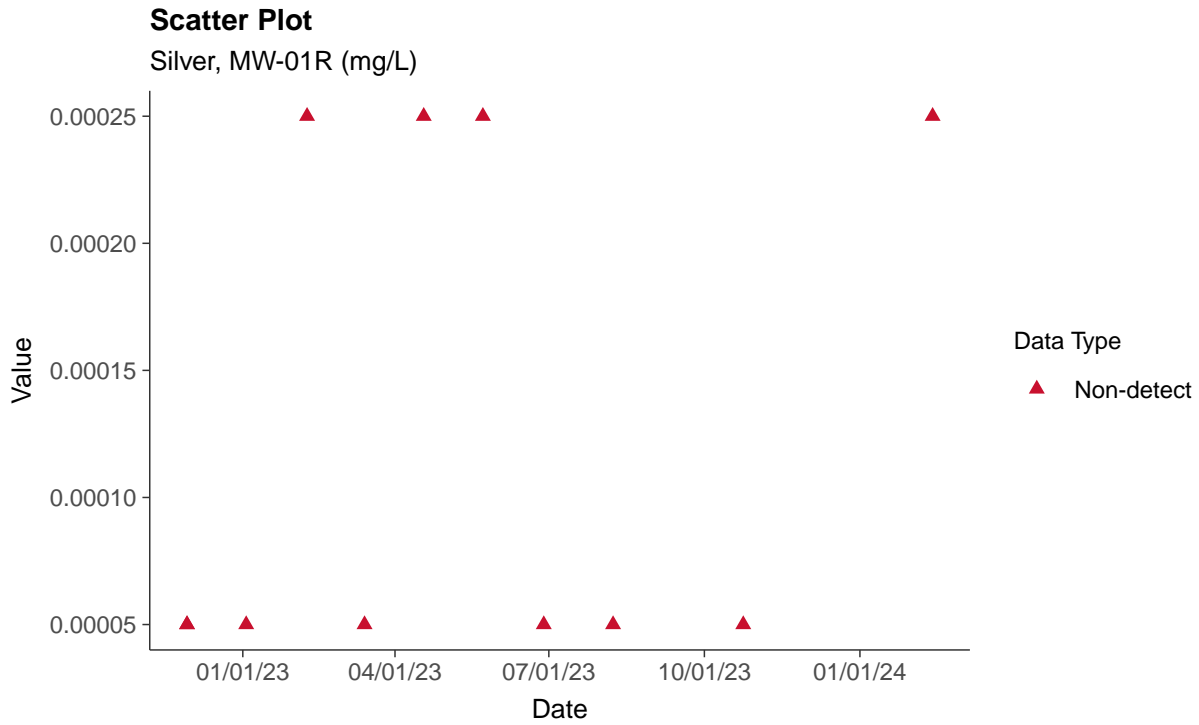
Trend Regression: Mann-Kendall/Theil-Sen Estimate
Nickel, MW-01R (mg/L)





Part 115: Silver, MW-01R

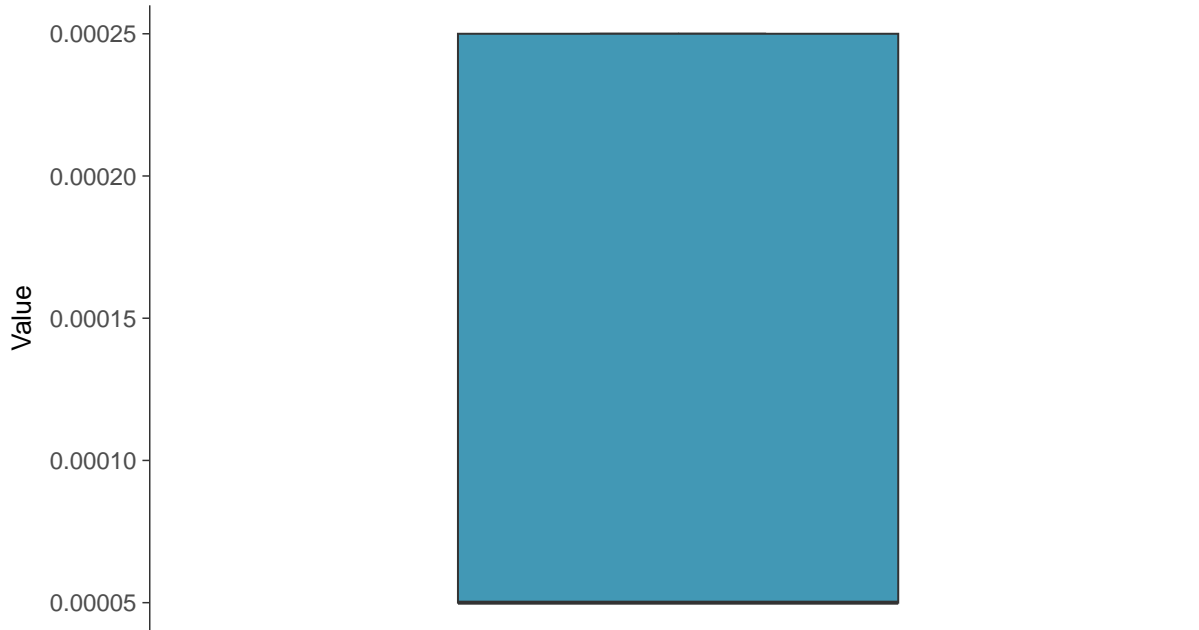
ID: 2_11_6_123





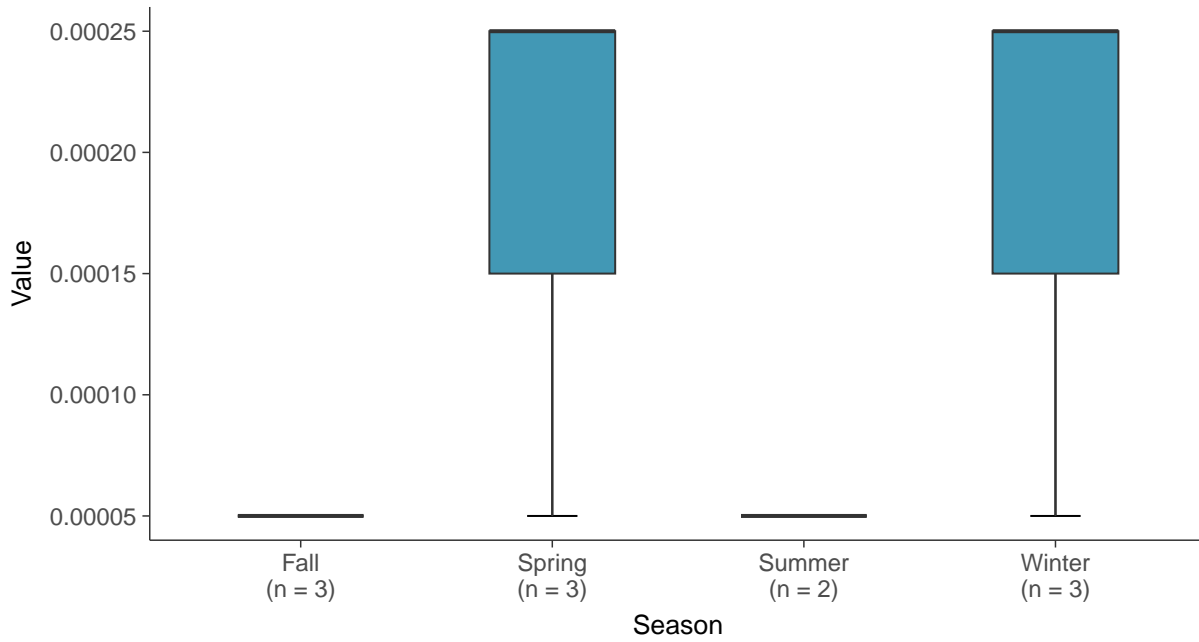
Boxplot

Silver, MW-01R (mg/L)



Boxplot by Season

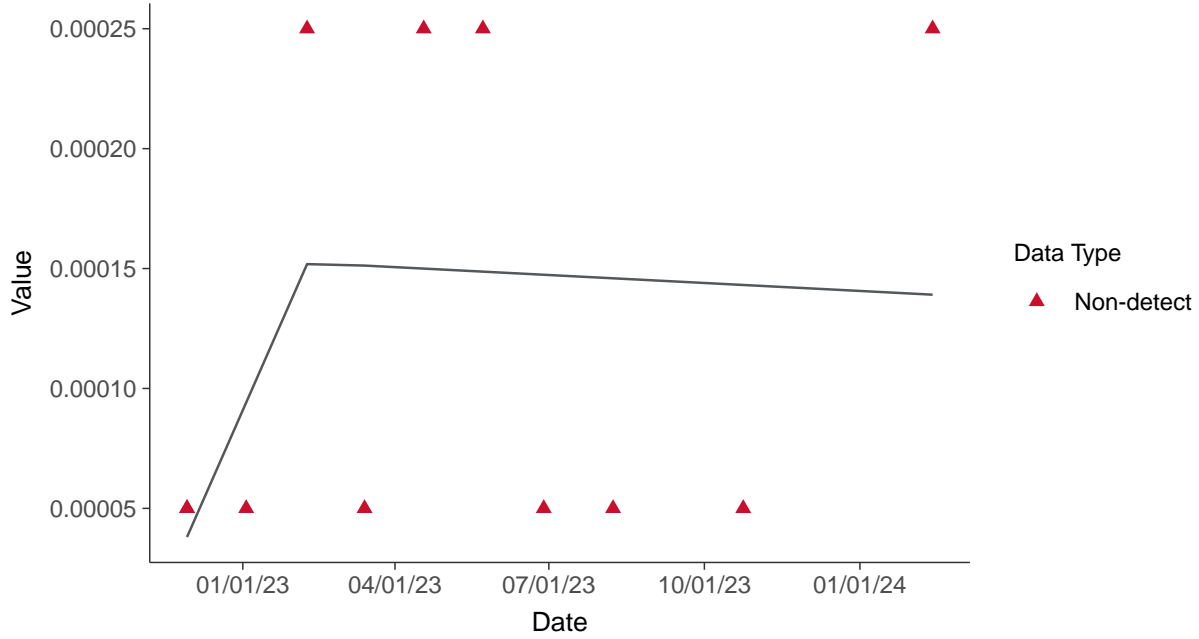
Silver, MW-01R (mg/L)





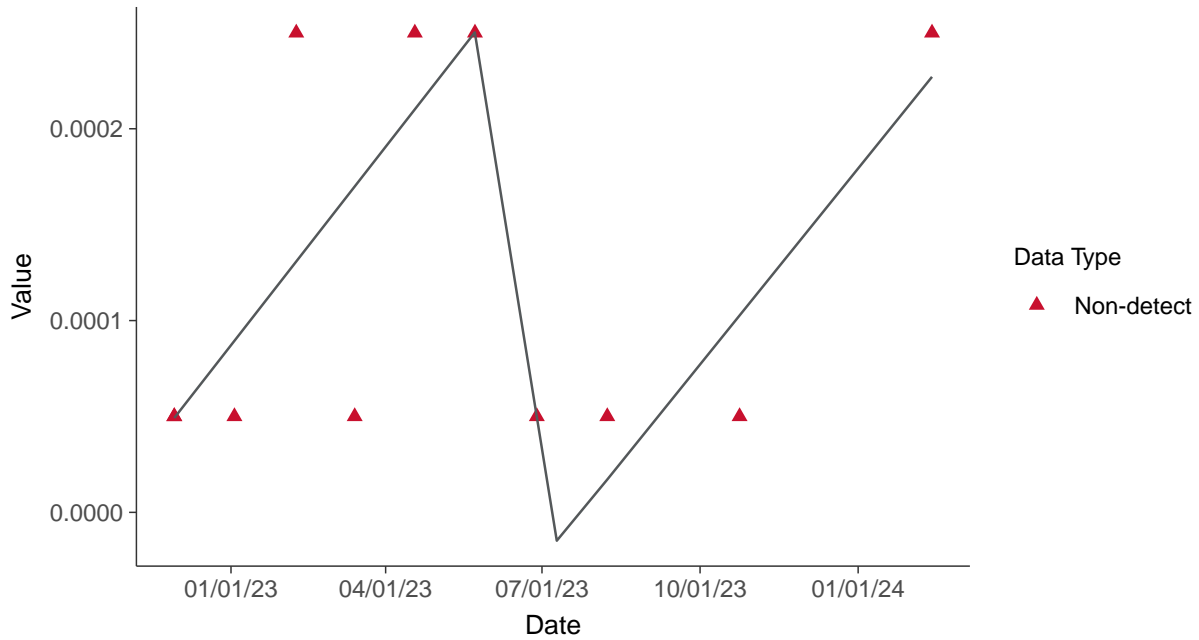
Trend Regression: Piecewise Linear-Linear

Silver, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-01R (mg/L)



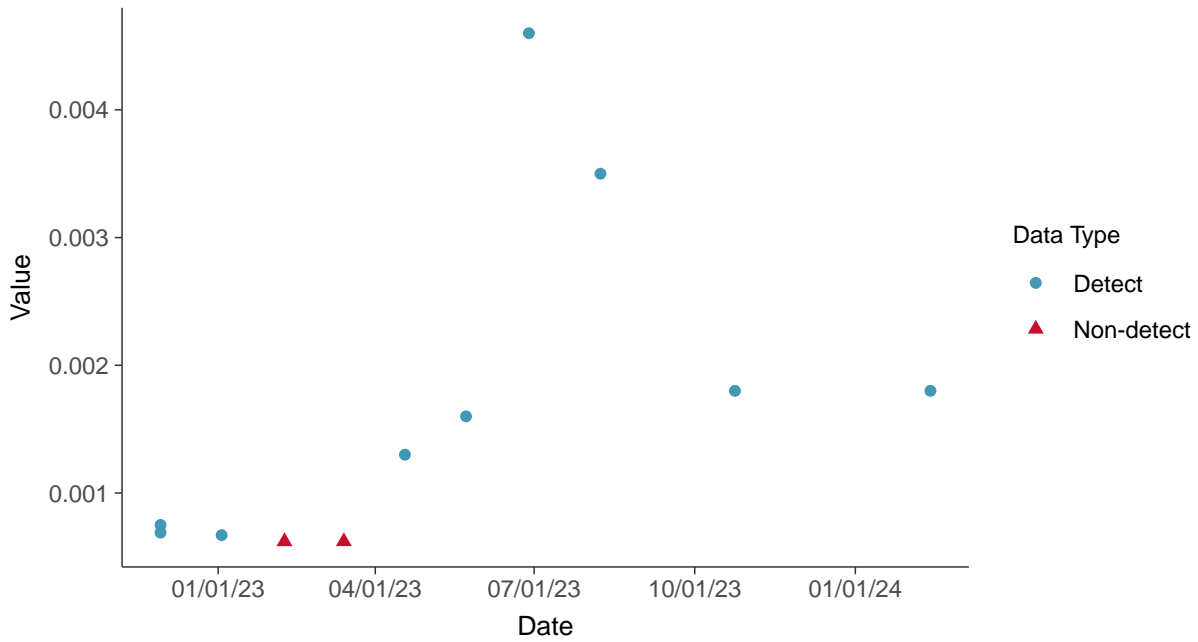


Part 115: Vanadium, MW-01R

ID: 2_11_6_129

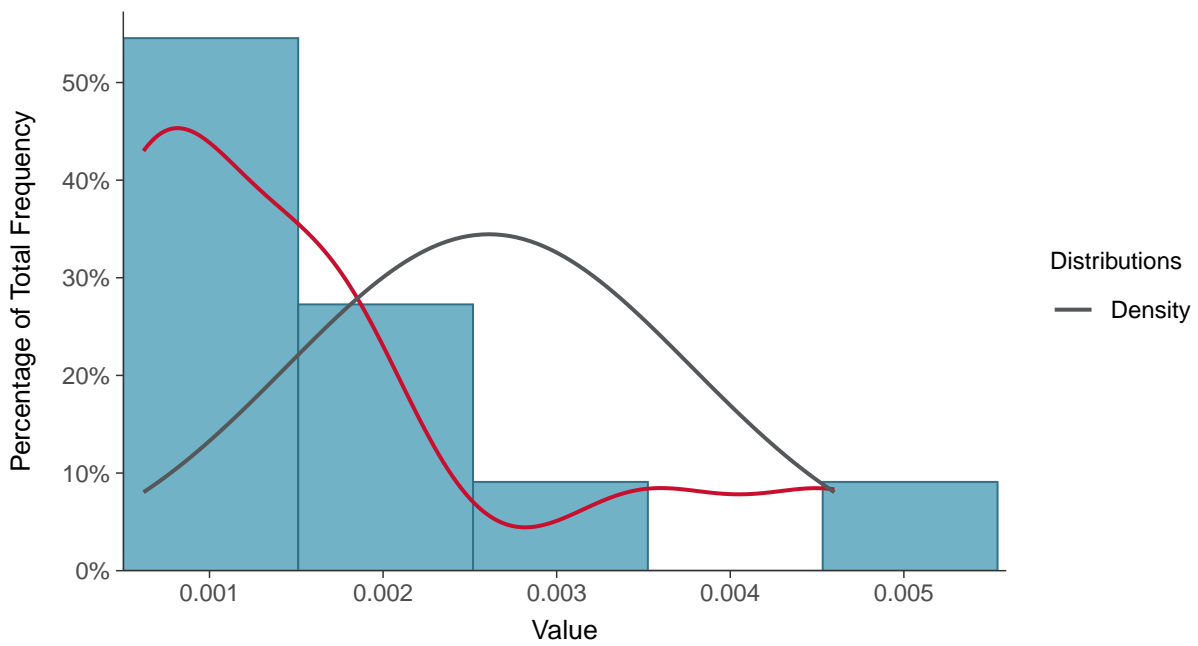
Scatter Plot

Vanadium, MW-01R (mg/L)



Histogram

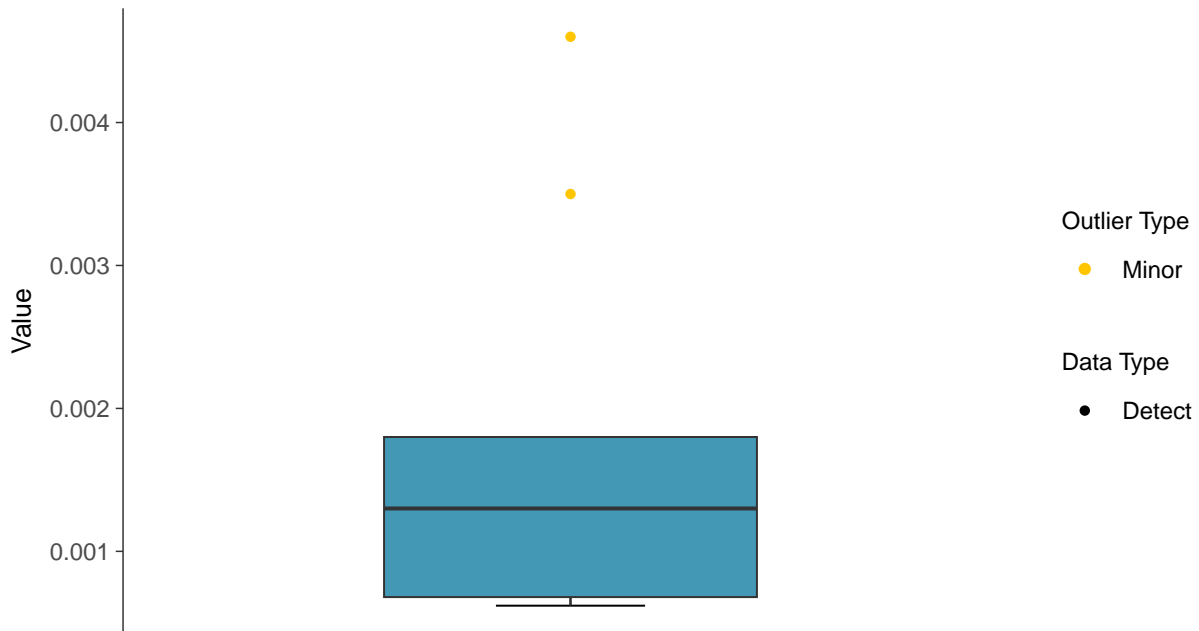
Vanadium, MW-01R (mg/L)





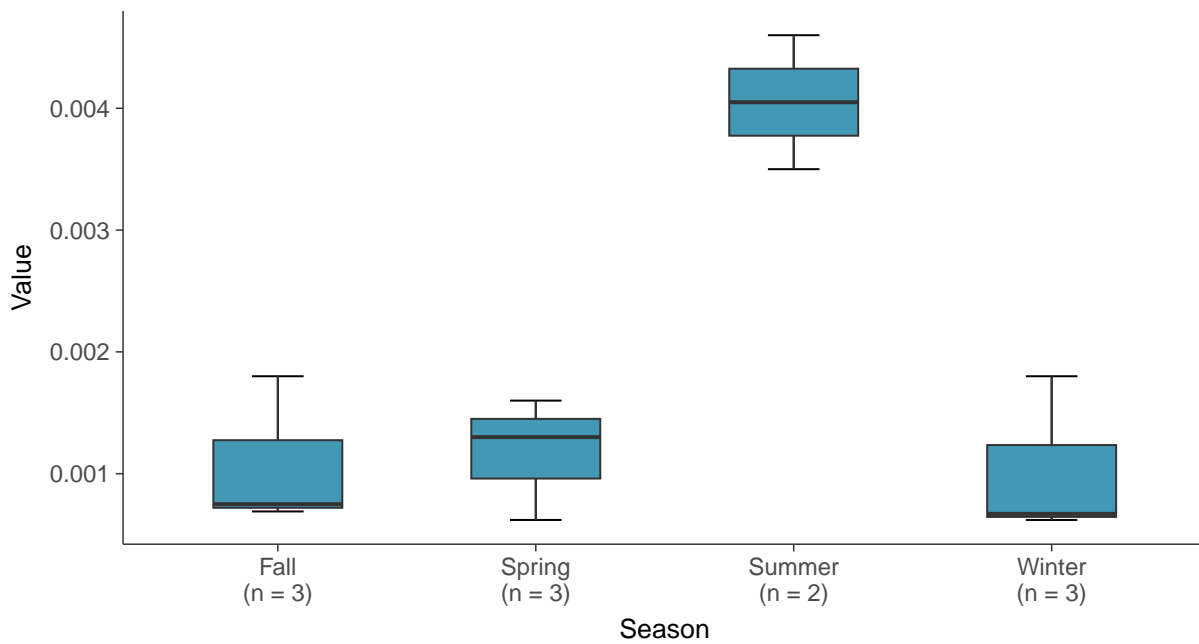
Boxplot

Vanadium, MW-01R (mg/L)



Boxplot by Season

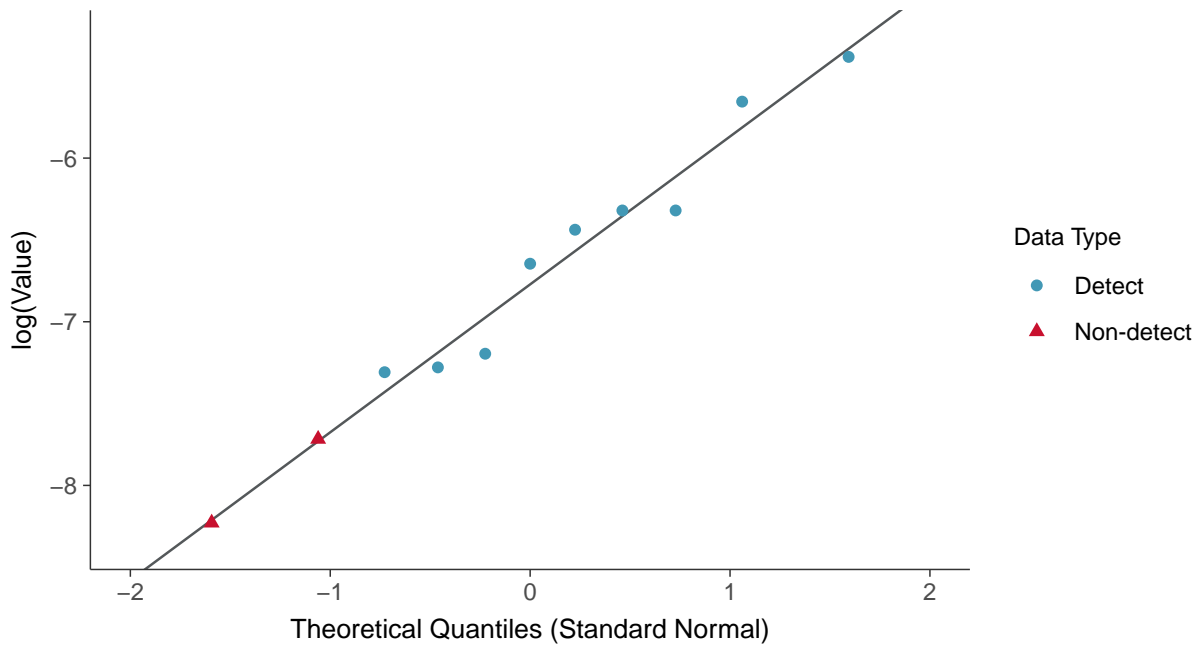
Vanadium, MW-01R (mg/L)





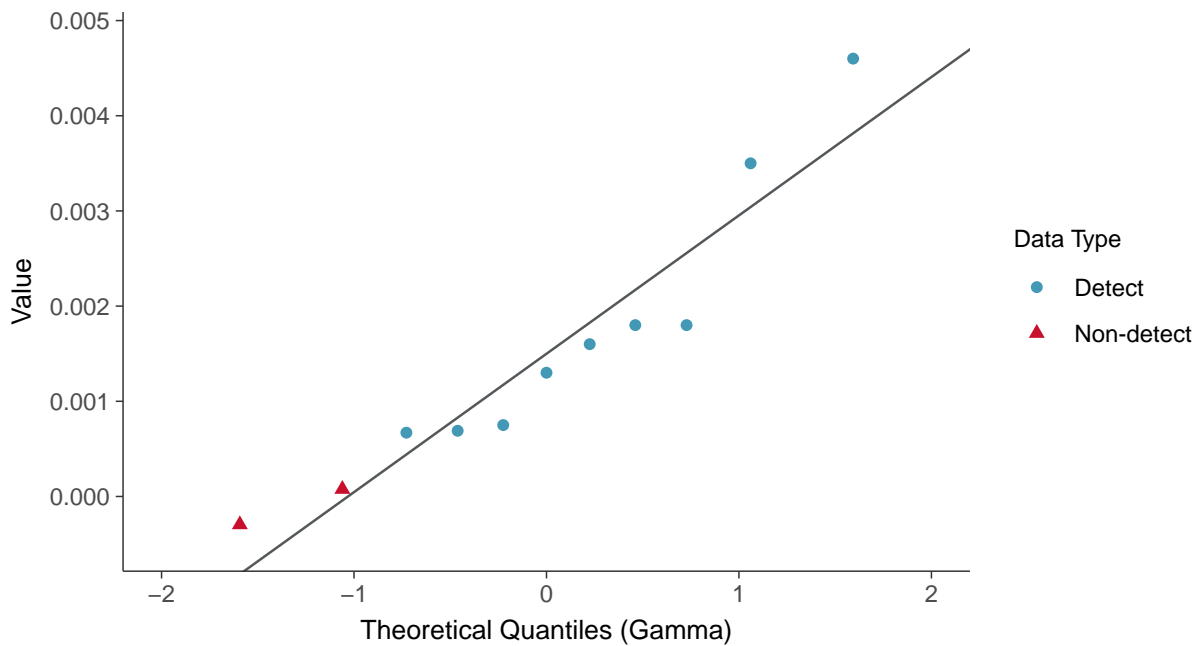
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-01R (mg/L)



Gamma Q-Q plot using ROS Imputed Estimates

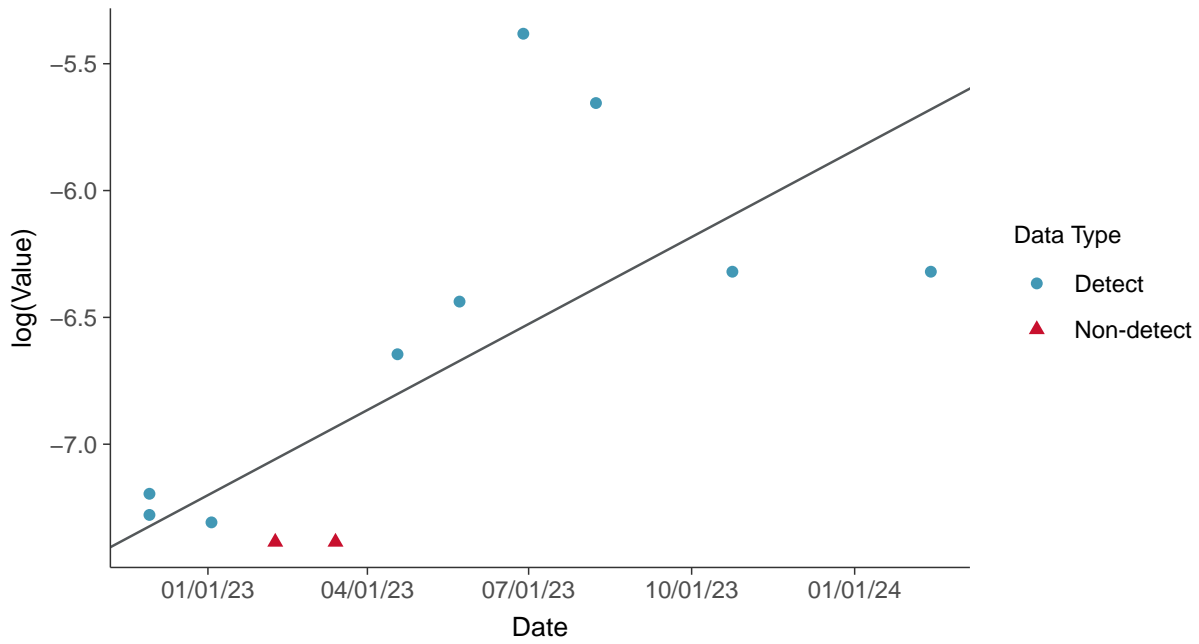
Vanadium, MW-01R (mg/L)





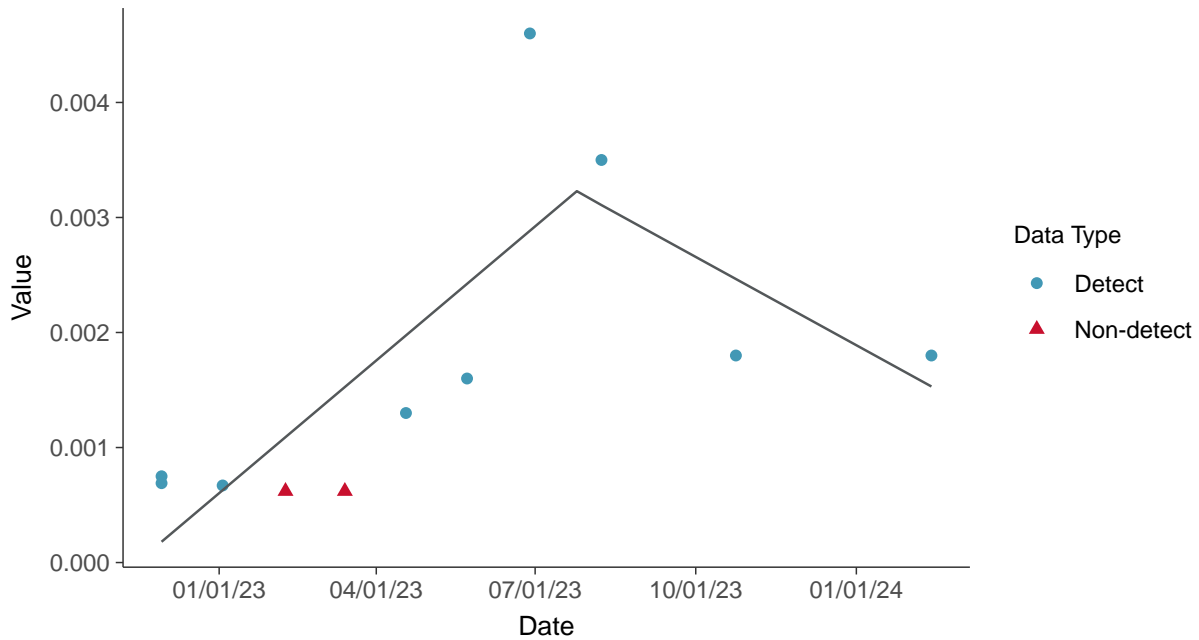
Trend Regression: Lognormal MLE

Vanadium, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

Vanadium, MW-01R (mg/L)



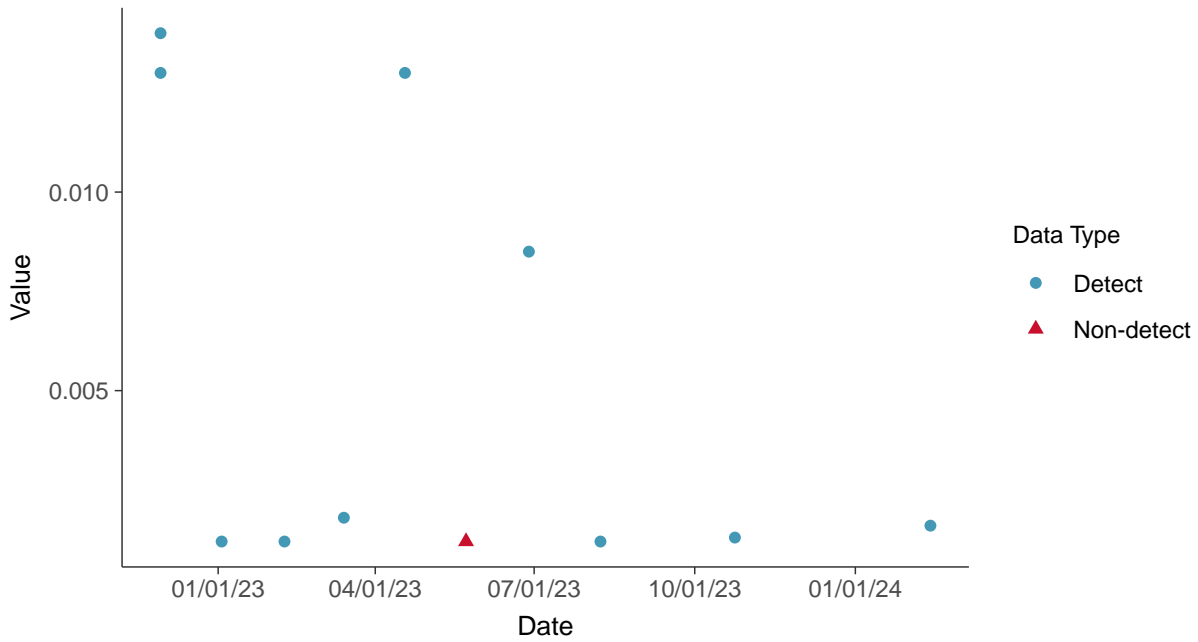


Part 115: Zinc, MW-01R

ID: 2_11_6_130

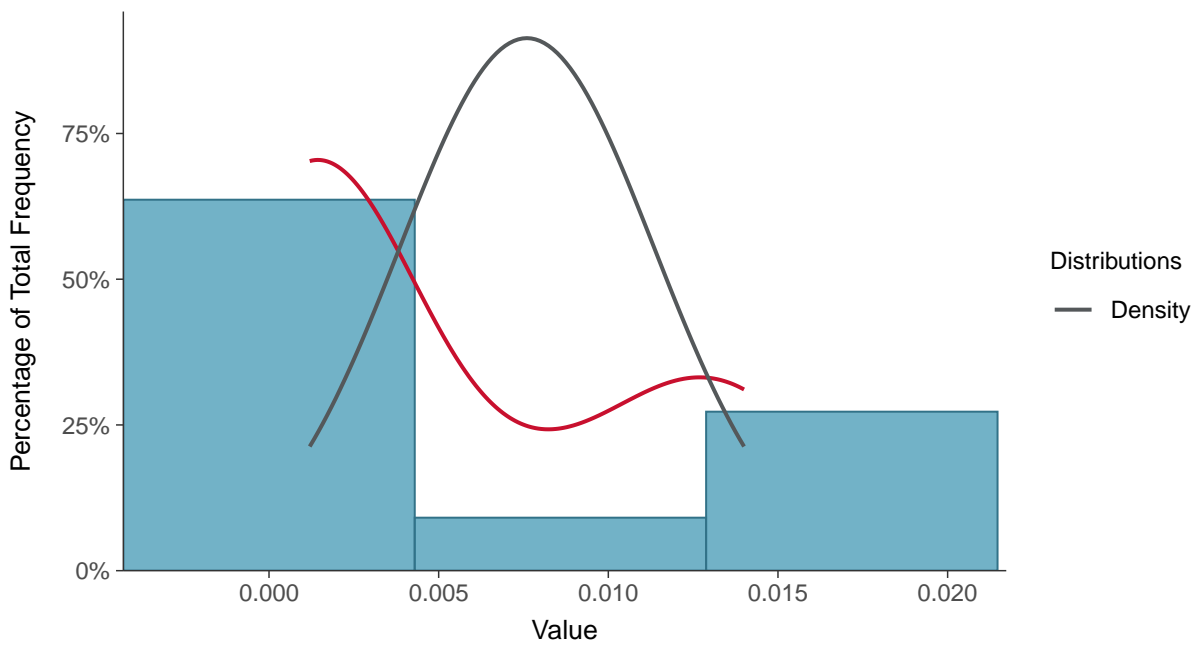
Scatter Plot

Zinc, MW-01R (mg/L)



Histogram

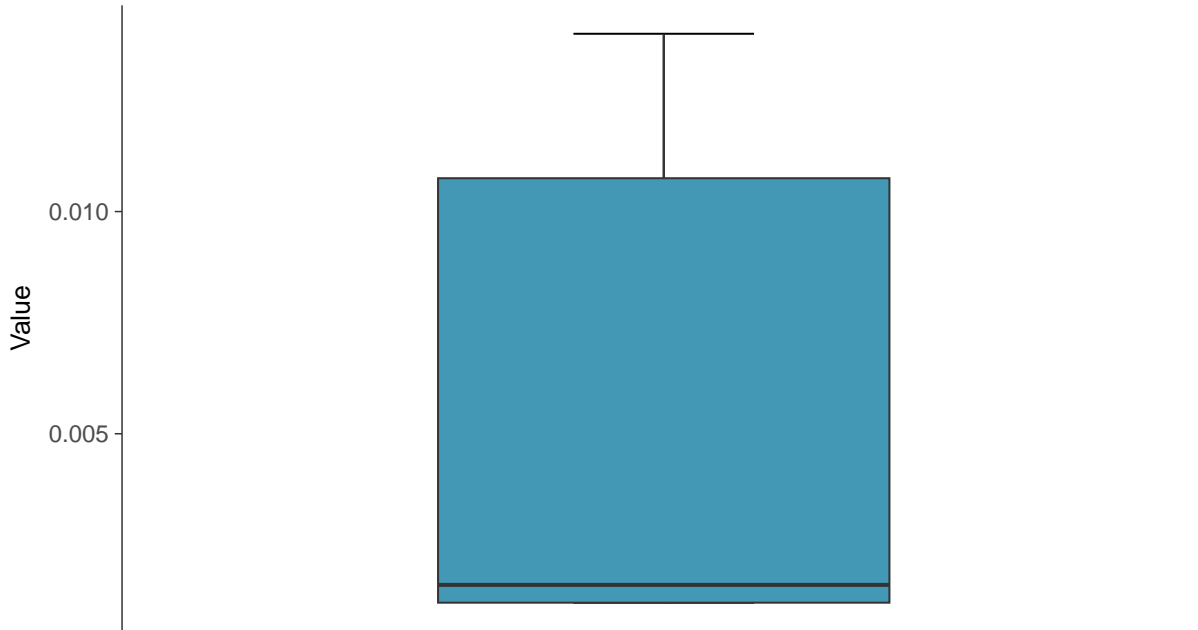
Zinc, MW-01R (mg/L)





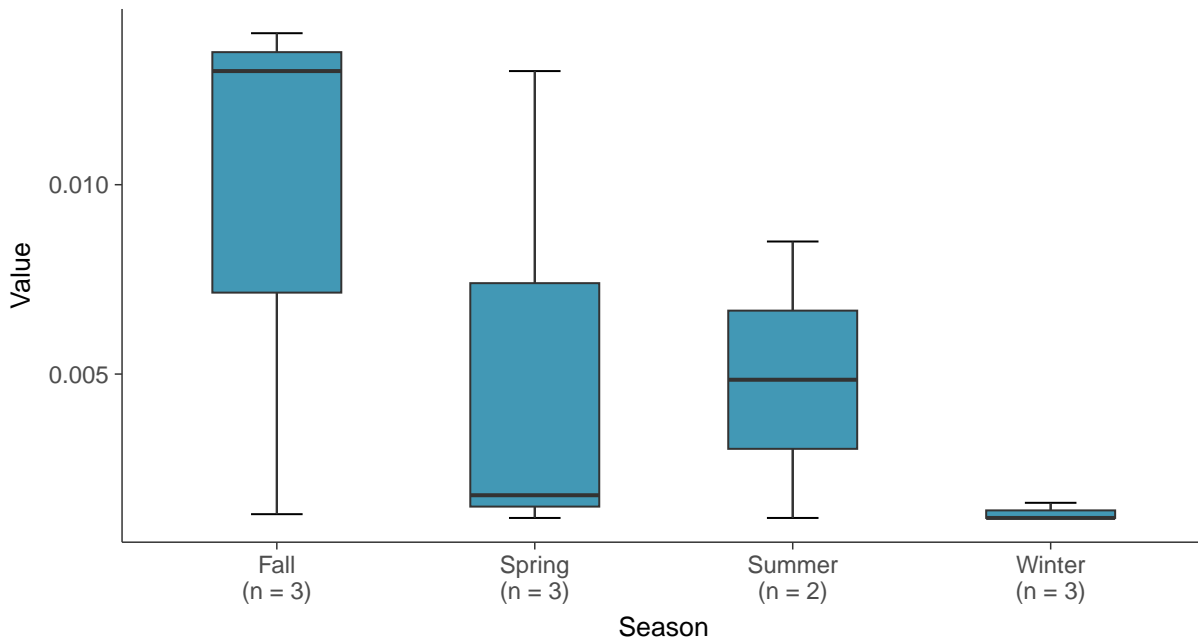
Boxplot

Zinc, MW-01R (mg/L)



Boxplot by Season

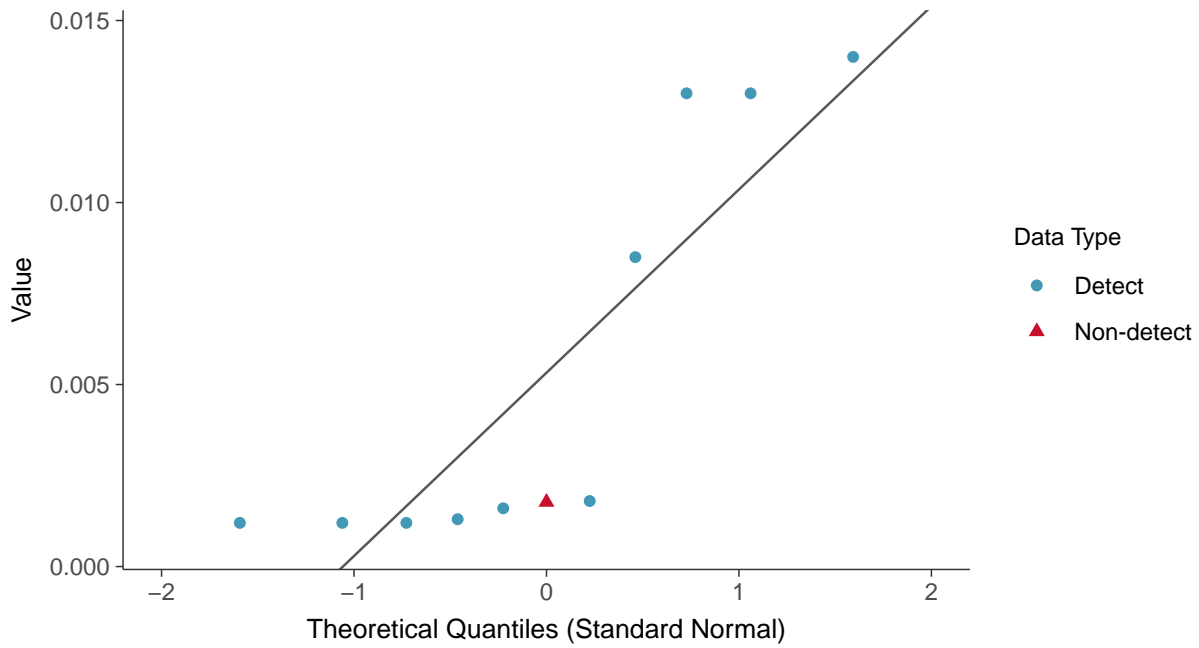
Zinc, MW-01R (mg/L)





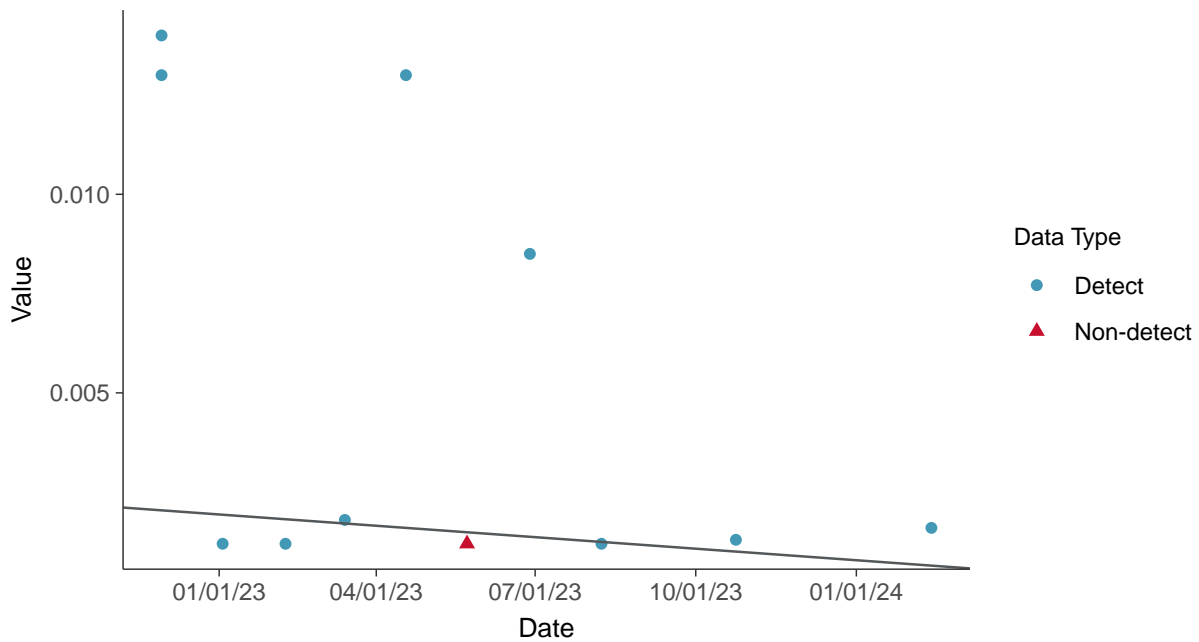
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-01R (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

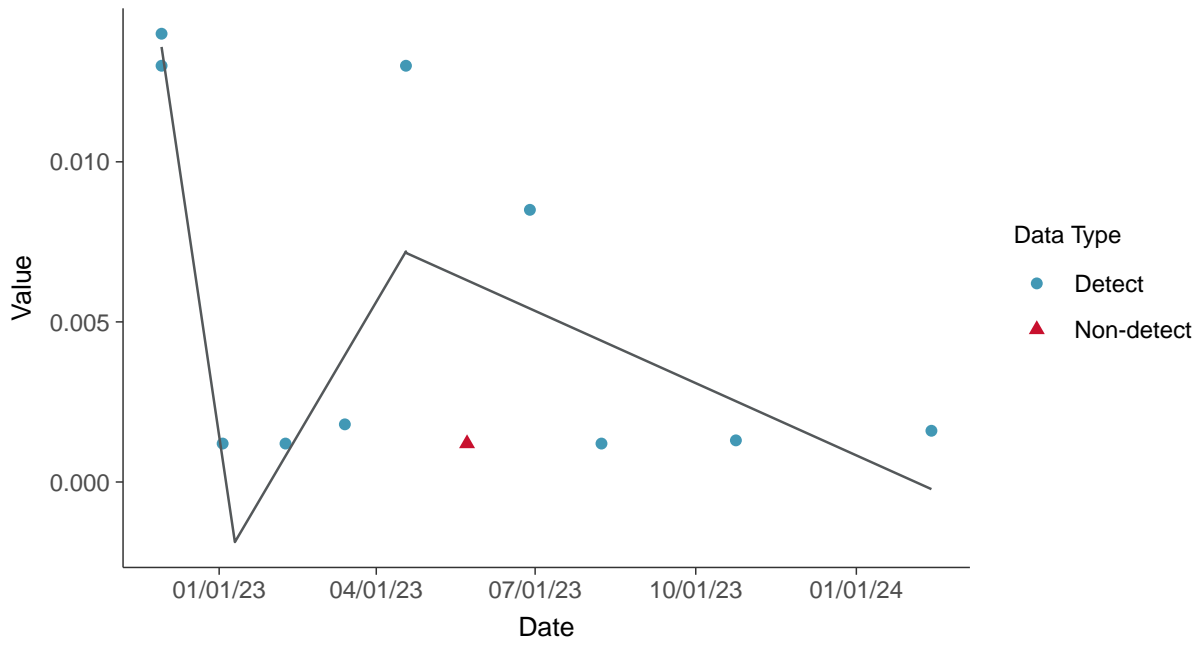
Zinc, MW-01R (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-01R (mg/L)



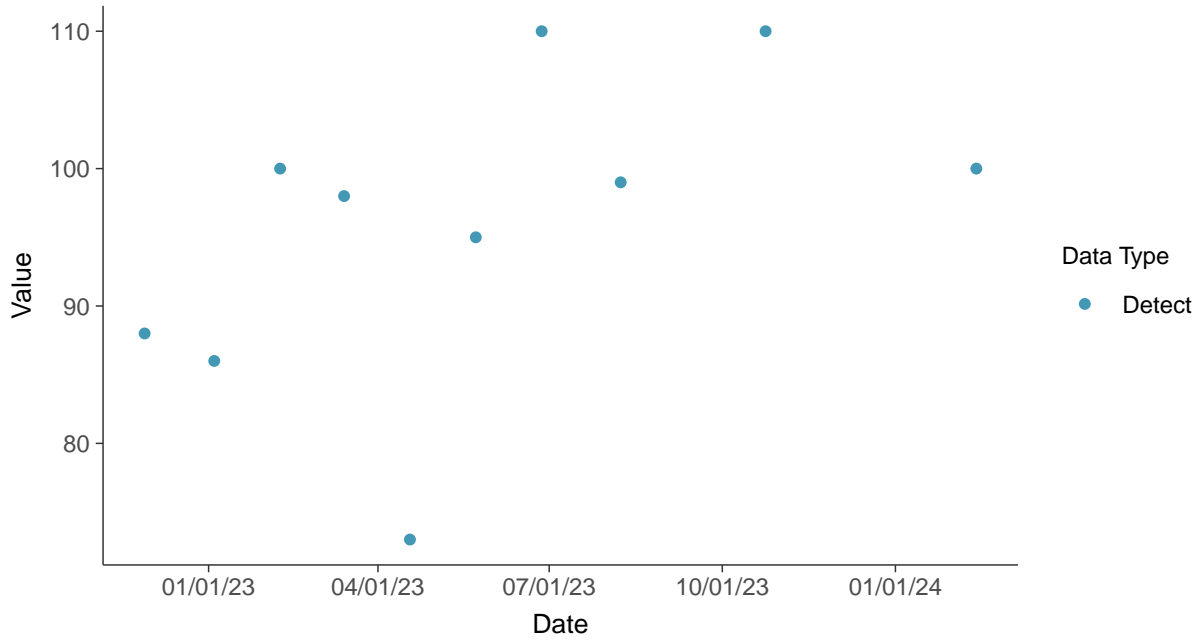


Appendix III: Boron, MW-02

ID: 2_12_4_105

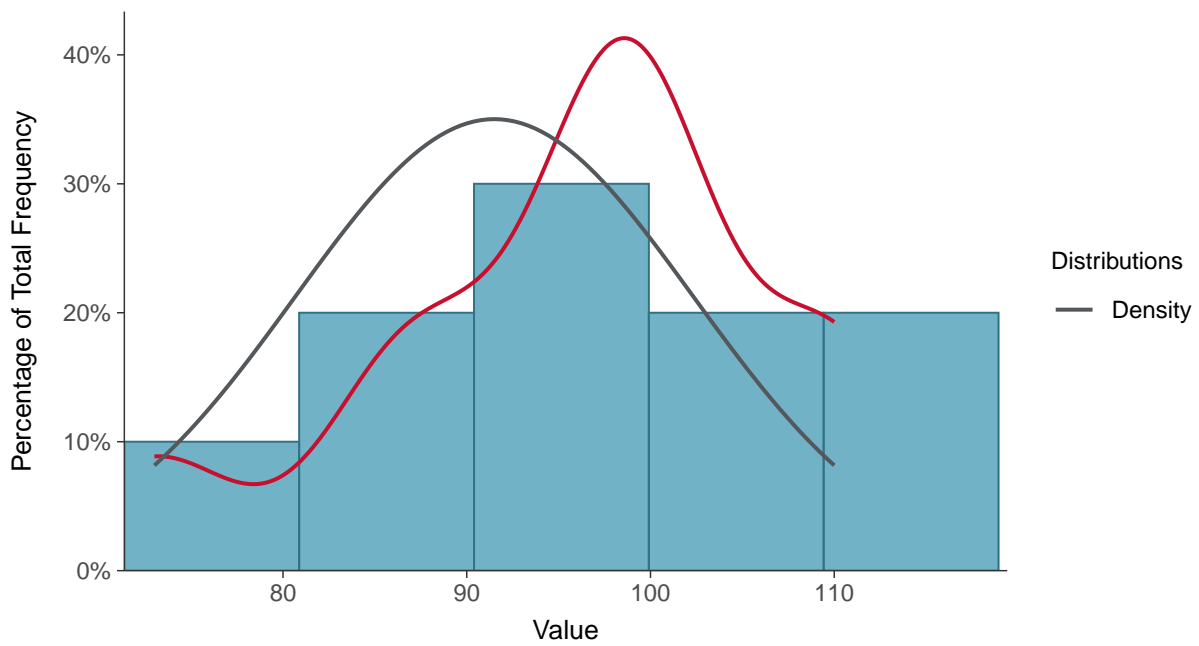
Scatter Plot

Boron, MW-02 (mg/L)



Histogram

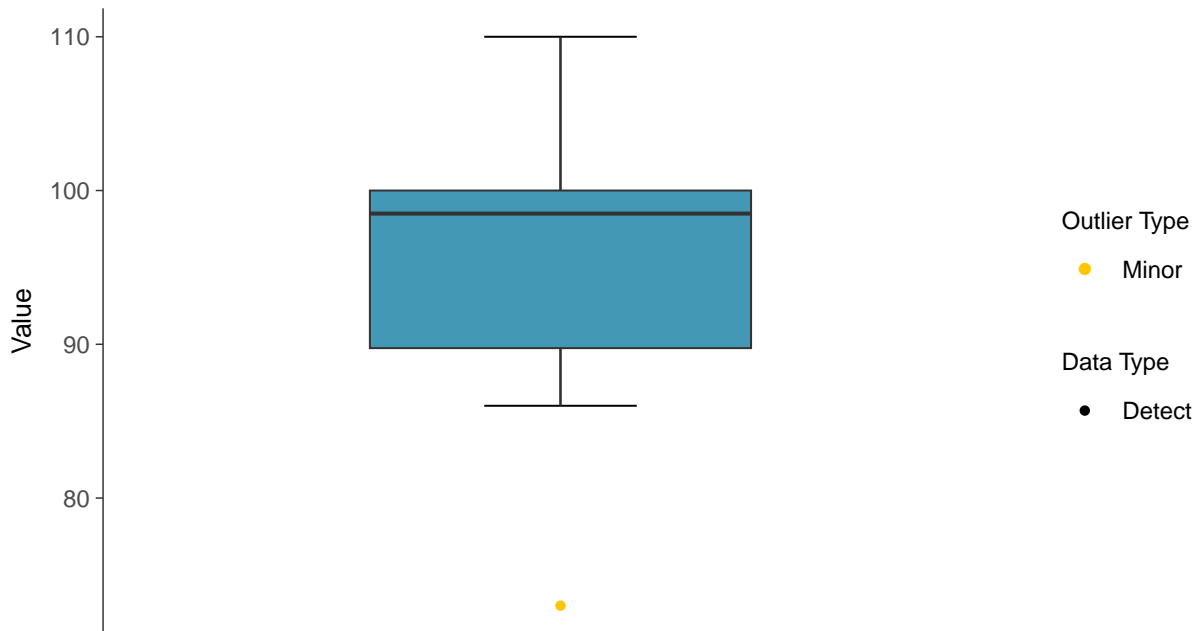
Boron, MW-02 (mg/L)





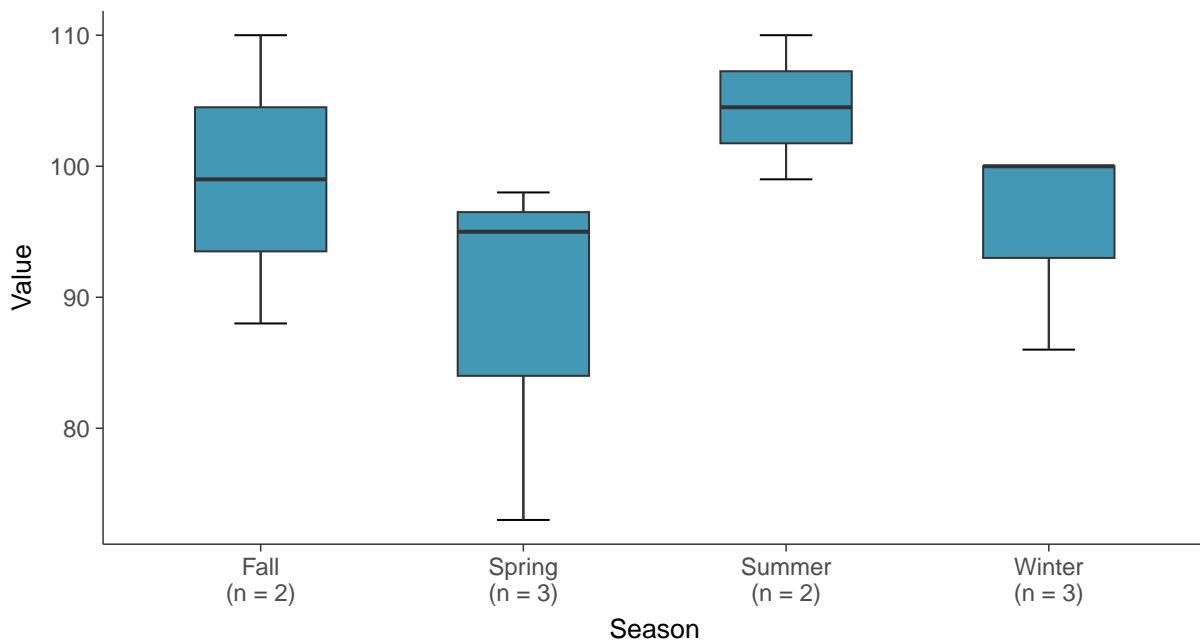
Boxplot

Boron, MW-02 (mg/L)



Boxplot by Season

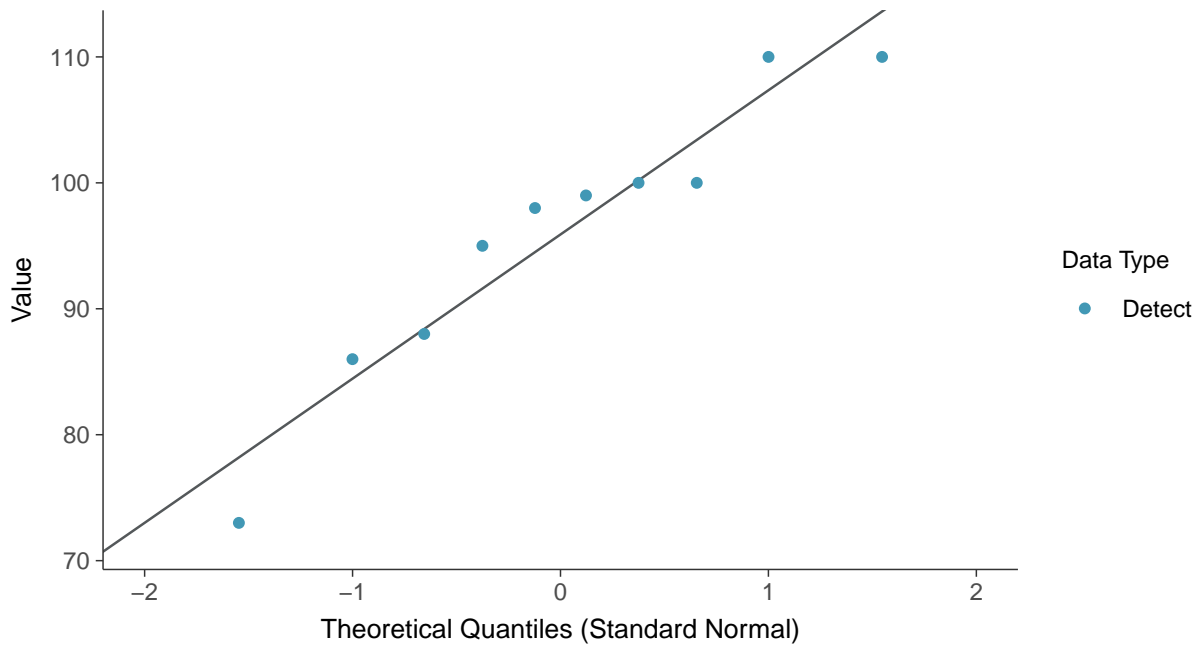
Boron, MW-02 (mg/L)





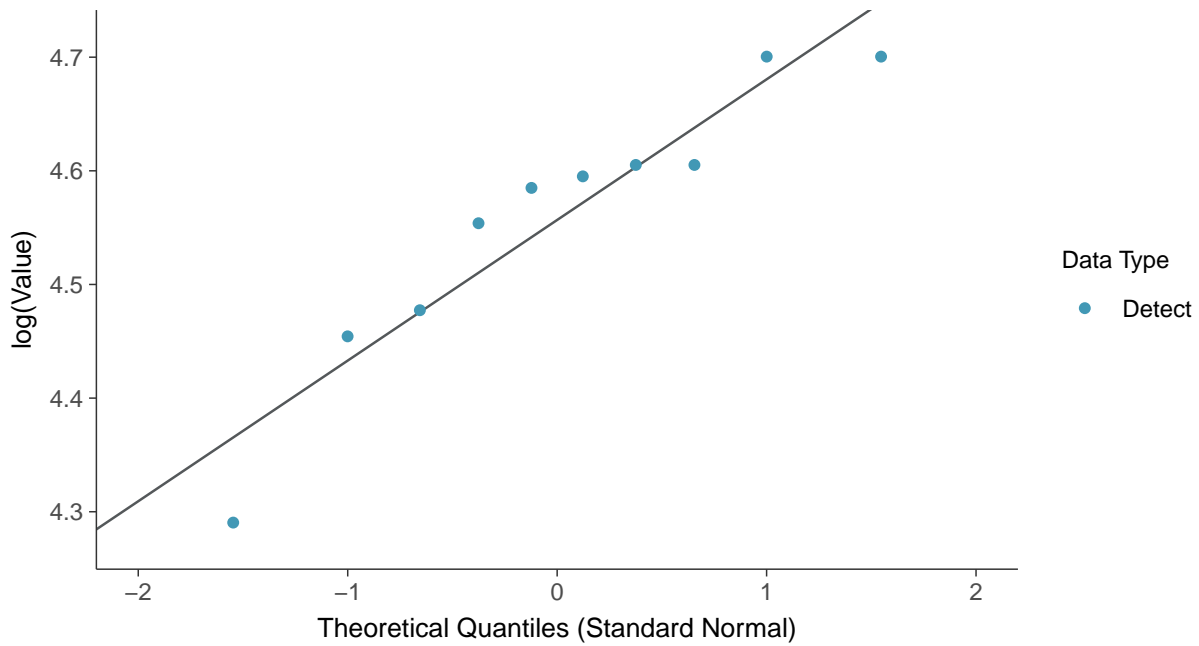
Normal Q-Q plot

Boron, MW-02 (mg/L)



Lognormal Q-Q plot

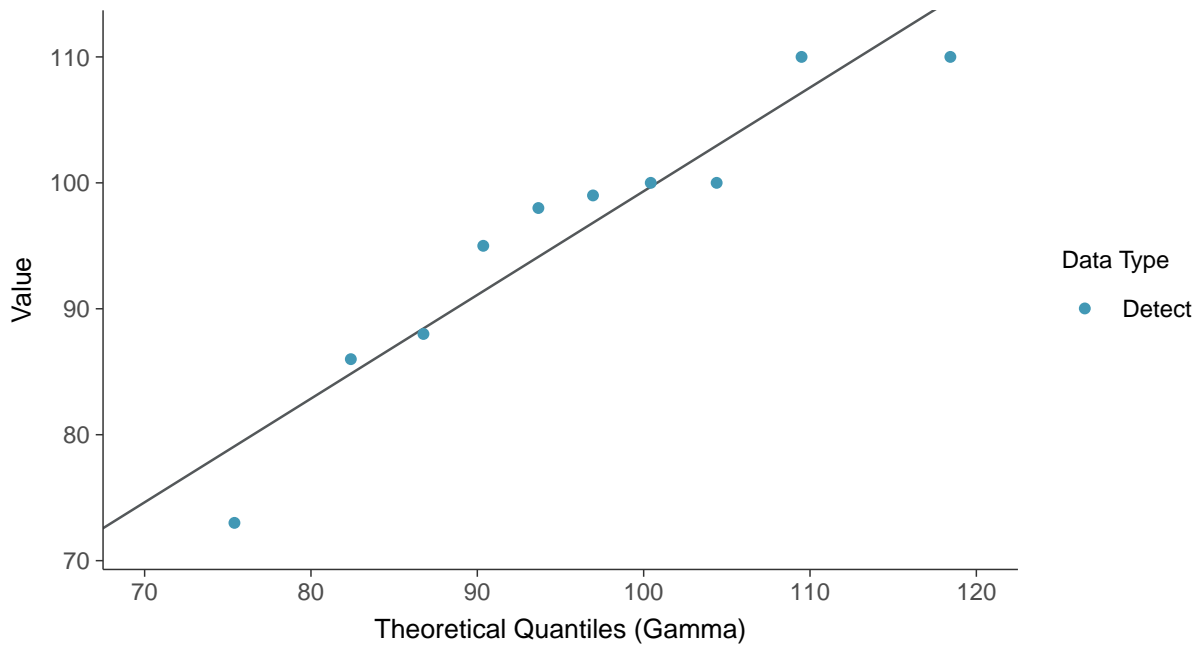
Boron, MW-02 (mg/L)





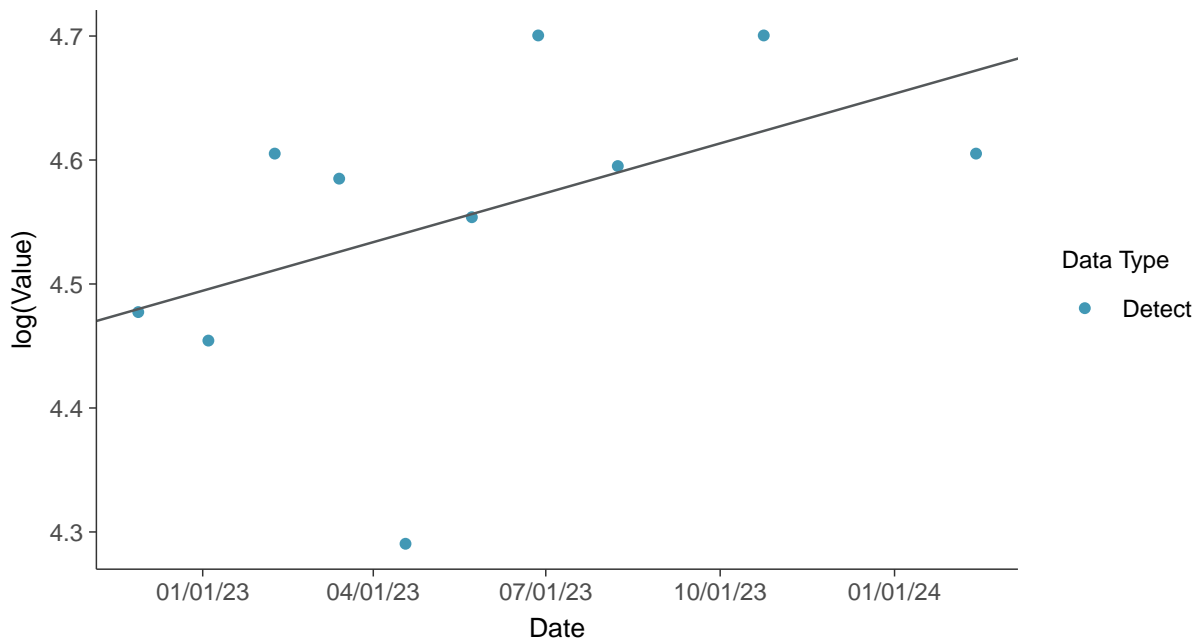
Gamma Q-Q plot

Boron, MW-02 (mg/L)



Trend Regression: Lognormal MLE

Boron, MW-02 (mg/L)



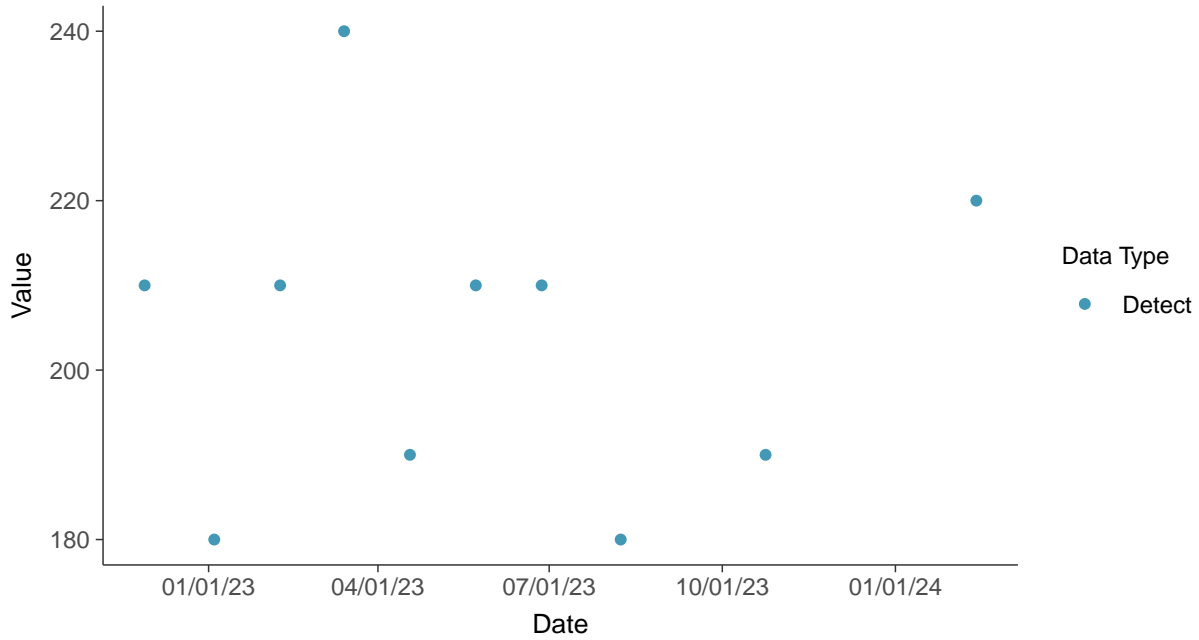


Appendix III: Calcium, MW-02

ID: 2_12_4_107

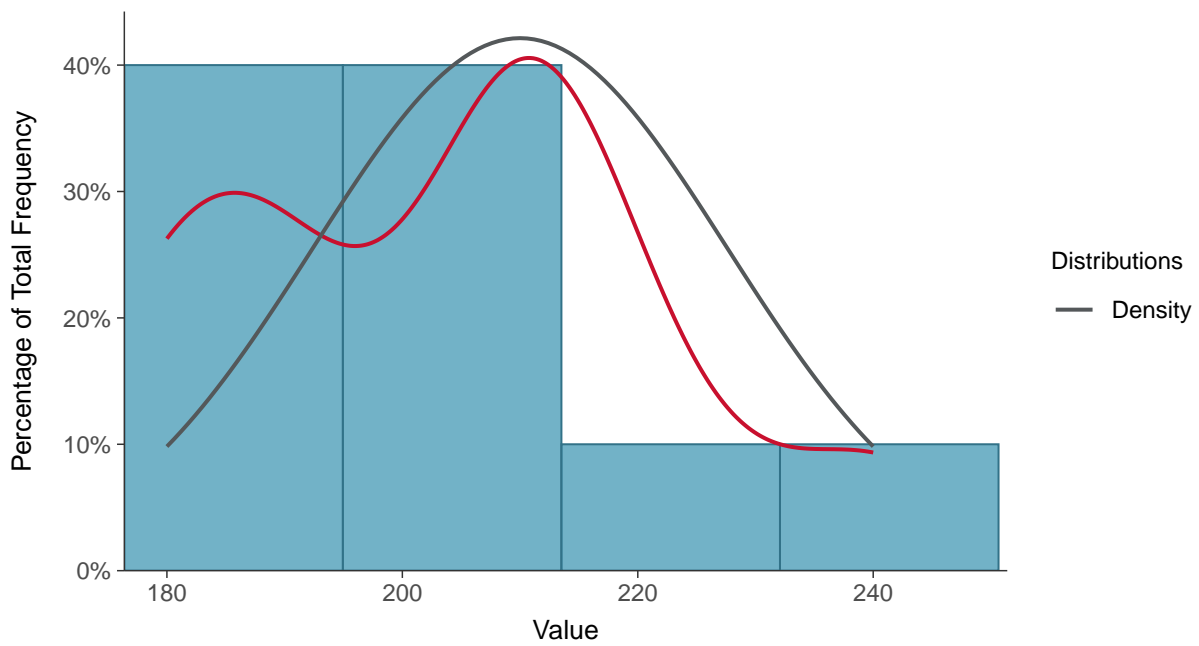
Scatter Plot

Calcium, MW-02 (mg/L)



Histogram

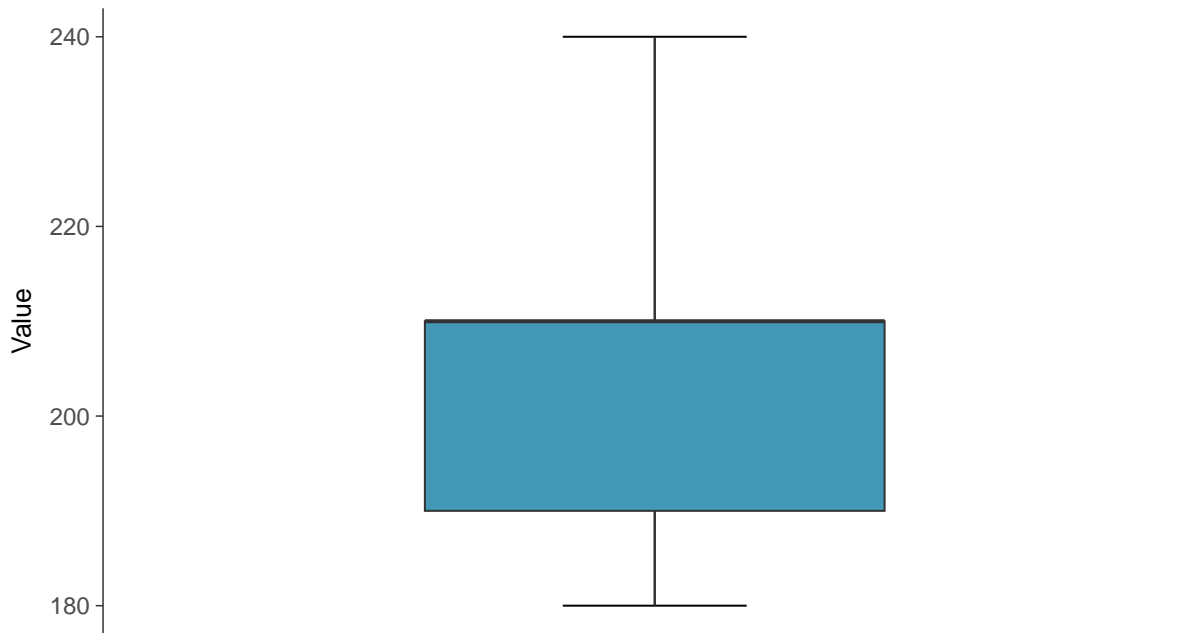
Calcium, MW-02 (mg/L)





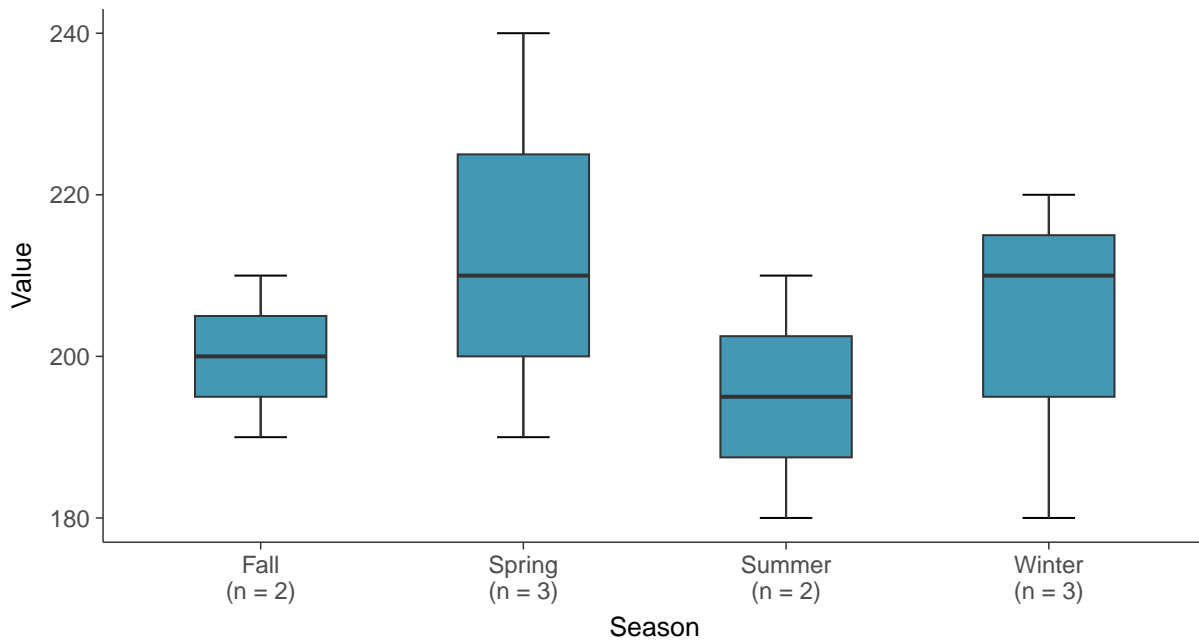
Boxplot

Calcium, MW-02 (mg/L)



Boxplot by Season

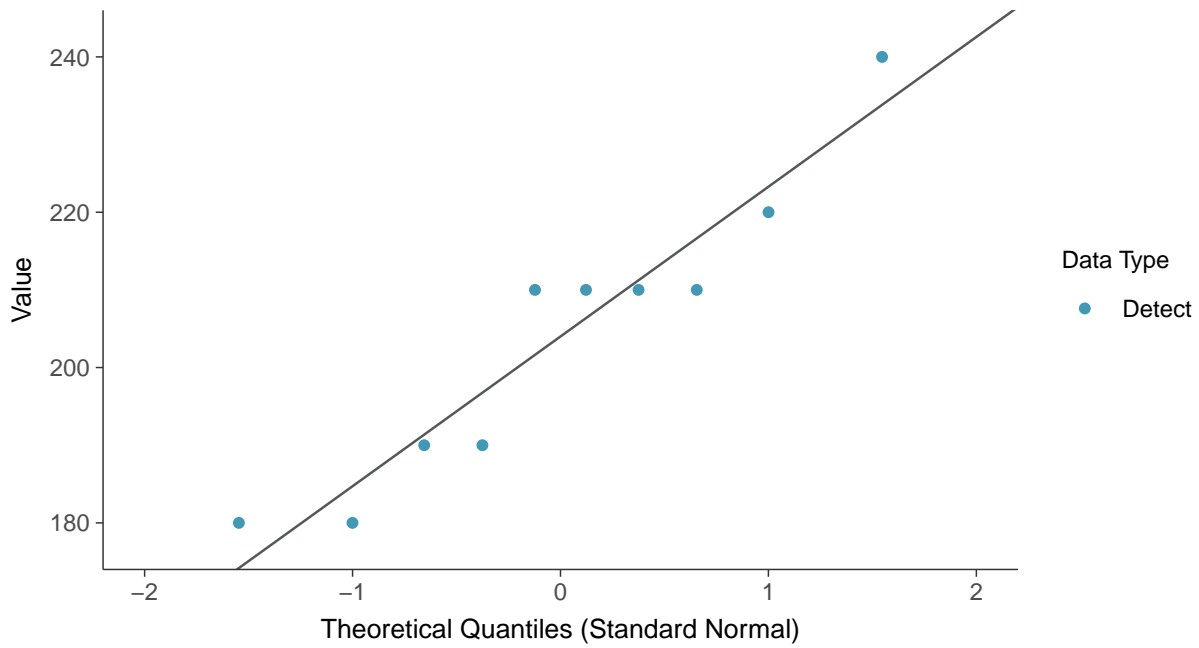
Calcium, MW-02 (mg/L)





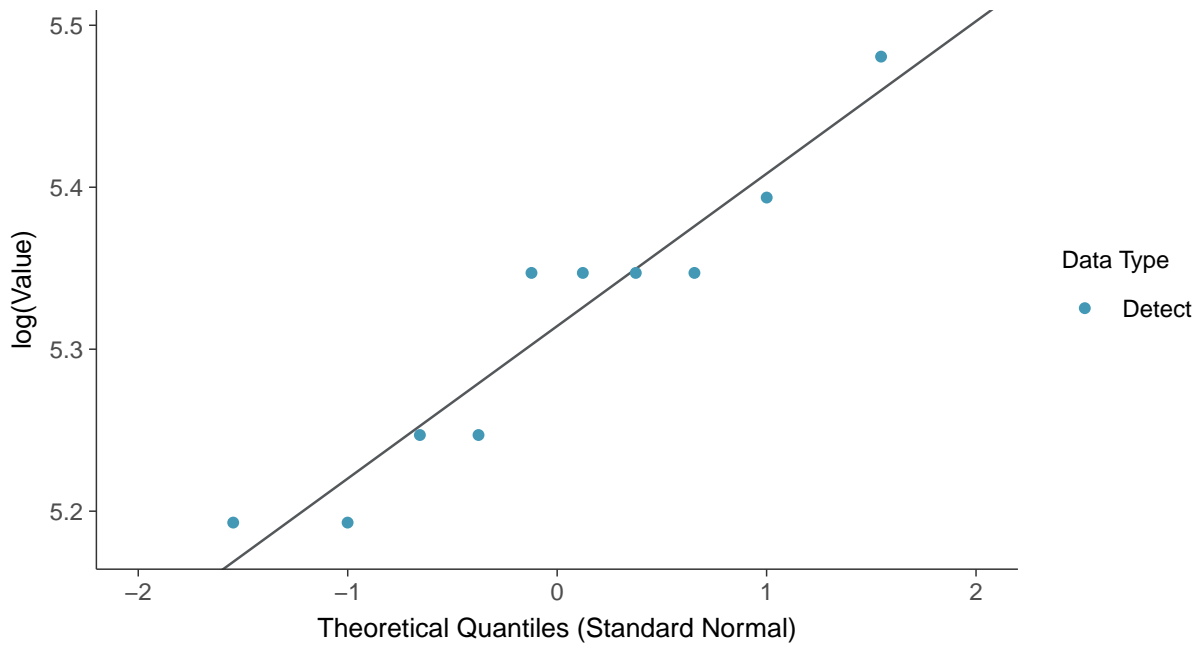
Normal Q-Q plot

Calcium, MW-02 (mg/L)



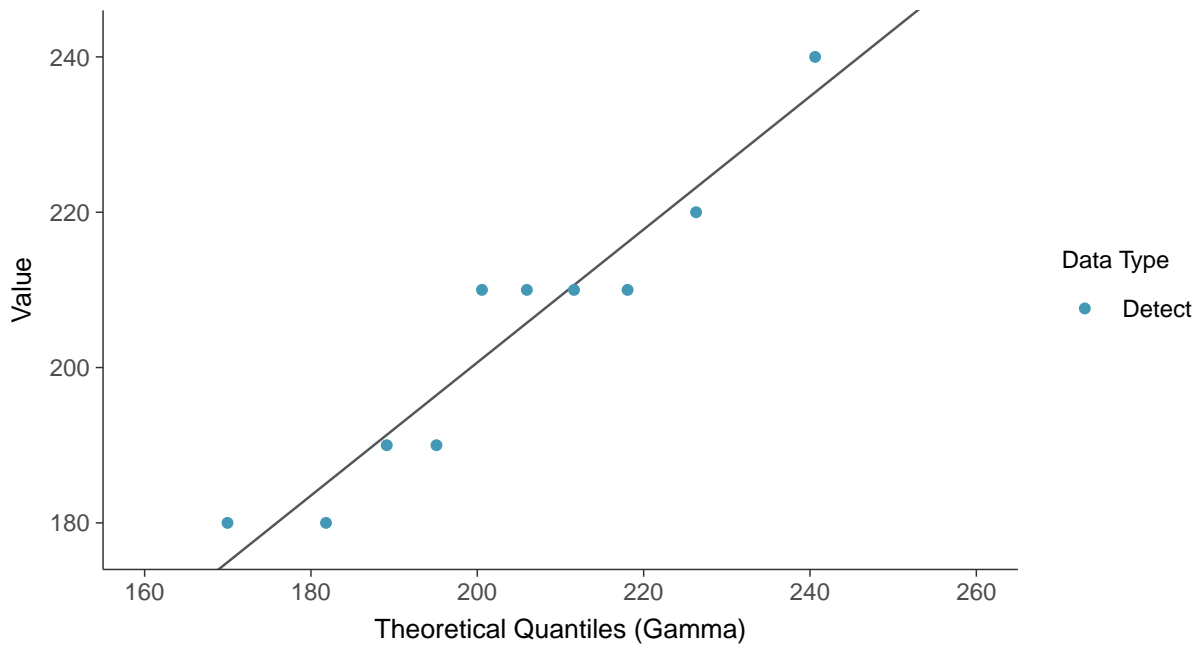
Lognormal Q-Q plot

Calcium, MW-02 (mg/L)

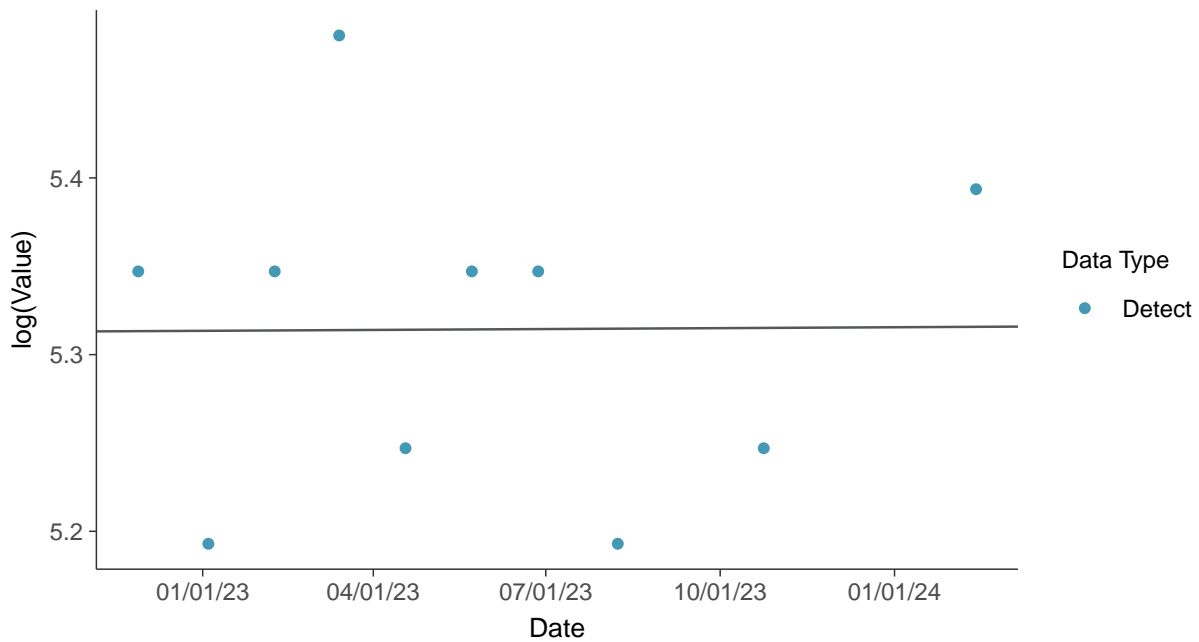




Gamma Q-Q plot
Calcium, MW-02 (mg/L)



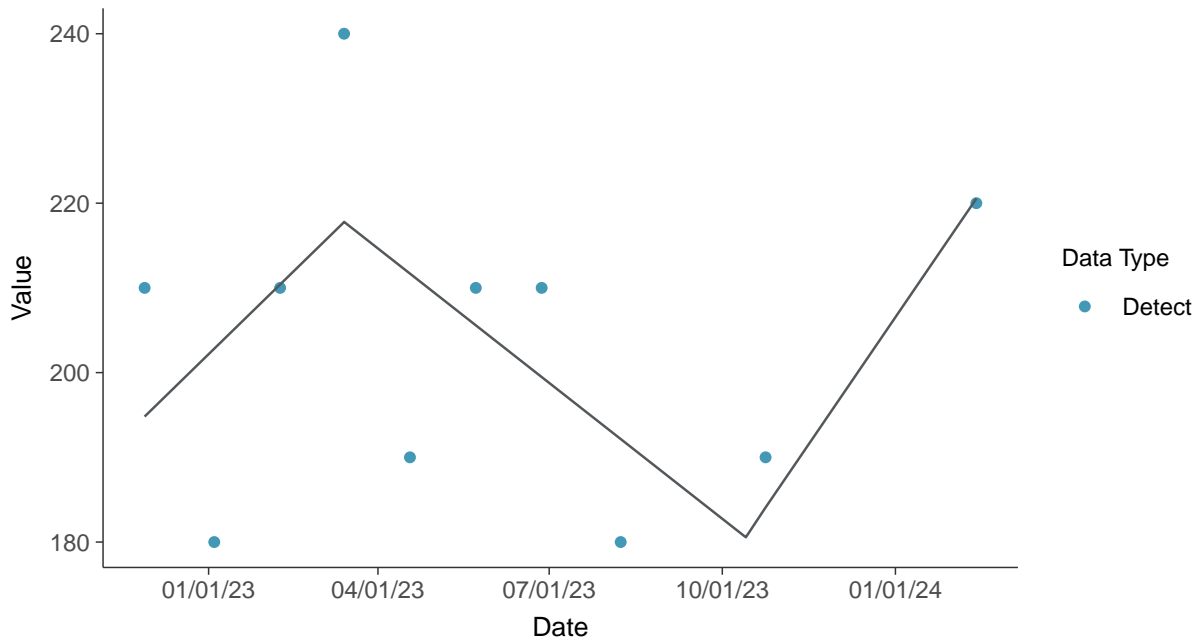
Trend Regression: Lognormal MLE
Calcium, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-02 (mg/L)



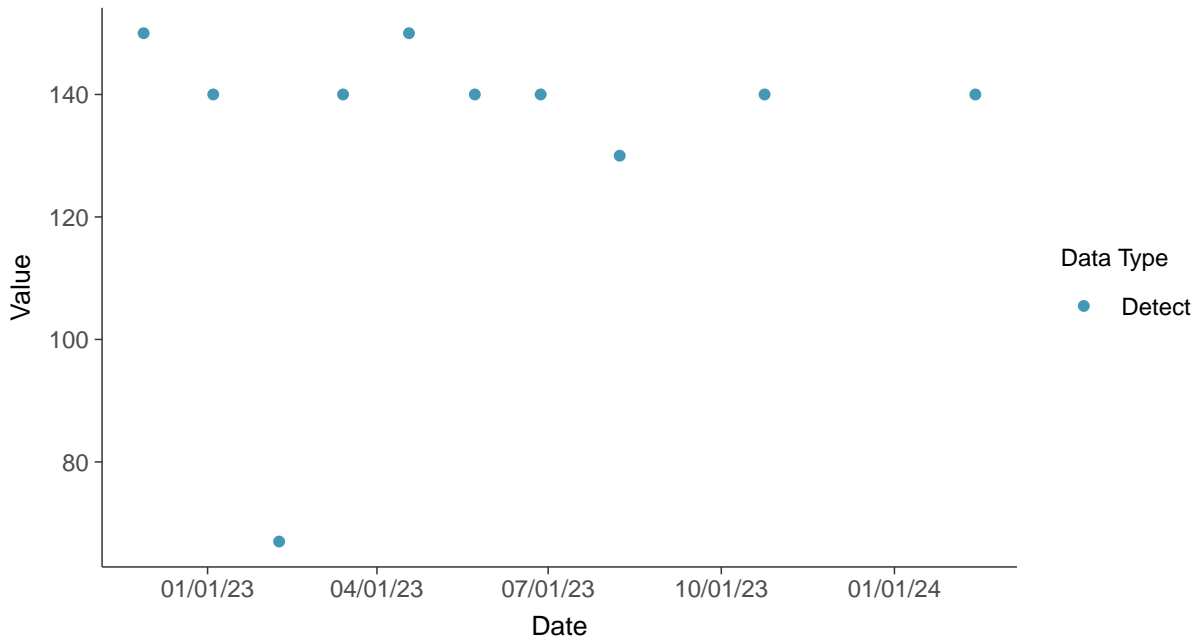


Appendix III: Chloride (as Cl), MW-02

ID: 2_12_4_108

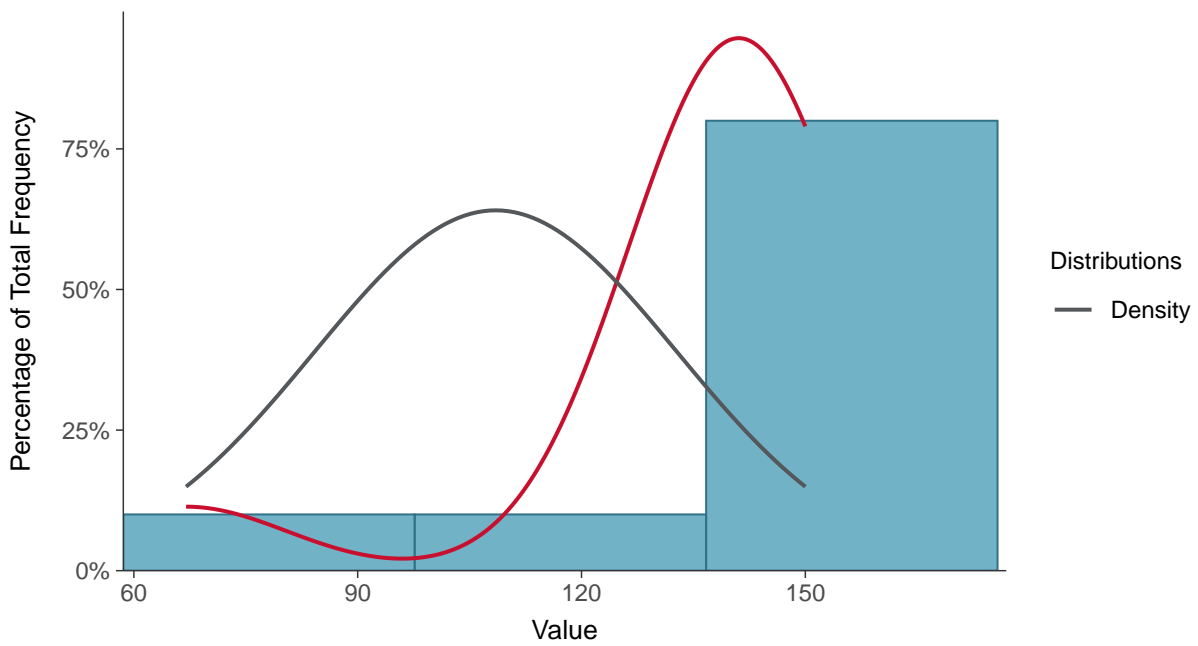
Scatter Plot

Chloride (as Cl), MW-02 (mg/L)



Histogram

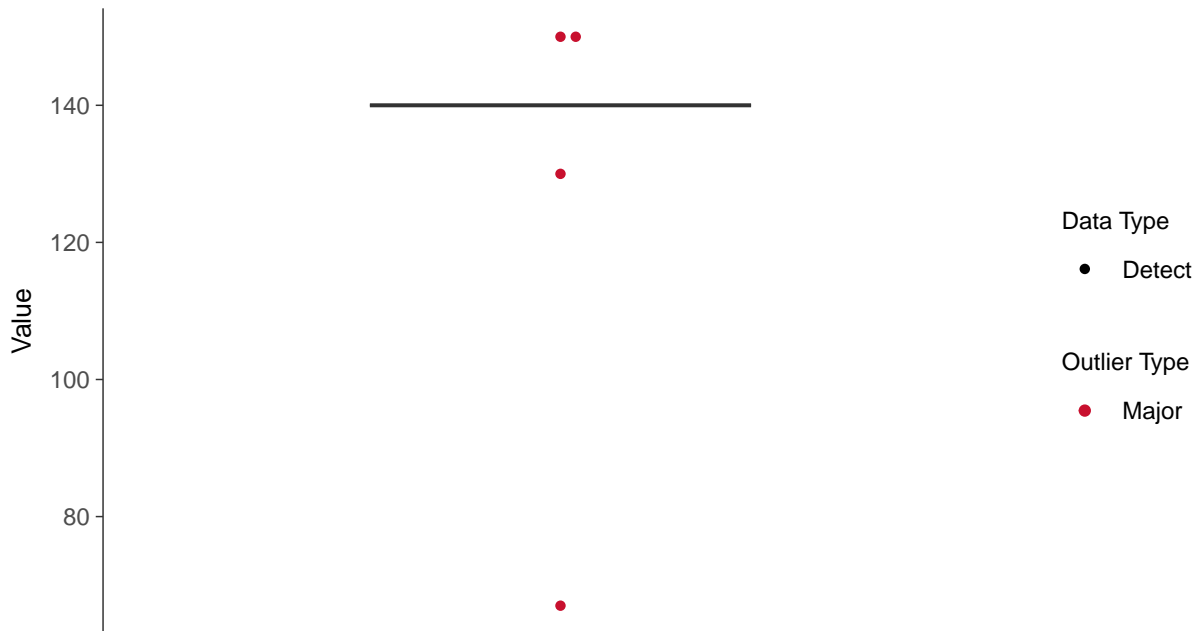
Chloride (as Cl), MW-02 (mg/L)





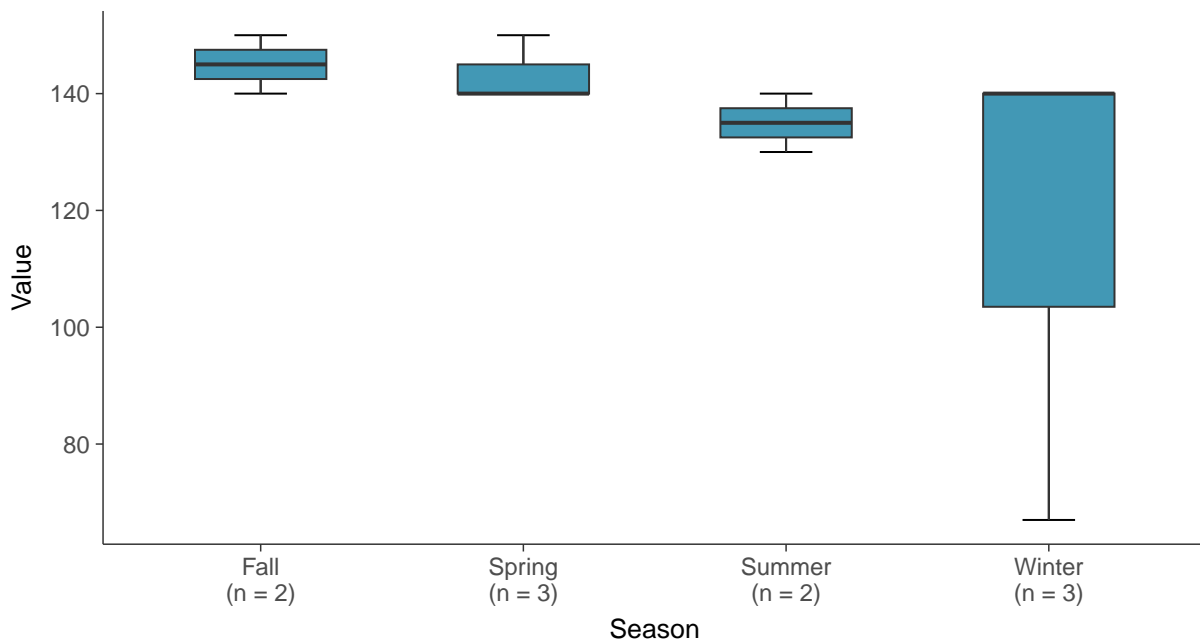
Boxplot

Chloride (as Cl), MW-02 (mg/L)



Boxplot by Season

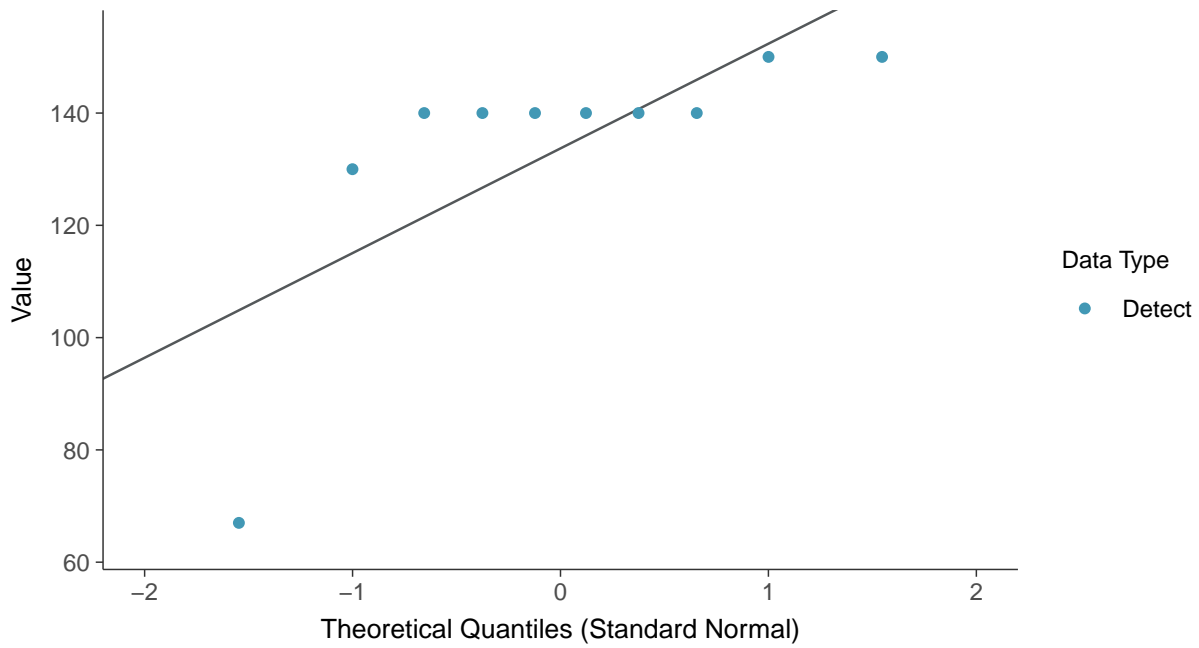
Chloride (as Cl), MW-02 (mg/L)





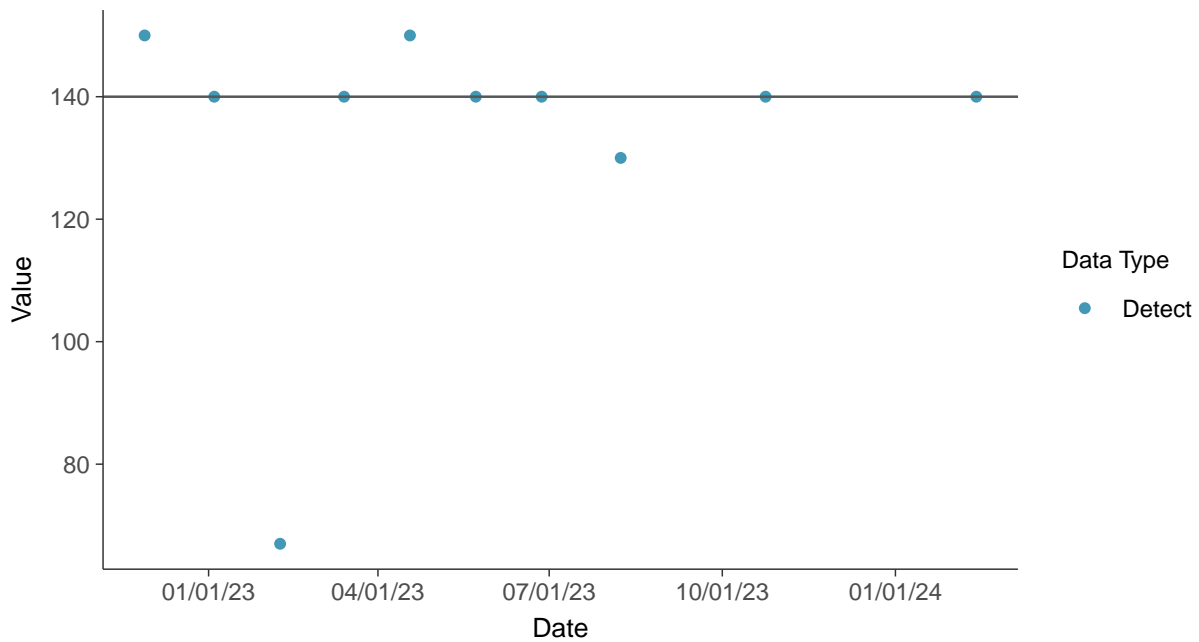
Normal Q-Q plot

Chloride (as Cl), MW-02 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

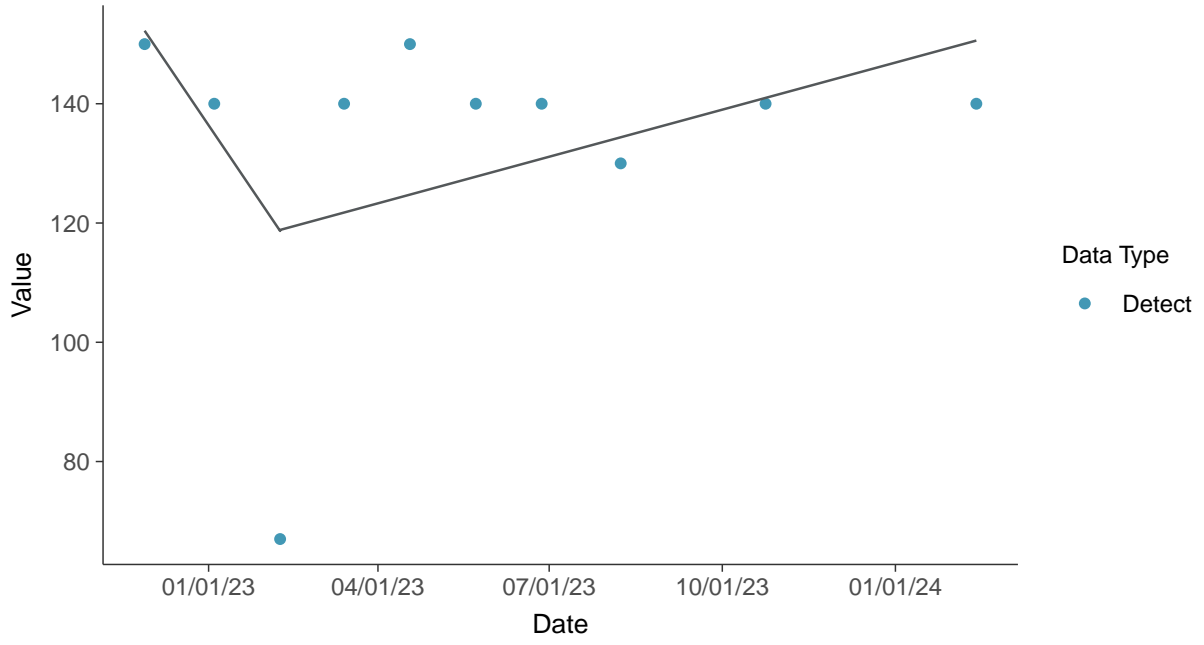
Chloride (as Cl), MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear

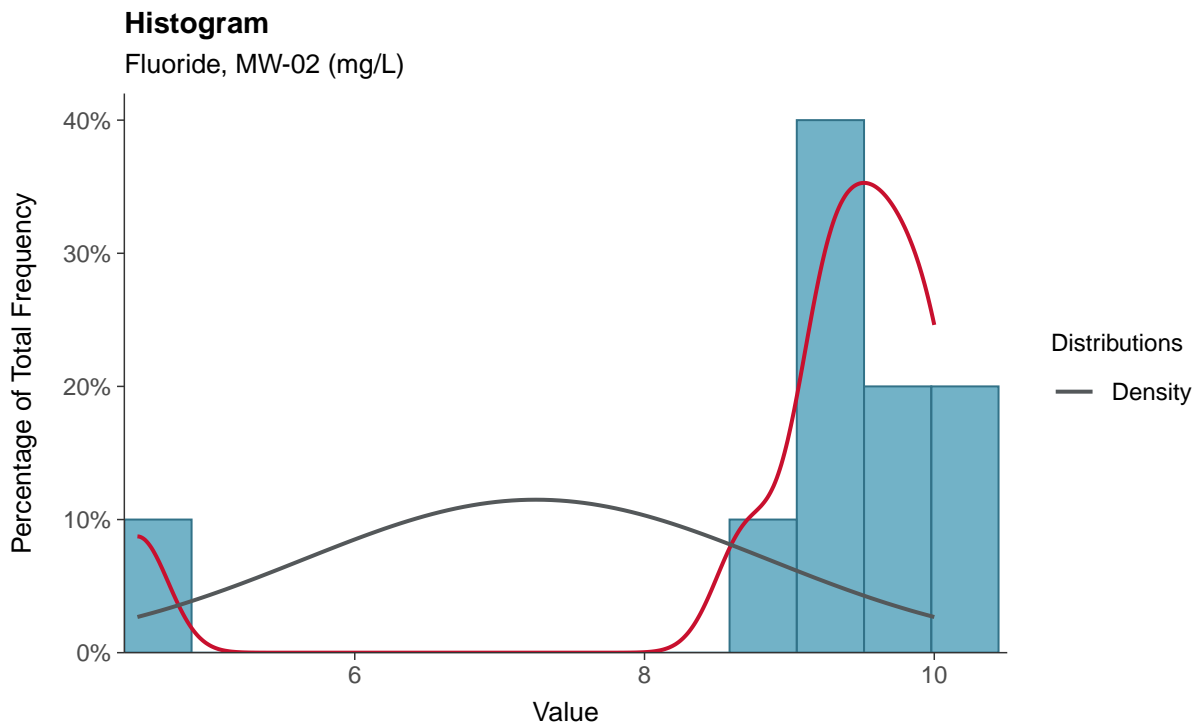
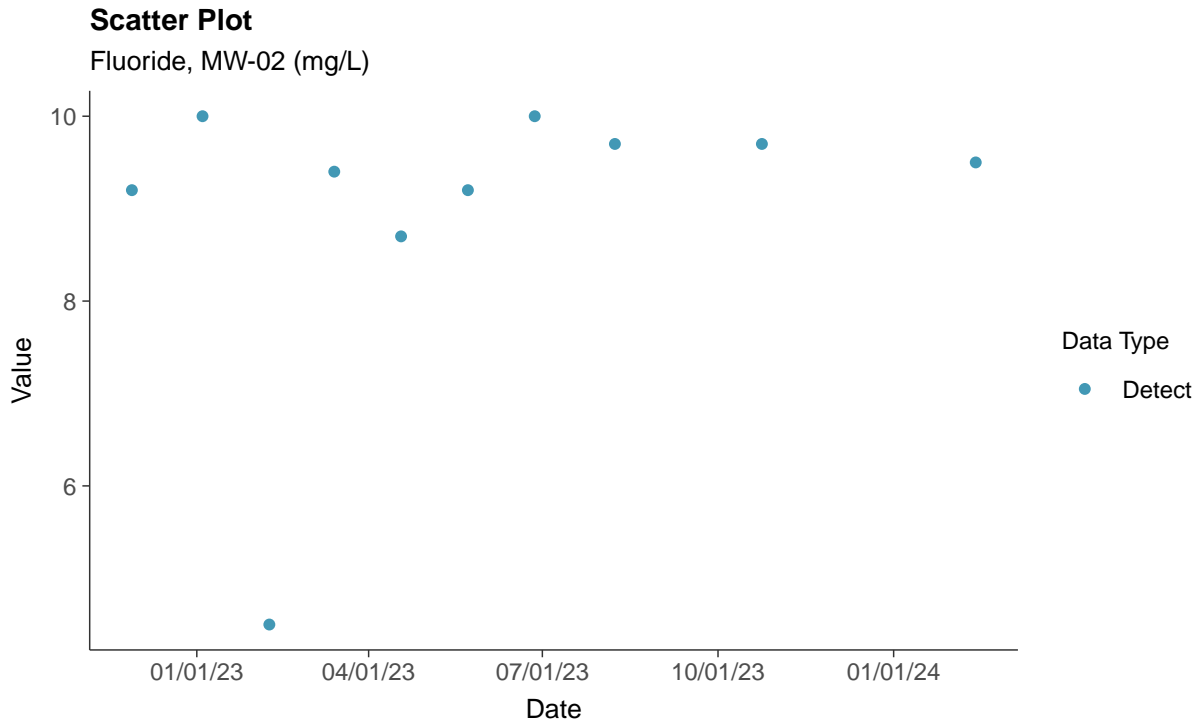
Chloride (as Cl), MW-02 (mg/L)





Appendix III: Fluoride, MW-02

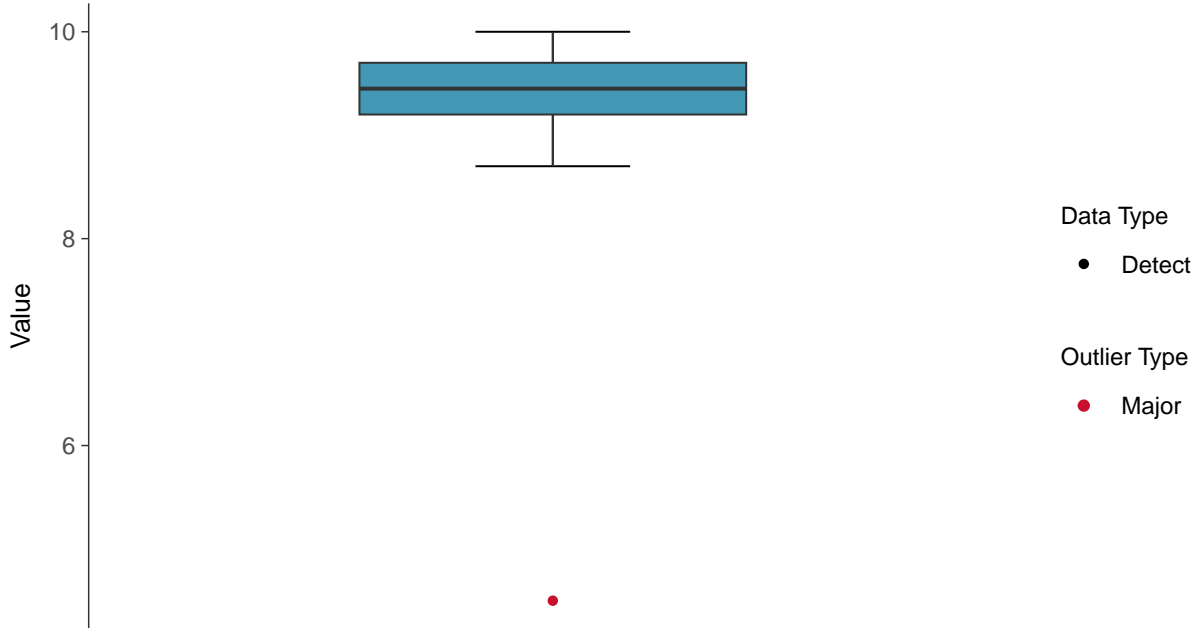
ID: 2_12_4_112





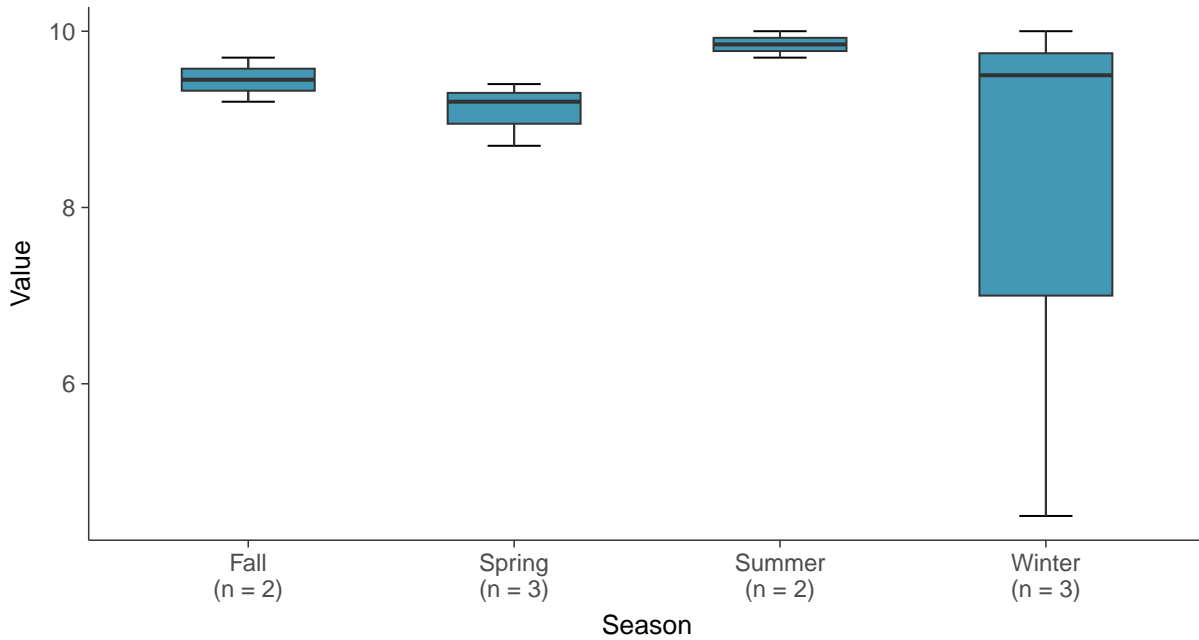
Boxplot

Fluoride, MW-02 (mg/L)



Boxplot by Season

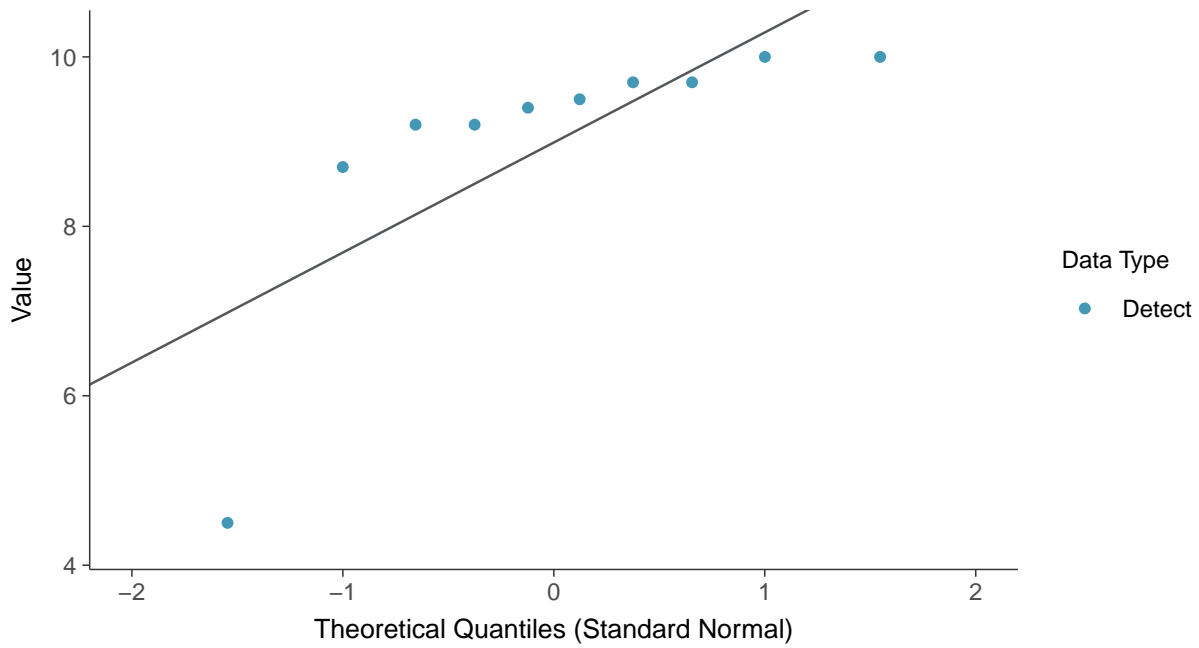
Fluoride, MW-02 (mg/L)





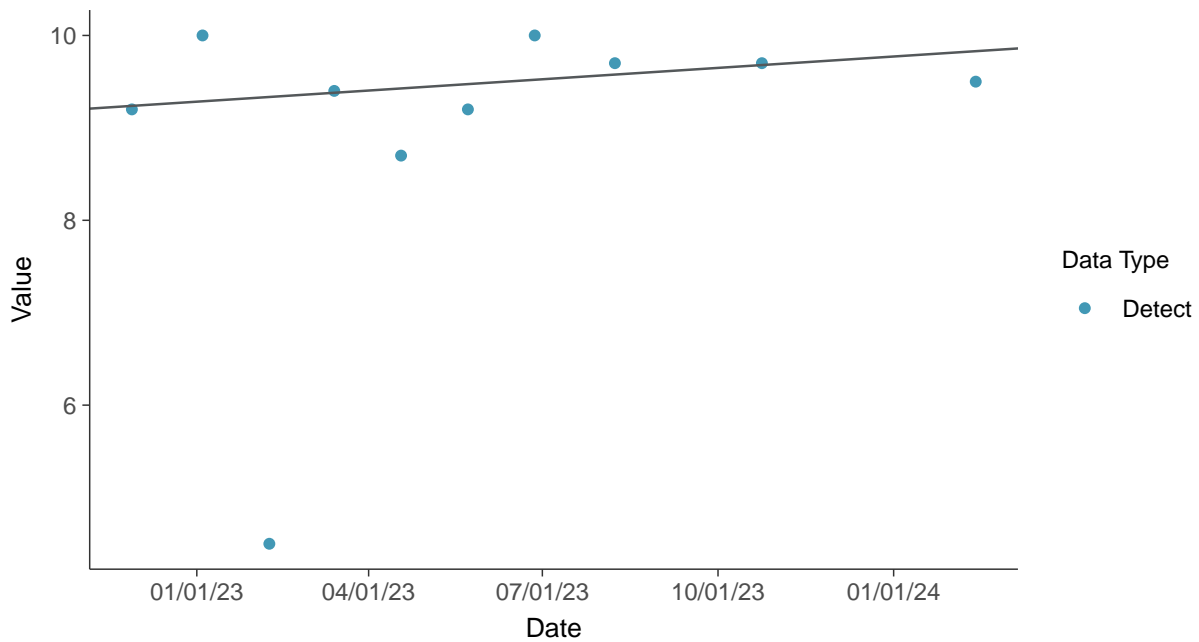
Normal Q-Q plot

Fluoride, MW-02 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

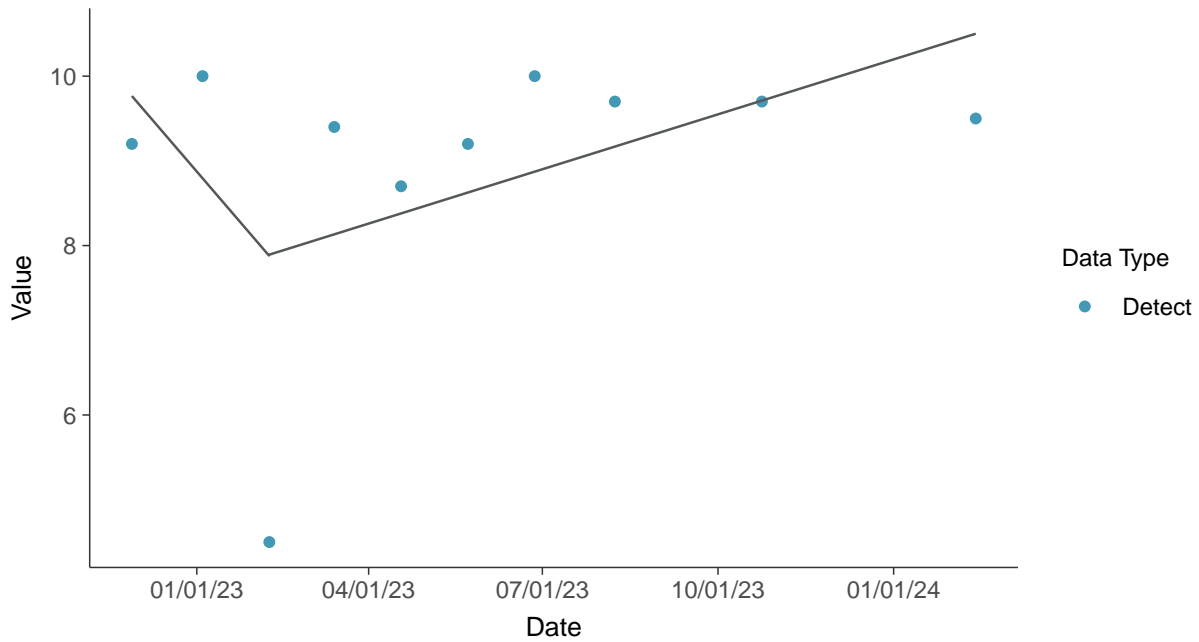
Fluoride, MW-02 (mg/L)





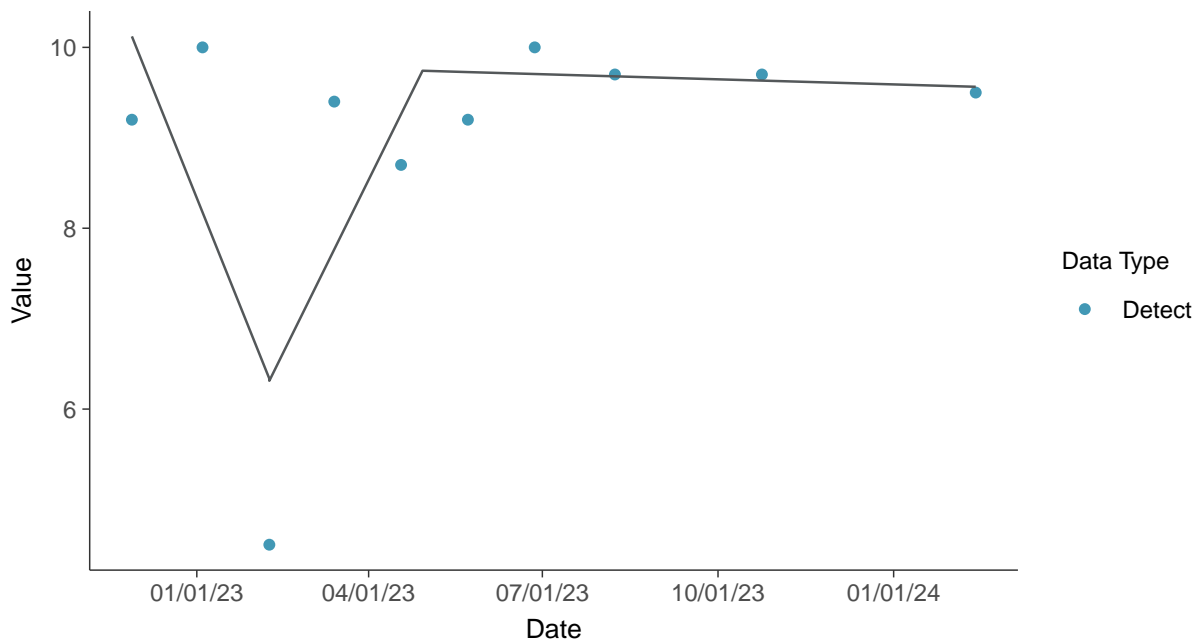
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

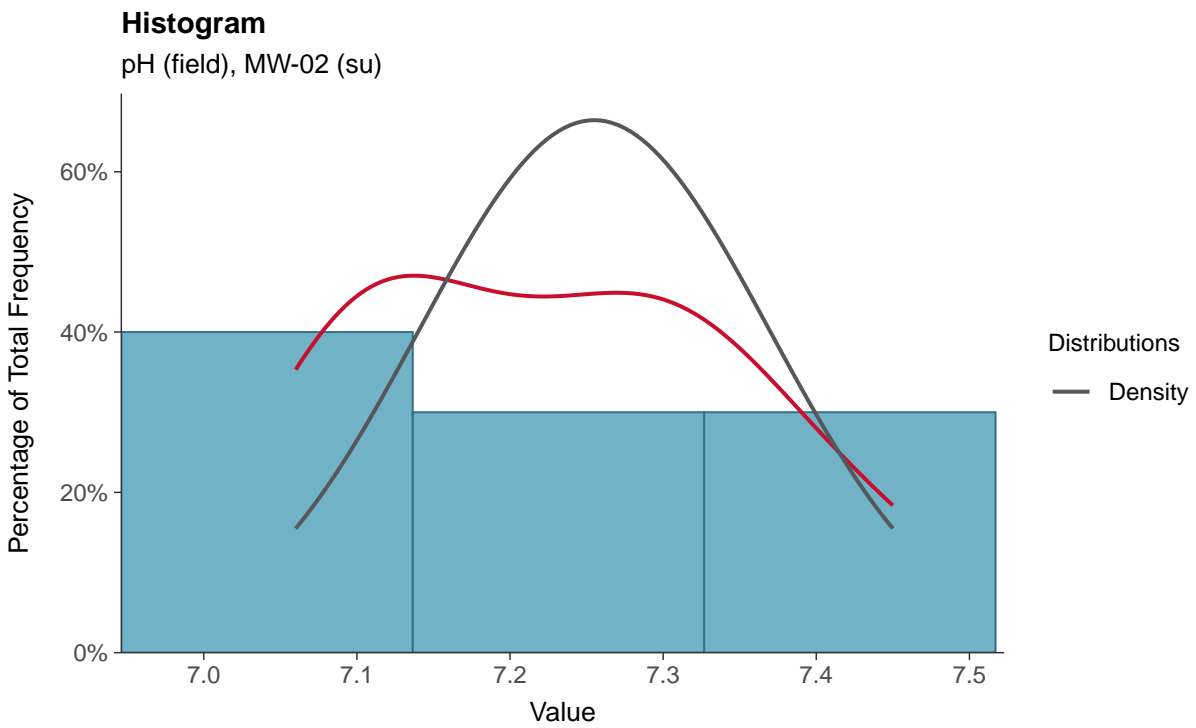
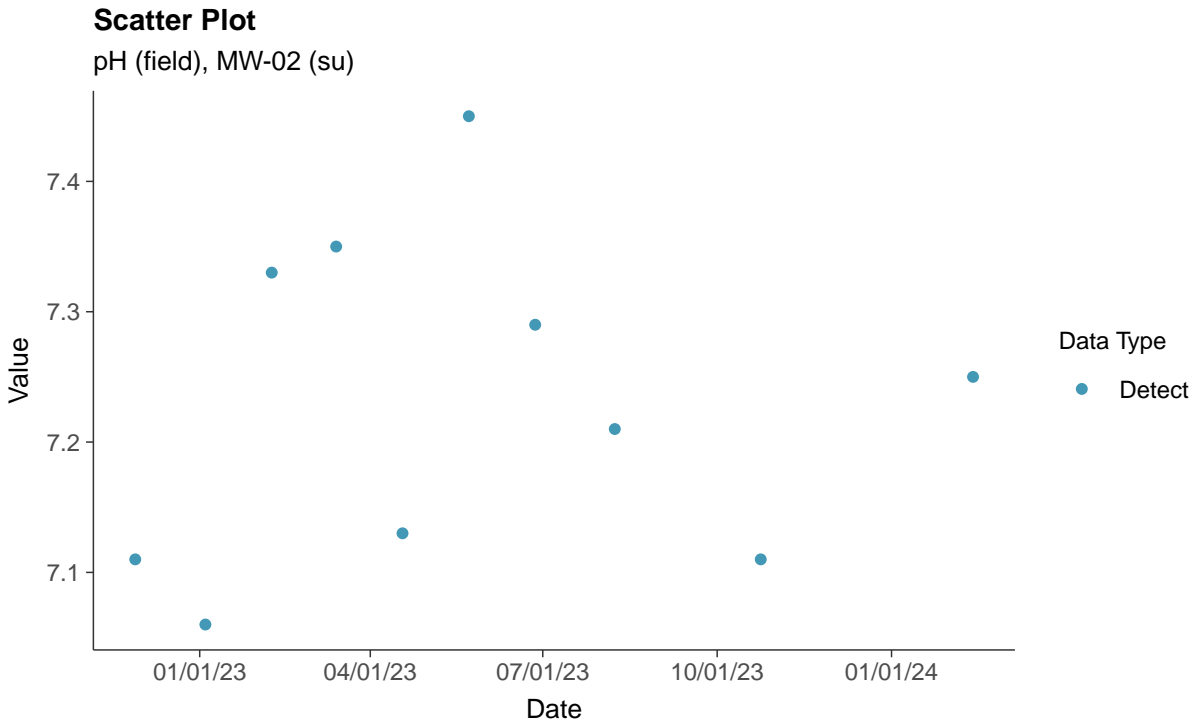
Fluoride, MW-02 (mg/L)





Appendix III: pH (field), MW-02

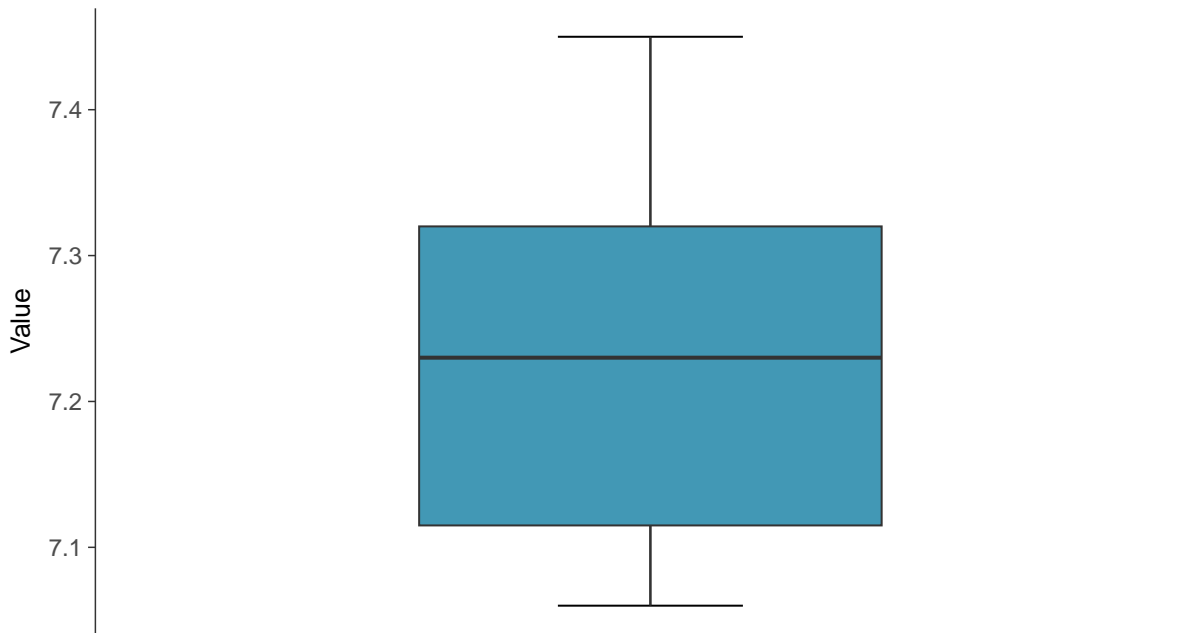
ID: 2_12_4_120





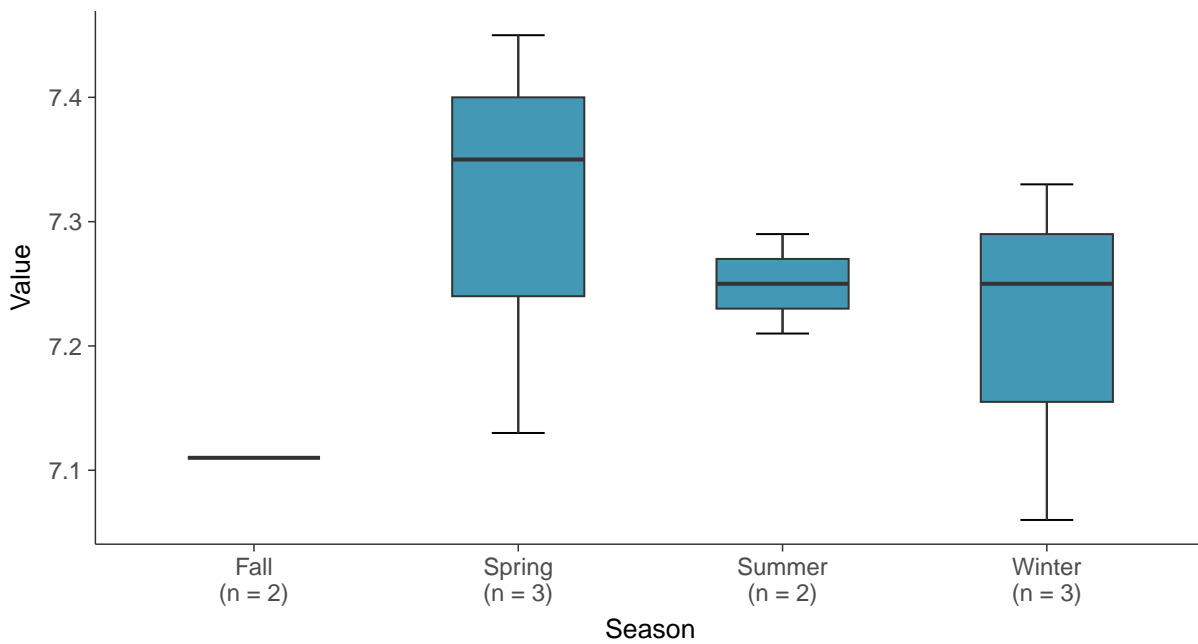
Boxplot

pH (field), MW-02 (su)



Boxplot by Season

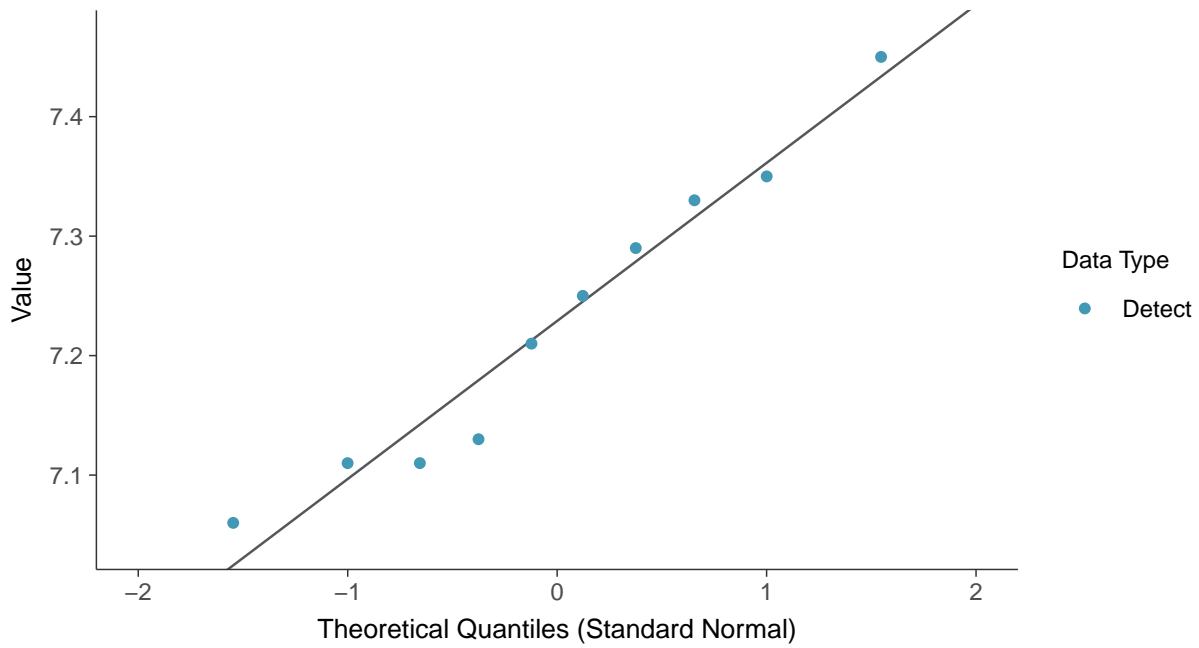
pH (field), MW-02 (su)





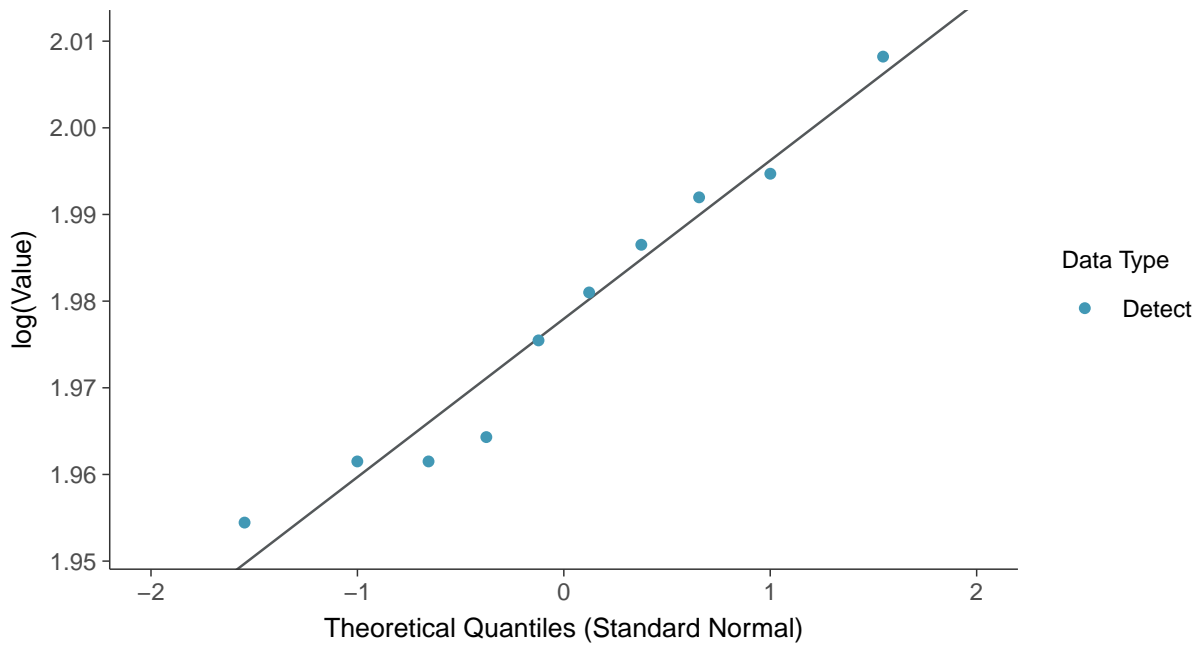
Normal Q-Q plot

pH (field), MW-02 (su)



Lognormal Q-Q plot

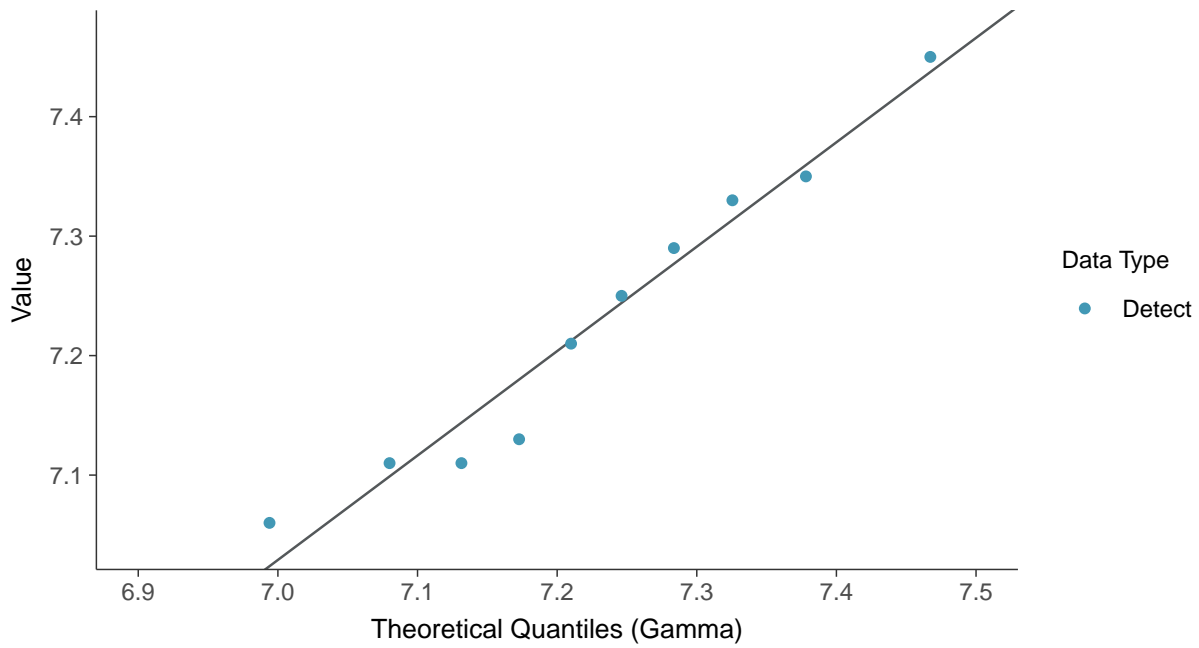
pH (field), MW-02 (su)





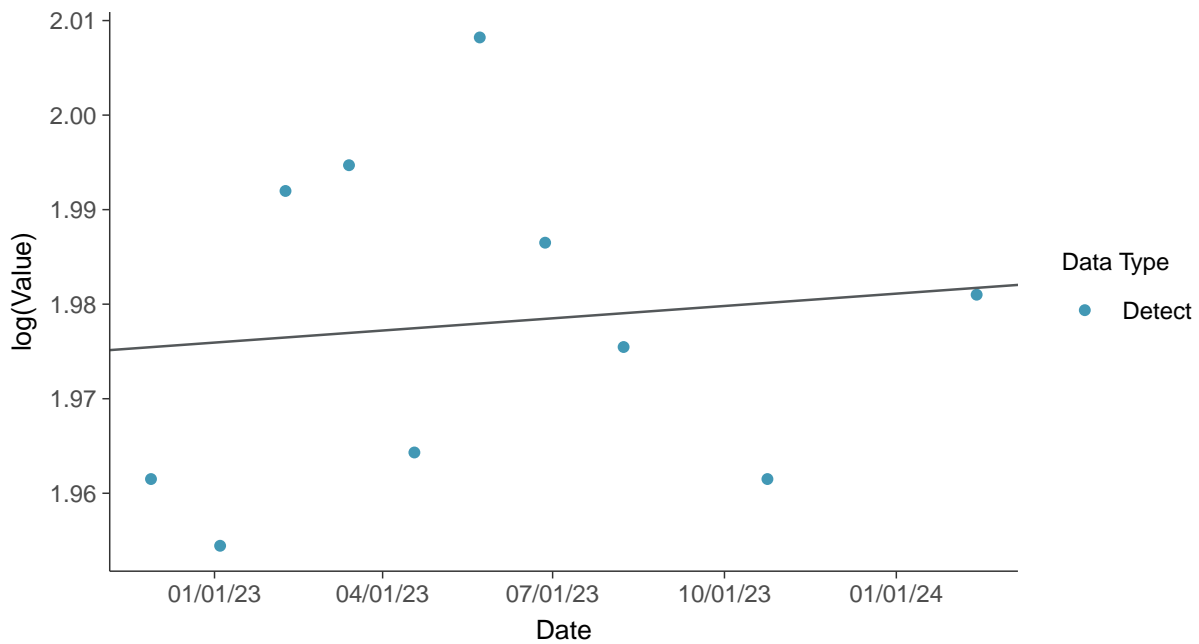
Gamma Q-Q plot

pH (field), MW-02 (su)



Trend Regression: Lognormal MLE

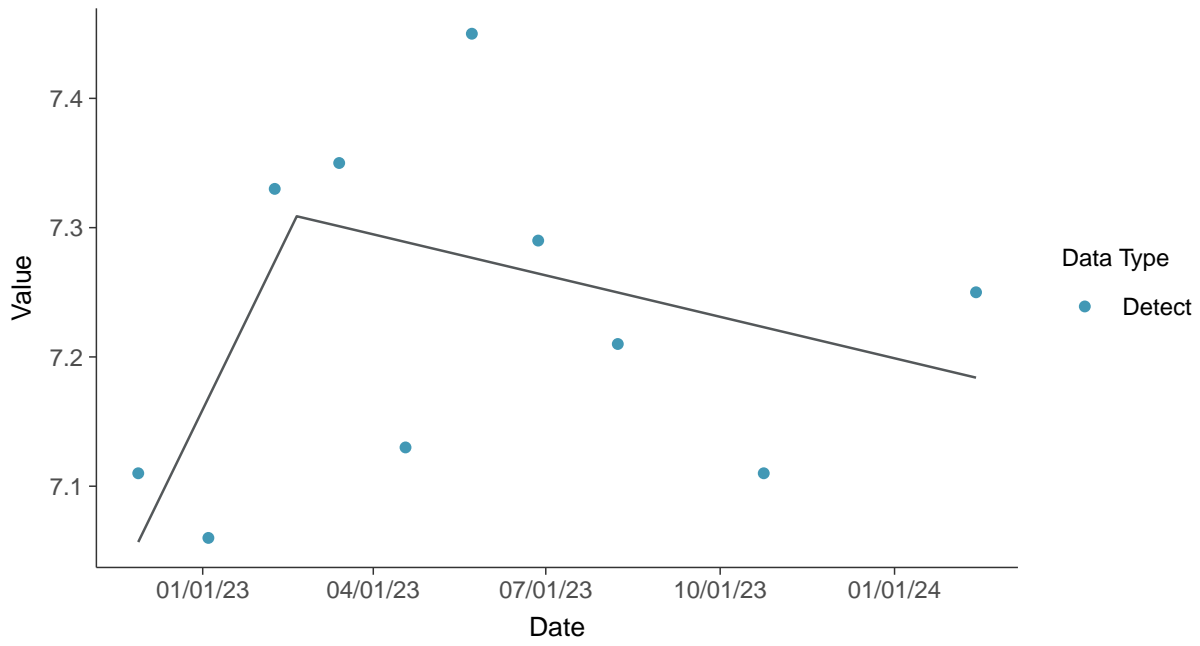
pH (field), MW-02 (su)





Trend Regression: Piecewise Linear-Linear

pH (field), MW-02 (su)



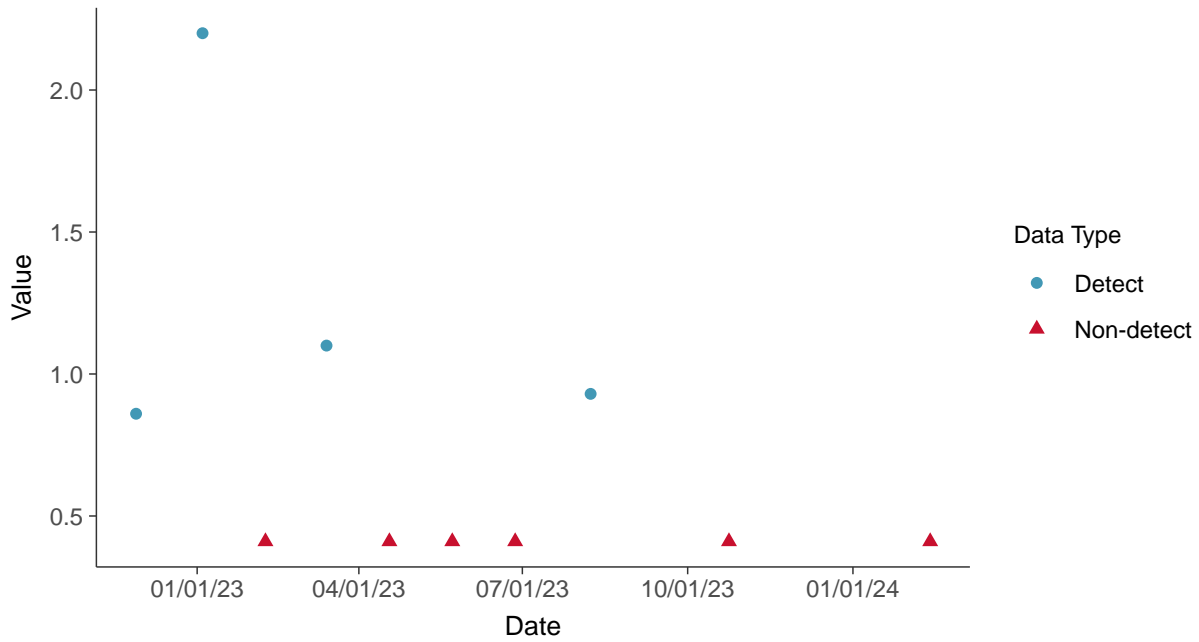


Appendix III: Sulfate (as SO₄), MW-02

ID: 2_12_4_124

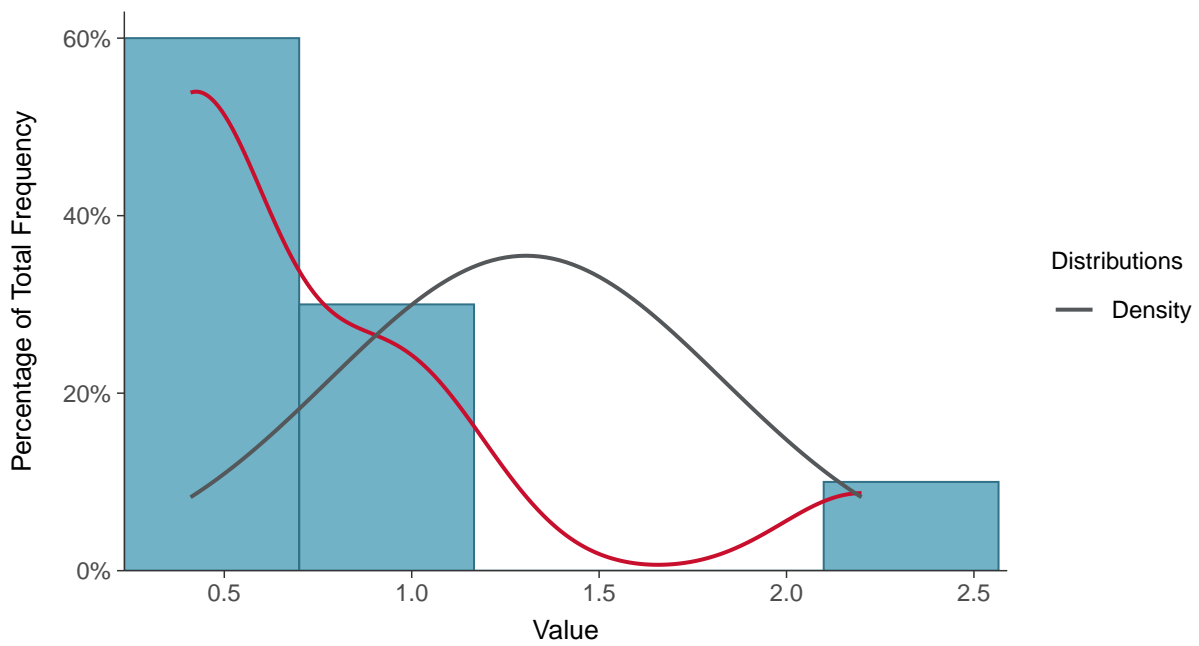
Scatter Plot

Sulfate (as SO₄), MW-02 (mg/L)



Histogram

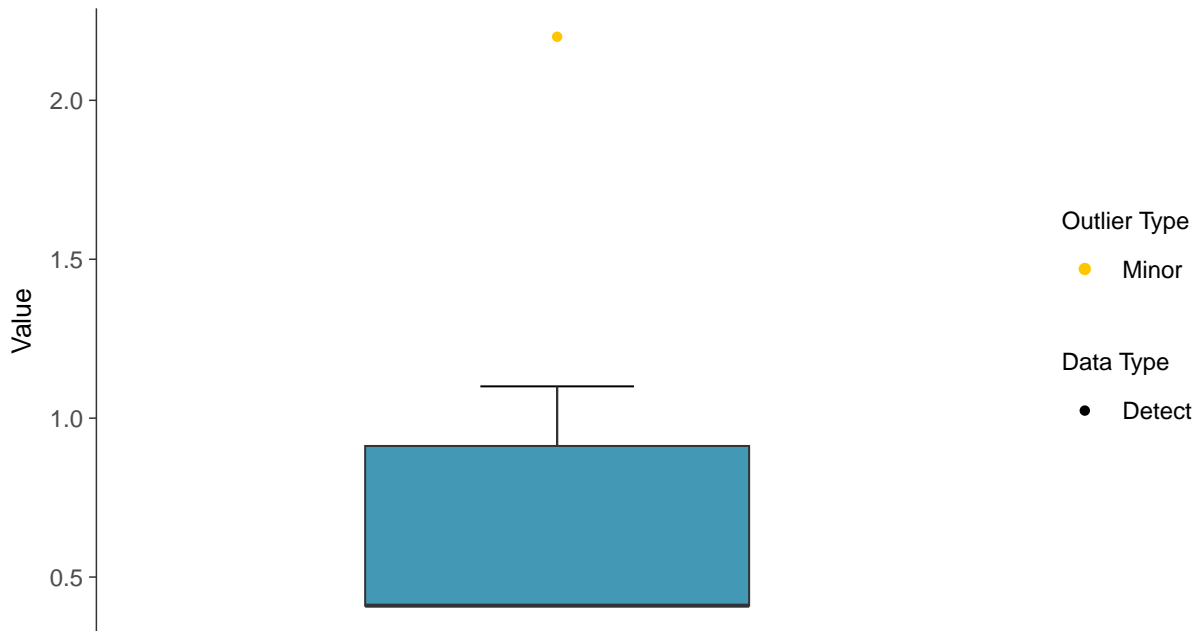
Sulfate (as SO₄), MW-02 (mg/L)





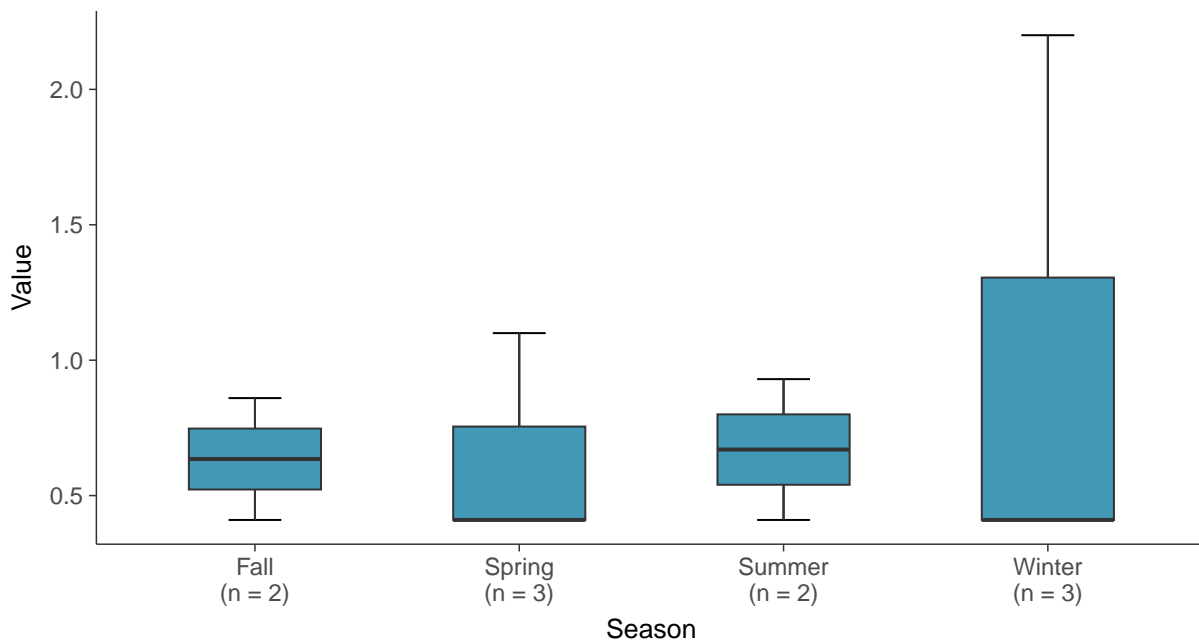
Boxplot

Sulfate (as SO₄), MW-02 (mg/L)



Boxplot by Season

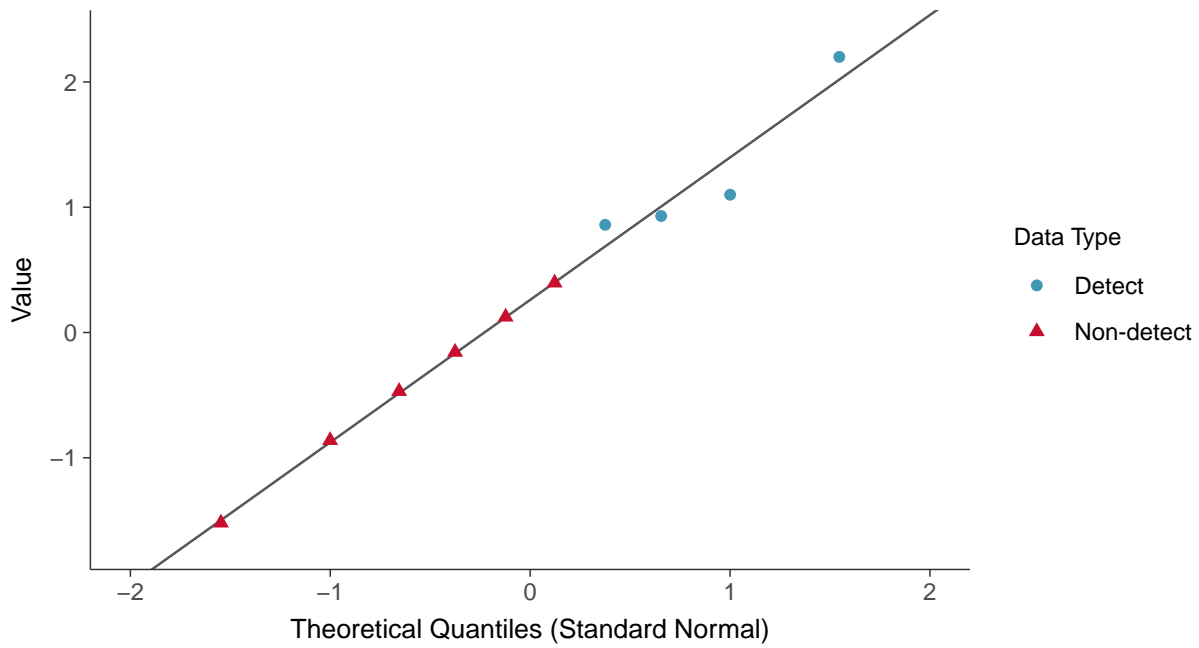
Sulfate (as SO₄), MW-02 (mg/L)





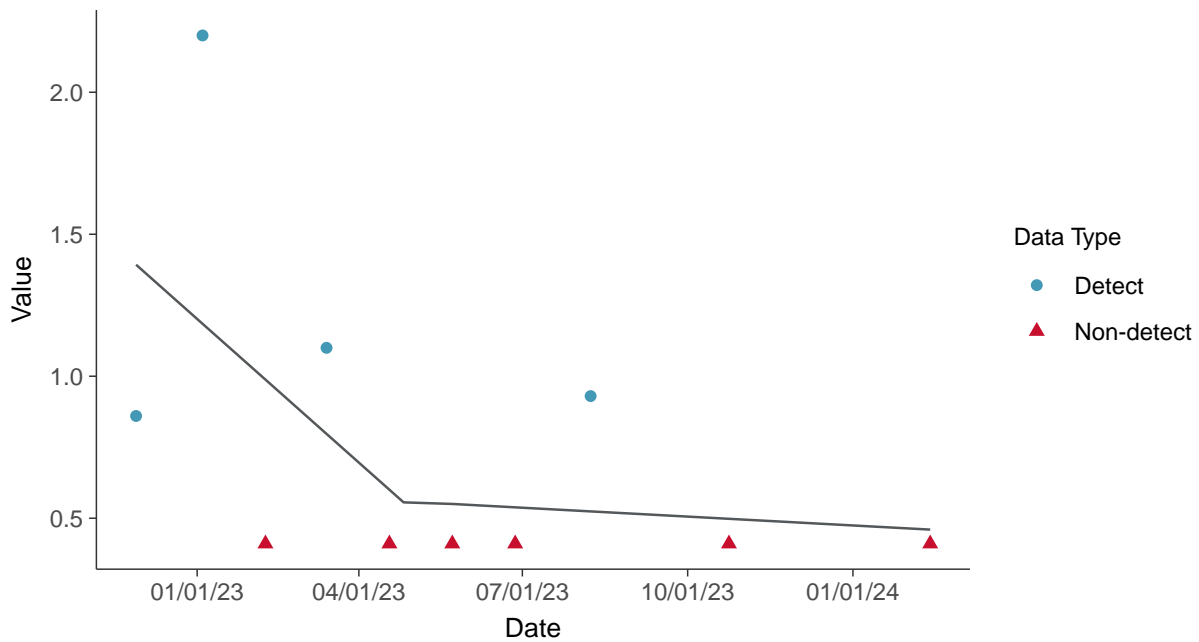
Normal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO₄), MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-02 (mg/L)



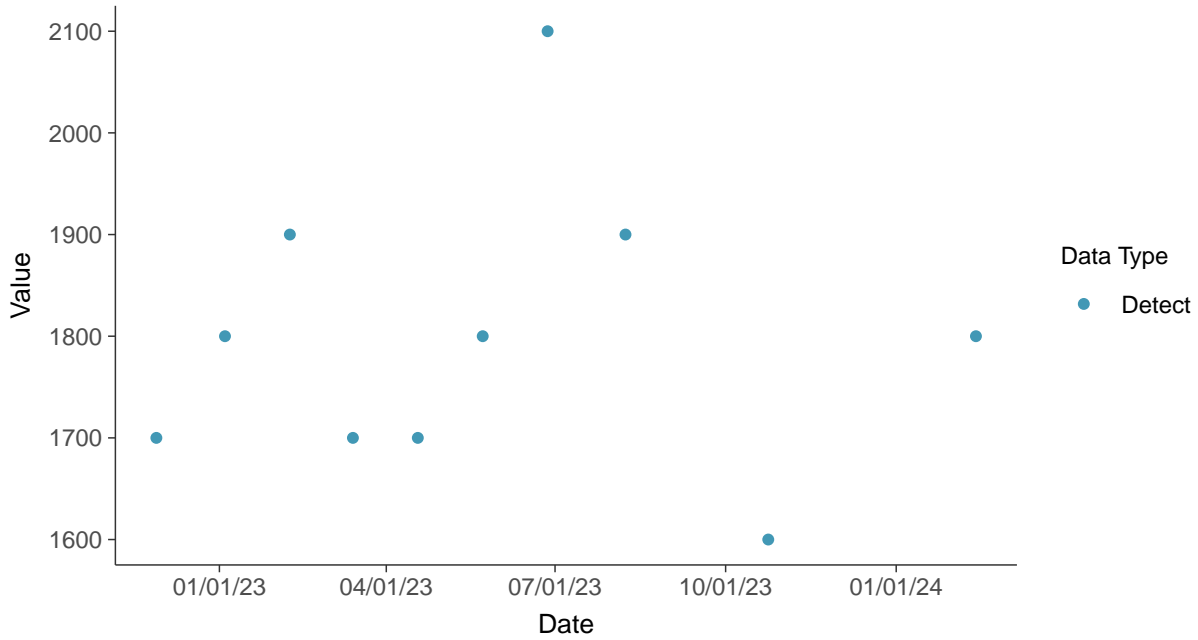


Appendix III: Total Dissolved Solids, MW-02

ID: 2_12_4_126

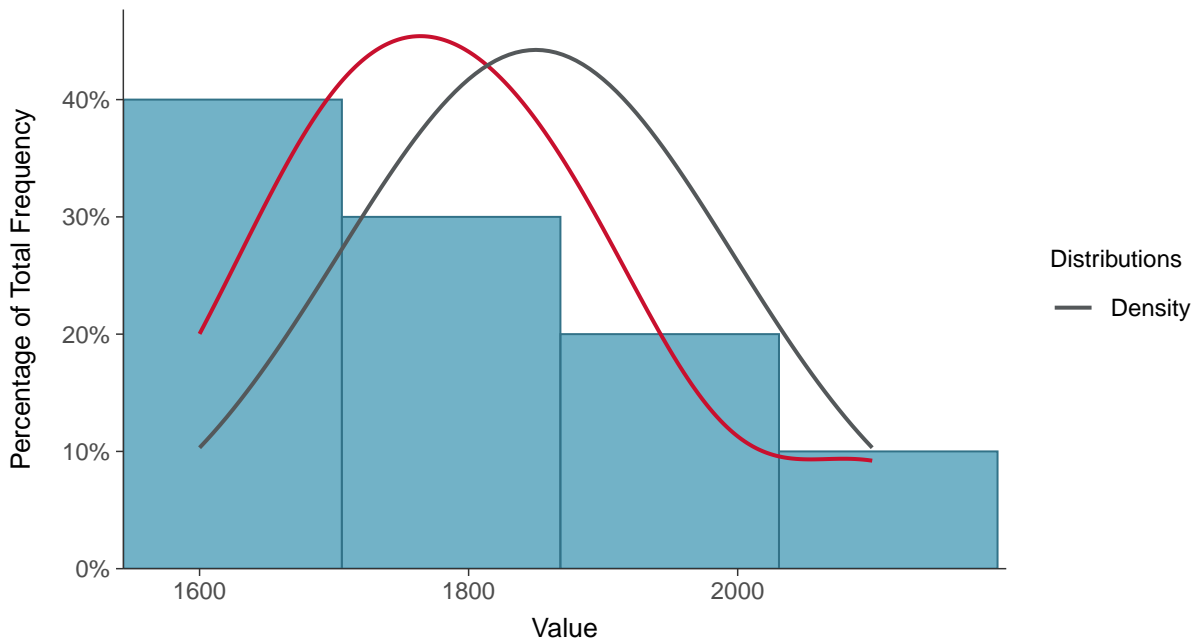
Scatter Plot

Total Dissolved Solids, MW-02 (mg/L)



Histogram

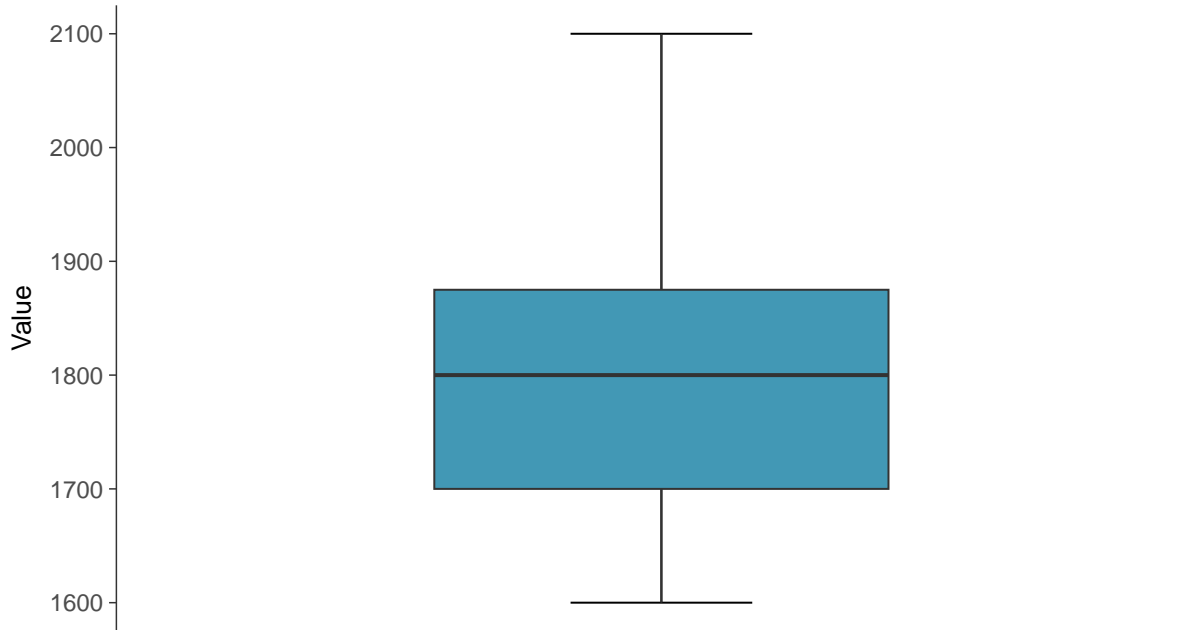
Total Dissolved Solids, MW-02 (mg/L)





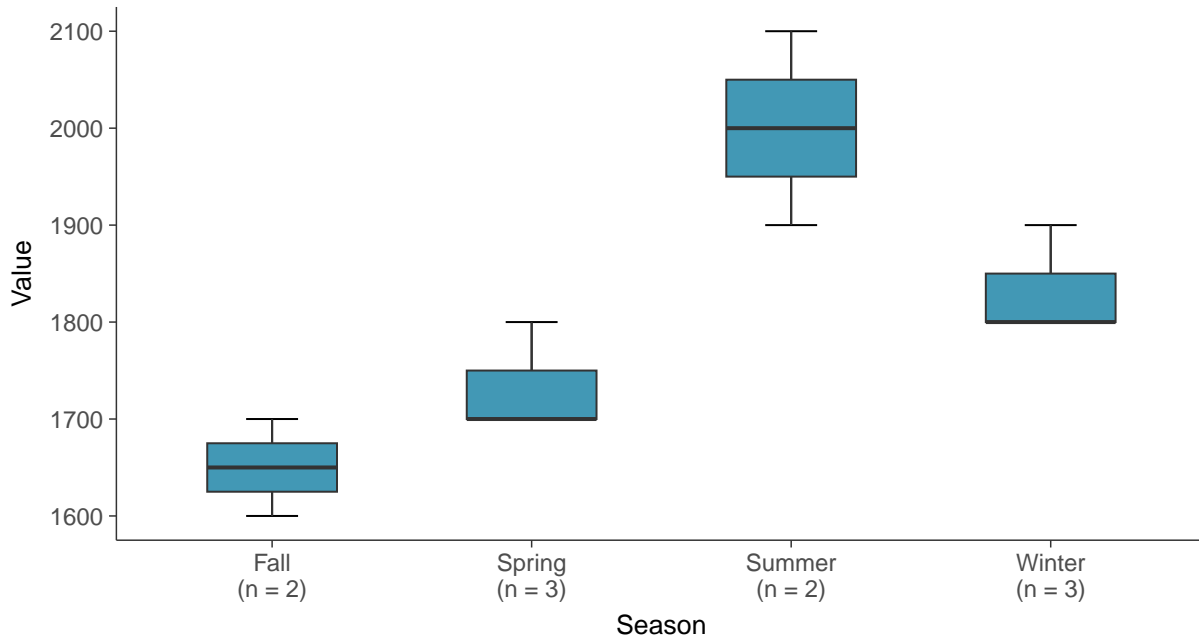
Boxplot

Total Dissolved Solids, MW-02 (mg/L)



Boxplot by Season

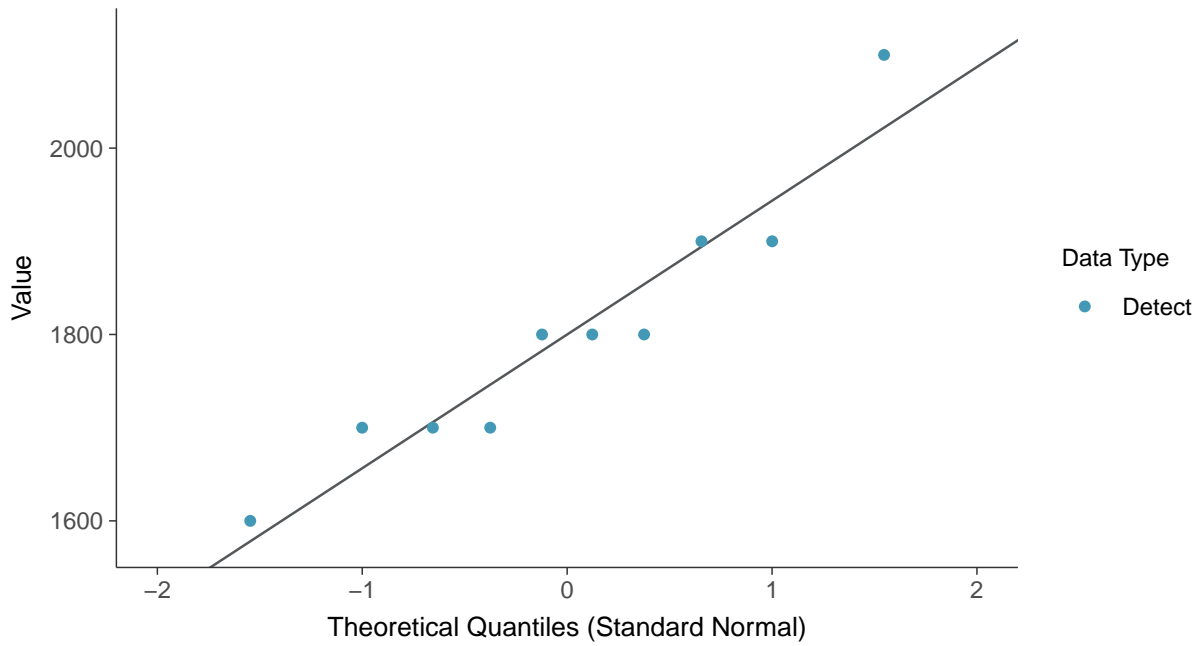
Total Dissolved Solids, MW-02 (mg/L)





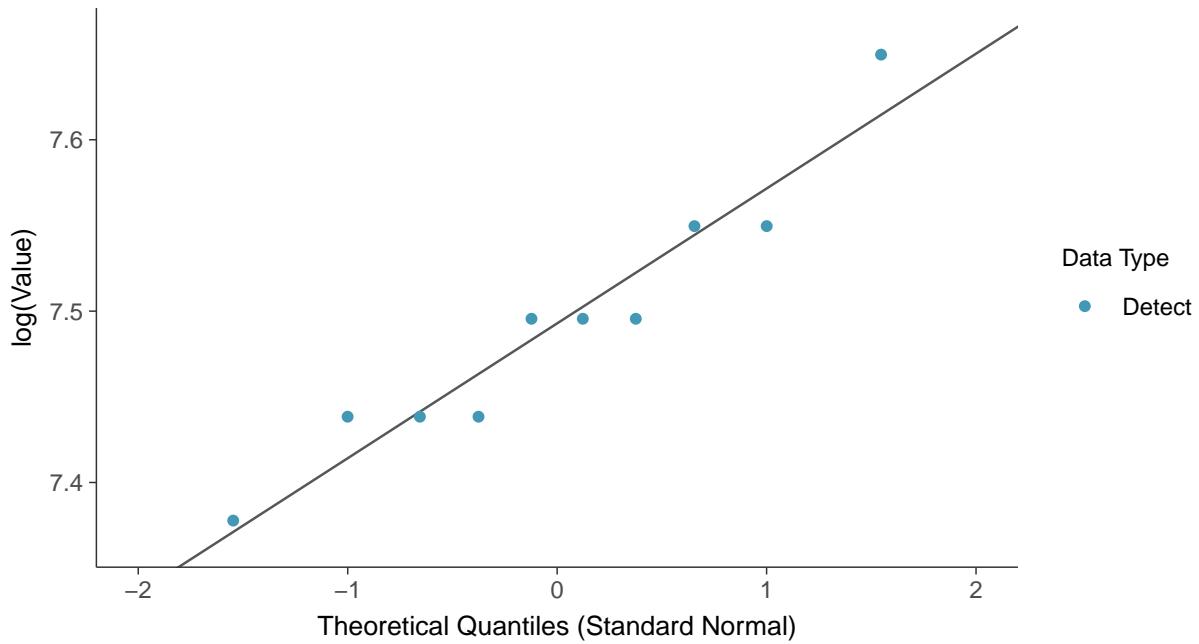
Normal Q-Q plot

Total Dissolved Solids, MW-02 (mg/L)



Lognormal Q-Q plot

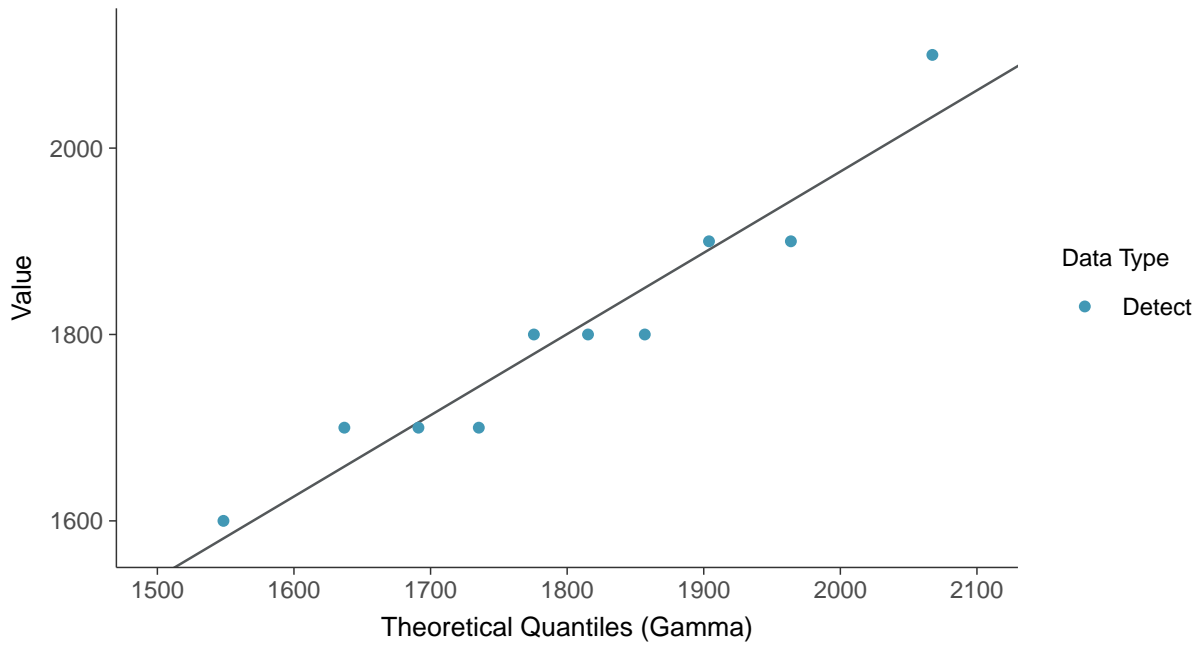
Total Dissolved Solids, MW-02 (mg/L)





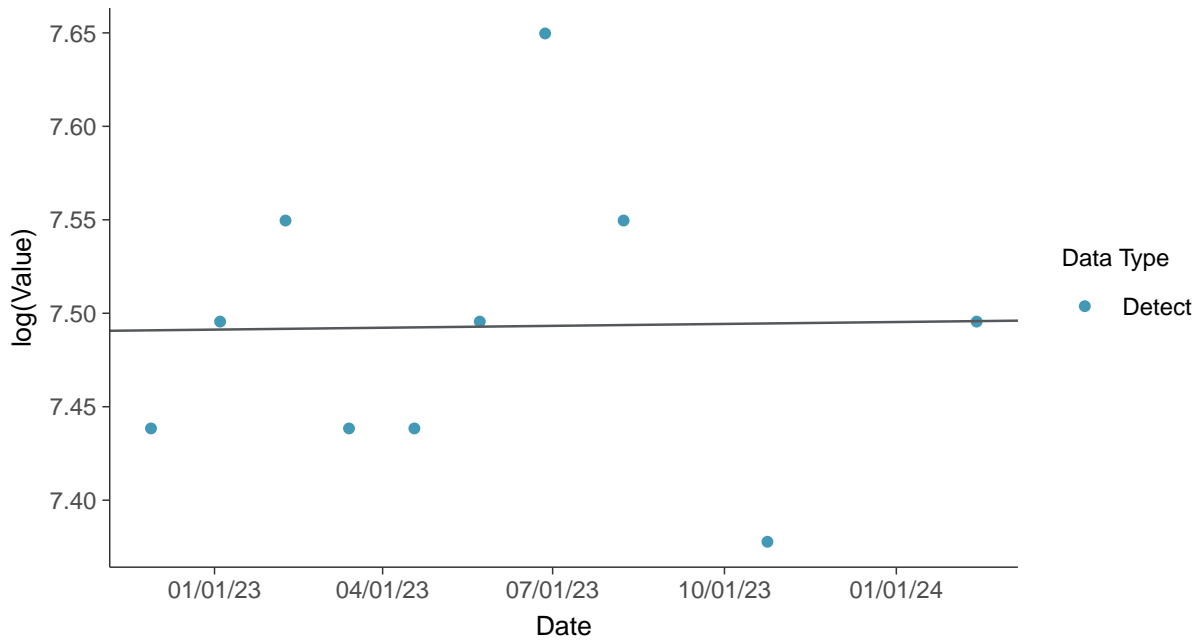
Gamma Q-Q plot

Total Dissolved Solids, MW-02 (mg/L)



Trend Regression: Lognormal MLE

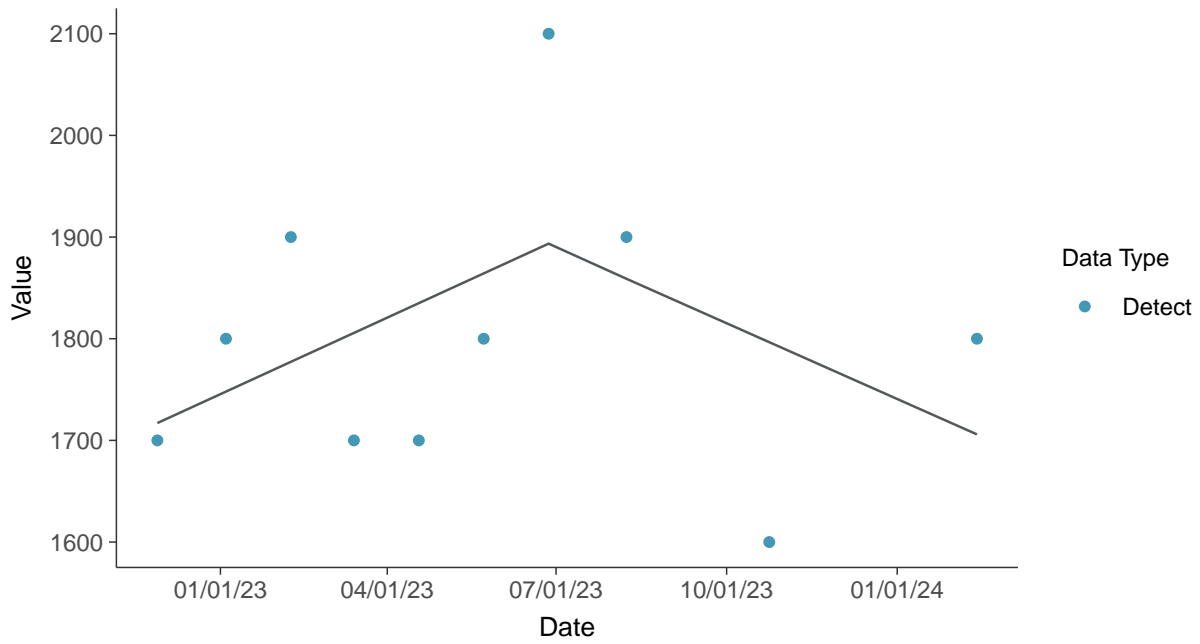
Total Dissolved Solids, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear

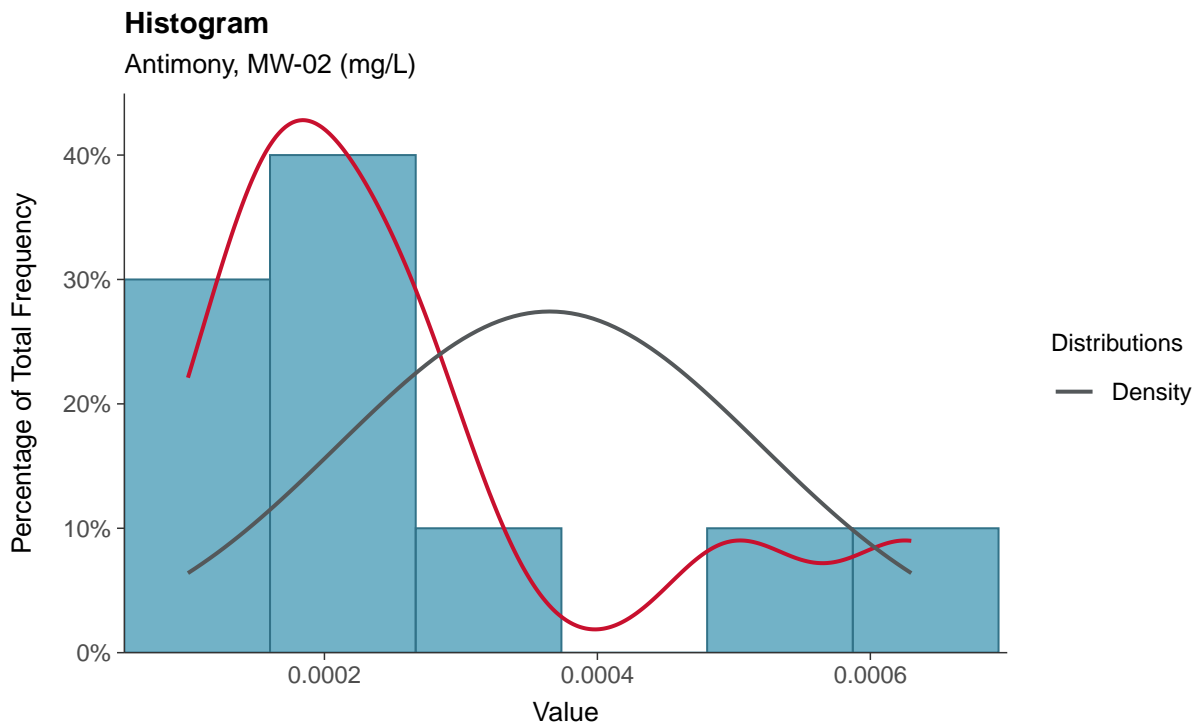
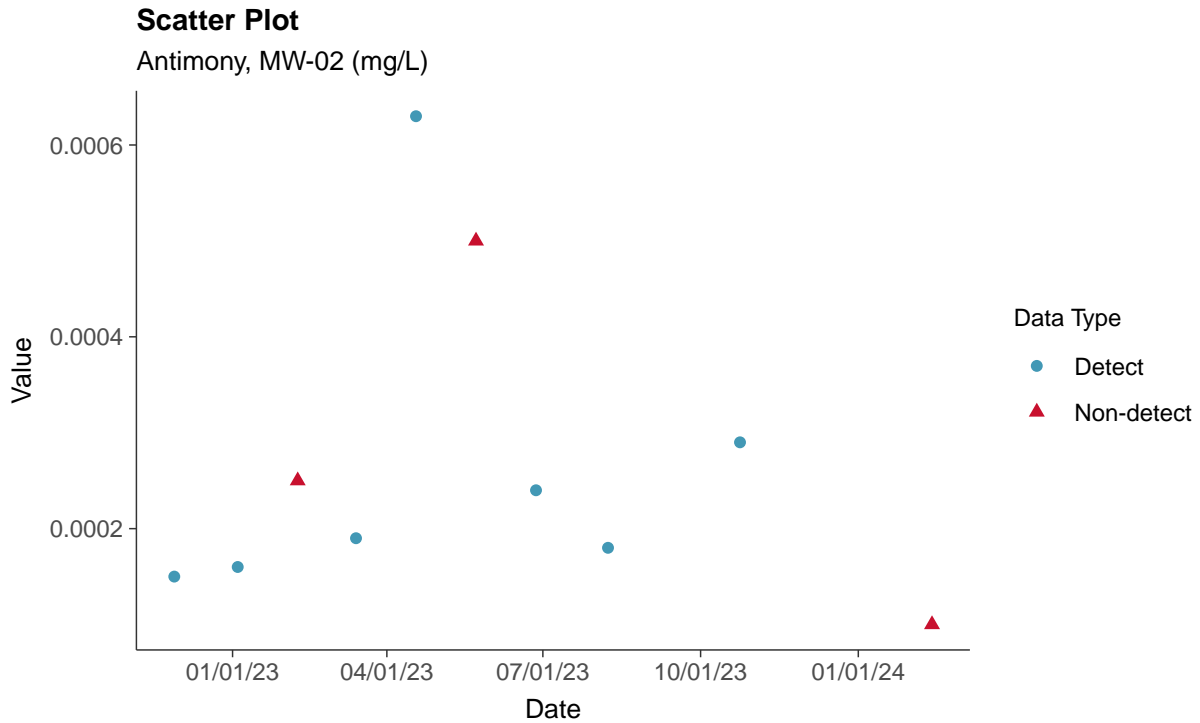
Total Dissolved Solids, MW-02 (mg/L)





Appendix IV: Antimony, MW-02

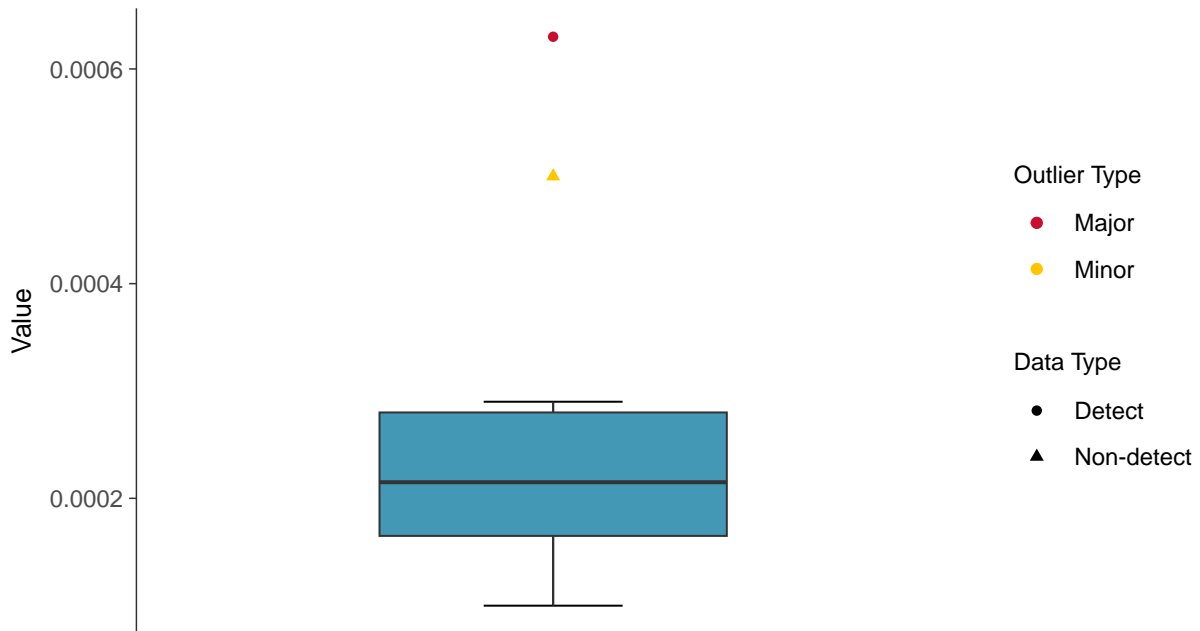
ID: 2_12_5_101





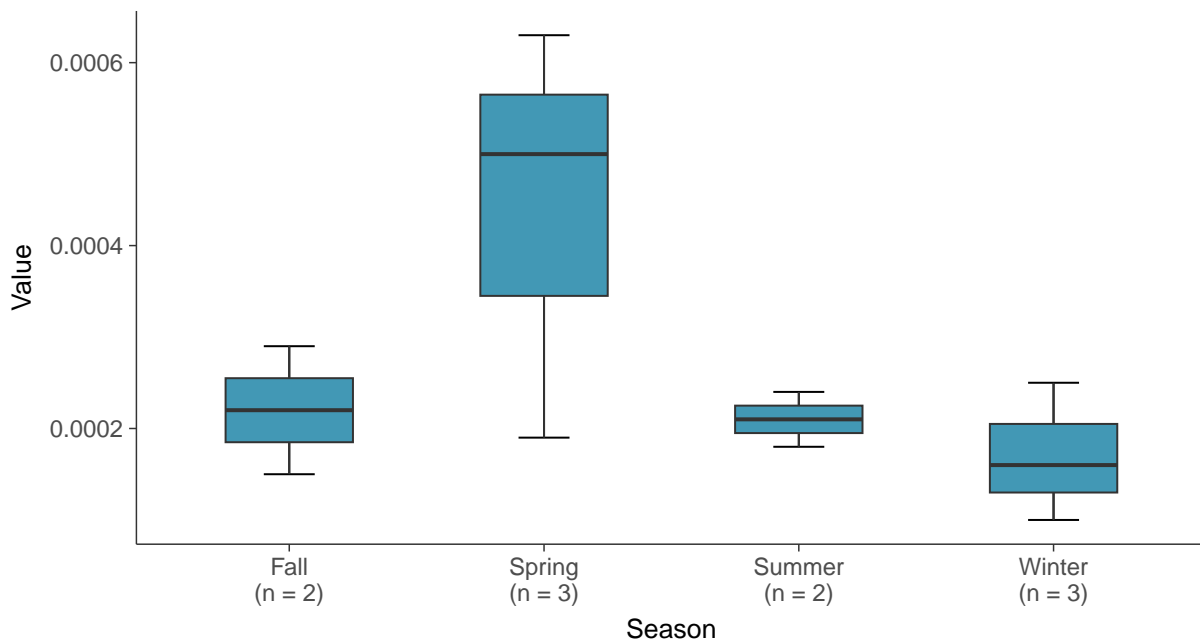
Boxplot

Antimony, MW-02 (mg/L)



Boxplot by Season

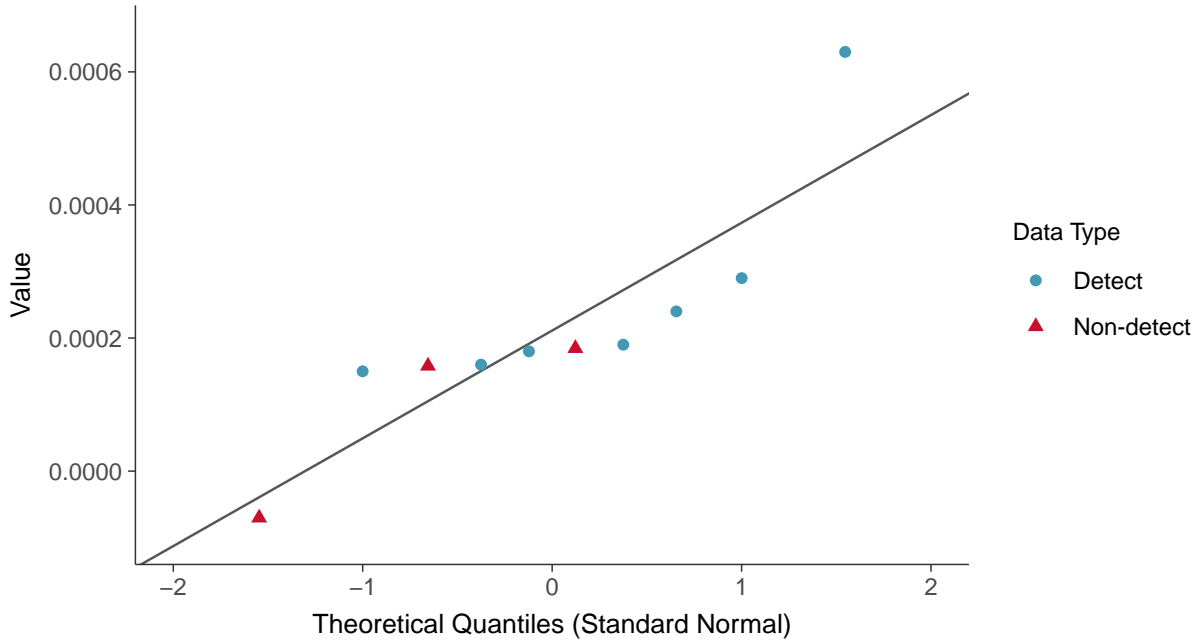
Antimony, MW-02 (mg/L)





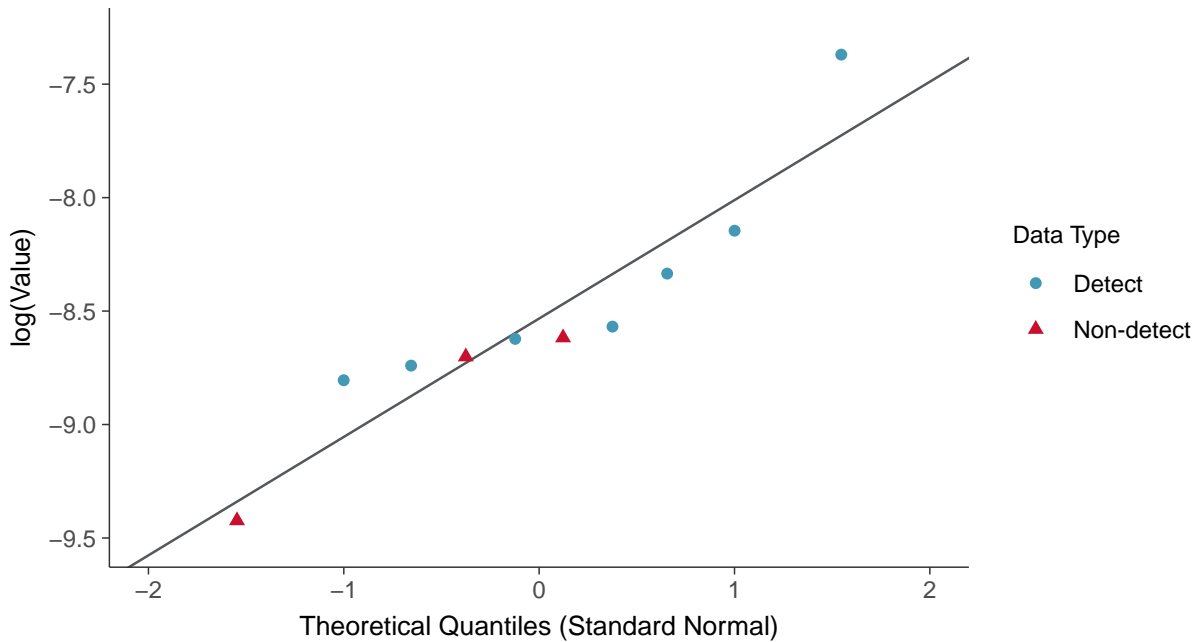
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-02 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

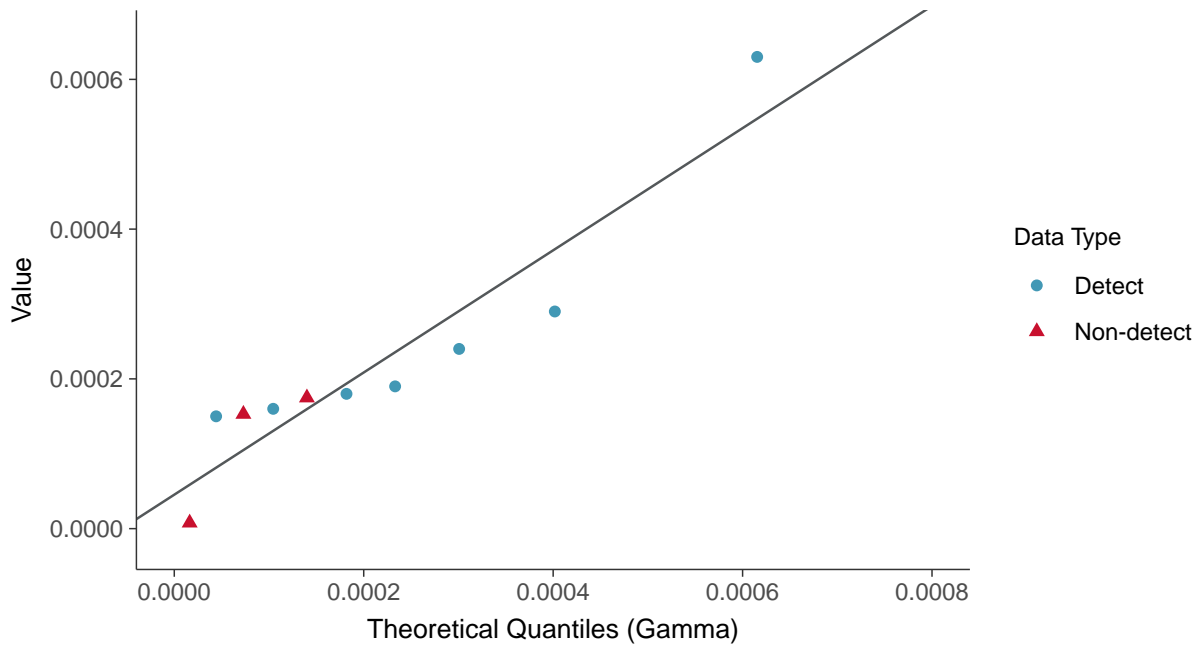
Antimony, MW-02 (mg/L)





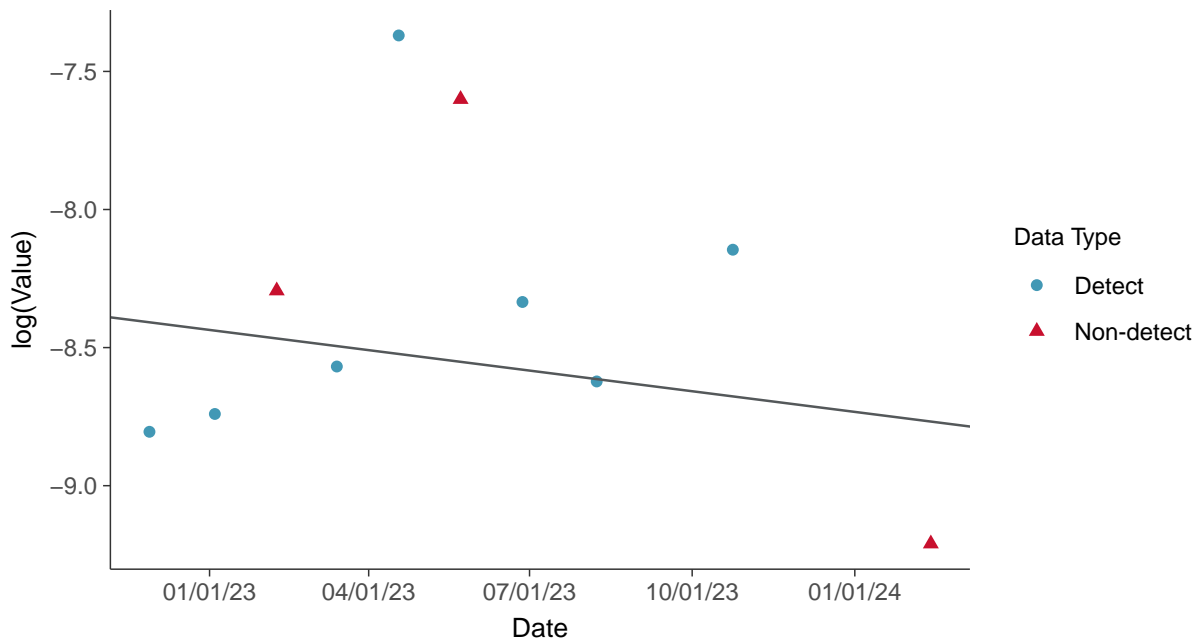
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-02 (mg/L)



Trend Regression: Lognormal MLE

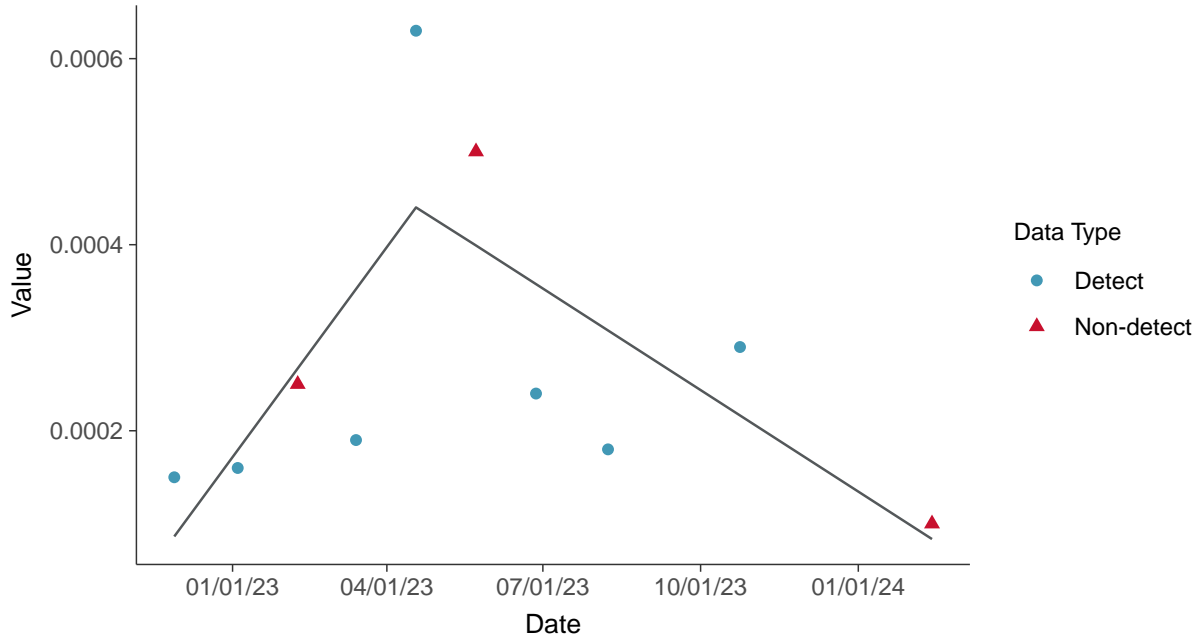
Antimony, MW-02 (mg/L)





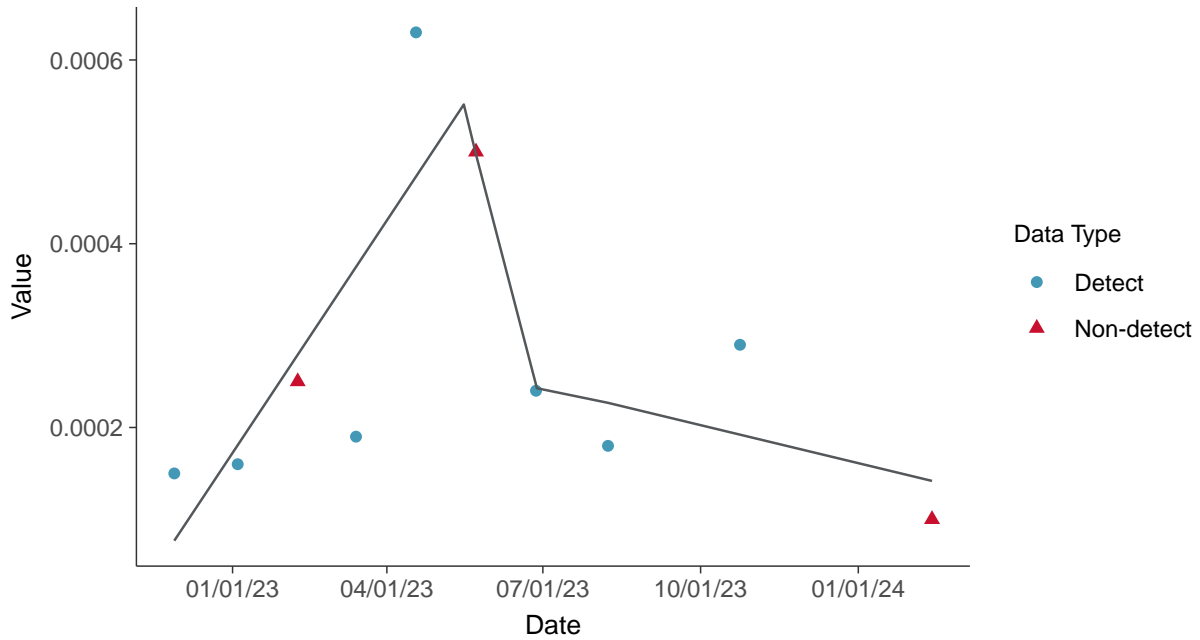
Trend Regression: Piecewise Linear-Linear

Antimony, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

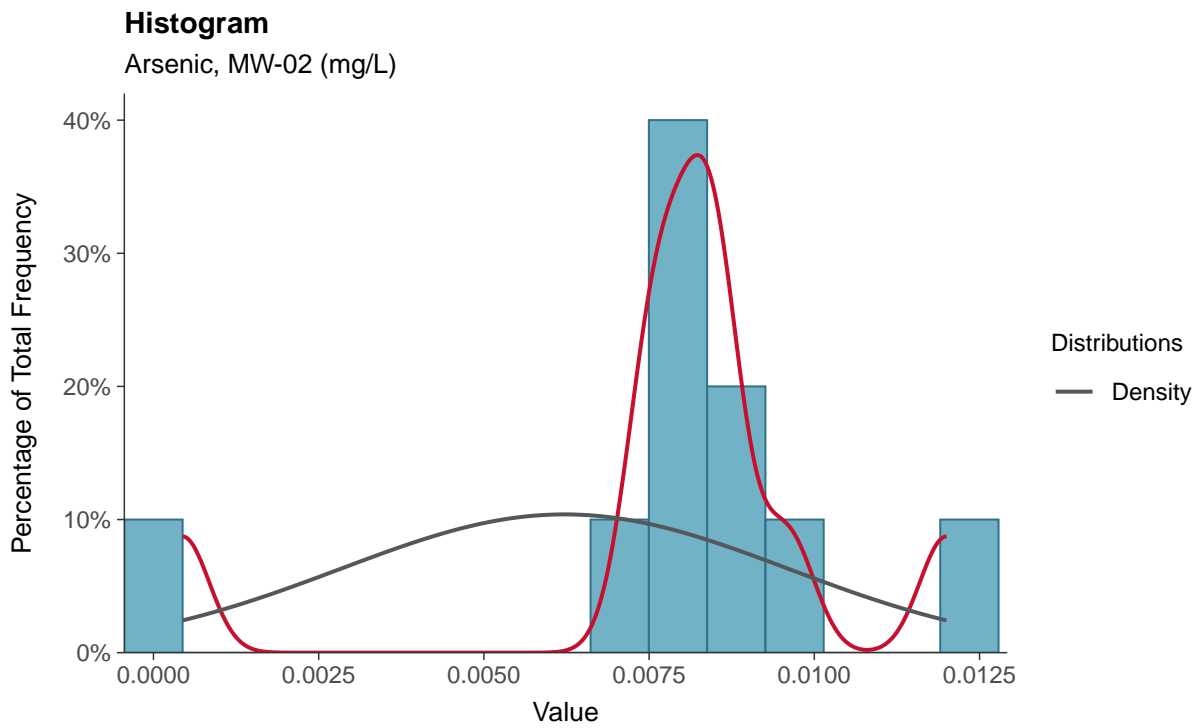
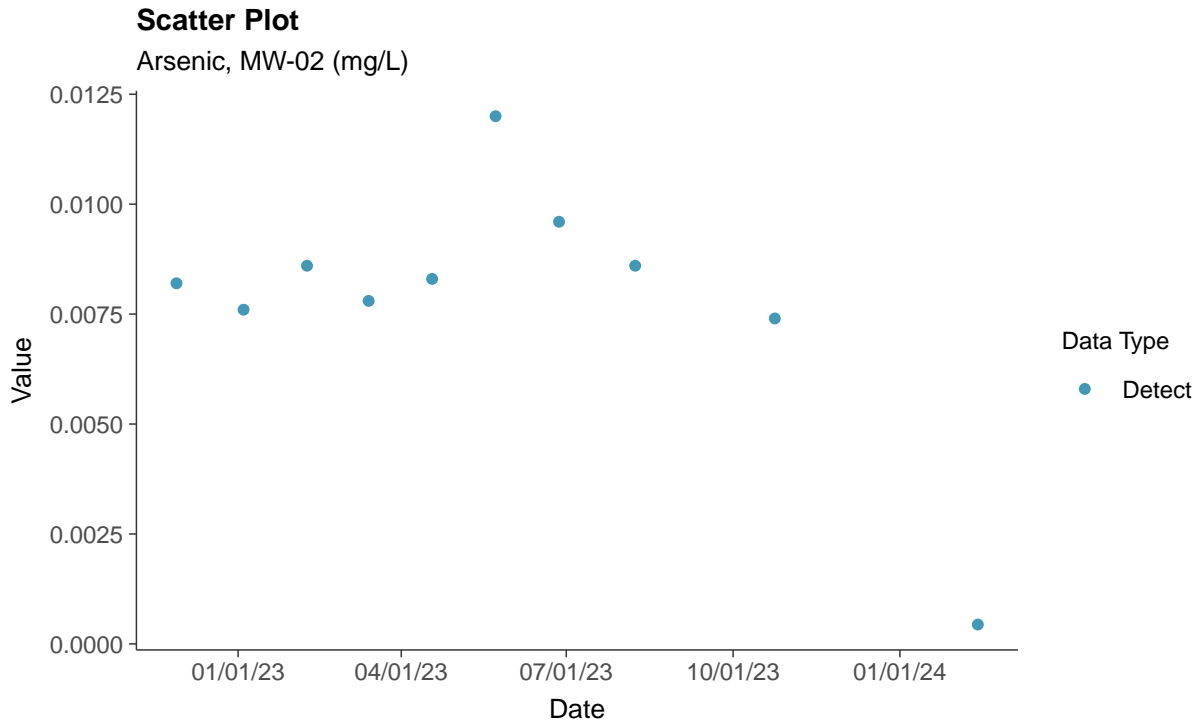
Antimony, MW-02 (mg/L)





Appendix IV: Arsenic, MW-02

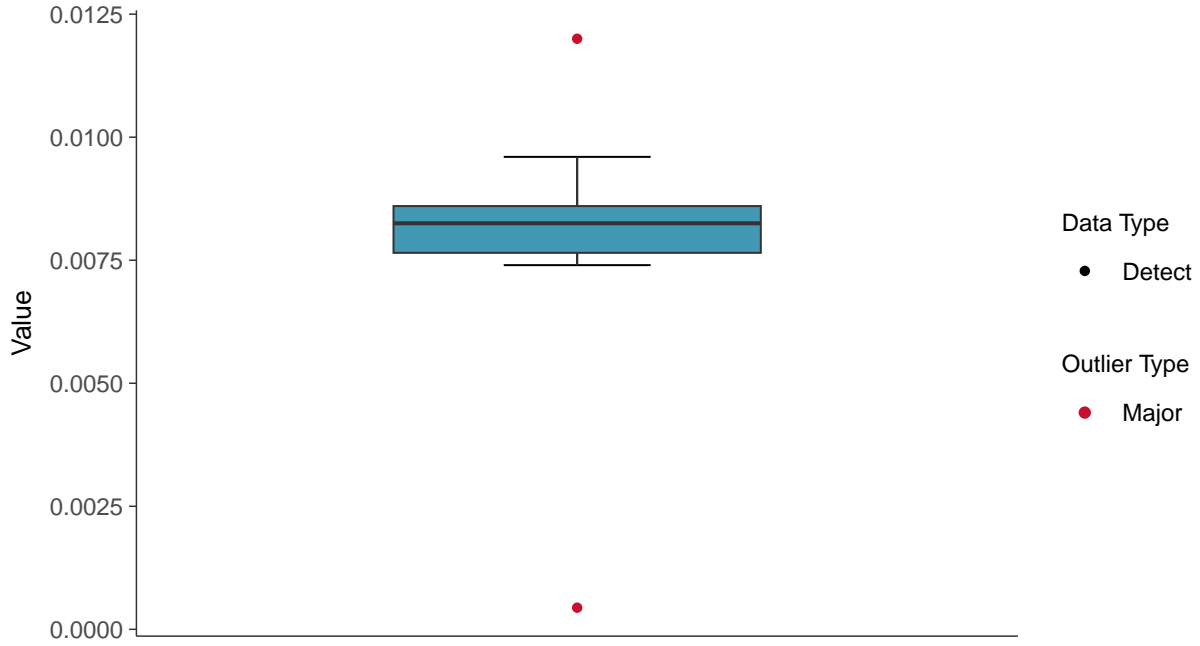
ID: 2_12_5_102





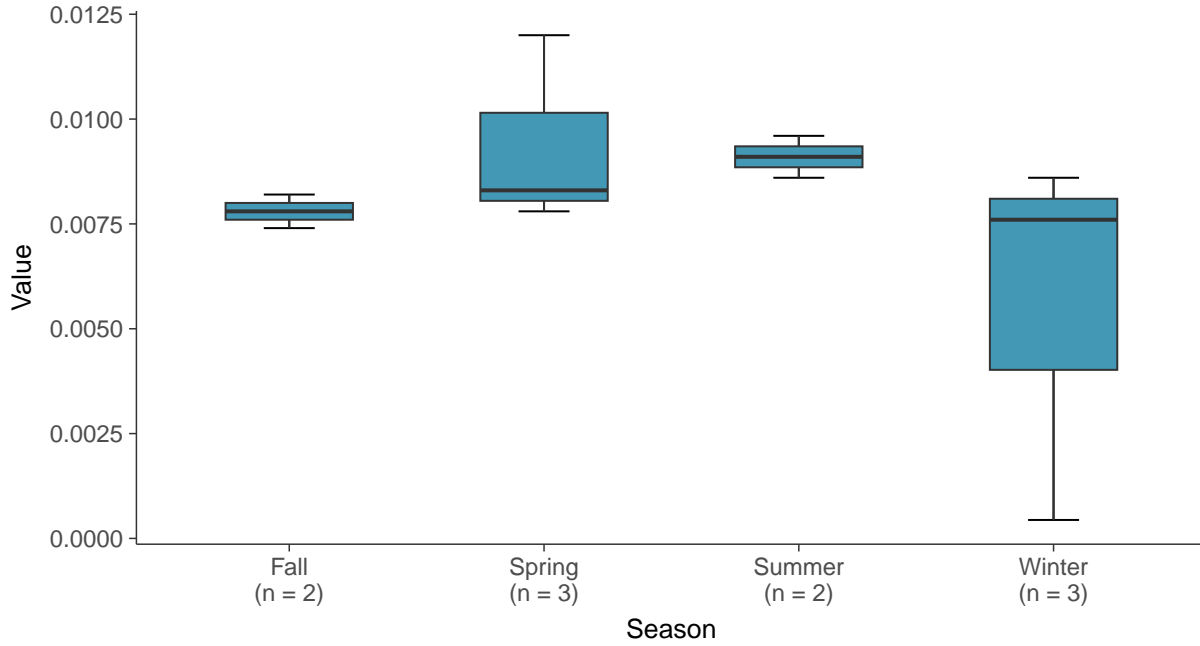
Boxplot

Arsenic, MW-02 (mg/L)



Boxplot by Season

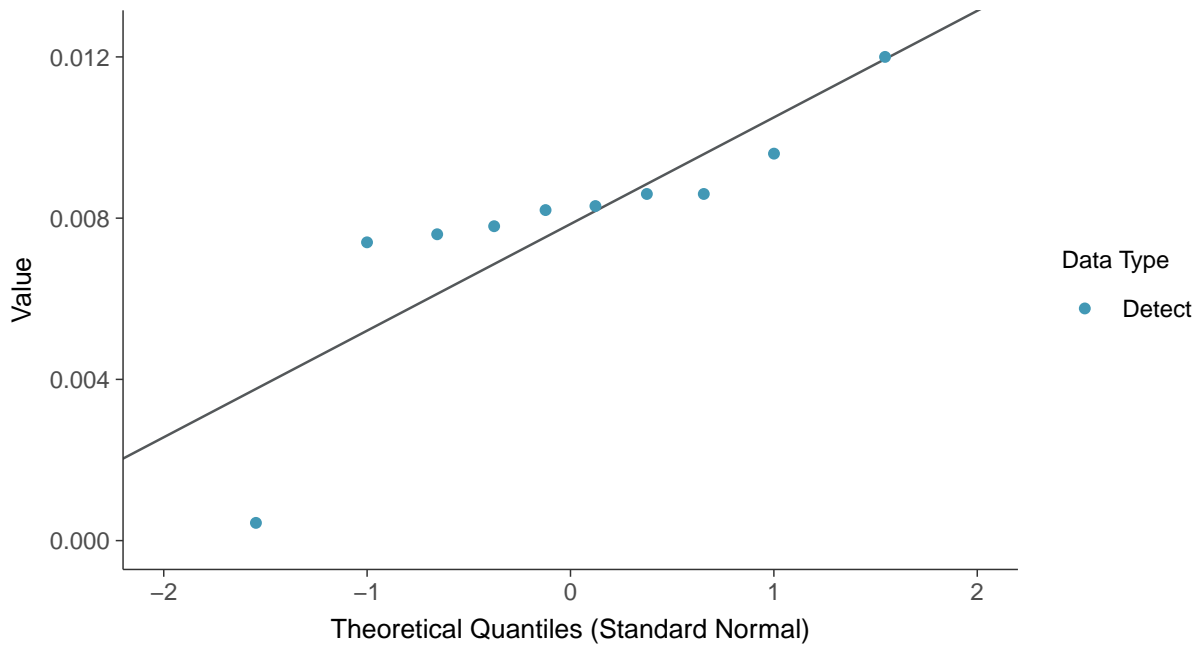
Arsenic, MW-02 (mg/L)





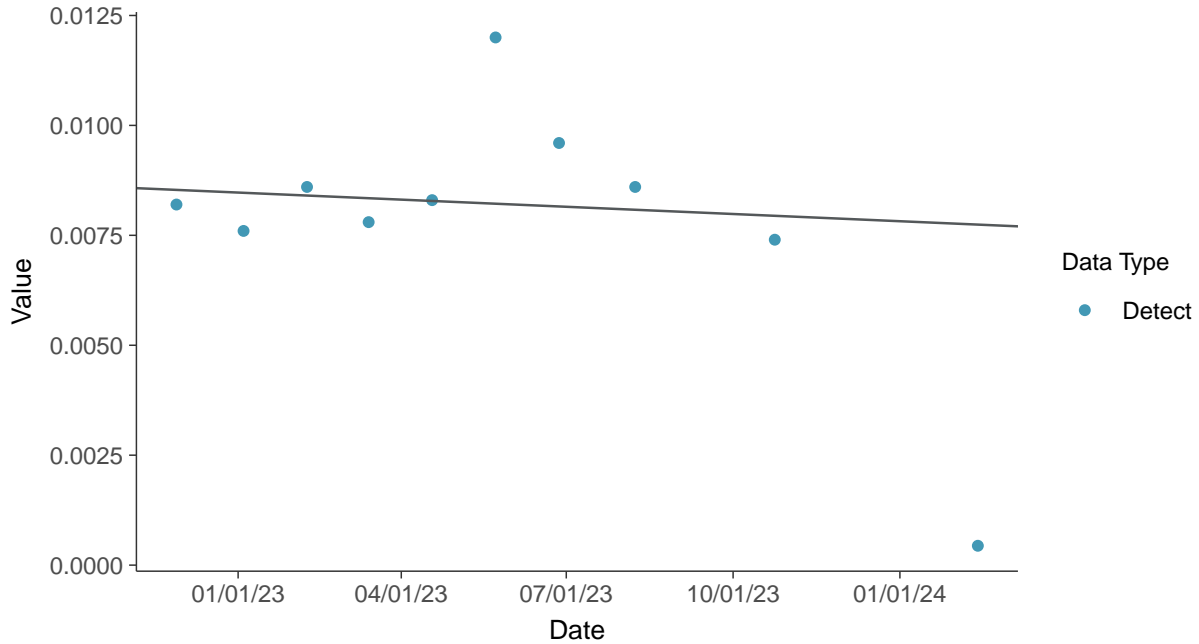
Normal Q-Q plot

Arsenic, MW-02 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

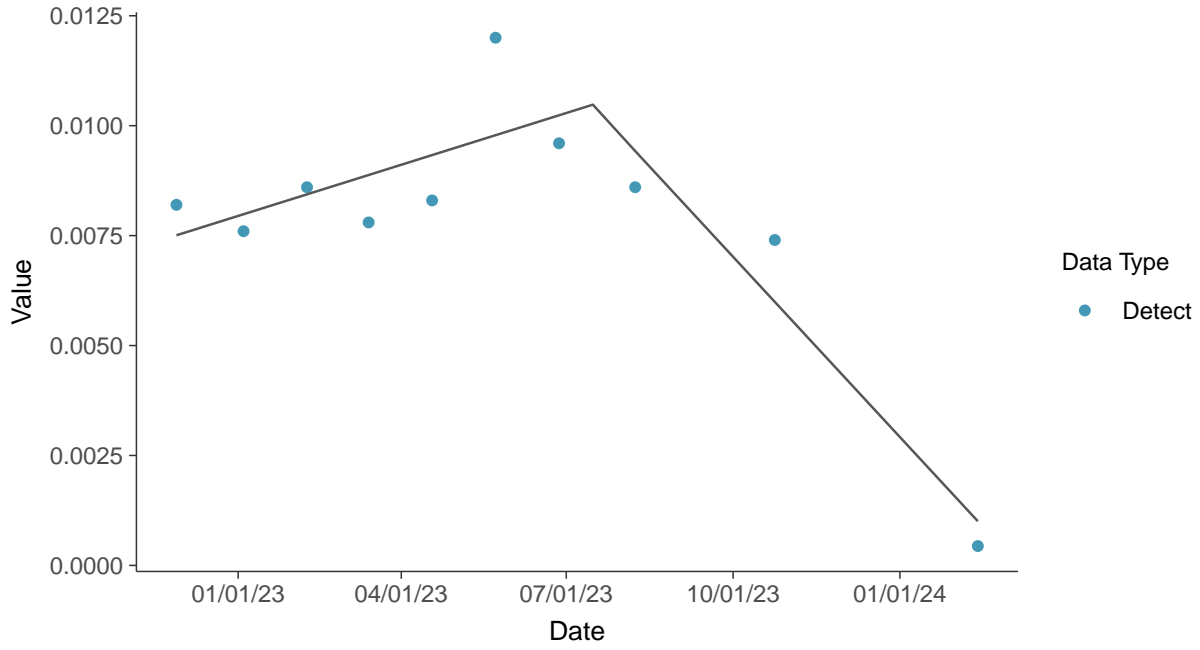
Arsenic, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear

Arsenic, MW-02 (mg/L)



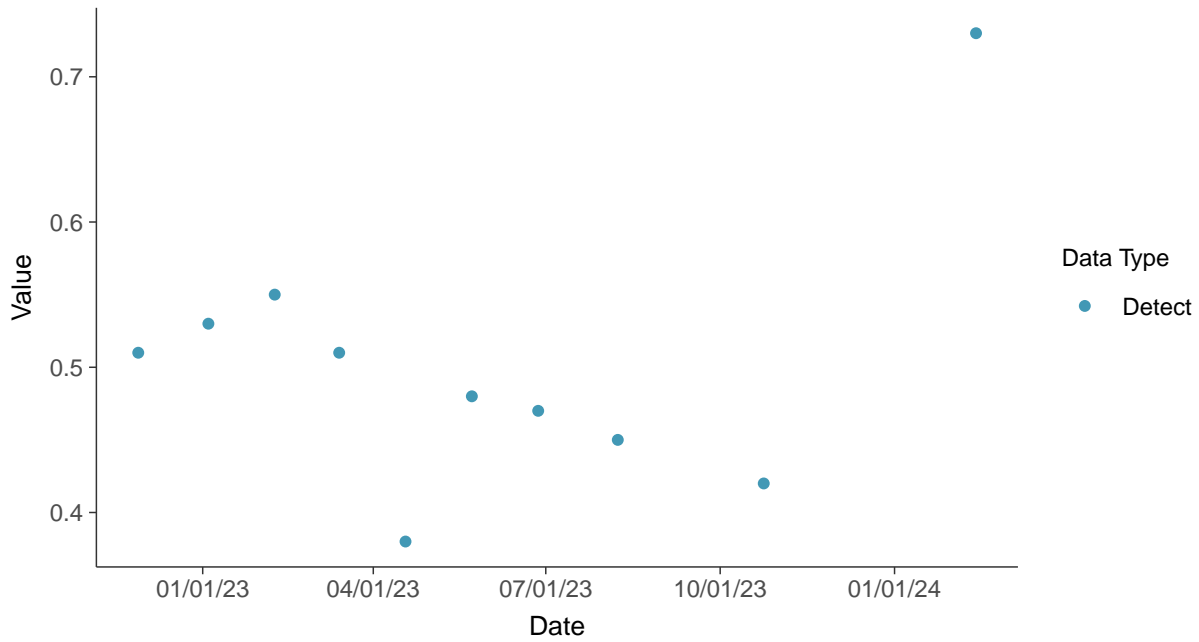


Appendix IV: Barium, MW-02

ID: 2_12_5_103

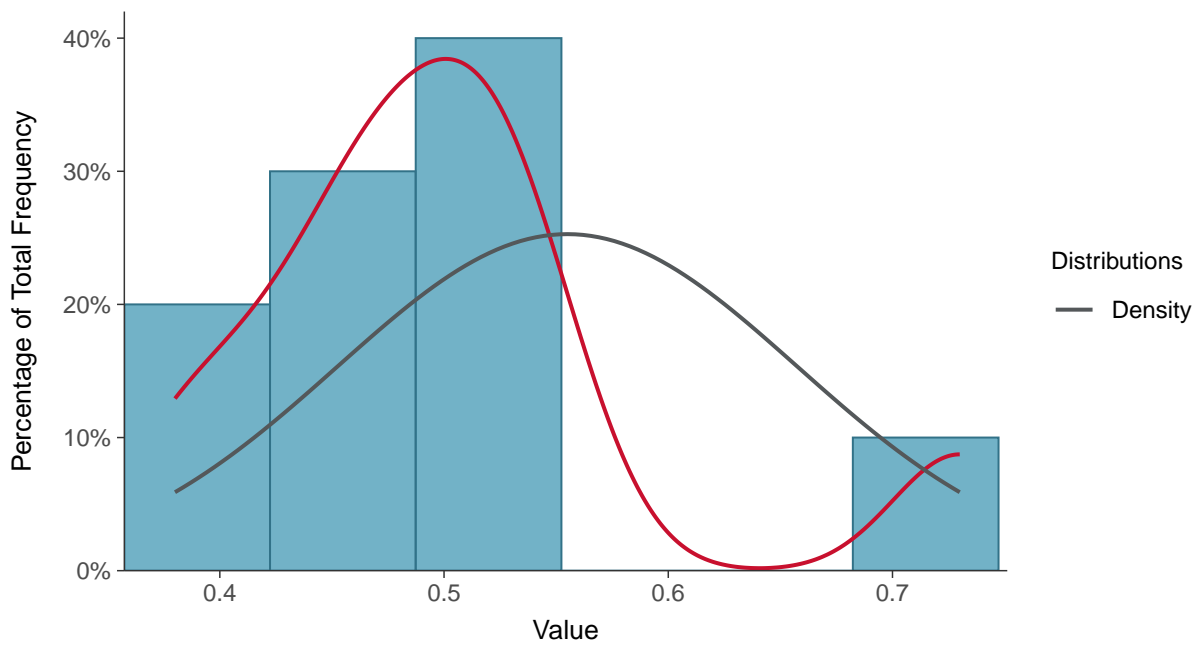
Scatter Plot

Barium, MW-02 (mg/L)



Histogram

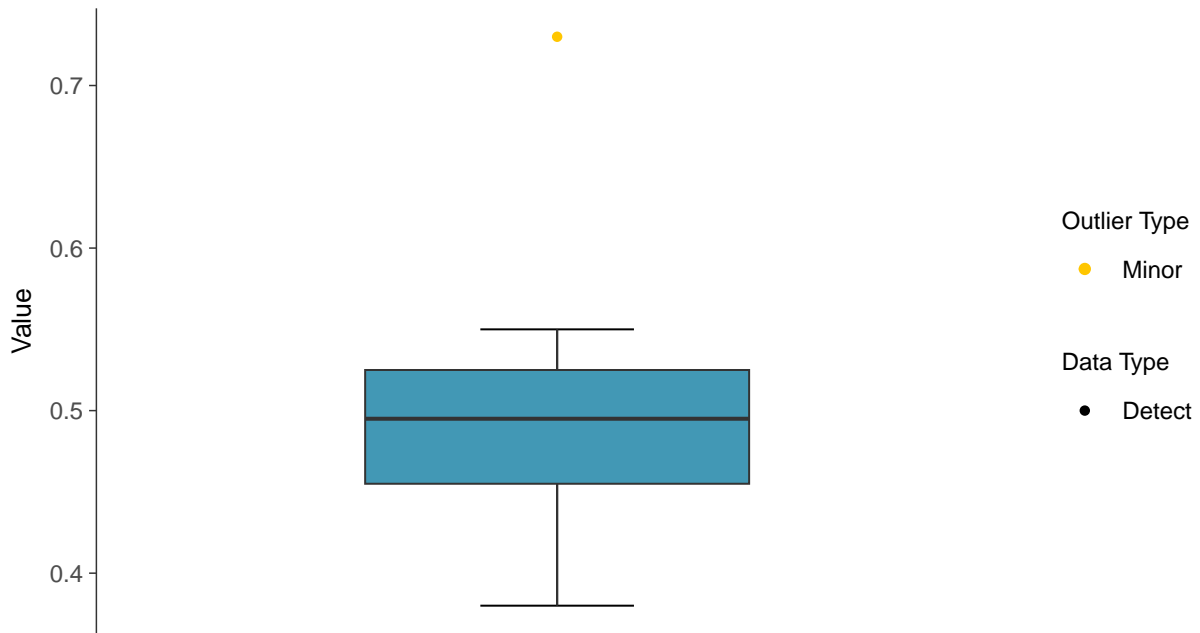
Barium, MW-02 (mg/L)





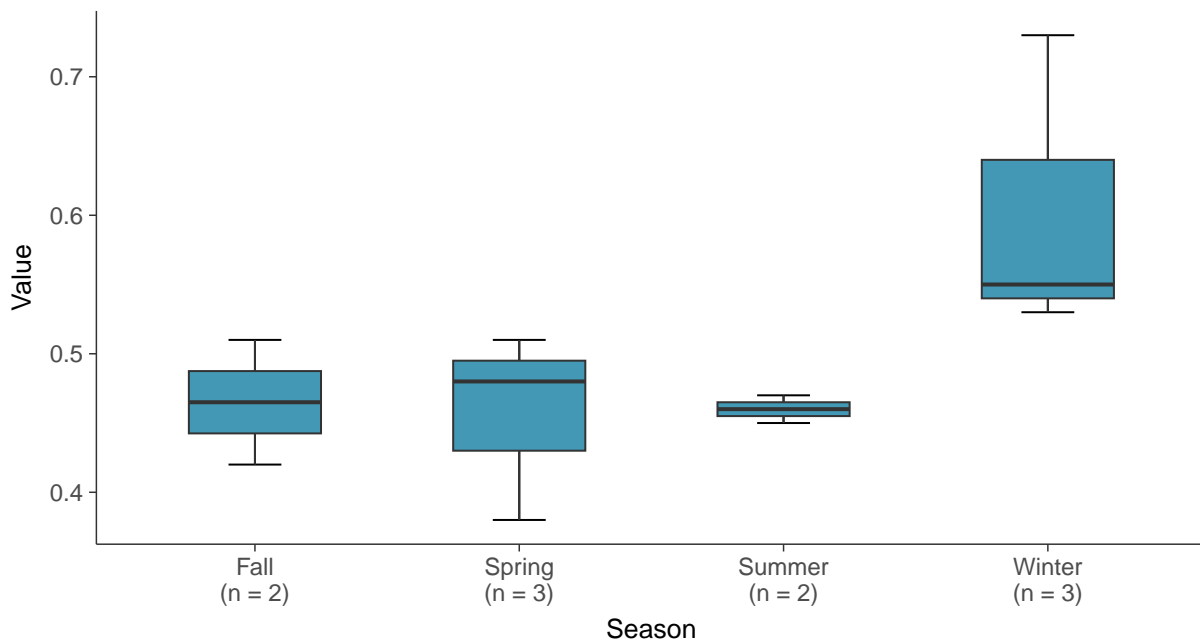
Boxplot

Barium, MW-02 (mg/L)



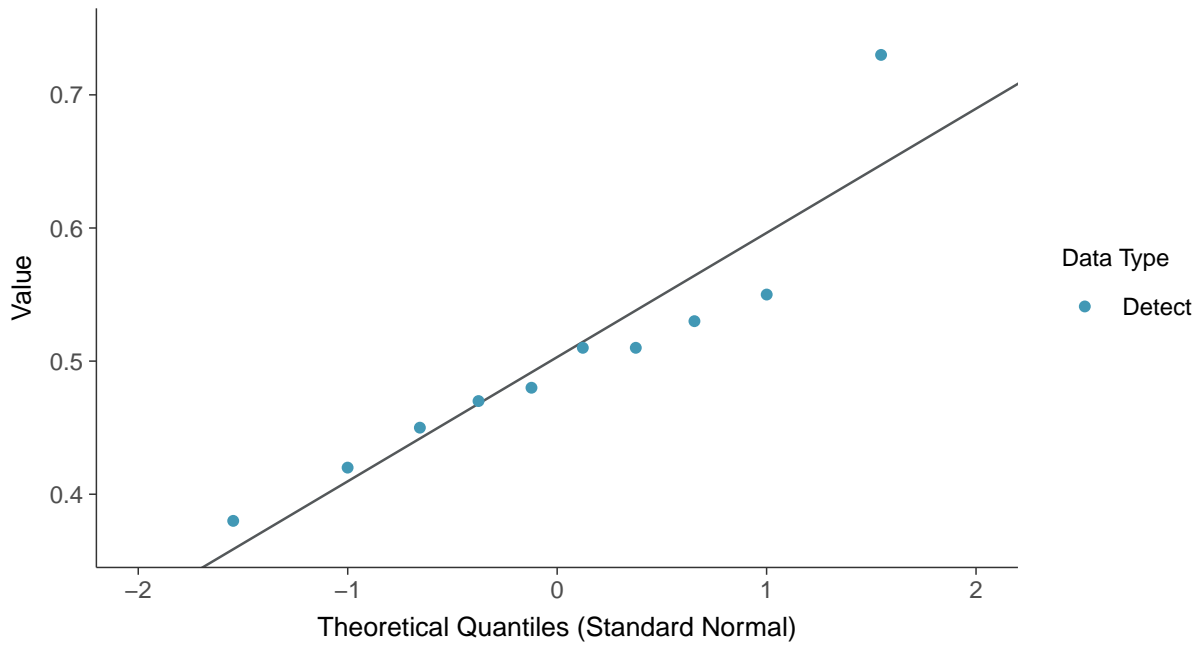
Boxplot by Season

Barium, MW-02 (mg/L)

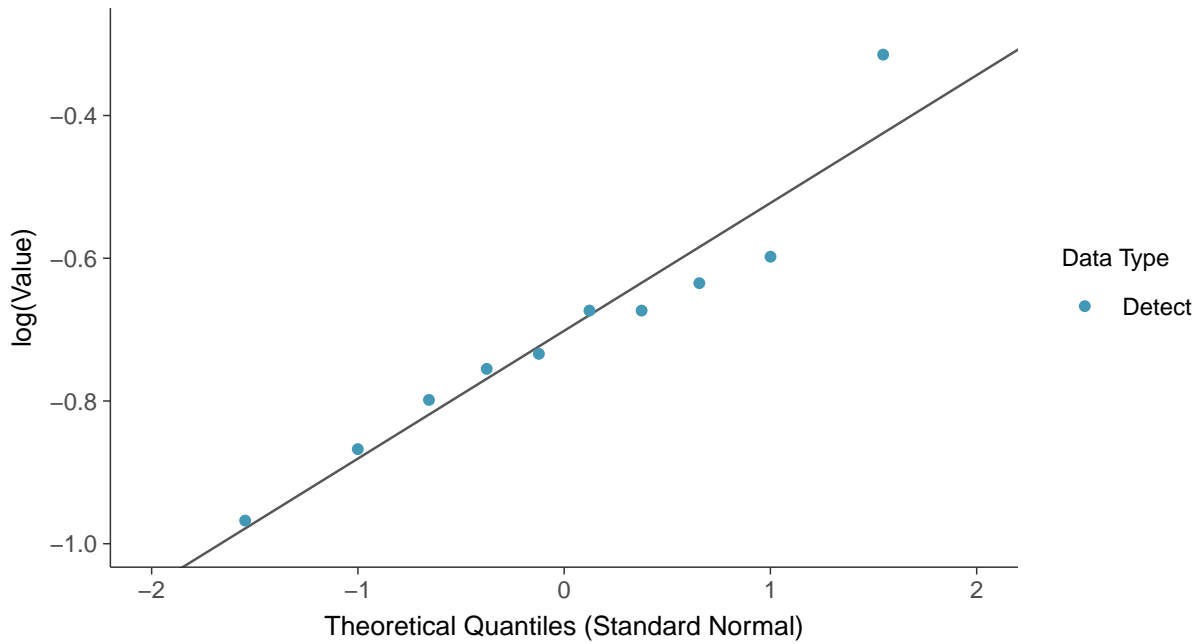




Normal Q-Q plot
Barium, MW-02 (mg/L)



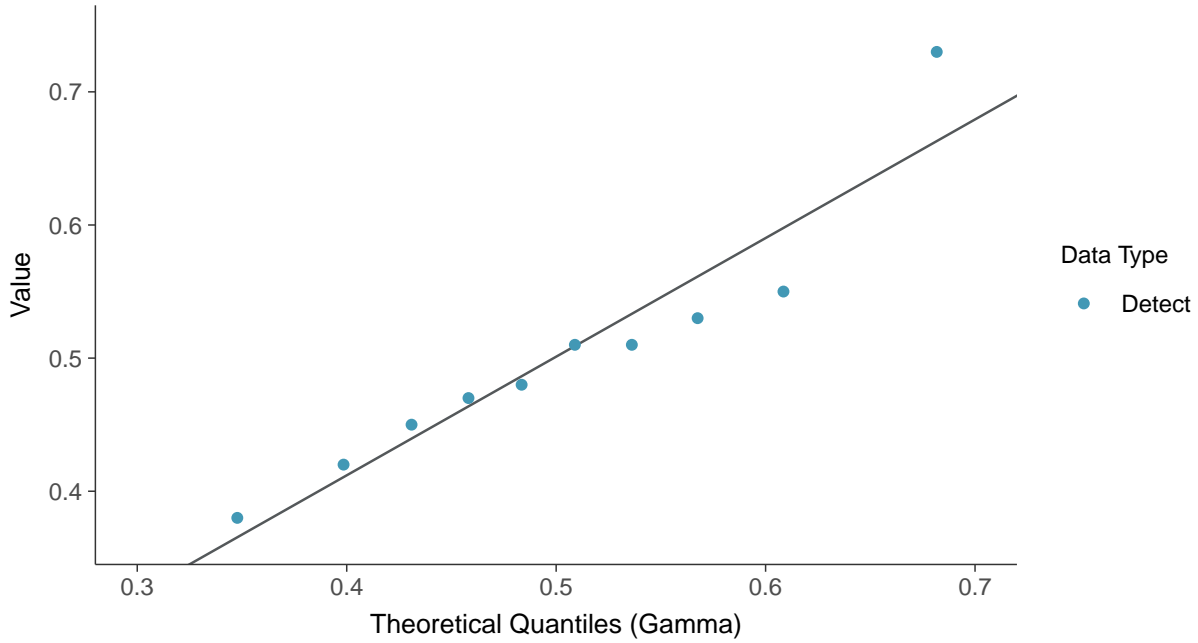
Lognormal Q-Q plot
Barium, MW-02 (mg/L)





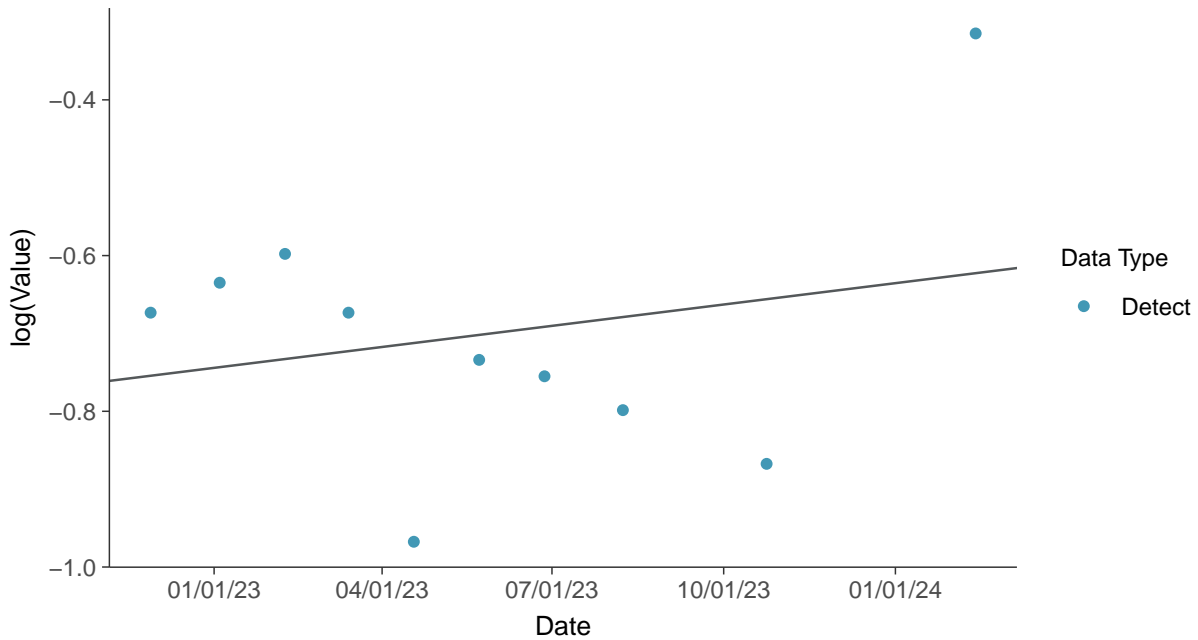
Gamma Q-Q plot

Barium, MW-02 (mg/L)



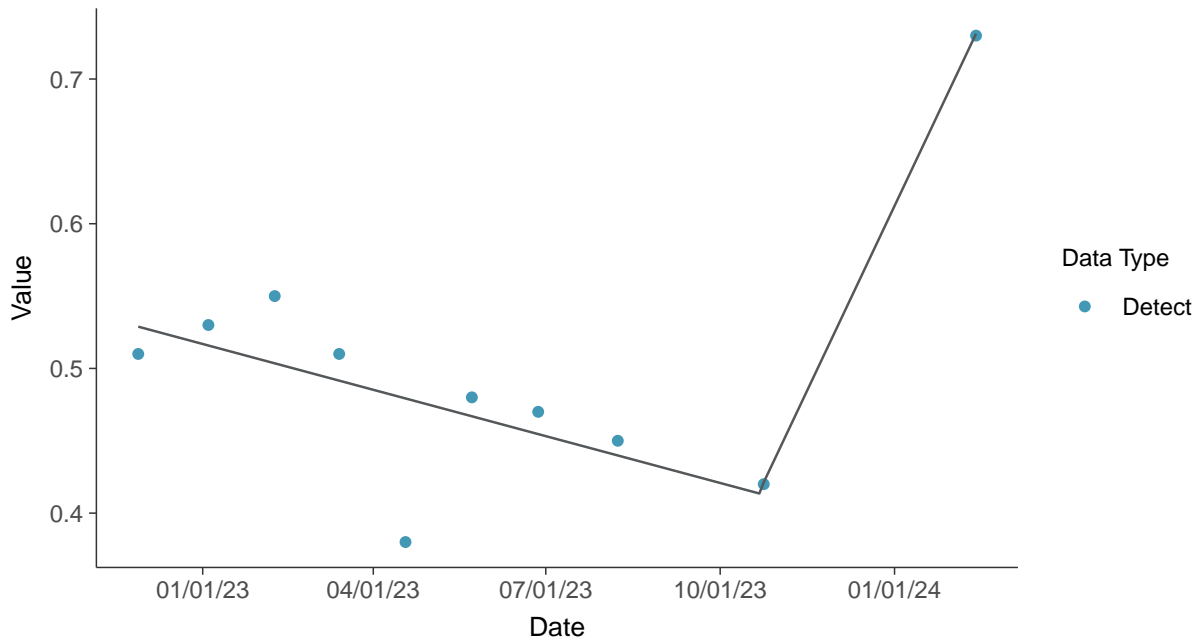
Trend Regression: Lognormal MLE

Barium, MW-02 (mg/L)





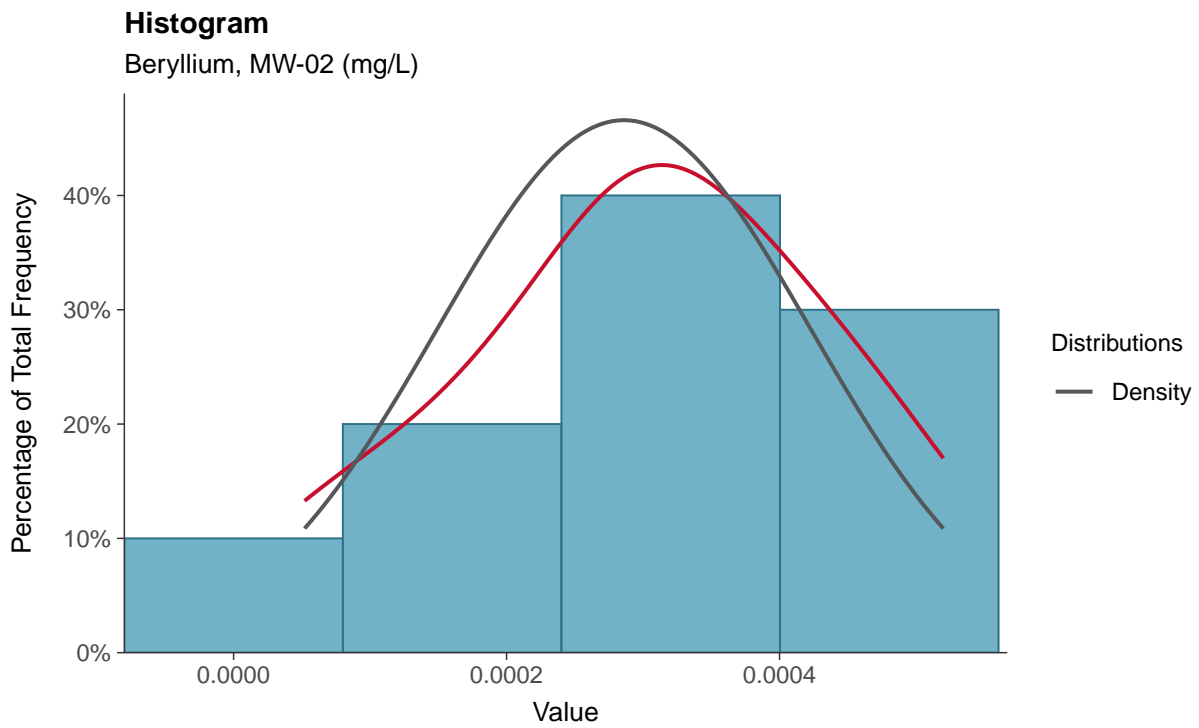
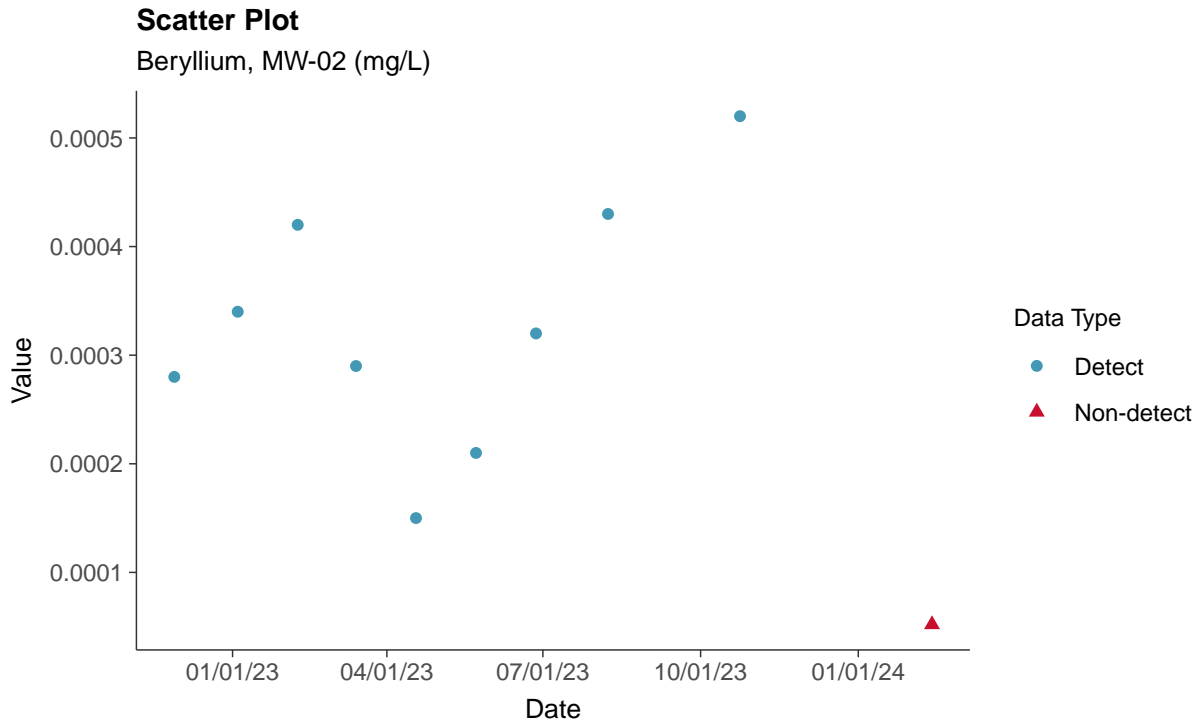
Trend Regression: Piecewise Linear-Linear
Barium, MW-02 (mg/L)





Appendix IV: Beryllium, MW-02

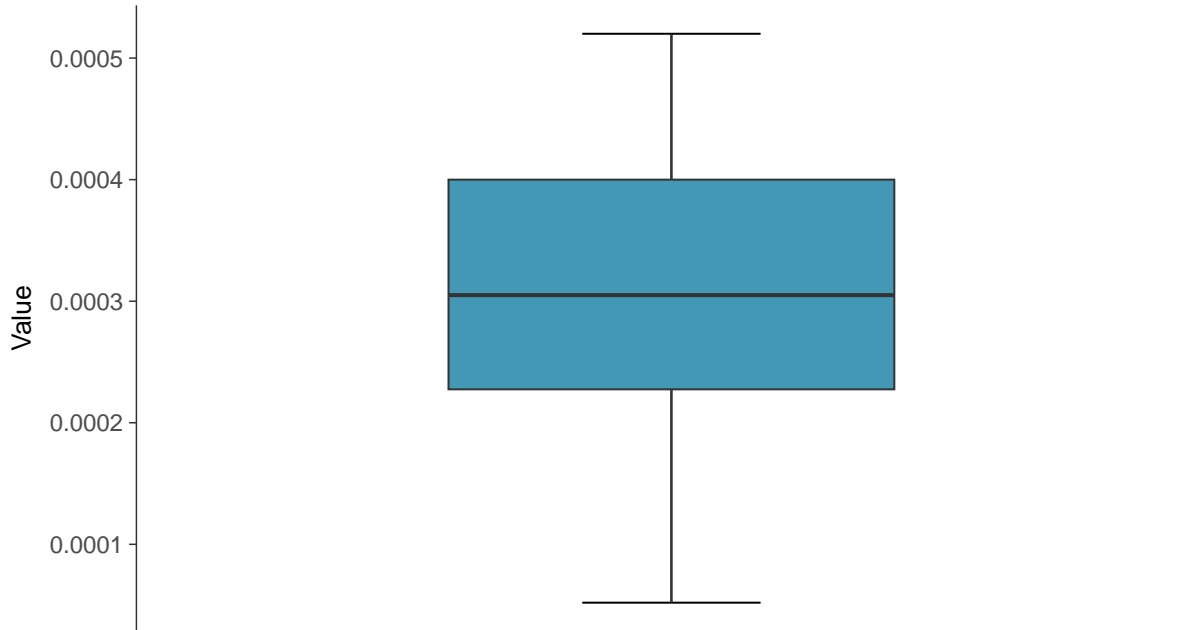
ID: 2_12_5_104





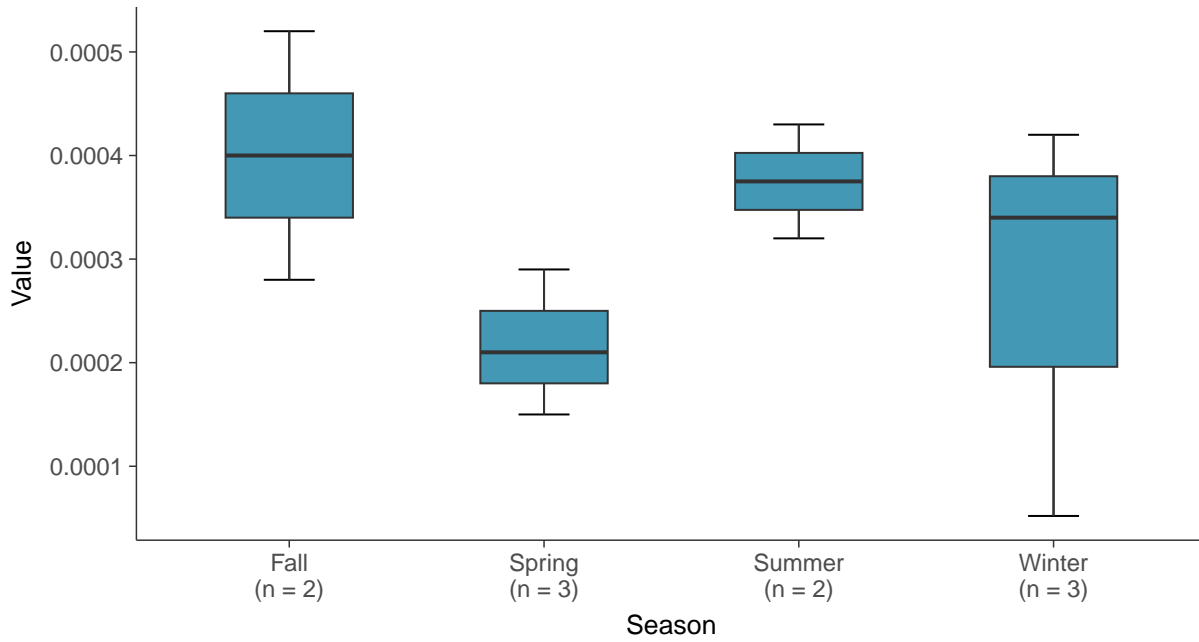
Boxplot

Beryllium, MW-02 (mg/L)



Boxplot by Season

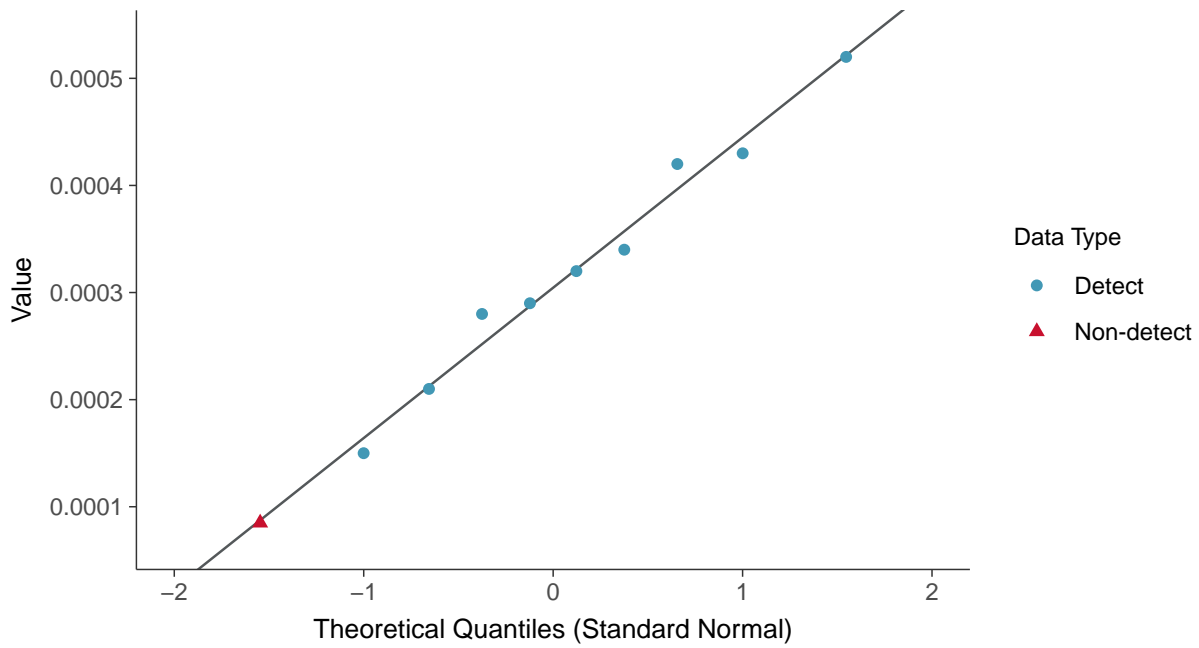
Beryllium, MW-02 (mg/L)





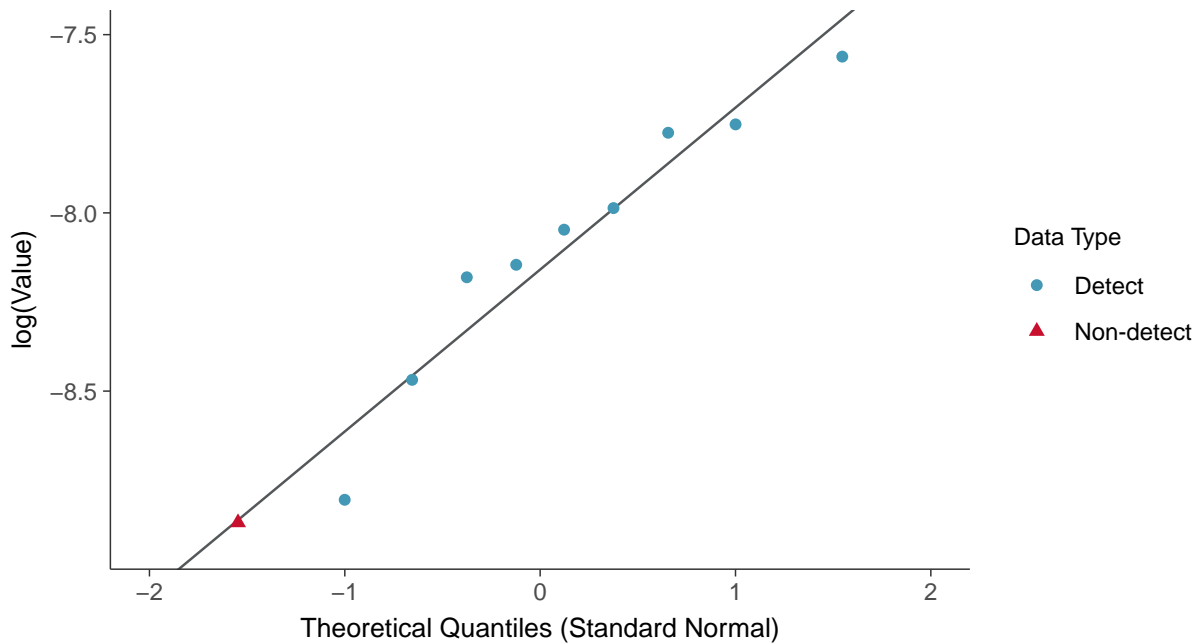
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-02 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

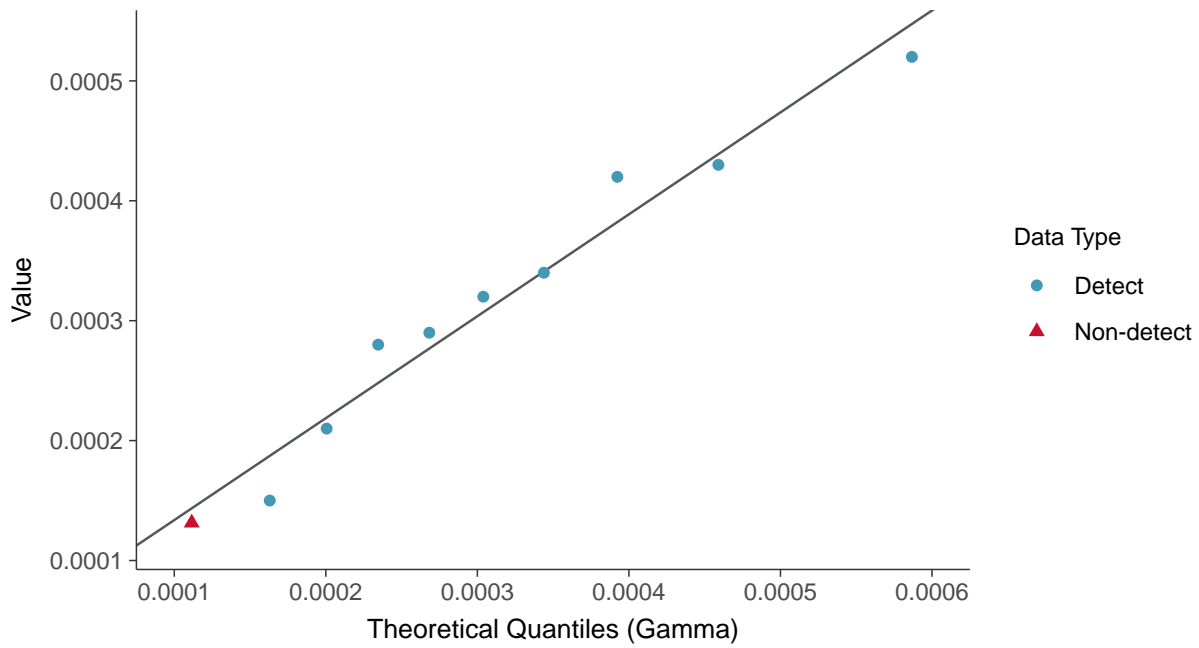
Beryllium, MW-02 (mg/L)





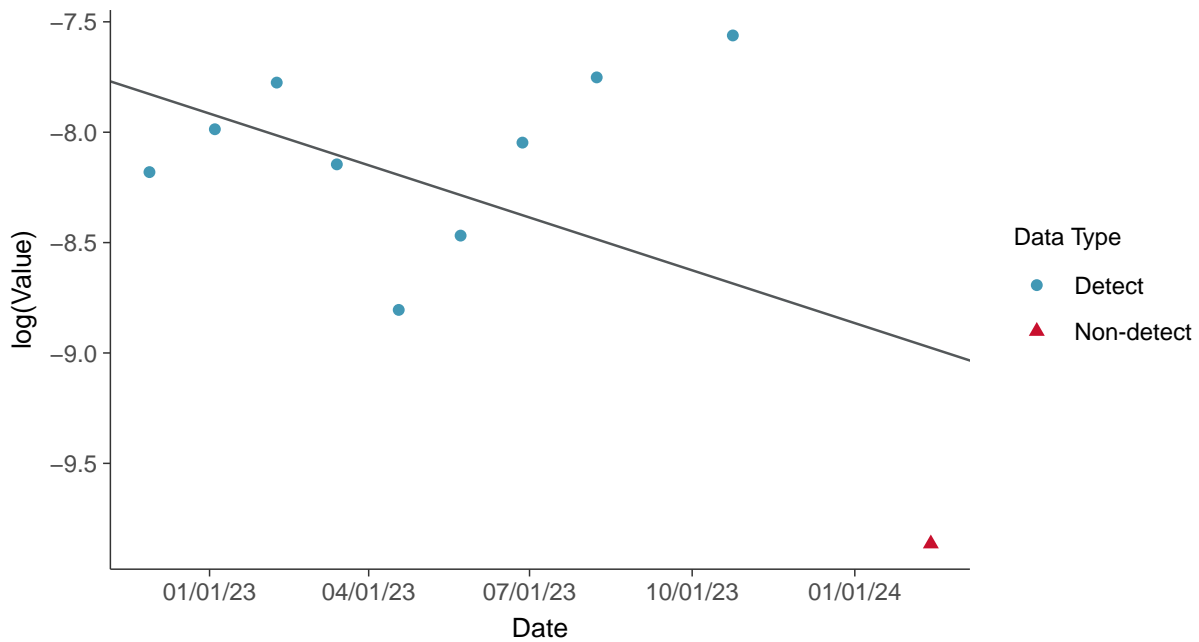
Gamma Q-Q plot using ROS Imputed Estimates

Beryllium, MW-02 (mg/L)



Trend Regression: Lognormal MLE

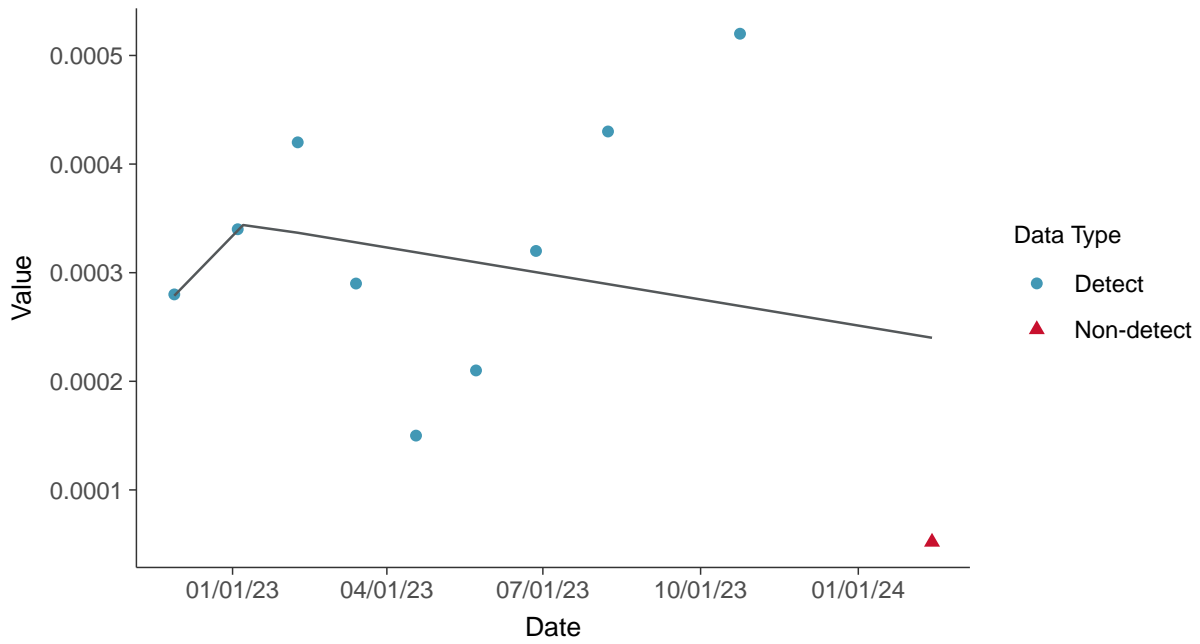
Beryllium, MW-02 (mg/L)





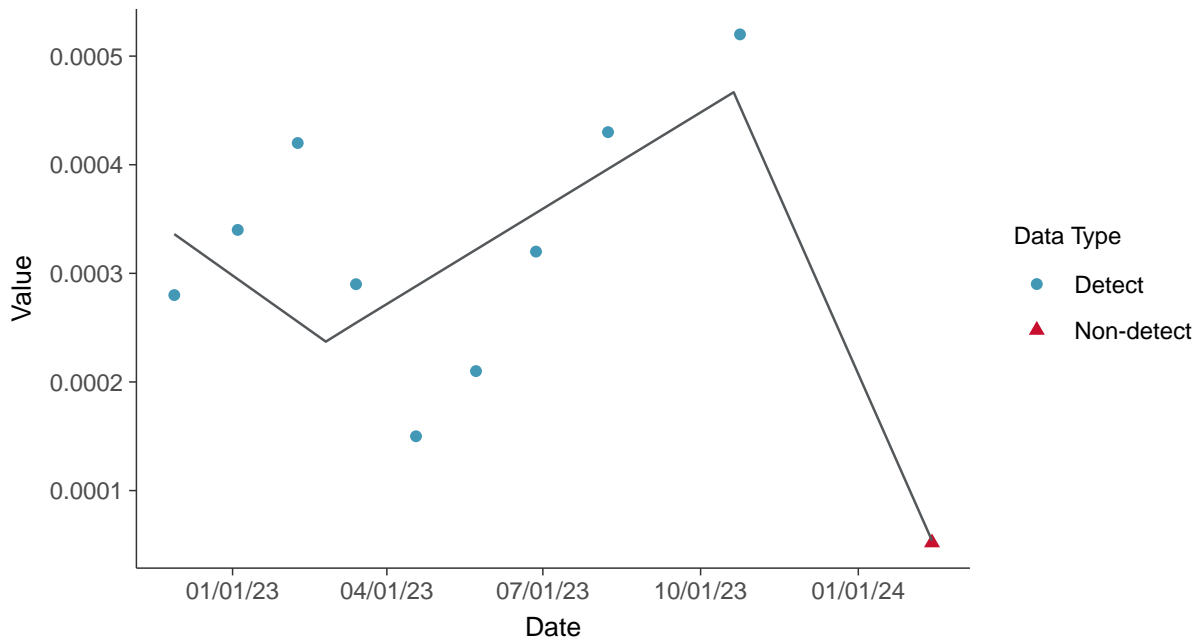
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-02 (mg/L)



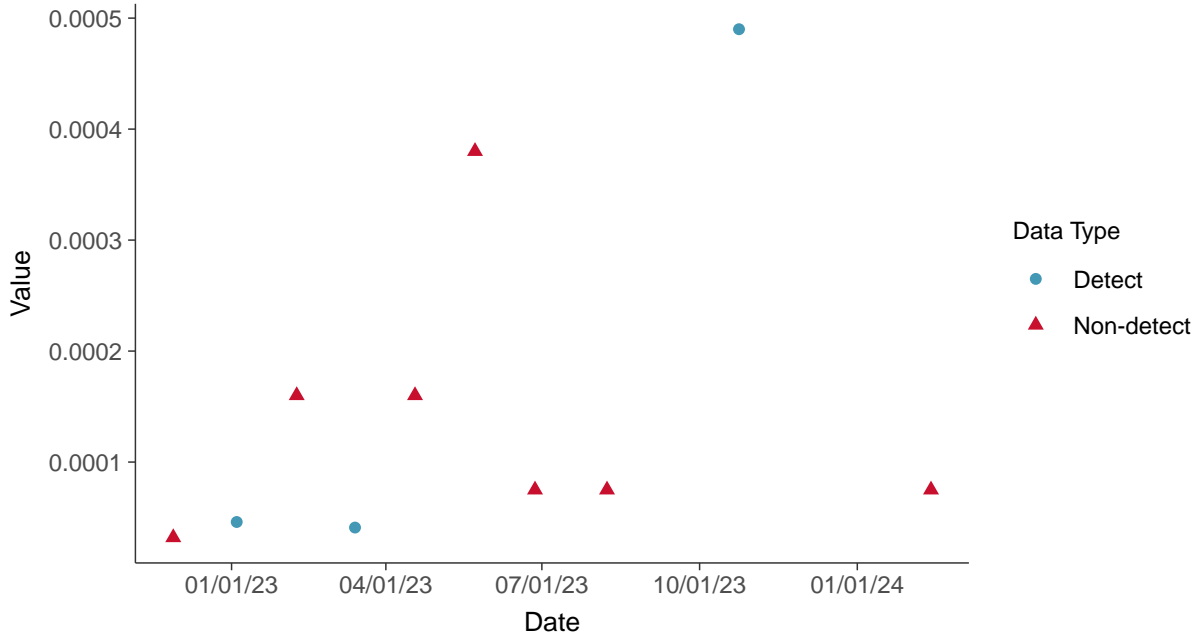


Appendix IV: Cadmium, MW-02

ID: 2_12_5_106

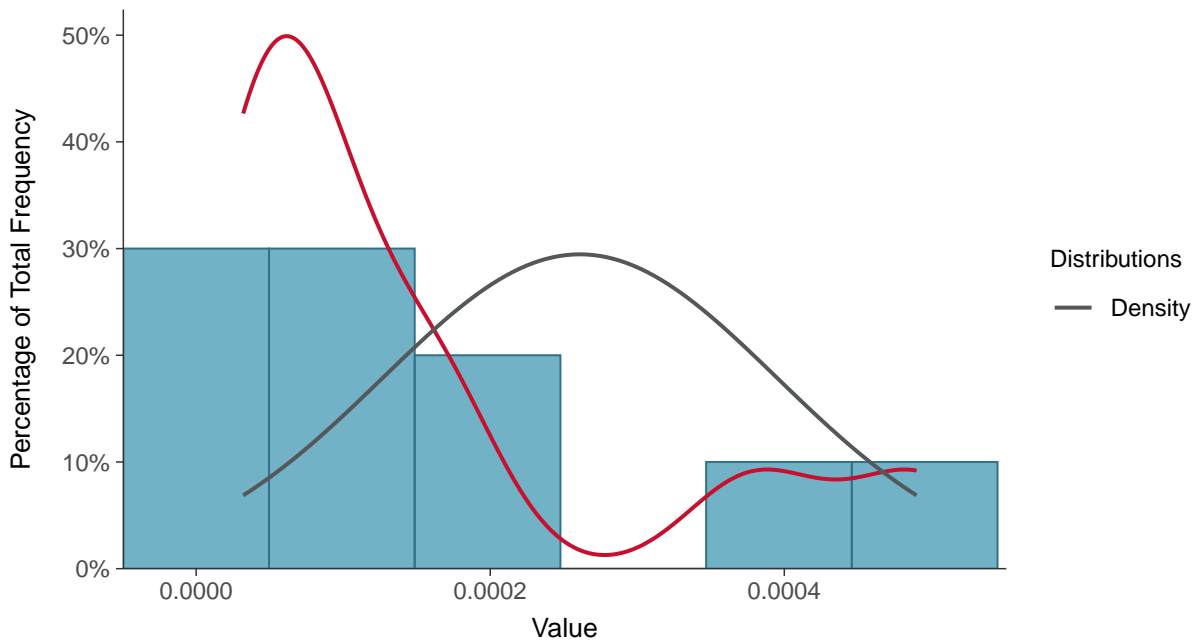
Scatter Plot

Cadmium, MW-02 (mg/L)



Histogram

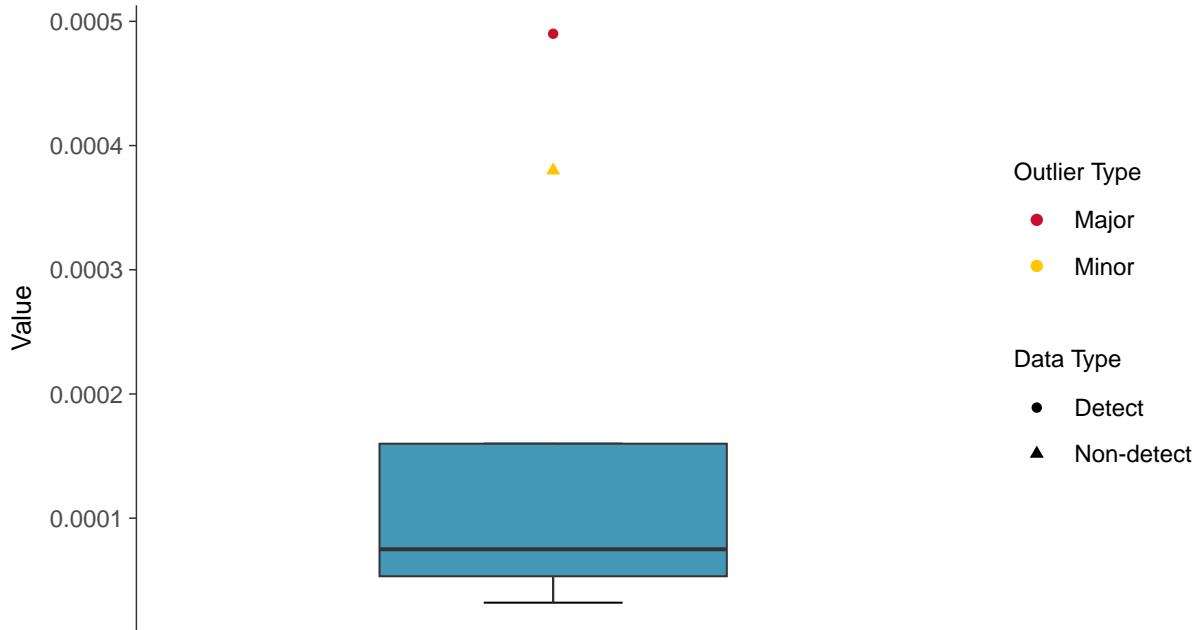
Cadmium, MW-02 (mg/L)





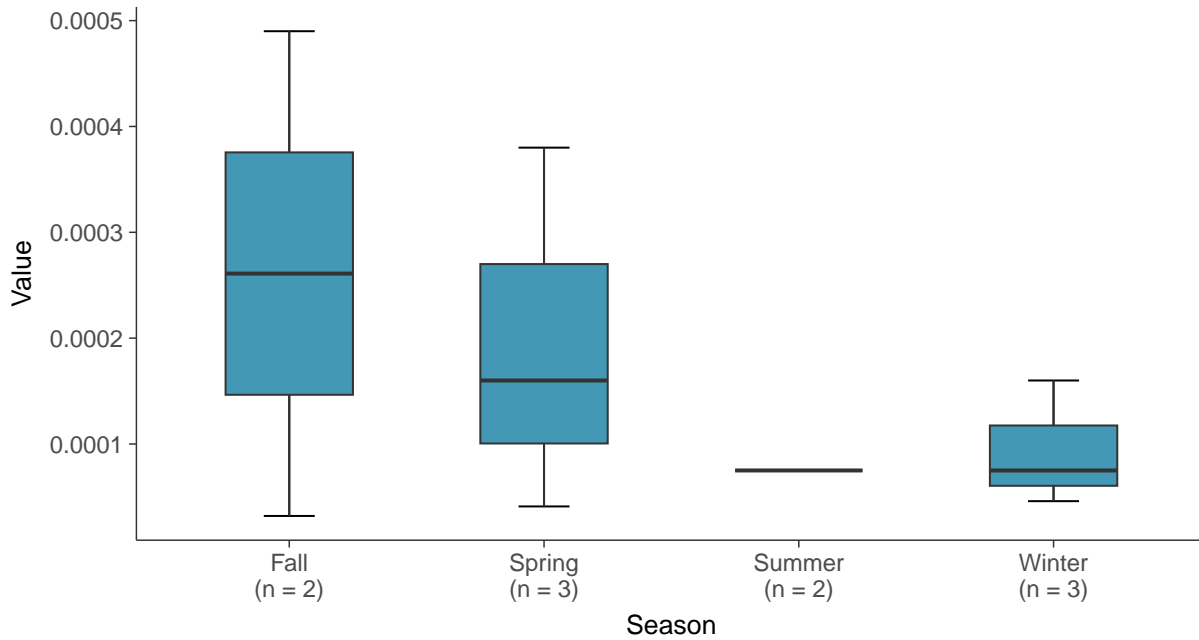
Boxplot

Cadmium, MW-02 (mg/L)



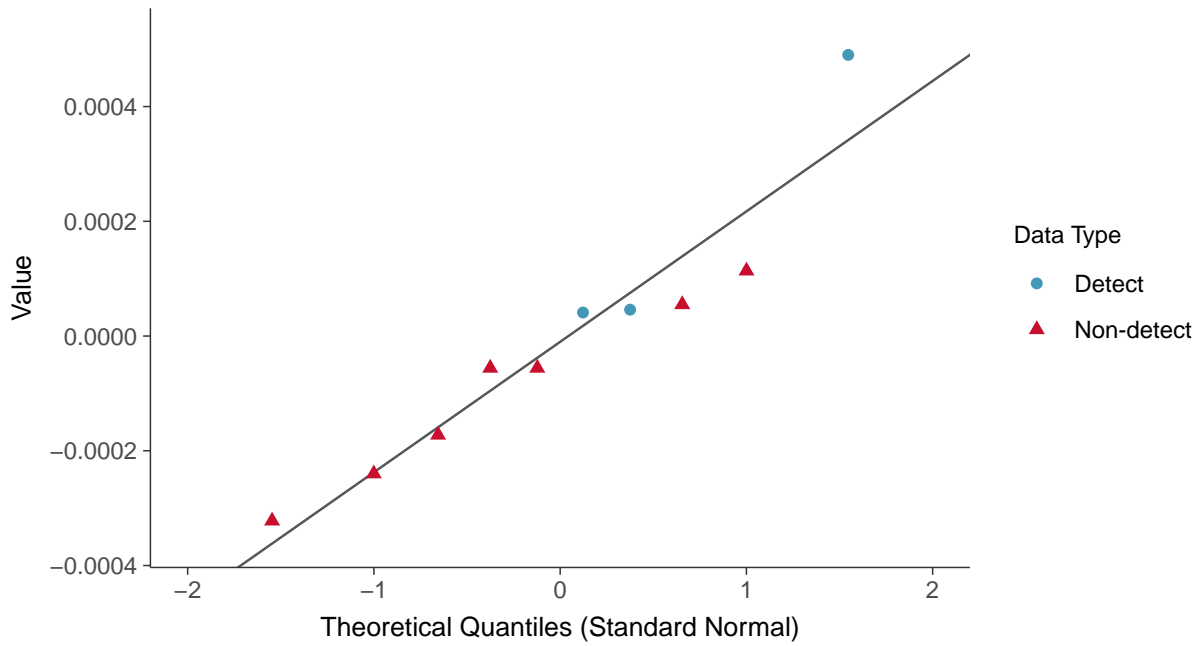
Boxplot by Season

Cadmium, MW-02 (mg/L)

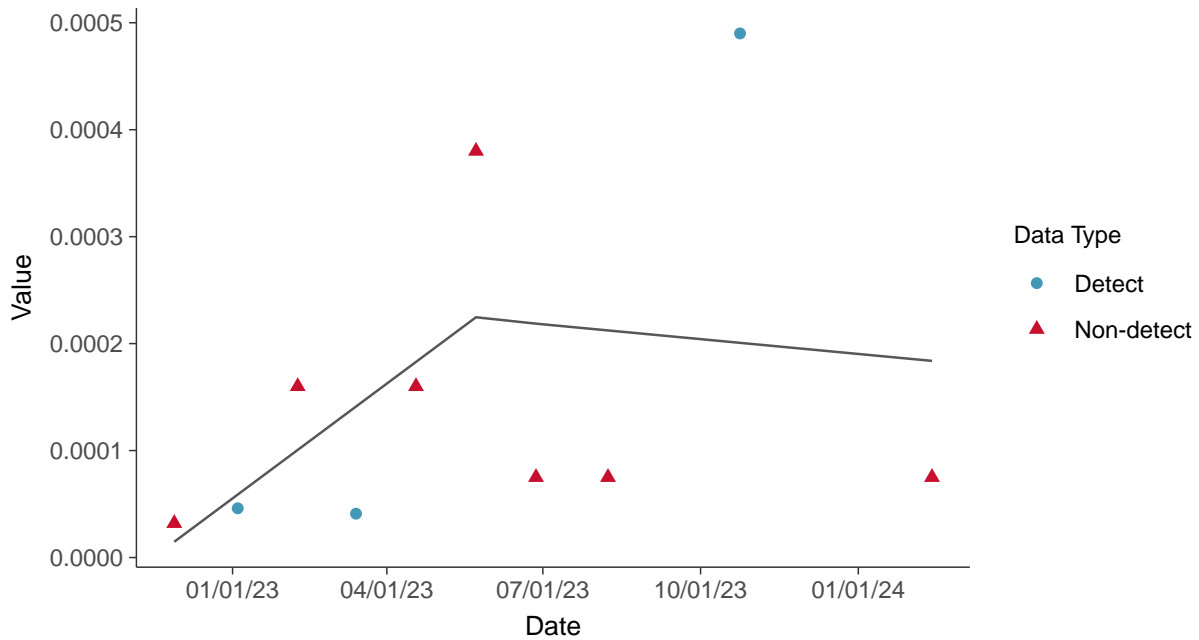




Normal Q-Q plot using ROS Imputed Estimates
Cadmium, MW-02 (mg/L)



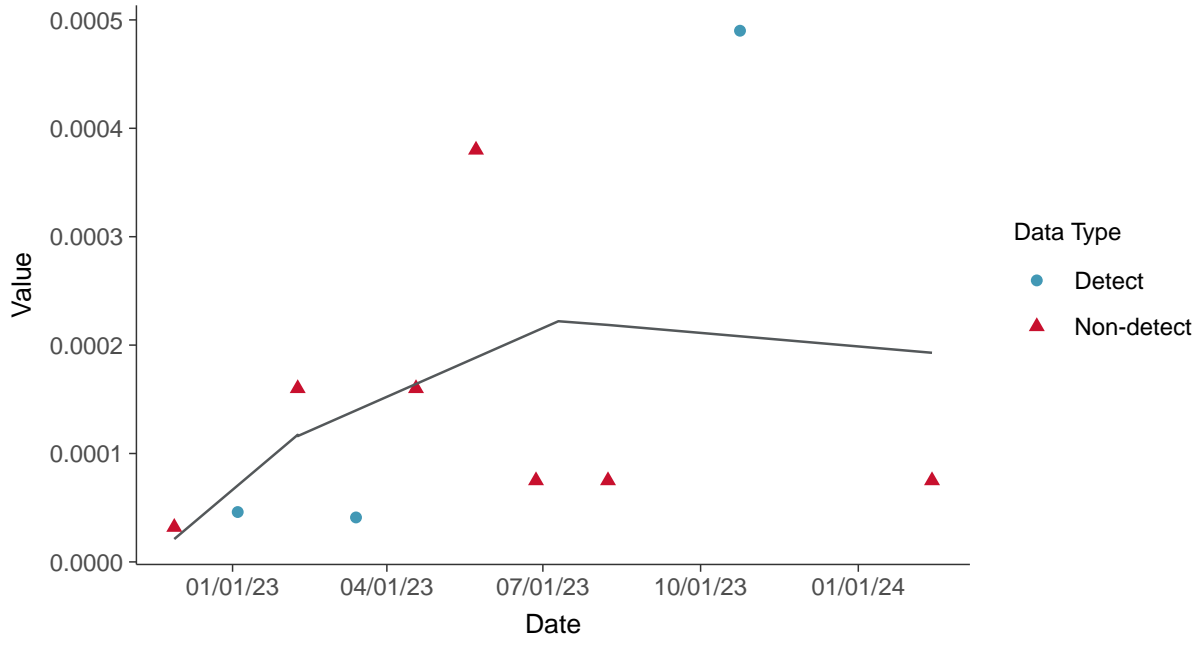
Trend Regression: Piecewise Linear-Linear
Cadmium, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-02 (mg/L)



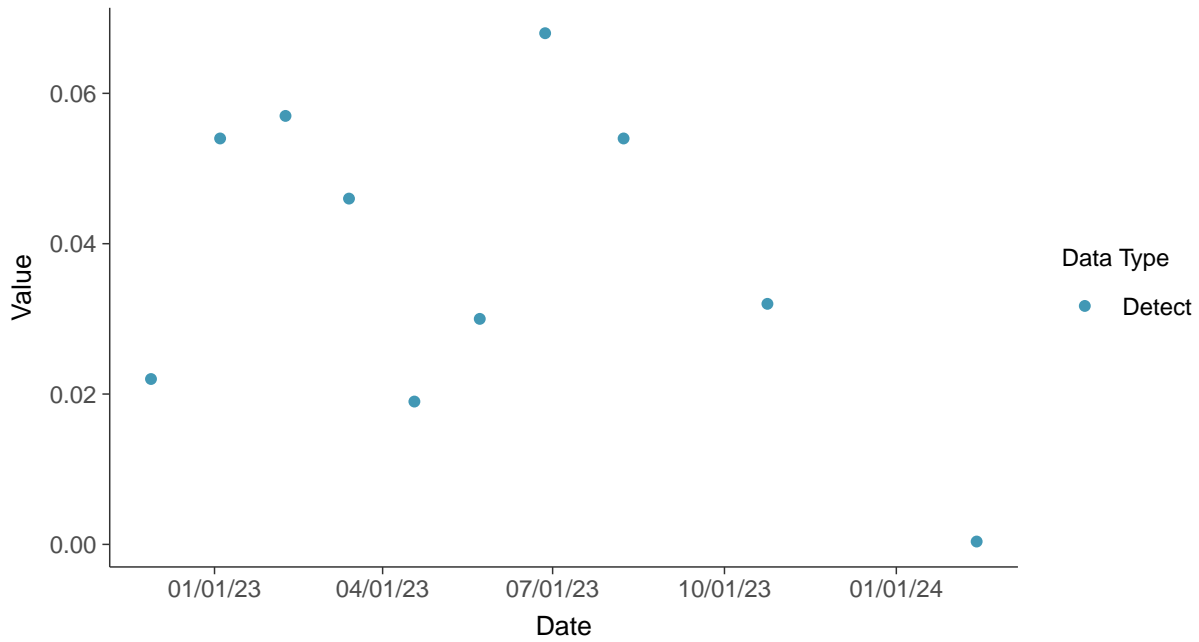


Appendix IV: Chromium, Total, MW-02

ID: 2_12_5_109

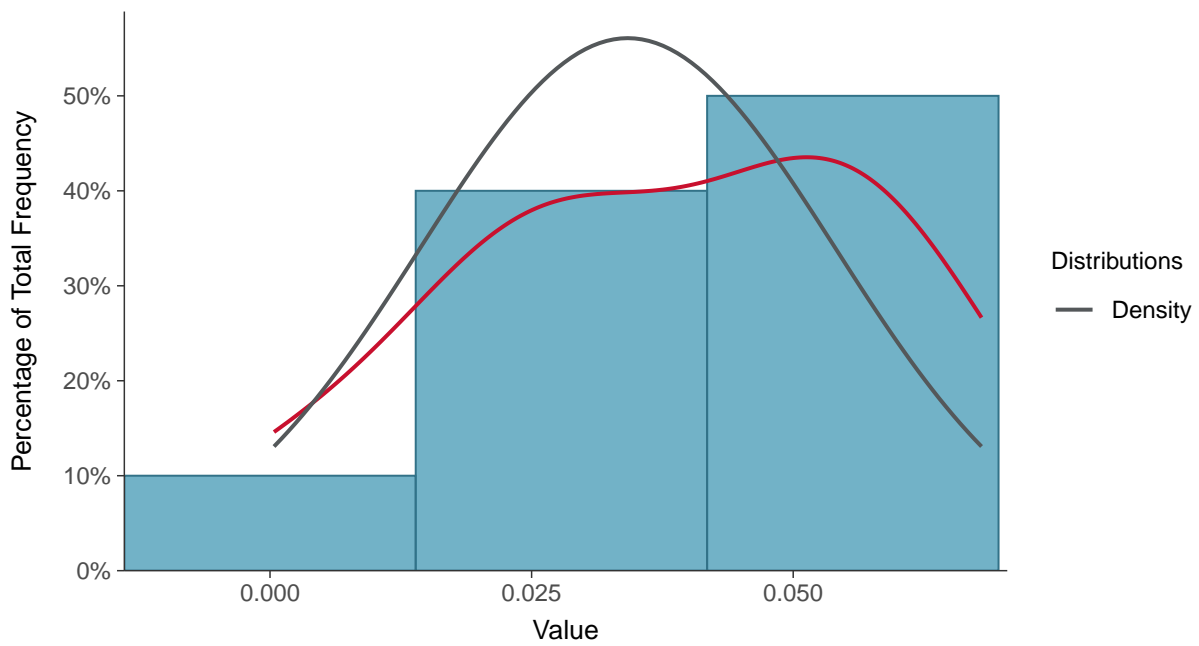
Scatter Plot

Chromium, Total, MW-02 (mg/L)



Histogram

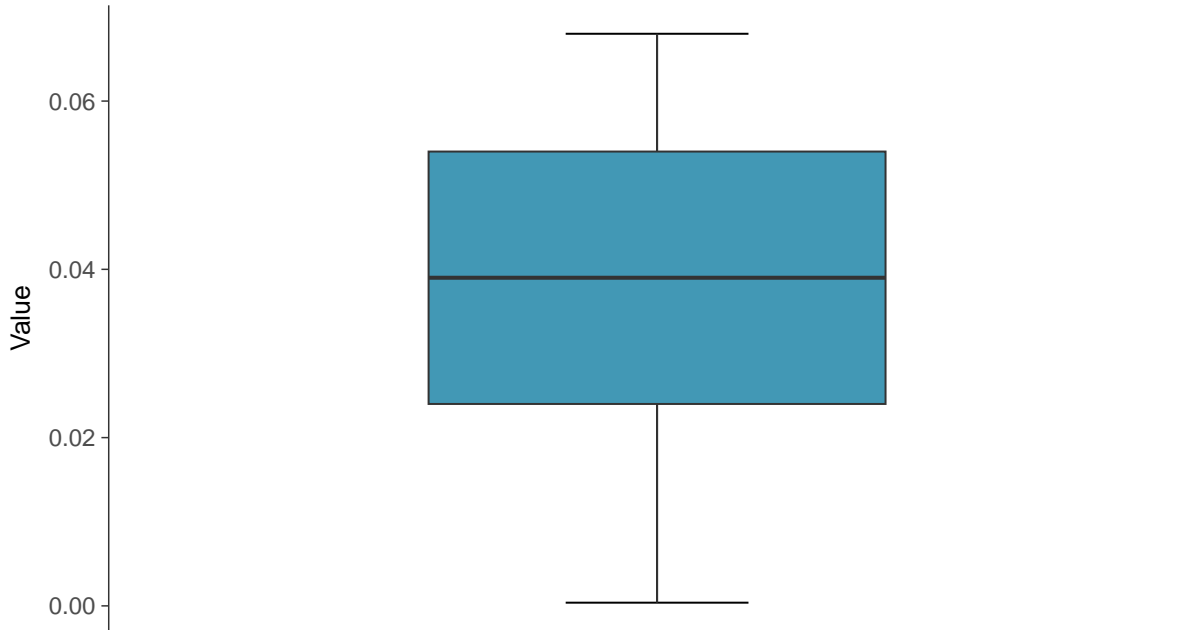
Chromium, Total, MW-02 (mg/L)





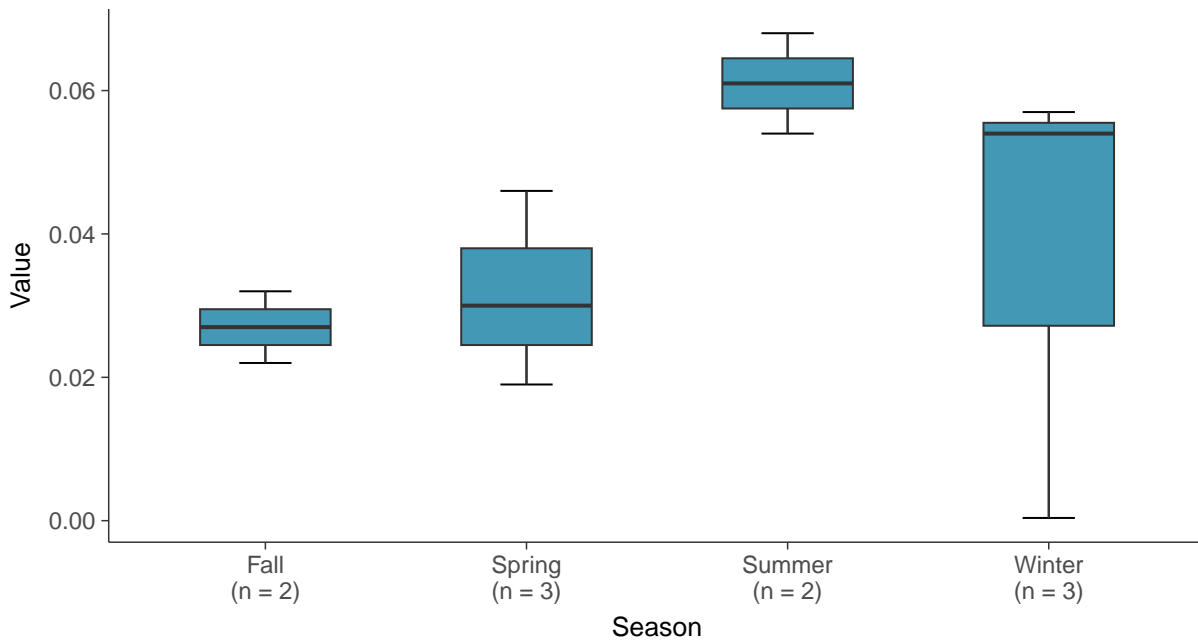
Boxplot

Chromium, Total, MW-02 (mg/L)



Boxplot by Season

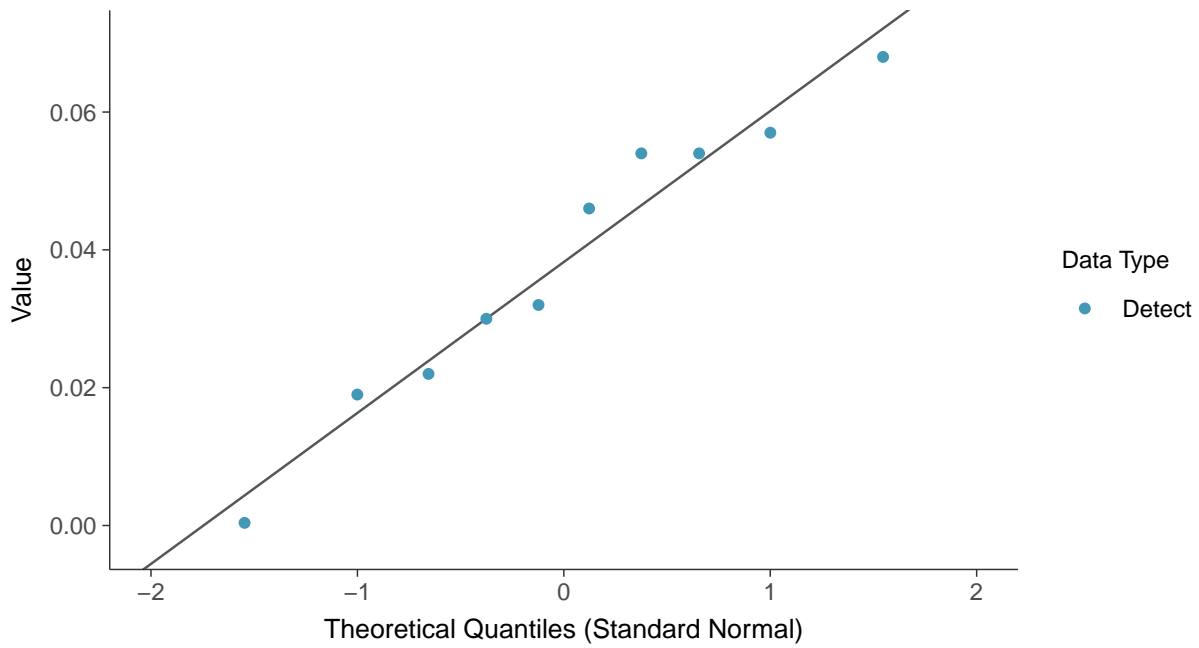
Chromium, Total, MW-02 (mg/L)





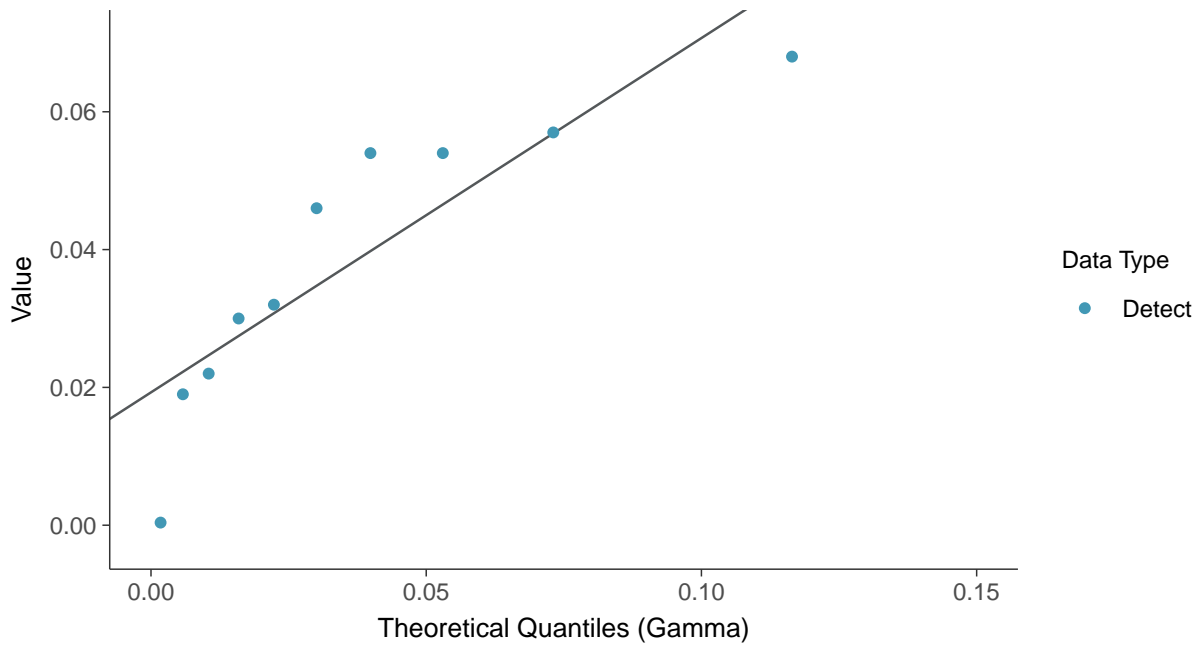
Normal Q-Q plot

Chromium, Total, MW-02 (mg/L)



Gamma Q-Q plot

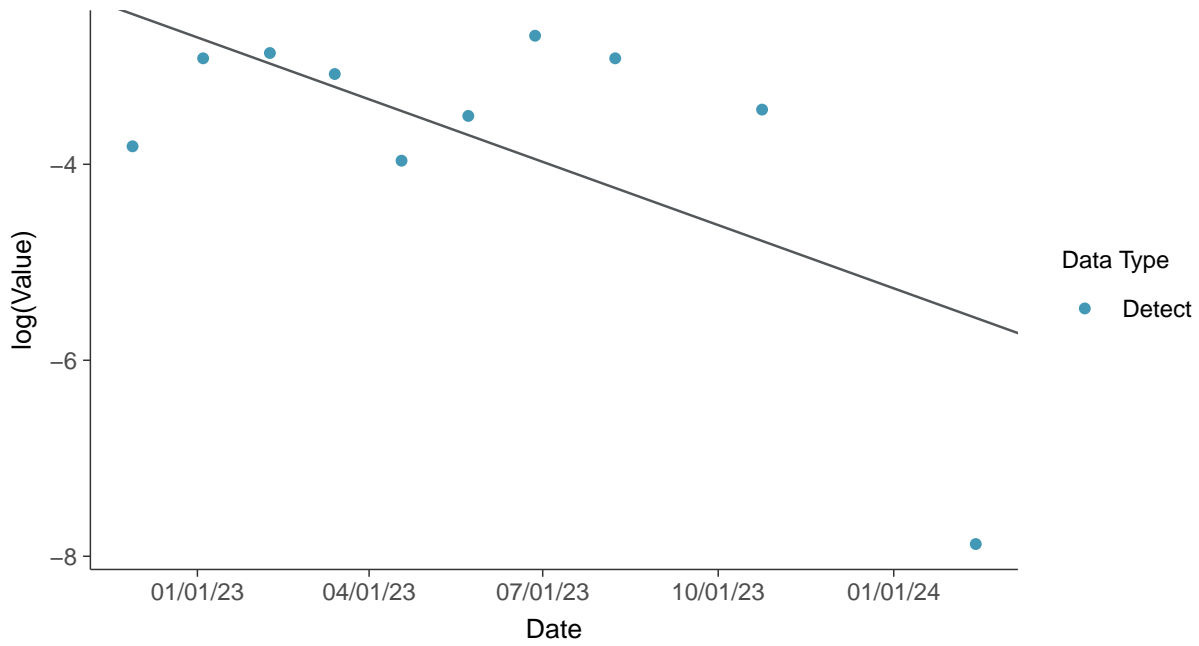
Chromium, Total, MW-02 (mg/L)





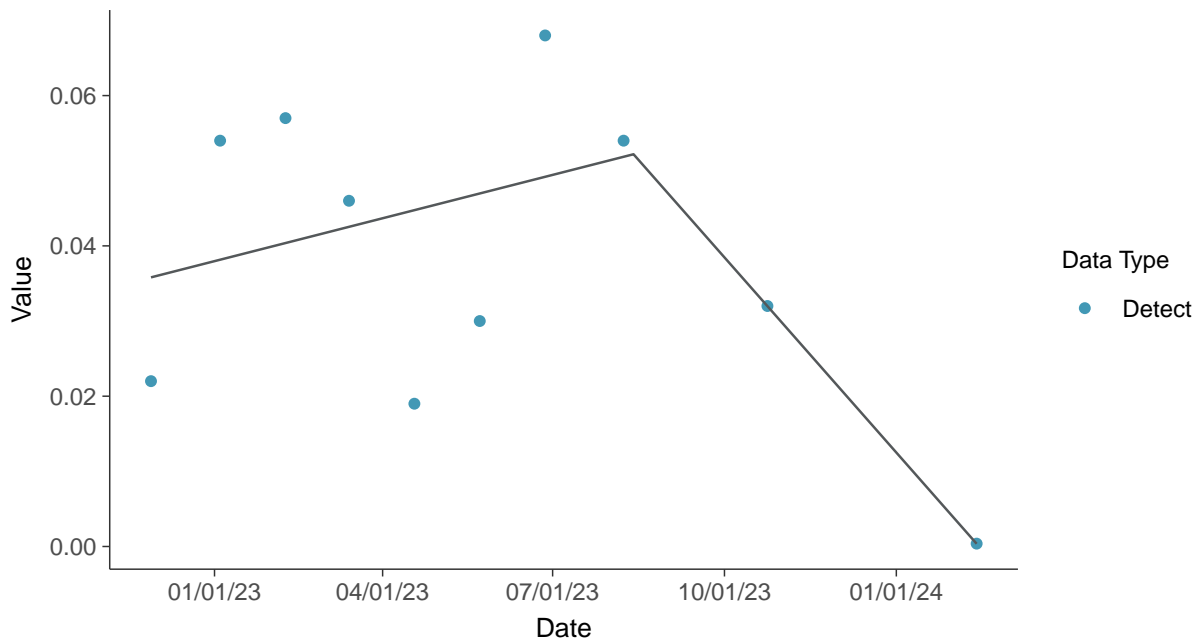
Trend Regression: Lognormal MLE

Chromium, Total, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-02 (mg/L)



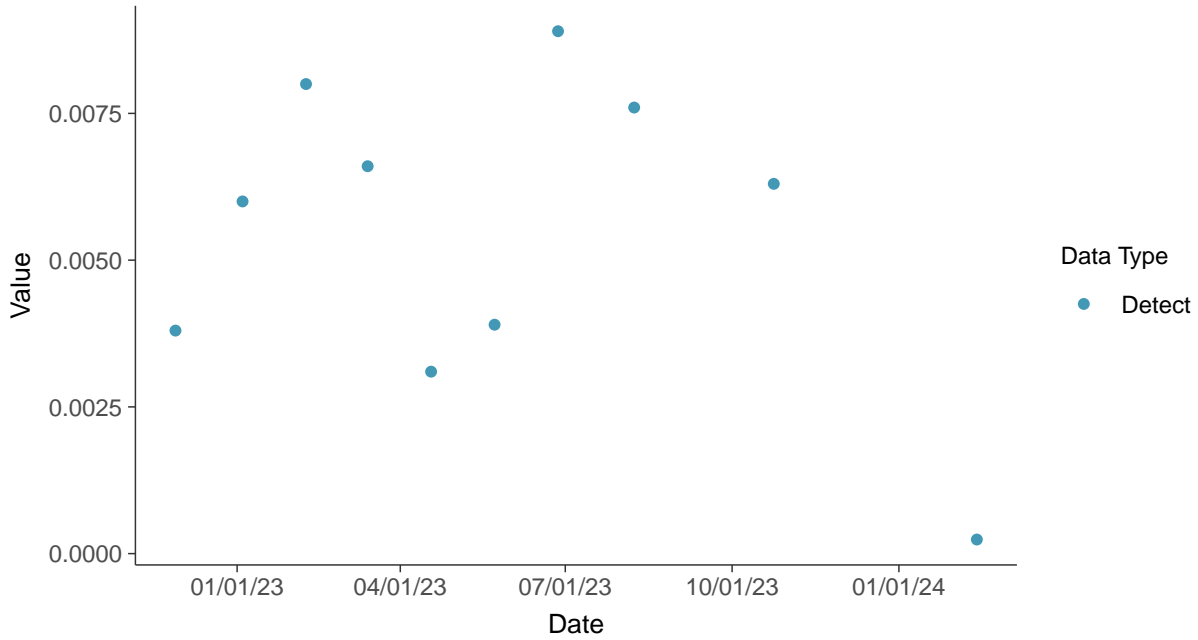


Appendix IV: Cobalt, MW-02

ID: 2_12_5_110

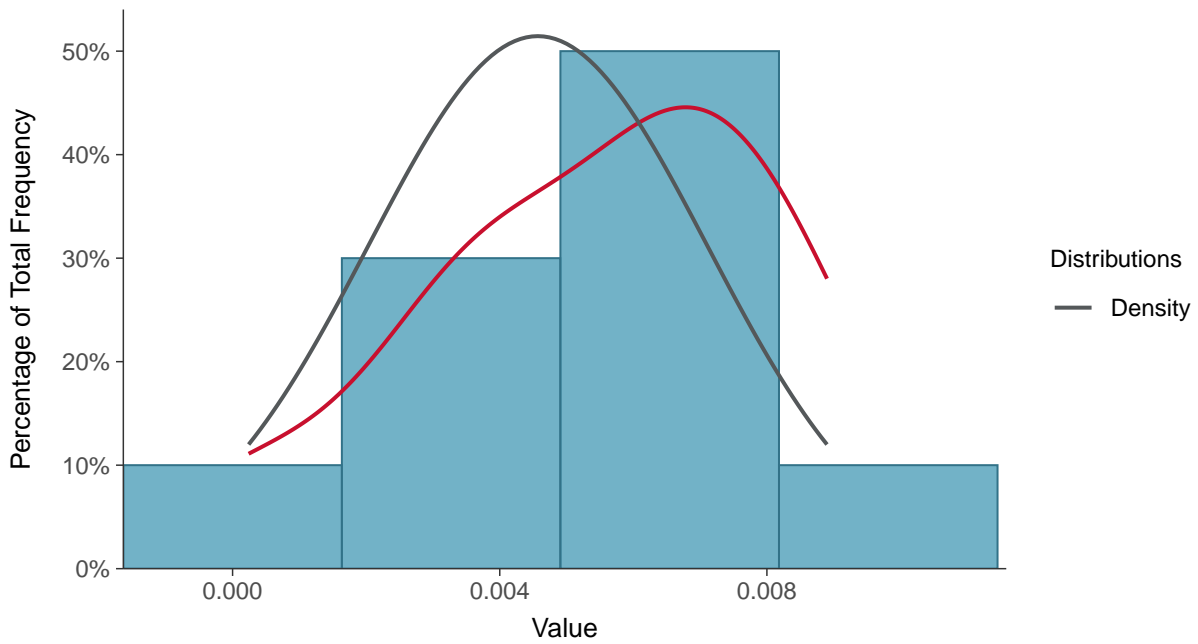
Scatter Plot

Cobalt, MW-02 (mg/L)



Histogram

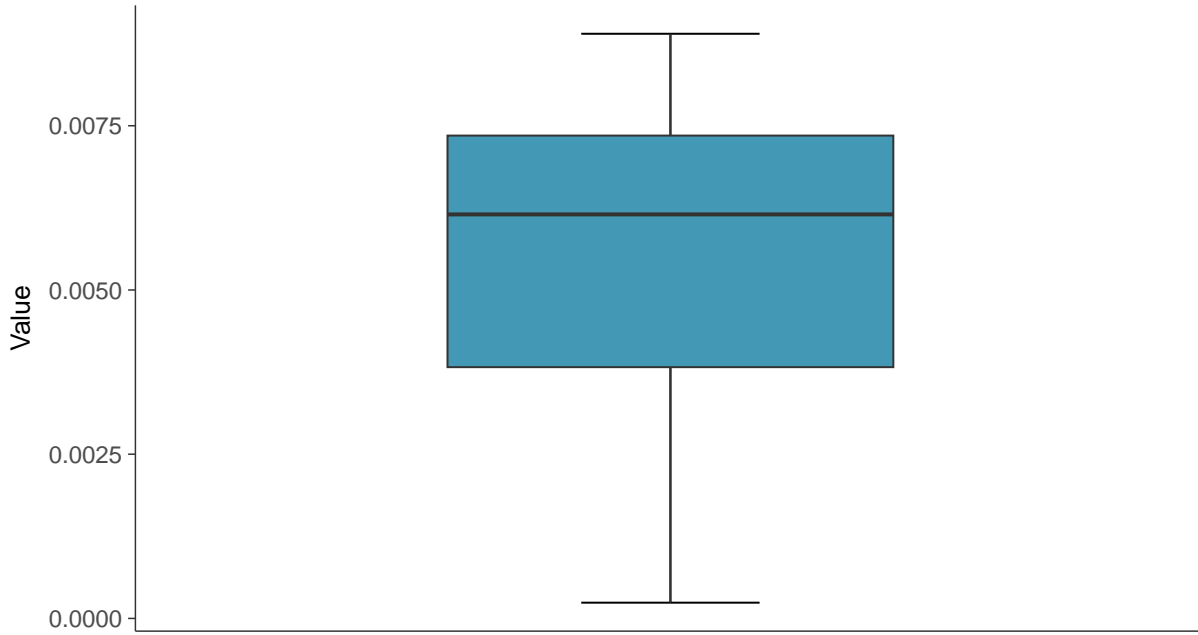
Cobalt, MW-02 (mg/L)





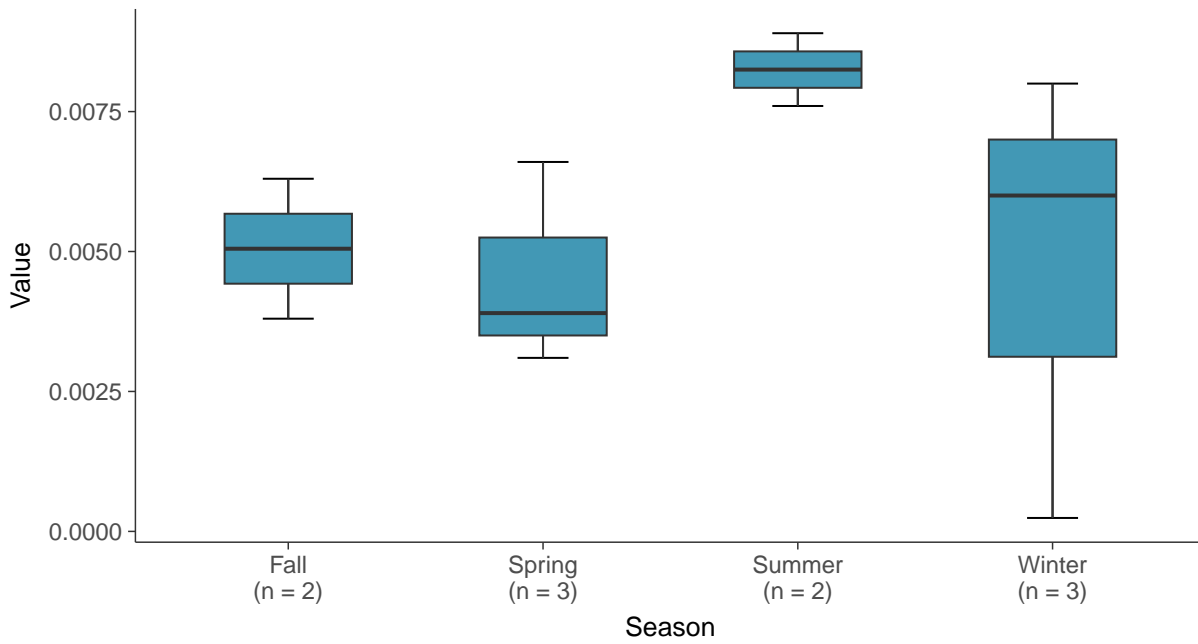
Boxplot

Cobalt, MW-02 (mg/L)



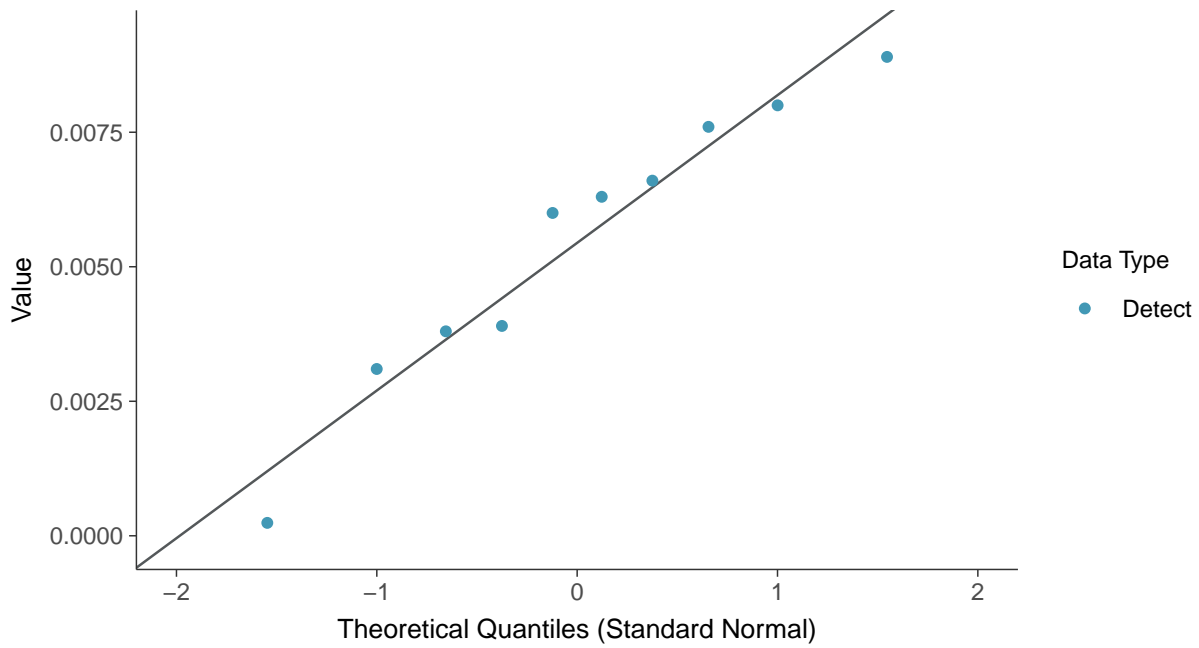
Boxplot by Season

Cobalt, MW-02 (mg/L)

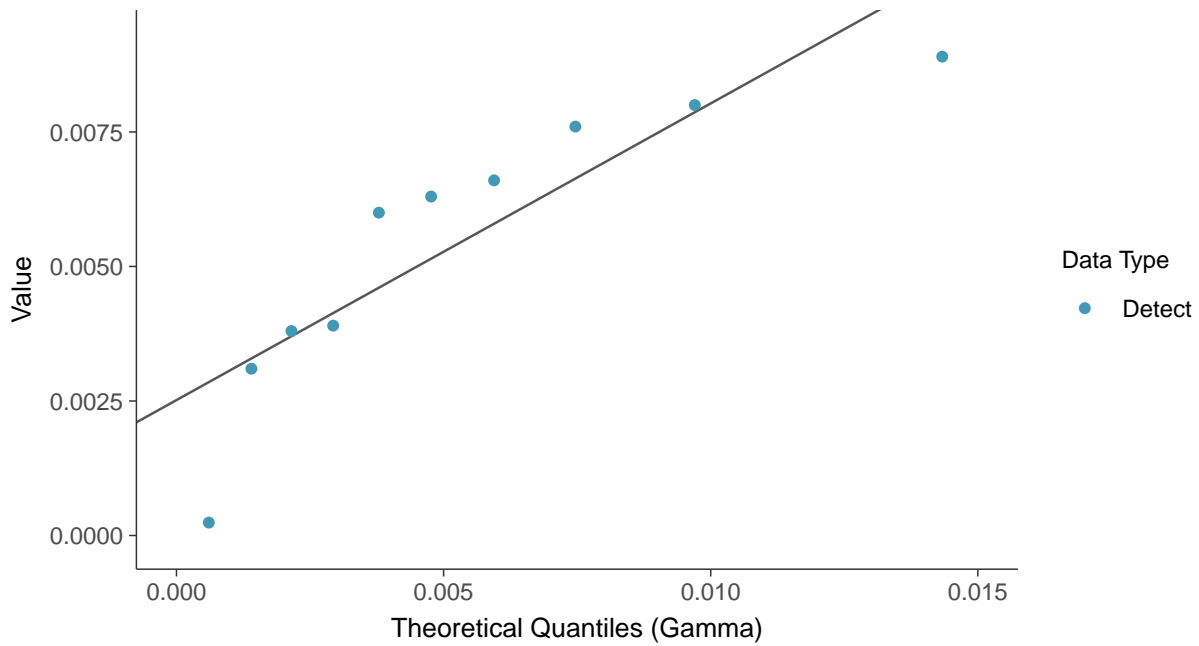




Normal Q-Q plot
Cobalt, MW-02 (mg/L)



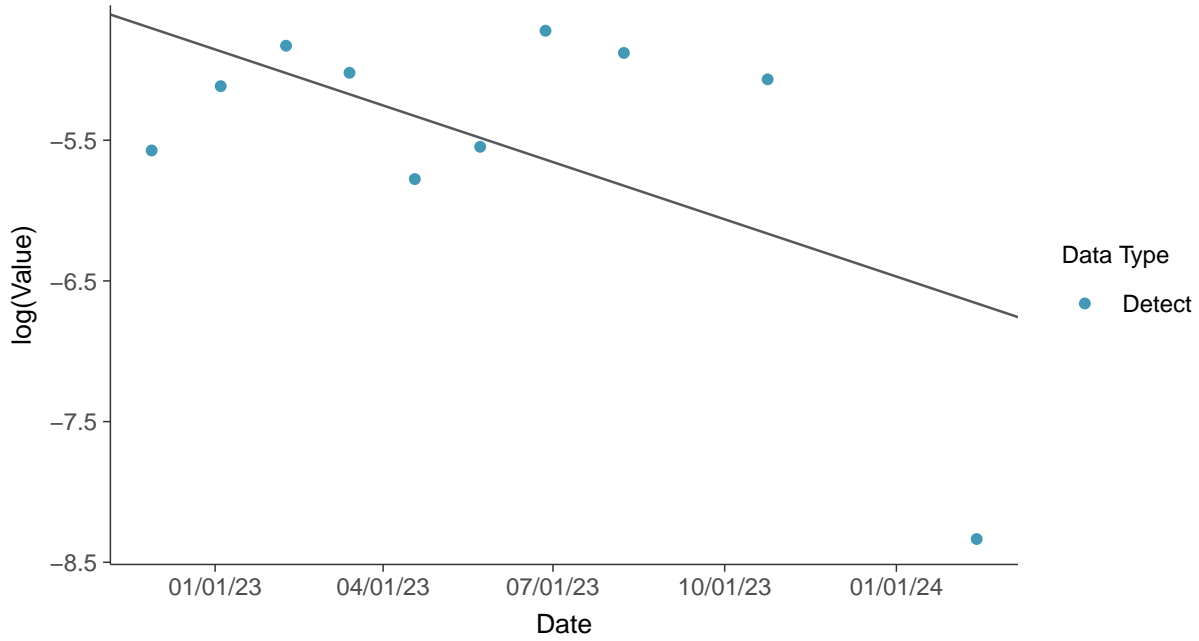
Gamma Q-Q plot
Cobalt, MW-02 (mg/L)





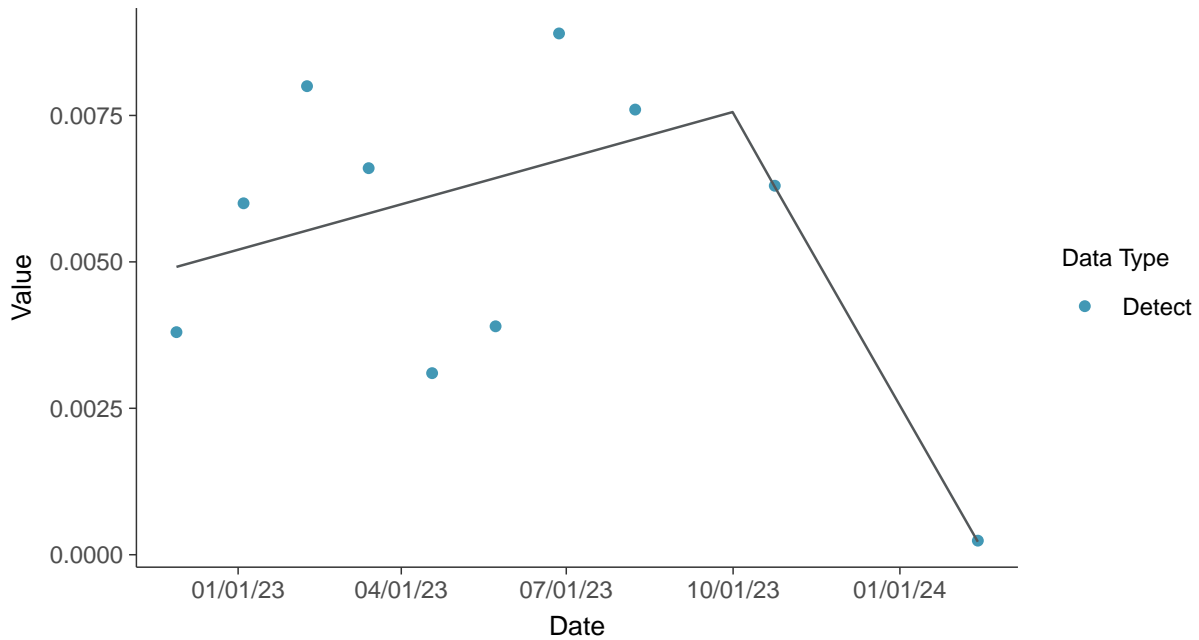
Trend Regression: Lognormal MLE

Cobalt, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, MW-02 (mg/L)



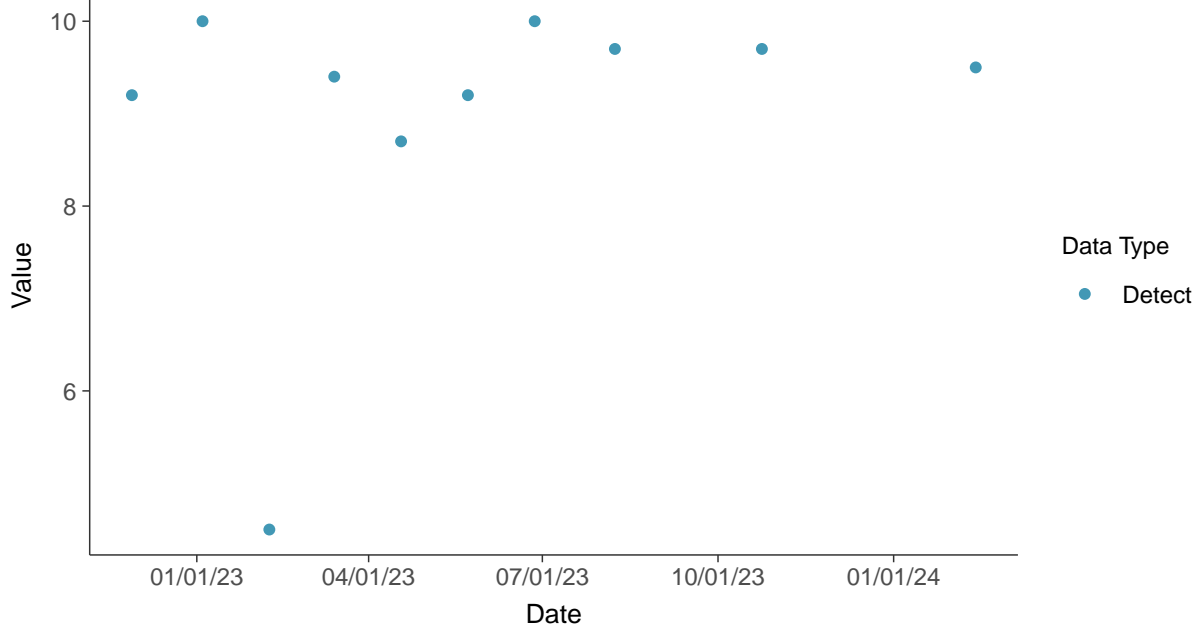


Appendix IV: Fluoride (App IV), MW-02

ID: 2_12_5_113

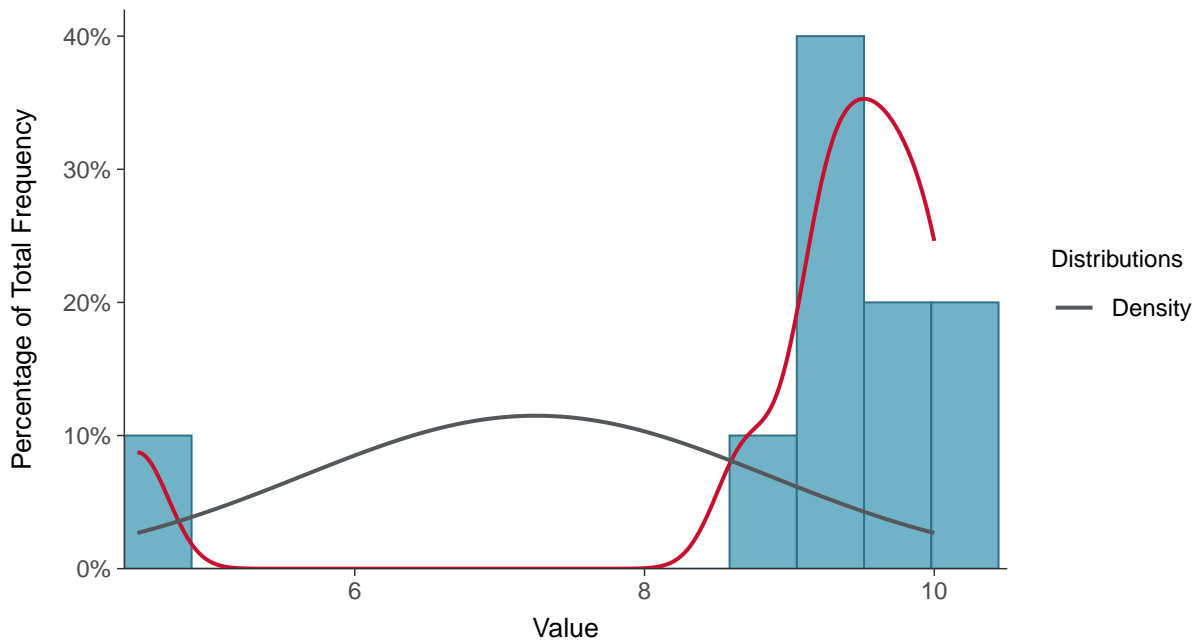
Scatter Plot

Fluoride (App IV), MW-02 (mg/L)



Histogram

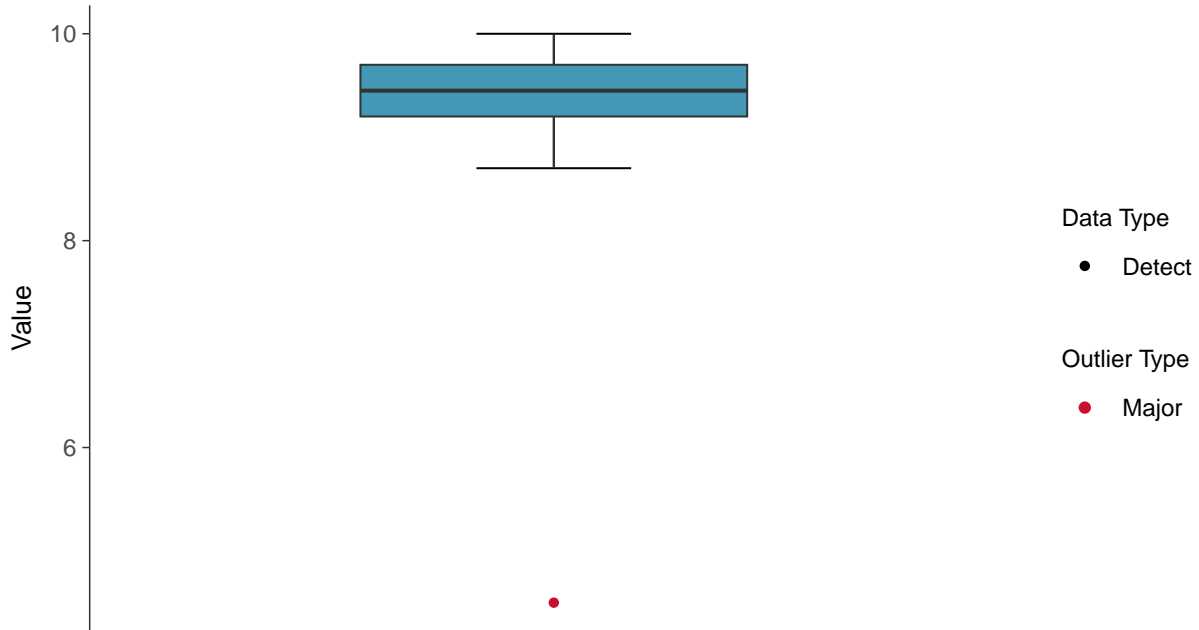
Fluoride (App IV), MW-02 (mg/L)





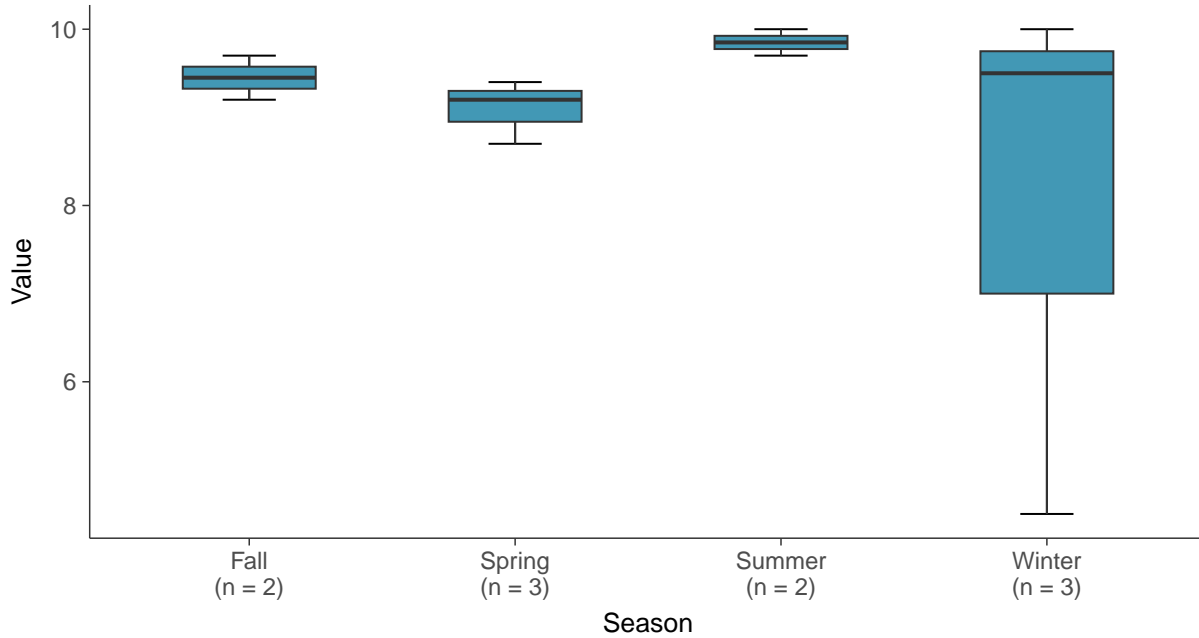
Boxplot

Fluoride (App IV), MW-02 (mg/L)



Boxplot by Season

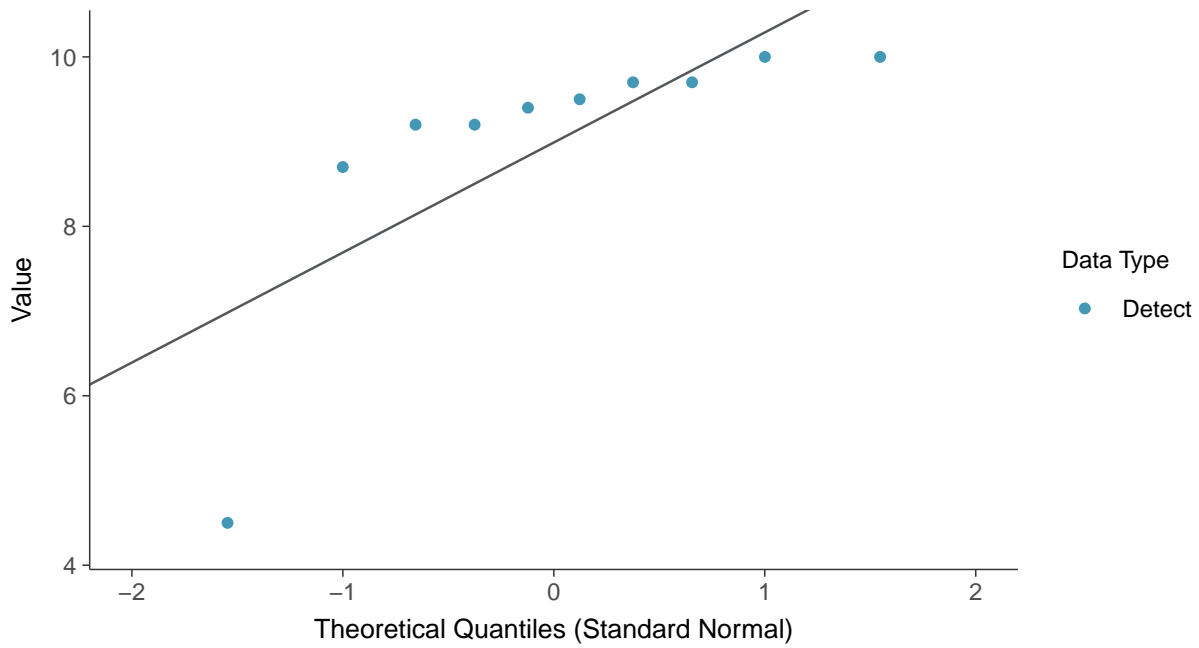
Fluoride (App IV), MW-02 (mg/L)





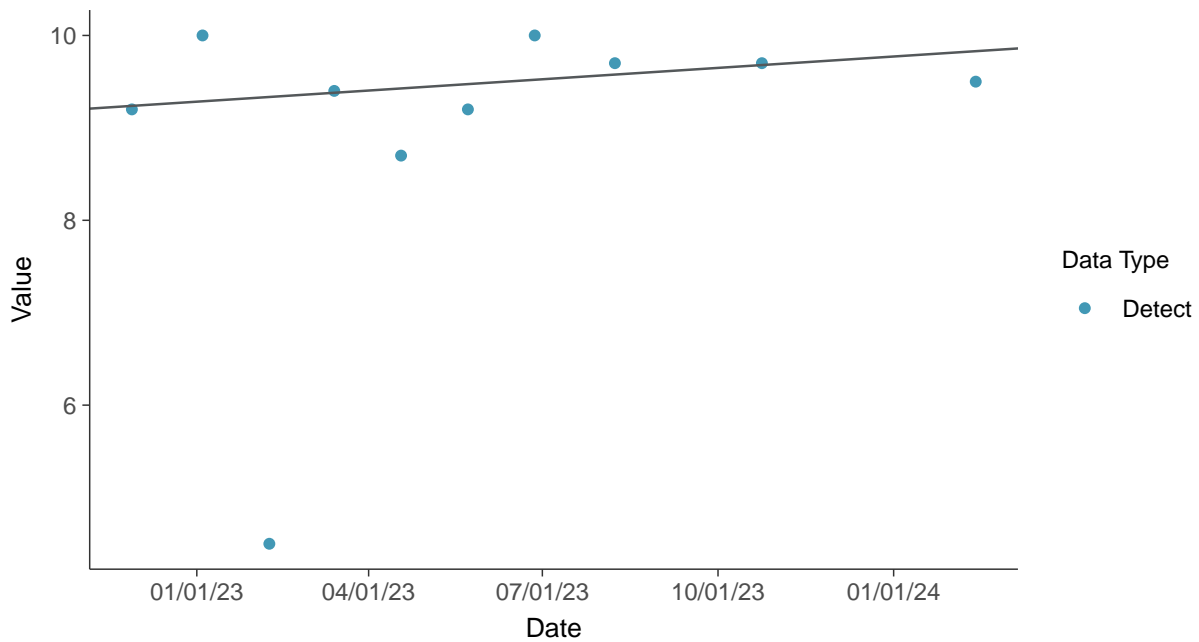
Normal Q-Q plot

Fluoride (App IV), MW-02 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

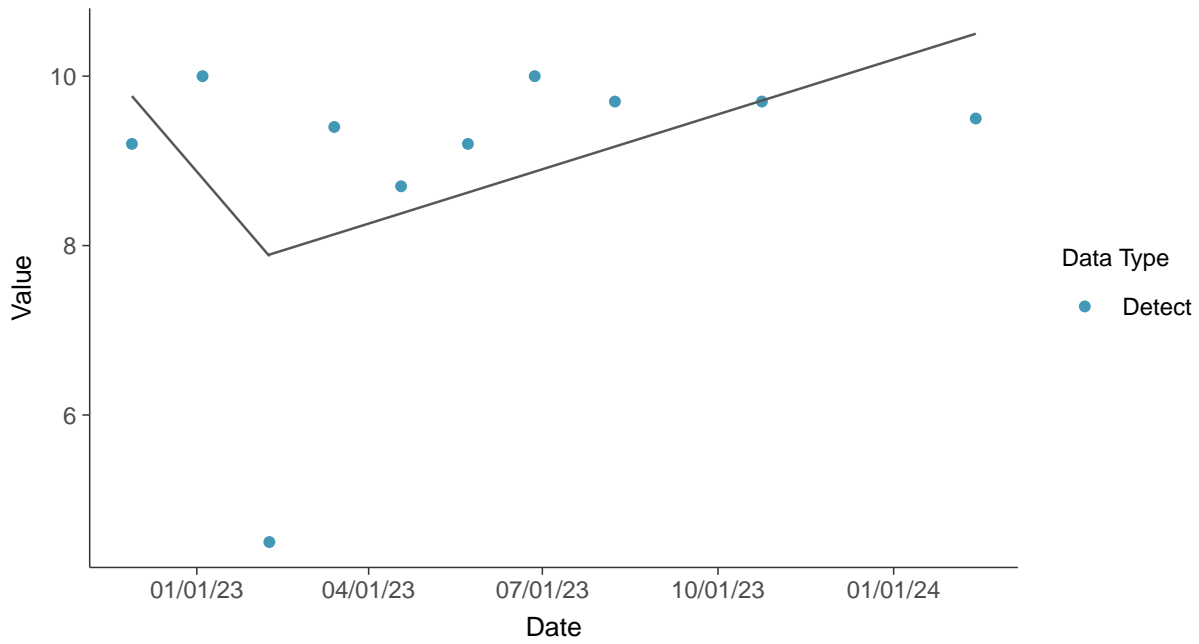
Fluoride (App IV), MW-02 (mg/L)





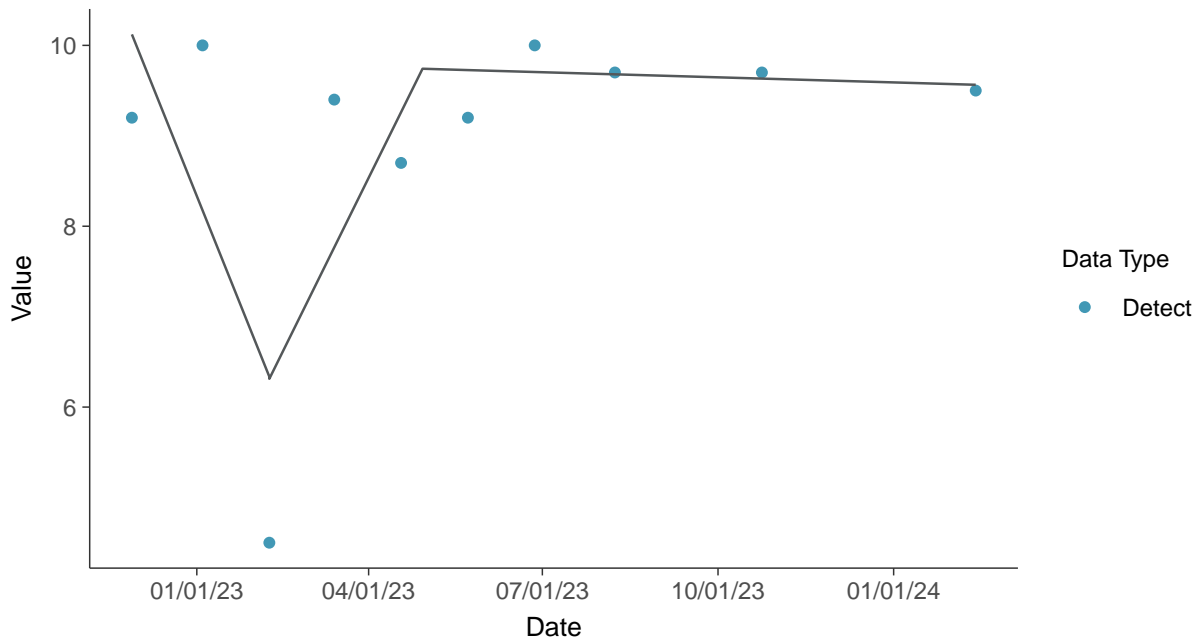
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride (App IV), MW-02 (mg/L)



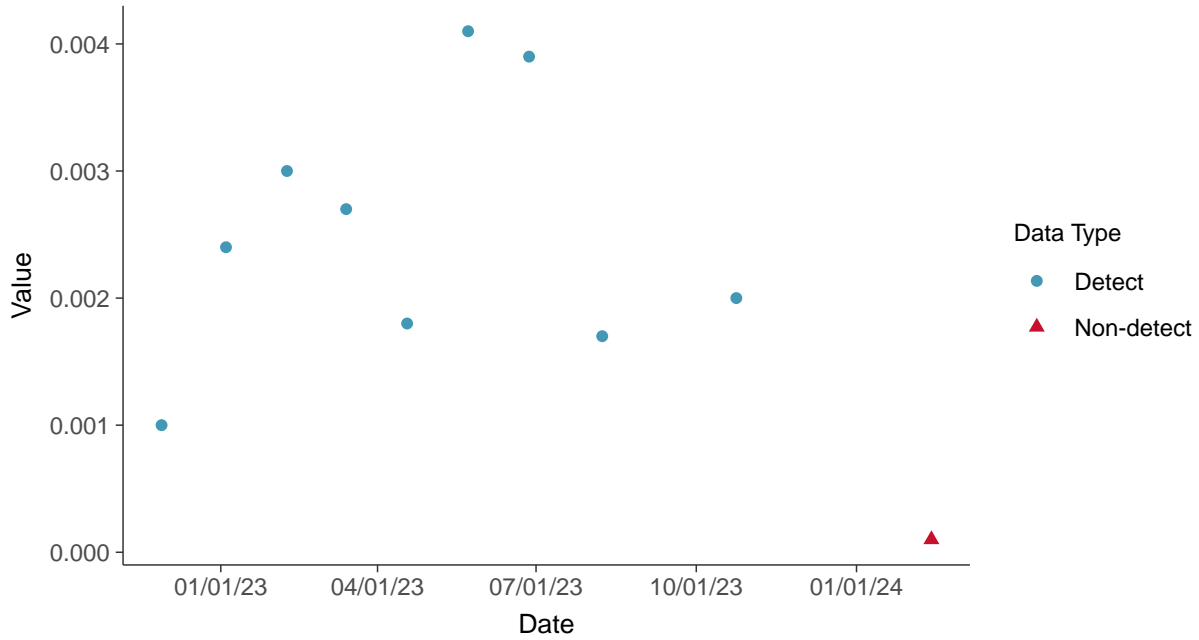


Appendix IV: Lead, MW-02

ID: 2_12_5_115

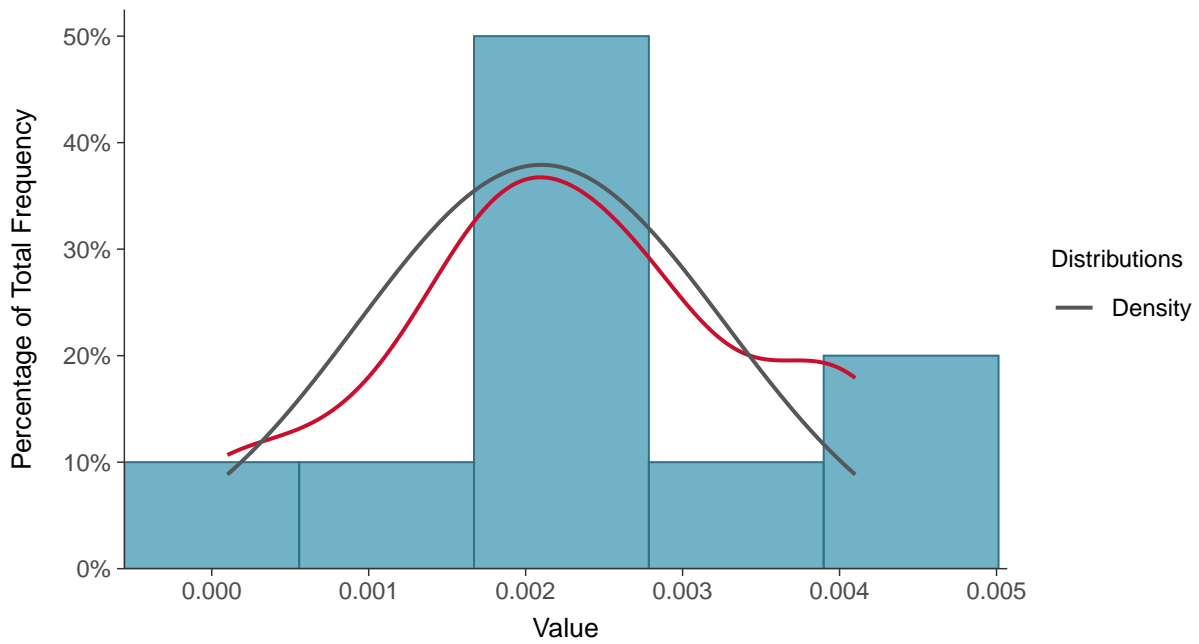
Scatter Plot

Lead, MW-02 (mg/L)



Histogram

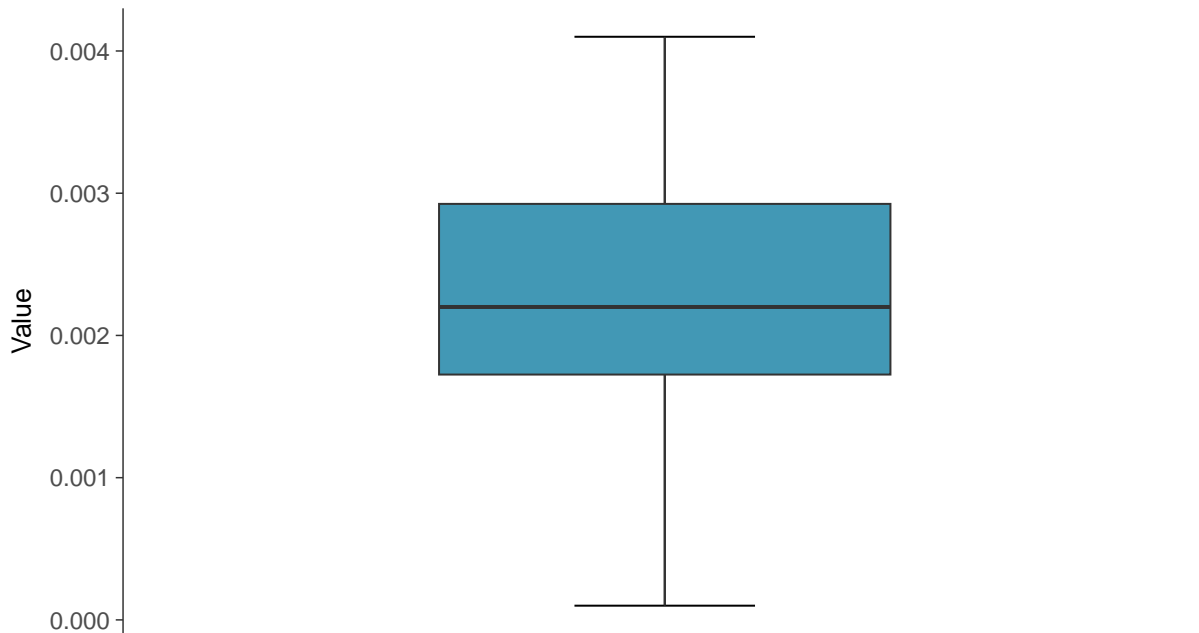
Lead, MW-02 (mg/L)





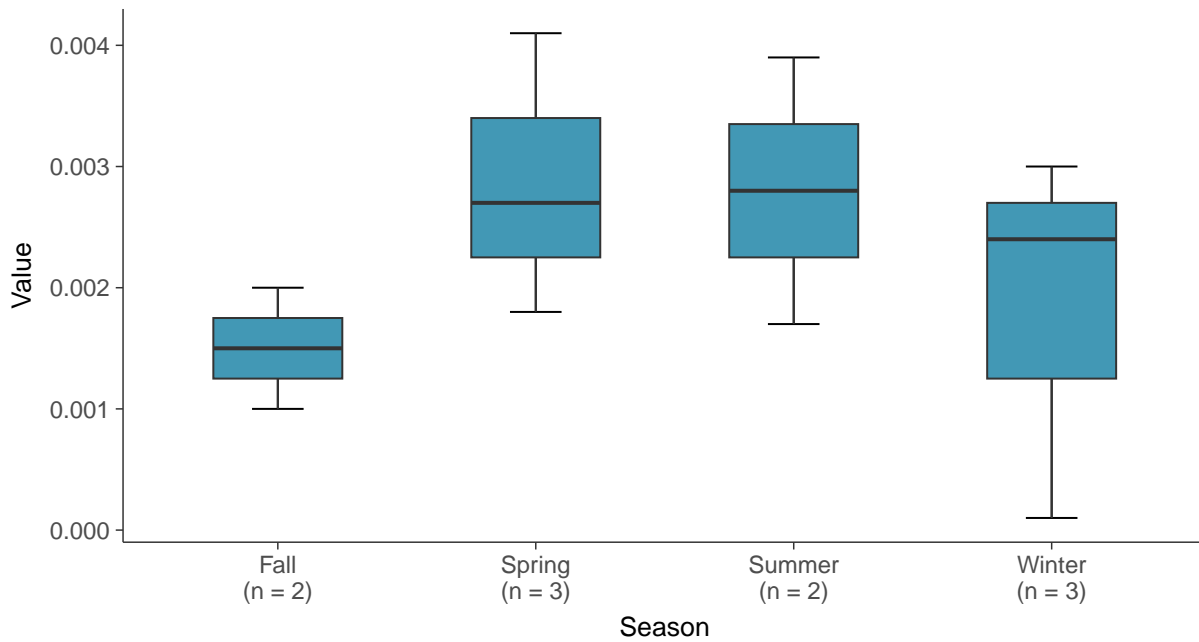
Boxplot

Lead, MW-02 (mg/L)



Boxplot by Season

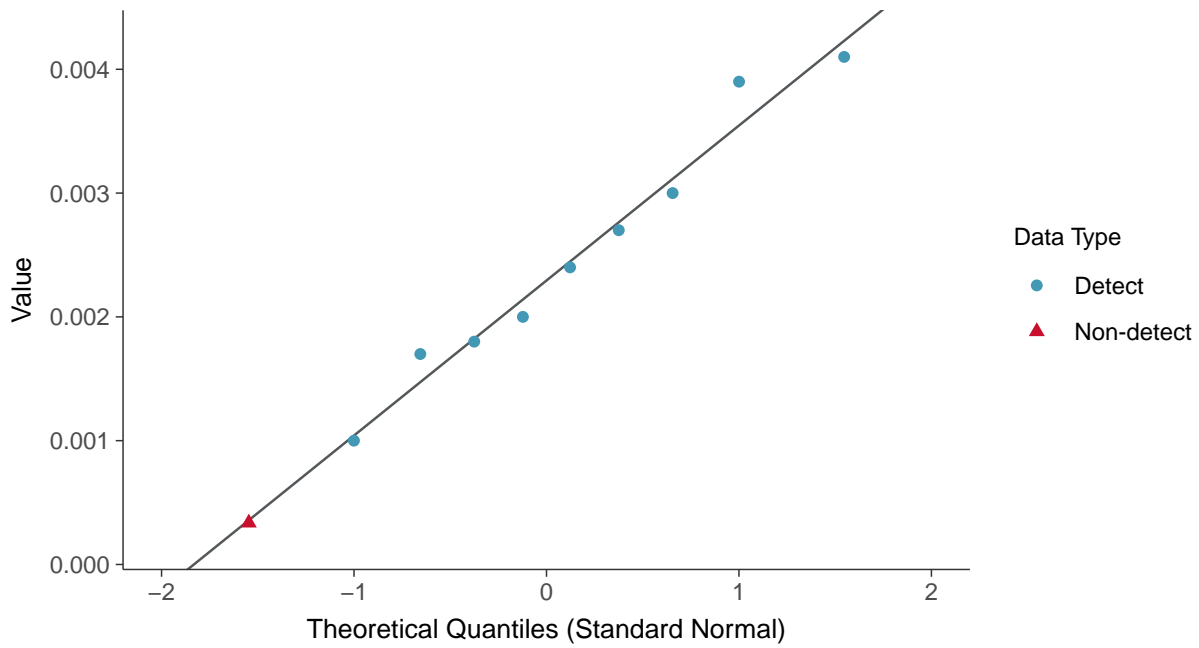
Lead, MW-02 (mg/L)





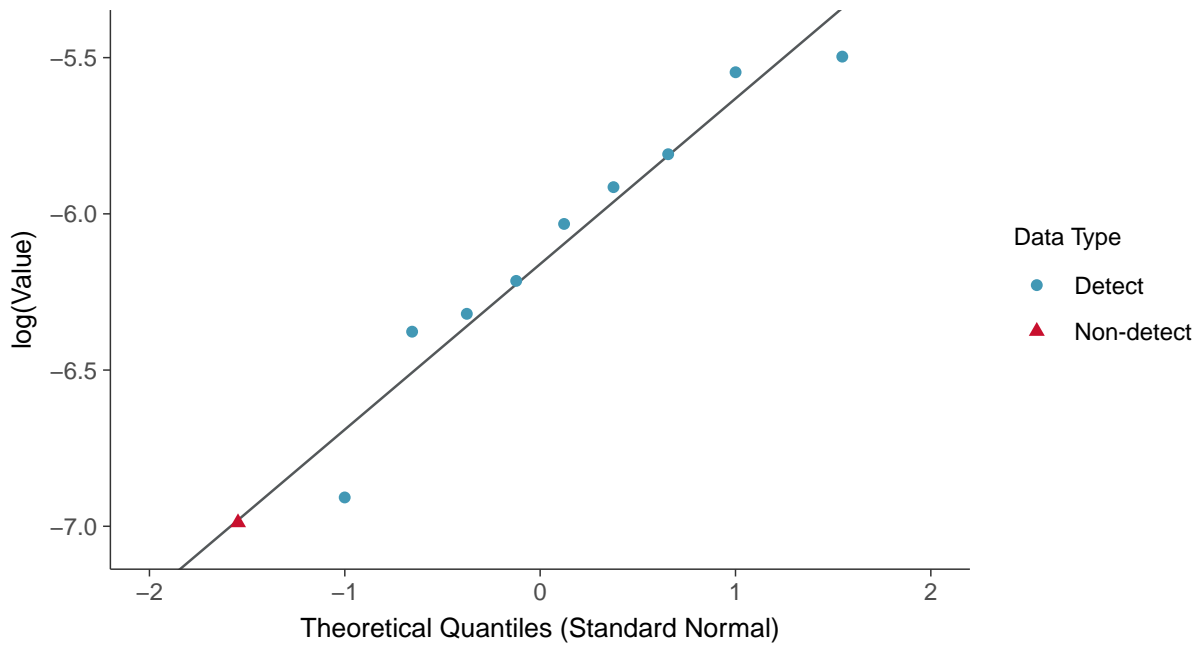
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-02 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

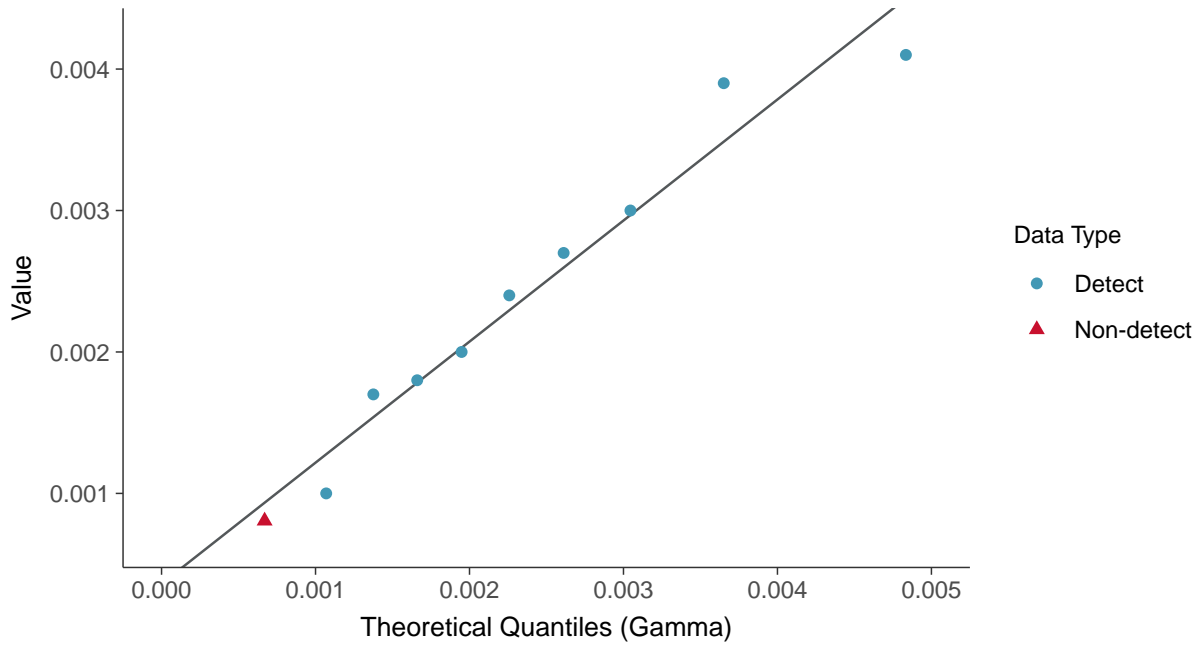
Lead, MW-02 (mg/L)





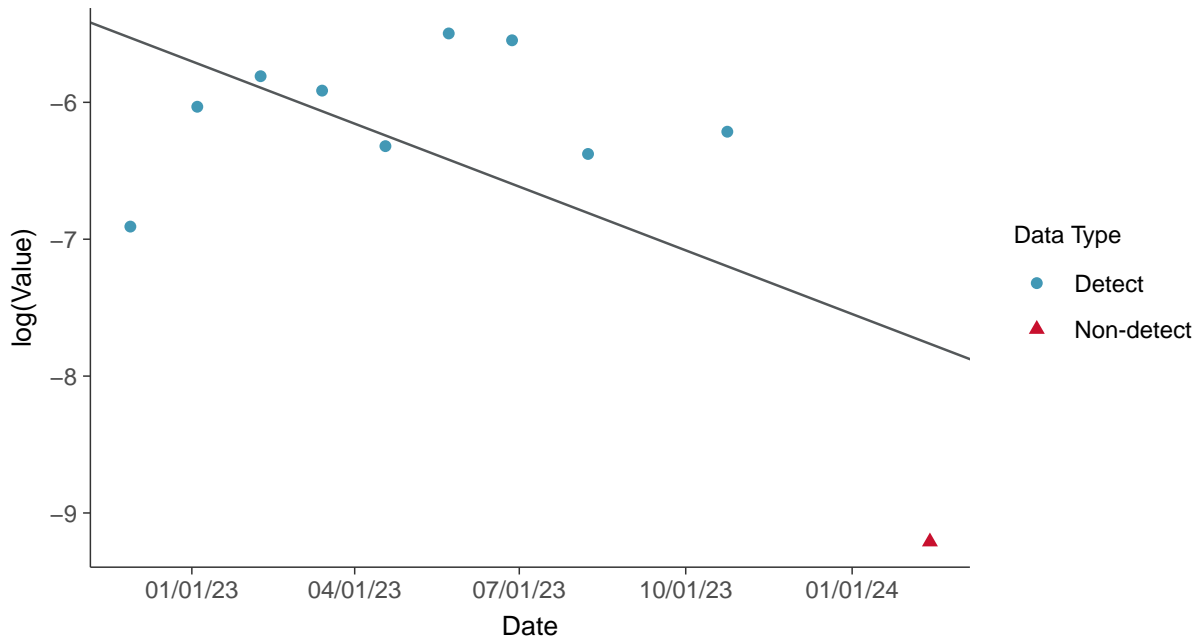
Gamma Q-Q plot using ROS Imputed Estimates

Lead, MW-02 (mg/L)



Trend Regression: Lognormal MLE

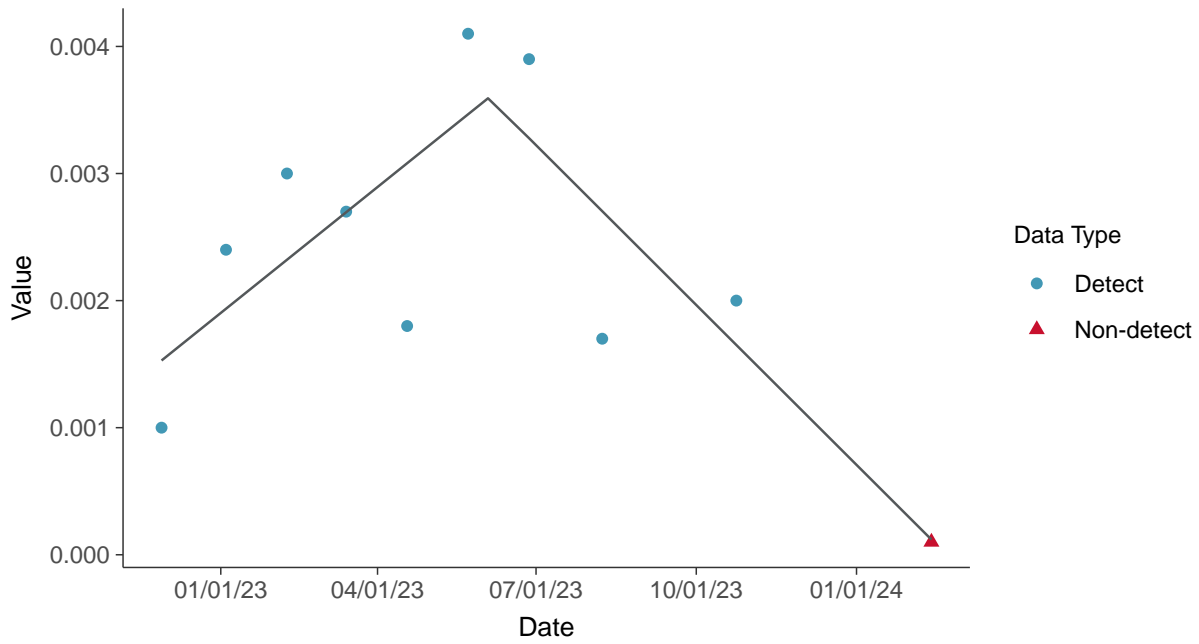
Lead, MW-02 (mg/L)





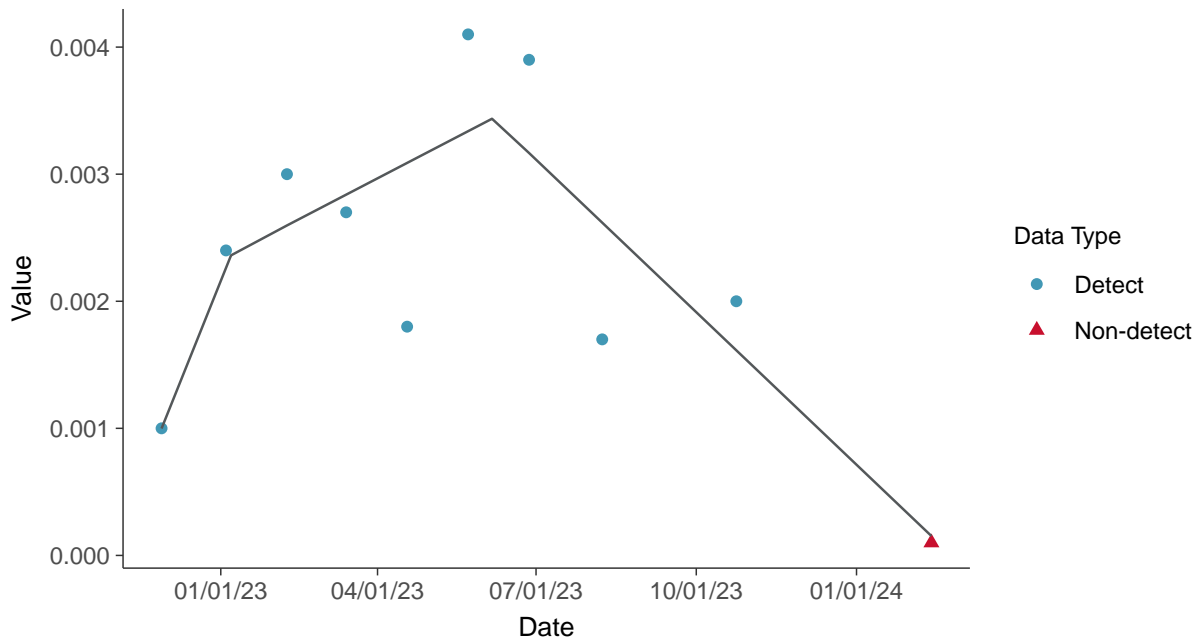
Trend Regression: Piecewise Linear-Linear

Lead, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

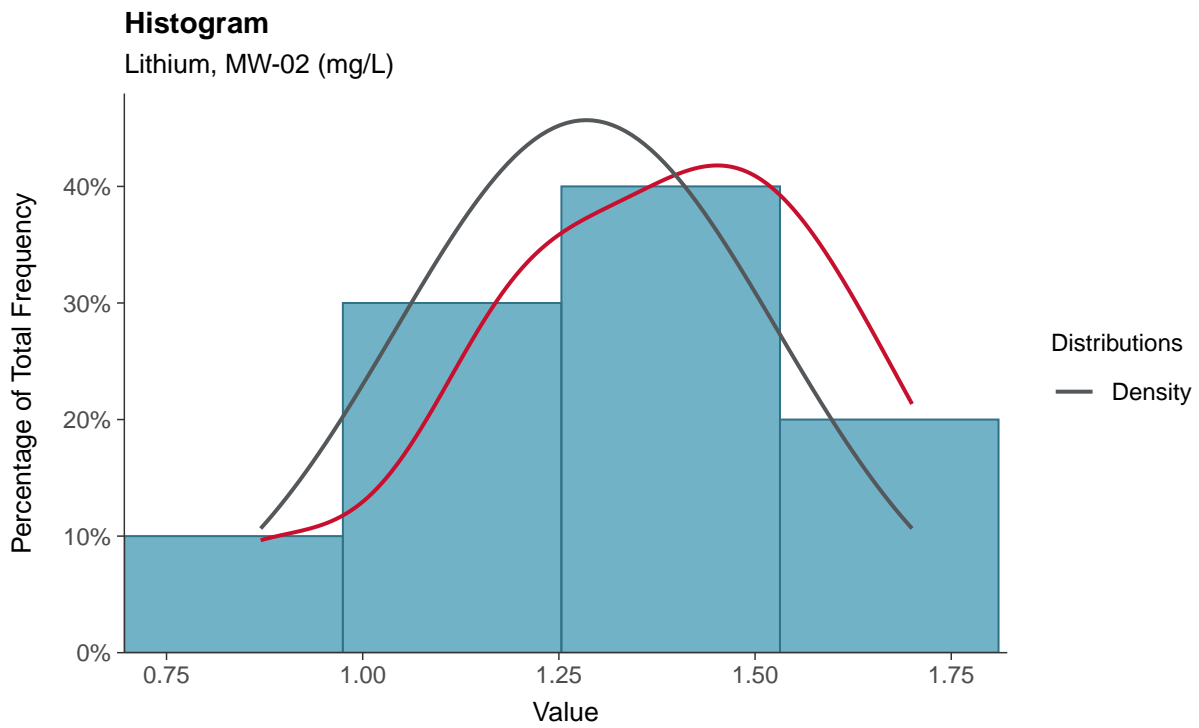
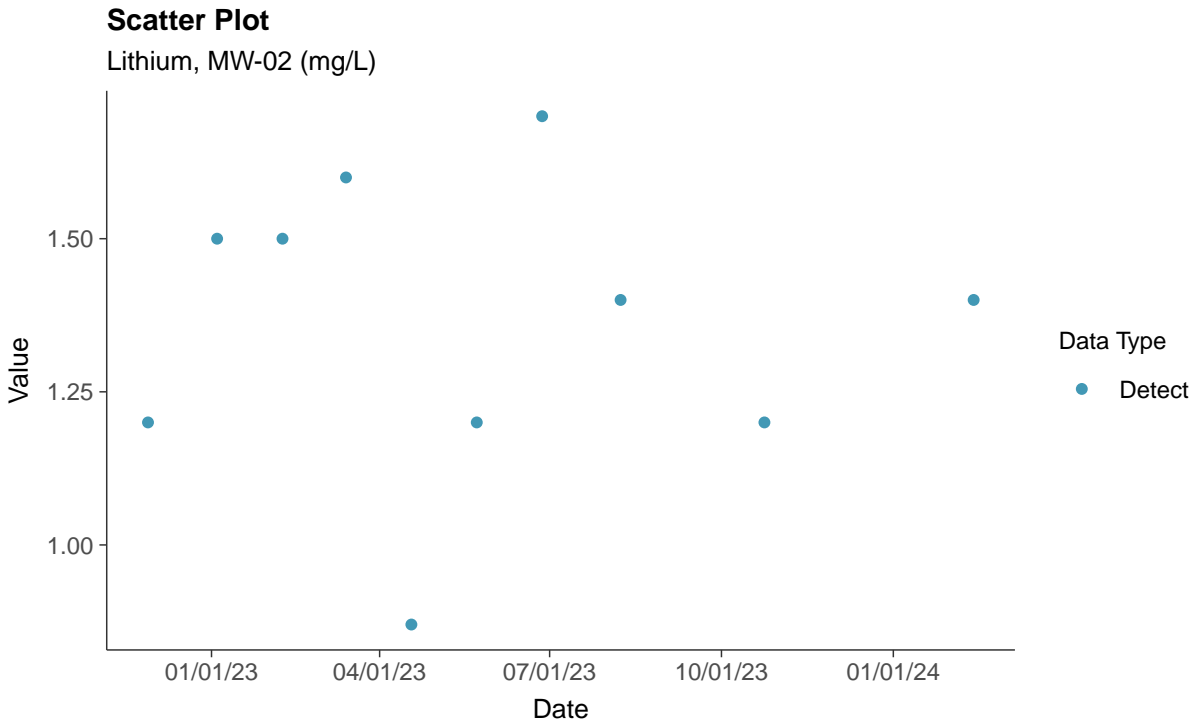
Lead, MW-02 (mg/L)





Appendix IV: Lithium, MW-02

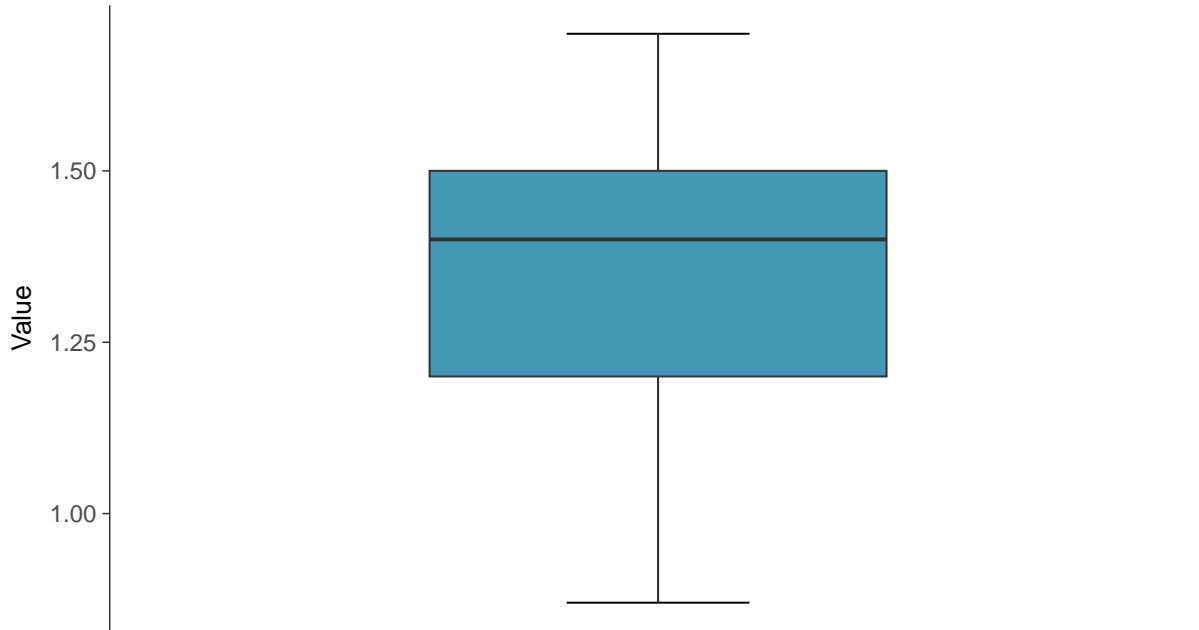
ID: 2_12_5_116





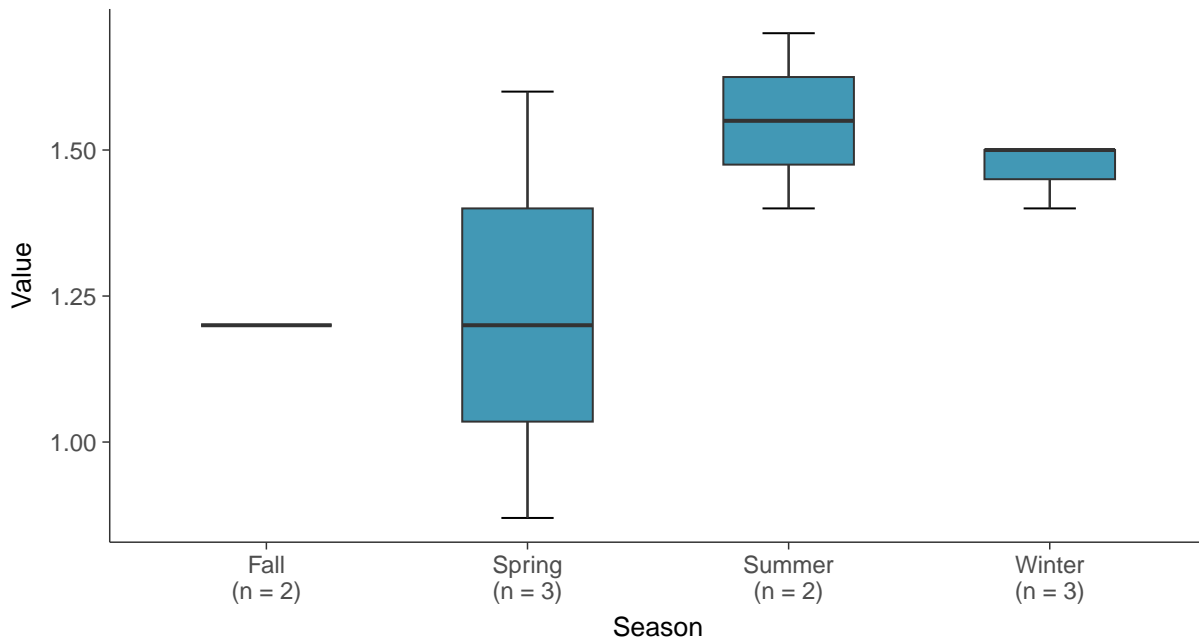
Boxplot

Lithium, MW-02 (mg/L)



Boxplot by Season

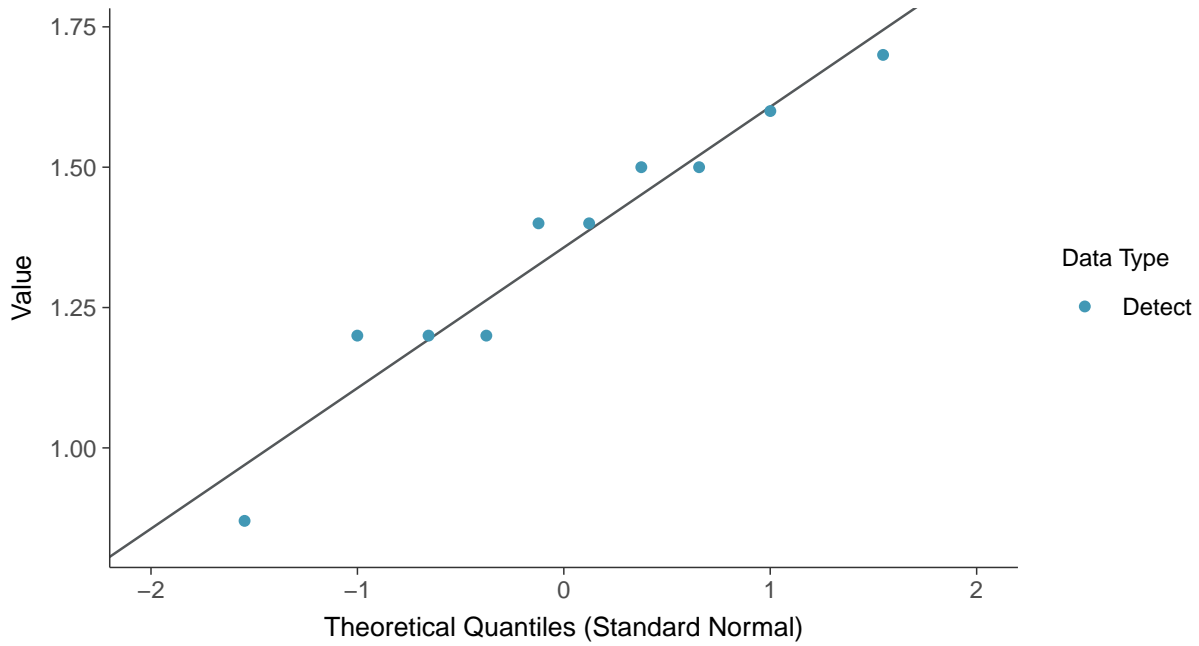
Lithium, MW-02 (mg/L)





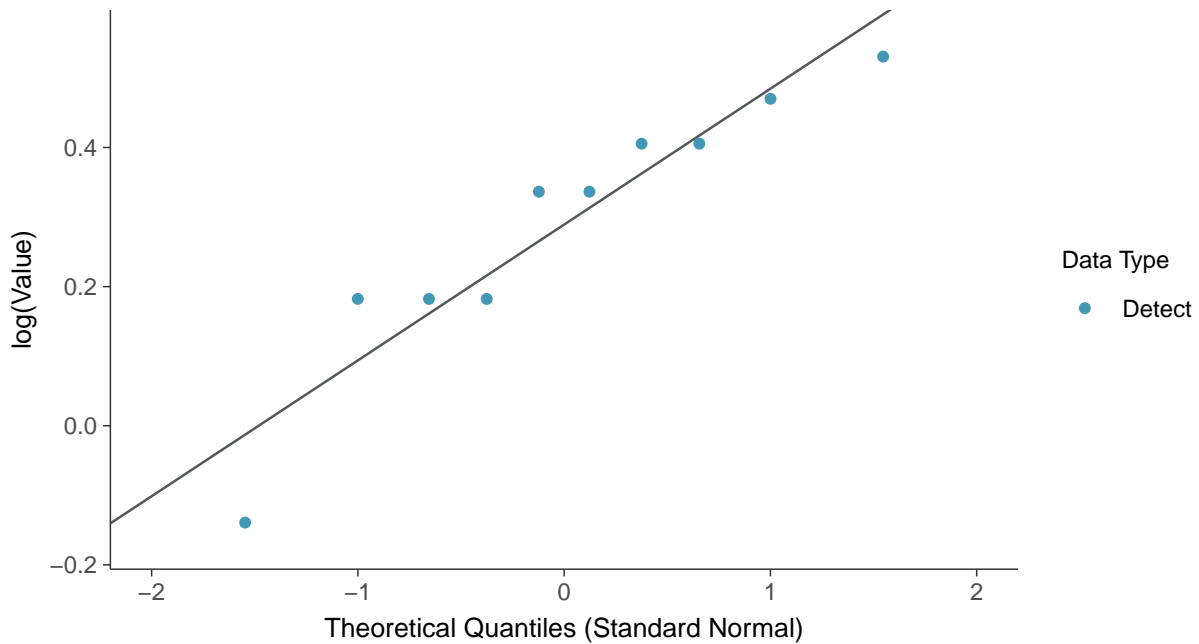
Normal Q-Q plot

Lithium, MW-02 (mg/L)



Lognormal Q-Q plot

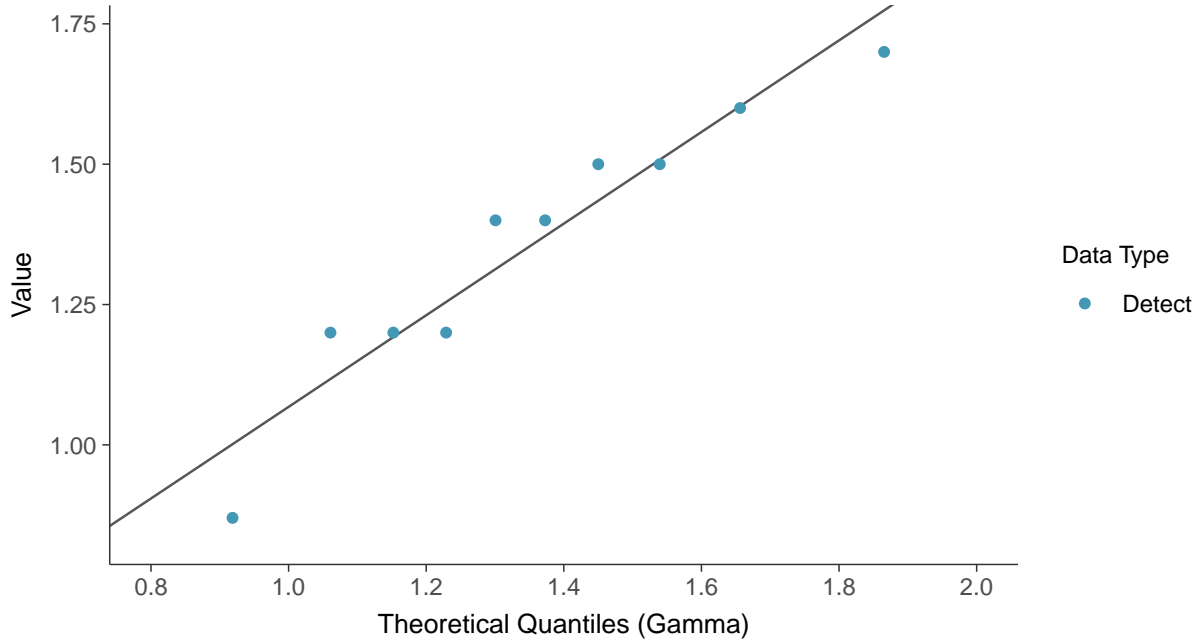
Lithium, MW-02 (mg/L)





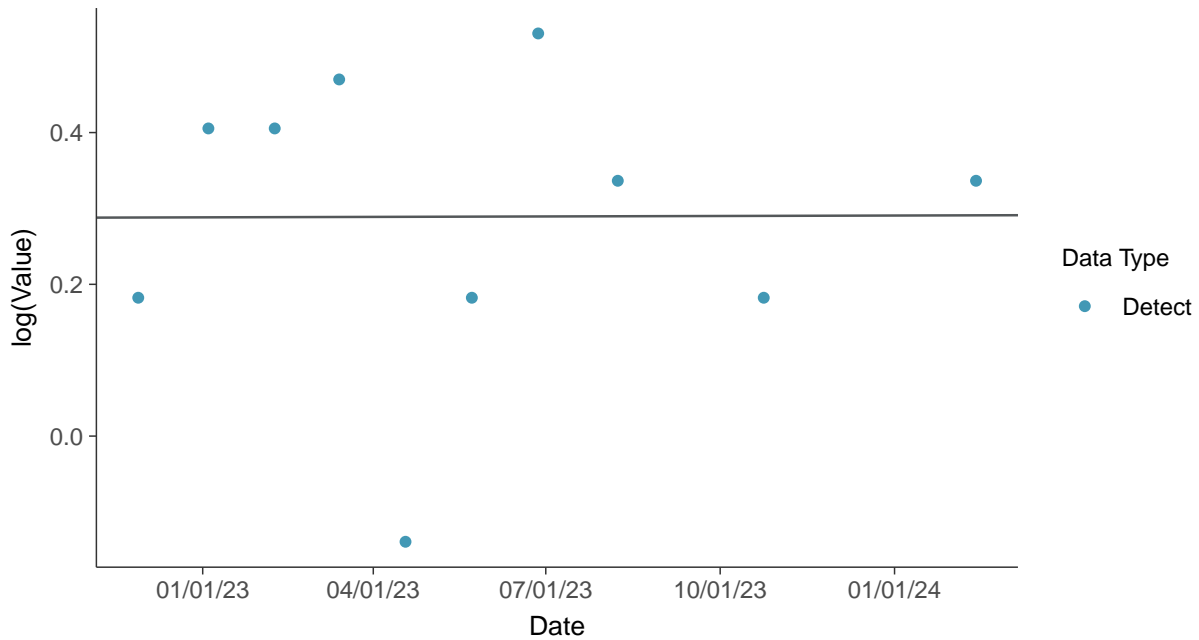
Gamma Q-Q plot

Lithium, MW-02 (mg/L)



Trend Regression: Lognormal MLE

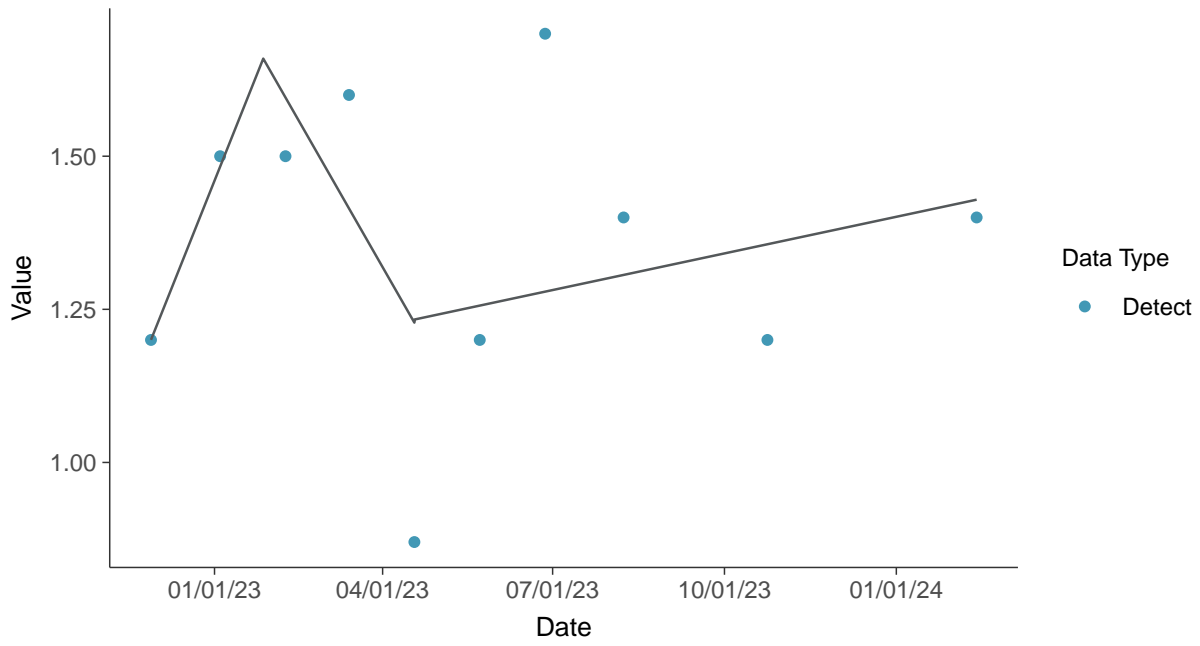
Lithium, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

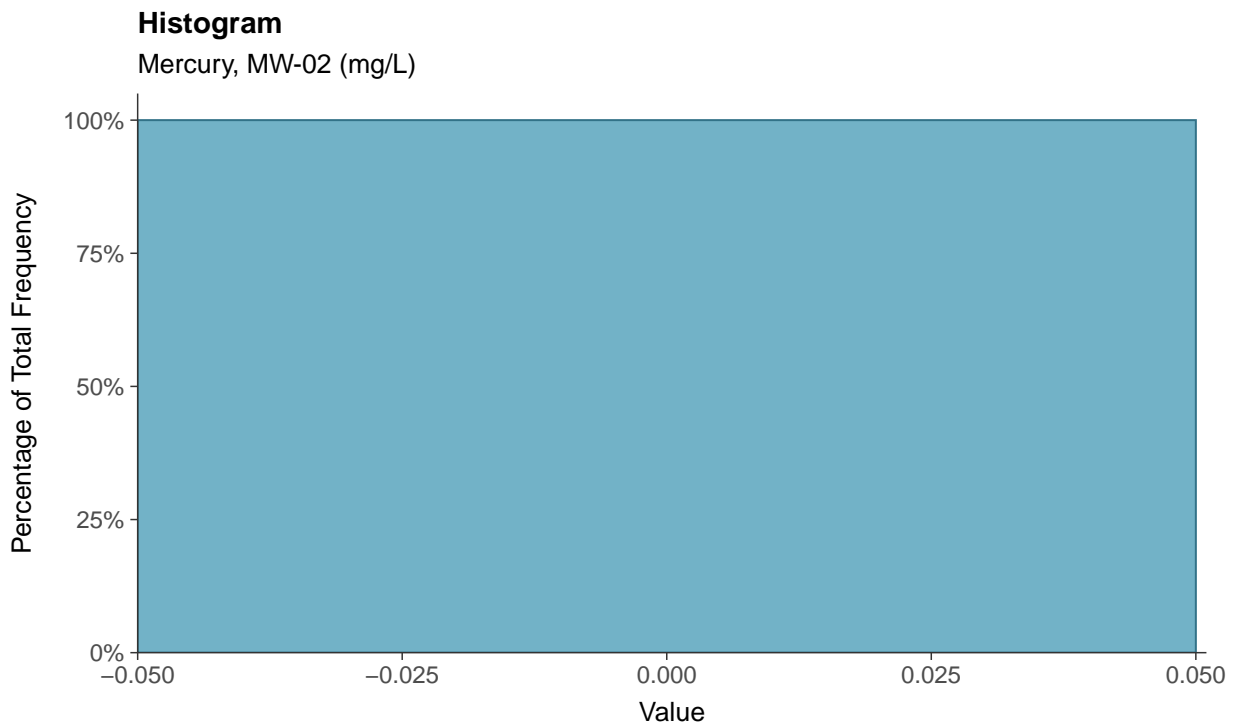
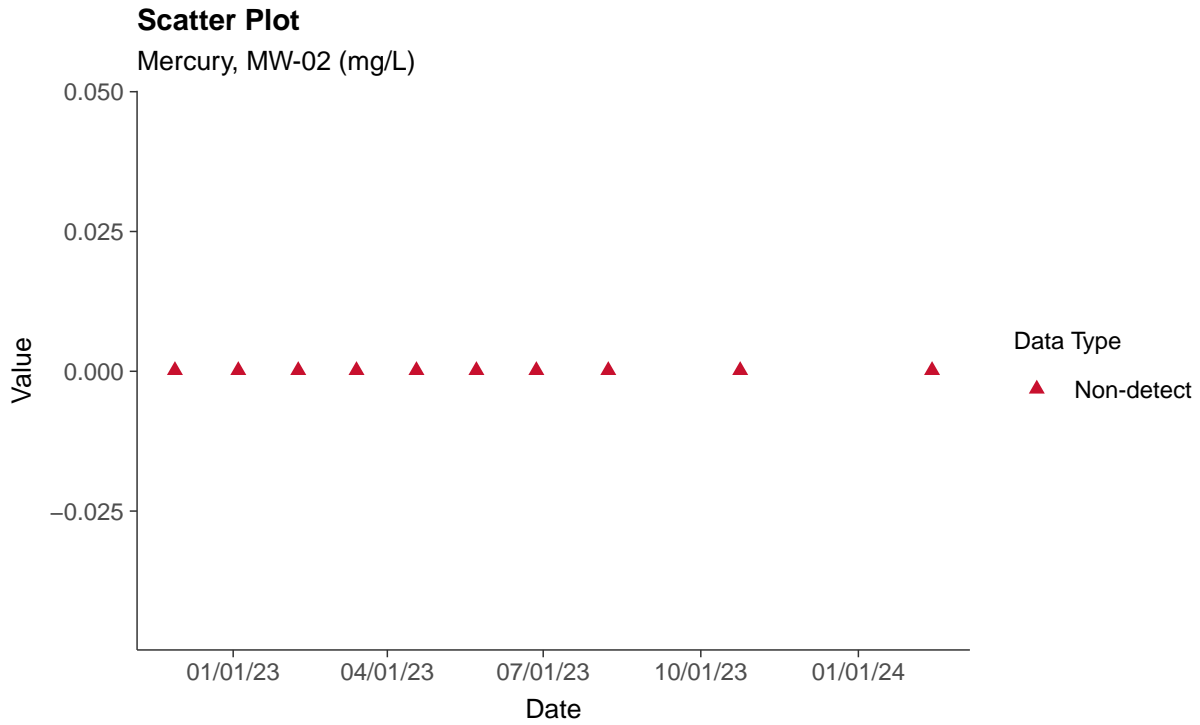
Lithium, MW-02 (mg/L)





Appendix IV: Mercury, MW-02

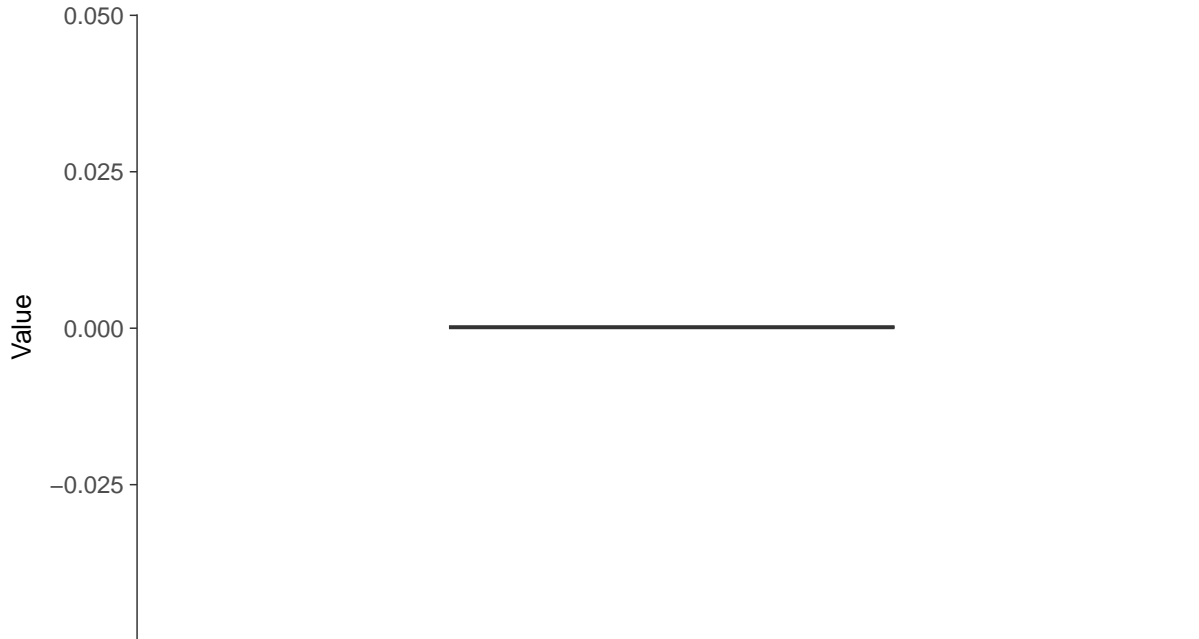
ID: 2_12_5_117





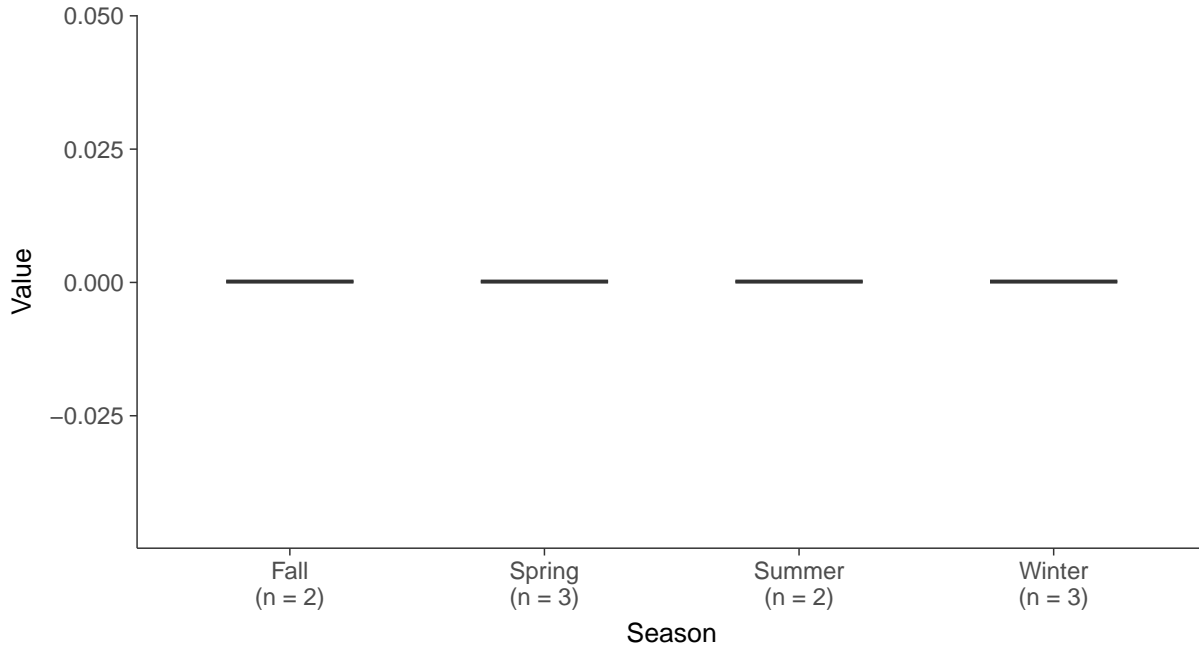
Boxplot

Mercury, MW-02 (mg/L)



Boxplot by Season

Mercury, MW-02 (mg/L)



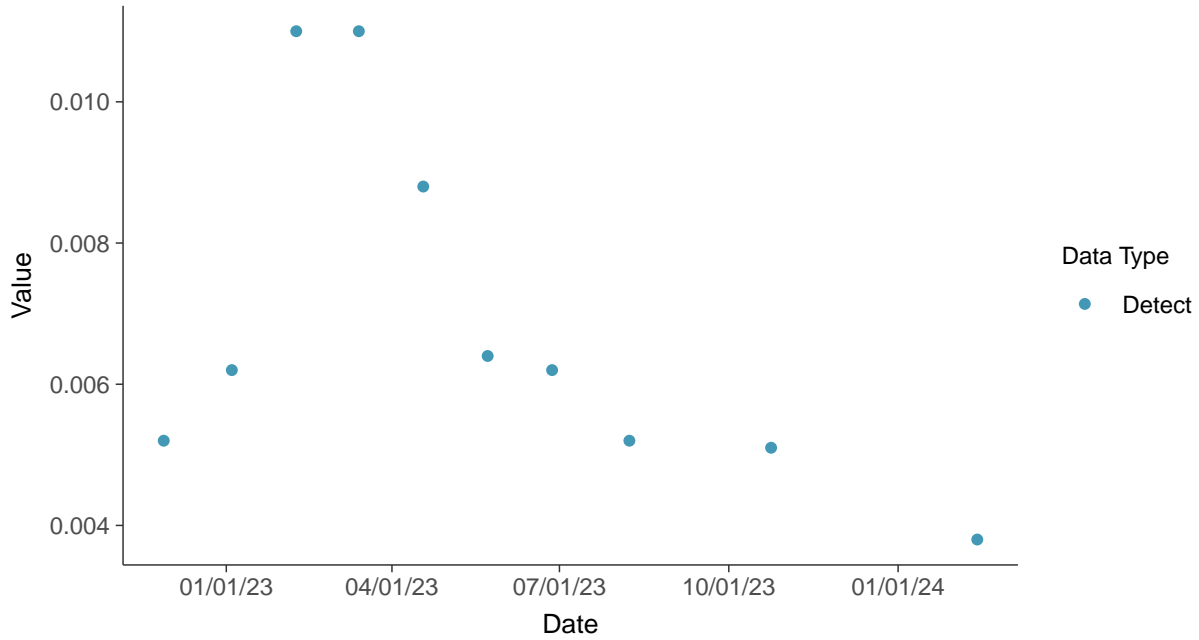


Appendix IV: Molybdenum, MW-02

ID: 2_12_5_118

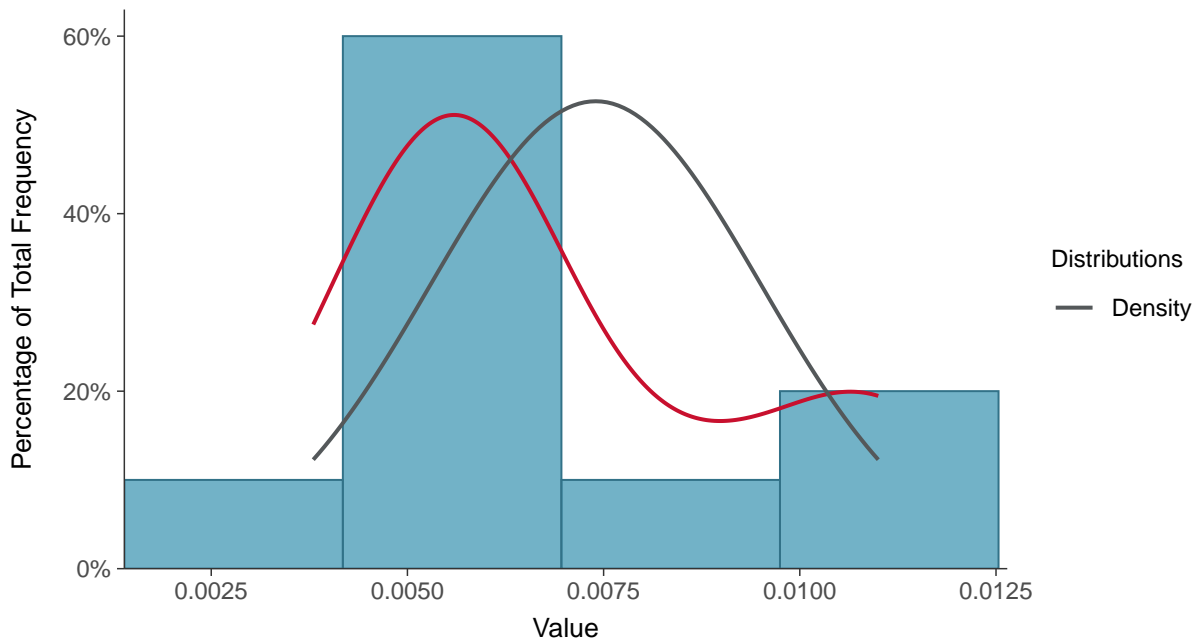
Scatter Plot

Molybdenum, MW-02 (mg/L)



Histogram

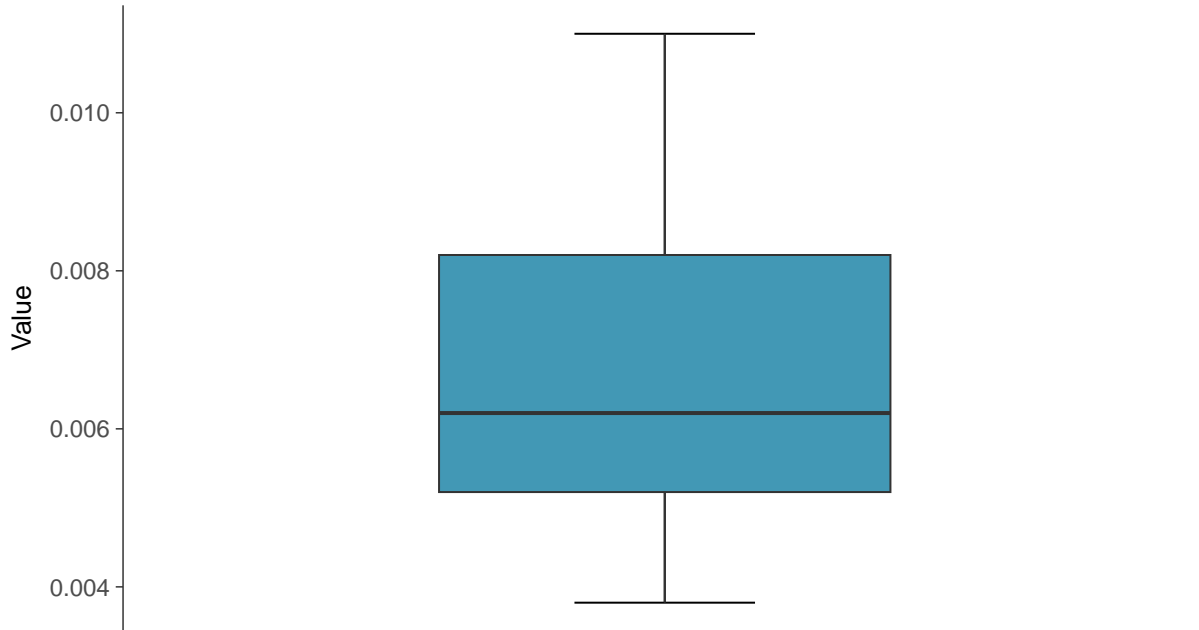
Molybdenum, MW-02 (mg/L)





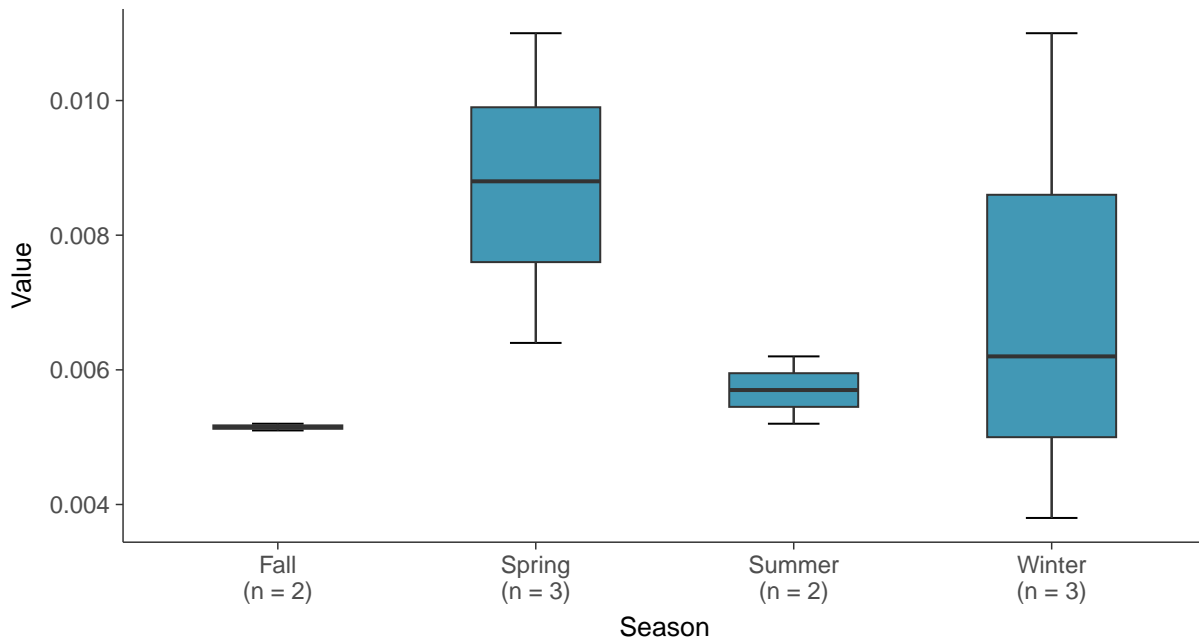
Boxplot

Molybdenum, MW-02 (mg/L)



Boxplot by Season

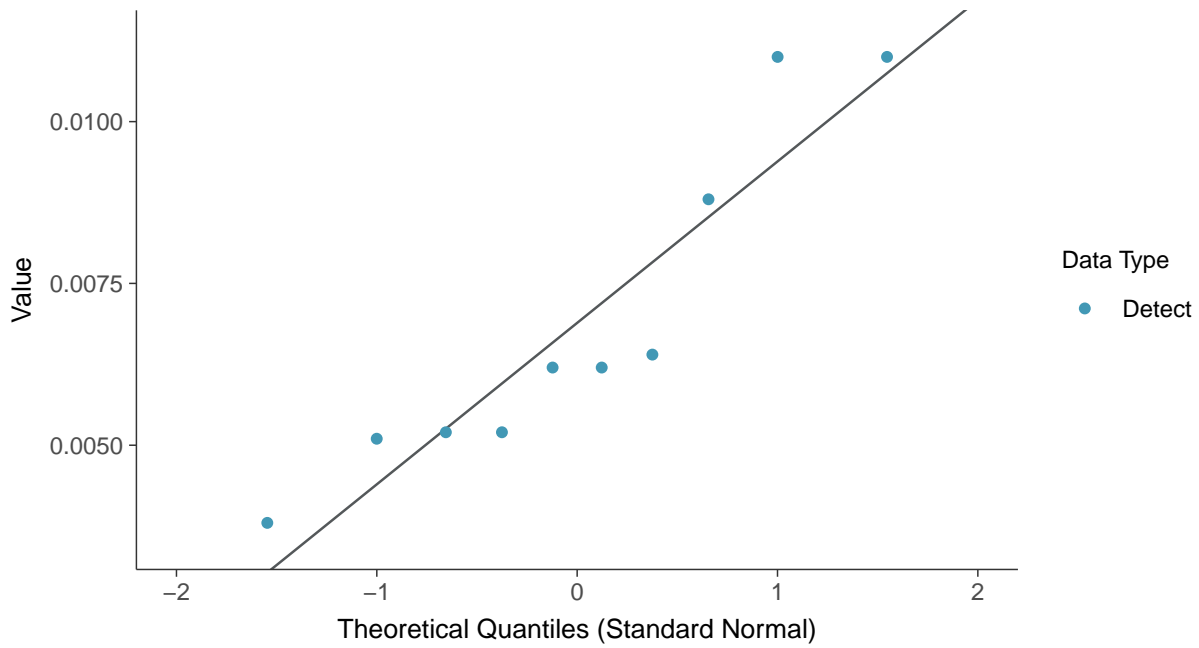
Molybdenum, MW-02 (mg/L)





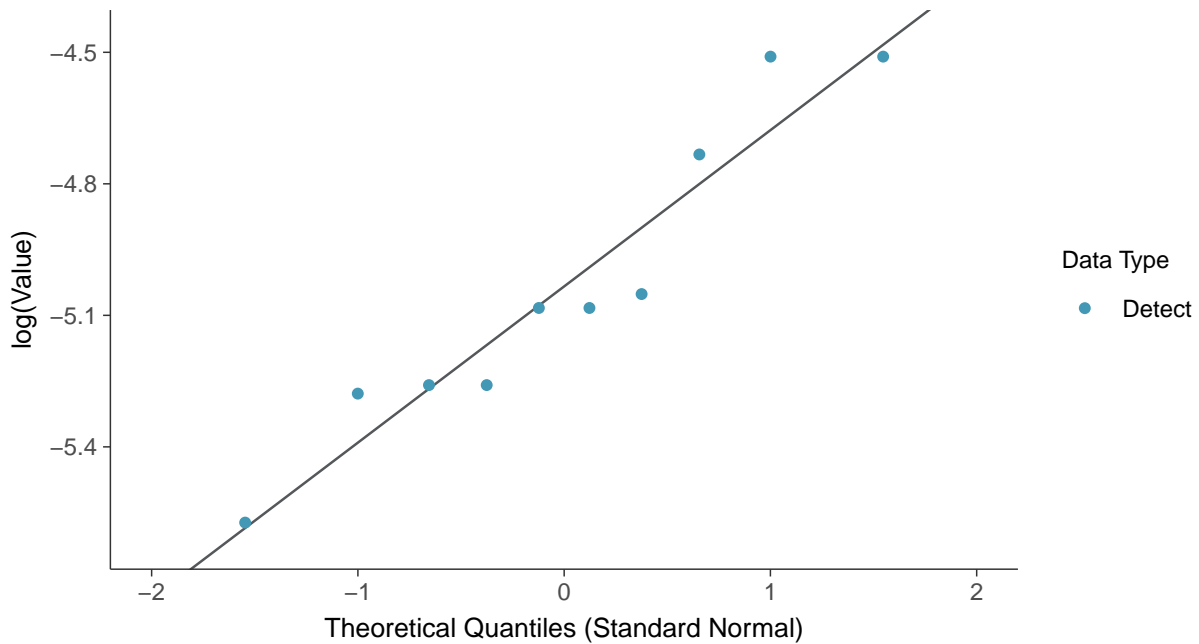
Normal Q-Q plot

Molybdenum, MW-02 (mg/L)



Lognormal Q-Q plot

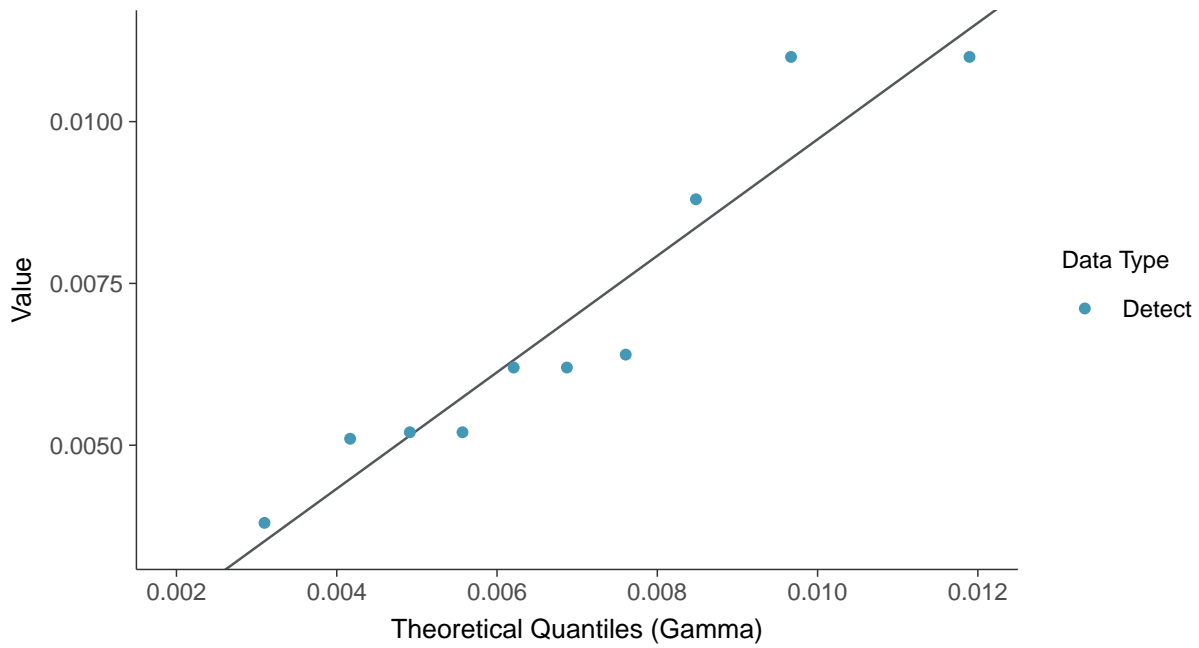
Molybdenum, MW-02 (mg/L)





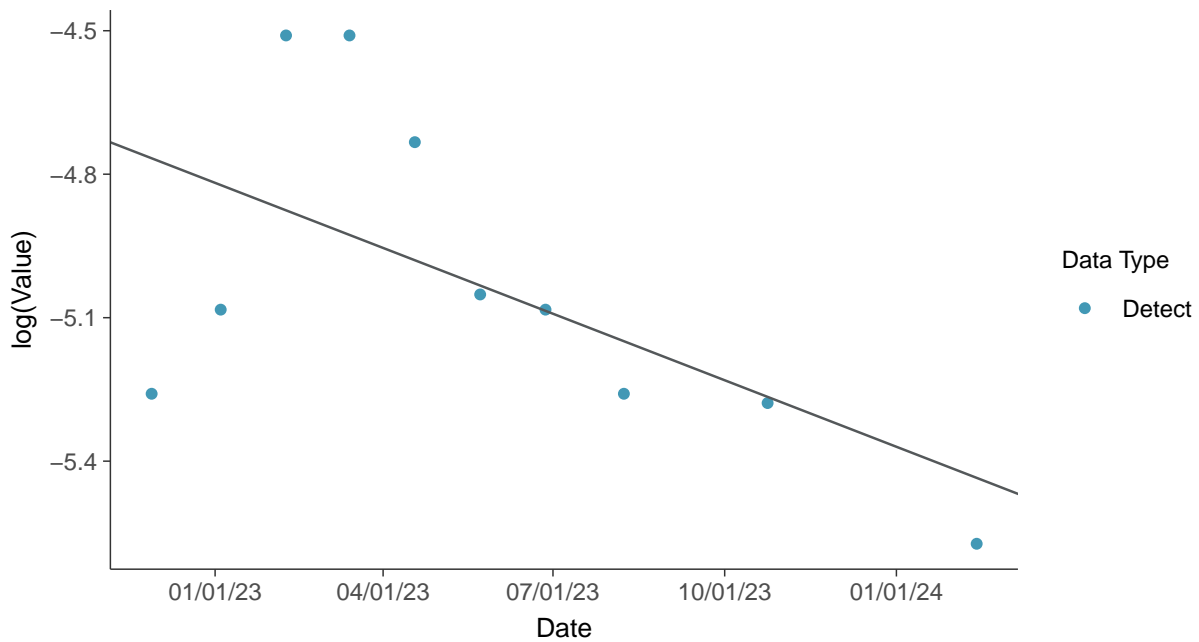
Gamma Q-Q plot

Molybdenum, MW-02 (mg/L)



Trend Regression: Lognormal MLE

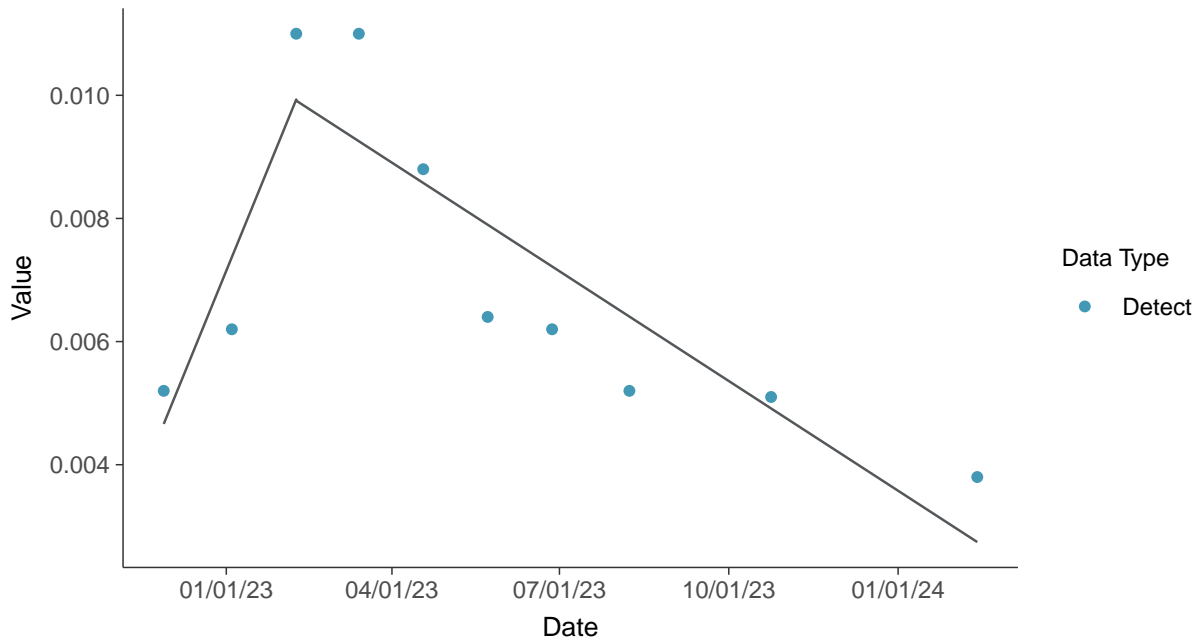
Molybdenum, MW-02 (mg/L)





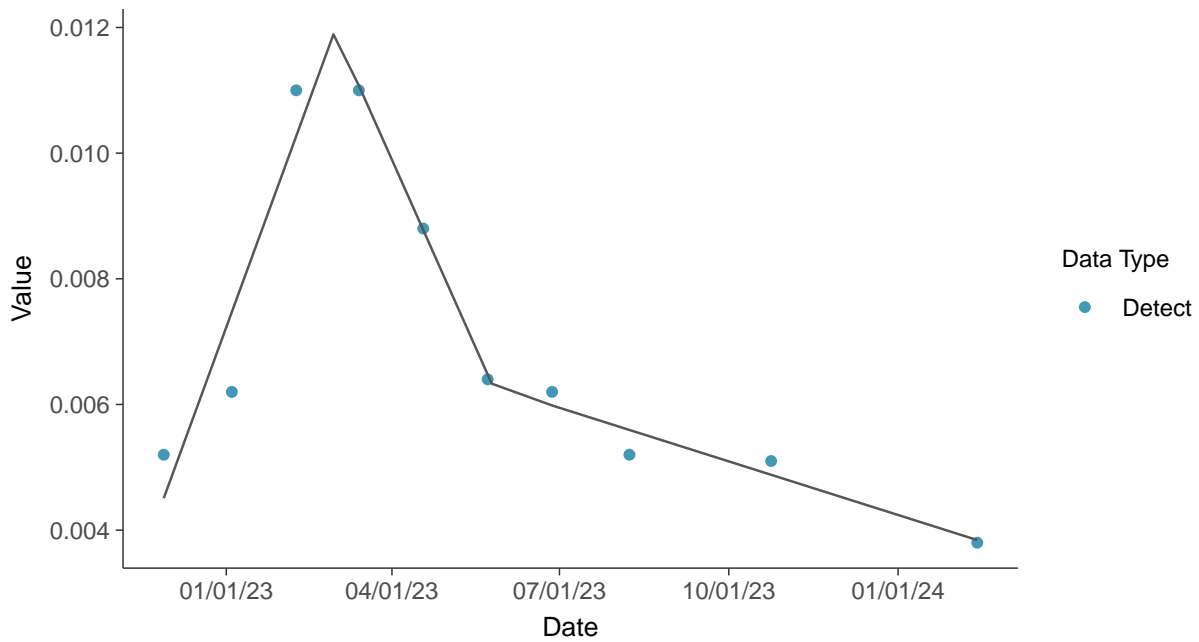
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-02 (mg/L)



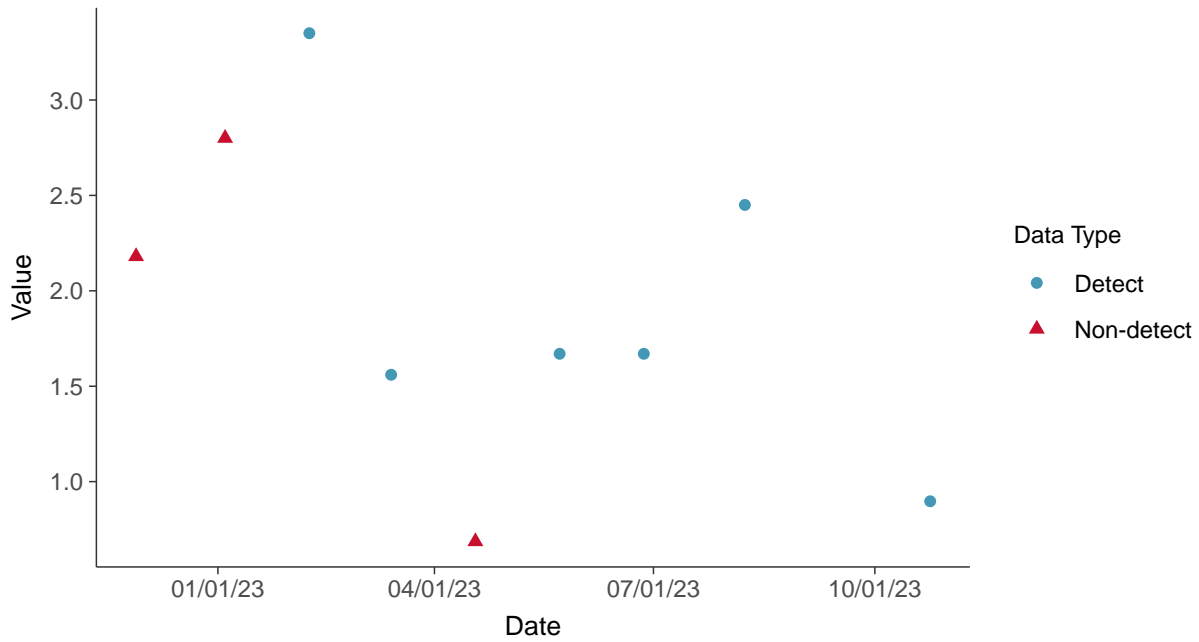


Appendix IV: Radium 226 and 228, MW-02

ID: 2_12_5_121

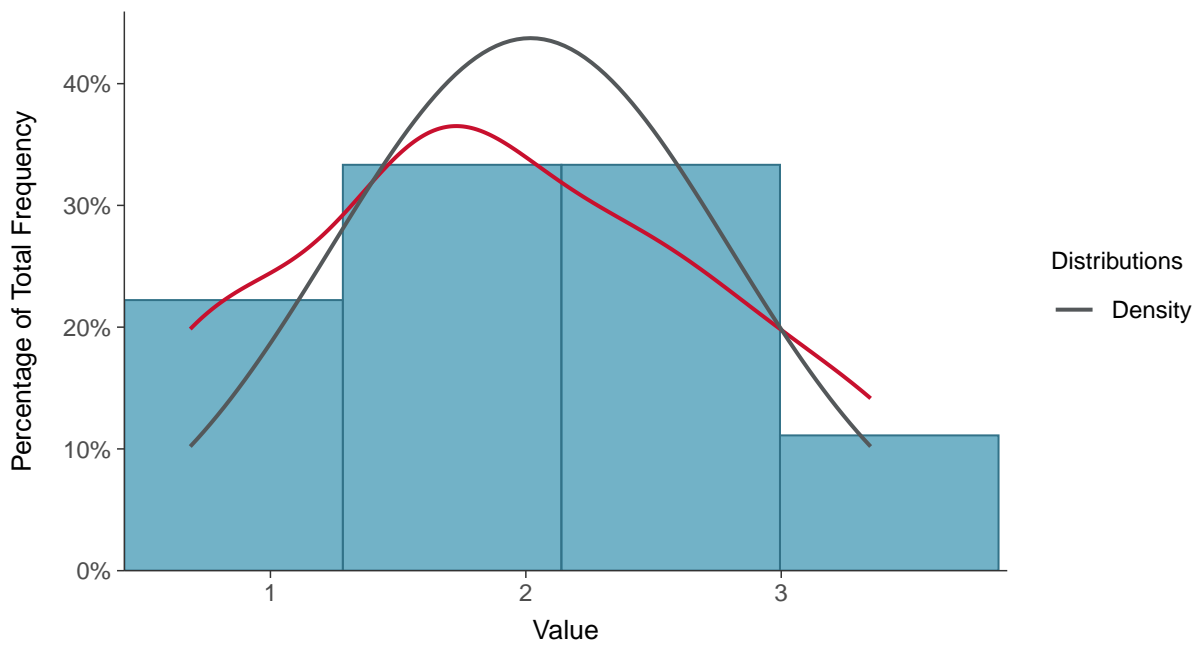
Scatter Plot

Radium 226 and 228, MW-02 (pCi/L)



Histogram

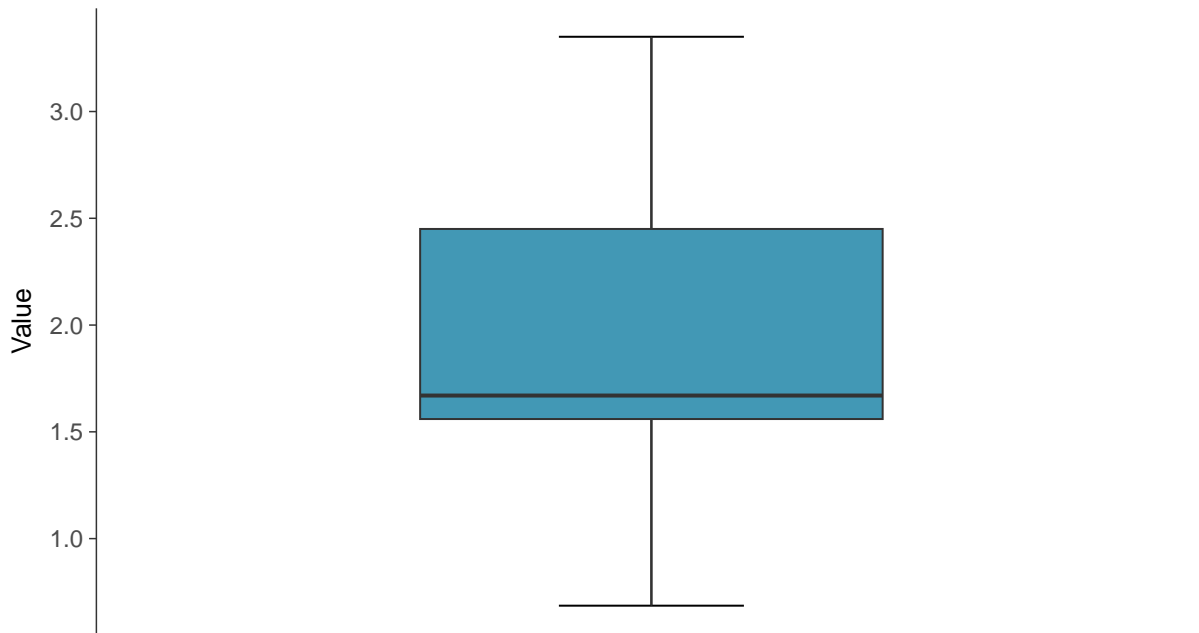
Radium 226 and 228, MW-02 (pCi/L)





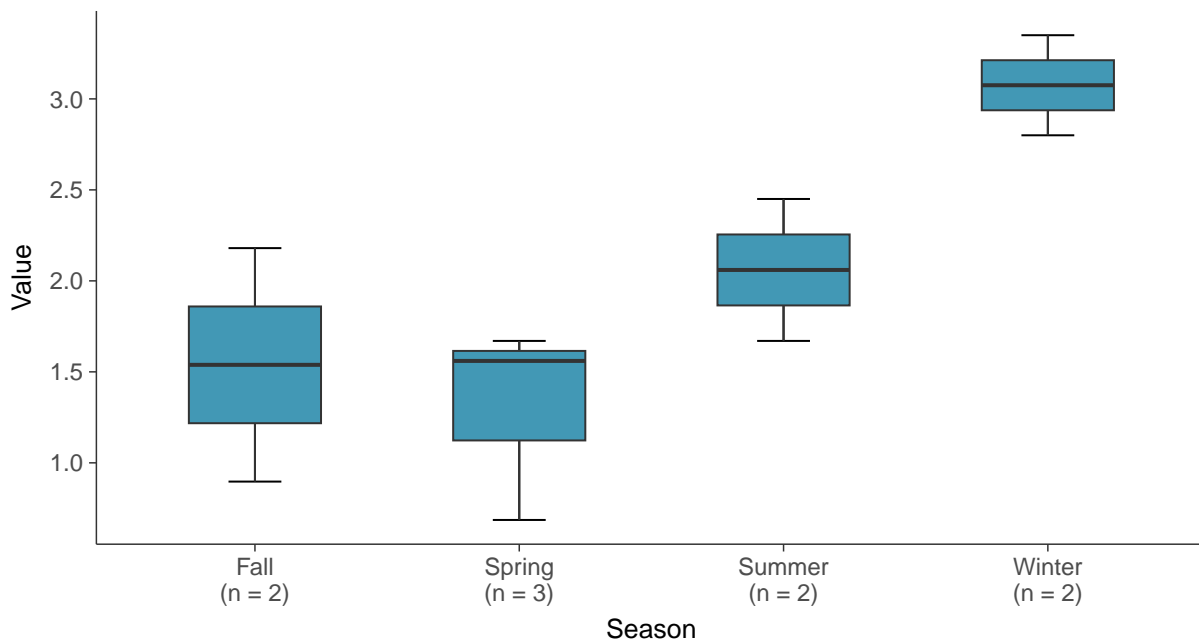
Boxplot

Radium 226 and 228, MW-02 (pCi/L)



Boxplot by Season

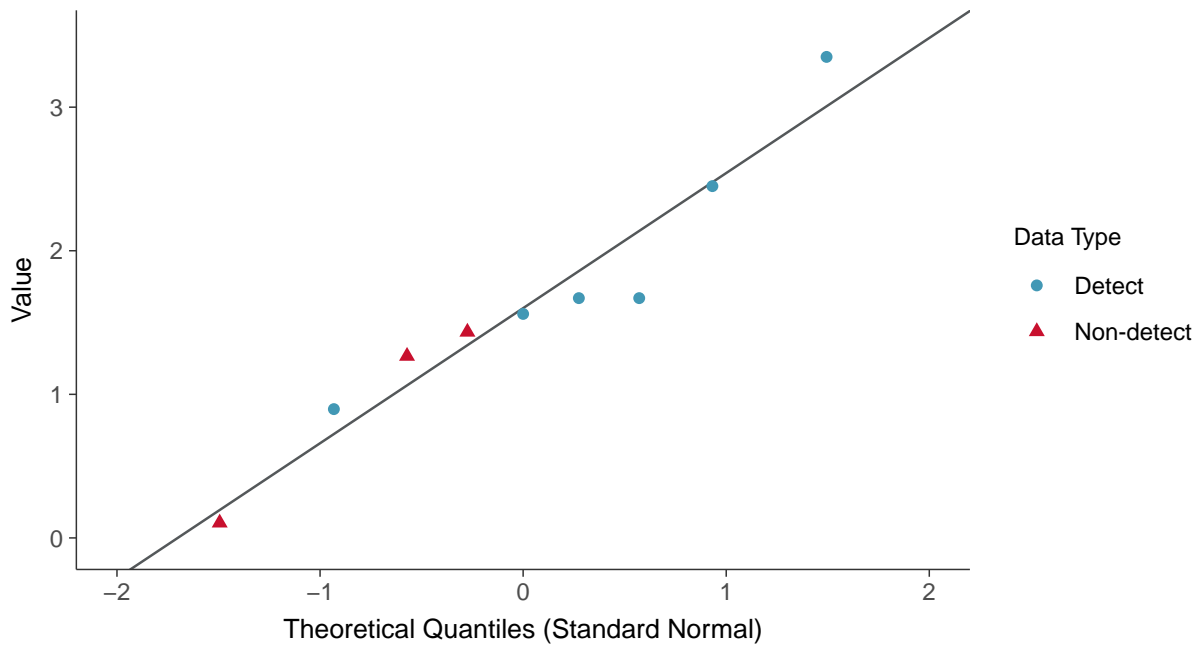
Radium 226 and 228, MW-02 (pCi/L)





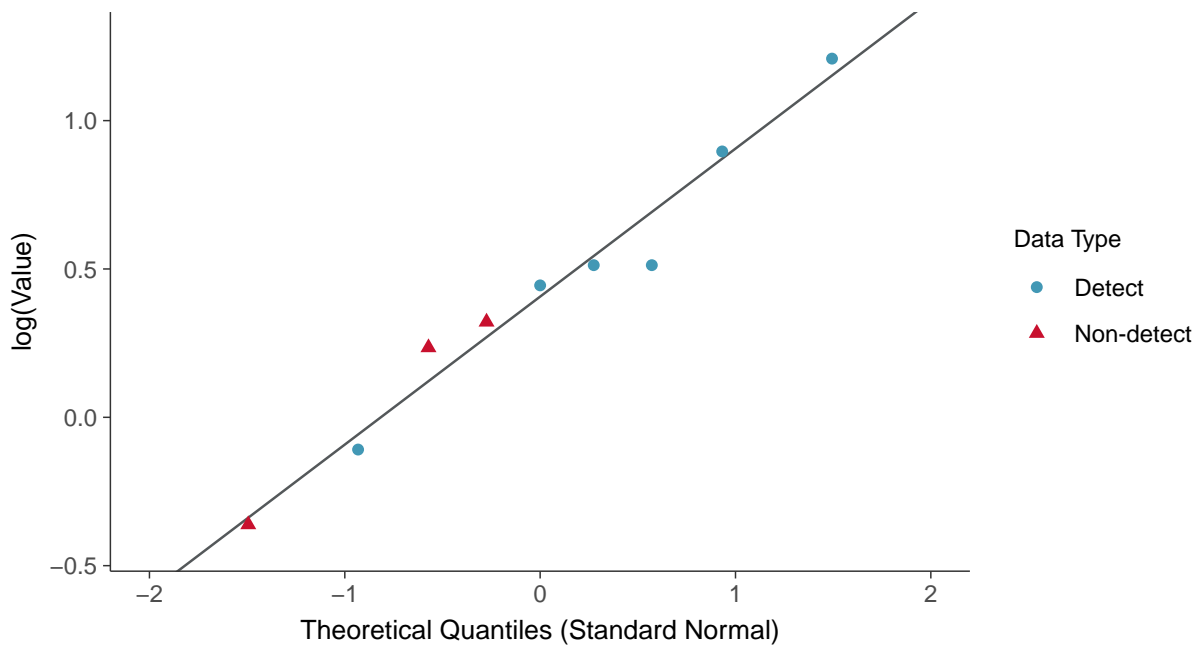
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-02 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

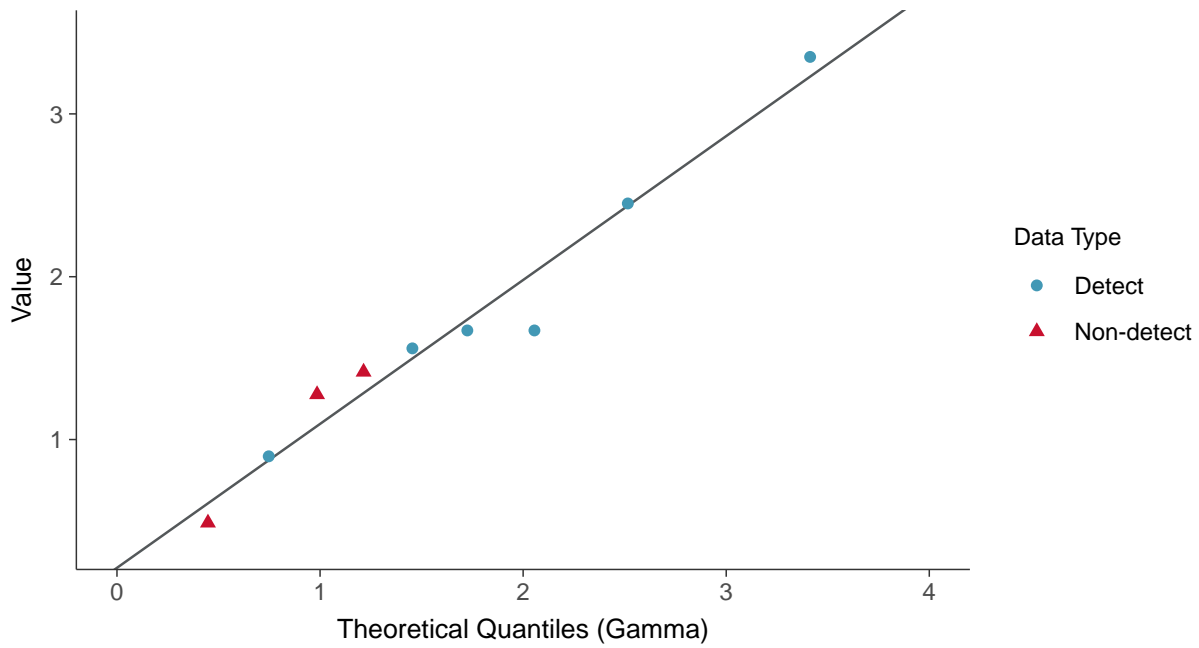
Radium 226 and 228, MW-02 (pCi/L)





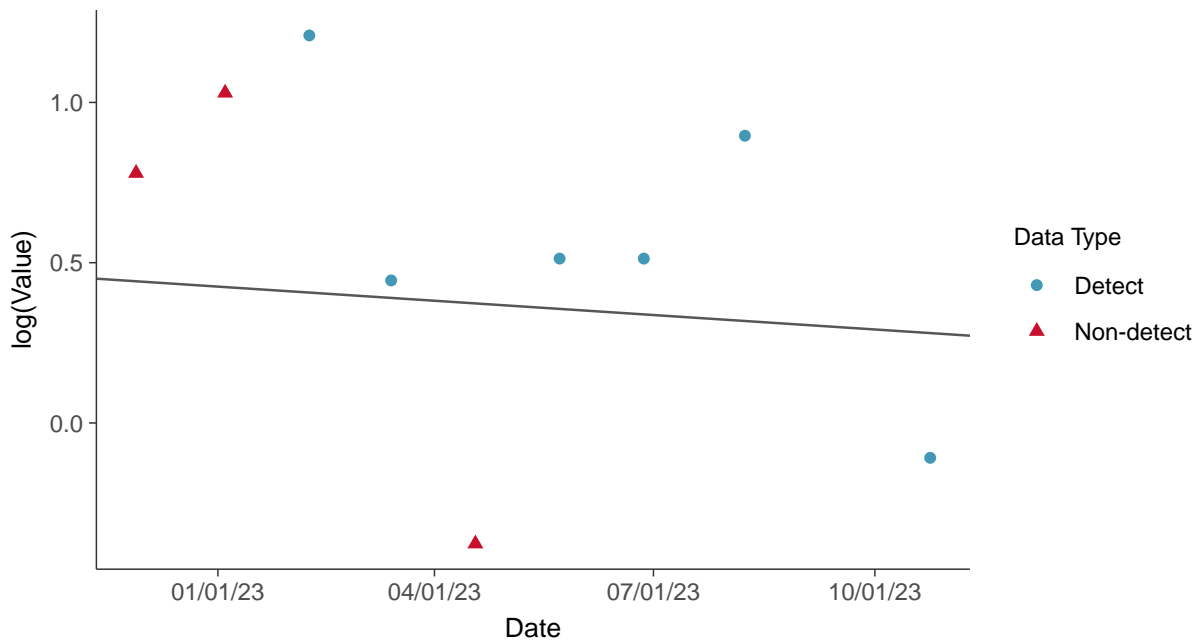
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-02 (pCi/L)



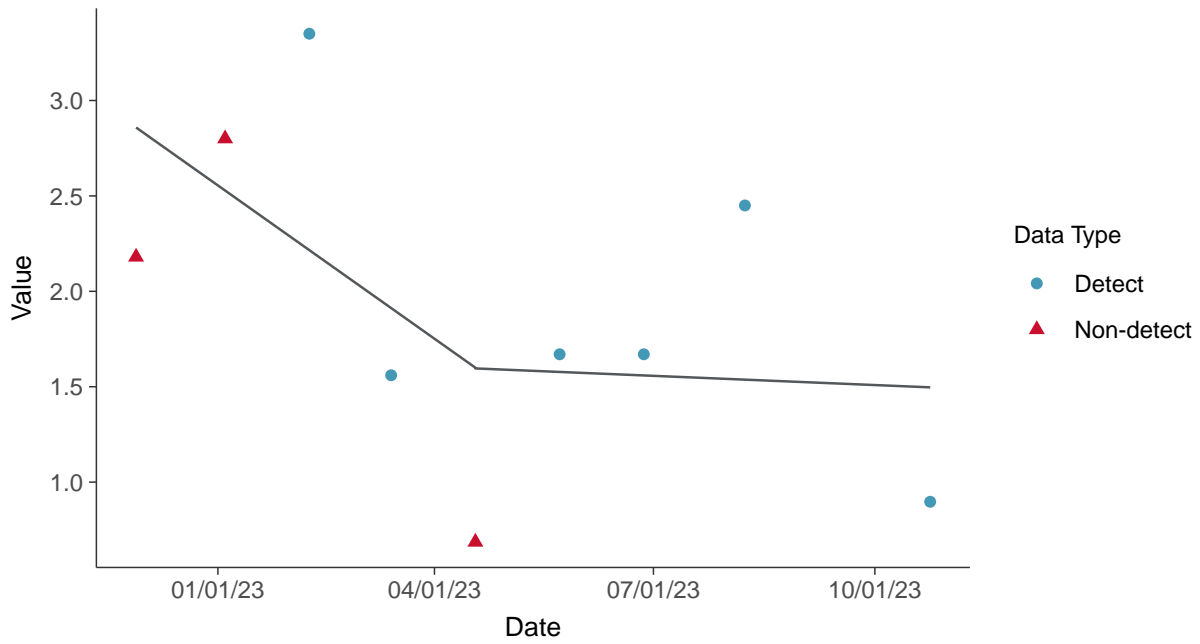
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-02 (pCi/L)





Trend Regression: Piecewise Linear-Linear
Radium 226 and 228, MW-02 (pCi/L)



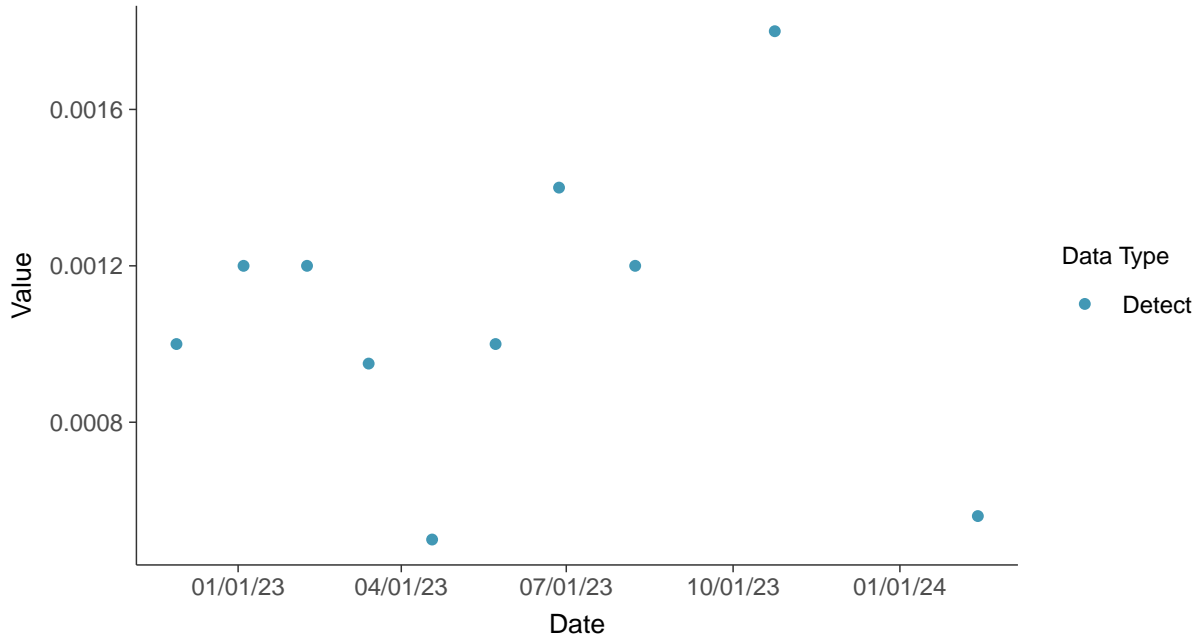


Appendix IV: Selenium, MW-02

ID: 2_12_5_122

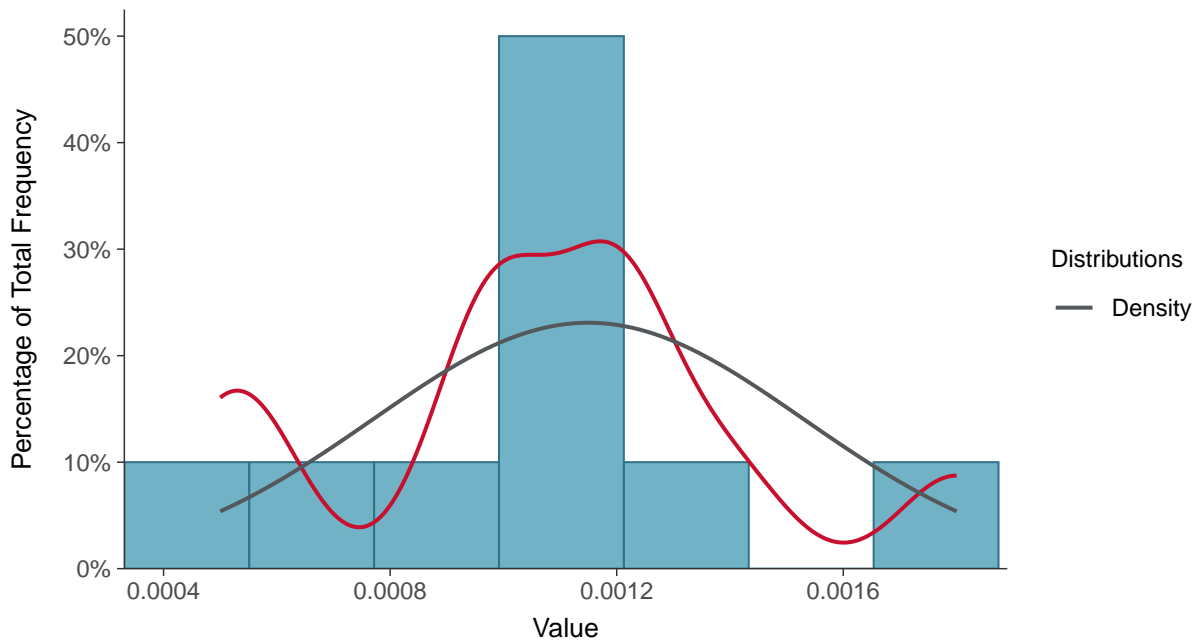
Scatter Plot

Selenium, MW-02 (mg/L)



Histogram

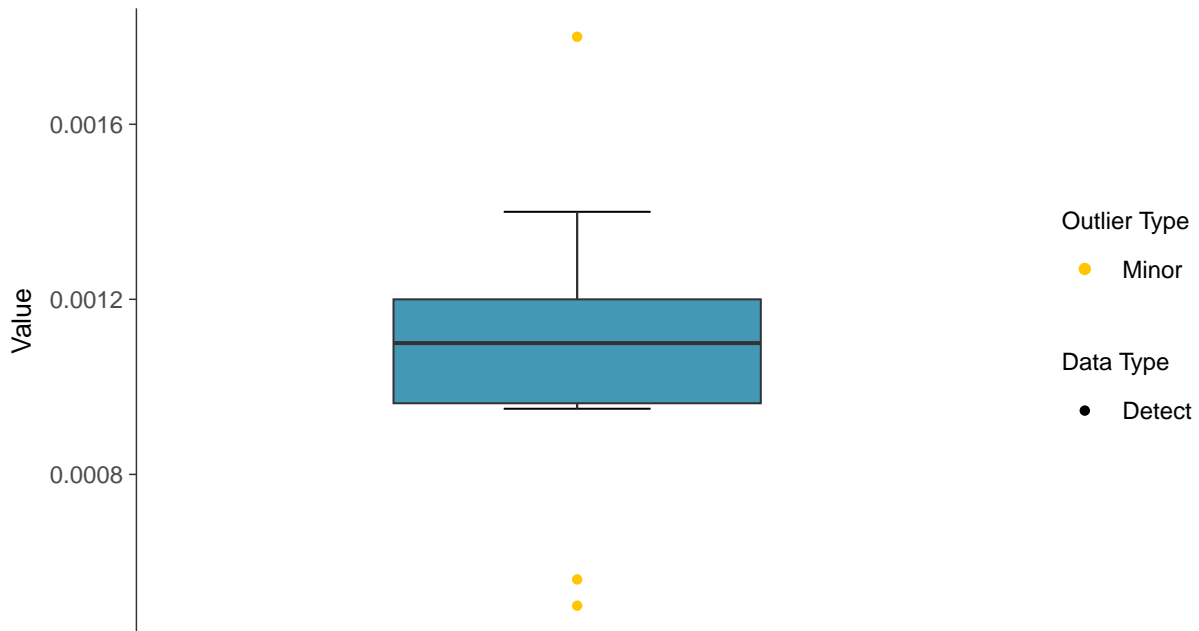
Selenium, MW-02 (mg/L)





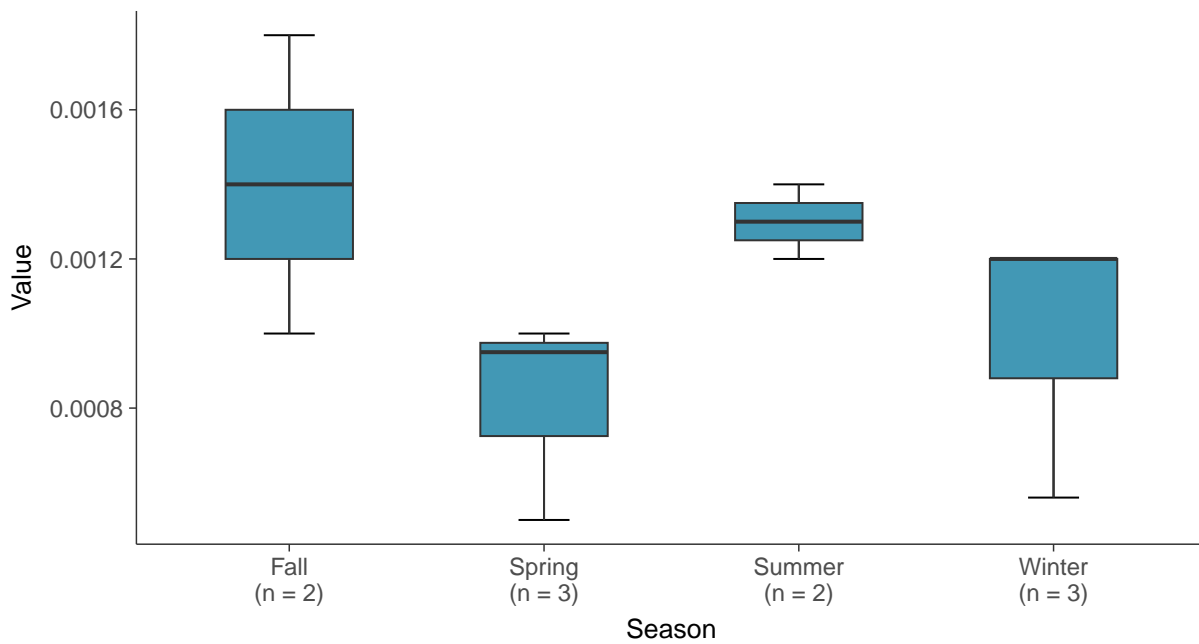
Boxplot

Selenium, MW-02 (mg/L)



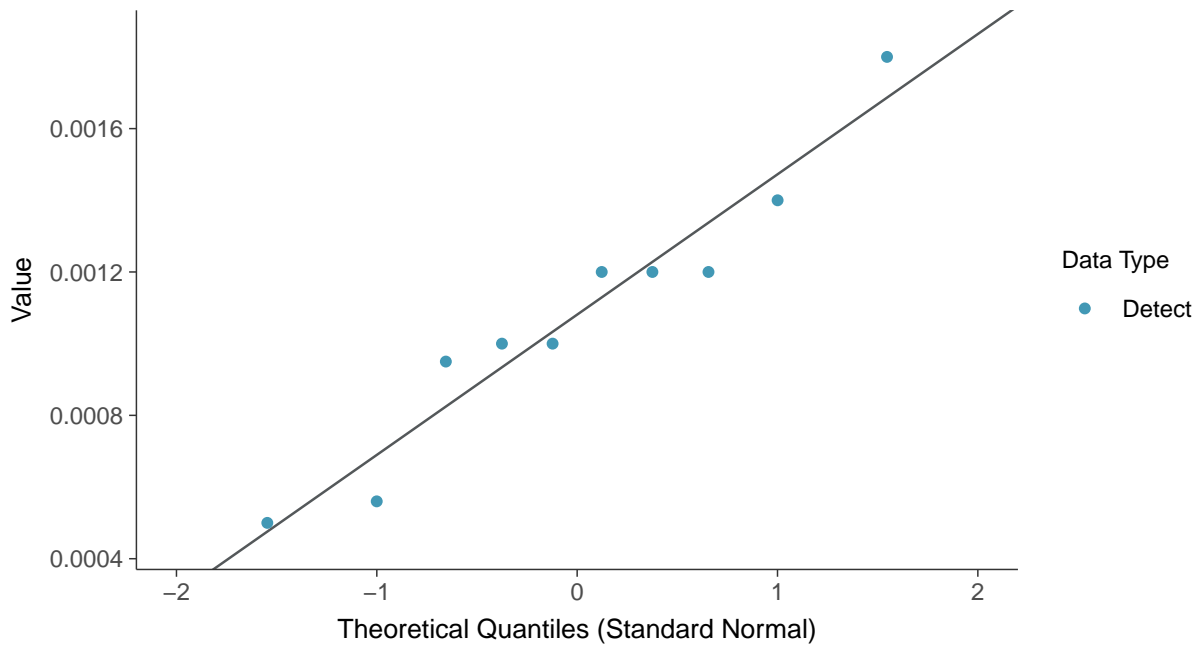
Boxplot by Season

Selenium, MW-02 (mg/L)

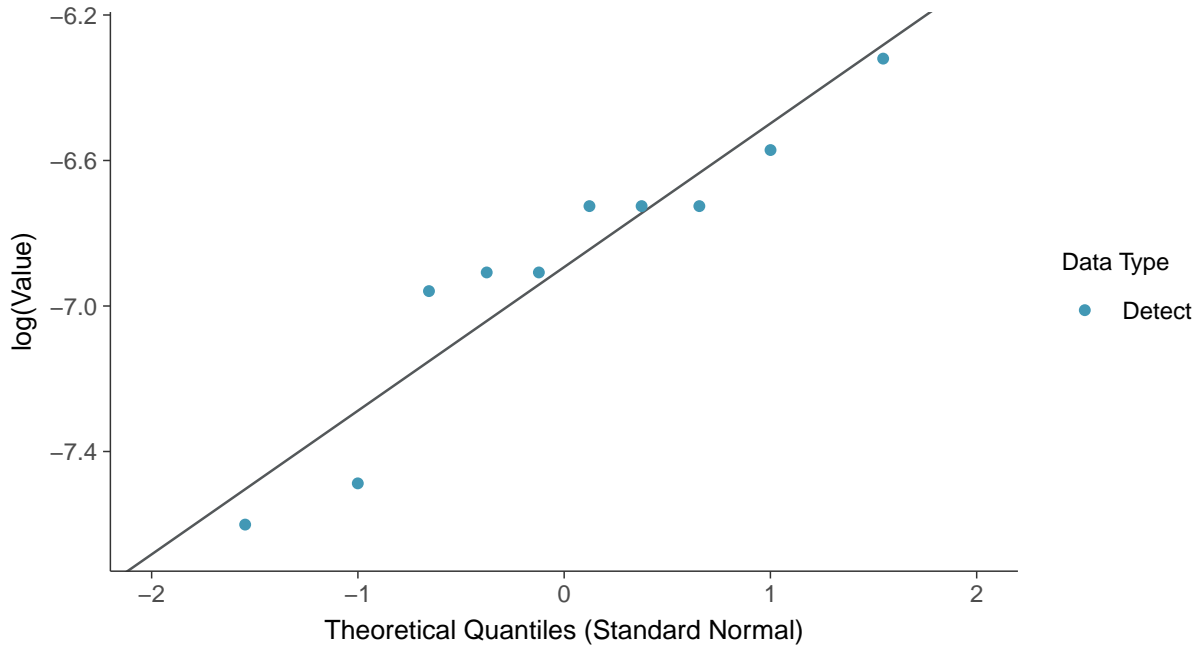




Normal Q-Q plot
Selenium, MW-02 (mg/L)

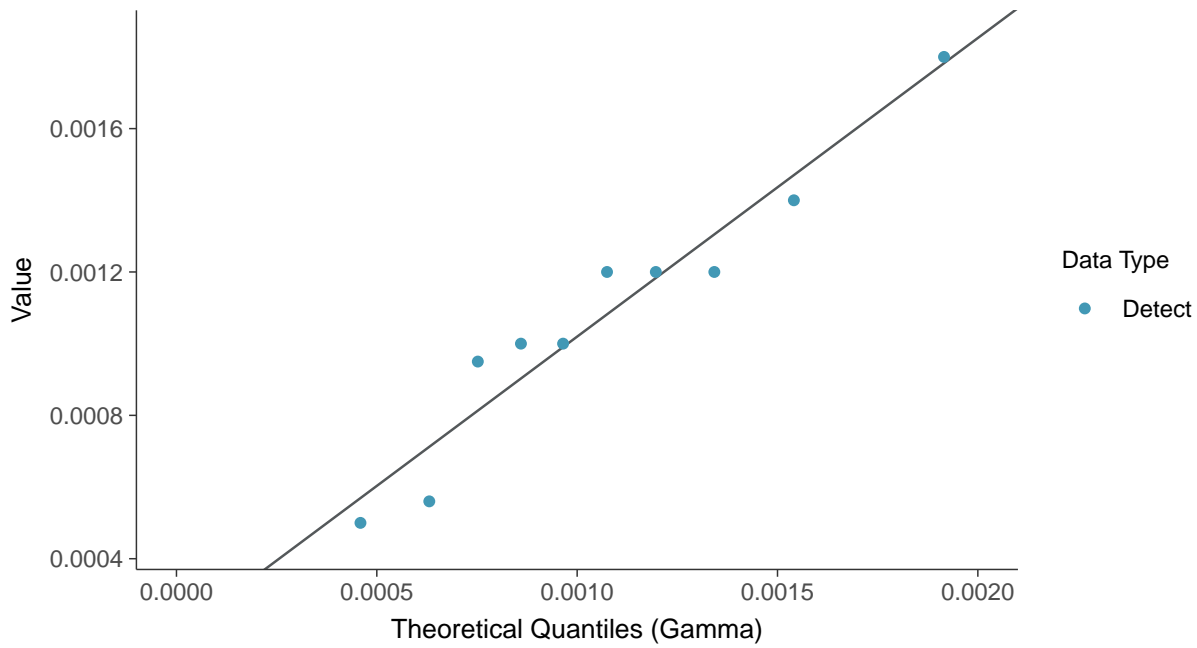


Lognormal Q-Q plot
Selenium, MW-02 (mg/L)

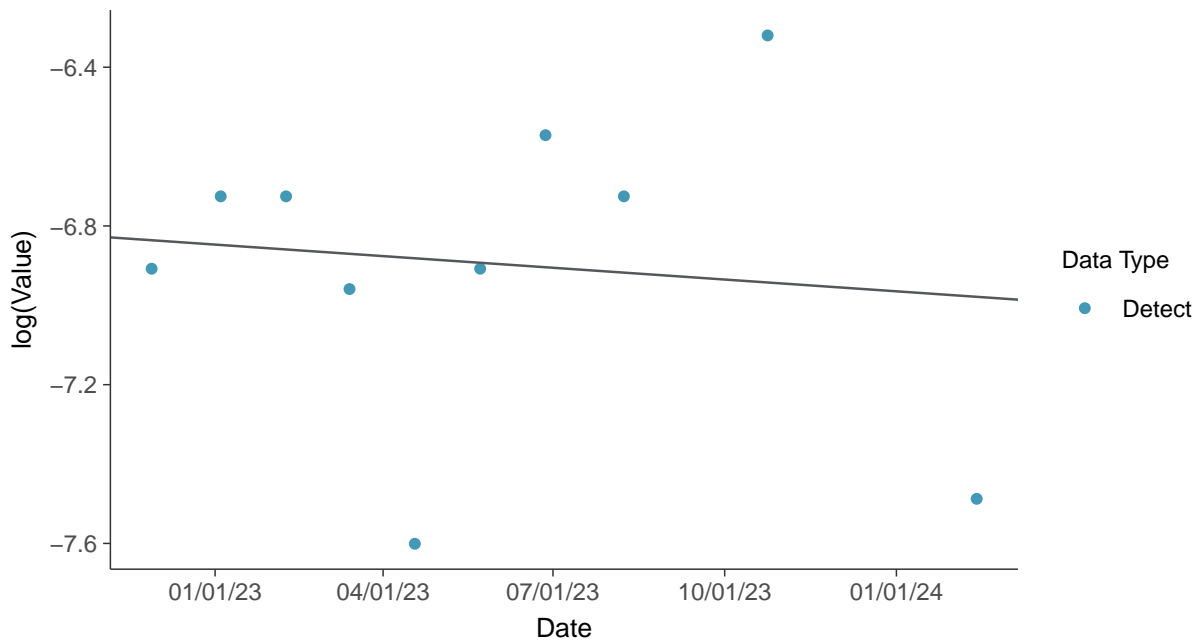




Gamma Q-Q plot
Selenium, MW-02 (mg/L)

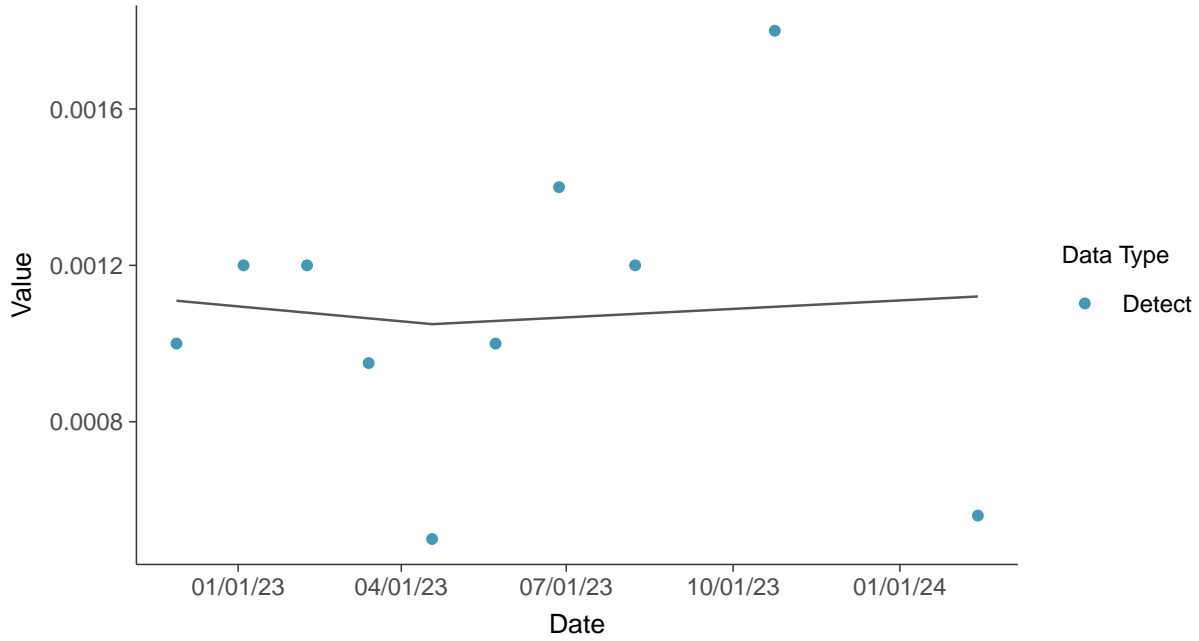


Trend Regression: Lognormal MLE
Selenium, MW-02 (mg/L)

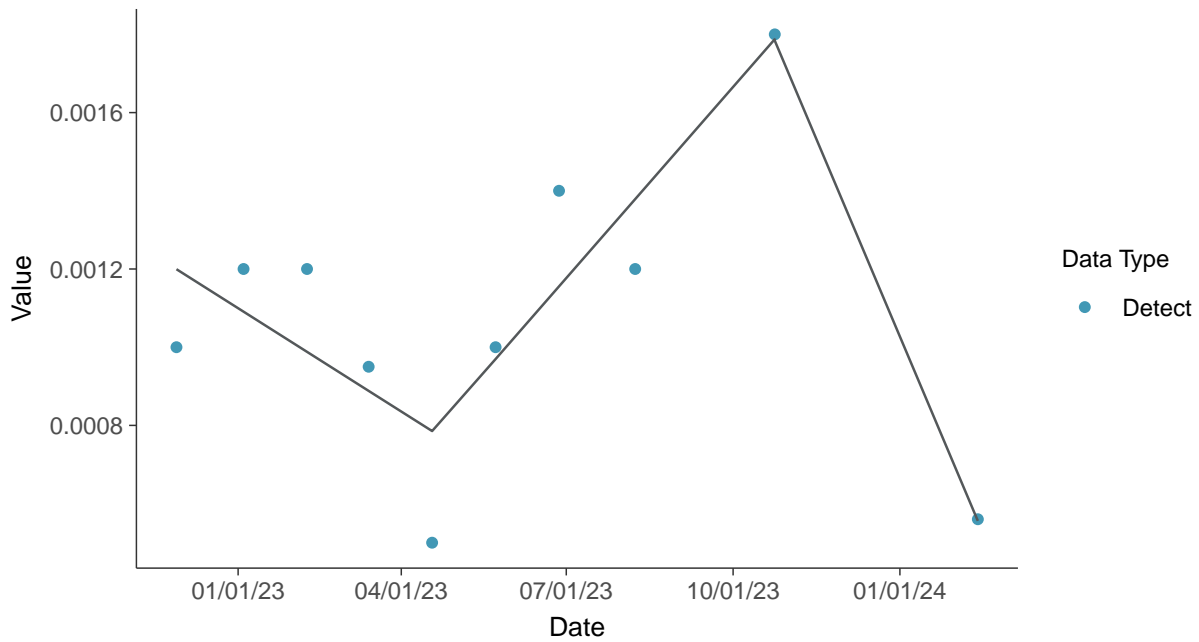




Trend Regression: Piecewise Linear-Linear
Selenium, MW-02 (mg/L)



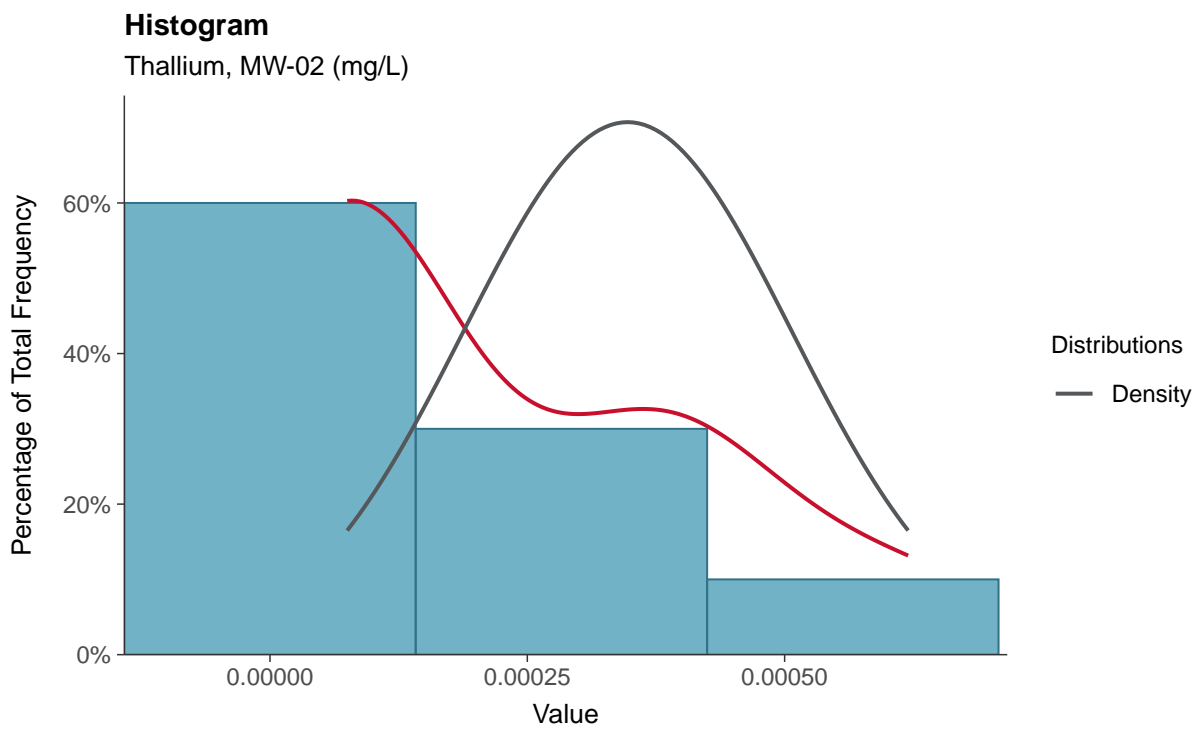
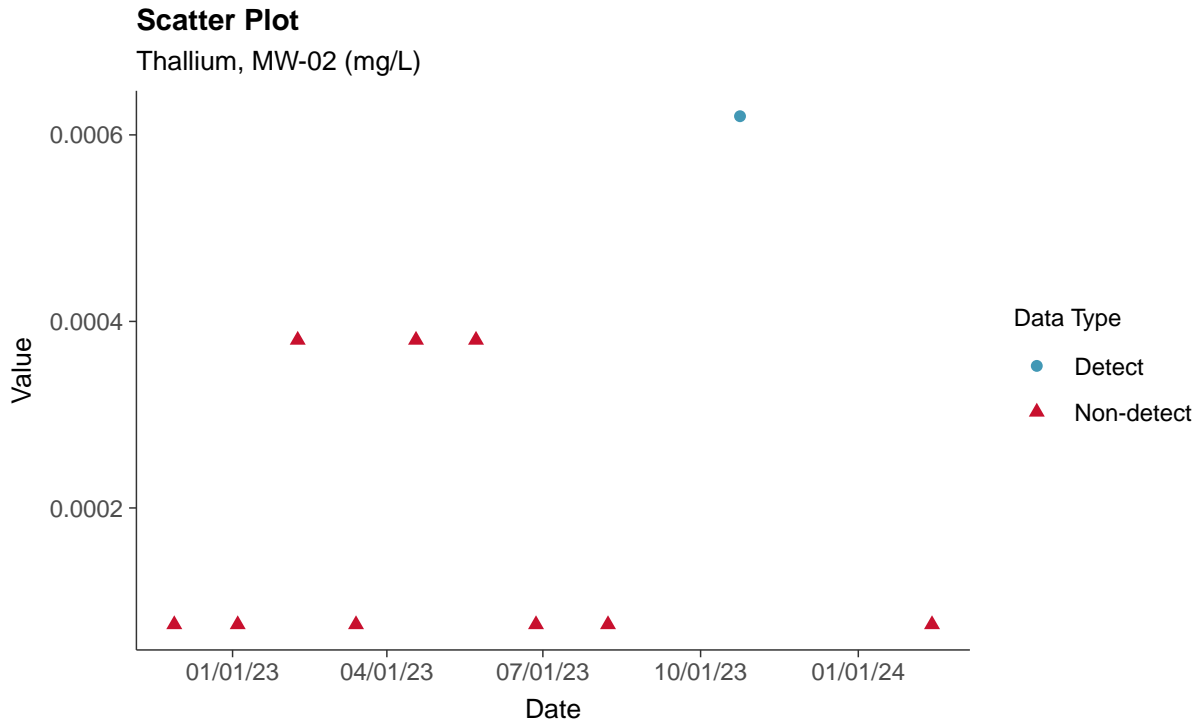
Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-02 (mg/L)





Appendix IV: Thallium, MW-02

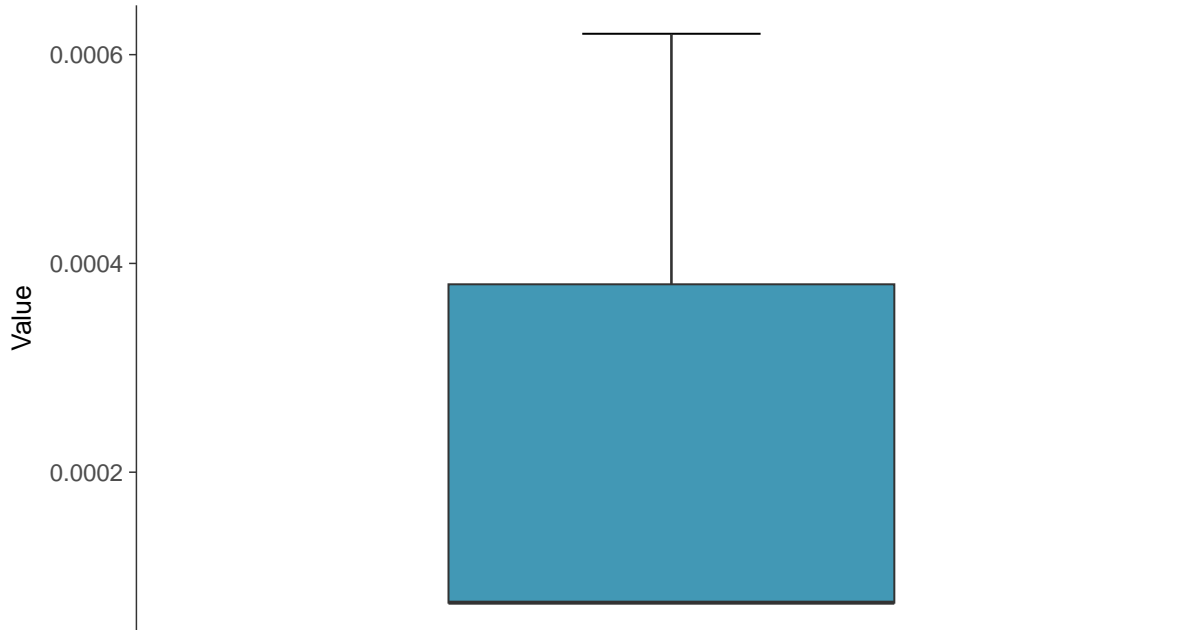
ID: 2_12_5_125





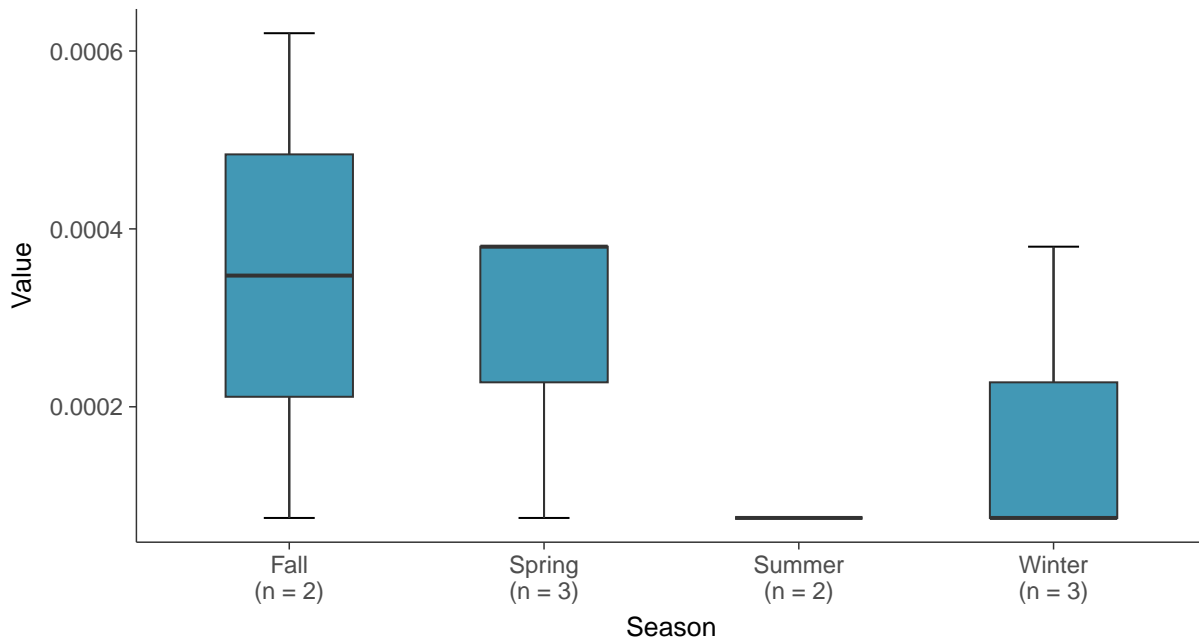
Boxplot

Thallium, MW-02 (mg/L)



Boxplot by Season

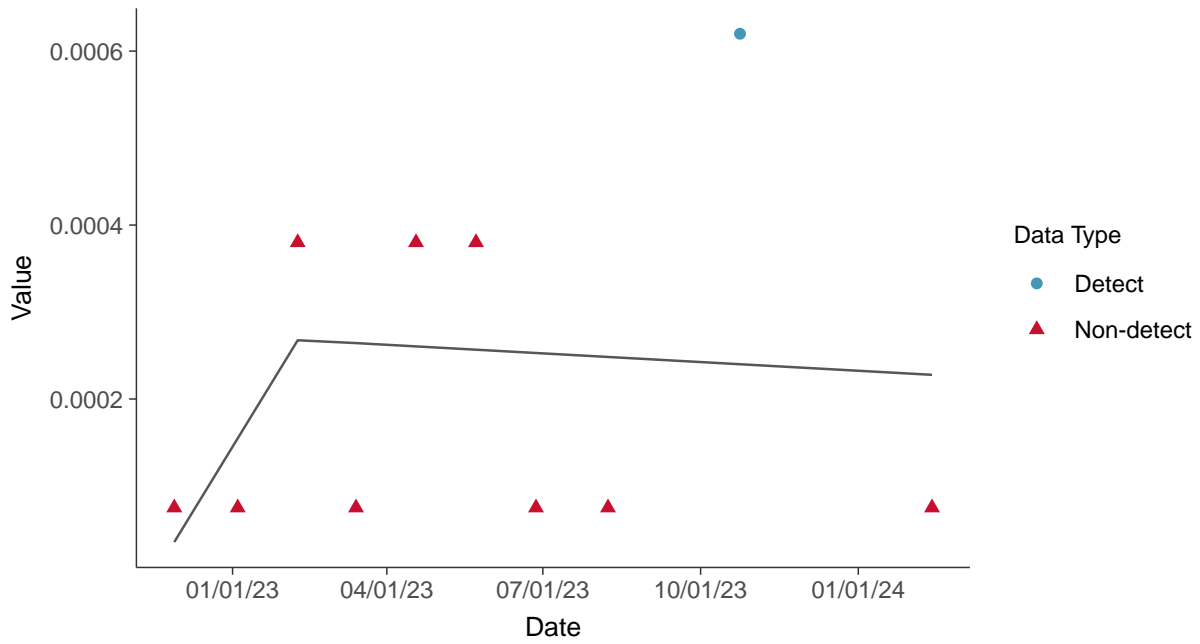
Thallium, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear

Thallium, MW-02 (mg/L)



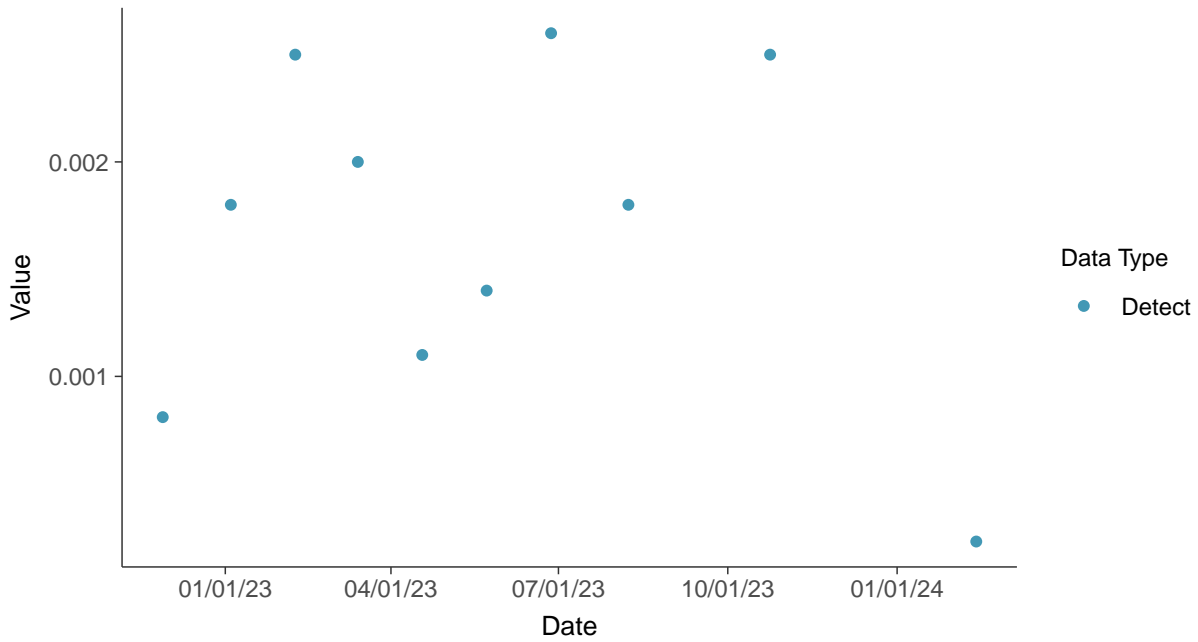


Part 115: Copper, MW-02

ID: 2_12_6_111

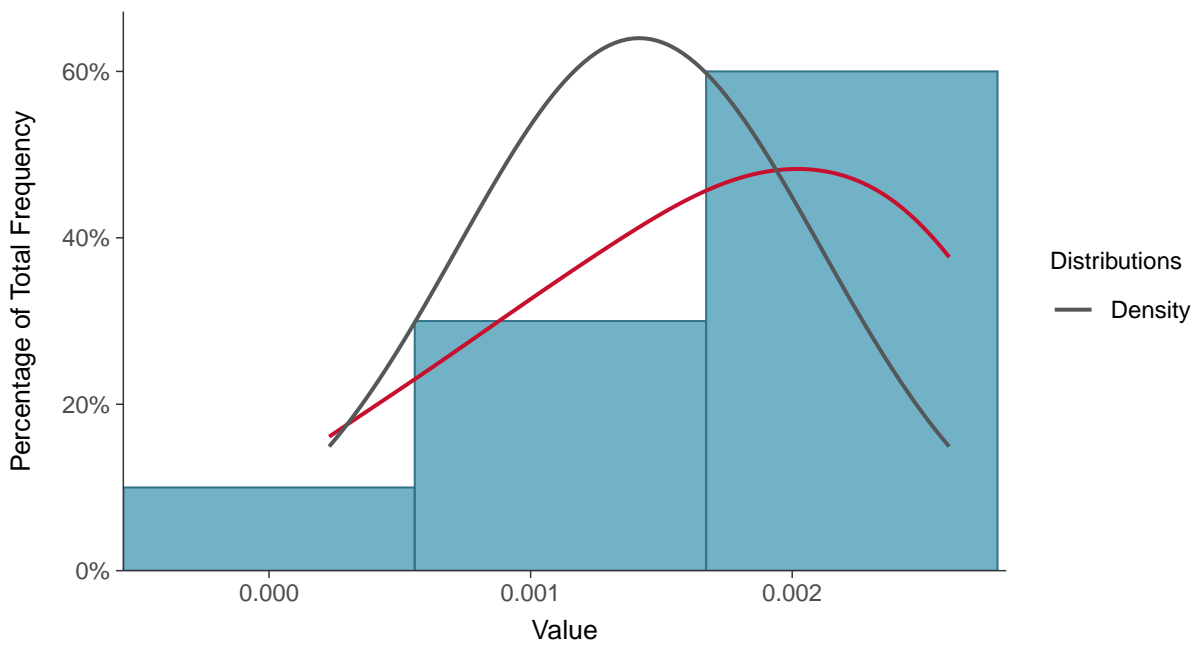
Scatter Plot

Copper, MW-02 (mg/L)



Histogram

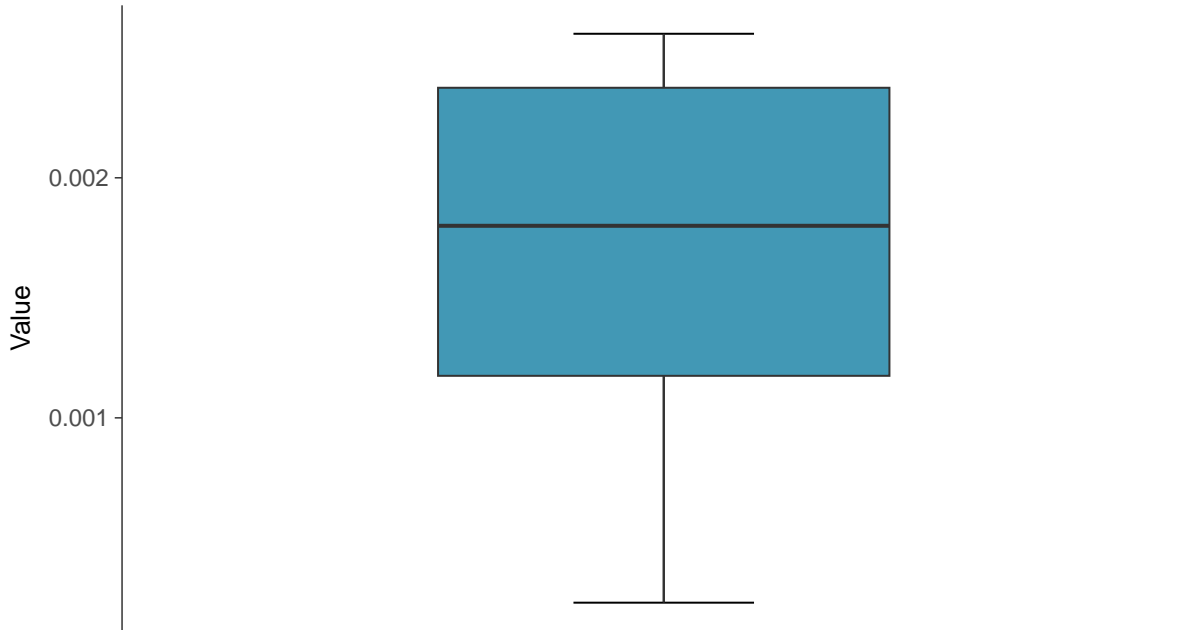
Copper, MW-02 (mg/L)





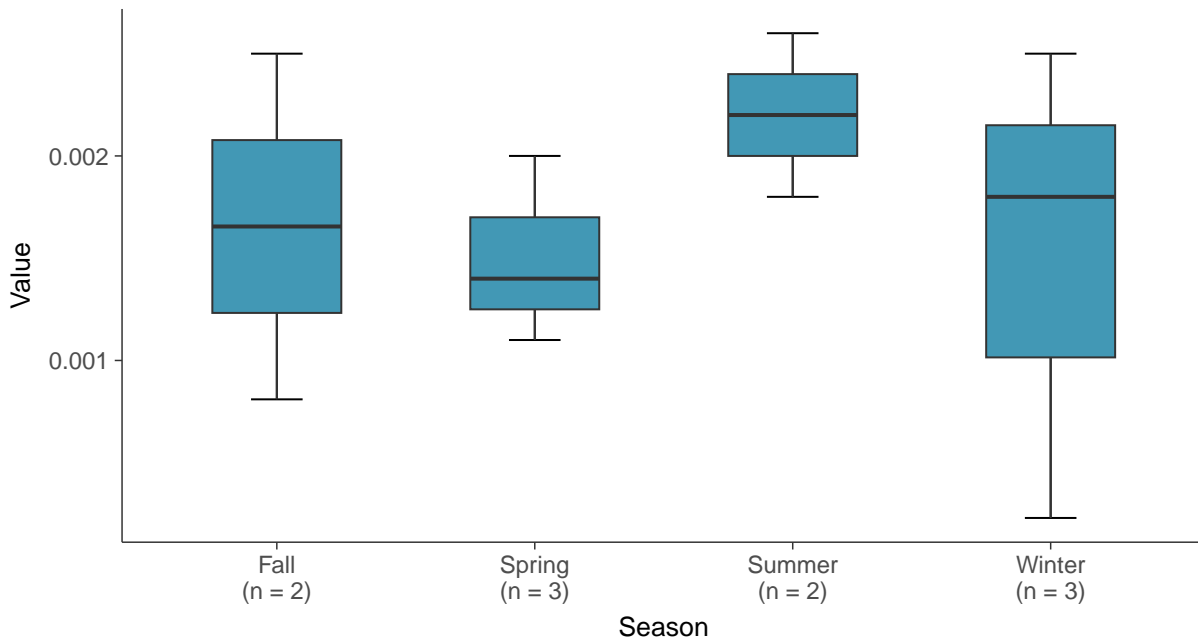
Boxplot

Copper, MW-02 (mg/L)



Boxplot by Season

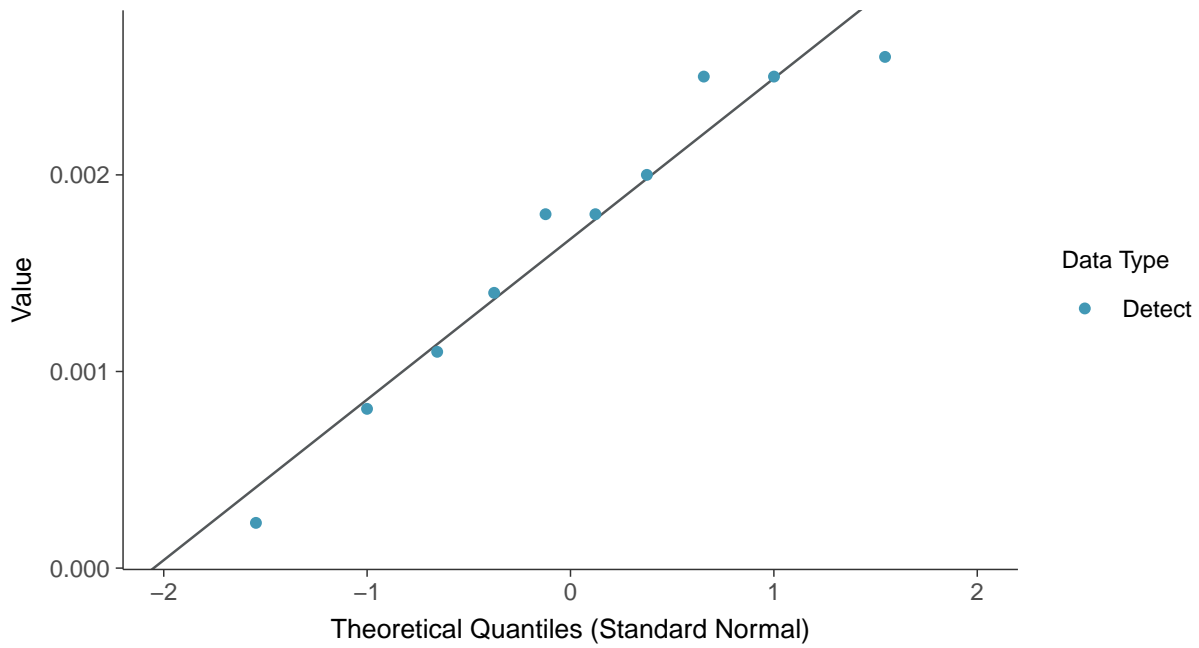
Copper, MW-02 (mg/L)





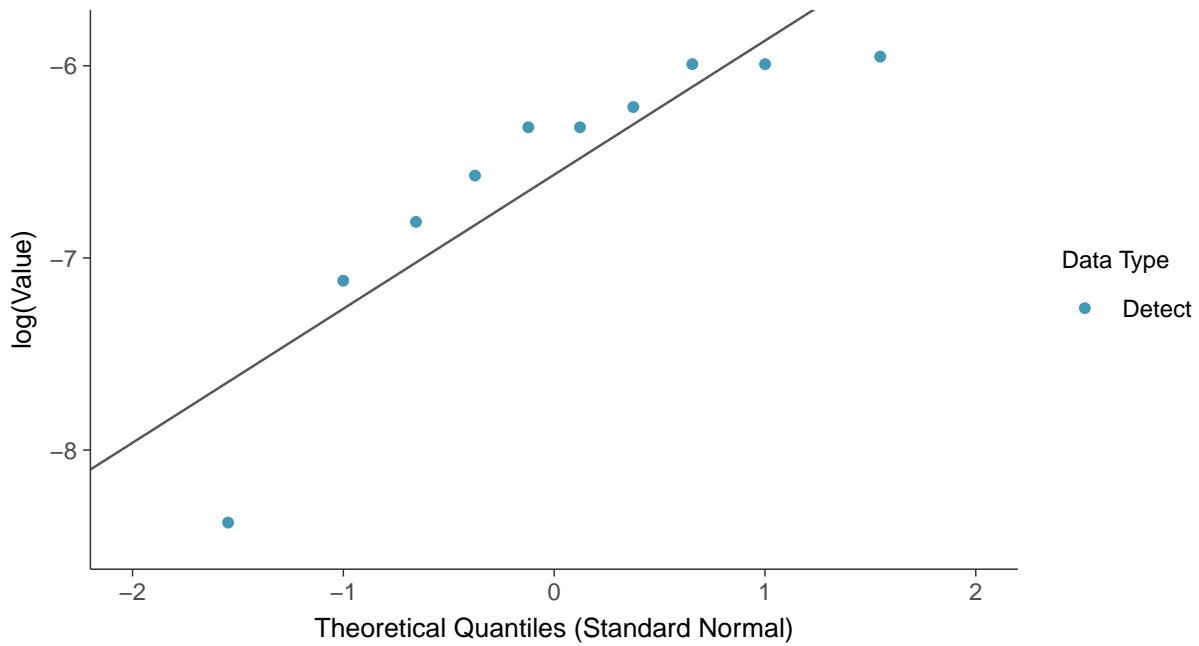
Normal Q-Q plot

Copper, MW-02 (mg/L)



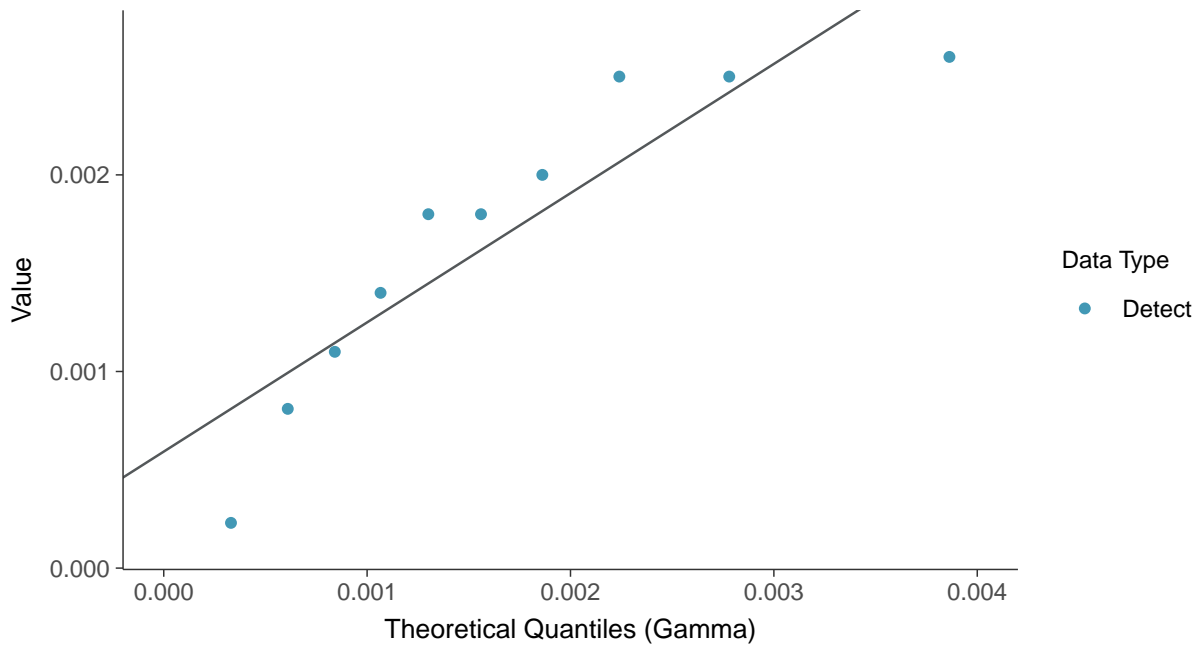
Lognormal Q-Q plot

Copper, MW-02 (mg/L)

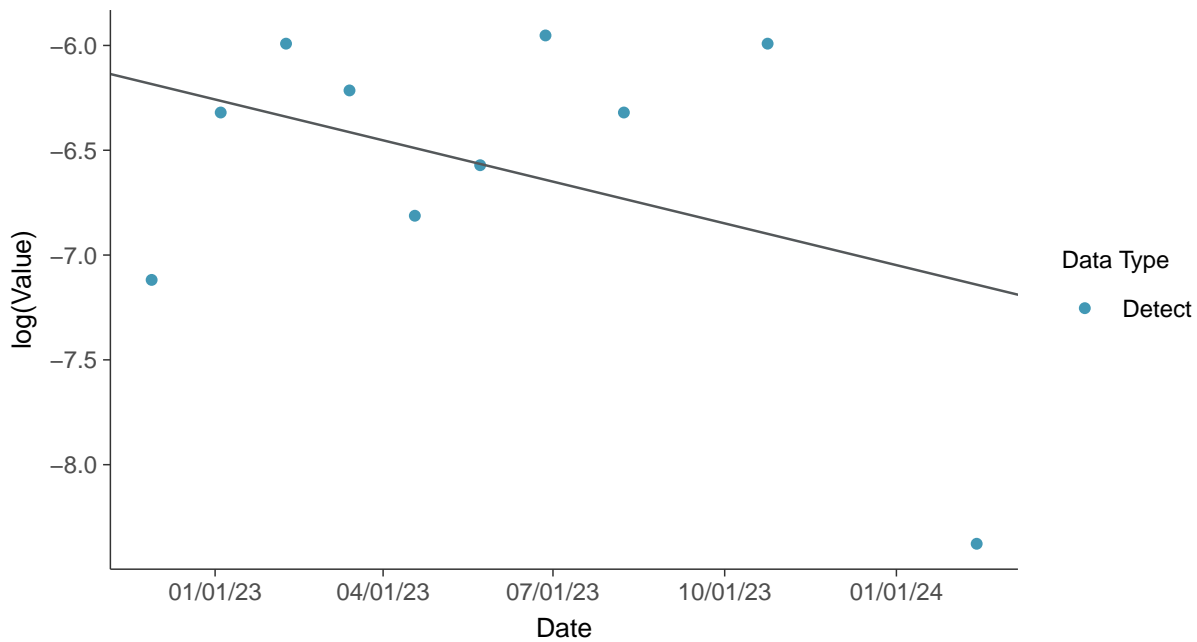




Gamma Q-Q plot
Copper, MW-02 (mg/L)



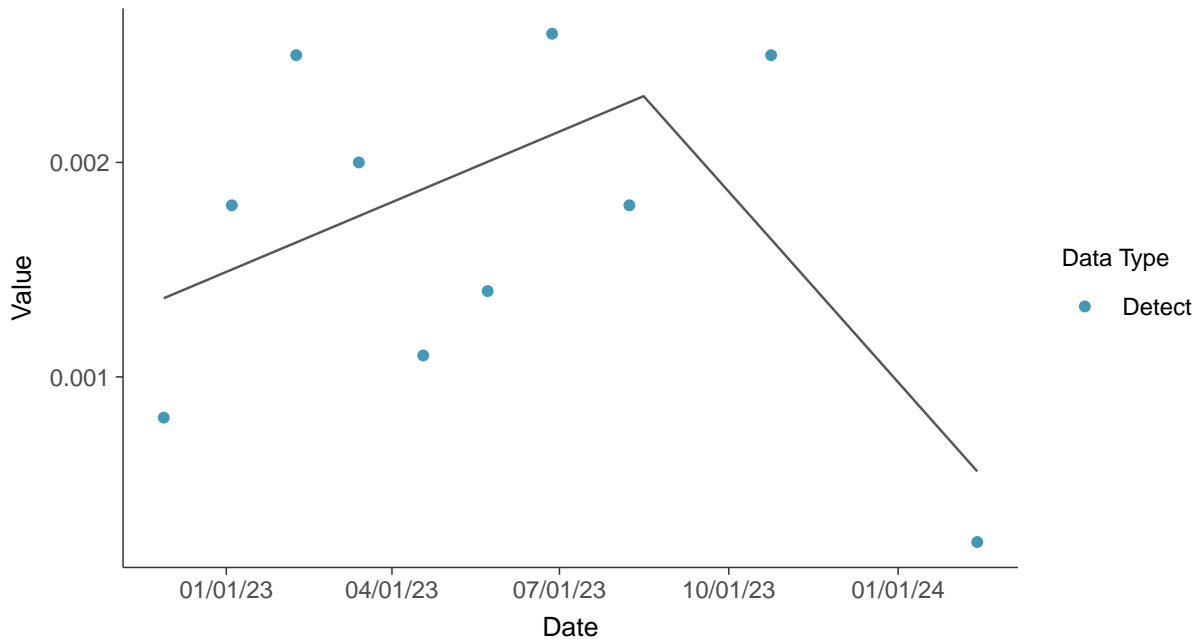
Trend Regression: Lognormal MLE
Copper, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear

Copper, MW-02 (mg/L)



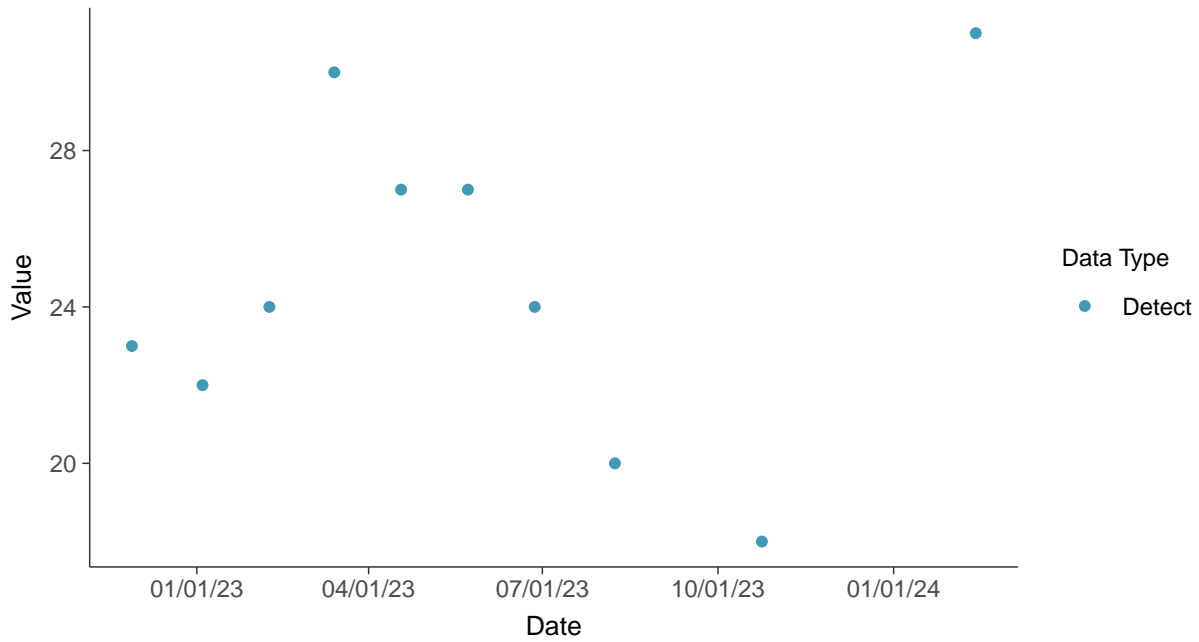


Part 115: Iron, MW-02

ID: 2_12_6_114

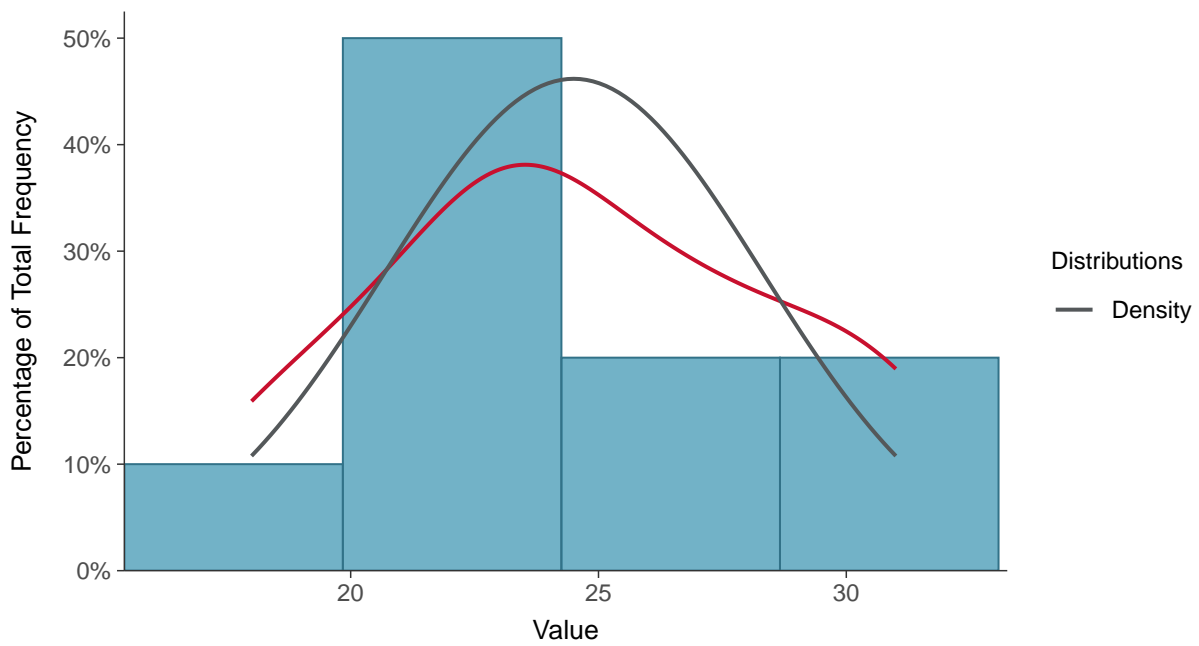
Scatter Plot

Iron, MW-02 (mg/L)



Histogram

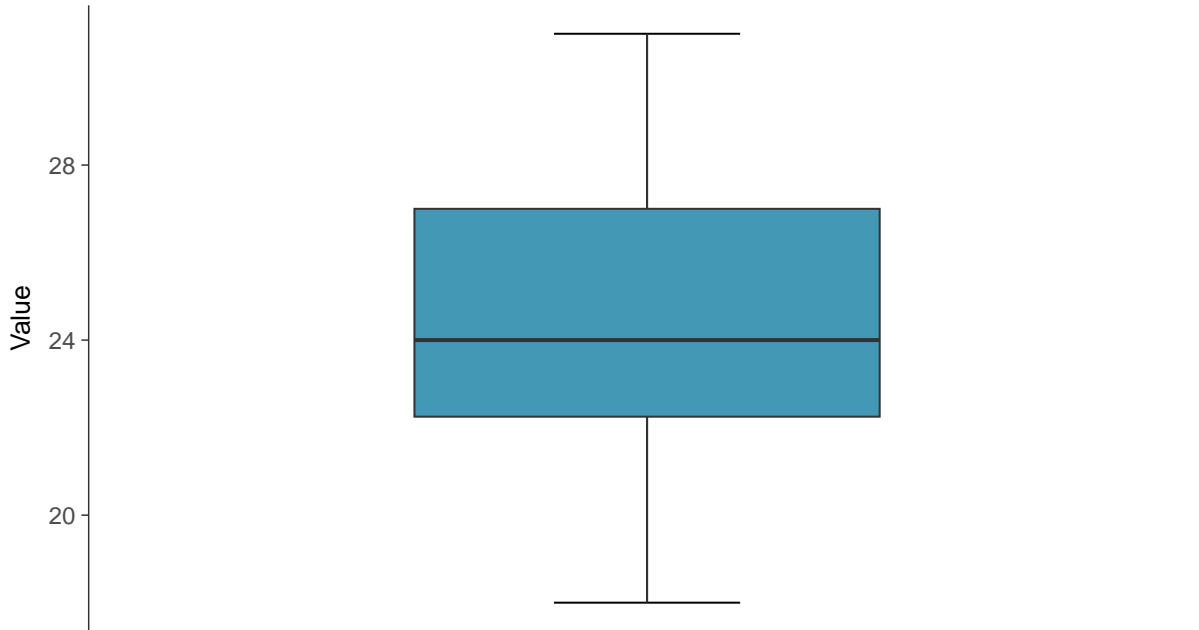
Iron, MW-02 (mg/L)





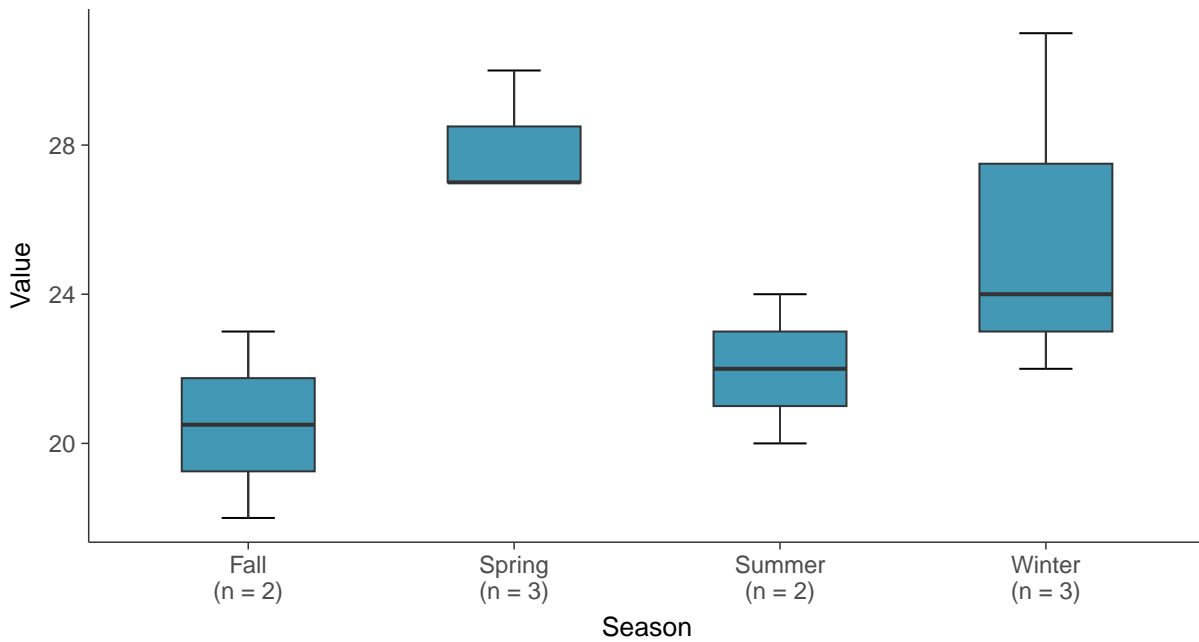
Boxplot

Iron, MW-02 (mg/L)



Boxplot by Season

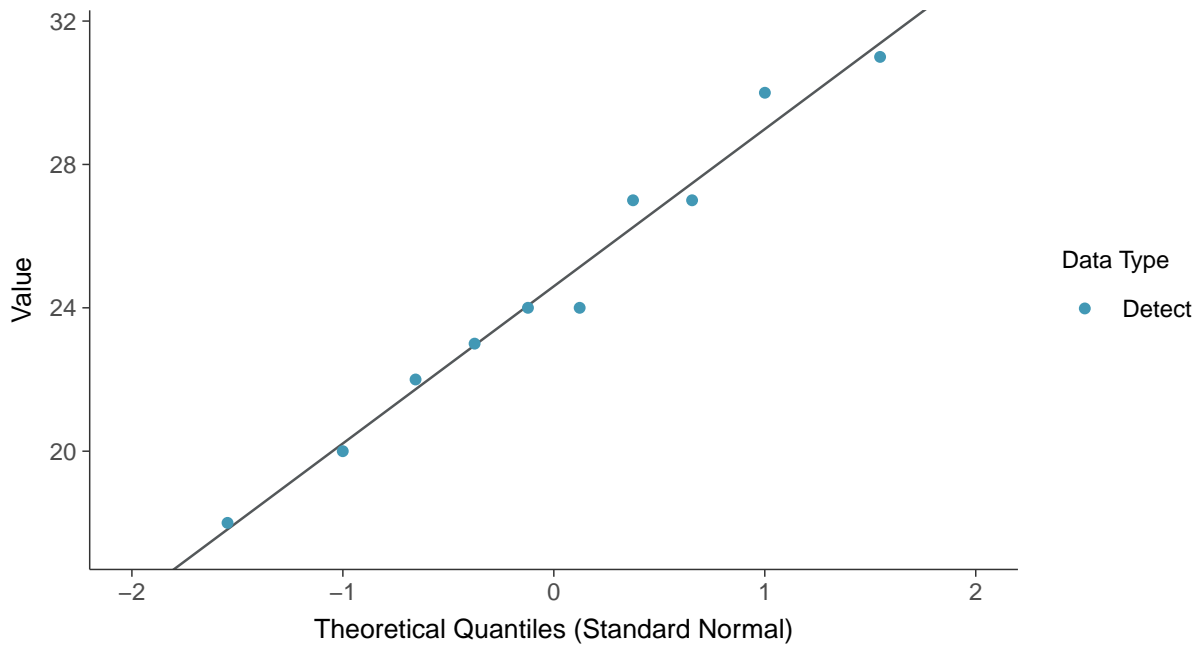
Iron, MW-02 (mg/L)





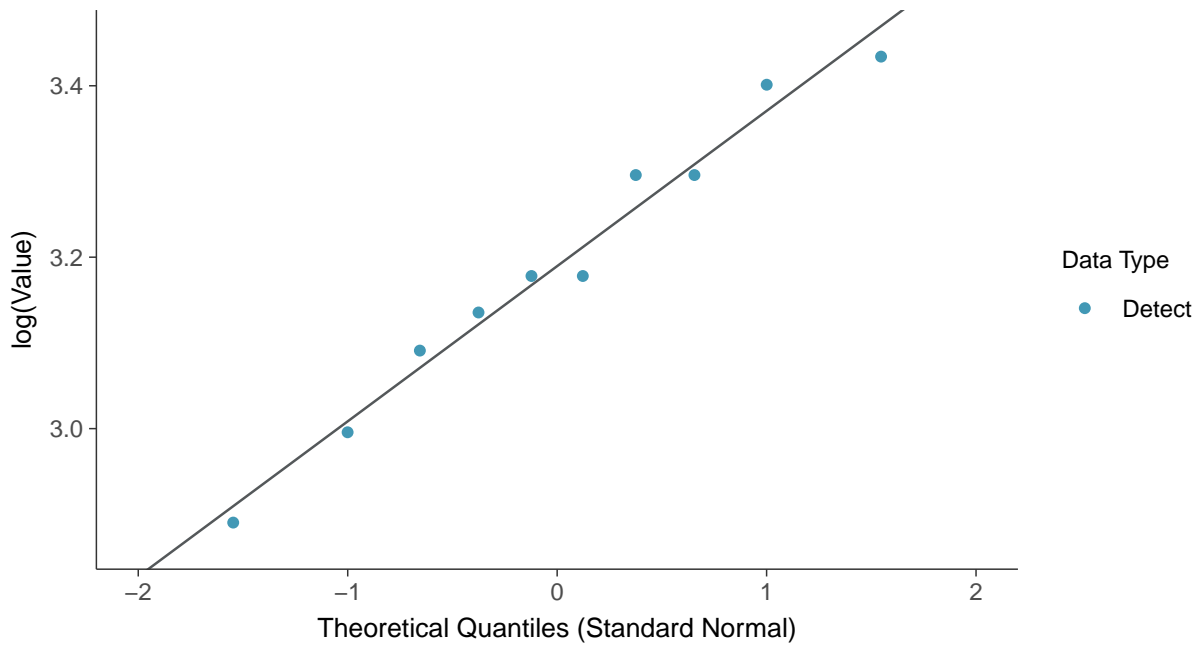
Normal Q-Q plot

Iron, MW-02 (mg/L)



Lognormal Q-Q plot

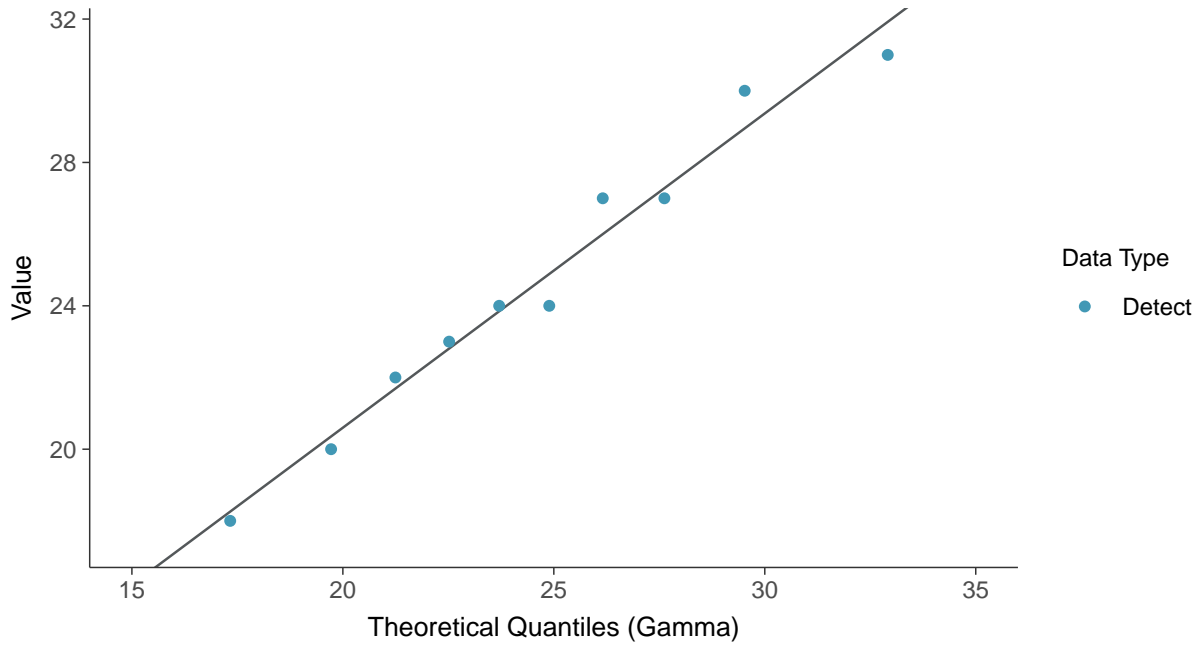
Iron, MW-02 (mg/L)





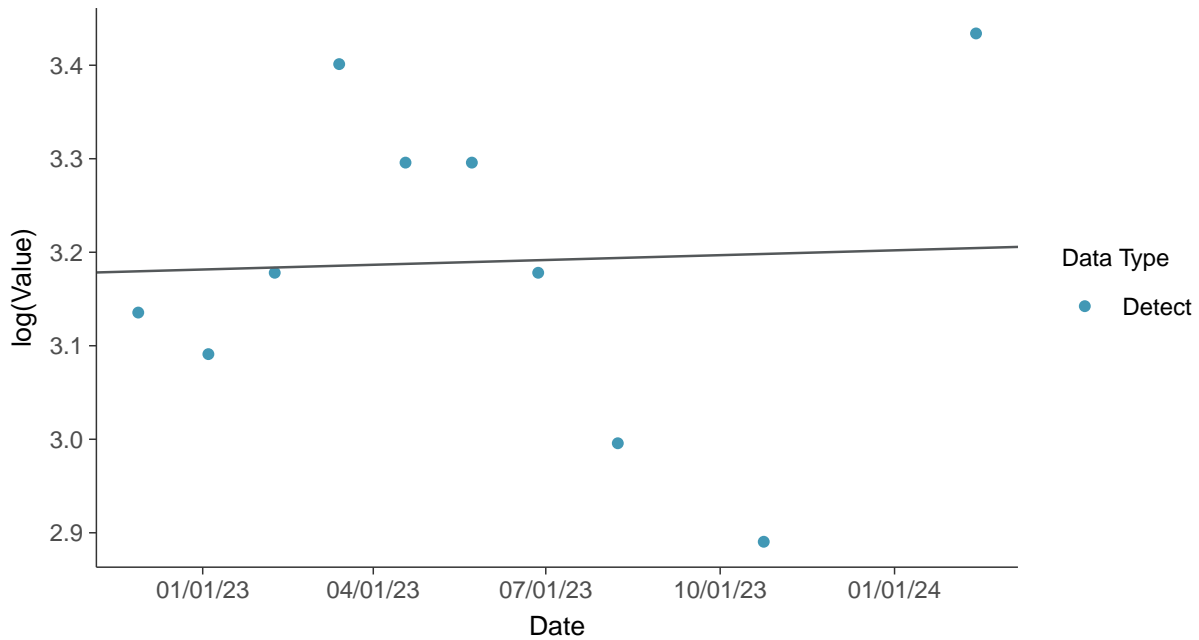
Gamma Q-Q plot

Iron, MW-02 (mg/L)



Trend Regression: Lognormal MLE

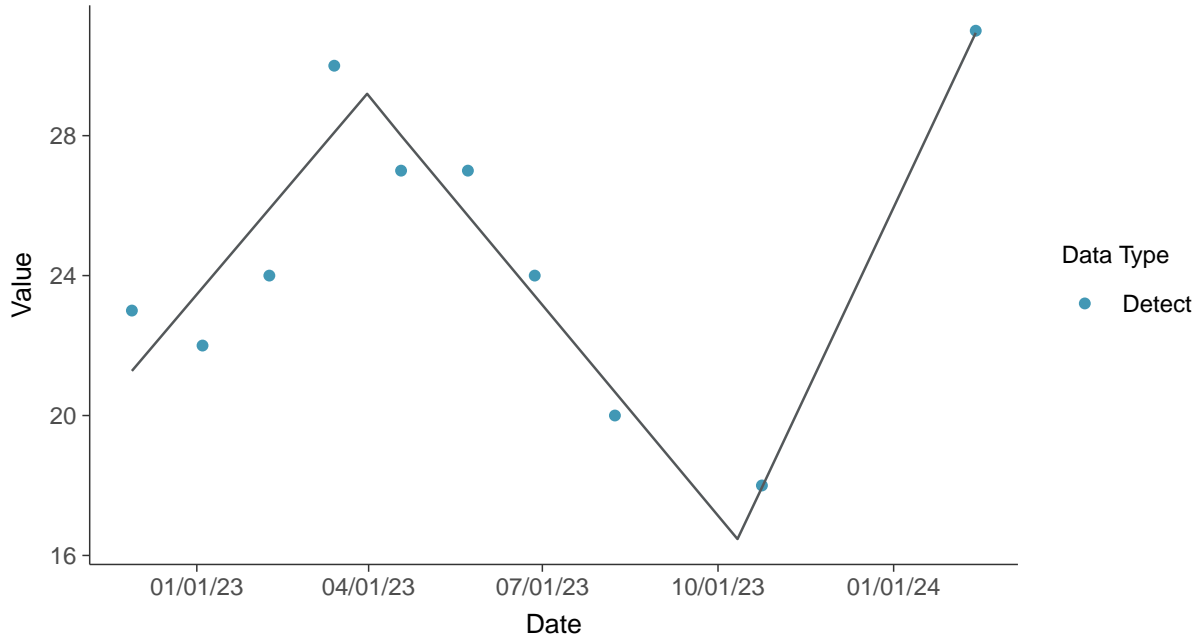
Iron, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

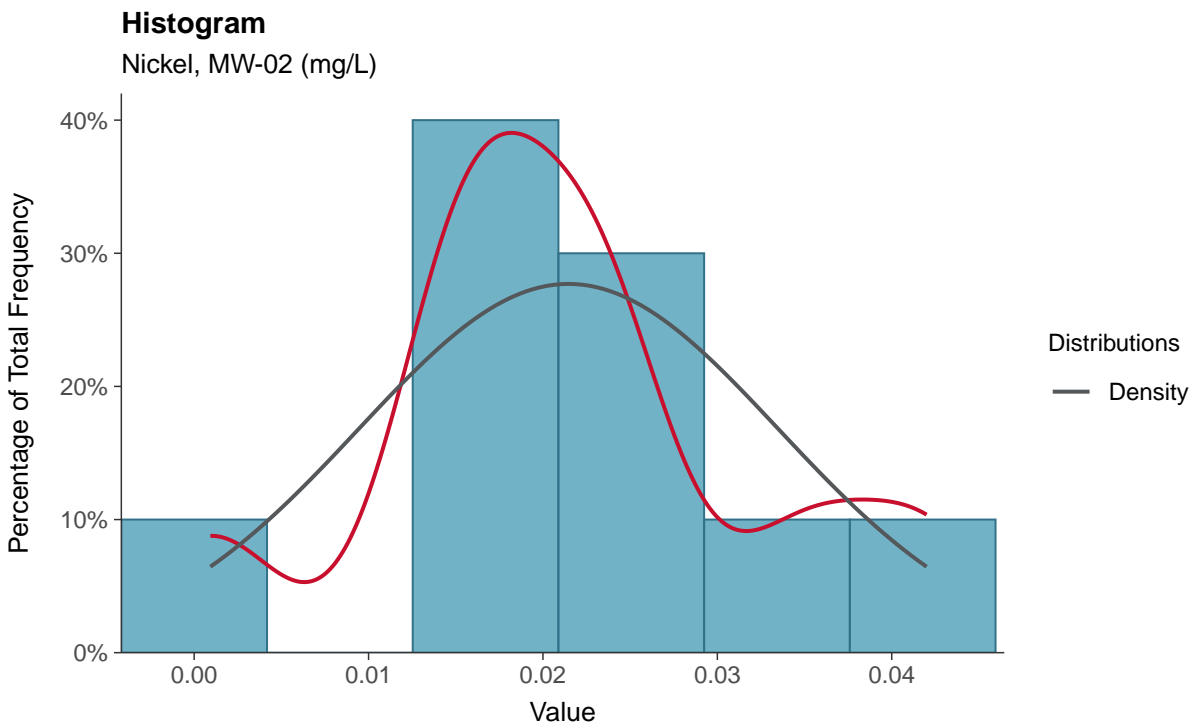
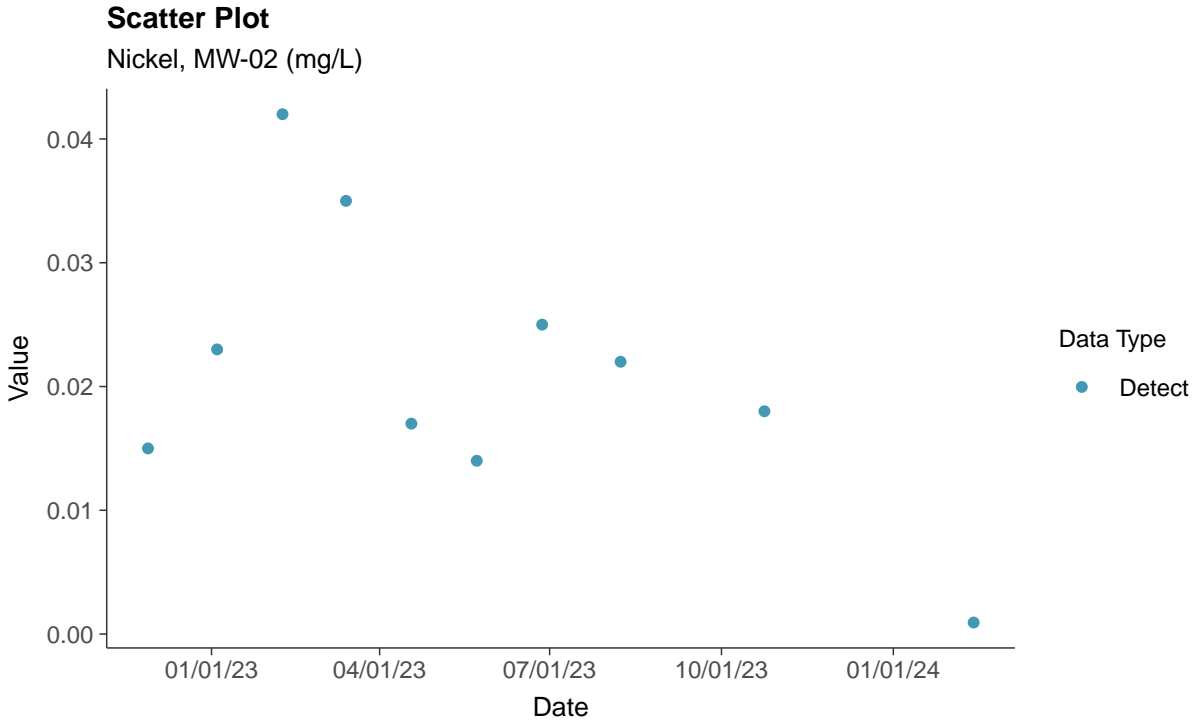
Iron, MW-02 (mg/L)





Part 115: Nickel, MW-02

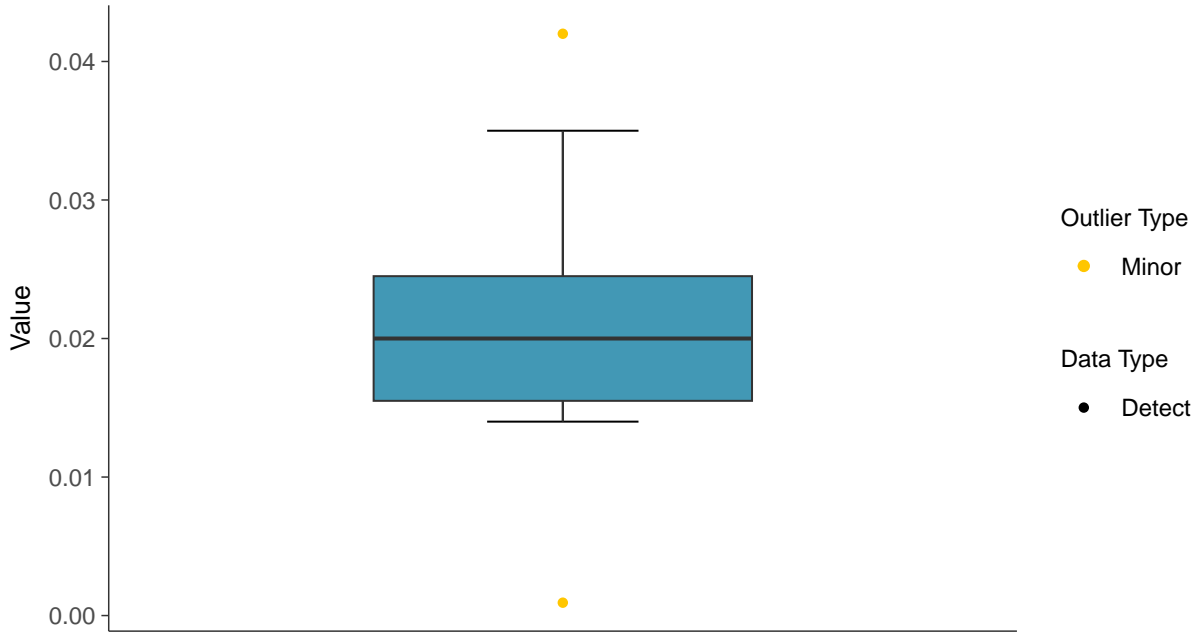
ID: 2_12_6_119





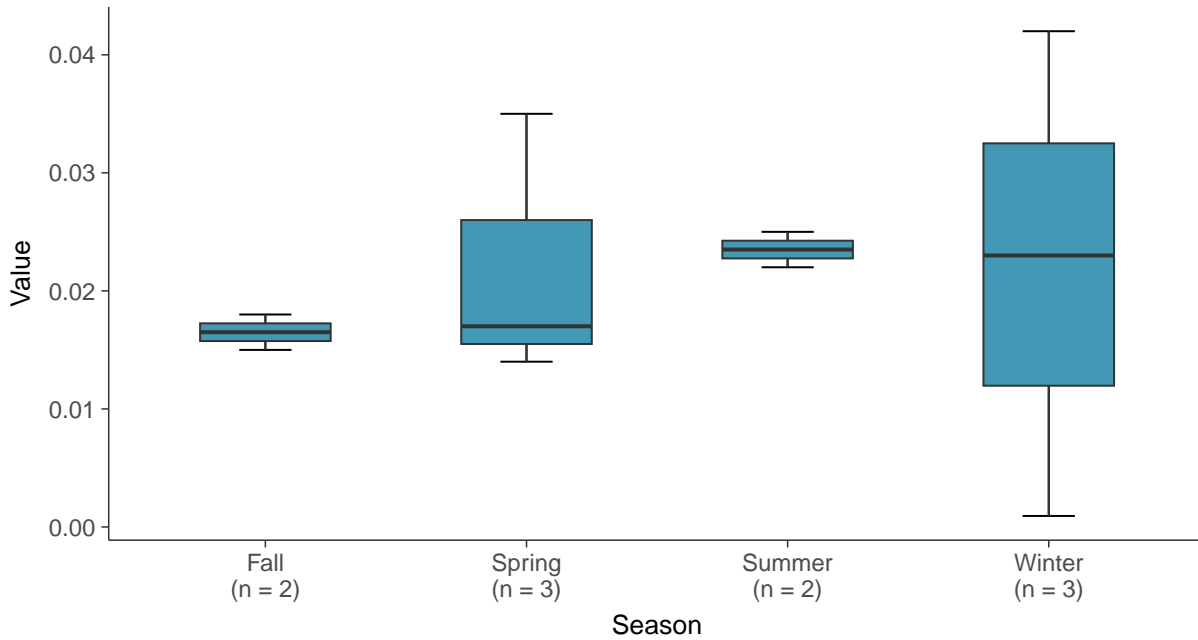
Boxplot

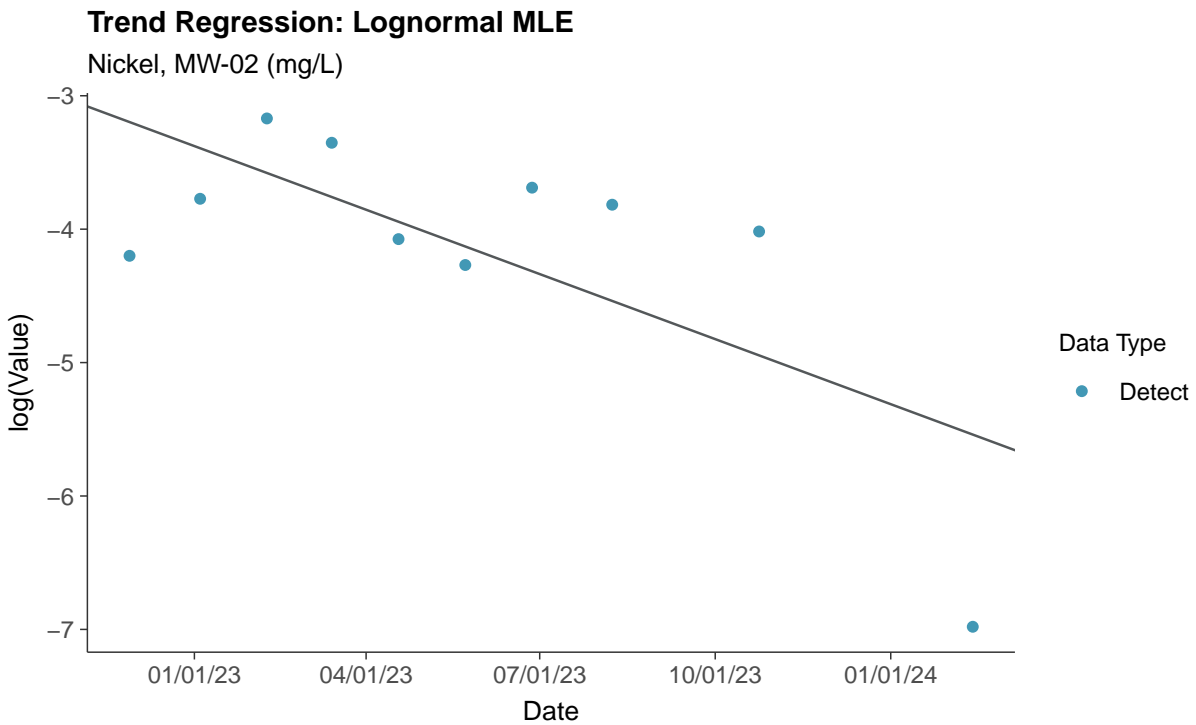
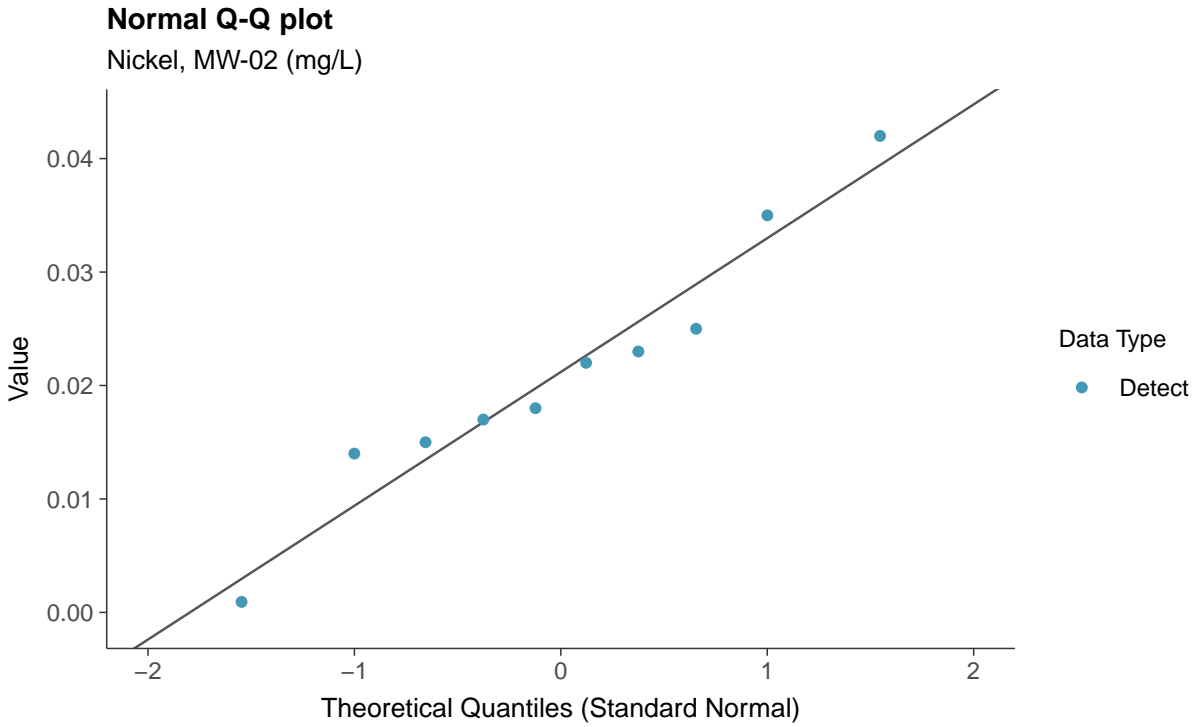
Nickel, MW-02 (mg/L)



Boxplot by Season

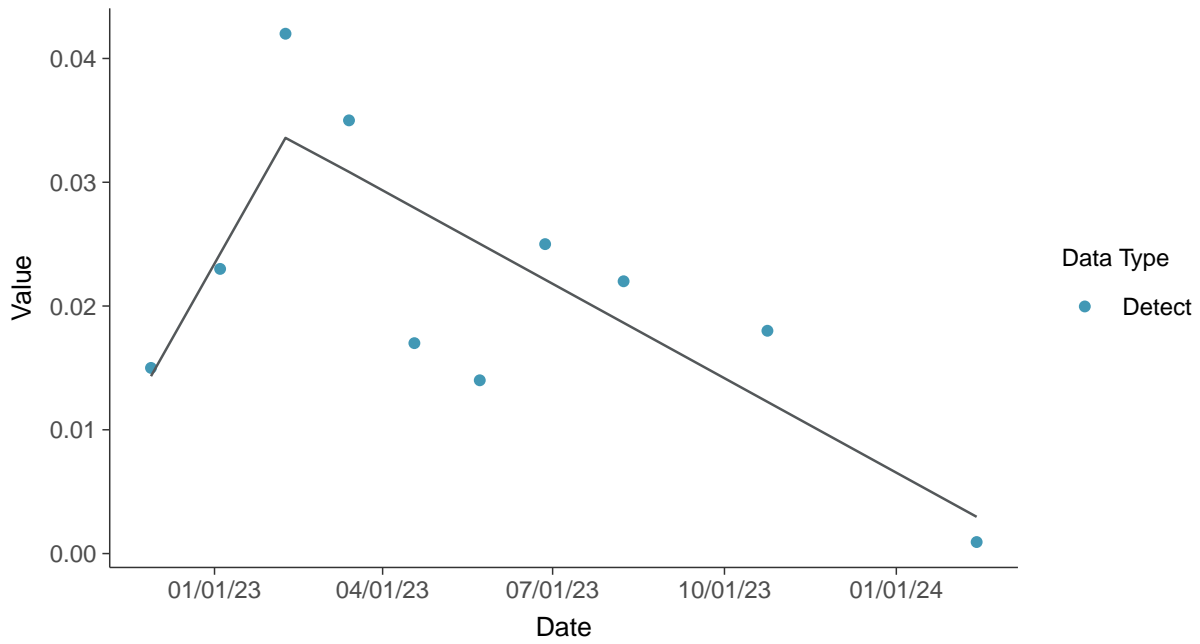
Nickel, MW-02 (mg/L)







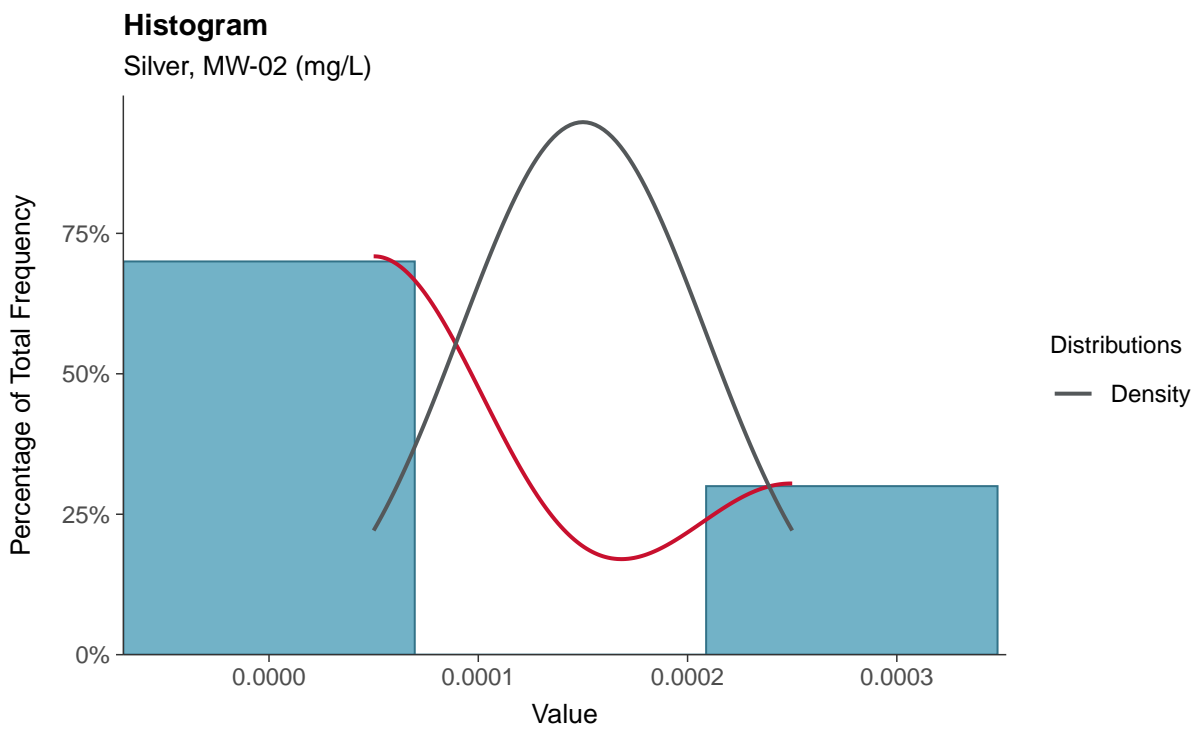
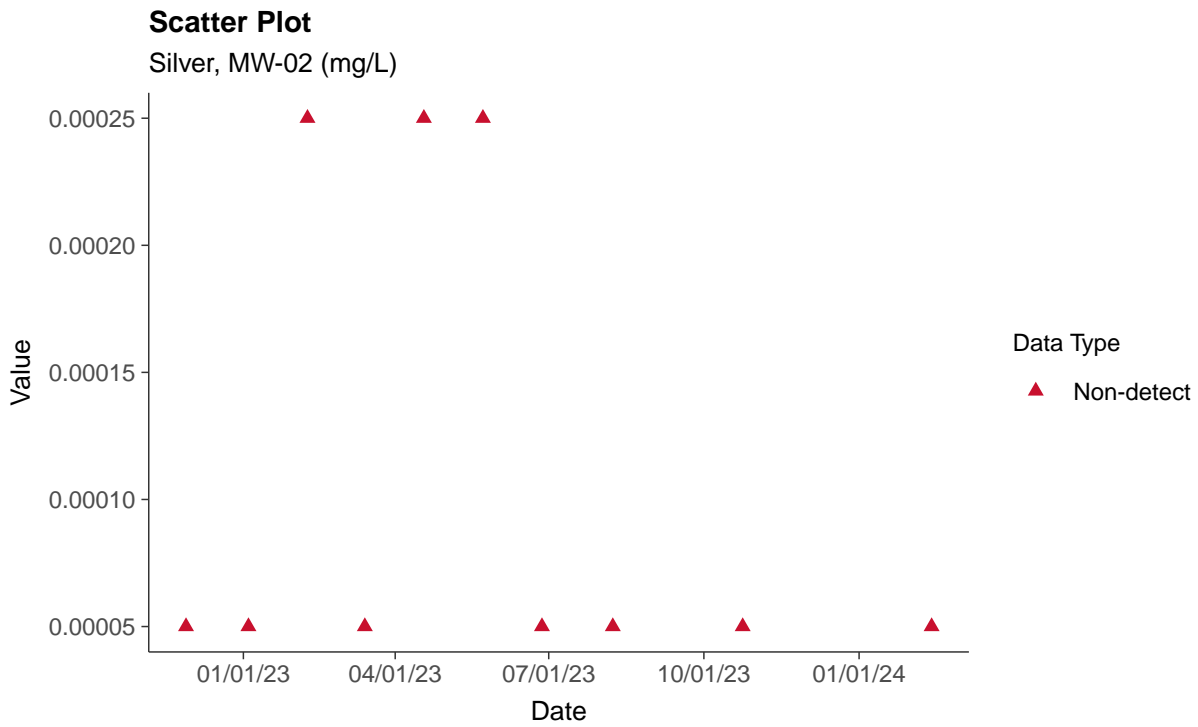
Trend Regression: Piecewise Linear-Linear
Nickel, MW-02 (mg/L)





Part 115: Silver, MW-02

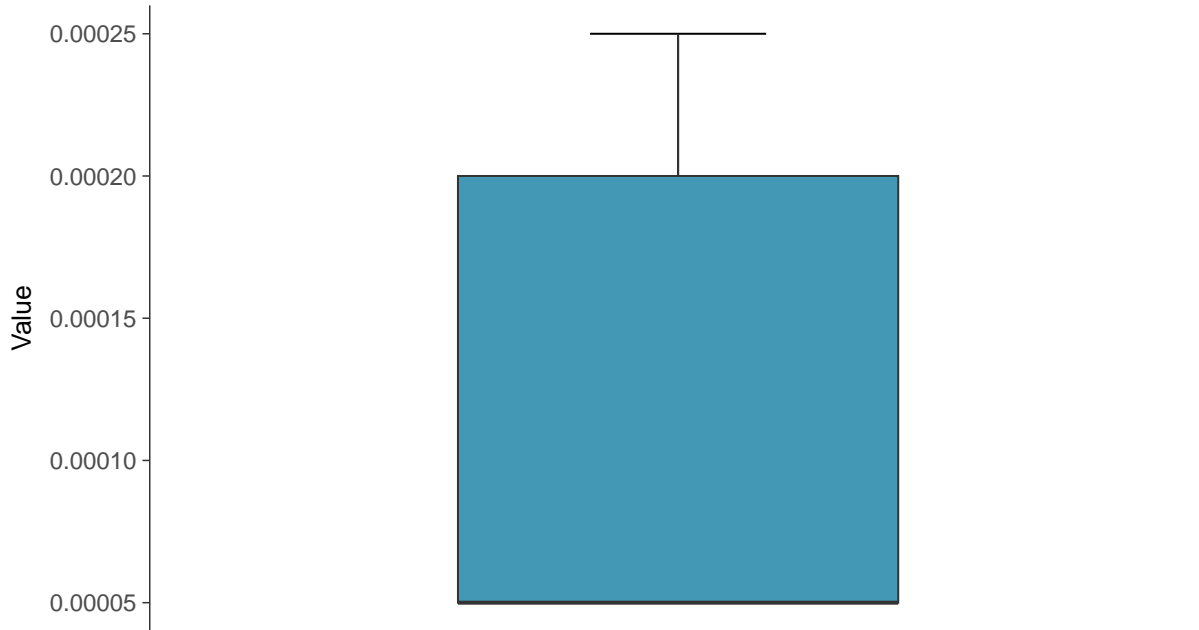
ID: 2_12_6_123





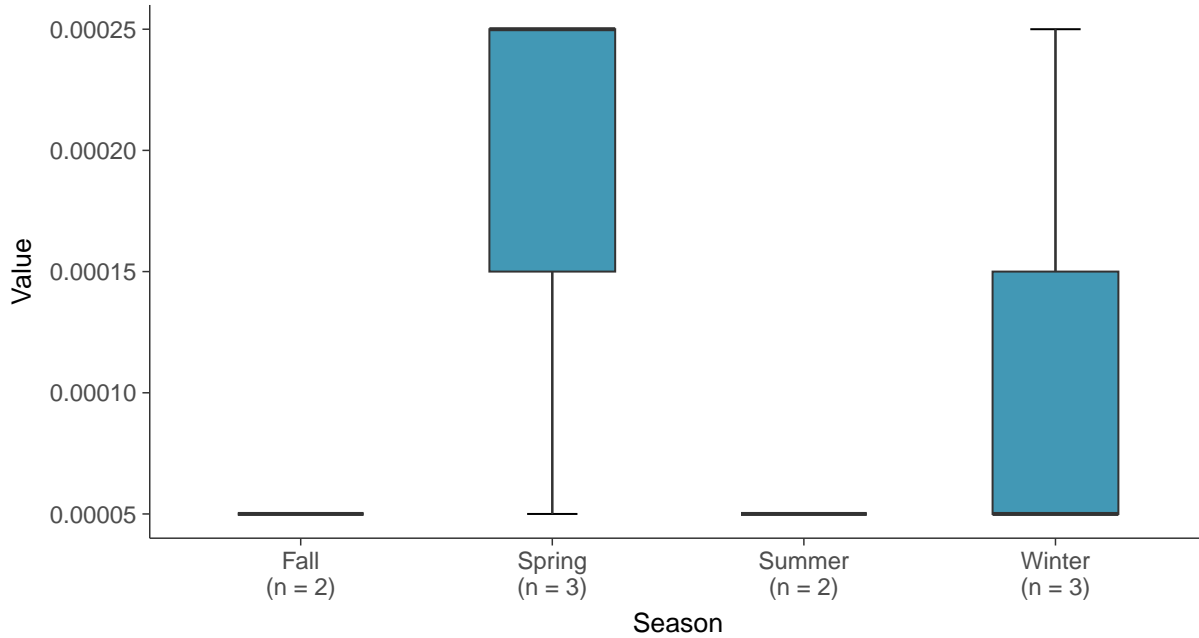
Boxplot

Silver, MW-02 (mg/L)



Boxplot by Season

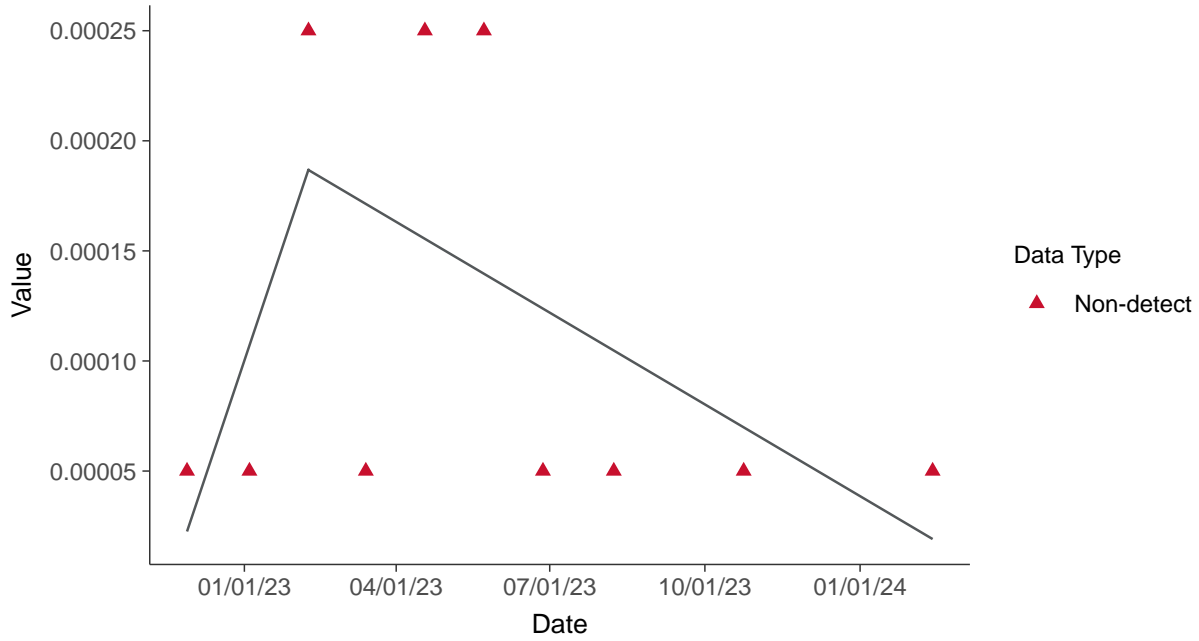
Silver, MW-02 (mg/L)





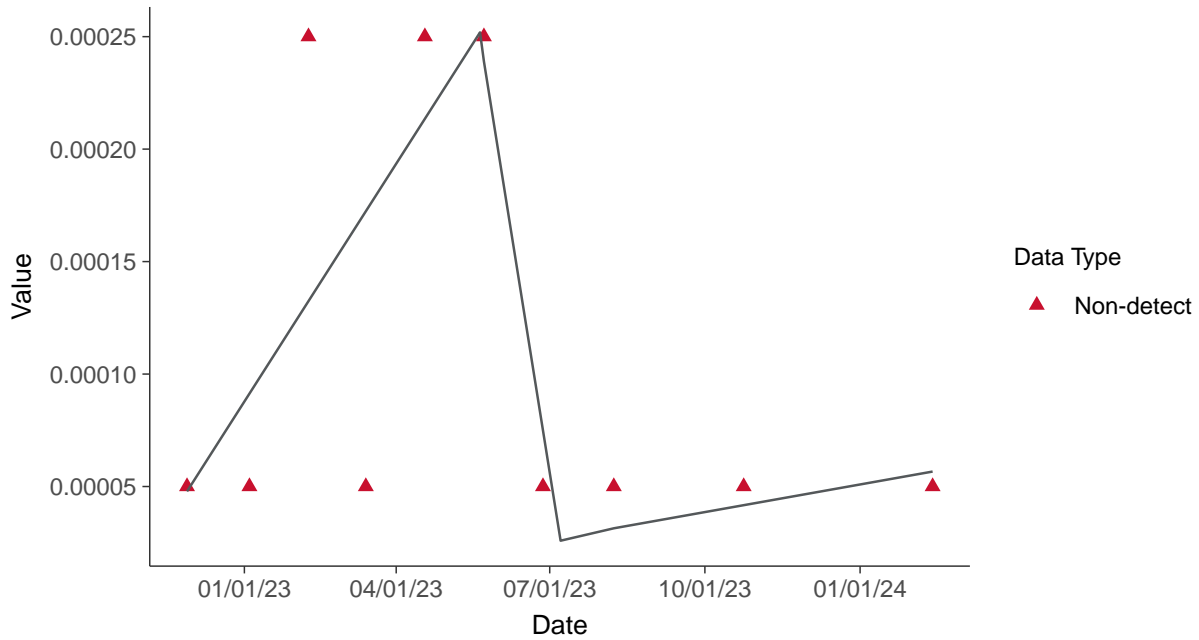
Trend Regression: Piecewise Linear-Linear

Silver, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-02 (mg/L)



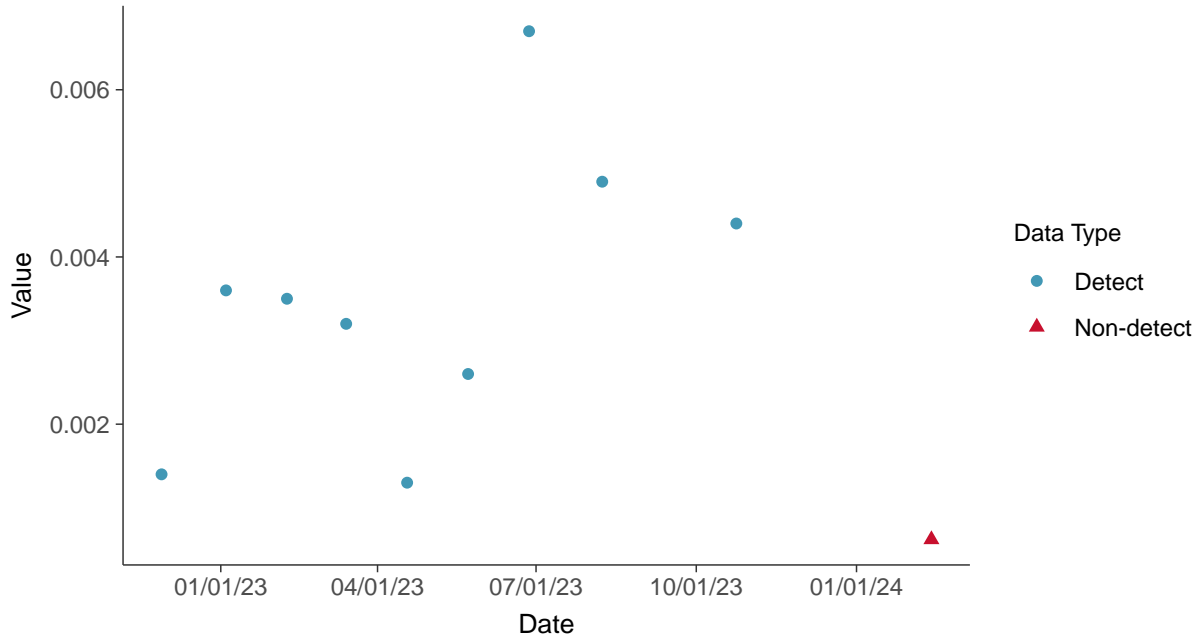


Part 115: Vanadium, MW-02

ID: 2_12_6_129

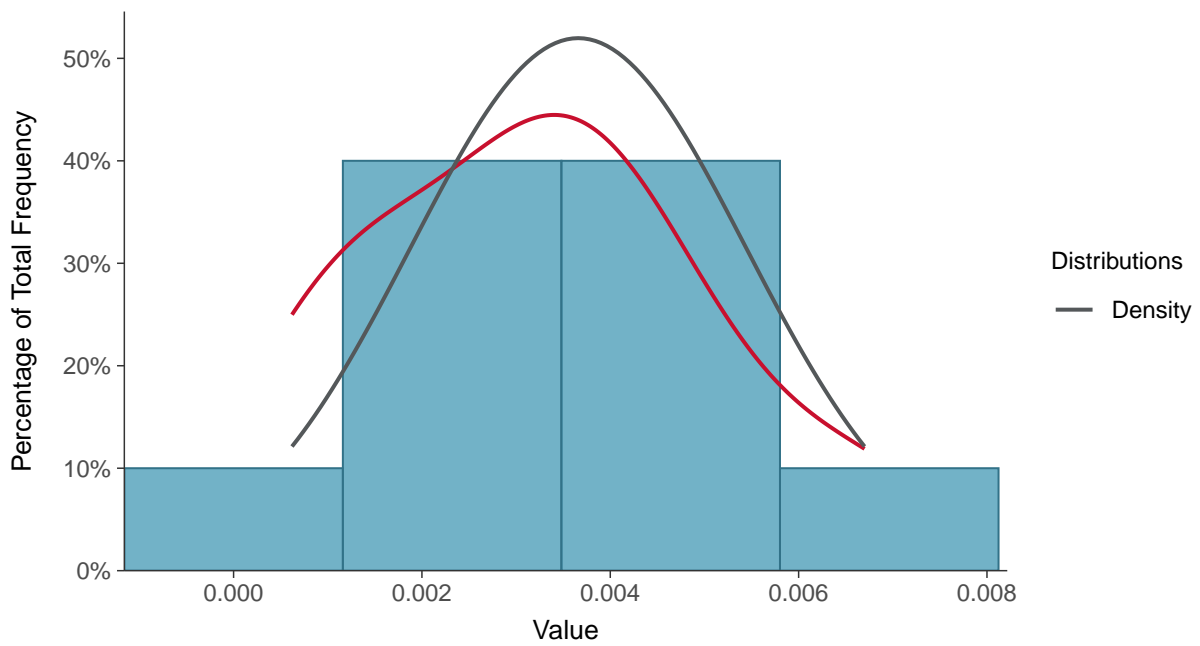
Scatter Plot

Vanadium, MW-02 (mg/L)



Histogram

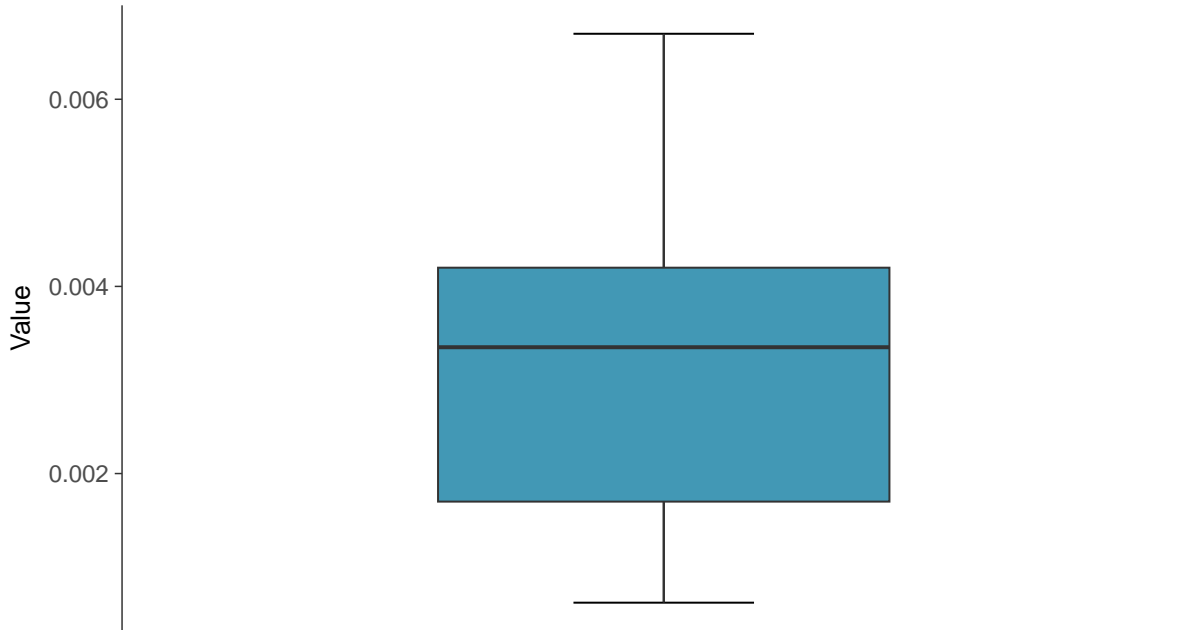
Vanadium, MW-02 (mg/L)





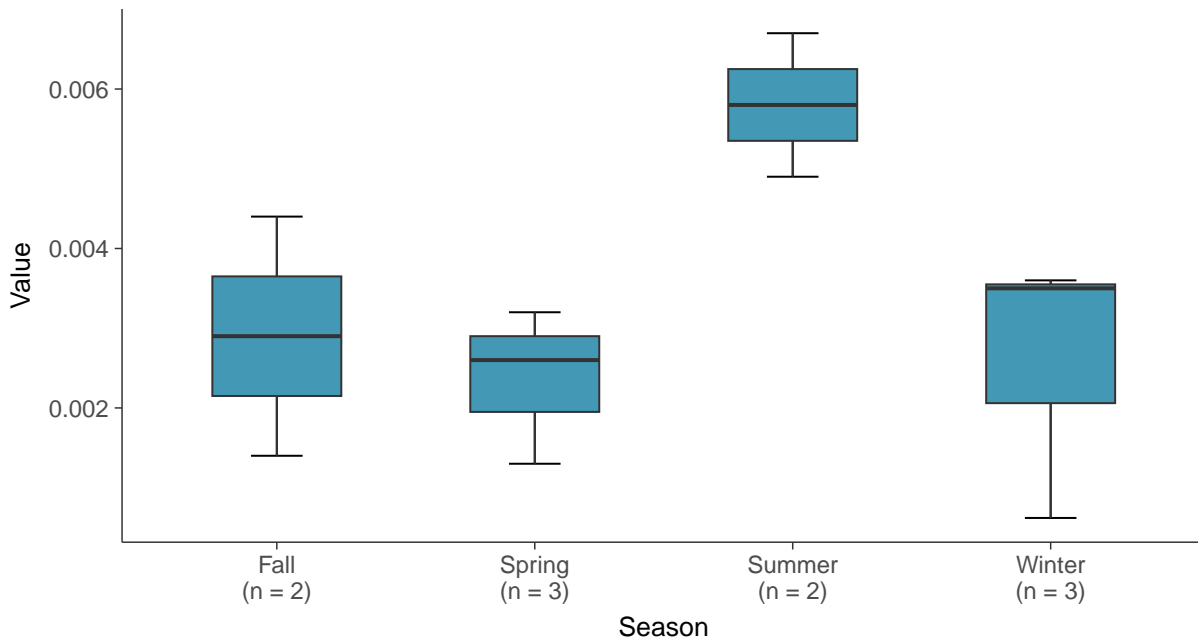
Boxplot

Vanadium, MW-02 (mg/L)



Boxplot by Season

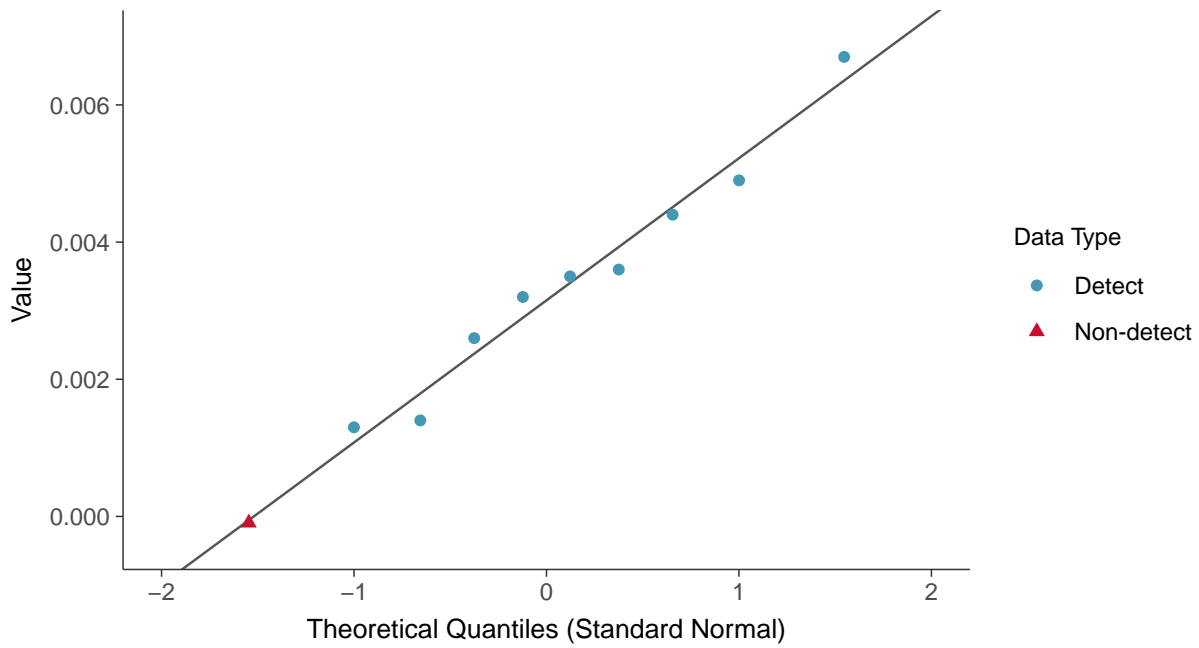
Vanadium, MW-02 (mg/L)





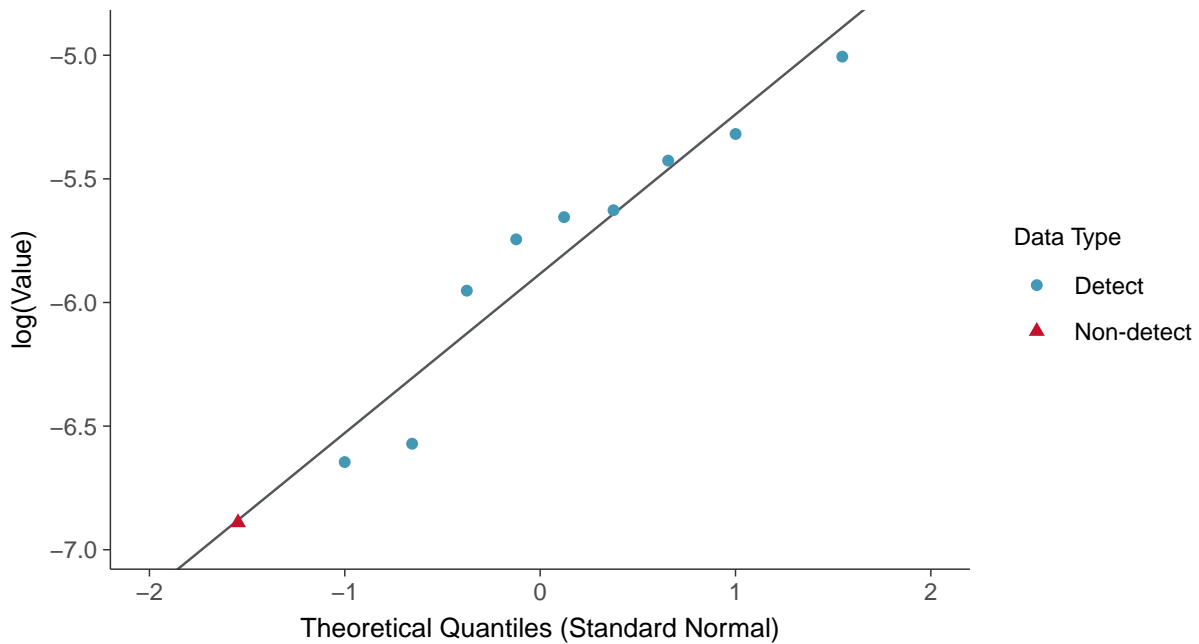
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-02 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

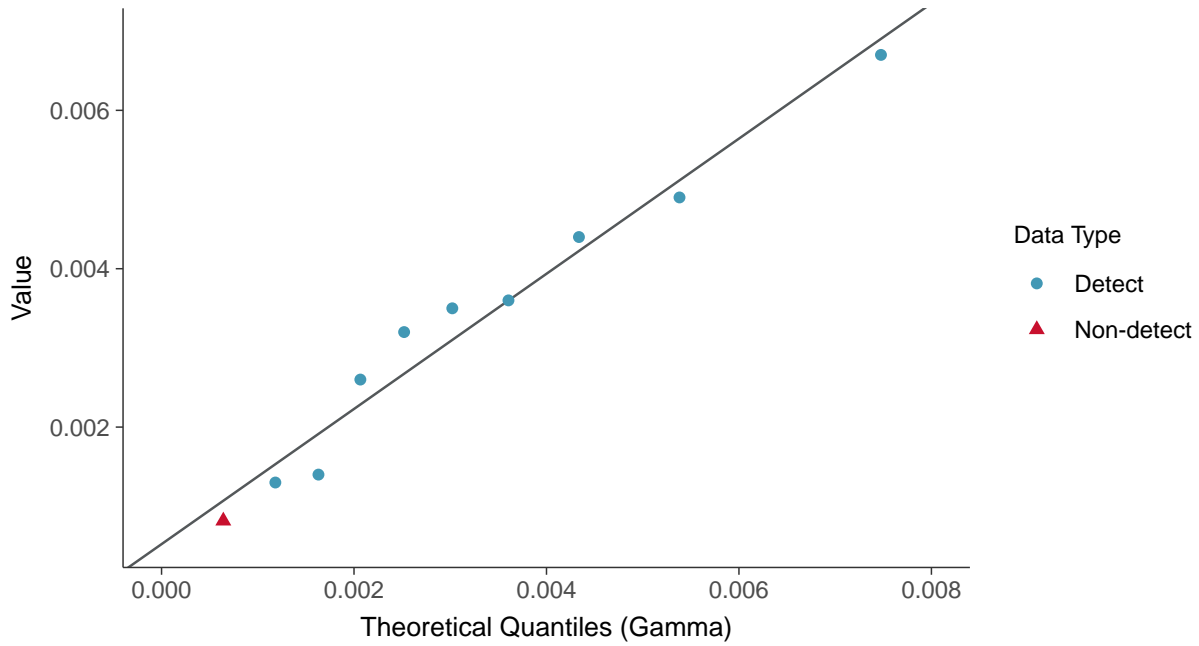
Vanadium, MW-02 (mg/L)





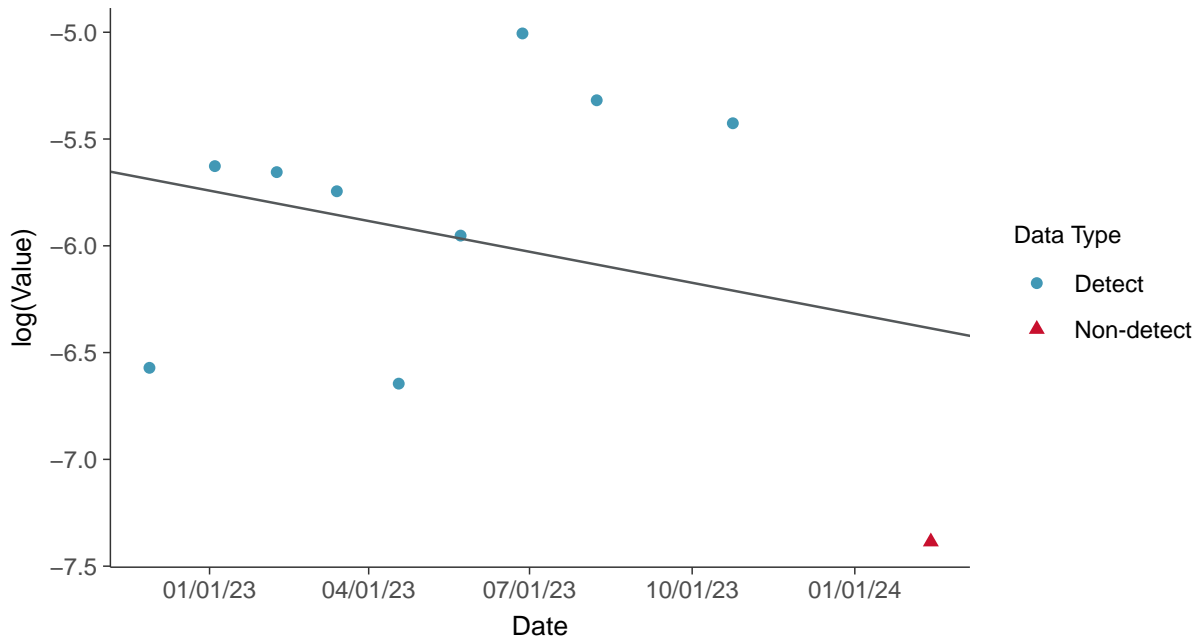
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-02 (mg/L)



Trend Regression: Lognormal MLE

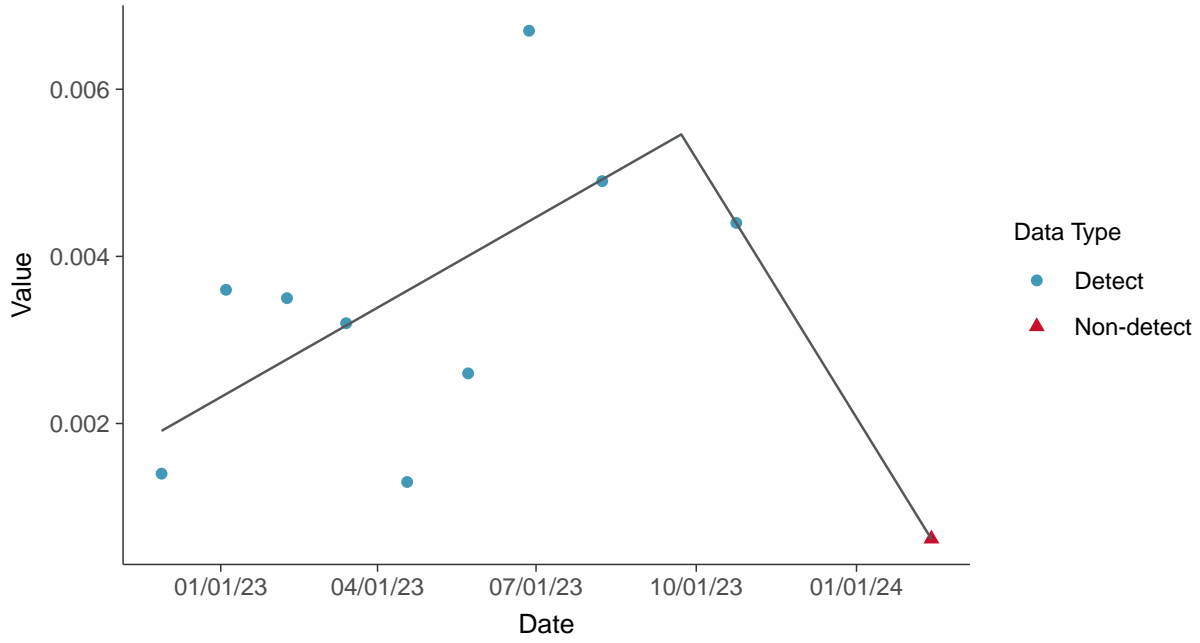
Vanadium, MW-02 (mg/L)





Trend Regression: Piecewise Linear-Linear

Vanadium, MW-02 (mg/L)



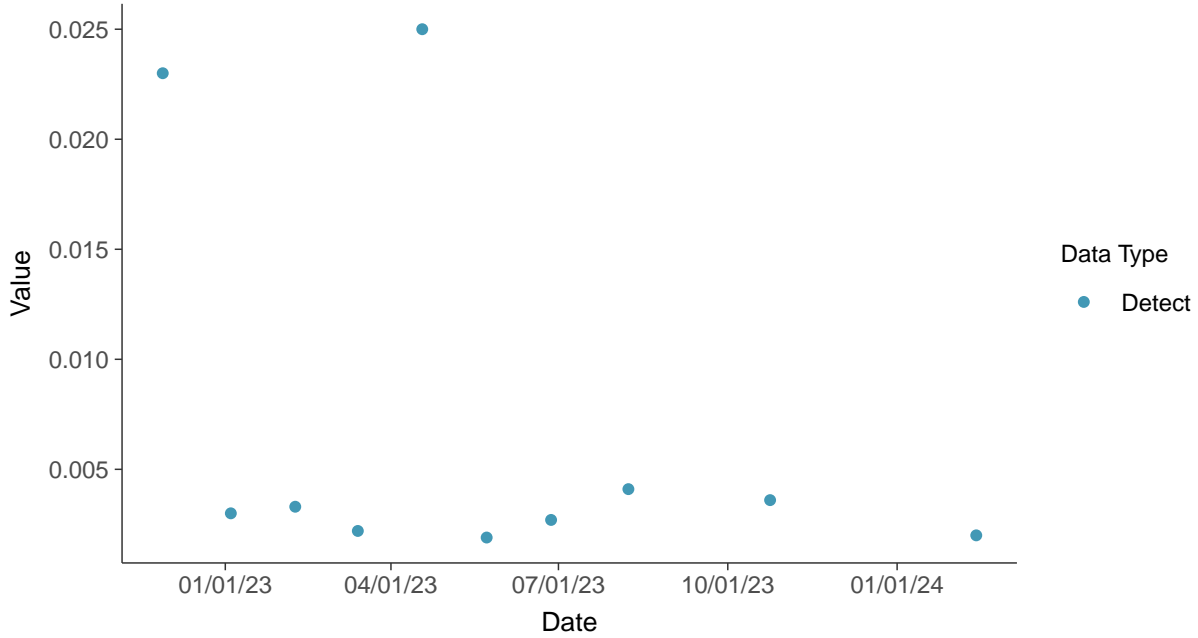


Part 115: Zinc, MW-02

ID: 2_12_6_130

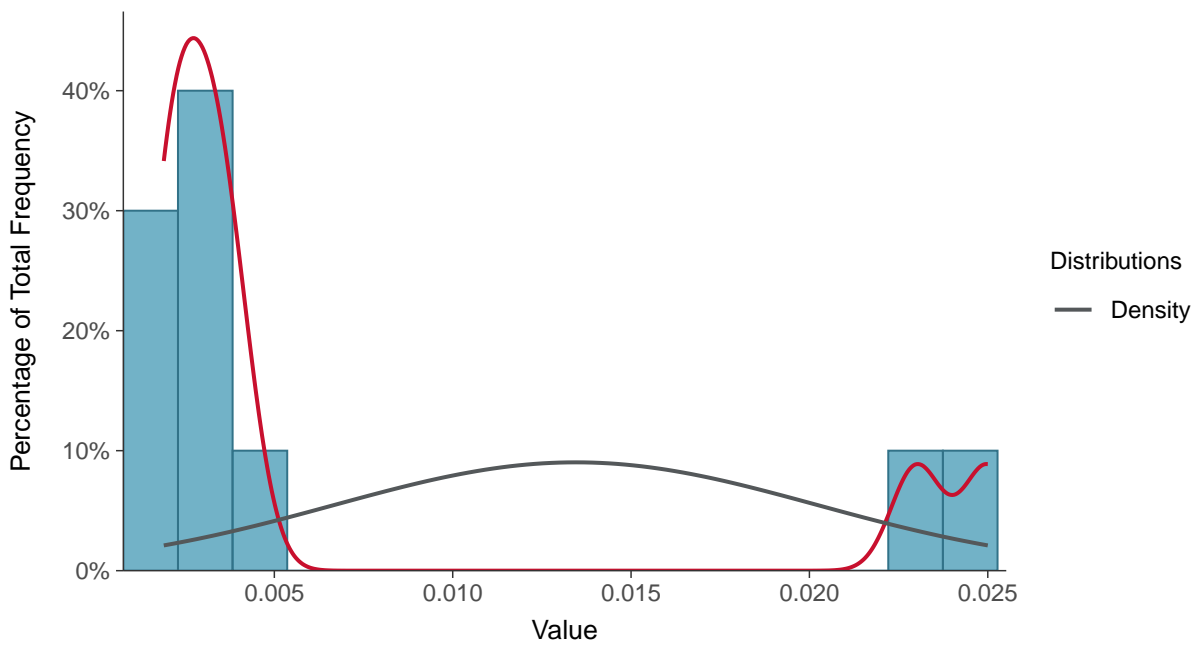
Scatter Plot

Zinc, MW-02 (mg/L)



Histogram

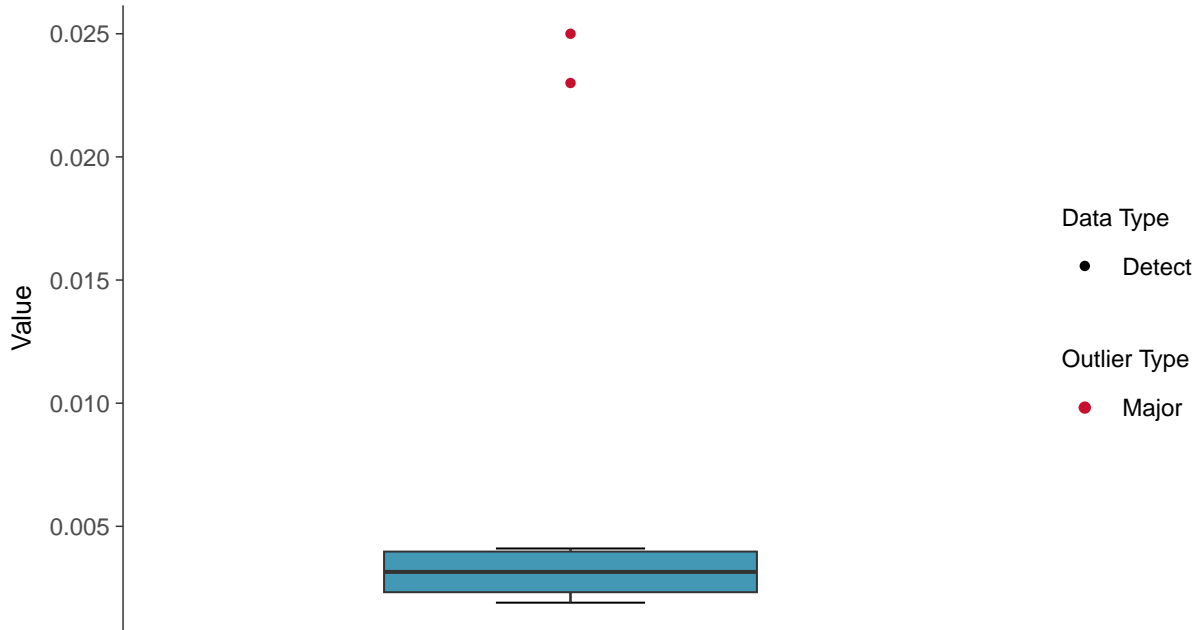
Zinc, MW-02 (mg/L)





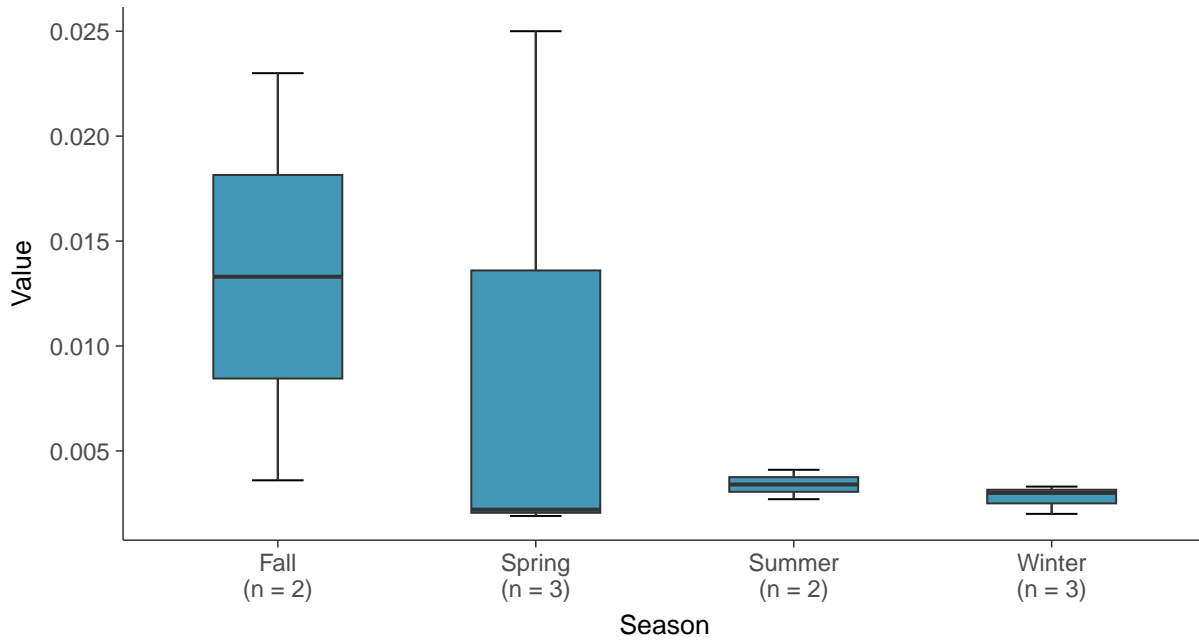
Boxplot

Zinc, MW-02 (mg/L)



Boxplot by Season

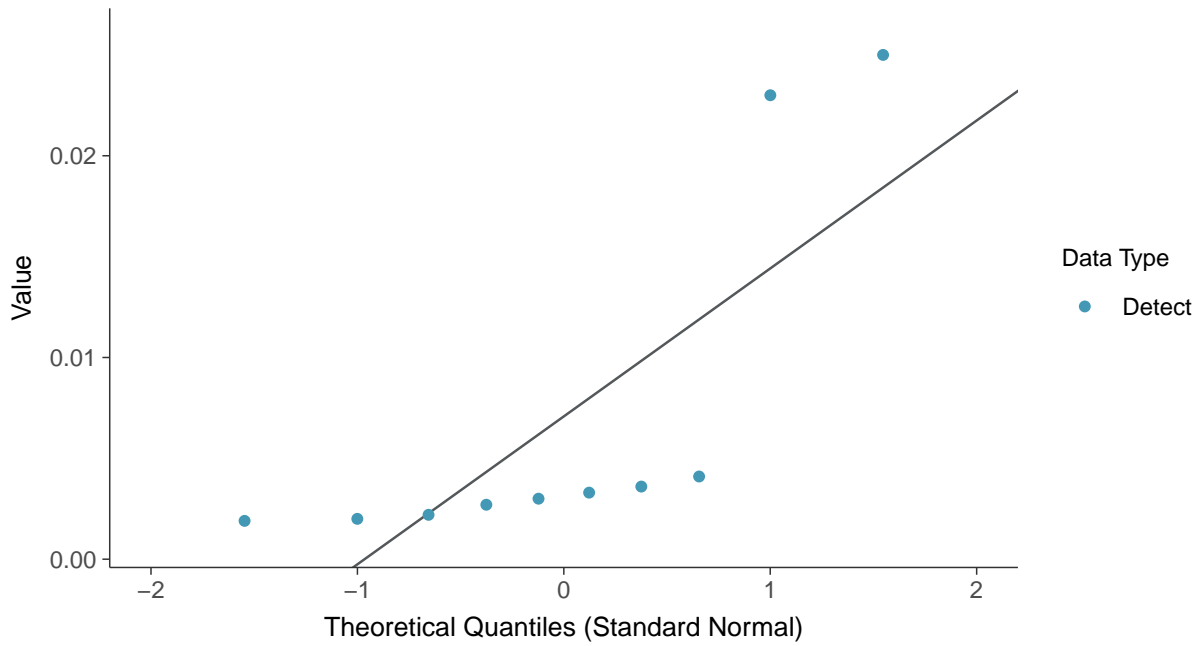
Zinc, MW-02 (mg/L)





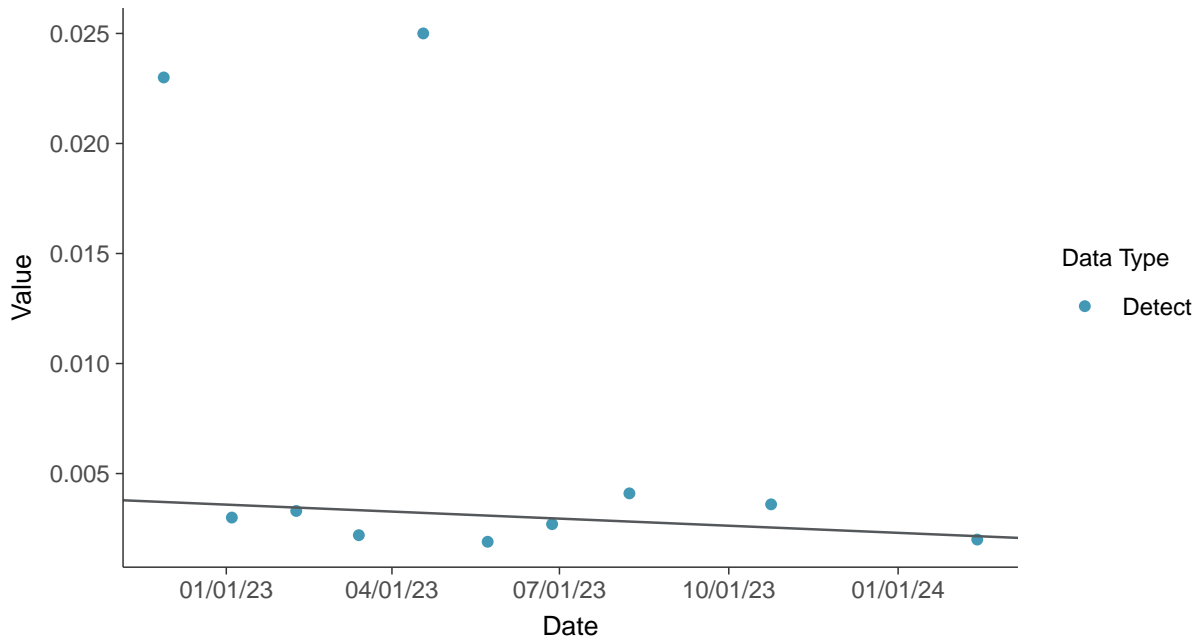
Normal Q-Q plot

Zinc, MW-02 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

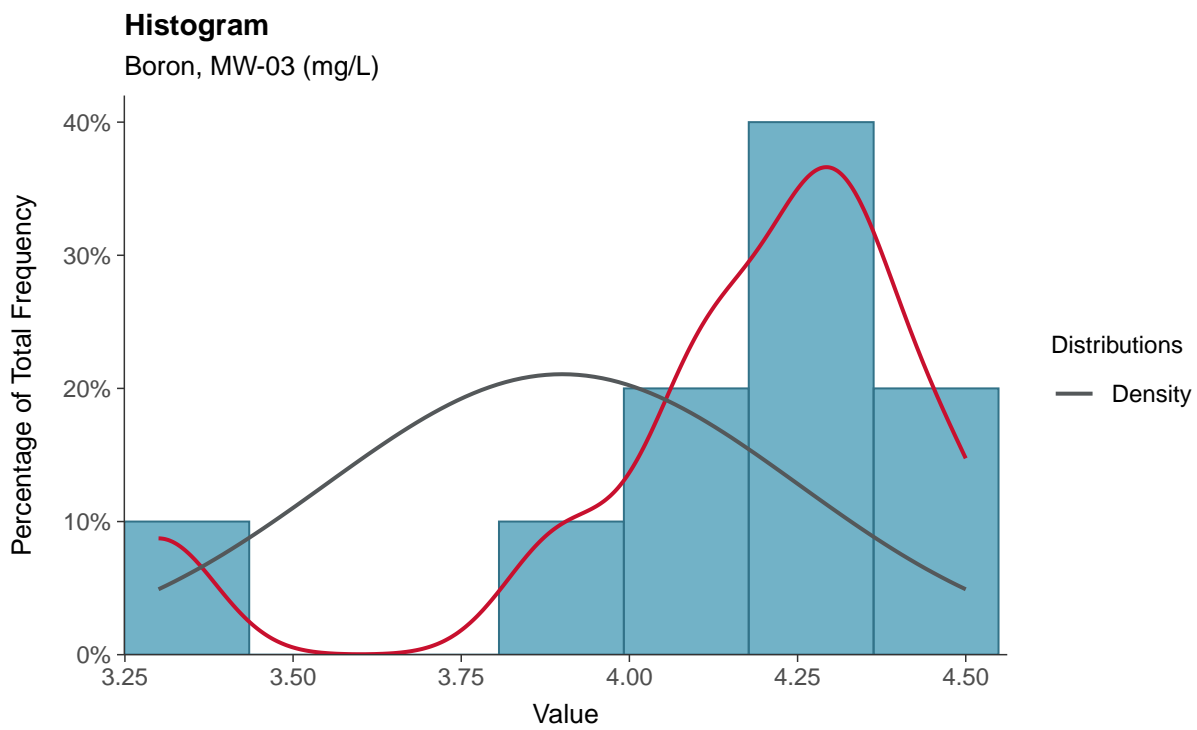
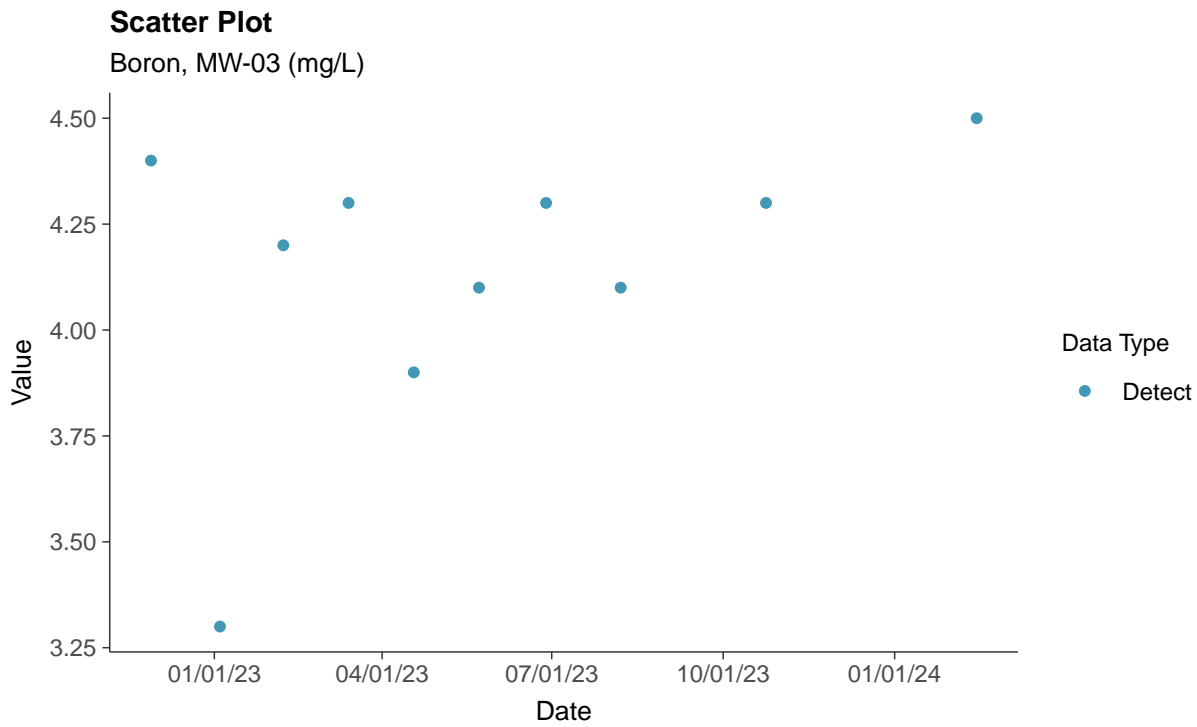
Zinc, MW-02 (mg/L)





Appendix III: Boron, MW-03

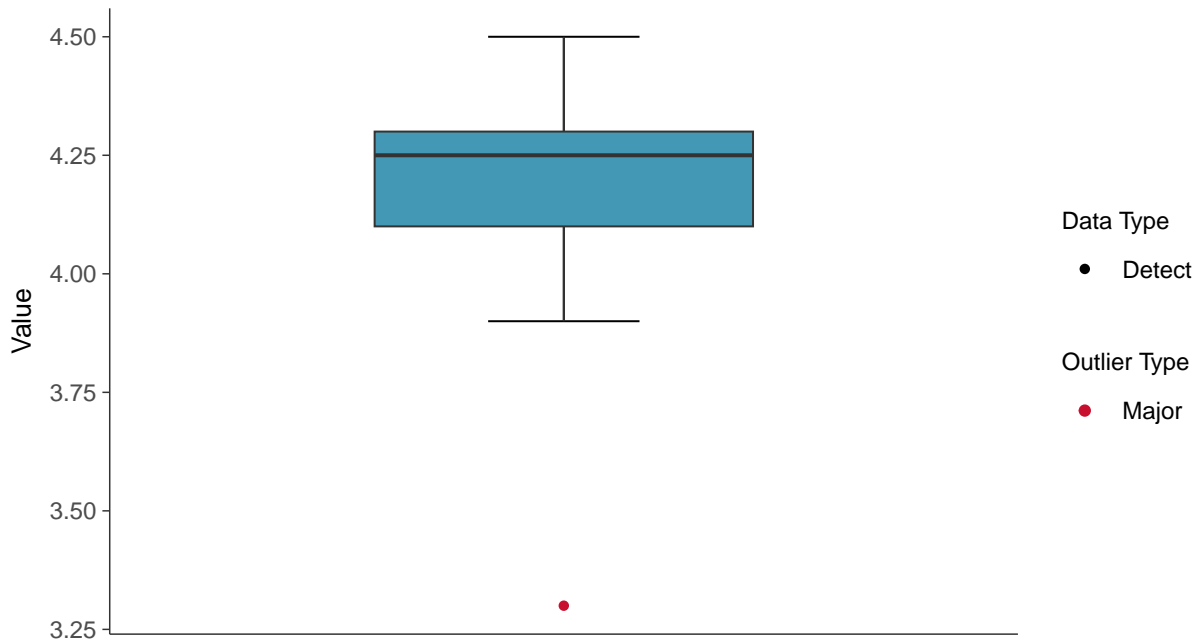
ID: 2_13_4_105





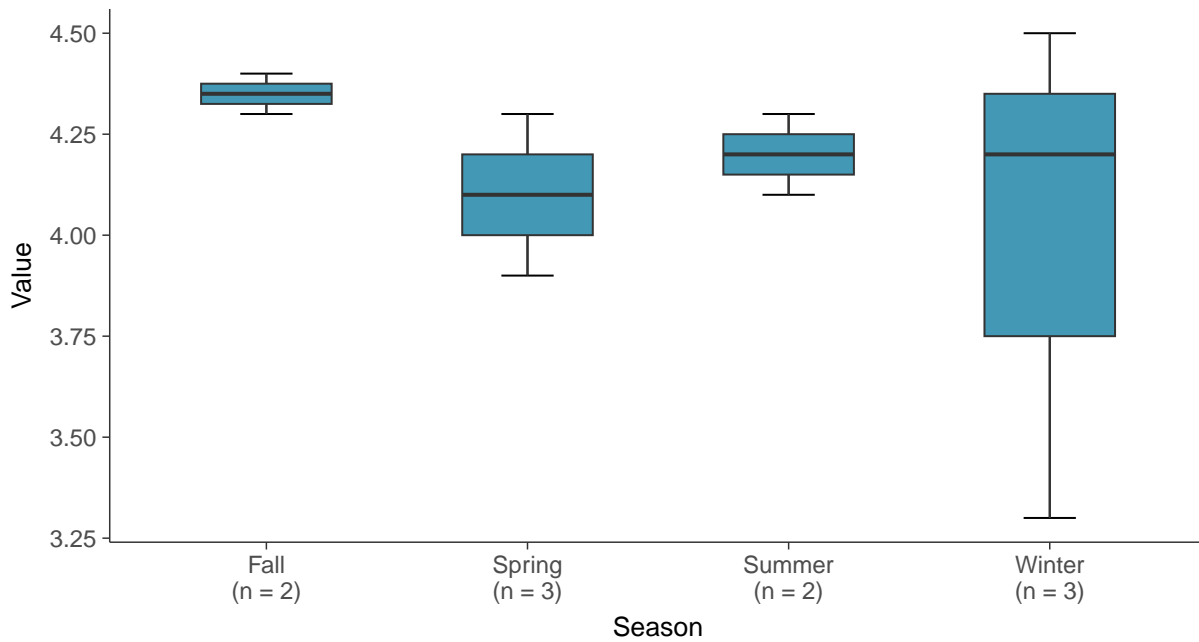
Boxplot

Boron, MW-03 (mg/L)



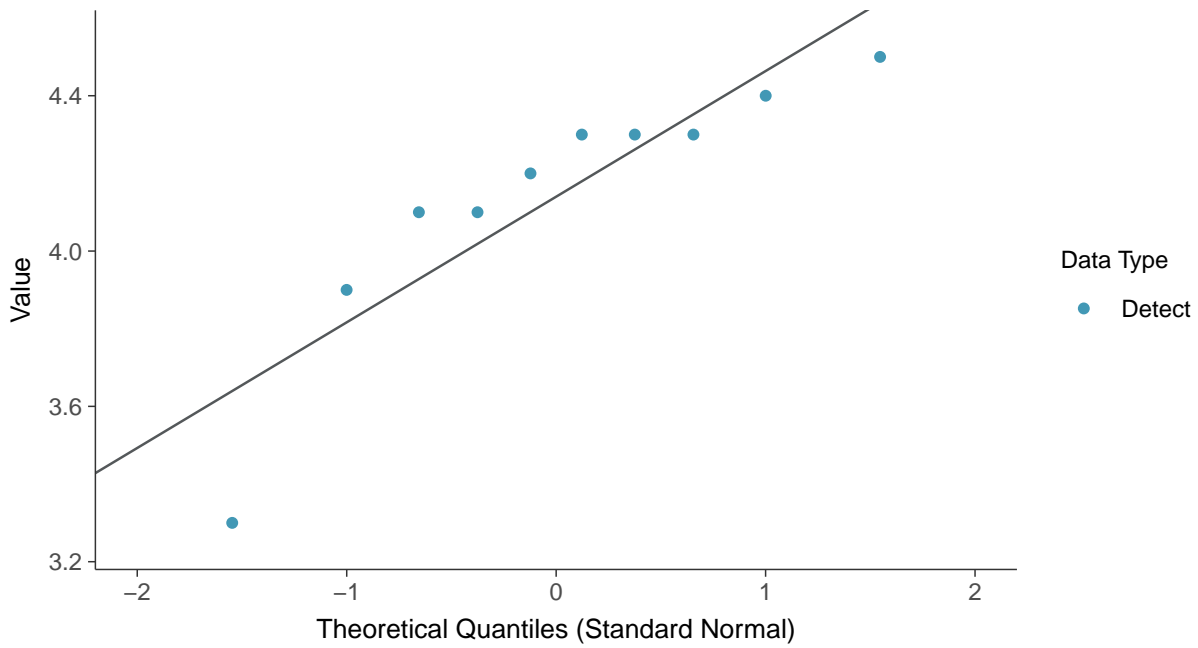
Boxplot by Season

Boron, MW-03 (mg/L)

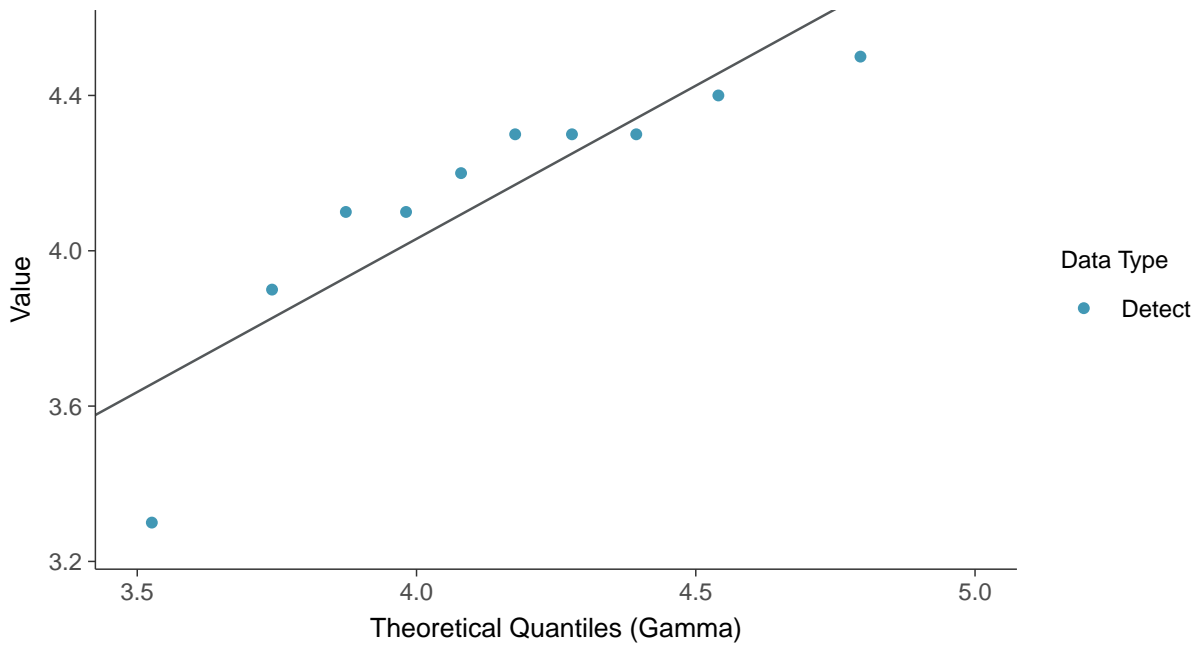




Normal Q-Q plot
Boron, MW-03 (mg/L)



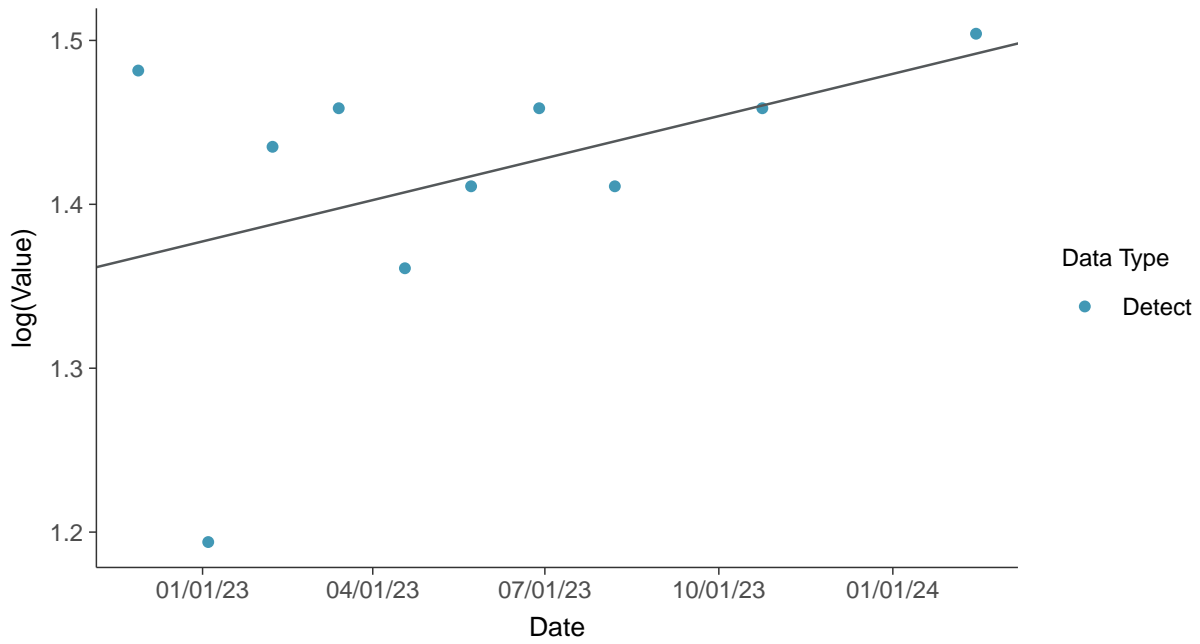
Gamma Q-Q plot
Boron, MW-03 (mg/L)





Trend Regression: Lognormal MLE

Boron, MW-03 (mg/L)



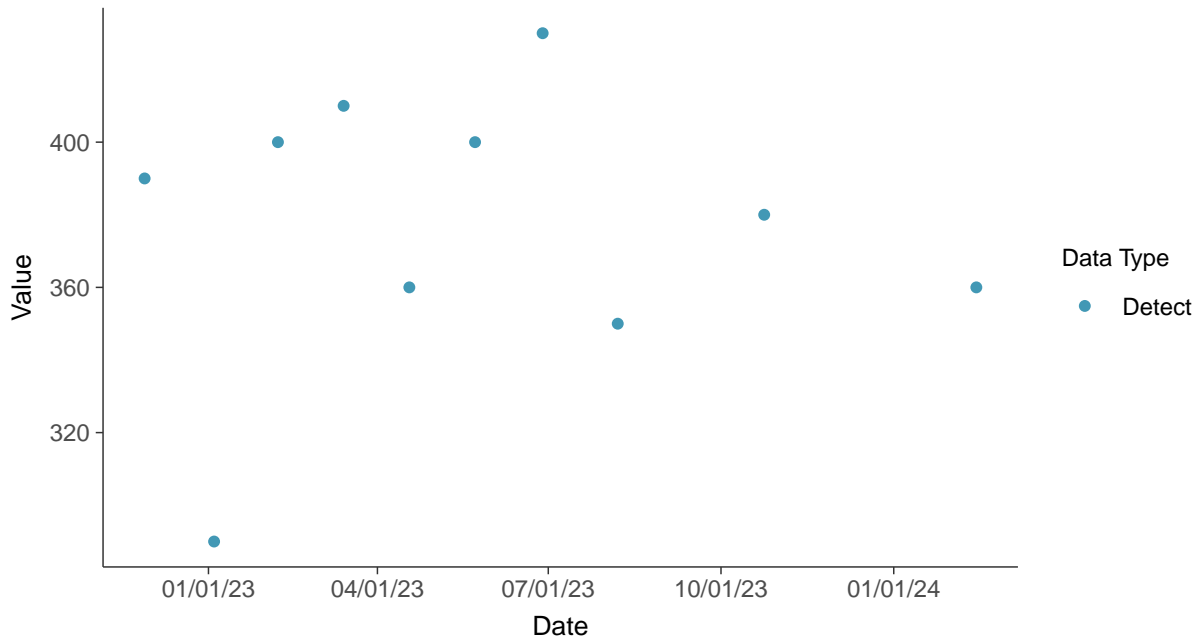


Appendix III: Calcium, MW-03

ID: 2_13_4_107

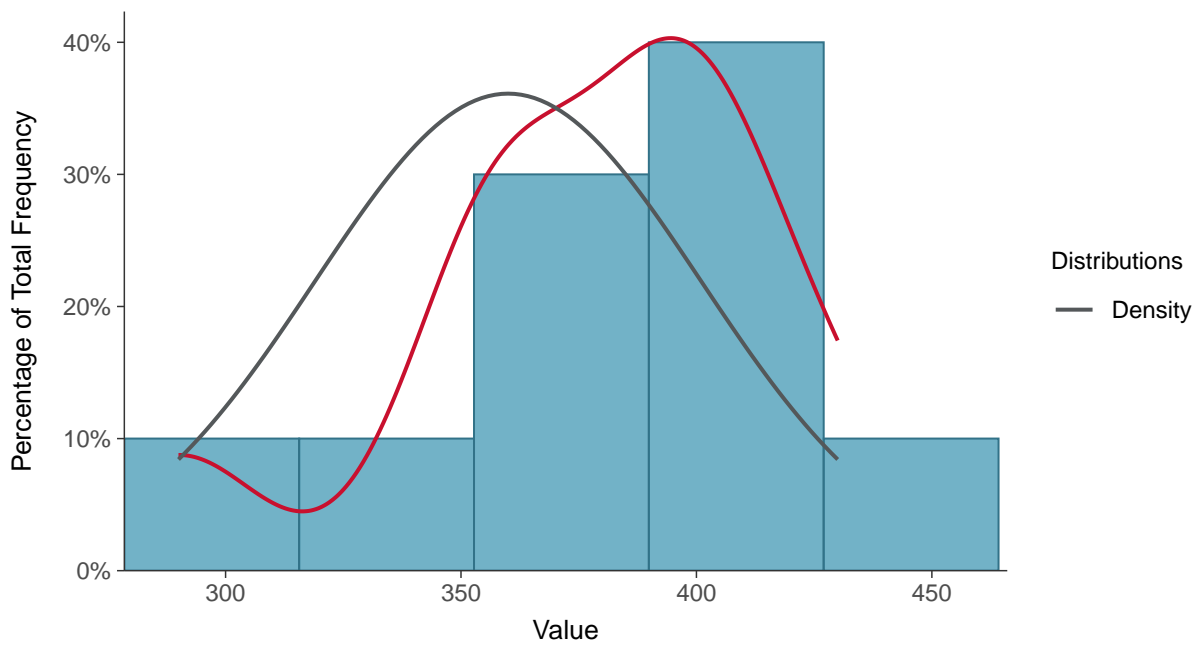
Scatter Plot

Calcium, MW-03 (mg/L)



Histogram

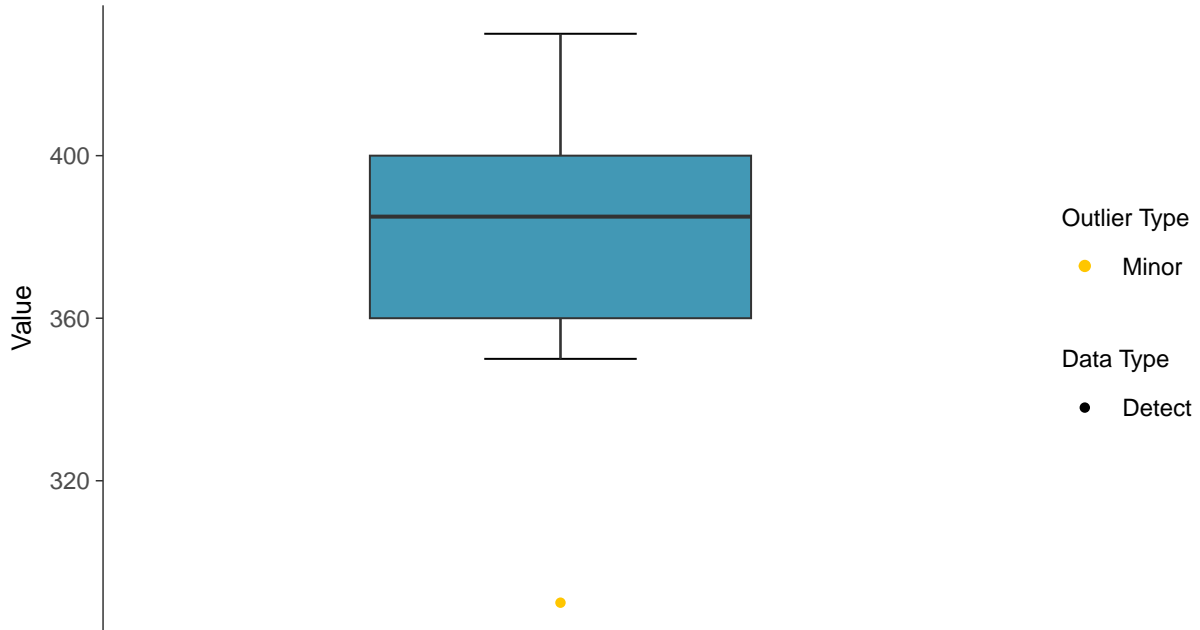
Calcium, MW-03 (mg/L)





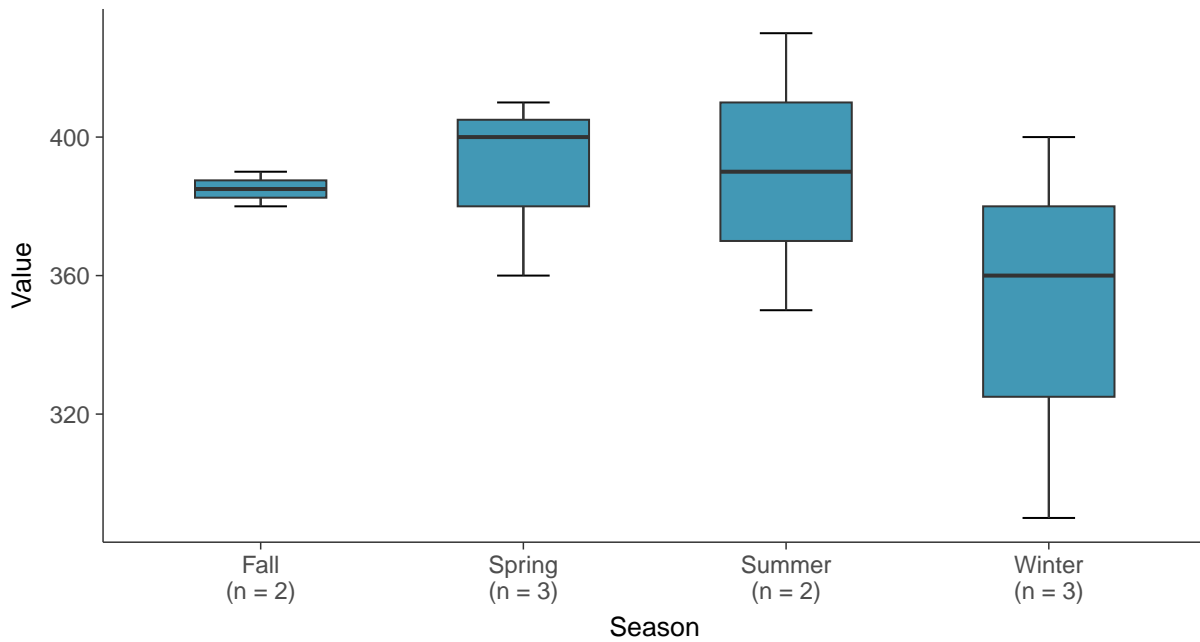
Boxplot

Calcium, MW-03 (mg/L)



Boxplot by Season

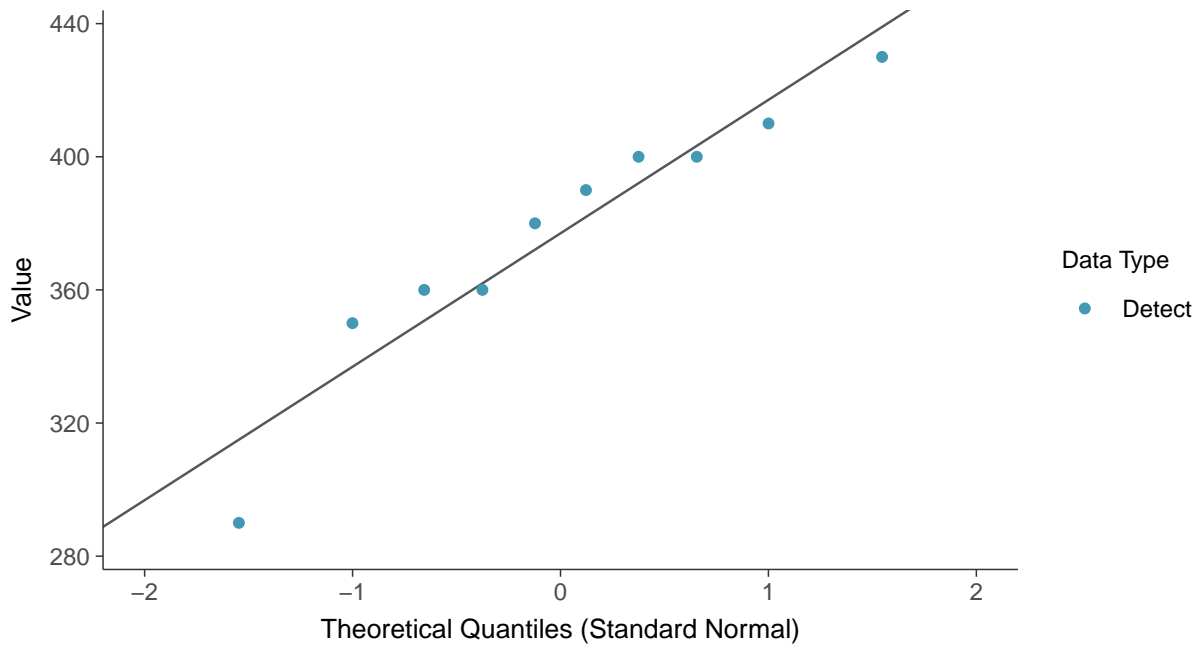
Calcium, MW-03 (mg/L)





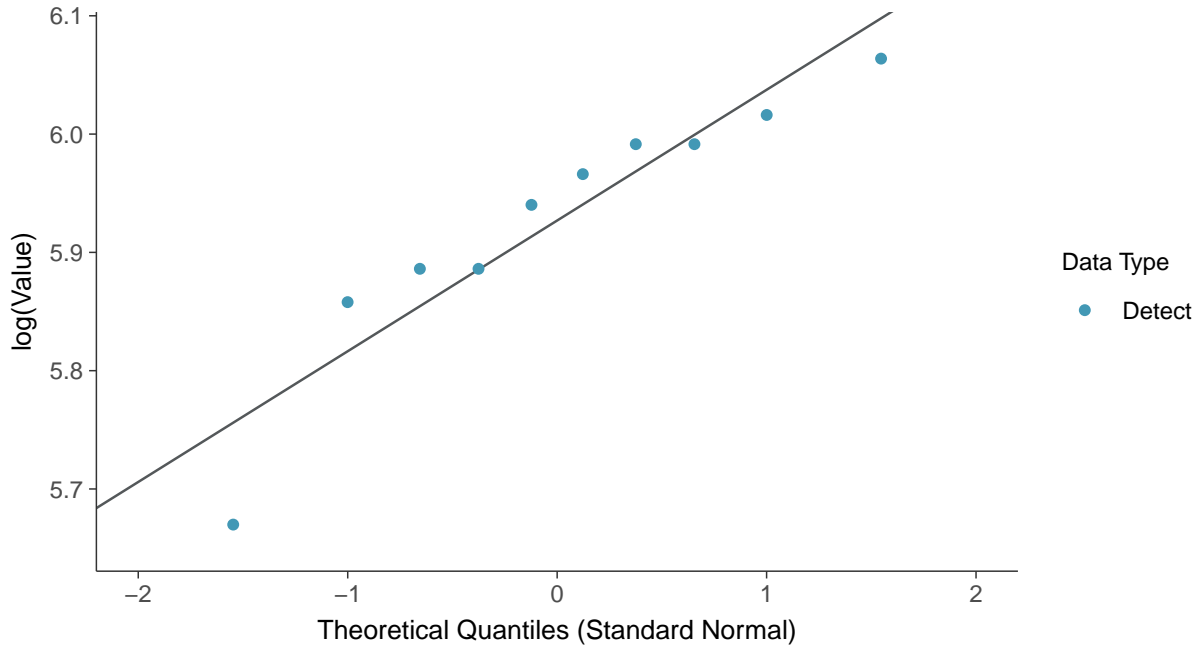
Normal Q-Q plot

Calcium, MW-03 (mg/L)



Lognormal Q-Q plot

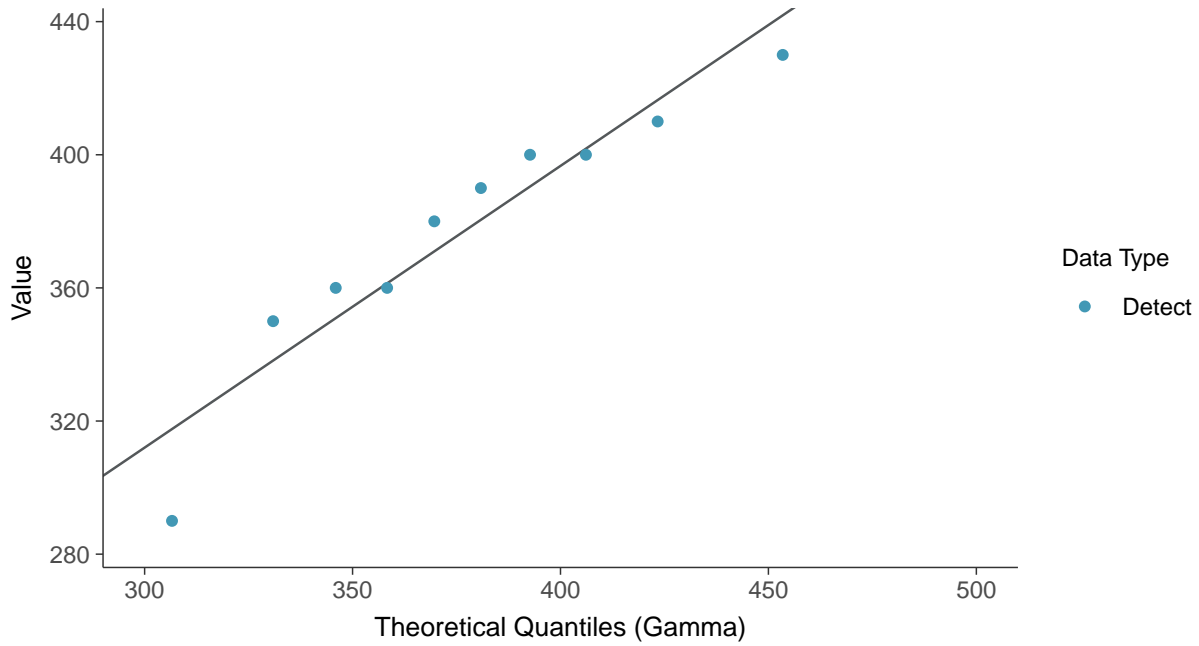
Calcium, MW-03 (mg/L)





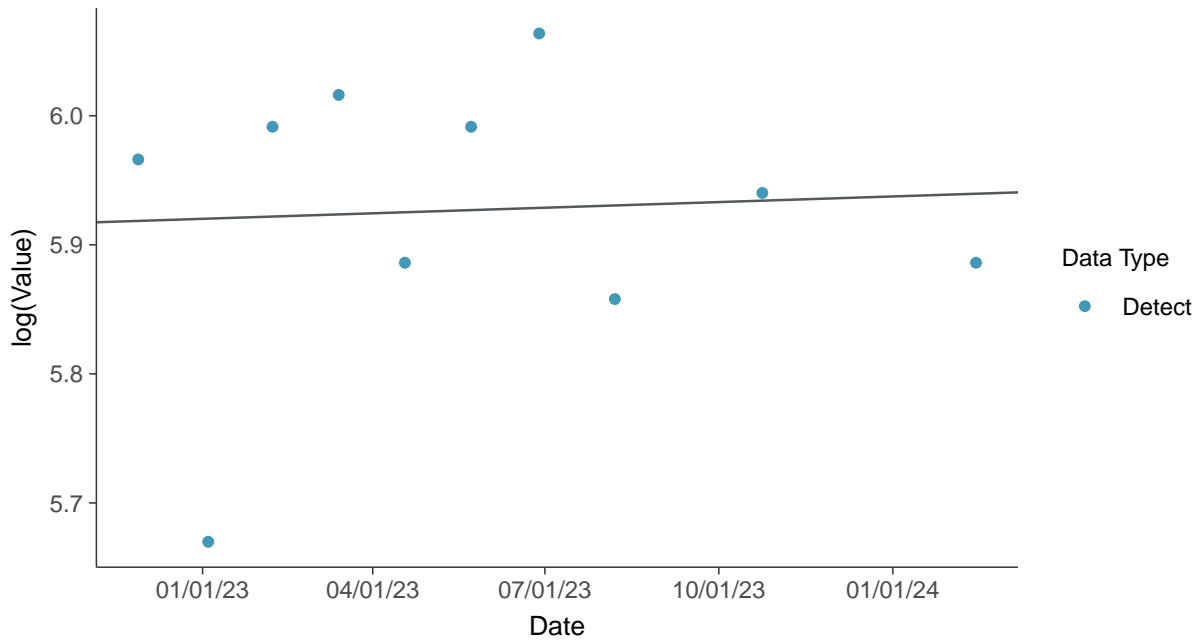
Gamma Q-Q plot

Calcium, MW-03 (mg/L)



Trend Regression: Lognormal MLE

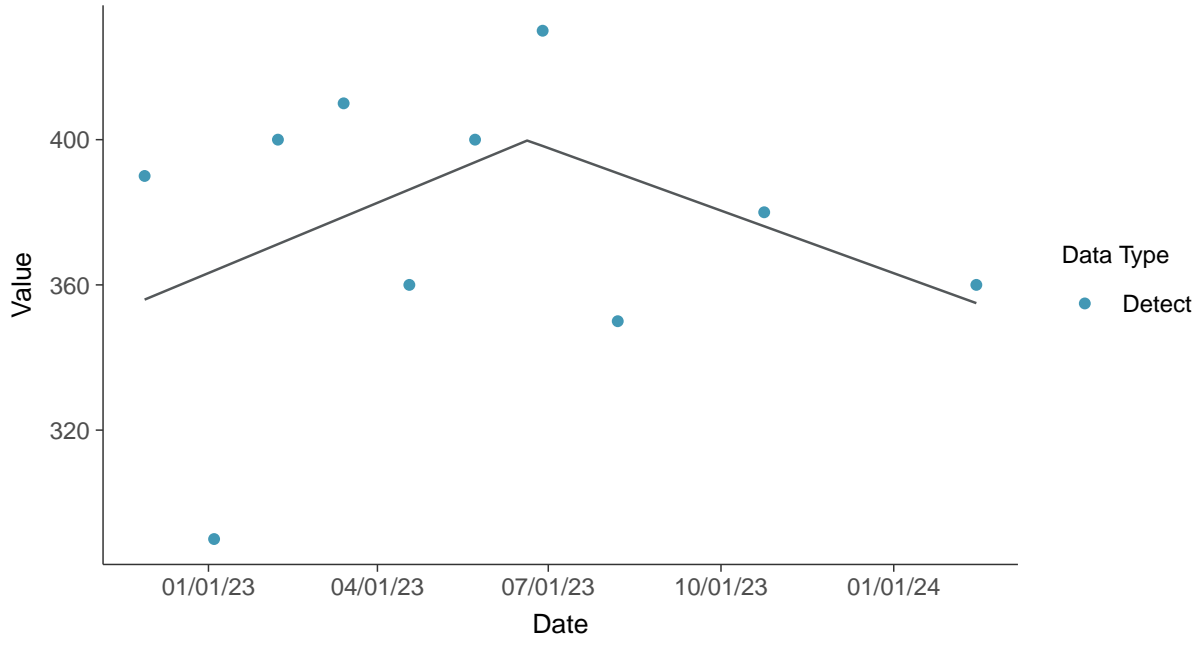
Calcium, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear

Calcium, MW-03 (mg/L)



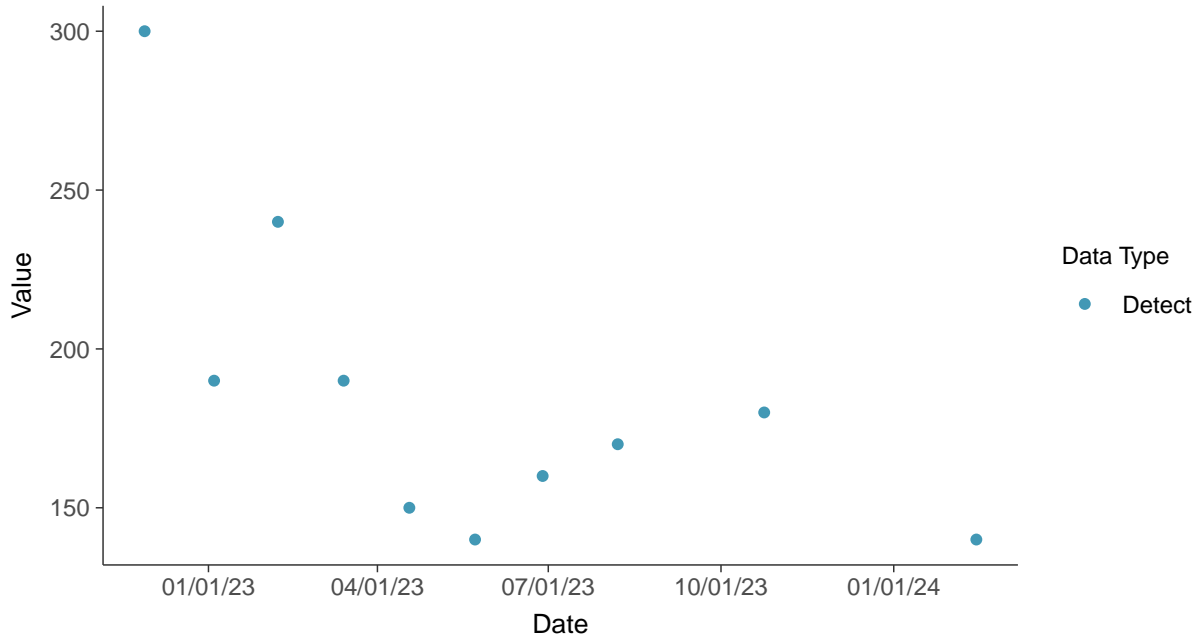


Appendix III: Chloride (as Cl), MW-03

ID: 2_13_4_108

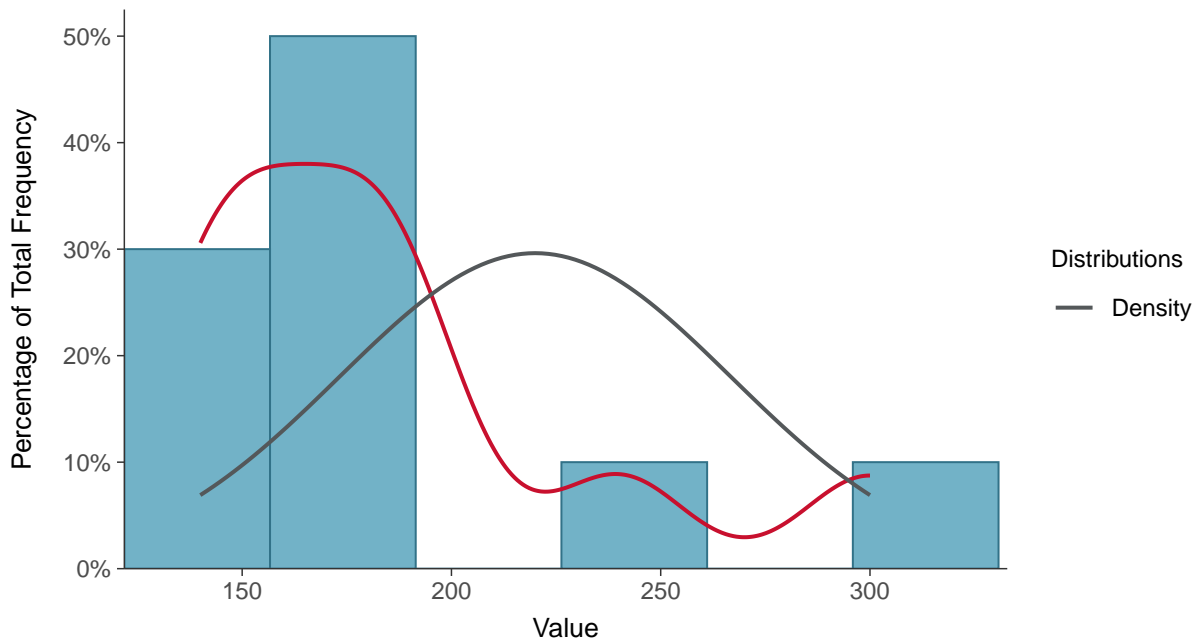
Scatter Plot

Chloride (as Cl), MW-03 (mg/L)



Histogram

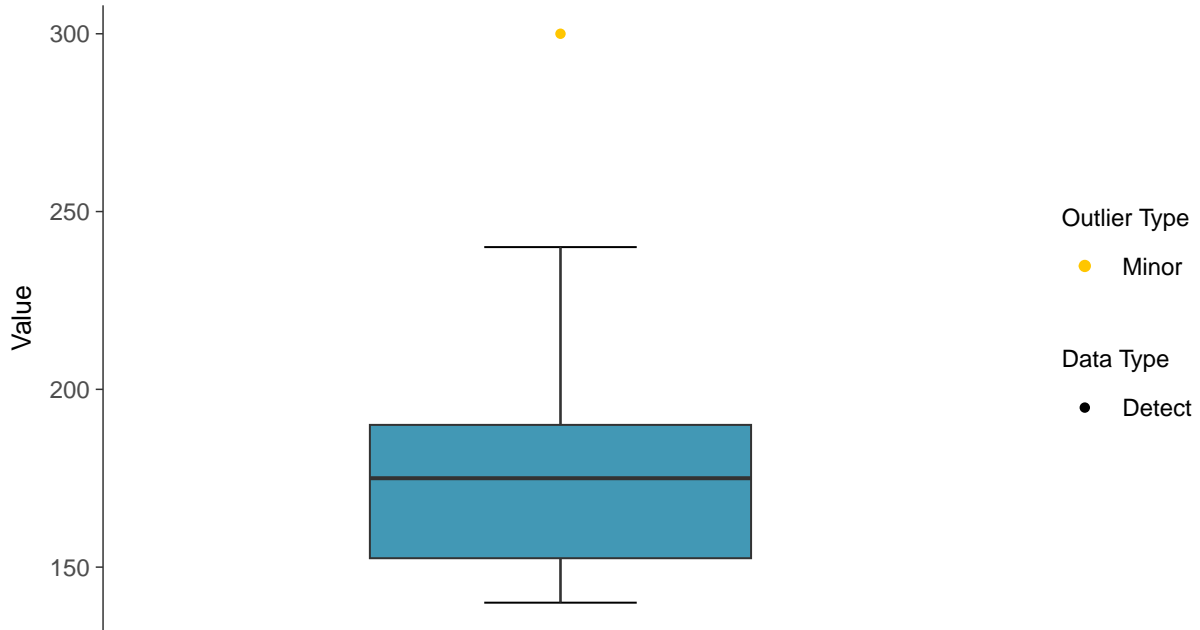
Chloride (as Cl), MW-03 (mg/L)





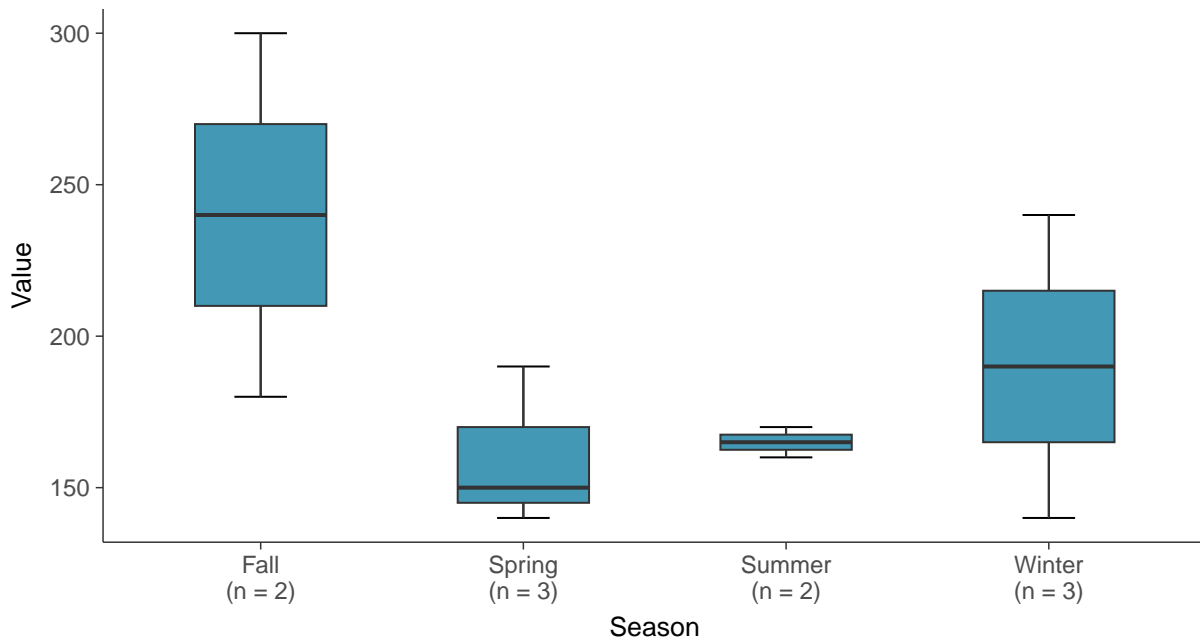
Boxplot

Chloride (as Cl), MW-03 (mg/L)



Boxplot by Season

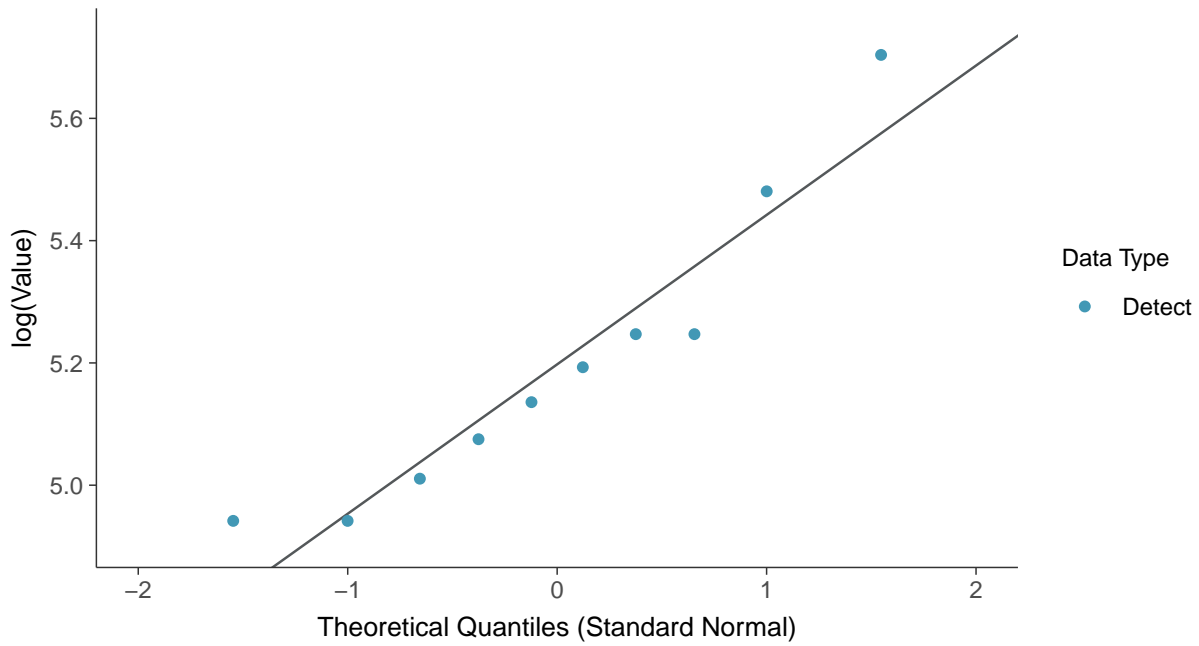
Chloride (as Cl), MW-03 (mg/L)





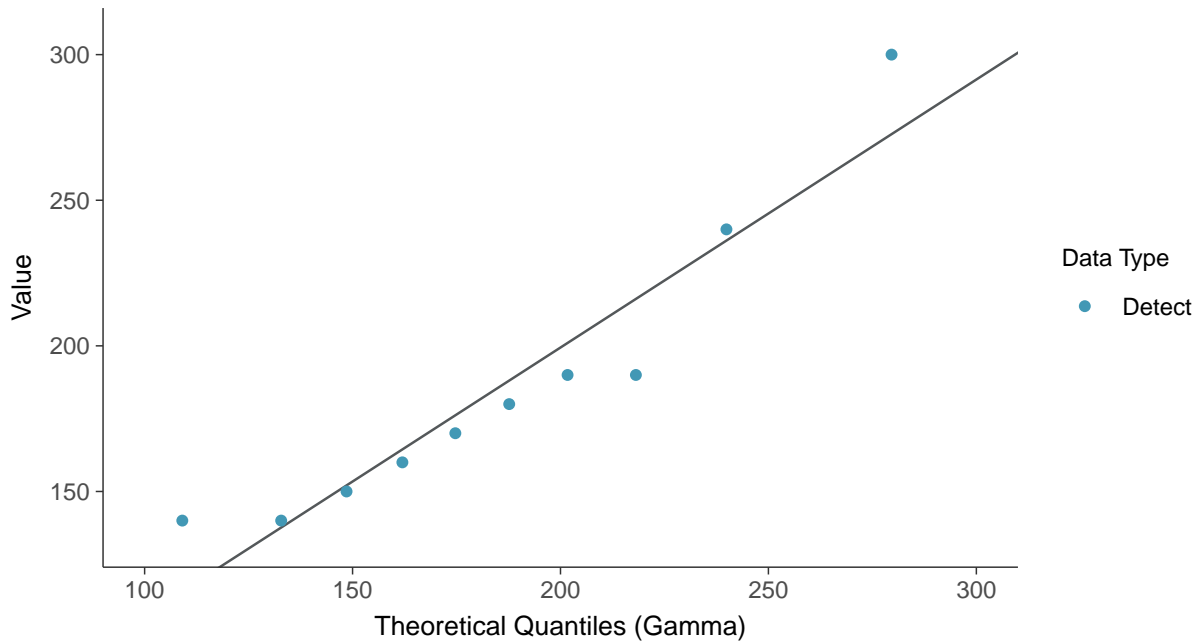
Lognormal Q-Q plot

Chloride (as Cl), MW-03 (mg/L)



Gamma Q-Q plot

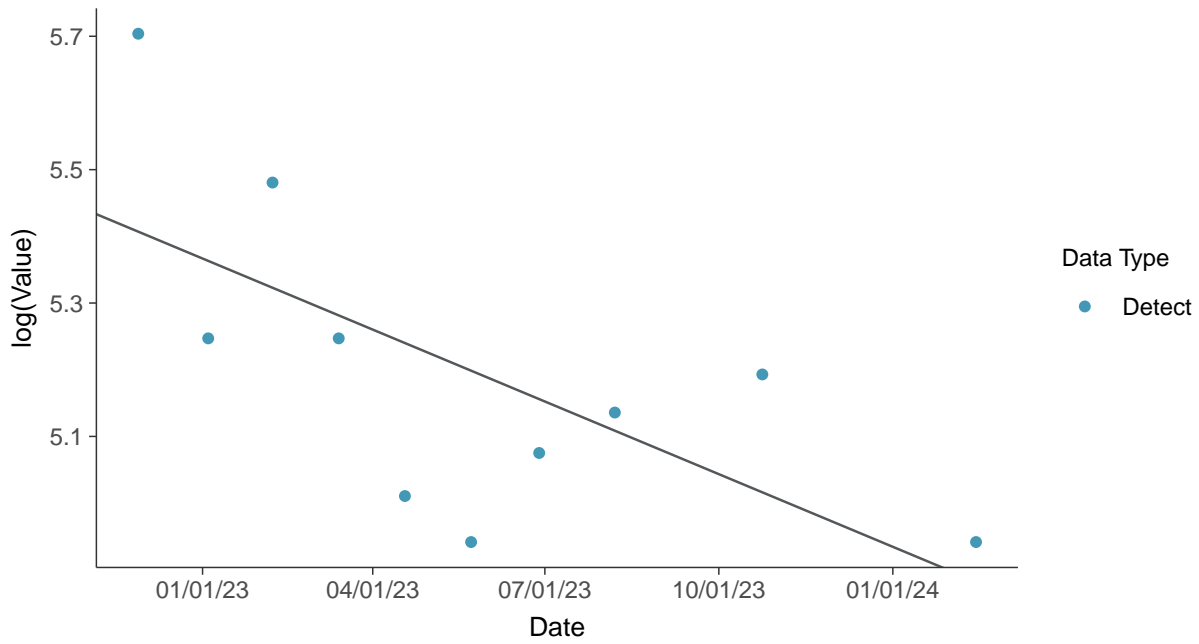
Chloride (as Cl), MW-03 (mg/L)





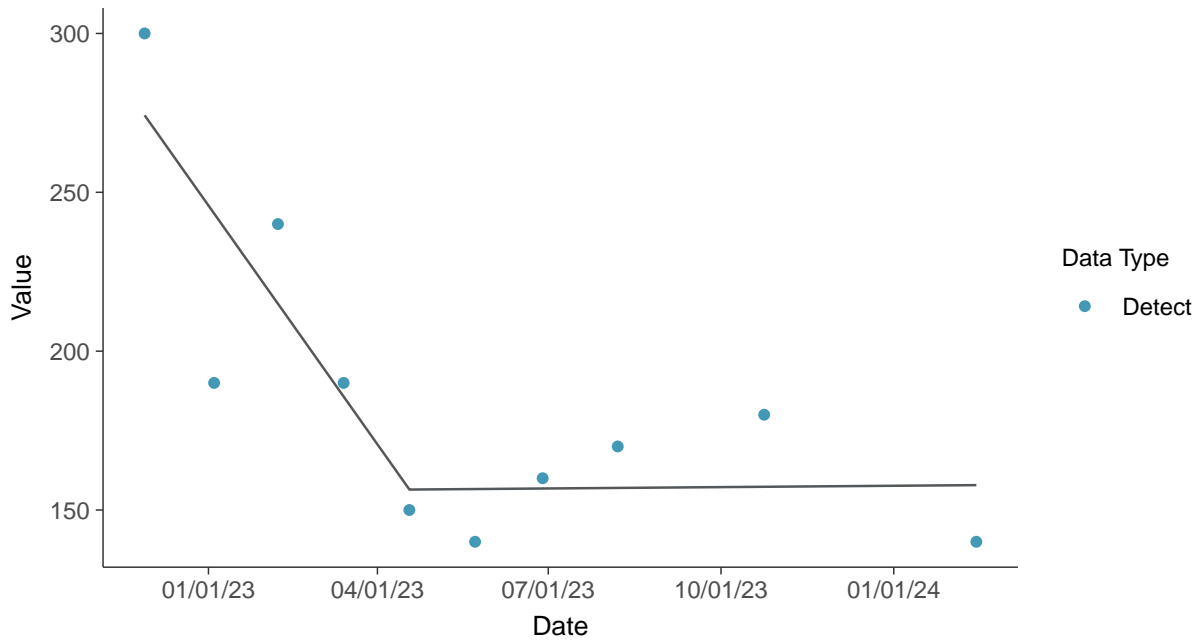
Trend Regression: Lognormal MLE

Chloride (as Cl), MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear

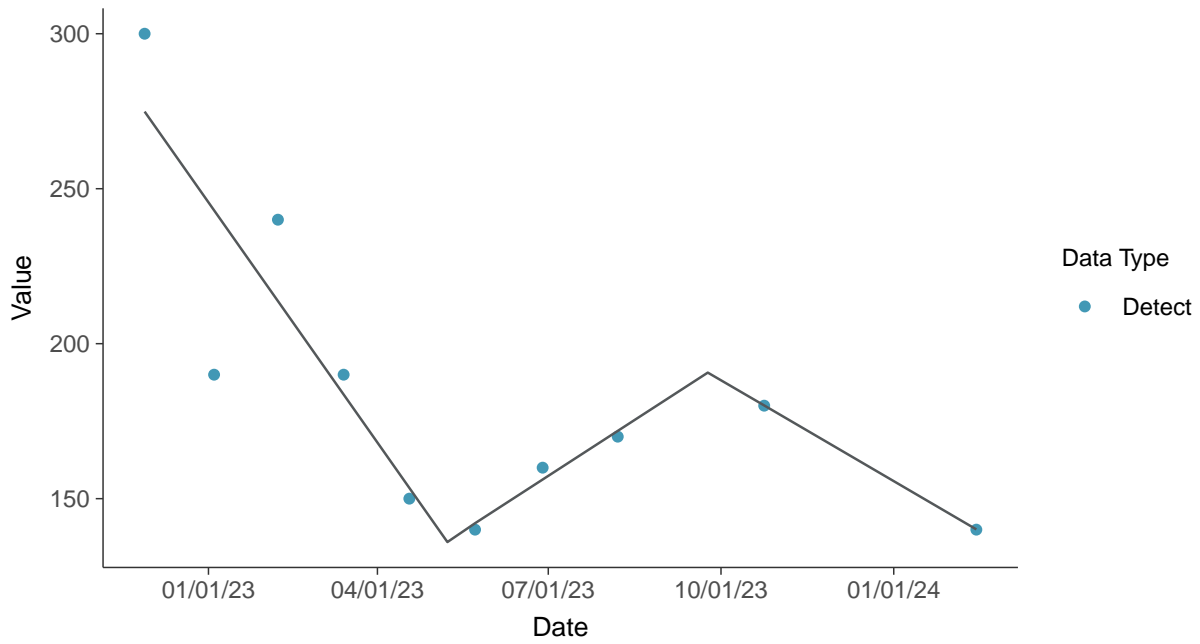
Chloride (as Cl), MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

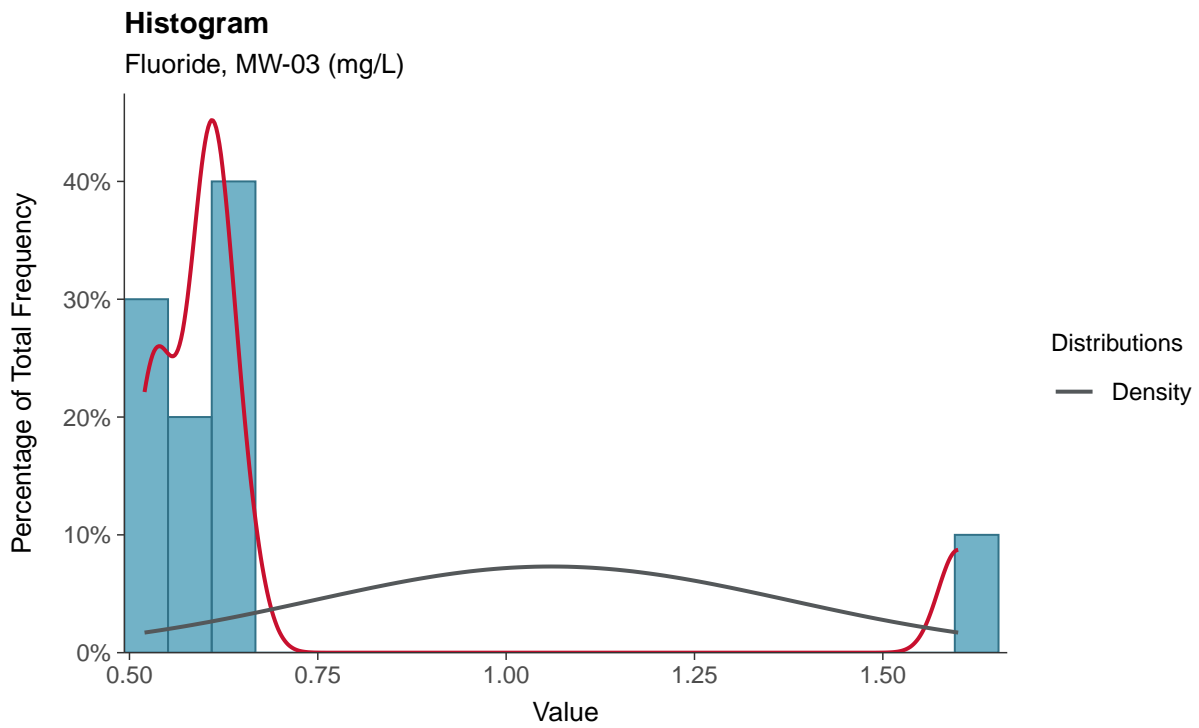
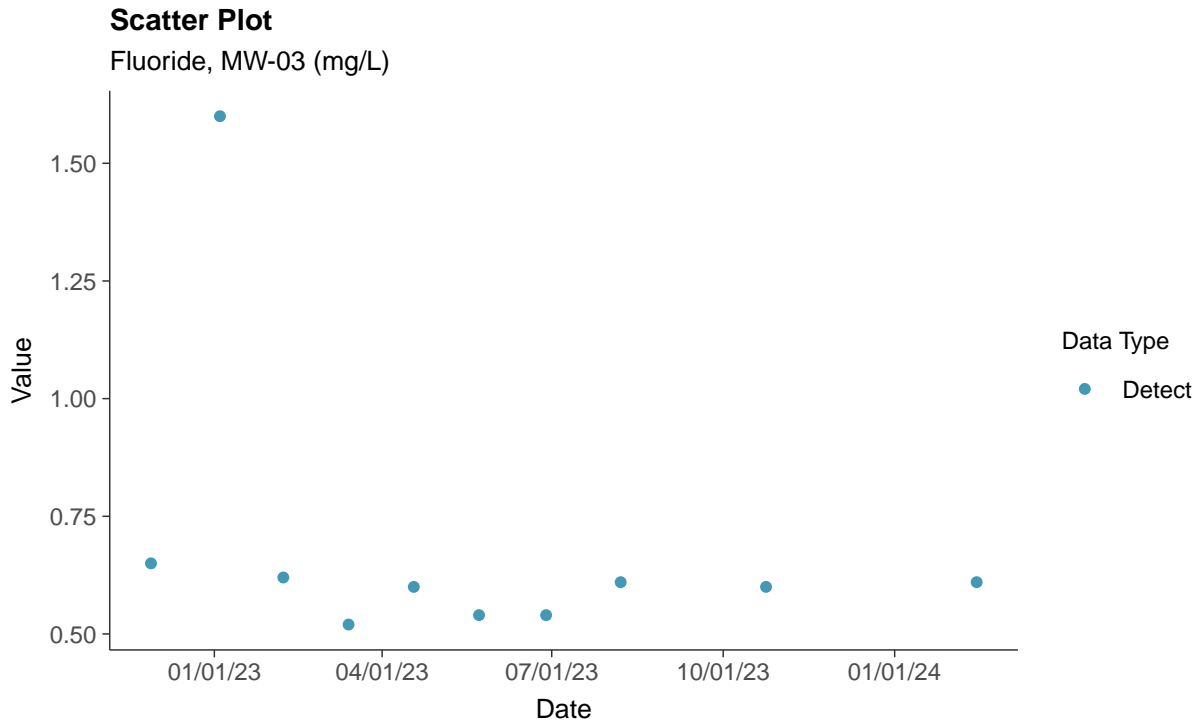
Chloride (as Cl), MW-03 (mg/L)





Appendix III: Fluoride, MW-03

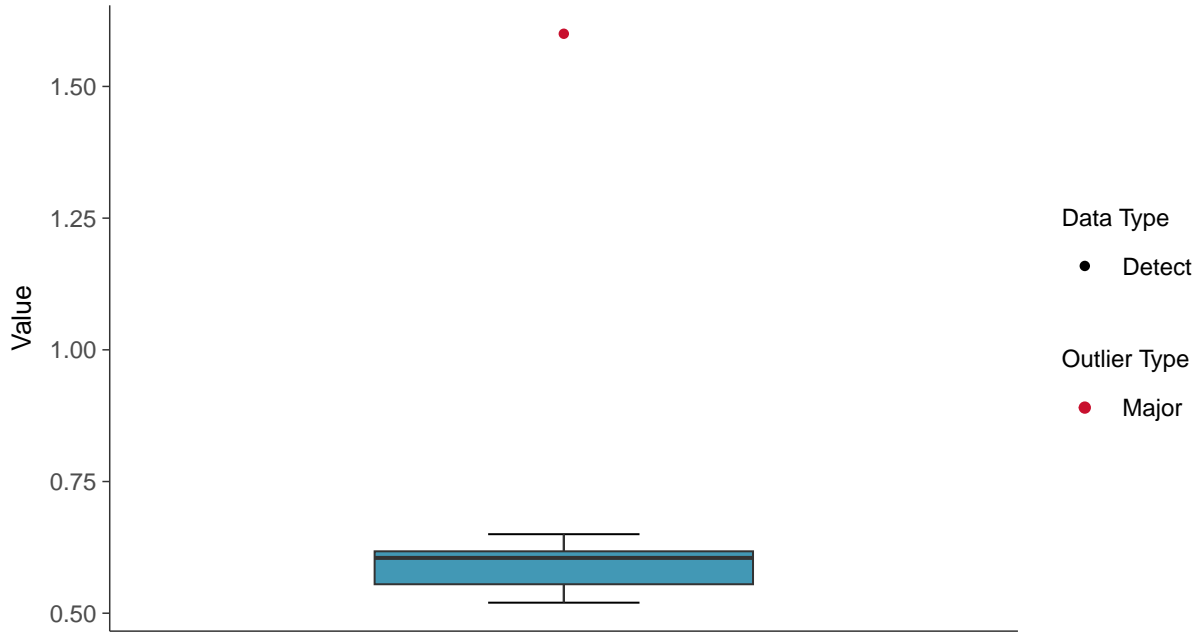
ID: 2_13_4_112





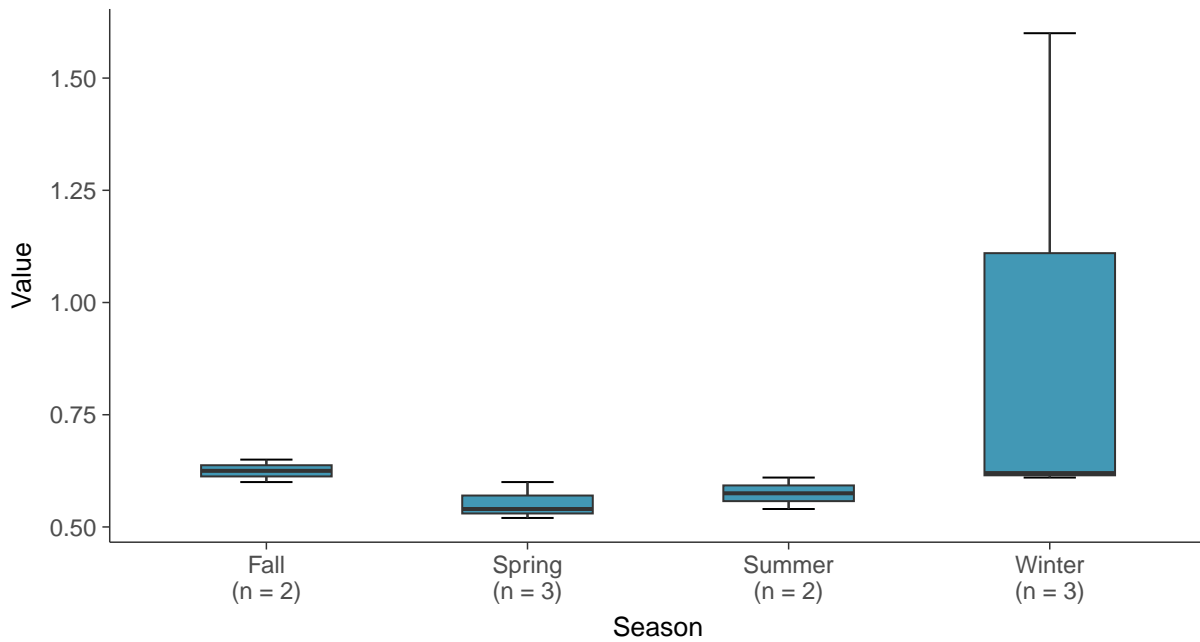
Boxplot

Fluoride, MW-03 (mg/L)



Boxplot by Season

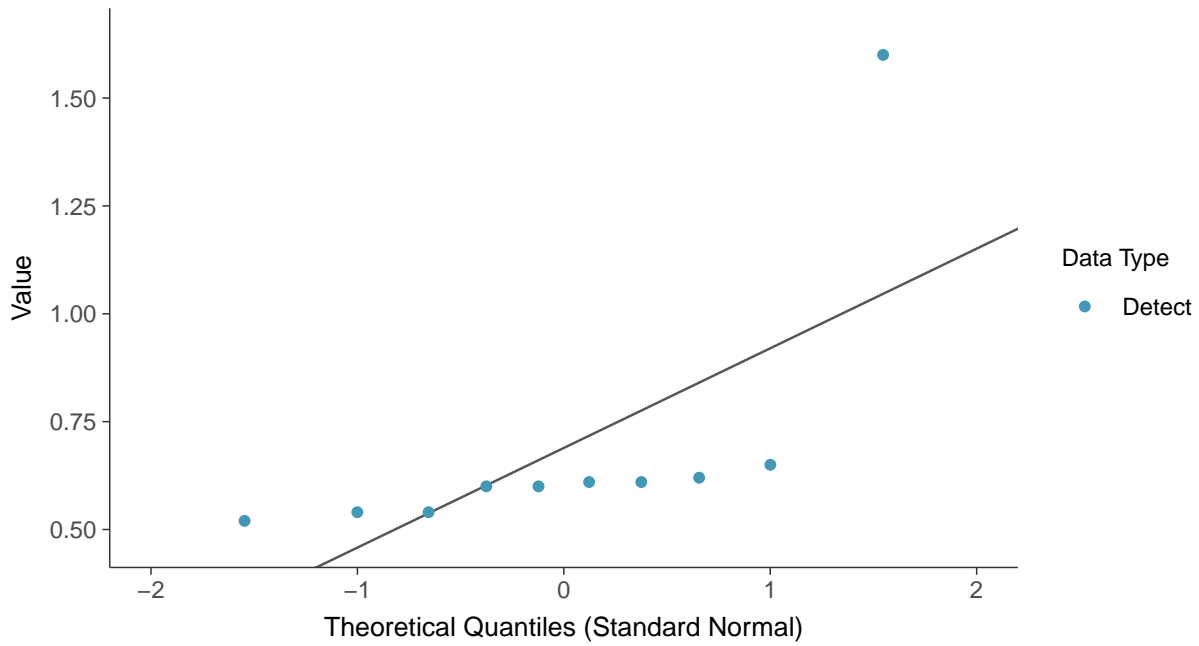
Fluoride, MW-03 (mg/L)





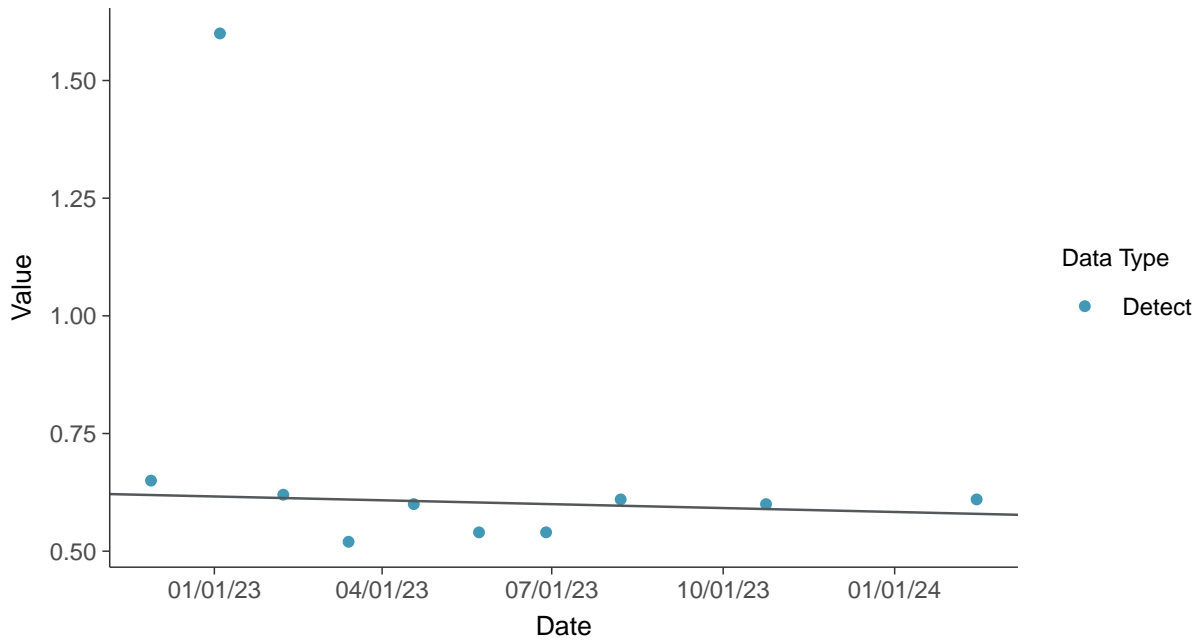
Normal Q-Q plot

Fluoride, MW-03 (mg/L)



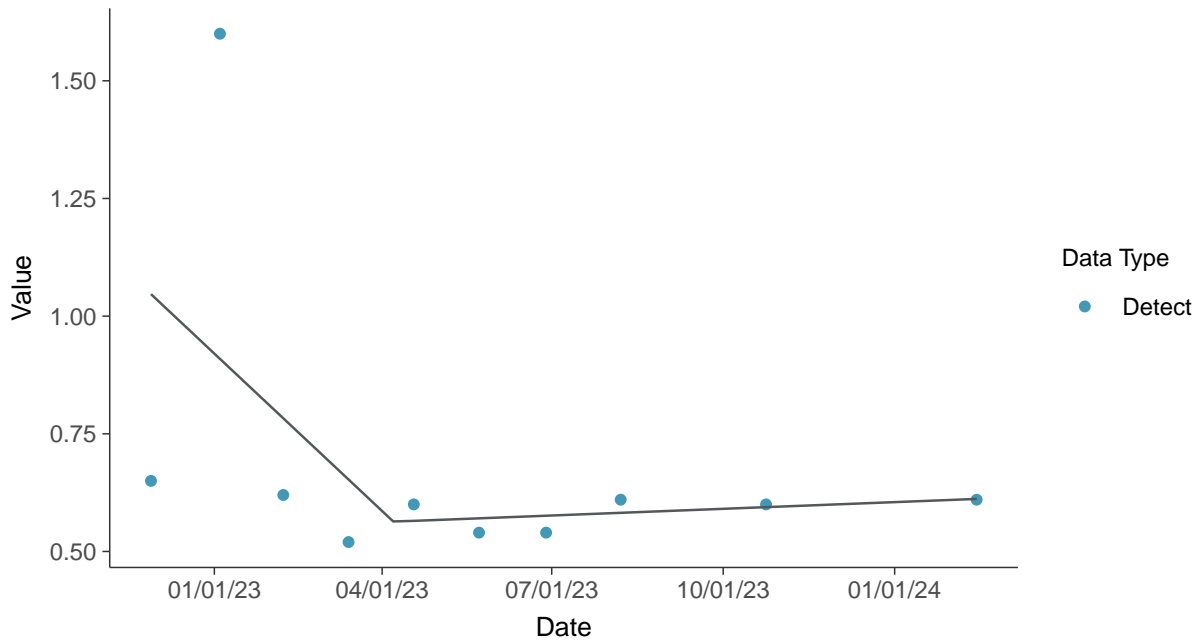
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-03 (mg/L)





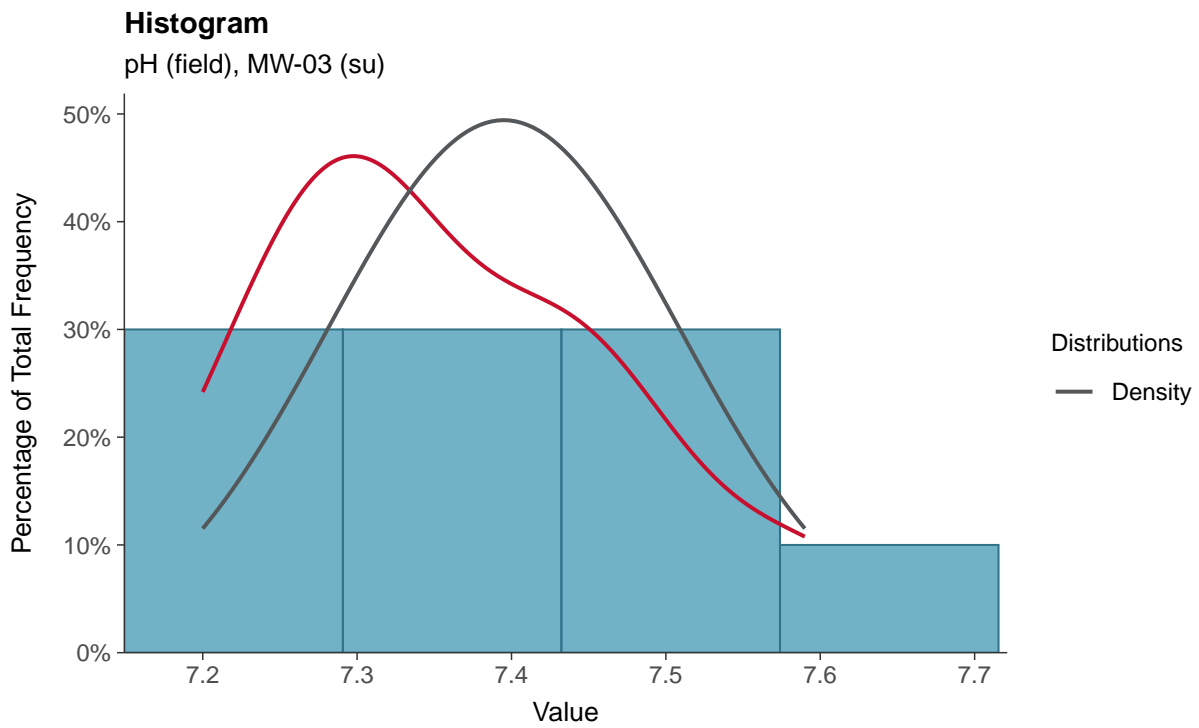
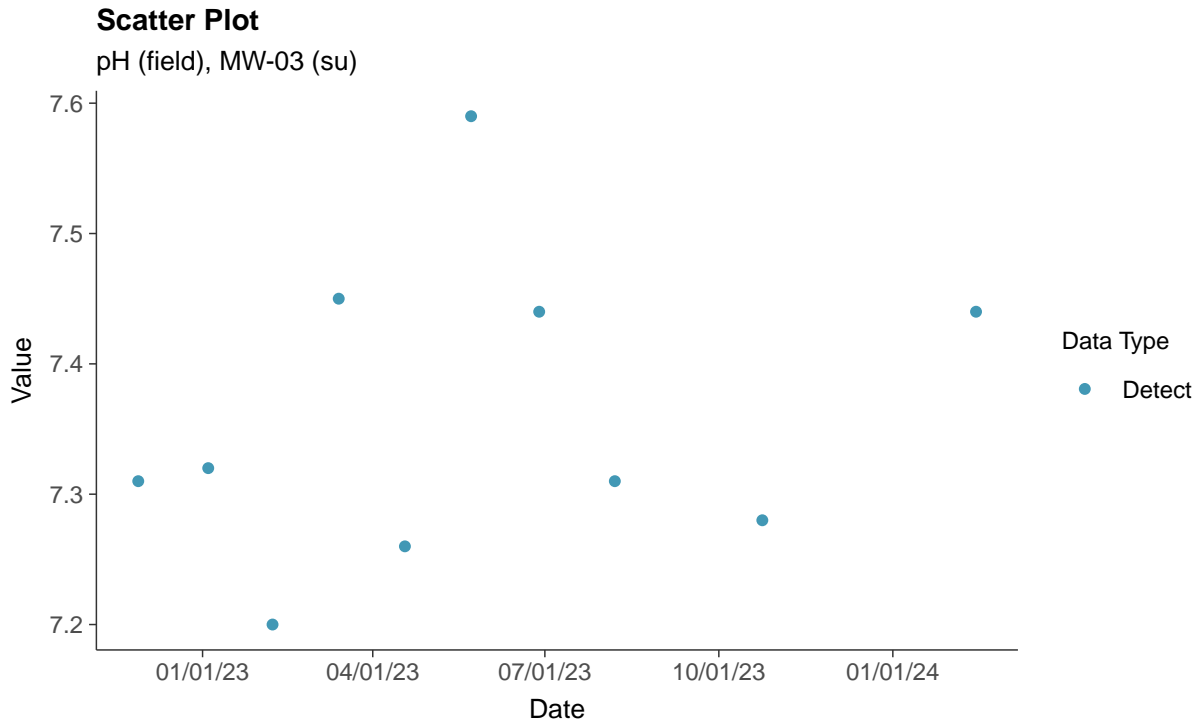
Trend Regression: Piecewise Linear-Linear
Fluoride, MW-03 (mg/L)





Appendix III: pH (field), MW-03

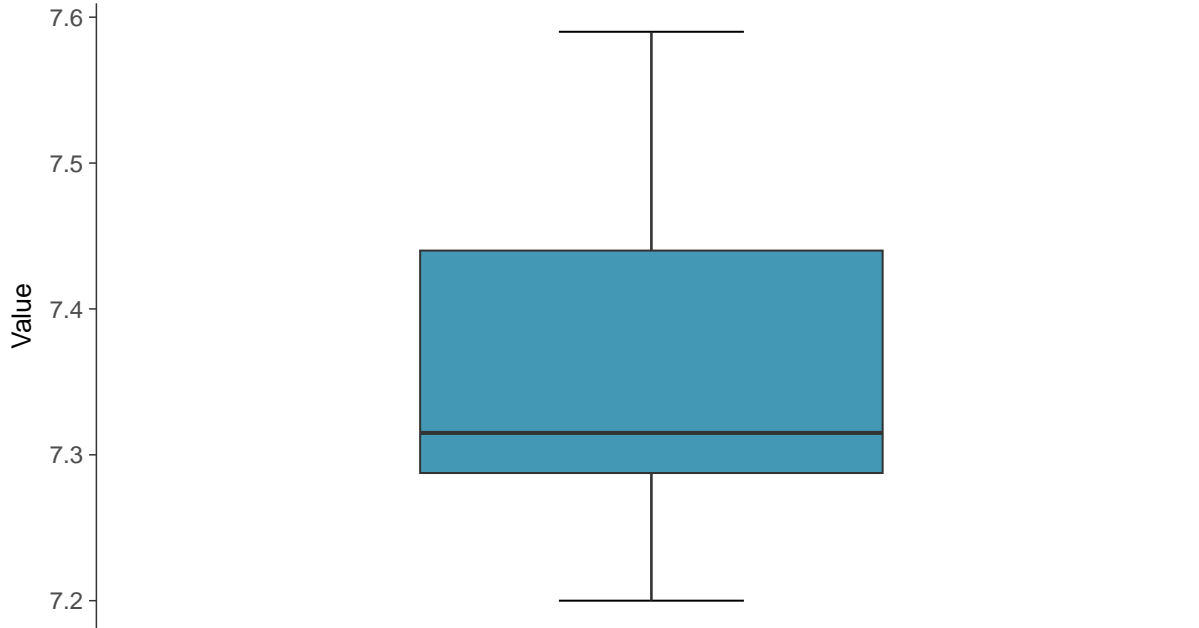
ID: 2_13_4_120





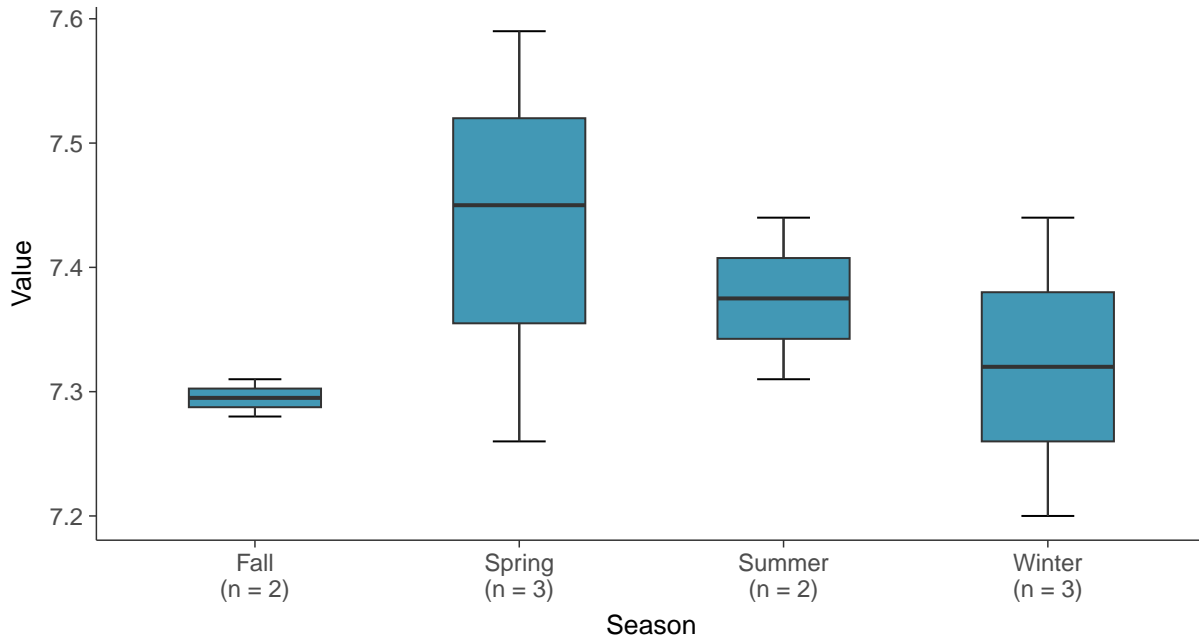
Boxplot

pH (field), MW-03 (su)



Boxplot by Season

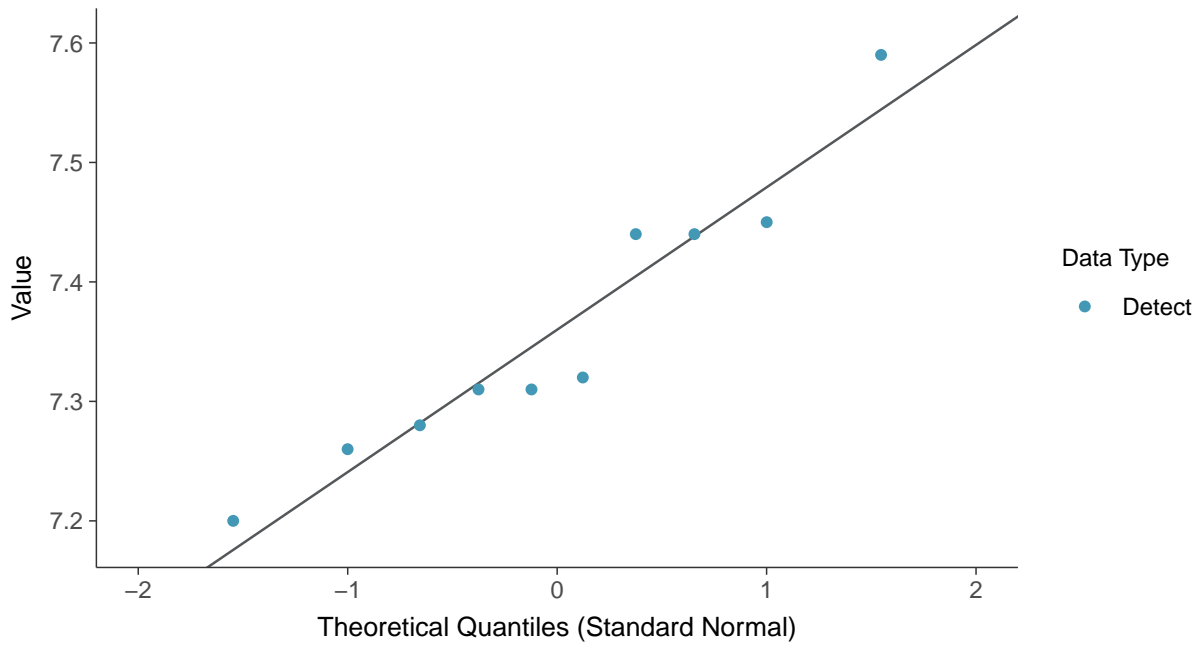
pH (field), MW-03 (su)





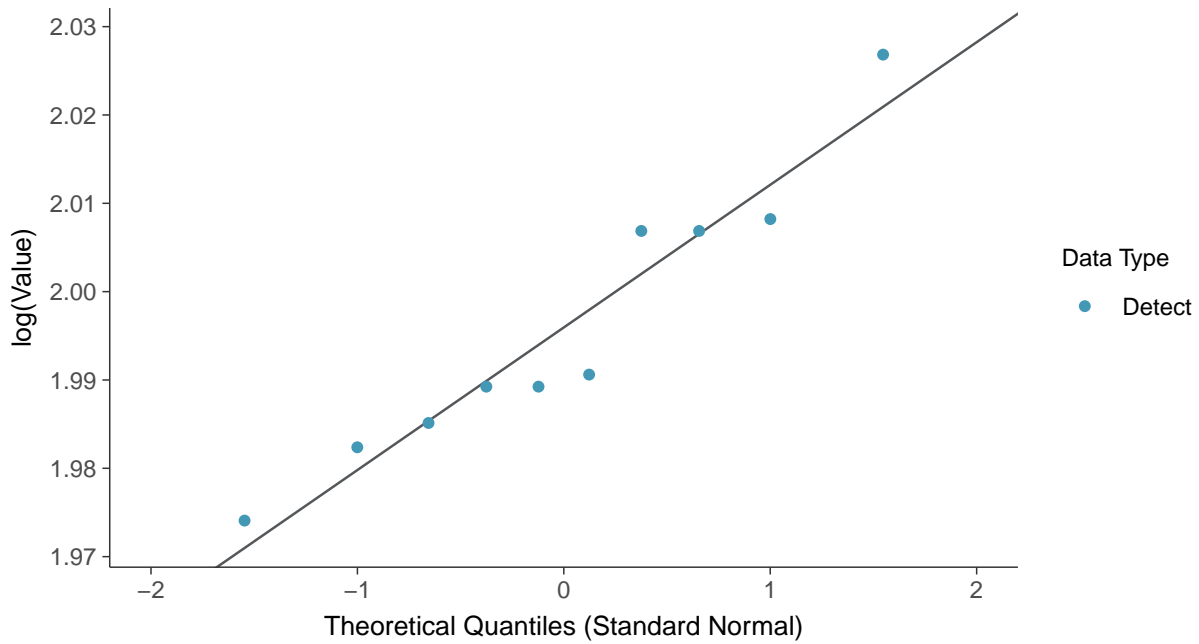
Normal Q-Q plot

pH (field), MW-03 (su)



Lognormal Q-Q plot

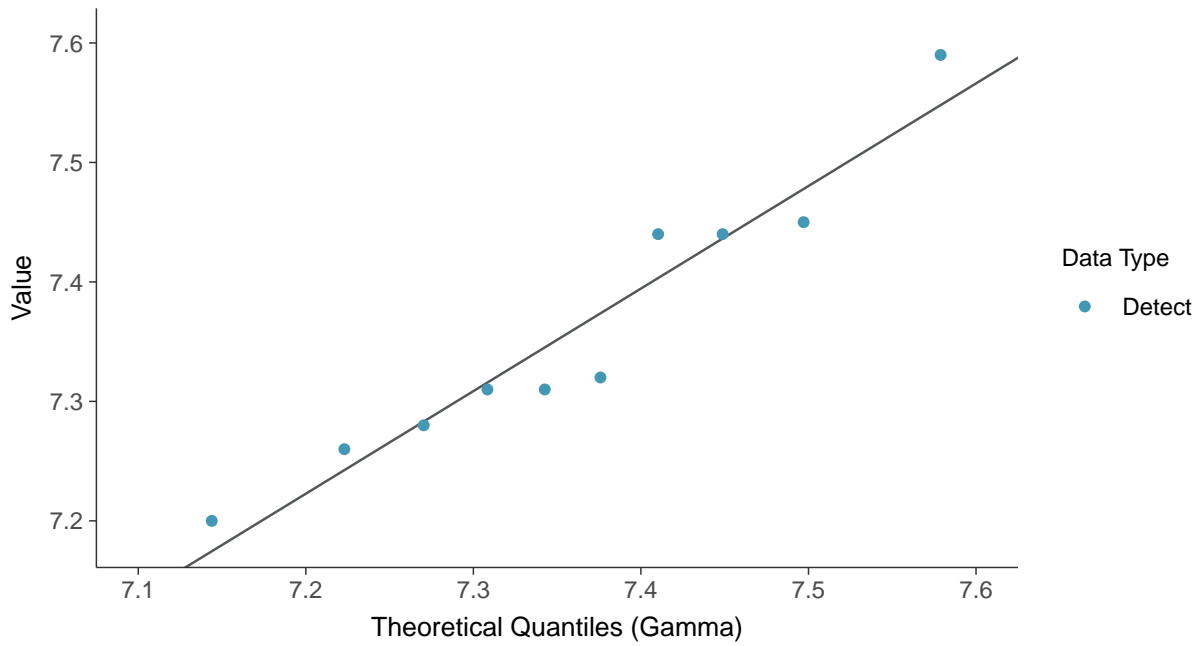
pH (field), MW-03 (su)





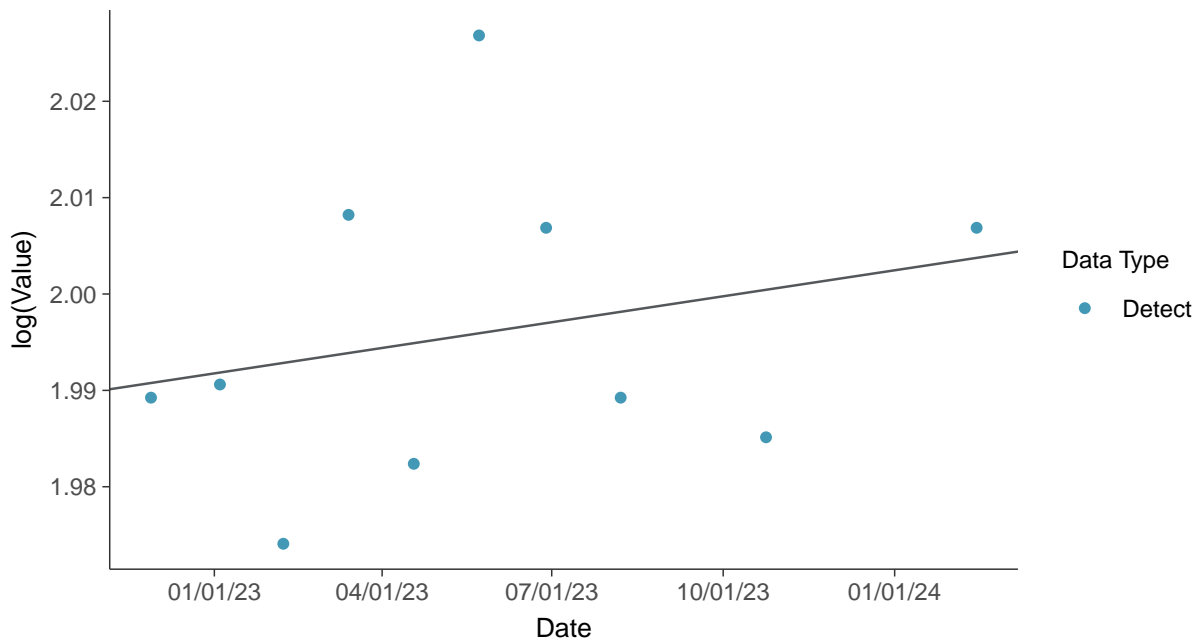
Gamma Q-Q plot

pH (field), MW-03 (su)



Trend Regression: Lognormal MLE

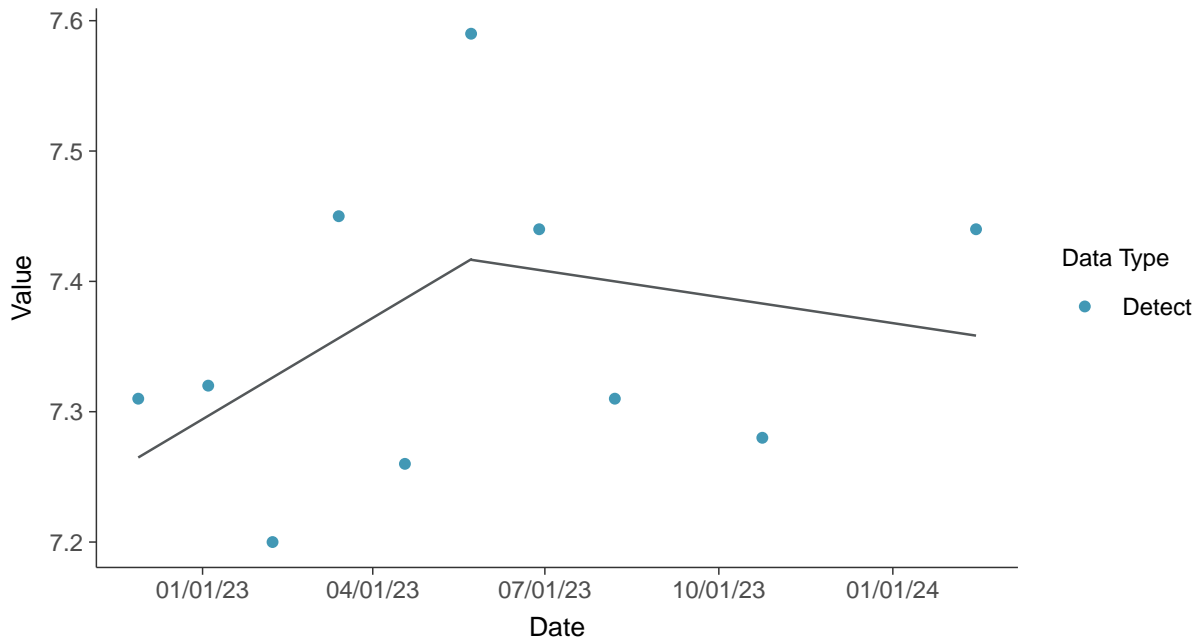
pH (field), MW-03 (su)





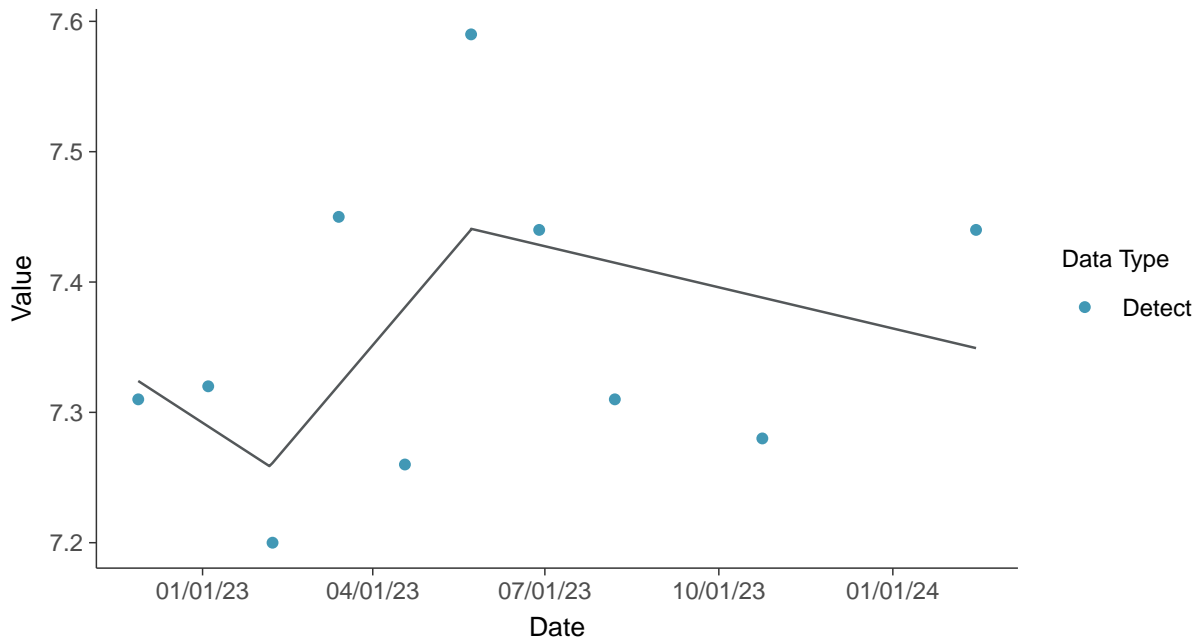
Trend Regression: Piecewise Linear-Linear

pH (field), MW-03 (su)



Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-03 (su)



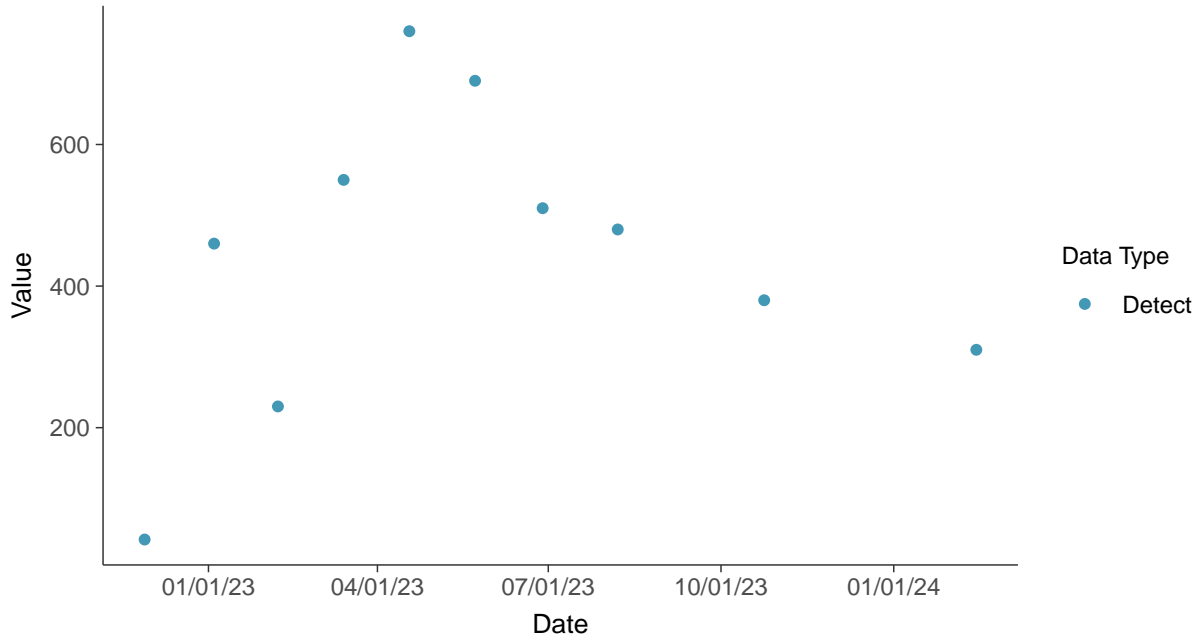


Appendix III: Sulfate (as SO₄), MW-03

ID: 2_13_4_124

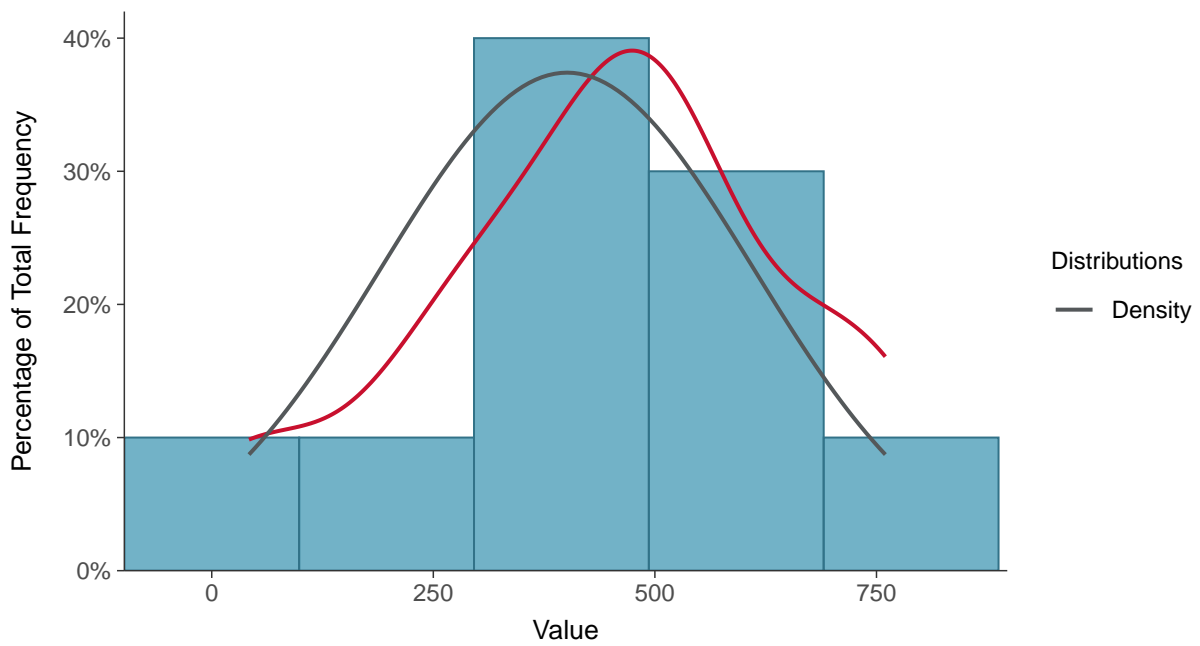
Scatter Plot

Sulfate (as SO₄), MW-03 (mg/L)



Histogram

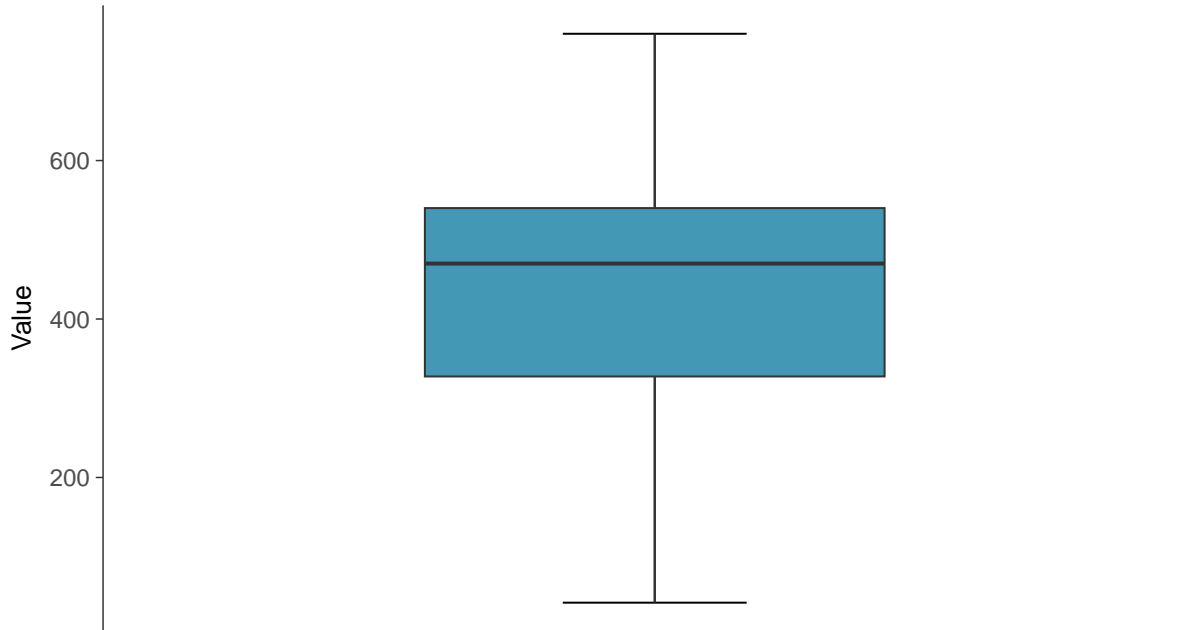
Sulfate (as SO₄), MW-03 (mg/L)





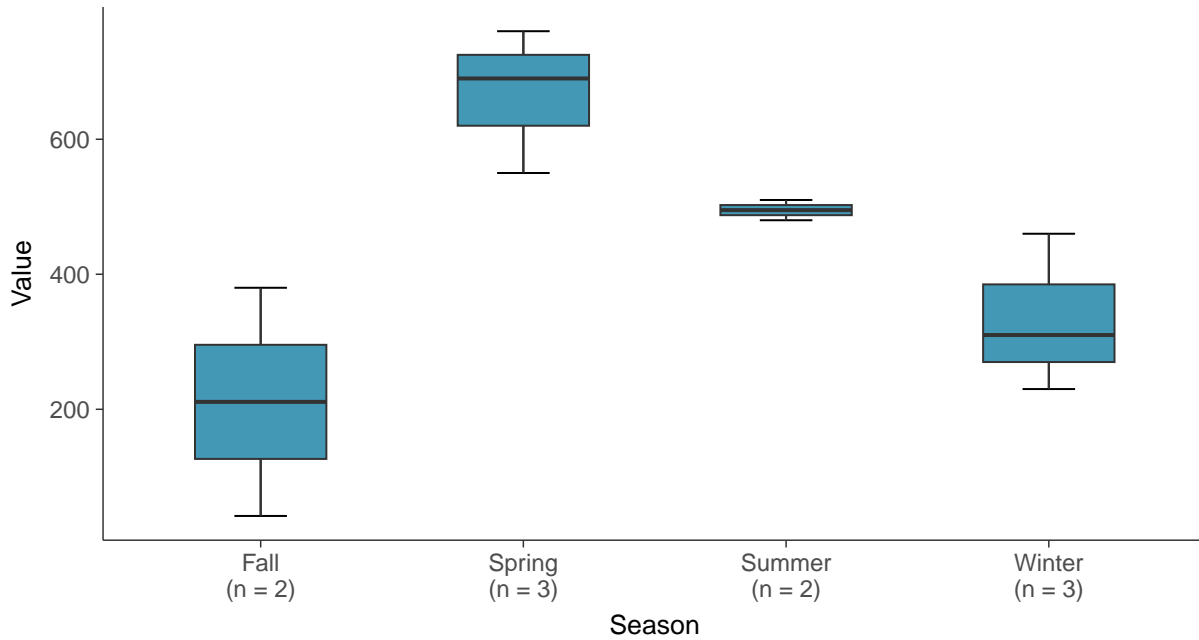
Boxplot

Sulfate (as SO₄), MW-03 (mg/L)



Boxplot by Season

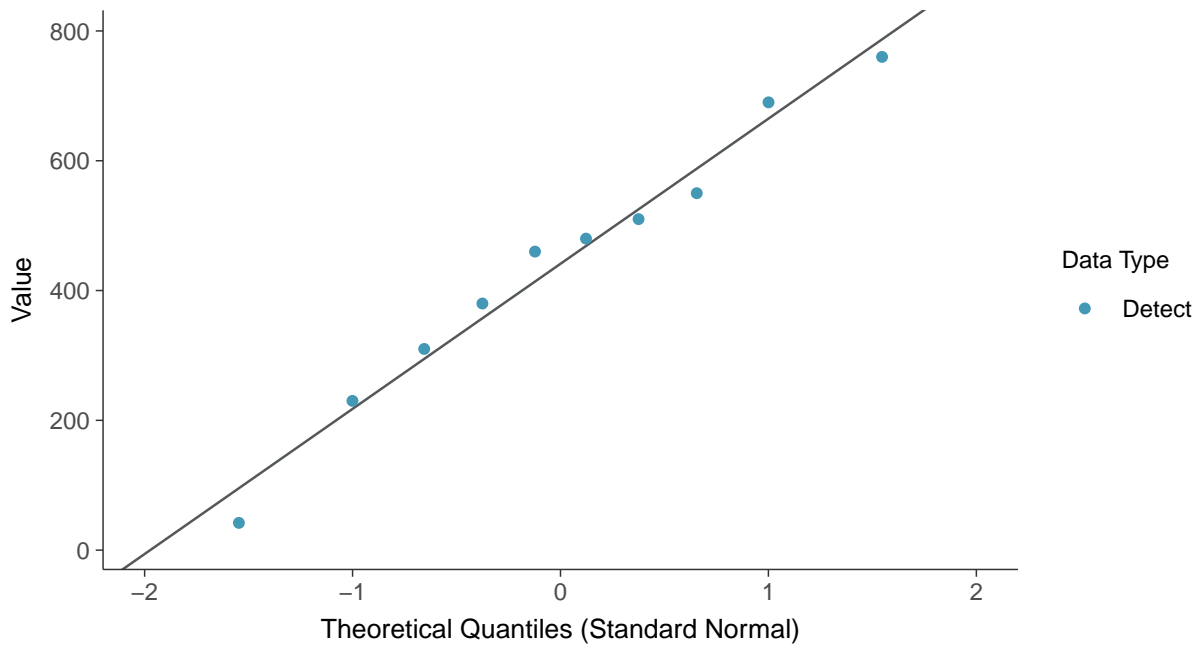
Sulfate (as SO₄), MW-03 (mg/L)





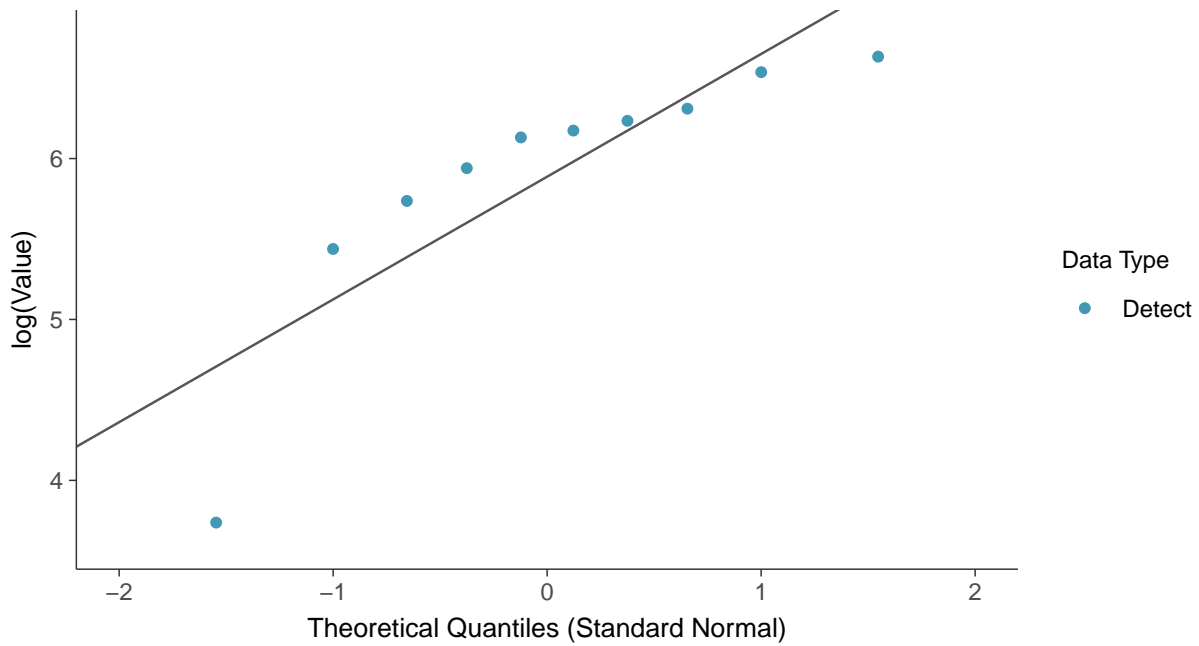
Normal Q-Q plot

Sulfate (as SO₄), MW-03 (mg/L)



Lognormal Q-Q plot

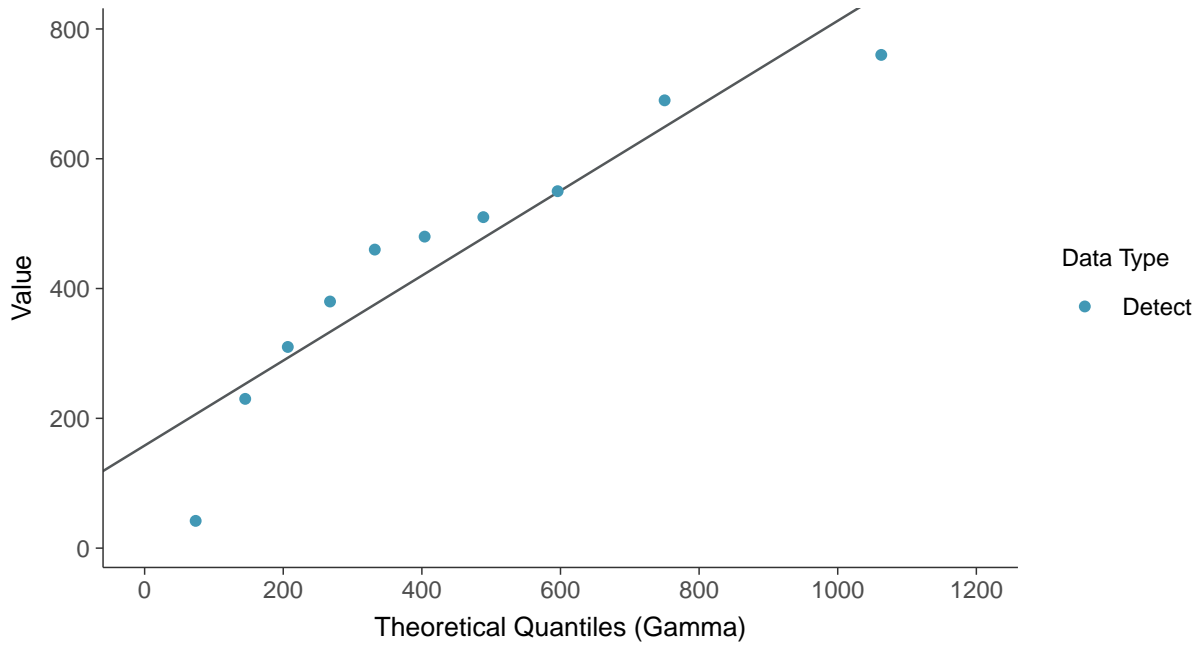
Sulfate (as SO₄), MW-03 (mg/L)





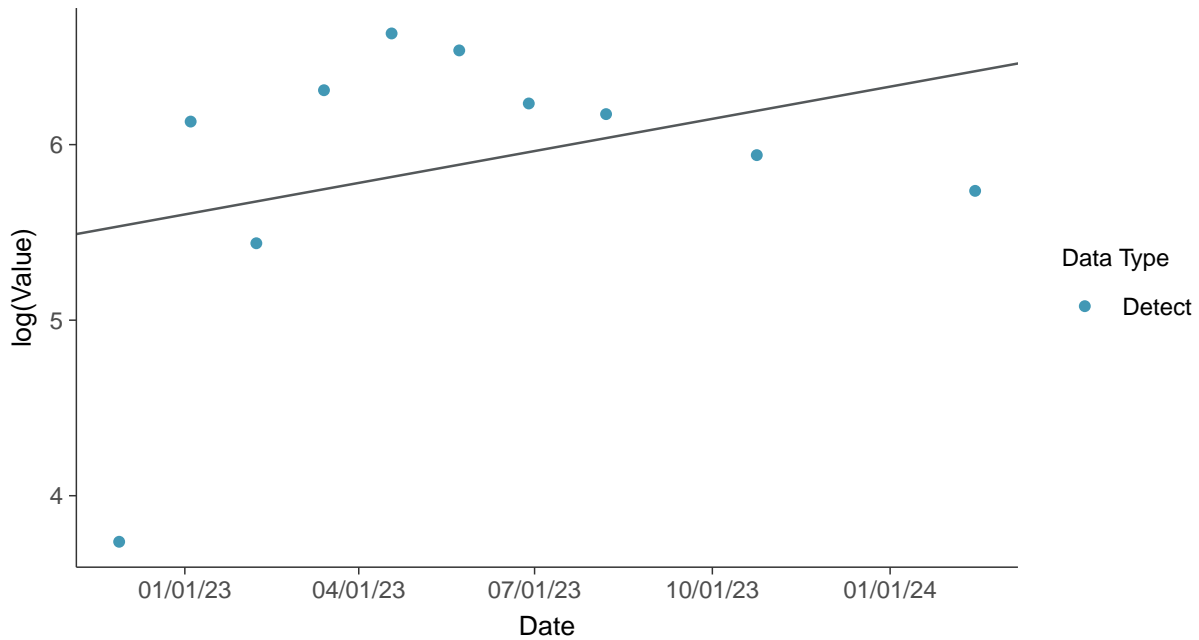
Gamma Q-Q plot

Sulfate (as SO4), MW-03 (mg/L)



Trend Regression: Lognormal MLE

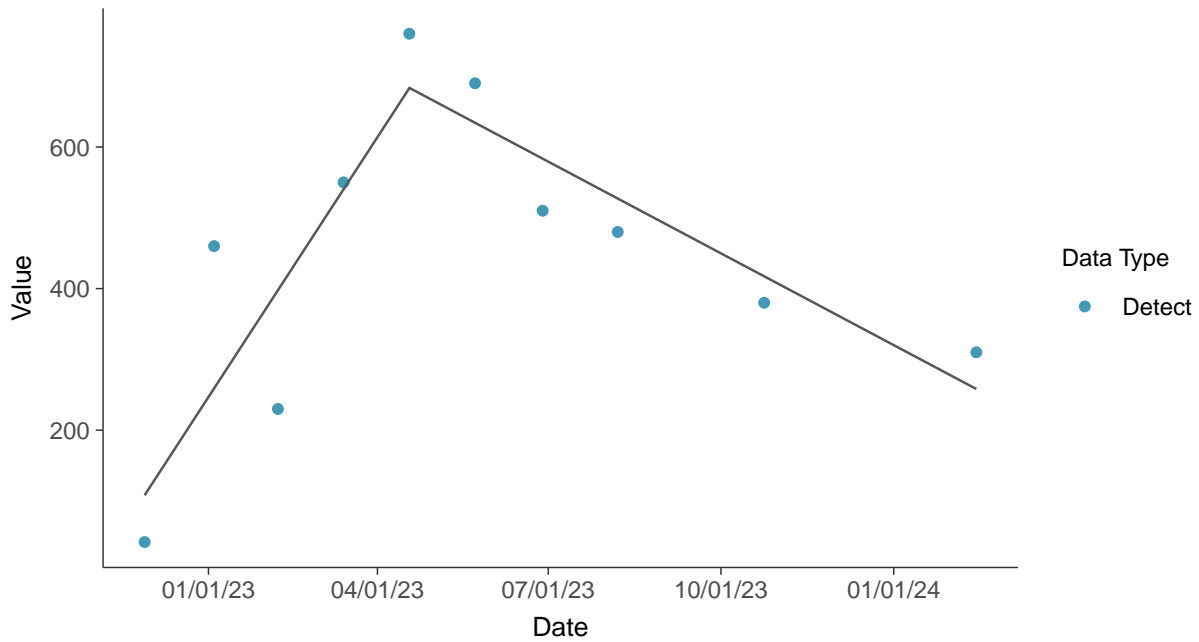
Sulfate (as SO4), MW-03 (mg/L)





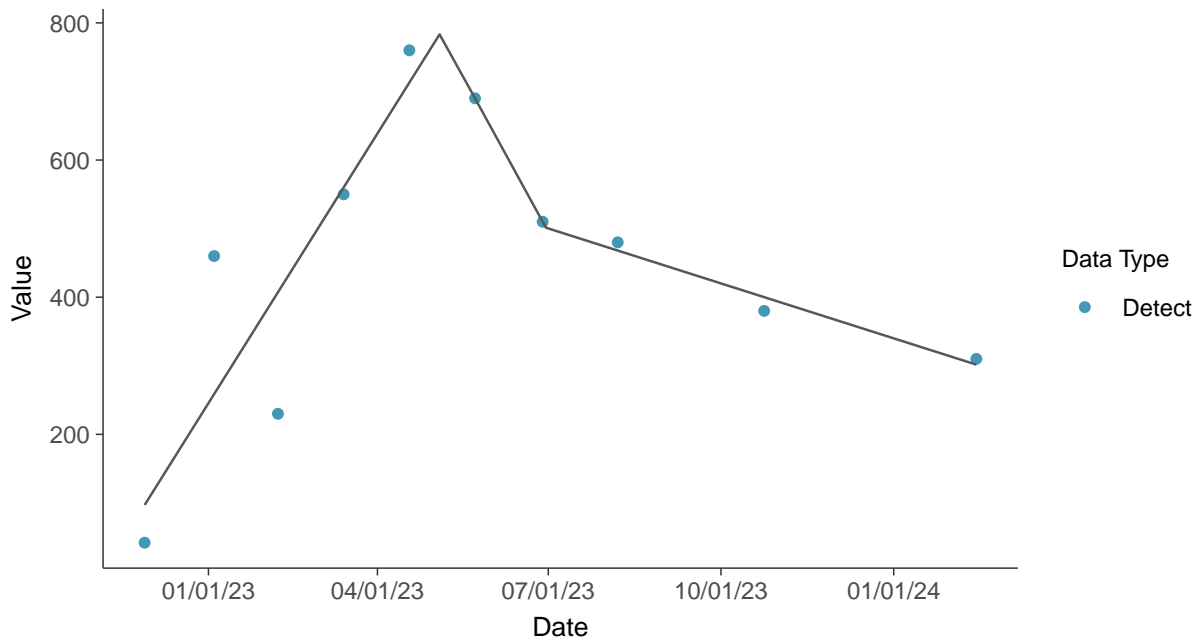
Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO₄), MW-03 (mg/L)



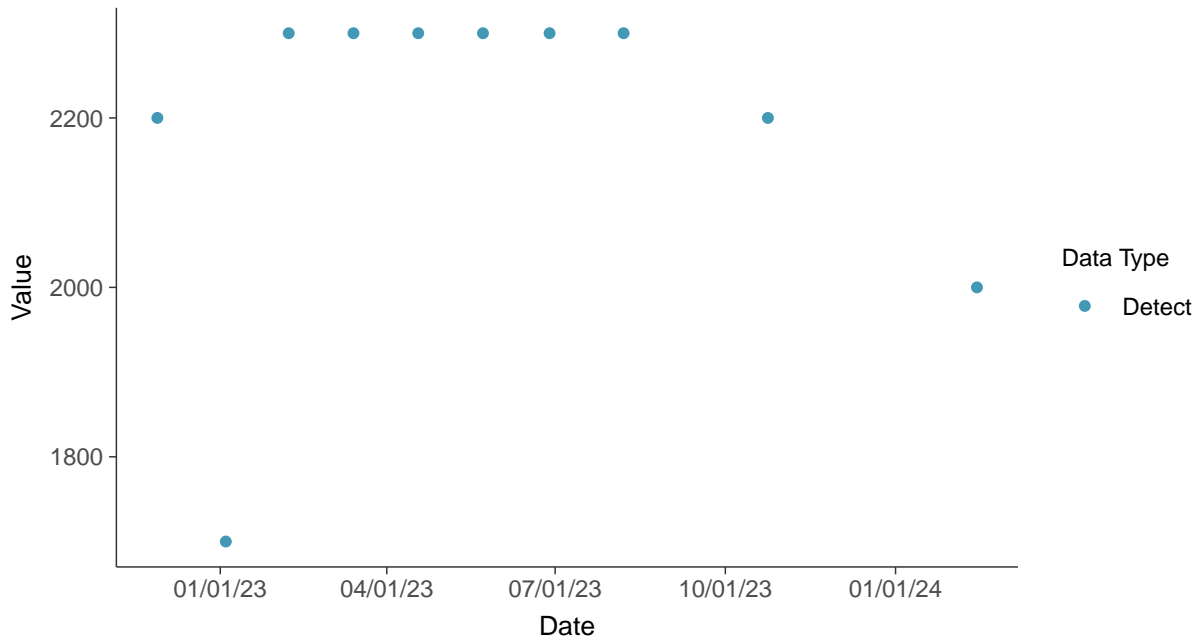


Appendix III: Total Dissolved Solids, MW-03

ID: 2_13_4_126

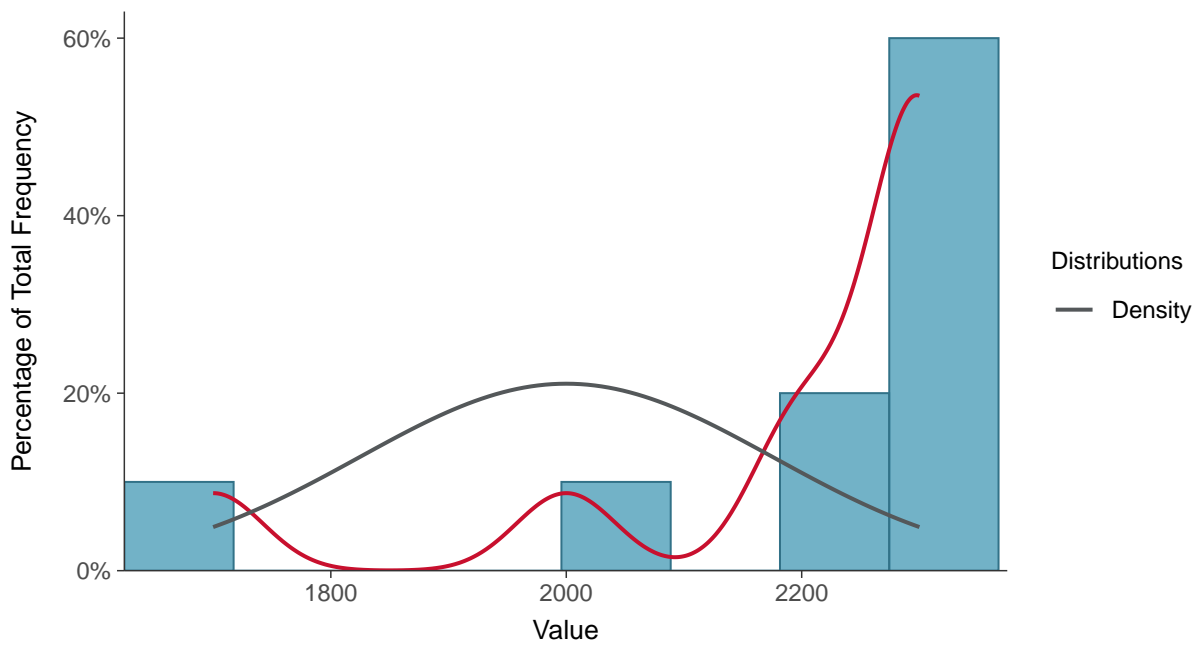
Scatter Plot

Total Dissolved Solids, MW-03 (mg/L)



Histogram

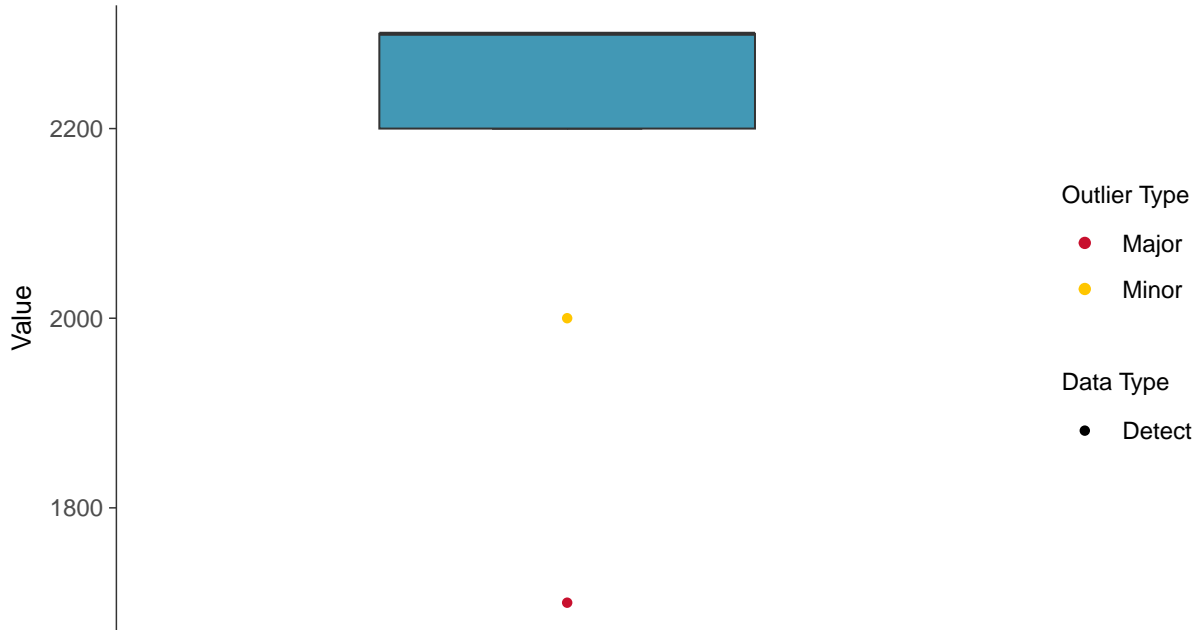
Total Dissolved Solids, MW-03 (mg/L)





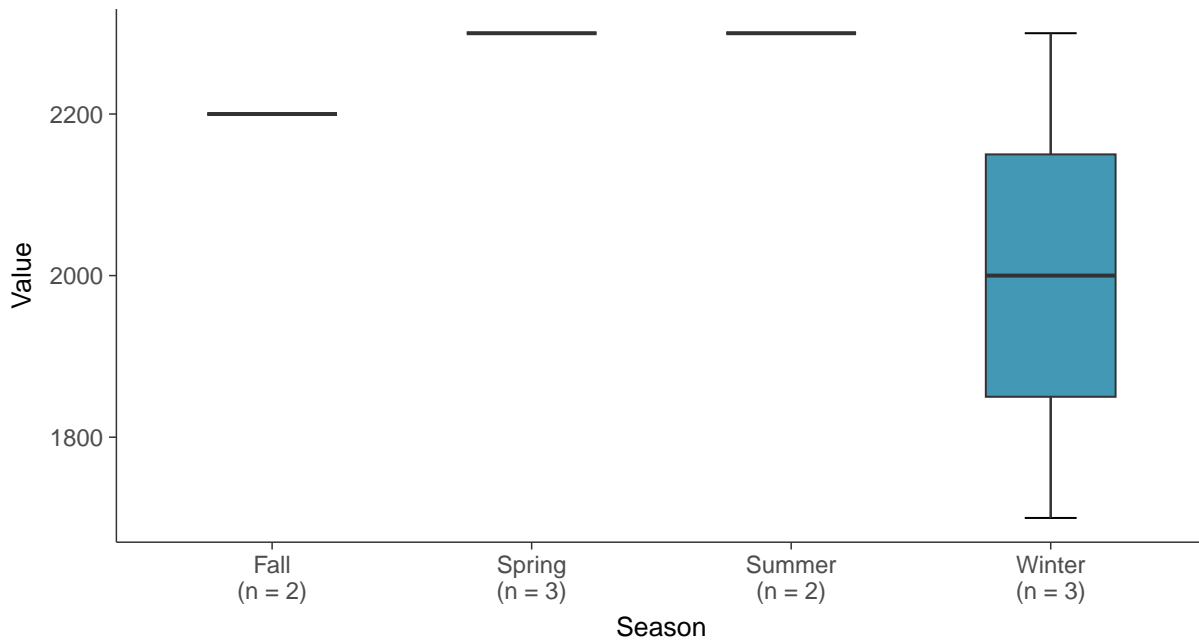
Boxplot

Total Dissolved Solids, MW-03 (mg/L)



Boxplot by Season

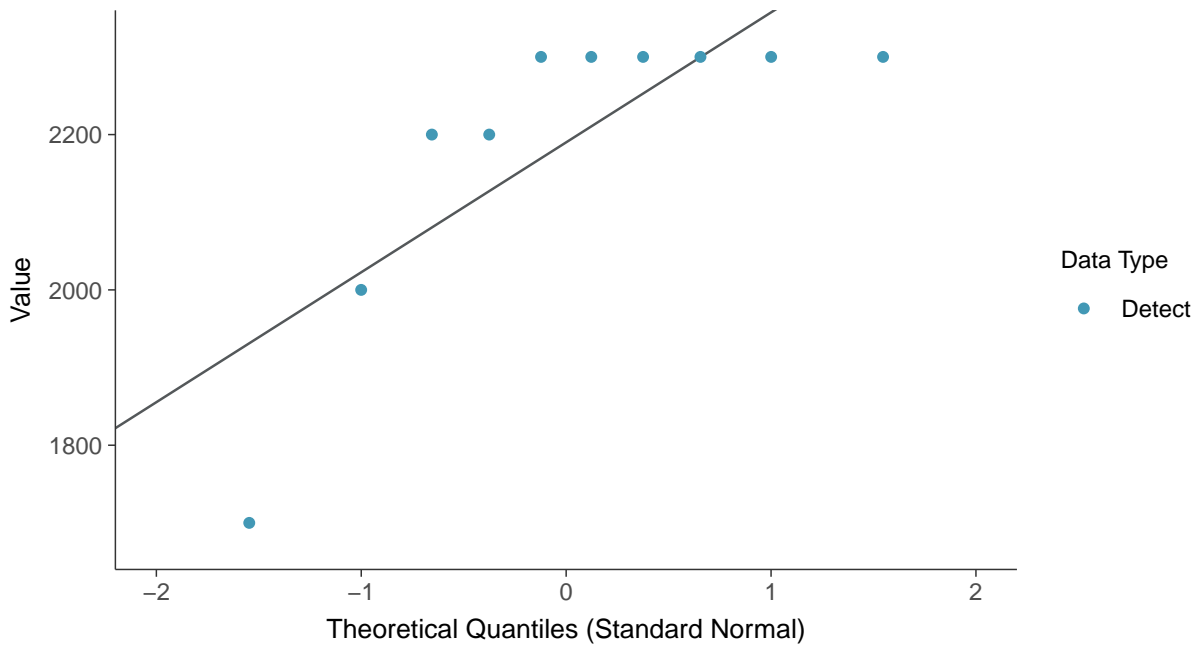
Total Dissolved Solids, MW-03 (mg/L)





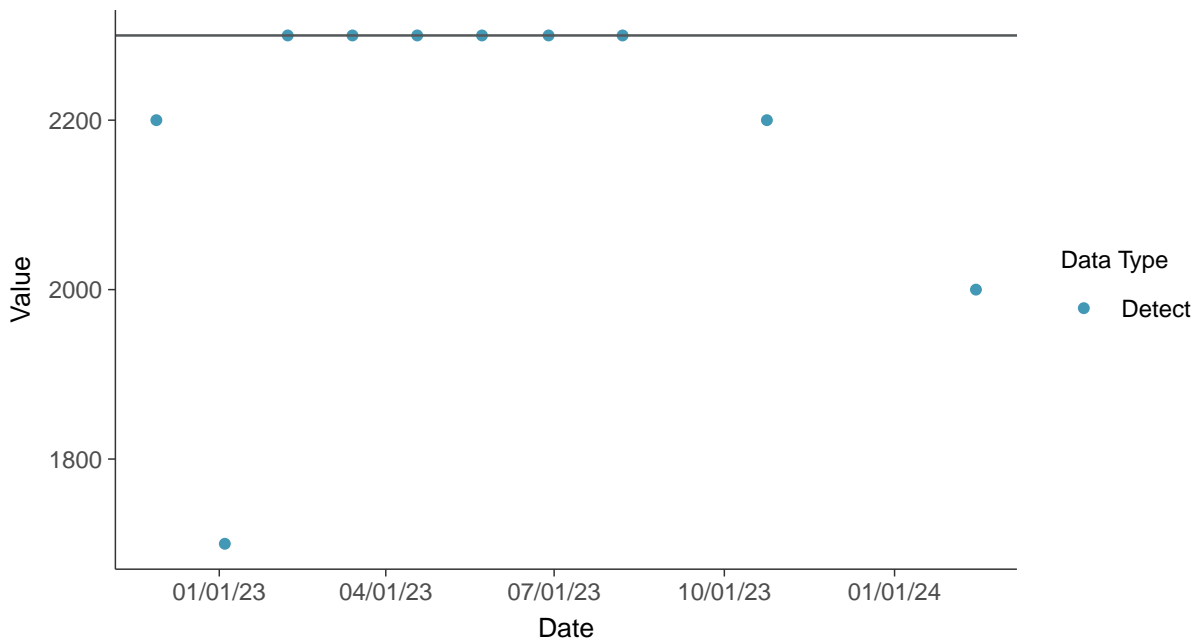
Normal Q-Q plot

Total Dissolved Solids, MW-03 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

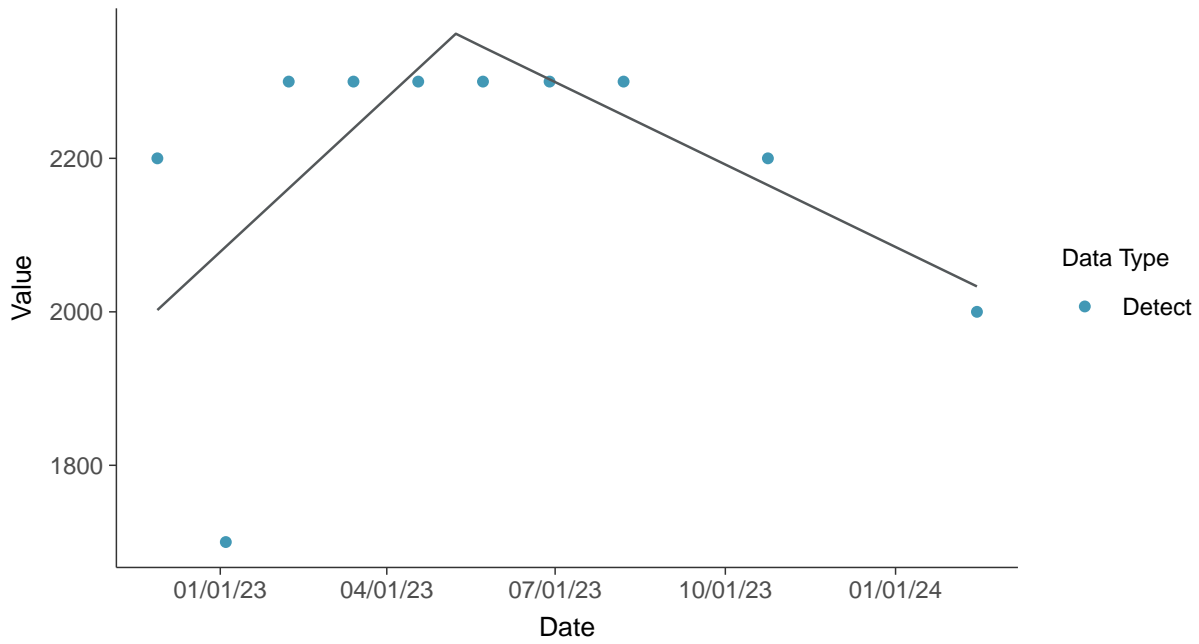
Total Dissolved Solids, MW-03 (mg/L)





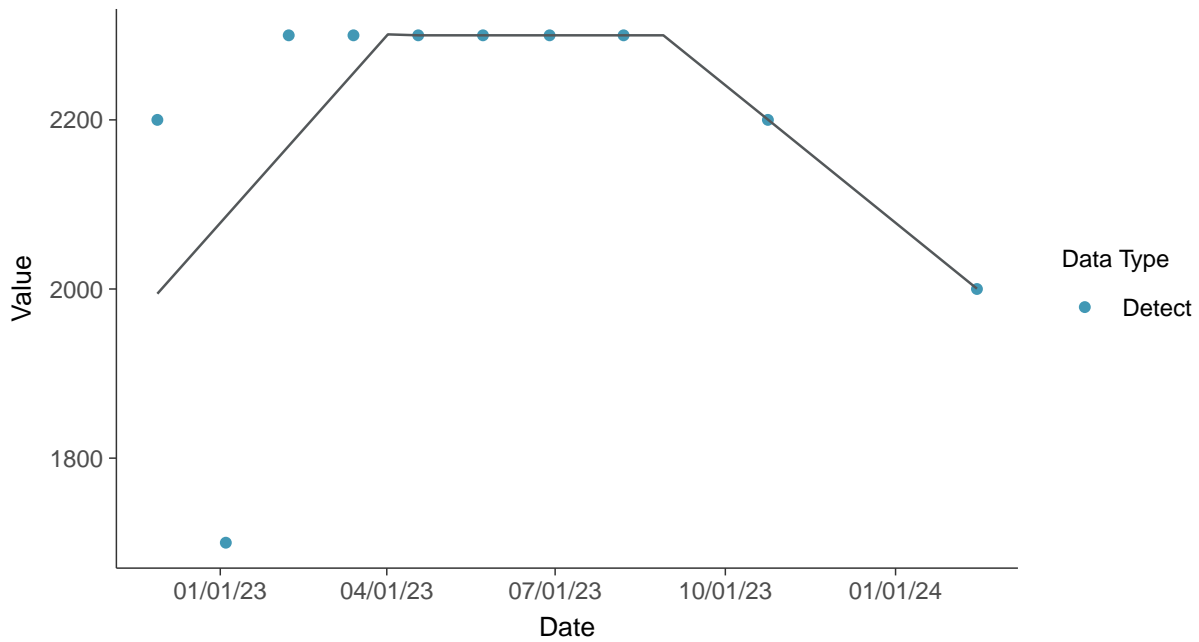
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-03 (mg/L)



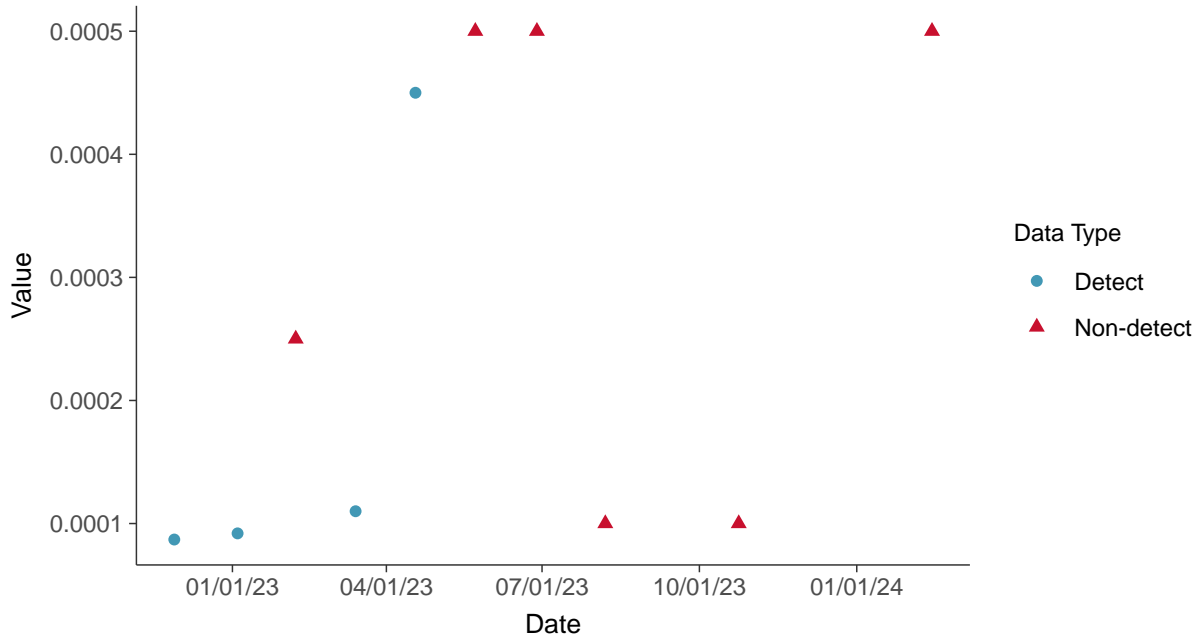


Appendix IV: Antimony, MW-03

ID: 2_13_5_101

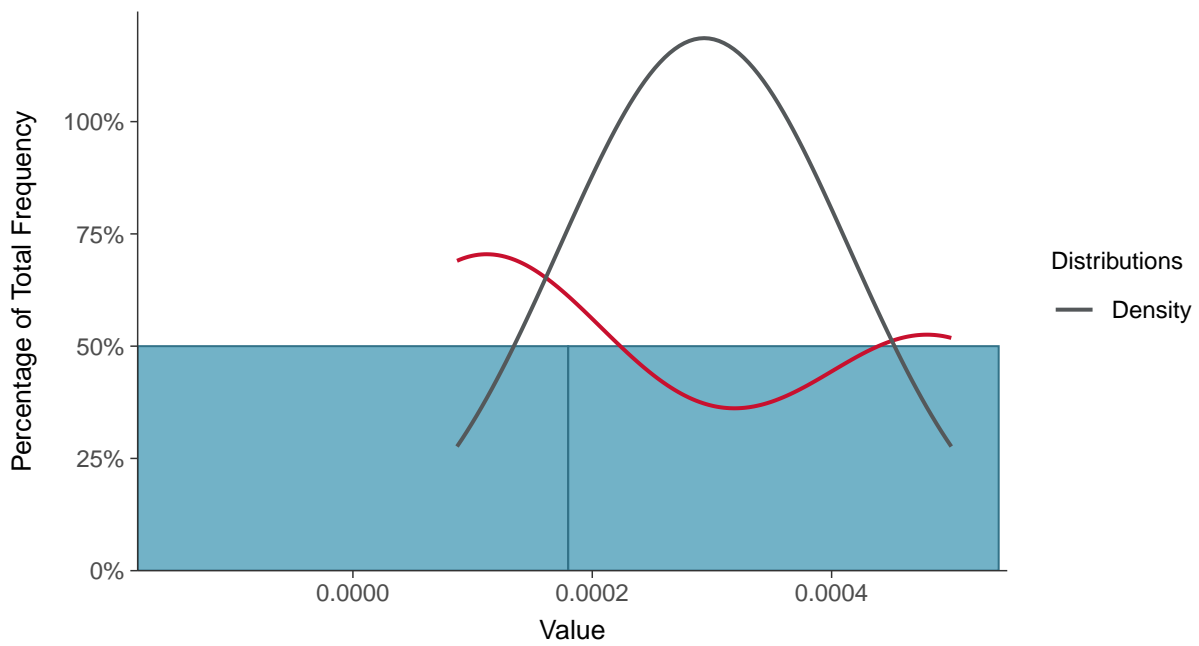
Scatter Plot

Antimony, MW-03 (mg/L)



Histogram

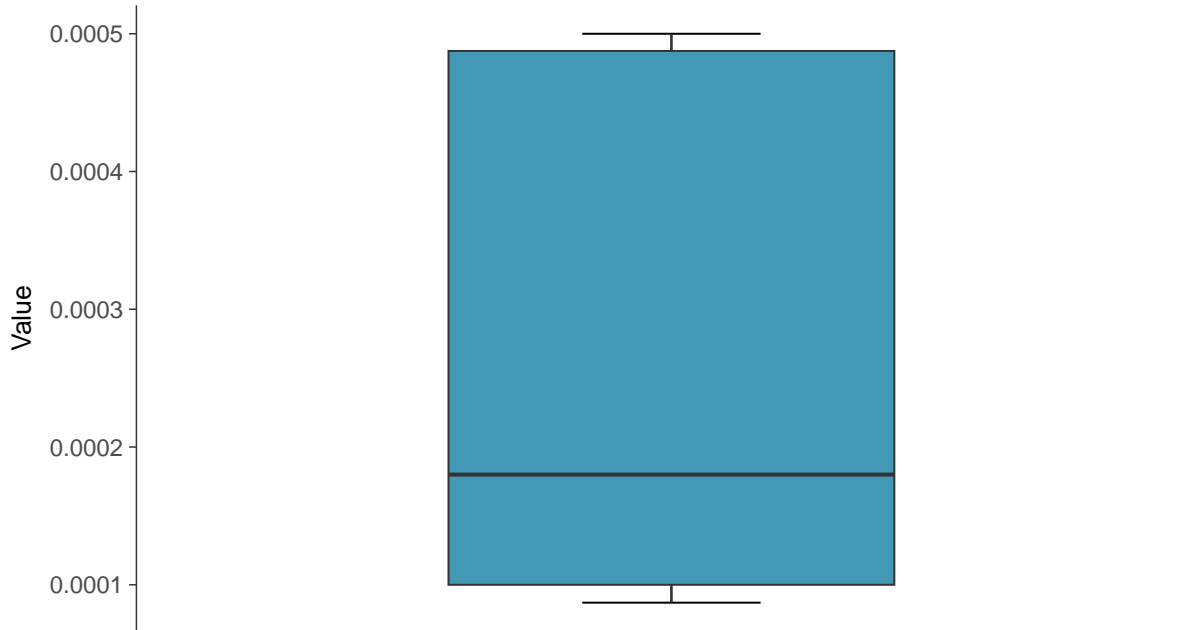
Antimony, MW-03 (mg/L)





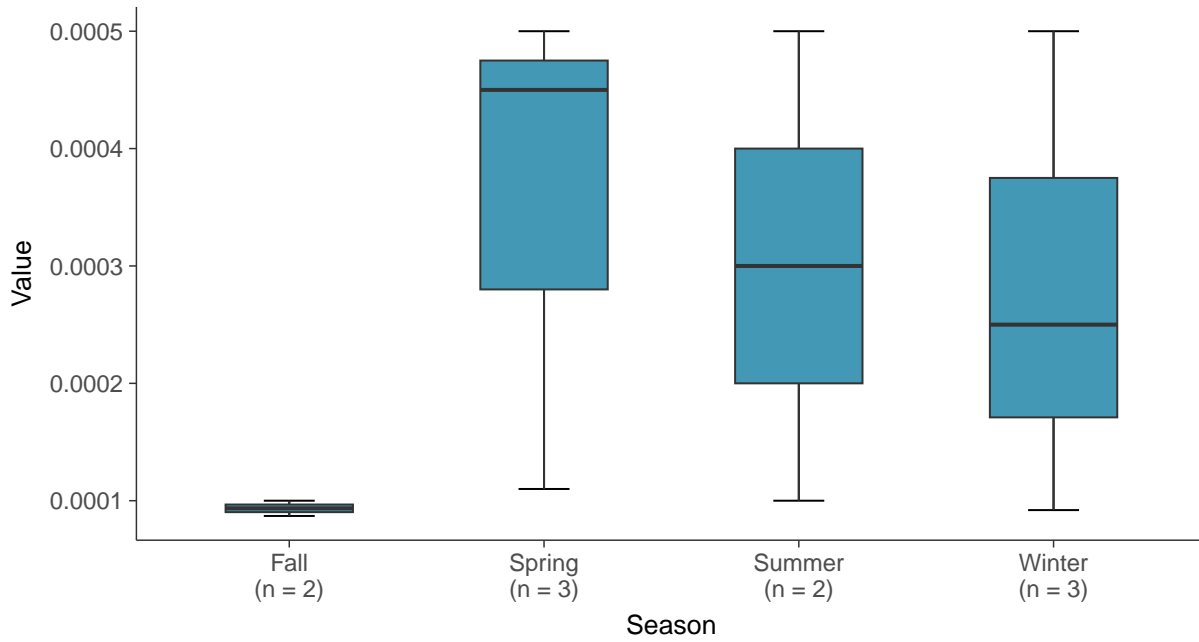
Boxplot

Antimony, MW-03 (mg/L)



Boxplot by Season

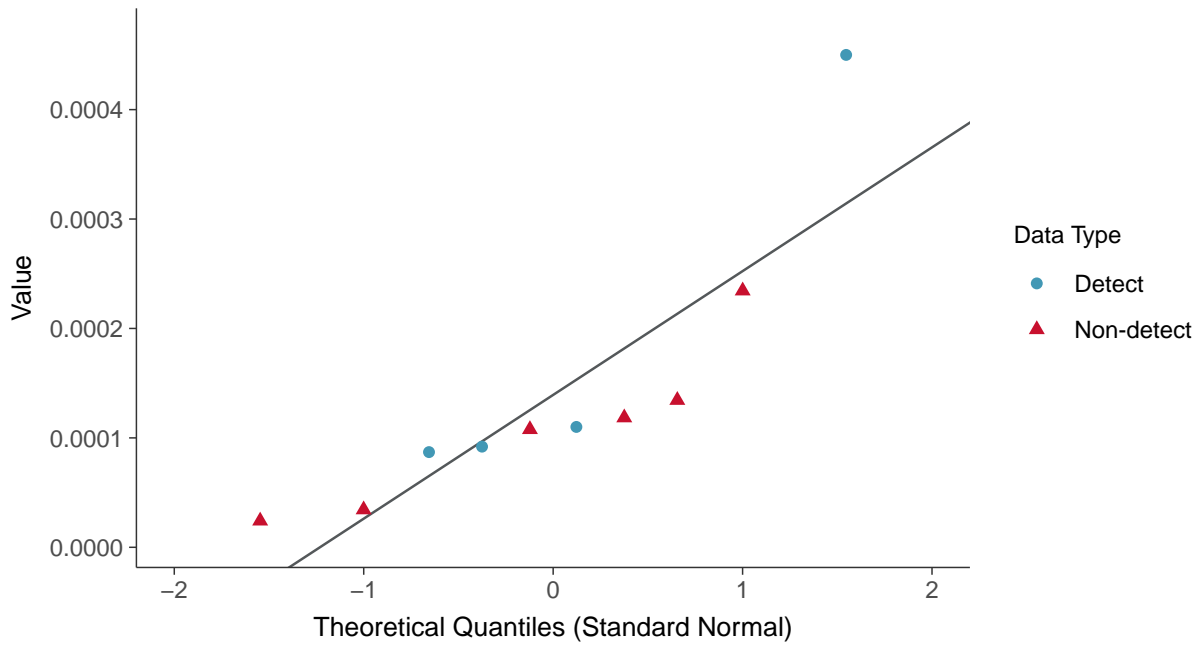
Antimony, MW-03 (mg/L)





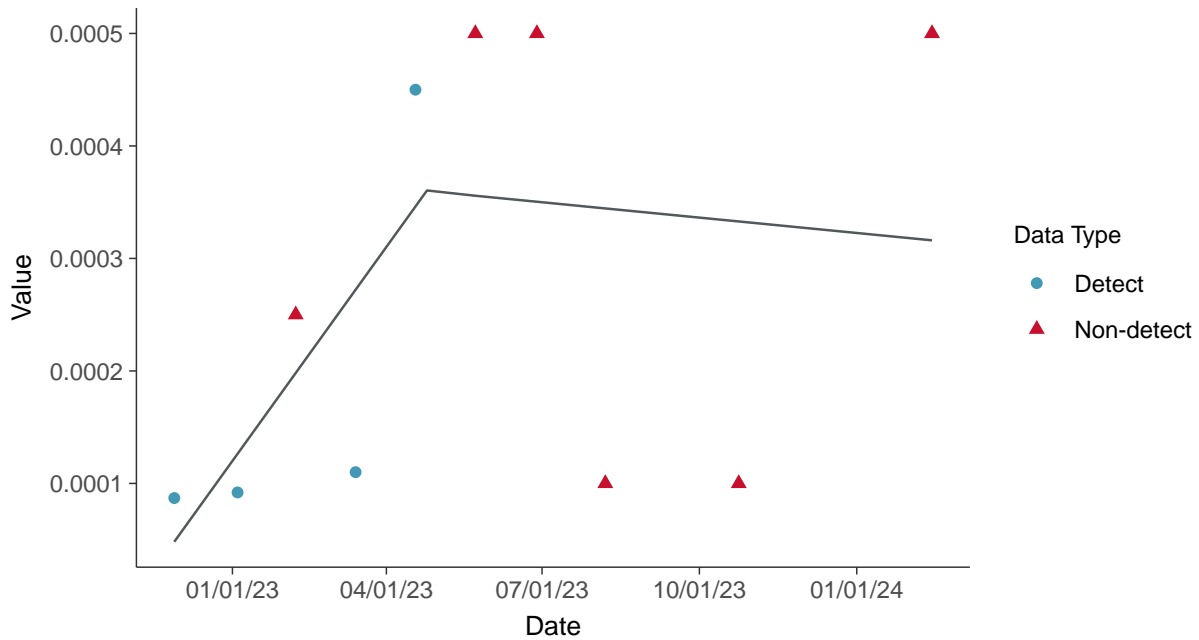
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear

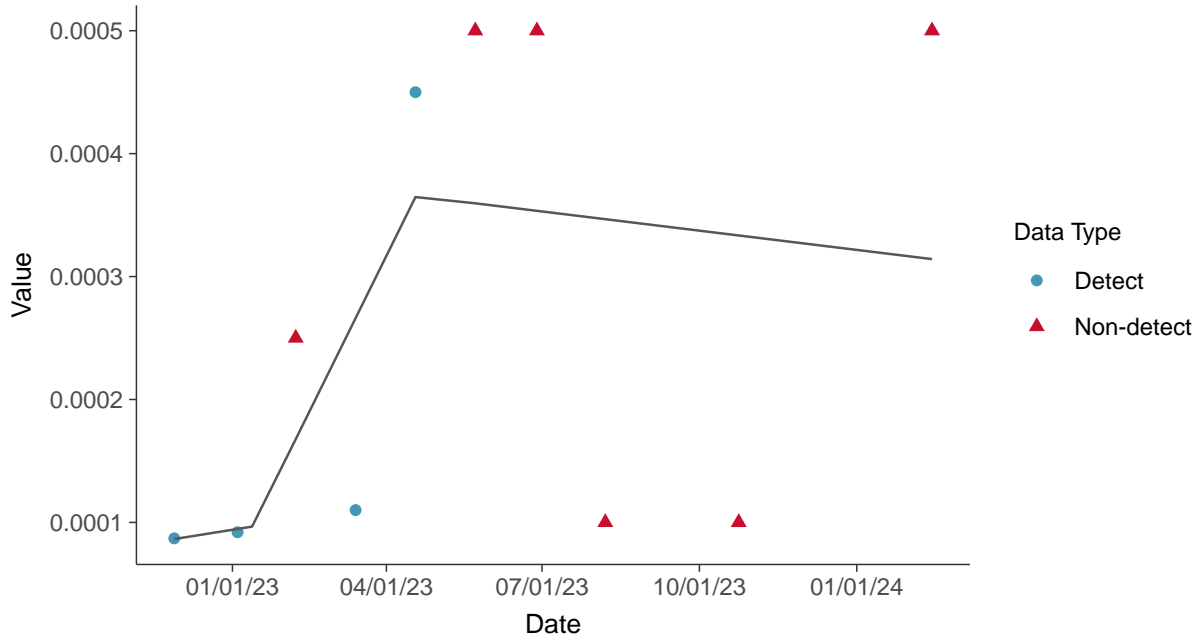
Antimony, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

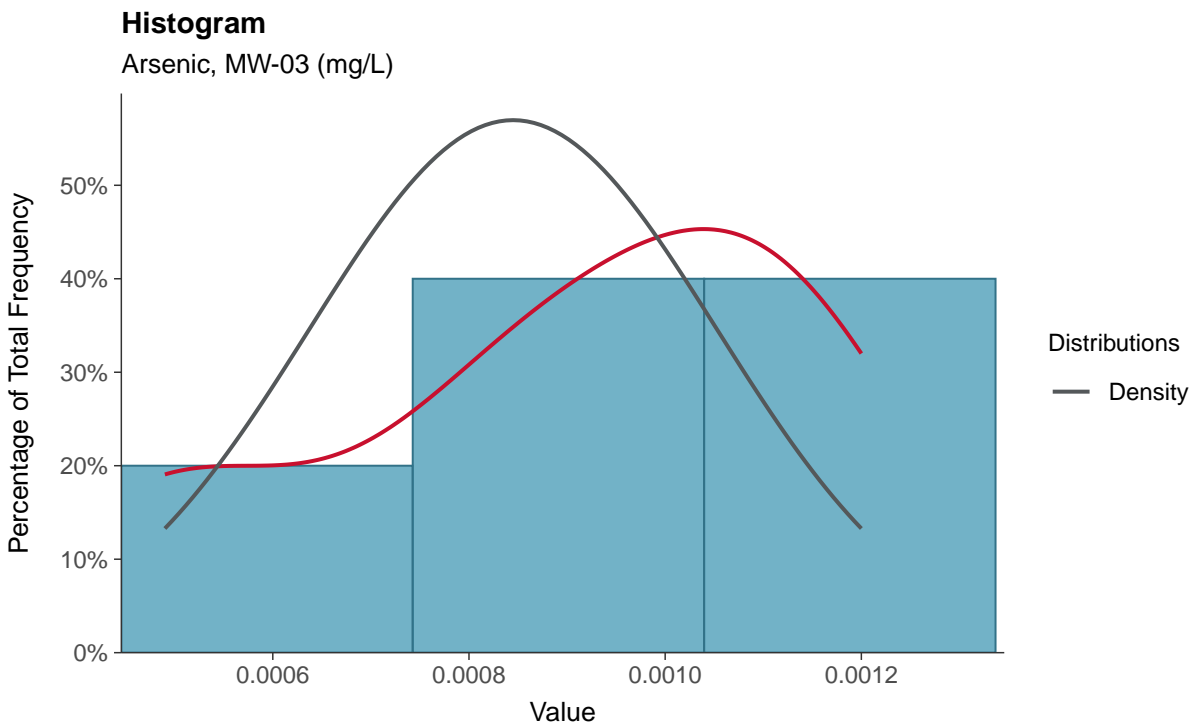
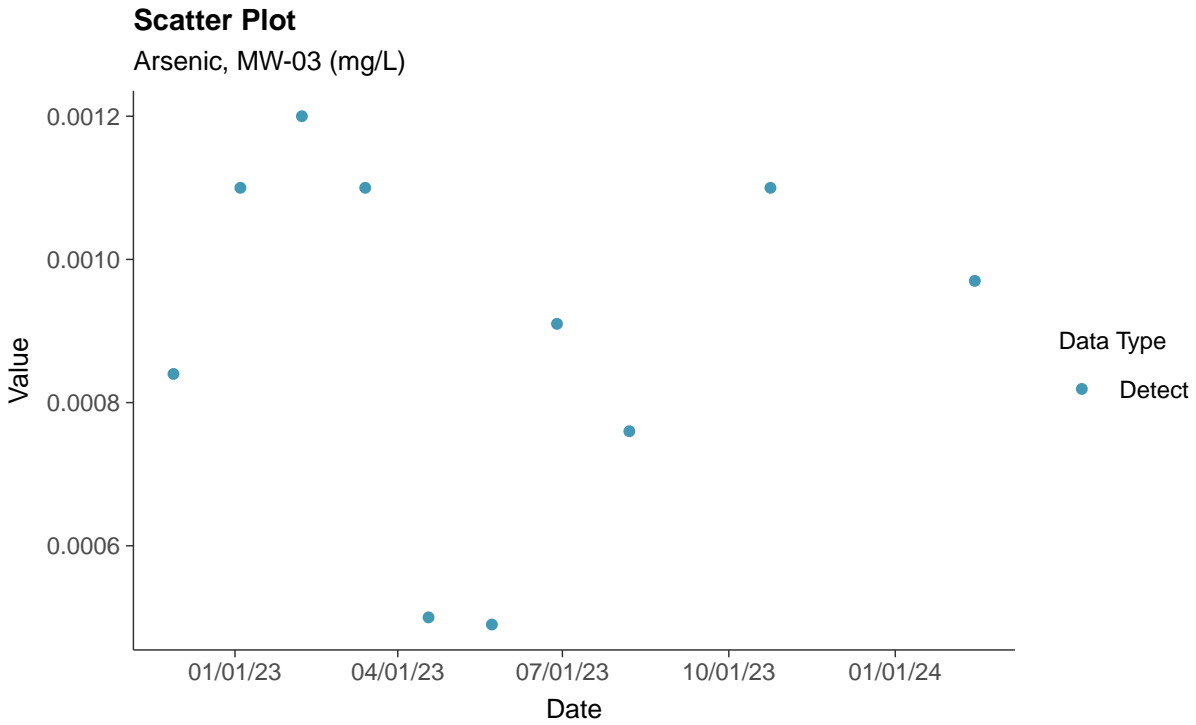
Antimony, MW-03 (mg/L)





Appendix IV: Arsenic, MW-03

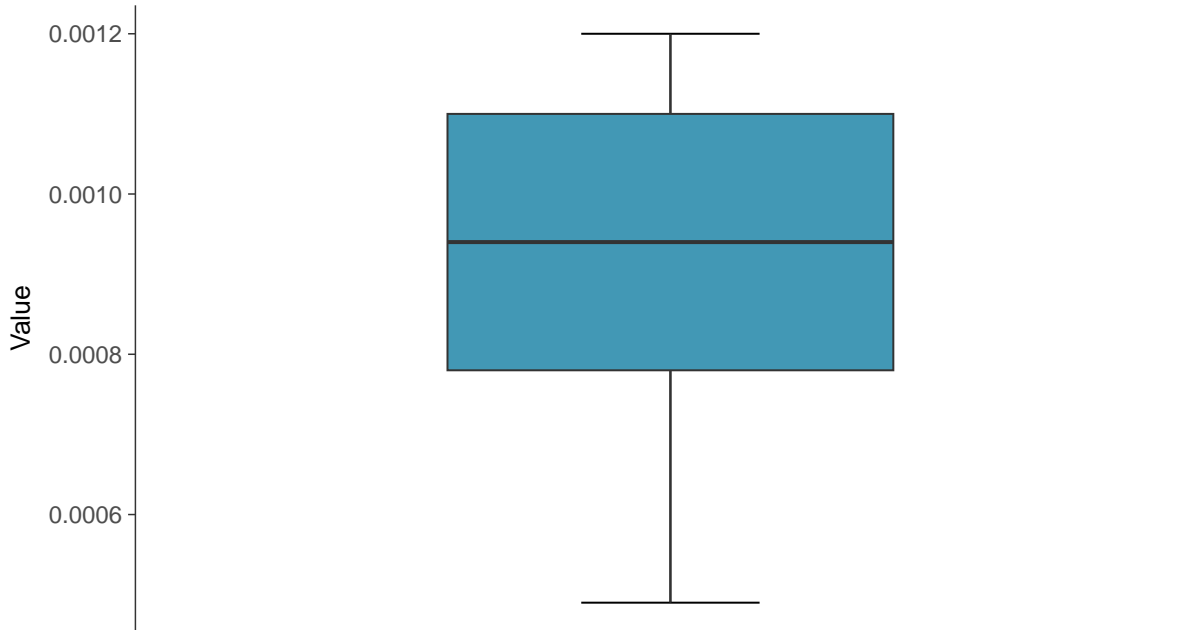
ID: 2_13_5_102





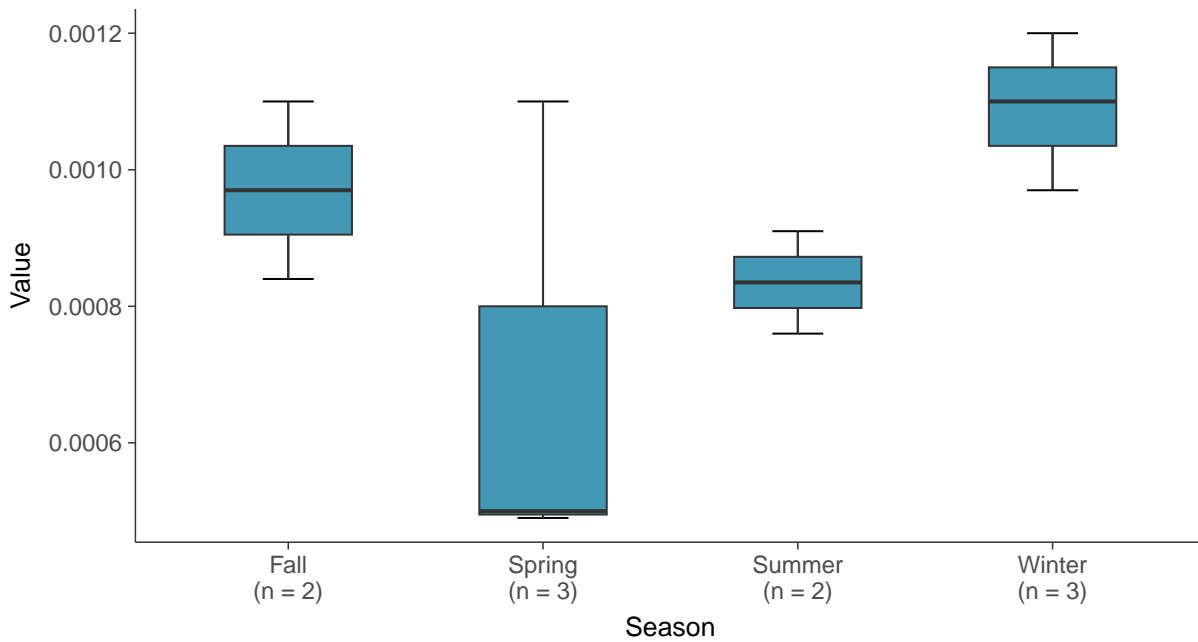
Boxplot

Arsenic, MW-03 (mg/L)



Boxplot by Season

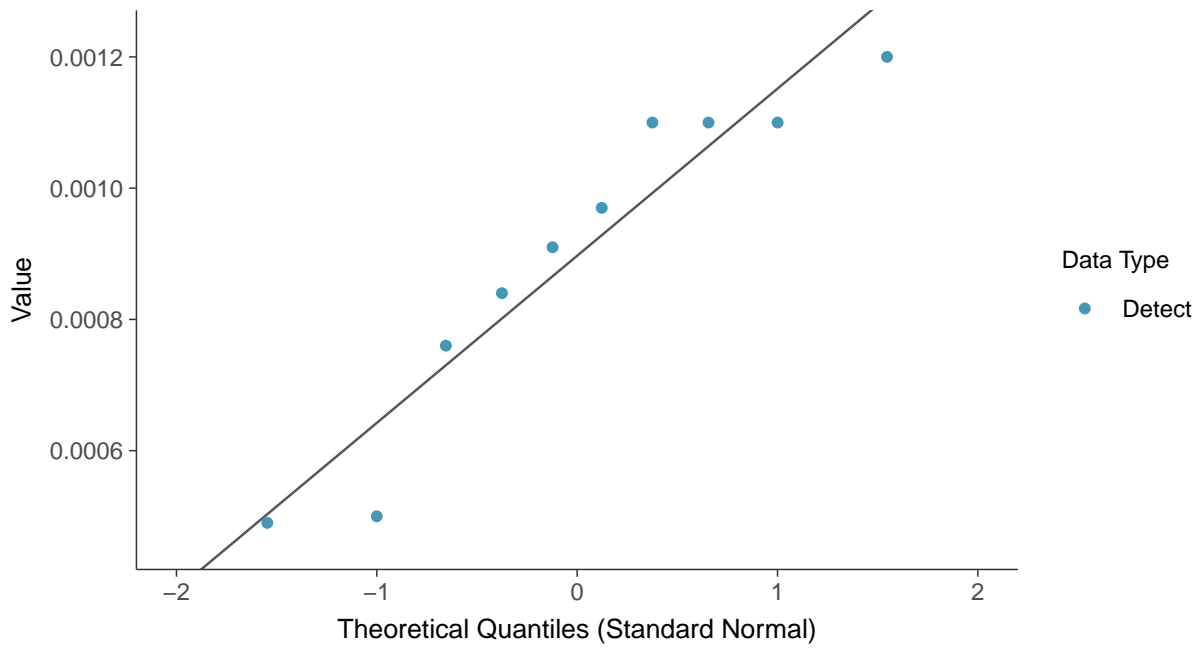
Arsenic, MW-03 (mg/L)





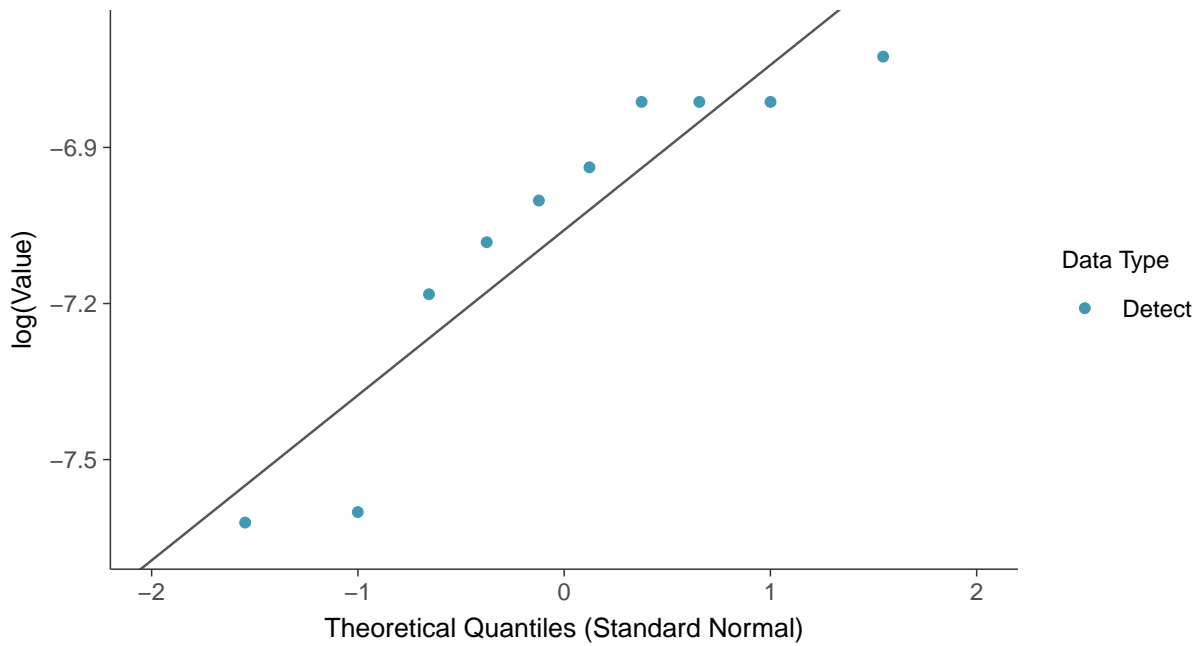
Normal Q-Q plot

Arsenic, MW-03 (mg/L)



Lognormal Q-Q plot

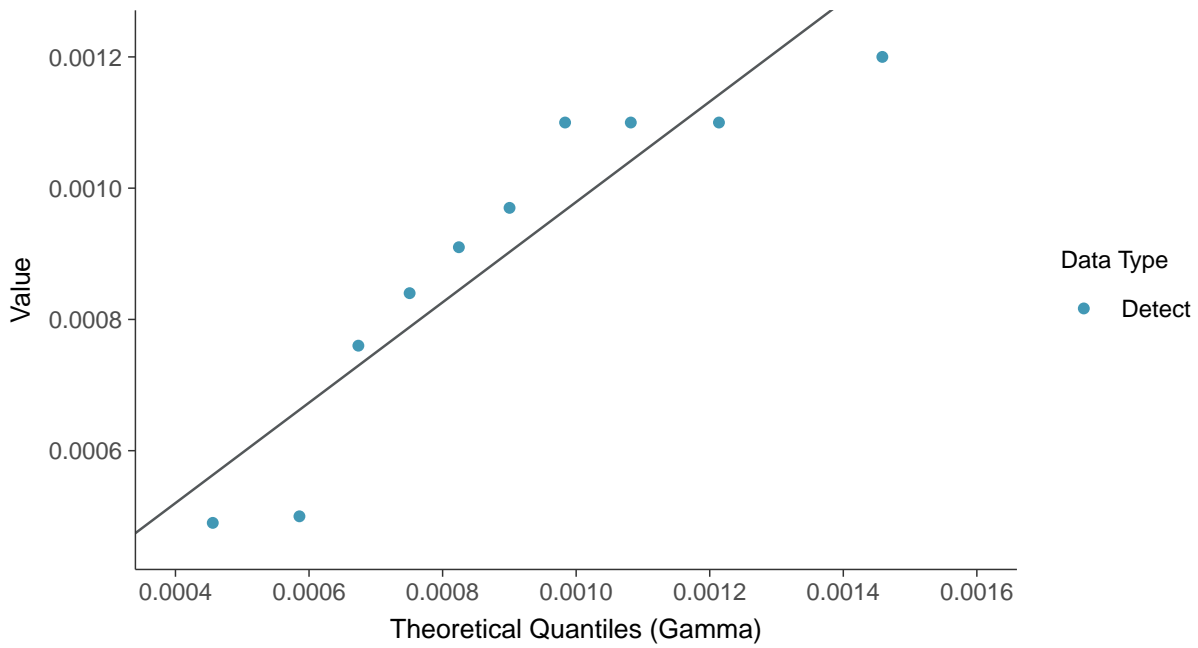
Arsenic, MW-03 (mg/L)





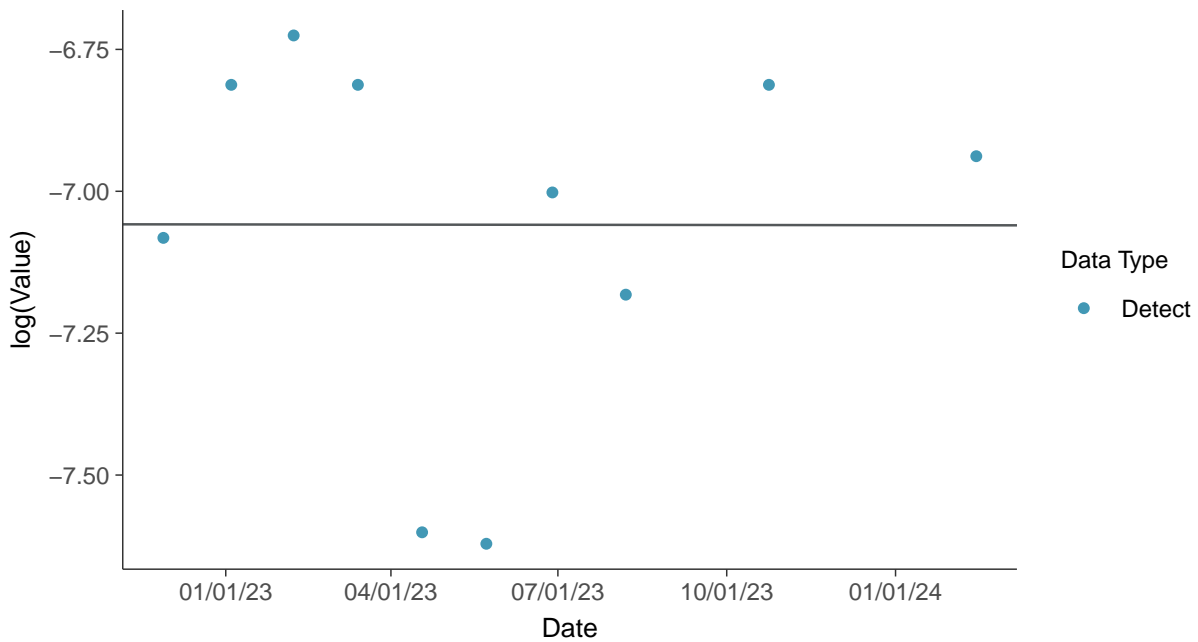
Gamma Q-Q plot

Arsenic, MW-03 (mg/L)



Trend Regression: Lognormal MLE

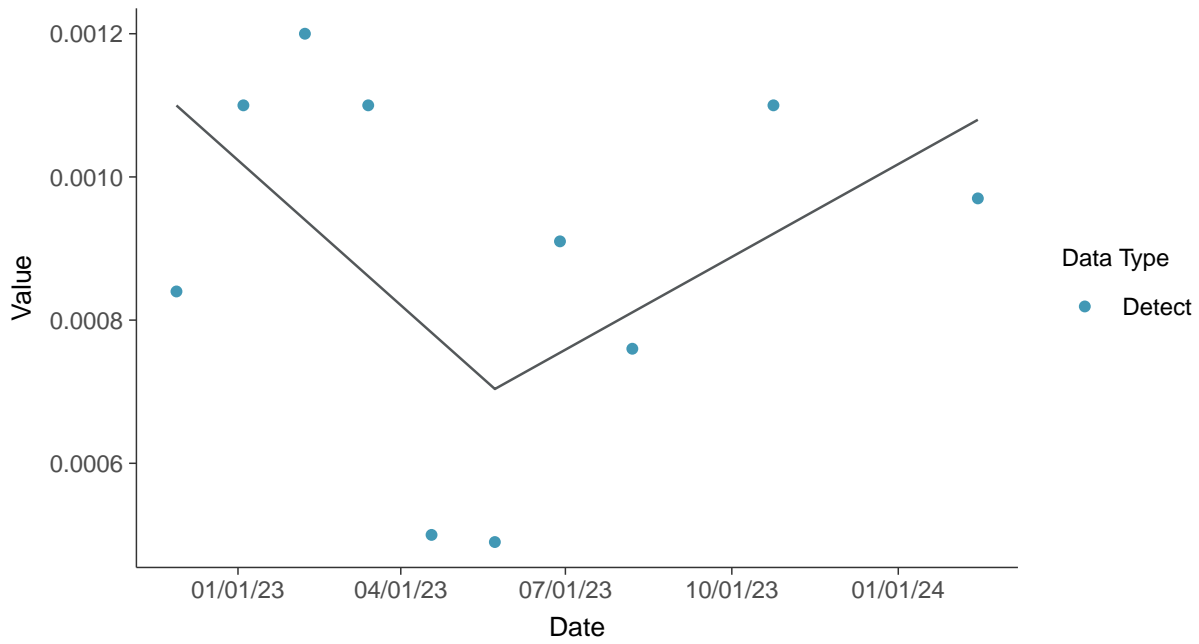
Arsenic, MW-03 (mg/L)





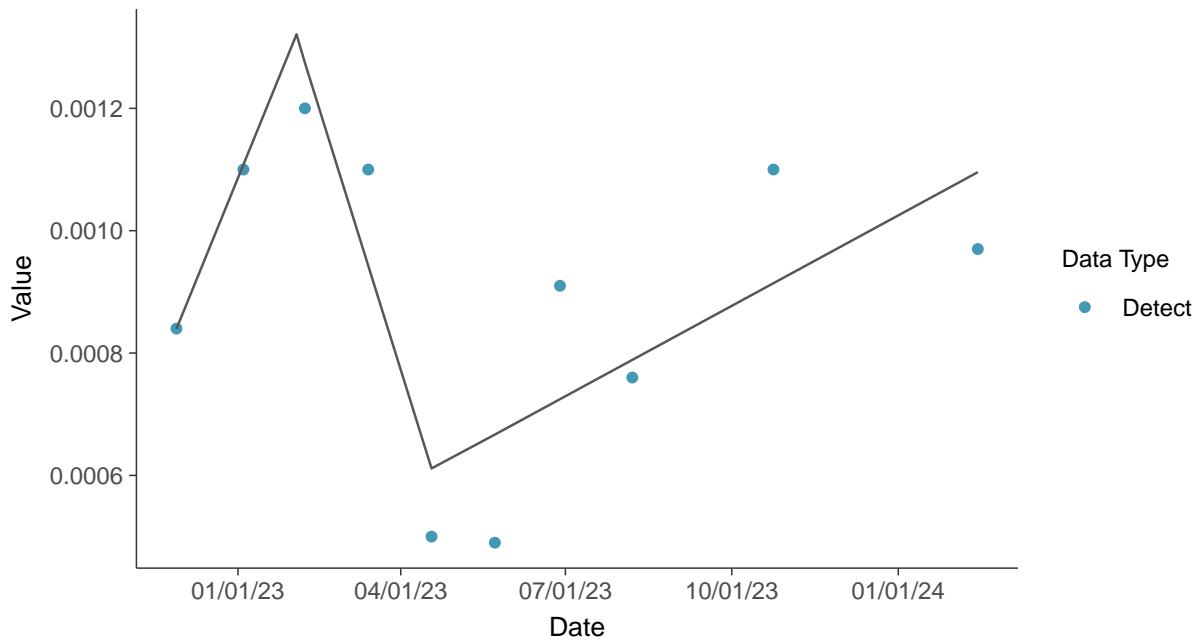
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

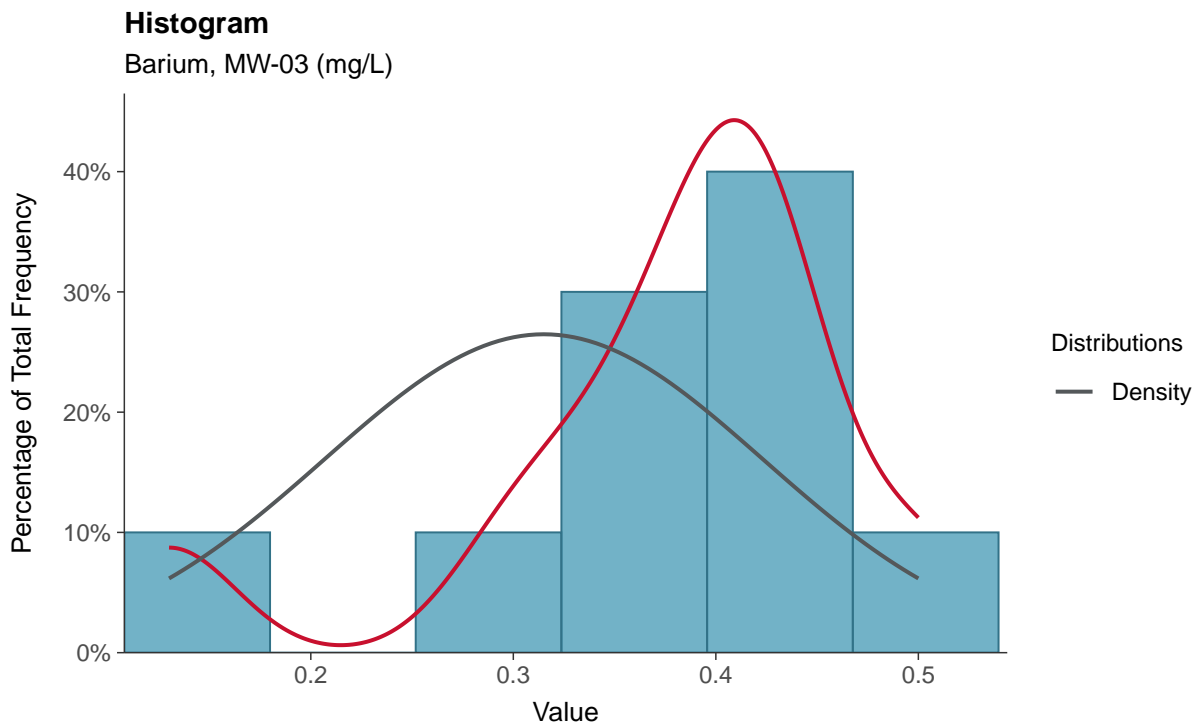
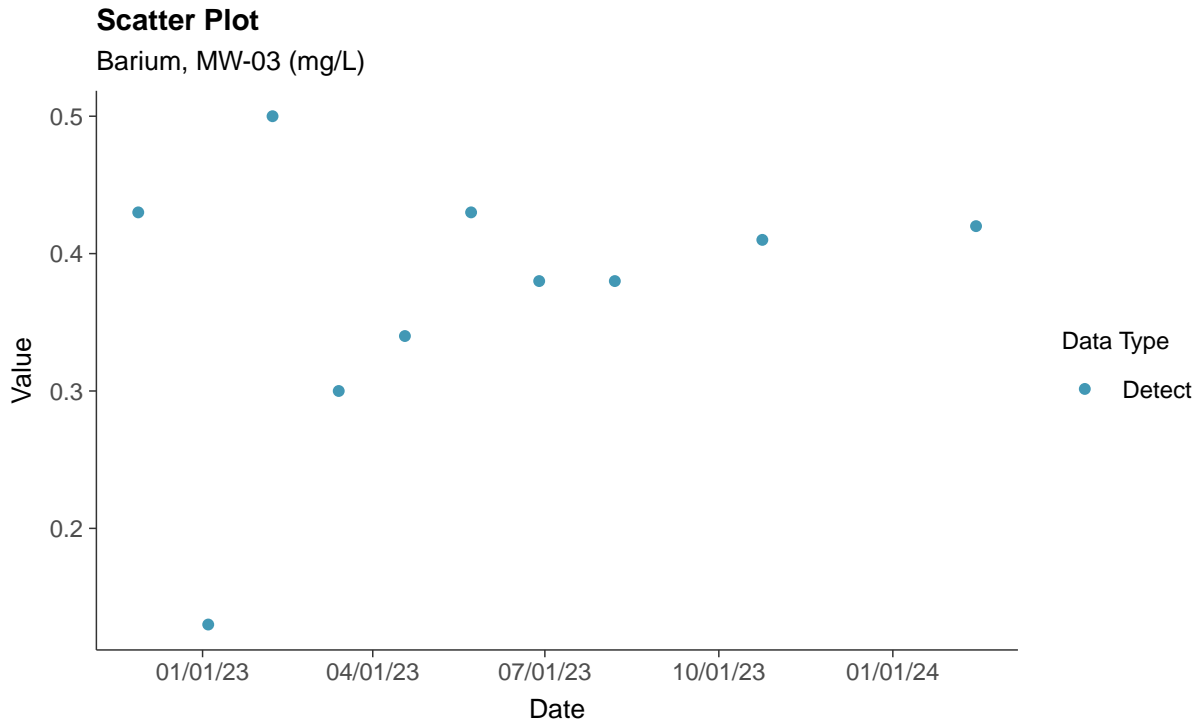
Arsenic, MW-03 (mg/L)





Appendix IV: Barium, MW-03

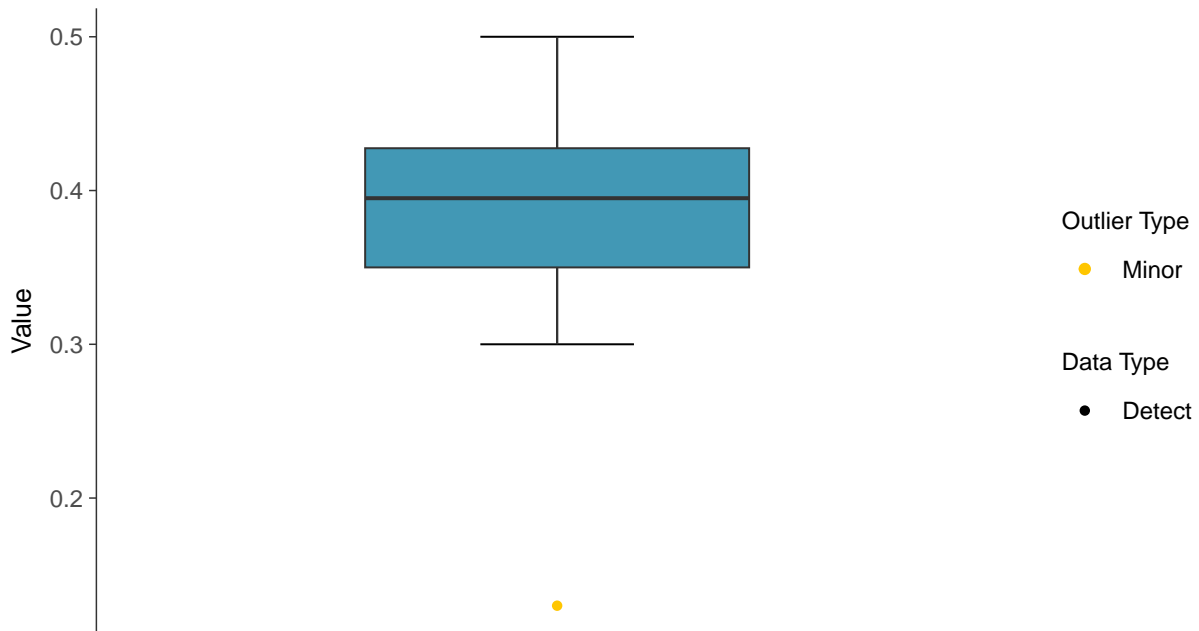
ID: 2_13_5_103





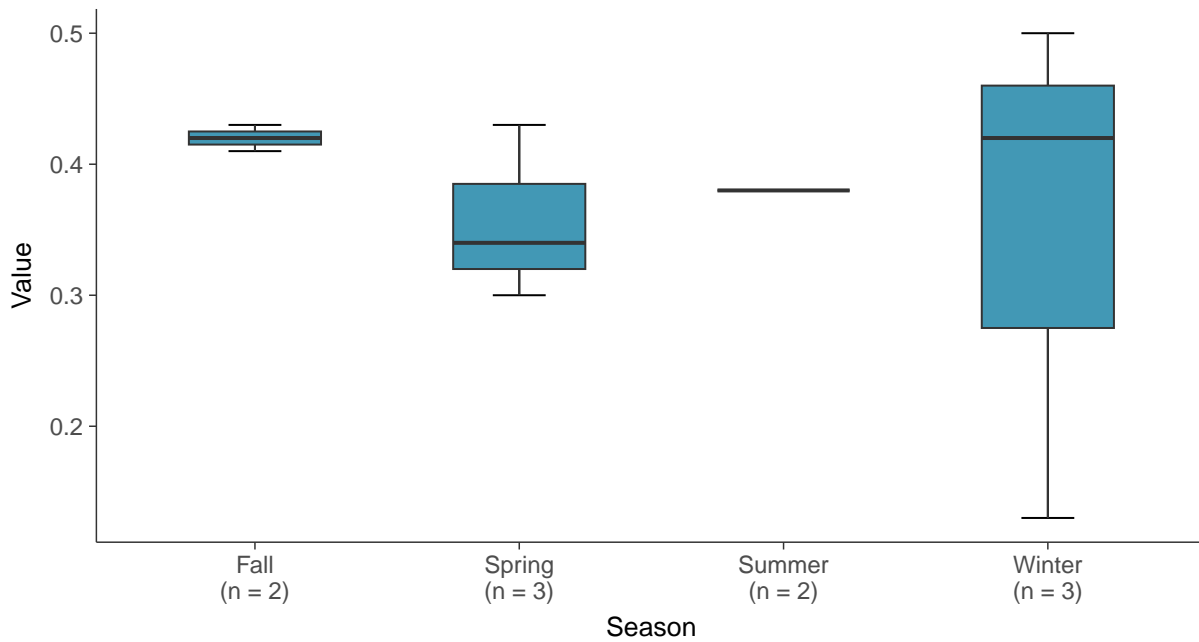
Boxplot

Barium, MW-03 (mg/L)



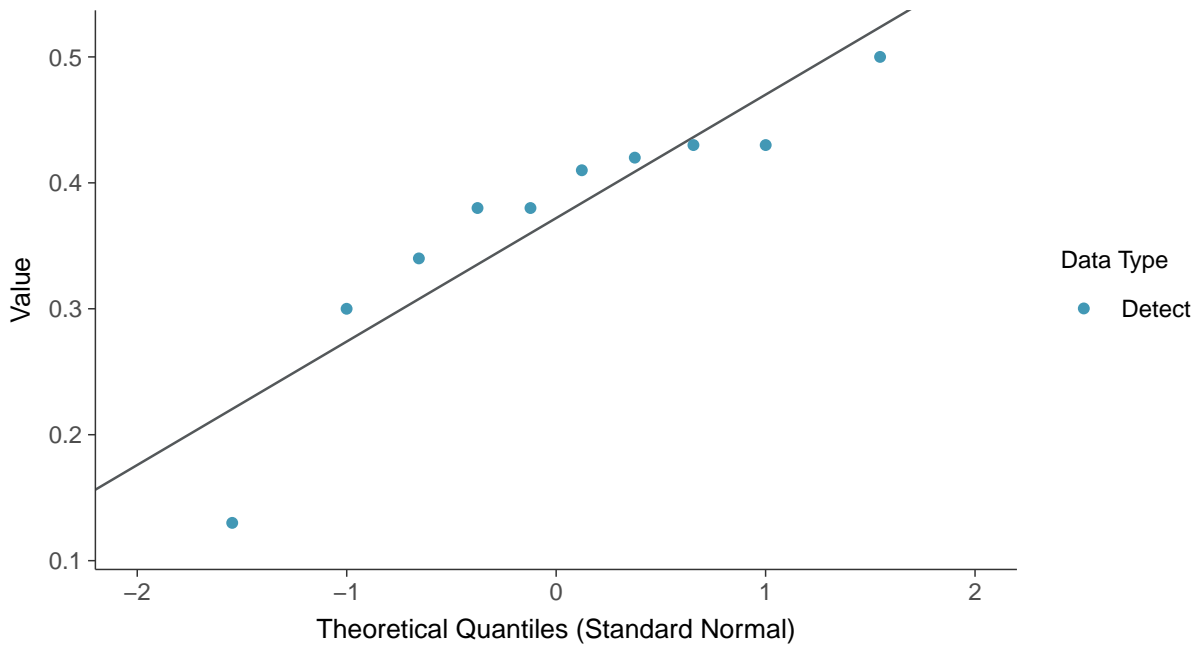
Boxplot by Season

Barium, MW-03 (mg/L)

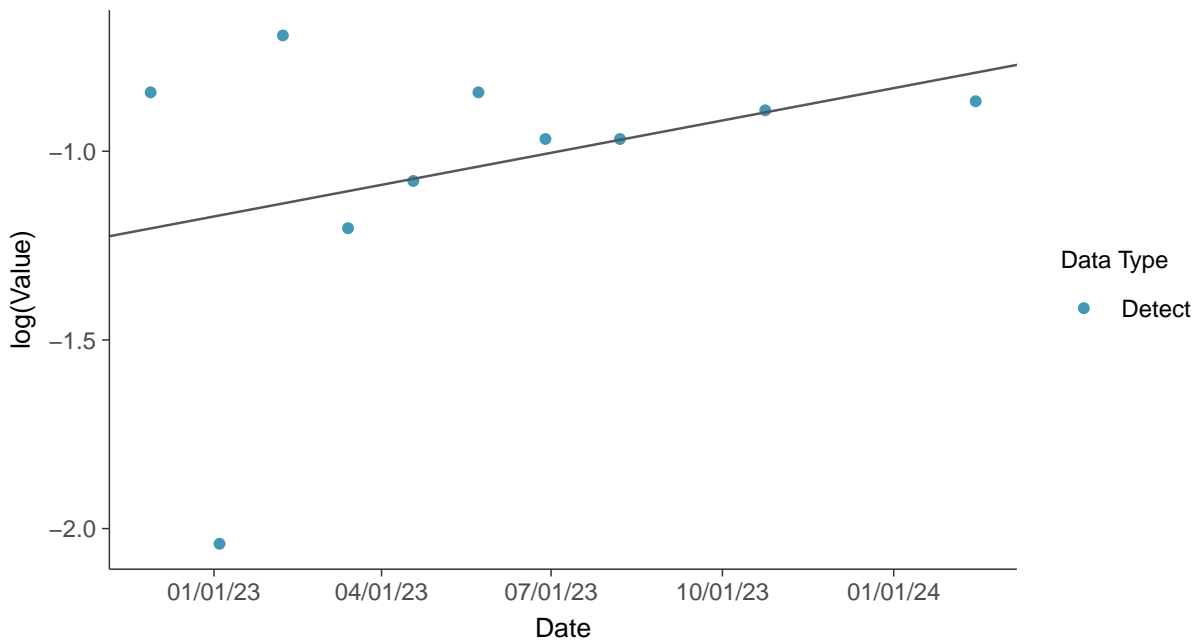




Normal Q-Q plot
Barium, MW-03 (mg/L)



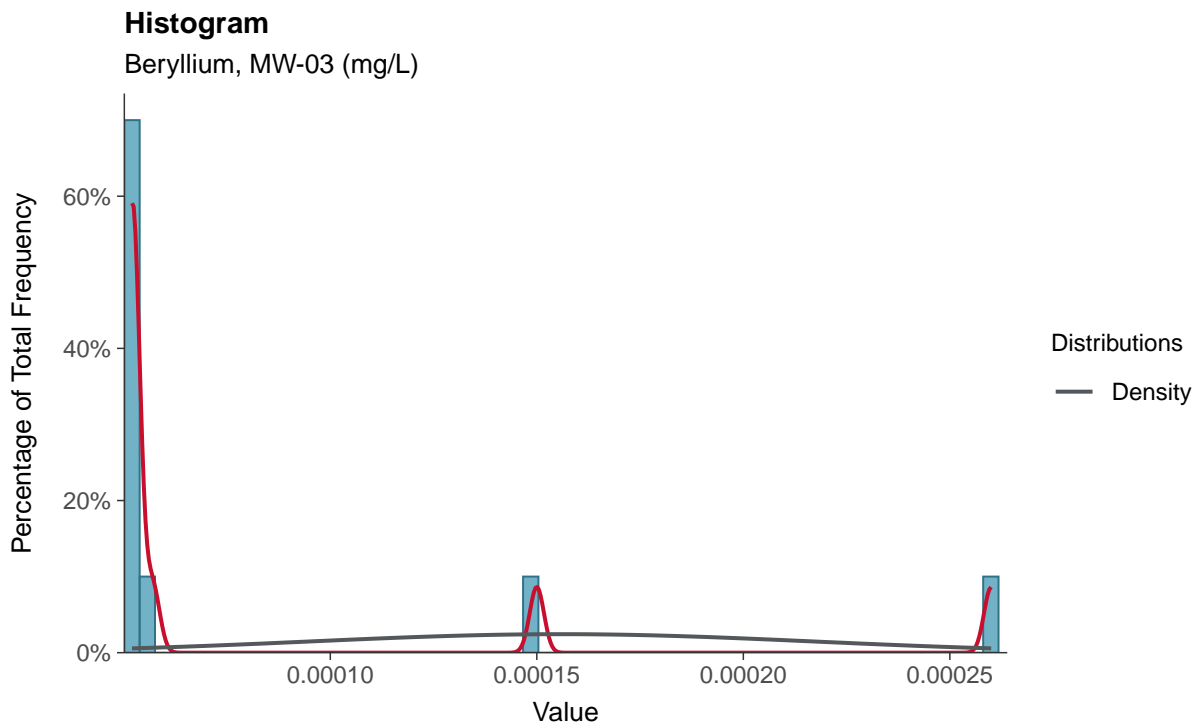
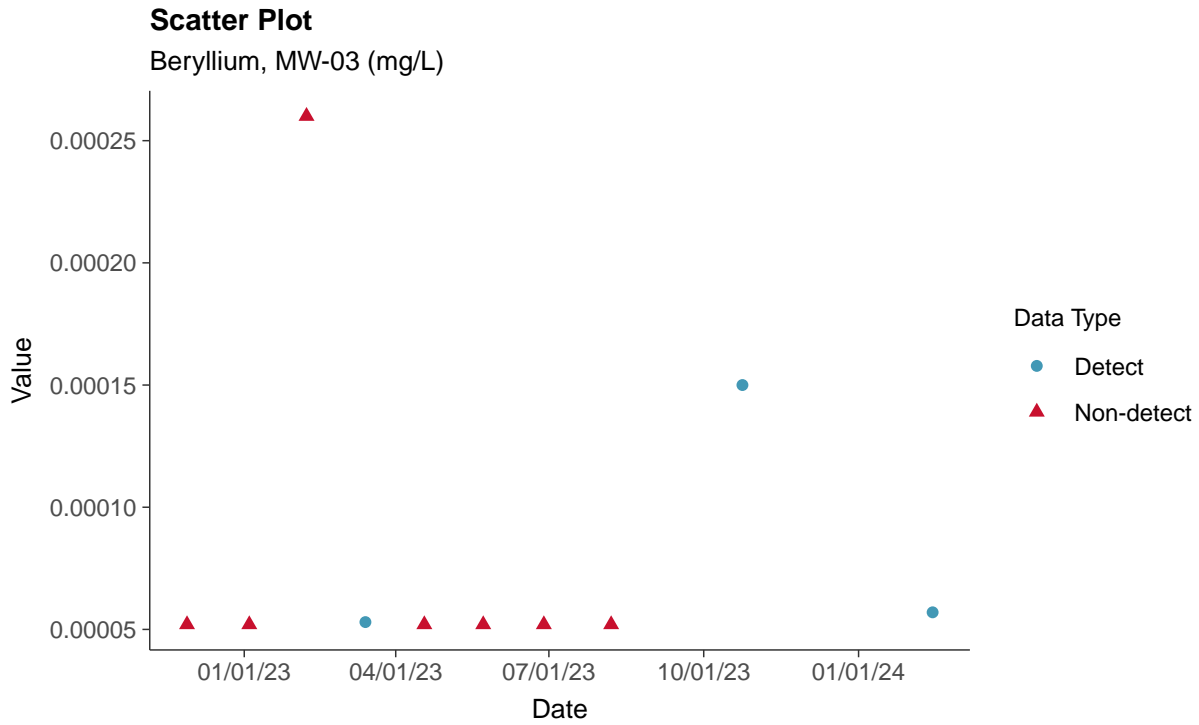
Trend Regression: Lognormal MLE
Barium, MW-03 (mg/L)





Appendix IV: Beryllium, MW-03

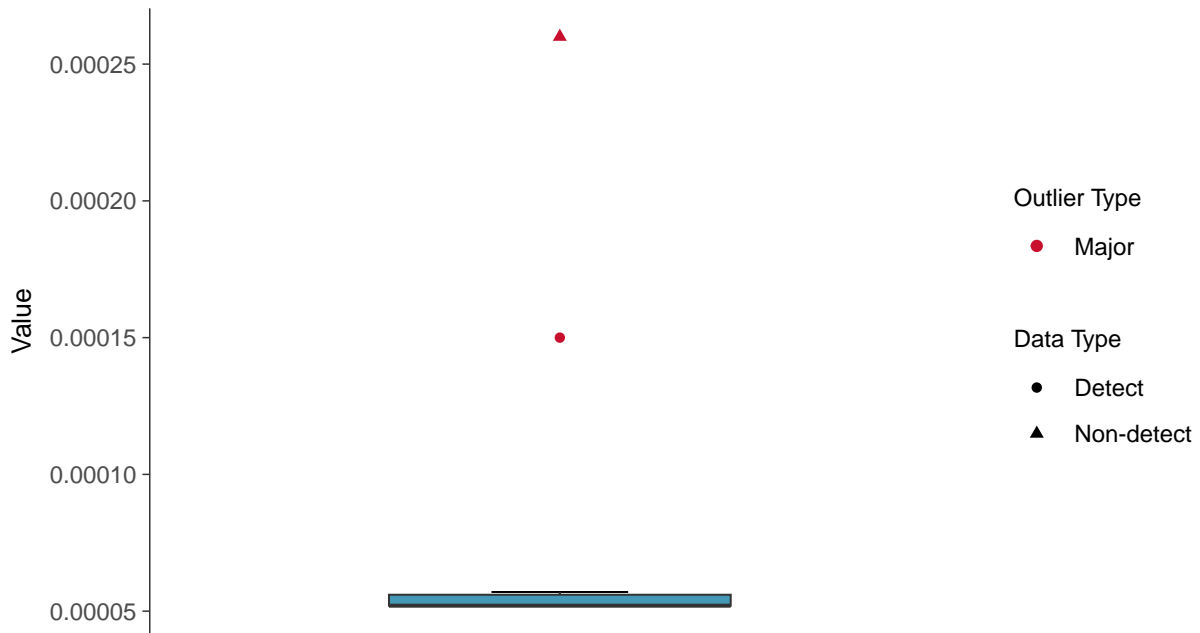
ID: 2_13_5_104





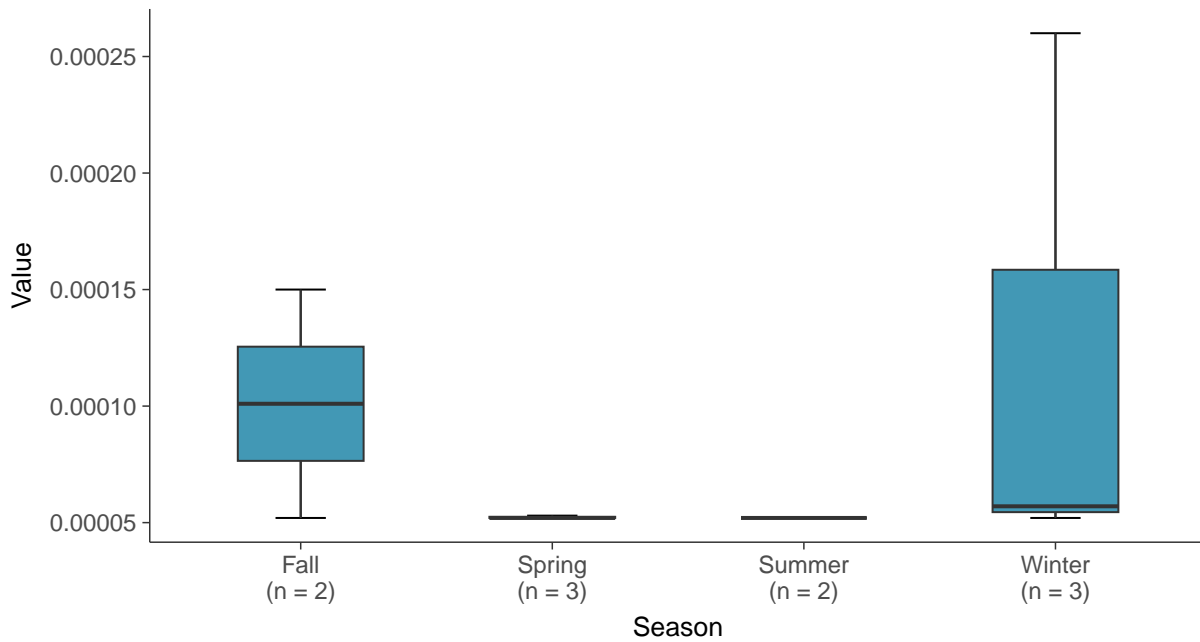
Boxplot

Beryllium, MW-03 (mg/L)



Boxplot by Season

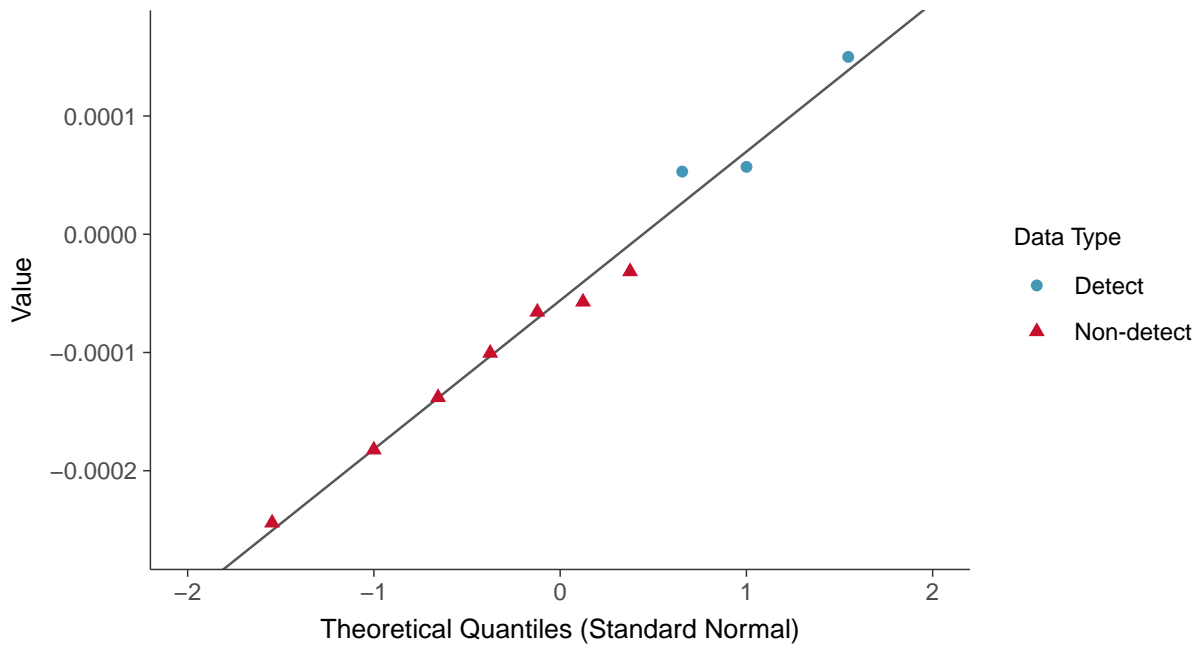
Beryllium, MW-03 (mg/L)





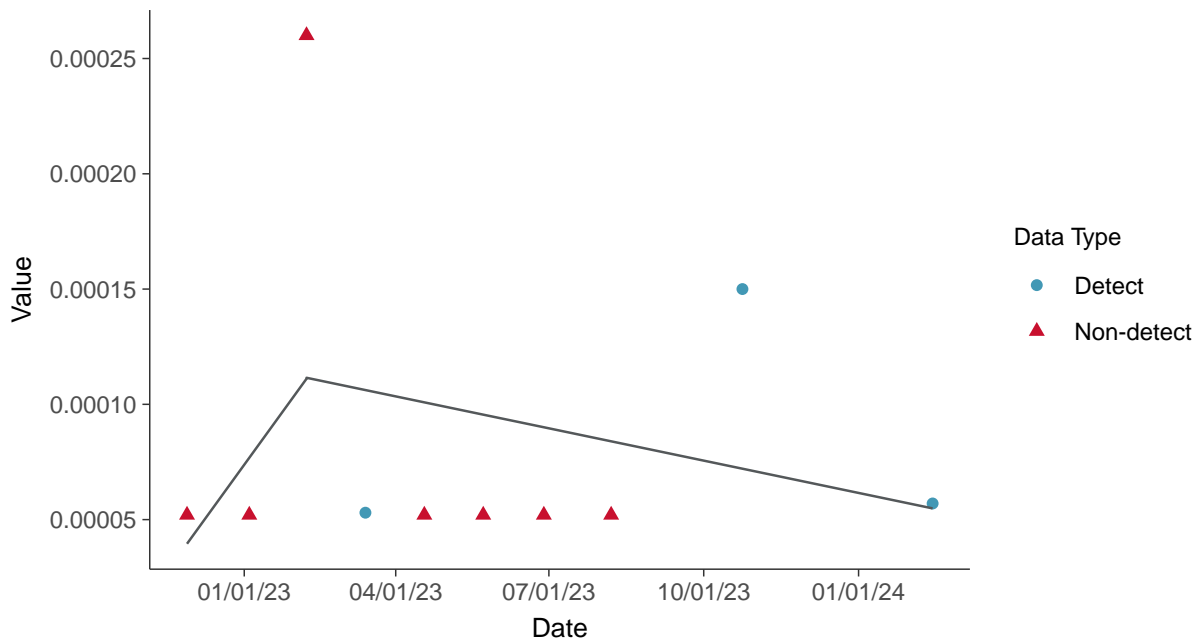
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear

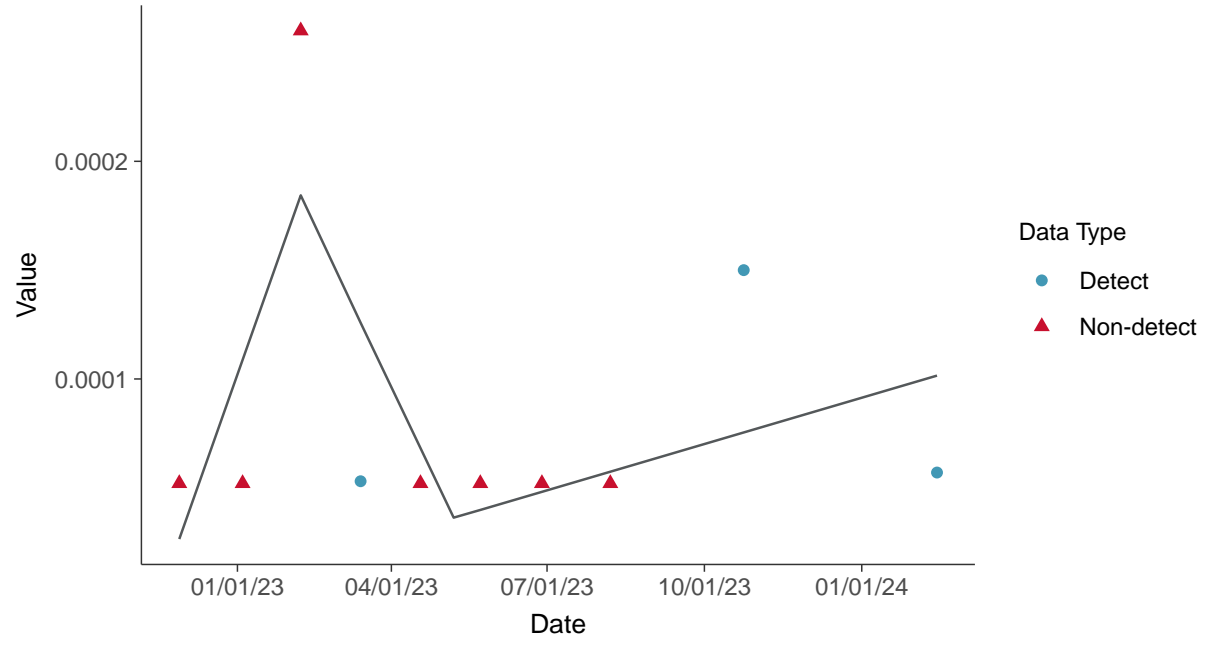
Beryllium, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-03 (mg/L)



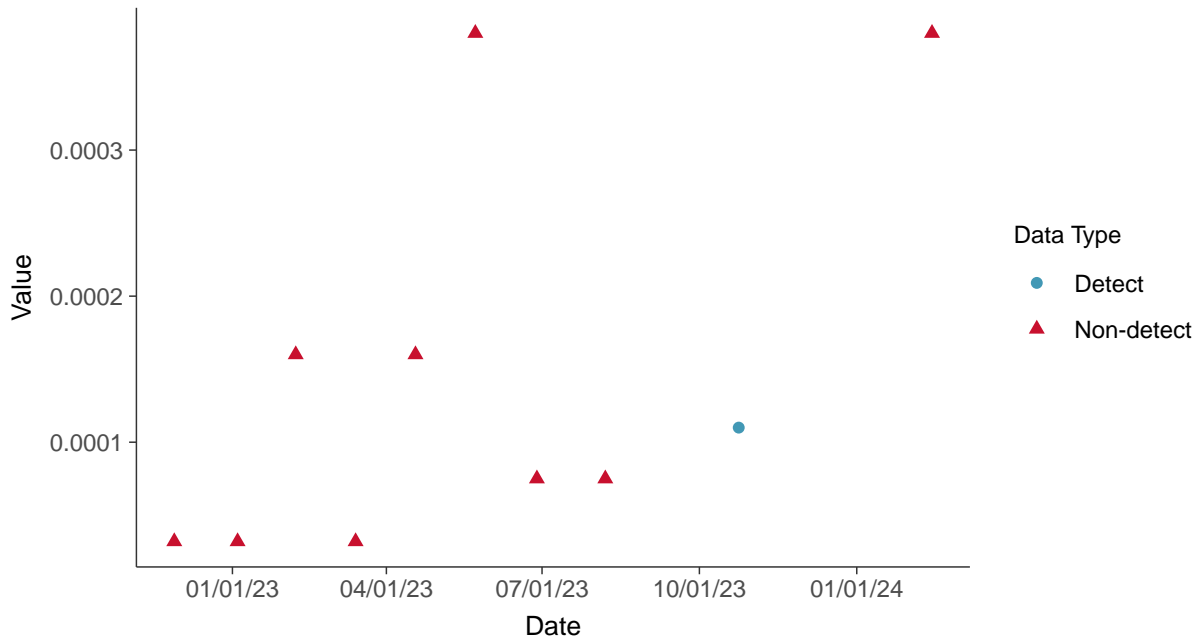


Appendix IV: Cadmium, MW-03

ID: 2_13_5_106

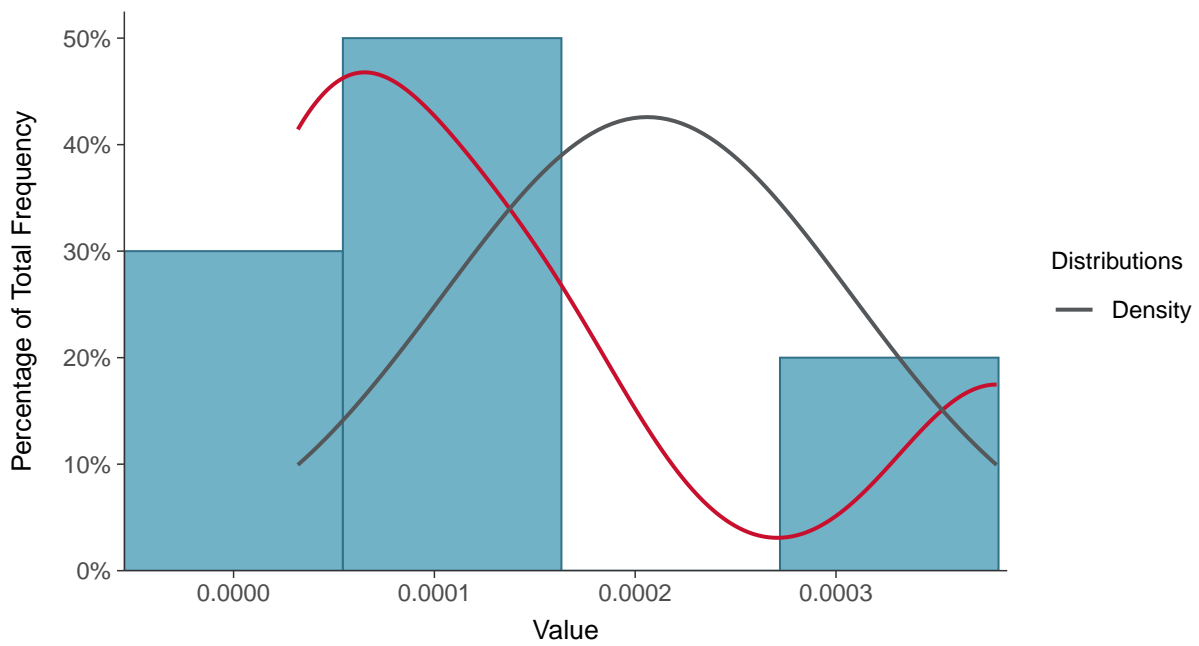
Scatter Plot

Cadmium, MW-03 (mg/L)



Histogram

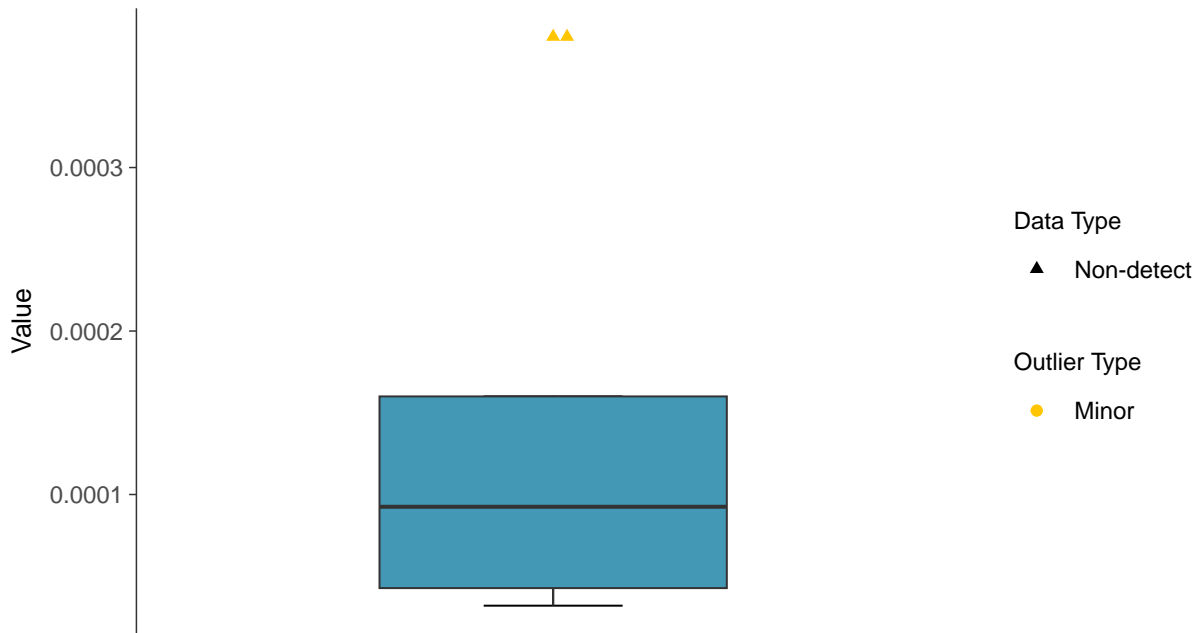
Cadmium, MW-03 (mg/L)





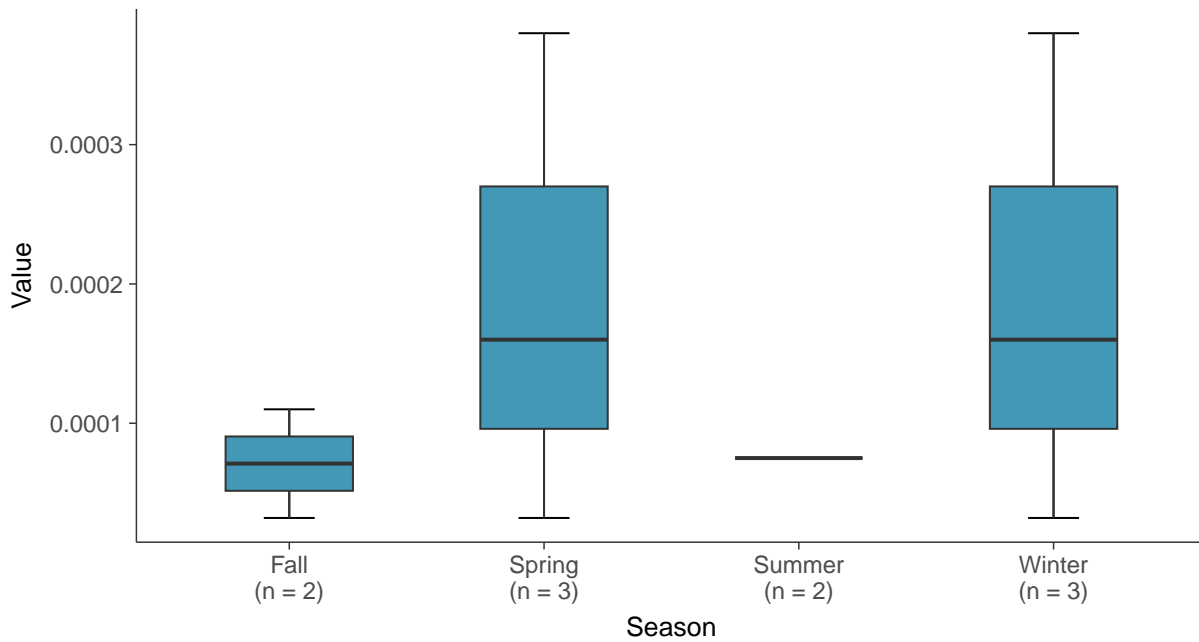
Boxplot

Cadmium, MW-03 (mg/L)



Boxplot by Season

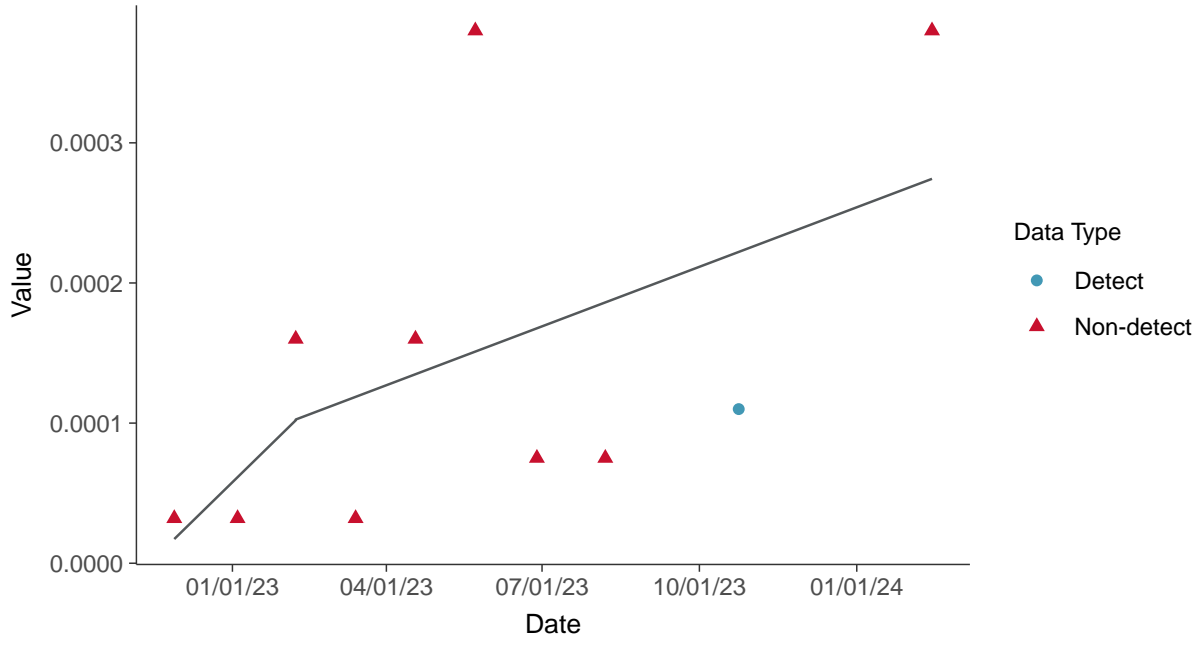
Cadmium, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear

Cadmium, MW-03 (mg/L)



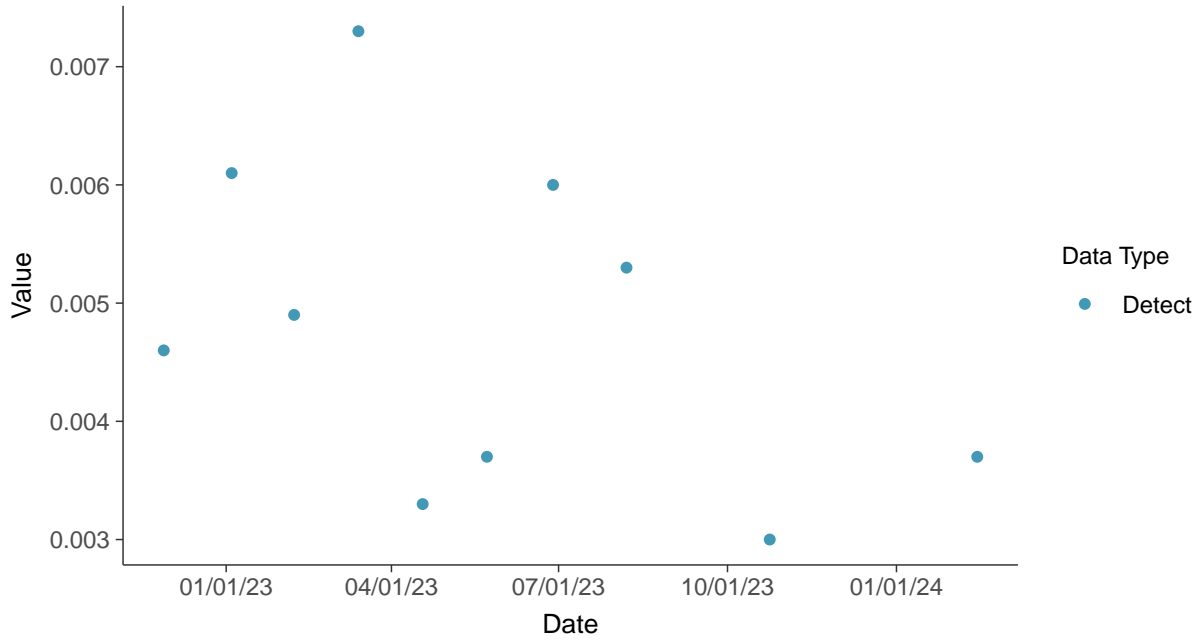


Appendix IV: Chromium, Total, MW-03

ID: 2_13_5_109

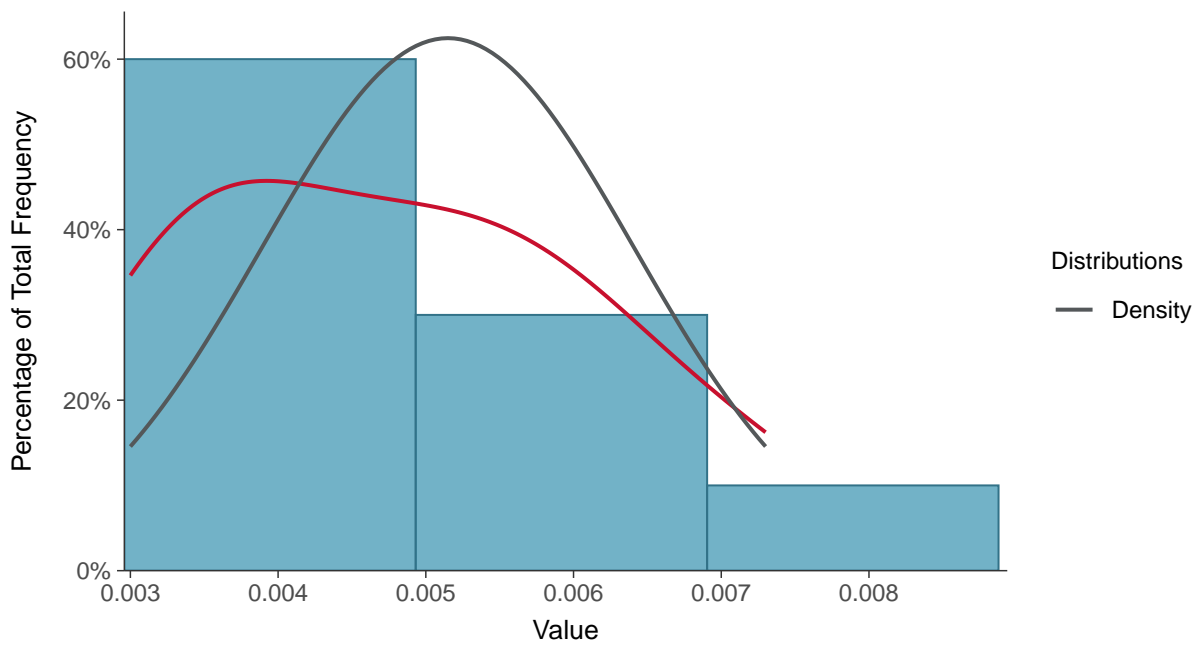
Scatter Plot

Chromium, Total, MW-03 (mg/L)



Histogram

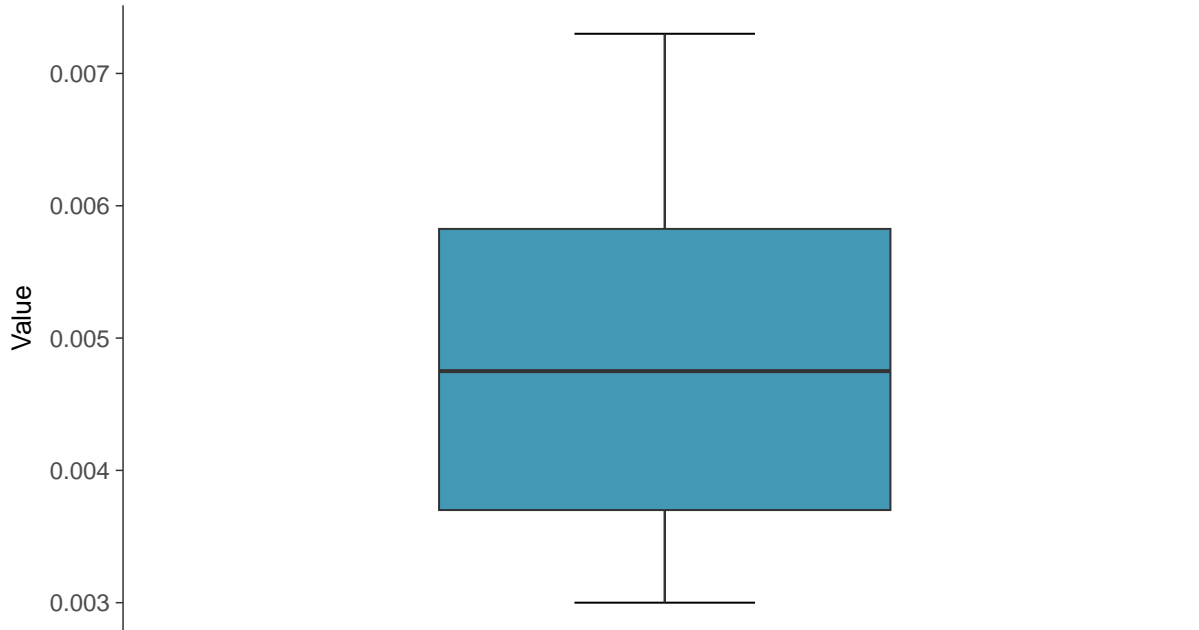
Chromium, Total, MW-03 (mg/L)





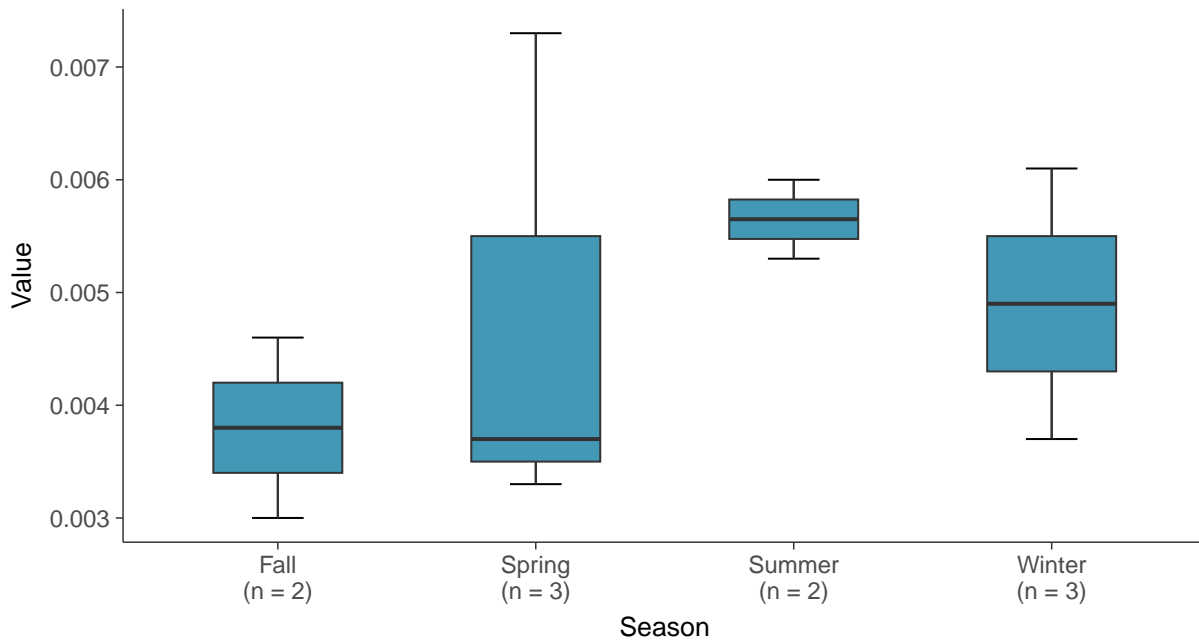
Boxplot

Chromium, Total, MW-03 (mg/L)



Boxplot by Season

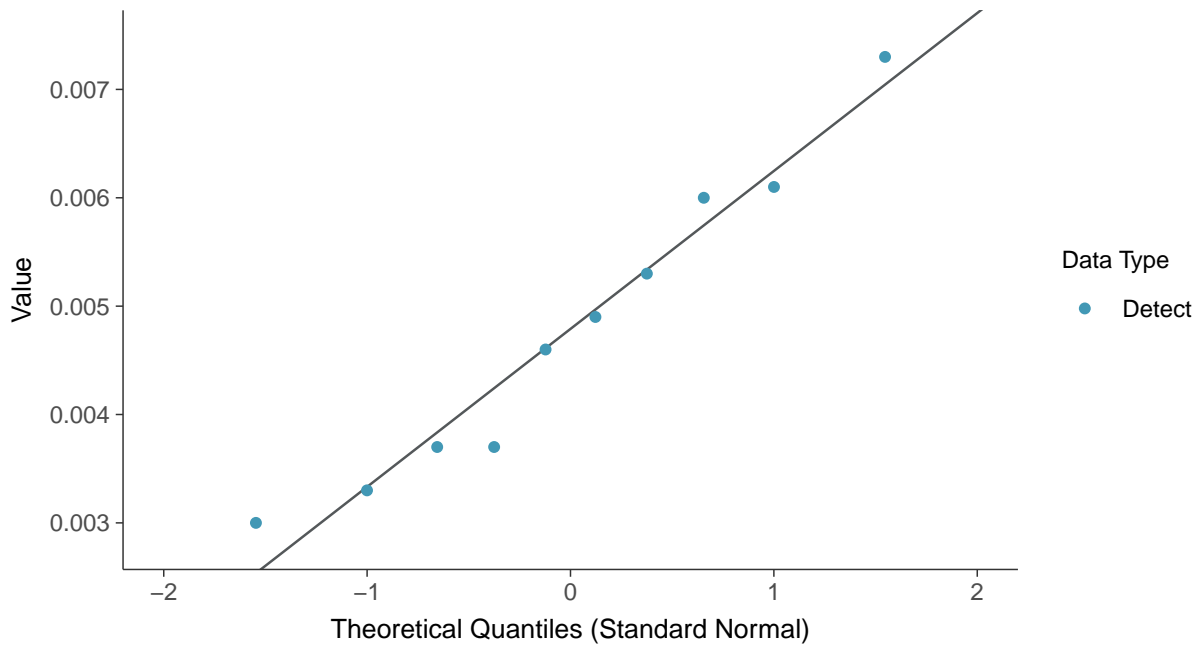
Chromium, Total, MW-03 (mg/L)





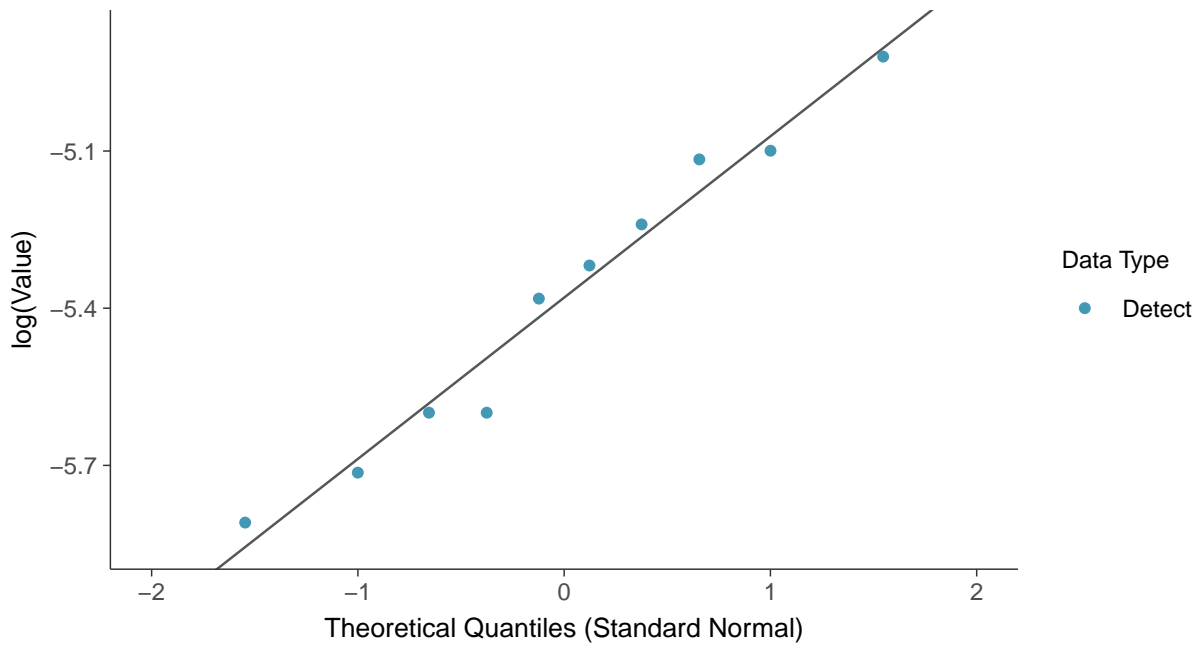
Normal Q-Q plot

Chromium, Total, MW-03 (mg/L)



Lognormal Q-Q plot

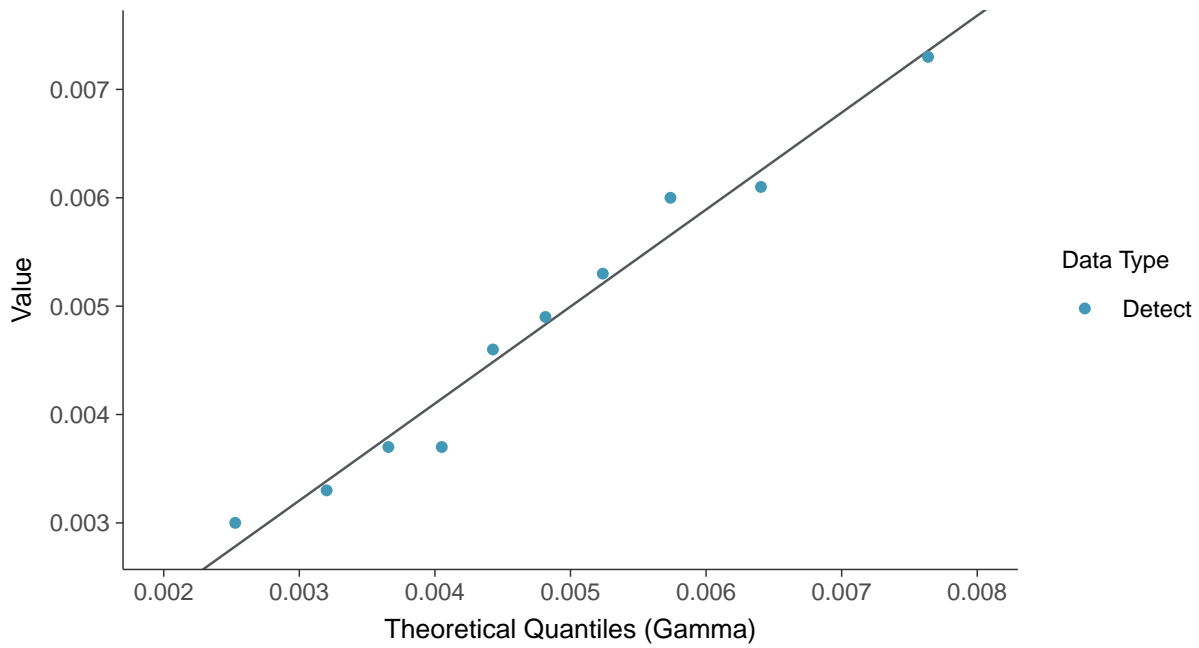
Chromium, Total, MW-03 (mg/L)





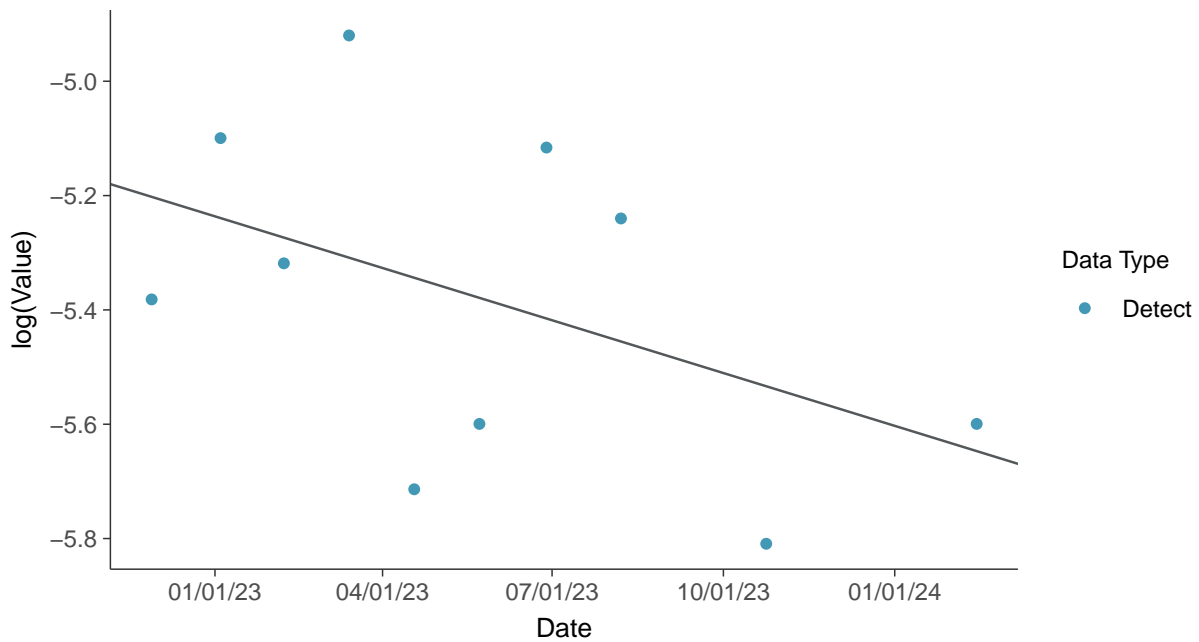
Gamma Q-Q plot

Chromium, Total, MW-03 (mg/L)



Trend Regression: Lognormal MLE

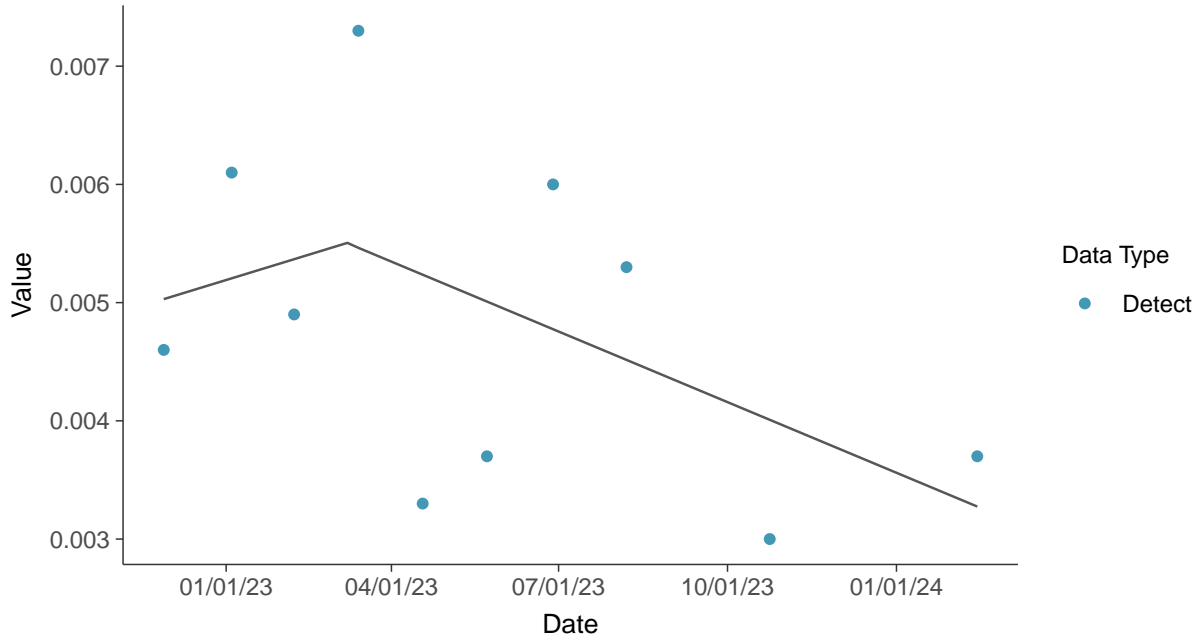
Chromium, Total, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear

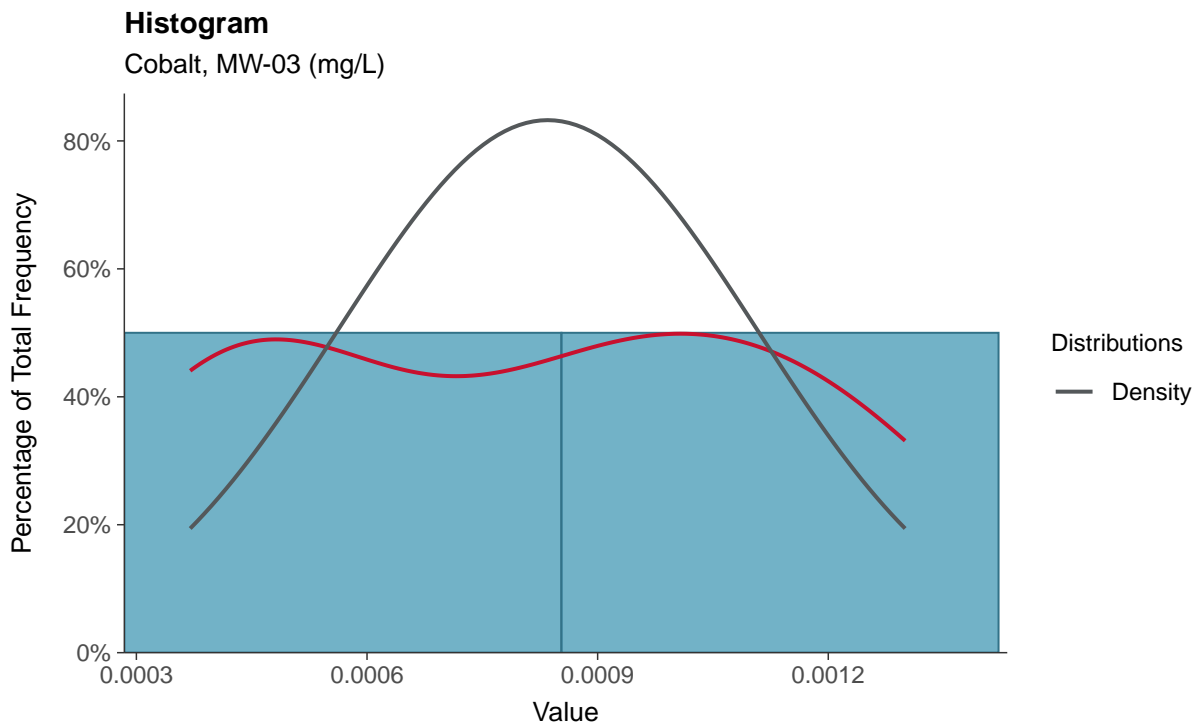
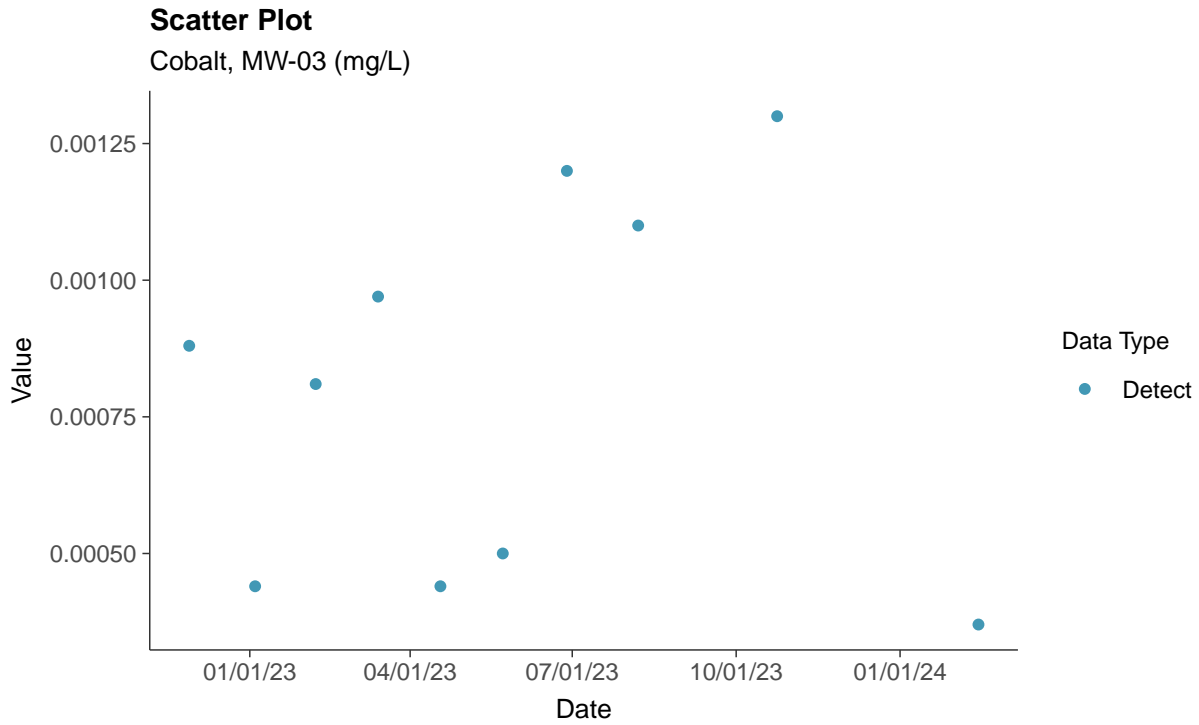
Chromium, Total, MW-03 (mg/L)





Appendix IV: Cobalt, MW-03

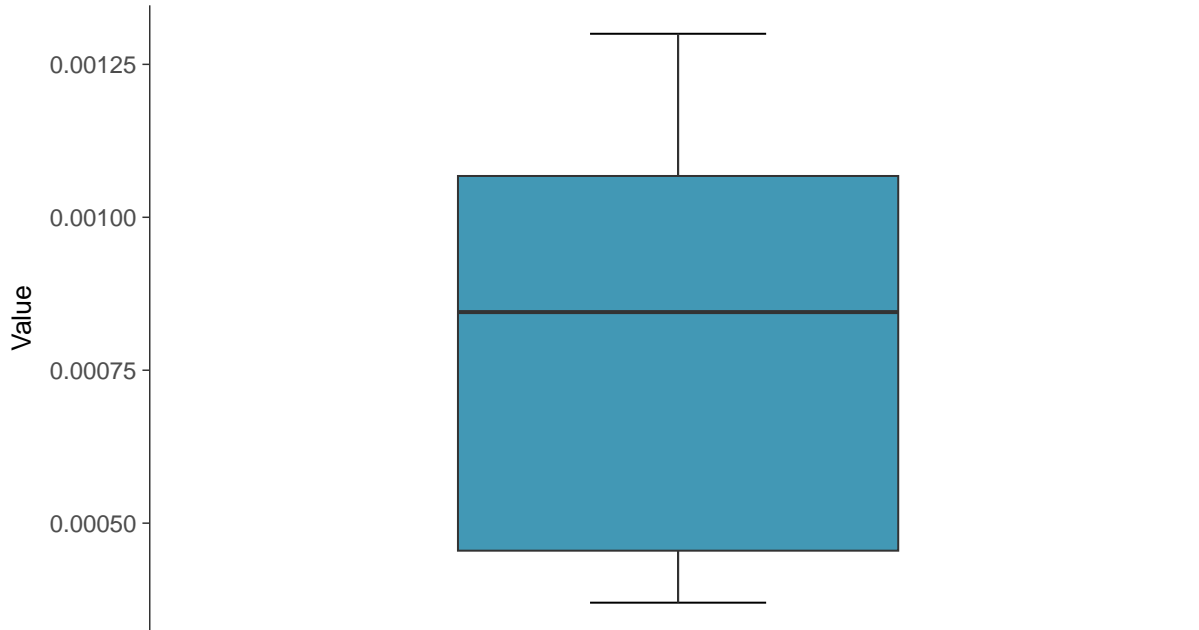
ID: 2_13_5_110





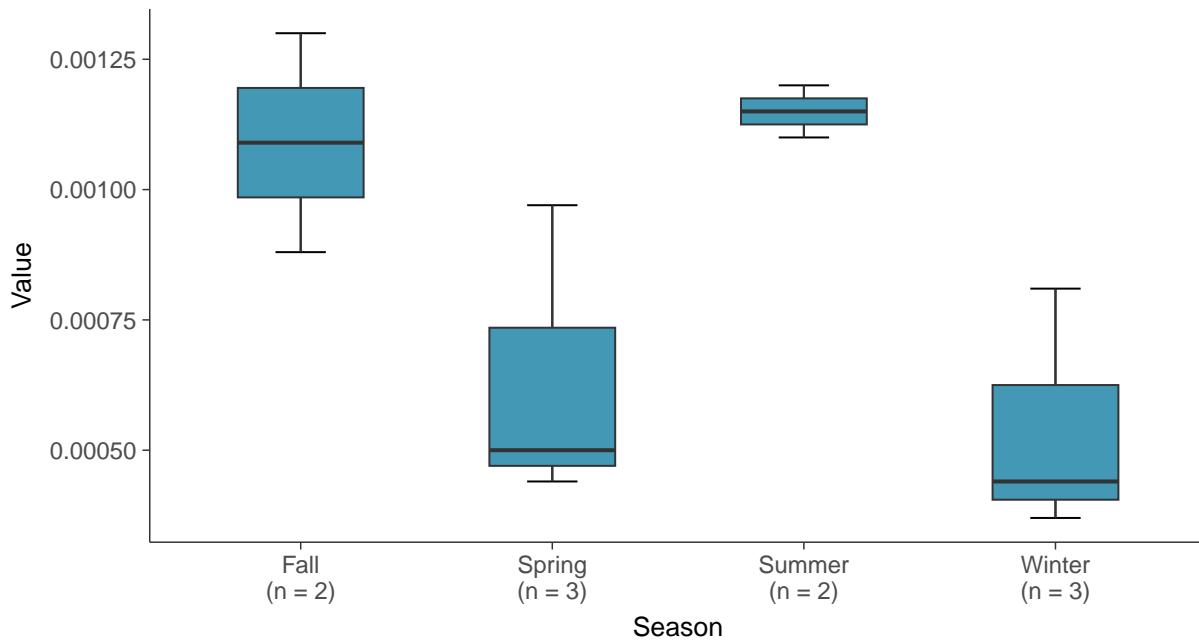
Boxplot

Cobalt, MW-03 (mg/L)



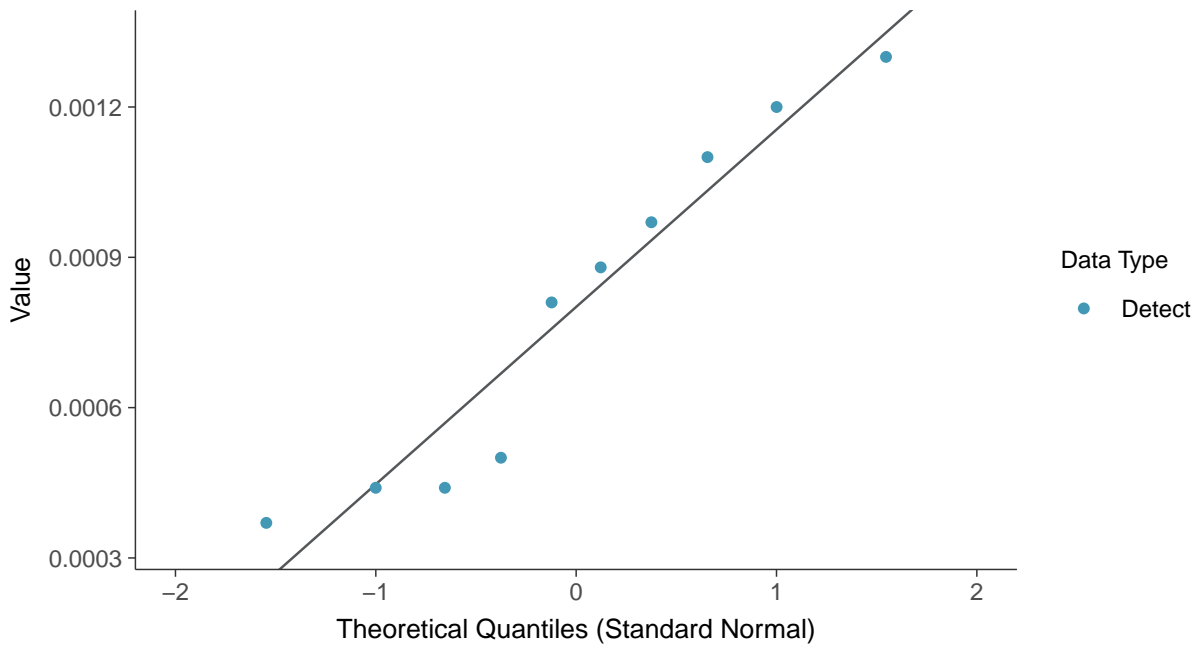
Boxplot by Season

Cobalt, MW-03 (mg/L)

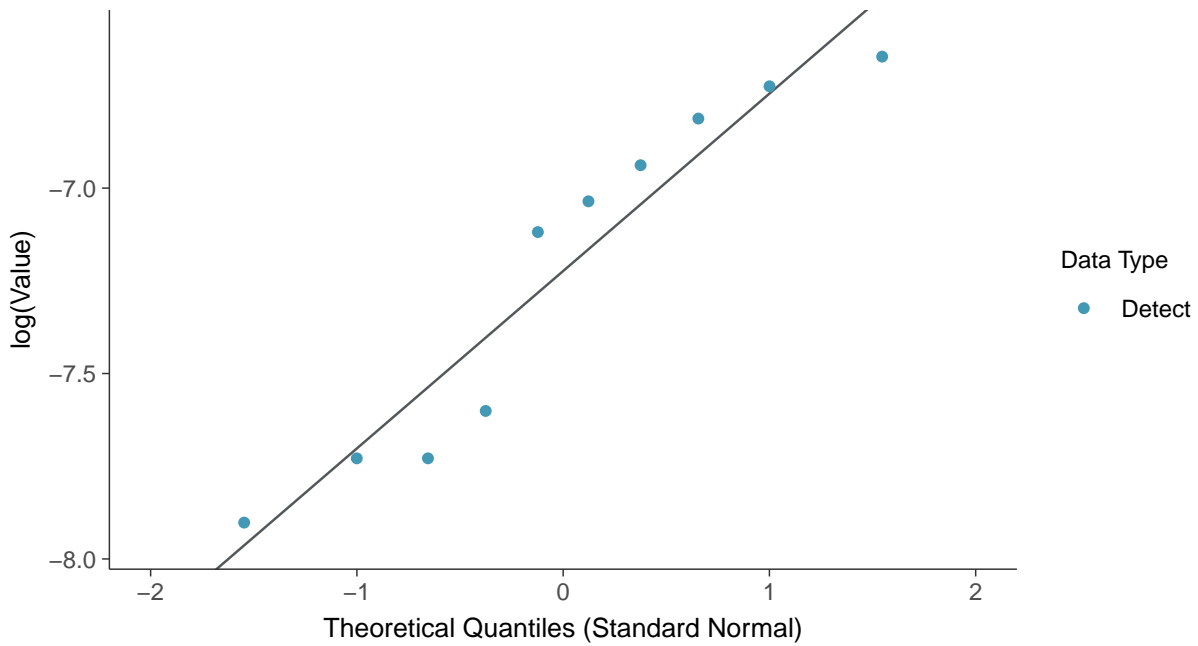




Normal Q-Q plot
Cobalt, MW-03 (mg/L)

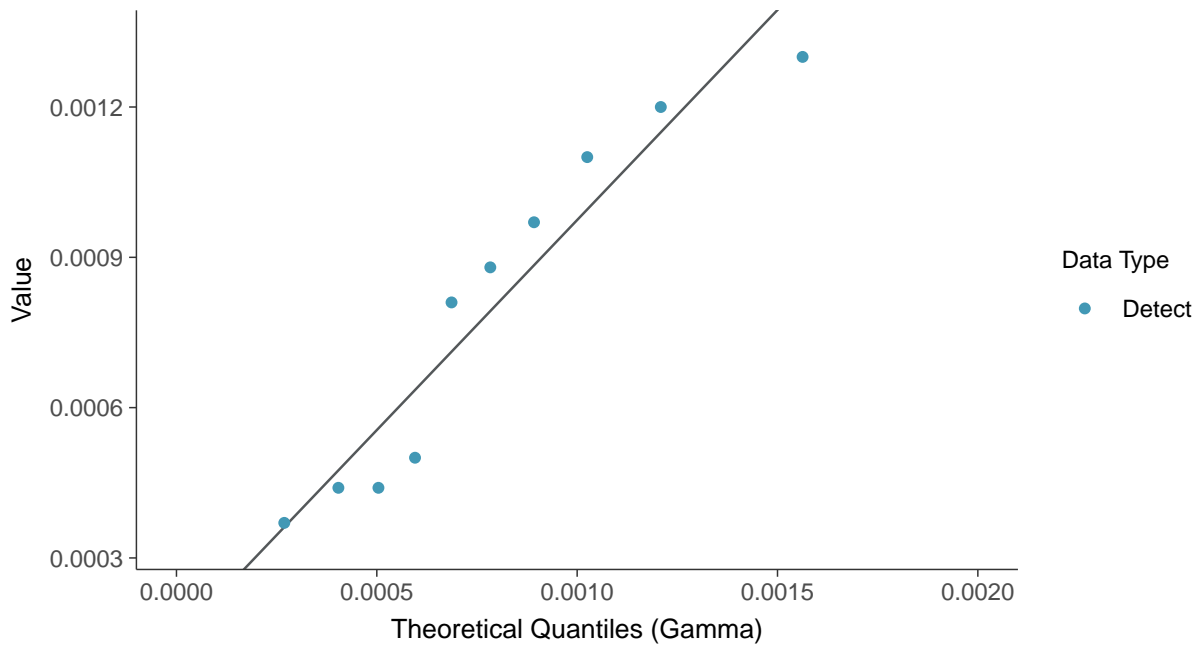


Lognormal Q-Q plot
Cobalt, MW-03 (mg/L)

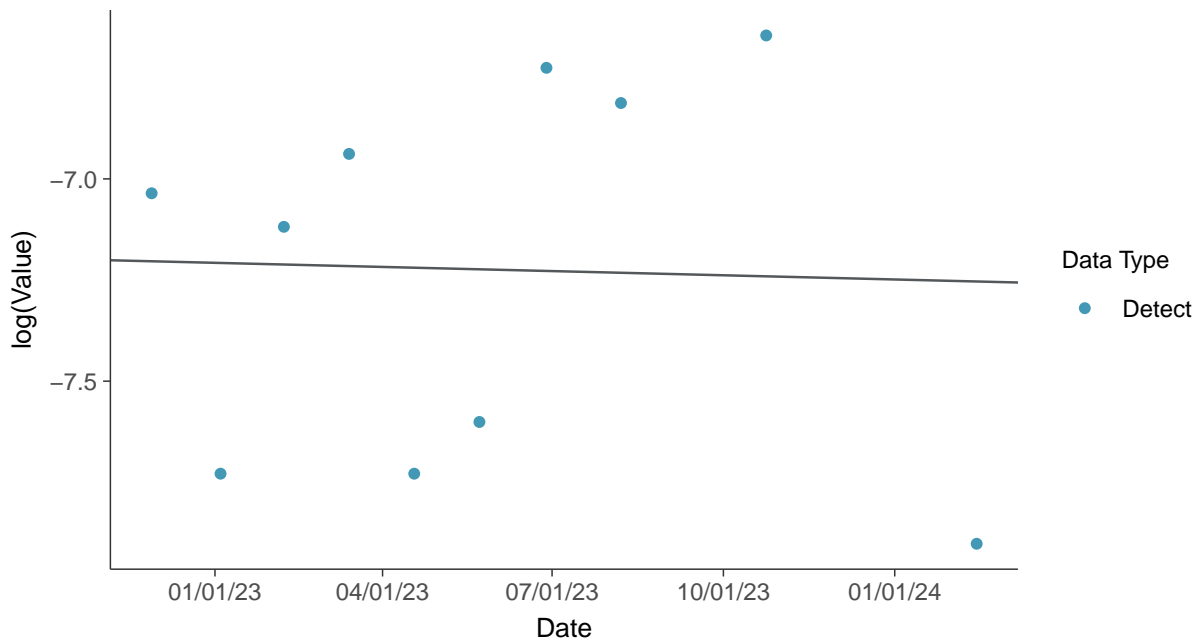




Gamma Q-Q plot
Cobalt, MW-03 (mg/L)



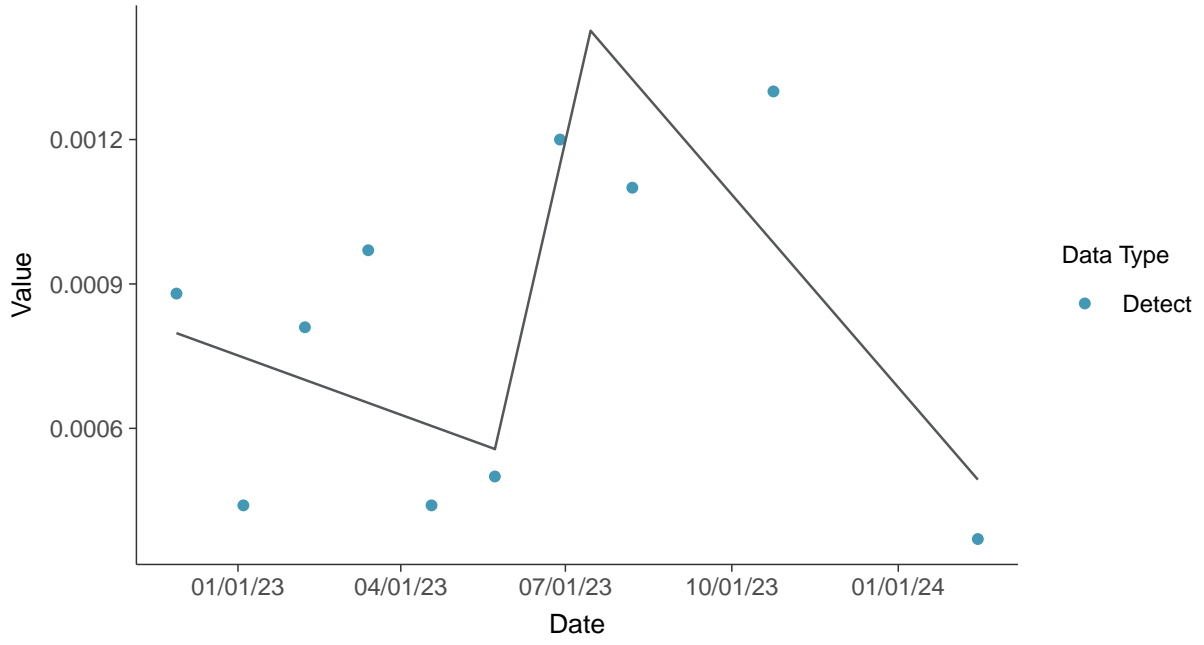
Trend Regression: Lognormal MLE
Cobalt, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

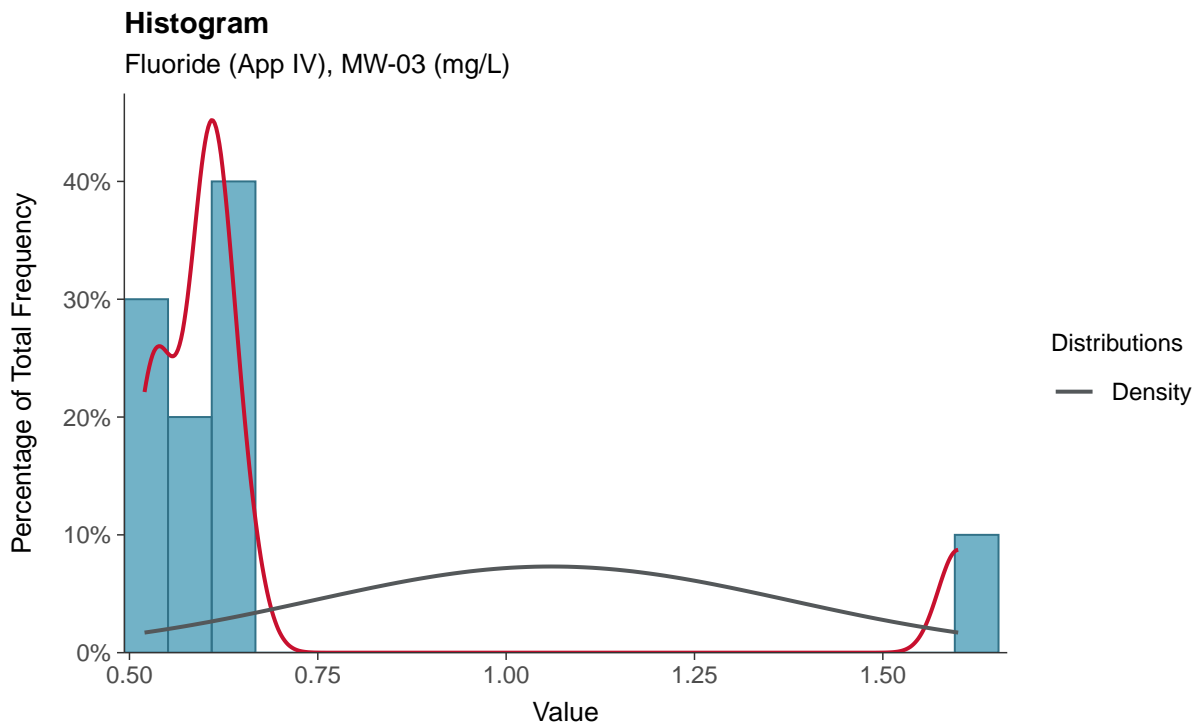
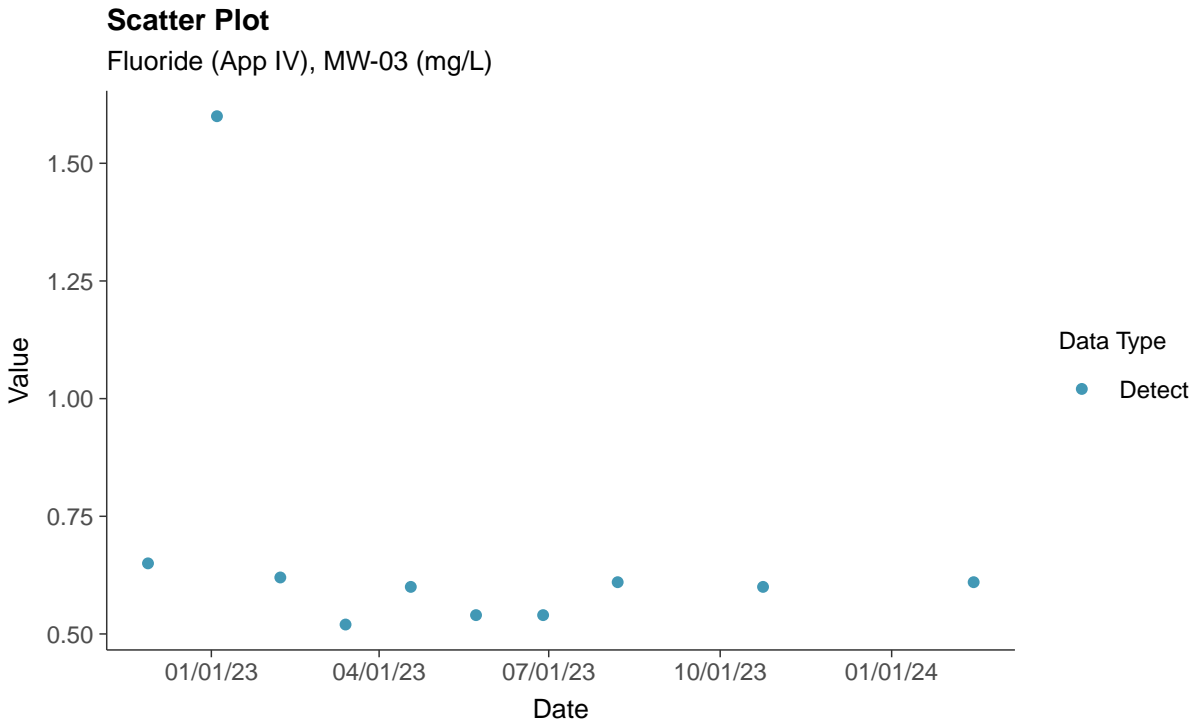
Cobalt, MW-03 (mg/L)





Appendix IV: Fluoride (App IV), MW-03

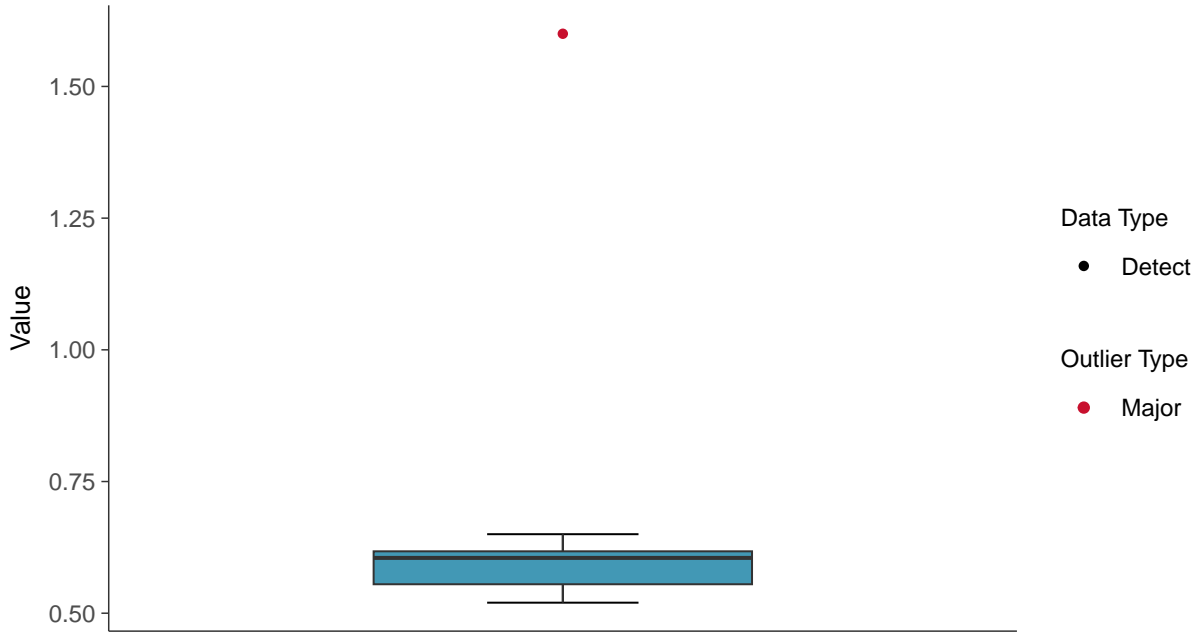
ID: 2_13_5_113





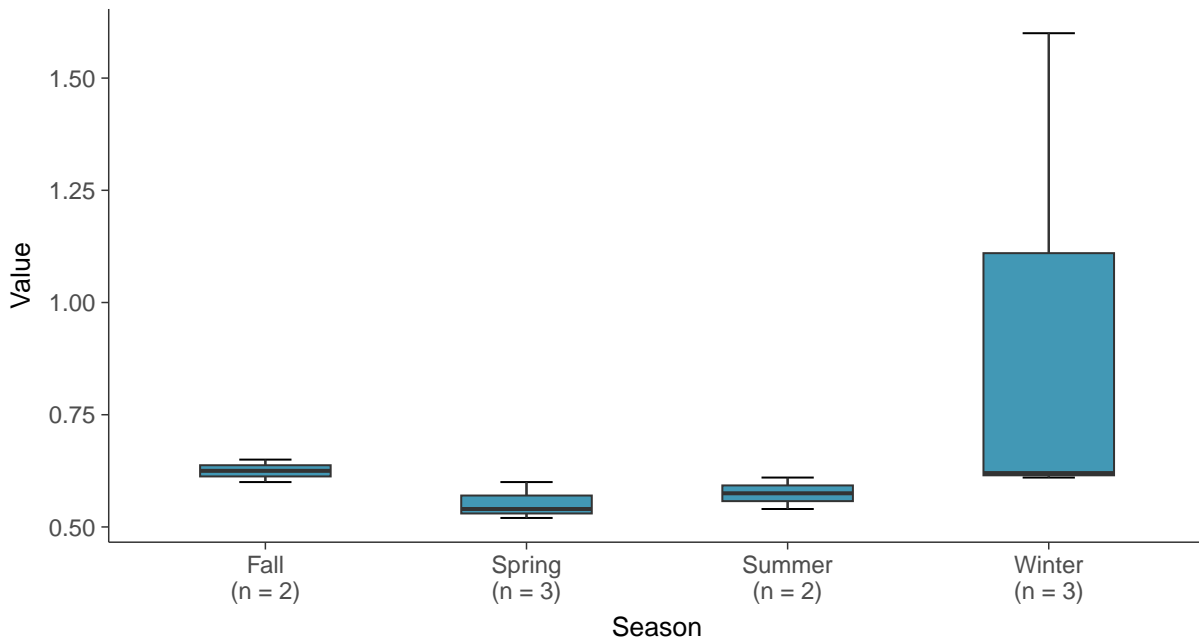
Boxplot

Fluoride (App IV), MW-03 (mg/L)



Boxplot by Season

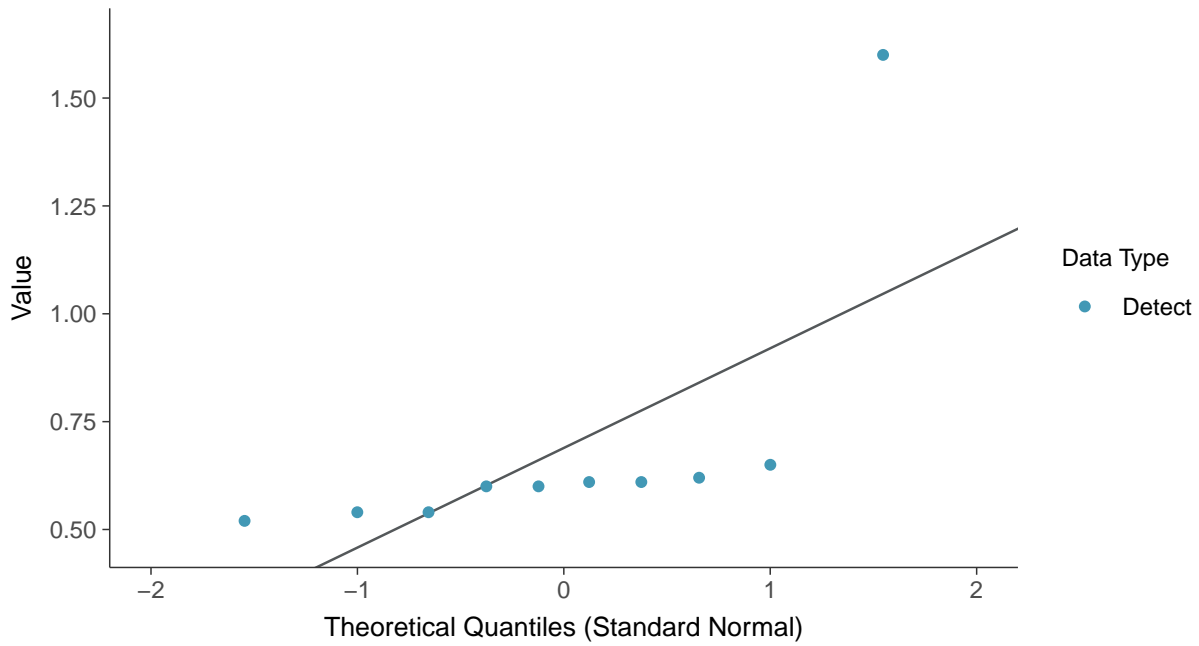
Fluoride (App IV), MW-03 (mg/L)





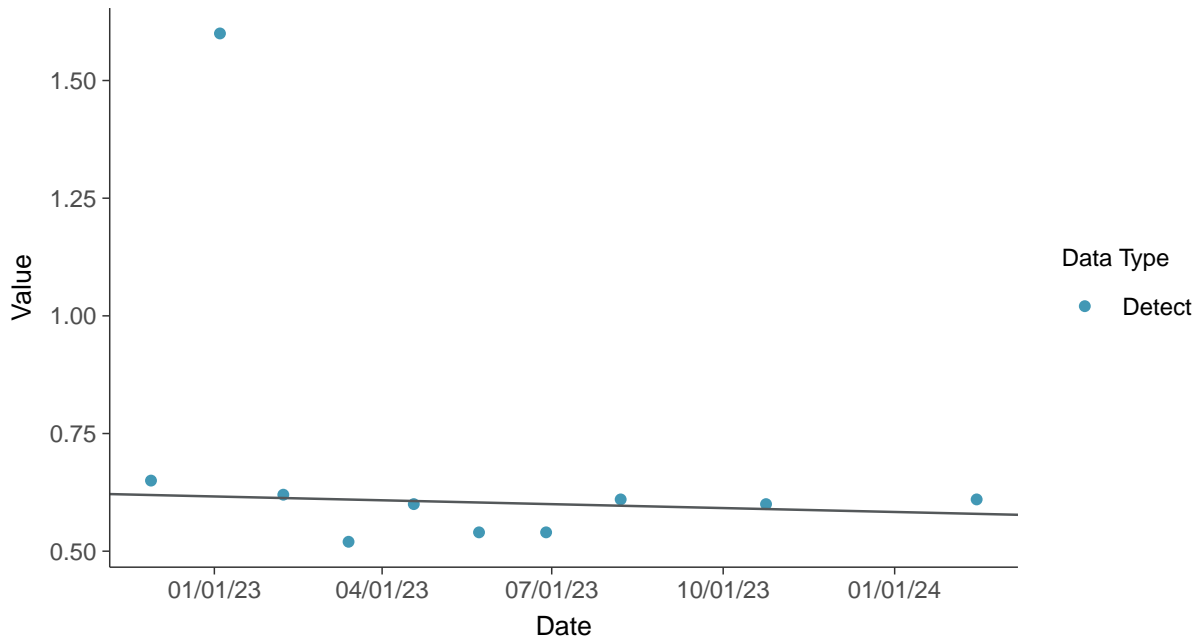
Normal Q-Q plot

Fluoride (App IV), MW-03 (mg/L)



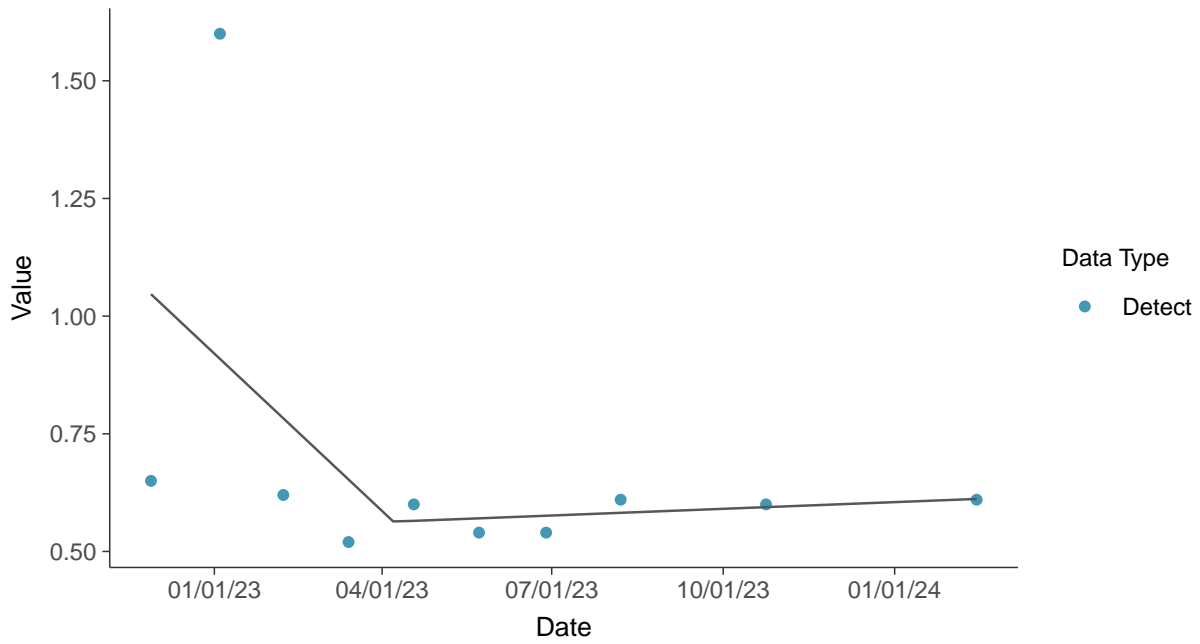
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride (App IV), MW-03 (mg/L)





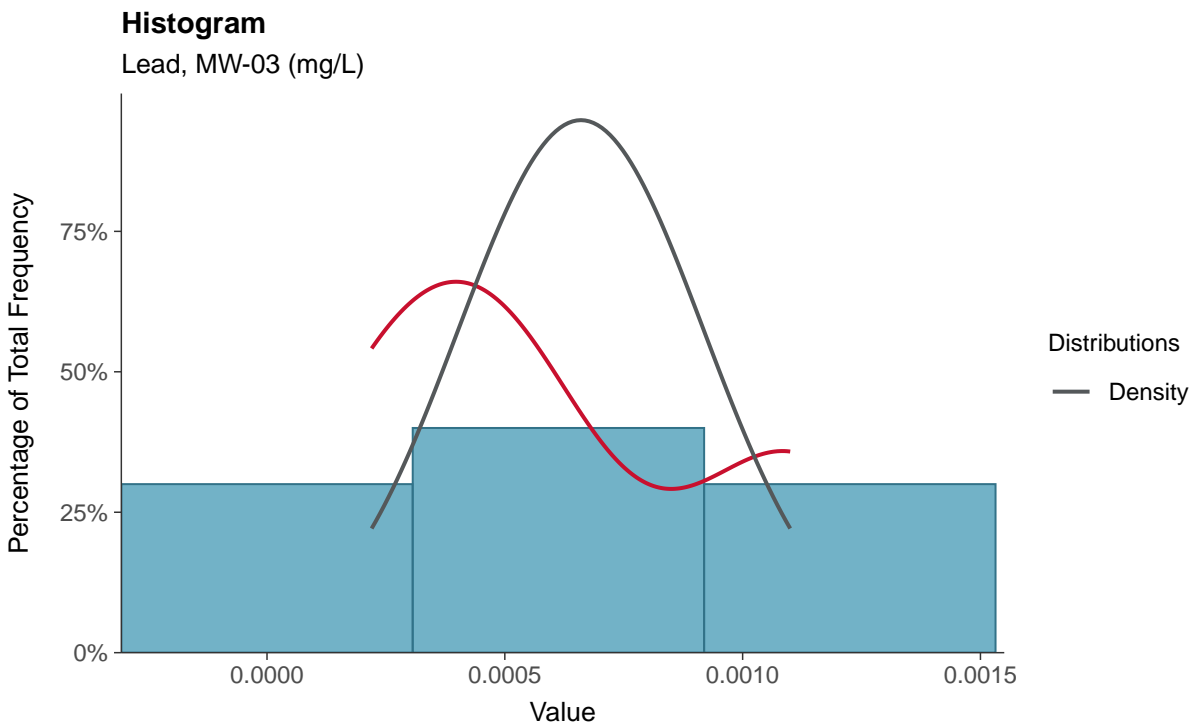
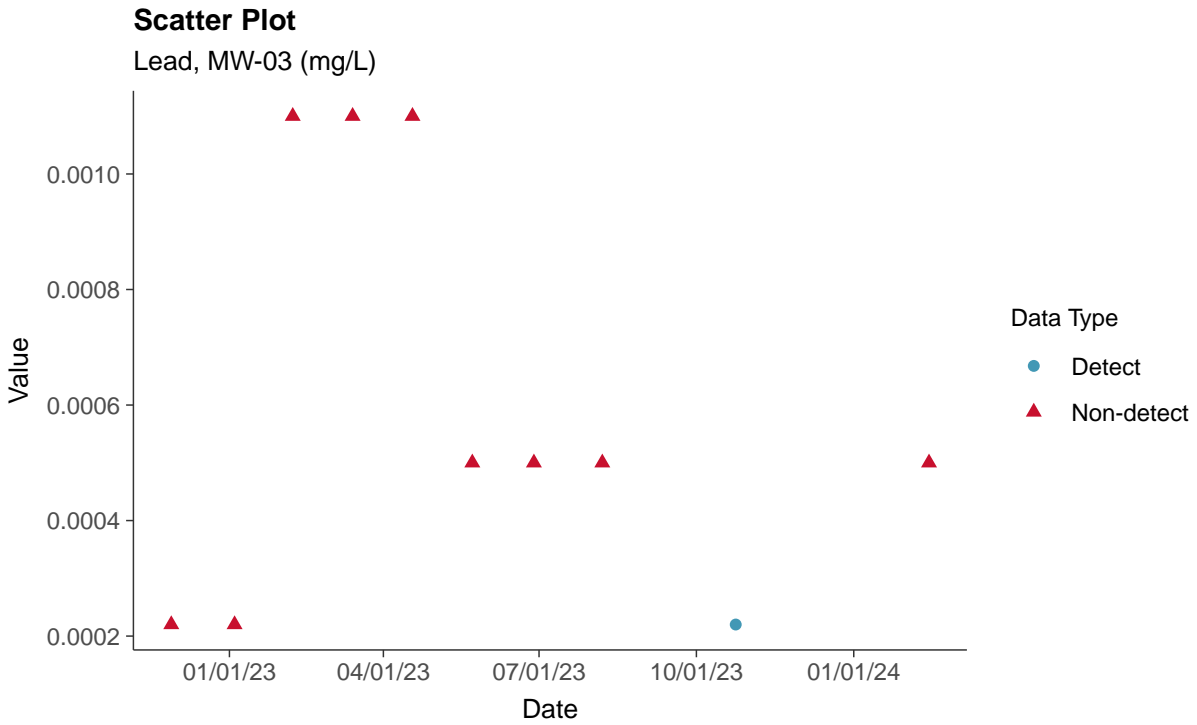
Trend Regression: Piecewise Linear-Linear
Fluoride (App IV), MW-03 (mg/L)





Appendix IV: Lead, MW-03

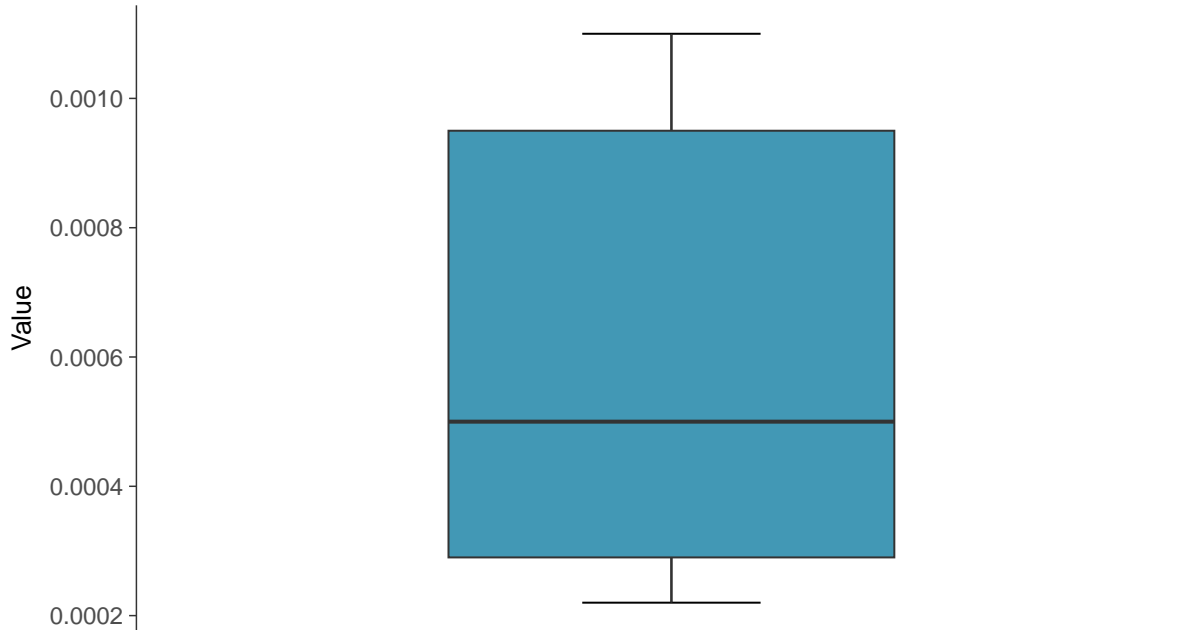
ID: 2_13_5_115





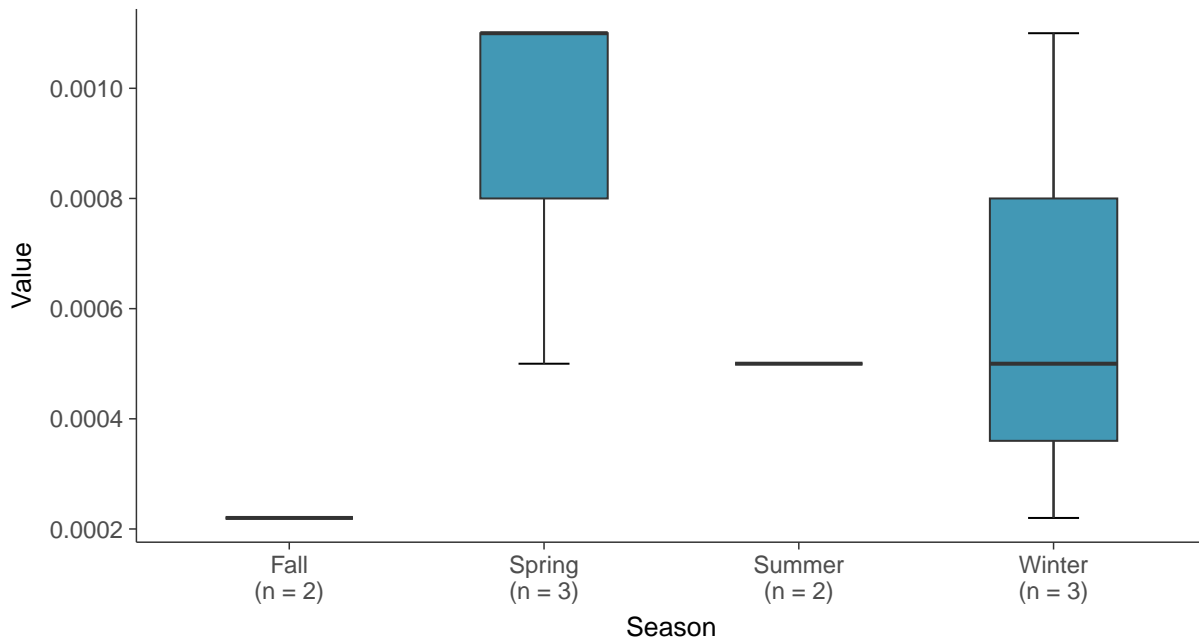
Boxplot

Lead, MW-03 (mg/L)



Boxplot by Season

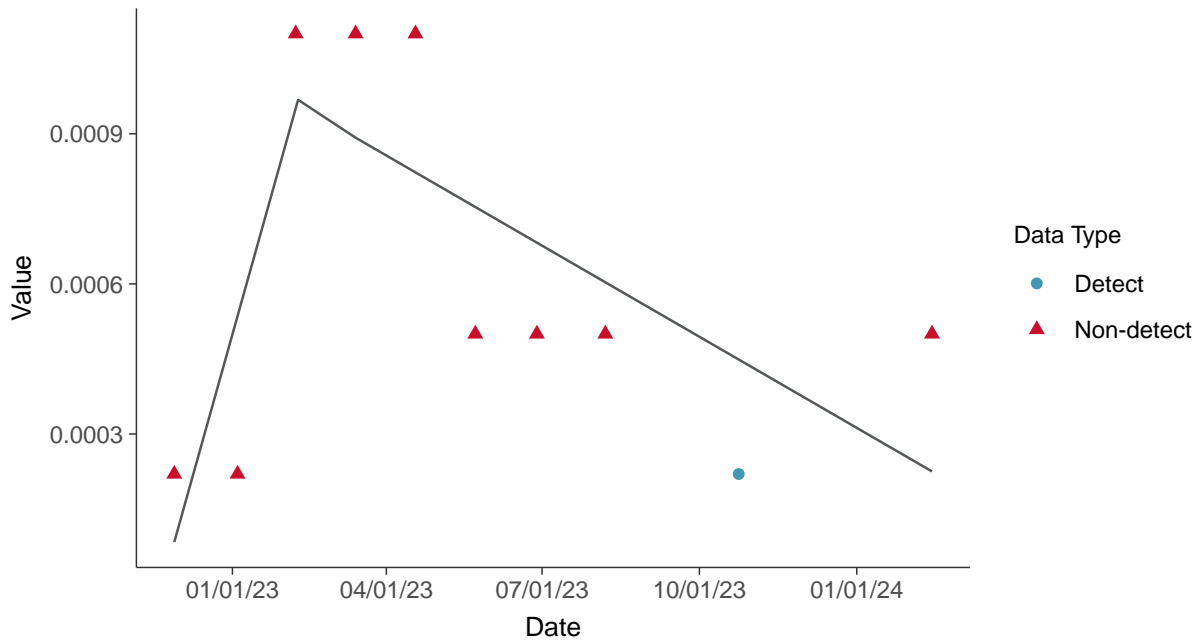
Lead, MW-03 (mg/L)





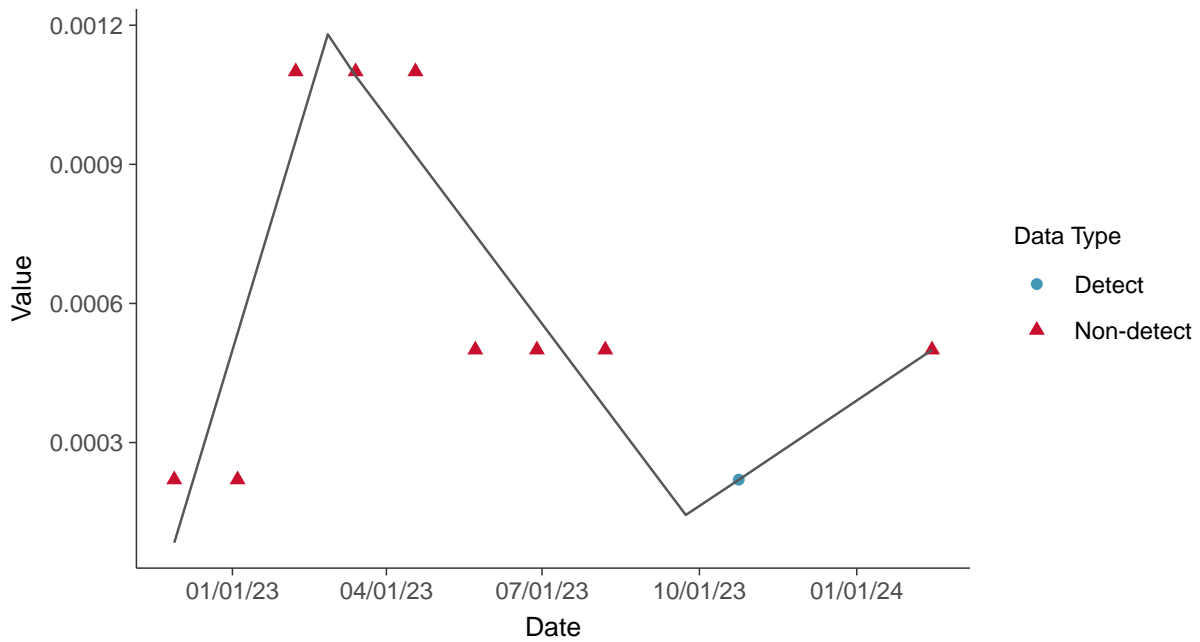
Trend Regression: Piecewise Linear-Linear

Lead, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

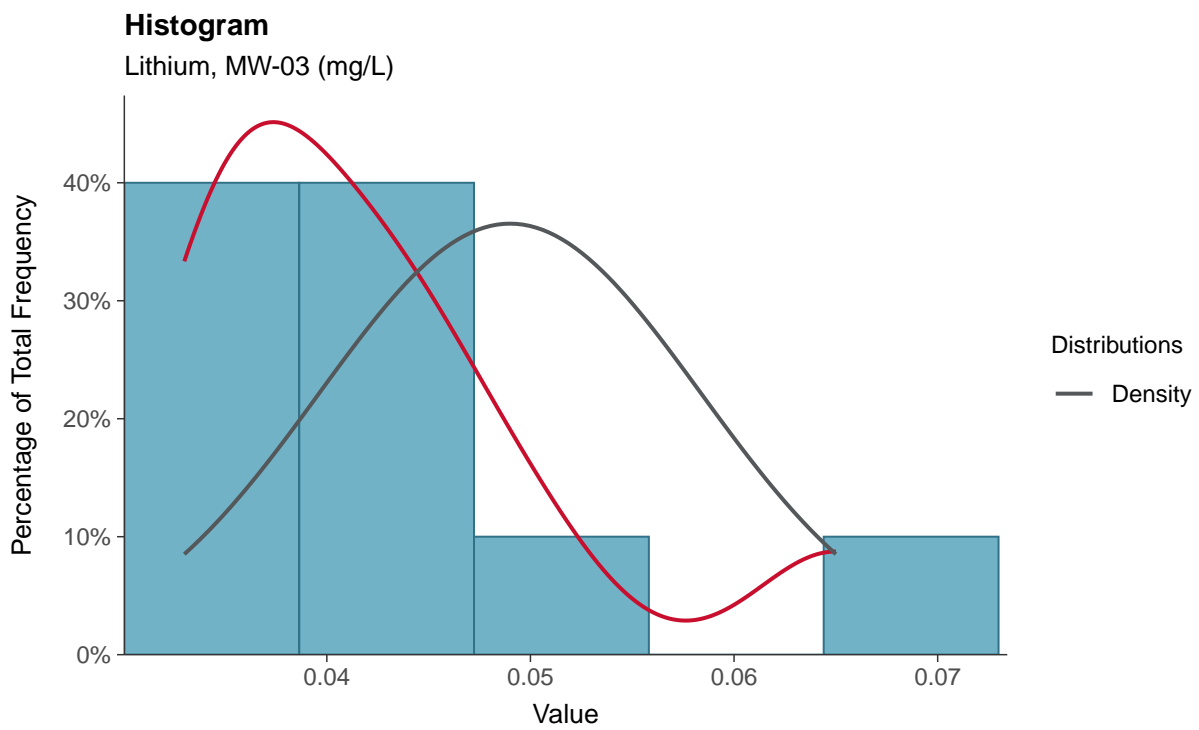
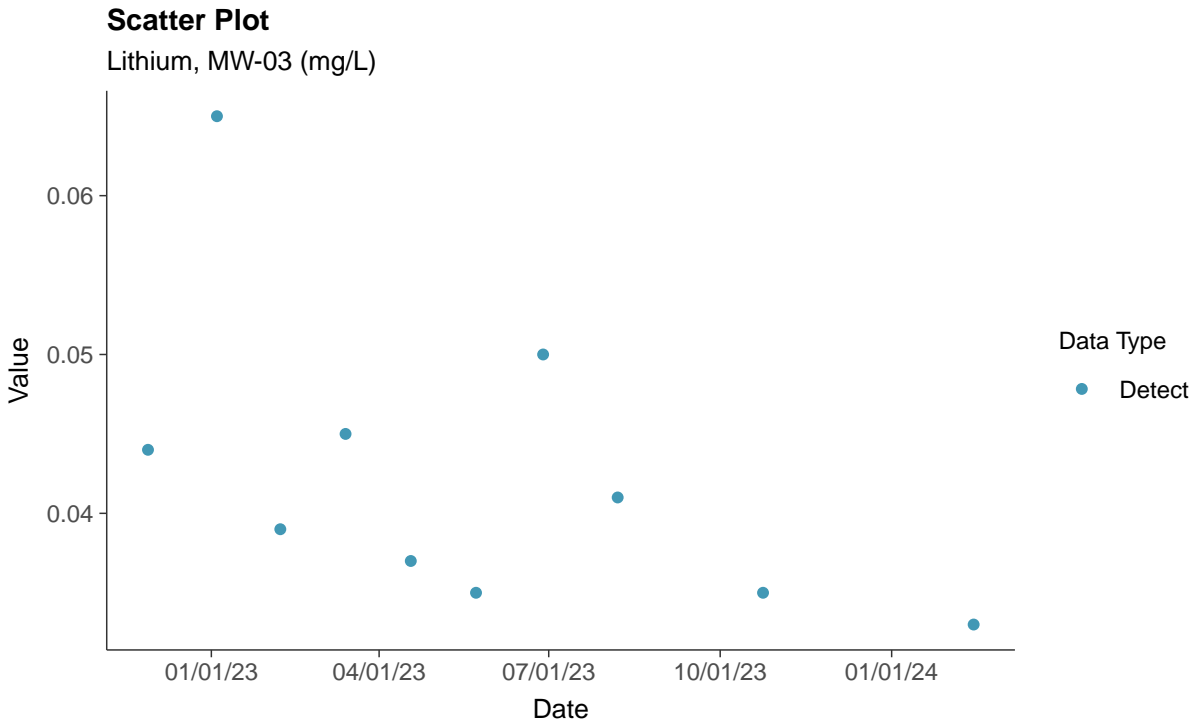
Lead, MW-03 (mg/L)





Appendix IV: Lithium, MW-03

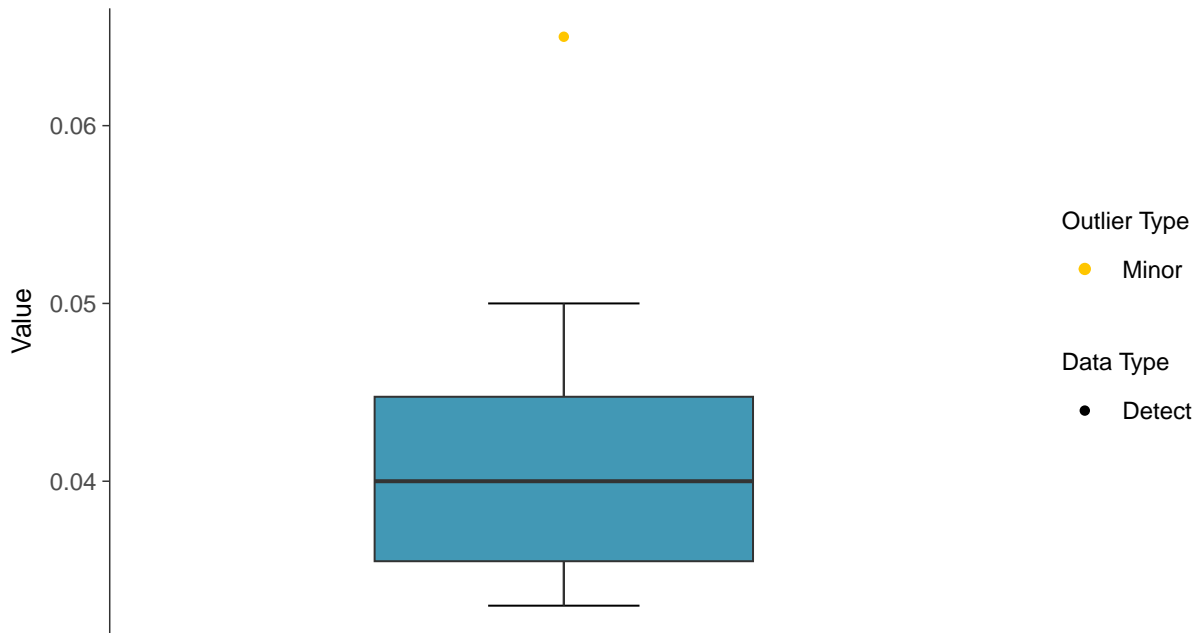
ID: 2_13_5_116





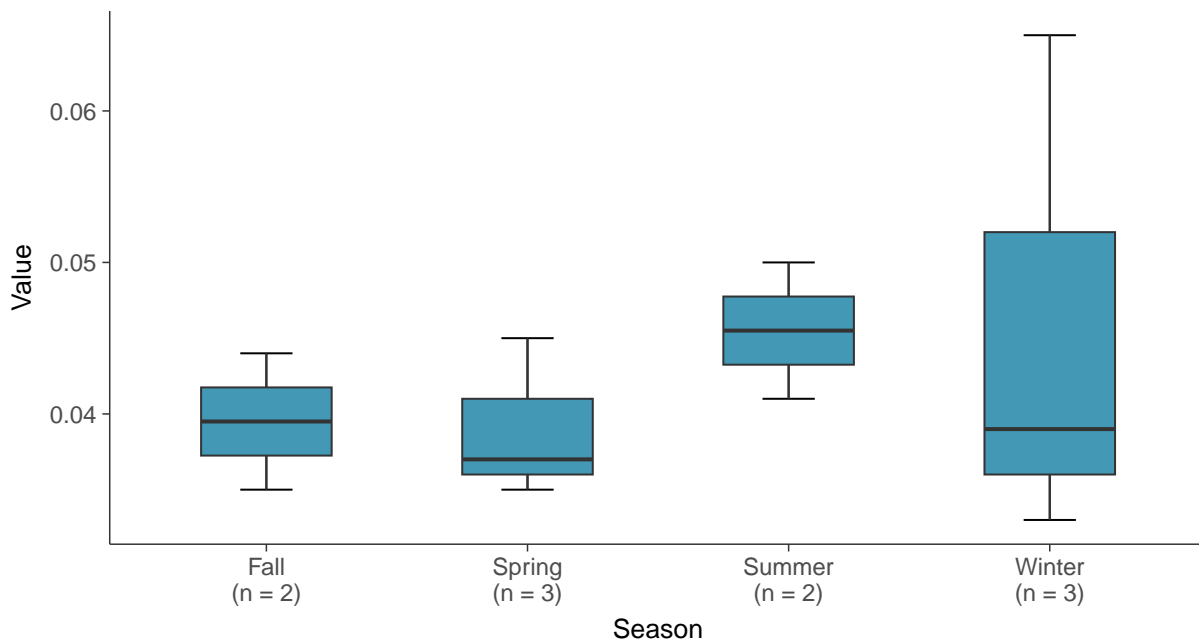
Boxplot

Lithium, MW-03 (mg/L)



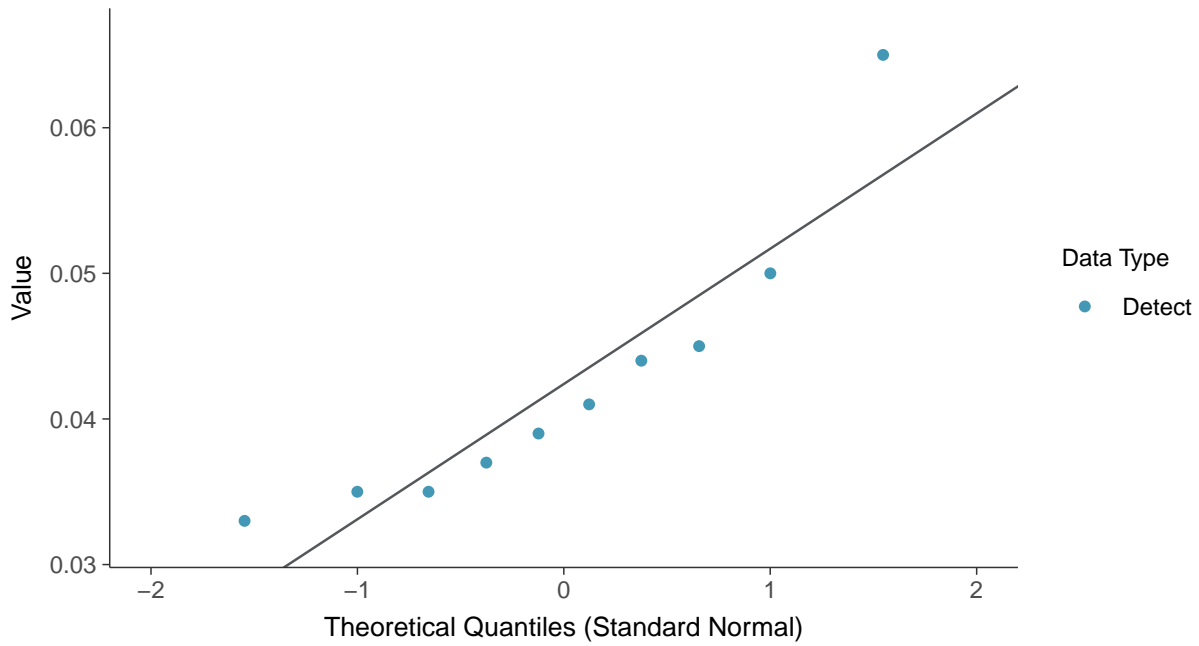
Boxplot by Season

Lithium, MW-03 (mg/L)

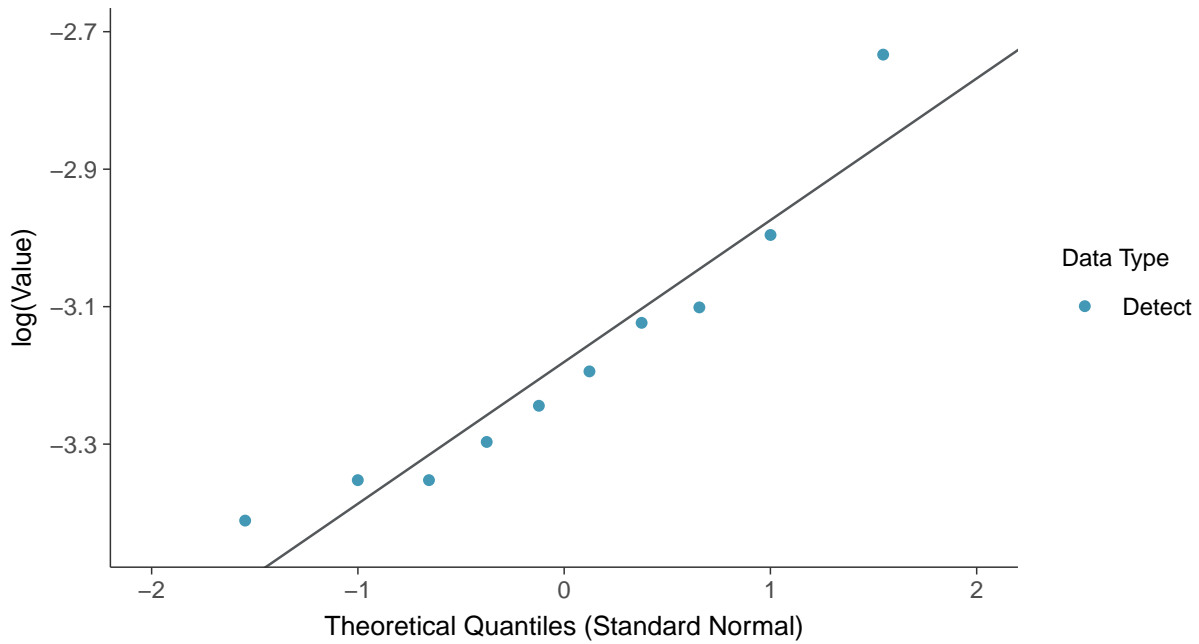




Normal Q-Q plot
Lithium, MW-03 (mg/L)

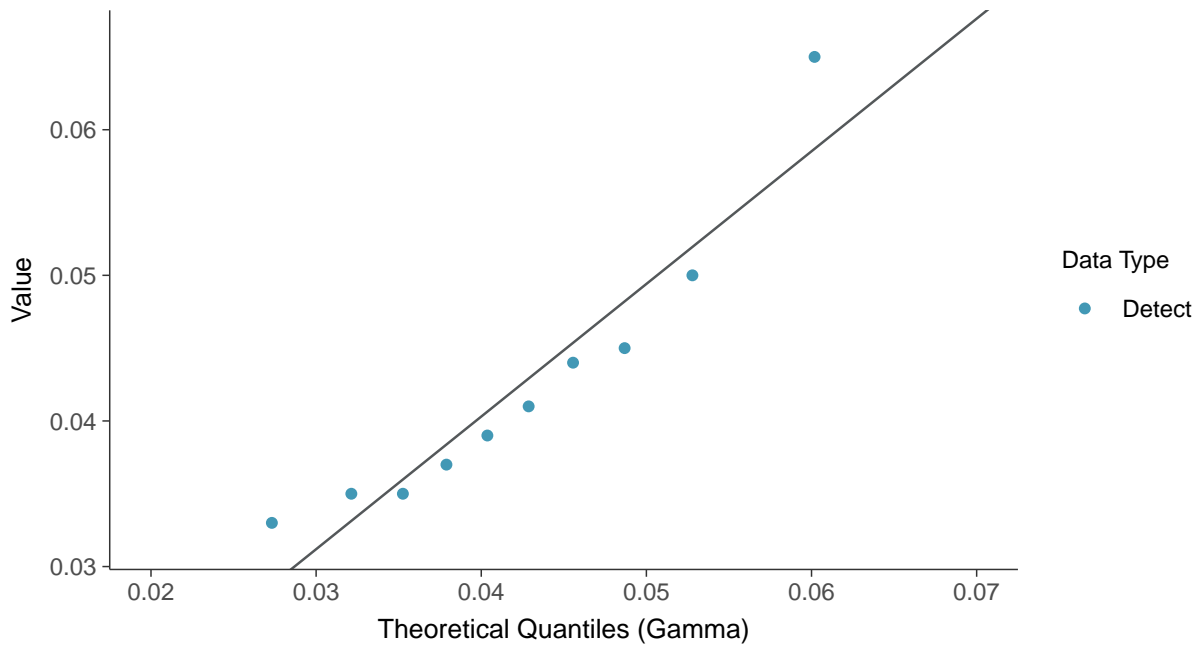


Lognormal Q-Q plot
Lithium, MW-03 (mg/L)

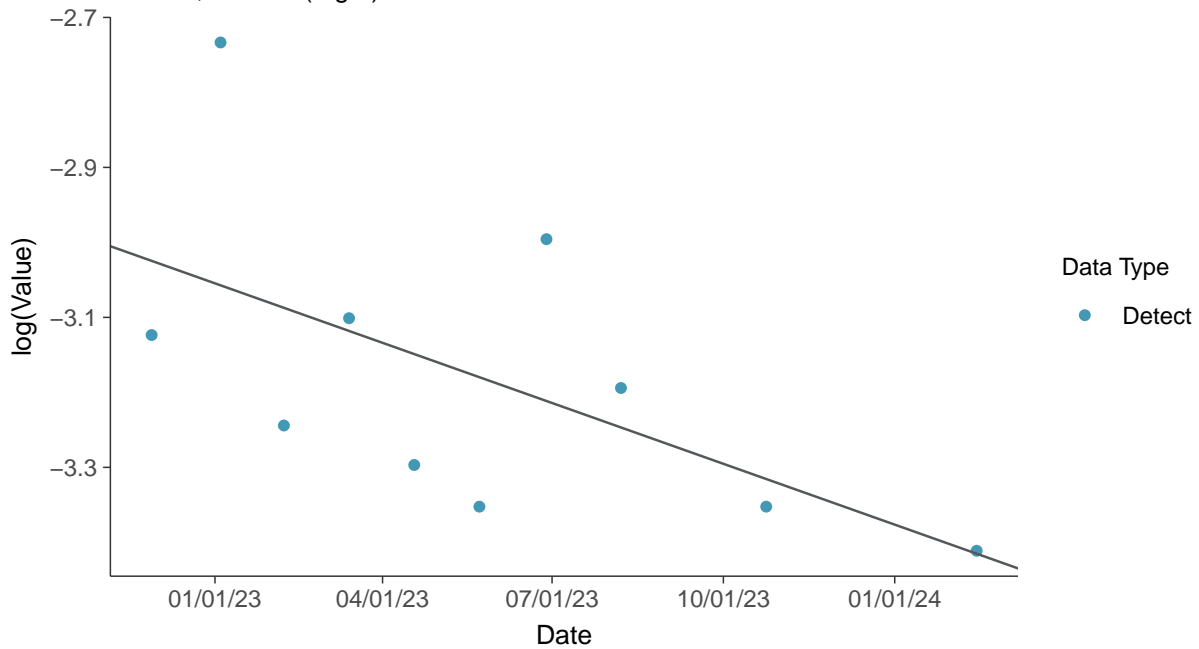




Gamma Q-Q plot
Lithium, MW-03 (mg/L)

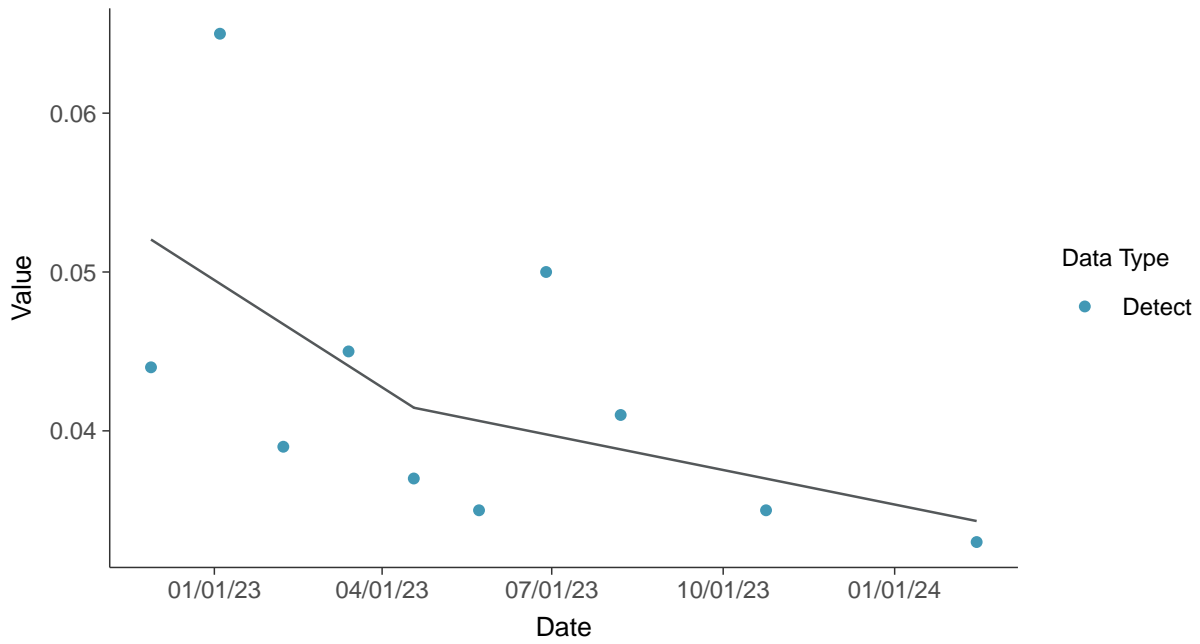


Trend Regression: Lognormal MLE
Lithium, MW-03 (mg/L)





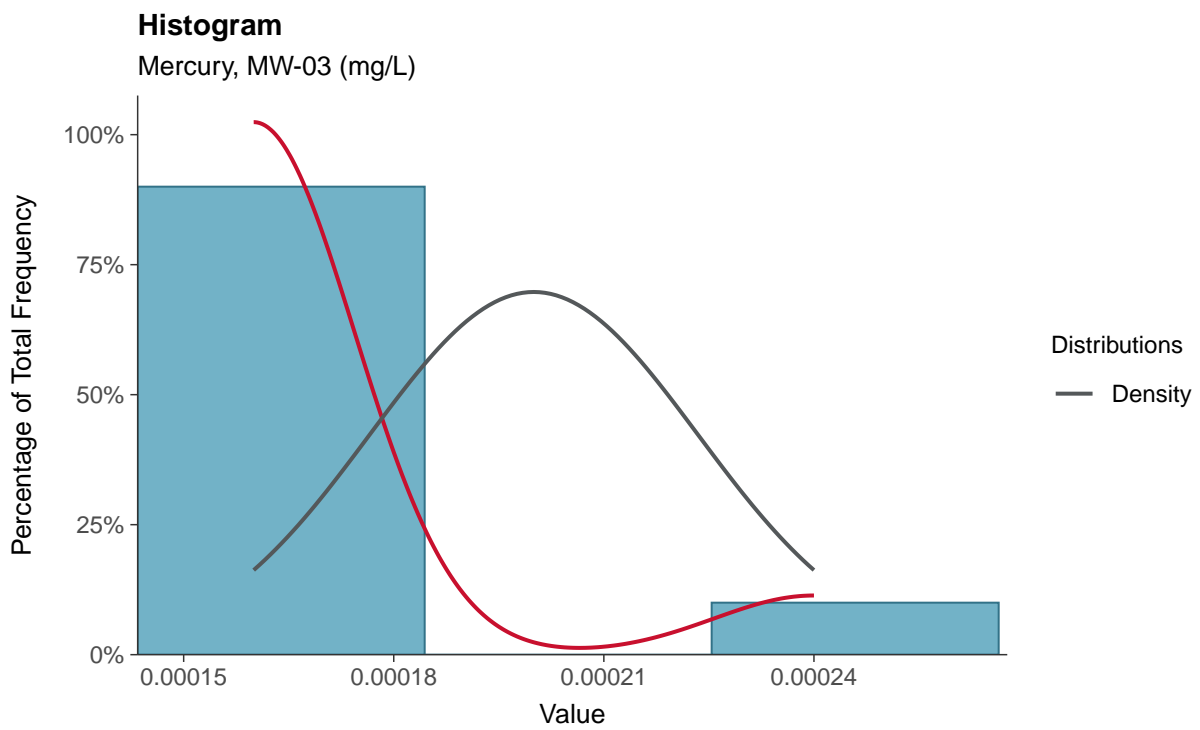
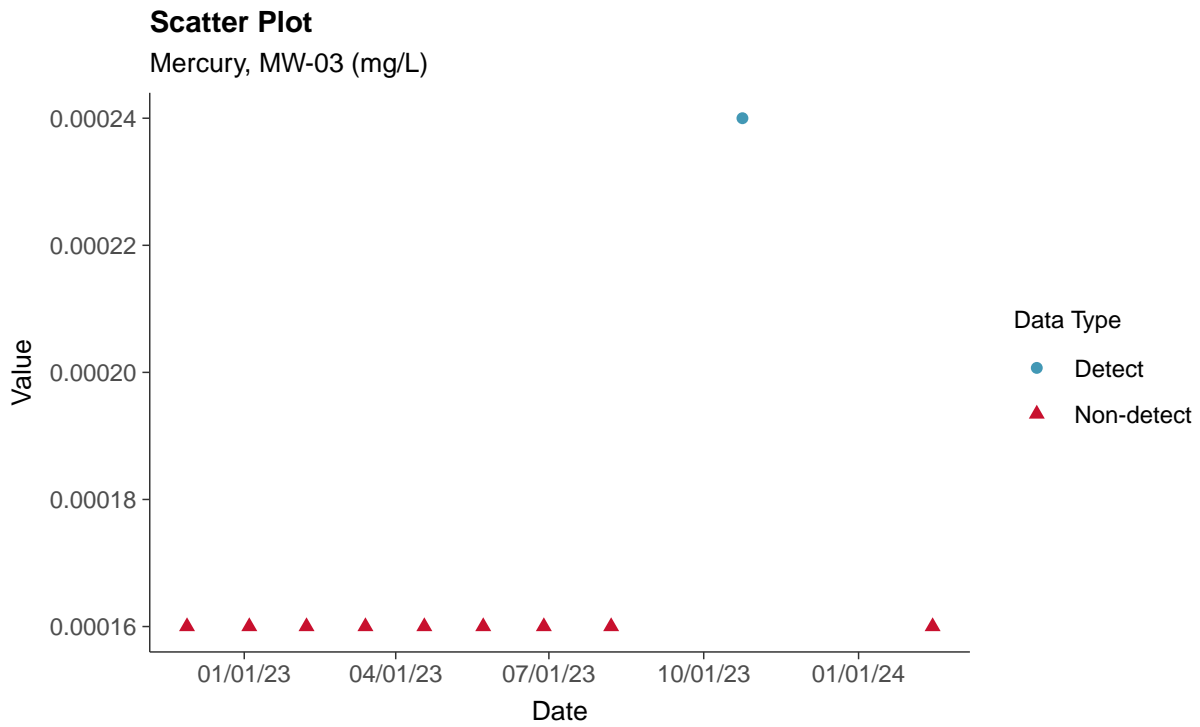
Trend Regression: Piecewise Linear-Linear
Lithium, MW-03 (mg/L)





Appendix IV: Mercury, MW-03

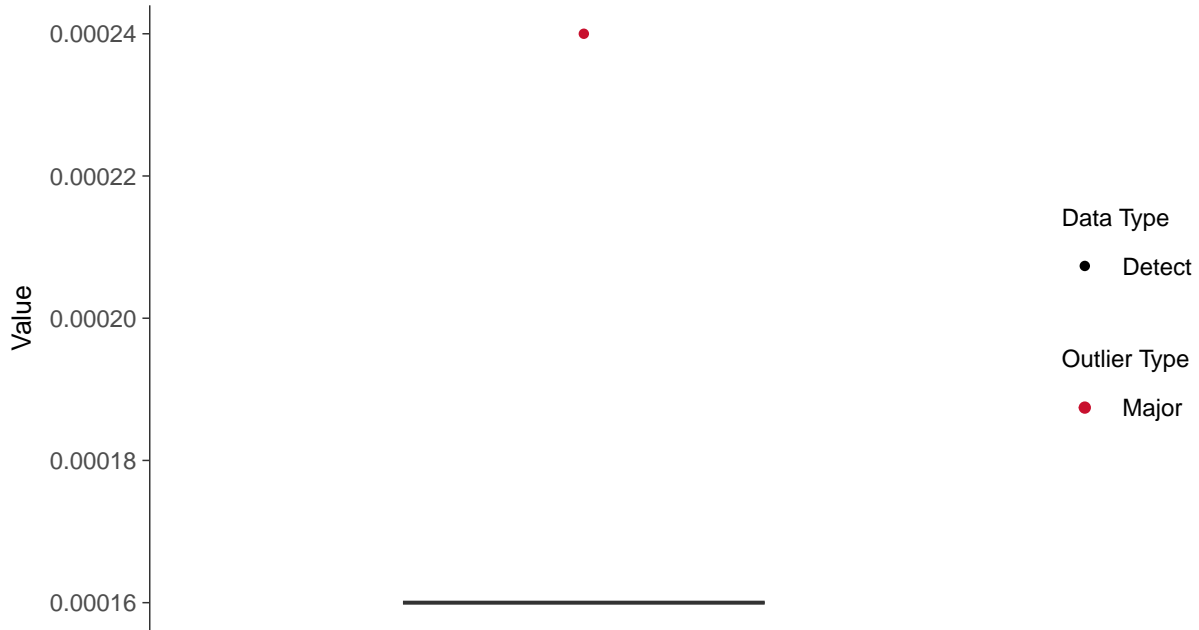
ID: 2_13_5_117





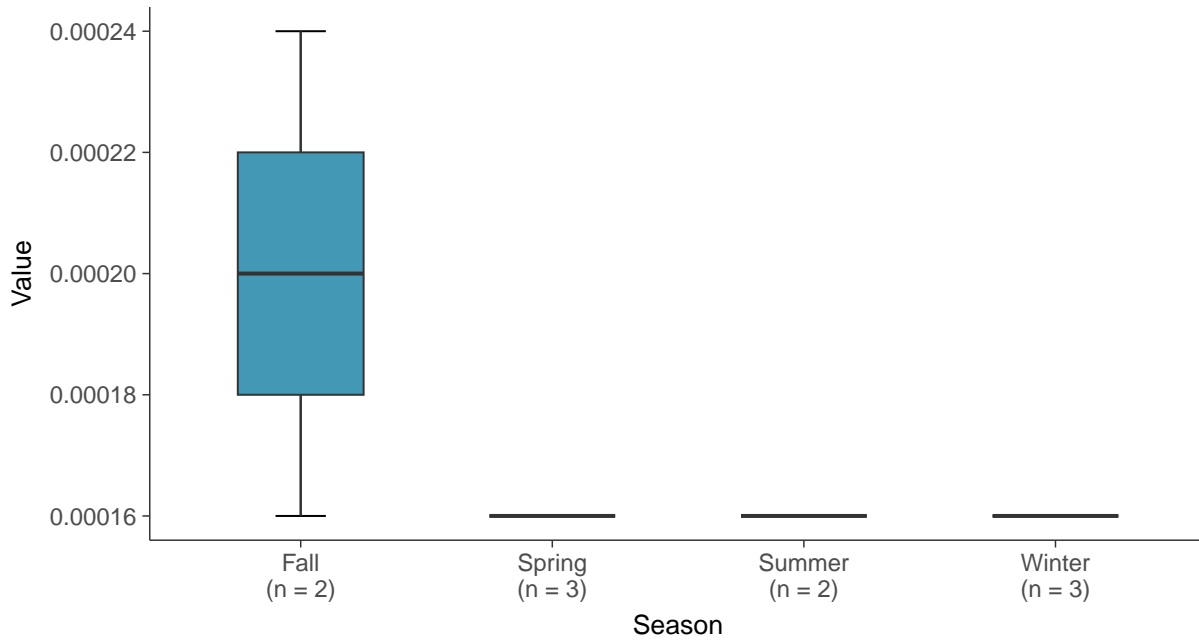
Boxplot

Mercury, MW-03 (mg/L)



Boxplot by Season

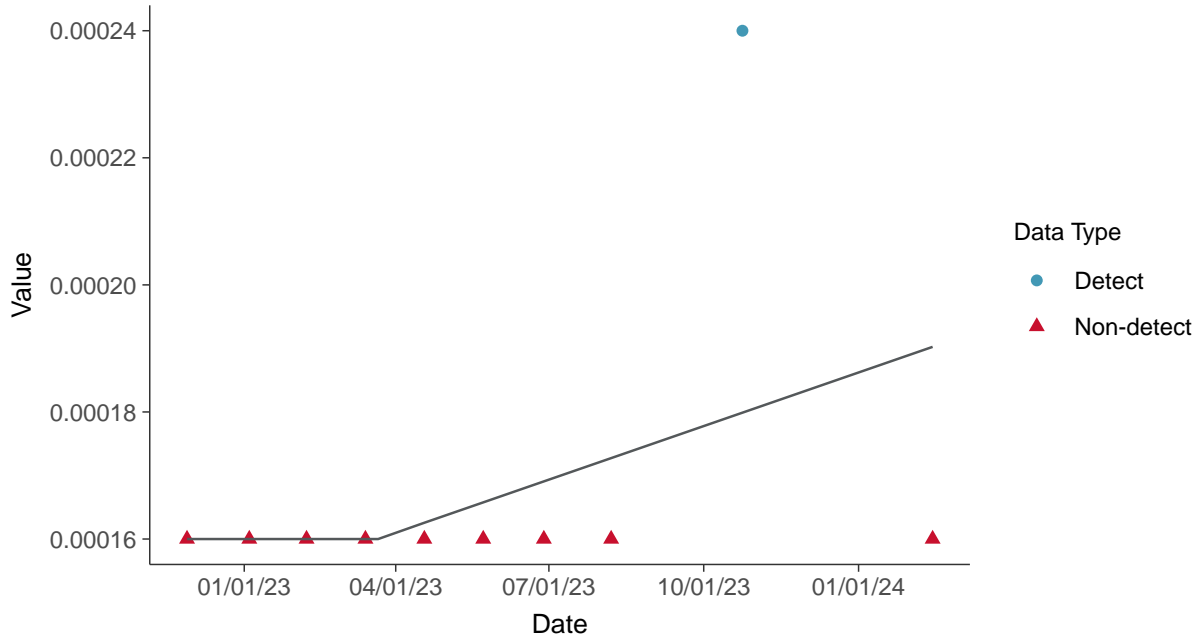
Mercury, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear

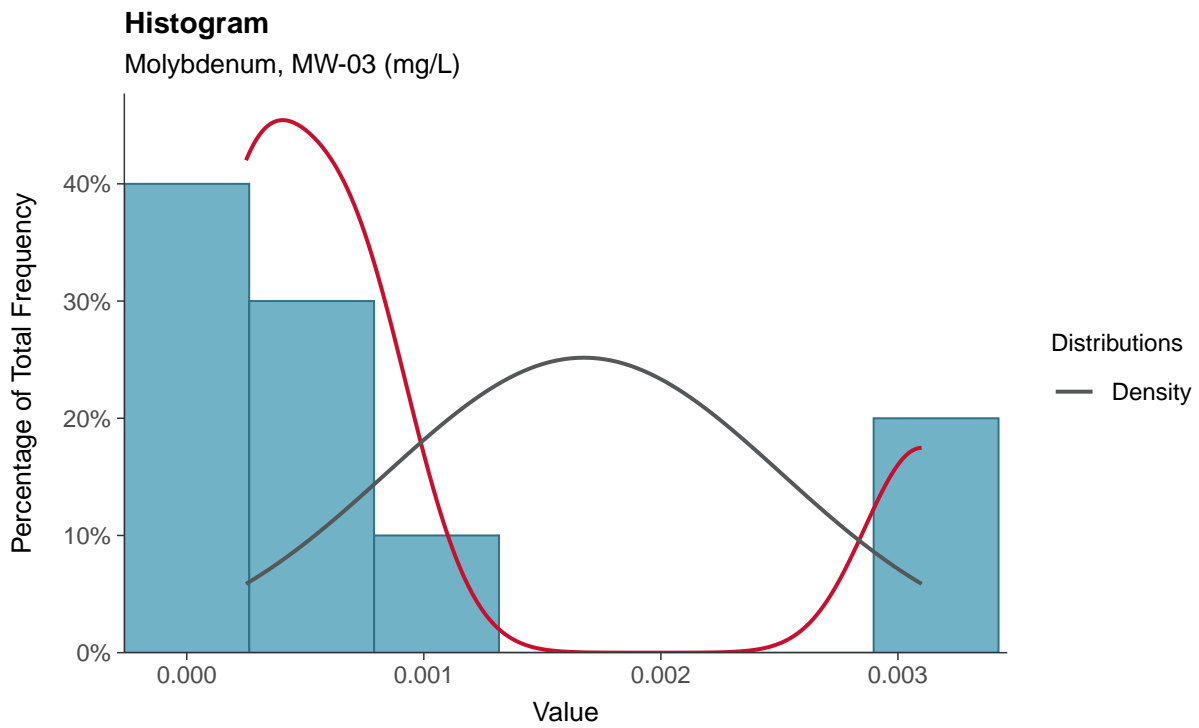
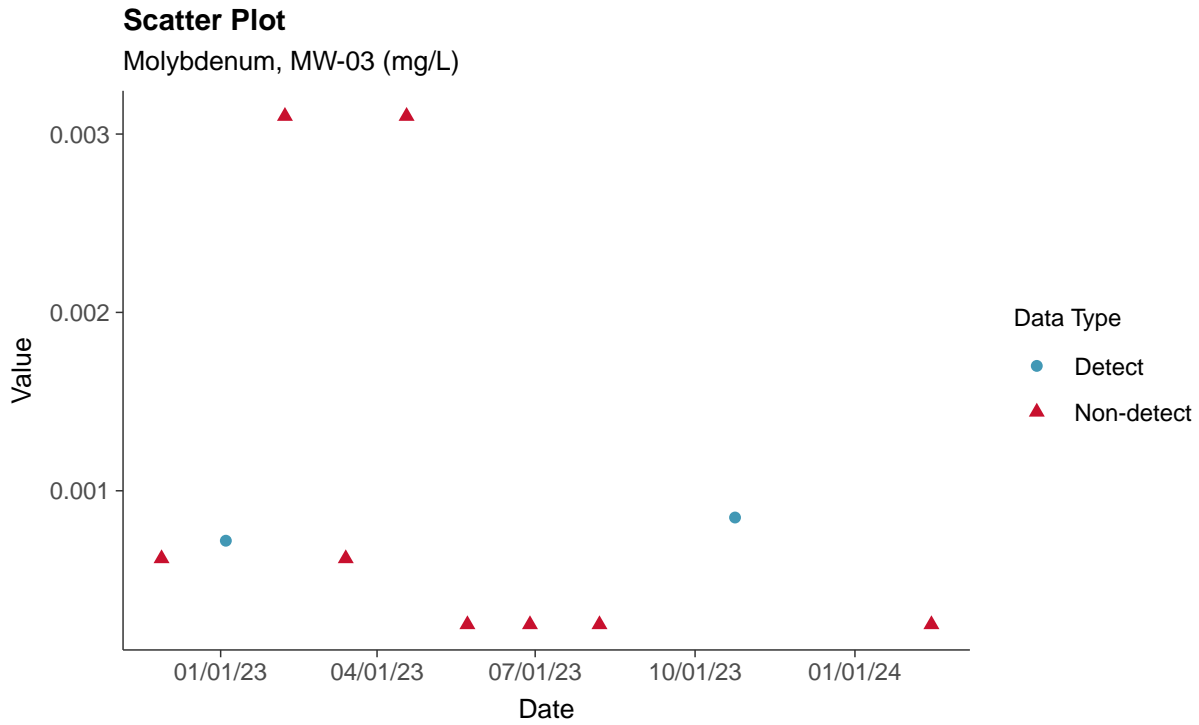
Mercury, MW-03 (mg/L)





Appendix IV: Molybdenum, MW-03

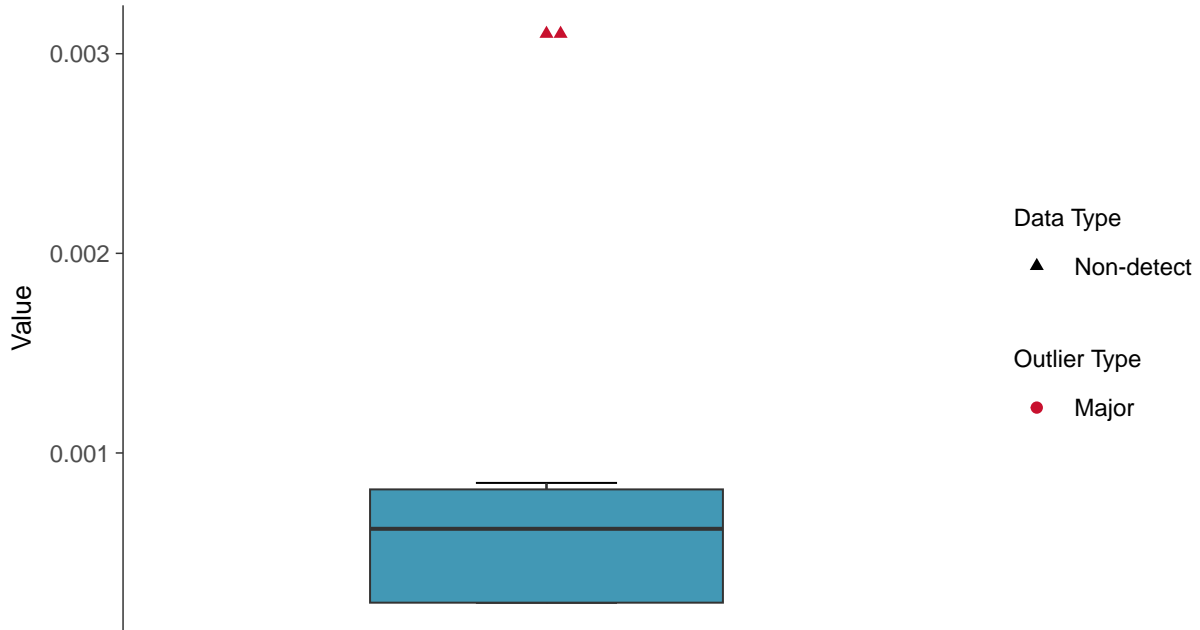
ID: 2_13_5_118





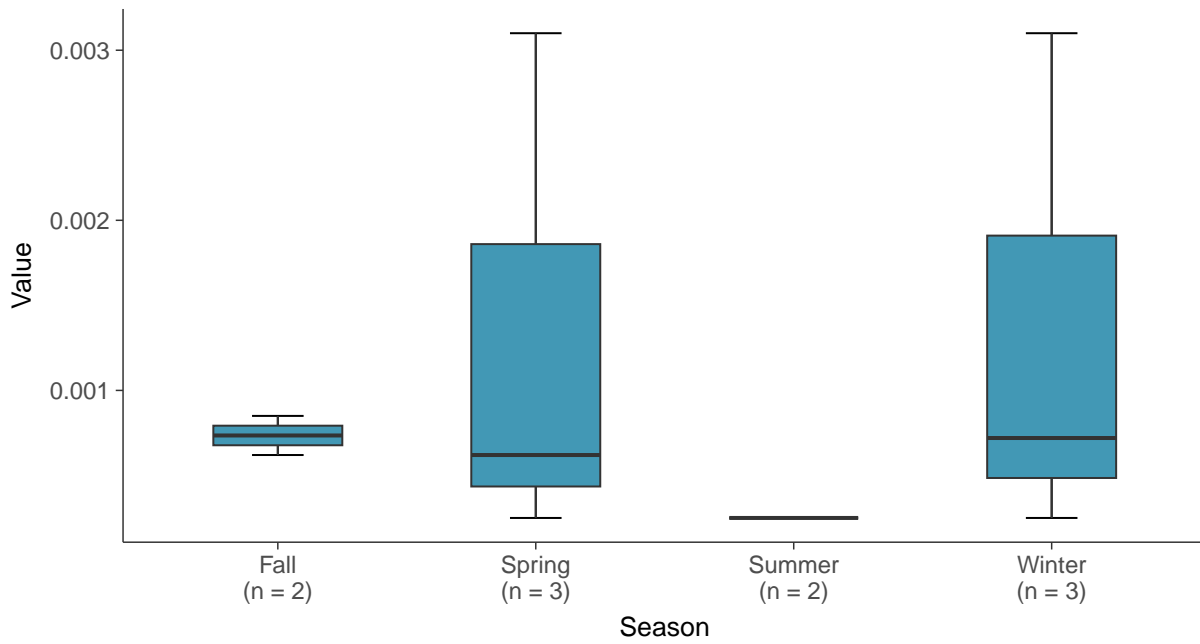
Boxplot

Molybdenum, MW-03 (mg/L)



Boxplot by Season

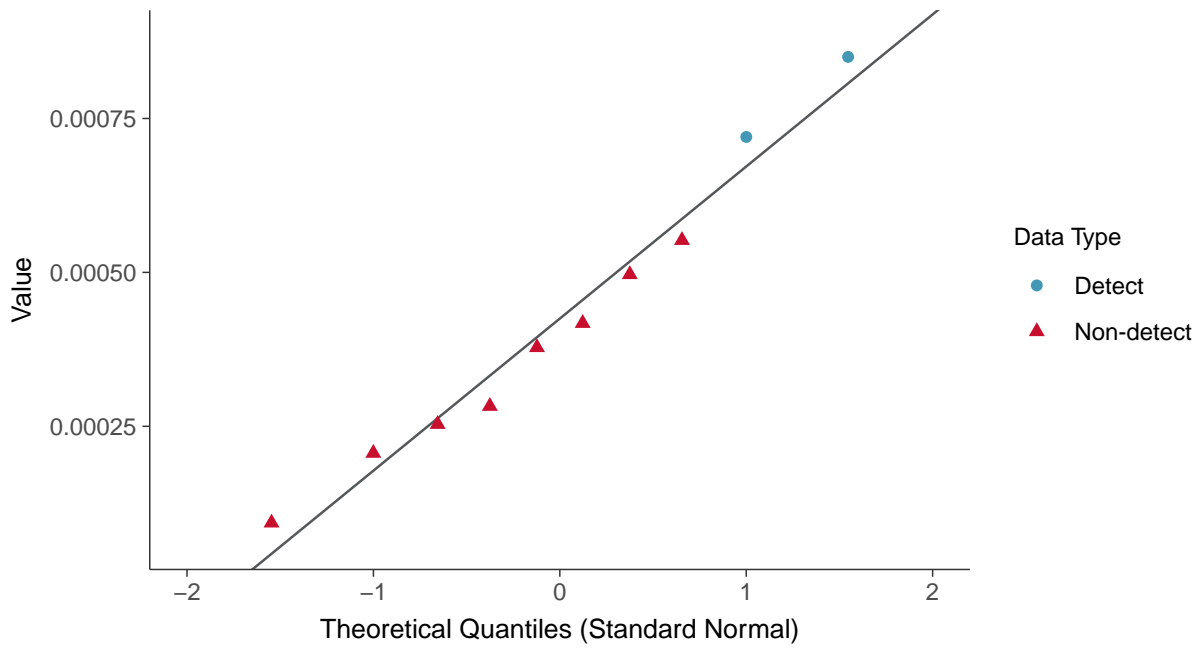
Molybdenum, MW-03 (mg/L)





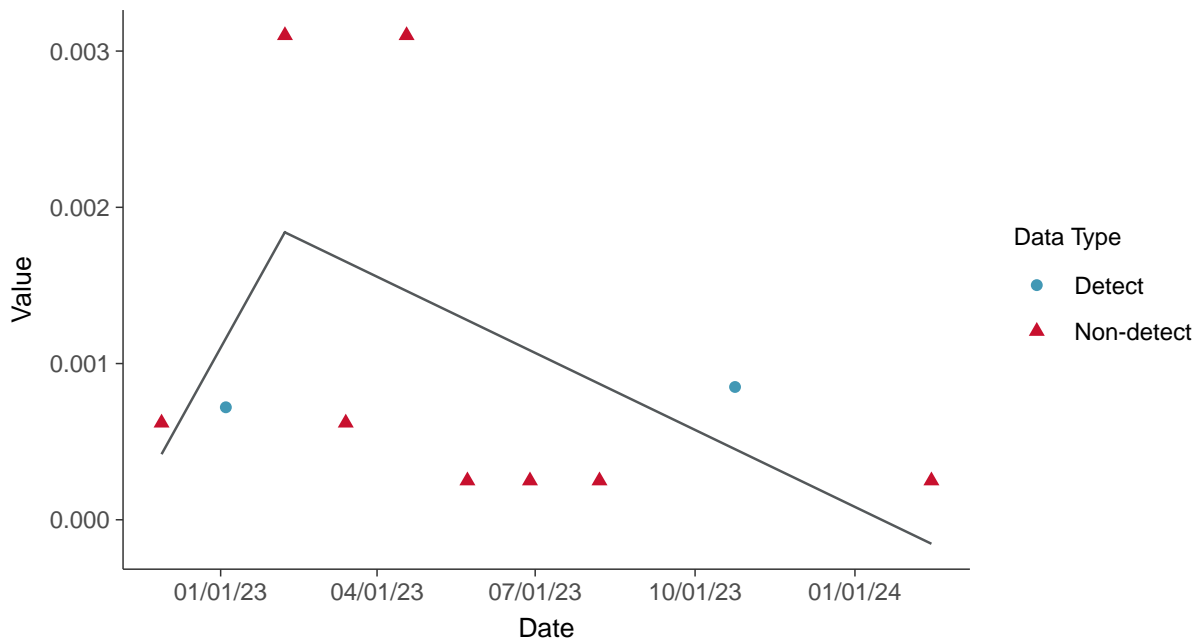
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-03 (mg/L)



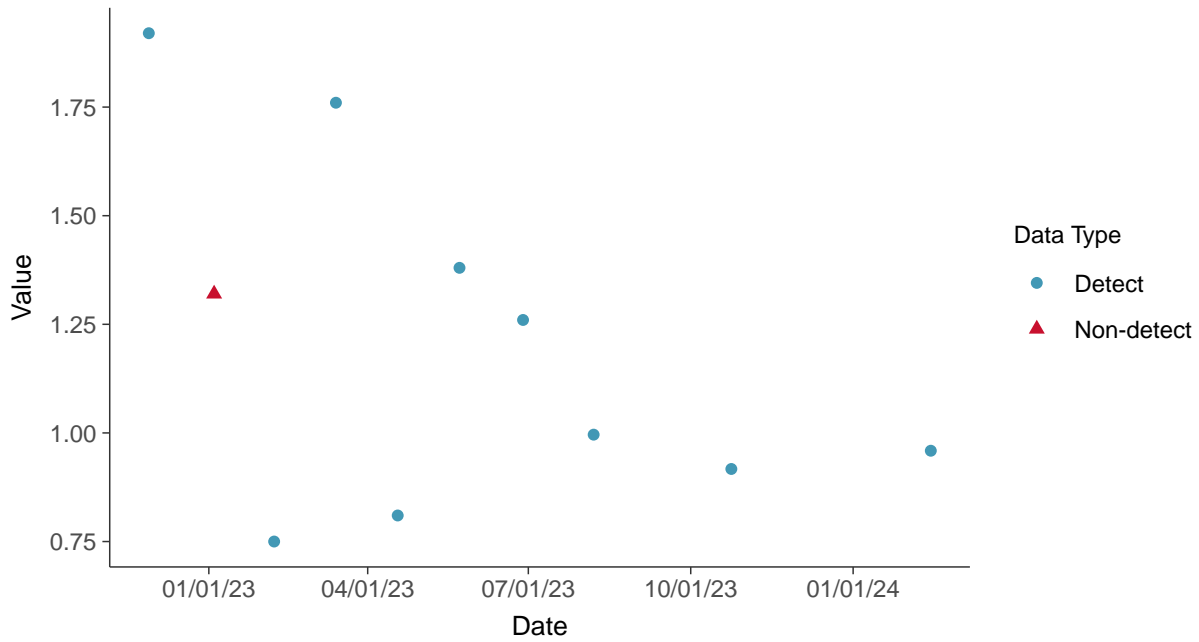


Appendix IV: Radium 226 and 228, MW-03

ID: 2_13_5_121

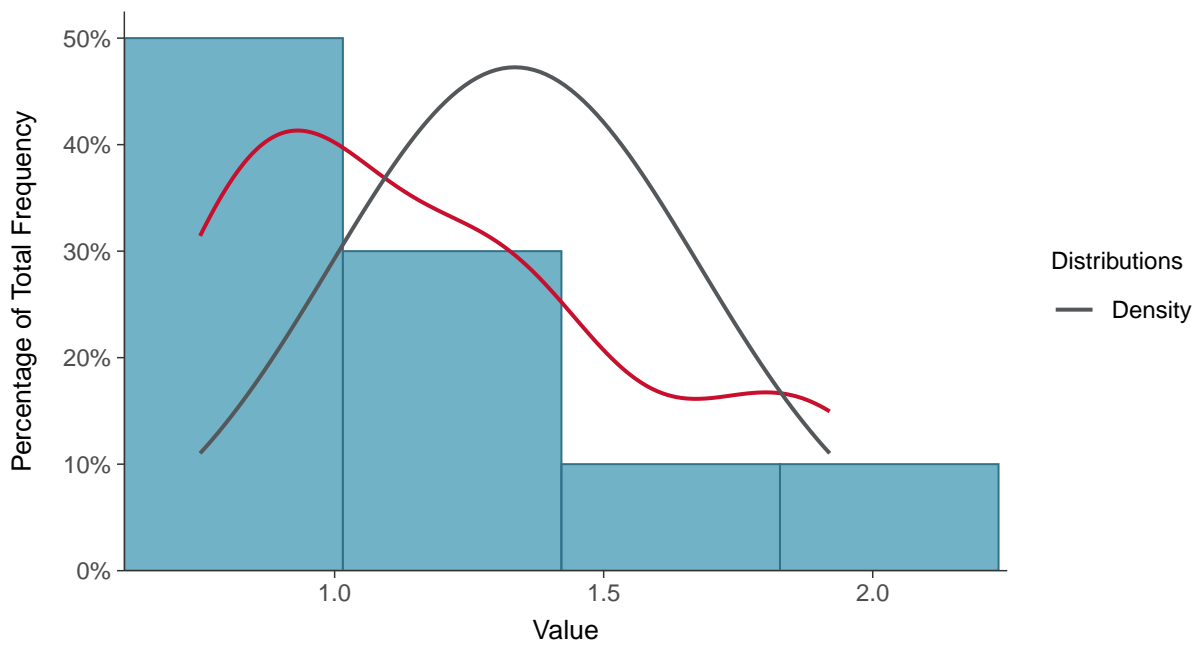
Scatter Plot

Radium 226 and 228, MW-03 (pCi/L)



Histogram

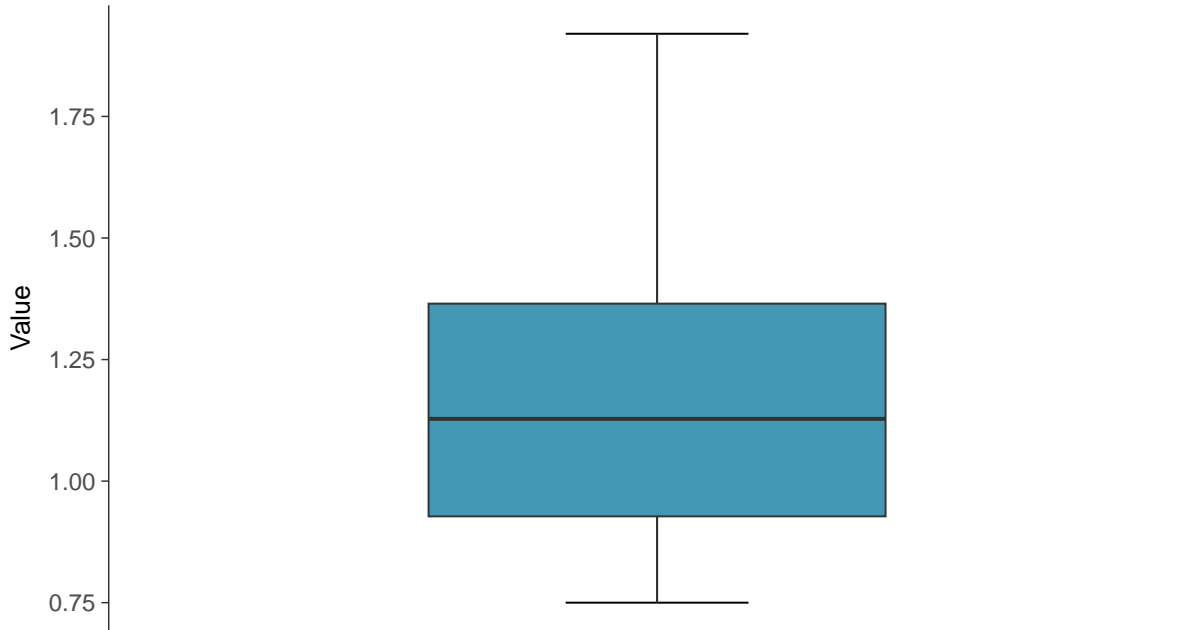
Radium 226 and 228, MW-03 (pCi/L)





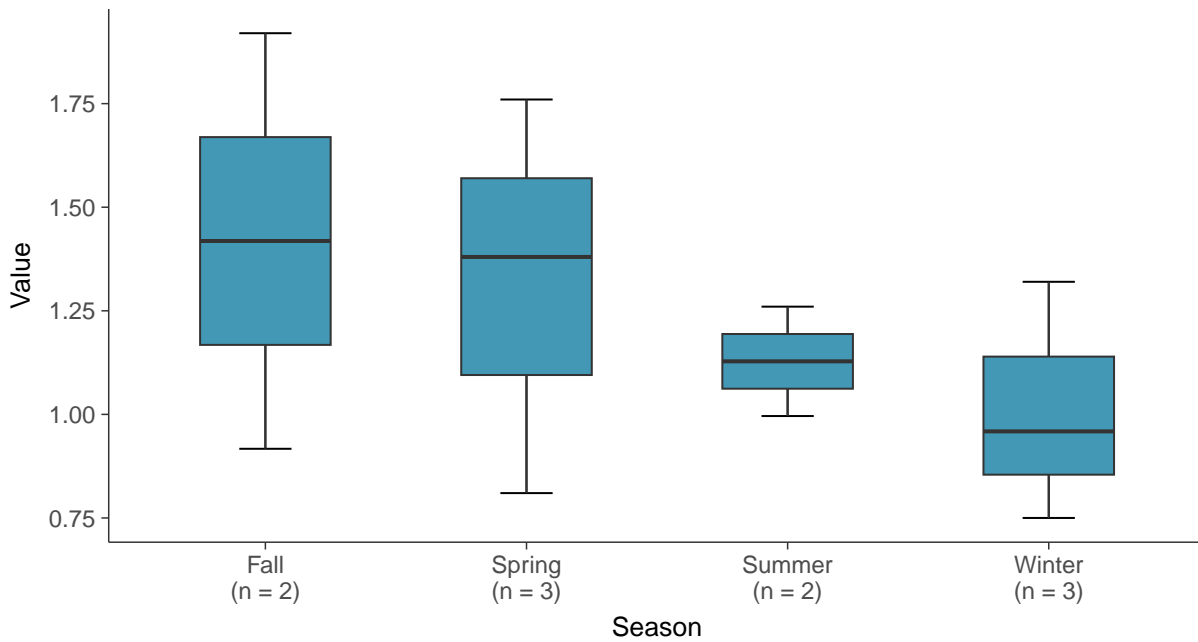
Boxplot

Radium 226 and 228, MW-03 (pCi/L)



Boxplot by Season

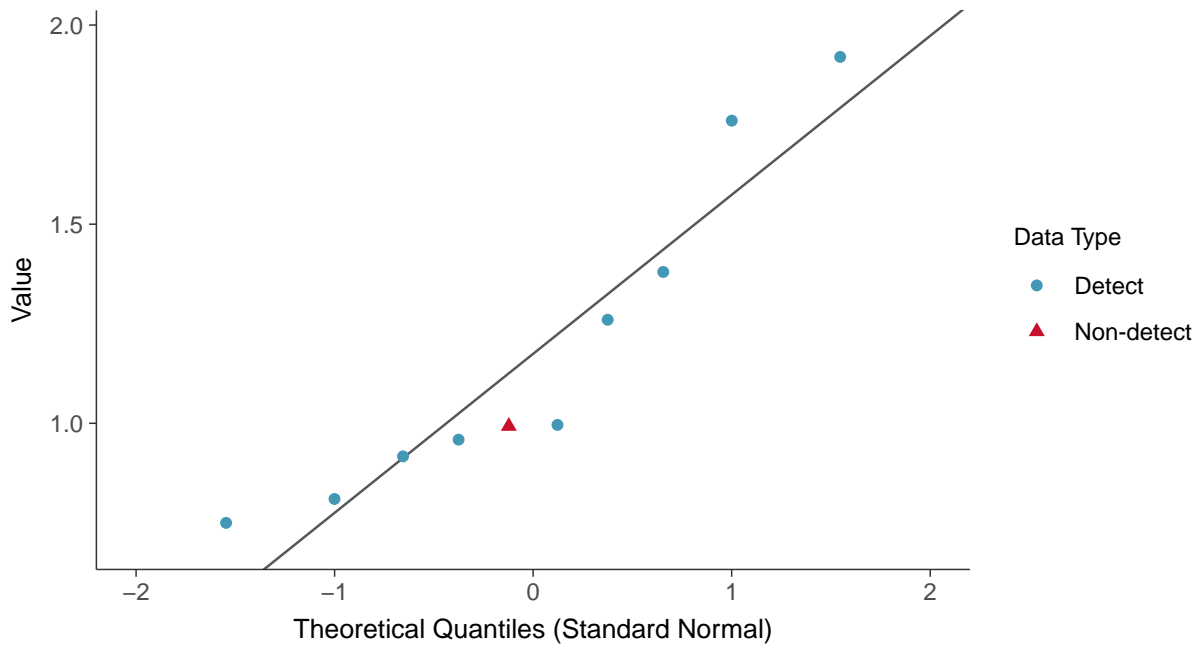
Radium 226 and 228, MW-03 (pCi/L)





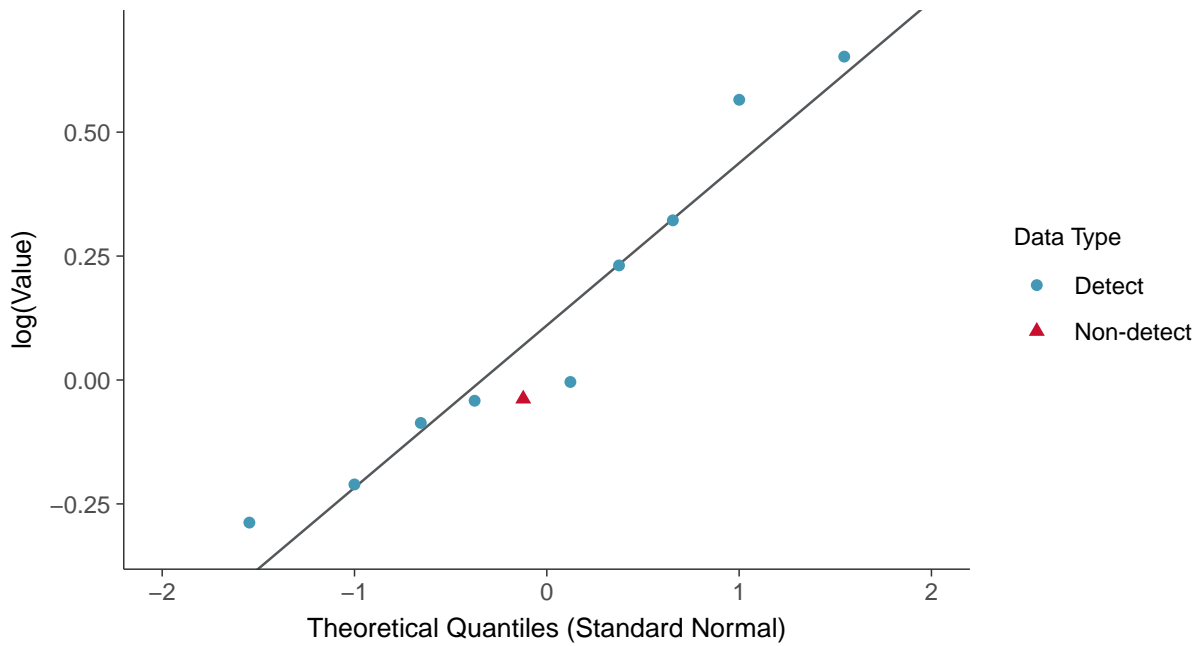
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-03 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

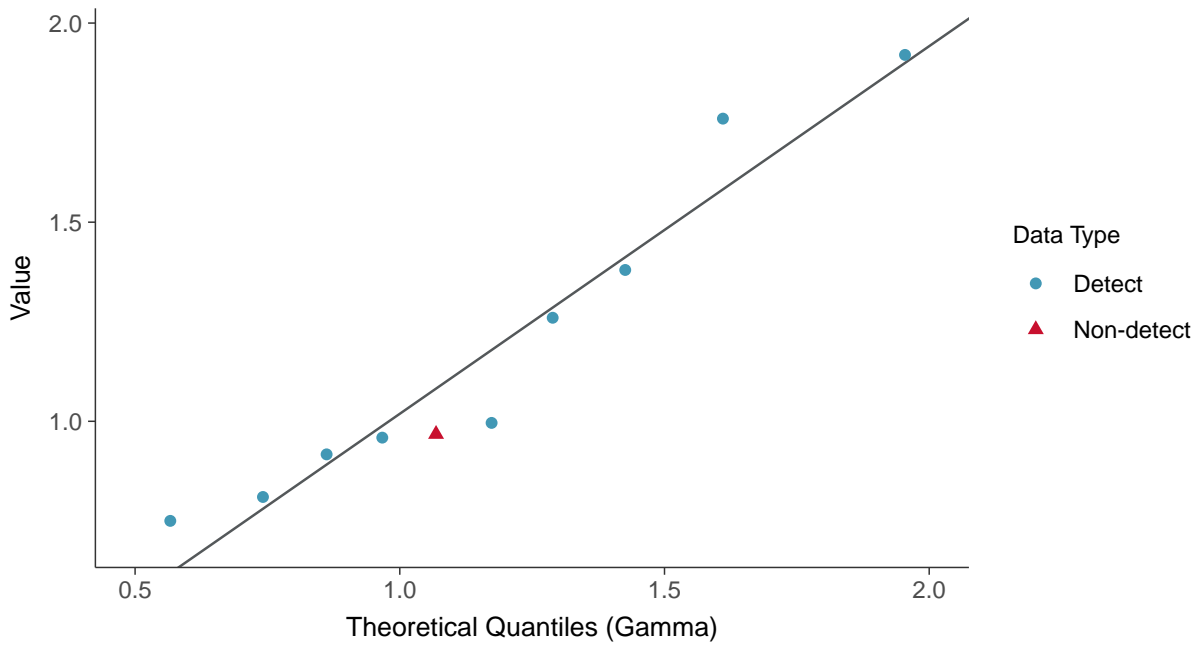
Radium 226 and 228, MW-03 (pCi/L)





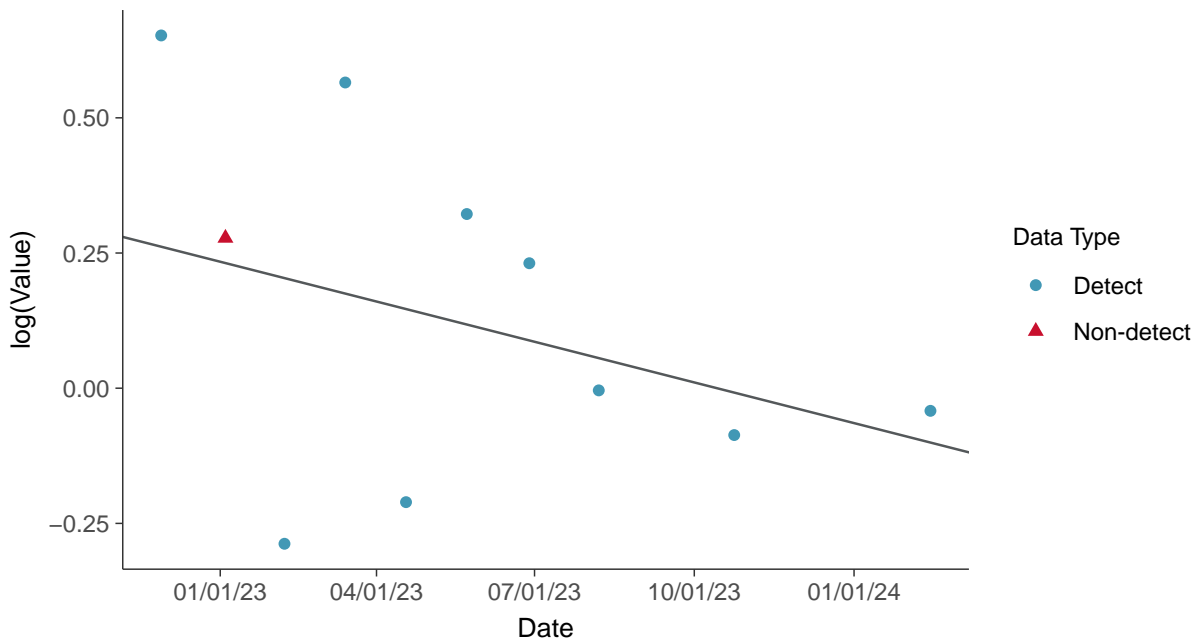
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-03 (pCi/L)



Trend Regression: Lognormal MLE

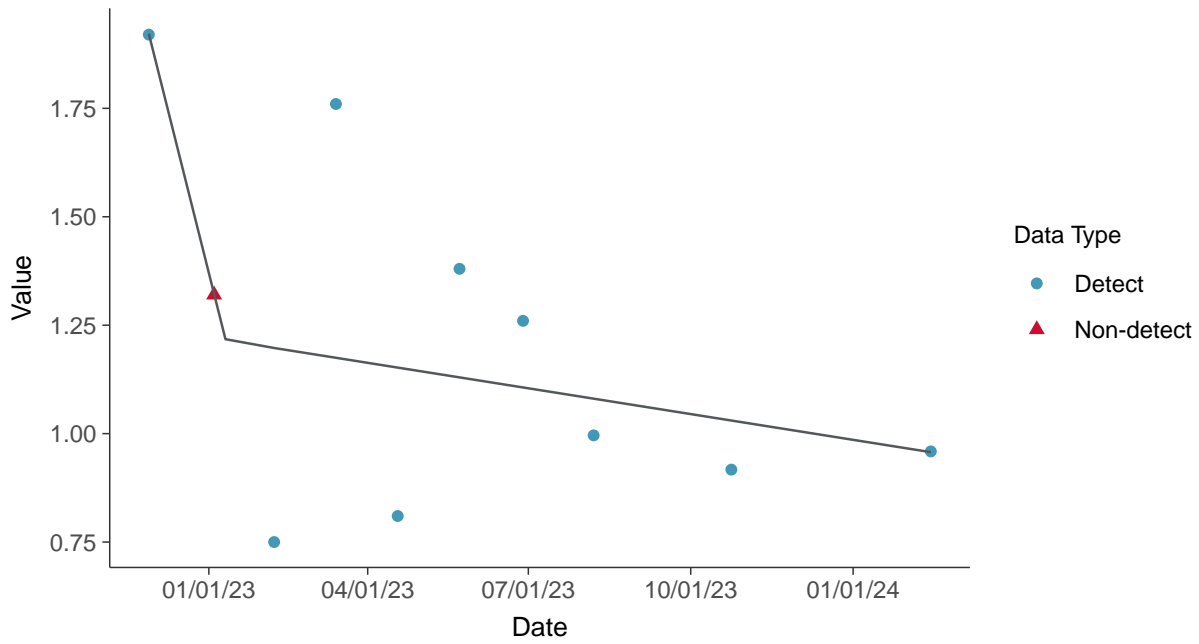
Radium 226 and 228, MW-03 (pCi/L)





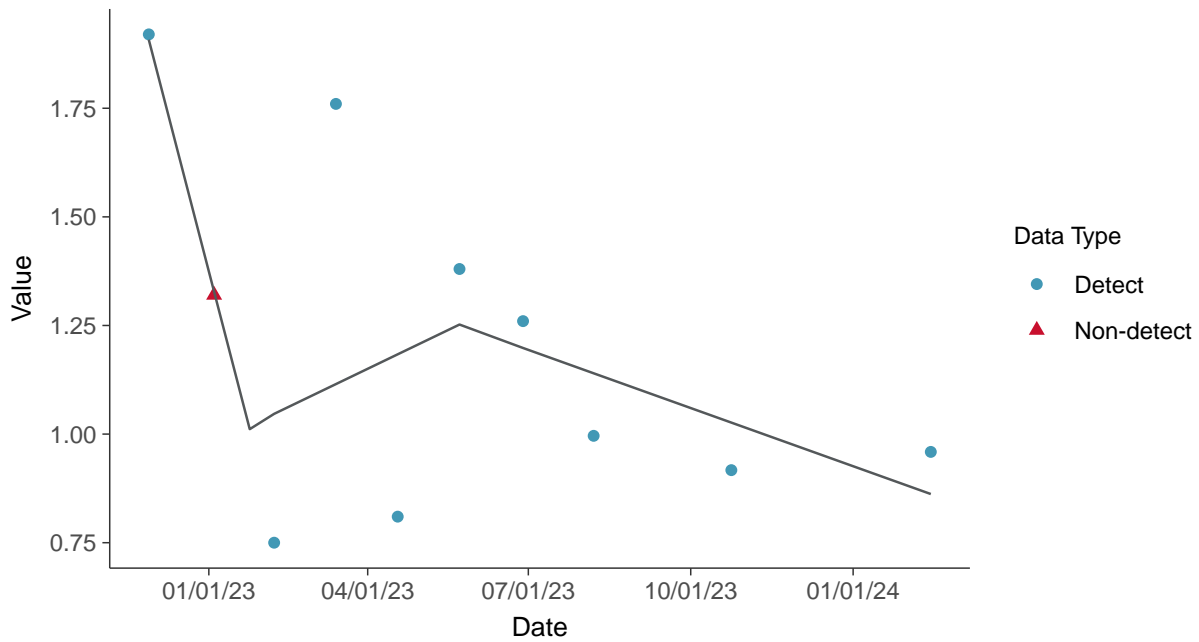
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-03 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-03 (pCi/L)



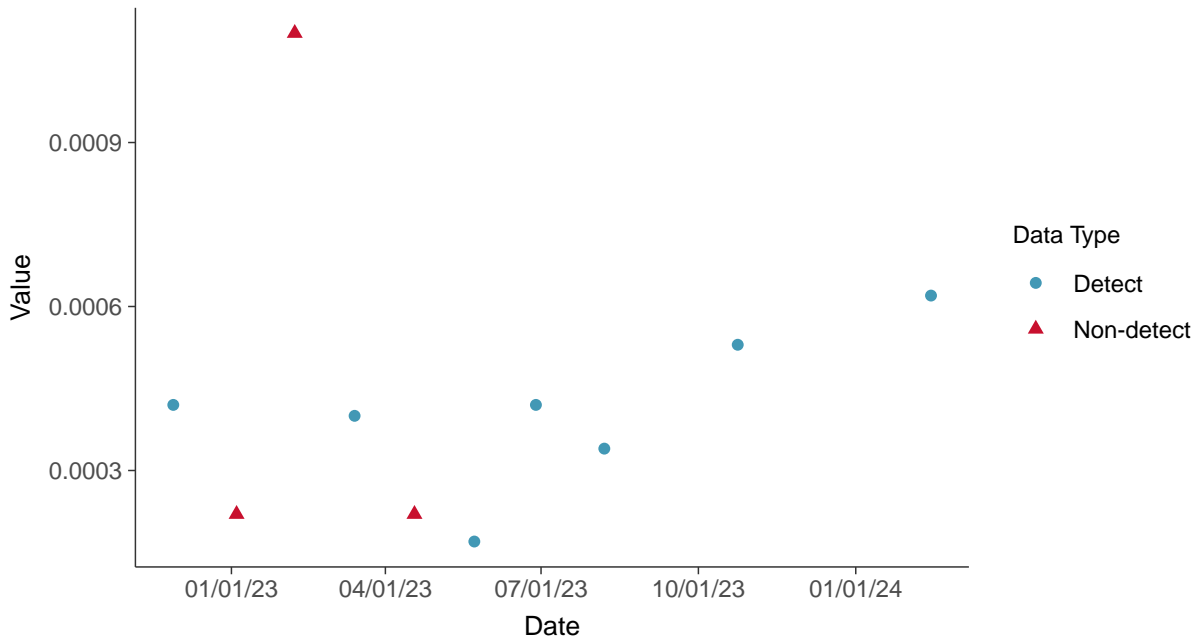


Appendix IV: Selenium, MW-03

ID: 2_13_5_122

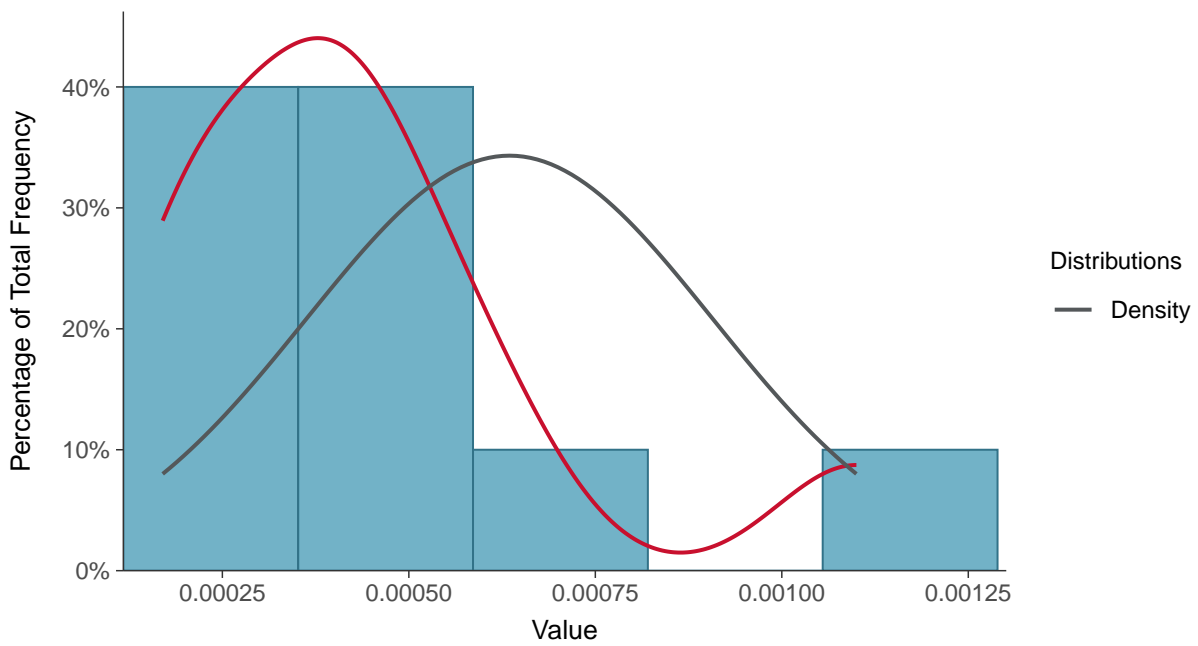
Scatter Plot

Selenium, MW-03 (mg/L)



Histogram

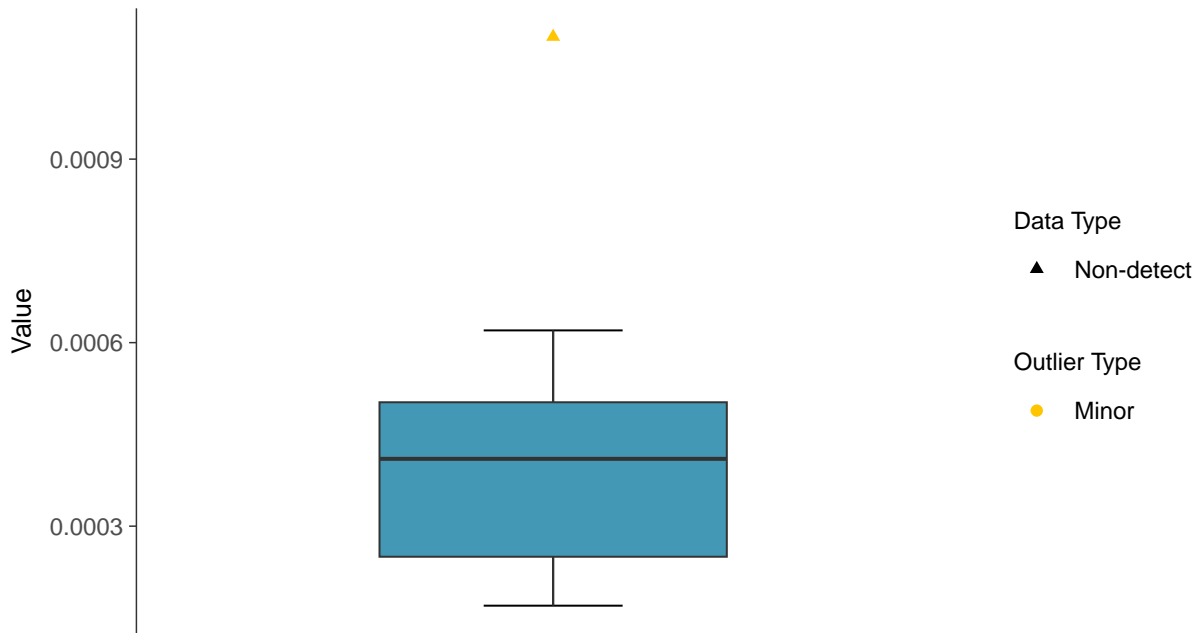
Selenium, MW-03 (mg/L)





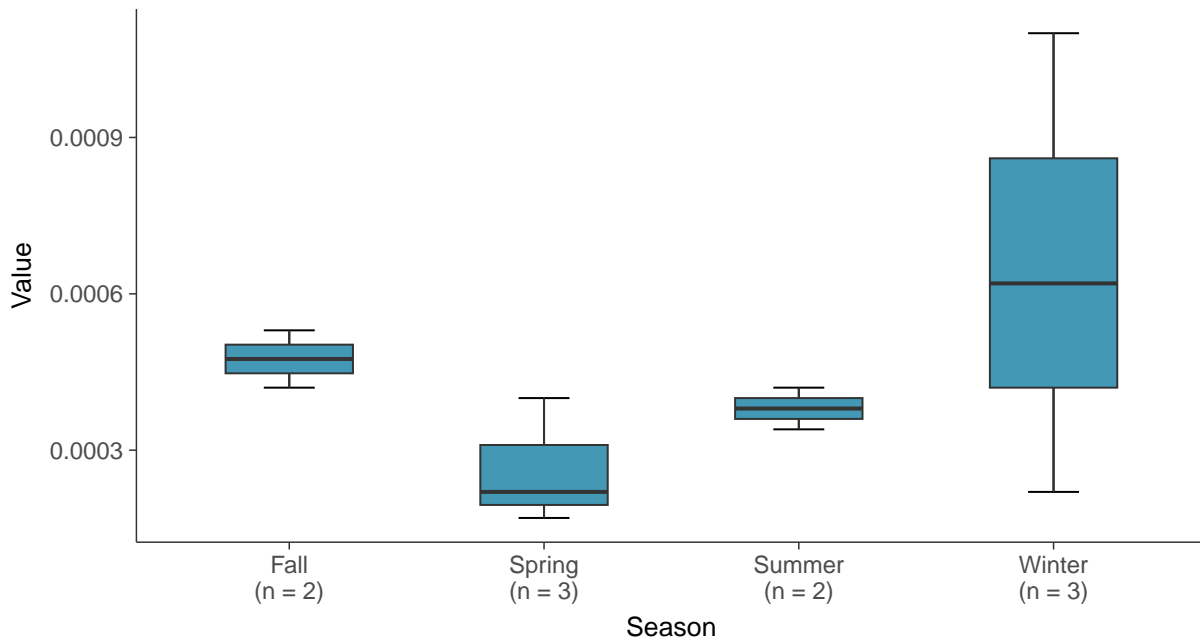
Boxplot

Selenium, MW-03 (mg/L)



Boxplot by Season

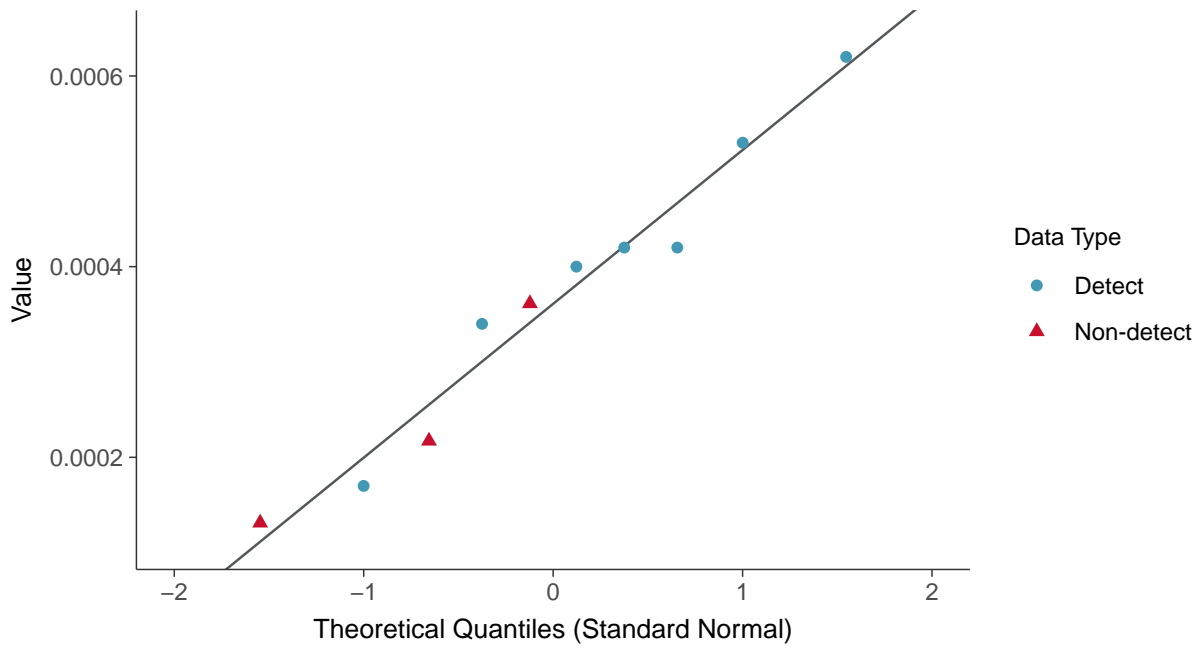
Selenium, MW-03 (mg/L)





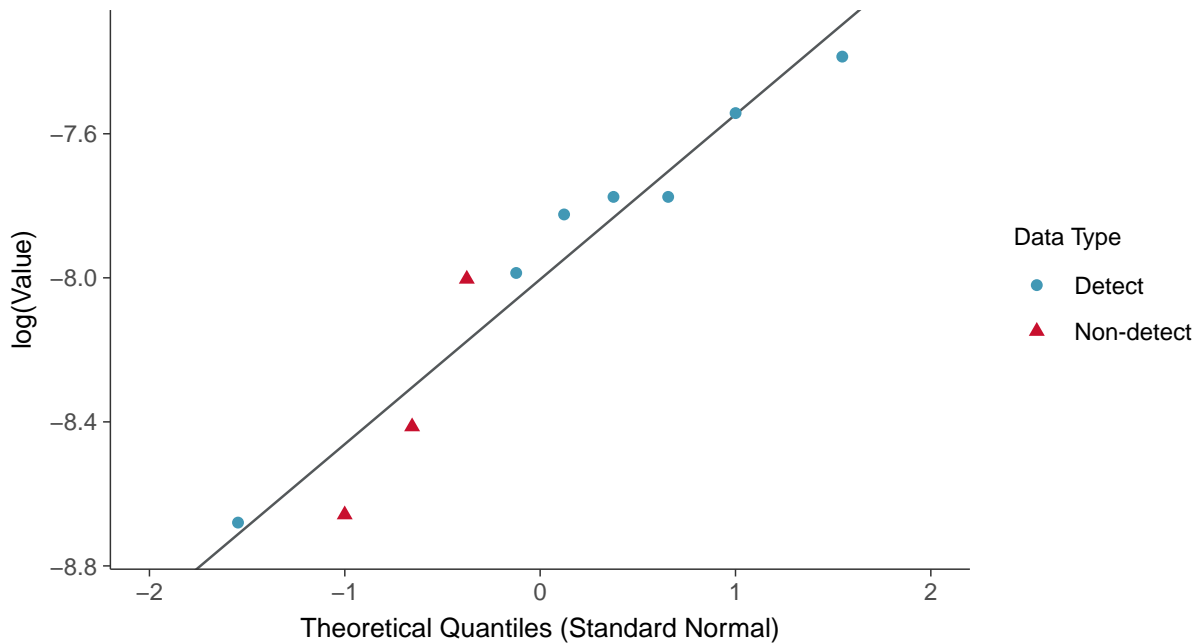
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-03 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

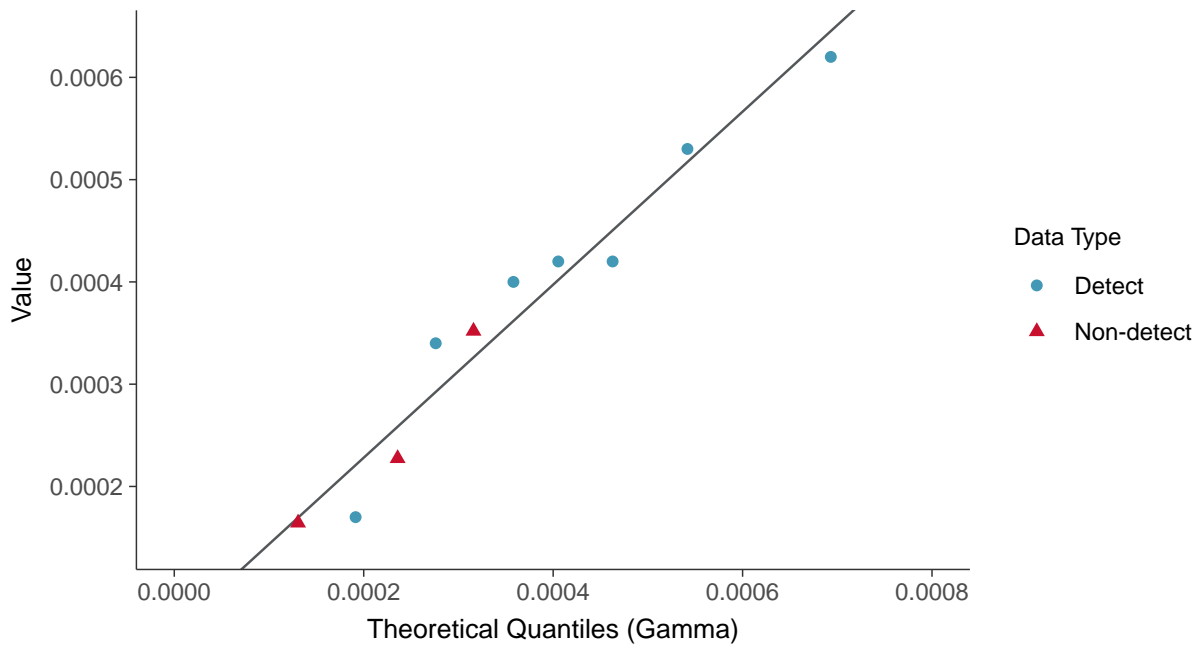
Selenium, MW-03 (mg/L)





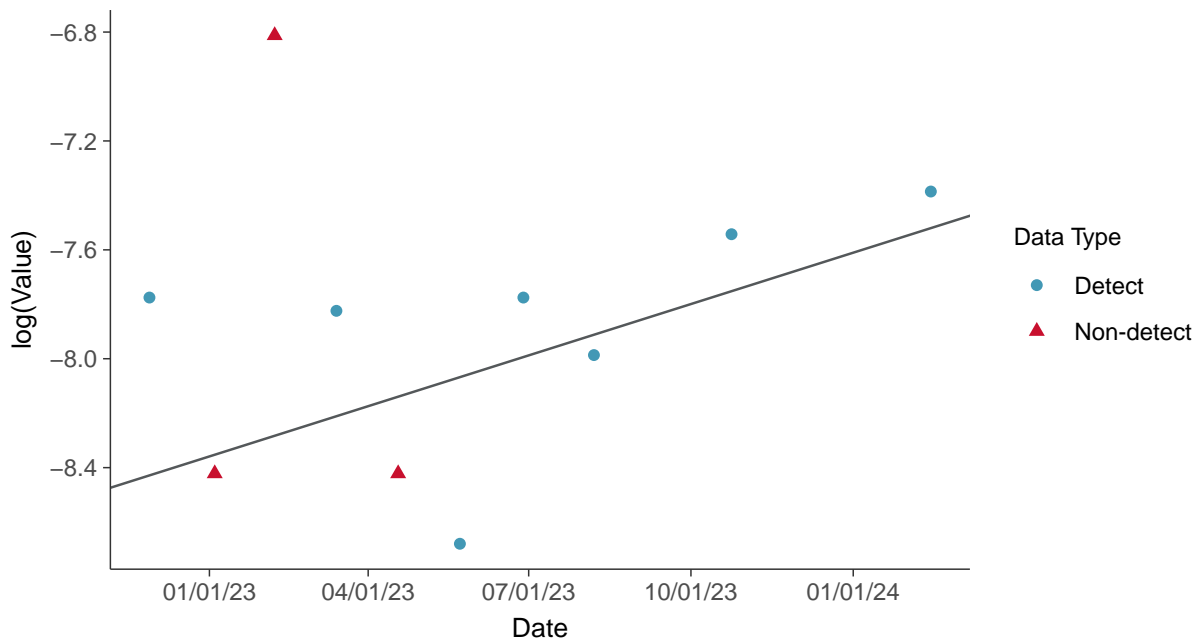
Gamma Q-Q plot using ROS Imputed Estimates

Selenium, MW-03 (mg/L)



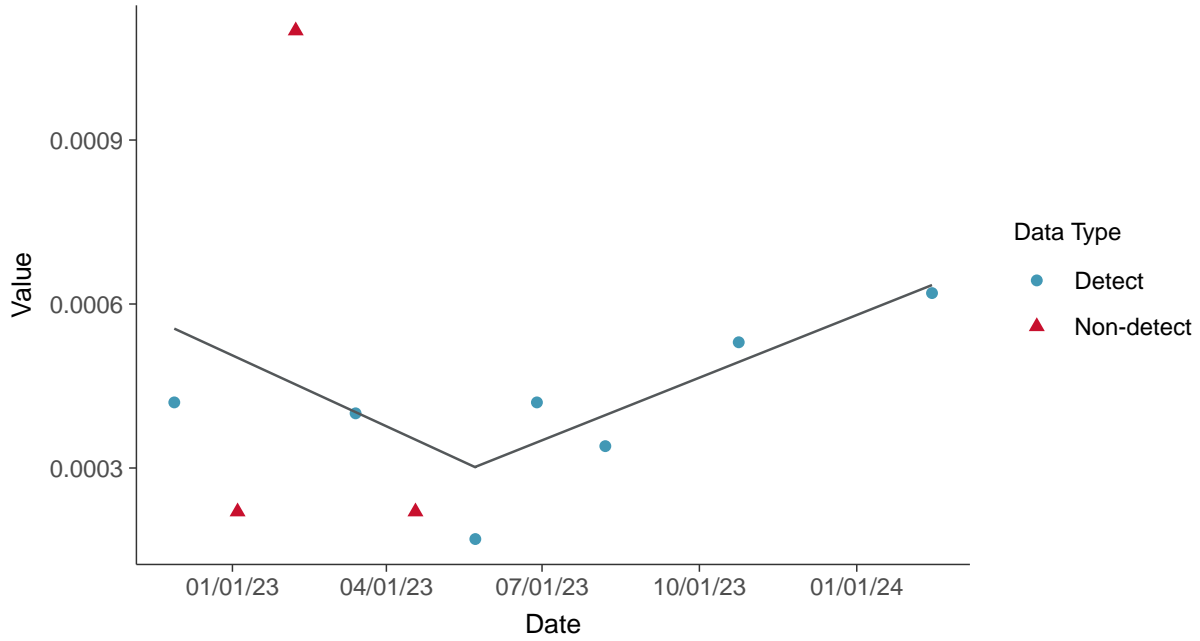
Trend Regression: Lognormal MLE

Selenium, MW-03 (mg/L)

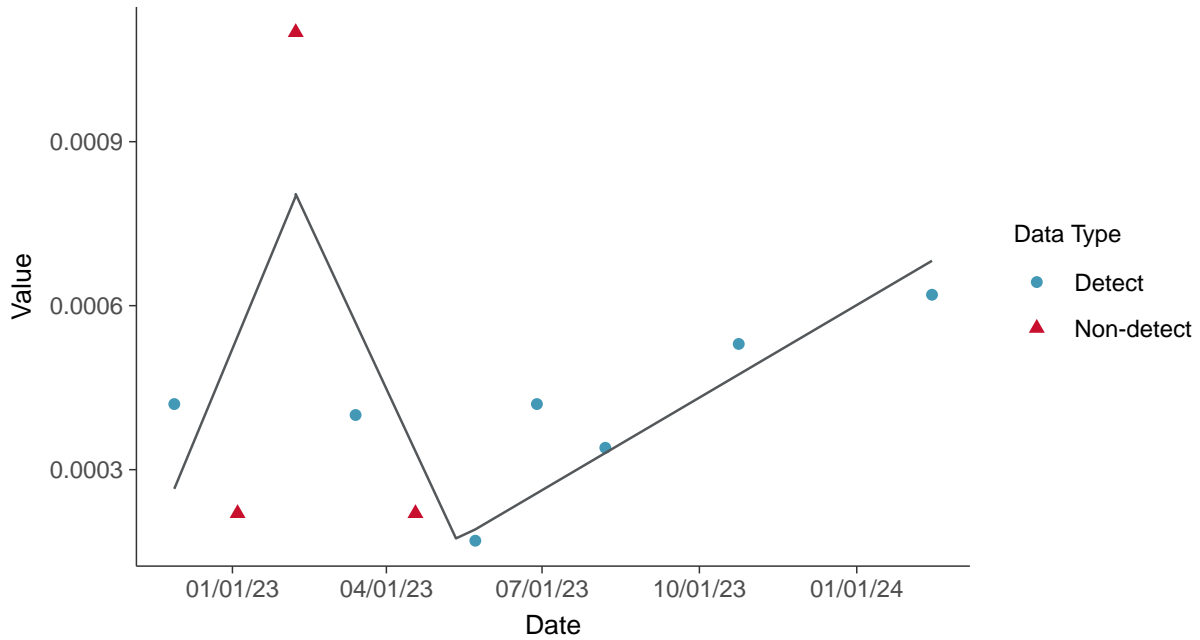




Trend Regression: Piecewise Linear-Linear
Selenium, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-03 (mg/L)



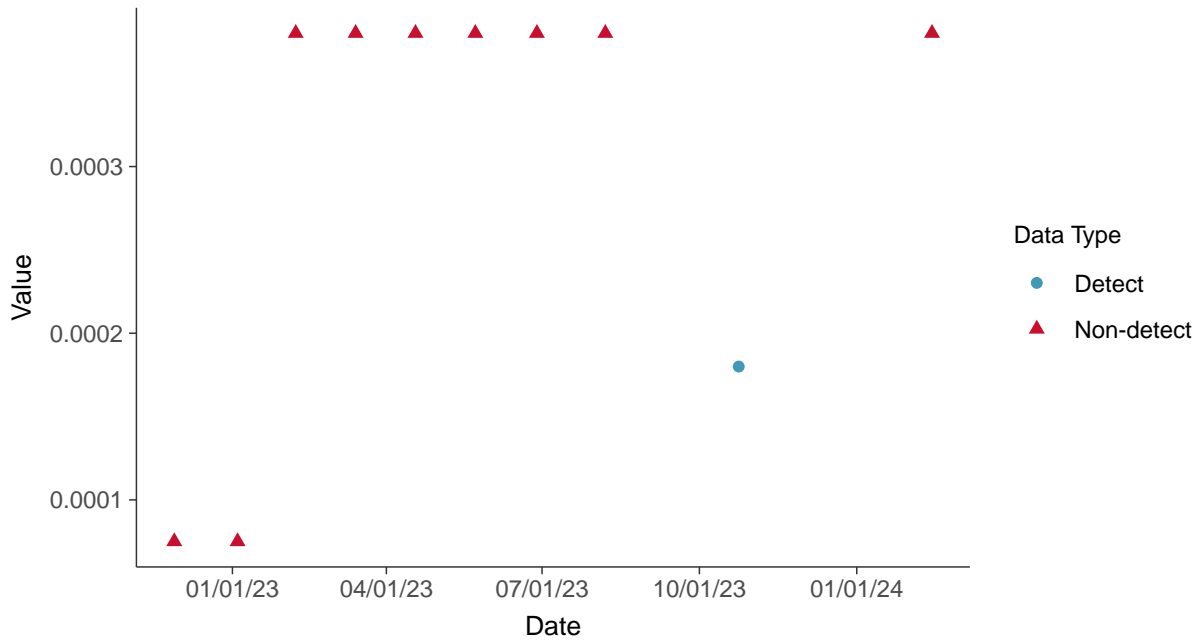


Appendix IV: Thallium, MW-03

ID: 2_13_5_125

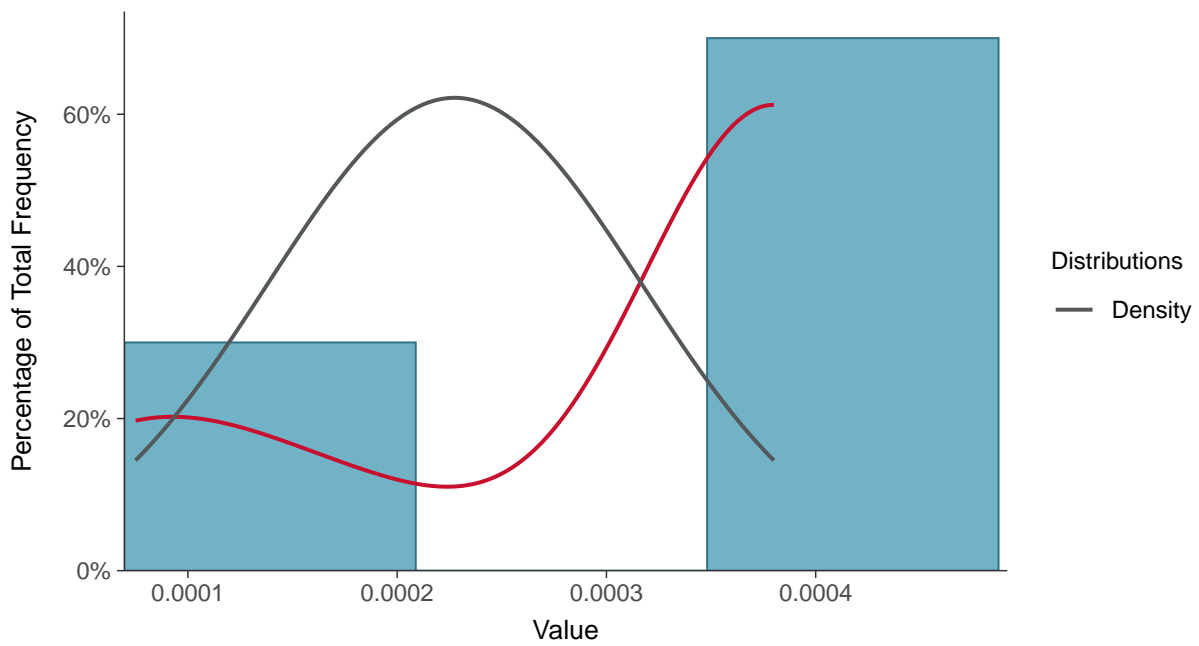
Scatter Plot

Thallium, MW-03 (mg/L)



Histogram

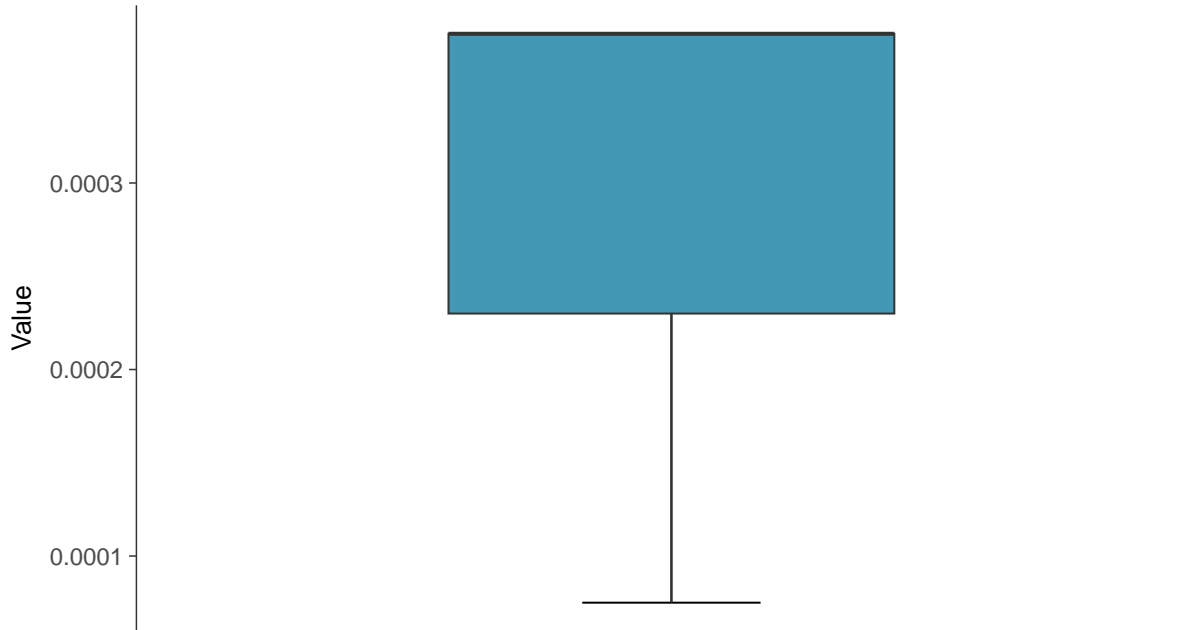
Thallium, MW-03 (mg/L)





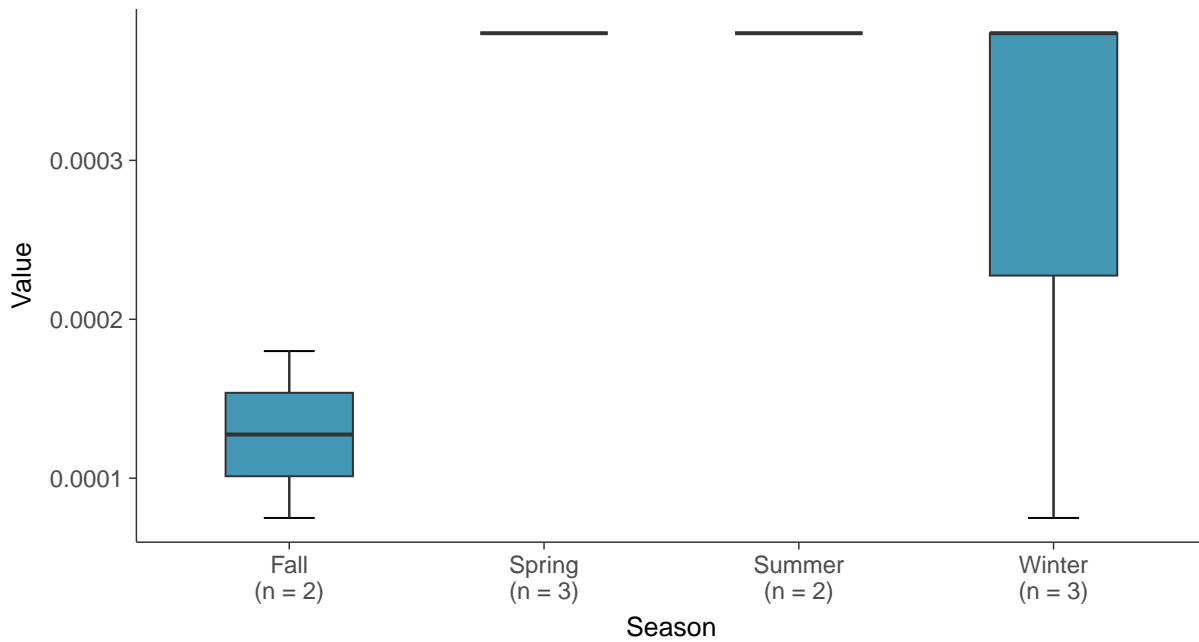
Boxplot

Thallium, MW-03 (mg/L)



Boxplot by Season

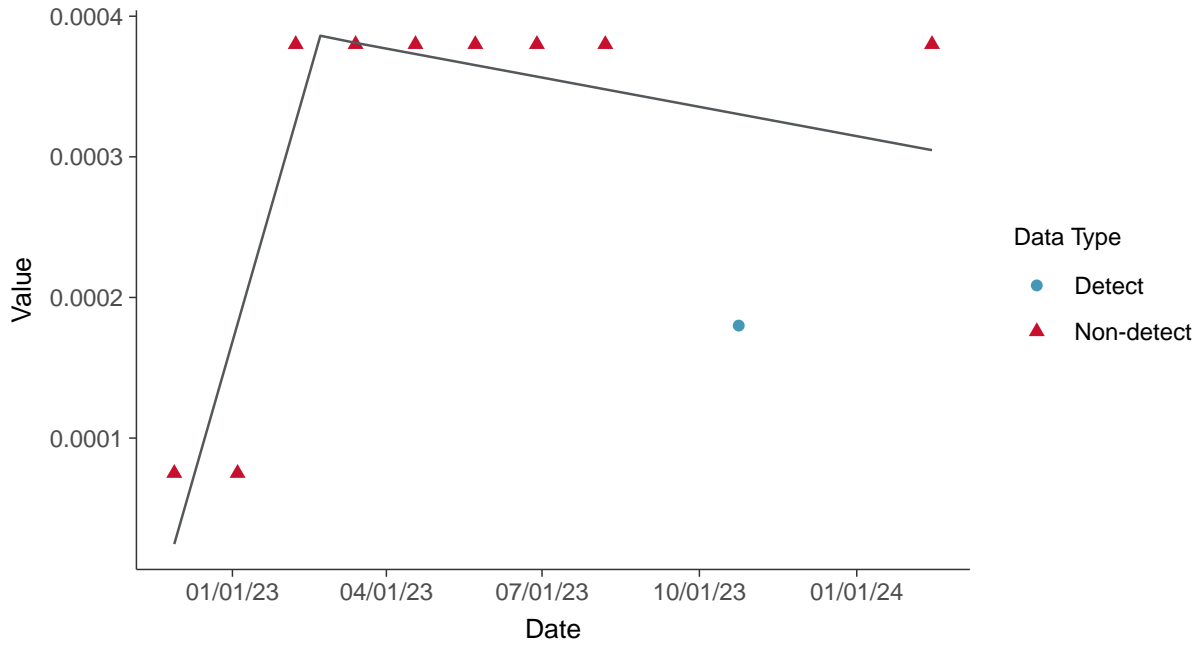
Thallium, MW-03 (mg/L)





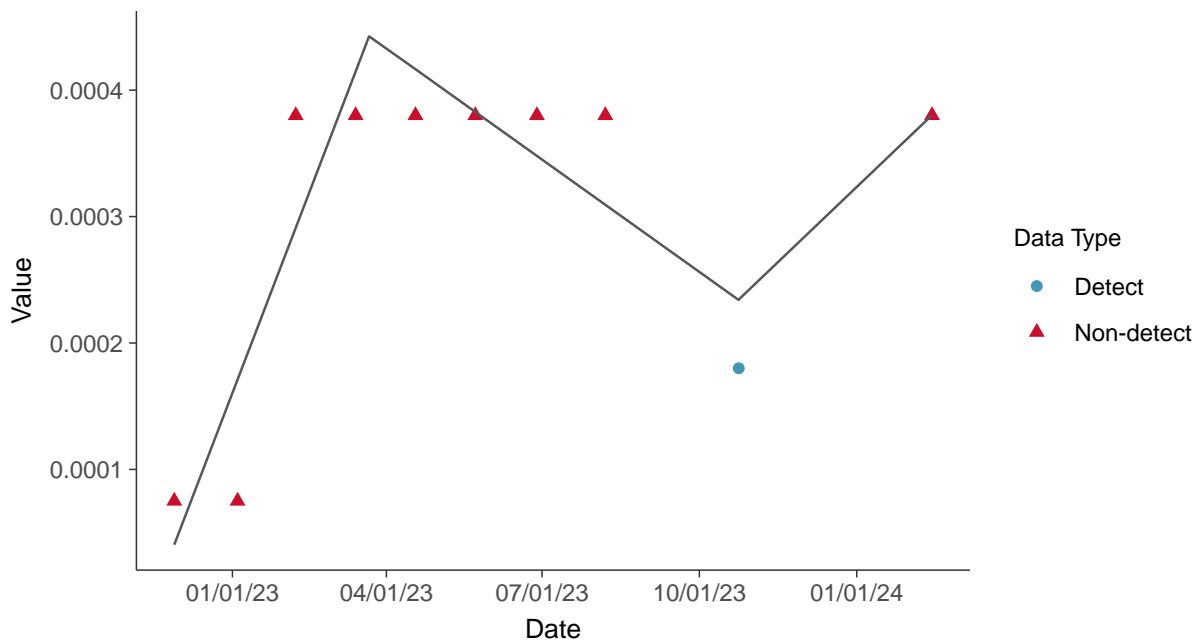
Trend Regression: Piecewise Linear-Linear

Thallium, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

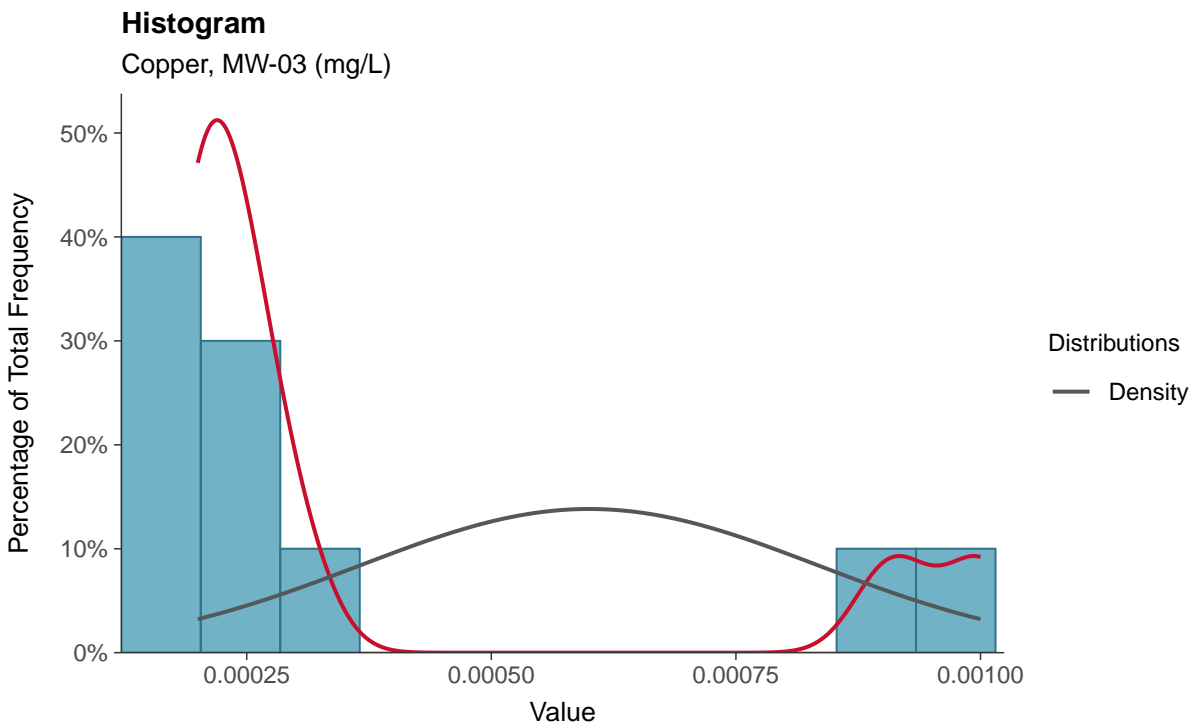
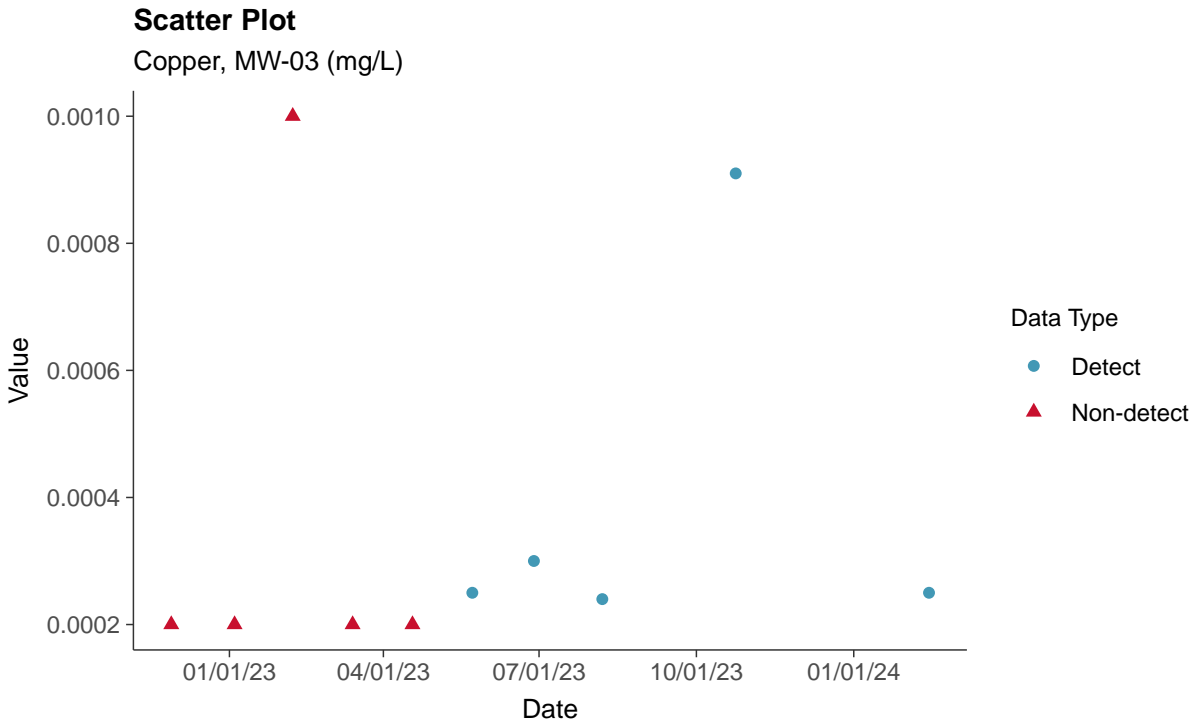
Thallium, MW-03 (mg/L)





Part 115: Copper, MW-03

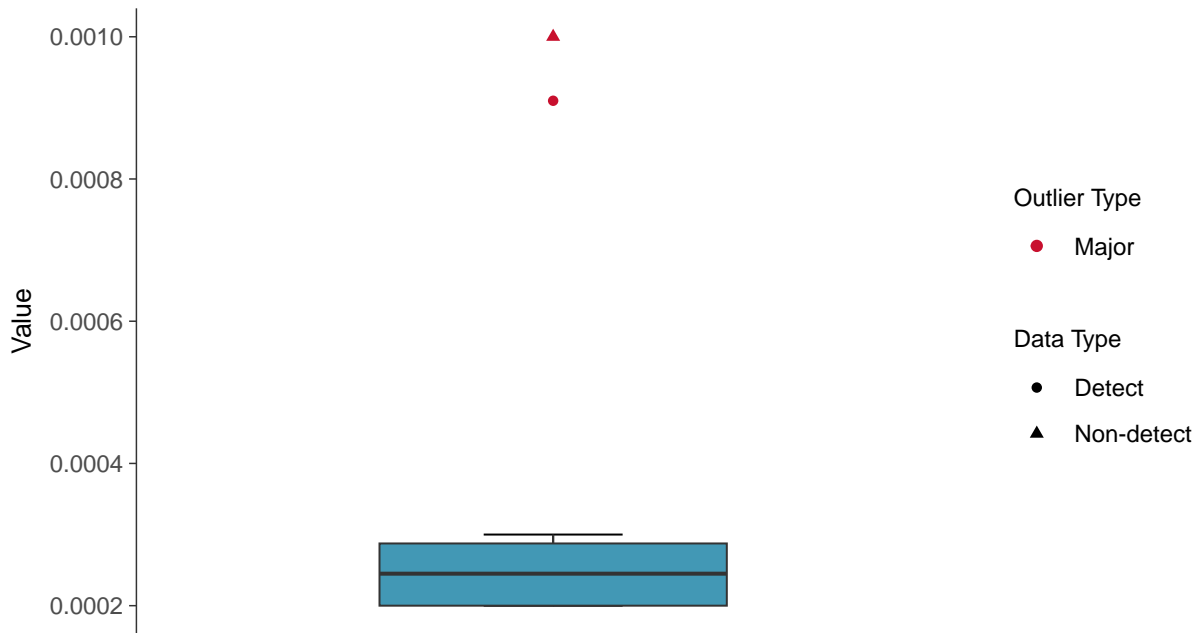
ID: 2_13_6_111





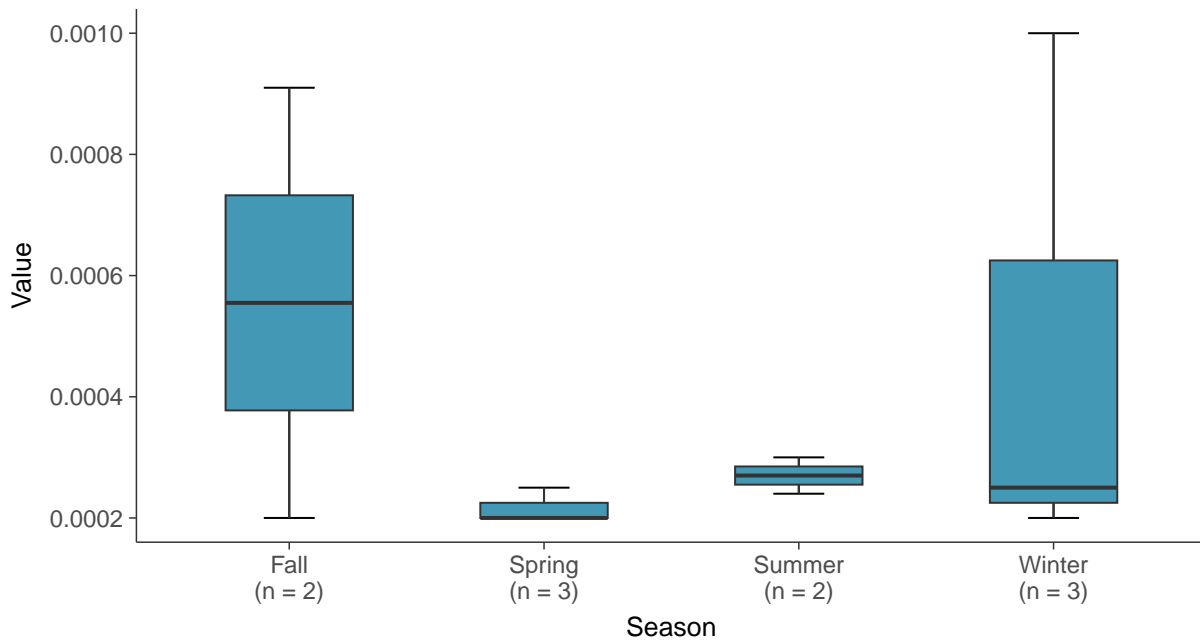
Boxplot

Copper, MW-03 (mg/L)



Boxplot by Season

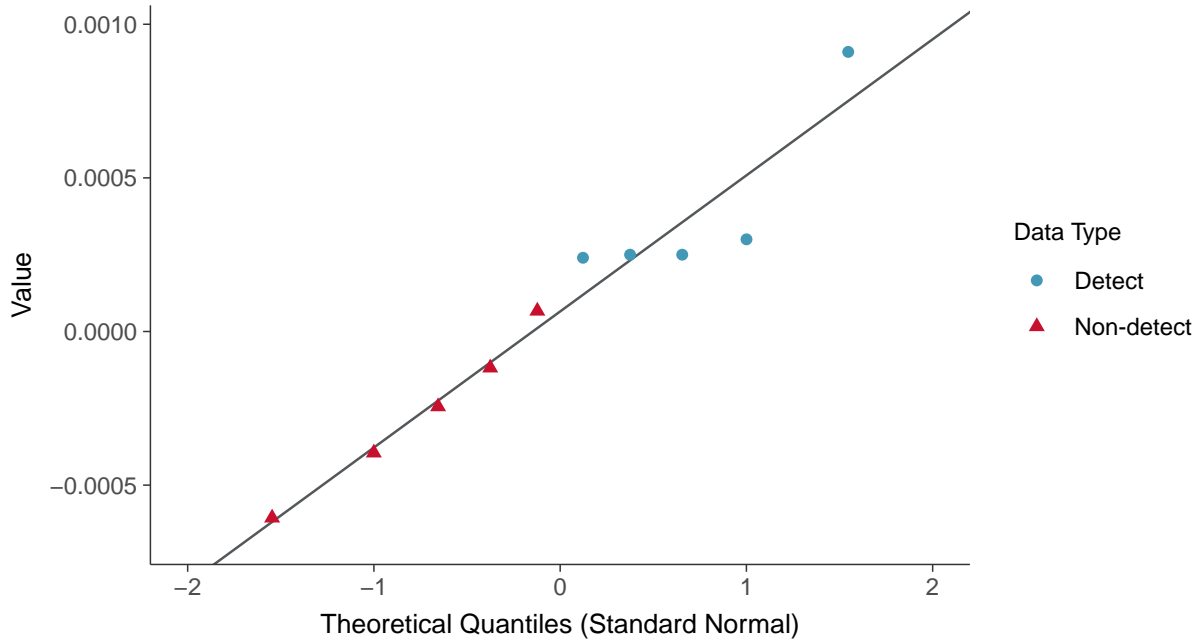
Copper, MW-03 (mg/L)





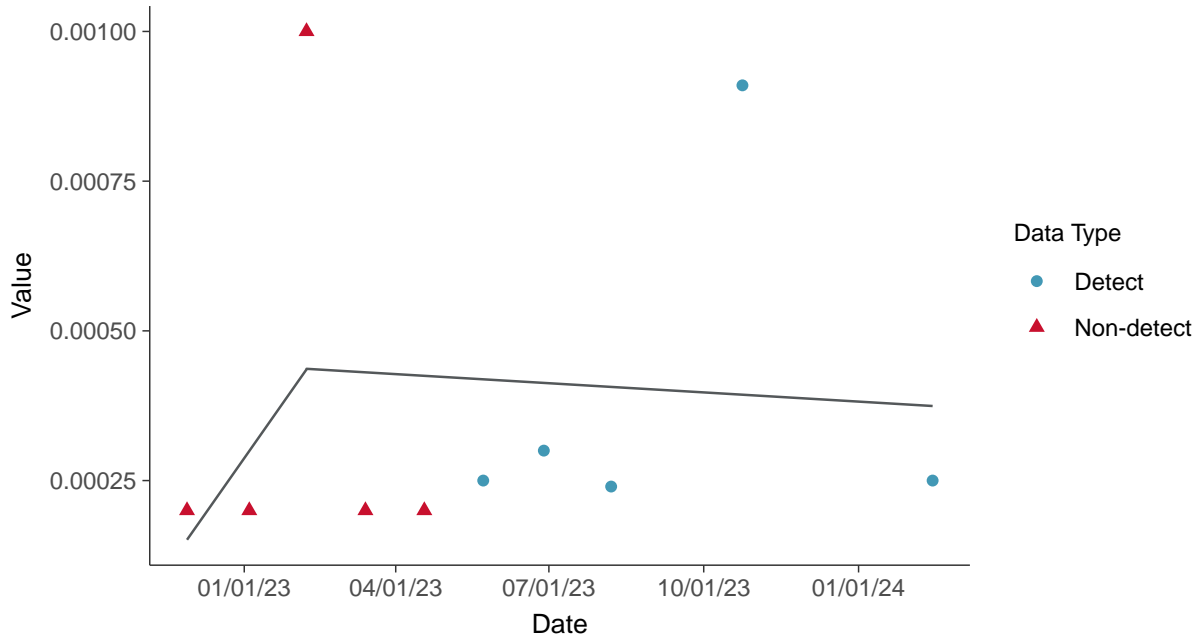
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear

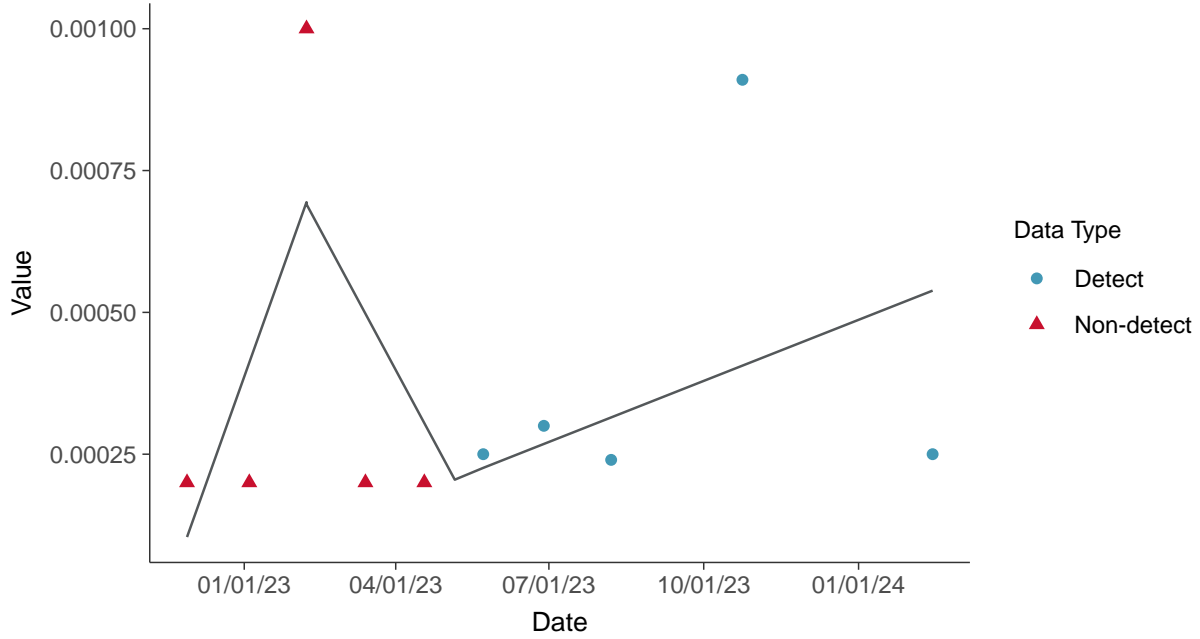
Copper, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

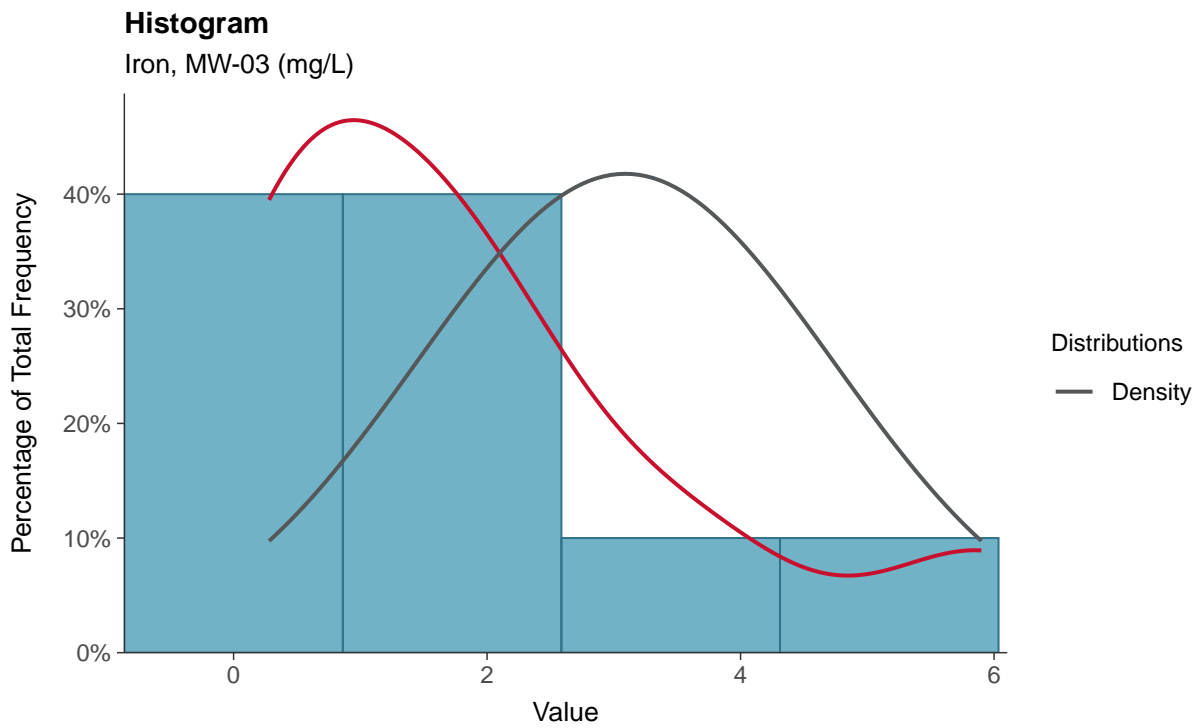
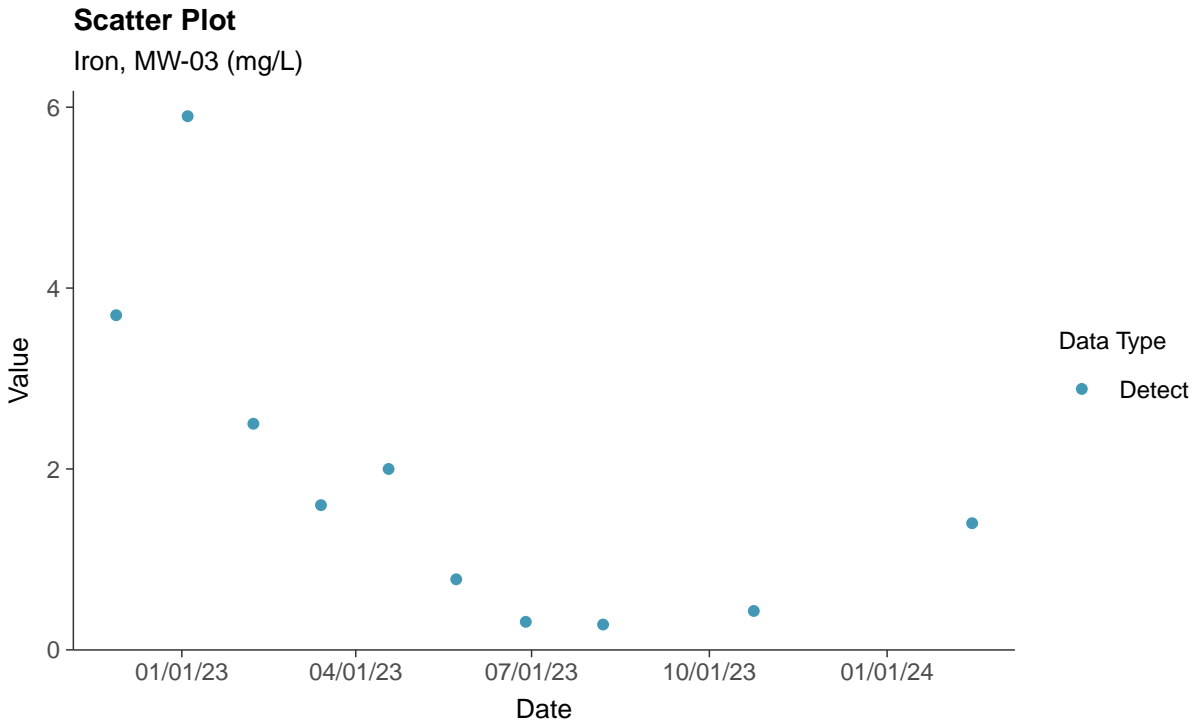
Copper, MW-03 (mg/L)





Part 115: Iron, MW-03

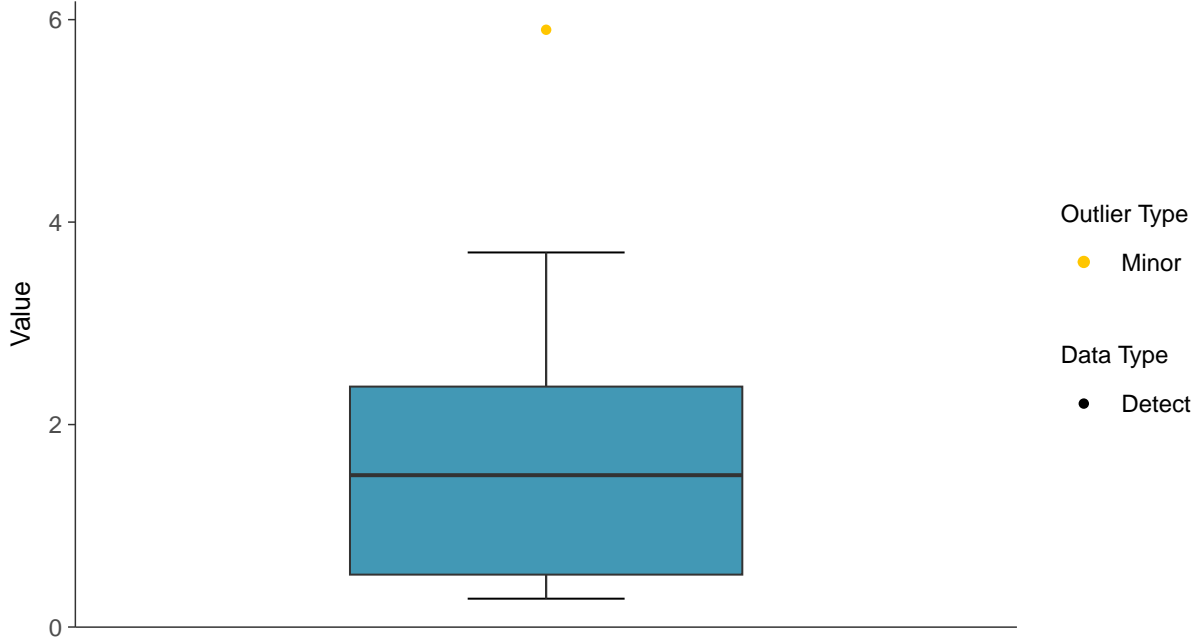
ID: 2_13_6_114





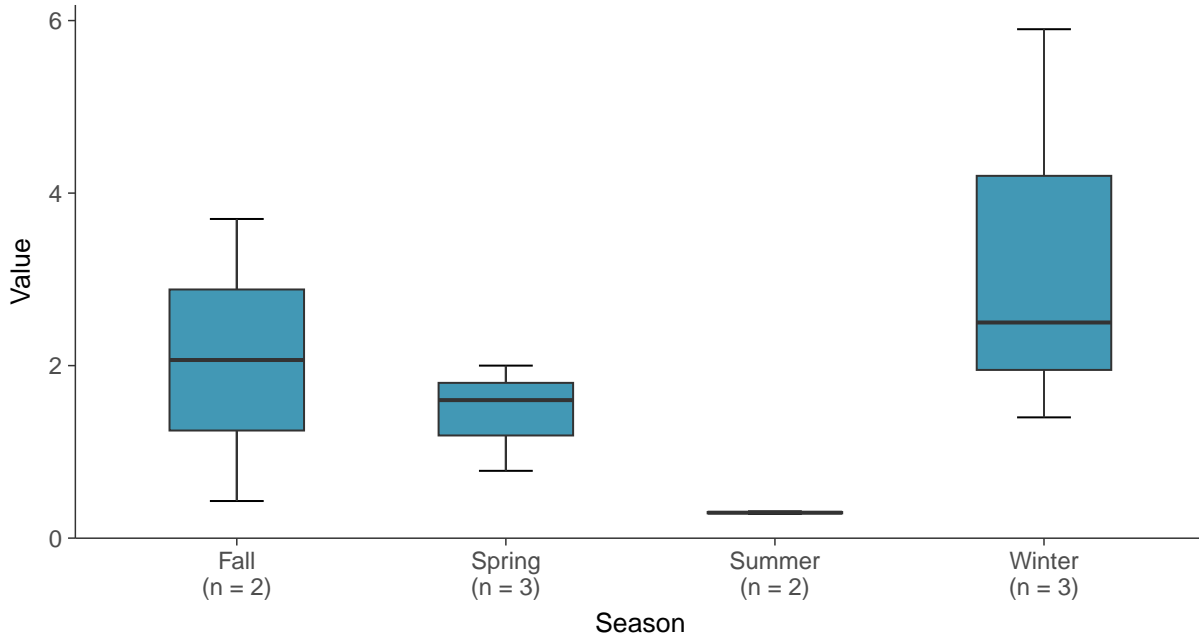
Boxplot

Iron, MW-03 (mg/L)



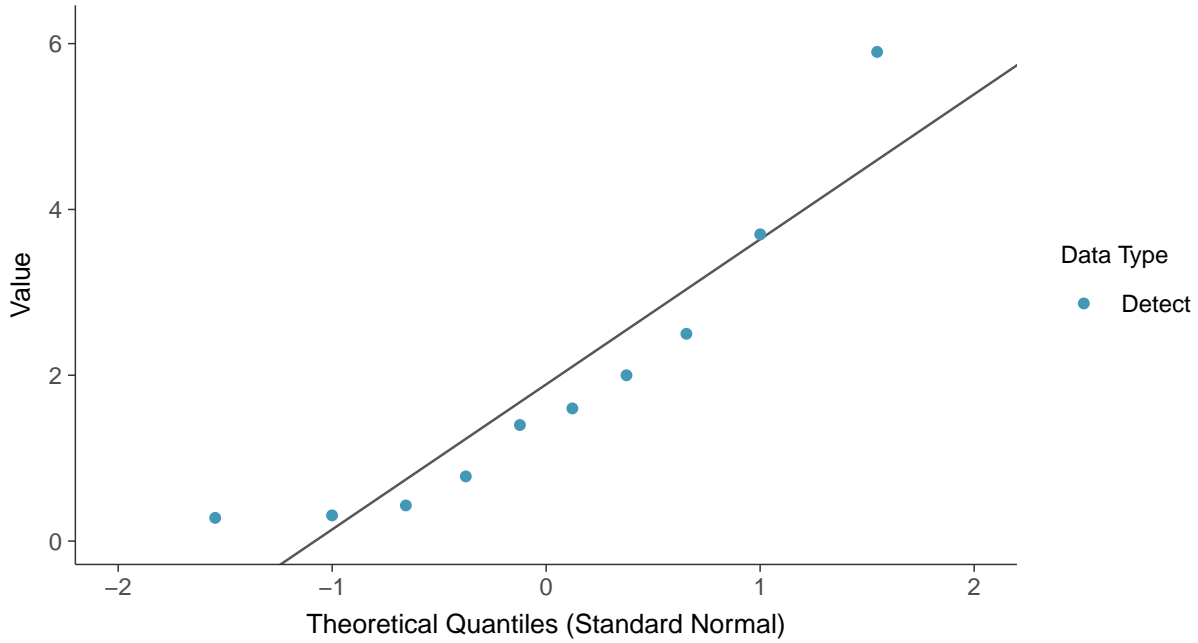
Boxplot by Season

Iron, MW-03 (mg/L)

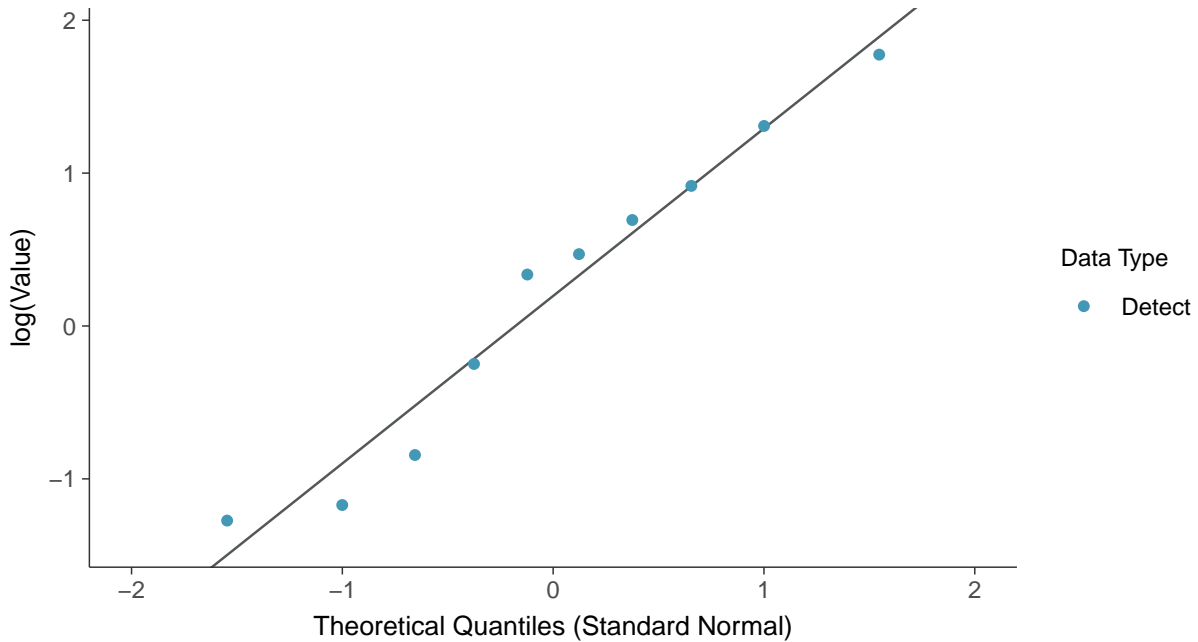




Normal Q-Q plot
Iron, MW-03 (mg/L)

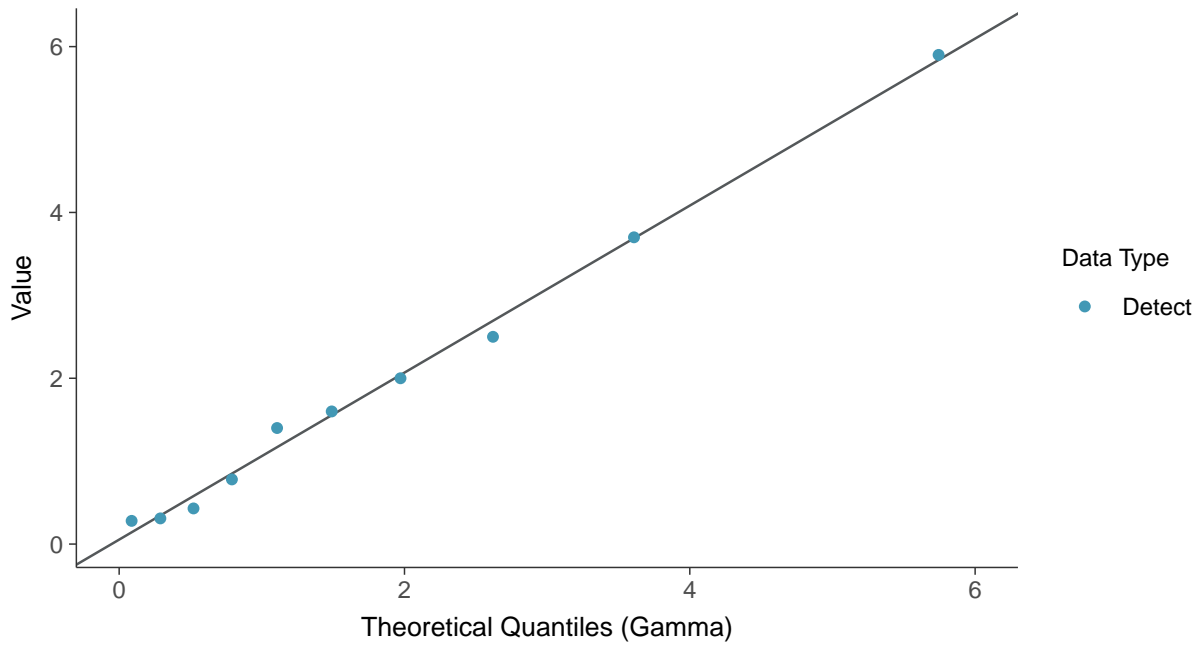


Lognormal Q-Q plot
Iron, MW-03 (mg/L)

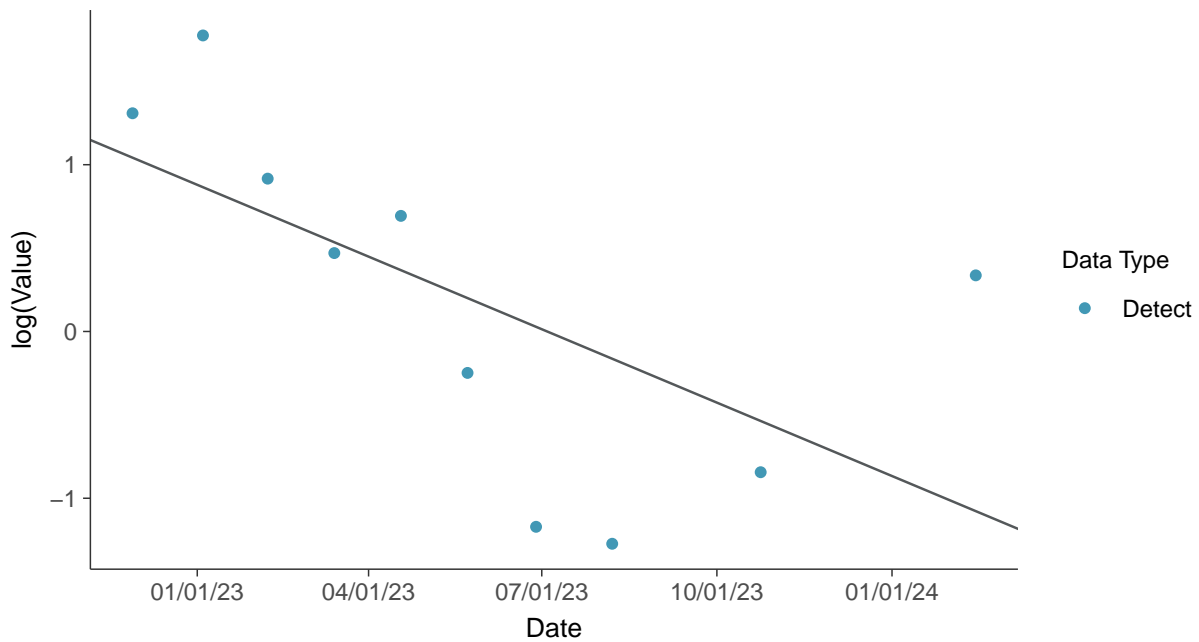




Gamma Q-Q plot
Iron, MW-03 (mg/L)



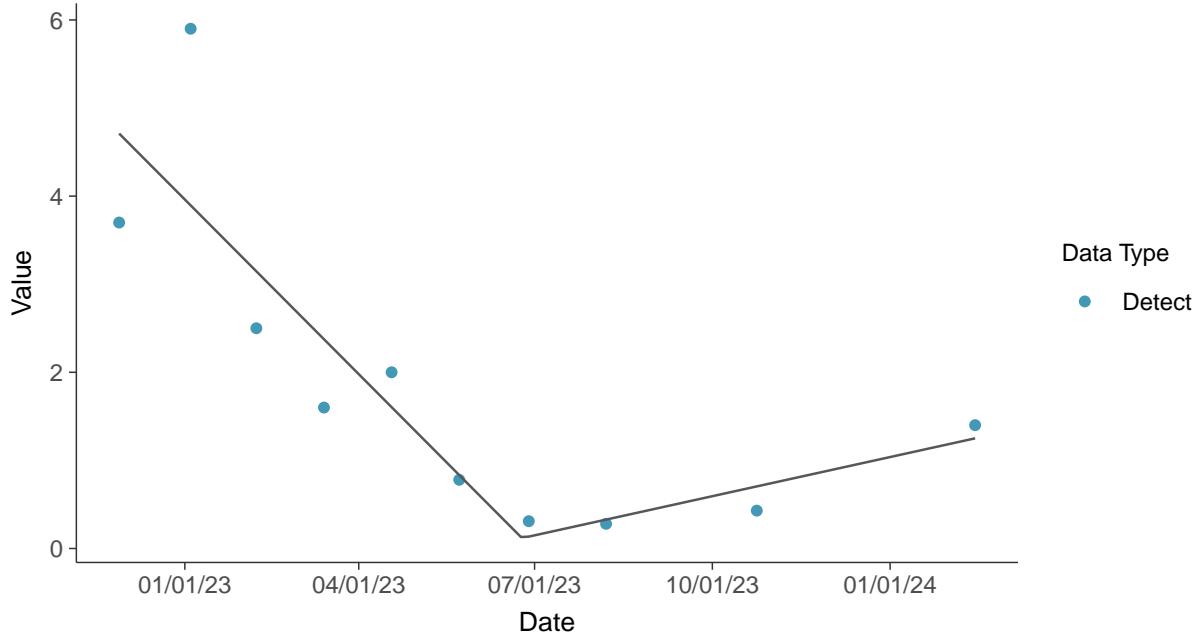
Trend Regression: Lognormal MLE
Iron, MW-03 (mg/L)





Trend Regression: Piecewise Linear-Linear

Iron, MW-03 (mg/L)



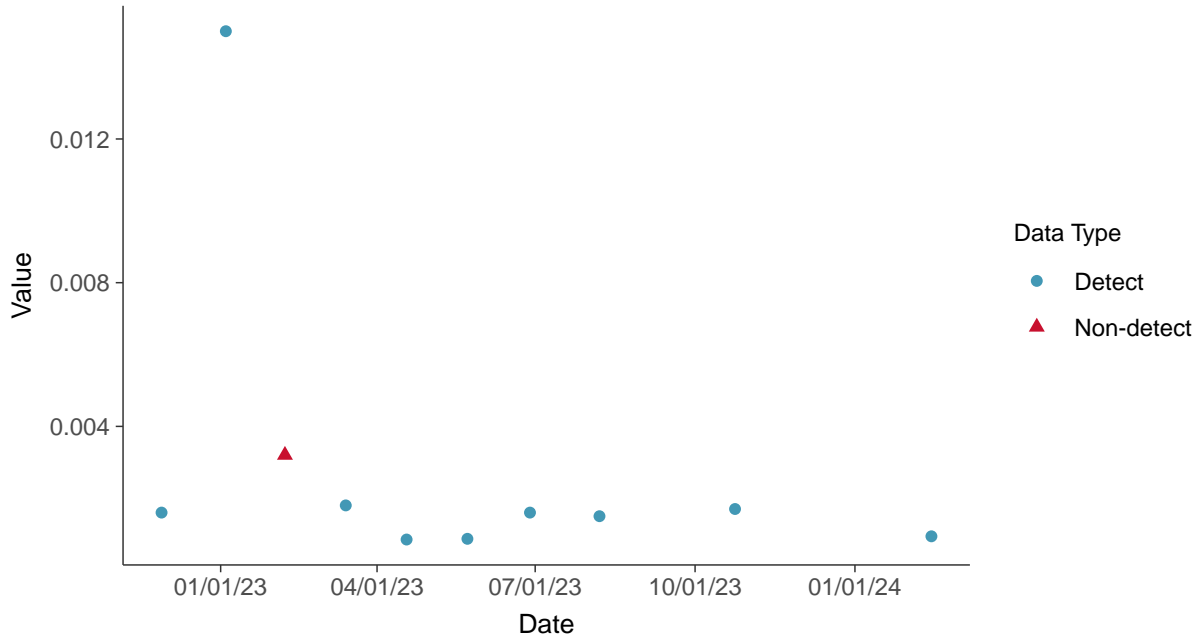


Part 115: Nickel, MW-03

ID: 2_13_6_119

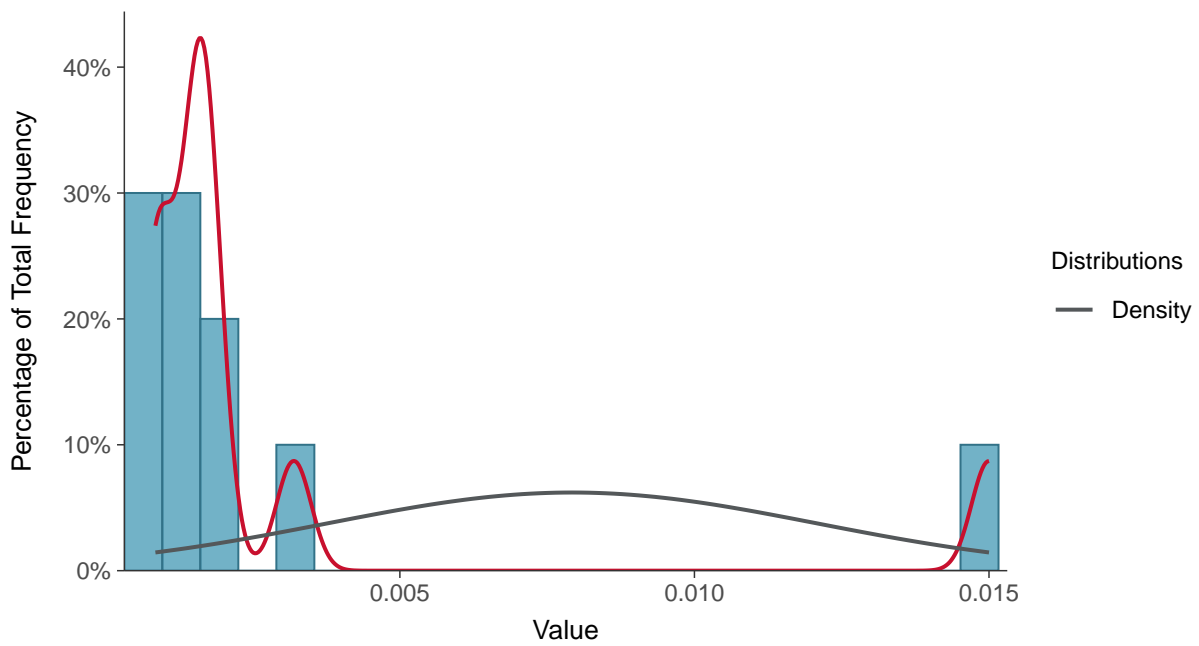
Scatter Plot

Nickel, MW-03 (mg/L)



Histogram

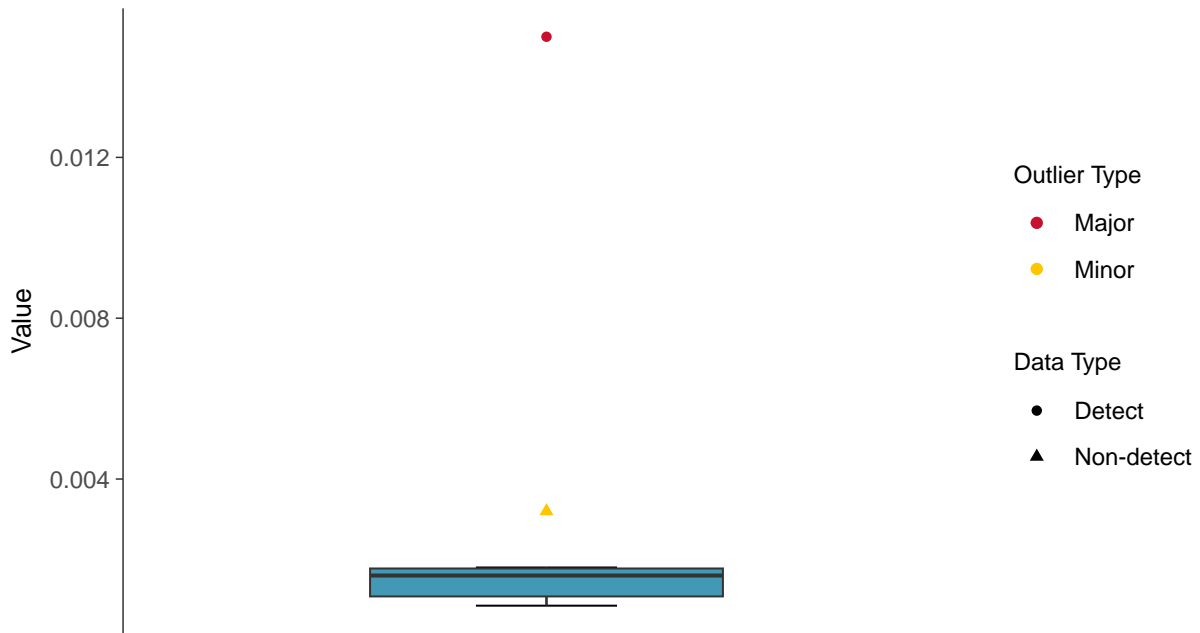
Nickel, MW-03 (mg/L)





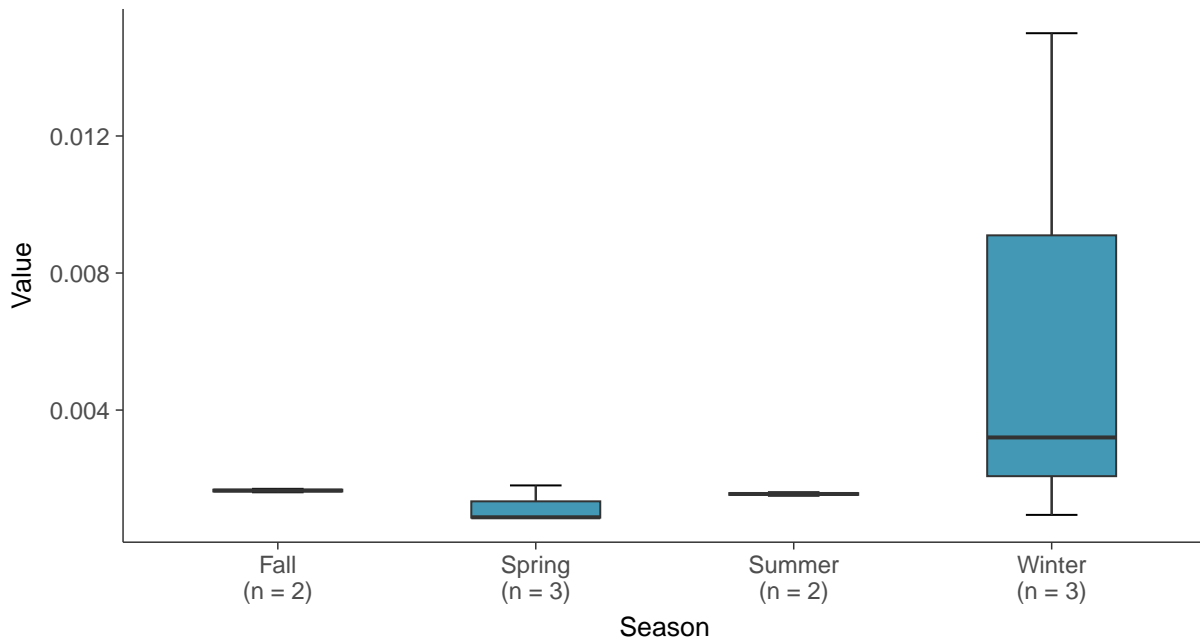
Boxplot

Nickel, MW-03 (mg/L)



Boxplot by Season

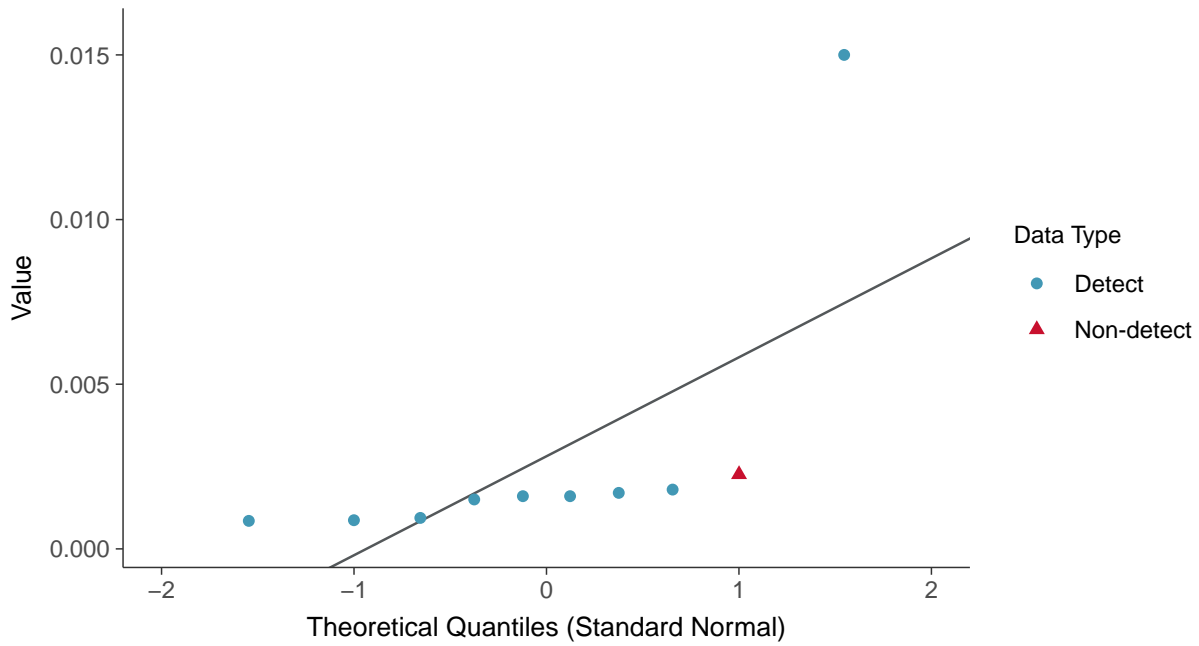
Nickel, MW-03 (mg/L)





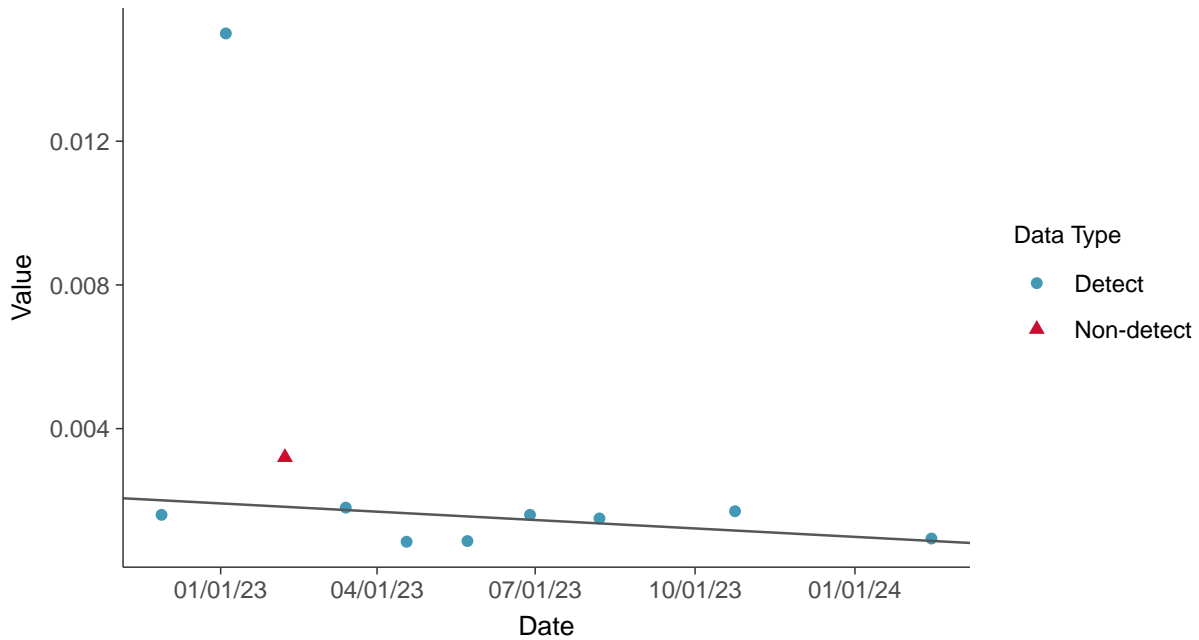
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-03 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Nickel, MW-03 (mg/L)



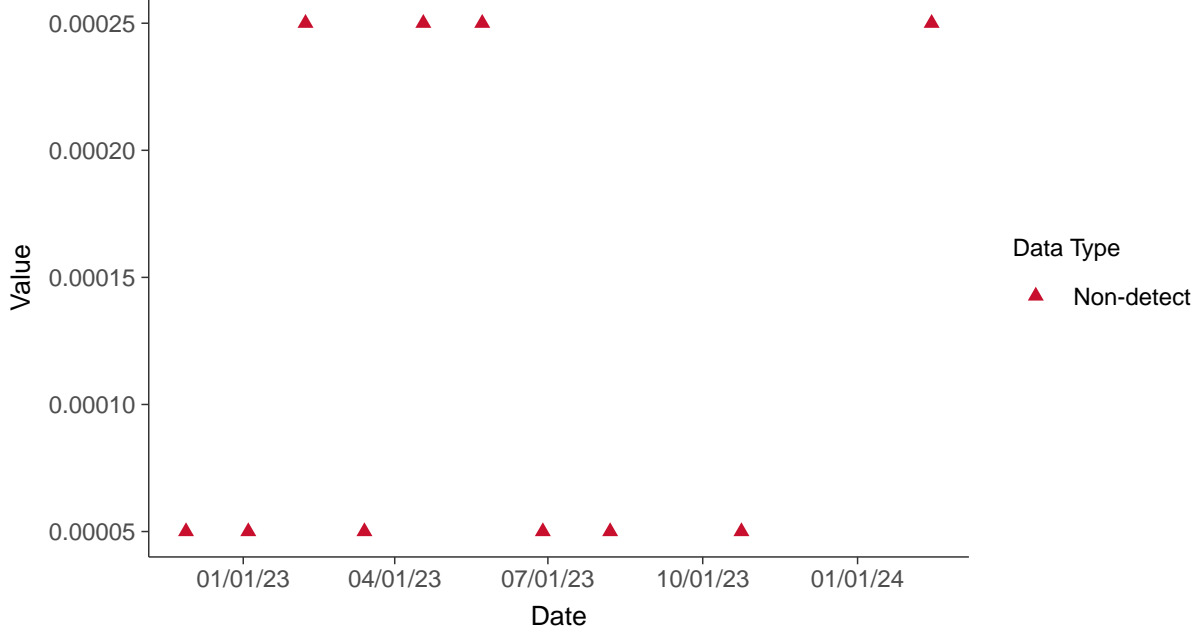


Part 115: Silver, MW-03

ID: 2_13_6_123

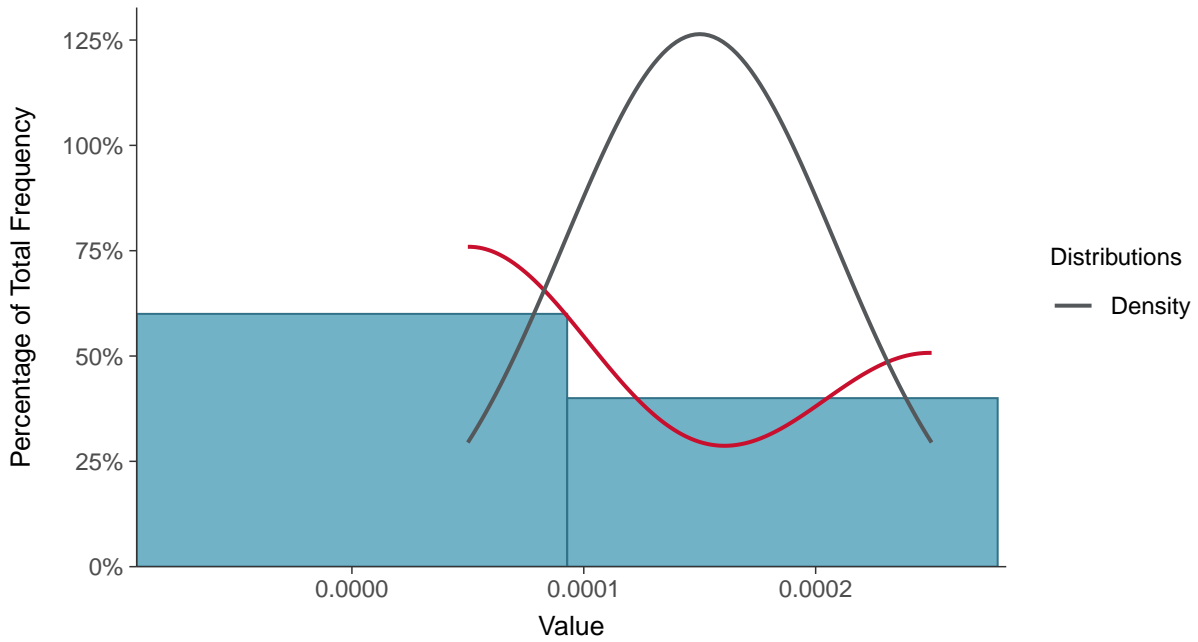
Scatter Plot

Silver, MW-03 (mg/L)



Histogram

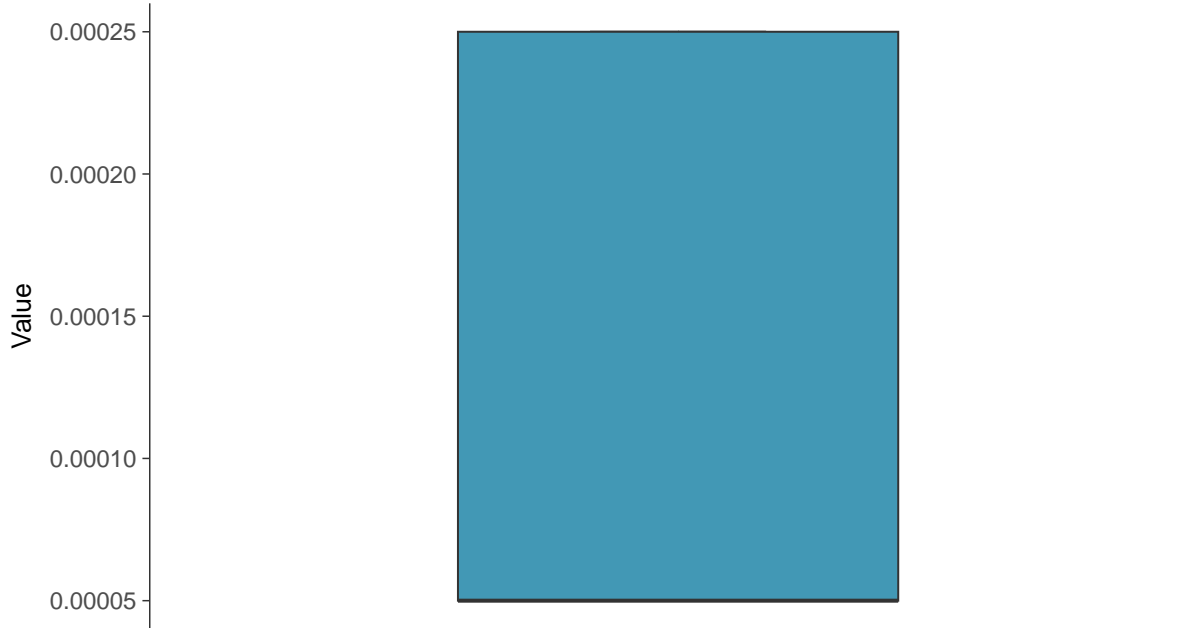
Silver, MW-03 (mg/L)





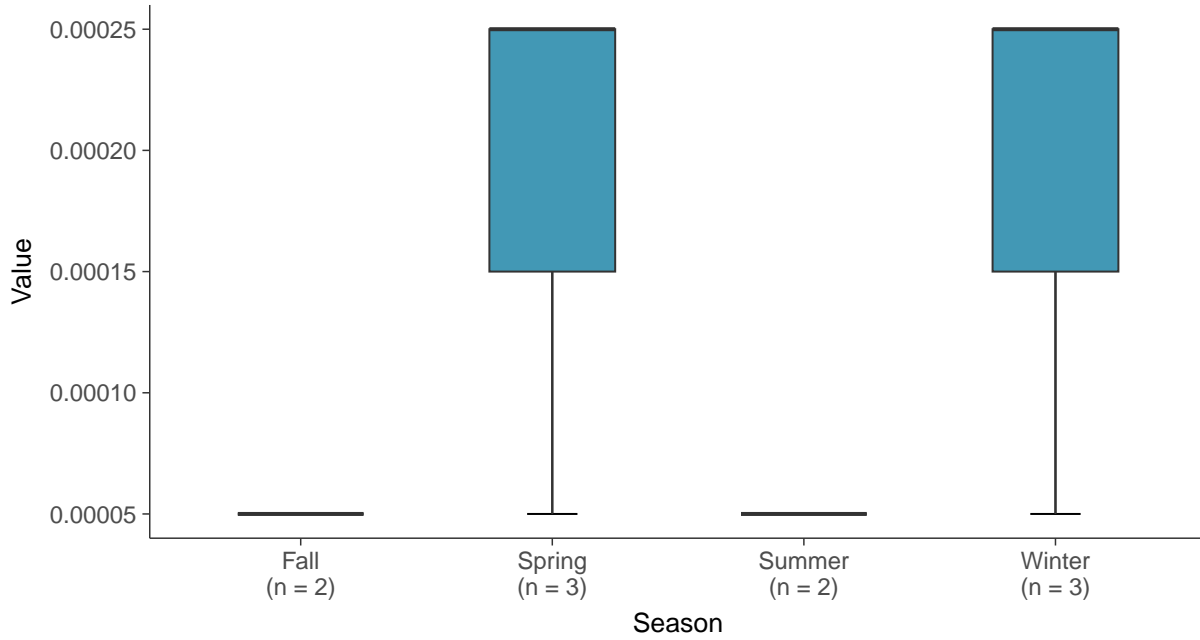
Boxplot

Silver, MW-03 (mg/L)



Boxplot by Season

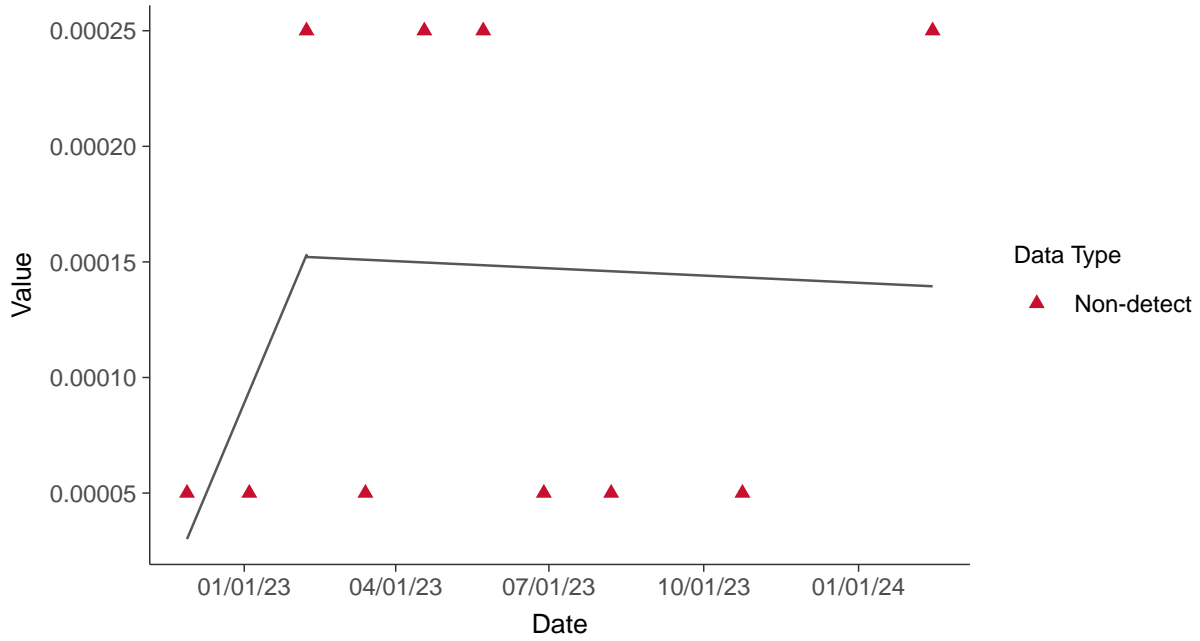
Silver, MW-03 (mg/L)





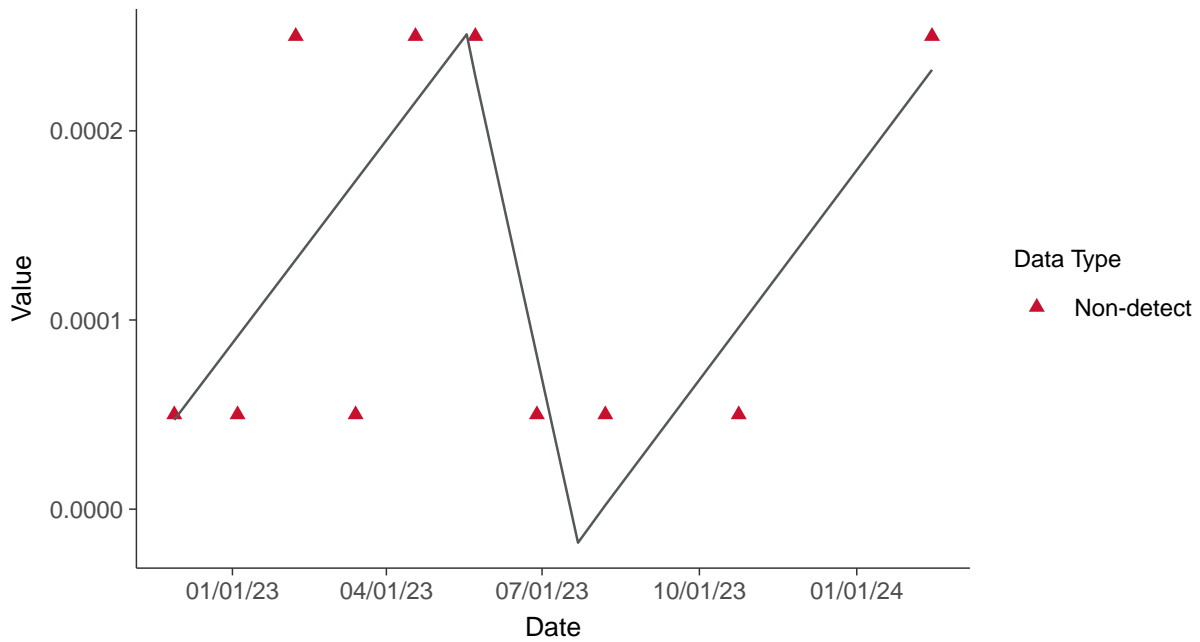
Trend Regression: Piecewise Linear-Linear

Silver, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-03 (mg/L)



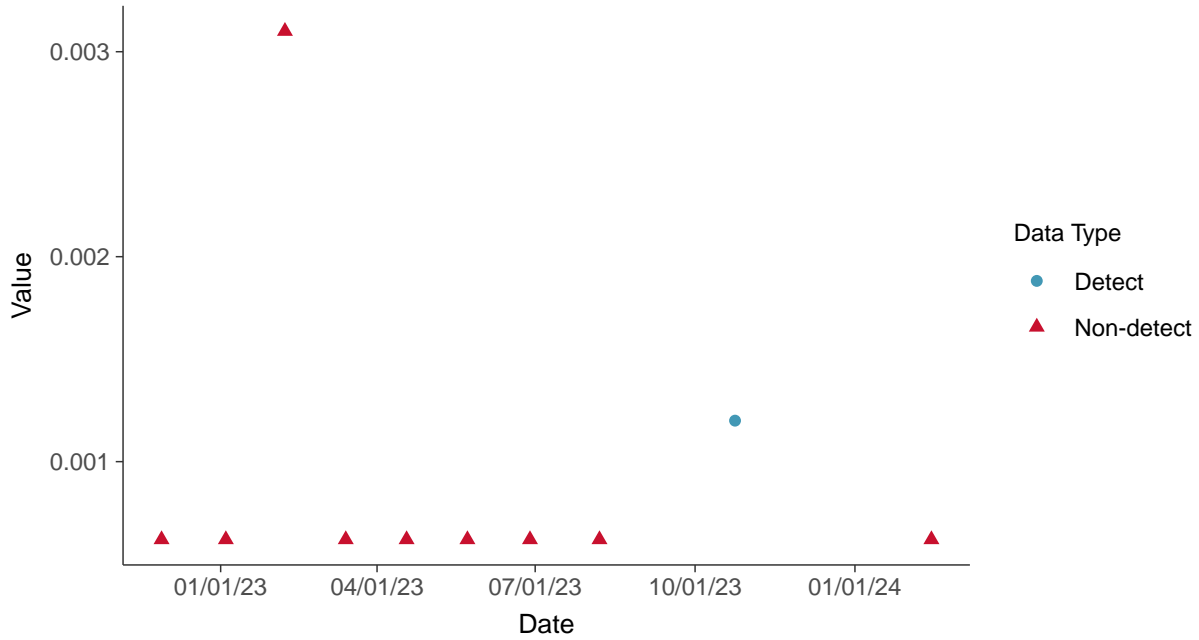


Part 115: Vanadium, MW-03

ID: 2_13_6_129

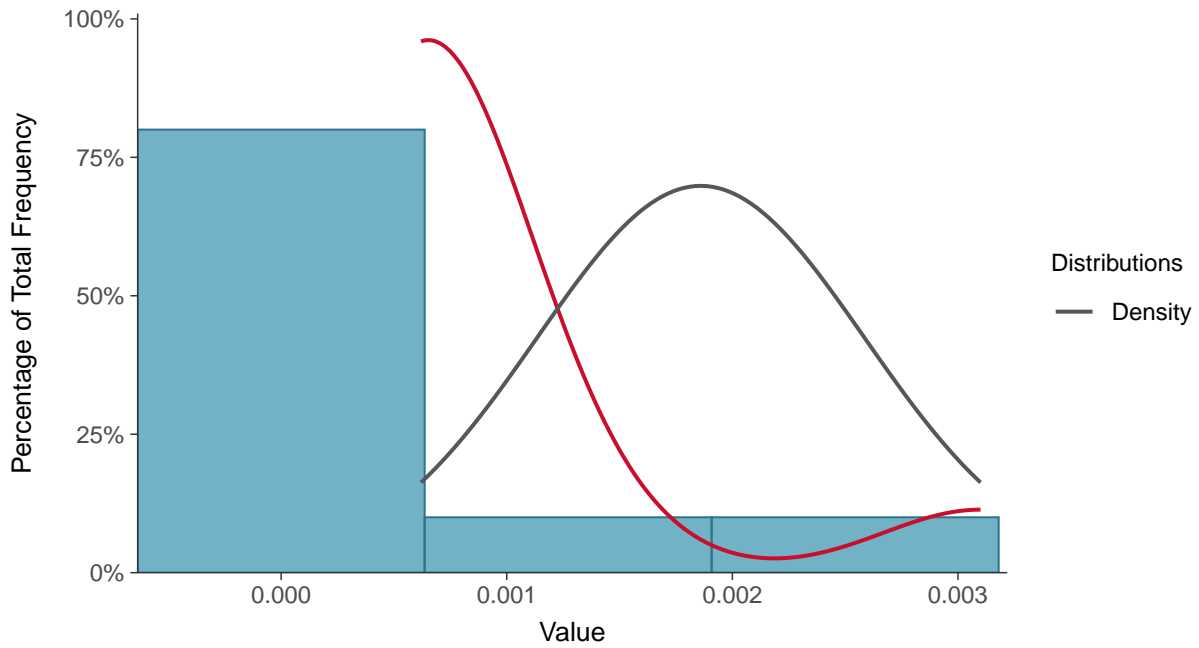
Scatter Plot

Vanadium, MW-03 (mg/L)



Histogram

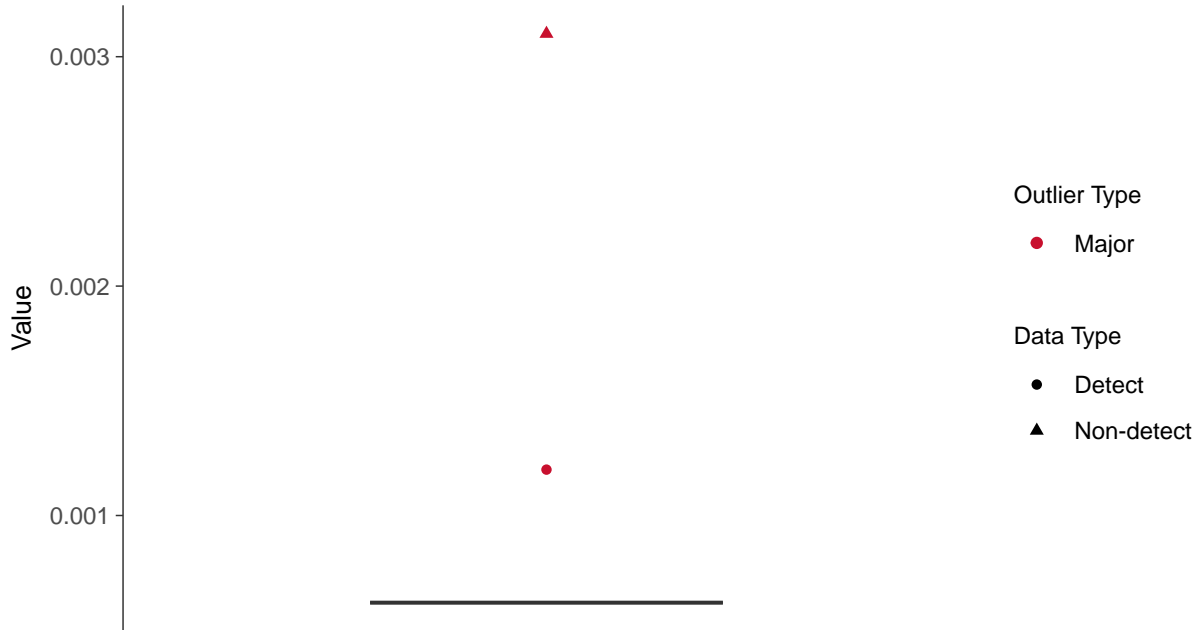
Vanadium, MW-03 (mg/L)





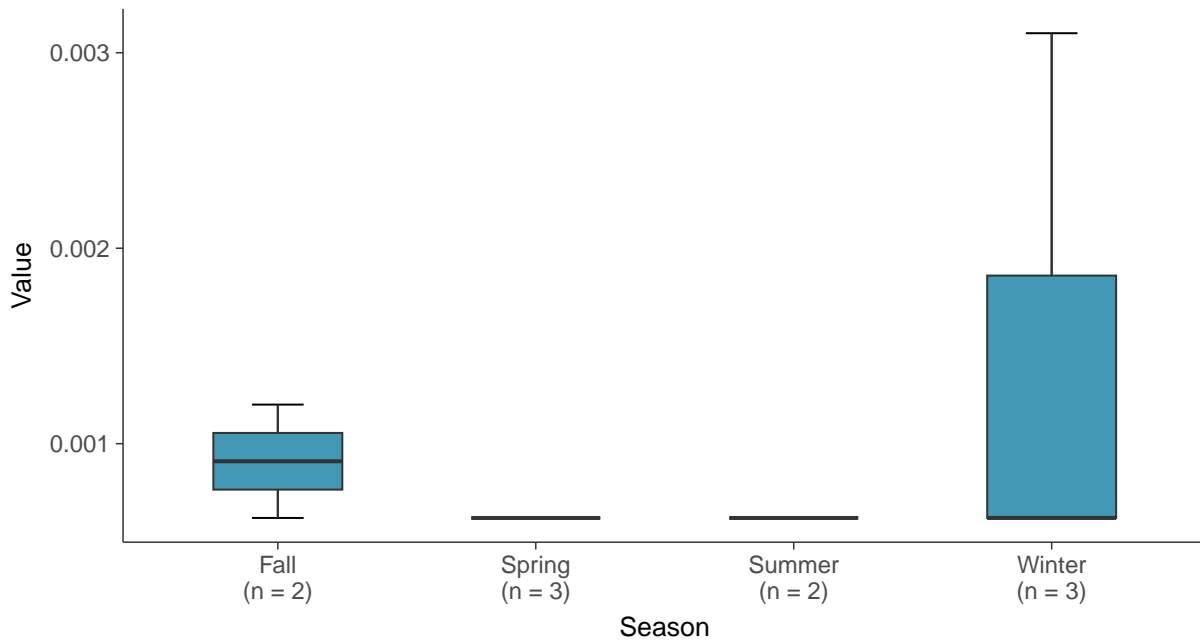
Boxplot

Vanadium, MW-03 (mg/L)



Boxplot by Season

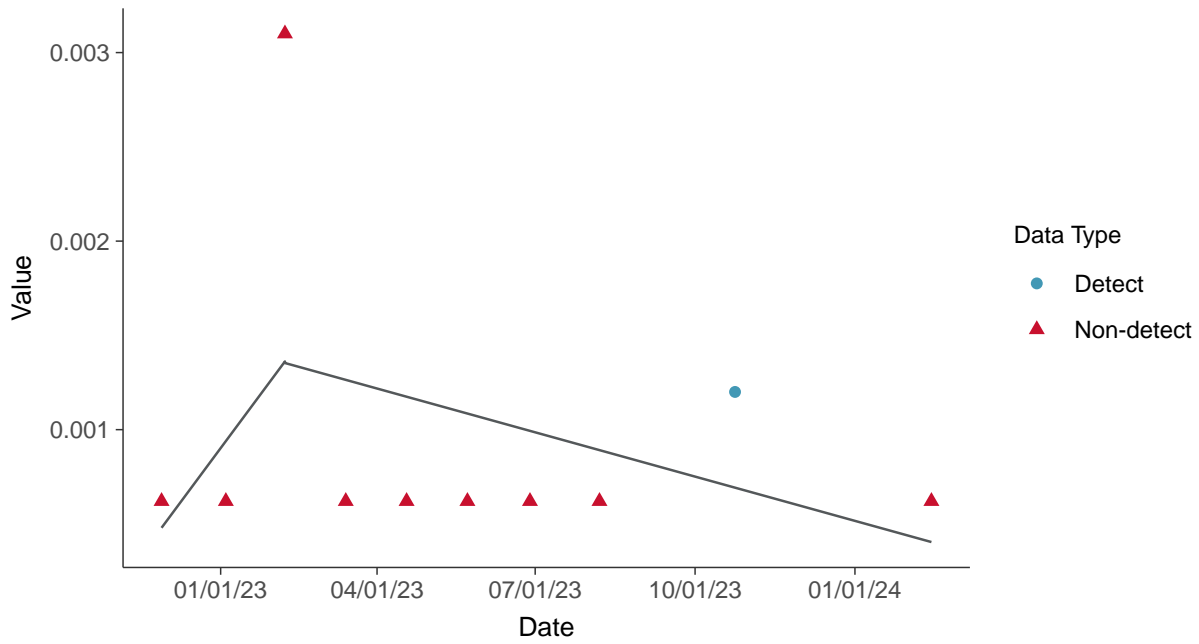
Vanadium, MW-03 (mg/L)





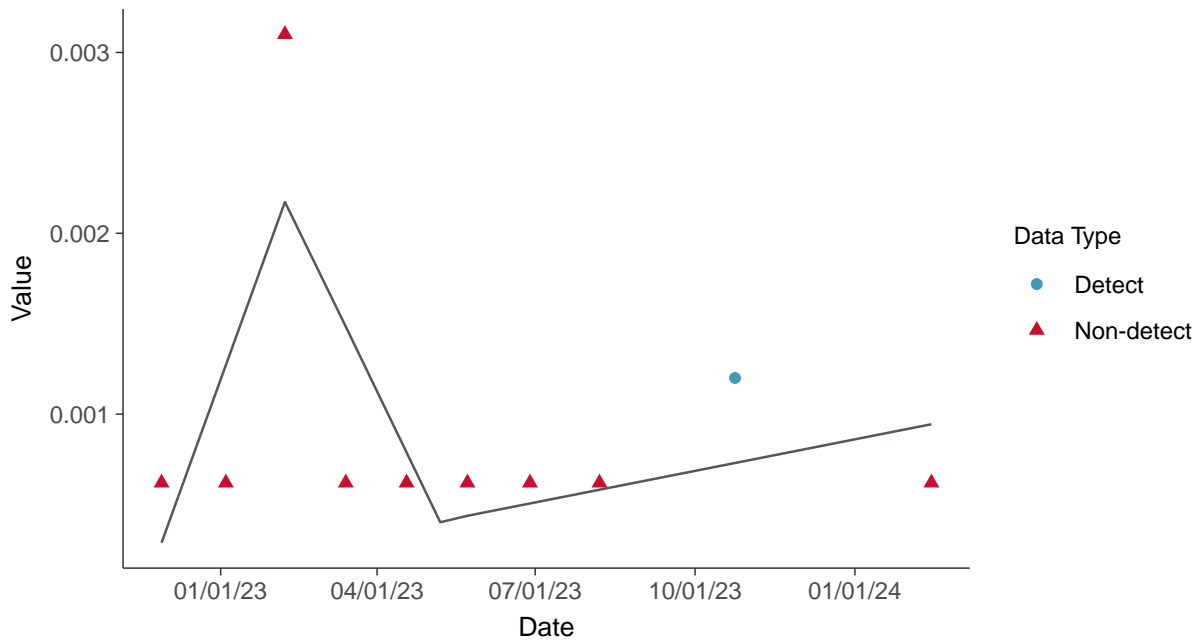
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

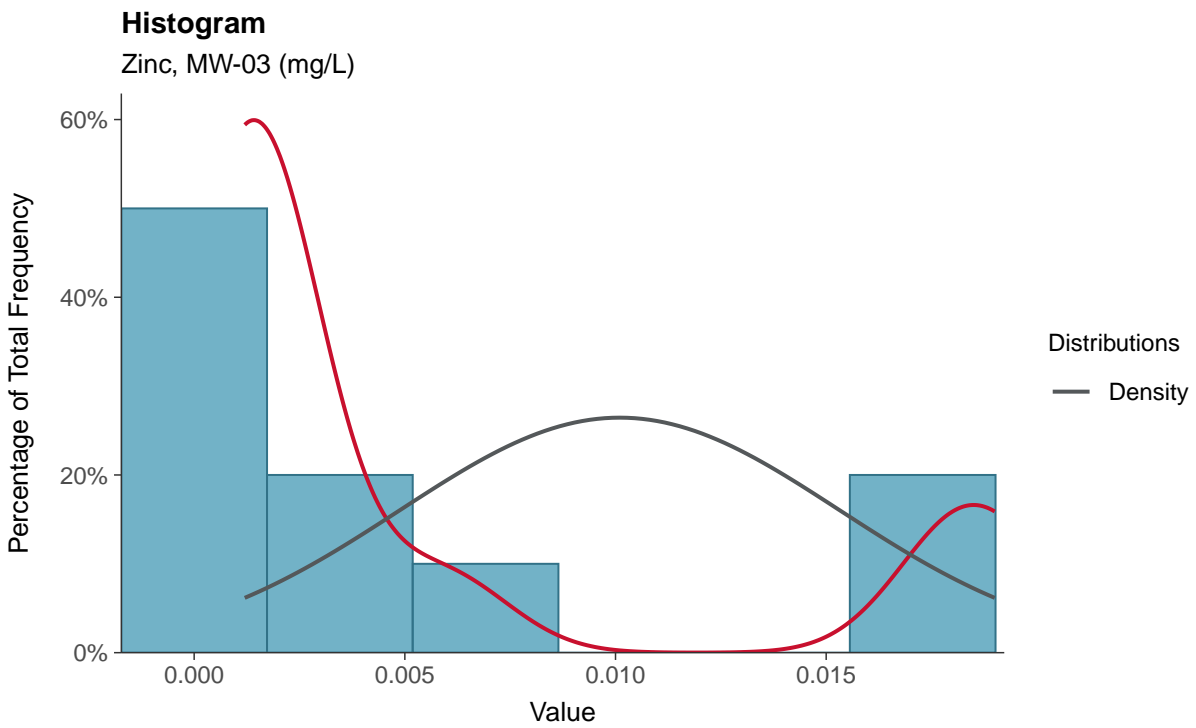
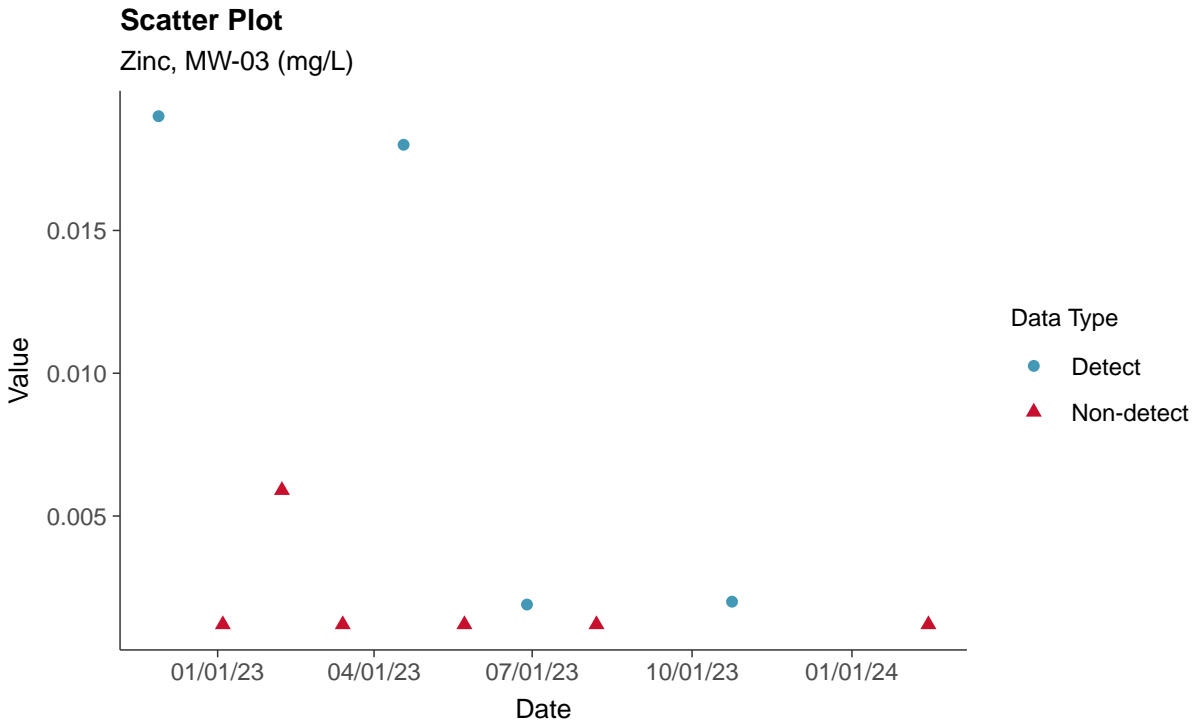
Vanadium, MW-03 (mg/L)





Part 115: Zinc, MW-03

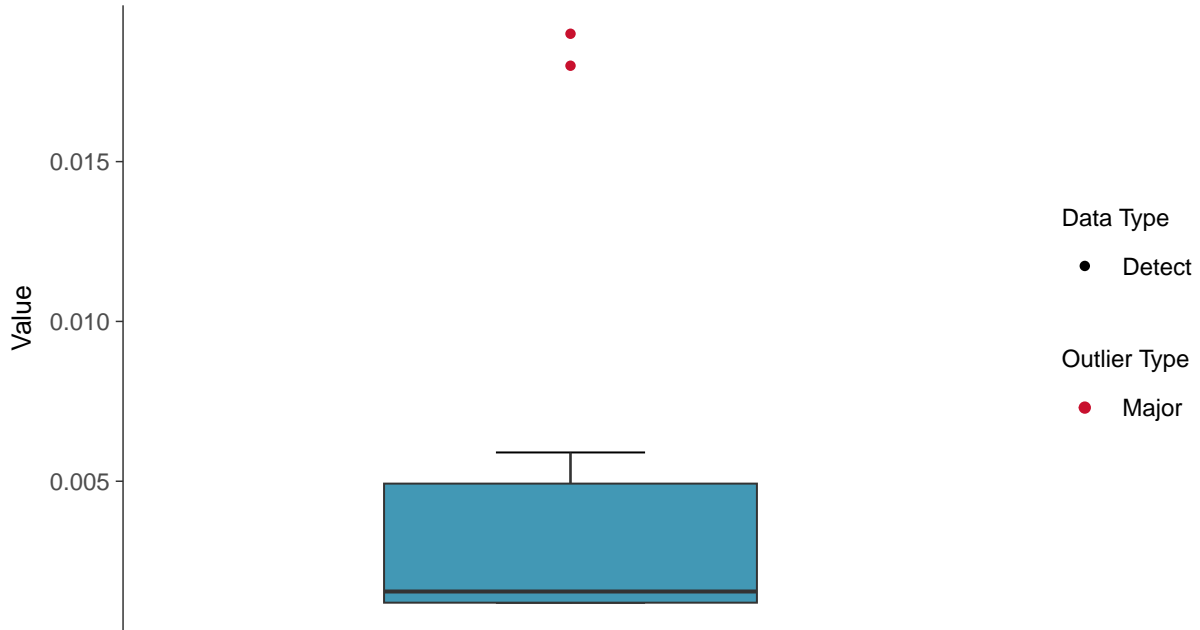
ID: 2_13_6_130





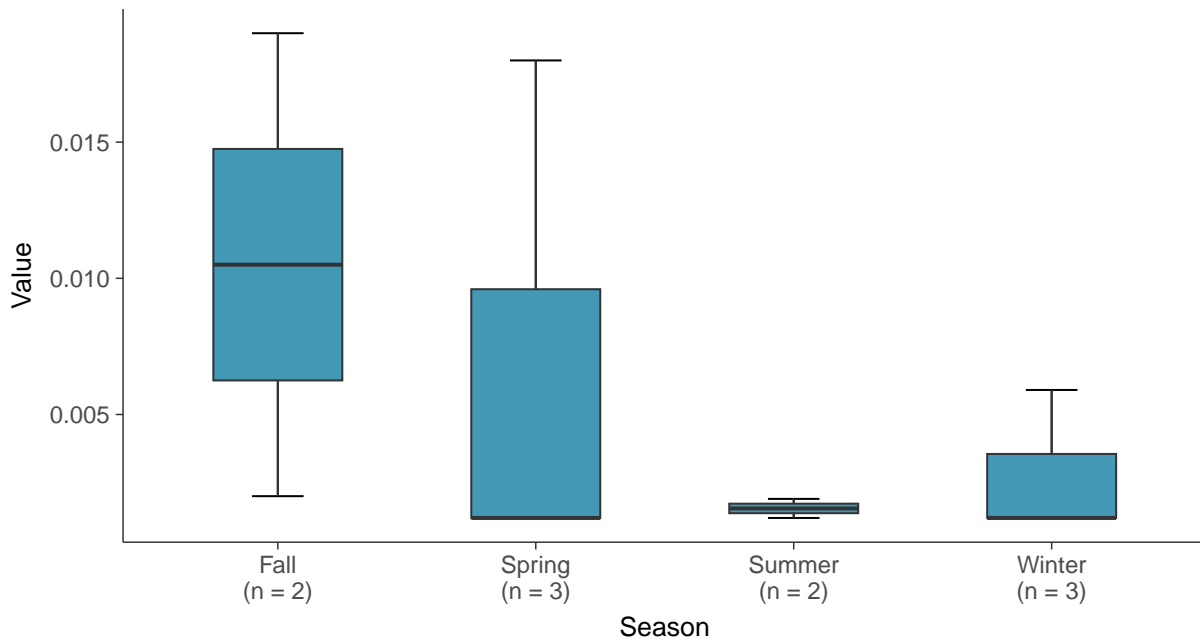
Boxplot

Zinc, MW-03 (mg/L)



Boxplot by Season

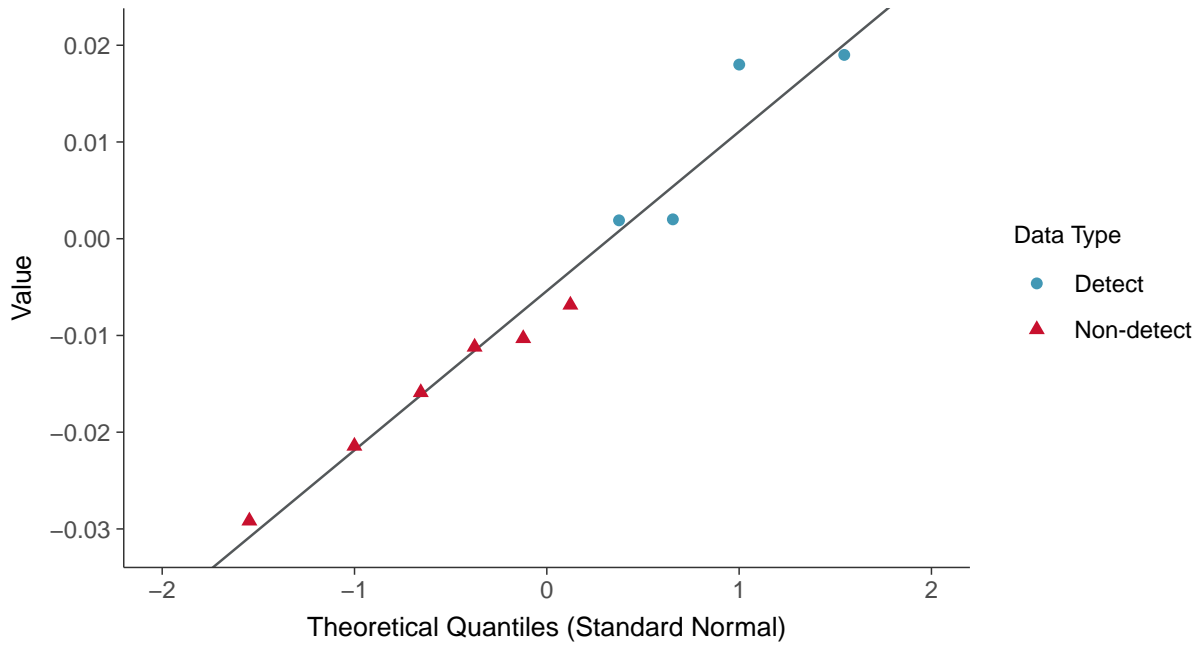
Zinc, MW-03 (mg/L)





Normal Q-Q plot using ROS Imputed Estimates

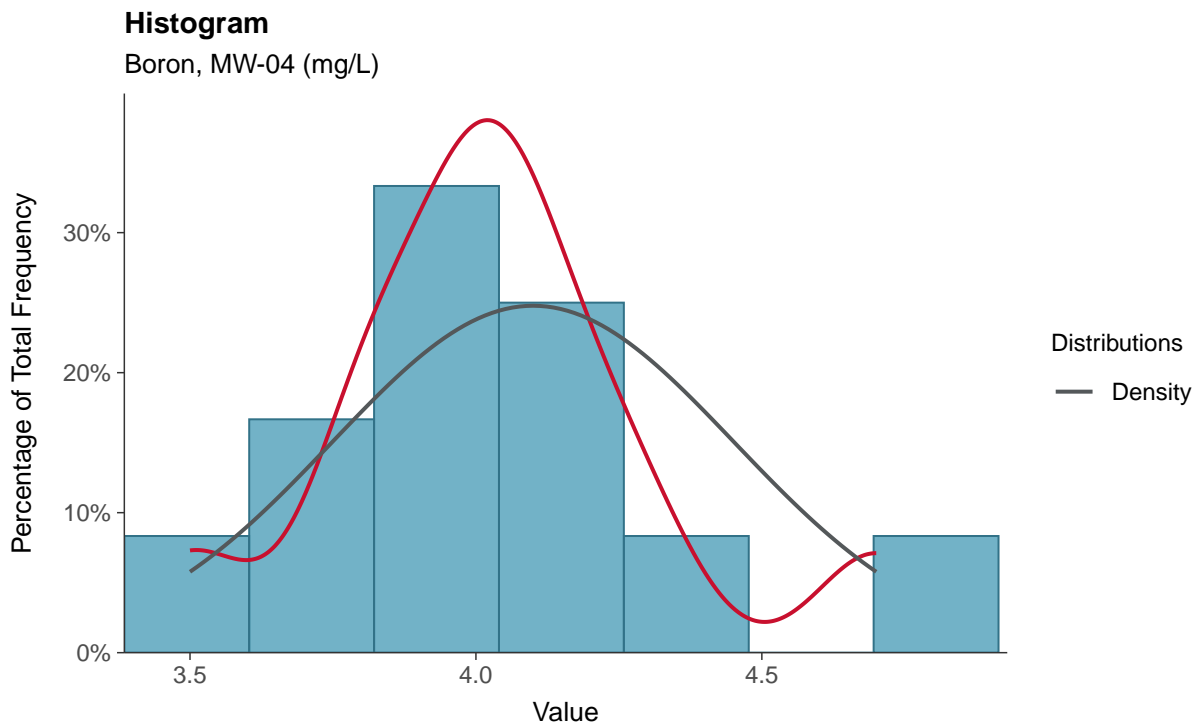
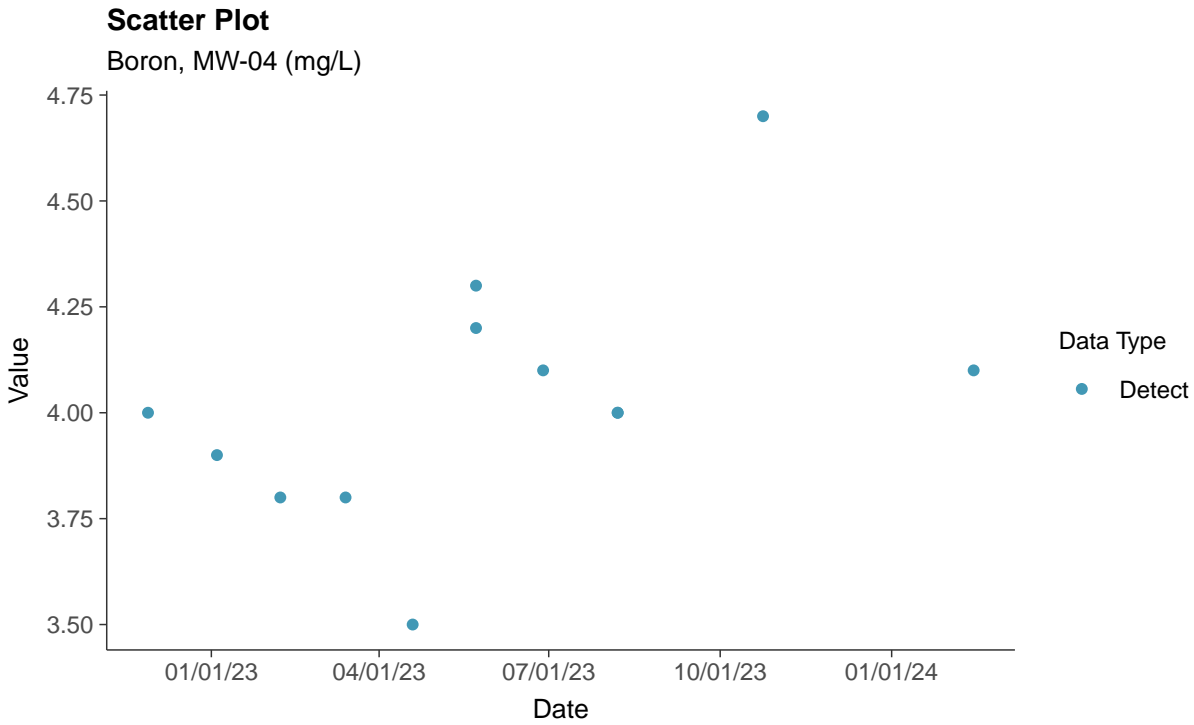
Zinc, MW-03 (mg/L)





Appendix III: Boron, MW-04

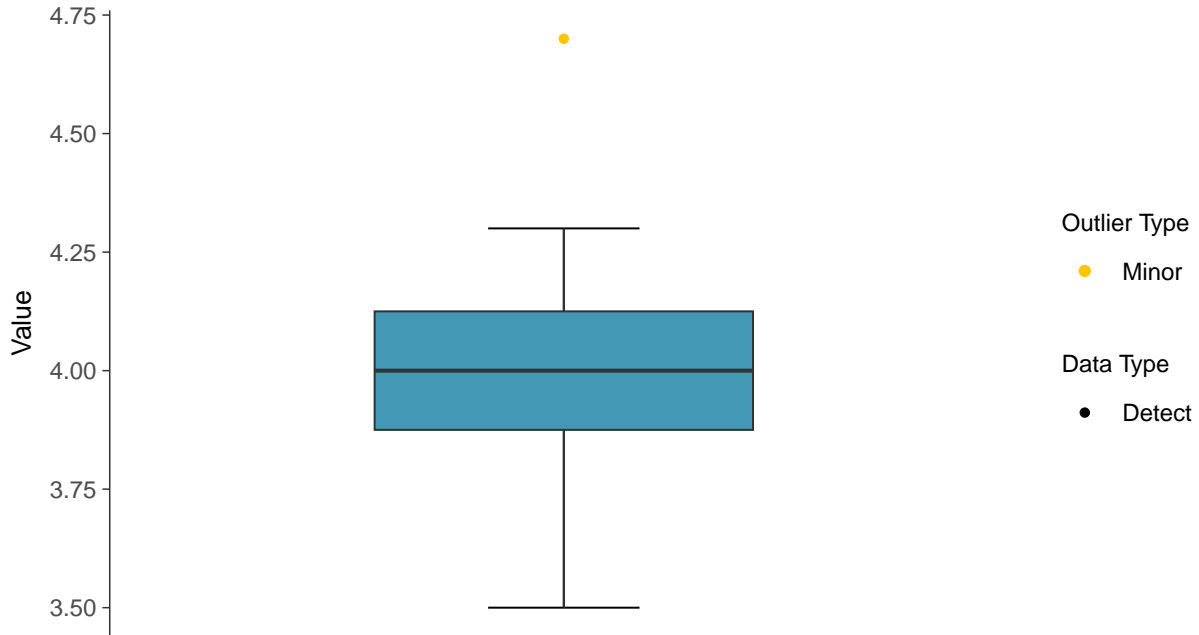
ID: 2_14_4_105





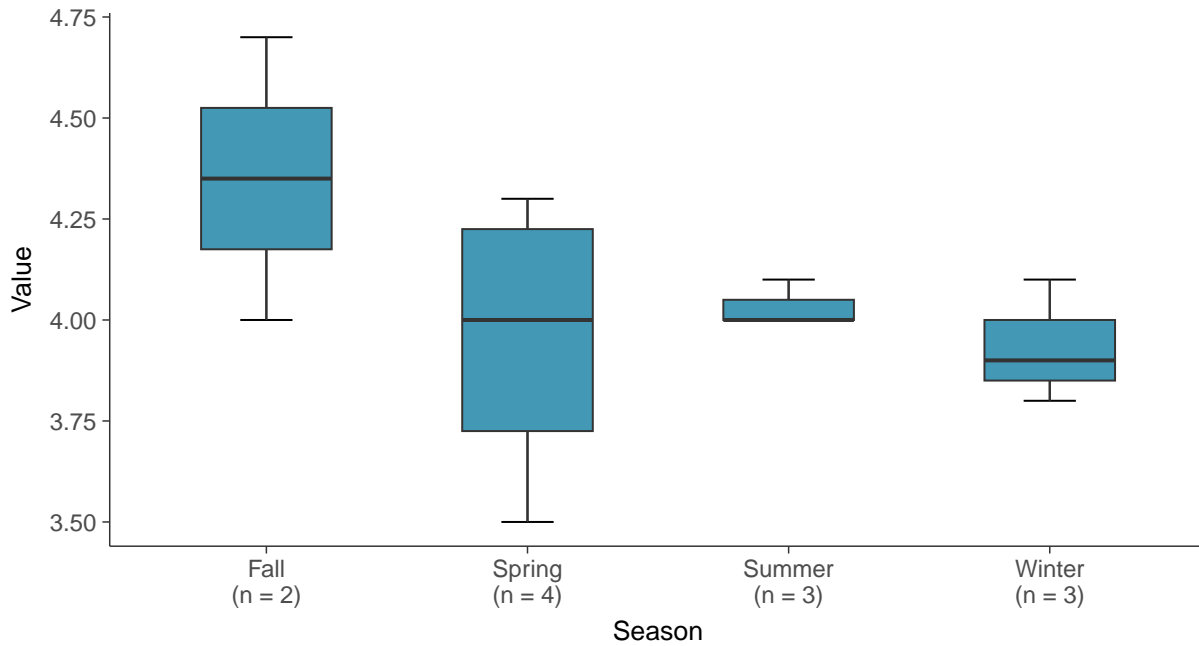
Boxplot

Boron, MW-04 (mg/L)



Boxplot by Season

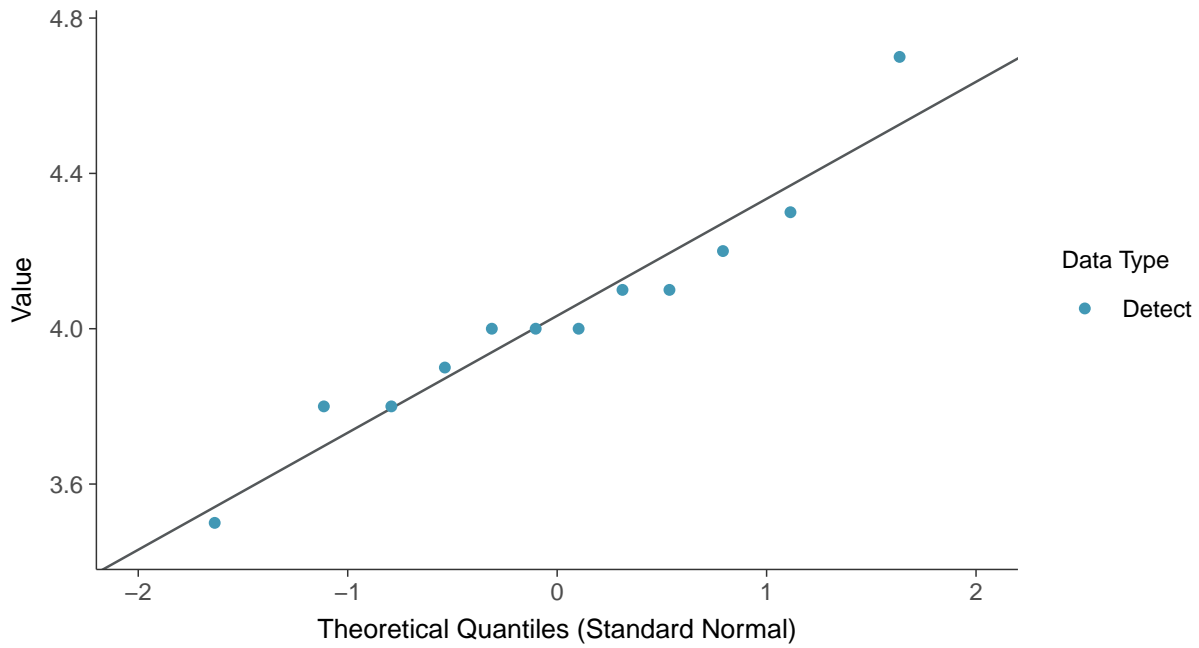
Boron, MW-04 (mg/L)





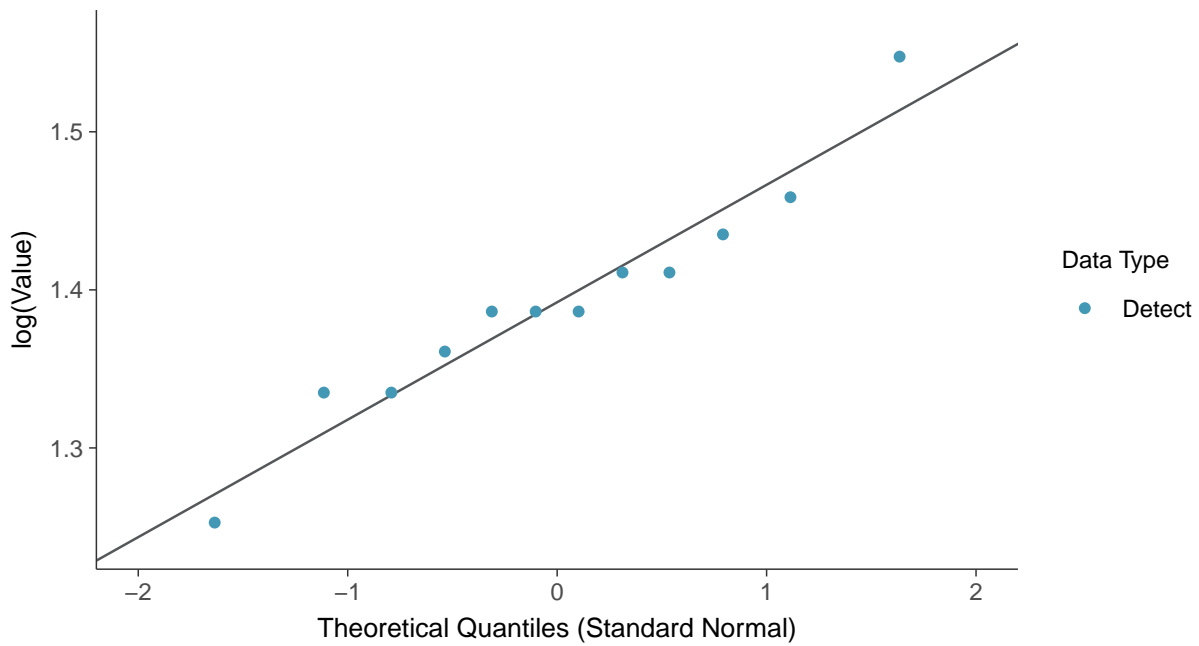
Normal Q-Q plot

Boron, MW-04 (mg/L)



Lognormal Q-Q plot

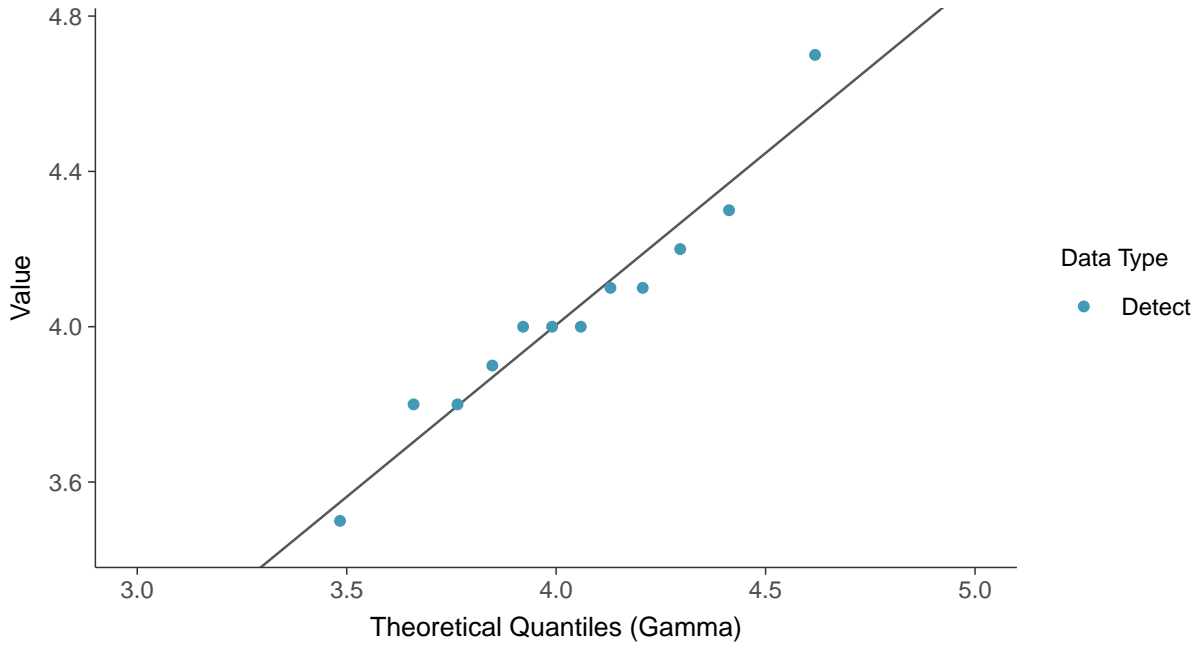
Boron, MW-04 (mg/L)





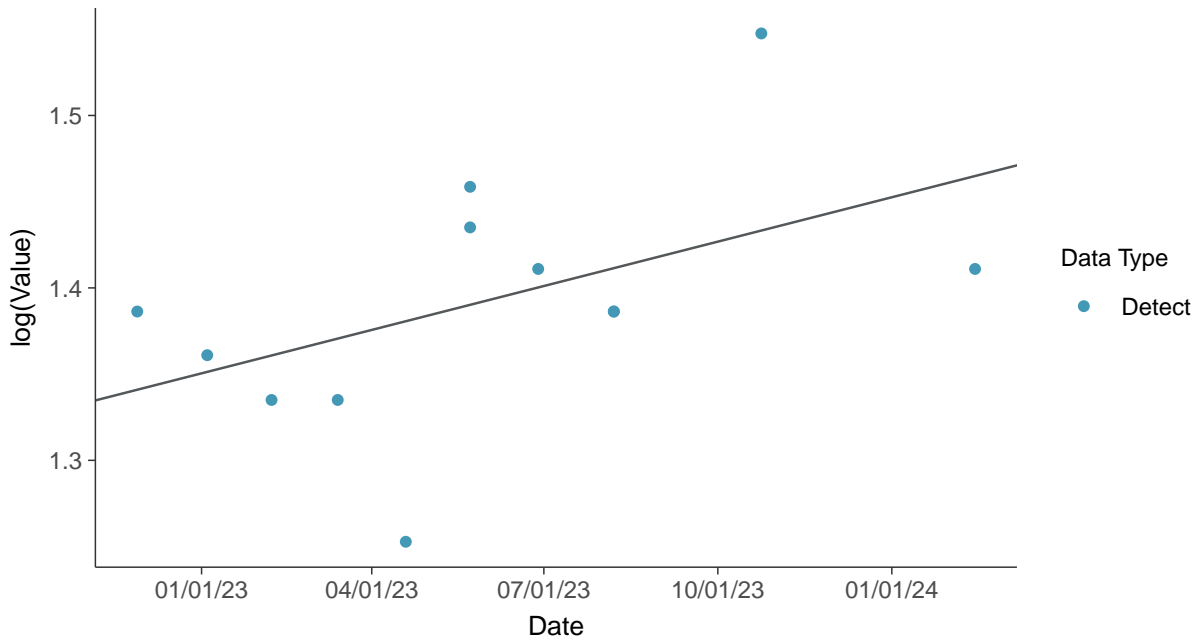
Gamma Q-Q plot

Boron, MW-04 (mg/L)



Trend Regression: Lognormal MLE

Boron, MW-04 (mg/L)



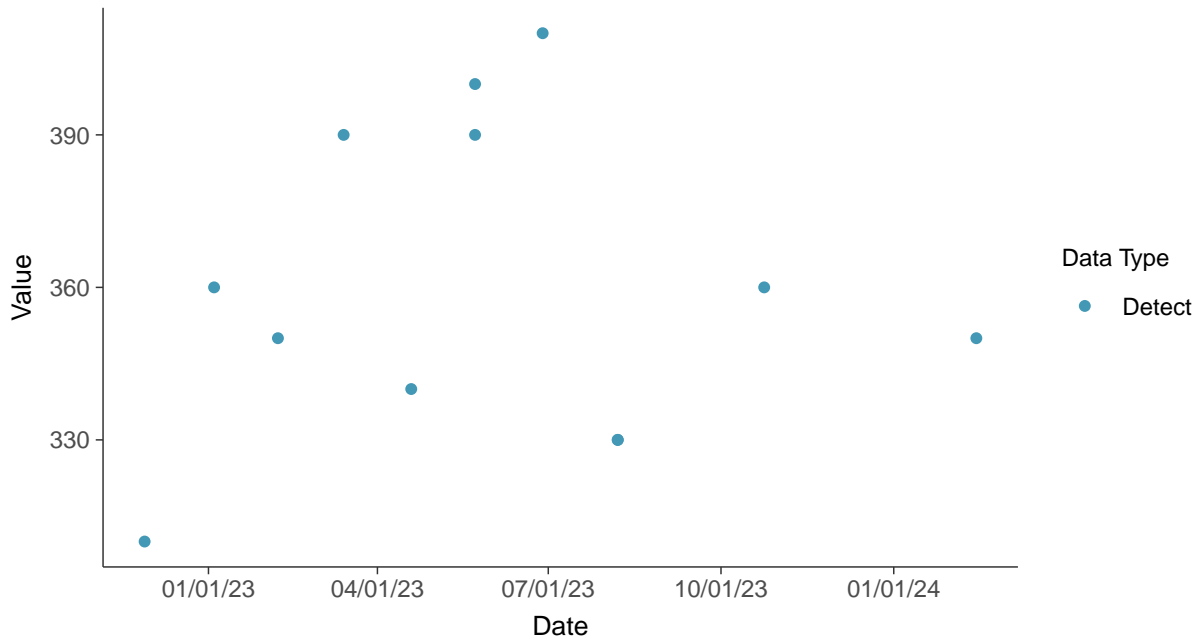


Appendix III: Calcium, MW-04

ID: 2_14_4_107

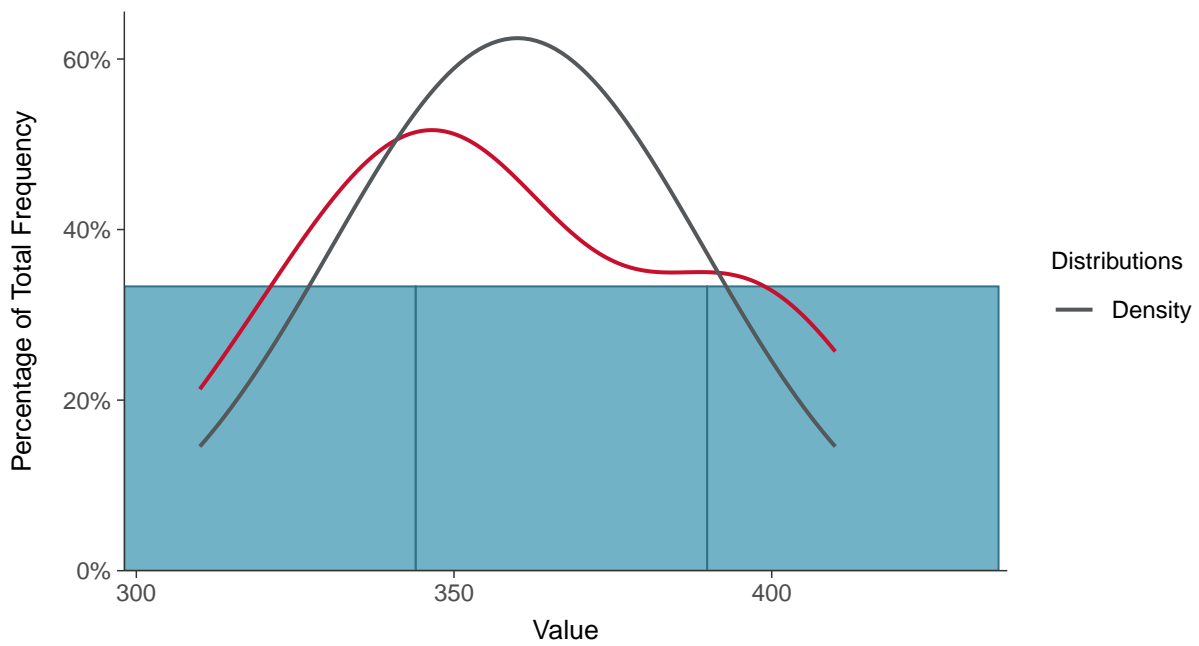
Scatter Plot

Calcium, MW-04 (mg/L)



Histogram

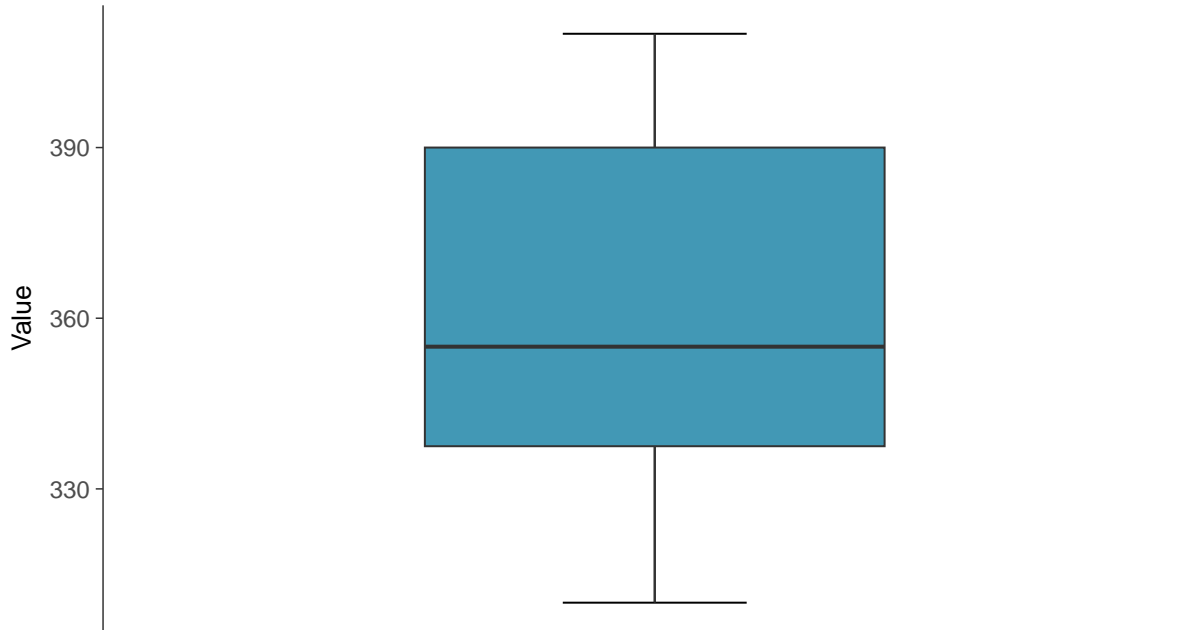
Calcium, MW-04 (mg/L)





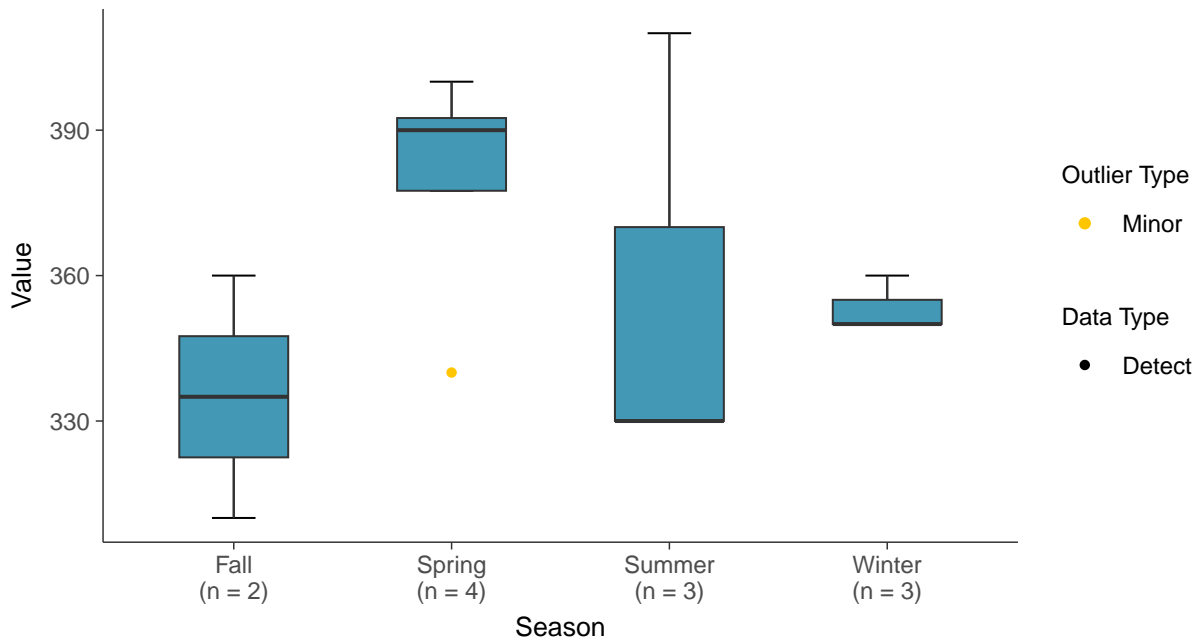
Boxplot

Calcium, MW-04 (mg/L)



Boxplot by Season

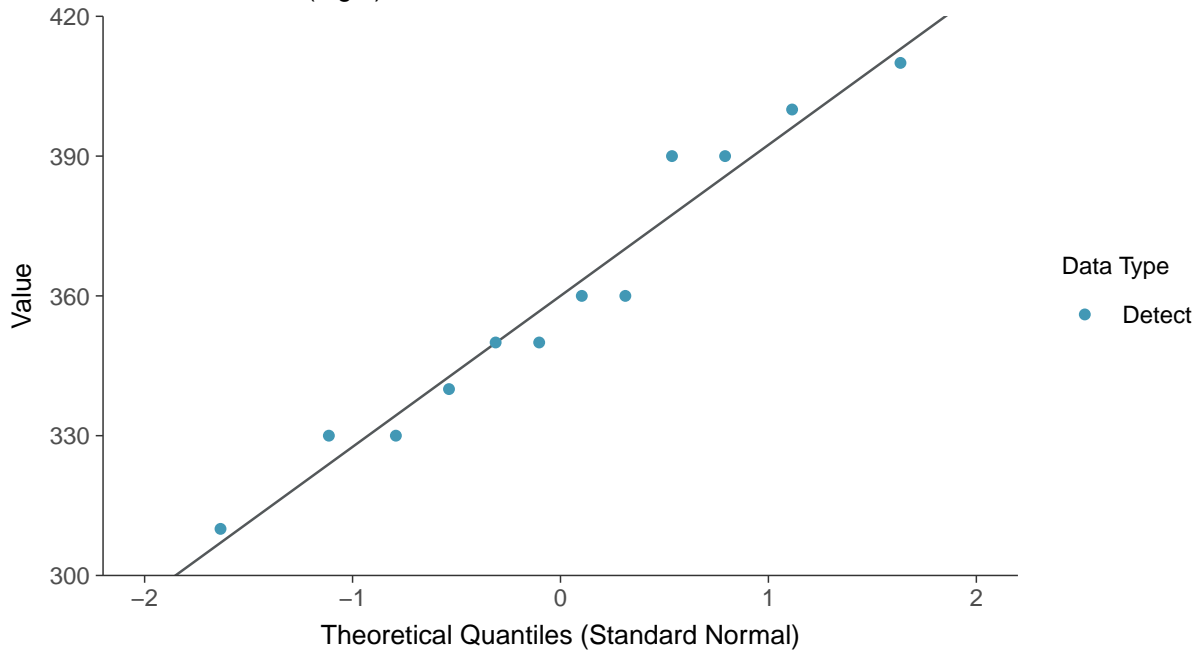
Calcium, MW-04 (mg/L)





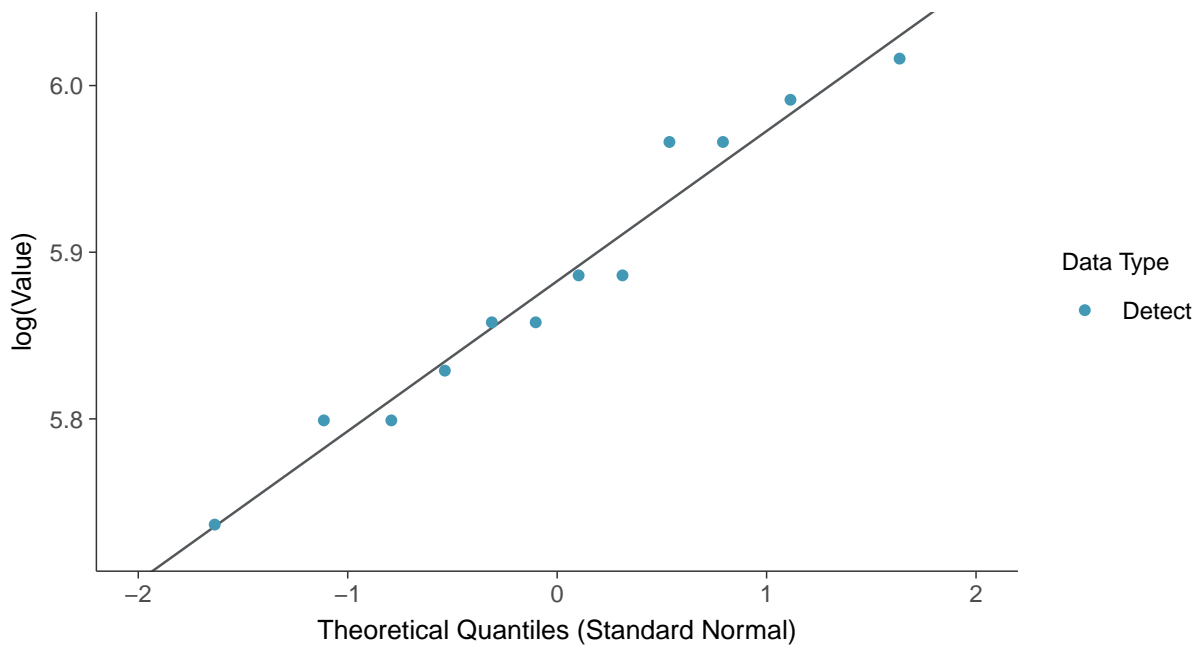
Normal Q-Q plot

Calcium, MW-04 (mg/L)



Lognormal Q-Q plot

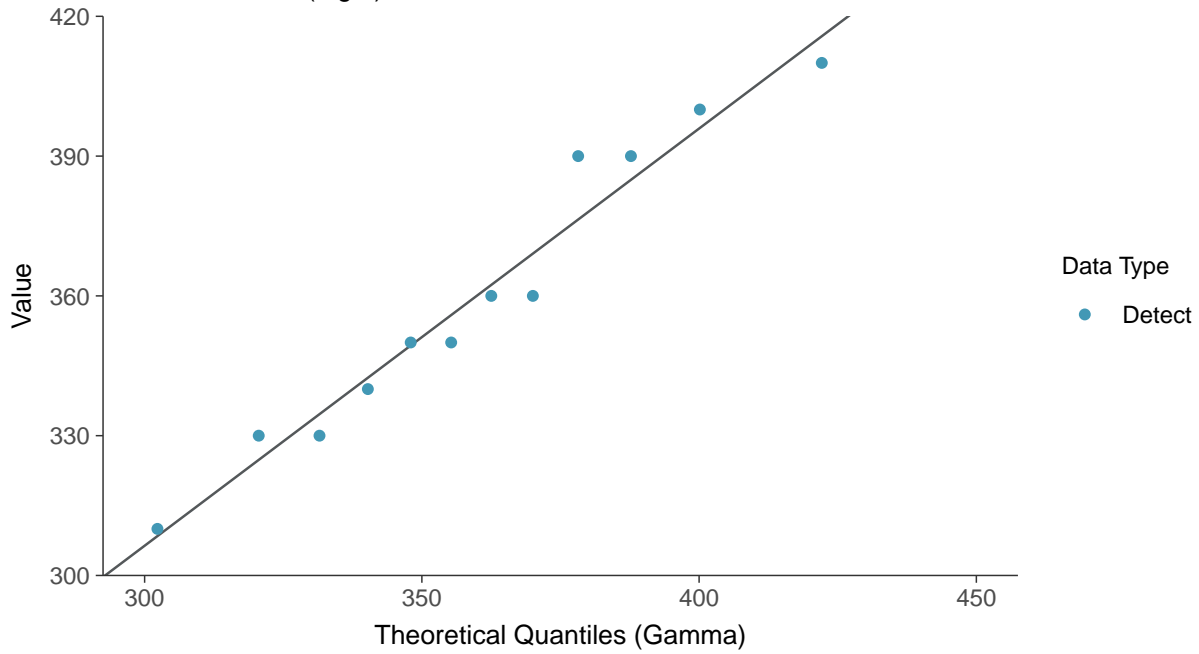
Calcium, MW-04 (mg/L)





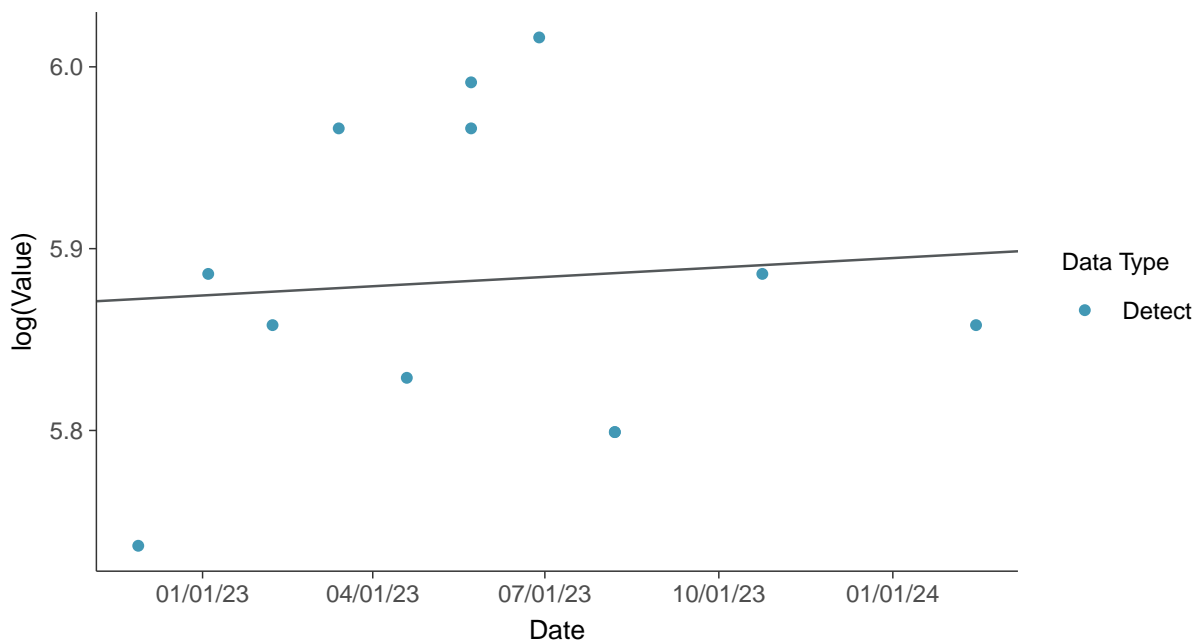
Gamma Q-Q plot

Calcium, MW-04 (mg/L)



Trend Regression: Lognormal MLE

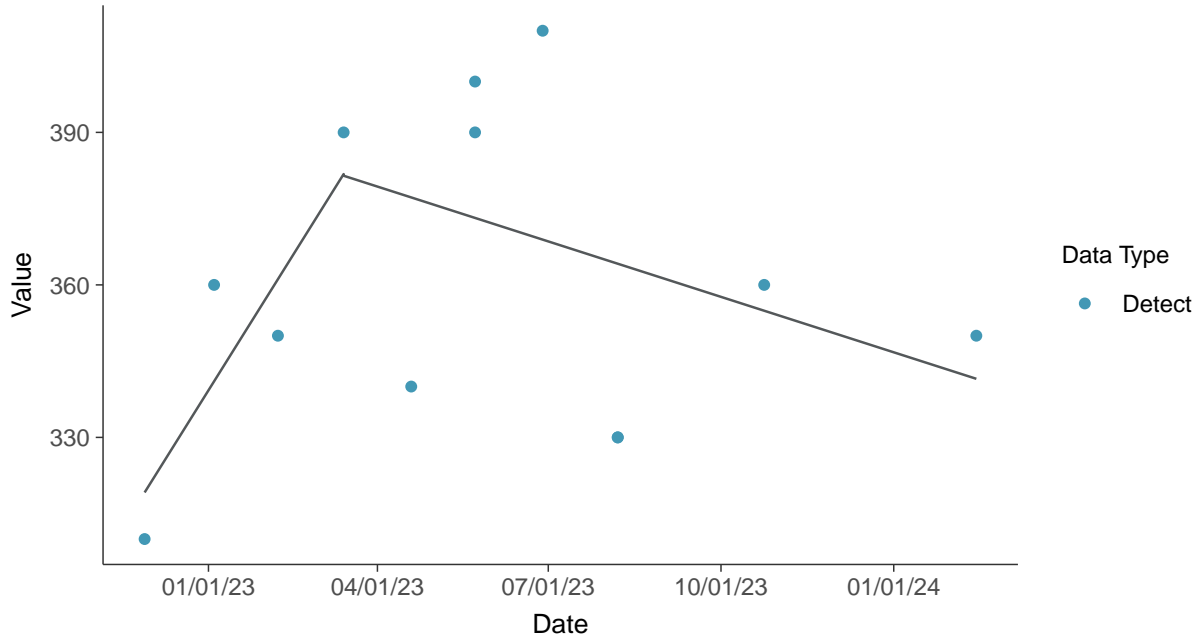
Calcium, MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear

Calcium, MW-04 (mg/L)



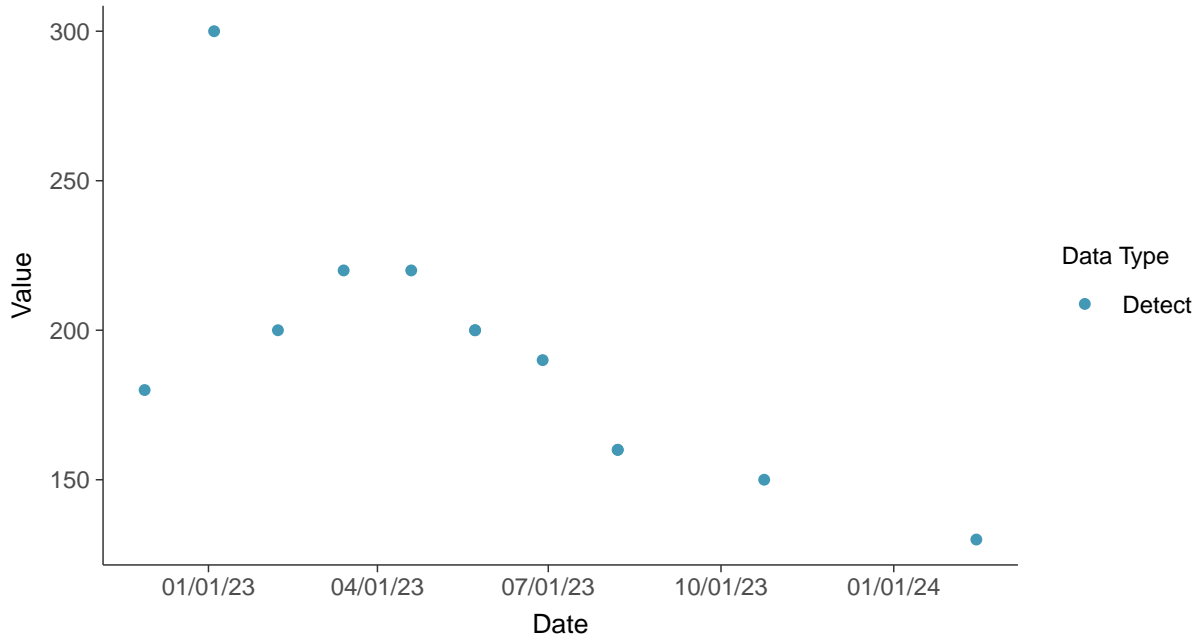


Appendix III: Chloride (as Cl), MW-04

ID: 2_14_4_108

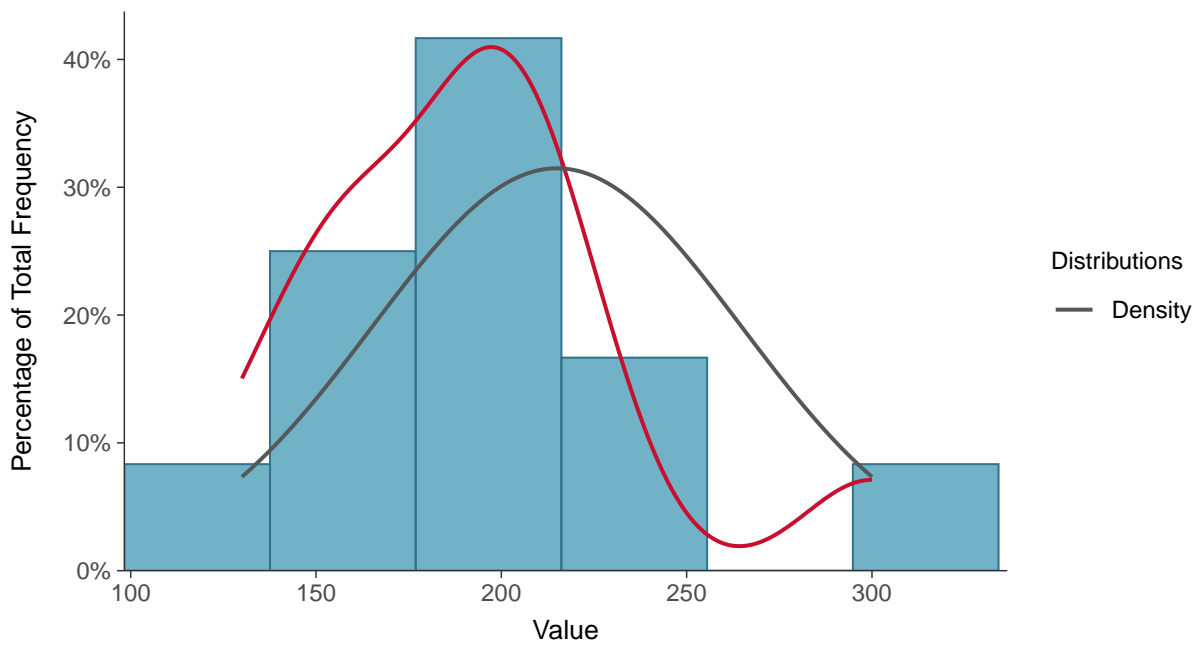
Scatter Plot

Chloride (as Cl), MW-04 (mg/L)



Histogram

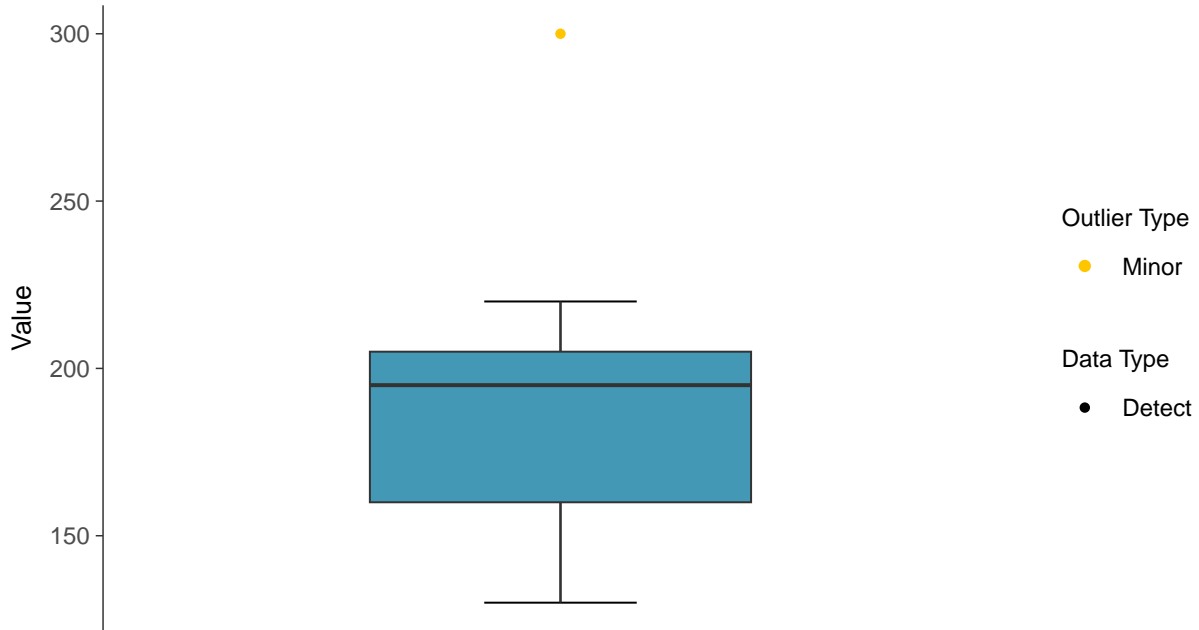
Chloride (as Cl), MW-04 (mg/L)





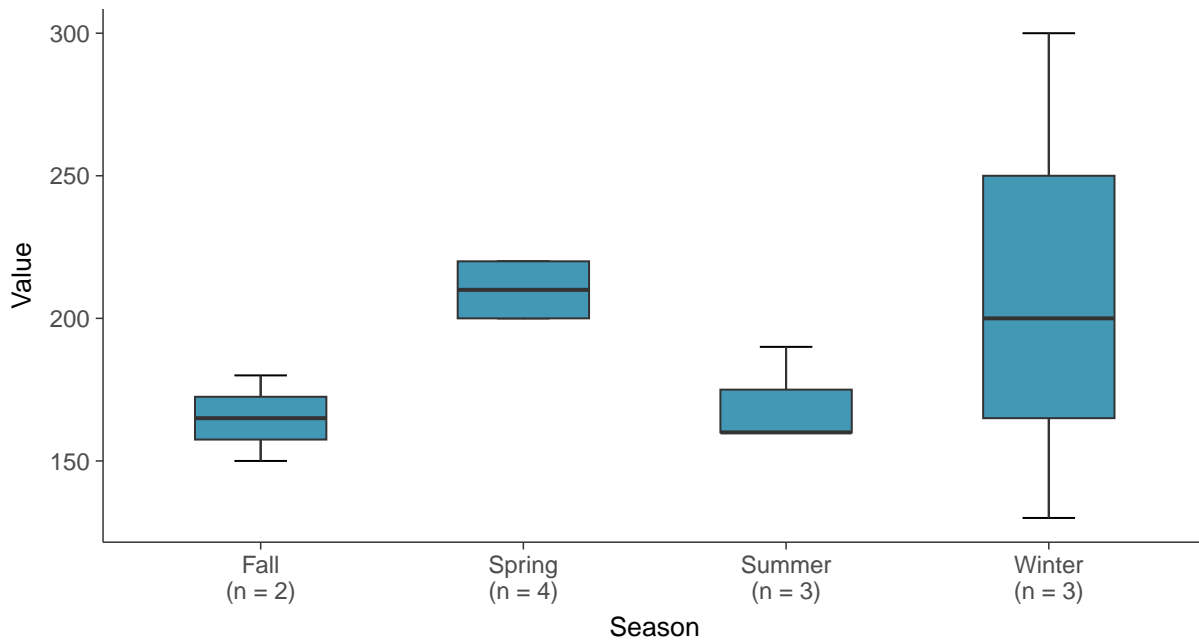
Boxplot

Chloride (as Cl), MW-04 (mg/L)



Boxplot by Season

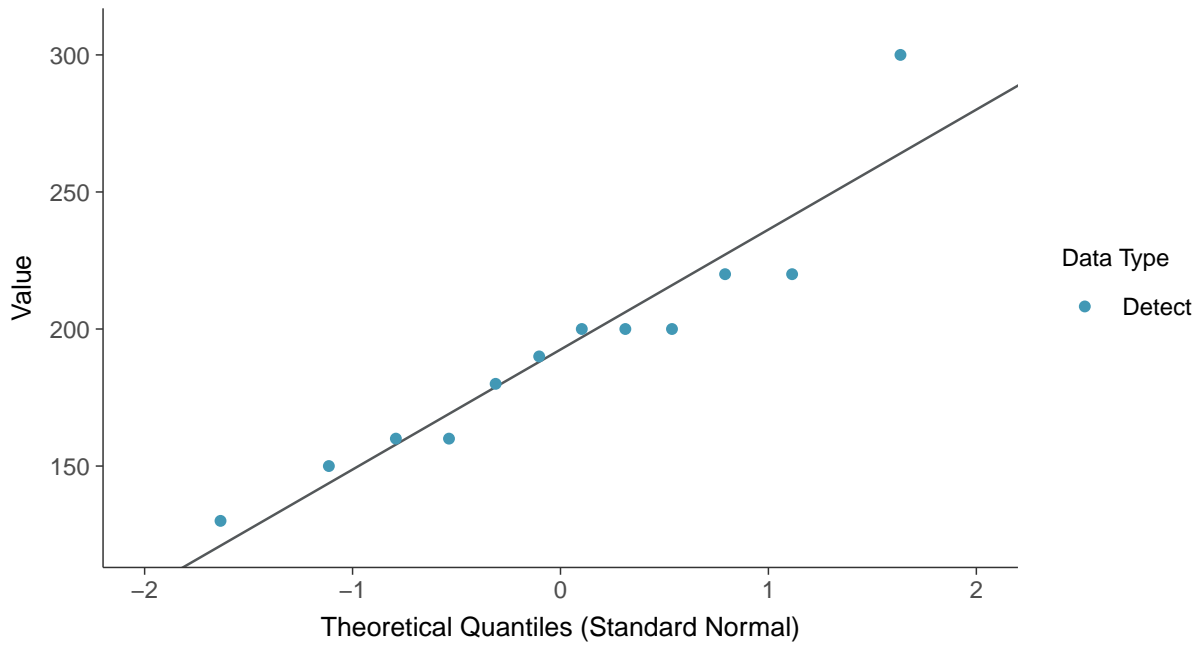
Chloride (as Cl), MW-04 (mg/L)





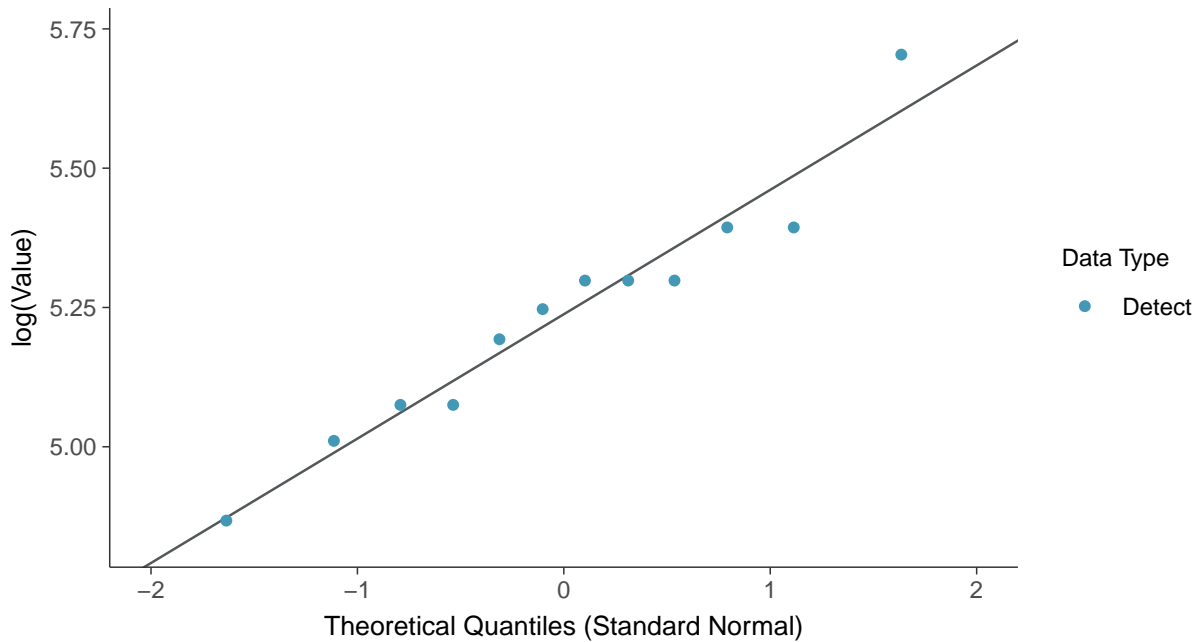
Normal Q-Q plot

Chloride (as Cl), MW-04 (mg/L)



Lognormal Q-Q plot

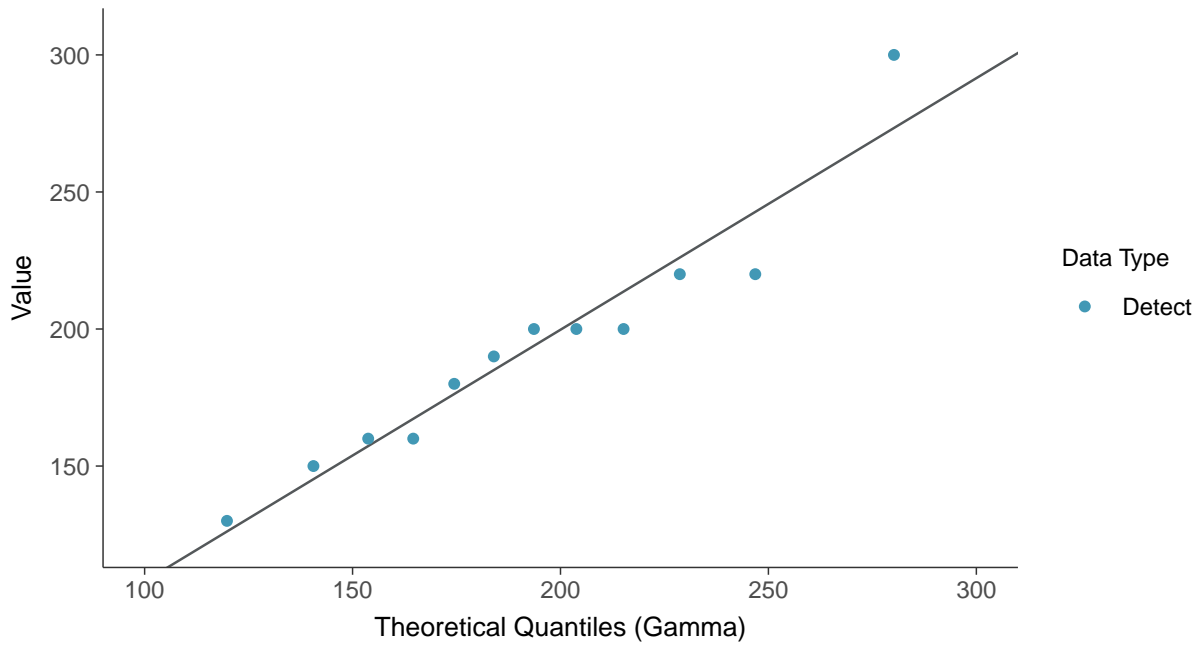
Chloride (as Cl), MW-04 (mg/L)





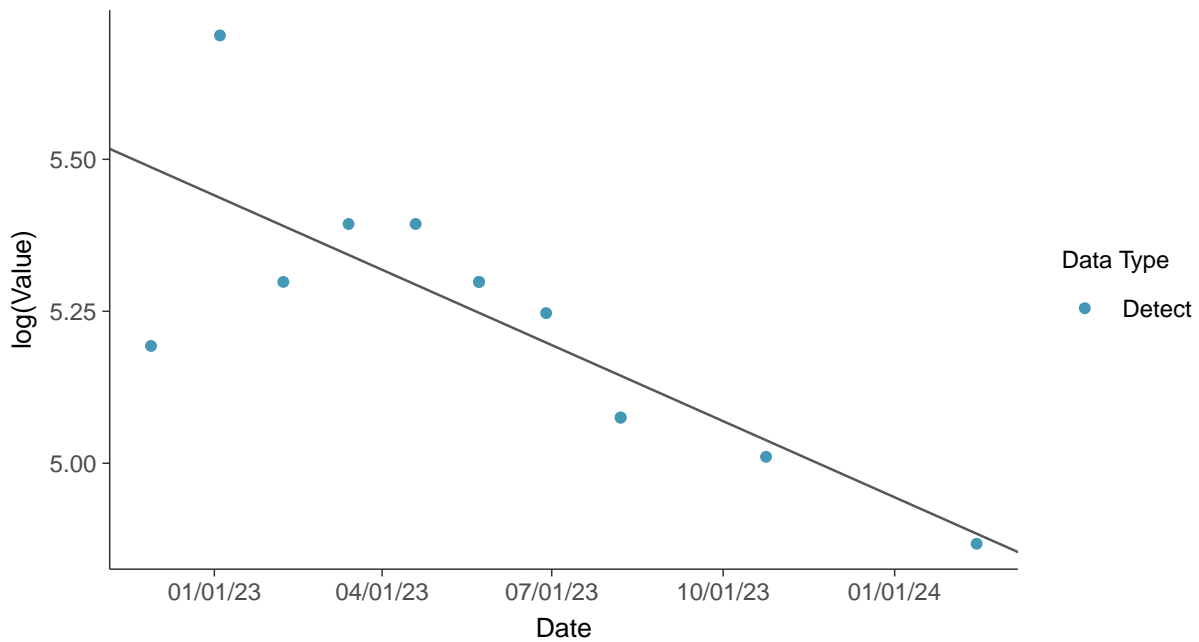
Gamma Q-Q plot

Chloride (as Cl), MW-04 (mg/L)



Trend Regression: Lognormal MLE

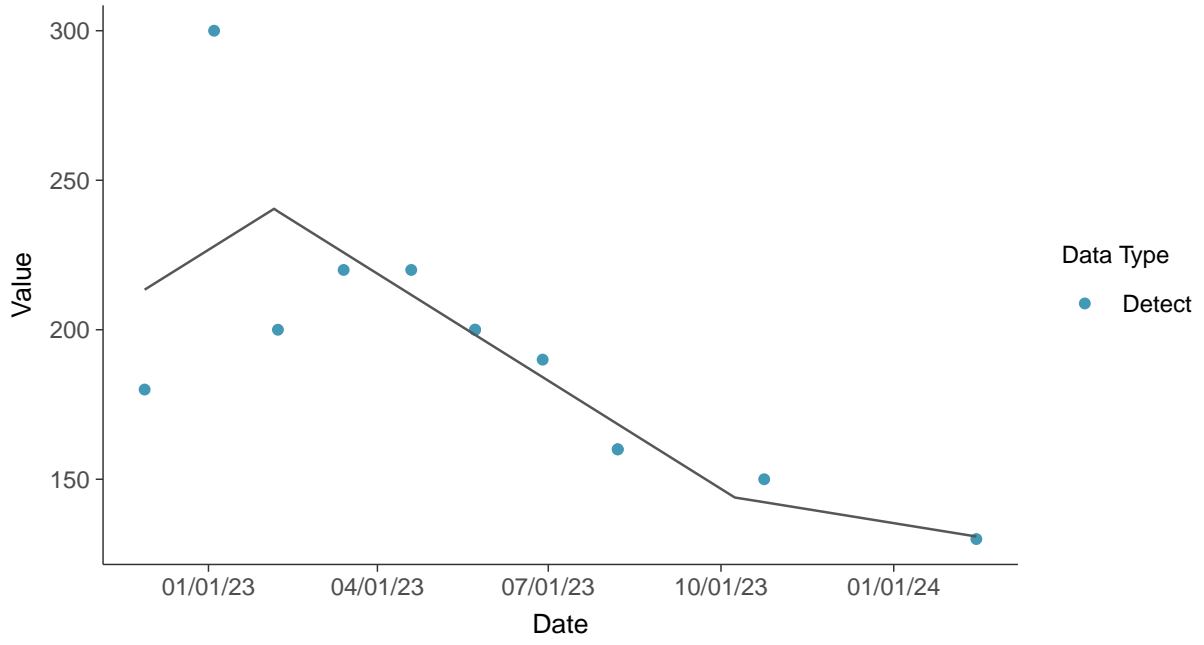
Chloride (as Cl), MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

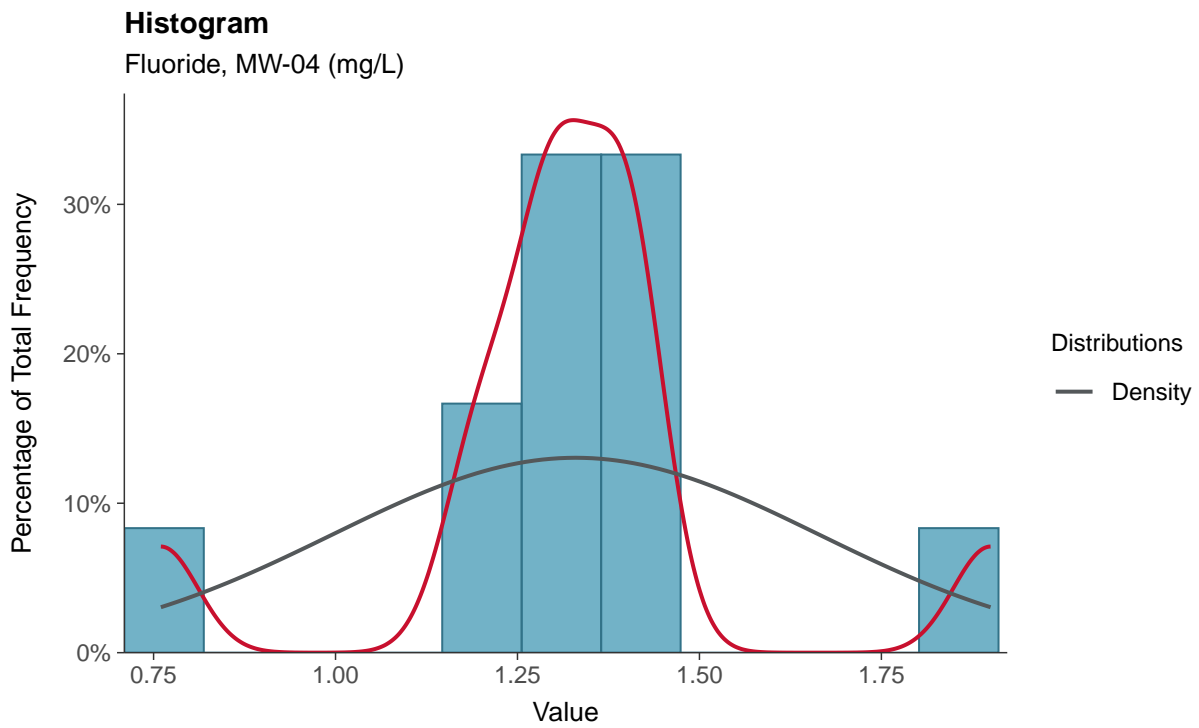
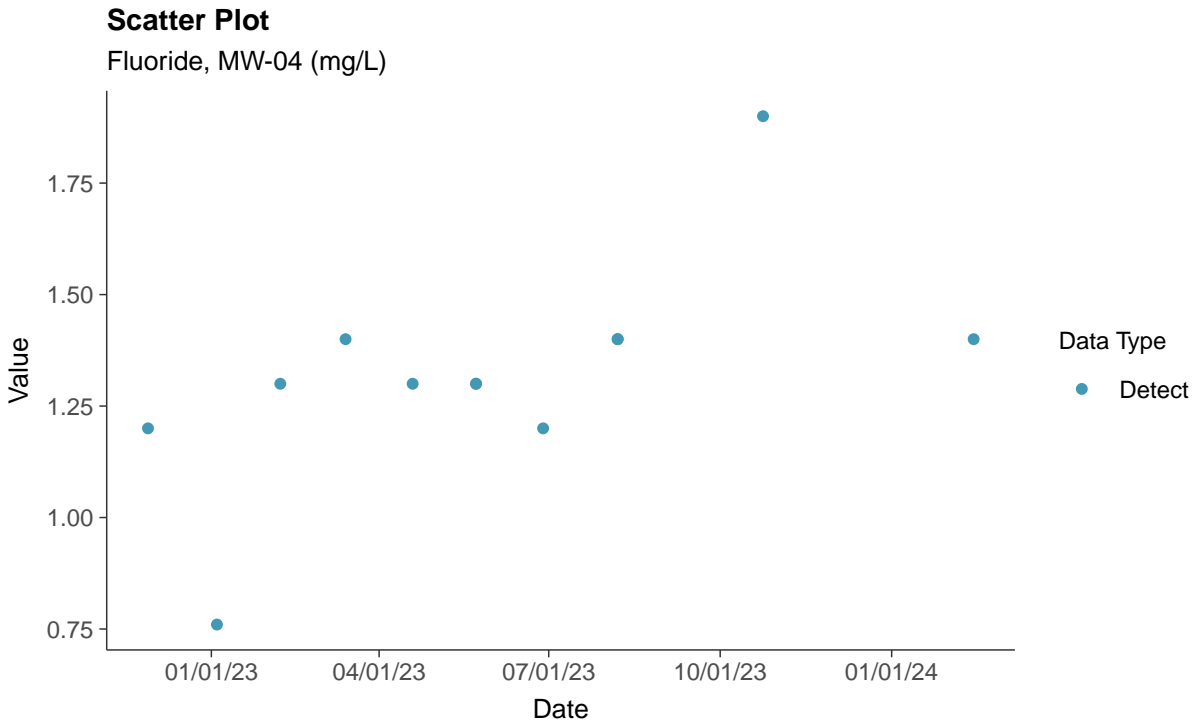
Chloride (as Cl), MW-04 (mg/L)





Appendix III: Fluoride, MW-04

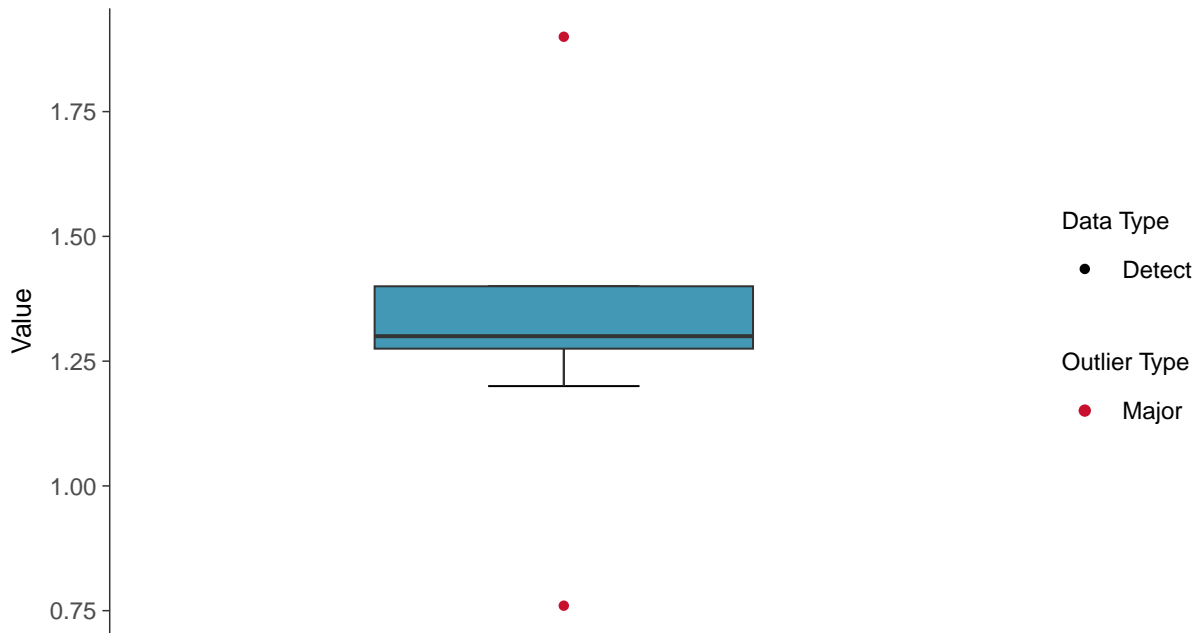
ID: 2_14_4_112





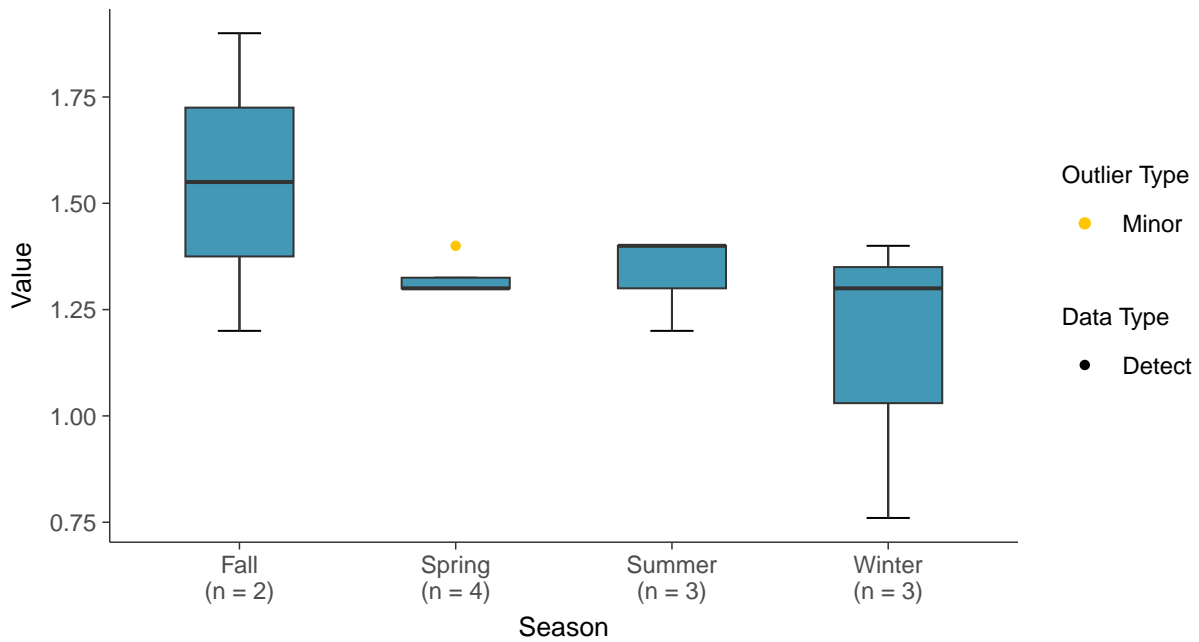
Boxplot

Fluoride, MW-04 (mg/L)



Boxplot by Season

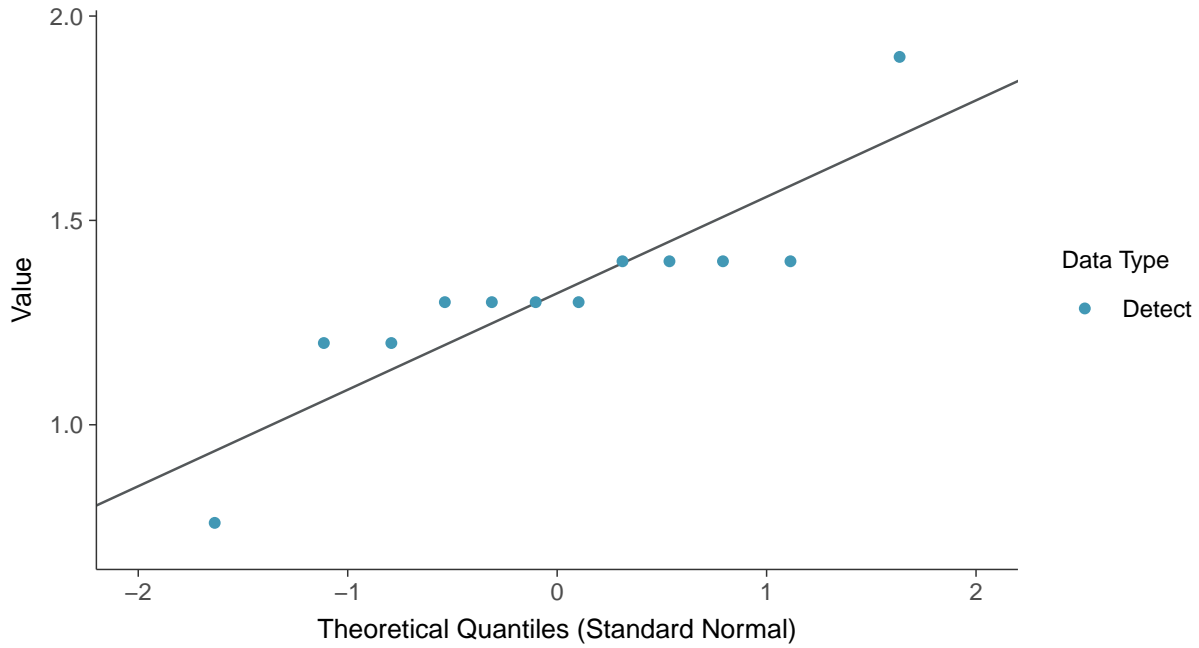
Fluoride, MW-04 (mg/L)





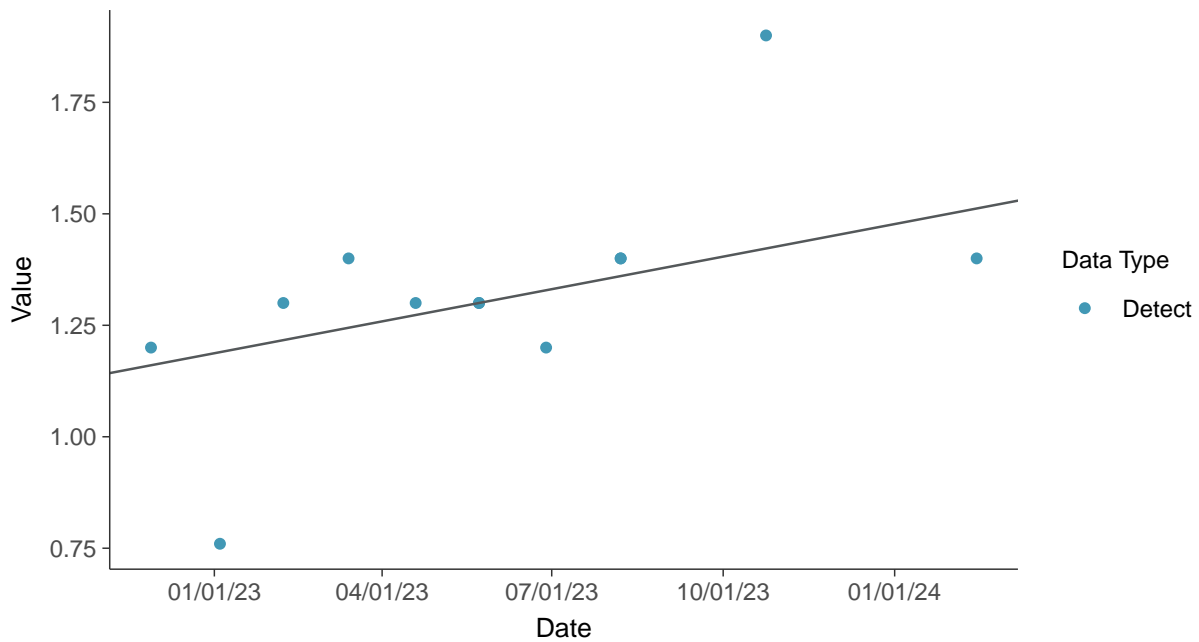
Normal Q-Q plot

Fluoride, MW-04 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-04 (mg/L)



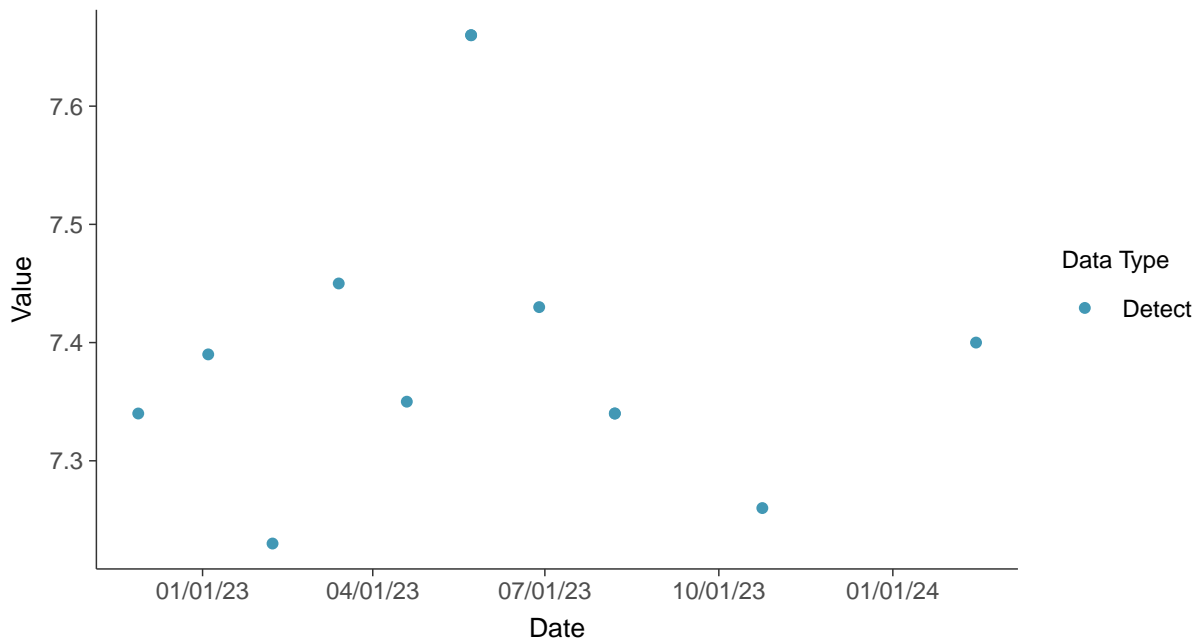


Appendix III: pH (field), MW-04

ID: 2_14_4_120

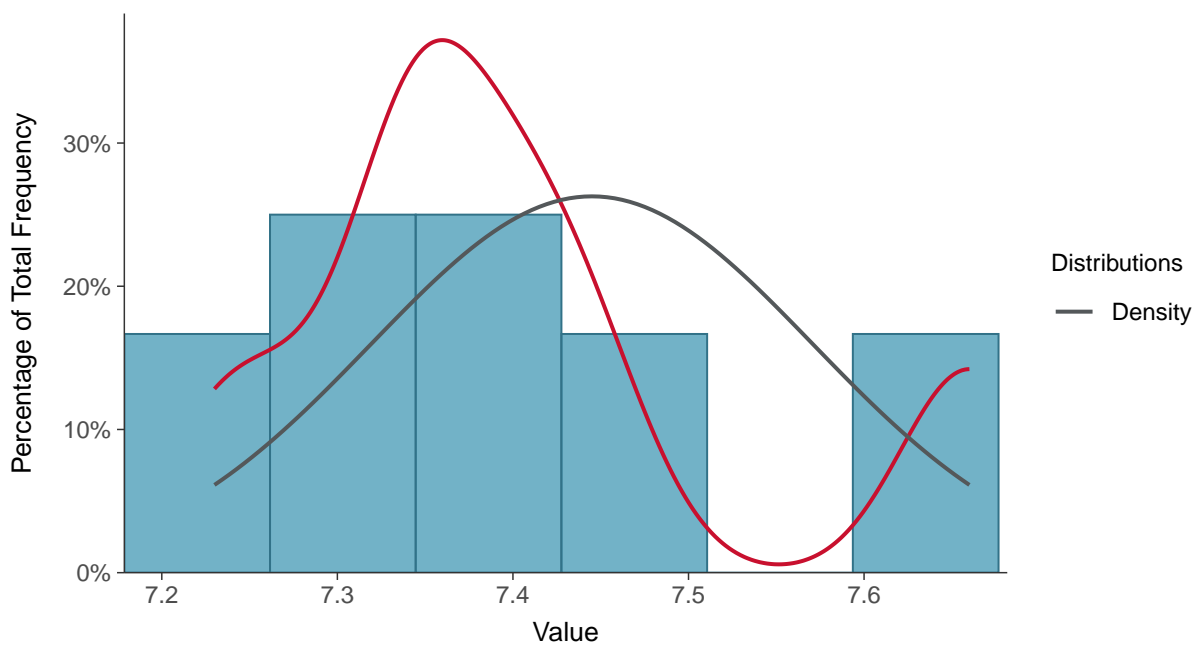
Scatter Plot

pH (field), MW-04 (su)



Histogram

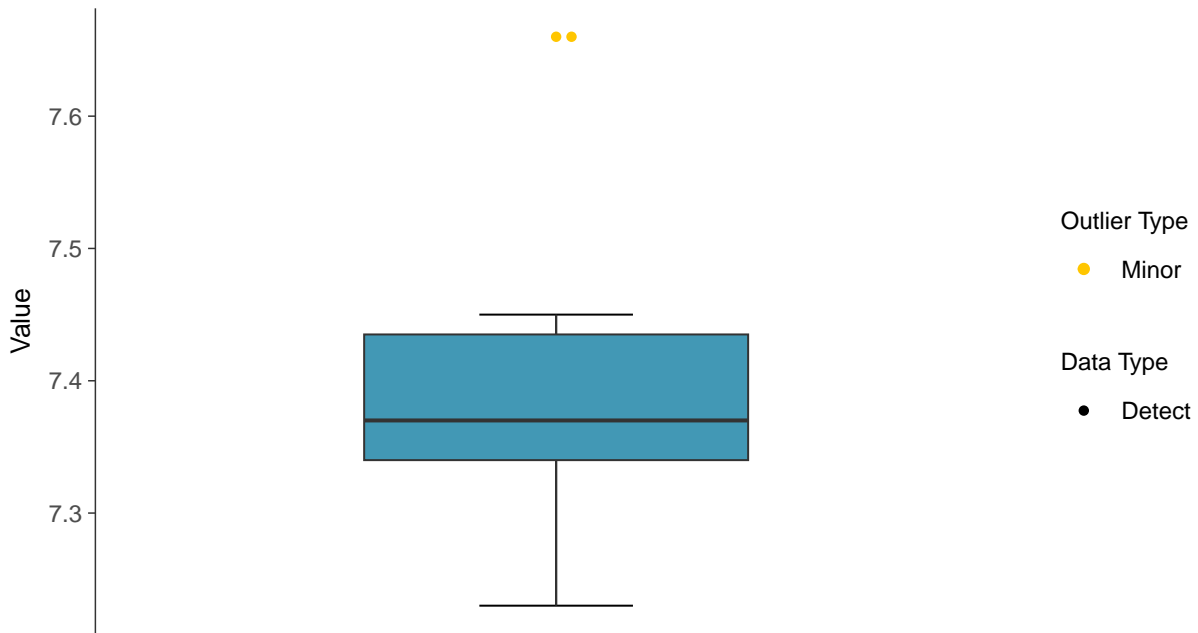
pH (field), MW-04 (su)





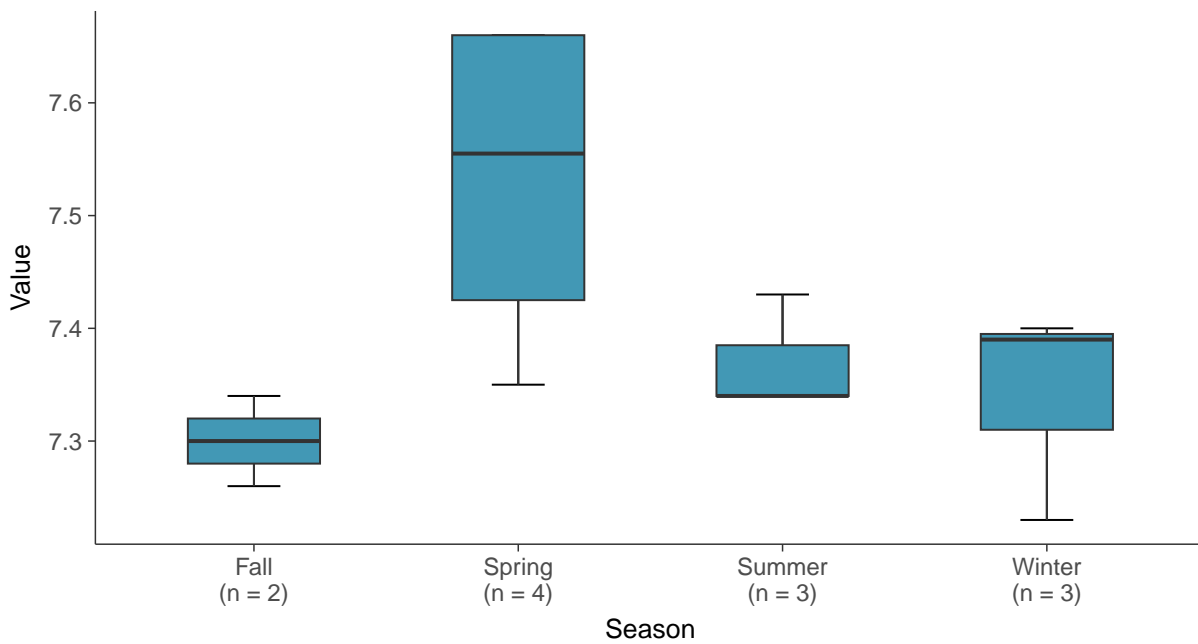
Boxplot

pH (field), MW-04 (su)



Boxplot by Season

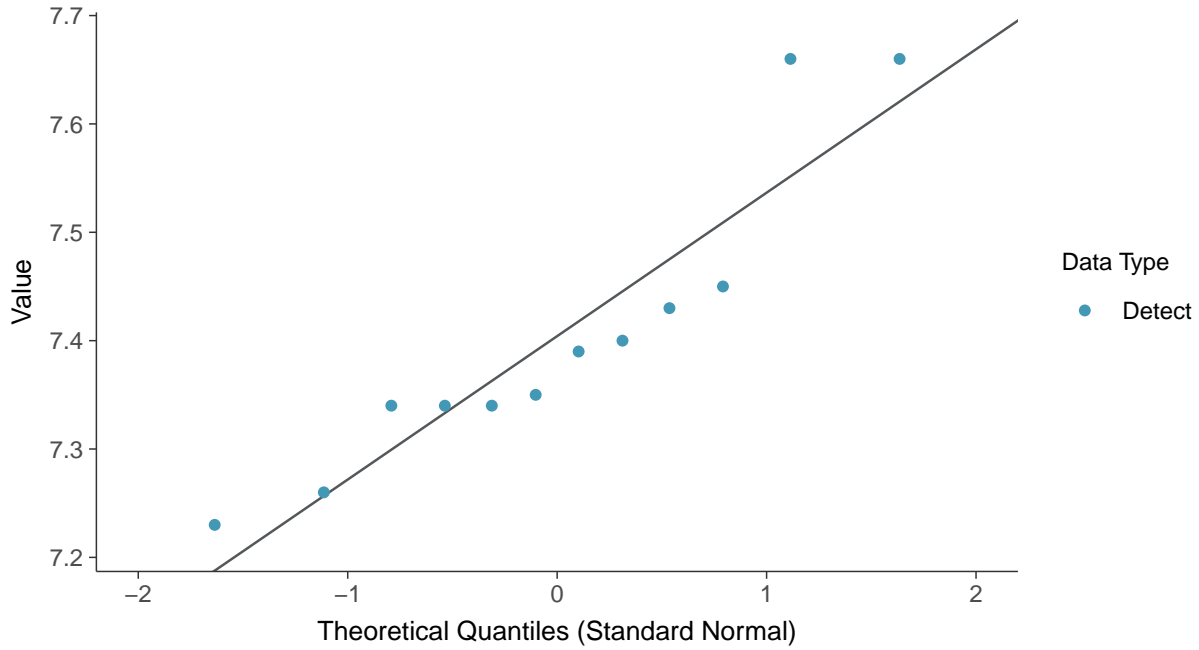
pH (field), MW-04 (su)





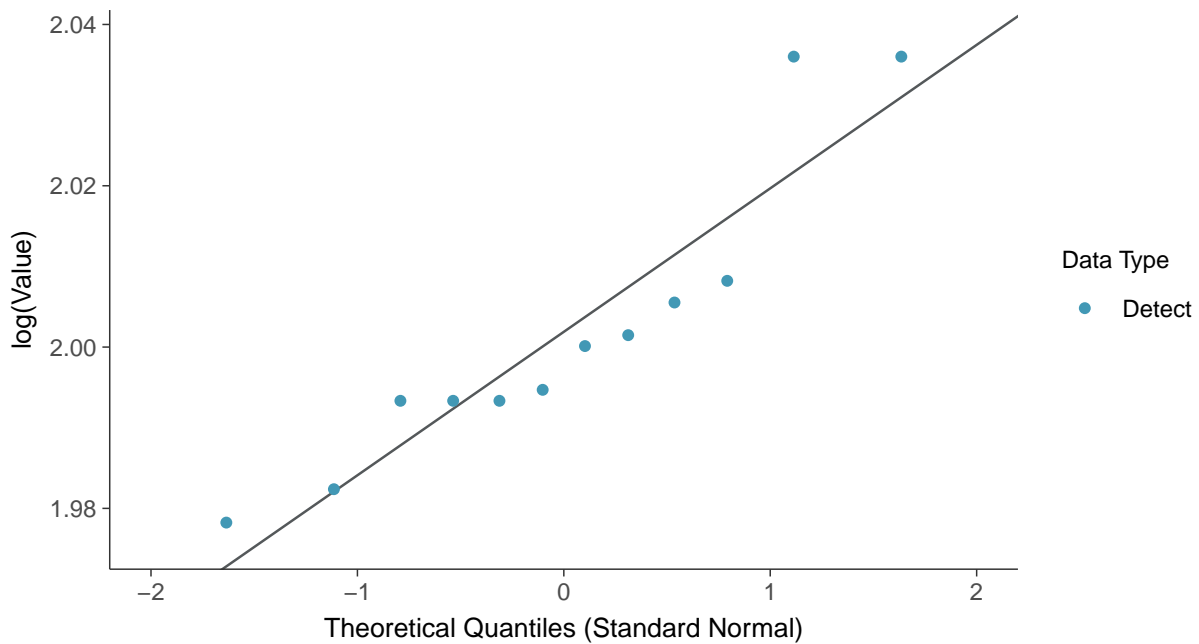
Normal Q-Q plot

pH (field), MW-04 (su)



Lognormal Q-Q plot

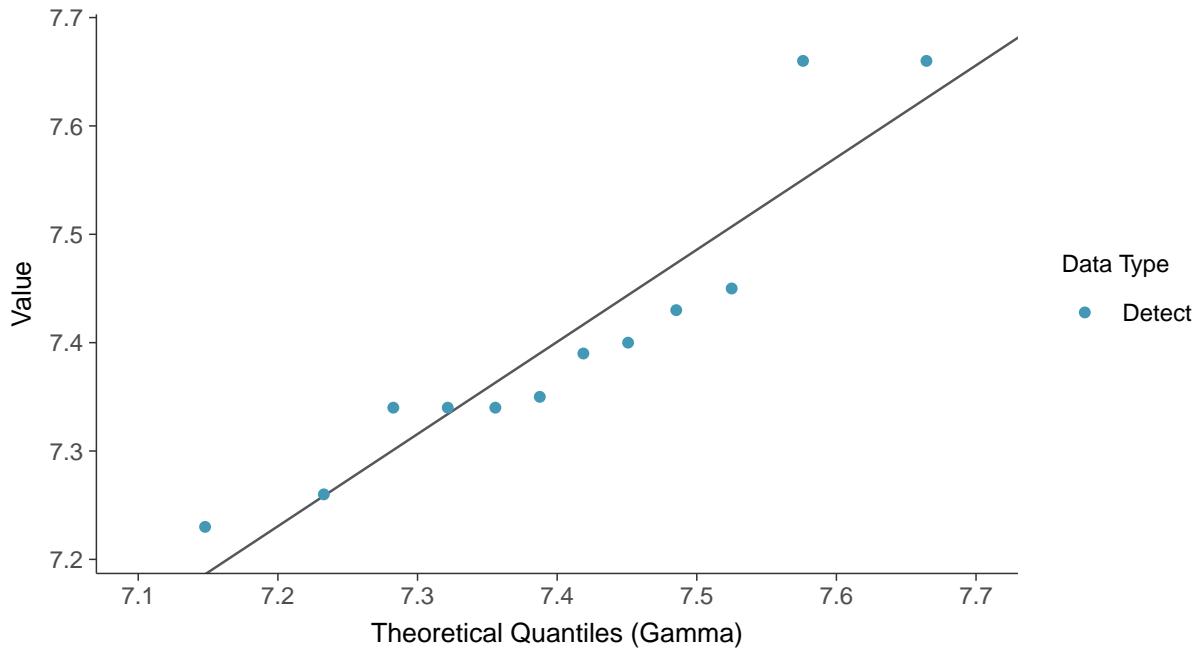
pH (field), MW-04 (su)





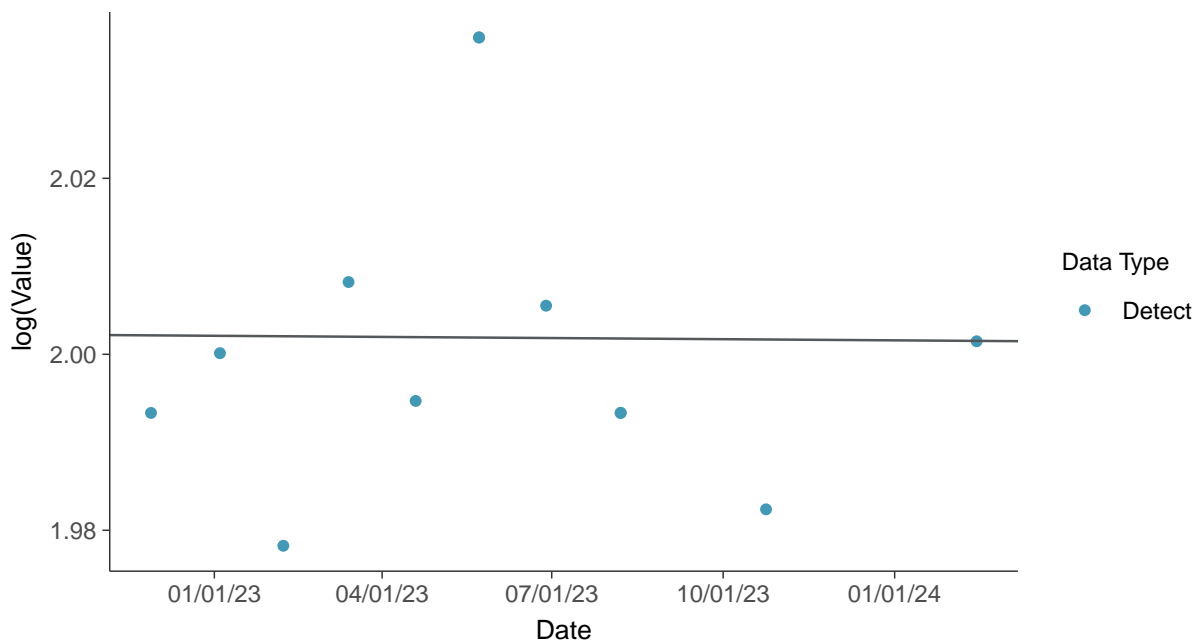
Gamma Q-Q plot

pH (field), MW-04 (su)



Trend Regression: Lognormal MLE

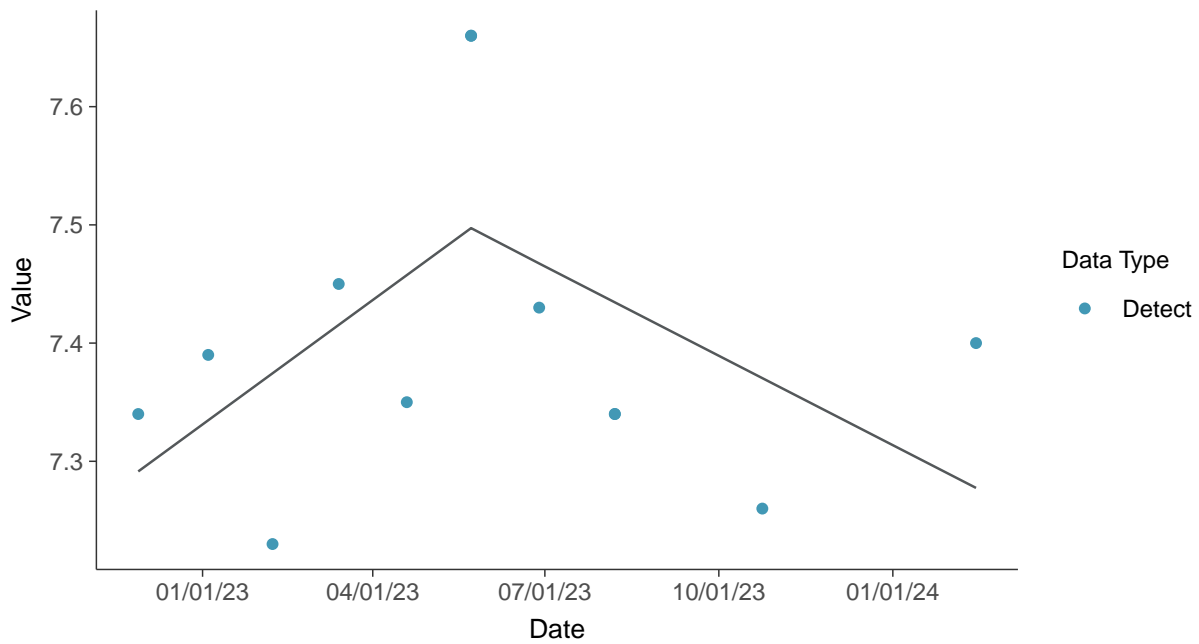
pH (field), MW-04 (su)





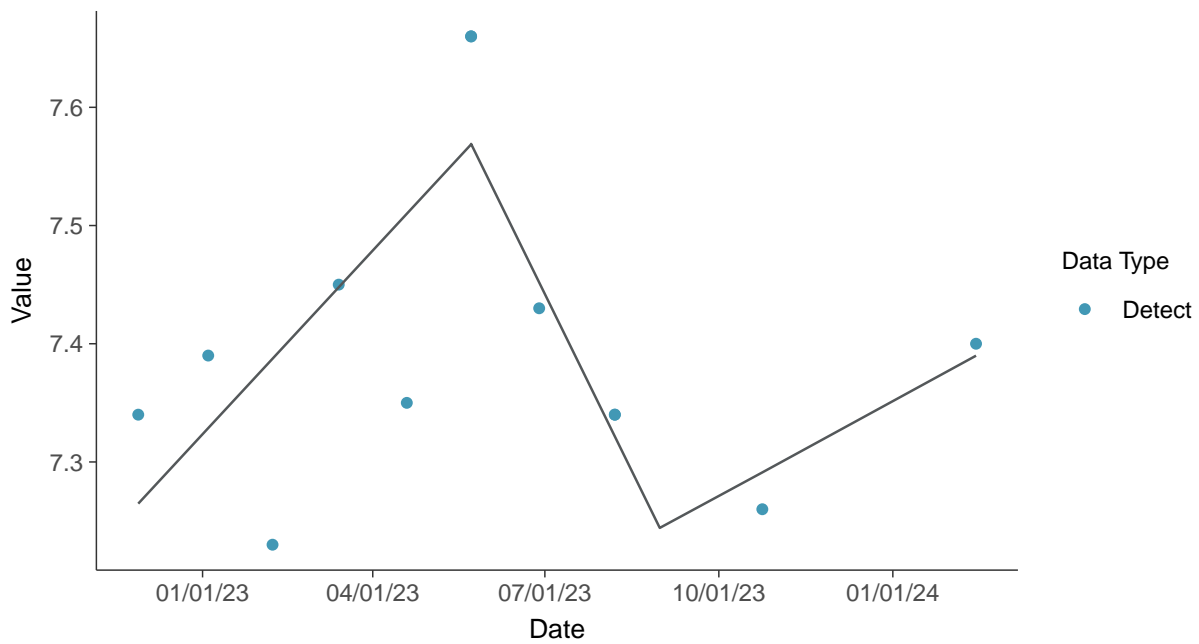
Trend Regression: Piecewise Linear-Linear

pH (field), MW-04 (su)



Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-04 (su)



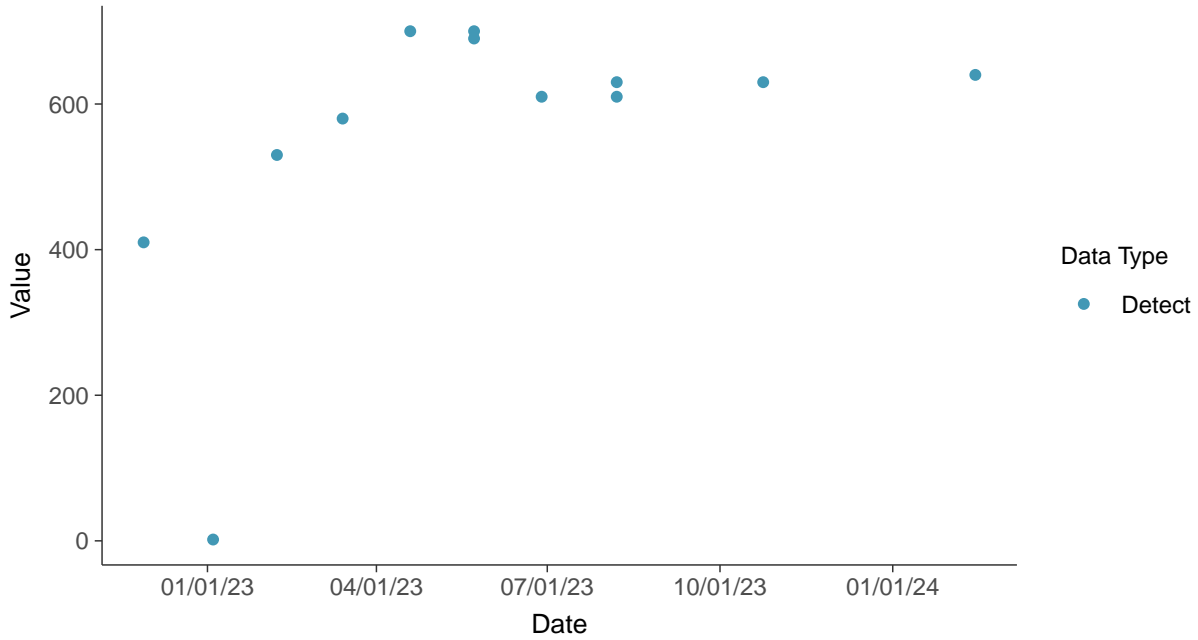


Appendix III: Sulfate (as SO₄), MW-04

ID: 2_14_4_124

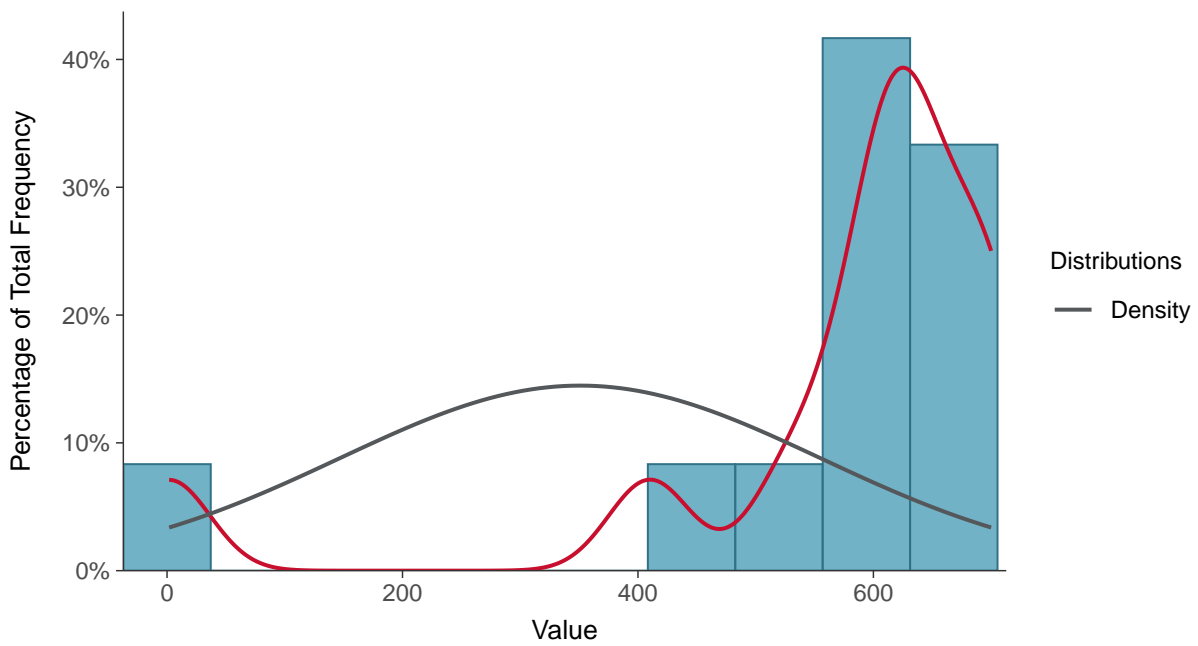
Scatter Plot

Sulfate (as SO₄), MW-04 (mg/L)



Histogram

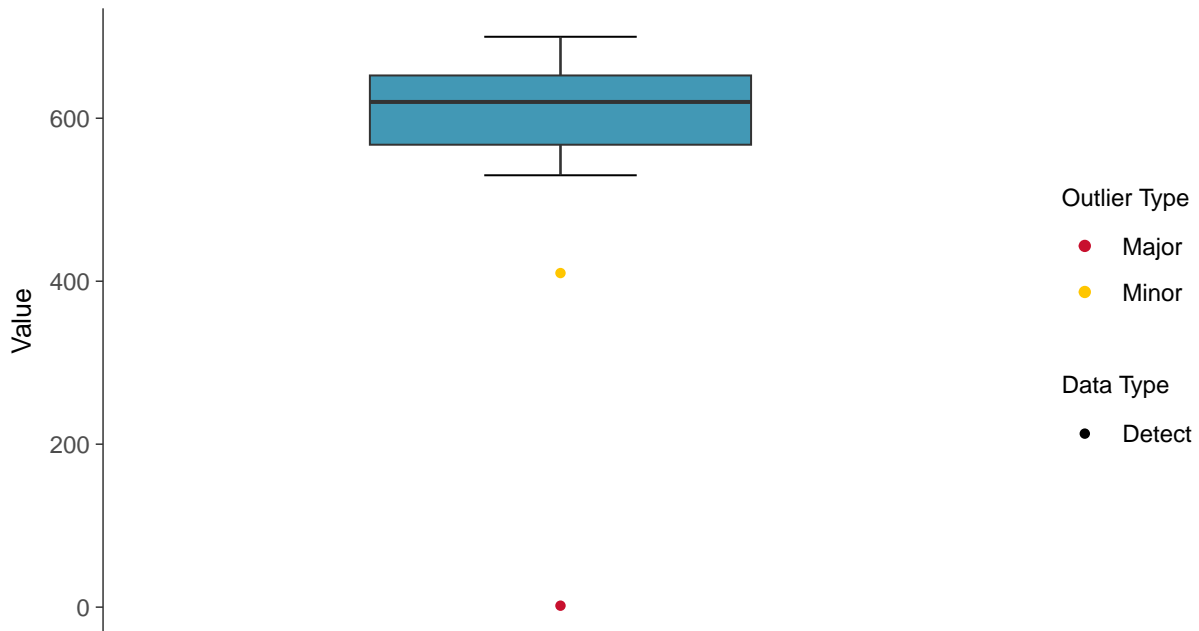
Sulfate (as SO₄), MW-04 (mg/L)





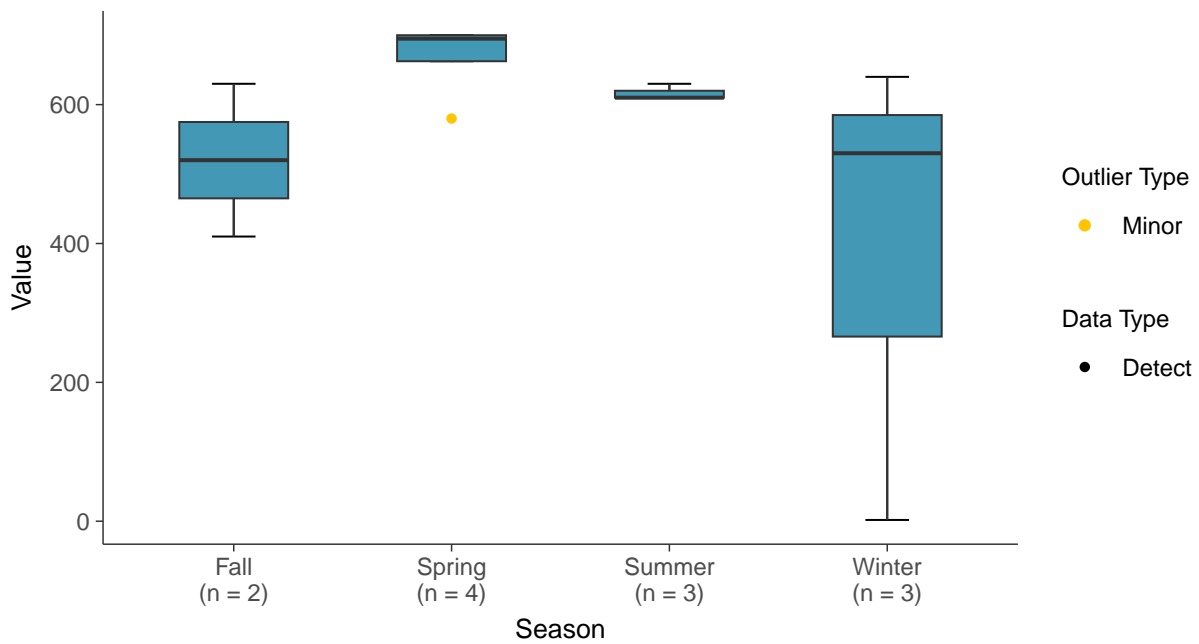
Boxplot

Sulfate (as SO₄), MW-04 (mg/L)



Boxplot by Season

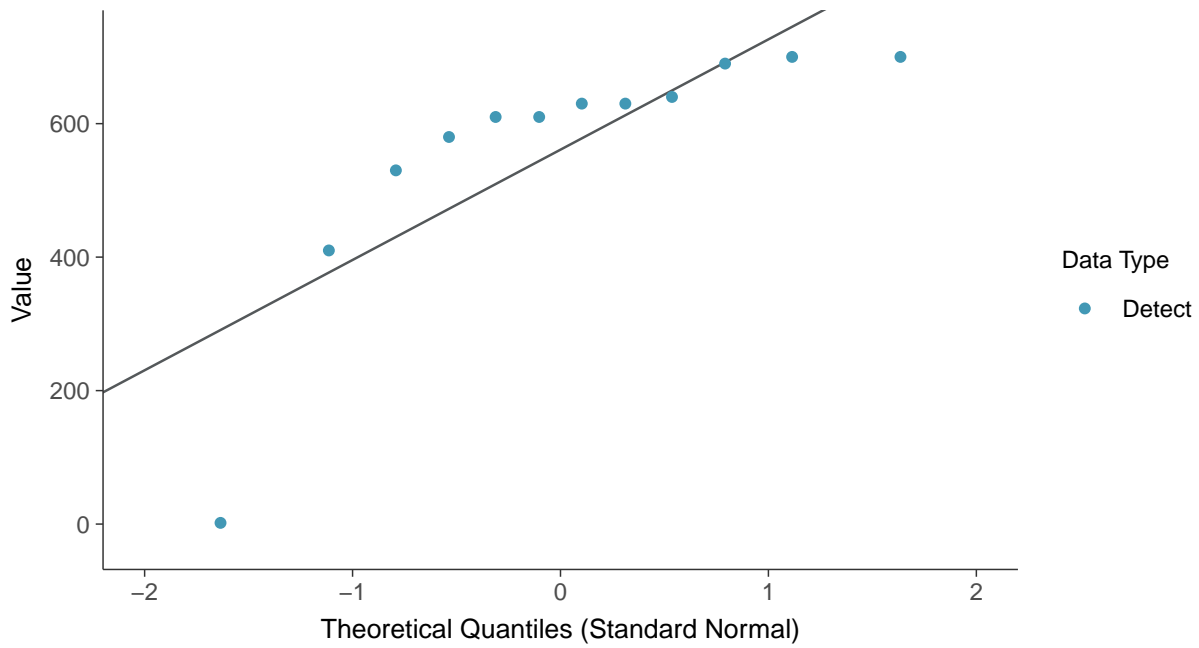
Sulfate (as SO₄), MW-04 (mg/L)





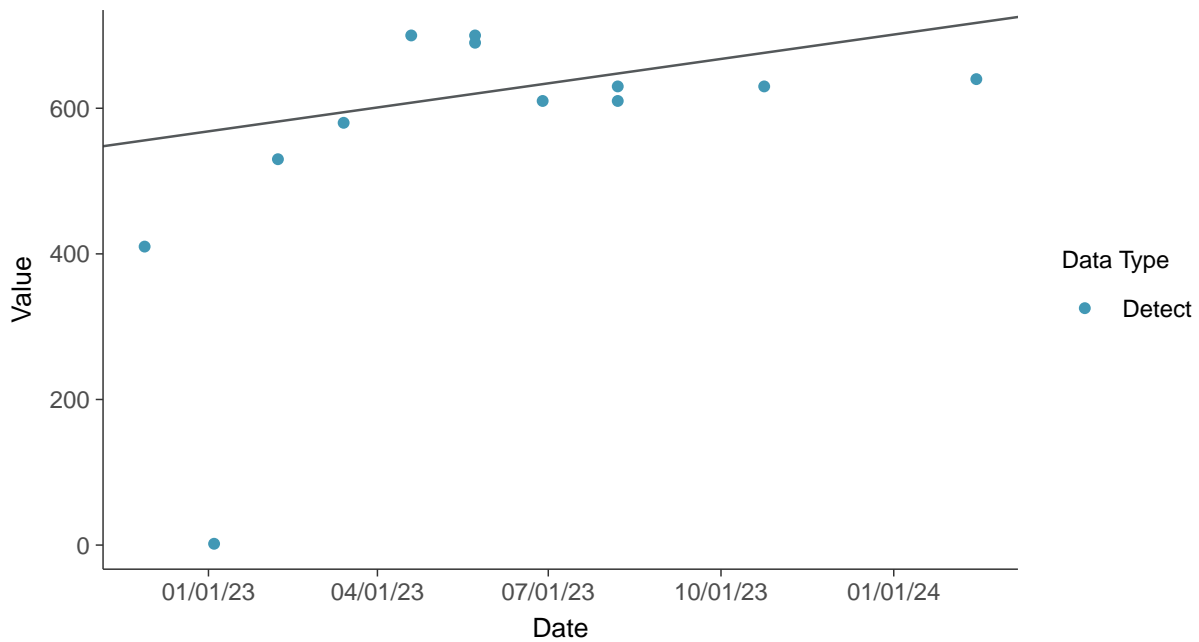
Normal Q-Q plot

Sulfate (as SO₄), MW-04 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

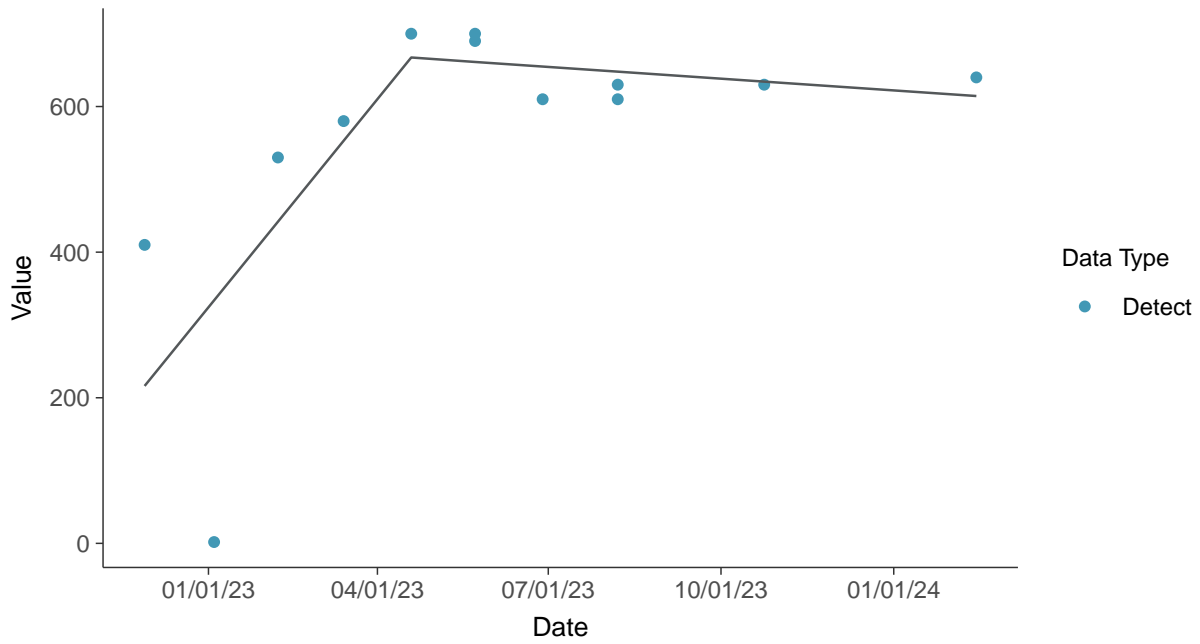
Sulfate (as SO₄), MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear

Sulfate (as SO4), MW-04 (mg/L)



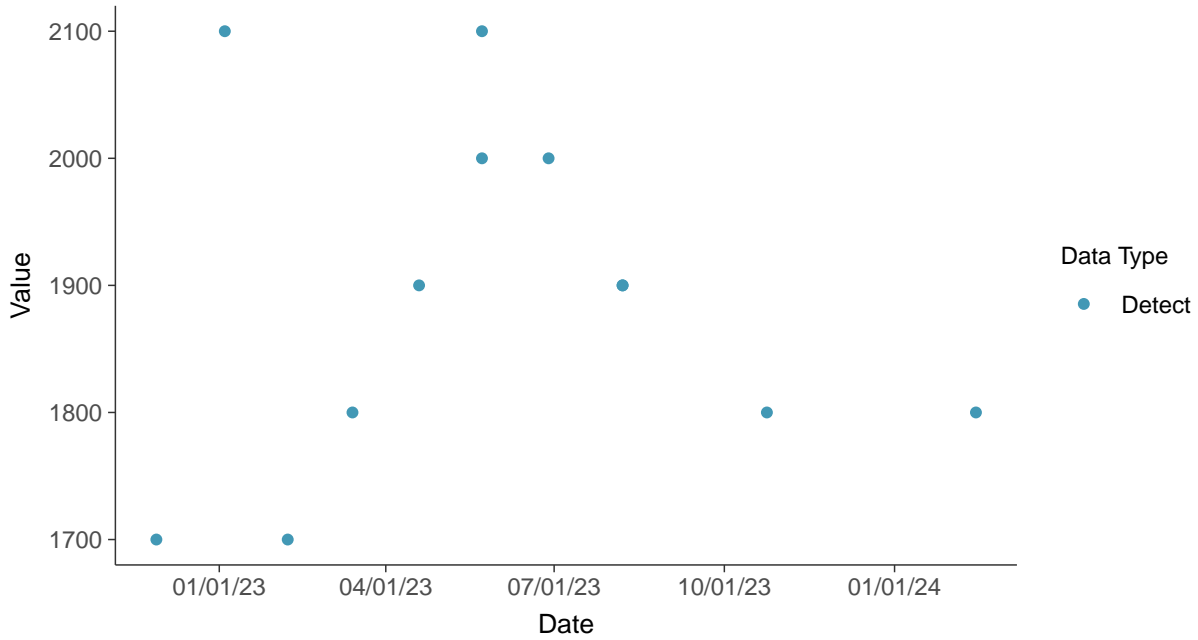


Appendix III: Total Dissolved Solids, MW-04

ID: 2_14_4_126

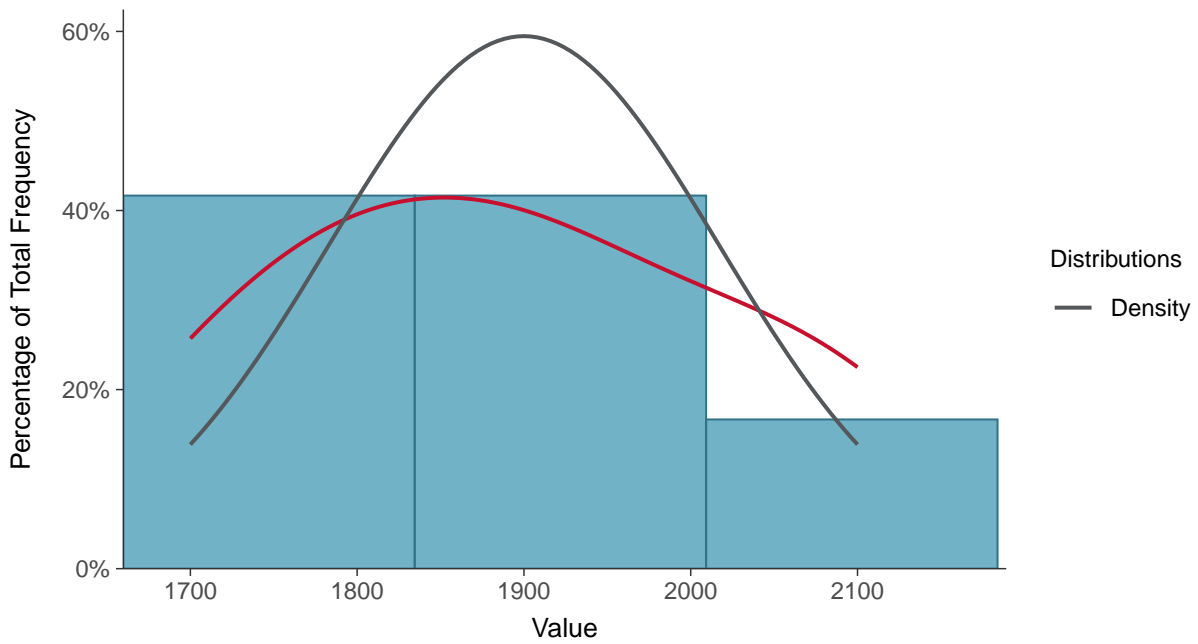
Scatter Plot

Total Dissolved Solids, MW-04 (mg/L)



Histogram

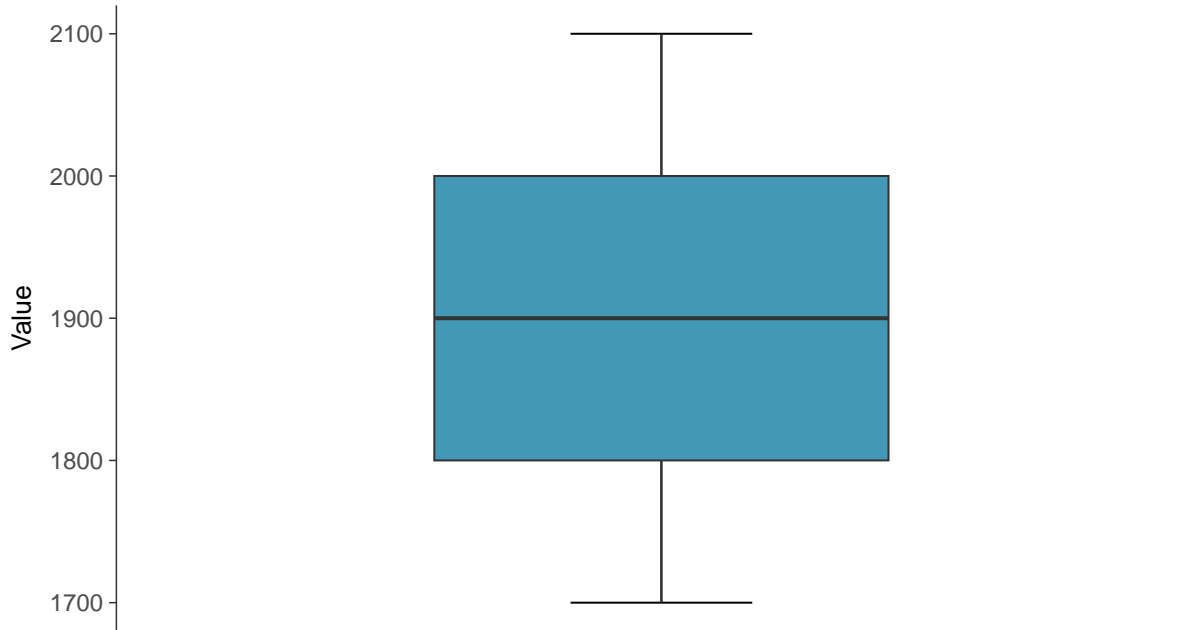
Total Dissolved Solids, MW-04 (mg/L)





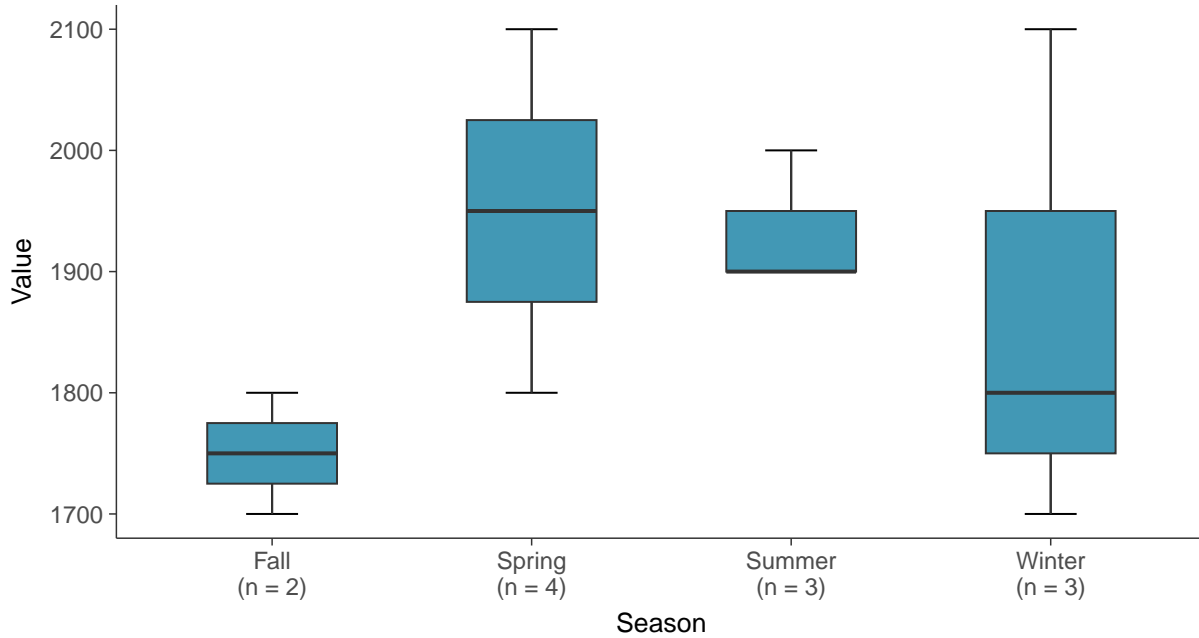
Boxplot

Total Dissolved Solids, MW-04 (mg/L)



Boxplot by Season

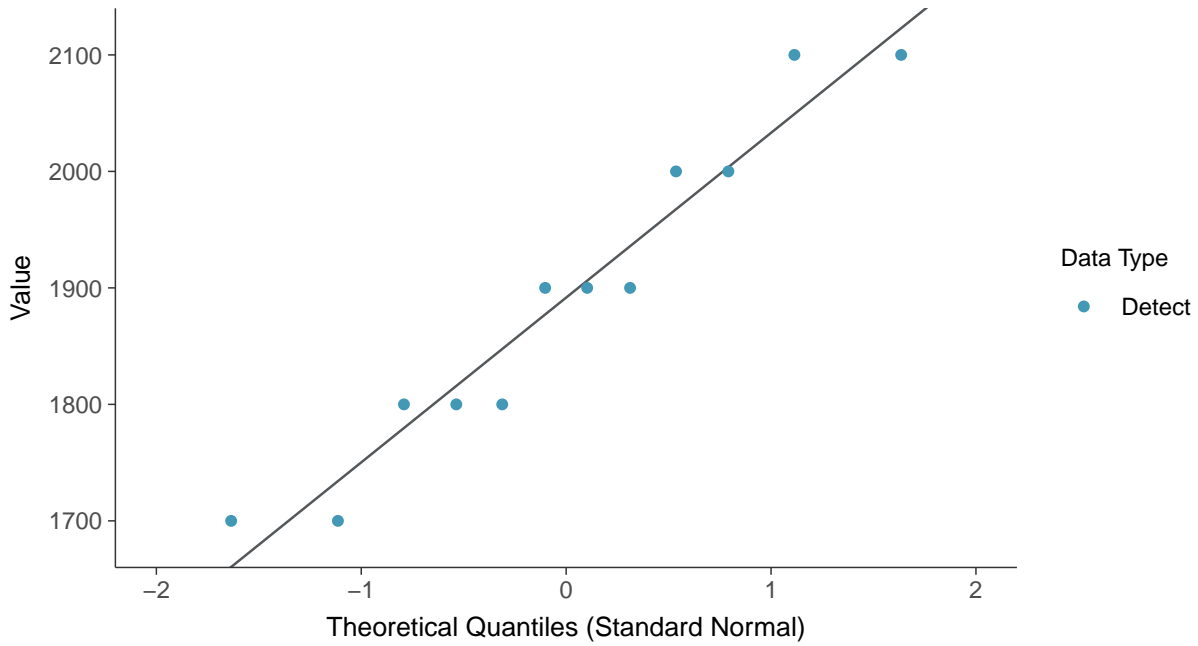
Total Dissolved Solids, MW-04 (mg/L)





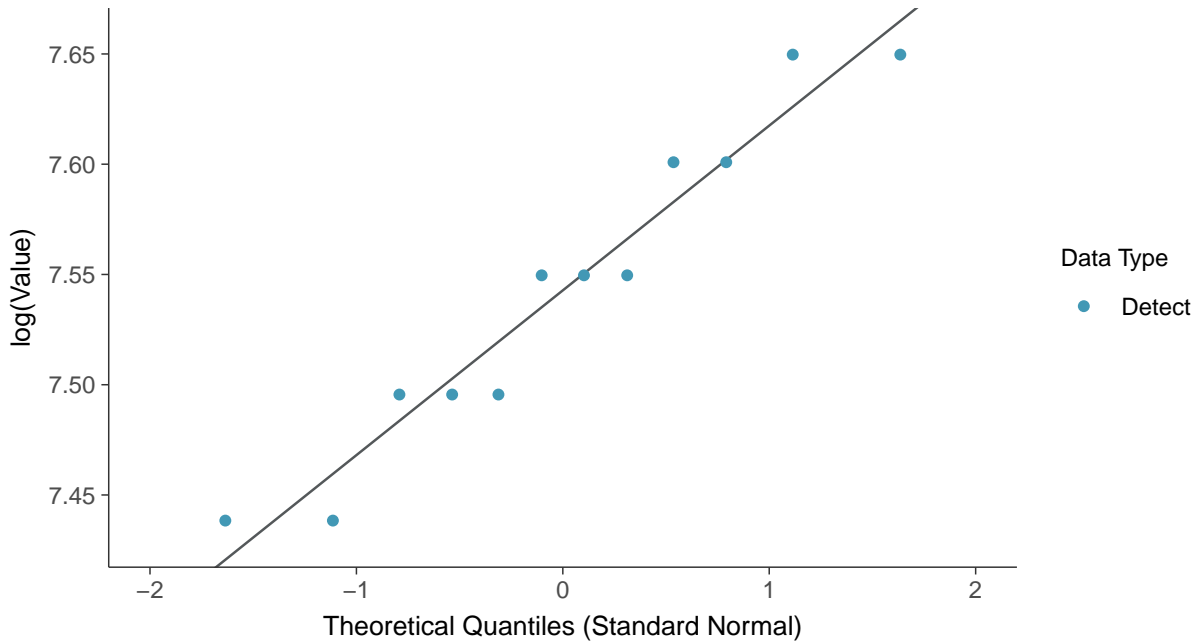
Normal Q-Q plot

Total Dissolved Solids, MW-04 (mg/L)



Lognormal Q-Q plot

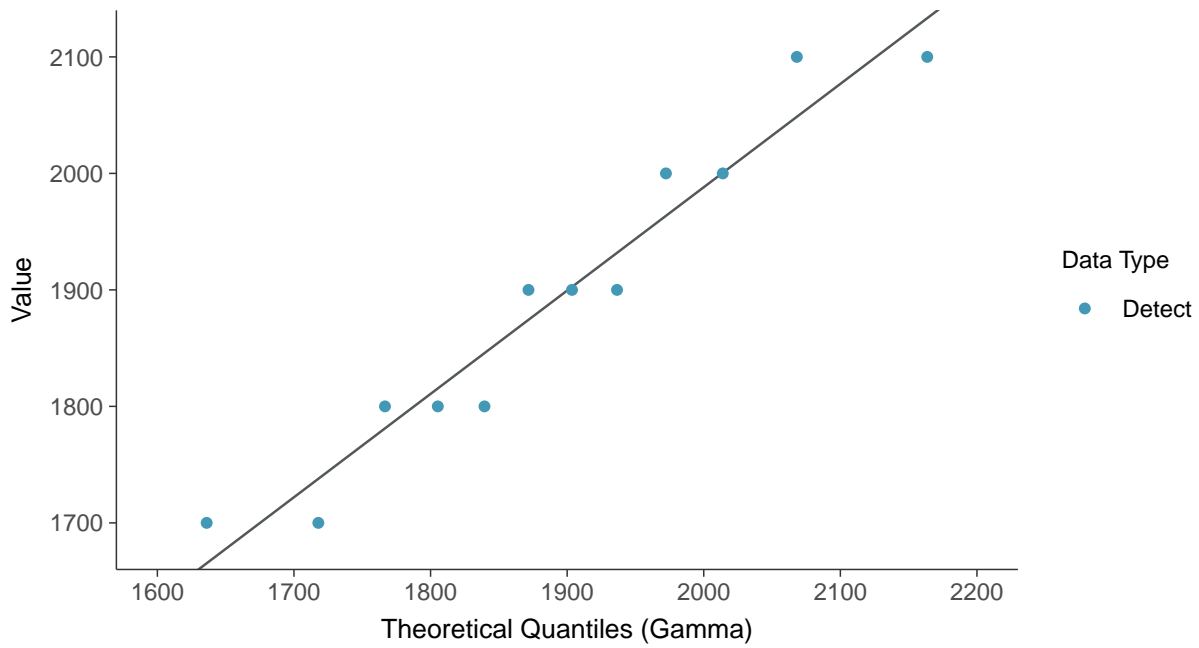
Total Dissolved Solids, MW-04 (mg/L)





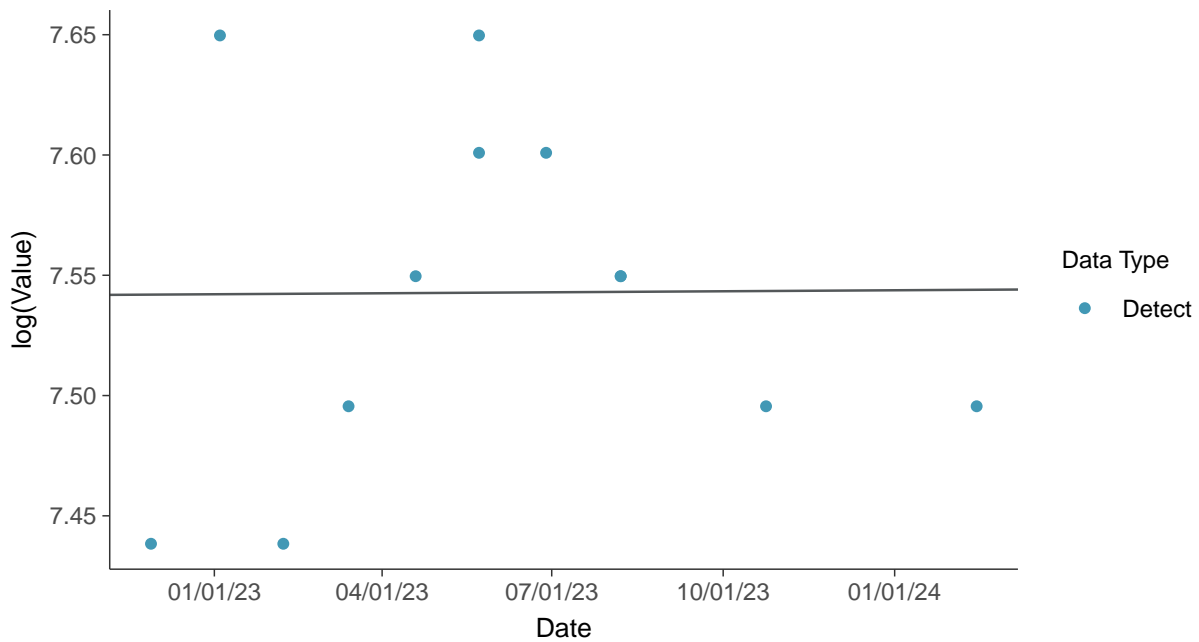
Gamma Q-Q plot

Total Dissolved Solids, MW-04 (mg/L)



Trend Regression: Lognormal MLE

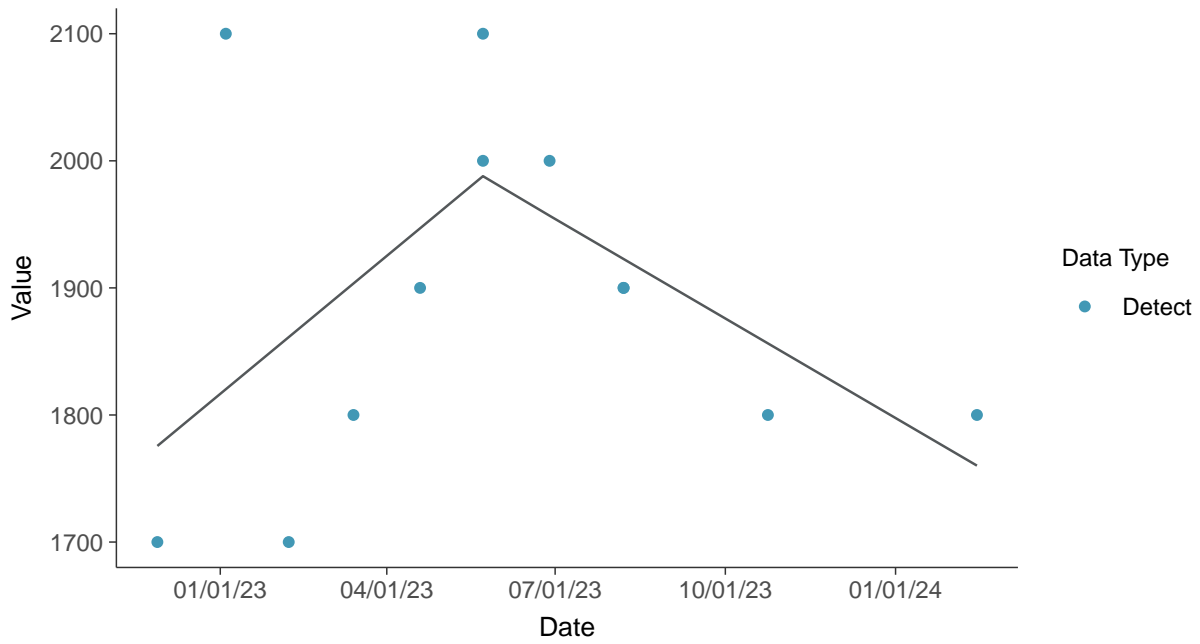
Total Dissolved Solids, MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear

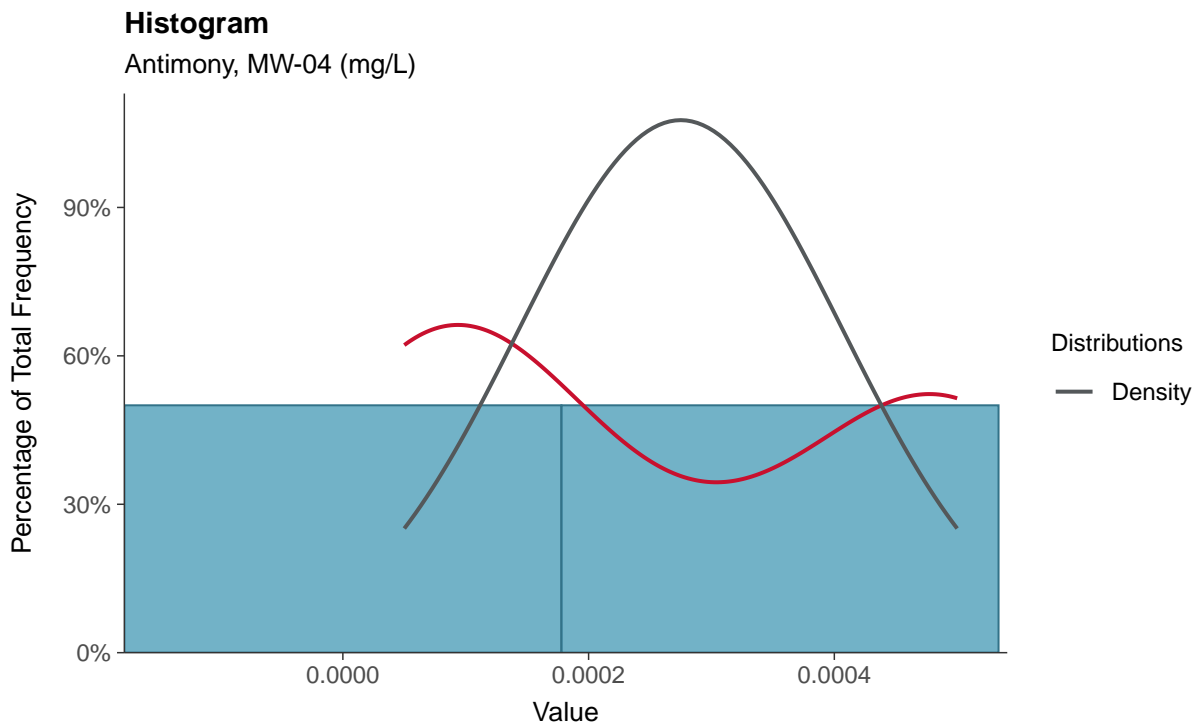
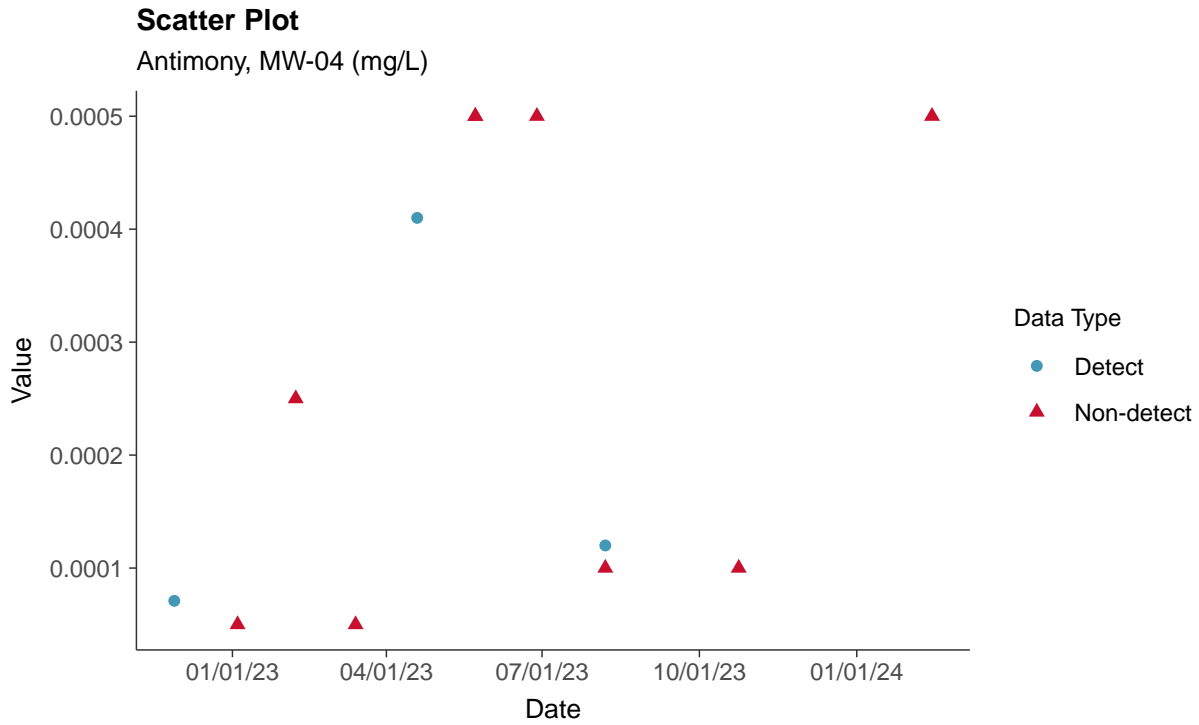
Total Dissolved Solids, MW-04 (mg/L)





Appendix IV: Antimony, MW-04

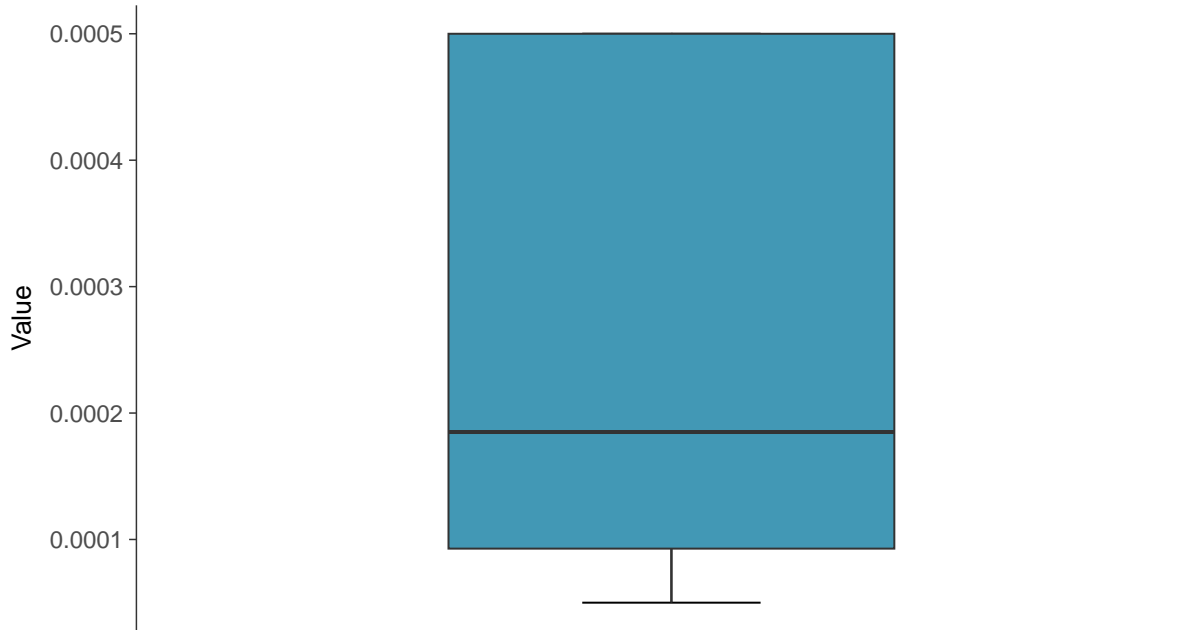
ID: 2_14_5_101





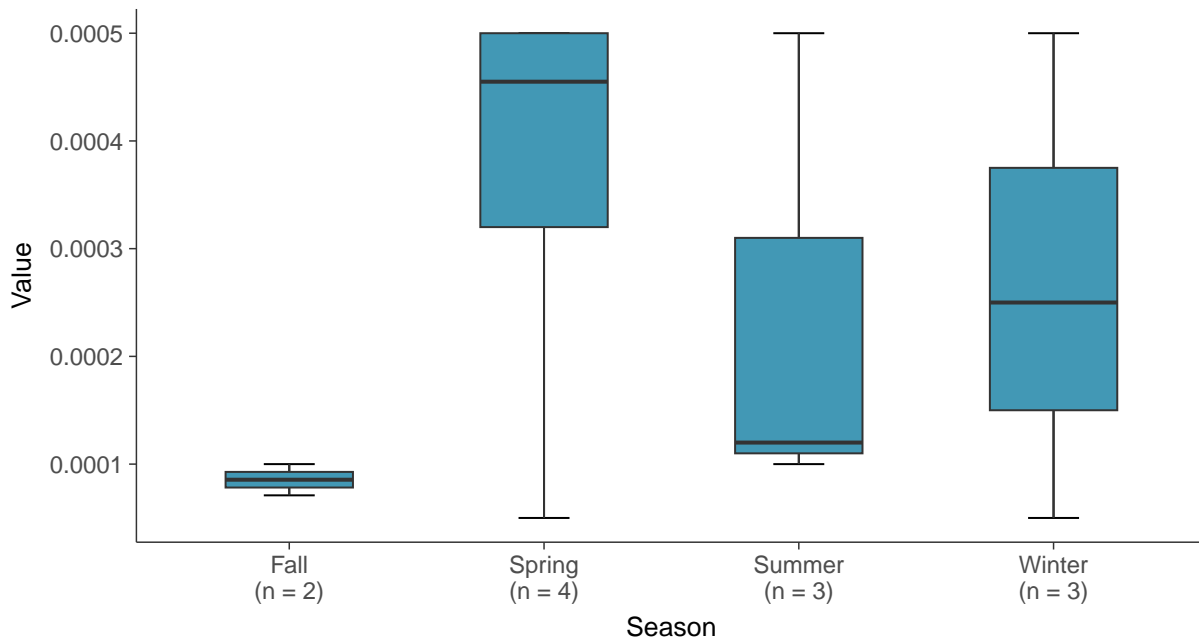
Boxplot

Antimony, MW-04 (mg/L)



Boxplot by Season

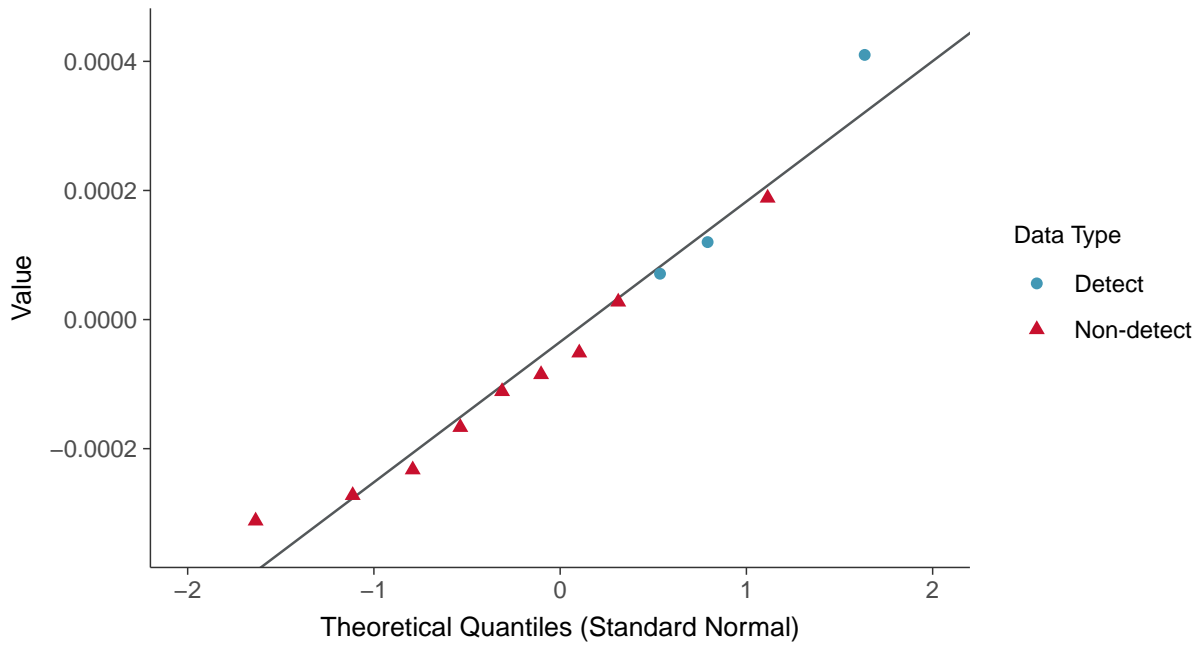
Antimony, MW-04 (mg/L)





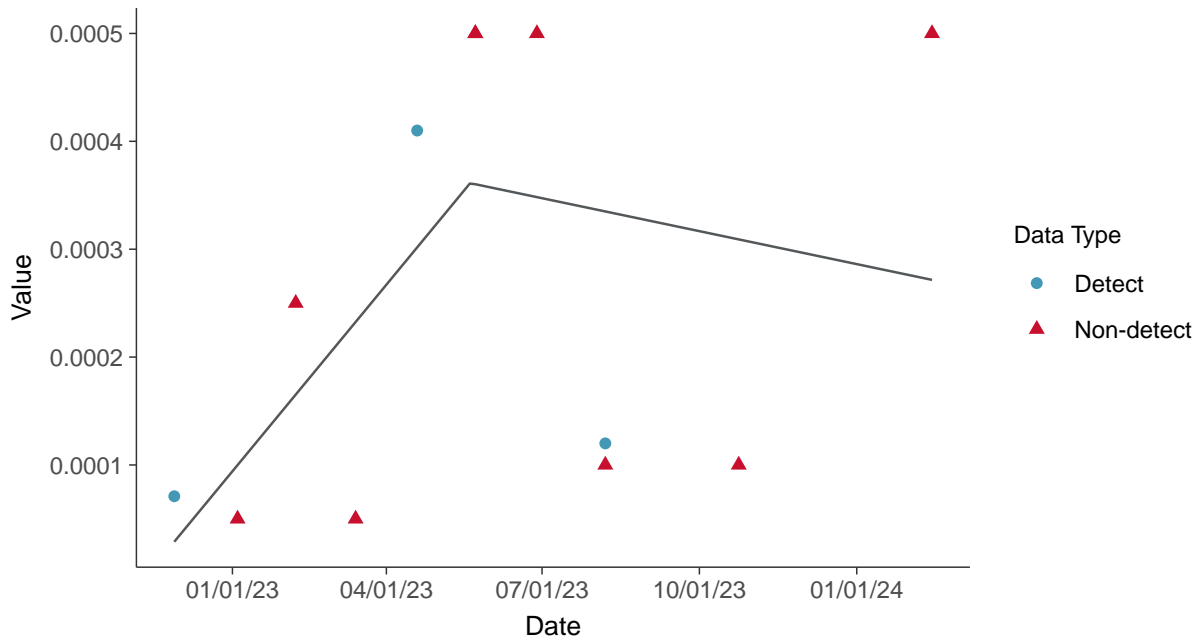
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear

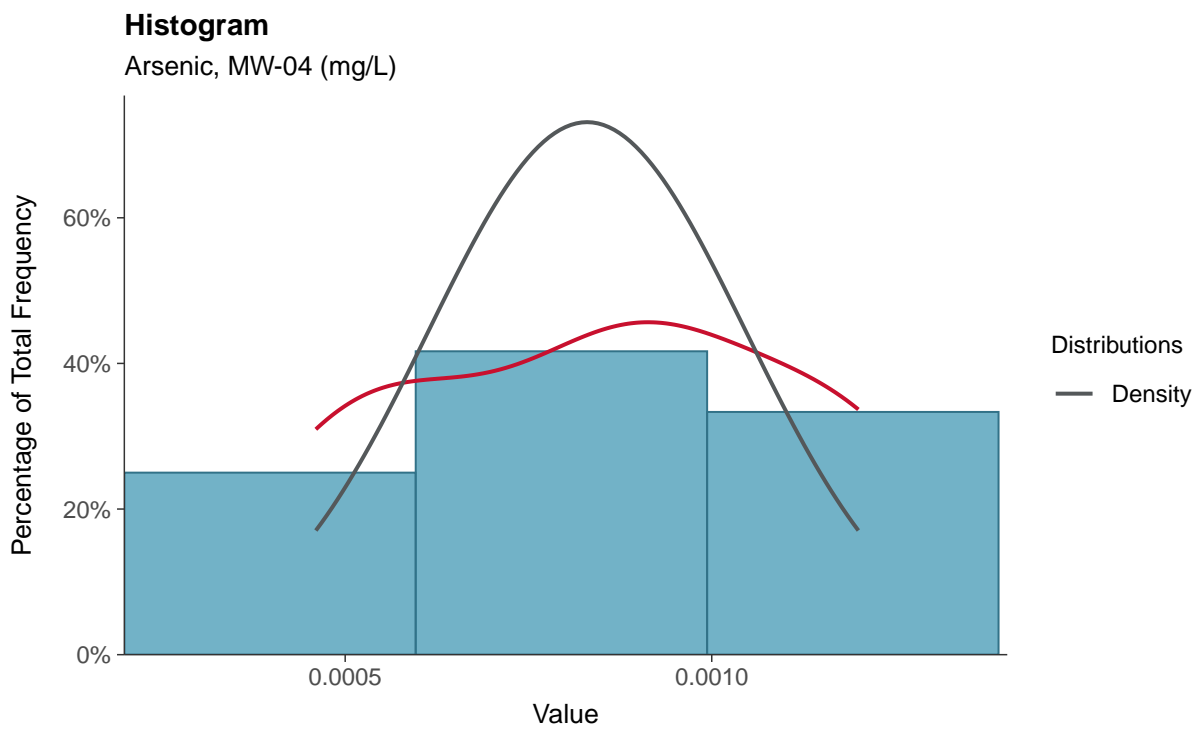
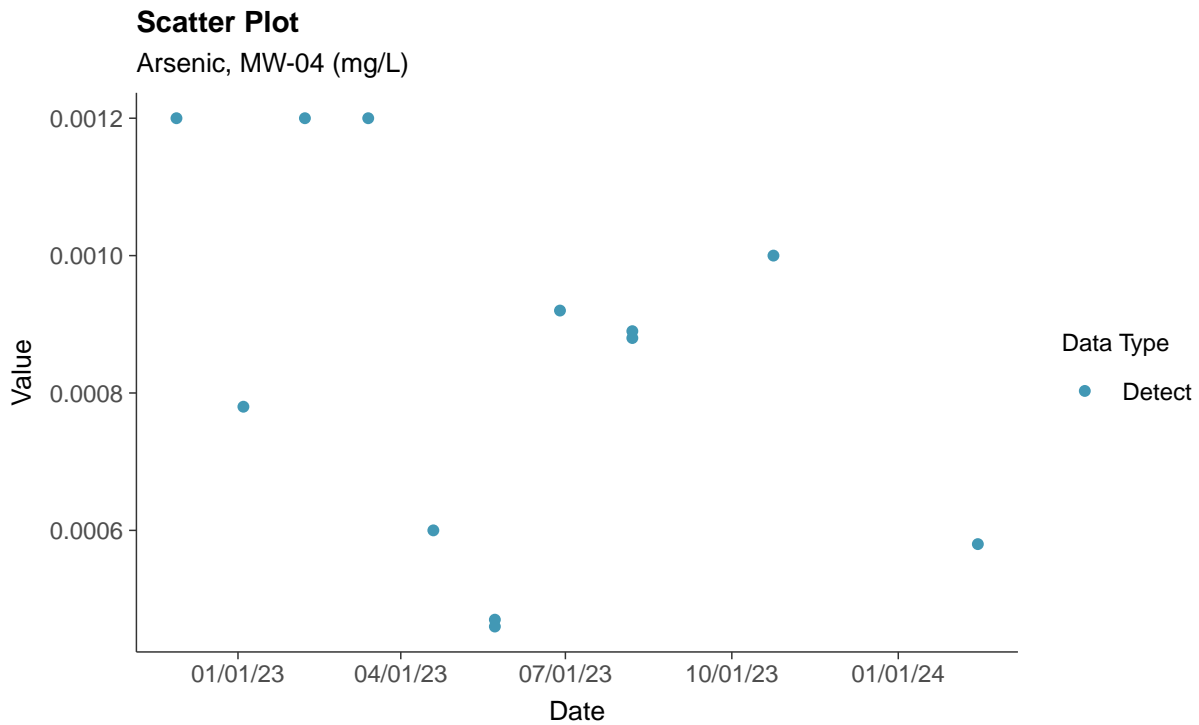
Antimony, MW-04 (mg/L)





Appendix IV: Arsenic, MW-04

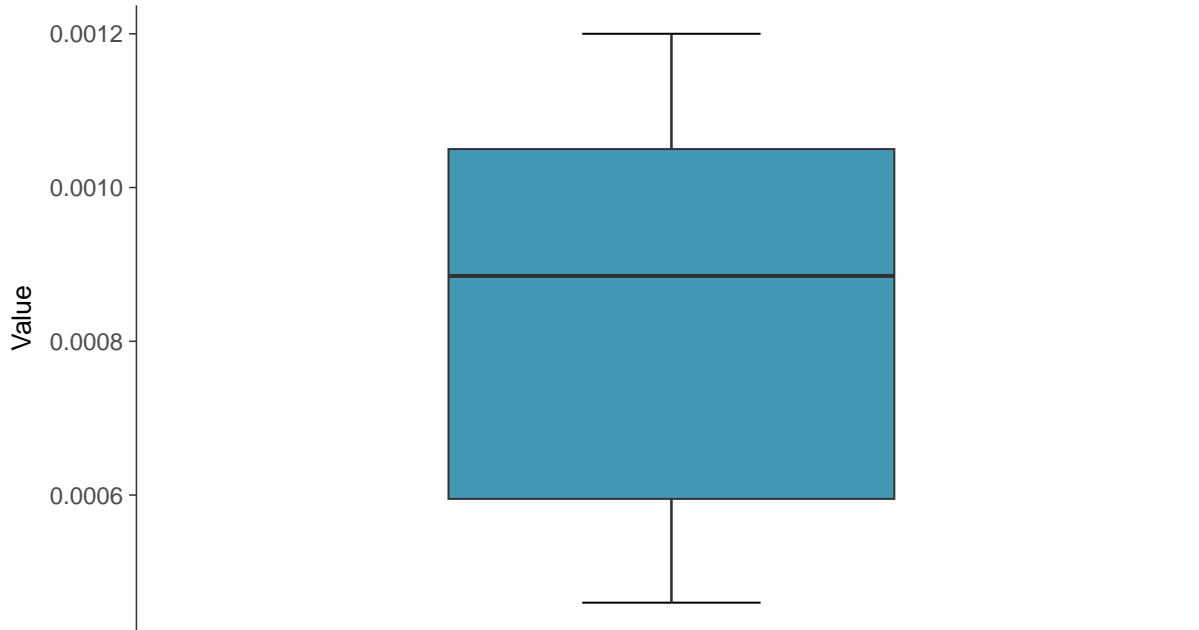
ID: 2_14_5_102





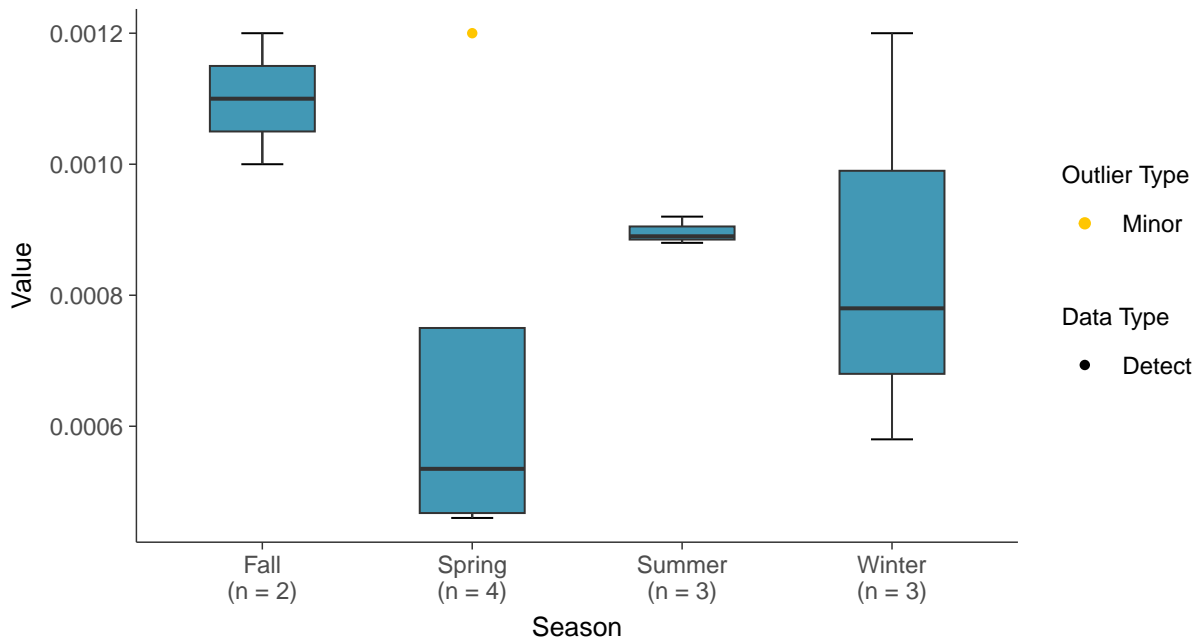
Boxplot

Arsenic, MW-04 (mg/L)



Boxplot by Season

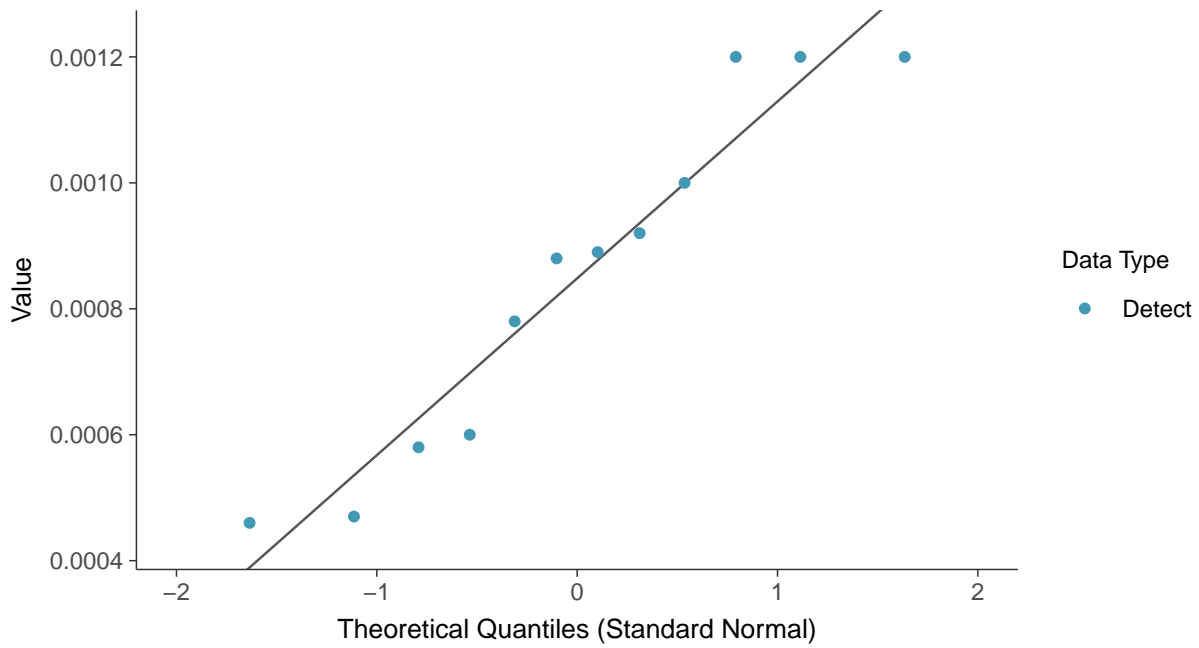
Arsenic, MW-04 (mg/L)





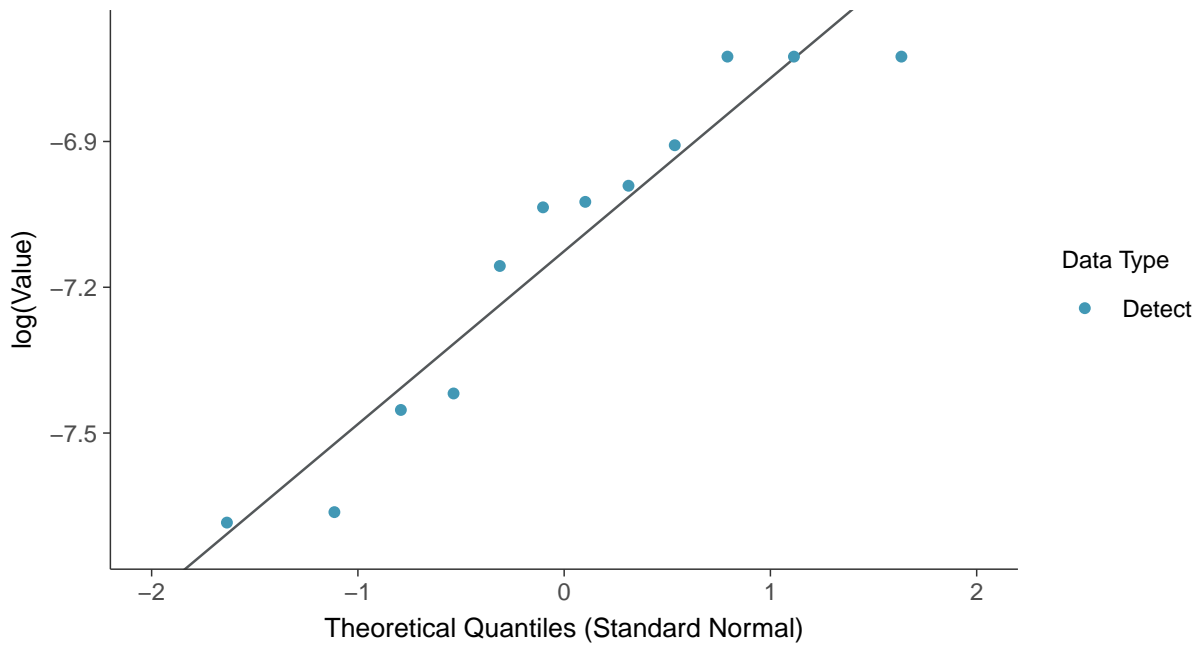
Normal Q-Q plot

Arsenic, MW-04 (mg/L)



Lognormal Q-Q plot

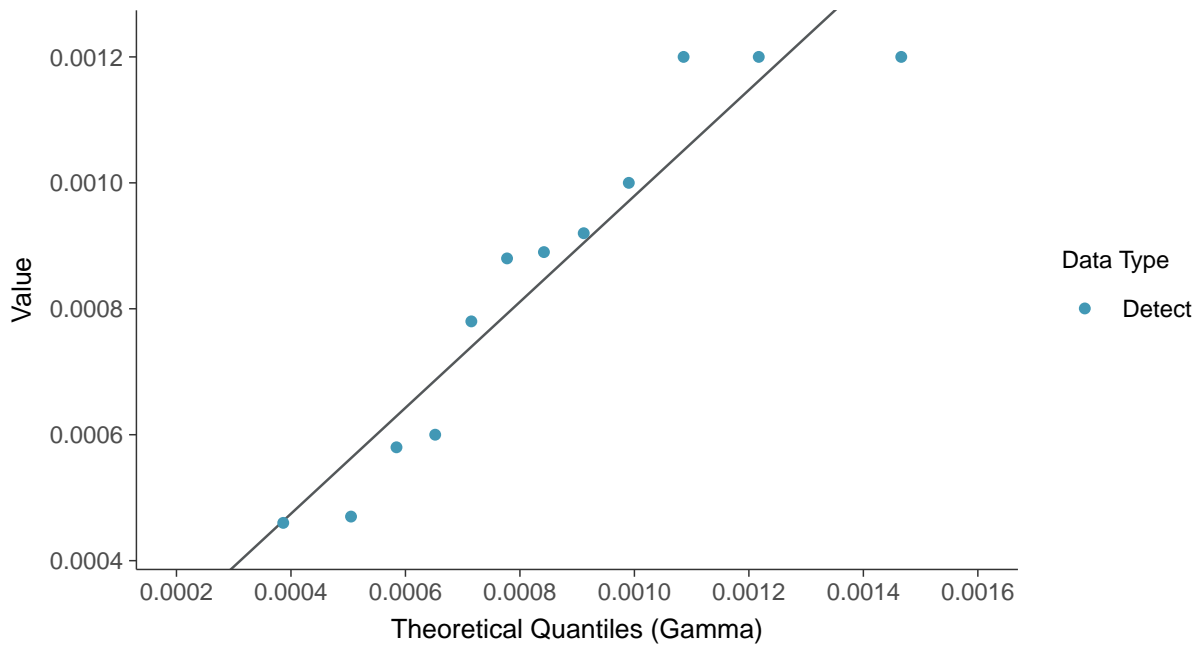
Arsenic, MW-04 (mg/L)





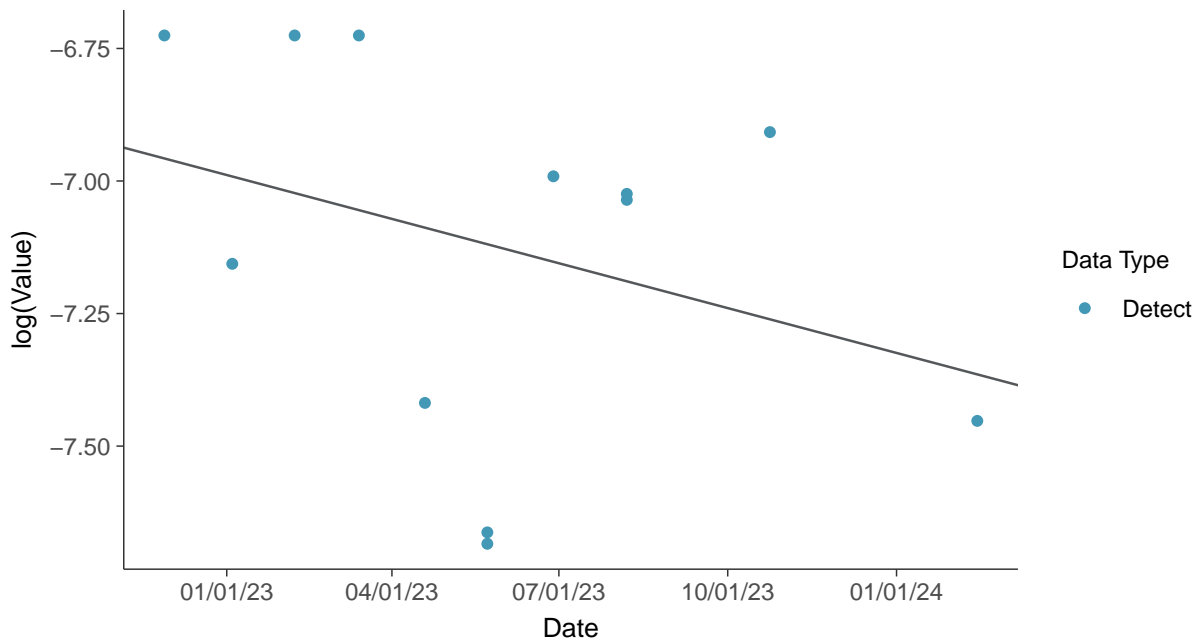
Gamma Q-Q plot

Arsenic, MW-04 (mg/L)



Trend Regression: Lognormal MLE

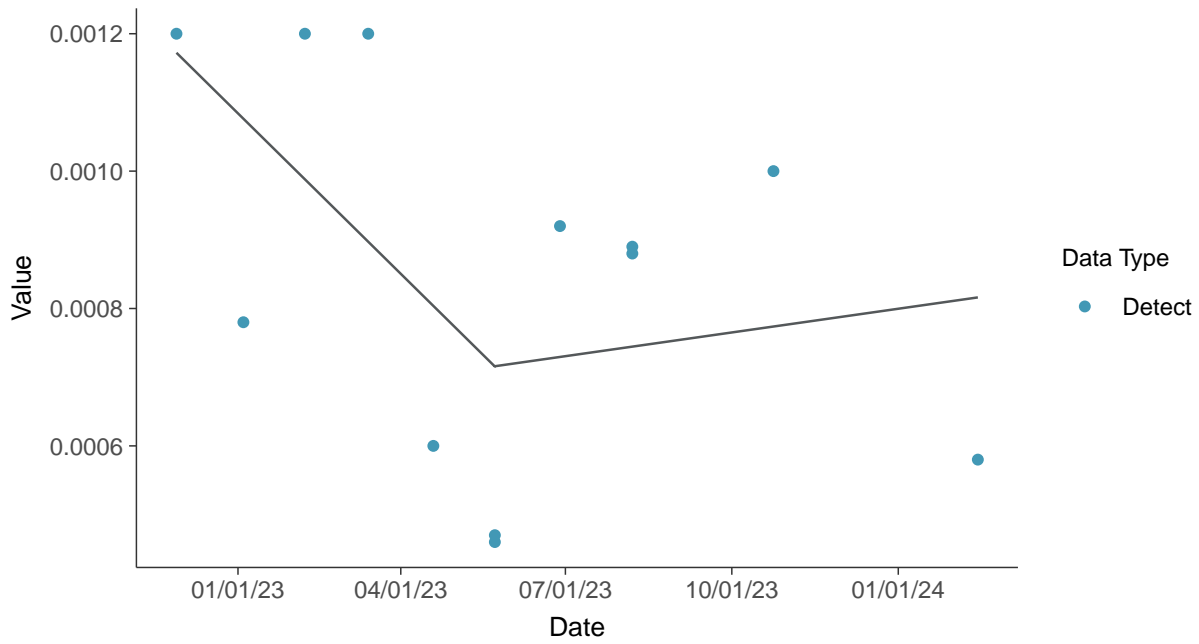
Arsenic, MW-04 (mg/L)





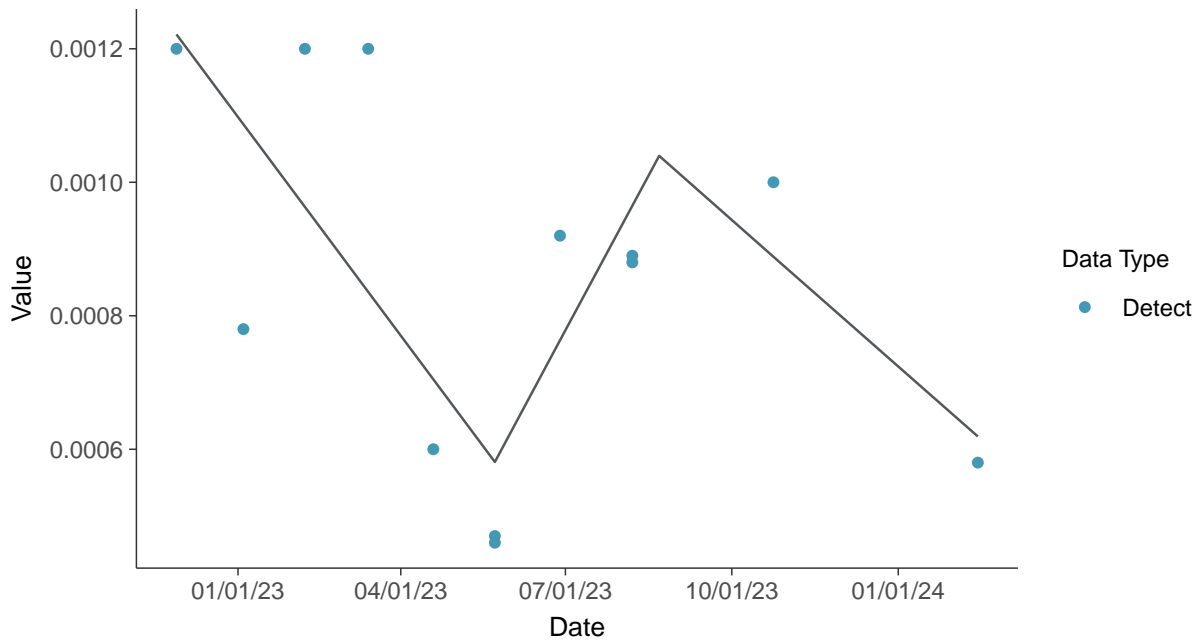
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-04 (mg/L)



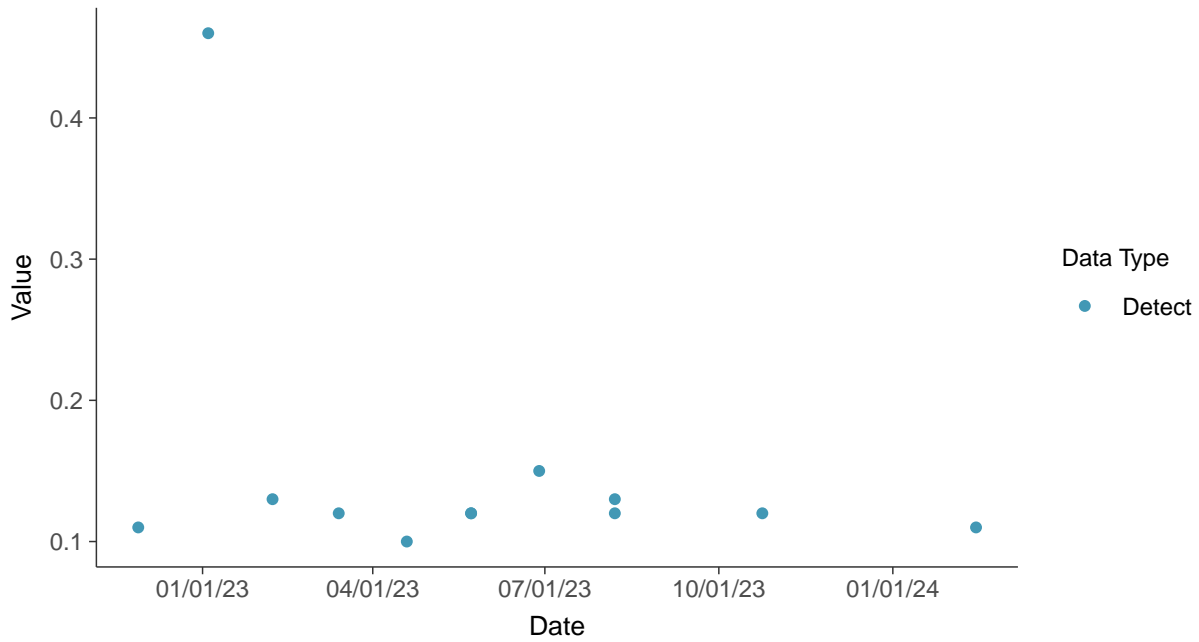


Appendix IV: Barium, MW-04

ID: 2_14_5_103

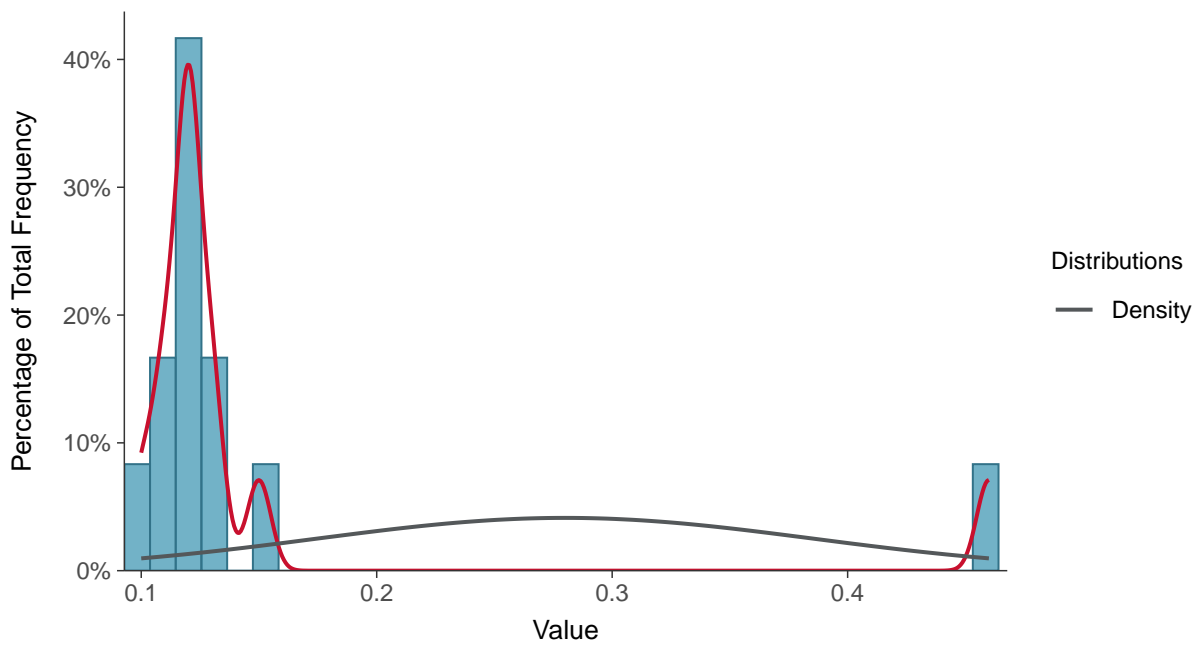
Scatter Plot

Barium, MW-04 (mg/L)



Histogram

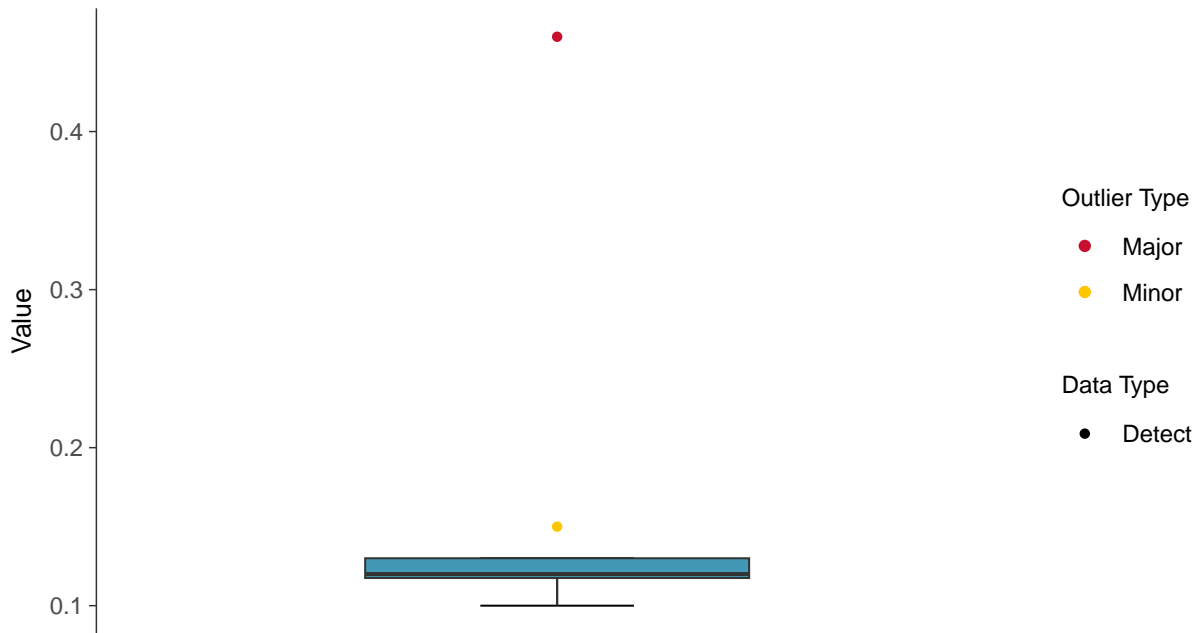
Barium, MW-04 (mg/L)





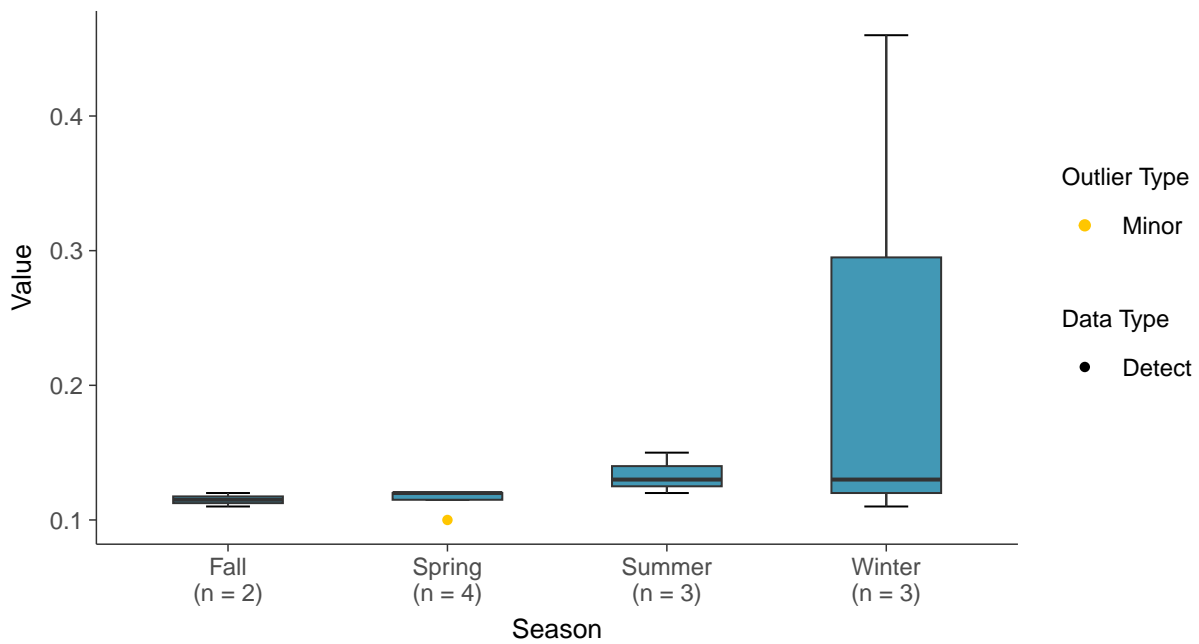
Boxplot

Barium, MW-04 (mg/L)



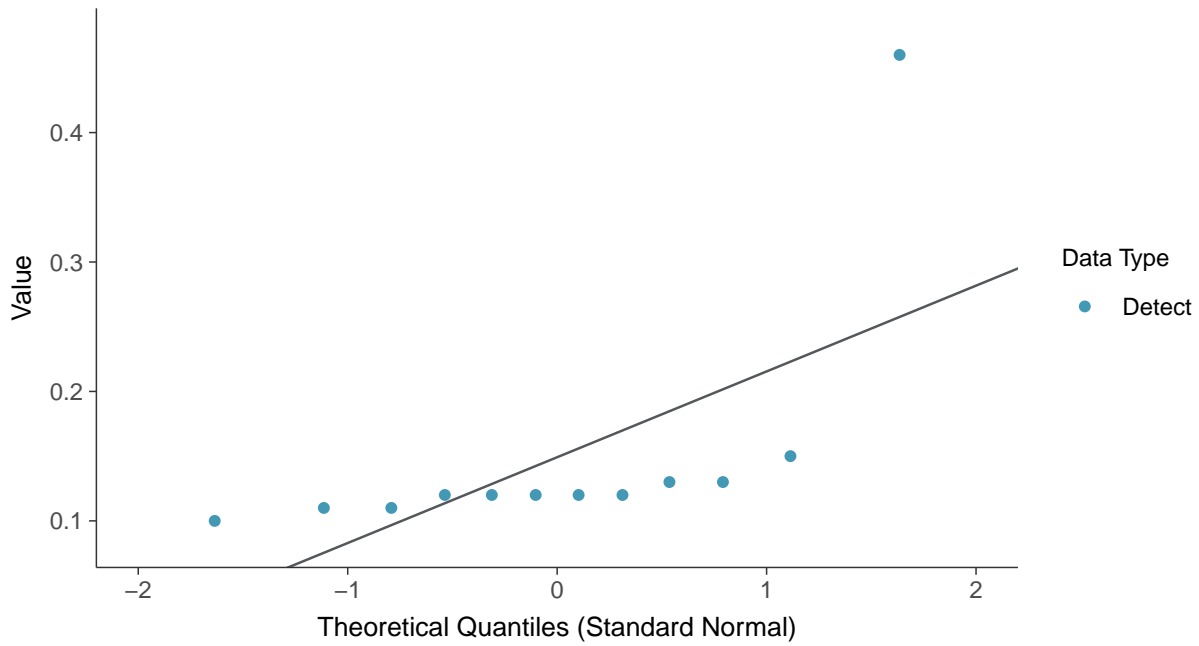
Boxplot by Season

Barium, MW-04 (mg/L)

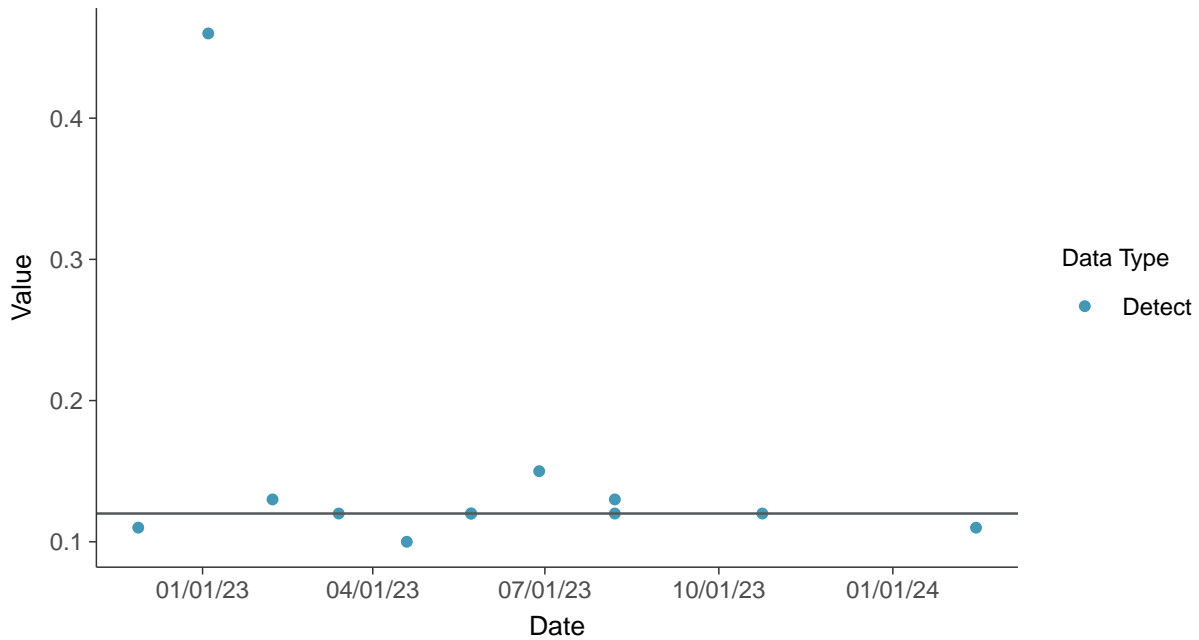




Normal Q-Q plot
Barium, MW-04 (mg/L)

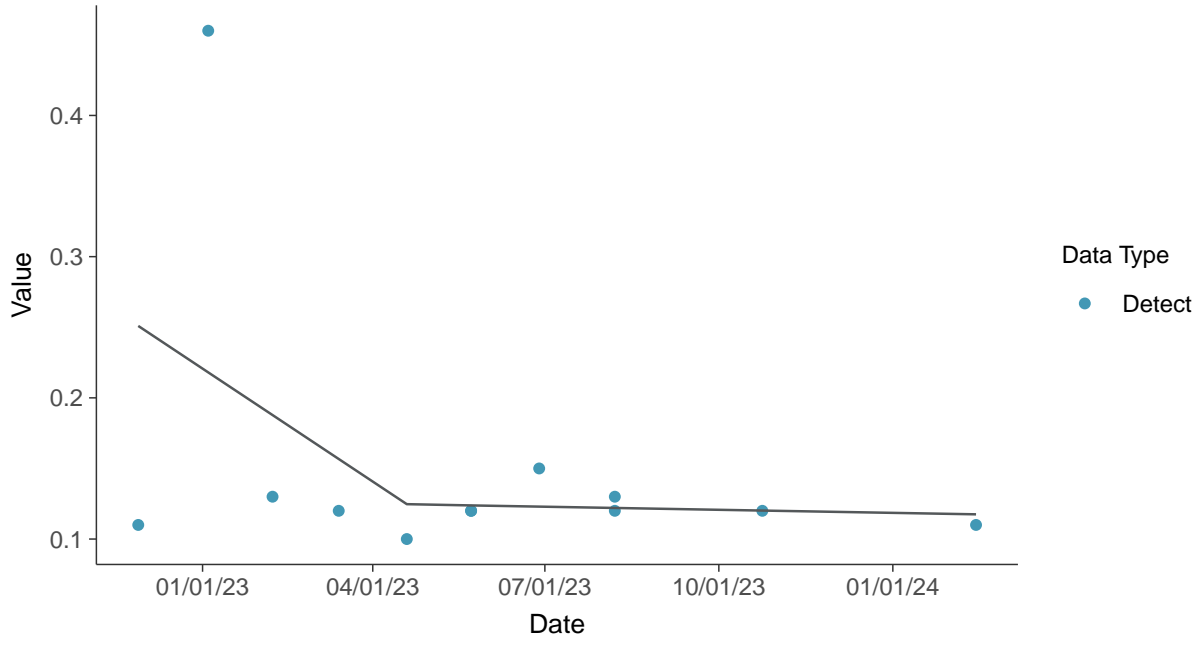


Trend Regression: Mann-Kendall/Theil-Sen Estimate
Barium, MW-04 (mg/L)





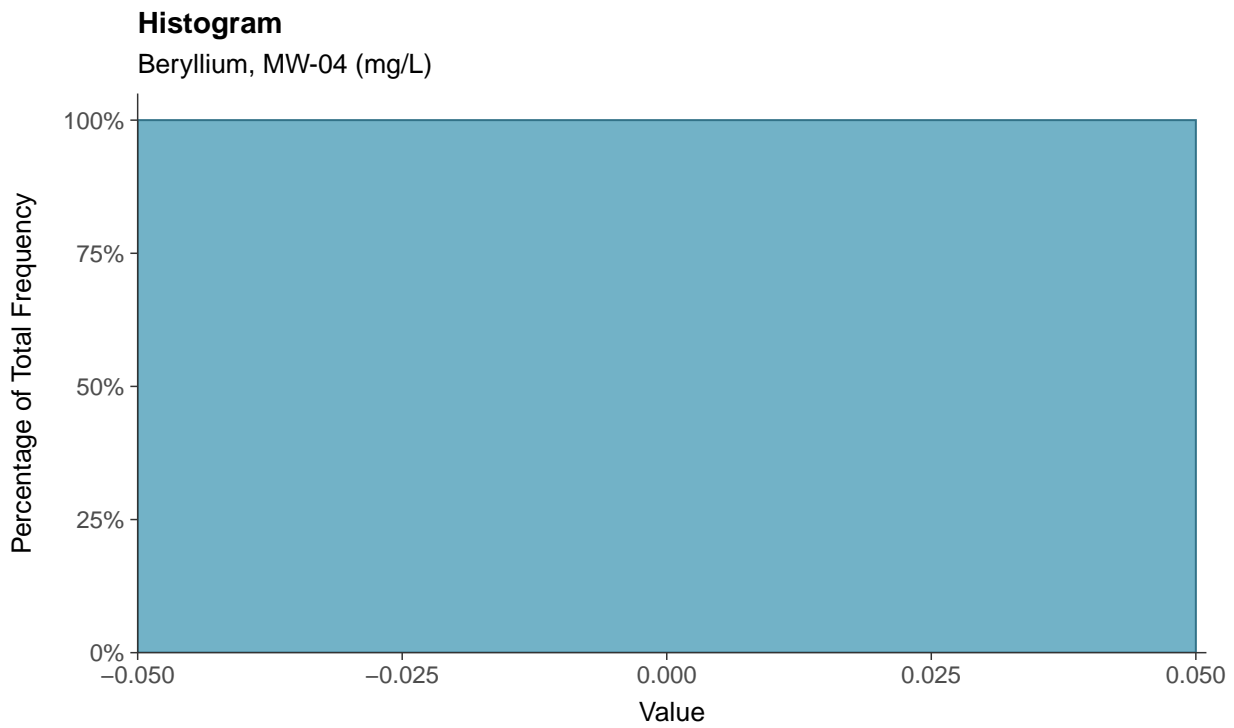
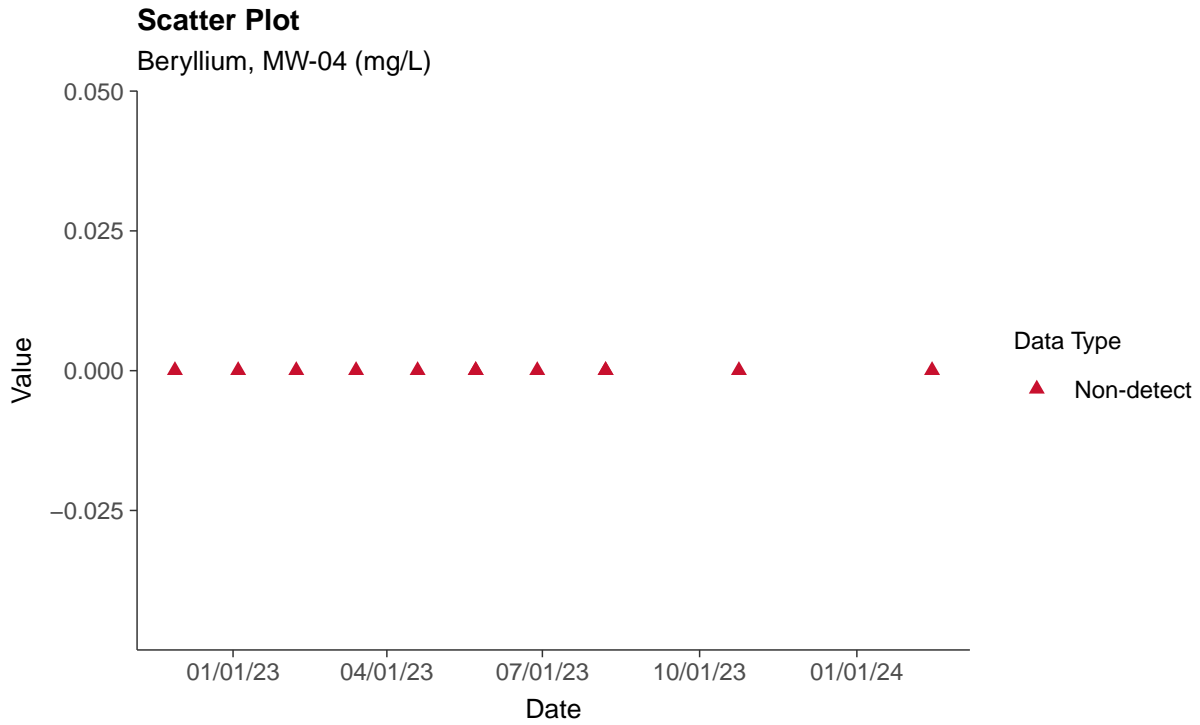
Trend Regression: Piecewise Linear-Linear
Barium, MW-04 (mg/L)





Appendix IV: Beryllium, MW-04

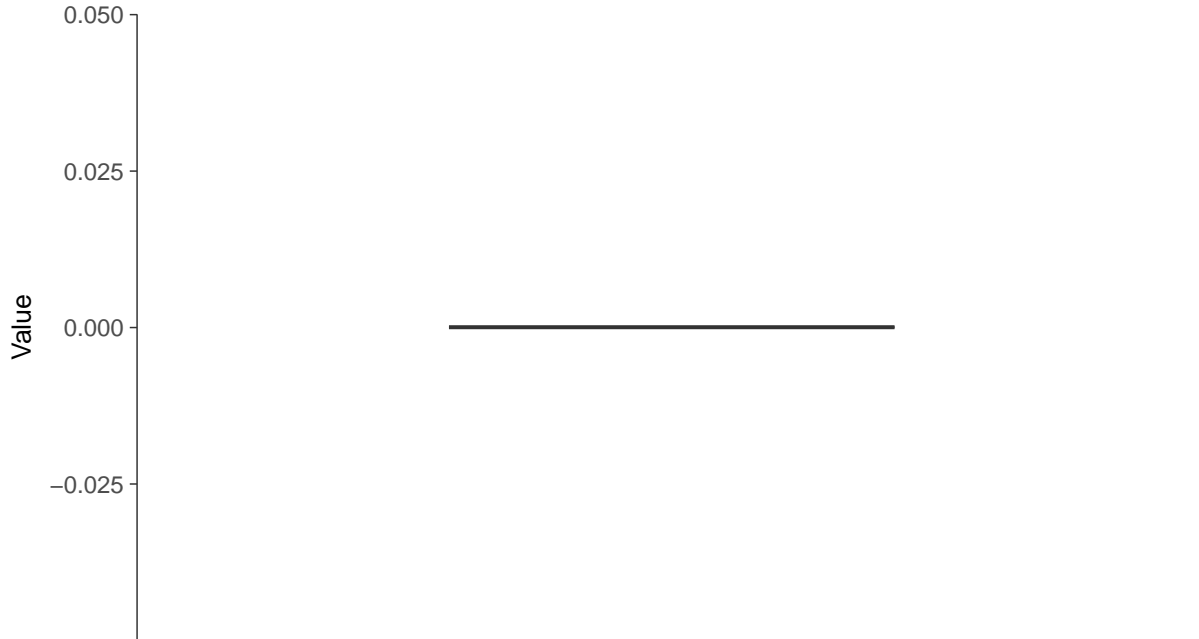
ID: 2_14_5_104





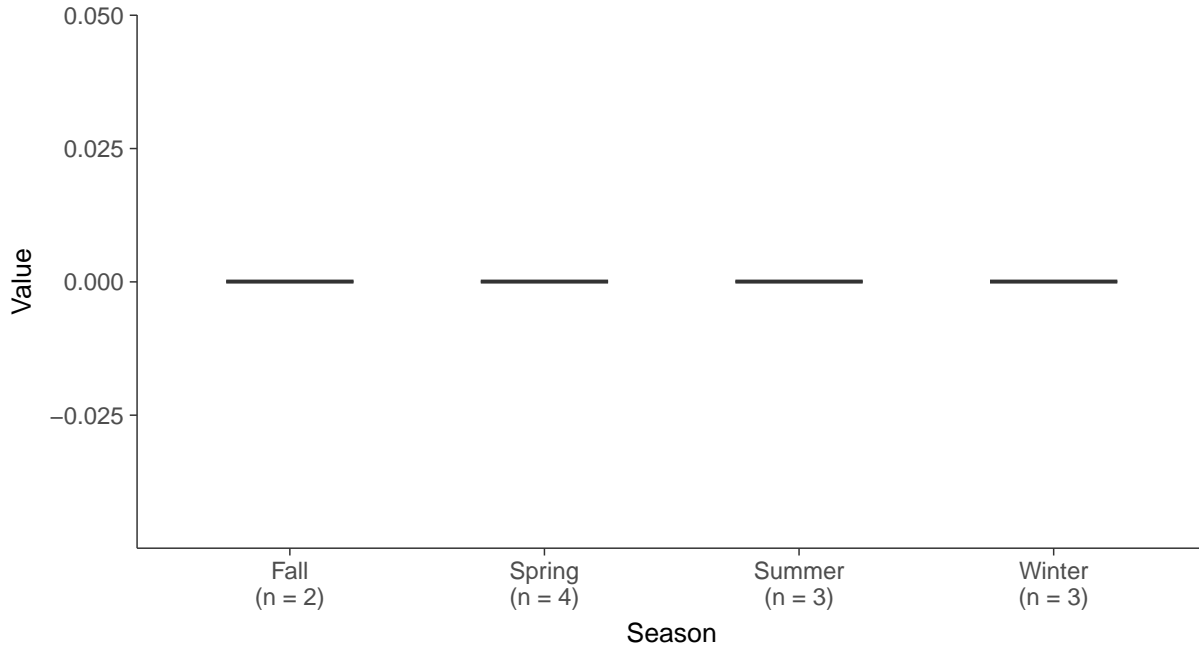
Boxplot

Beryllium, MW-04 (mg/L)



Boxplot by Season

Beryllium, MW-04 (mg/L)



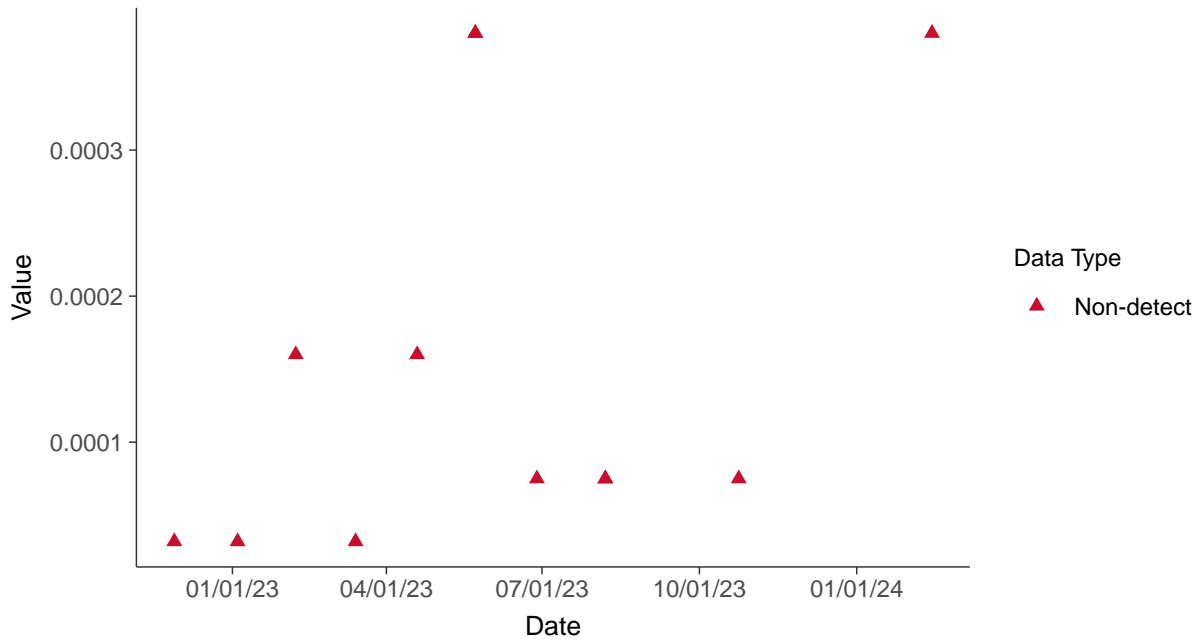


Appendix IV: Cadmium, MW-04

ID: 2_14_5_106

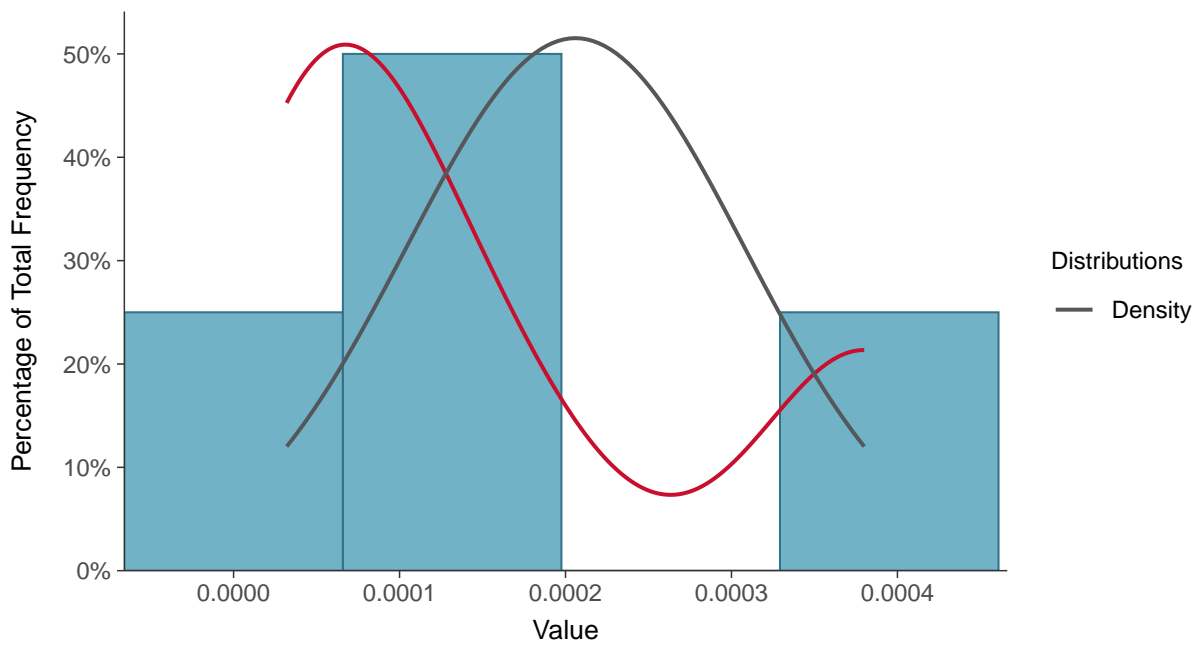
Scatter Plot

Cadmium, MW-04 (mg/L)



Histogram

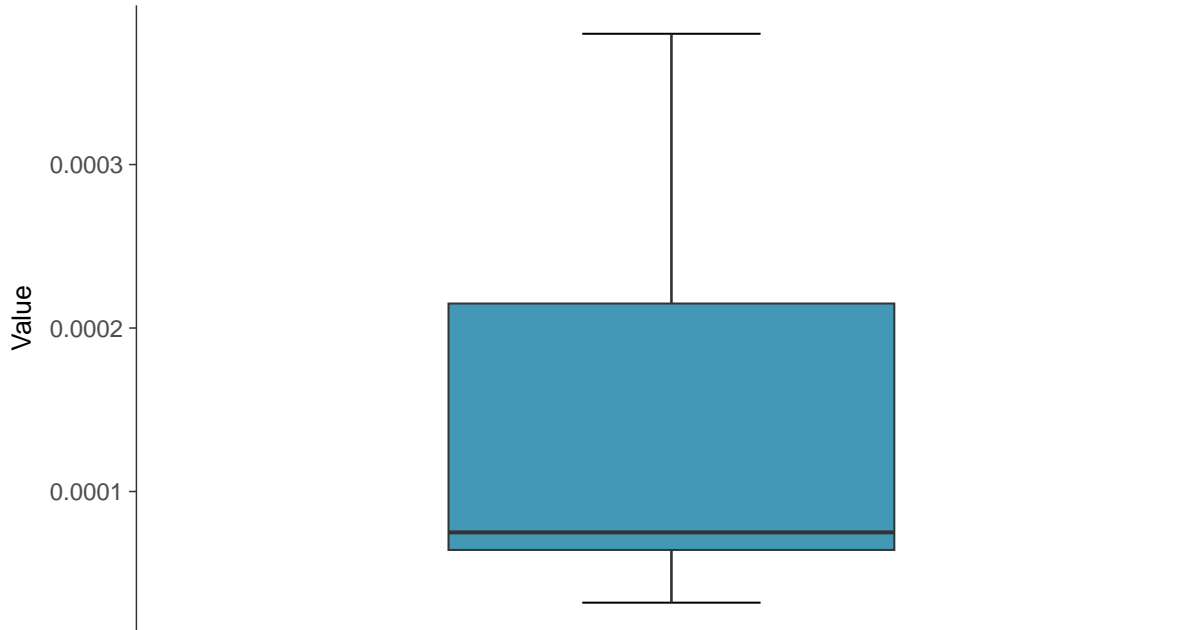
Cadmium, MW-04 (mg/L)





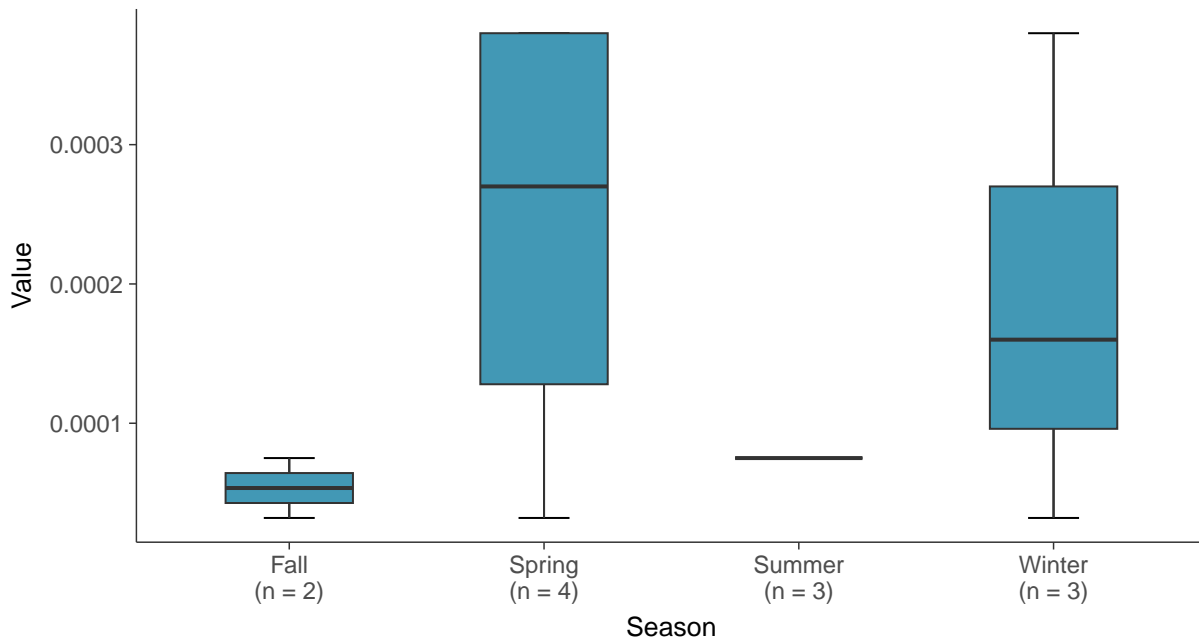
Boxplot

Cadmium, MW-04 (mg/L)



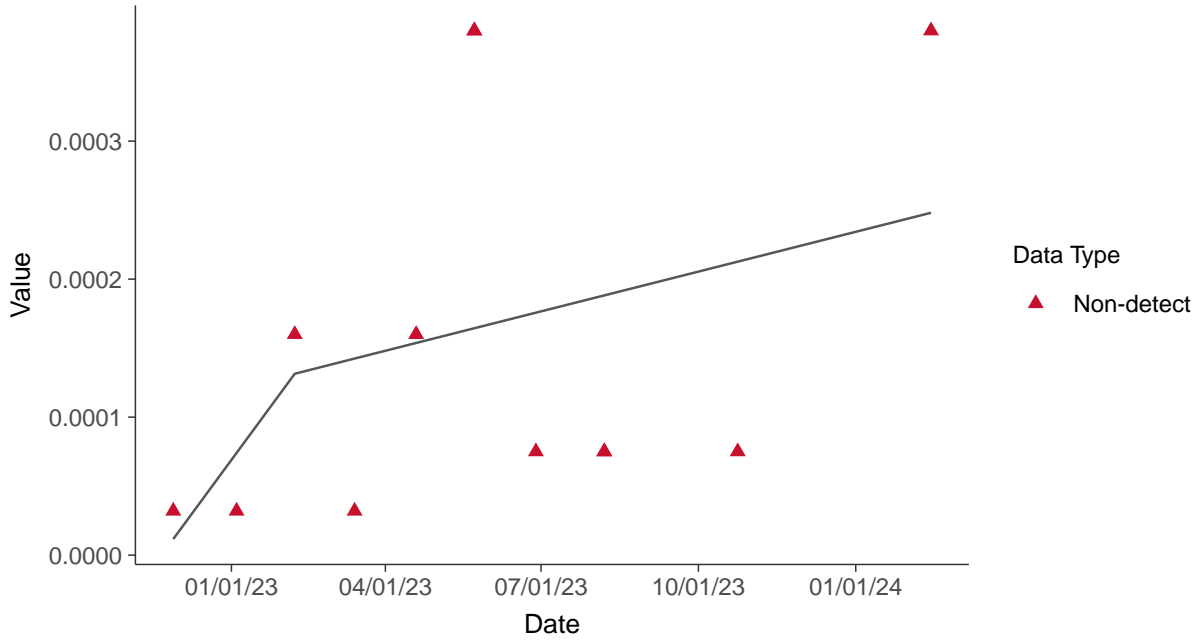
Boxplot by Season

Cadmium, MW-04 (mg/L)

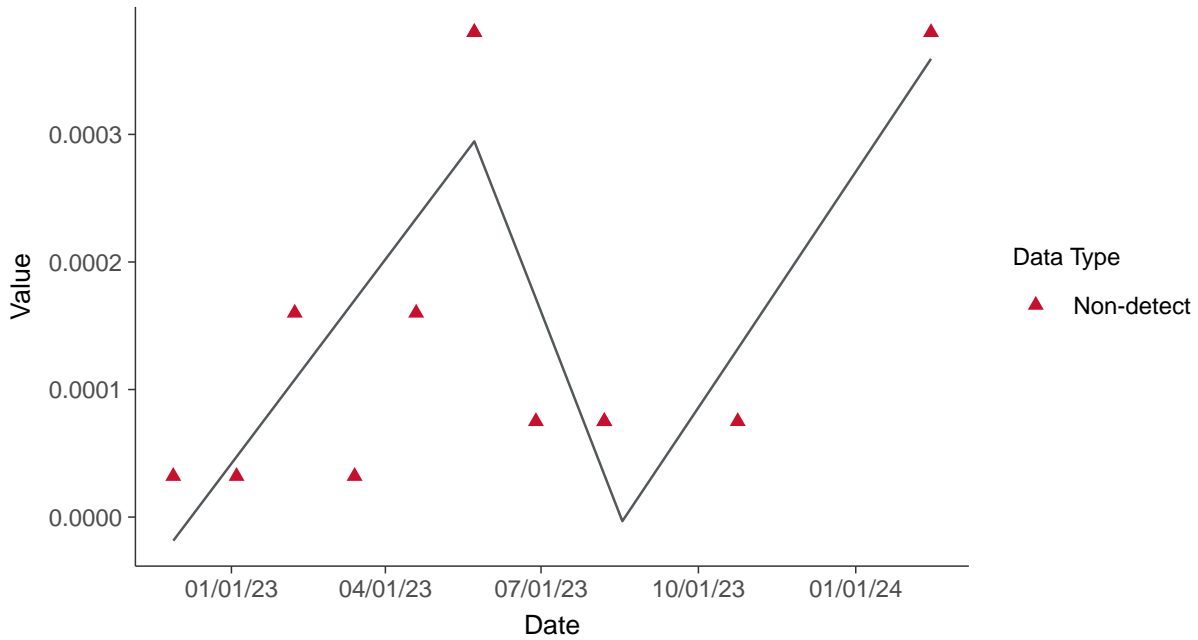




Trend Regression: Piecewise Linear-Linear
Cadmium, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cadmium, MW-04 (mg/L)



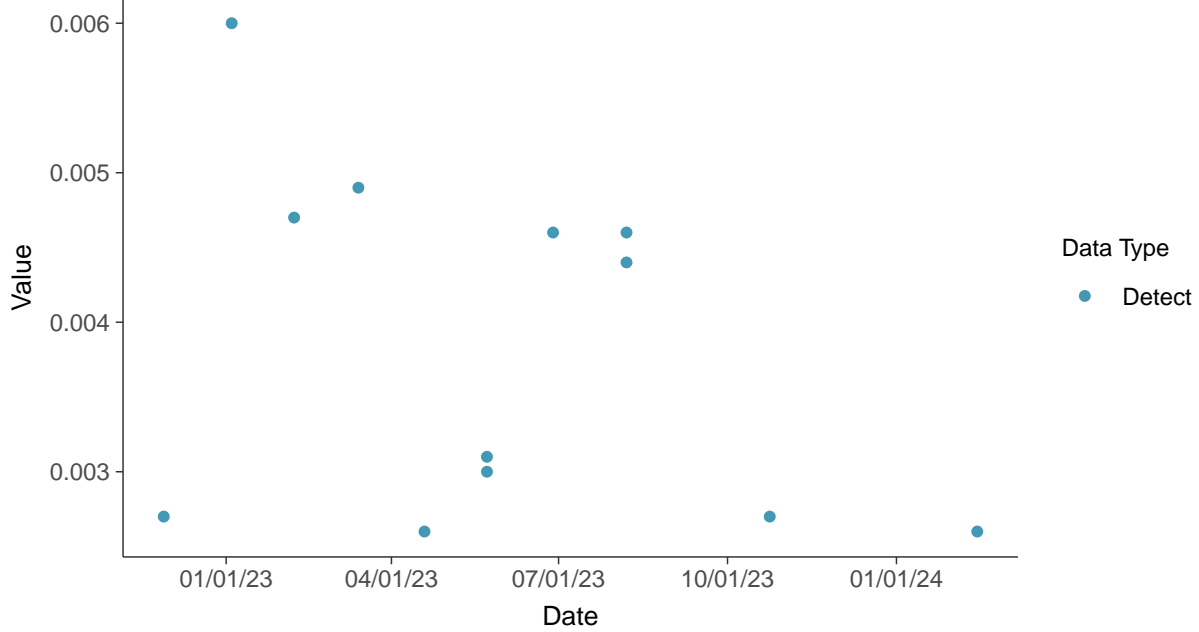


Appendix IV: Chromium, Total, MW-04

ID: 2_14_5_109

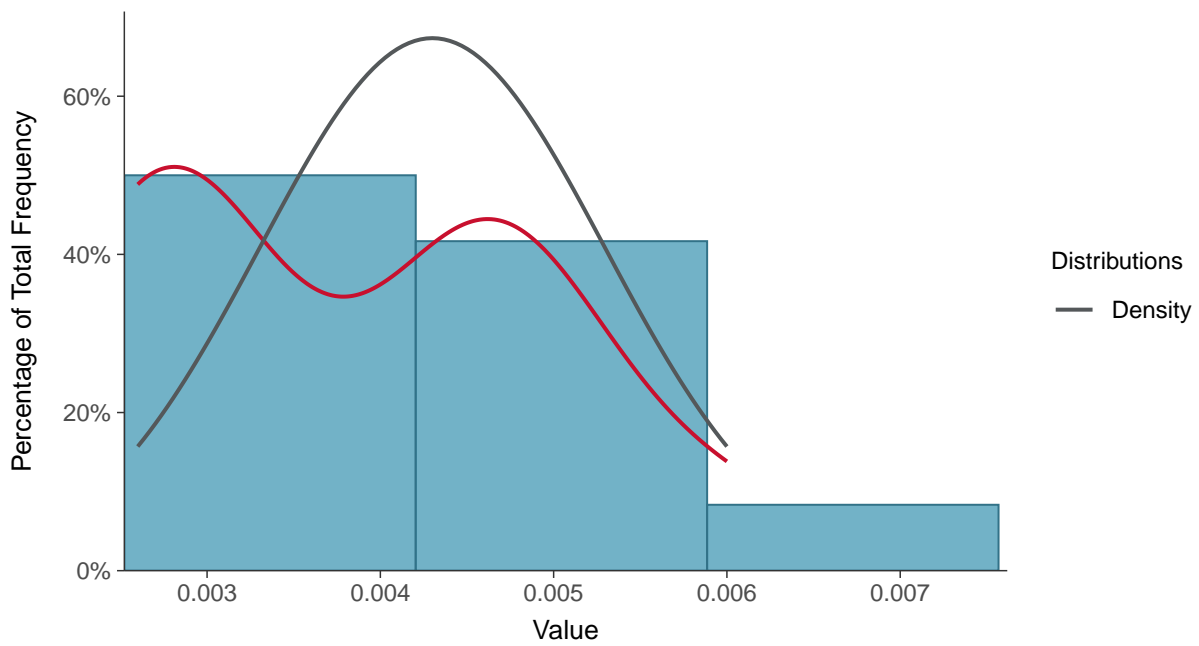
Scatter Plot

Chromium, Total, MW-04 (mg/L)



Histogram

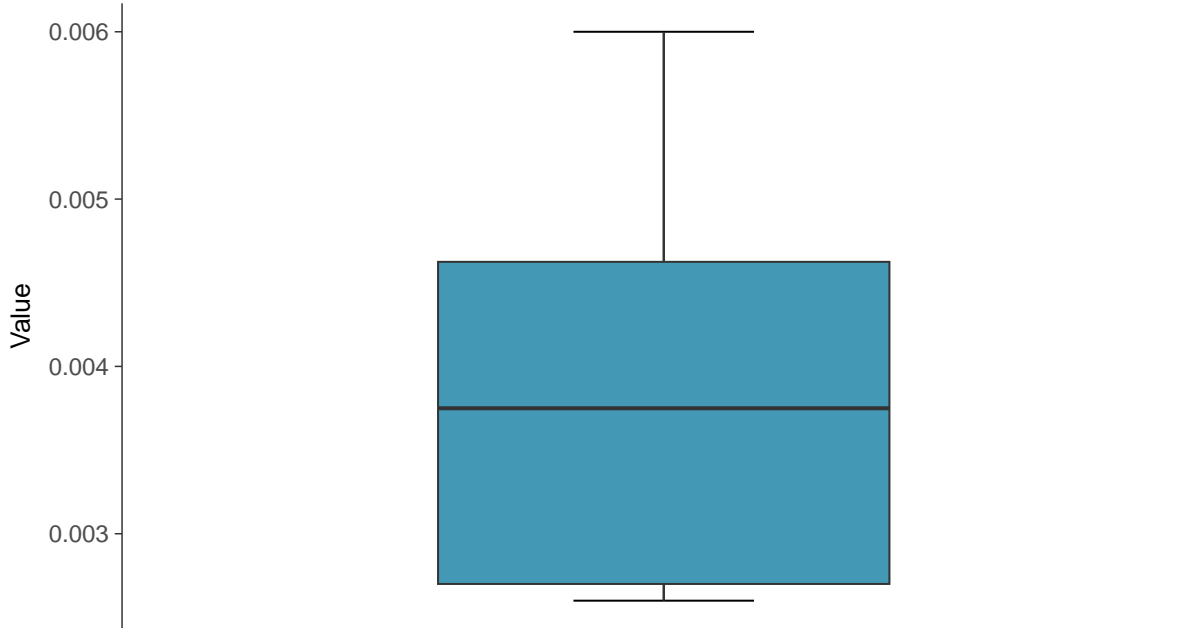
Chromium, Total, MW-04 (mg/L)





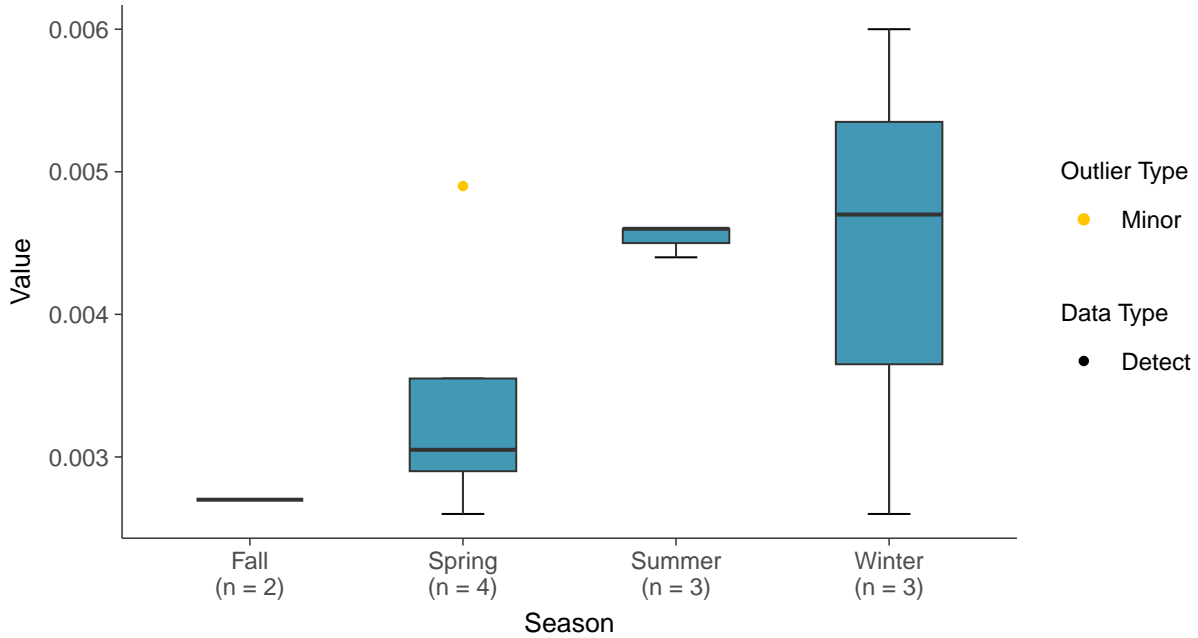
Boxplot

Chromium, Total, MW-04 (mg/L)



Boxplot by Season

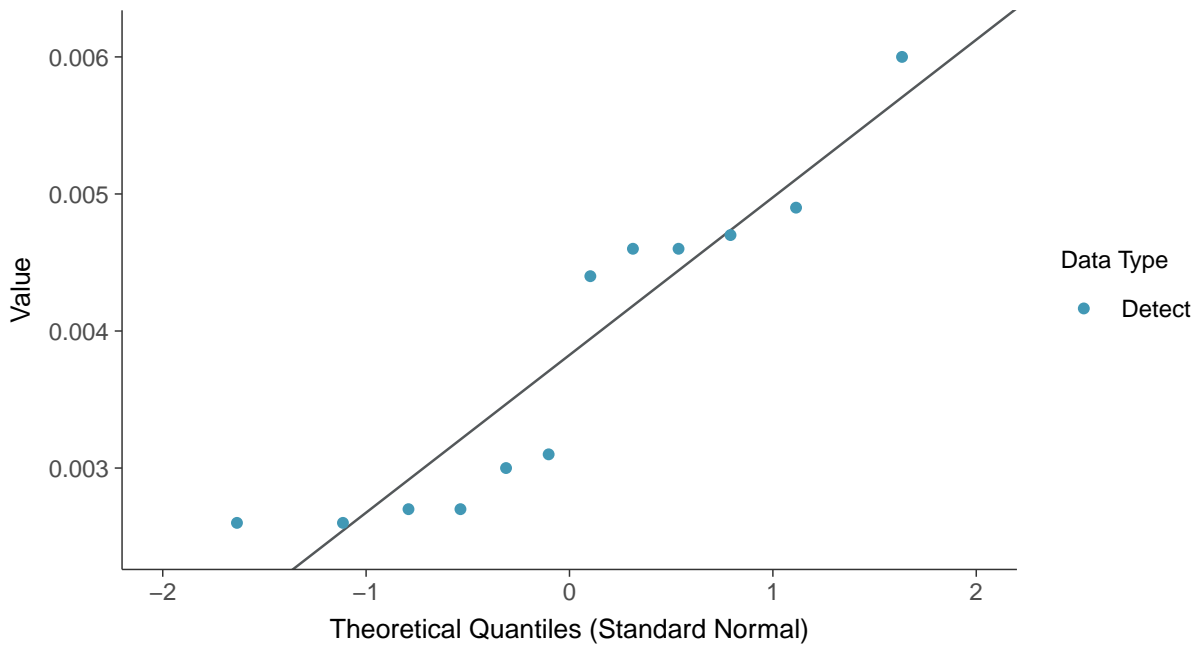
Chromium, Total, MW-04 (mg/L)





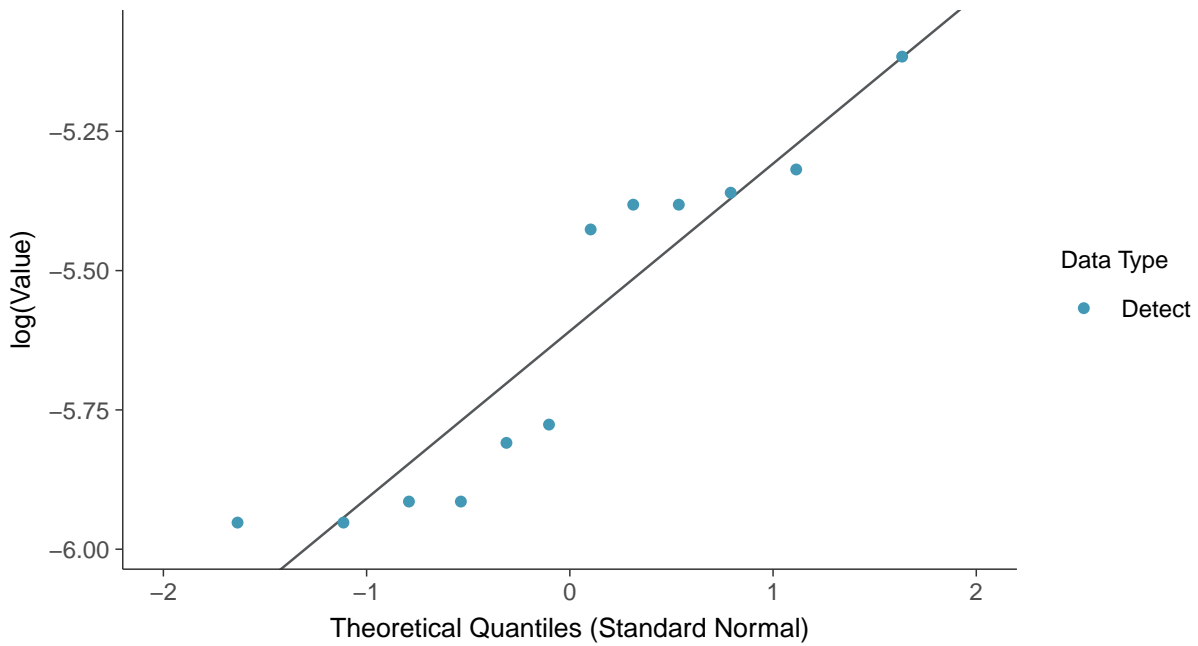
Normal Q-Q plot

Chromium, Total, MW-04 (mg/L)



Lognormal Q-Q plot

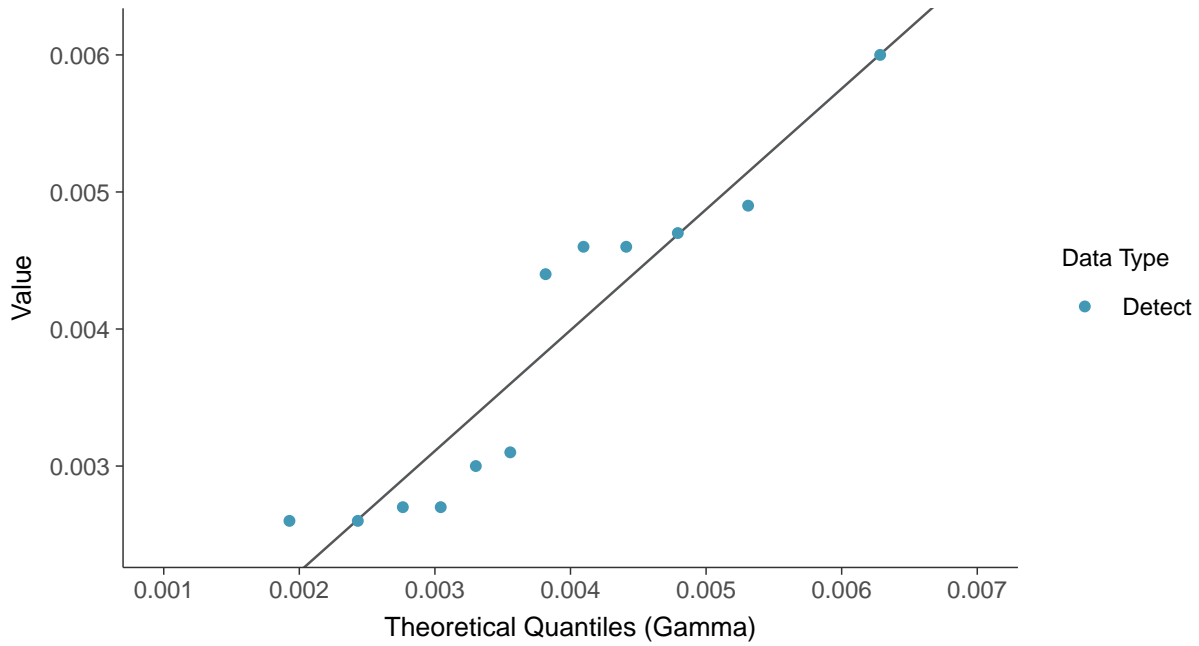
Chromium, Total, MW-04 (mg/L)





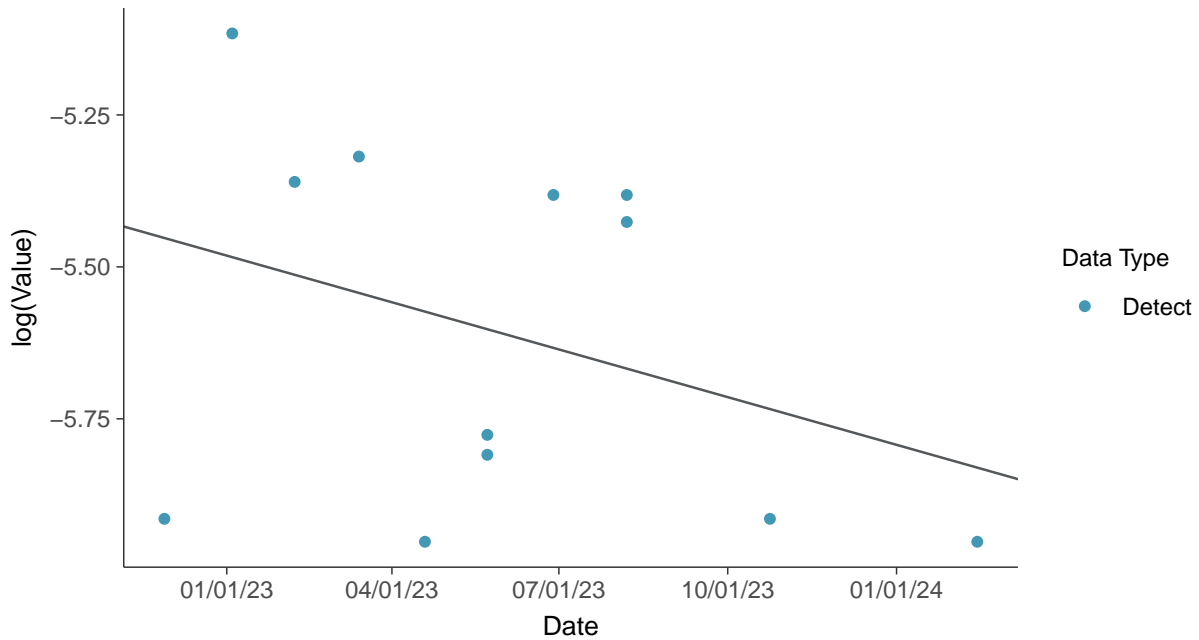
Gamma Q-Q plot

Chromium, Total, MW-04 (mg/L)



Trend Regression: Lognormal MLE

Chromium, Total, MW-04 (mg/L)



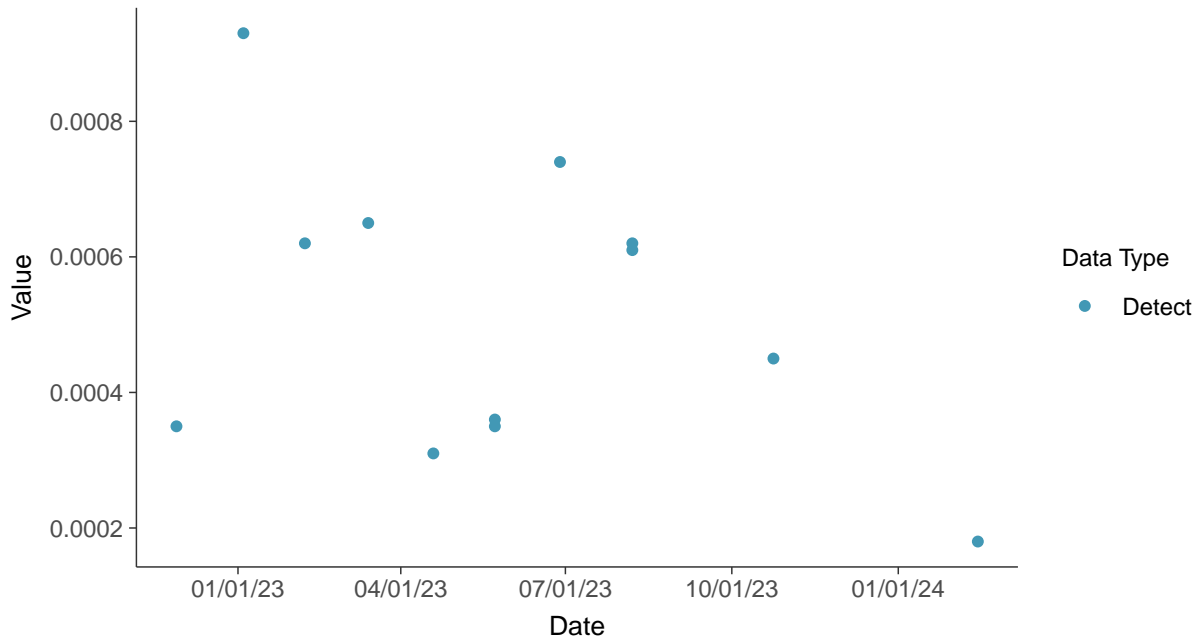


Appendix IV: Cobalt, MW-04

ID: 2_14_5_110

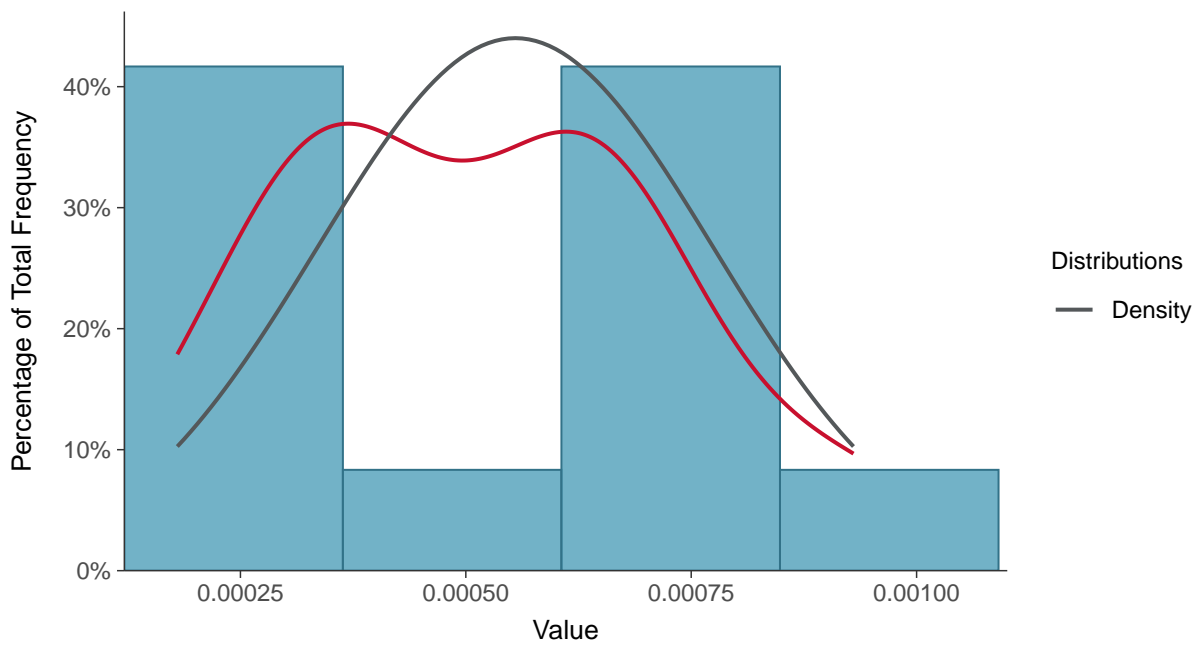
Scatter Plot

Cobalt, MW-04 (mg/L)



Histogram

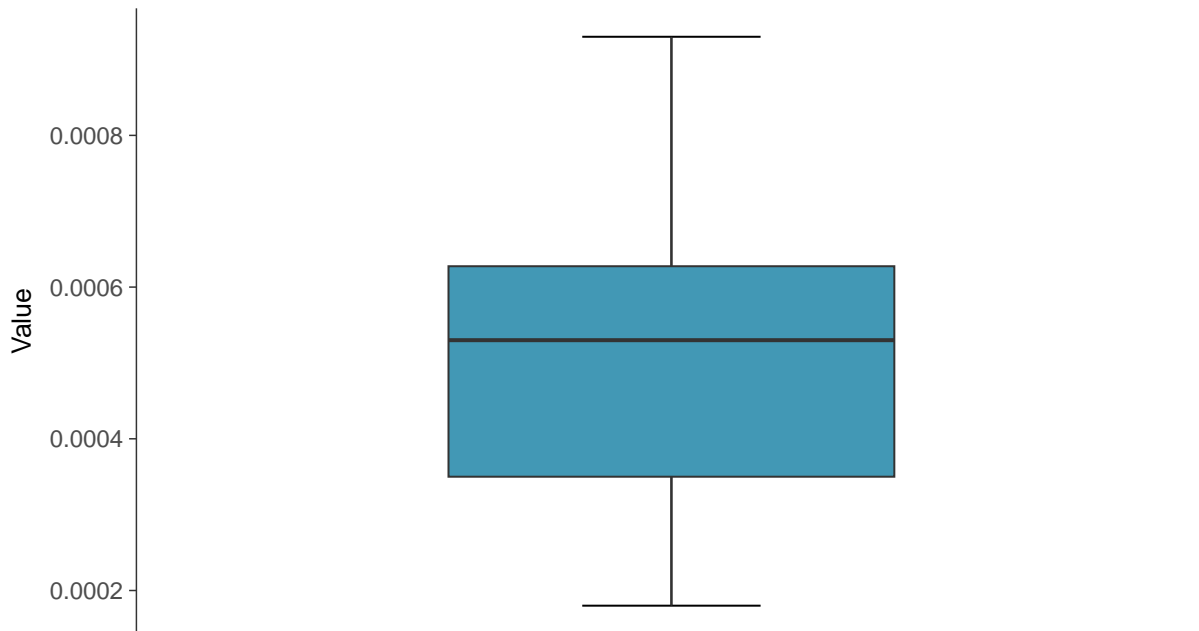
Cobalt, MW-04 (mg/L)





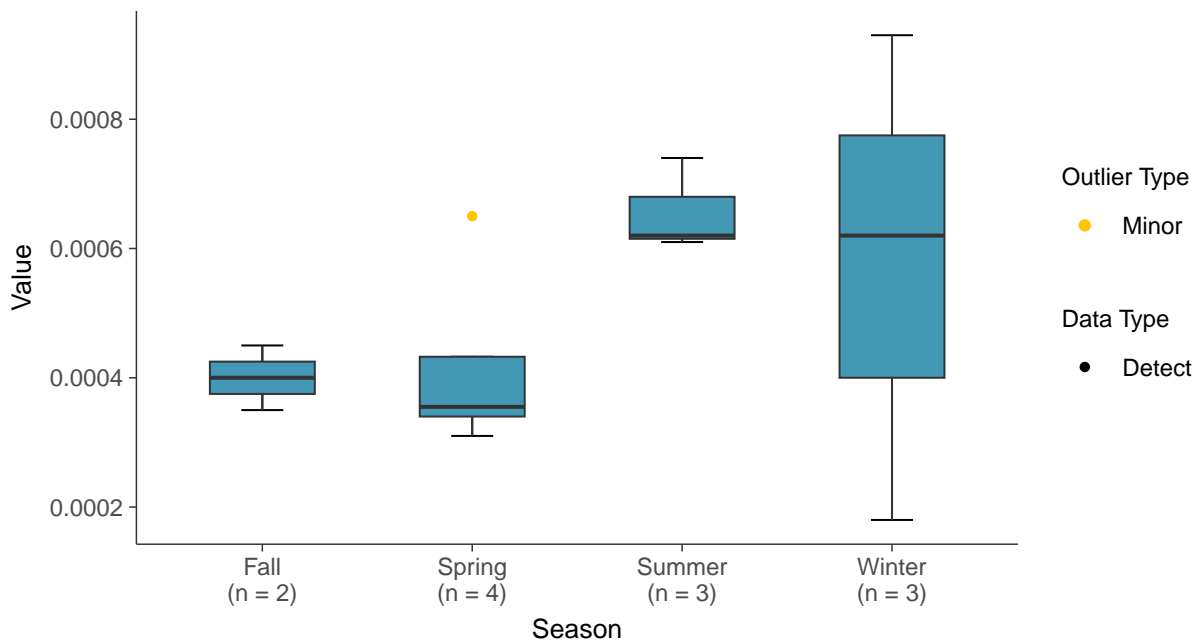
Boxplot

Cobalt, MW-04 (mg/L)



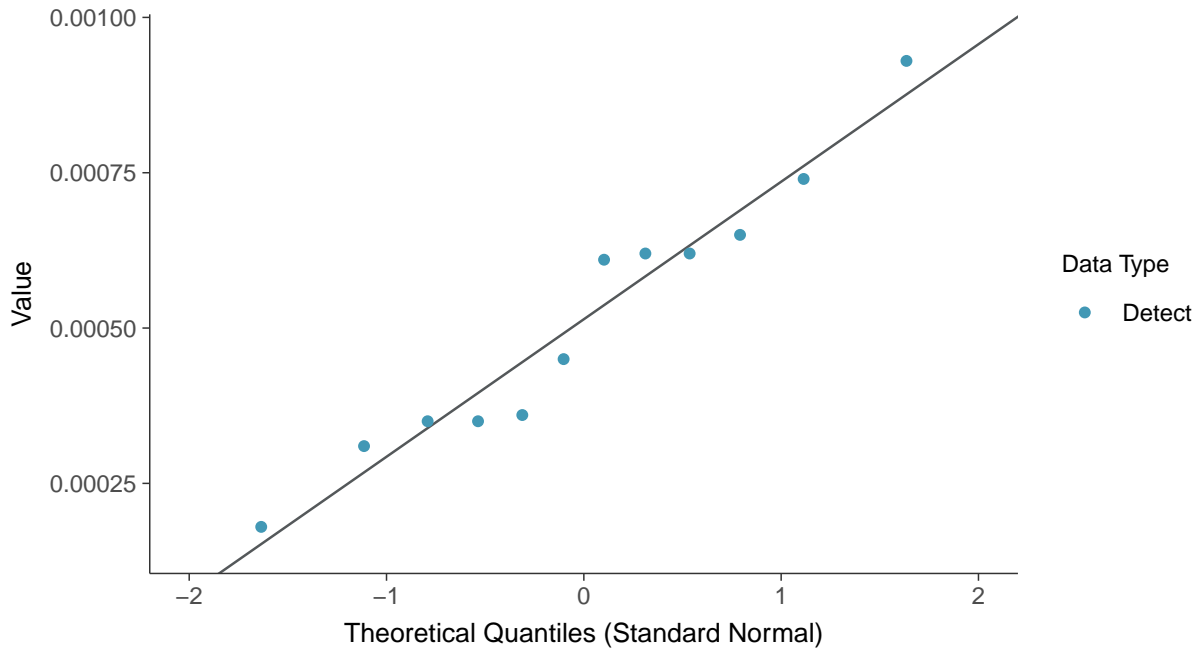
Boxplot by Season

Cobalt, MW-04 (mg/L)

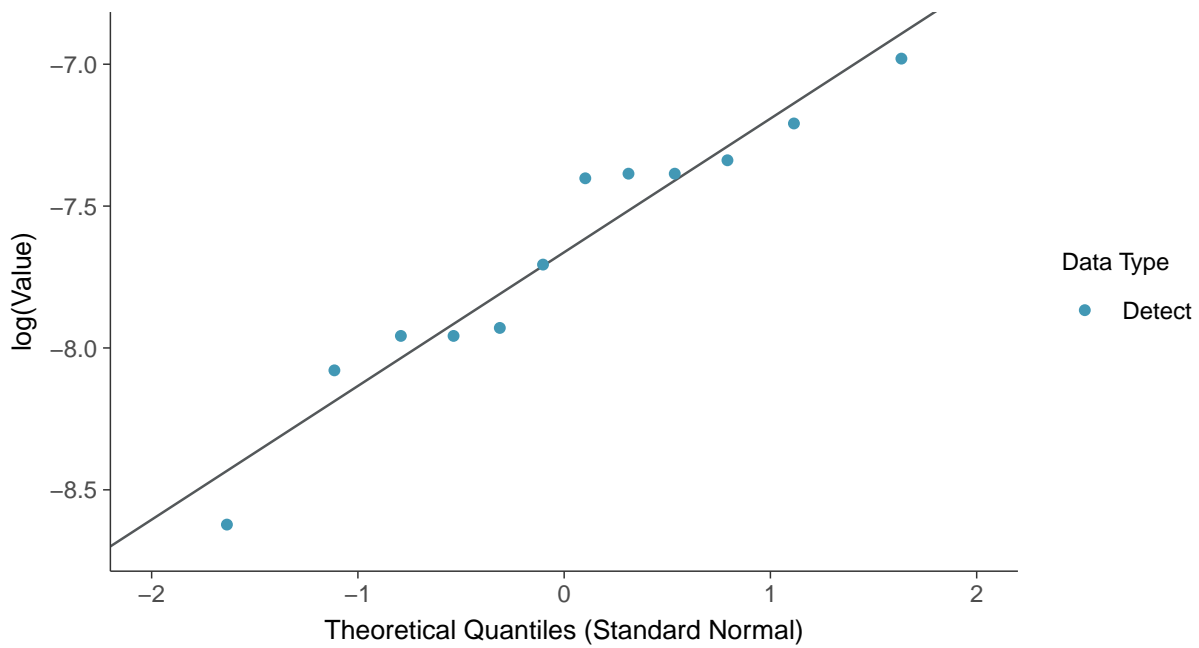




Normal Q-Q plot
Cobalt, MW-04 (mg/L)

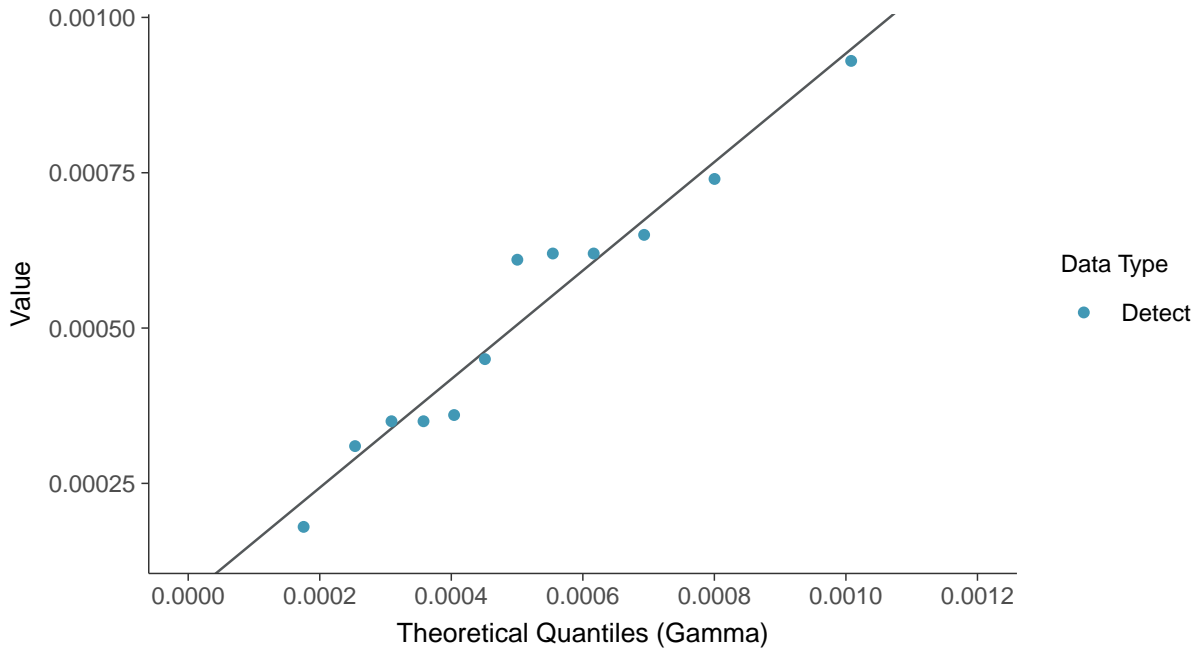


Lognormal Q-Q plot
Cobalt, MW-04 (mg/L)

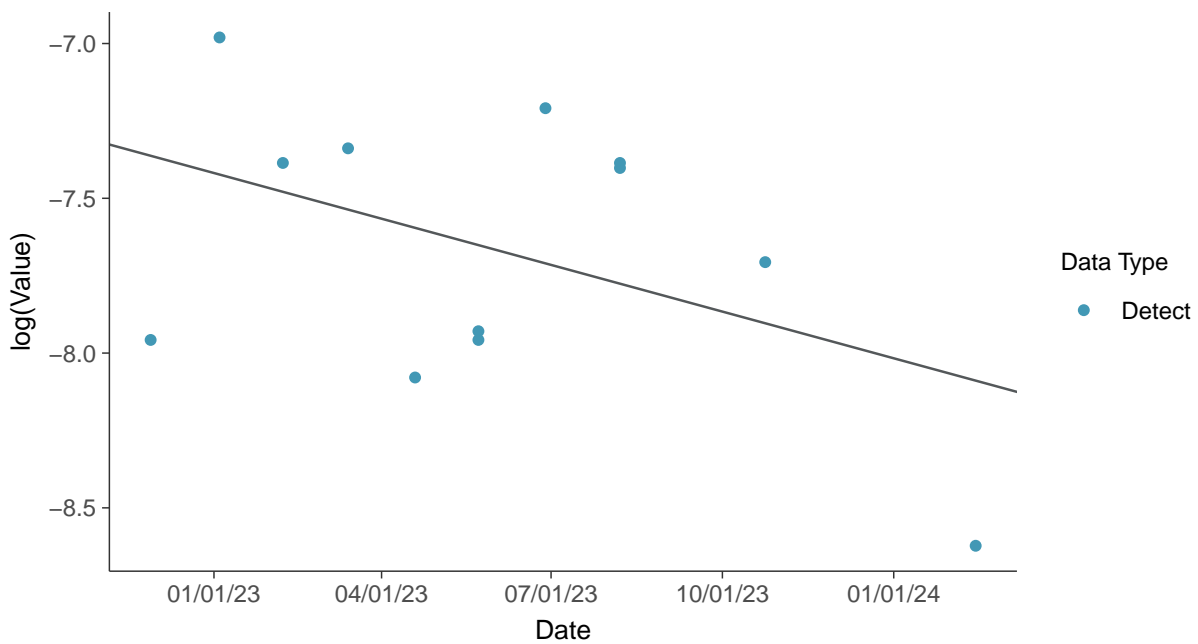




Gamma Q-Q plot
Cobalt, MW-04 (mg/L)



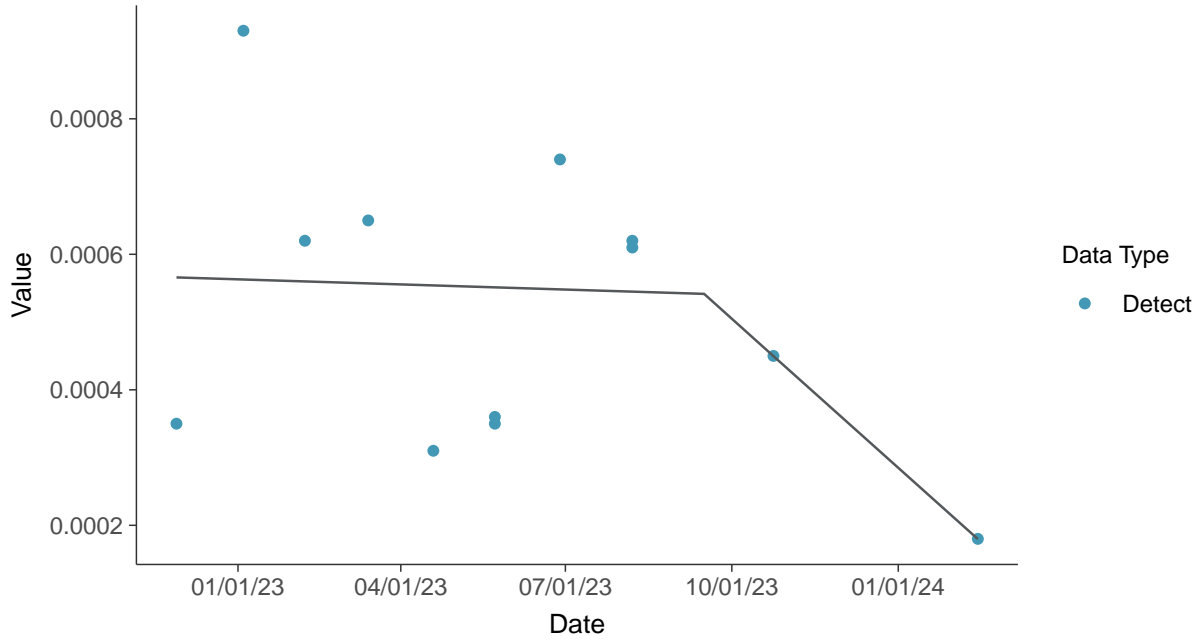
Trend Regression: Lognormal MLE
Cobalt, MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear

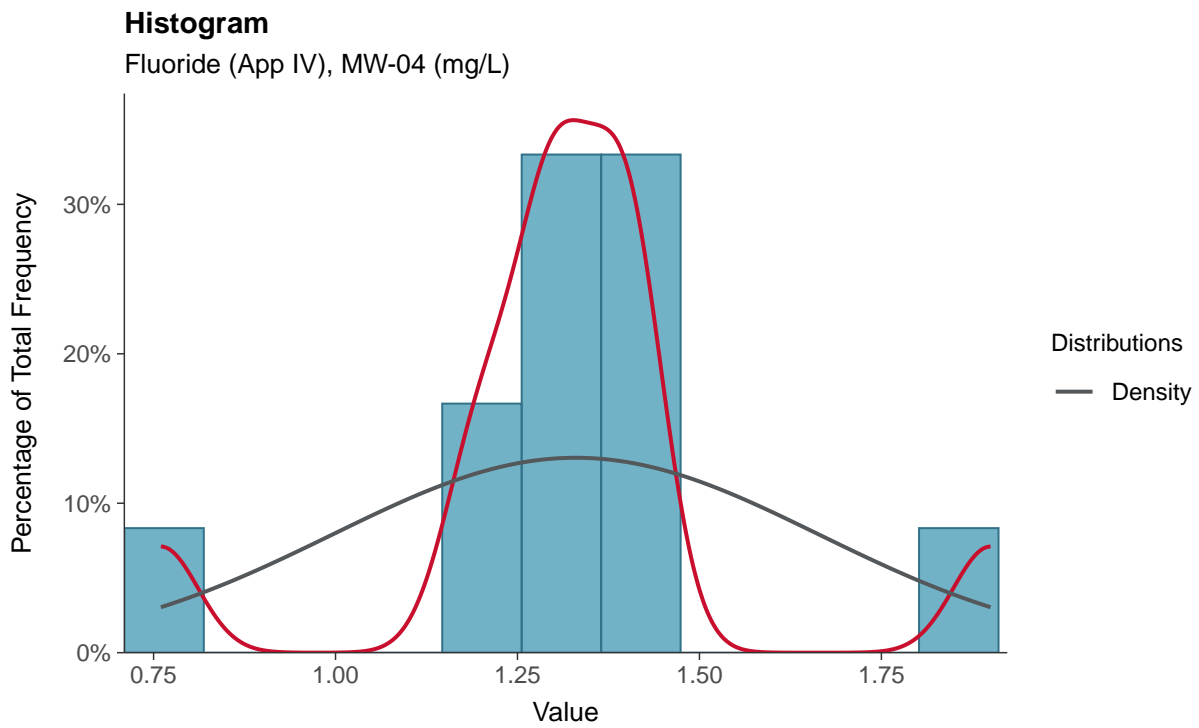
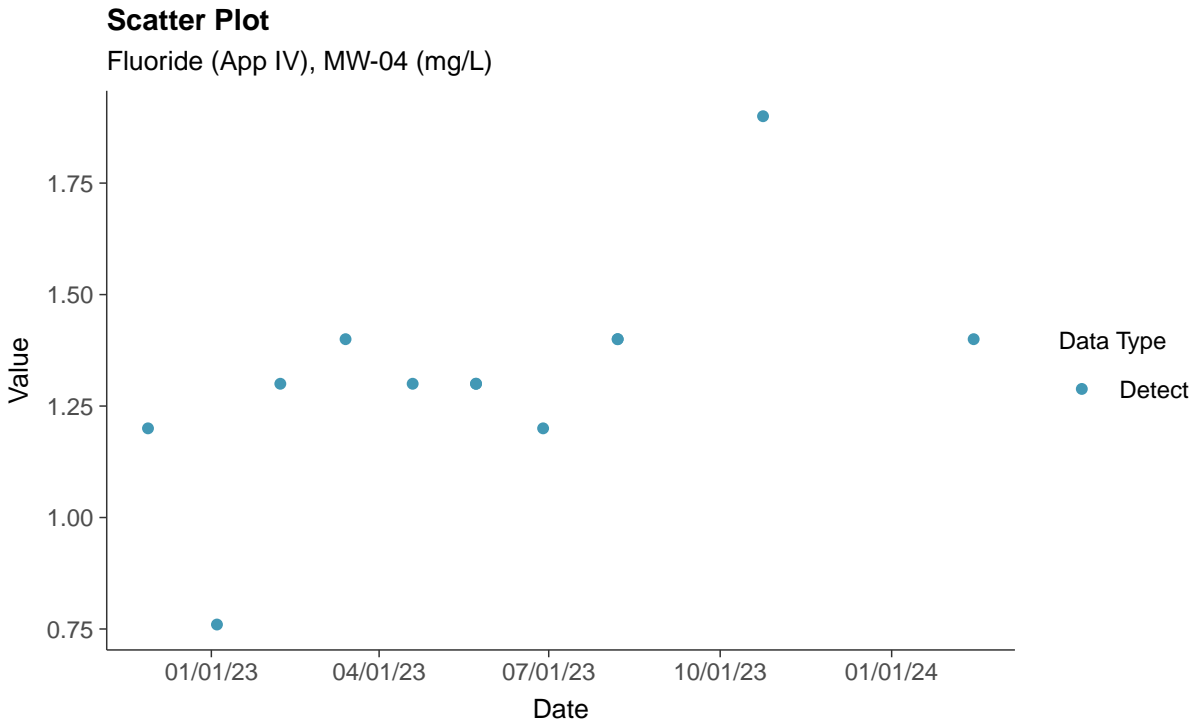
Cobalt, MW-04 (mg/L)





Appendix IV: Fluoride (App IV), MW-04

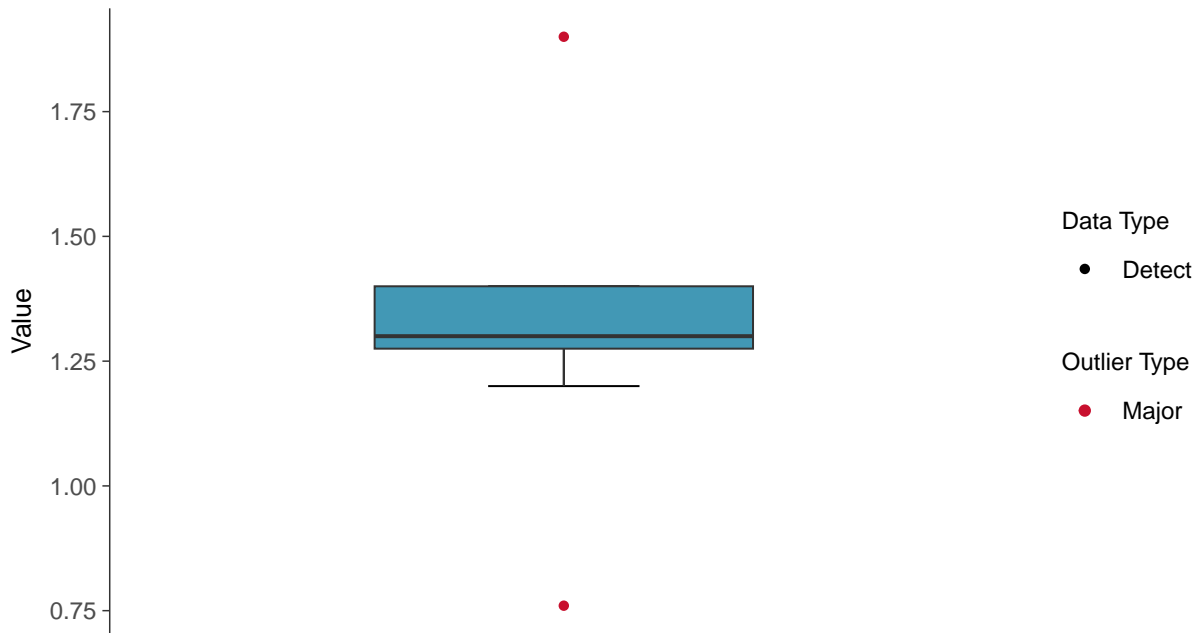
ID: 2_14_5_113





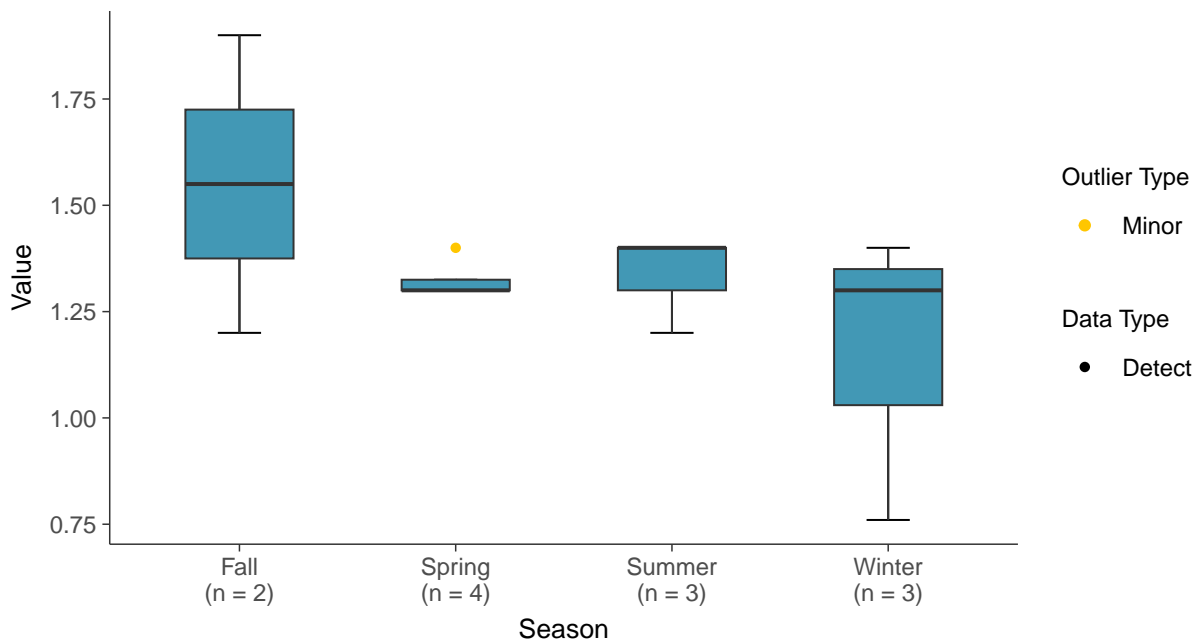
Boxplot

Fluoride (App IV), MW-04 (mg/L)



Boxplot by Season

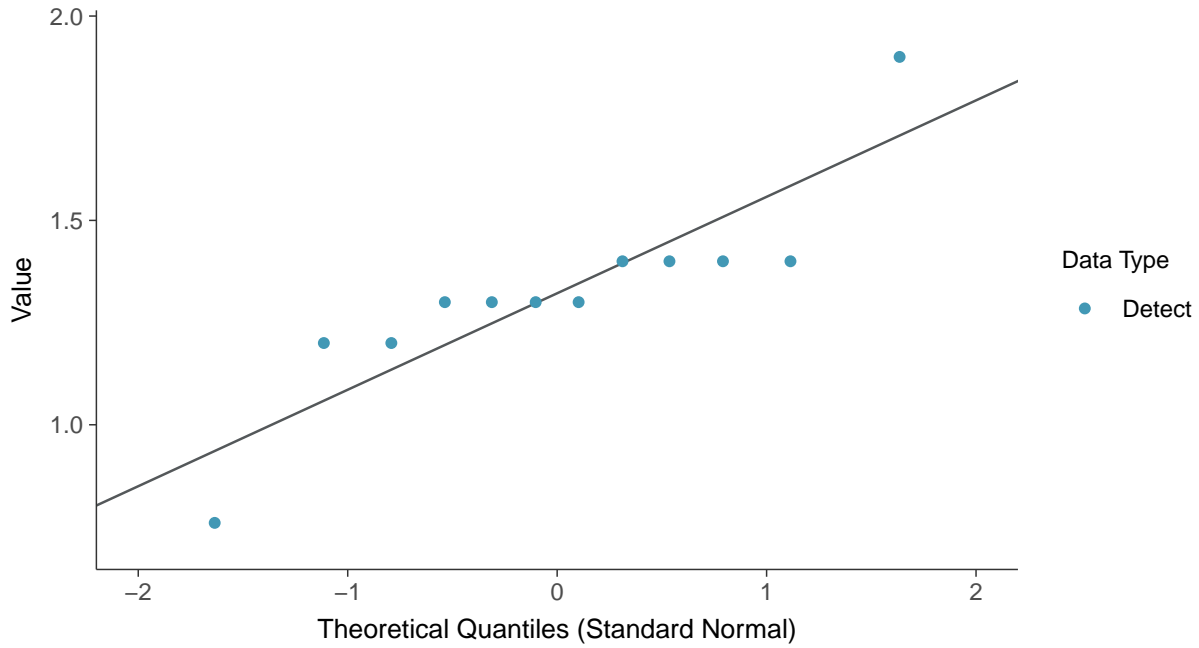
Fluoride (App IV), MW-04 (mg/L)





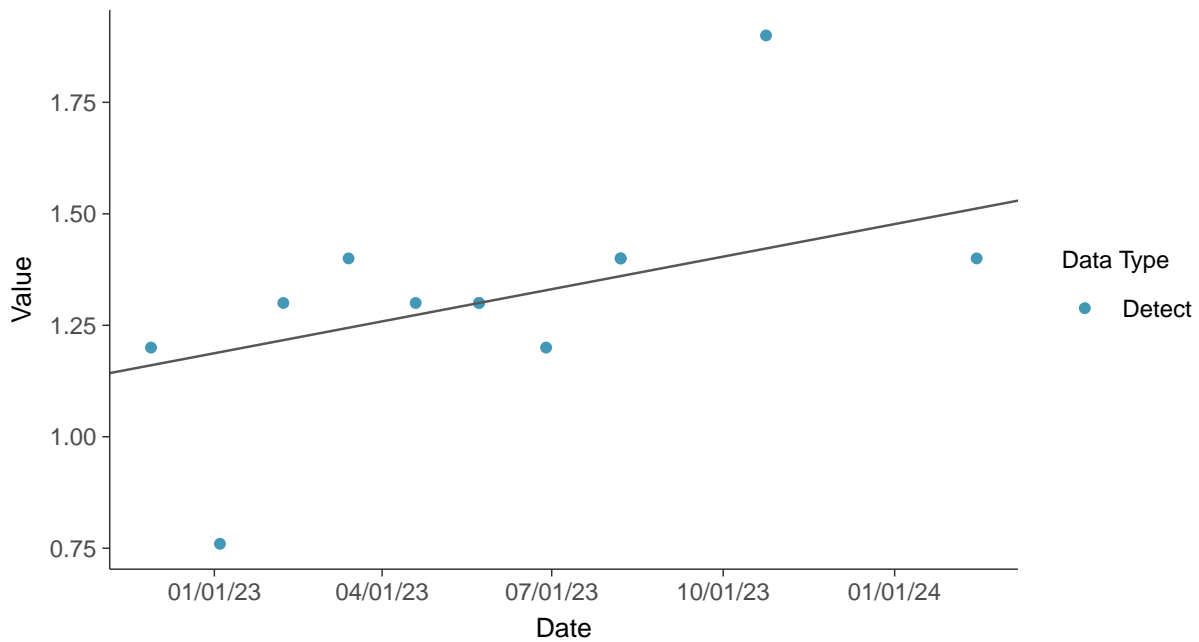
Normal Q-Q plot

Fluoride (App IV), MW-04 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

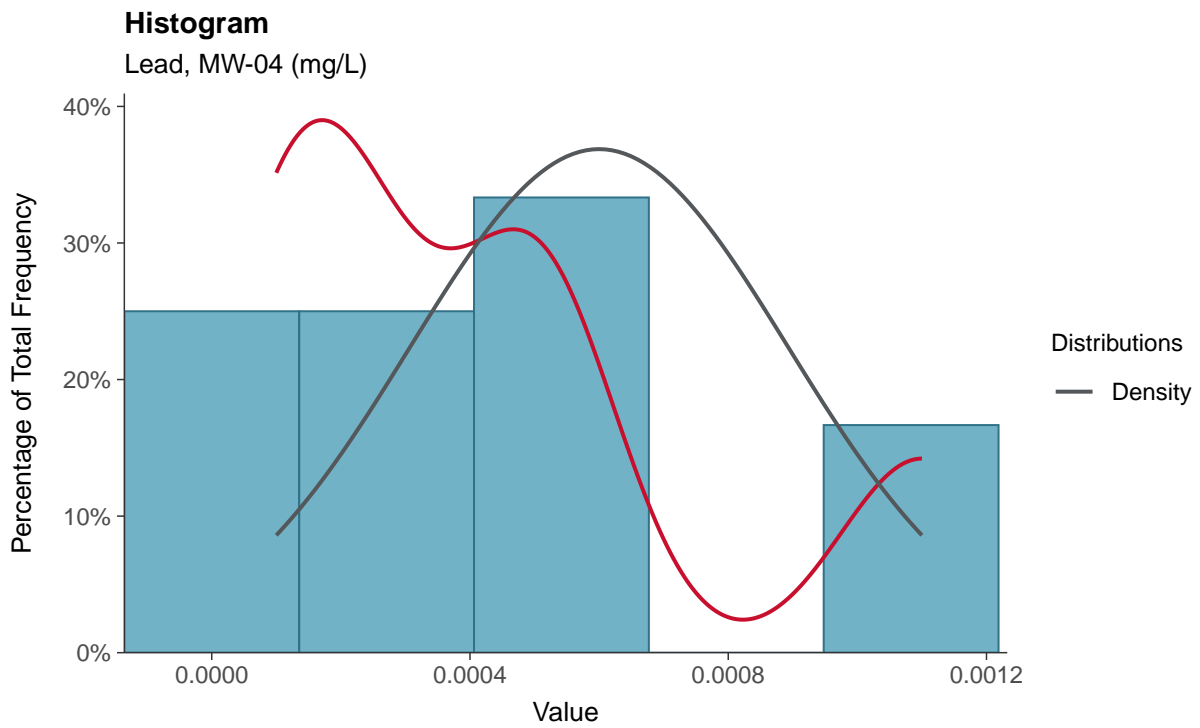
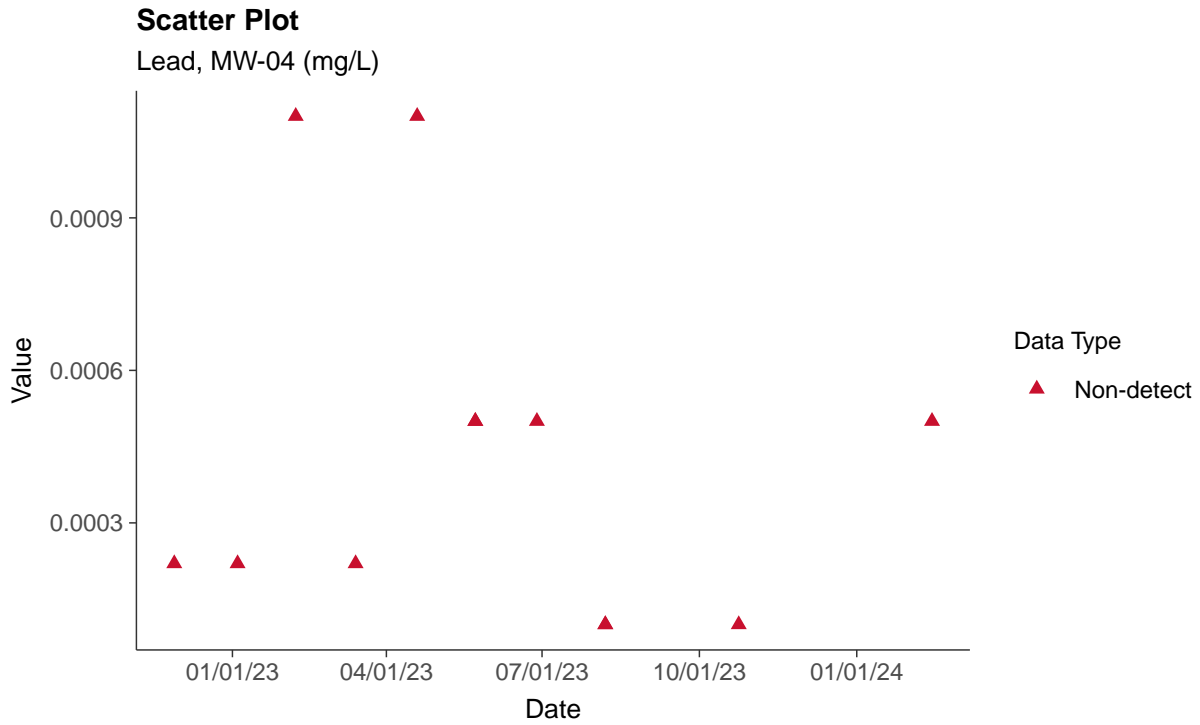
Fluoride (App IV), MW-04 (mg/L)





Appendix IV: Lead, MW-04

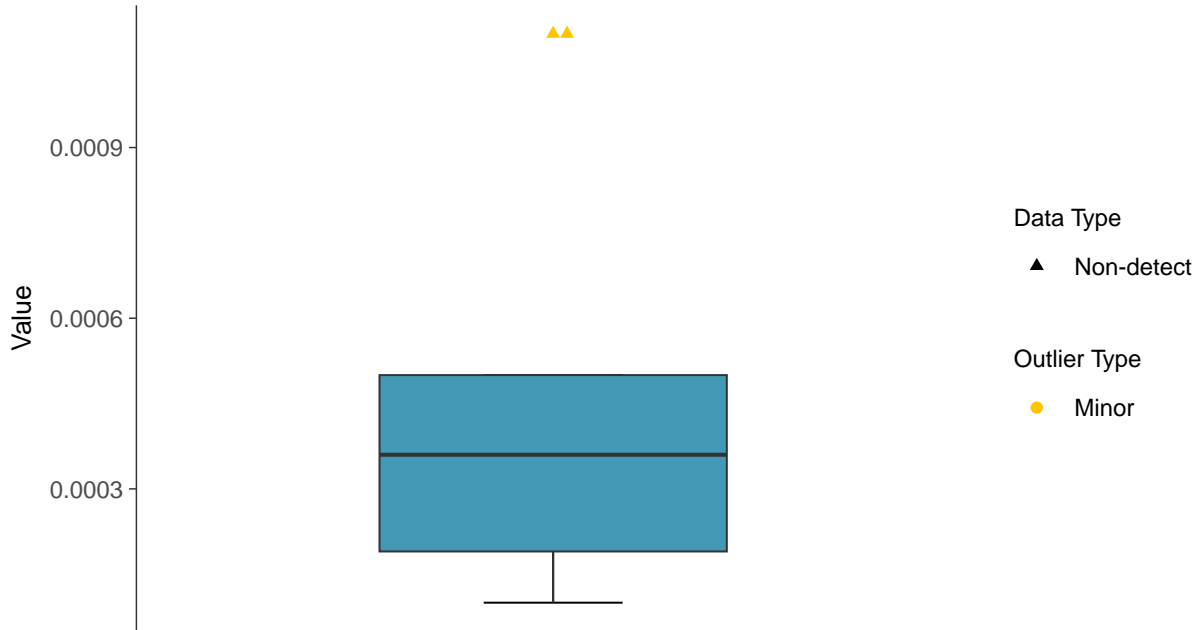
ID: 2_14_5_115





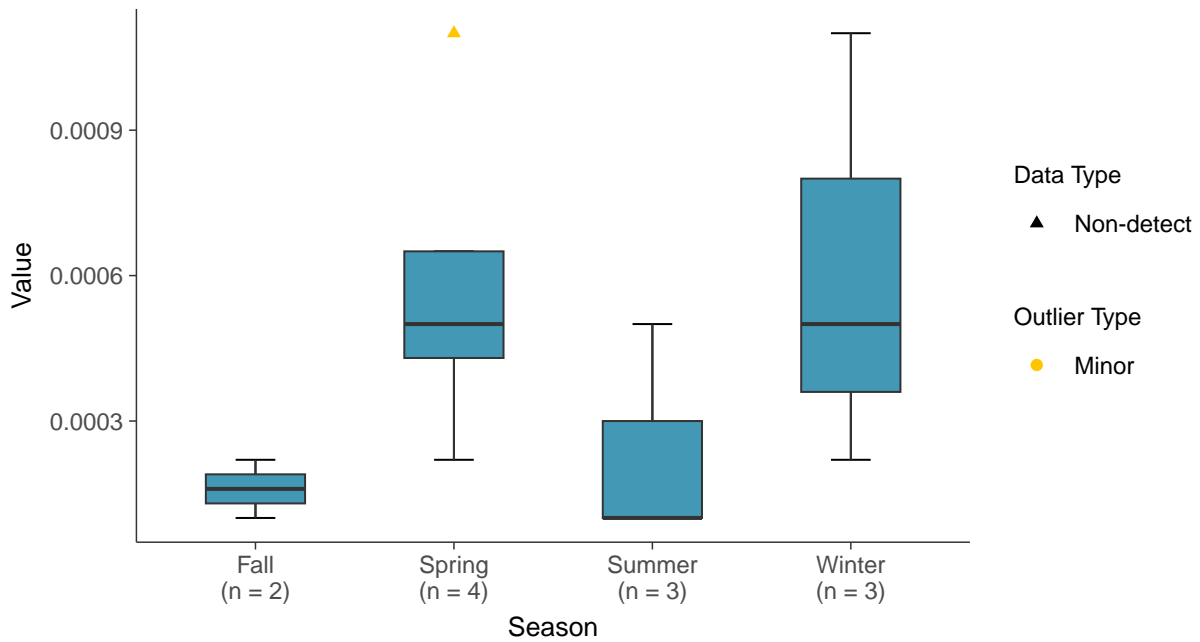
Boxplot

Lead, MW-04 (mg/L)



Boxplot by Season

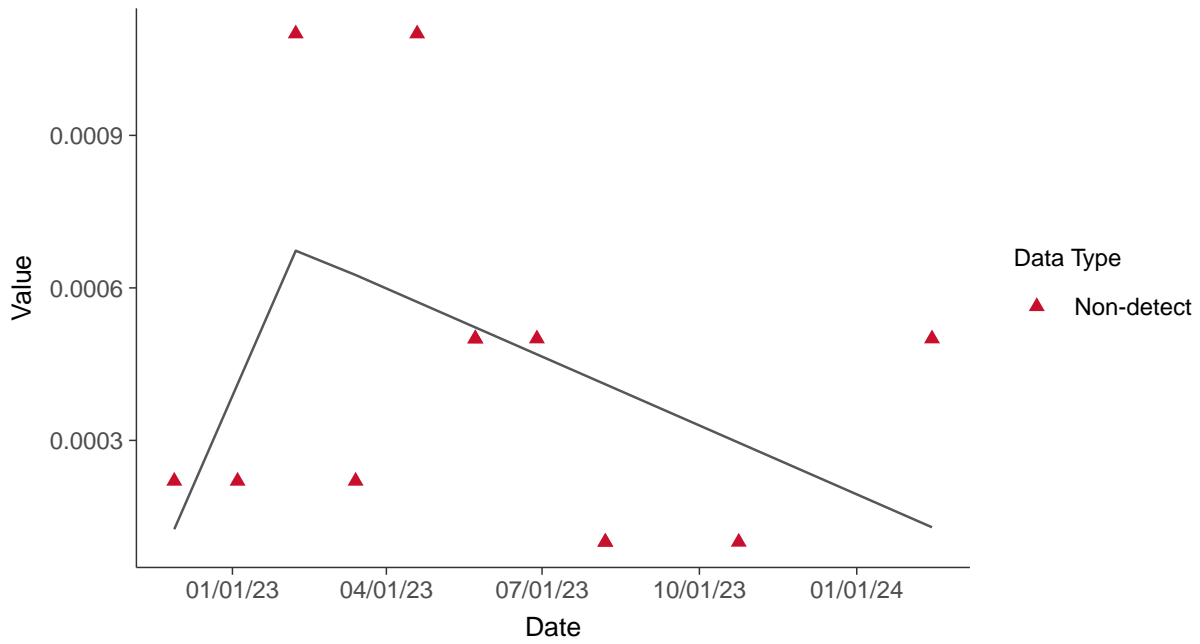
Lead, MW-04 (mg/L)





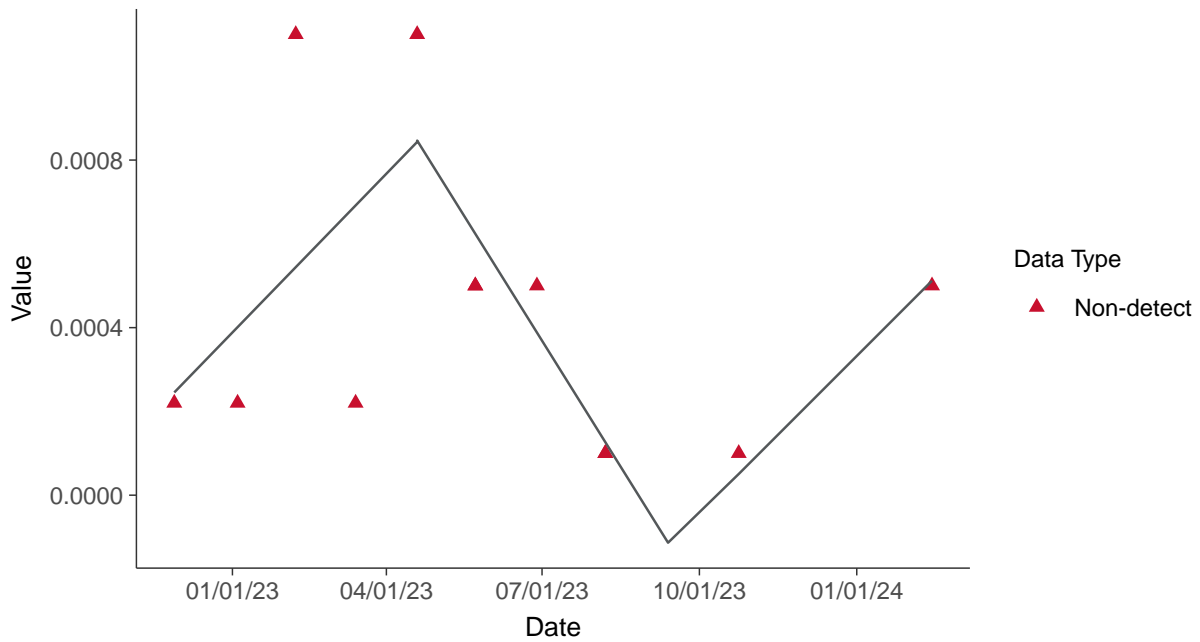
Trend Regression: Piecewise Linear-Linear

Lead, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

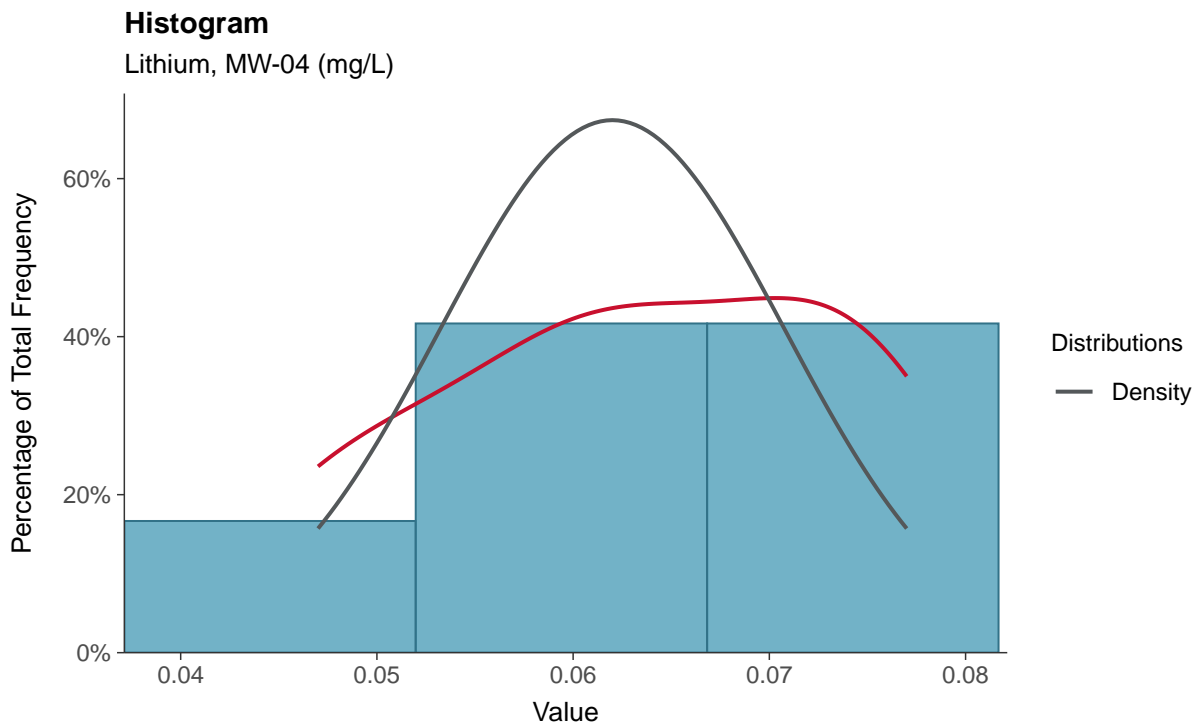
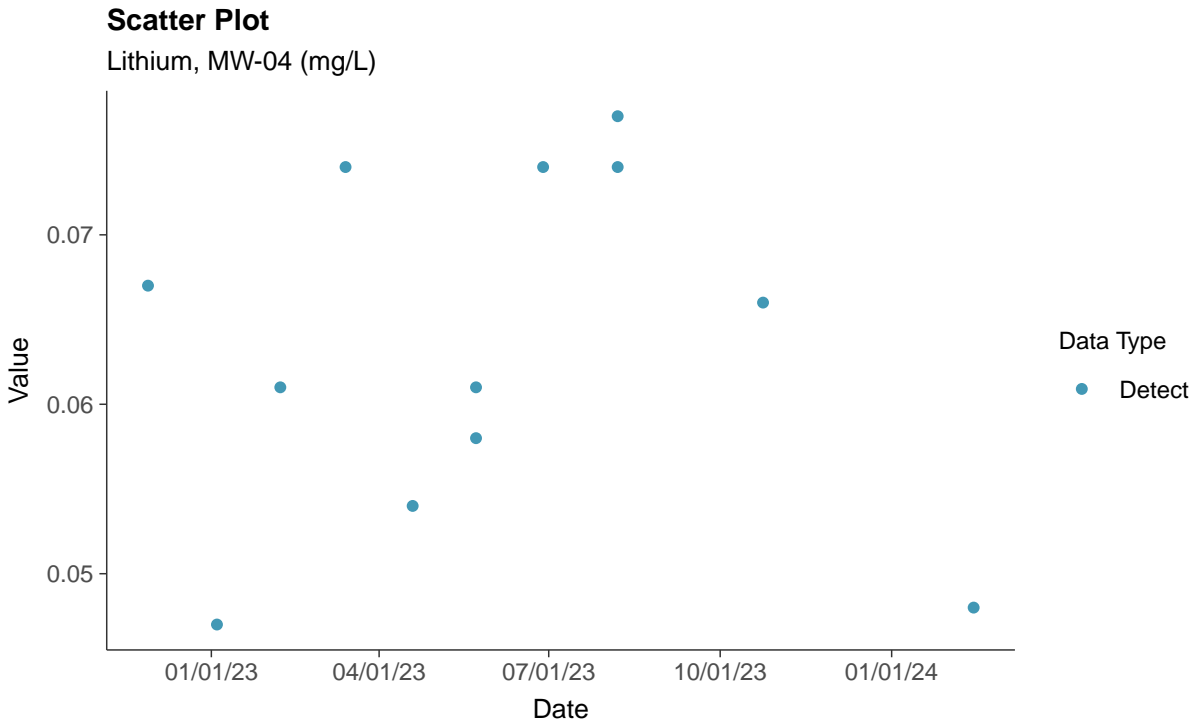
Lead, MW-04 (mg/L)





Appendix IV: Lithium, MW-04

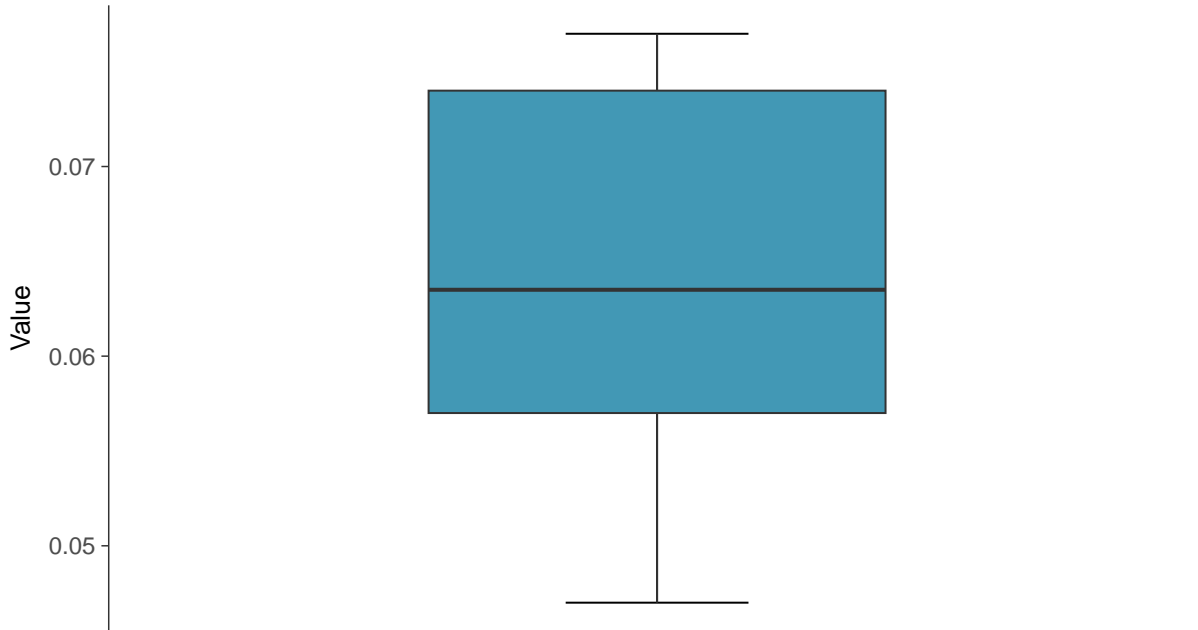
ID: 2_14_5_116





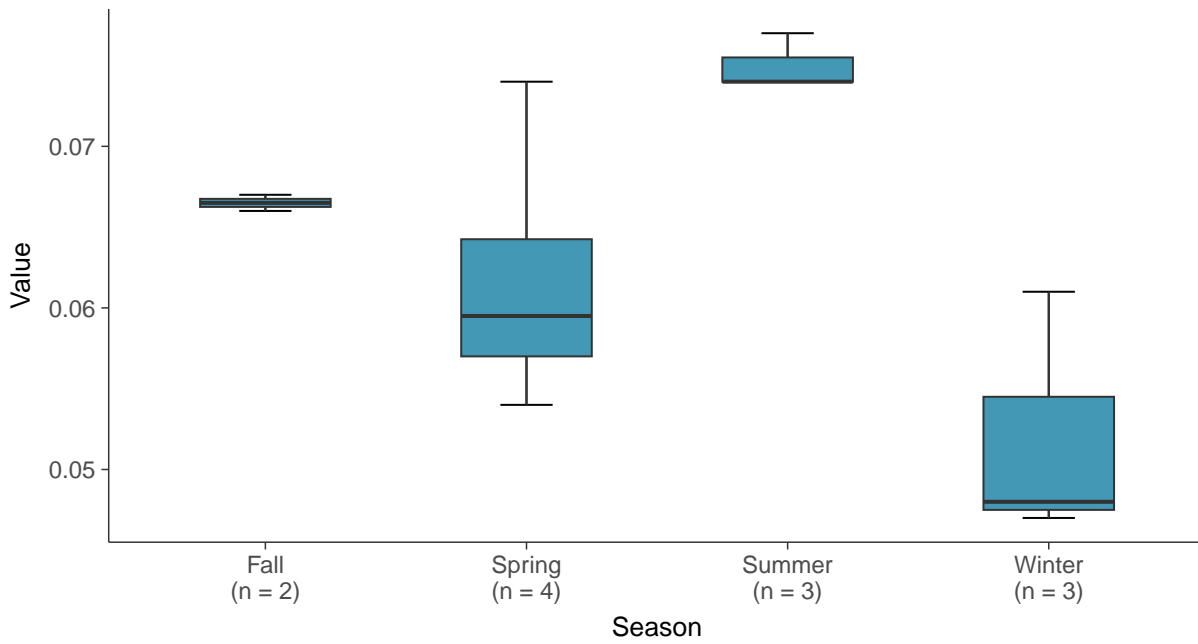
Boxplot

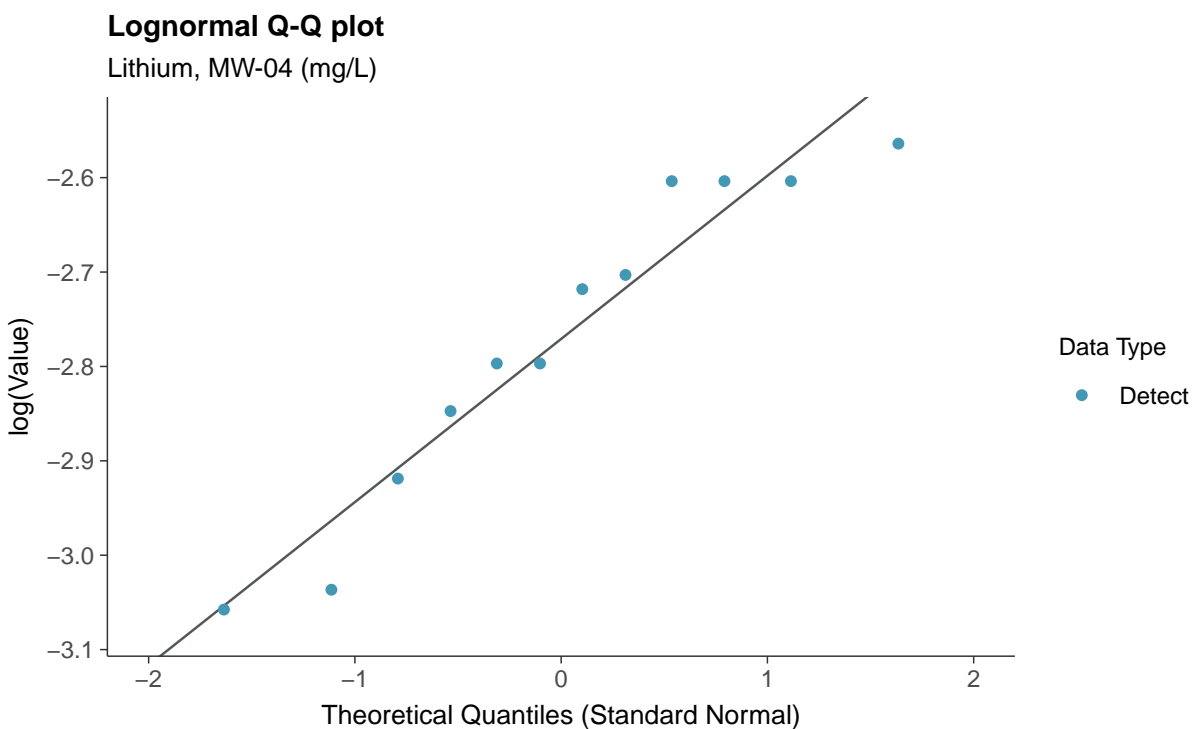
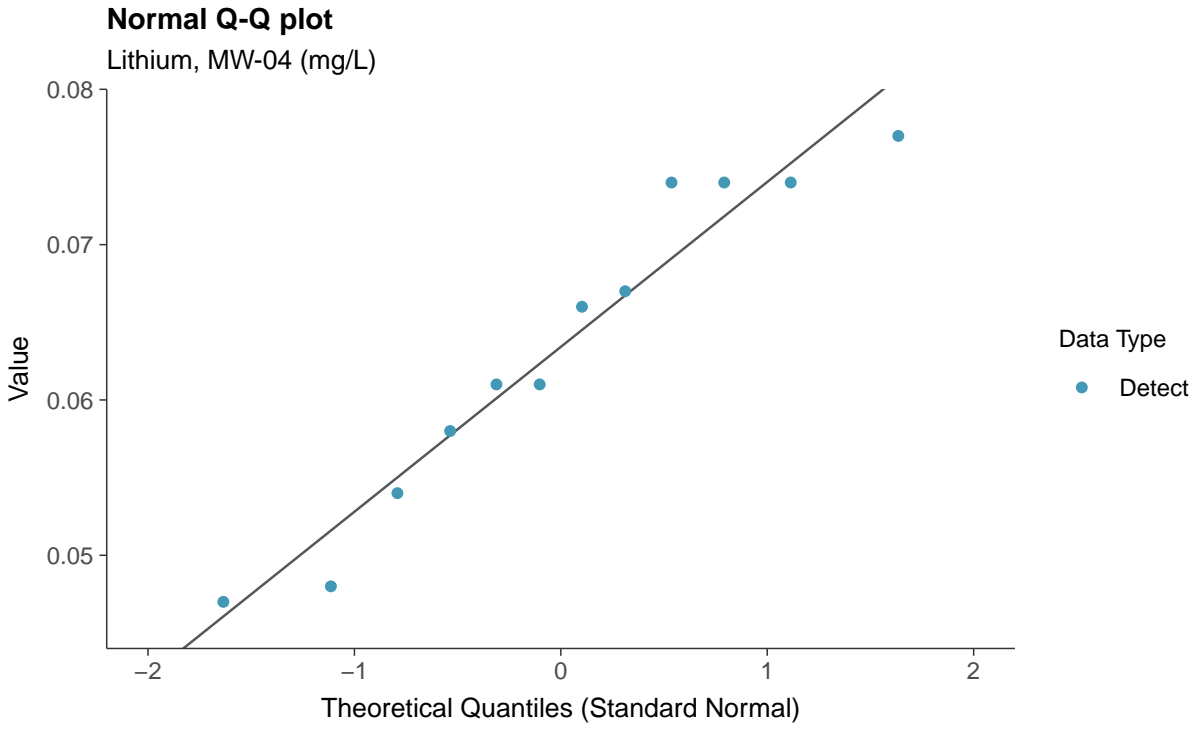
Lithium, MW-04 (mg/L)

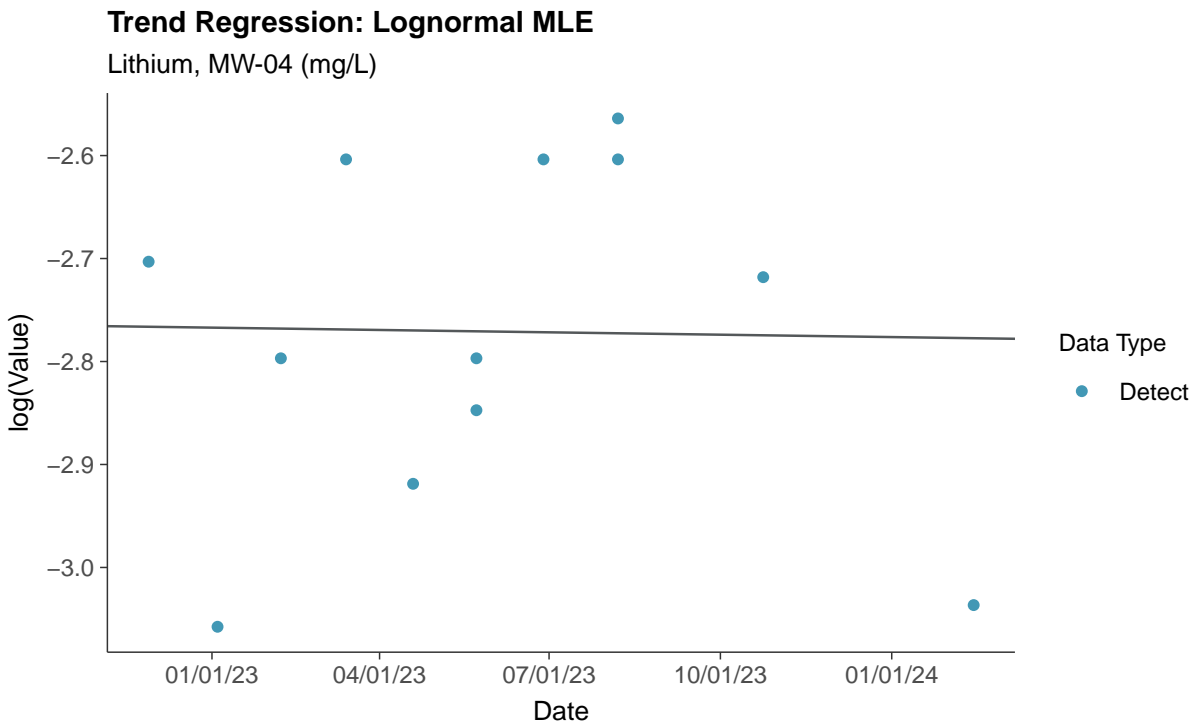
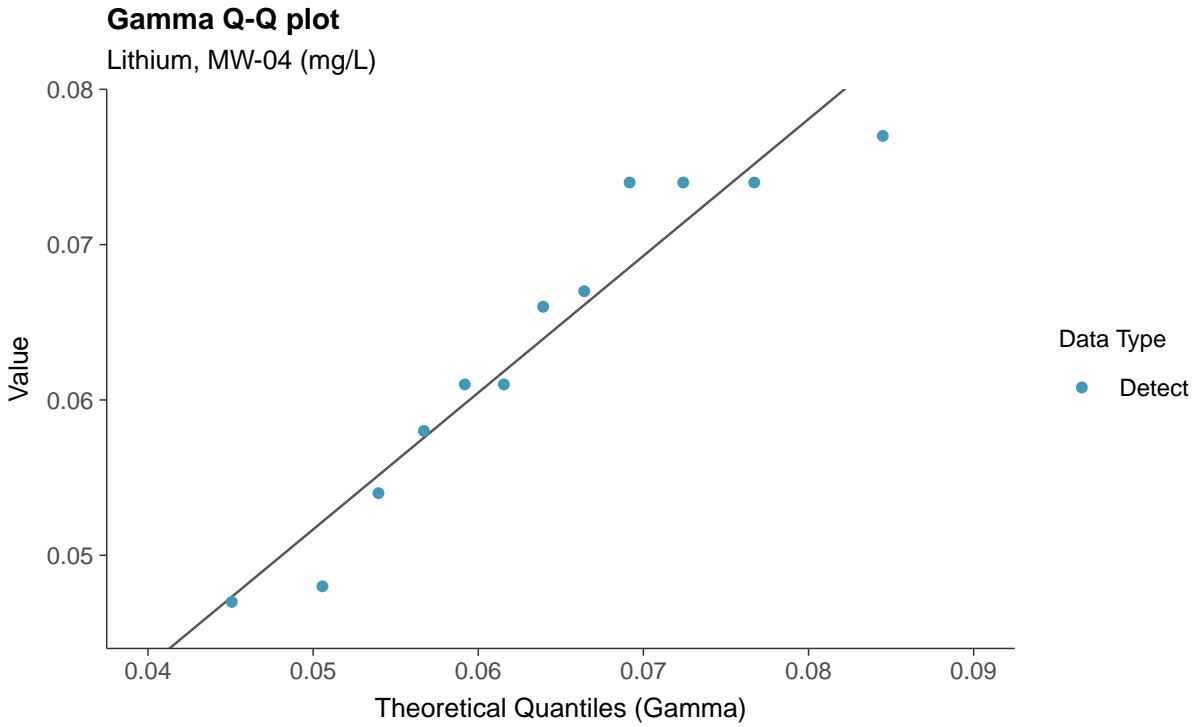


Boxplot by Season

Lithium, MW-04 (mg/L)

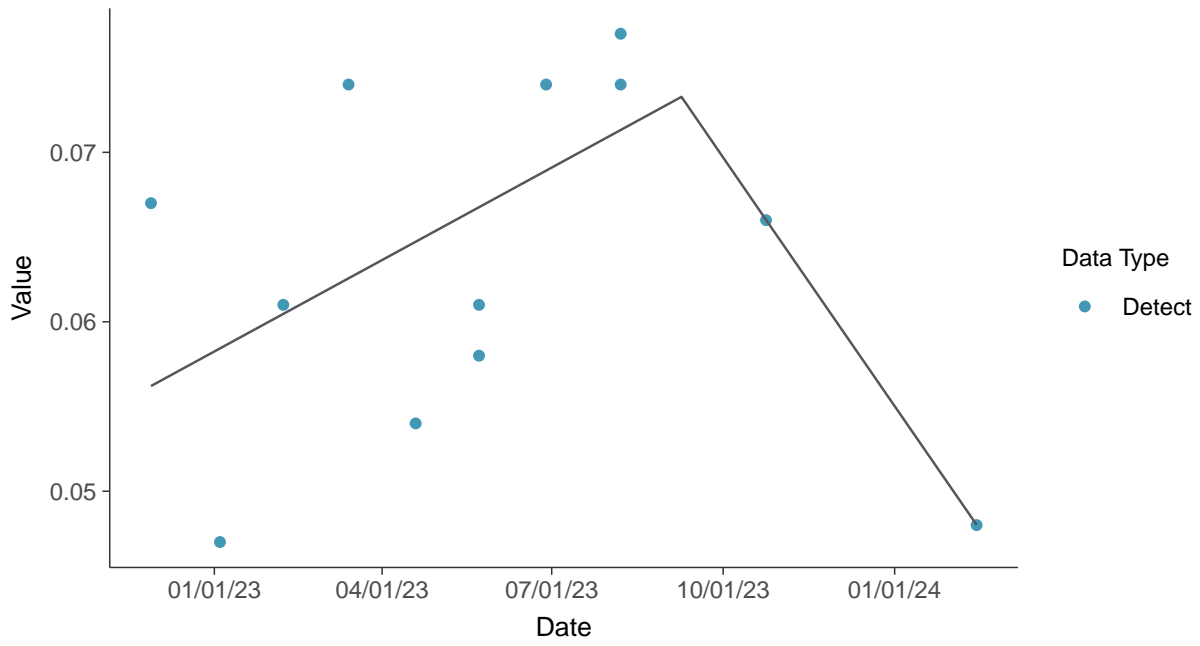








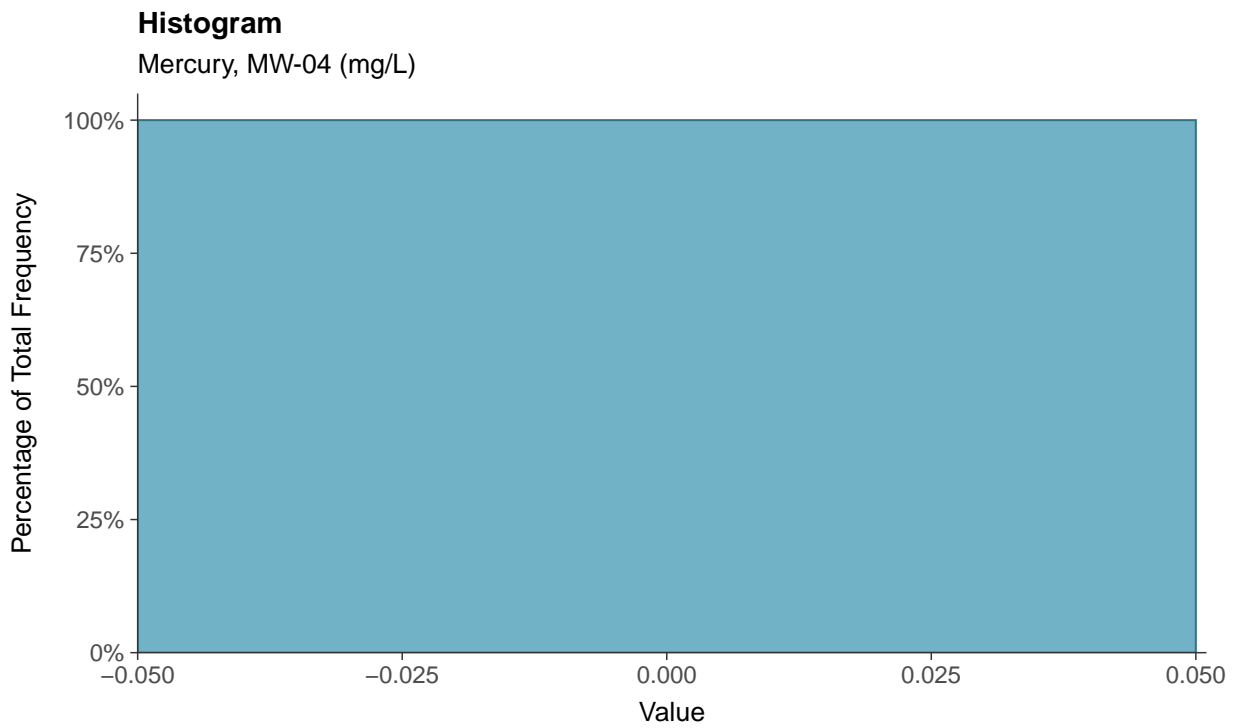
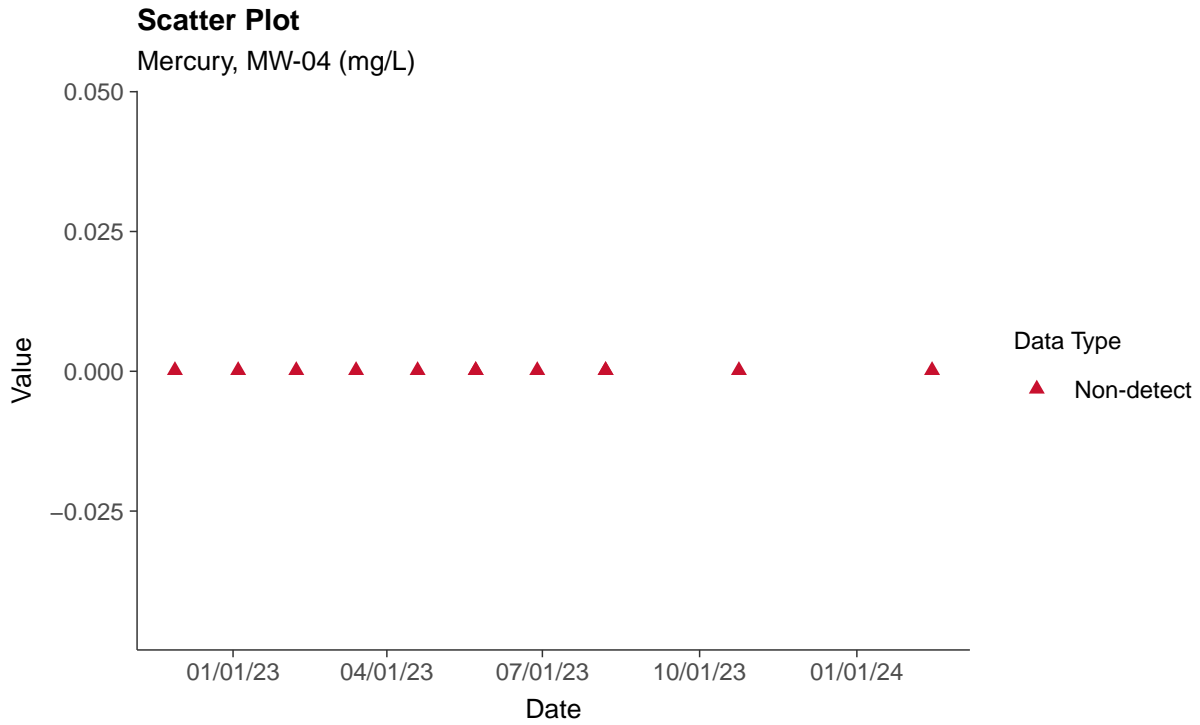
Trend Regression: Piecewise Linear-Linear
Lithium, MW-04 (mg/L)





Appendix IV: Mercury, MW-04

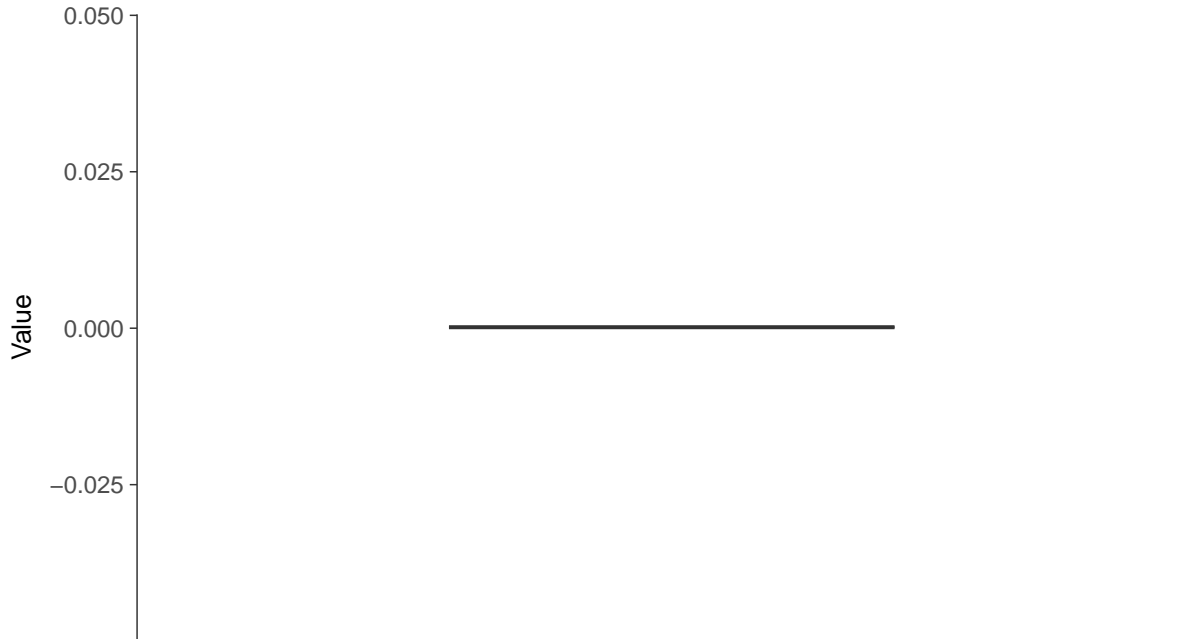
ID: 2_14_5_117





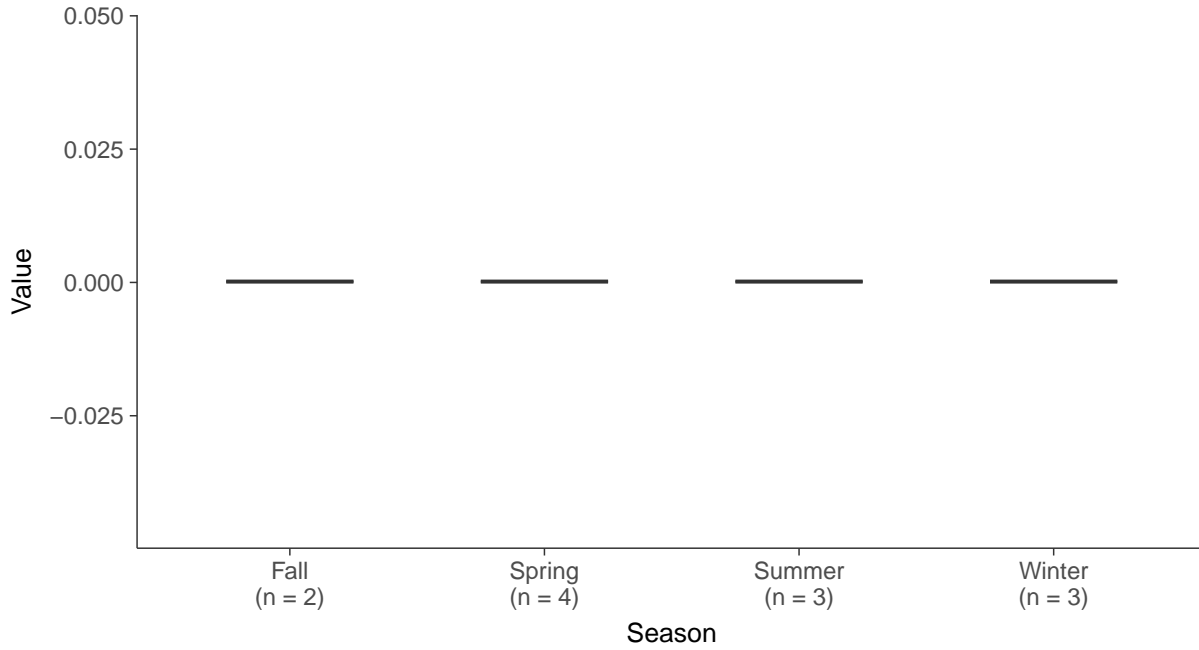
Boxplot

Mercury, MW-04 (mg/L)



Boxplot by Season

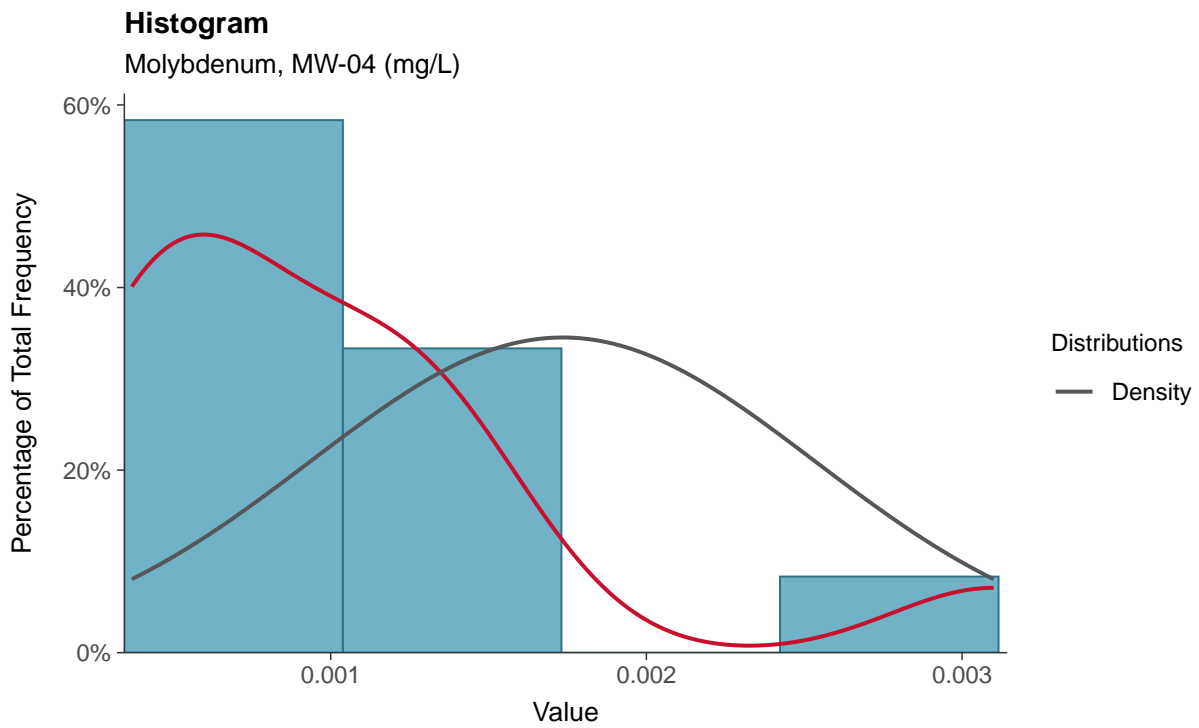
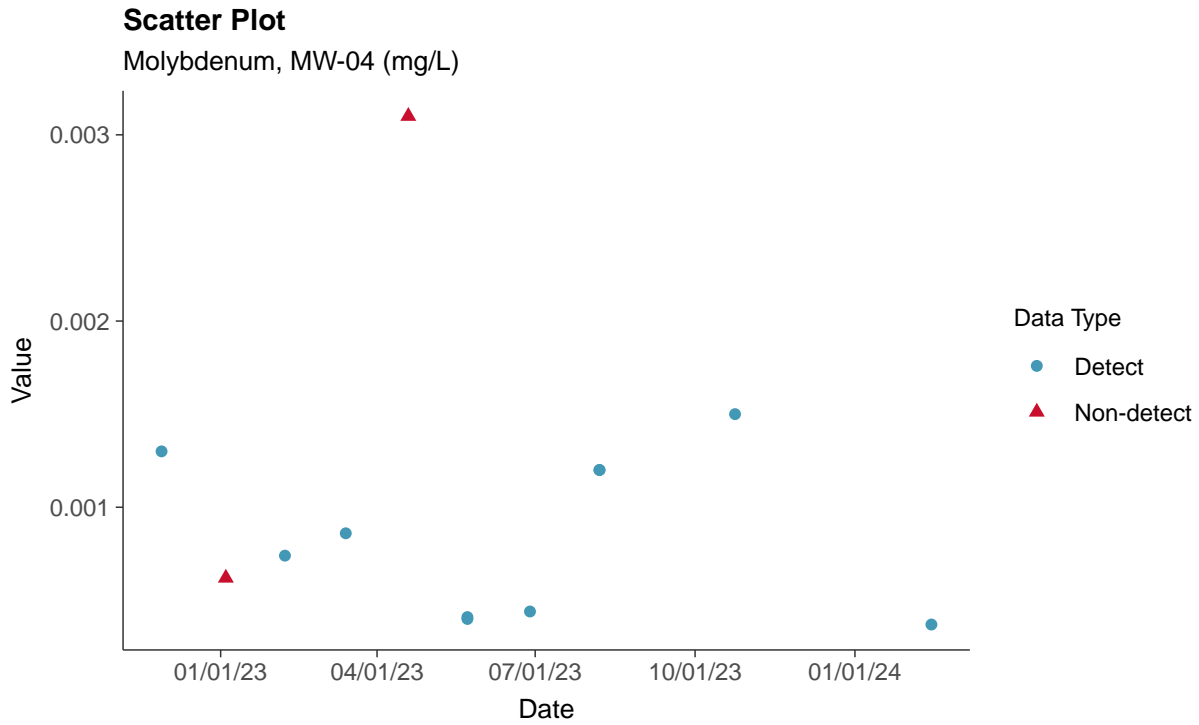
Mercury, MW-04 (mg/L)





Appendix IV: Molybdenum, MW-04

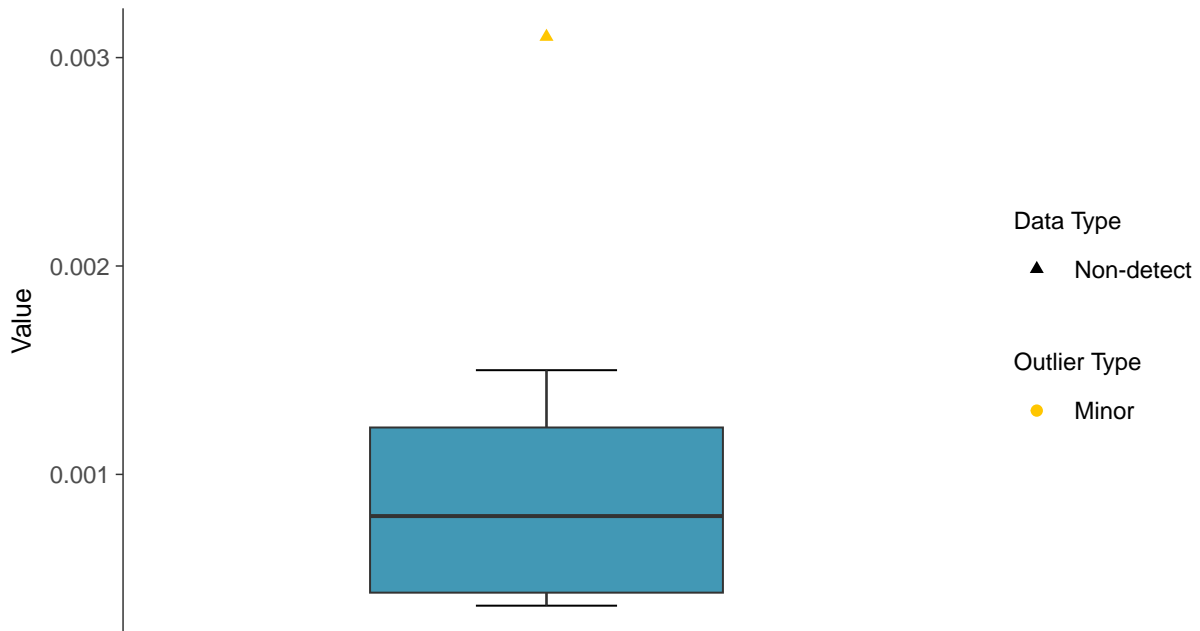
ID: 2_14_5_118





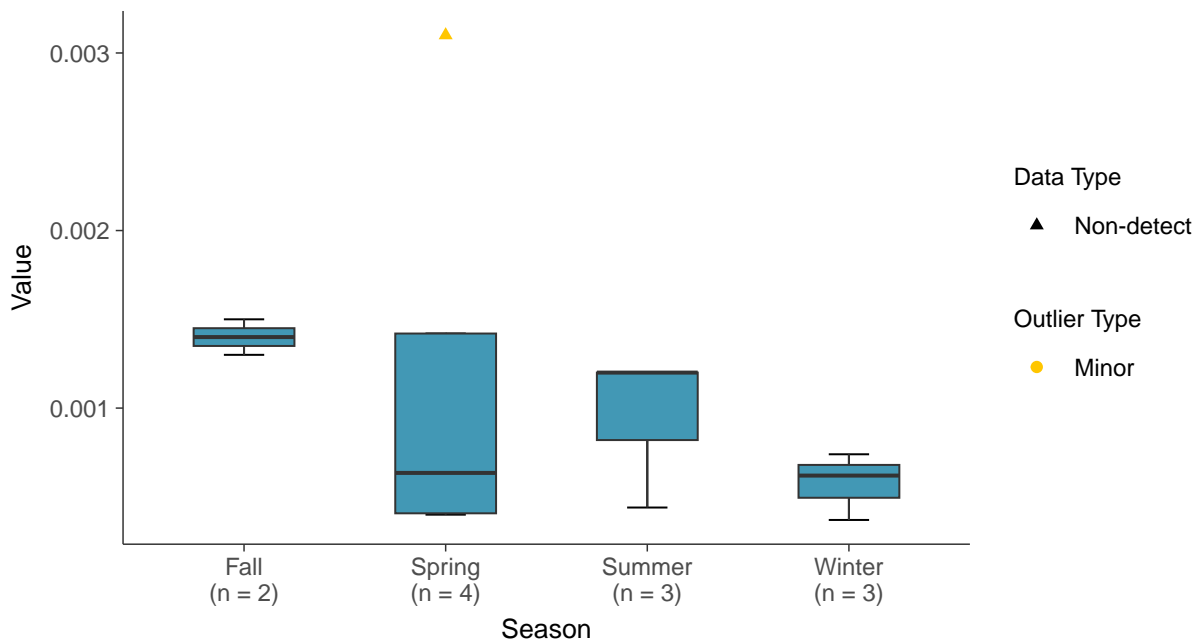
Boxplot

Molybdenum, MW-04 (mg/L)



Boxplot by Season

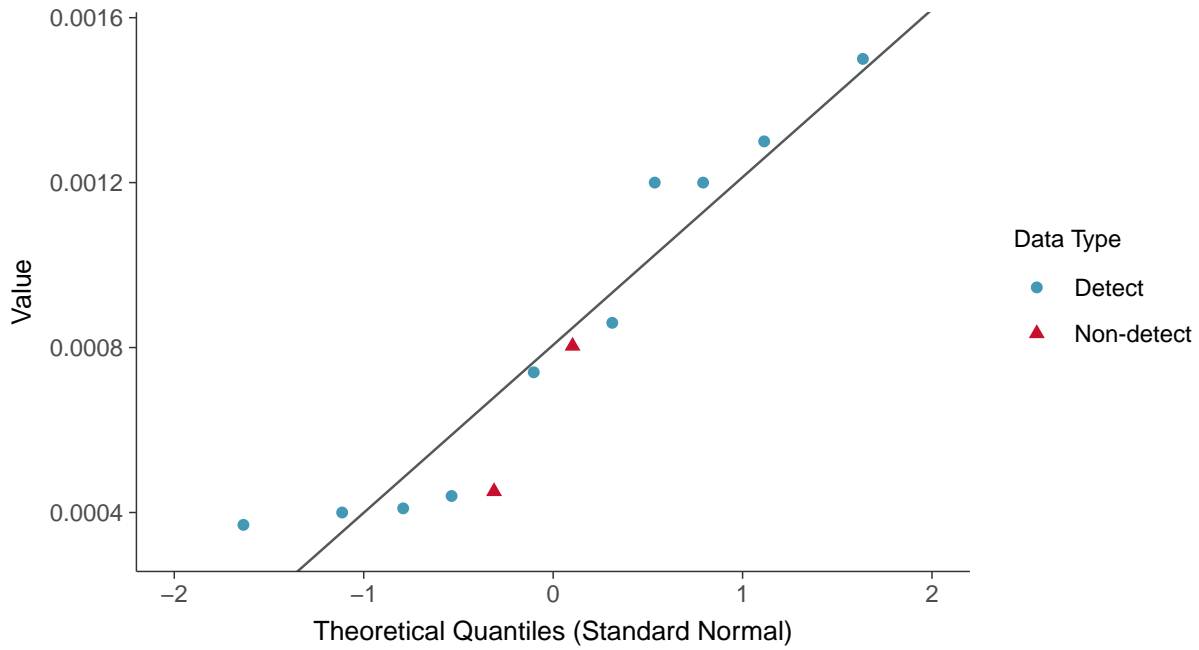
Molybdenum, MW-04 (mg/L)





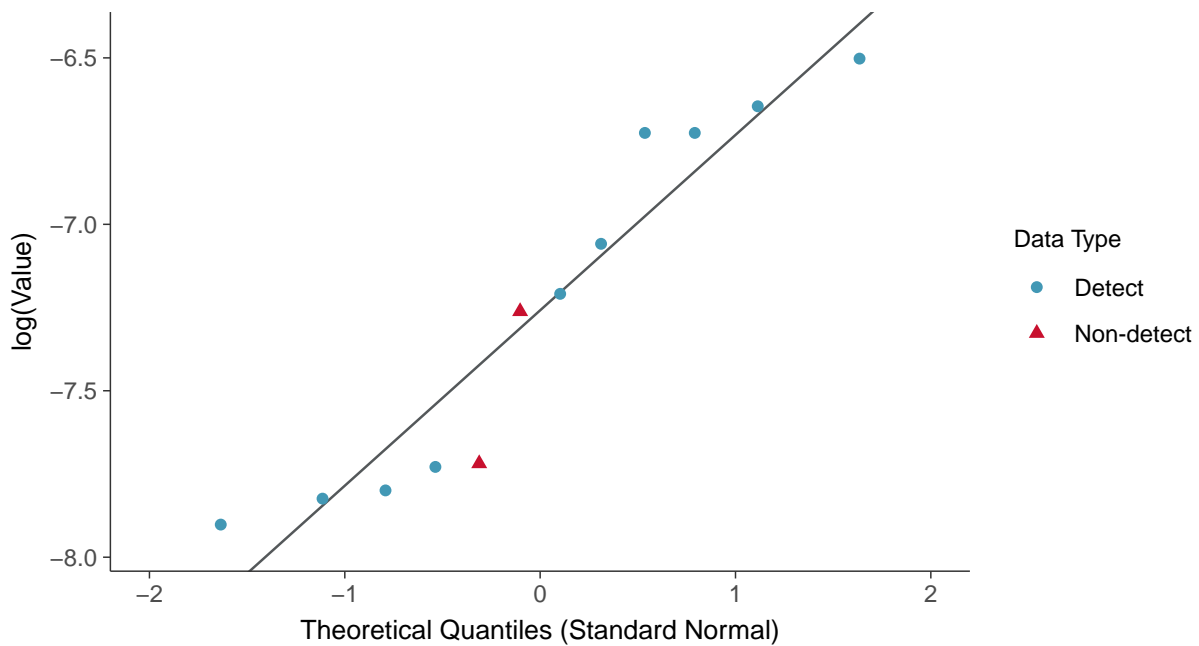
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-04 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

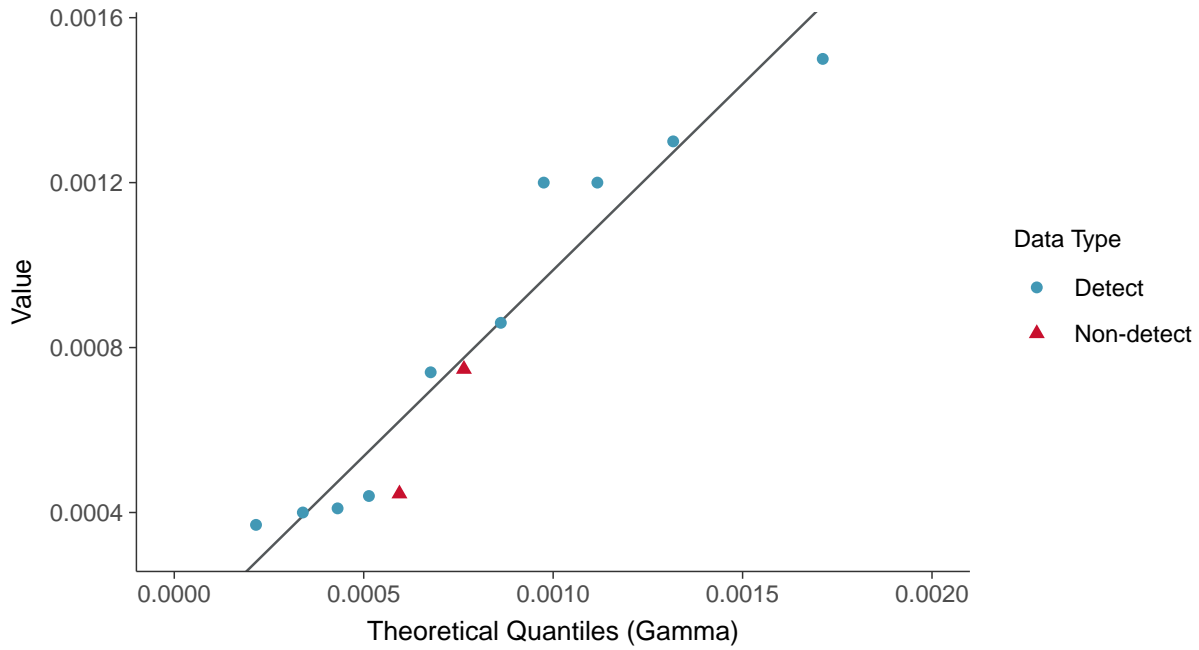
Molybdenum, MW-04 (mg/L)





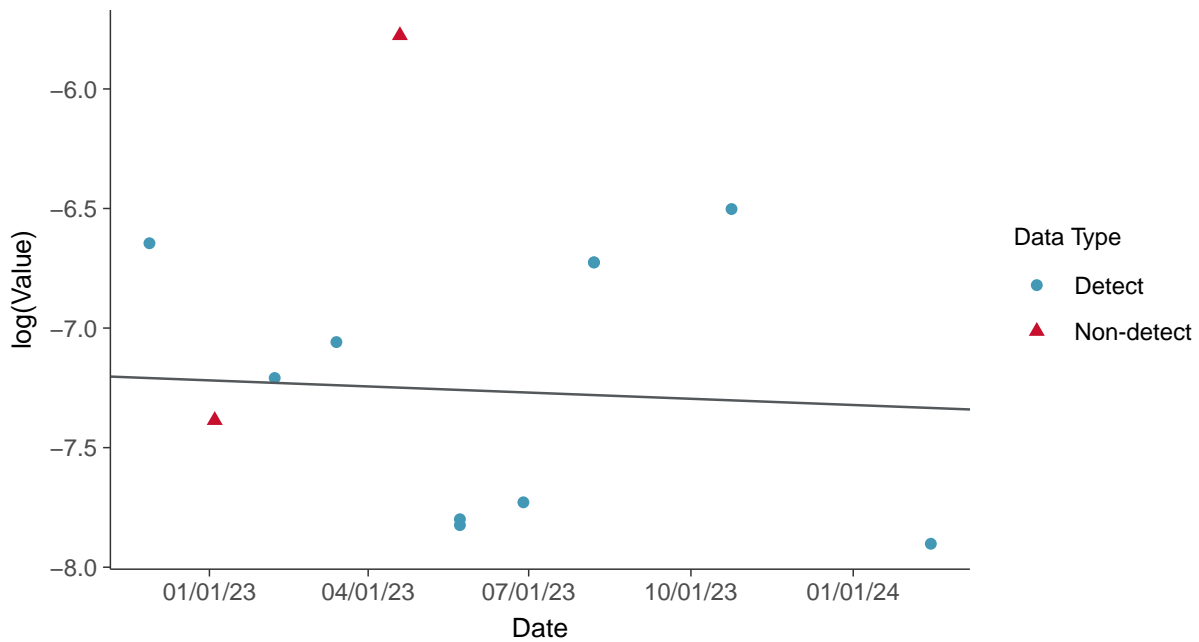
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-04 (mg/L)



Trend Regression: Lognormal MLE

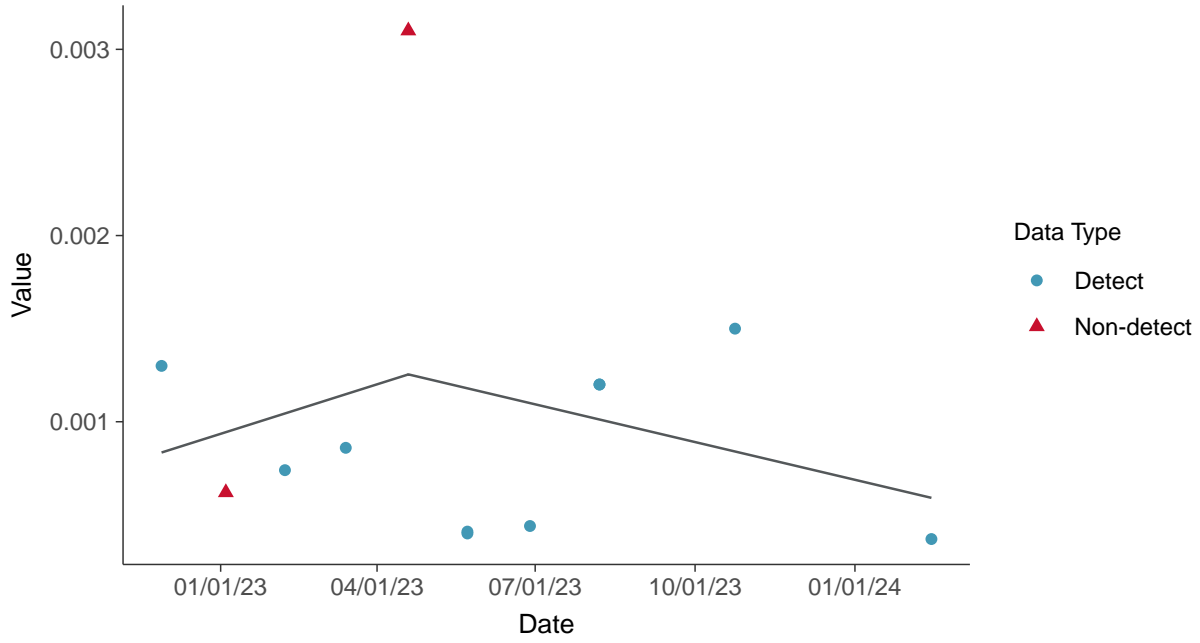
Molybdenum, MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-04 (mg/L)



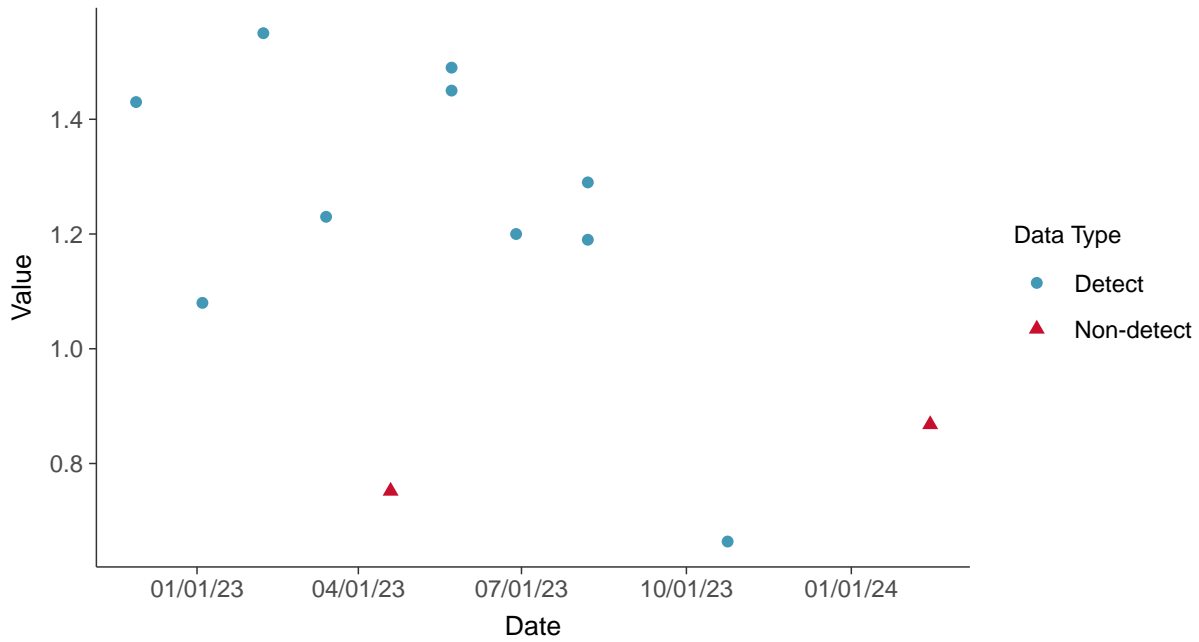


Appendix IV: Radium 226 and 228, MW-04

ID: 2_14_5_121

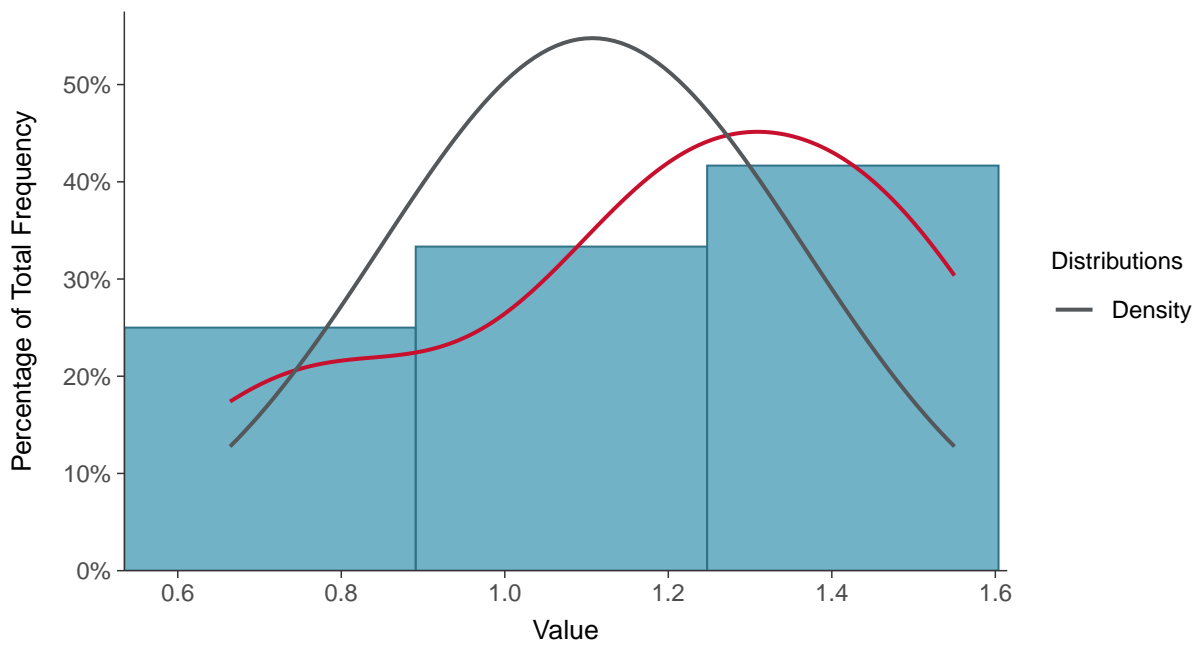
Scatter Plot

Radium 226 and 228, MW-04 (pCi/L)



Histogram

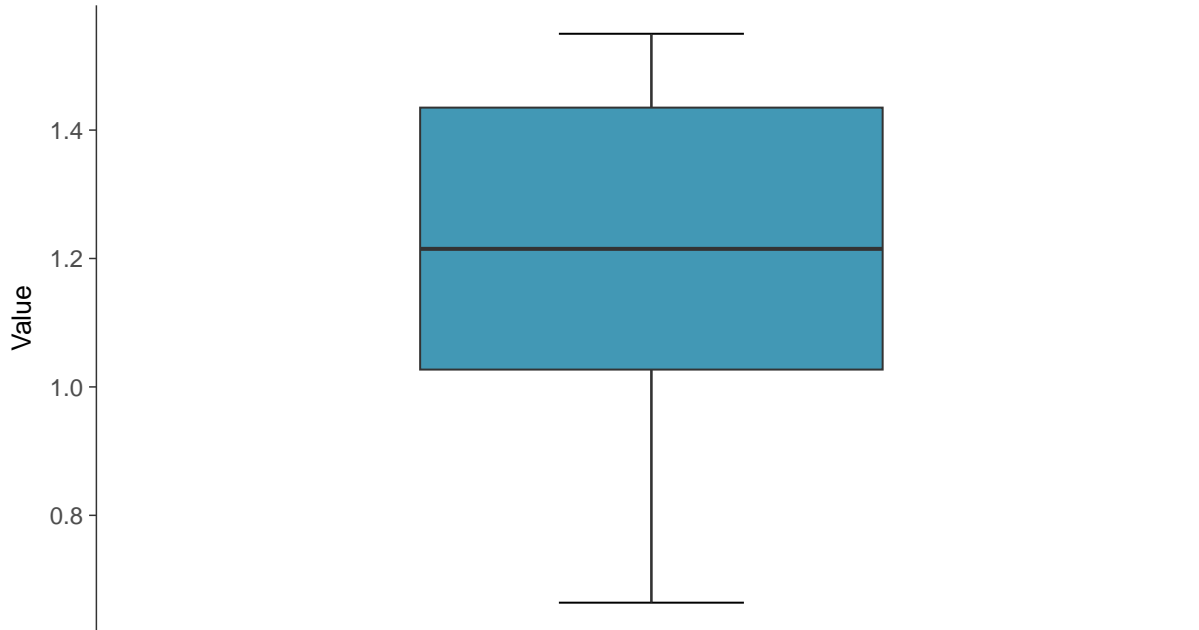
Radium 226 and 228, MW-04 (pCi/L)





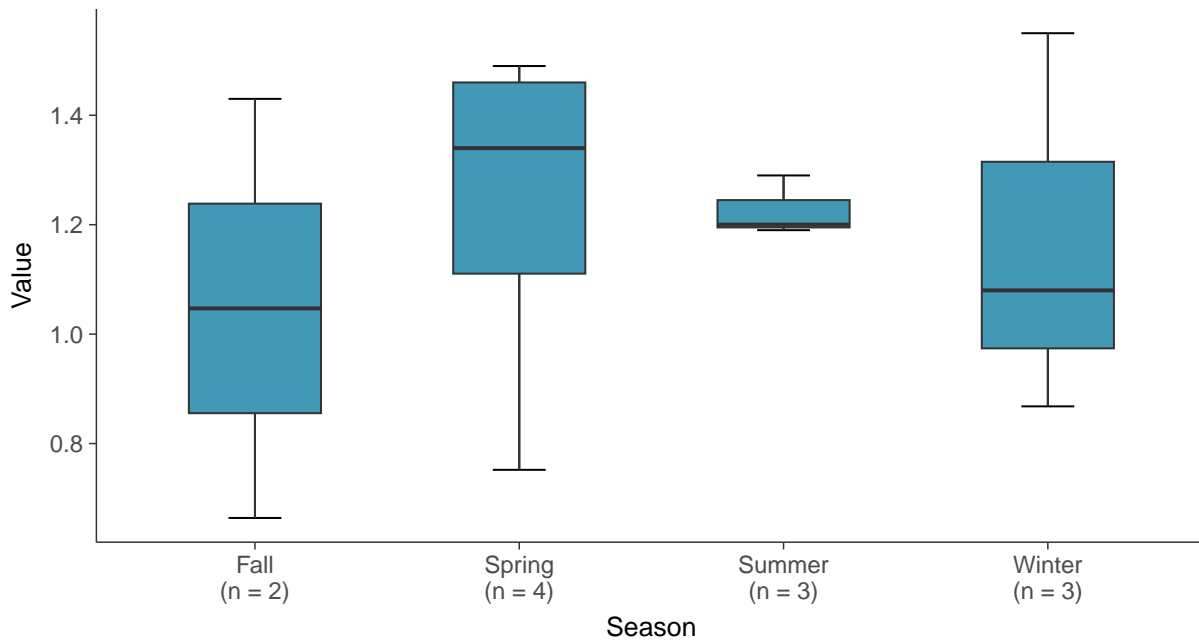
Boxplot

Radium 226 and 228, MW-04 (pCi/L)



Boxplot by Season

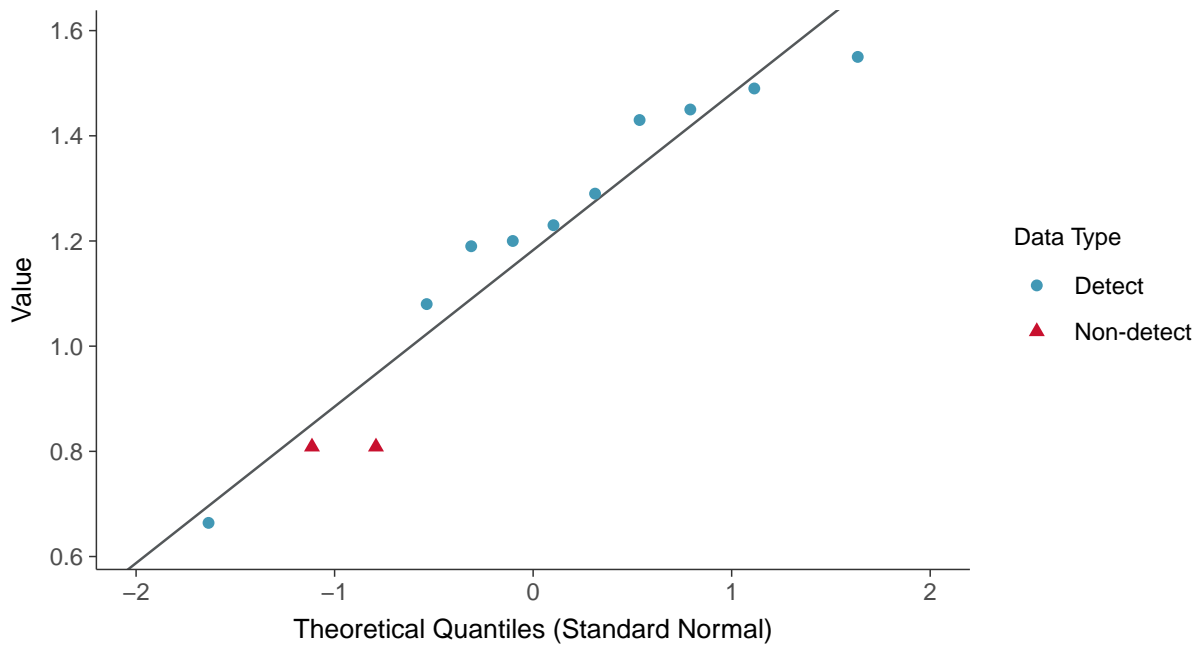
Radium 226 and 228, MW-04 (pCi/L)





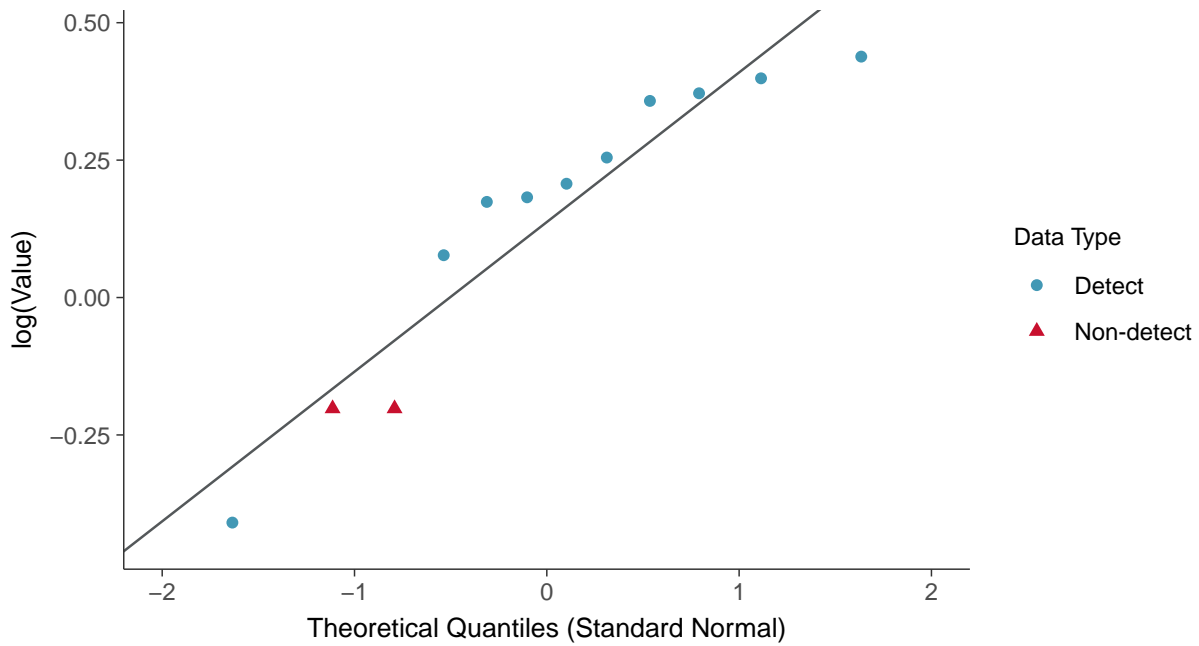
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-04 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

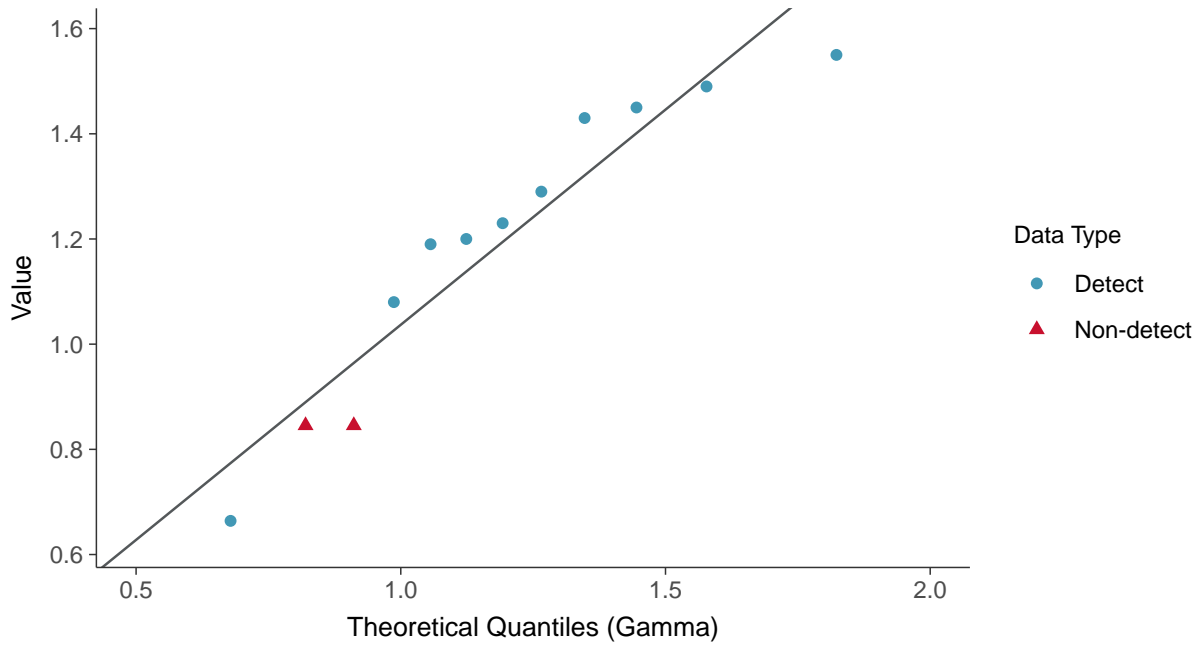
Radium 226 and 228, MW-04 (pCi/L)





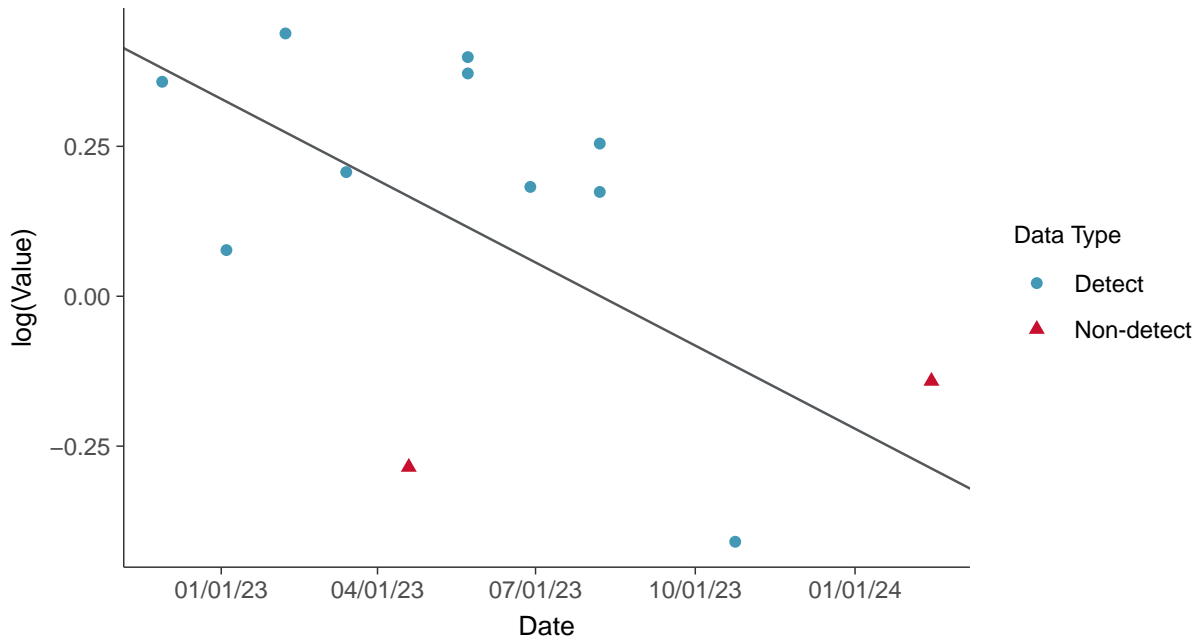
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-04 (pCi/L)



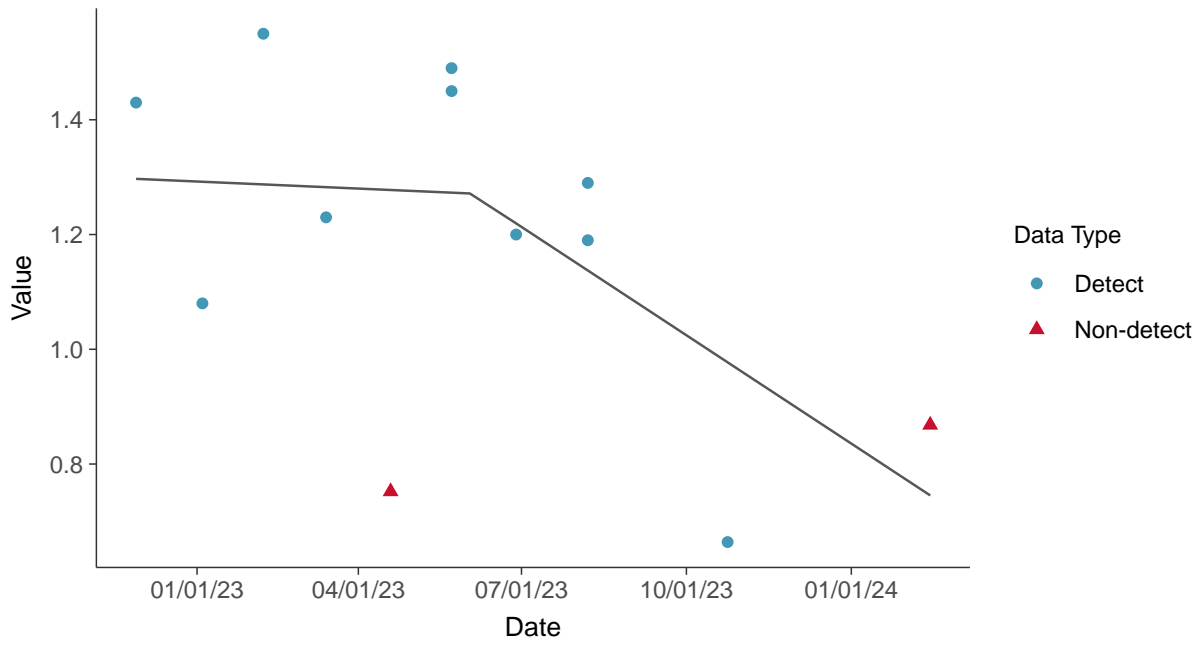
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-04 (pCi/L)





Trend Regression: Piecewise Linear-Linear
Radium 226 and 228, MW-04 (pCi/L)



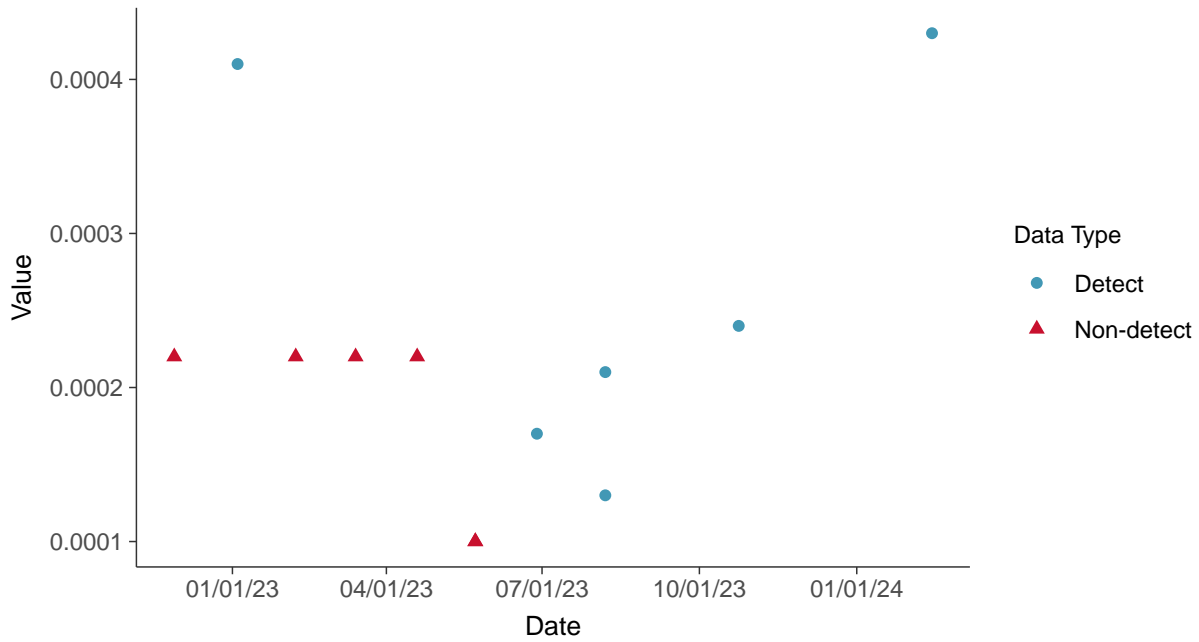


Appendix IV: Selenium, MW-04

ID: 2_14_5_122

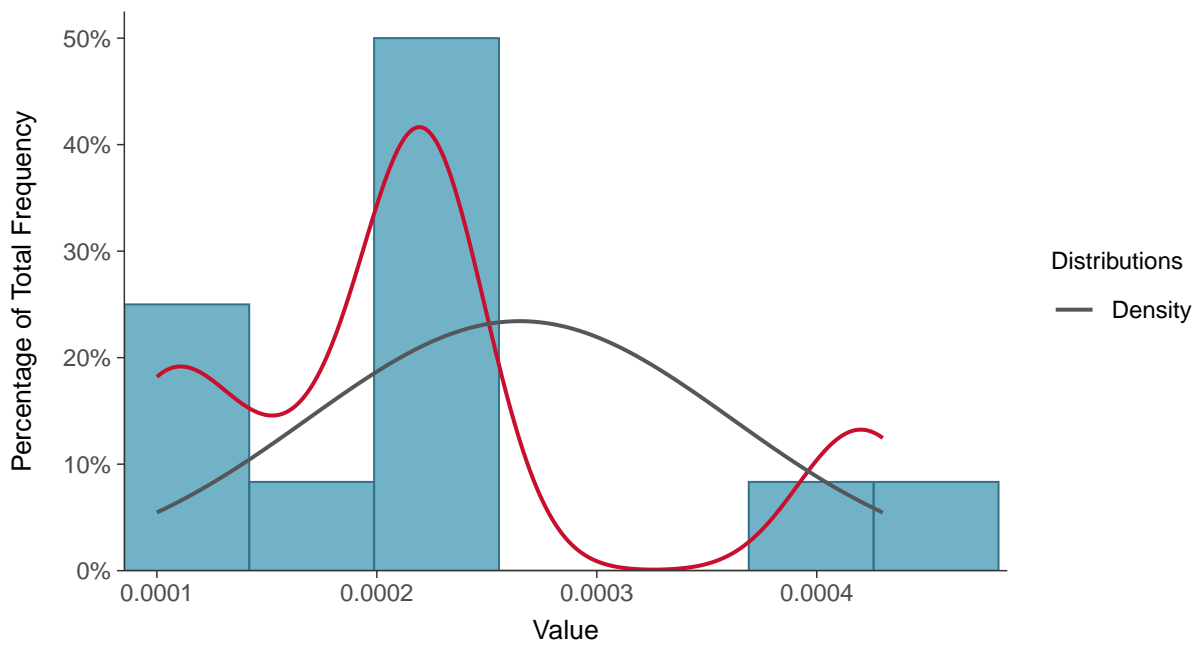
Scatter Plot

Selenium, MW-04 (mg/L)



Histogram

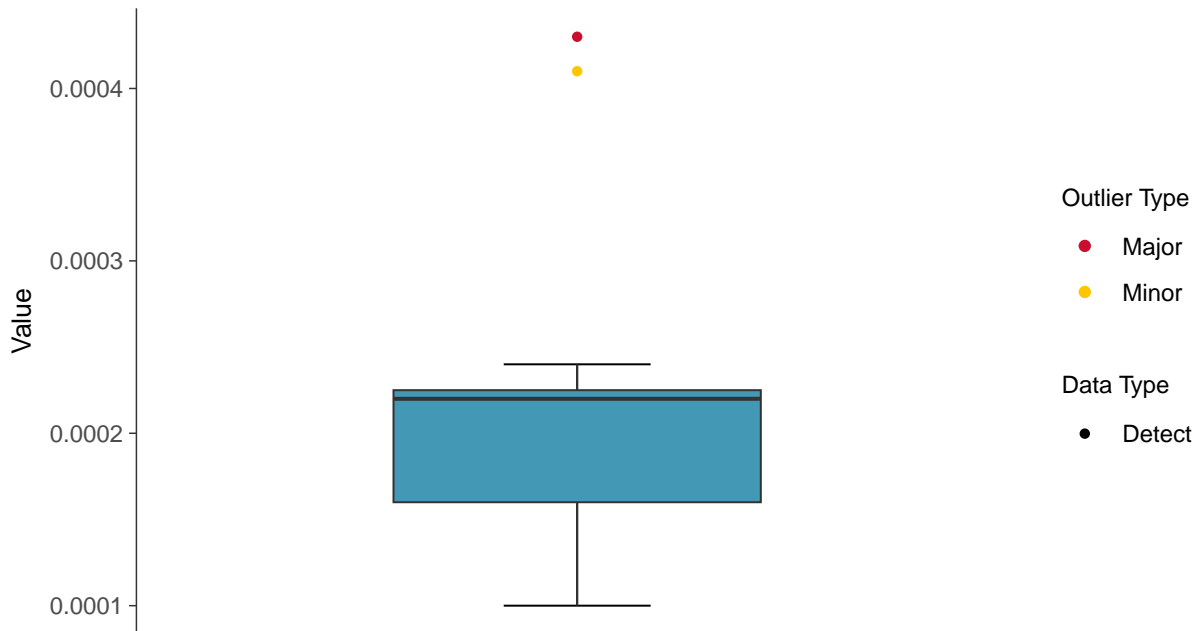
Selenium, MW-04 (mg/L)





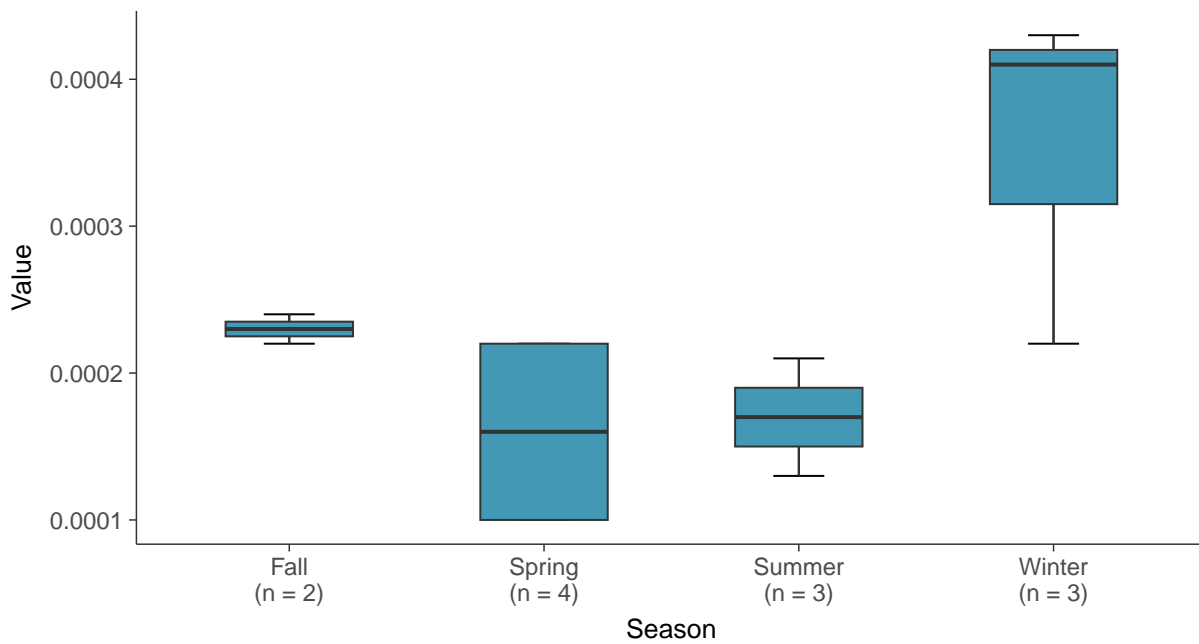
Boxplot

Selenium, MW-04 (mg/L)



Boxplot by Season

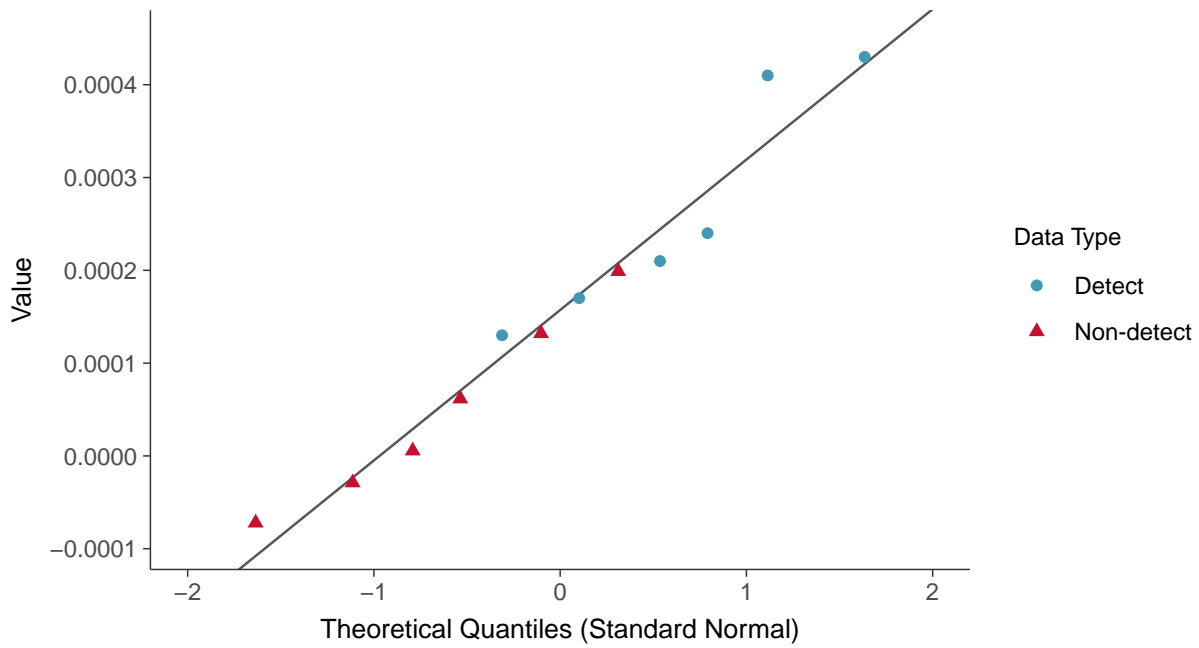
Selenium, MW-04 (mg/L)





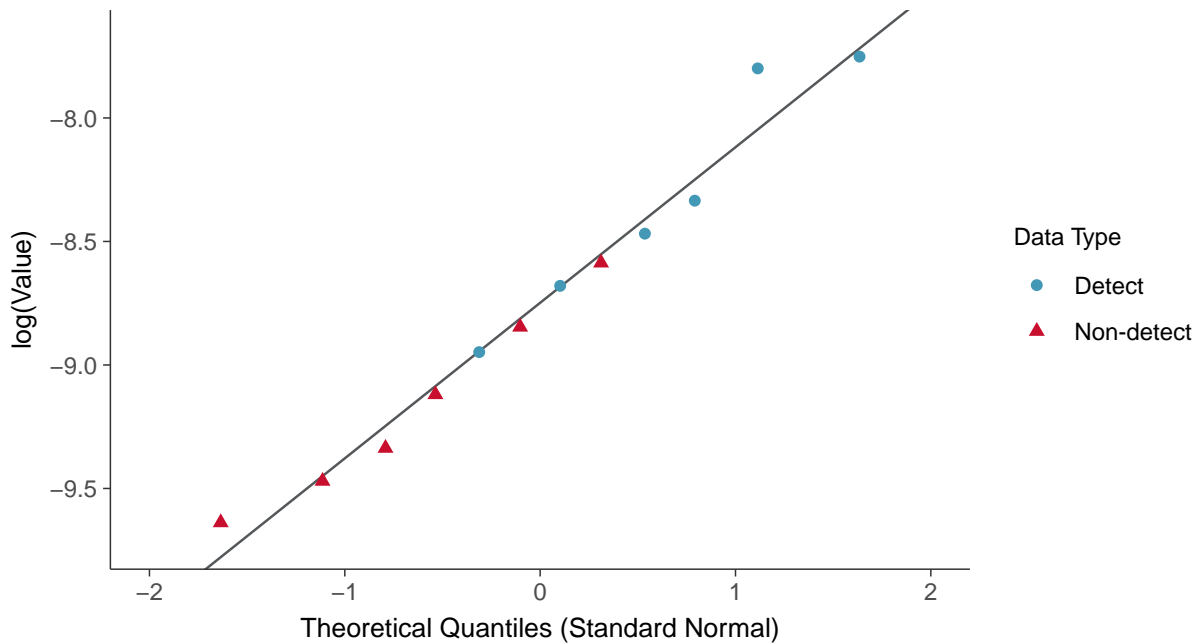
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-04 (mg/L)



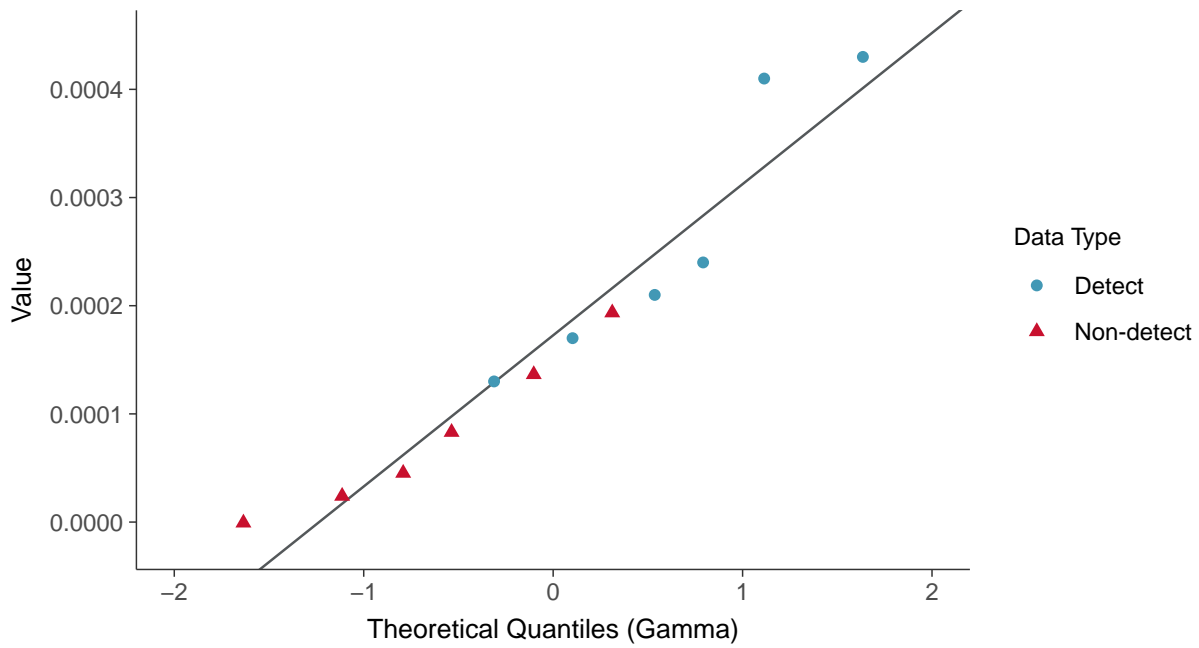
Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-04 (mg/L)

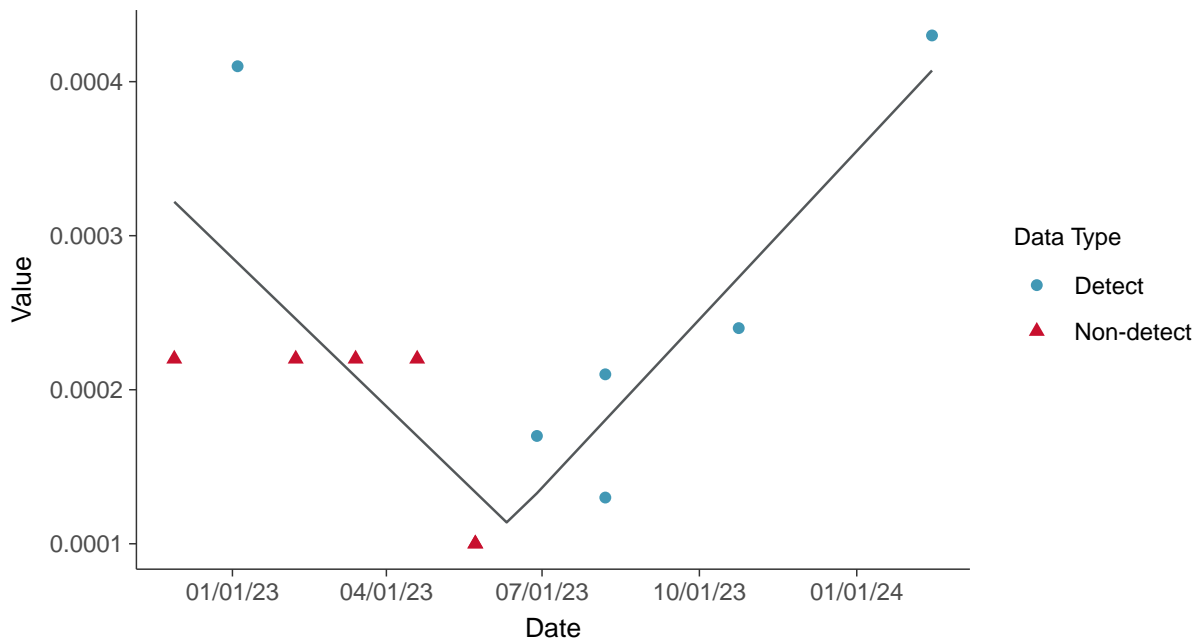




Gamma Q-Q plot using ROS Imputed Estimates
Selenium, MW-04 (mg/L)



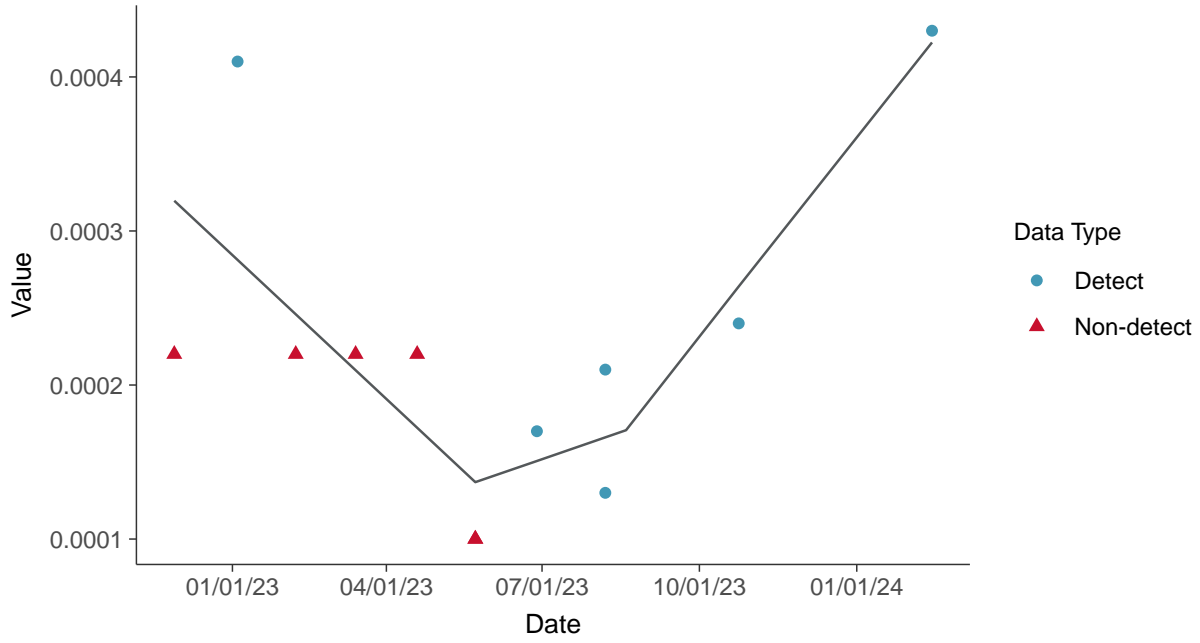
Trend Regression: Piecewise Linear-Linear
Selenium, MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-04 (mg/L)



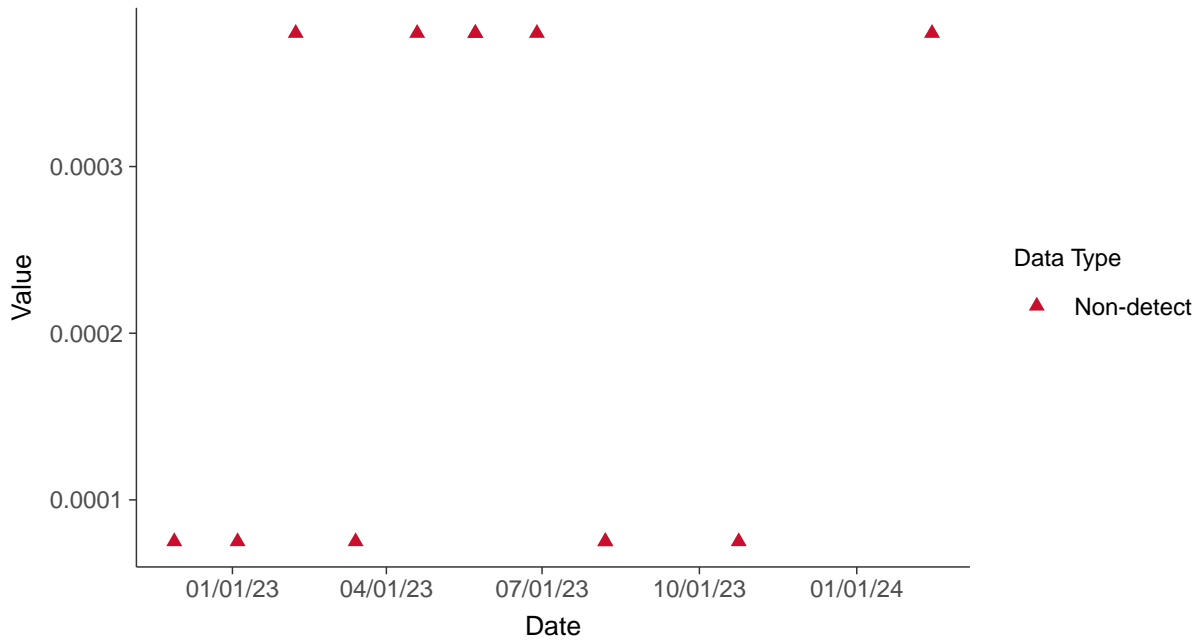


Appendix IV: Thallium, MW-04

ID: 2_14_5_125

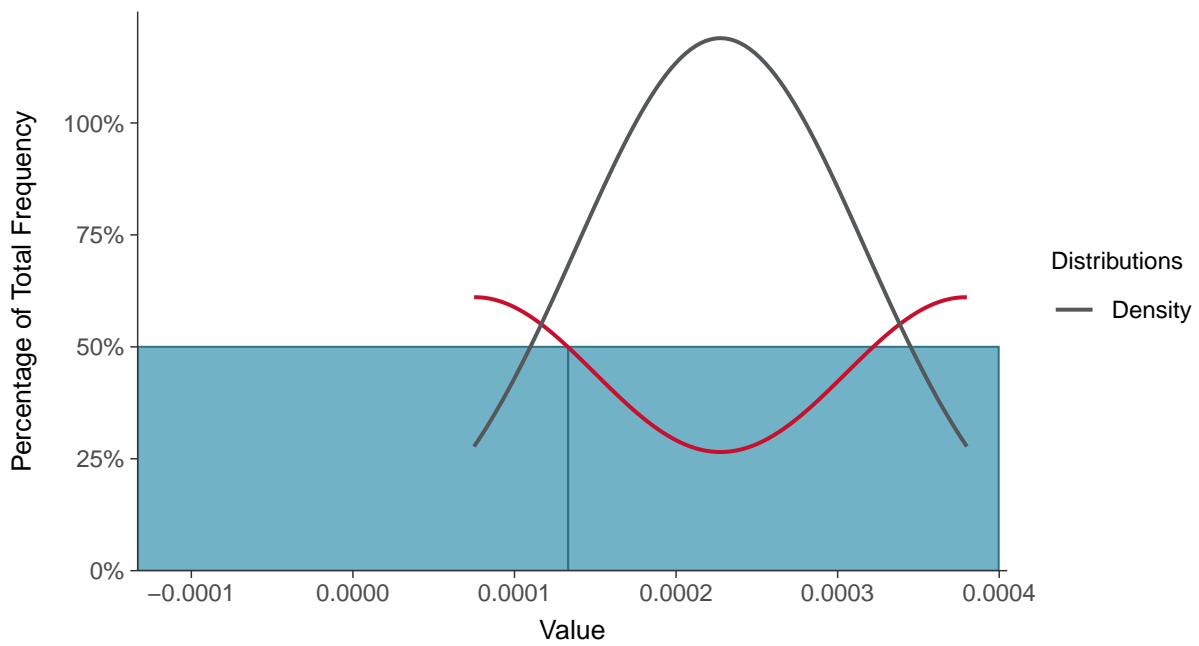
Scatter Plot

Thallium, MW-04 (mg/L)



Histogram

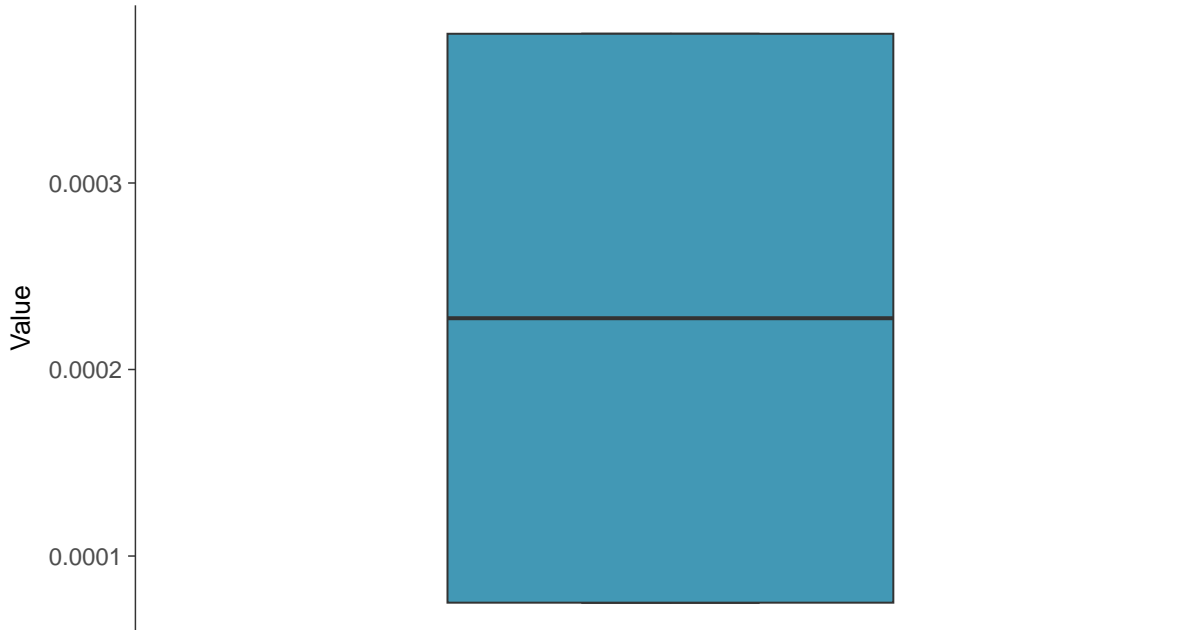
Thallium, MW-04 (mg/L)





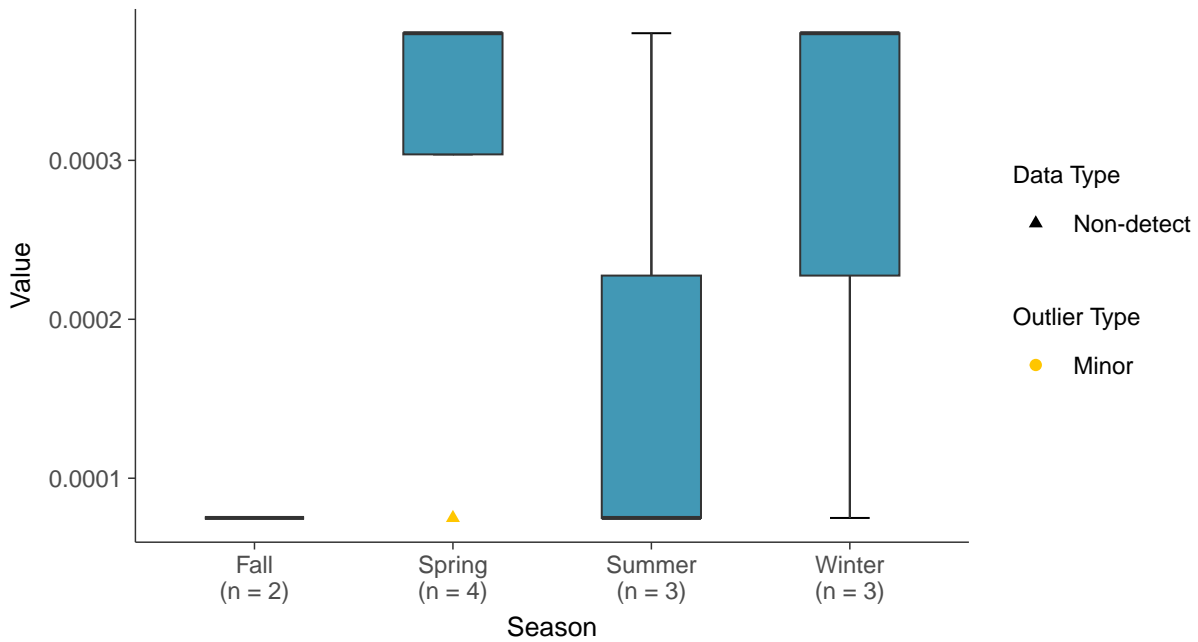
Boxplot

Thallium, MW-04 (mg/L)



Boxplot by Season

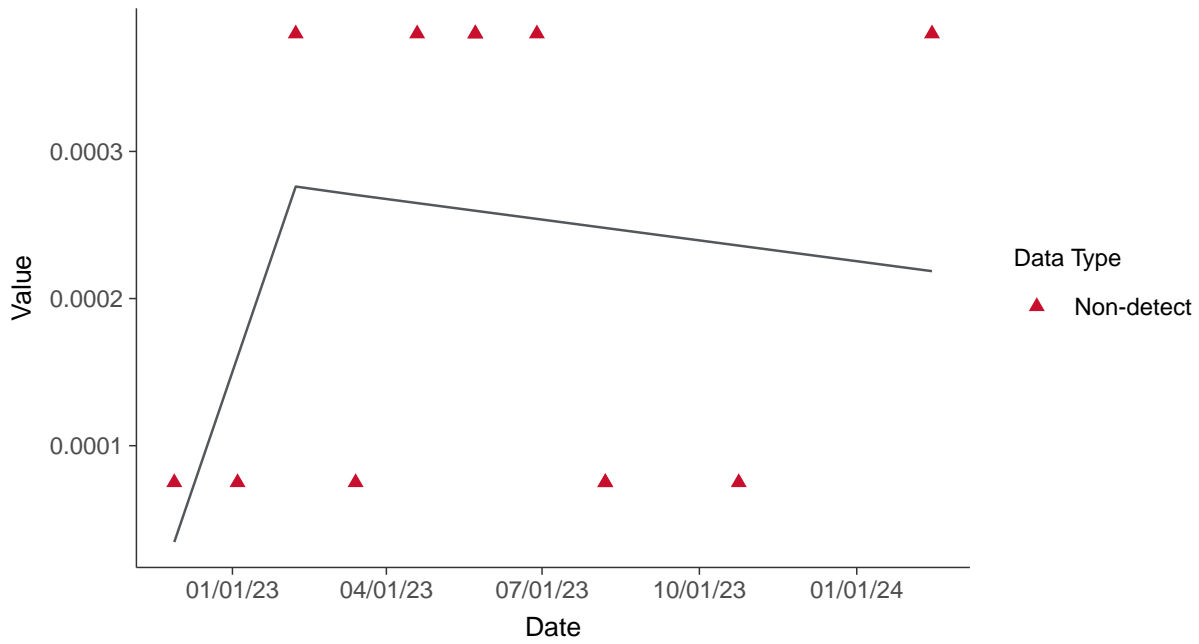
Thallium, MW-04 (mg/L)





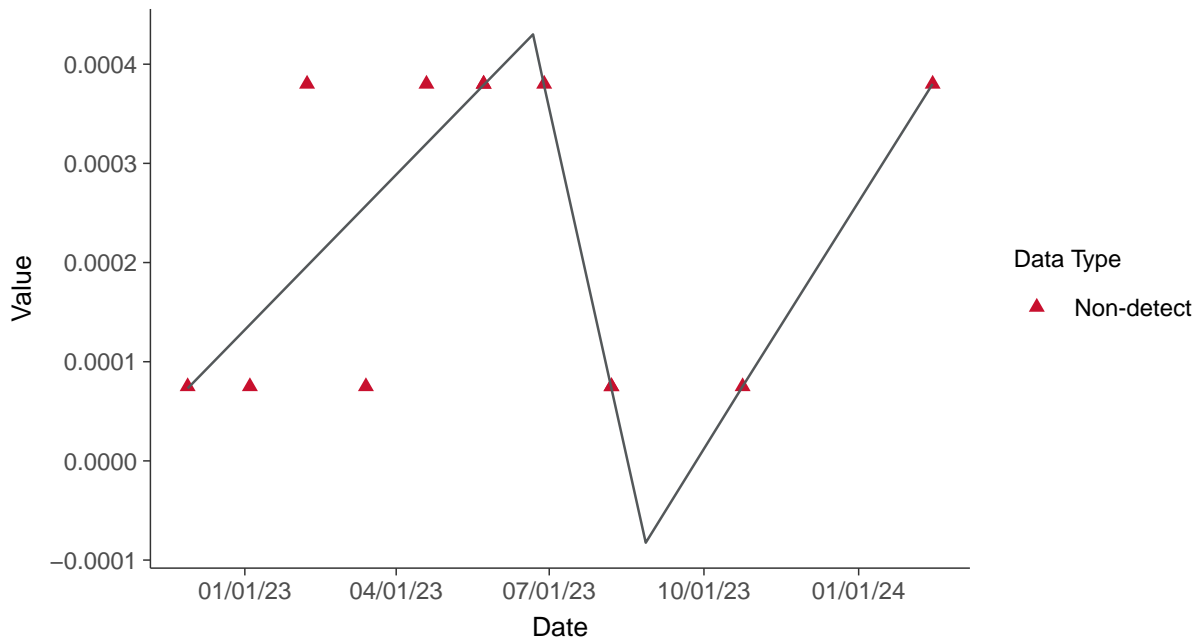
Trend Regression: Piecewise Linear-Linear

Thallium, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-04 (mg/L)

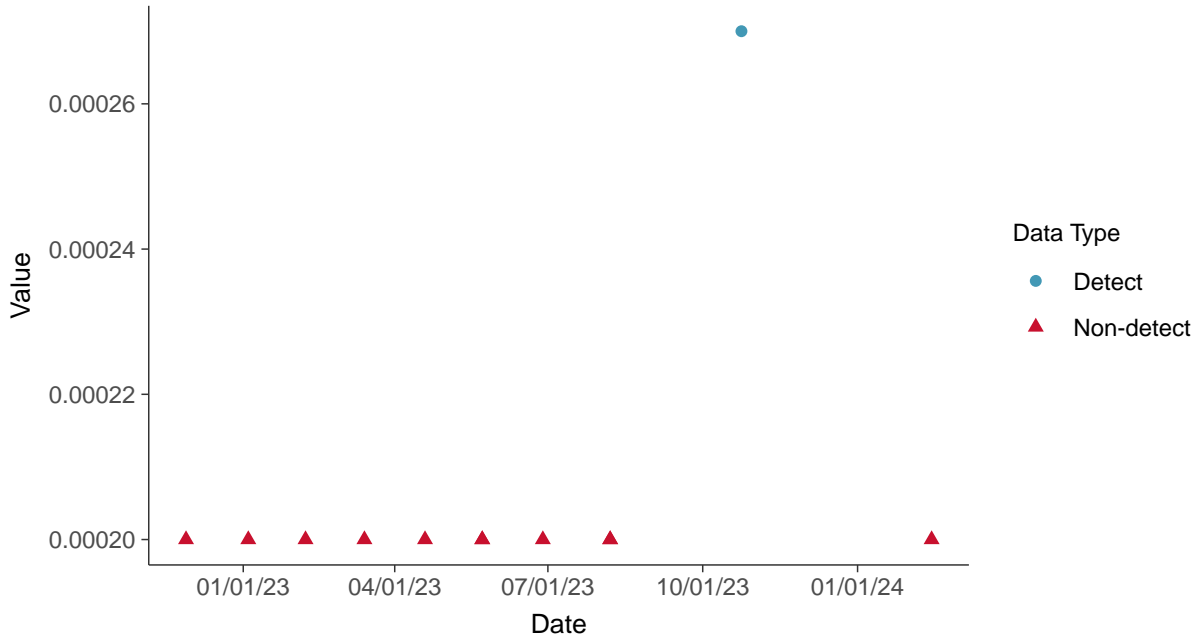




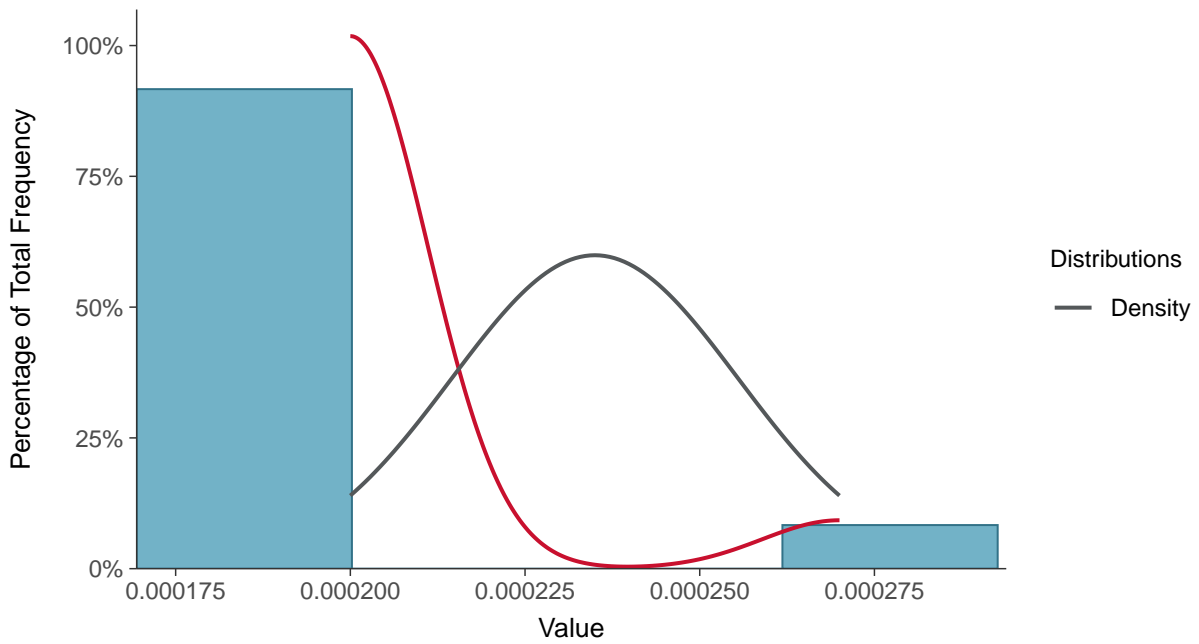
Part 115: Copper, MW-04

ID: 2_14_6_111

Scatter Plot
Copper, MW-04 (mg/L)



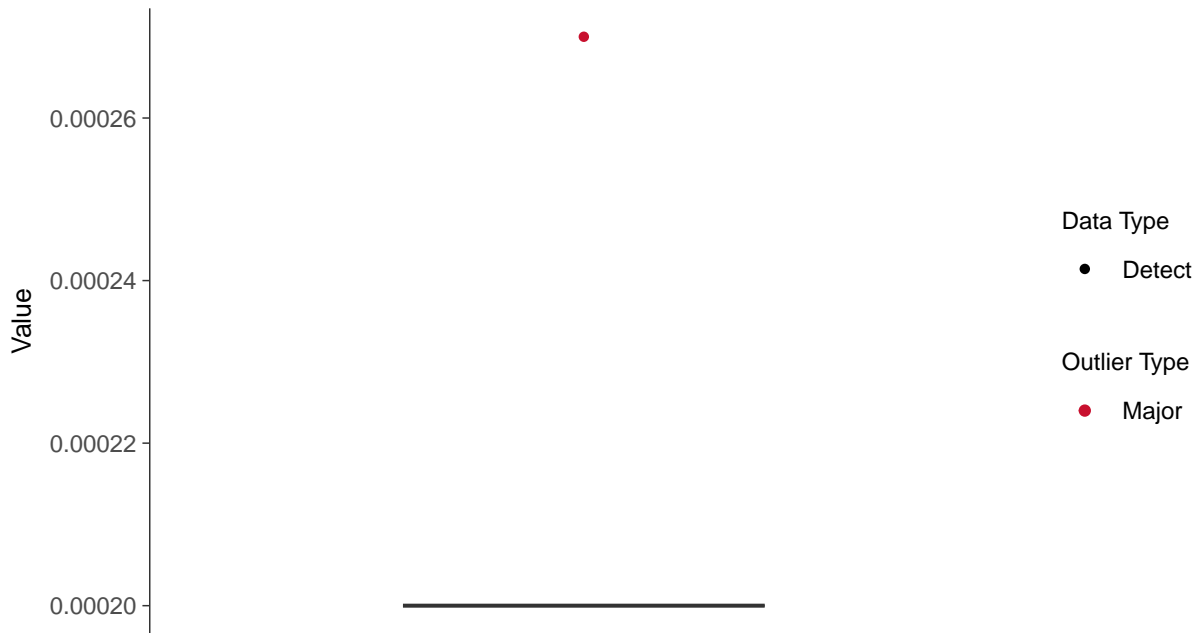
Histogram
Copper, MW-04 (mg/L)





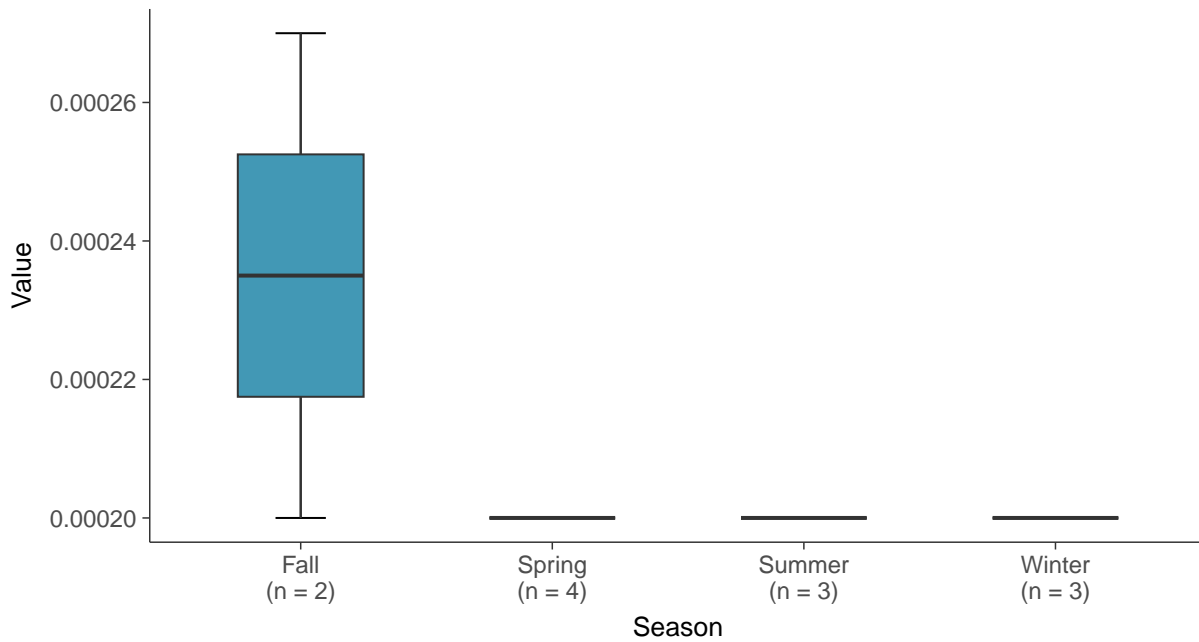
Boxplot

Copper, MW-04 (mg/L)



Boxplot by Season

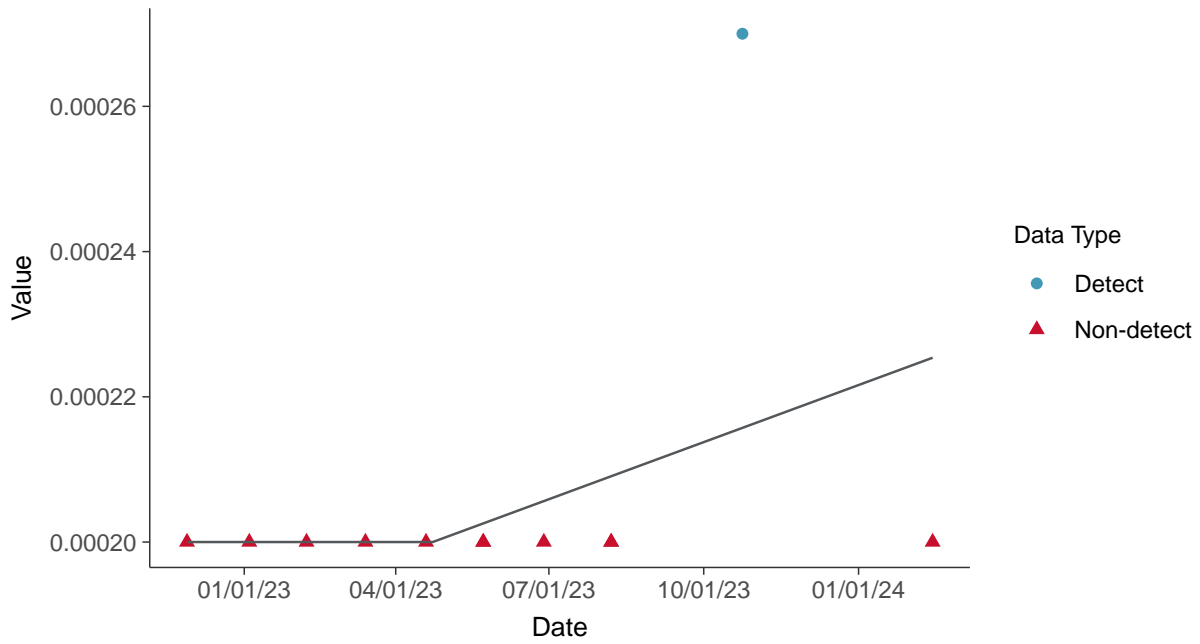
Copper, MW-04 (mg/L)





Trend Regression: Piecewise Linear-Linear

Copper, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-04 (mg/L)



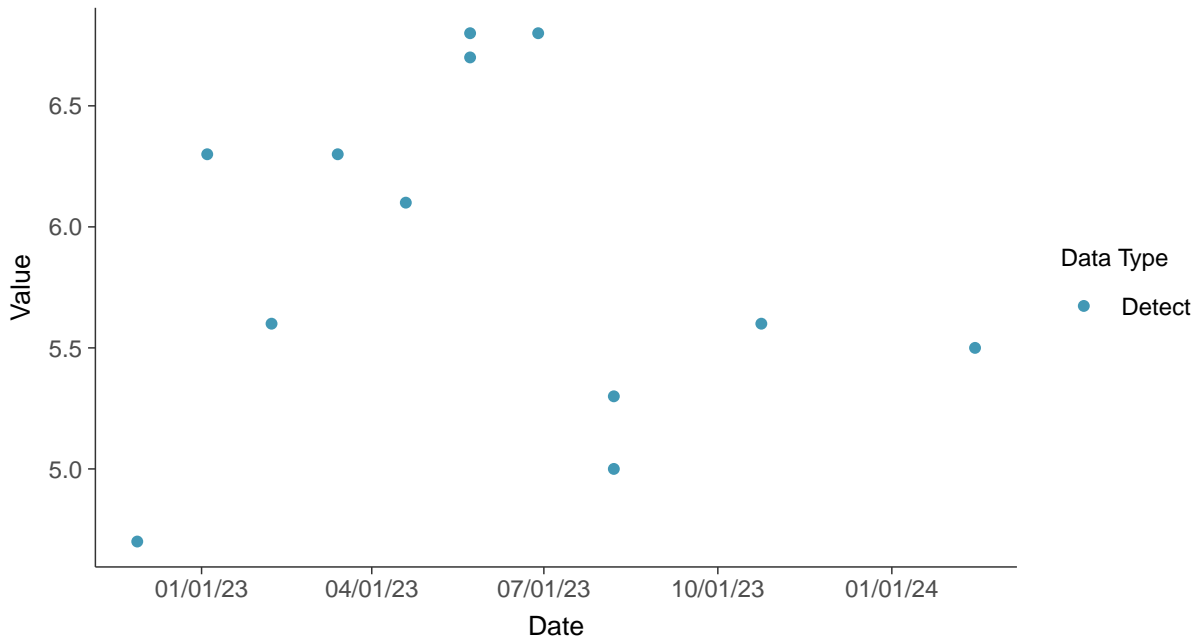


Part 115: Iron, MW-04

ID: 2_14_6_114

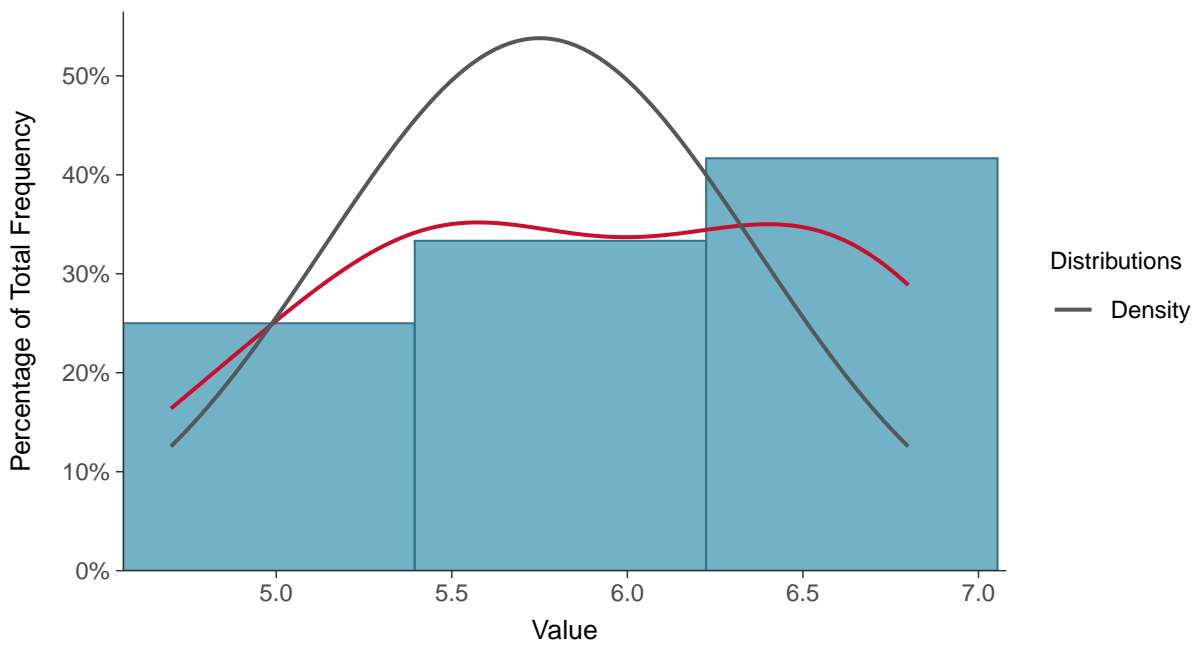
Scatter Plot

Iron, MW-04 (mg/L)



Histogram

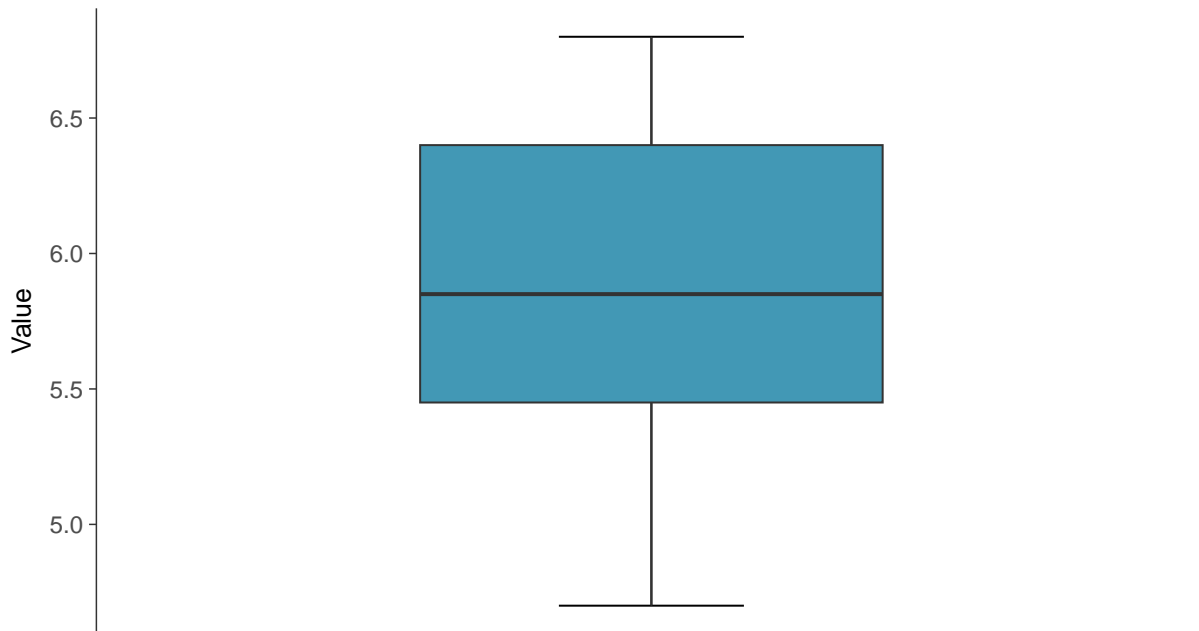
Iron, MW-04 (mg/L)





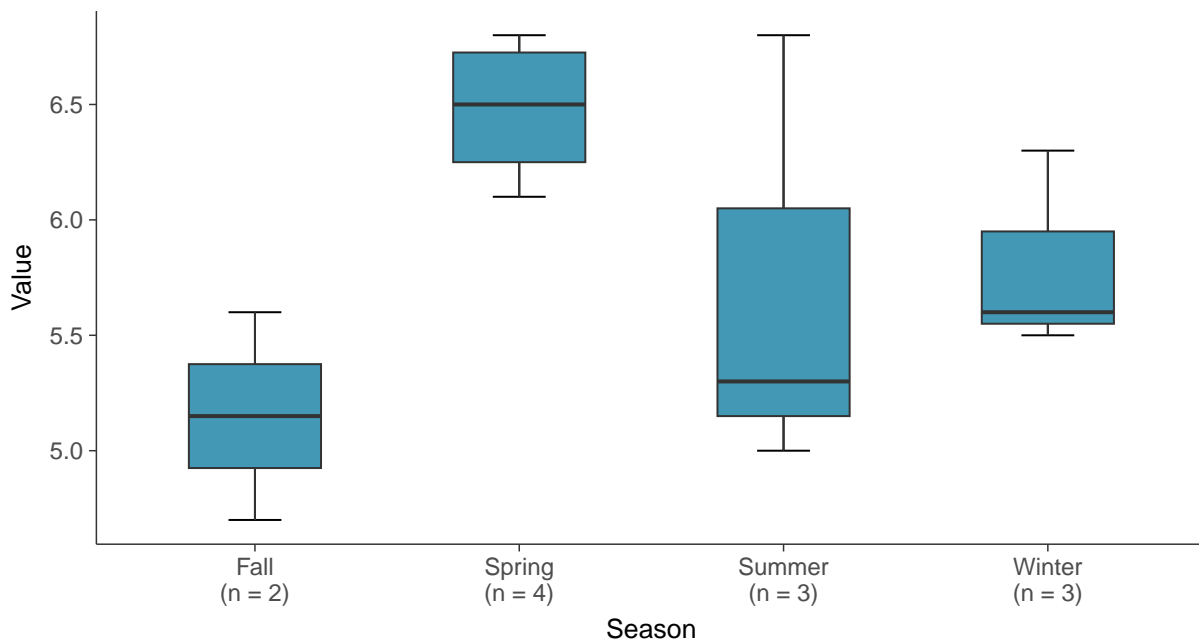
Boxplot

Iron, MW-04 (mg/L)



Boxplot by Season

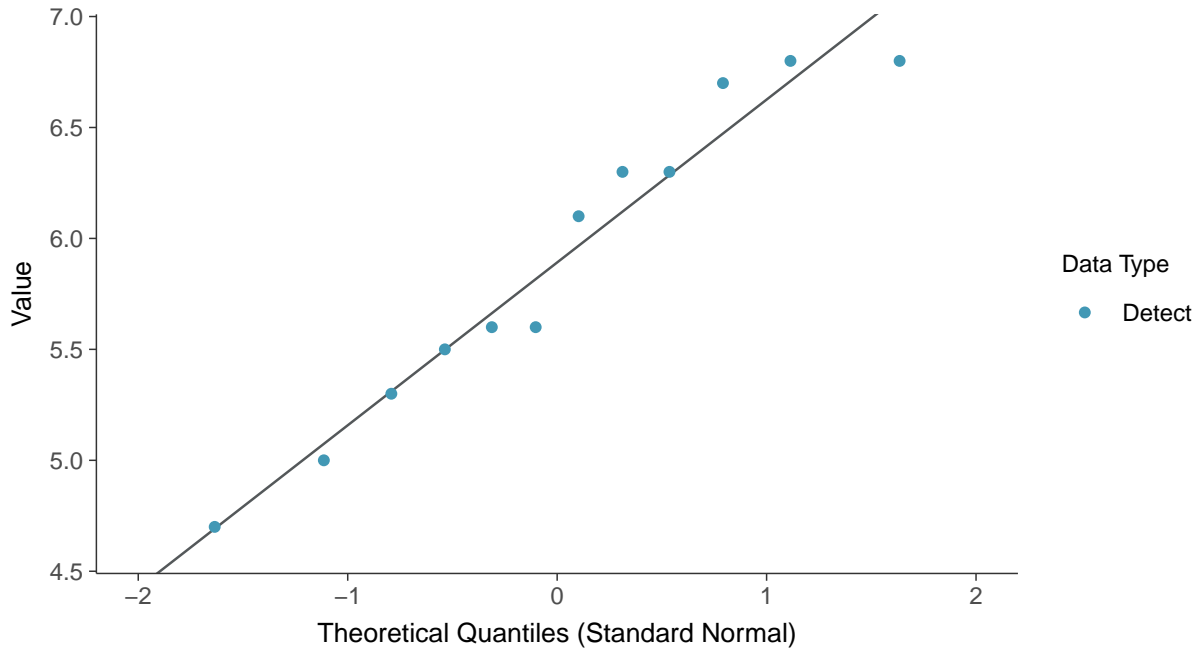
Iron, MW-04 (mg/L)





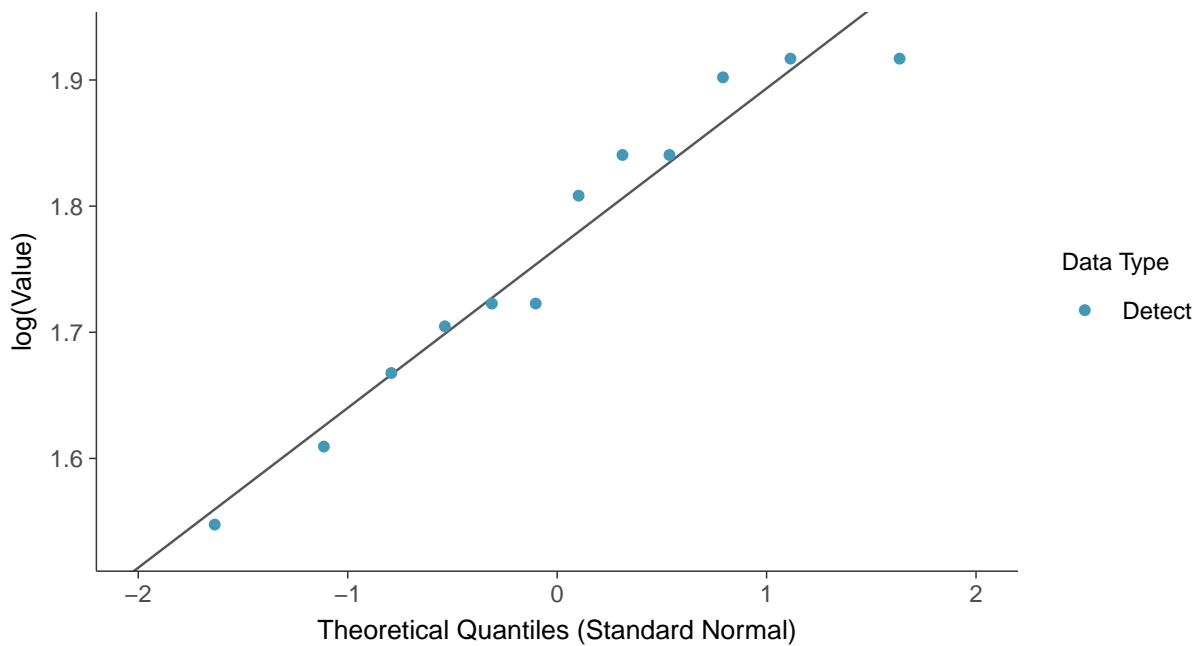
Normal Q-Q plot

Iron, MW-04 (mg/L)



Lognormal Q-Q plot

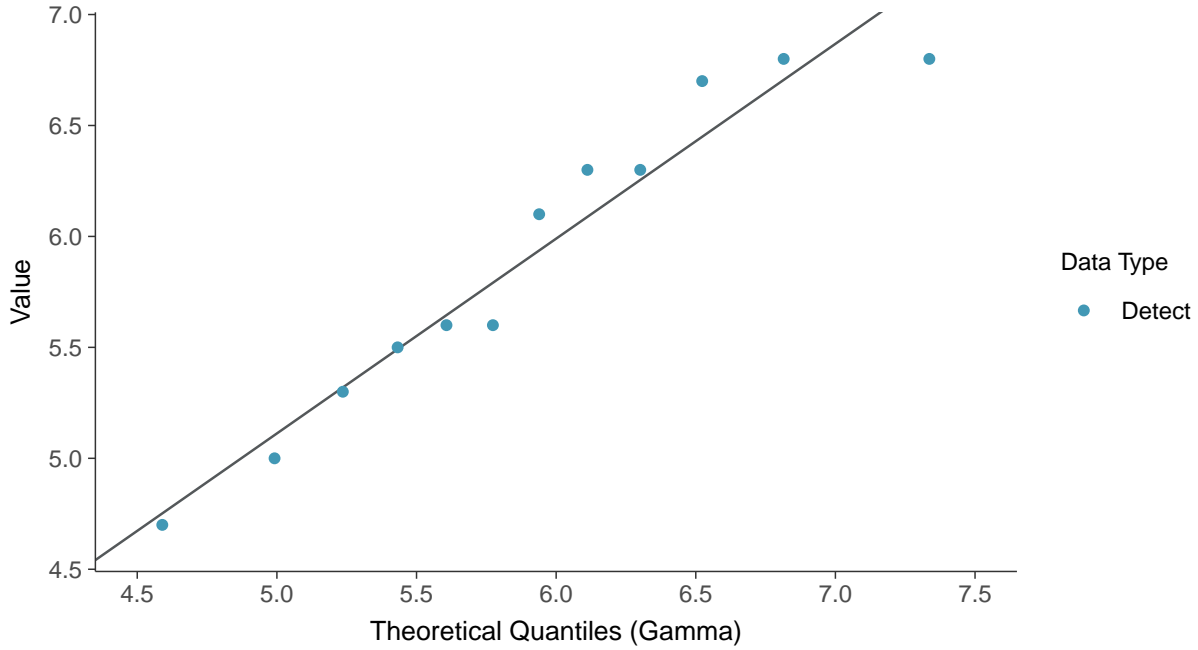
Iron, MW-04 (mg/L)





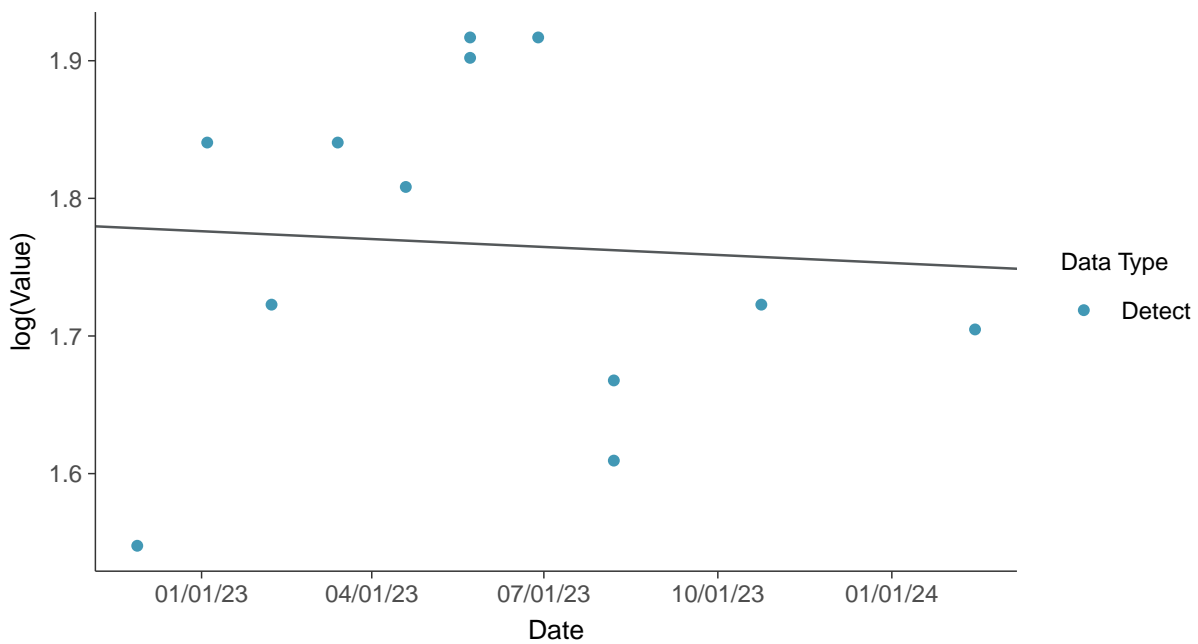
Gamma Q-Q plot

Iron, MW-04 (mg/L)



Trend Regression: Lognormal MLE

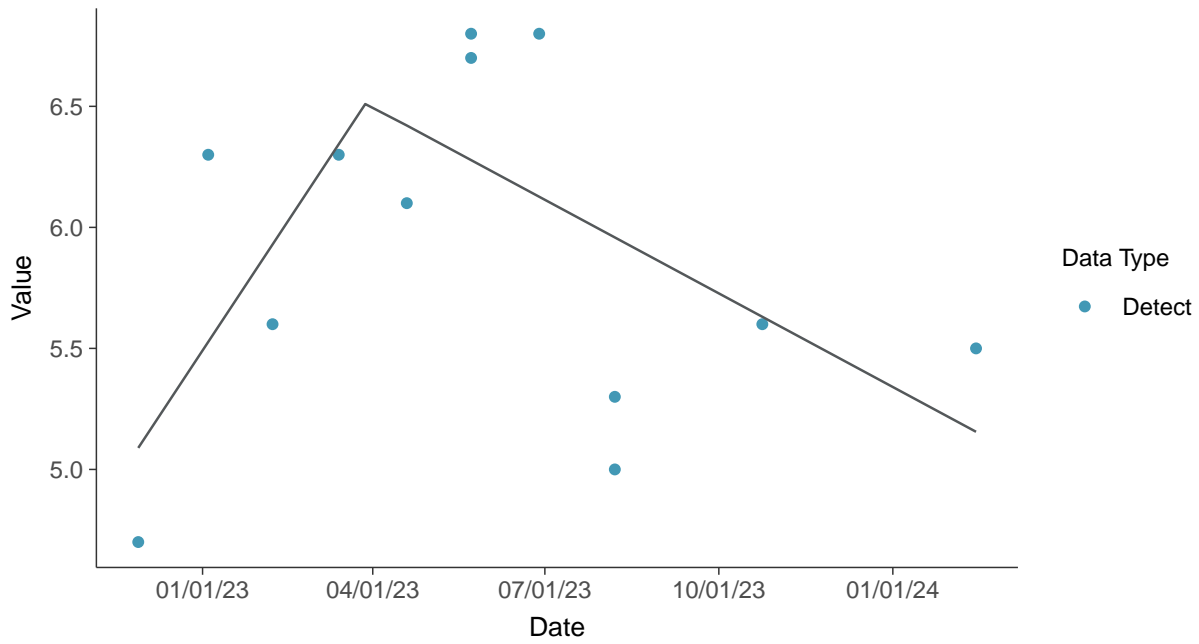
Iron, MW-04 (mg/L)





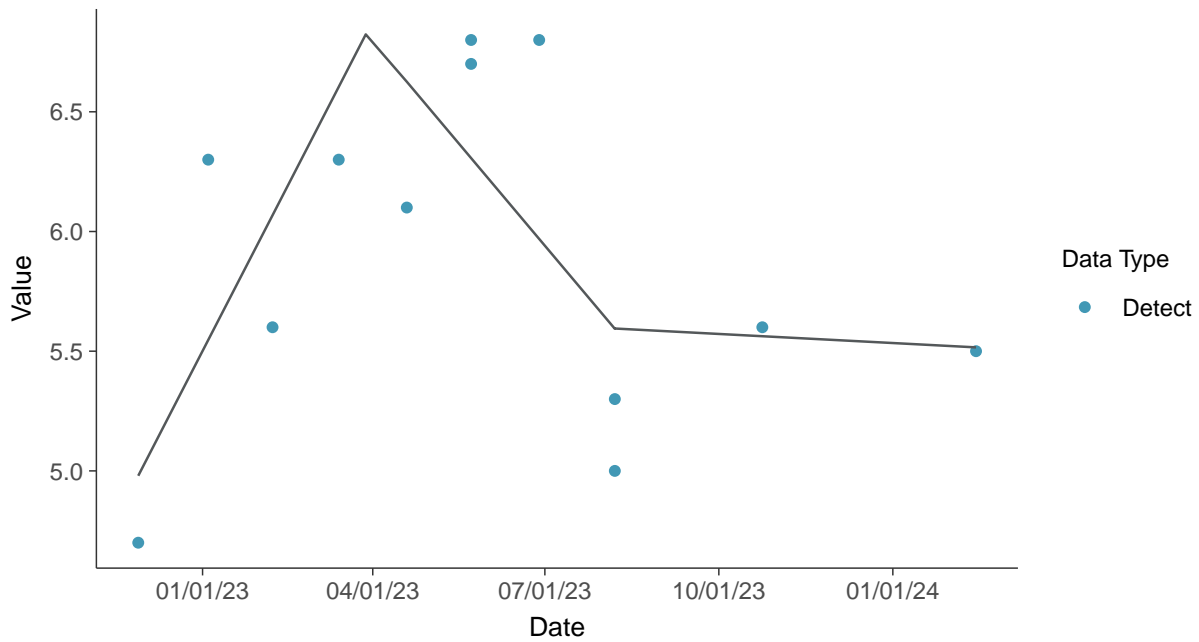
Trend Regression: Piecewise Linear-Linear

Iron, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-04 (mg/L)



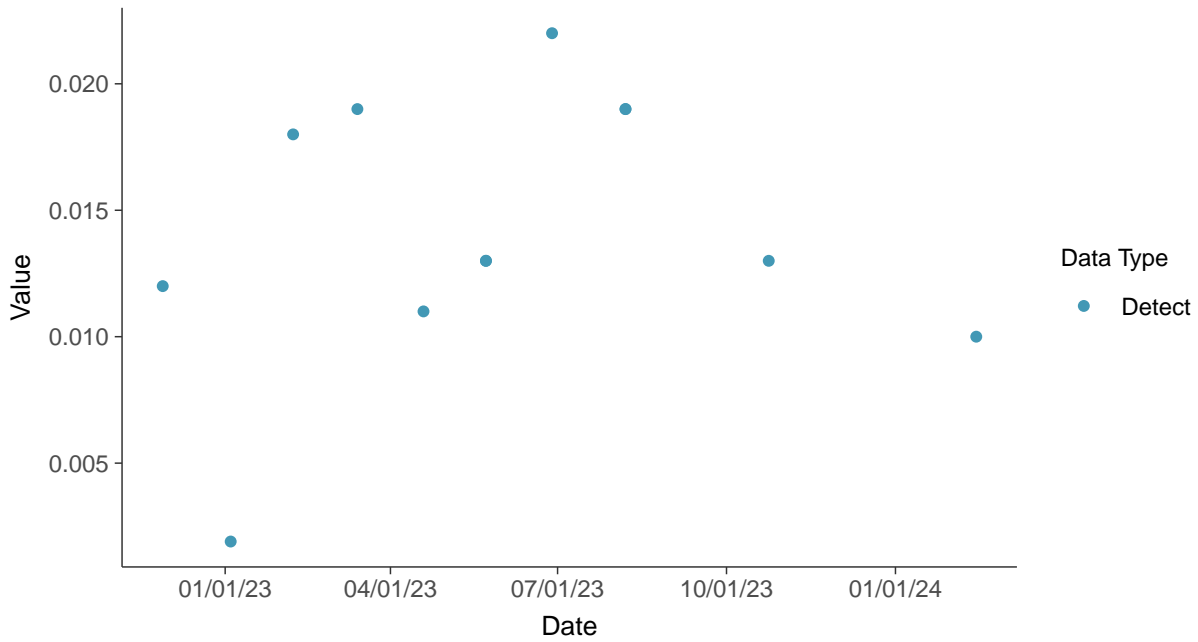


Part 115: Nickel, MW-04

ID: 2_14_6_119

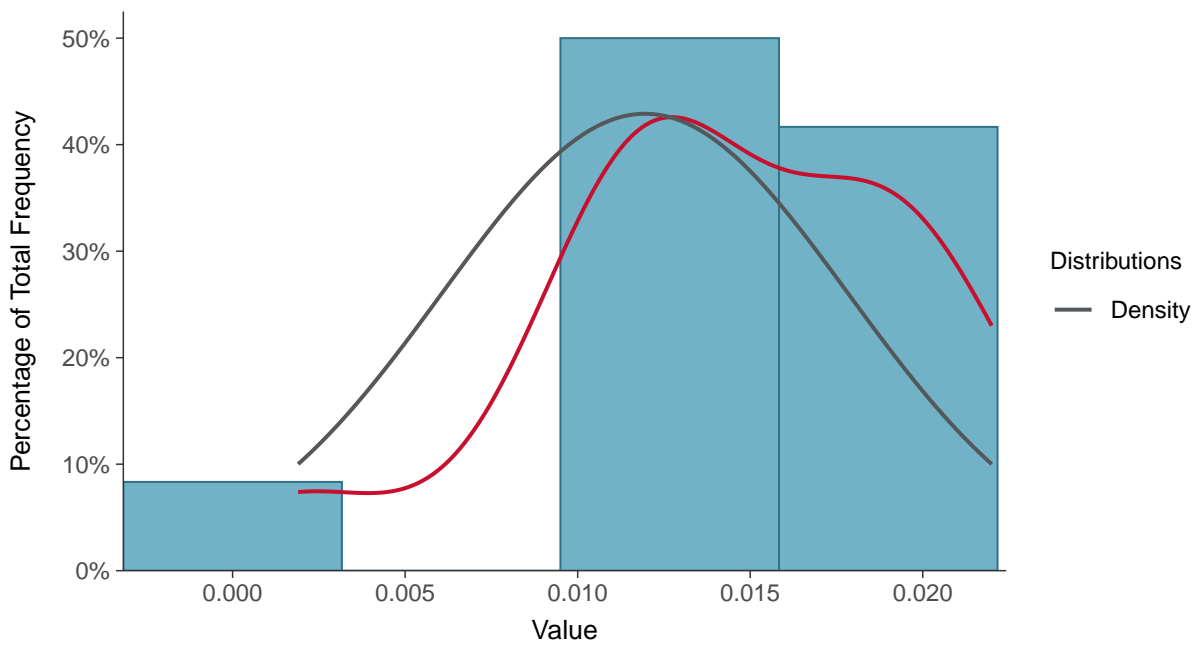
Scatter Plot

Nickel, MW-04 (mg/L)



Histogram

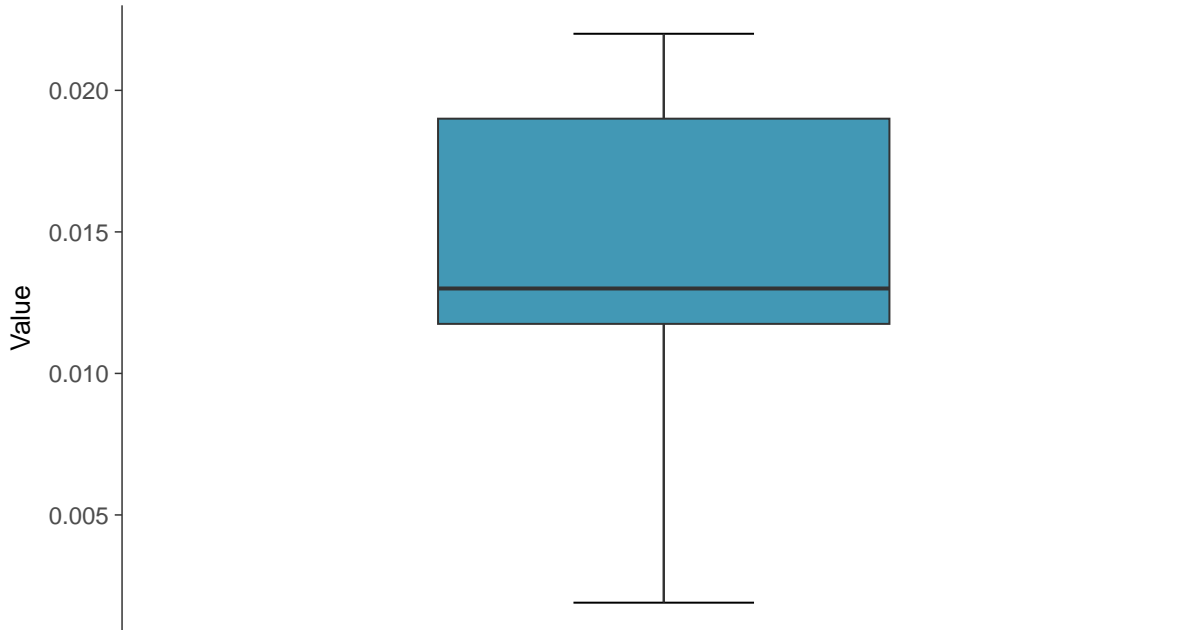
Nickel, MW-04 (mg/L)





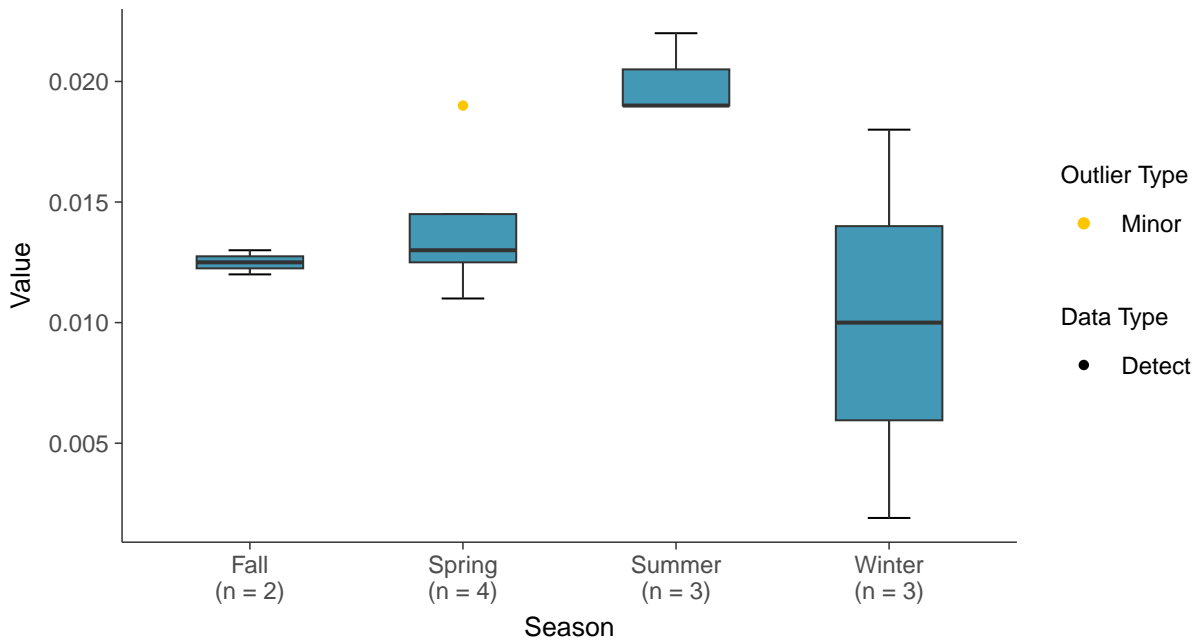
Boxplot

Nickel, MW-04 (mg/L)



Boxplot by Season

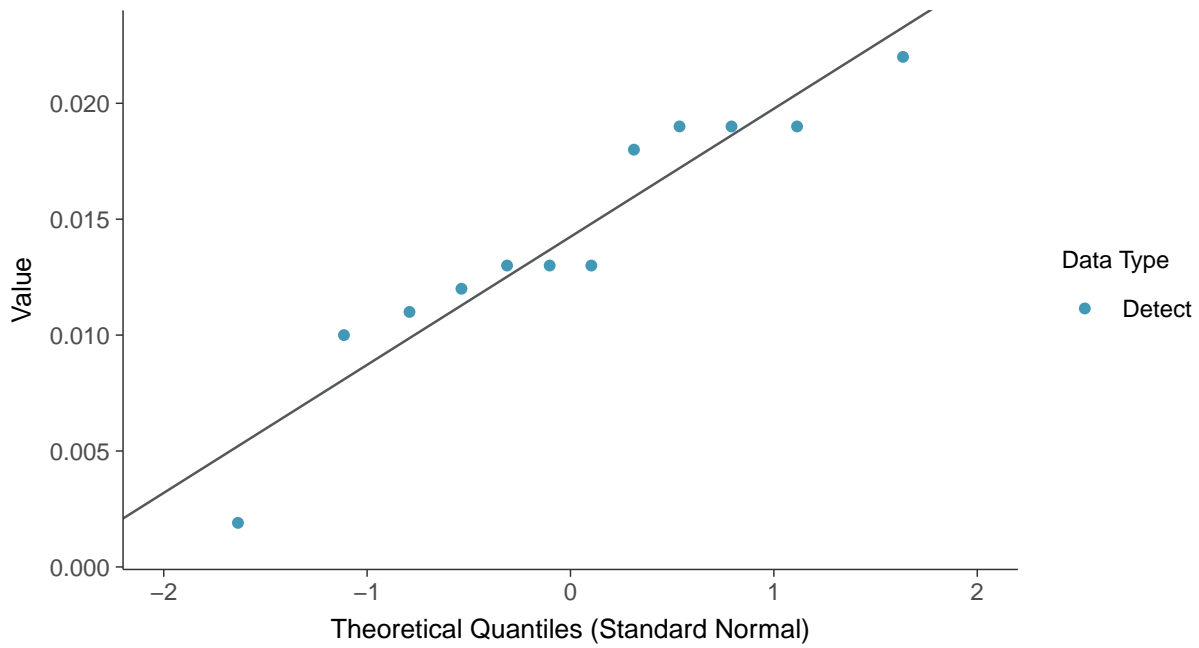
Nickel, MW-04 (mg/L)





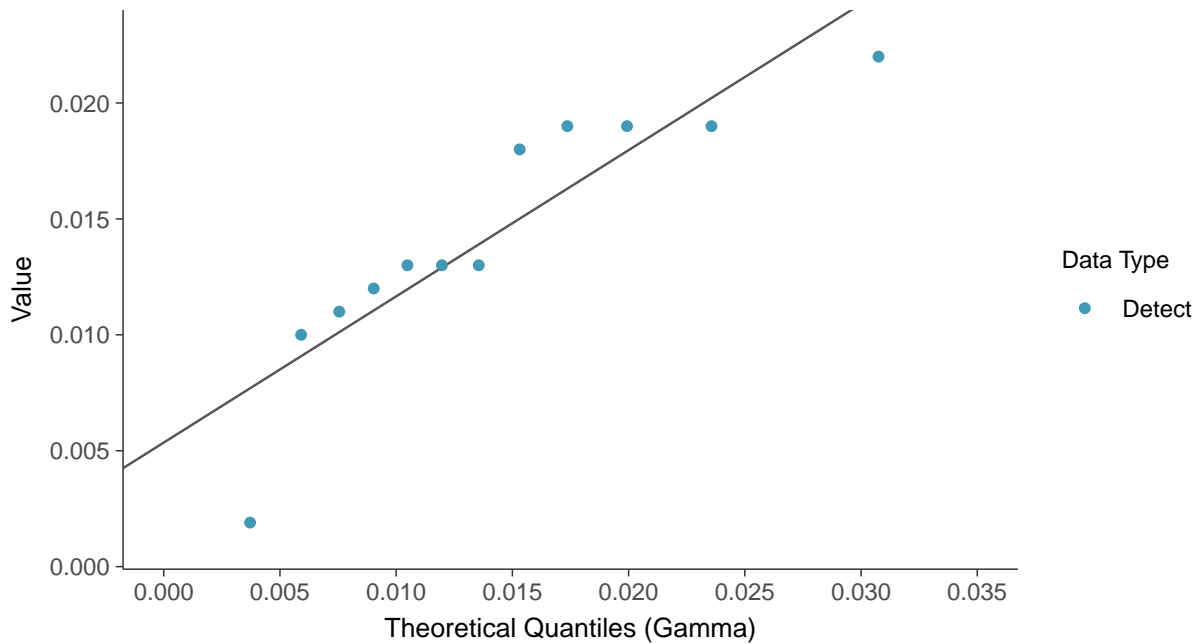
Normal Q-Q plot

Nickel, MW-04 (mg/L)



Gamma Q-Q plot

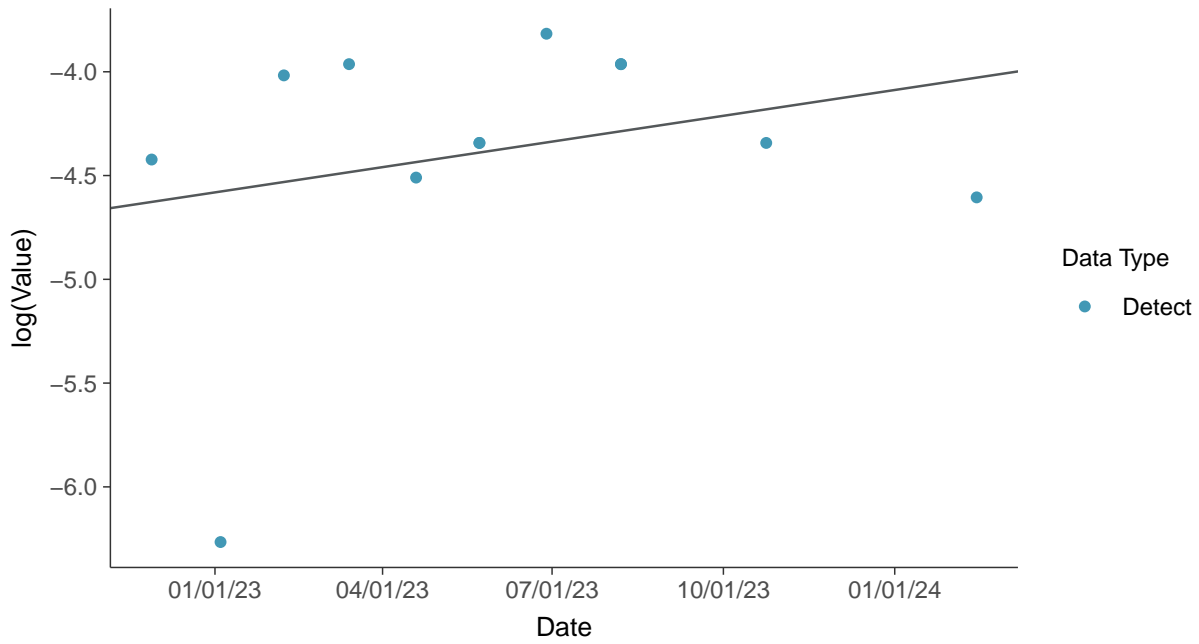
Nickel, MW-04 (mg/L)





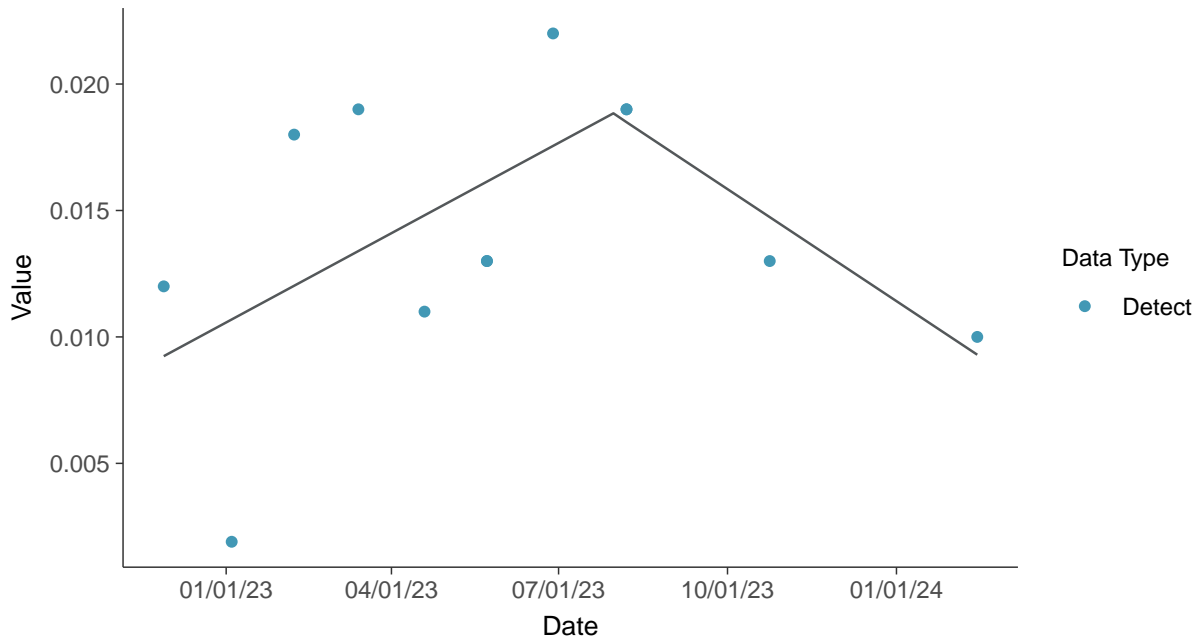
Trend Regression: Lognormal MLE

Nickel, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear

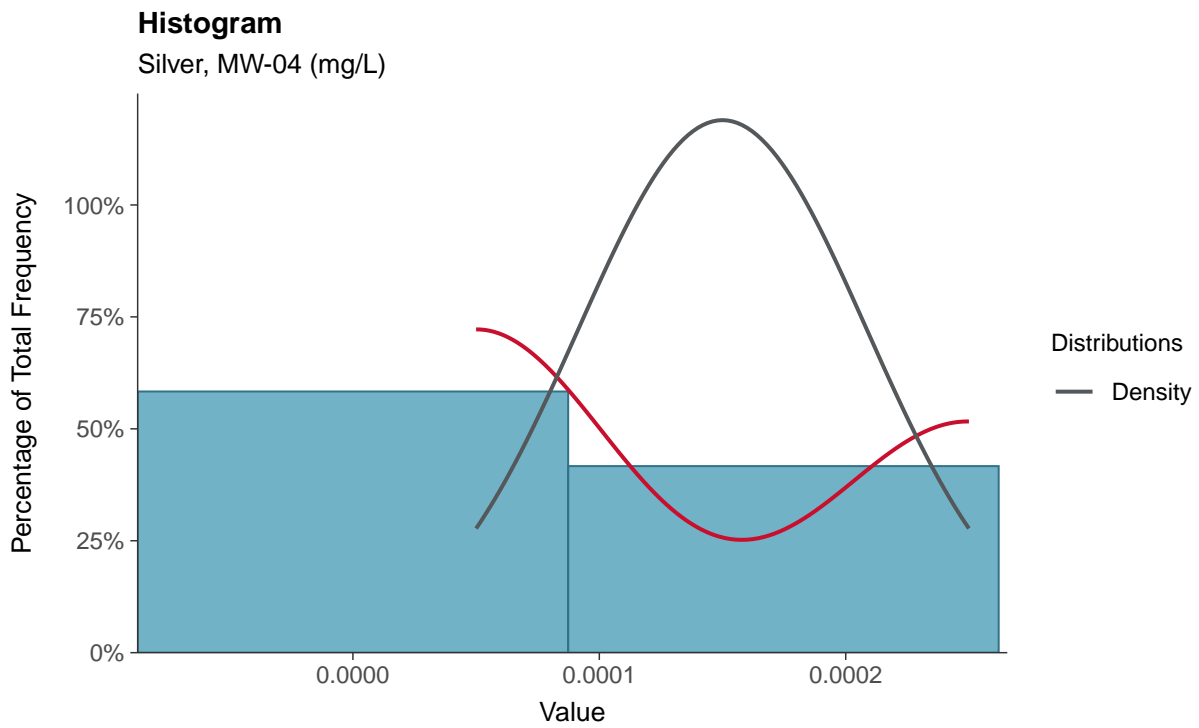
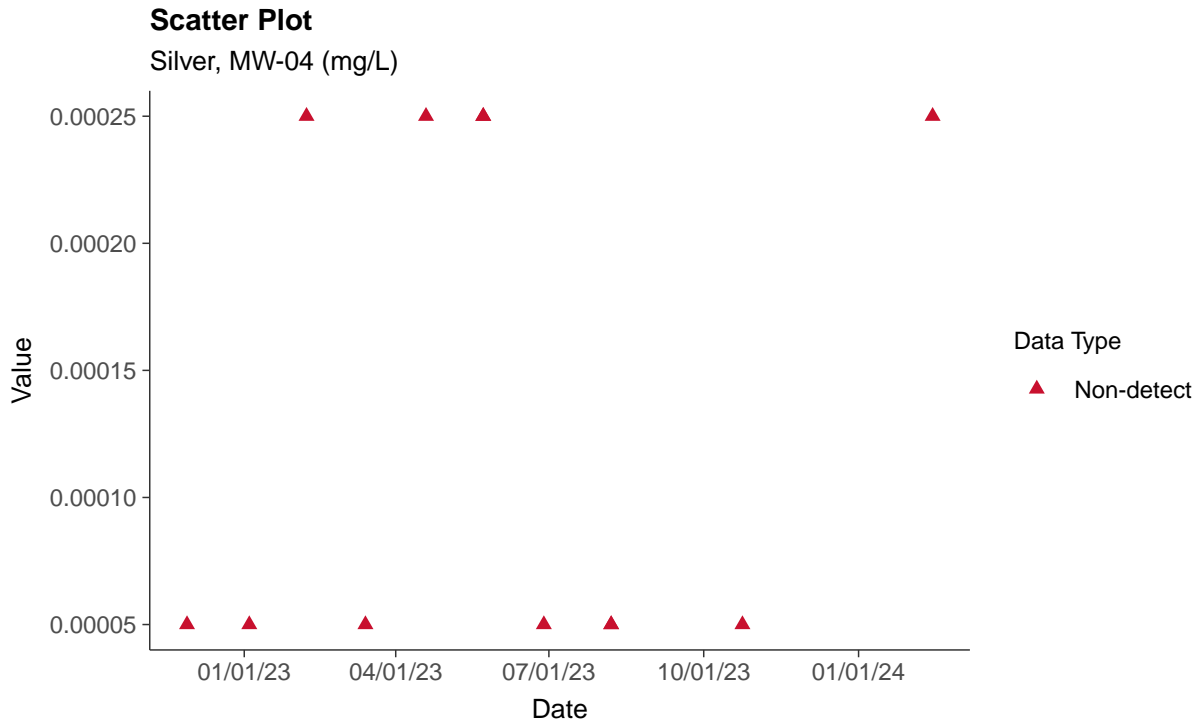
Nickel, MW-04 (mg/L)





Part 115: Silver, MW-04

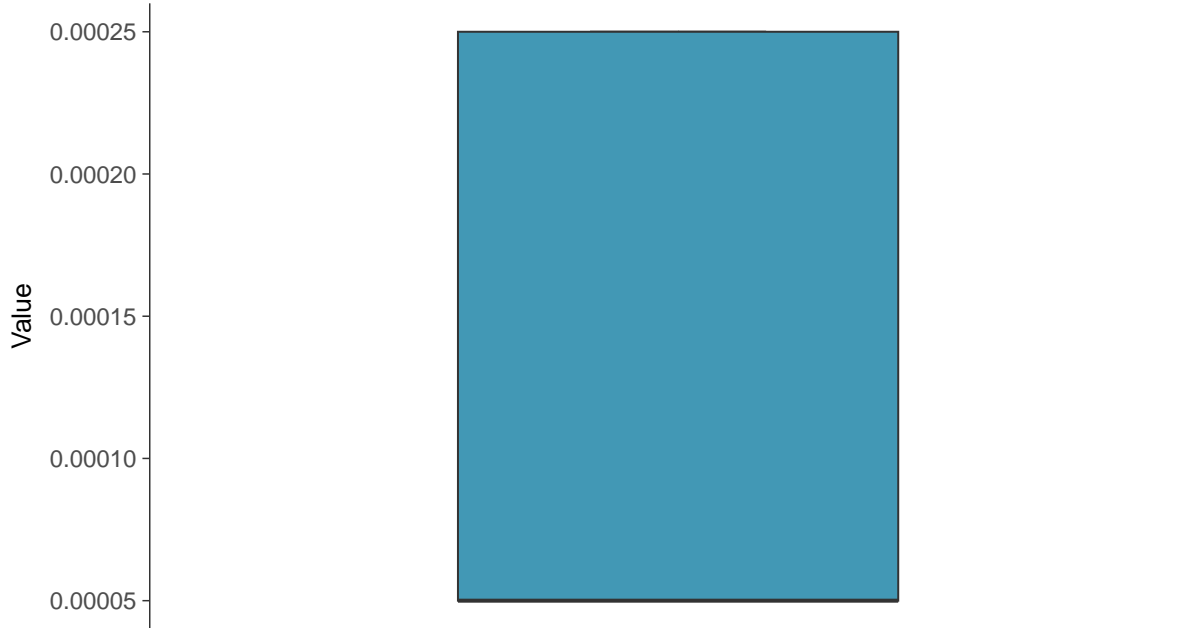
ID: 2_14_6_123





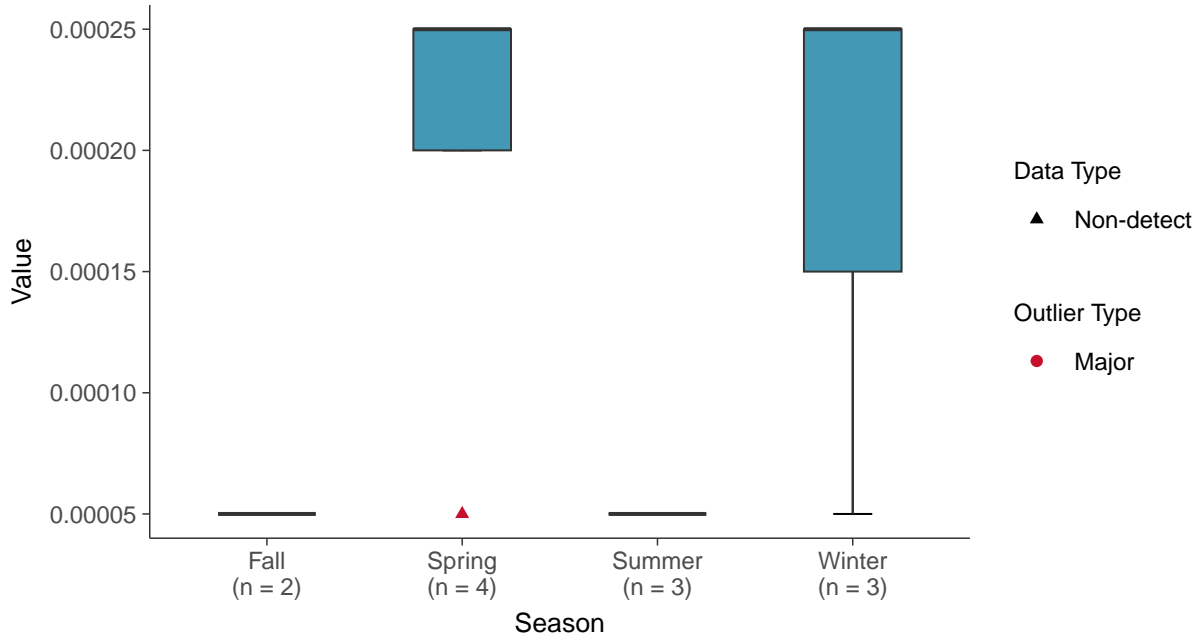
Boxplot

Silver, MW-04 (mg/L)



Boxplot by Season

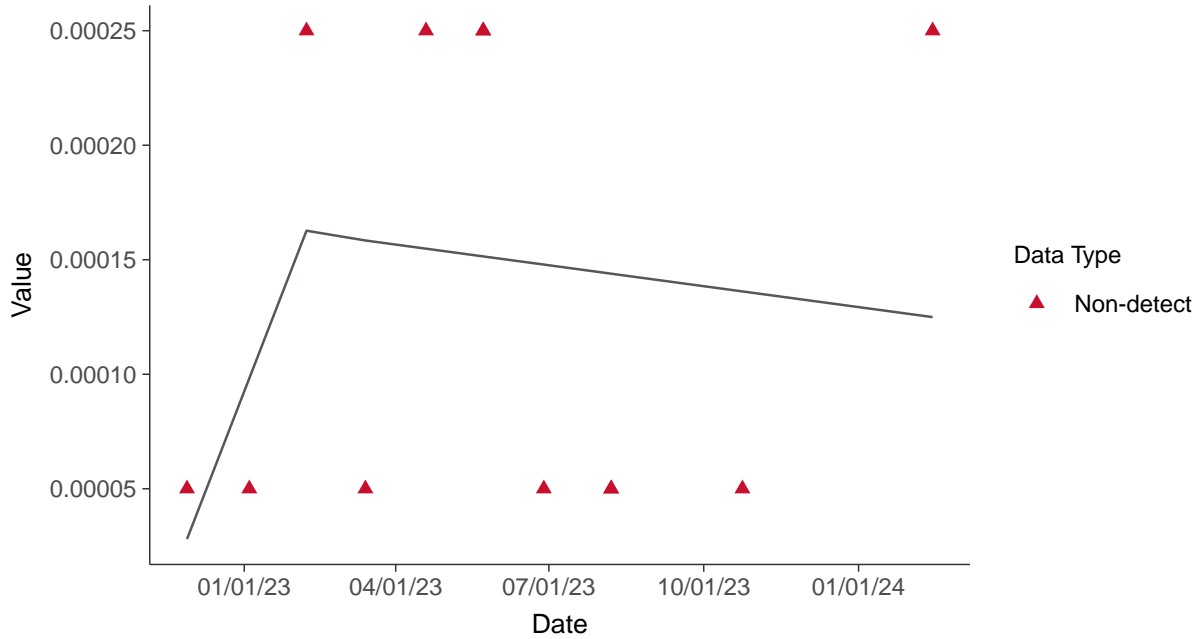
Silver, MW-04 (mg/L)





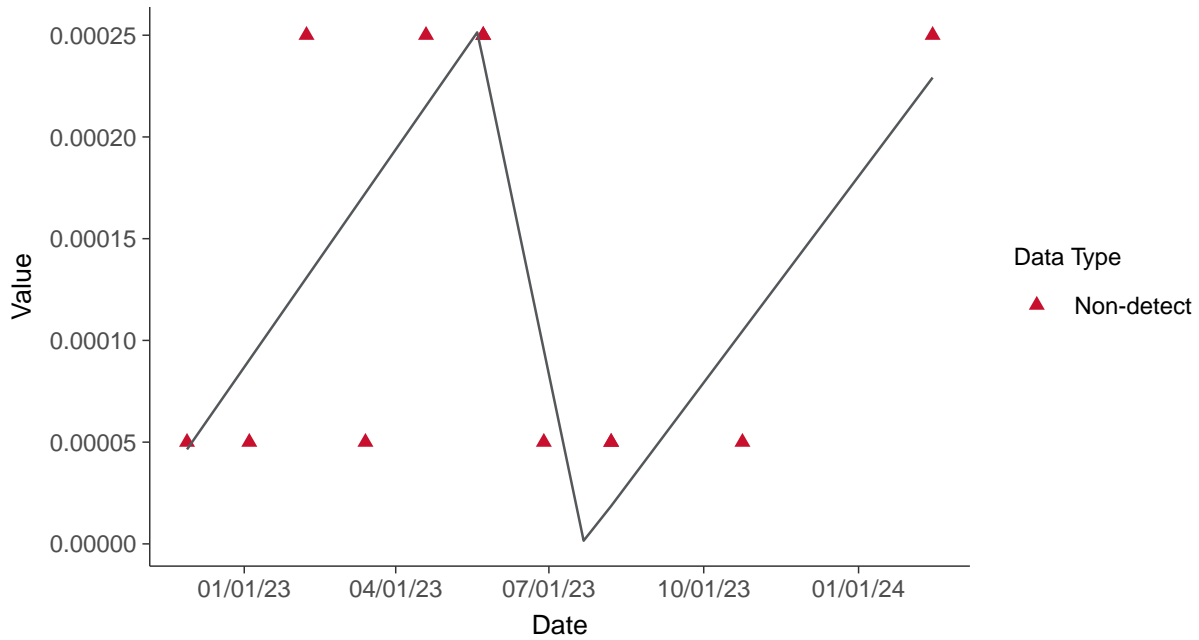
Trend Regression: Piecewise Linear-Linear

Silver, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-04 (mg/L)



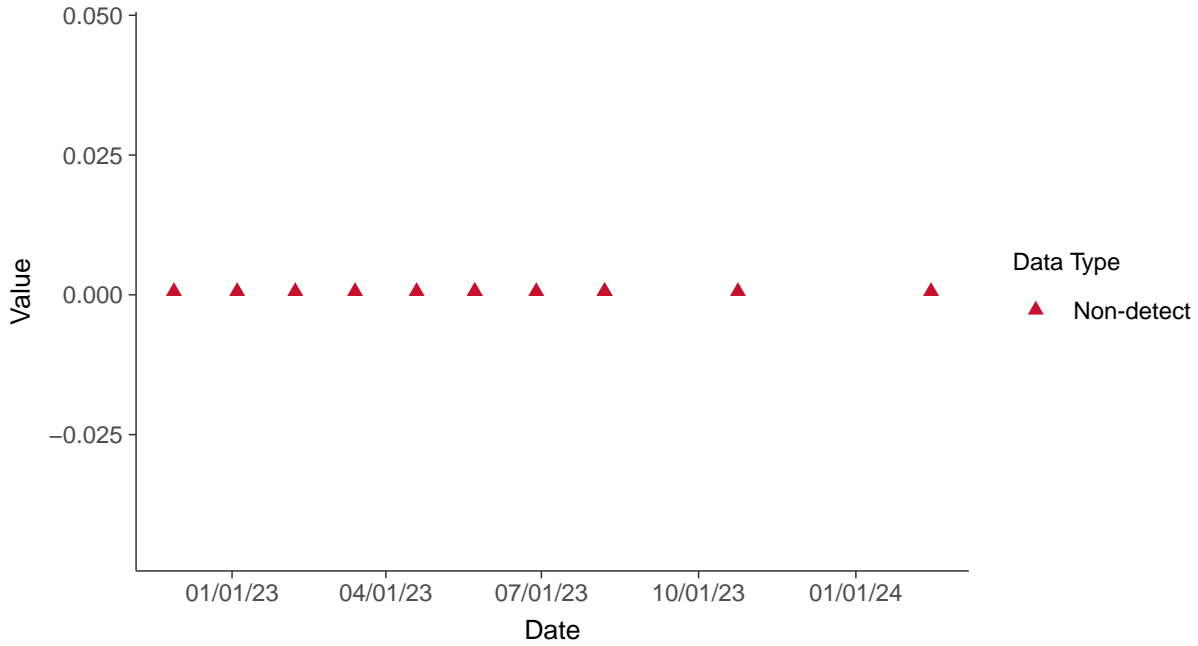


Part 115: Vanadium, MW-04

ID: 2_14_6_129

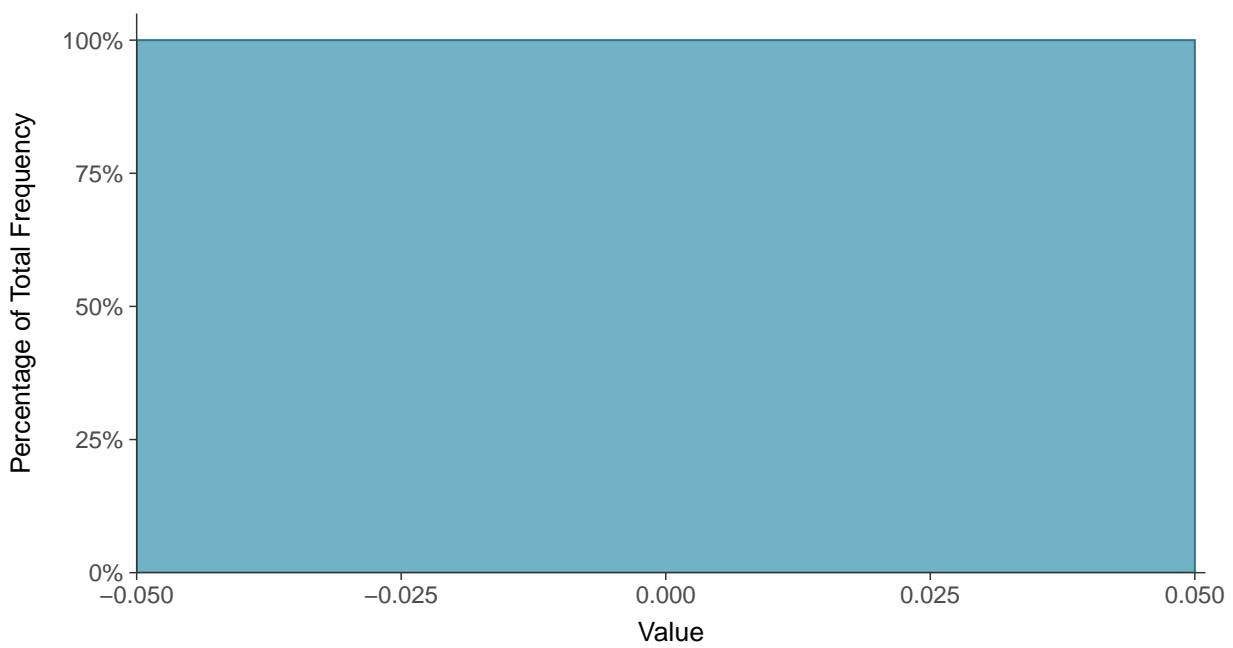
Scatter Plot

Vanadium, MW-04 (mg/L)



Histogram

Vanadium, MW-04 (mg/L)





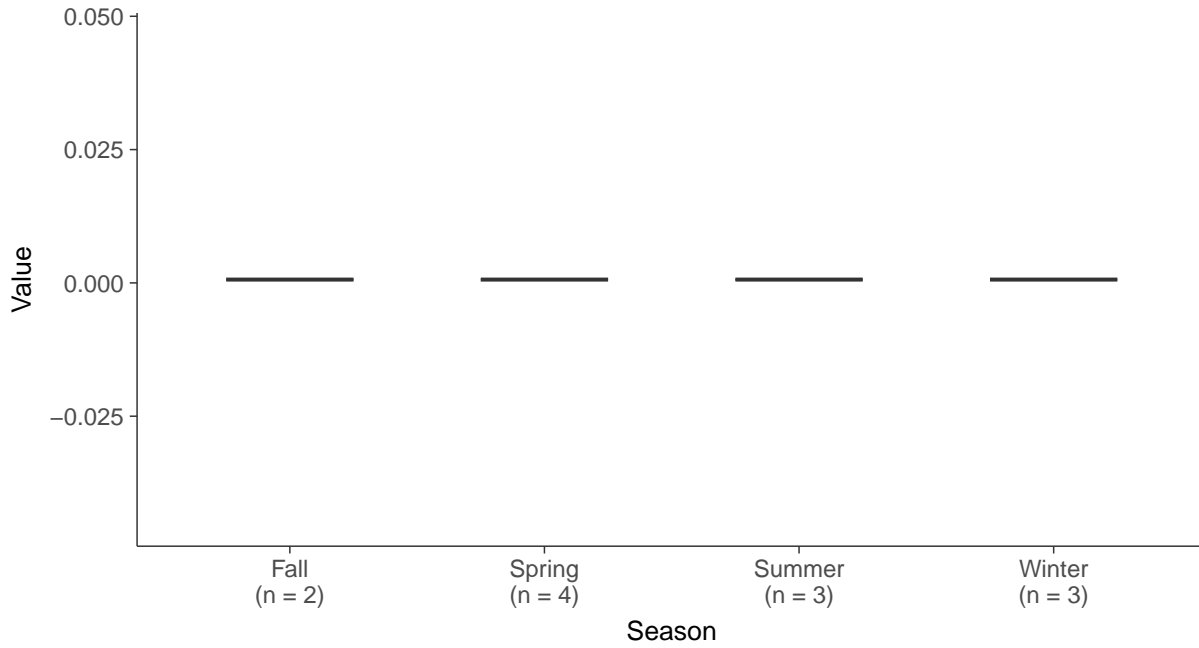
Boxplot

Vanadium, MW-04 (mg/L)



Boxplot by Season

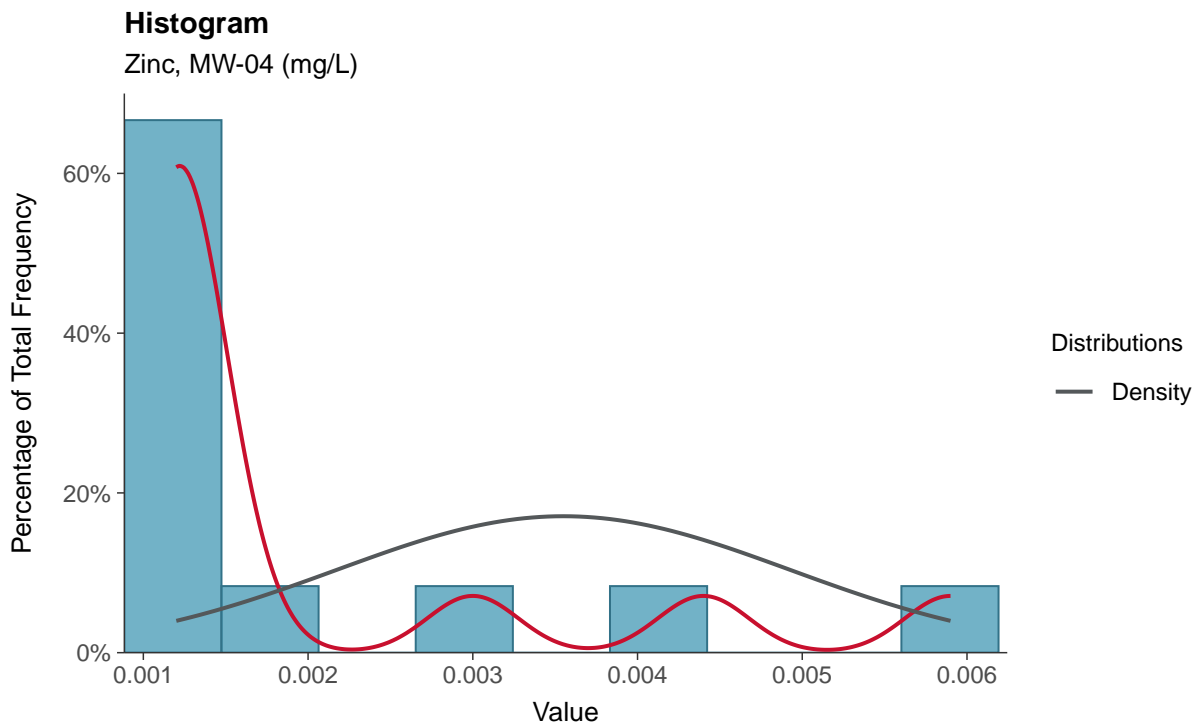
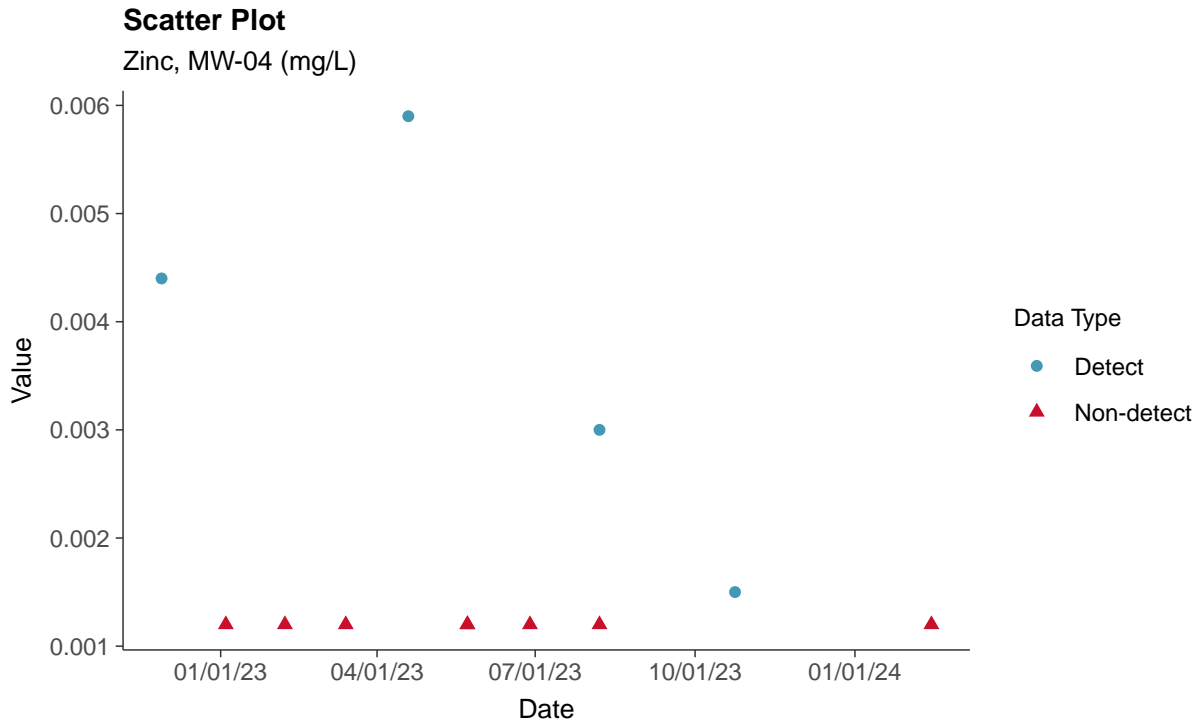
Vanadium, MW-04 (mg/L)





Part 115: Zinc, MW-04

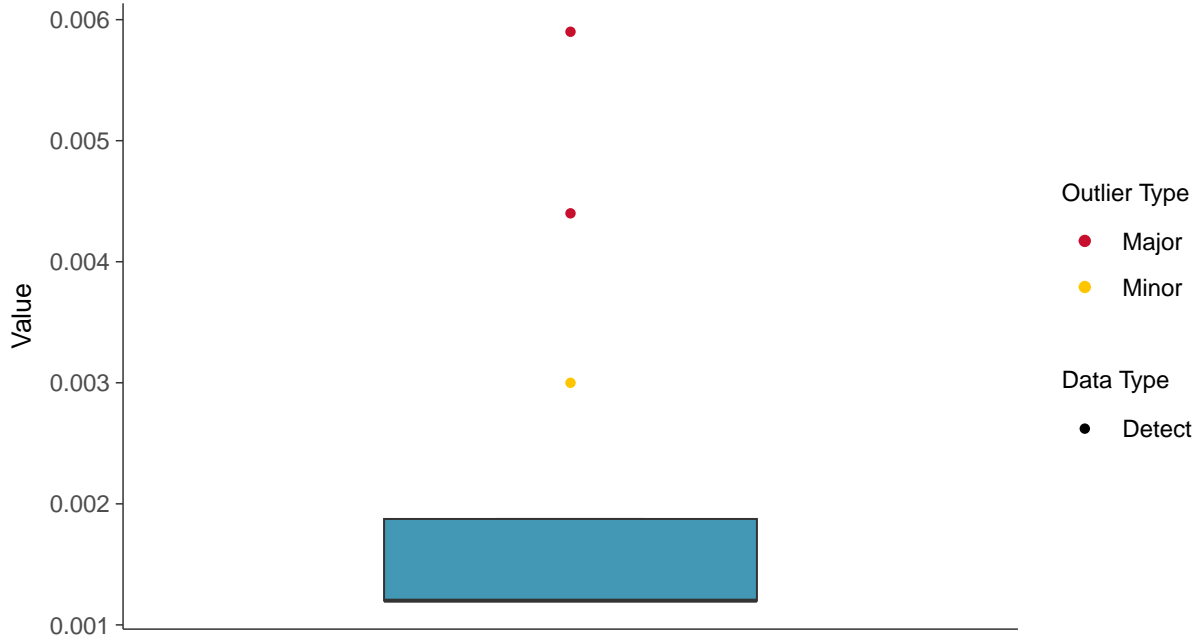
ID: 2_14_6_130





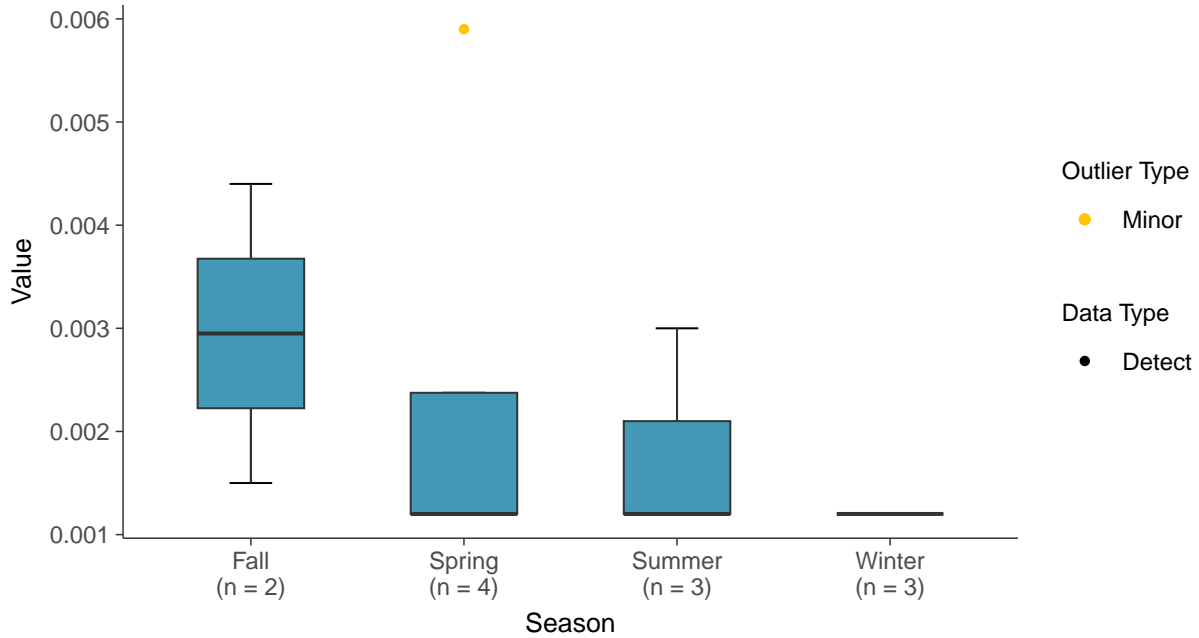
Boxplot

Zinc, MW-04 (mg/L)



Boxplot by Season

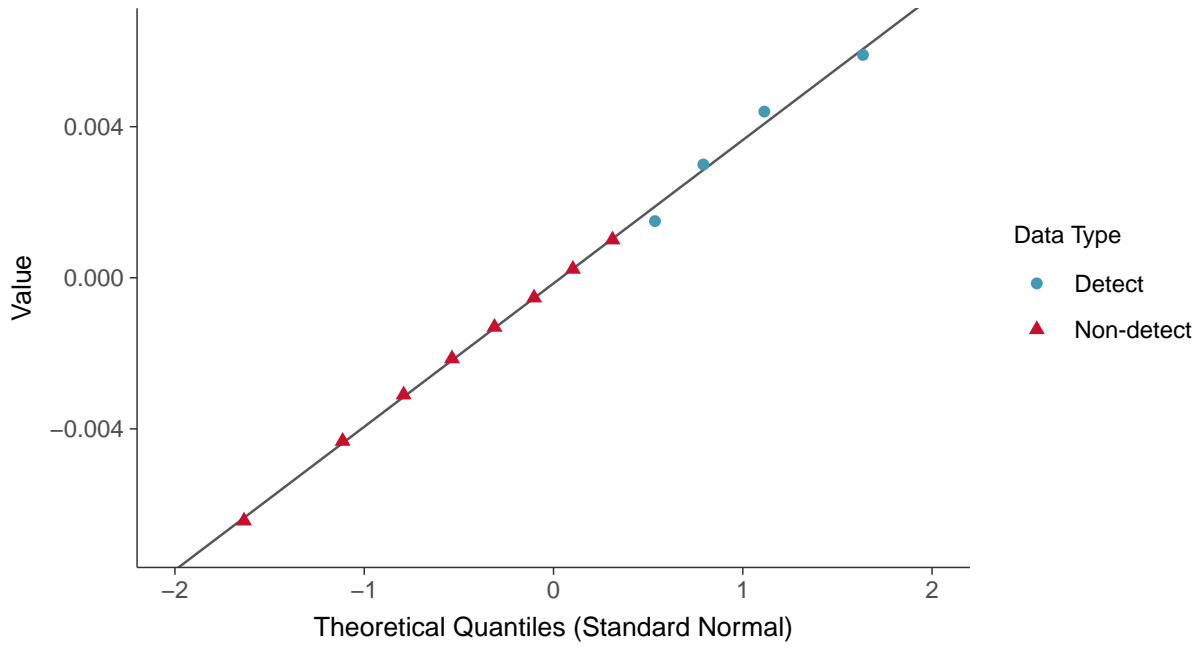
Zinc, MW-04 (mg/L)





Normal Q-Q plot using ROS Imputed Estimates

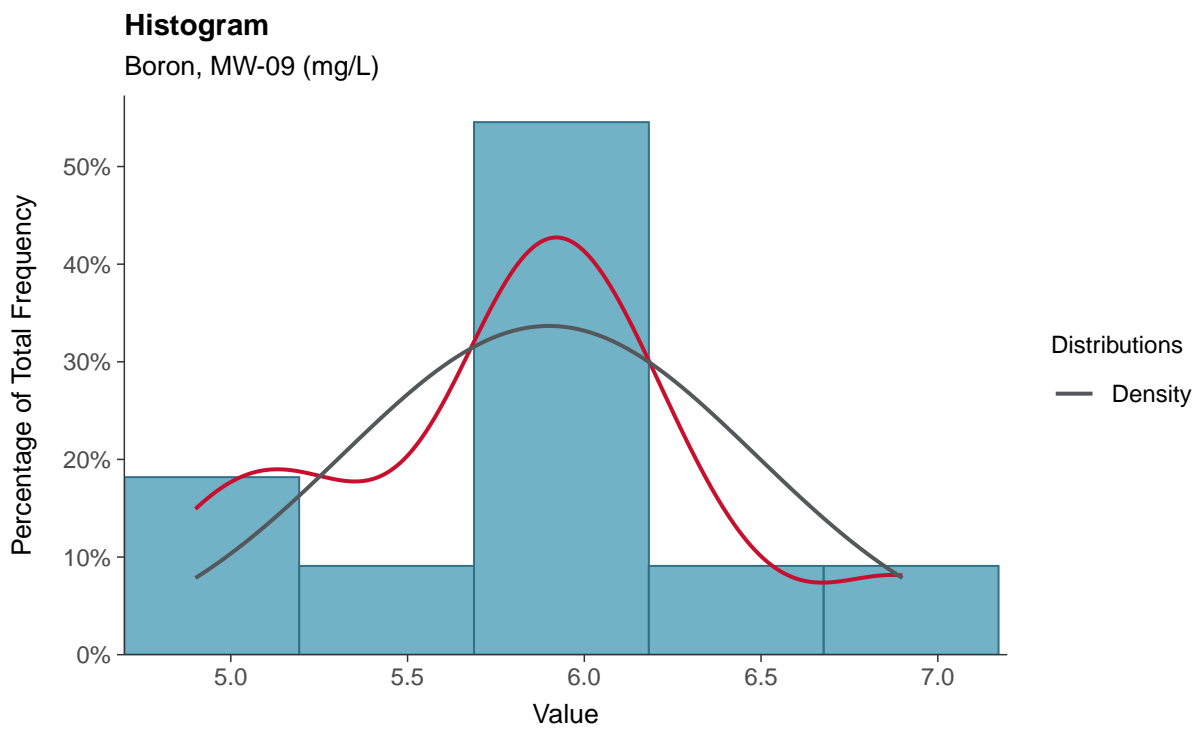
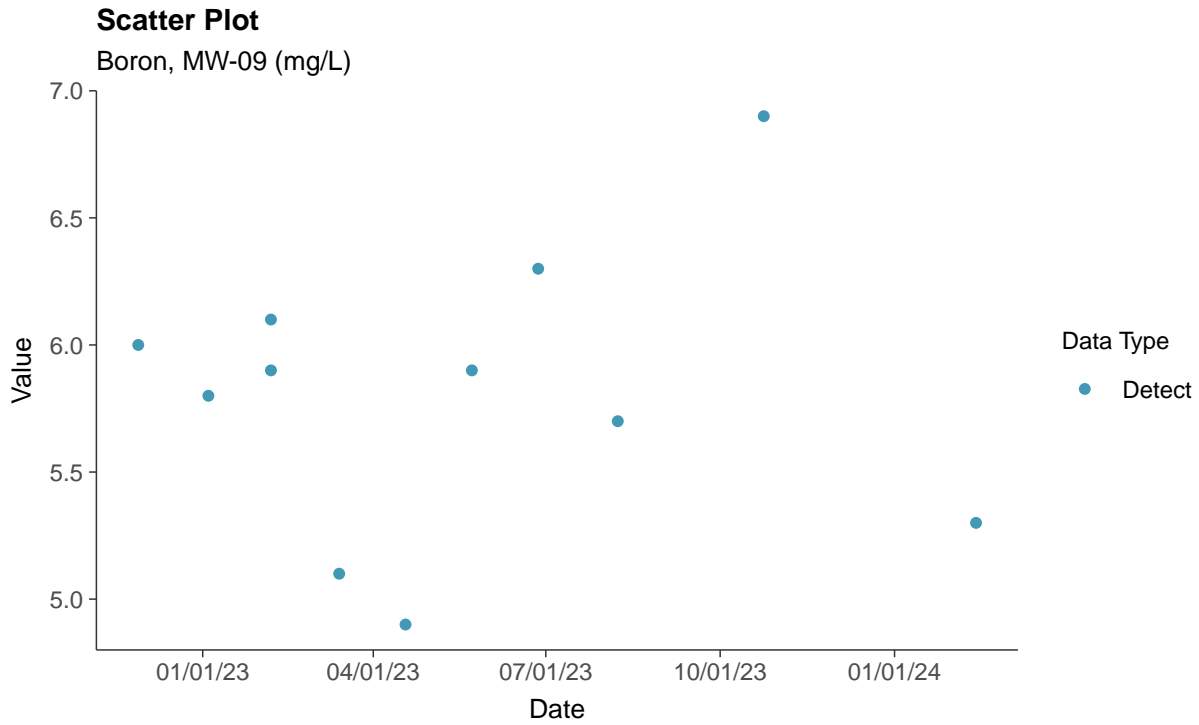
Zinc, MW-04 (mg/L)





Appendix III: Boron, MW-09

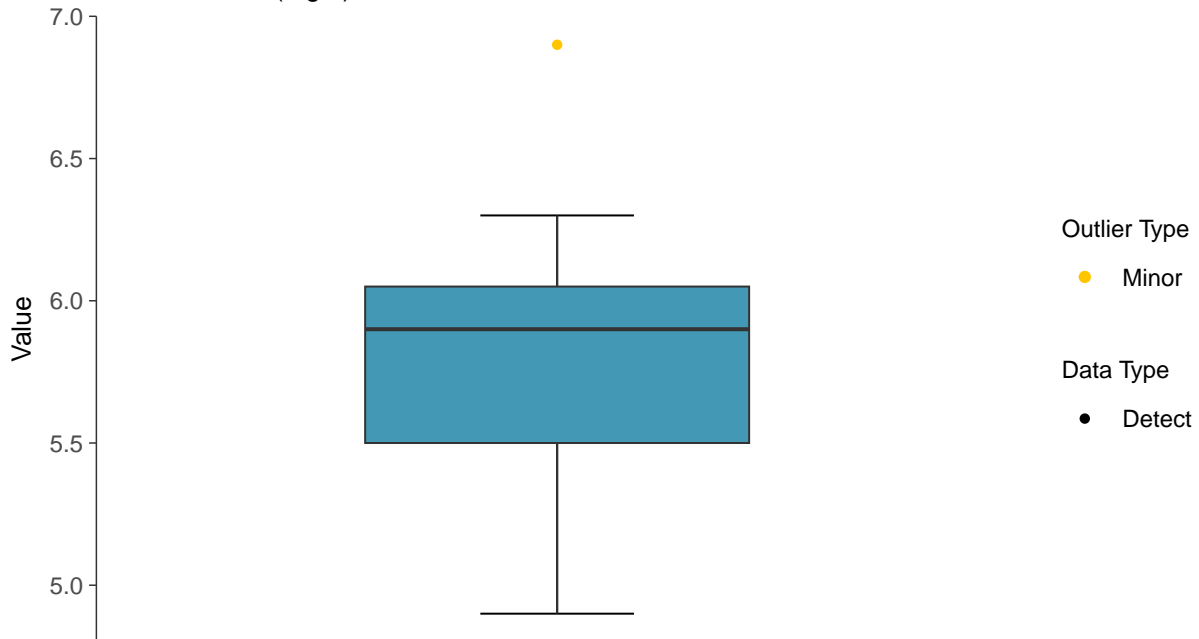
ID: 2_19_4_105





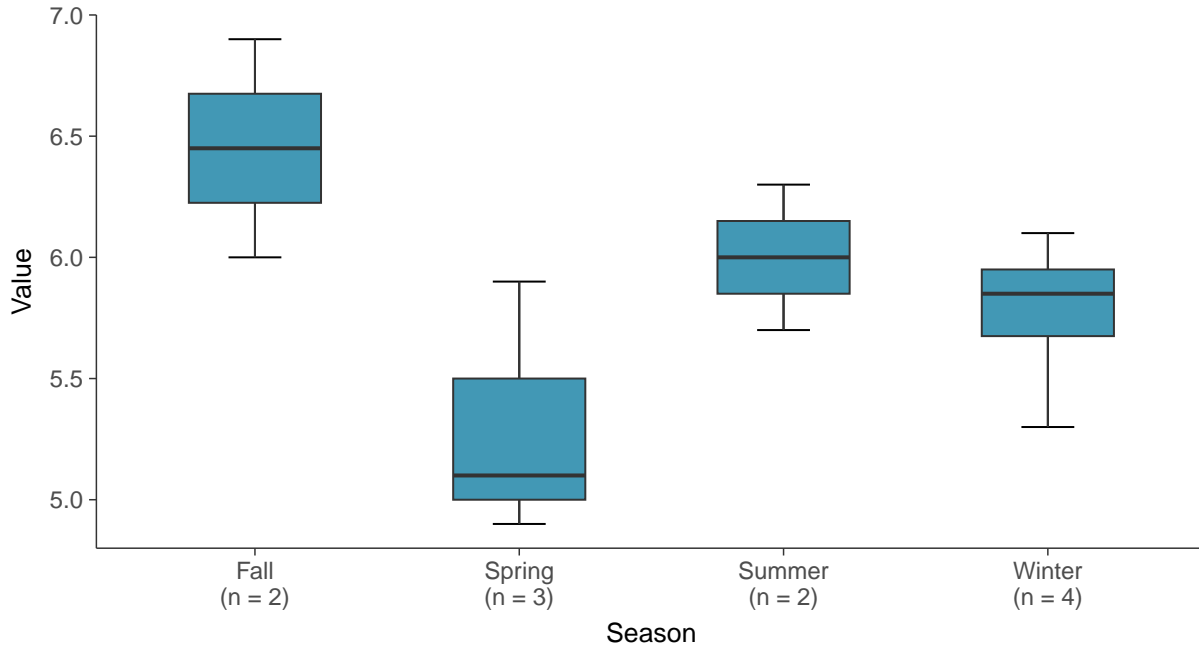
Boxplot

Boron, MW-09 (mg/L)



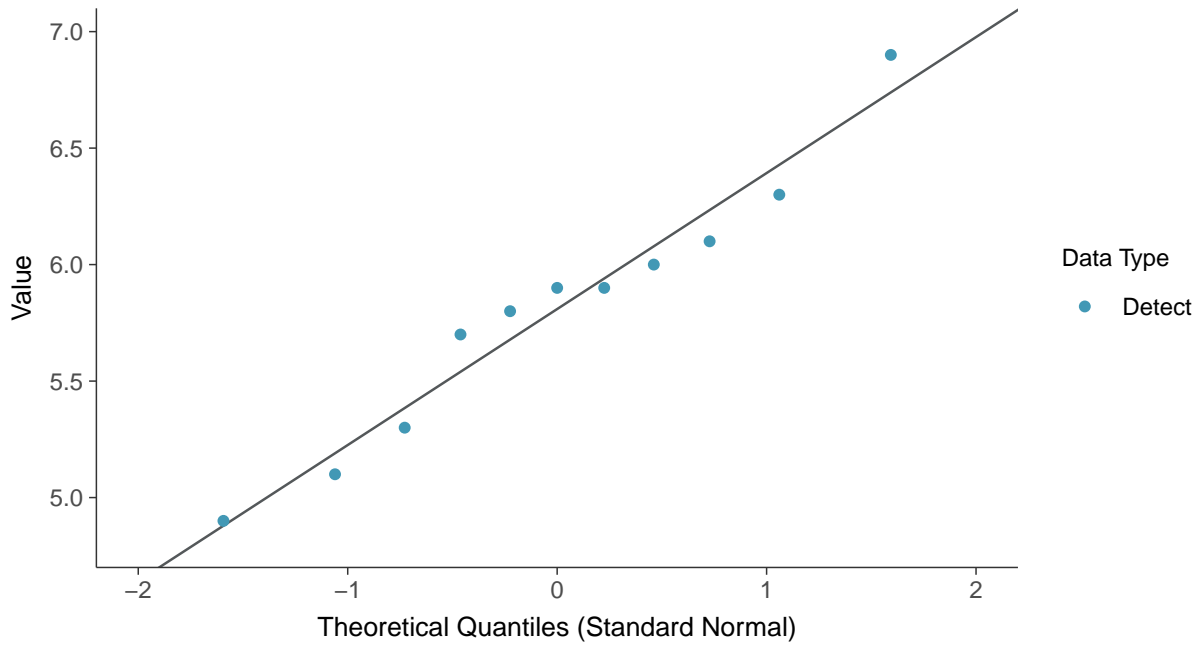
Boxplot by Season

Boron, MW-09 (mg/L)

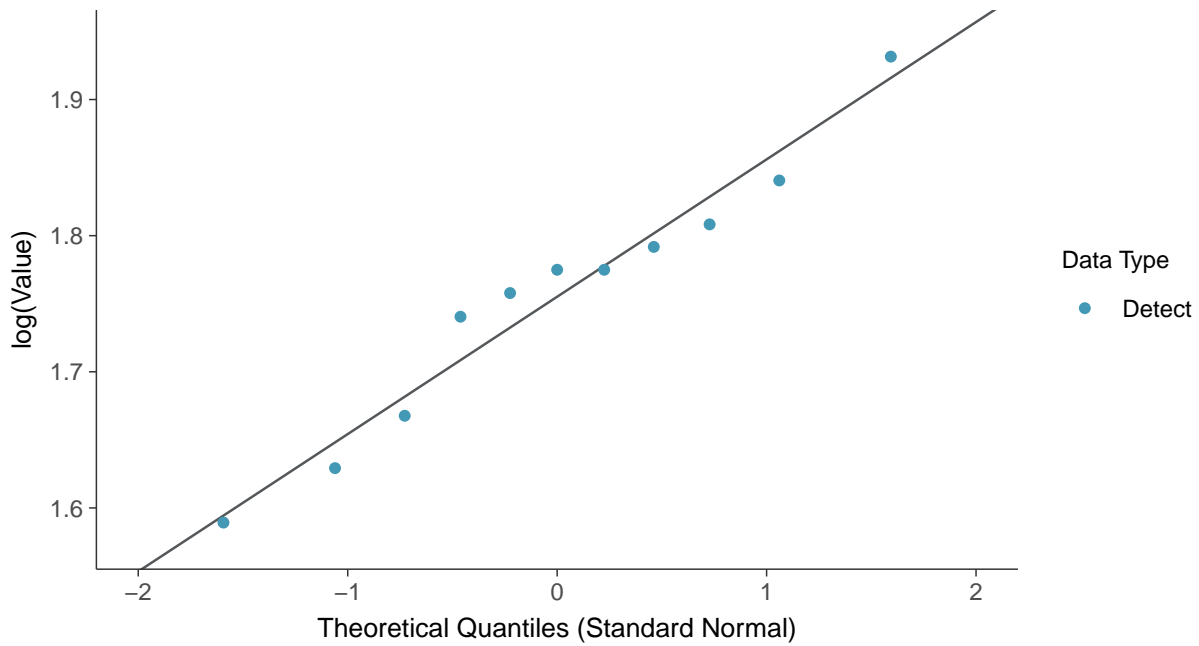




Normal Q-Q plot
Boron, MW-09 (mg/L)



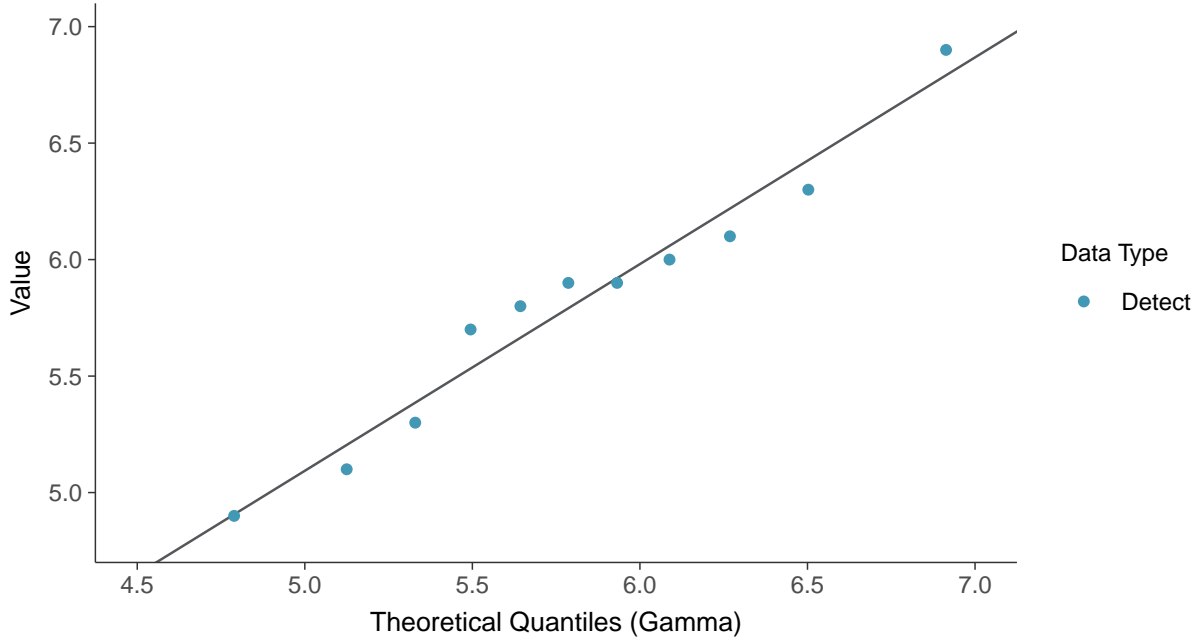
Lognormal Q-Q plot
Boron, MW-09 (mg/L)





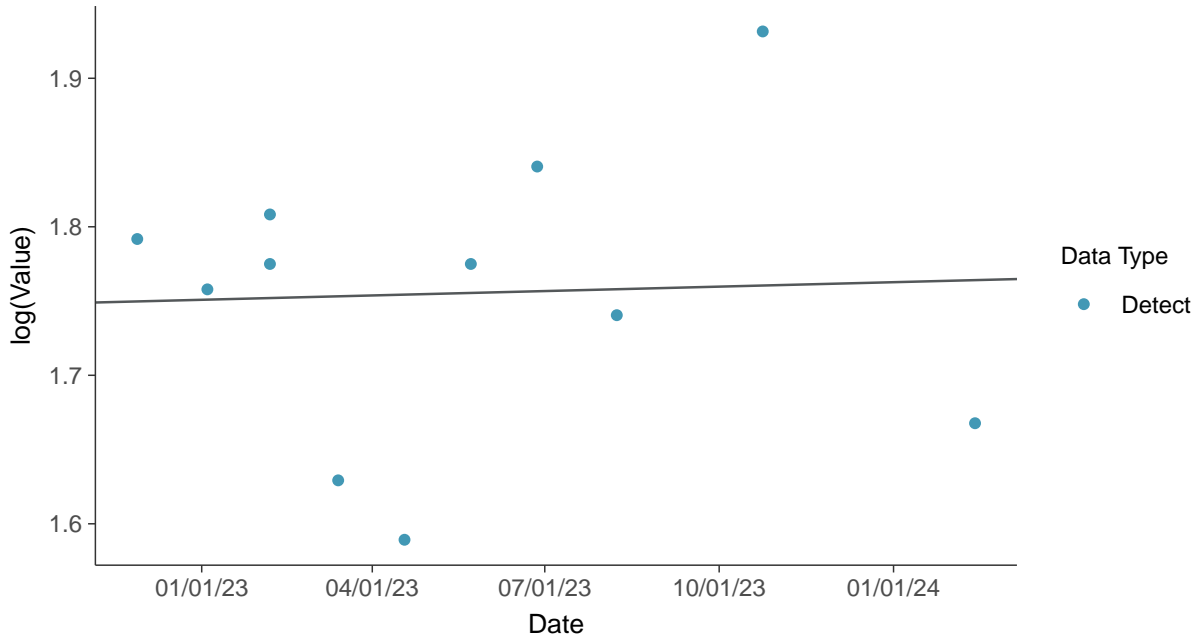
Gamma Q-Q plot

Boron, MW-09 (mg/L)



Trend Regression: Lognormal MLE

Boron, MW-09 (mg/L)



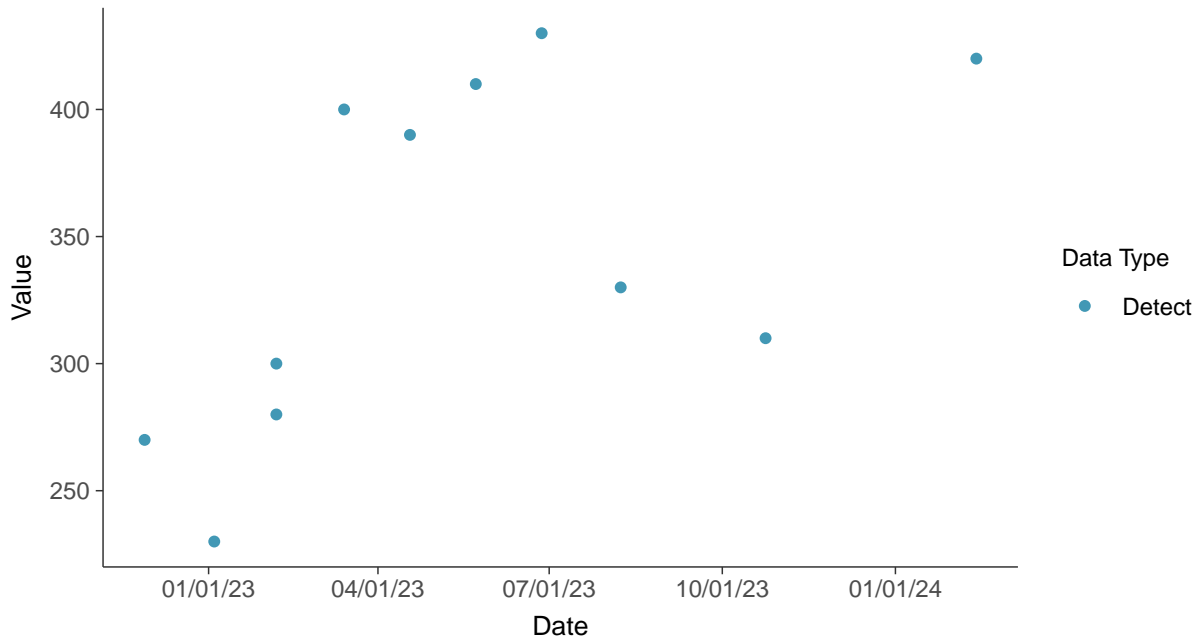


Appendix III: Calcium, MW-09

ID: 2_19_4_107

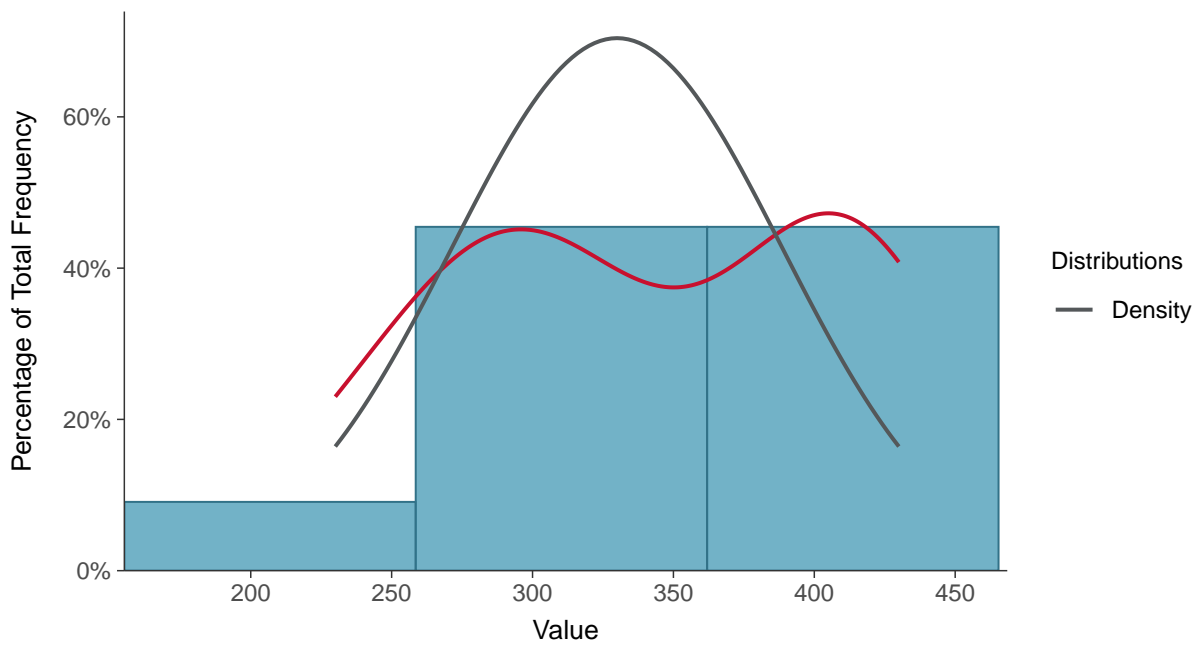
Scatter Plot

Calcium, MW-09 (mg/L)



Histogram

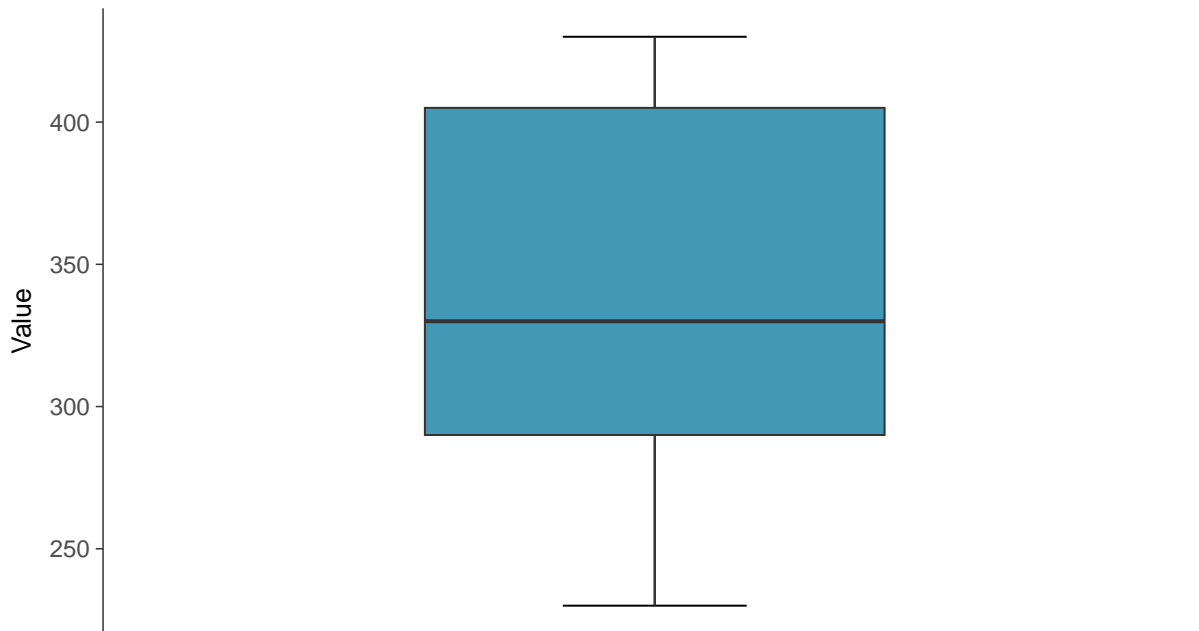
Calcium, MW-09 (mg/L)





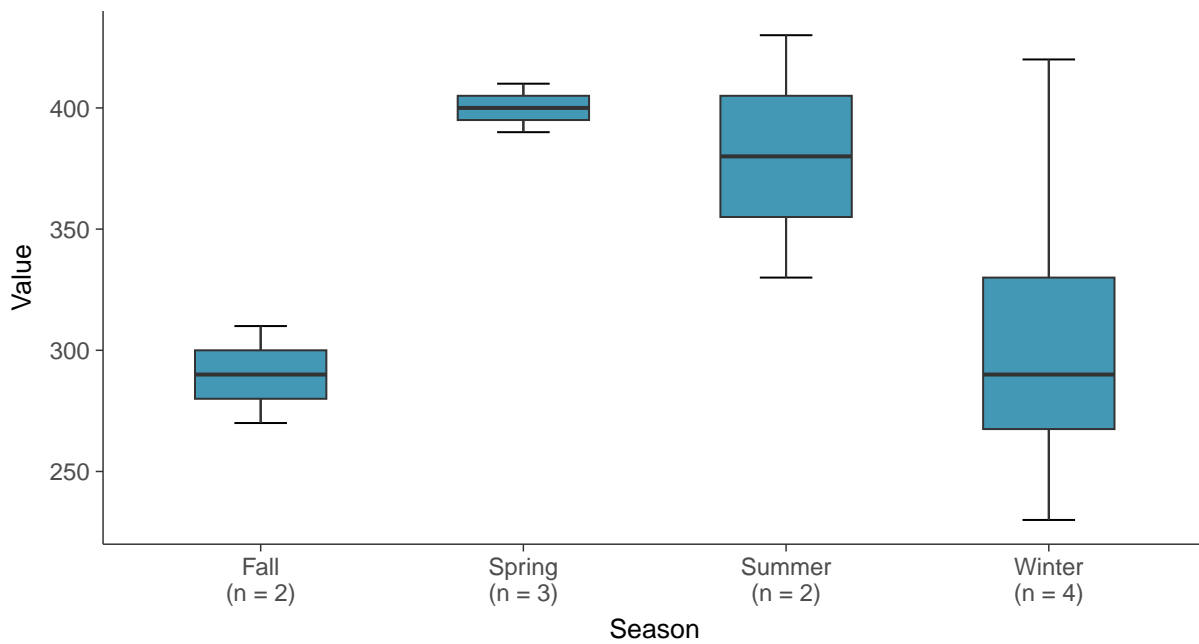
Boxplot

Calcium, MW-09 (mg/L)



Boxplot by Season

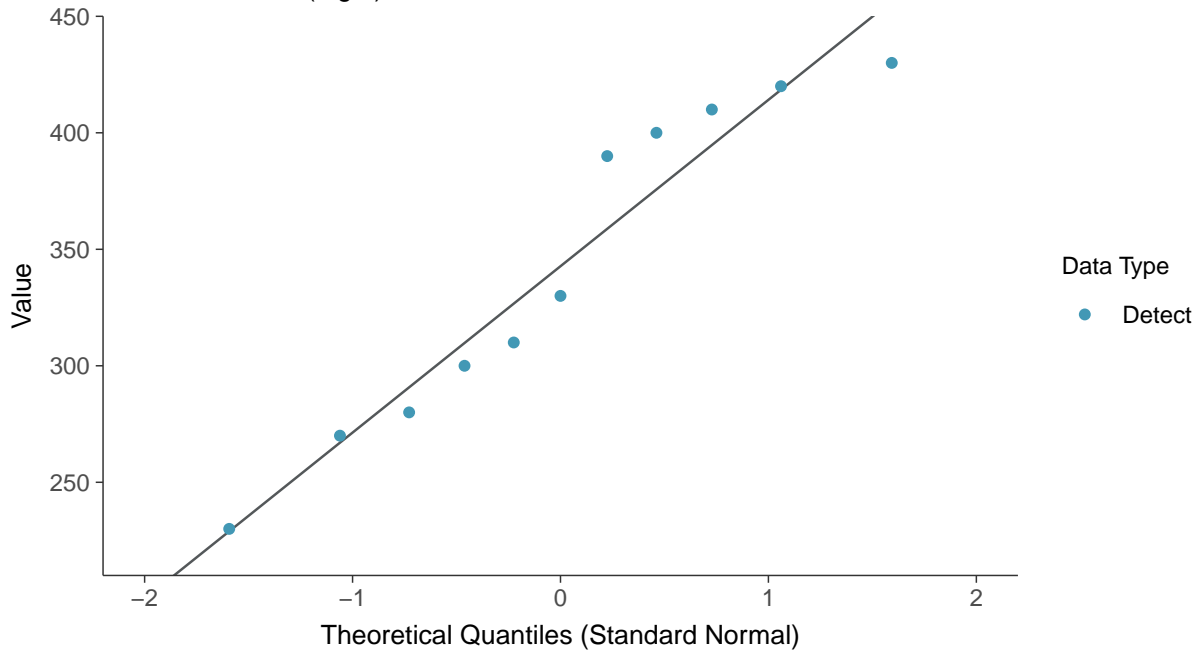
Calcium, MW-09 (mg/L)





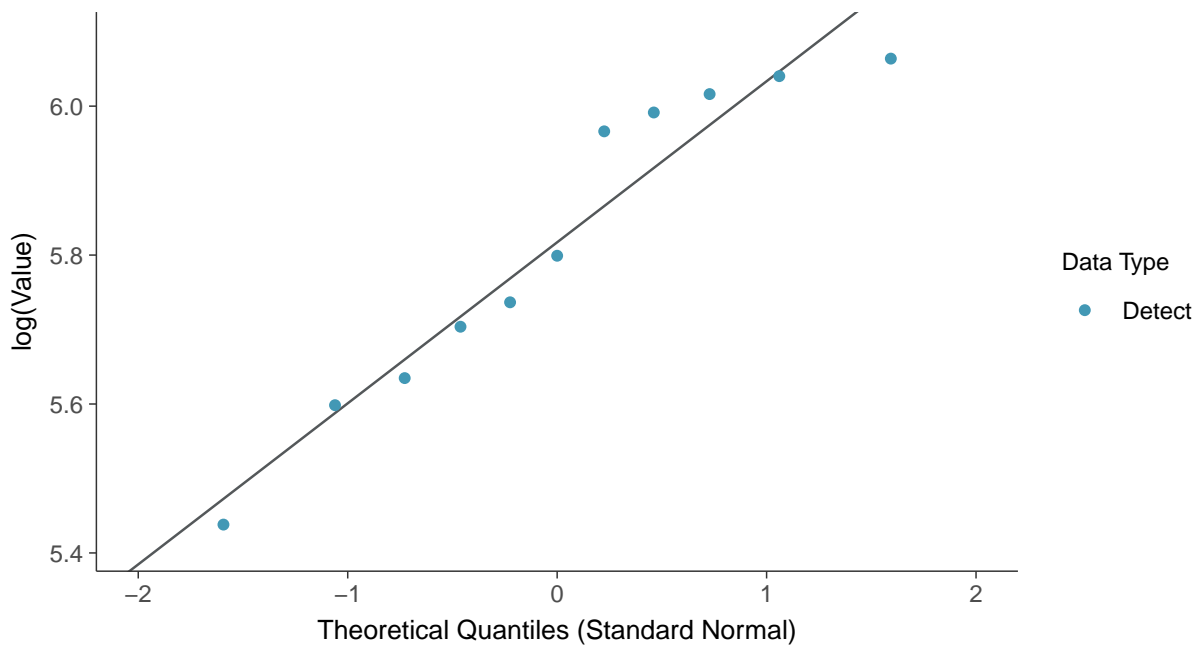
Normal Q-Q plot

Calcium, MW-09 (mg/L)



Lognormal Q-Q plot

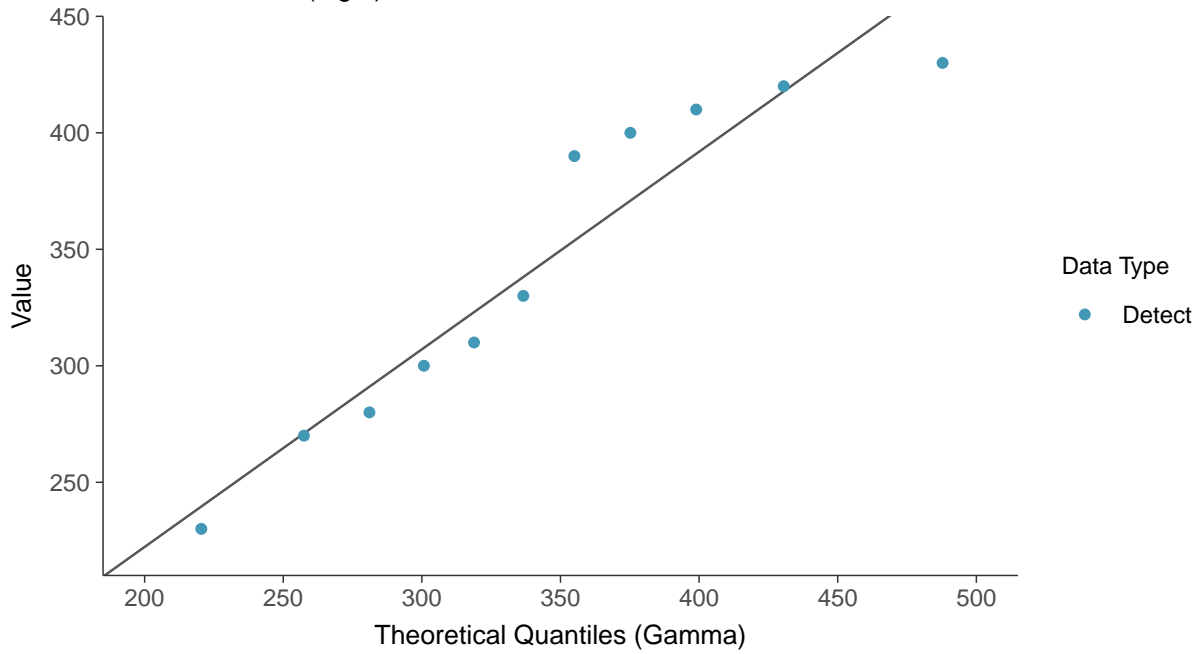
Calcium, MW-09 (mg/L)





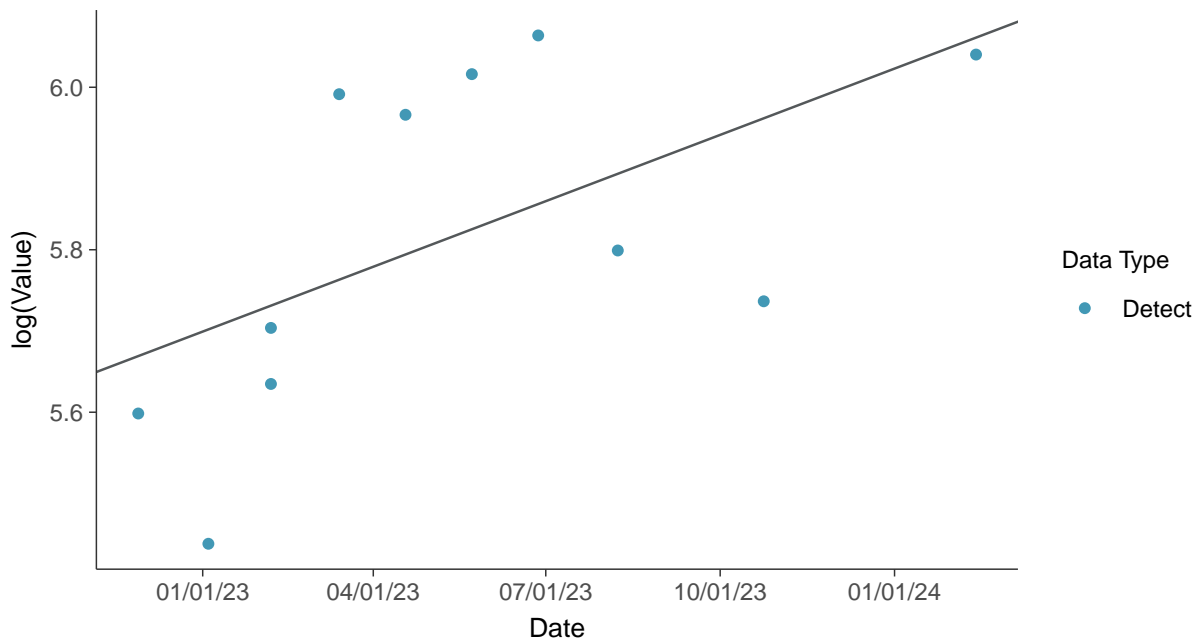
Gamma Q-Q plot

Calcium, MW-09 (mg/L)



Trend Regression: Lognormal MLE

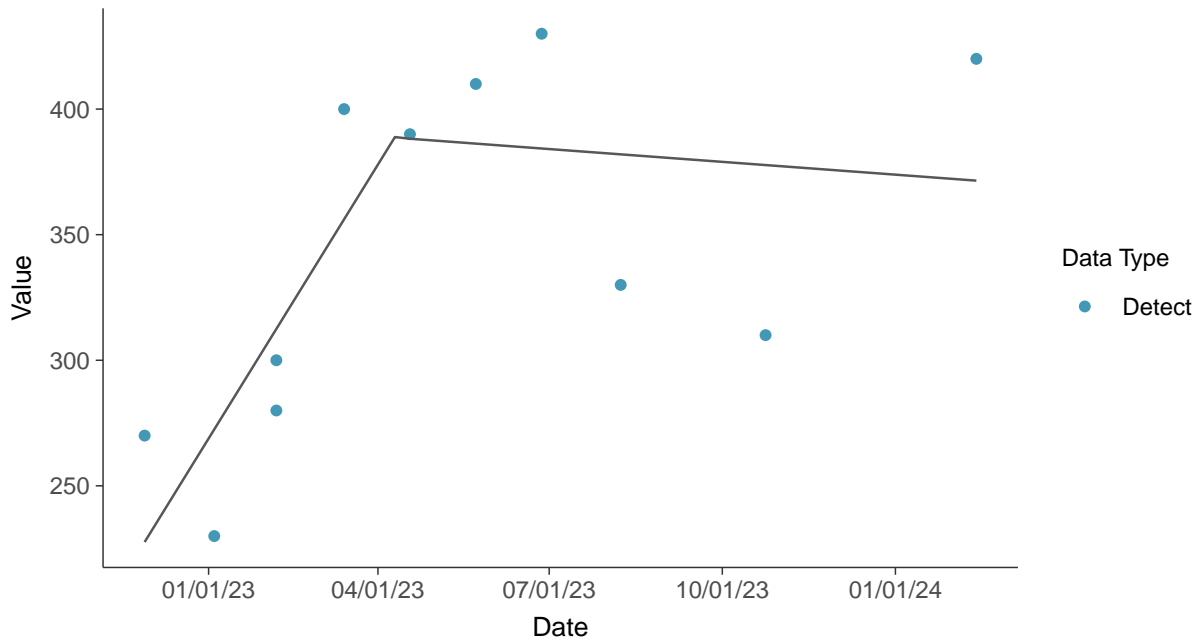
Calcium, MW-09 (mg/L)





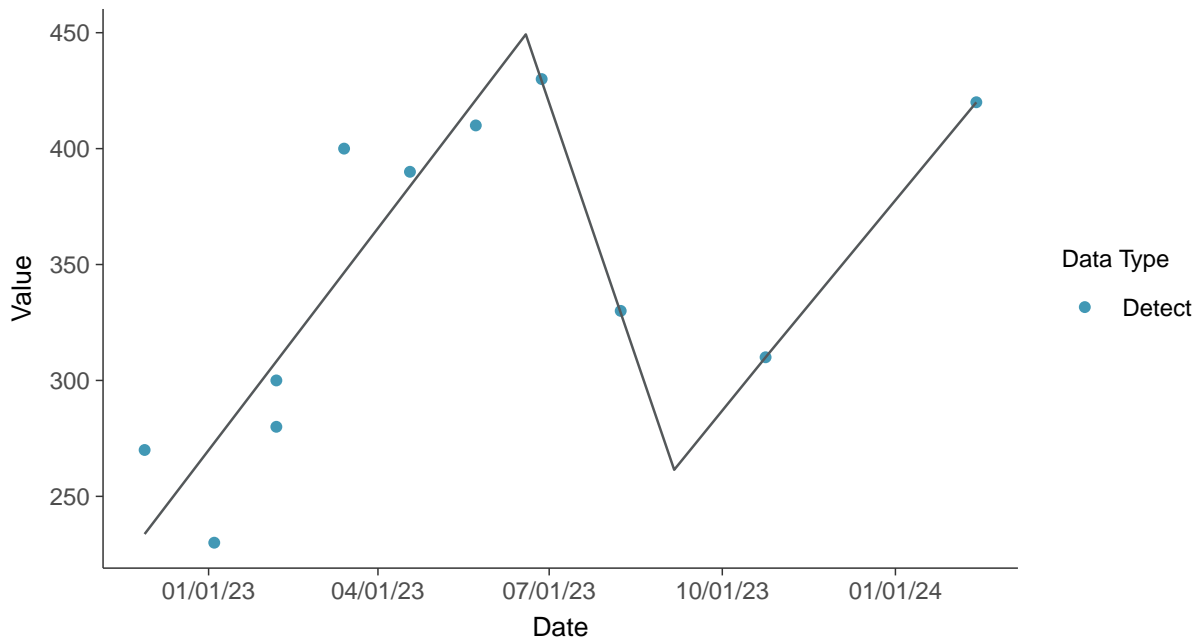
Trend Regression: Piecewise Linear-Linear

Calcium, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-09 (mg/L)



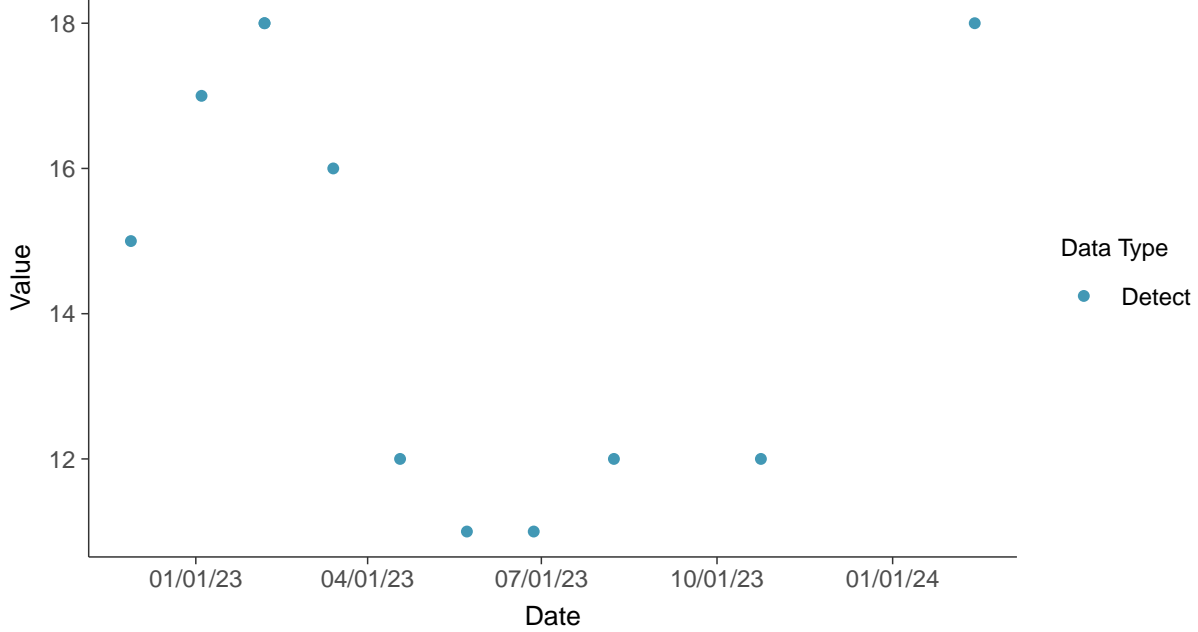


Appendix III: Chloride (as Cl), MW-09

ID: 2_19_4_108

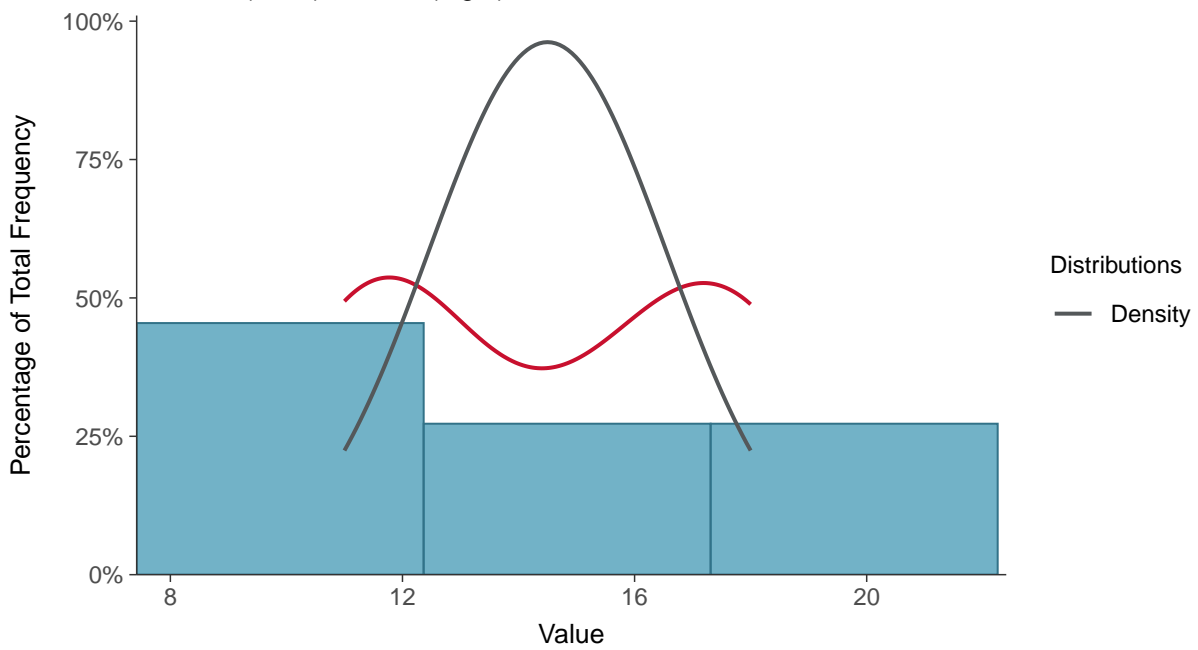
Scatter Plot

Chloride (as Cl), MW-09 (mg/L)



Histogram

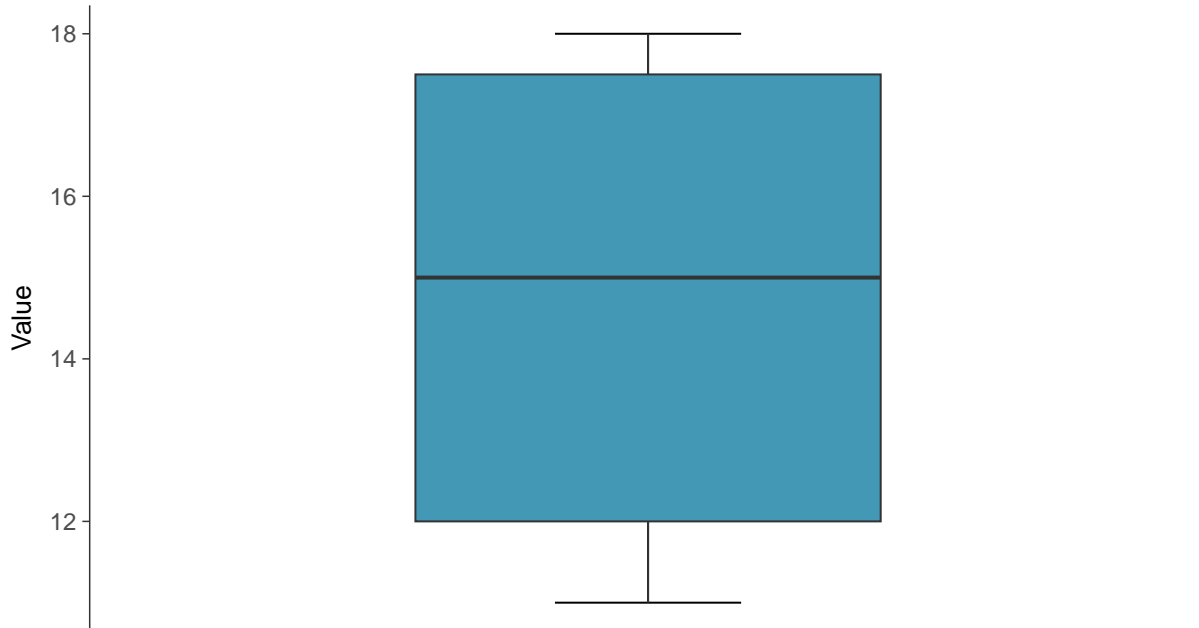
Chloride (as Cl), MW-09 (mg/L)





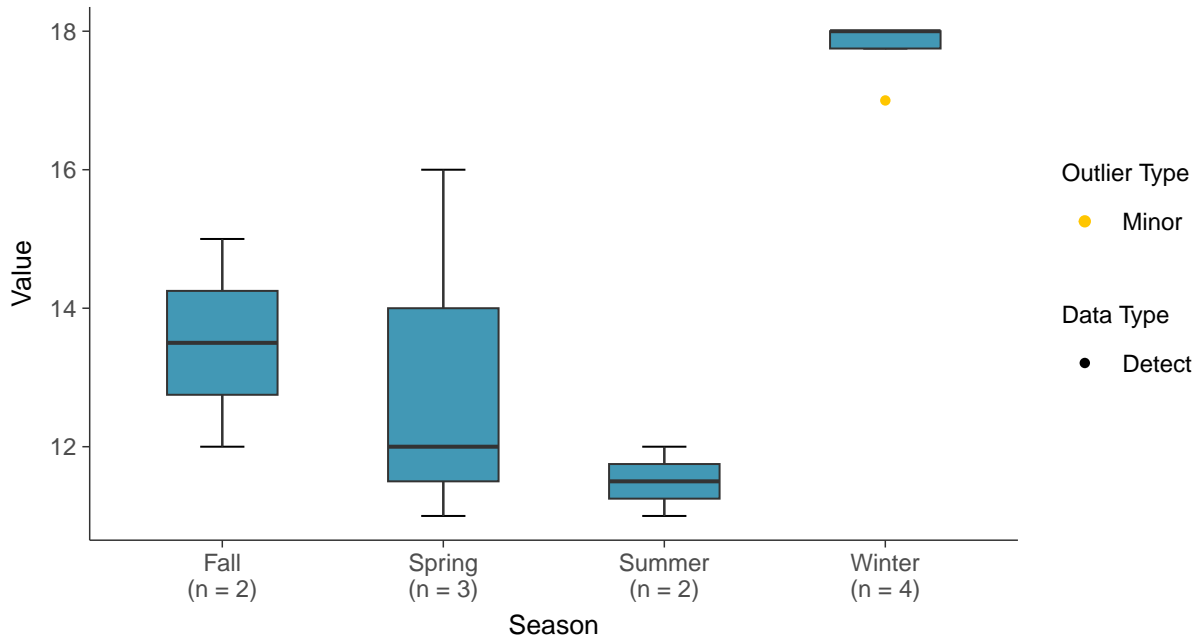
Boxplot

Chloride (as Cl), MW-09 (mg/L)



Boxplot by Season

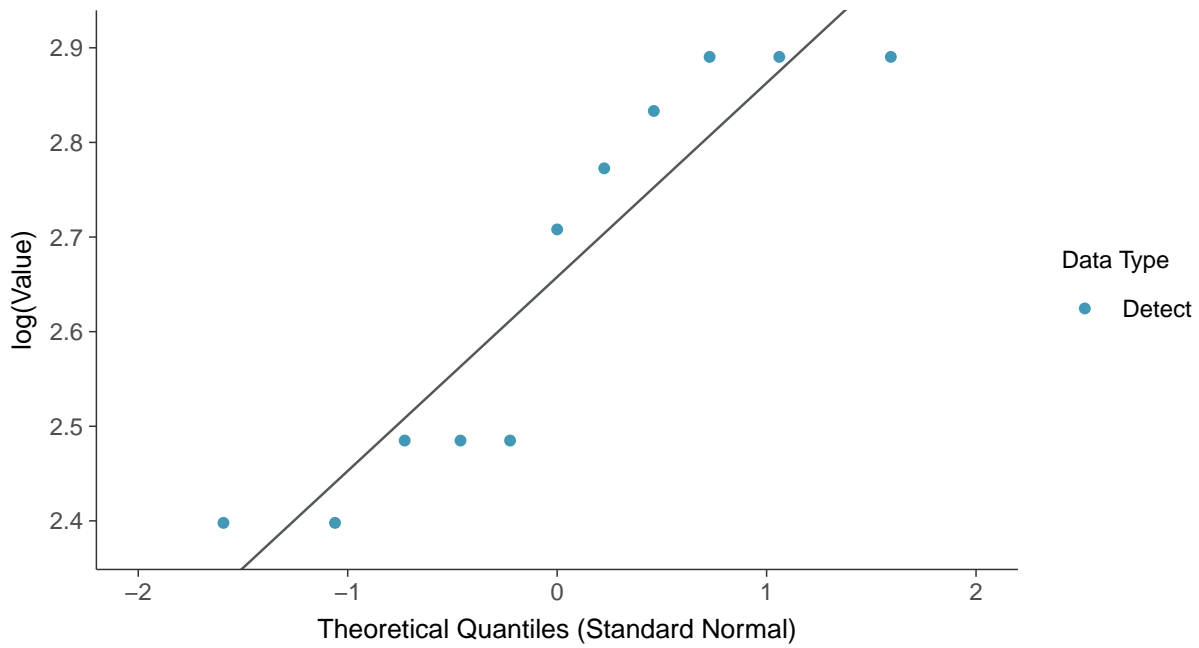
Chloride (as Cl), MW-09 (mg/L)





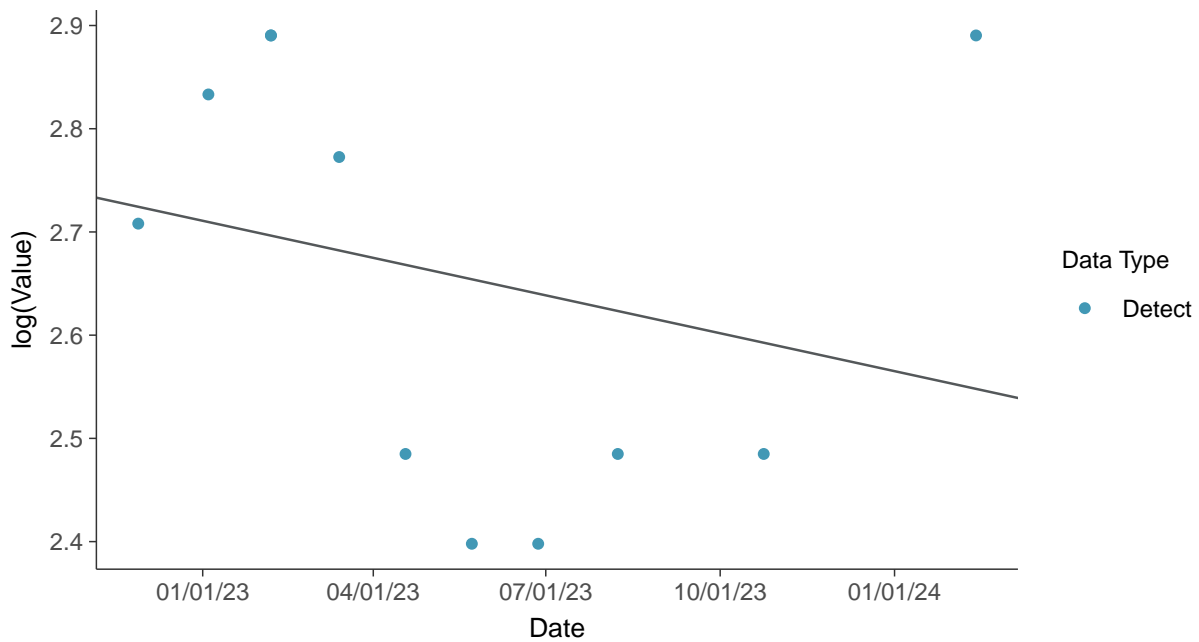
Lognormal Q-Q plot

Chloride (as Cl), MW-09 (mg/L)



Trend Regression: Lognormal MLE

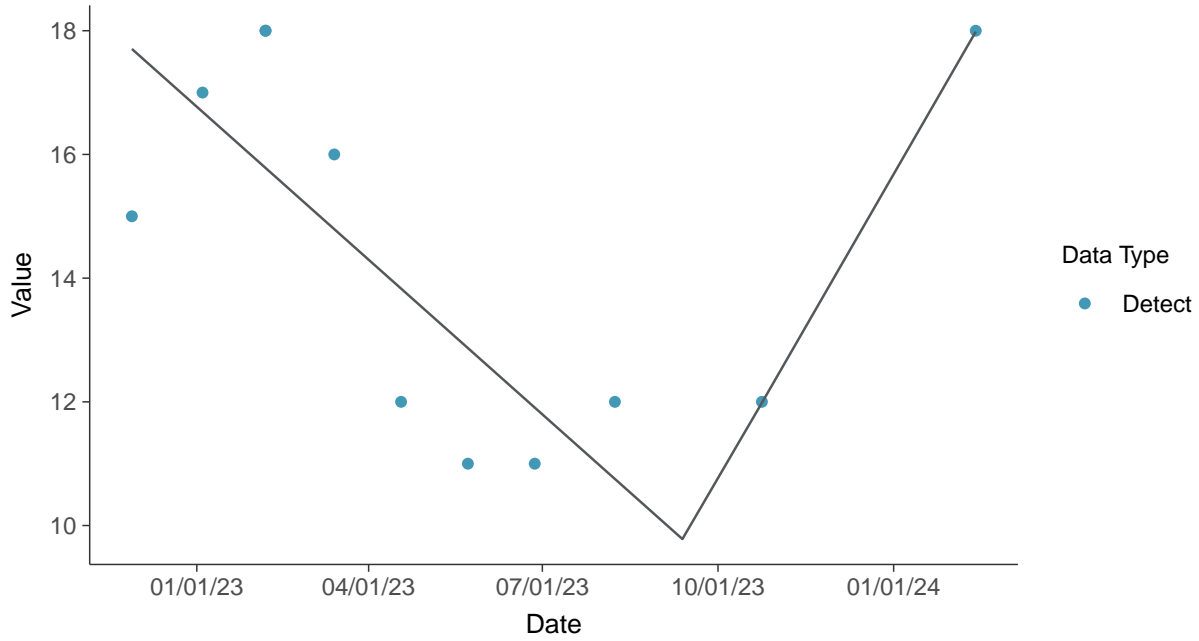
Chloride (as Cl), MW-09 (mg/L)





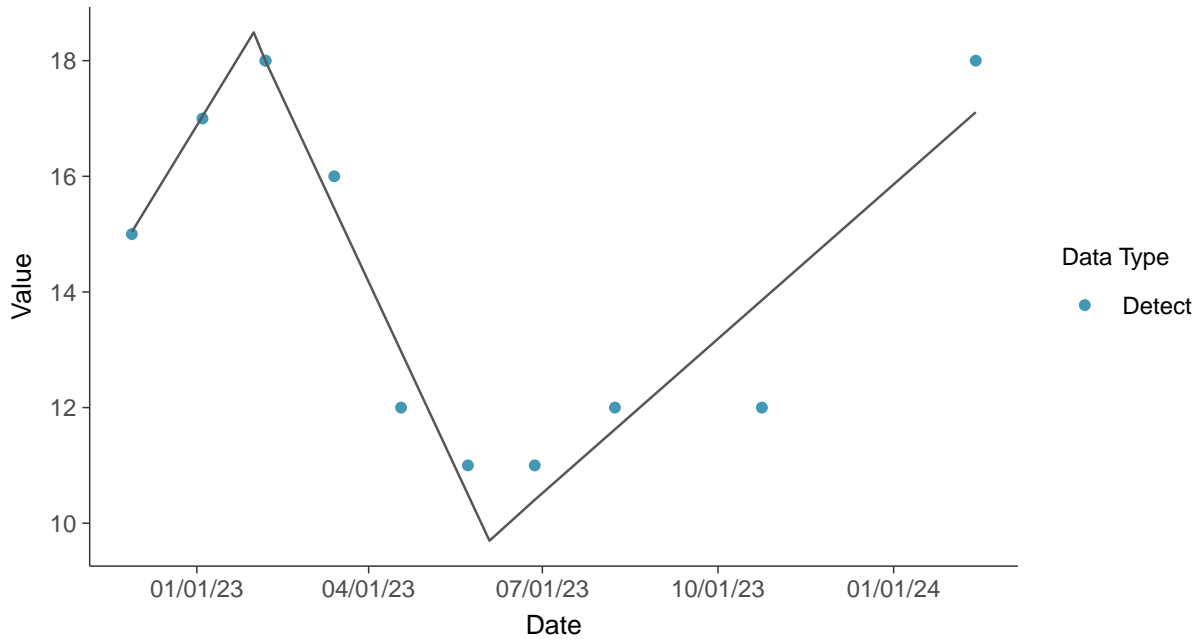
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-09 (mg/L)



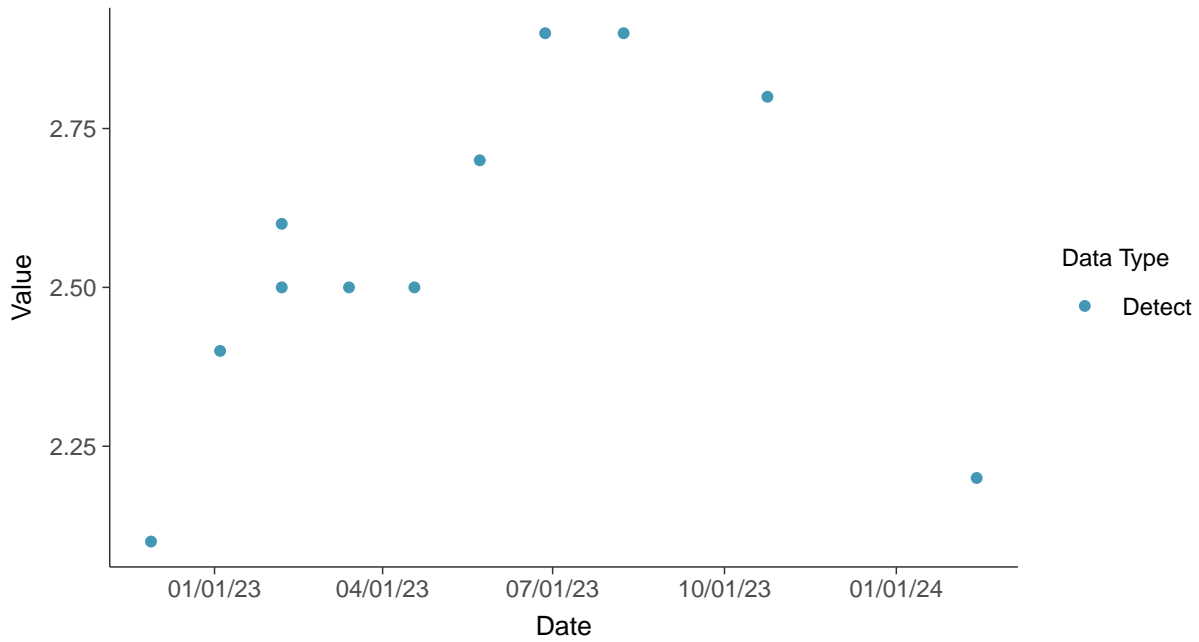


Appendix III: Fluoride, MW-09

ID: 2_19_4_112

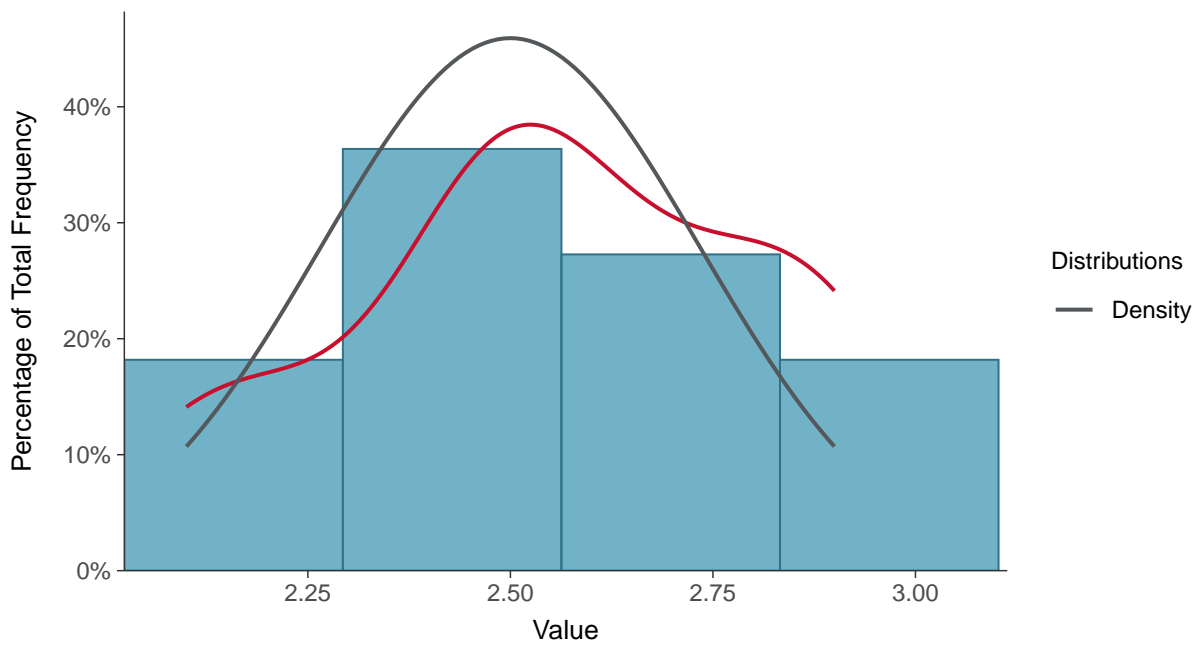
Scatter Plot

Fluoride, MW-09 (mg/L)



Histogram

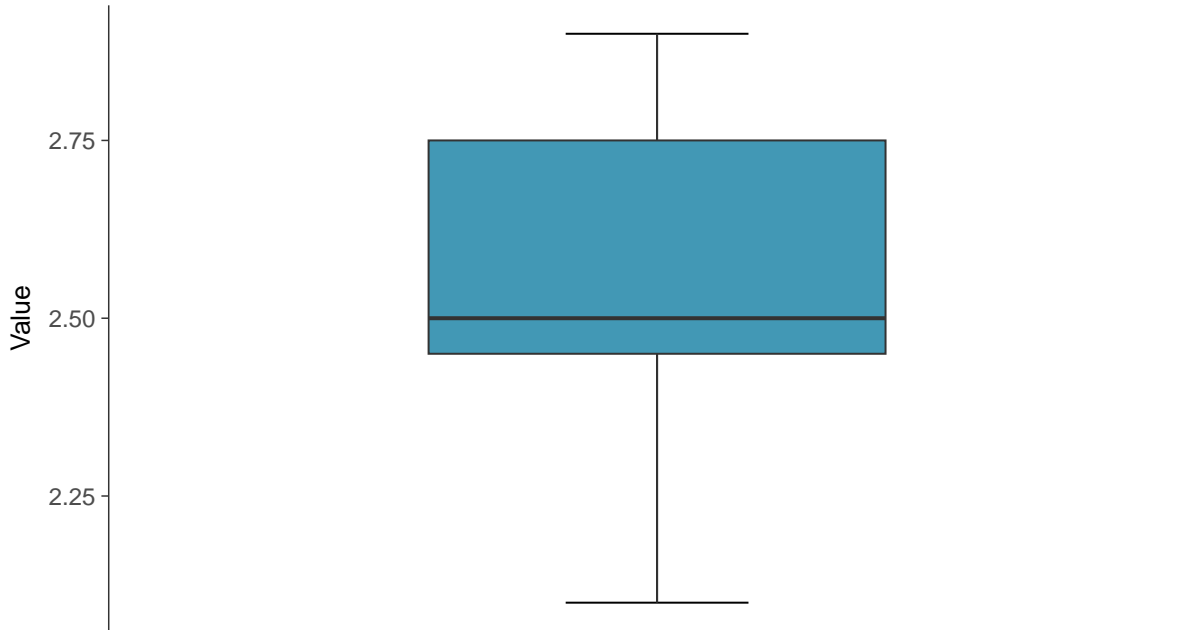
Fluoride, MW-09 (mg/L)





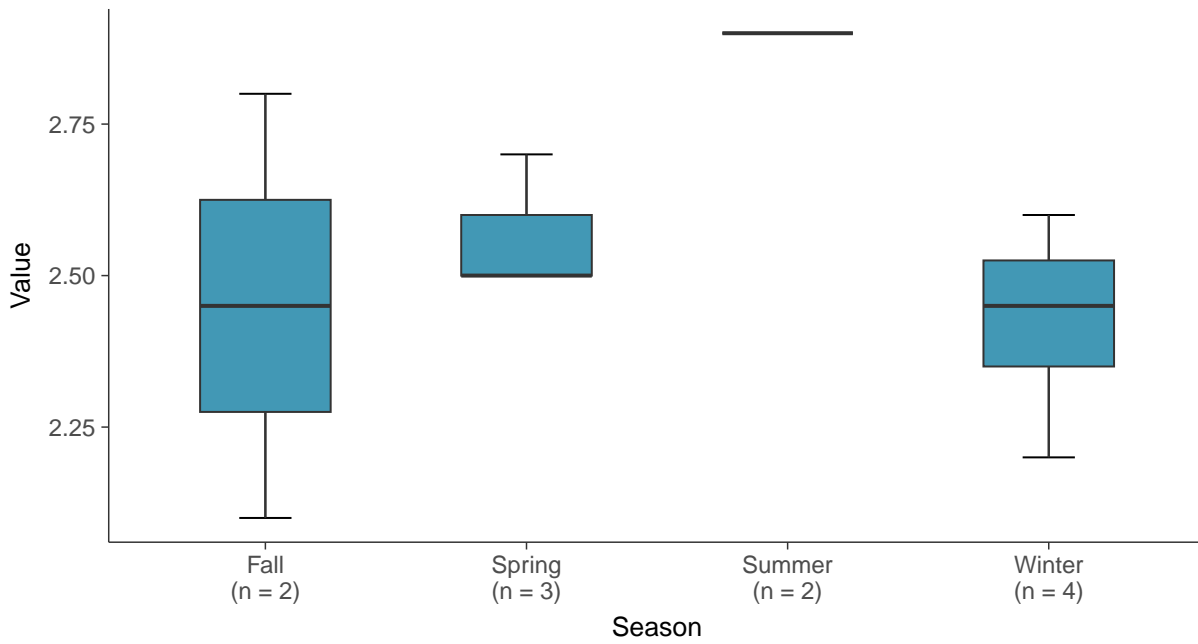
Boxplot

Fluoride, MW-09 (mg/L)



Boxplot by Season

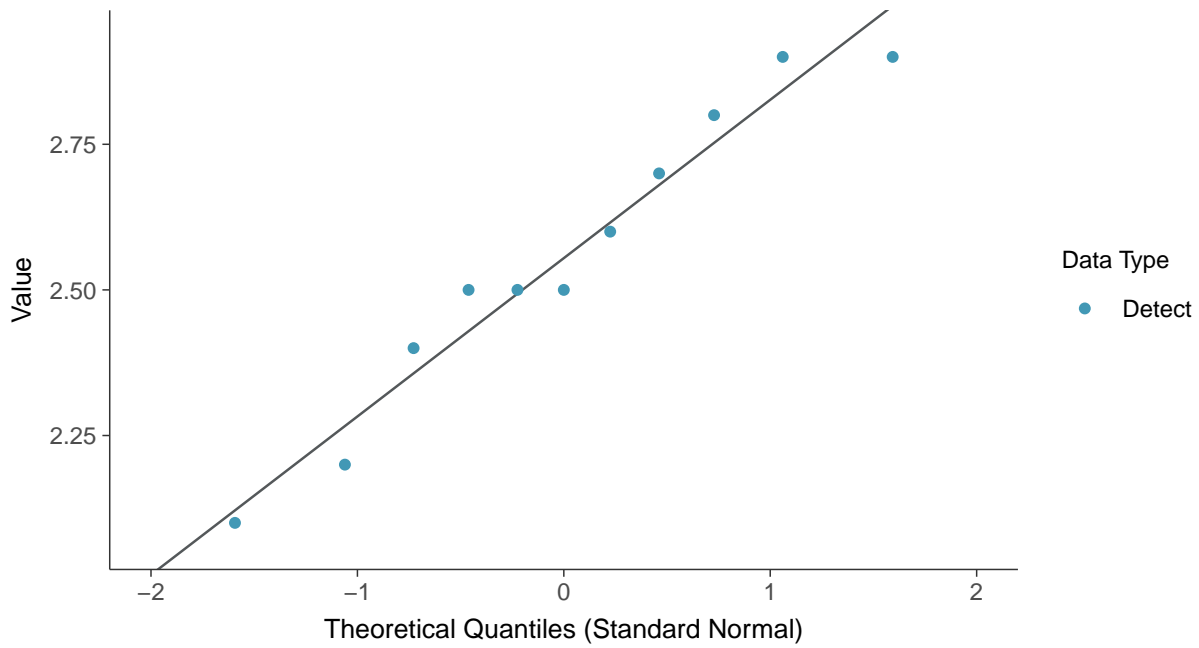
Fluoride, MW-09 (mg/L)





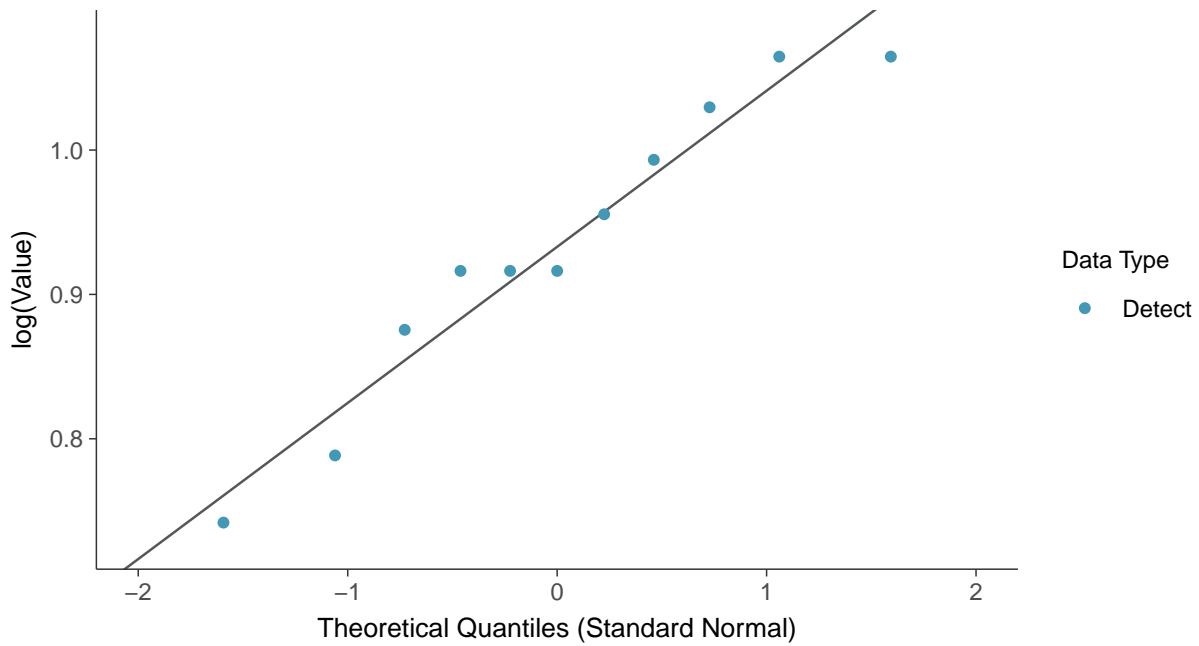
Normal Q-Q plot

Fluoride, MW-09 (mg/L)



Lognormal Q-Q plot

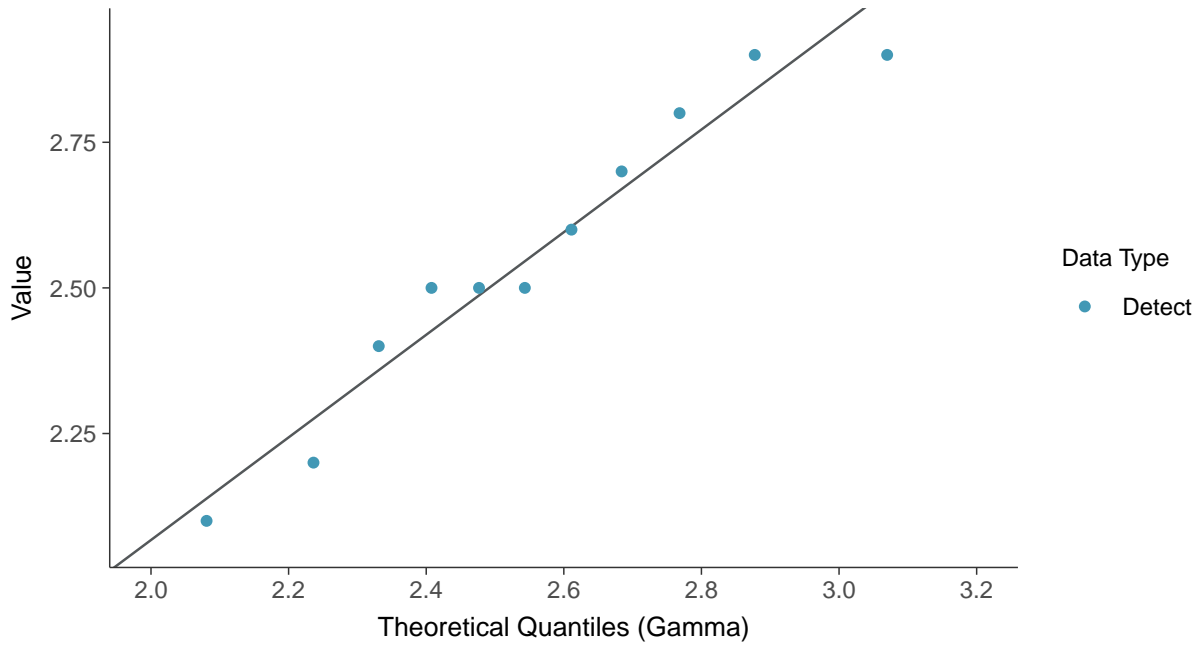
Fluoride, MW-09 (mg/L)





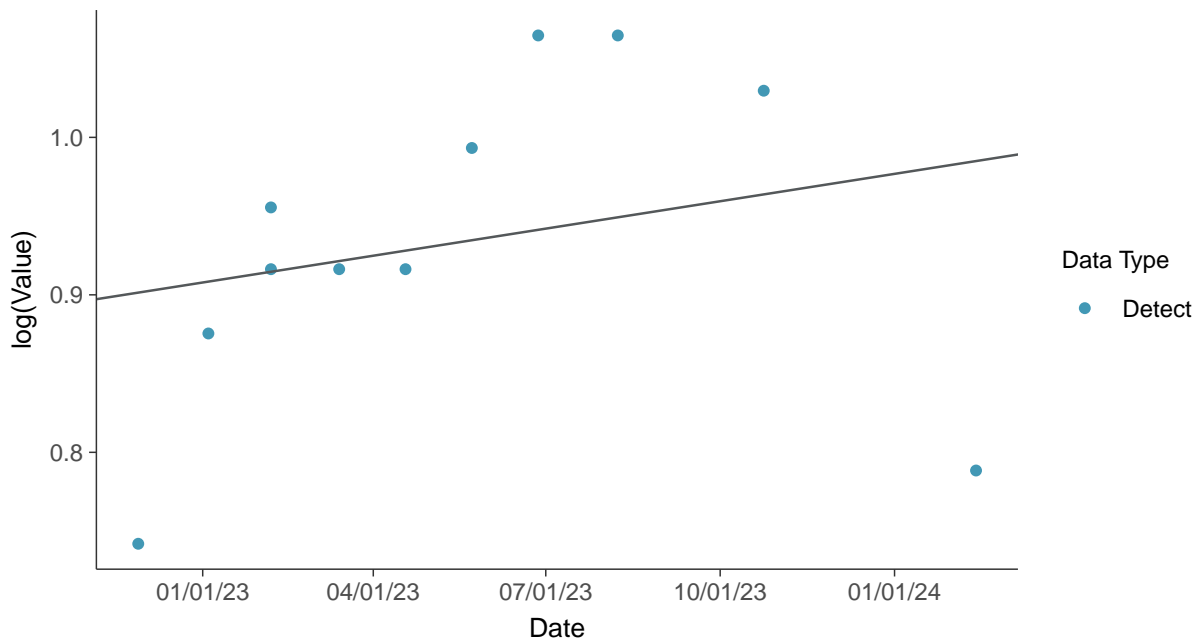
Gamma Q-Q plot

Fluoride, MW-09 (mg/L)



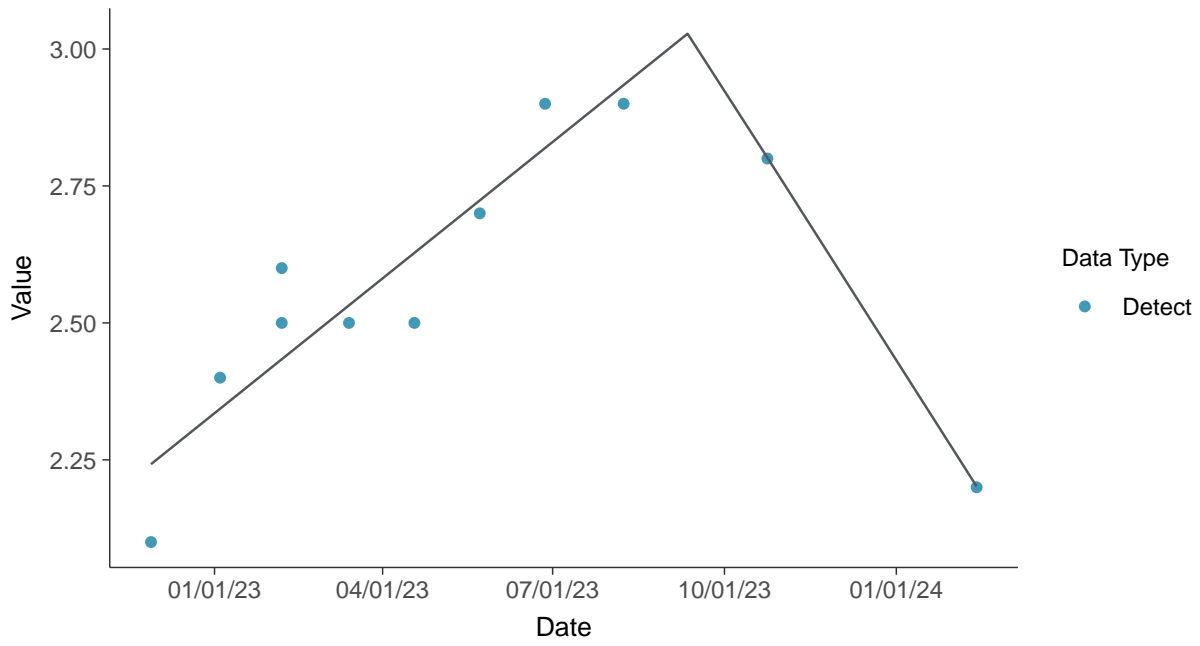
Trend Regression: Lognormal MLE

Fluoride, MW-09 (mg/L)





Trend Regression: Piecewise Linear-Linear
Fluoride, MW-09 (mg/L)



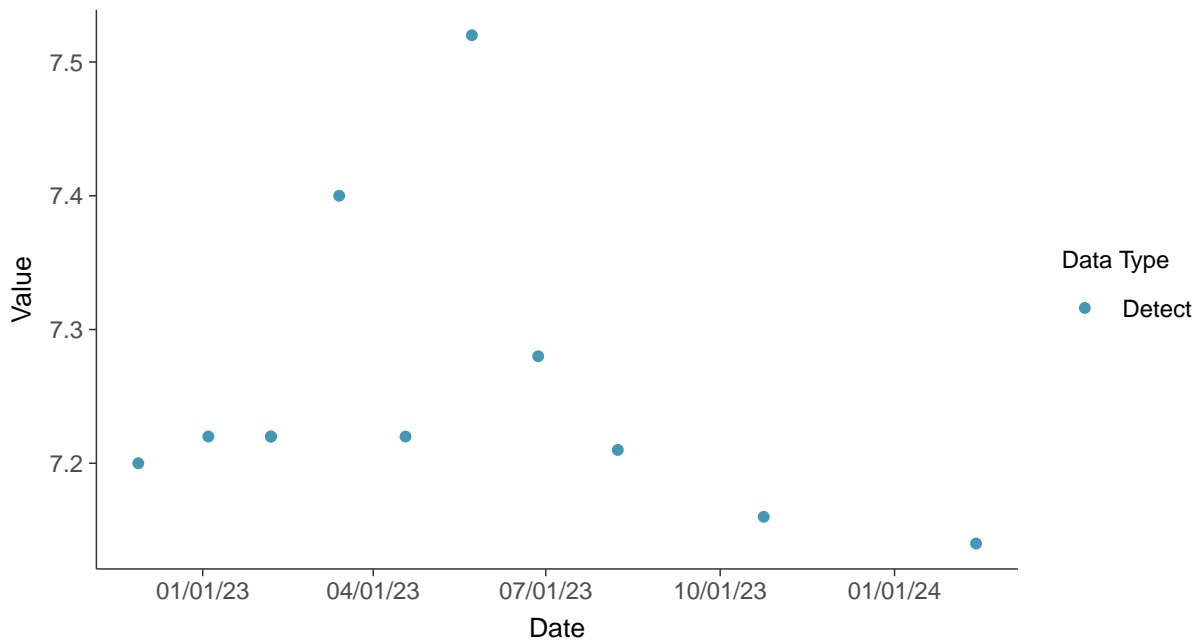


Appendix III: pH (field), MW-09

ID: 2_19_4_120

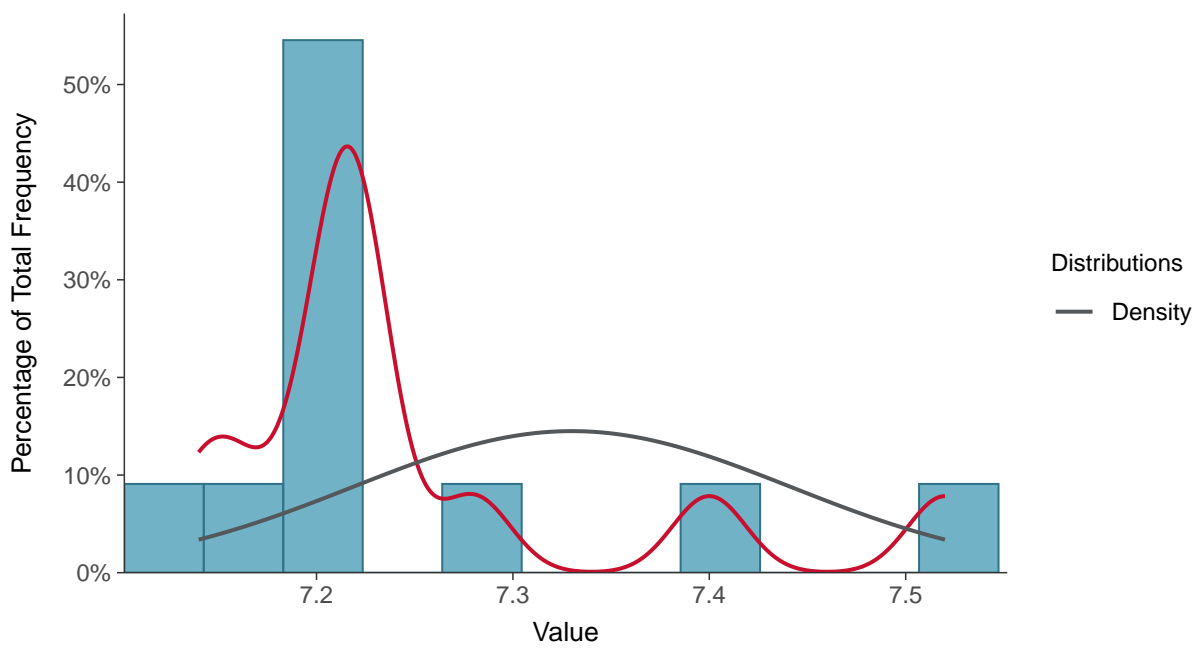
Scatter Plot

pH (field), MW-09 (su)



Histogram

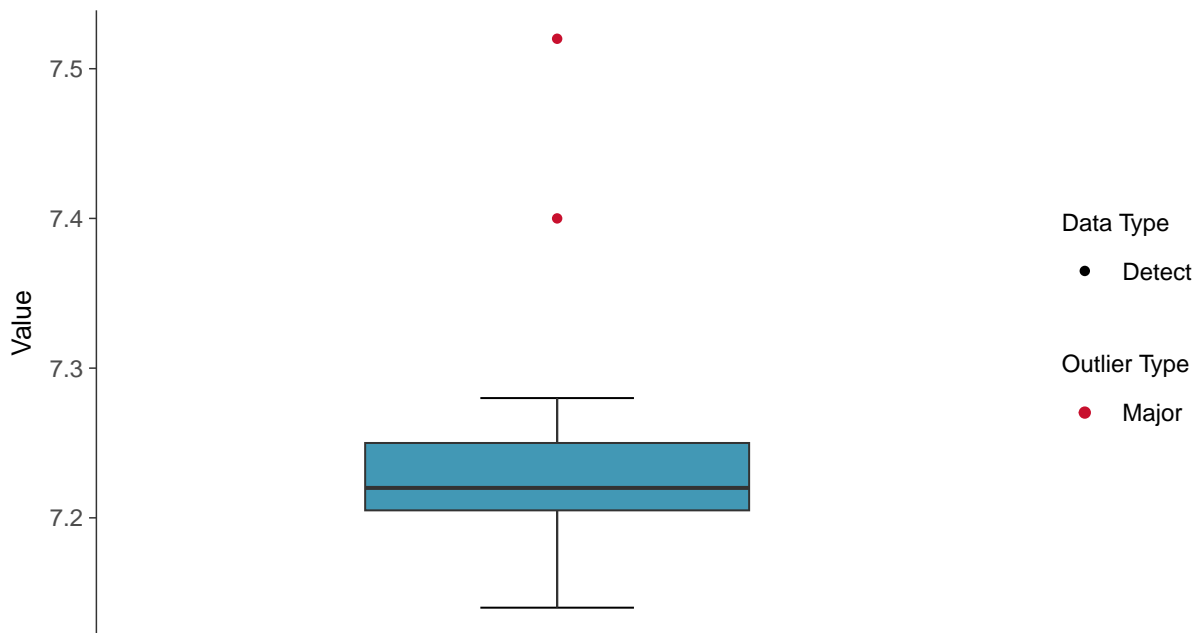
pH (field), MW-09 (su)





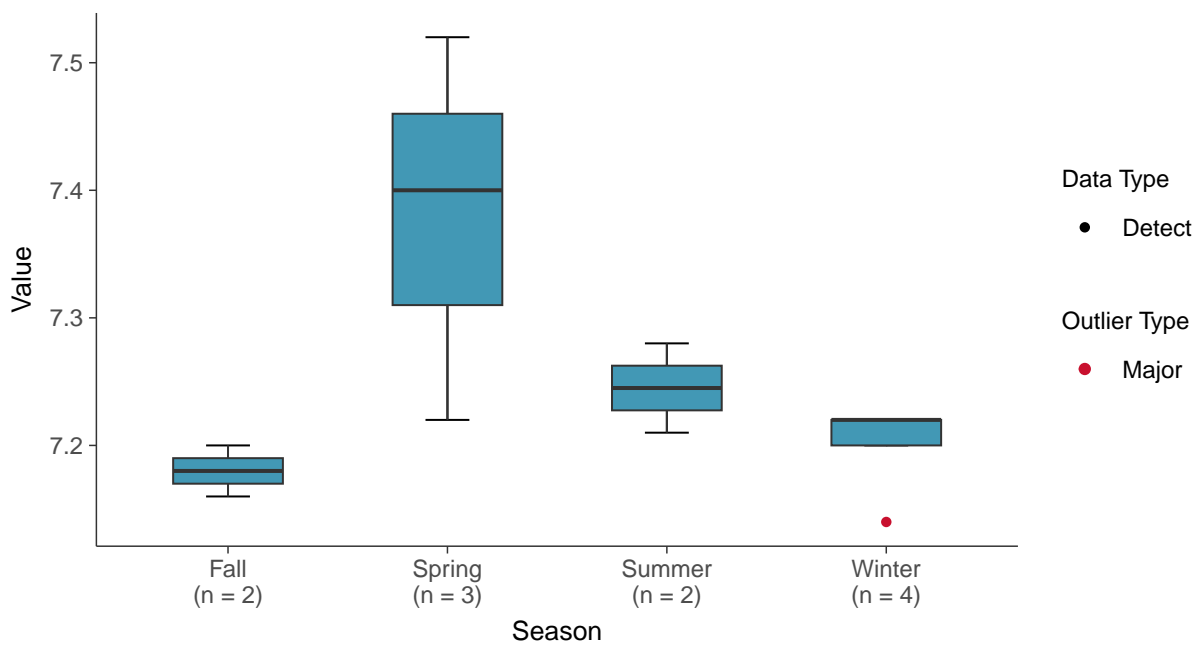
Boxplot

pH (field), MW-09 (su)



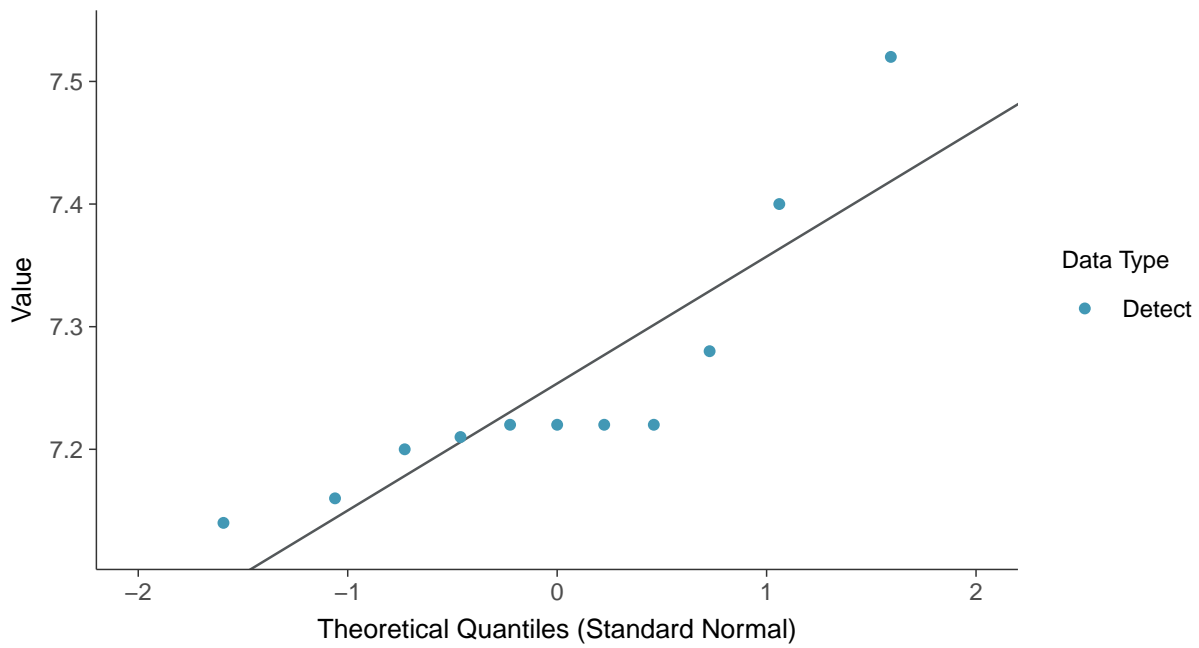
Boxplot by Season

pH (field), MW-09 (su)

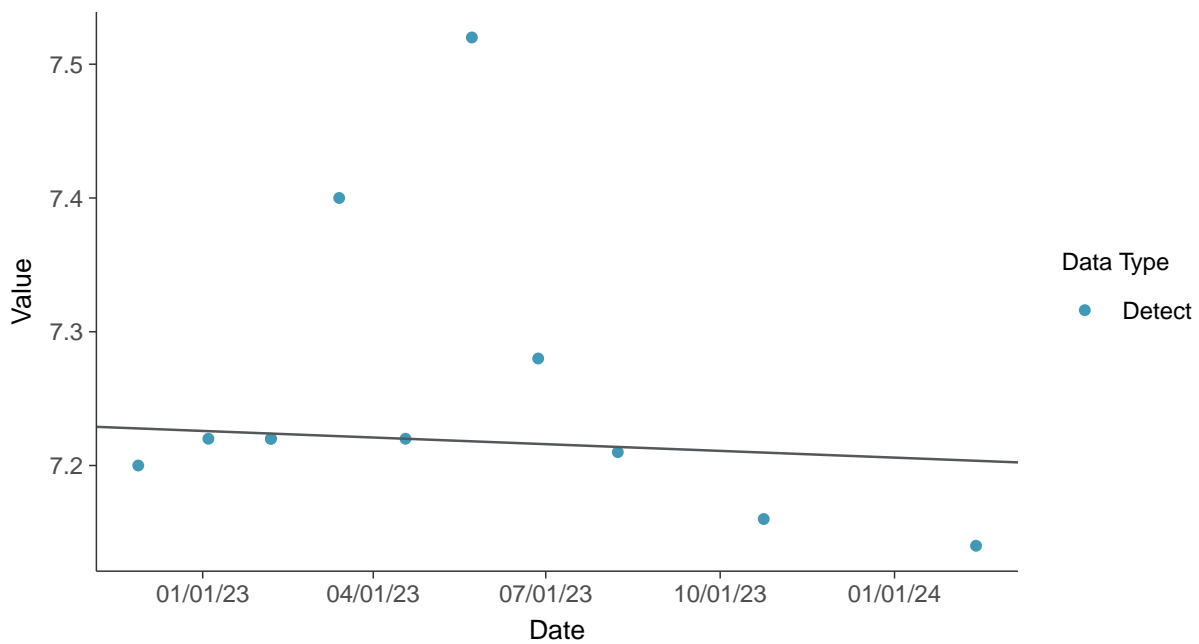




Normal Q-Q plot
pH (field), MW-09 (su)



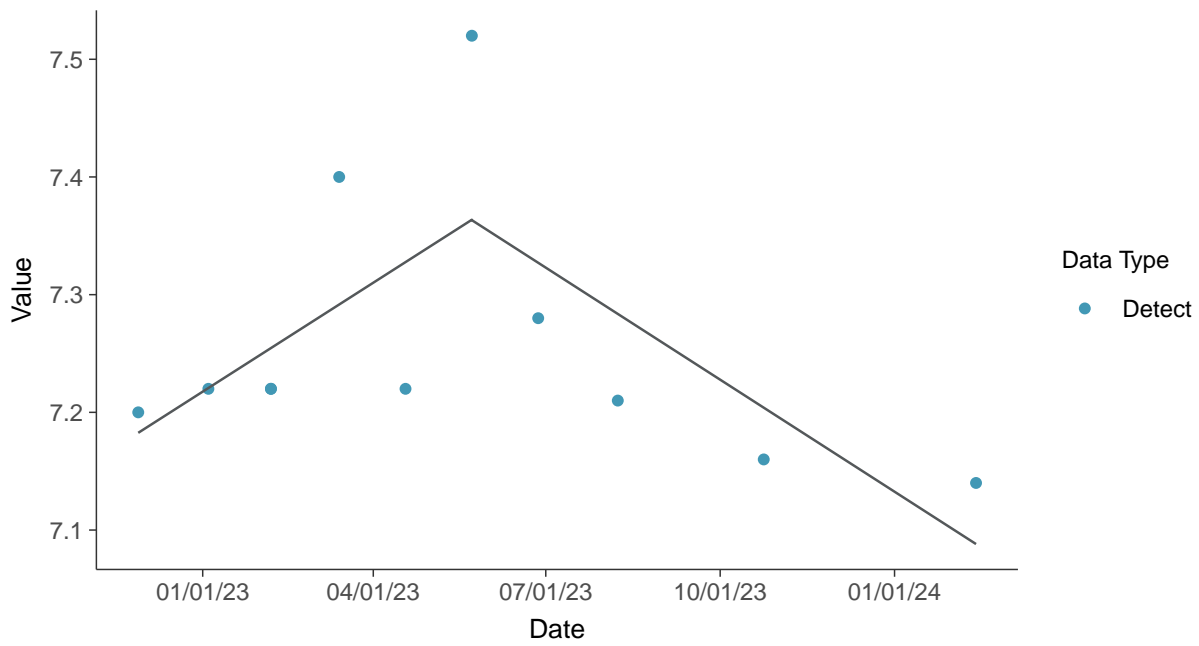
Trend Regression: Mann-Kendall/Theil-Sen Estimate
pH (field), MW-09 (su)





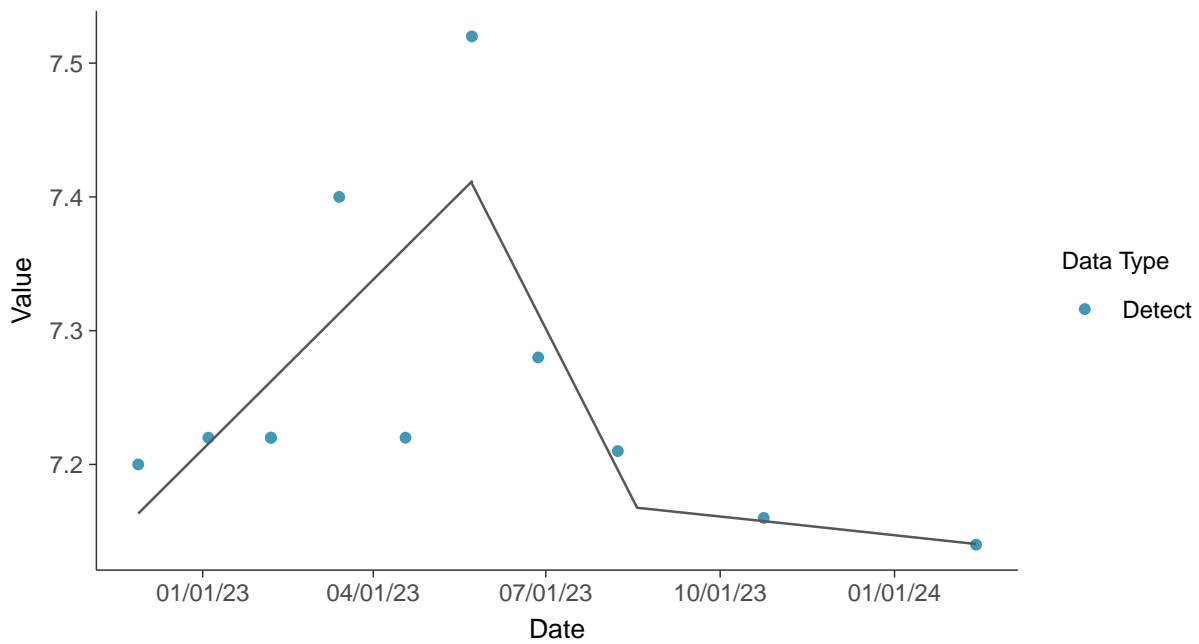
Trend Regression: Piecewise Linear-Linear

pH (field), MW-09 (su)



Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-09 (su)



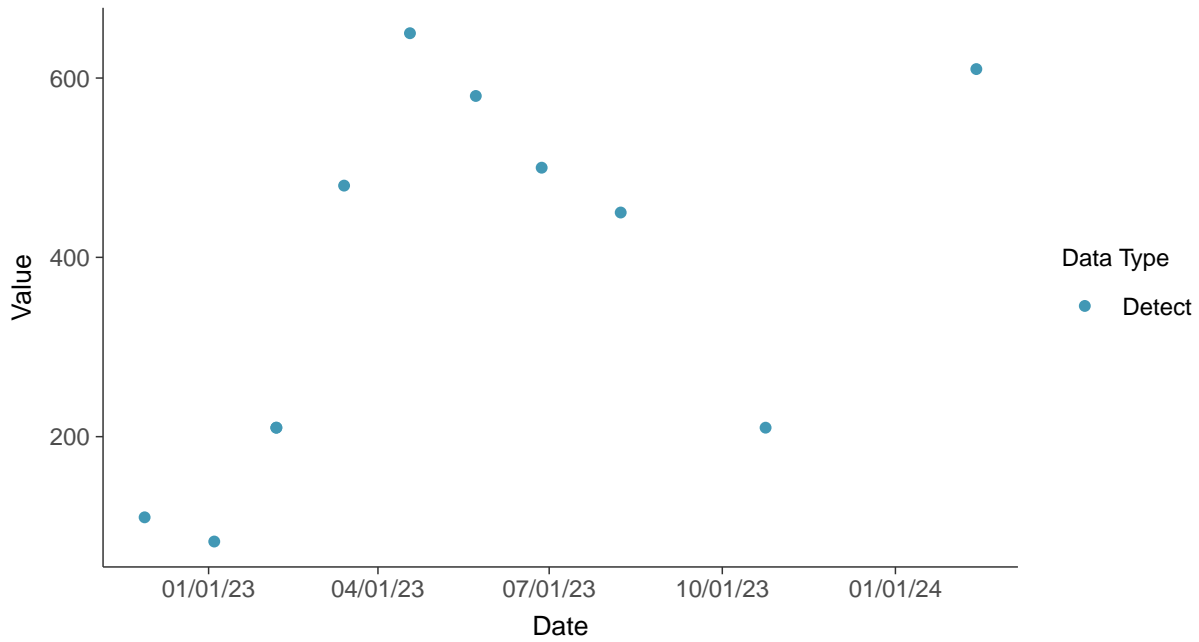


Appendix III: Sulfate (as SO₄), MW-09

ID: 2_19_4_124

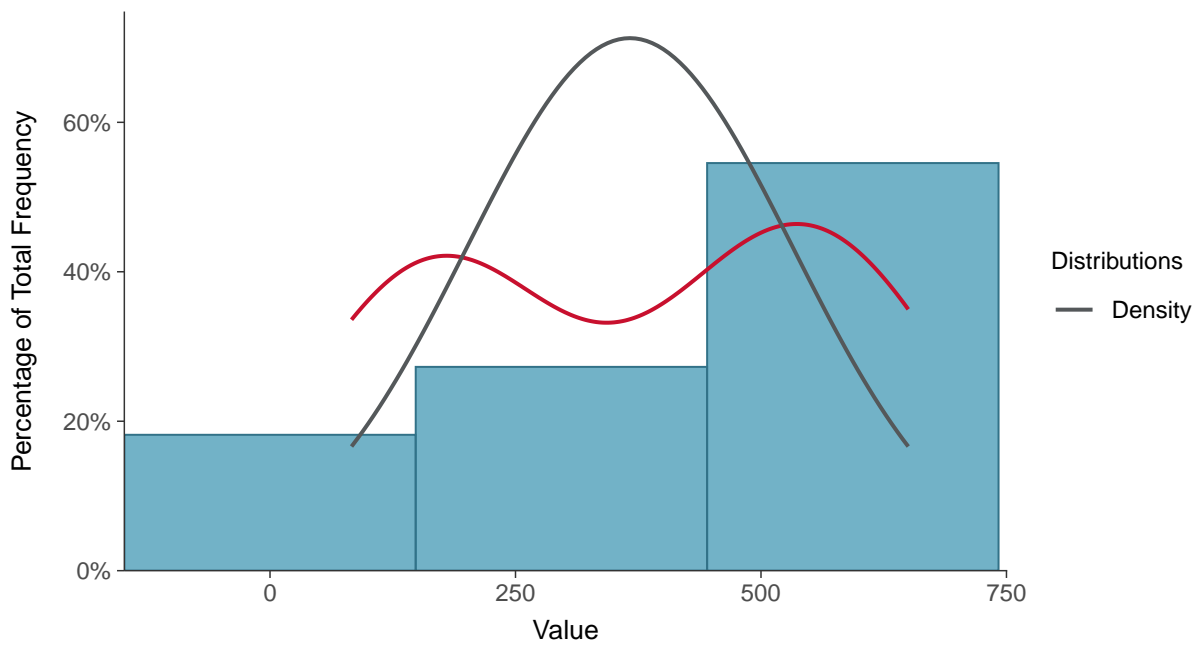
Scatter Plot

Sulfate (as SO₄), MW-09 (mg/L)



Histogram

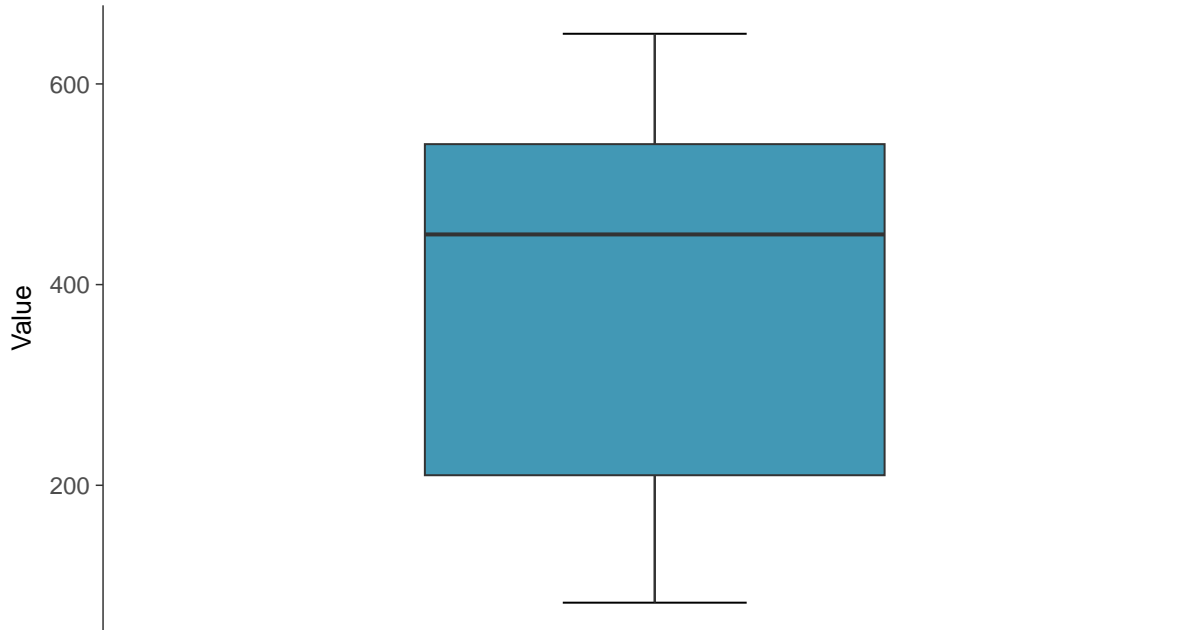
Sulfate (as SO₄), MW-09 (mg/L)





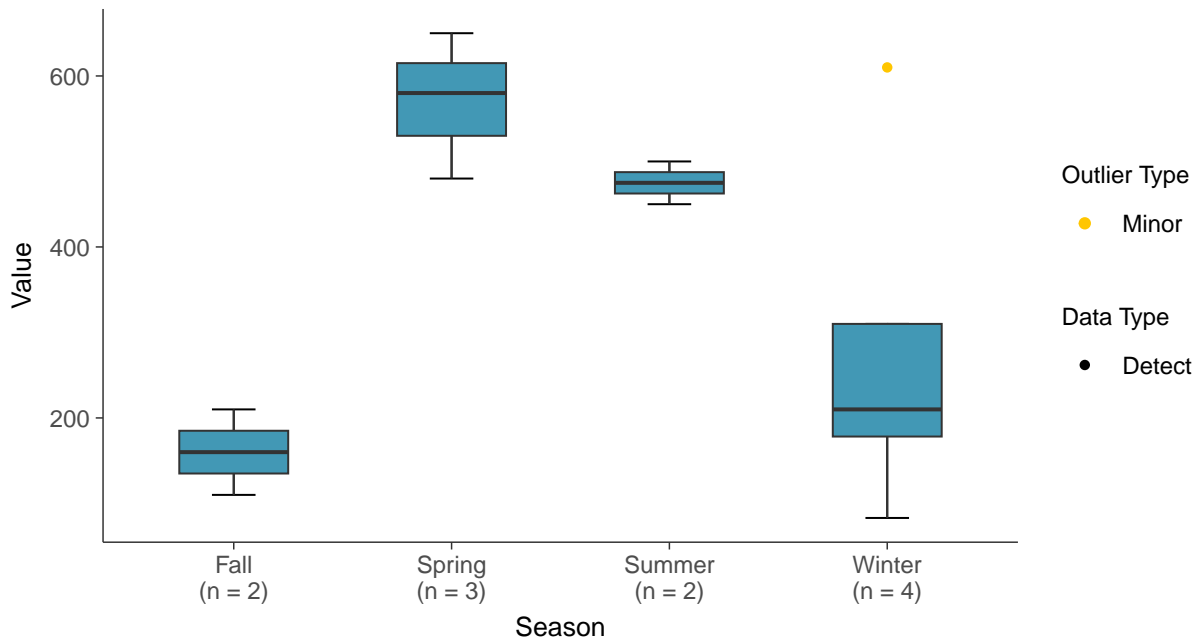
Boxplot

Sulfate (as SO₄), MW-09 (mg/L)



Boxplot by Season

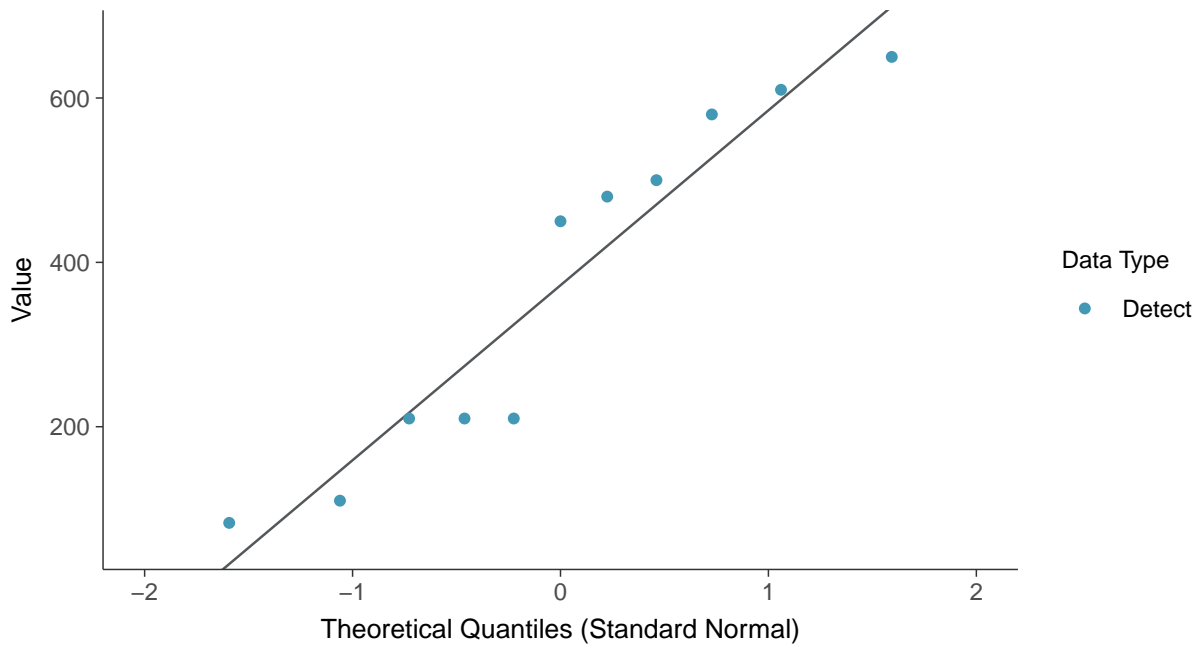
Sulfate (as SO₄), MW-09 (mg/L)





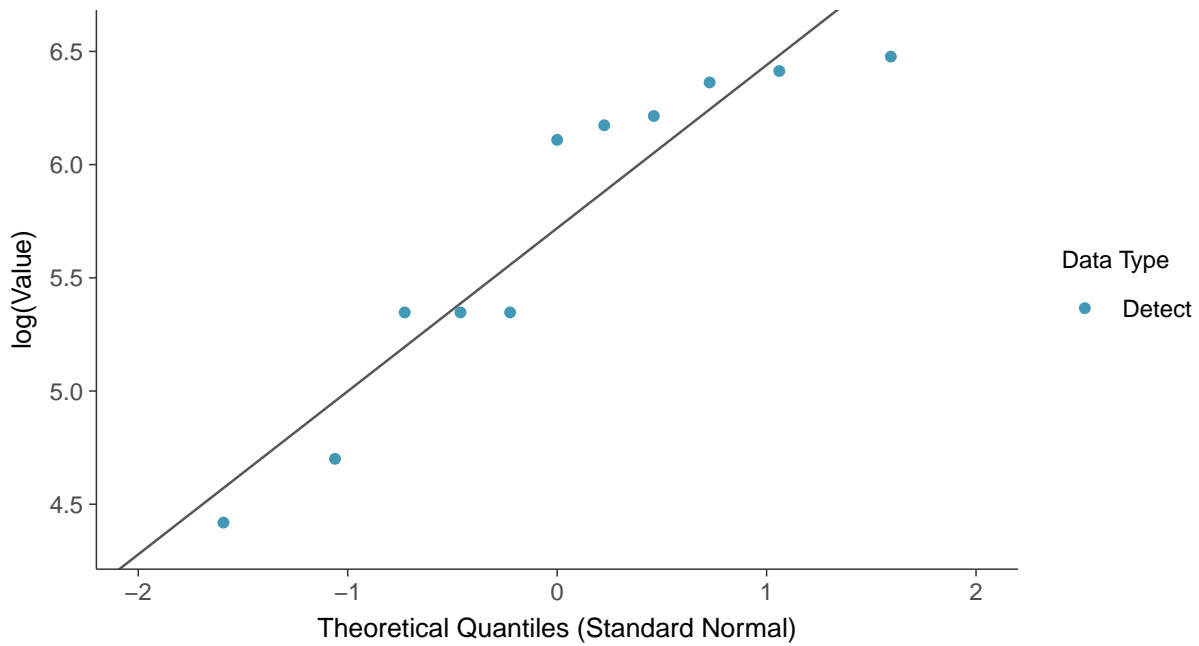
Normal Q-Q plot

Sulfate (as SO₄), MW-09 (mg/L)



Lognormal Q-Q plot

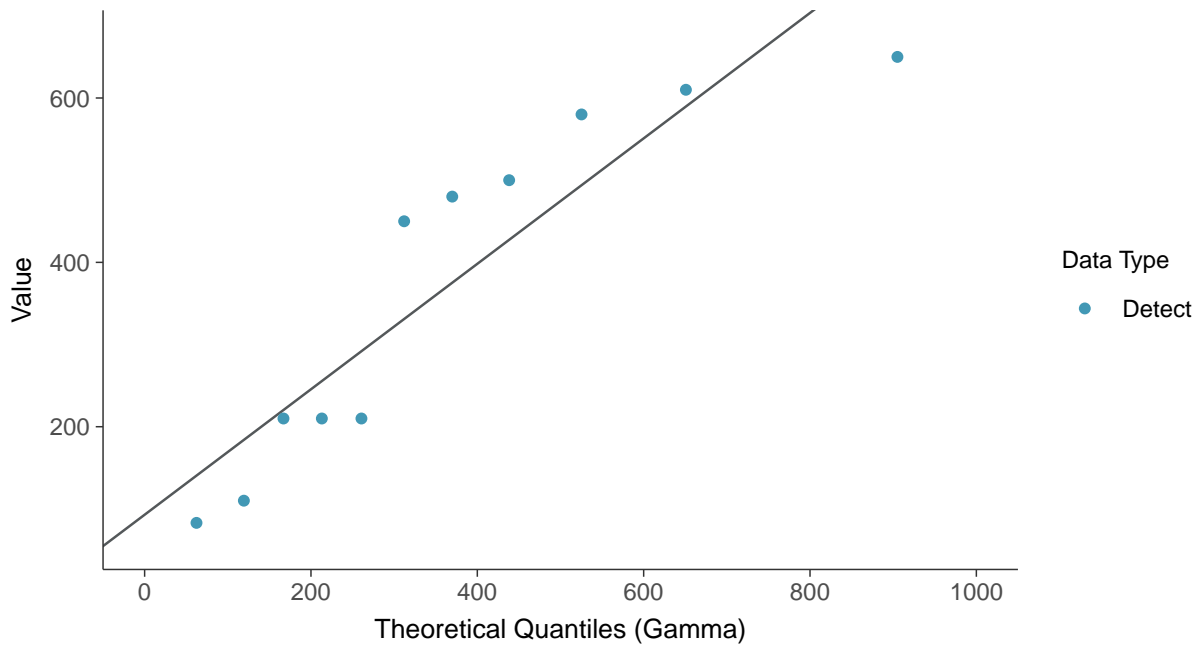
Sulfate (as SO₄), MW-09 (mg/L)





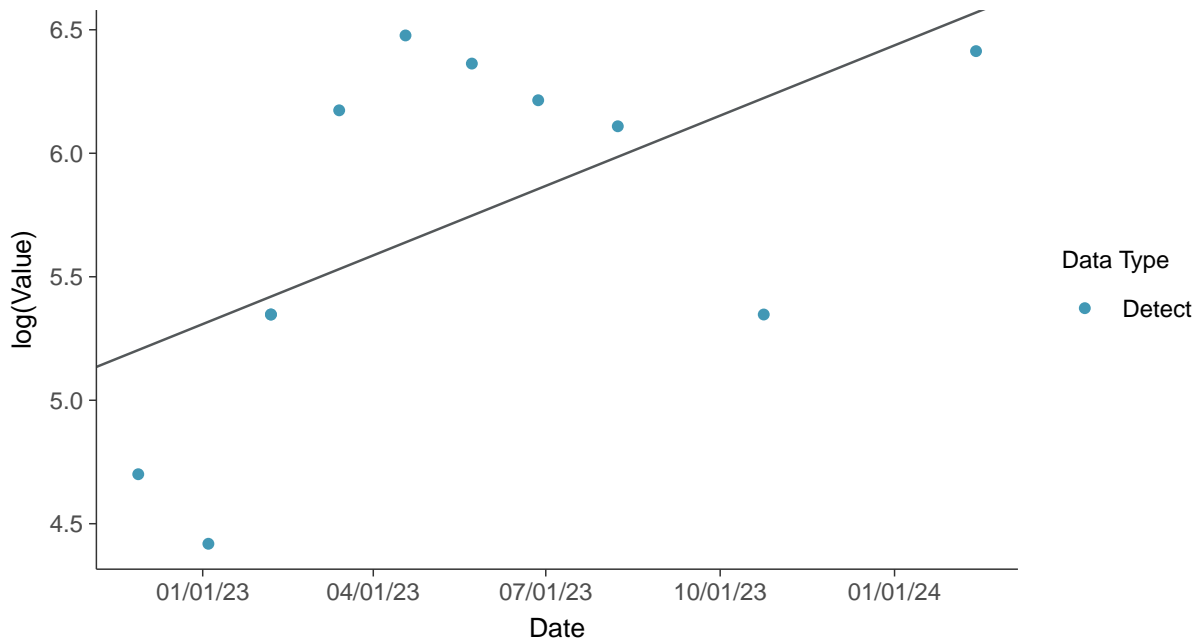
Gamma Q-Q plot

Sulfate (as SO₄), MW-09 (mg/L)



Trend Regression: Lognormal MLE

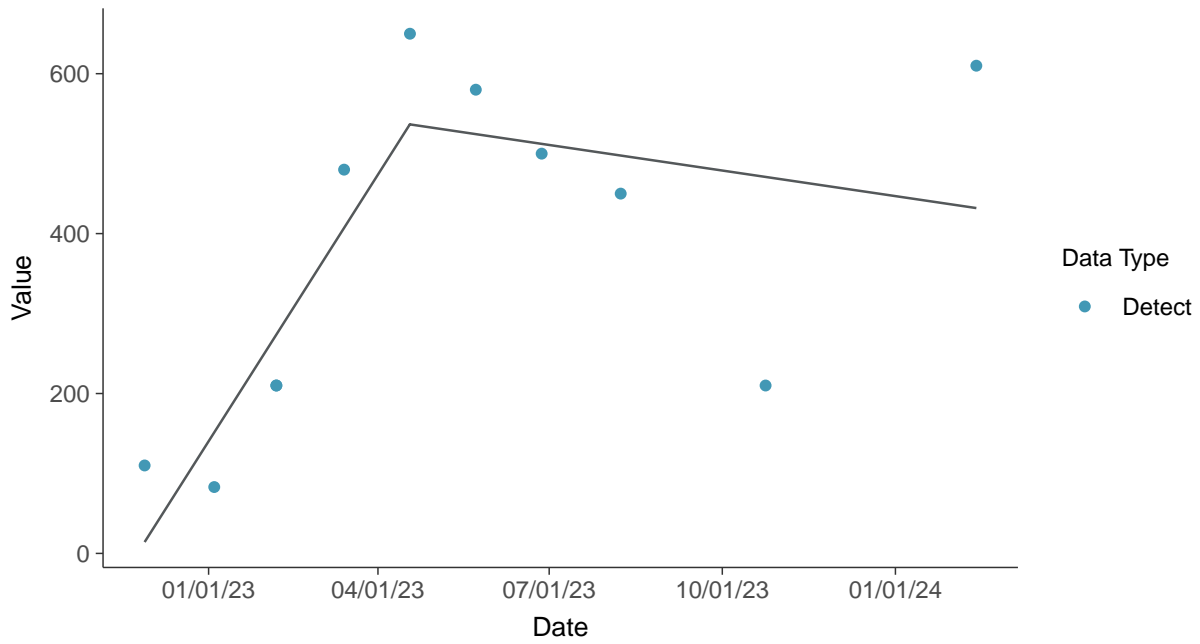
Sulfate (as SO₄), MW-09 (mg/L)





Trend Regression: Piecewise Linear-Linear

Sulfate (as SO₄), MW-09 (mg/L)



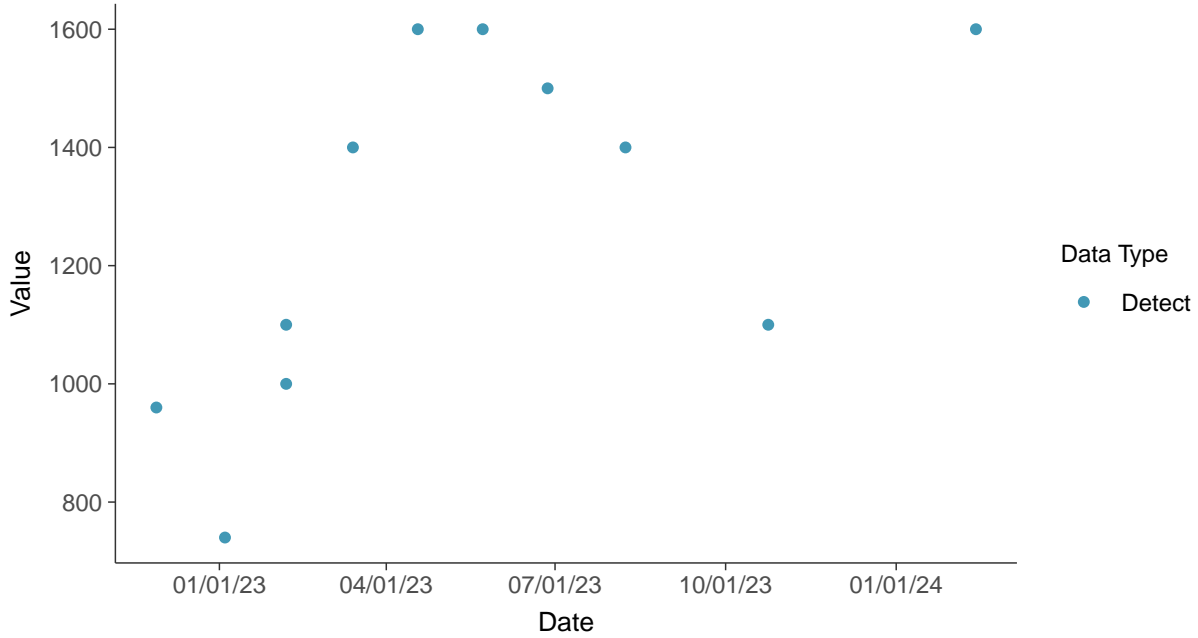


Appendix III: Total Dissolved Solids, MW-09

ID: 2_19_4_126

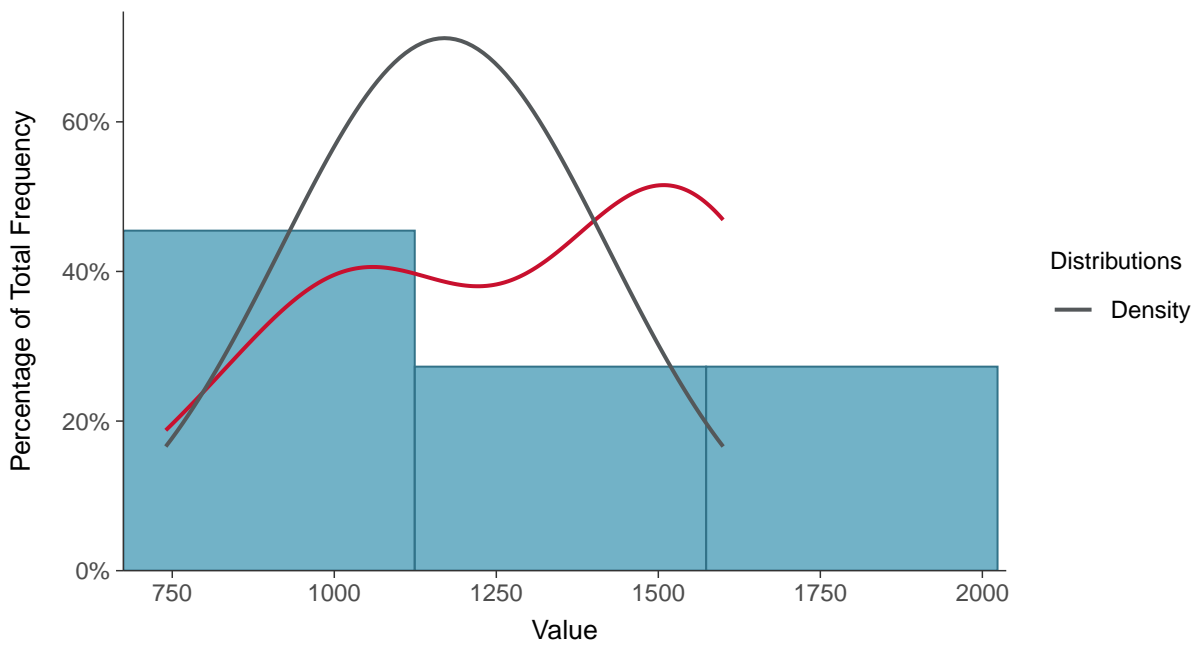
Scatter Plot

Total Dissolved Solids, MW-09 (mg/L)



Histogram

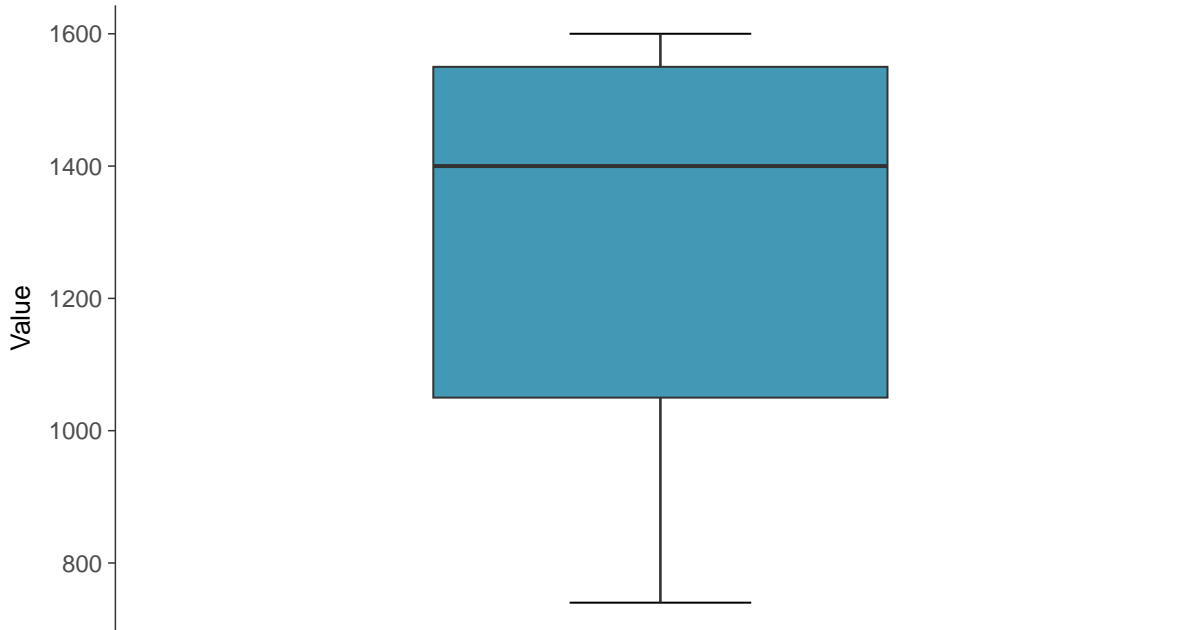
Total Dissolved Solids, MW-09 (mg/L)





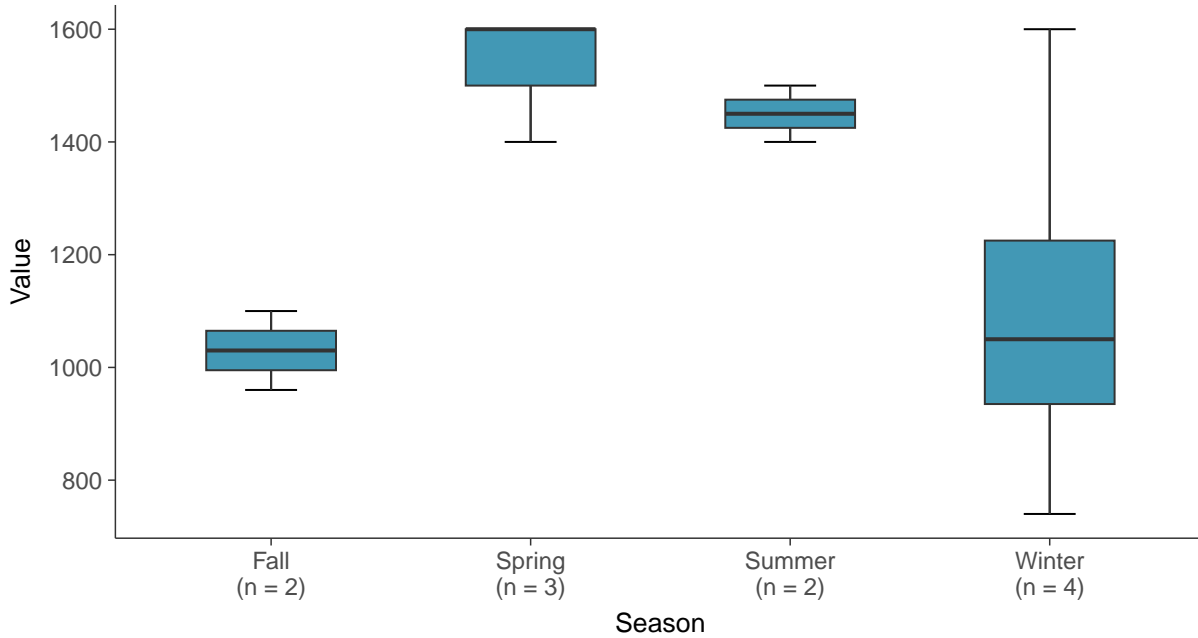
Boxplot

Total Dissolved Solids, MW-09 (mg/L)



Boxplot by Season

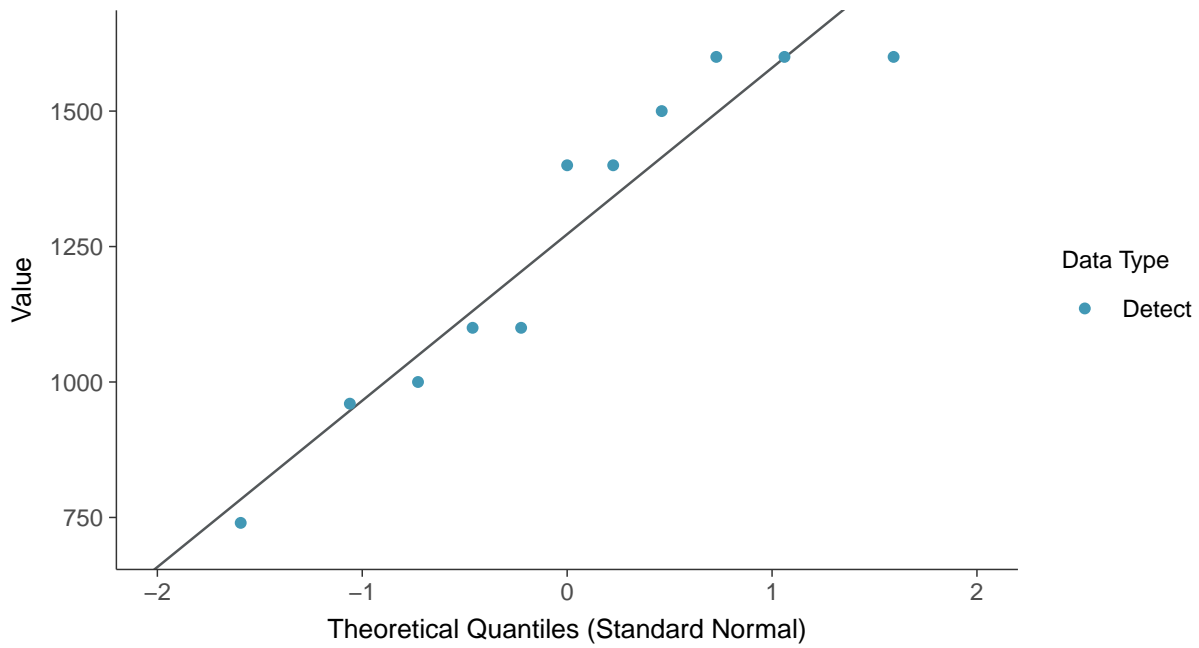
Total Dissolved Solids, MW-09 (mg/L)





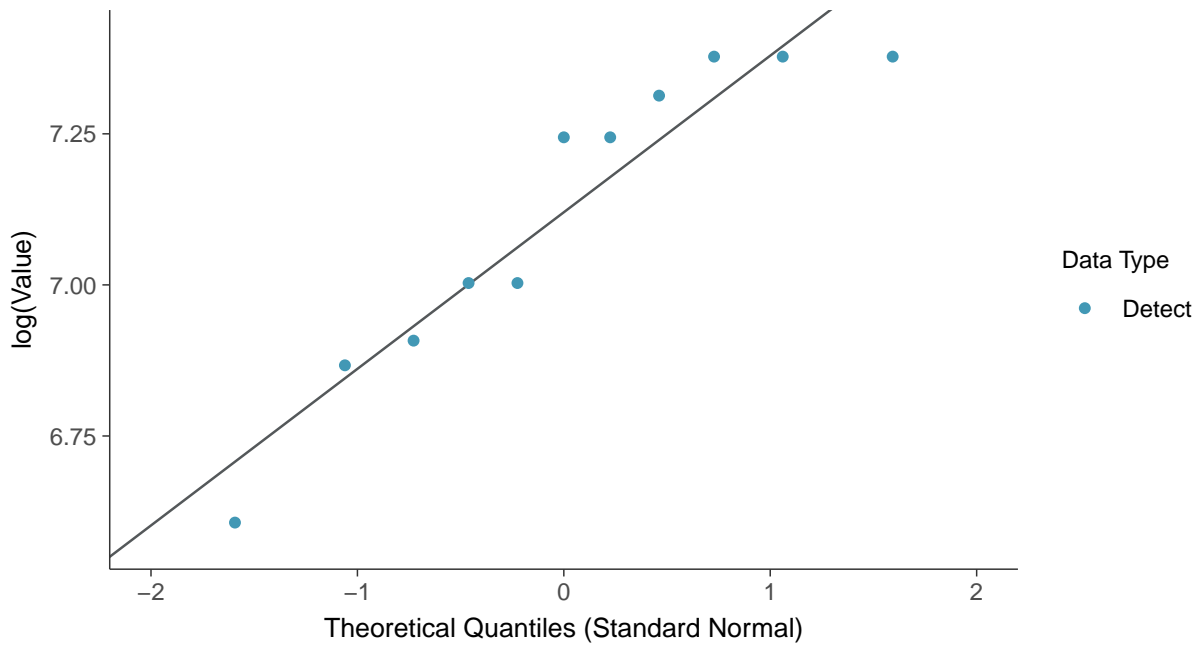
Normal Q-Q plot

Total Dissolved Solids, MW-09 (mg/L)



Lognormal Q-Q plot

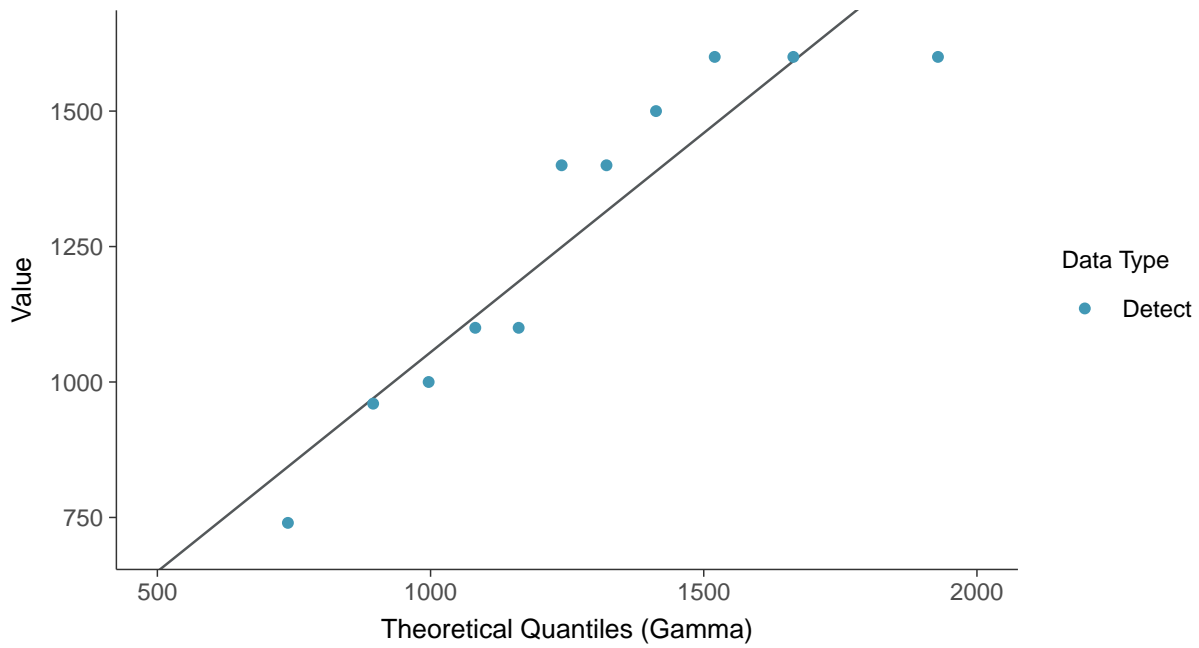
Total Dissolved Solids, MW-09 (mg/L)





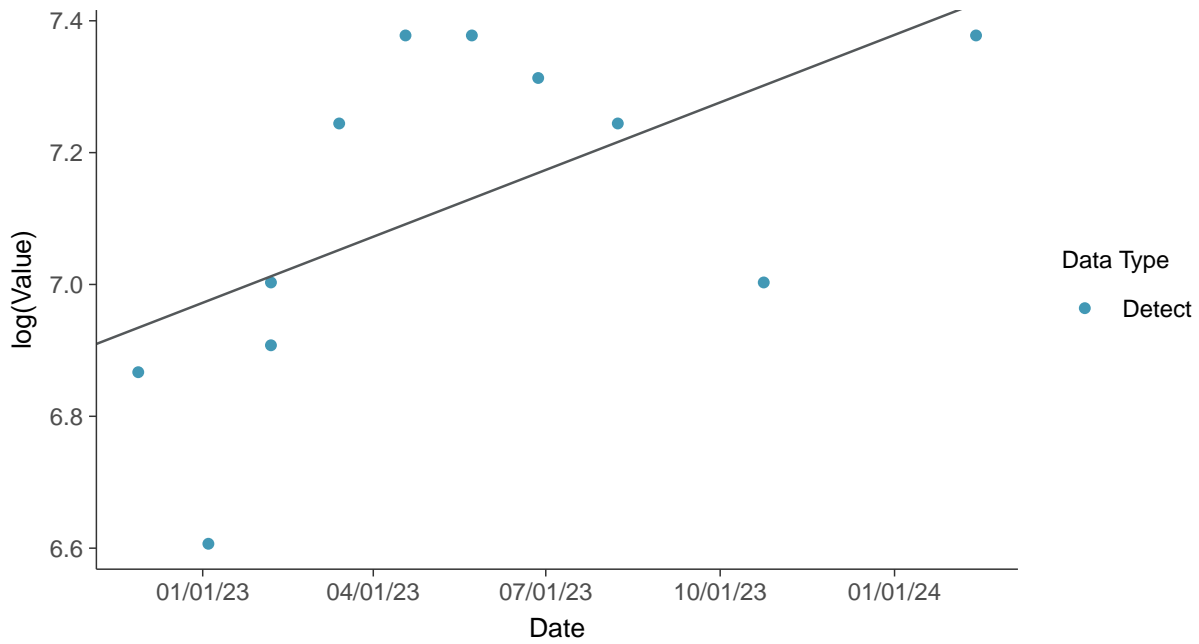
Gamma Q-Q plot

Total Dissolved Solids, MW-09 (mg/L)



Trend Regression: Lognormal MLE

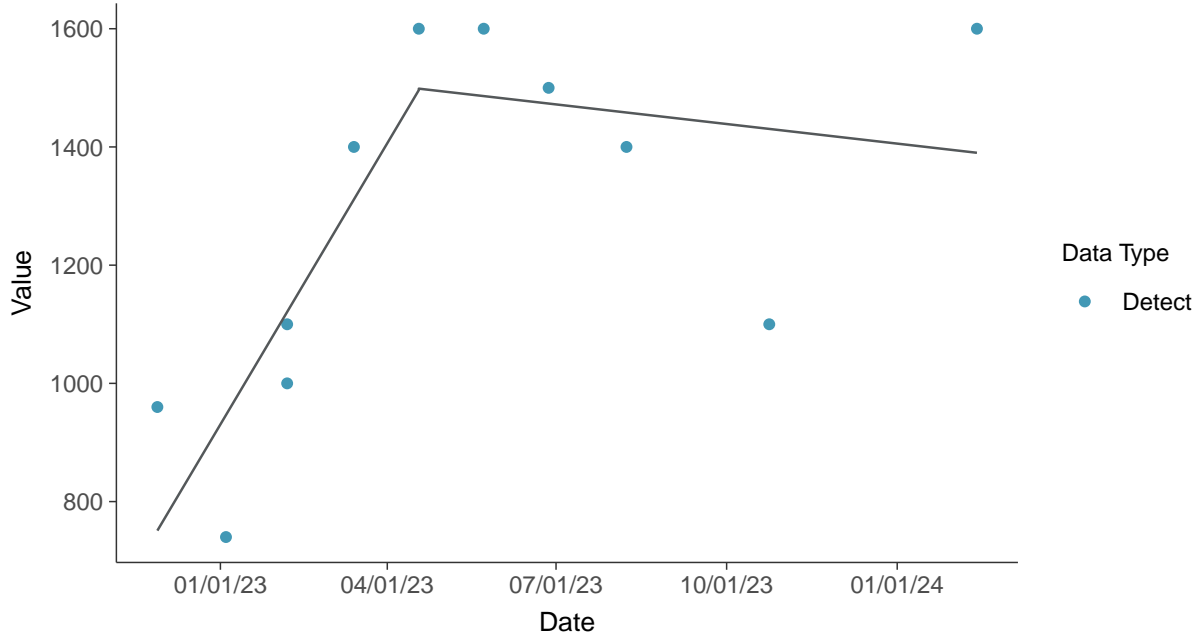
Total Dissolved Solids, MW-09 (mg/L)





Trend Regression: Piecewise Linear-Linear

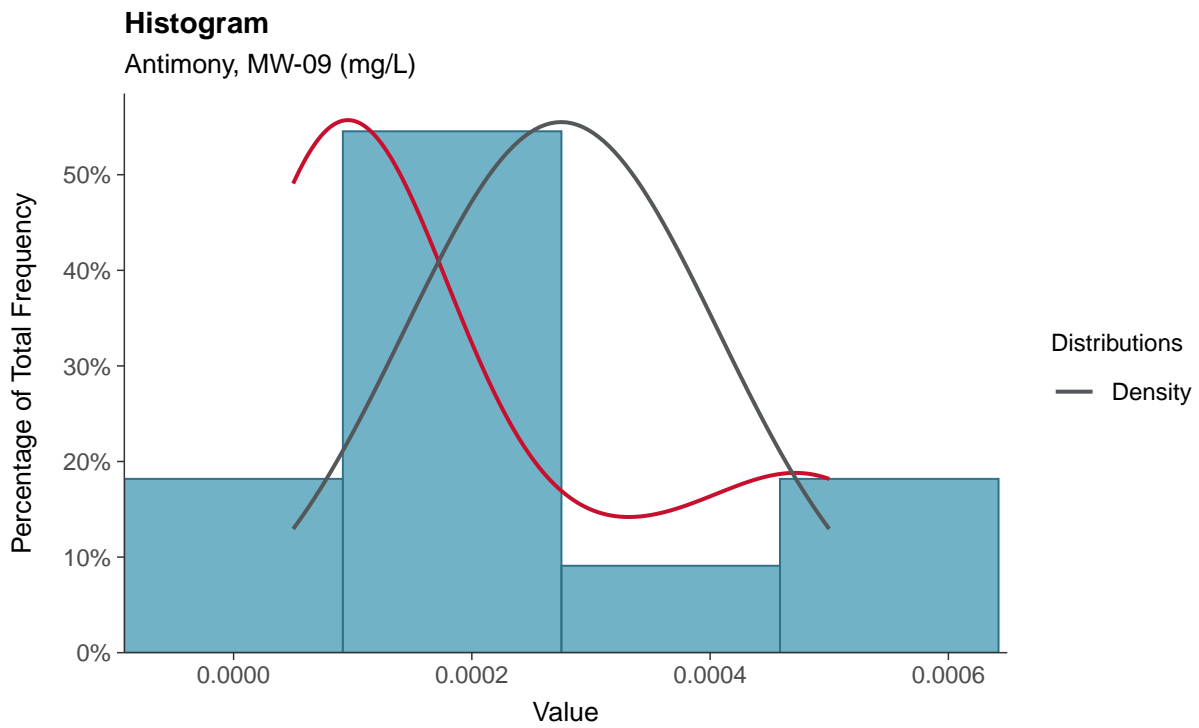
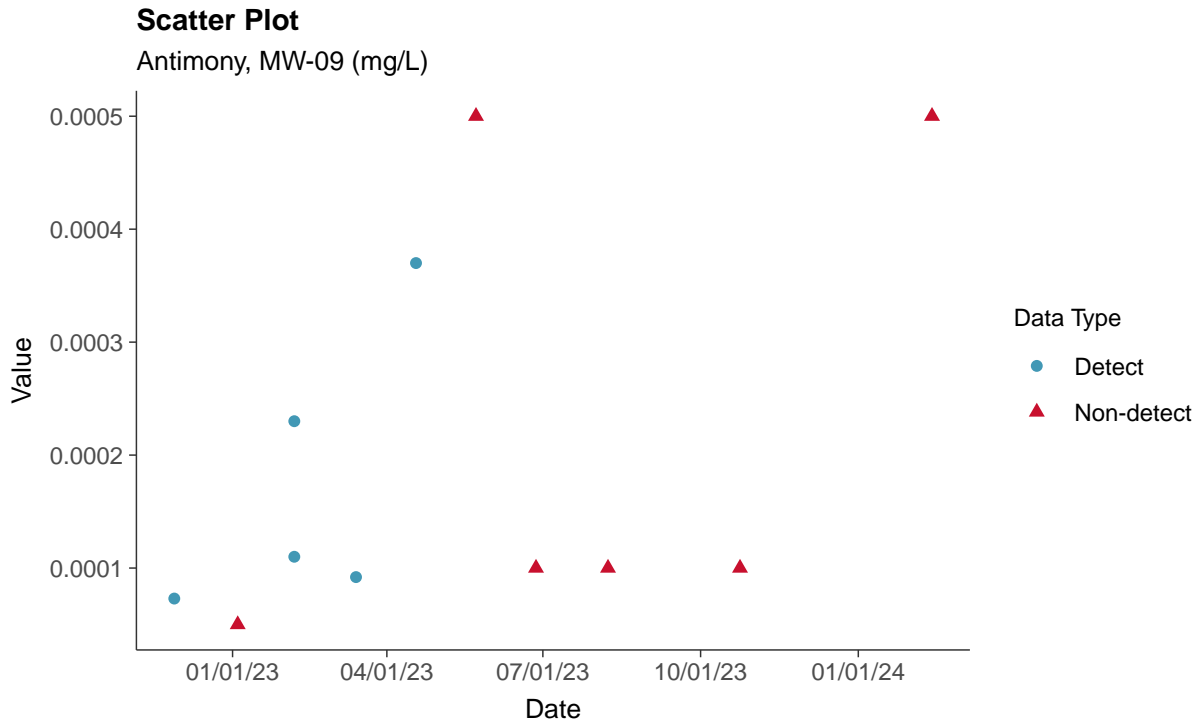
Total Dissolved Solids, MW-09 (mg/L)





Appendix IV: Antimony, MW-09

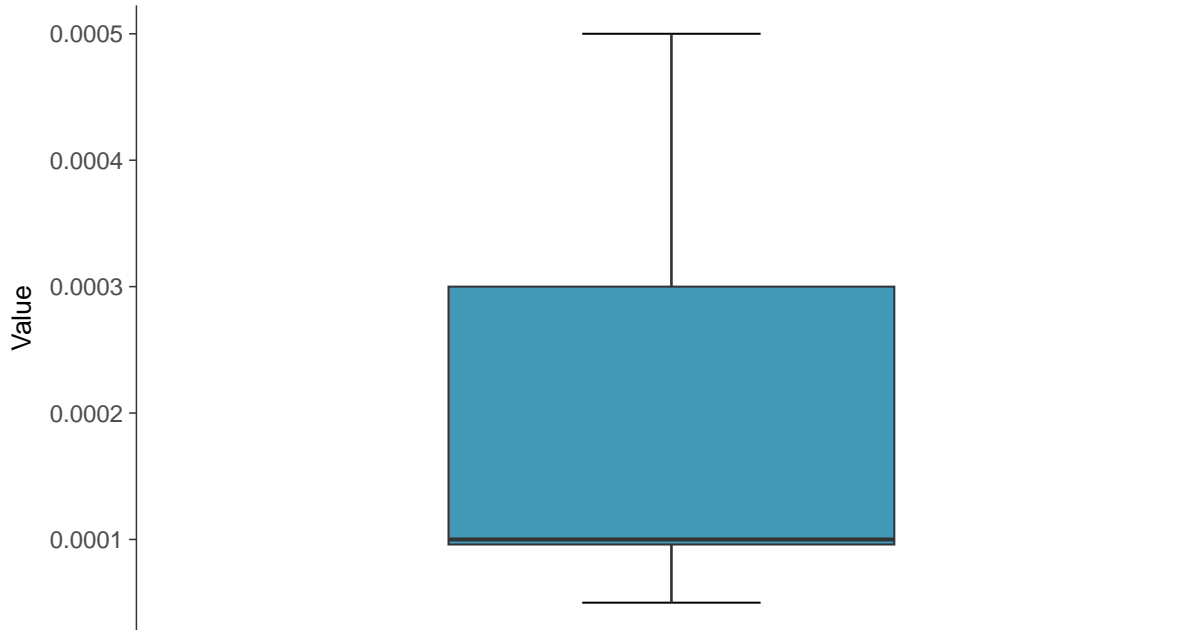
ID: 2_19_5_101





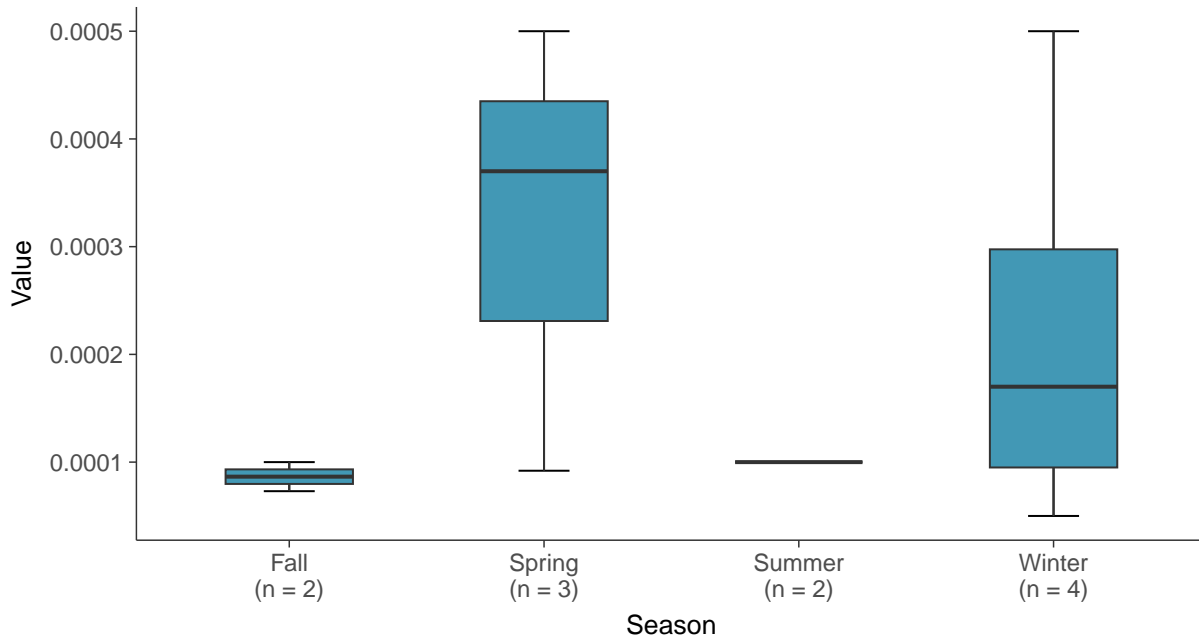
Boxplot

Antimony, MW-09 (mg/L)



Boxplot by Season

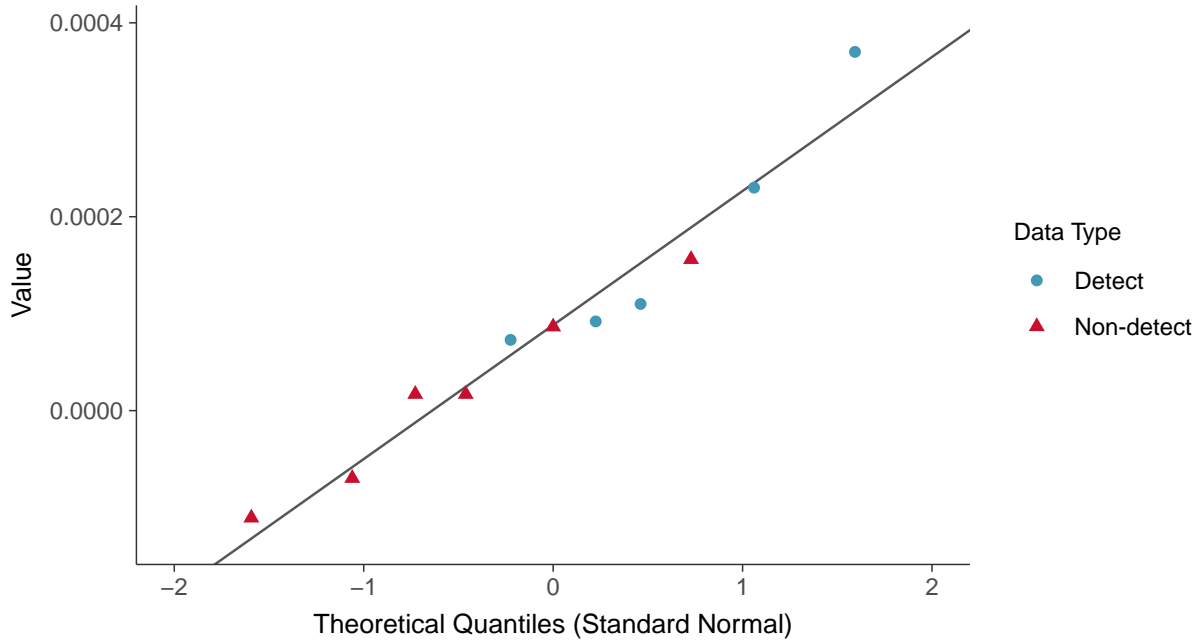
Antimony, MW-09 (mg/L)





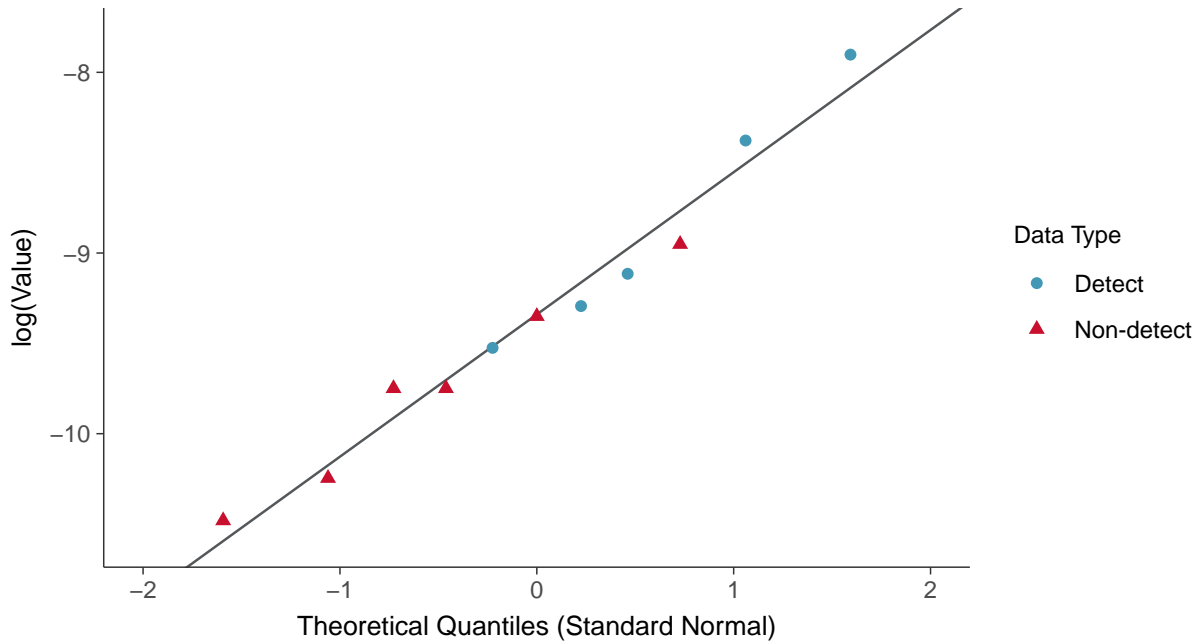
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-09 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

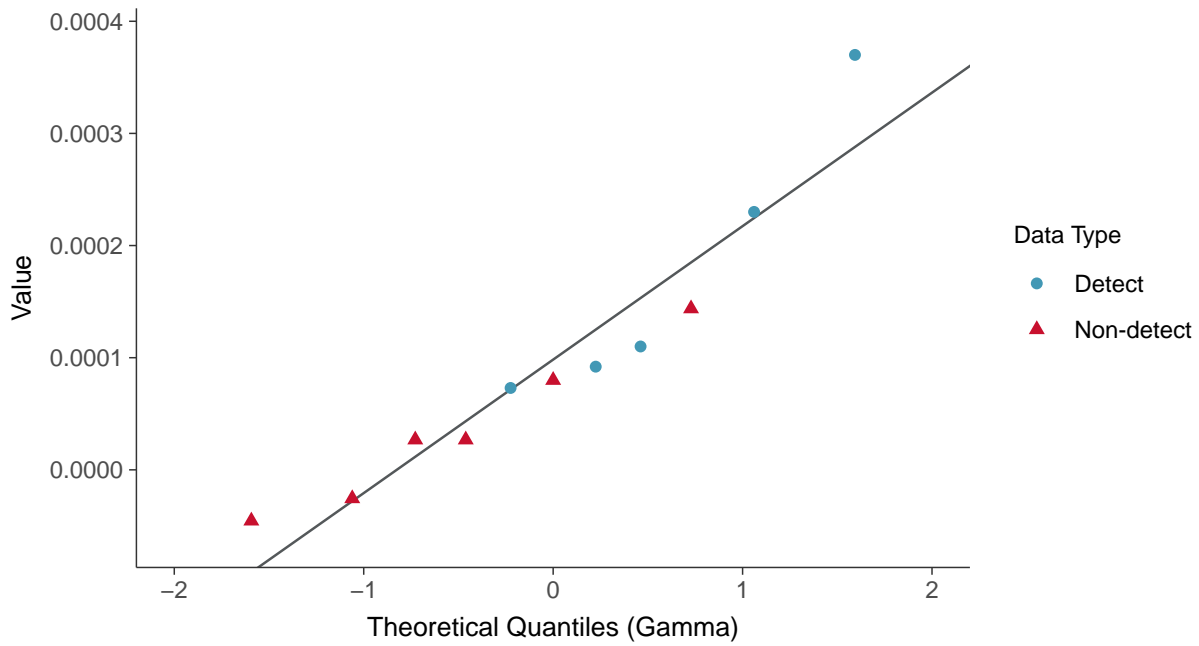
Antimony, MW-09 (mg/L)





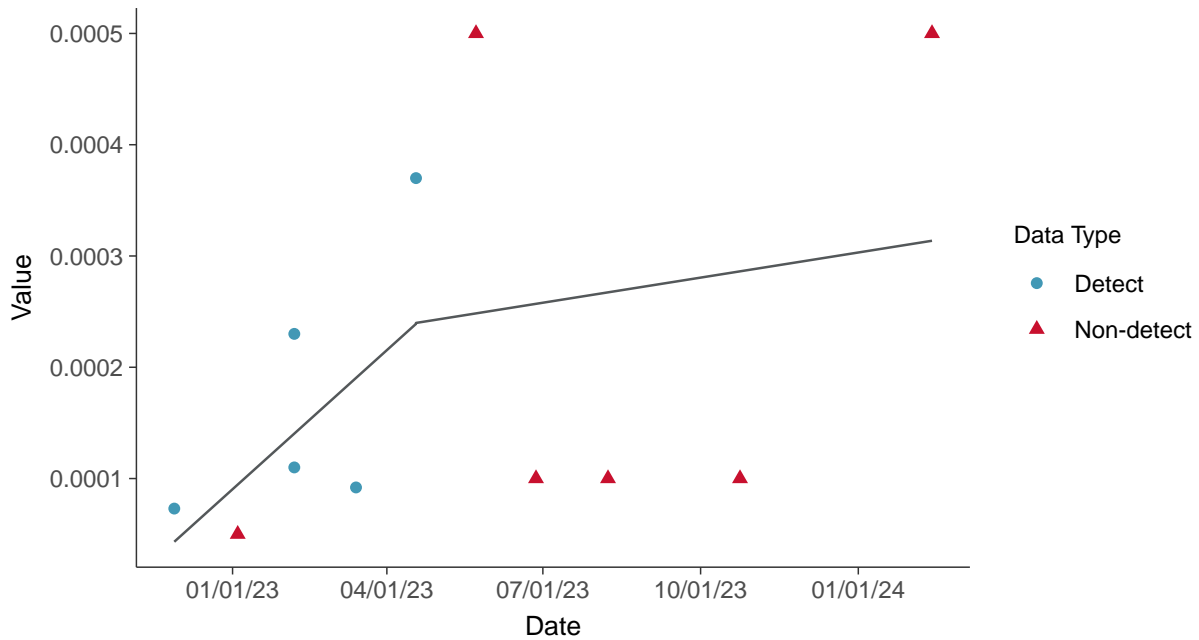
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear

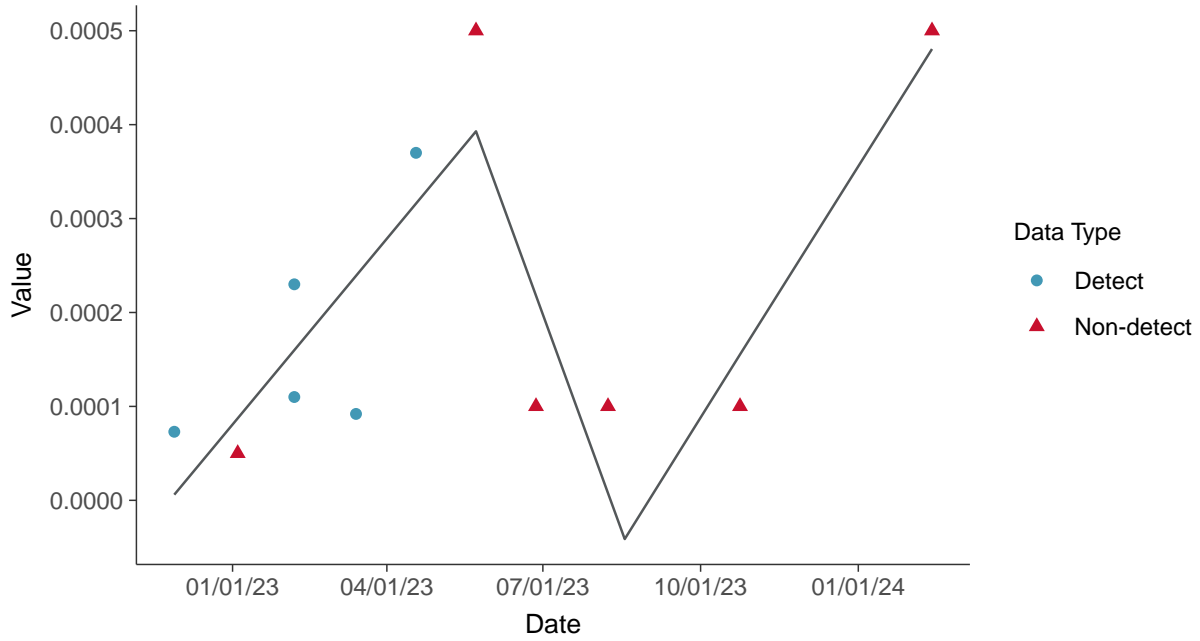
Antimony, MW-09 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-09 (mg/L)



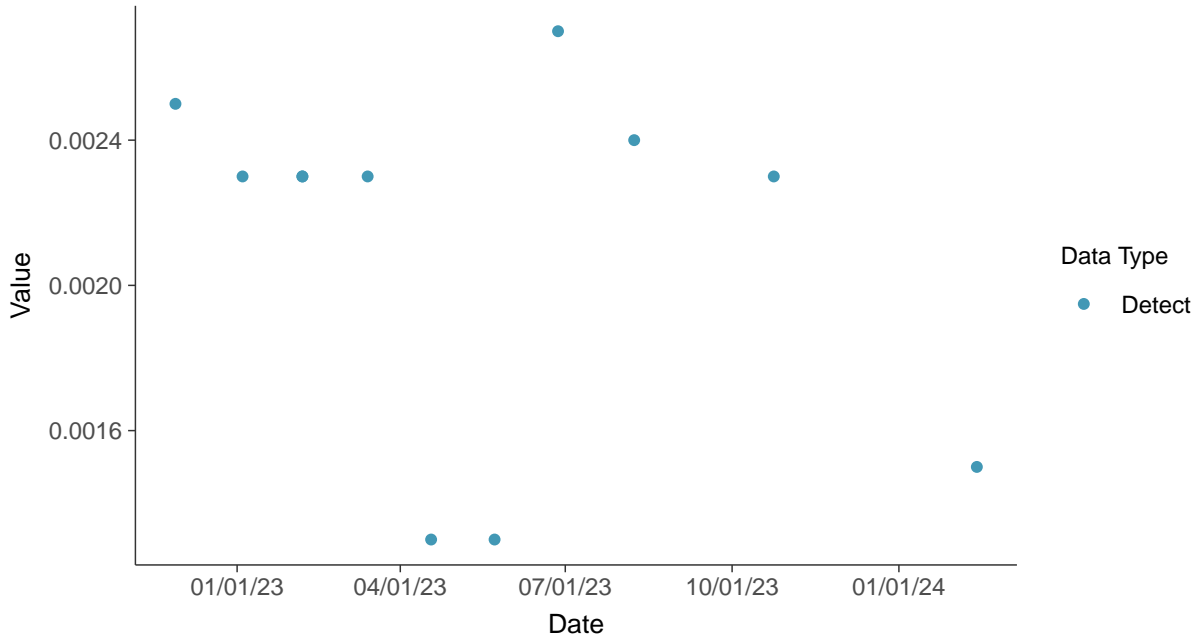


Appendix IV: Arsenic, MW-09

ID: 2_19_5_102

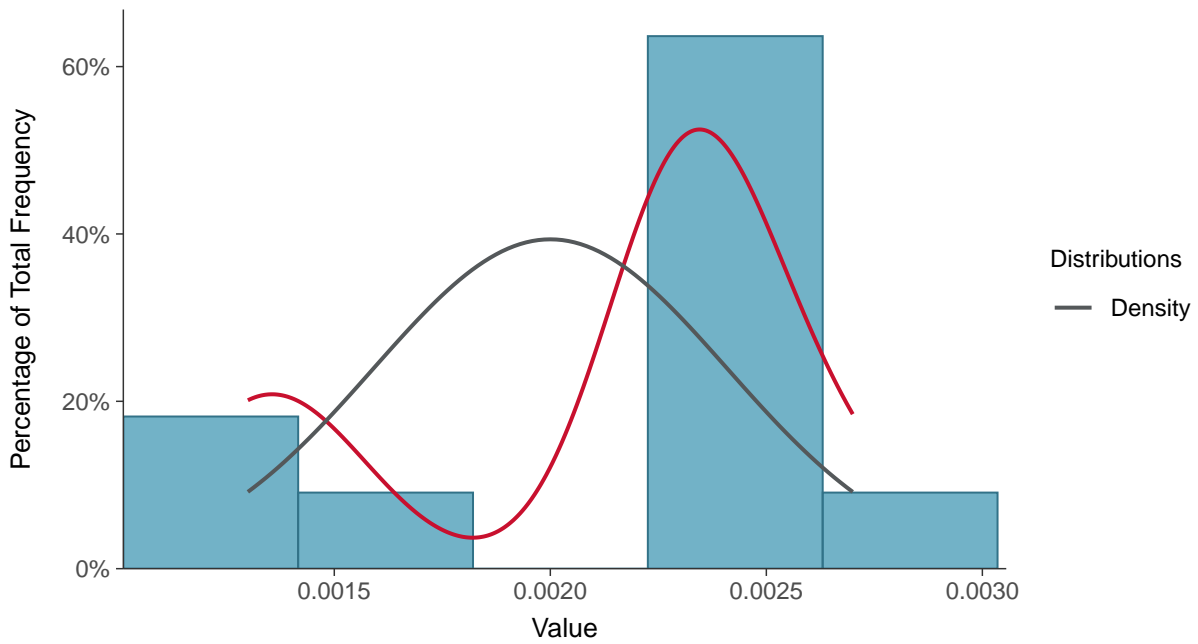
Scatter Plot

Arsenic, MW-09 (mg/L)



Histogram

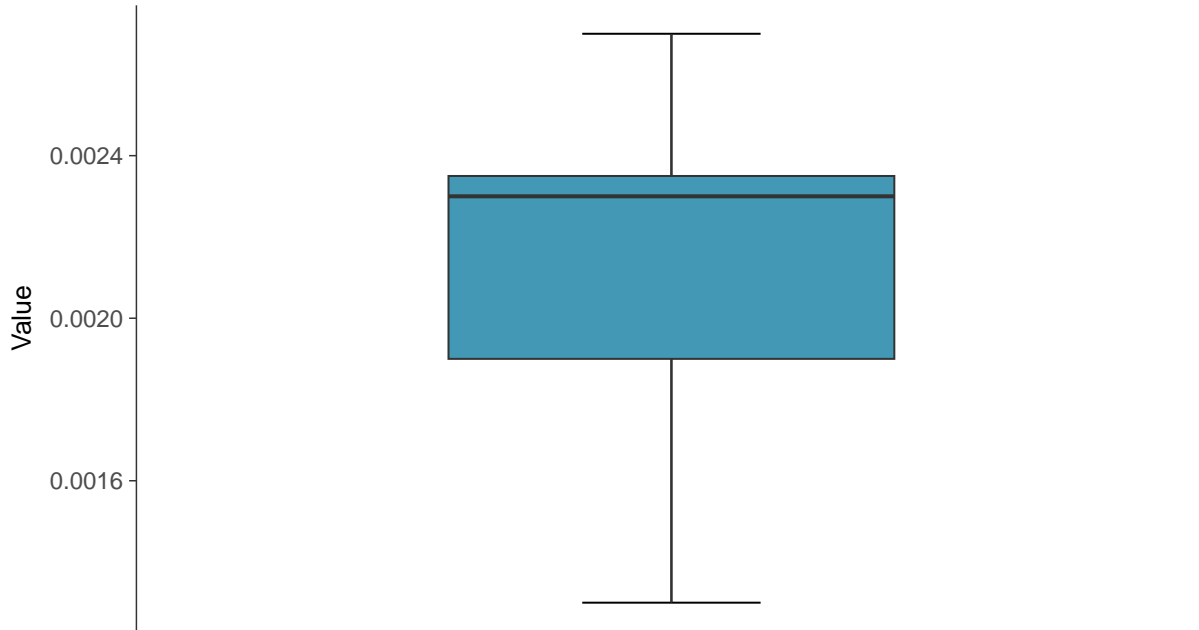
Arsenic, MW-09 (mg/L)





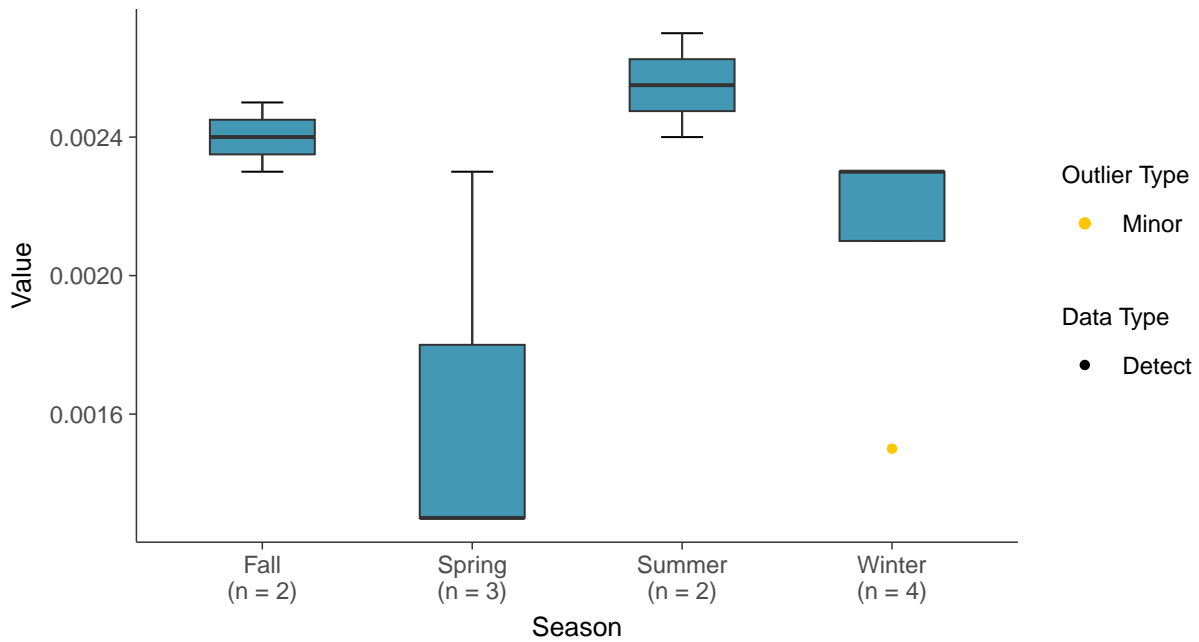
Boxplot

Arsenic, MW-09 (mg/L)



Boxplot by Season

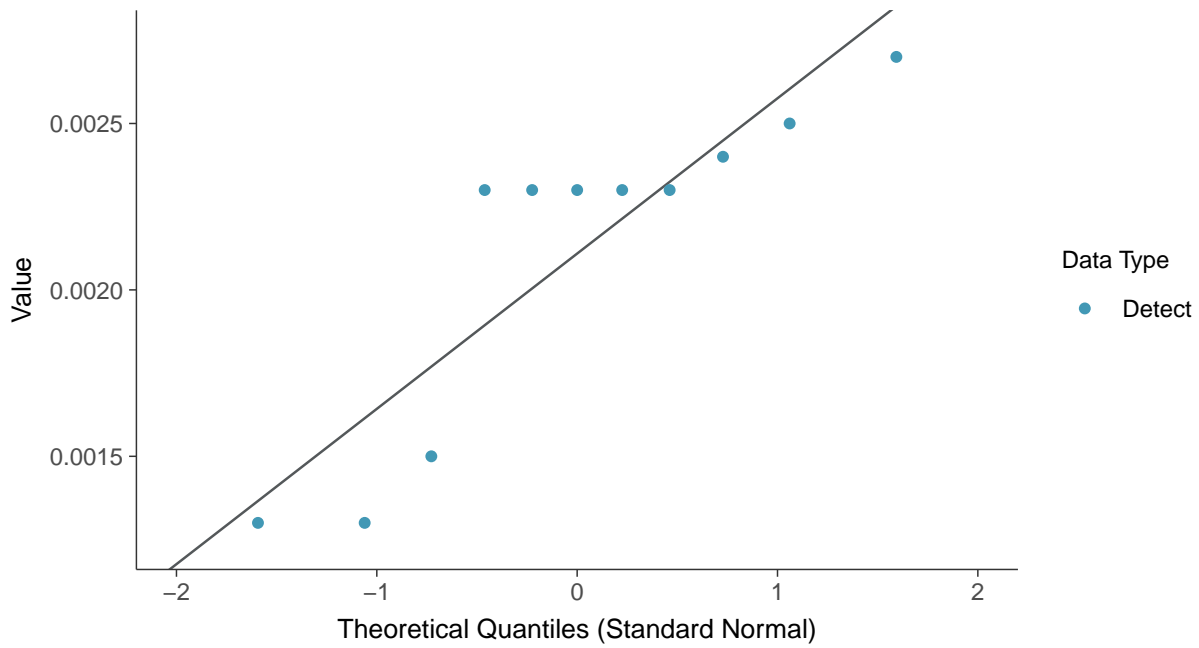
Arsenic, MW-09 (mg/L)





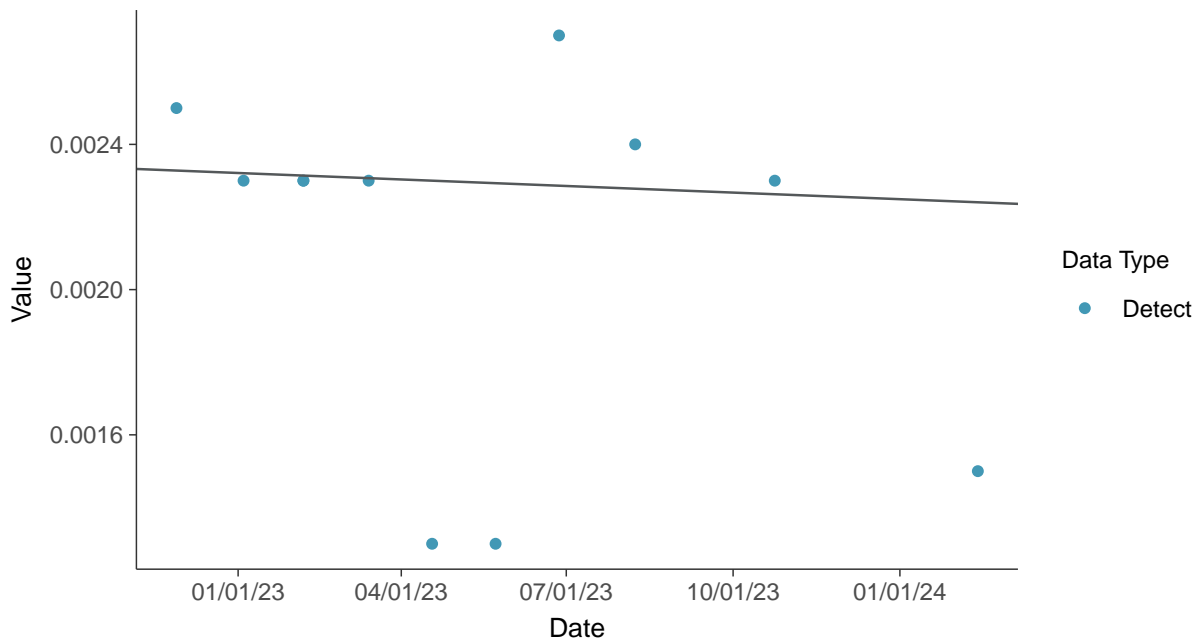
Normal Q-Q plot

Arsenic, MW-09 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

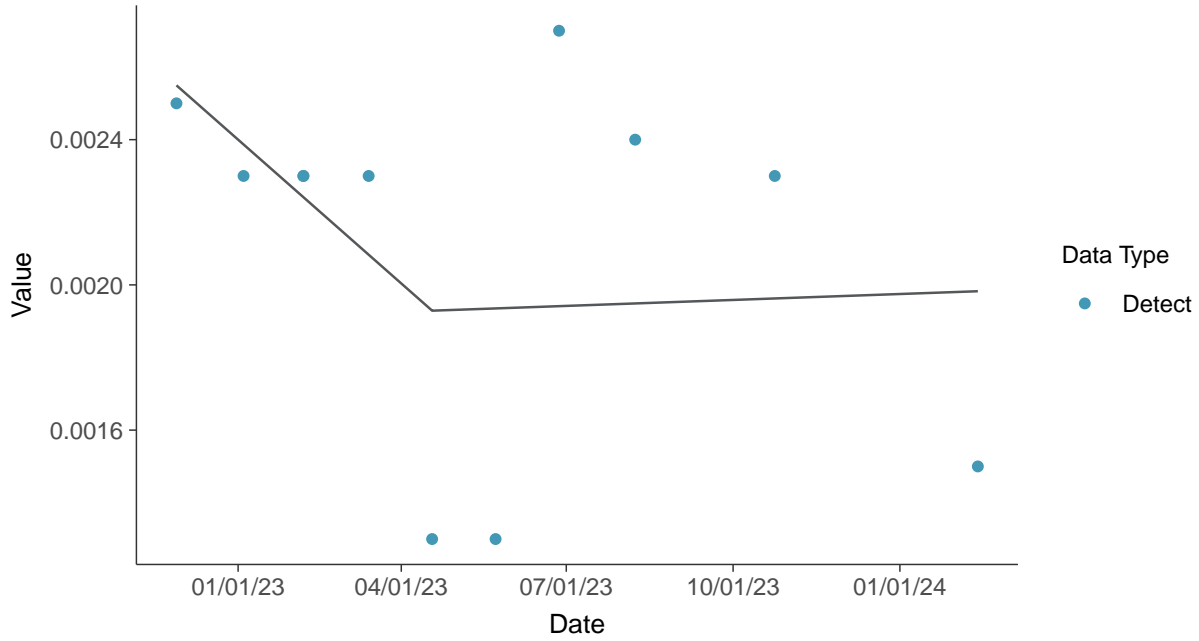
Arsenic, MW-09 (mg/L)





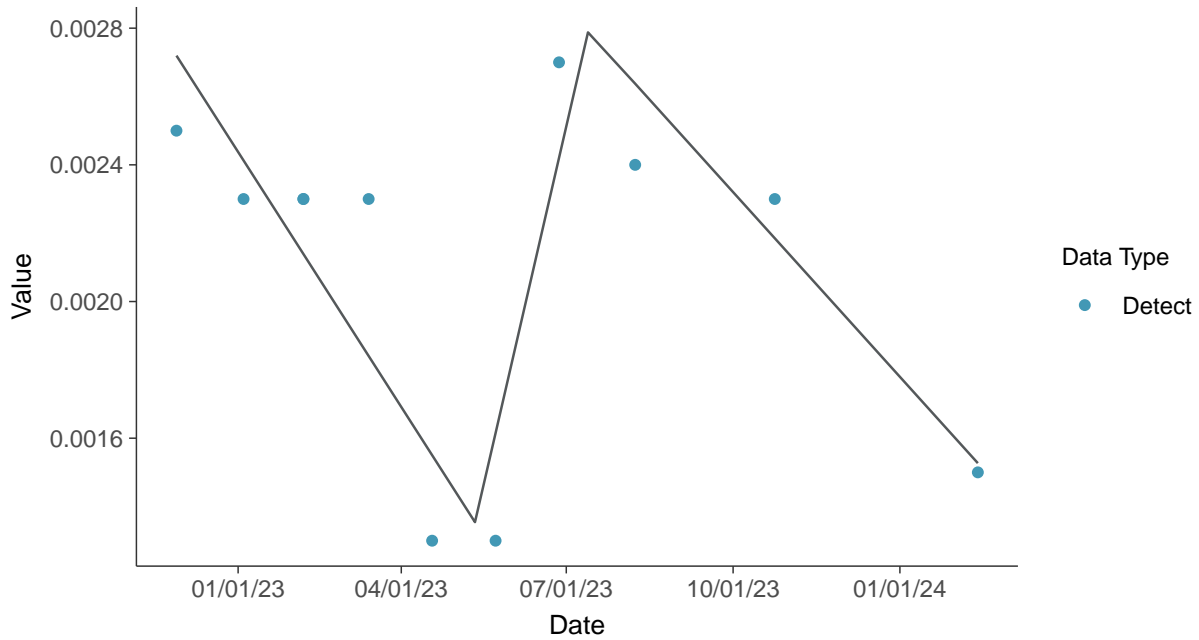
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

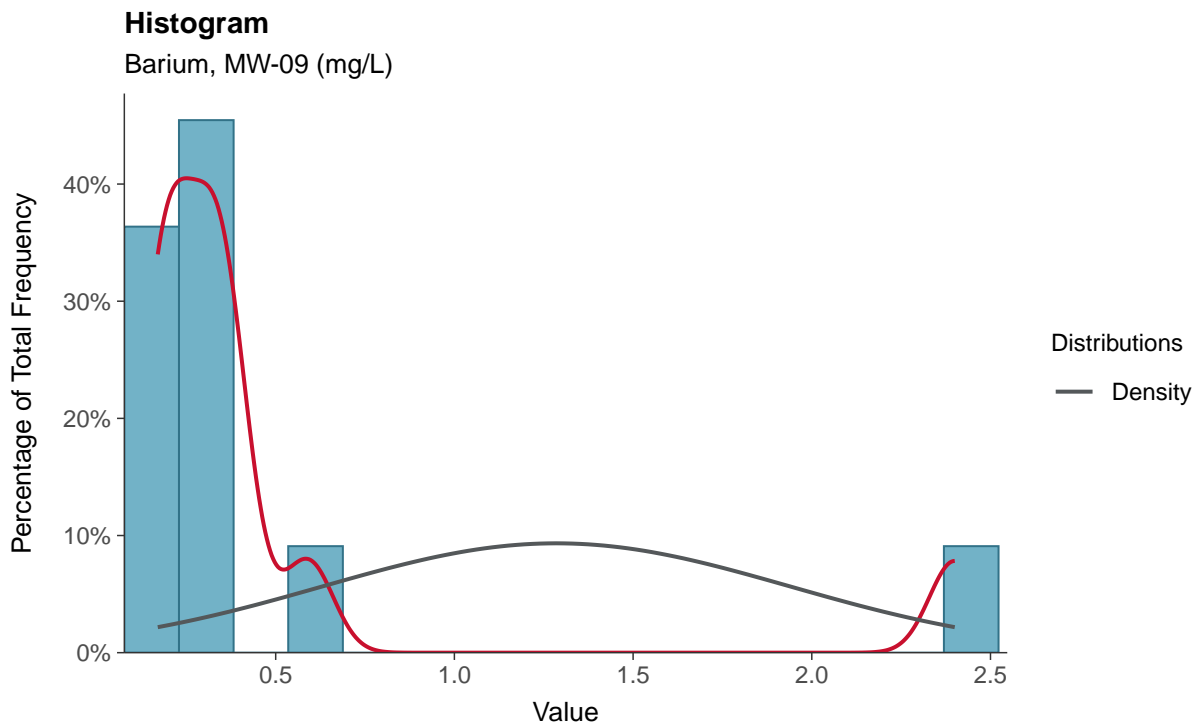
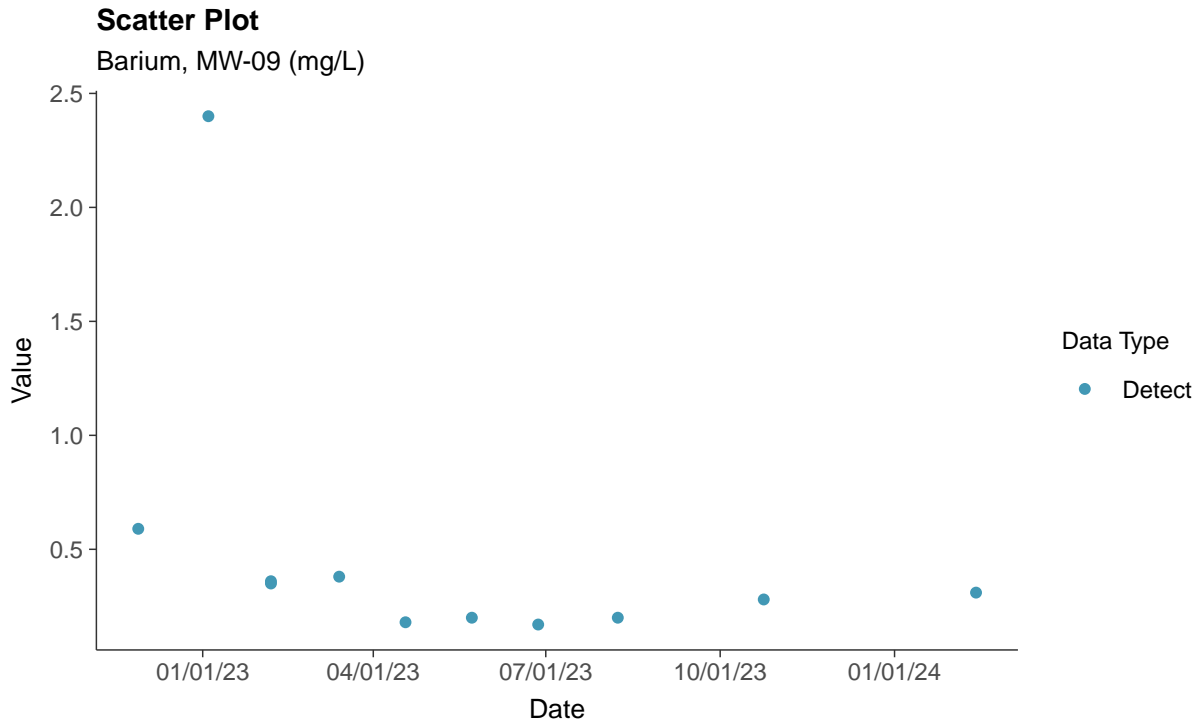
Arsenic, MW-09 (mg/L)





Appendix IV: Barium, MW-09

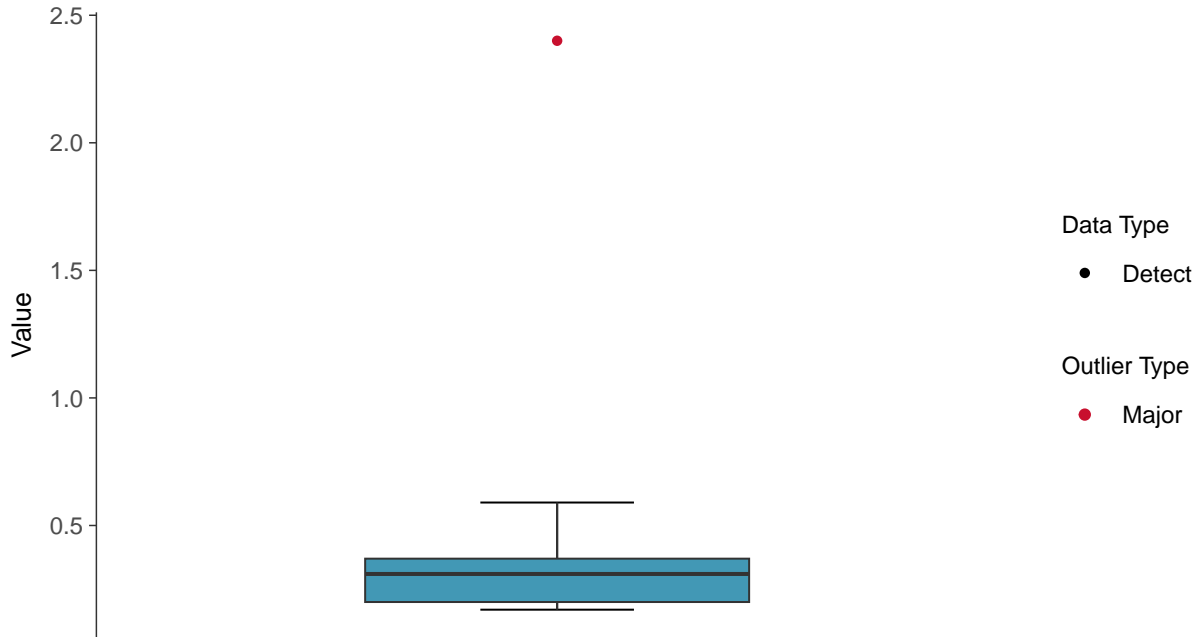
ID: 2_19_5_103





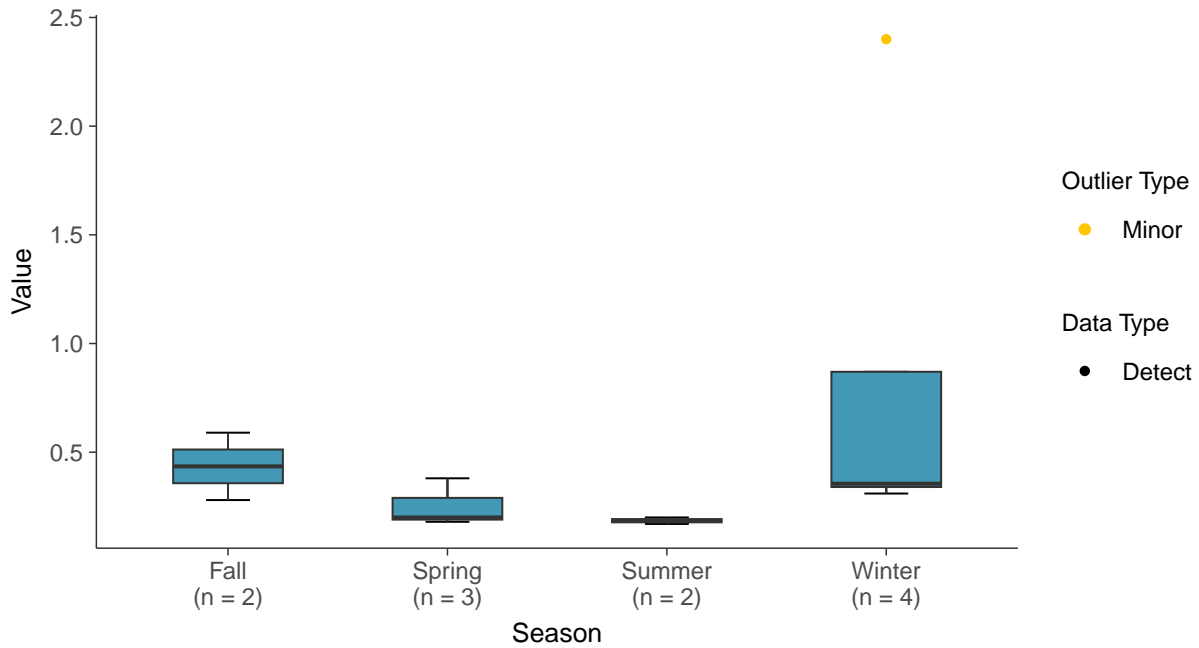
Boxplot

Barium, MW-09 (mg/L)



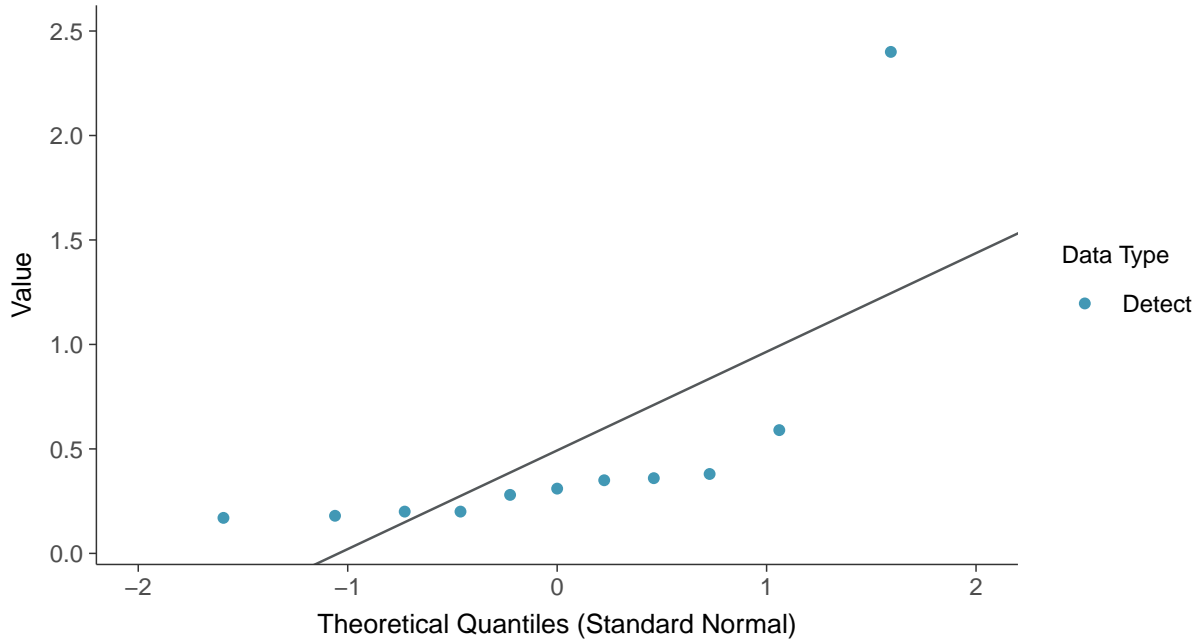
Boxplot by Season

Barium, MW-09 (mg/L)

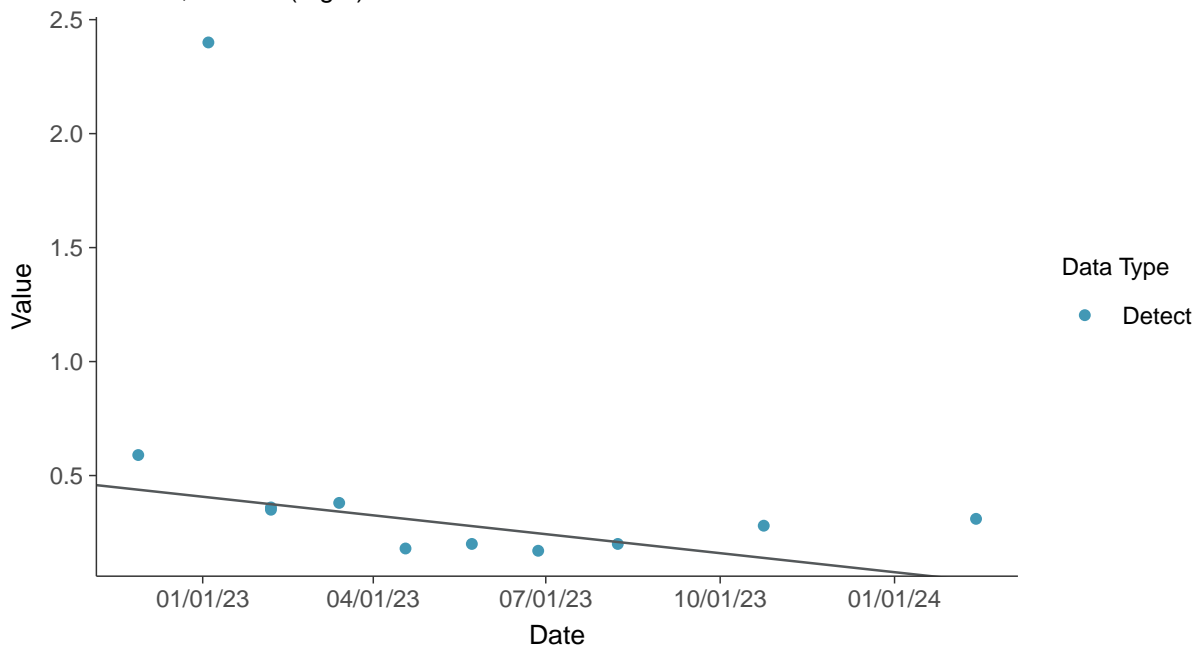




Normal Q-Q plot
Barium, MW-09 (mg/L)

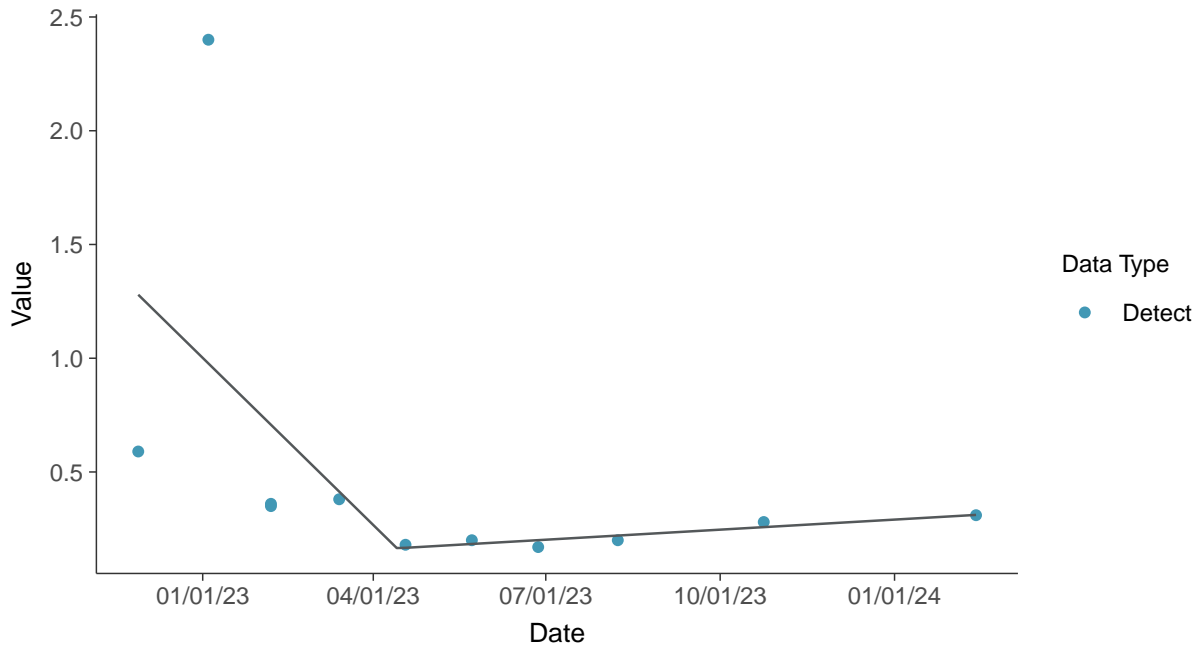


Trend Regression: Mann-Kendall/Theil-Sen Estimate
Barium, MW-09 (mg/L)





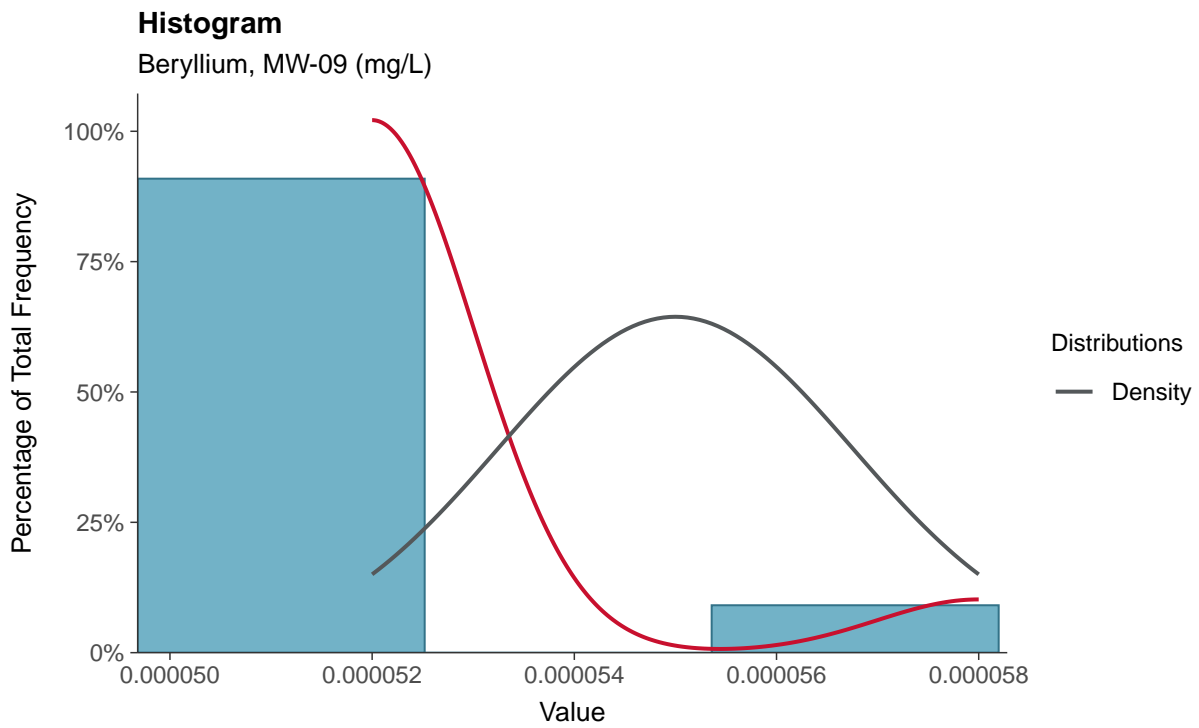
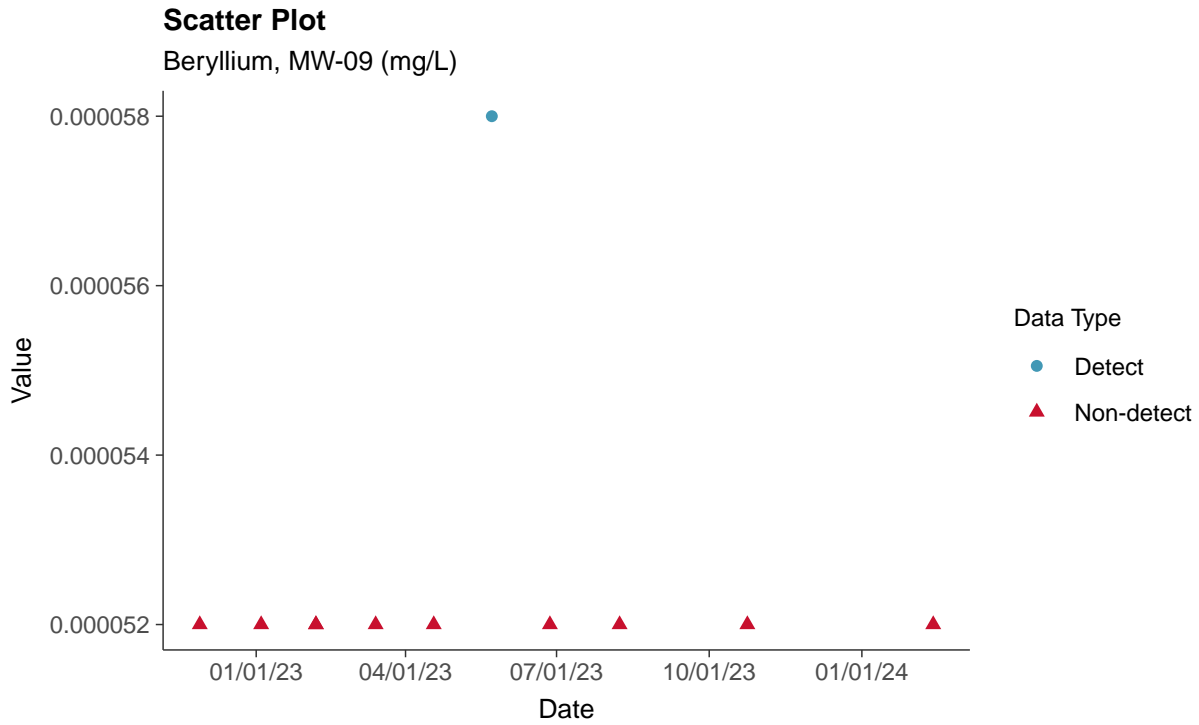
Trend Regression: Piecewise Linear-Linear
Barium, MW-09 (mg/L)





Appendix IV: Beryllium, MW-09

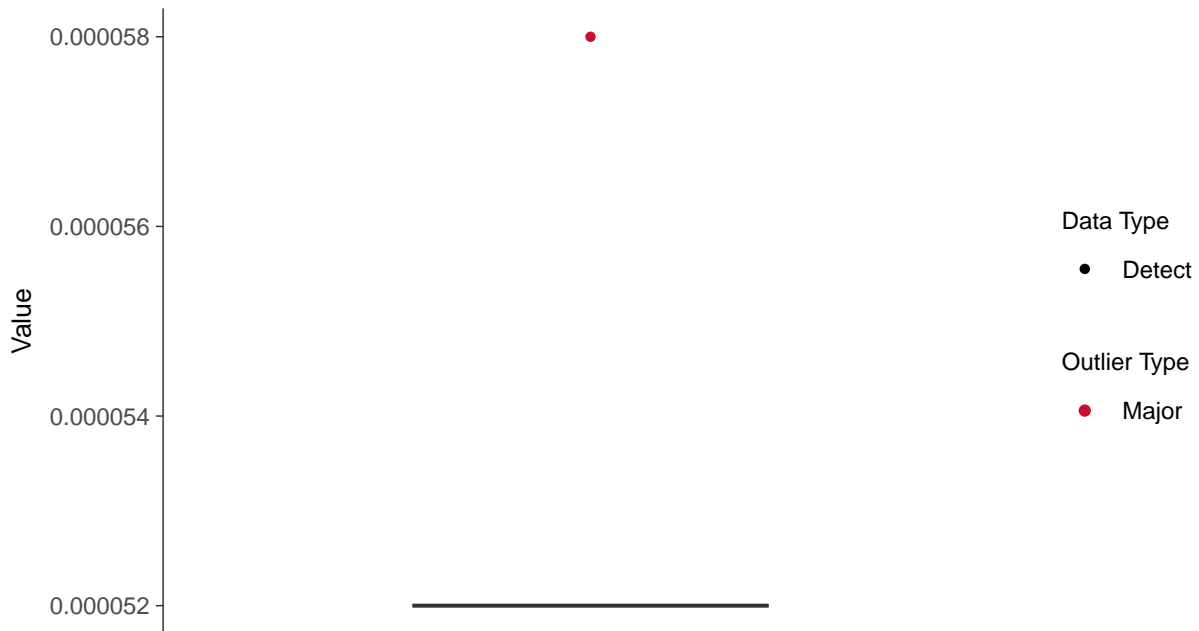
ID: 2_19_5_104





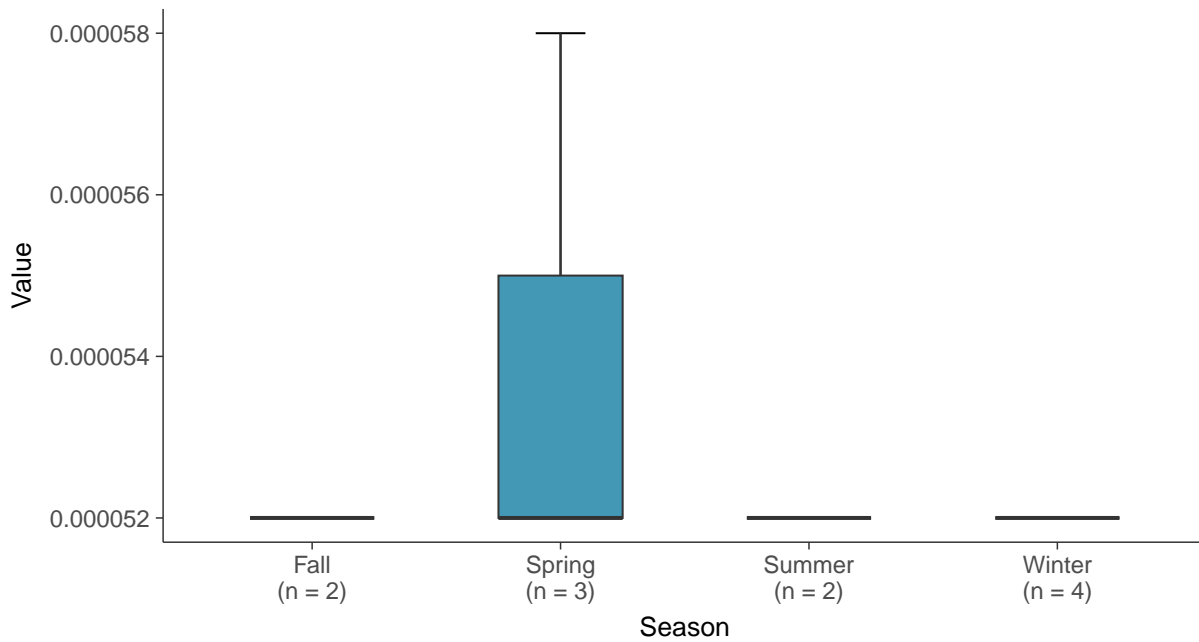
Boxplot

Beryllium, MW-09 (mg/L)



Boxplot by Season

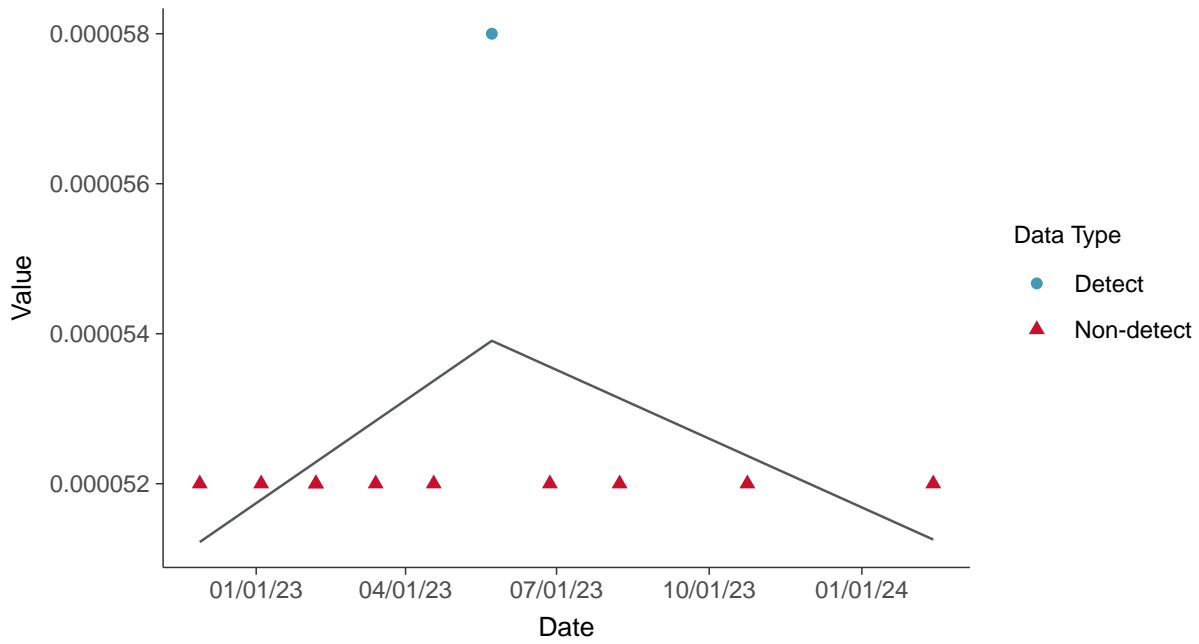
Beryllium, MW-09 (mg/L)





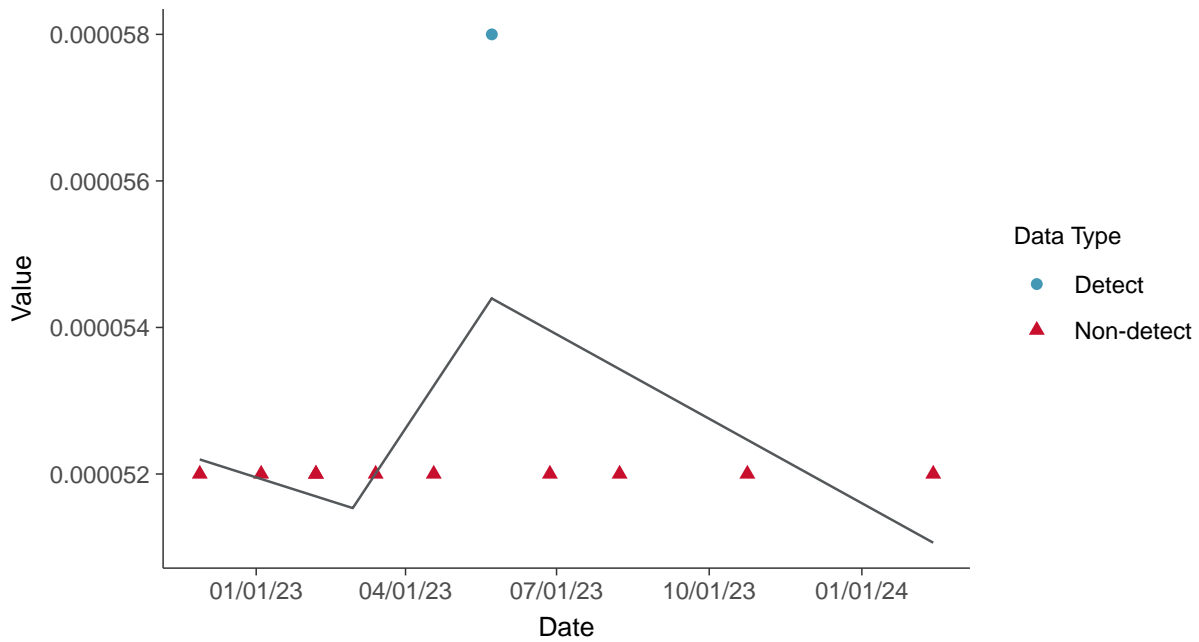
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-09 (mg/L)



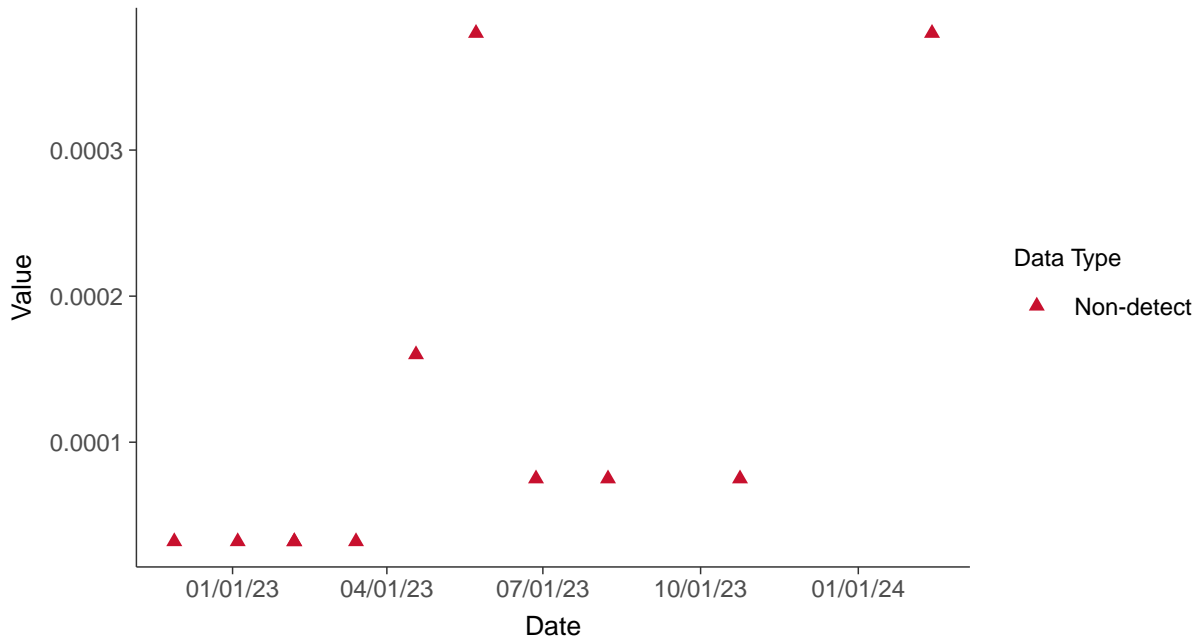


Appendix IV: Cadmium, MW-09

ID: 2_19_5_106

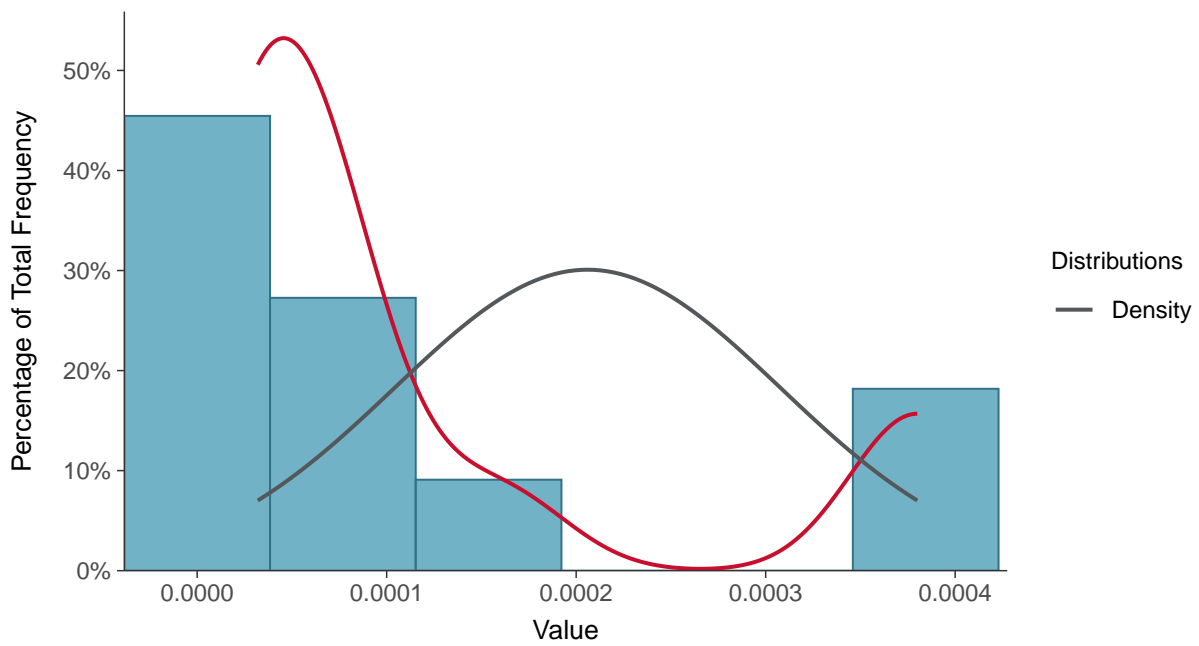
Scatter Plot

Cadmium, MW-09 (mg/L)



Histogram

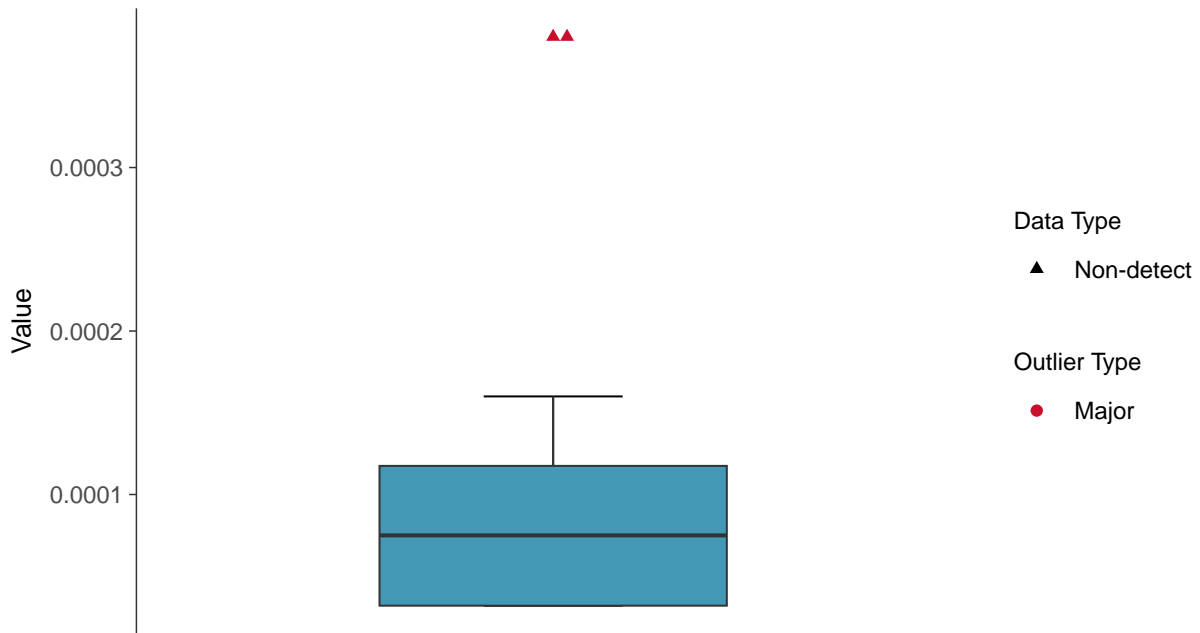
Cadmium, MW-09 (mg/L)





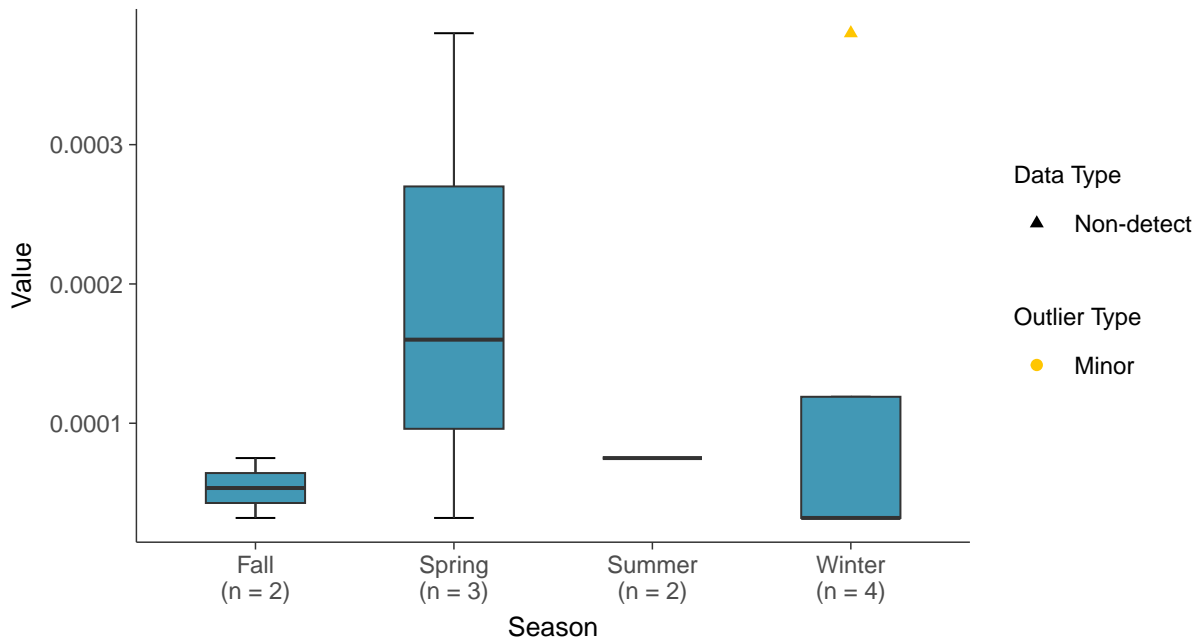
Boxplot

Cadmium, MW-09 (mg/L)



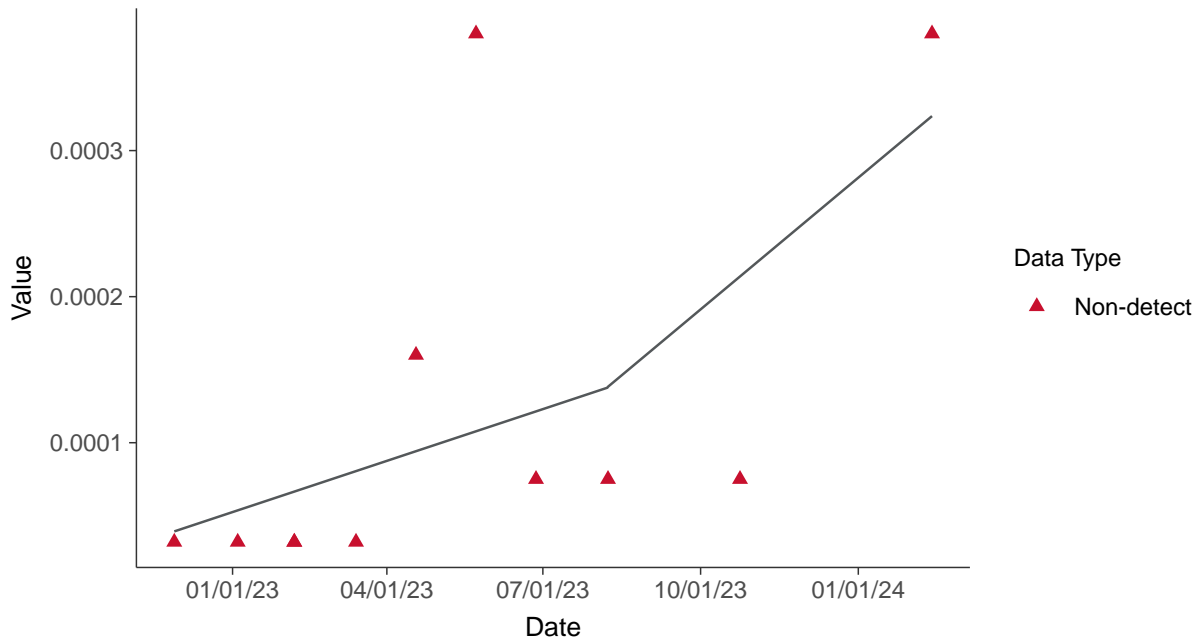
Boxplot by Season

Cadmium, MW-09 (mg/L)

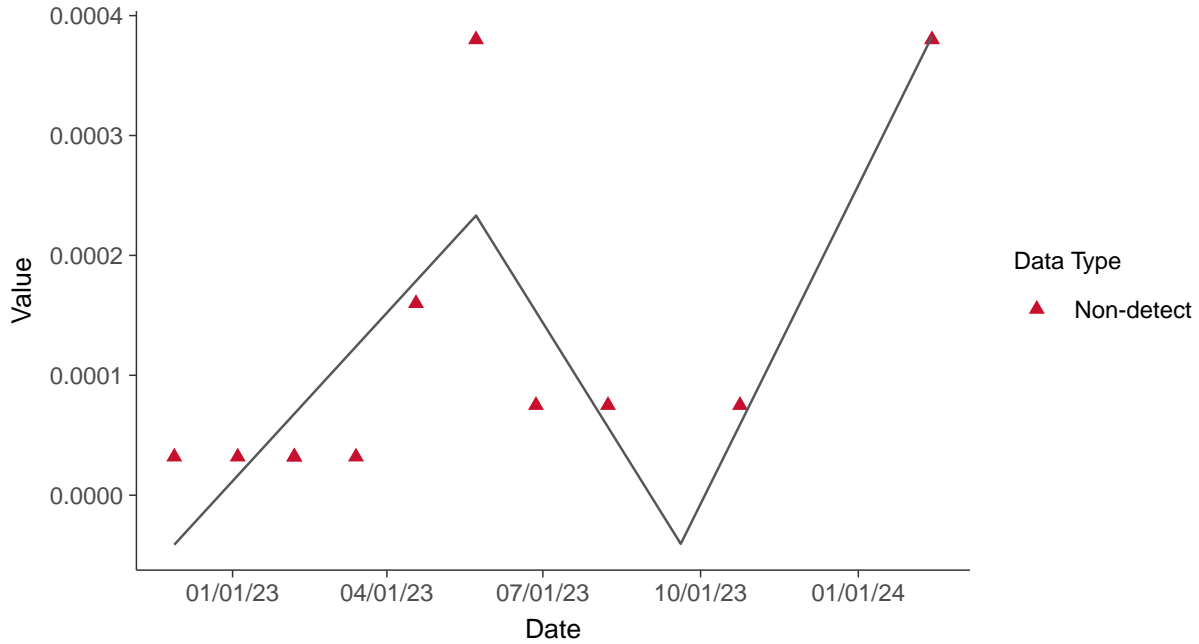




Trend Regression: Piecewise Linear-Linear
Cadmium, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cadmium, MW-09 (mg/L)



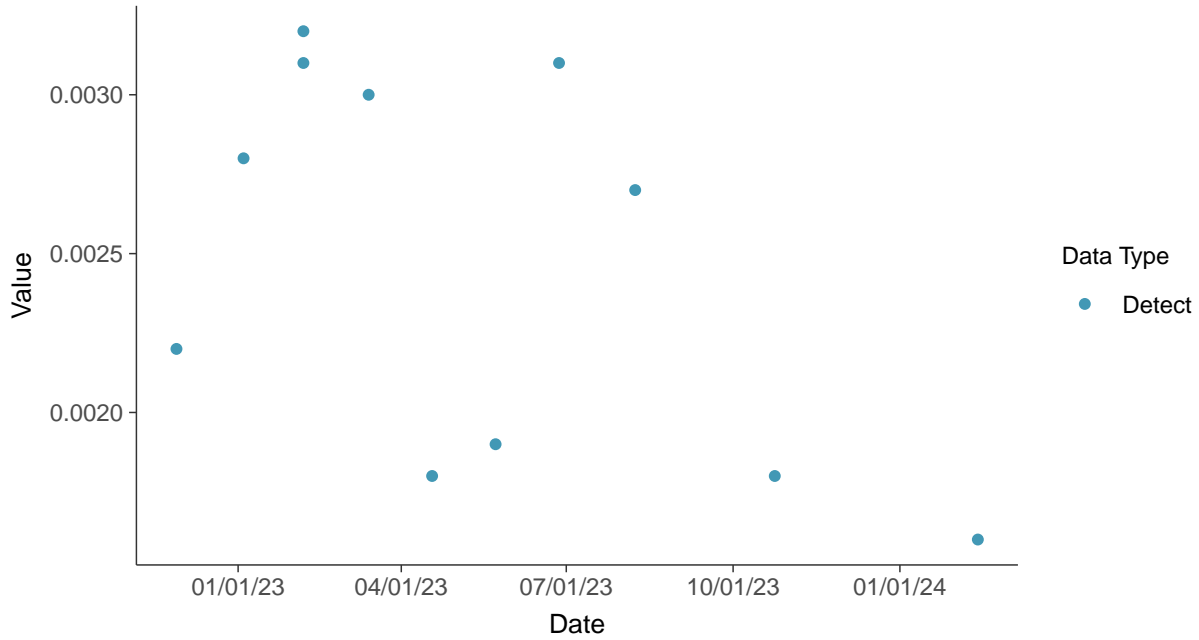


Appendix IV: Chromium, Total, MW-09

ID: 2_19_5_109

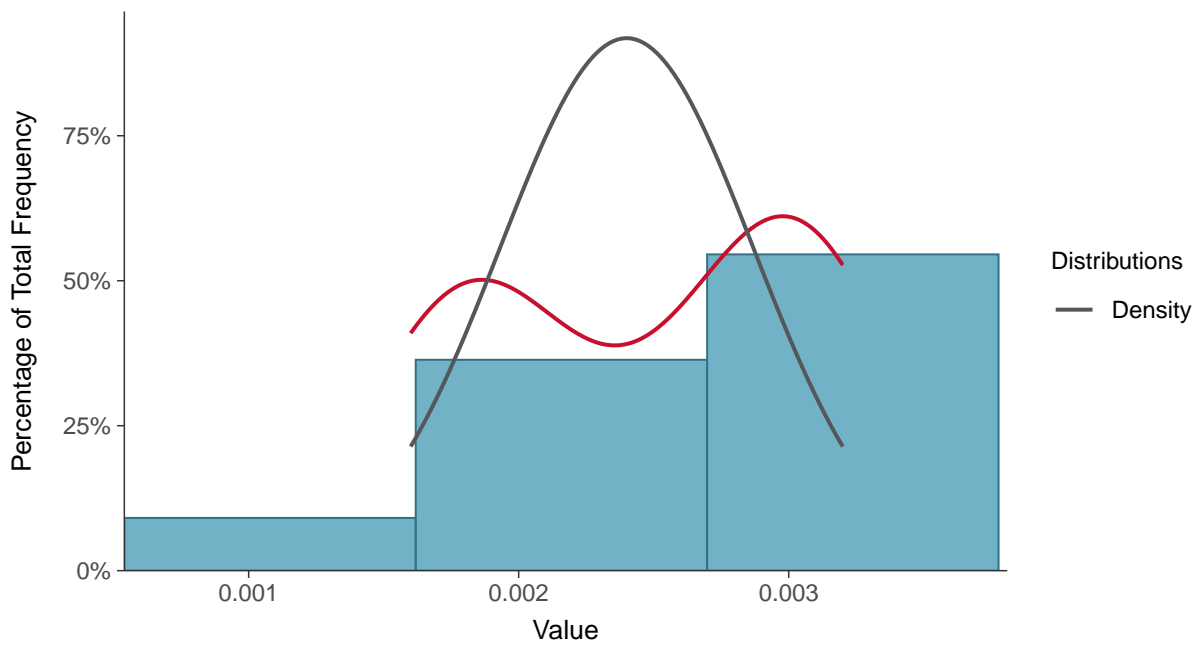
Scatter Plot

Chromium, Total, MW-09 (mg/L)



Histogram

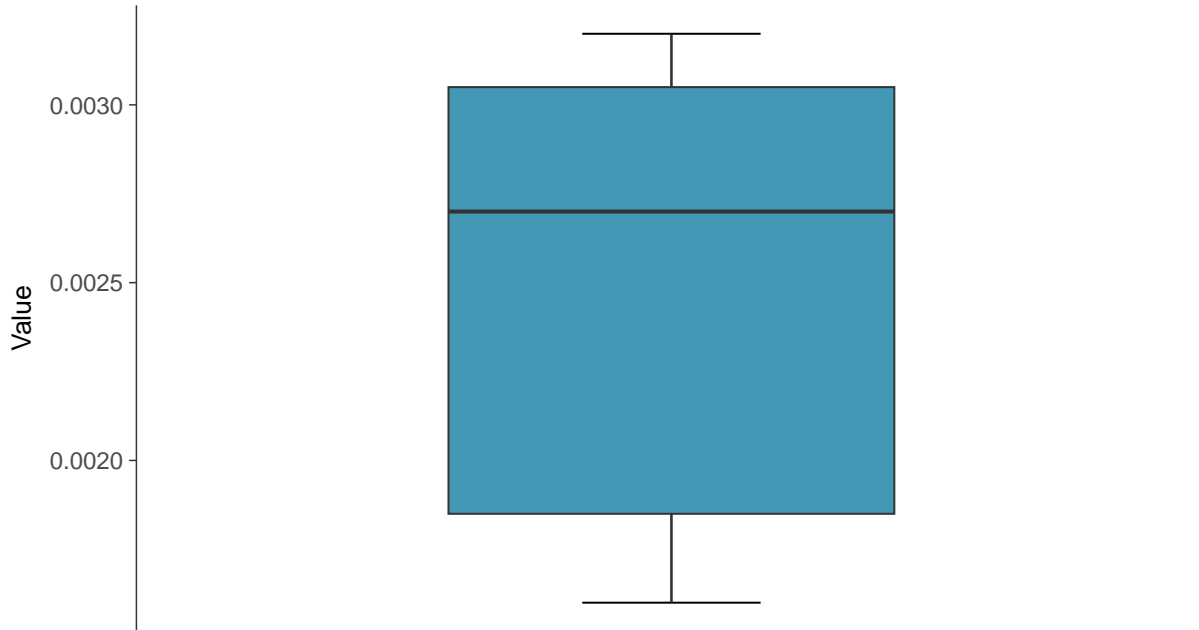
Chromium, Total, MW-09 (mg/L)





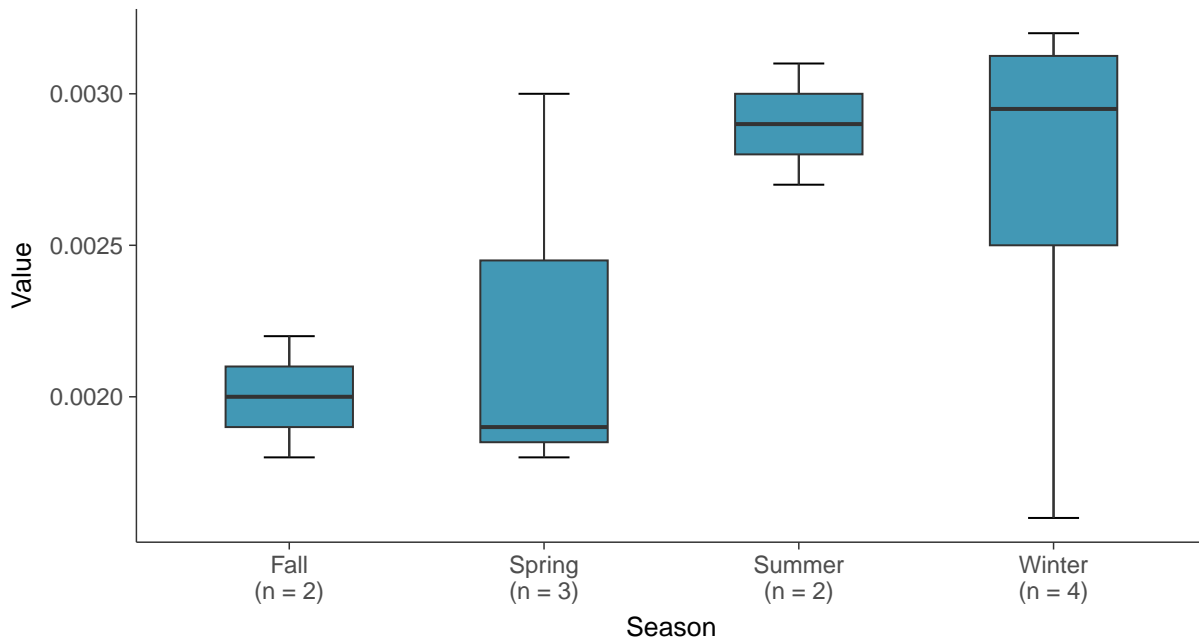
Boxplot

Chromium, Total, MW-09 (mg/L)



Boxplot by Season

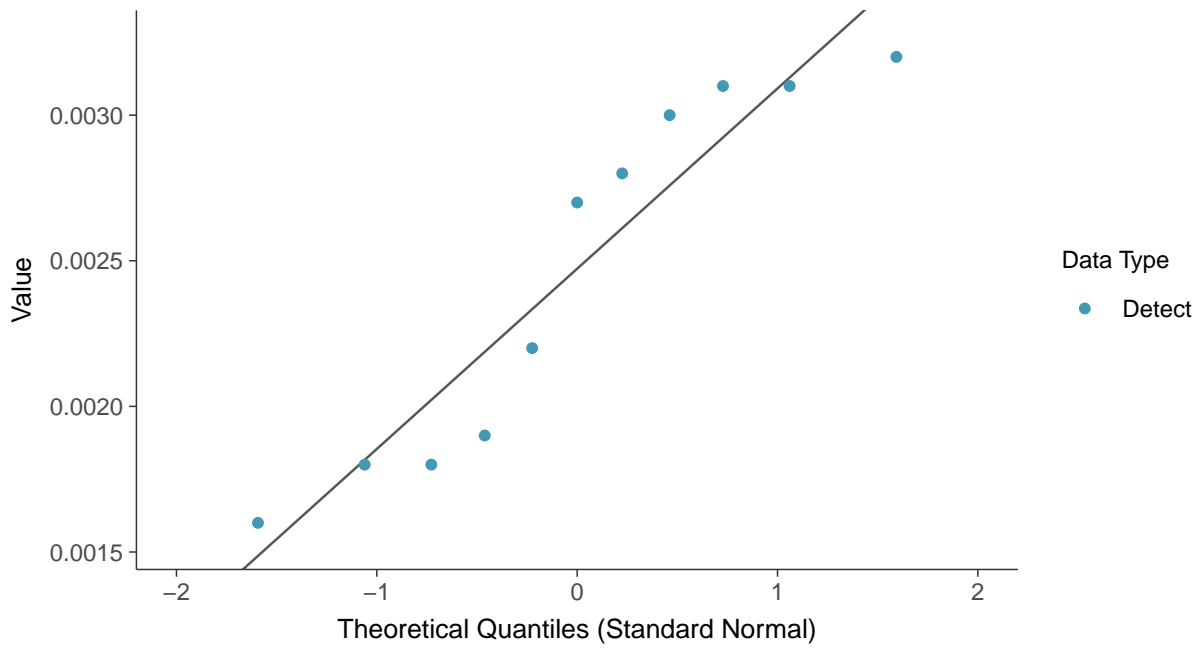
Chromium, Total, MW-09 (mg/L)





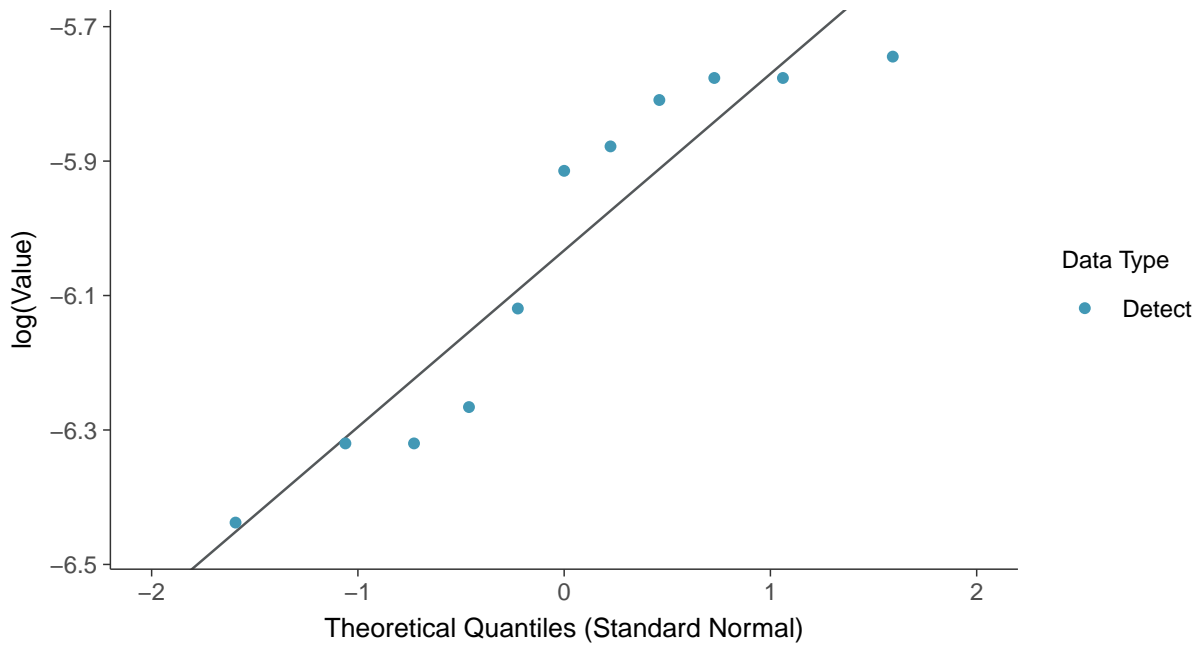
Normal Q-Q plot

Chromium, Total, MW-09 (mg/L)



Lognormal Q-Q plot

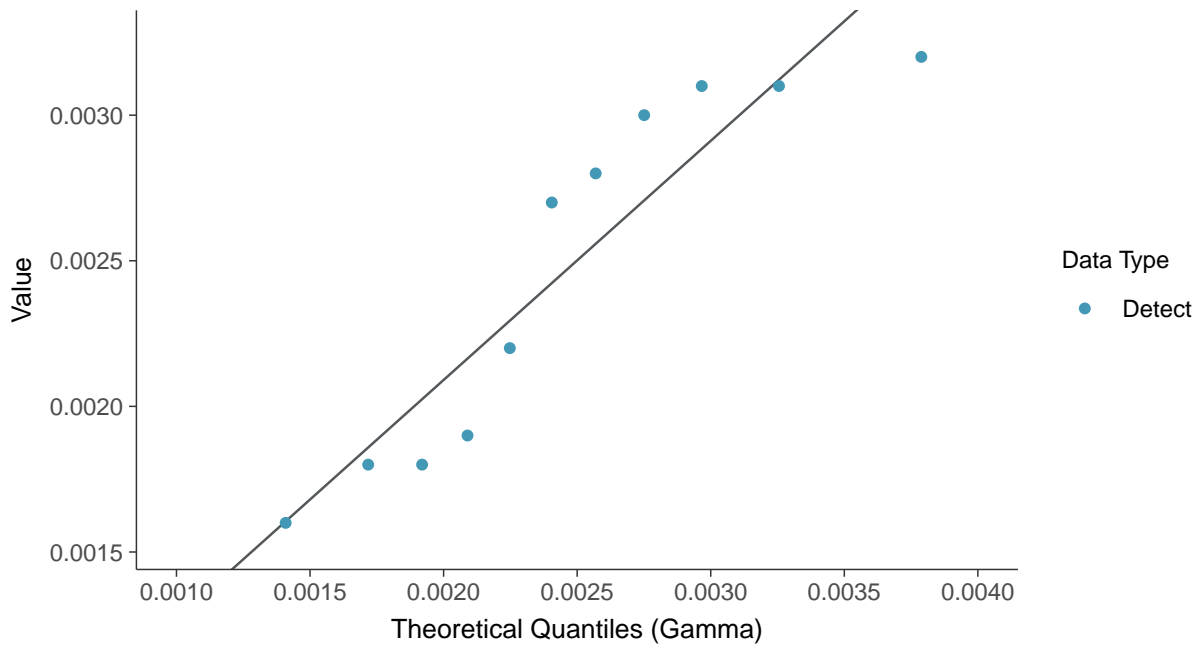
Chromium, Total, MW-09 (mg/L)





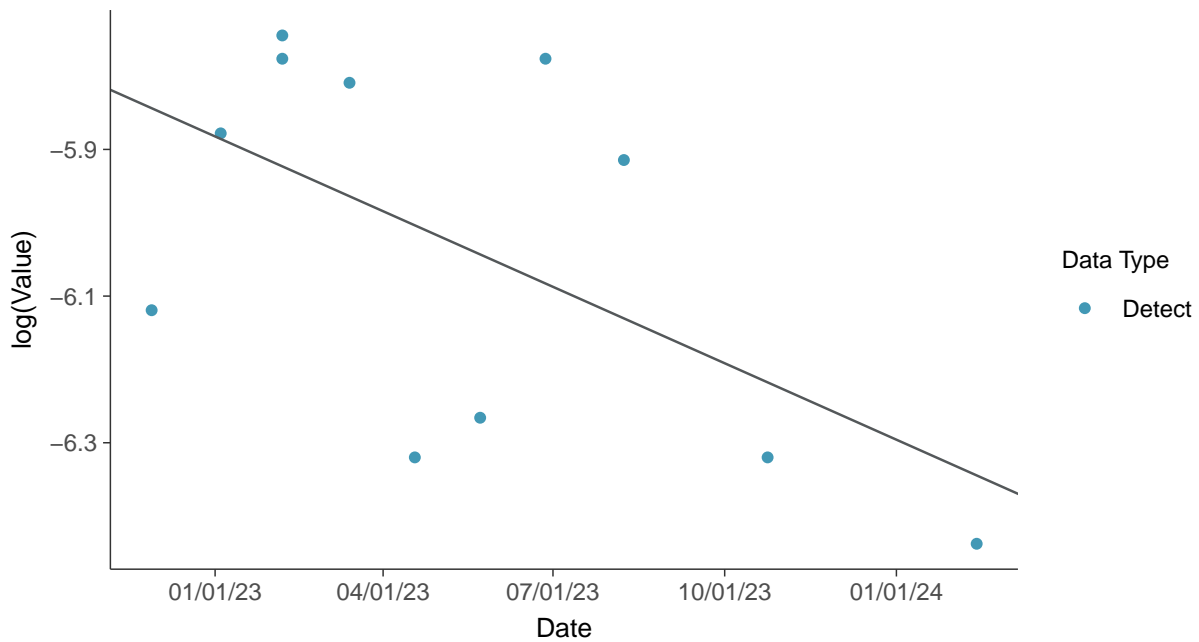
Gamma Q-Q plot

Chromium, Total, MW-09 (mg/L)



Trend Regression: Lognormal MLE

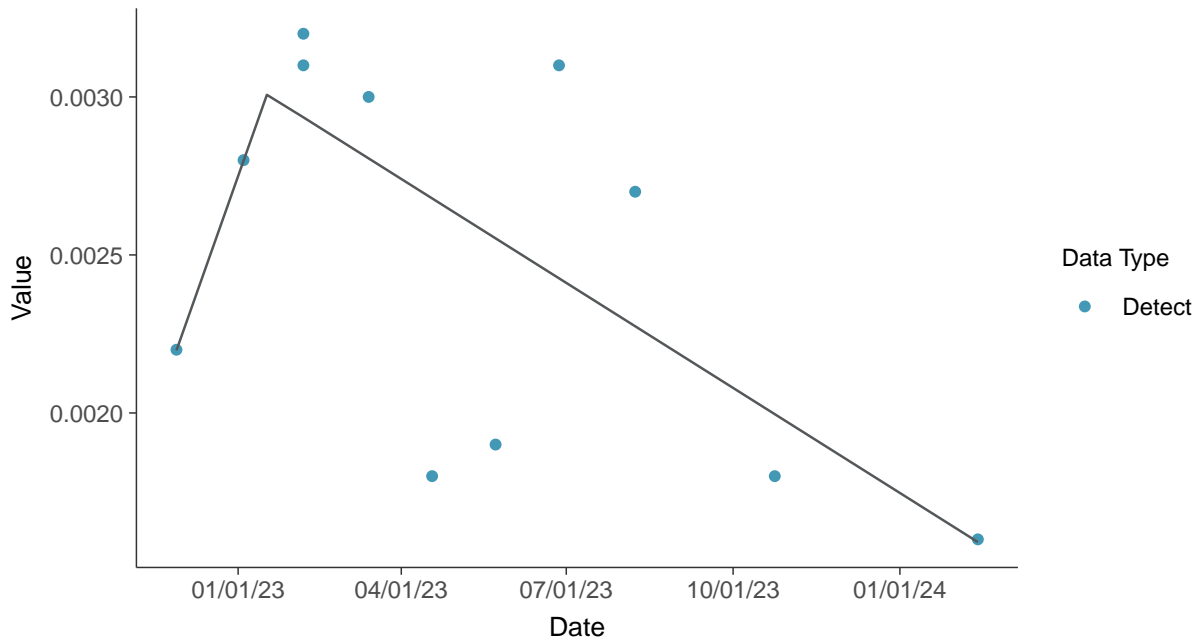
Chromium, Total, MW-09 (mg/L)





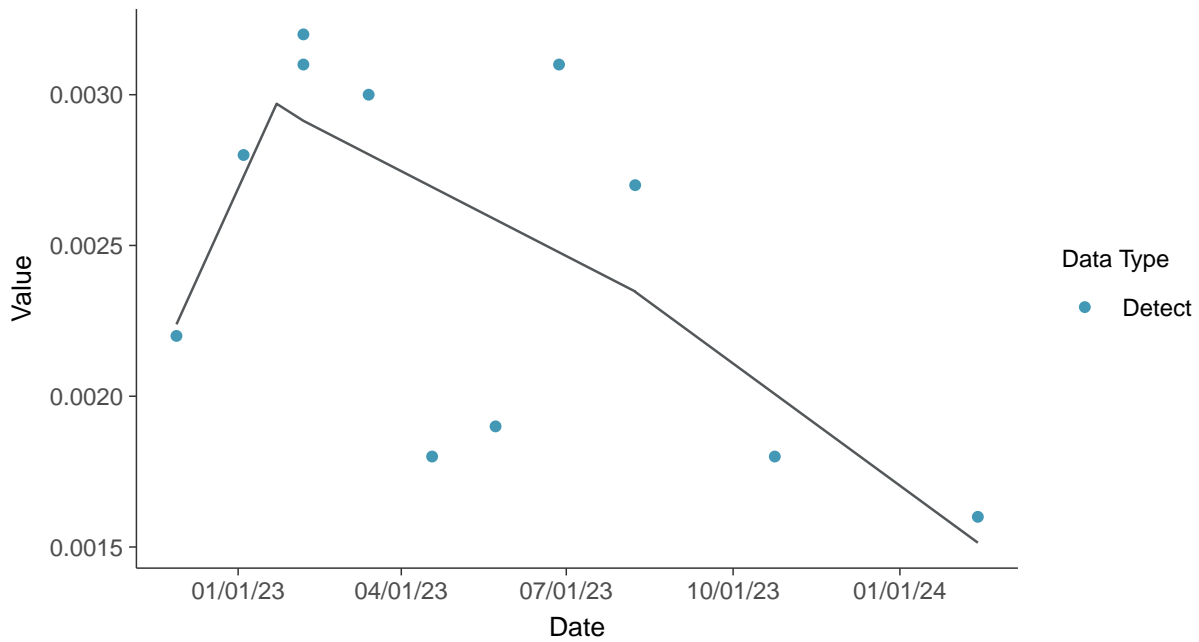
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-09 (mg/L)



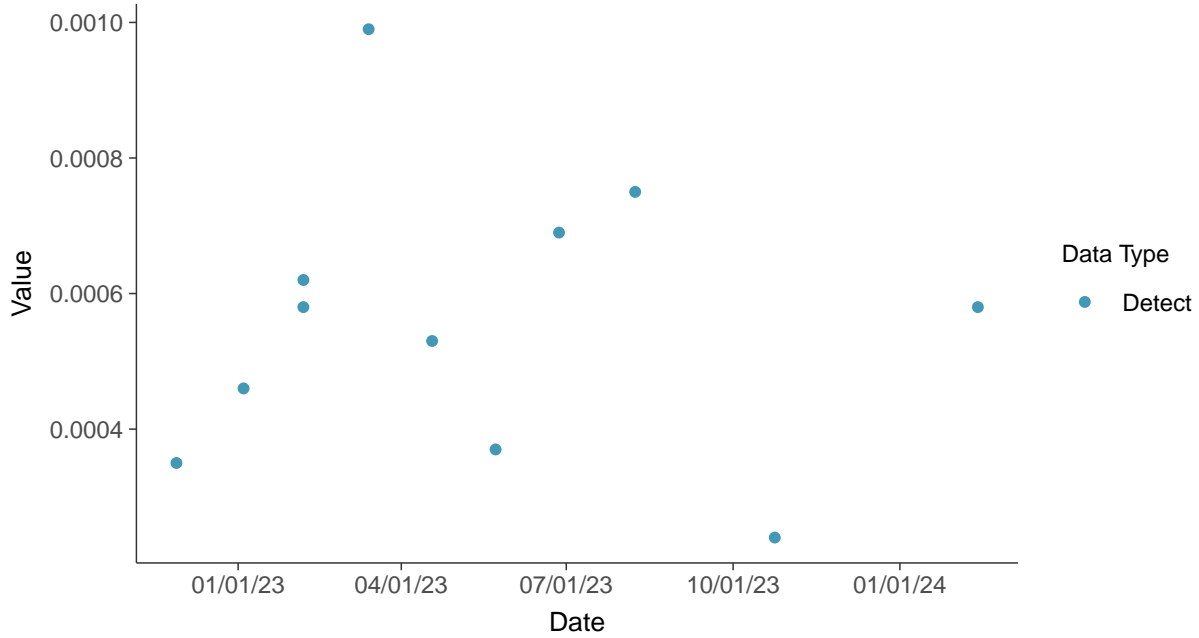


Appendix IV: Cobalt, MW-09

ID: 2_19_5_110

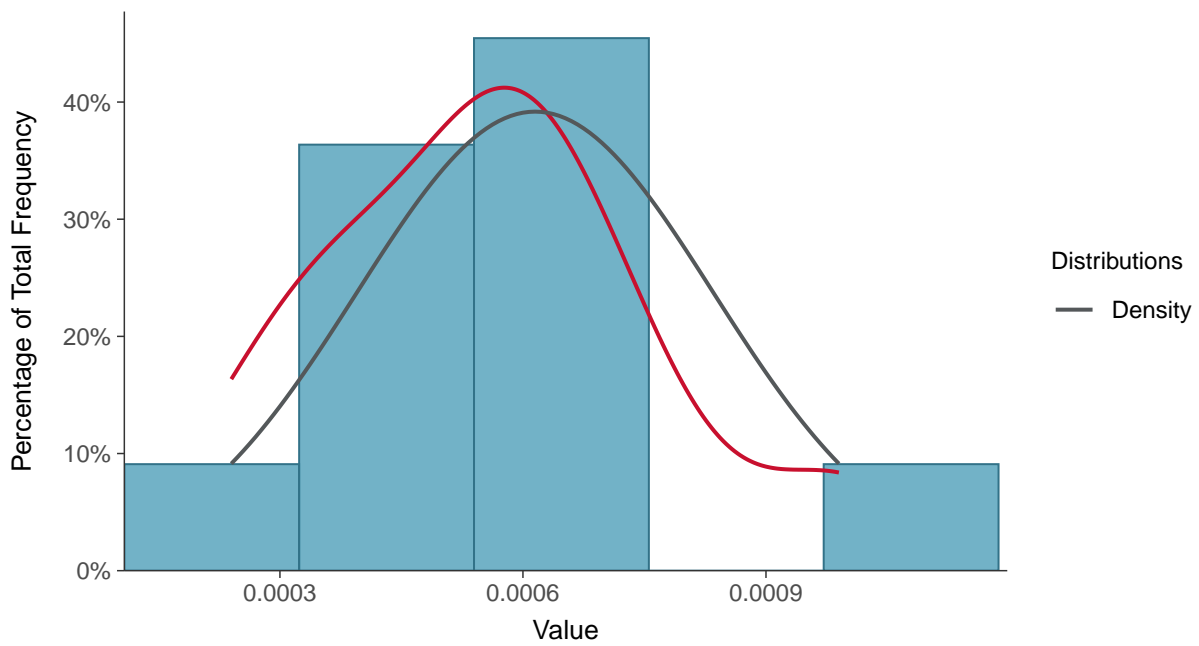
Scatter Plot

Cobalt, MW-09 (mg/L)



Histogram

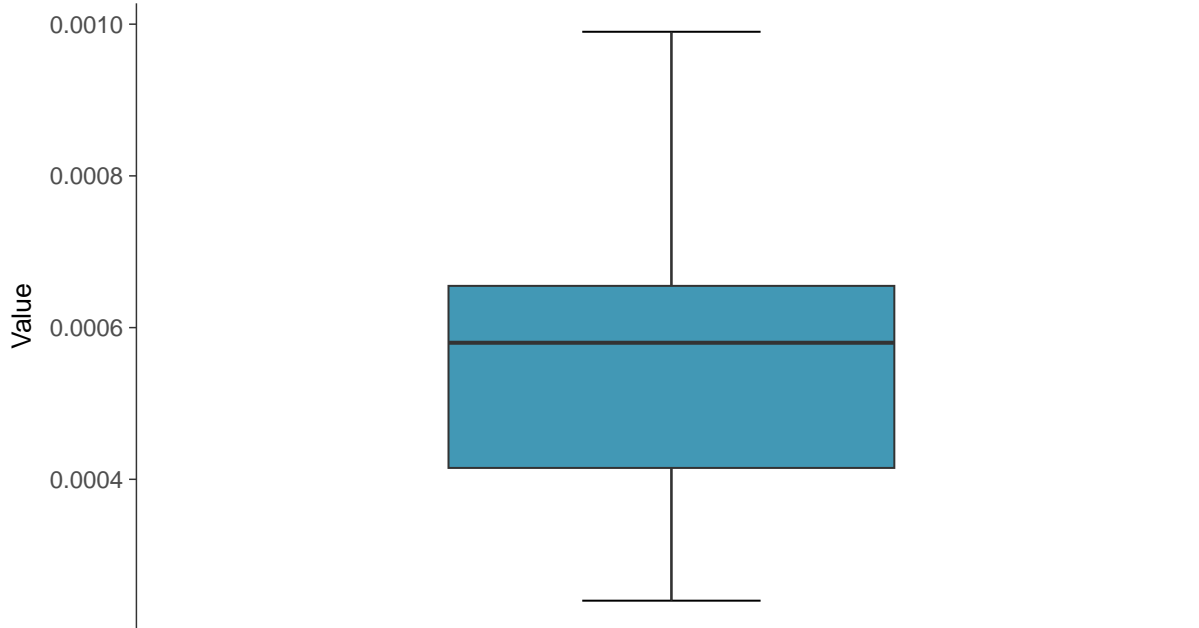
Cobalt, MW-09 (mg/L)





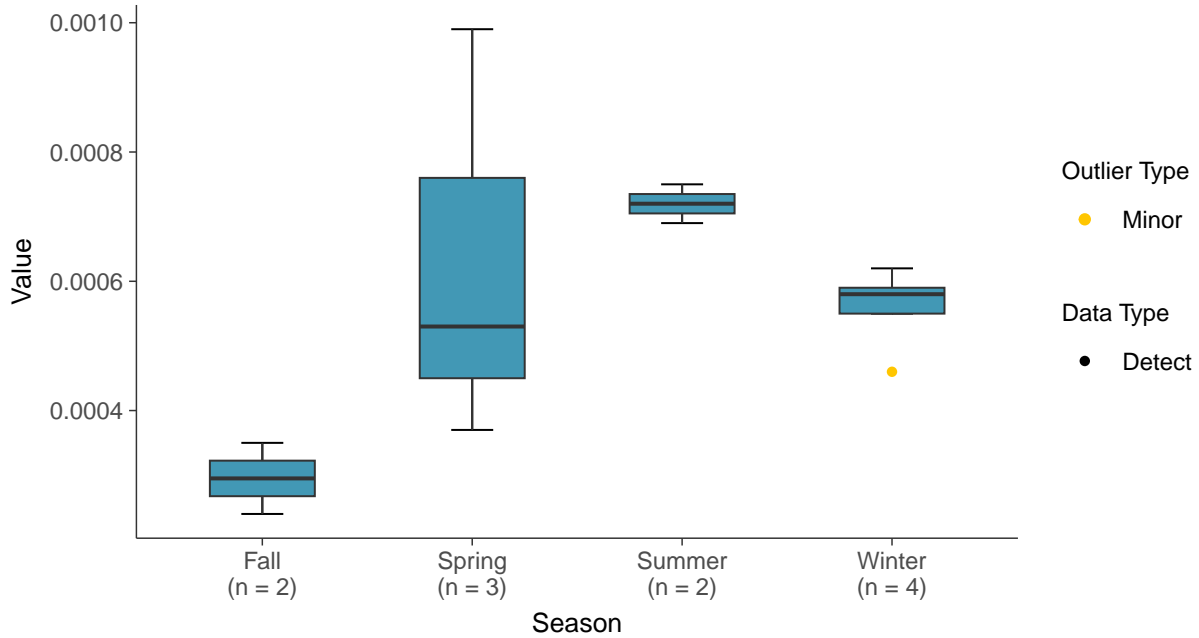
Boxplot

Cobalt, MW-09 (mg/L)



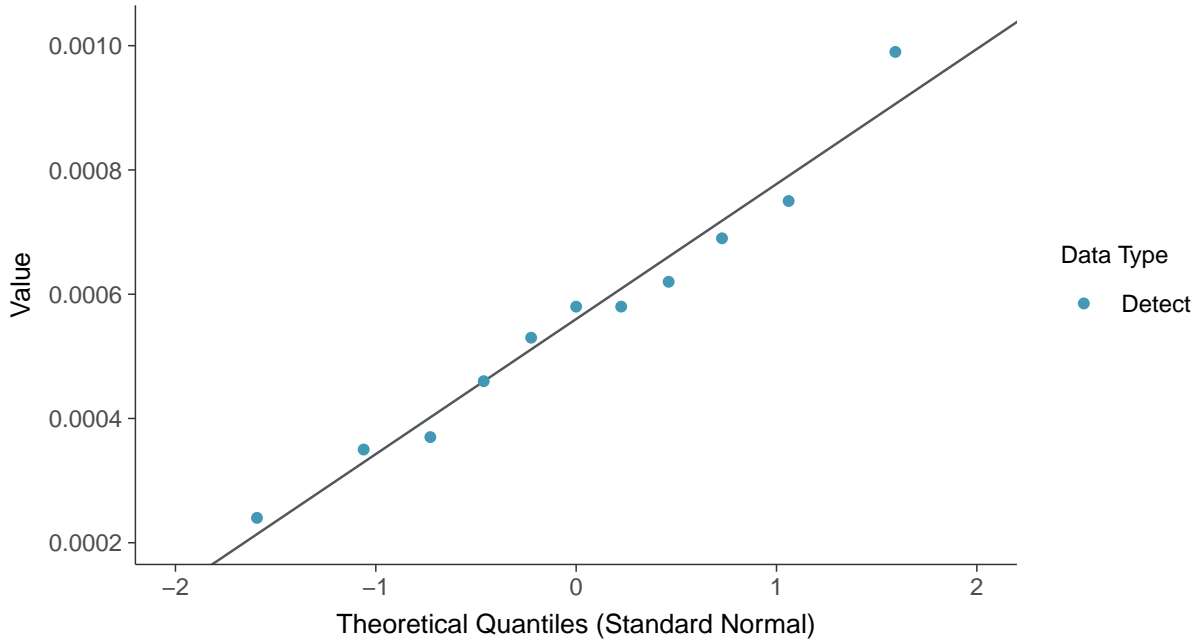
Boxplot by Season

Cobalt, MW-09 (mg/L)

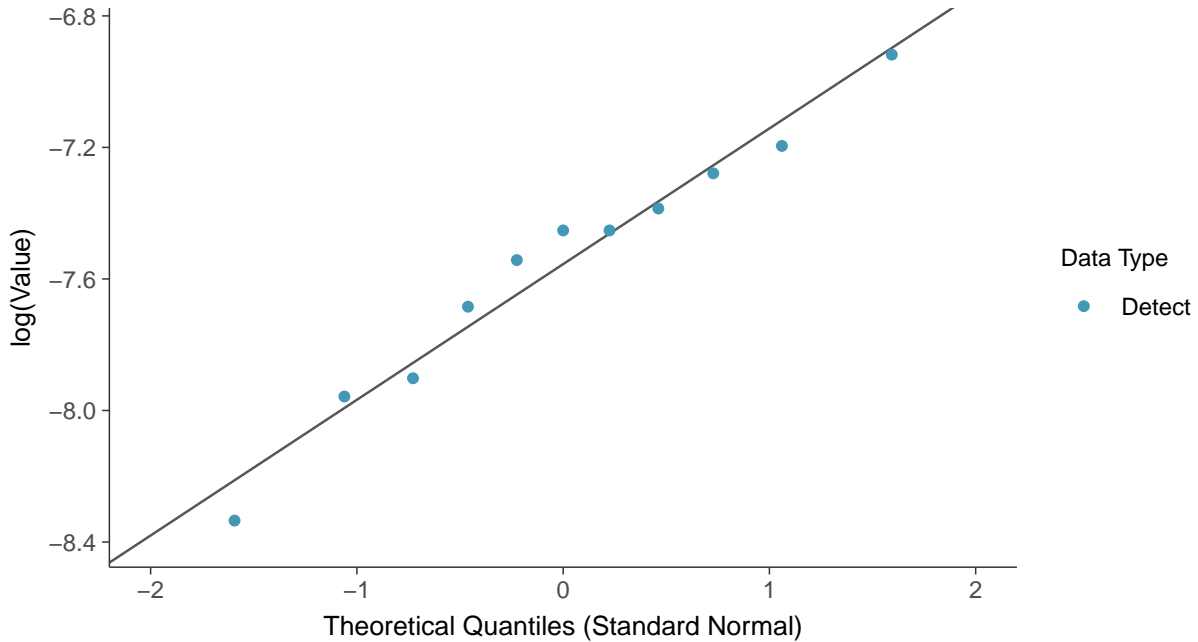




Normal Q-Q plot
Cobalt, MW-09 (mg/L)

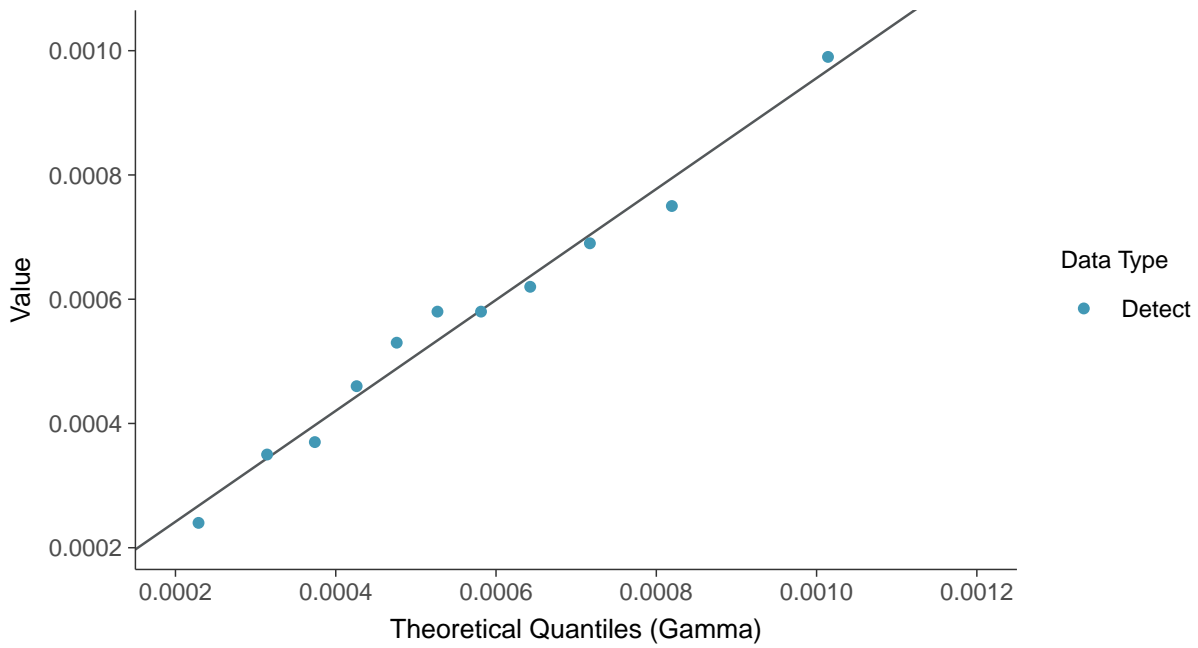


Lognormal Q-Q plot
Cobalt, MW-09 (mg/L)

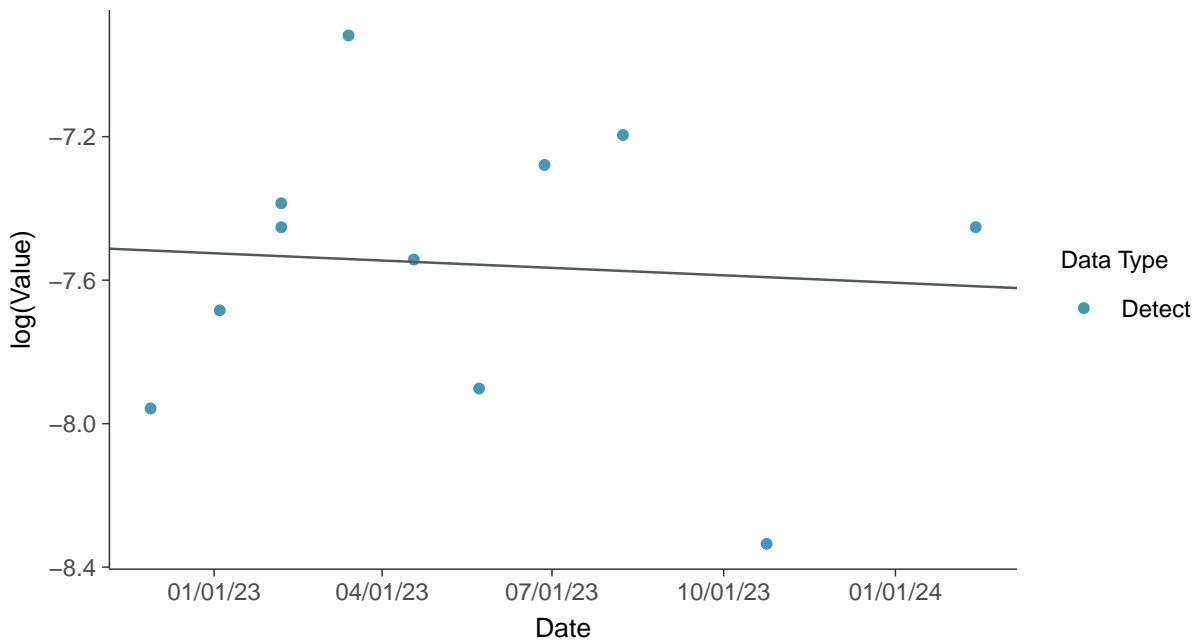




Gamma Q-Q plot
Cobalt, MW-09 (mg/L)



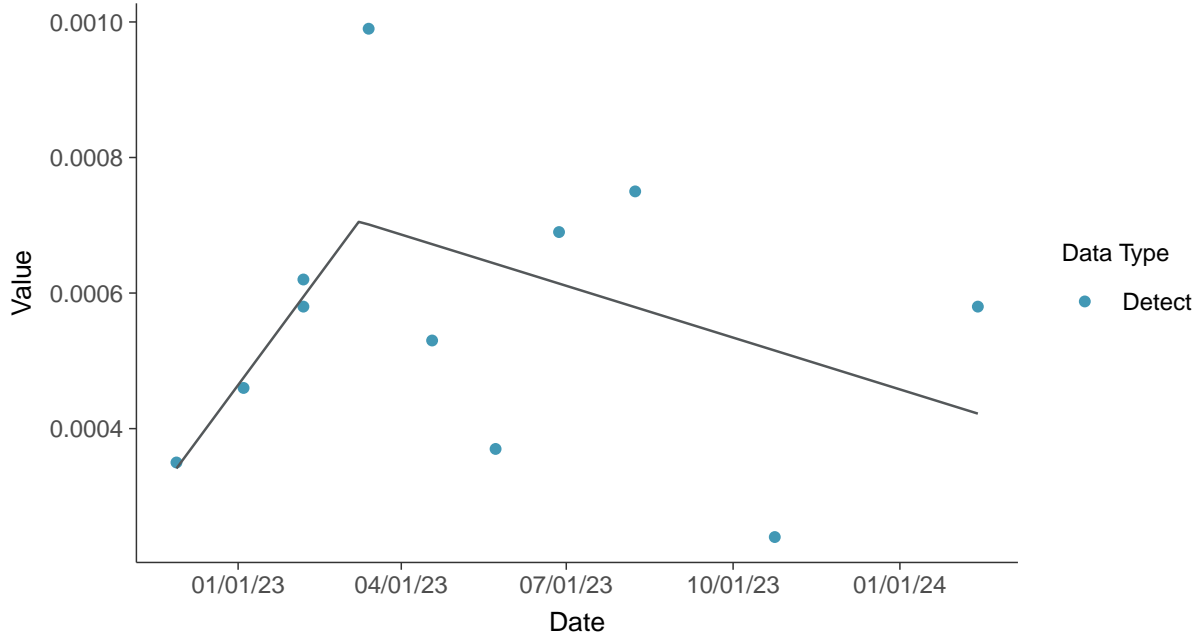
Trend Regression: Lognormal MLE
Cobalt, MW-09 (mg/L)





Trend Regression: Piecewise Linear-Linear

Cobalt, MW-09 (mg/L)



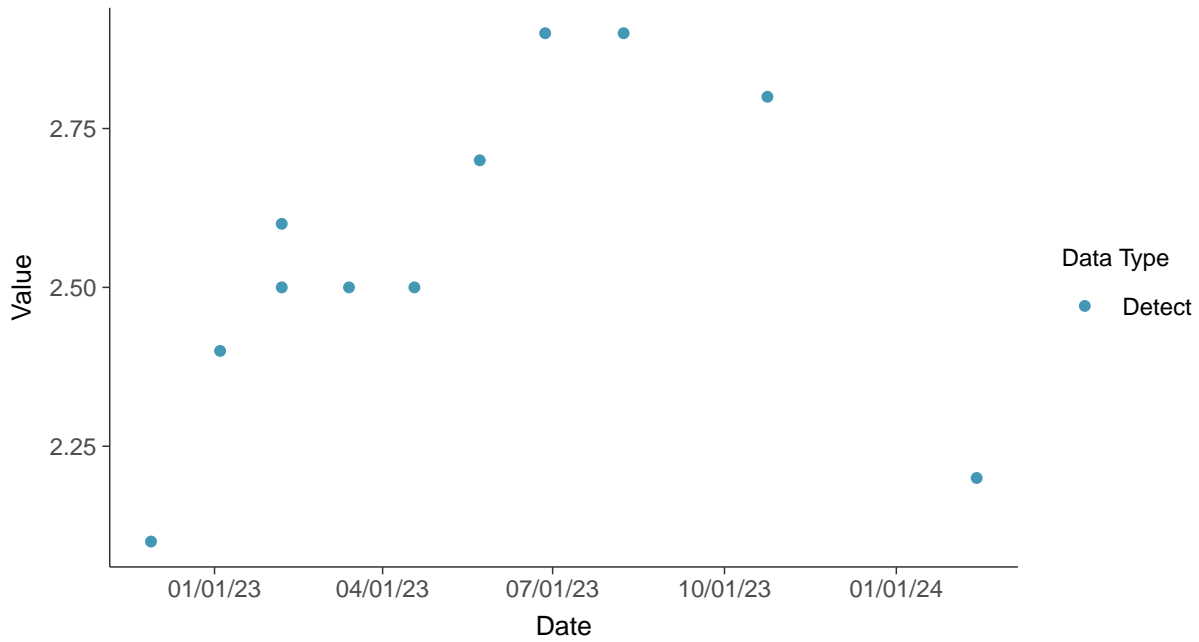


Appendix IV: Fluoride (App IV), MW-09

ID: 2_19_5_113

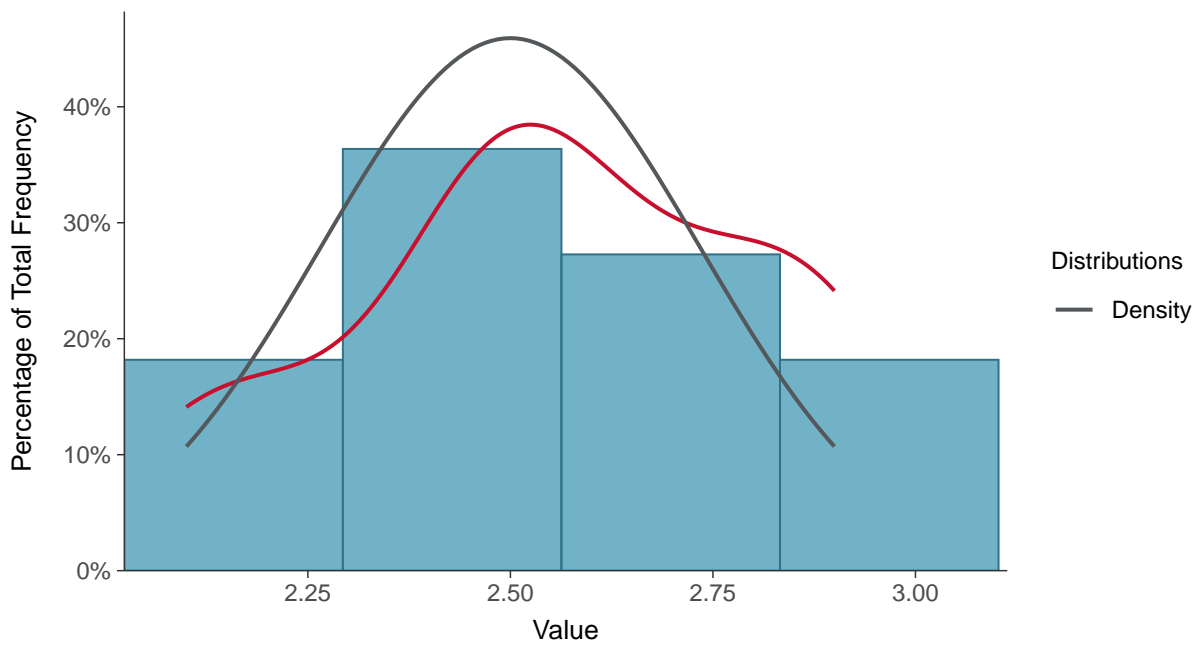
Scatter Plot

Fluoride (App IV), MW-09 (mg/L)



Histogram

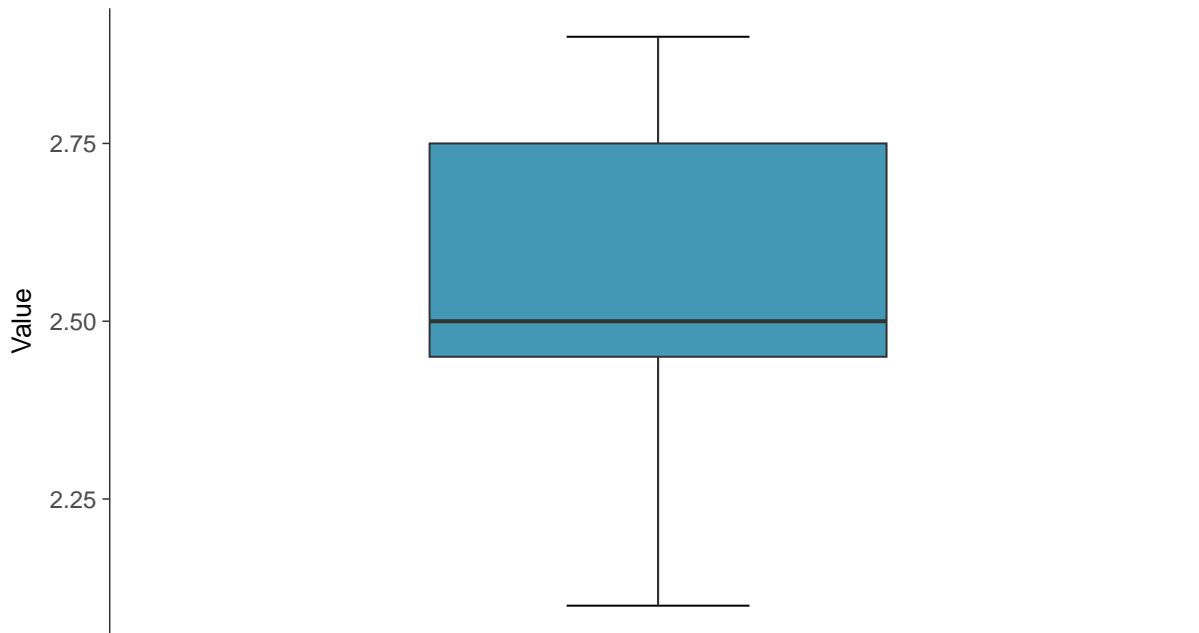
Fluoride (App IV), MW-09 (mg/L)





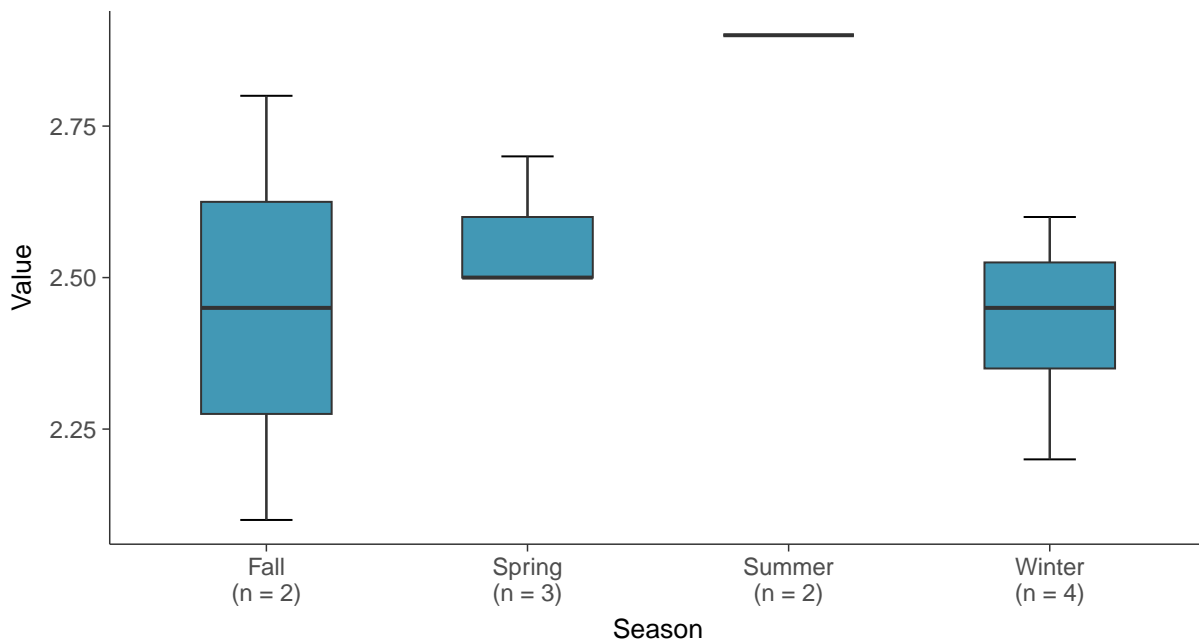
Boxplot

Fluoride (App IV), MW-09 (mg/L)



Boxplot by Season

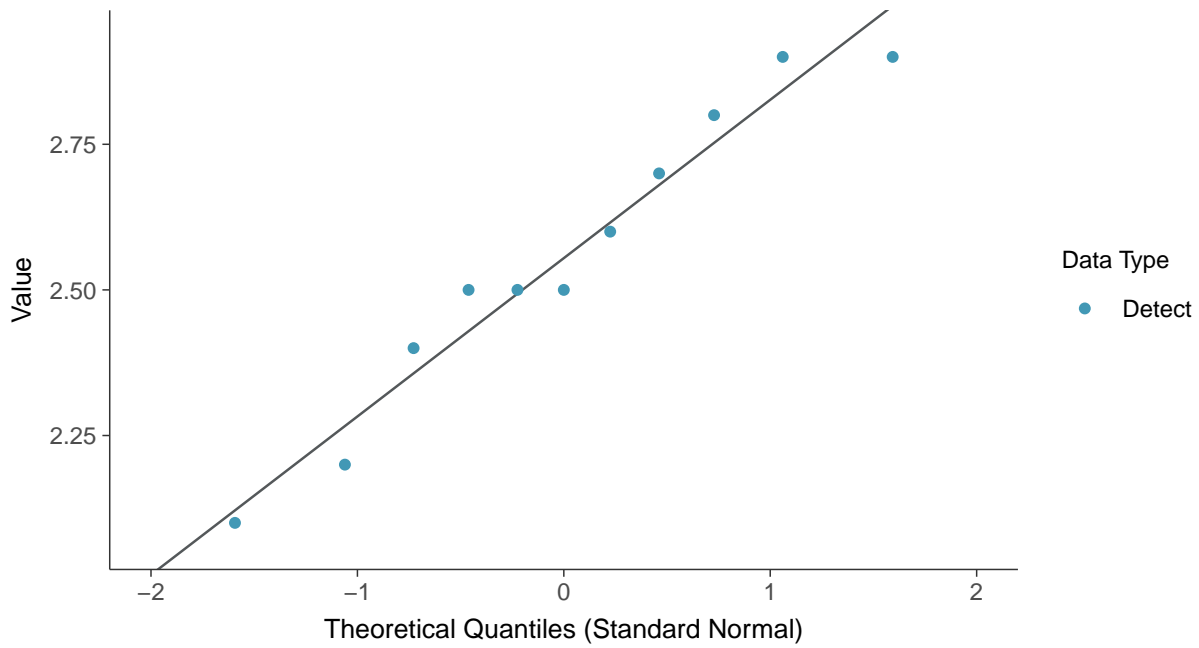
Fluoride (App IV), MW-09 (mg/L)





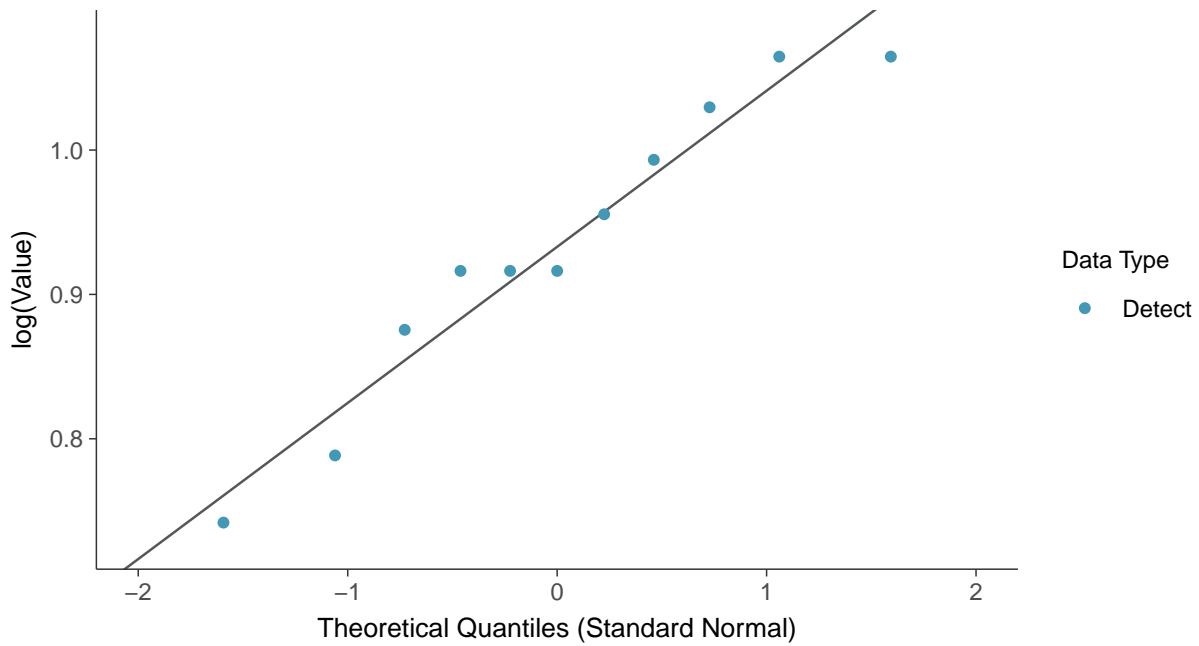
Normal Q-Q plot

Fluoride (App IV), MW-09 (mg/L)



Lognormal Q-Q plot

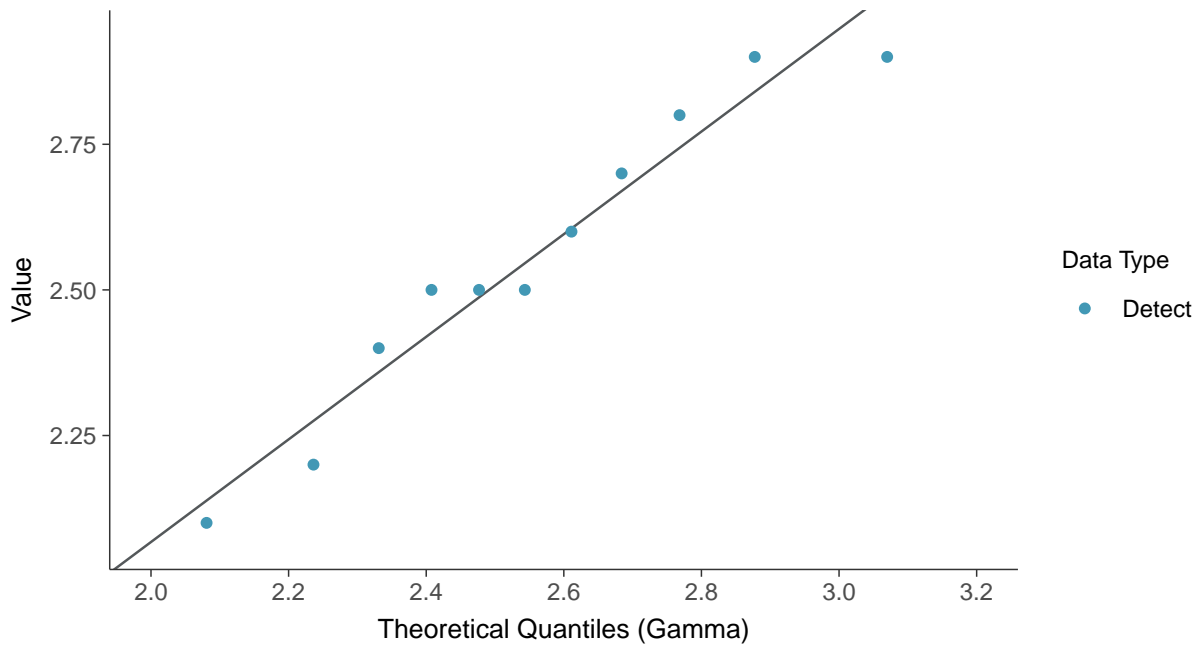
Fluoride (App IV), MW-09 (mg/L)





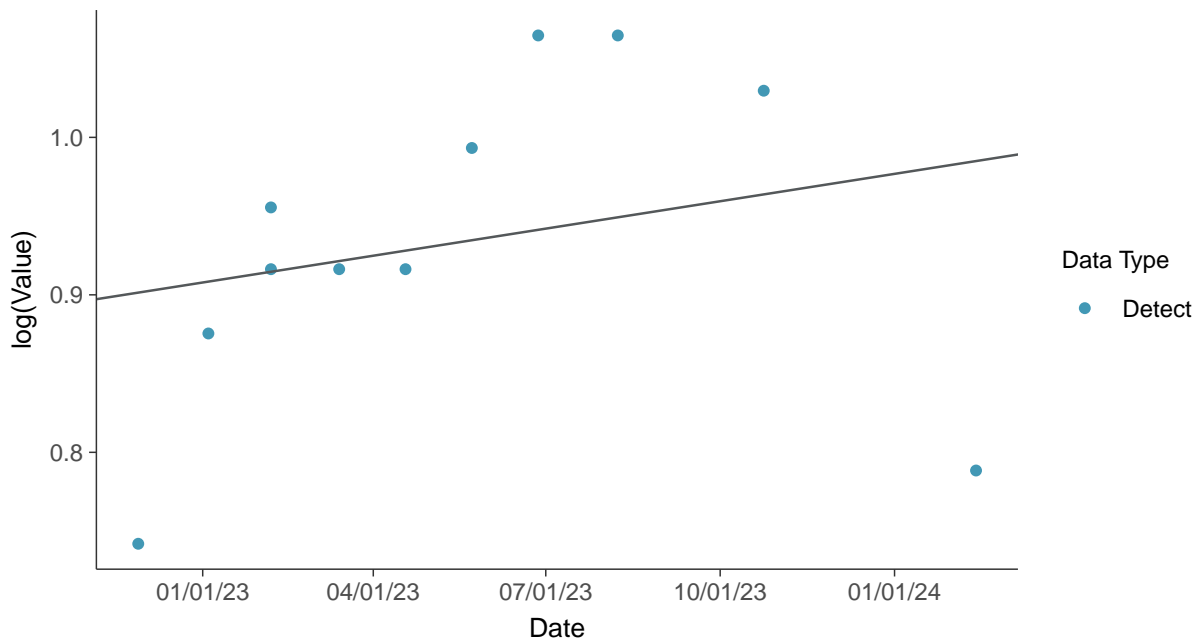
Gamma Q-Q plot

Fluoride (App IV), MW-09 (mg/L)



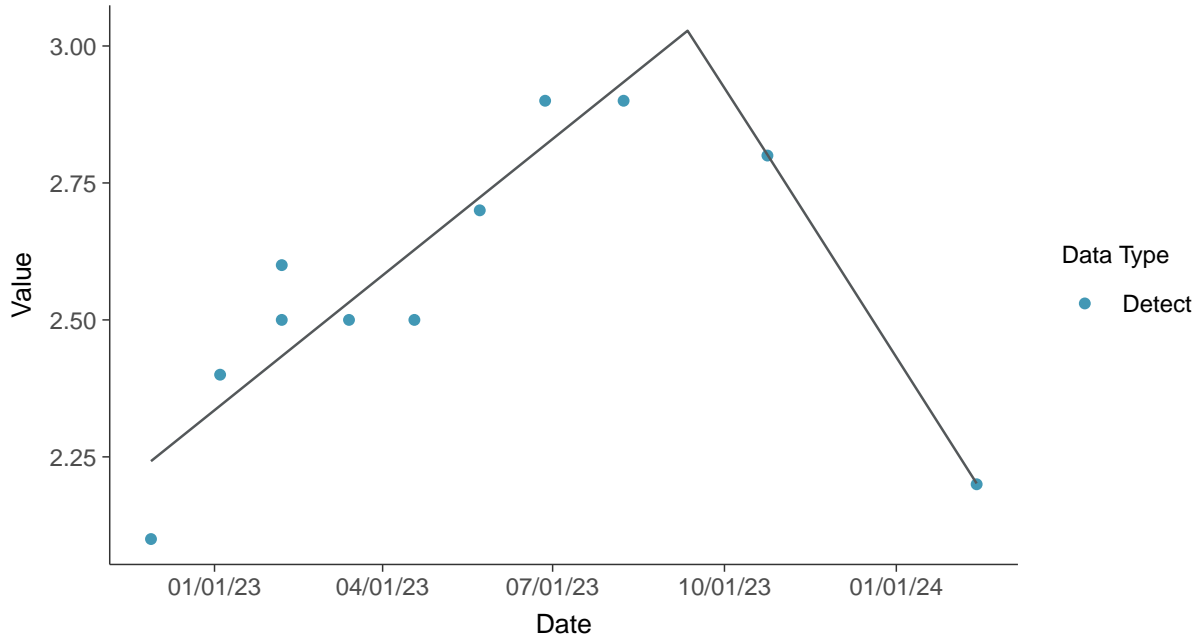
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-09 (mg/L)





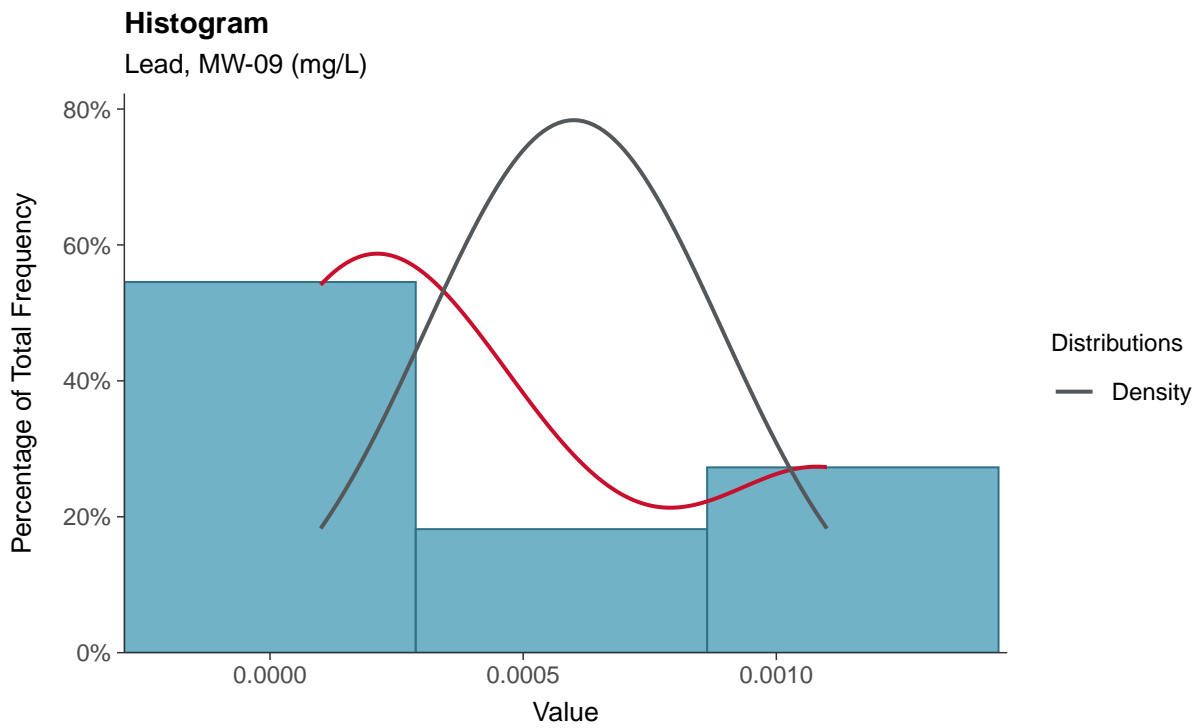
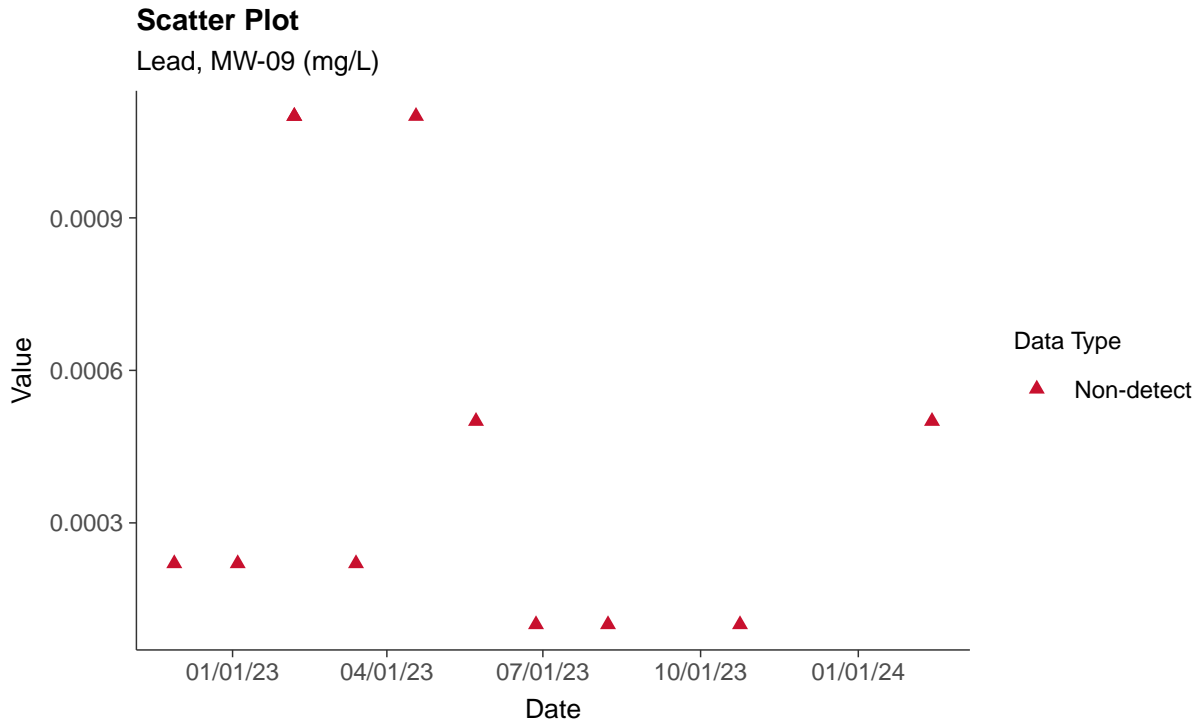
Trend Regression: Piecewise Linear-Linear
Fluoride (App IV), MW-09 (mg/L)





Appendix IV: Lead, MW-09

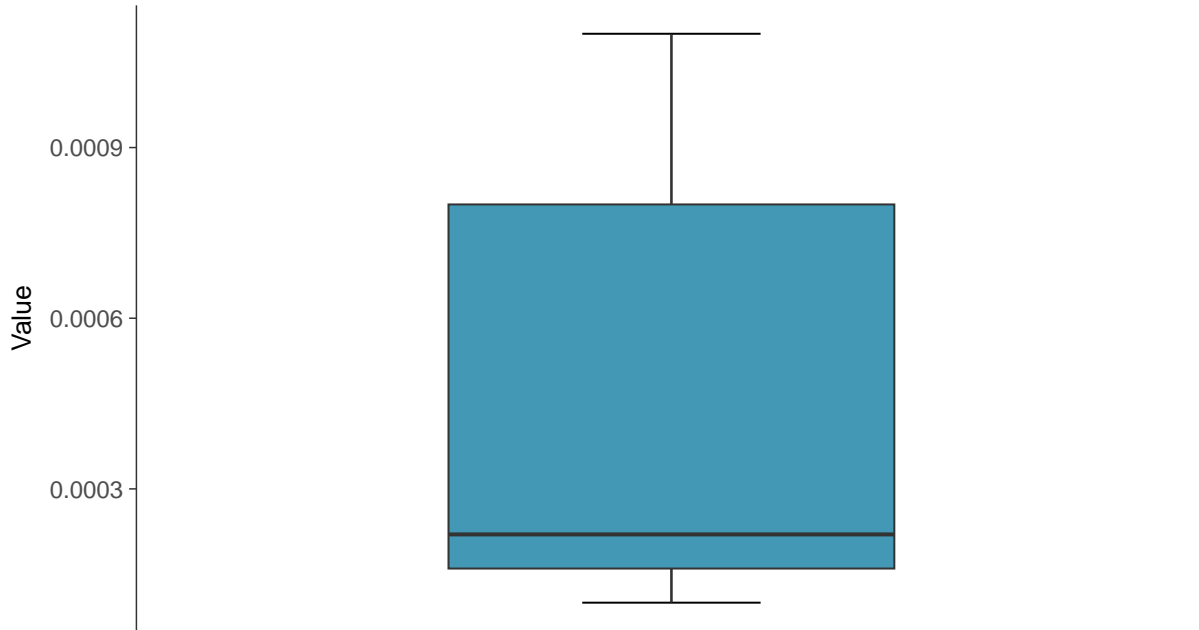
ID: 2_19_5_115





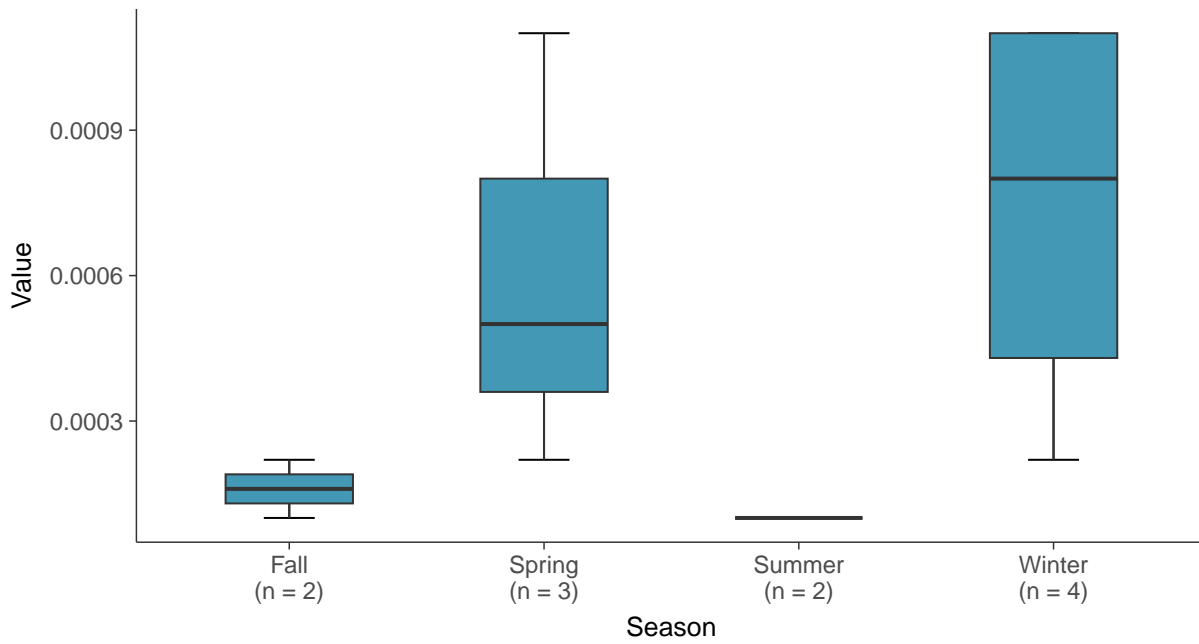
Boxplot

Lead, MW-09 (mg/L)



Boxplot by Season

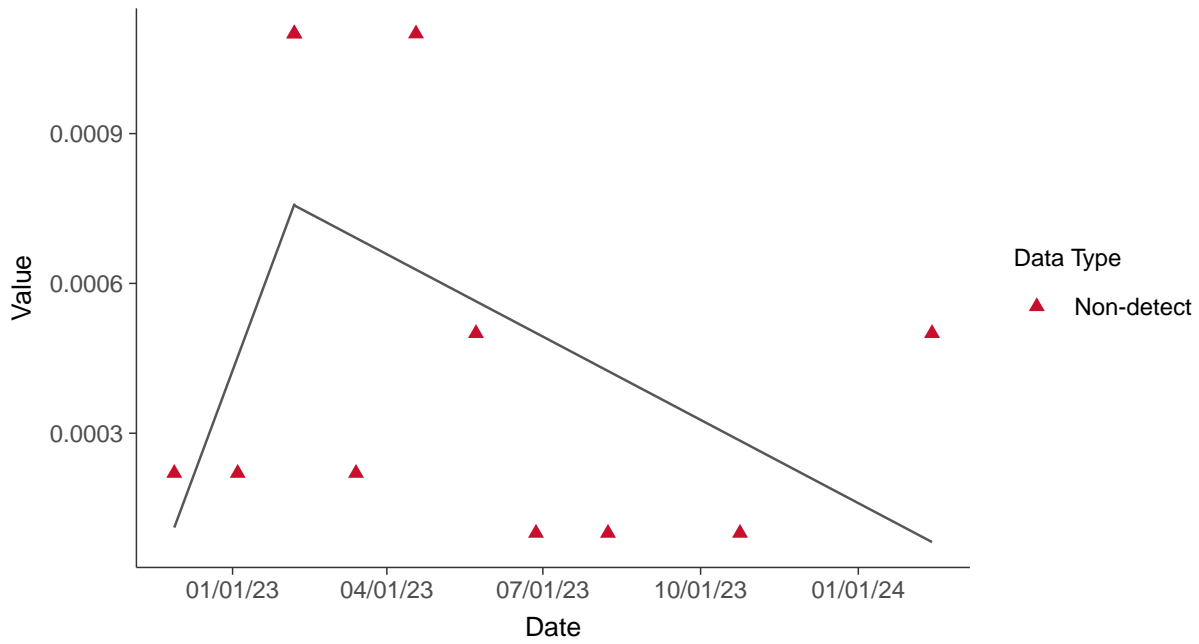
Lead, MW-09 (mg/L)





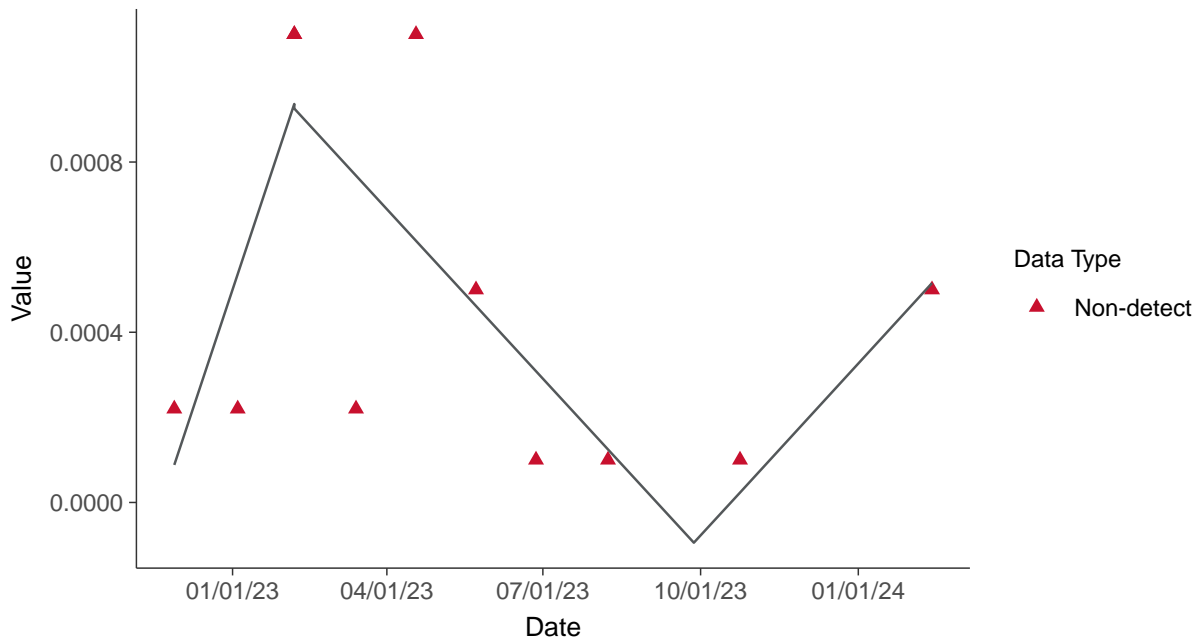
Trend Regression: Piecewise Linear-Linear

Lead, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

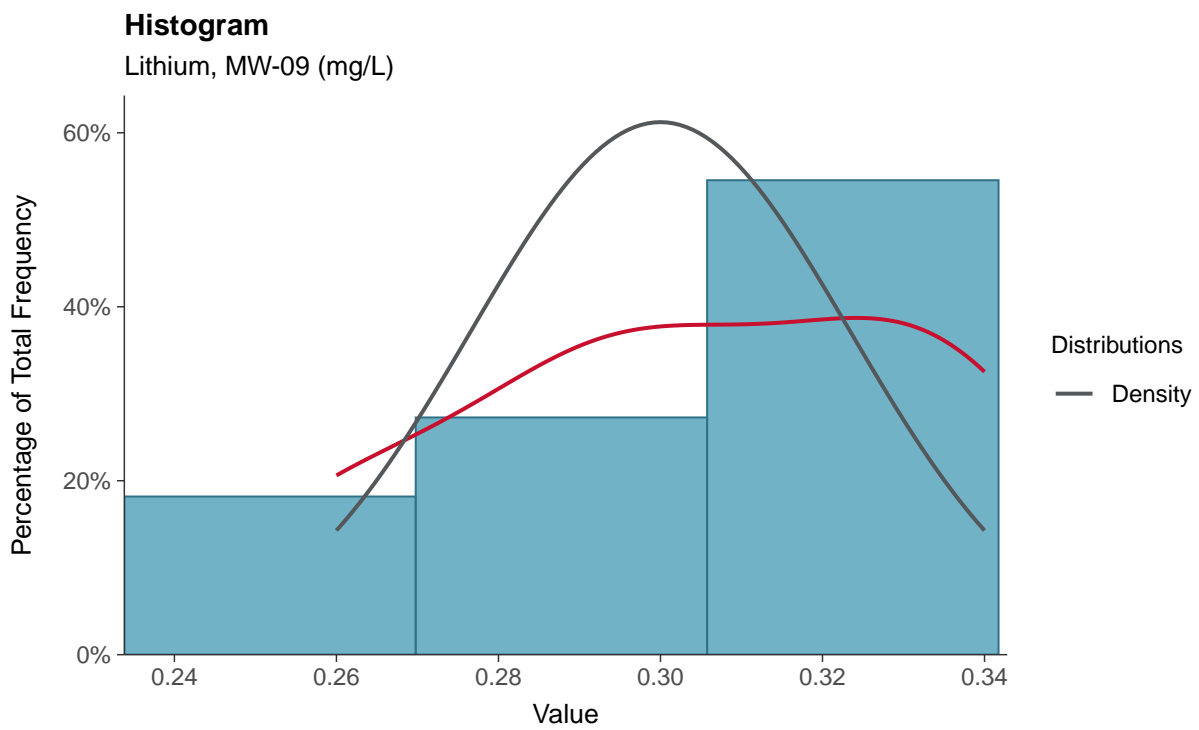
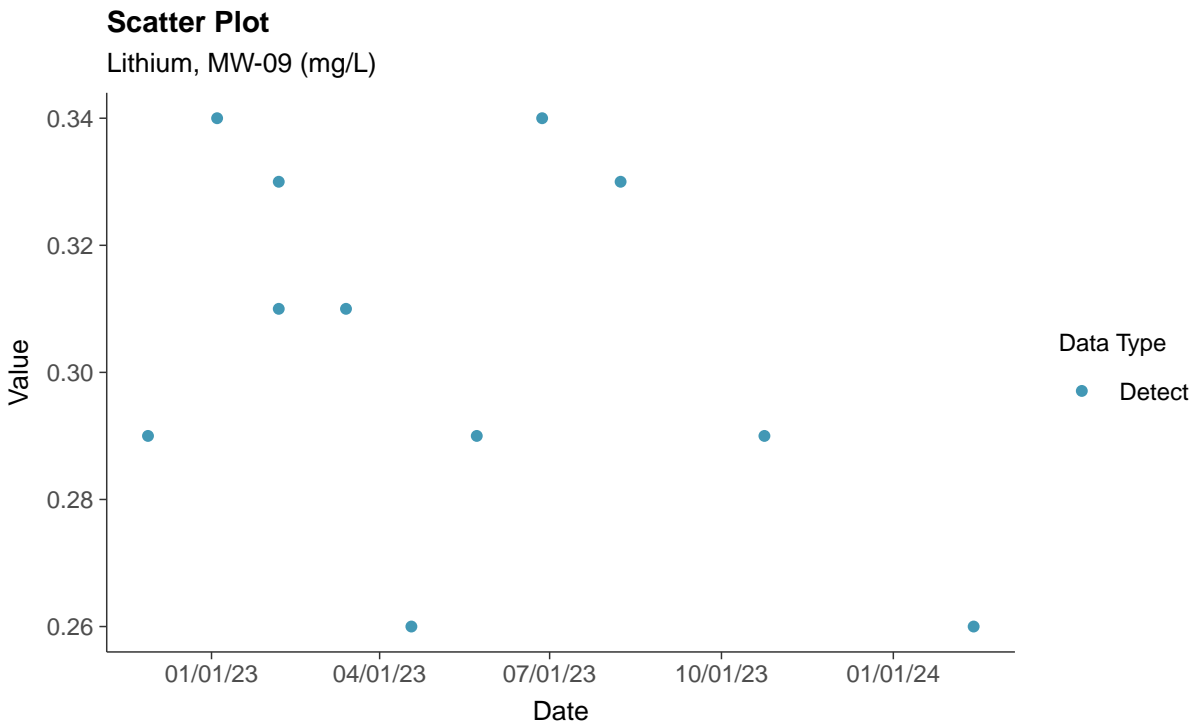
Lead, MW-09 (mg/L)





Appendix IV: Lithium, MW-09

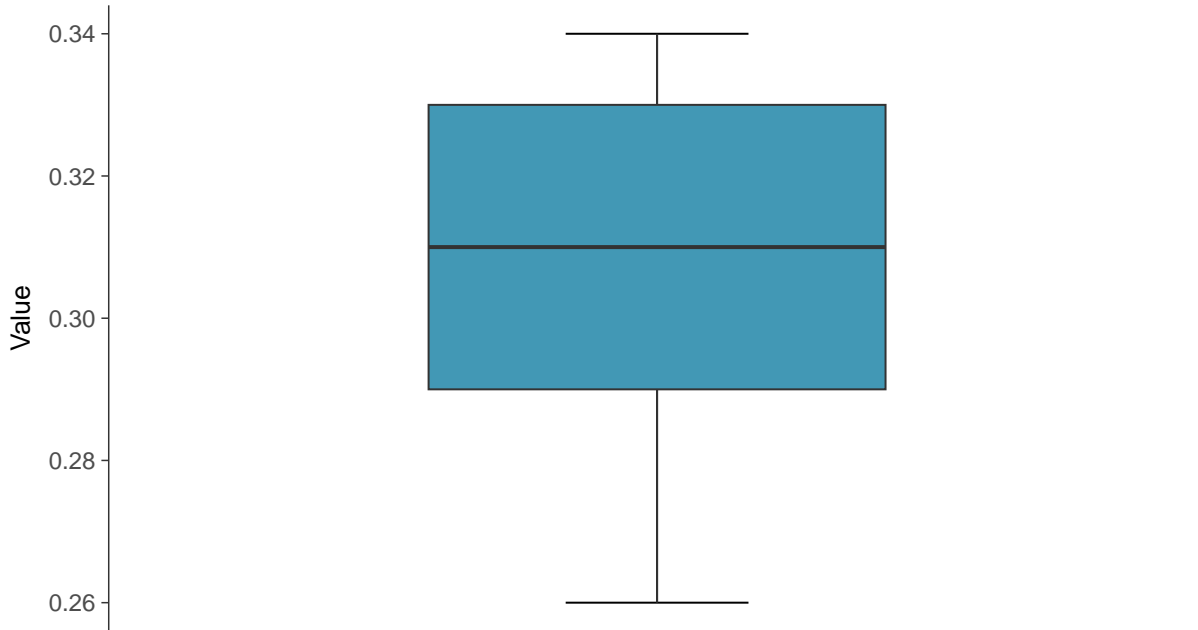
ID: 2_19_5_116





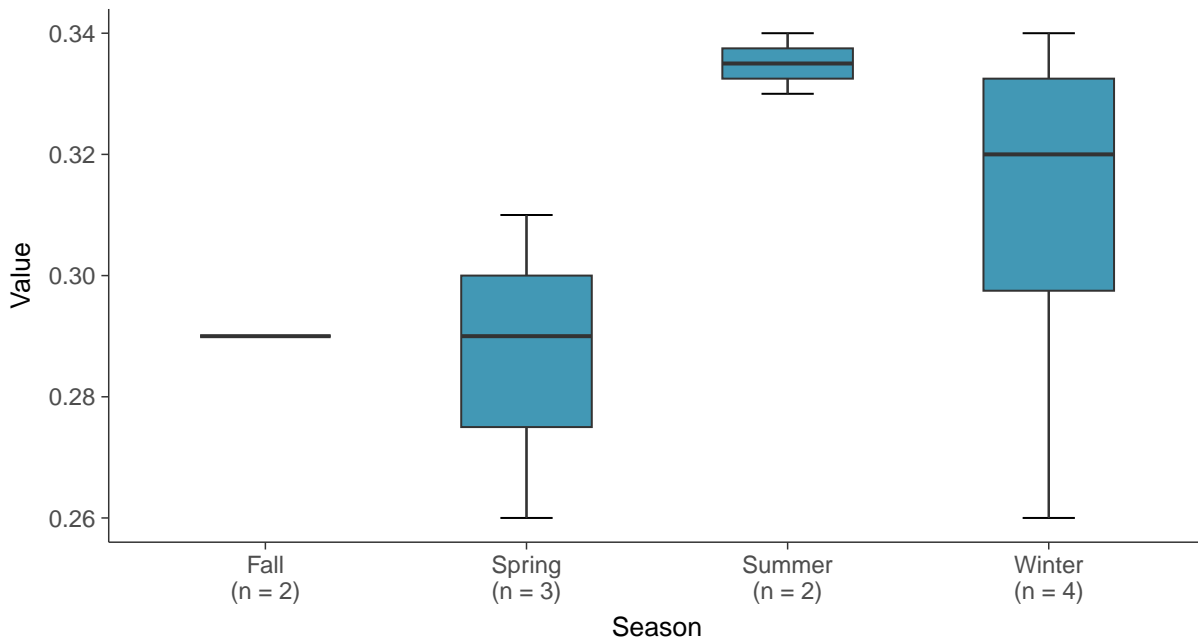
Boxplot

Lithium, MW-09 (mg/L)



Boxplot by Season

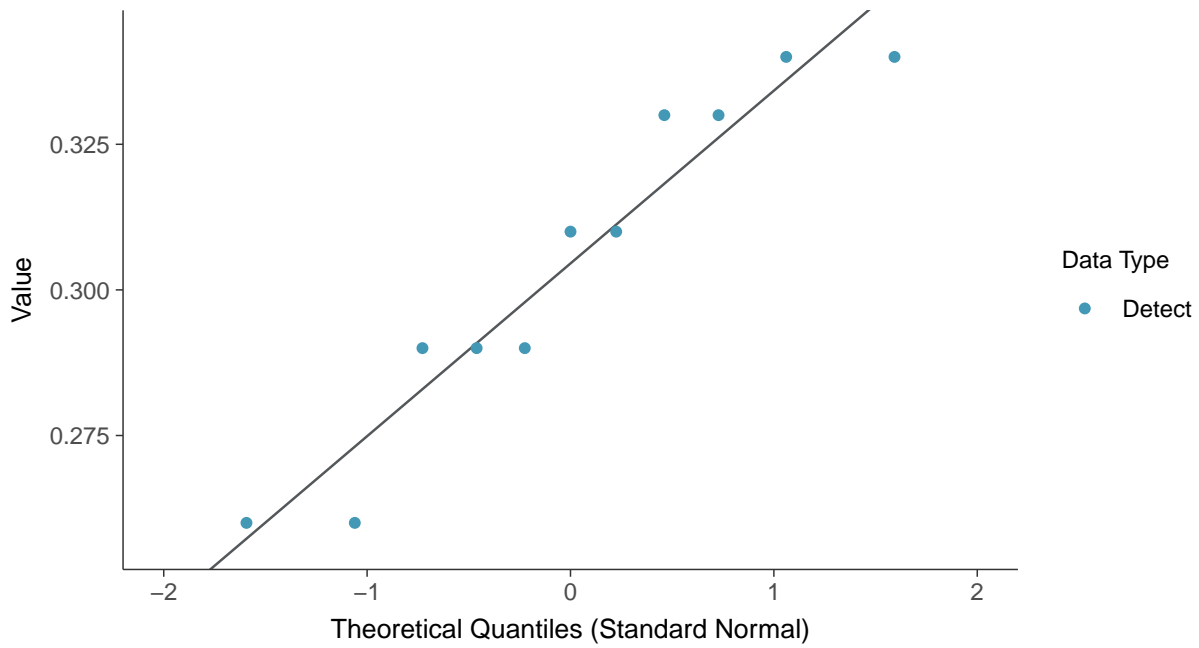
Lithium, MW-09 (mg/L)





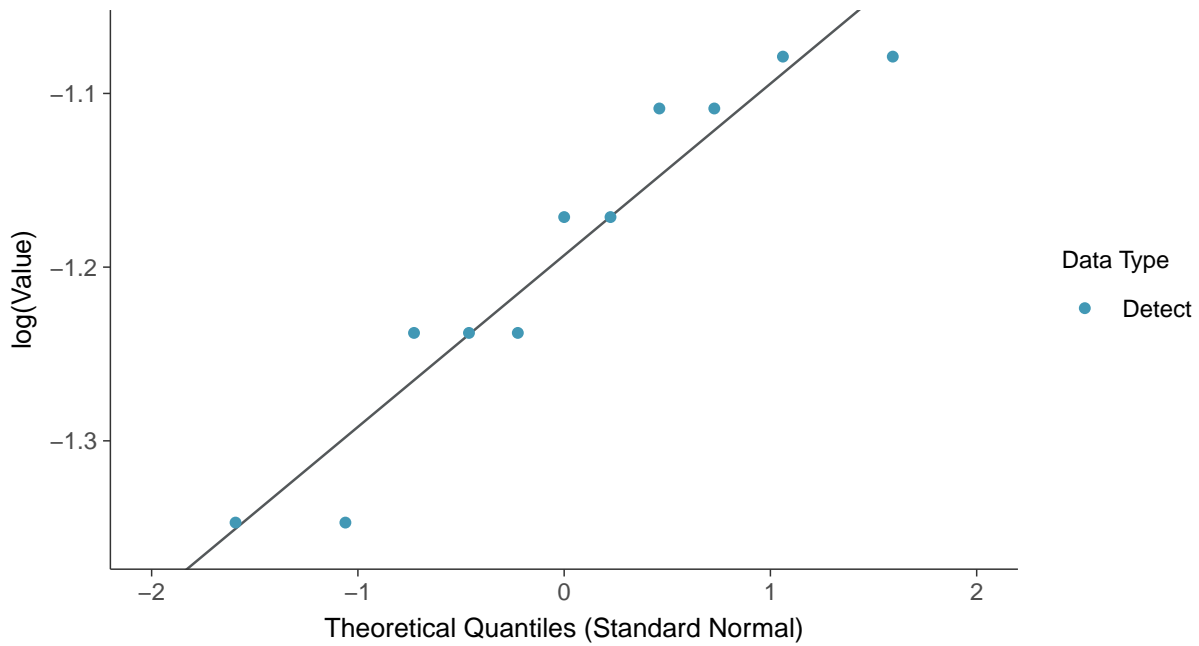
Normal Q-Q plot

Lithium, MW-09 (mg/L)



Lognormal Q-Q plot

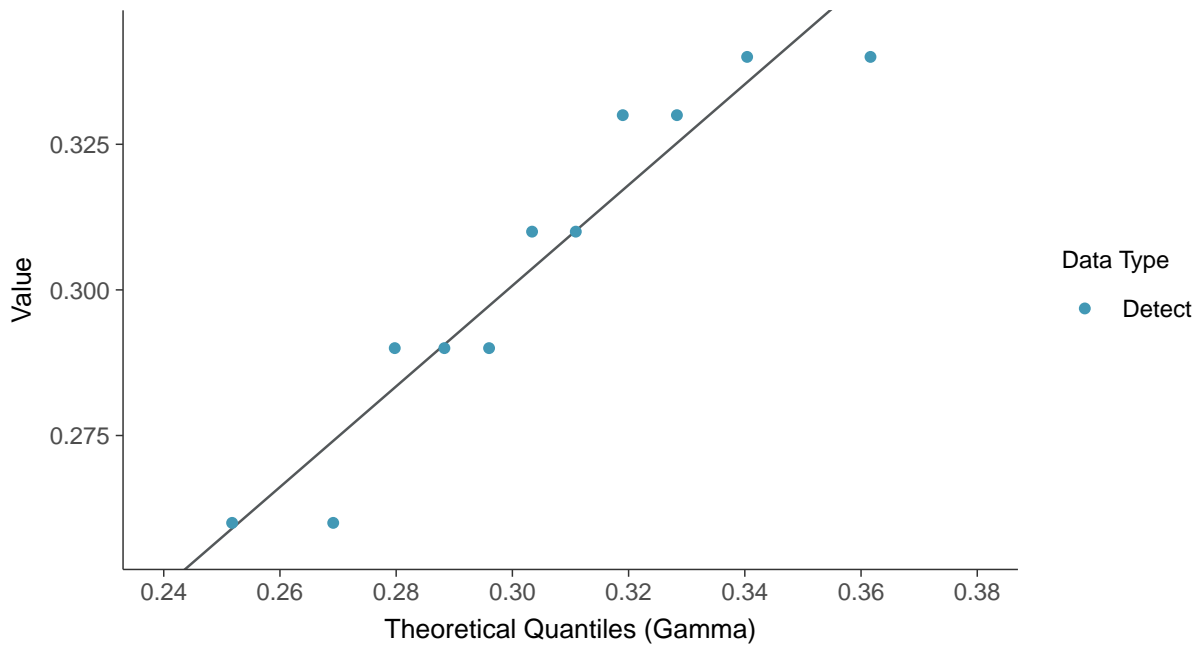
Lithium, MW-09 (mg/L)





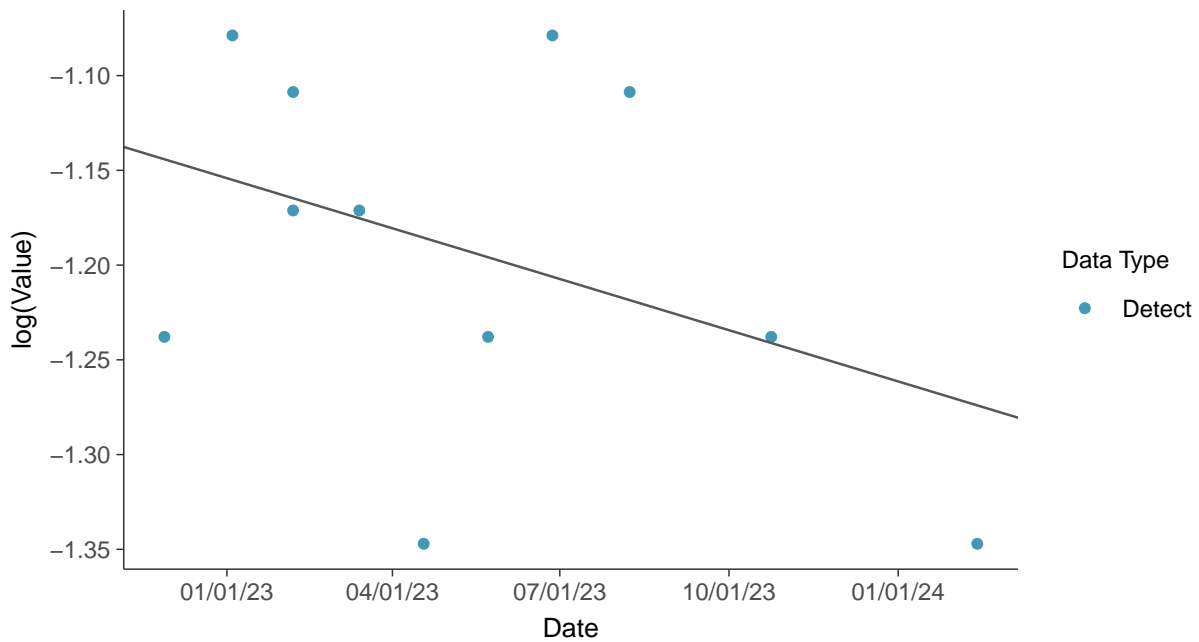
Gamma Q-Q plot

Lithium, MW-09 (mg/L)



Trend Regression: Lognormal MLE

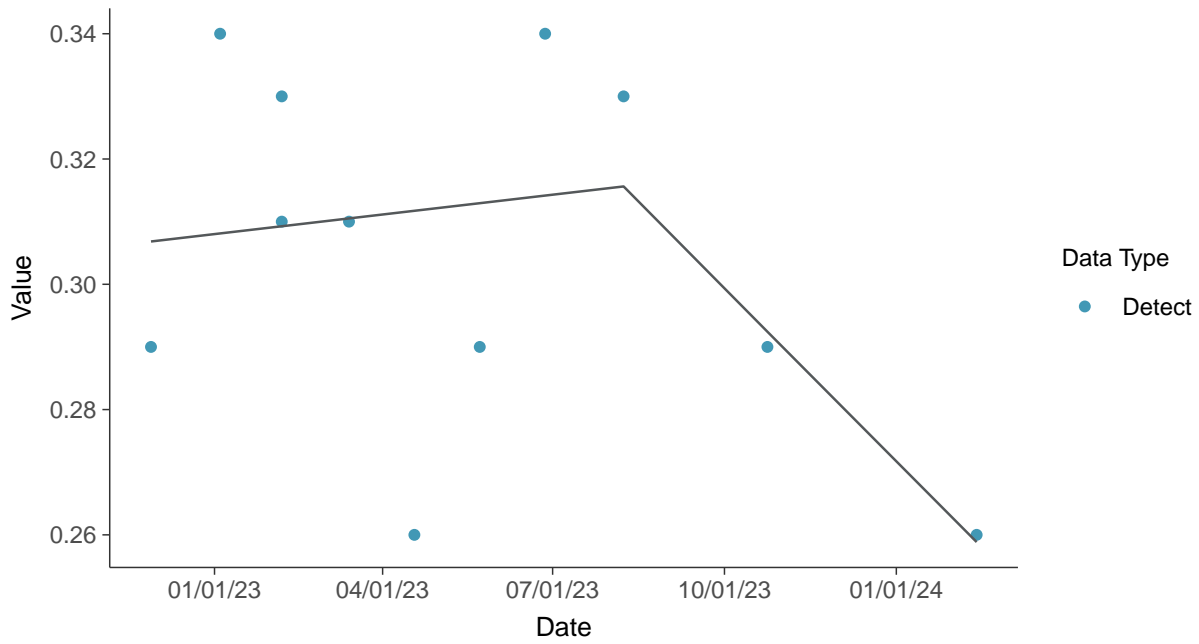
Lithium, MW-09 (mg/L)





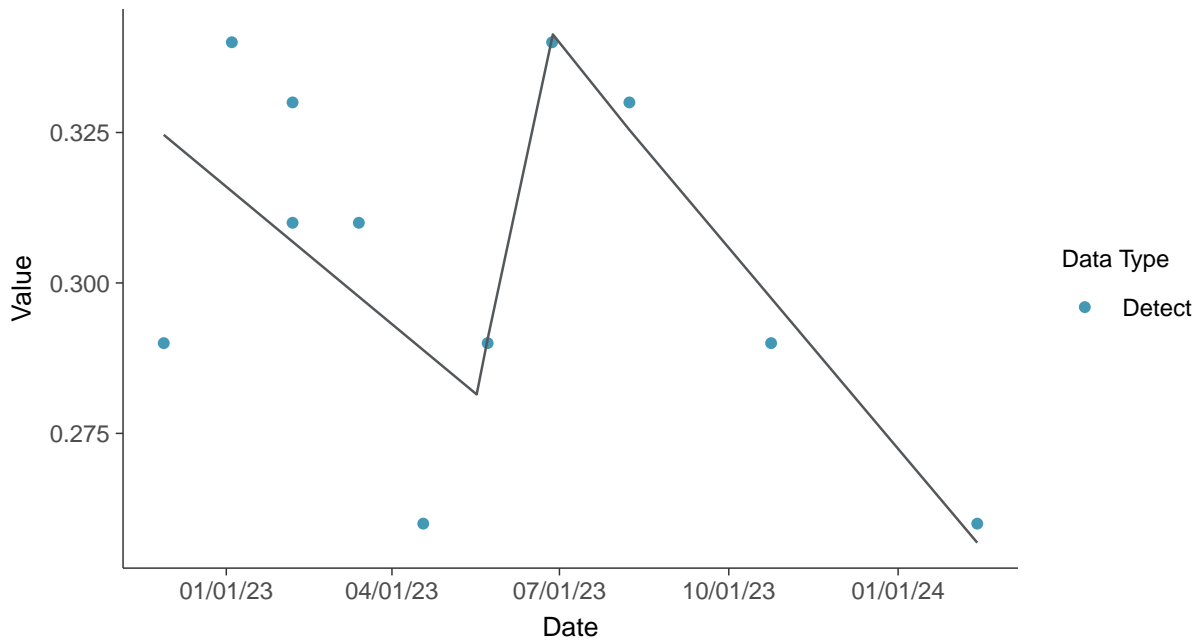
Trend Regression: Piecewise Linear-Linear

Lithium, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

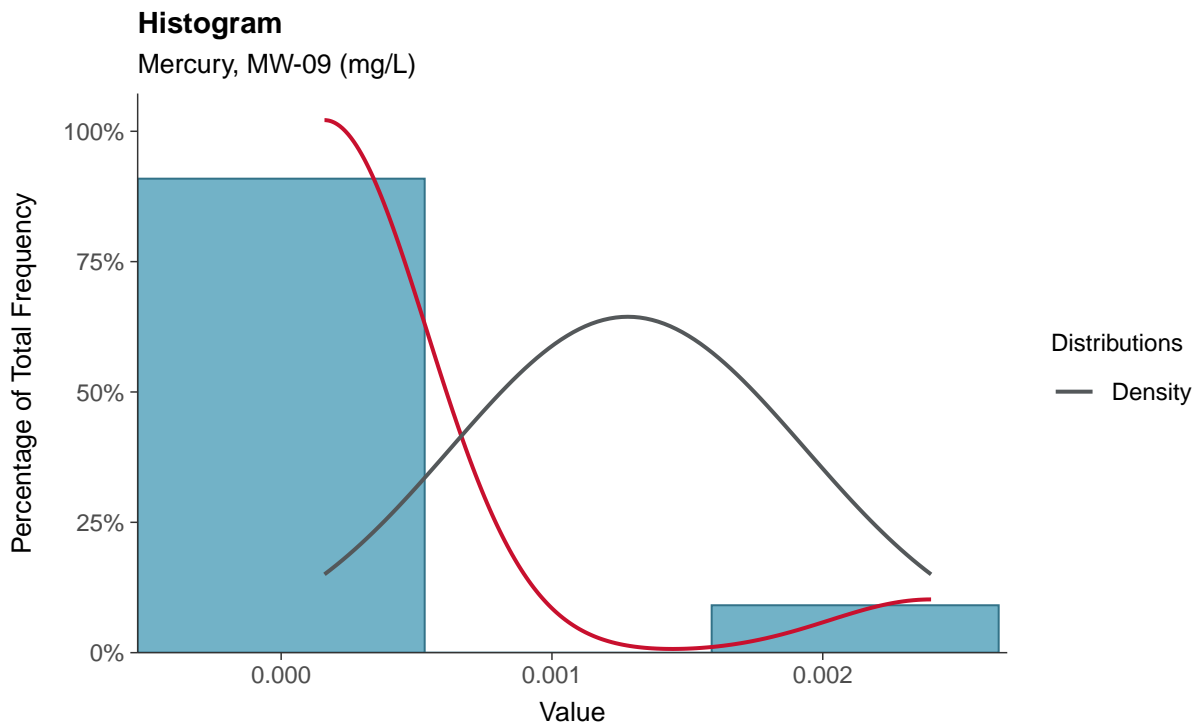
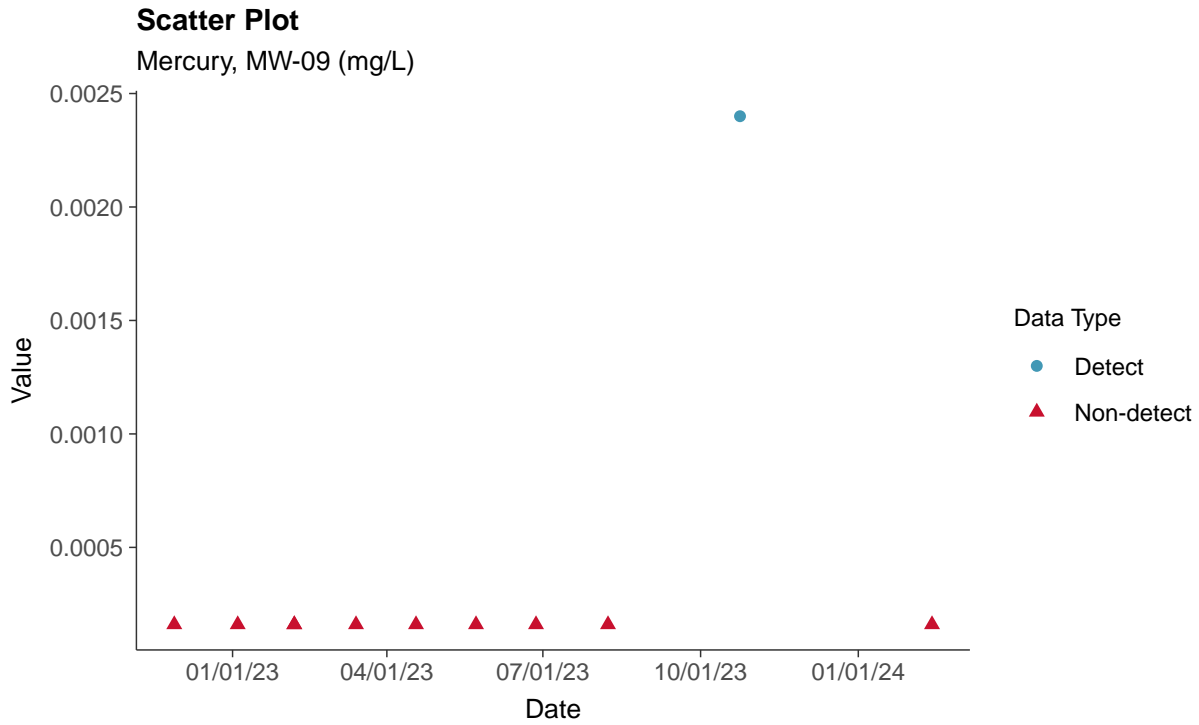
Lithium, MW-09 (mg/L)





Appendix IV: Mercury, MW-09

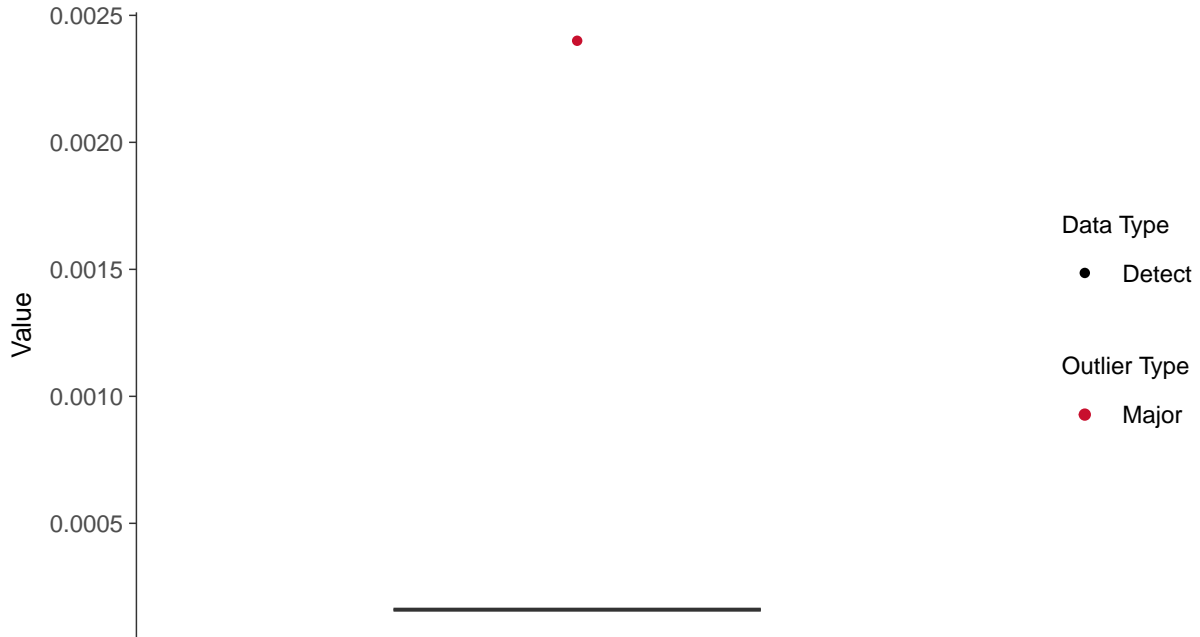
ID: 2_19_5_117





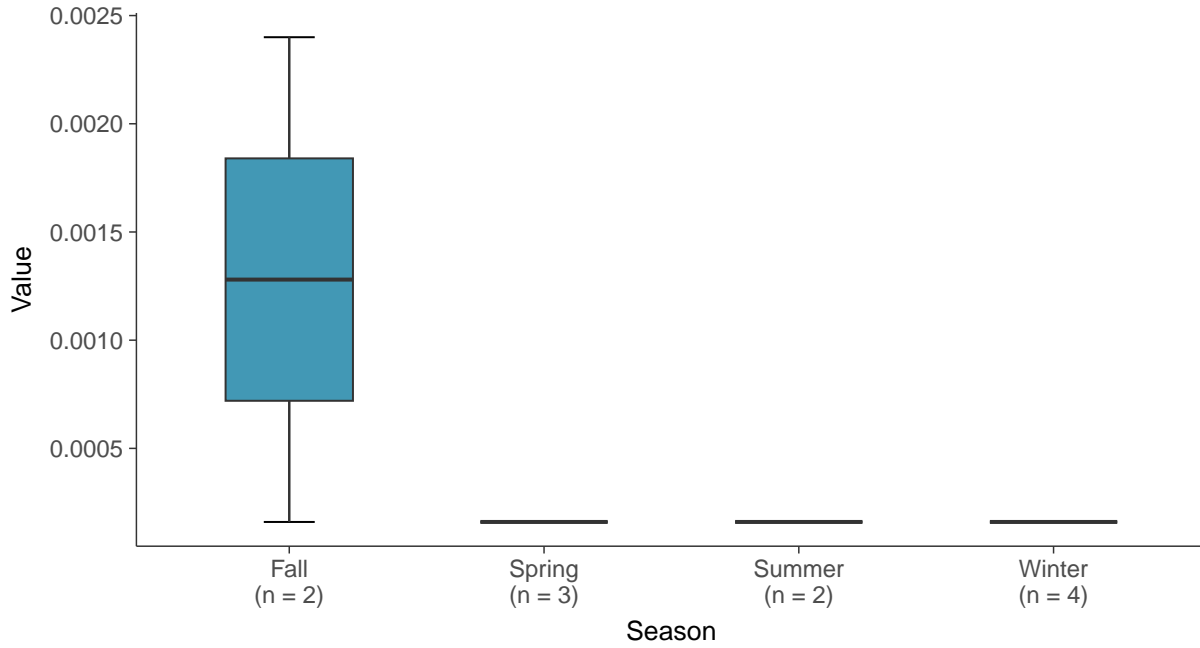
Boxplot

Mercury, MW-09 (mg/L)



Boxplot by Season

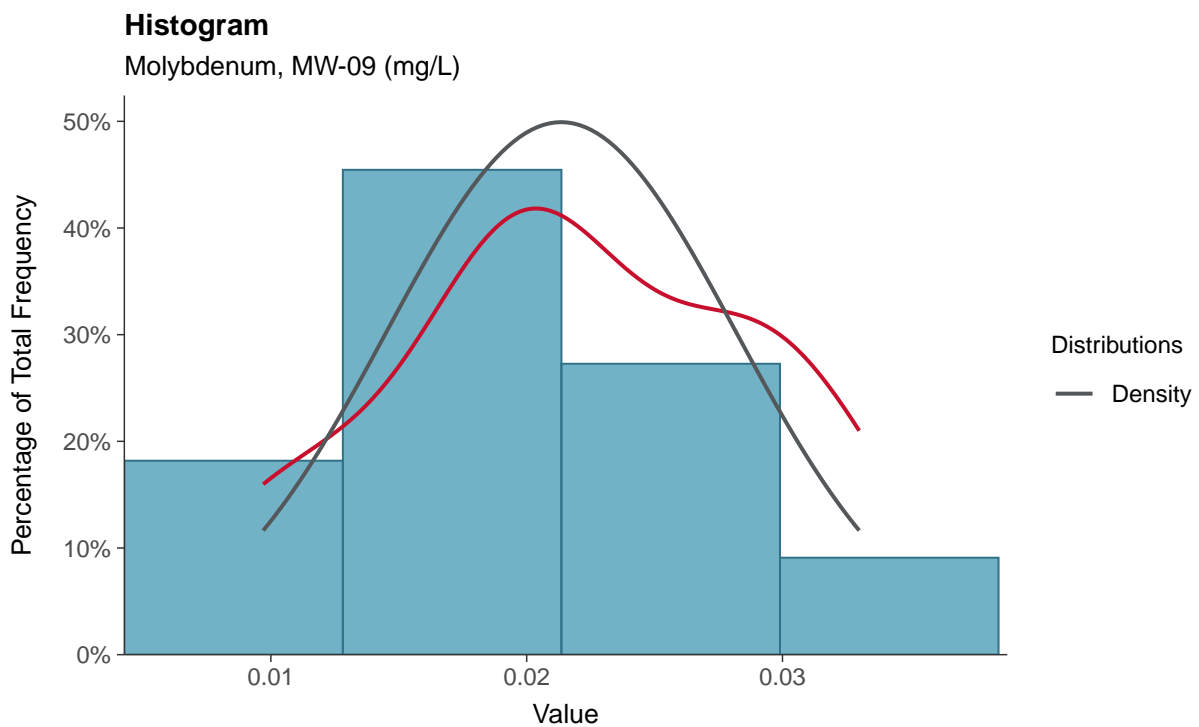
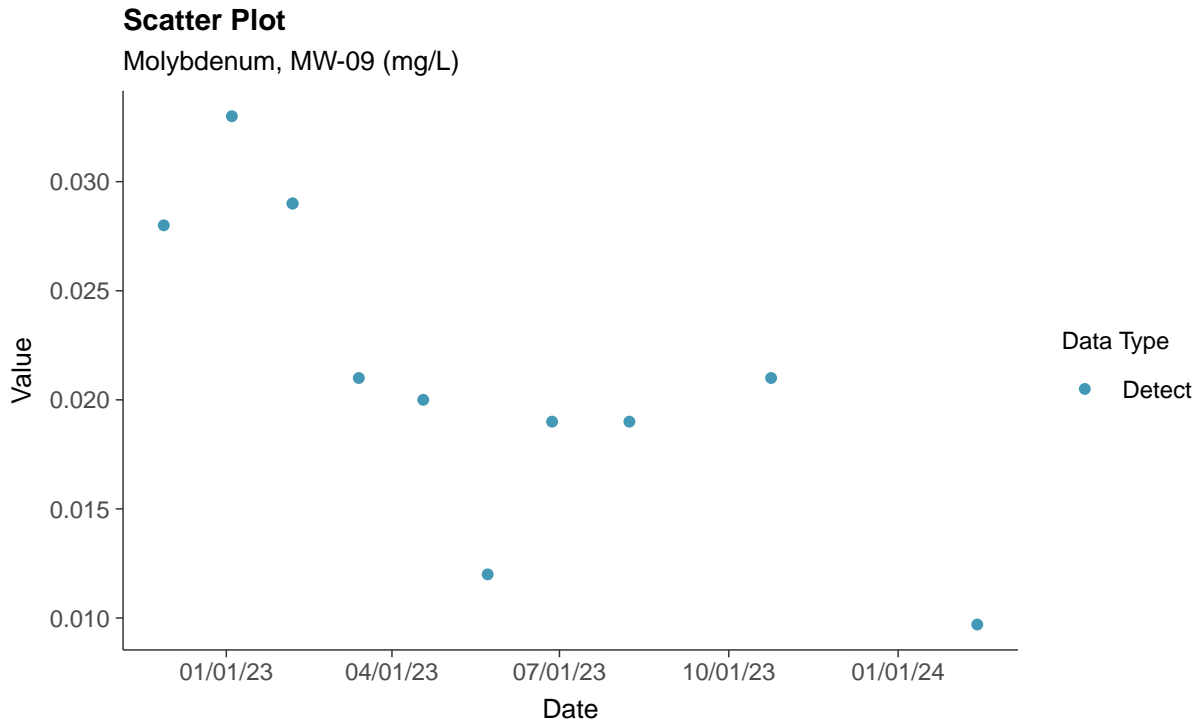
Mercury, MW-09 (mg/L)





Appendix IV: Molybdenum, MW-09

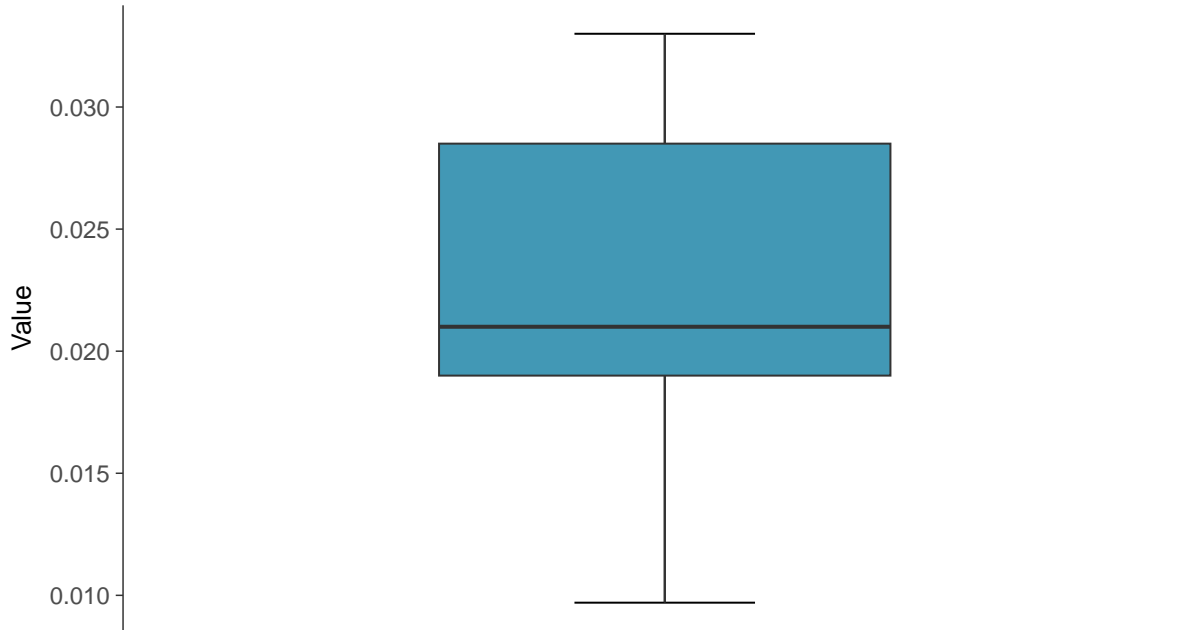
ID: 2_19_5_118





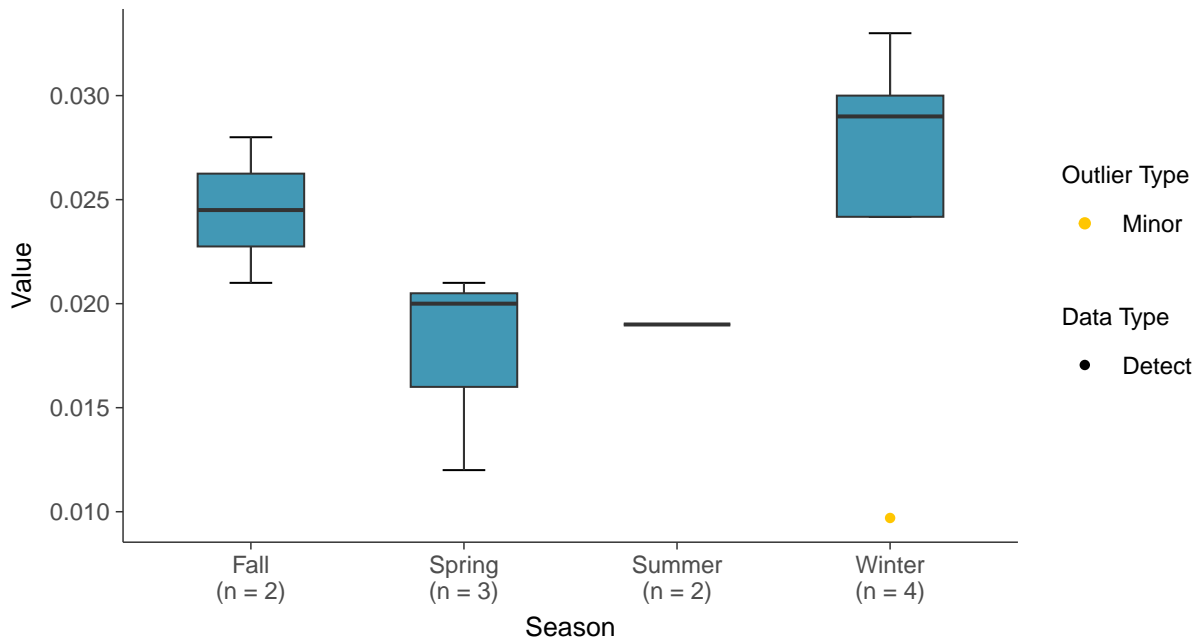
Boxplot

Molybdenum, MW-09 (mg/L)



Boxplot by Season

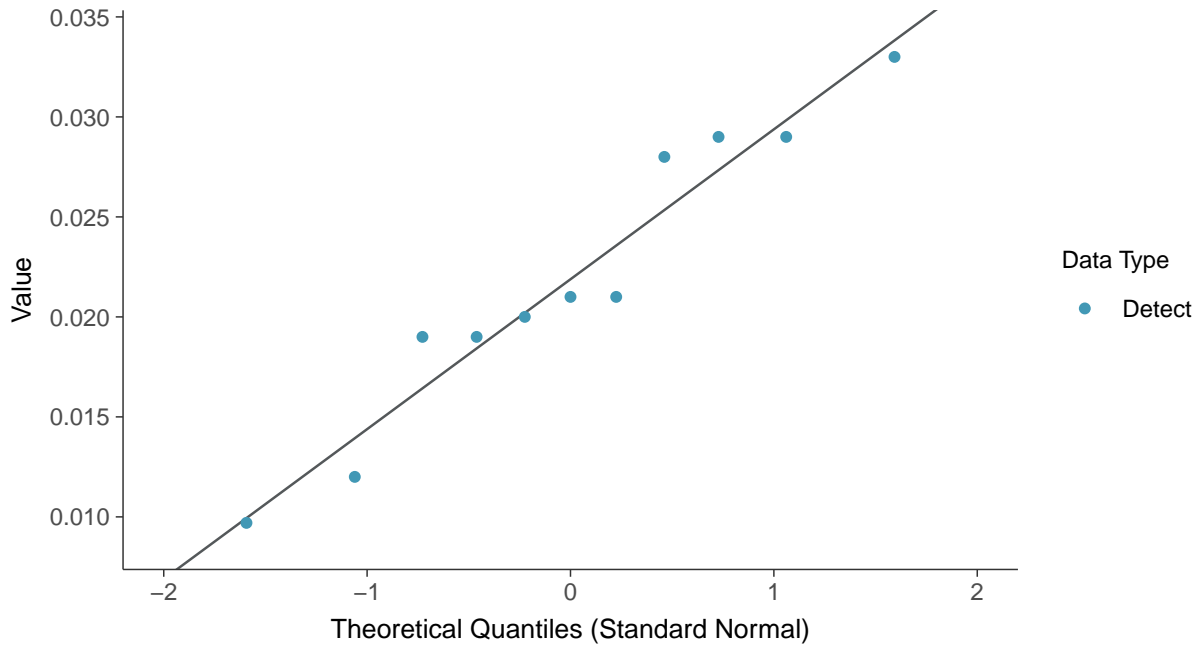
Molybdenum, MW-09 (mg/L)





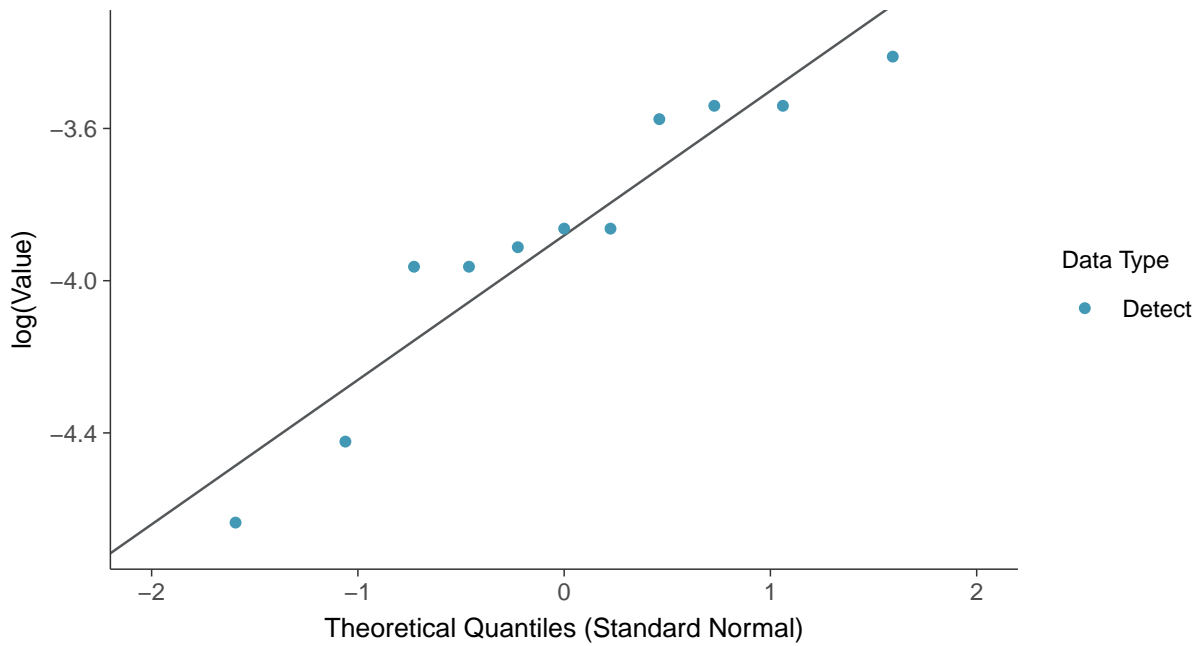
Normal Q-Q plot

Molybdenum, MW-09 (mg/L)



Lognormal Q-Q plot

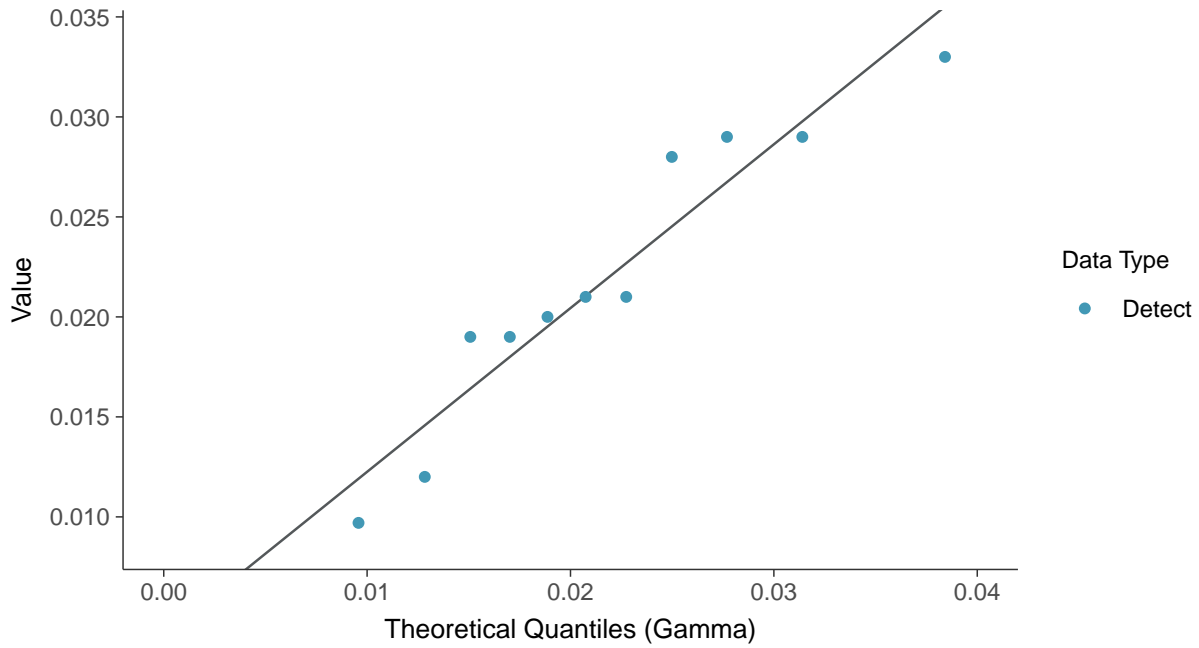
Molybdenum, MW-09 (mg/L)





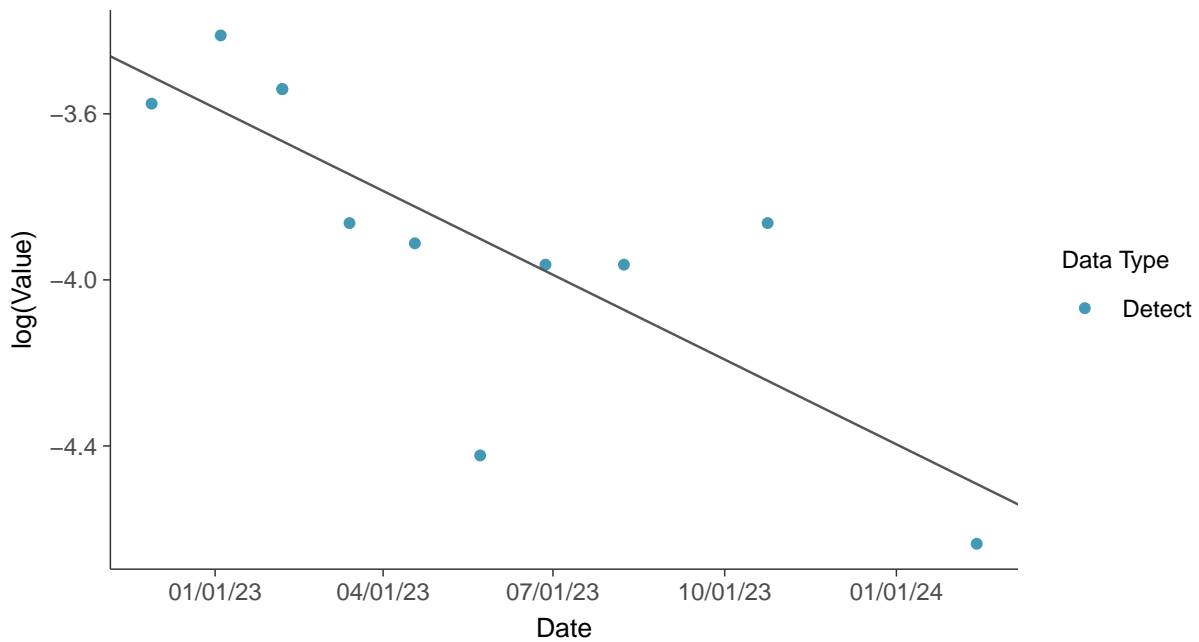
Gamma Q-Q plot

Molybdenum, MW-09 (mg/L)



Trend Regression: Lognormal MLE

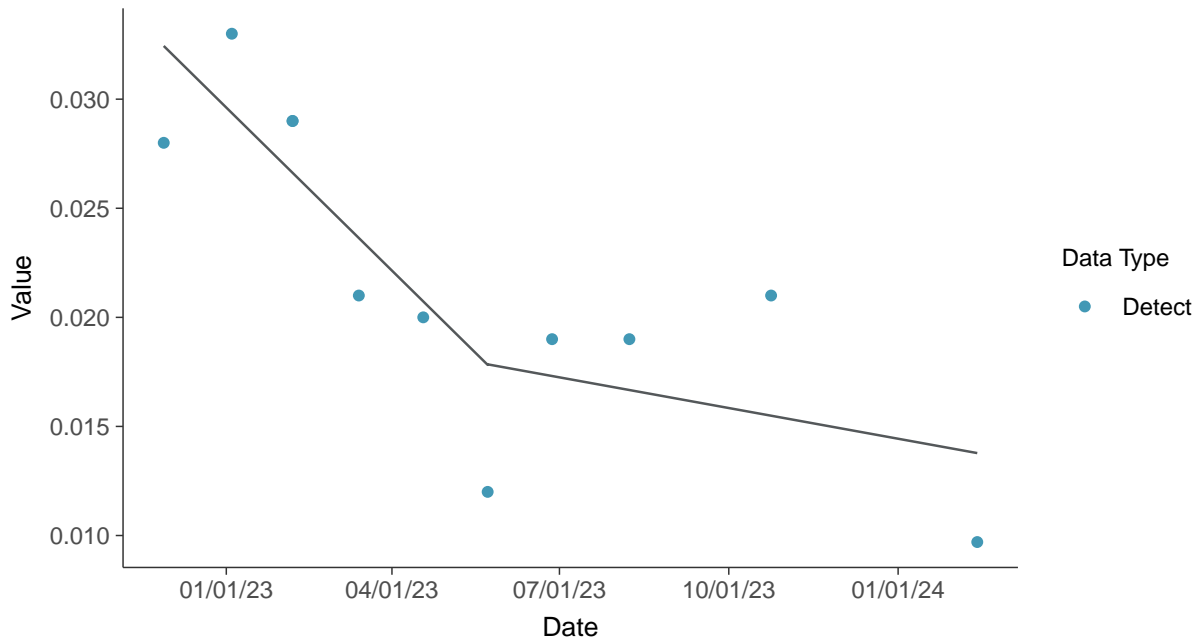
Molybdenum, MW-09 (mg/L)





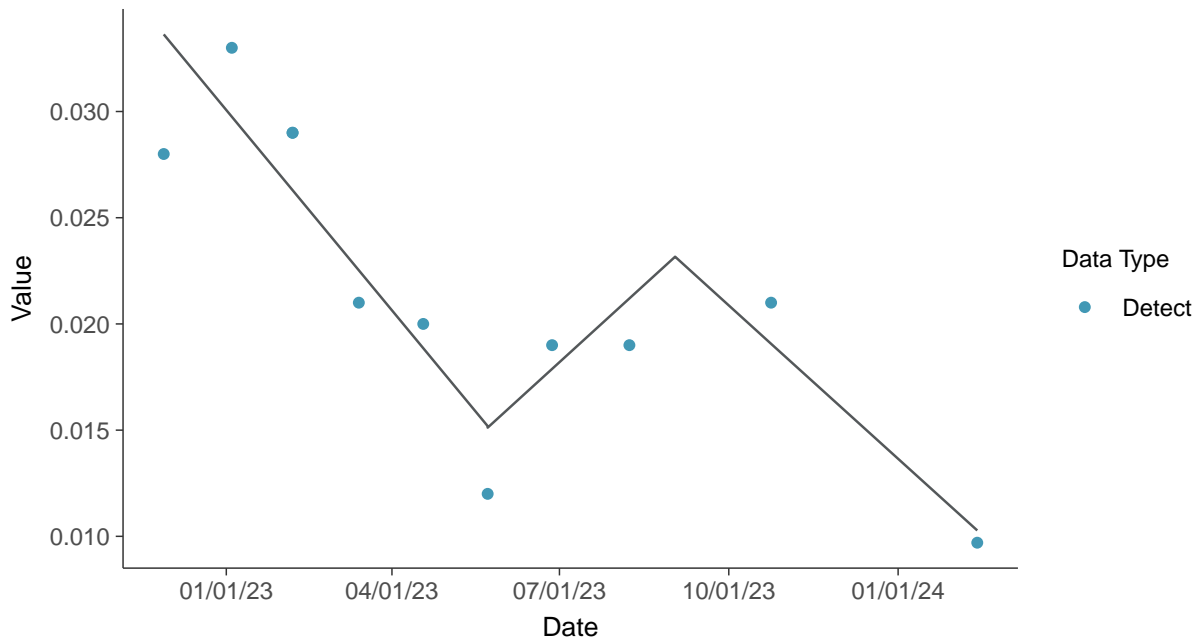
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-09 (mg/L)



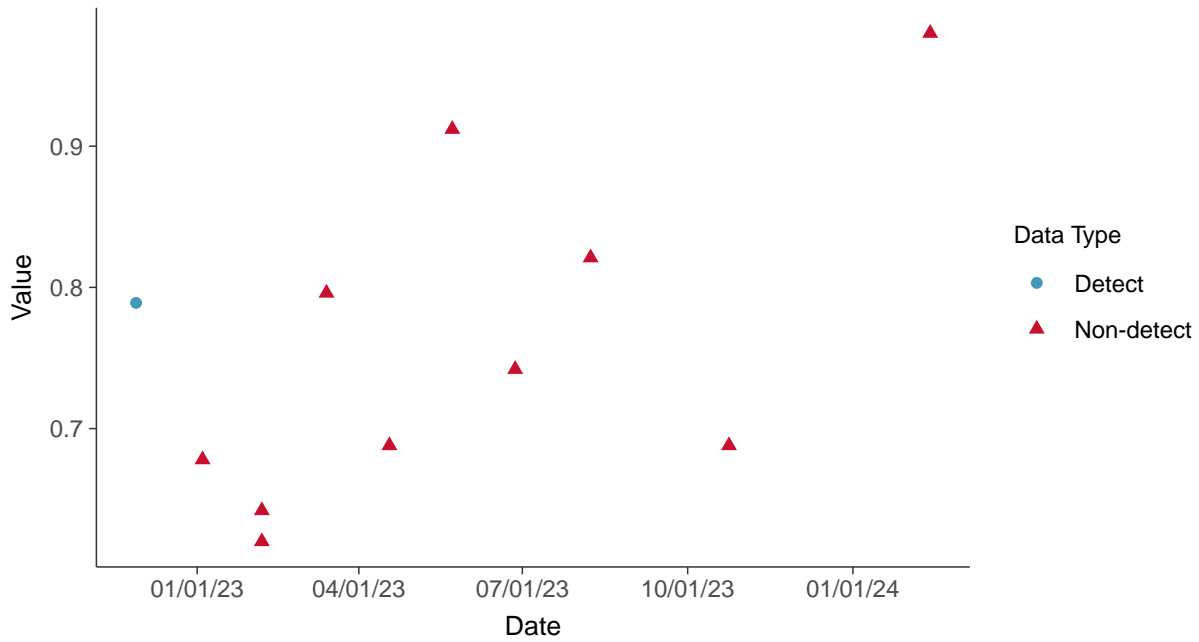


Appendix IV: Radium 226 and 228, MW-09

ID: 2_19_5_121

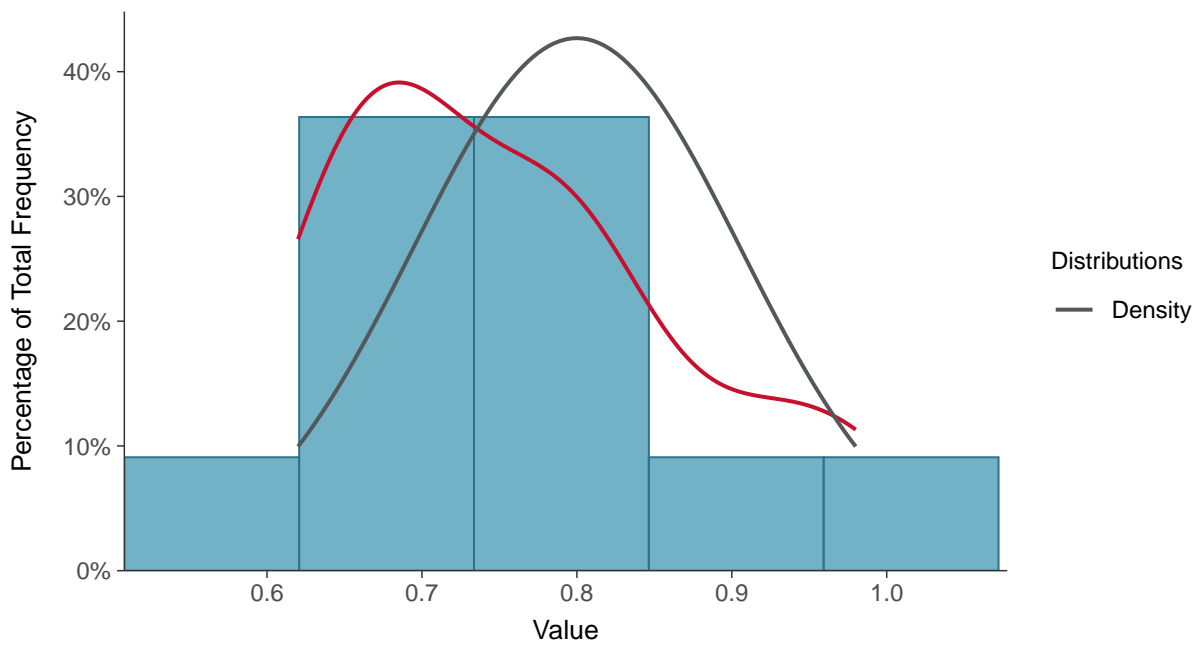
Scatter Plot

Radium 226 and 228, MW-09 (pCi/L)



Histogram

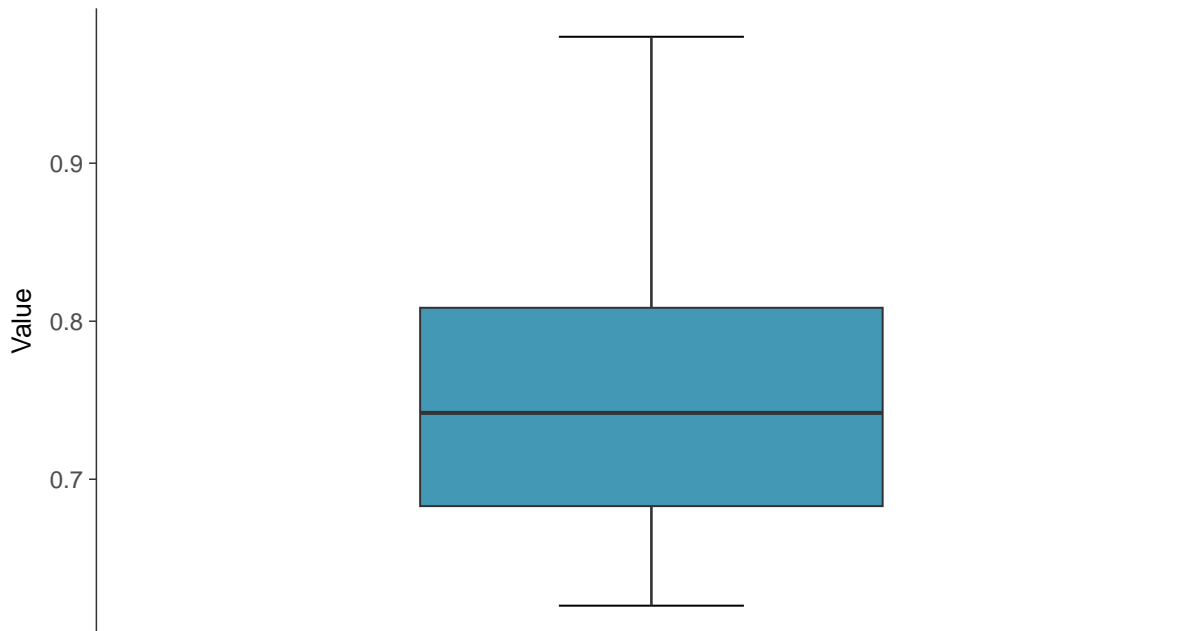
Radium 226 and 228, MW-09 (pCi/L)





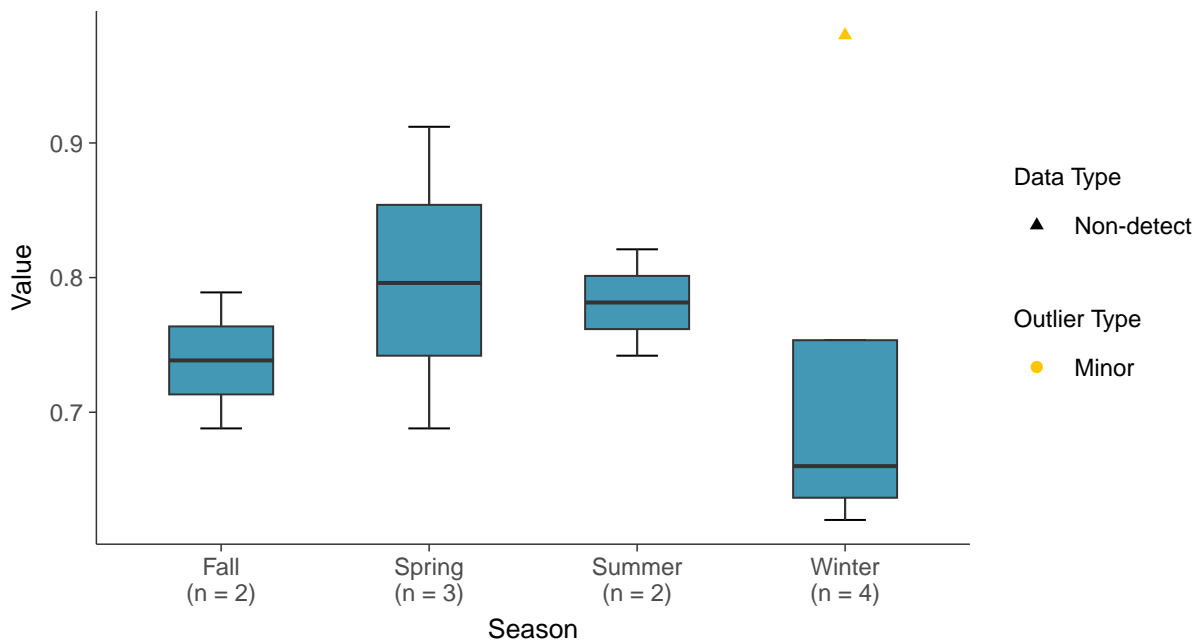
Boxplot

Radium 226 and 228, MW-09 (pCi/L)



Boxplot by Season

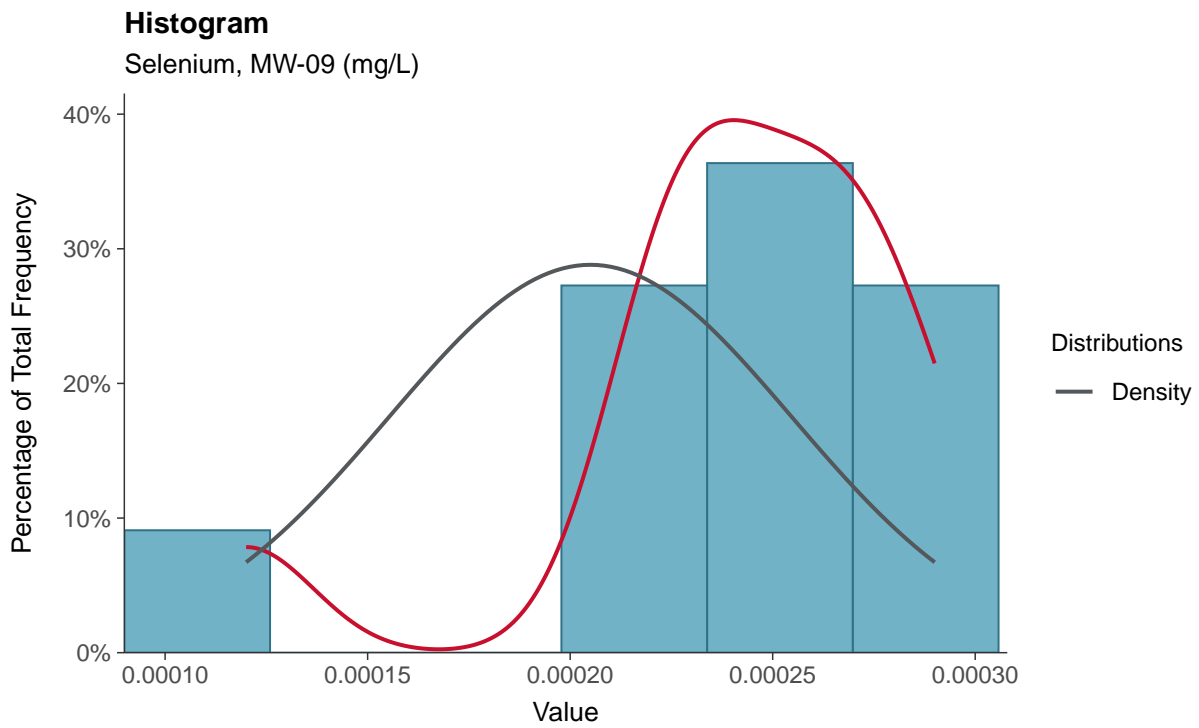
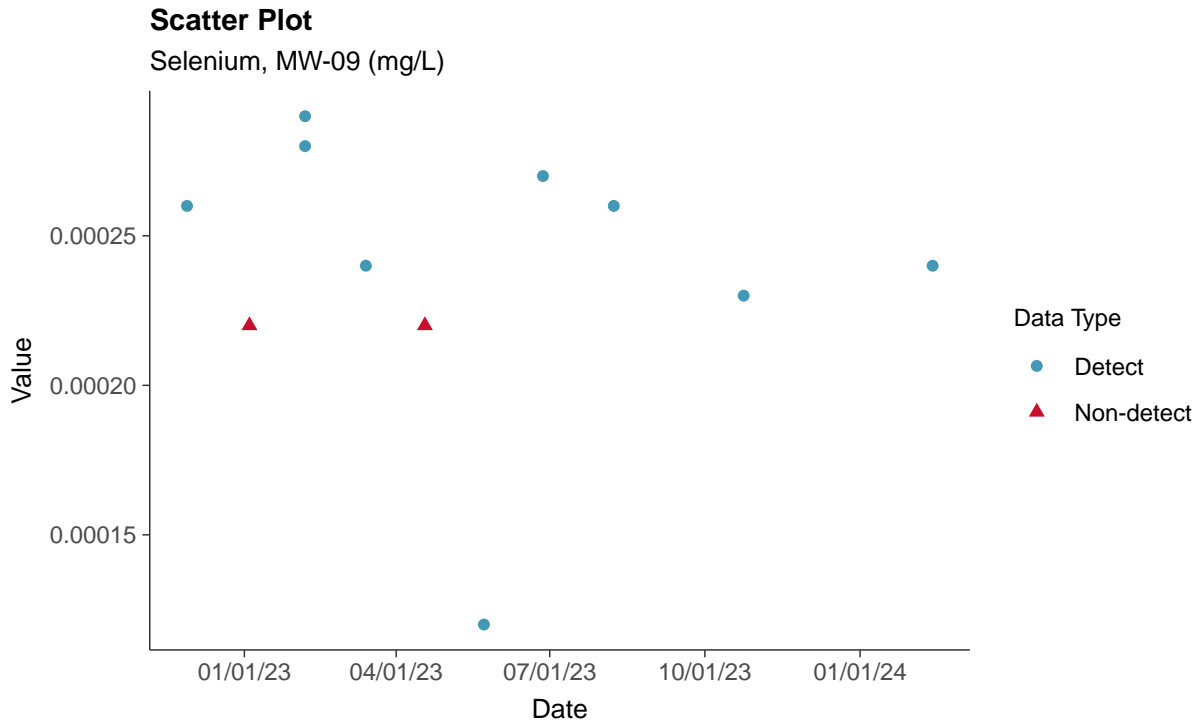
Radium 226 and 228, MW-09 (pCi/L)





Appendix IV: Selenium, MW-09

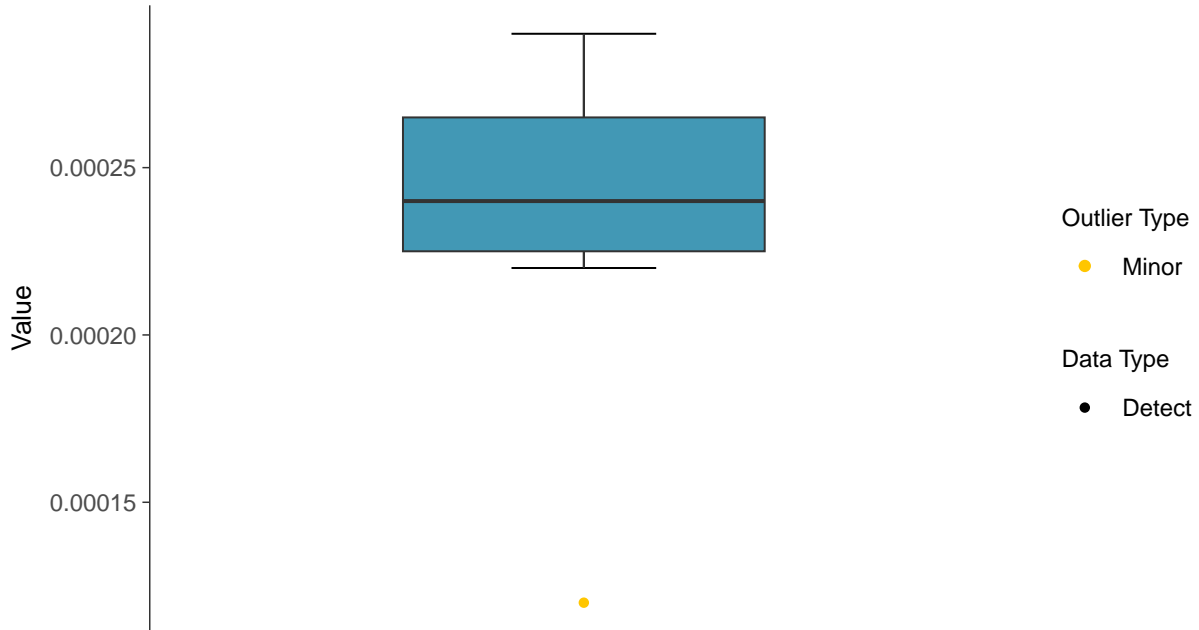
ID: 2_19_5_122





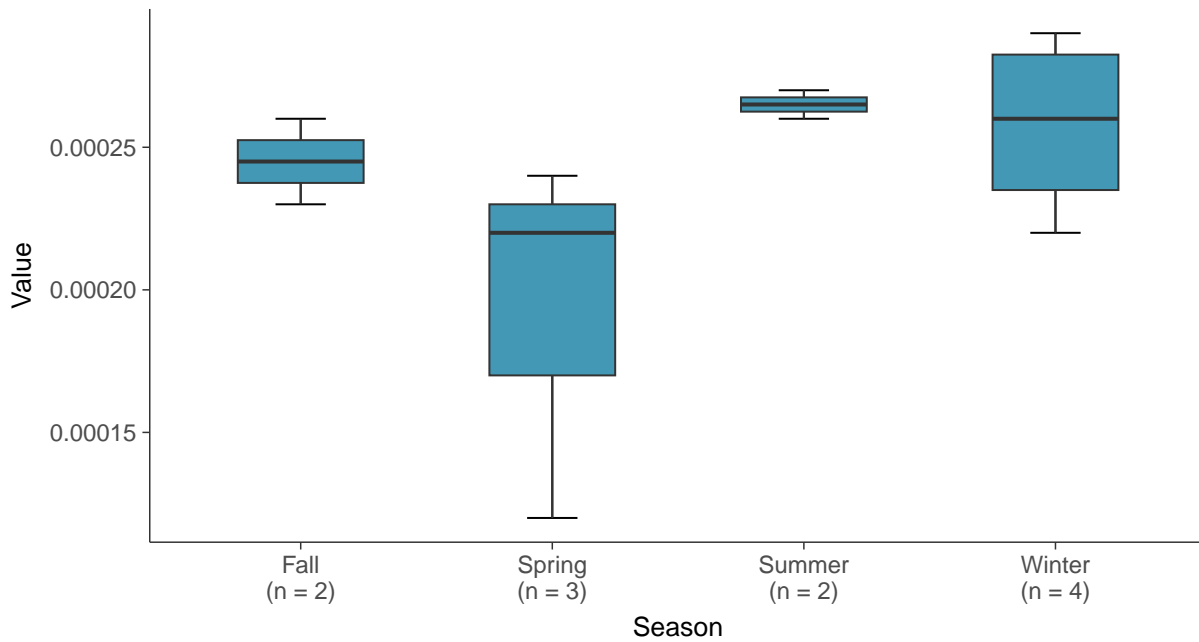
Boxplot

Selenium, MW-09 (mg/L)



Boxplot by Season

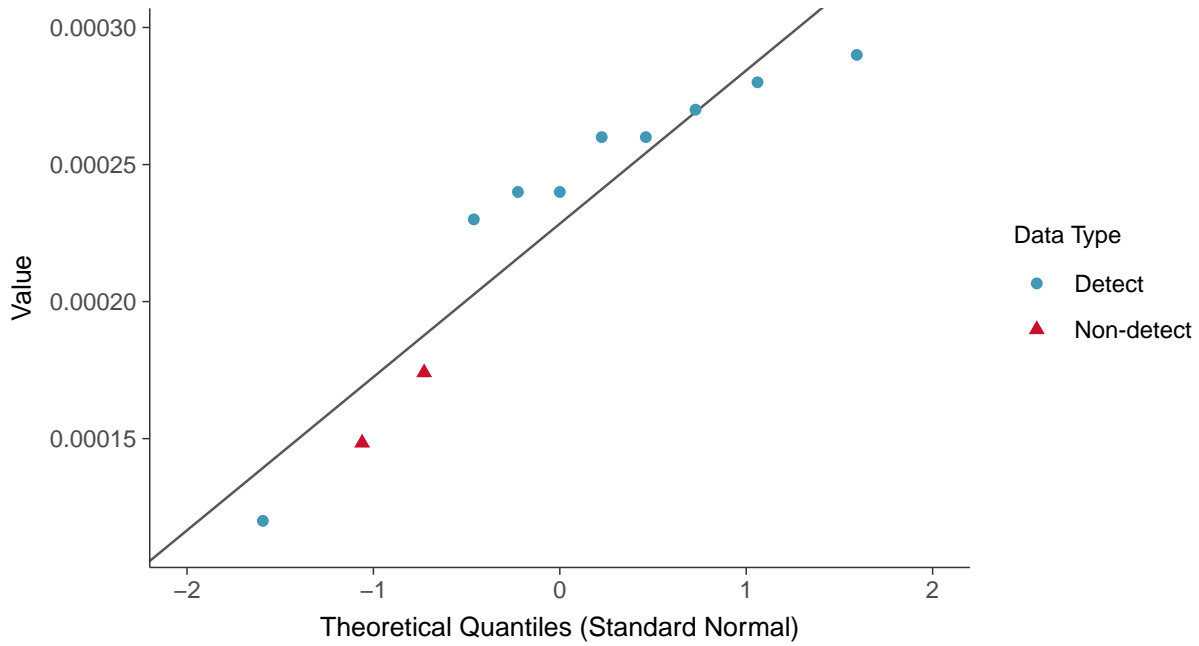
Selenium, MW-09 (mg/L)





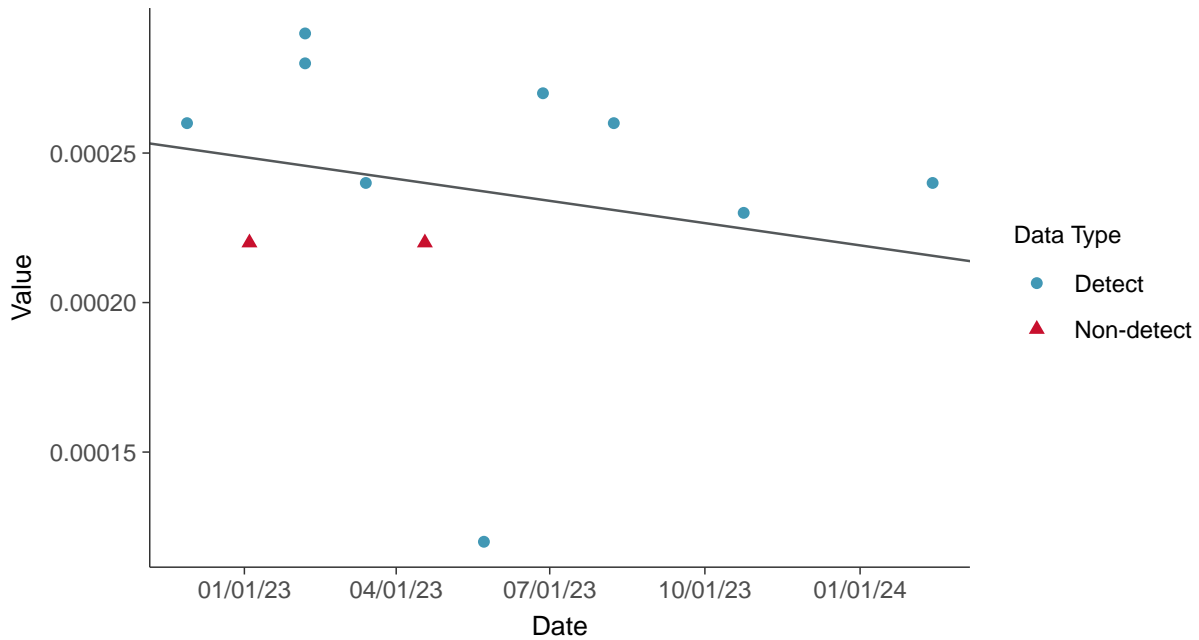
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-09 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

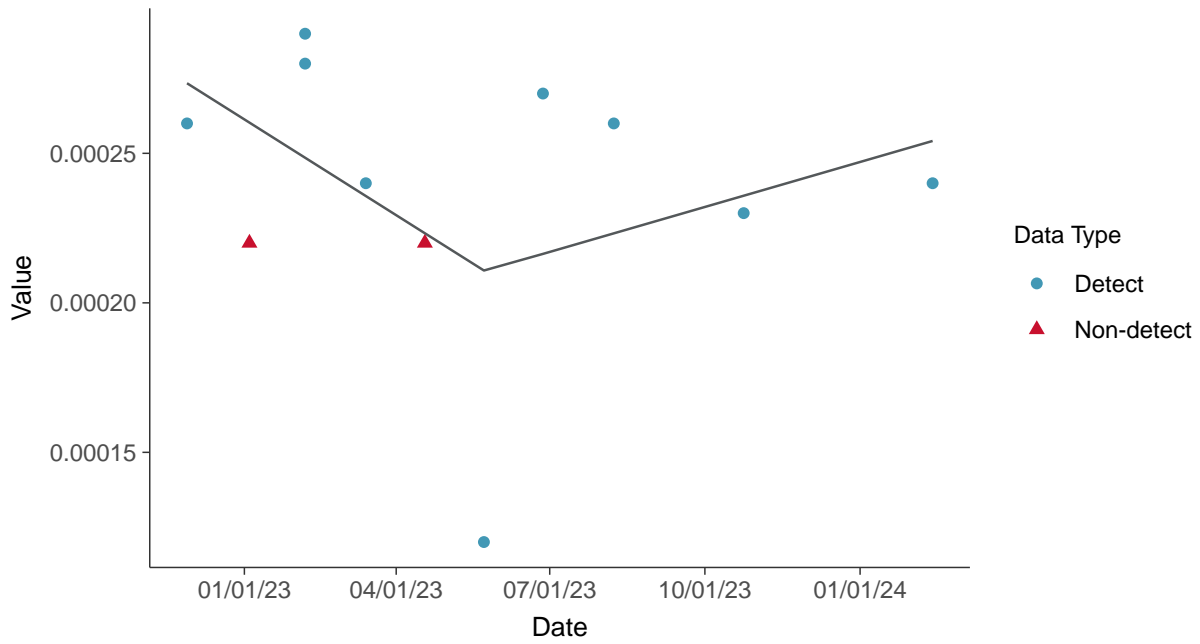
Selenium, MW-09 (mg/L)





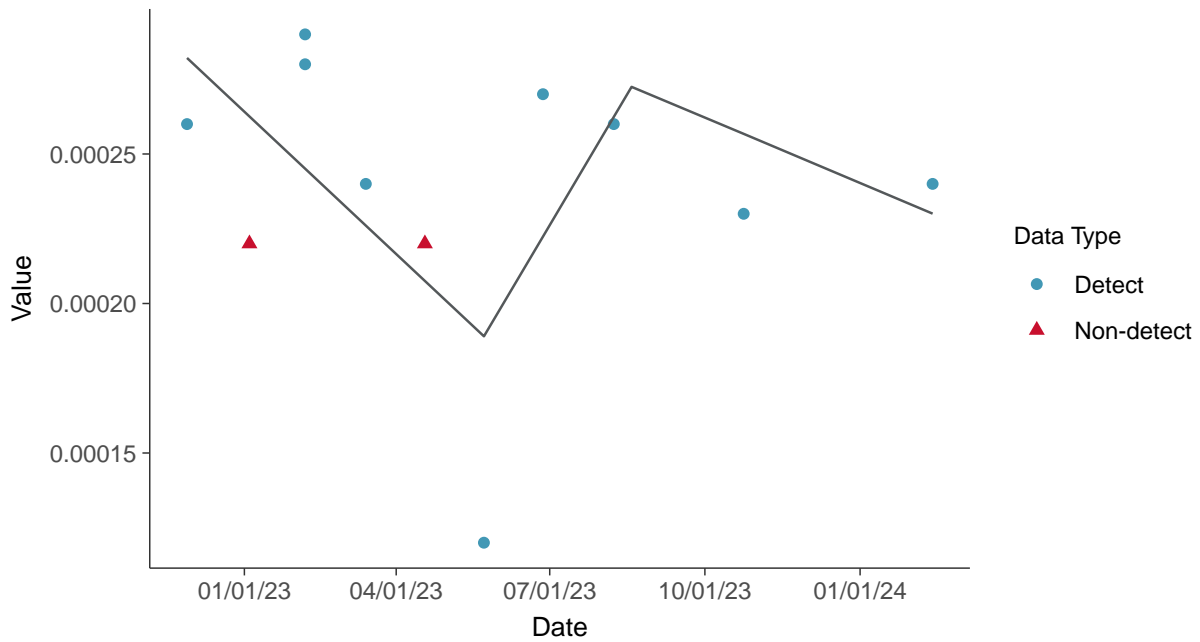
Trend Regression: Piecewise Linear-Linear

Selenium, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-09 (mg/L)



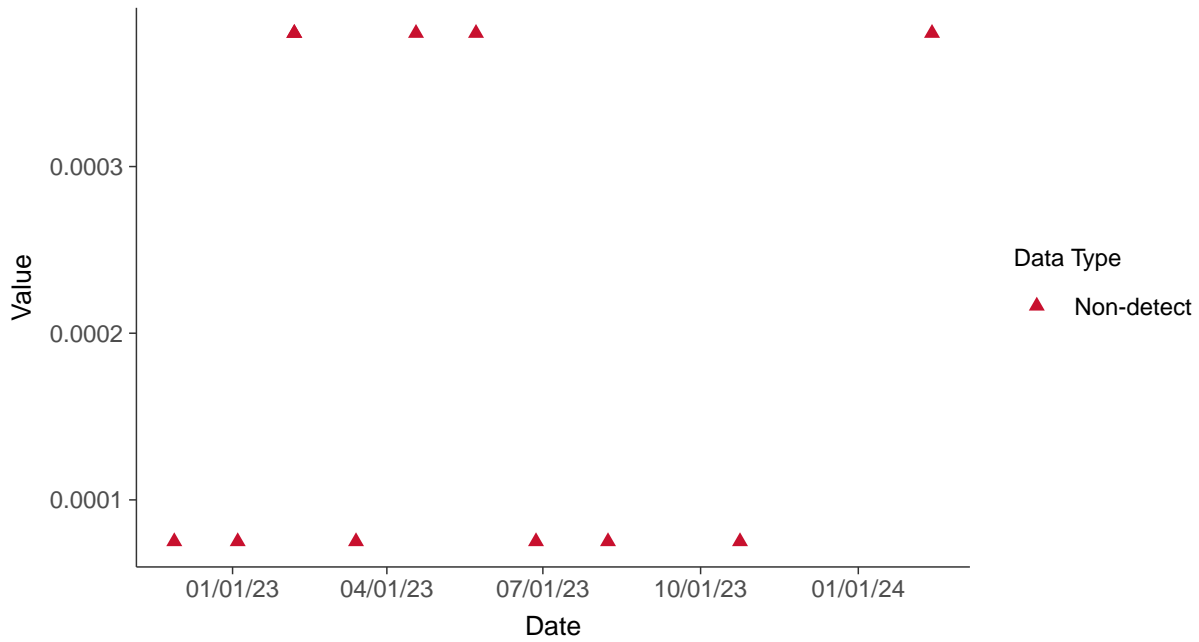


Appendix IV: Thallium, MW-09

ID: 2_19_5_125

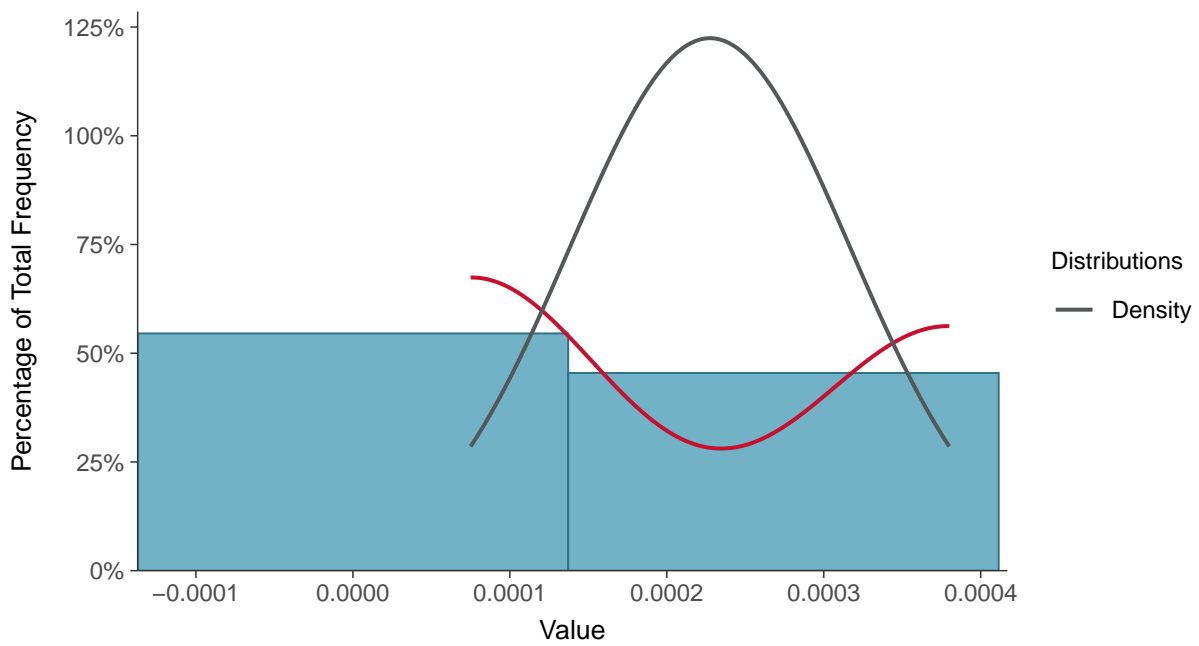
Scatter Plot

Thallium, MW-09 (mg/L)



Histogram

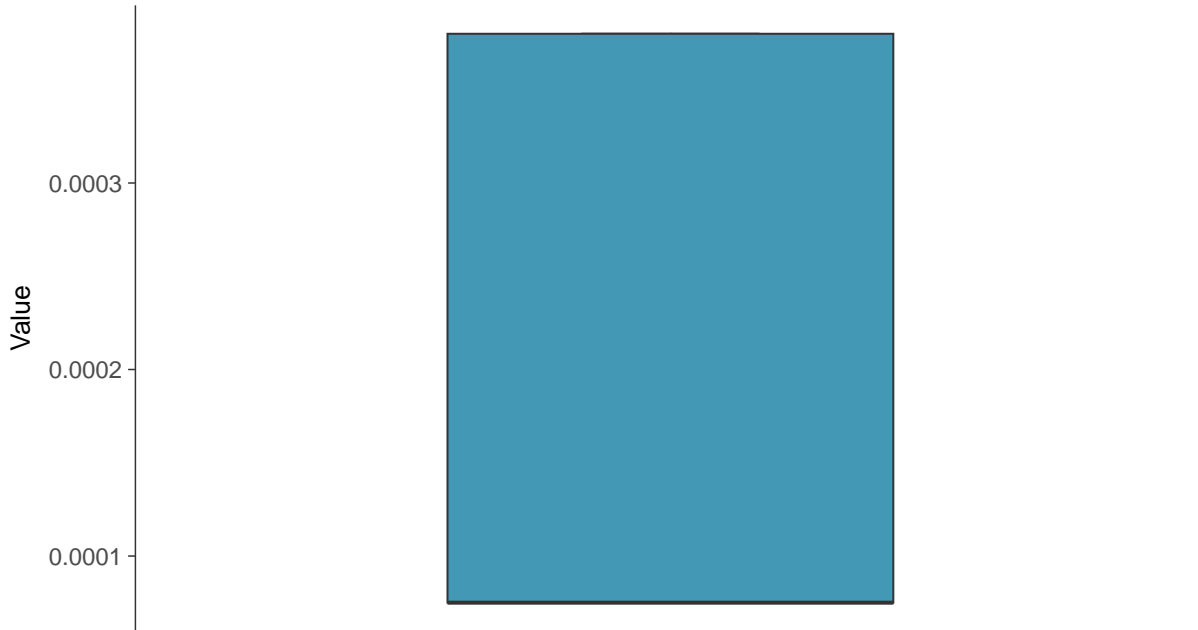
Thallium, MW-09 (mg/L)





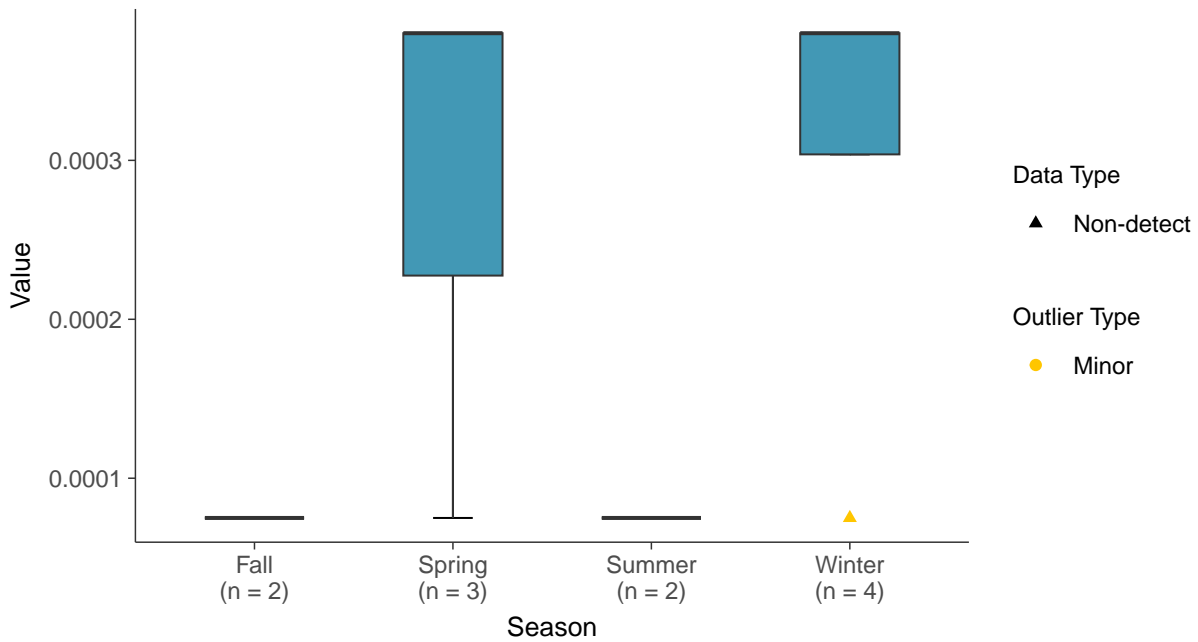
Boxplot

Thallium, MW-09 (mg/L)



Boxplot by Season

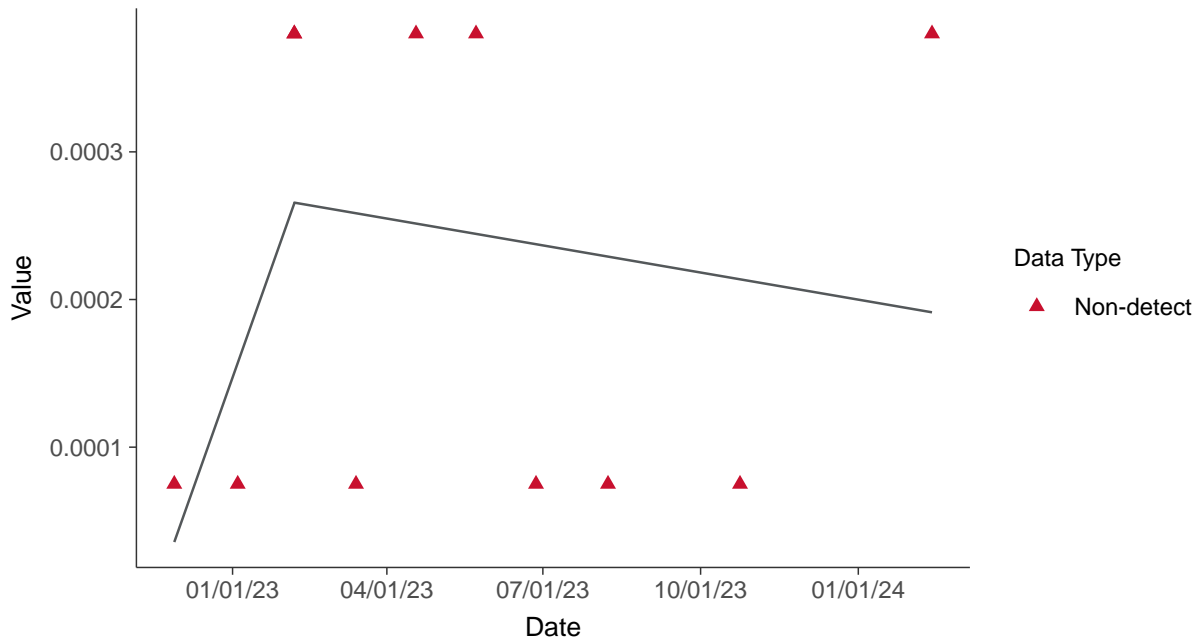
Thallium, MW-09 (mg/L)





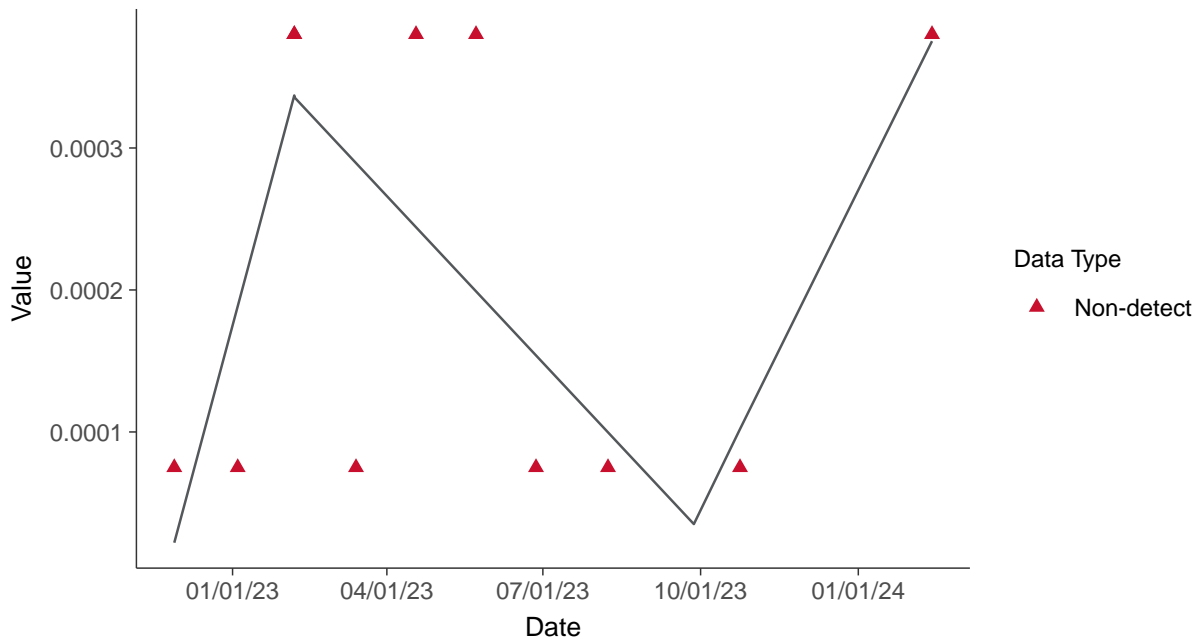
Trend Regression: Piecewise Linear-Linear

Thallium, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-09 (mg/L)

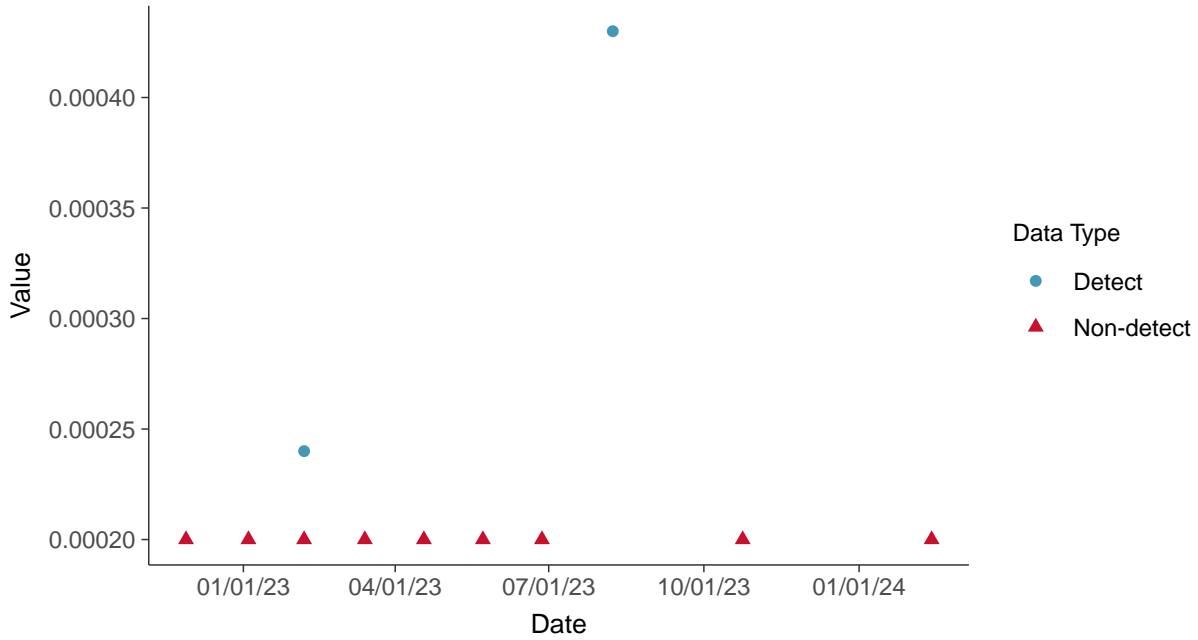




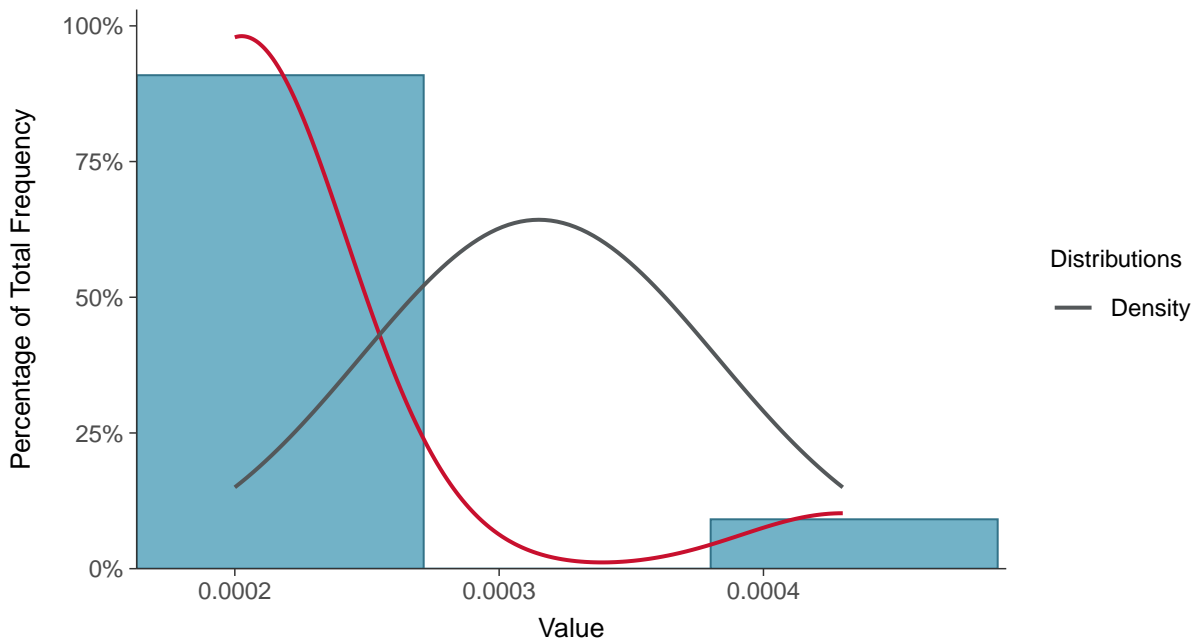
Part 115: Copper, MW-09

ID: 2_19_6_111

Scatter Plot
Copper, MW-09 (mg/L)



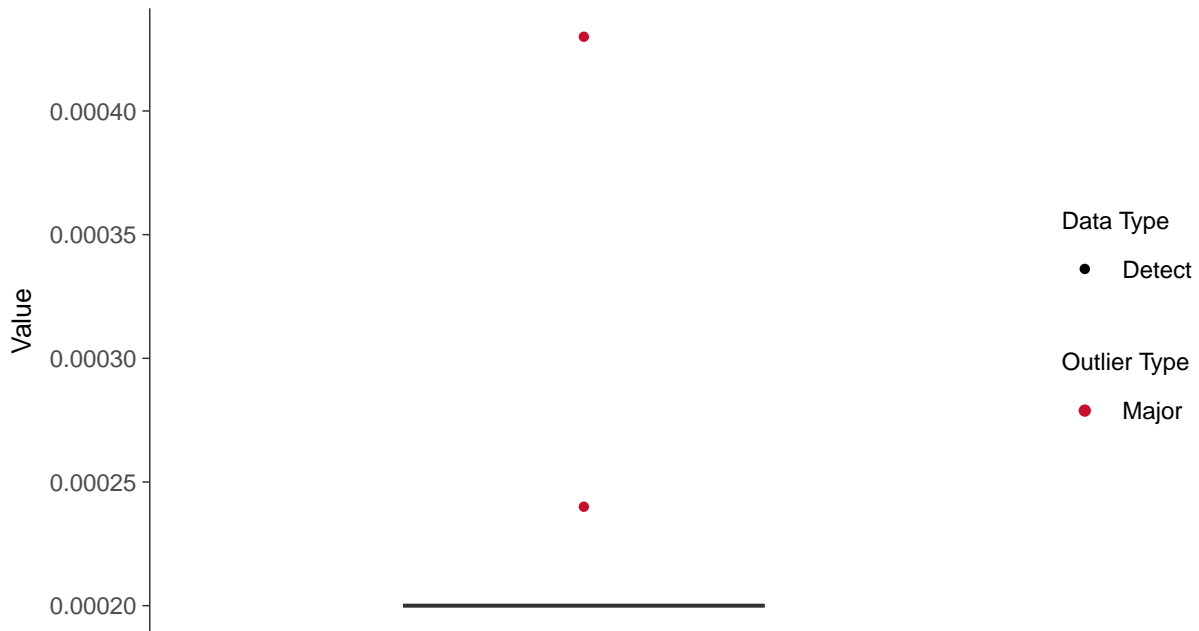
Histogram
Copper, MW-09 (mg/L)





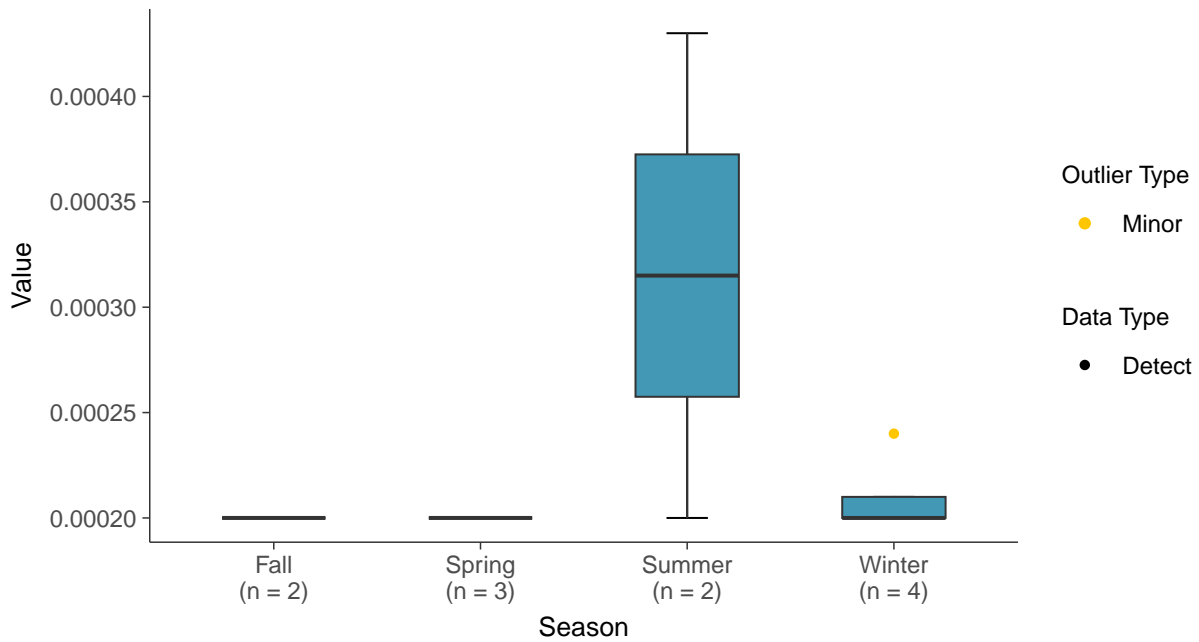
Boxplot

Copper, MW-09 (mg/L)



Boxplot by Season

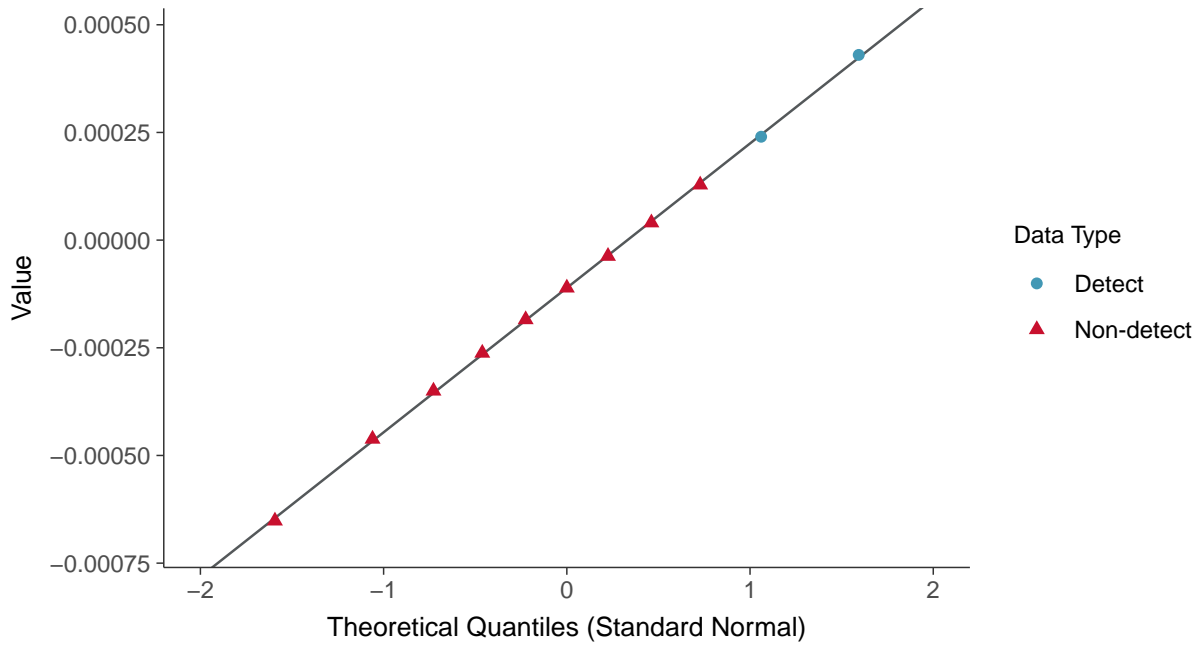
Copper, MW-09 (mg/L)





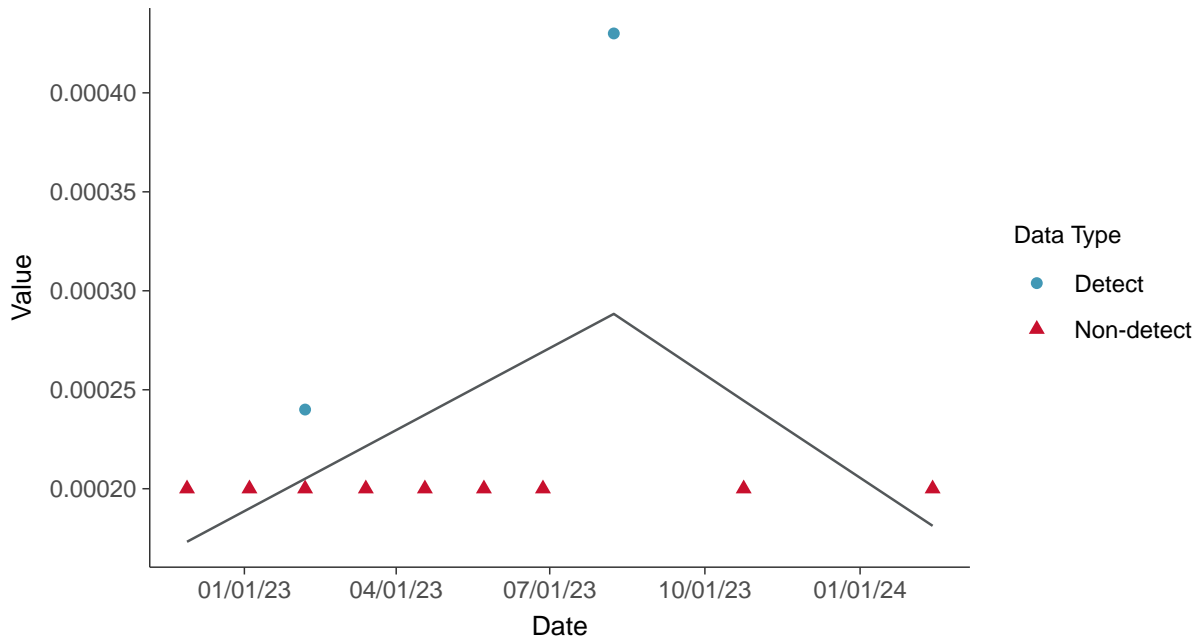
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear

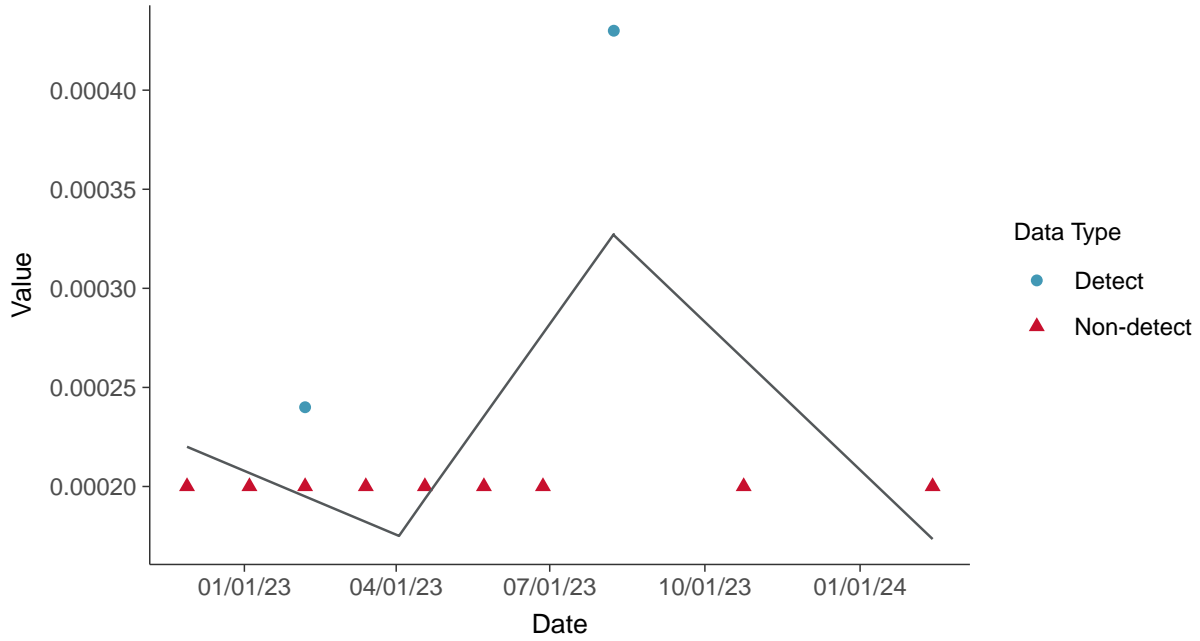
Copper, MW-09 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

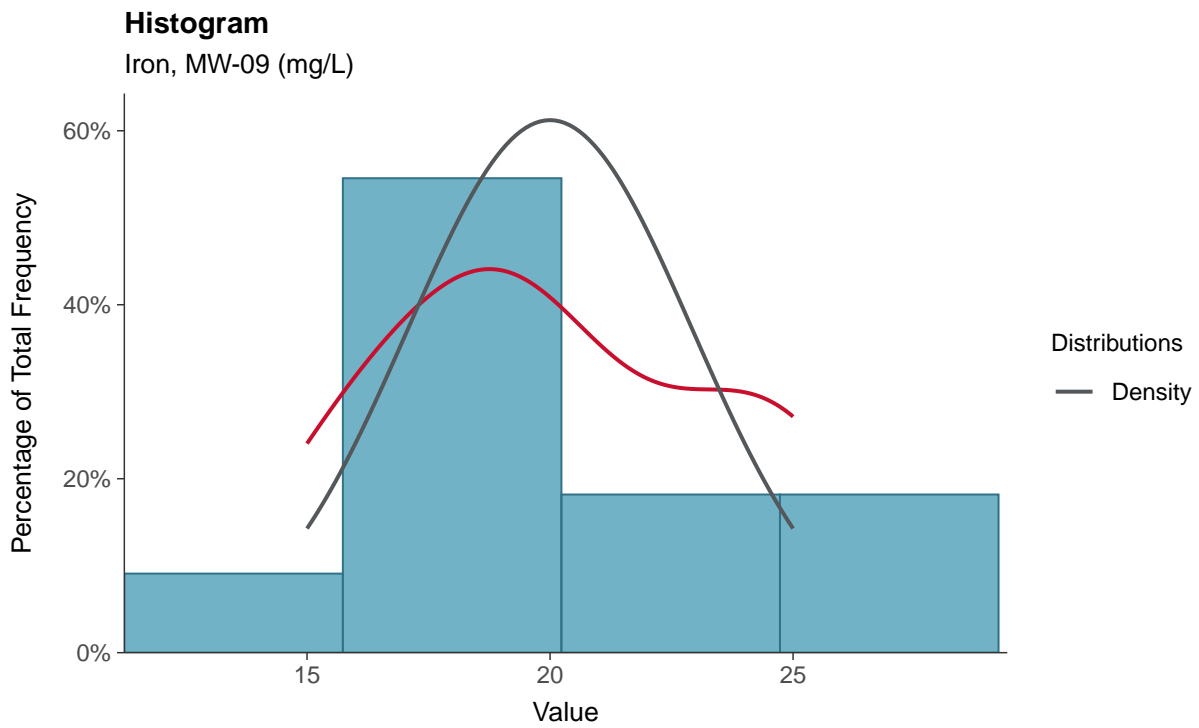
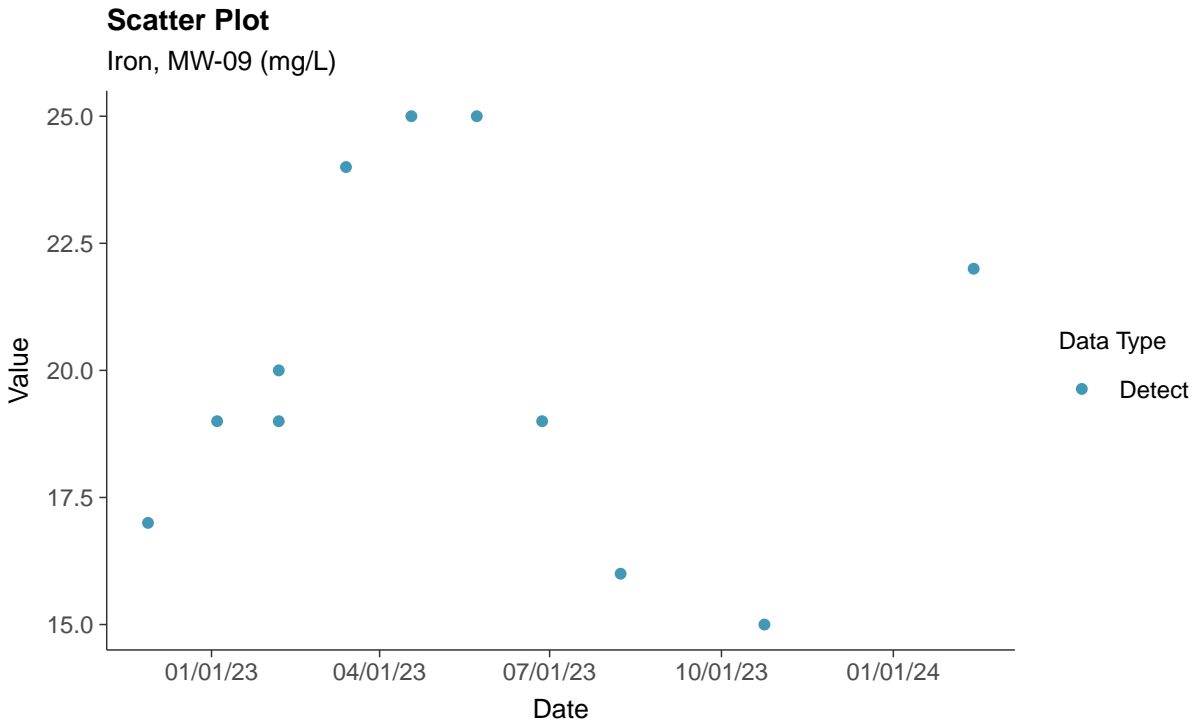
Copper, MW-09 (mg/L)





Part 115: Iron, MW-09

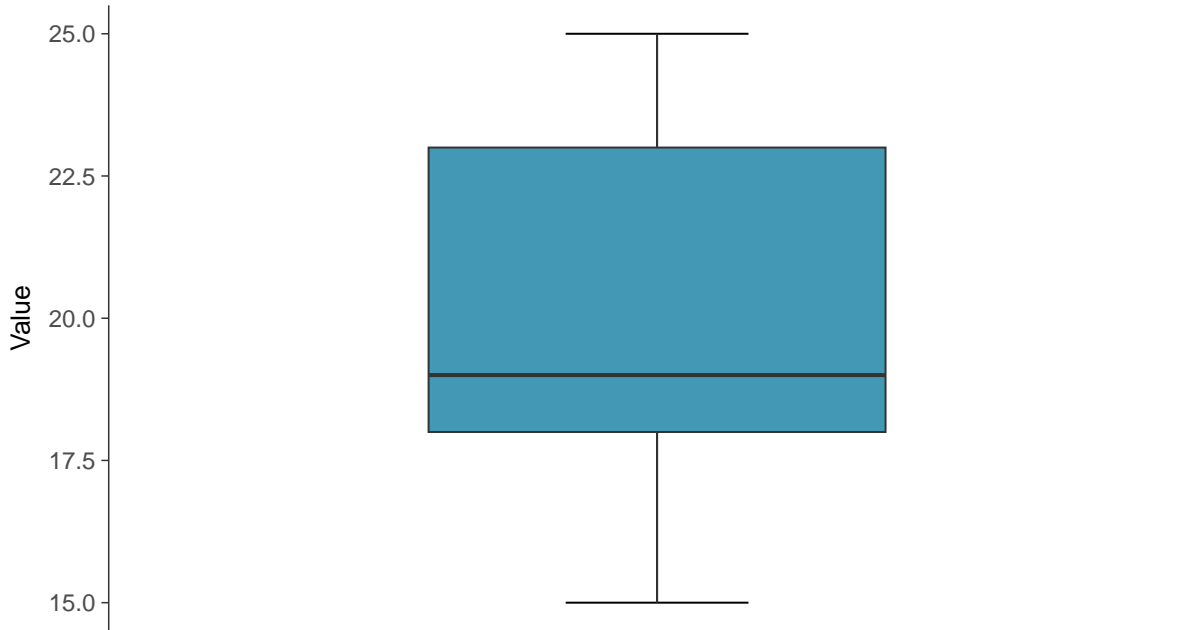
ID: 2_19_6_114





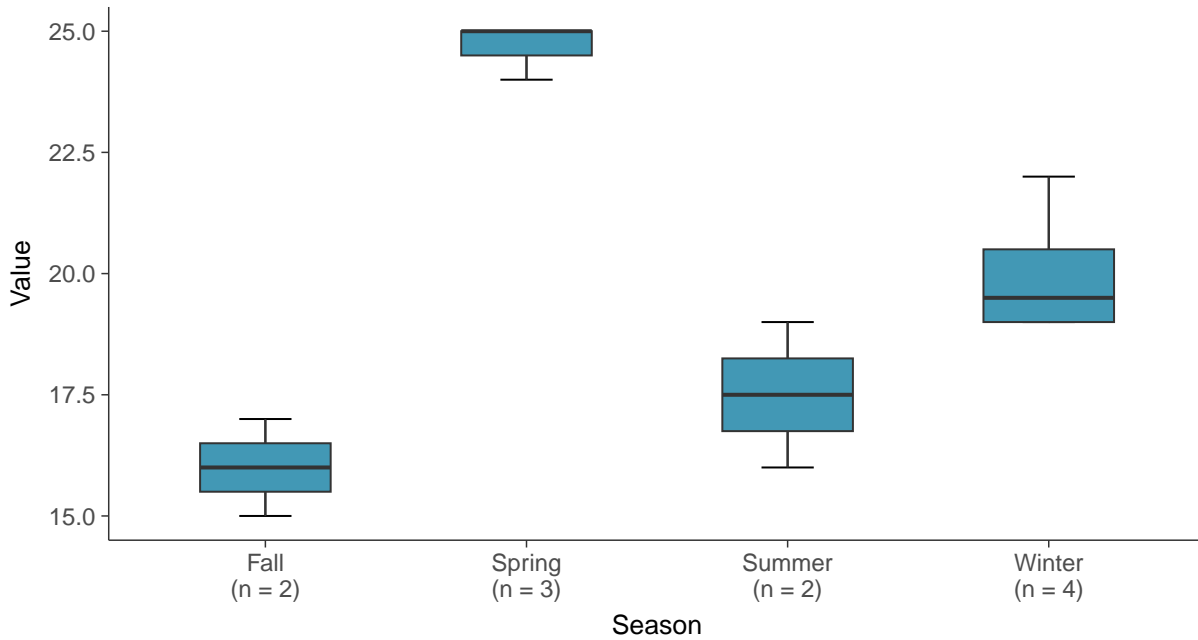
Boxplot

Iron, MW-09 (mg/L)



Boxplot by Season

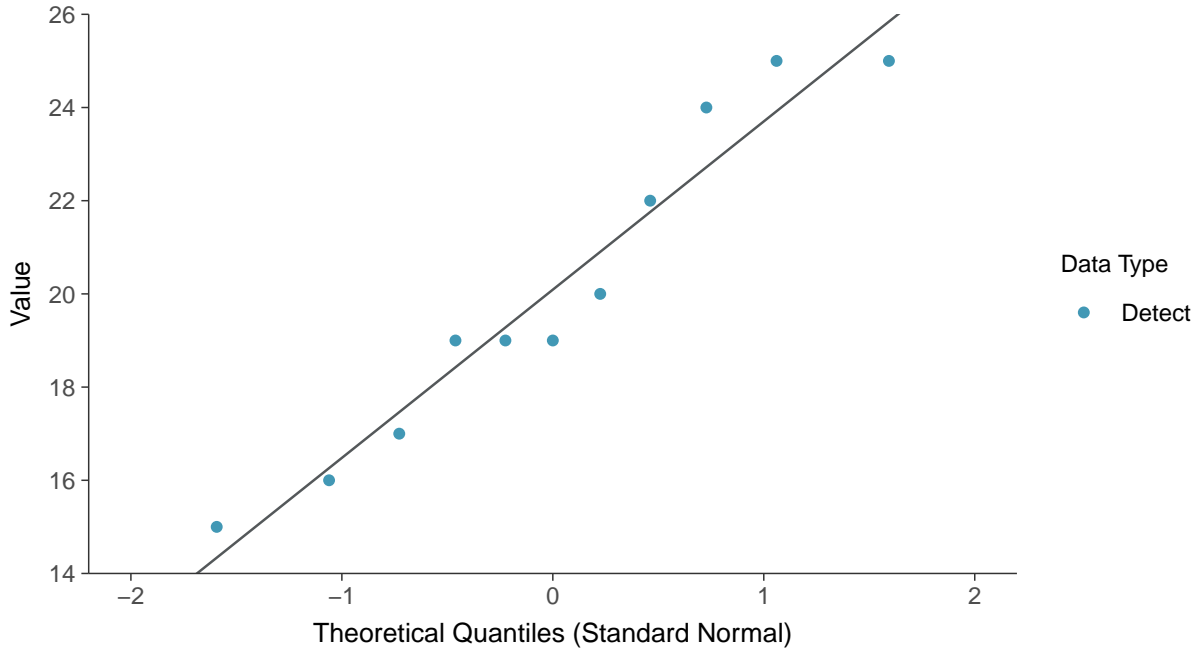
Iron, MW-09 (mg/L)





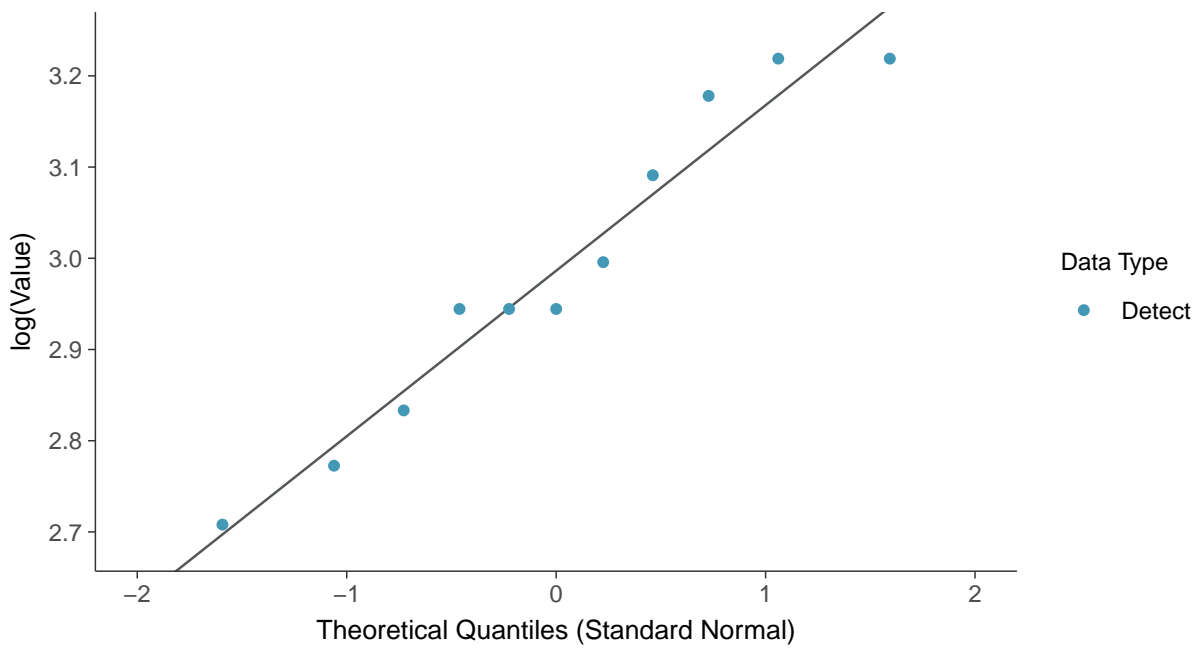
Normal Q-Q plot

Iron, MW-09 (mg/L)



Lognormal Q-Q plot

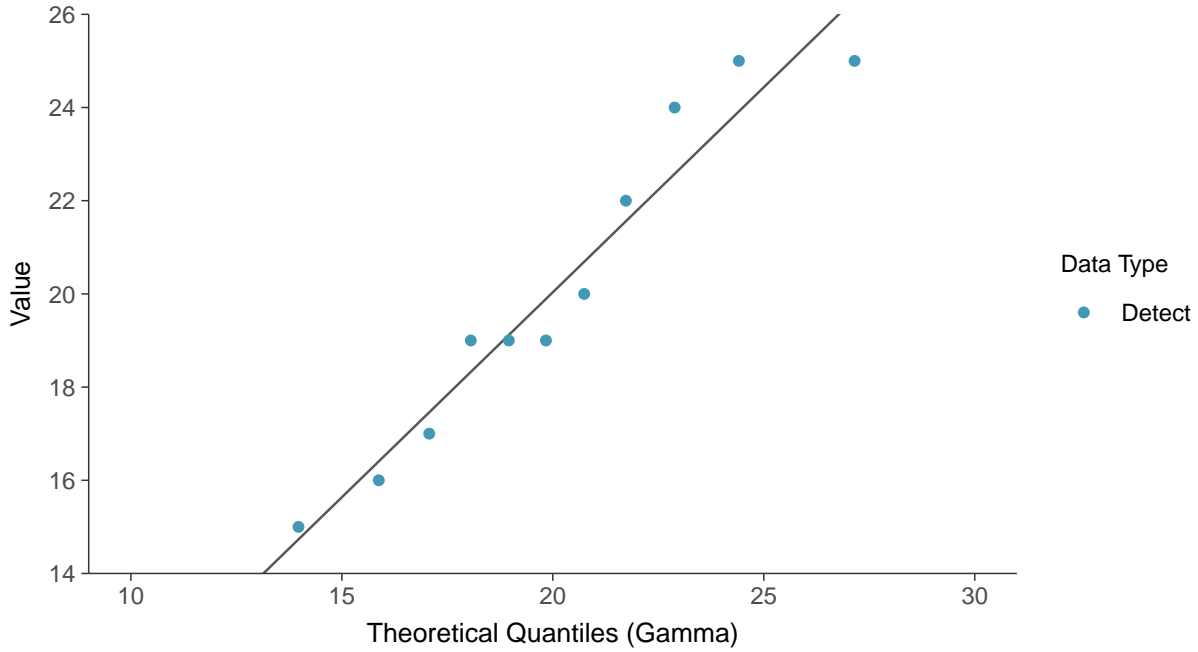
Iron, MW-09 (mg/L)





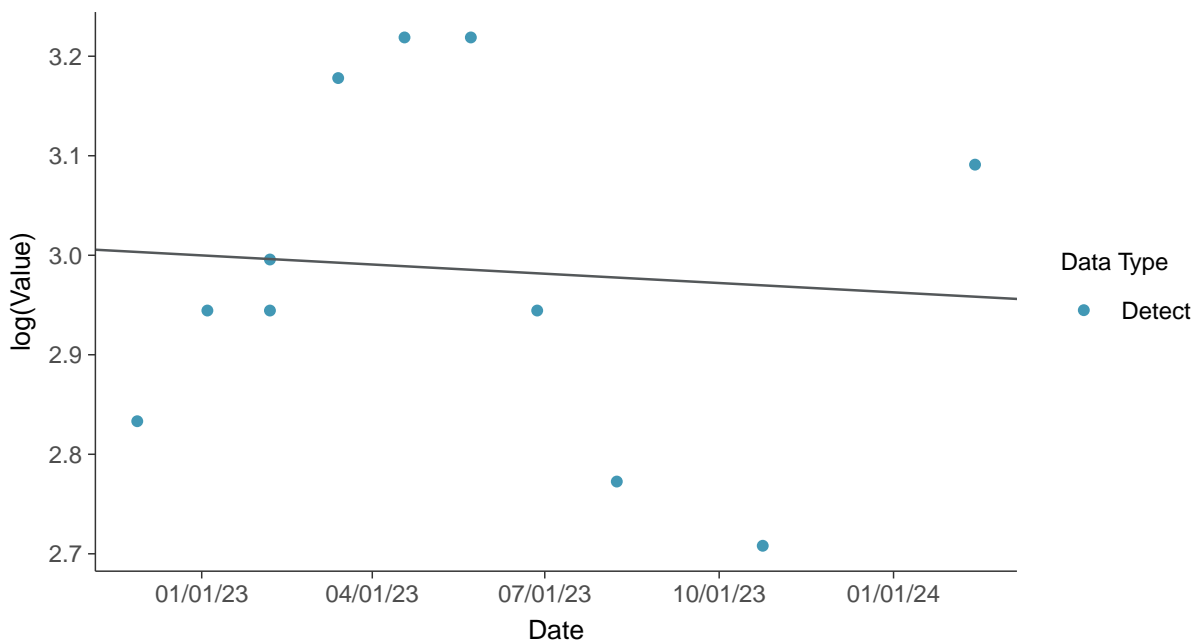
Gamma Q-Q plot

Iron, MW-09 (mg/L)



Trend Regression: Lognormal MLE

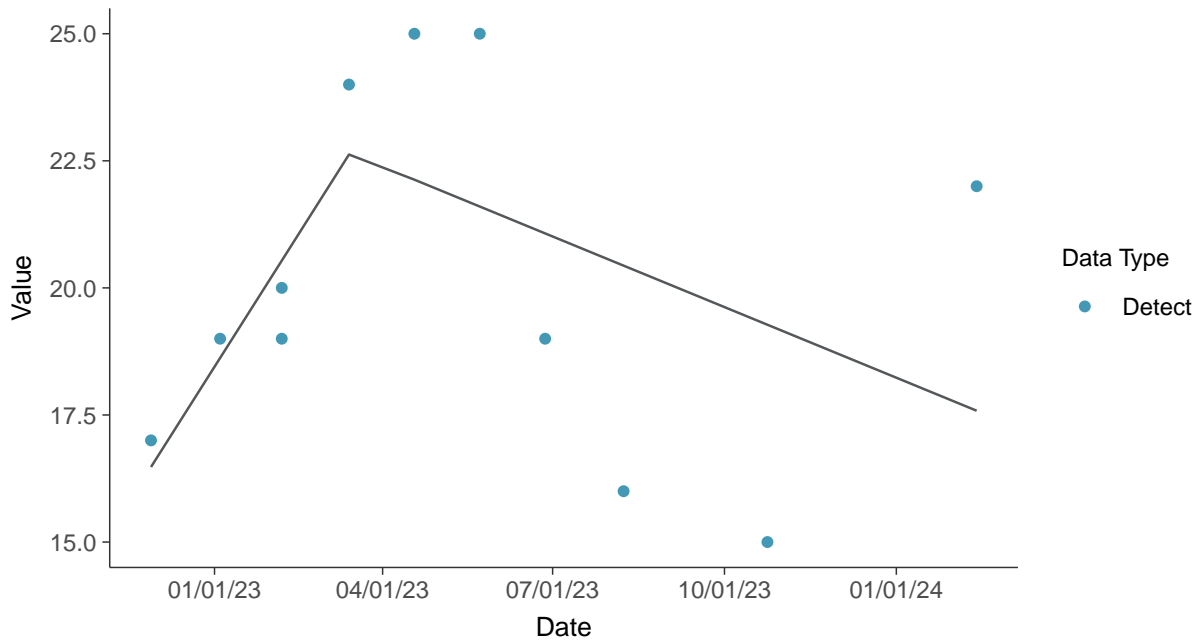
Iron, MW-09 (mg/L)





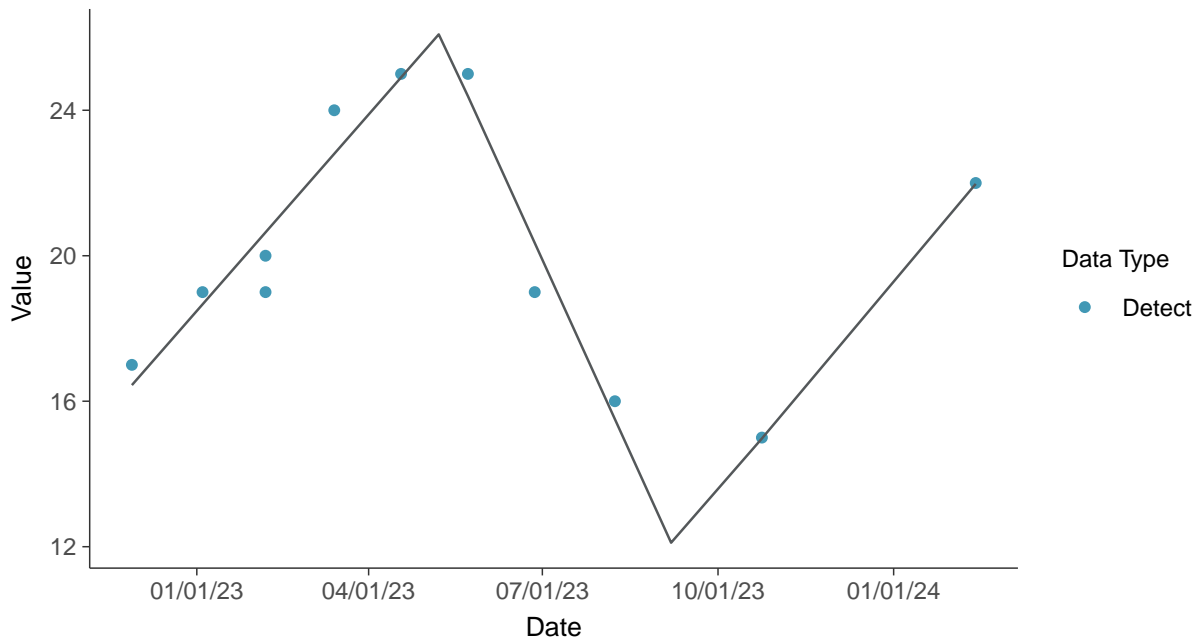
Trend Regression: Piecewise Linear-Linear

Iron, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-09 (mg/L)



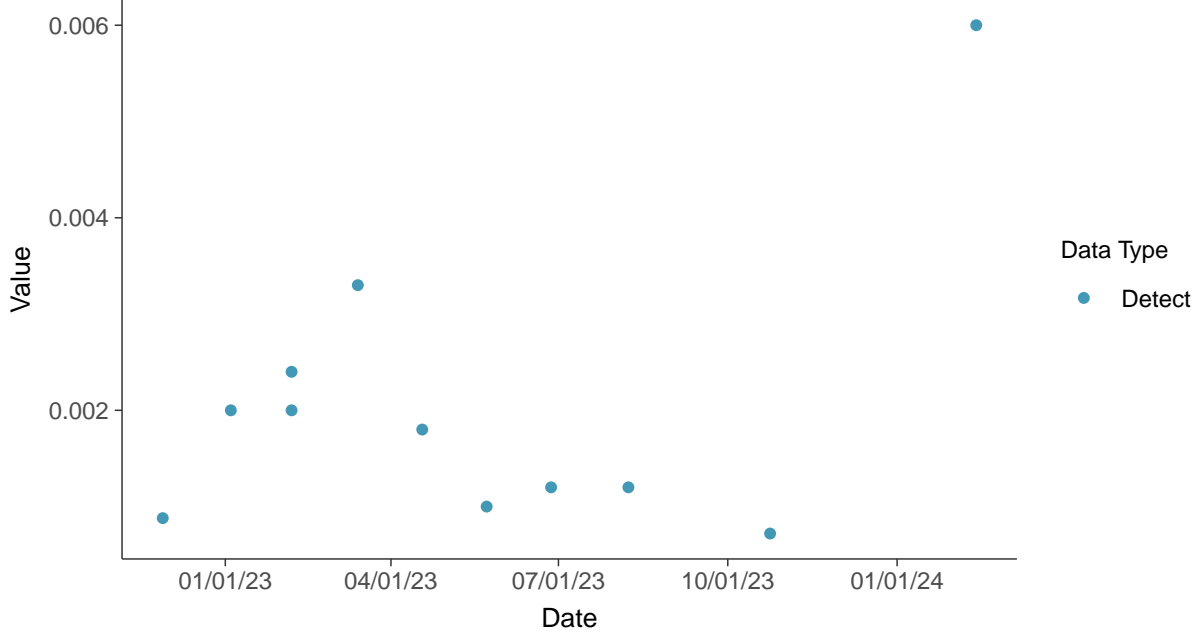


Part 115: Nickel, MW-09

ID: 2_19_6_119

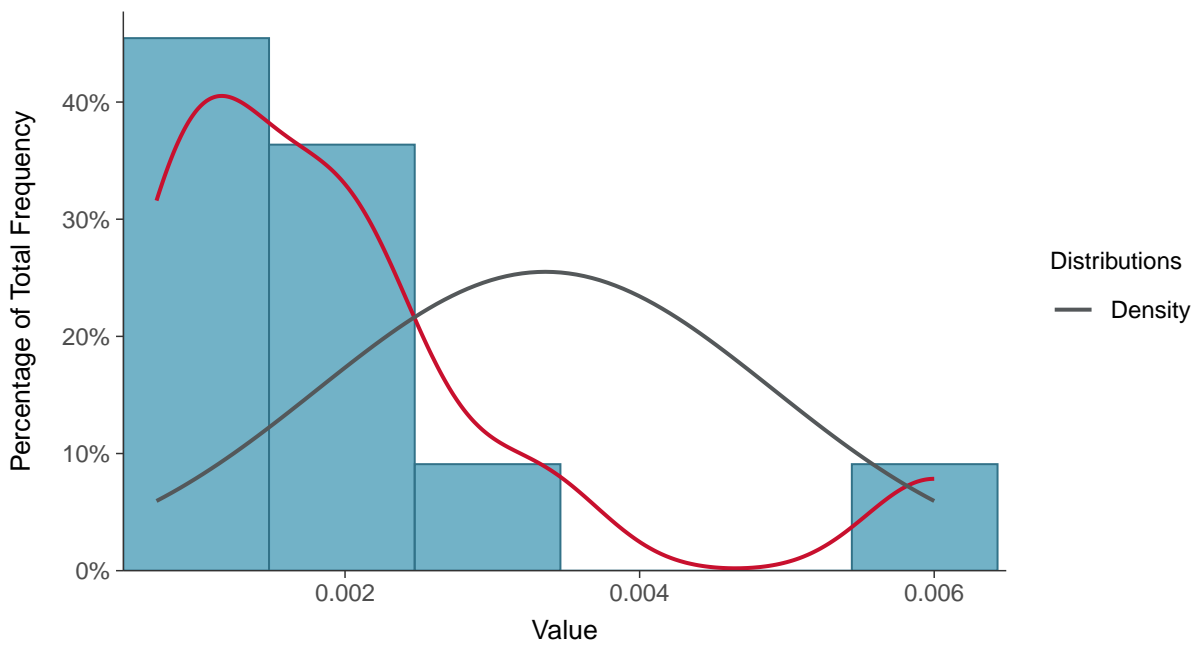
Scatter Plot

Nickel, MW-09 (mg/L)



Histogram

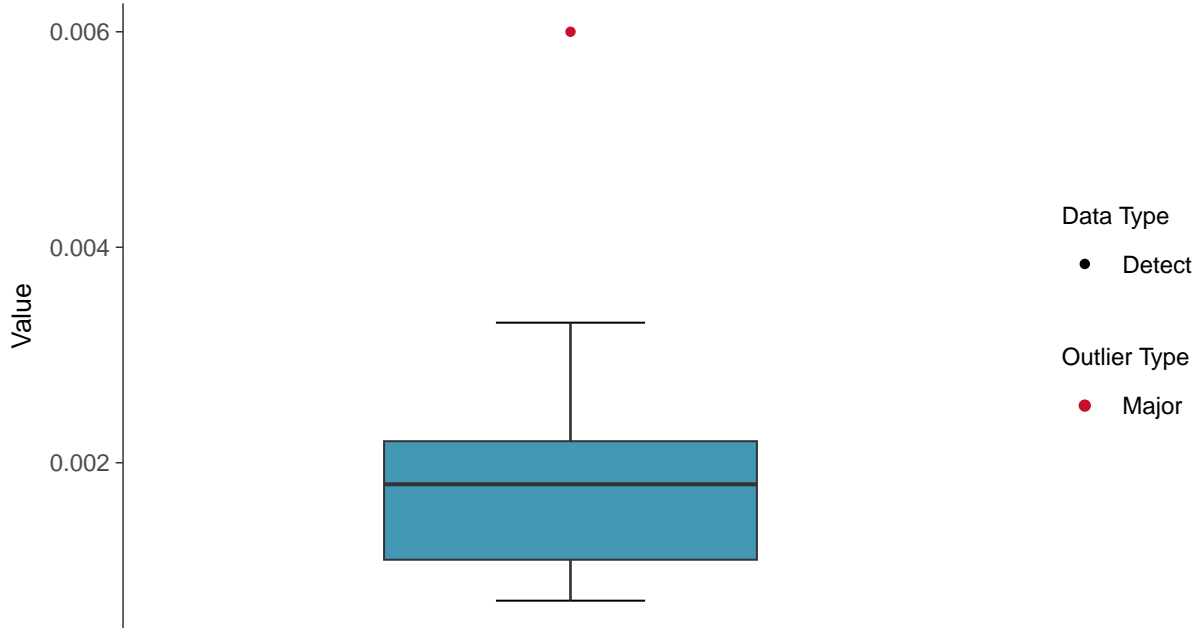
Nickel, MW-09 (mg/L)





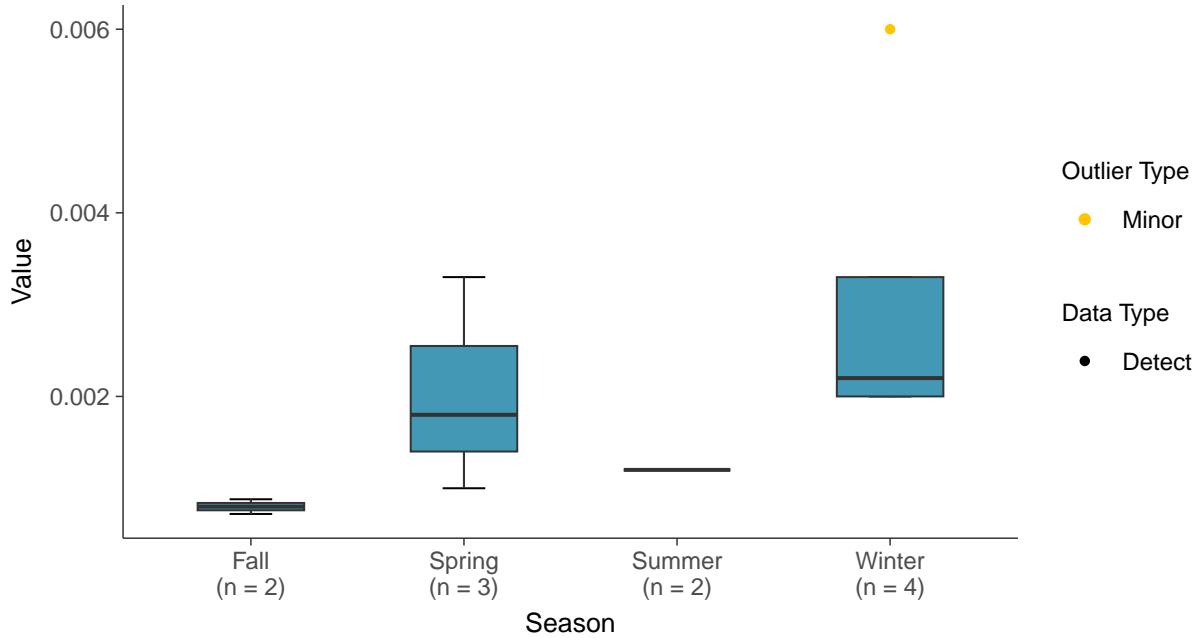
Boxplot

Nickel, MW-09 (mg/L)



Boxplot by Season

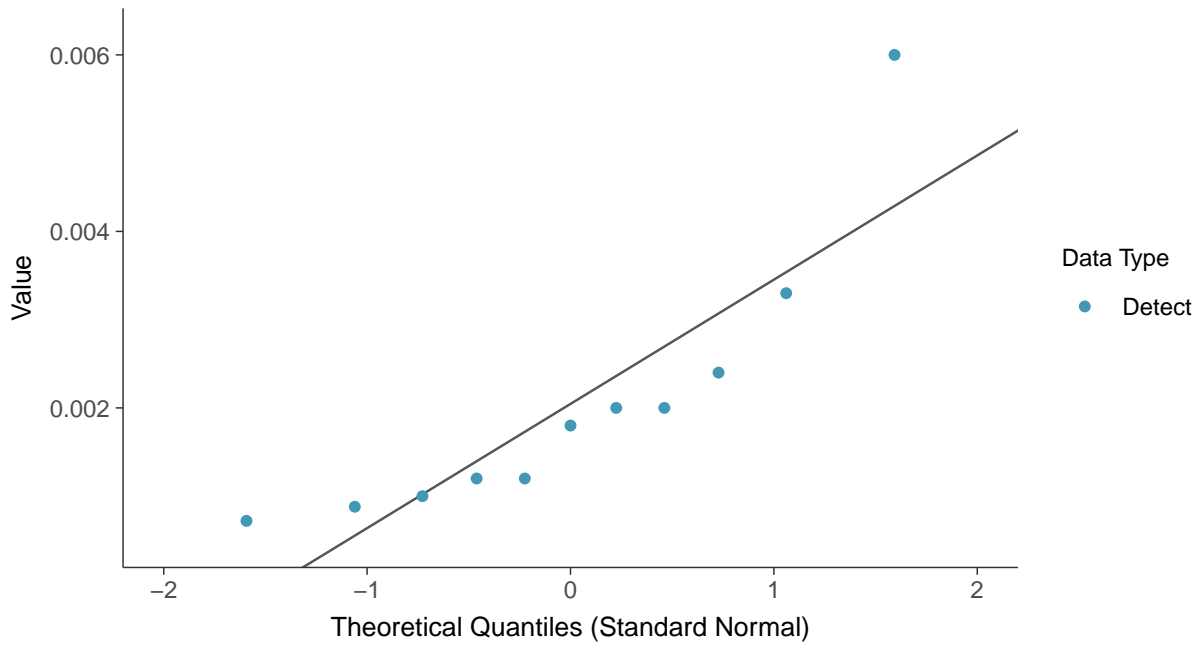
Nickel, MW-09 (mg/L)





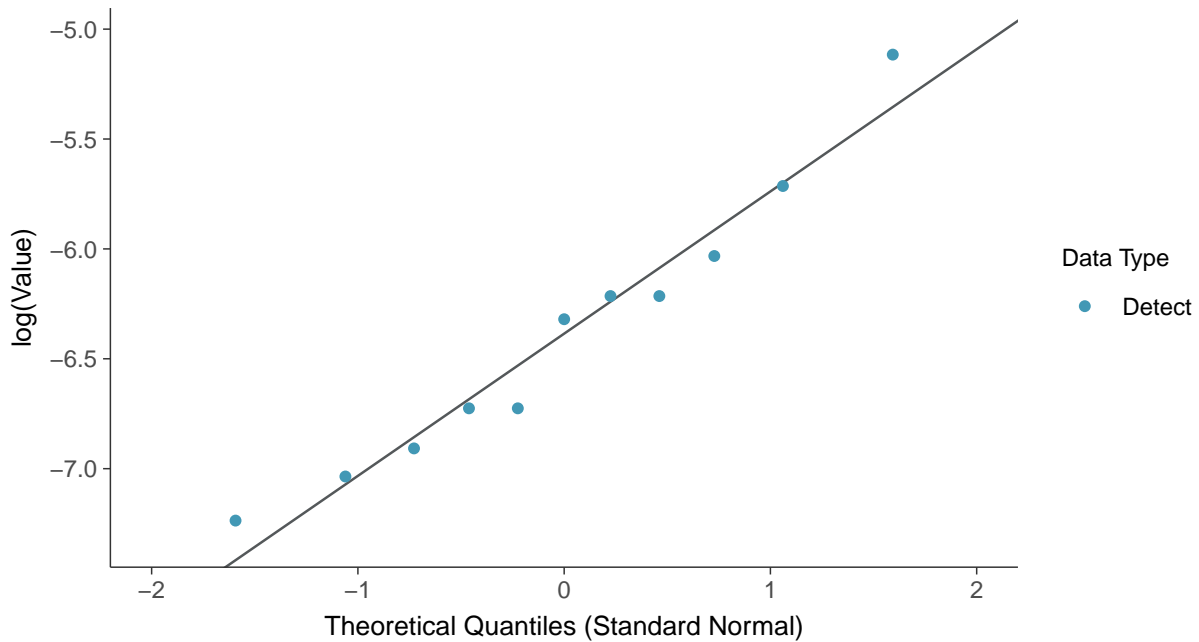
Normal Q-Q plot

Nickel, MW-09 (mg/L)



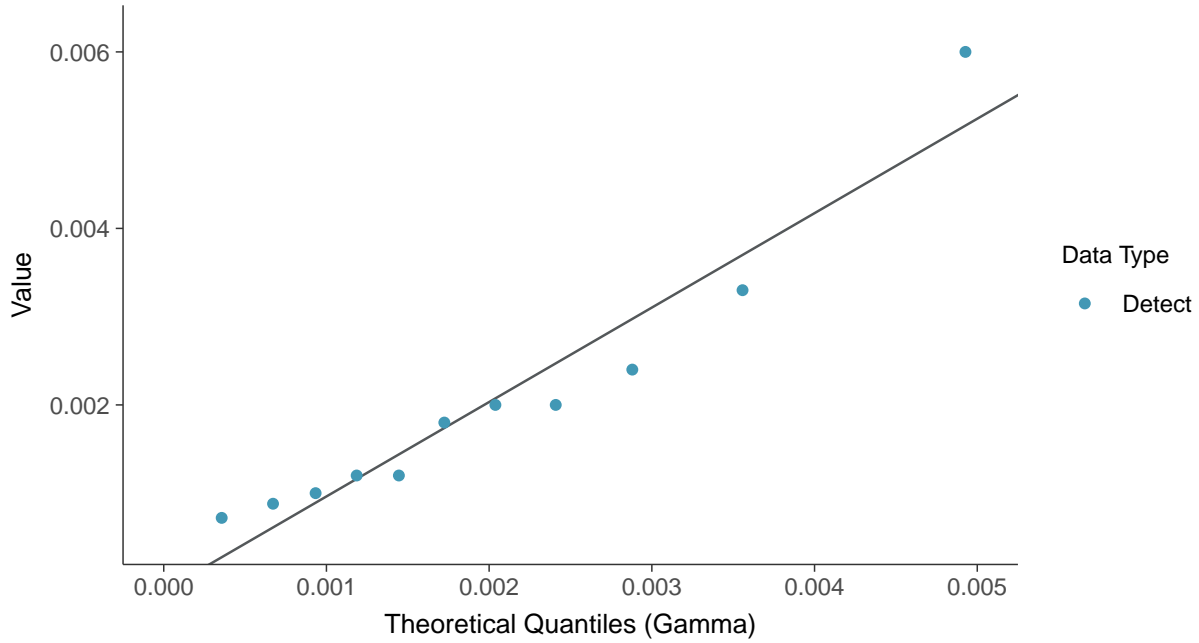
Lognormal Q-Q plot

Nickel, MW-09 (mg/L)

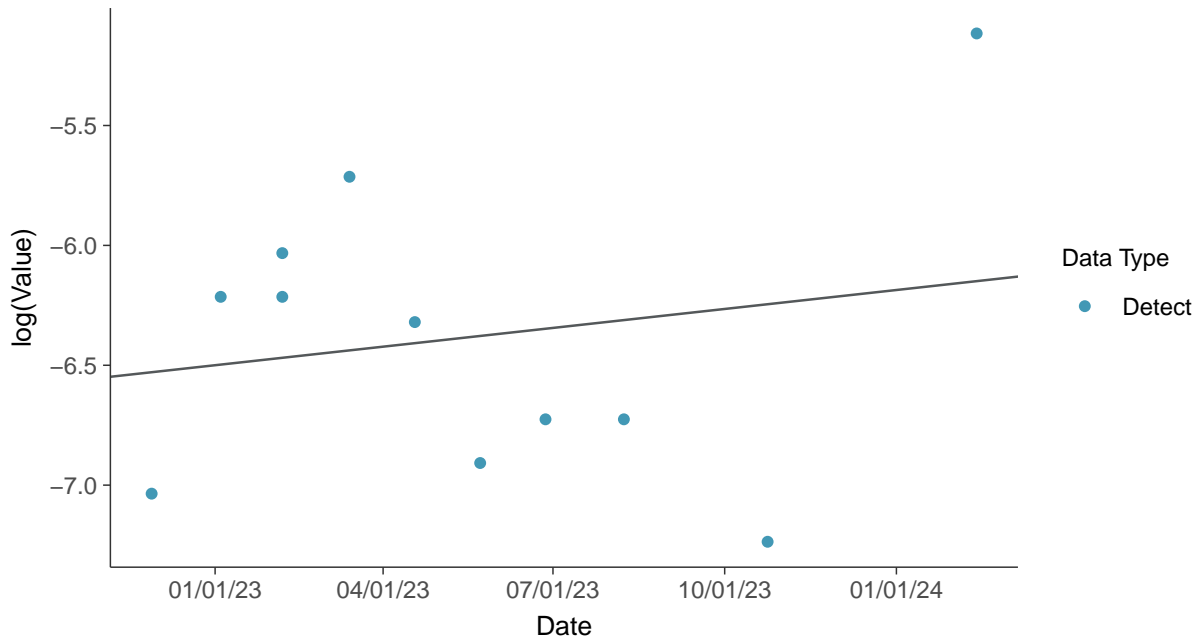




Gamma Q-Q plot
Nickel, MW-09 (mg/L)



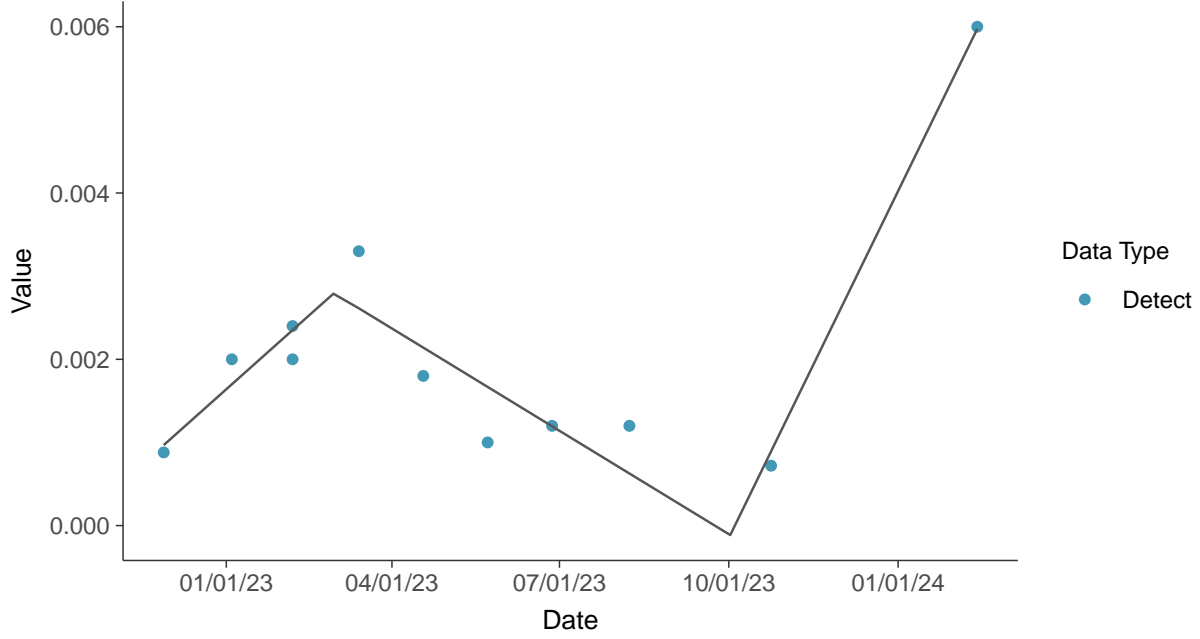
Trend Regression: Lognormal MLE
Nickel, MW-09 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Nickel, MW-09 (mg/L)



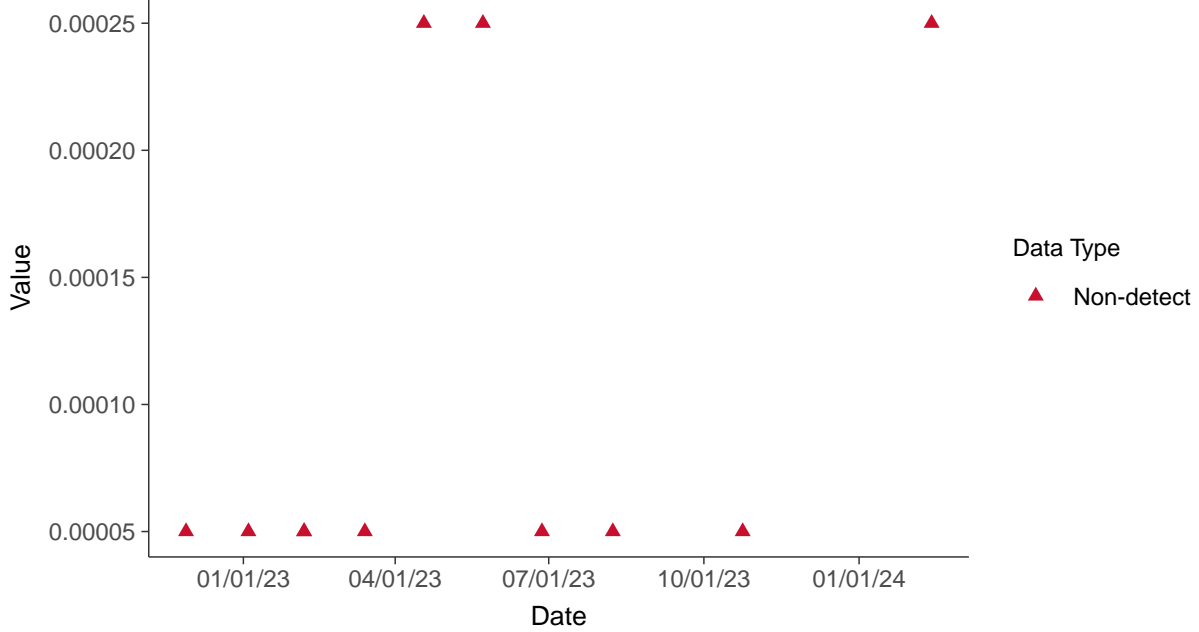


Part 115: Silver, MW-09

ID: 2_19_6_123

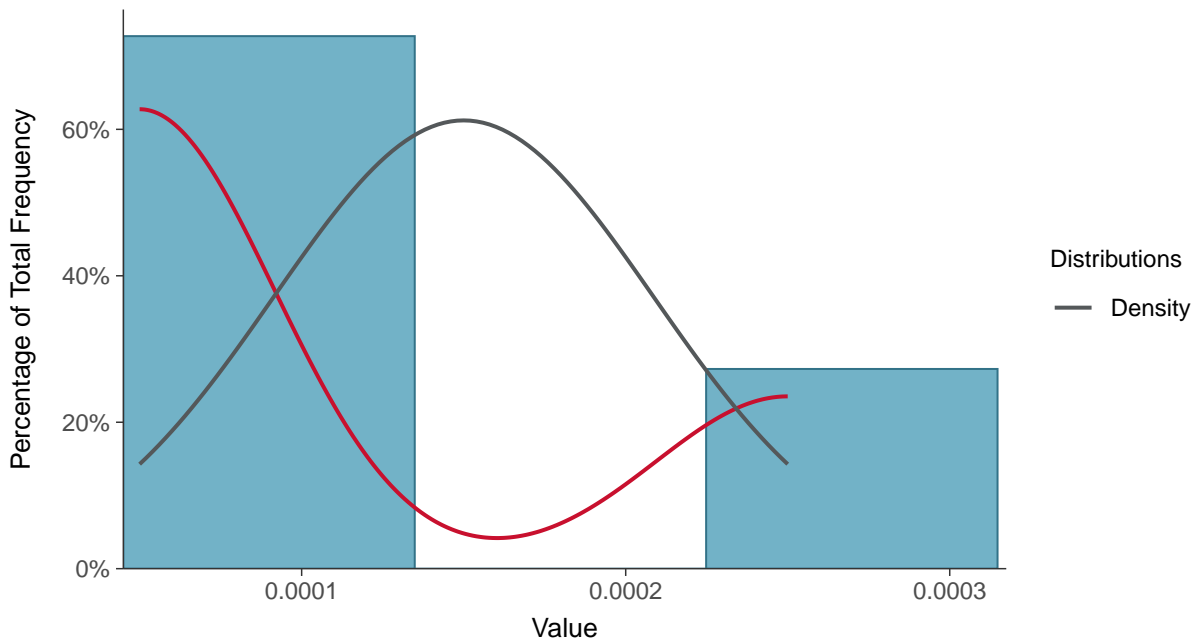
Scatter Plot

Silver, MW-09 (mg/L)



Histogram

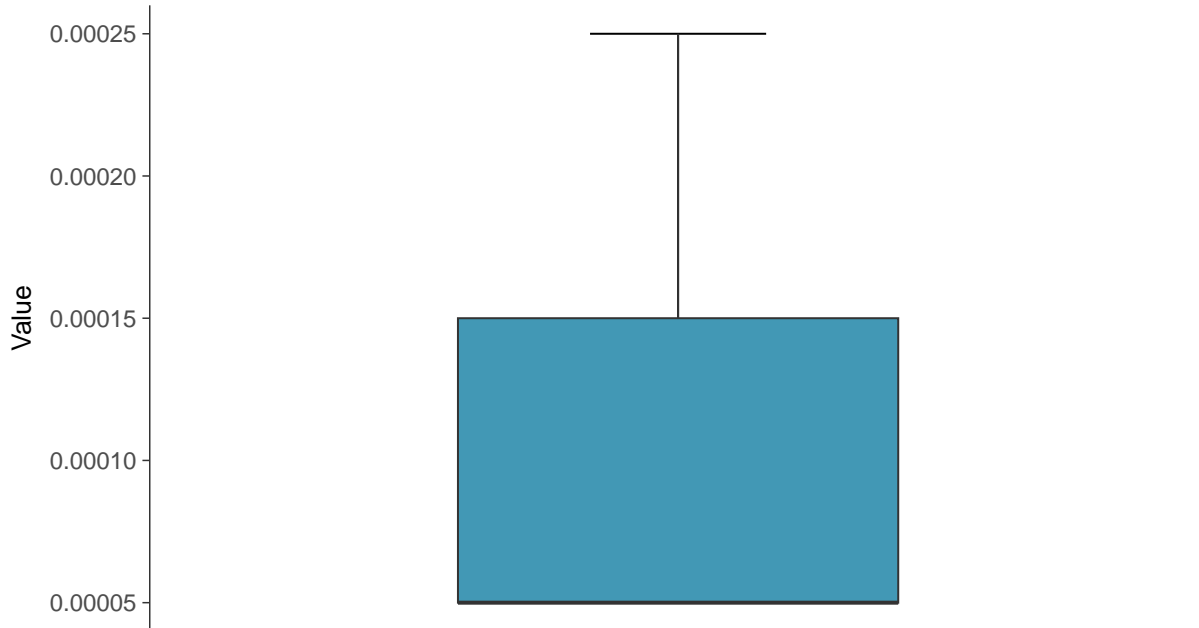
Silver, MW-09 (mg/L)





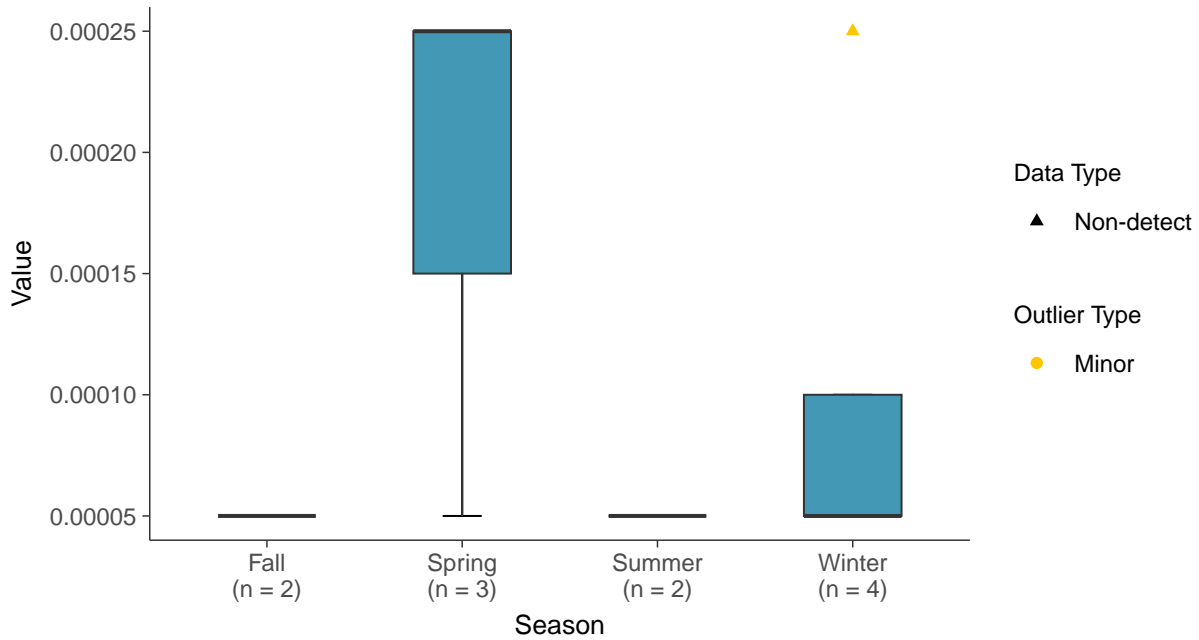
Boxplot

Silver, MW-09 (mg/L)



Boxplot by Season

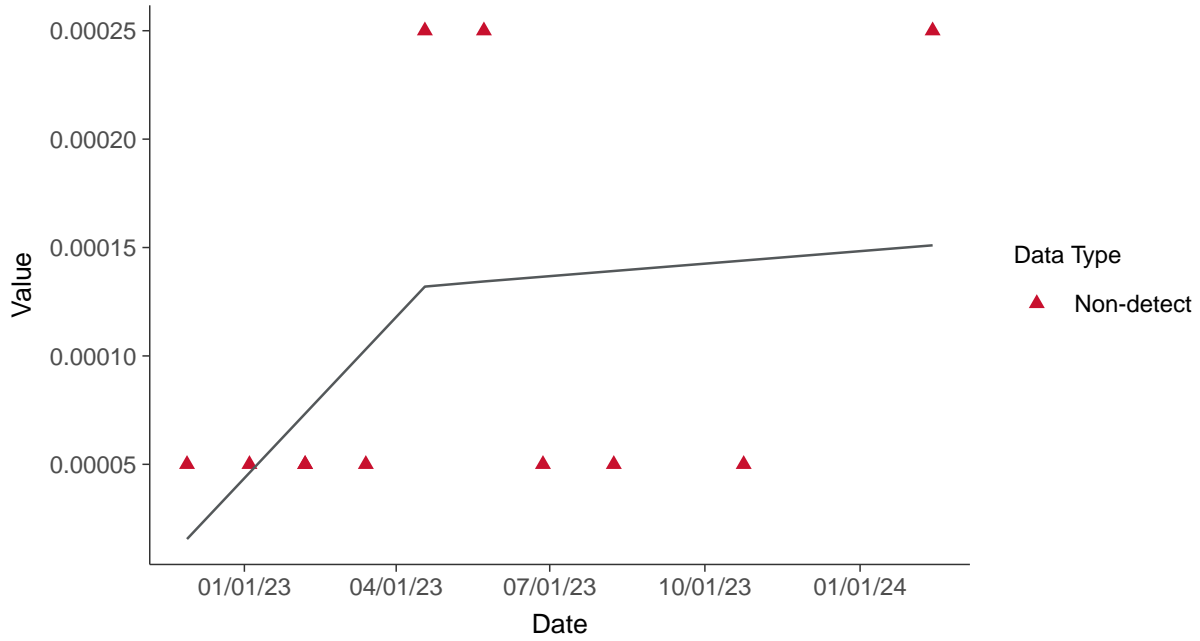
Silver, MW-09 (mg/L)





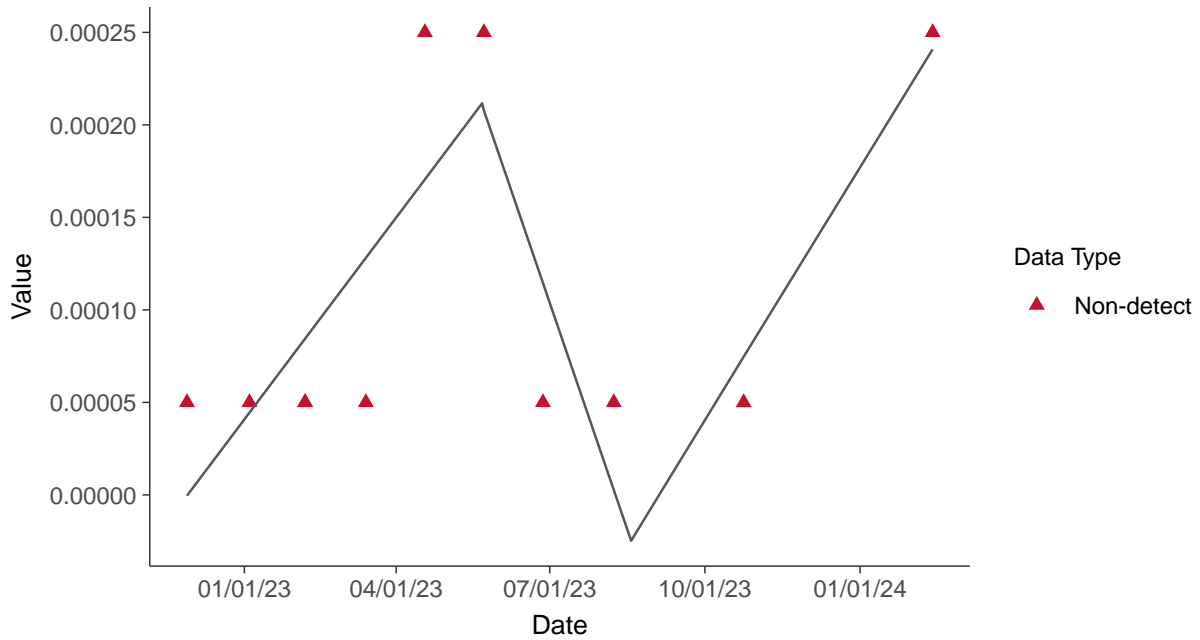
Trend Regression: Piecewise Linear-Linear

Silver, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-09 (mg/L)



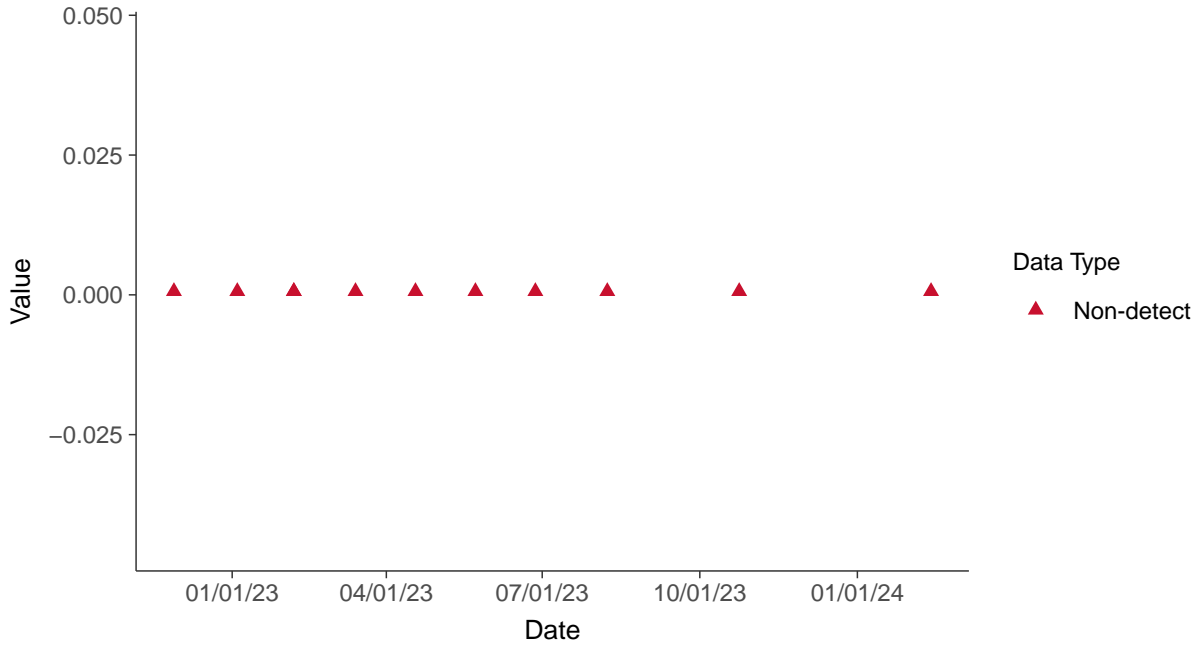


Part 115: Vanadium, MW-09

ID: 2_19_6_129

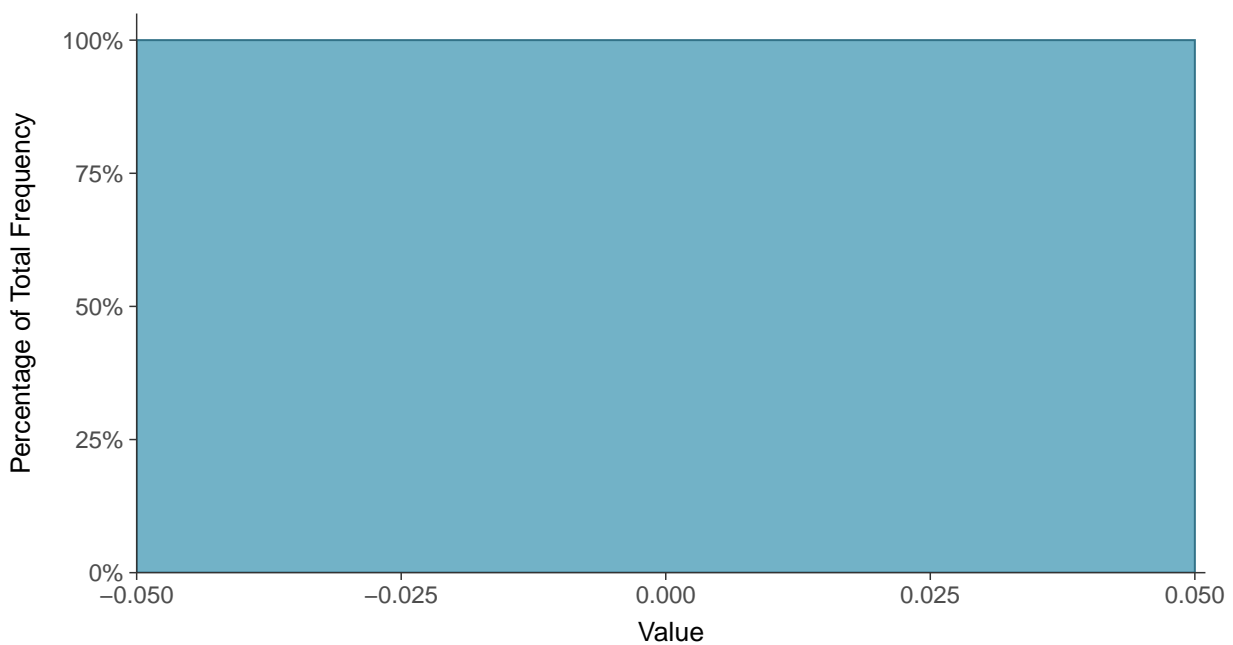
Scatter Plot

Vanadium, MW-09 (mg/L)



Histogram

Vanadium, MW-09 (mg/L)





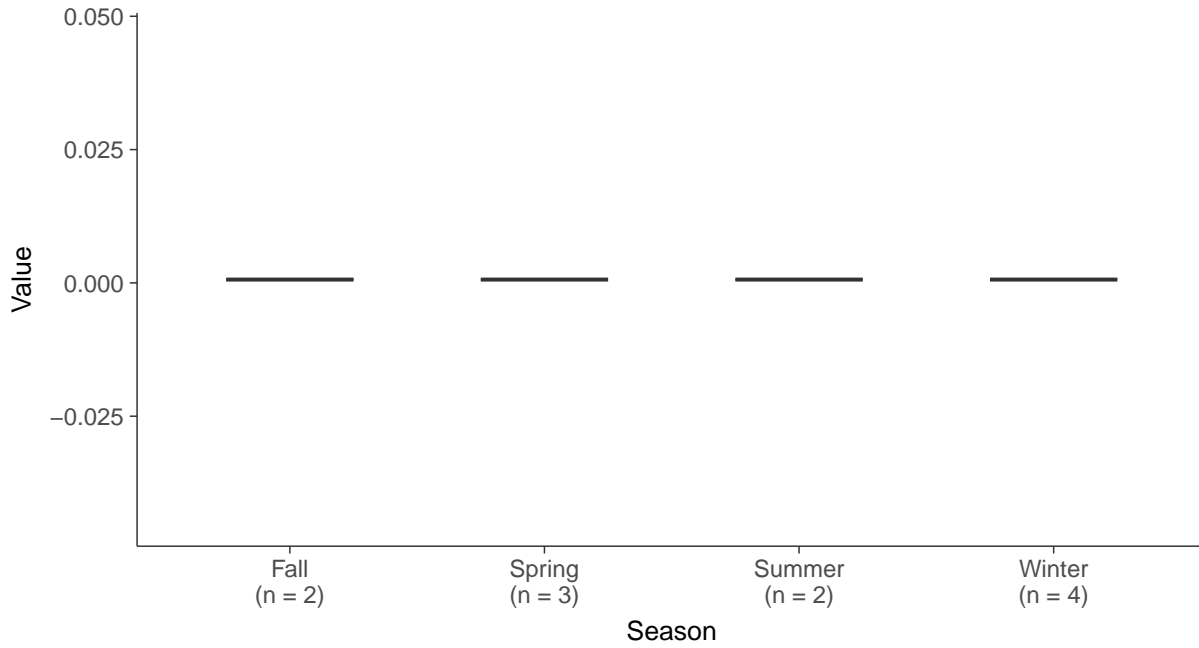
Boxplot

Vanadium, MW-09 (mg/L)



Boxplot by Season

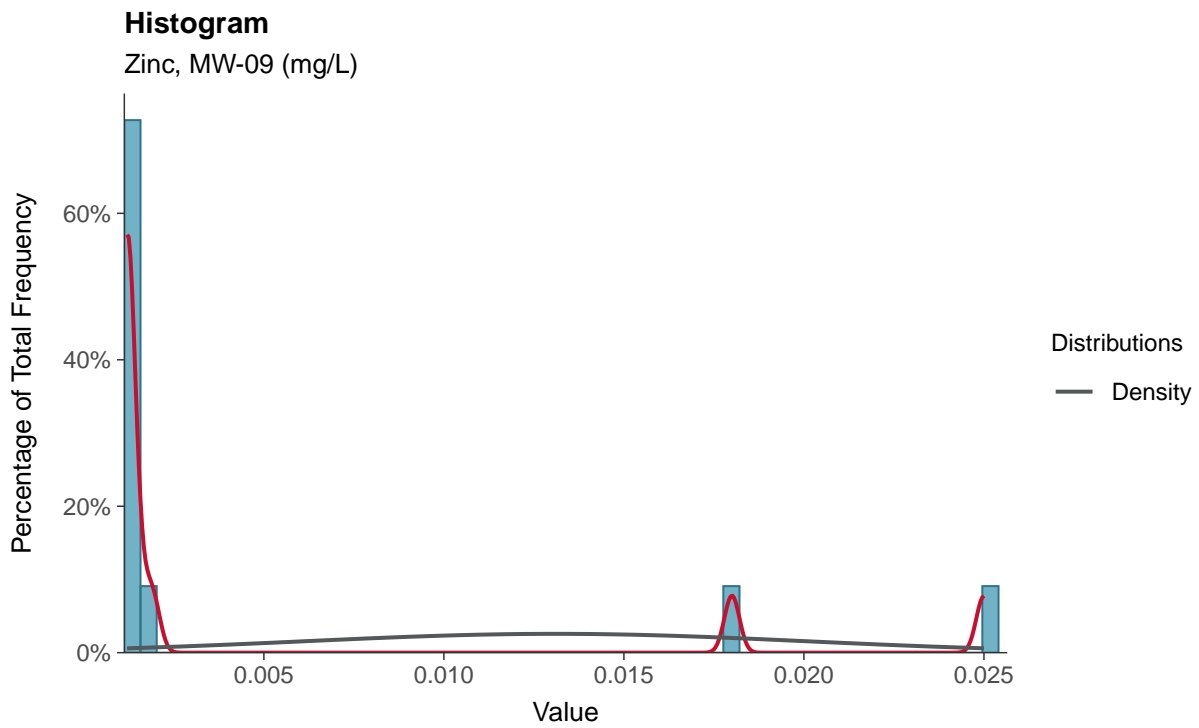
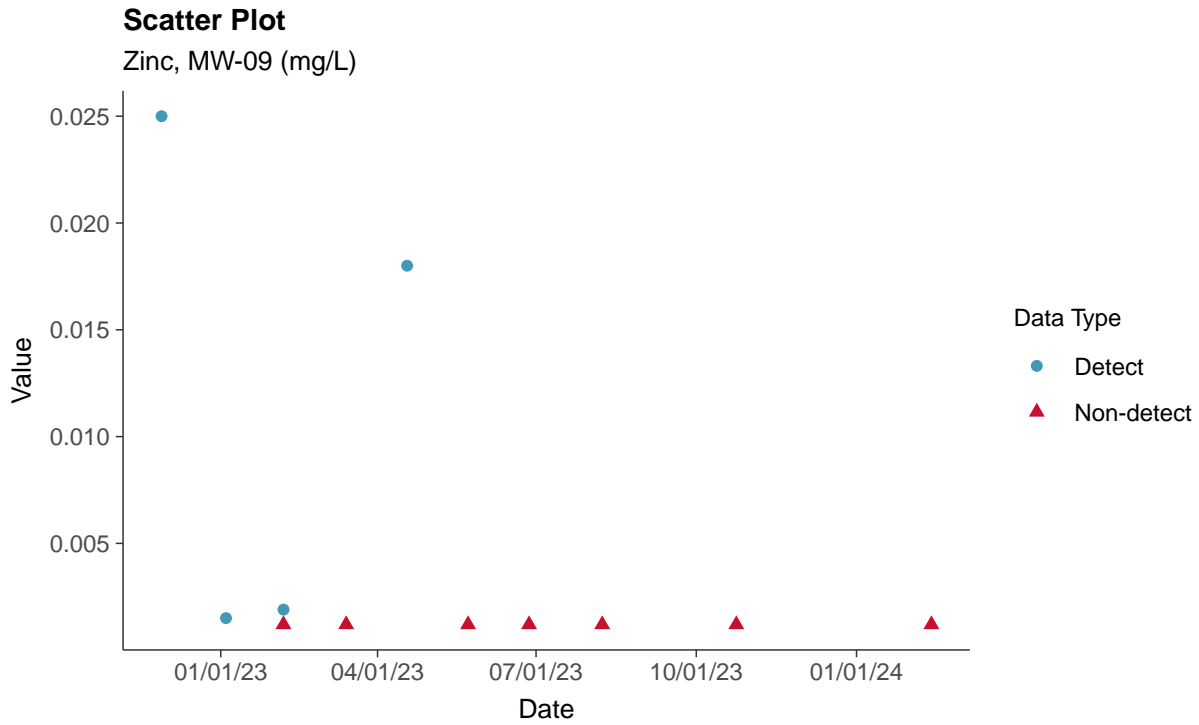
Vanadium, MW-09 (mg/L)





Part 115: Zinc, MW-09

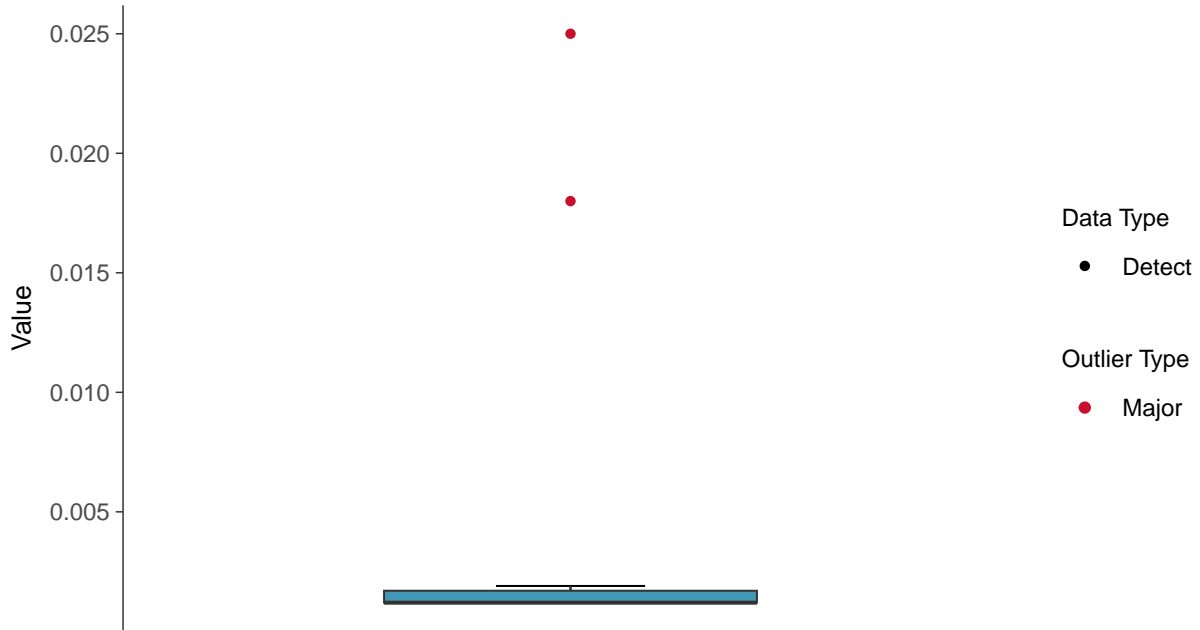
ID: 2_19_6_130





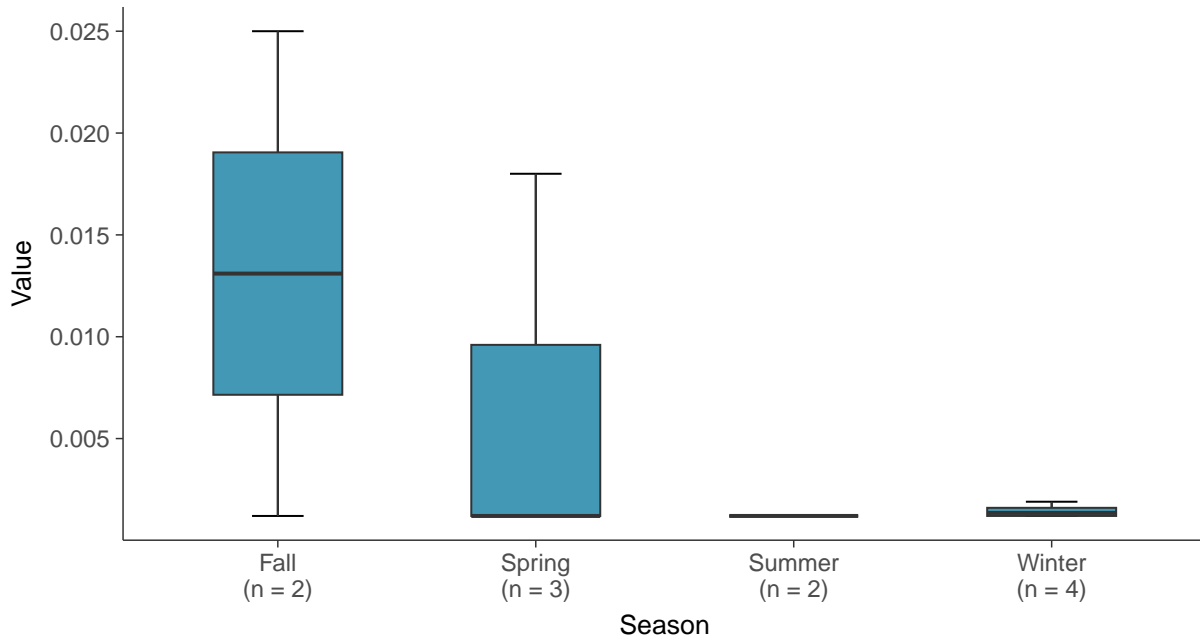
Boxplot

Zinc, MW-09 (mg/L)



Boxplot by Season

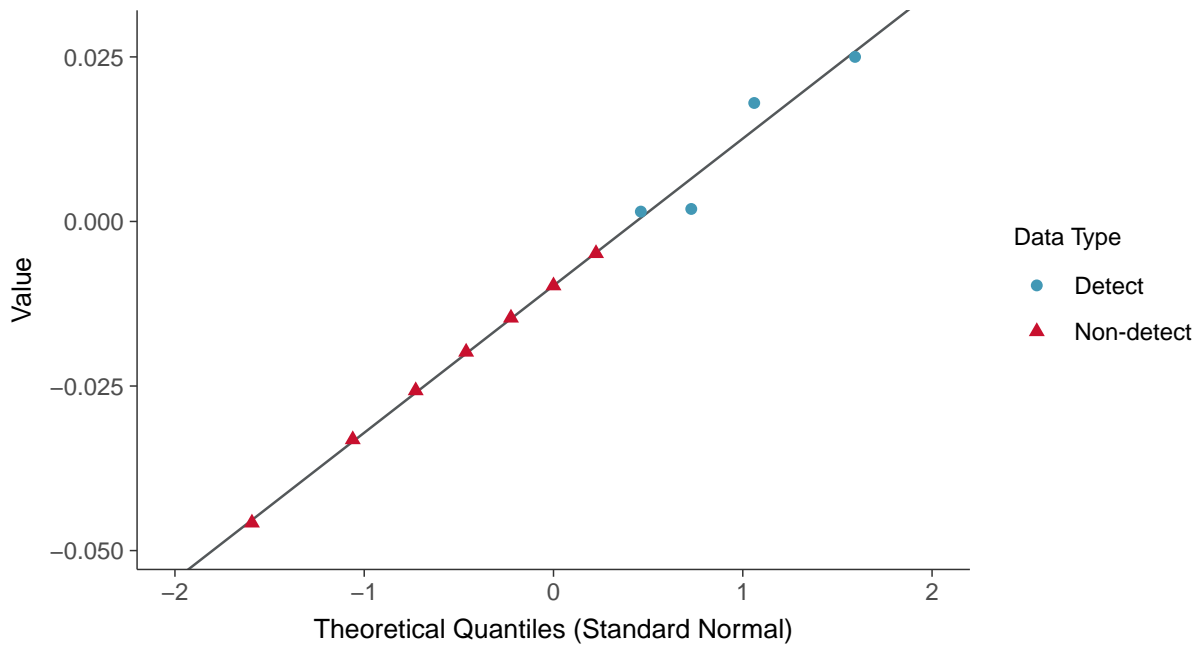
Zinc, MW-09 (mg/L)





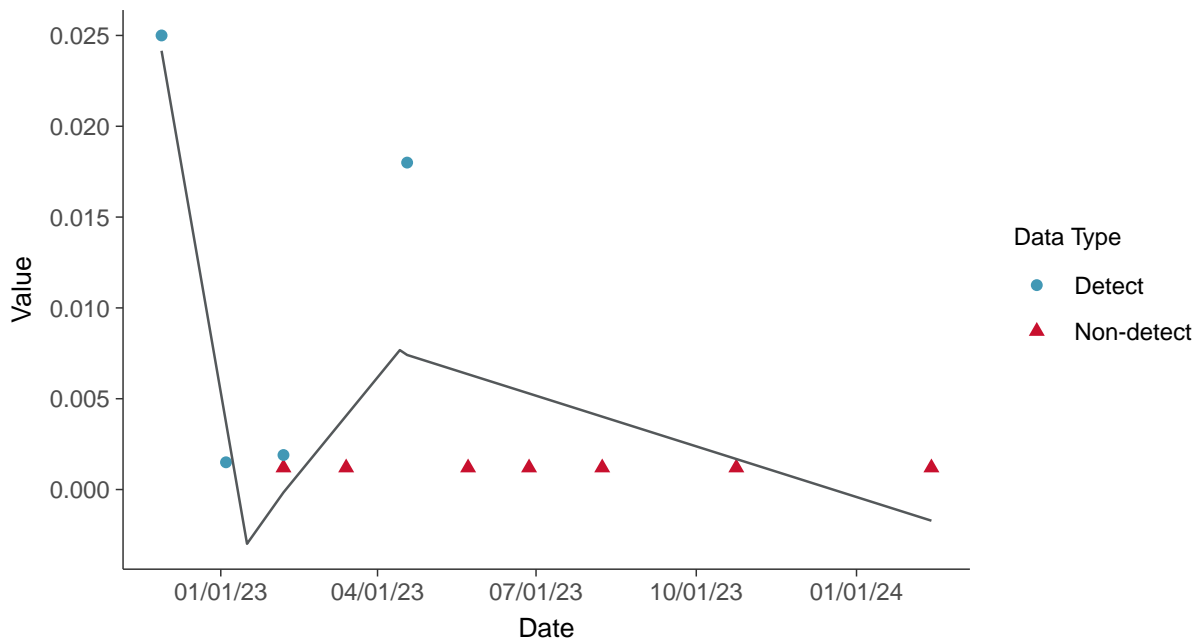
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-09 (mg/L)



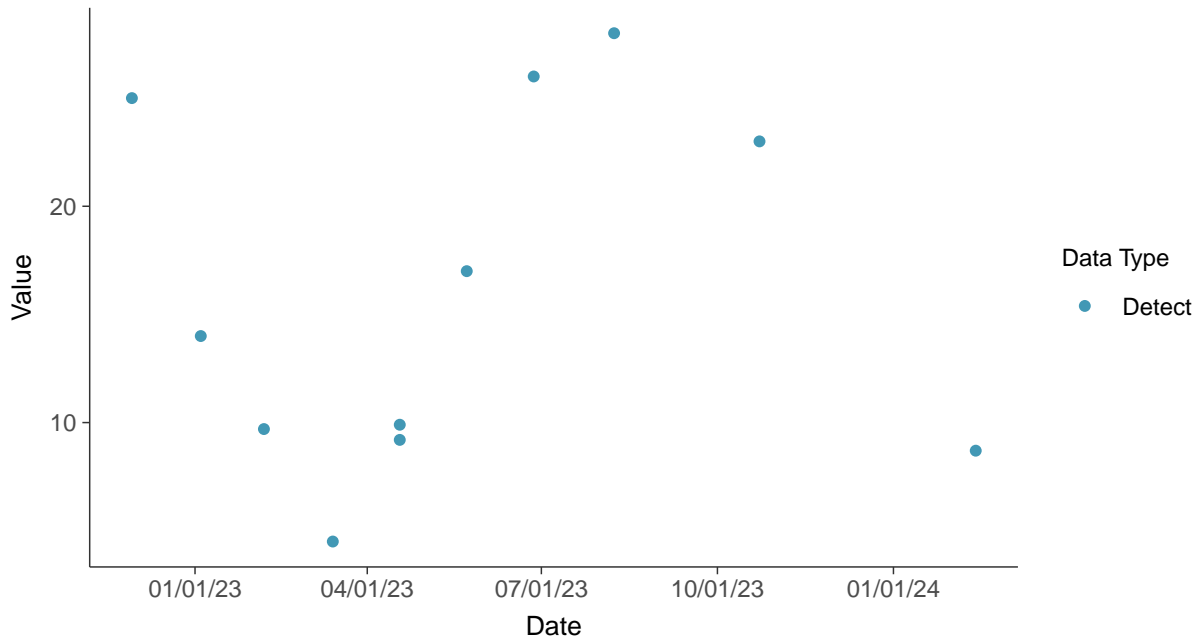


Appendix III: Boron, MW-10

ID: 2_20_4_105

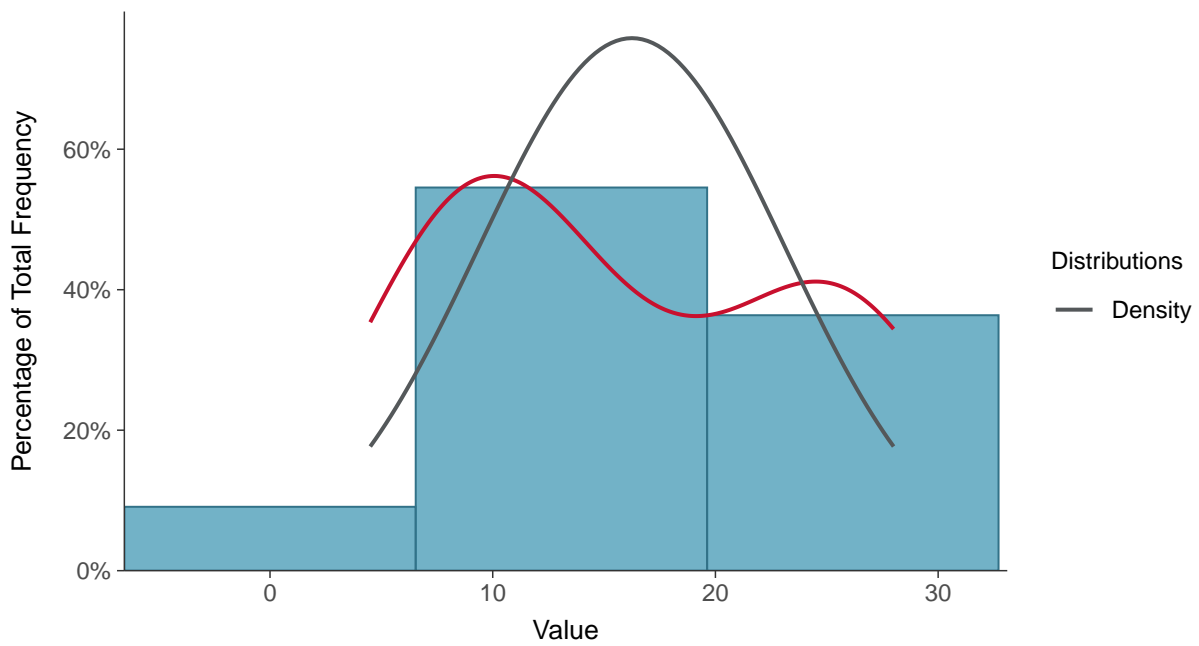
Scatter Plot

Boron, MW-10 (mg/L)



Histogram

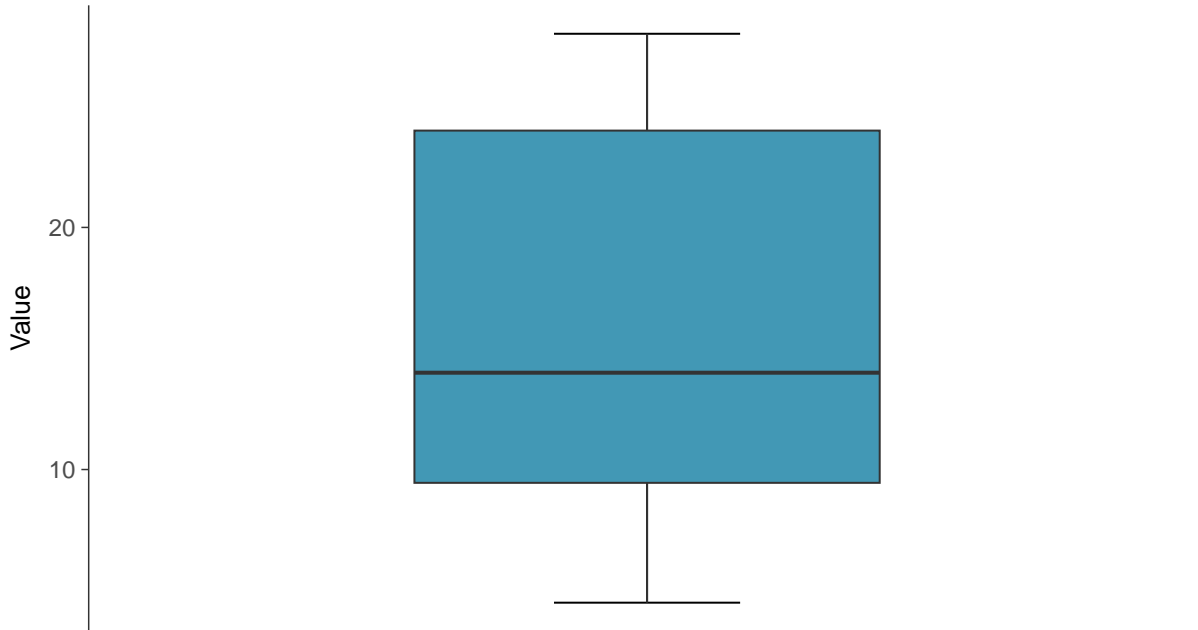
Boron, MW-10 (mg/L)





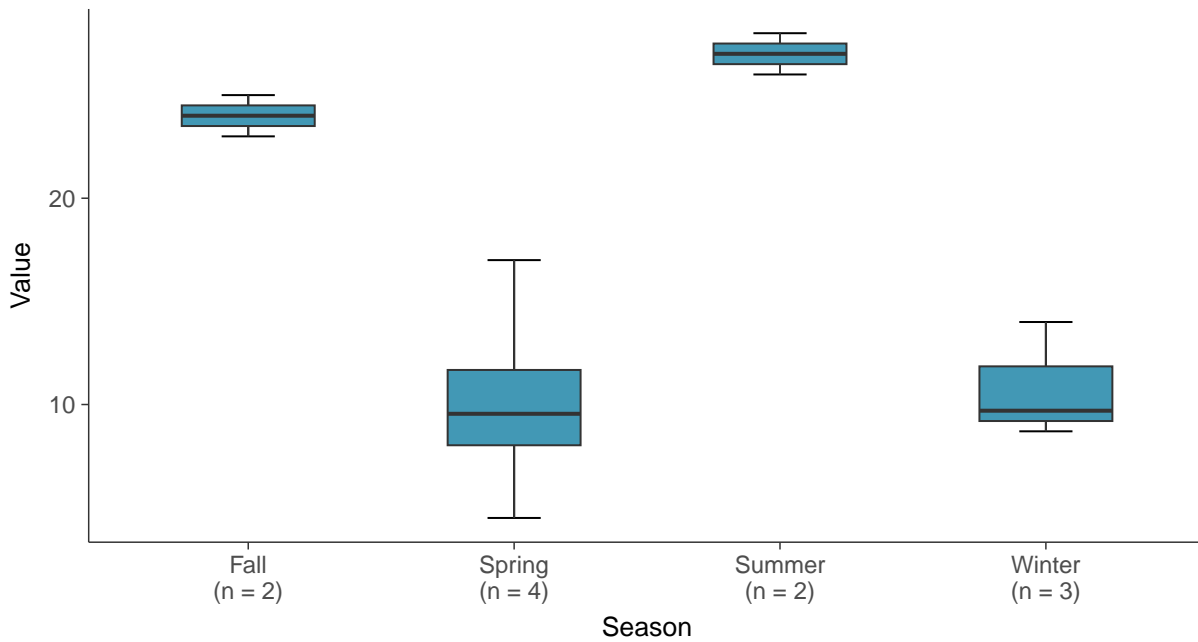
Boxplot

Boron, MW-10 (mg/L)



Boxplot by Season

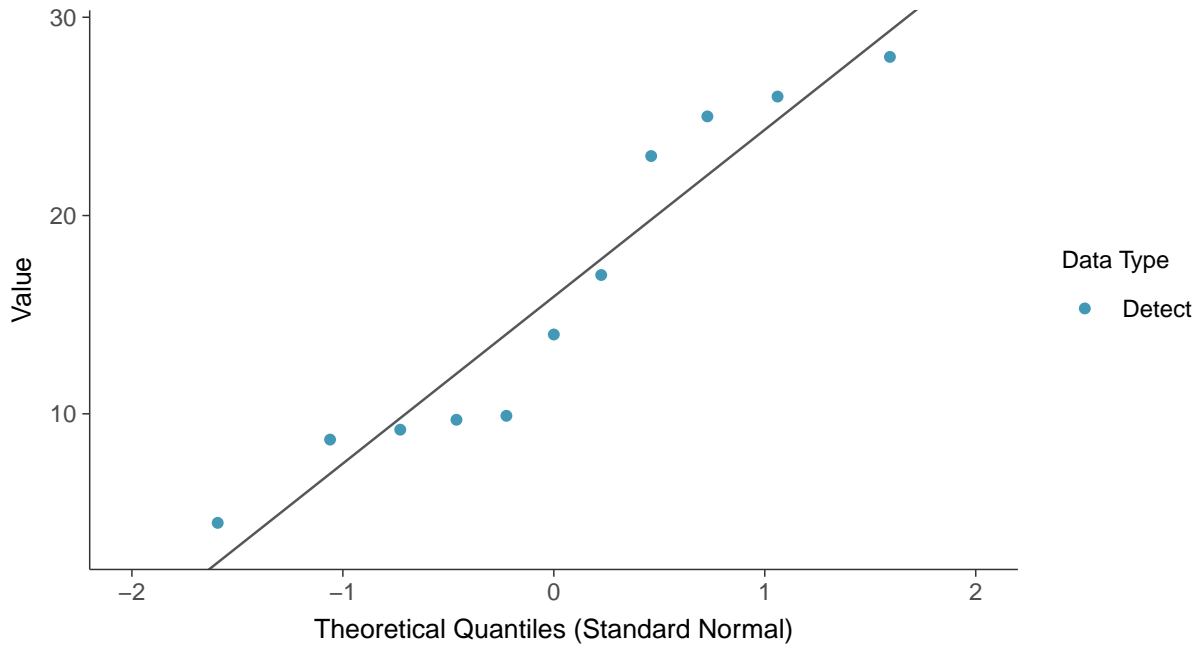
Boron, MW-10 (mg/L)





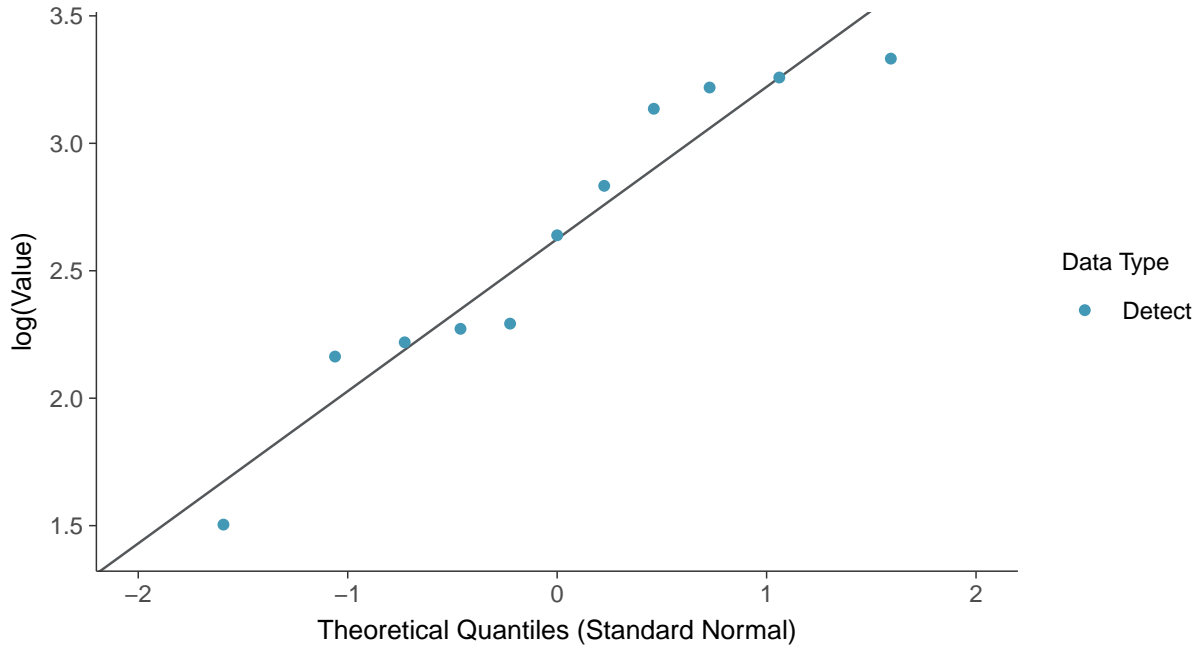
Normal Q-Q plot

Boron, MW-10 (mg/L)



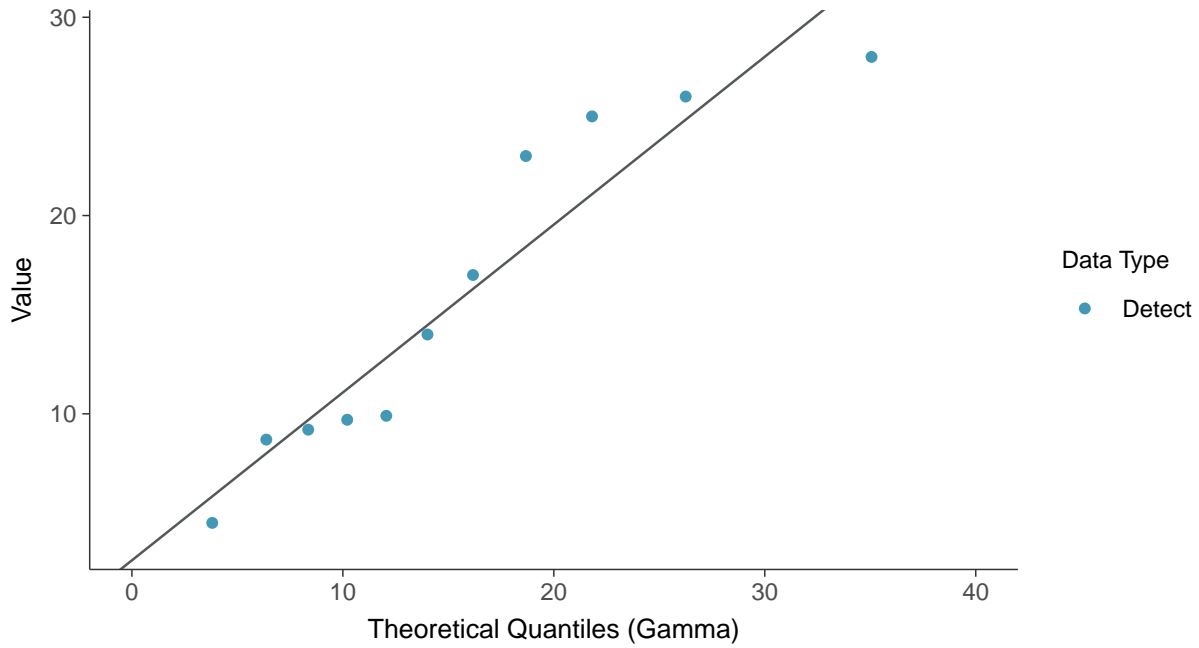
Lognormal Q-Q plot

Boron, MW-10 (mg/L)

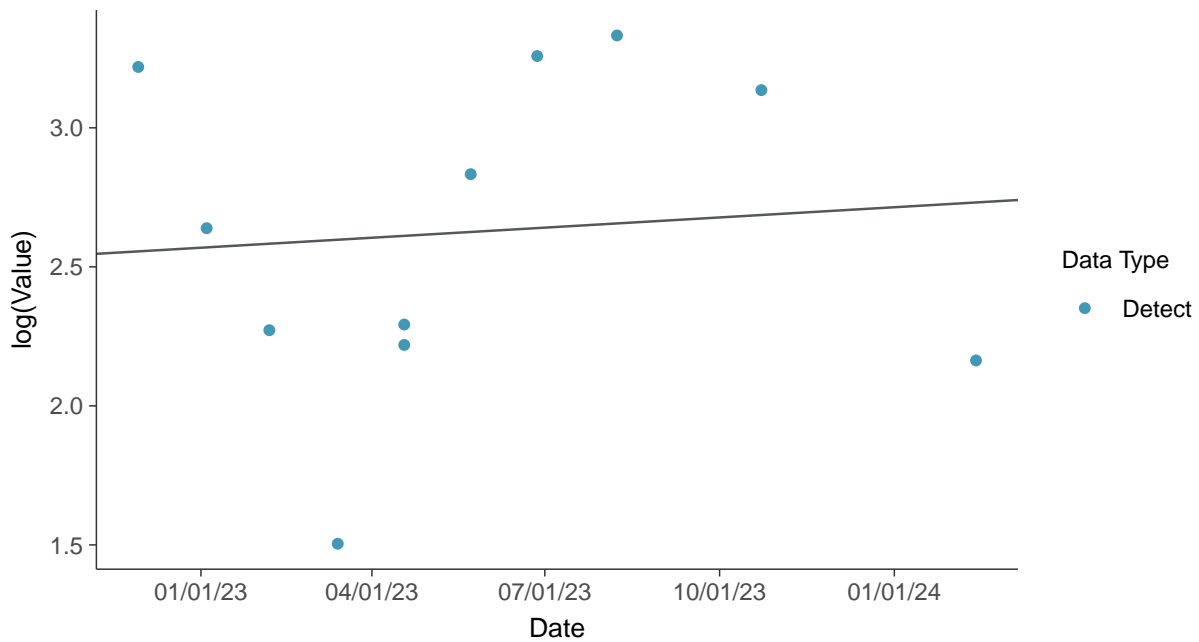




Gamma Q-Q plot
Boron, MW-10 (mg/L)



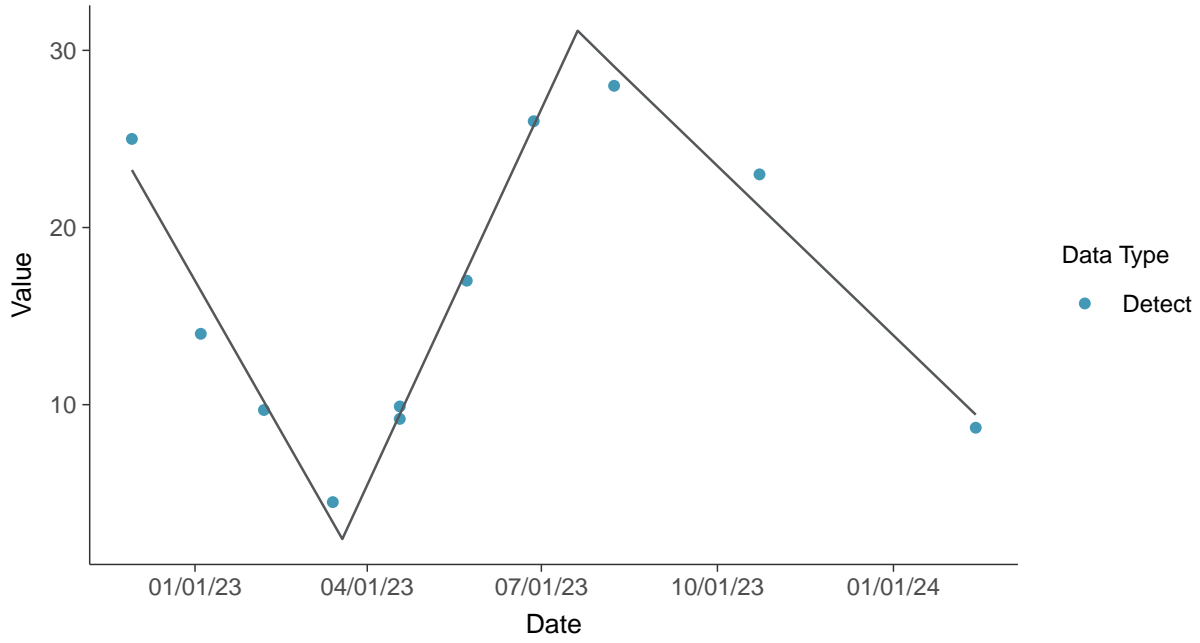
Trend Regression: Lognormal MLE
Boron, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-10 (mg/L)



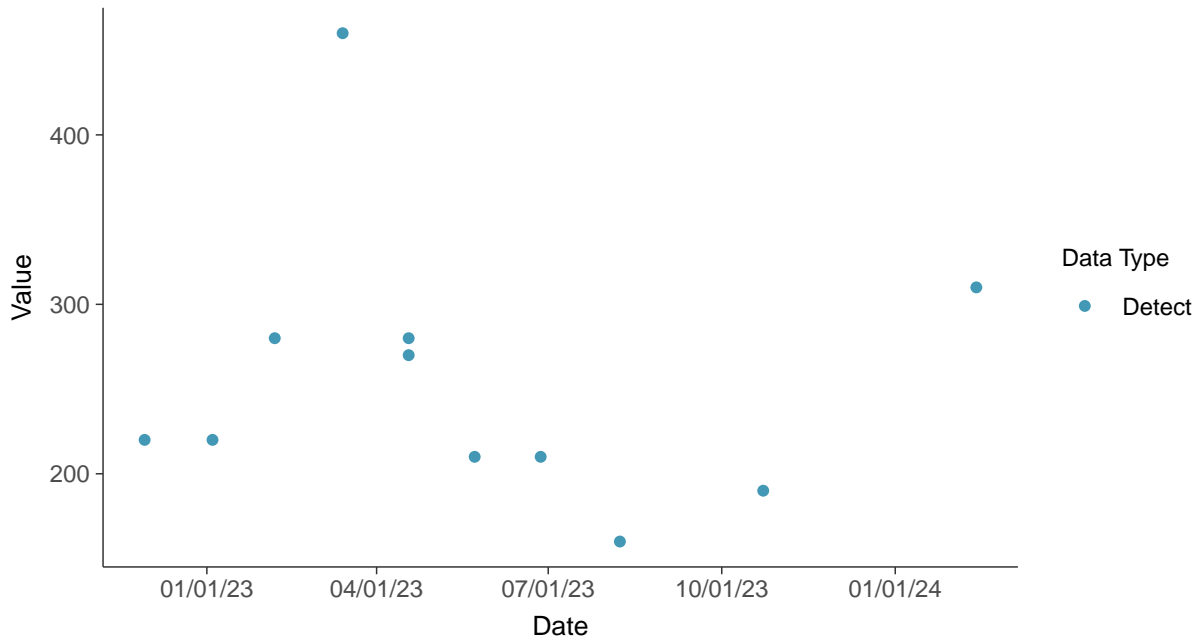


Appendix III: Calcium, MW-10

ID: 2_20_4_107

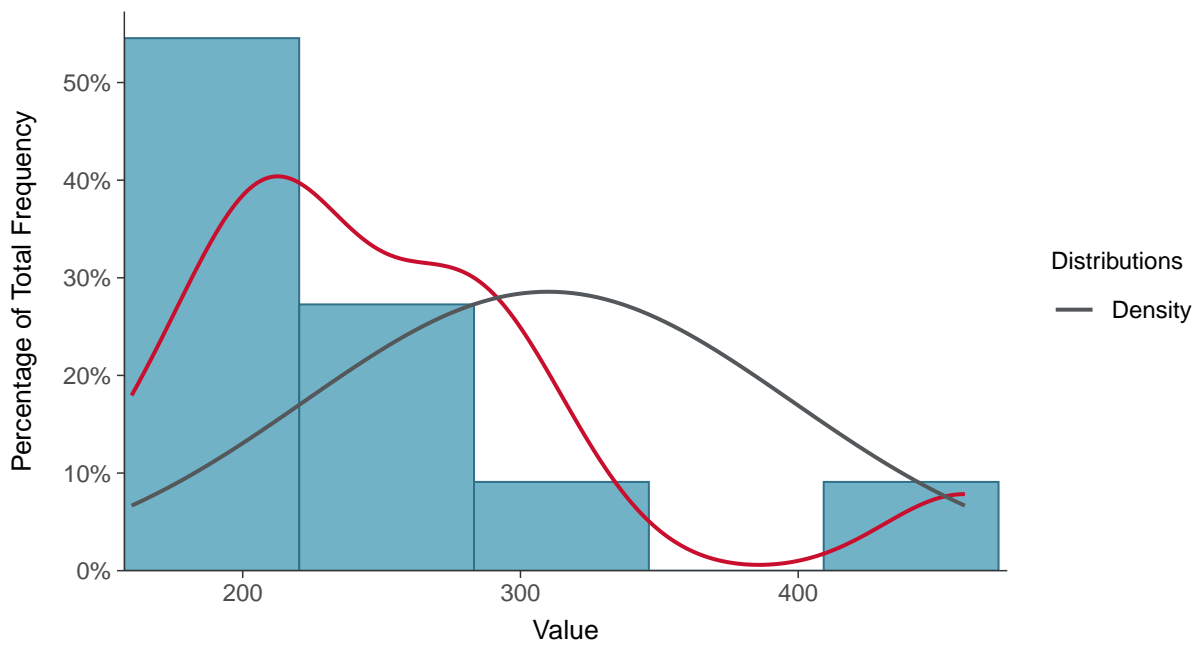
Scatter Plot

Calcium, MW-10 (mg/L)



Histogram

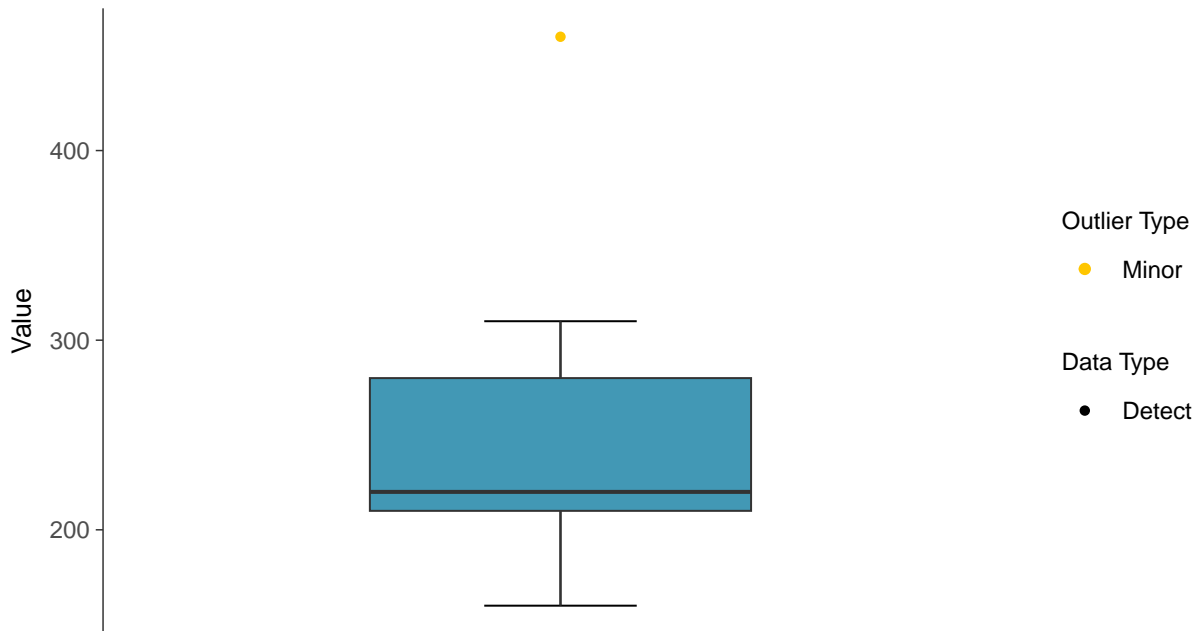
Calcium, MW-10 (mg/L)





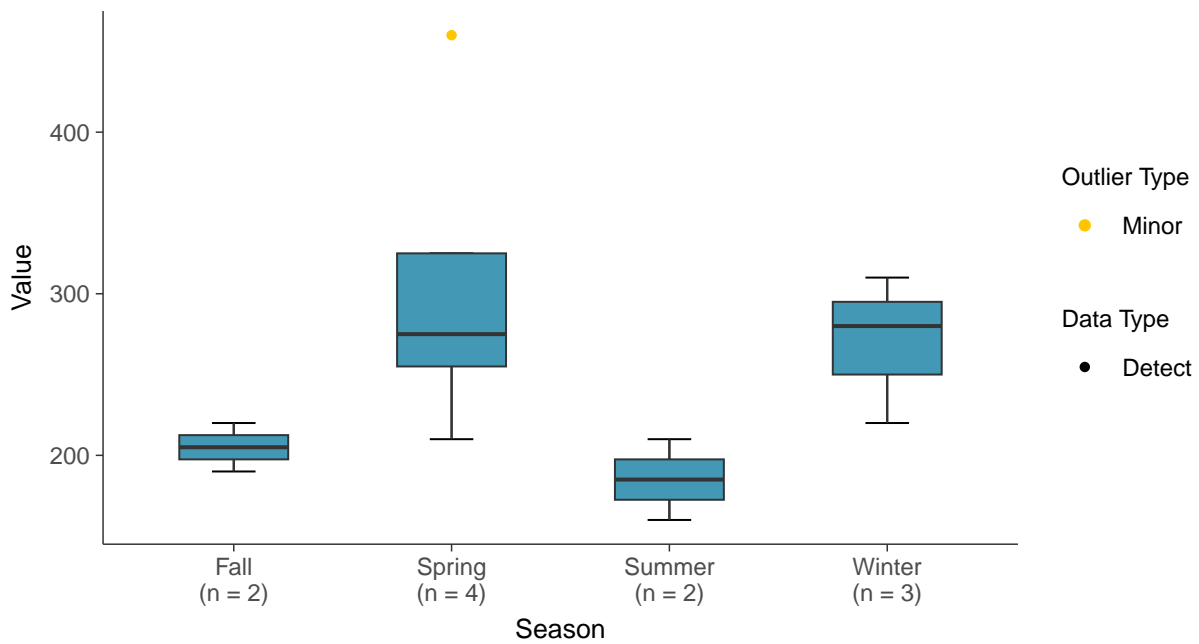
Boxplot

Calcium, MW-10 (mg/L)



Boxplot by Season

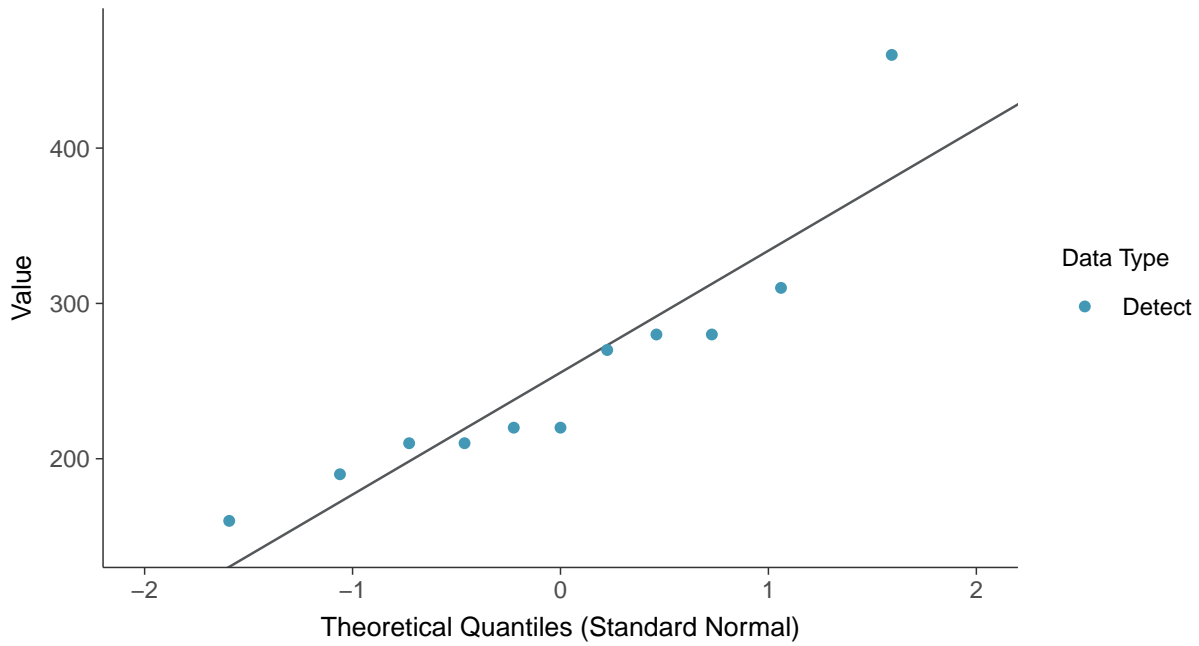
Calcium, MW-10 (mg/L)





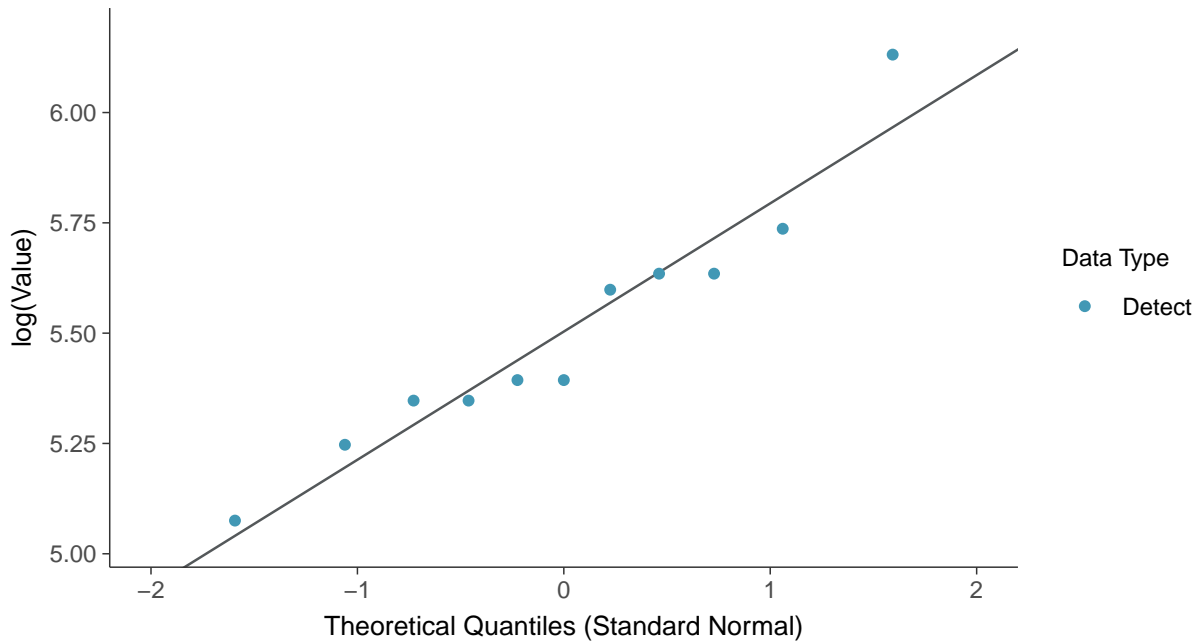
Normal Q-Q plot

Calcium, MW-10 (mg/L)



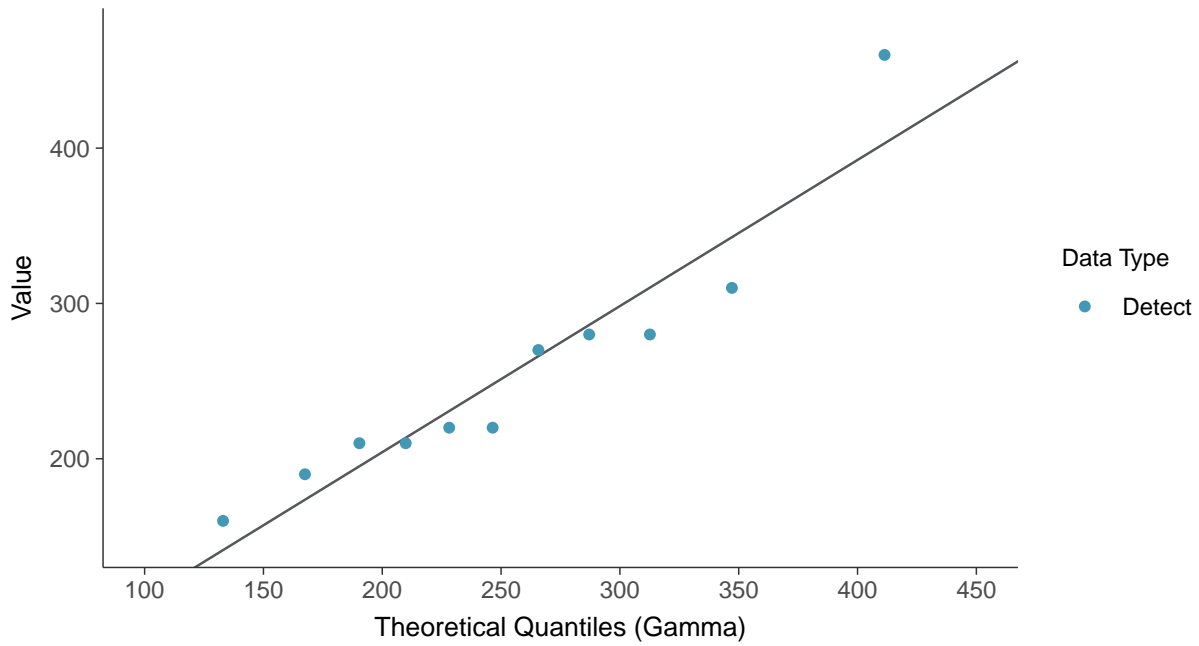
Lognormal Q-Q plot

Calcium, MW-10 (mg/L)

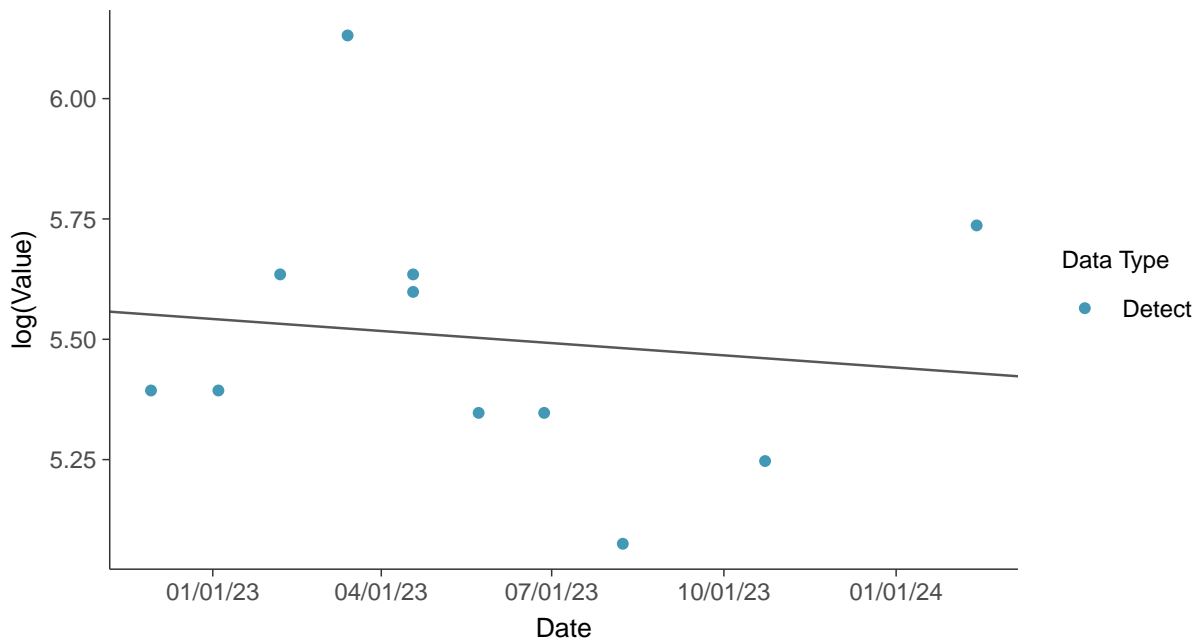




Gamma Q-Q plot
Calcium, MW-10 (mg/L)



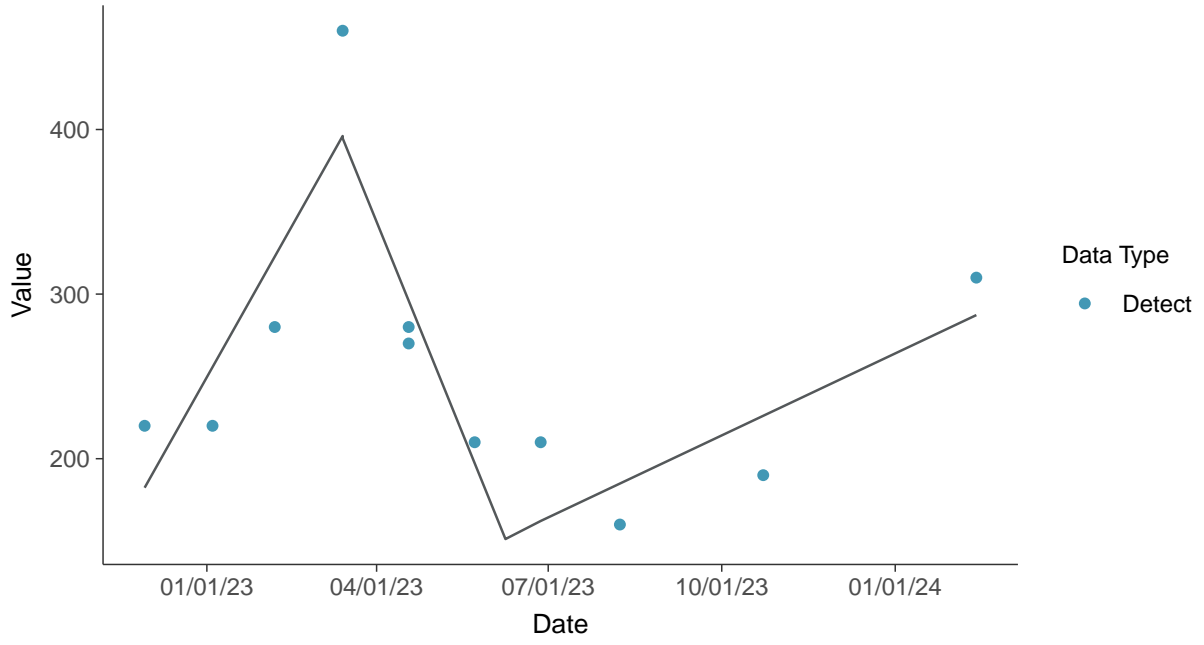
Trend Regression: Lognormal MLE
Calcium, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-10 (mg/L)



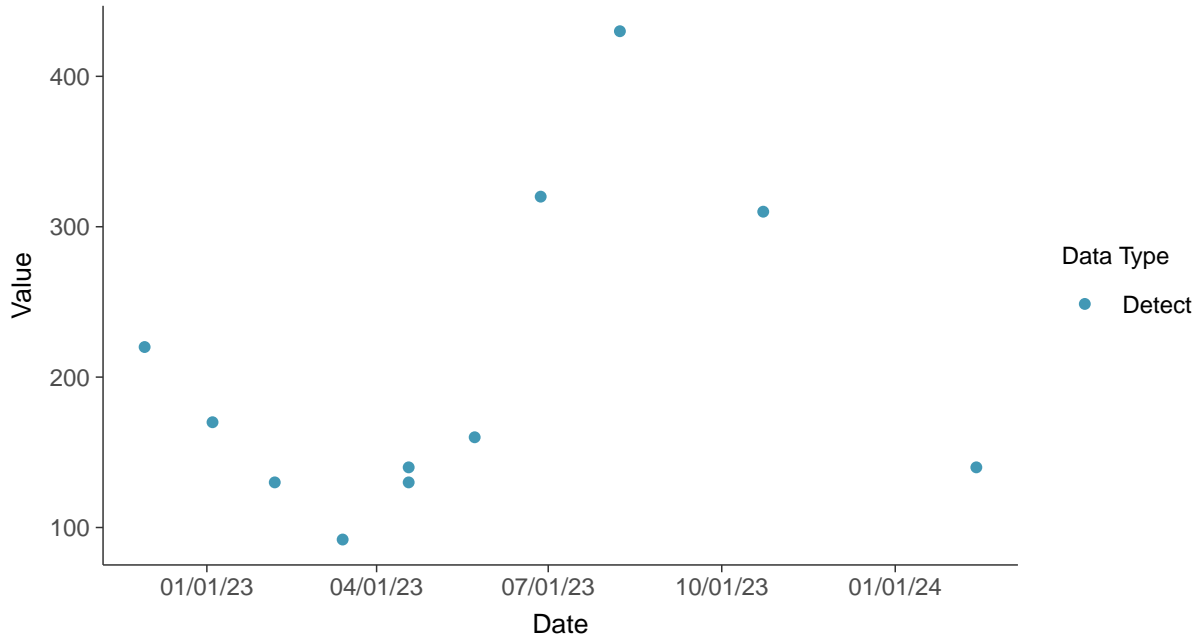


Appendix III: Chloride (as Cl), MW-10

ID: 2_20_4_108

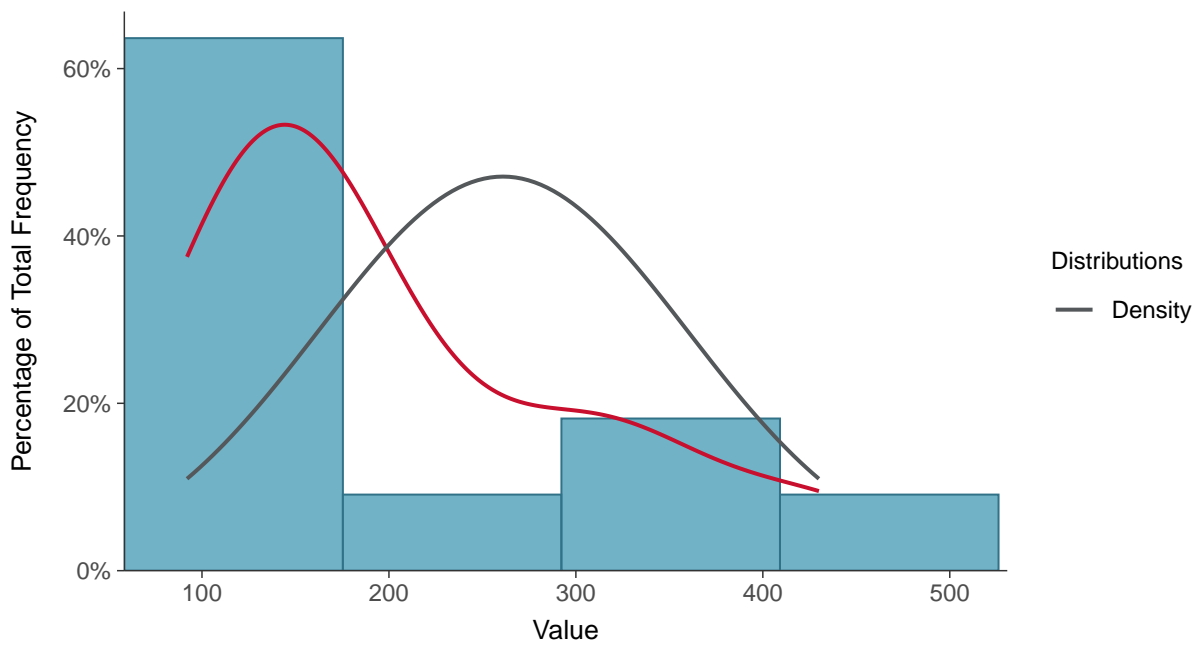
Scatter Plot

Chloride (as Cl), MW-10 (mg/L)



Histogram

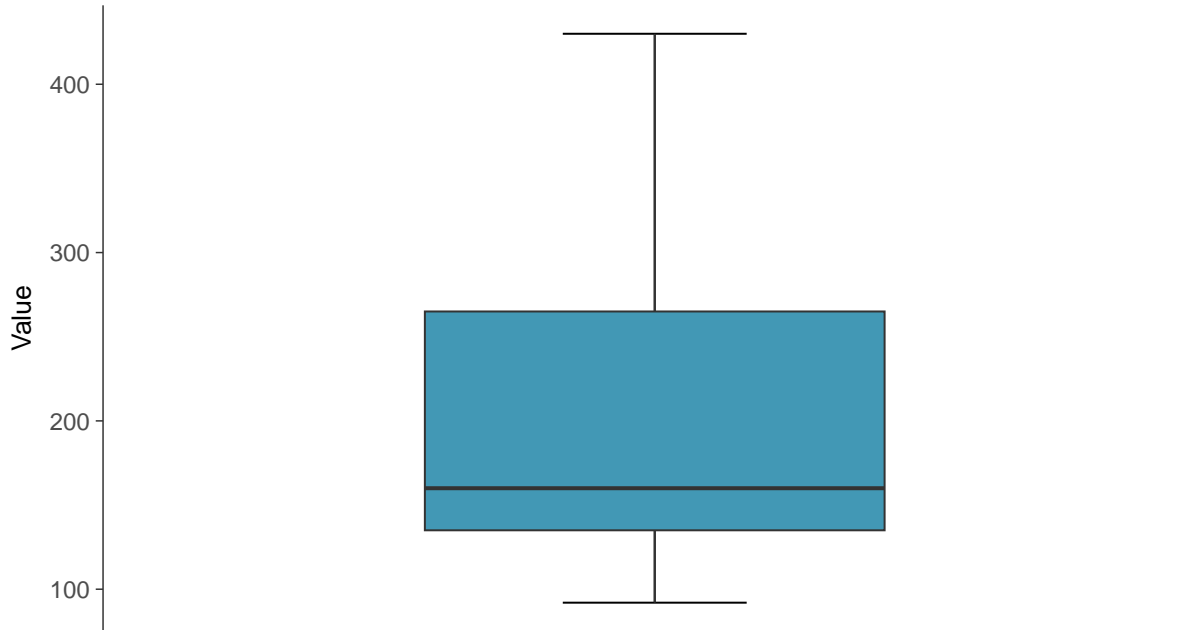
Chloride (as Cl), MW-10 (mg/L)





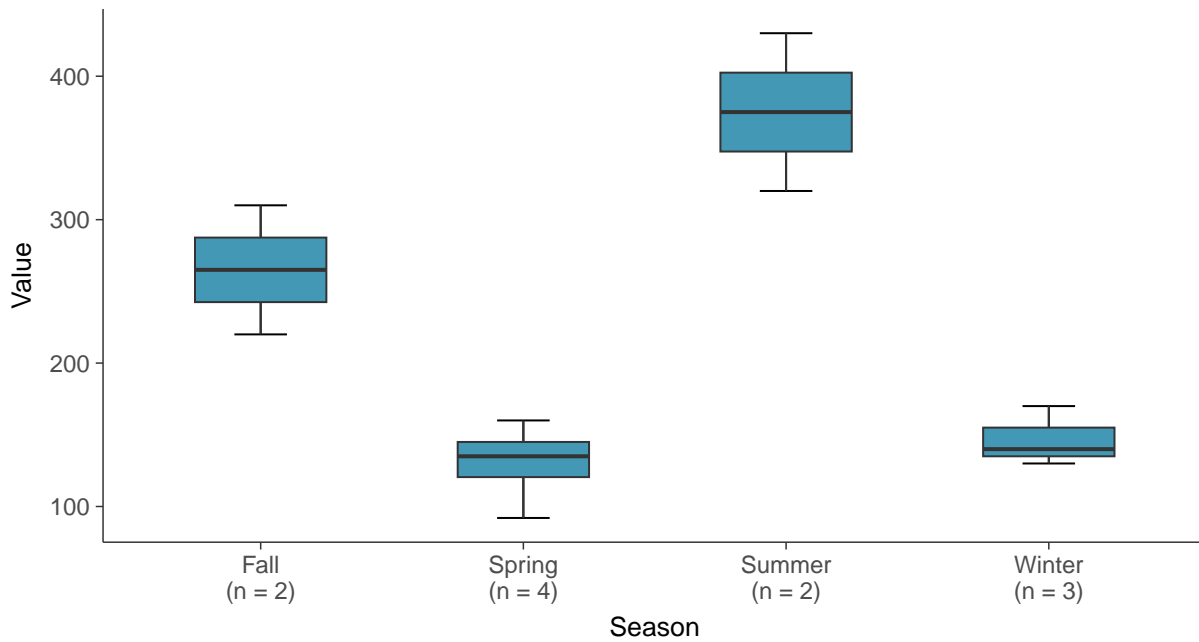
Boxplot

Chloride (as Cl), MW-10 (mg/L)



Boxplot by Season

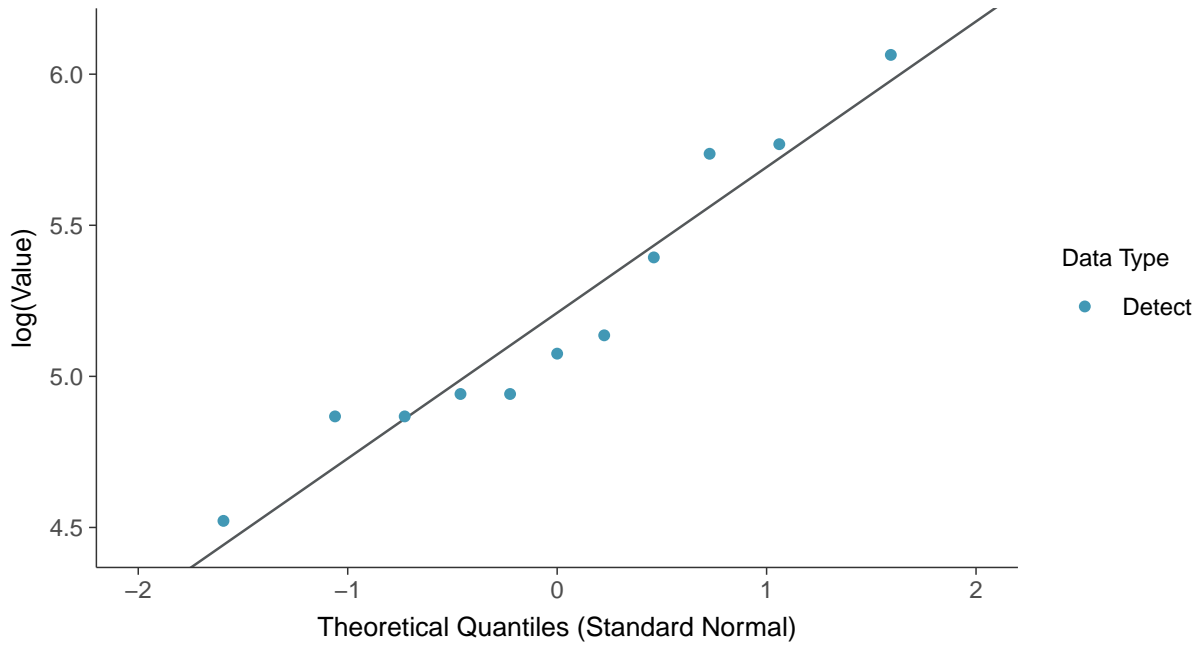
Chloride (as Cl), MW-10 (mg/L)





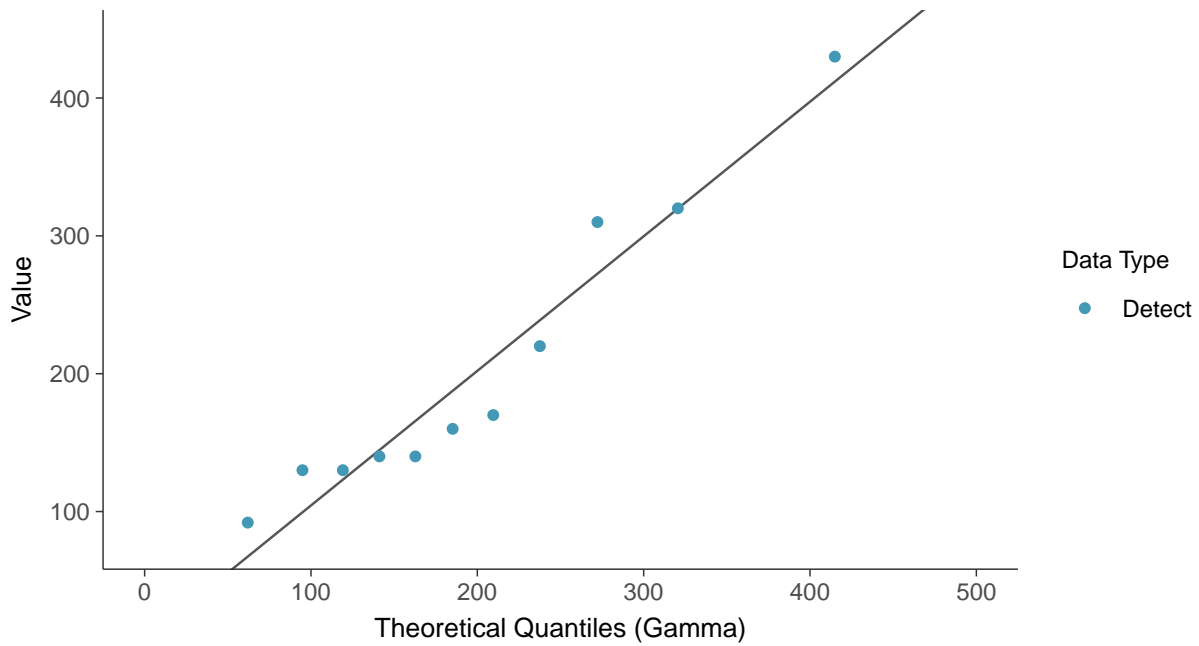
Lognormal Q-Q plot

Chloride (as Cl), MW-10 (mg/L)



Gamma Q-Q plot

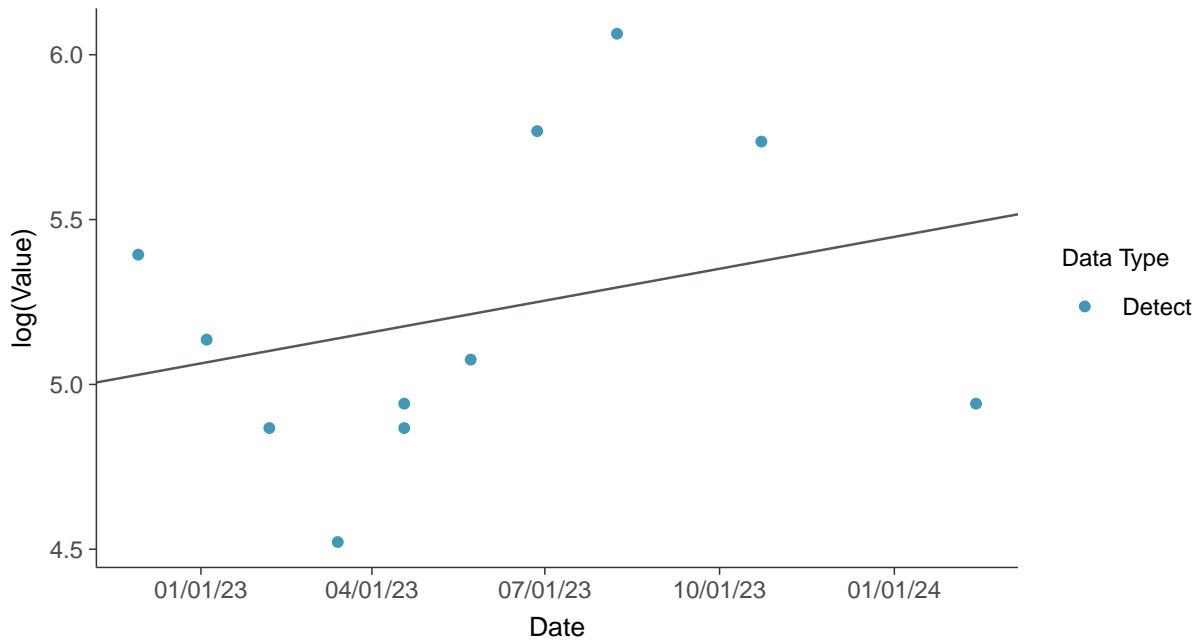
Chloride (as Cl), MW-10 (mg/L)





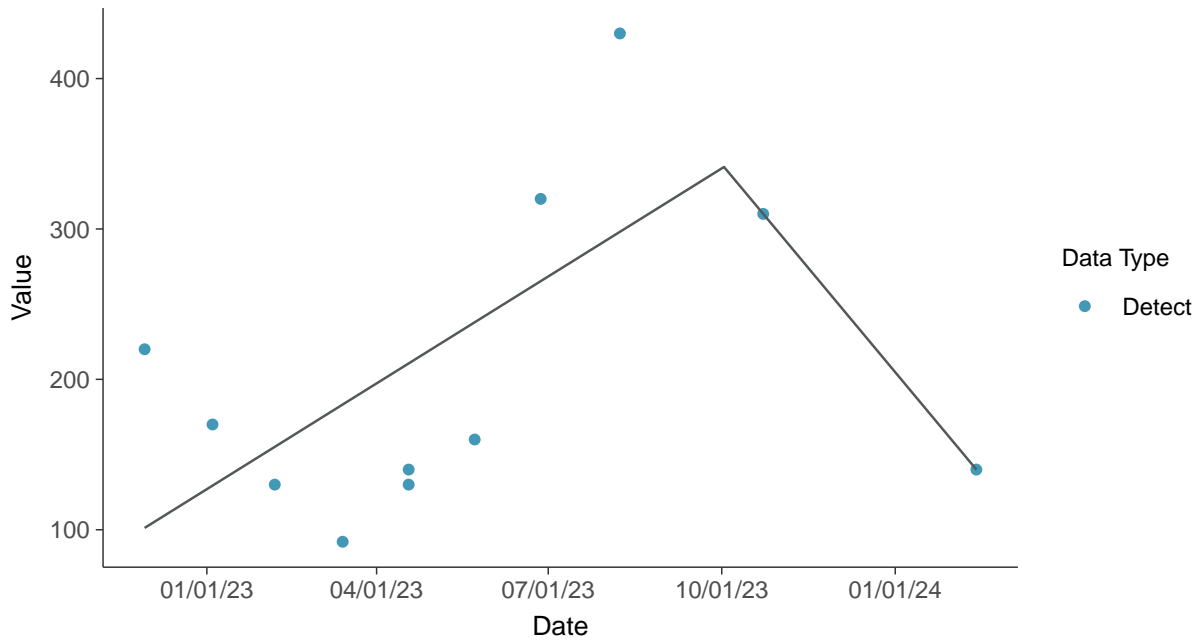
Trend Regression: Lognormal MLE

Chloride (as Cl), MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear

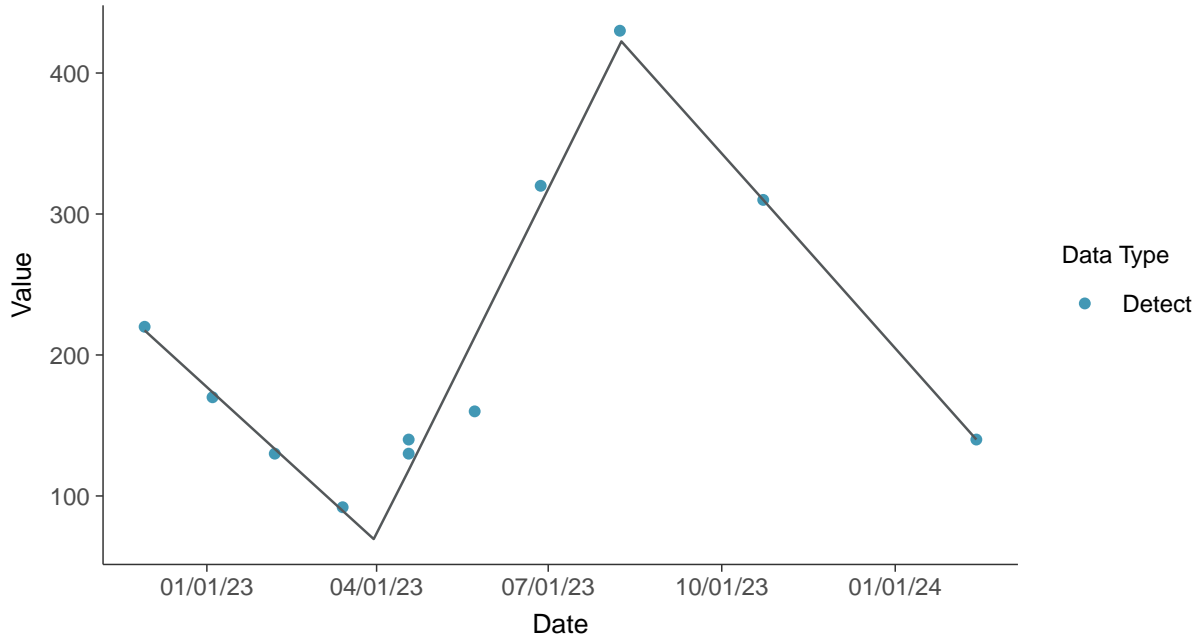
Chloride (as Cl), MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-10 (mg/L)



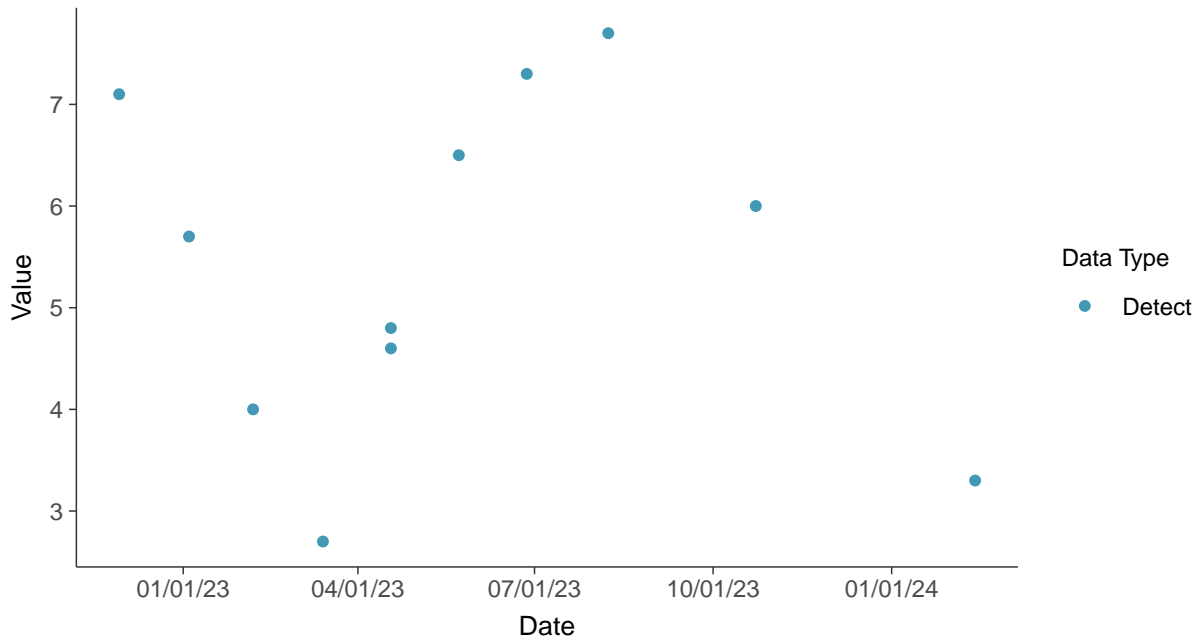


Appendix III: Fluoride, MW-10

ID: 2_20_4_112

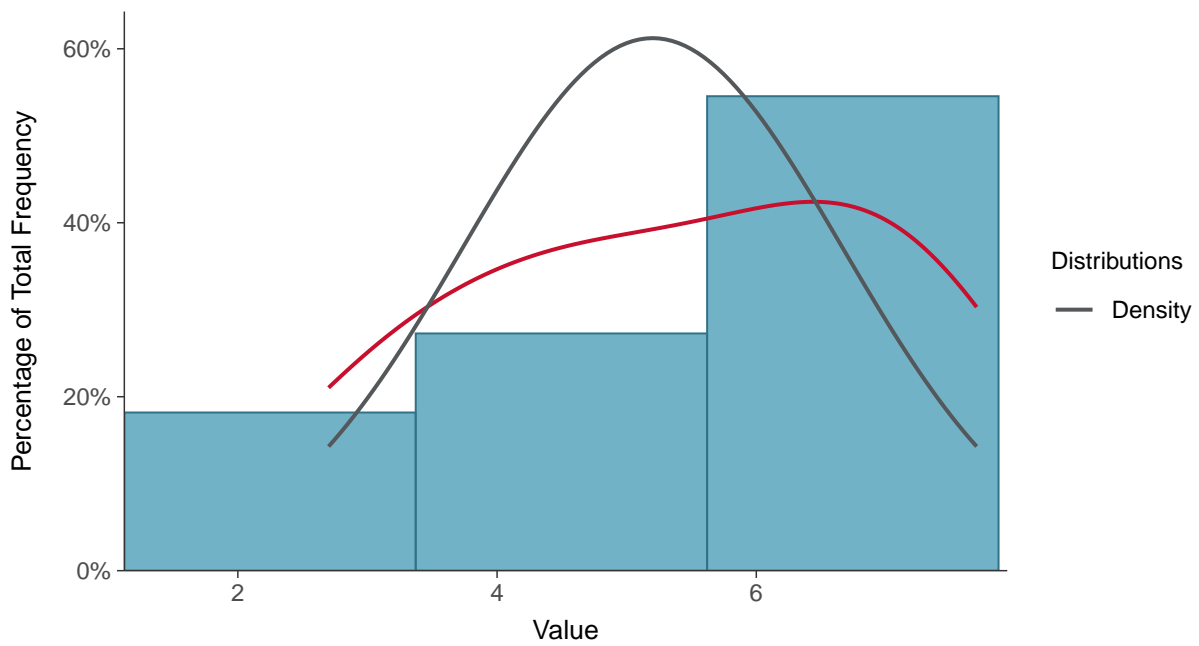
Scatter Plot

Fluoride, MW-10 (mg/L)



Histogram

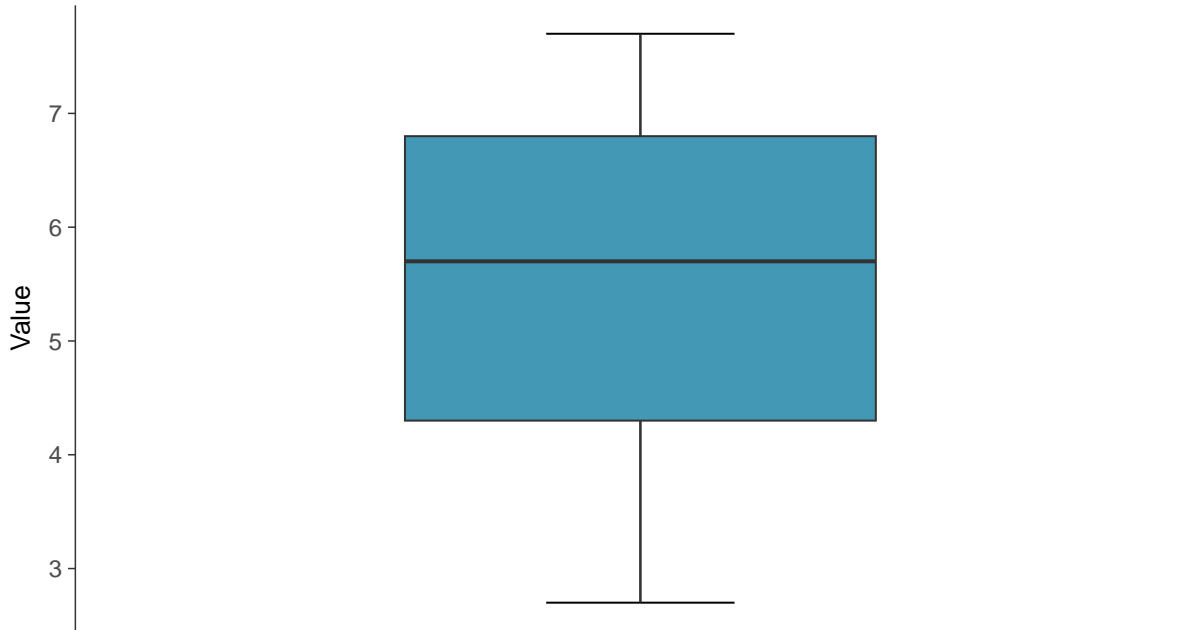
Fluoride, MW-10 (mg/L)





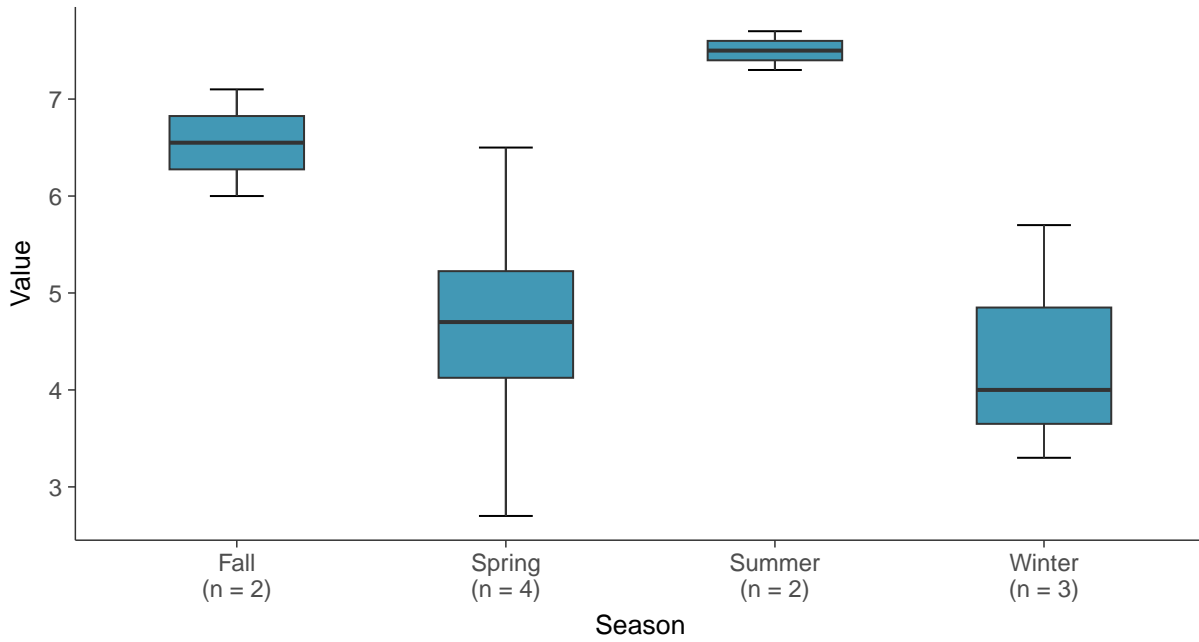
Boxplot

Fluoride, MW-10 (mg/L)



Boxplot by Season

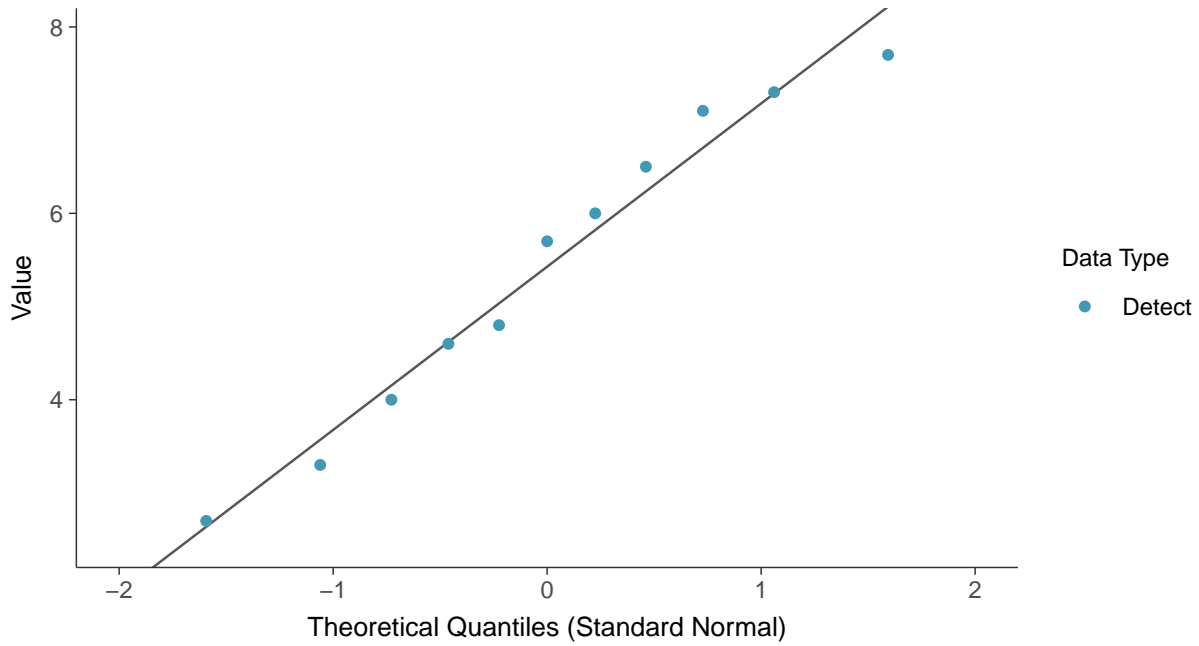
Fluoride, MW-10 (mg/L)





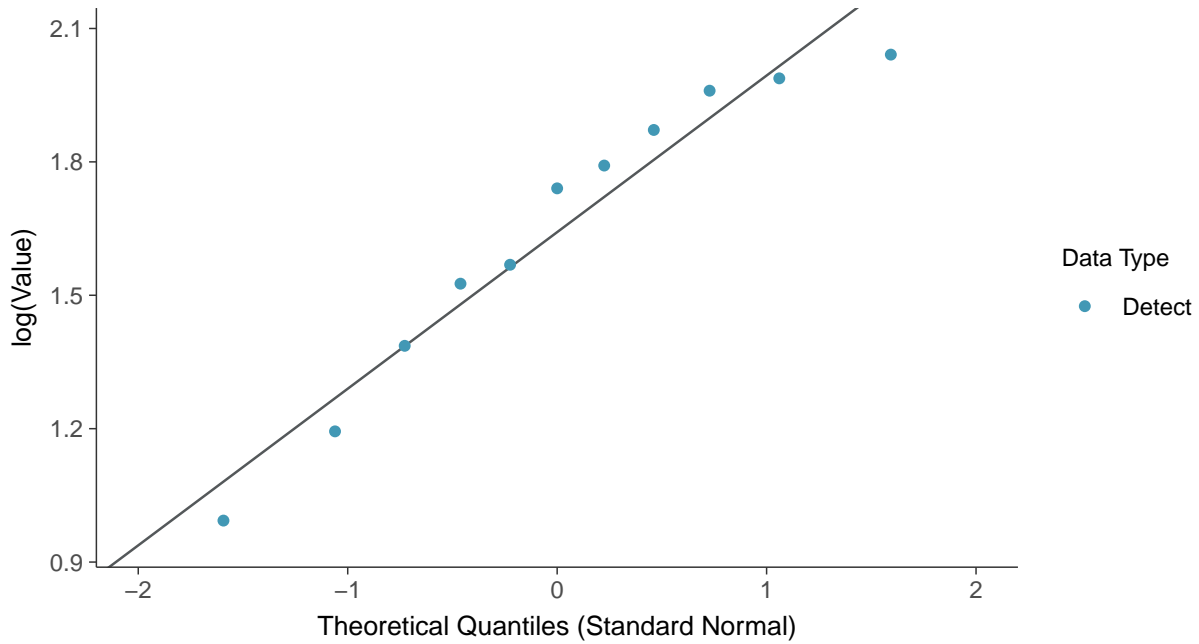
Normal Q-Q plot

Fluoride, MW-10 (mg/L)



Lognormal Q-Q plot

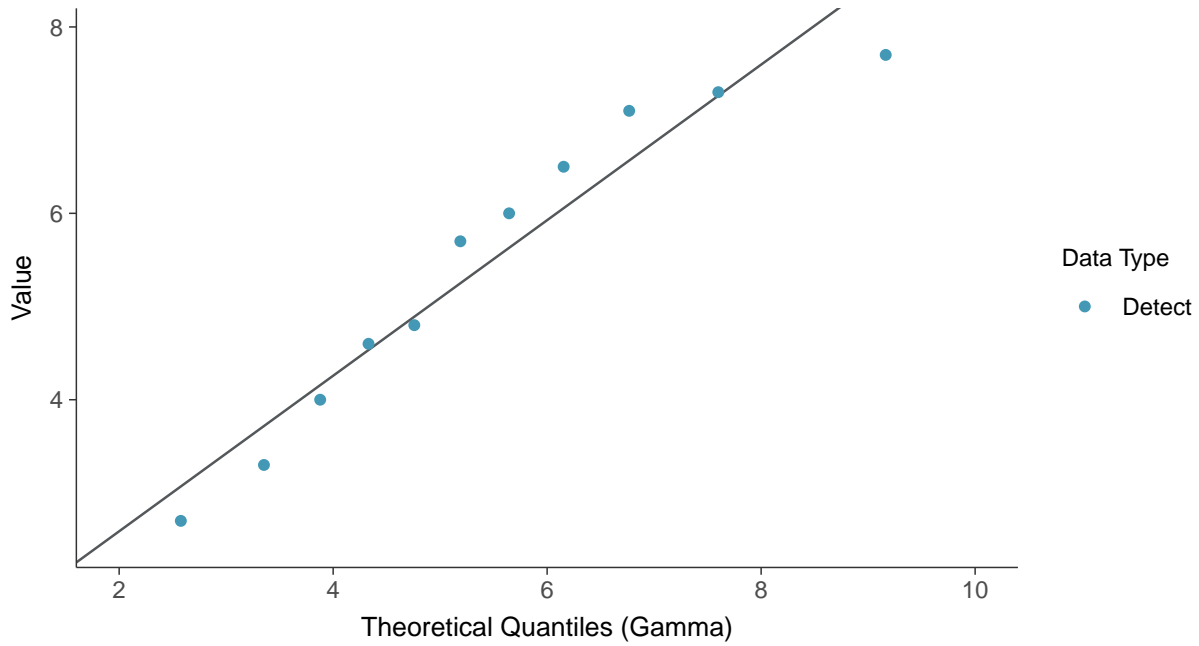
Fluoride, MW-10 (mg/L)





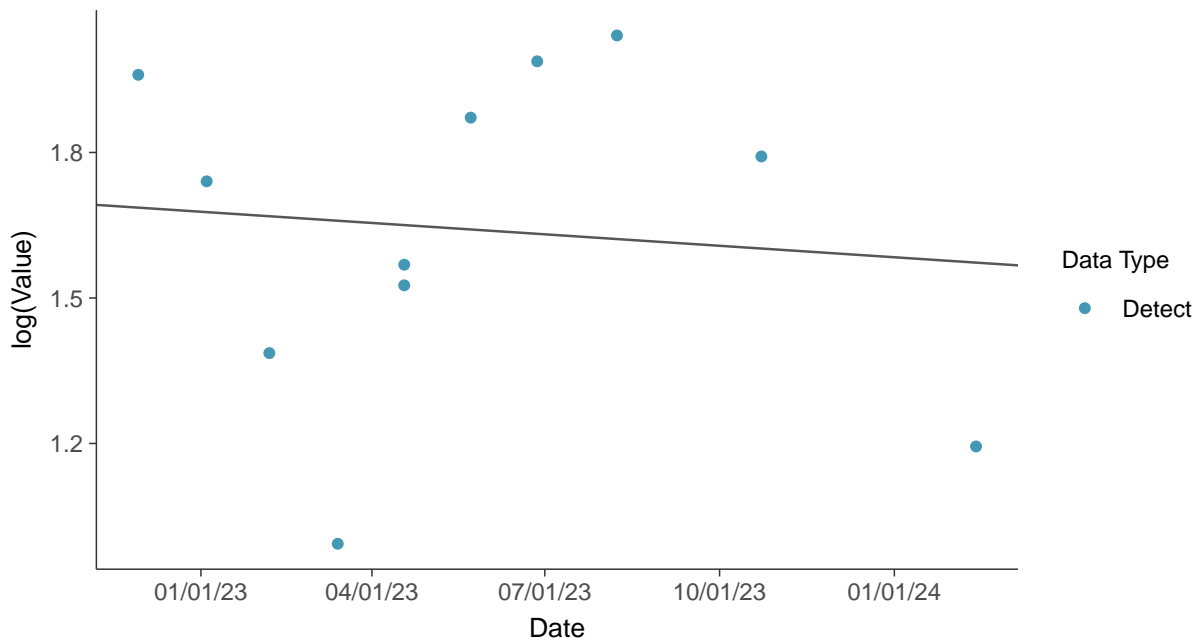
Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



Trend Regression: Lognormal MLE

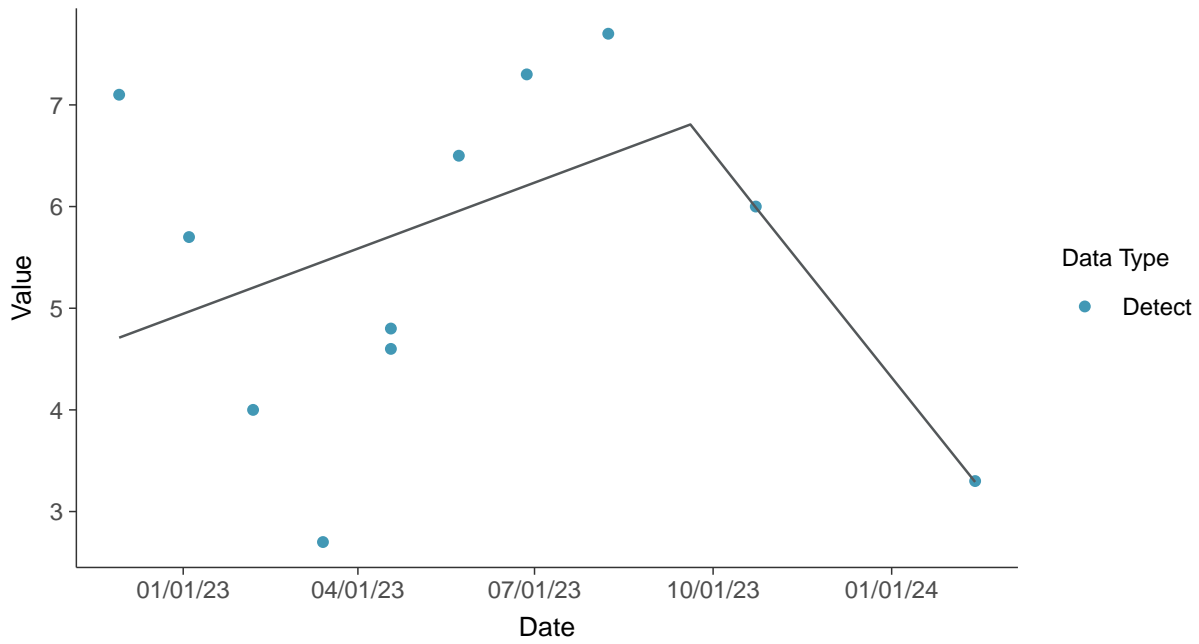
Fluoride, MW-10 (mg/L)





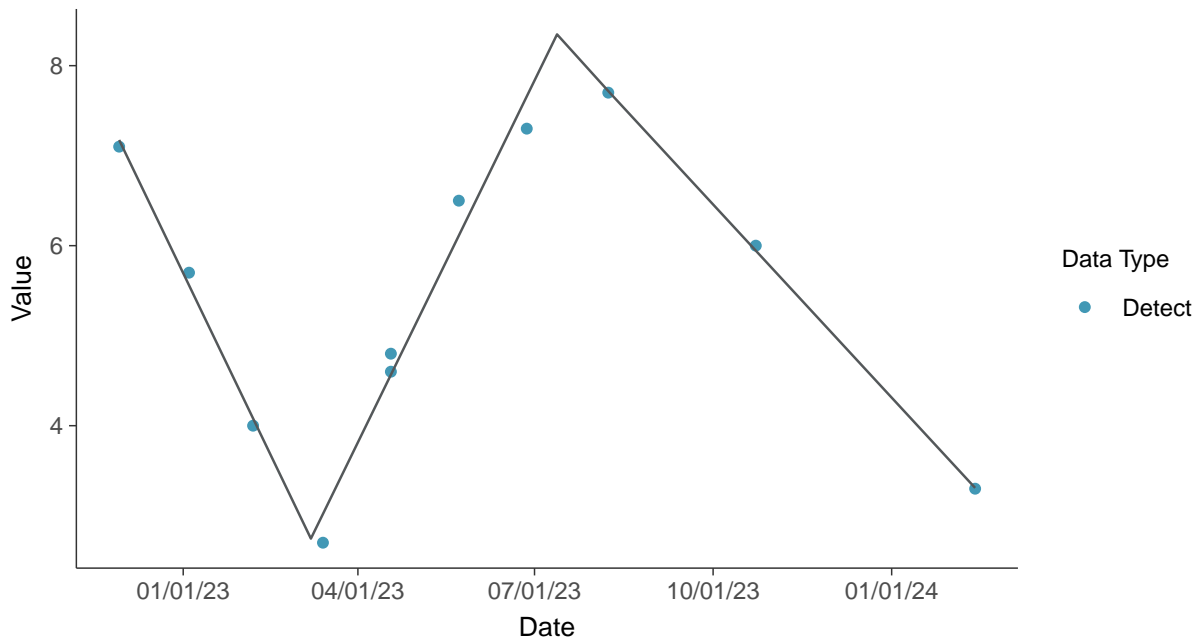
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-10 (mg/L)



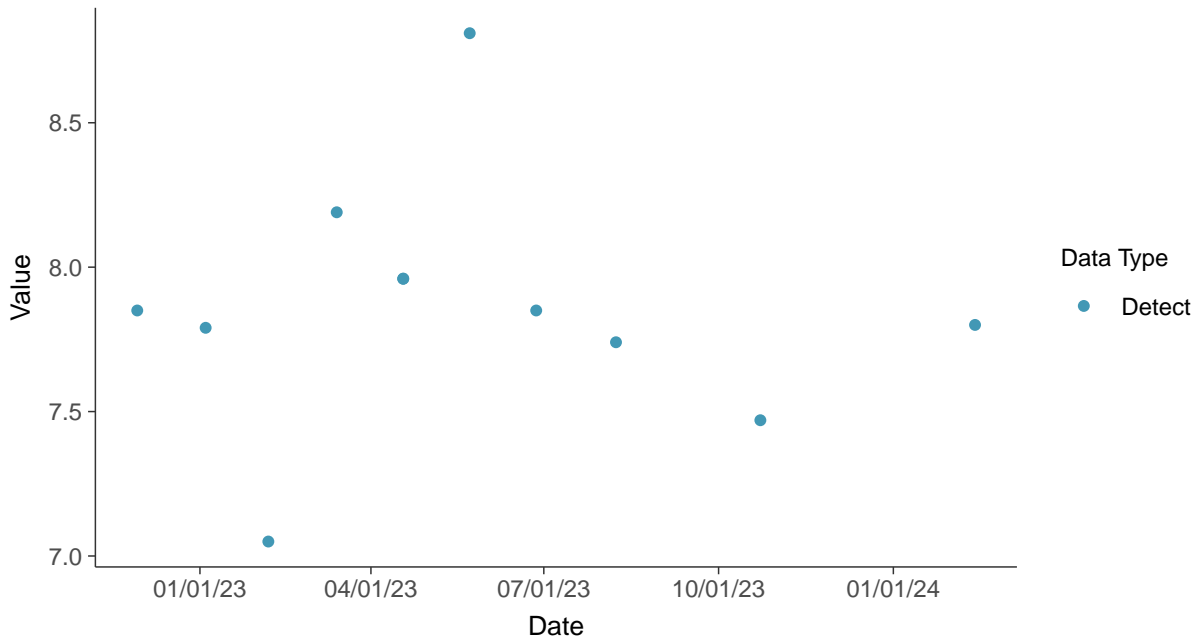


Appendix III: pH (field), MW-10

ID: 2_20_4_120

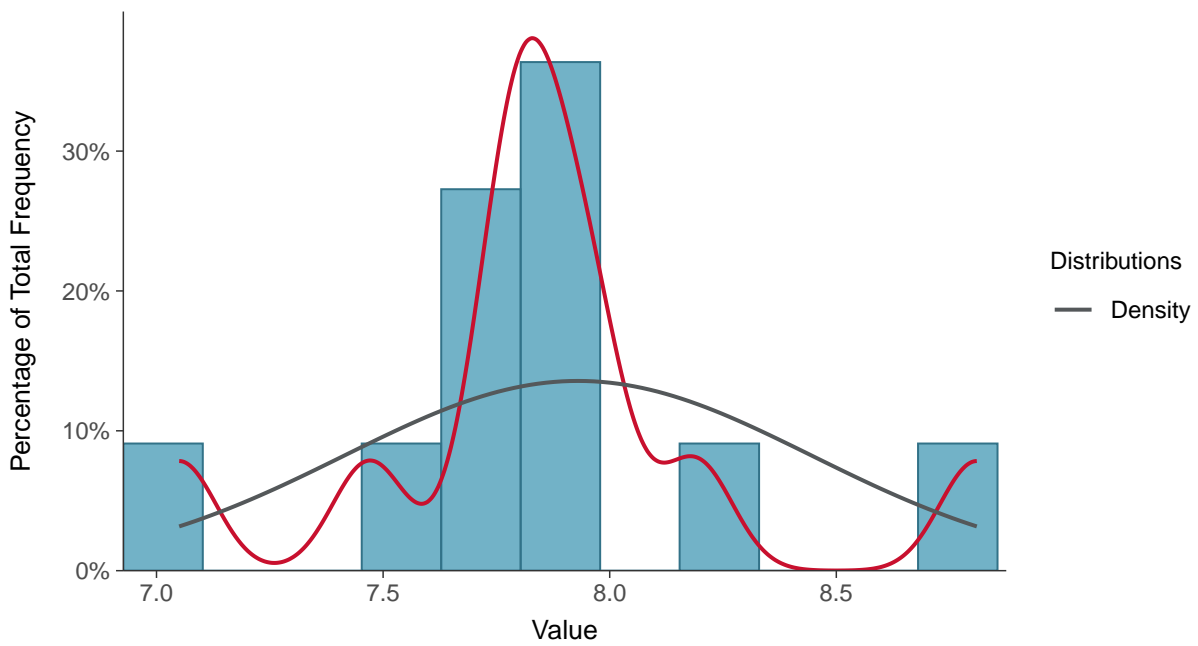
Scatter Plot

pH (field), MW-10 (su)



Histogram

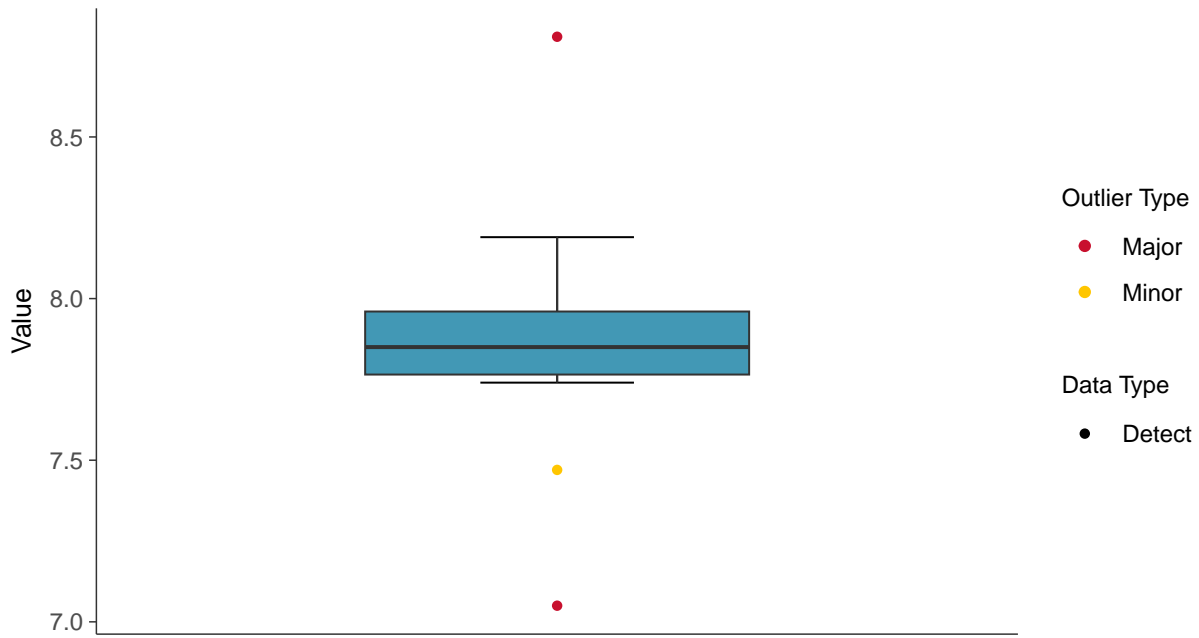
pH (field), MW-10 (su)





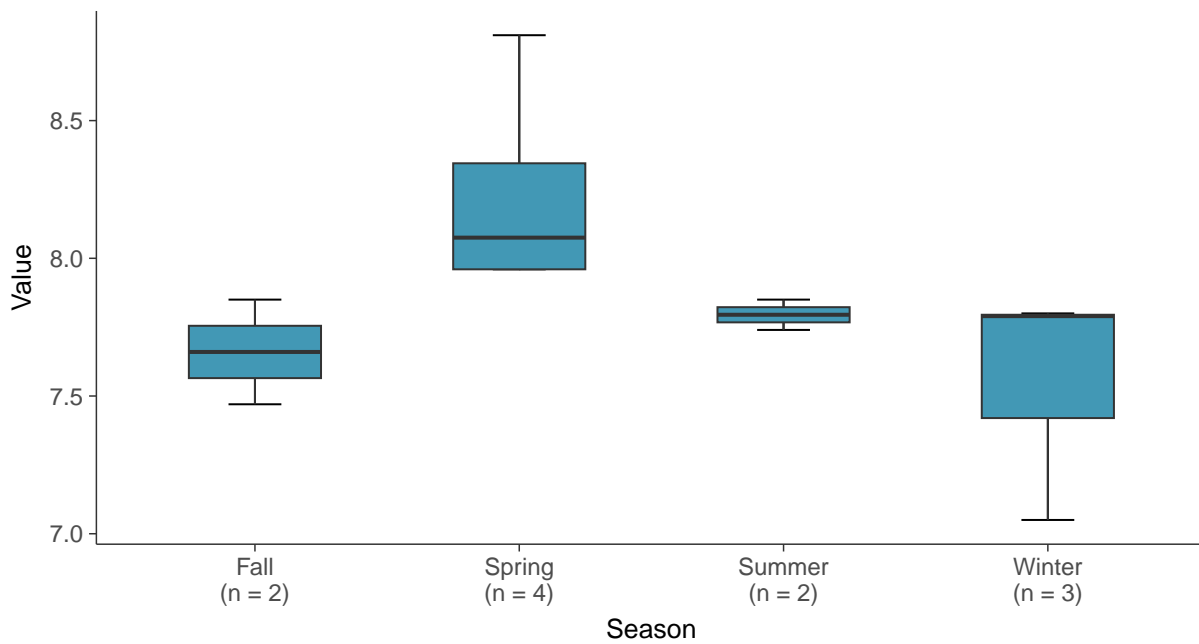
Boxplot

pH (field), MW-10 (su)



Boxplot by Season

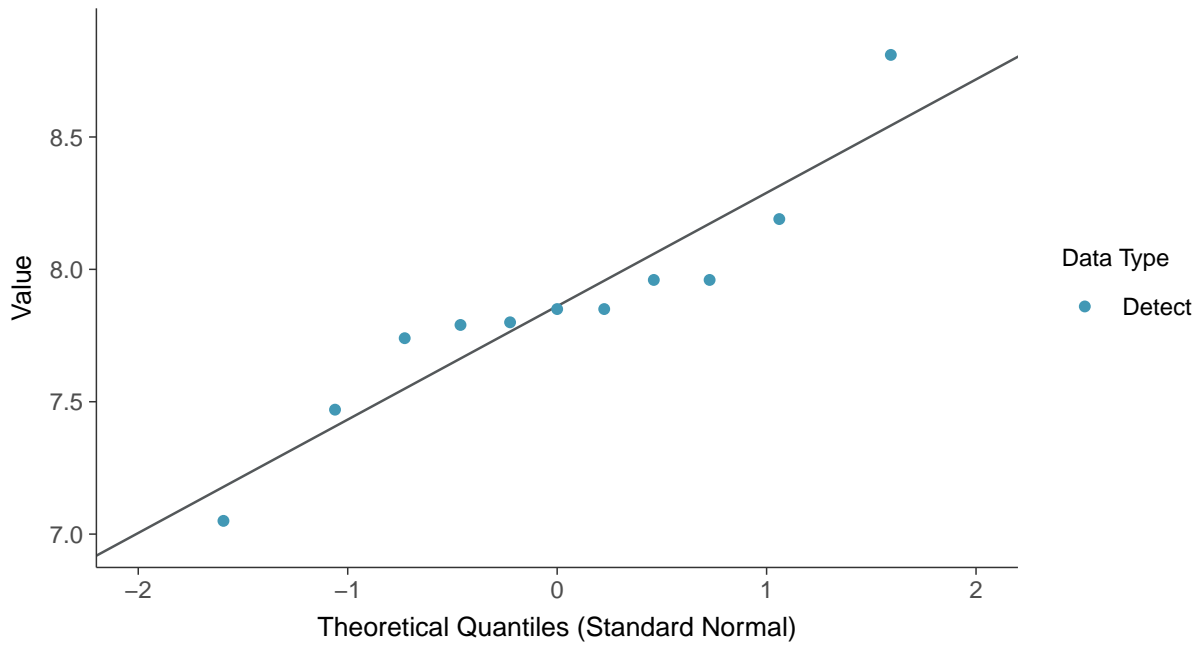
pH (field), MW-10 (su)





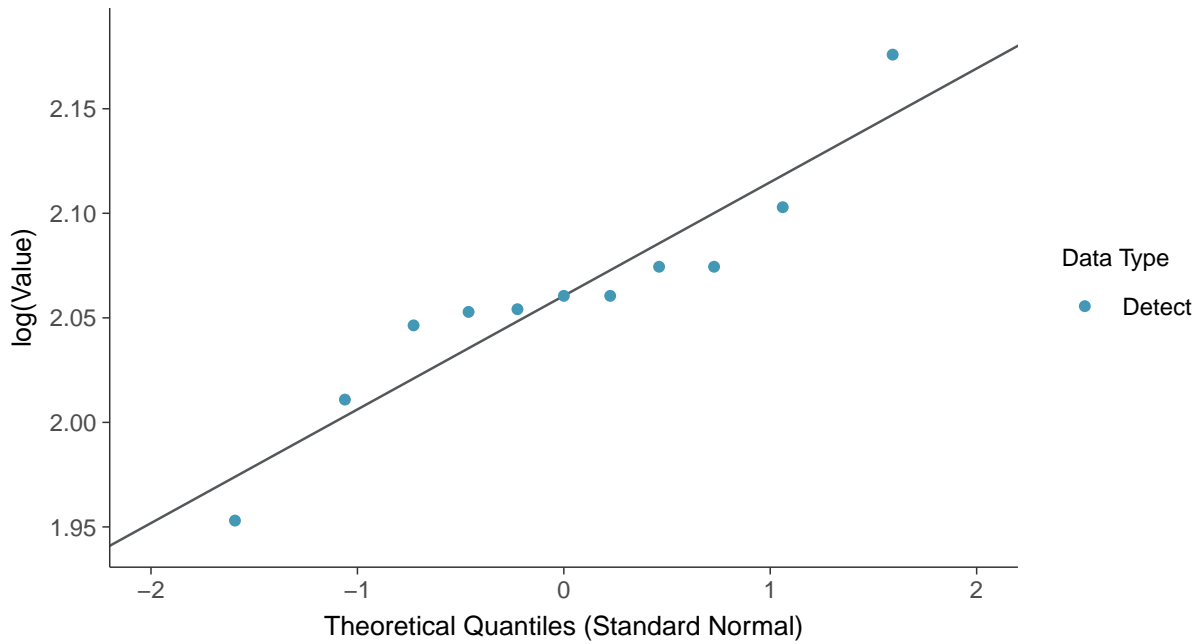
Normal Q-Q plot

pH (field), MW-10 (su)



Lognormal Q-Q plot

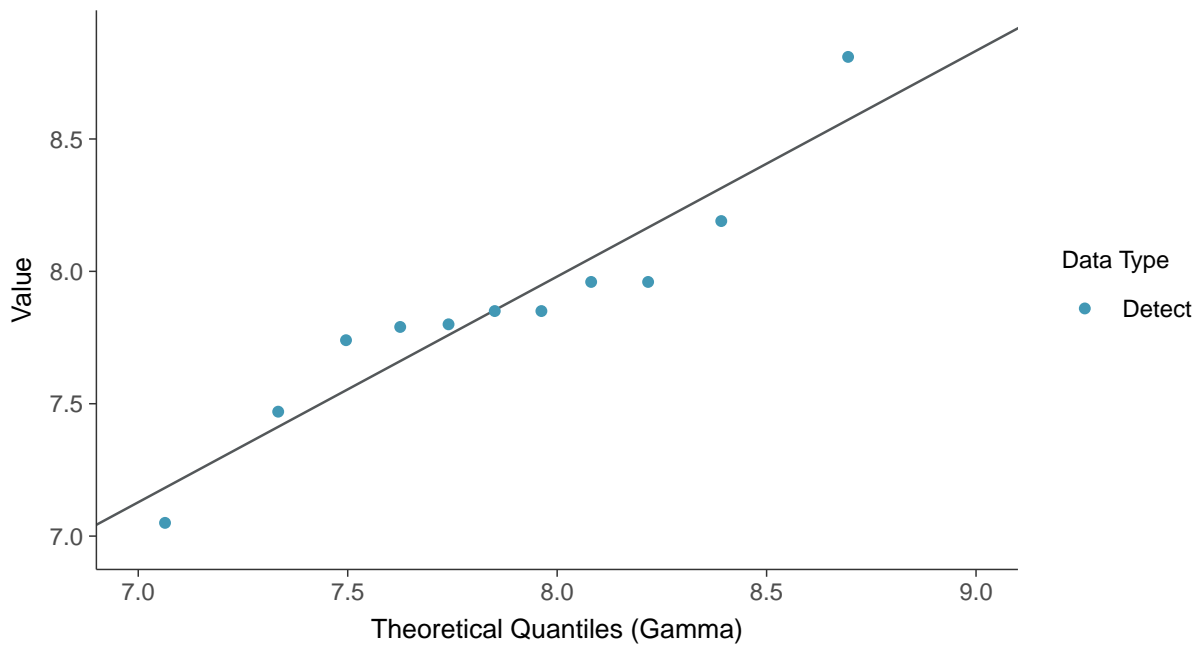
pH (field), MW-10 (su)





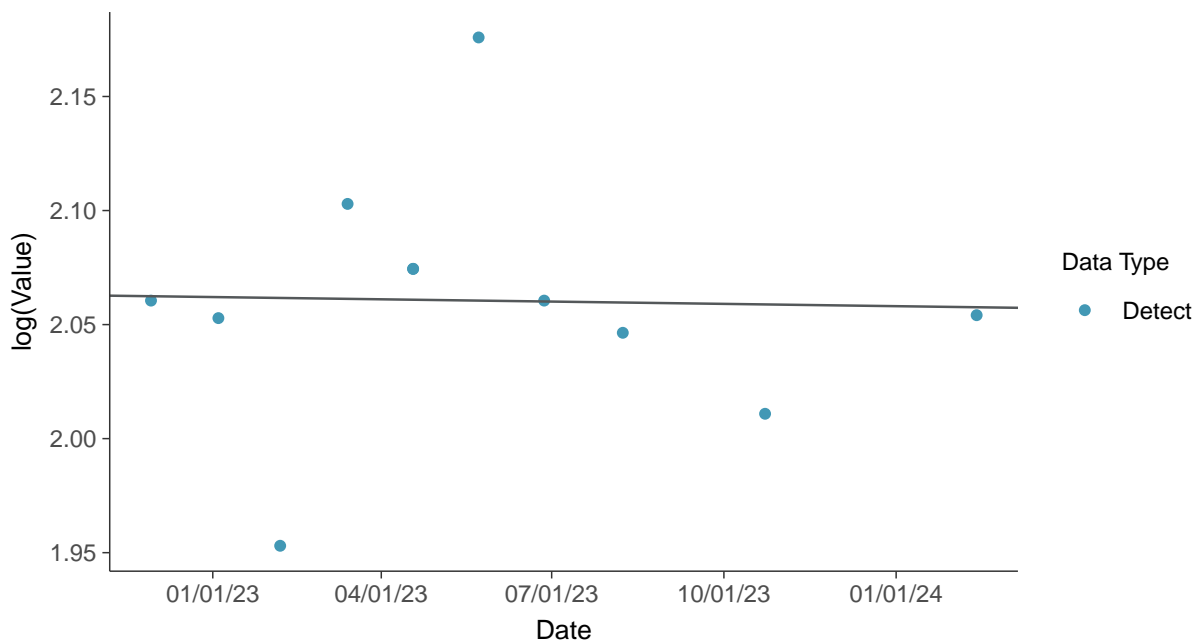
Gamma Q-Q plot

pH (field), MW-10 (su)



Trend Regression: Lognormal MLE

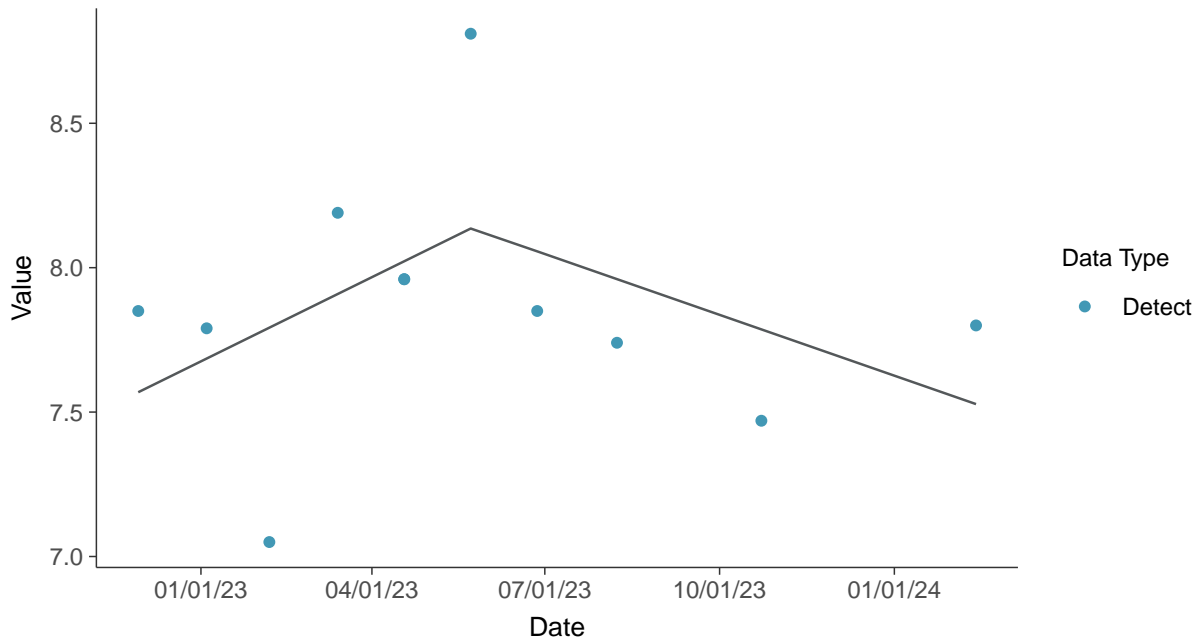
pH (field), MW-10 (su)





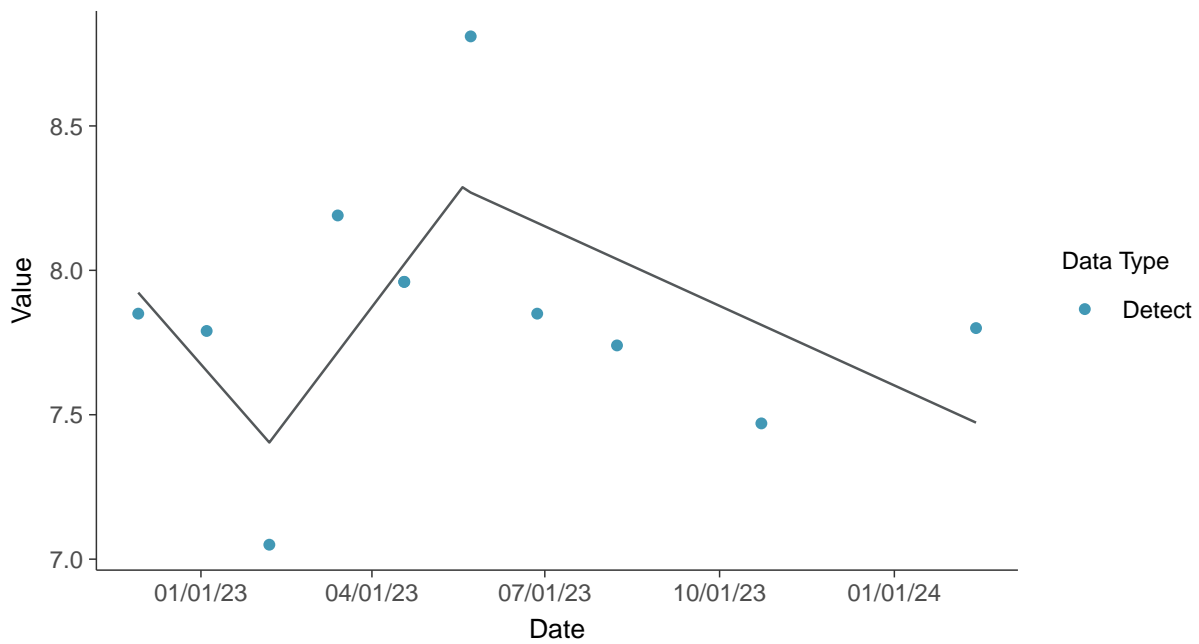
Trend Regression: Piecewise Linear-Linear

pH (field), MW-10 (su)



Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-10 (su)



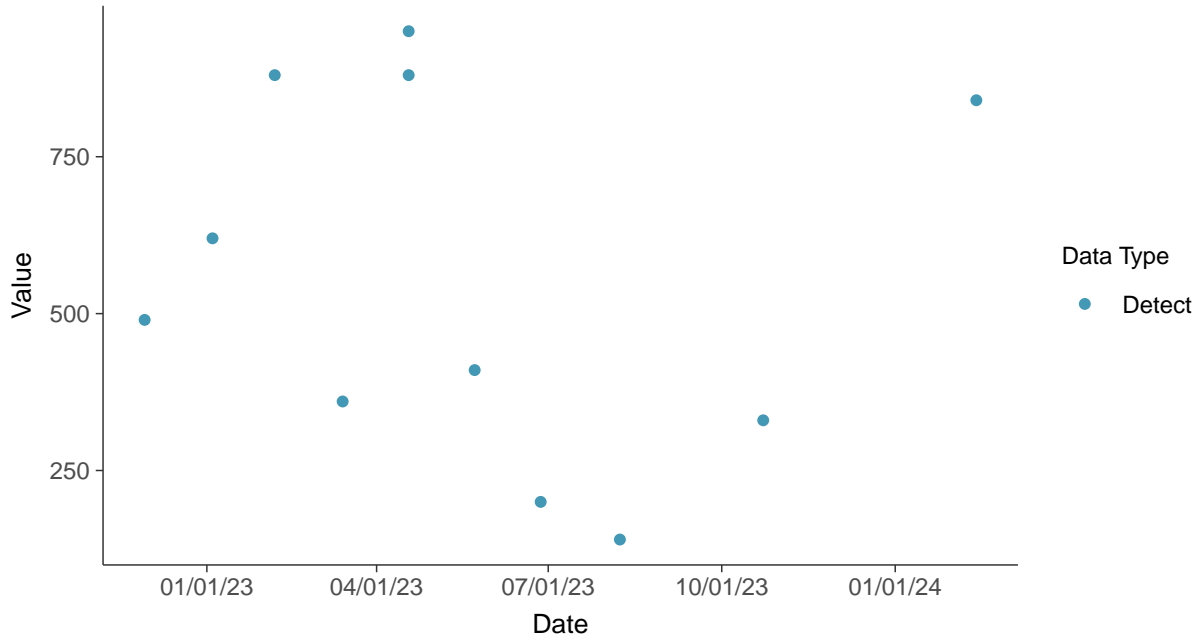


Appendix III: Sulfate (as SO₄), MW-10

ID: 2_20_4_124

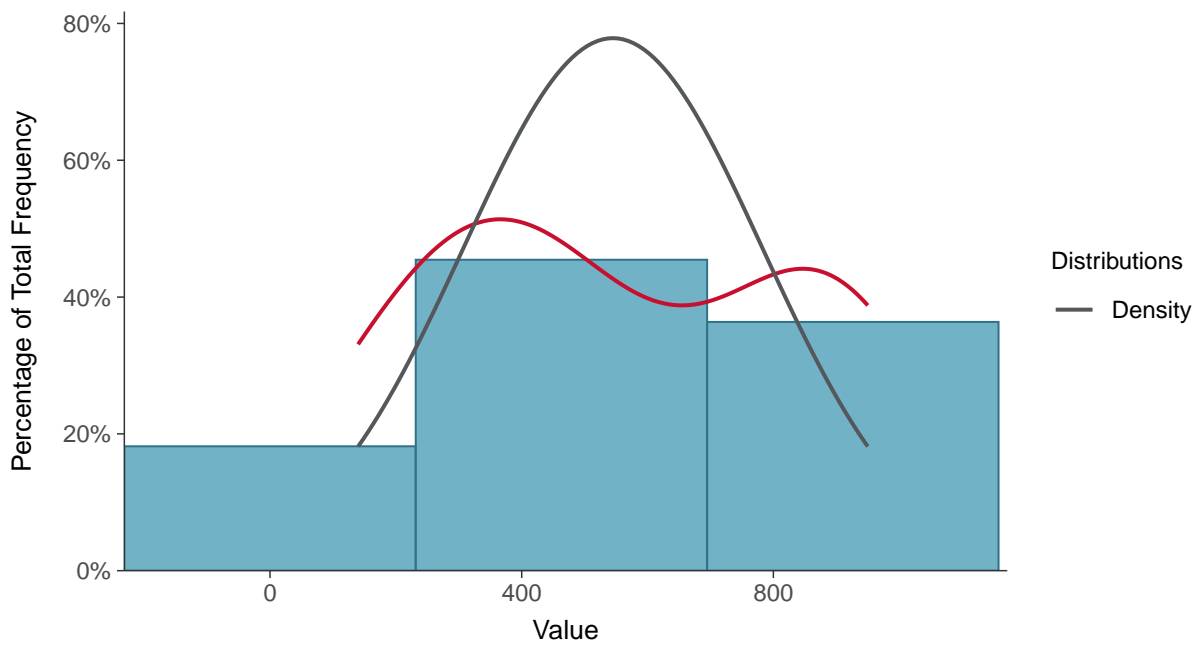
Scatter Plot

Sulfate (as SO₄), MW-10 (mg/L)



Histogram

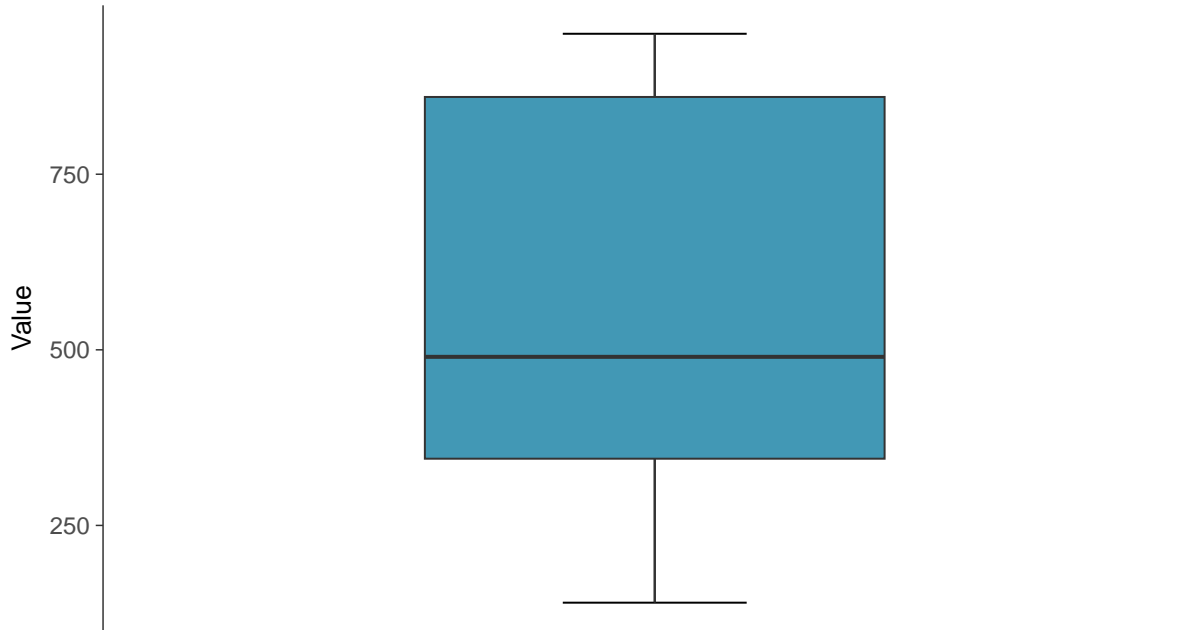
Sulfate (as SO₄), MW-10 (mg/L)





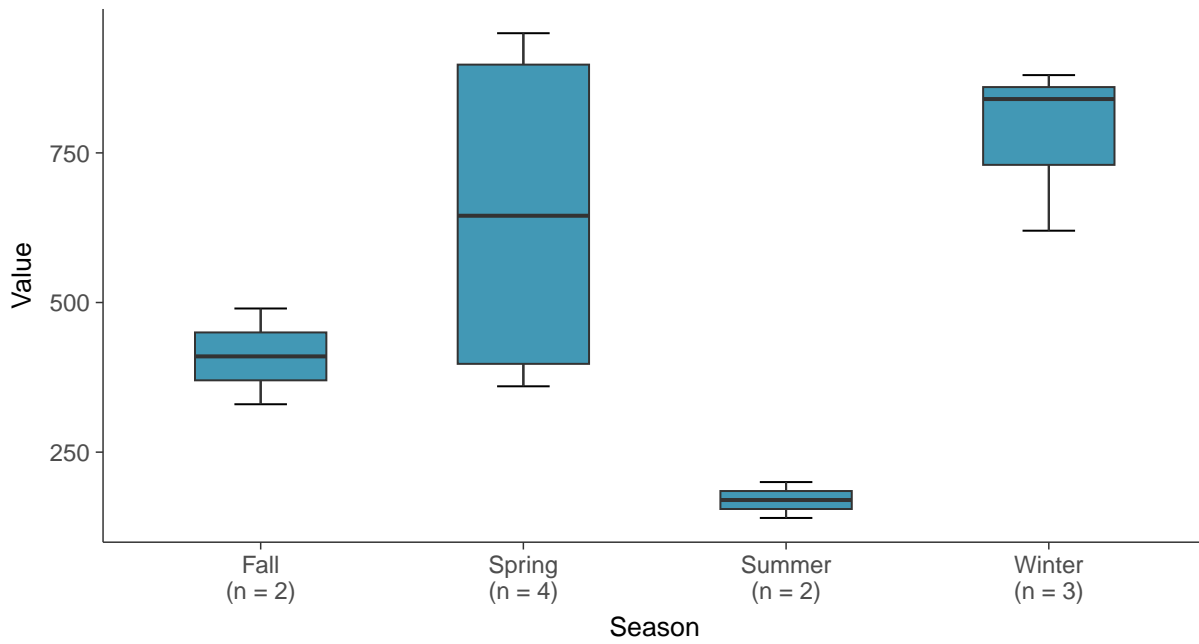
Boxplot

Sulfate (as SO₄), MW-10 (mg/L)



Boxplot by Season

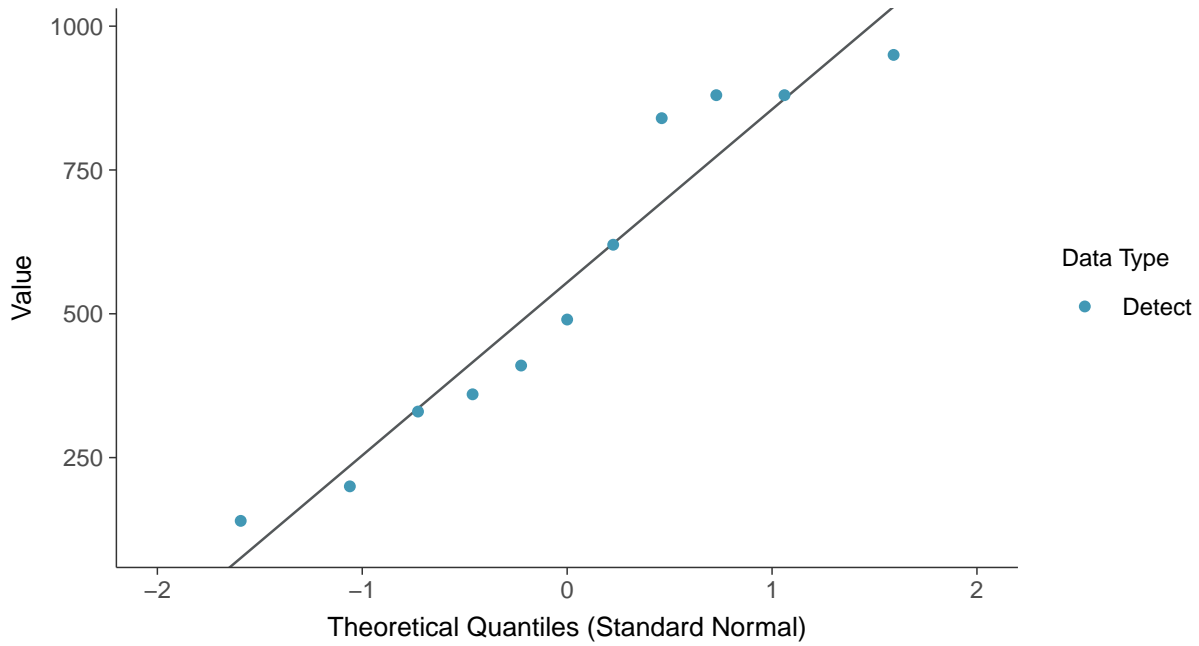
Sulfate (as SO₄), MW-10 (mg/L)





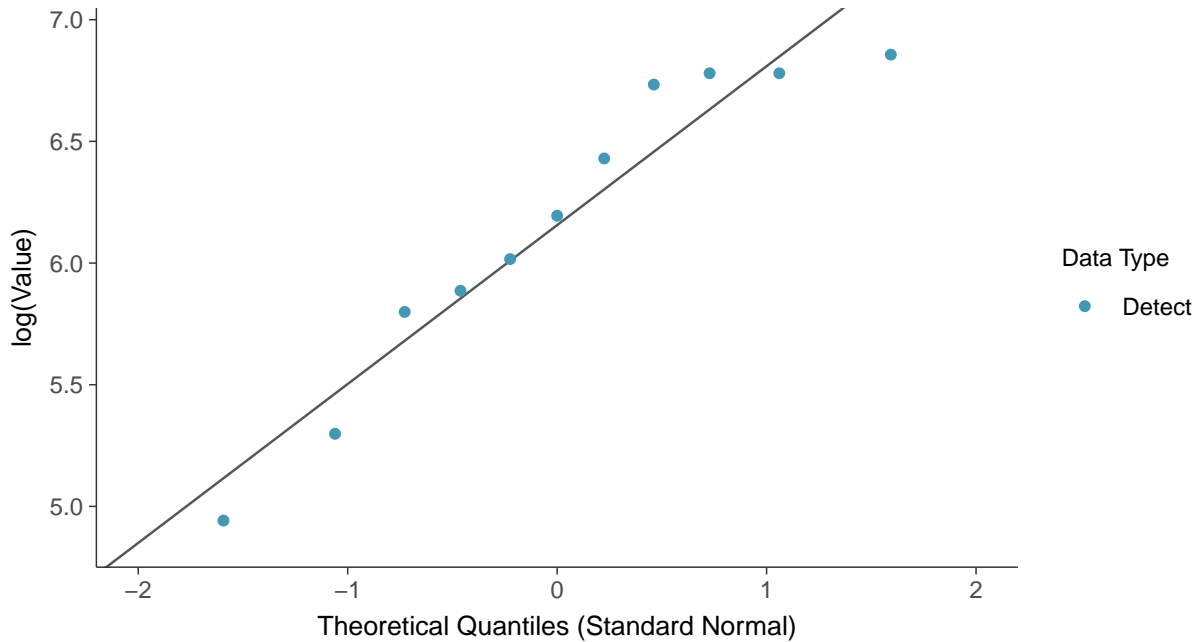
Normal Q-Q plot

Sulfate (as SO₄), MW-10 (mg/L)



Lognormal Q-Q plot

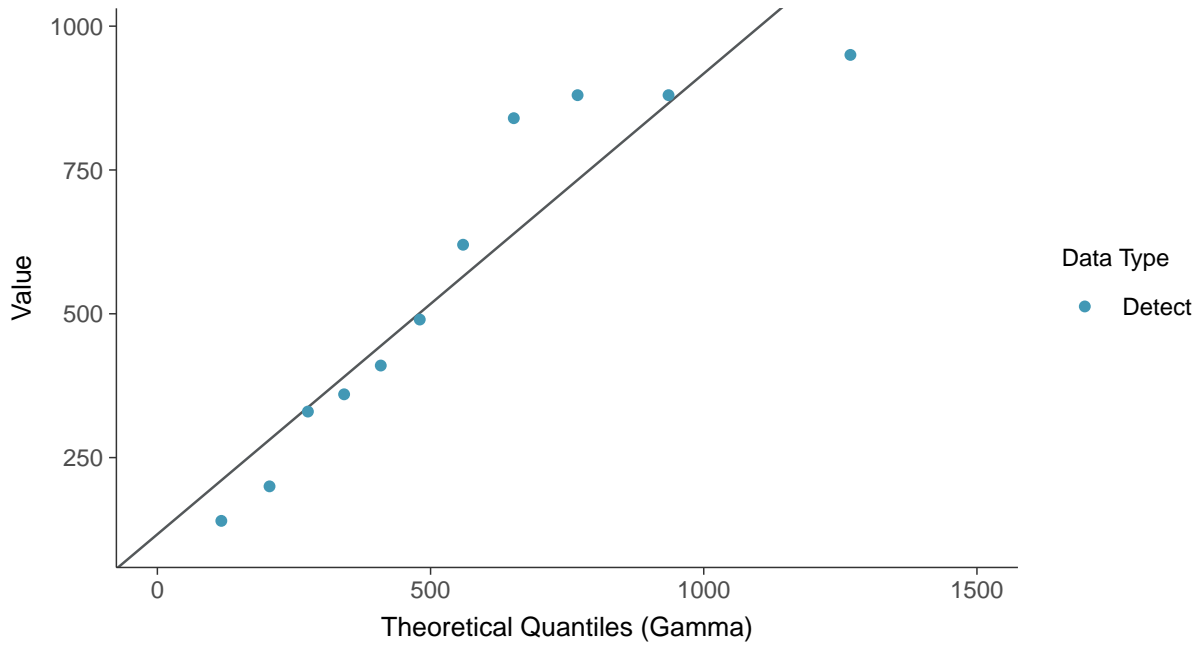
Sulfate (as SO₄), MW-10 (mg/L)





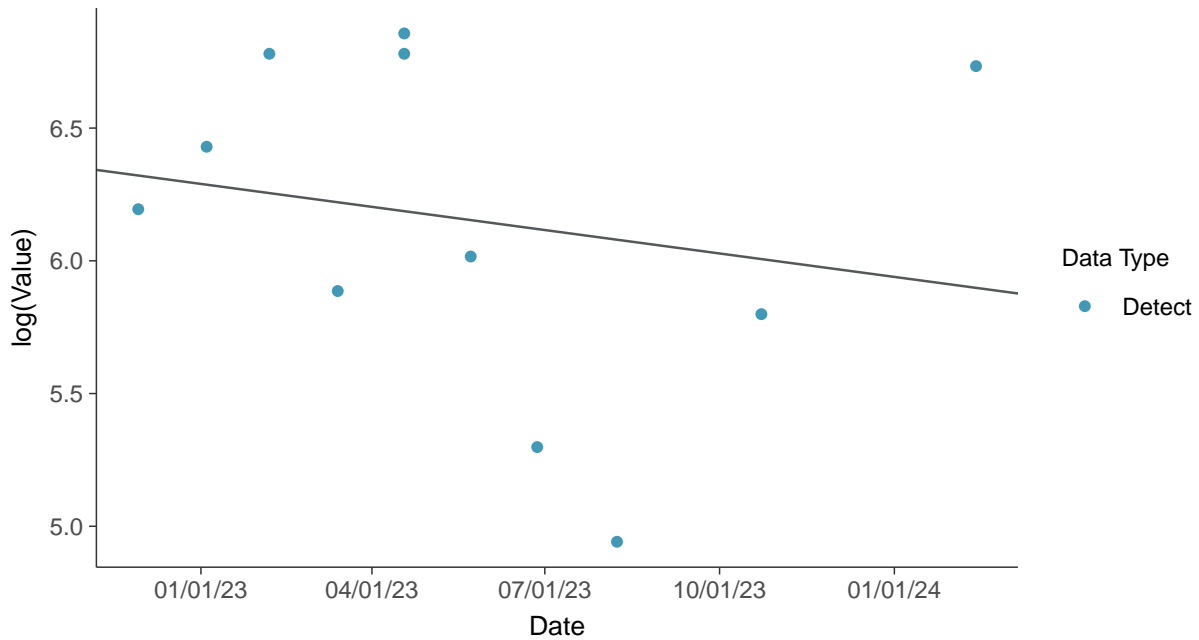
Gamma Q-Q plot

Sulfate (as SO₄), MW-10 (mg/L)



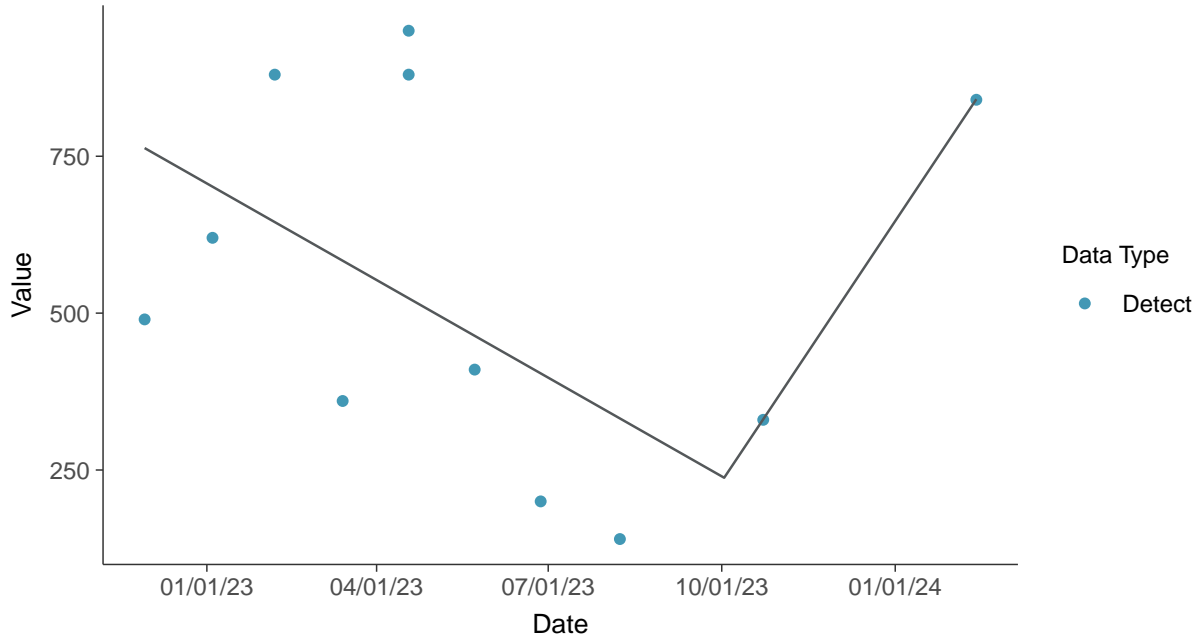
Trend Regression: Lognormal MLE

Sulfate (as SO₄), MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear
Sulfate (as SO₄), MW-10 (mg/L)



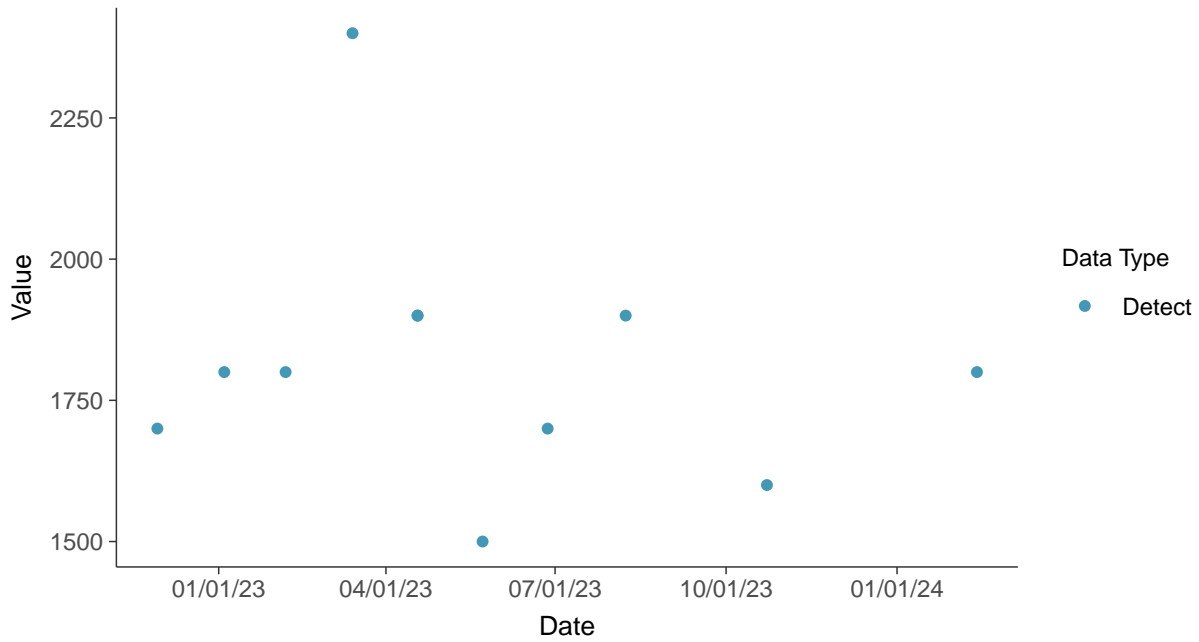


Appendix III: Total Dissolved Solids, MW-10

ID: 2_20_4_126

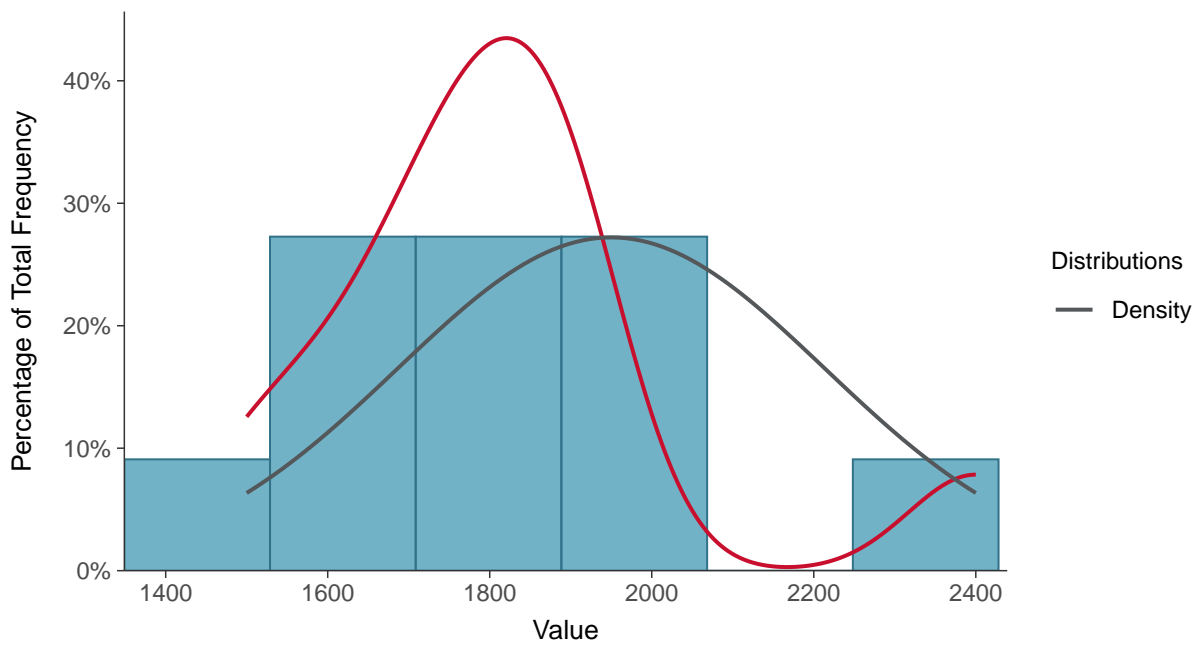
Scatter Plot

Total Dissolved Solids, MW-10 (mg/L)



Histogram

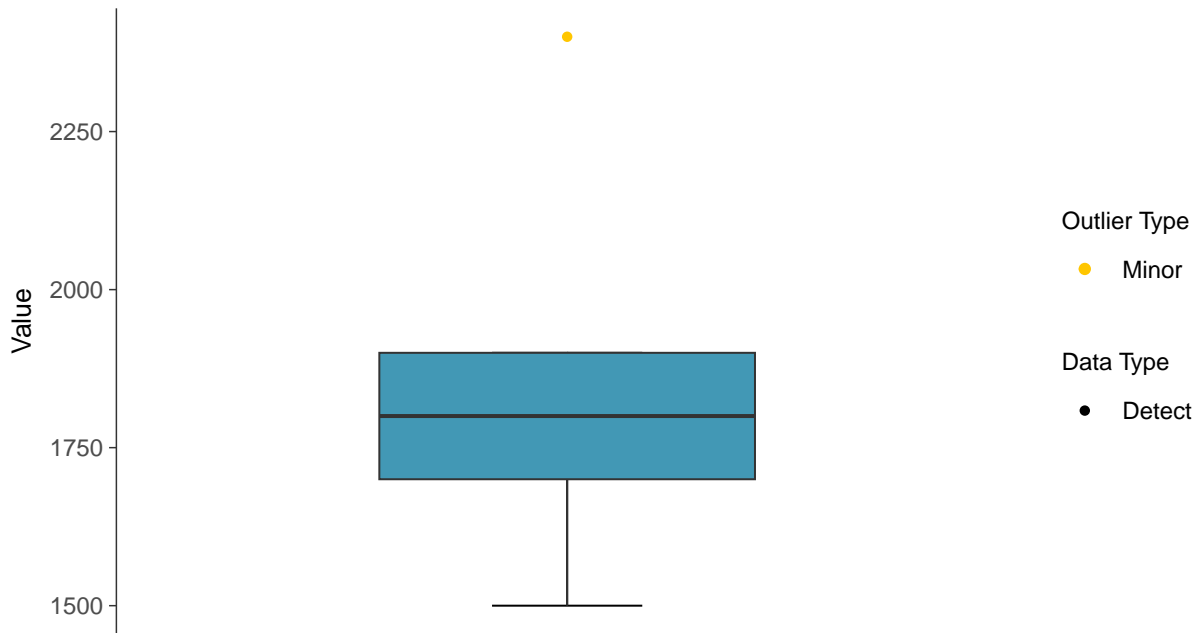
Total Dissolved Solids, MW-10 (mg/L)





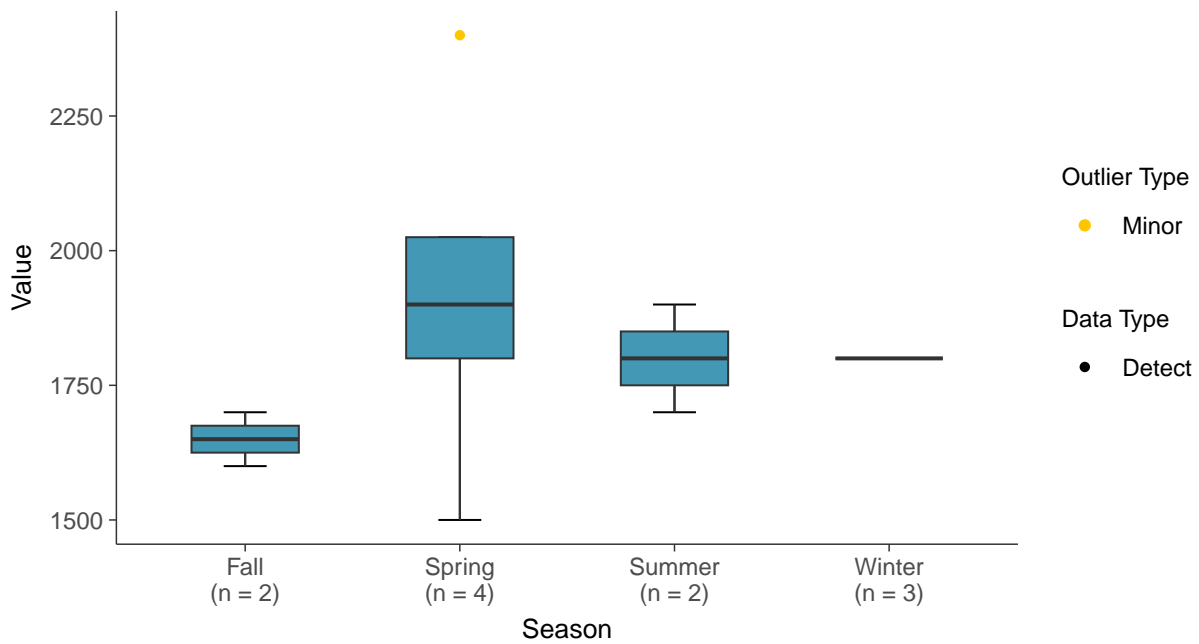
Boxplot

Total Dissolved Solids, MW-10 (mg/L)



Boxplot by Season

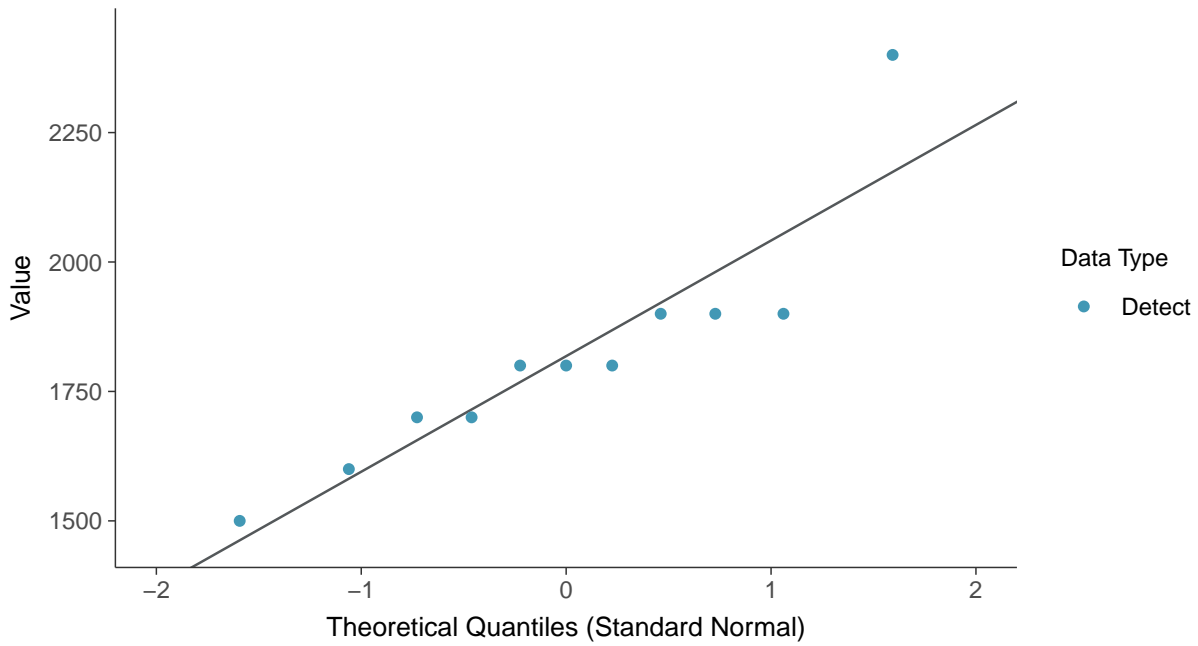
Total Dissolved Solids, MW-10 (mg/L)





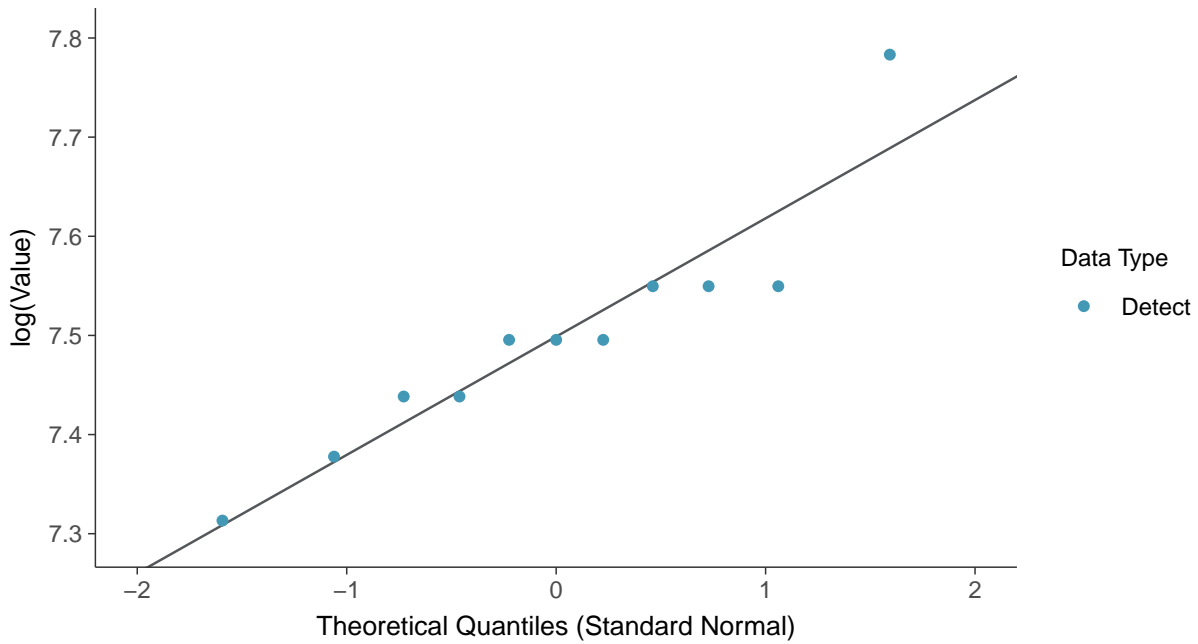
Normal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



Lognormal Q-Q plot

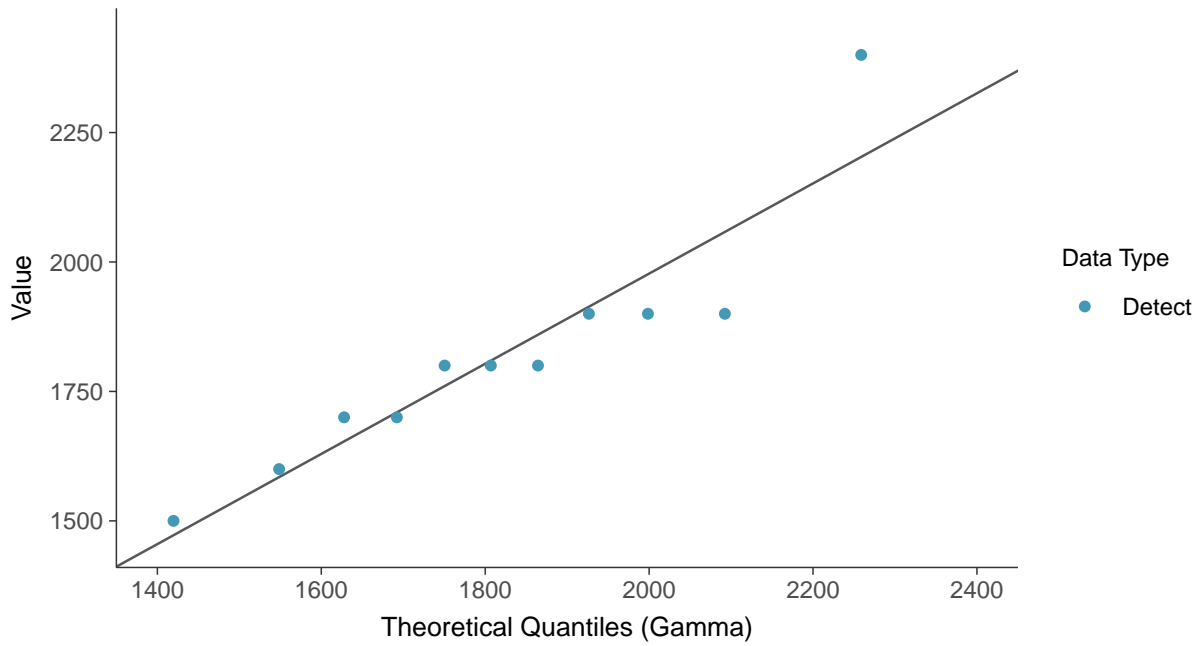
Total Dissolved Solids, MW-10 (mg/L)





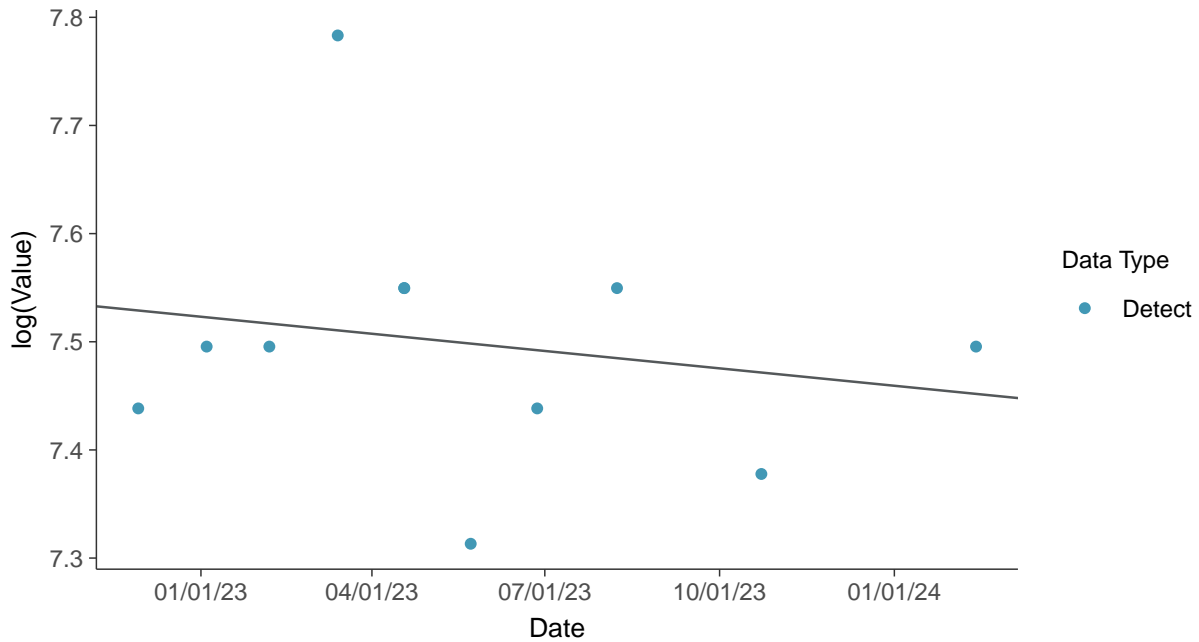
Gamma Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



Trend Regression: Lognormal MLE

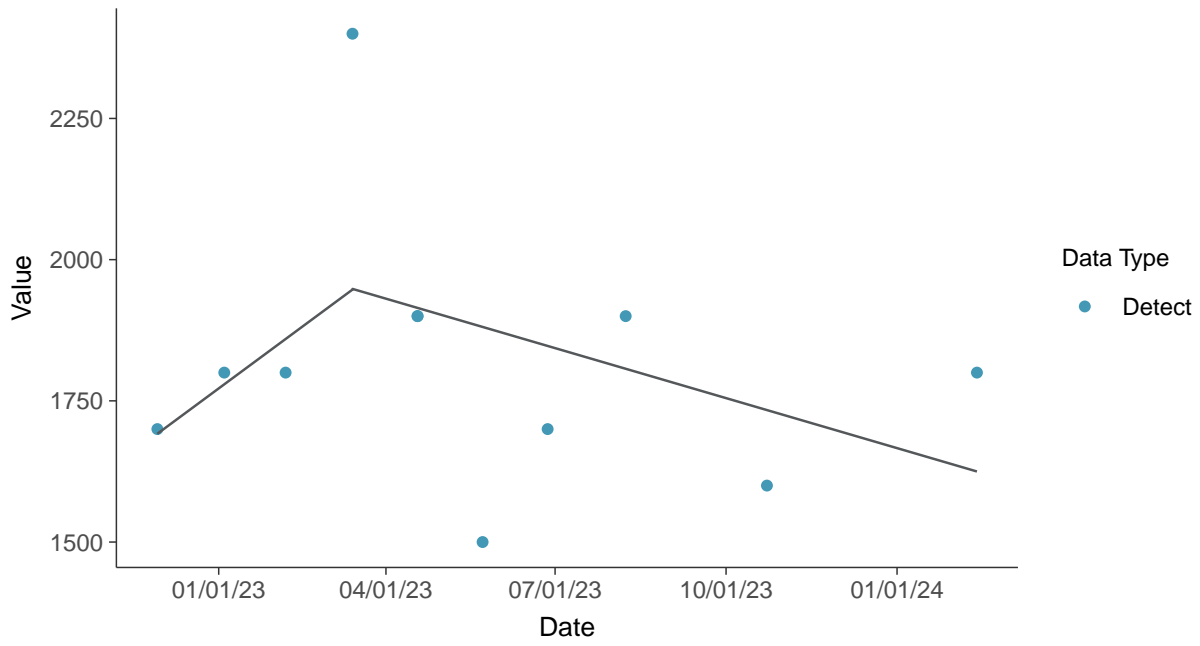
Total Dissolved Solids, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-10 (mg/L)



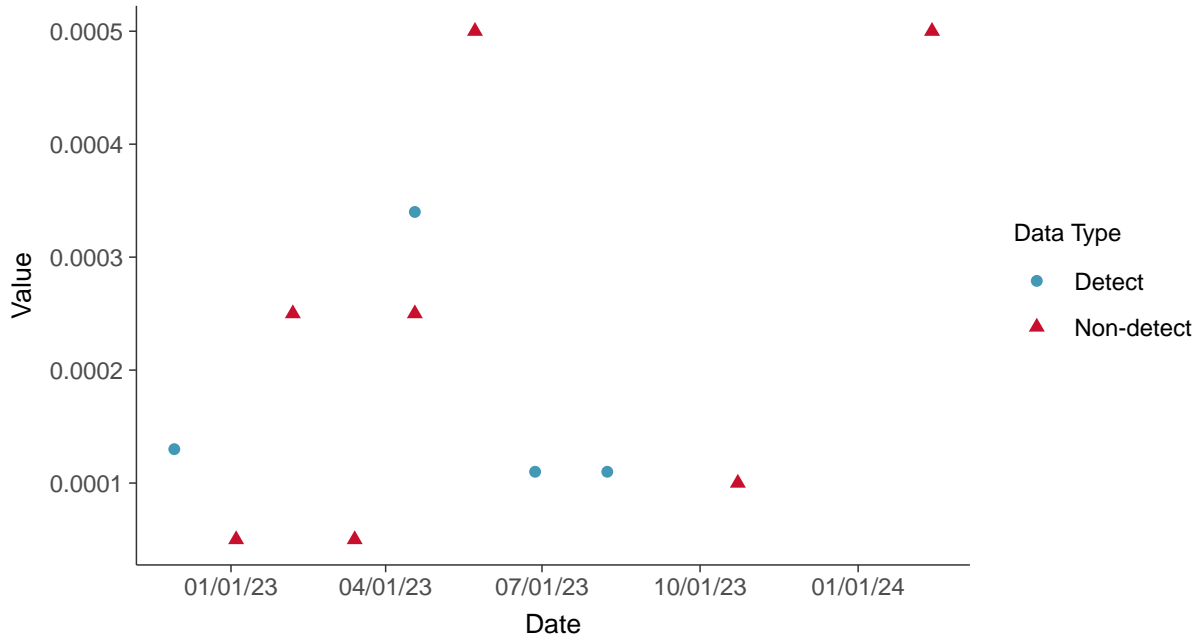


Appendix IV: Antimony, MW-10

ID: 2_20_5_101

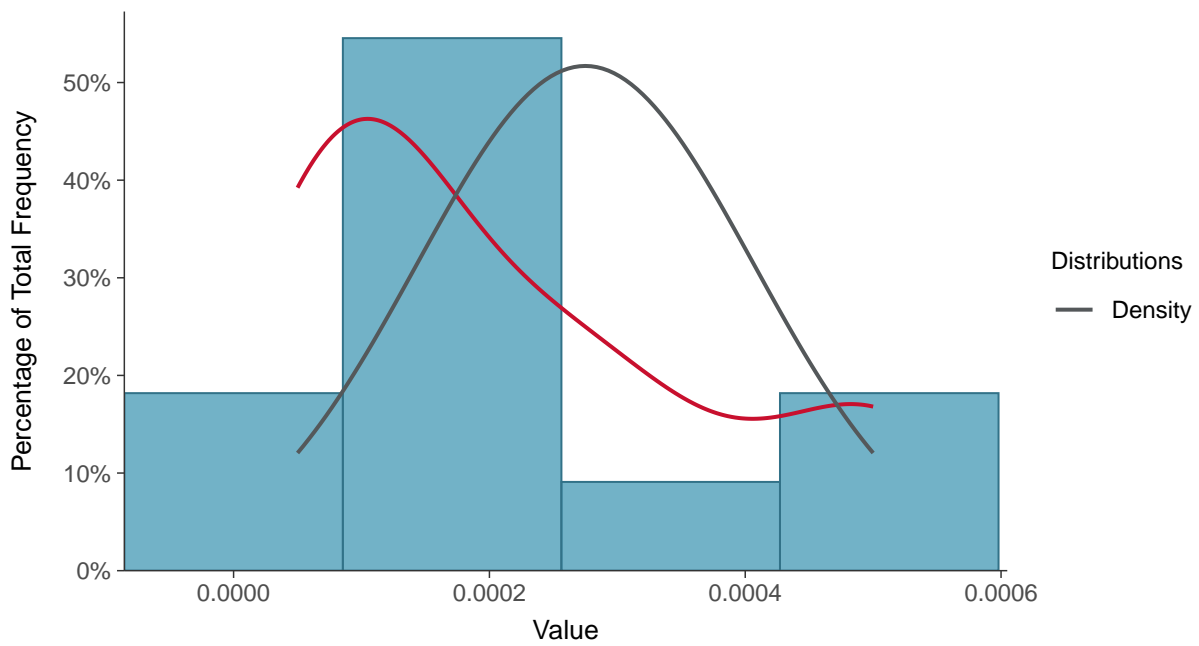
Scatter Plot

Antimony, MW-10 (mg/L)



Histogram

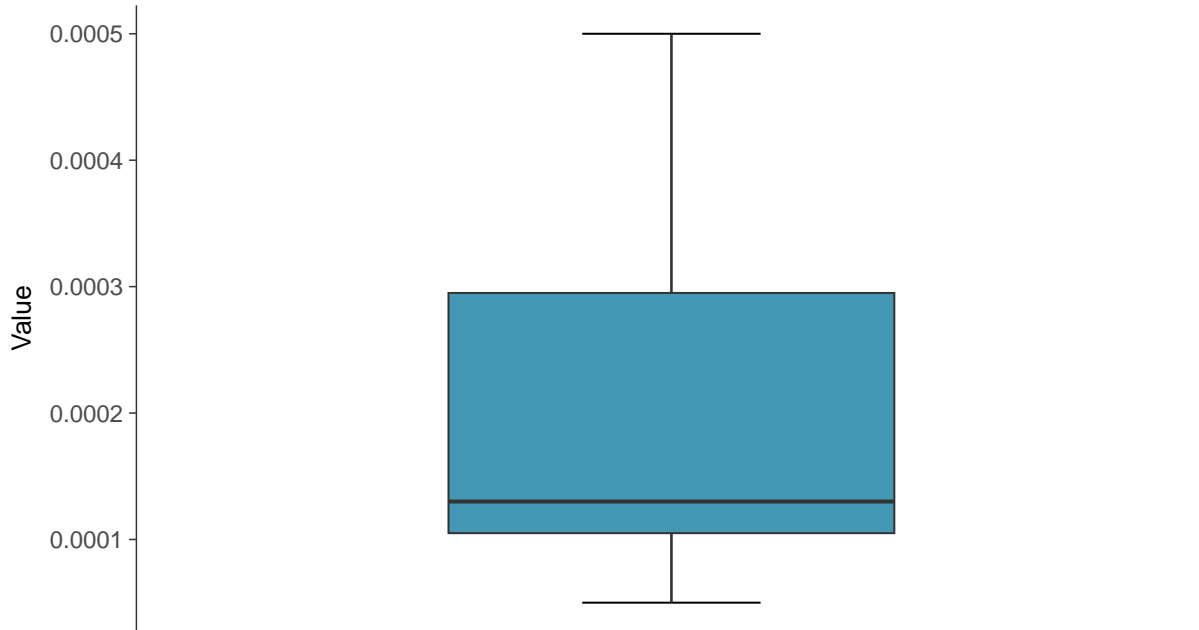
Antimony, MW-10 (mg/L)





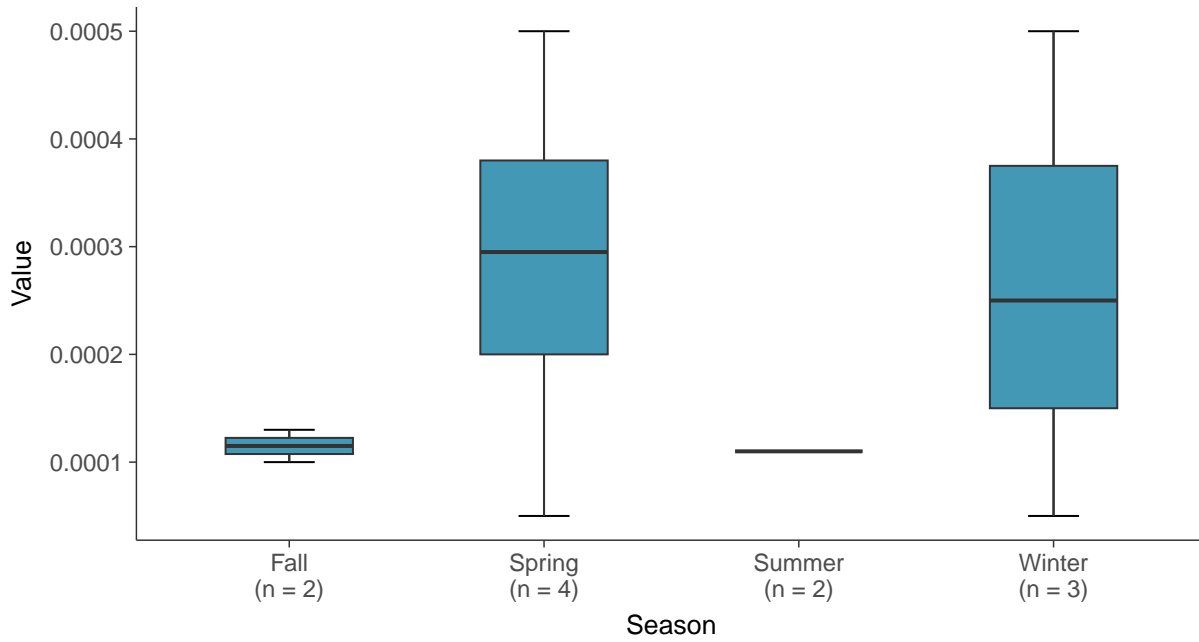
Boxplot

Antimony, MW-10 (mg/L)



Boxplot by Season

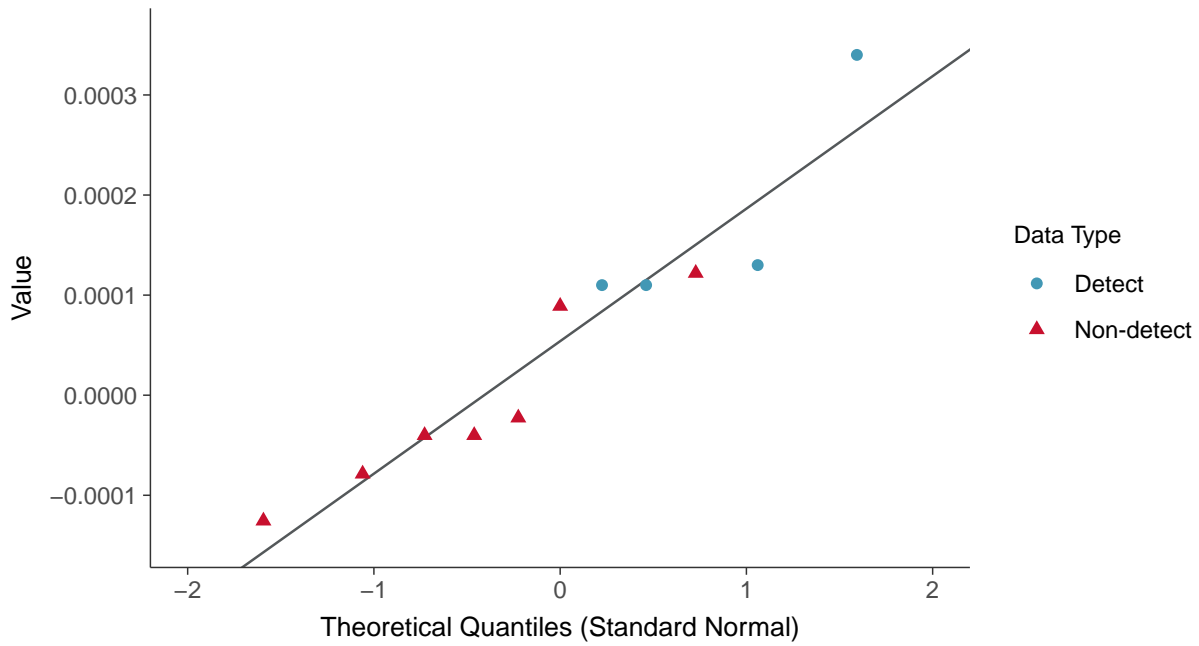
Antimony, MW-10 (mg/L)





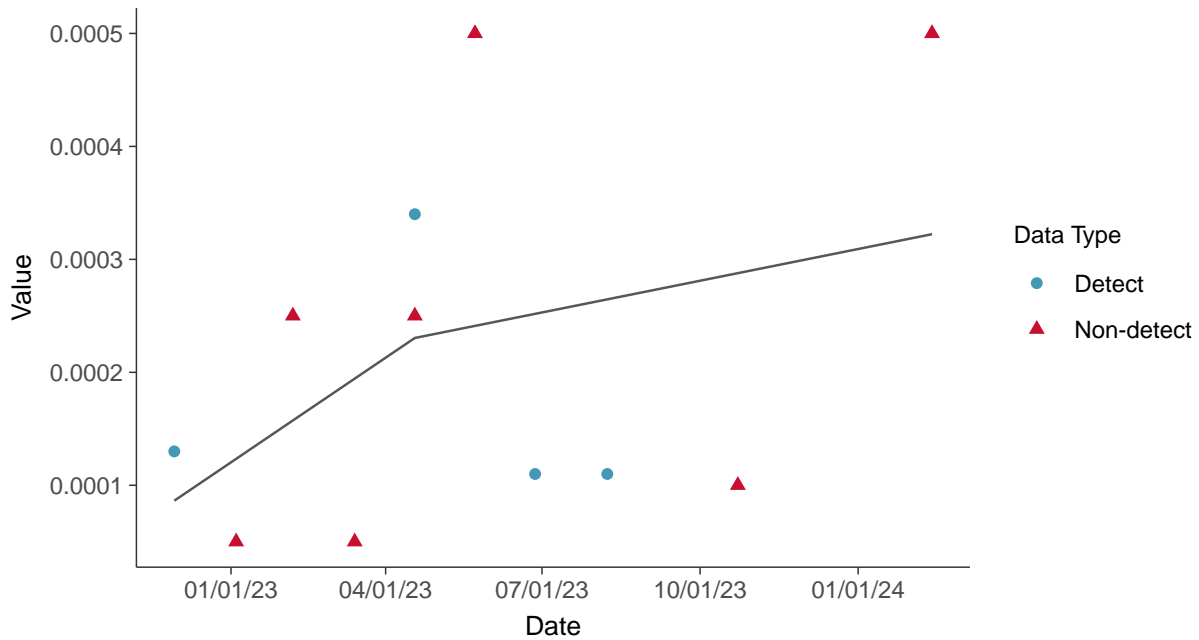
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear

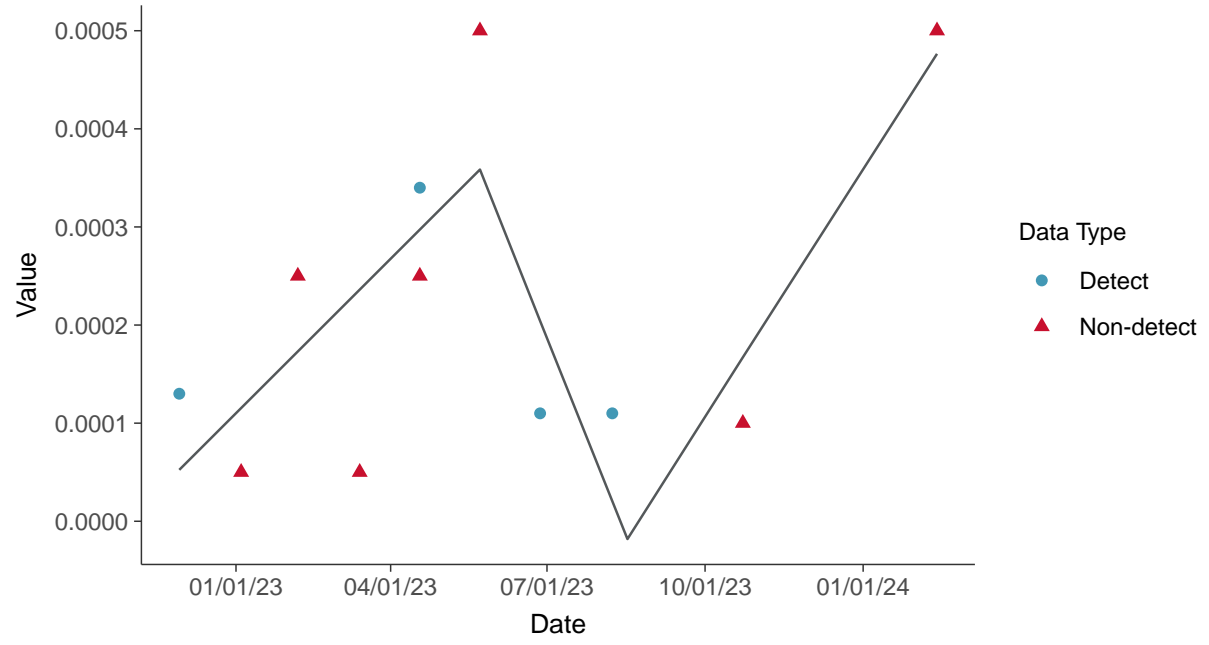
Antimony, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-10 (mg/L)



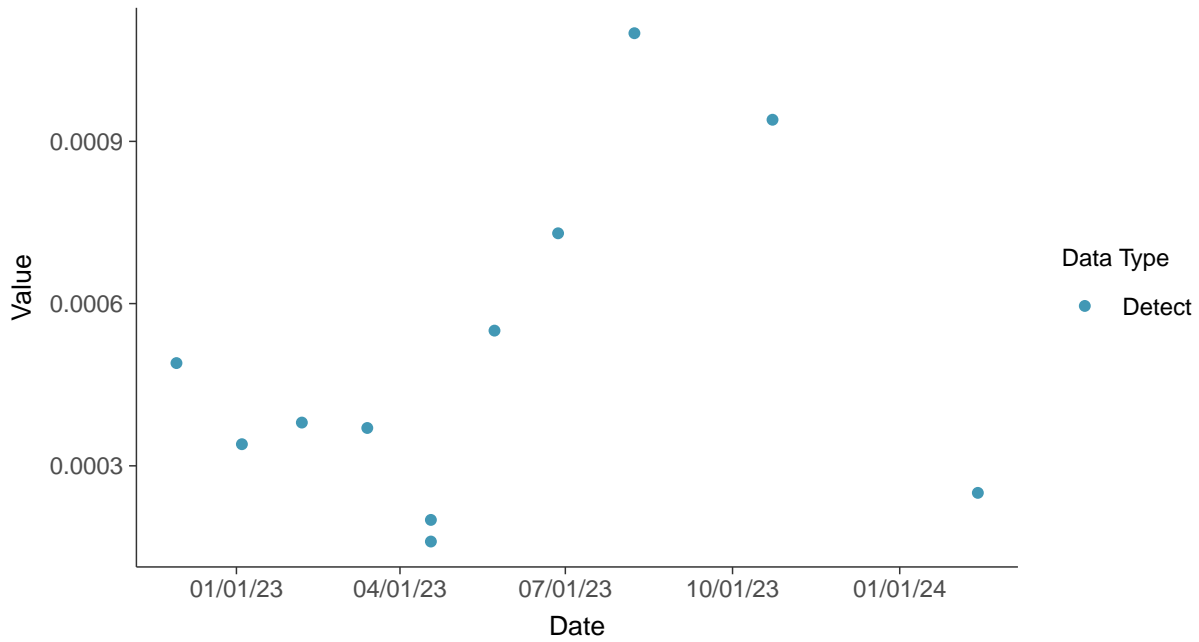


Appendix IV: Arsenic, MW-10

ID: 2_20_5_102

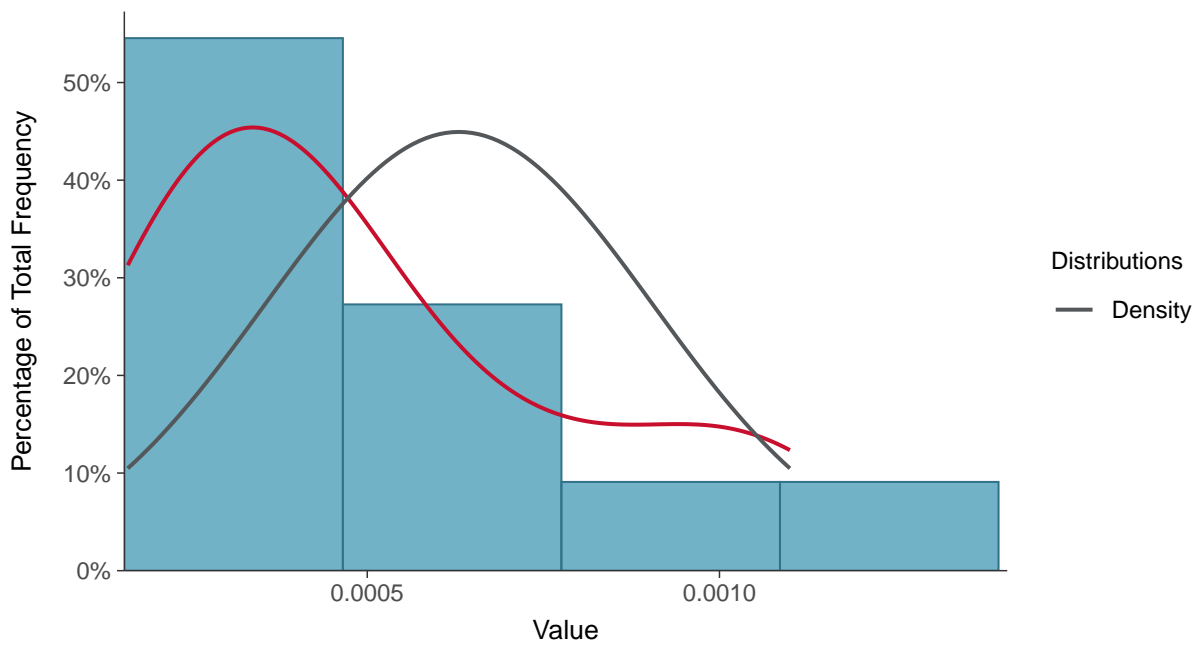
Scatter Plot

Arsenic, MW-10 (mg/L)



Histogram

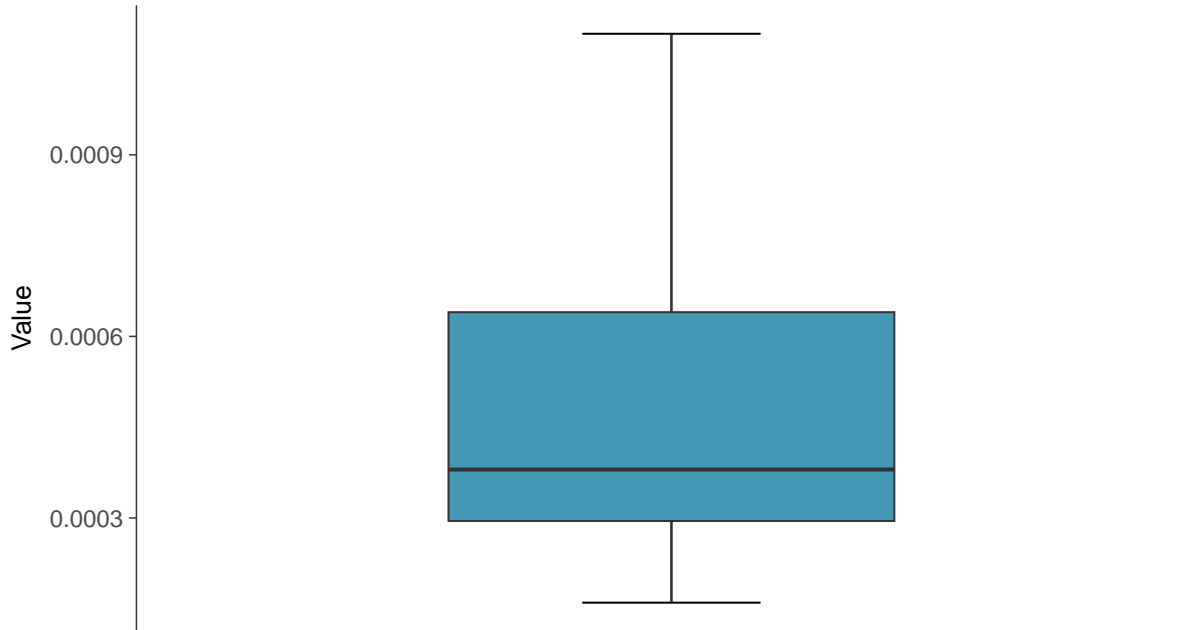
Arsenic, MW-10 (mg/L)





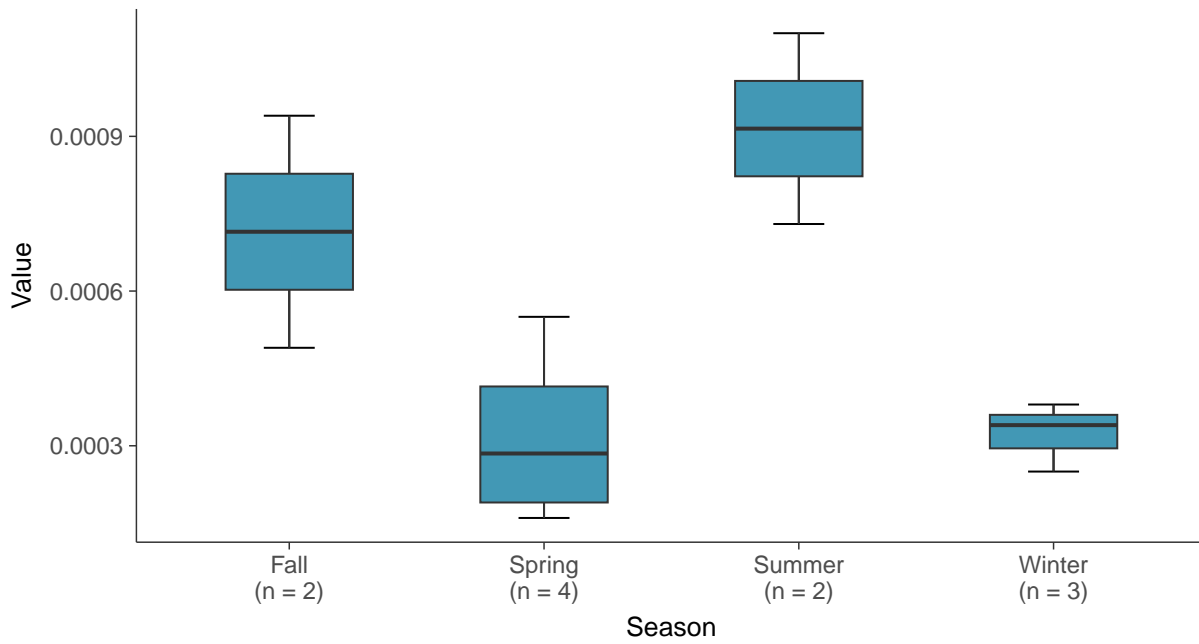
Boxplot

Arsenic, MW-10 (mg/L)



Boxplot by Season

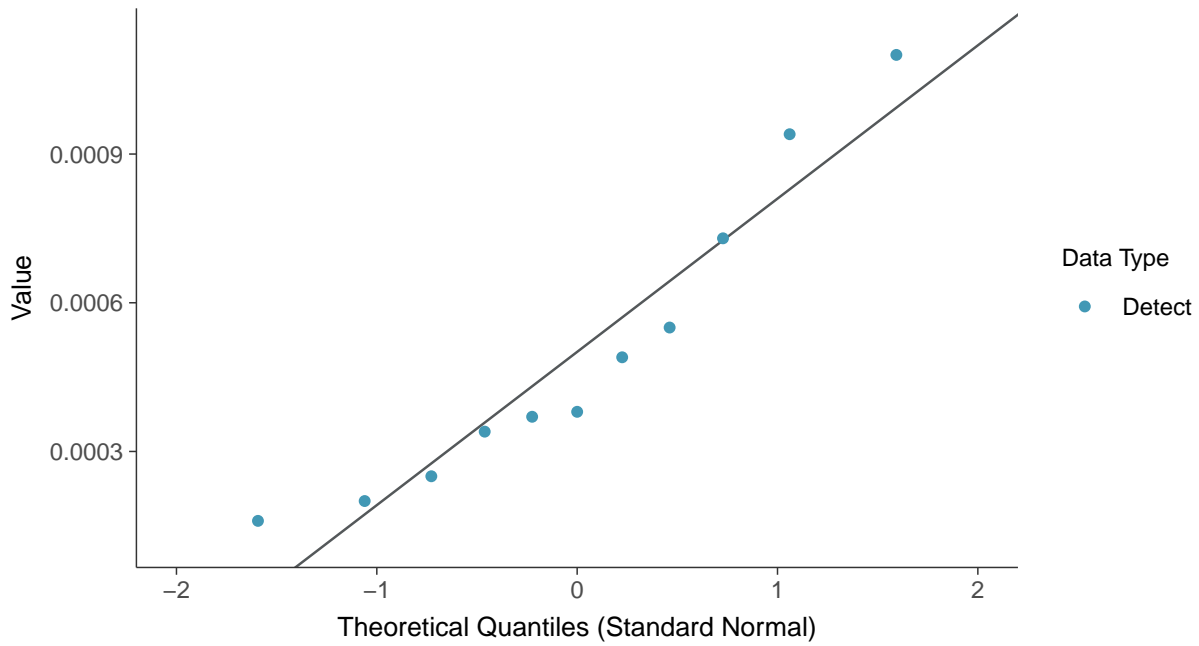
Arsenic, MW-10 (mg/L)





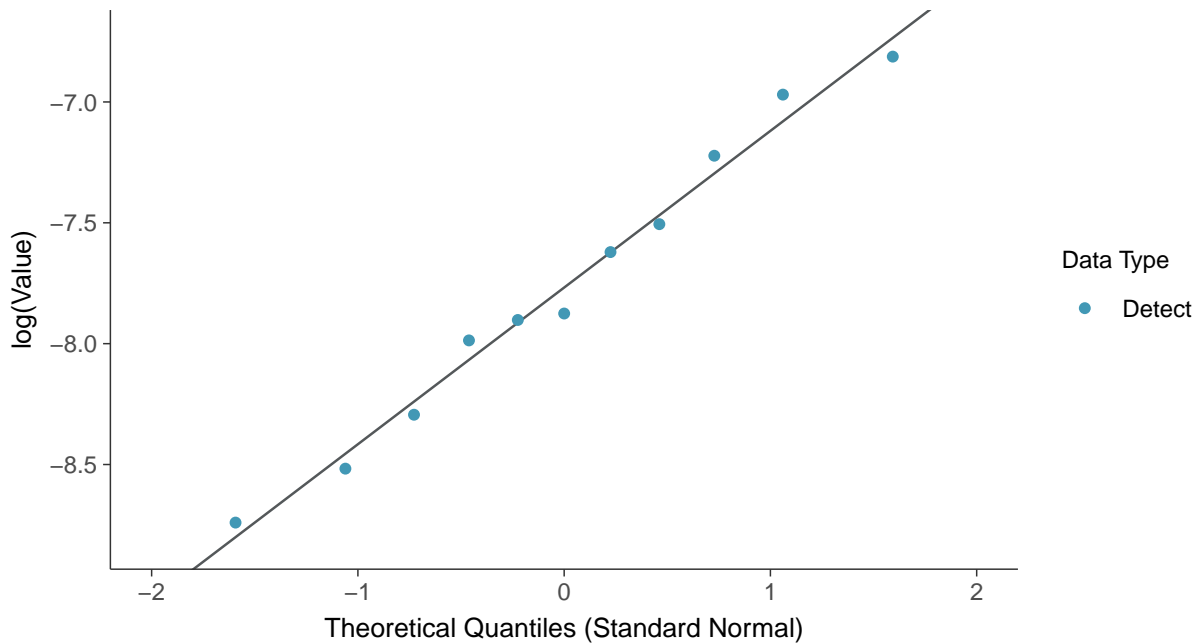
Normal Q-Q plot

Arsenic, MW-10 (mg/L)



Lognormal Q-Q plot

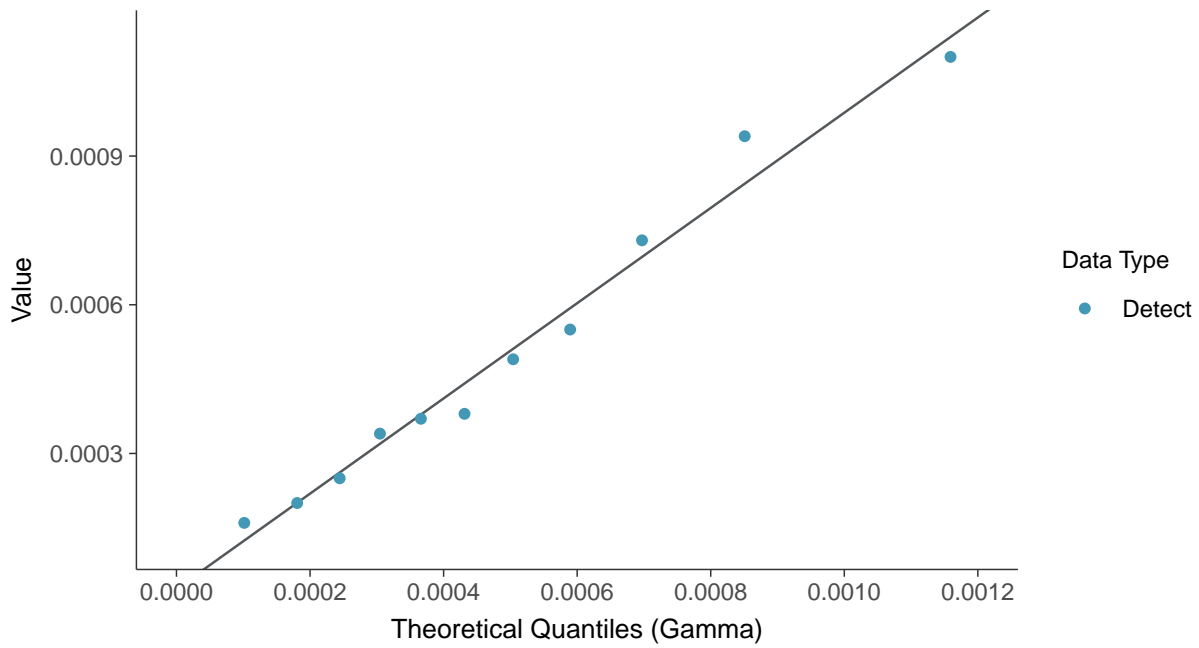
Arsenic, MW-10 (mg/L)





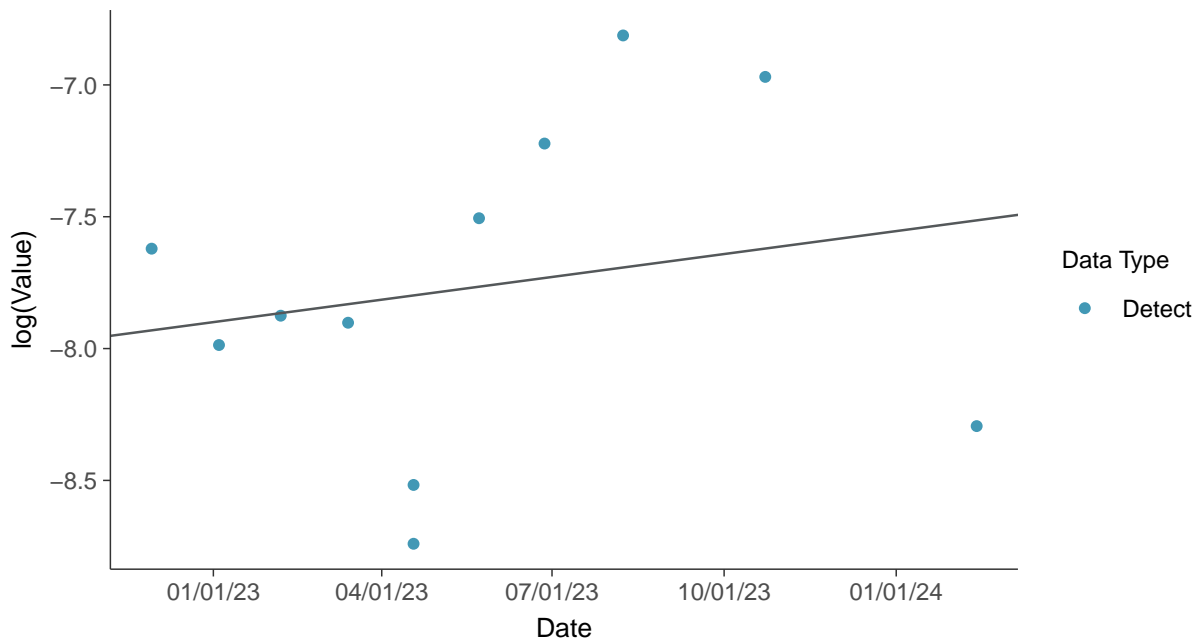
Gamma Q-Q plot

Arsenic, MW-10 (mg/L)



Trend Regression: Lognormal MLE

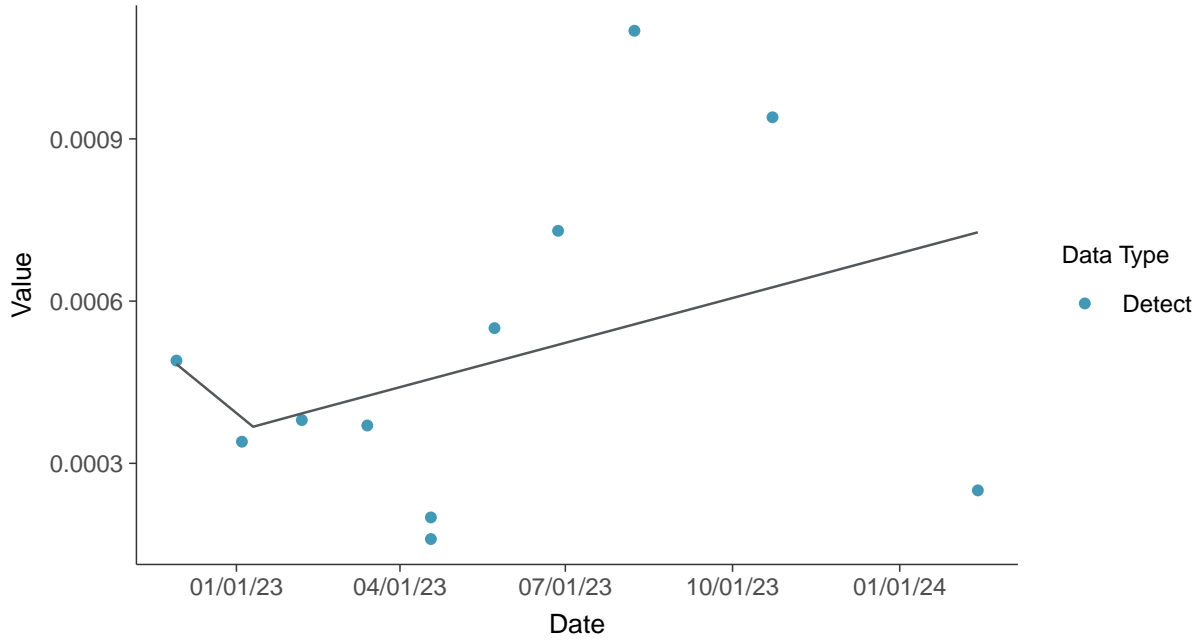
Arsenic, MW-10 (mg/L)





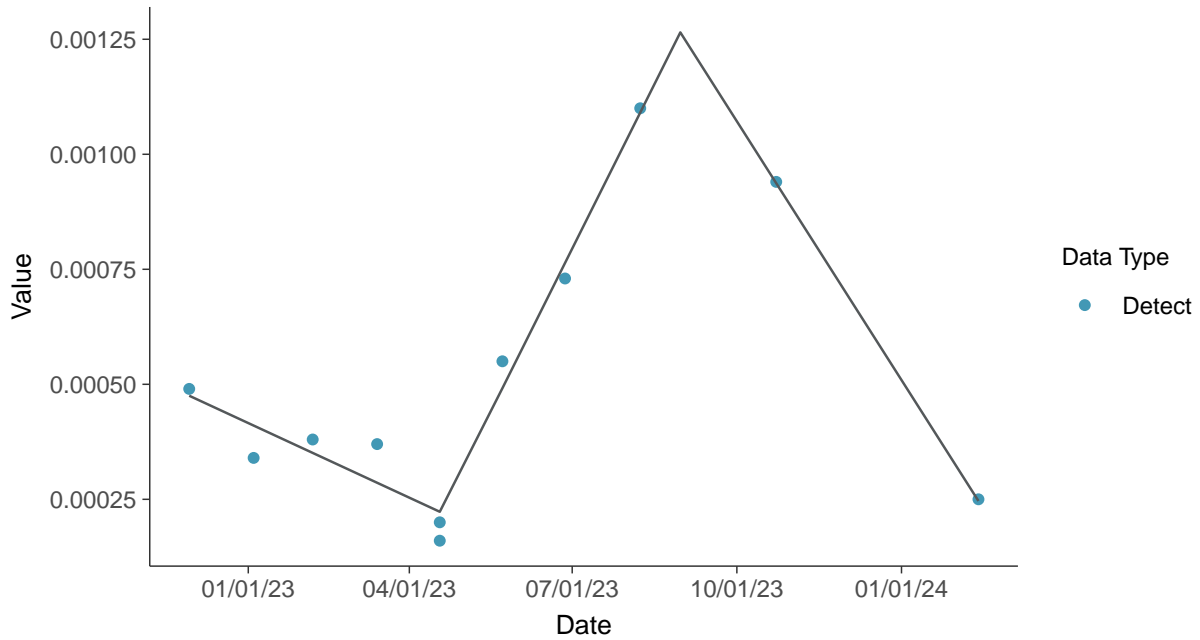
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-10 (mg/L)



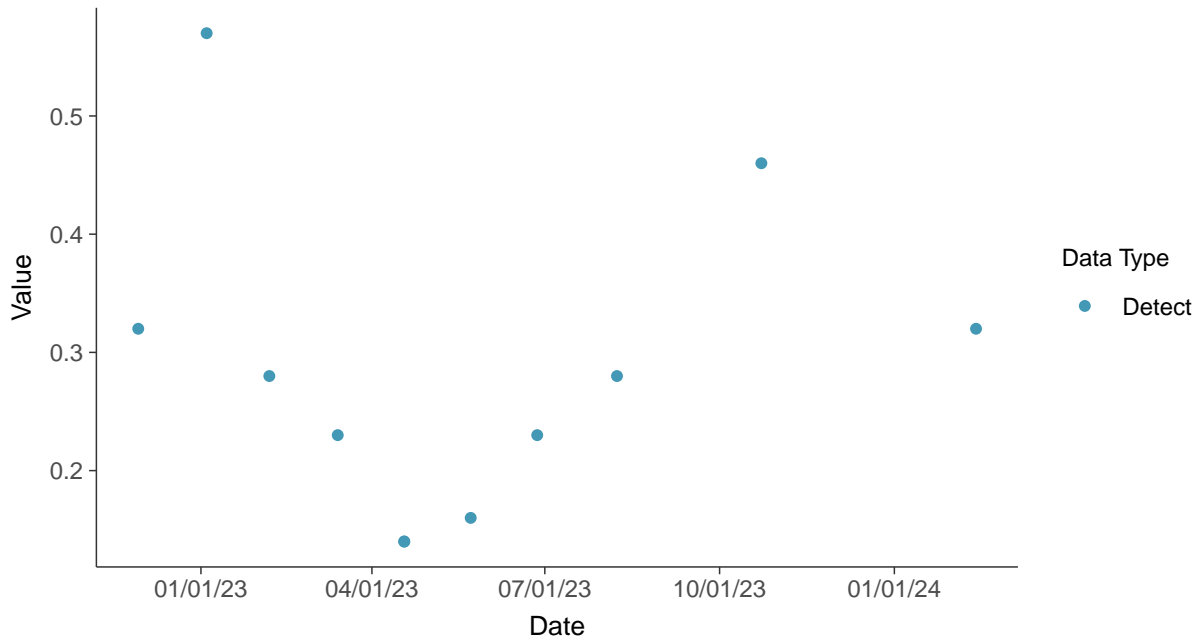


Appendix IV: Barium, MW-10

ID: 2_20_5_103

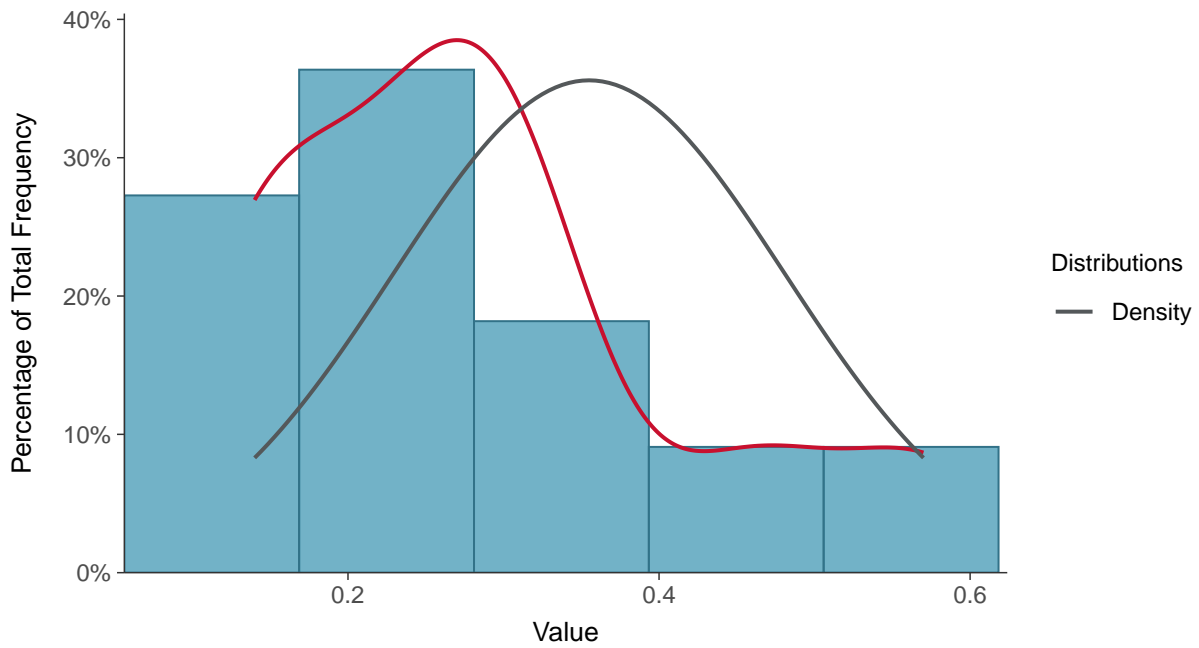
Scatter Plot

Barium, MW-10 (mg/L)



Histogram

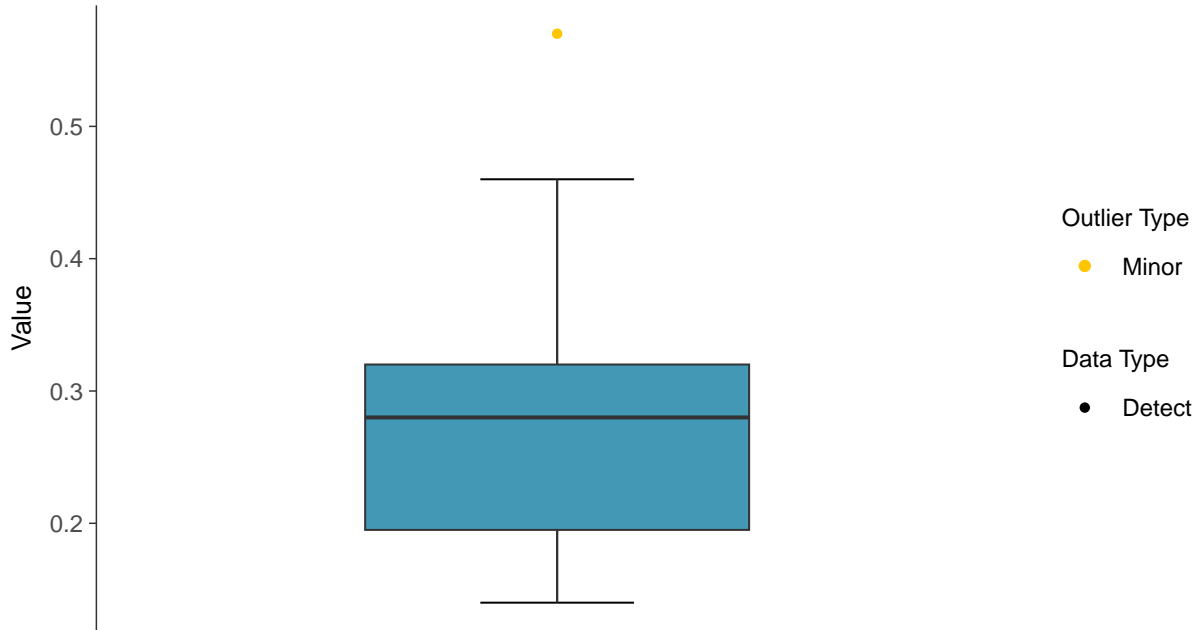
Barium, MW-10 (mg/L)





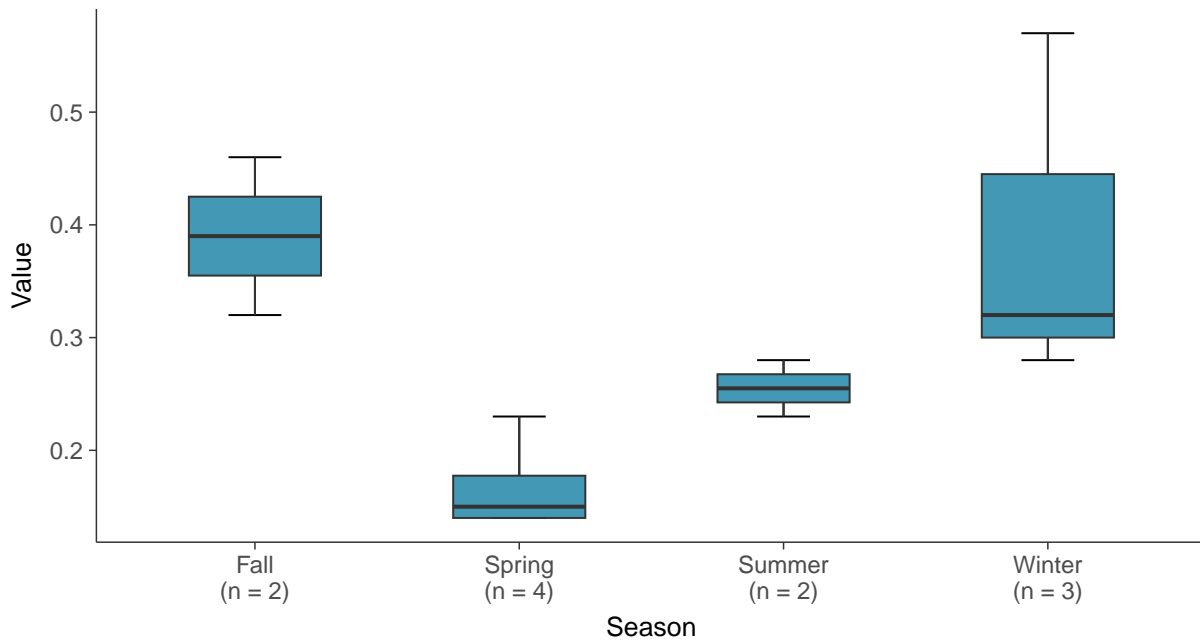
Boxplot

Barium, MW-10 (mg/L)



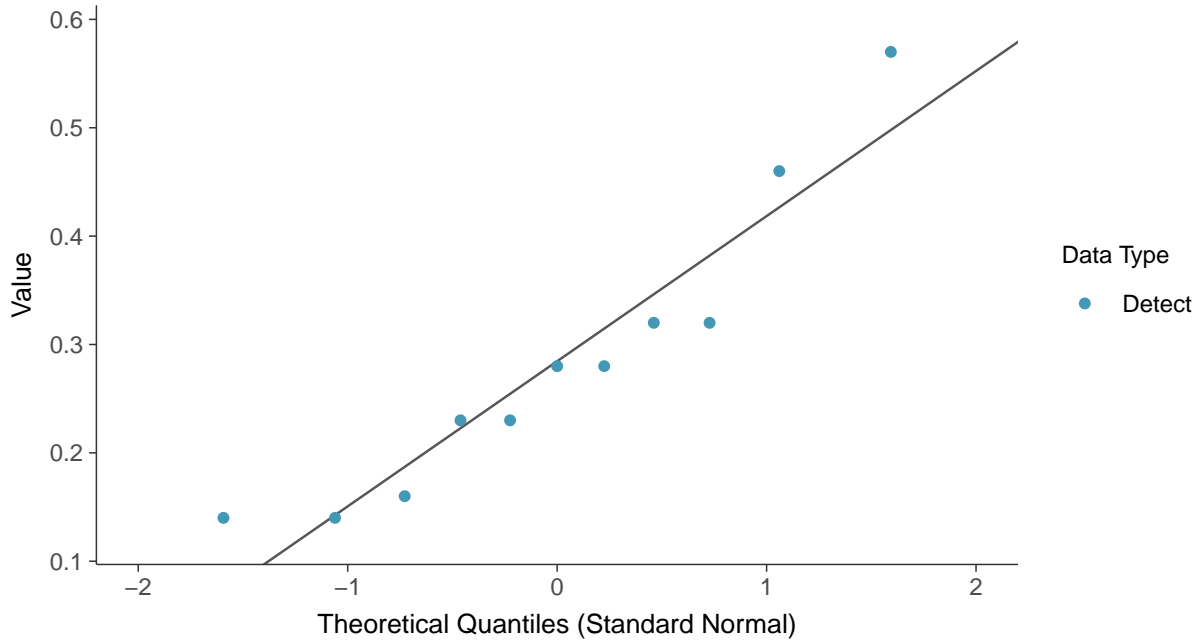
Boxplot by Season

Barium, MW-10 (mg/L)

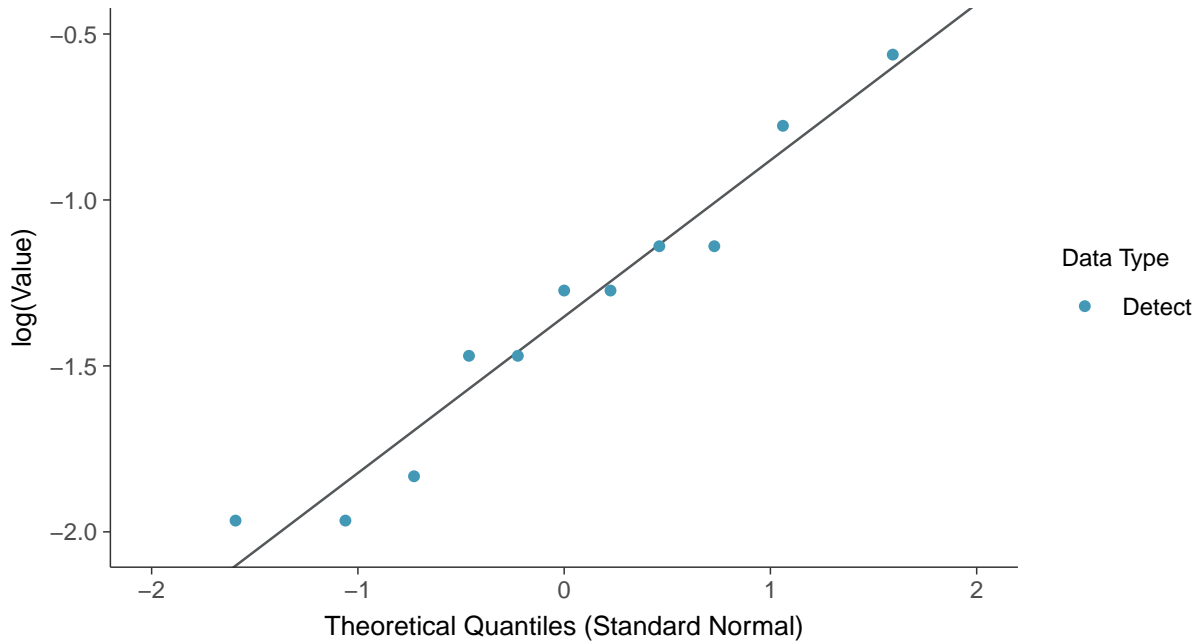




Normal Q-Q plot
Barium, MW-10 (mg/L)



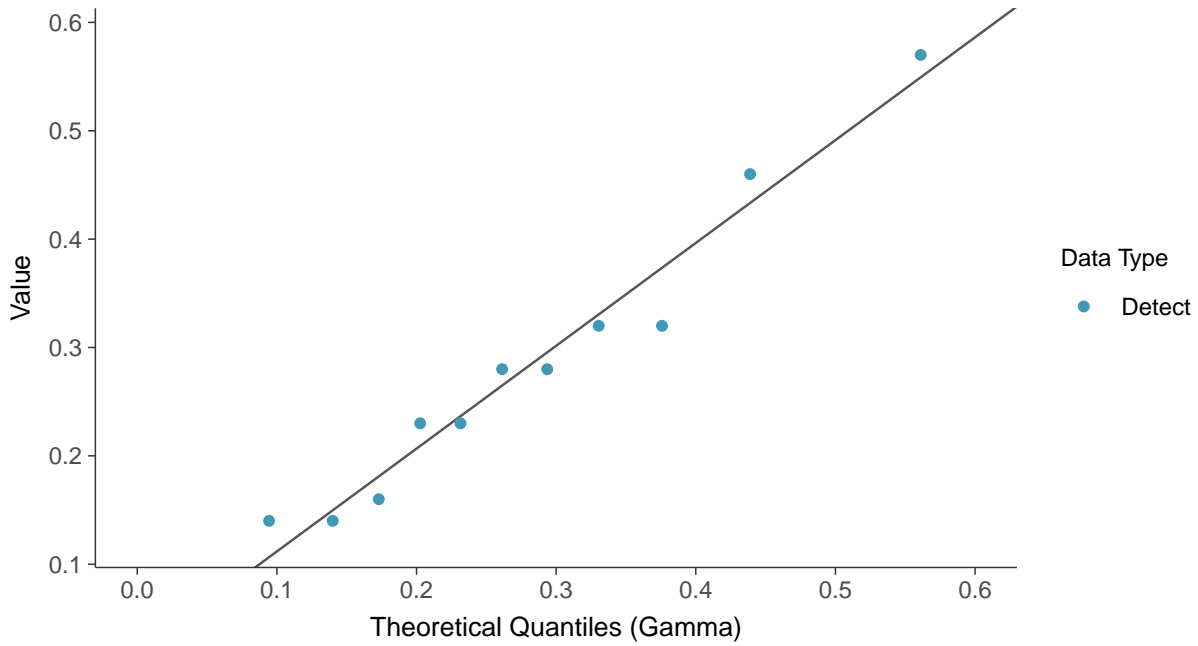
Lognormal Q-Q plot
Barium, MW-10 (mg/L)





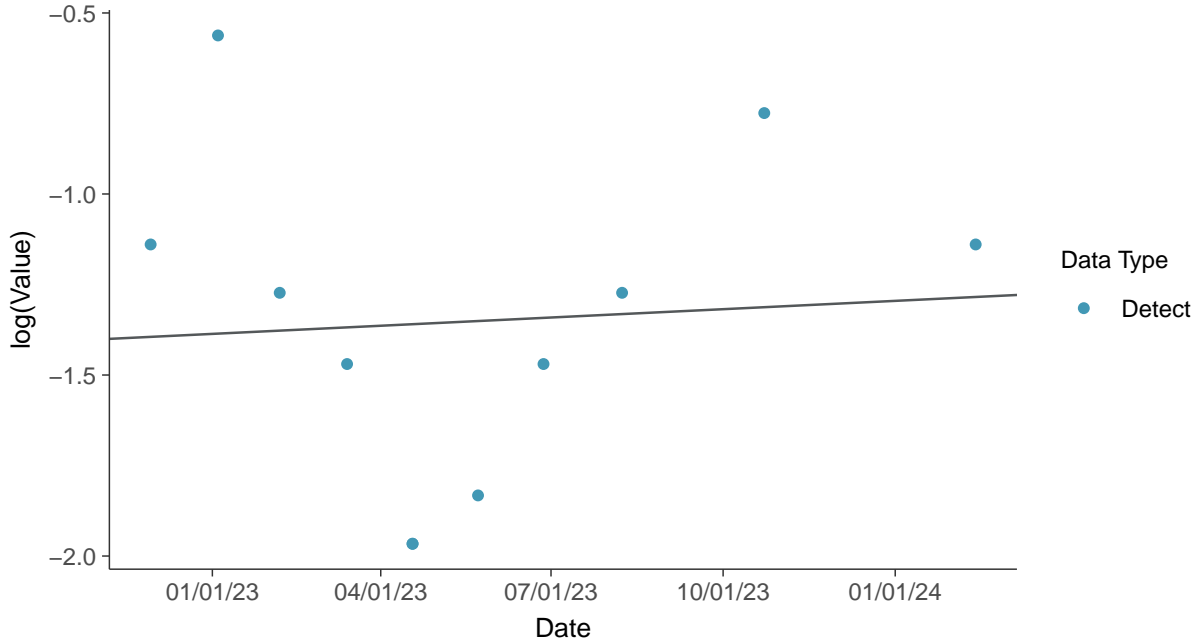
Gamma Q-Q plot

Barium, MW-10 (mg/L)



Trend Regression: Lognormal MLE

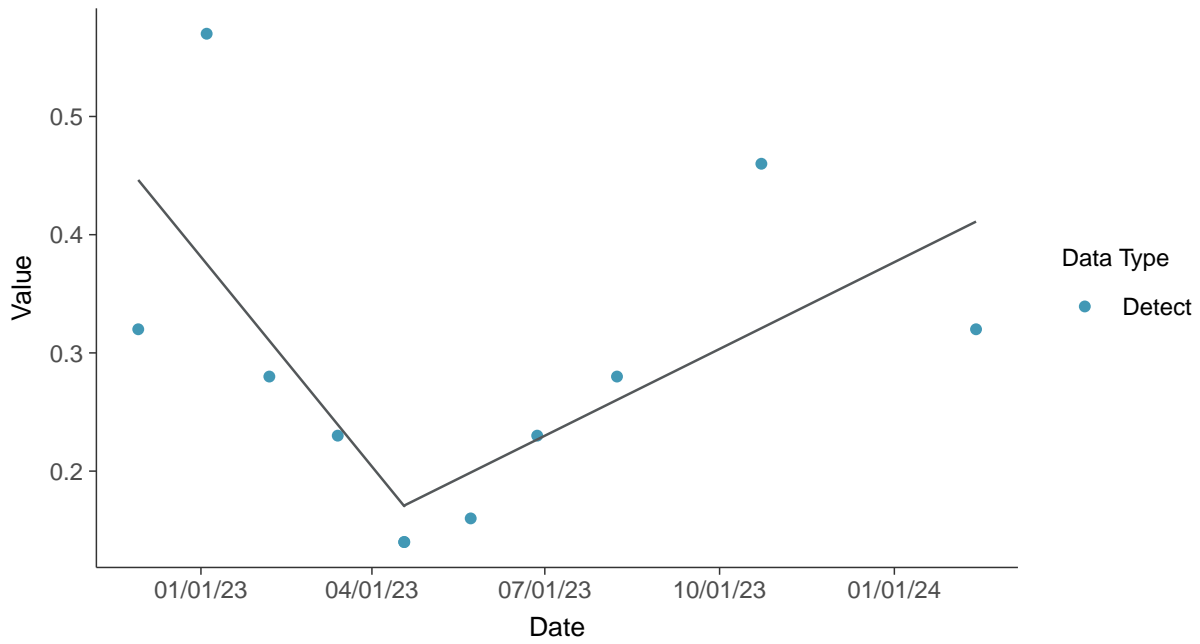
Barium, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear

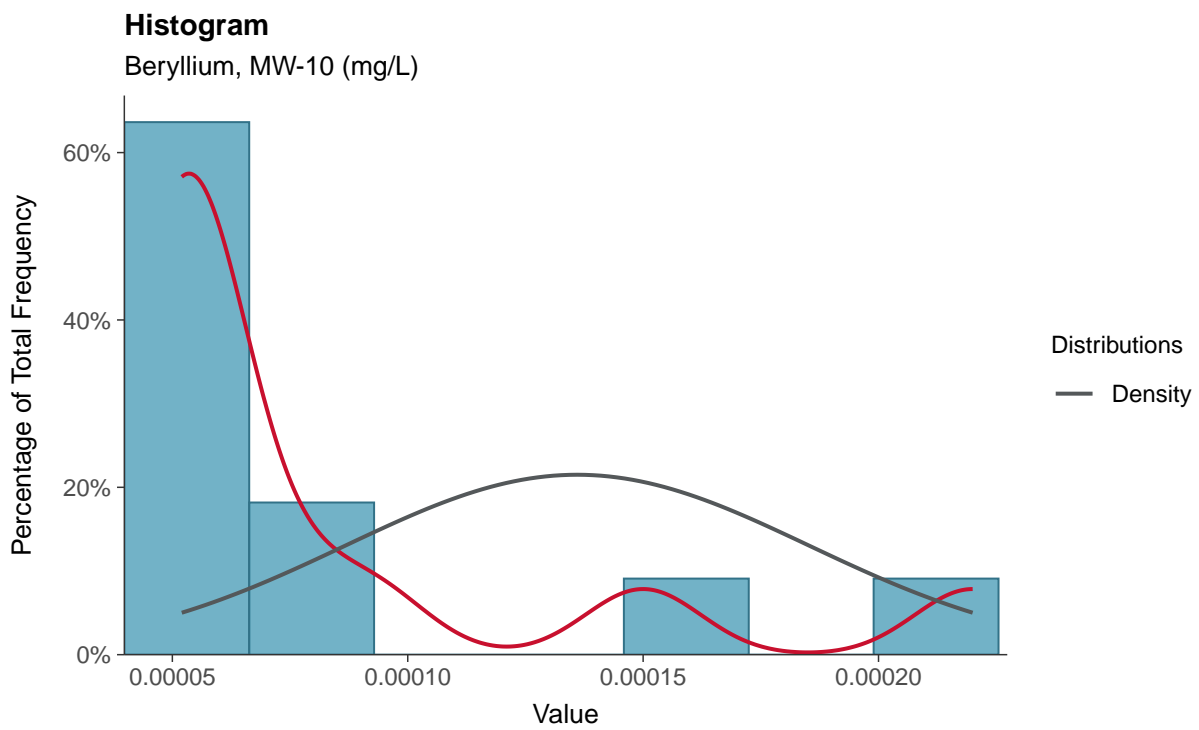
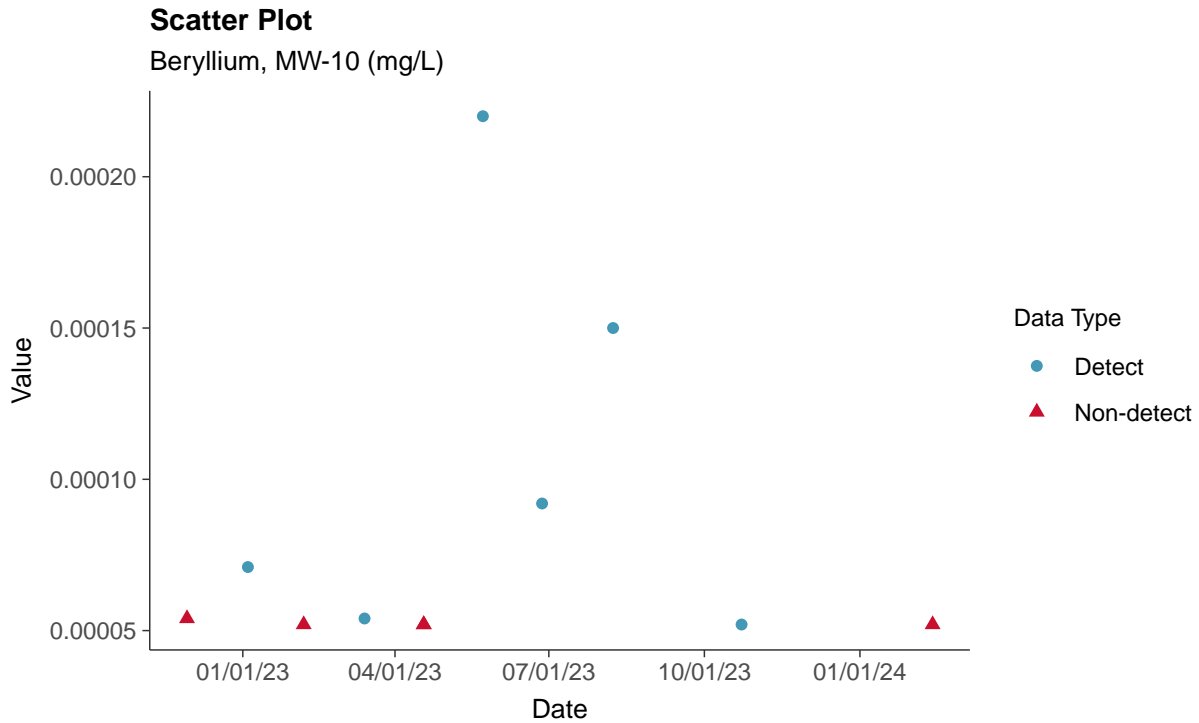
Barium, MW-10 (mg/L)





Appendix IV: Beryllium, MW-10

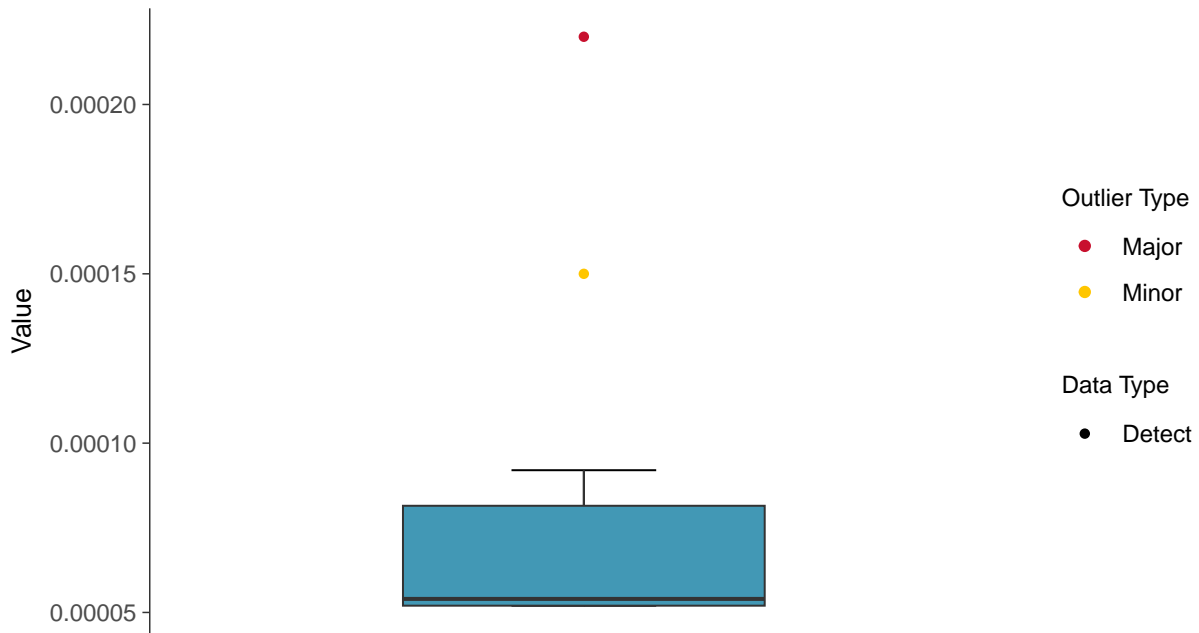
ID: 2_20_5_104





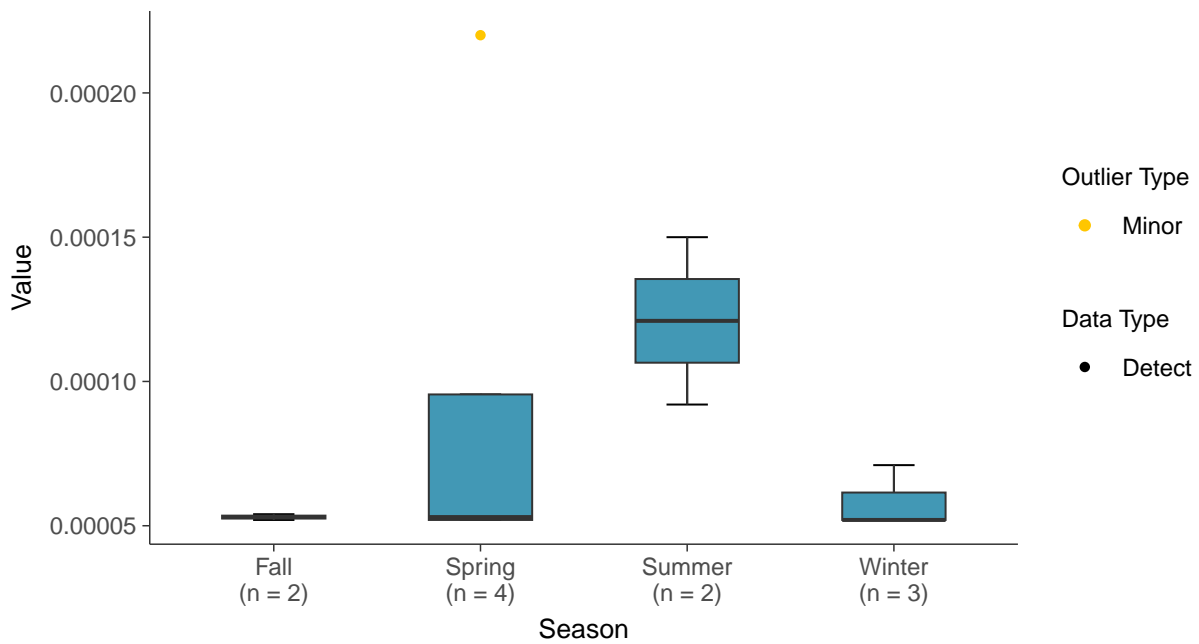
Boxplot

Beryllium, MW-10 (mg/L)



Boxplot by Season

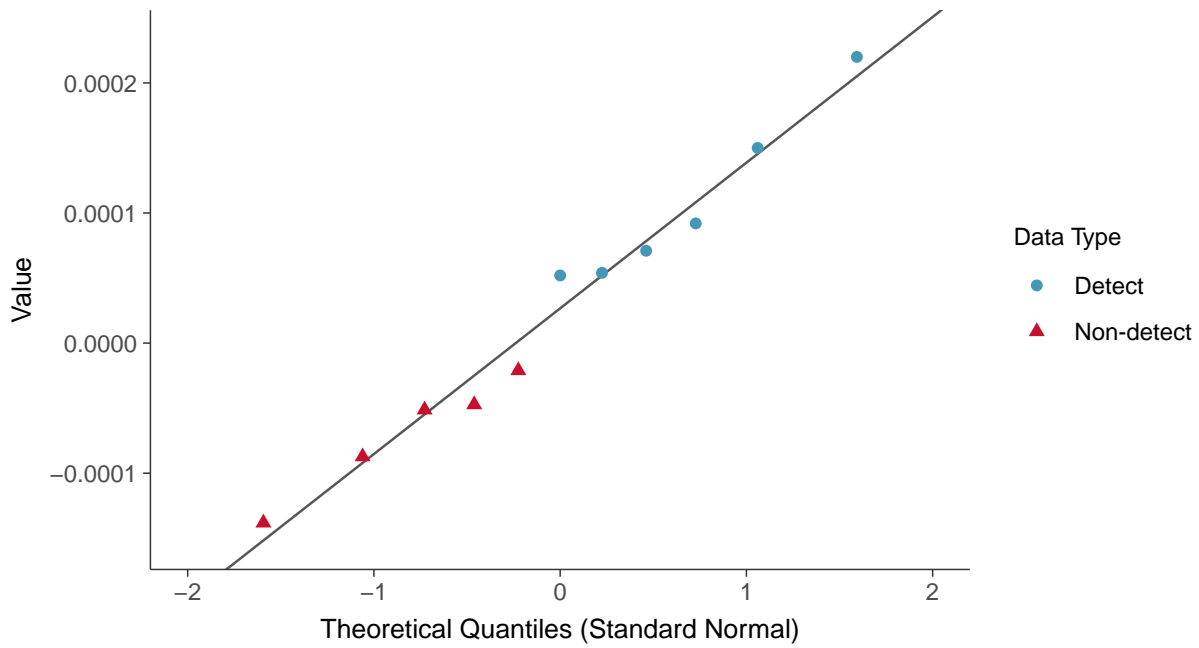
Beryllium, MW-10 (mg/L)





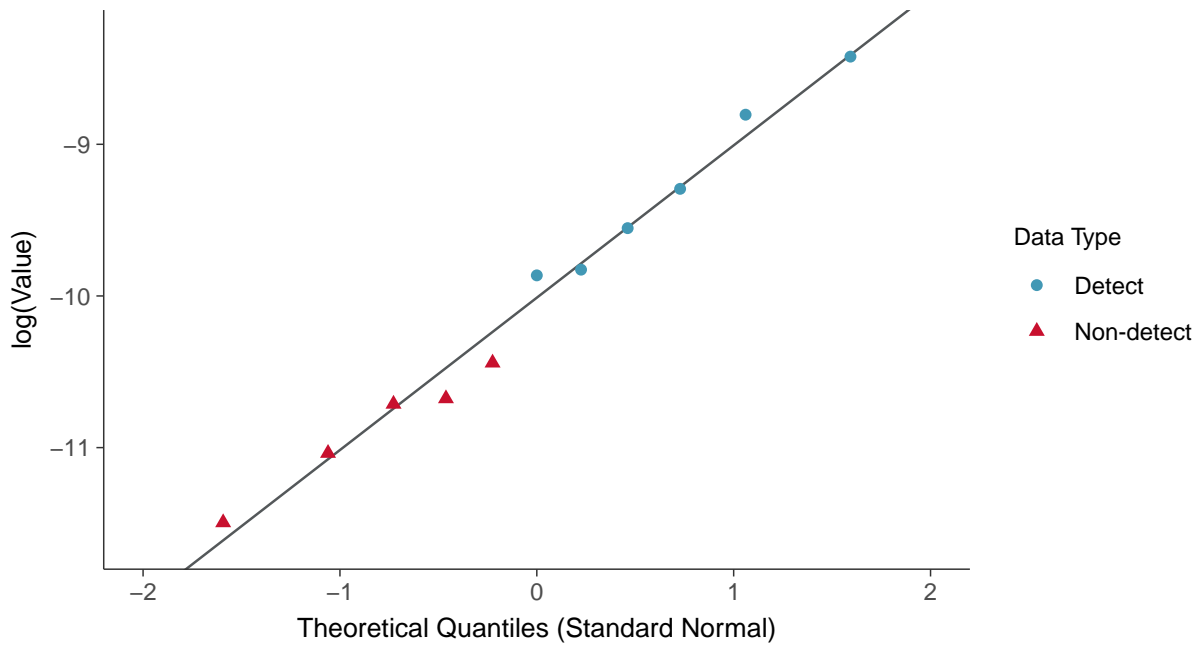
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-10 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

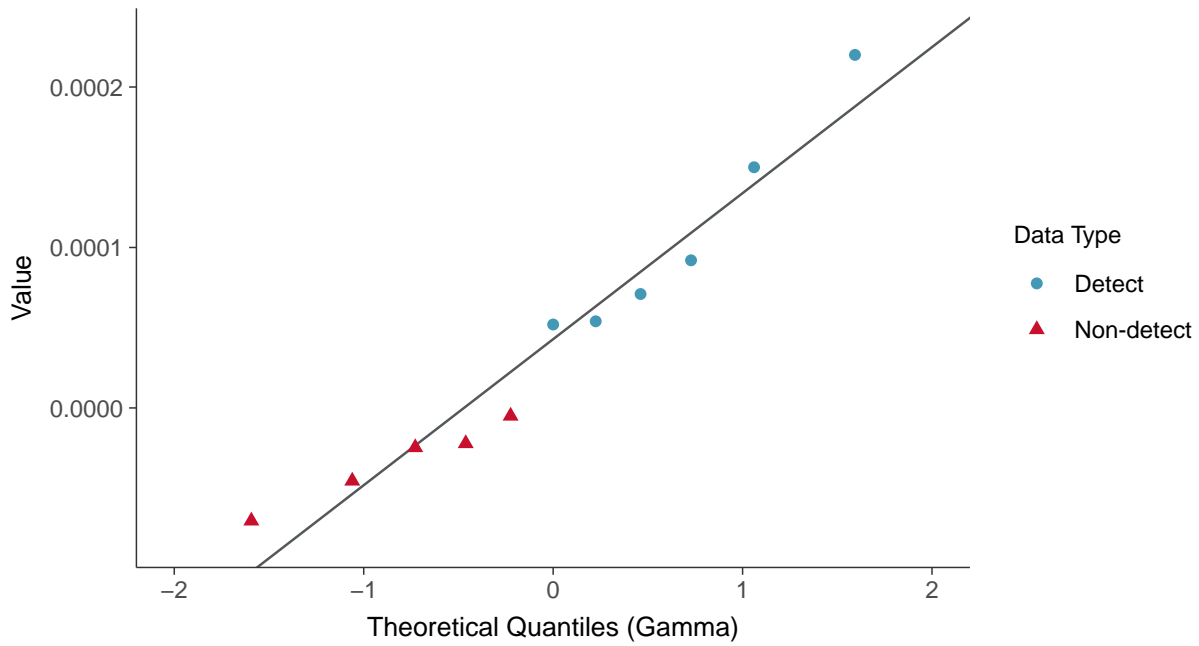
Beryllium, MW-10 (mg/L)





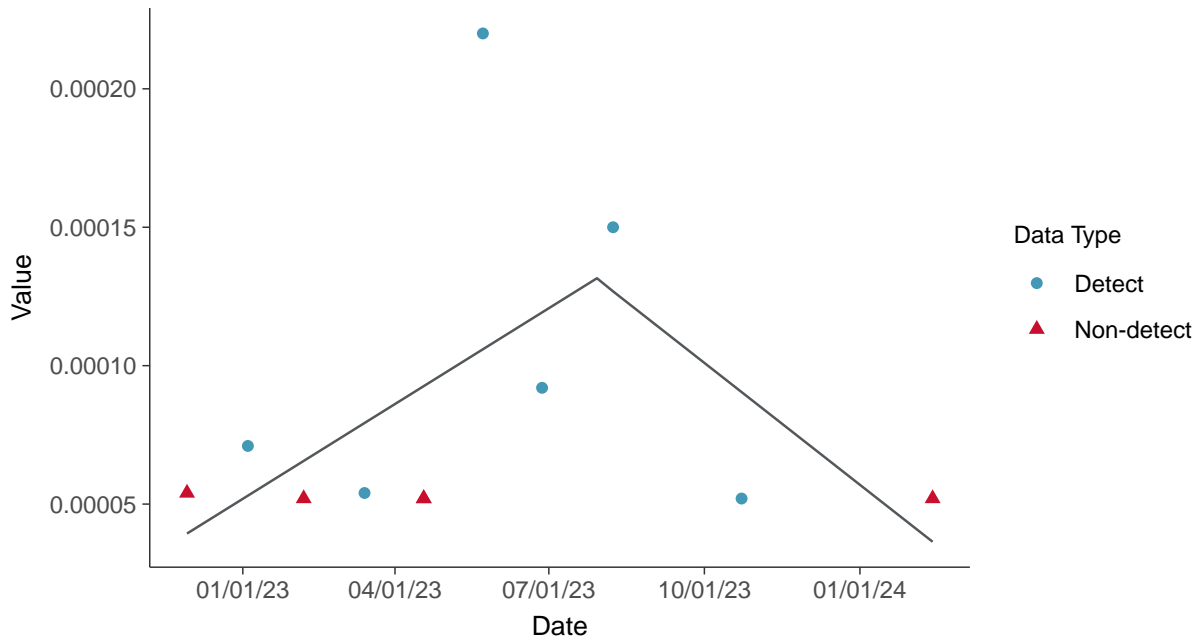
Gamma Q-Q plot using ROS Imputed Estimates

Beryllium, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear

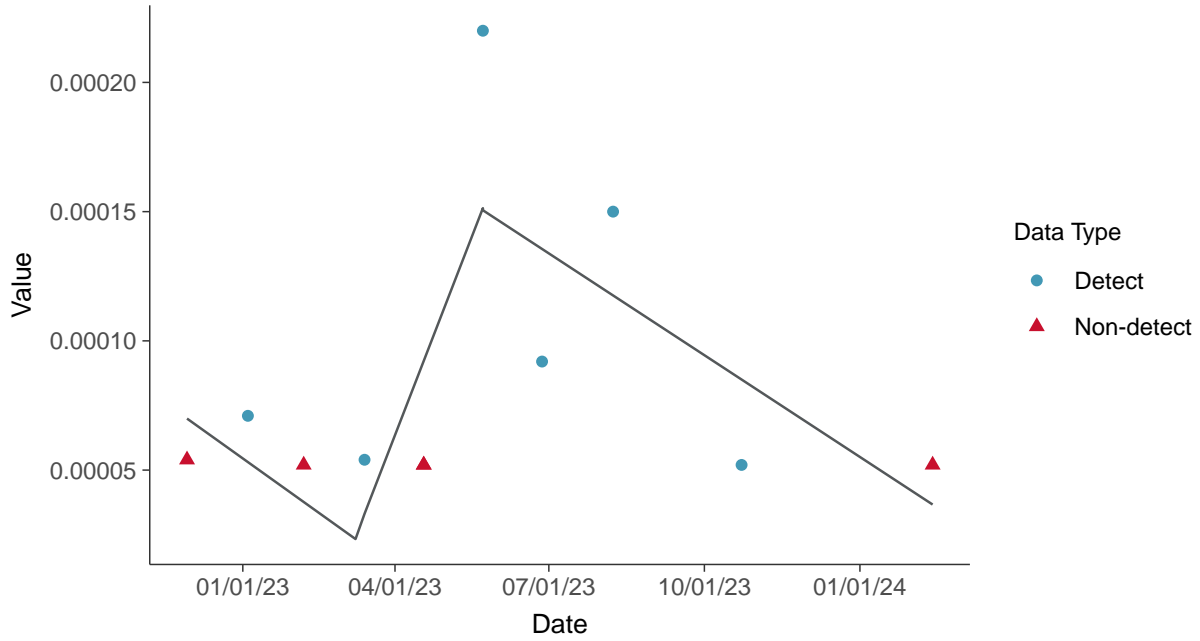
Beryllium, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-10 (mg/L)



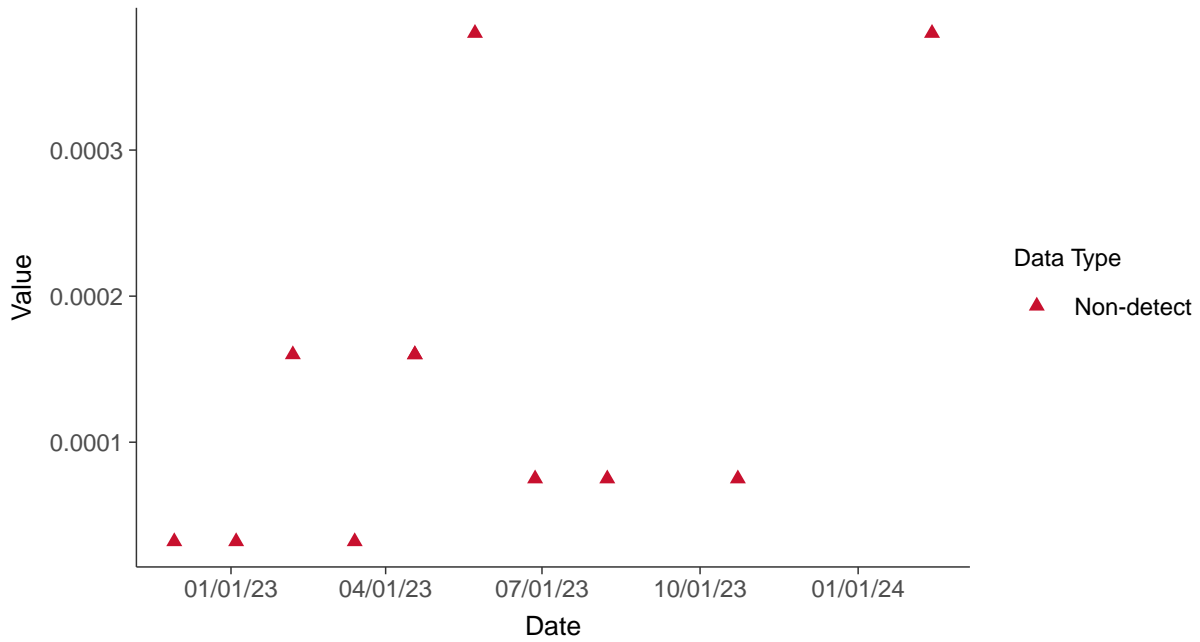


Appendix IV: Cadmium, MW-10

ID: 2_20_5_106

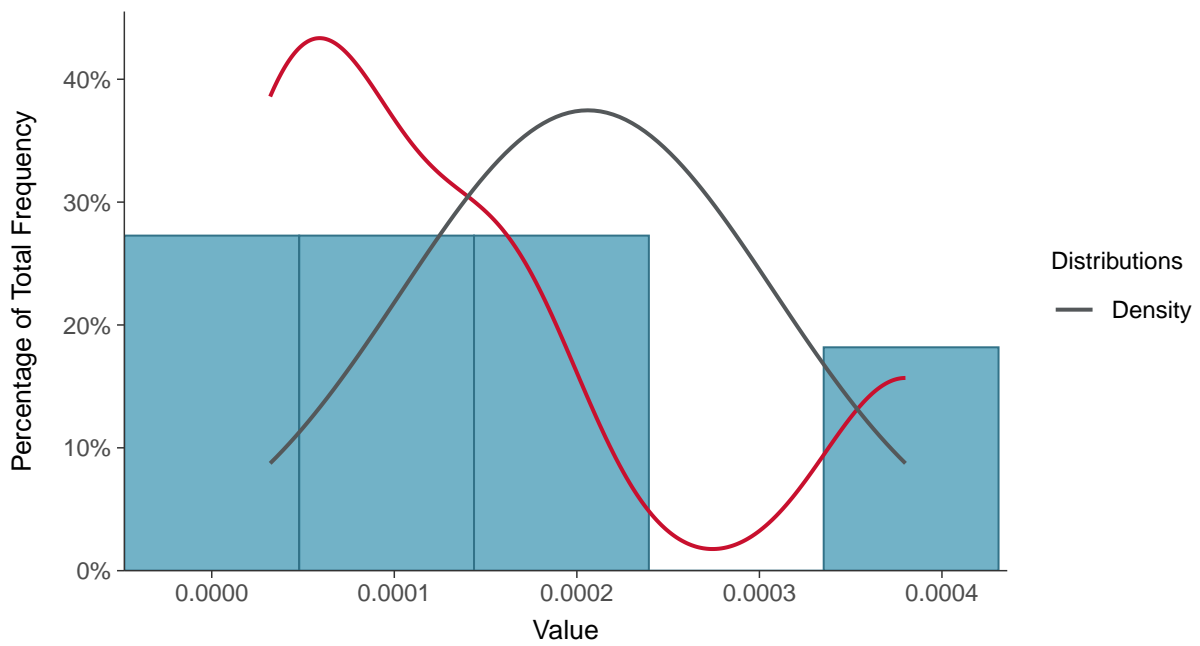
Scatter Plot

Cadmium, MW-10 (mg/L)



Histogram

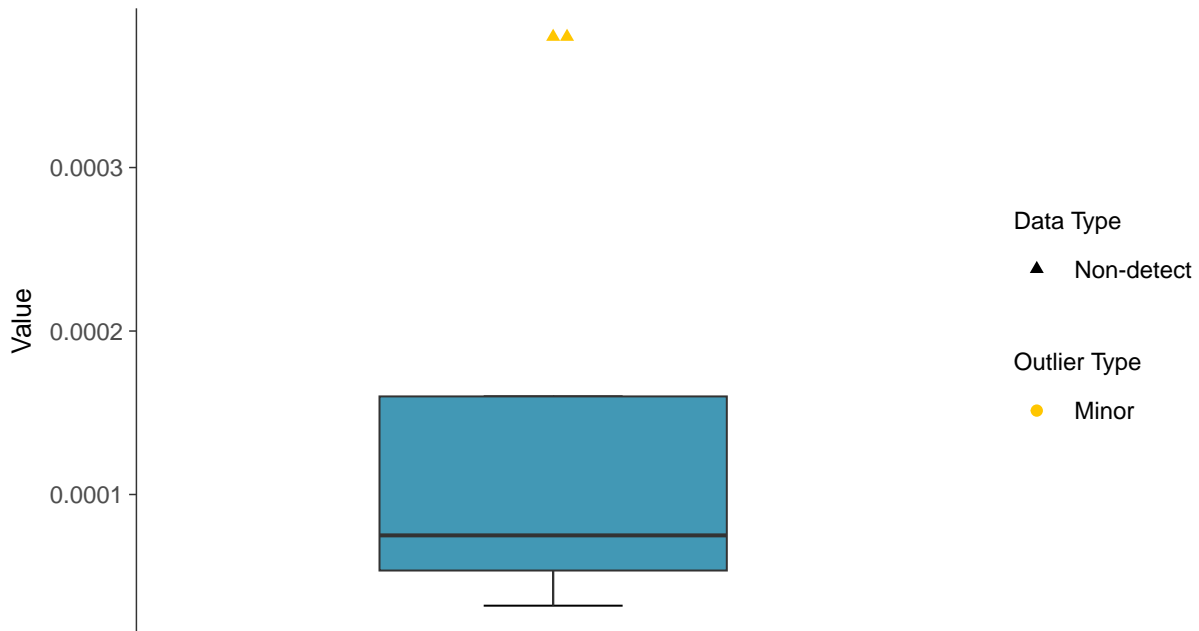
Cadmium, MW-10 (mg/L)





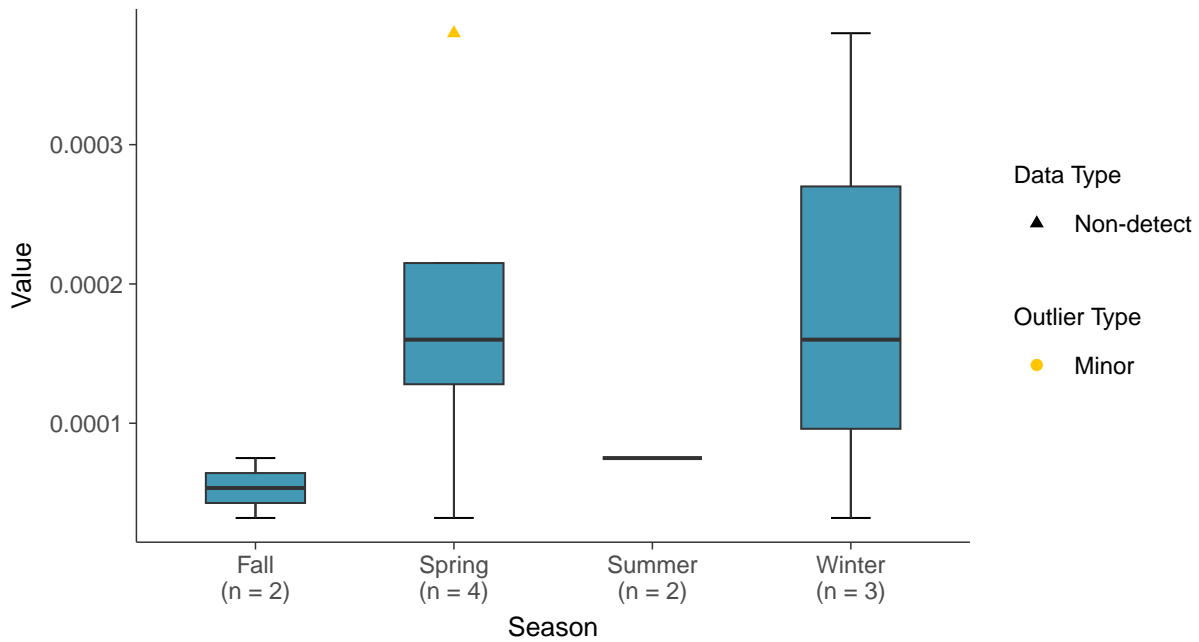
Boxplot

Cadmium, MW-10 (mg/L)



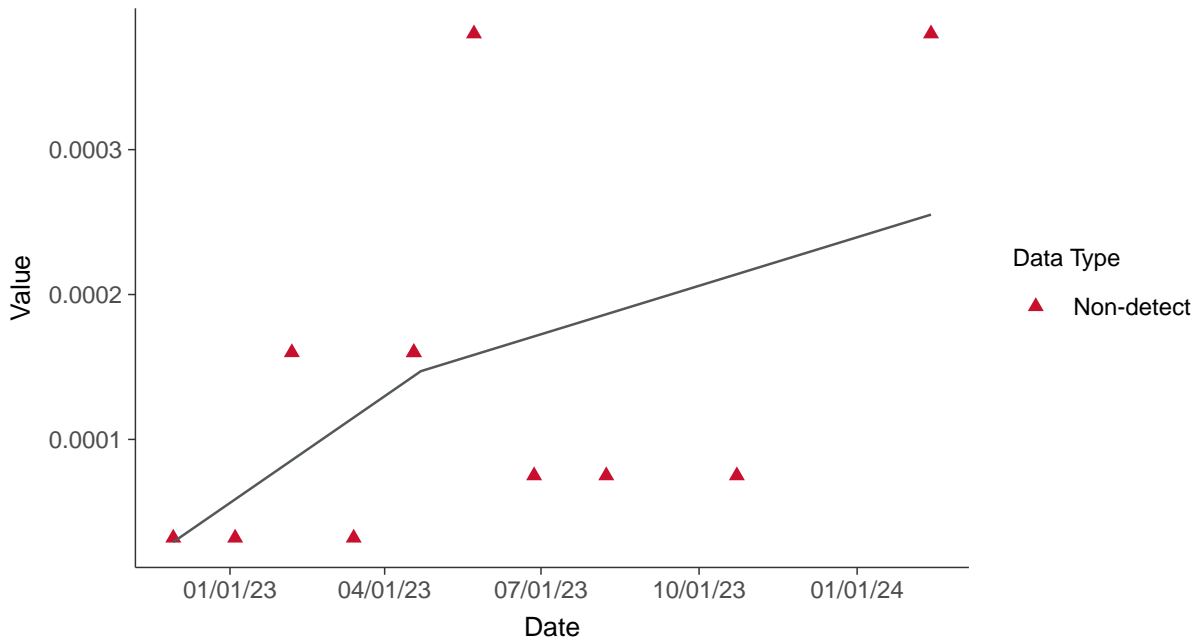
Boxplot by Season

Cadmium, MW-10 (mg/L)

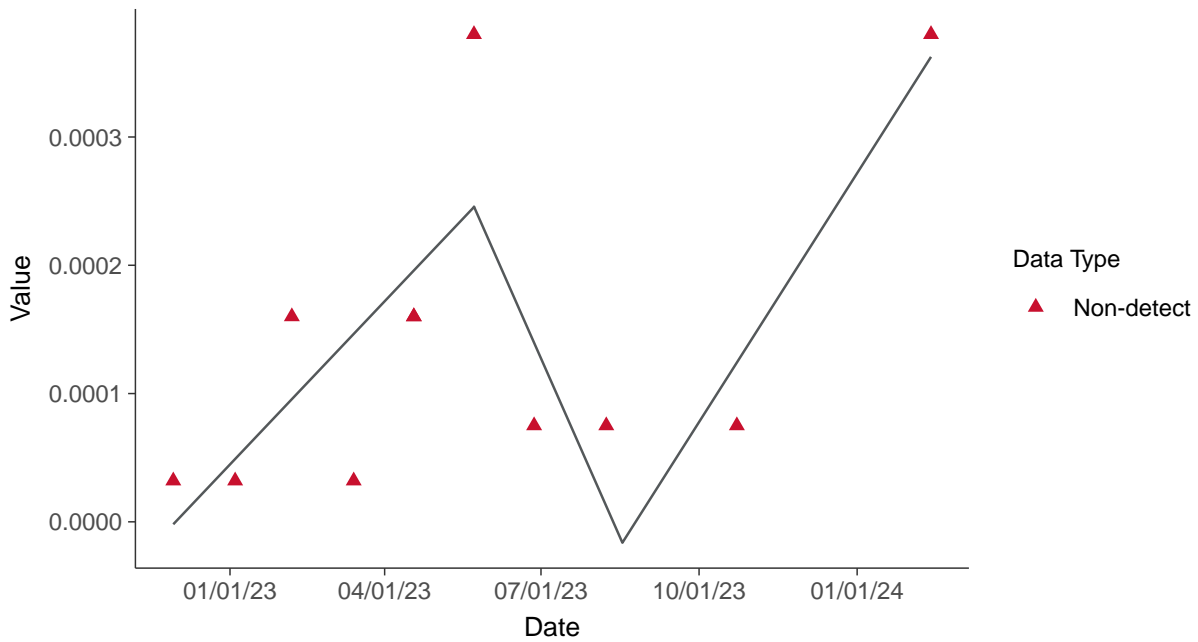




Trend Regression: Piecewise Linear-Linear
Cadmium, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cadmium, MW-10 (mg/L)



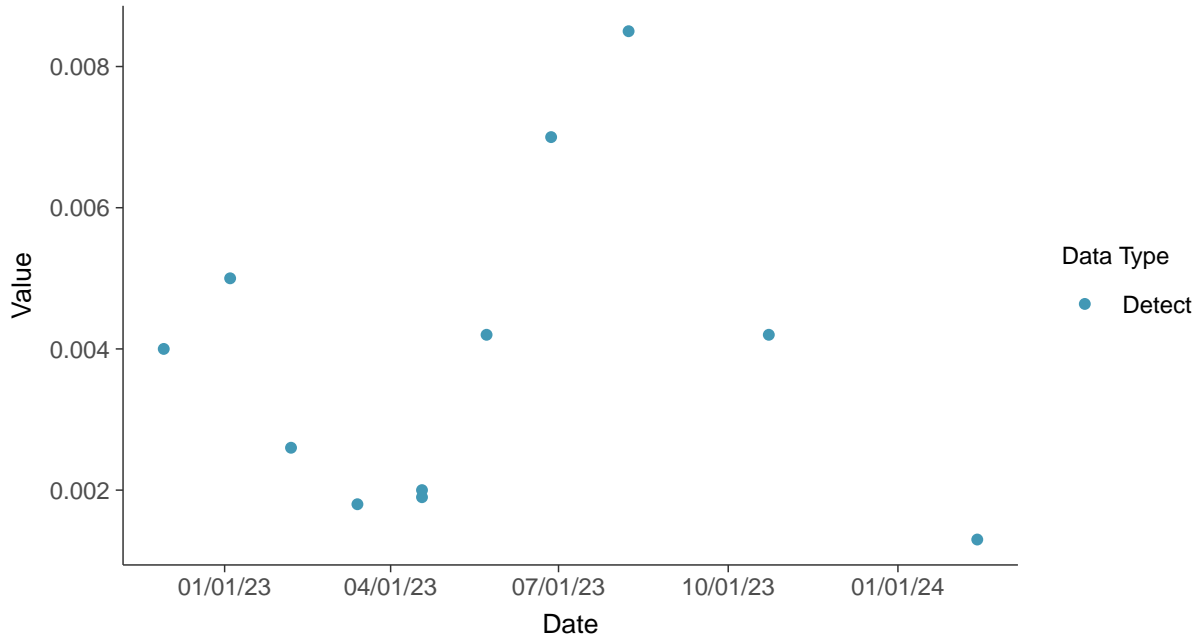


Appendix IV: Chromium, Total, MW-10

ID: 2_20_5_109

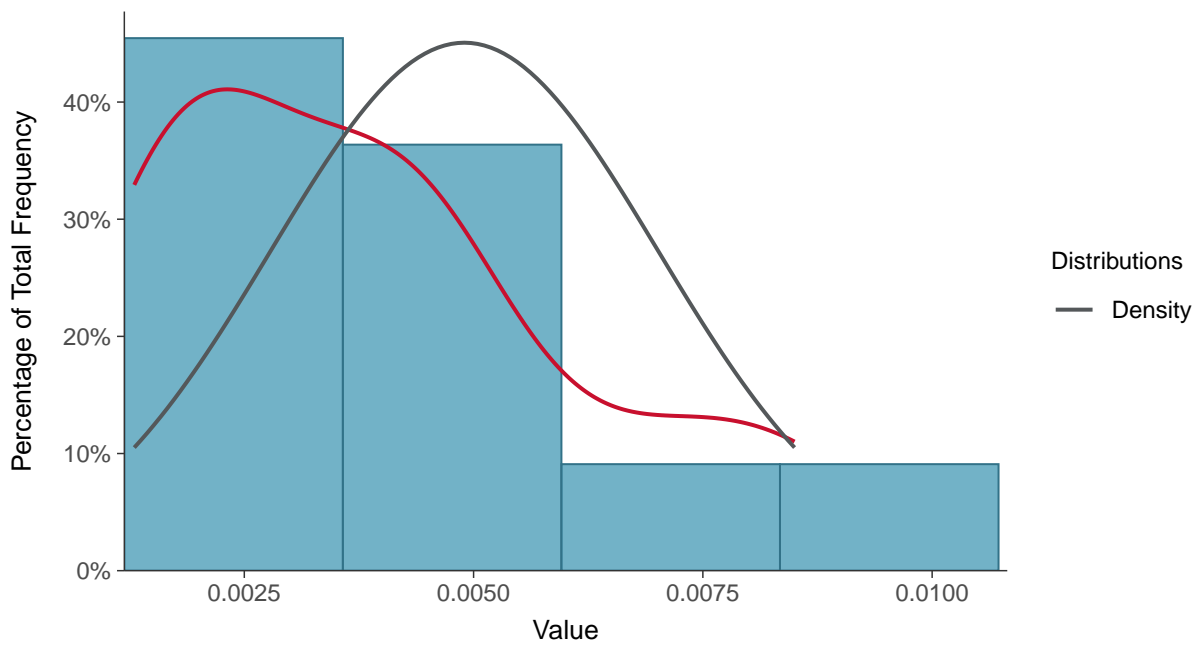
Scatter Plot

Chromium, Total, MW-10 (mg/L)



Histogram

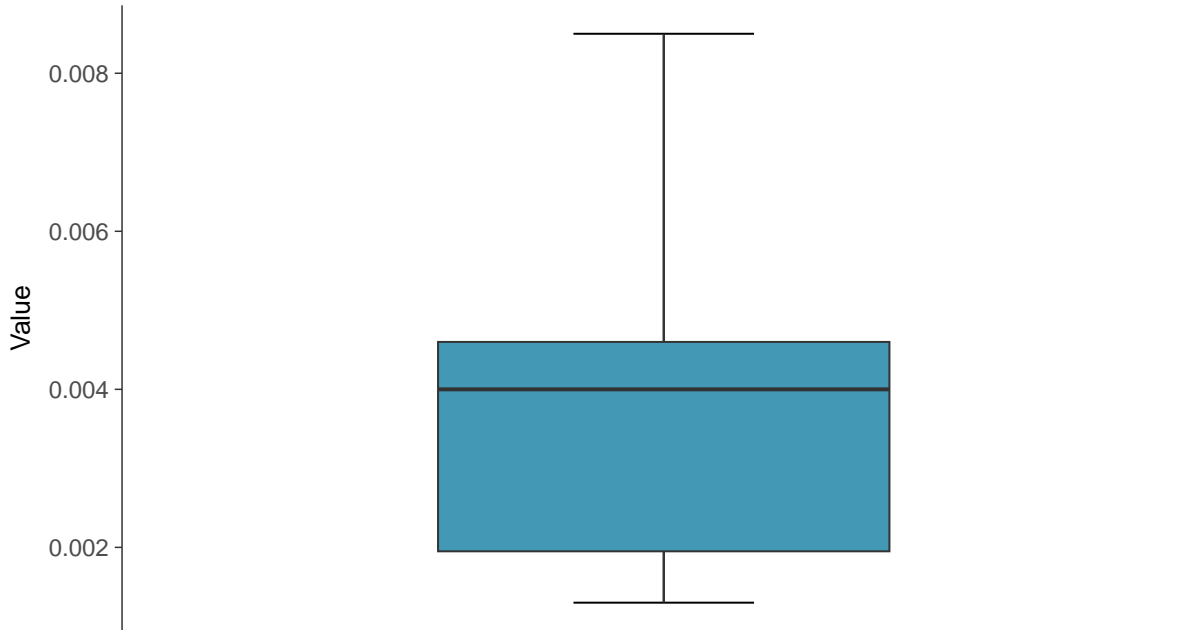
Chromium, Total, MW-10 (mg/L)





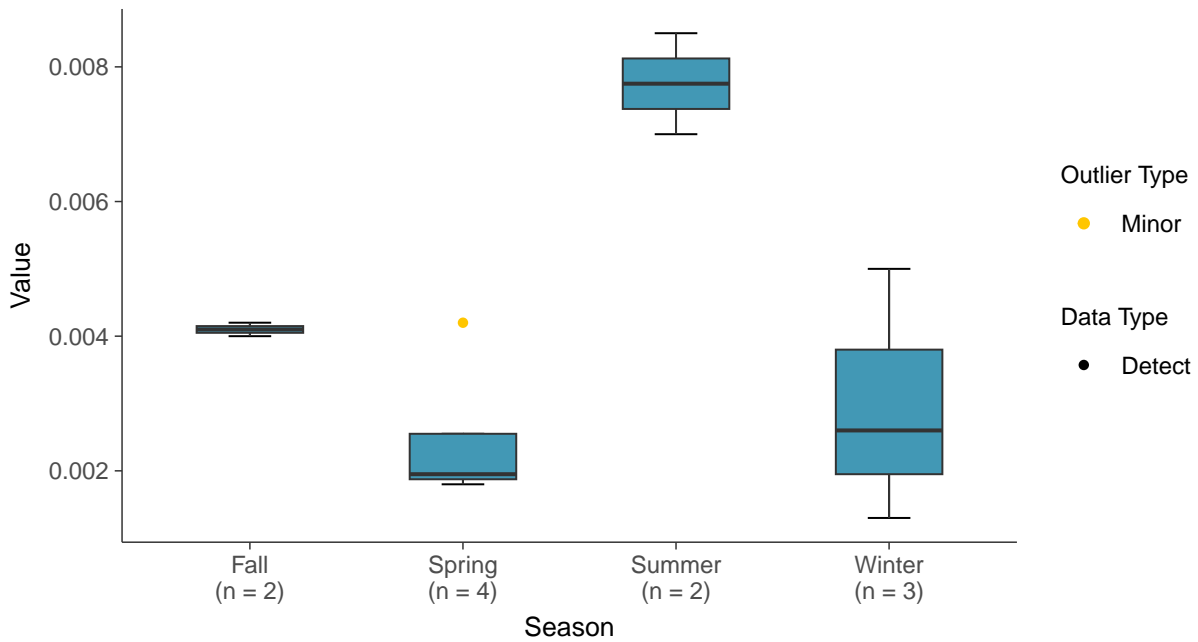
Boxplot

Chromium, Total, MW-10 (mg/L)



Boxplot by Season

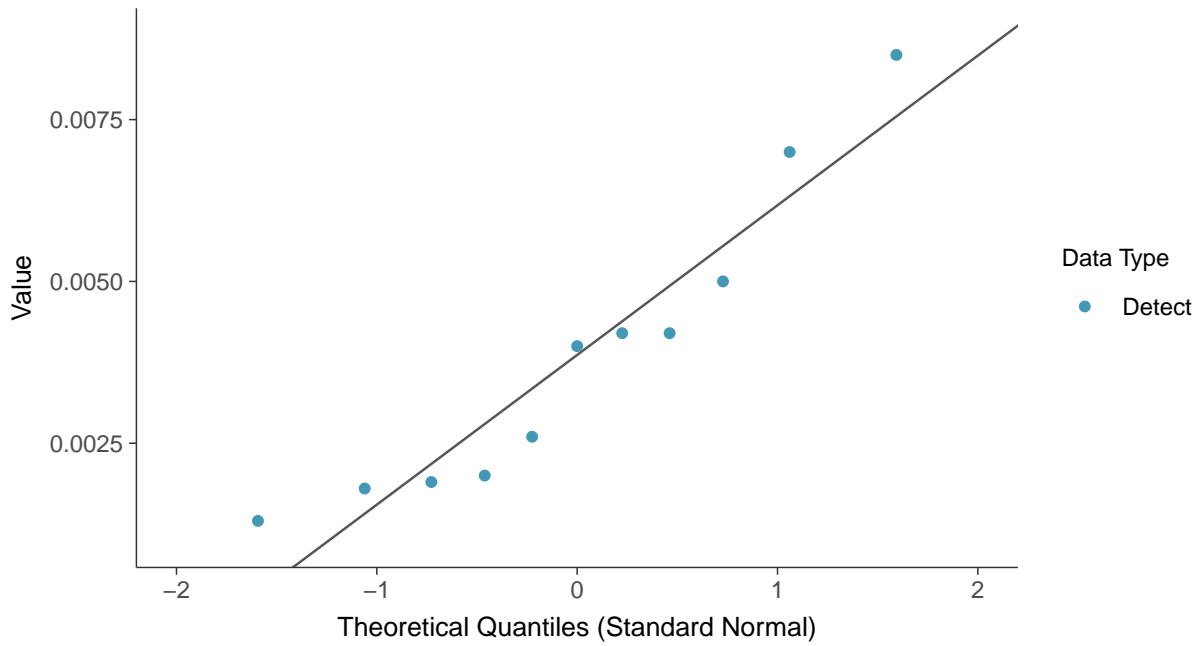
Chromium, Total, MW-10 (mg/L)





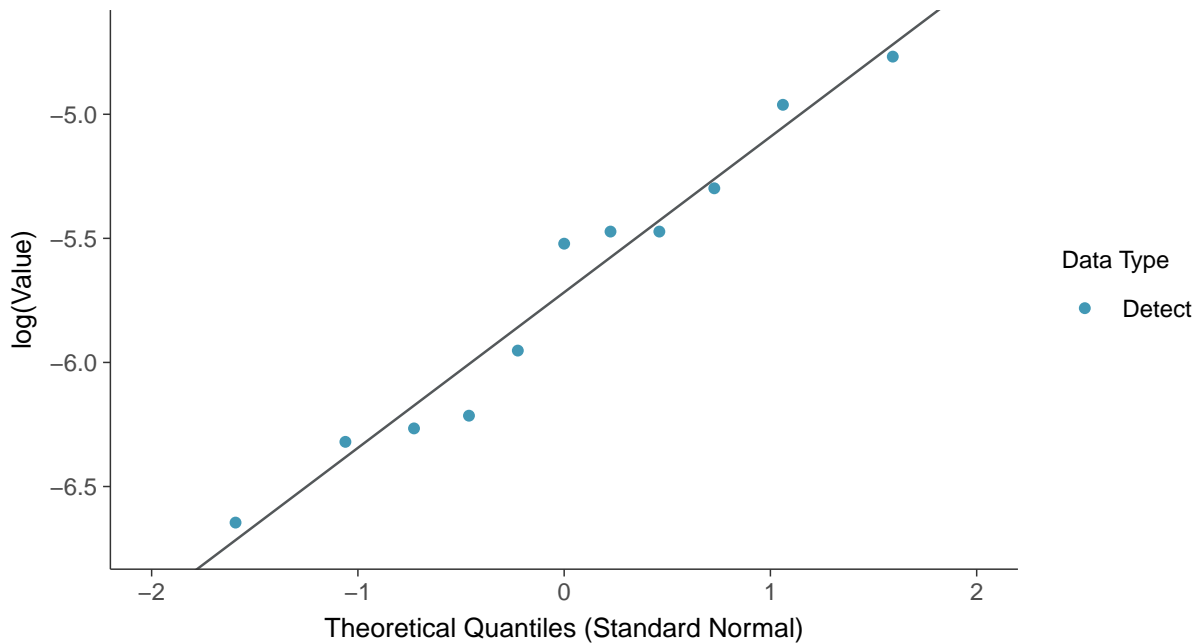
Normal Q-Q plot

Chromium, Total, MW-10 (mg/L)



Lognormal Q-Q plot

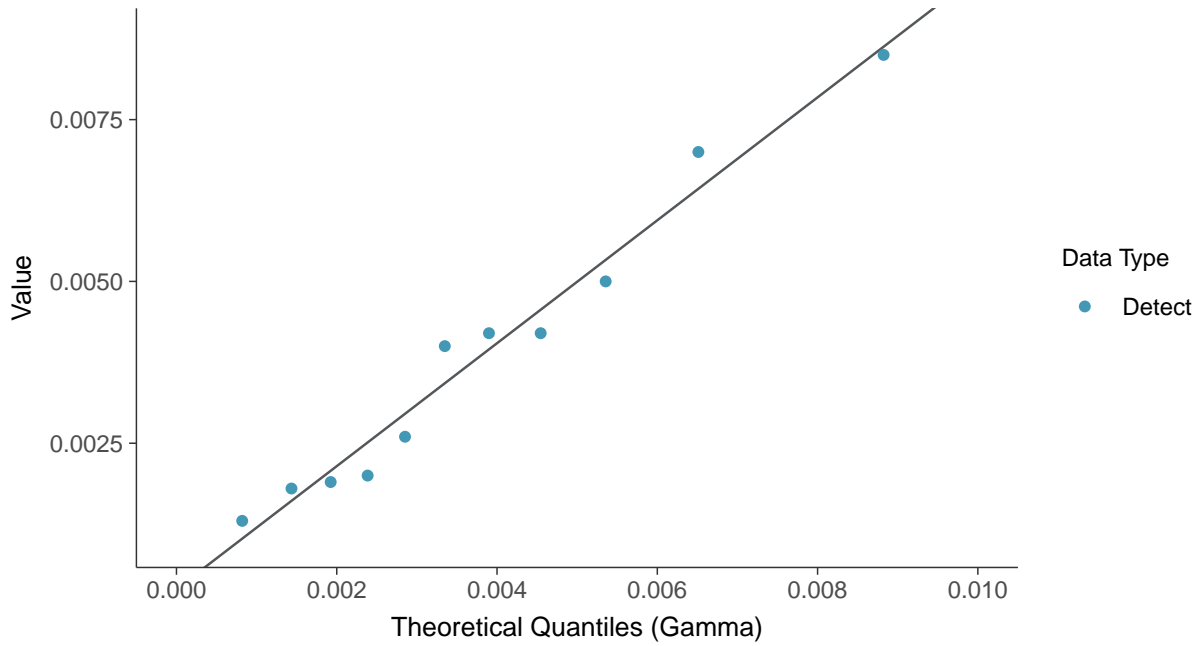
Chromium, Total, MW-10 (mg/L)





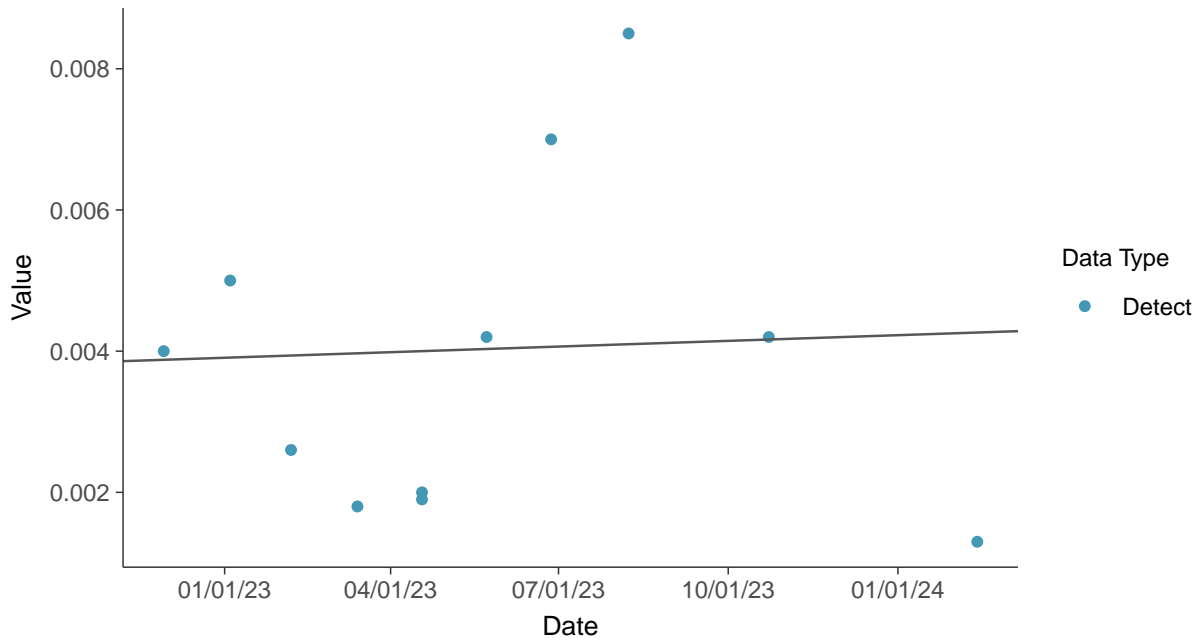
Gamma Q-Q plot

Chromium, Total, MW-10 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

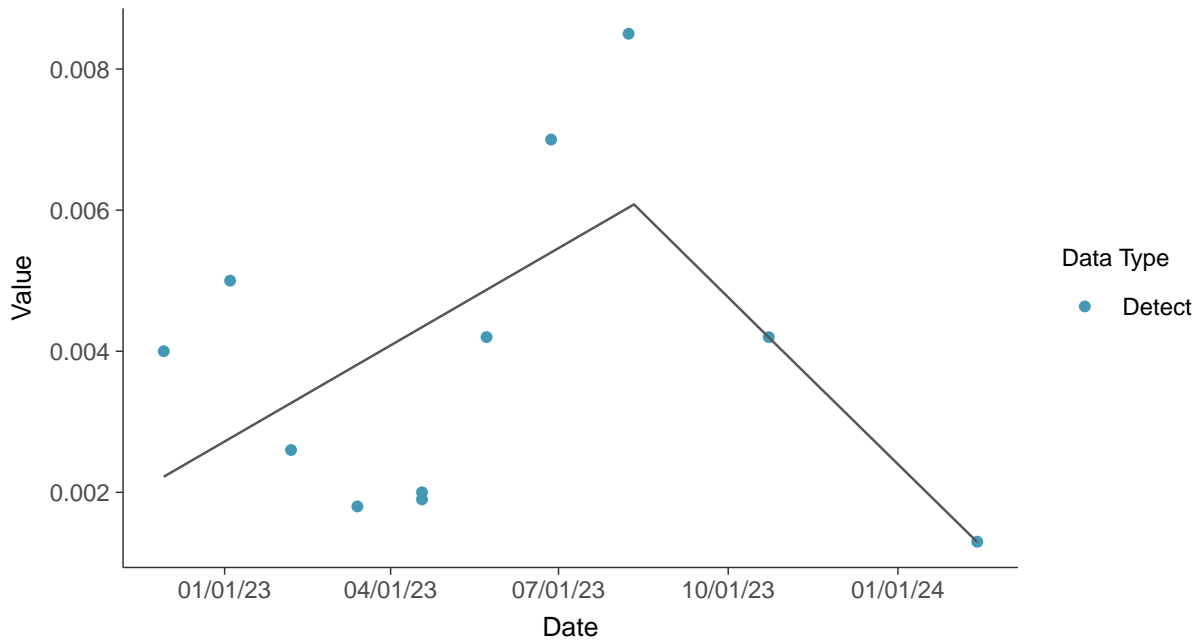
Chromium, Total, MW-10 (mg/L)





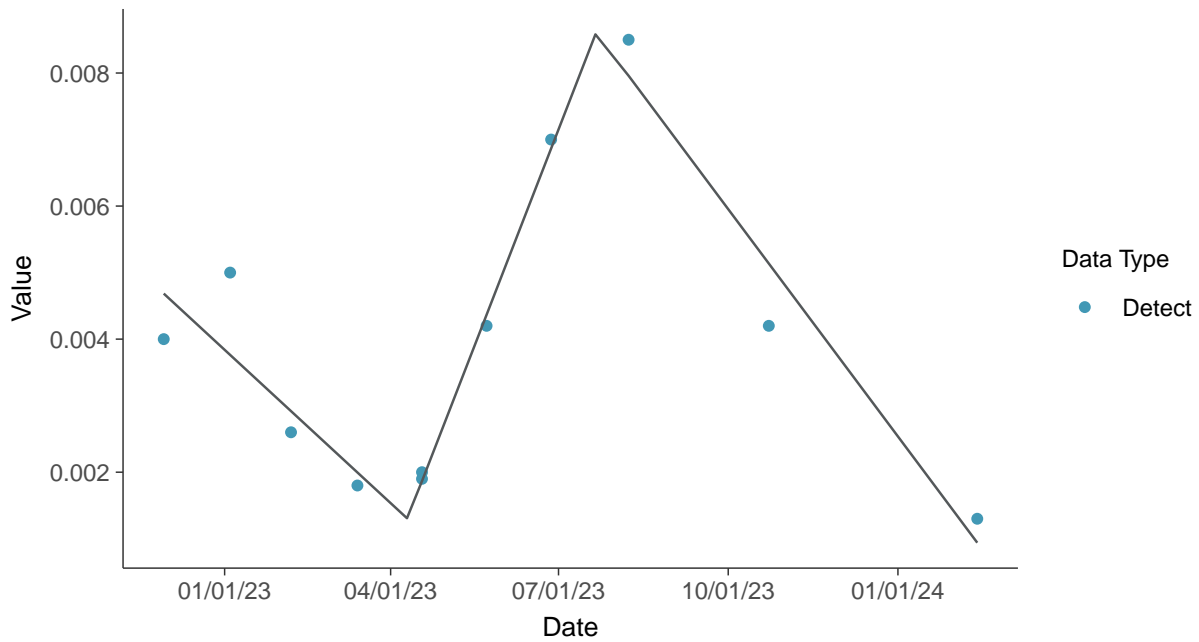
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-10 (mg/L)



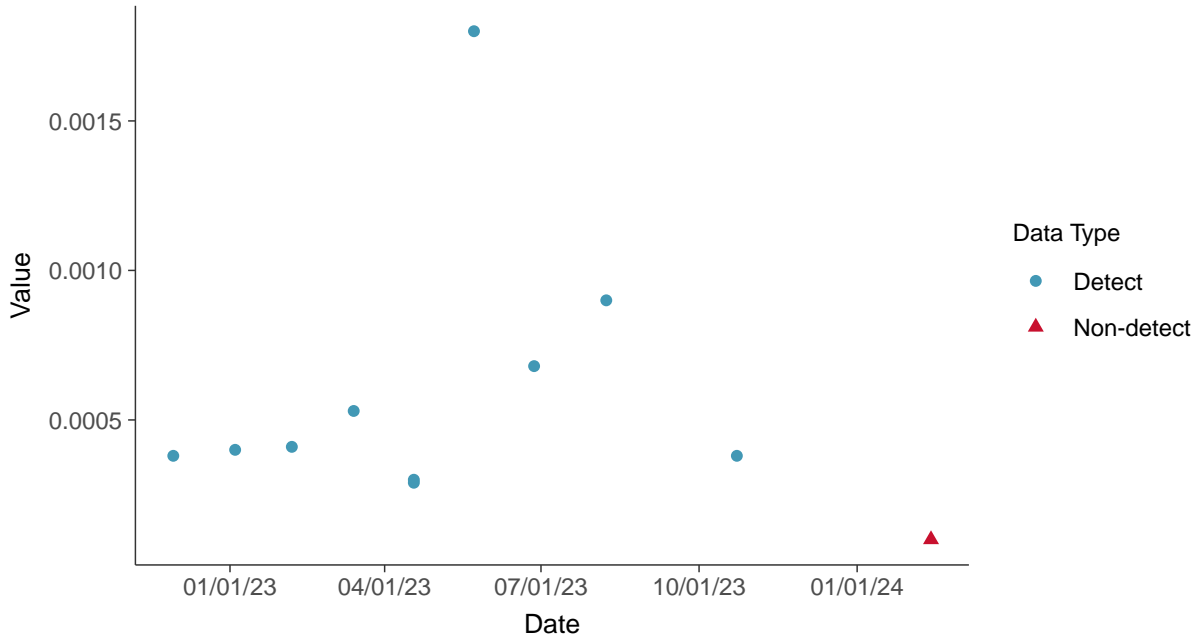


Appendix IV: Cobalt, MW-10

ID: 2_20_5_110

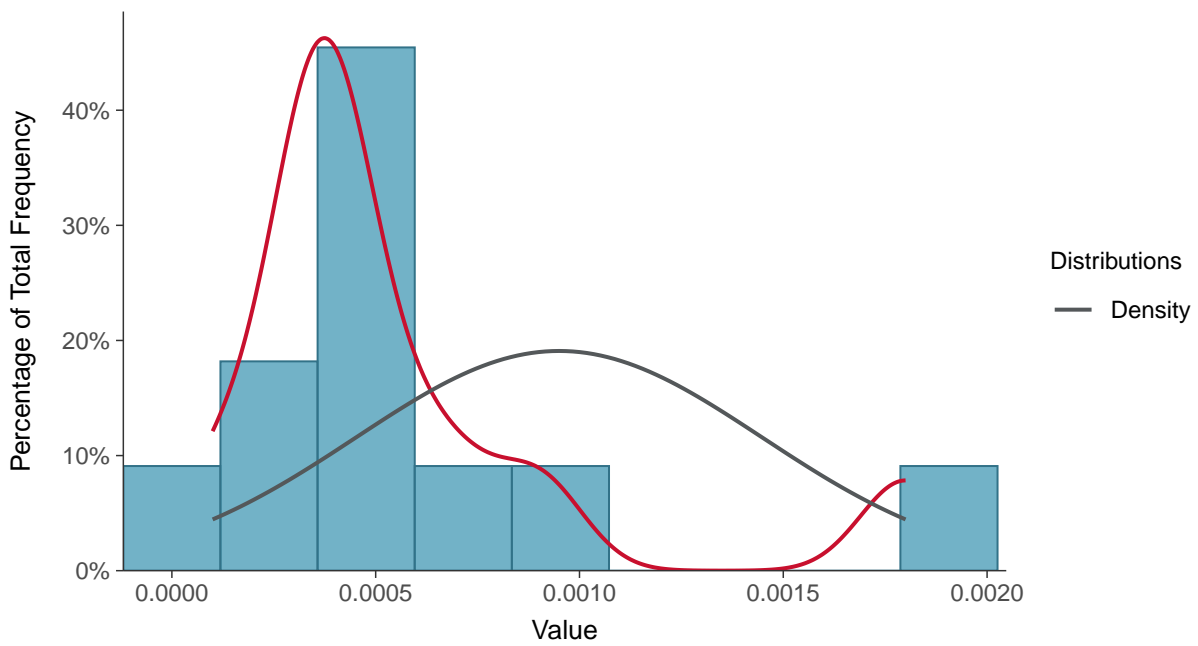
Scatter Plot

Cobalt, MW-10 (mg/L)



Histogram

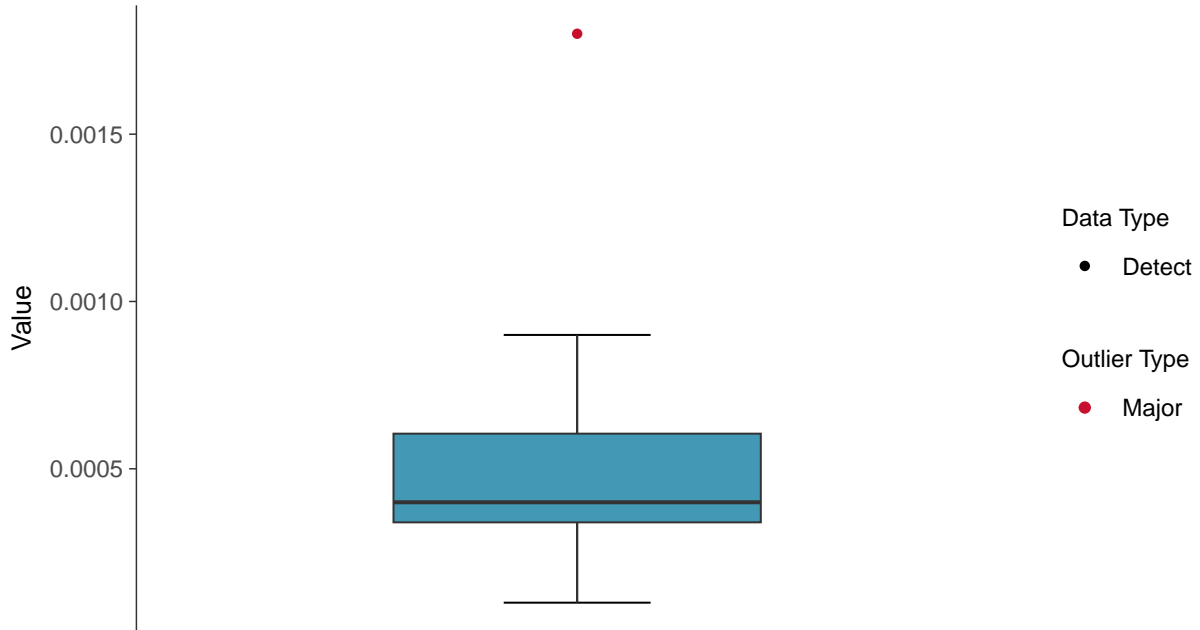
Cobalt, MW-10 (mg/L)





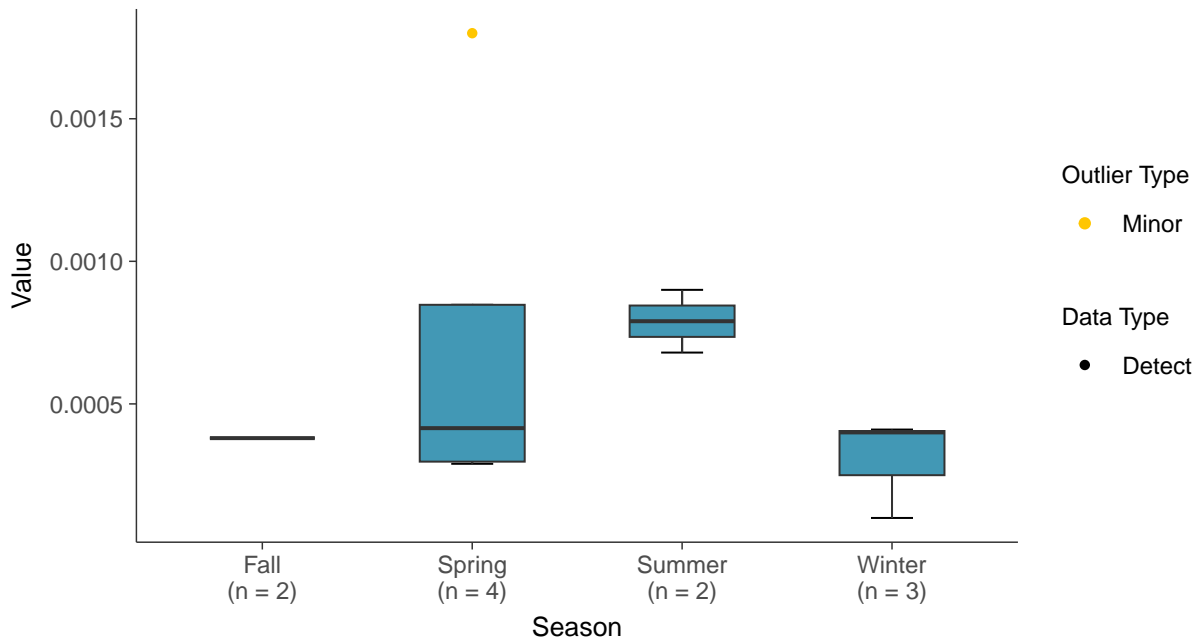
Boxplot

Cobalt, MW-10 (mg/L)



Boxplot by Season

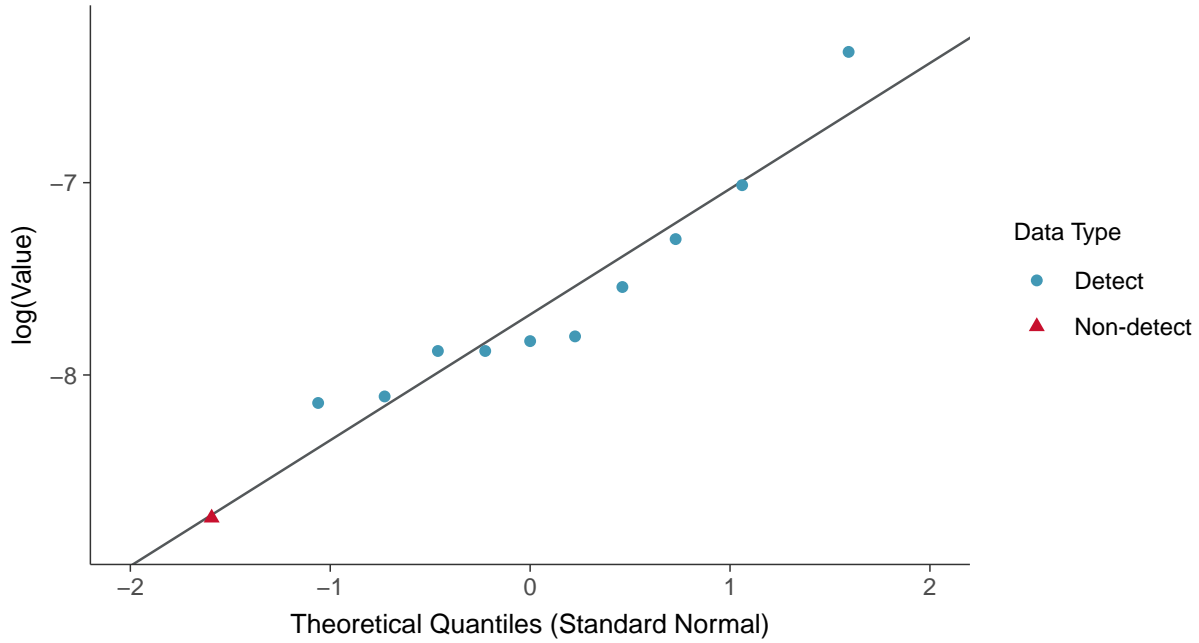
Cobalt, MW-10 (mg/L)





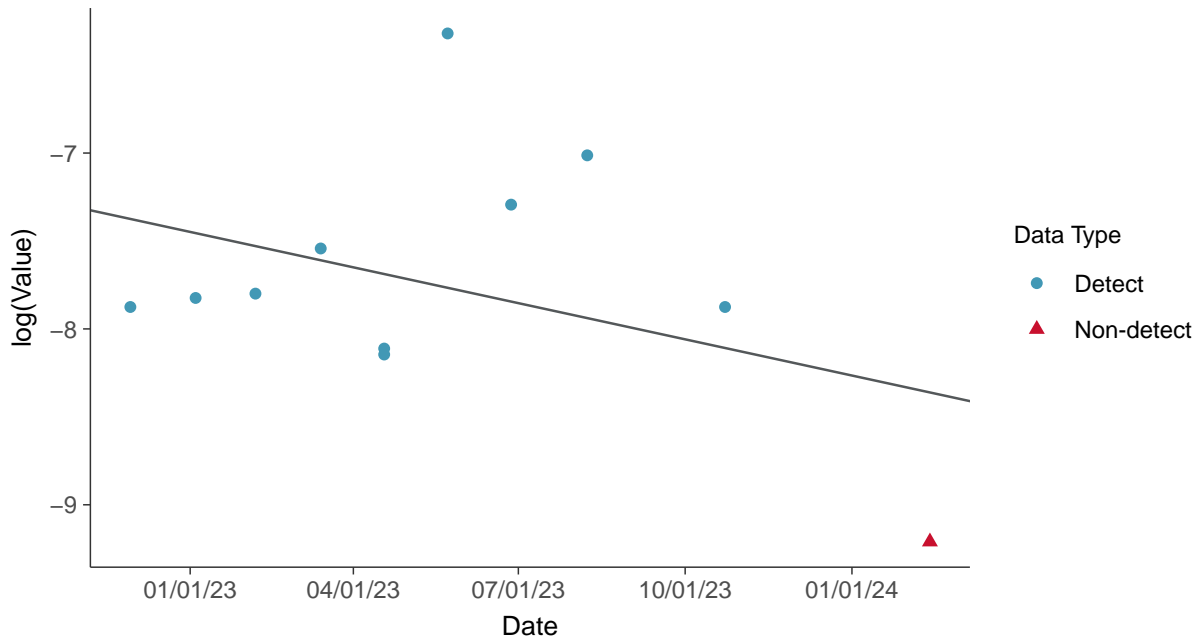
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-10 (mg/L)



Trend Regression: Lognormal MLE

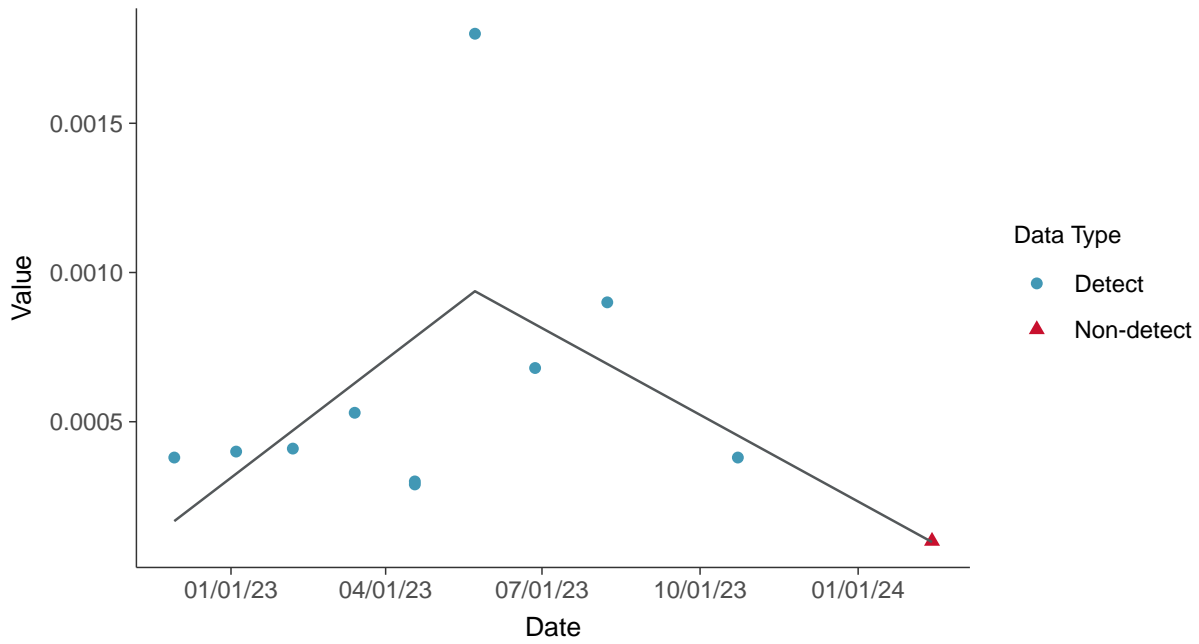
Cobalt, MW-10 (mg/L)





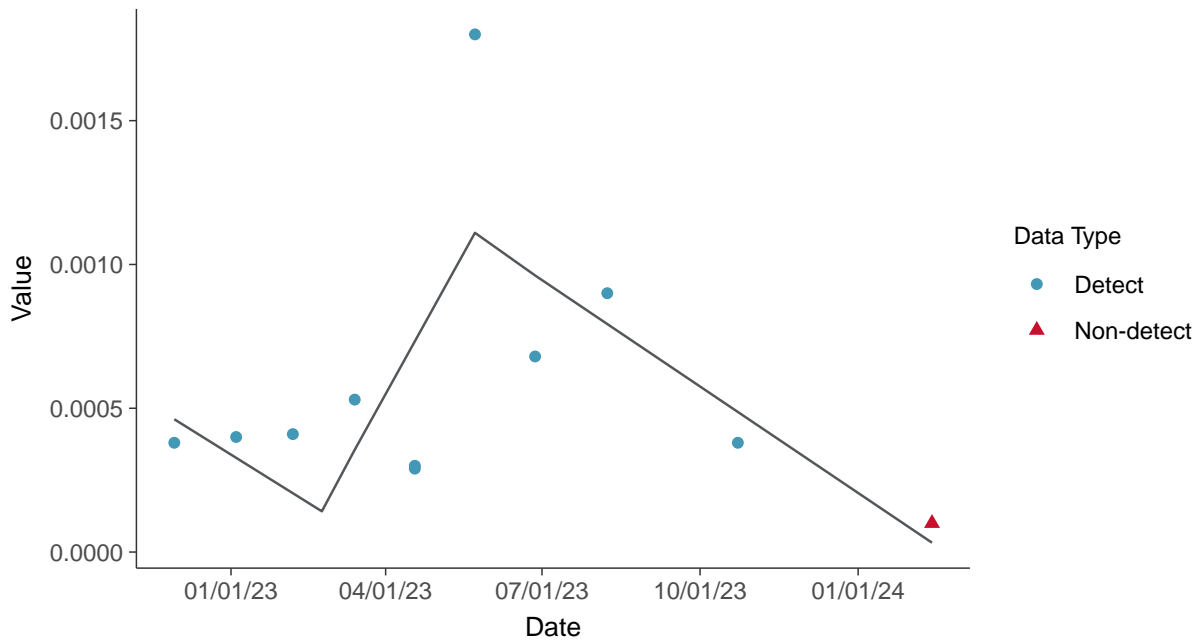
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-10 (mg/L)



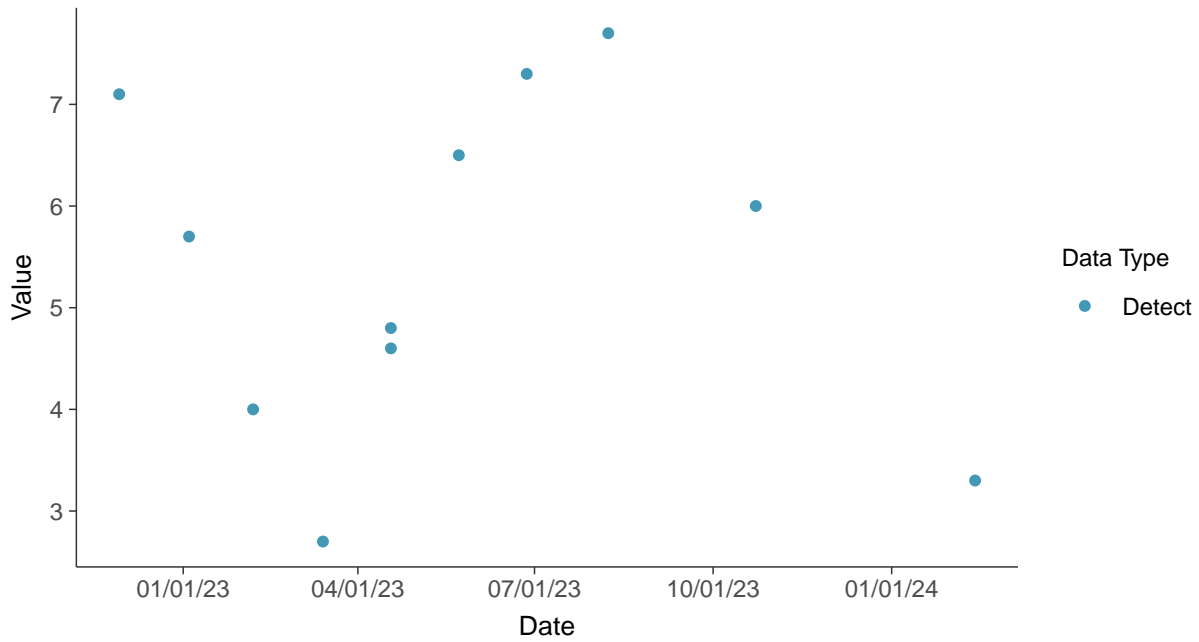


Appendix IV: Fluoride (App IV), MW-10

ID: 2_20_5_113

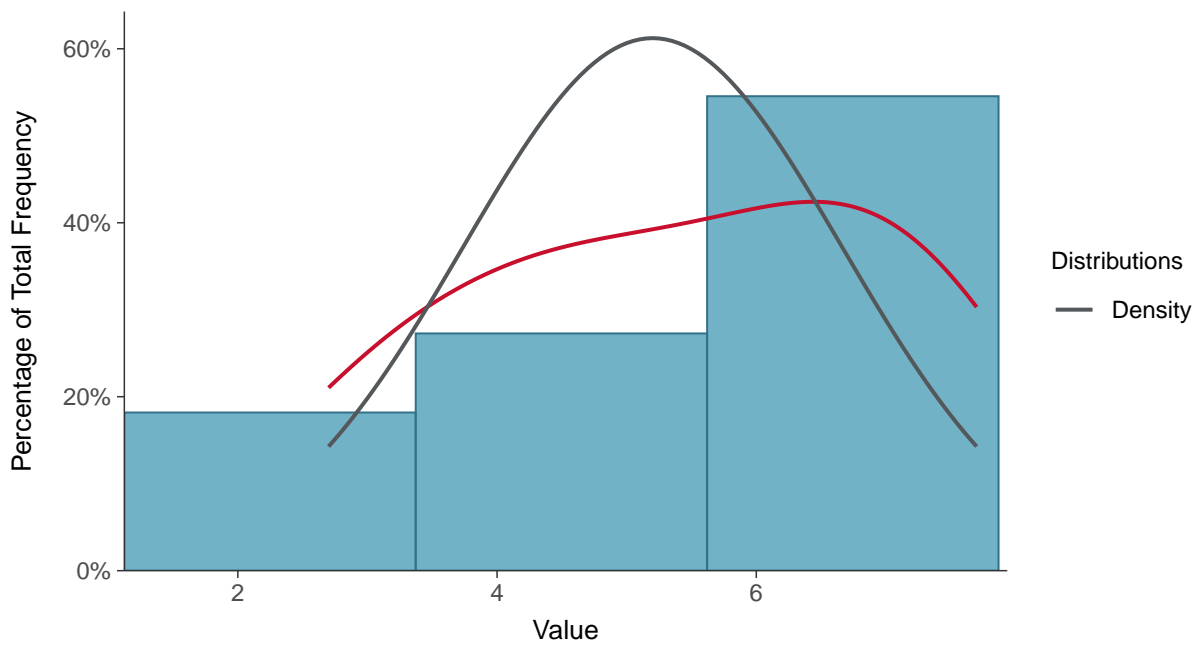
Scatter Plot

Fluoride (App IV), MW-10 (mg/L)



Histogram

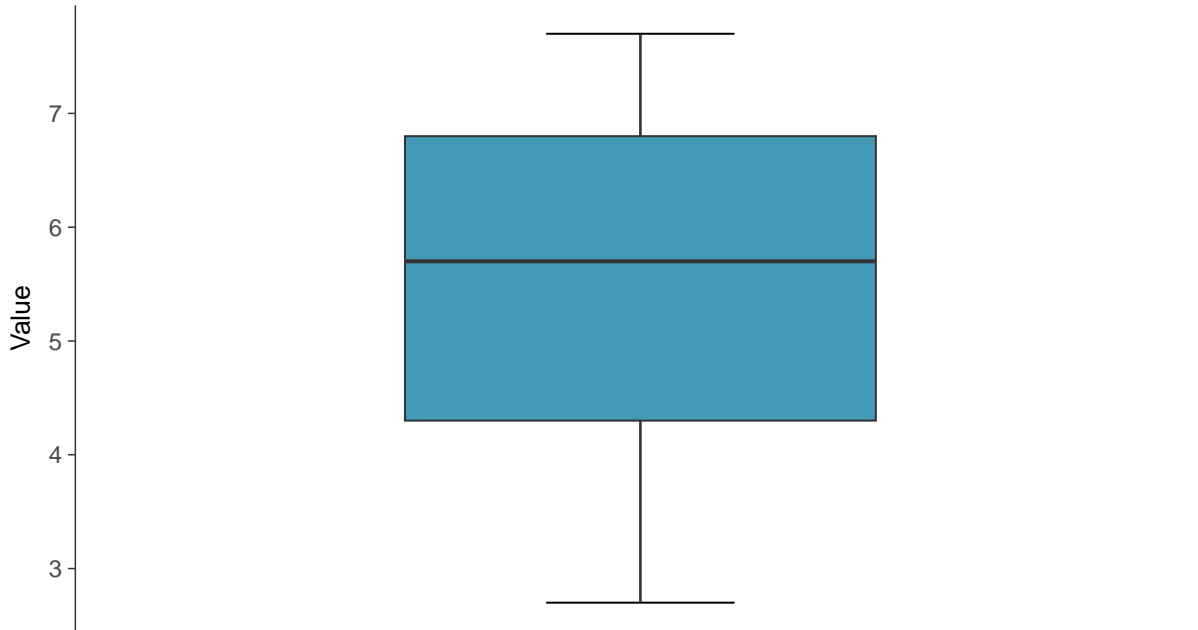
Fluoride (App IV), MW-10 (mg/L)





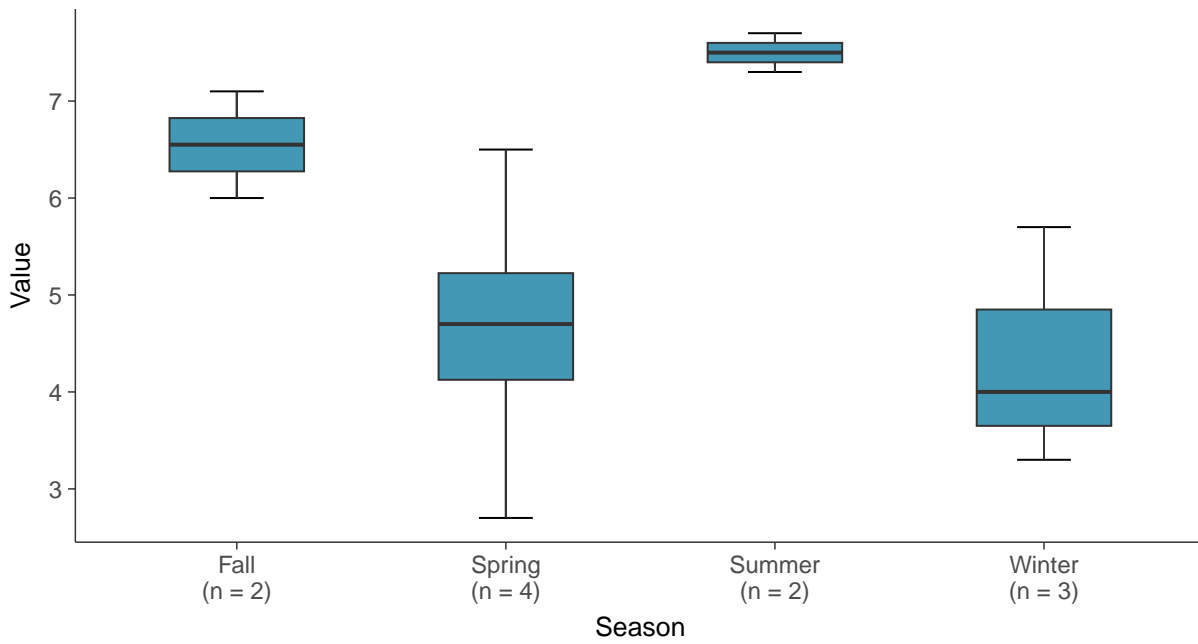
Boxplot

Fluoride (App IV), MW-10 (mg/L)



Boxplot by Season

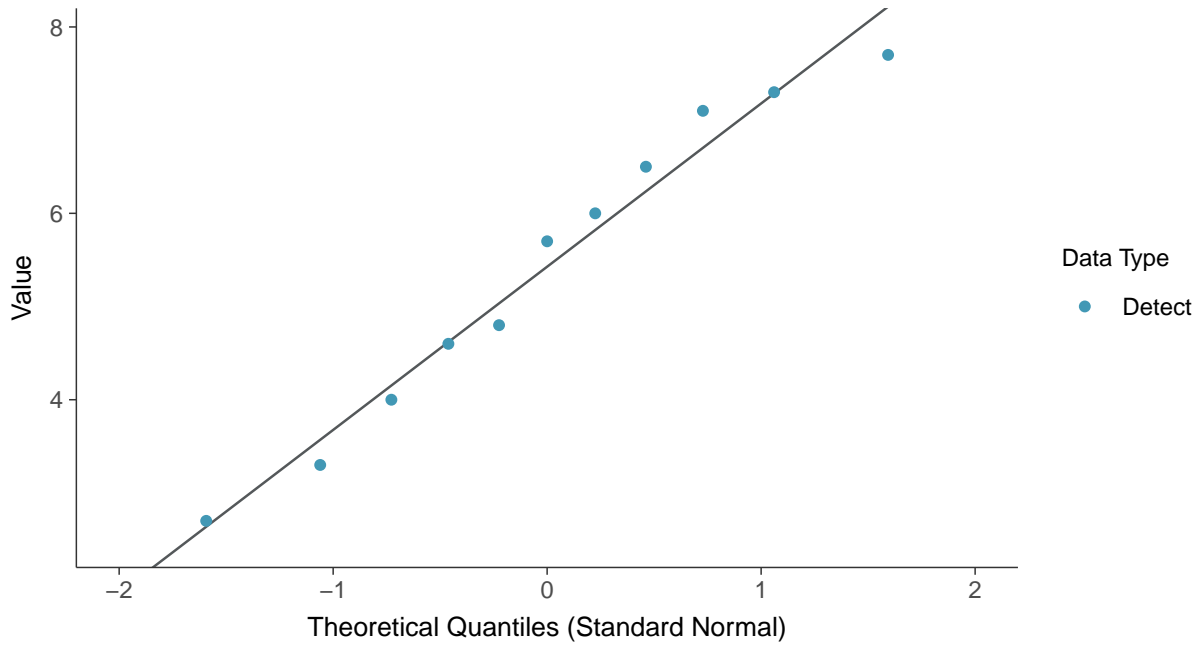
Fluoride (App IV), MW-10 (mg/L)





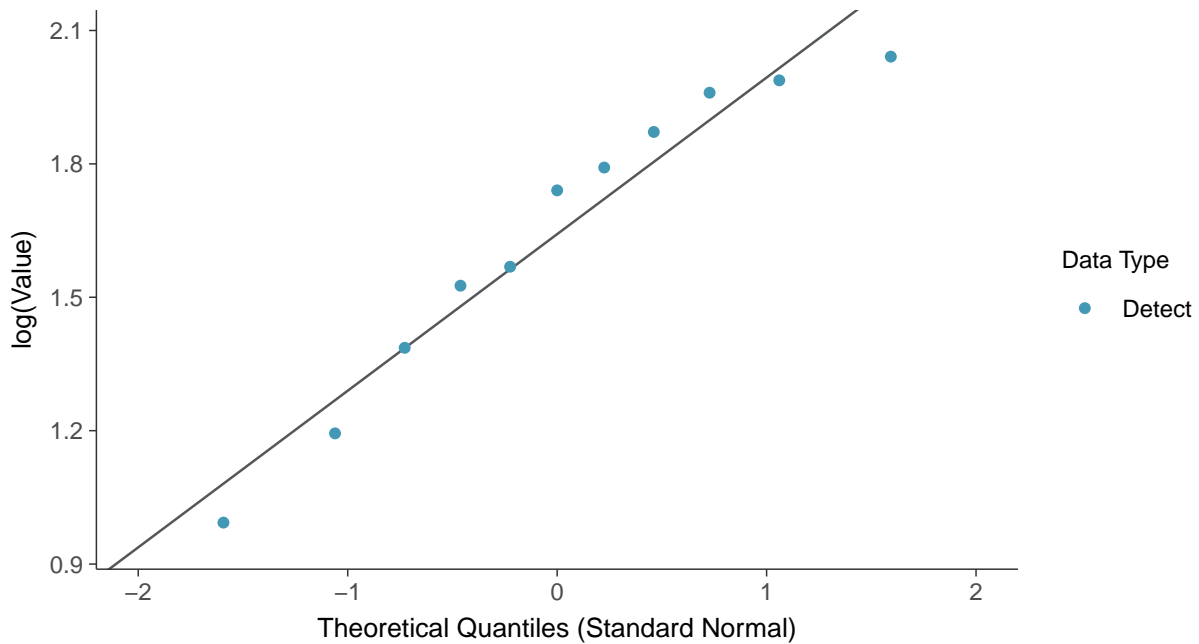
Normal Q-Q plot

Fluoride (App IV), MW-10 (mg/L)



Lognormal Q-Q plot

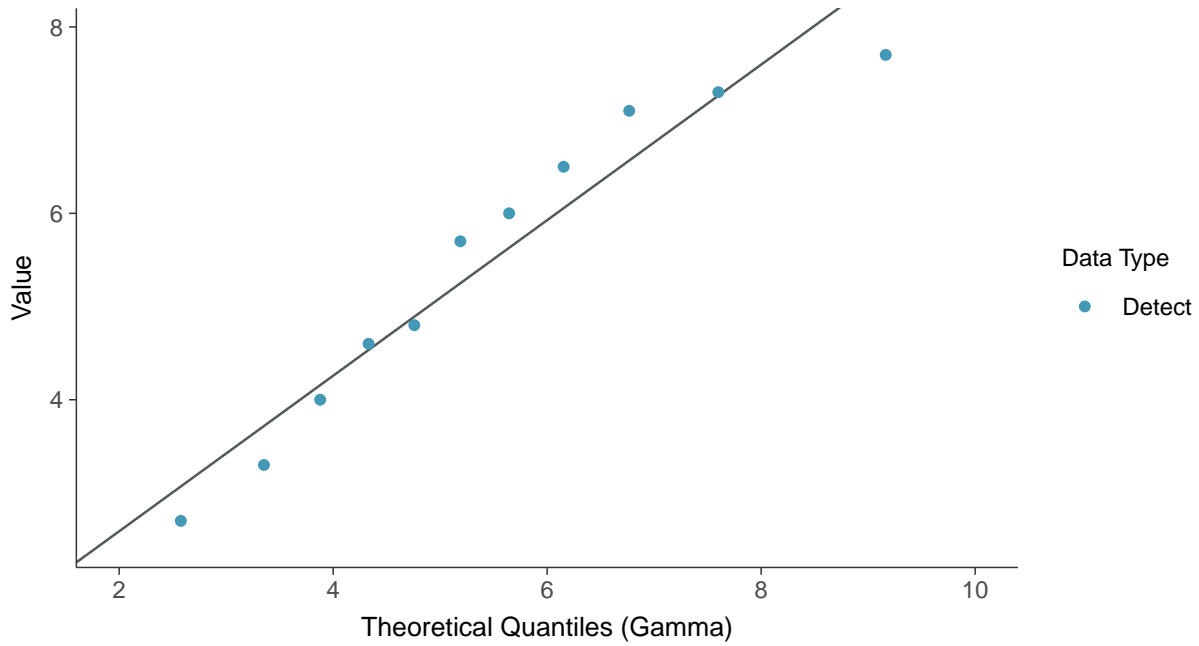
Fluoride (App IV), MW-10 (mg/L)





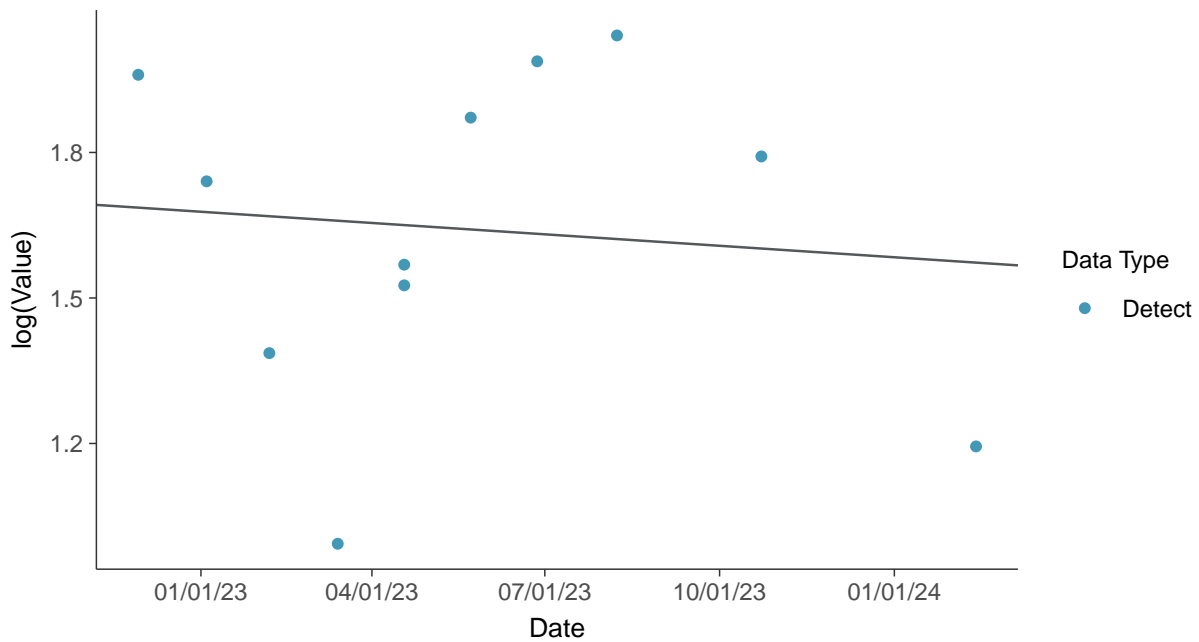
Gamma Q-Q plot

Fluoride (App IV), MW-10 (mg/L)



Trend Regression: Lognormal MLE

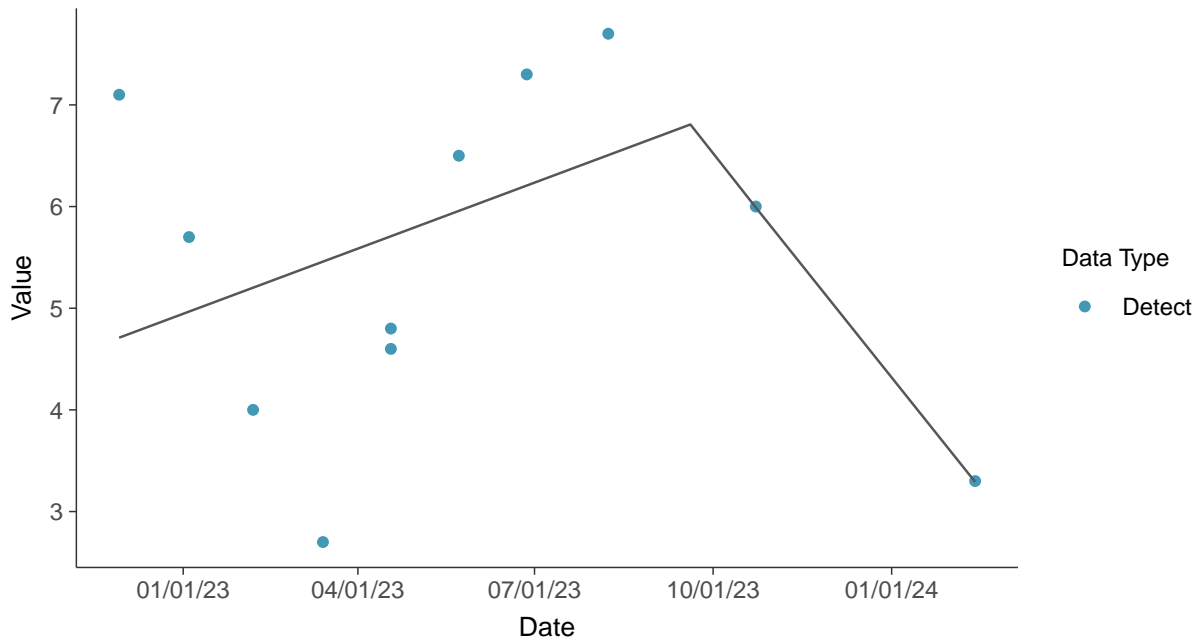
Fluoride (App IV), MW-10 (mg/L)





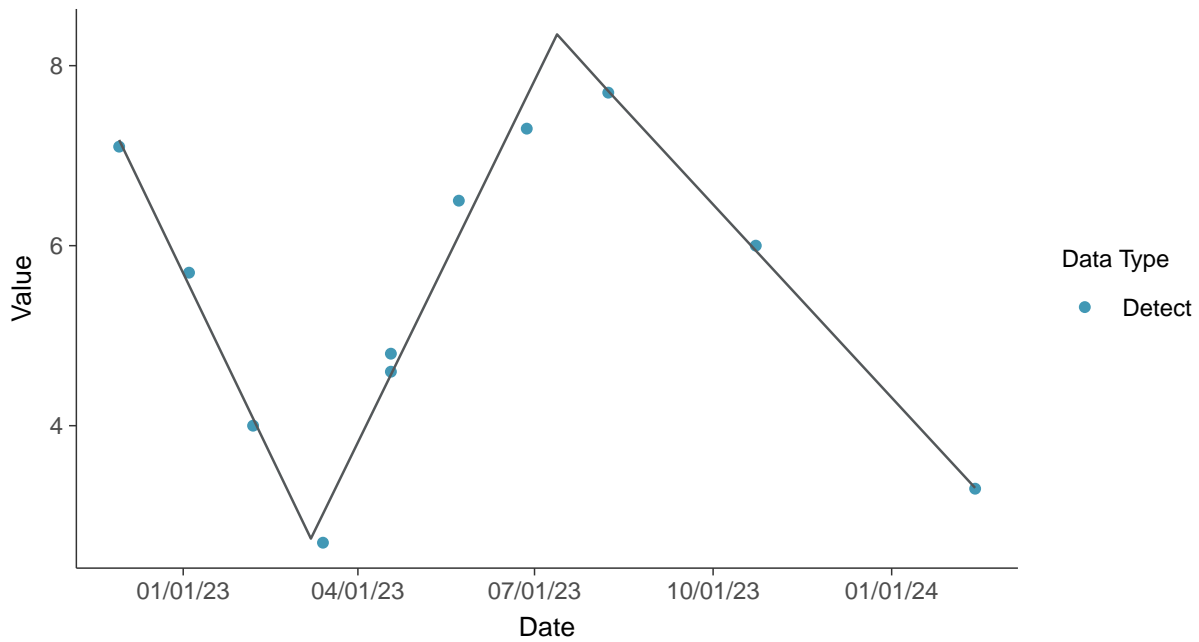
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

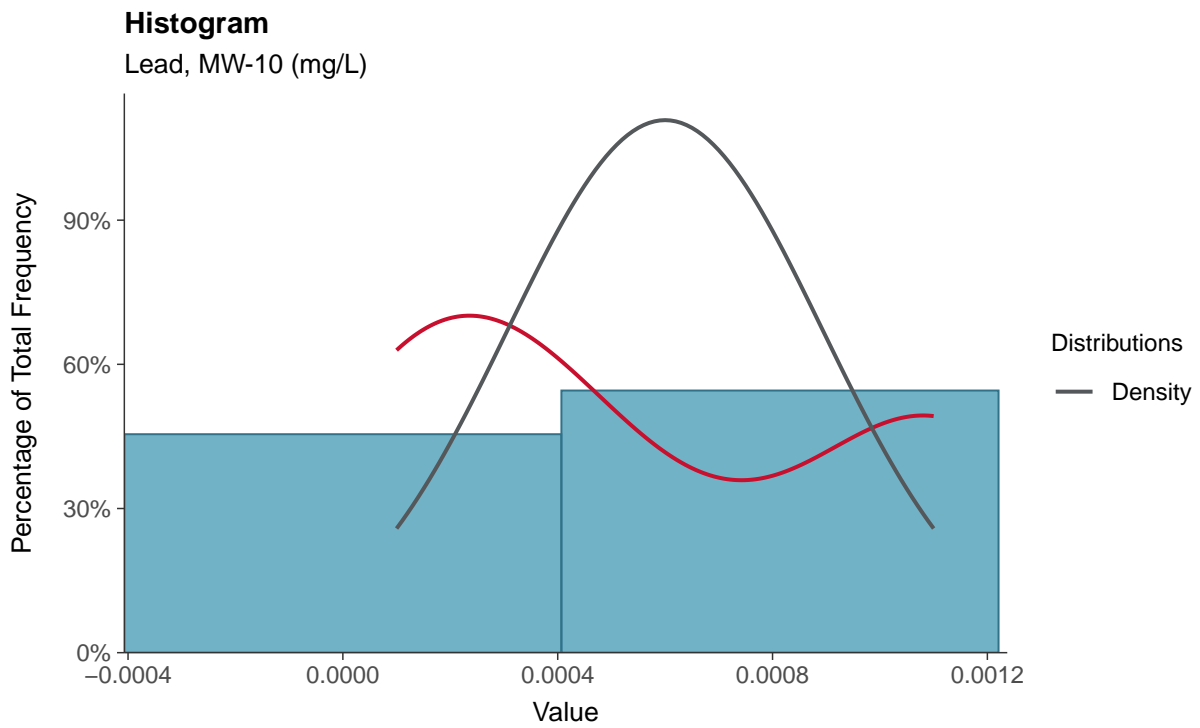
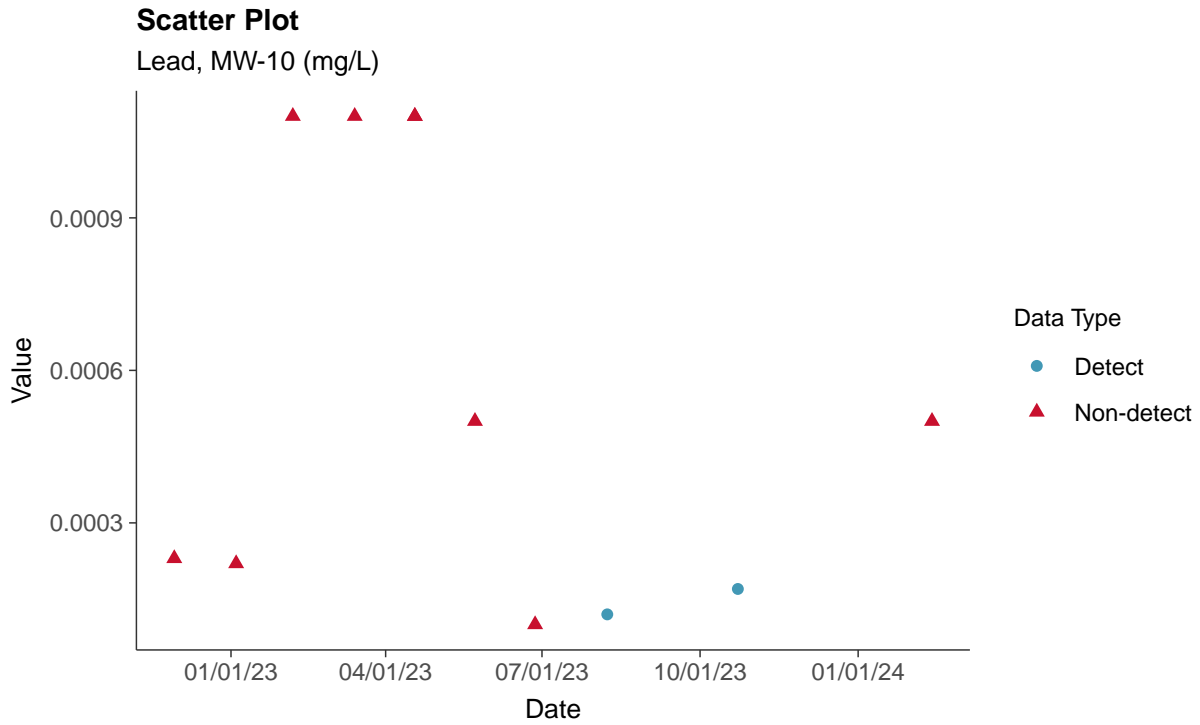
Fluoride (App IV), MW-10 (mg/L)





Appendix IV: Lead, MW-10

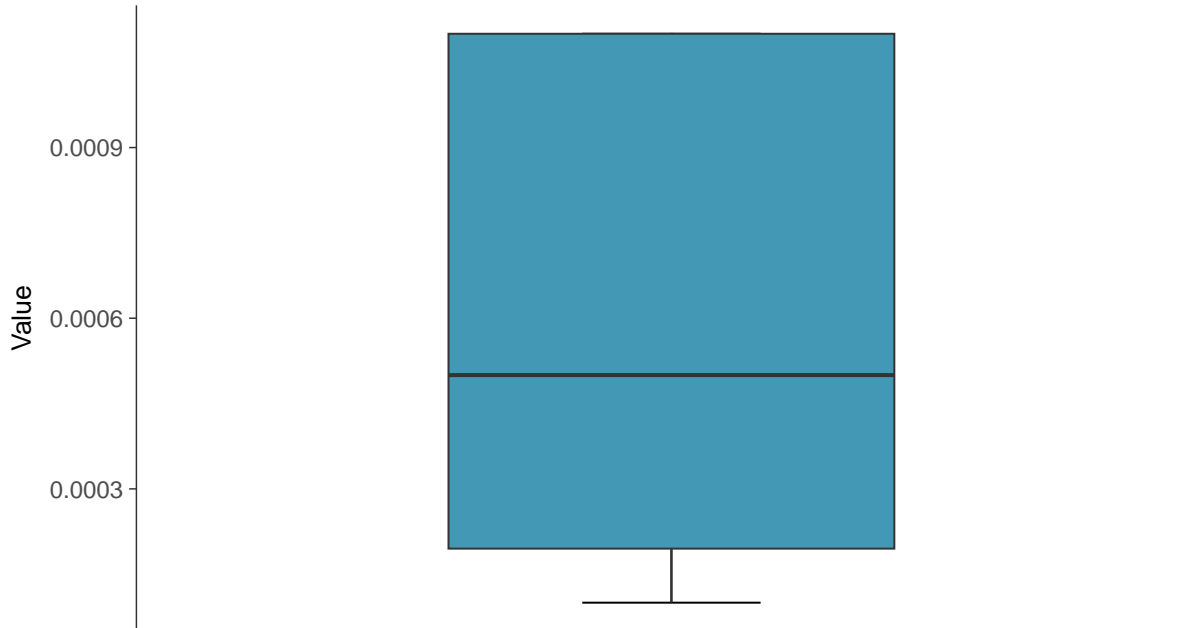
ID: 2_20_5_115





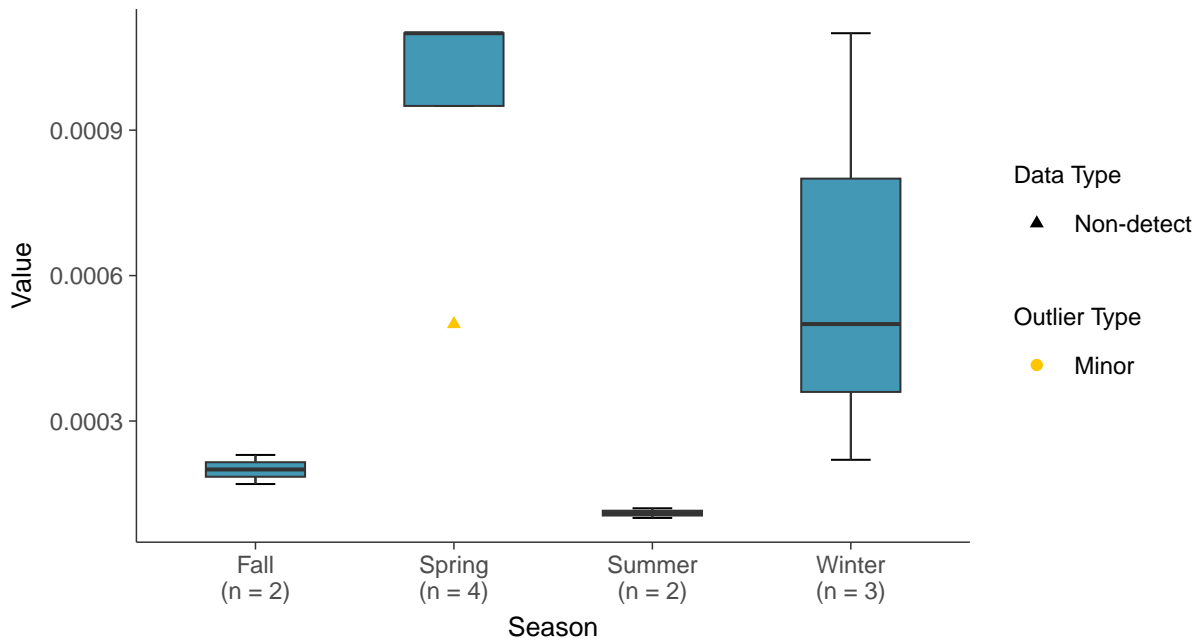
Boxplot

Lead, MW-10 (mg/L)



Boxplot by Season

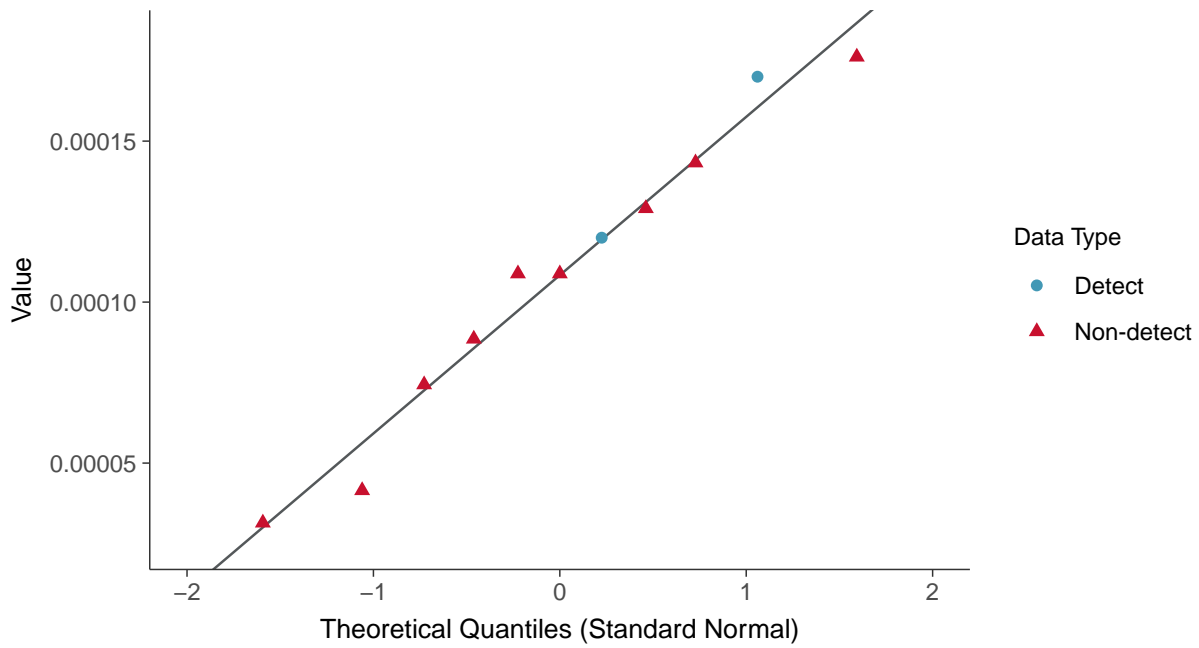
Lead, MW-10 (mg/L)





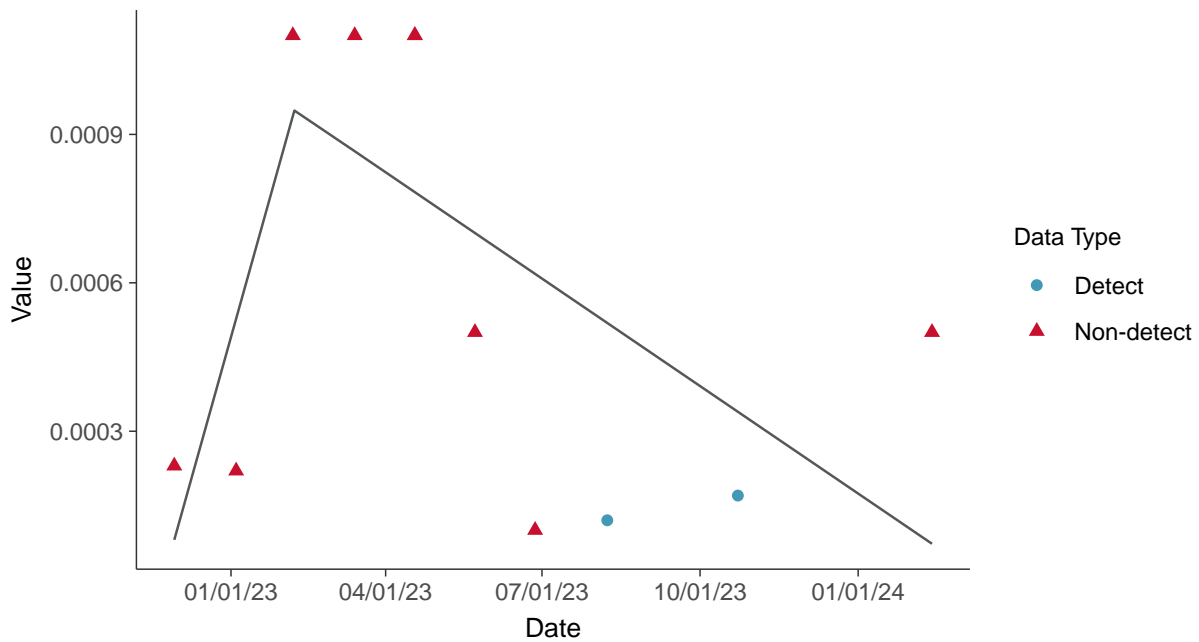
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear

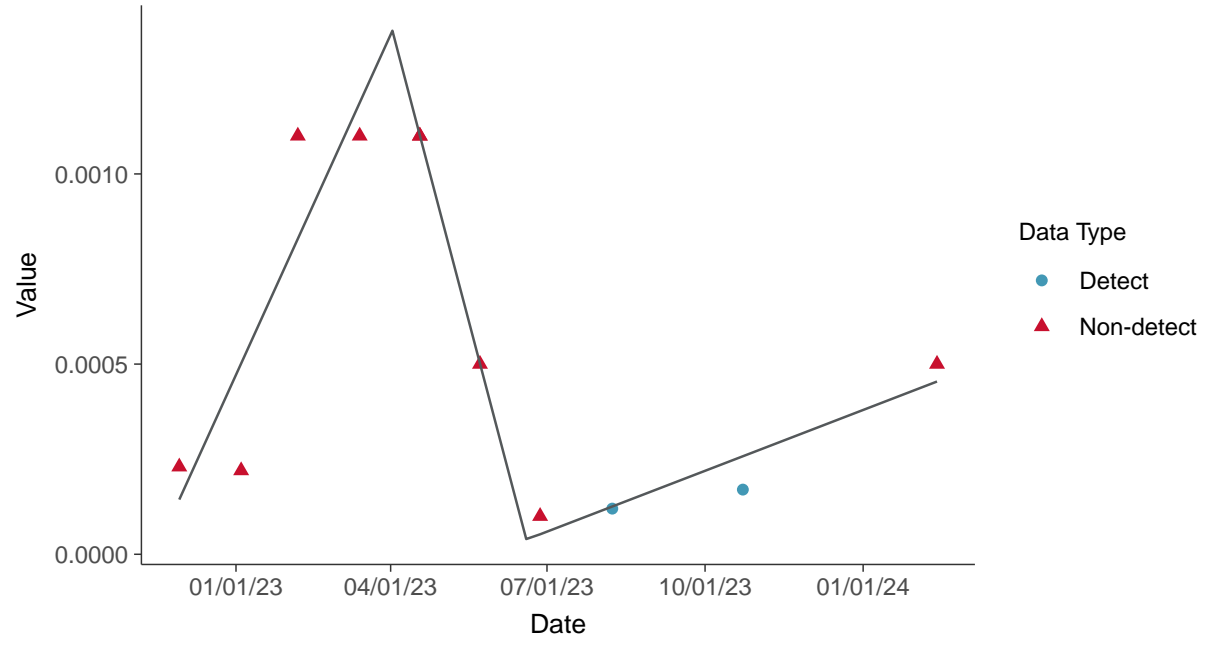
Lead, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

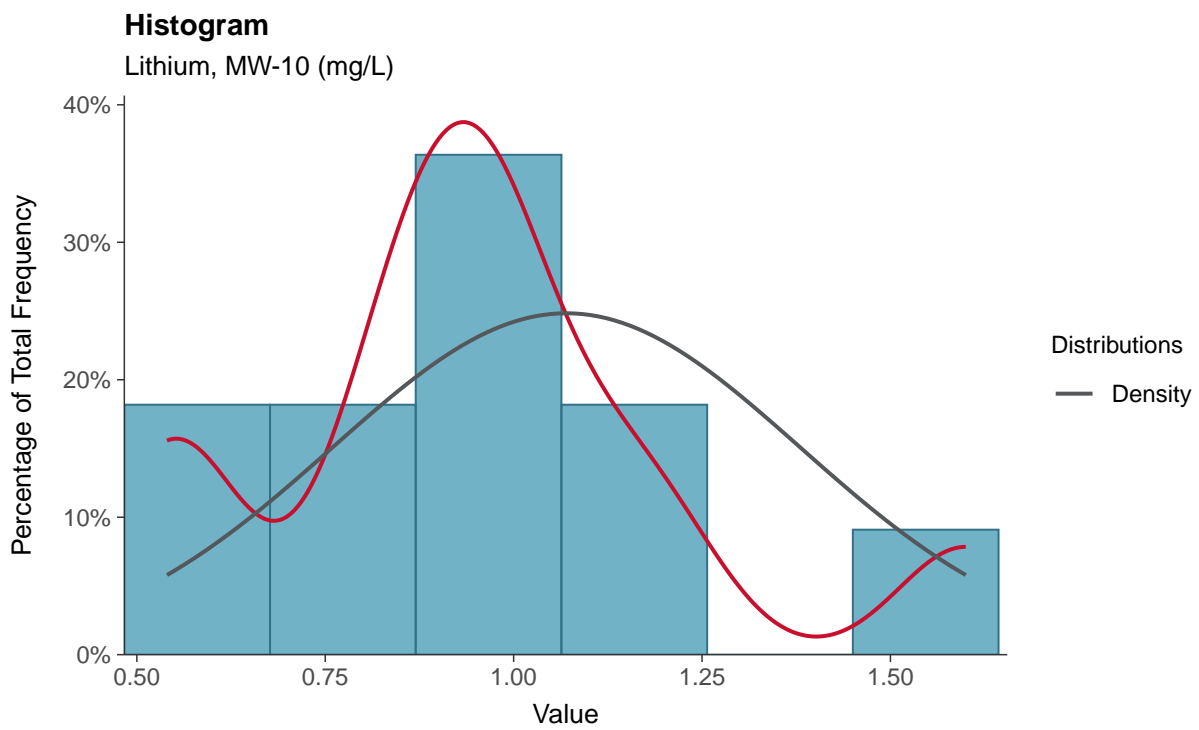
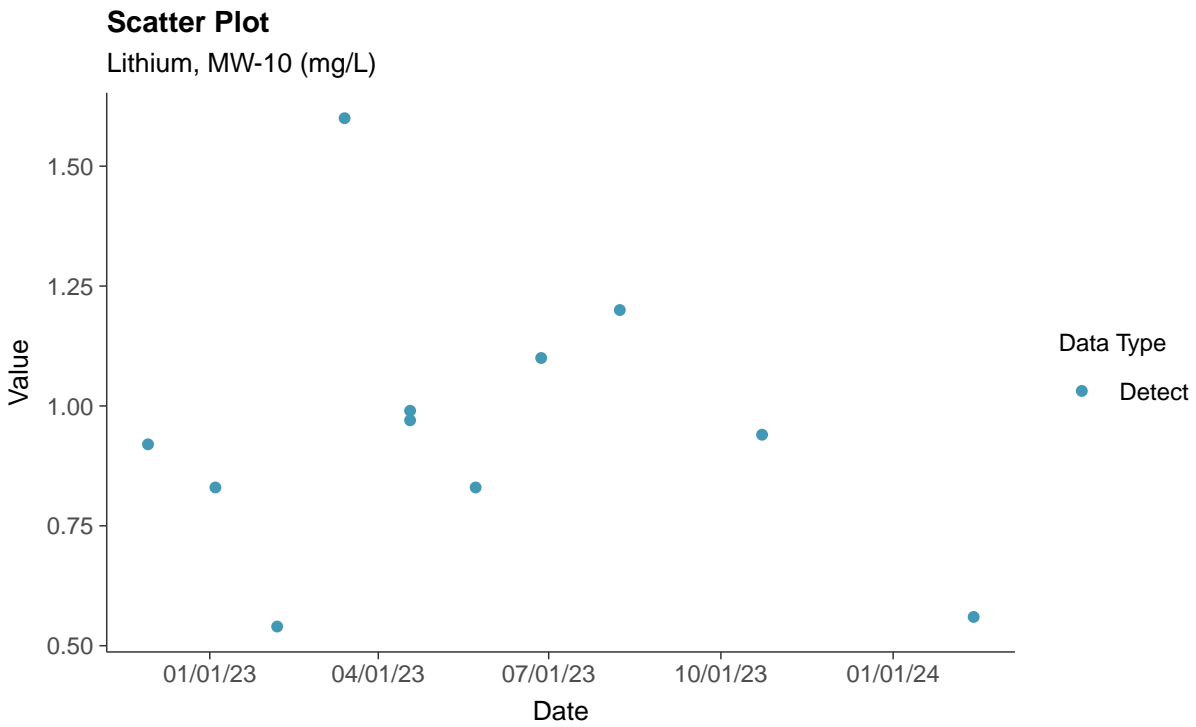
Lead, MW-10 (mg/L)





Appendix IV: Lithium, MW-10

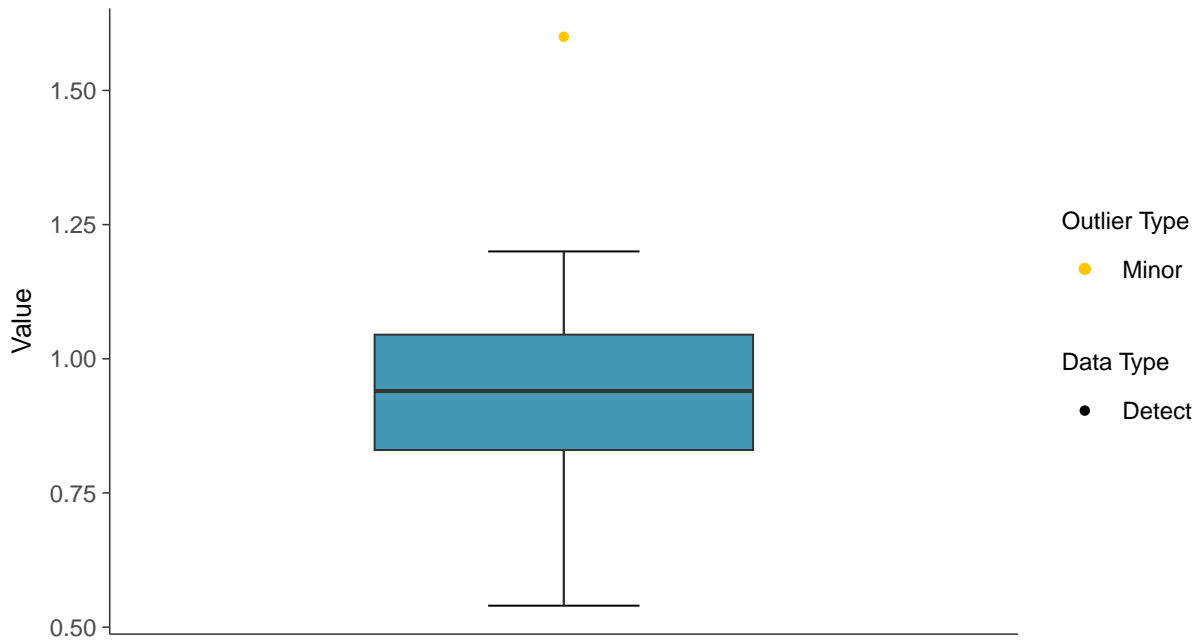
ID: 2_20_5_116





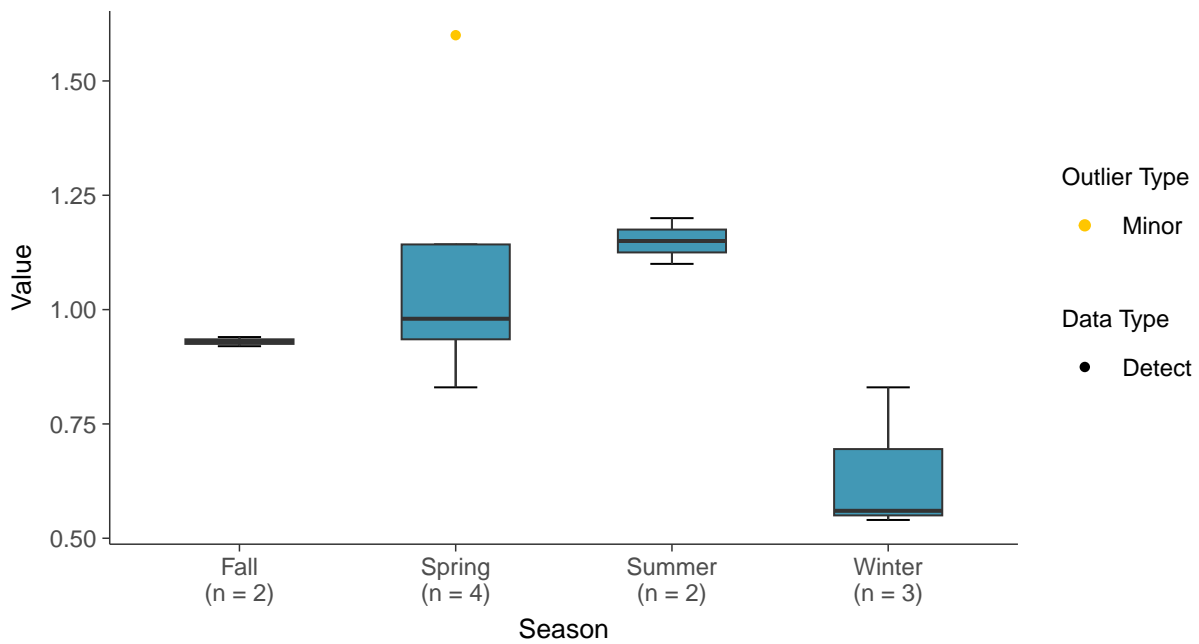
Boxplot

Lithium, MW-10 (mg/L)



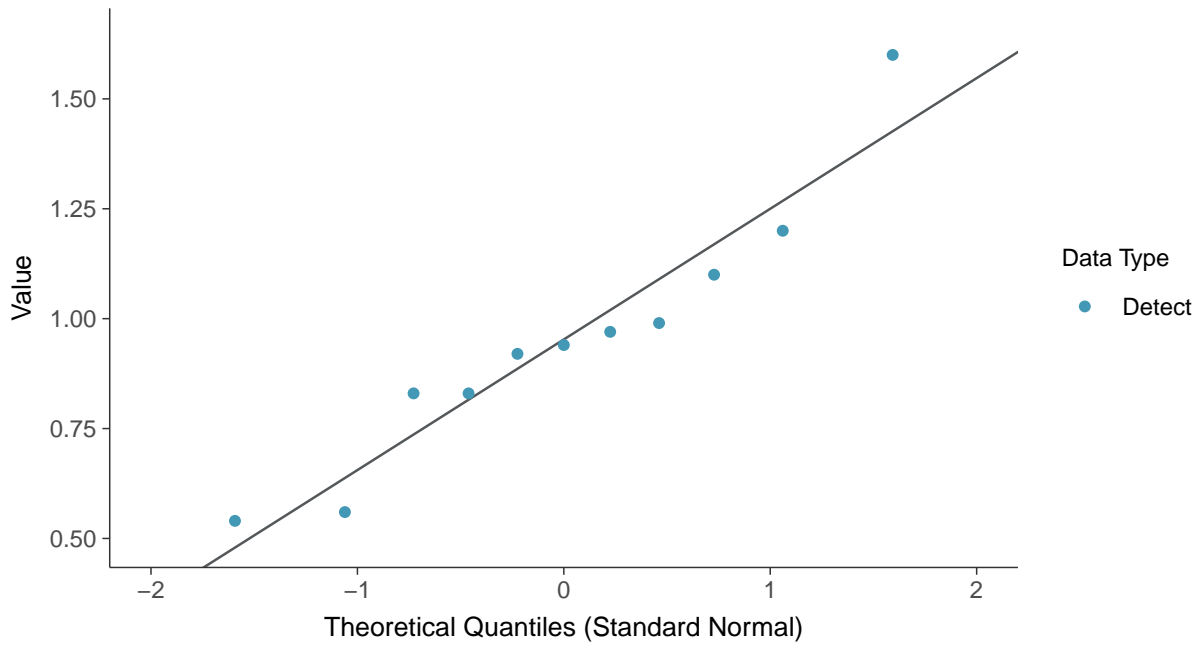
Boxplot by Season

Lithium, MW-10 (mg/L)

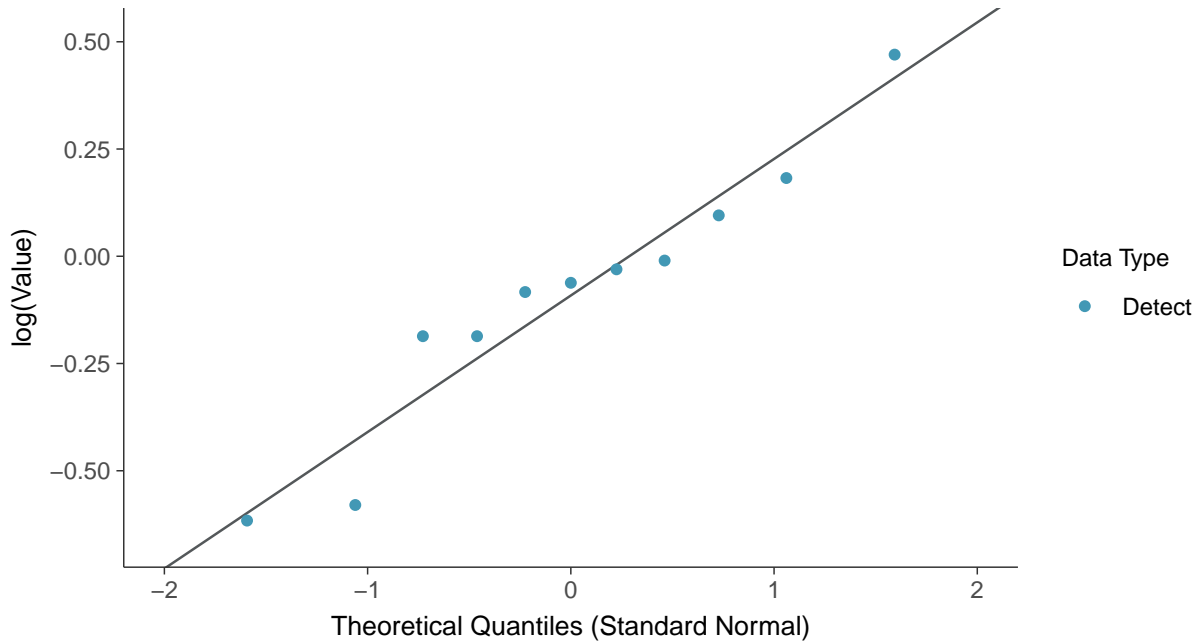




Normal Q-Q plot
Lithium, MW-10 (mg/L)

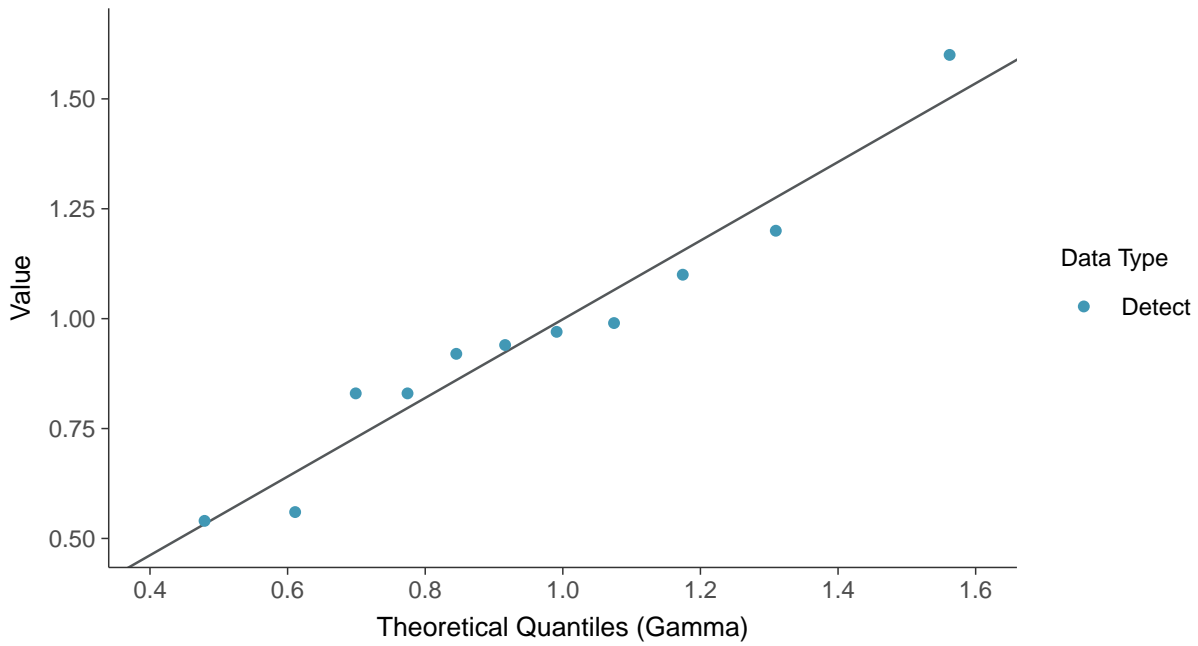


Lognormal Q-Q plot
Lithium, MW-10 (mg/L)

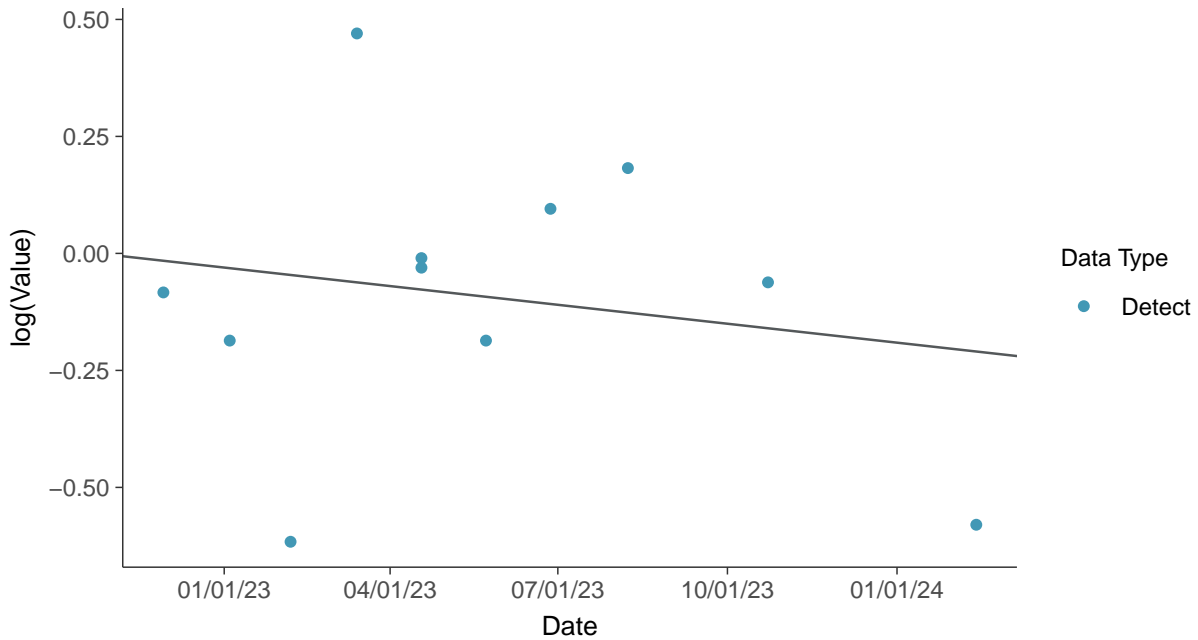




Gamma Q-Q plot
Lithium, MW-10 (mg/L)



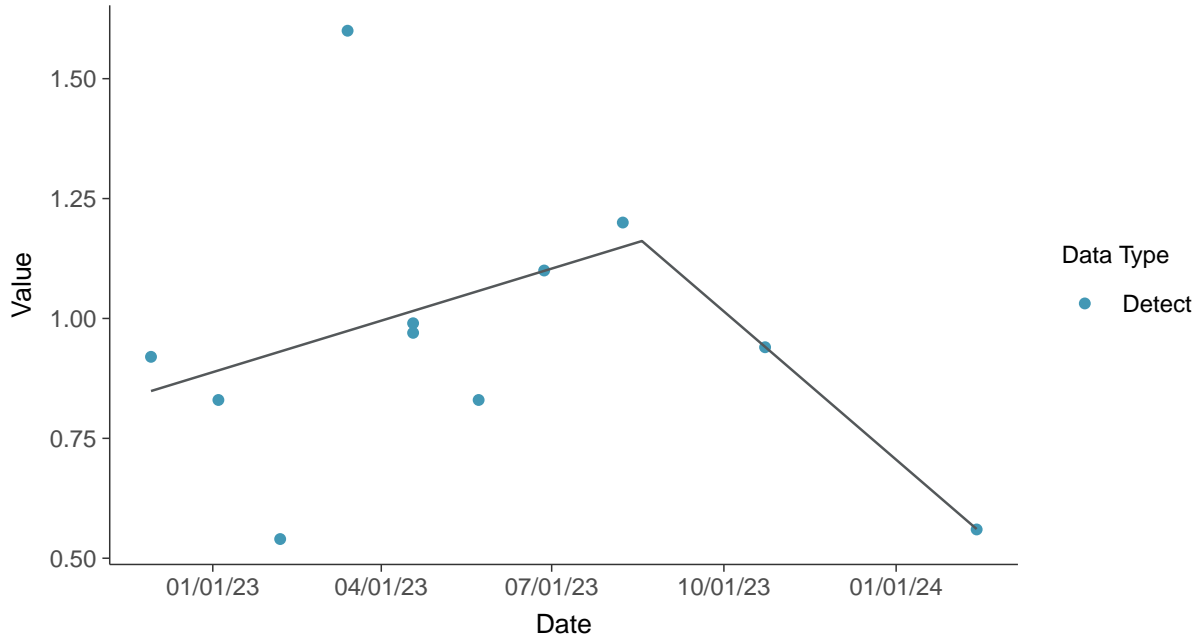
Trend Regression: Lognormal MLE
Lithium, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear

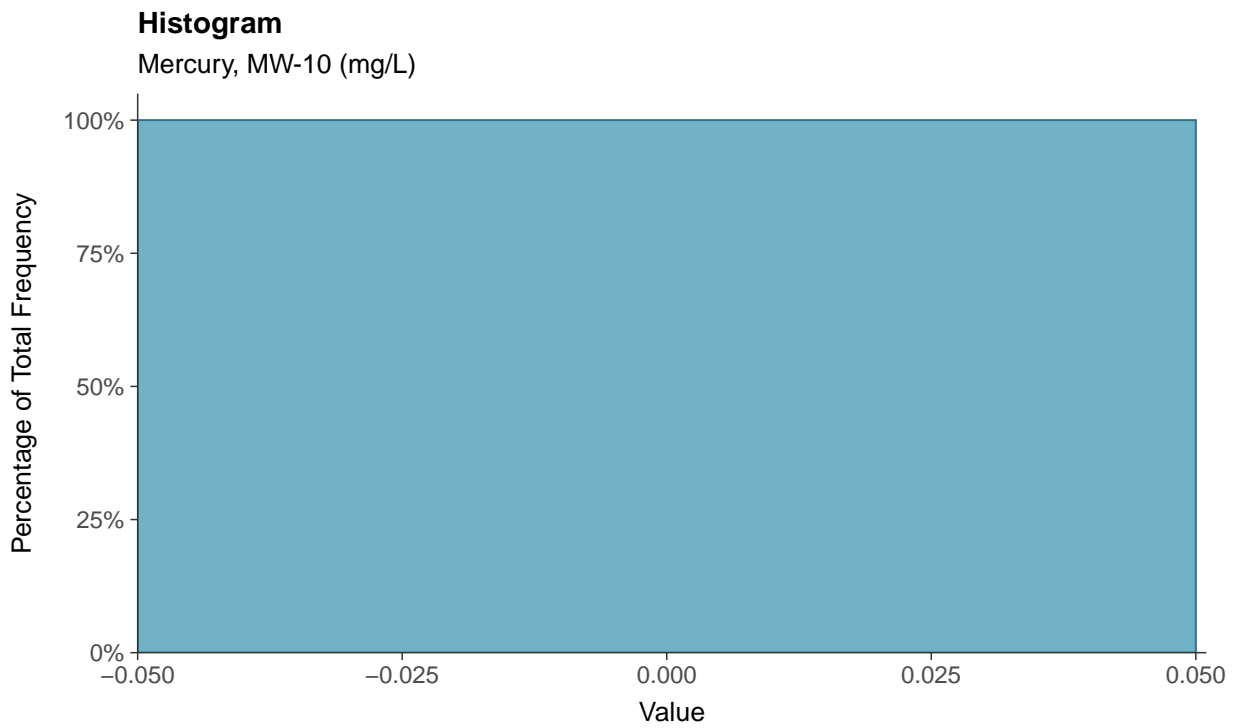
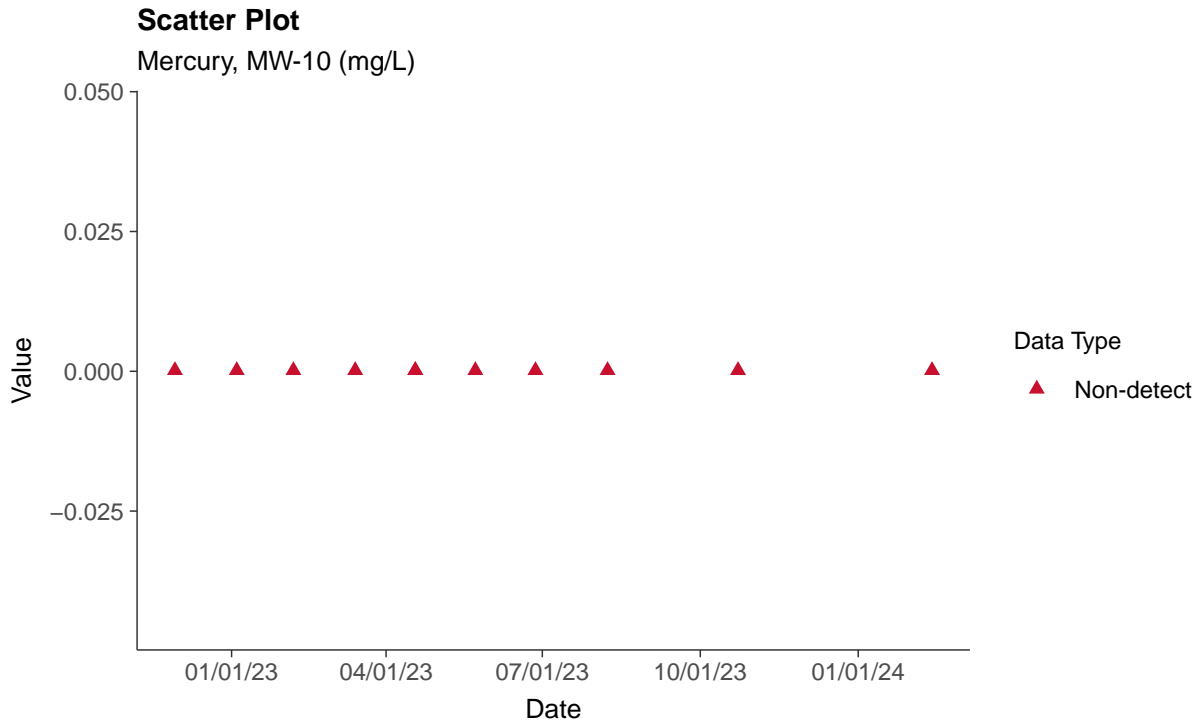
Lithium, MW-10 (mg/L)





Appendix IV: Mercury, MW-10

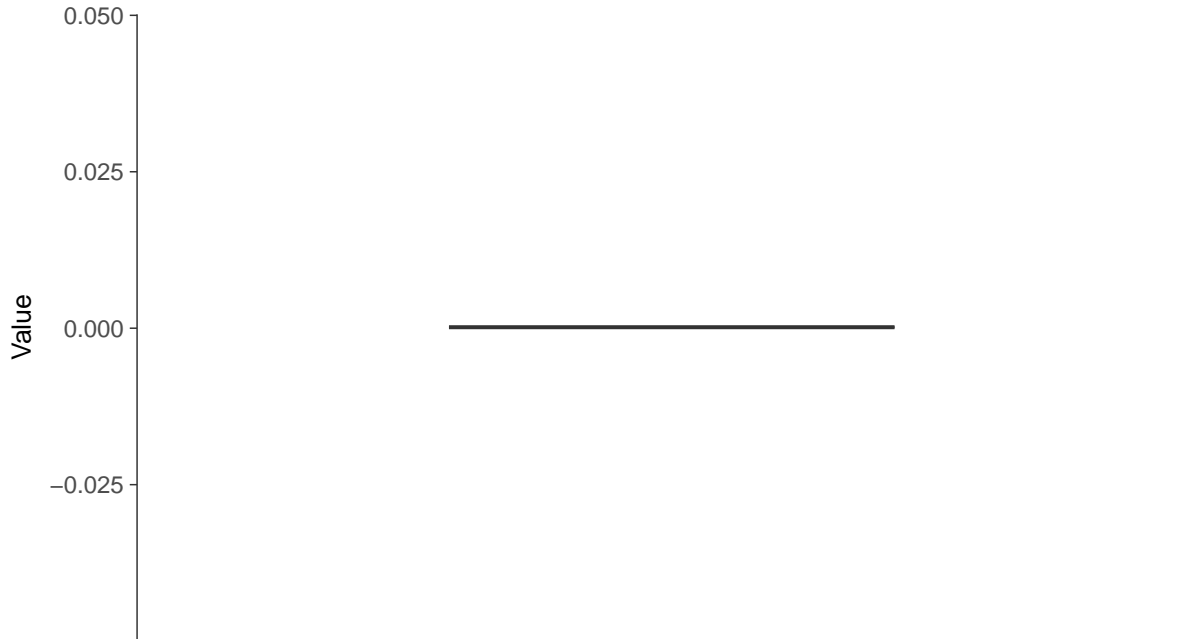
ID: 2_20_5_117





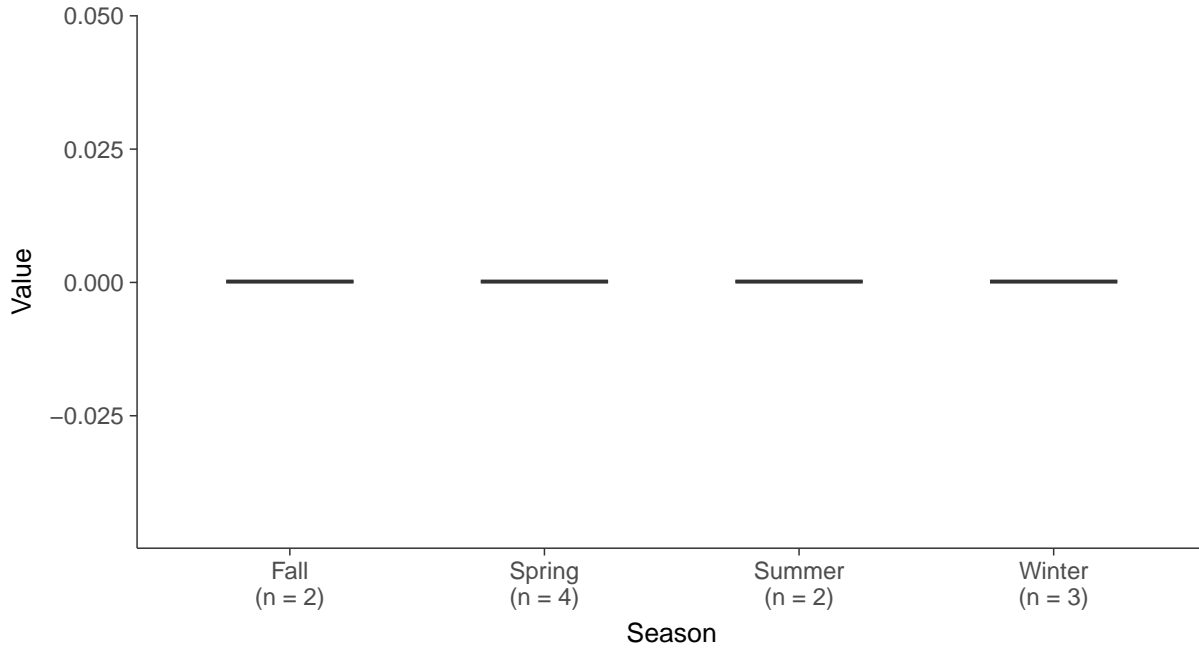
Boxplot

Mercury, MW-10 (mg/L)



Boxplot by Season

Mercury, MW-10 (mg/L)



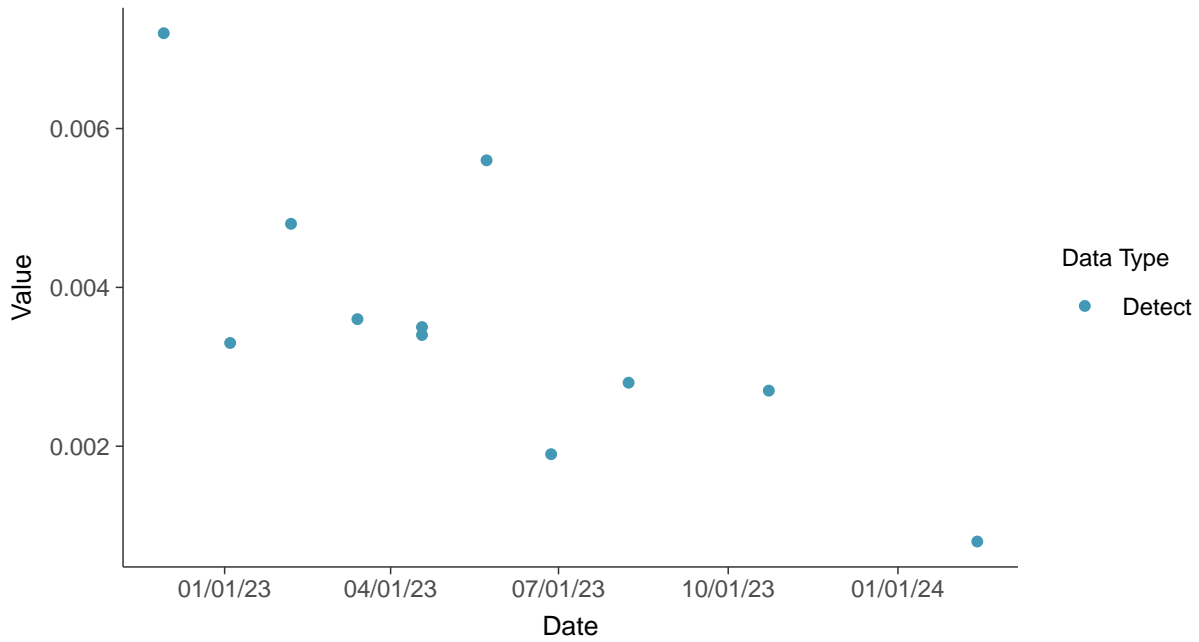


Appendix IV: Molybdenum, MW-10

ID: 2_20_5_118

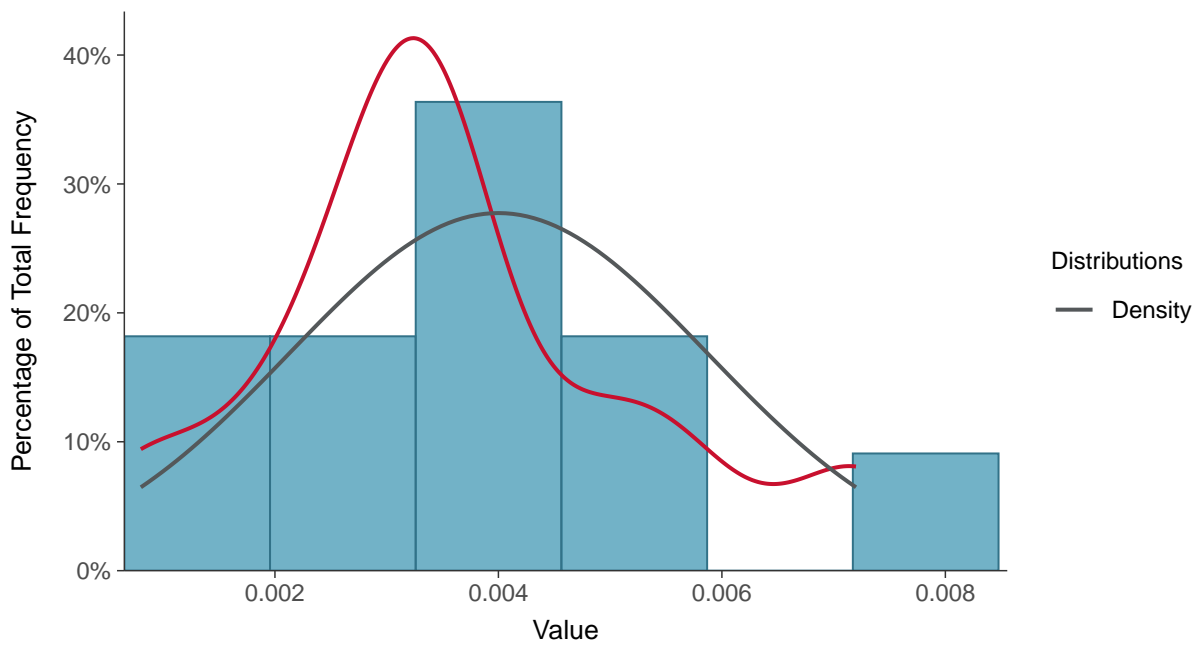
Scatter Plot

Molybdenum, MW-10 (mg/L)



Histogram

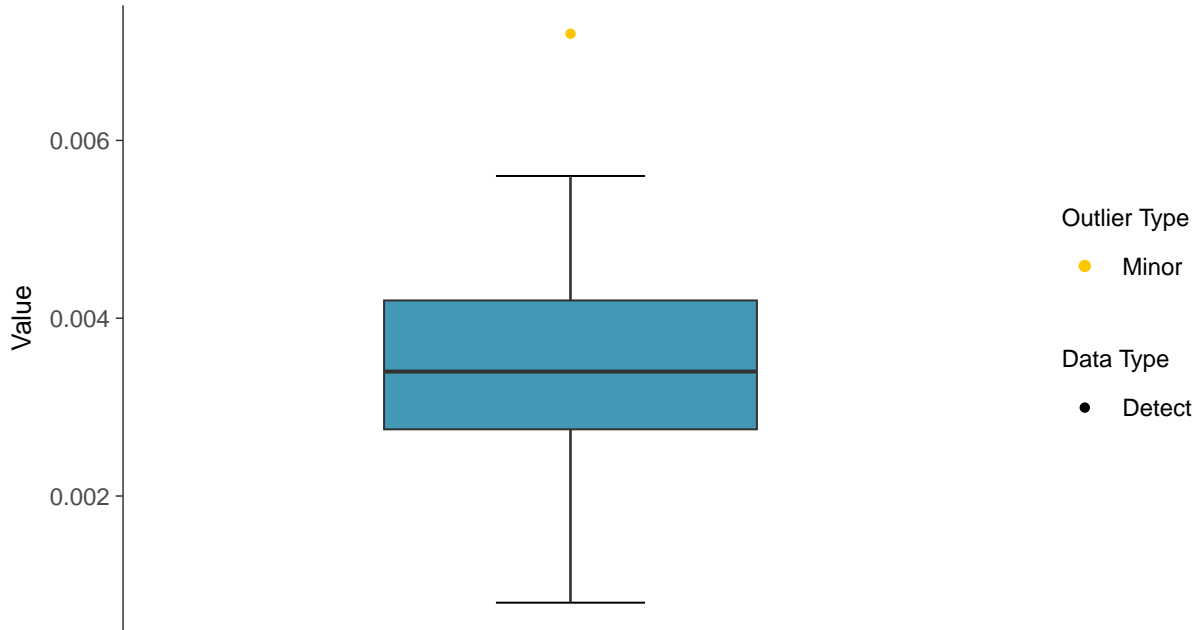
Molybdenum, MW-10 (mg/L)





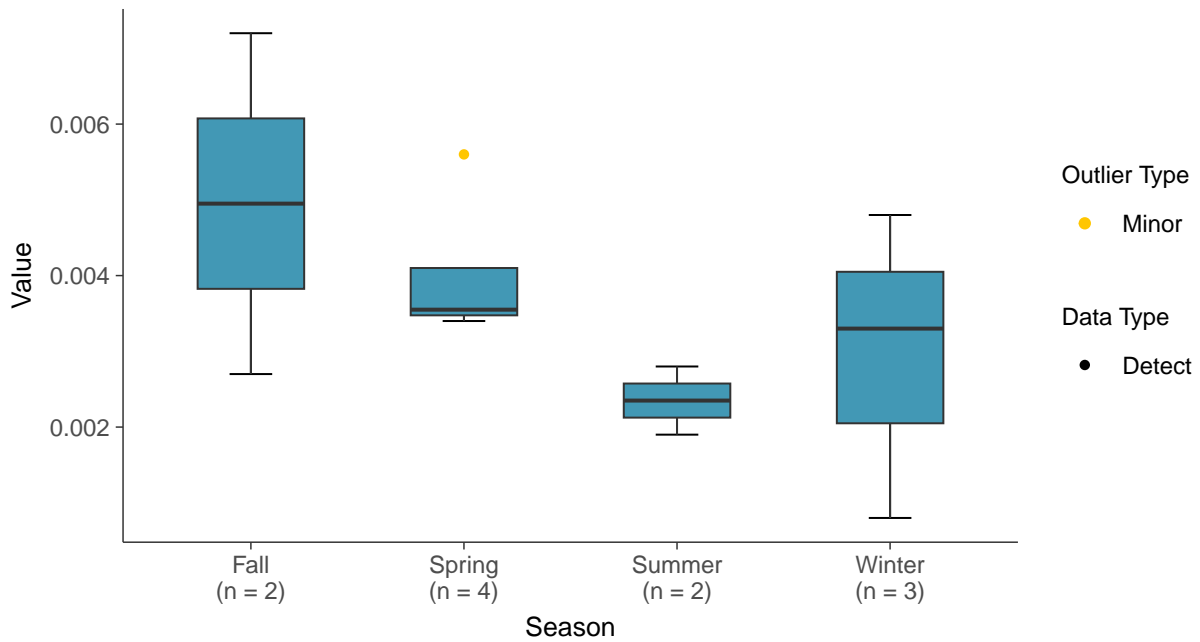
Boxplot

Molybdenum, MW-10 (mg/L)



Boxplot by Season

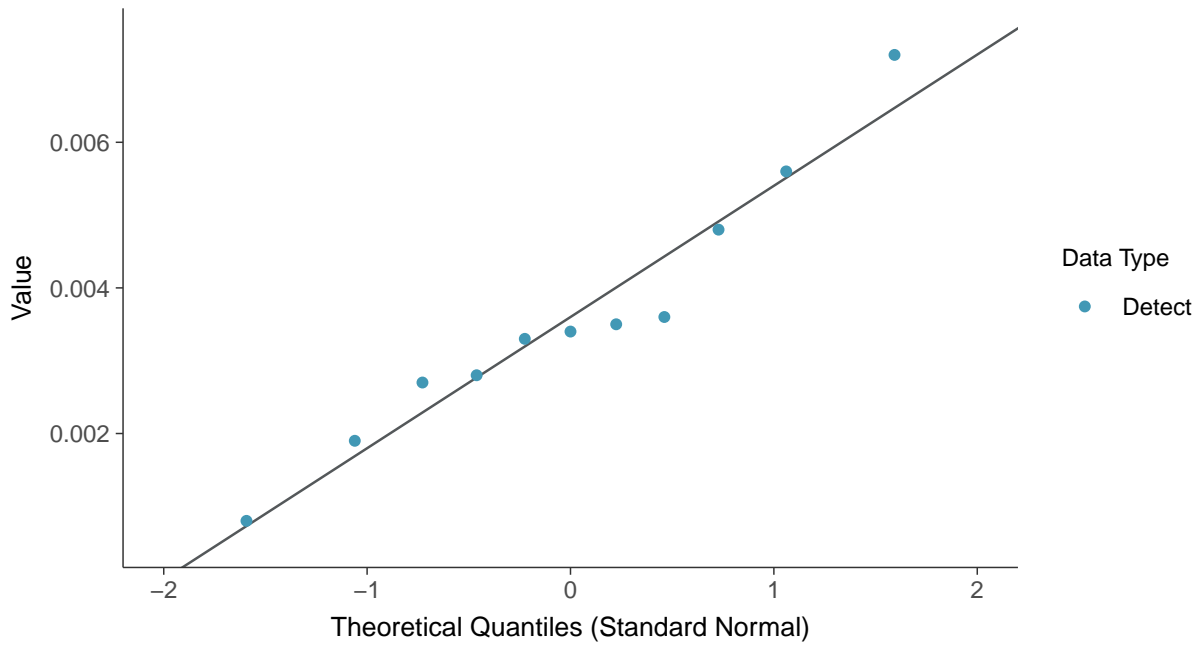
Molybdenum, MW-10 (mg/L)





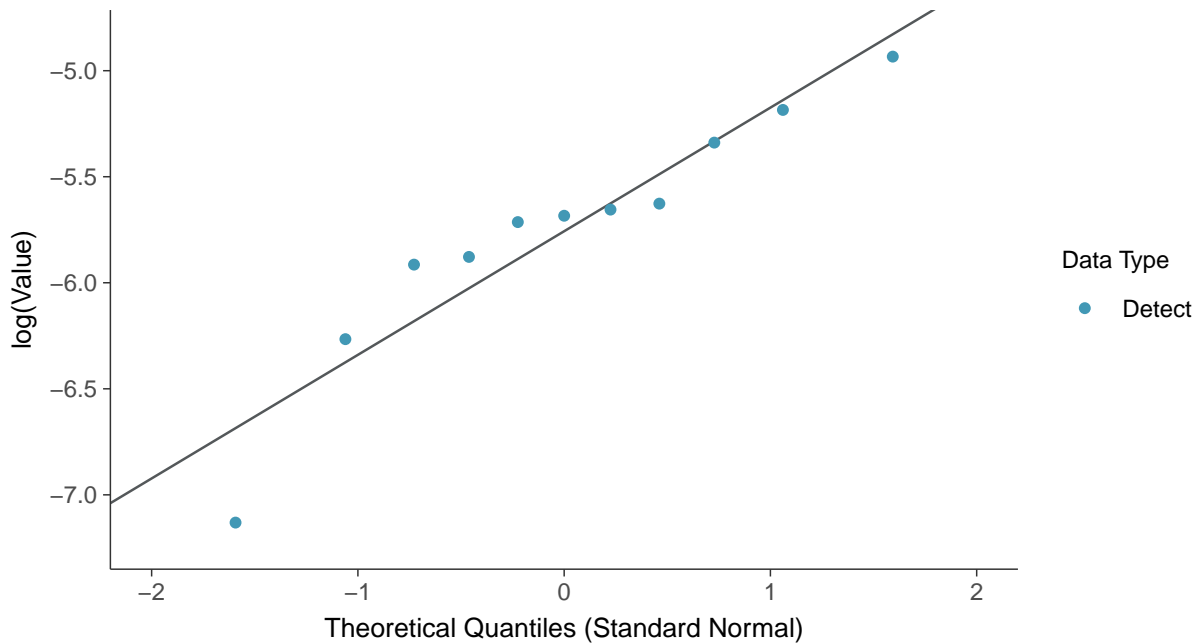
Normal Q-Q plot

Molybdenum, MW-10 (mg/L)



Lognormal Q-Q plot

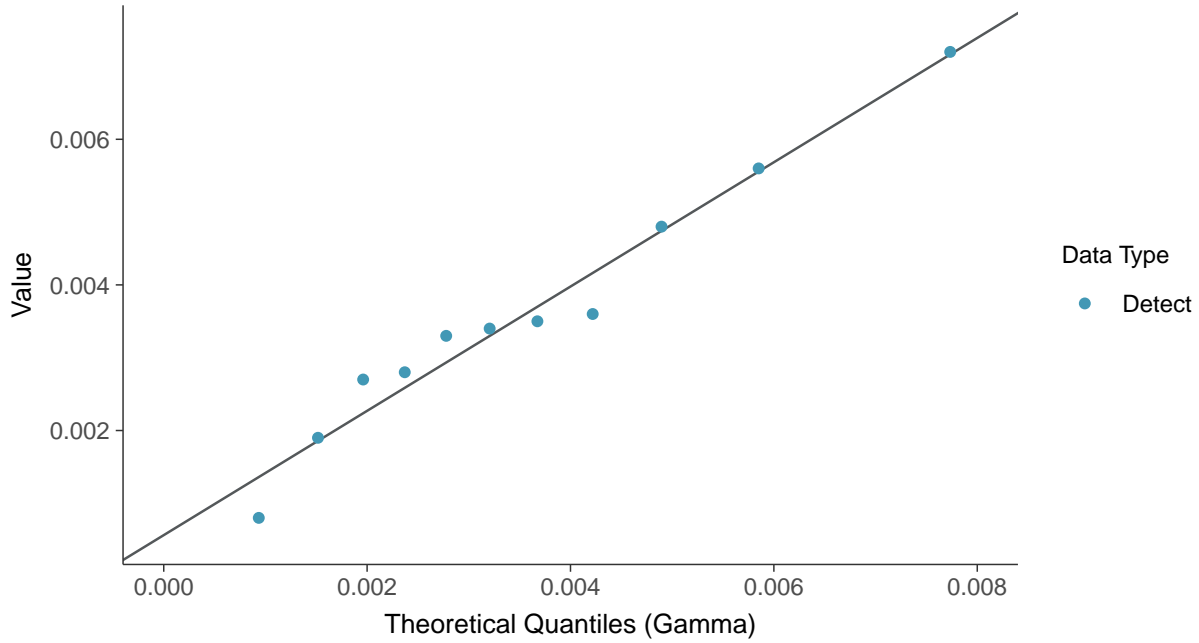
Molybdenum, MW-10 (mg/L)





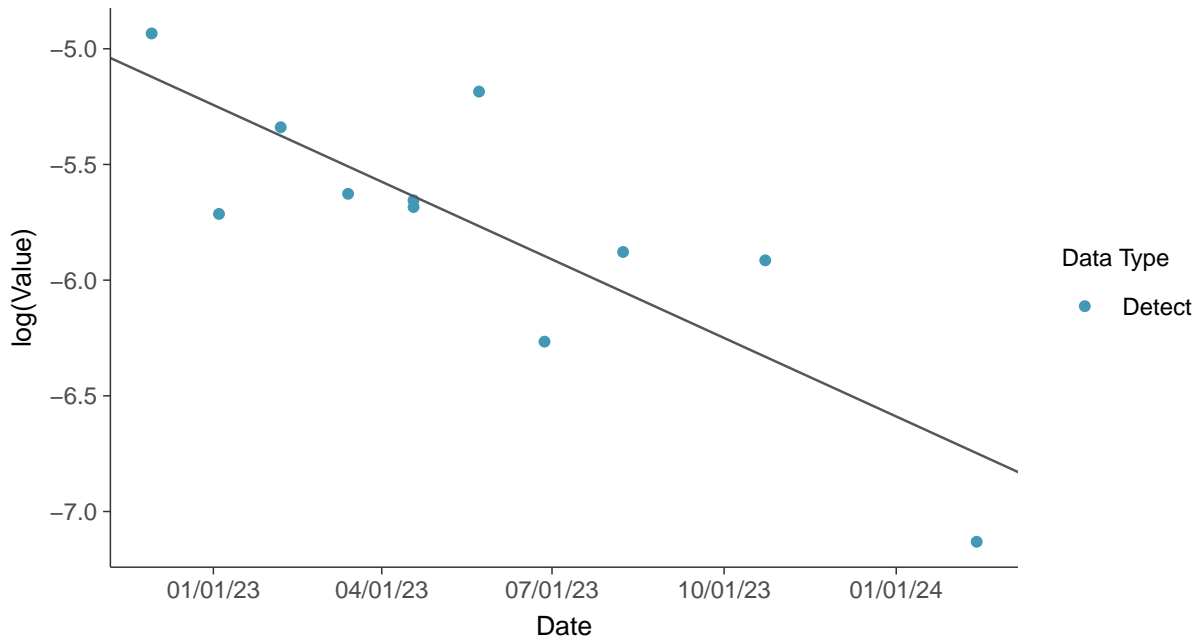
Gamma Q-Q plot

Molybdenum, MW-10 (mg/L)



Trend Regression: Lognormal MLE

Molybdenum, MW-10 (mg/L)



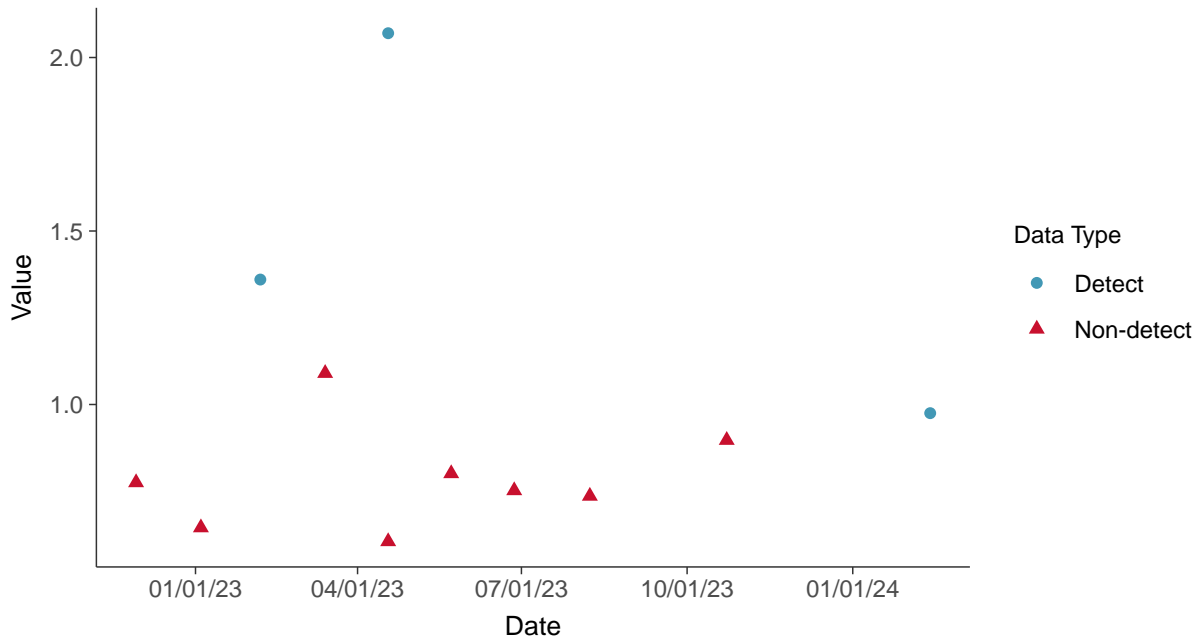


Appendix IV: Radium 226 and 228, MW-10

ID: 2_20_5_121

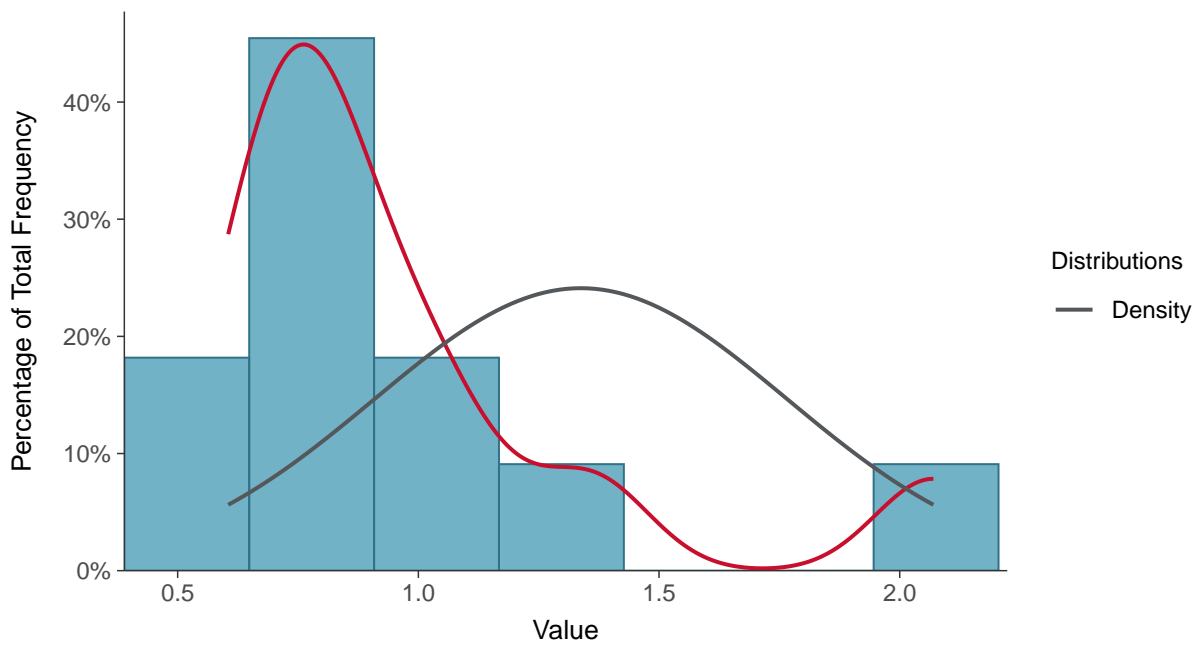
Scatter Plot

Radium 226 and 228, MW-10 (pCi/L)



Histogram

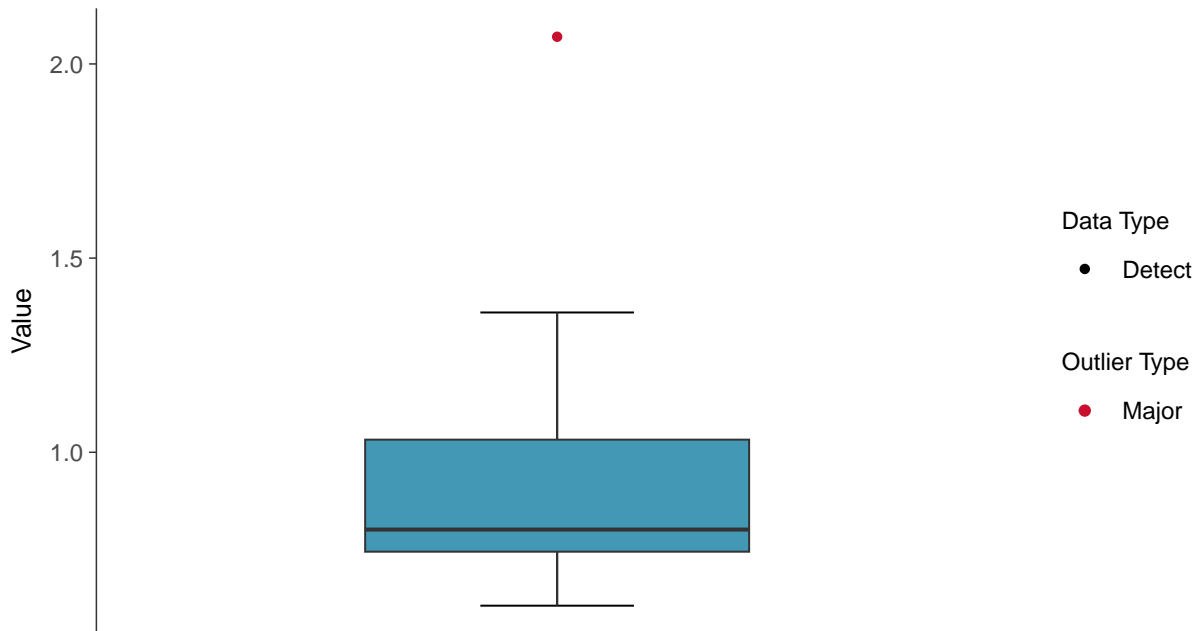
Radium 226 and 228, MW-10 (pCi/L)





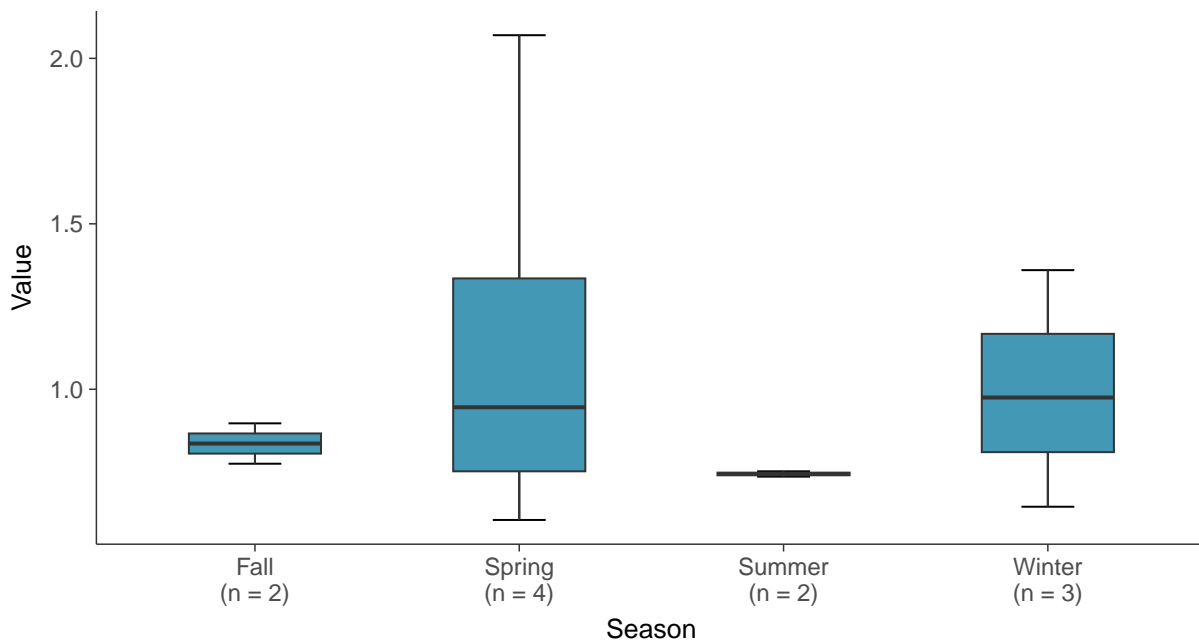
Boxplot

Radium 226 and 228, MW-10 (pCi/L)



Boxplot by Season

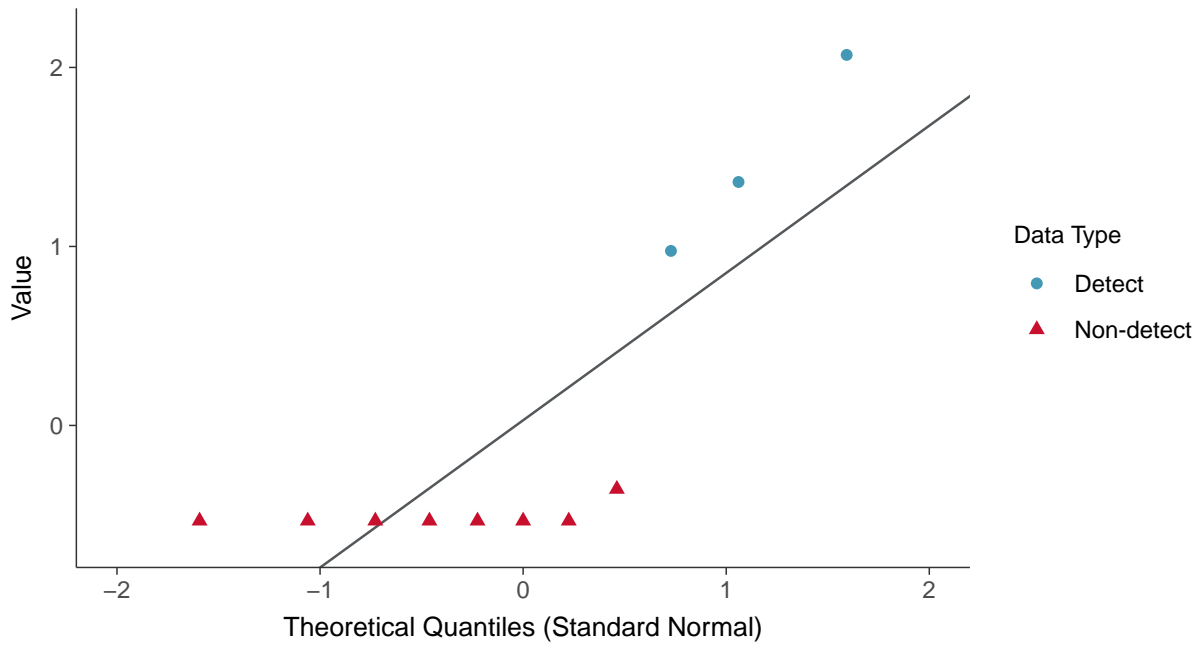
Radium 226 and 228, MW-10 (pCi/L)





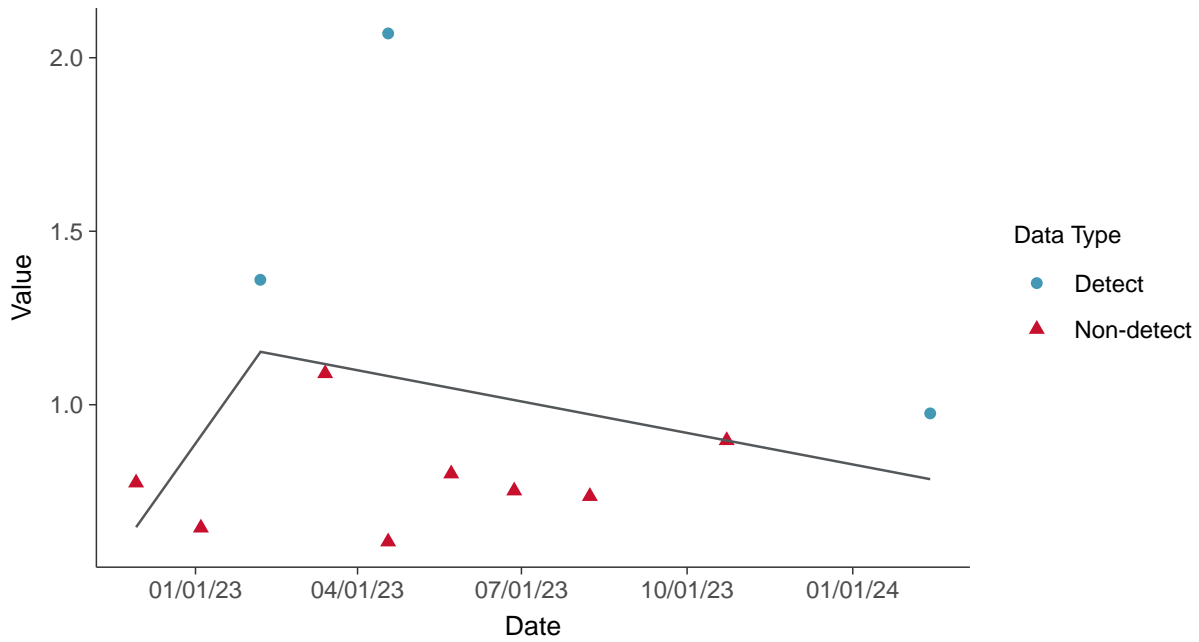
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-10 (pCi/L)



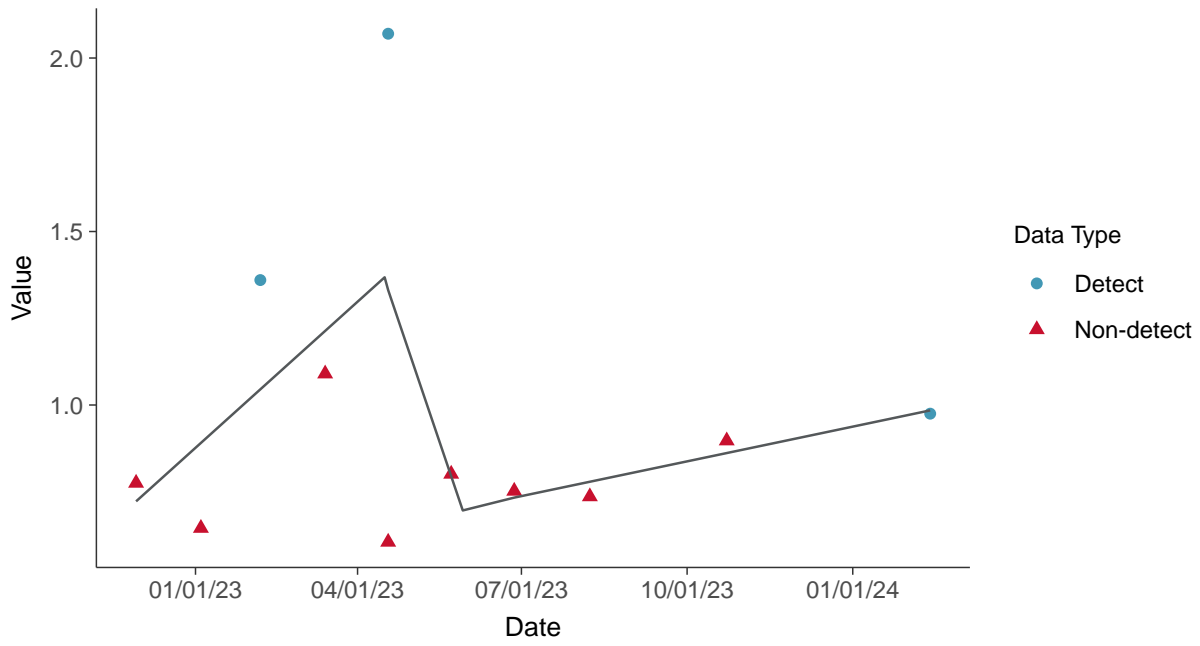
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-10 (pCi/L)





Trend Regression: Piecewise Linear-Linear-Linear
Radium 226 and 228, MW-10 (pCi/L)



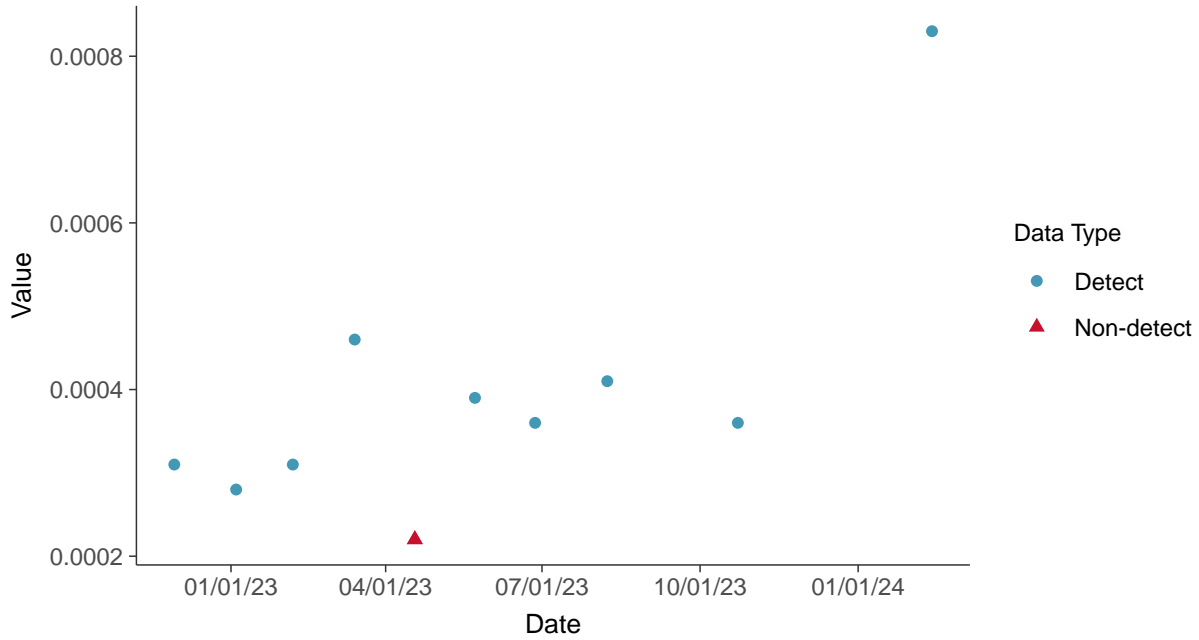


Appendix IV: Selenium, MW-10

ID: 2_20_5_122

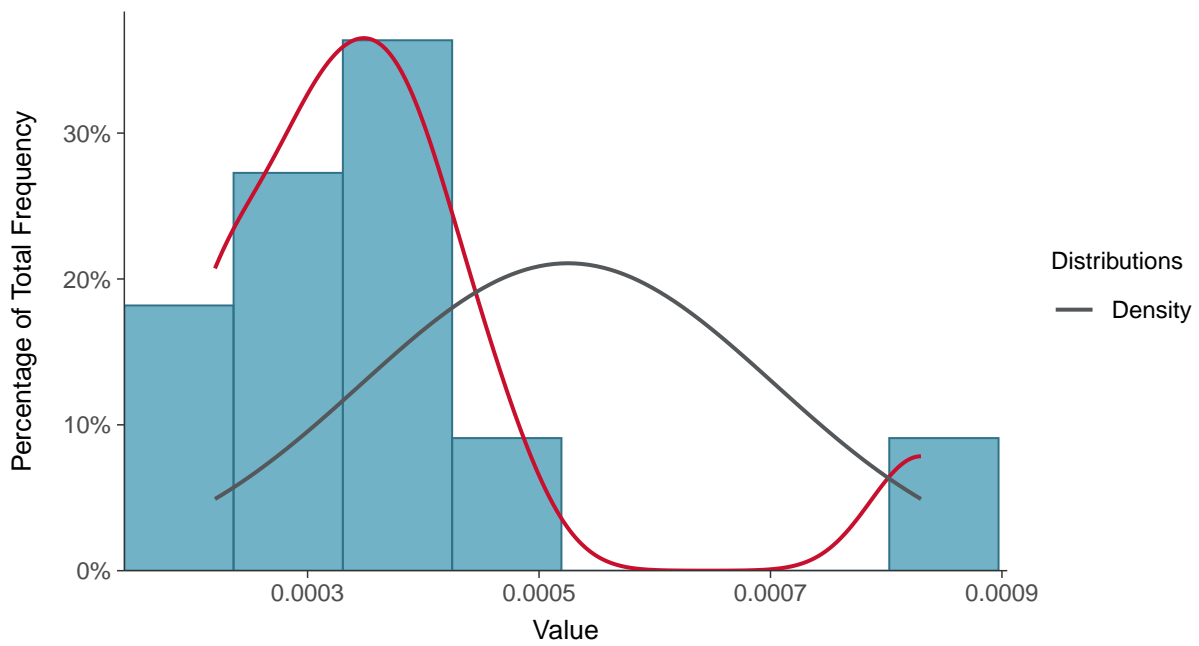
Scatter Plot

Selenium, MW-10 (mg/L)



Histogram

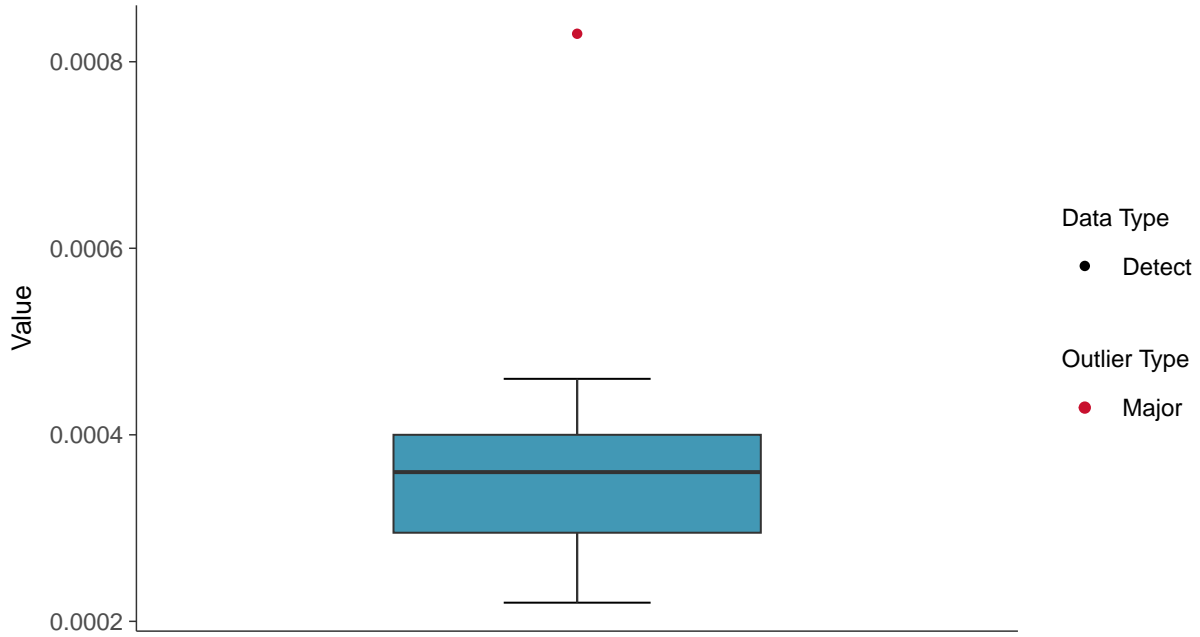
Selenium, MW-10 (mg/L)





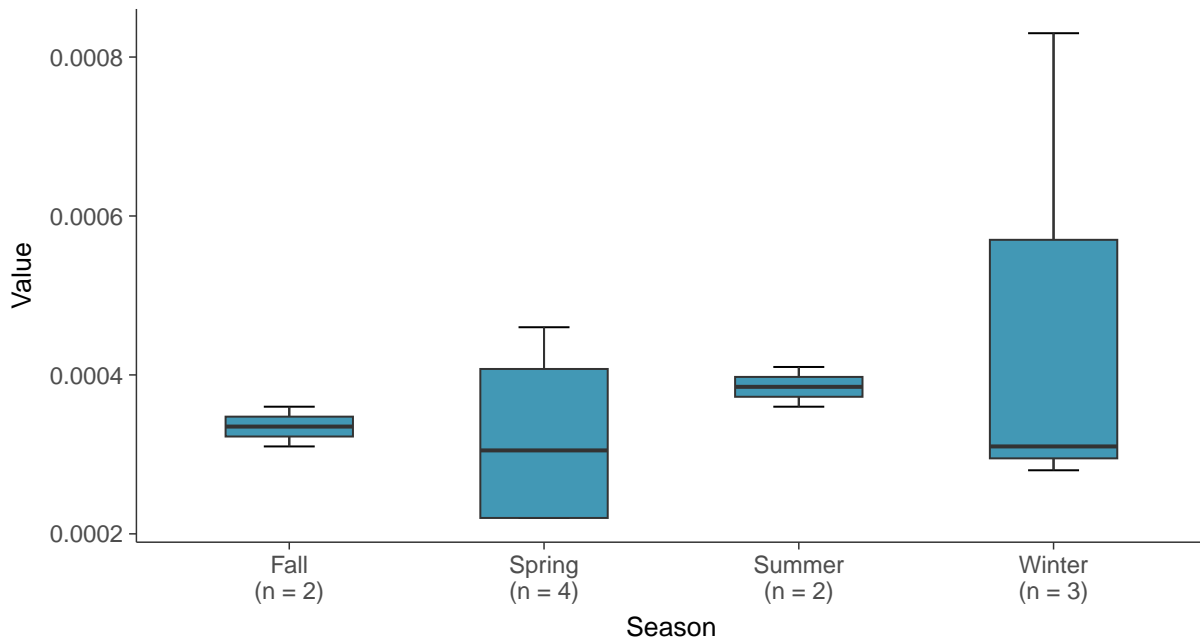
Boxplot

Selenium, MW-10 (mg/L)



Boxplot by Season

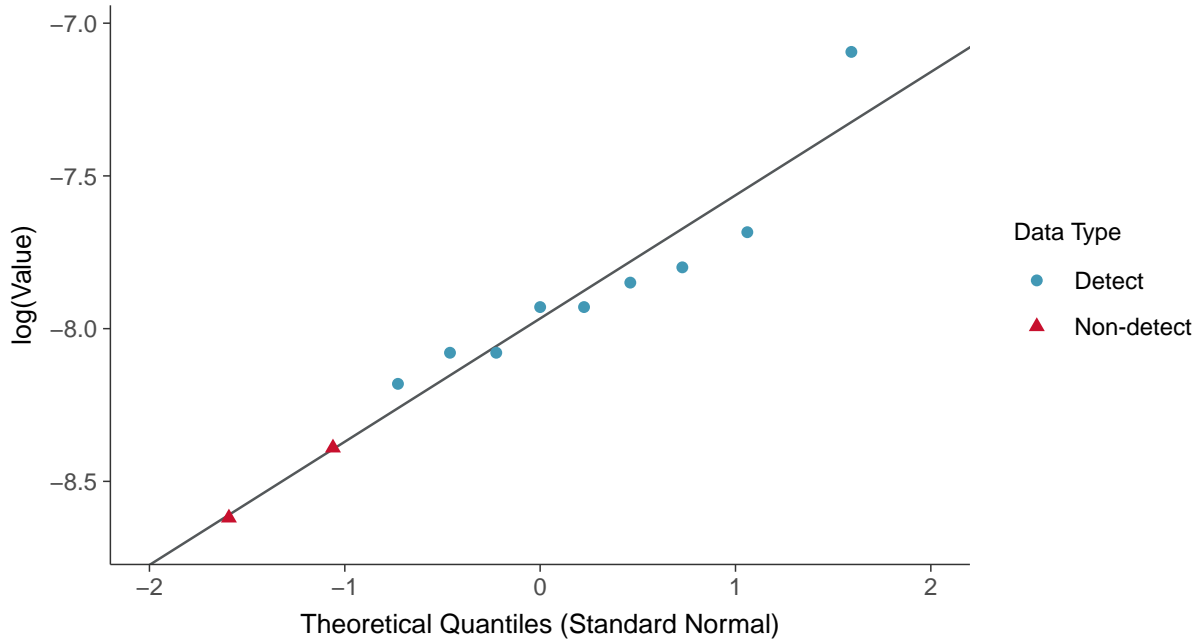
Selenium, MW-10 (mg/L)





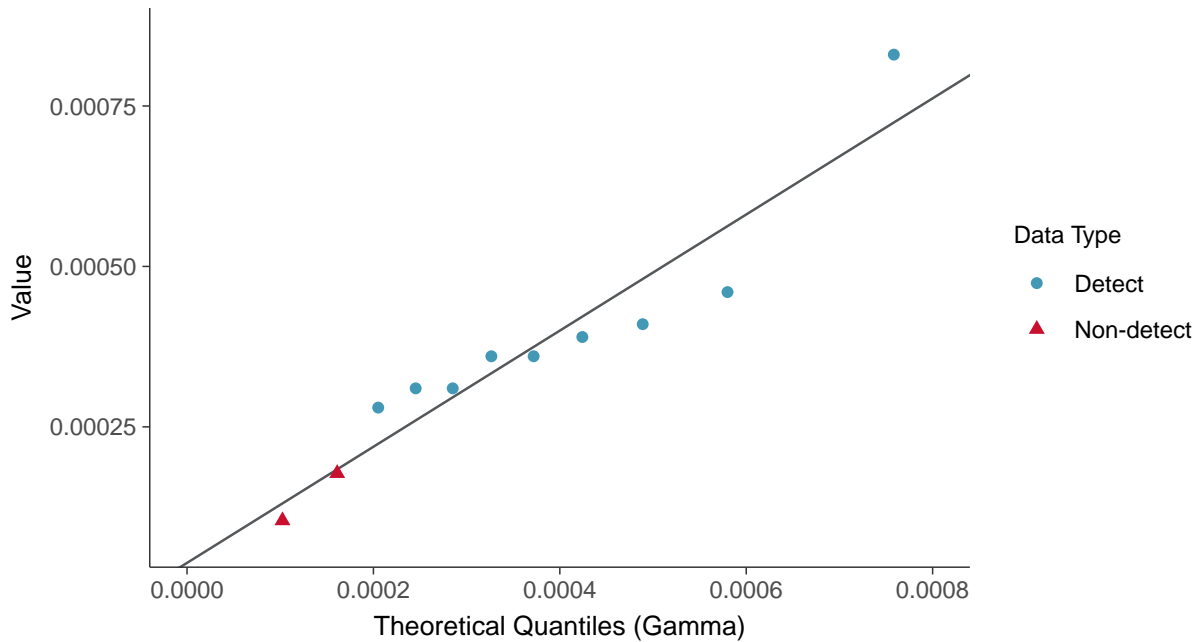
Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (mg/L)



Gamma Q-Q plot using ROS Imputed Estimates

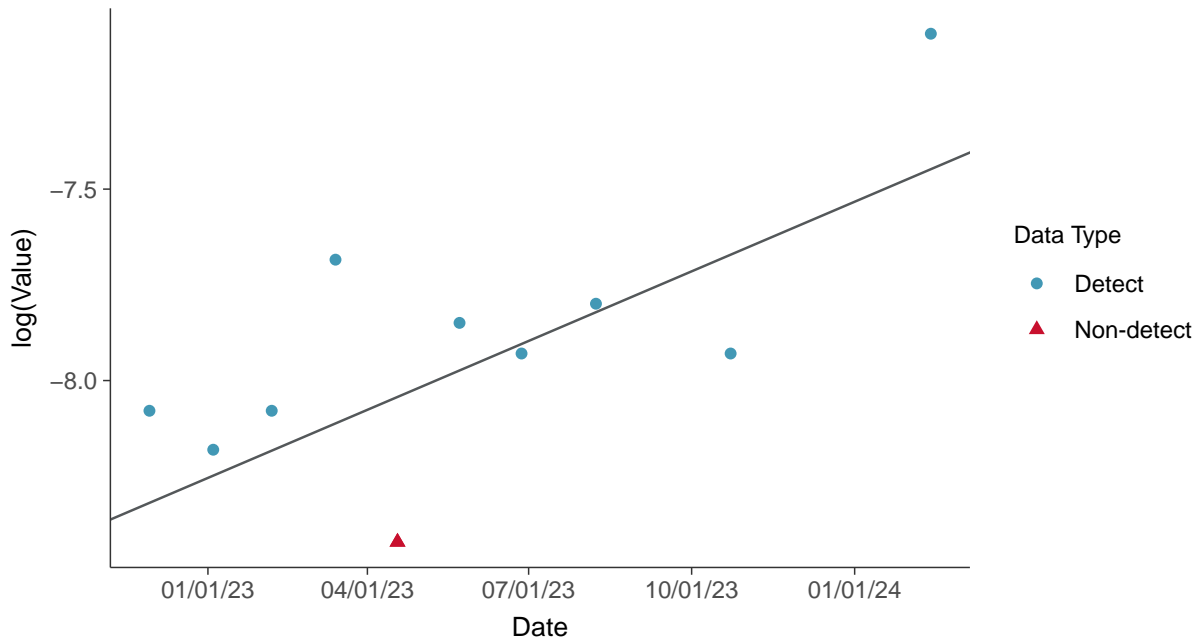
Selenium, MW-10 (mg/L)





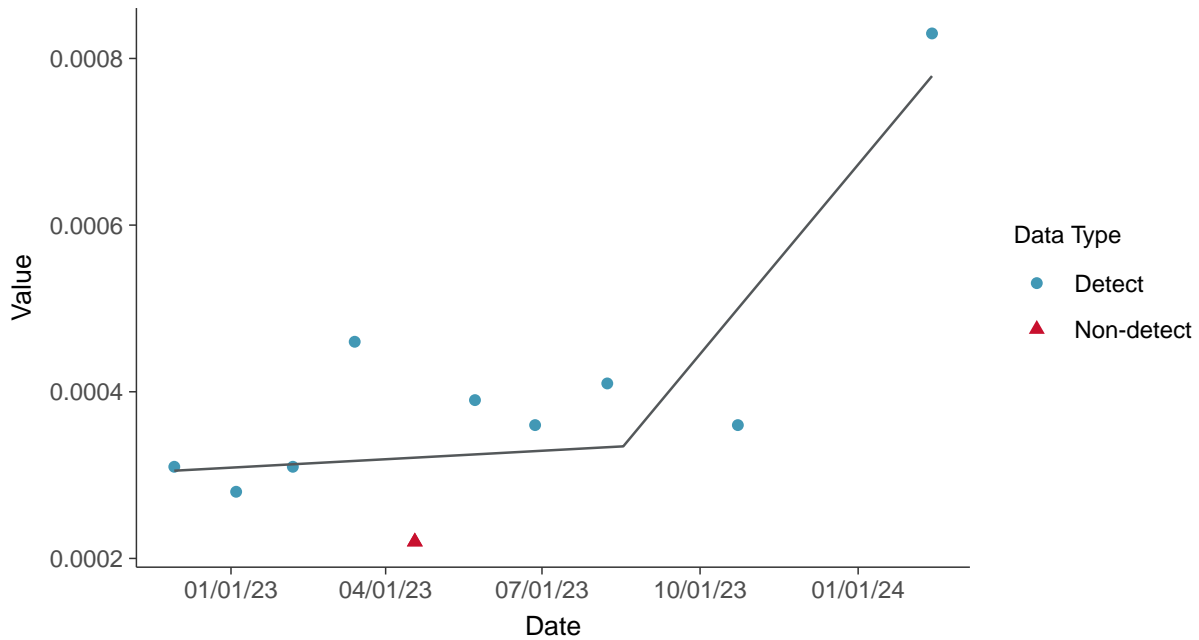
Trend Regression: Lognormal MLE

Selenium, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear

Selenium, MW-10 (mg/L)



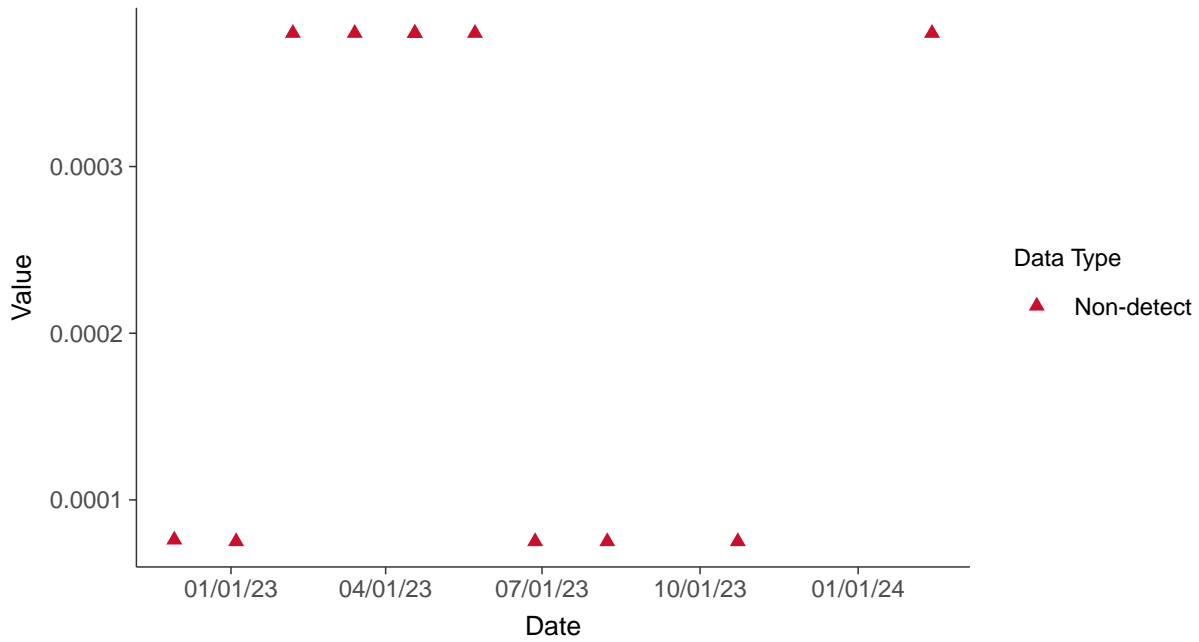


Appendix IV: Thallium, MW-10

ID: 2_20_5_125

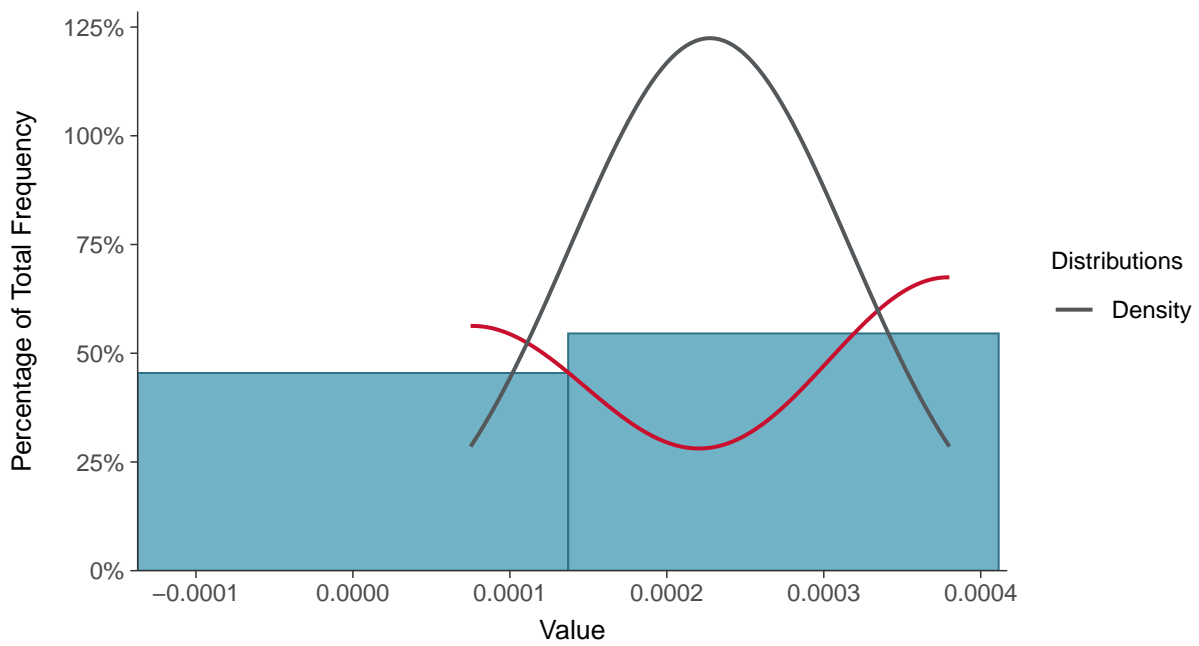
Scatter Plot

Thallium, MW-10 (mg/L)



Histogram

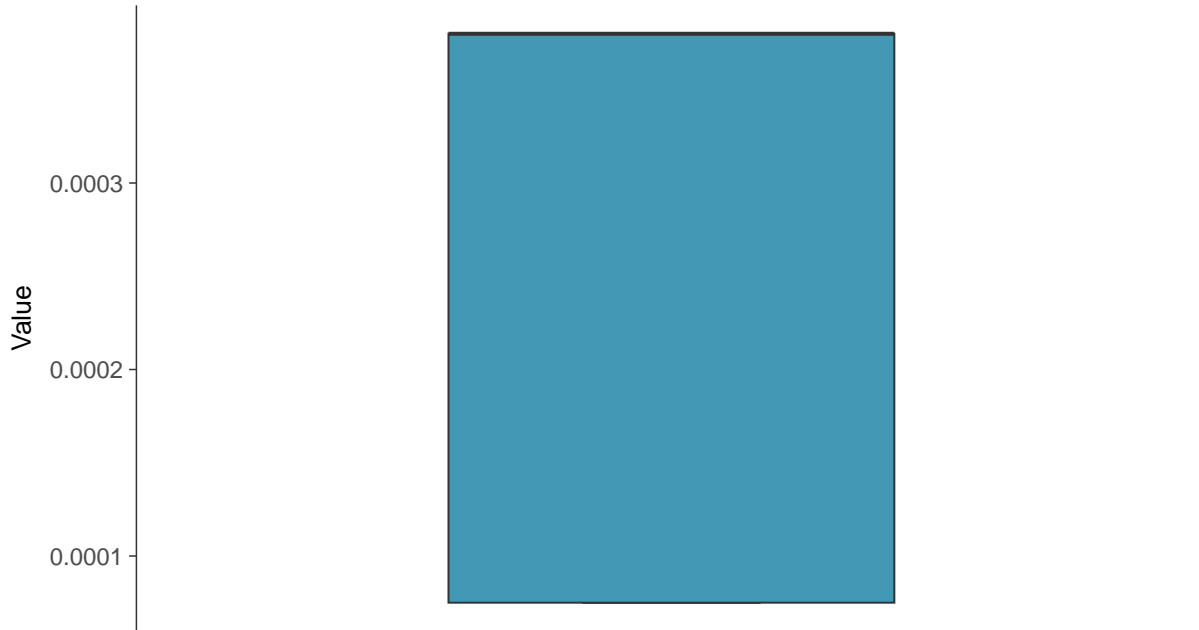
Thallium, MW-10 (mg/L)





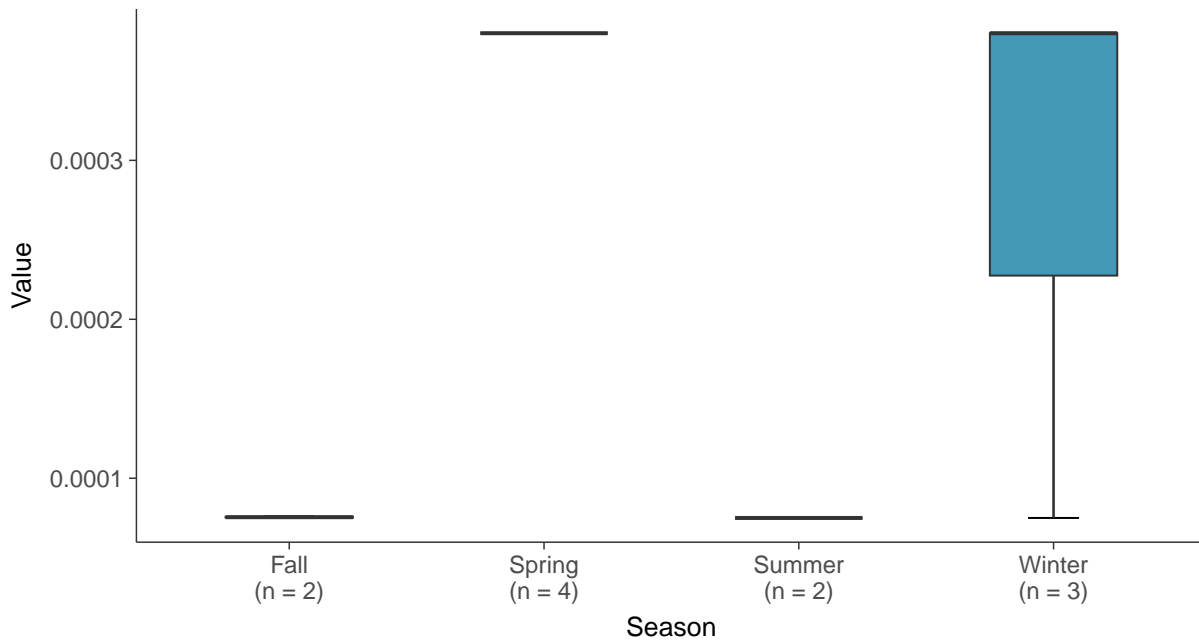
Boxplot

Thallium, MW-10 (mg/L)



Boxplot by Season

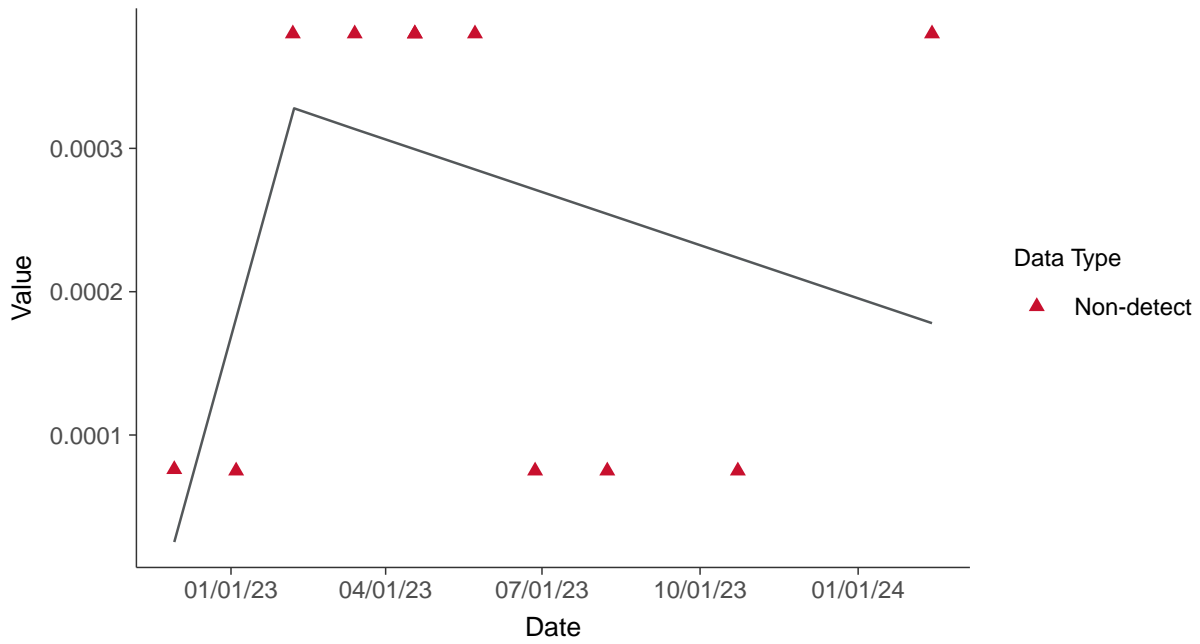
Thallium, MW-10 (mg/L)





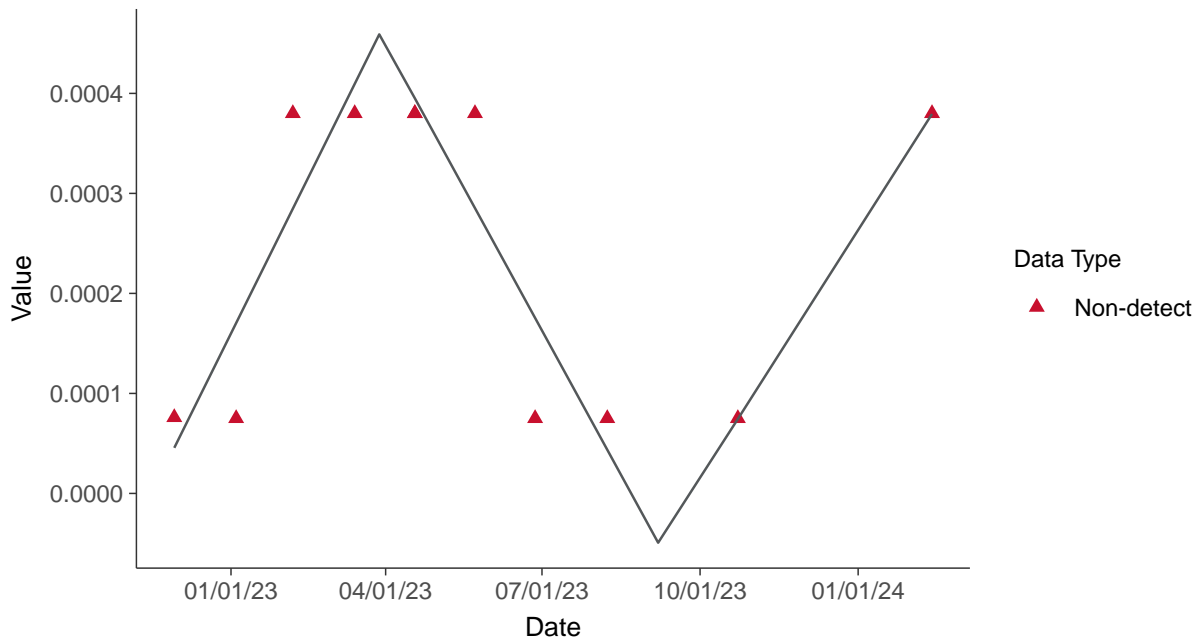
Trend Regression: Piecewise Linear-Linear

Thallium, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-10 (mg/L)



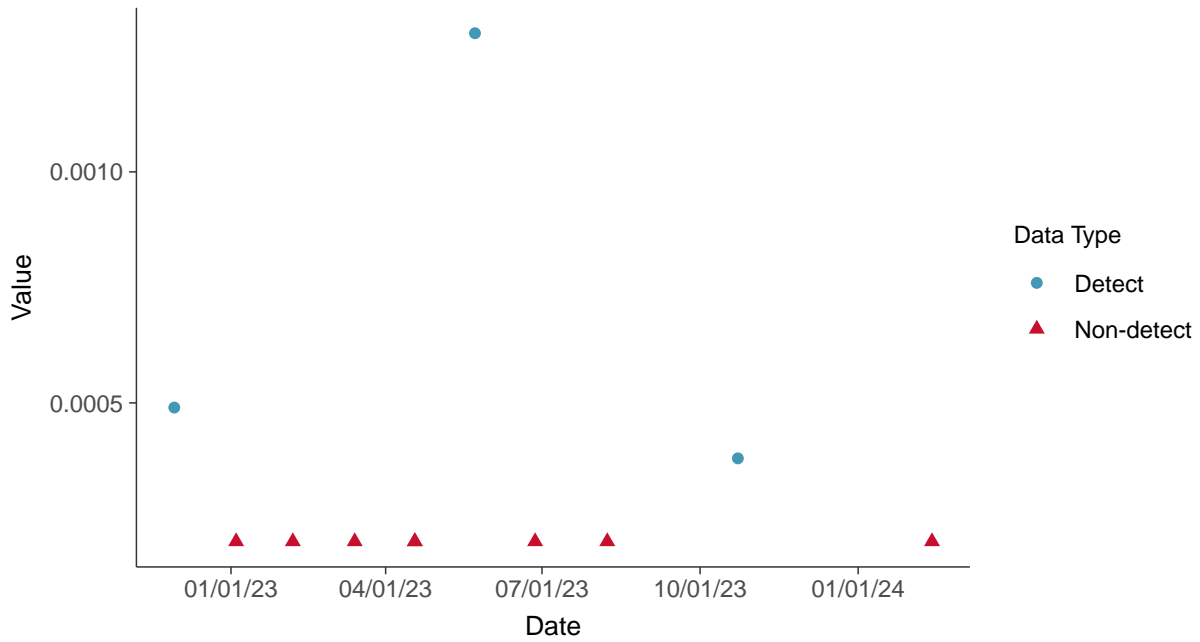


Part 115: Copper, MW-10

ID: 2_20_6_111

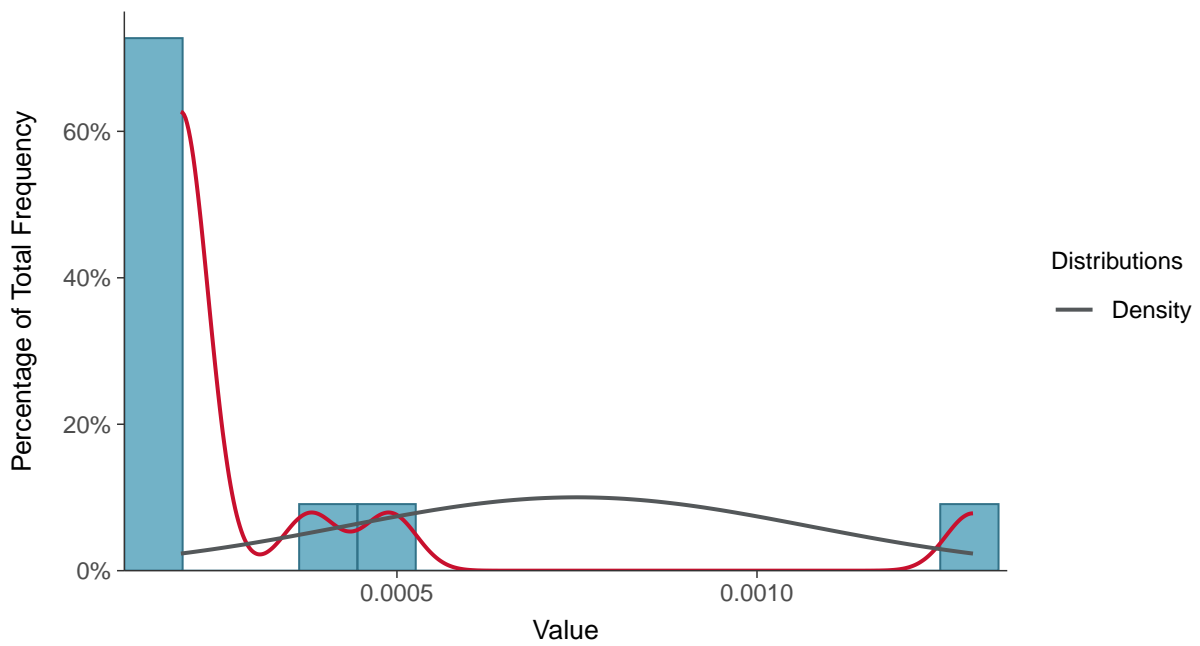
Scatter Plot

Copper, MW-10 (mg/L)



Histogram

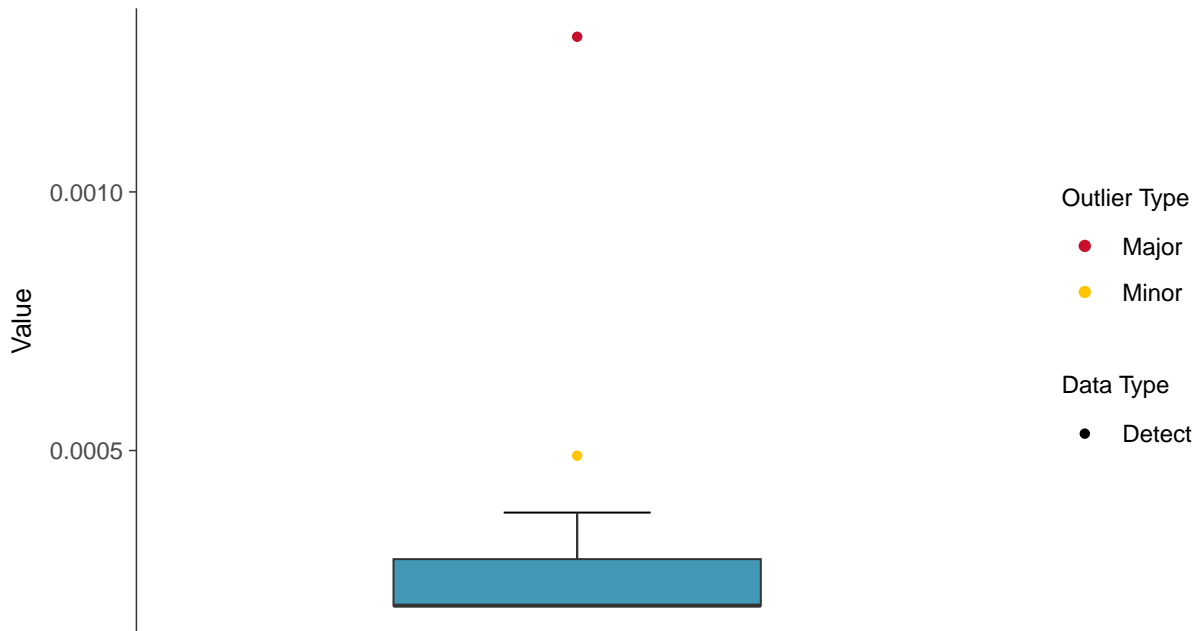
Copper, MW-10 (mg/L)





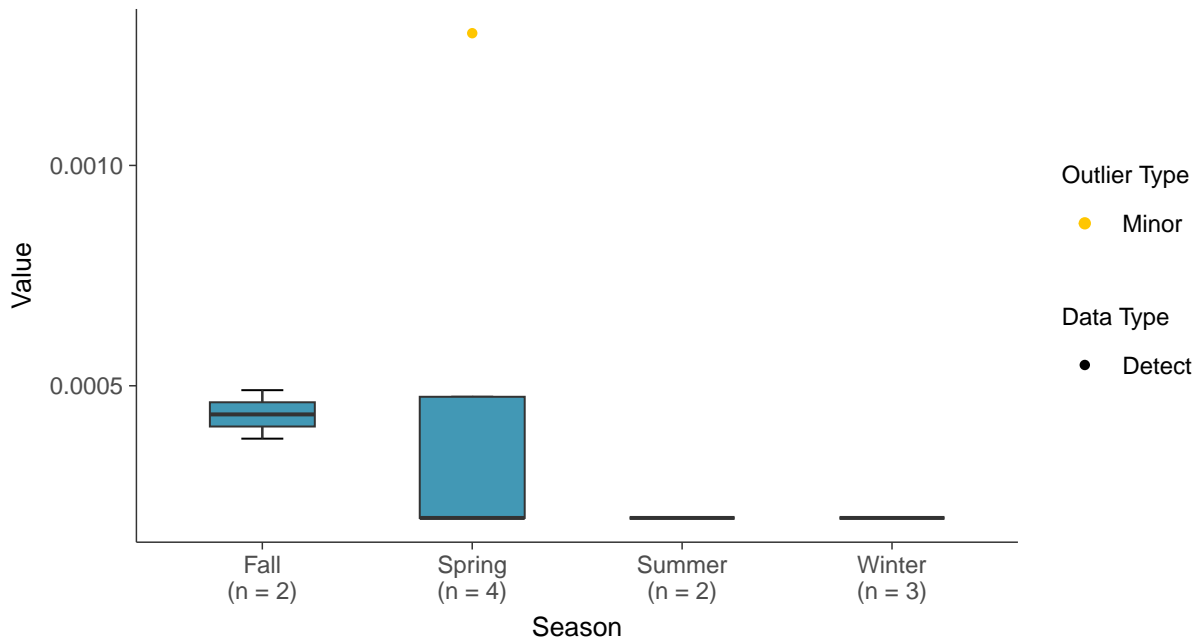
Boxplot

Copper, MW-10 (mg/L)



Boxplot by Season

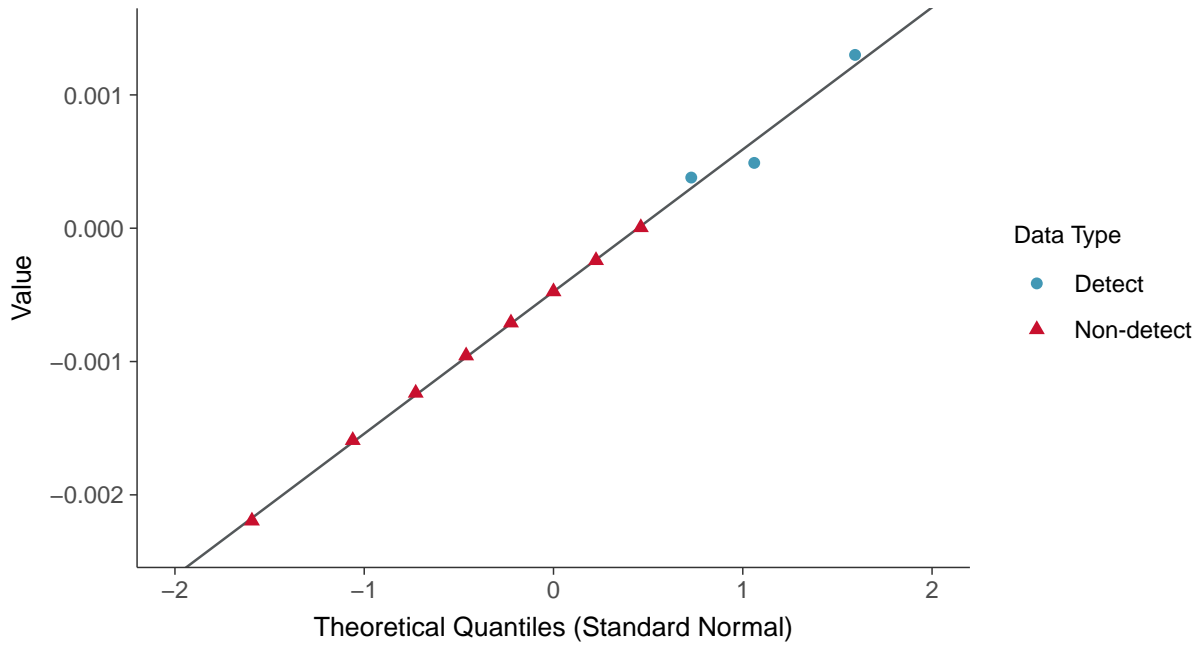
Copper, MW-10 (mg/L)





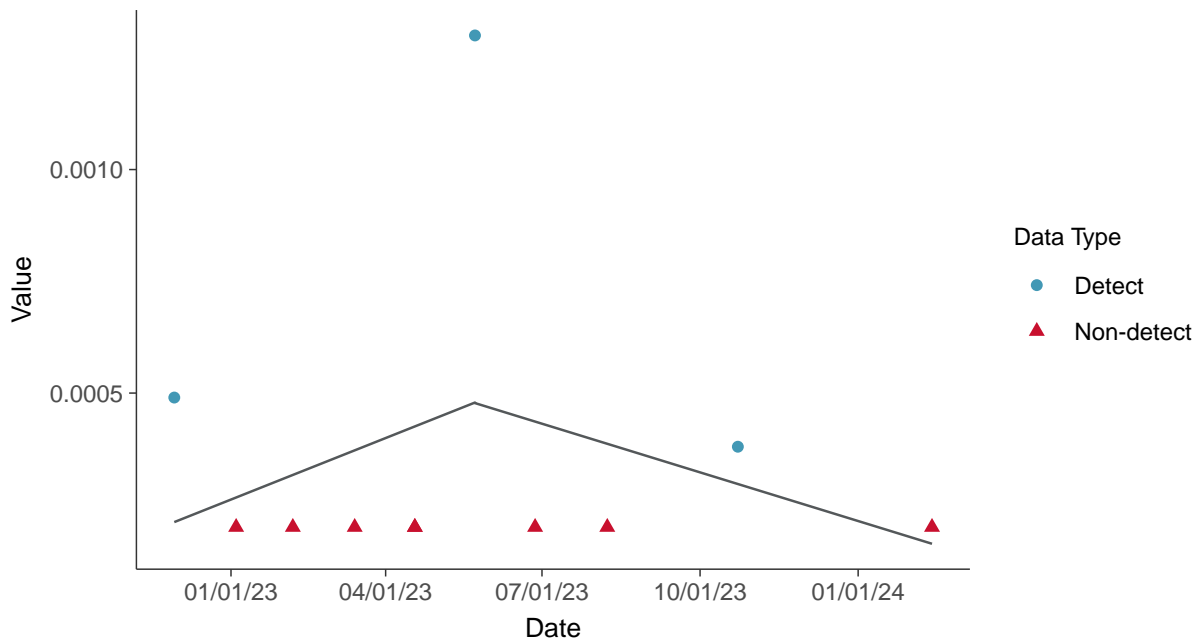
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear

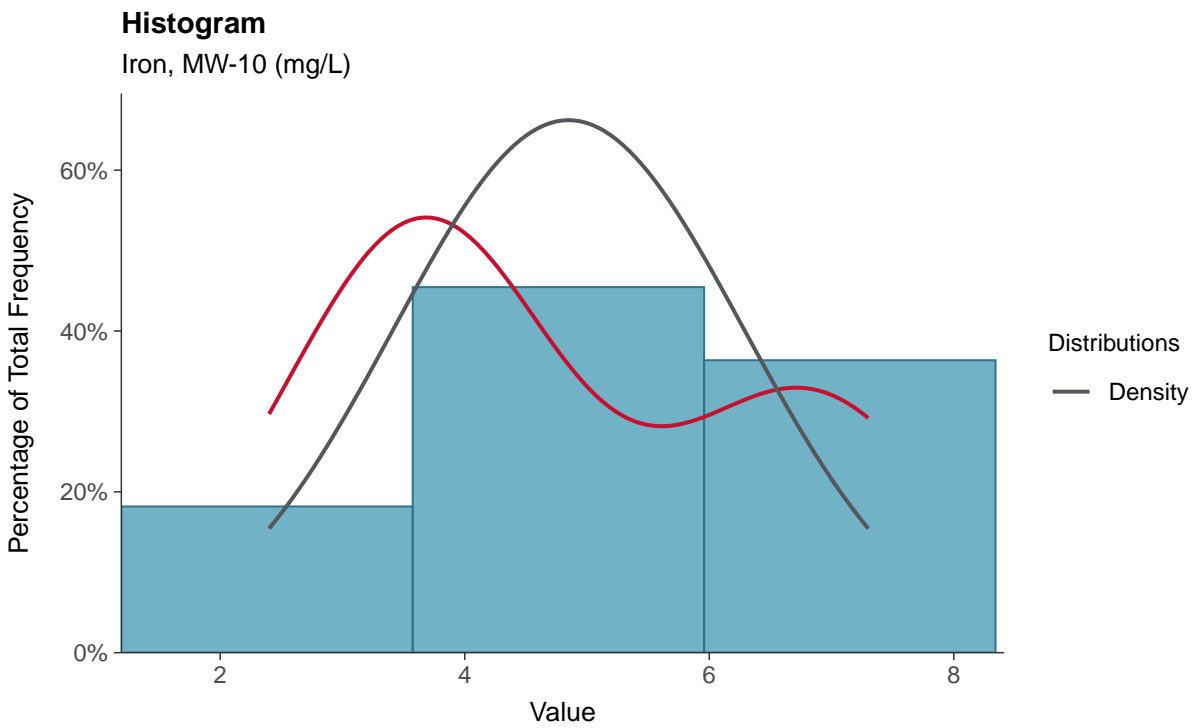
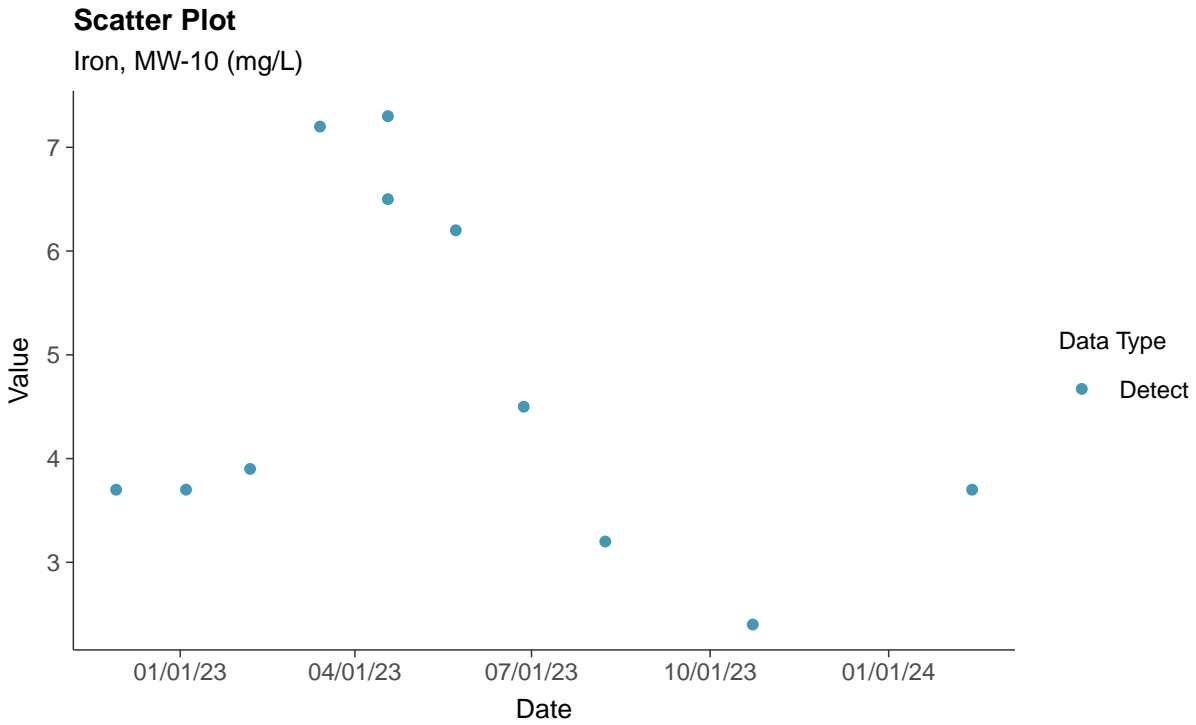
Copper, MW-10 (mg/L)





Part 115: Iron, MW-10

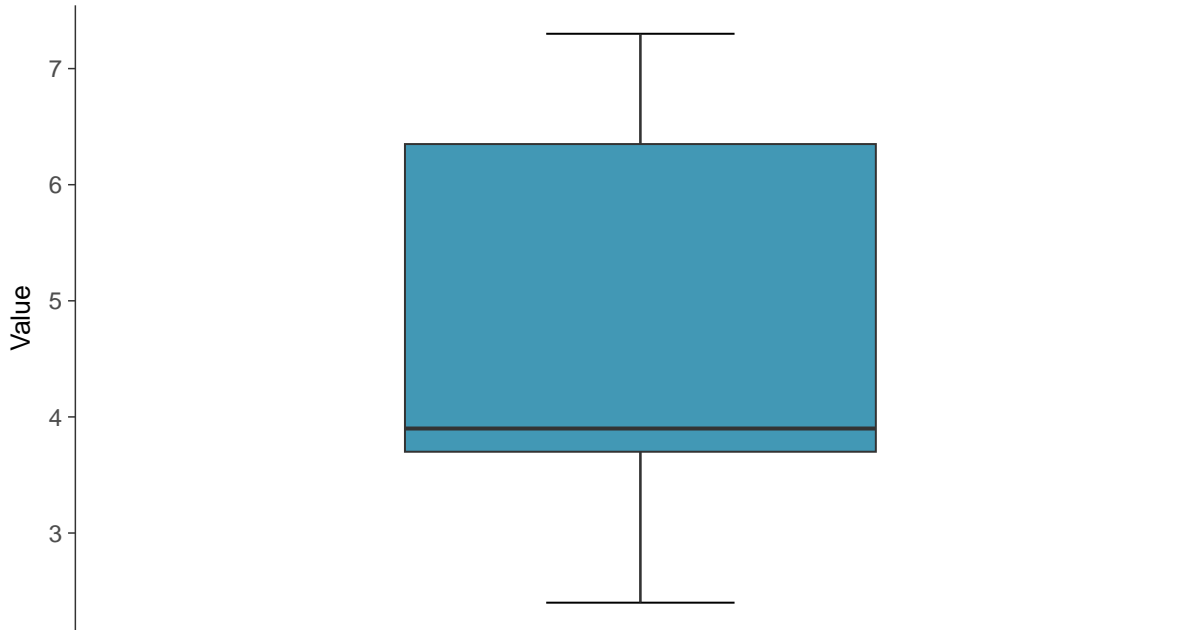
ID: 2_20_6_114





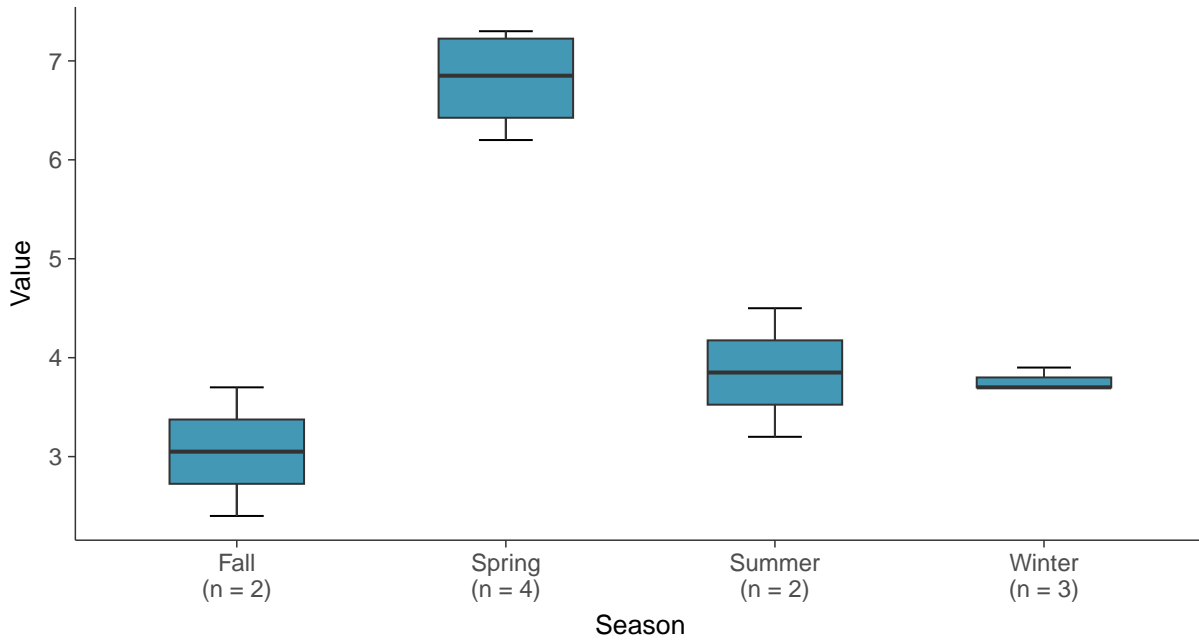
Boxplot

Iron, MW-10 (mg/L)



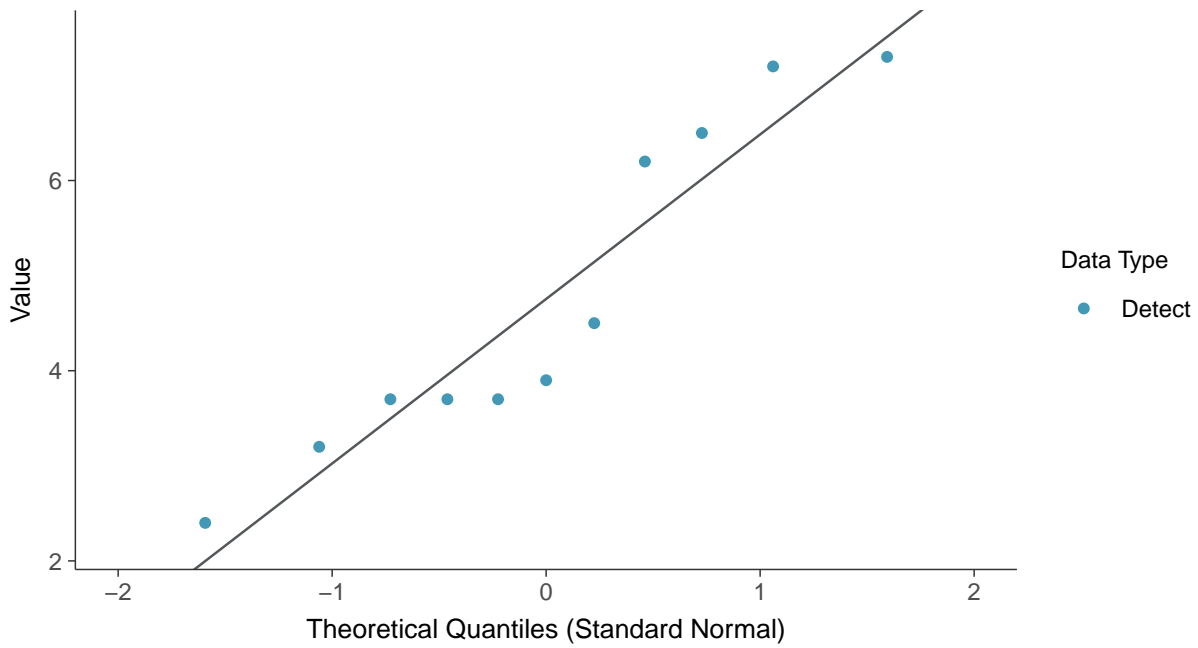
Boxplot by Season

Iron, MW-10 (mg/L)

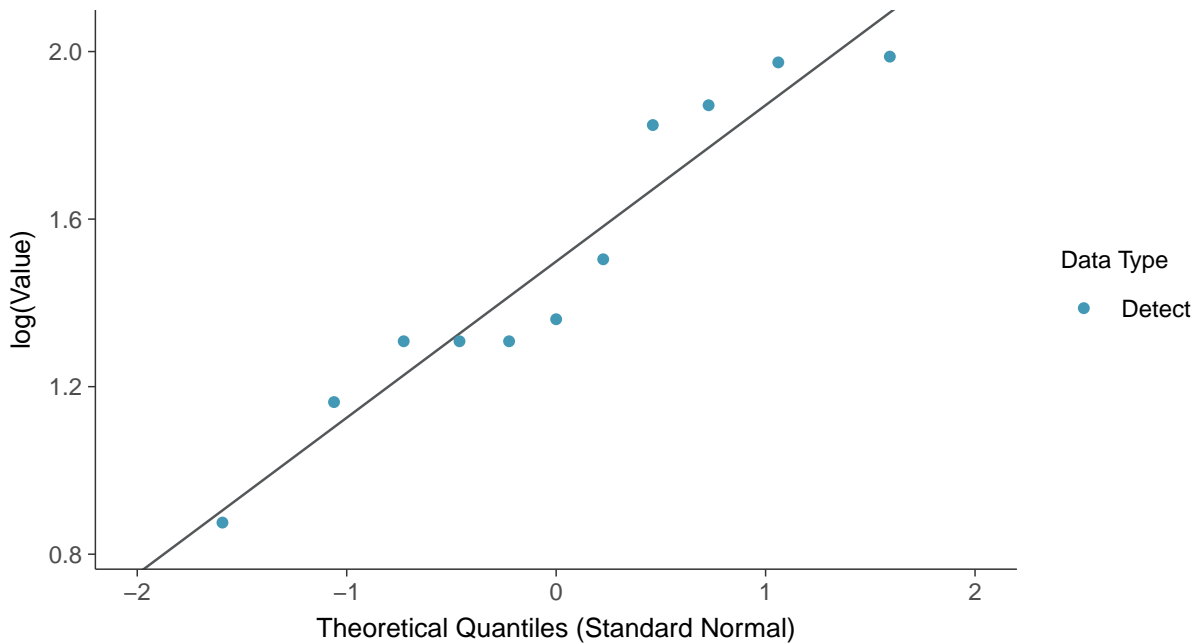




Normal Q-Q plot
Iron, MW-10 (mg/L)

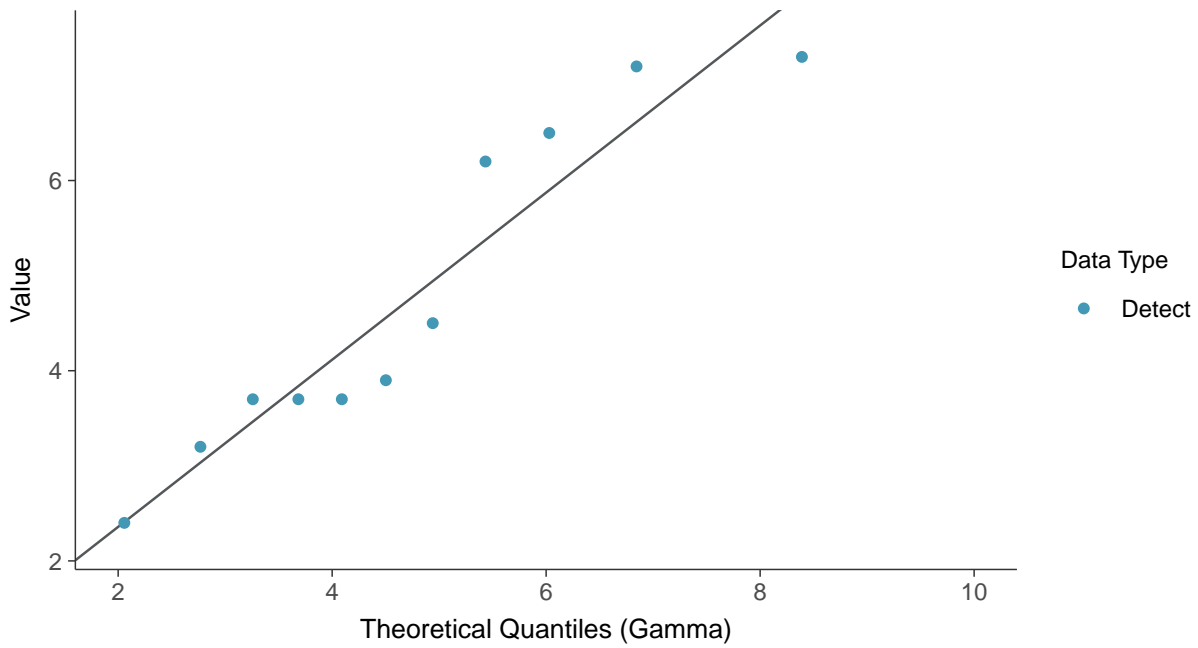


Lognormal Q-Q plot
Iron, MW-10 (mg/L)

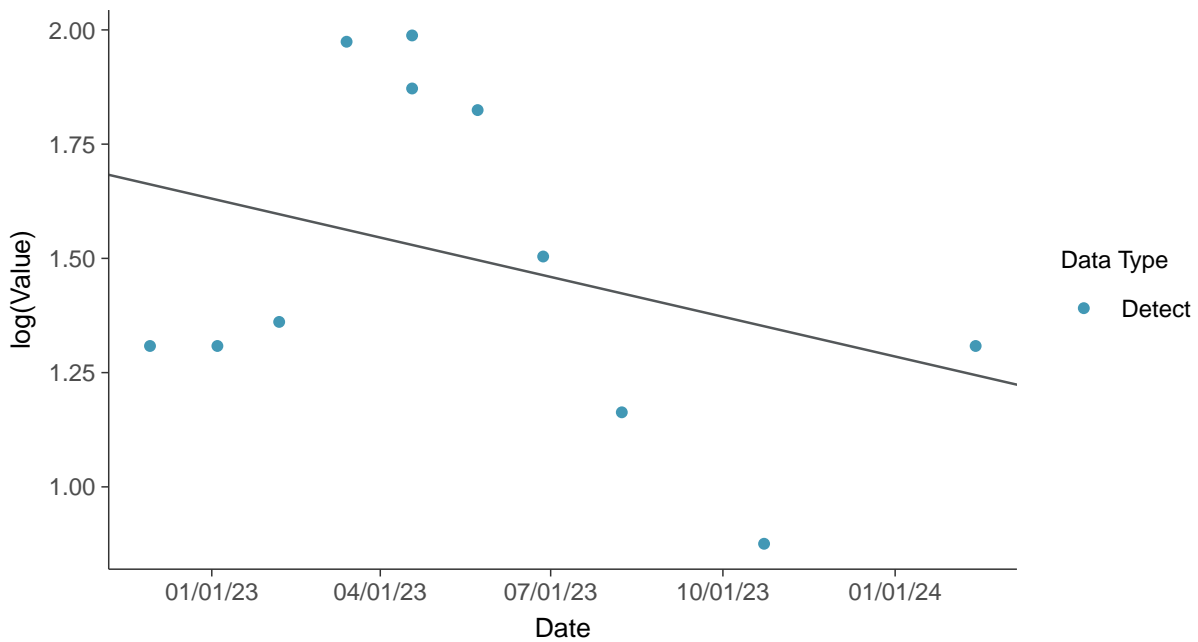




Gamma Q-Q plot
Iron, MW-10 (mg/L)



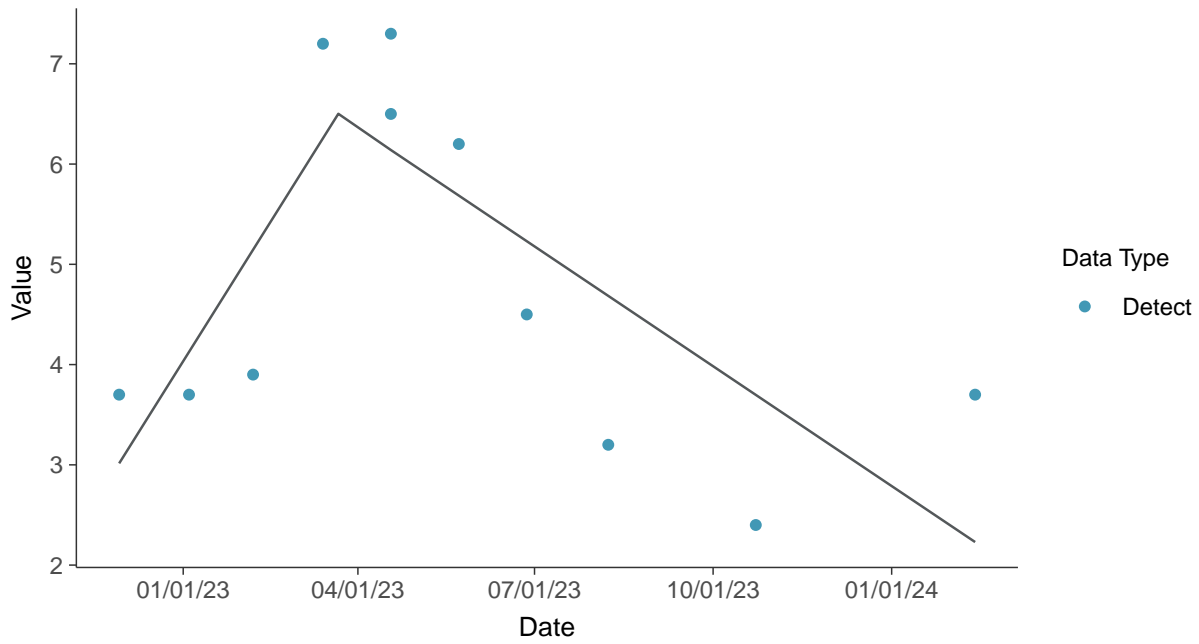
Trend Regression: Lognormal MLE
Iron, MW-10 (mg/L)





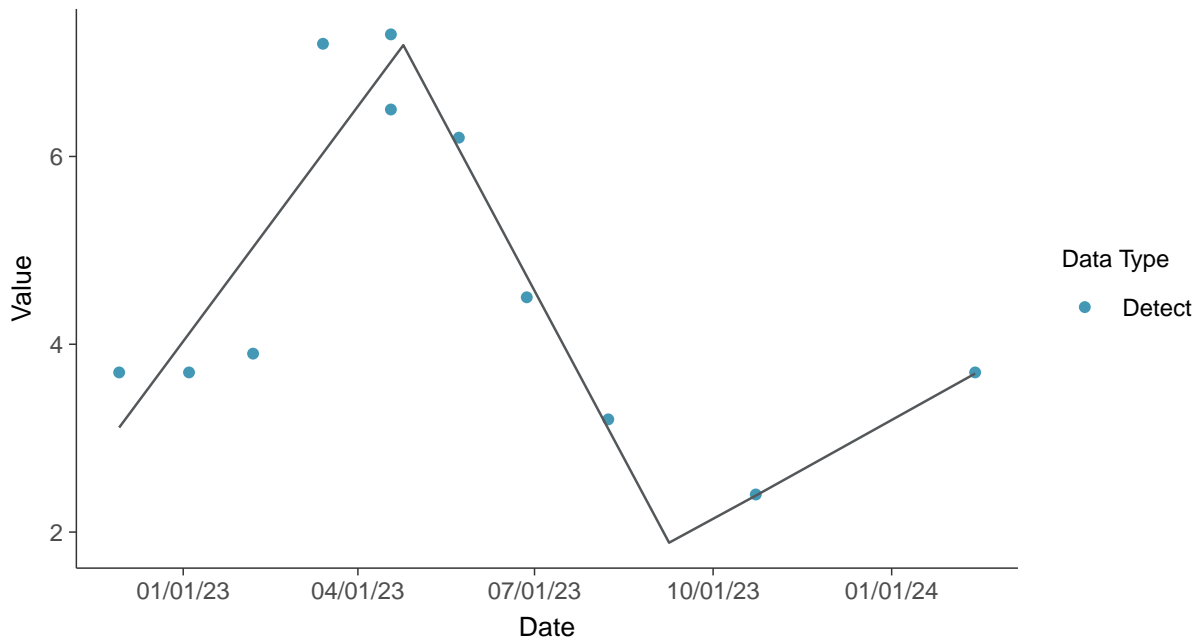
Trend Regression: Piecewise Linear-Linear

Iron, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-10 (mg/L)



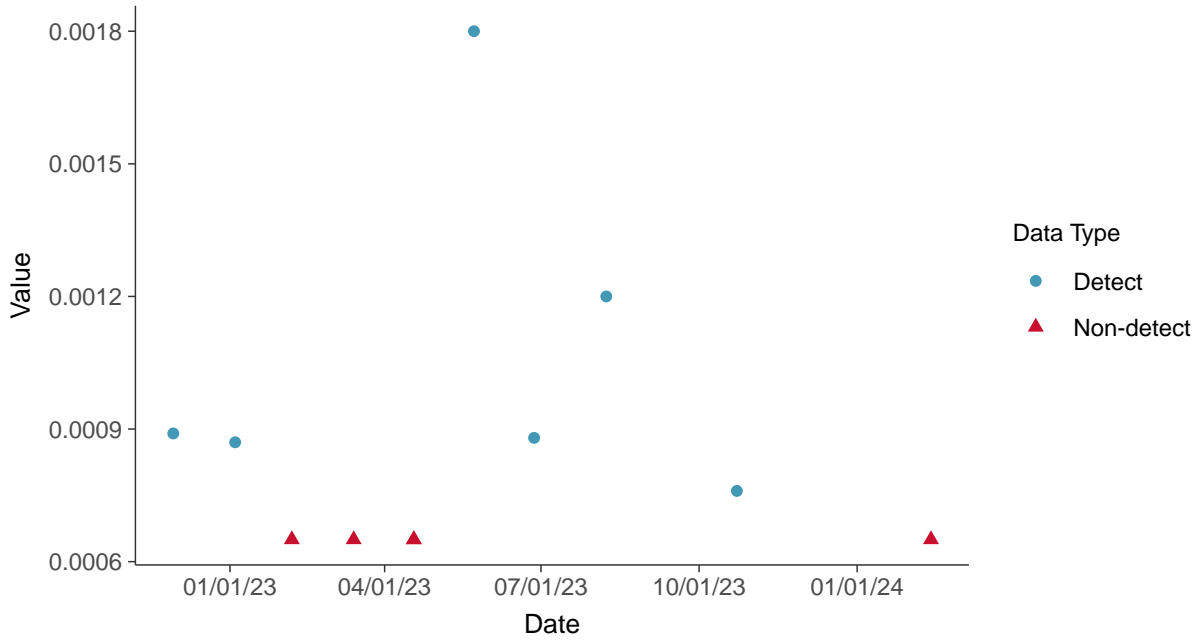


Part 115: Nickel, MW-10

ID: 2_20_6_119

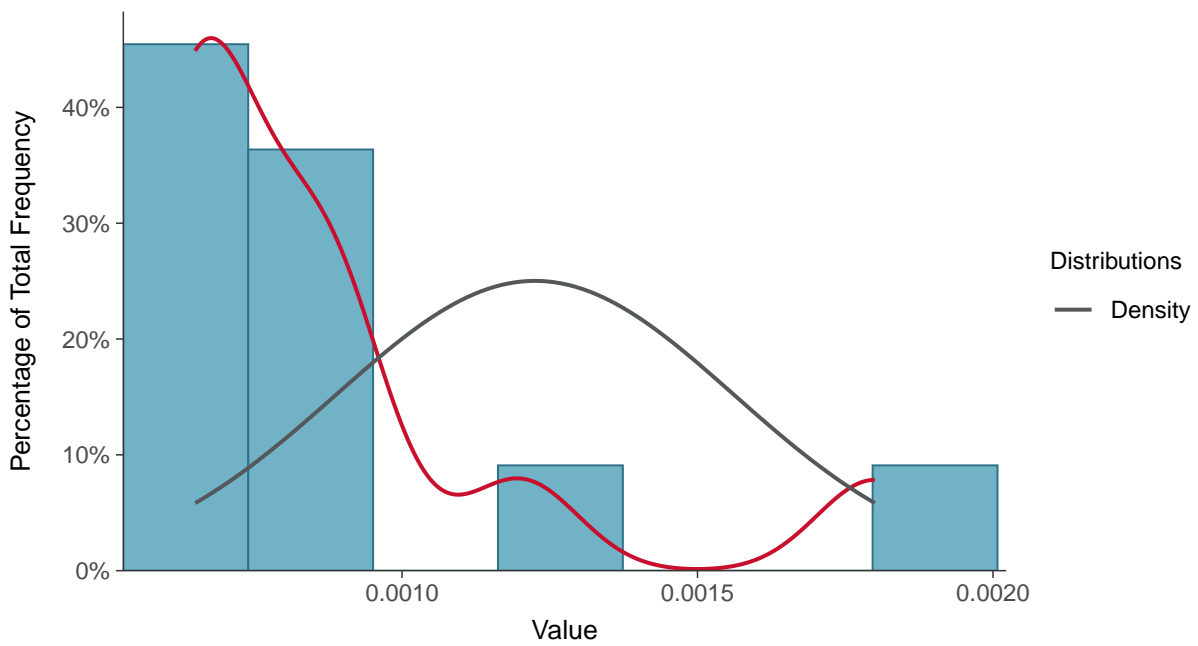
Scatter Plot

Nickel, MW-10 (mg/L)



Histogram

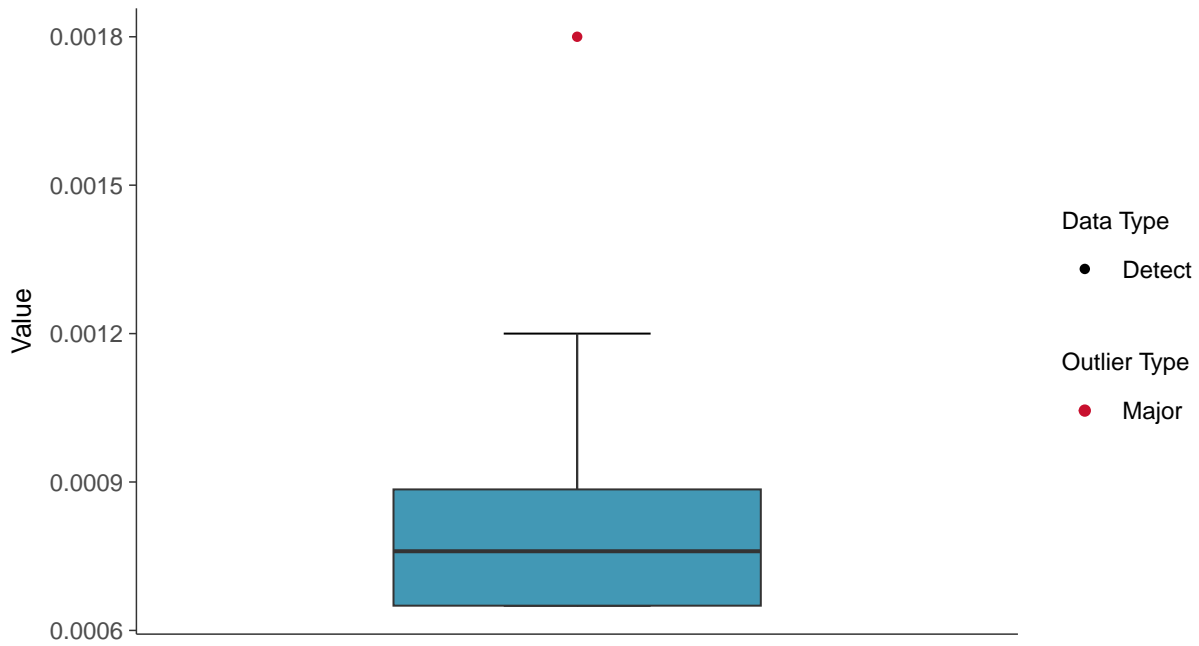
Nickel, MW-10 (mg/L)





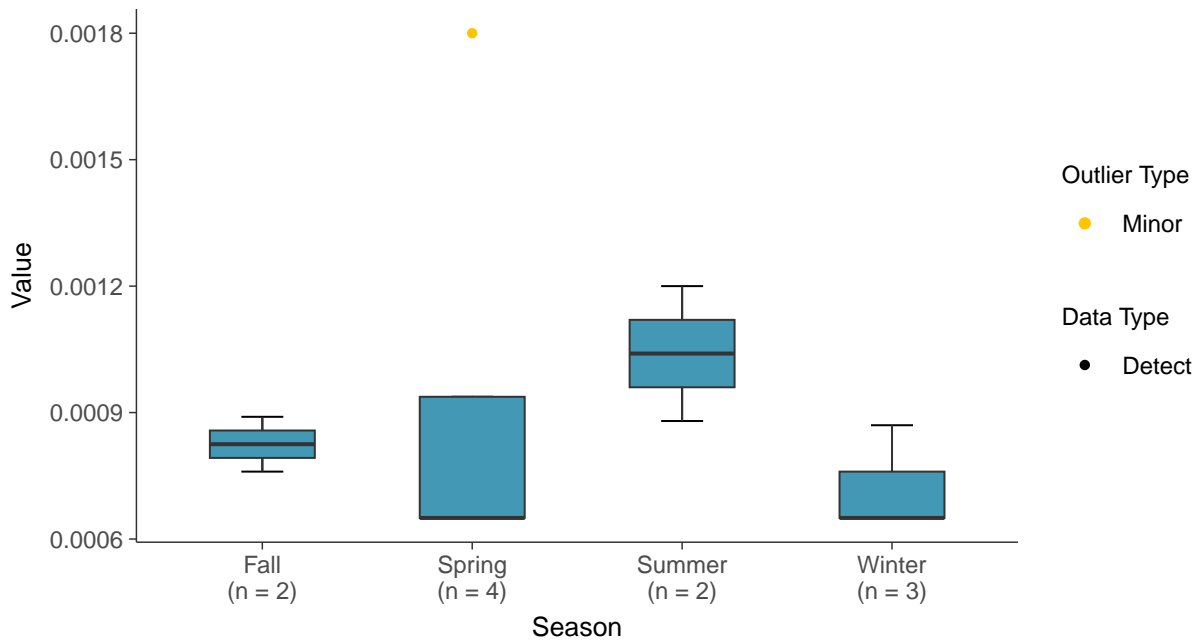
Boxplot

Nickel, MW-10 (mg/L)



Boxplot by Season

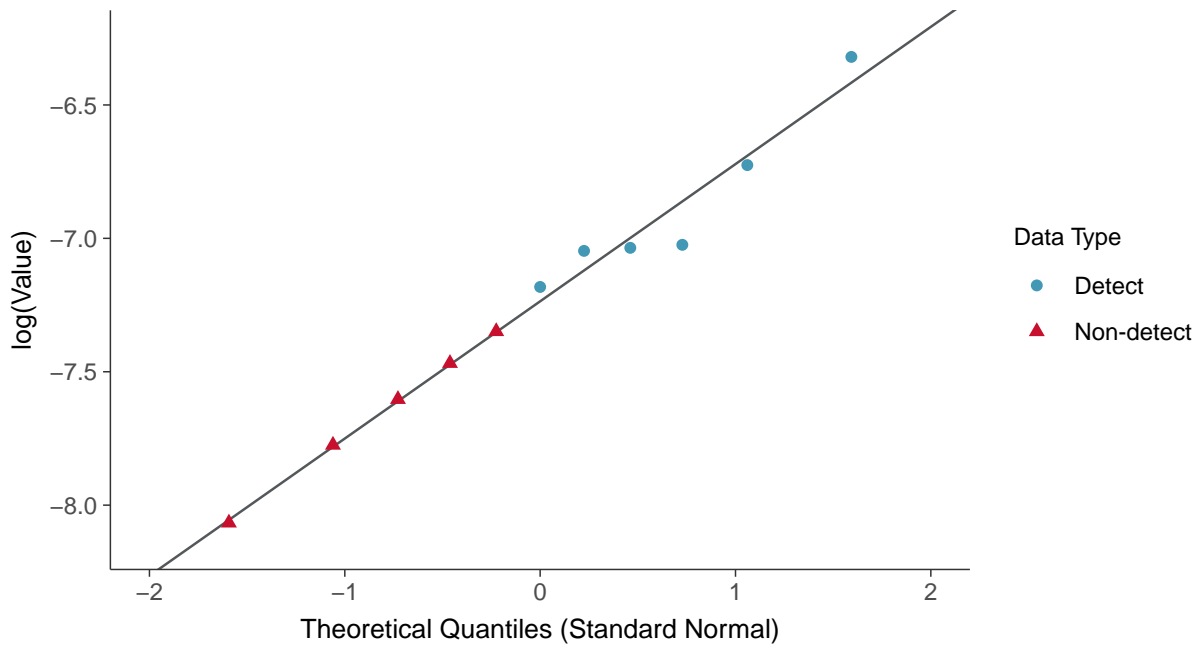
Nickel, MW-10 (mg/L)





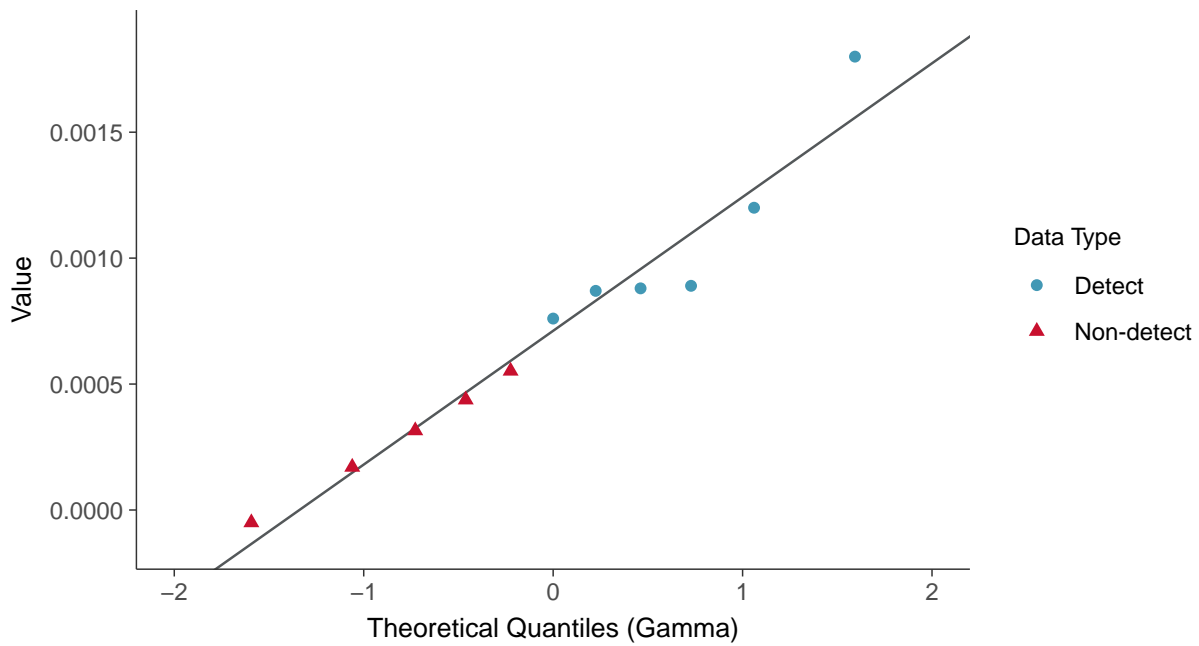
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-10 (mg/L)



Gamma Q-Q plot using ROS Imputed Estimates

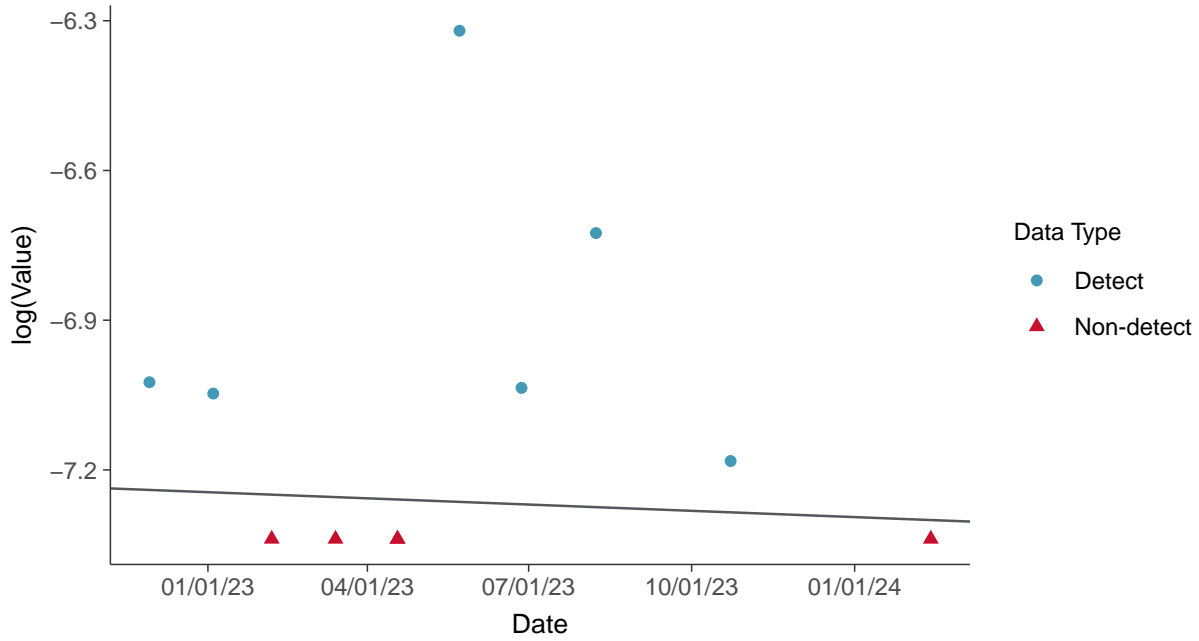
Nickel, MW-10 (mg/L)





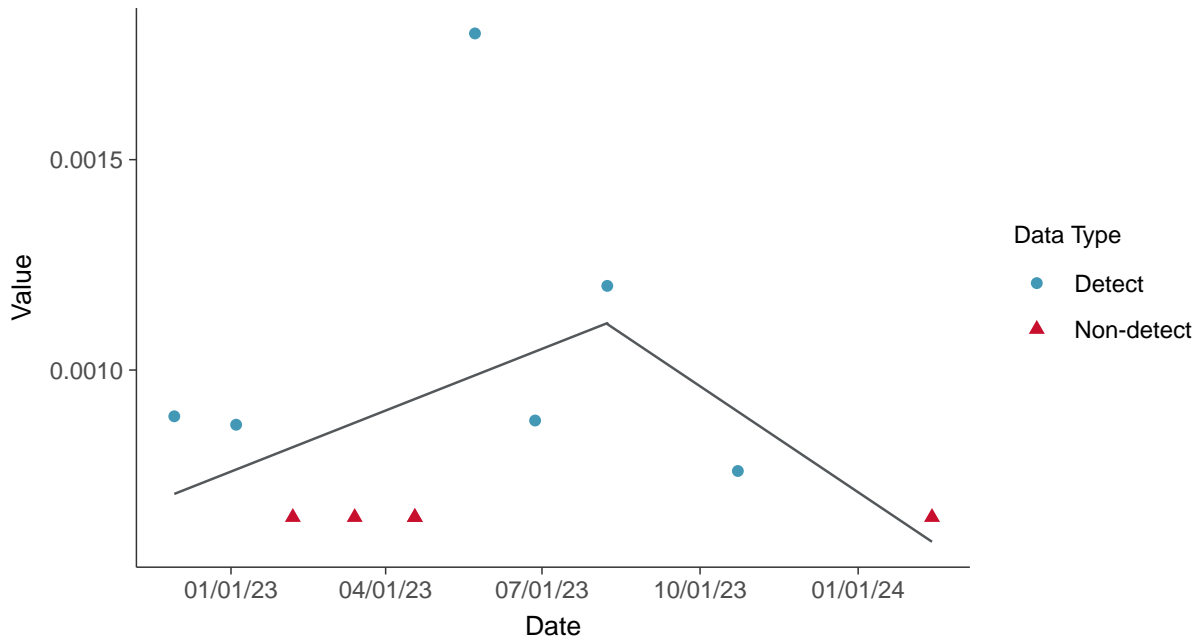
Trend Regression: Lognormal MLE

Nickel, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear

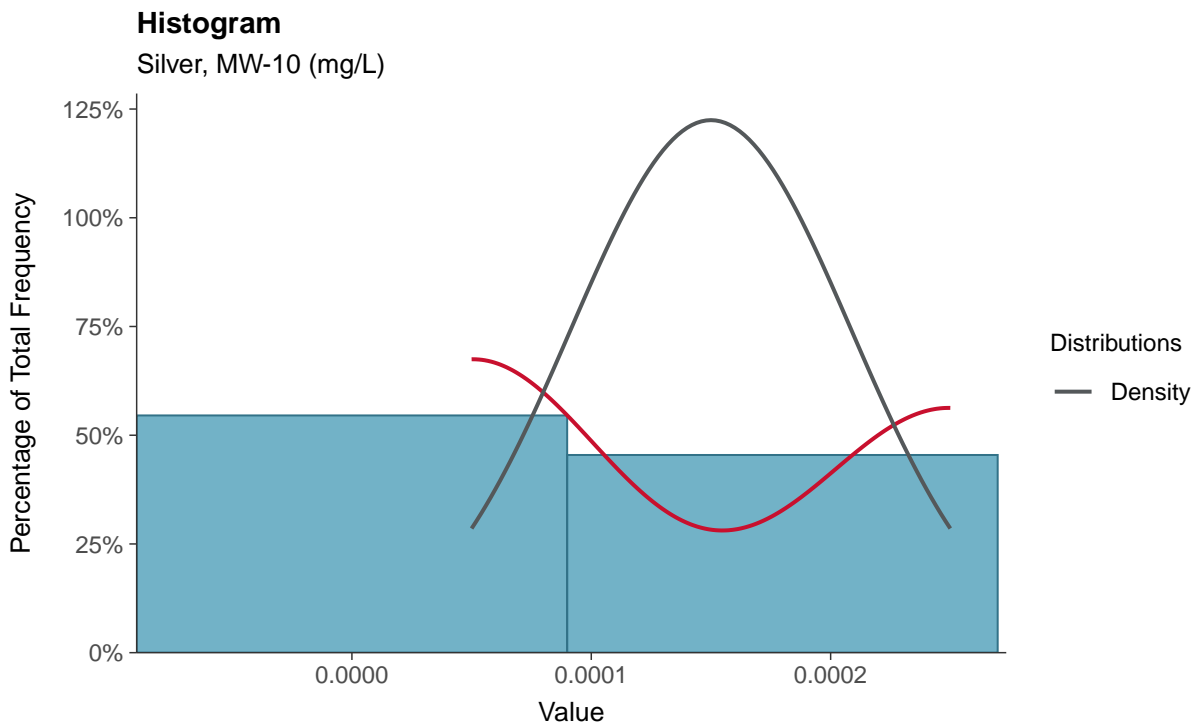
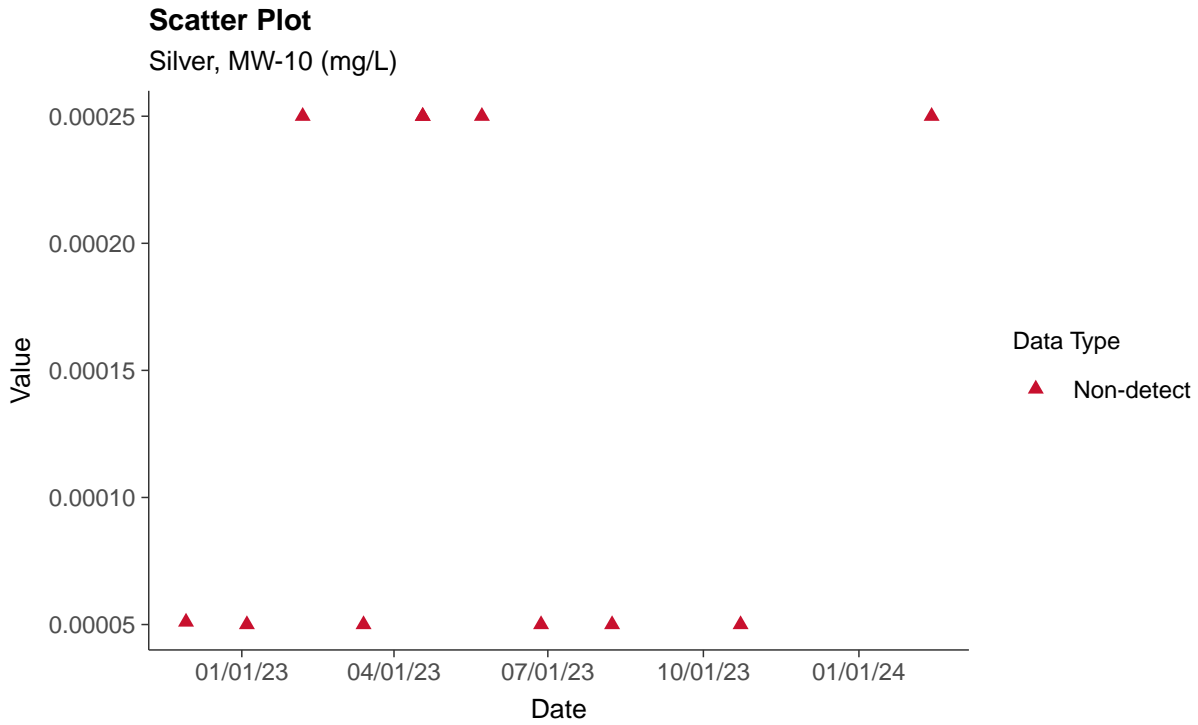
Nickel, MW-10 (mg/L)





Part 115: Silver, MW-10

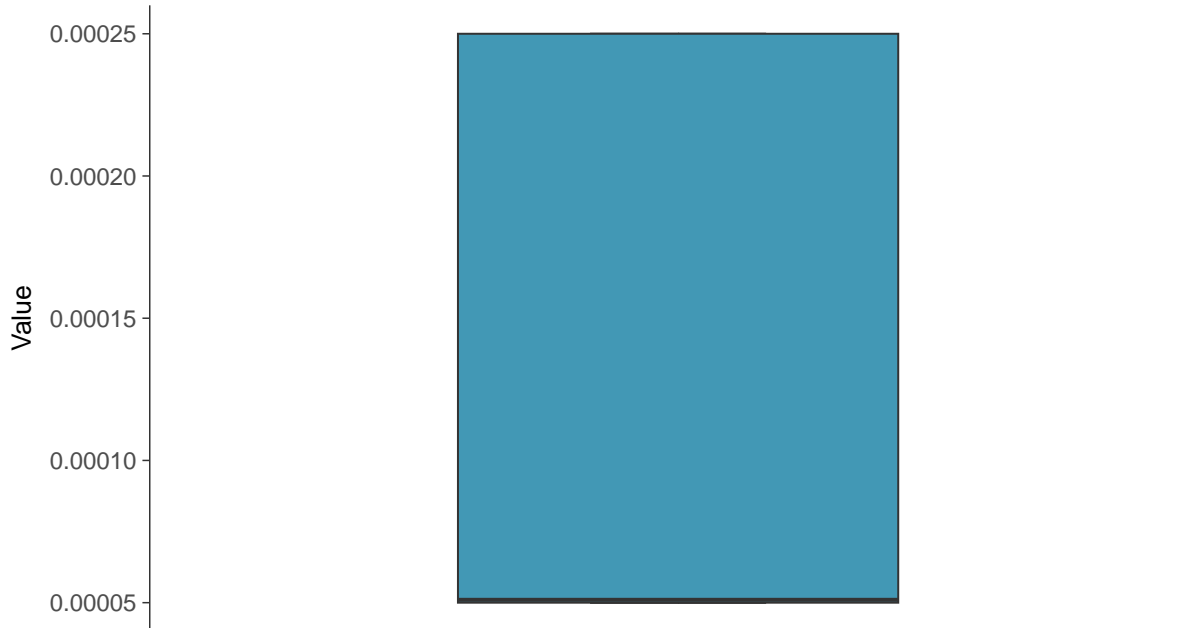
ID: 2_20_6_123





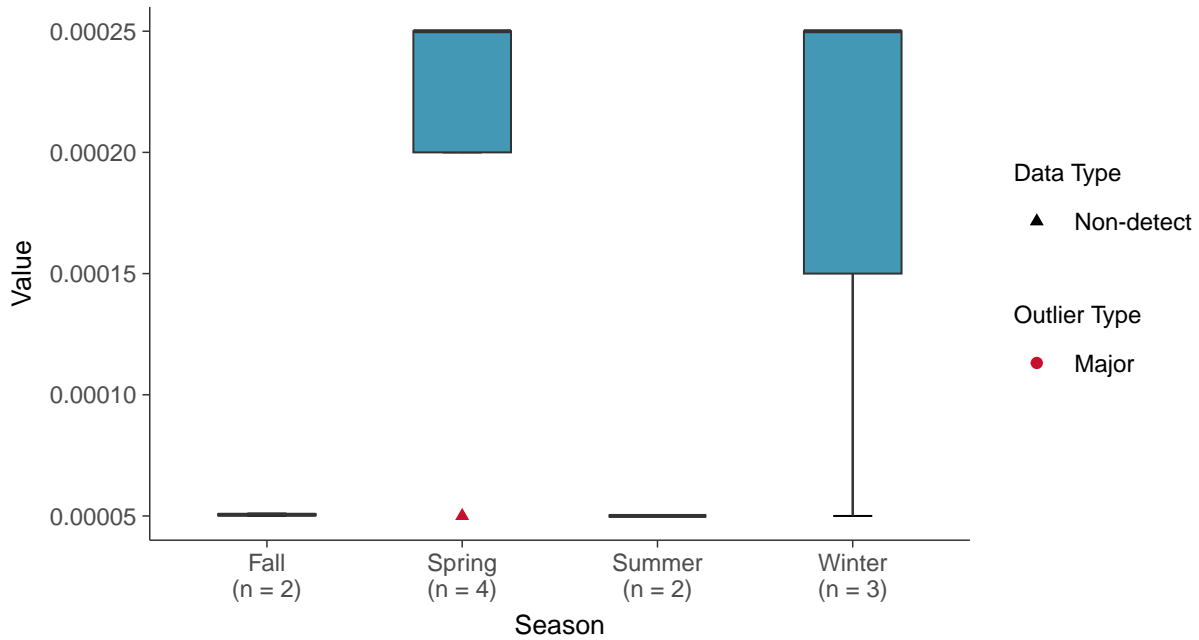
Boxplot

Silver, MW-10 (mg/L)



Boxplot by Season

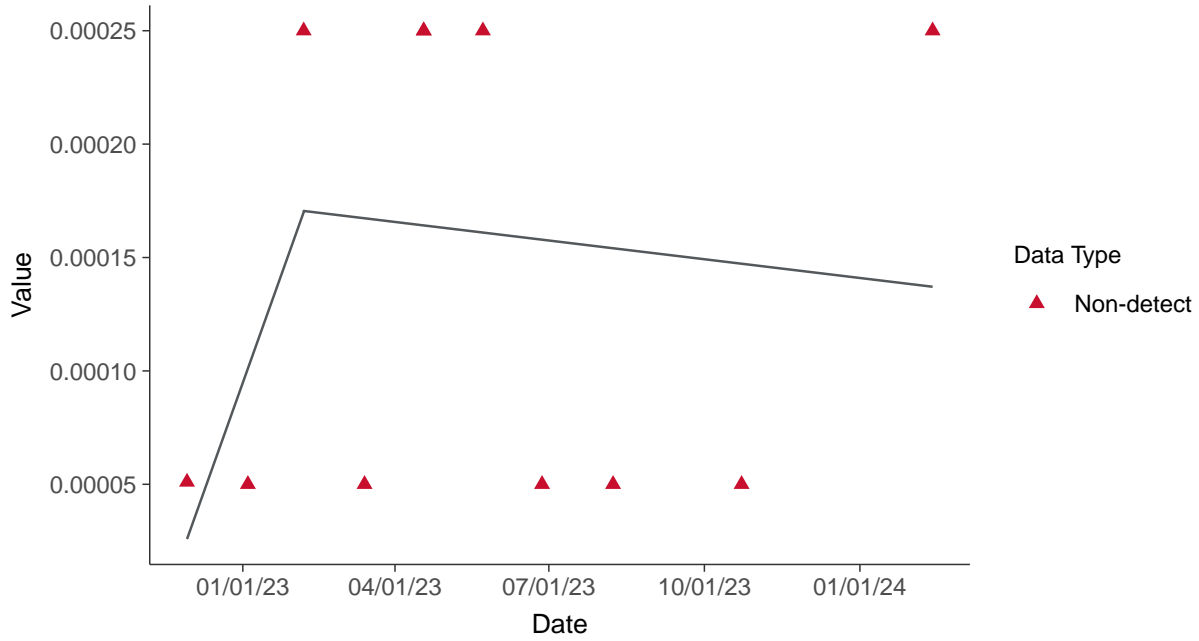
Silver, MW-10 (mg/L)





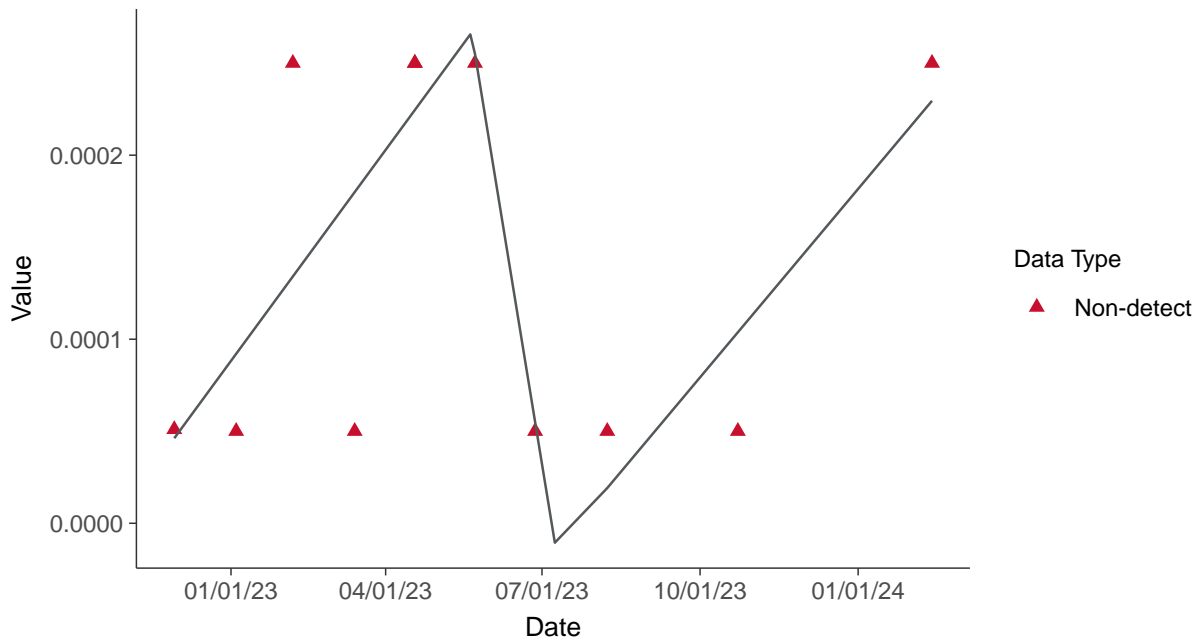
Trend Regression: Piecewise Linear-Linear

Silver, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-10 (mg/L)



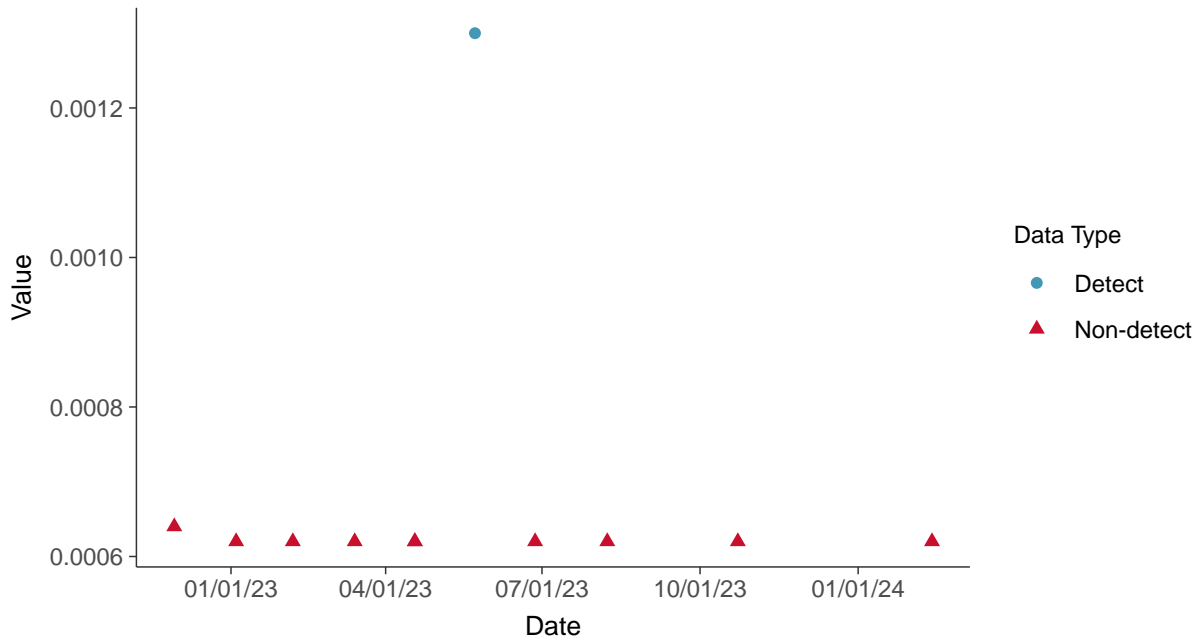


Part 115: Vanadium, MW-10

ID: 2_20_6_129

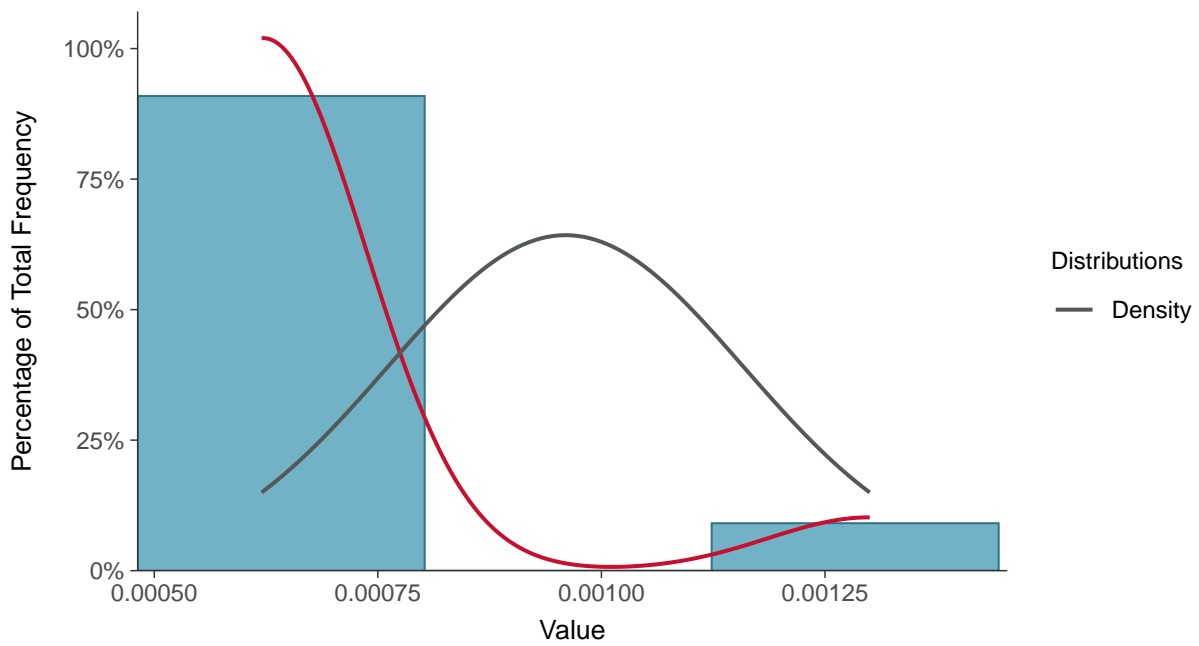
Scatter Plot

Vanadium, MW-10 (mg/L)



Histogram

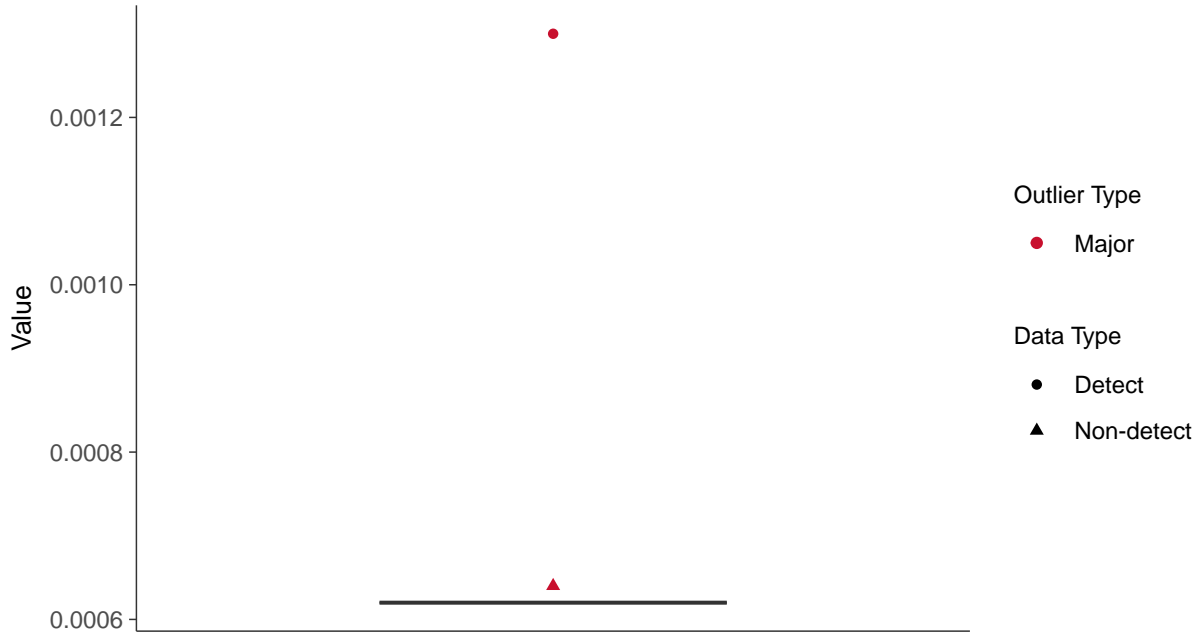
Vanadium, MW-10 (mg/L)





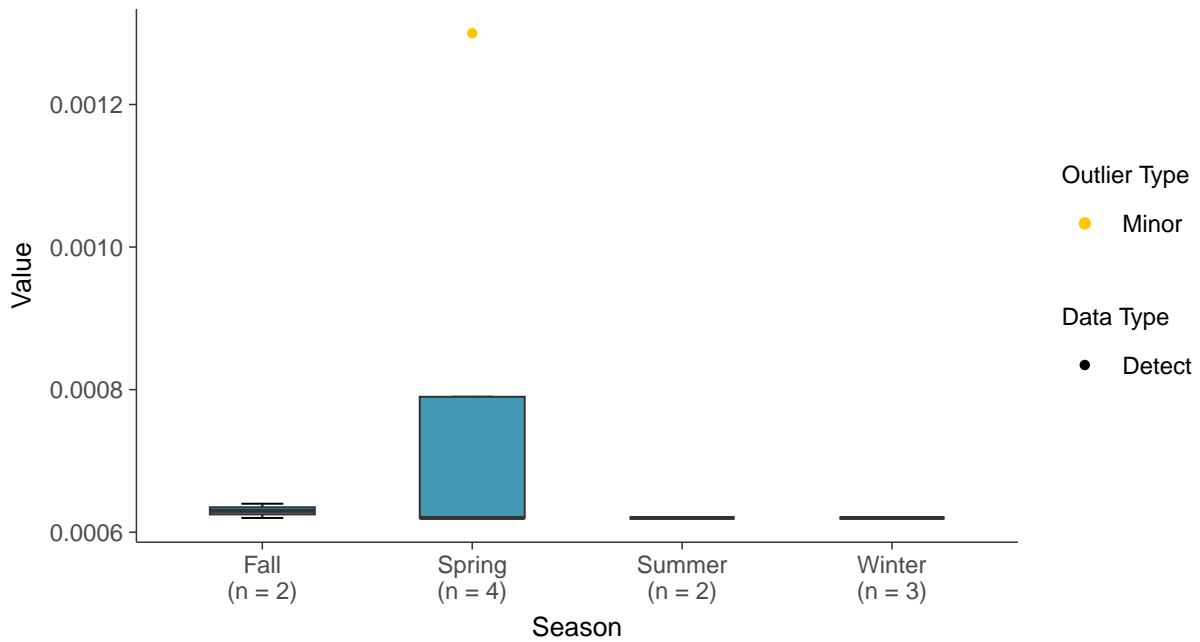
Boxplot

Vanadium, MW-10 (mg/L)



Boxplot by Season

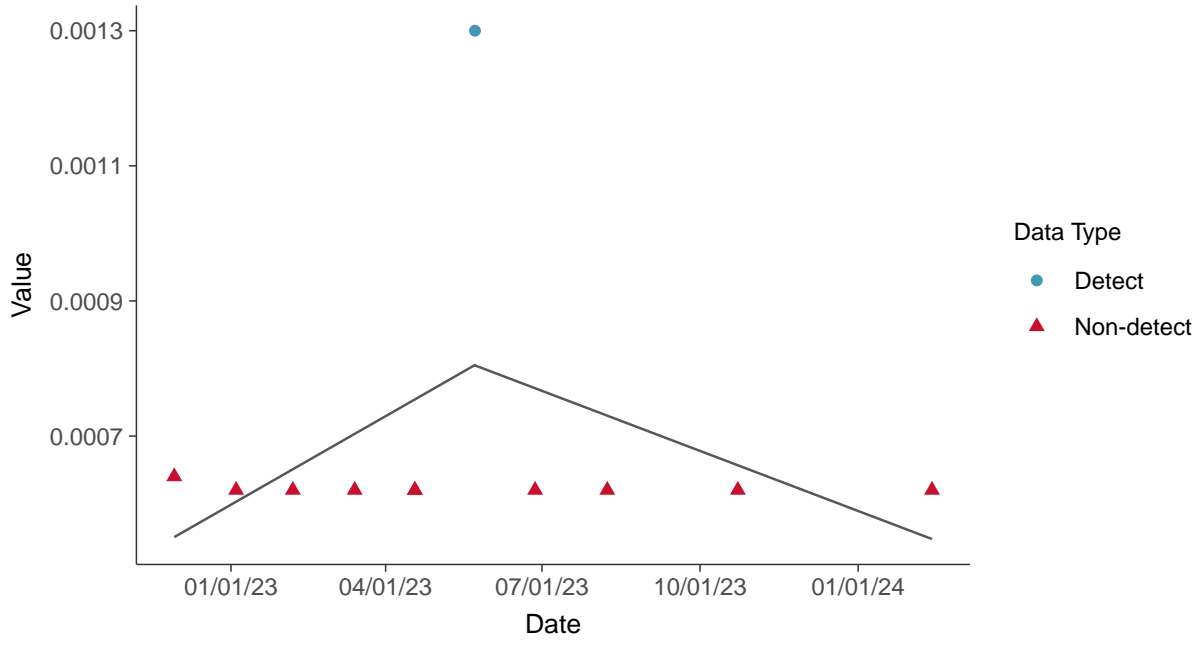
Vanadium, MW-10 (mg/L)





Trend Regression: Piecewise Linear-Linear

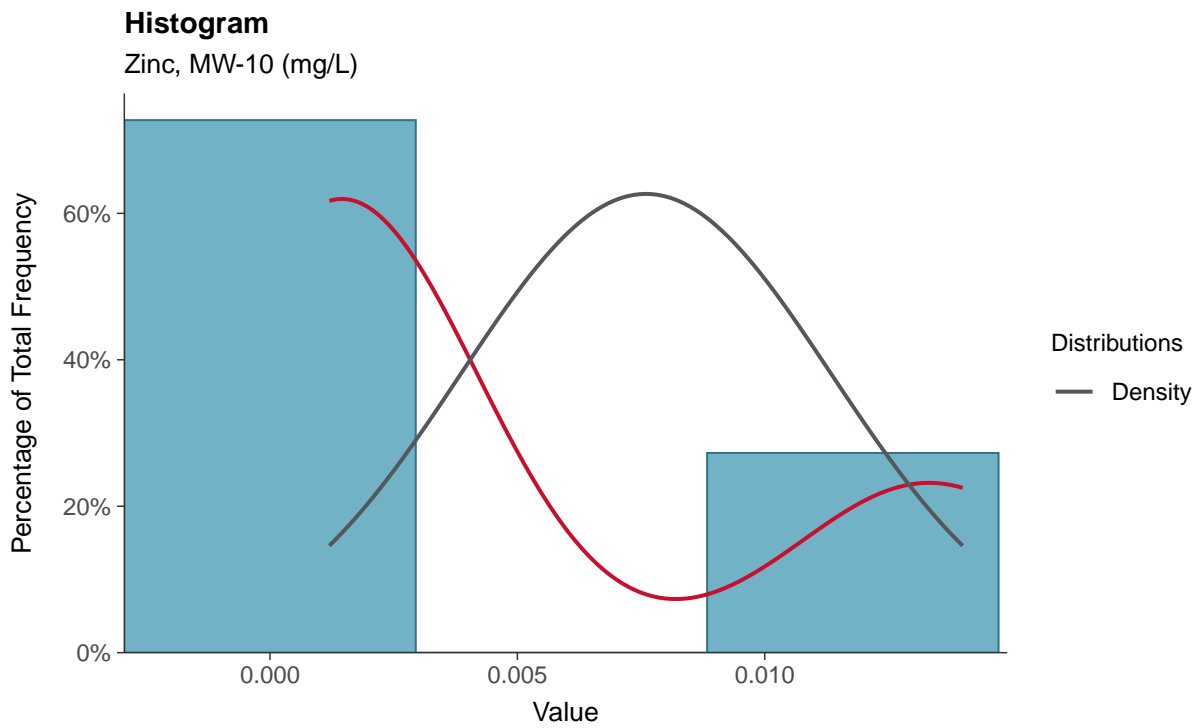
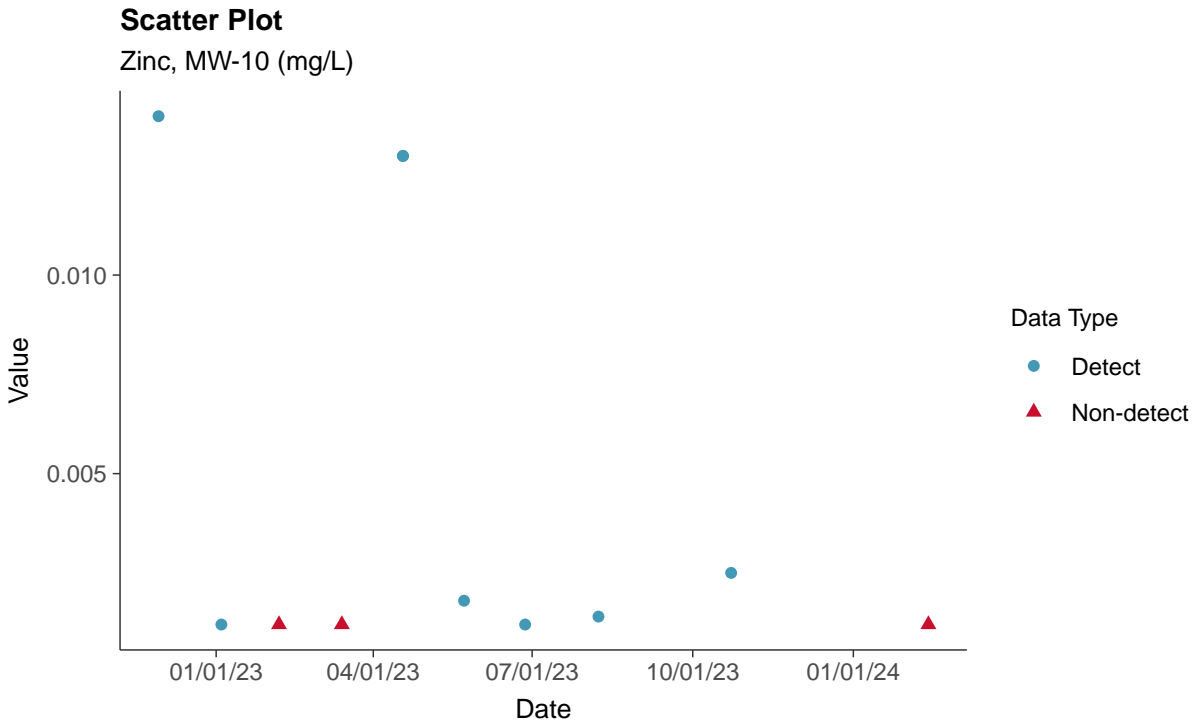
Vanadium, MW-10 (mg/L)





Part 115: Zinc, MW-10

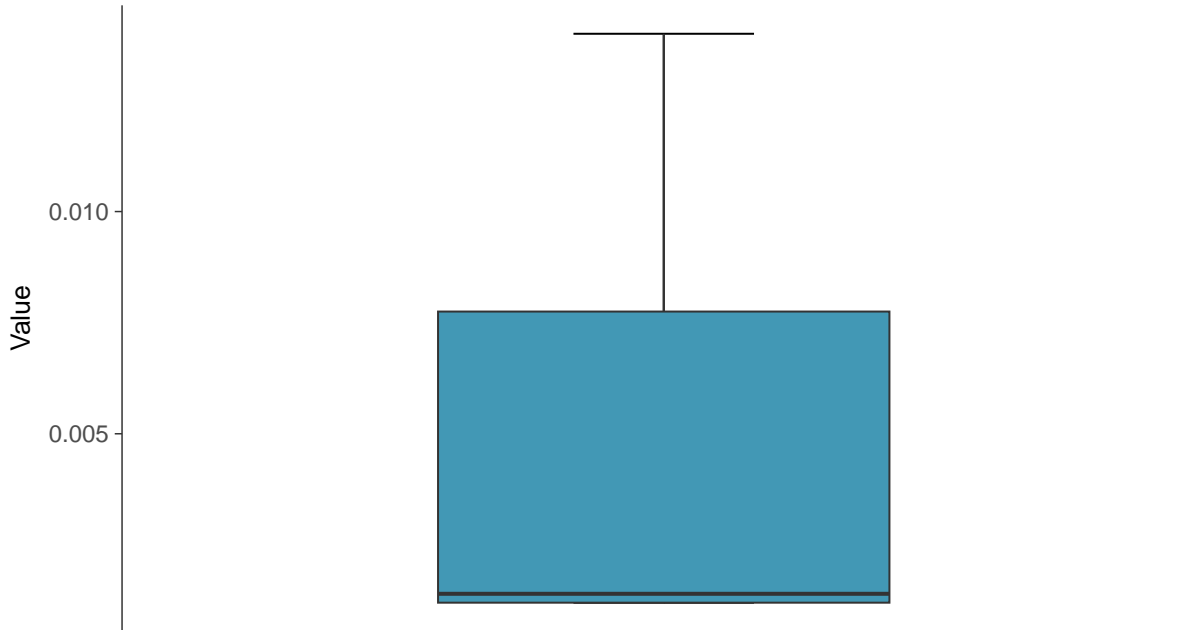
ID: 2_20_6_130





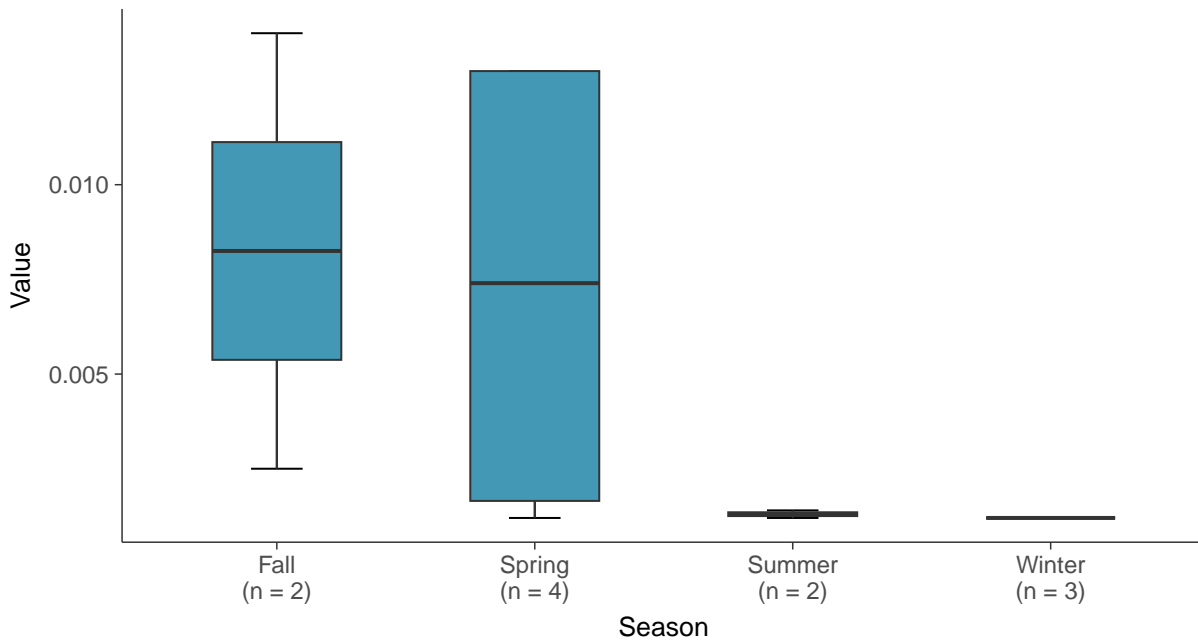
Boxplot

Zinc, MW-10 (mg/L)



Boxplot by Season

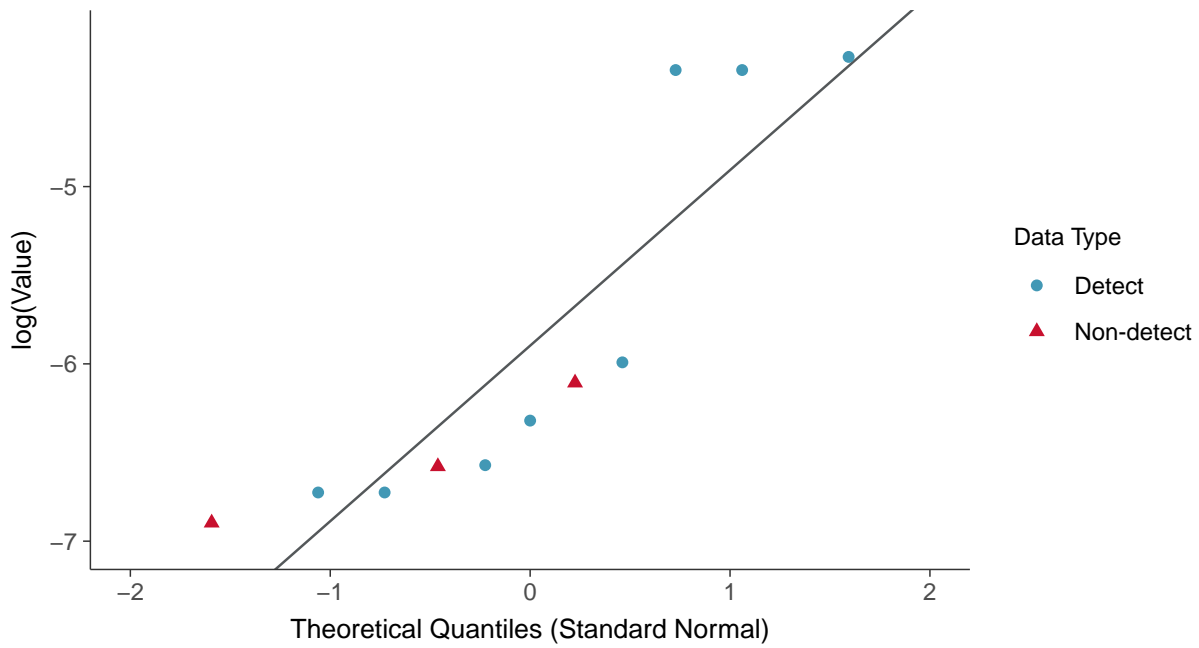
Zinc, MW-10 (mg/L)





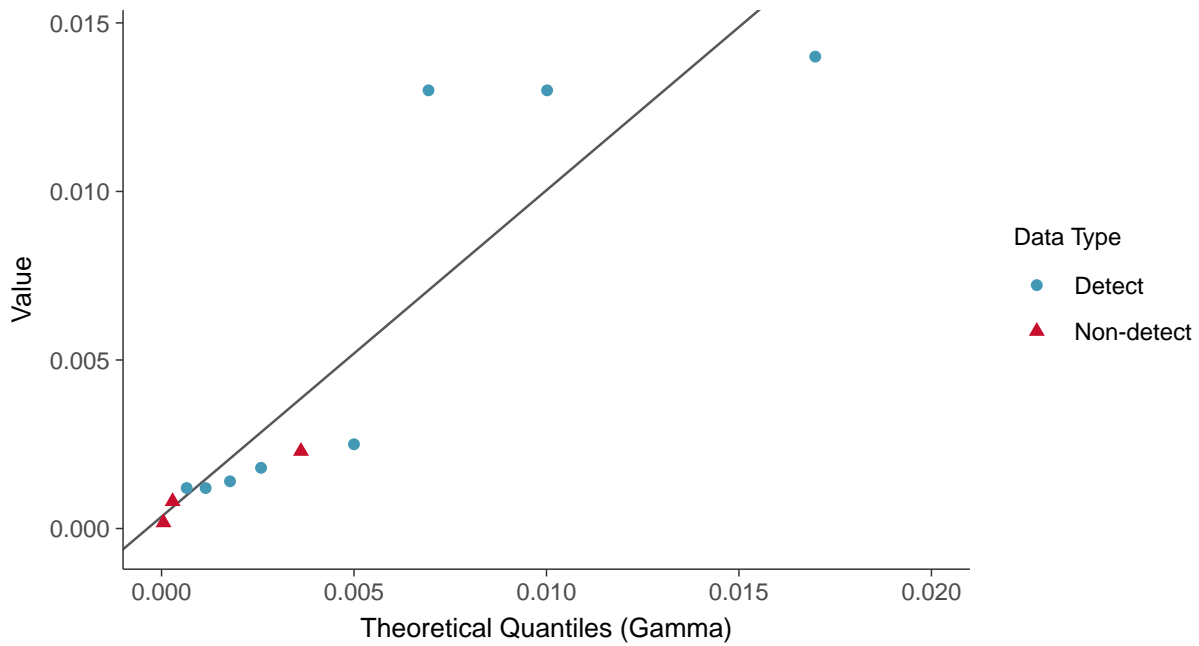
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-10 (mg/L)



Gamma Q-Q plot using ROS Imputed Estimates

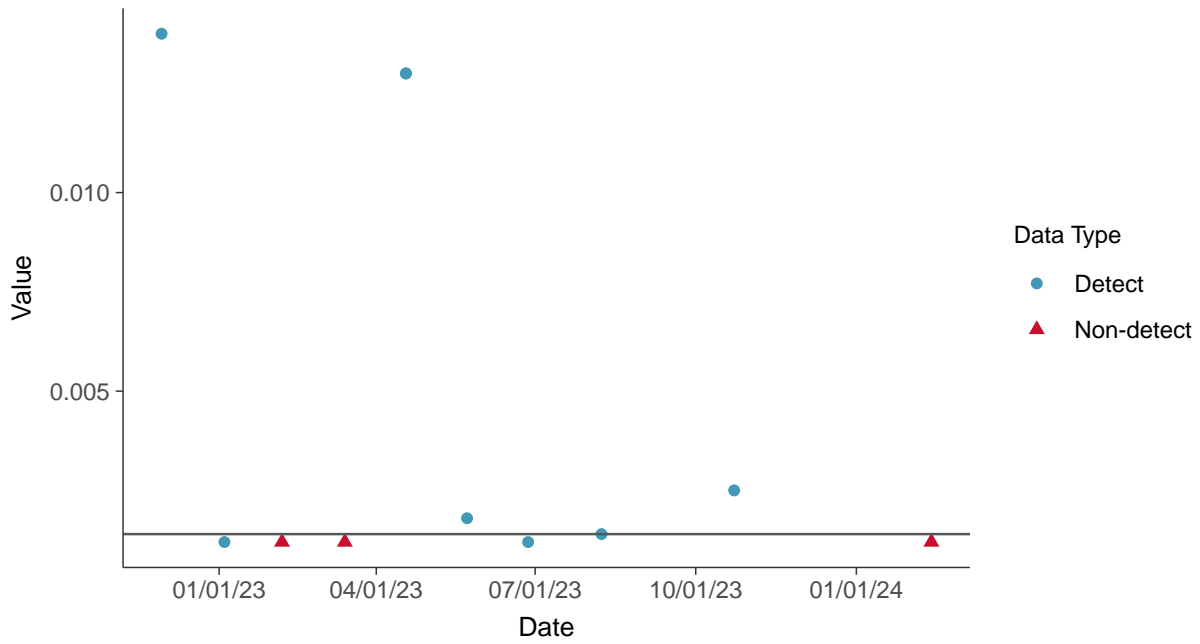
Zinc, MW-10 (mg/L)





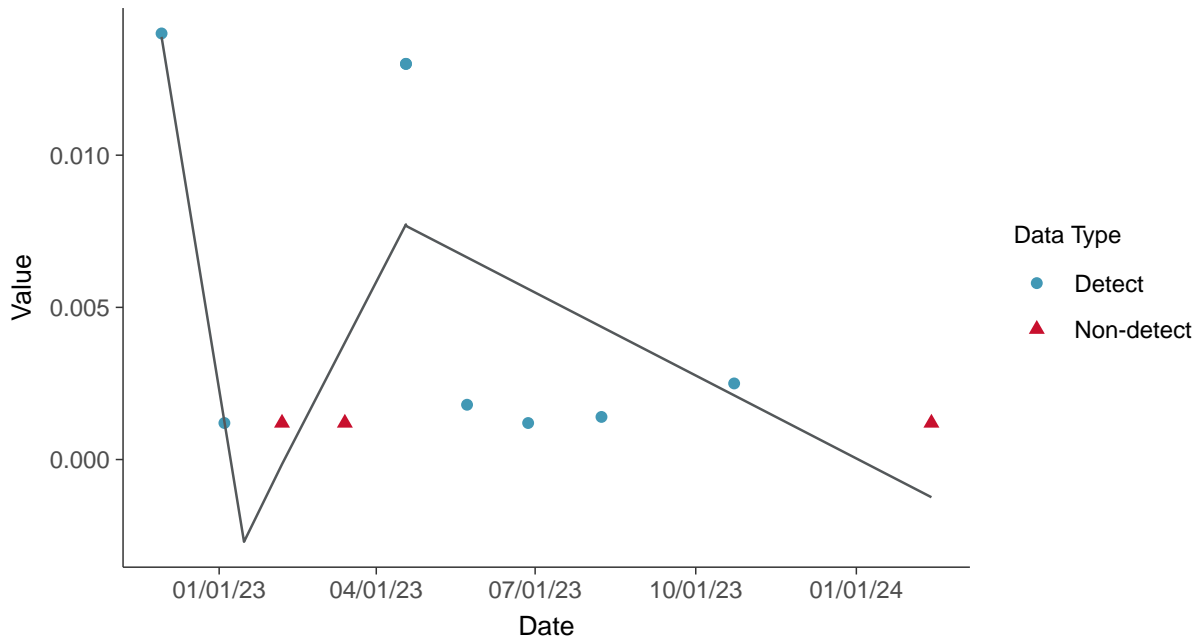
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Zinc, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-10 (mg/L)



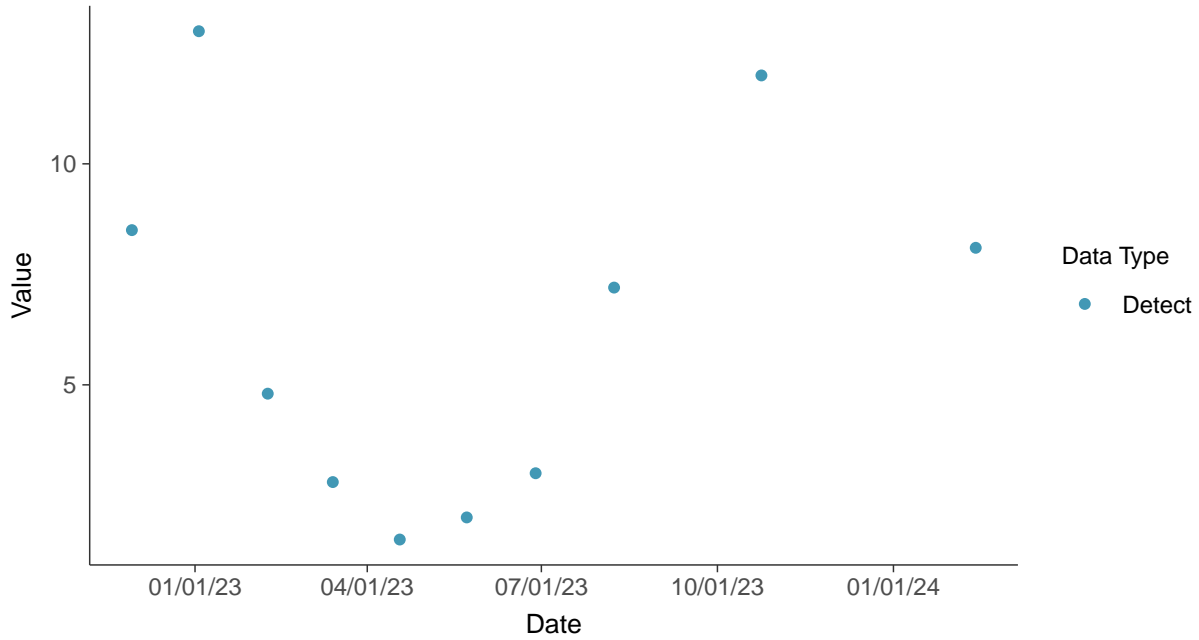


Appendix III: Boron, MW-11

ID: 2_21_4_105

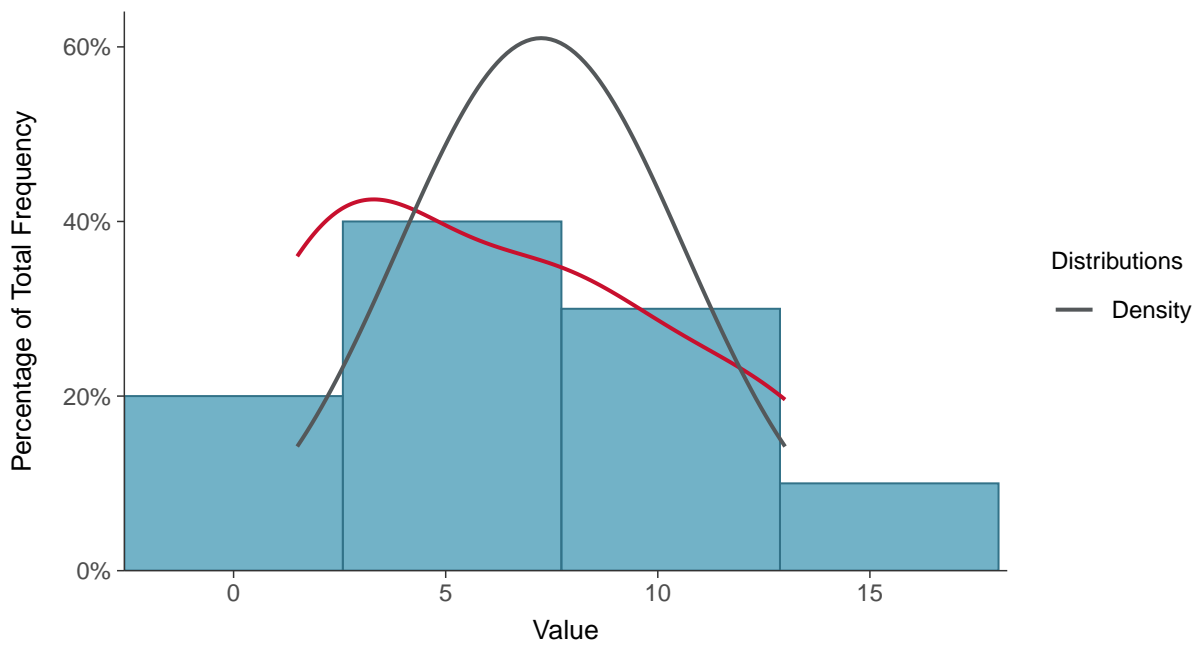
Scatter Plot

Boron, MW-11 (mg/L)



Histogram

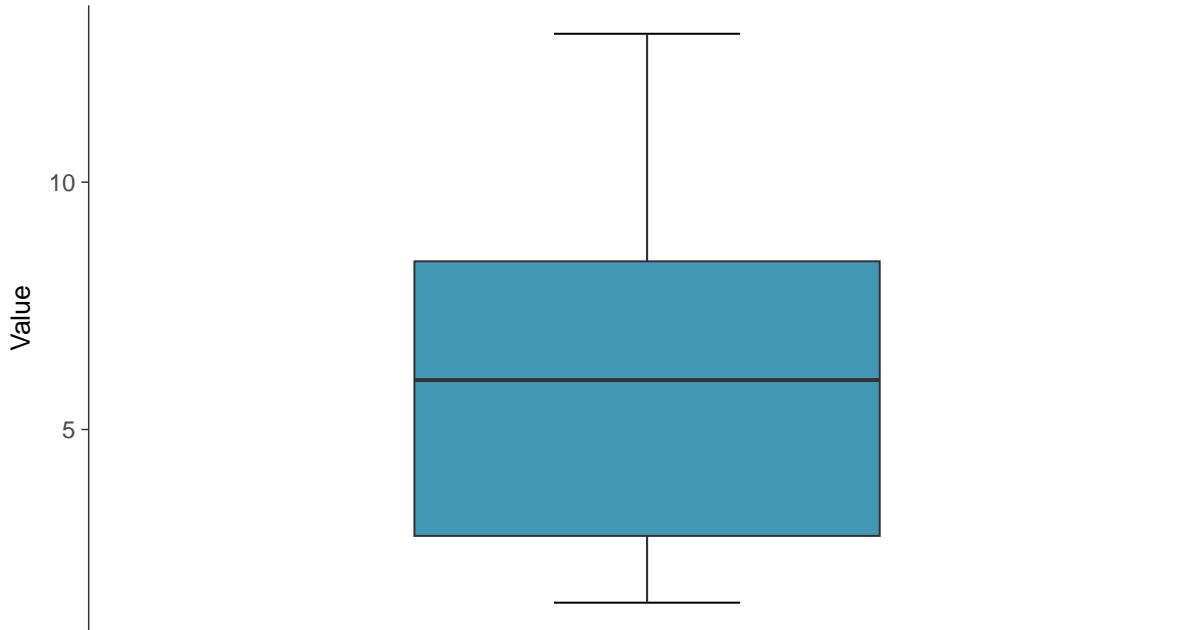
Boron, MW-11 (mg/L)





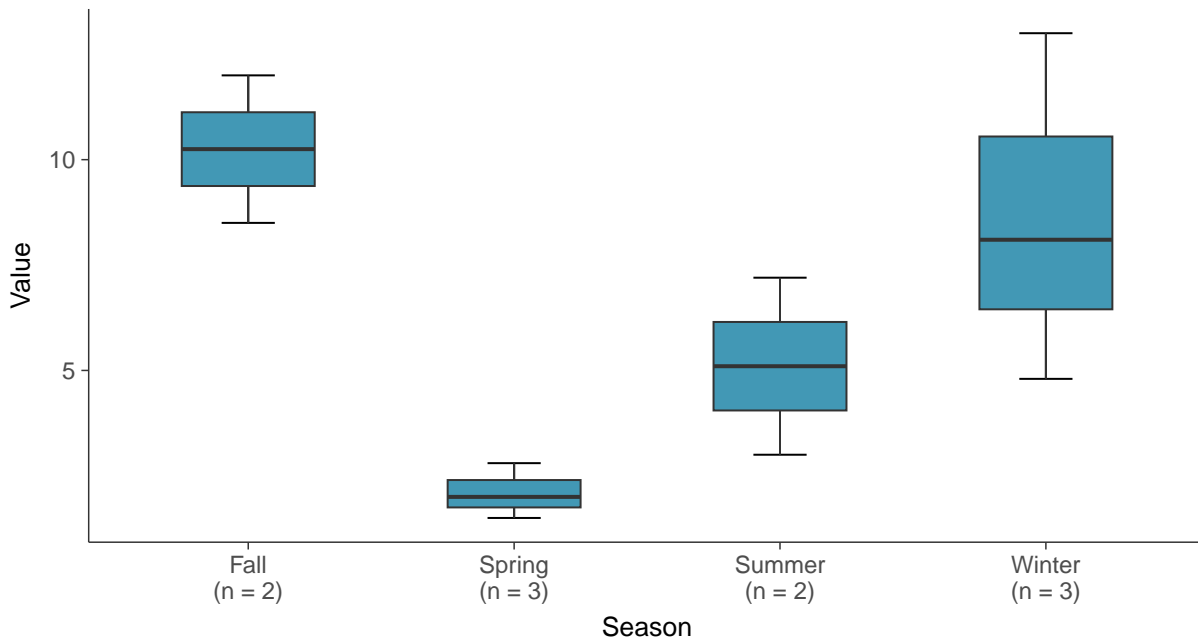
Boxplot

Boron, MW-11 (mg/L)



Boxplot by Season

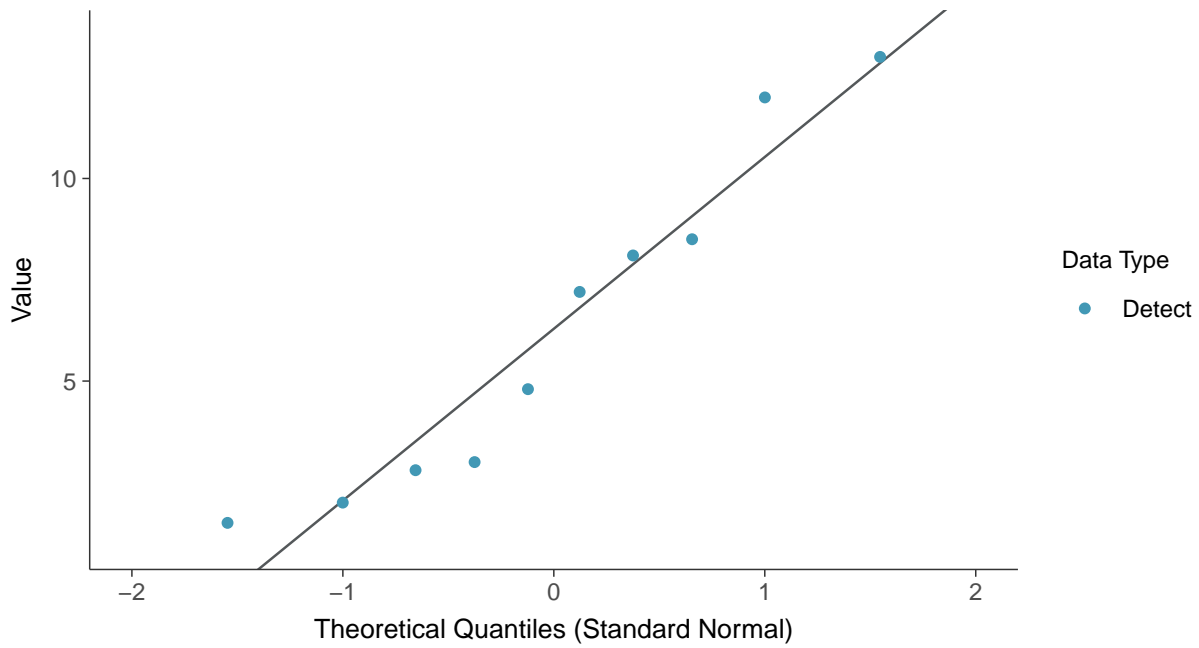
Boron, MW-11 (mg/L)





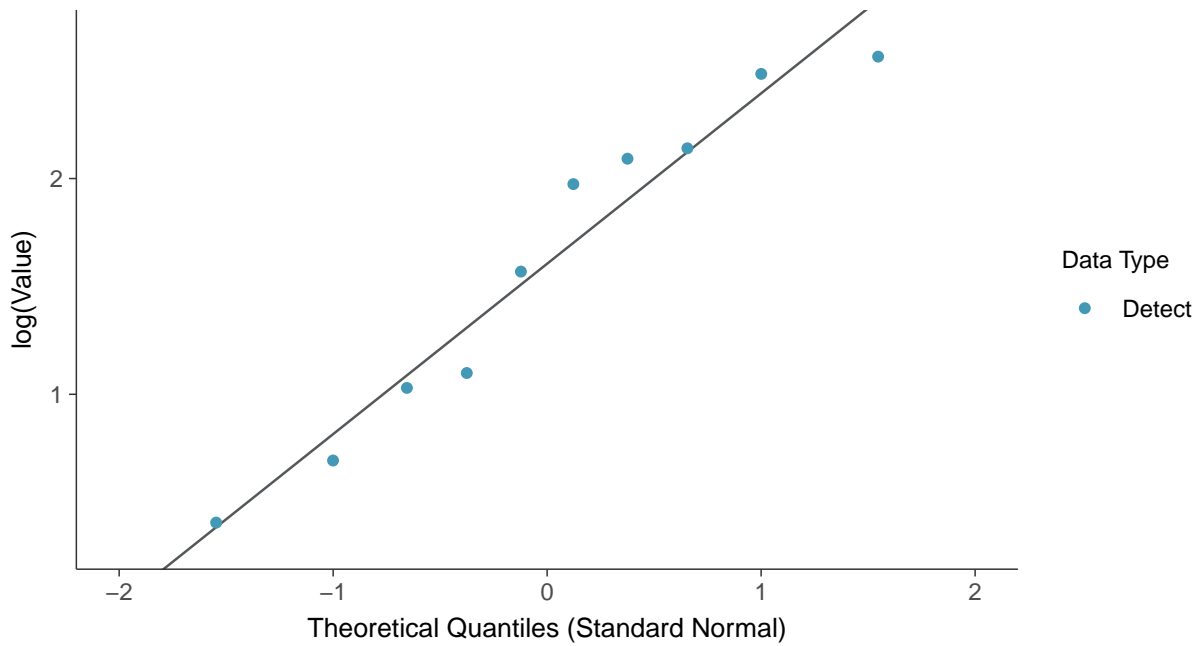
Normal Q-Q plot

Boron, MW-11 (mg/L)



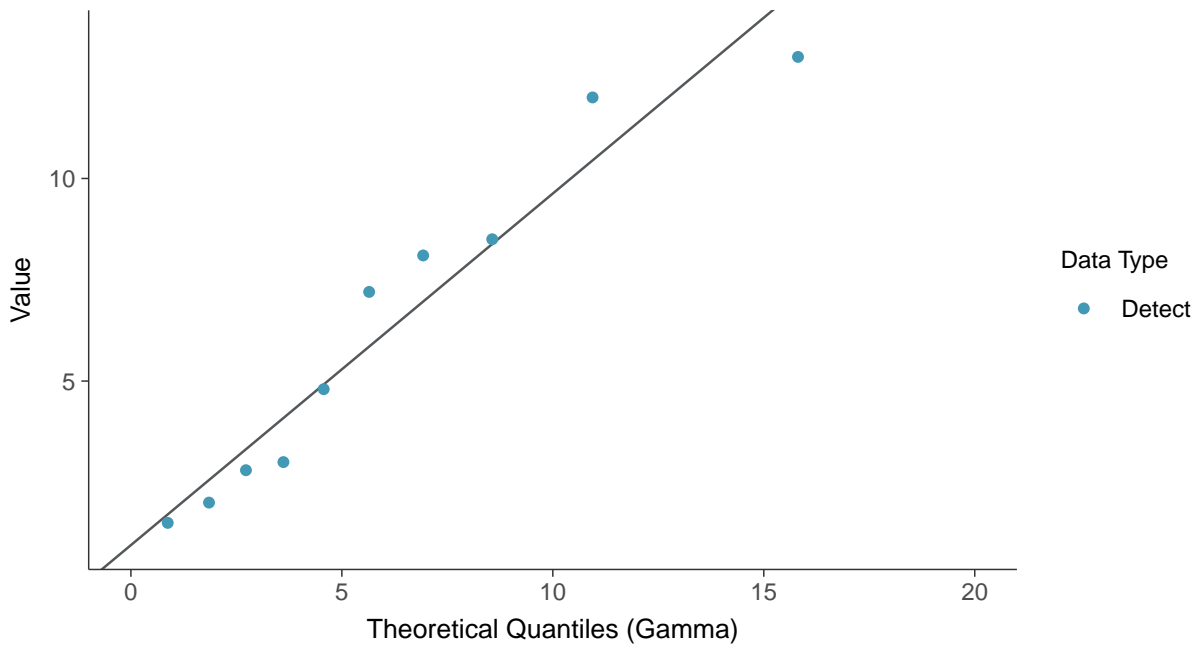
Lognormal Q-Q plot

Boron, MW-11 (mg/L)

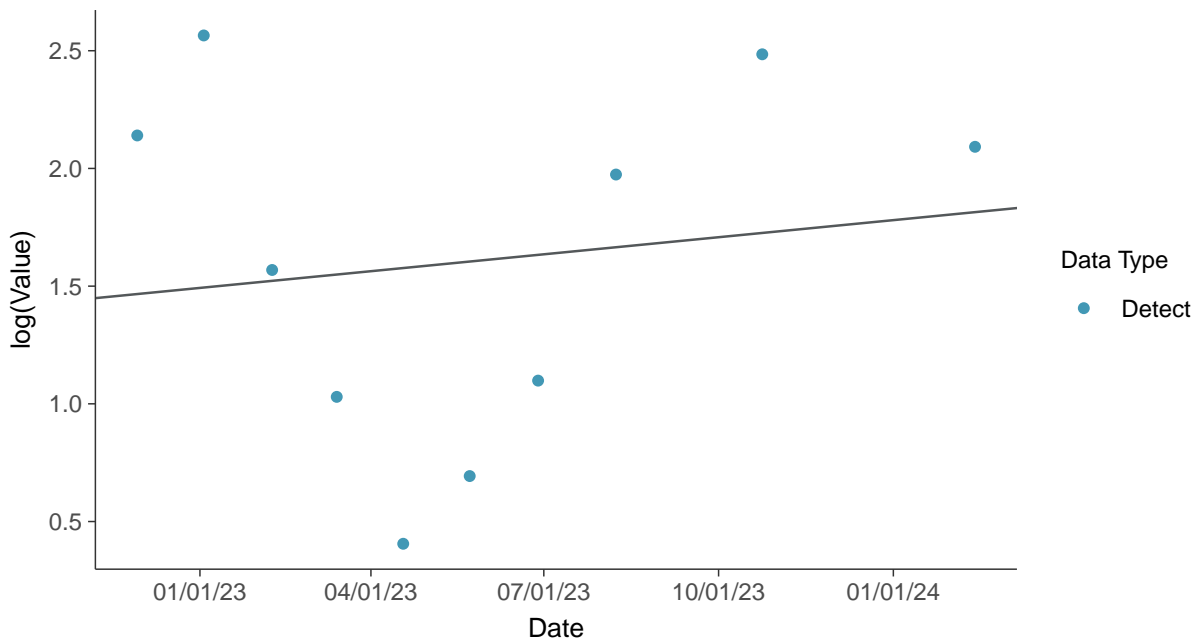




Gamma Q-Q plot
Boron, MW-11 (mg/L)



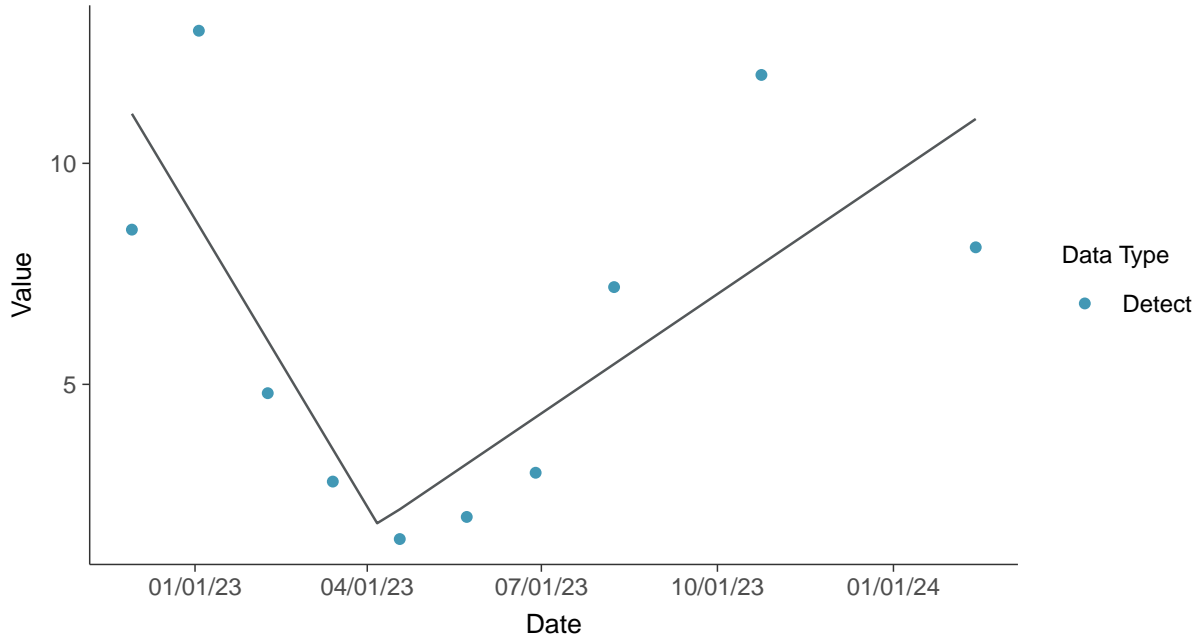
Trend Regression: Lognormal MLE
Boron, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Boron, MW-11 (mg/L)



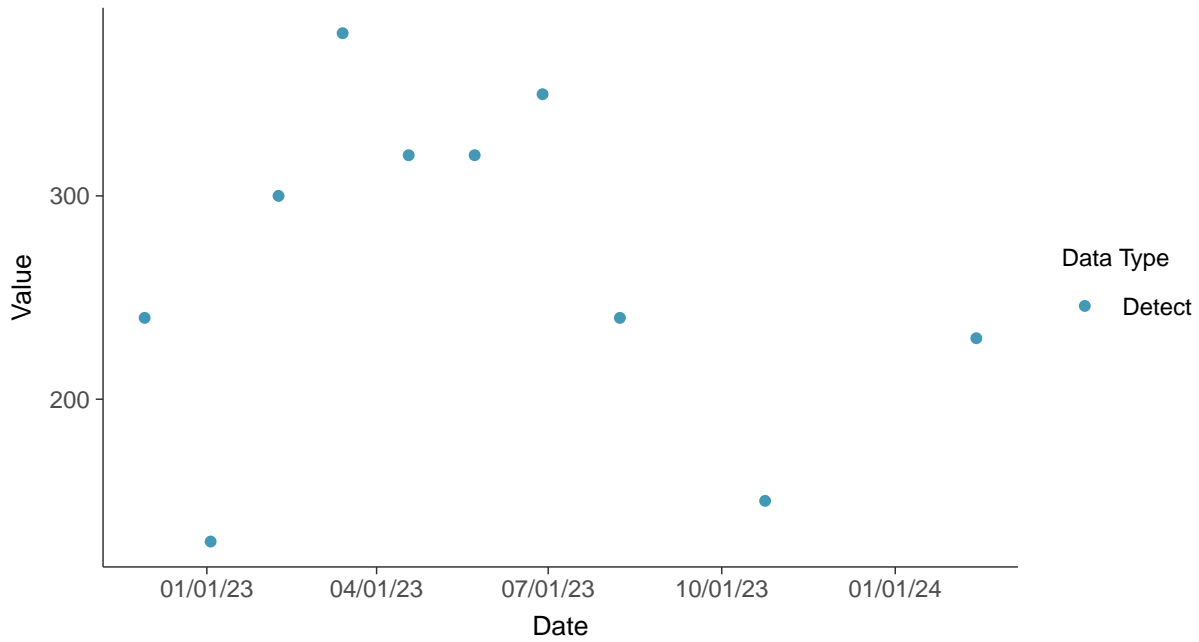


Appendix III: Calcium, MW-11

ID: 2_21_4_107

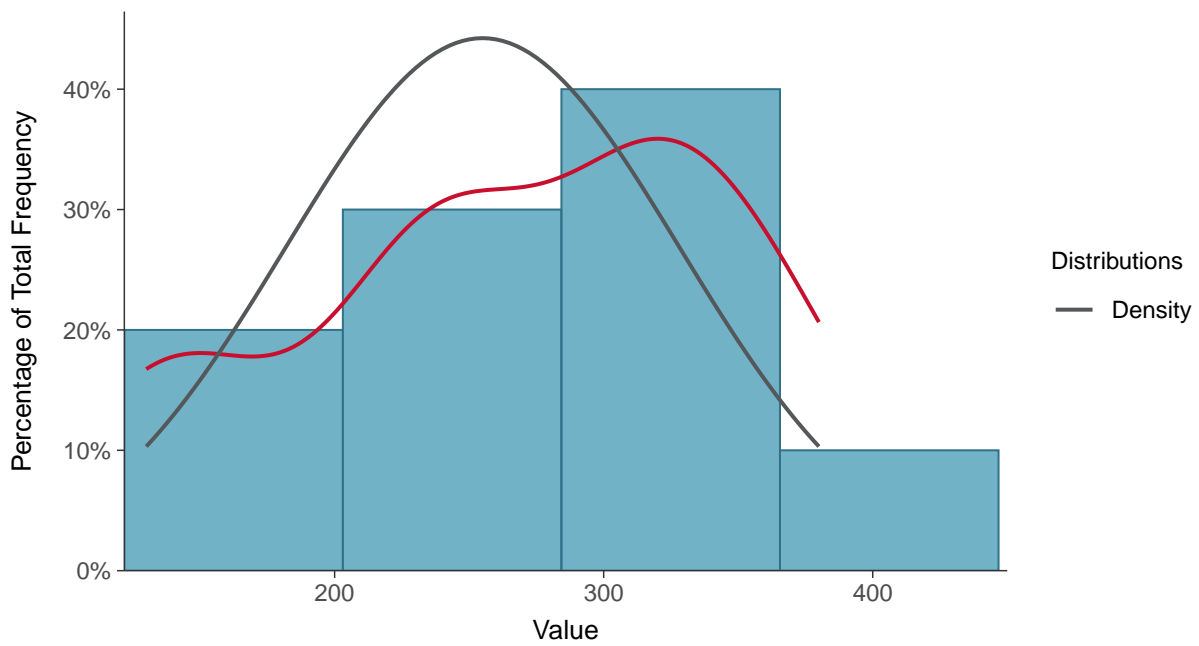
Scatter Plot

Calcium, MW-11 (mg/L)



Histogram

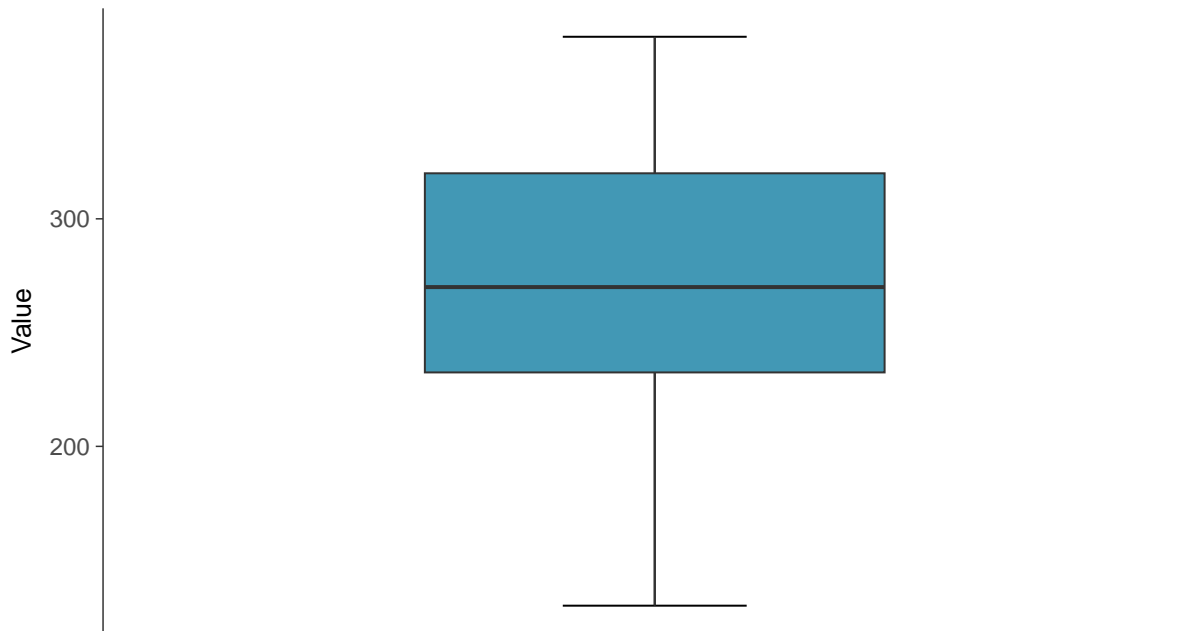
Calcium, MW-11 (mg/L)





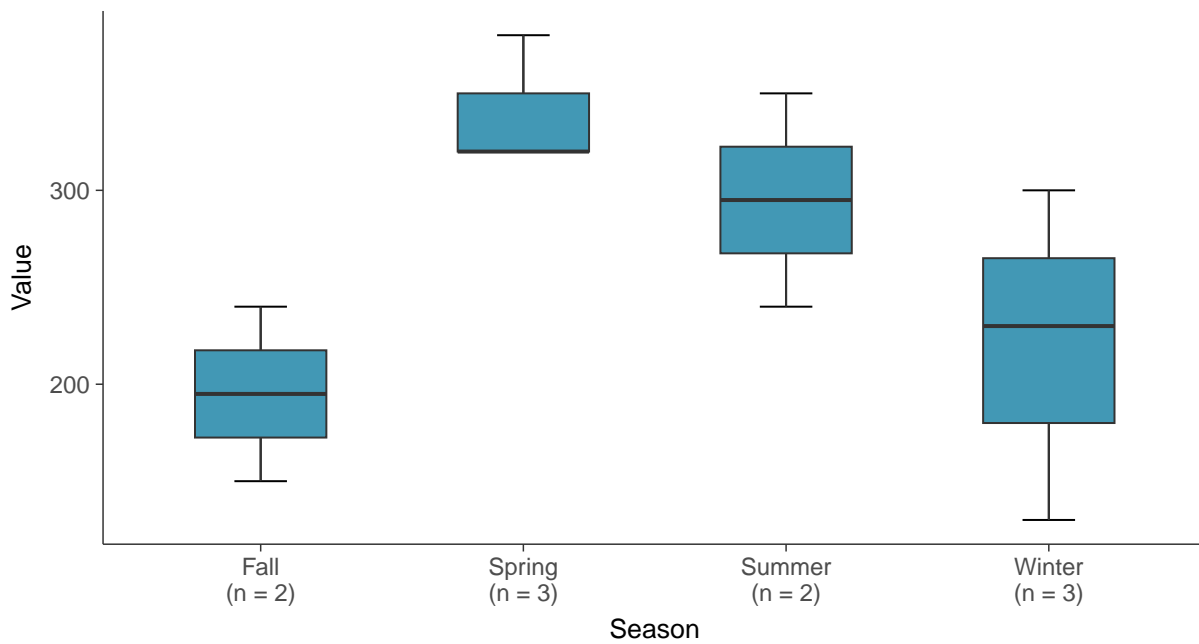
Boxplot

Calcium, MW-11 (mg/L)



Boxplot by Season

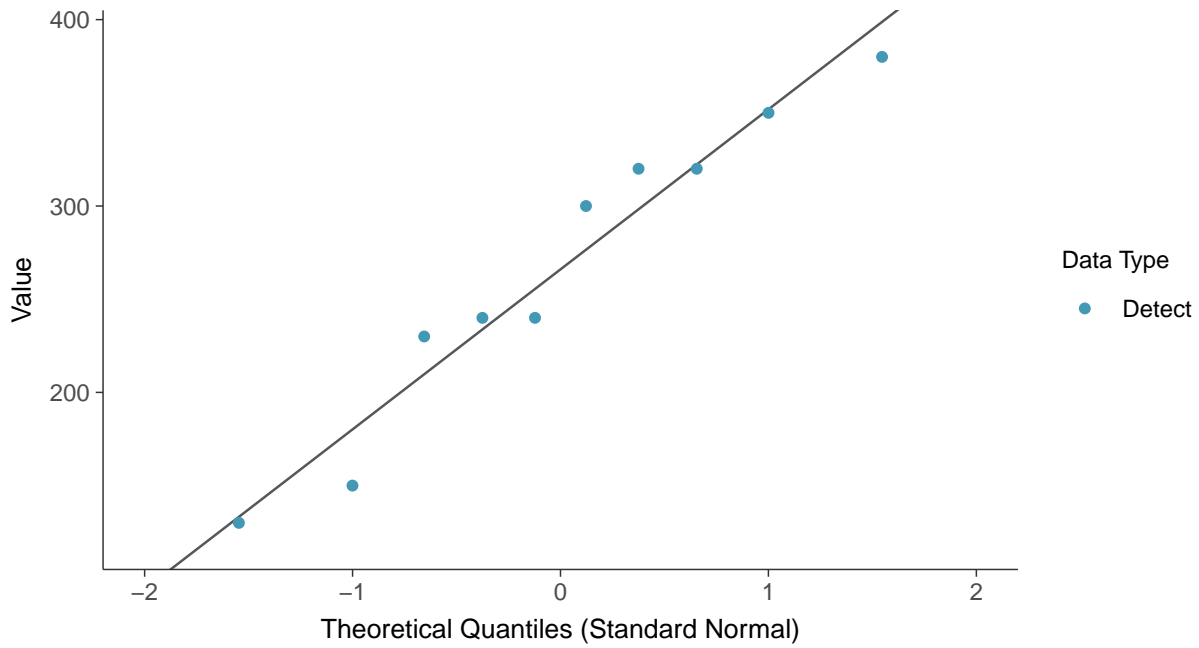
Calcium, MW-11 (mg/L)





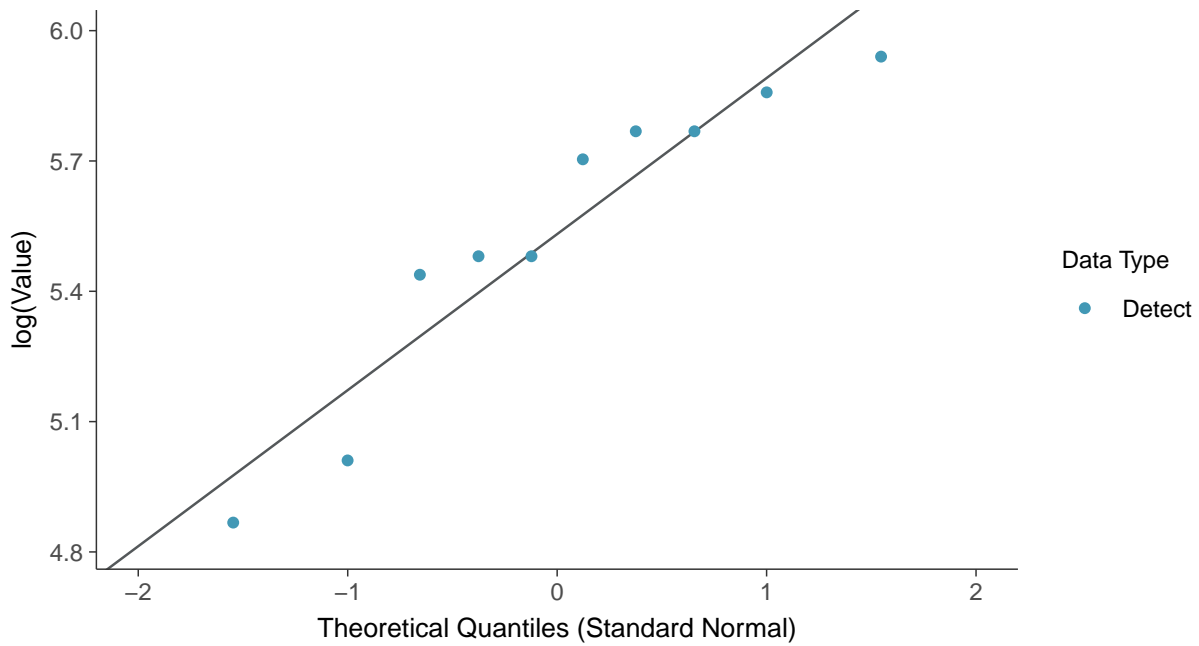
Normal Q-Q plot

Calcium, MW-11 (mg/L)



Lognormal Q-Q plot

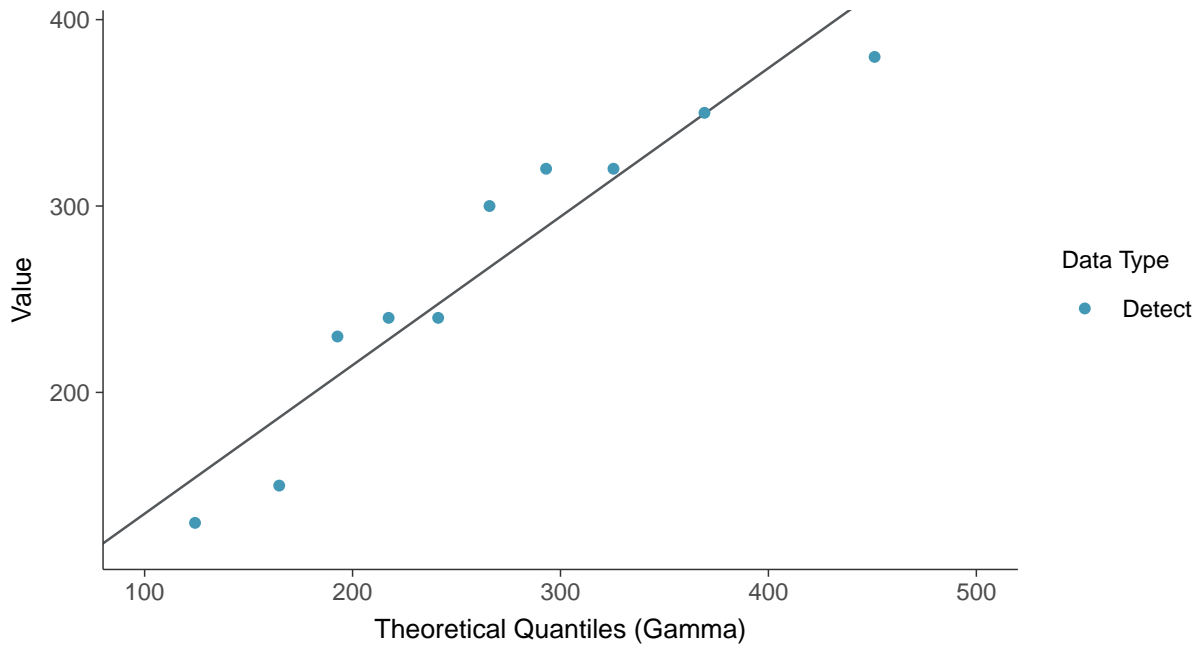
Calcium, MW-11 (mg/L)





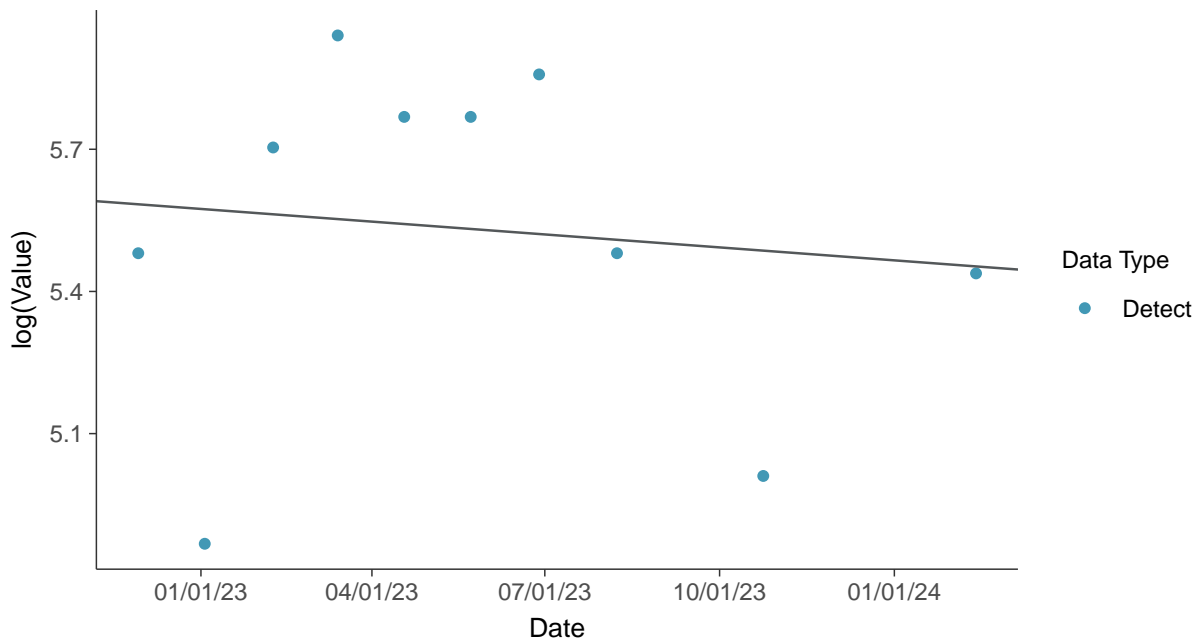
Gamma Q-Q plot

Calcium, MW-11 (mg/L)



Trend Regression: Lognormal MLE

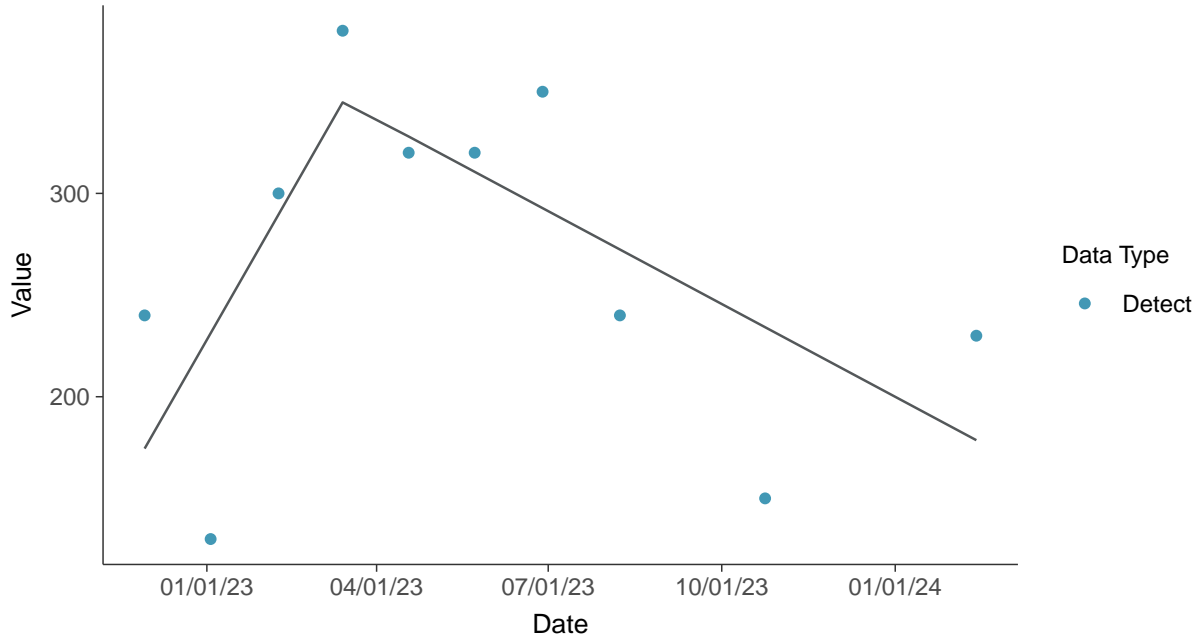
Calcium, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Calcium, MW-11 (mg/L)



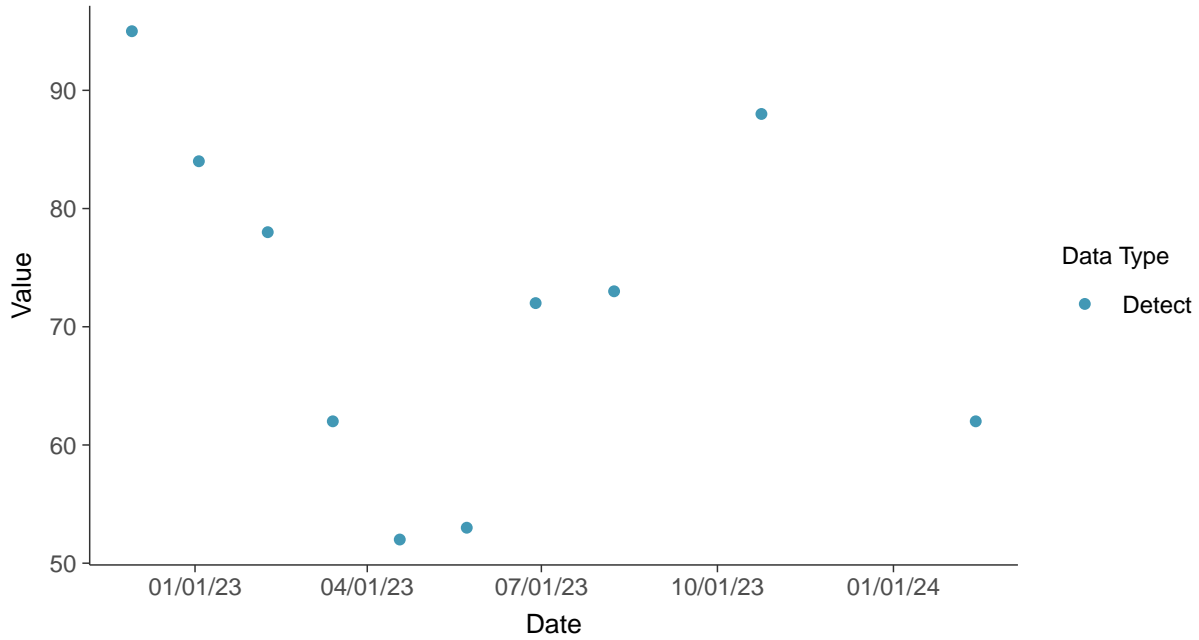


Appendix III: Chloride (as Cl), MW-11

ID: 2_21_4_108

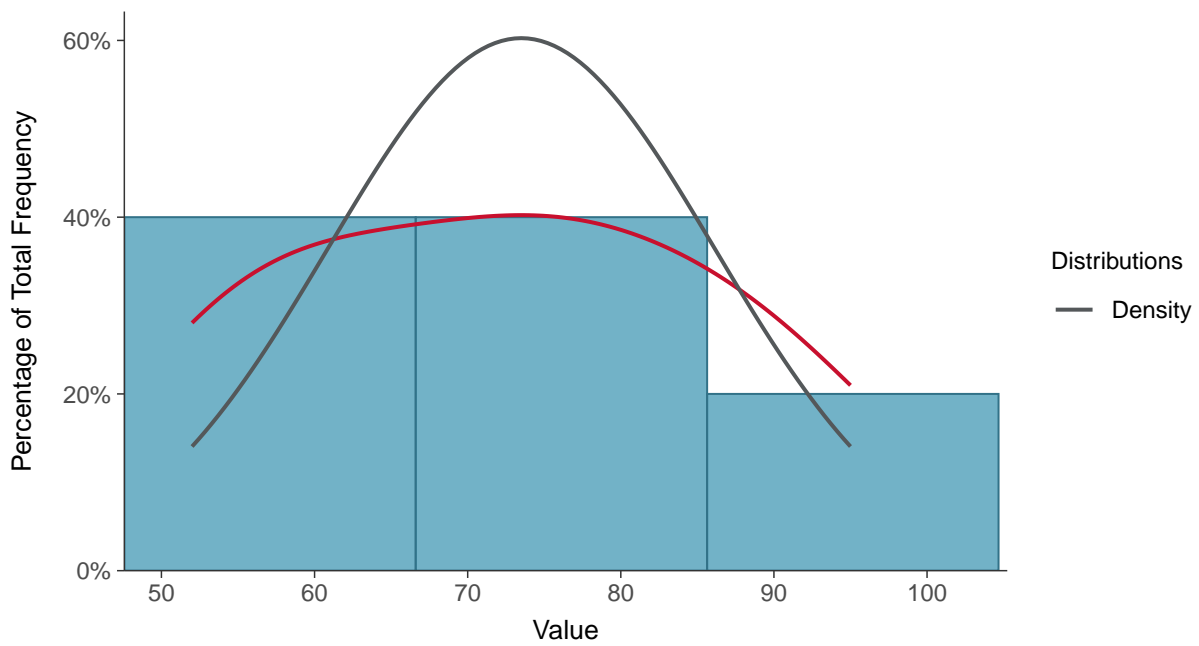
Scatter Plot

Chloride (as Cl), MW-11 (mg/L)



Histogram

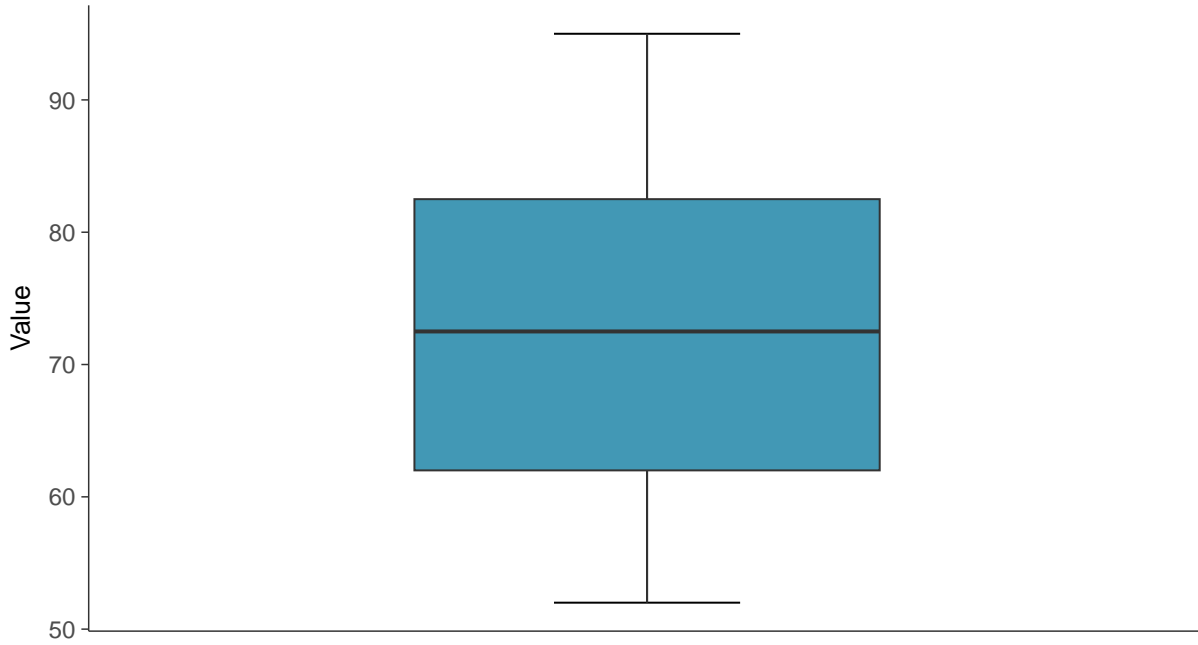
Chloride (as Cl), MW-11 (mg/L)





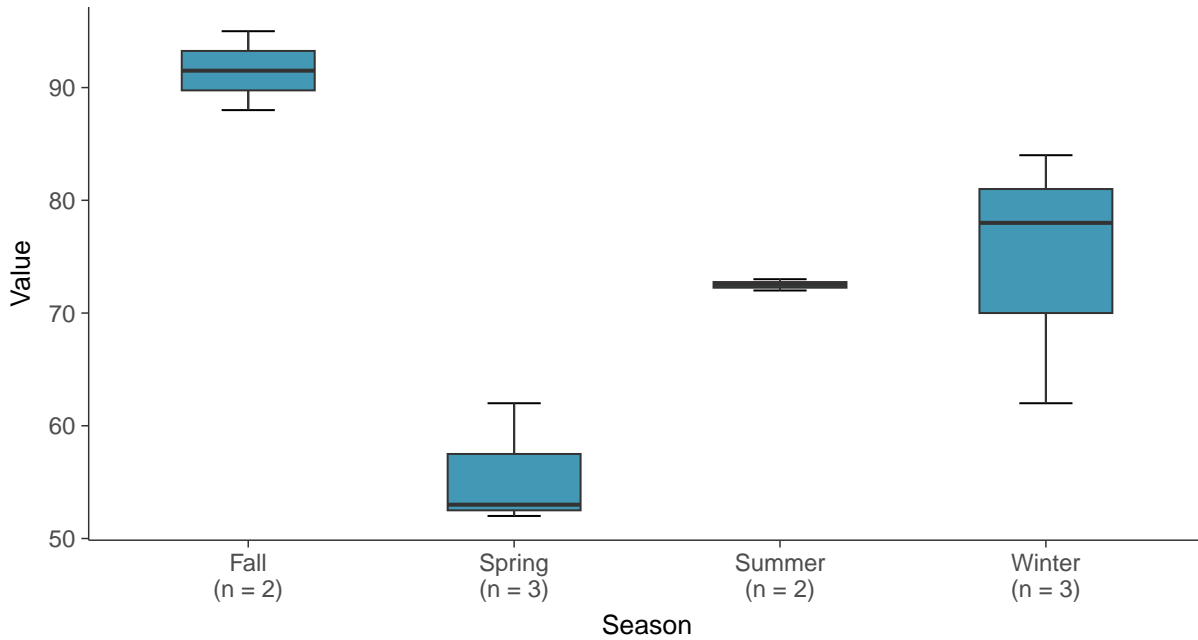
Boxplot

Chloride (as Cl), MW-11 (mg/L)



Boxplot by Season

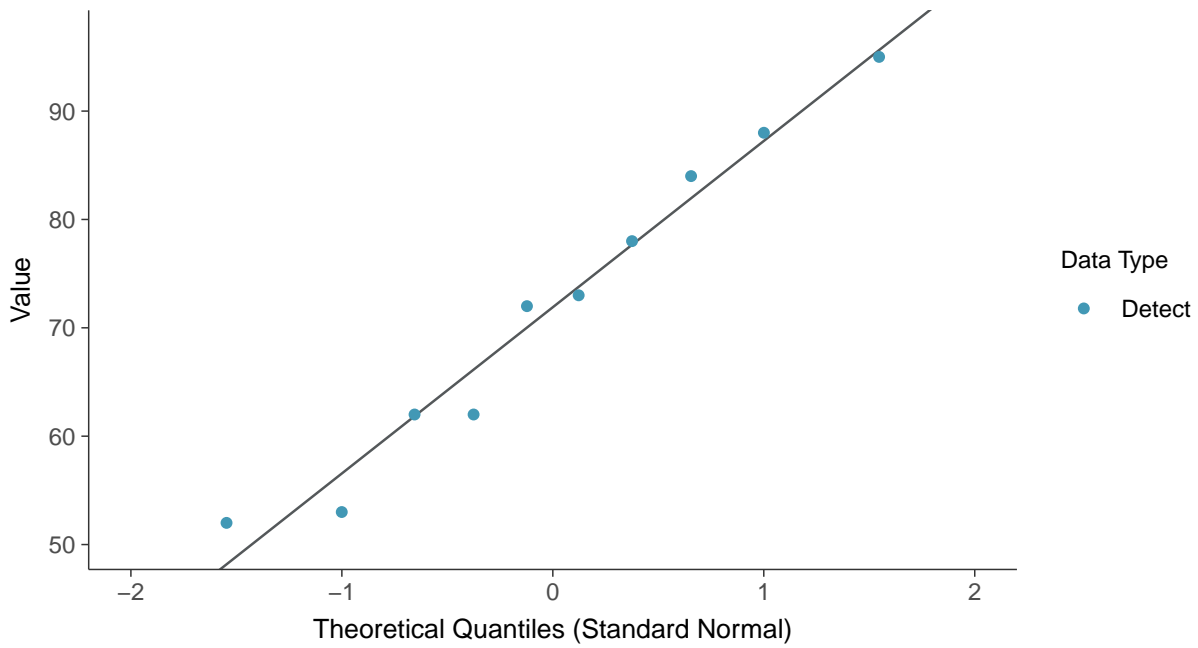
Chloride (as Cl), MW-11 (mg/L)





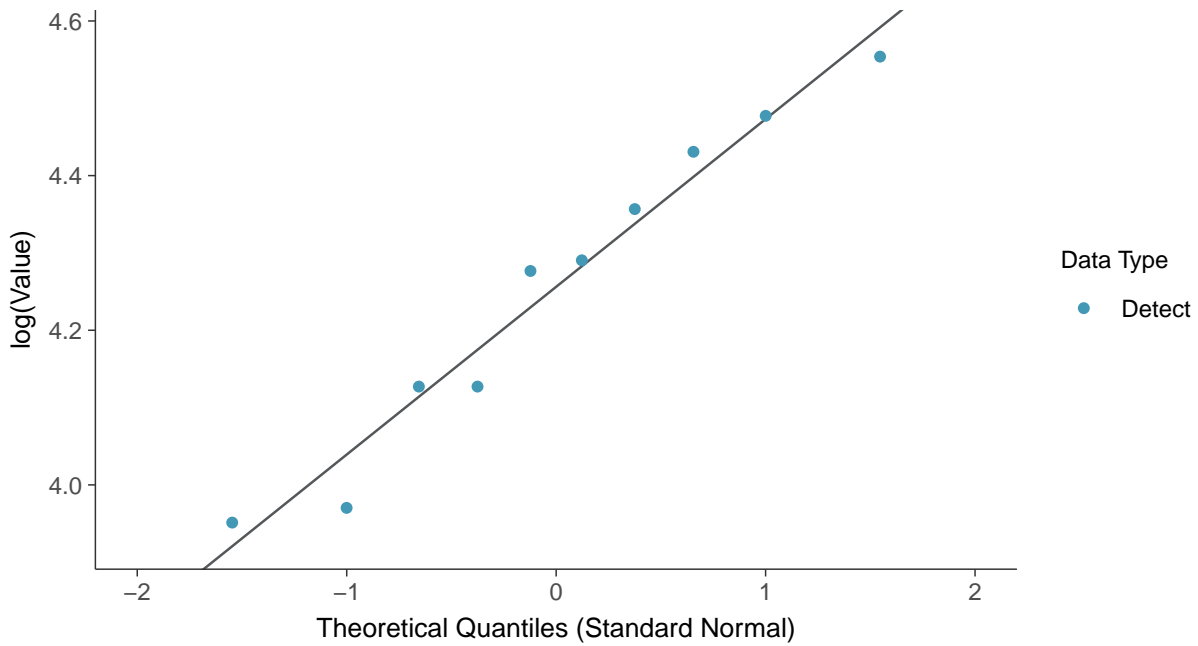
Normal Q-Q plot

Chloride (as Cl), MW-11 (mg/L)



Lognormal Q-Q plot

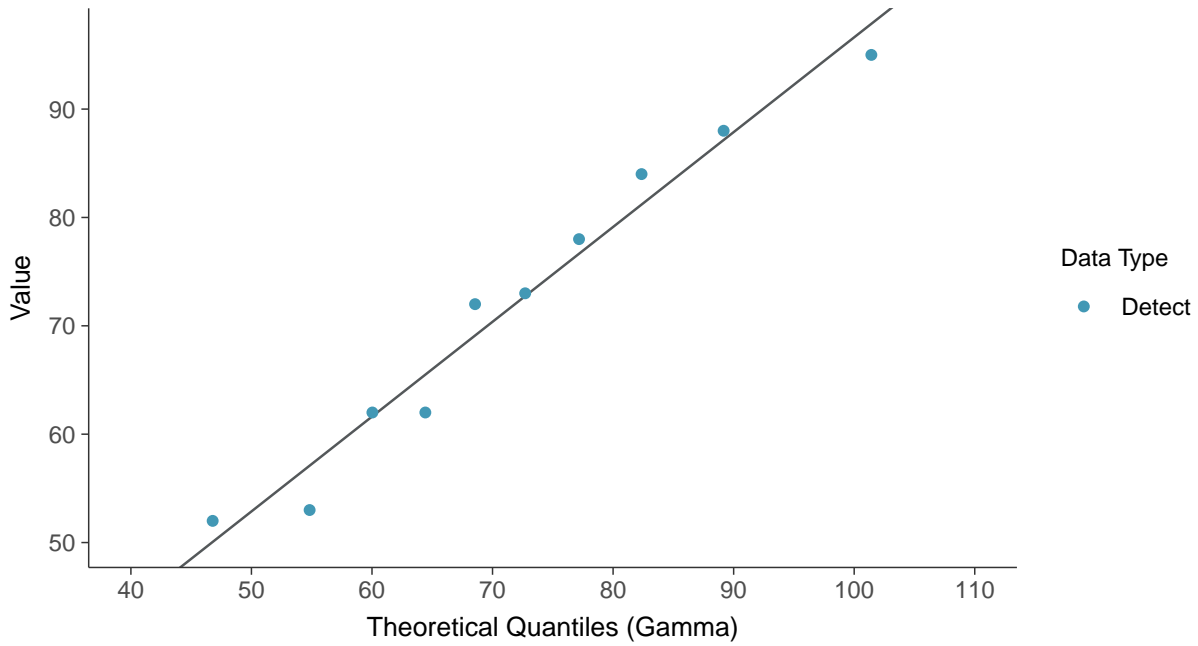
Chloride (as Cl), MW-11 (mg/L)





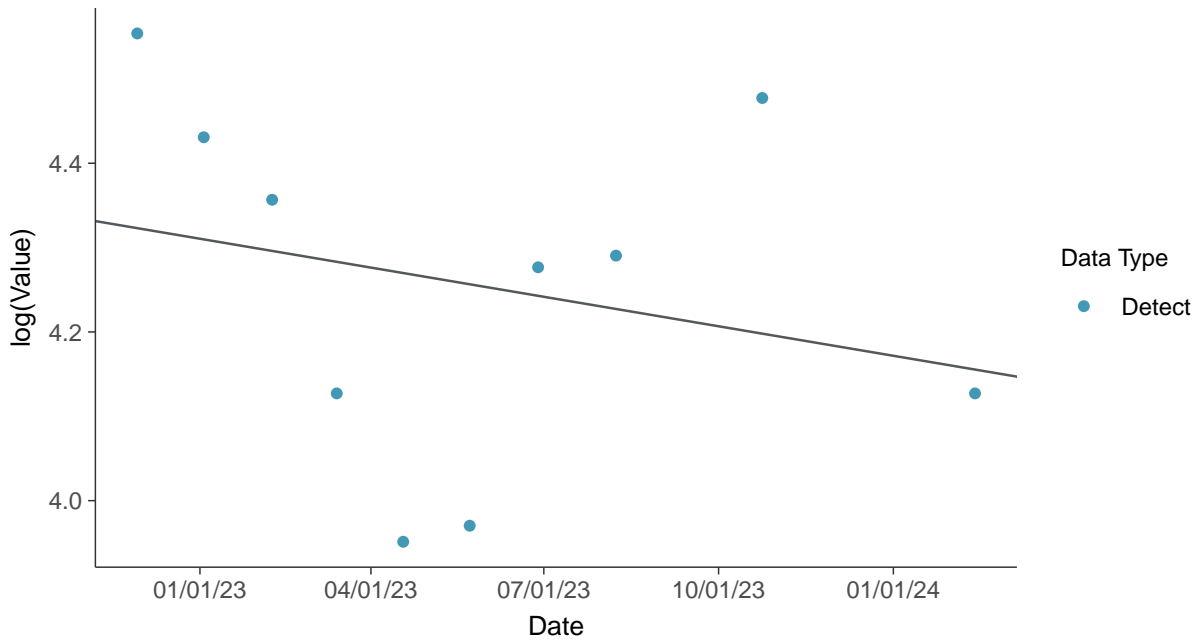
Gamma Q-Q plot

Chloride (as Cl), MW-11 (mg/L)



Trend Regression: Lognormal MLE

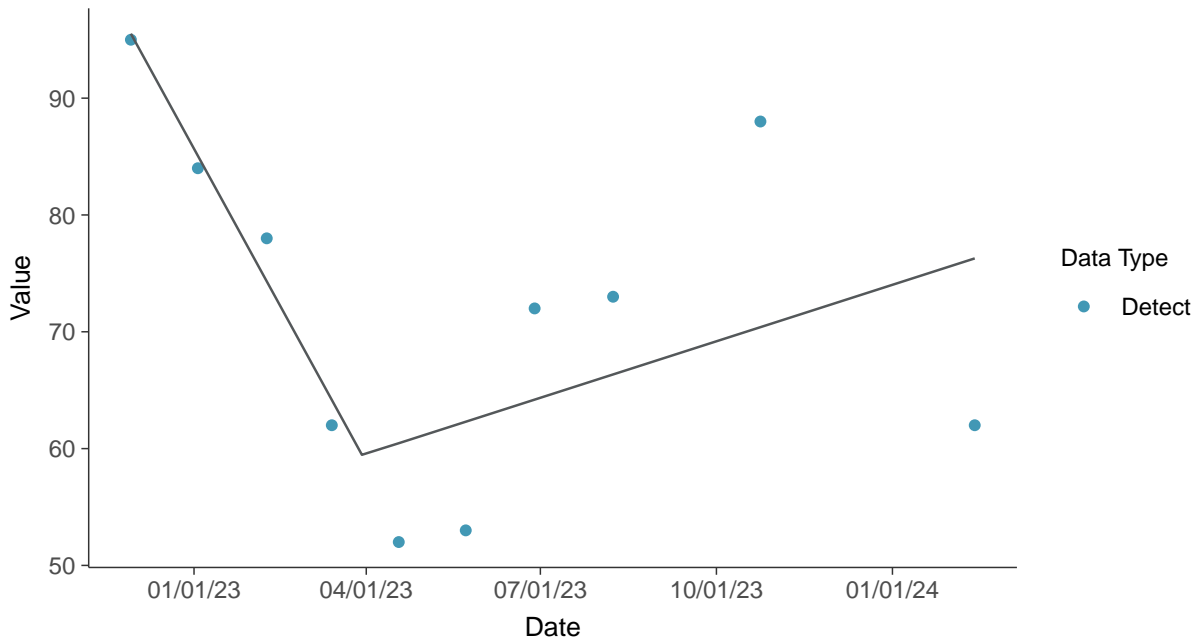
Chloride (as Cl), MW-11 (mg/L)





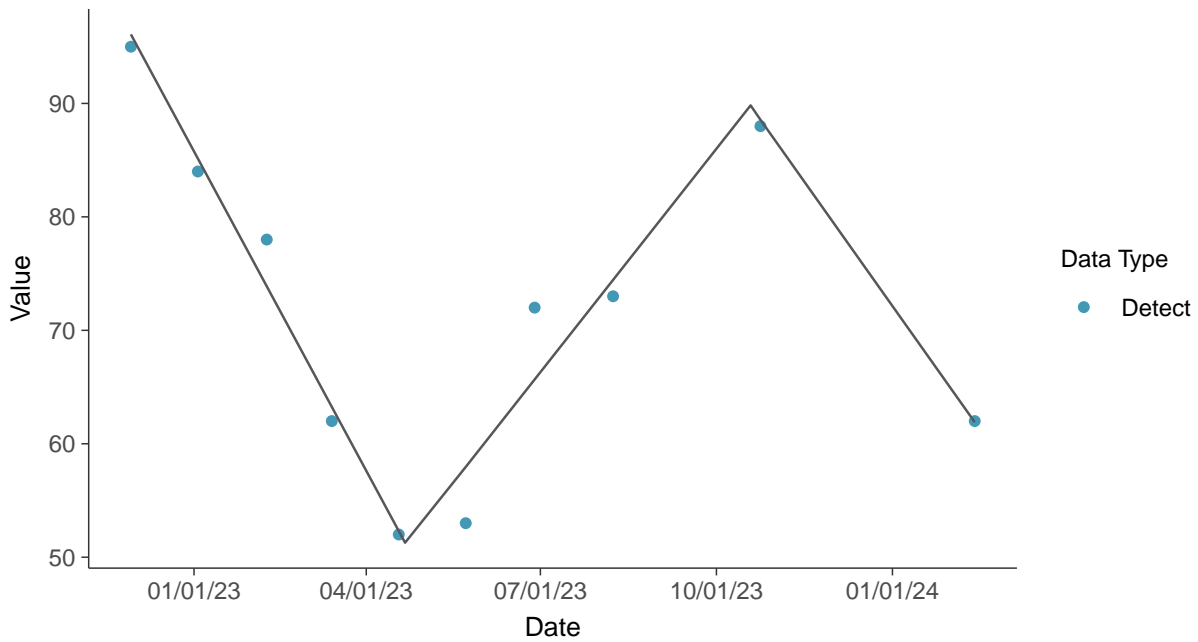
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-11 (mg/L)



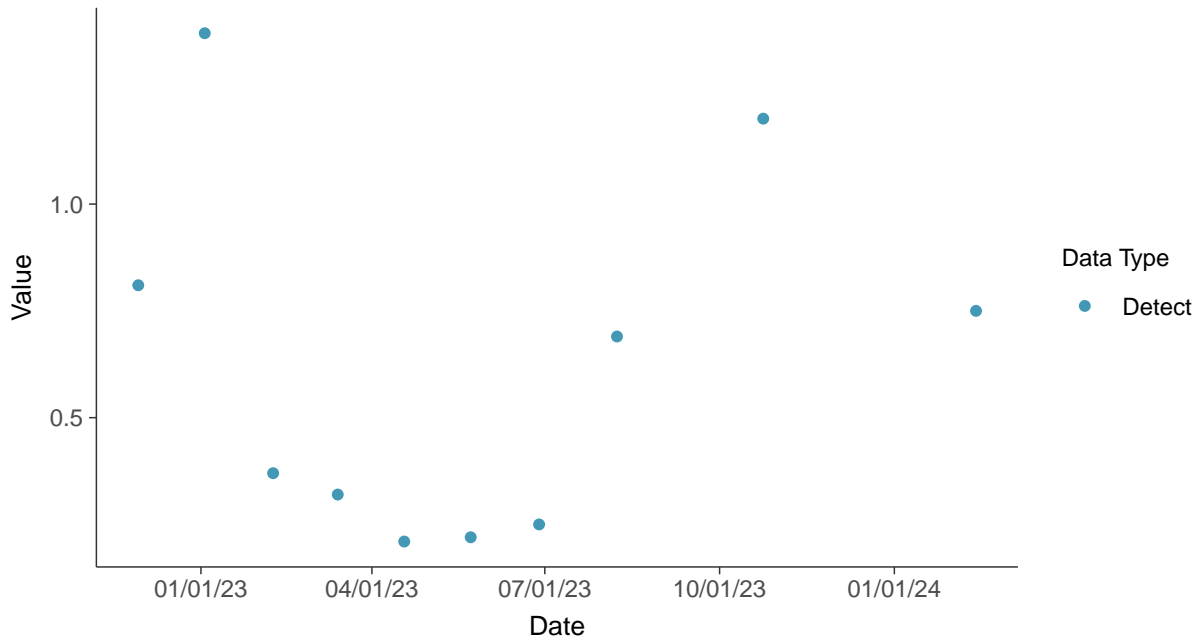


Appendix III: Fluoride, MW-11

ID: 2_21_4_112

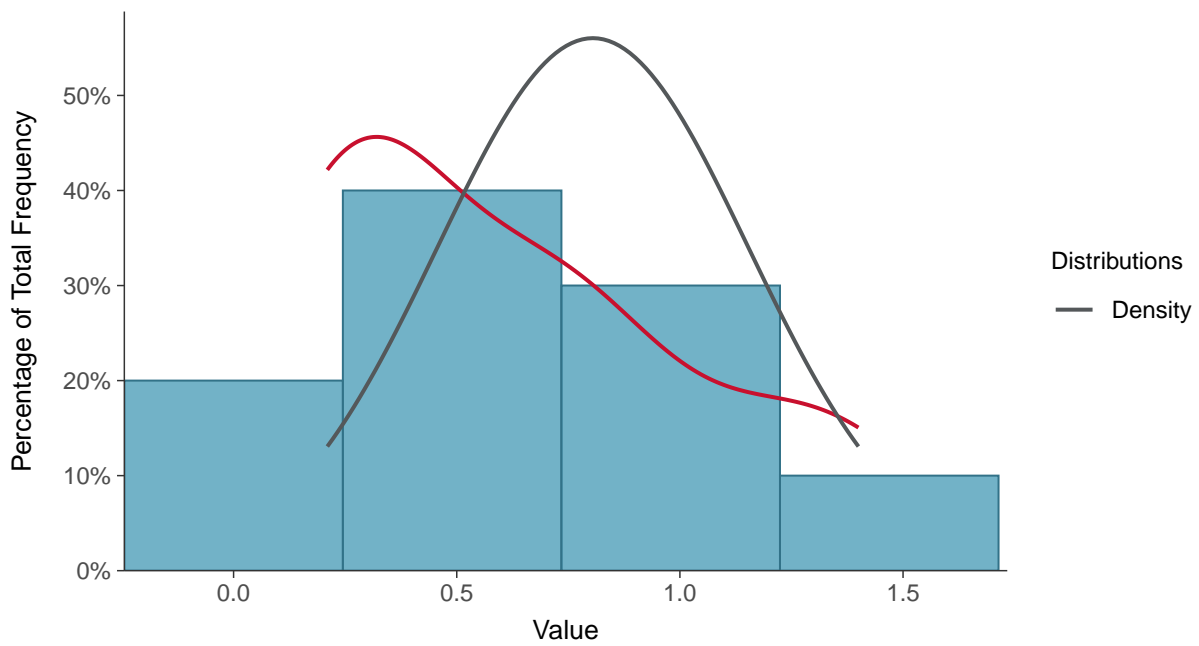
Scatter Plot

Fluoride, MW-11 (mg/L)



Histogram

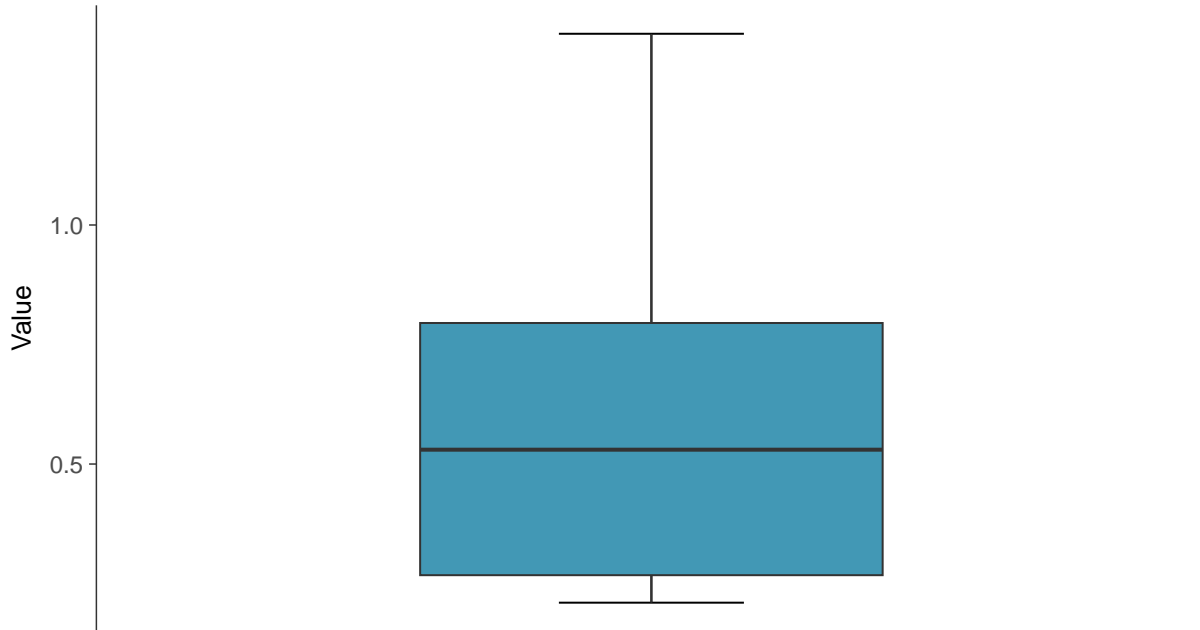
Fluoride, MW-11 (mg/L)





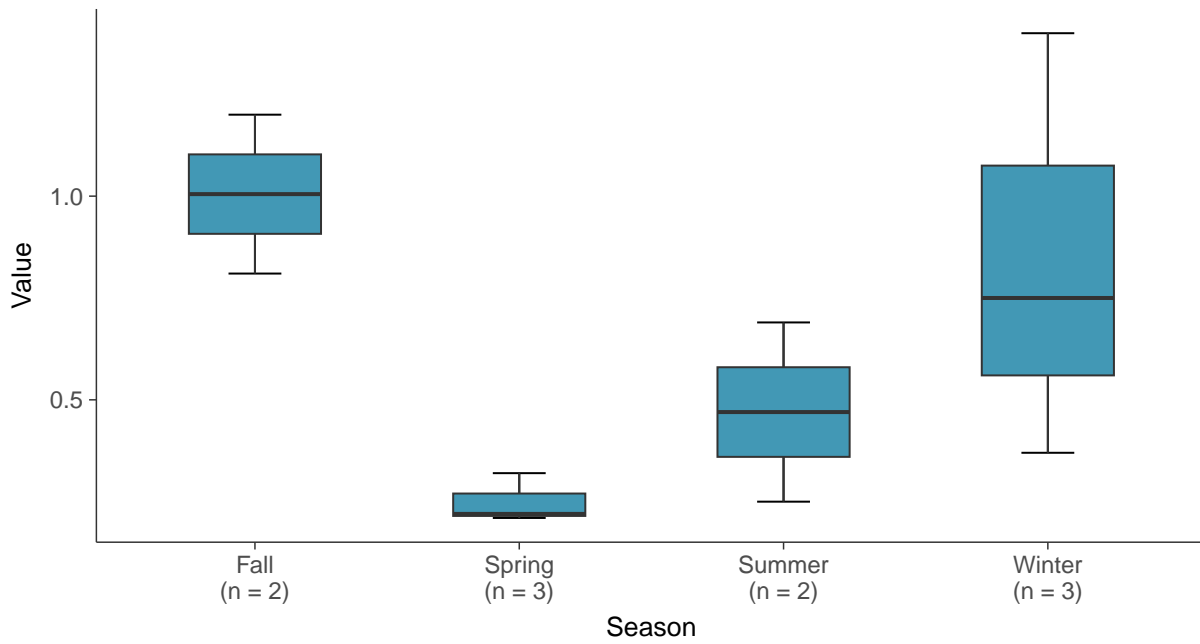
Boxplot

Fluoride, MW-11 (mg/L)



Boxplot by Season

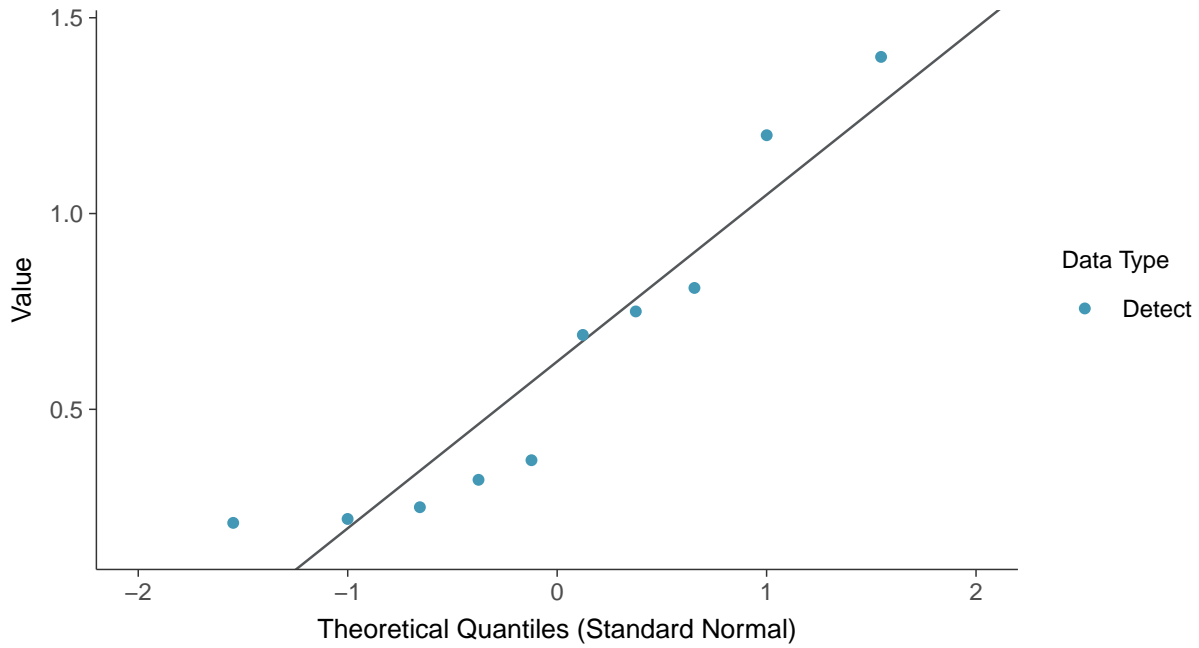
Fluoride, MW-11 (mg/L)





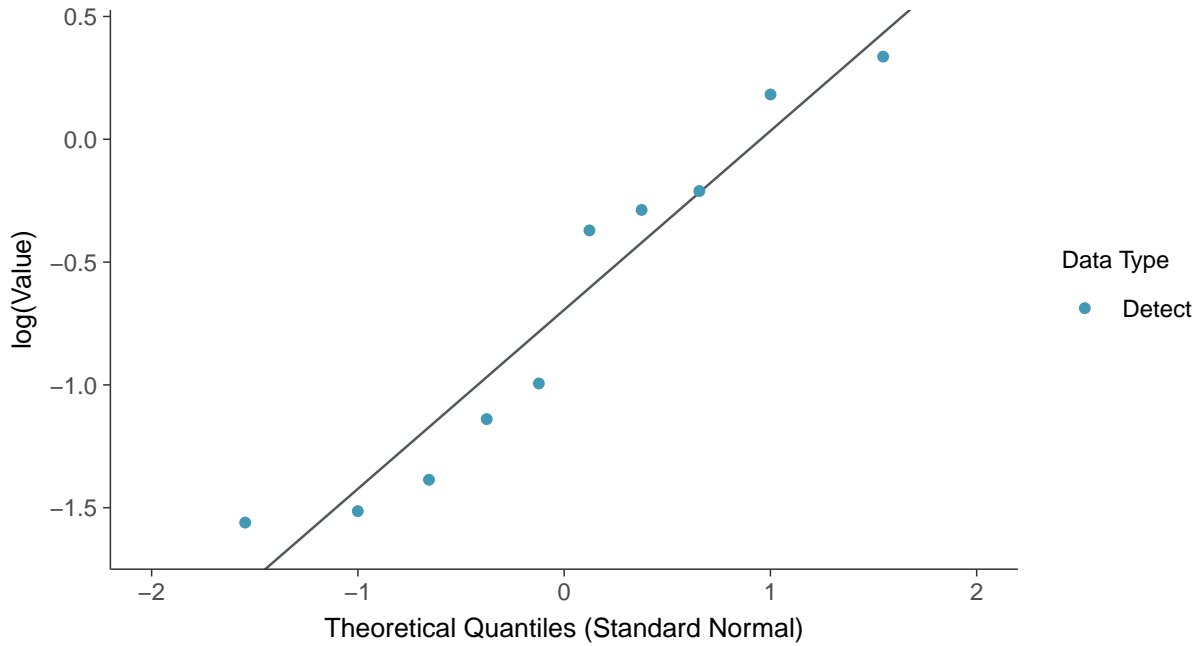
Normal Q-Q plot

Fluoride, MW-11 (mg/L)



Lognormal Q-Q plot

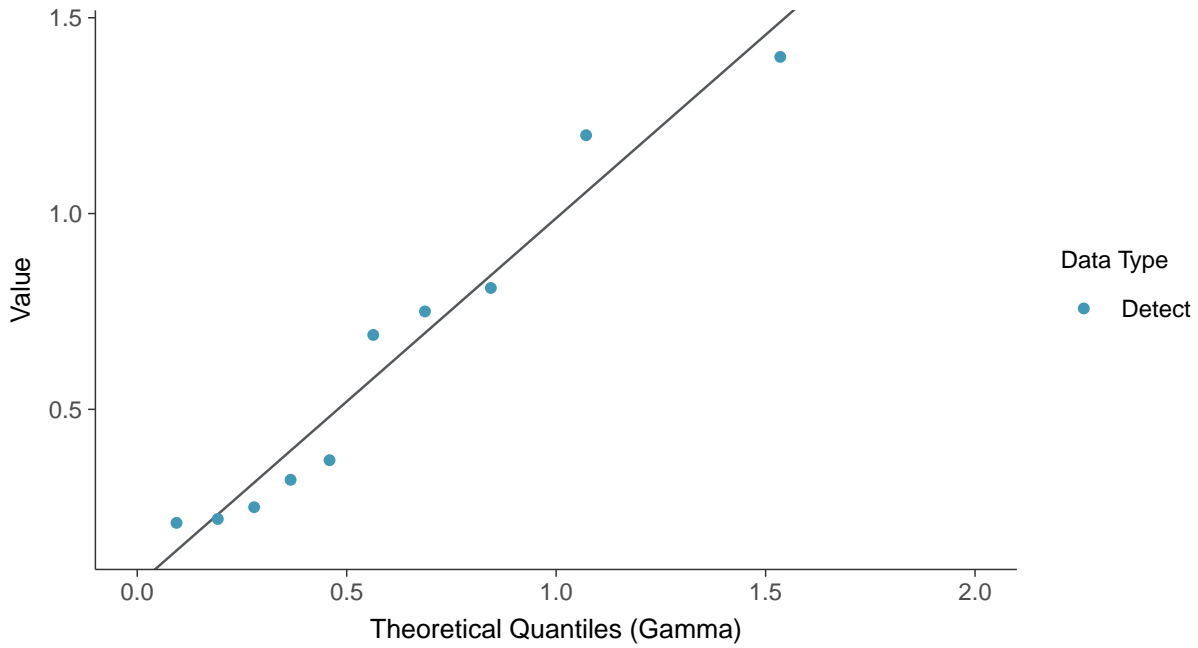
Fluoride, MW-11 (mg/L)





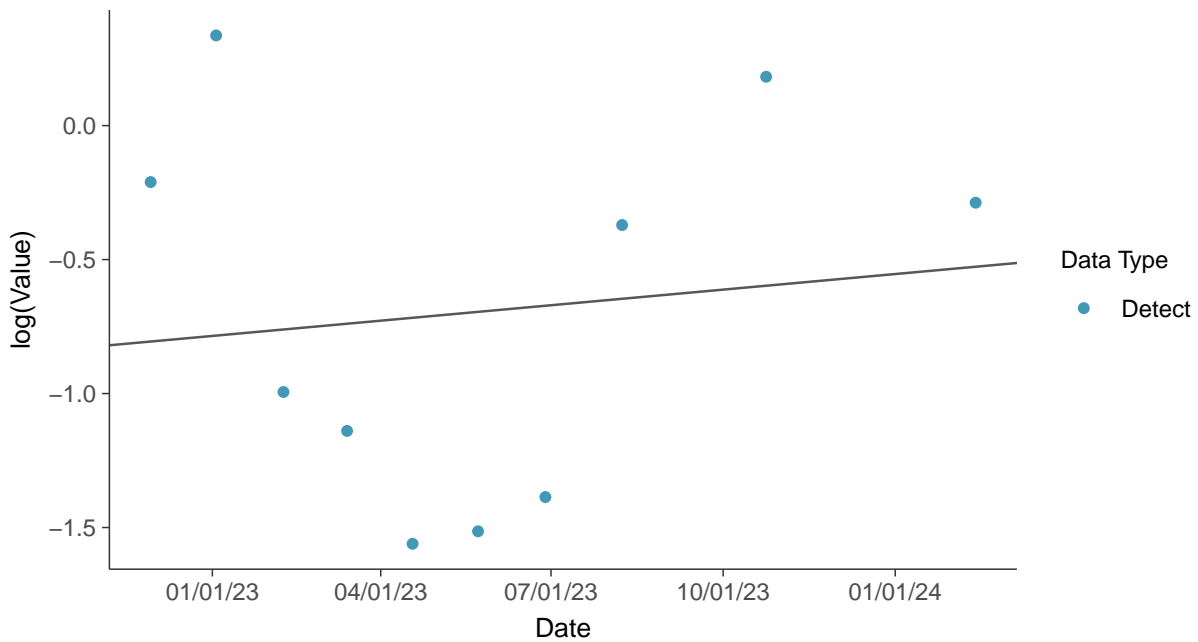
Gamma Q-Q plot

Fluoride, MW-11 (mg/L)



Trend Regression: Lognormal MLE

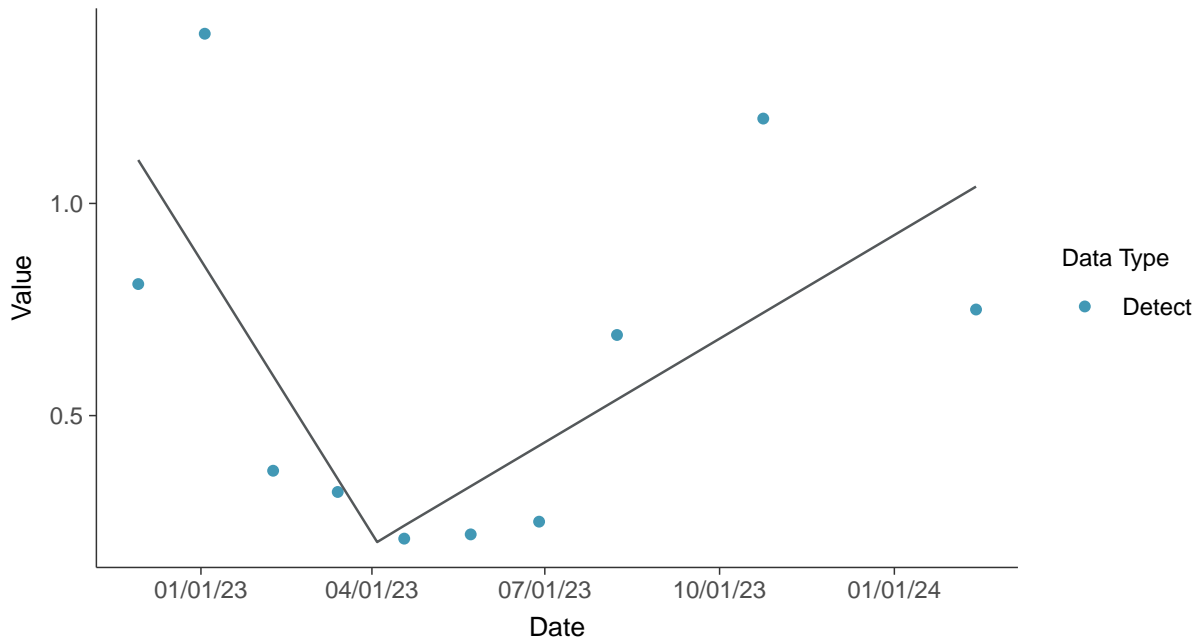
Fluoride, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

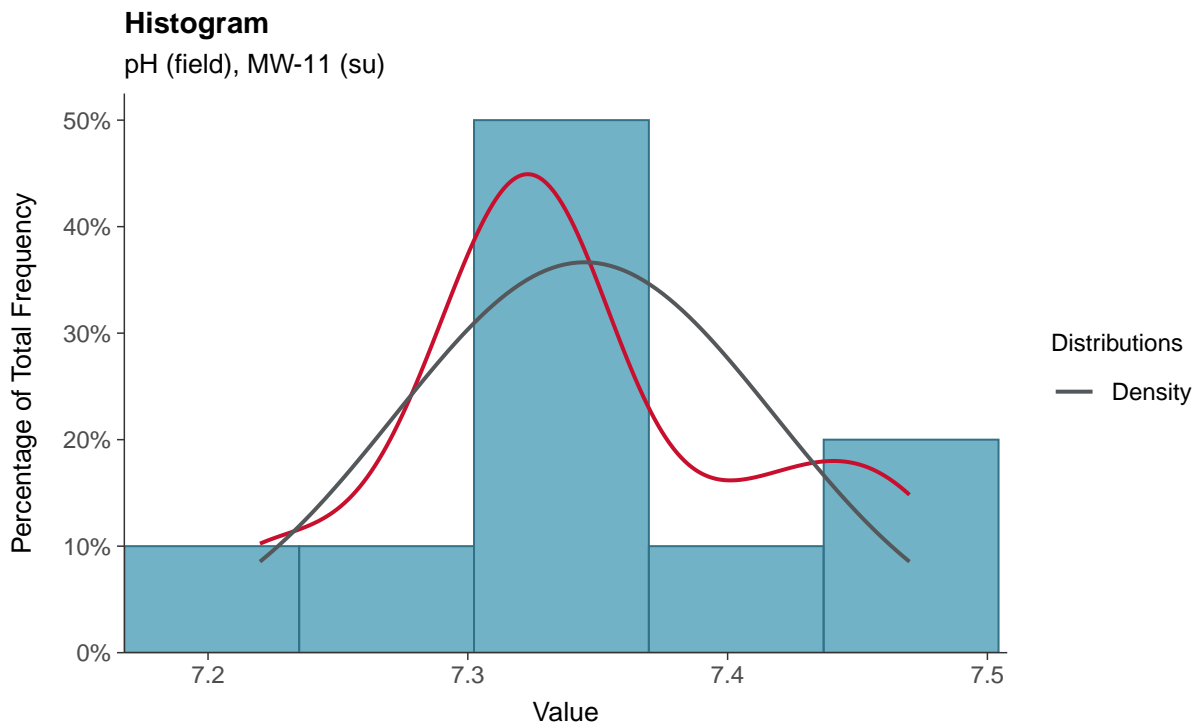
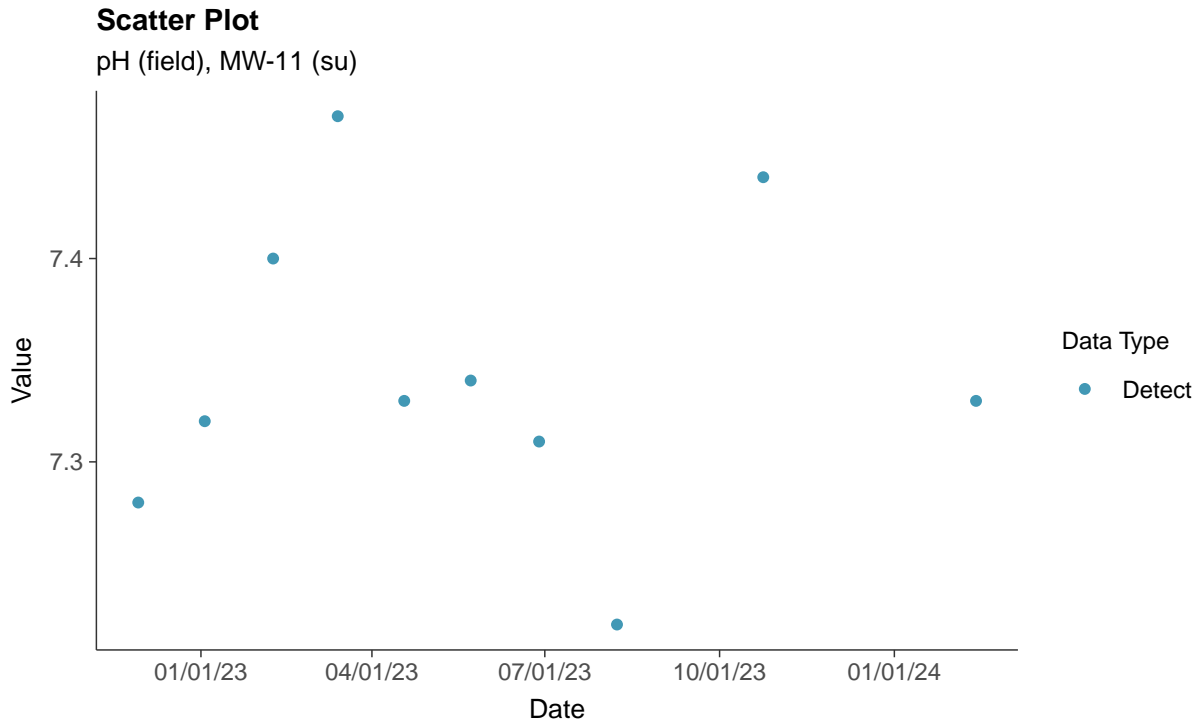
Fluoride, MW-11 (mg/L)





Appendix III: pH (field), MW-11

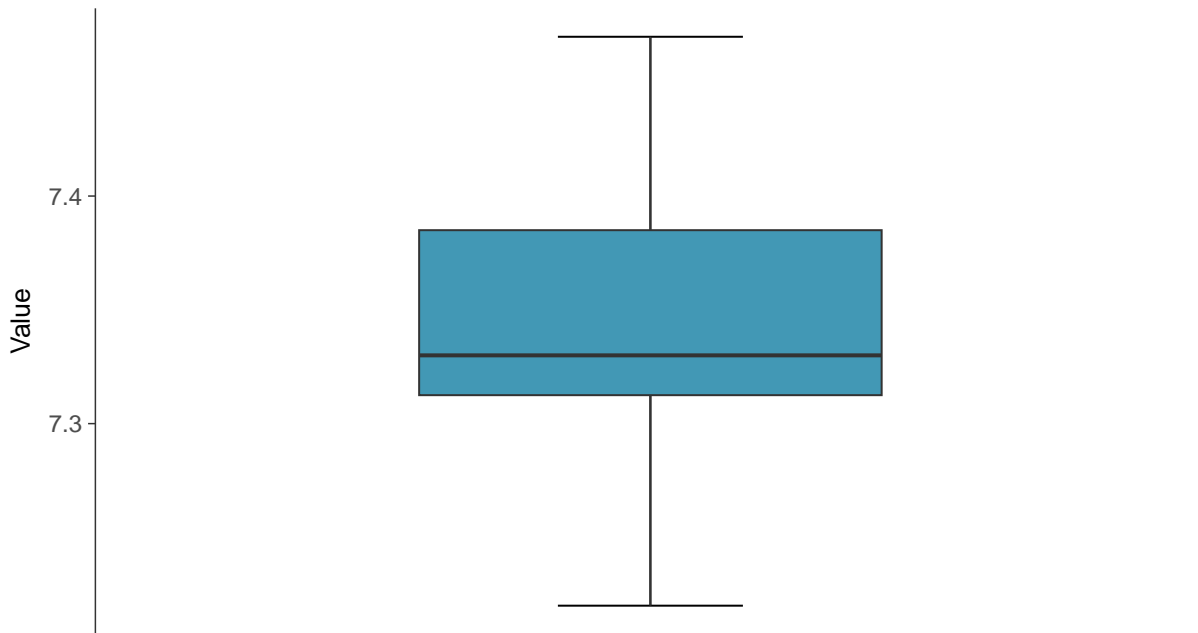
ID: 2_21_4_120





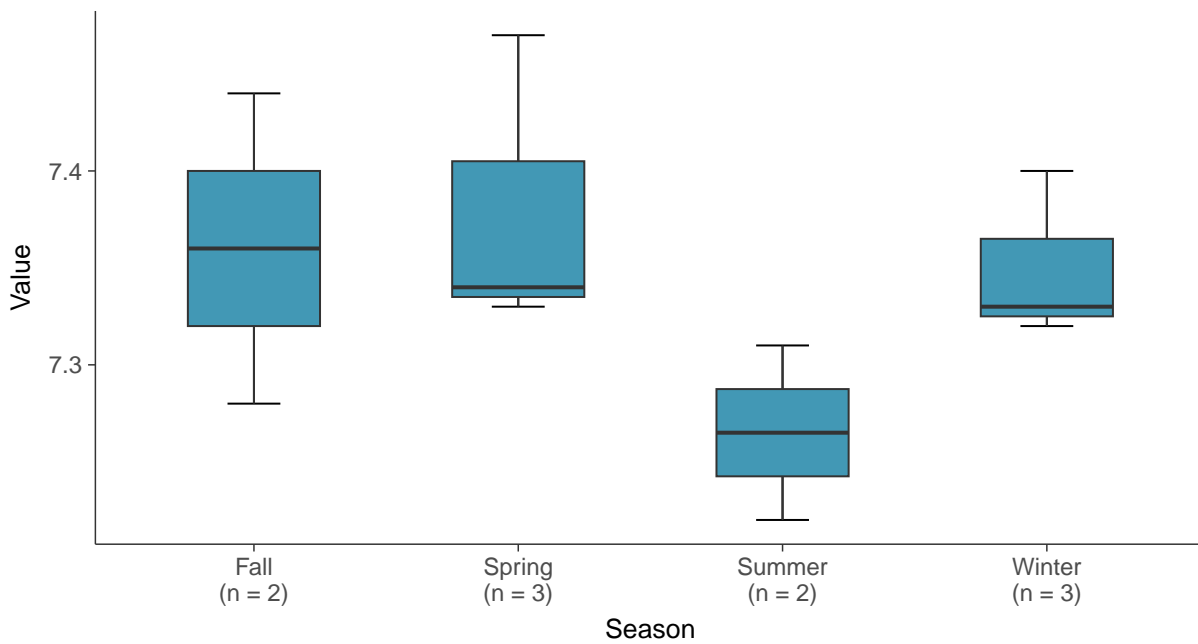
Boxplot

pH (field), MW-11 (su)



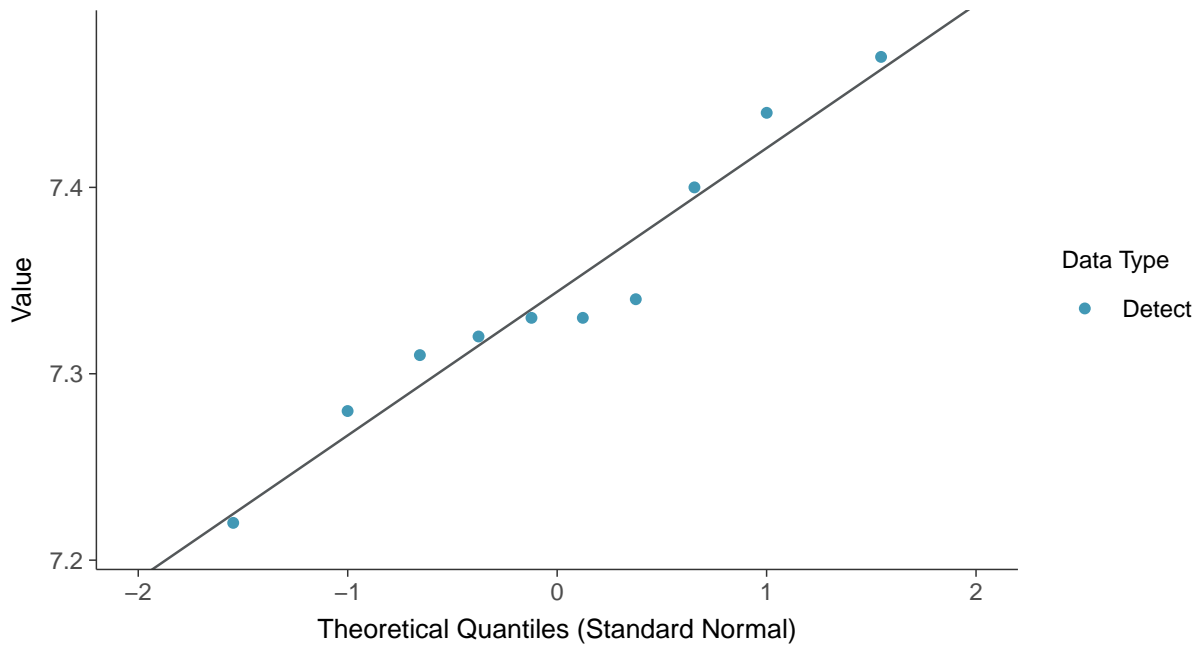
Boxplot by Season

pH (field), MW-11 (su)

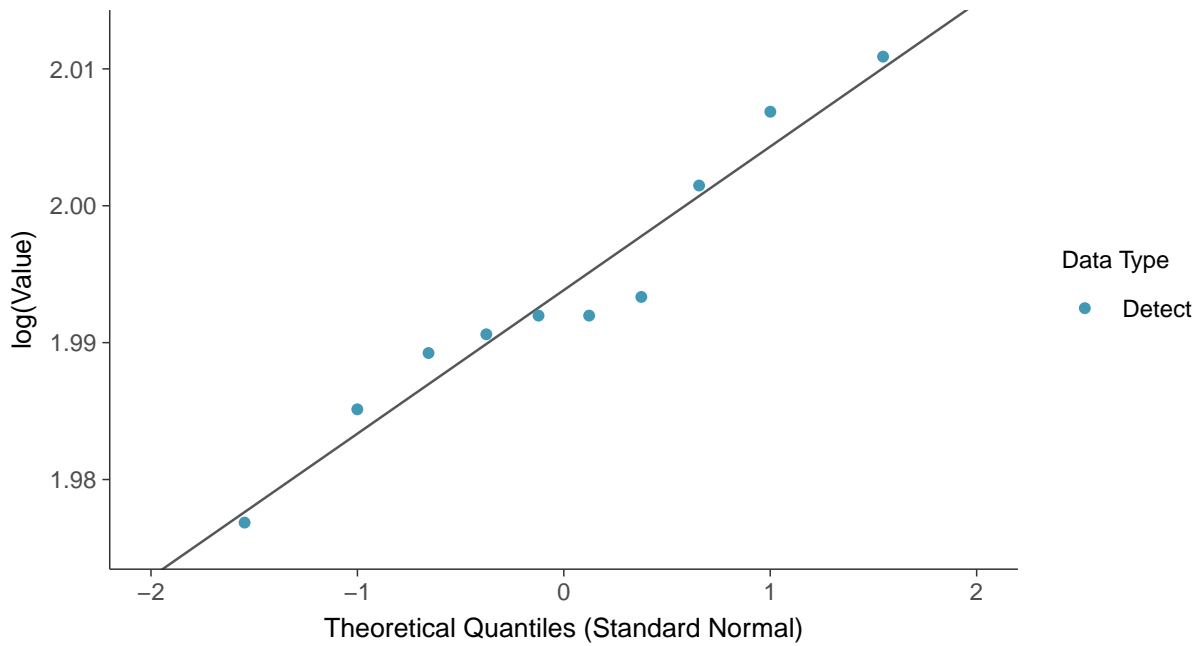




Normal Q-Q plot
pH (field), MW-11 (su)



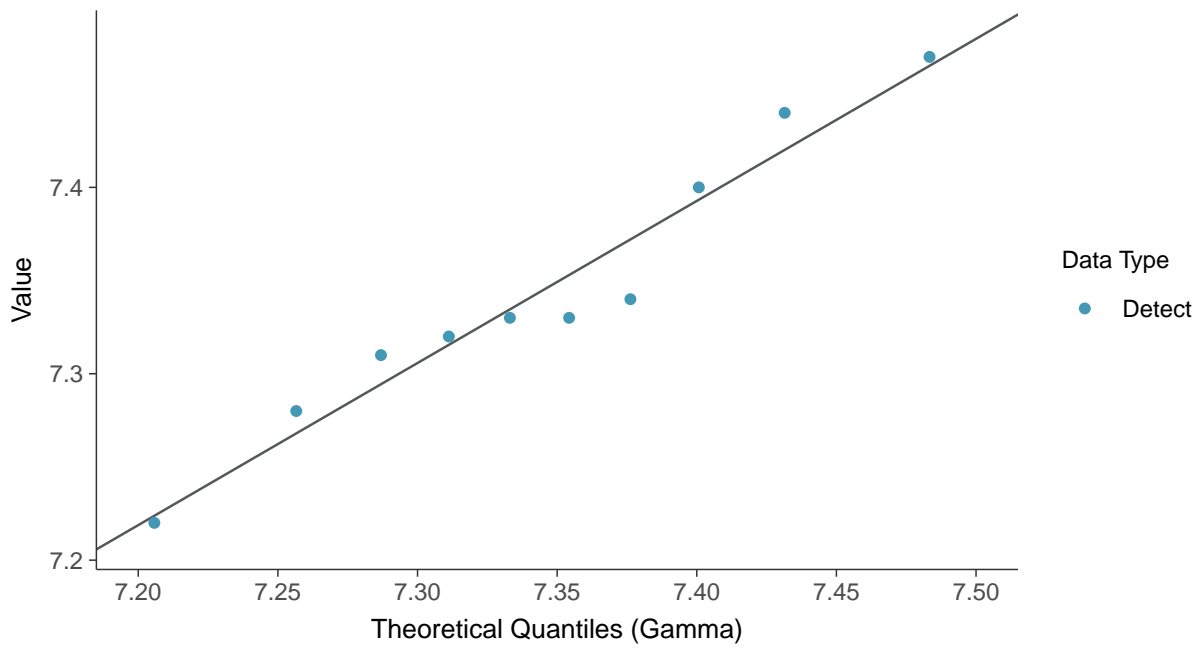
Lognormal Q-Q plot
pH (field), MW-11 (su)





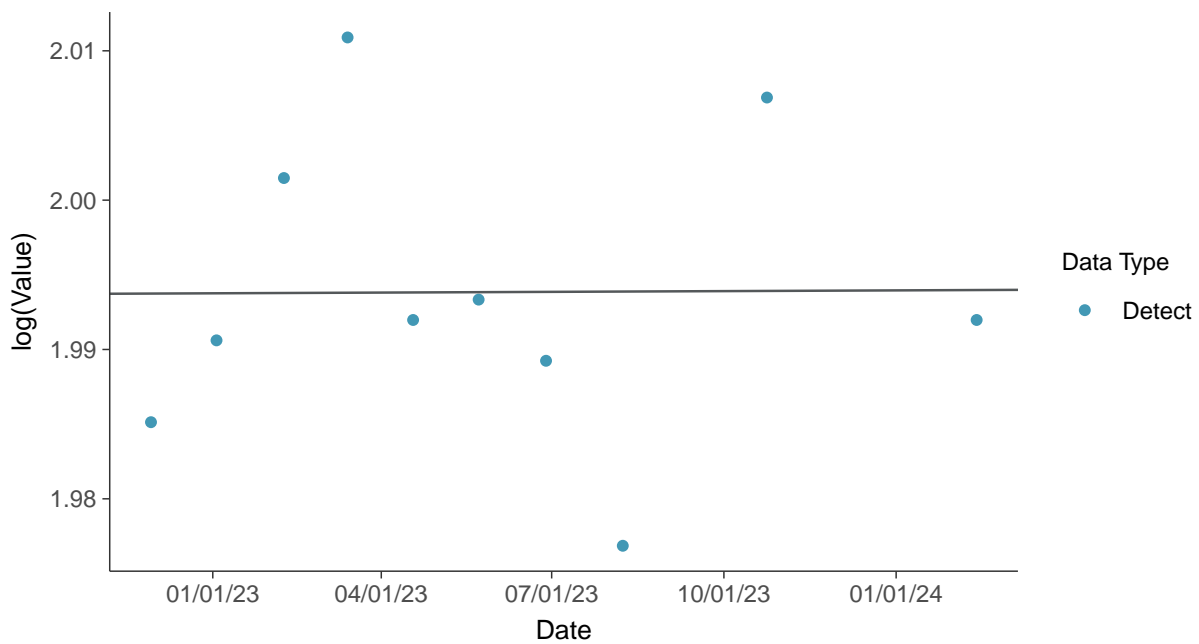
Gamma Q-Q plot

pH (field), MW-11 (su)



Trend Regression: Lognormal MLE

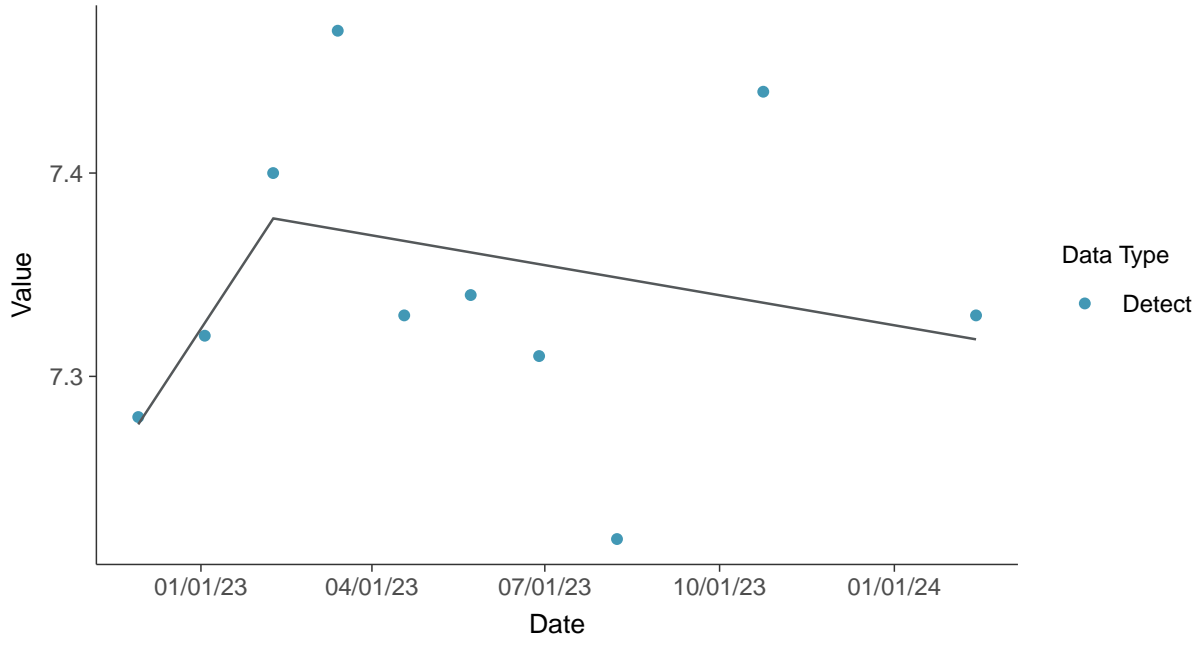
pH (field), MW-11 (su)





Trend Regression: Piecewise Linear-Linear

pH (field), MW-11 (su)



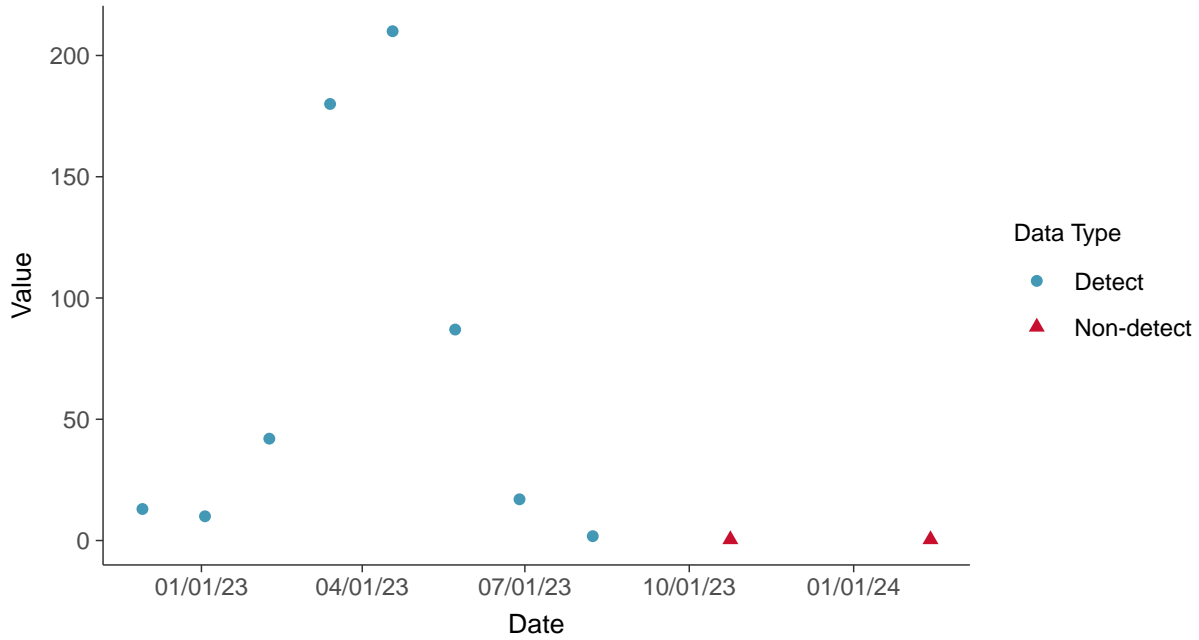


Appendix III: Sulfate (as SO₄), MW-11

ID: 2_21_4_124

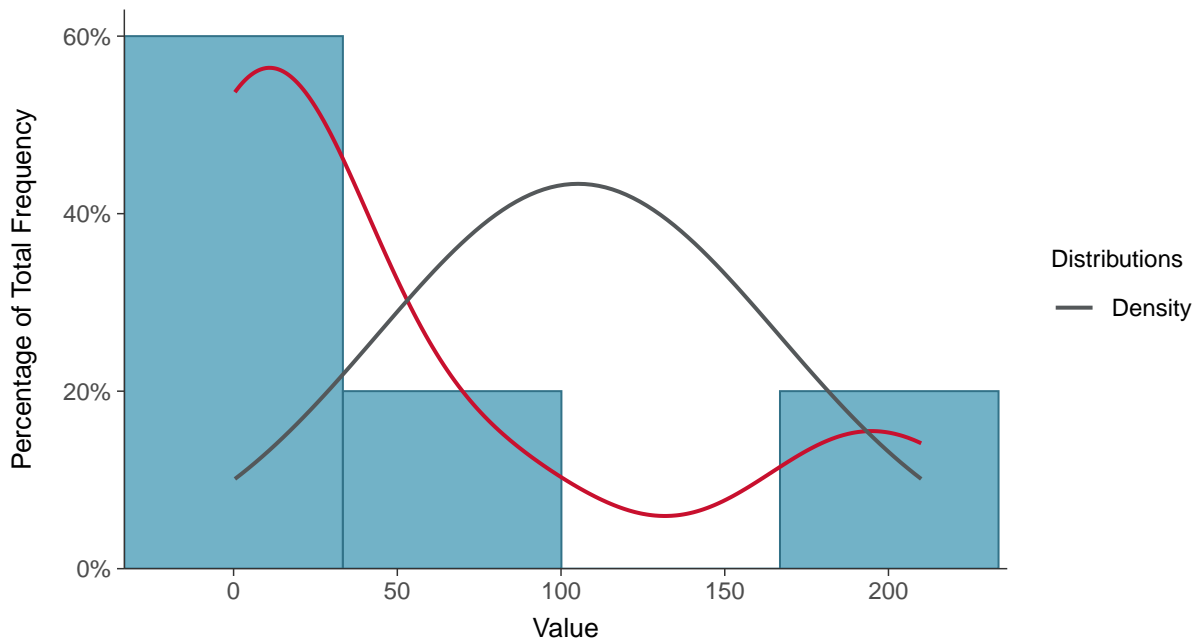
Scatter Plot

Sulfate (as SO₄), MW-11 (mg/L)



Histogram

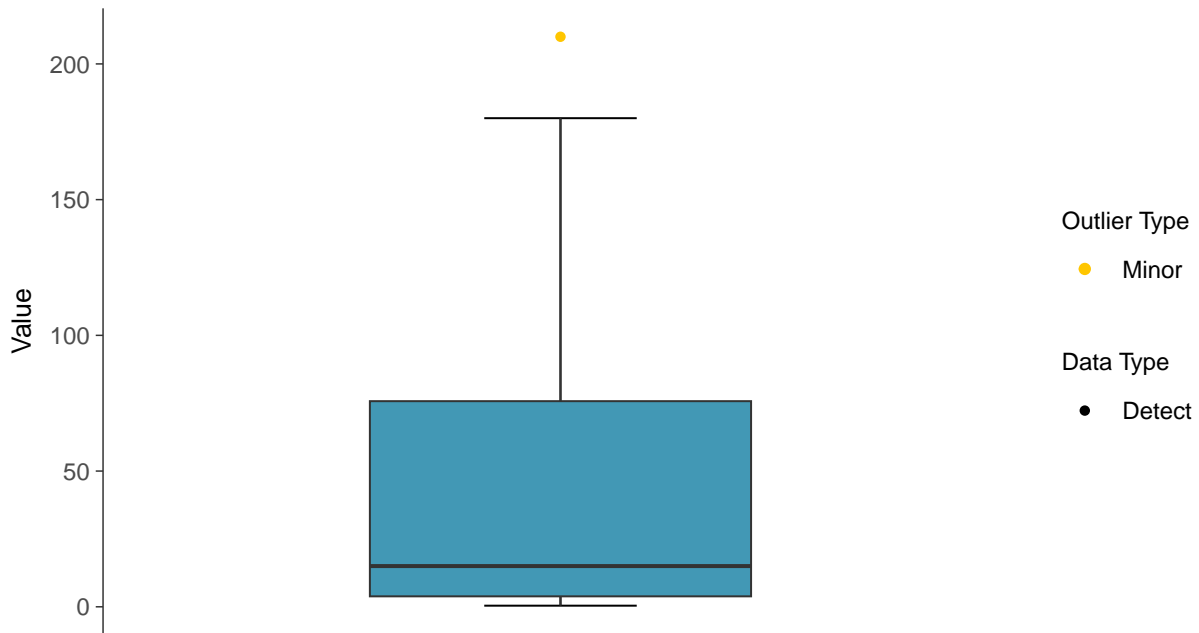
Sulfate (as SO₄), MW-11 (mg/L)





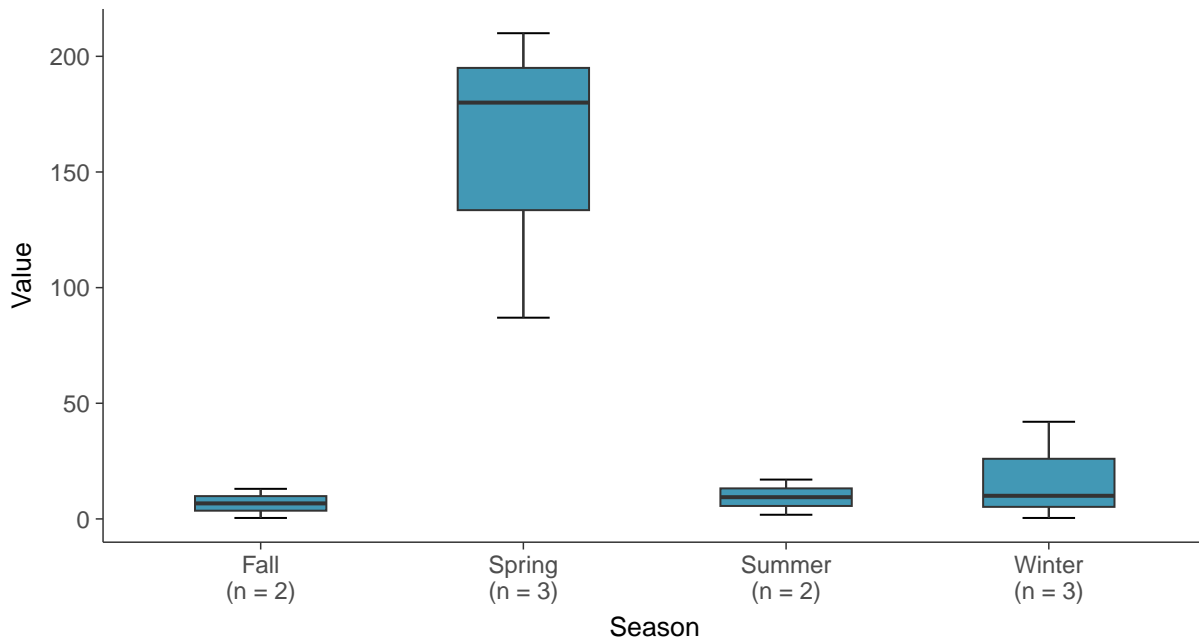
Boxplot

Sulfate (as SO₄), MW-11 (mg/L)



Boxplot by Season

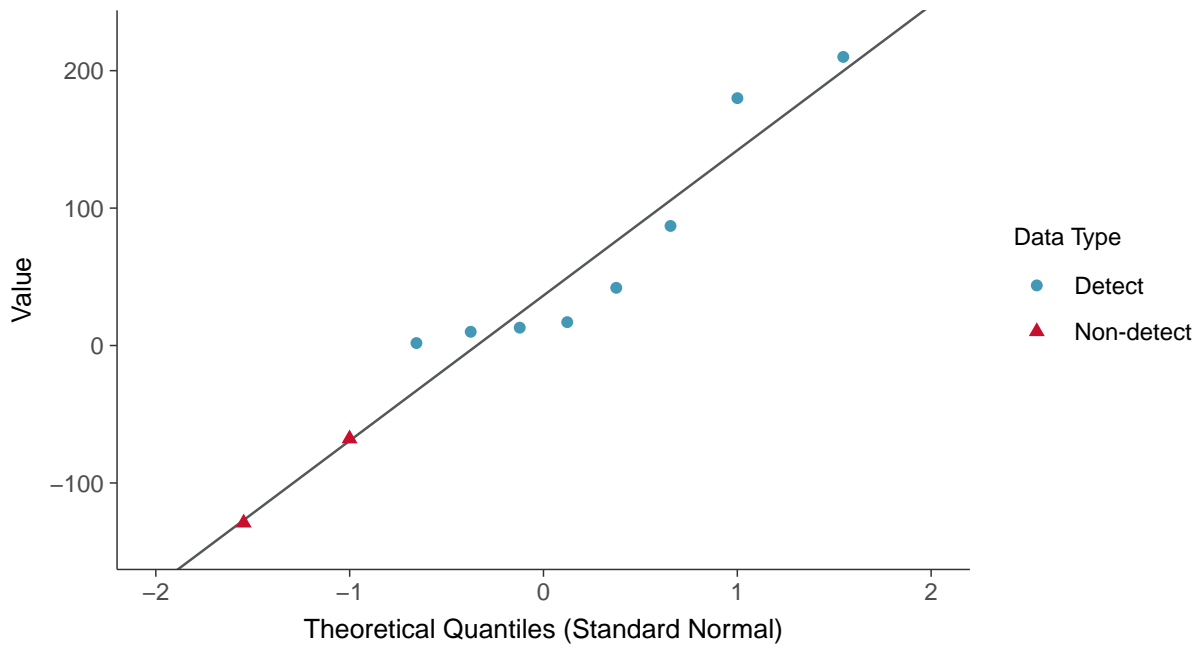
Sulfate (as SO₄), MW-11 (mg/L)





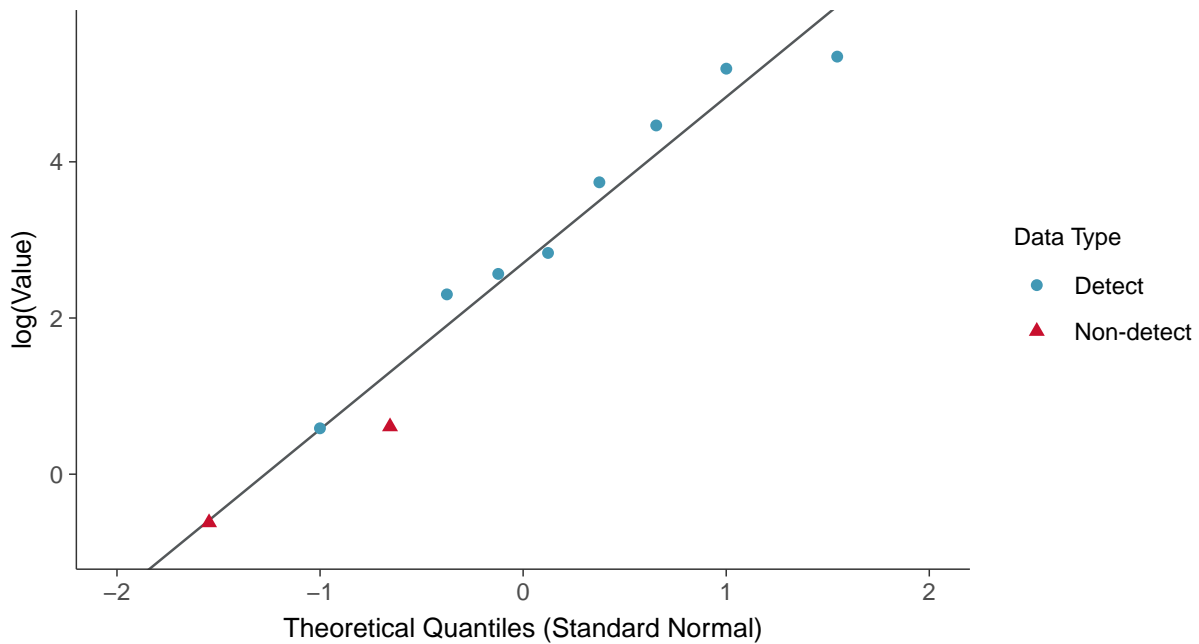
Normal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO₄), MW-11 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

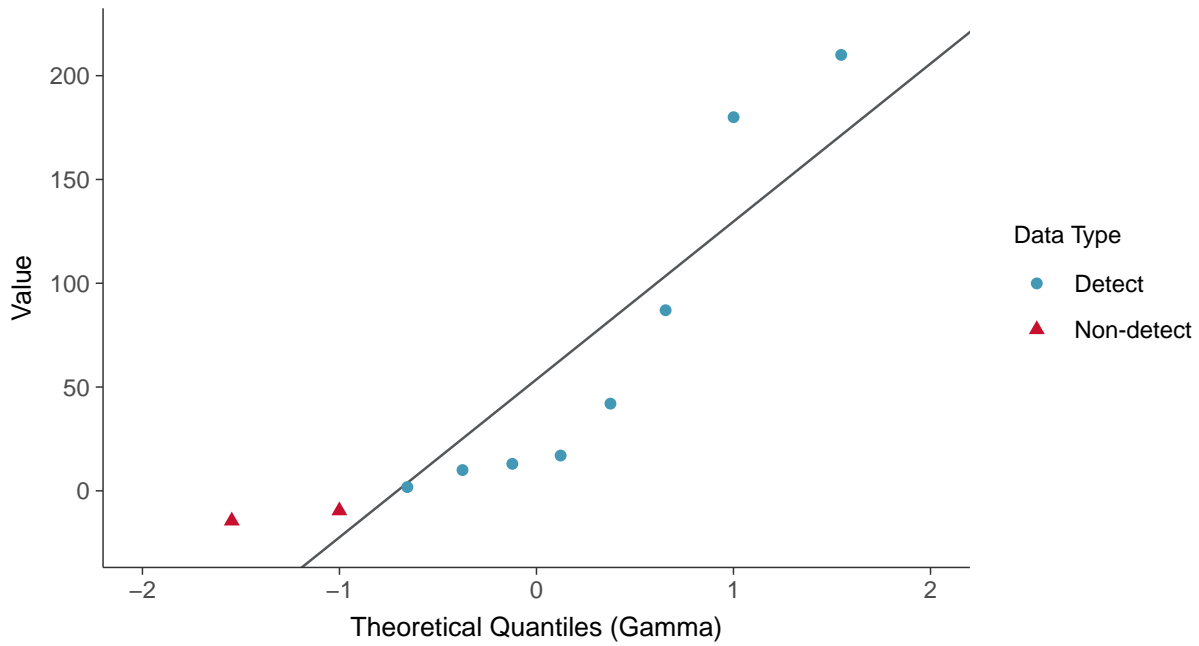
Sulfate (as SO₄), MW-11 (mg/L)





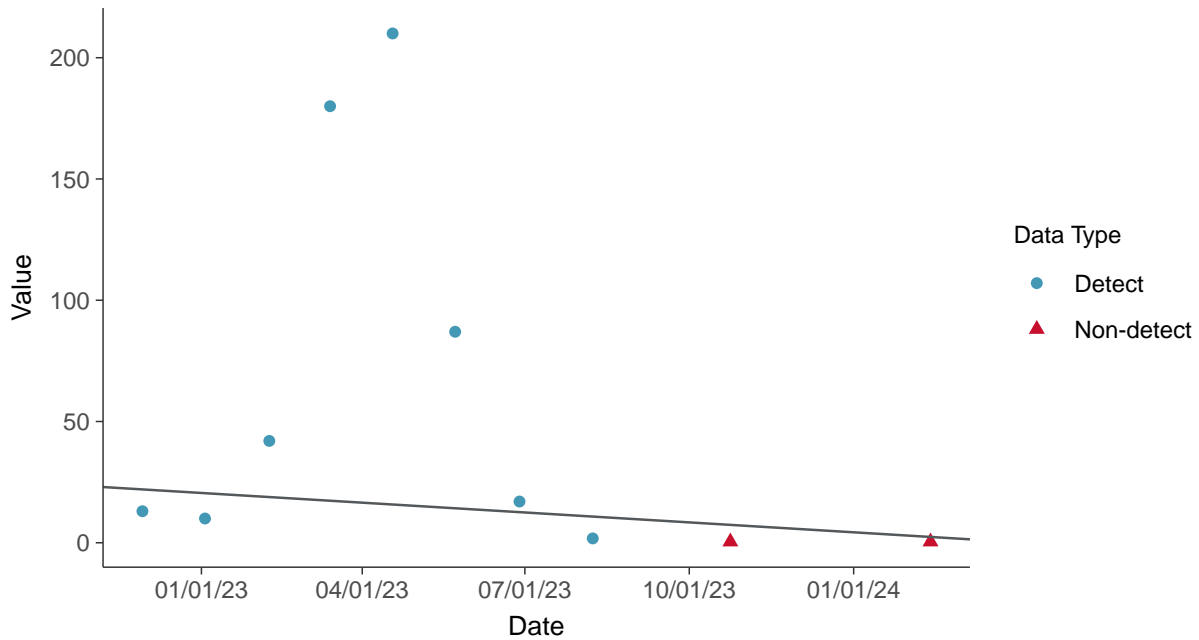
Gamma Q-Q plot using ROS Imputed Estimates

Sulfate (as SO₄), MW-11 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

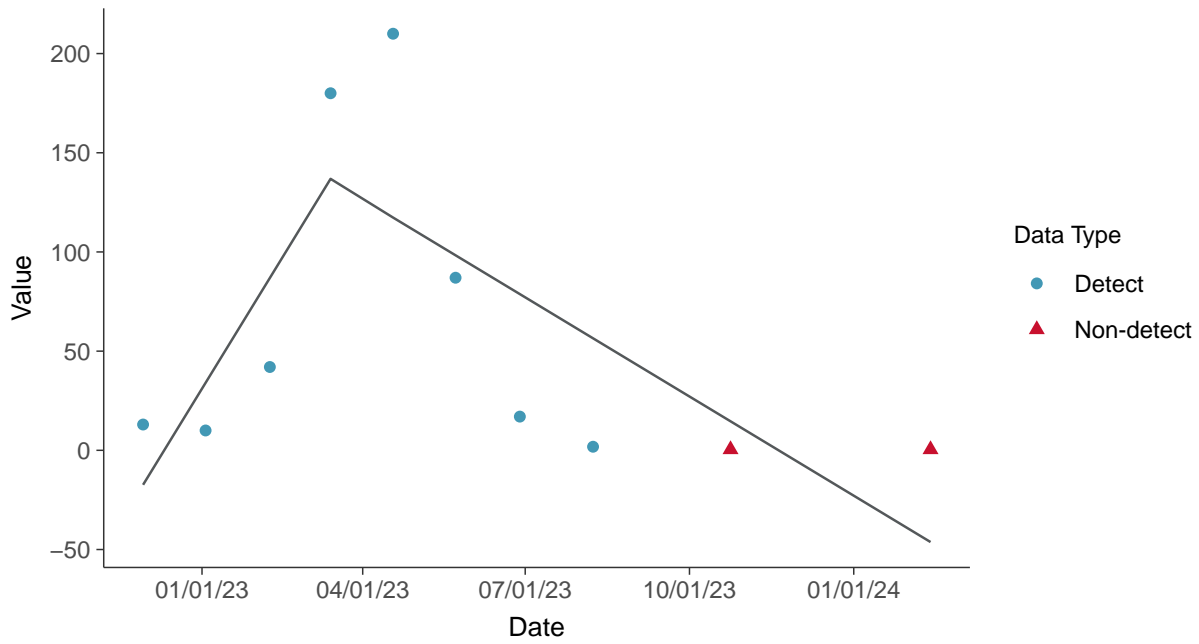
Sulfate (as SO₄), MW-11 (mg/L)





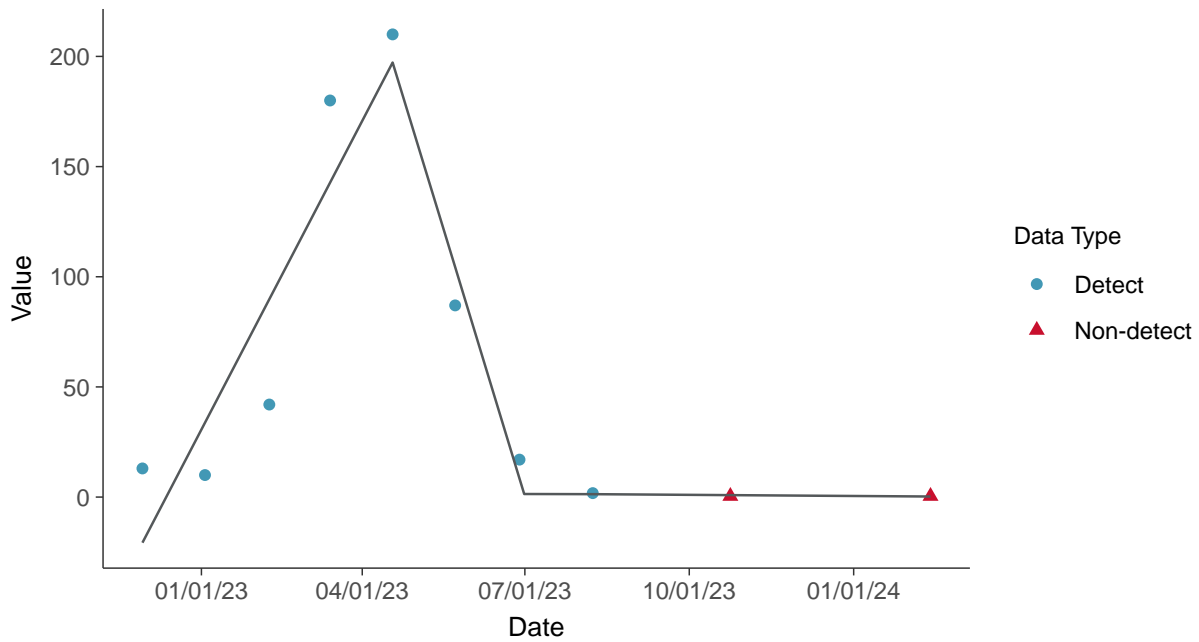
Trend Regression: Piecewise Linear-Linear

Sulfate (as SO4), MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO4), MW-11 (mg/L)



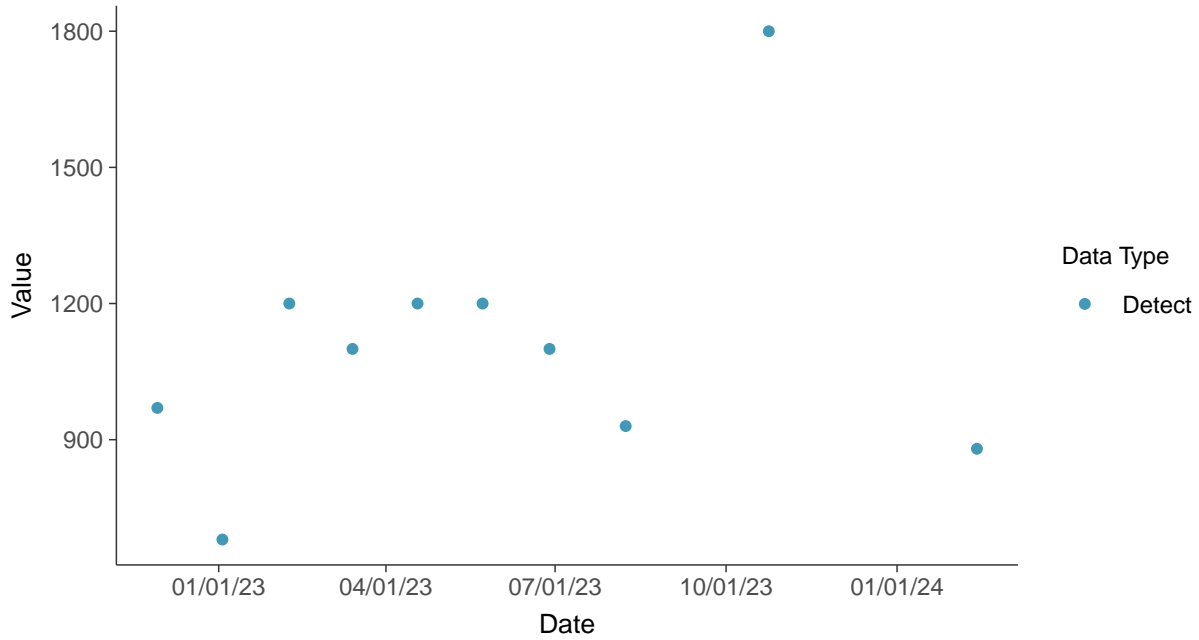


Appendix III: Total Dissolved Solids, MW-11

ID: 2_21_4_126

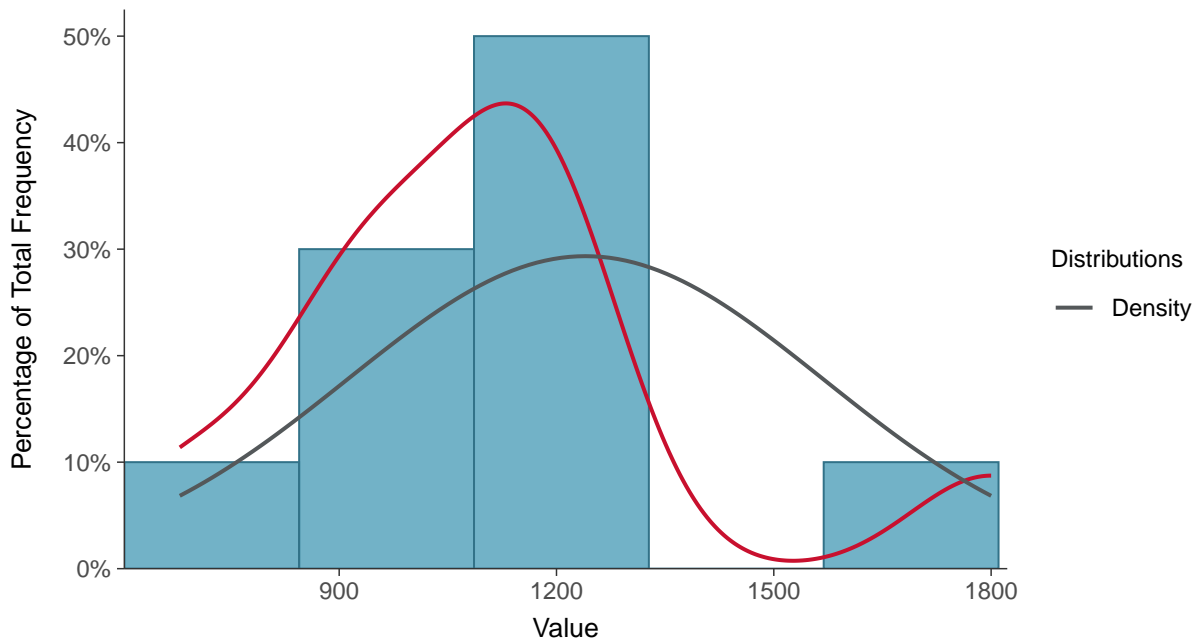
Scatter Plot

Total Dissolved Solids, MW-11 (mg/L)



Histogram

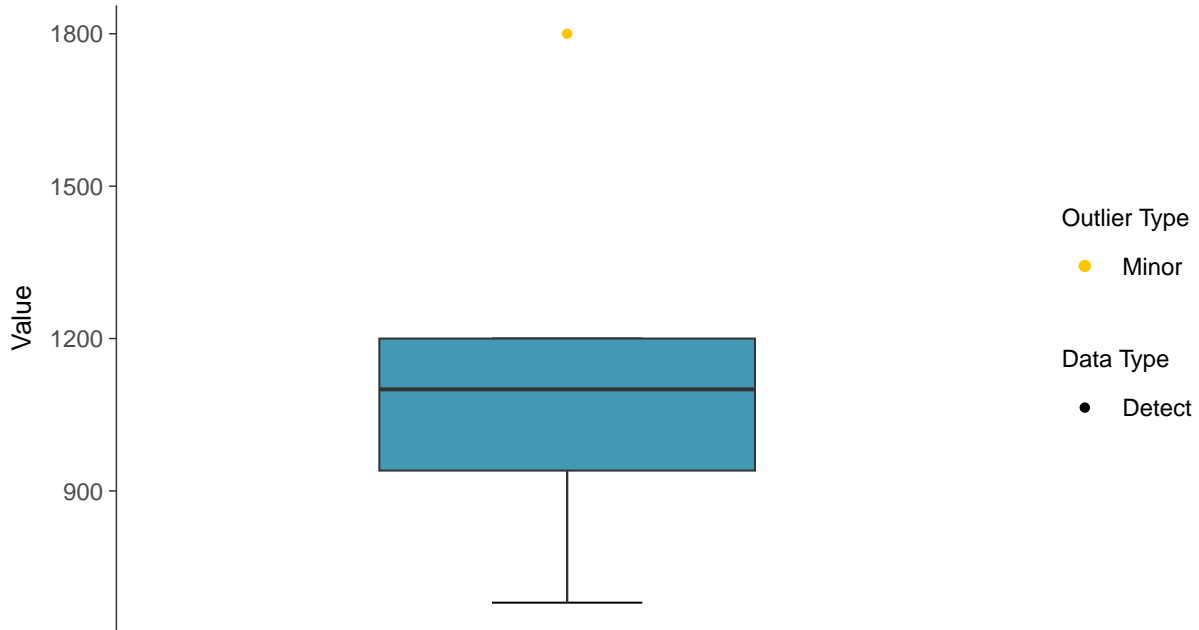
Total Dissolved Solids, MW-11 (mg/L)





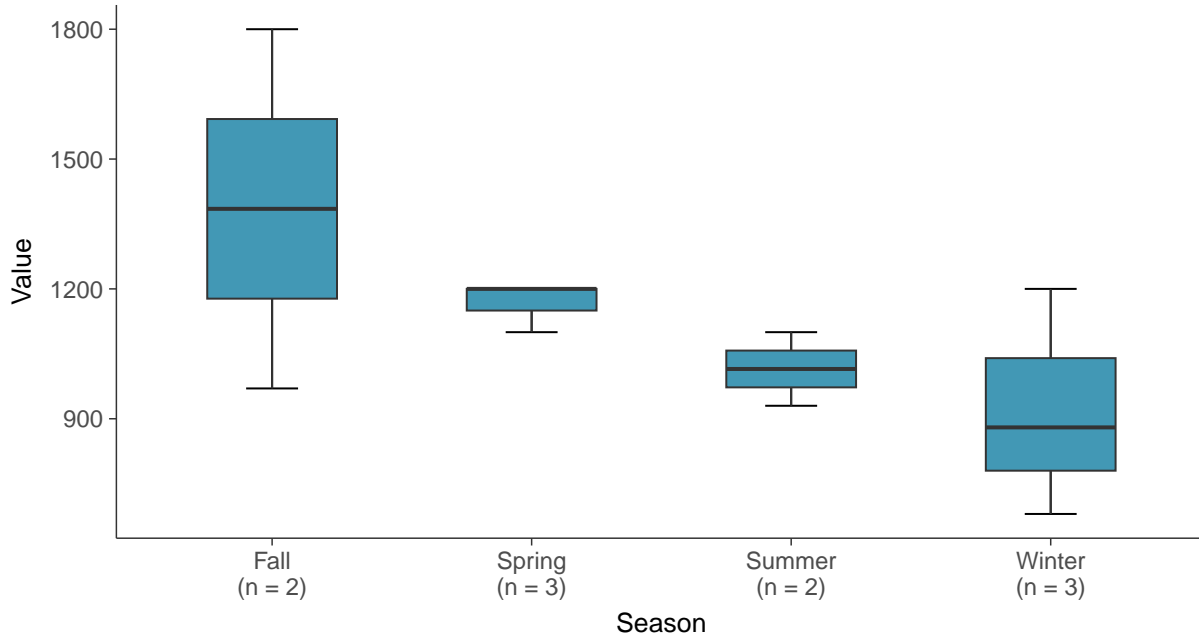
Boxplot

Total Dissolved Solids, MW-11 (mg/L)



Boxplot by Season

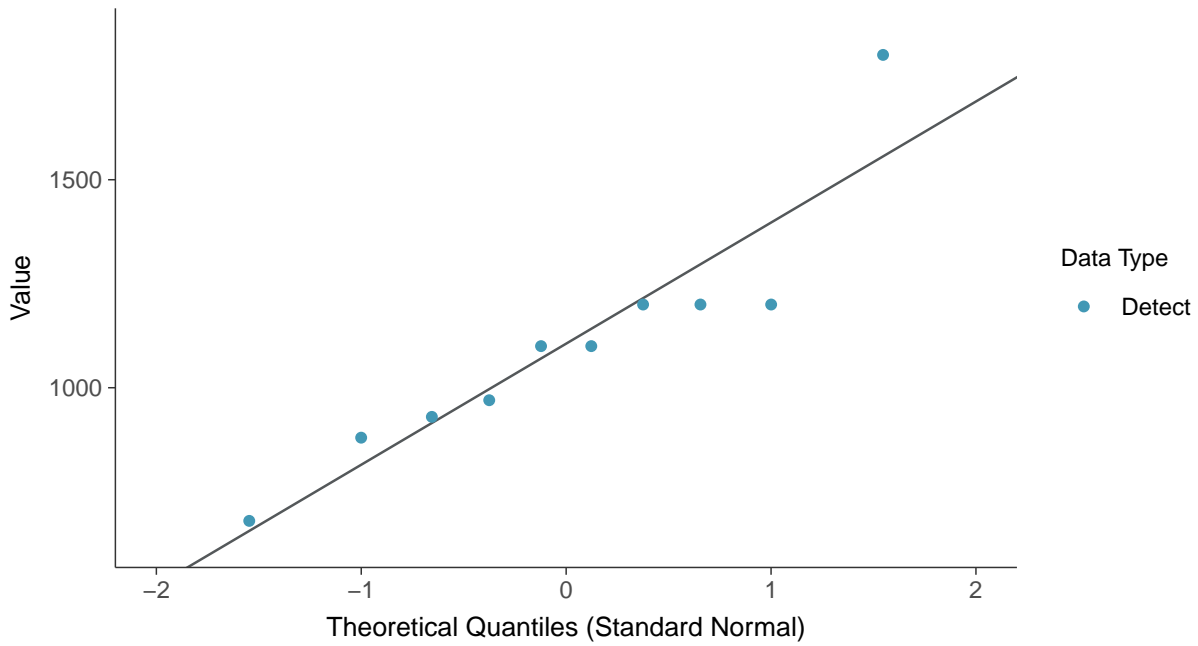
Total Dissolved Solids, MW-11 (mg/L)





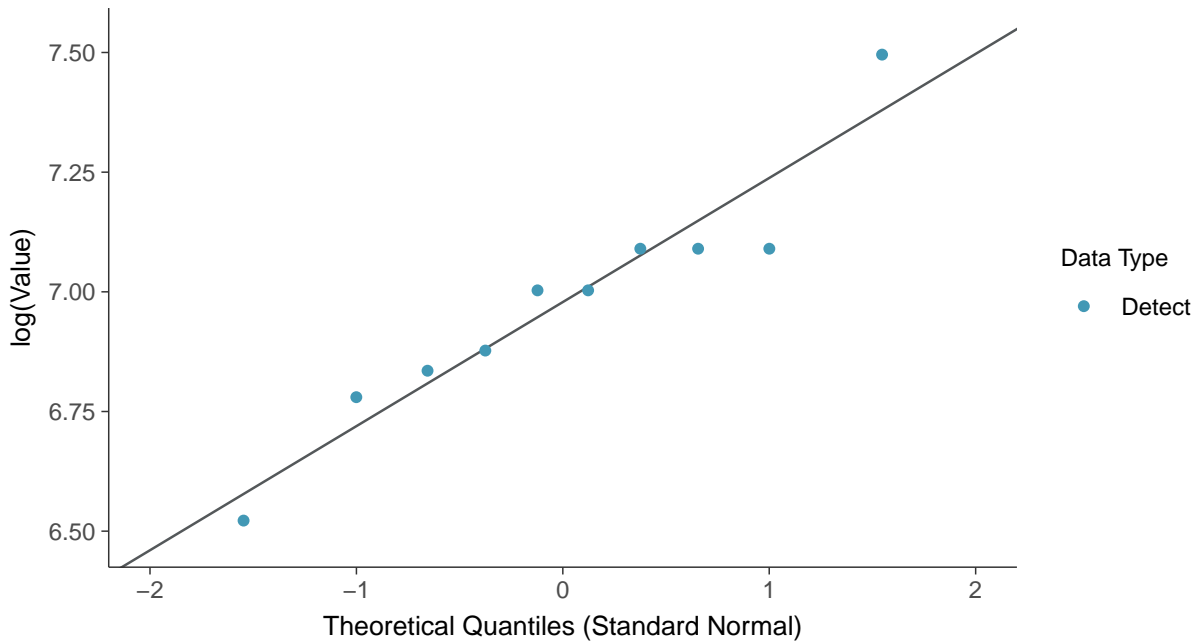
Normal Q-Q plot

Total Dissolved Solids, MW-11 (mg/L)



Lognormal Q-Q plot

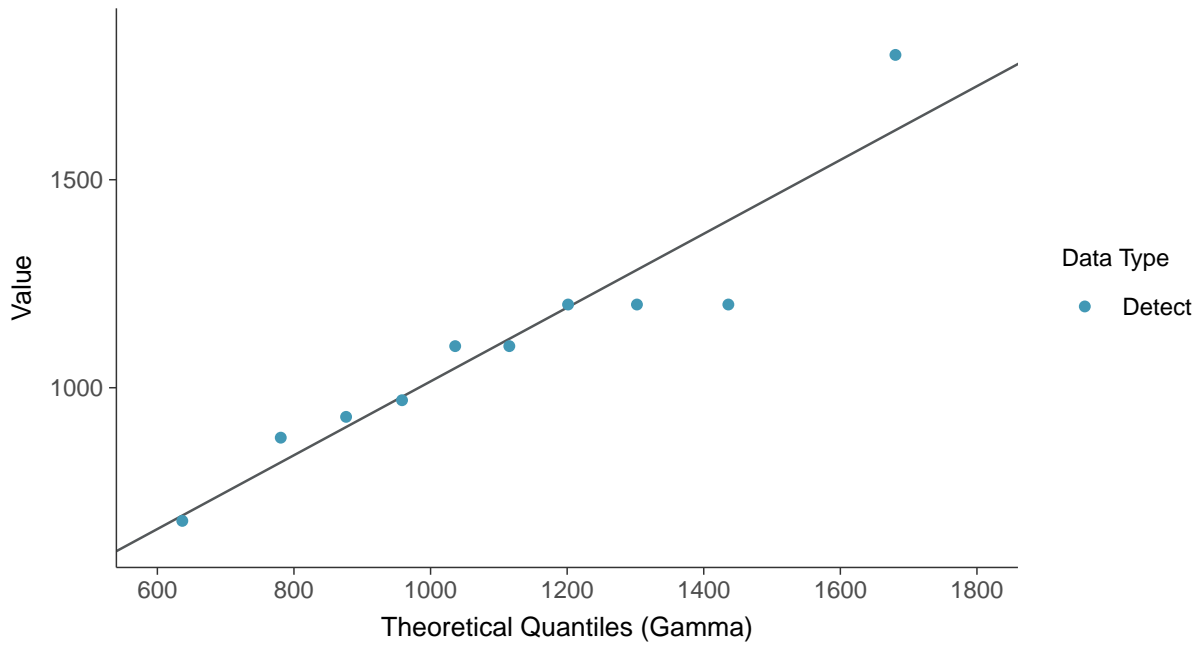
Total Dissolved Solids, MW-11 (mg/L)





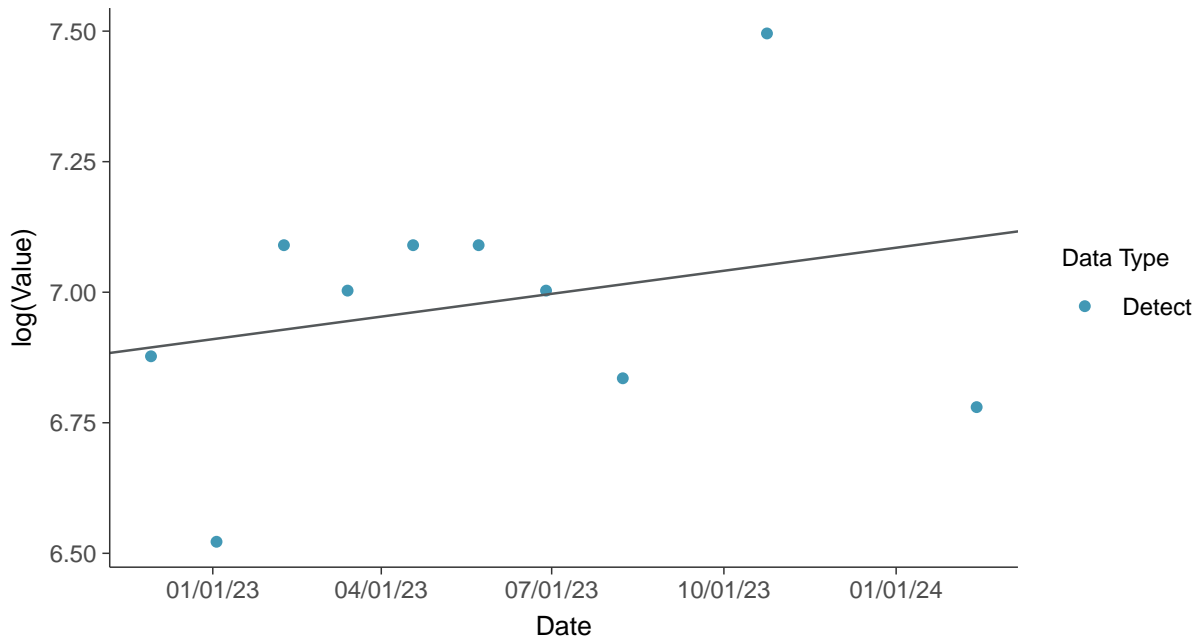
Gamma Q-Q plot

Total Dissolved Solids, MW-11 (mg/L)



Trend Regression: Lognormal MLE

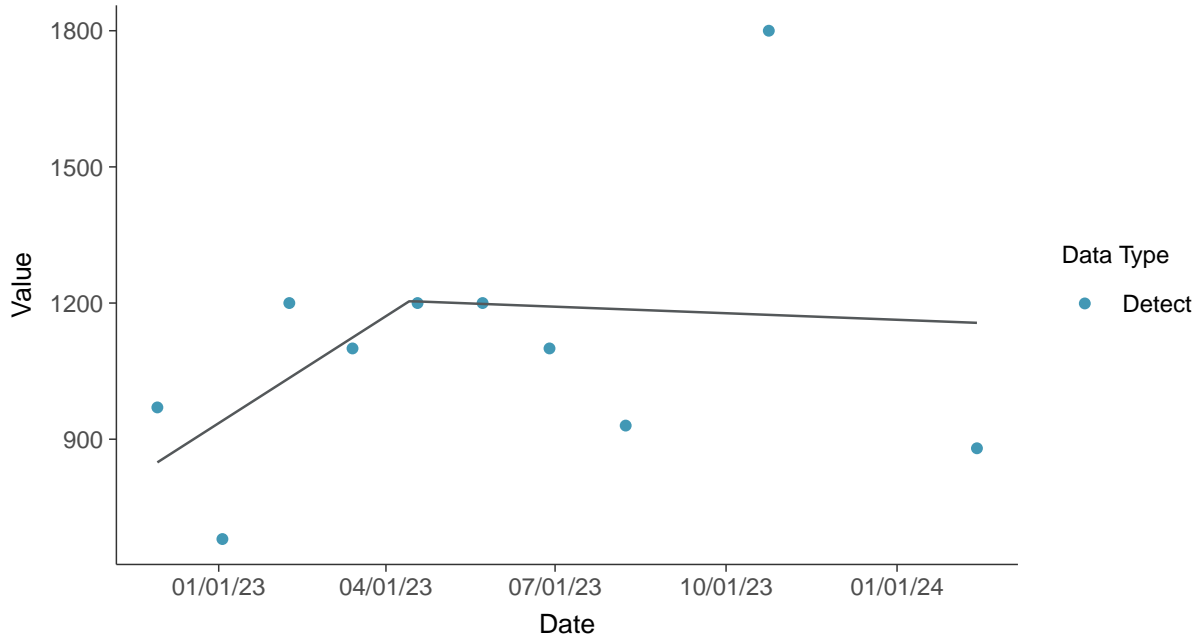
Total Dissolved Solids, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-11 (mg/L)



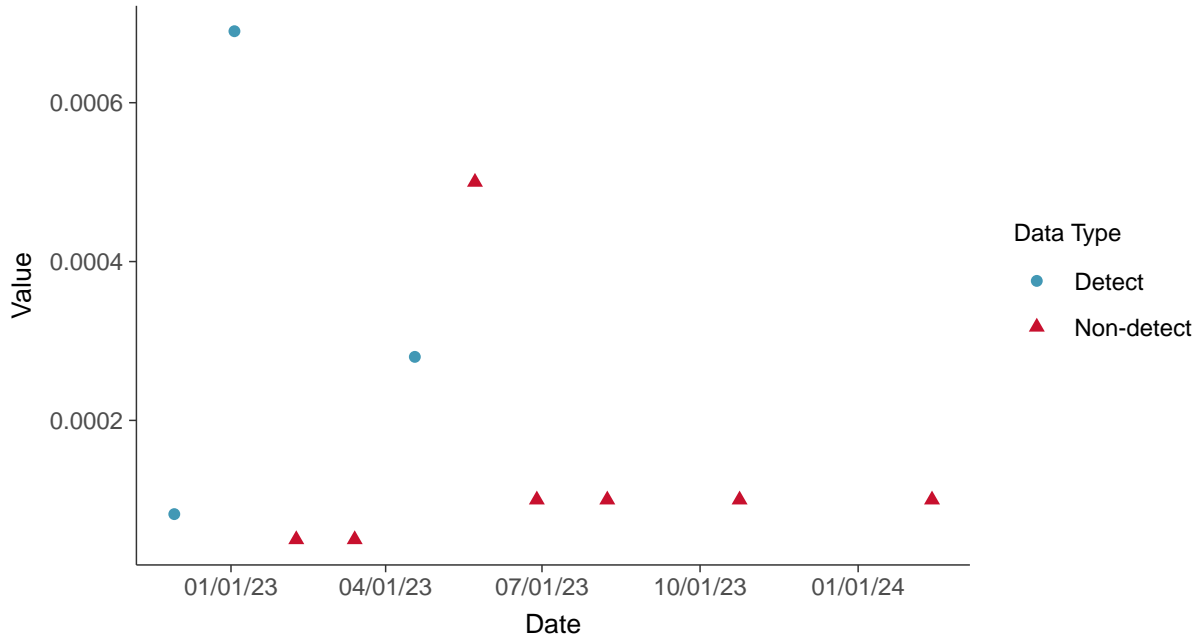


Appendix IV: Antimony, MW-11

ID: 2_21_5_101

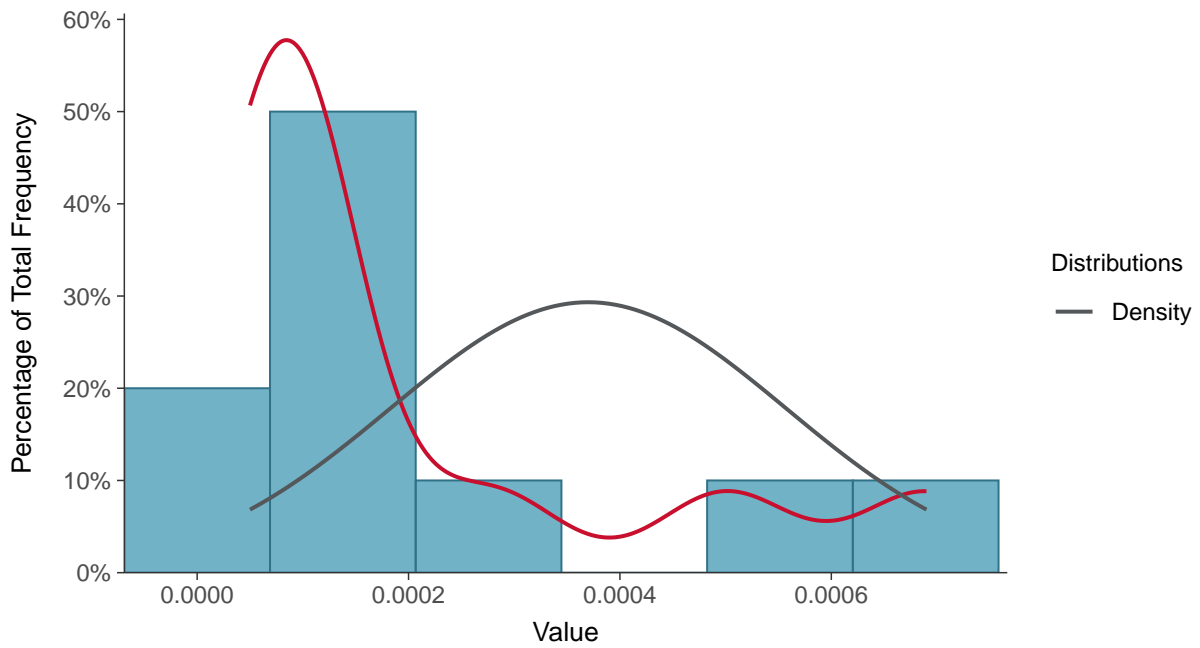
Scatter Plot

Antimony, MW-11 (mg/L)



Histogram

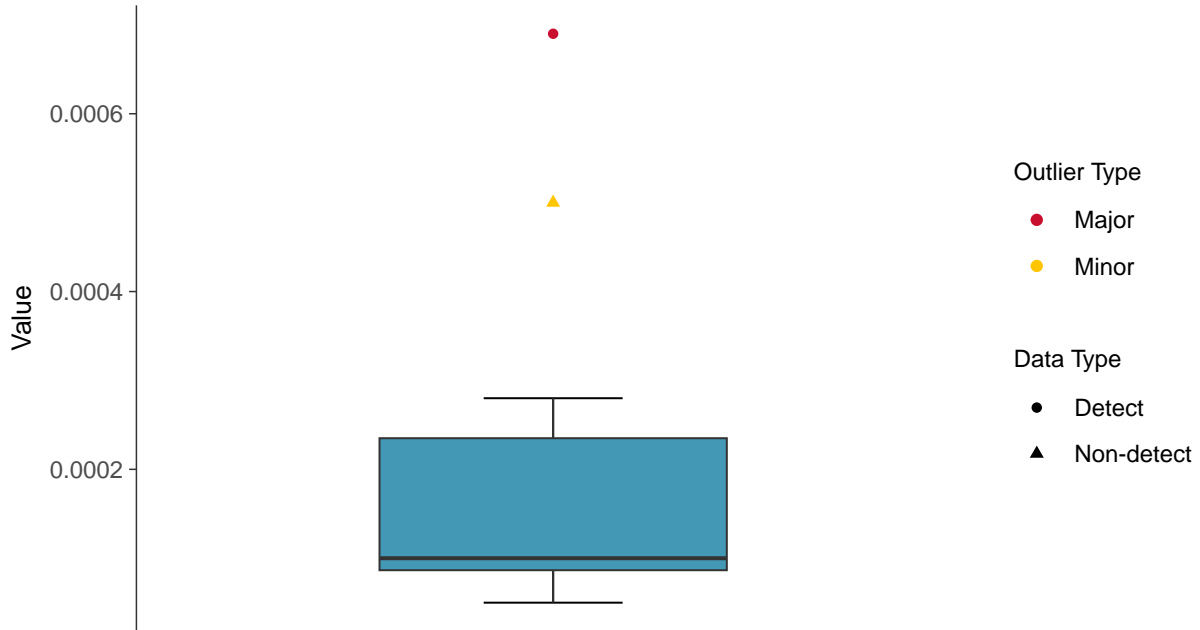
Antimony, MW-11 (mg/L)





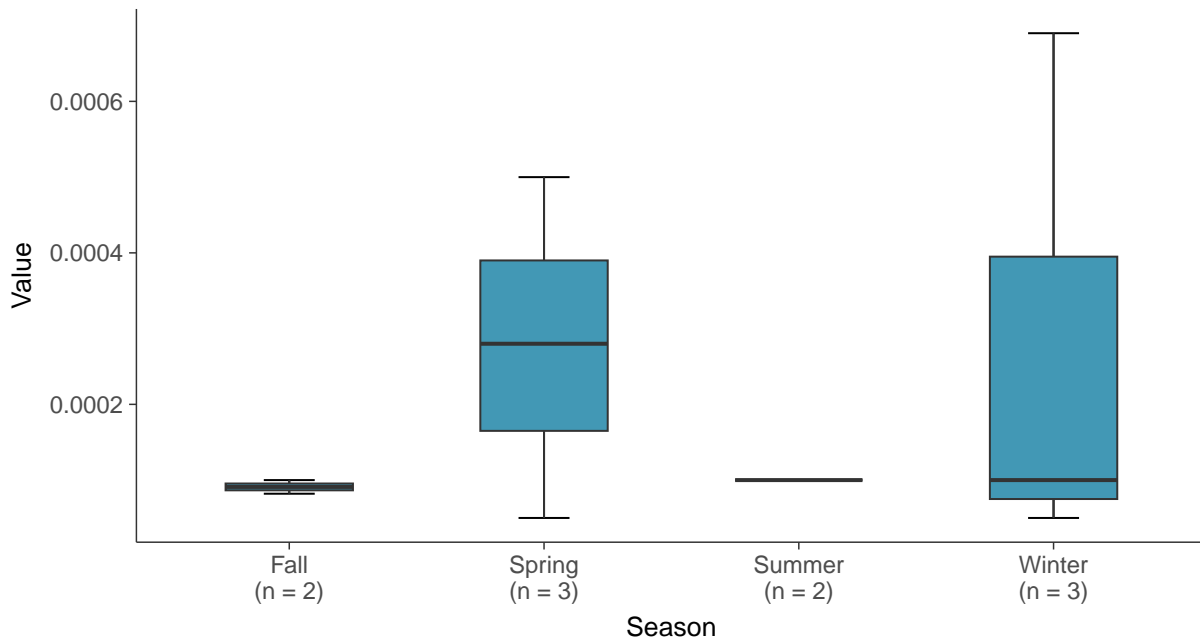
Boxplot

Antimony, MW-11 (mg/L)



Boxplot by Season

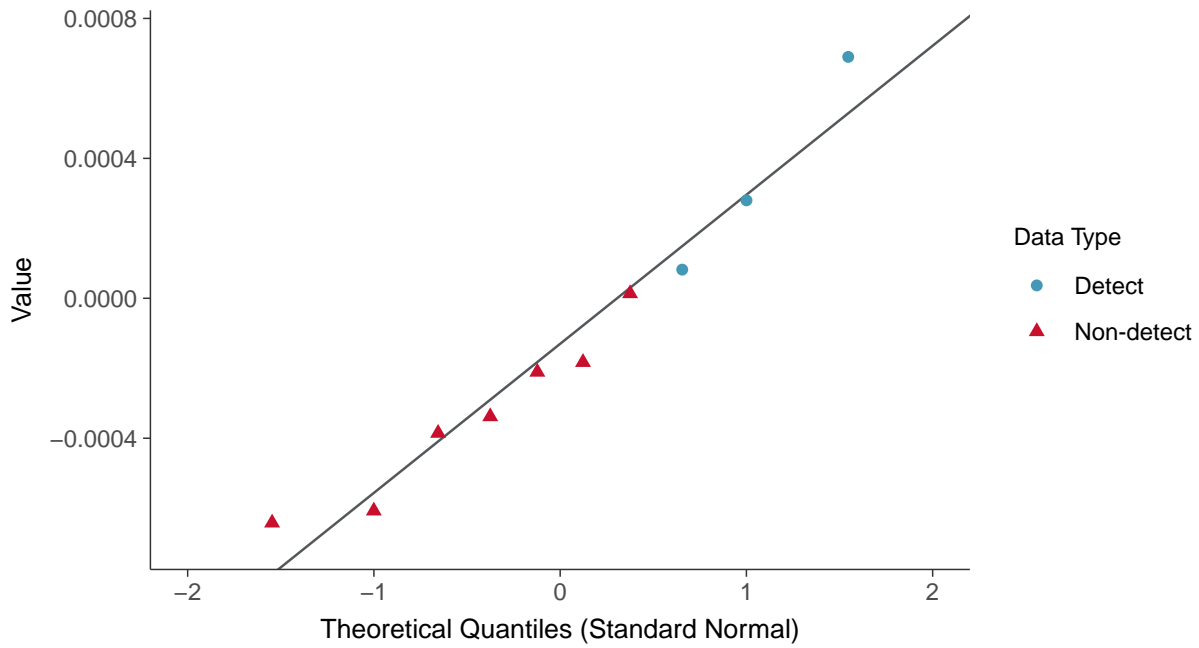
Antimony, MW-11 (mg/L)





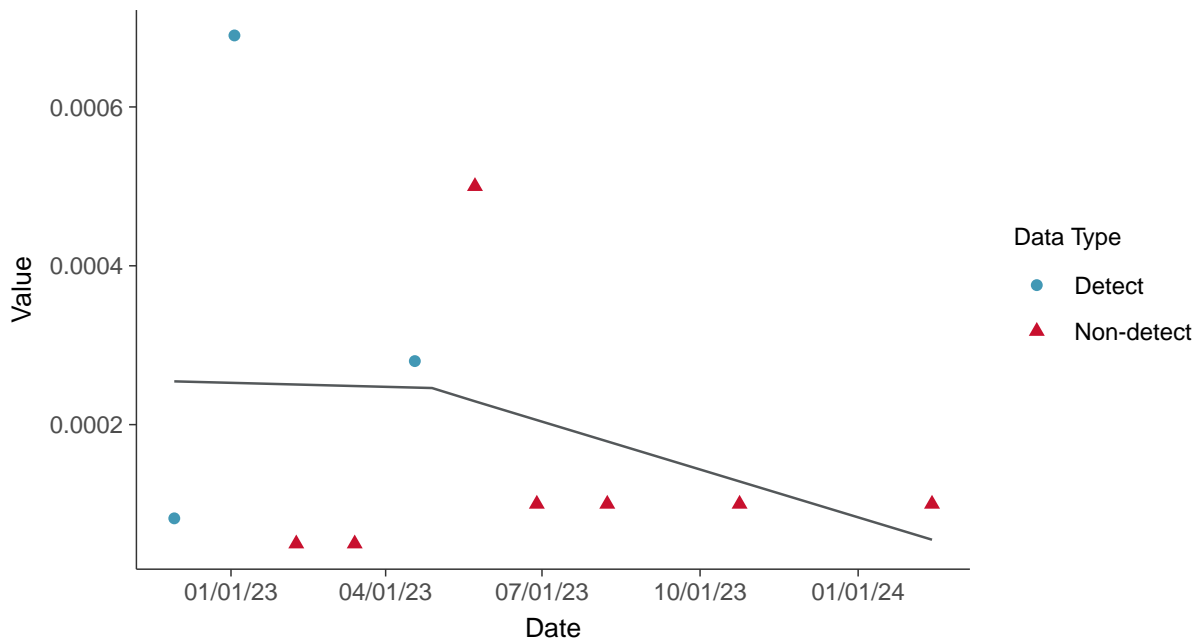
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-11 (mg/L)



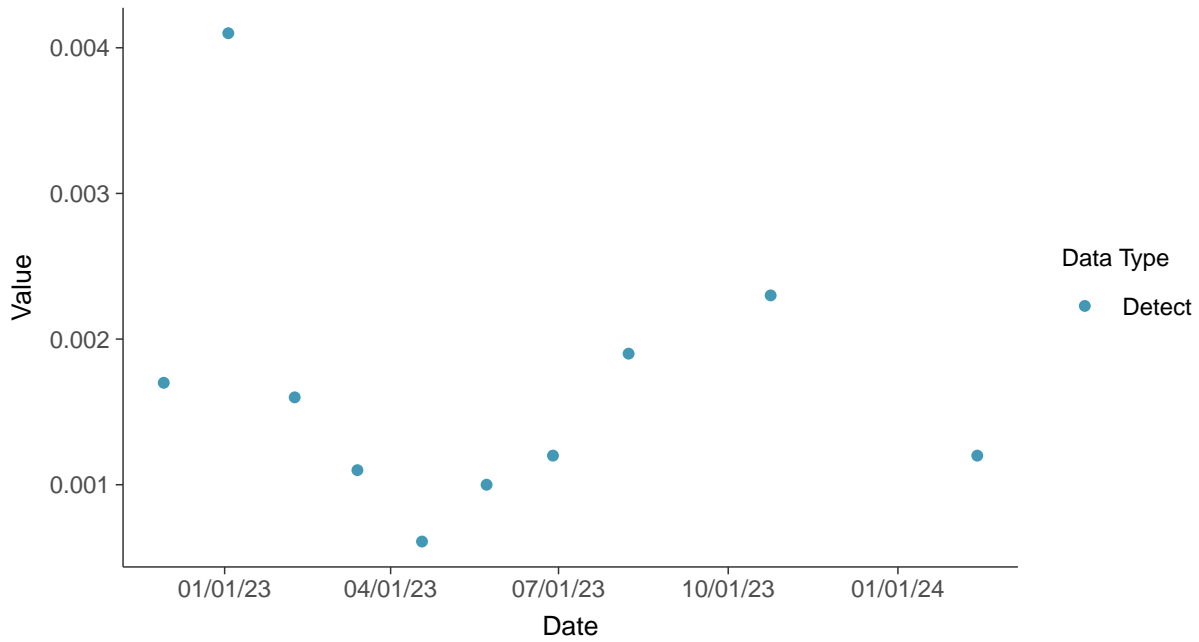


Appendix IV: Arsenic, MW-11

ID: 2_21_5_102

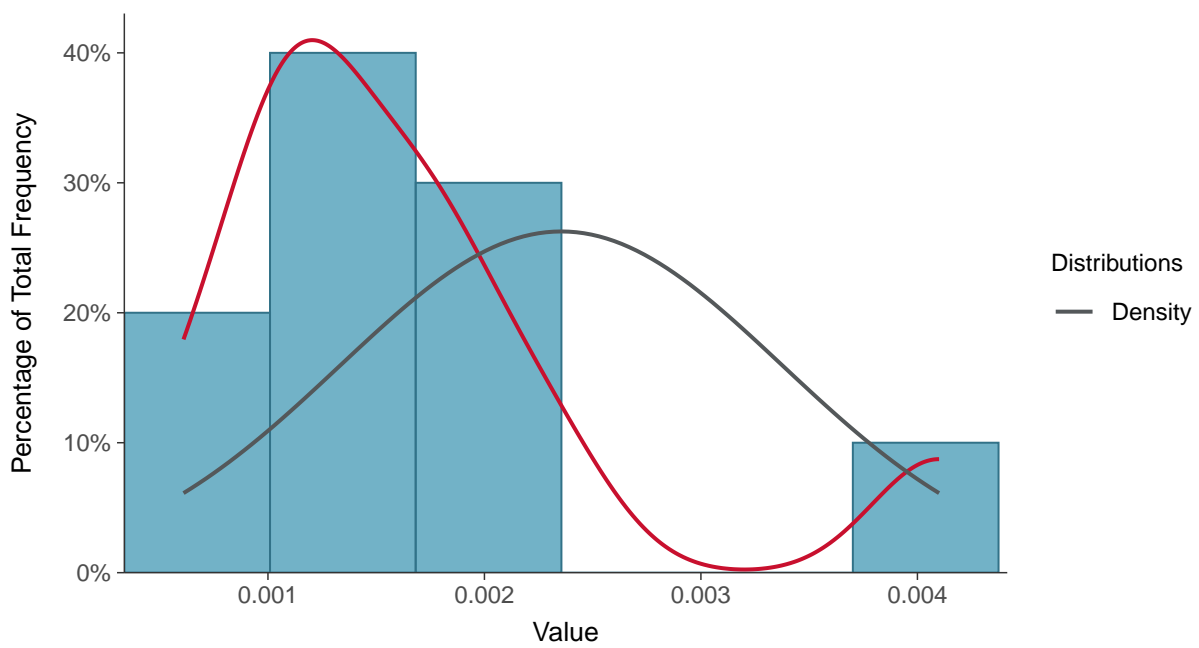
Scatter Plot

Arsenic, MW-11 (mg/L)



Histogram

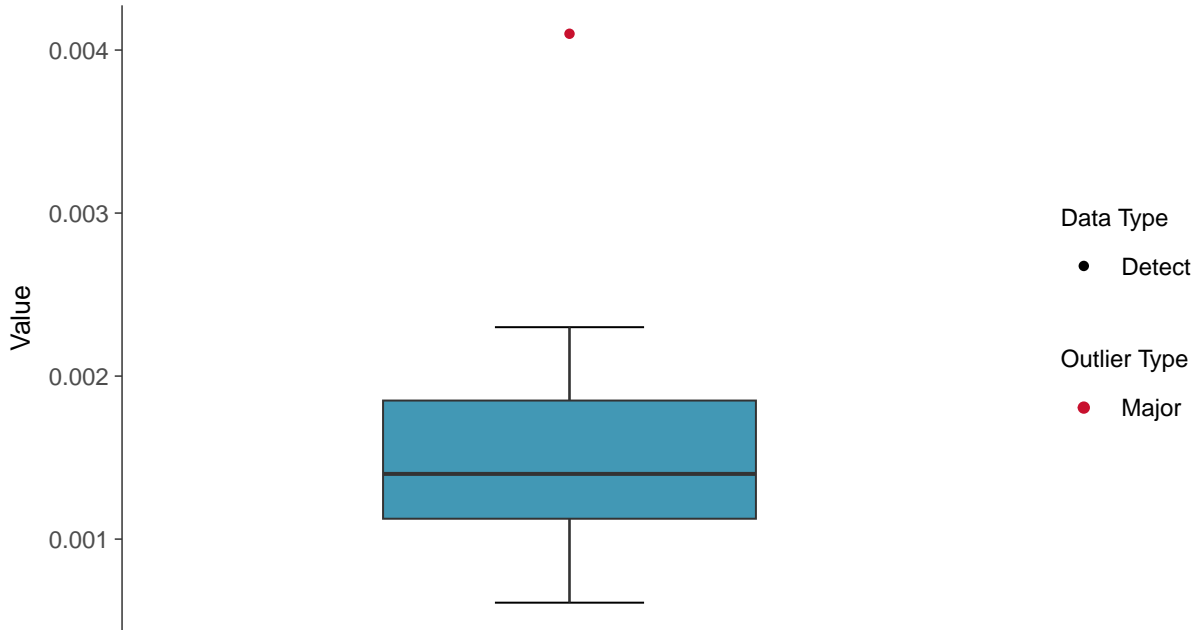
Arsenic, MW-11 (mg/L)





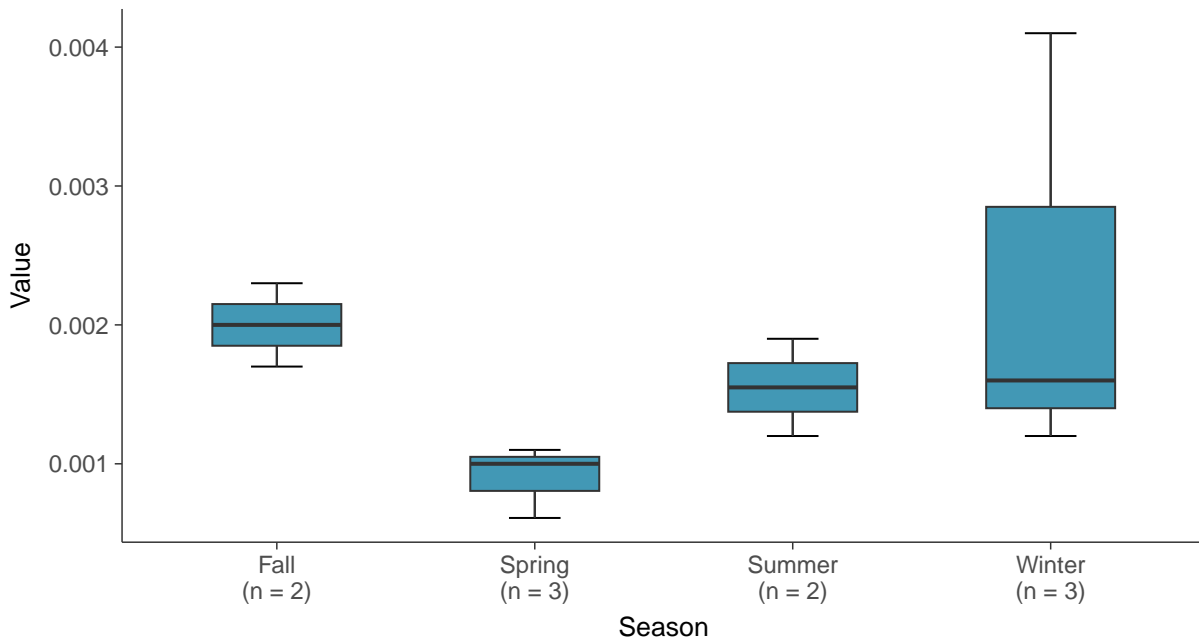
Boxplot

Arsenic, MW-11 (mg/L)



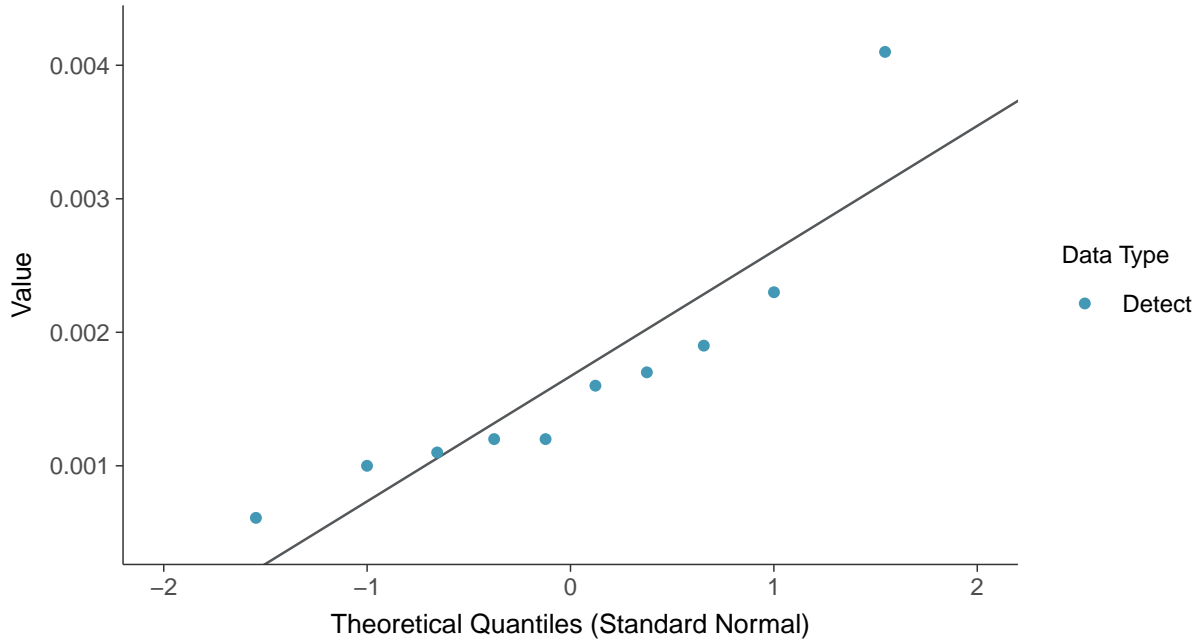
Boxplot by Season

Arsenic, MW-11 (mg/L)

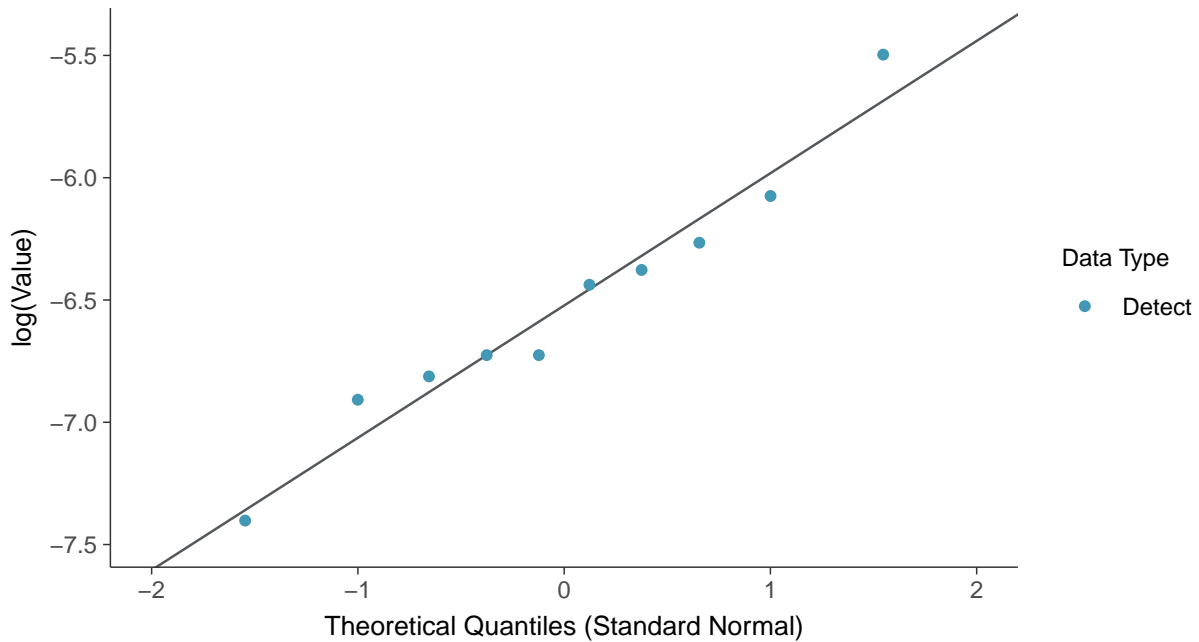




Normal Q-Q plot
Arsenic, MW-11 (mg/L)

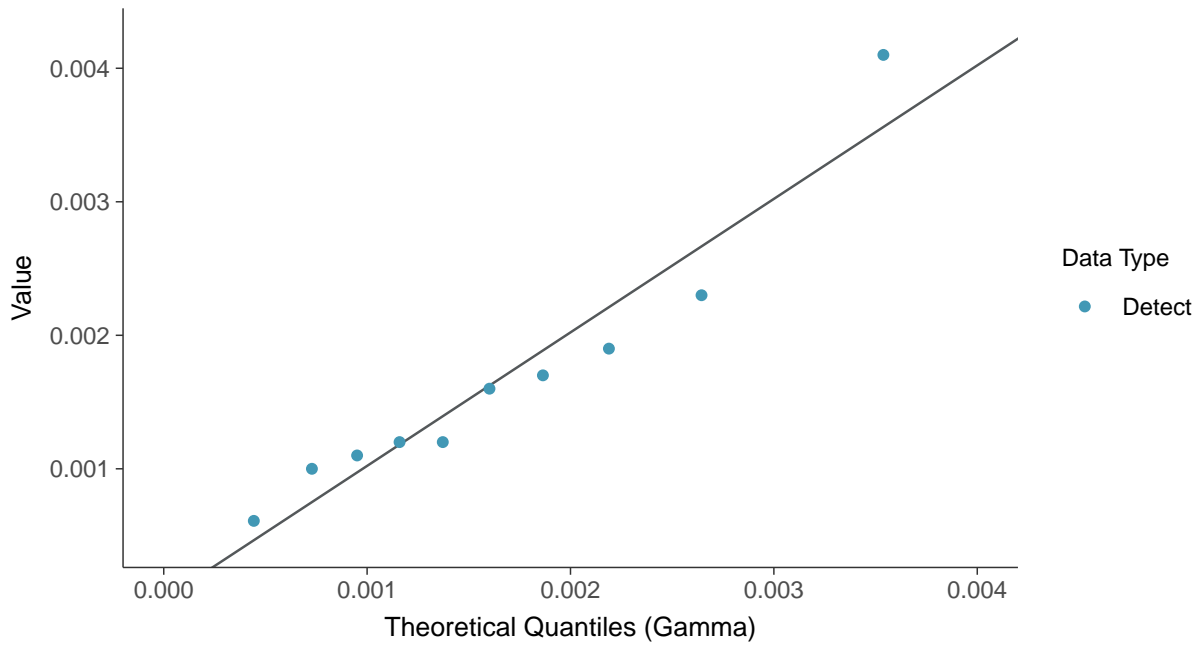


Lognormal Q-Q plot
Arsenic, MW-11 (mg/L)

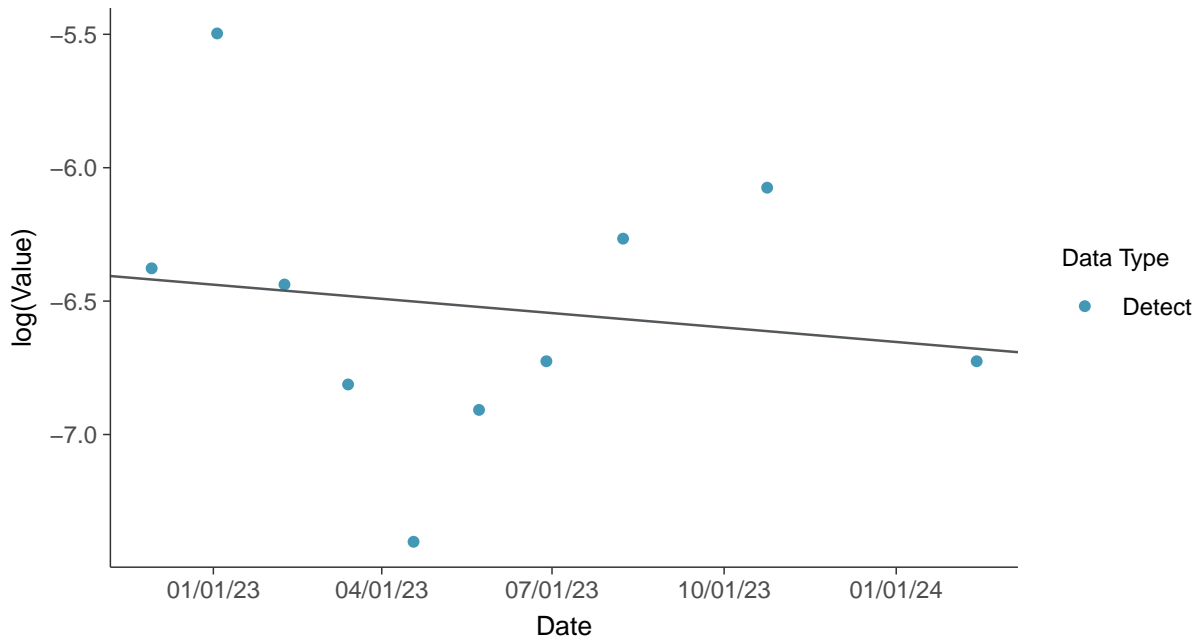




Gamma Q-Q plot
Arsenic, MW-11 (mg/L)



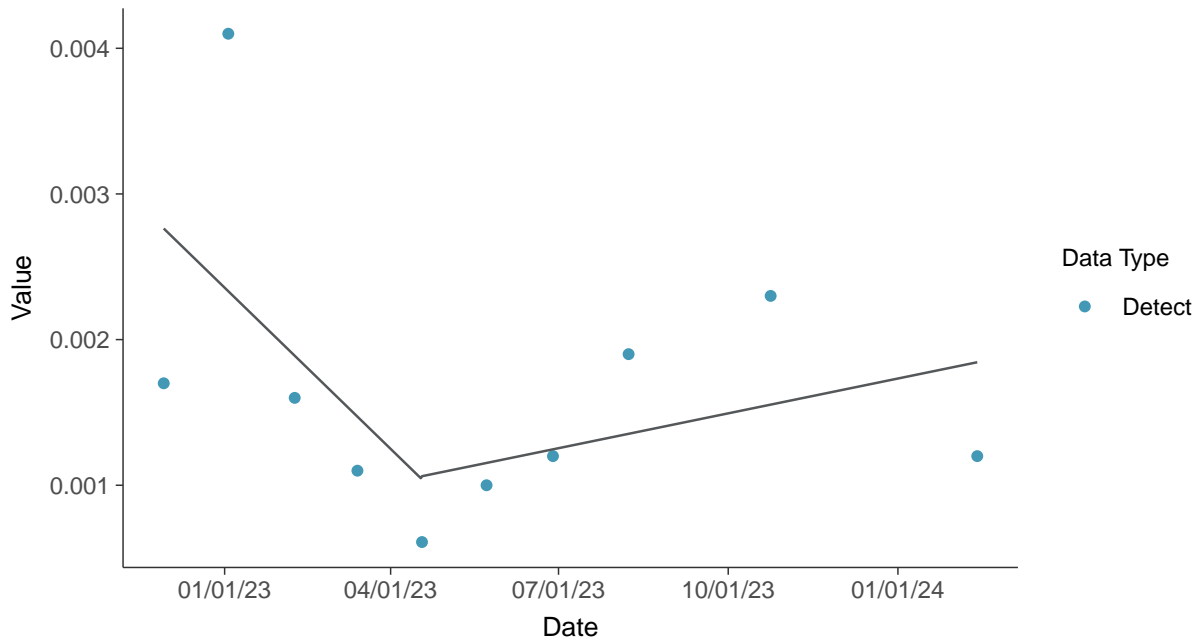
Trend Regression: Lognormal MLE
Arsenic, MW-11 (mg/L)





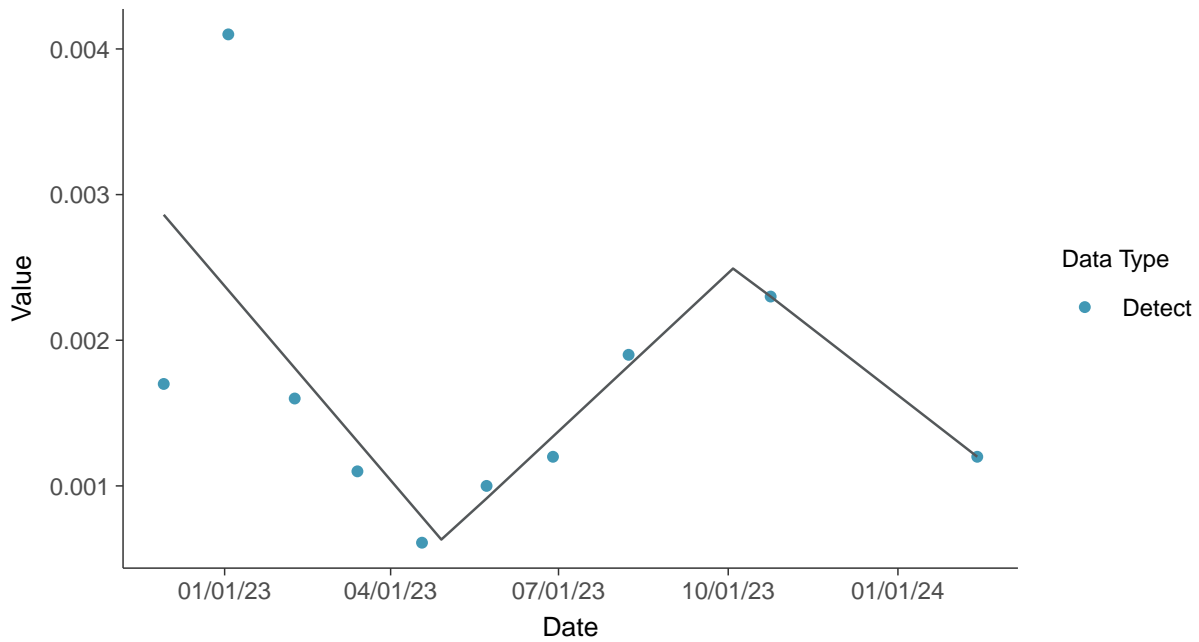
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

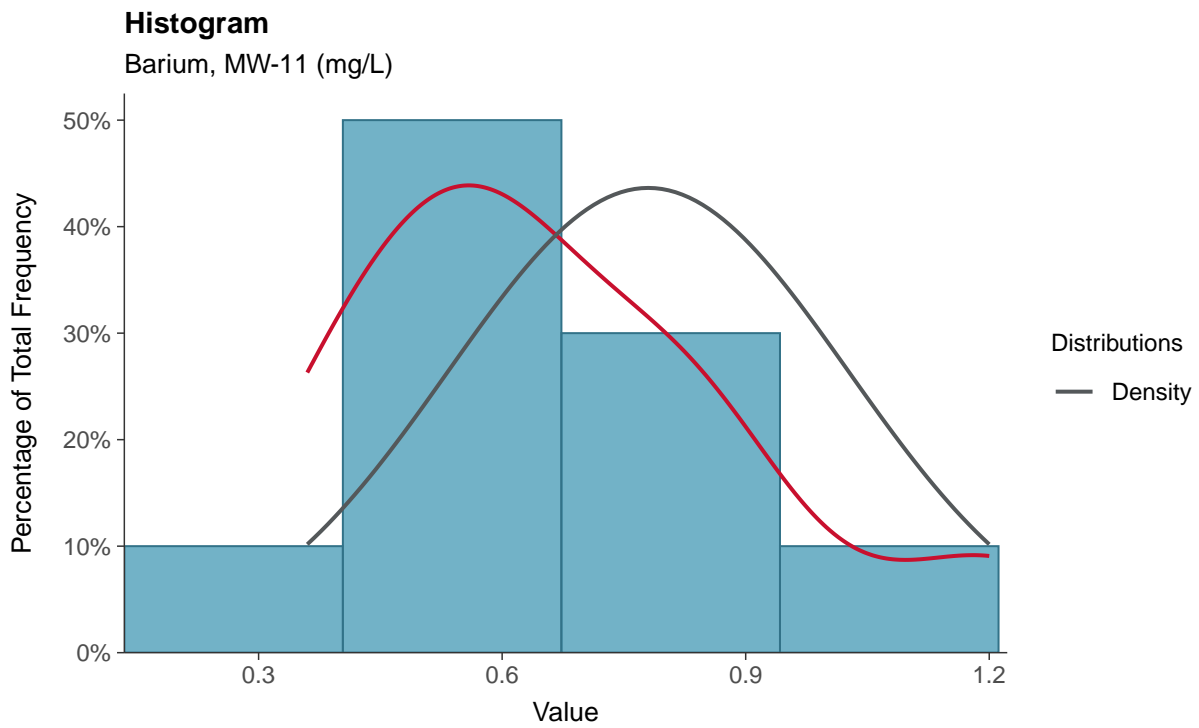
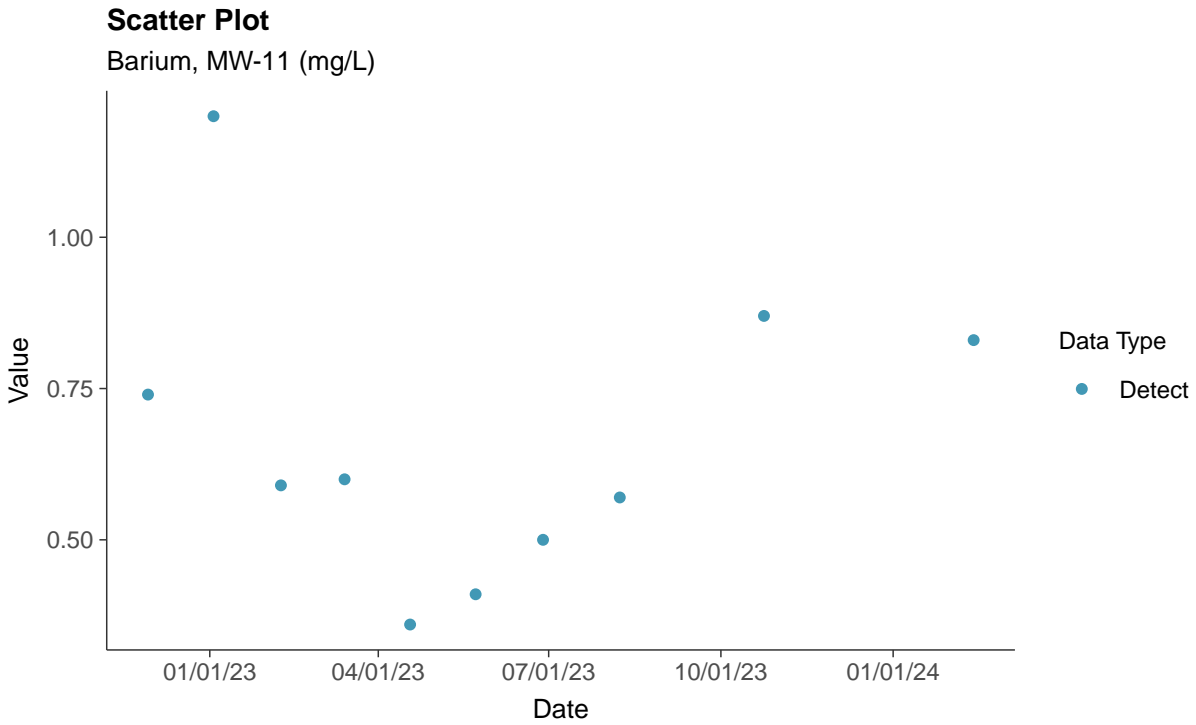
Arsenic, MW-11 (mg/L)





Appendix IV: Barium, MW-11

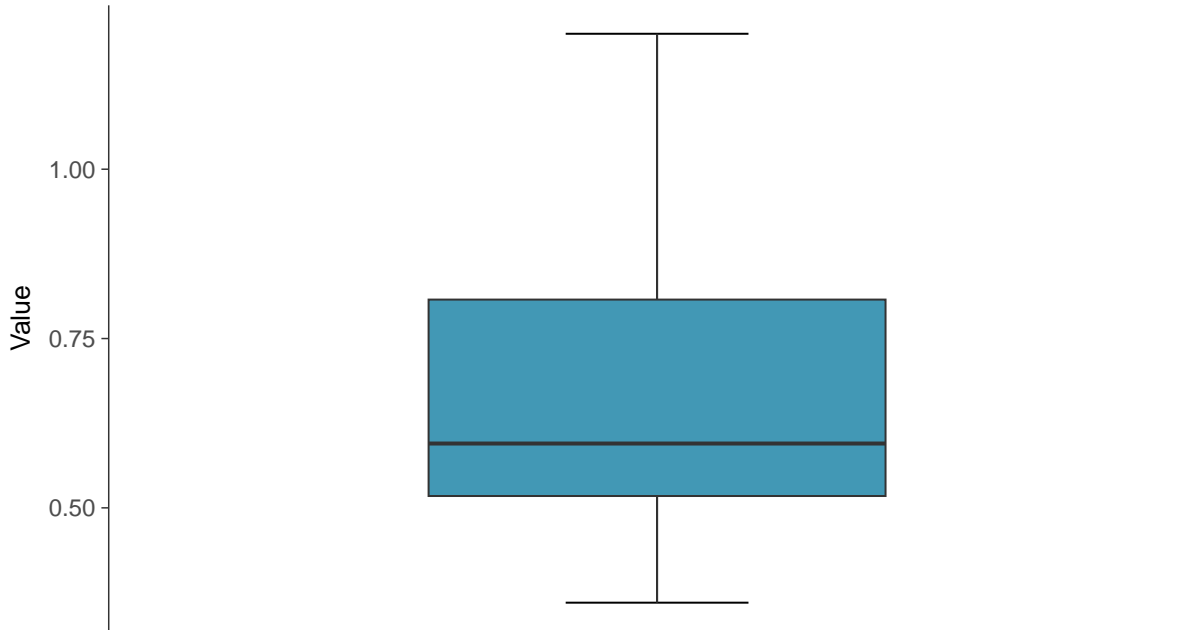
ID: 2_21_5_103





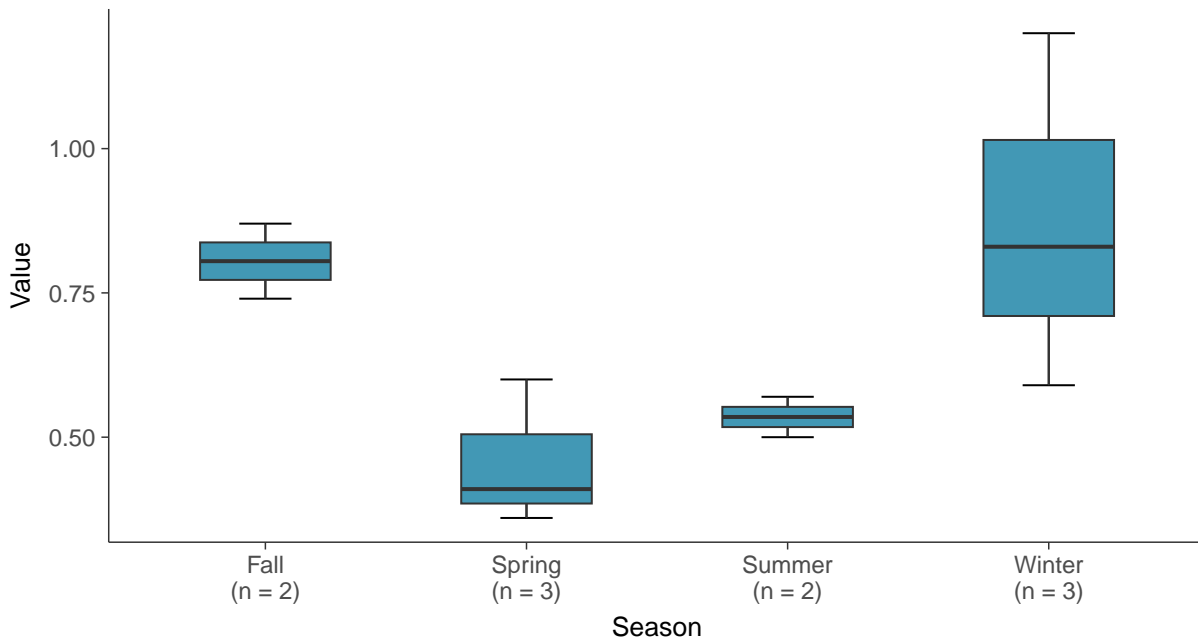
Boxplot

Barium, MW-11 (mg/L)



Boxplot by Season

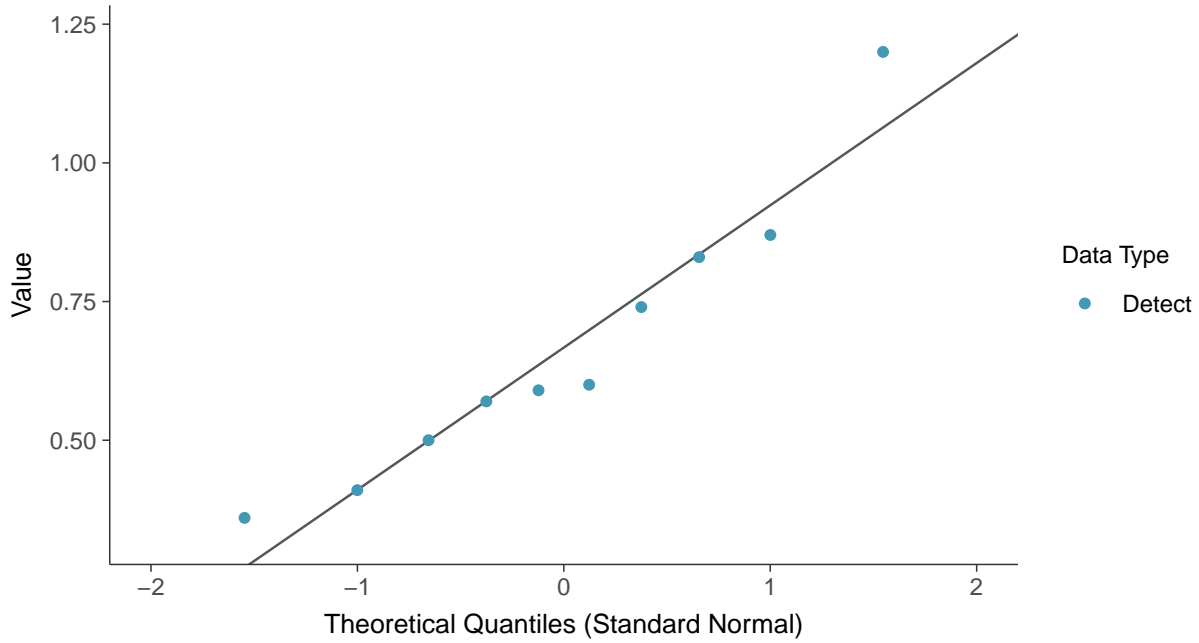
Barium, MW-11 (mg/L)





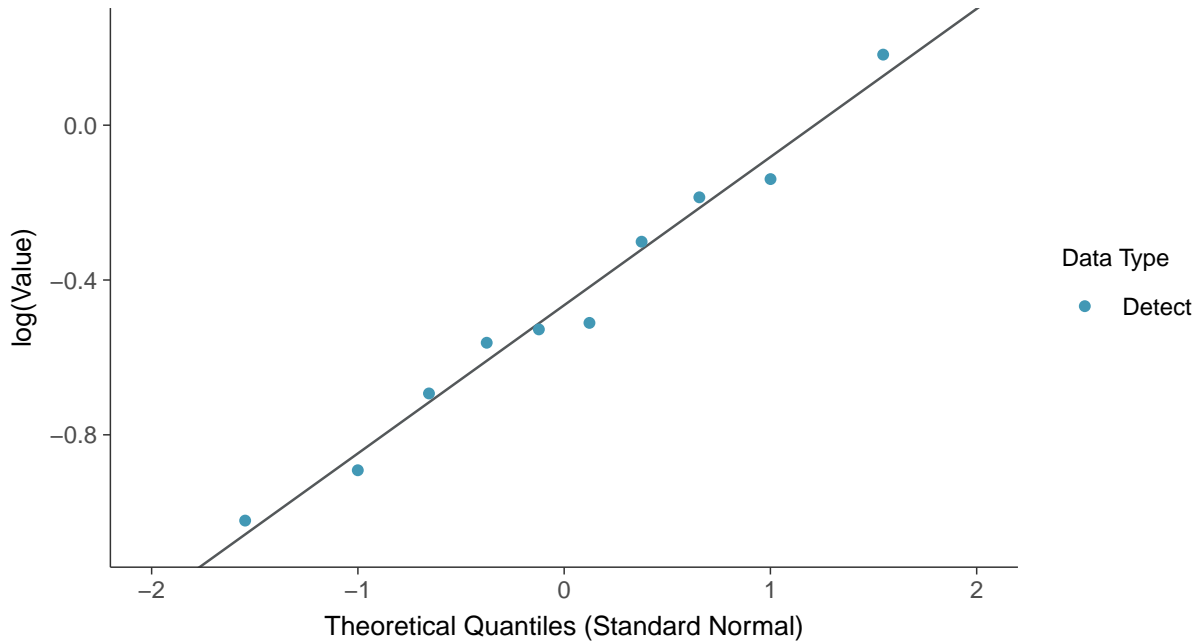
Normal Q-Q plot

Barium, MW-11 (mg/L)



Lognormal Q-Q plot

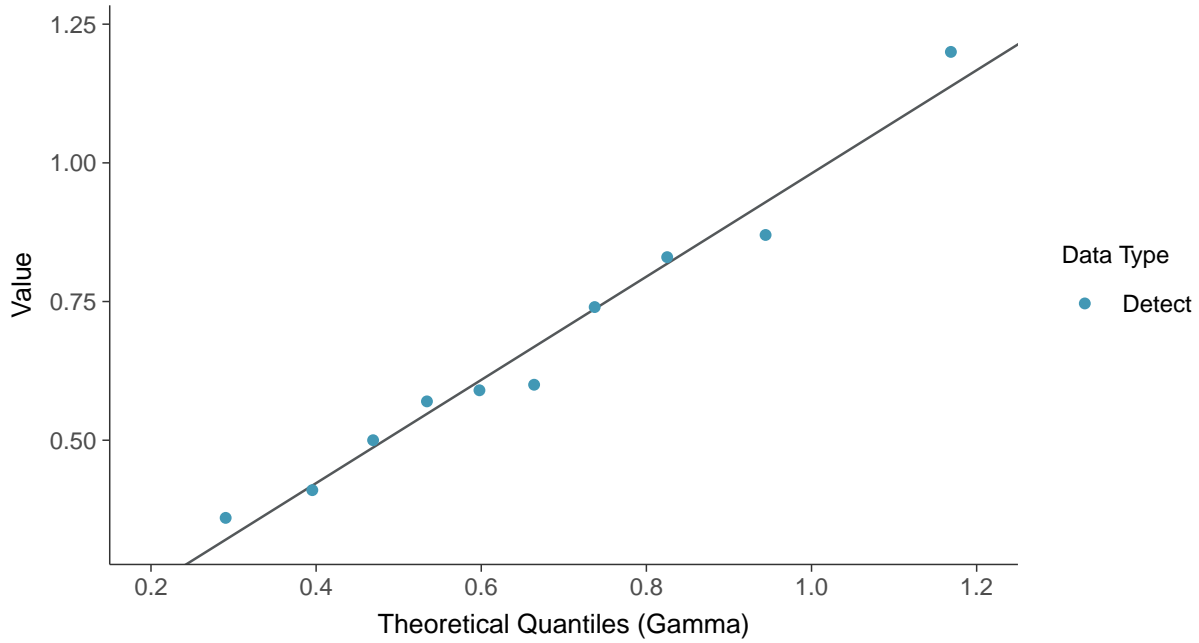
Barium, MW-11 (mg/L)





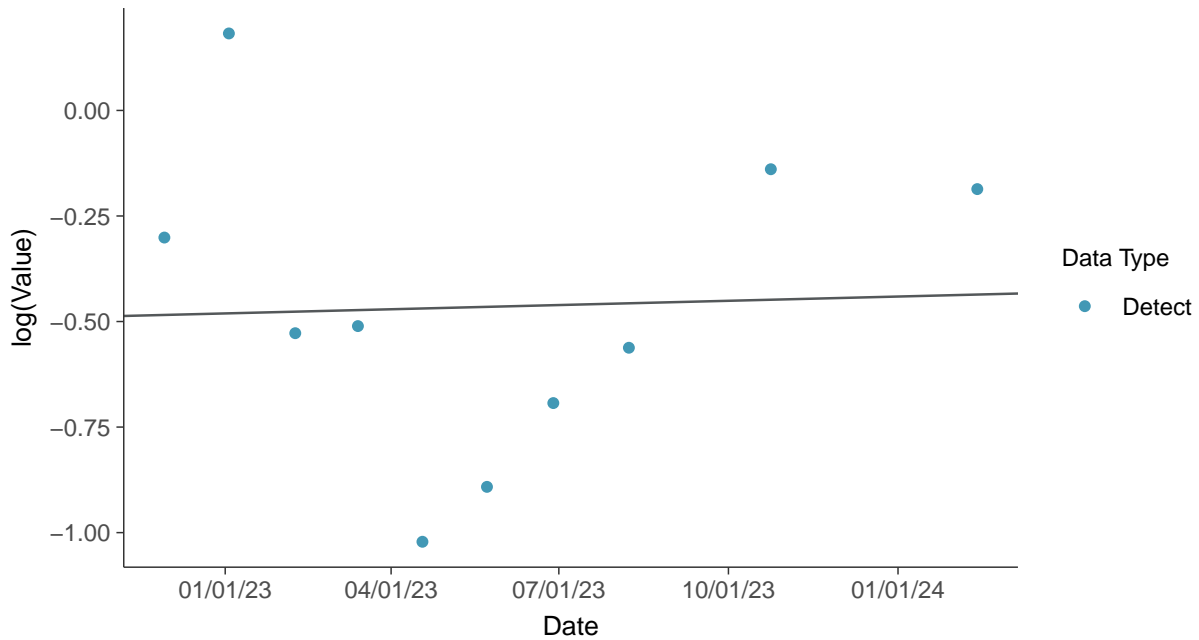
Gamma Q-Q plot

Barium, MW-11 (mg/L)



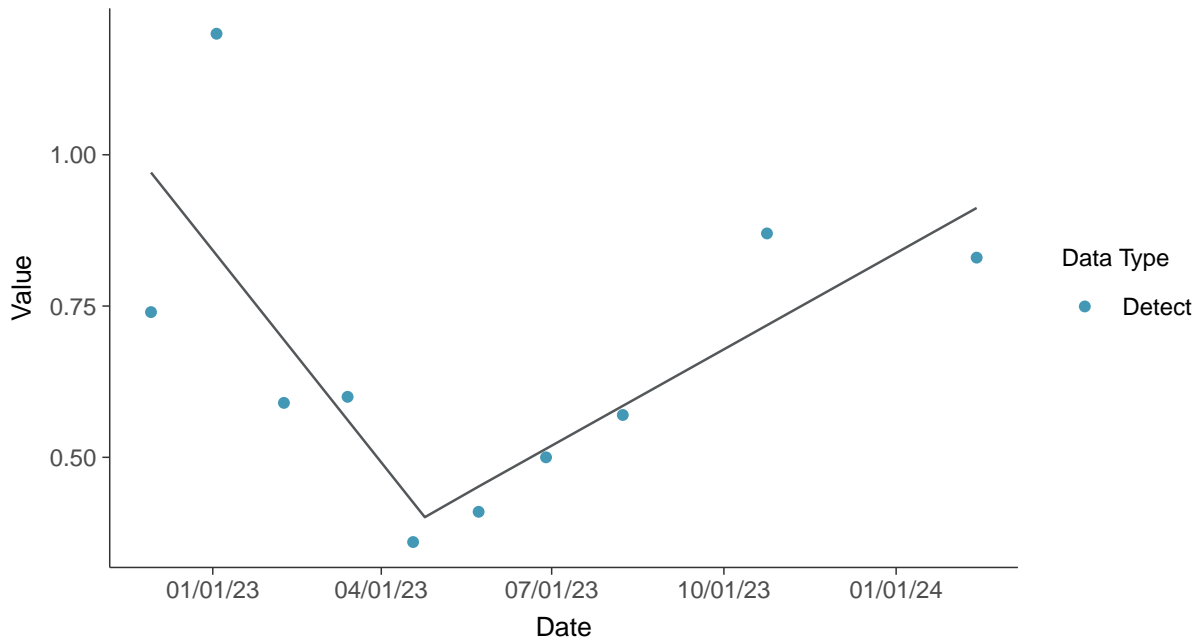
Trend Regression: Lognormal MLE

Barium, MW-11 (mg/L)





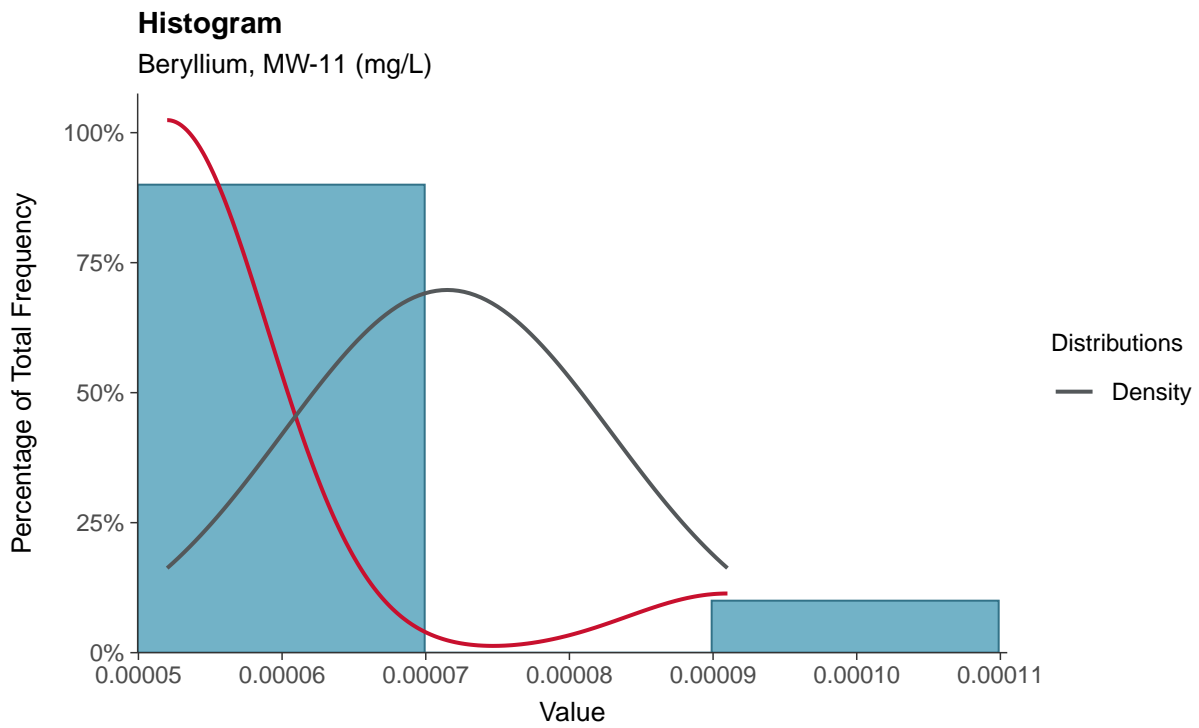
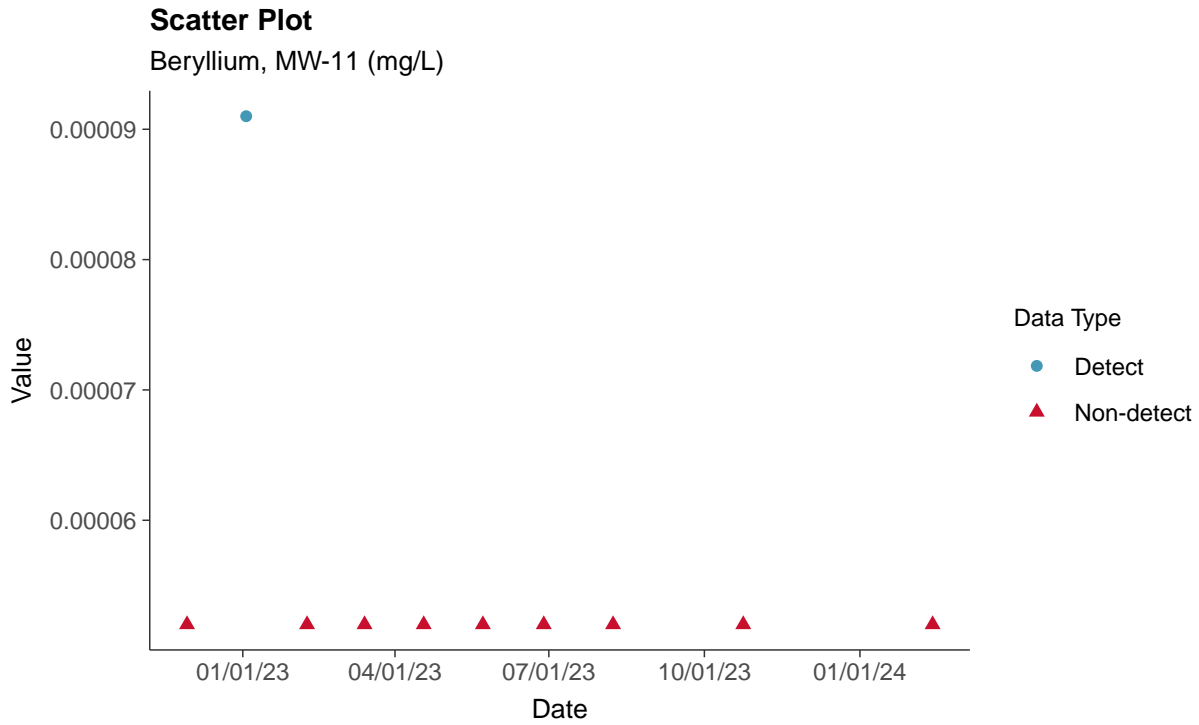
Trend Regression: Piecewise Linear-Linear
Barium, MW-11 (mg/L)





Appendix IV: Beryllium, MW-11

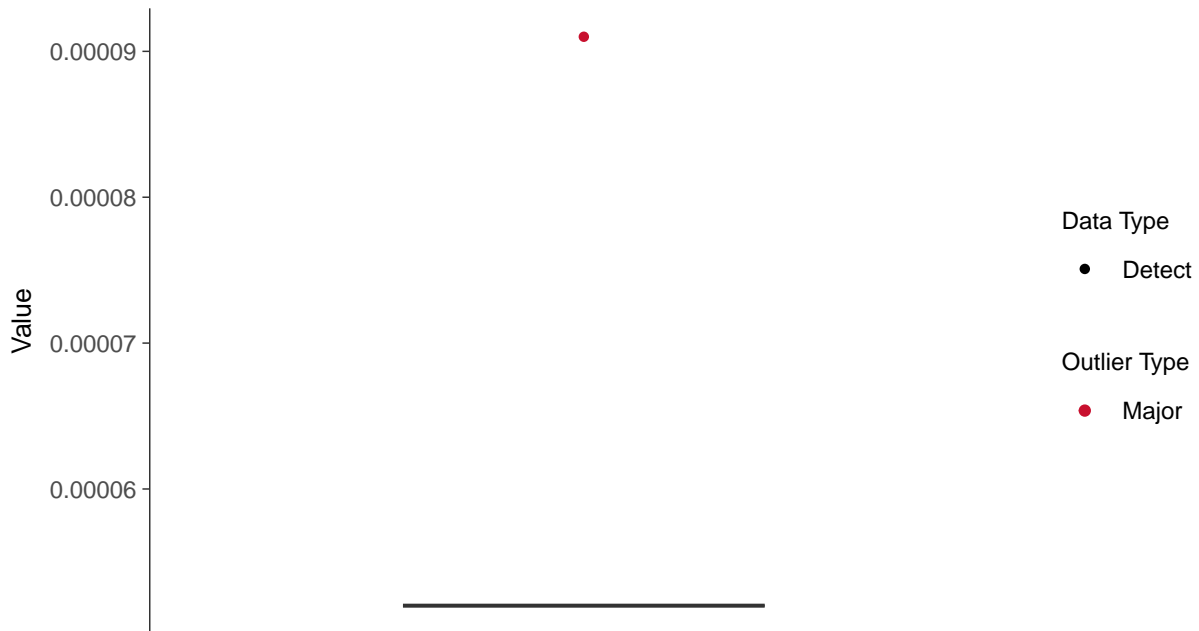
ID: 2_21_5_104





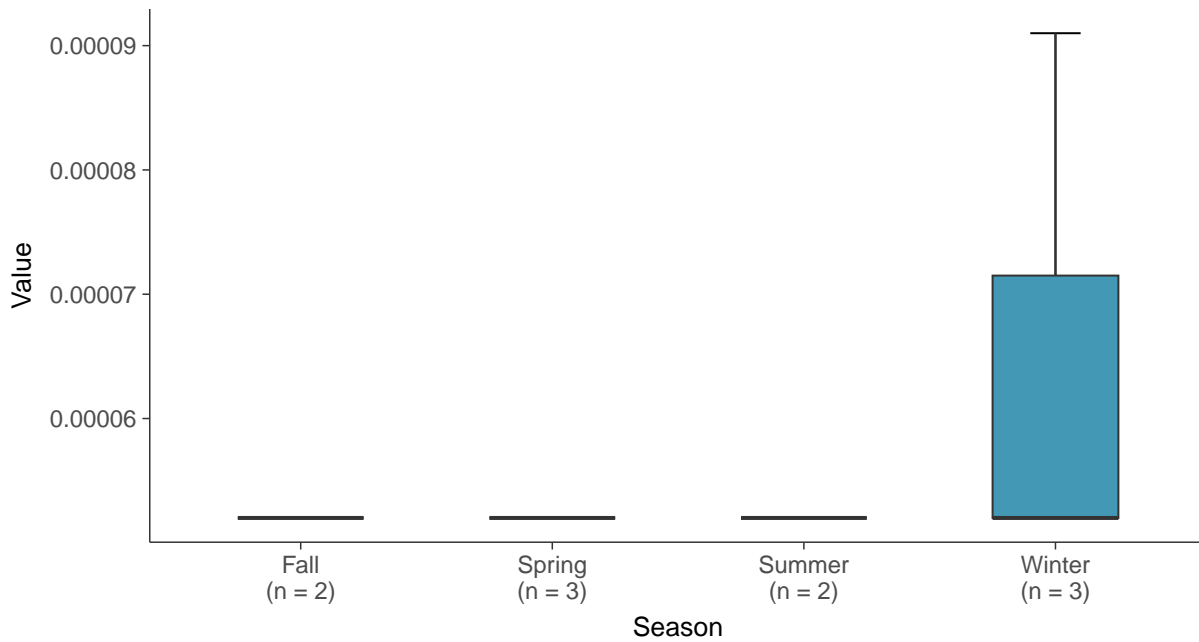
Boxplot

Beryllium, MW-11 (mg/L)



Boxplot by Season

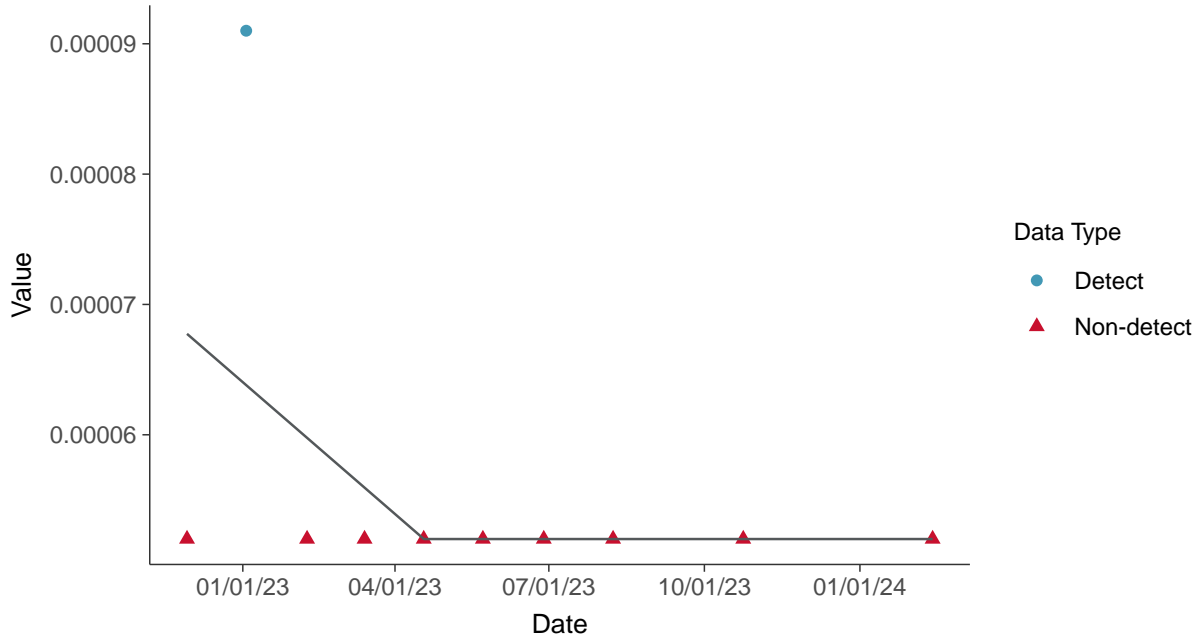
Beryllium, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

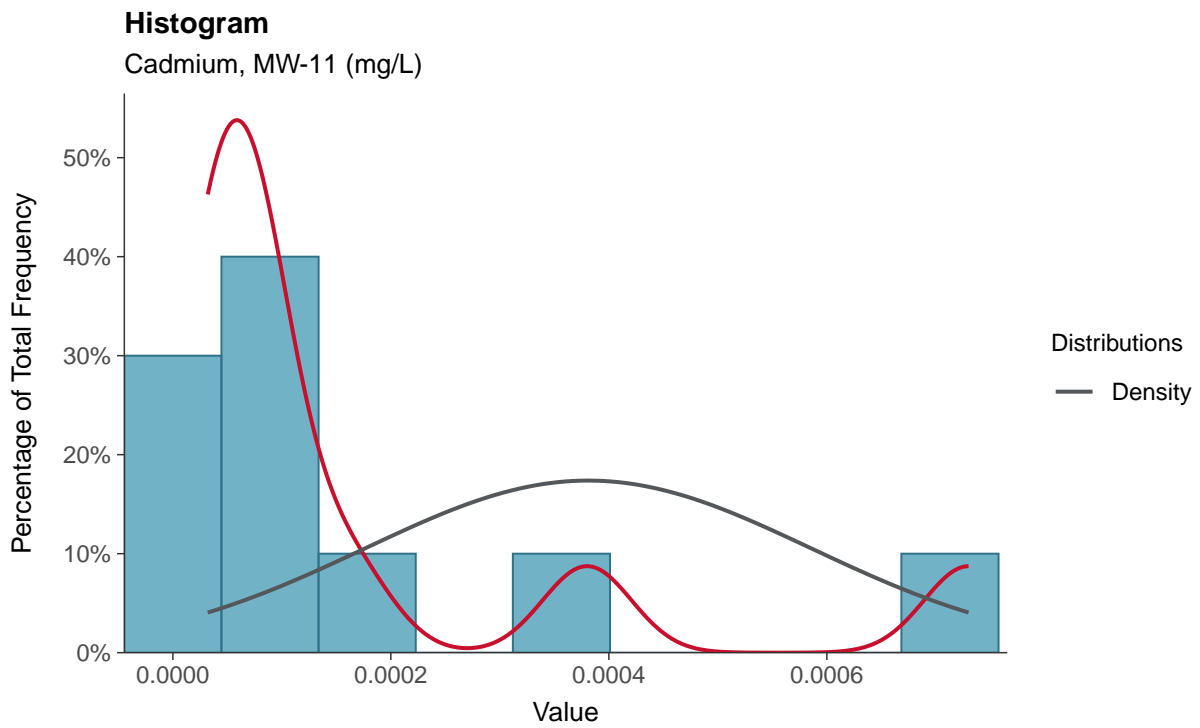
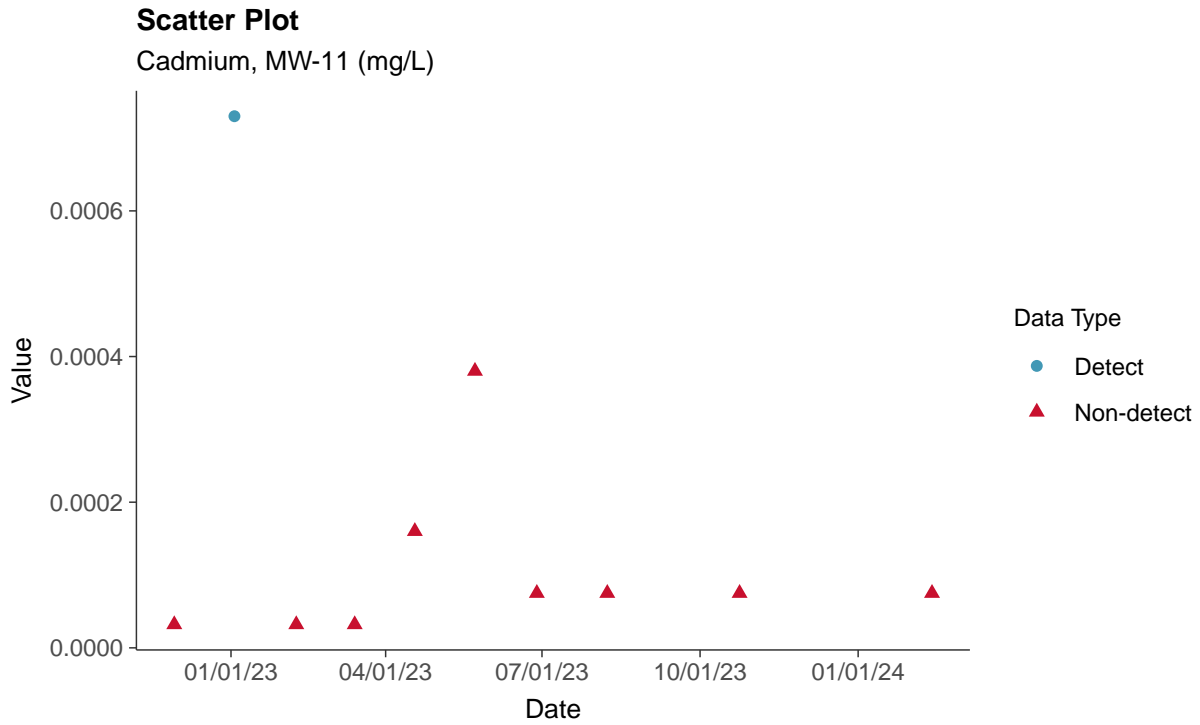
Beryllium, MW-11 (mg/L)





Appendix IV: Cadmium, MW-11

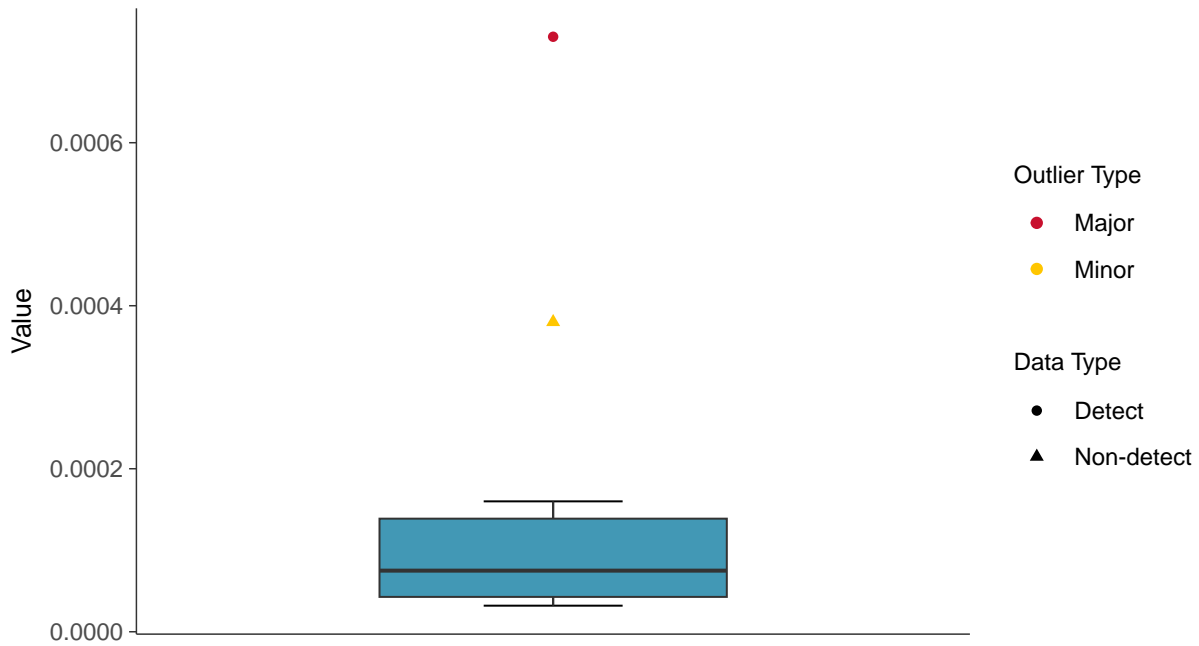
ID: 2_21_5_106





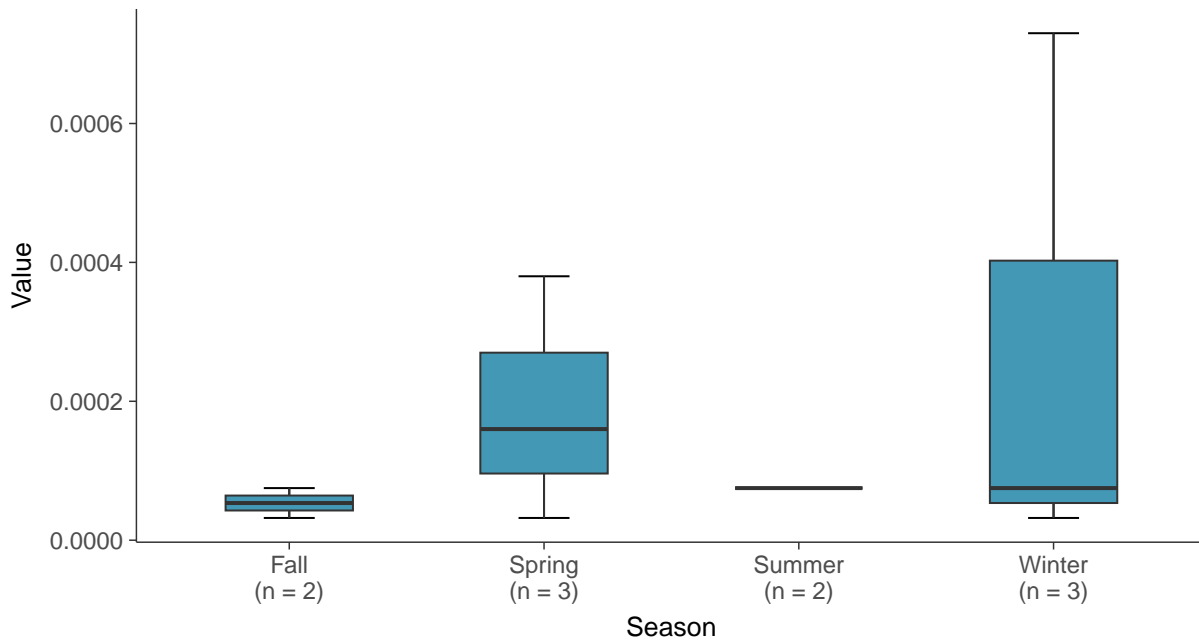
Boxplot

Cadmium, MW-11 (mg/L)



Boxplot by Season

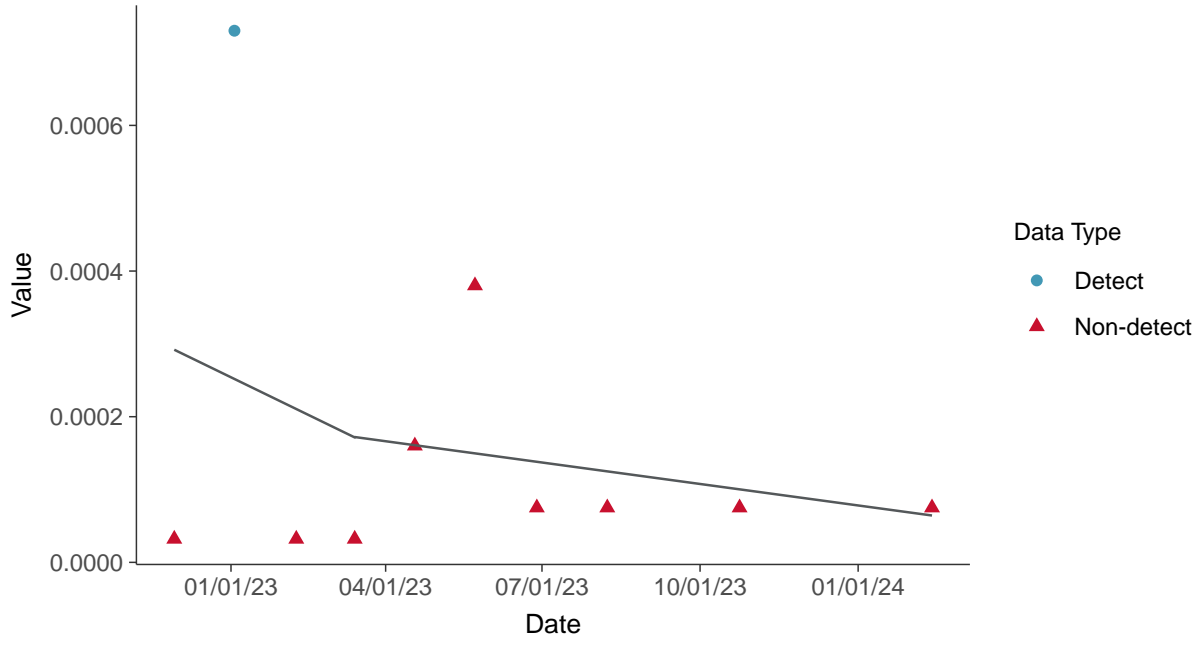
Cadmium, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Cadmium, MW-11 (mg/L)



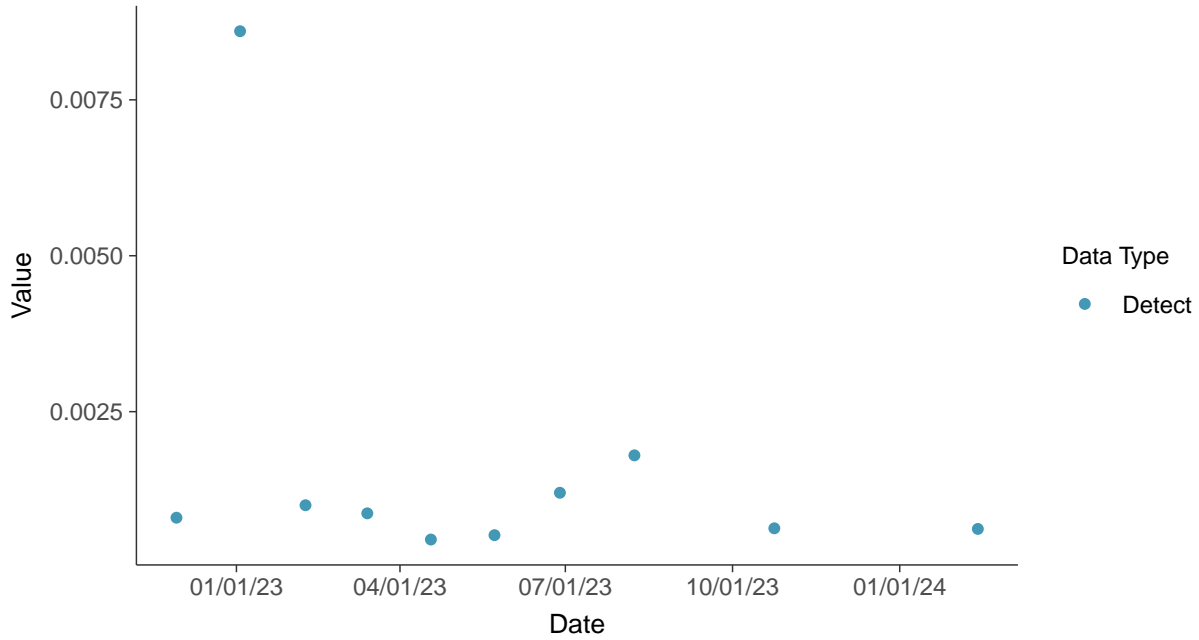


Appendix IV: Chromium, Total, MW-11

ID: 2_21_5_109

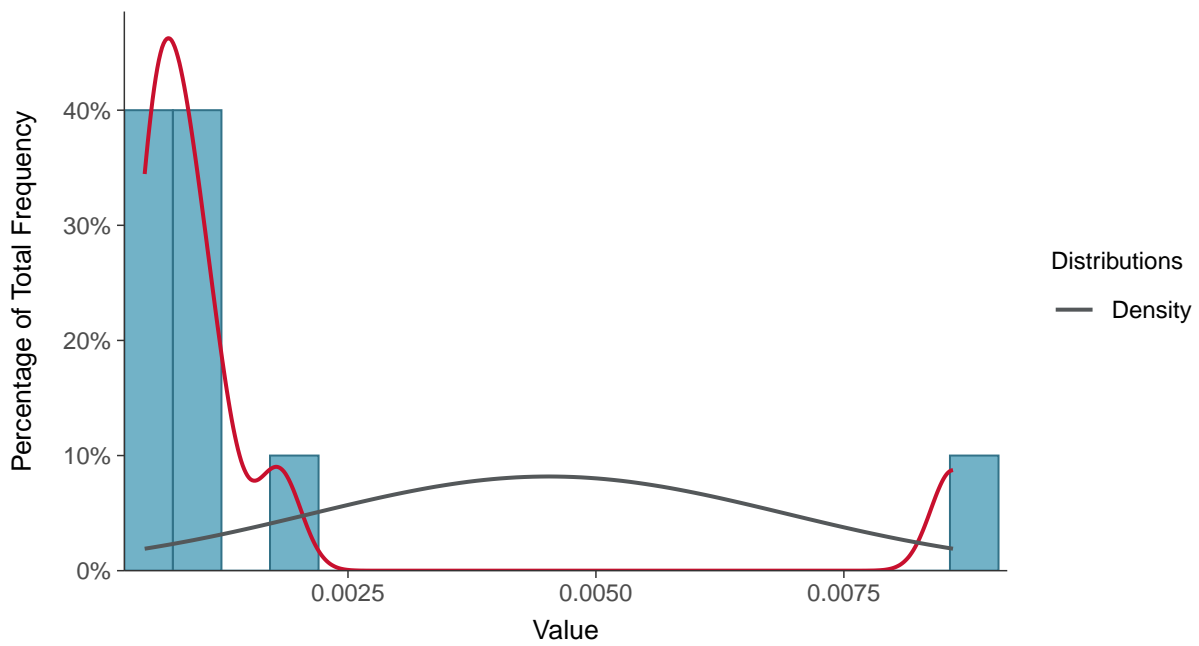
Scatter Plot

Chromium, Total, MW-11 (mg/L)



Histogram

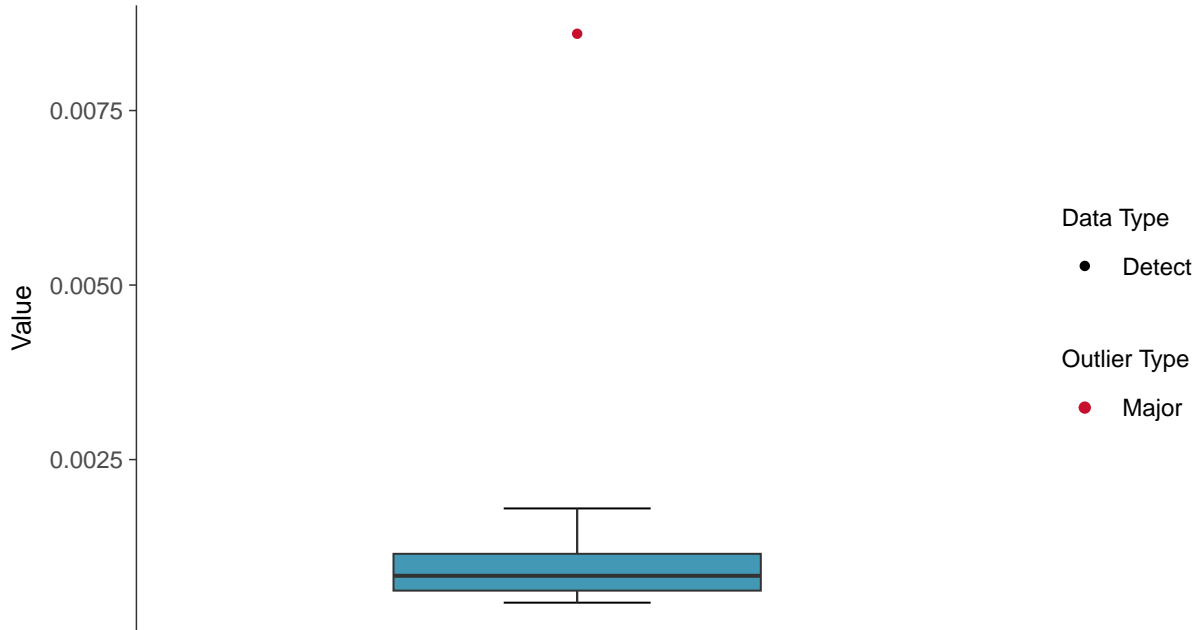
Chromium, Total, MW-11 (mg/L)





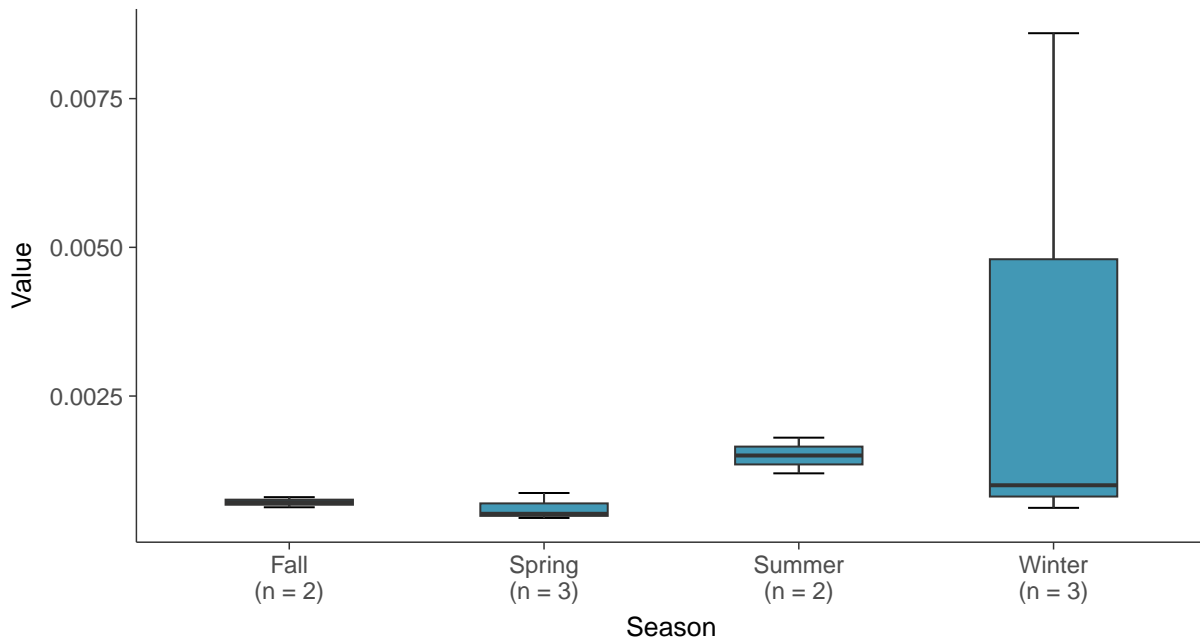
Boxplot

Chromium, Total, MW-11 (mg/L)



Boxplot by Season

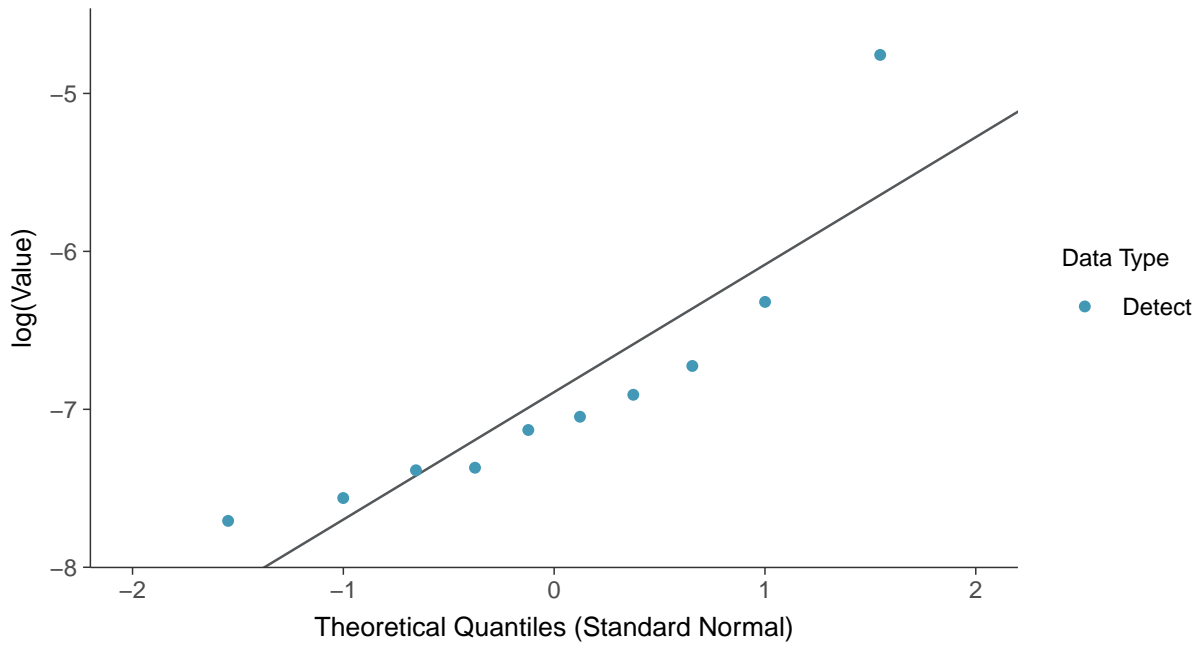
Chromium, Total, MW-11 (mg/L)





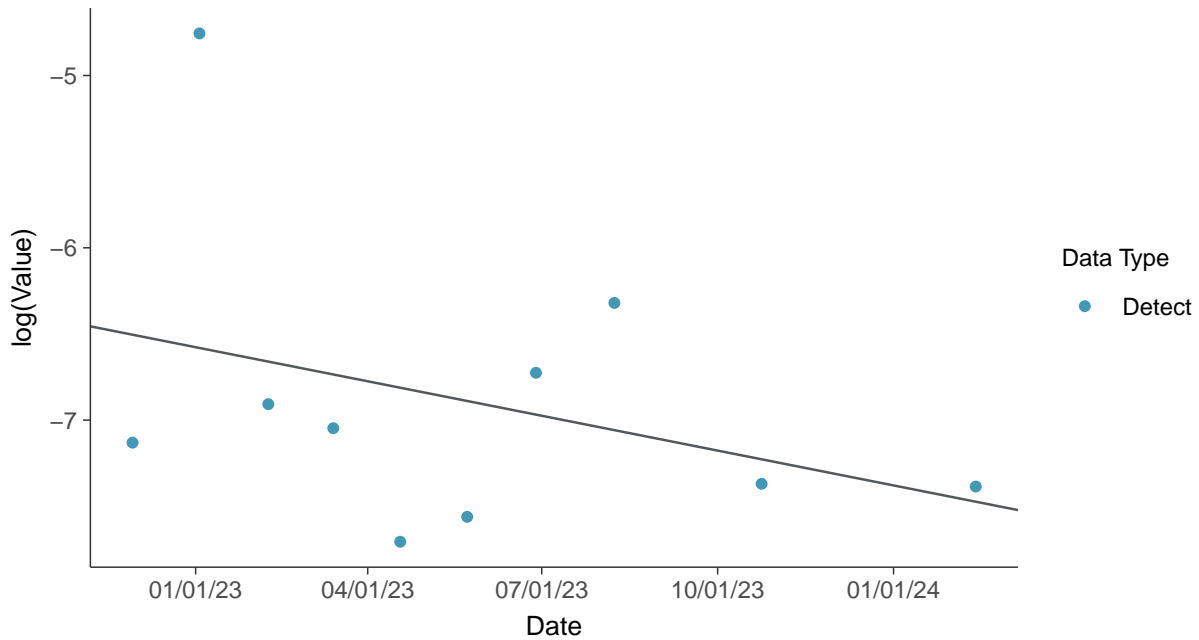
Lognormal Q-Q plot

Chromium, Total, MW-11 (mg/L)



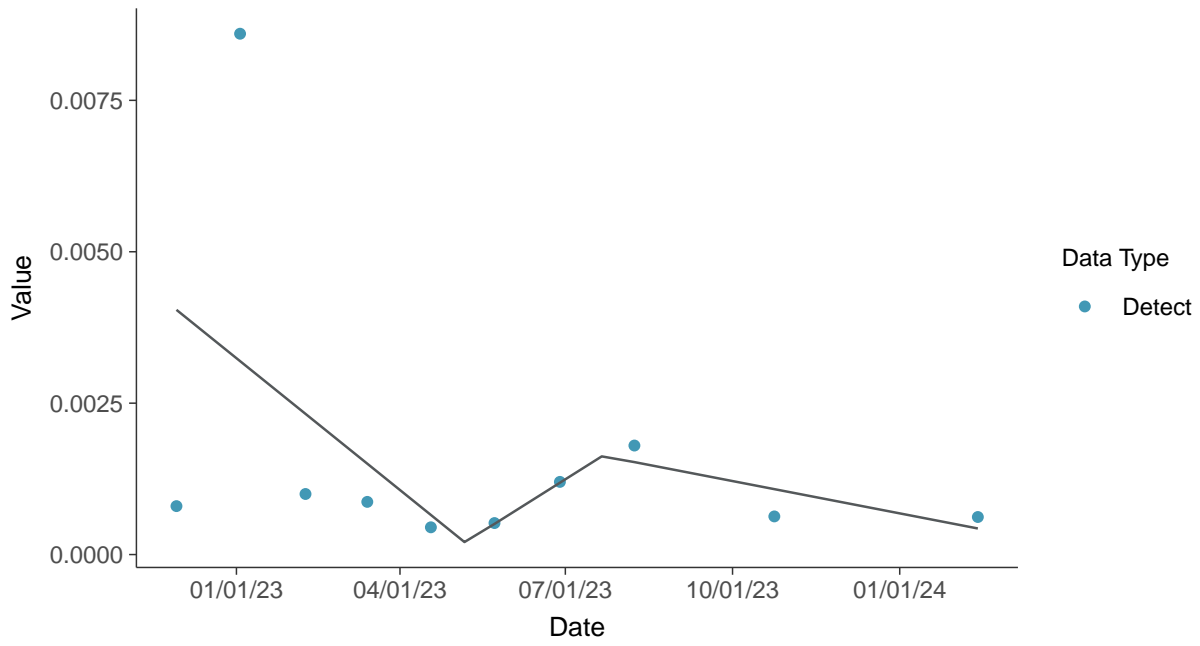
Trend Regression: Lognormal MLE

Chromium, Total, MW-11 (mg/L)





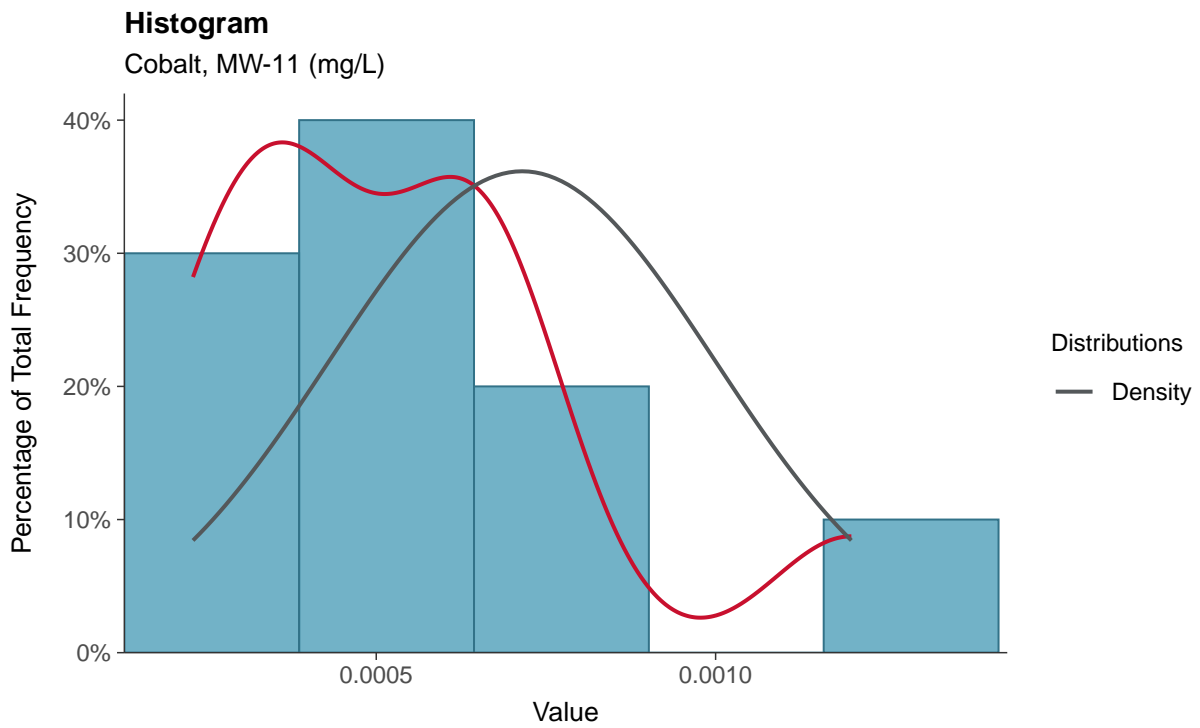
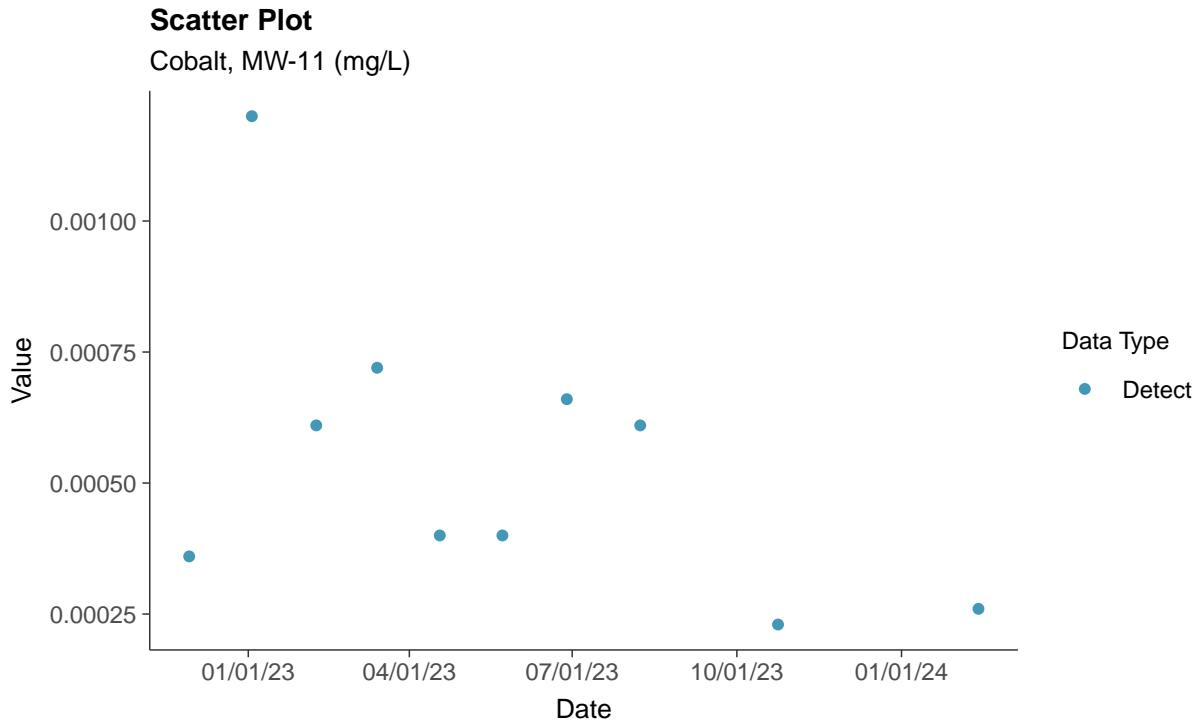
Trend Regression: Piecewise Linear-Linear-Linear
Chromium, Total, MW-11 (mg/L)





Appendix IV: Cobalt, MW-11

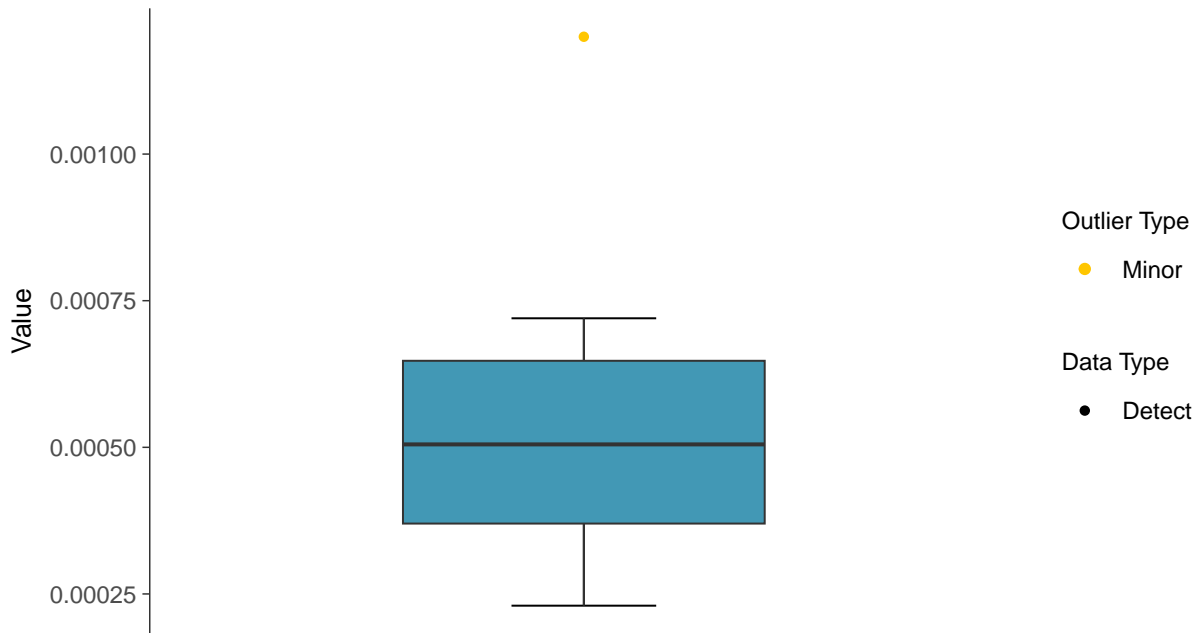
ID: 2_21_5_110





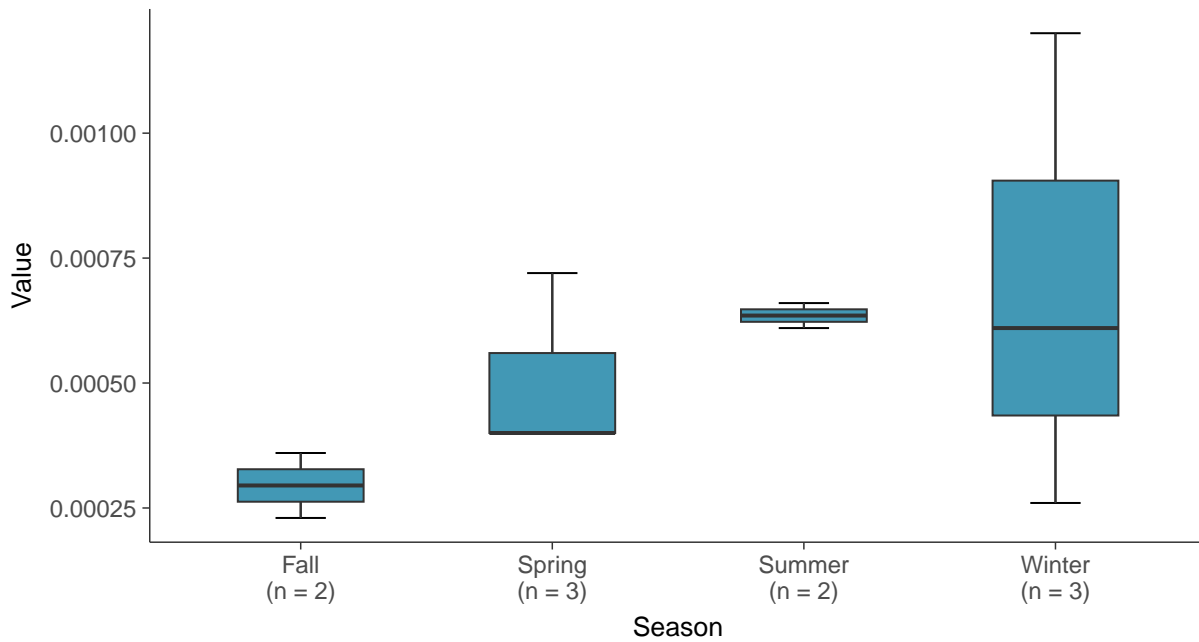
Boxplot

Cobalt, MW-11 (mg/L)



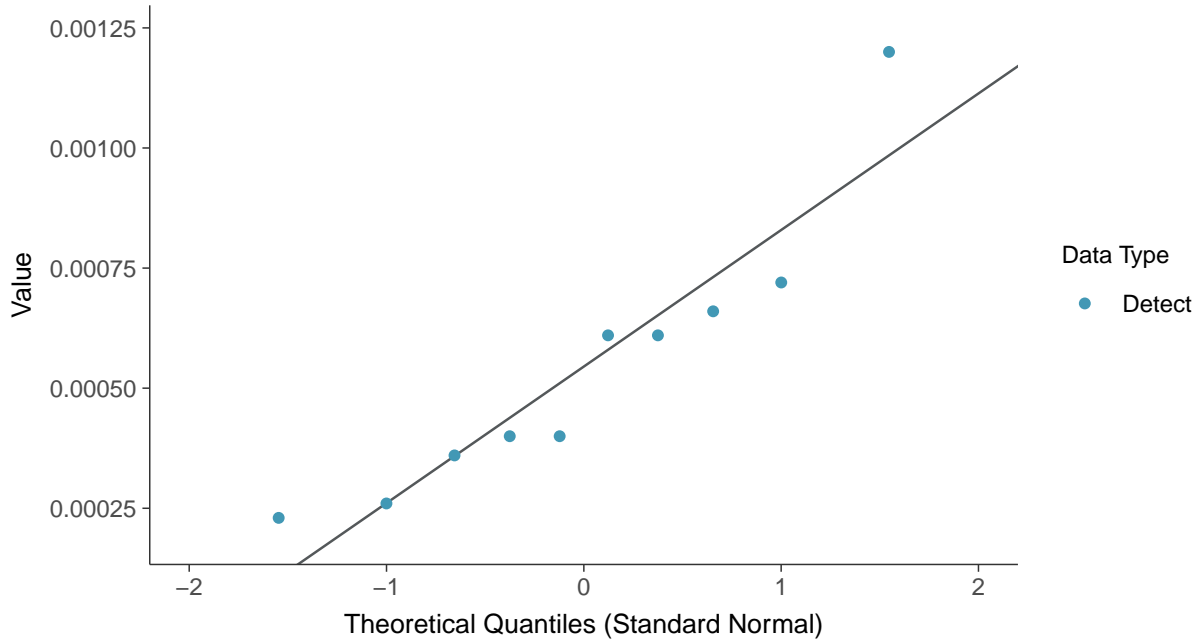
Boxplot by Season

Cobalt, MW-11 (mg/L)

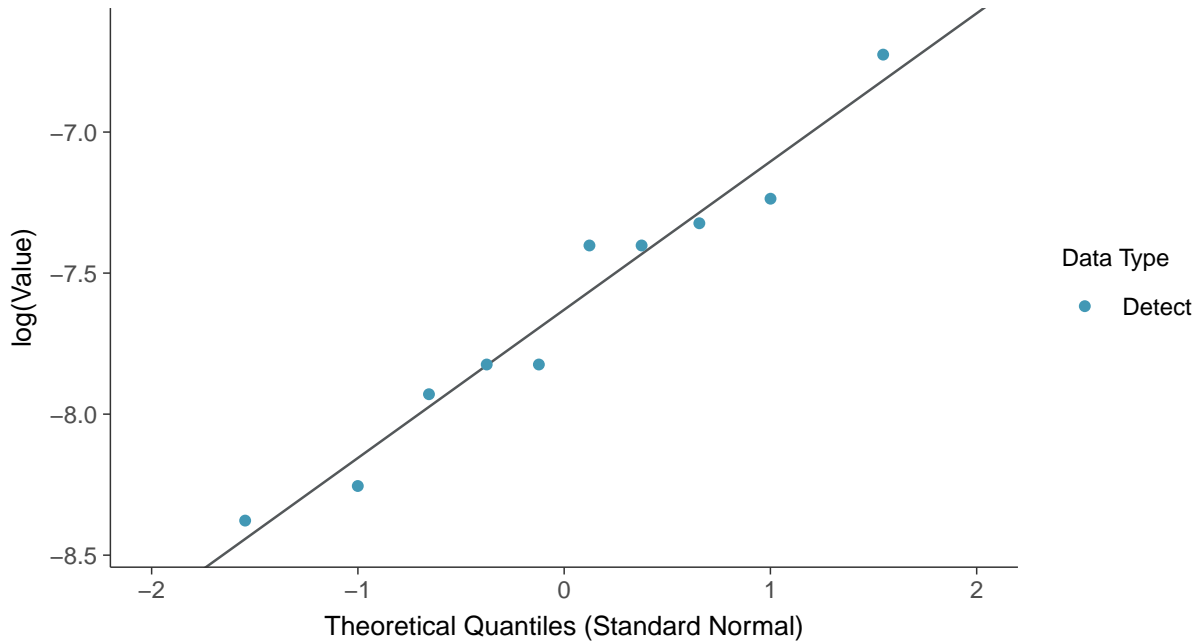




Normal Q-Q plot
Cobalt, MW-11 (mg/L)

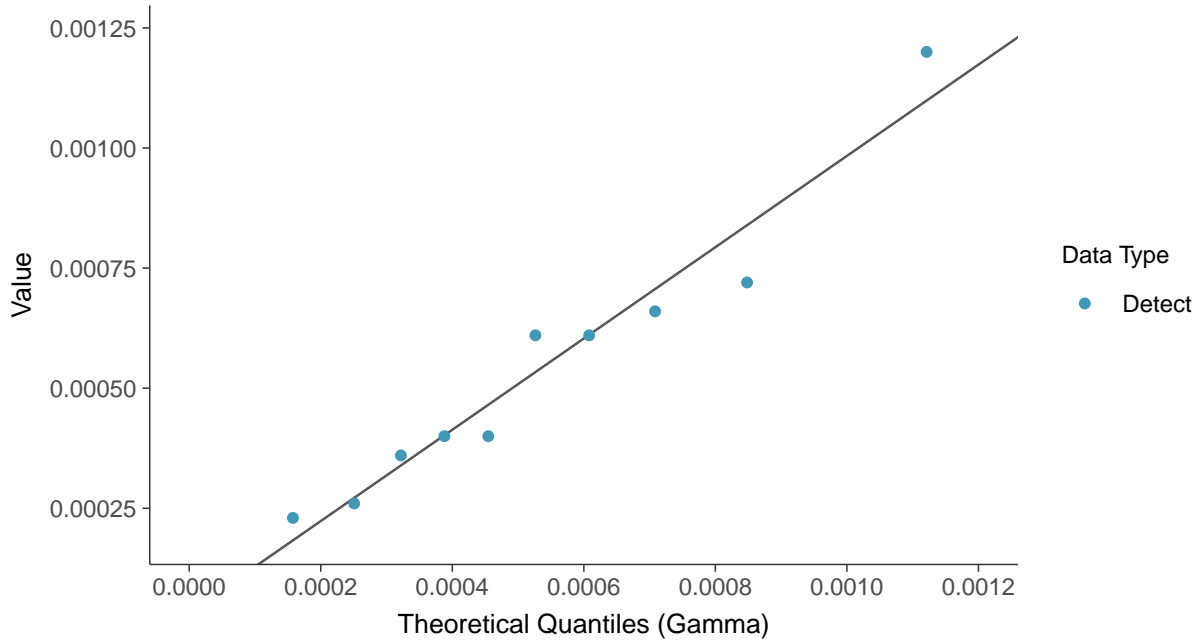


Lognormal Q-Q plot
Cobalt, MW-11 (mg/L)

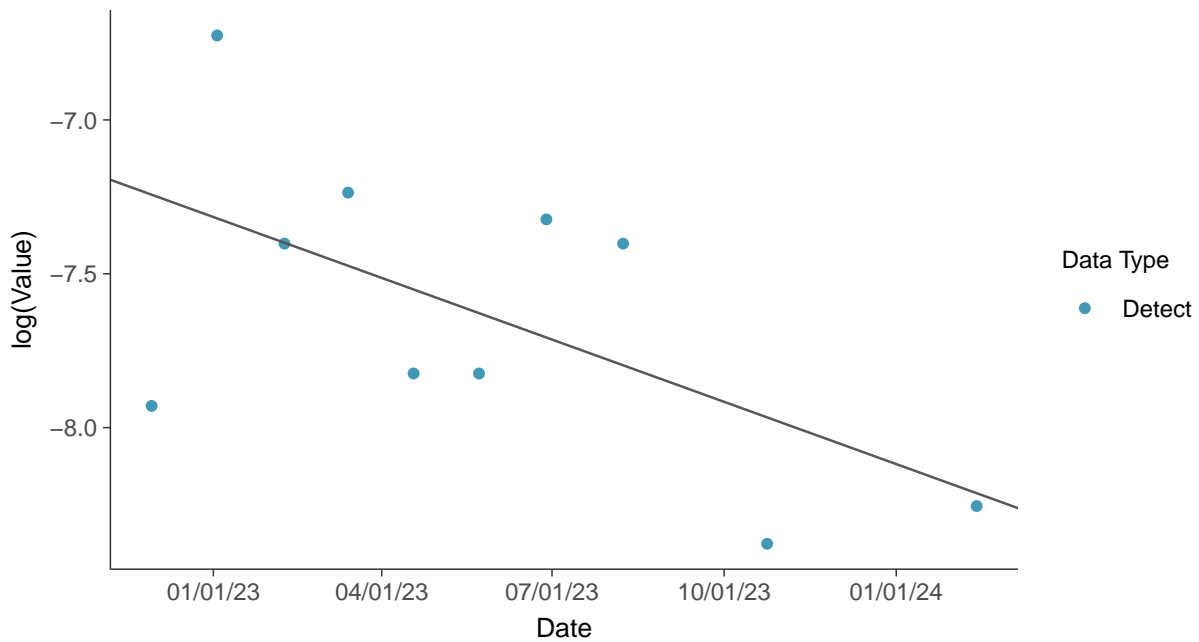




Gamma Q-Q plot
Cobalt, MW-11 (mg/L)



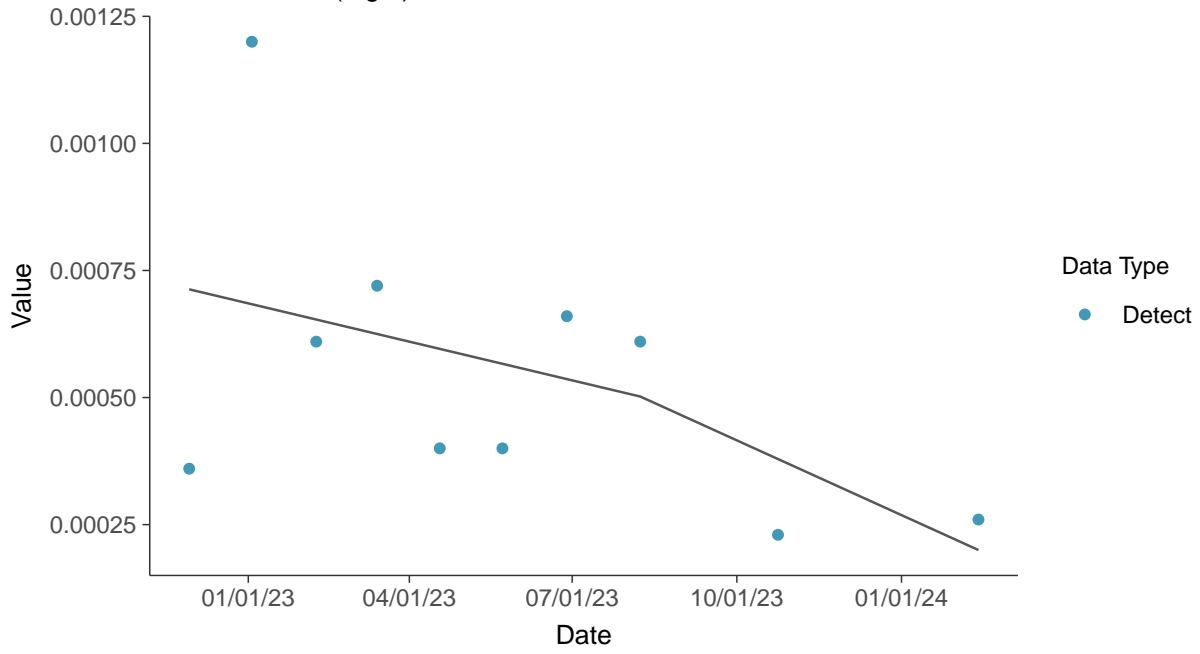
Trend Regression: Lognormal MLE
Cobalt, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Cobalt, MW-11 (mg/L)



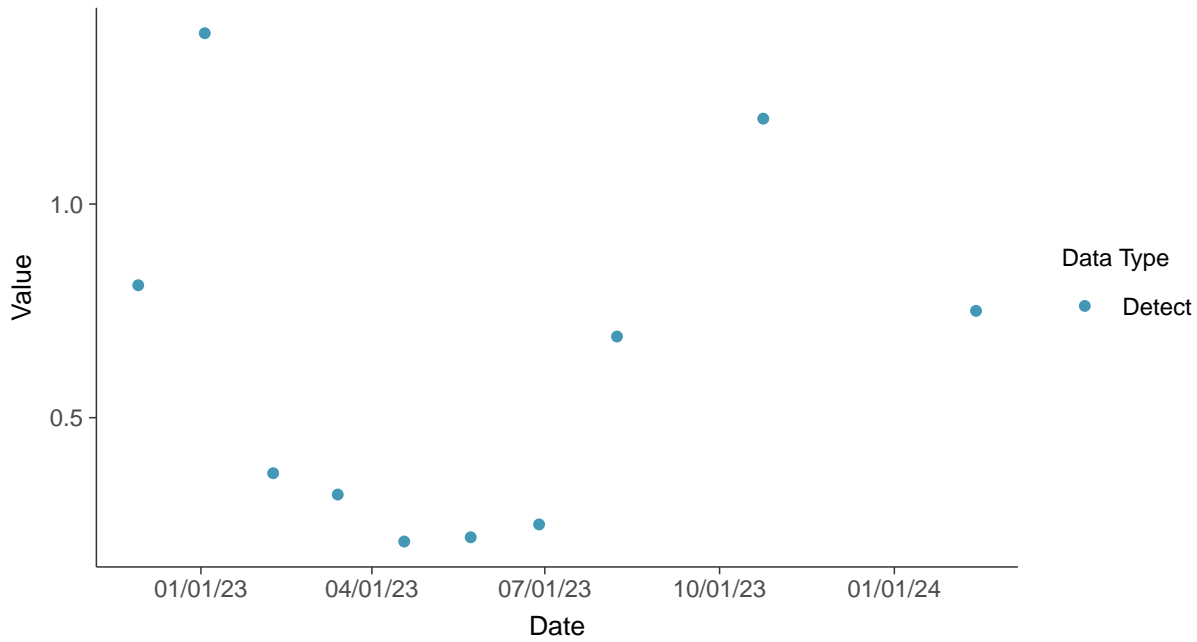


Appendix IV: Fluoride (App IV), MW-11

ID: 2_21_5_113

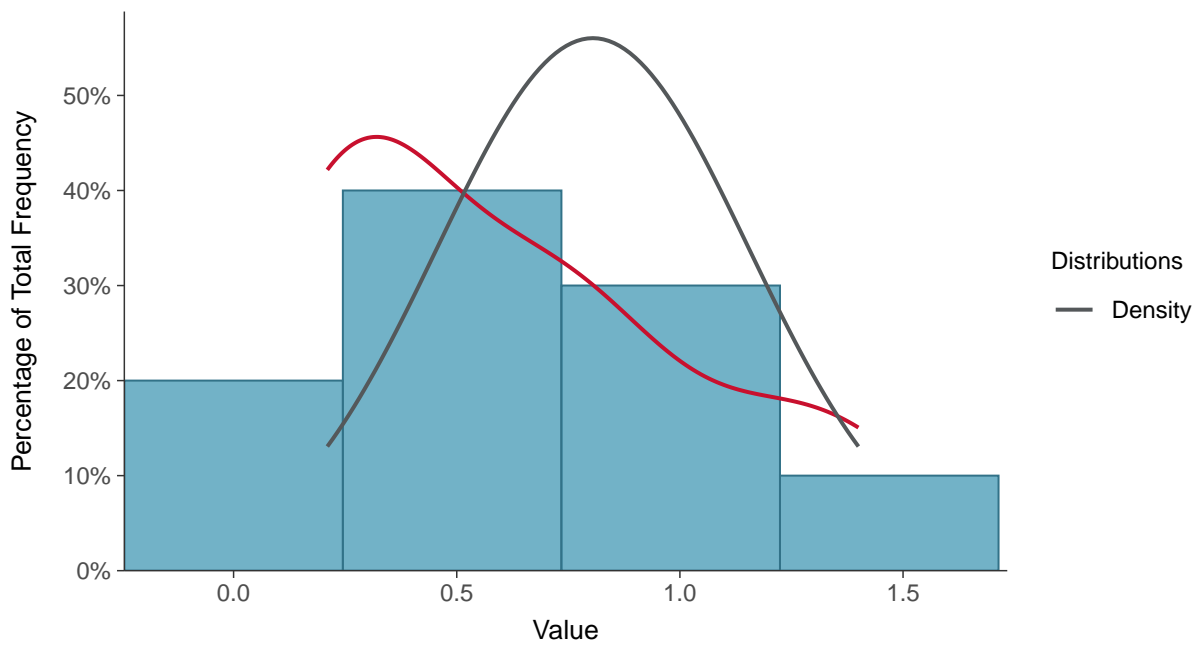
Scatter Plot

Fluoride (App IV), MW-11 (mg/L)



Histogram

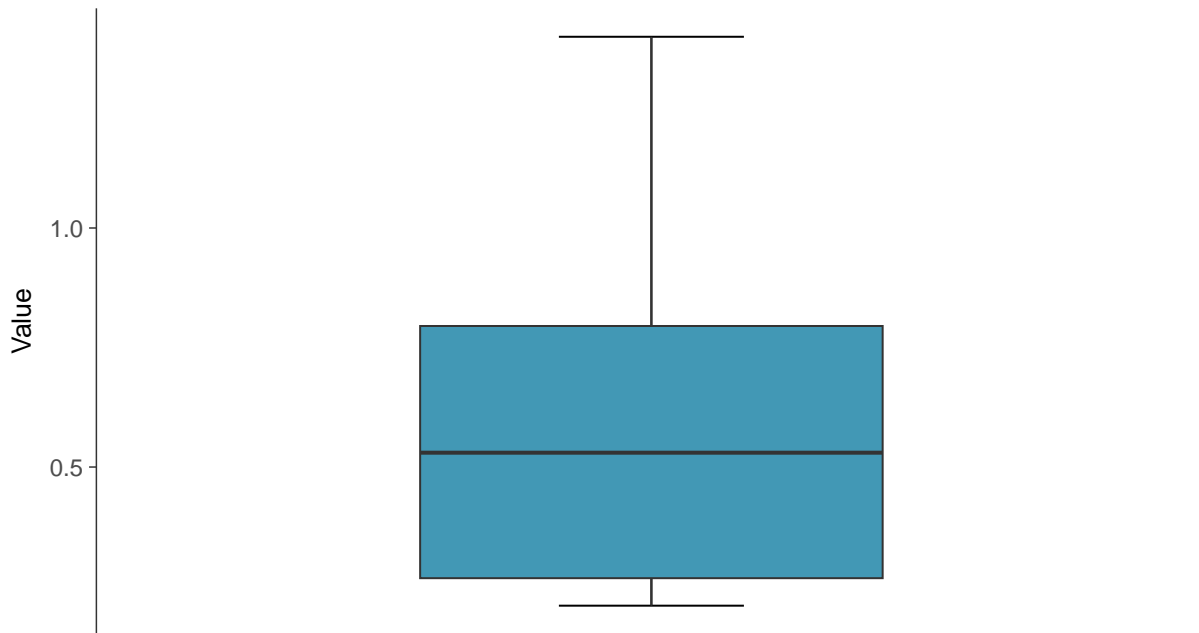
Fluoride (App IV), MW-11 (mg/L)





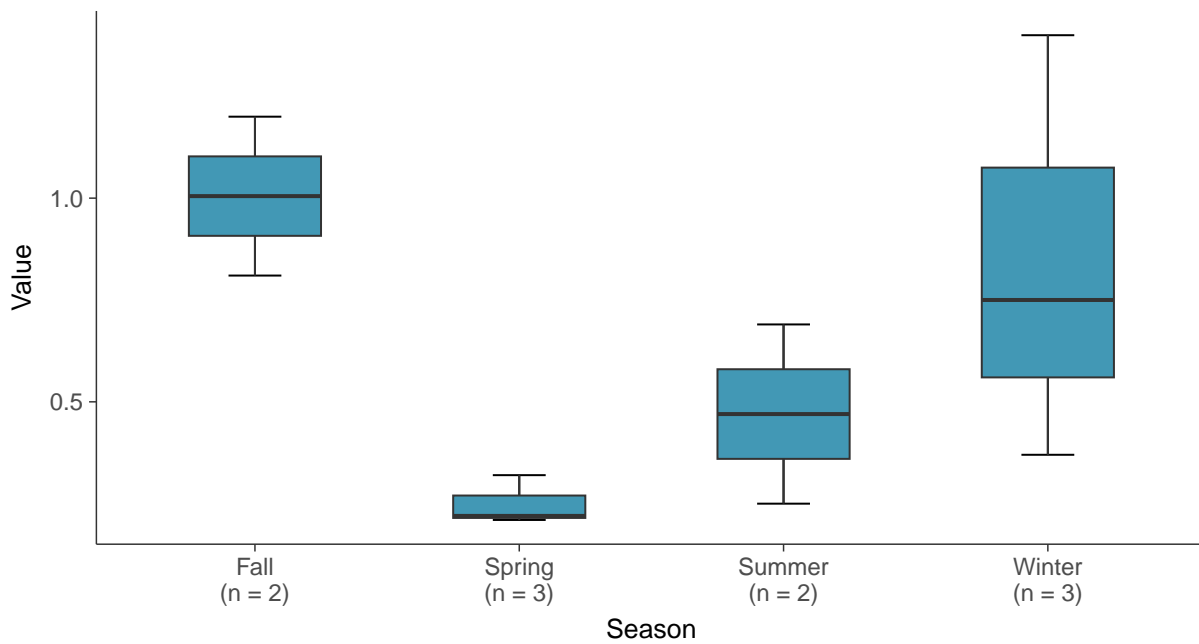
Boxplot

Fluoride (App IV), MW-11 (mg/L)



Boxplot by Season

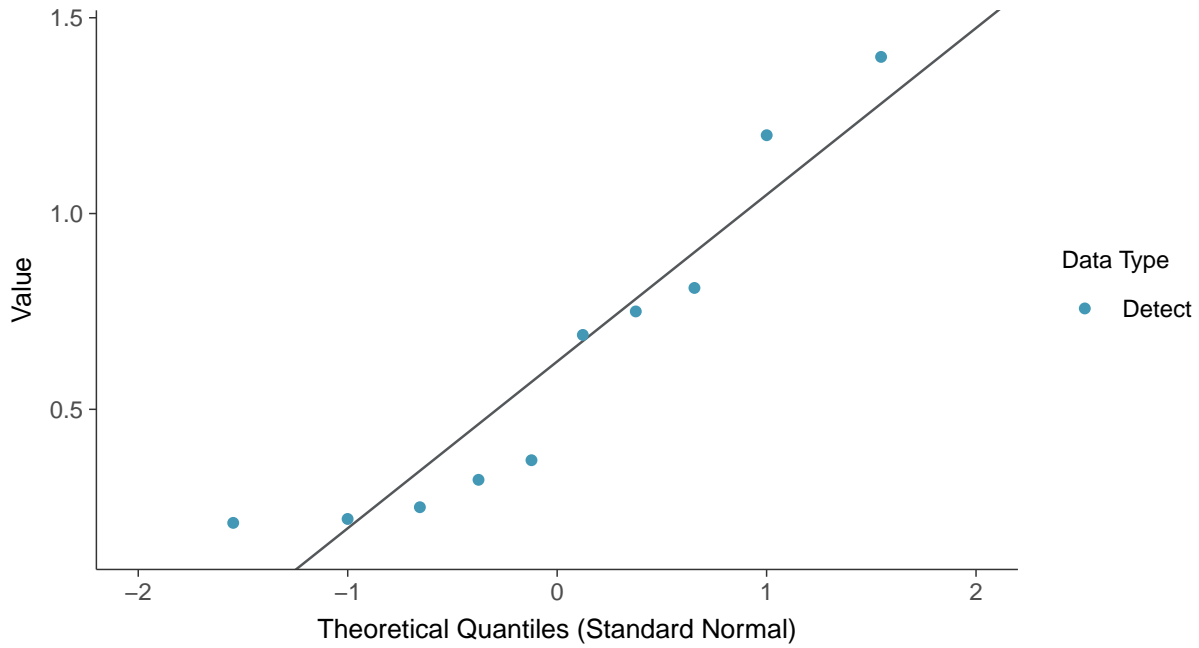
Fluoride (App IV), MW-11 (mg/L)





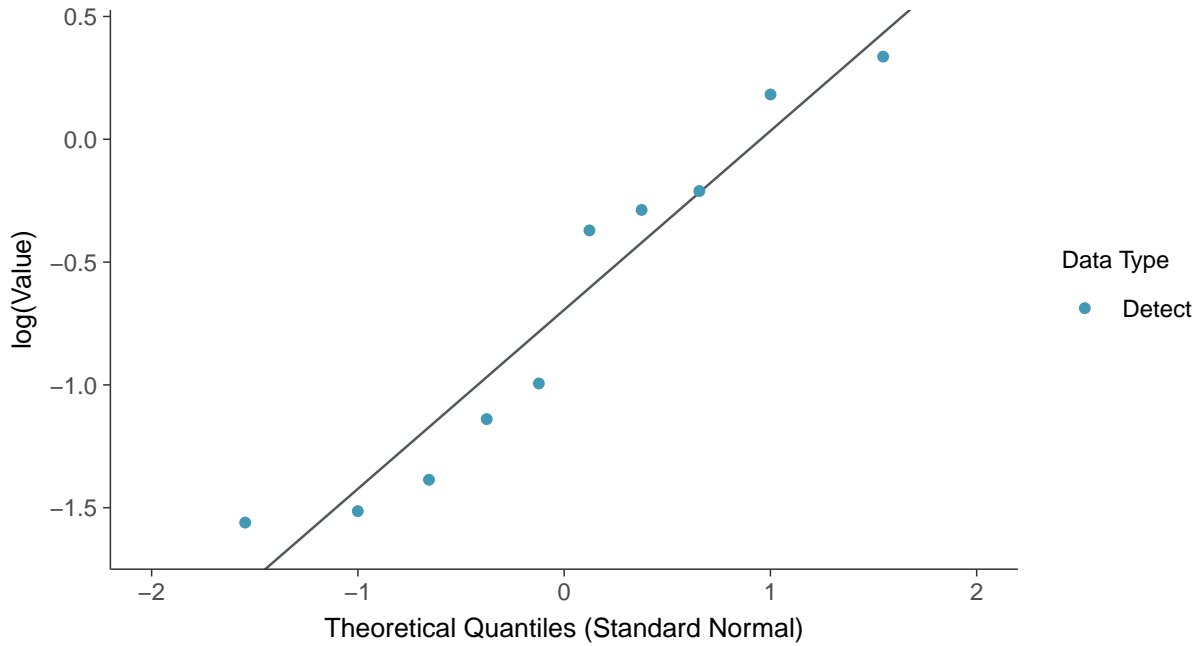
Normal Q-Q plot

Fluoride (App IV), MW-11 (mg/L)



Lognormal Q-Q plot

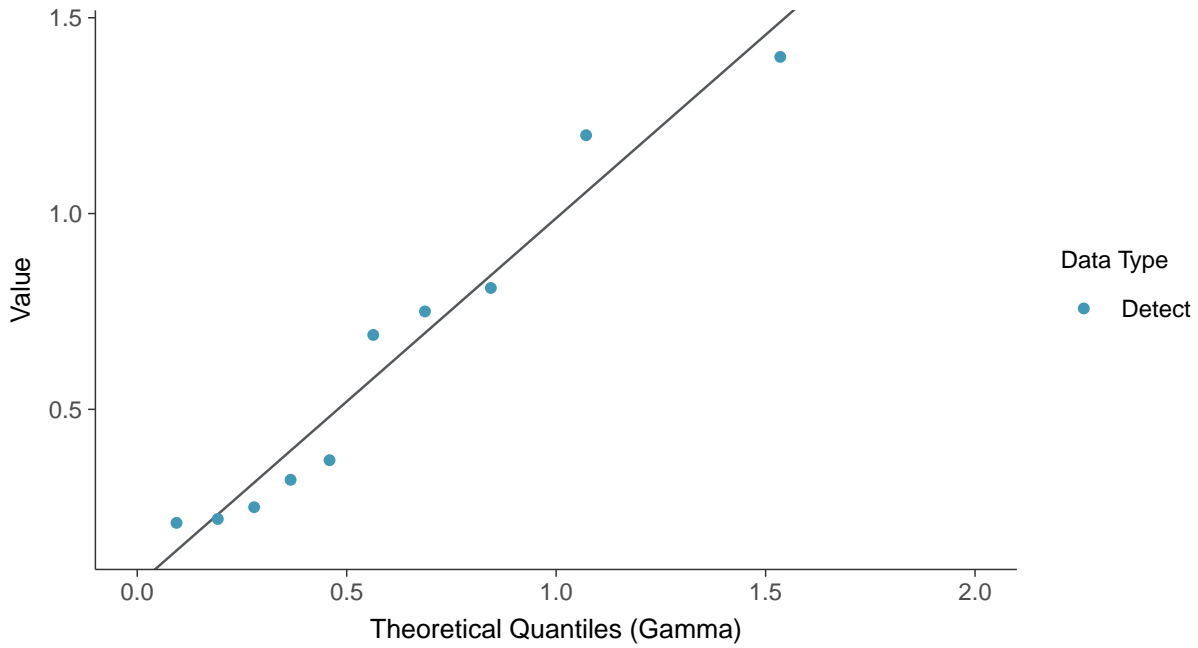
Fluoride (App IV), MW-11 (mg/L)





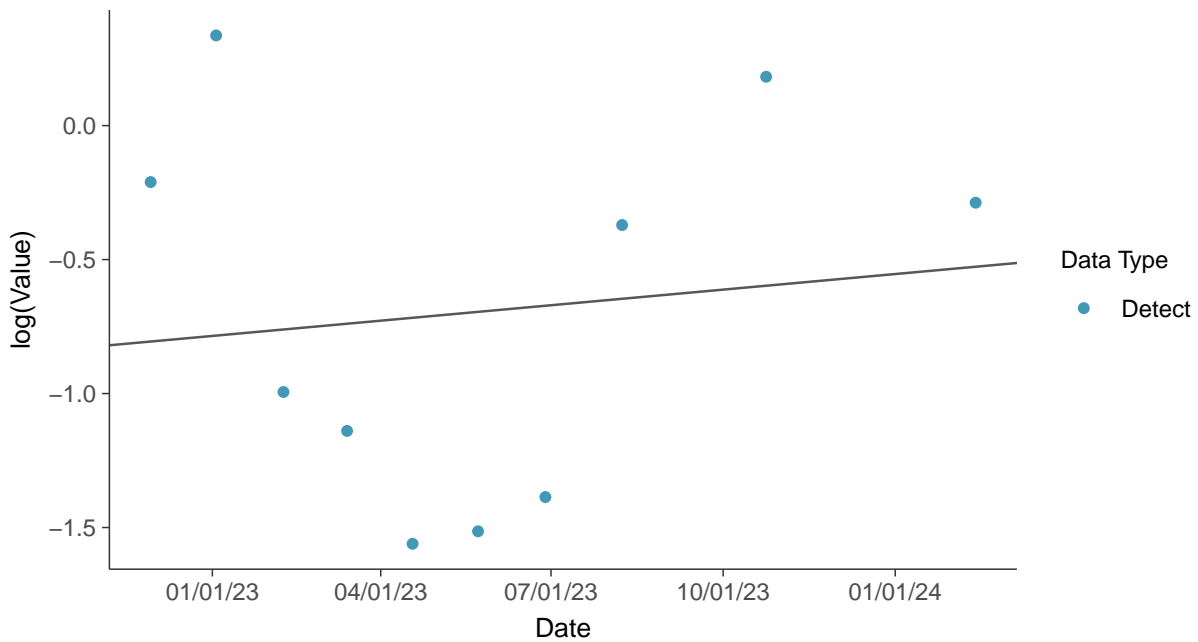
Gamma Q-Q plot

Fluoride (App IV), MW-11 (mg/L)



Trend Regression: Lognormal MLE

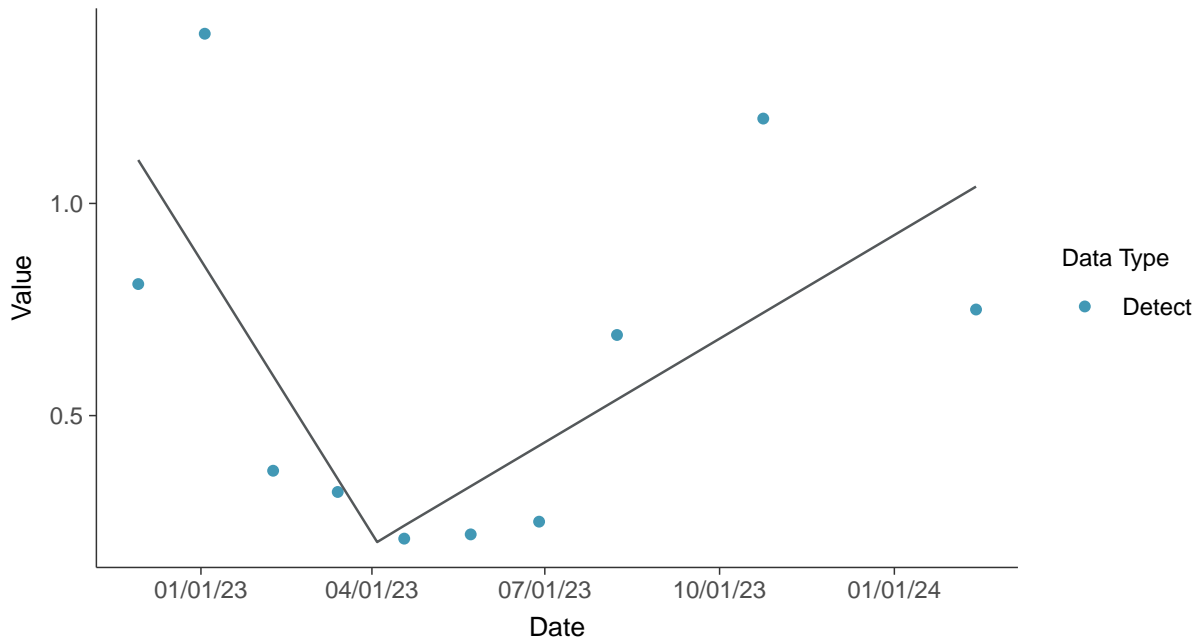
Fluoride (App IV), MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

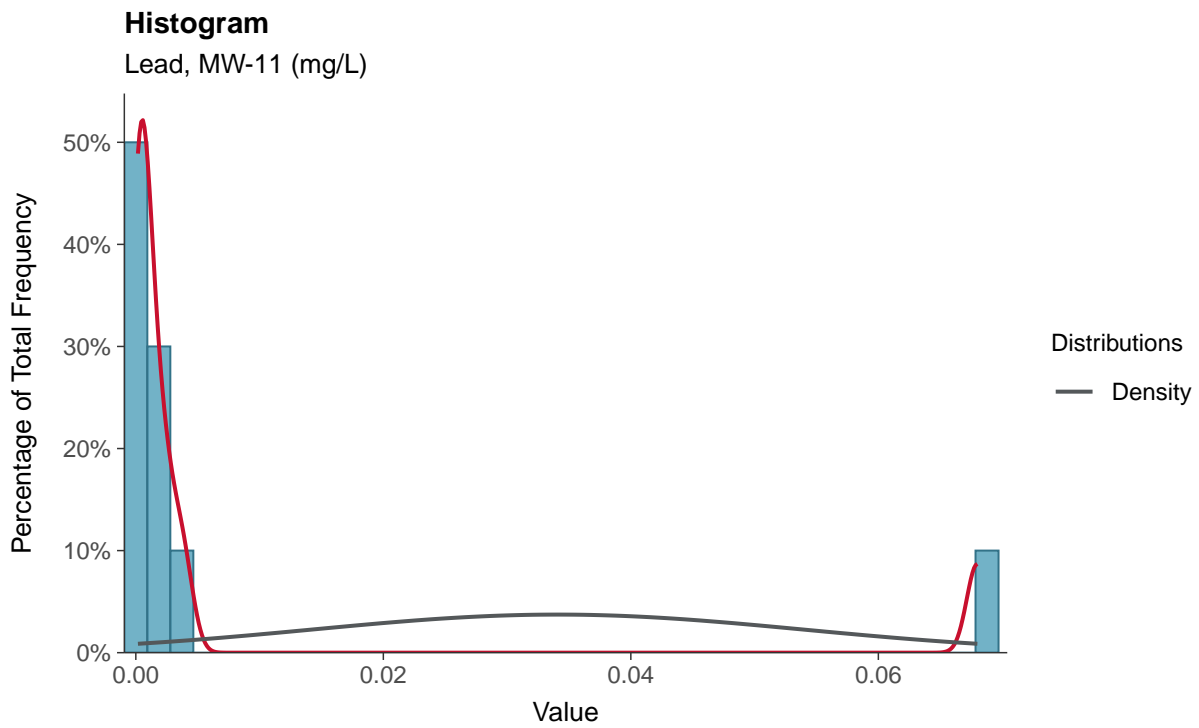
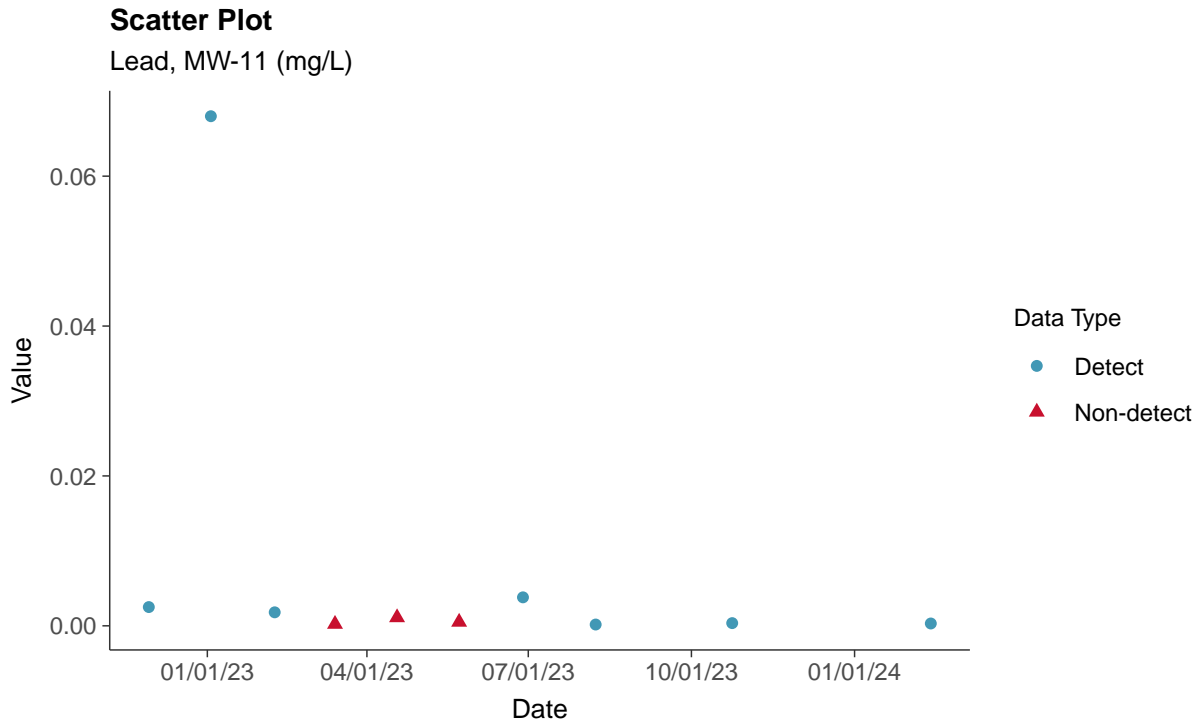
Fluoride (App IV), MW-11 (mg/L)





Appendix IV: Lead, MW-11

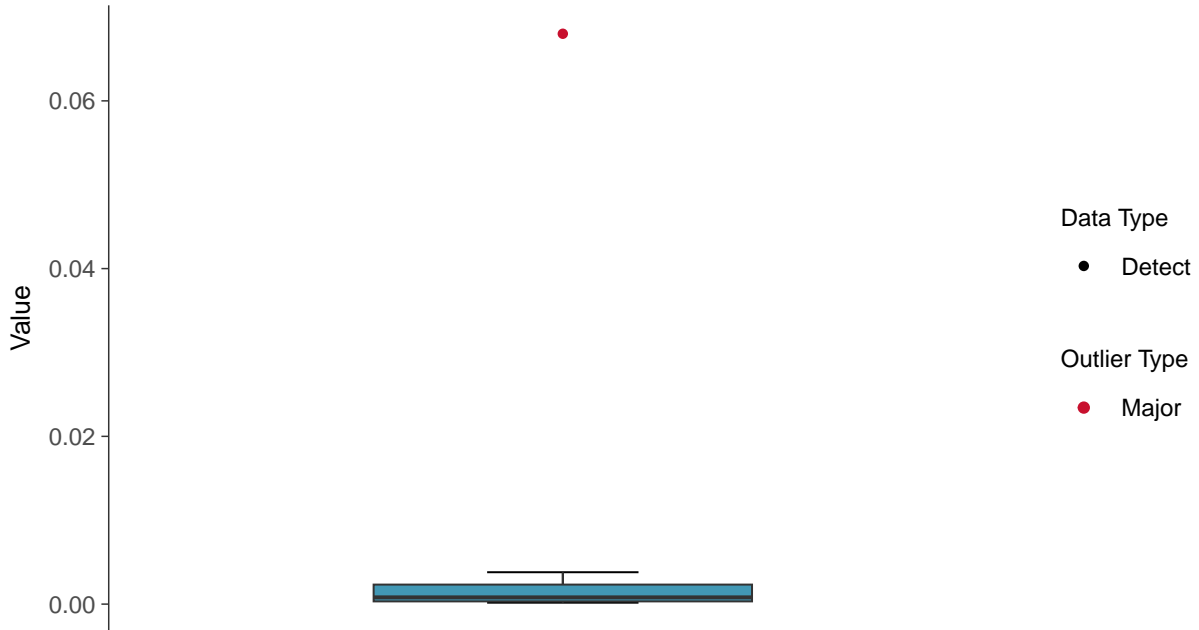
ID: 2_21_5_115





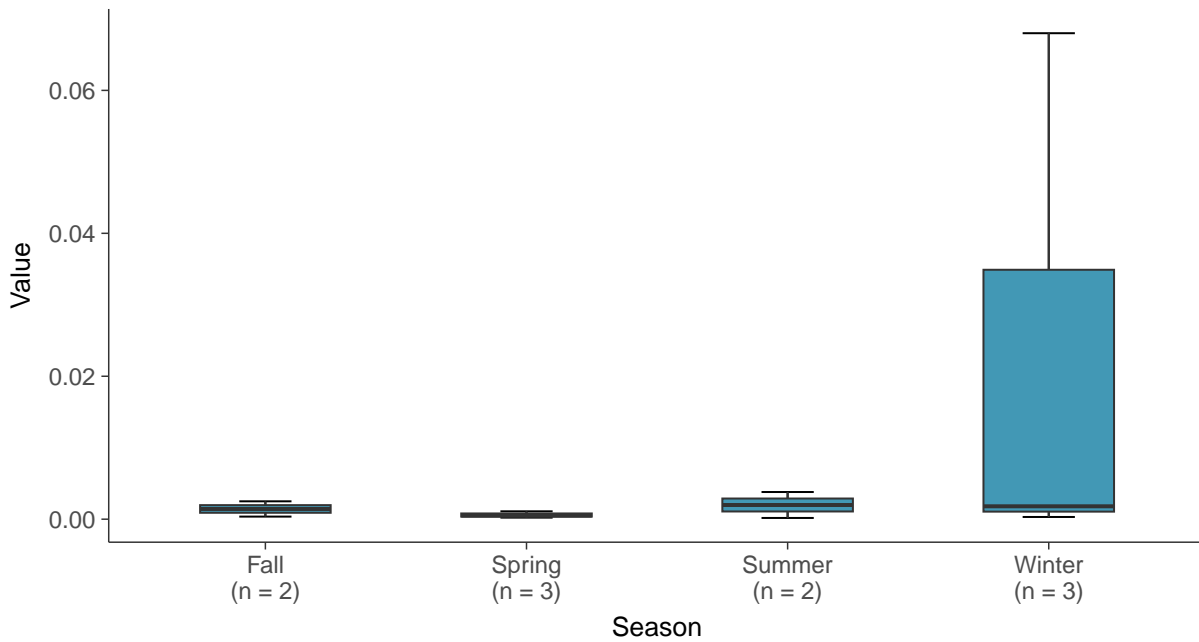
Boxplot

Lead, MW-11 (mg/L)



Boxplot by Season

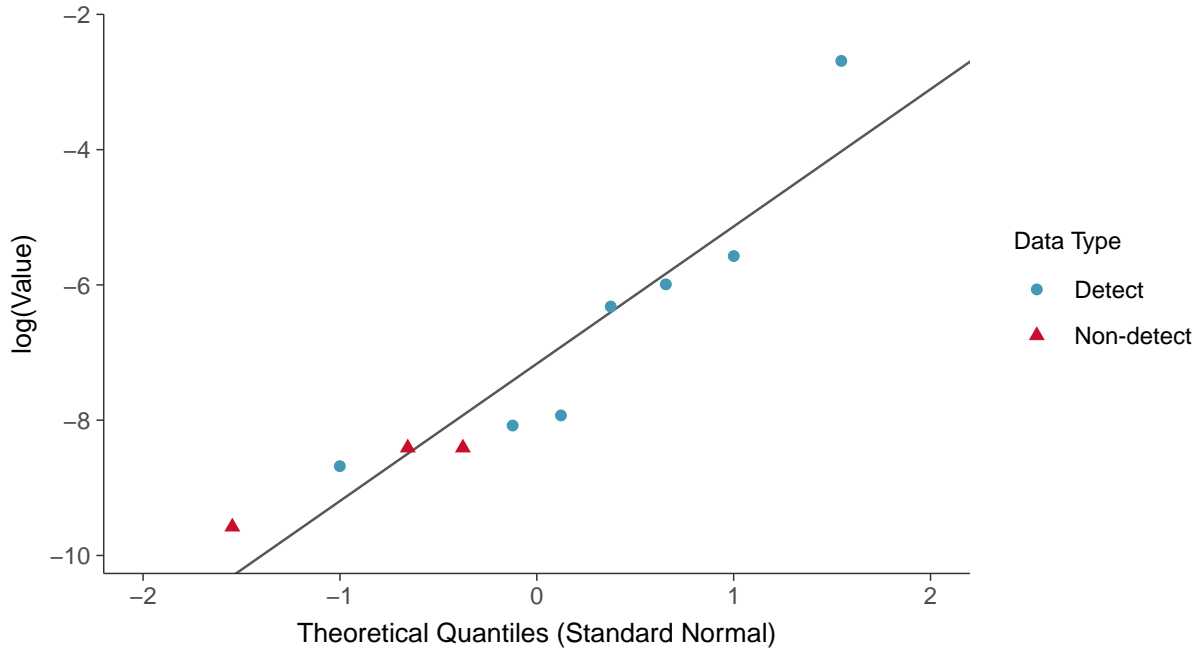
Lead, MW-11 (mg/L)





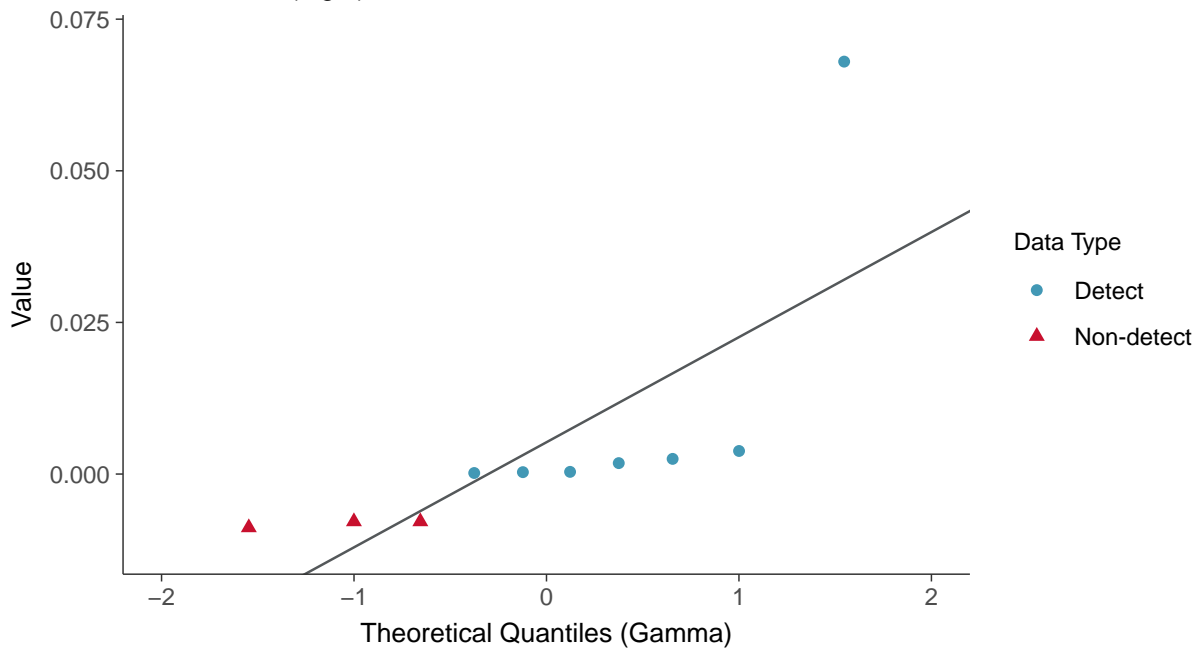
Lognormal Q-Q plot using ROS Imputed Estimates

Lead, MW-11 (mg/L)



Gamma Q-Q plot using ROS Imputed Estimates

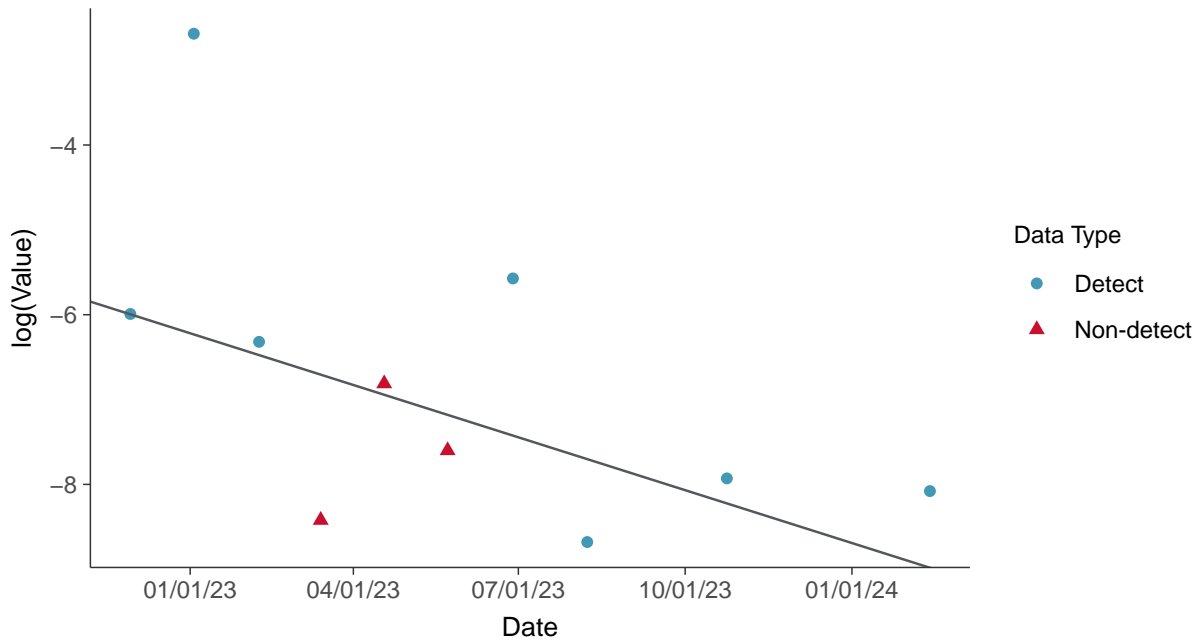
Lead, MW-11 (mg/L)





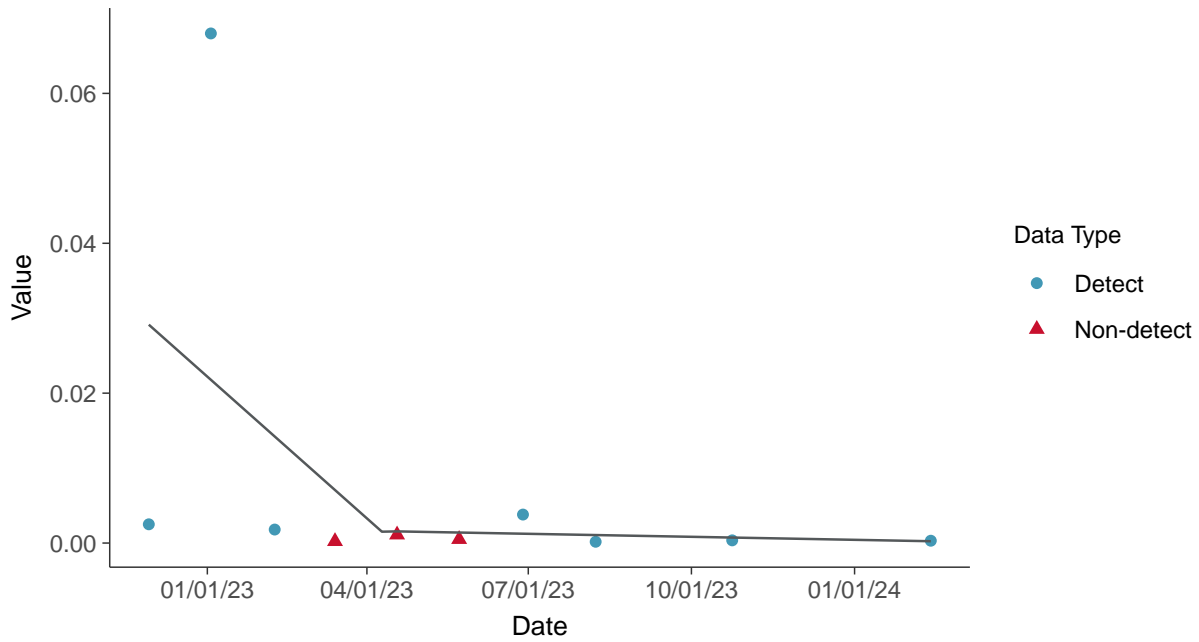
Trend Regression: Lognormal MLE

Lead, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear

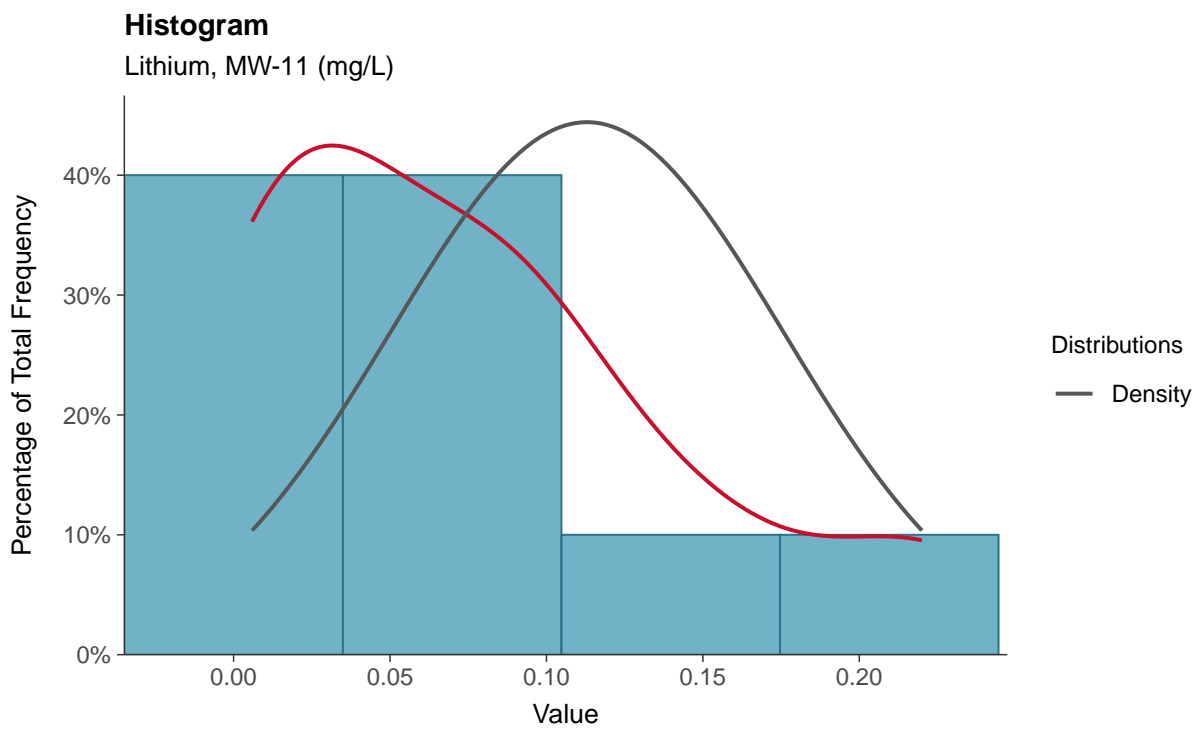
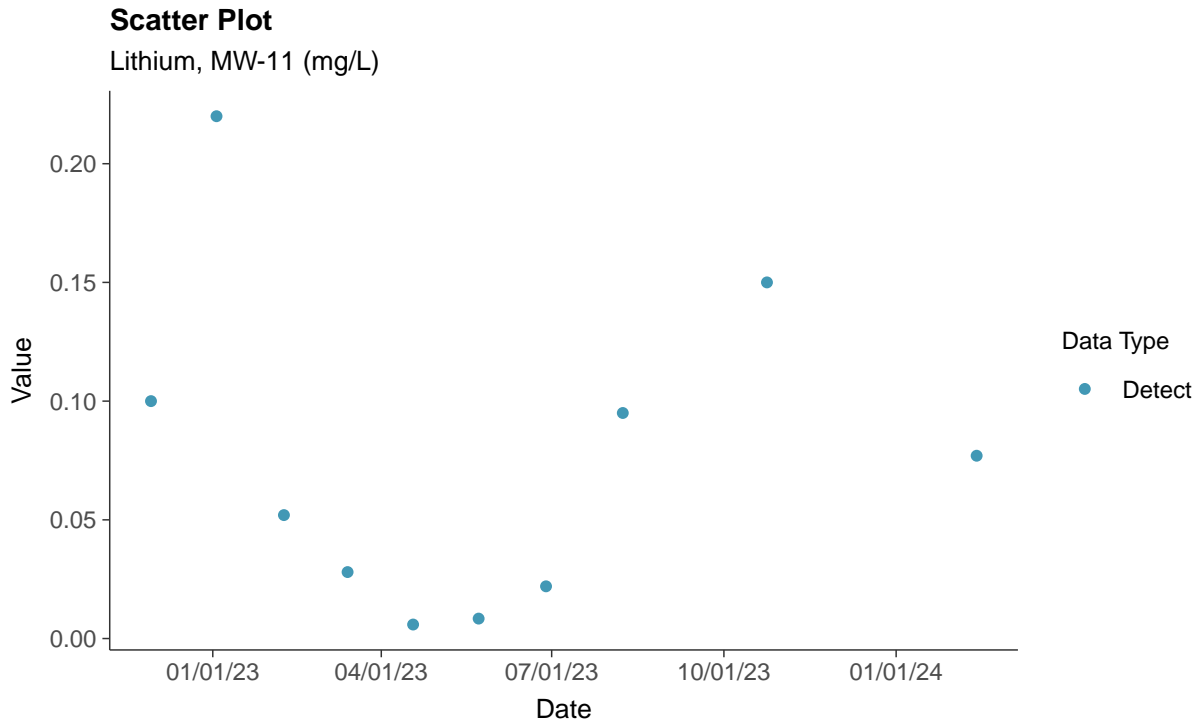
Lead, MW-11 (mg/L)





Appendix IV: Lithium, MW-11

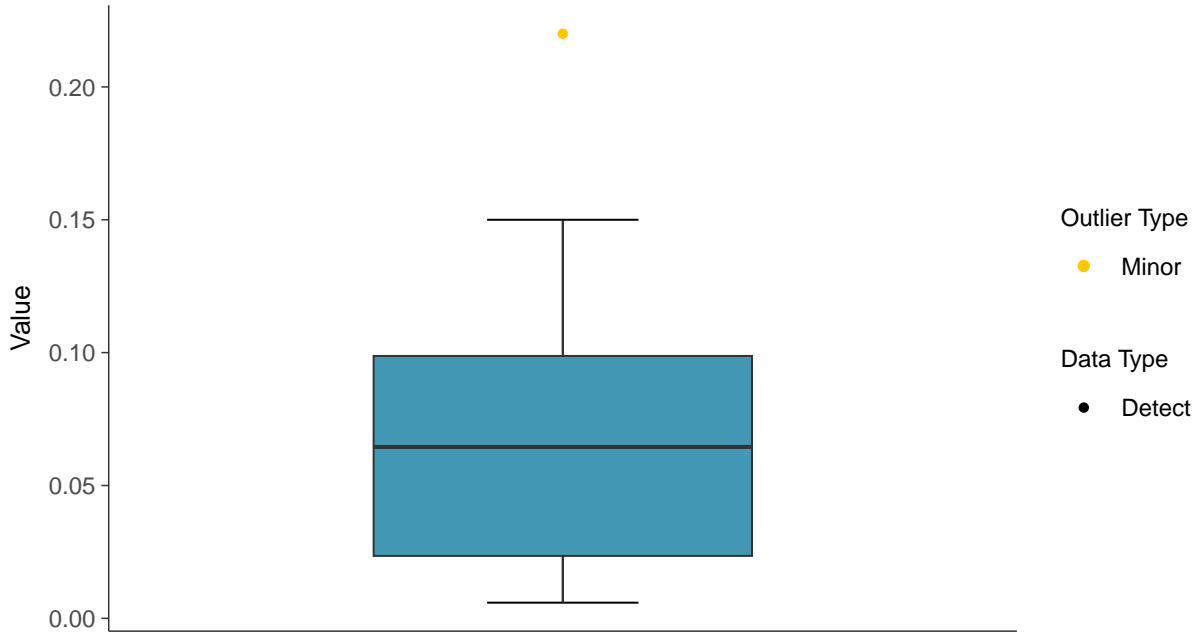
ID: 2_21_5_116





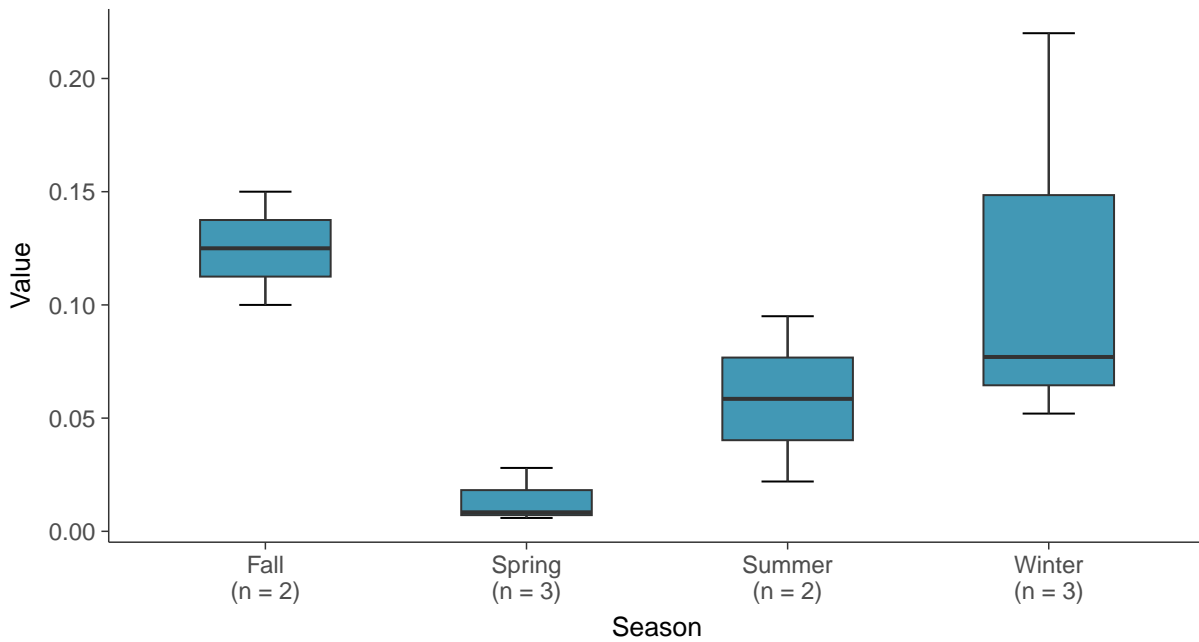
Boxplot

Lithium, MW-11 (mg/L)



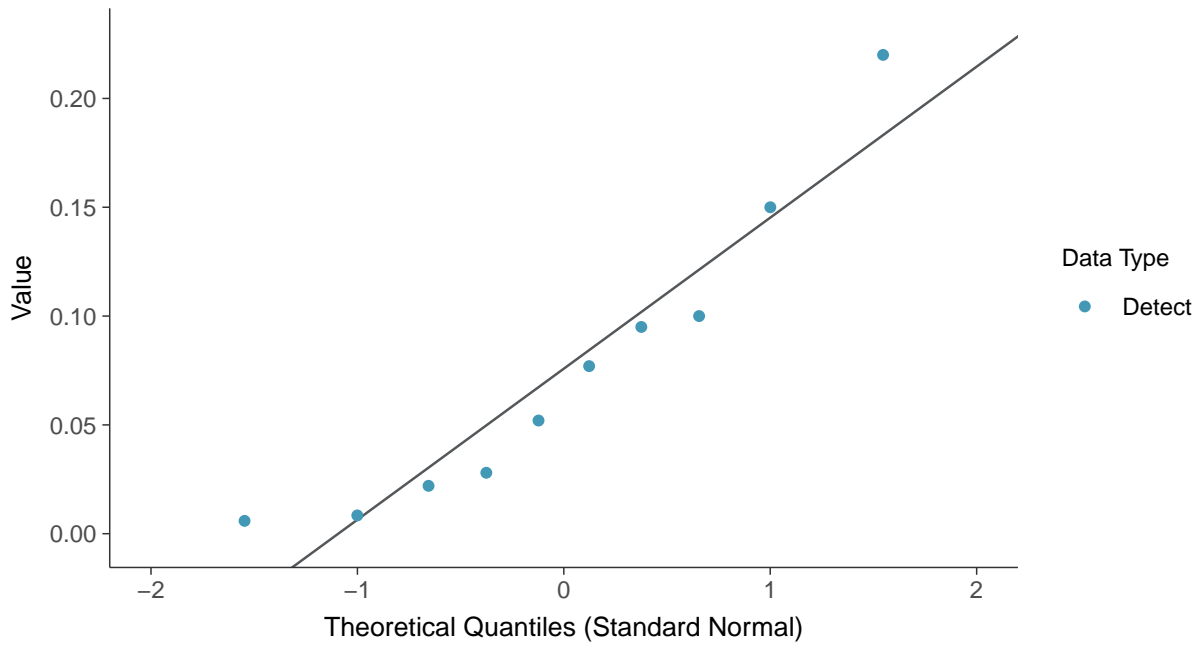
Boxplot by Season

Lithium, MW-11 (mg/L)

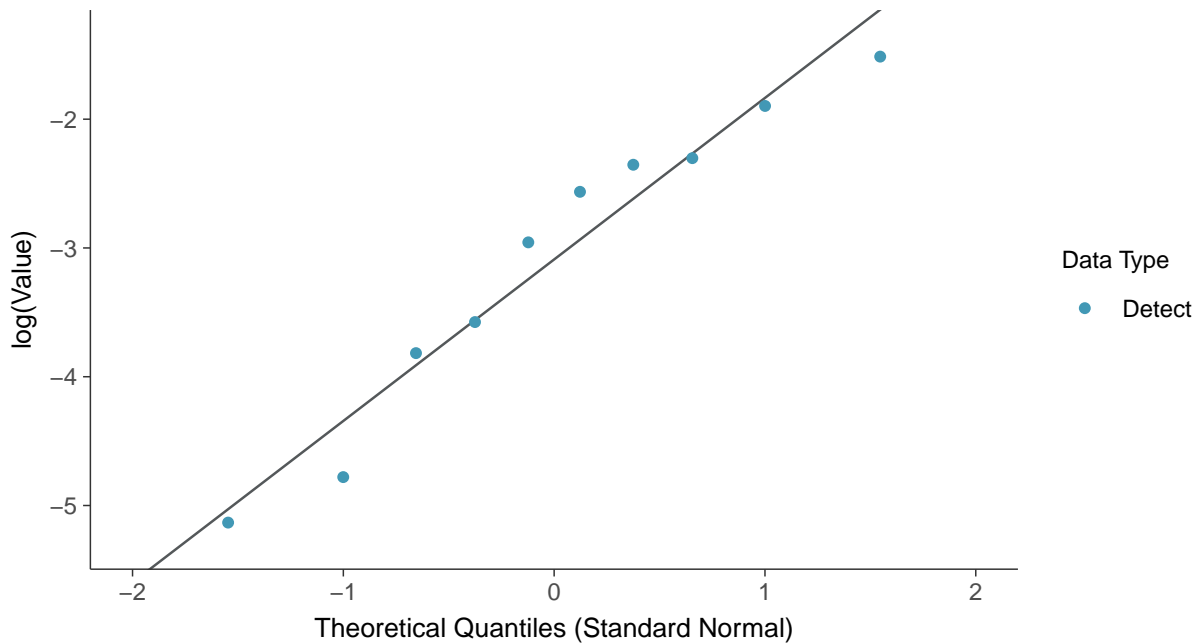




Normal Q-Q plot
Lithium, MW-11 (mg/L)



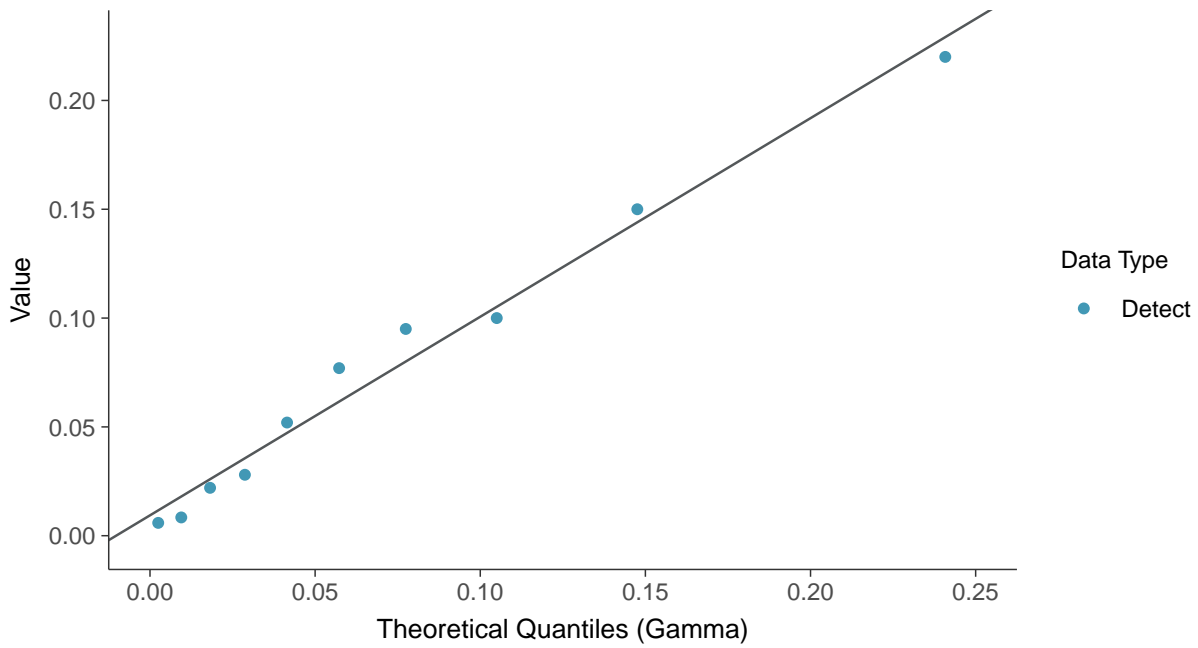
Lognormal Q-Q plot
Lithium, MW-11 (mg/L)





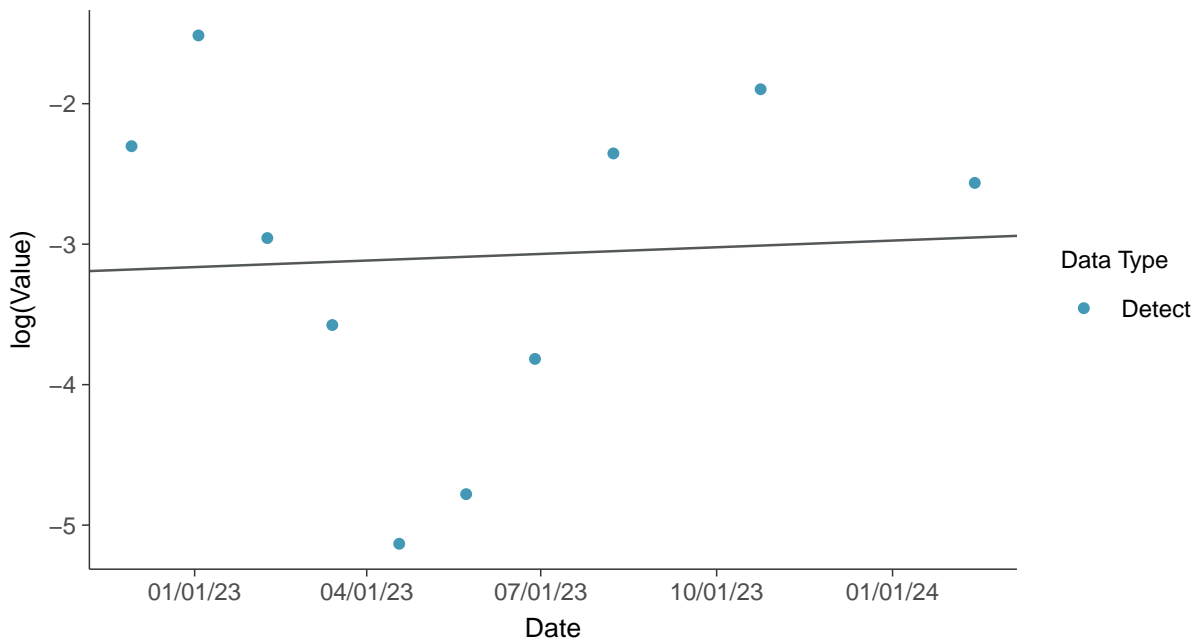
Gamma Q-Q plot

Lithium, MW-11 (mg/L)



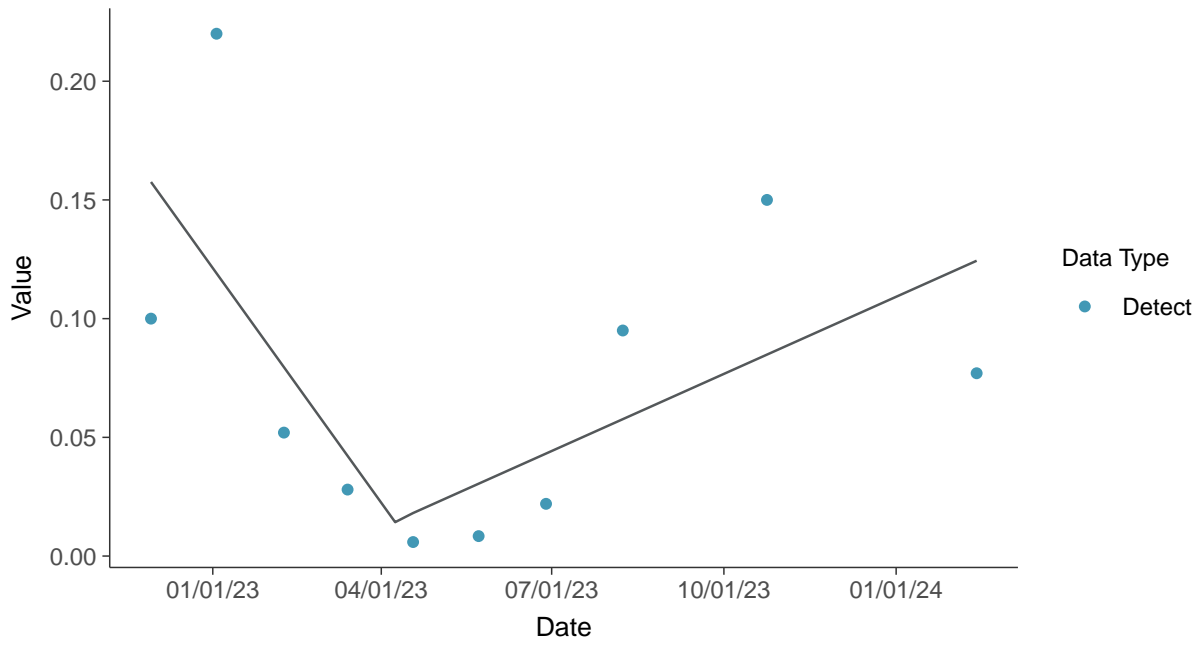
Trend Regression: Lognormal MLE

Lithium, MW-11 (mg/L)





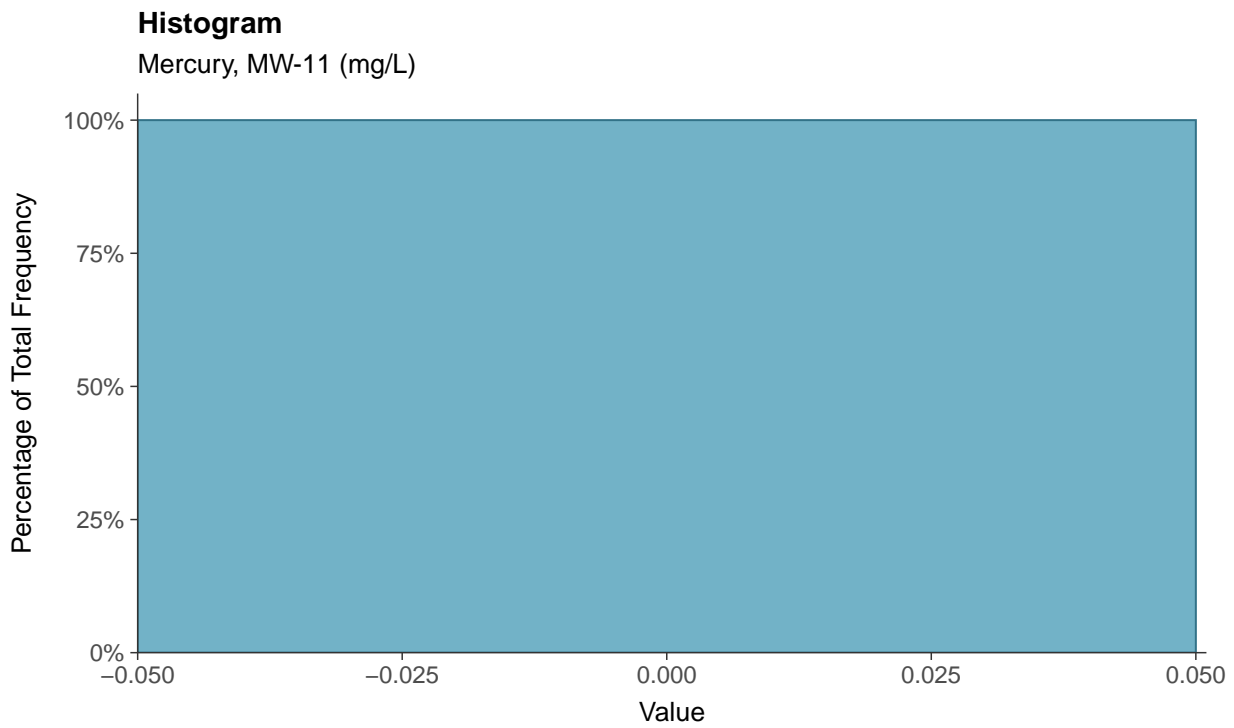
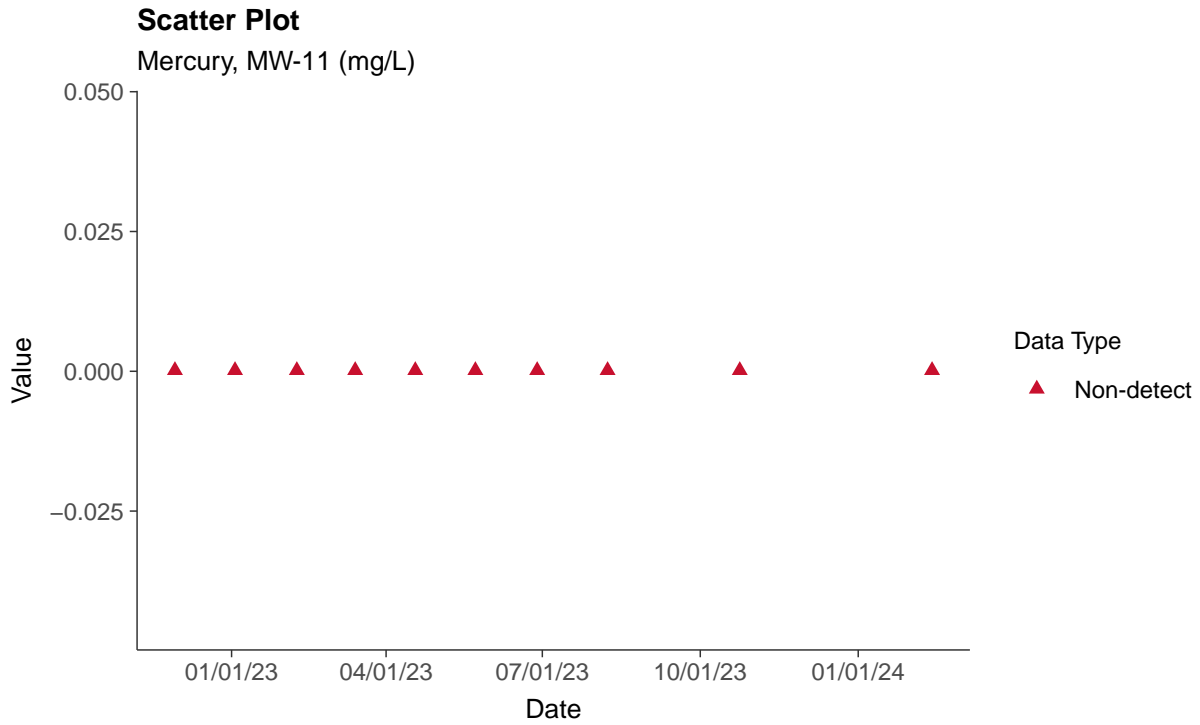
Trend Regression: Piecewise Linear-Linear
Lithium, MW-11 (mg/L)





Appendix IV: Mercury, MW-11

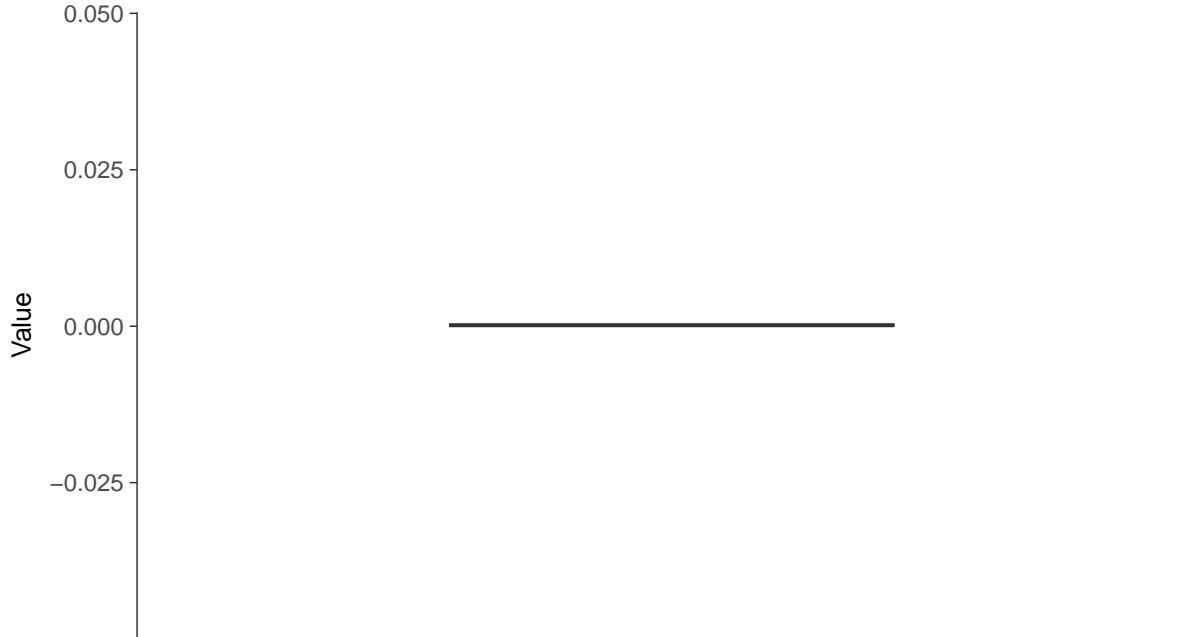
ID: 2_21_5_117





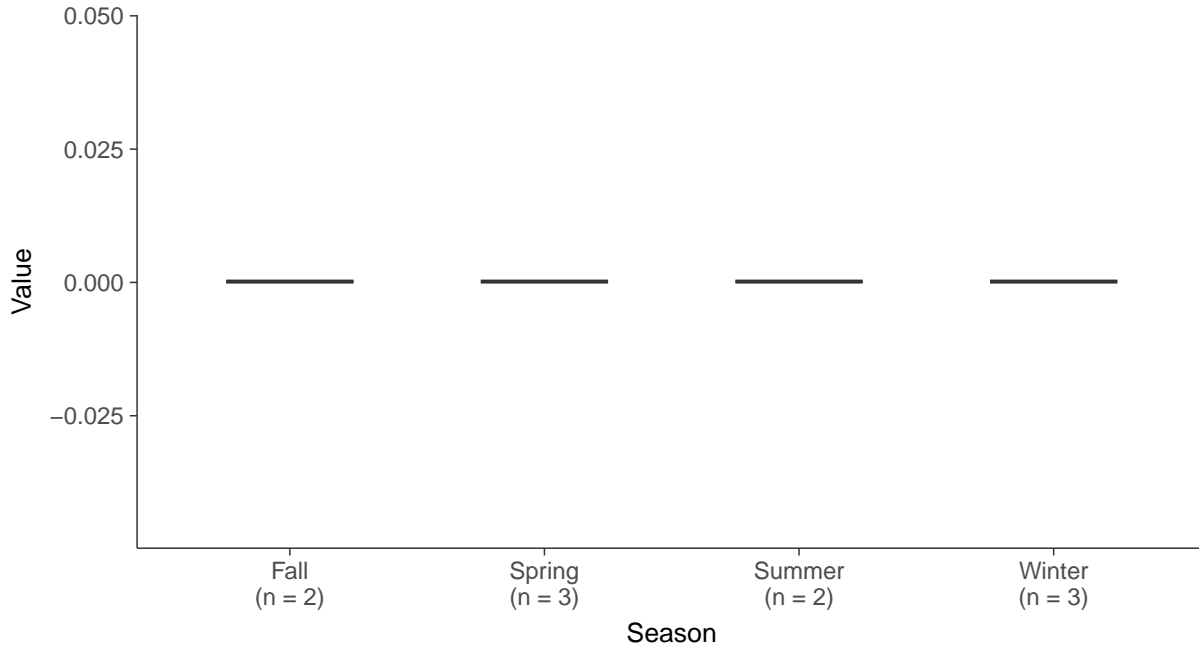
Boxplot

Mercury, MW-11 (mg/L)



Boxplot by Season

Mercury, MW-11 (mg/L)



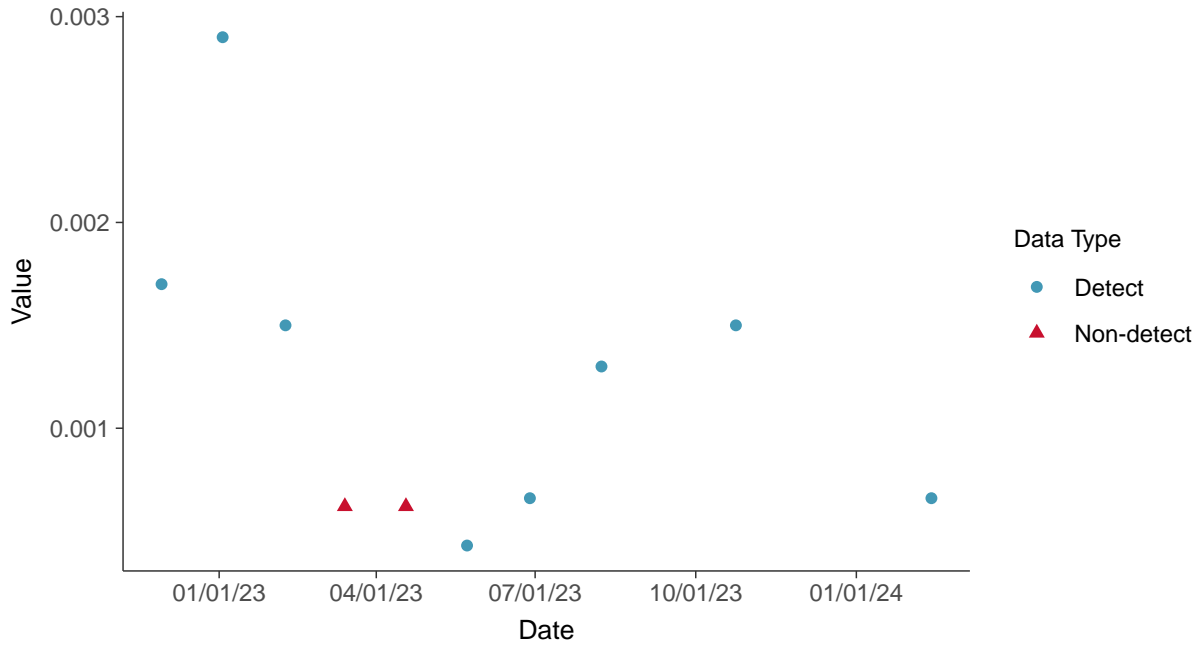


Appendix IV: Molybdenum, MW-11

ID: 2_21_5_118

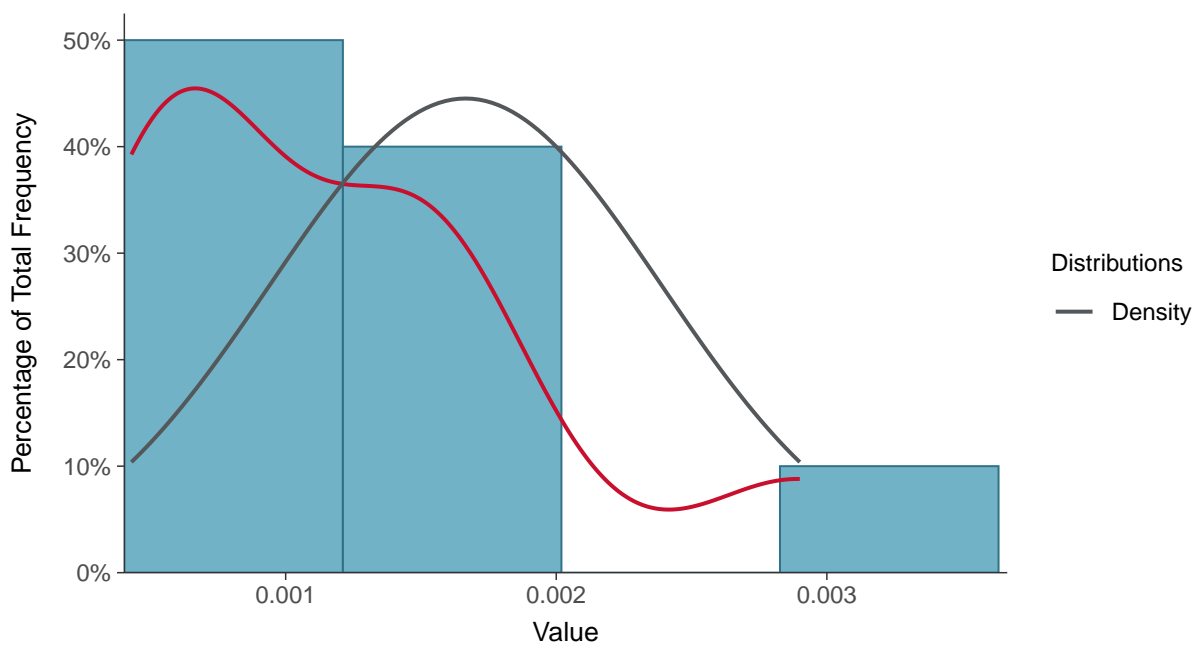
Scatter Plot

Molybdenum, MW-11 (mg/L)



Histogram

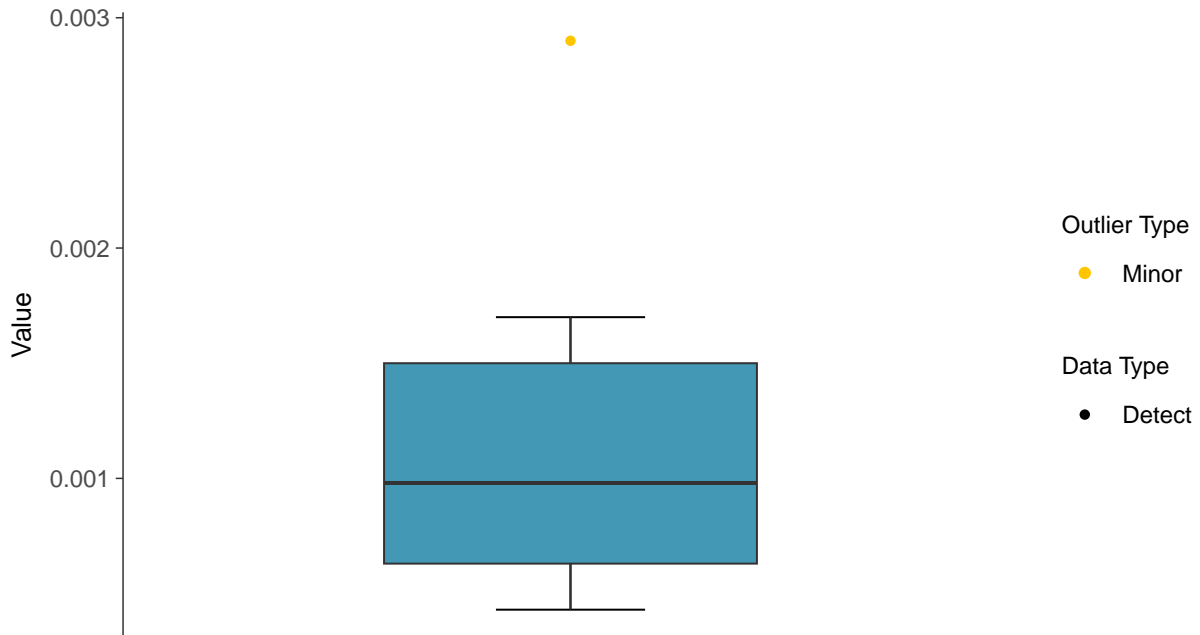
Molybdenum, MW-11 (mg/L)





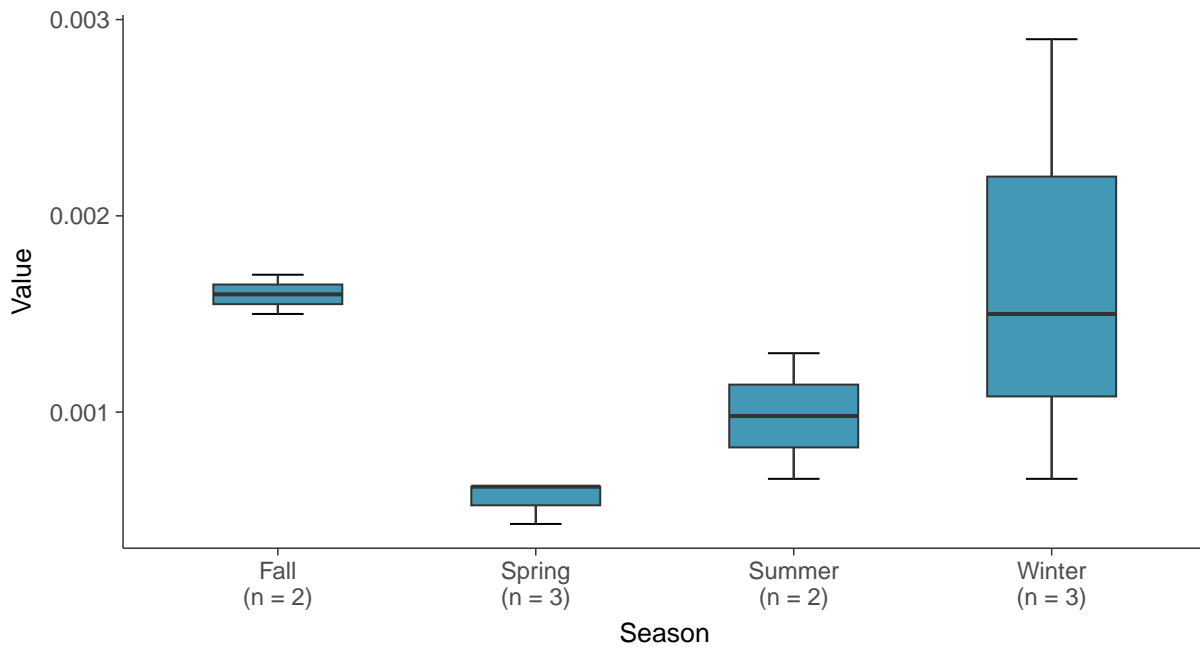
Boxplot

Molybdenum, MW-11 (mg/L)



Boxplot by Season

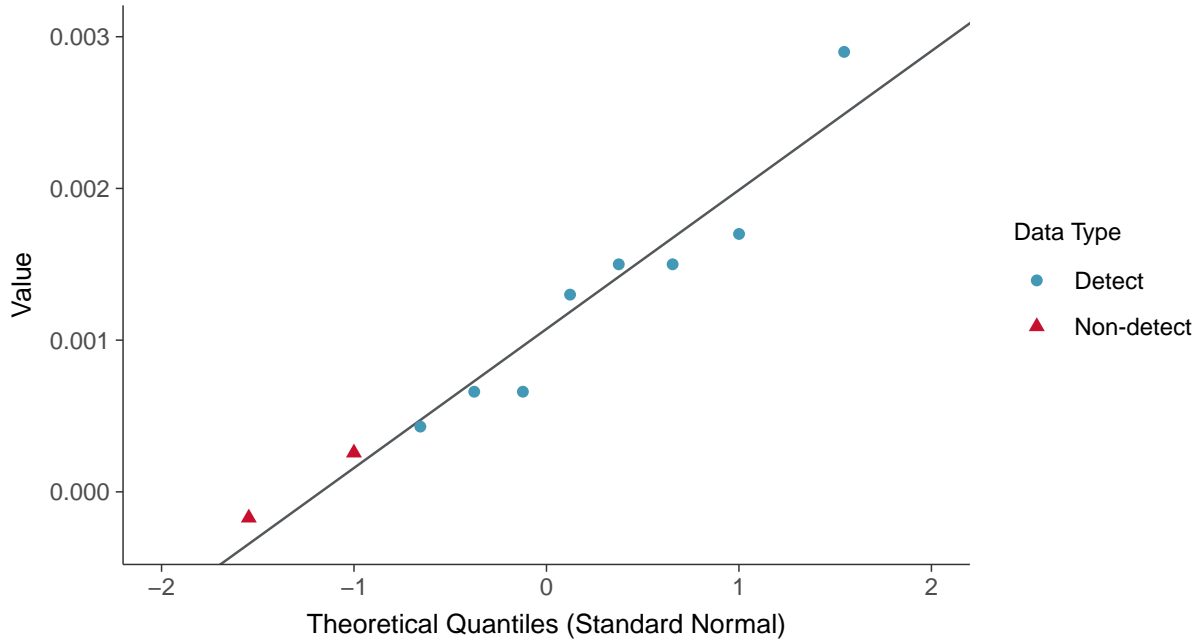
Molybdenum, MW-11 (mg/L)





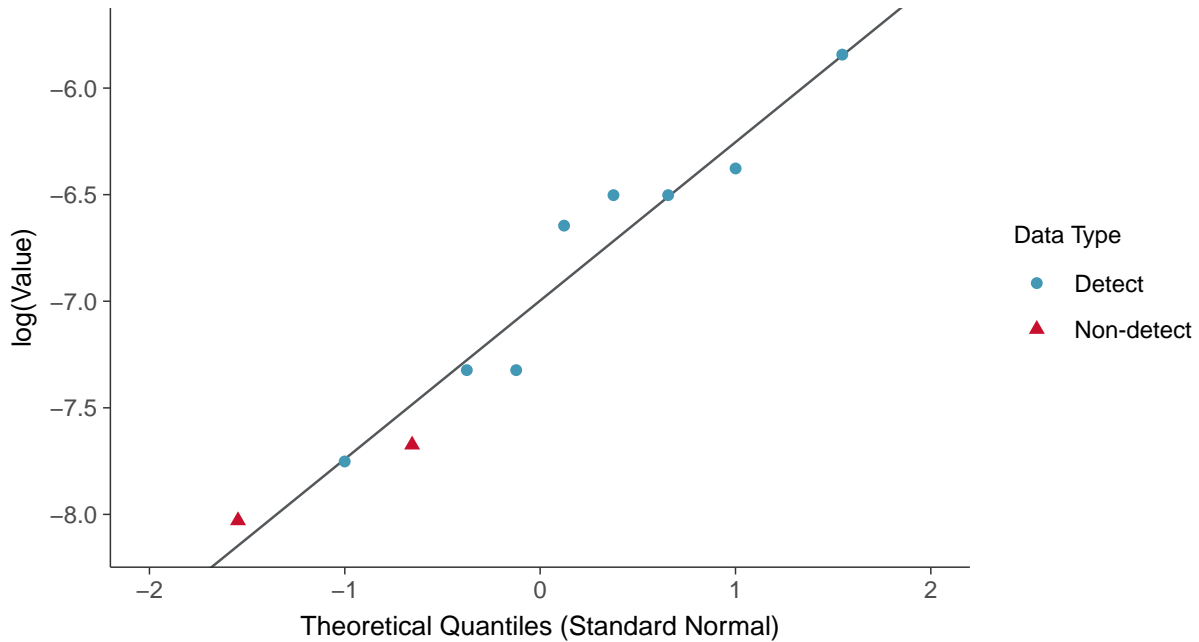
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

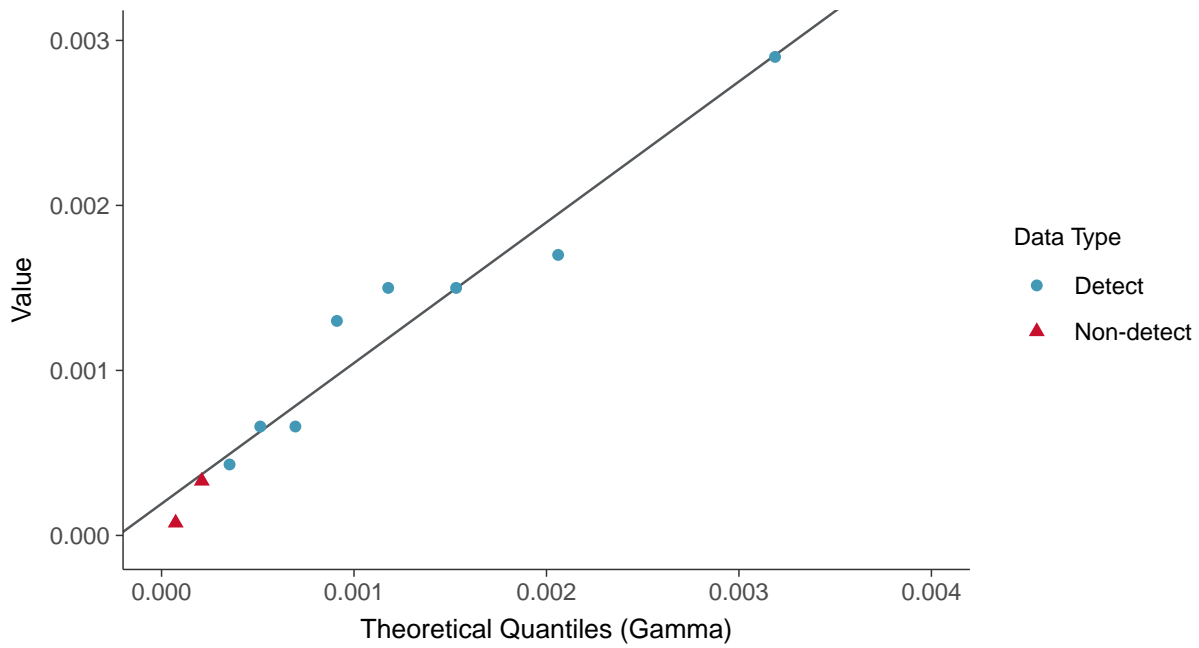
Molybdenum, MW-11 (mg/L)





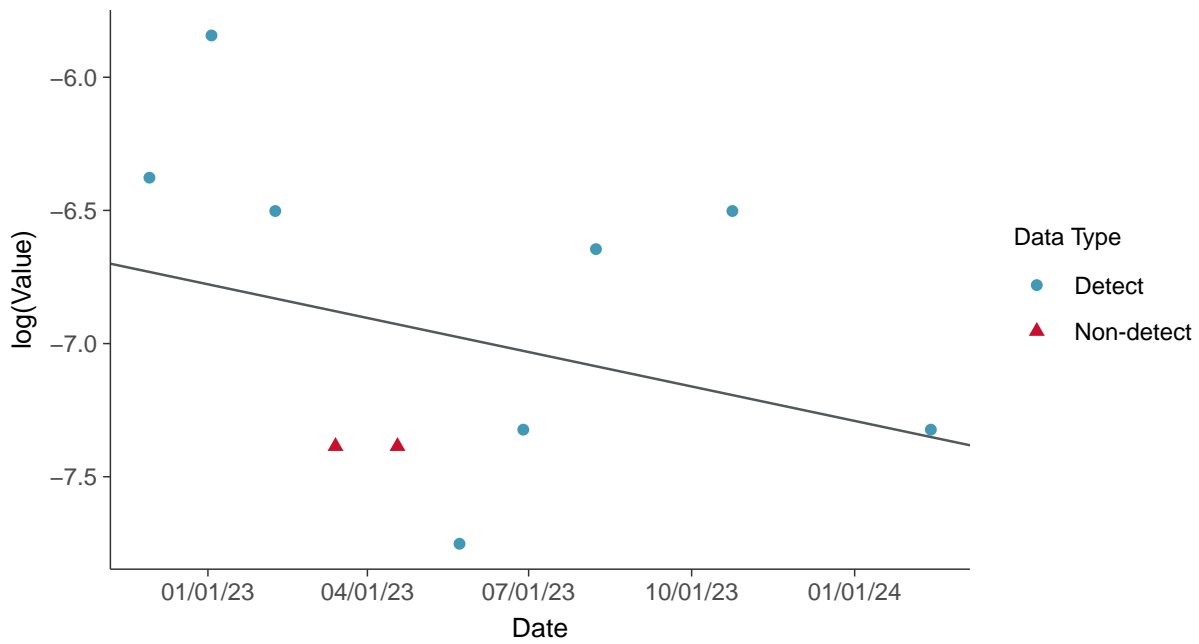
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (mg/L)



Trend Regression: Lognormal MLE

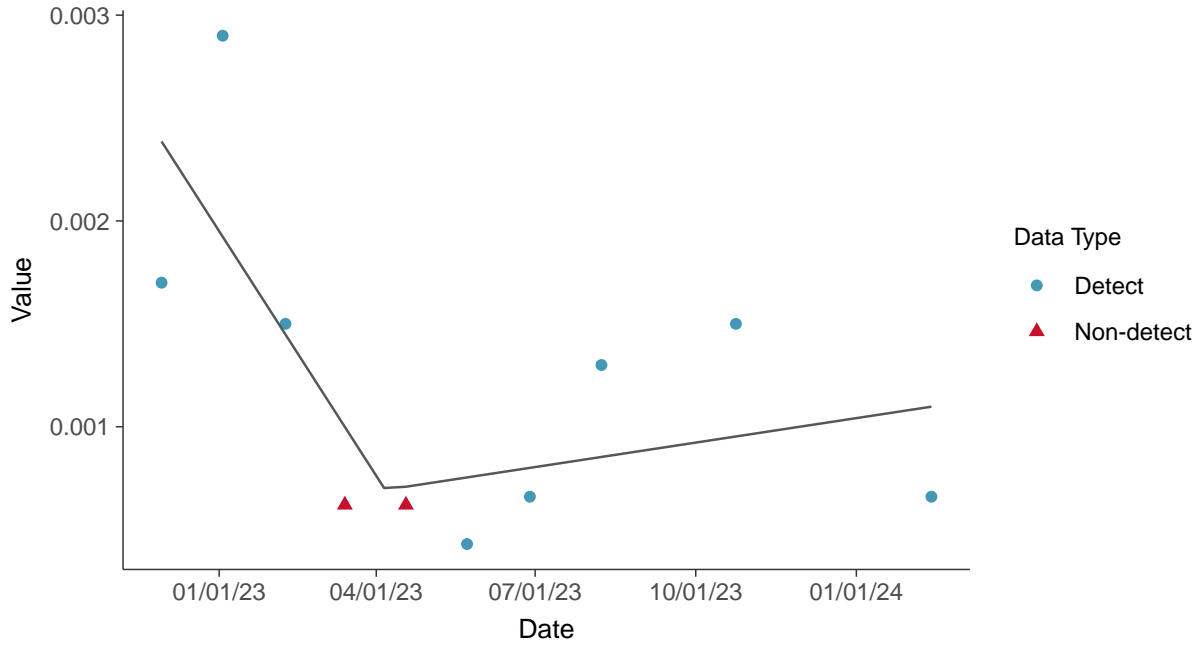
Molybdenum, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11 (mg/L)



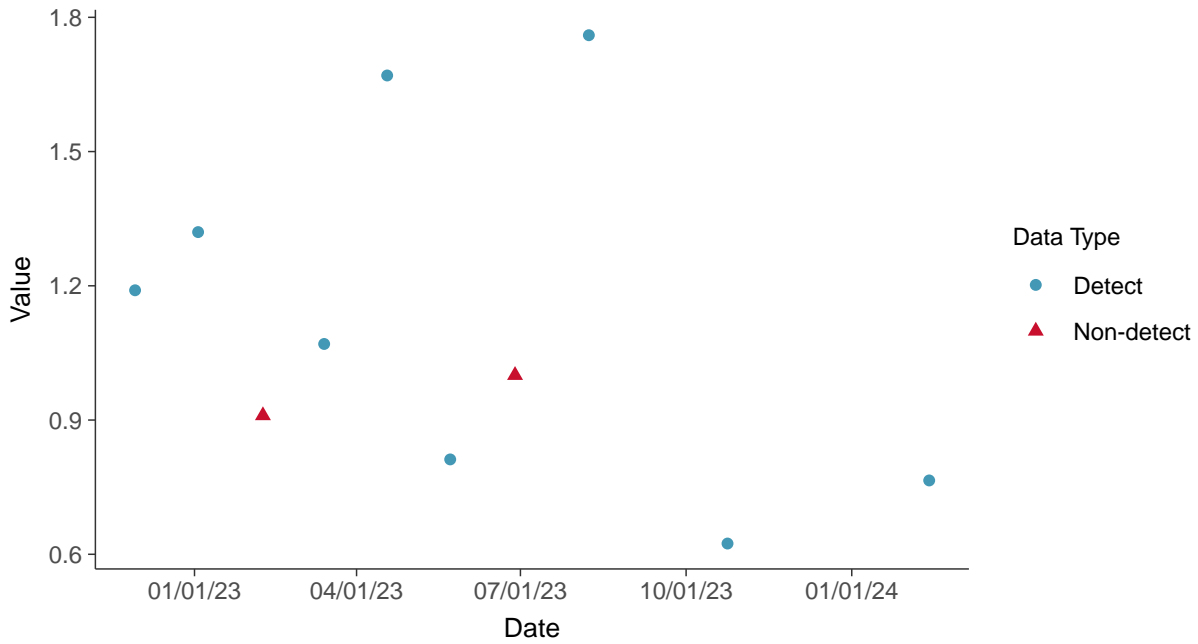


Appendix IV: Radium 226 and 228, MW-11

ID: 2_21_5_121

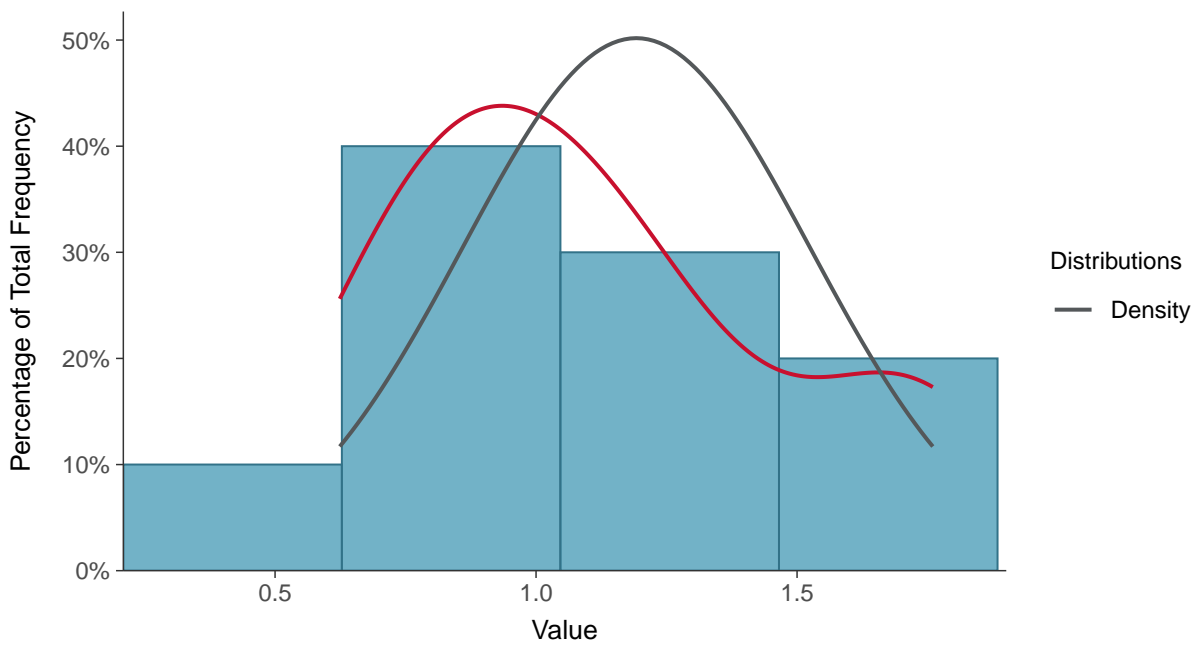
Scatter Plot

Radium 226 and 228, MW-11 (pCi/L)



Histogram

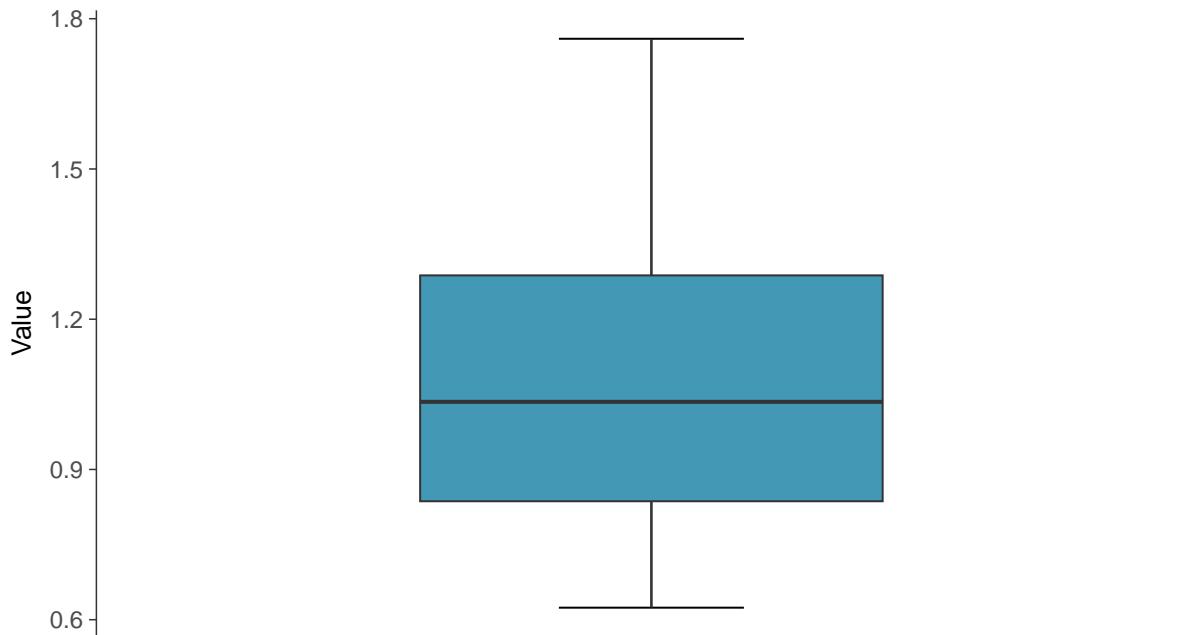
Radium 226 and 228, MW-11 (pCi/L)





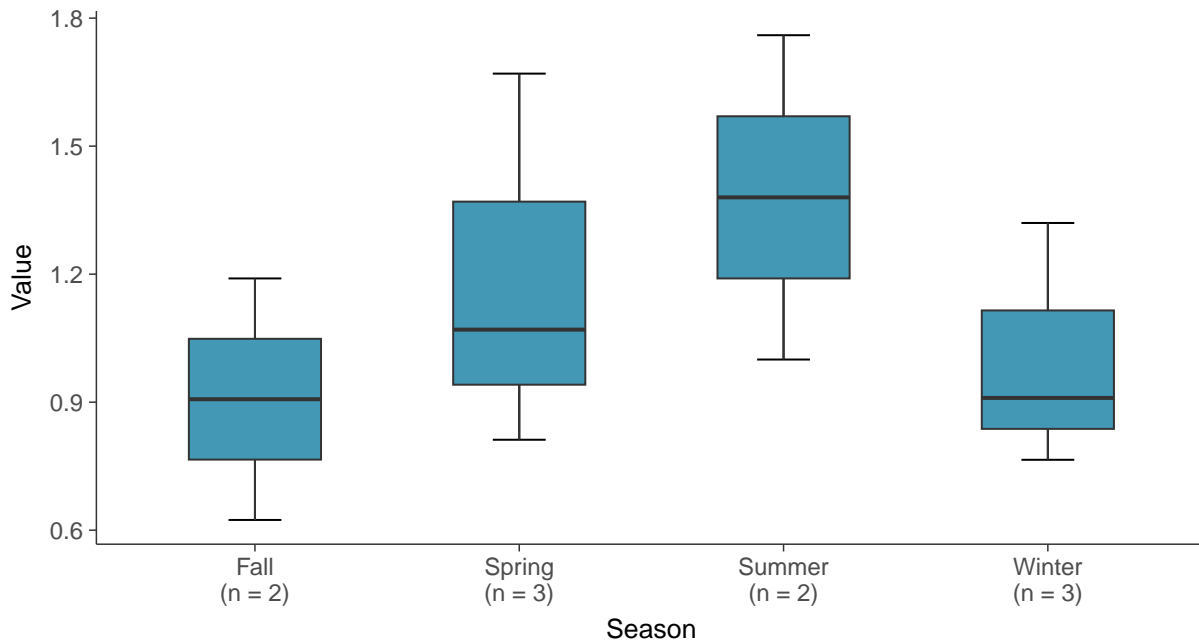
Boxplot

Radium 226 and 228, MW-11 (pCi/L)



Boxplot by Season

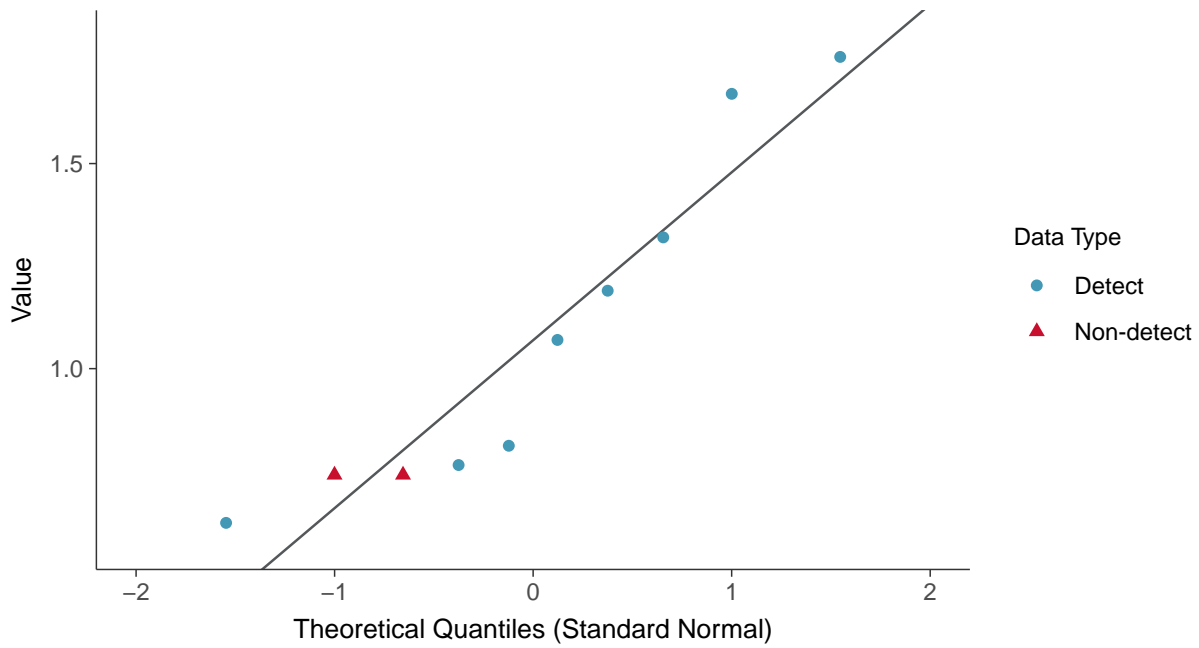
Radium 226 and 228, MW-11 (pCi/L)





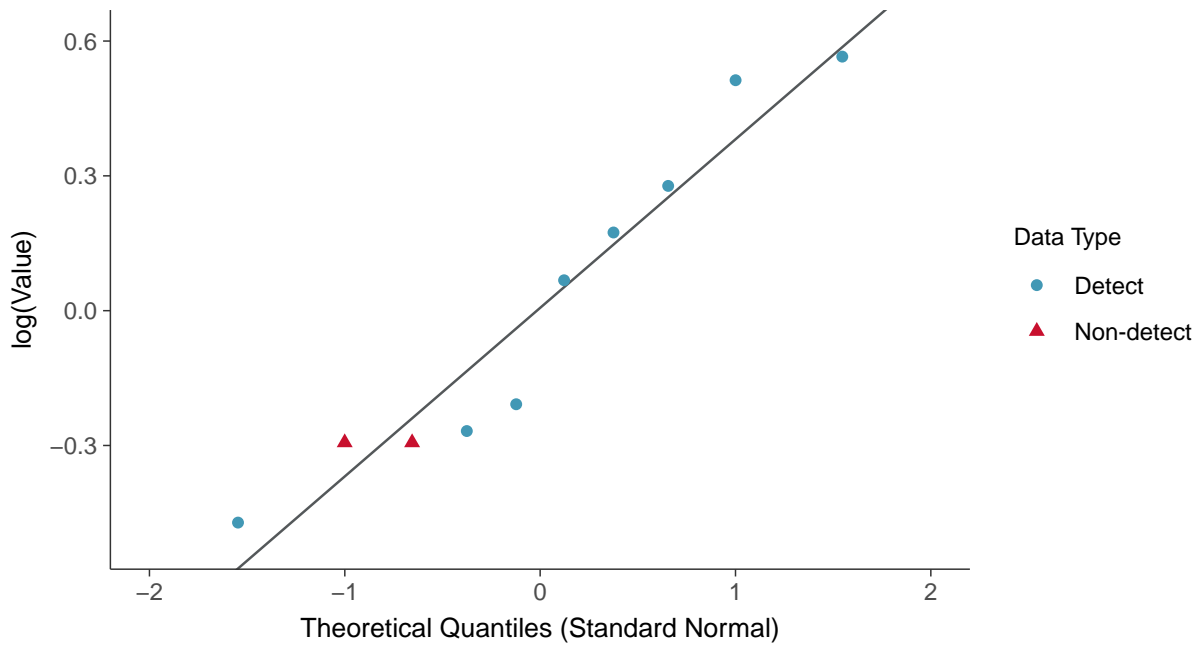
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-11 (pCi/L)



Lognormal Q-Q plot using ROS Imputed Estimates

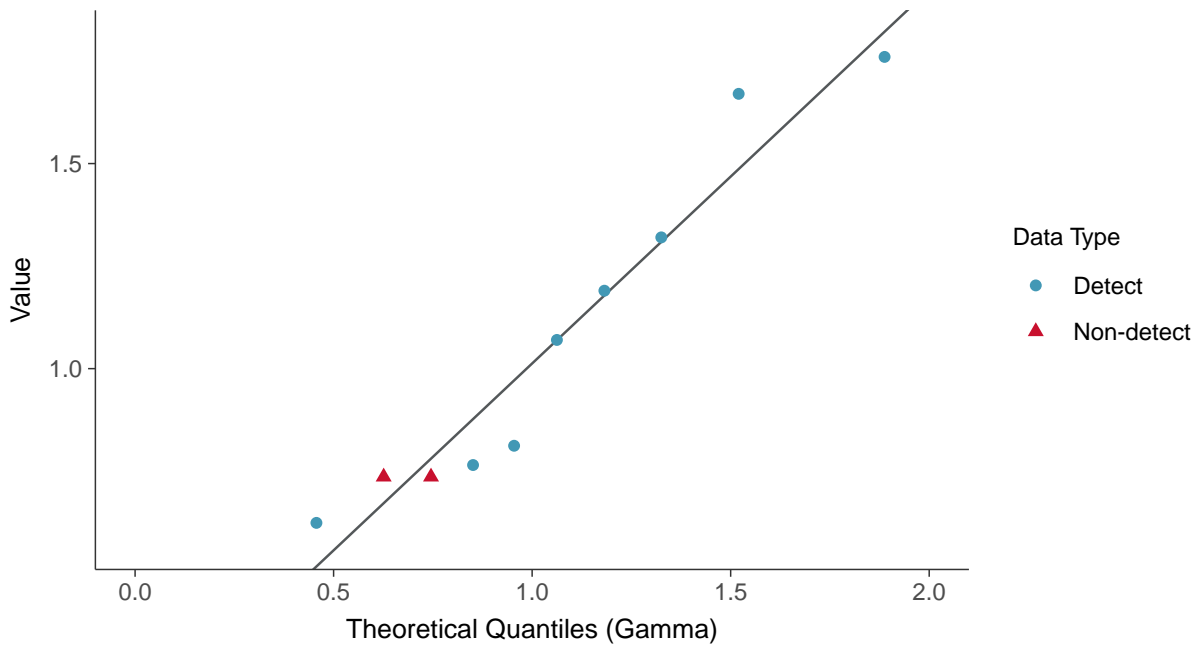
Radium 226 and 228, MW-11 (pCi/L)





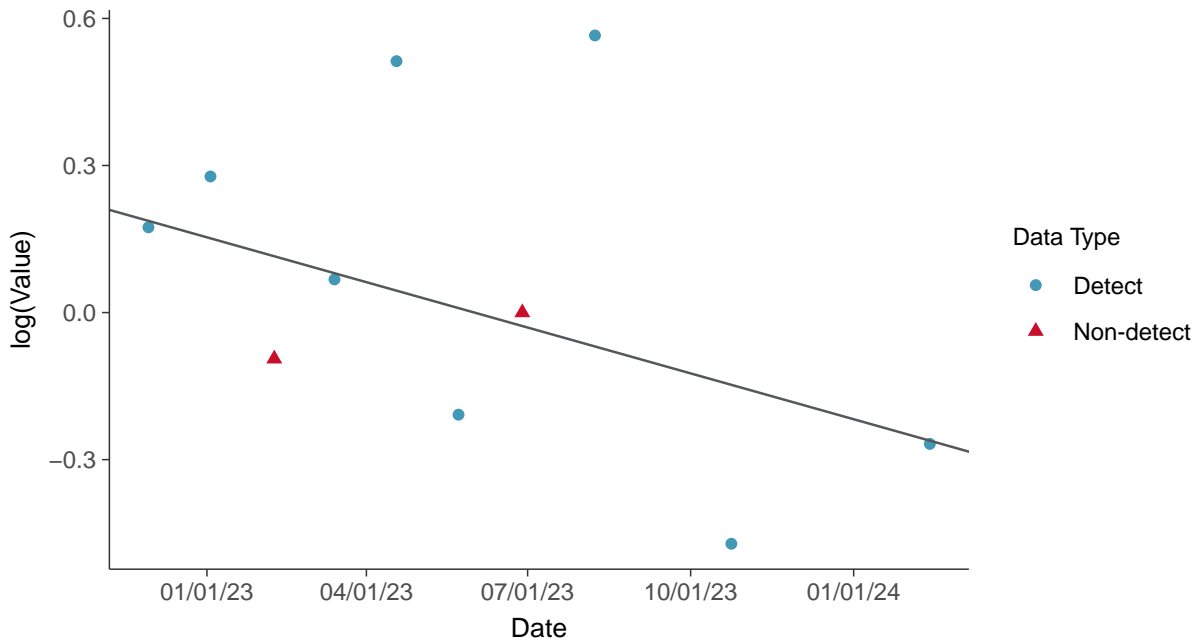
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-11 (pCi/L)



Trend Regression: Lognormal MLE

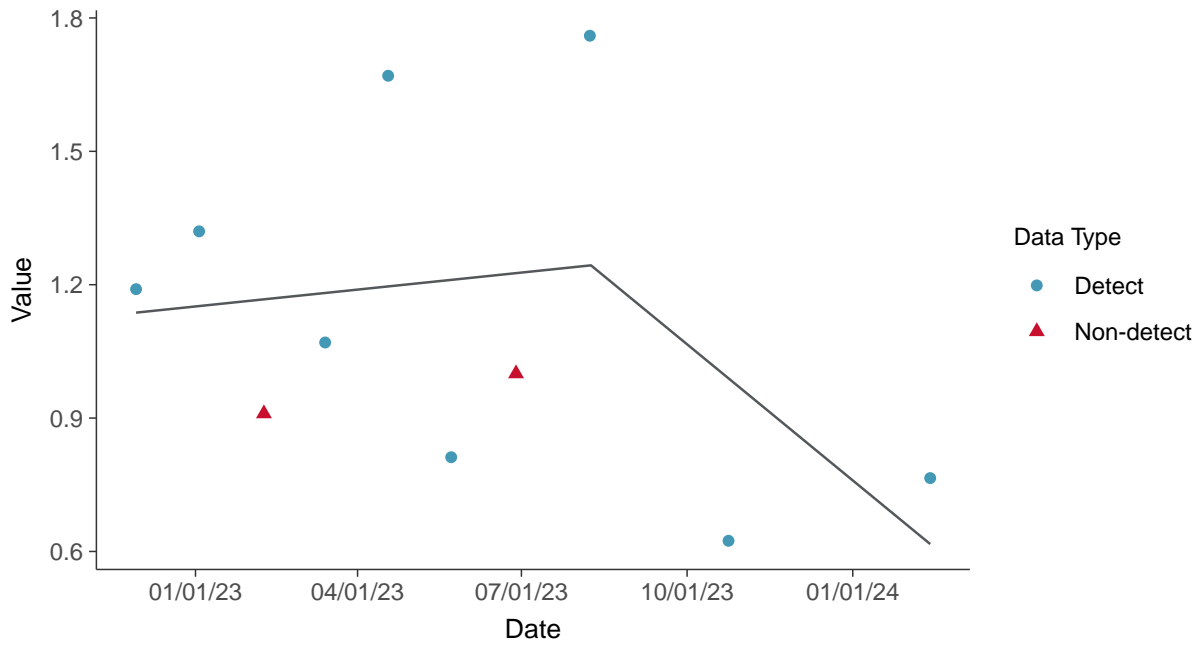
Radium 226 and 228, MW-11 (pCi/L)





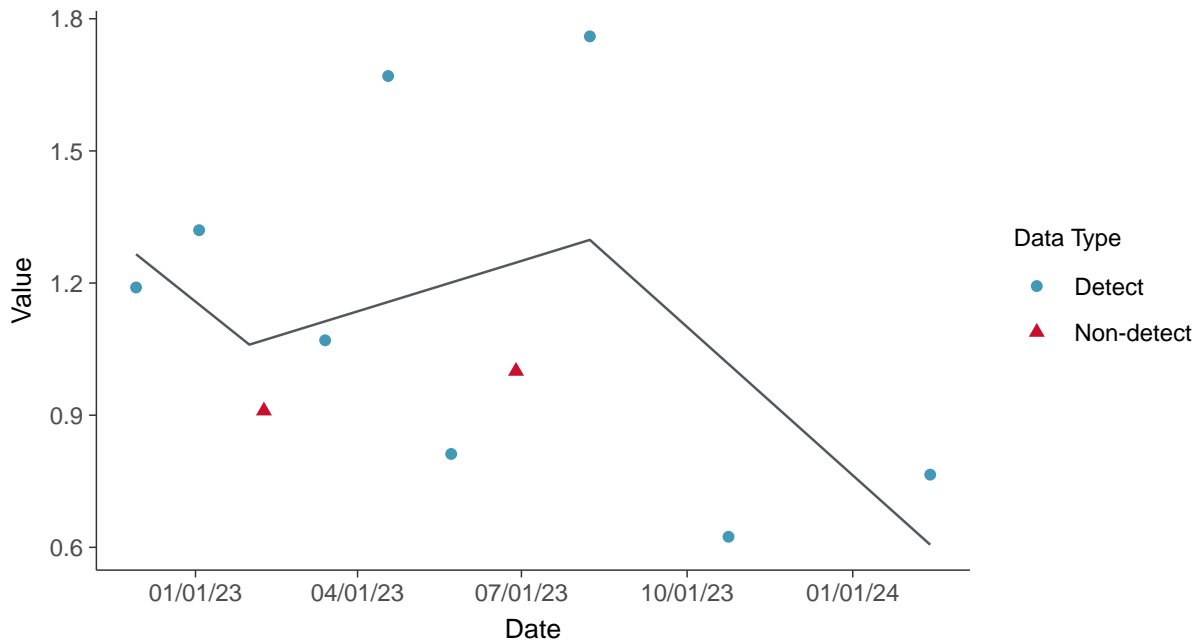
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-11 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-11 (pCi/L)



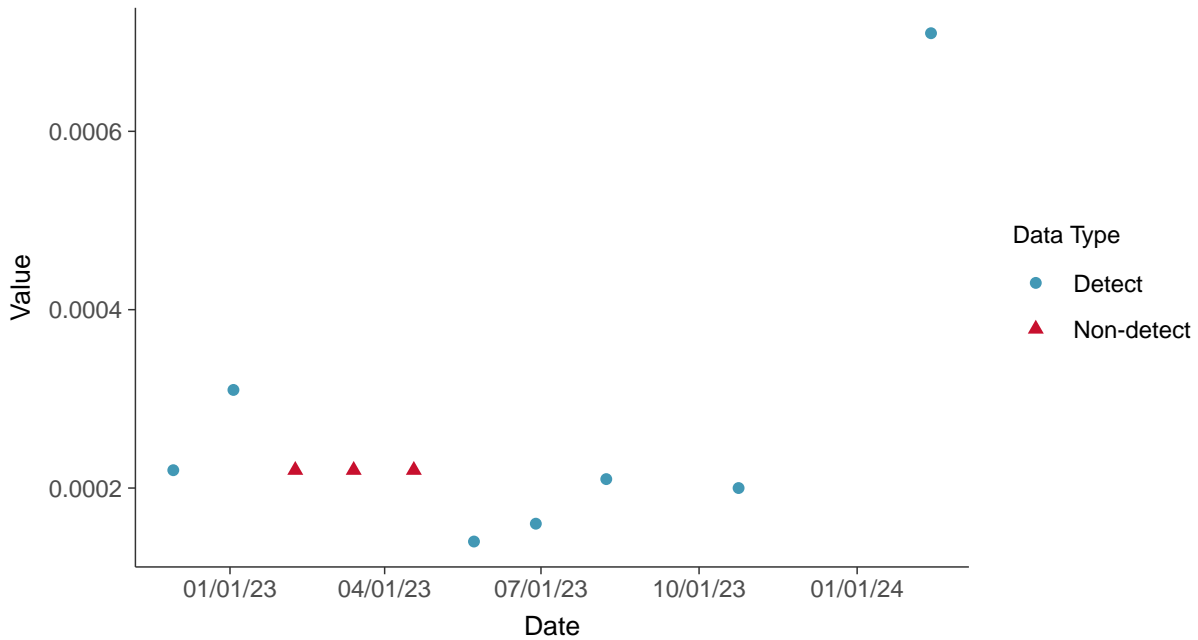


Appendix IV: Selenium, MW-11

ID: 2_21_5_122

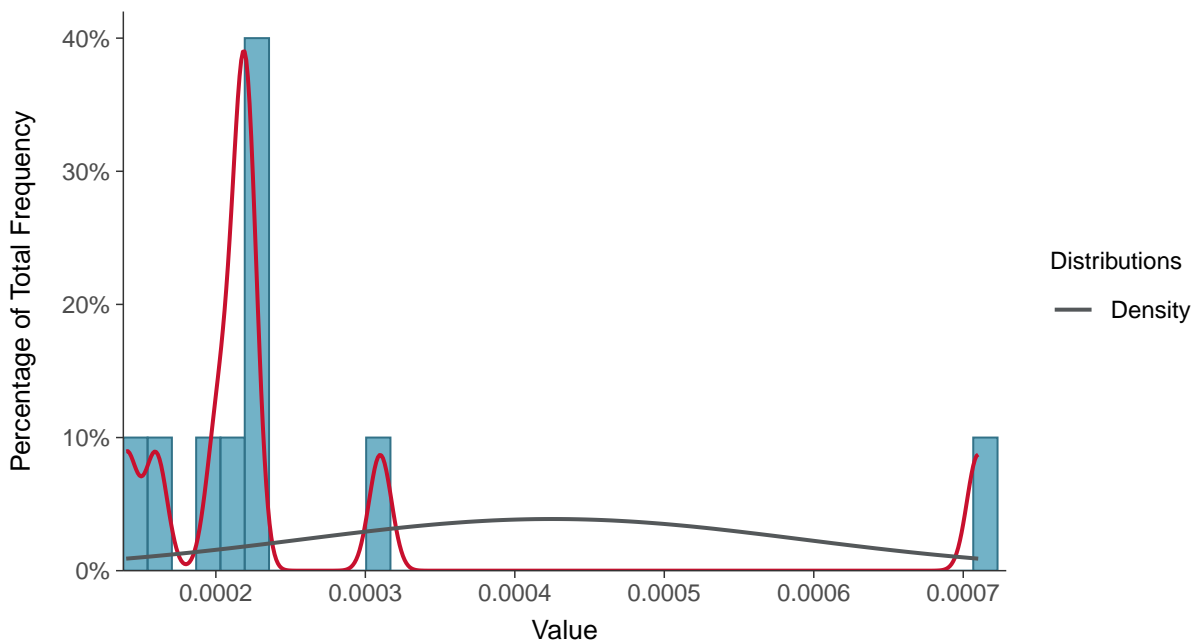
Scatter Plot

Selenium, MW-11 (mg/L)



Histogram

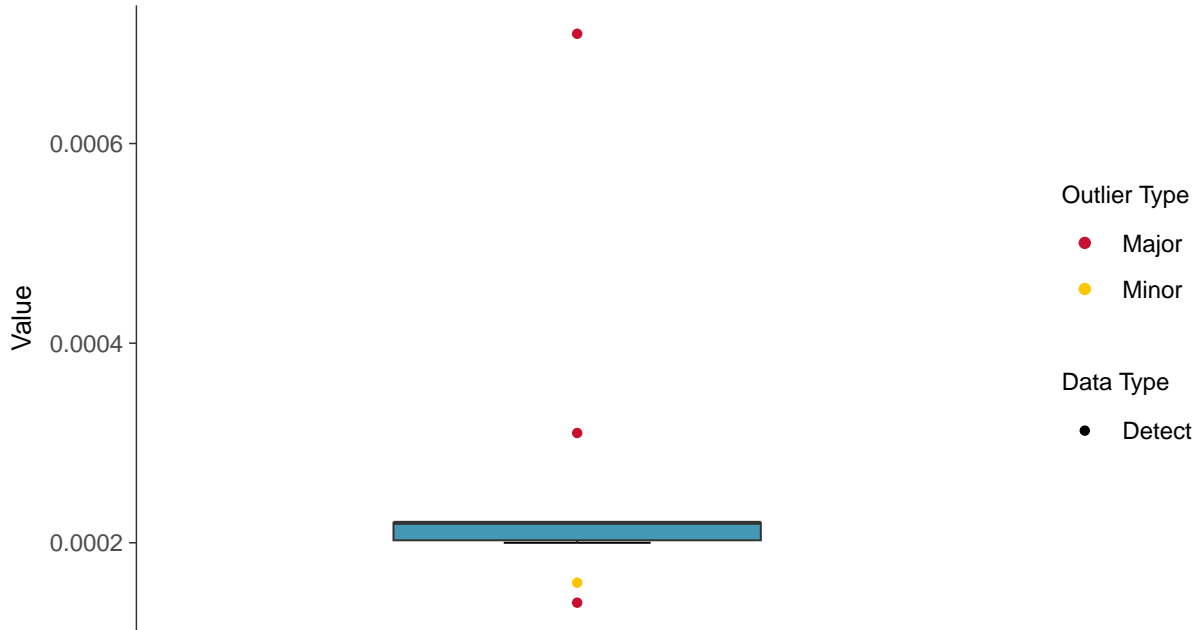
Selenium, MW-11 (mg/L)





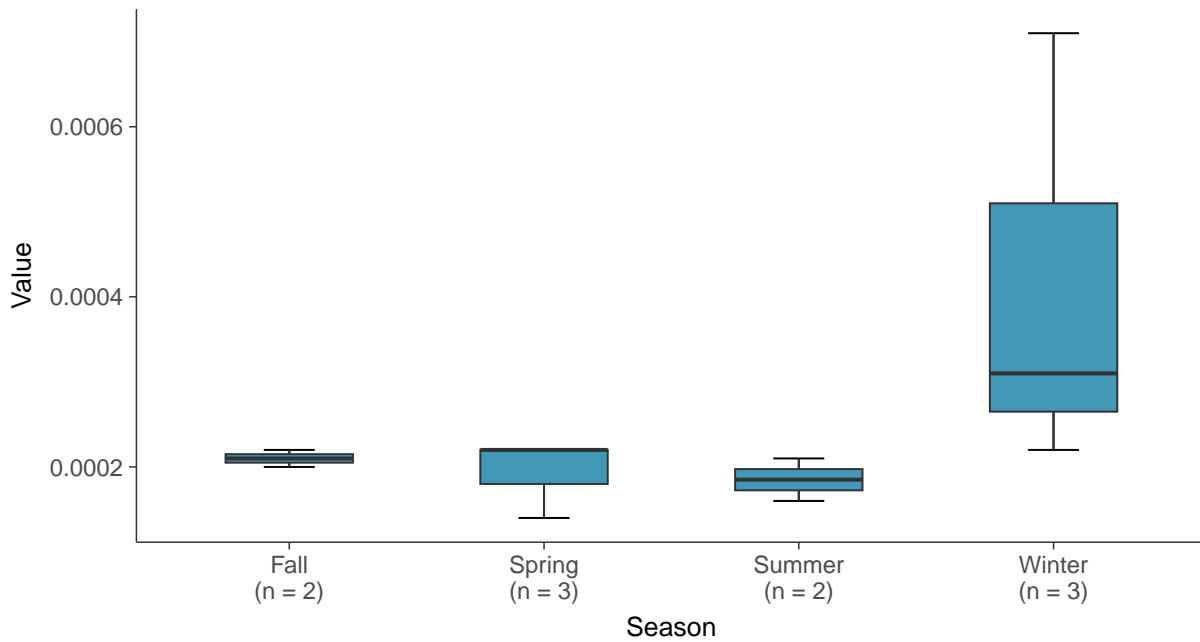
Boxplot

Selenium, MW-11 (mg/L)



Boxplot by Season

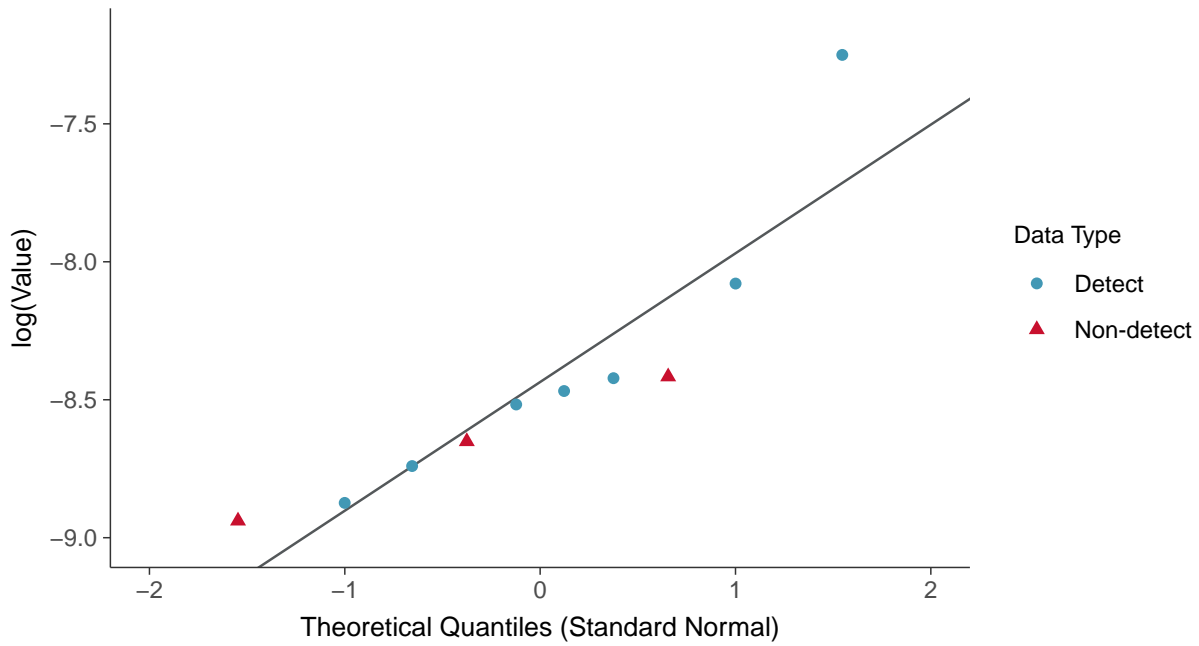
Selenium, MW-11 (mg/L)





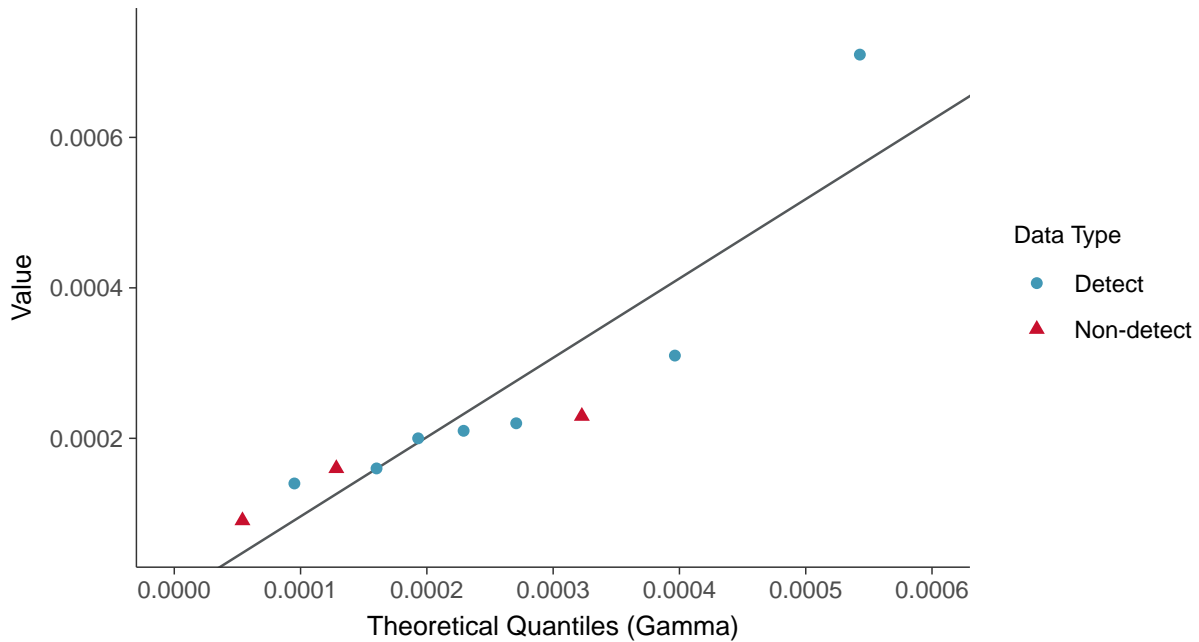
Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-11 (mg/L)



Gamma Q-Q plot using ROS Imputed Estimates

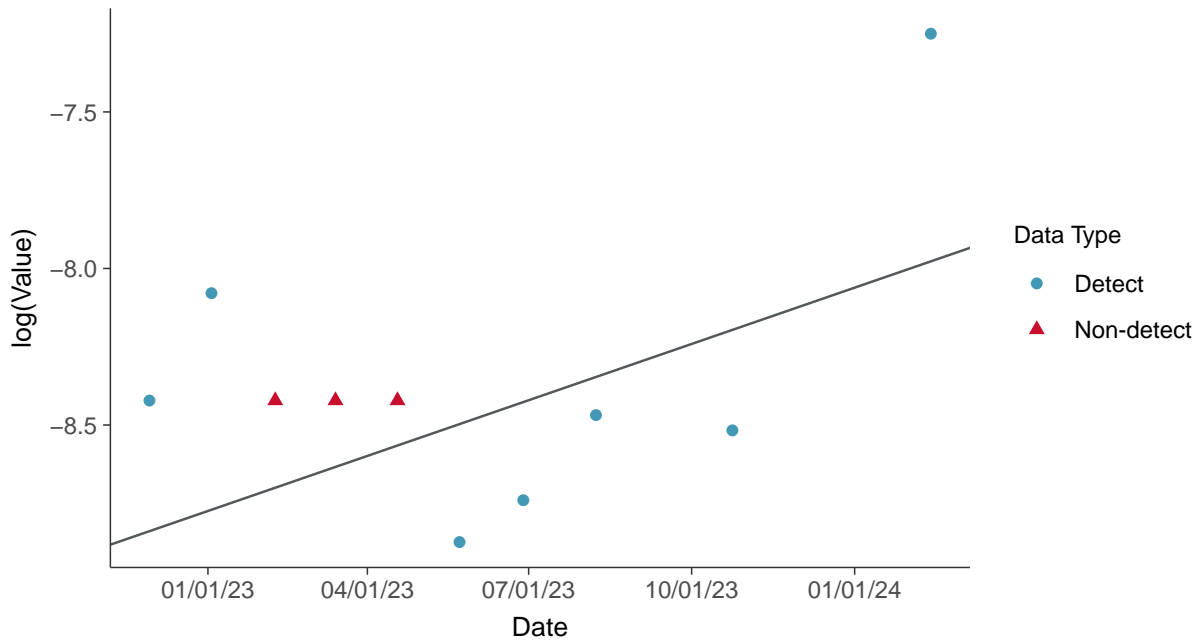
Selenium, MW-11 (mg/L)





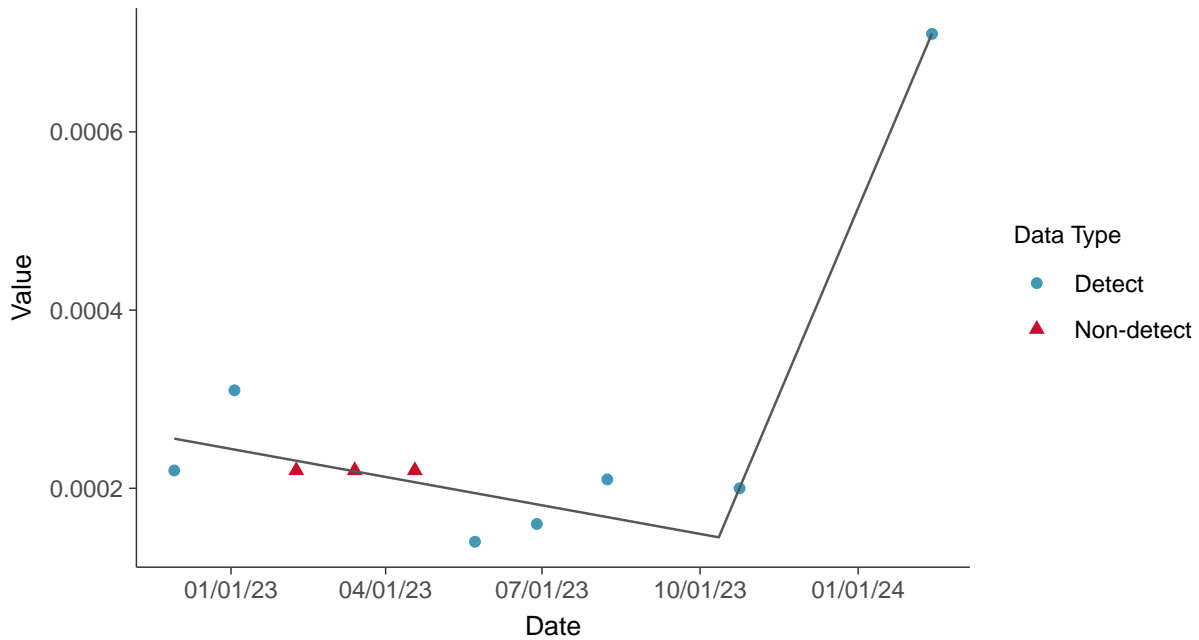
Trend Regression: Lognormal MLE

Selenium, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear

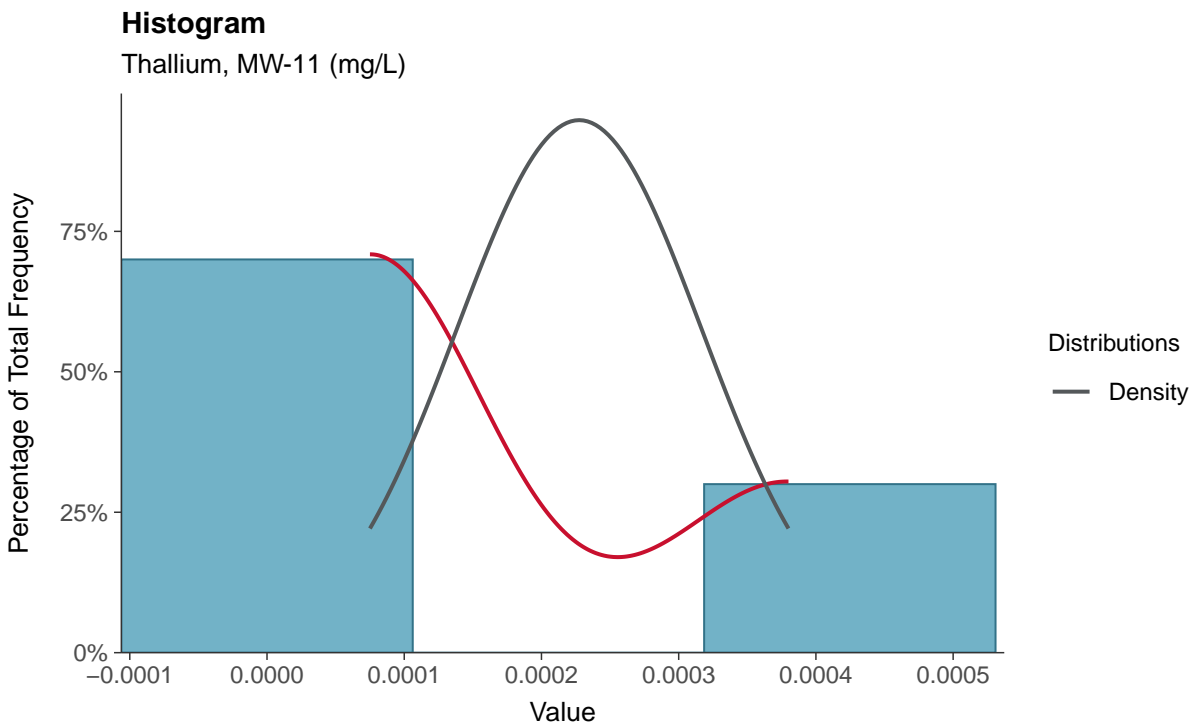
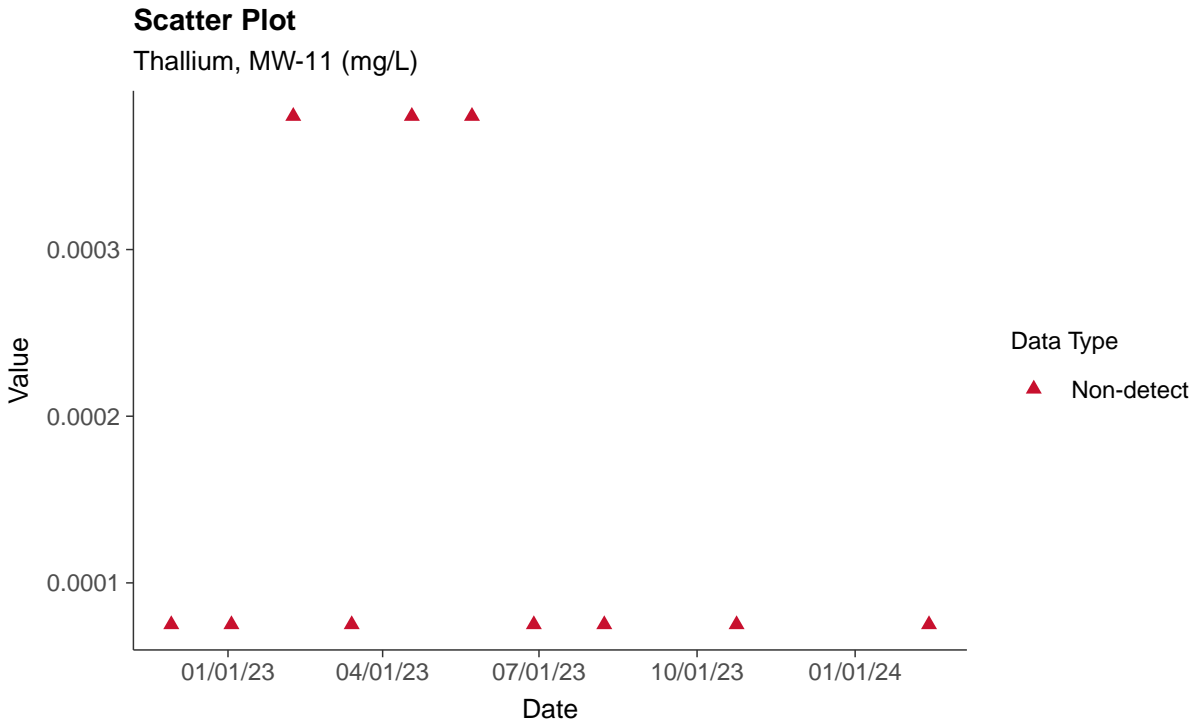
Selenium, MW-11 (mg/L)





Appendix IV: Thallium, MW-11

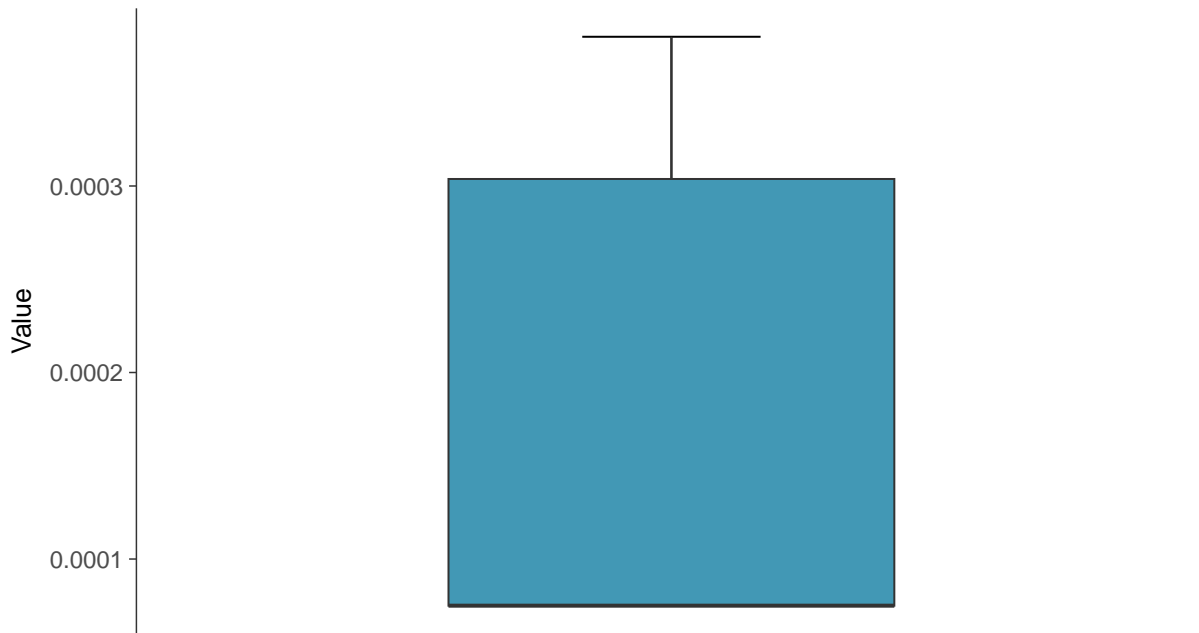
ID: 2_21_5_125





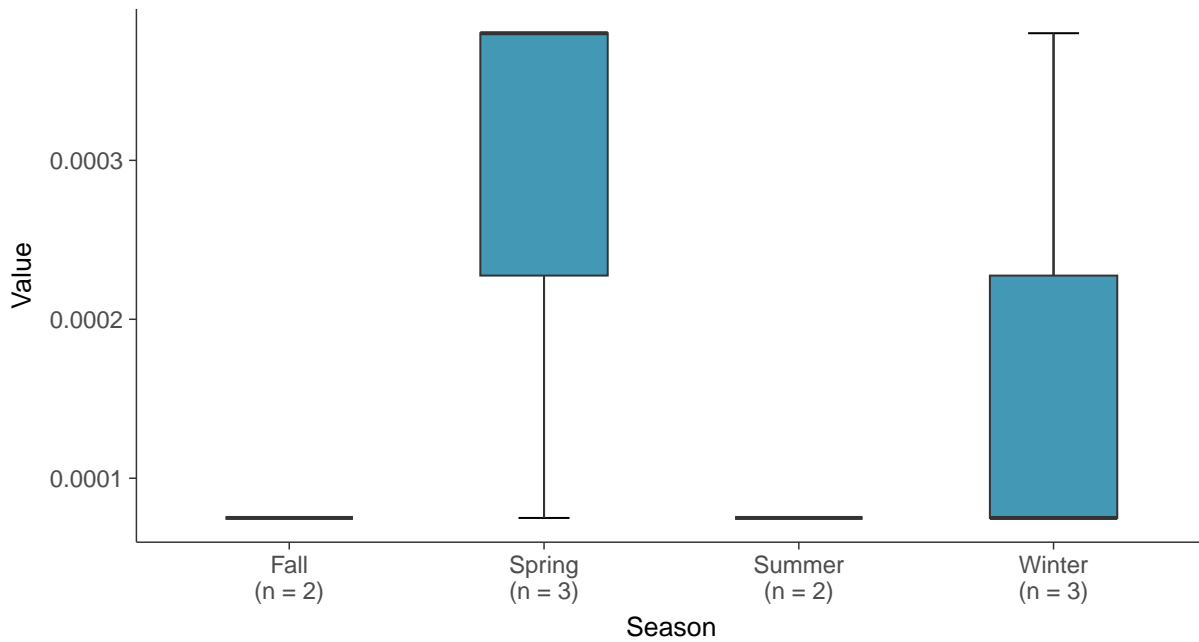
Boxplot

Thallium, MW-11 (mg/L)



Boxplot by Season

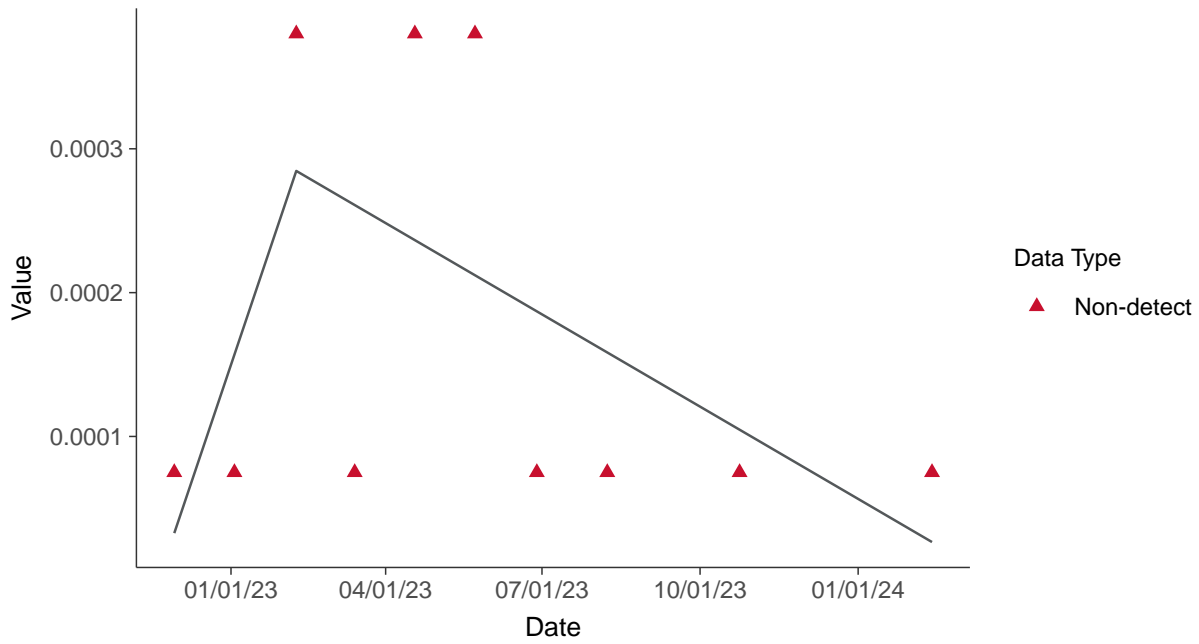
Thallium, MW-11 (mg/L)





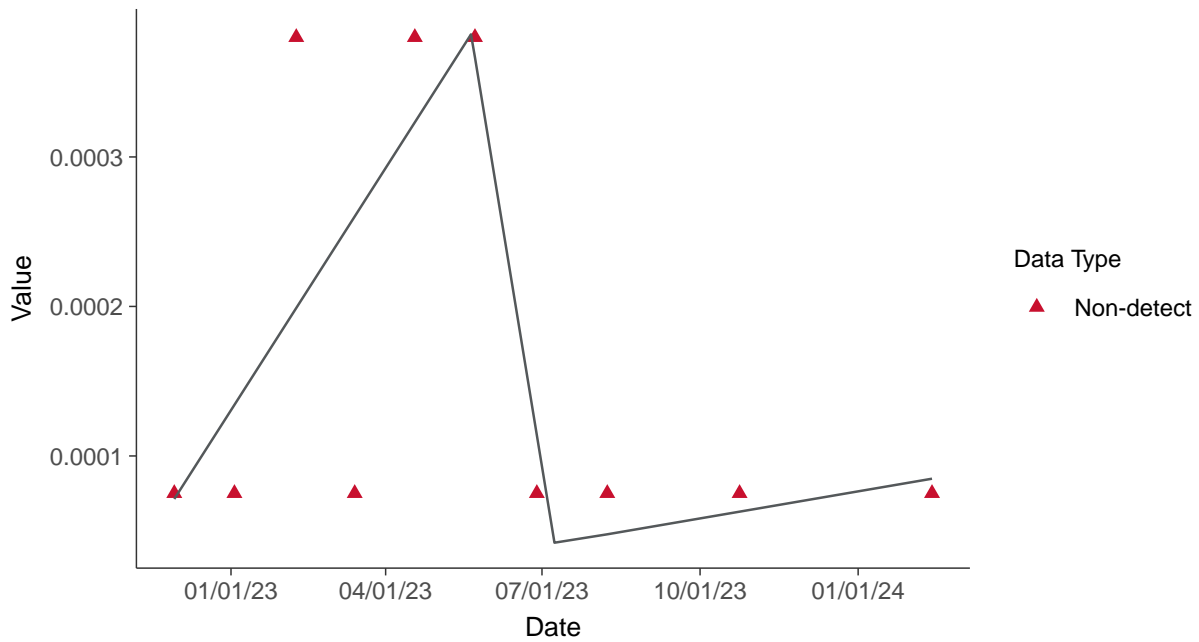
Trend Regression: Piecewise Linear-Linear

Thallium, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

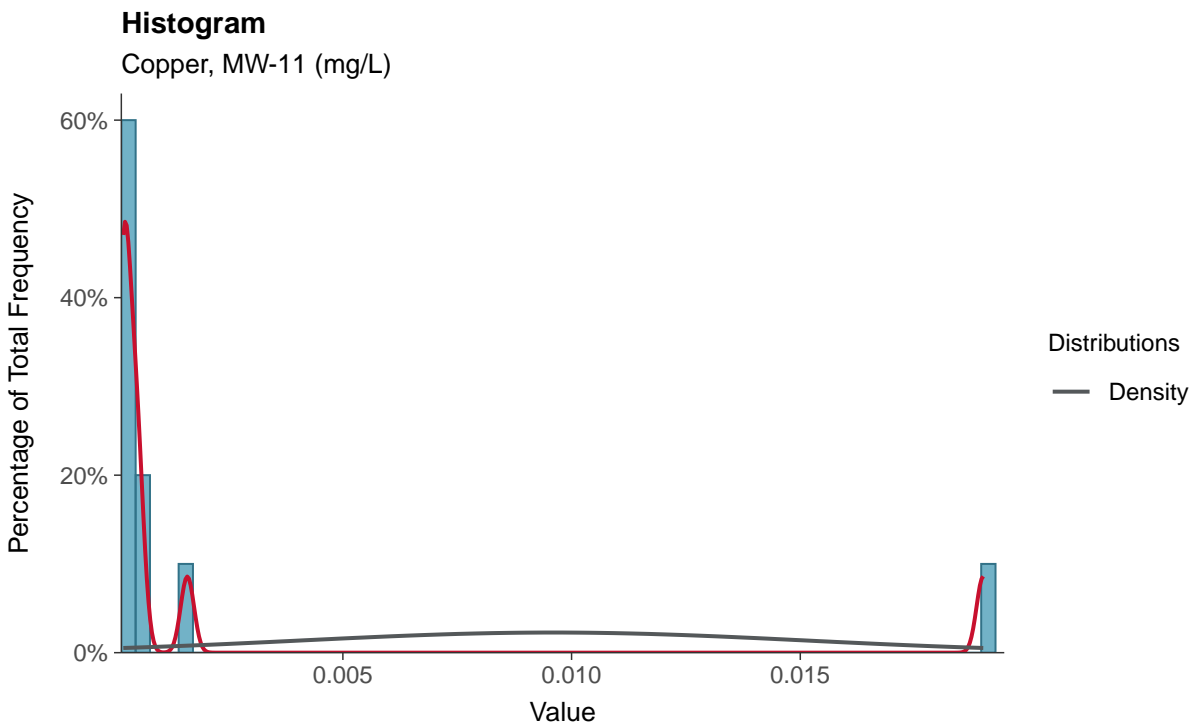
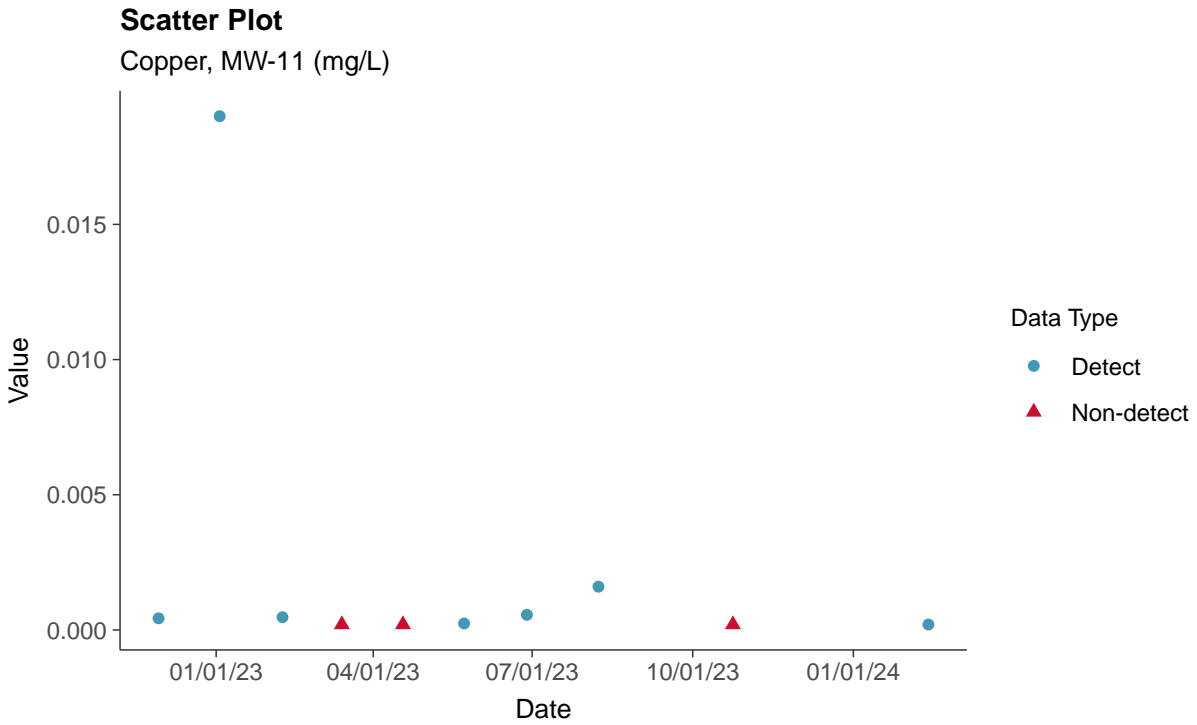
Thallium, MW-11 (mg/L)





Part 115: Copper, MW-11

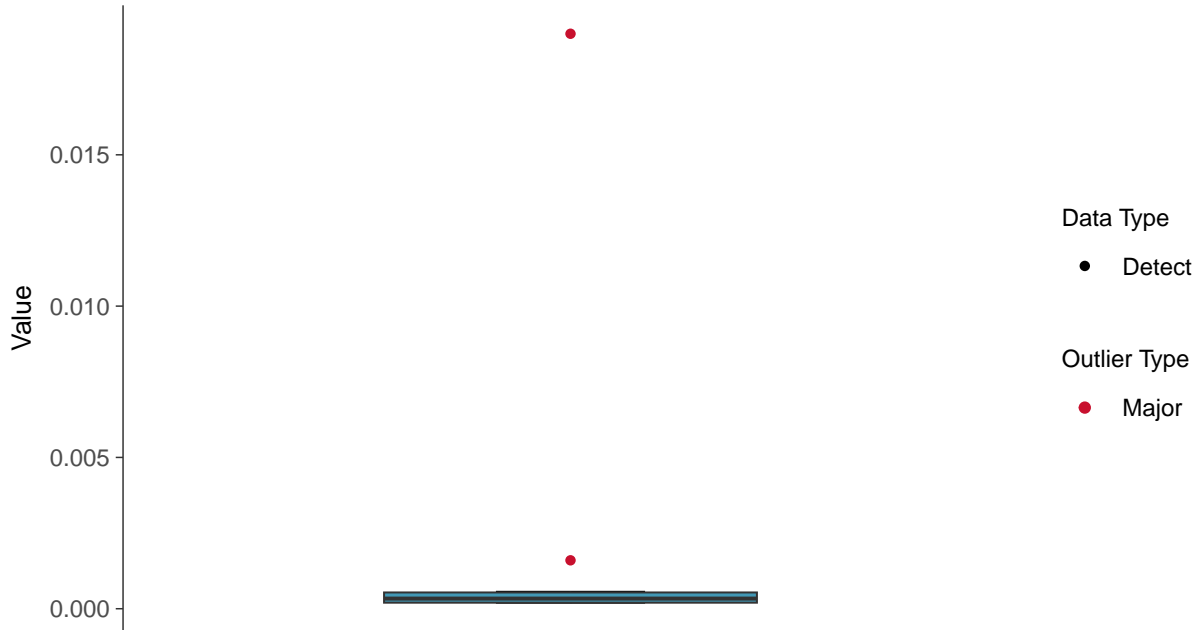
ID: 2_21_6_111





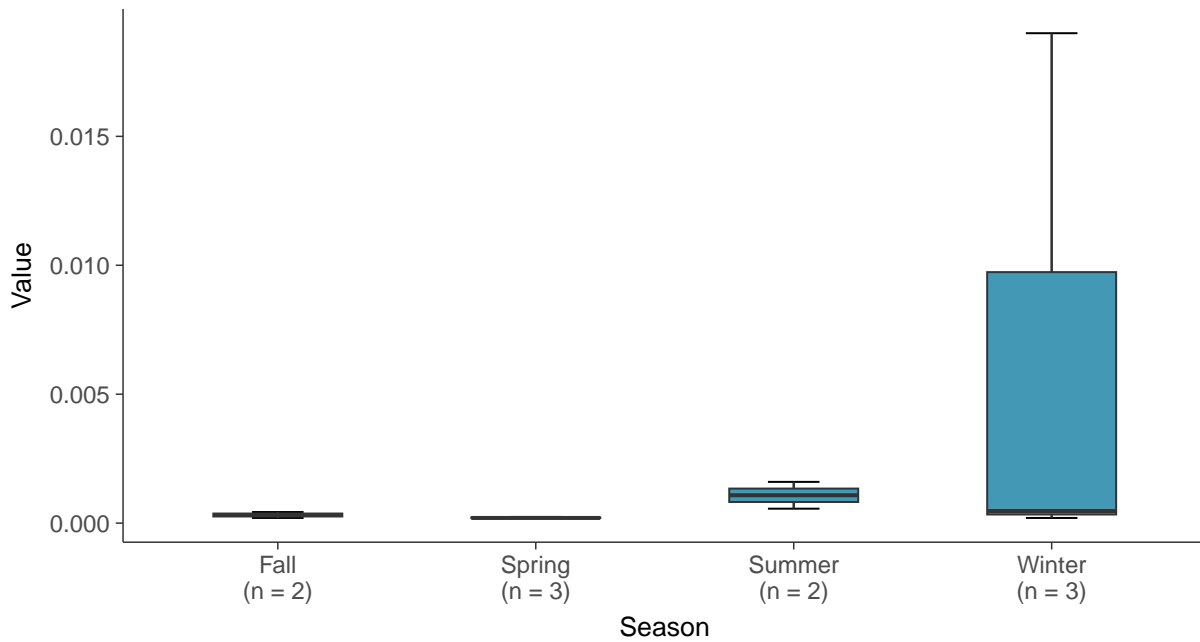
Boxplot

Copper, MW-11 (mg/L)



Boxplot by Season

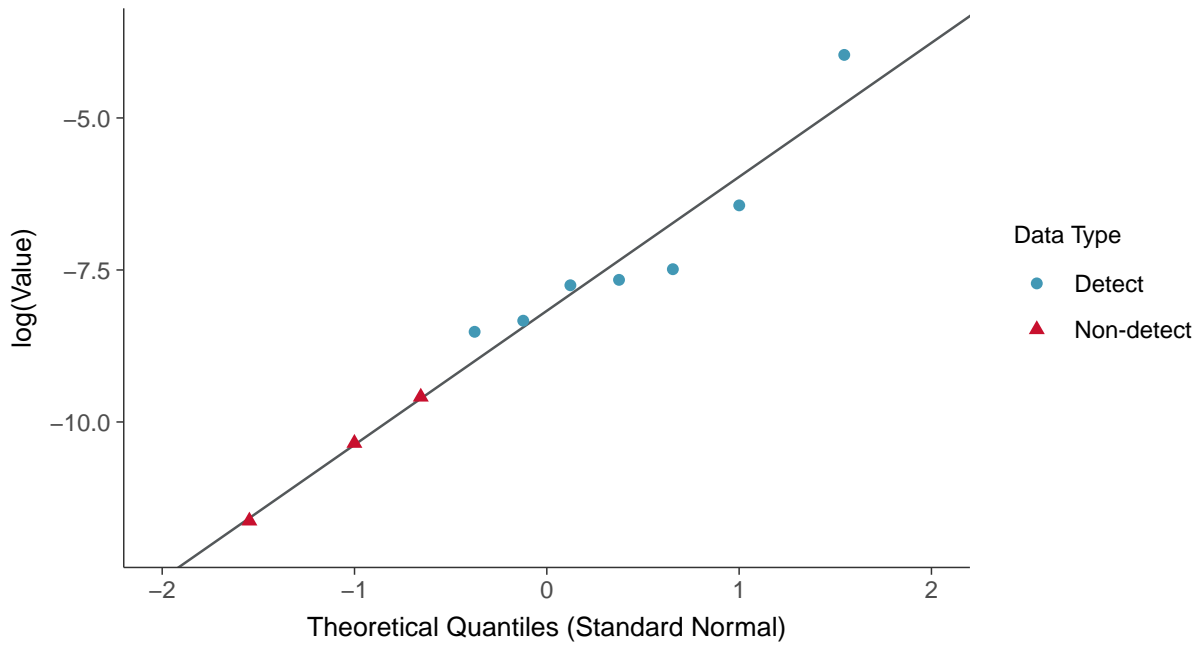
Copper, MW-11 (mg/L)





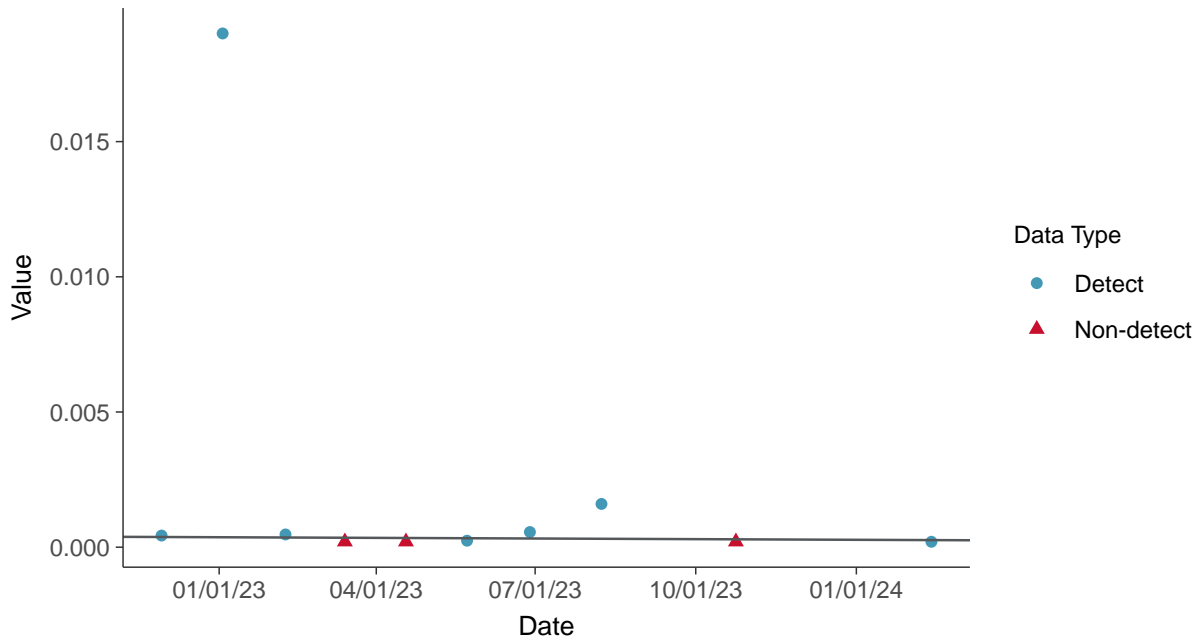
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

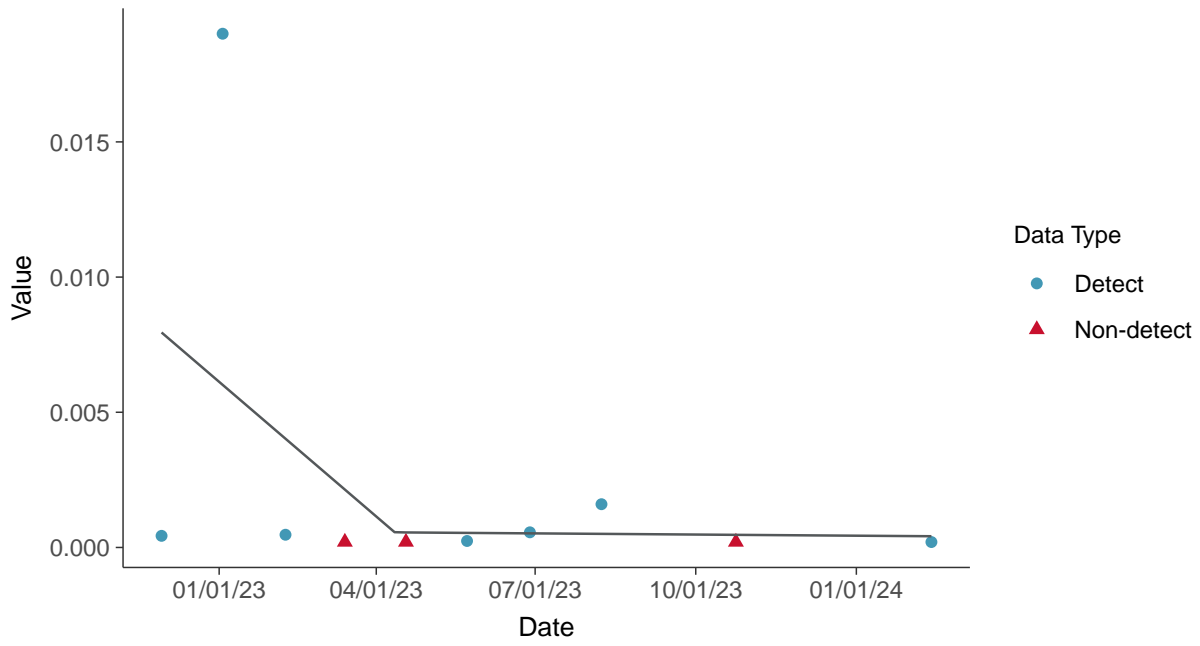
Copper, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Copper, MW-11 (mg/L)



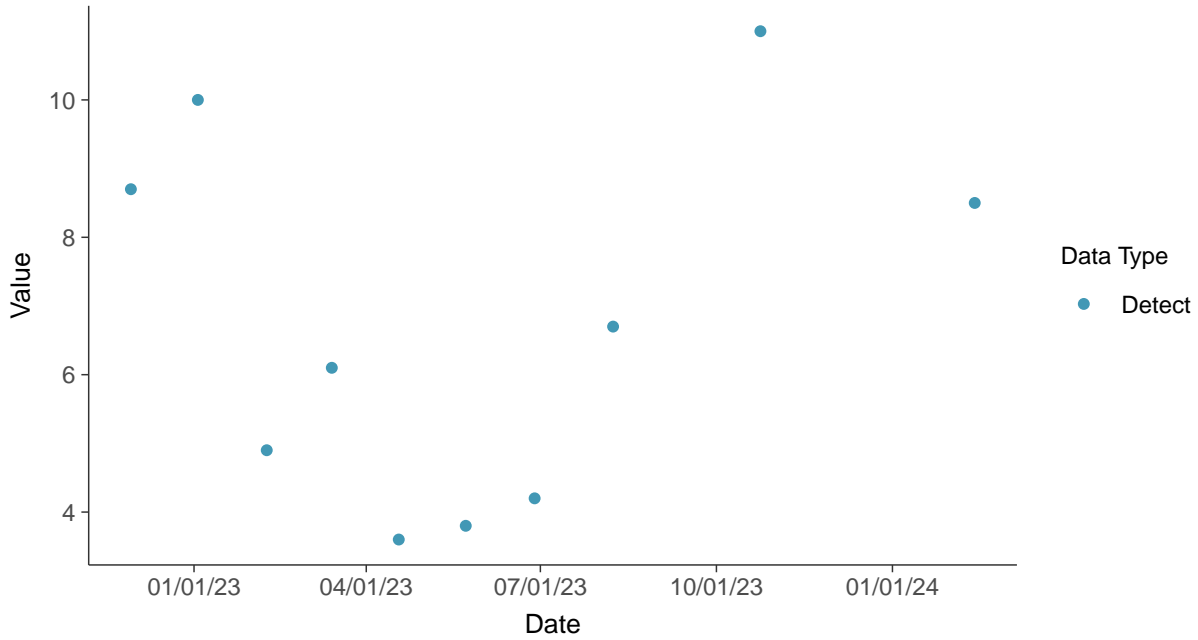


Part 115: Iron, MW-11

ID: 2_21_6_114

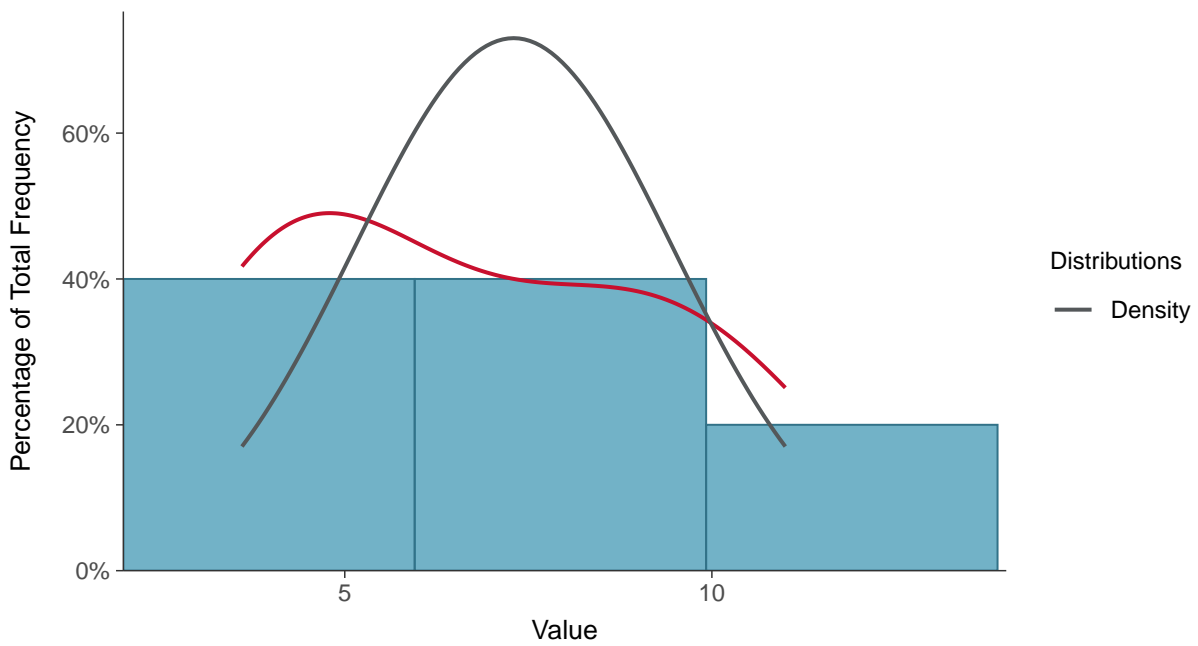
Scatter Plot

Iron, MW-11 (mg/L)



Histogram

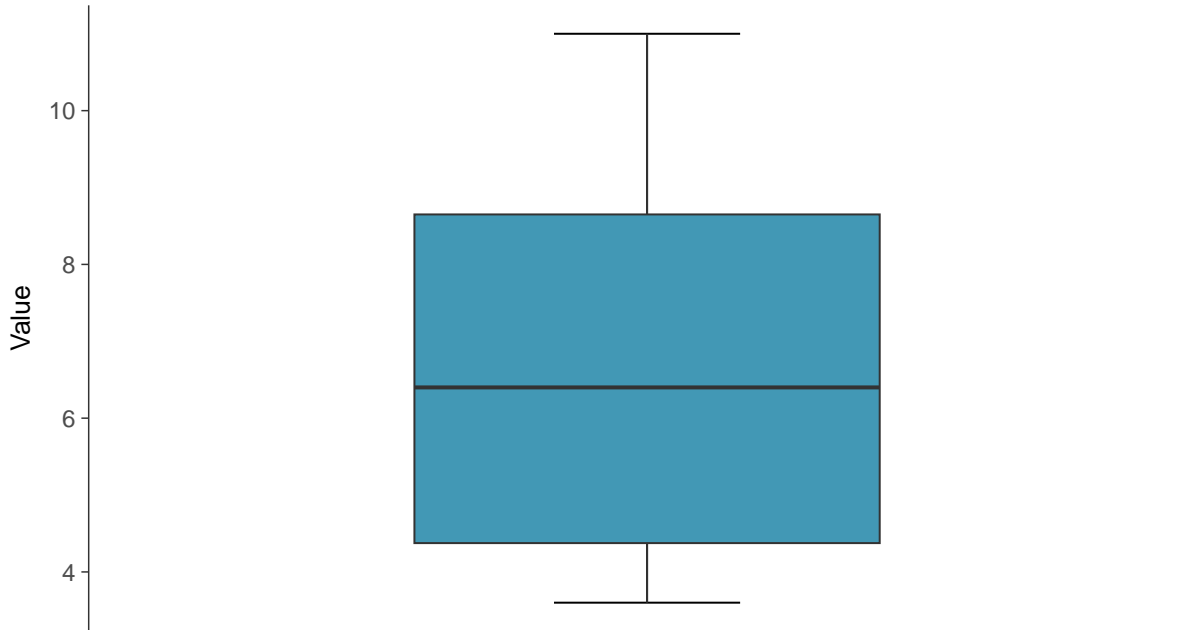
Iron, MW-11 (mg/L)





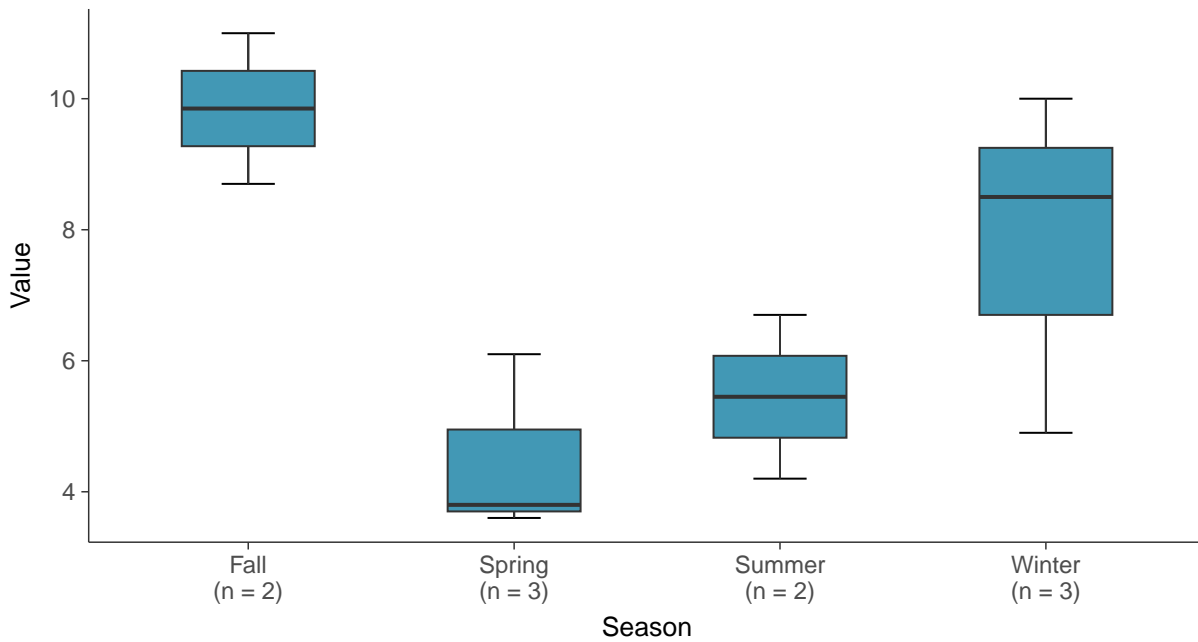
Boxplot

Iron, MW-11 (mg/L)



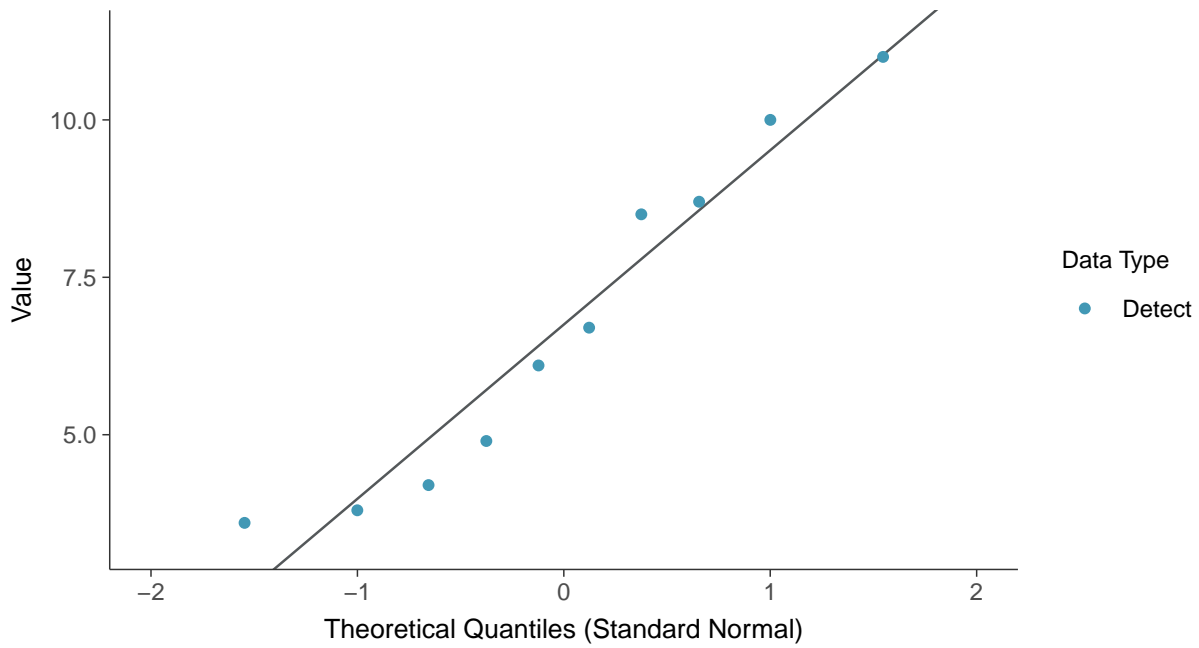
Boxplot by Season

Iron, MW-11 (mg/L)

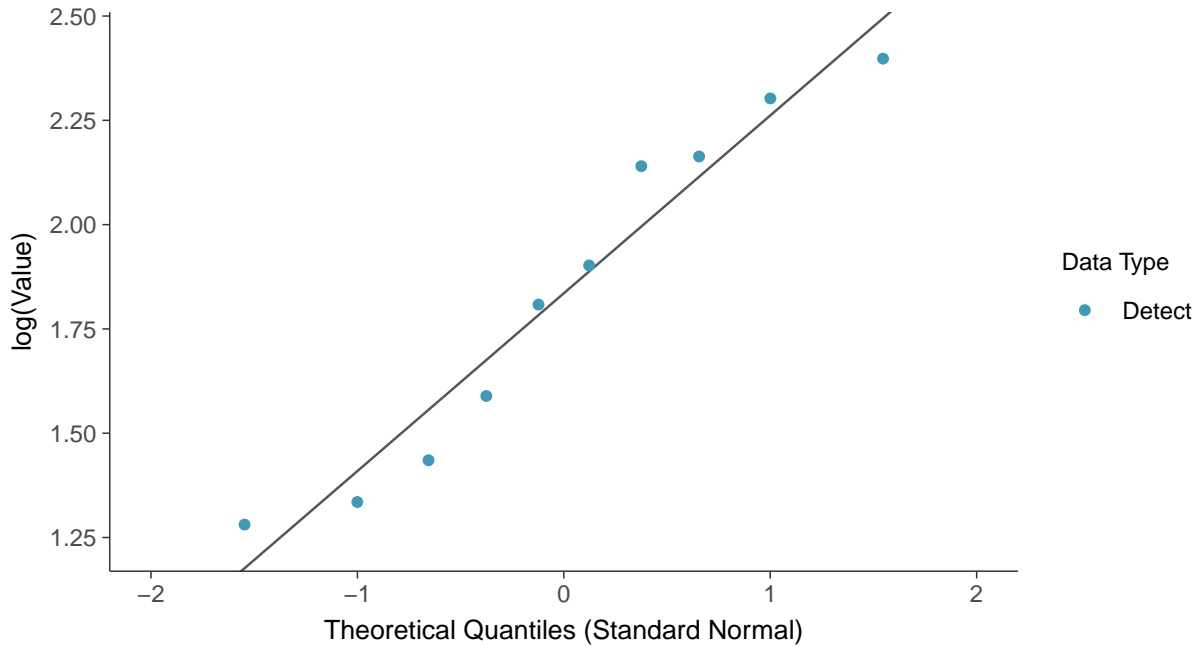


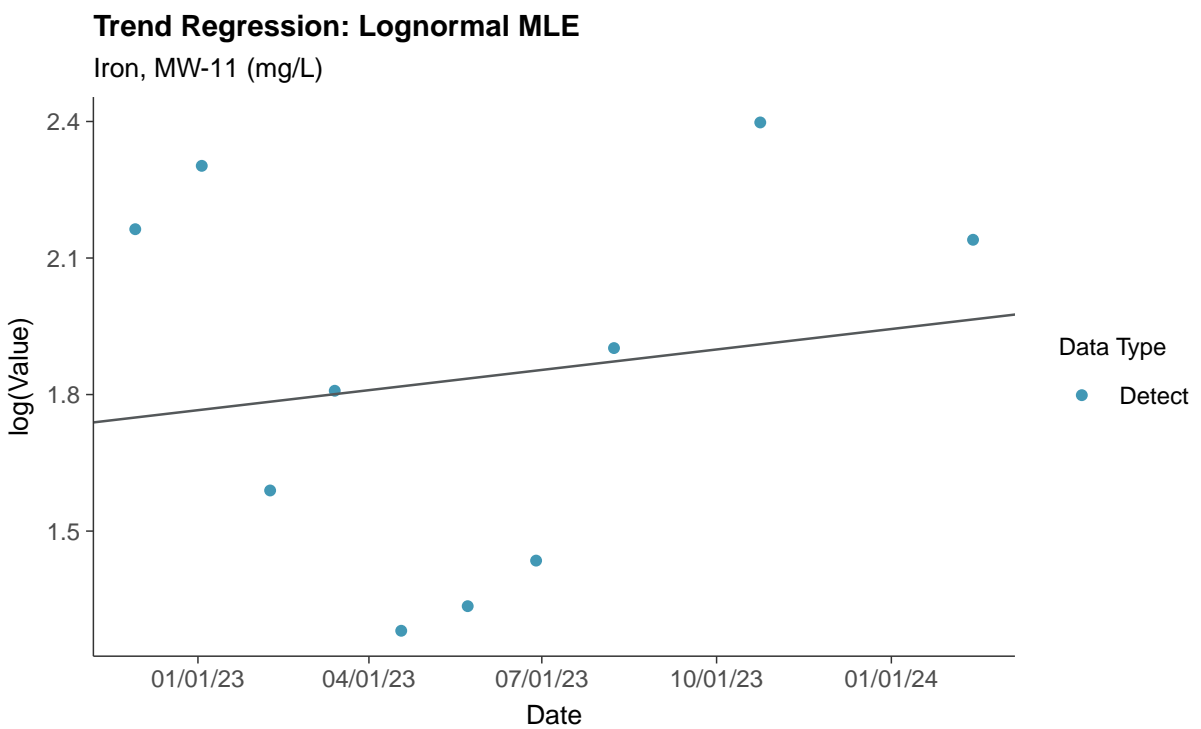
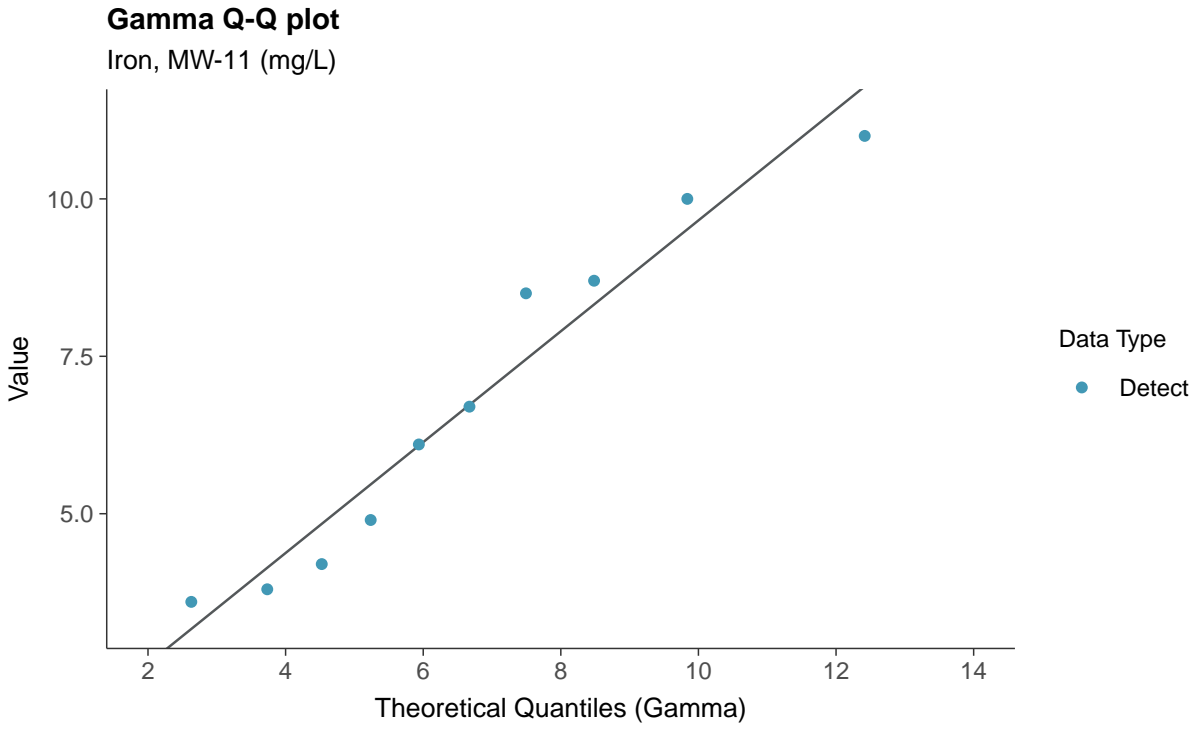


Normal Q-Q plot
Iron, MW-11 (mg/L)



Lognormal Q-Q plot
Iron, MW-11 (mg/L)

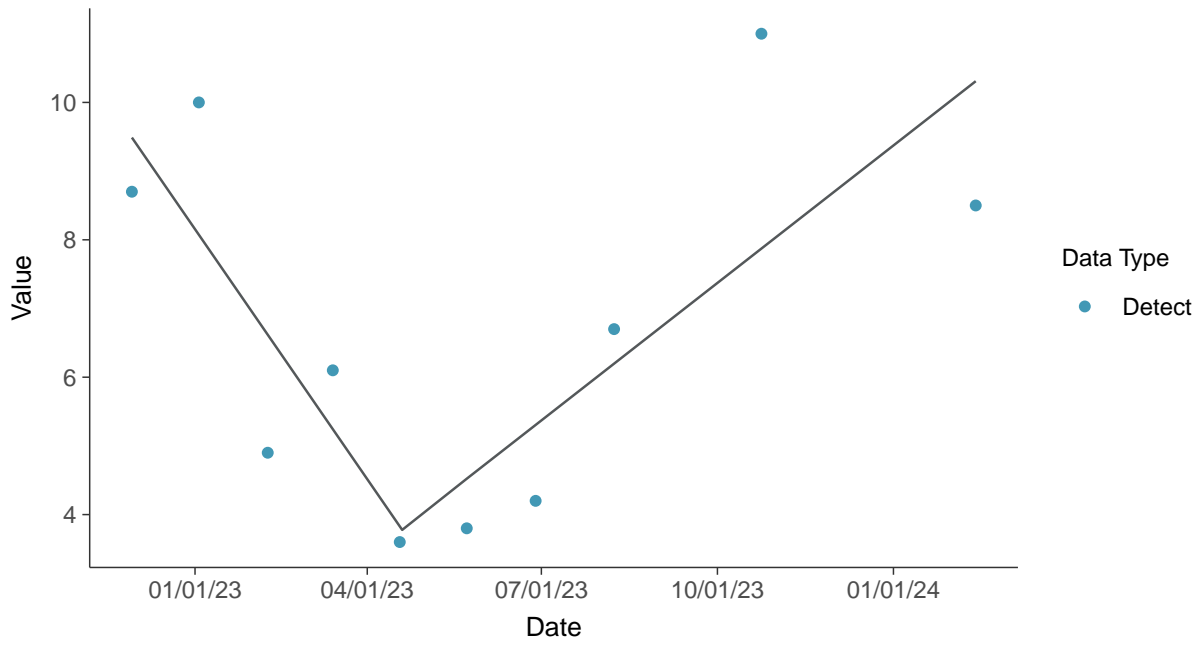






Trend Regression: Piecewise Linear-Linear

Iron, MW-11 (mg/L)



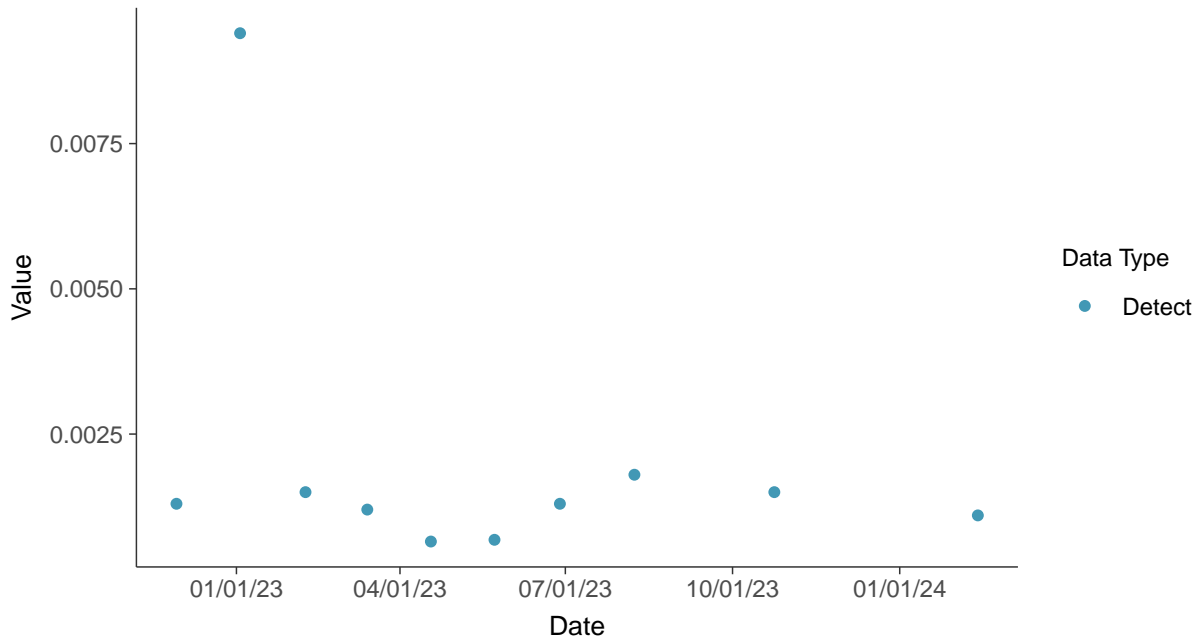


Part 115: Nickel, MW-11

ID: 2_21_6_119

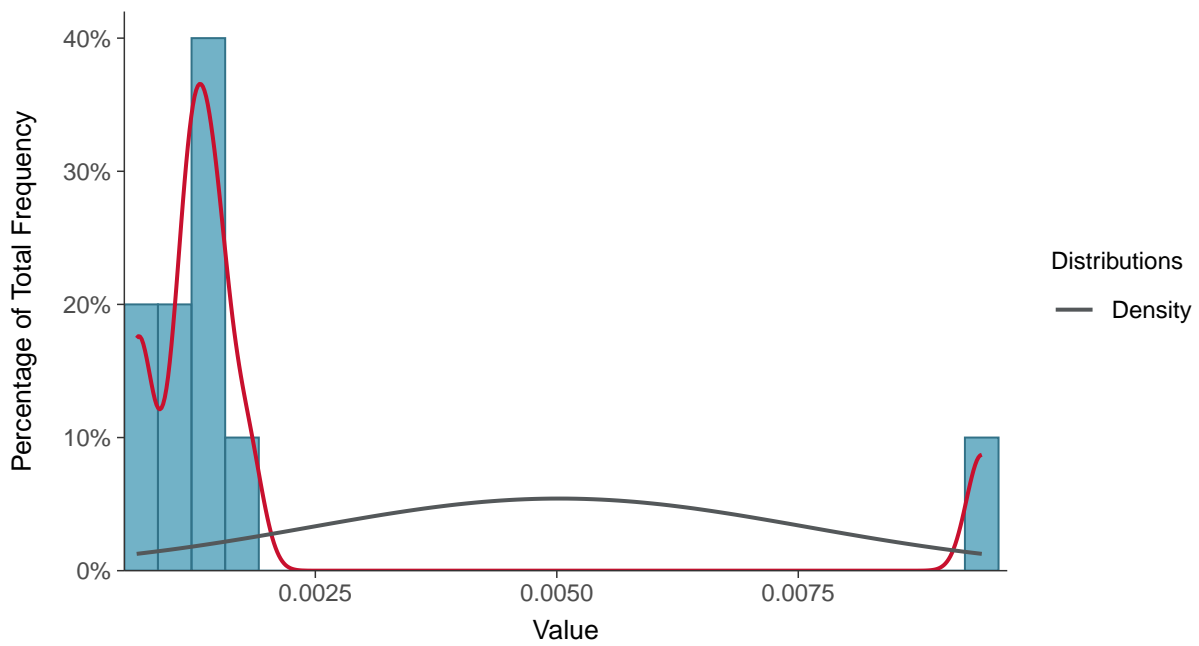
Scatter Plot

Nickel, MW-11 (mg/L)



Histogram

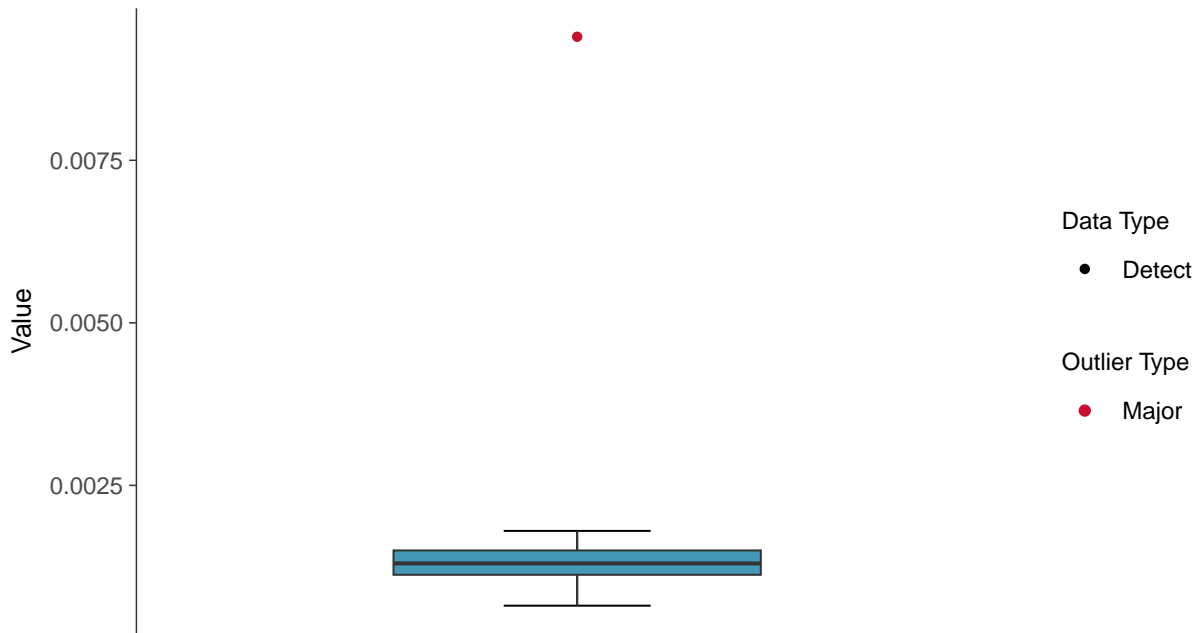
Nickel, MW-11 (mg/L)





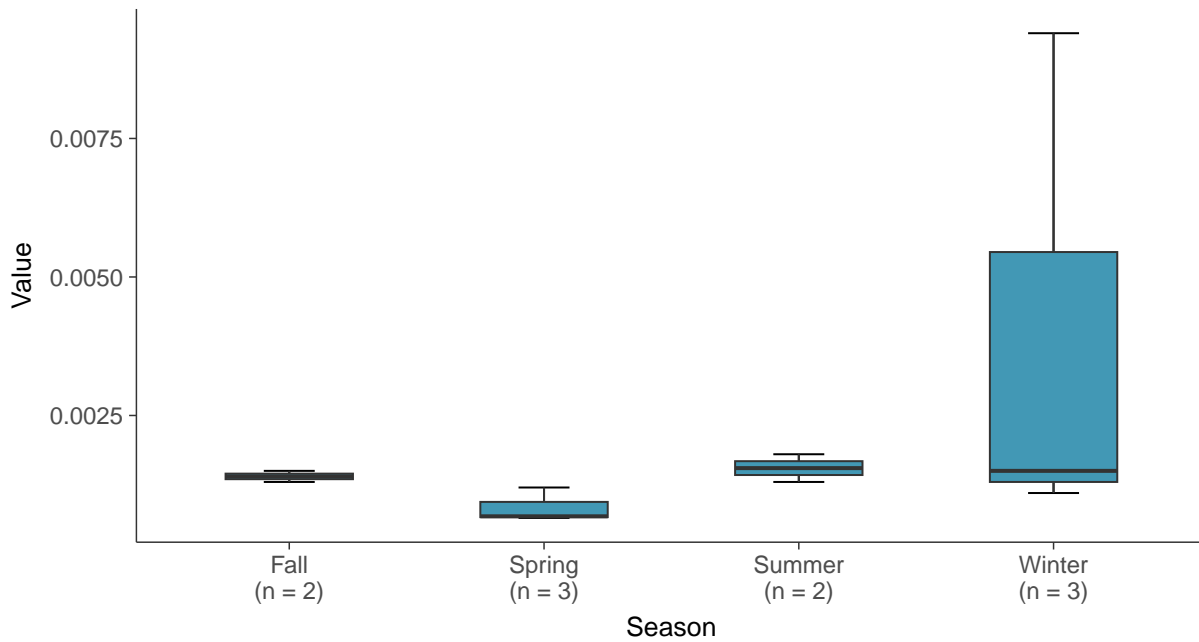
Boxplot

Nickel, MW-11 (mg/L)



Boxplot by Season

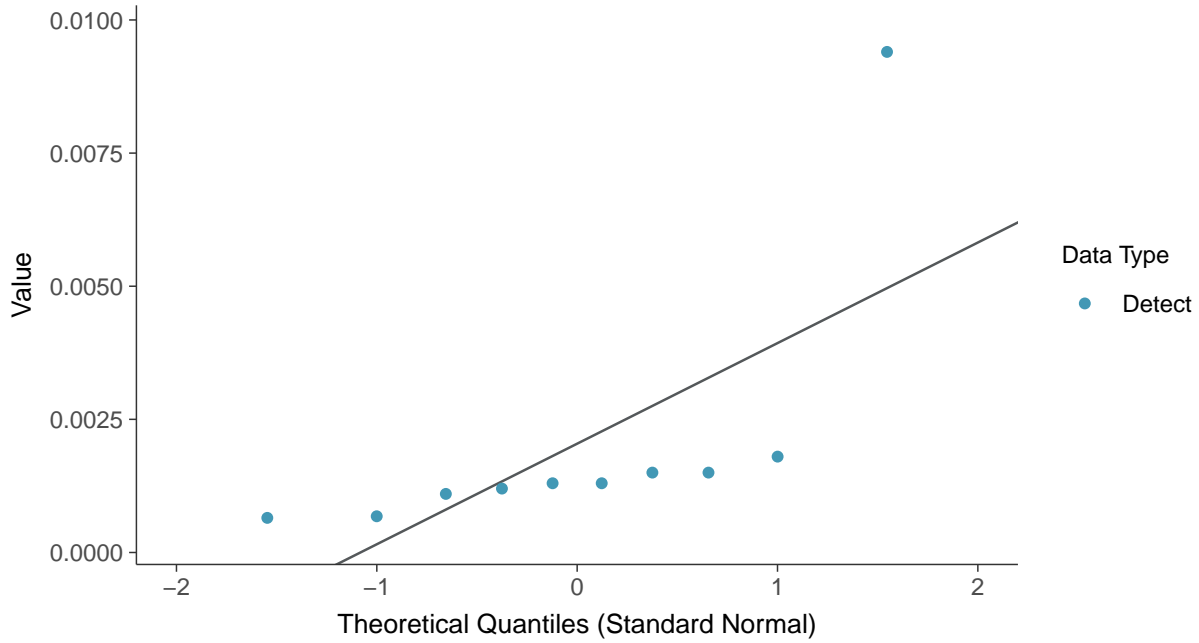
Nickel, MW-11 (mg/L)





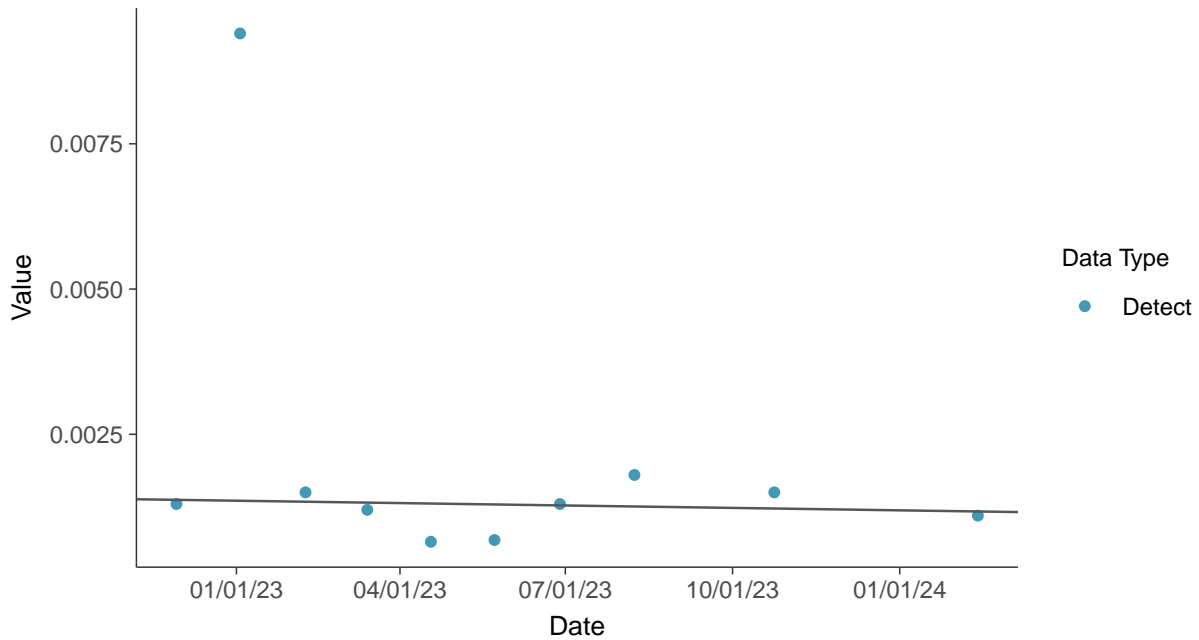
Normal Q-Q plot

Nickel, MW-11 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

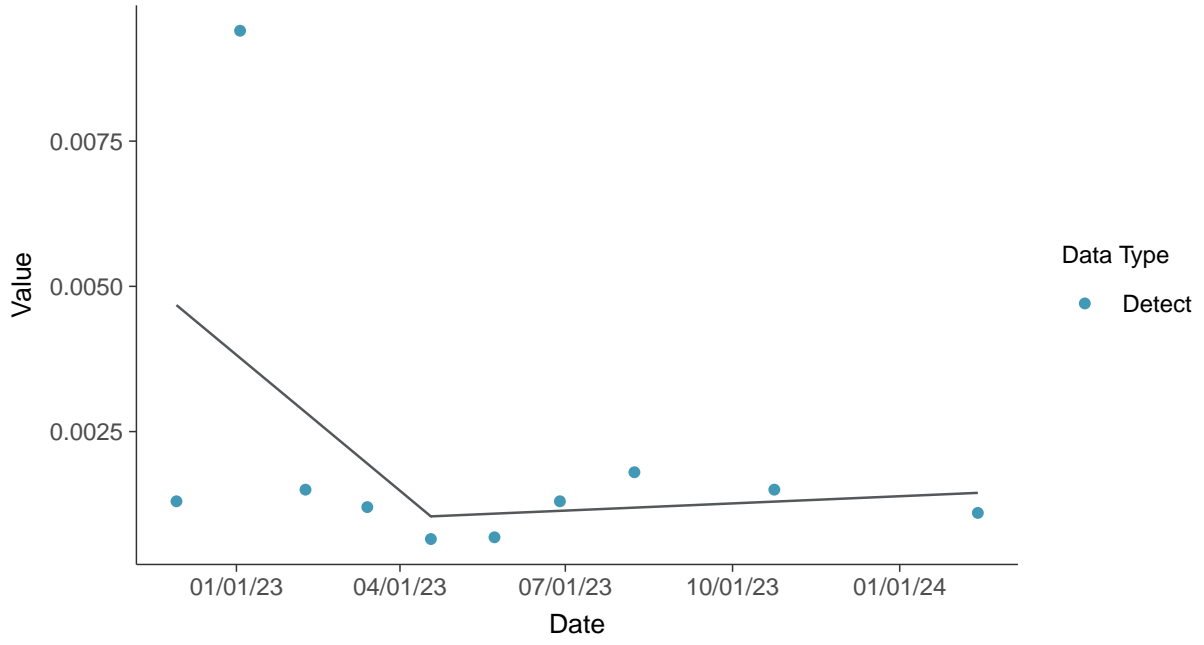
Nickel, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

Nickel, MW-11 (mg/L)



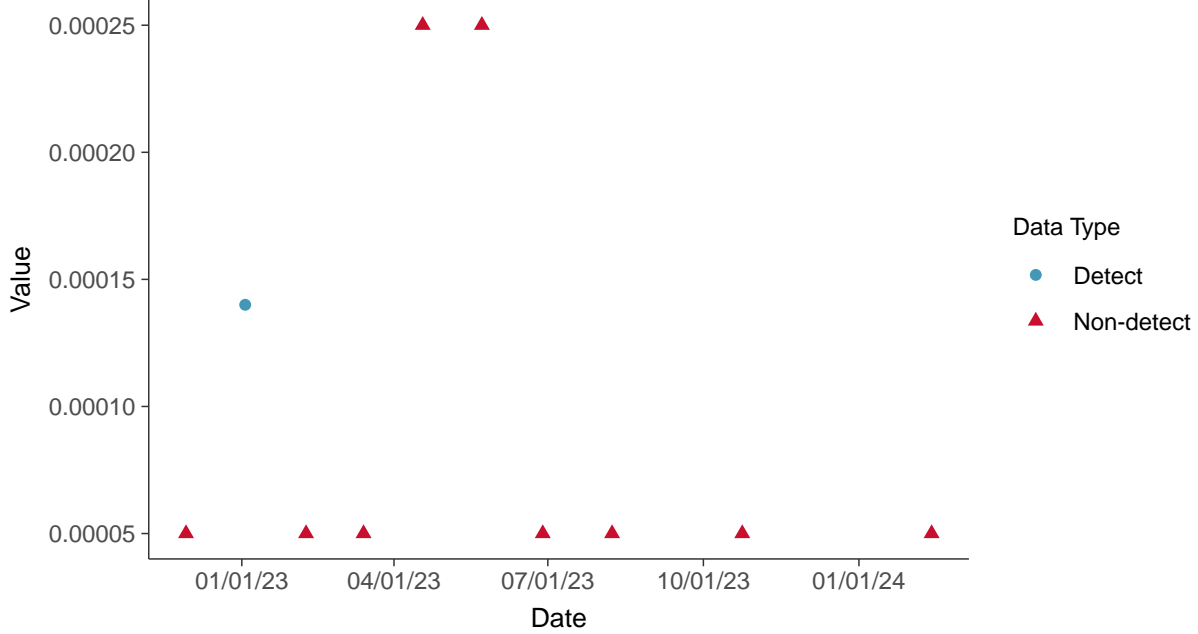


Part 115: Silver, MW-11

ID: 2_21_6_123

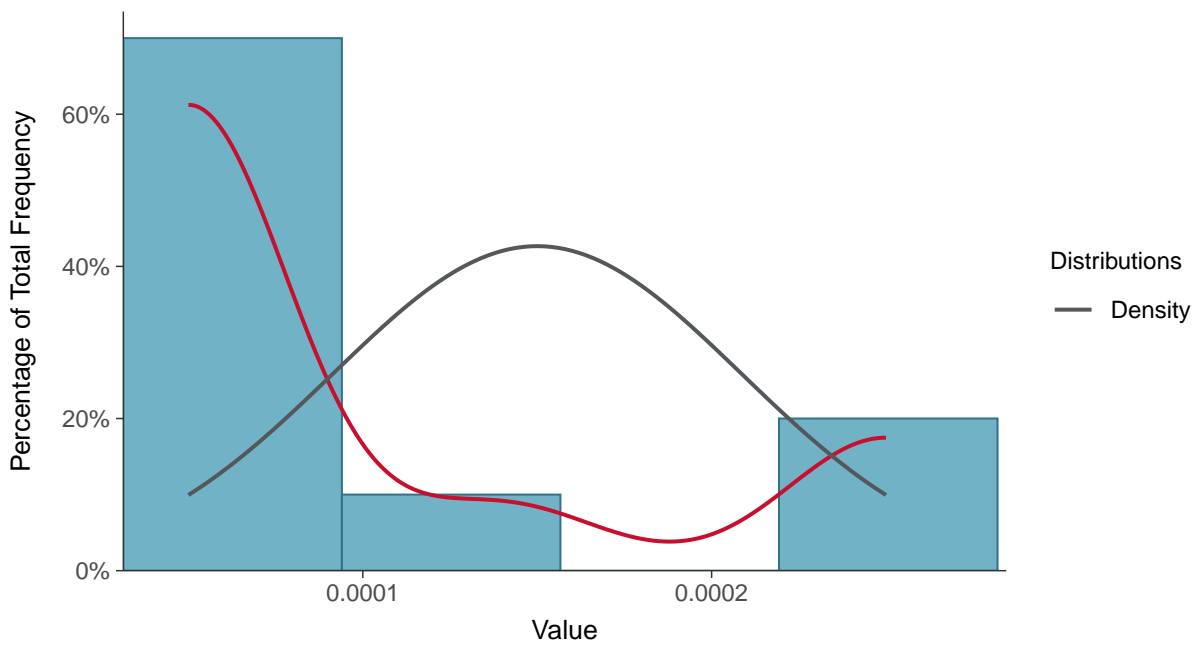
Scatter Plot

Silver, MW-11 (mg/L)



Histogram

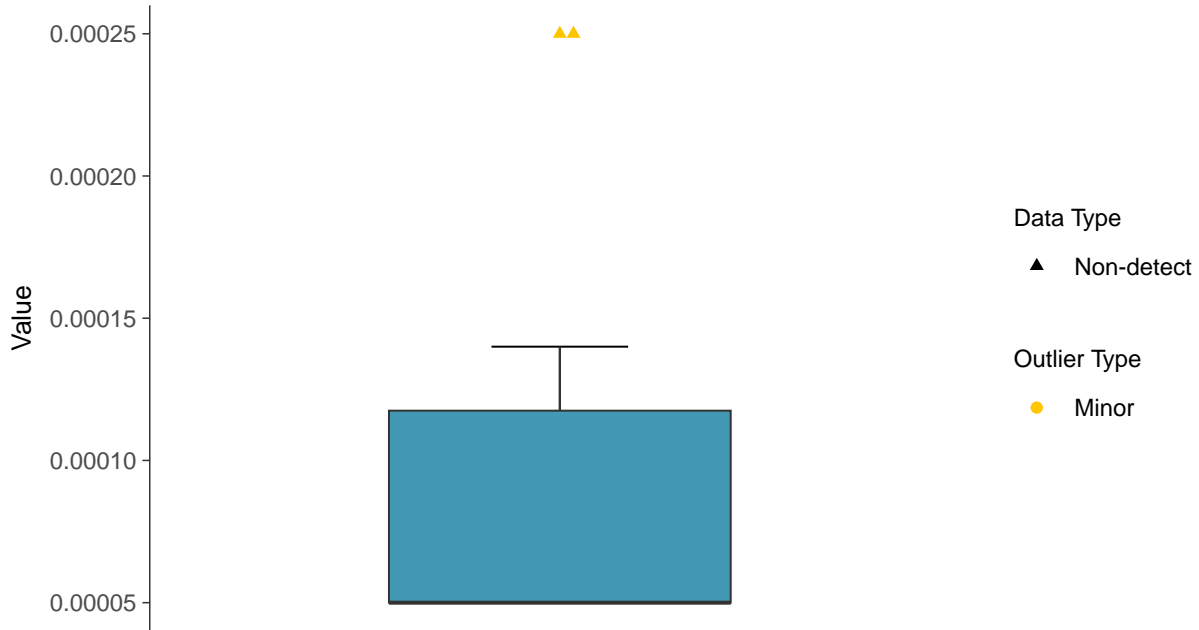
Silver, MW-11 (mg/L)





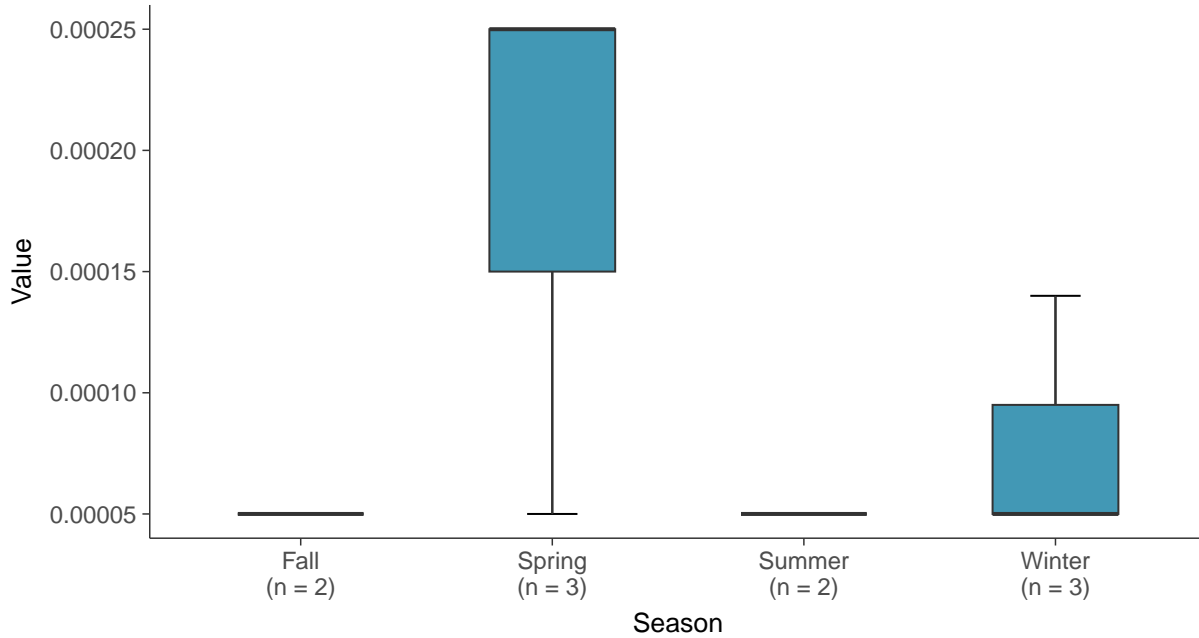
Boxplot

Silver, MW-11 (mg/L)



Boxplot by Season

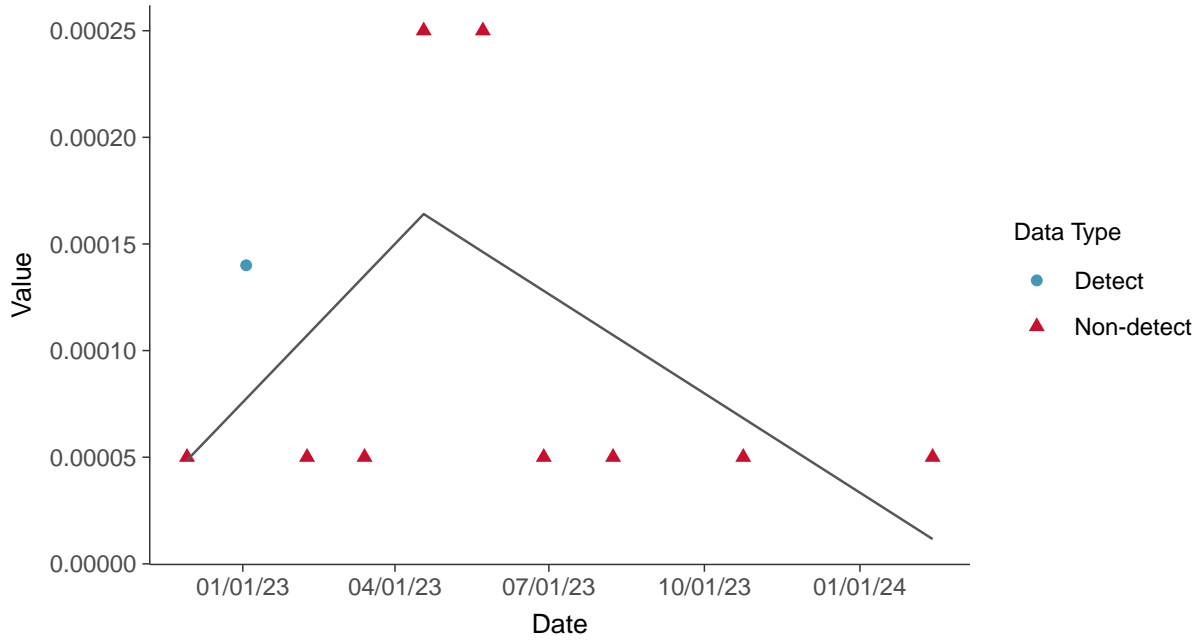
Silver, MW-11 (mg/L)





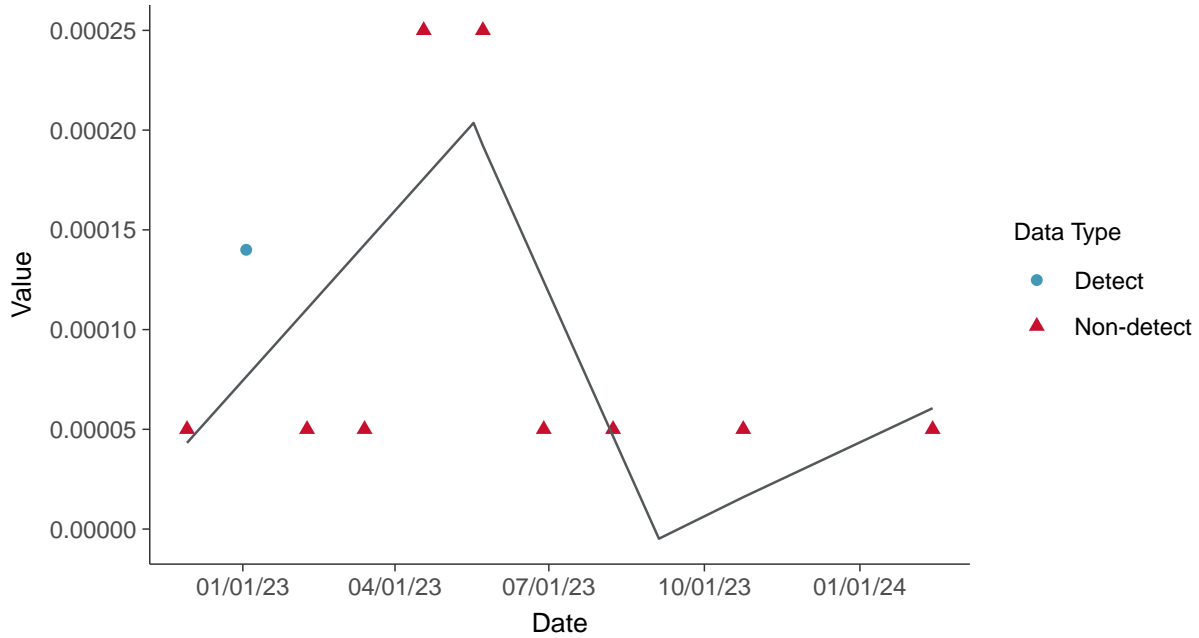
Trend Regression: Piecewise Linear-Linear

Silver, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-11 (mg/L)



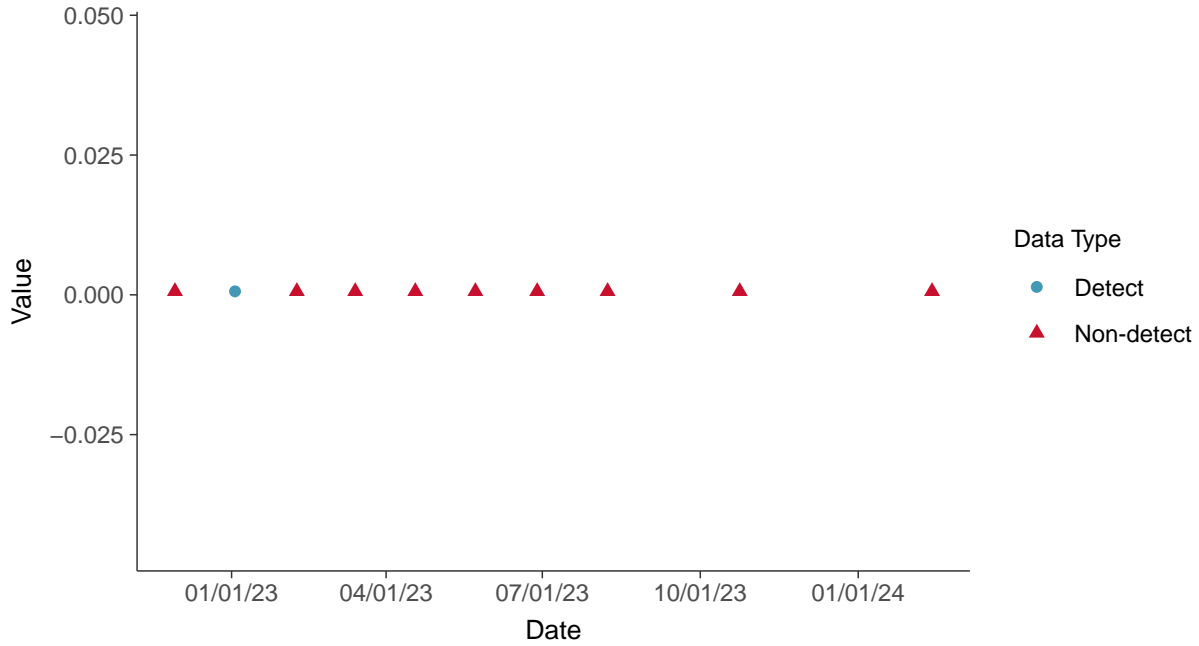


Part 115: Vanadium, MW-11

ID: 2_21_6_129

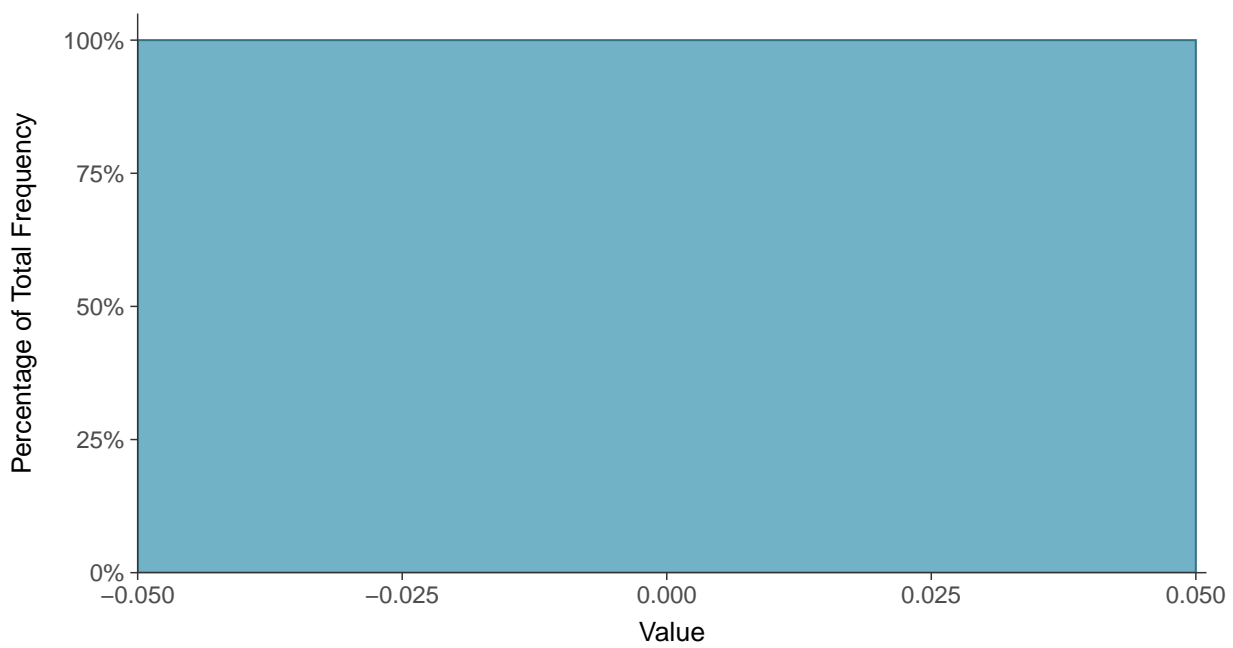
Scatter Plot

Vanadium, MW-11 (mg/L)



Histogram

Vanadium, MW-11 (mg/L)





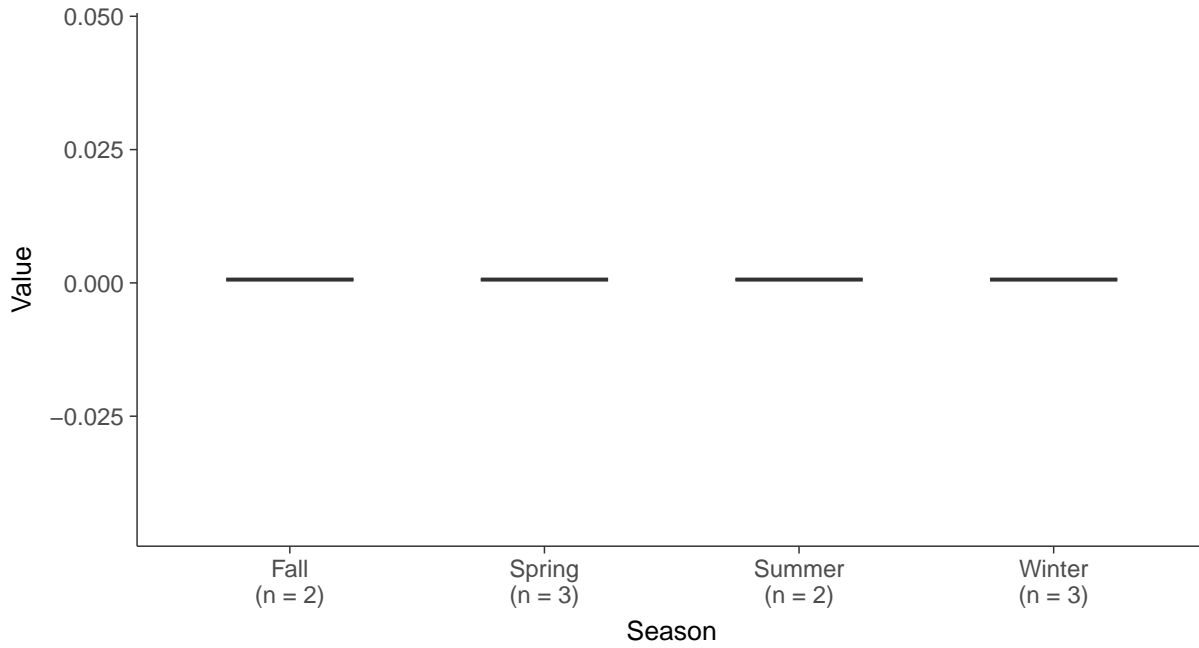
Boxplot

Vanadium, MW-11 (mg/L)



Boxplot by Season

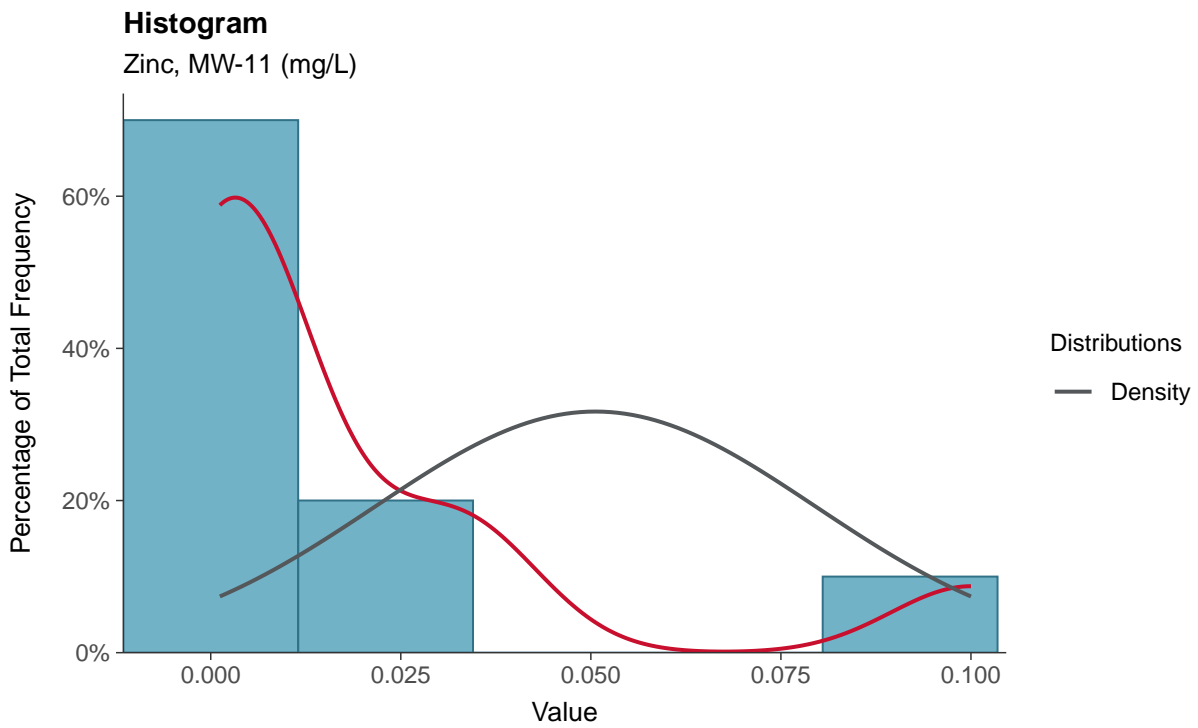
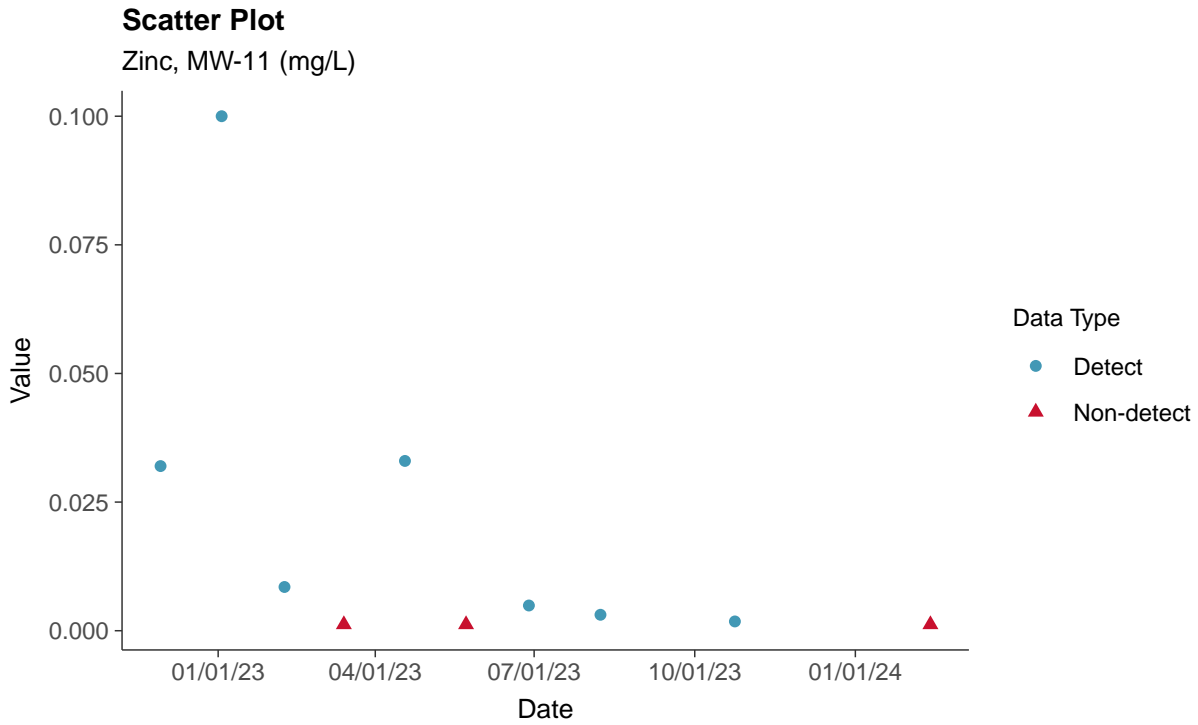
Vanadium, MW-11 (mg/L)





Part 115: Zinc, MW-11

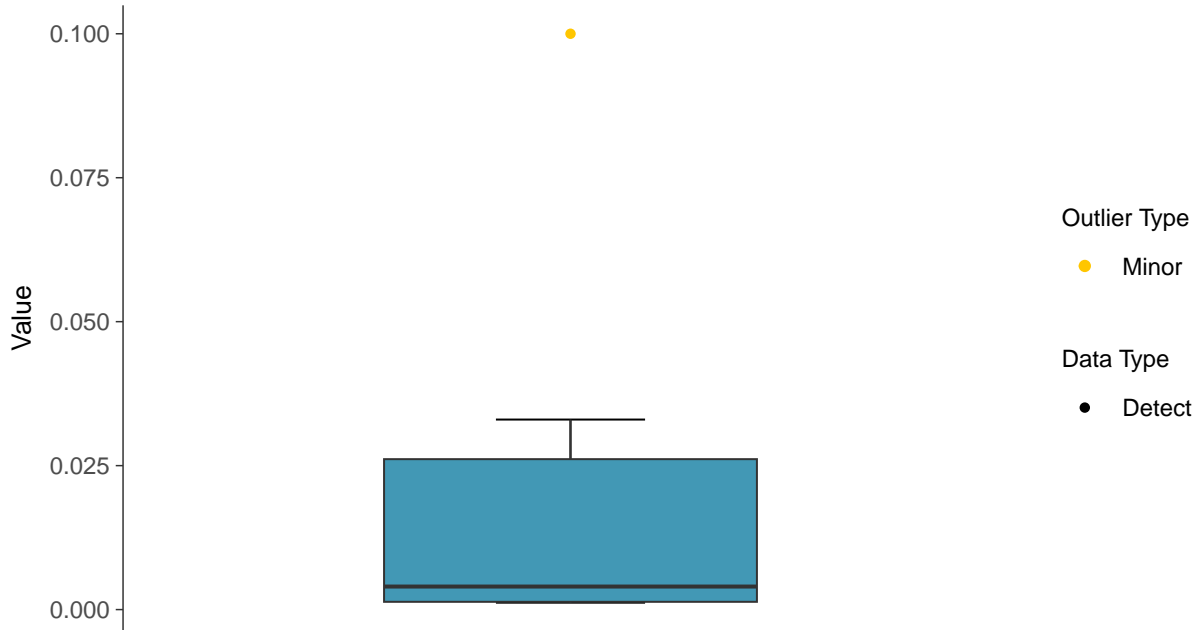
ID: 2_21_6_130





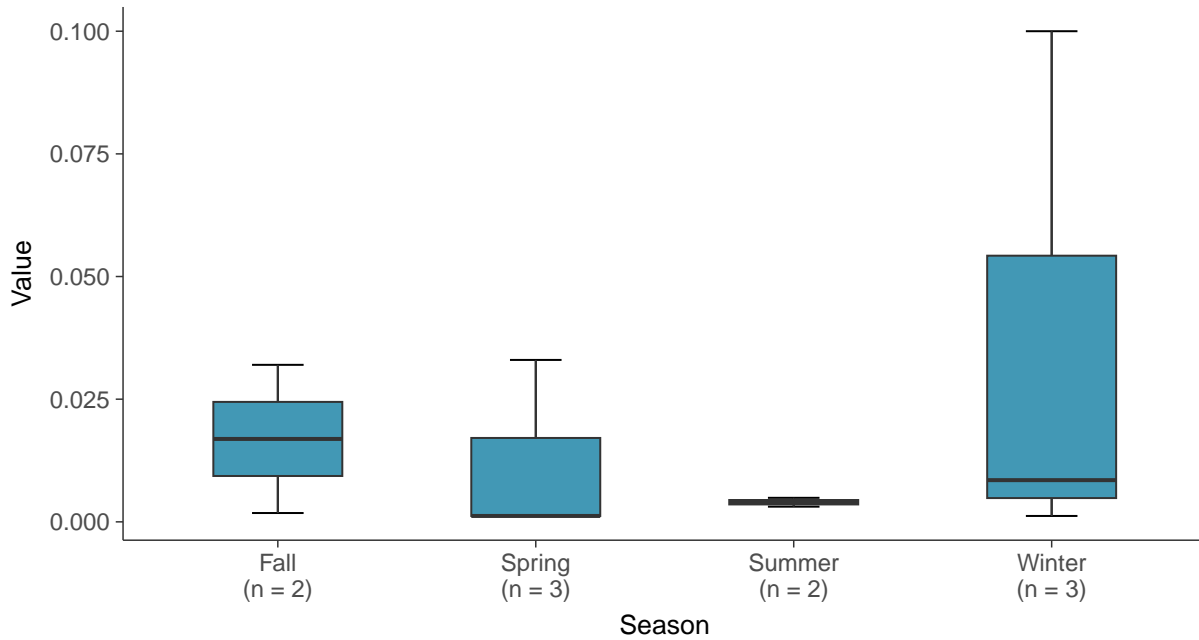
Boxplot

Zinc, MW-11 (mg/L)



Boxplot by Season

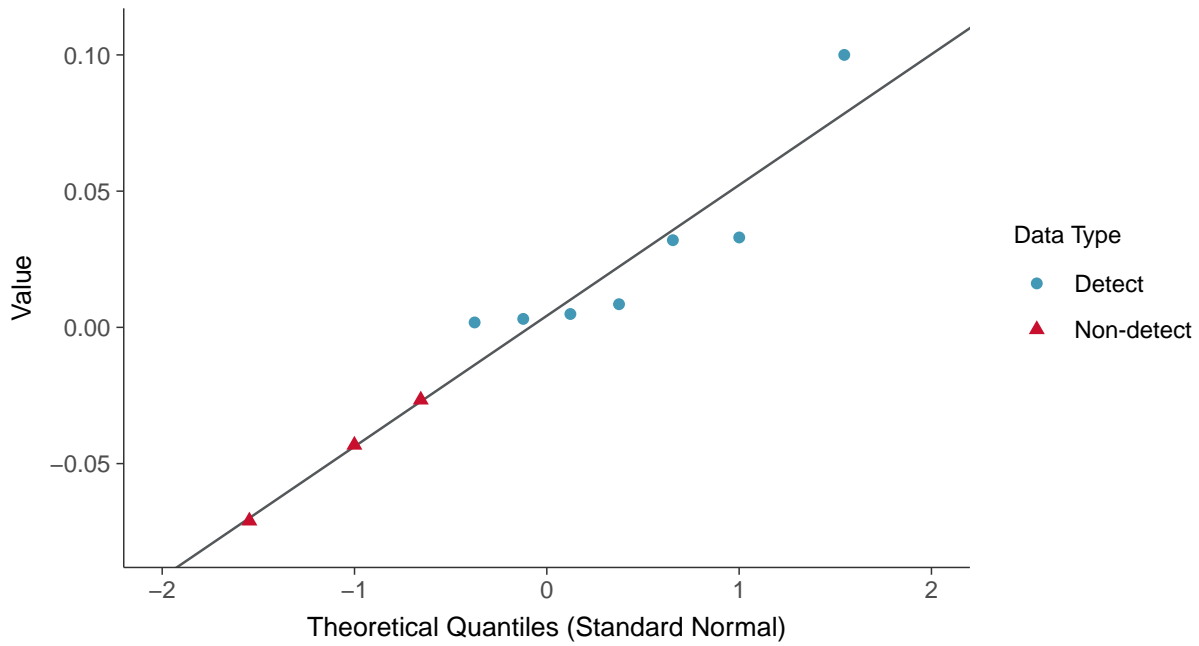
Zinc, MW-11 (mg/L)





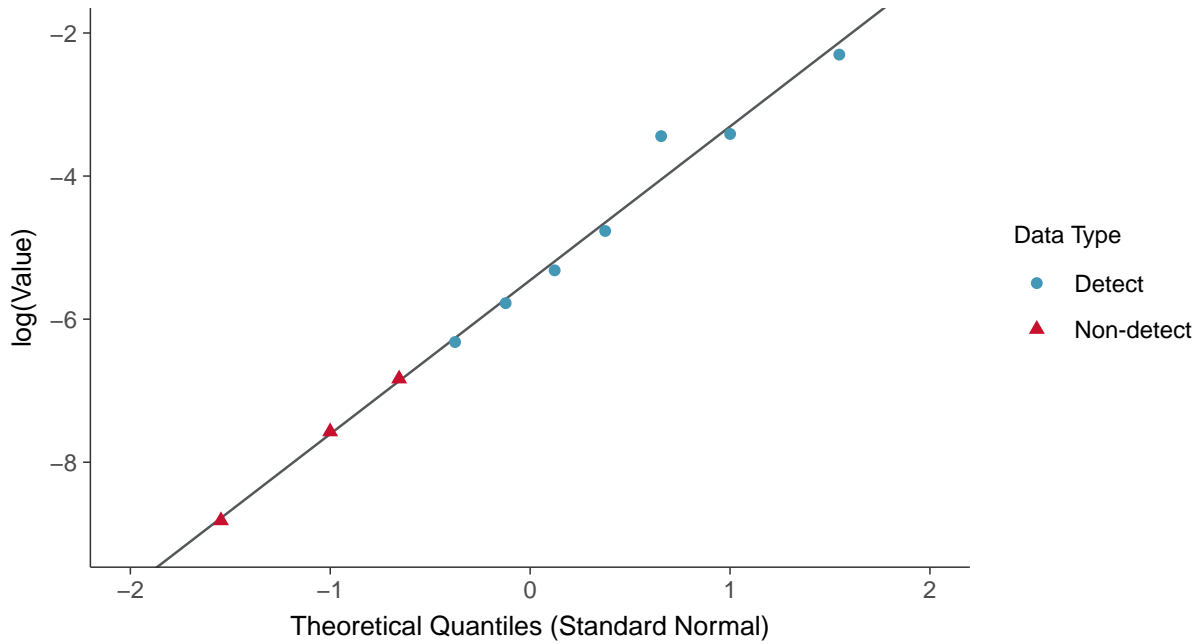
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

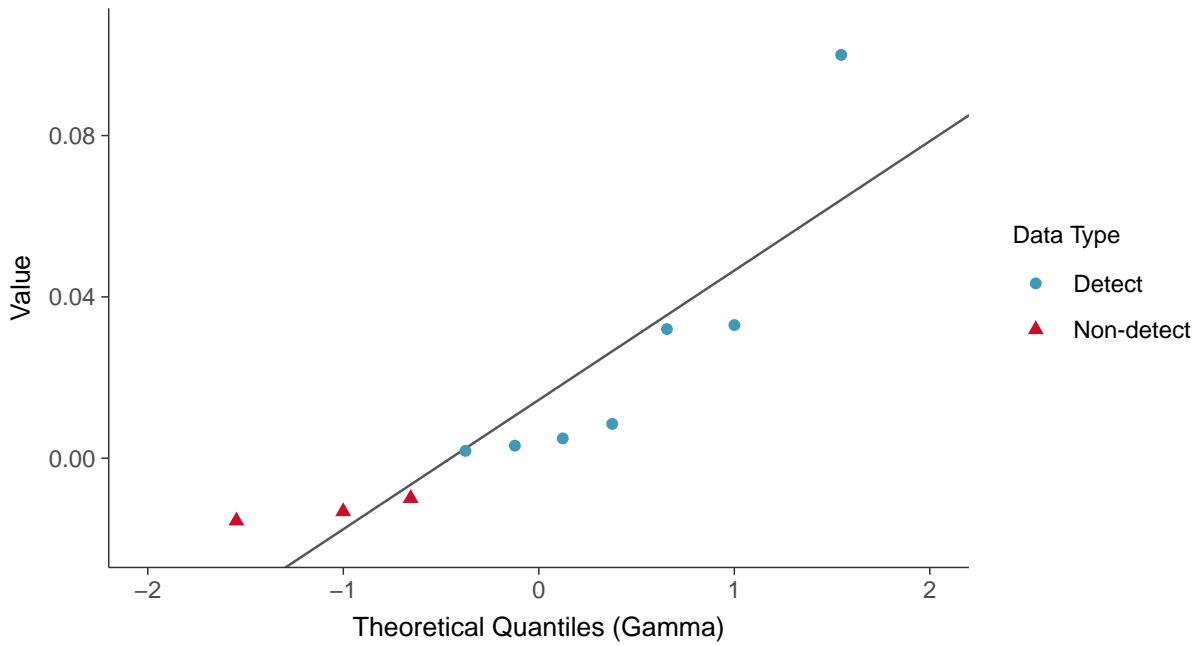
Zinc, MW-11 (mg/L)





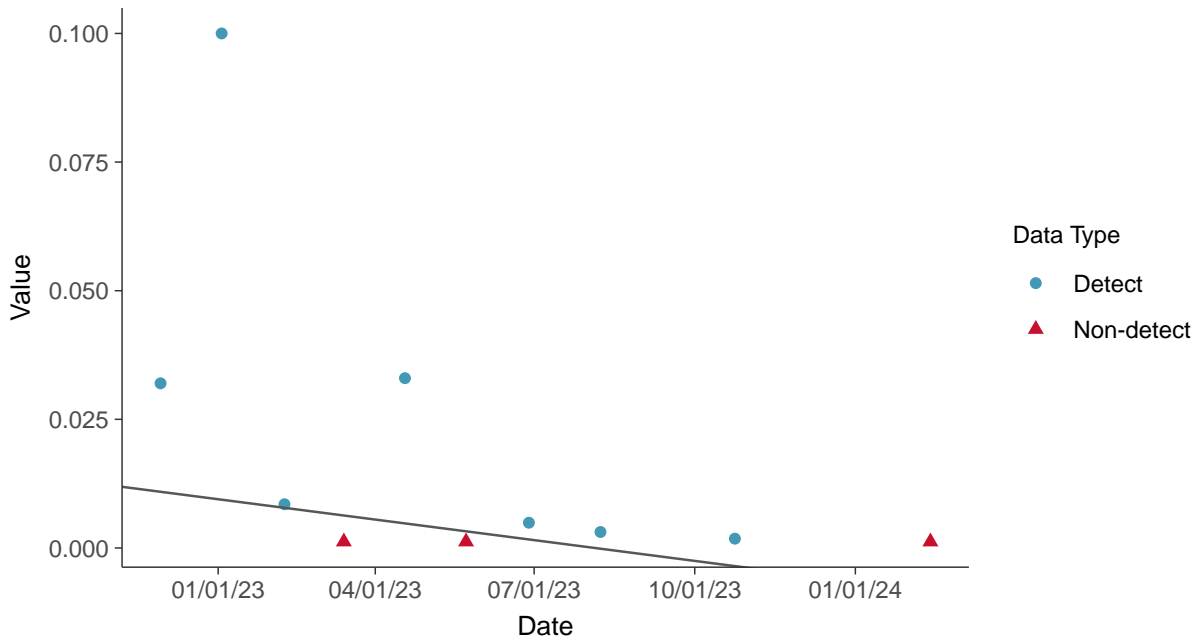
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-11 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

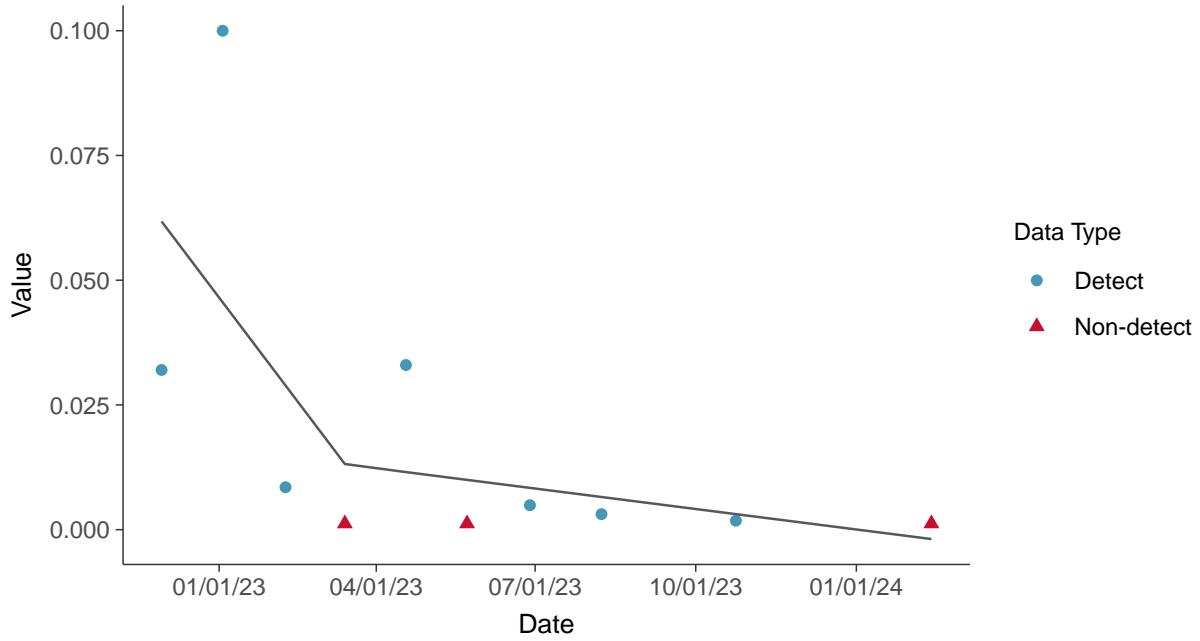
Zinc, MW-11 (mg/L)





Trend Regression: Piecewise Linear-Linear

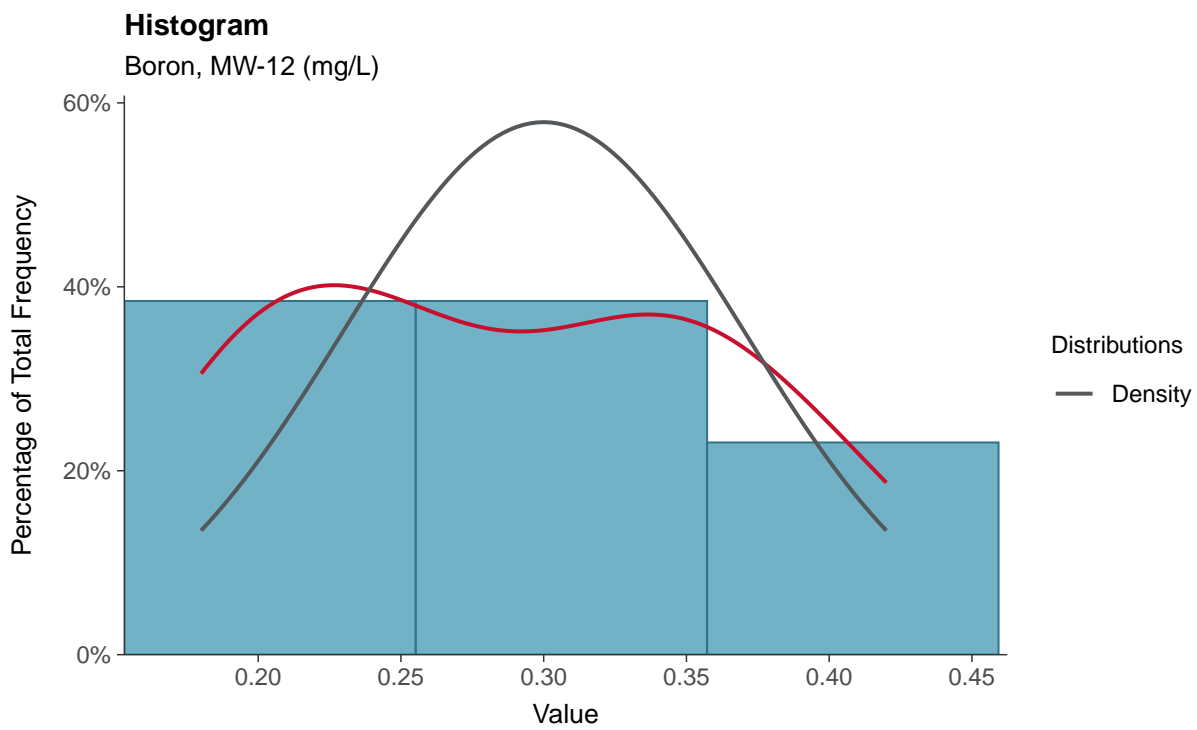
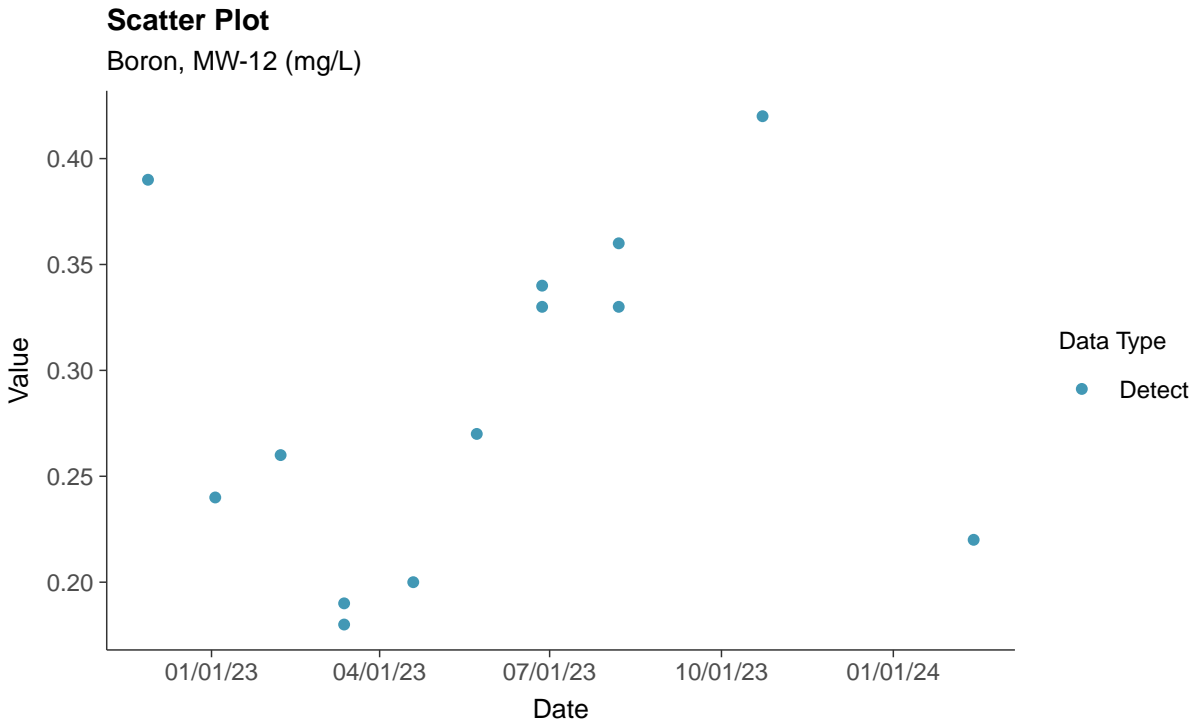
Zinc, MW-11 (mg/L)





Appendix III: Boron, MW-12

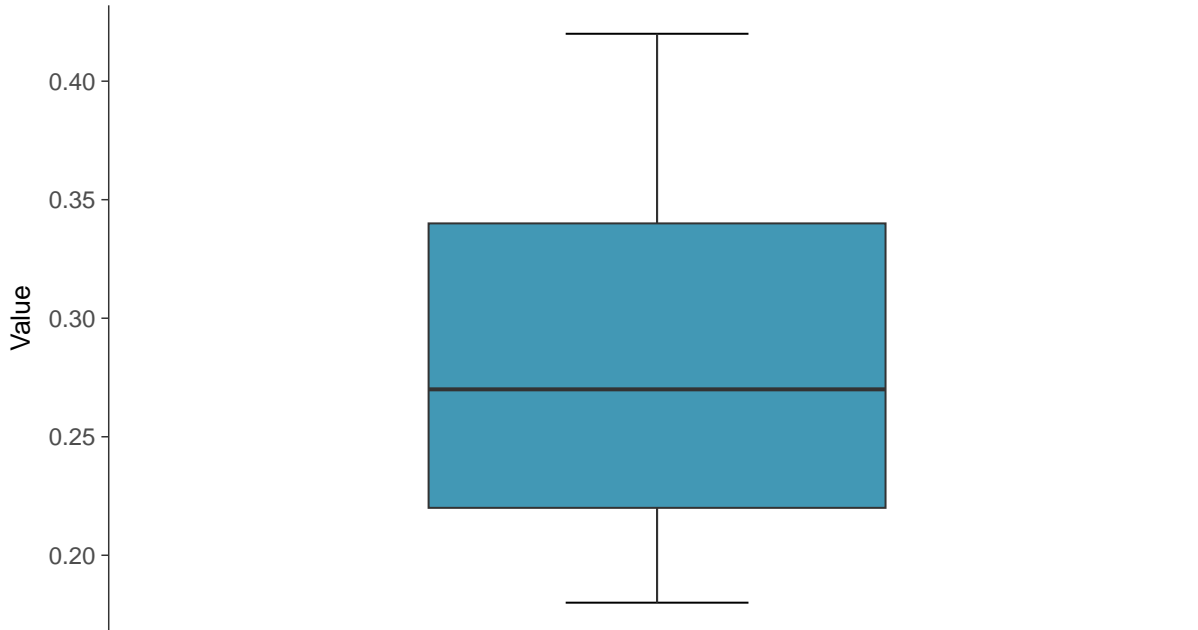
ID: 2_22_4_105





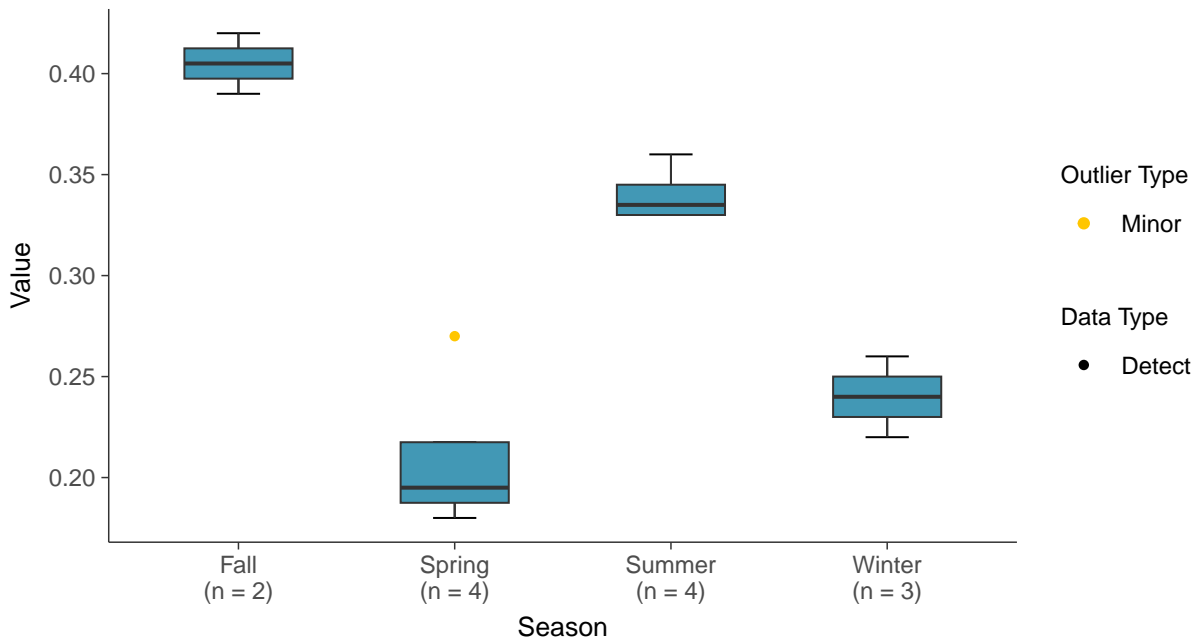
Boxplot

Boron, MW-12 (mg/L)



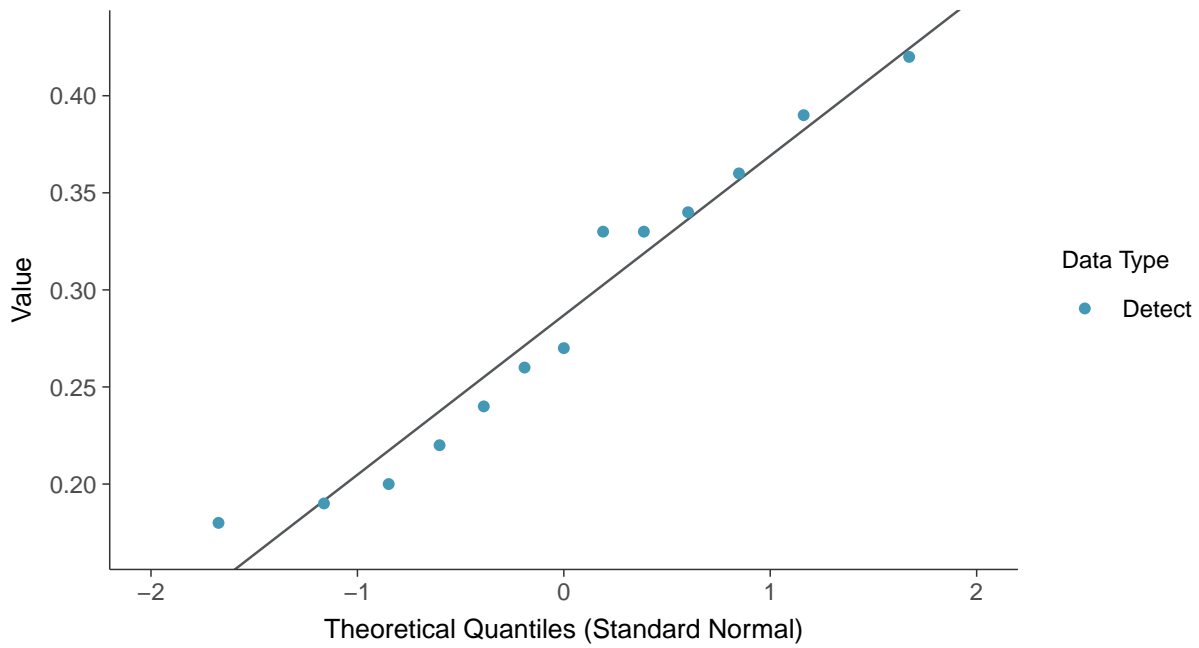
Boxplot by Season

Boron, MW-12 (mg/L)

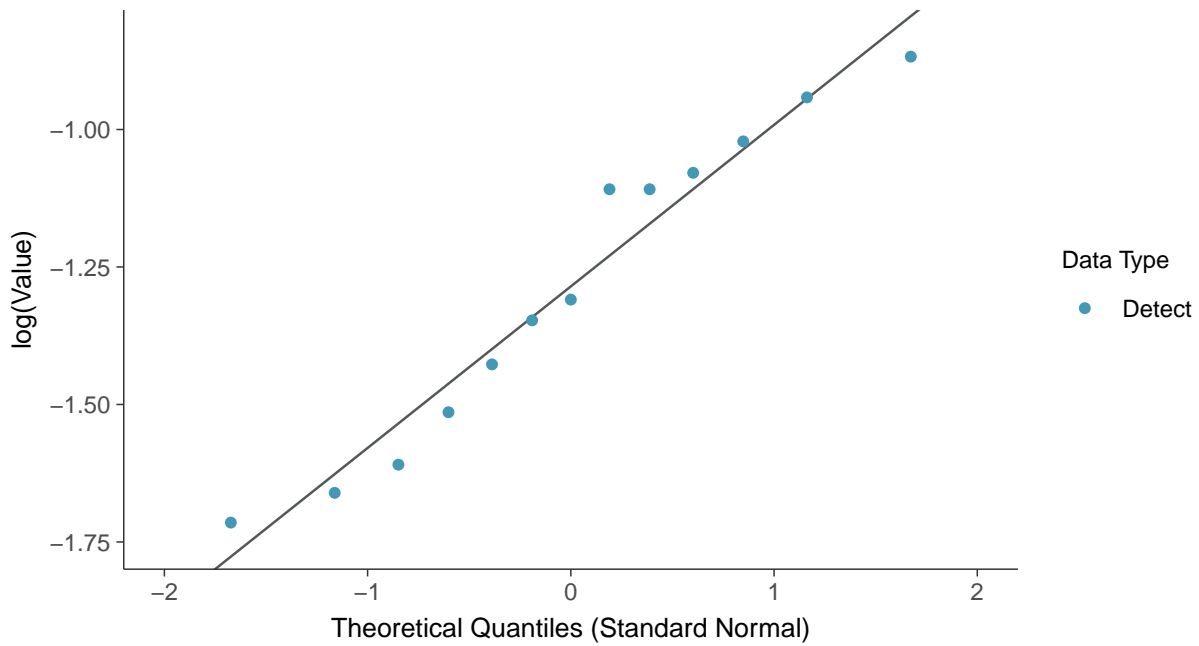




Normal Q-Q plot
Boron, MW-12 (mg/L)

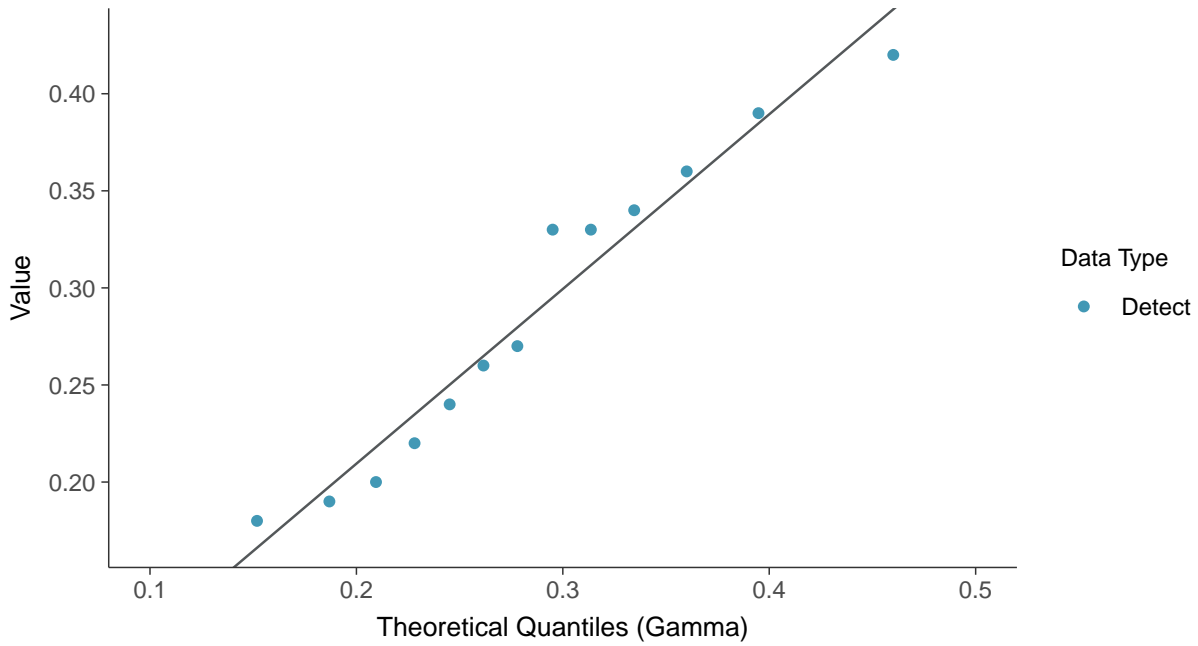


Lognormal Q-Q plot
Boron, MW-12 (mg/L)

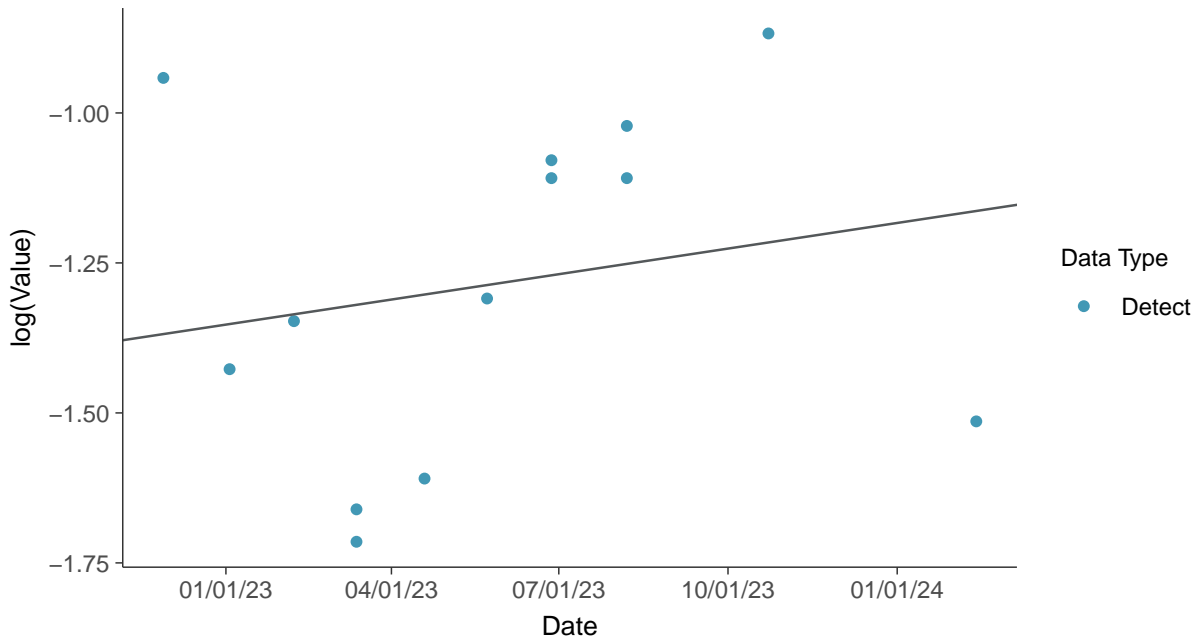




Gamma Q-Q plot
Boron, MW-12 (mg/L)

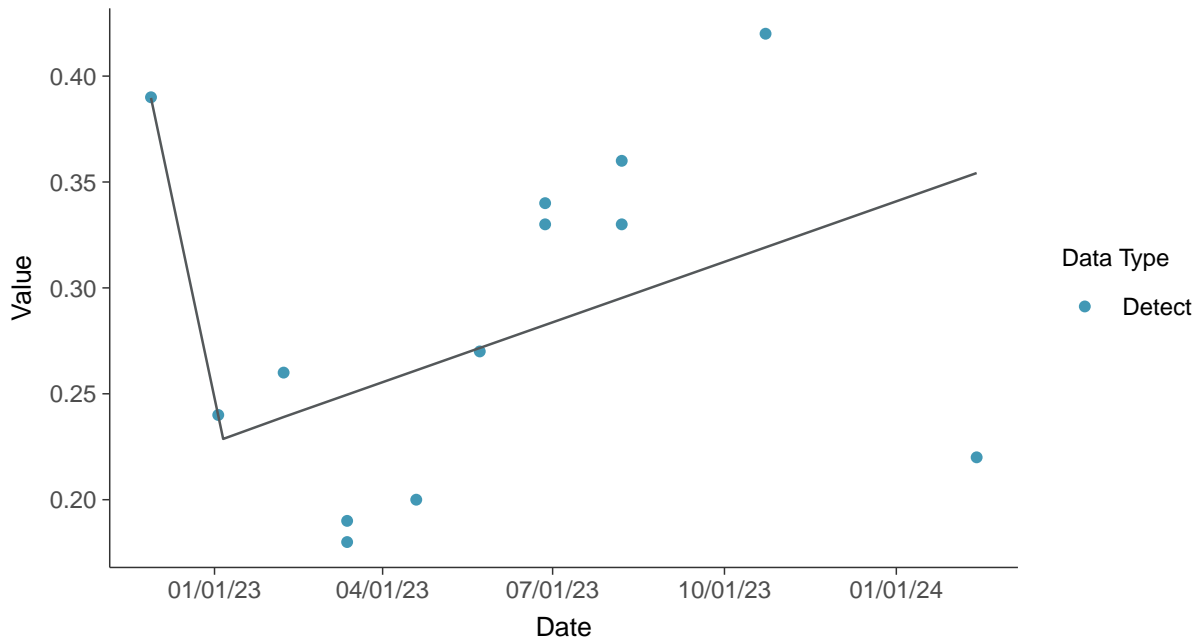


Trend Regression: Lognormal MLE
Boron, MW-12 (mg/L)

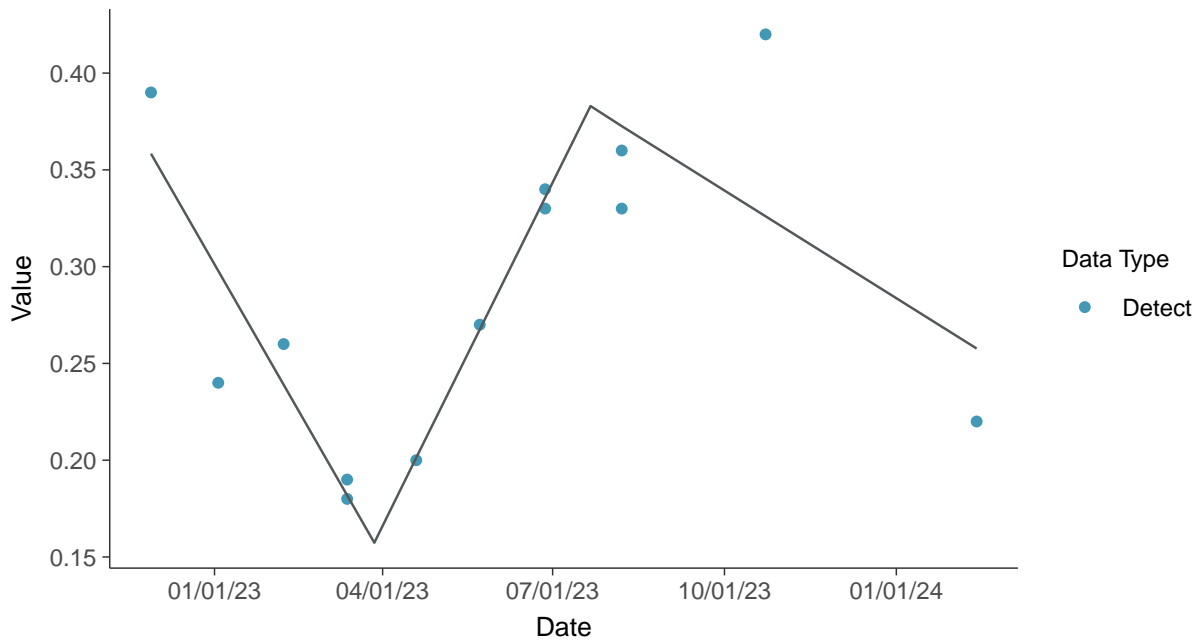




Trend Regression: Piecewise Linear-Linear
Boron, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Boron, MW-12 (mg/L)



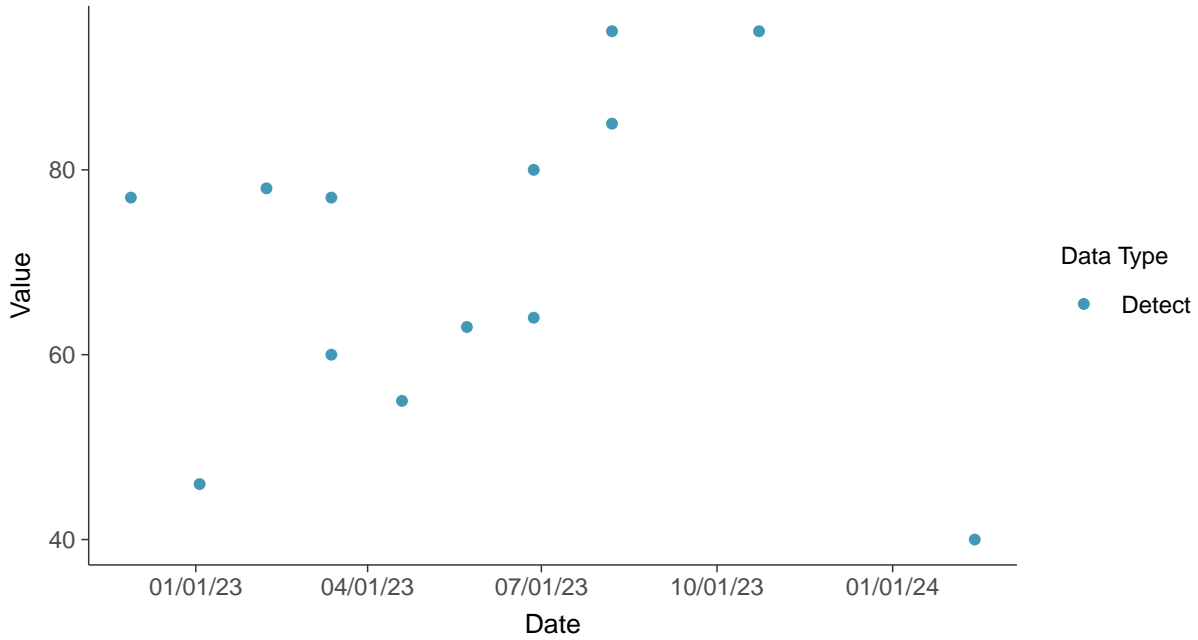


Appendix III: Calcium, MW-12

ID: 2_22_4_107

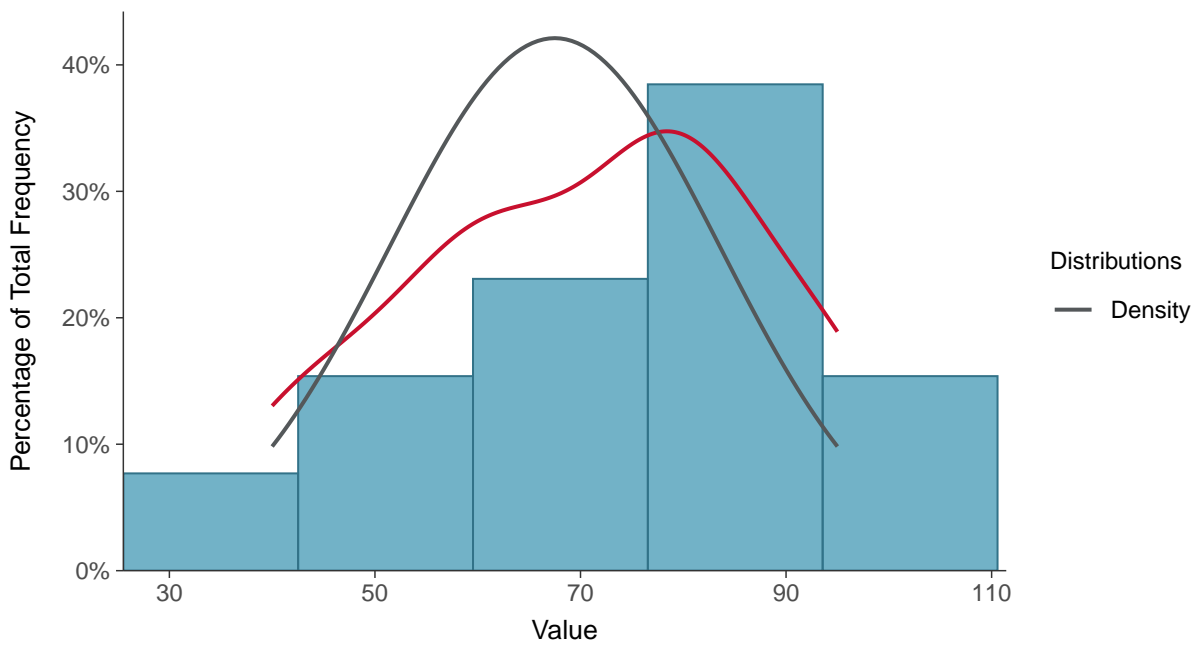
Scatter Plot

Calcium, MW-12 (mg/L)



Histogram

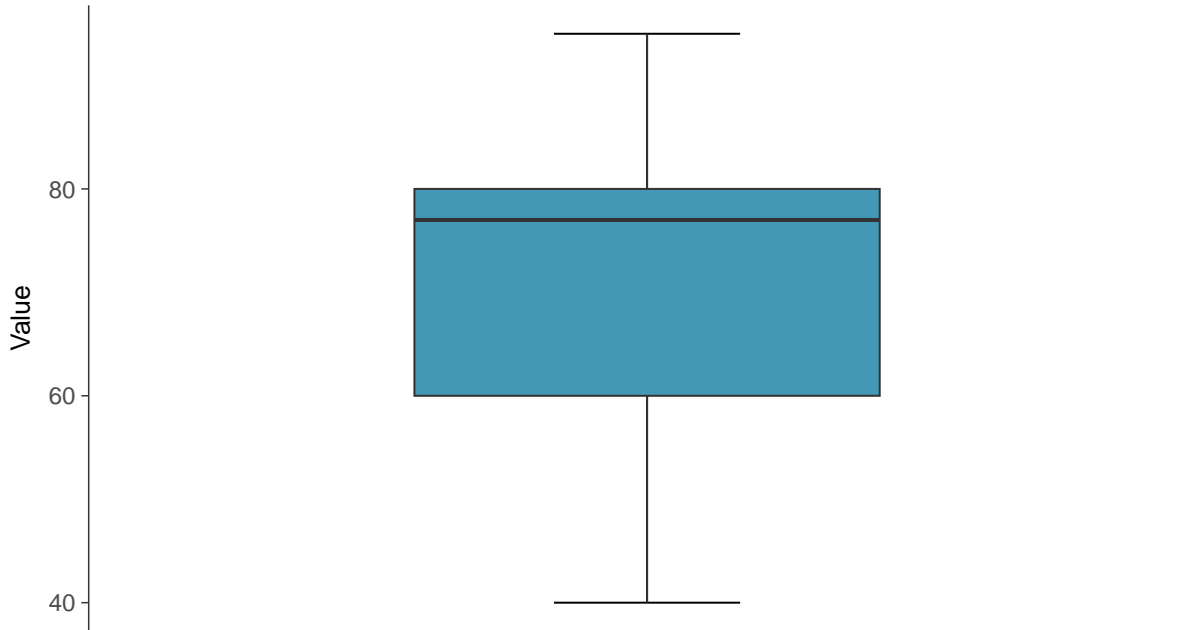
Calcium, MW-12 (mg/L)





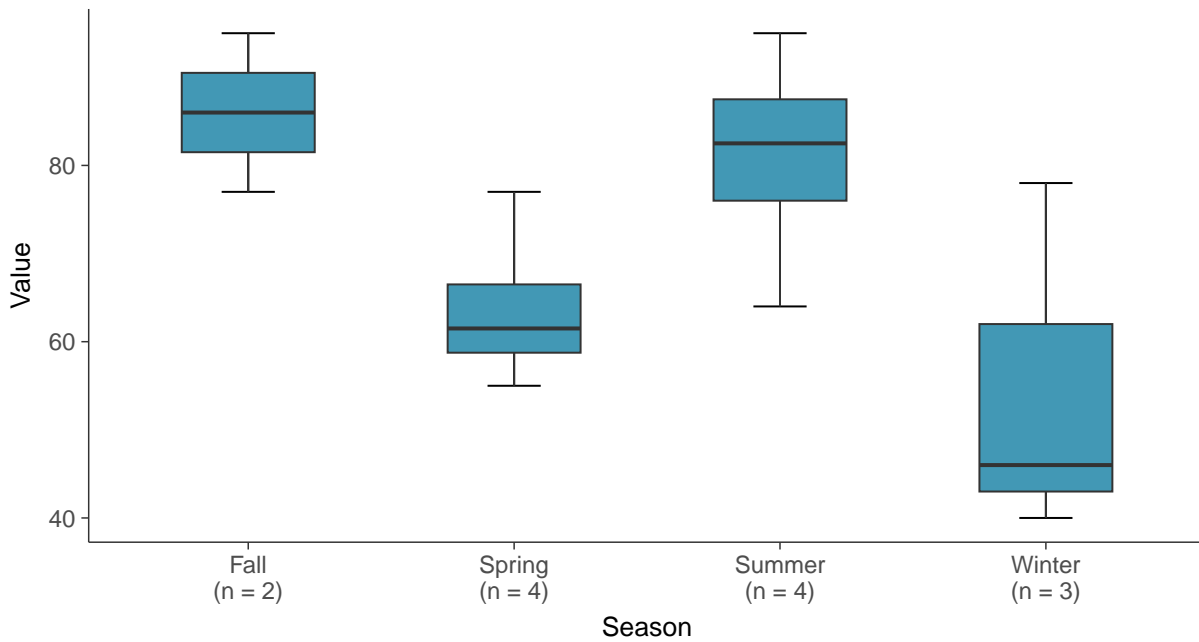
Boxplot

Calcium, MW-12 (mg/L)



Boxplot by Season

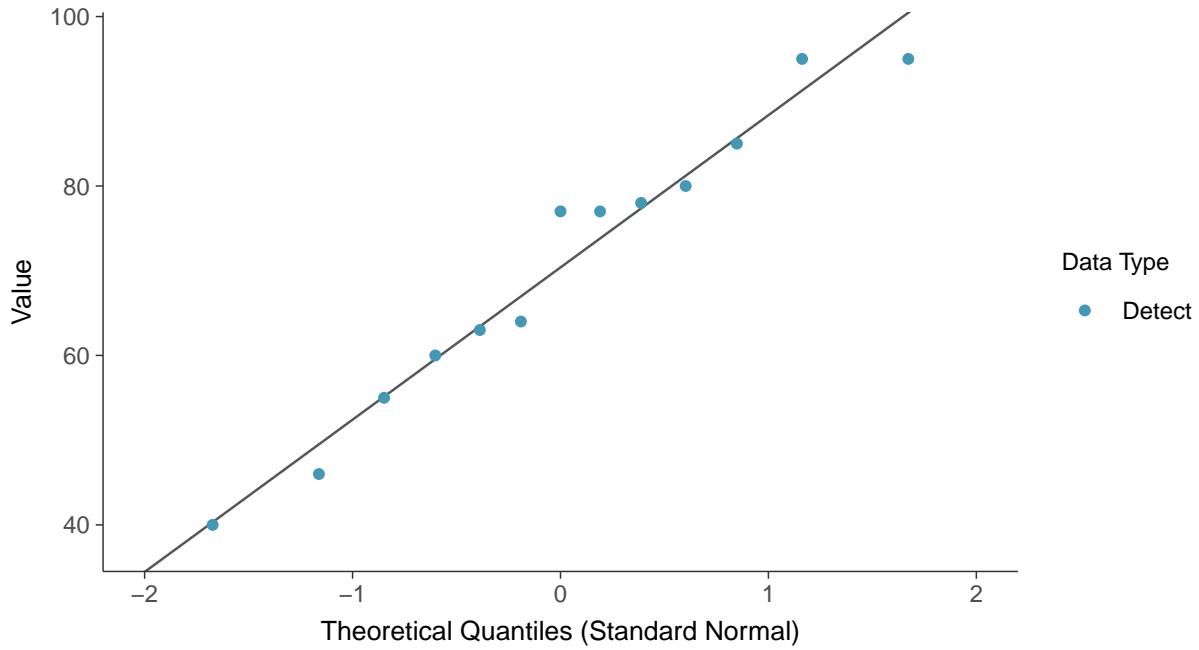
Calcium, MW-12 (mg/L)





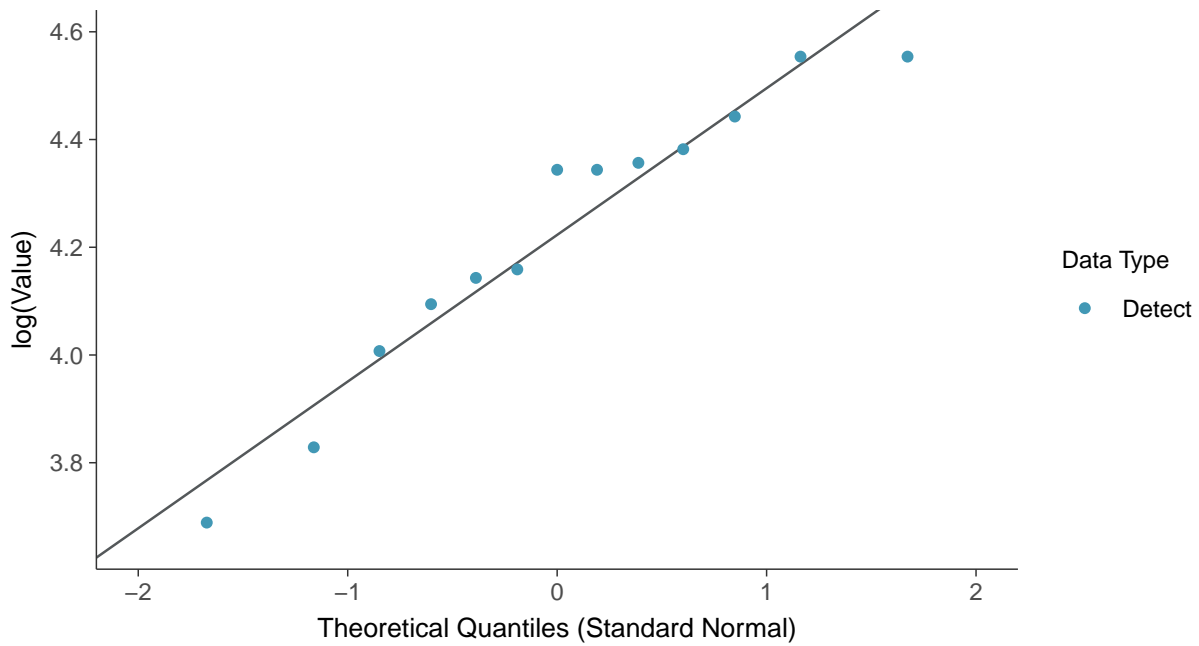
Normal Q-Q plot

Calcium, MW-12 (mg/L)



Lognormal Q-Q plot

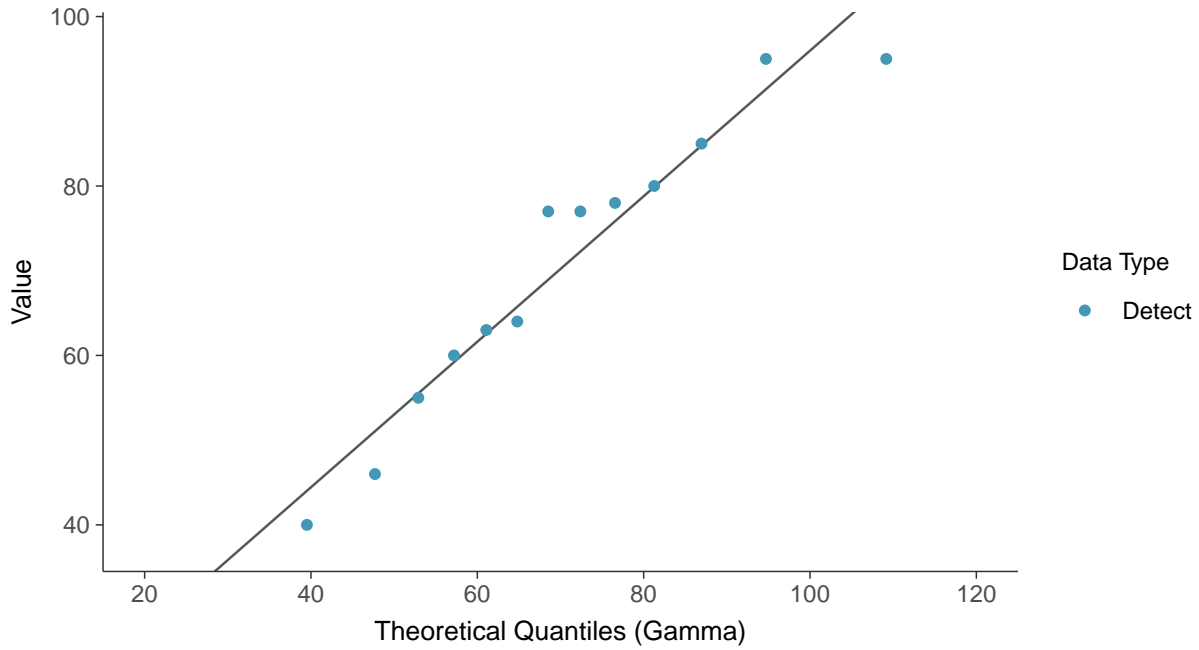
Calcium, MW-12 (mg/L)





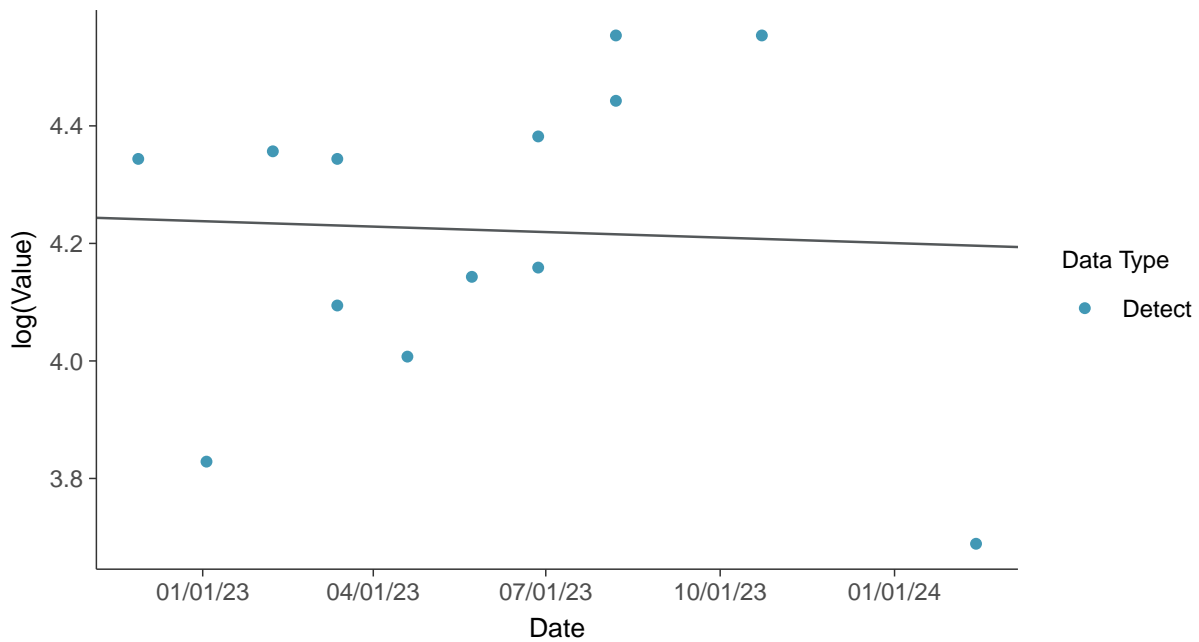
Gamma Q-Q plot

Calcium, MW-12 (mg/L)



Trend Regression: Lognormal MLE

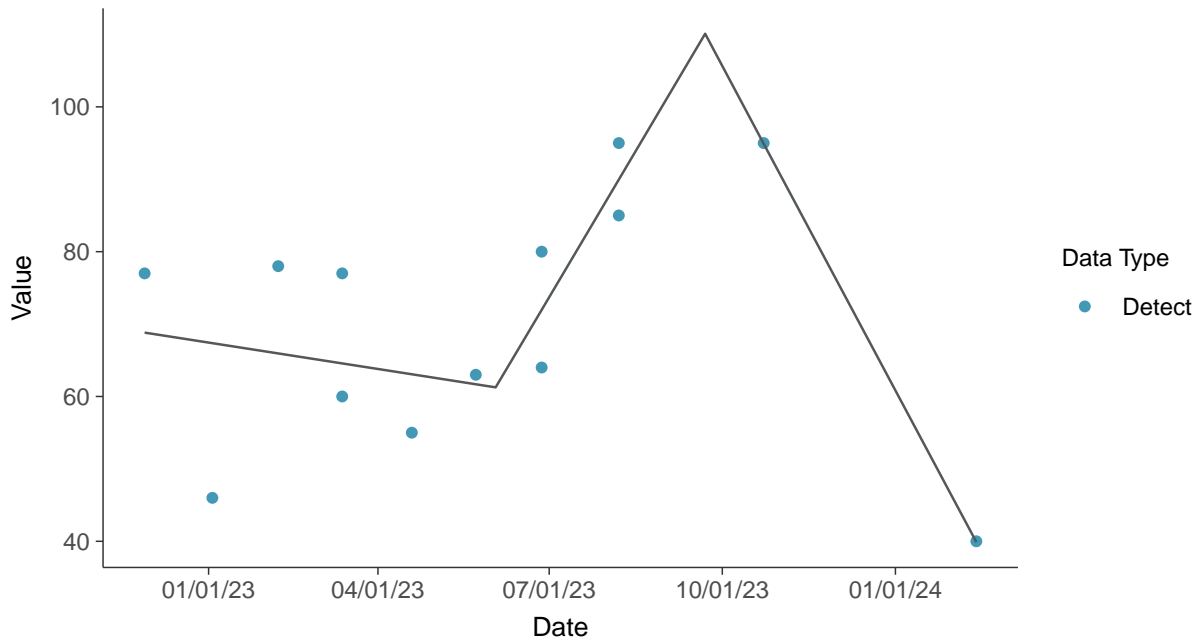
Calcium, MW-12 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

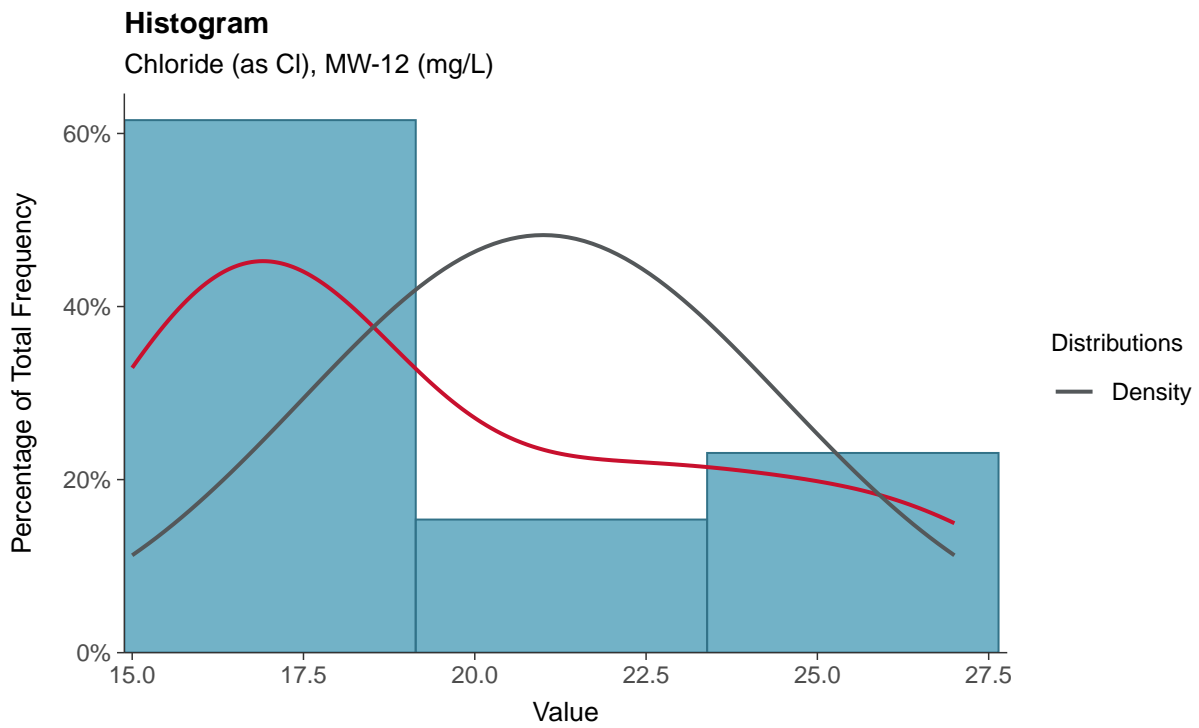
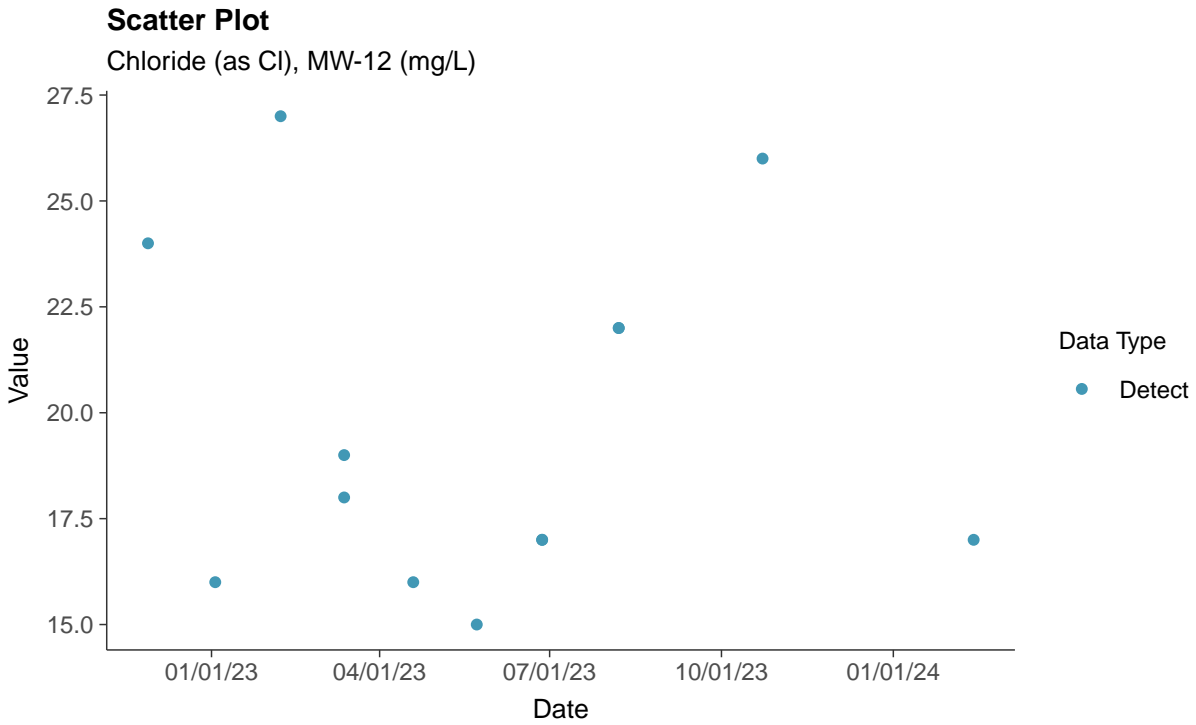
Calcium, MW-12 (mg/L)





Appendix III: Chloride (as Cl), MW-12

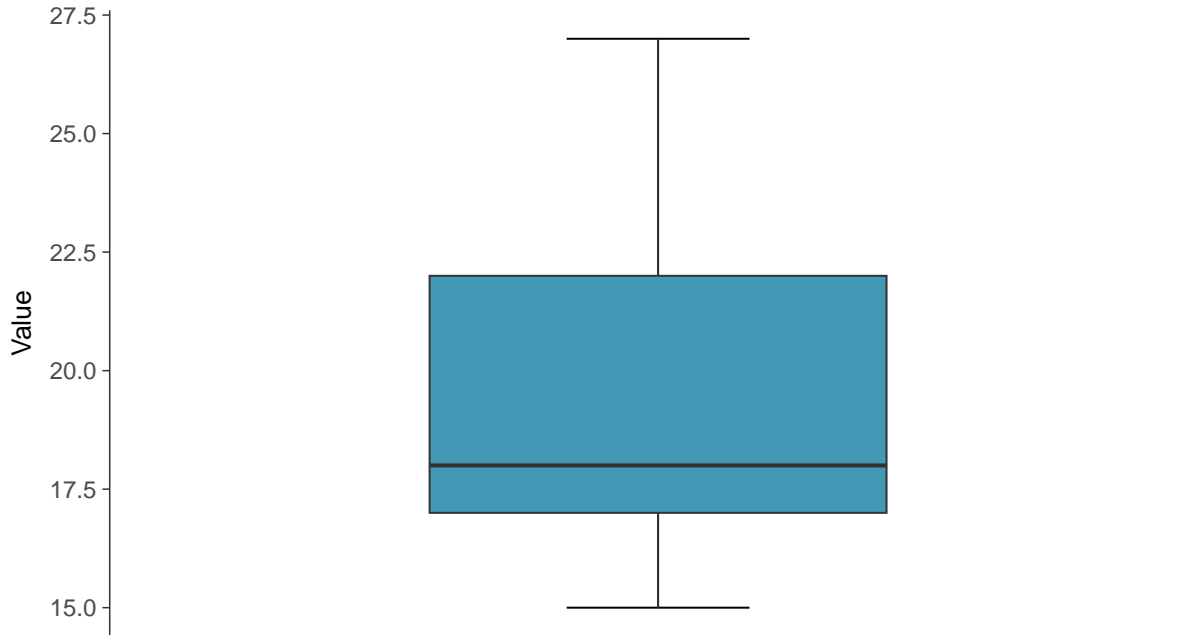
ID: 2_22_4_108





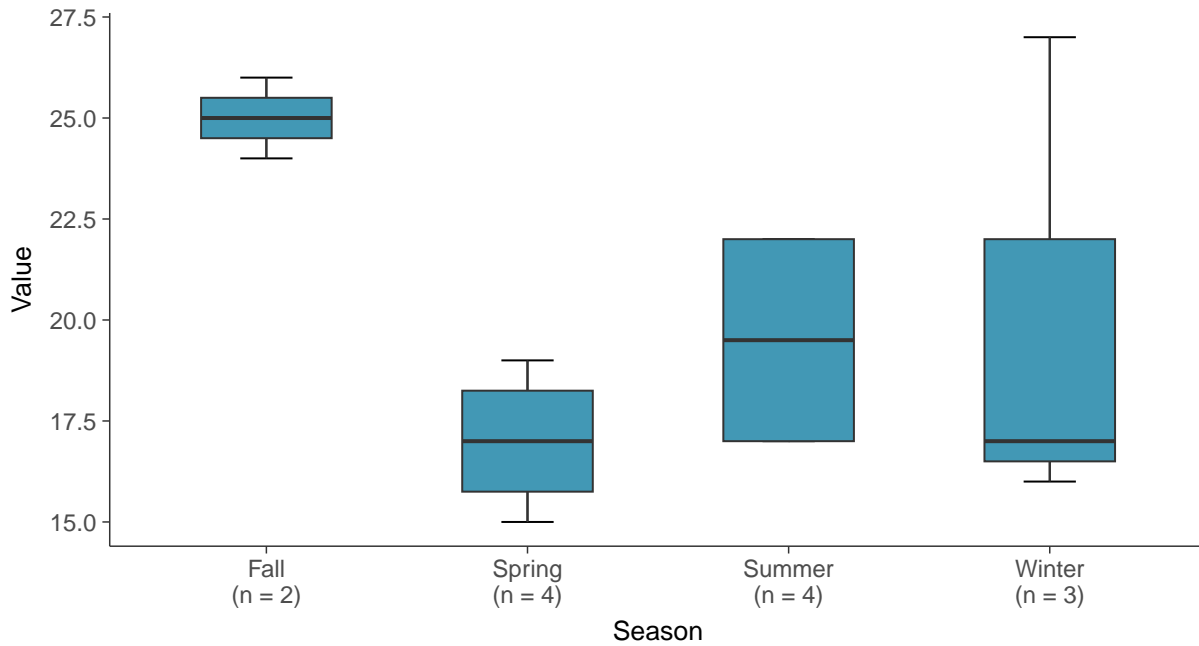
Boxplot

Chloride (as Cl), MW-12 (mg/L)



Boxplot by Season

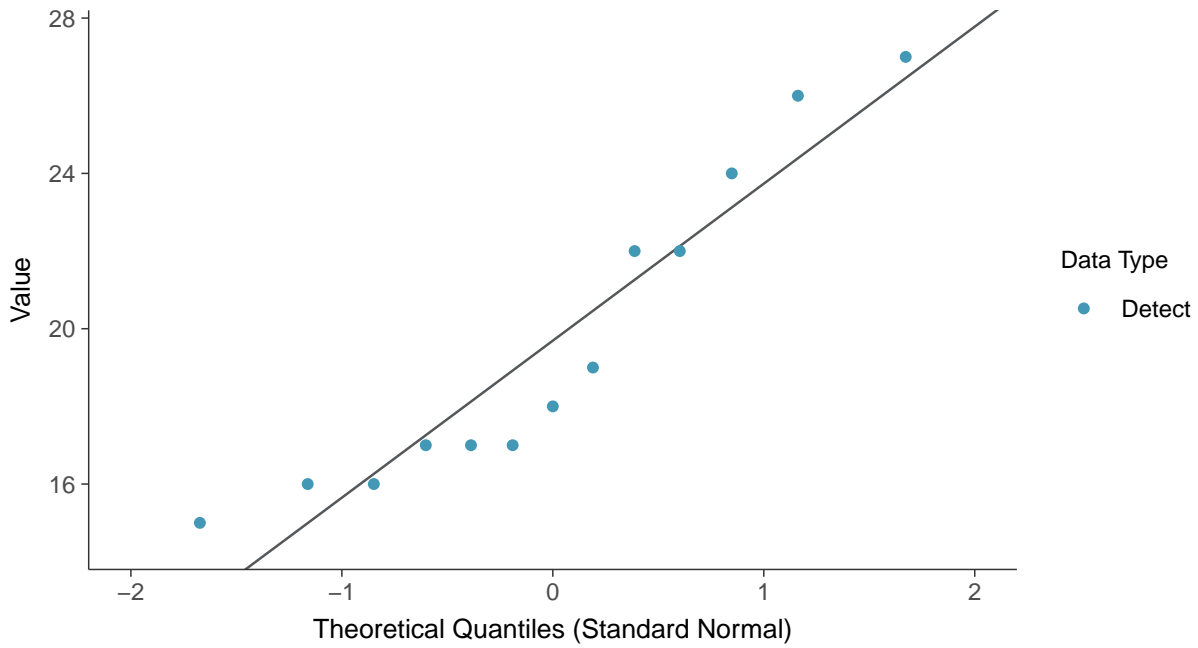
Chloride (as Cl), MW-12 (mg/L)





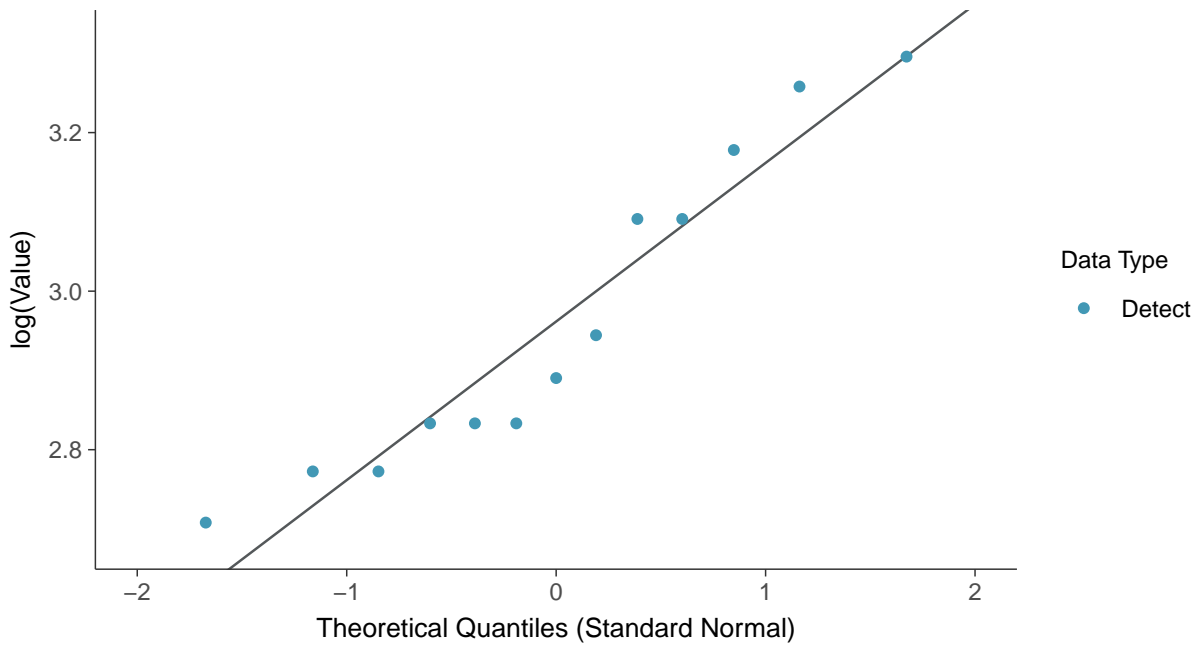
Normal Q-Q plot

Chloride (as Cl), MW-12 (mg/L)



Lognormal Q-Q plot

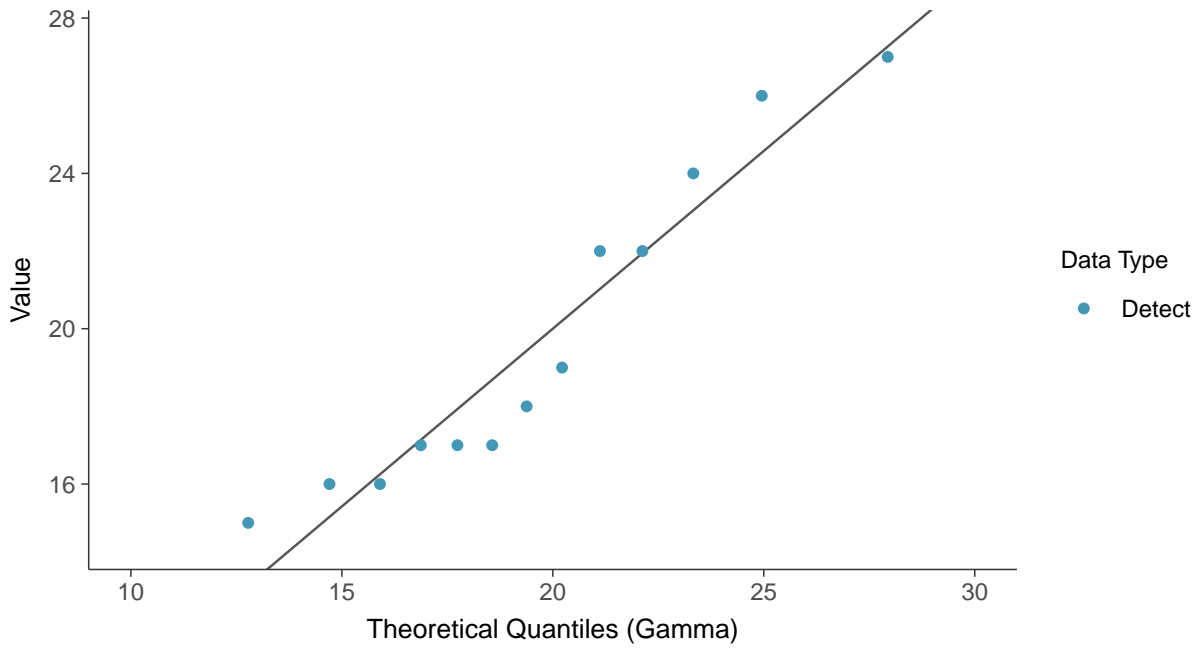
Chloride (as Cl), MW-12 (mg/L)





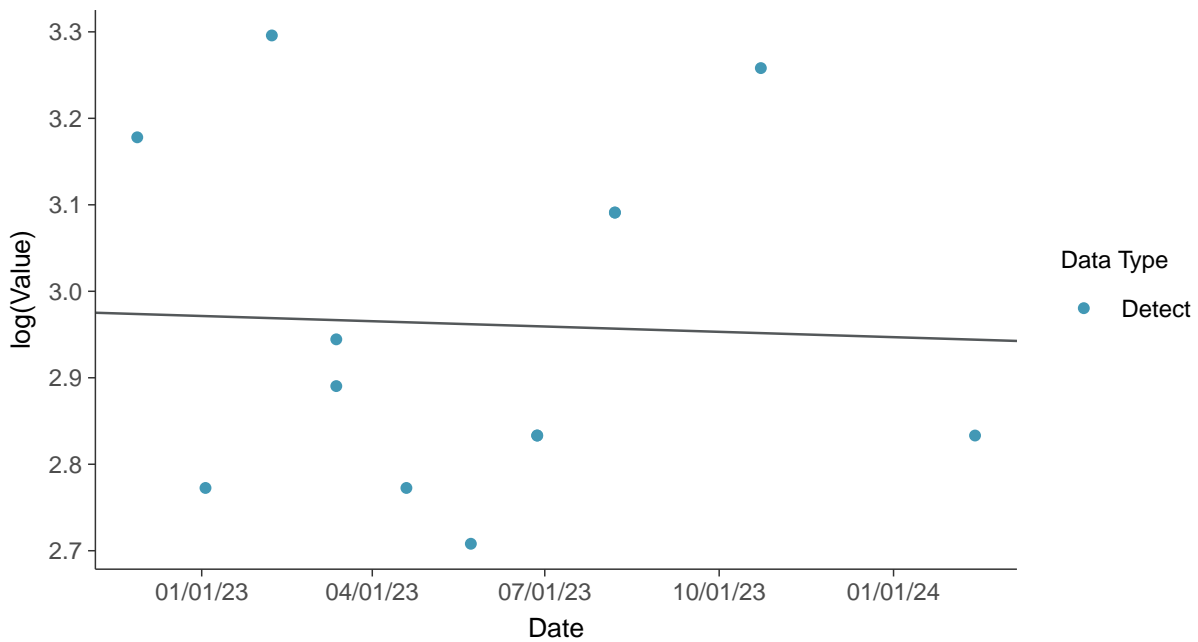
Gamma Q-Q plot

Chloride (as Cl), MW-12 (mg/L)



Trend Regression: Lognormal MLE

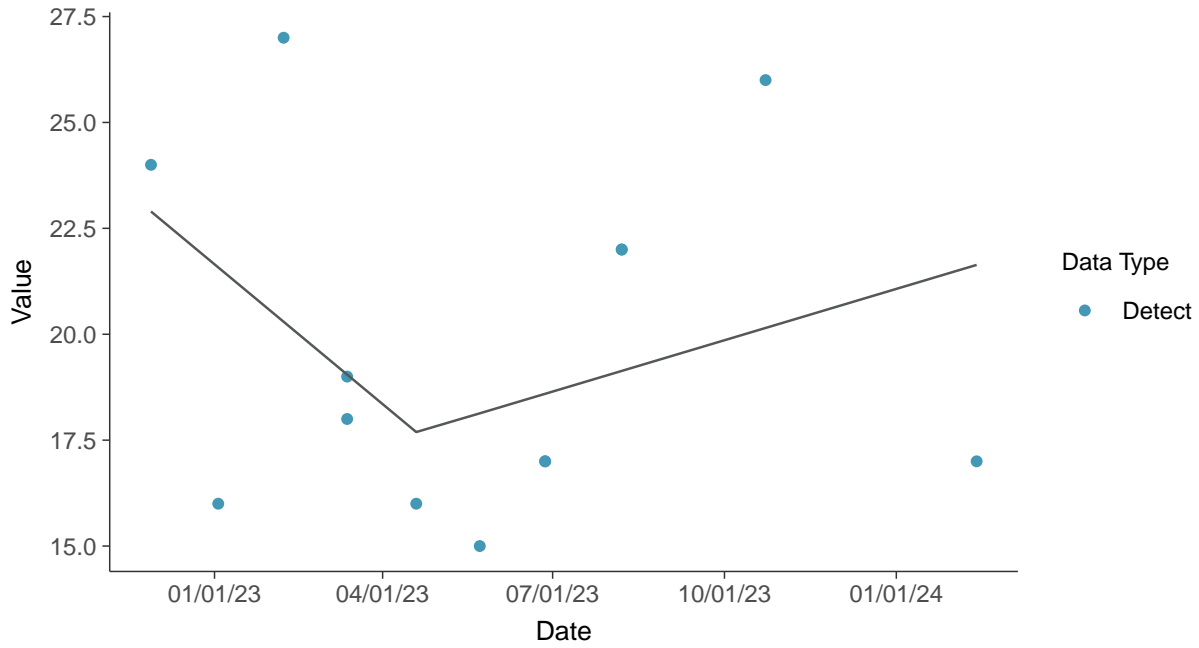
Chloride (as Cl), MW-12 (mg/L)





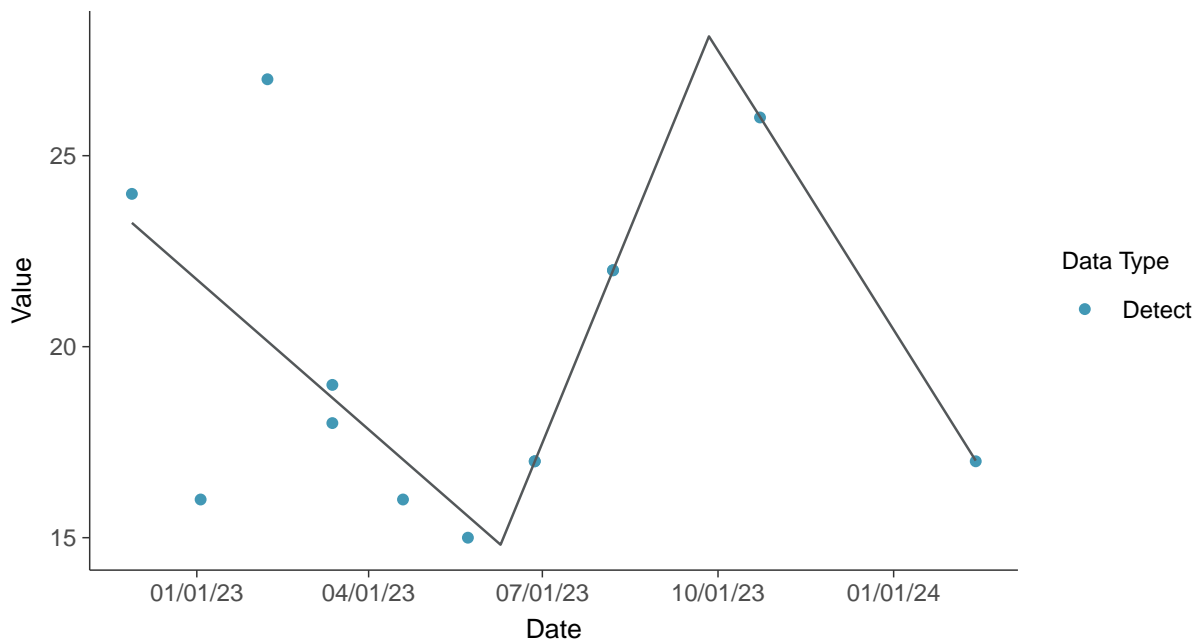
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-12 (mg/L)



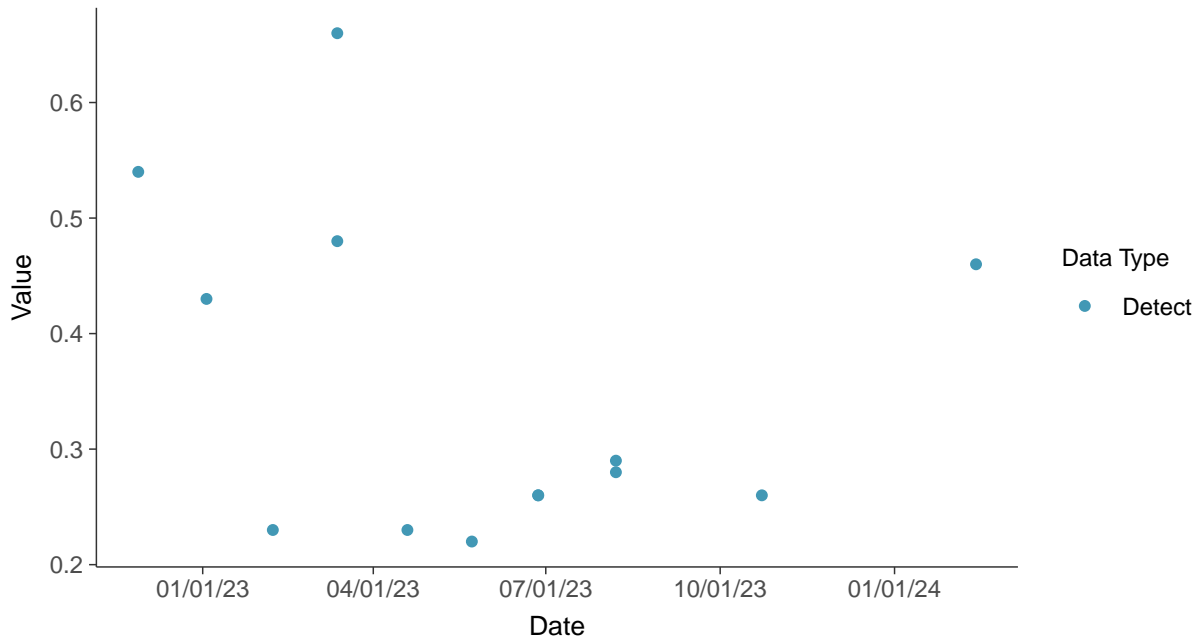


Appendix III: Fluoride, MW-12

ID: 2_22_4_112

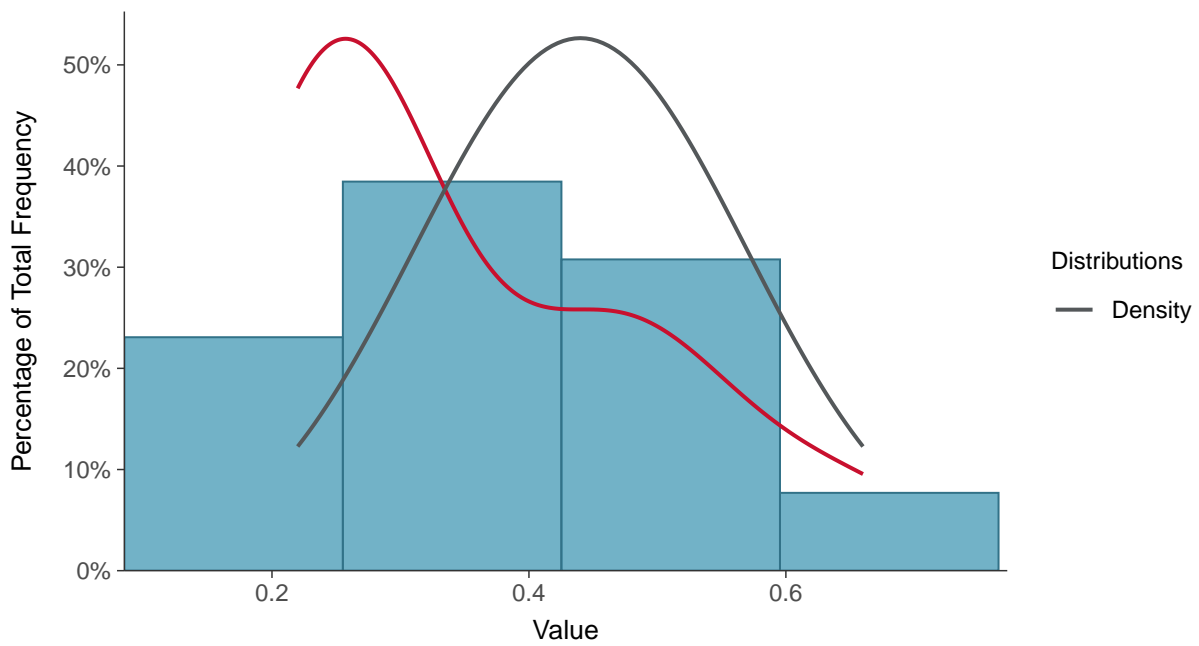
Scatter Plot

Fluoride, MW-12 (mg/L)



Histogram

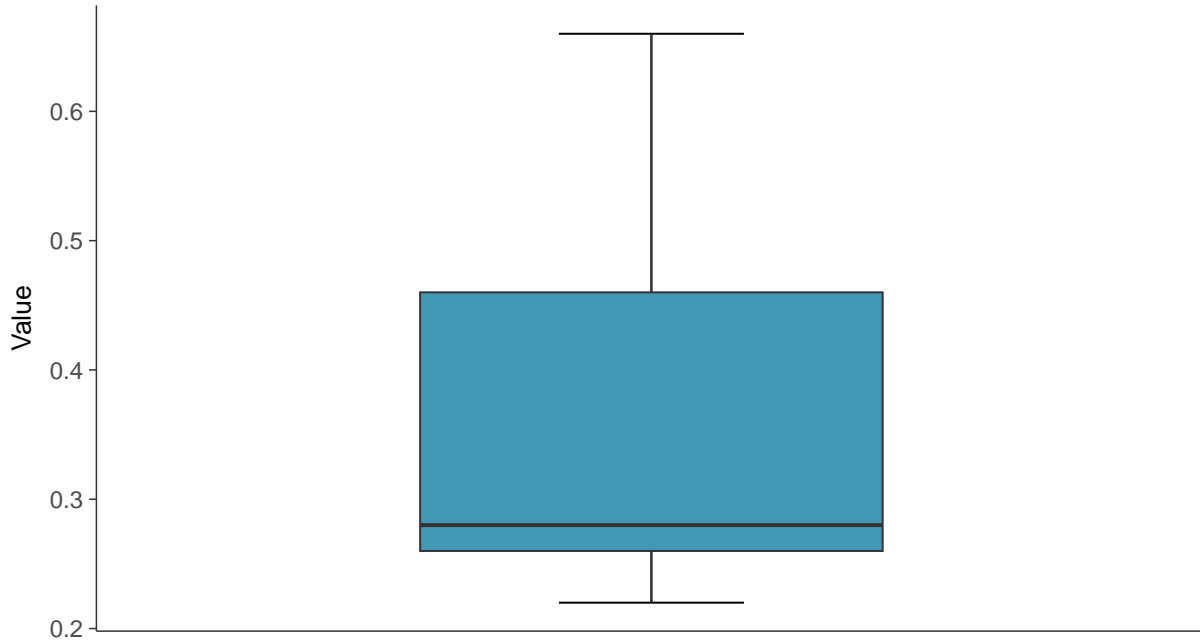
Fluoride, MW-12 (mg/L)





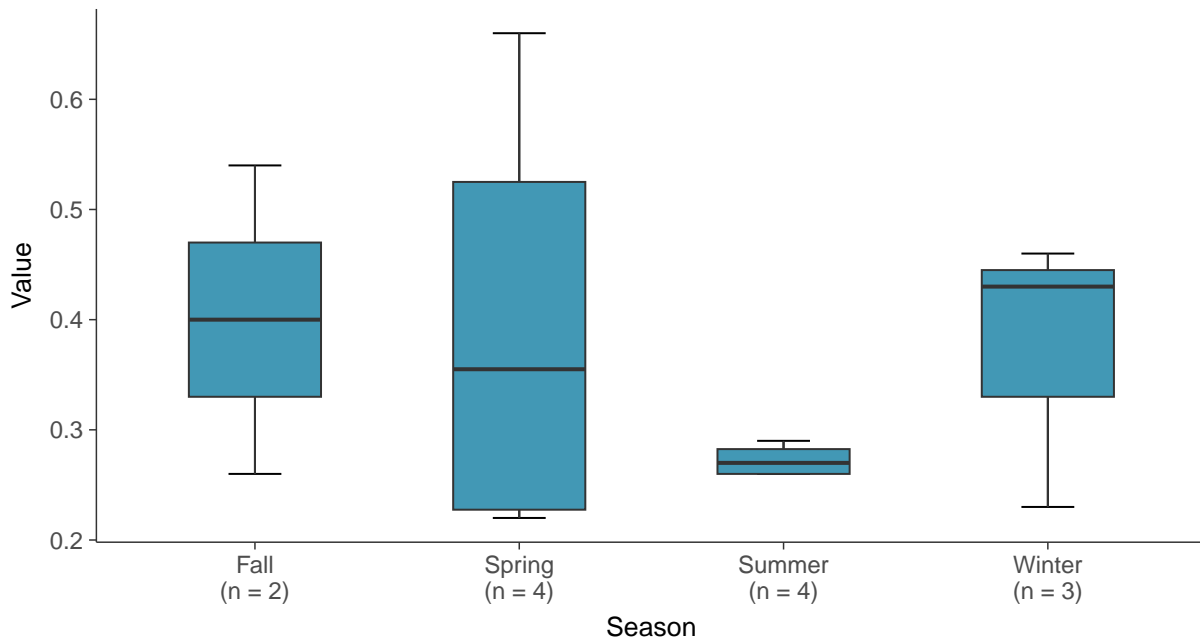
Boxplot

Fluoride, MW-12 (mg/L)



Boxplot by Season

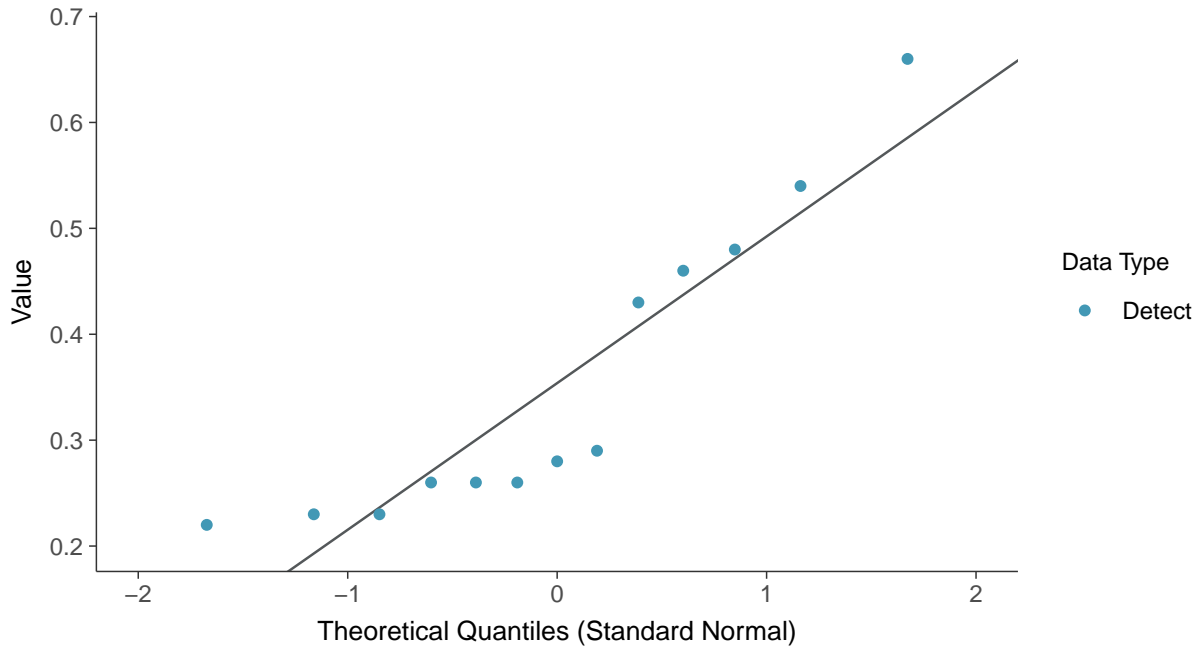
Fluoride, MW-12 (mg/L)





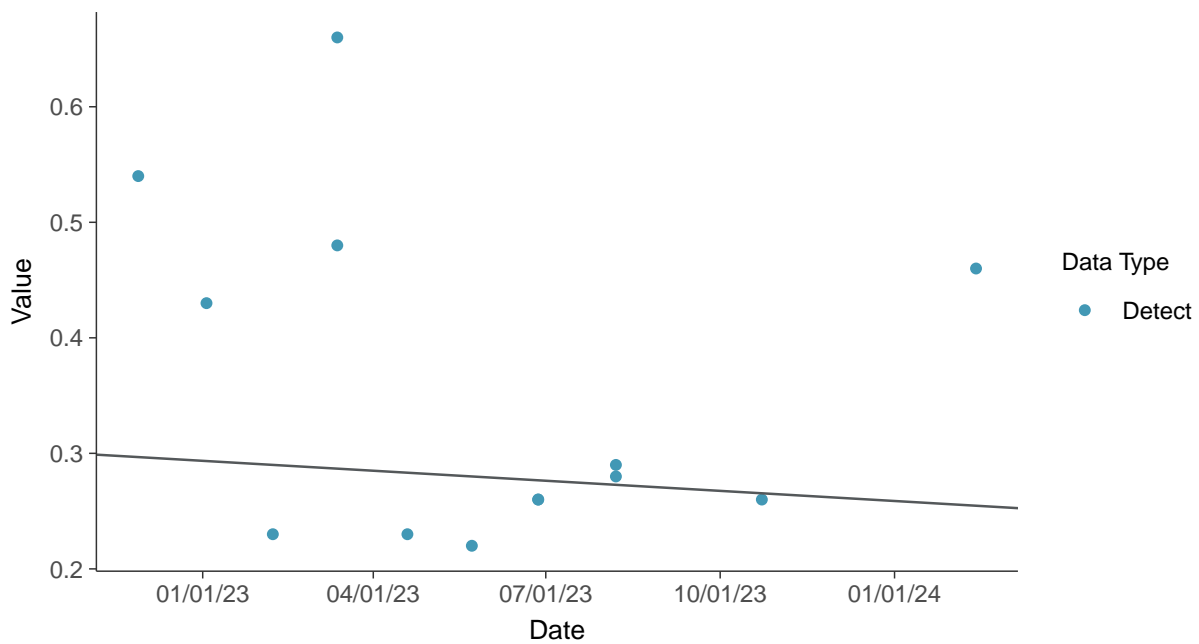
Normal Q-Q plot

Fluoride, MW-12 (mg/L)



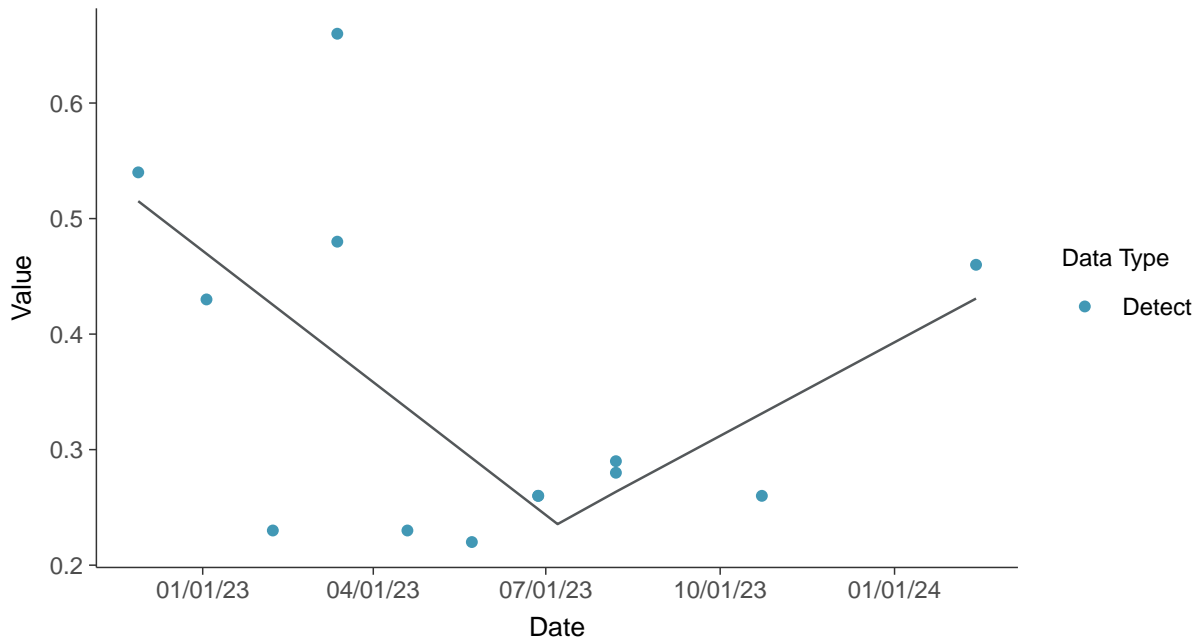
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-12 (mg/L)





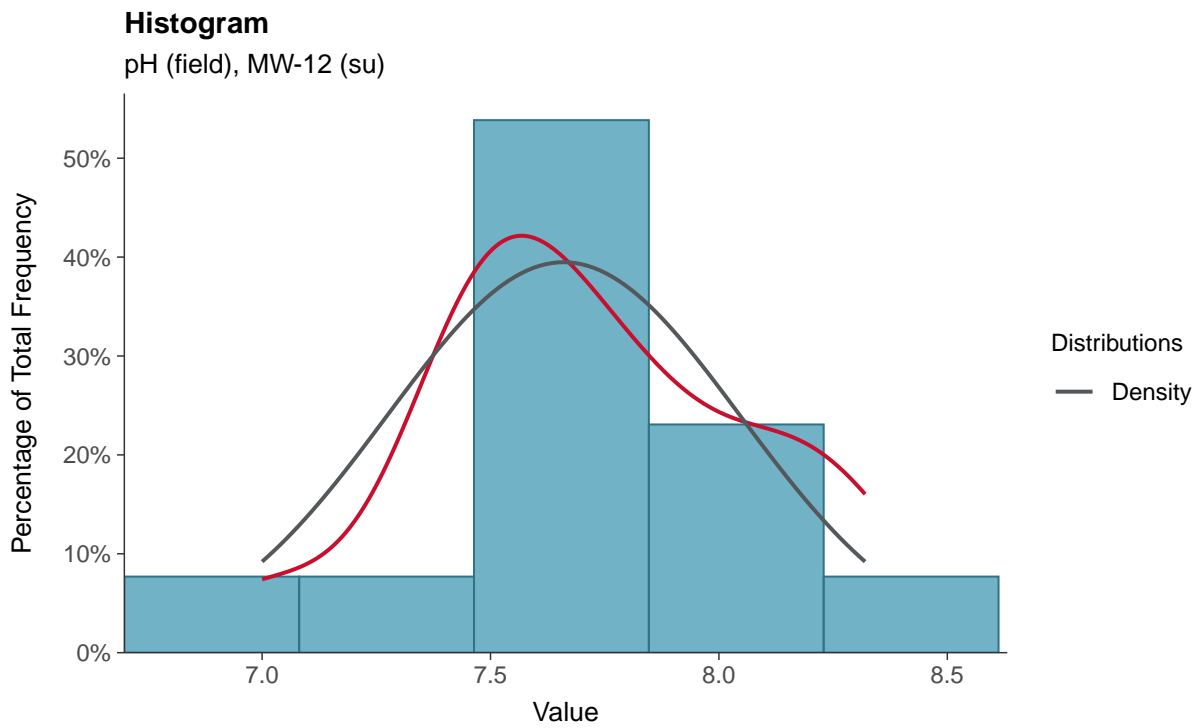
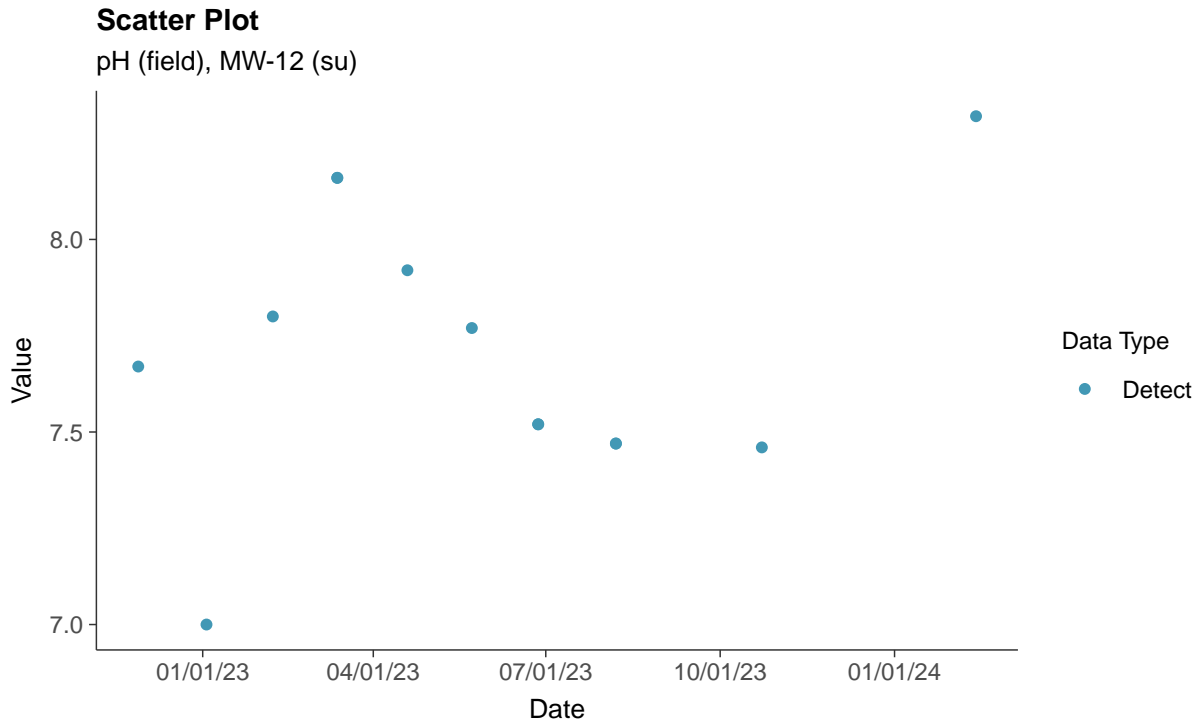
Trend Regression: Piecewise Linear-Linear
Fluoride, MW-12 (mg/L)





Appendix III: pH (field), MW-12

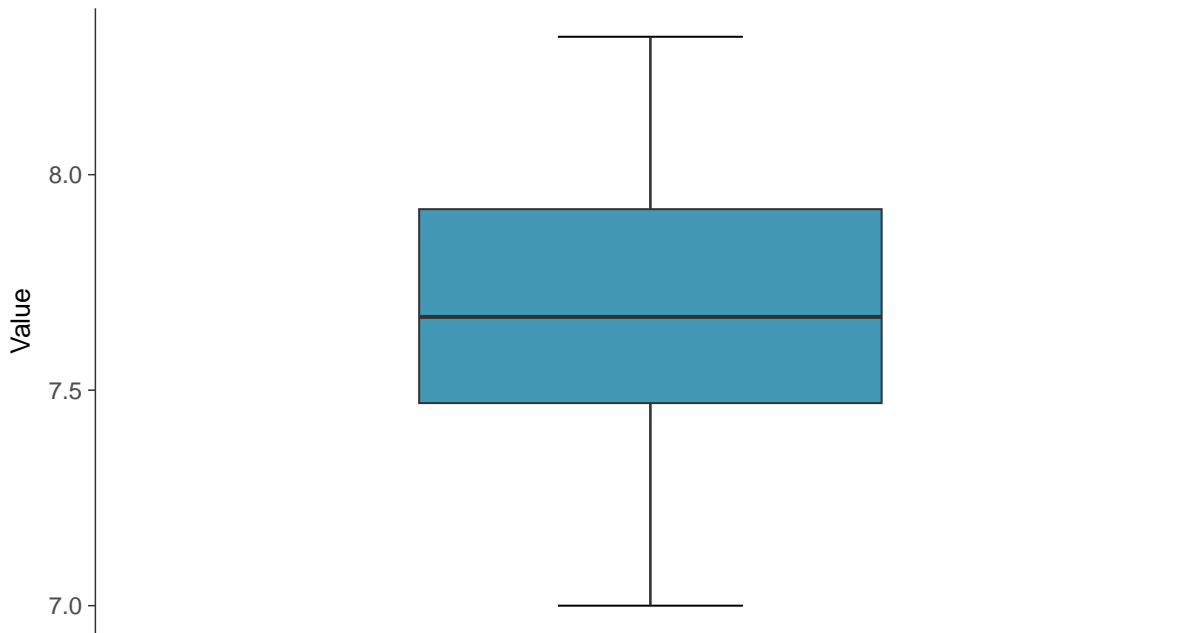
ID: 2_22_4_120





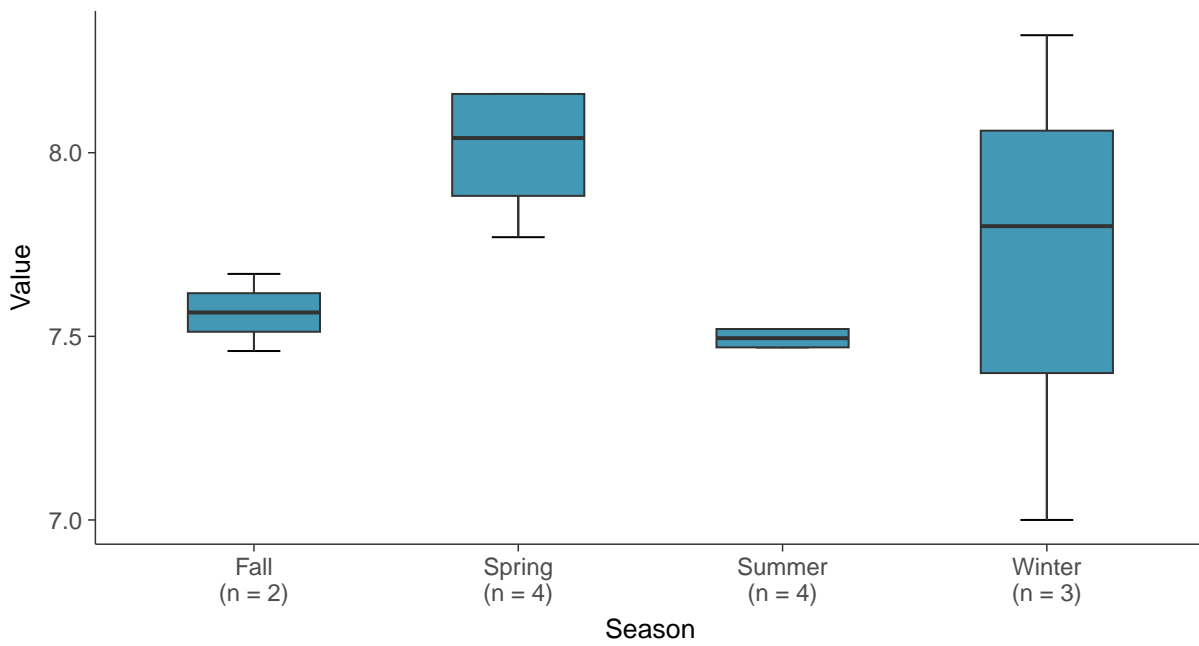
Boxplot

pH (field), MW-12 (su)



Boxplot by Season

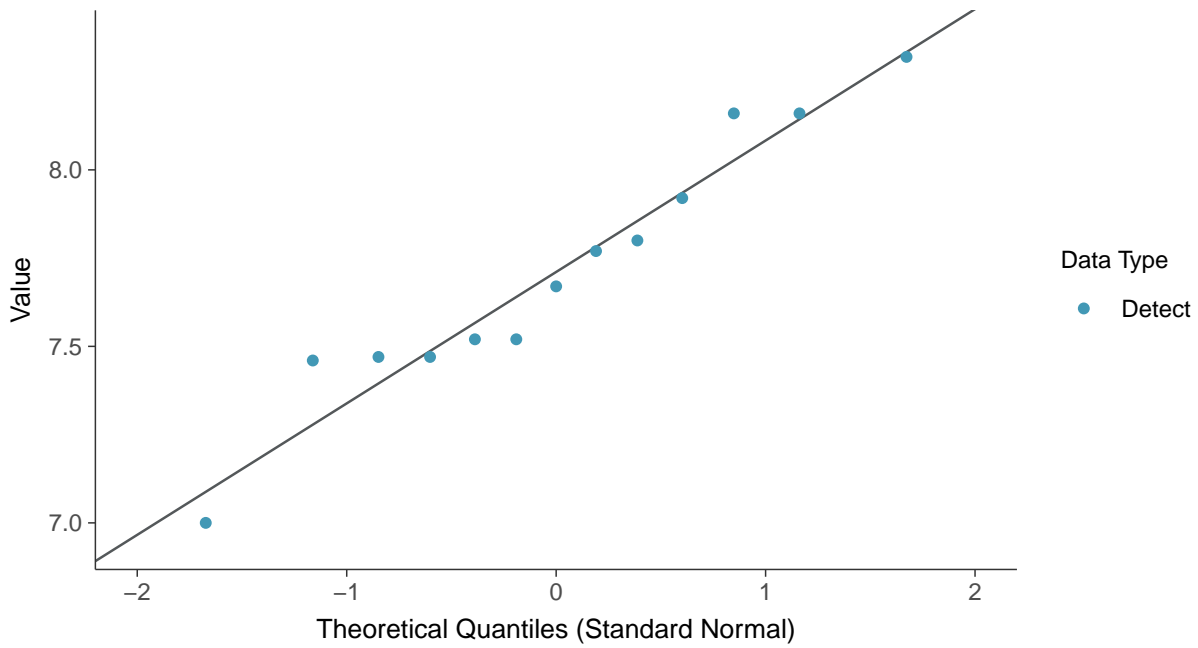
pH (field), MW-12 (su)





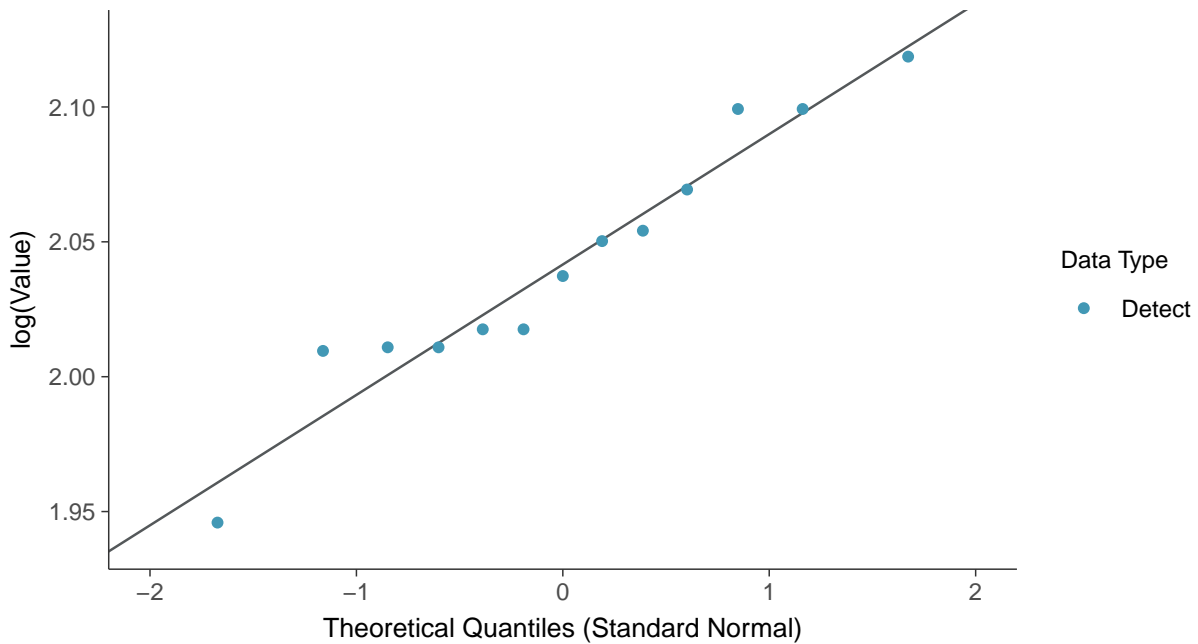
Normal Q-Q plot

pH (field), MW-12 (su)



Lognormal Q-Q plot

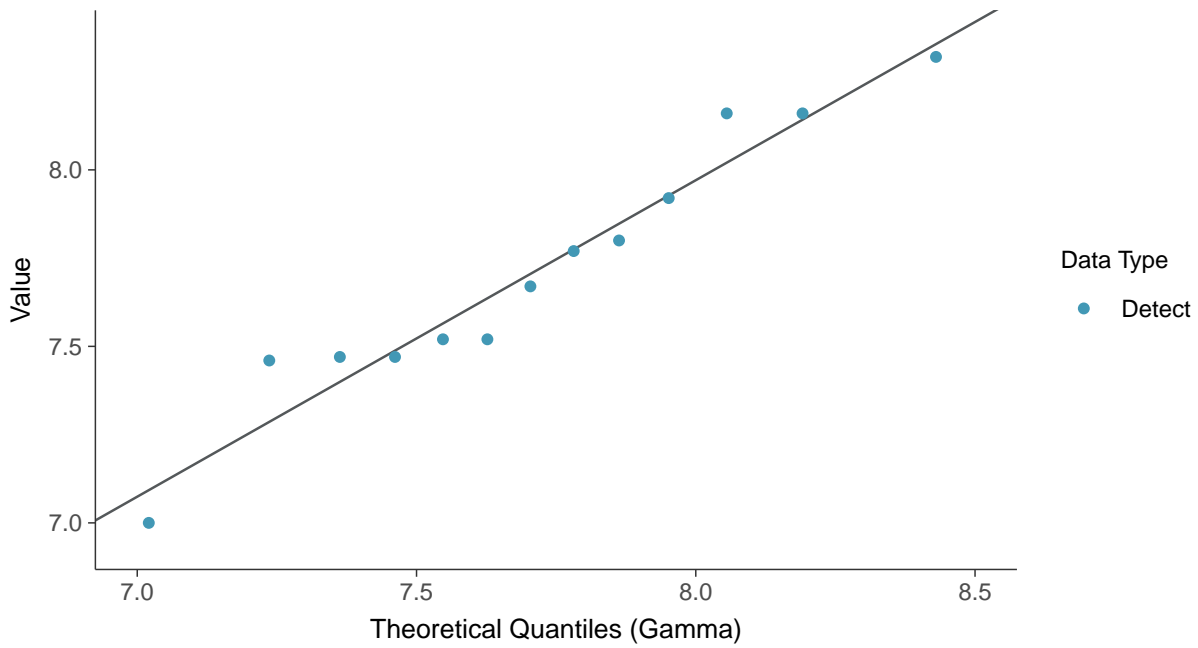
pH (field), MW-12 (su)





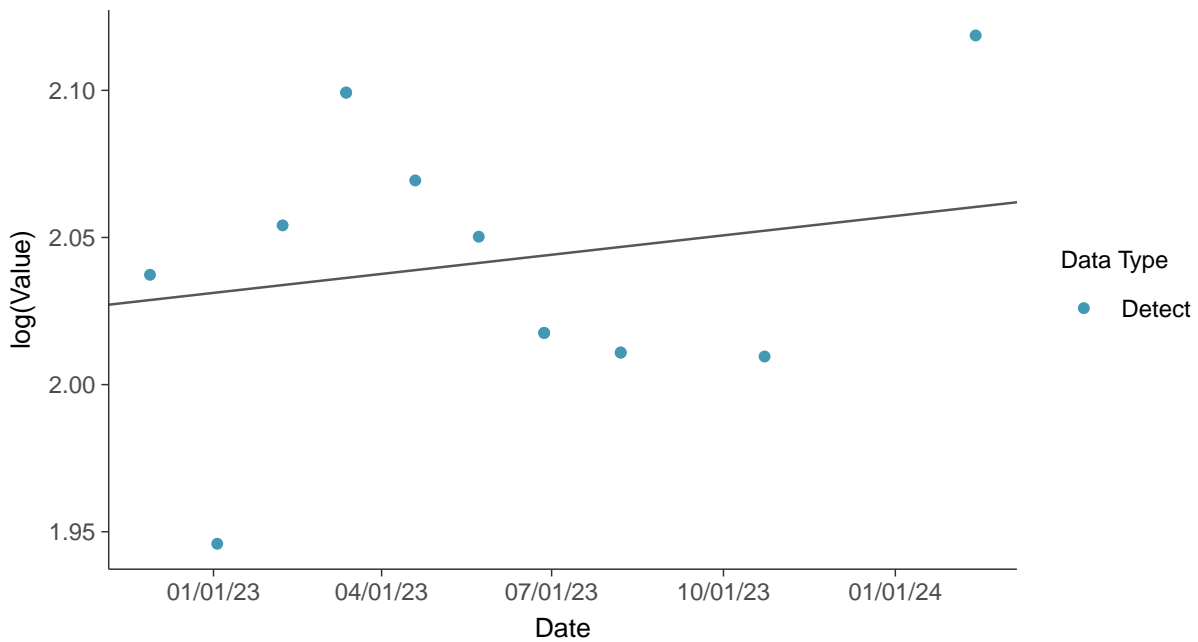
Gamma Q-Q plot

pH (field), MW-12 (su)



Trend Regression: Lognormal MLE

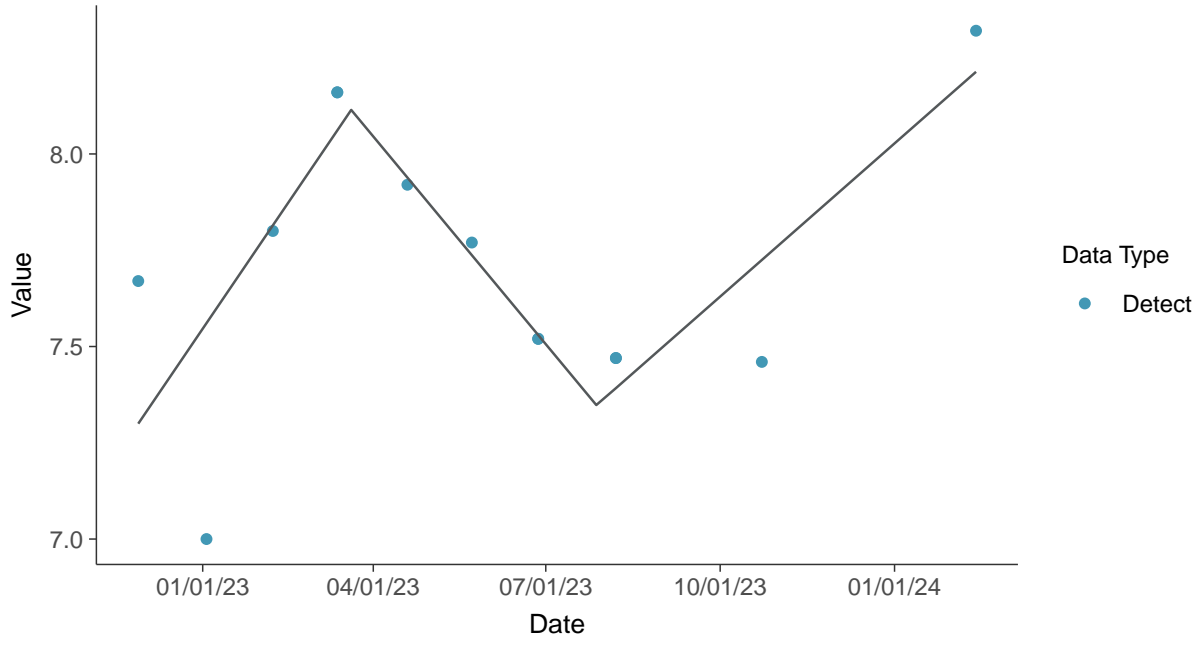
pH (field), MW-12 (su)





Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-12 (su)



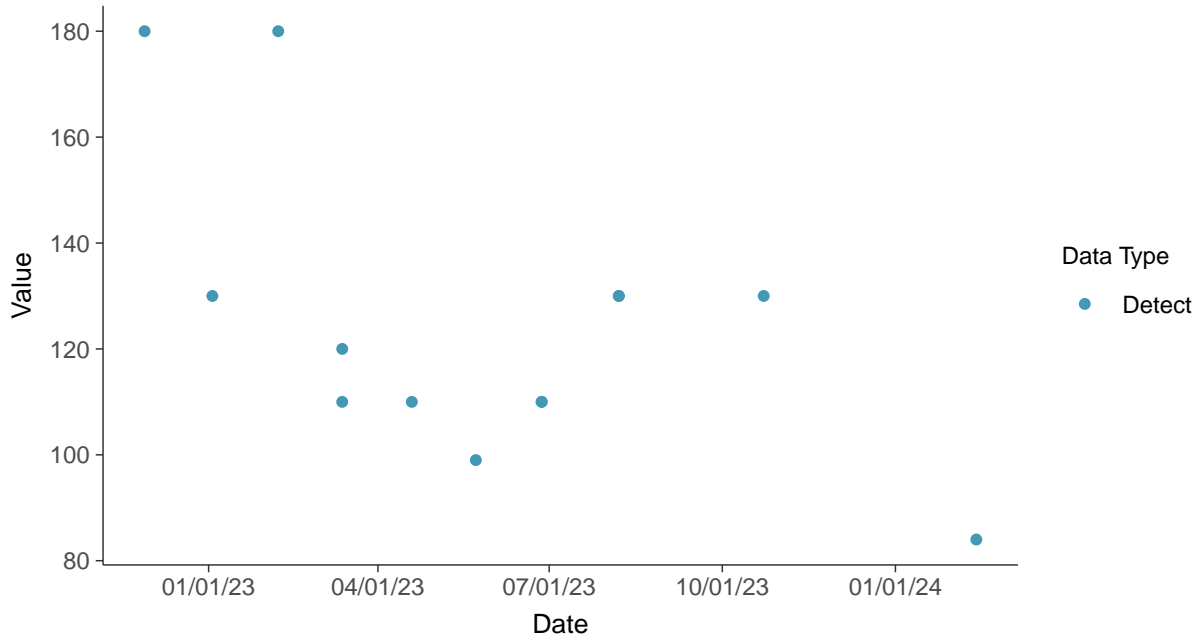


Appendix III: Sulfate (as SO₄), MW-12

ID: 2_22_4_124

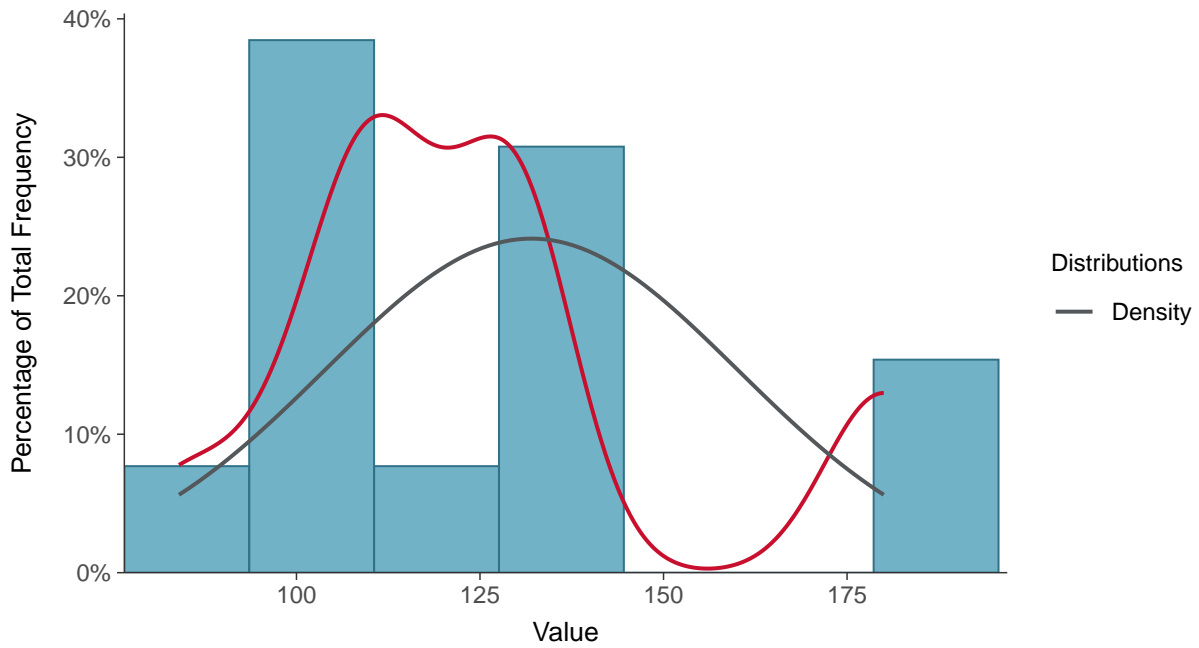
Scatter Plot

Sulfate (as SO₄), MW-12 (mg/L)



Histogram

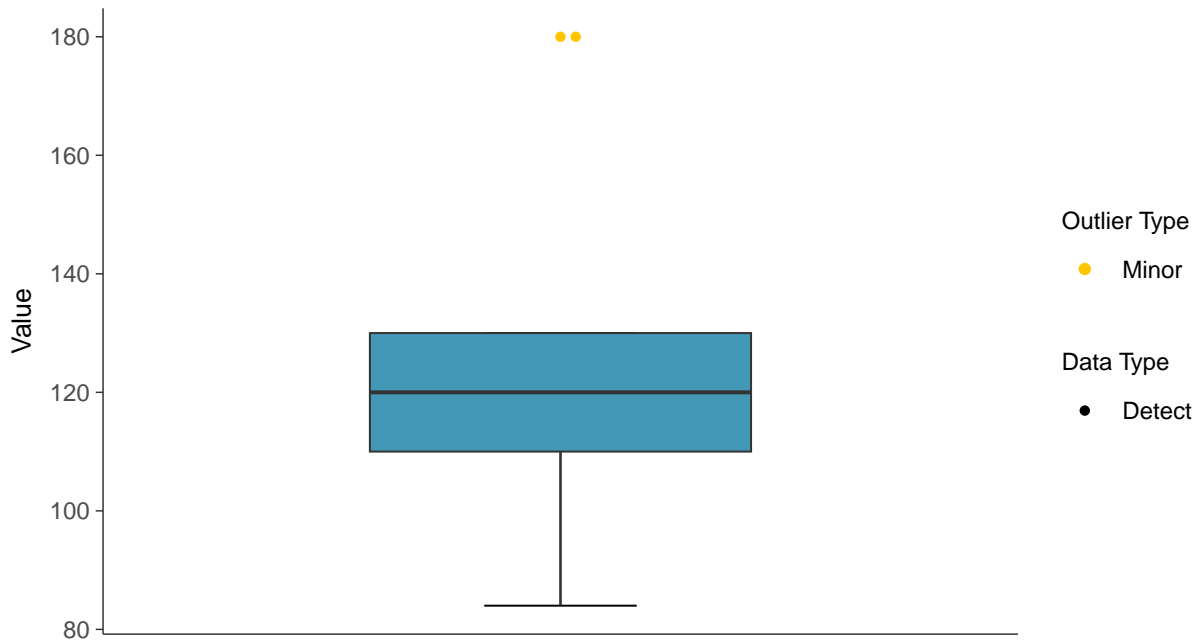
Sulfate (as SO₄), MW-12 (mg/L)





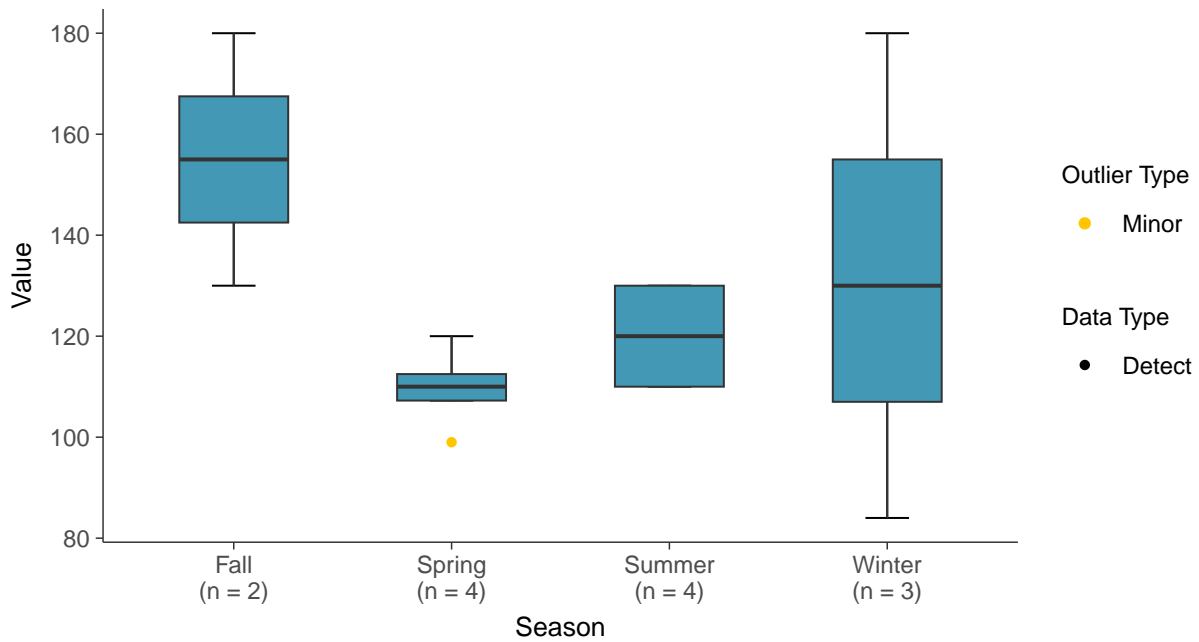
Boxplot

Sulfate (as SO₄), MW-12 (mg/L)



Boxplot by Season

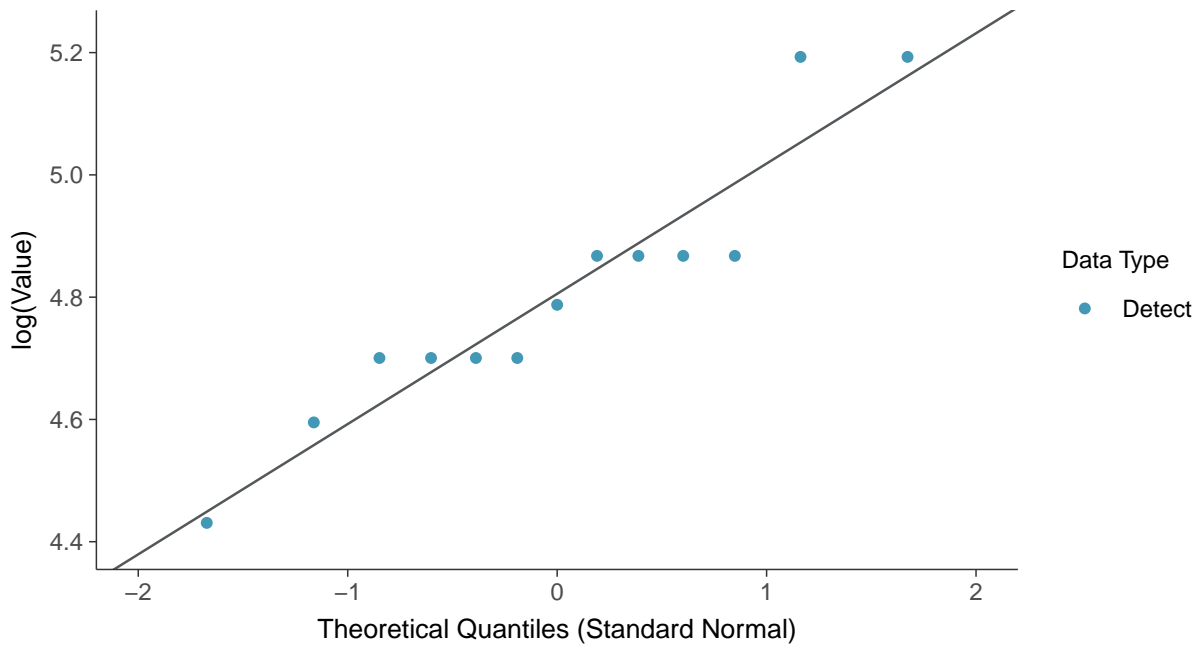
Sulfate (as SO₄), MW-12 (mg/L)





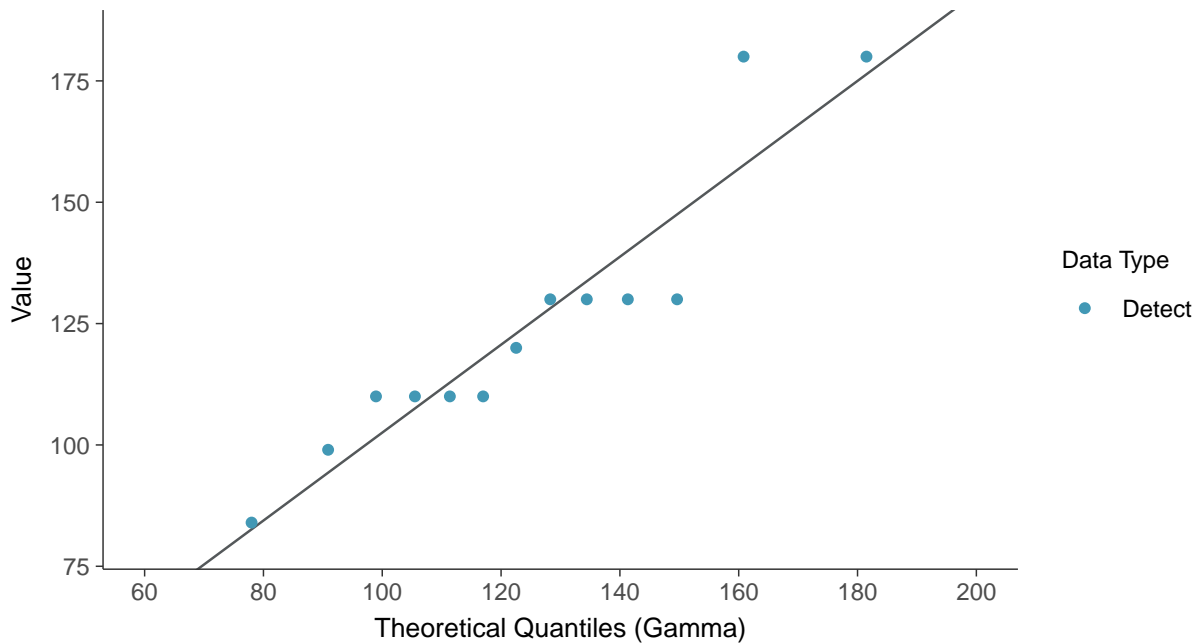
Lognormal Q-Q plot

Sulfate (as SO₄), MW-12 (mg/L)



Gamma Q-Q plot

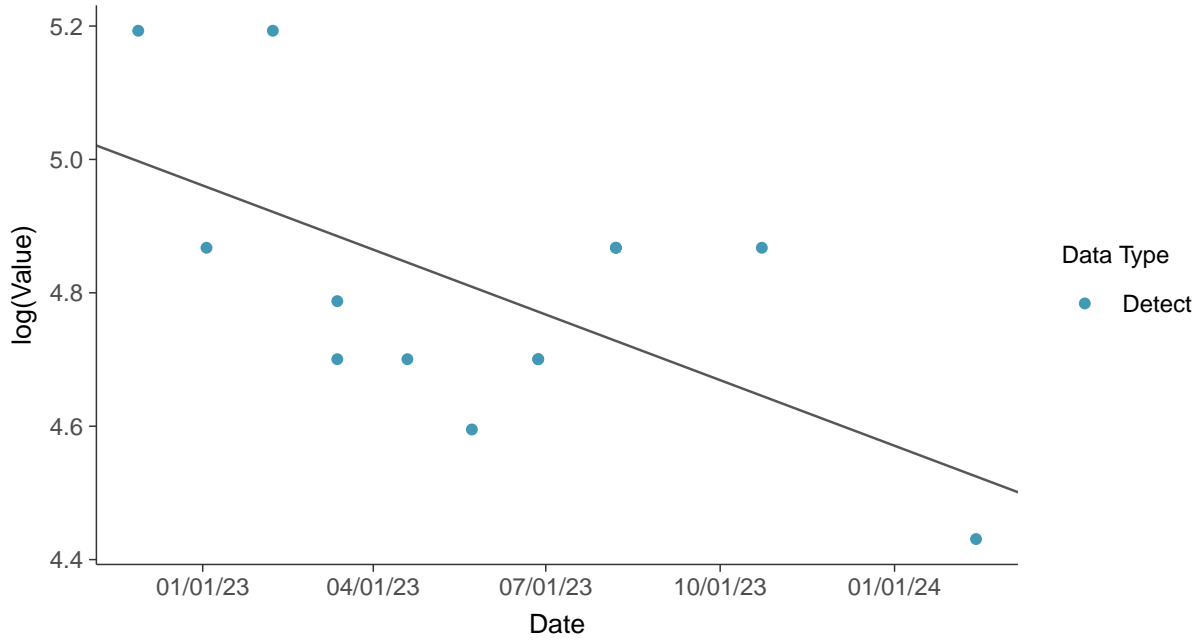
Sulfate (as SO₄), MW-12 (mg/L)





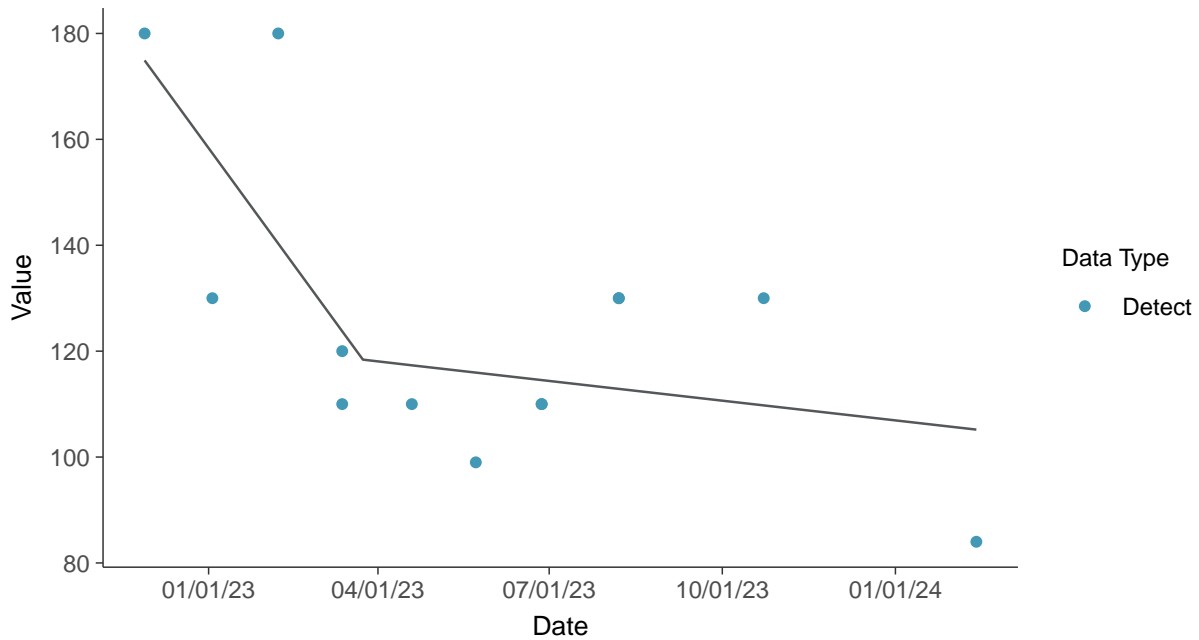
Trend Regression: Lognormal MLE

Sulfate (as SO₄), MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear

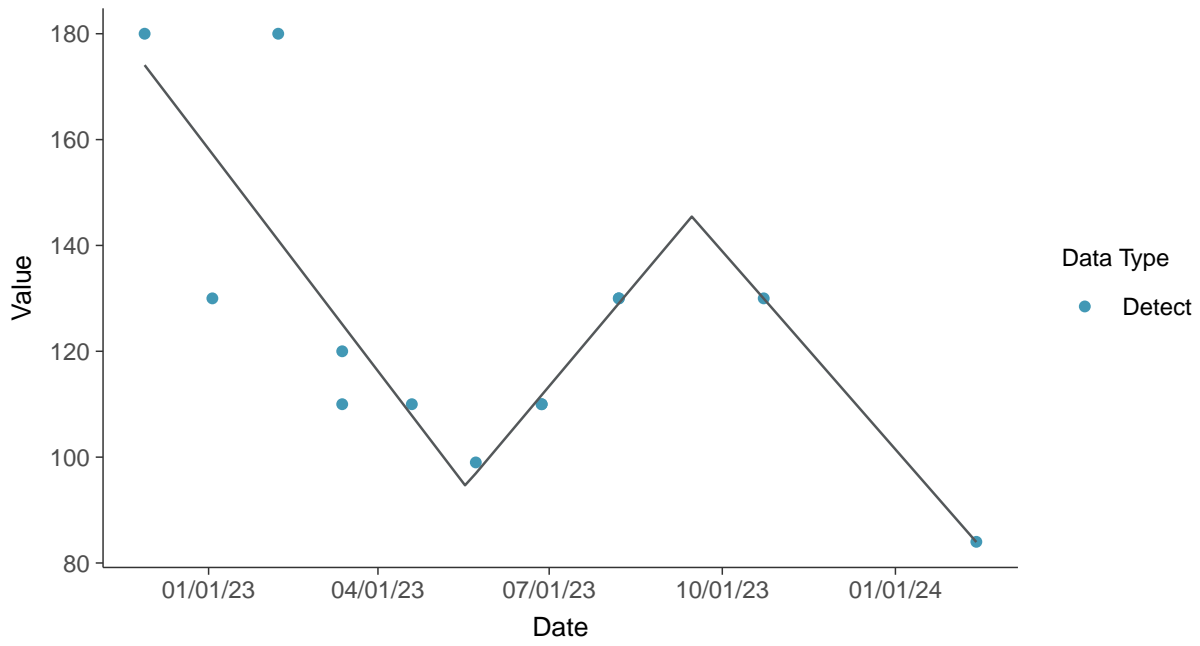
Sulfate (as SO₄), MW-12 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO₄), MW-12 (mg/L)



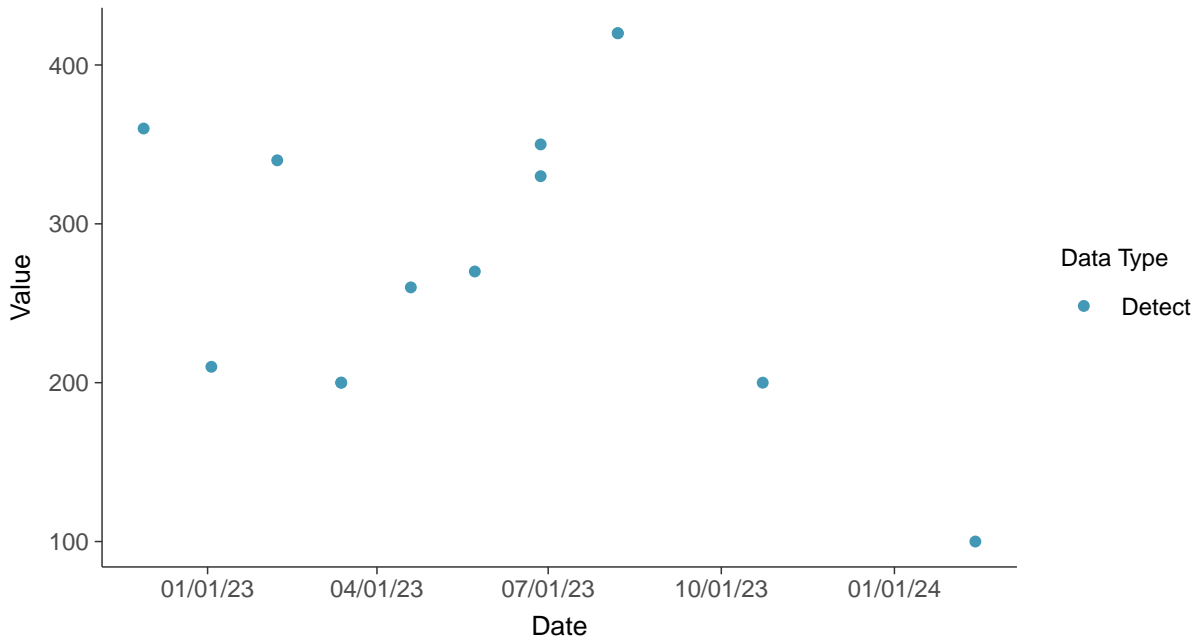


Appendix III: Total Dissolved Solids, MW-12

ID: 2_22_4_126

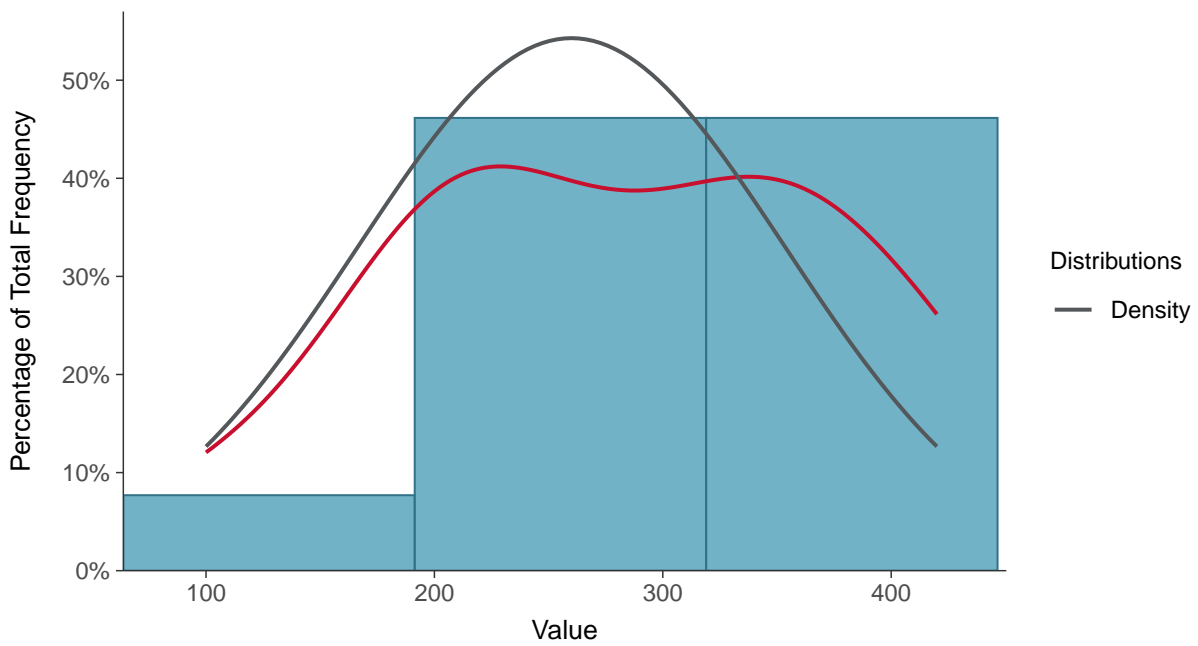
Scatter Plot

Total Dissolved Solids, MW-12 (mg/L)



Histogram

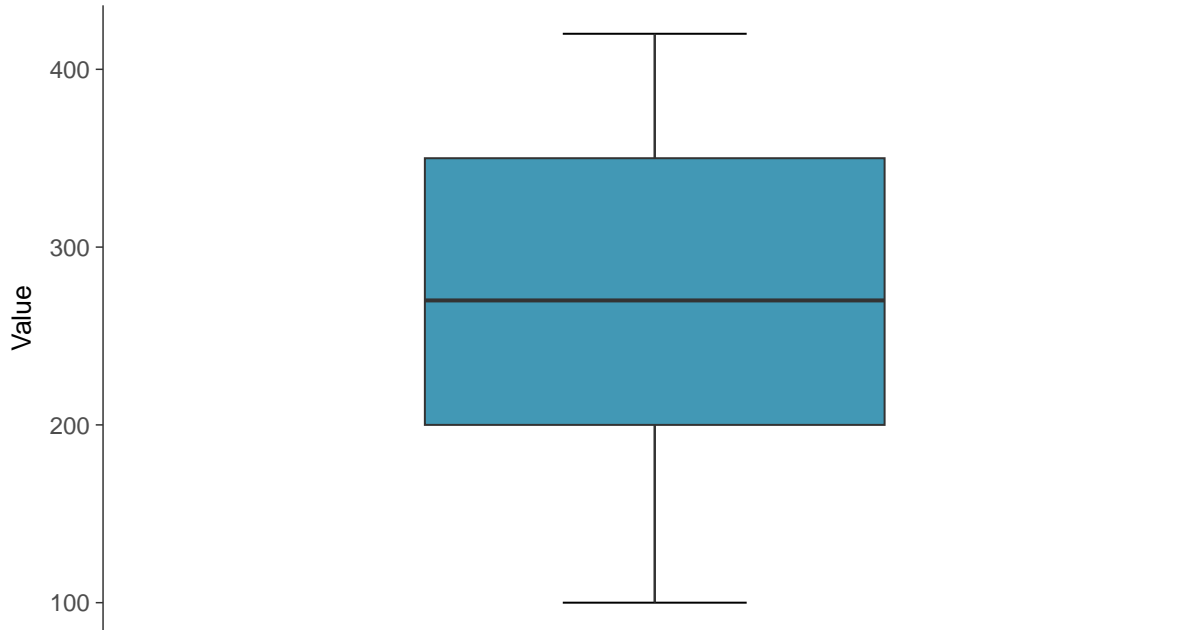
Total Dissolved Solids, MW-12 (mg/L)





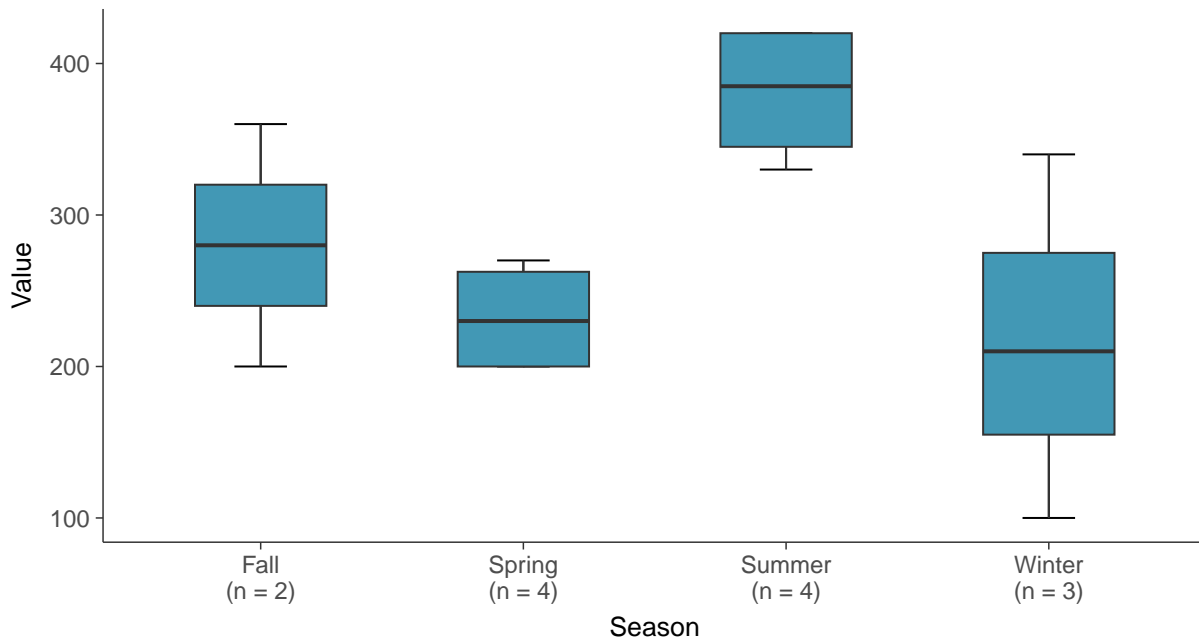
Boxplot

Total Dissolved Solids, MW-12 (mg/L)



Boxplot by Season

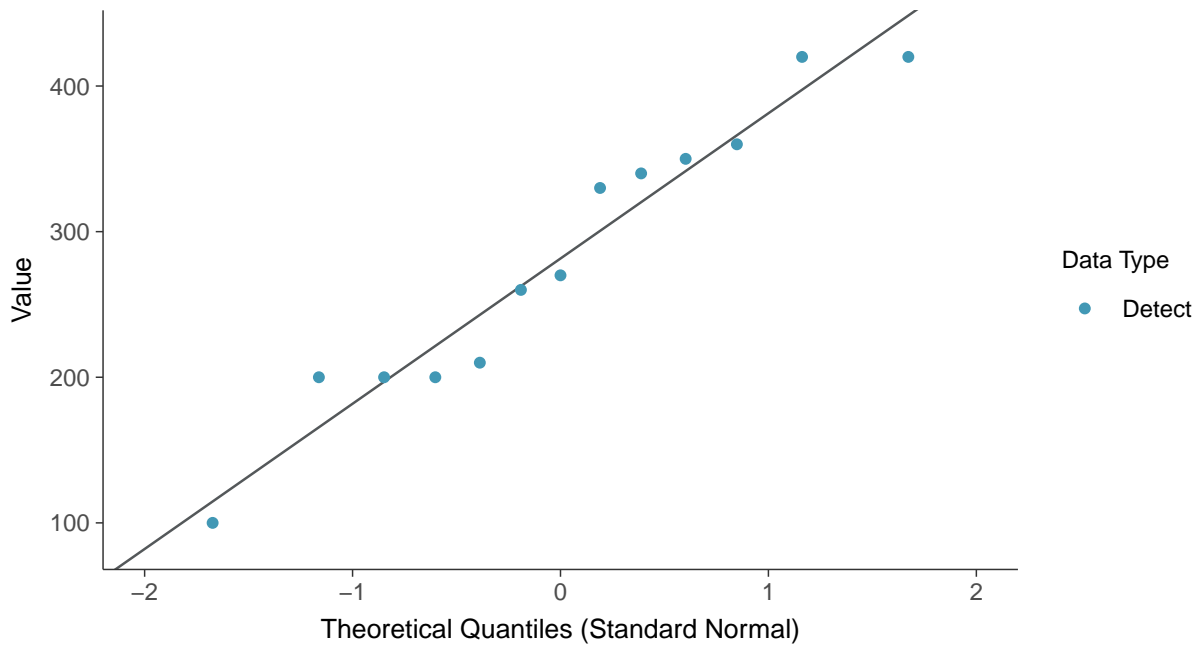
Total Dissolved Solids, MW-12 (mg/L)





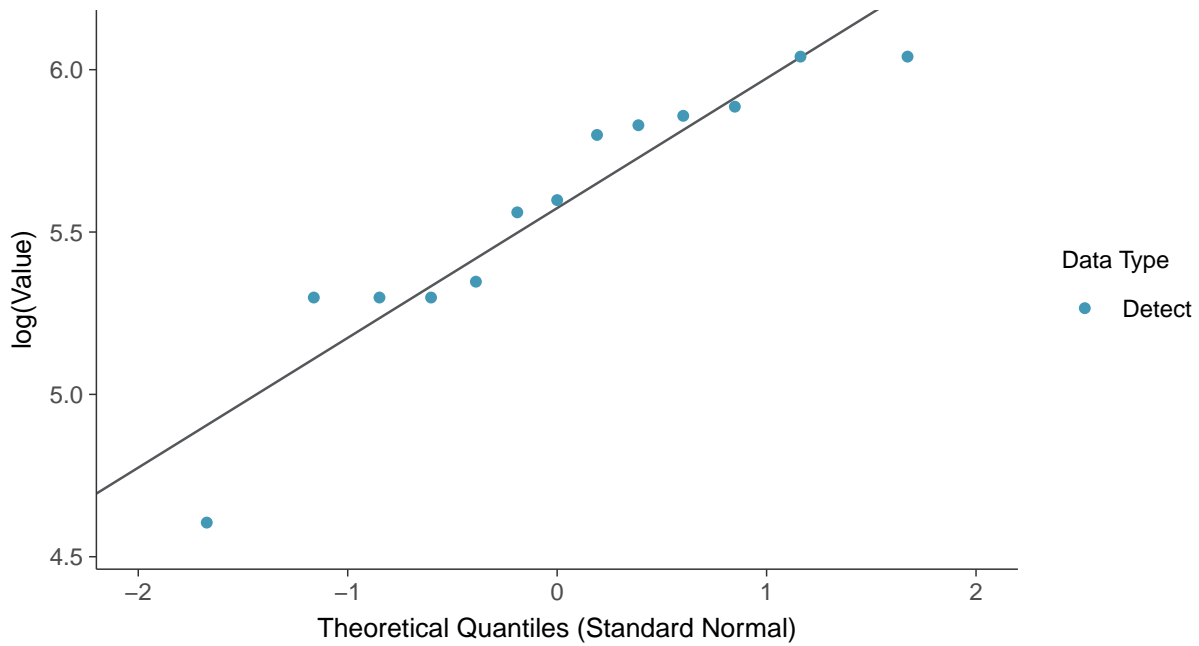
Normal Q-Q plot

Total Dissolved Solids, MW-12 (mg/L)



Lognormal Q-Q plot

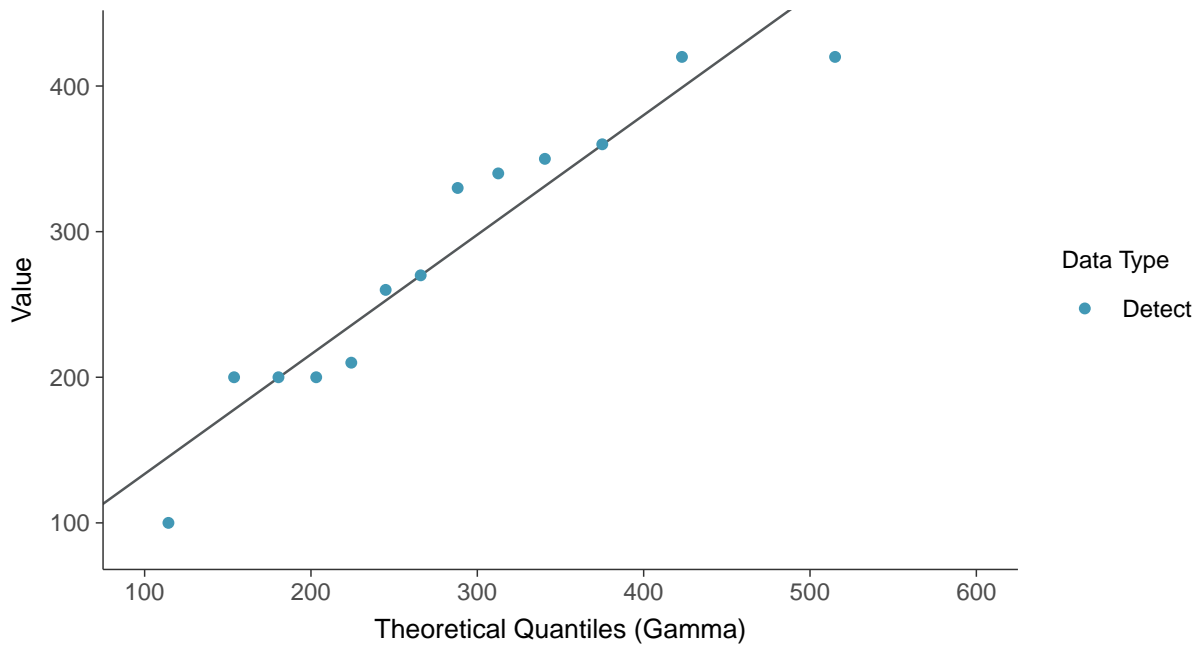
Total Dissolved Solids, MW-12 (mg/L)





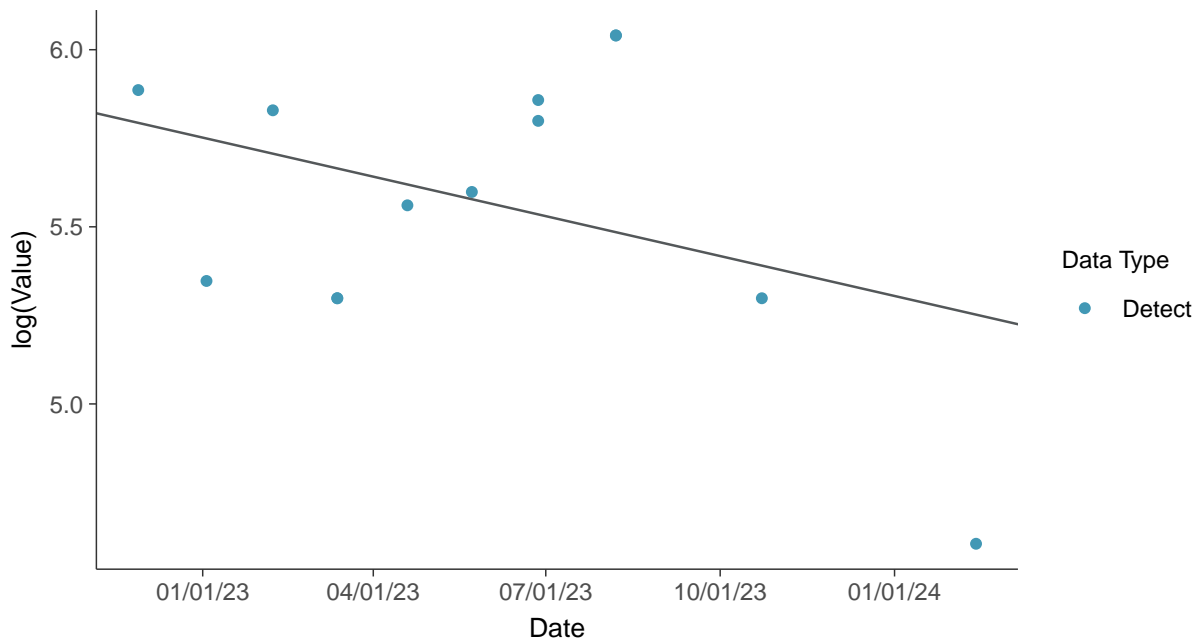
Gamma Q-Q plot

Total Dissolved Solids, MW-12 (mg/L)



Trend Regression: Lognormal MLE

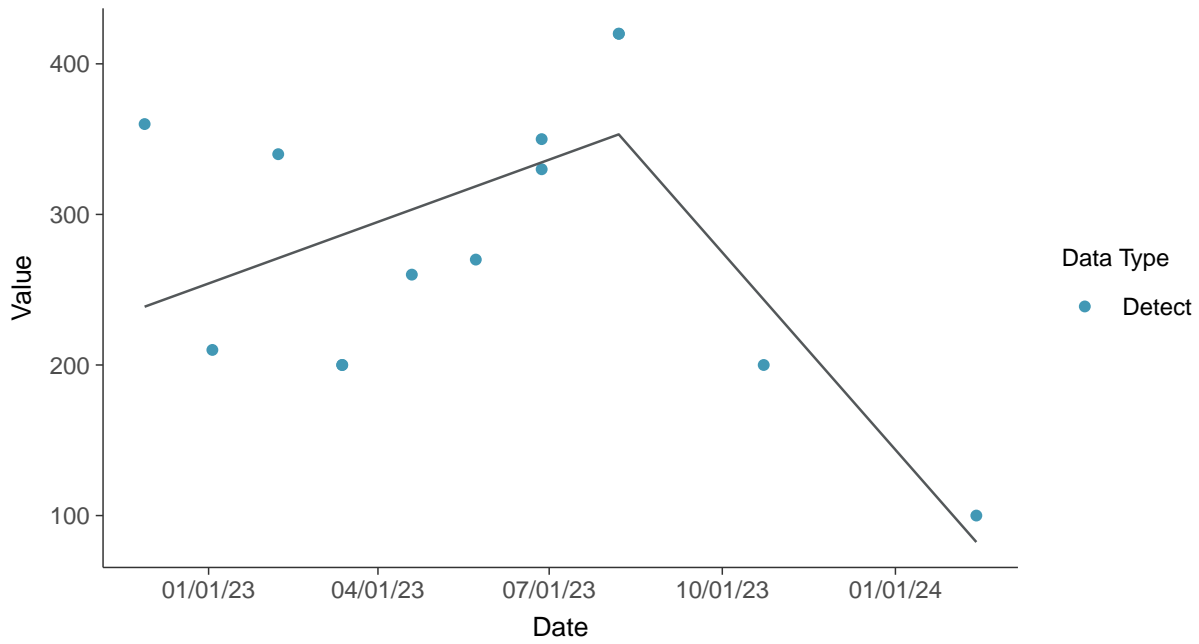
Total Dissolved Solids, MW-12 (mg/L)





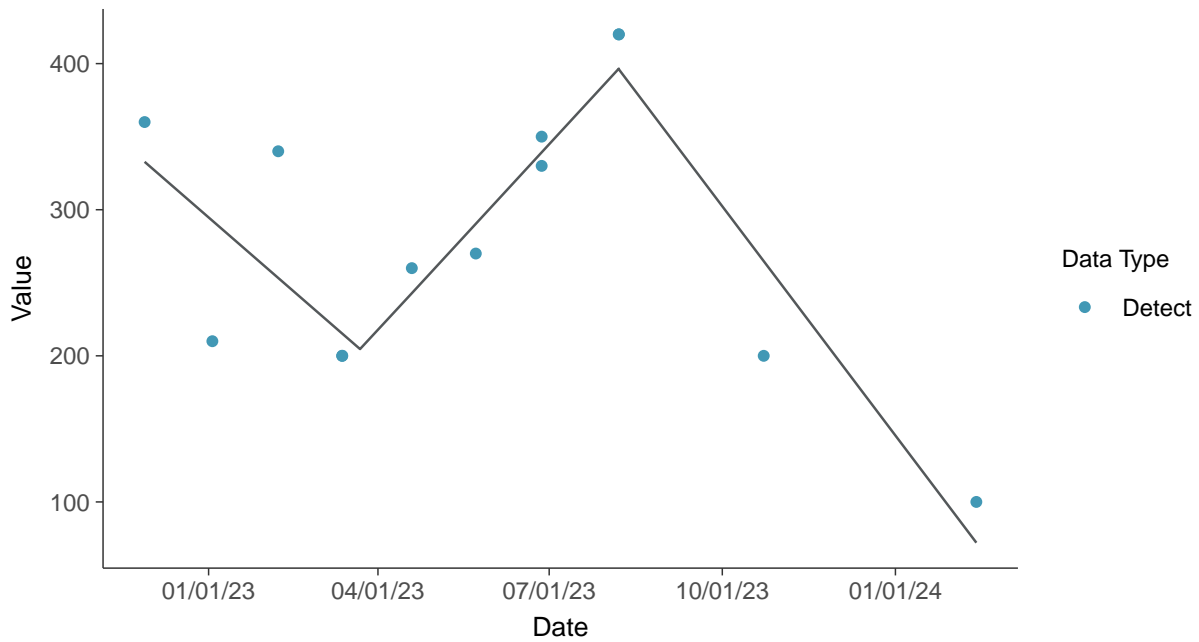
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-12 (mg/L)



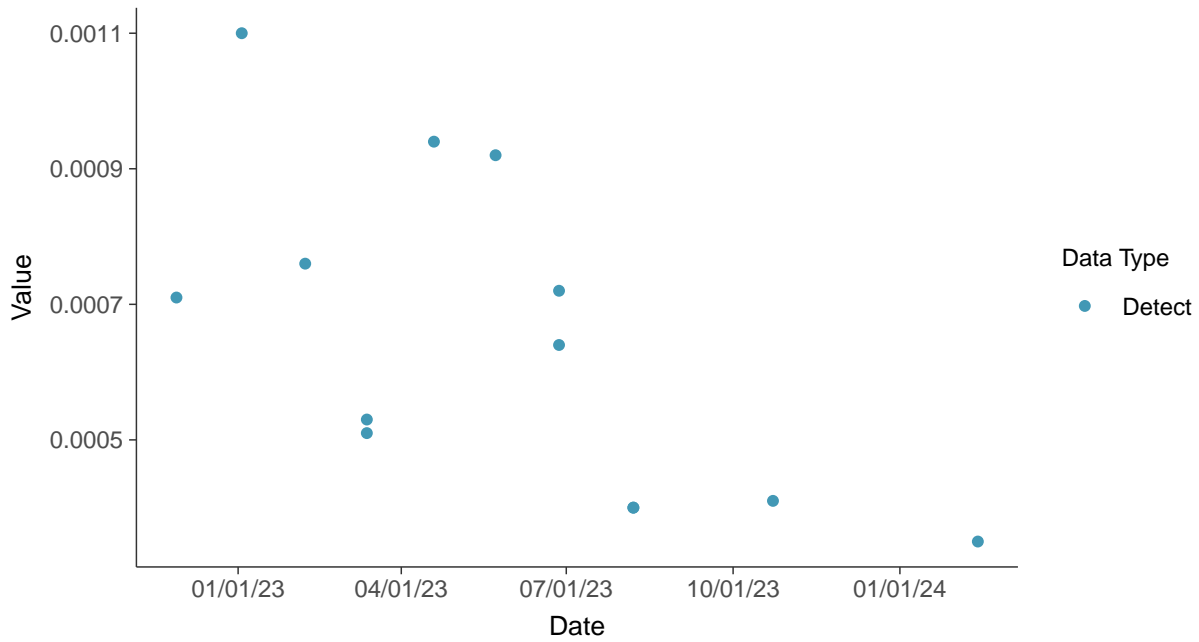


Appendix IV: Antimony, MW-12

ID: 2_22_5_101

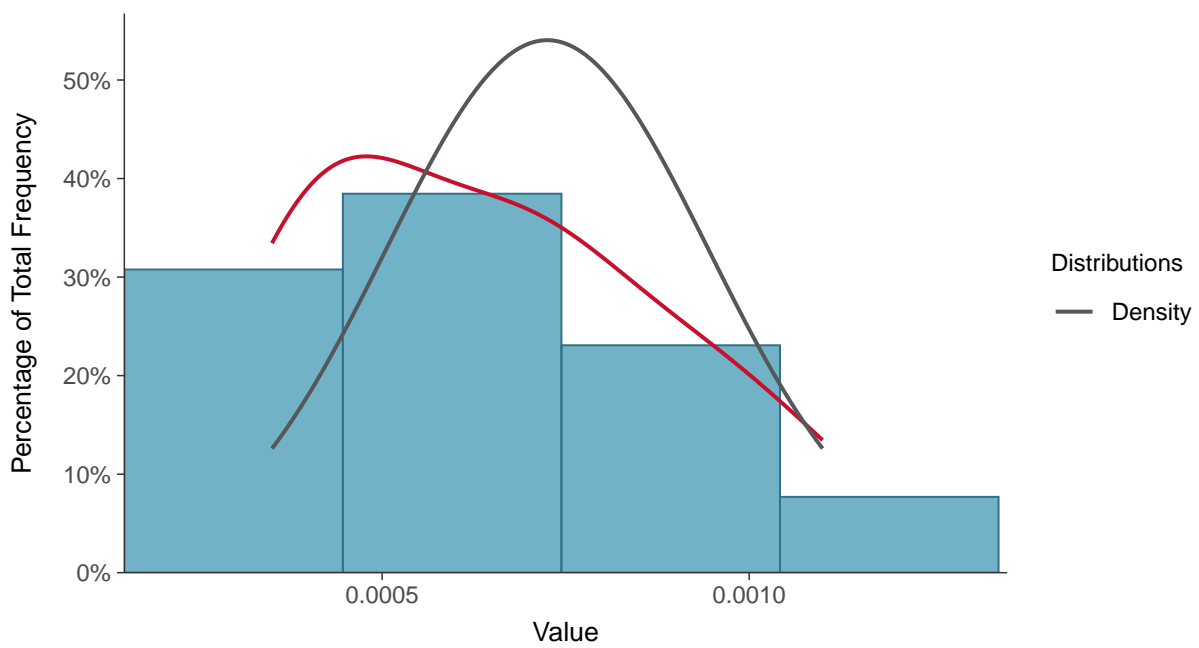
Scatter Plot

Antimony, MW-12 (mg/L)



Histogram

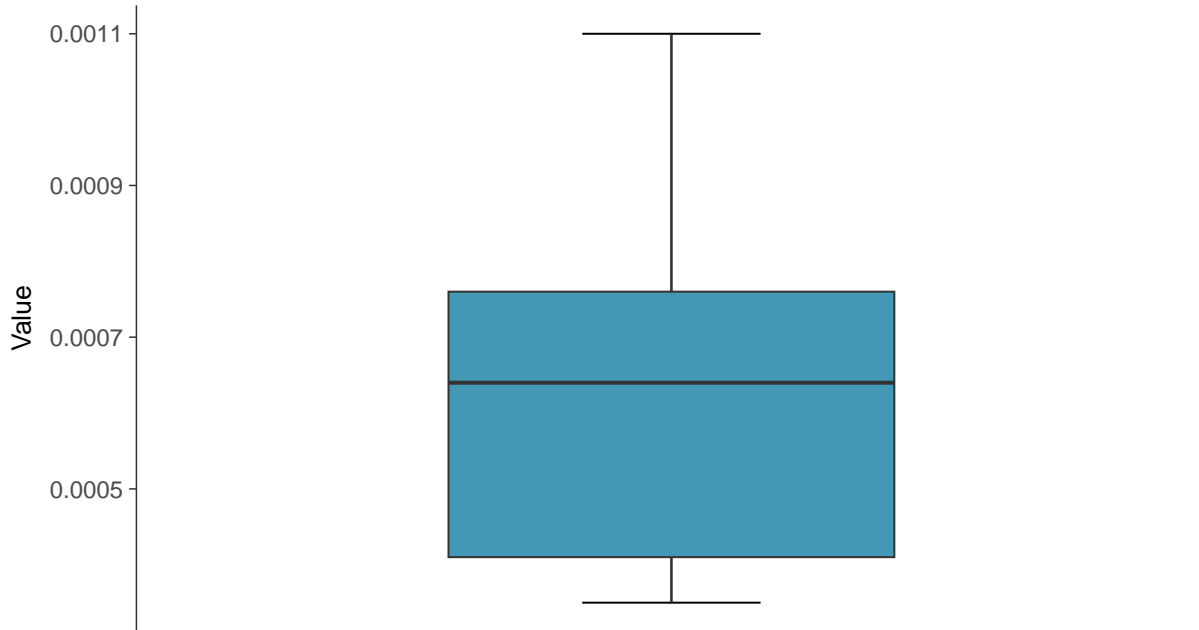
Antimony, MW-12 (mg/L)





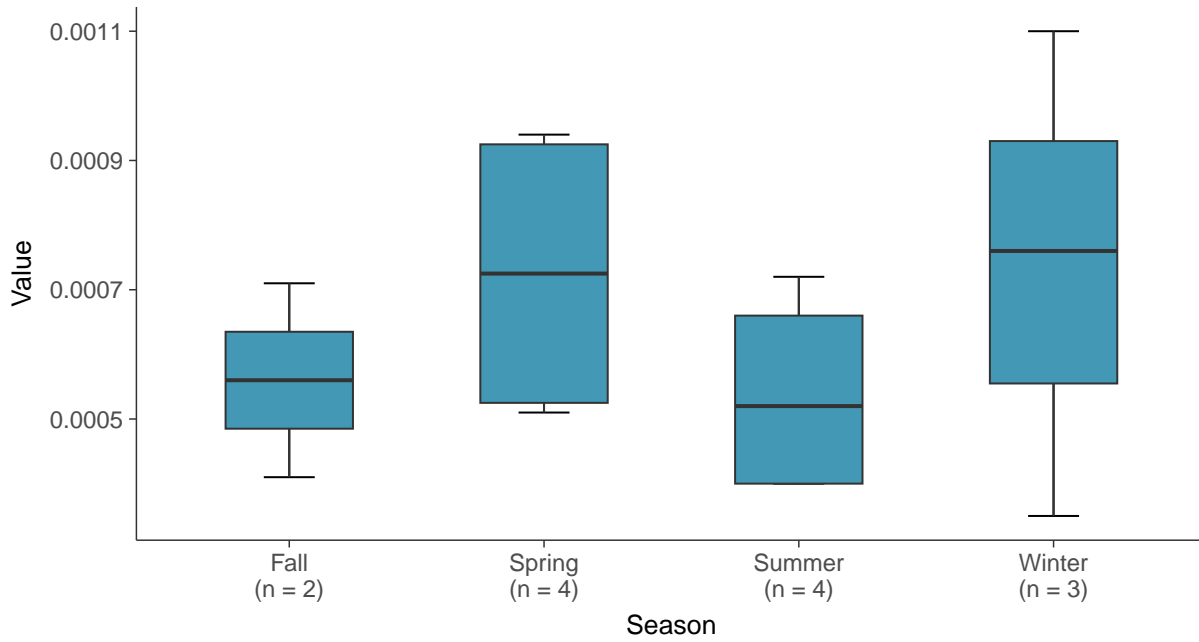
Boxplot

Antimony, MW-12 (mg/L)



Boxplot by Season

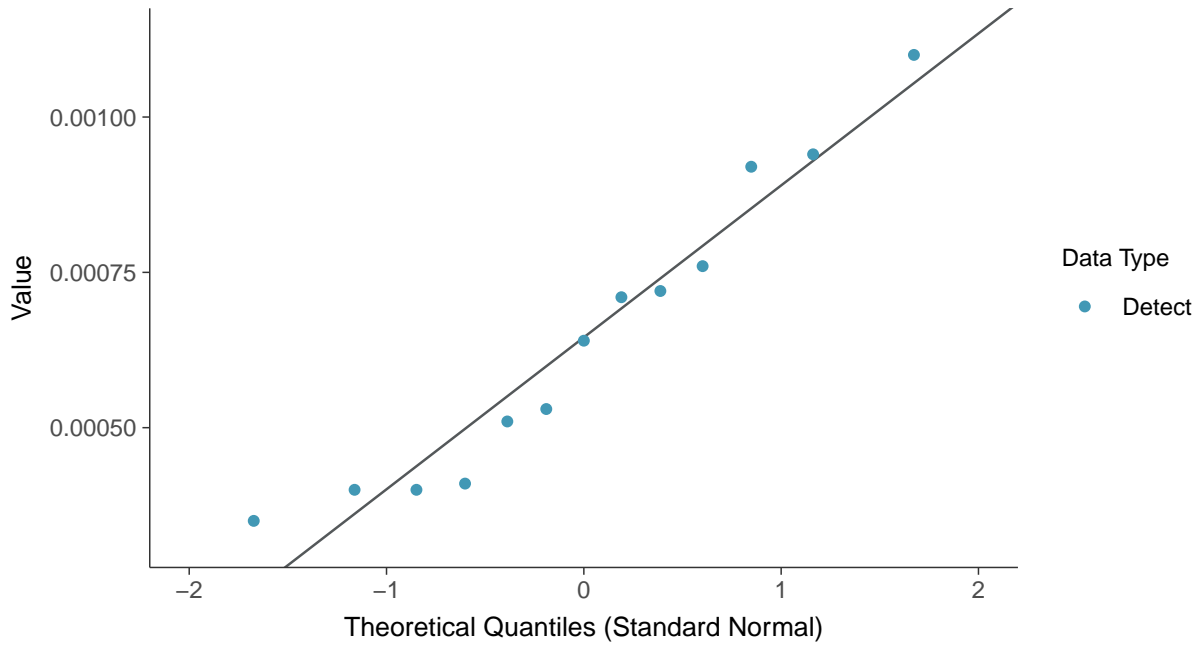
Antimony, MW-12 (mg/L)





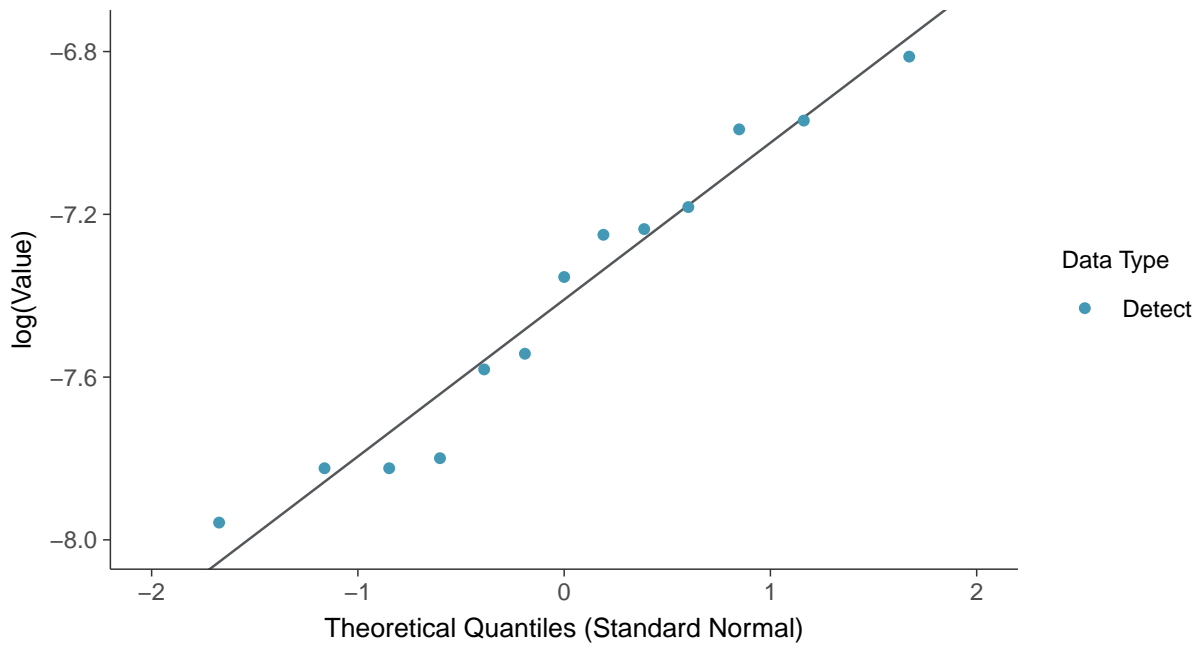
Normal Q-Q plot

Antimony, MW-12 (mg/L)



Lognormal Q-Q plot

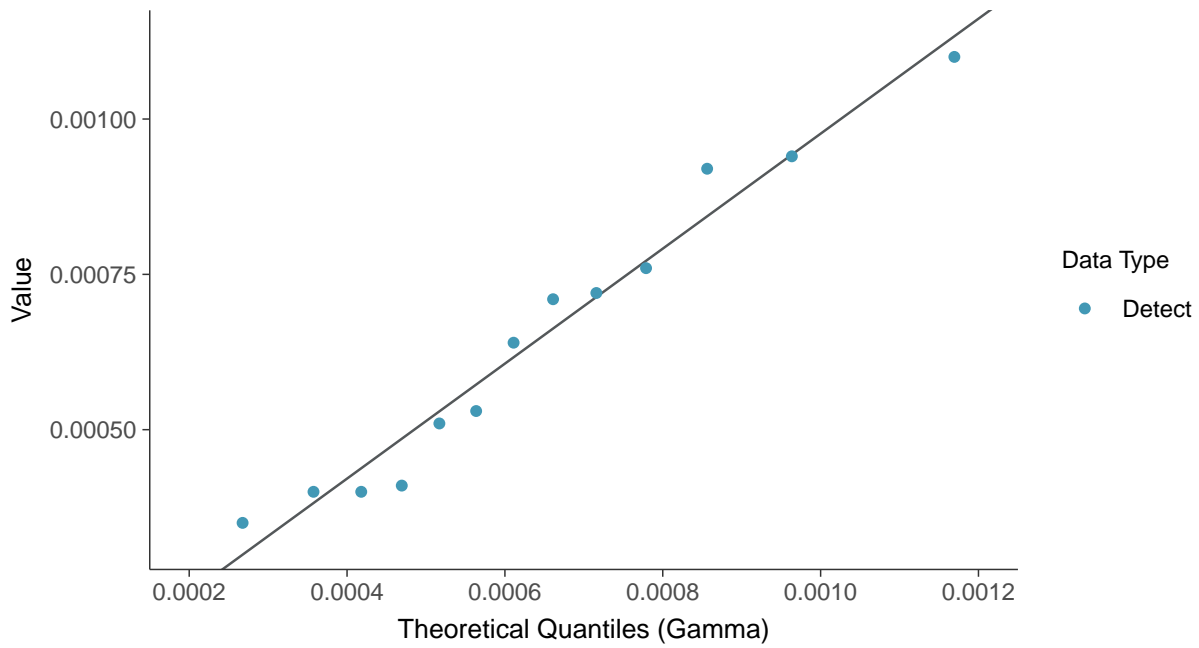
Antimony, MW-12 (mg/L)





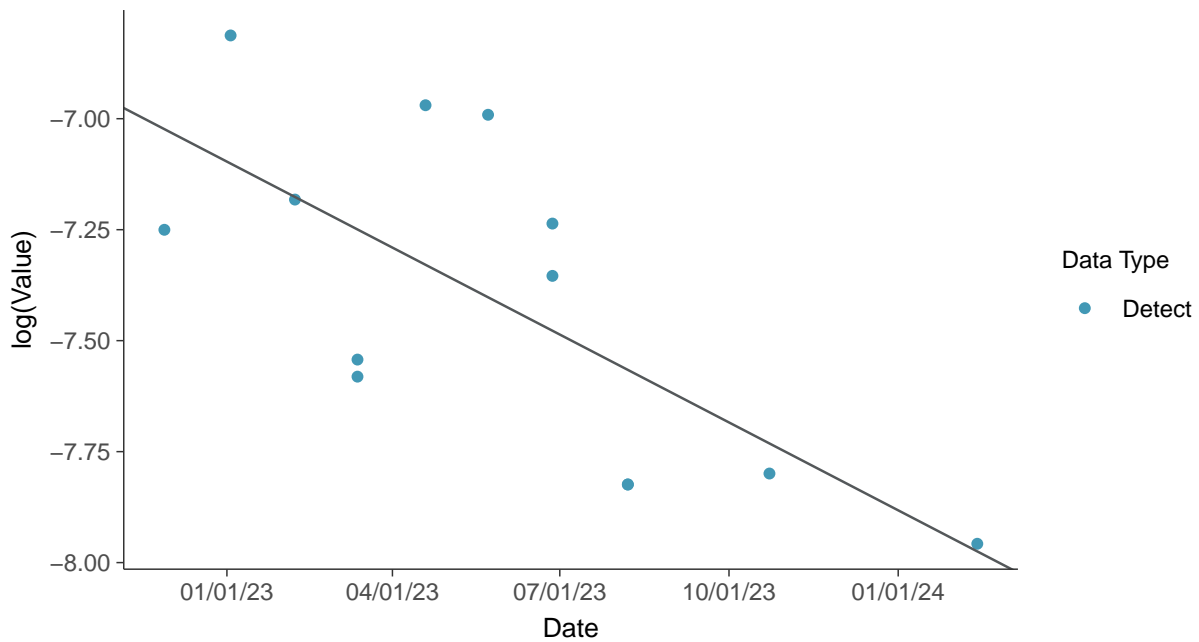
Gamma Q-Q plot

Antimony, MW-12 (mg/L)



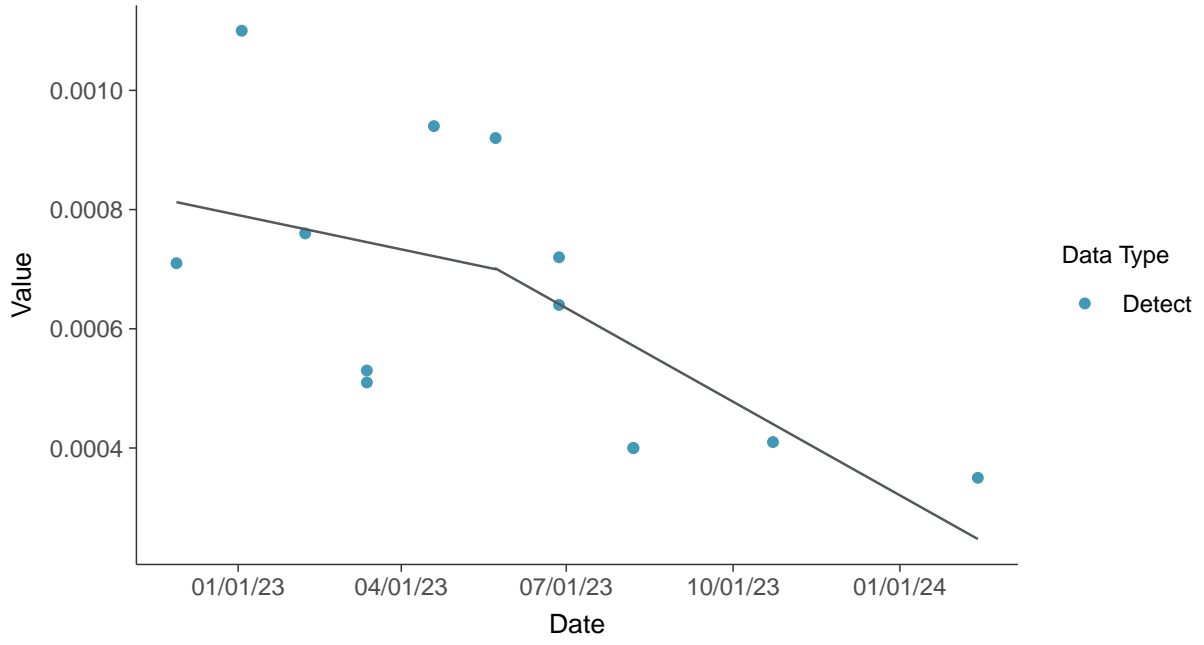
Trend Regression: Lognormal MLE

Antimony, MW-12 (mg/L)





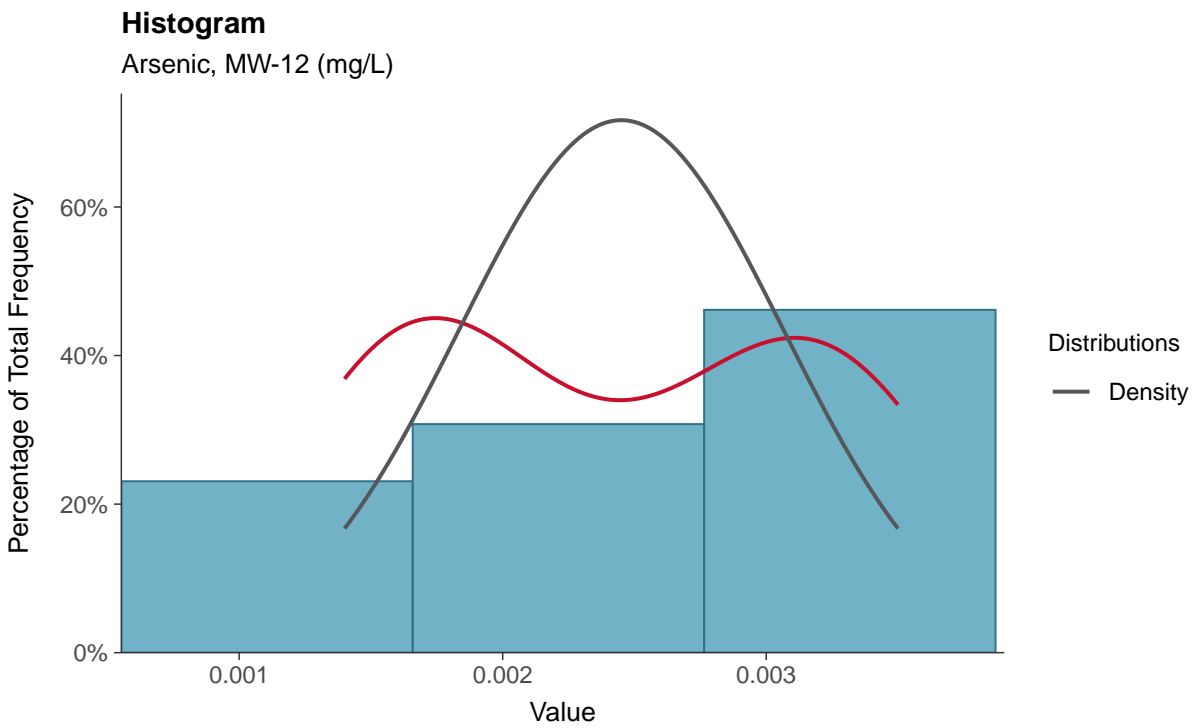
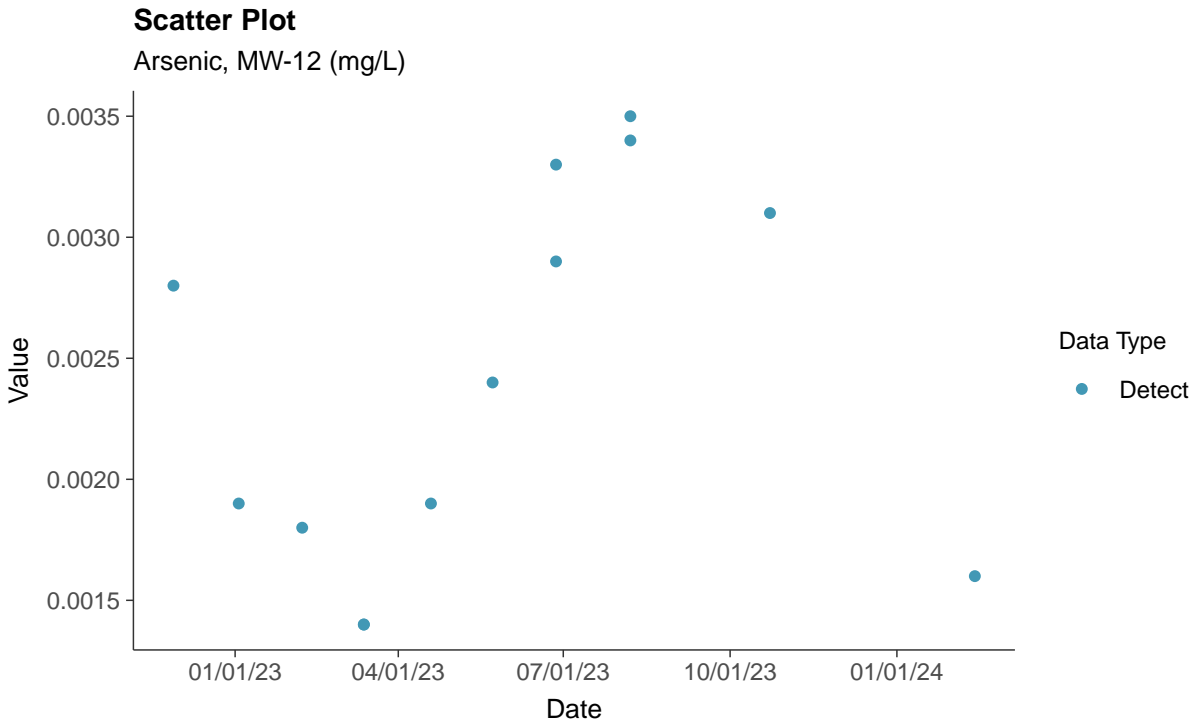
Trend Regression: Piecewise Linear-Linear
Antimony, MW-12 (mg/L)





Appendix IV: Arsenic, MW-12

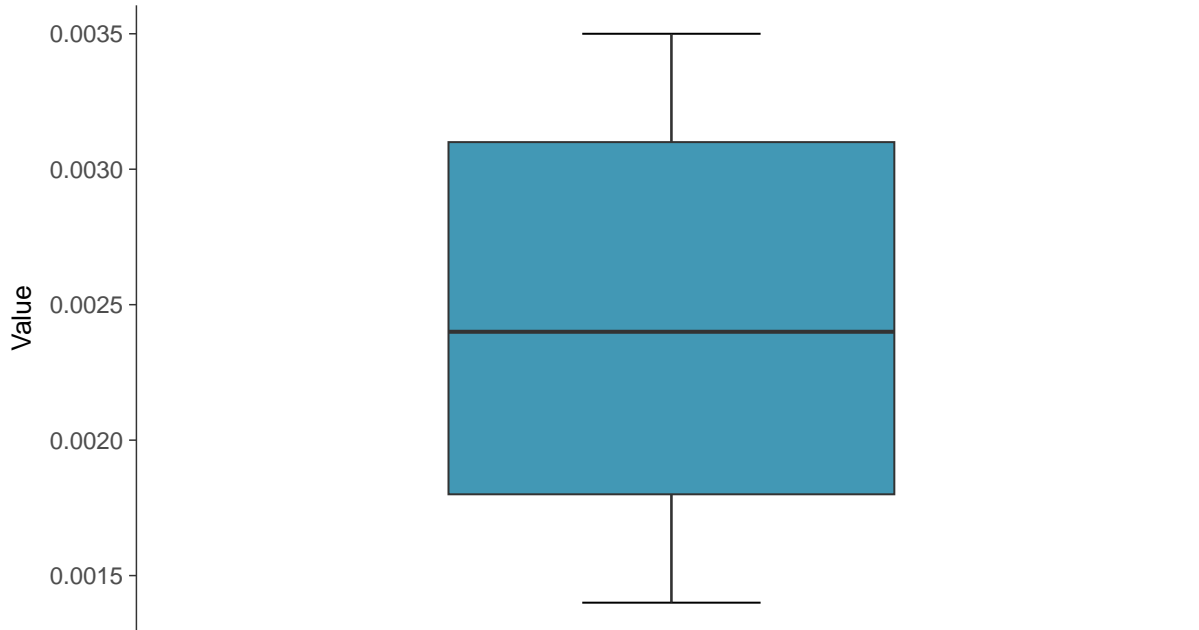
ID: 2_22_5_102





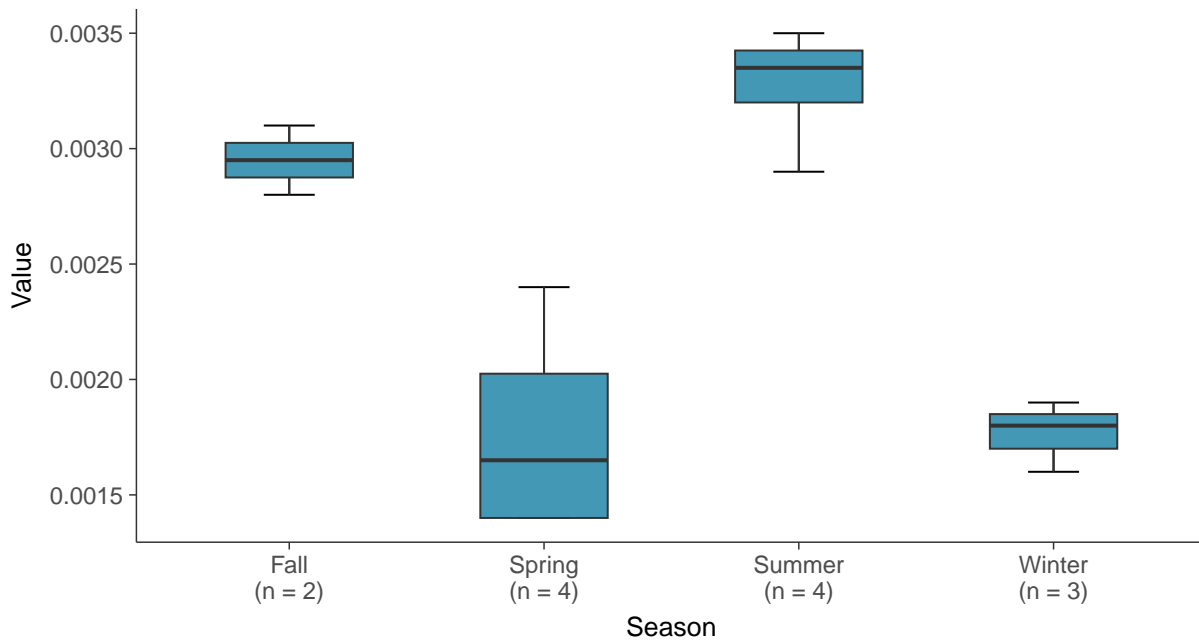
Boxplot

Arsenic, MW-12 (mg/L)



Boxplot by Season

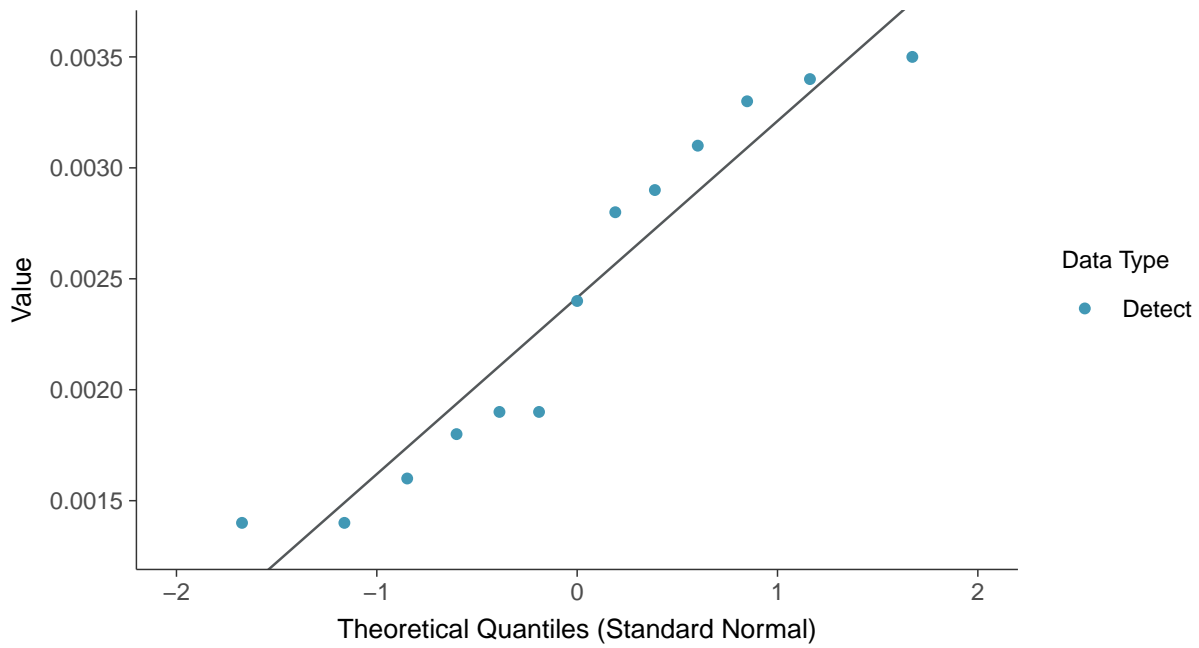
Arsenic, MW-12 (mg/L)





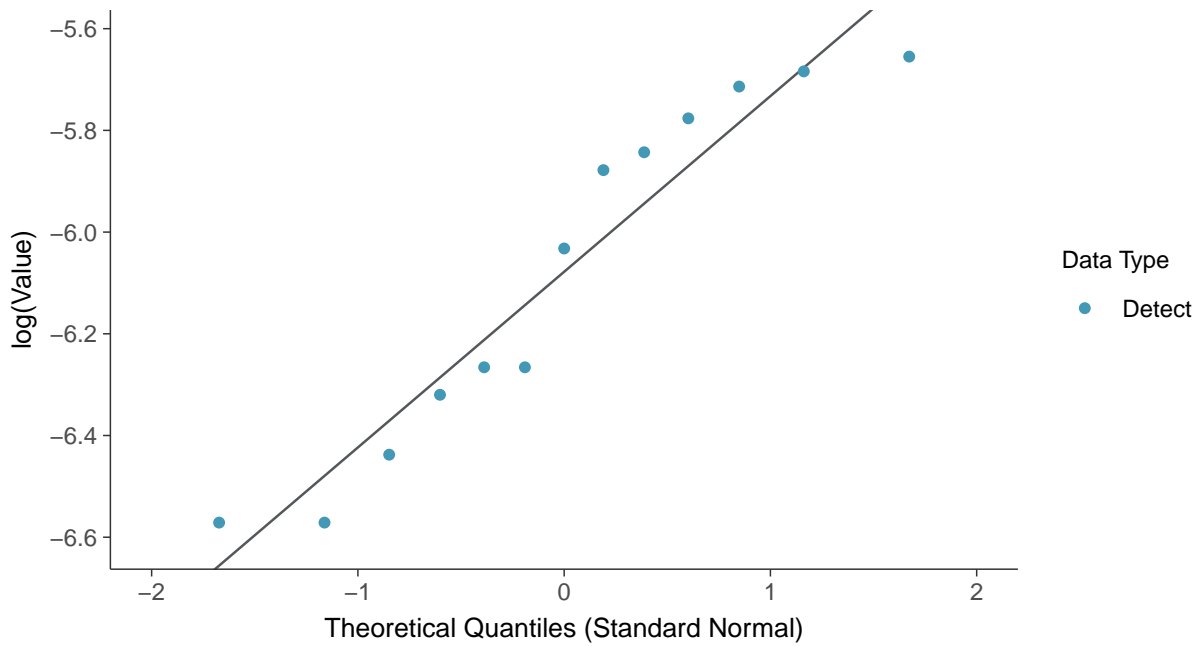
Normal Q-Q plot

Arsenic, MW-12 (mg/L)



Lognormal Q-Q plot

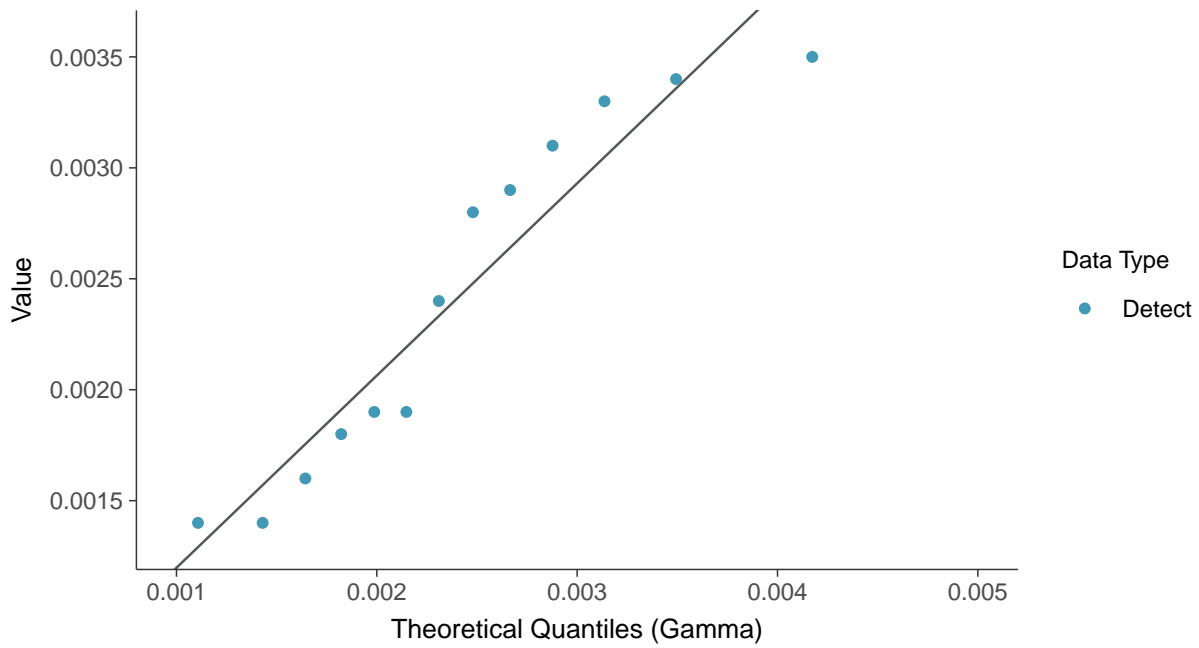
Arsenic, MW-12 (mg/L)





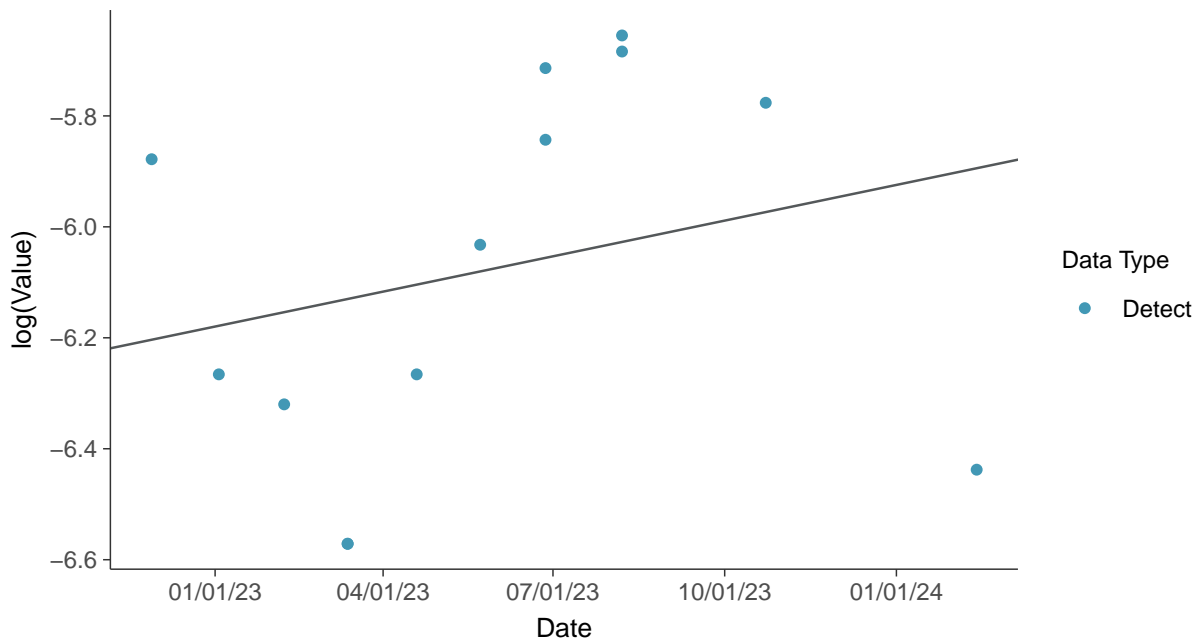
Gamma Q-Q plot

Arsenic, MW-12 (mg/L)



Trend Regression: Lognormal MLE

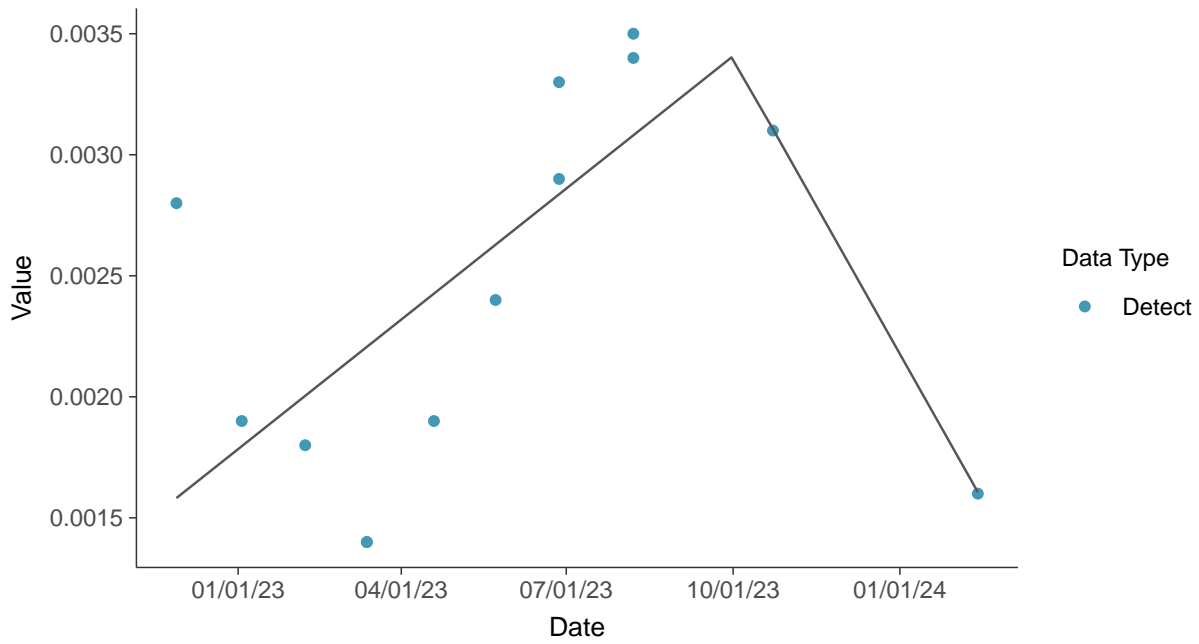
Arsenic, MW-12 (mg/L)





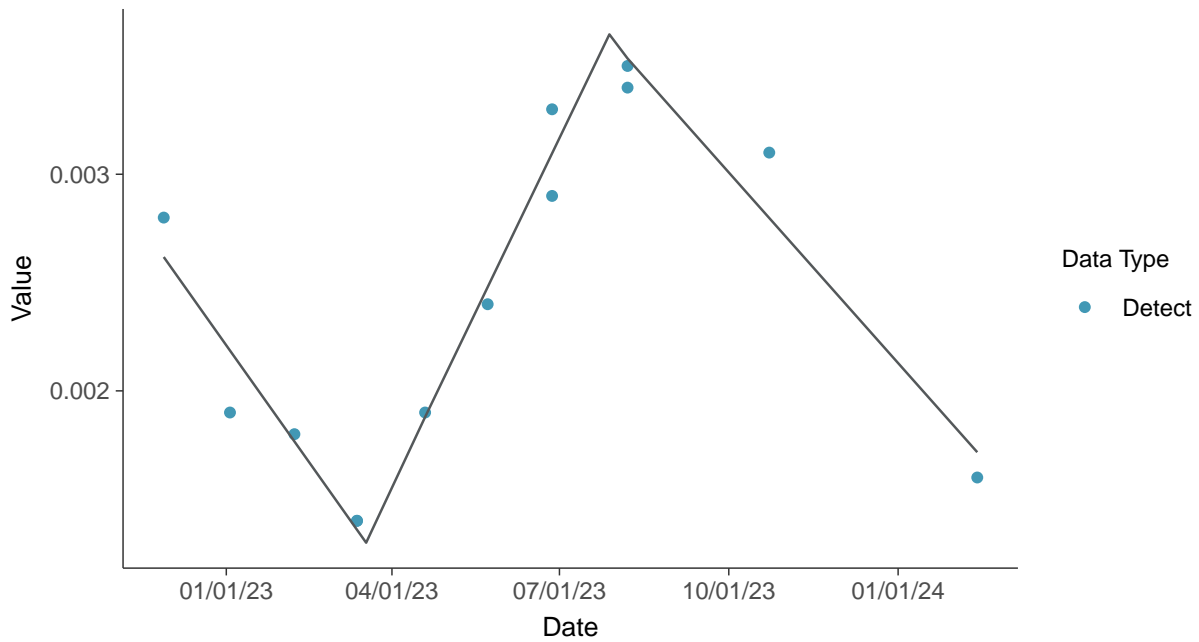
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

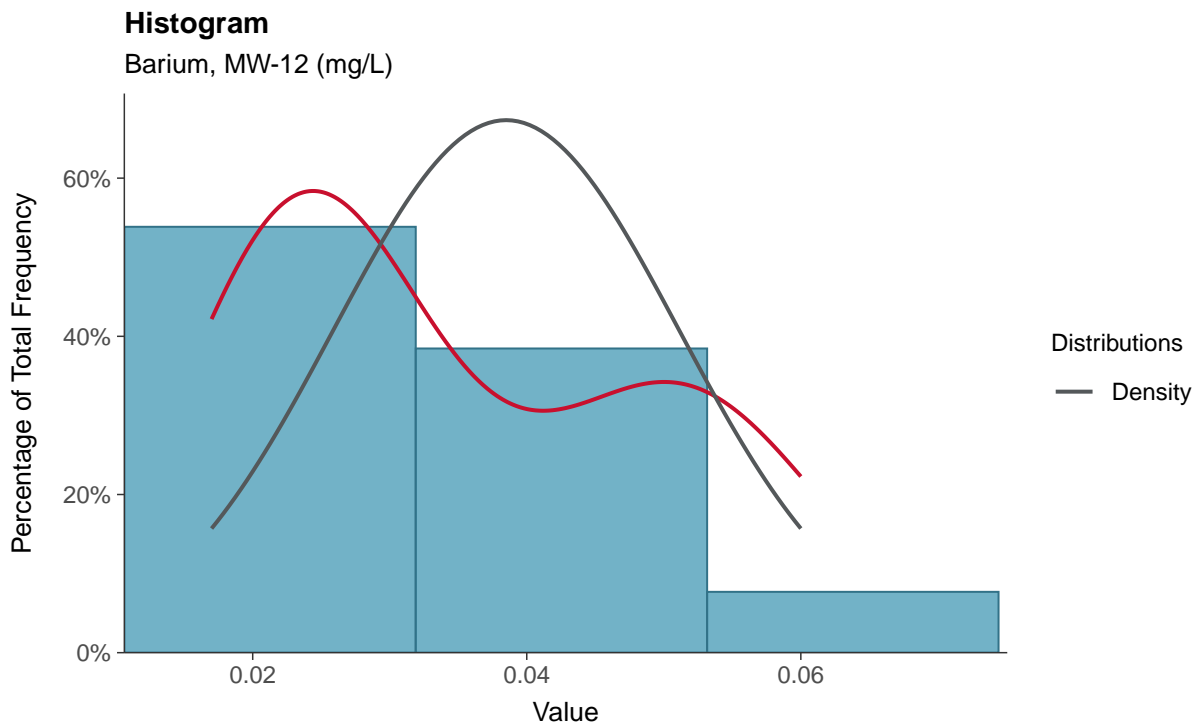
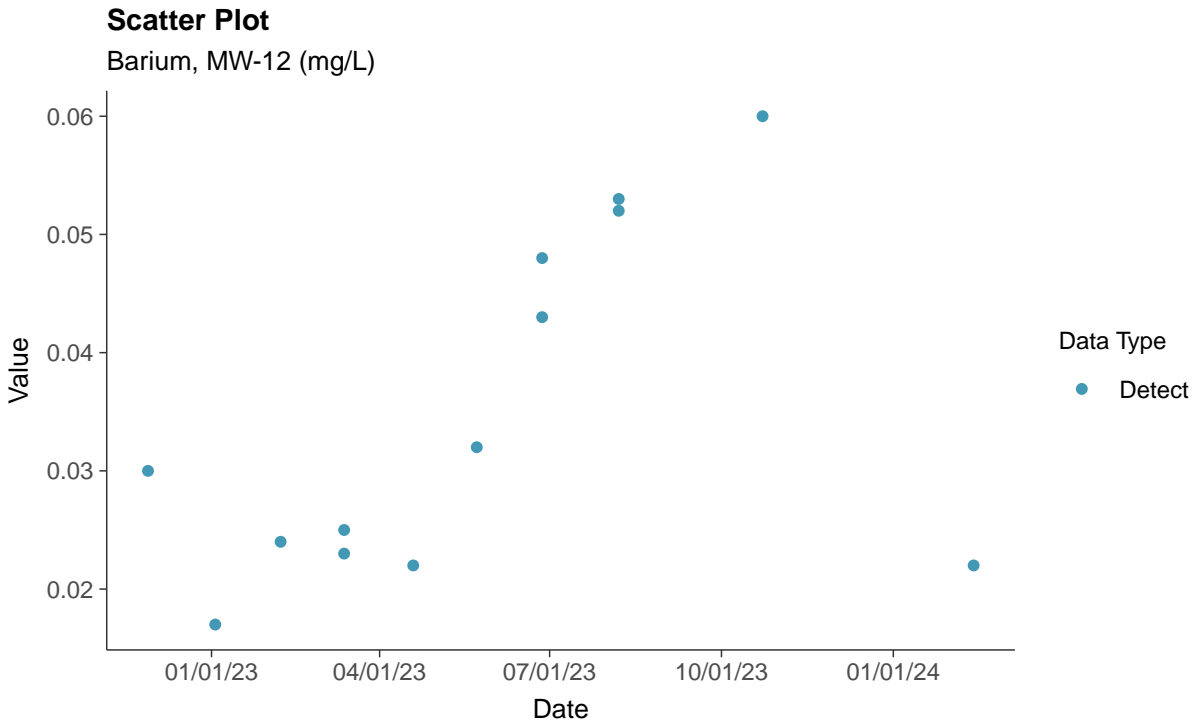
Arsenic, MW-12 (mg/L)





Appendix IV: Barium, MW-12

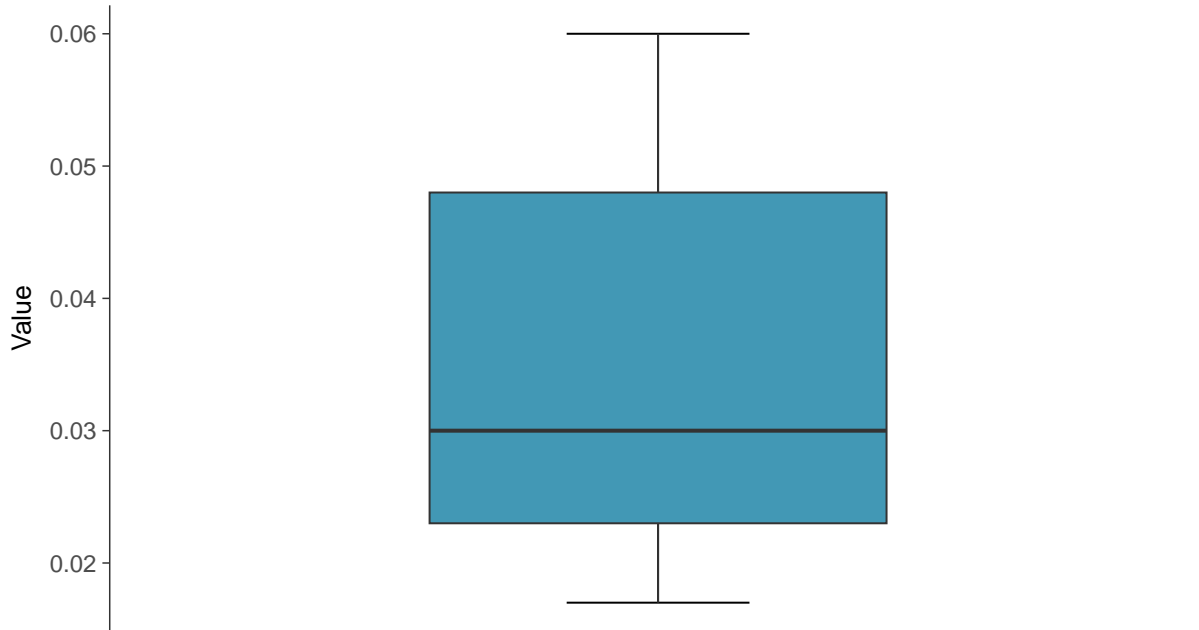
ID: 2_22_5_103





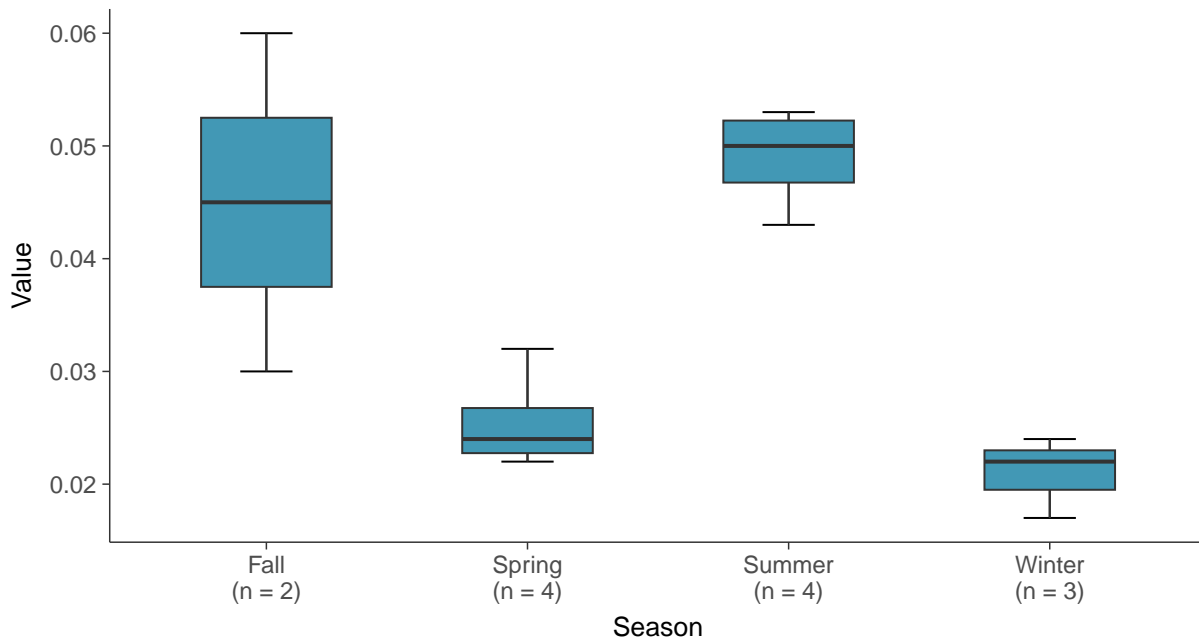
Boxplot

Barium, MW-12 (mg/L)



Boxplot by Season

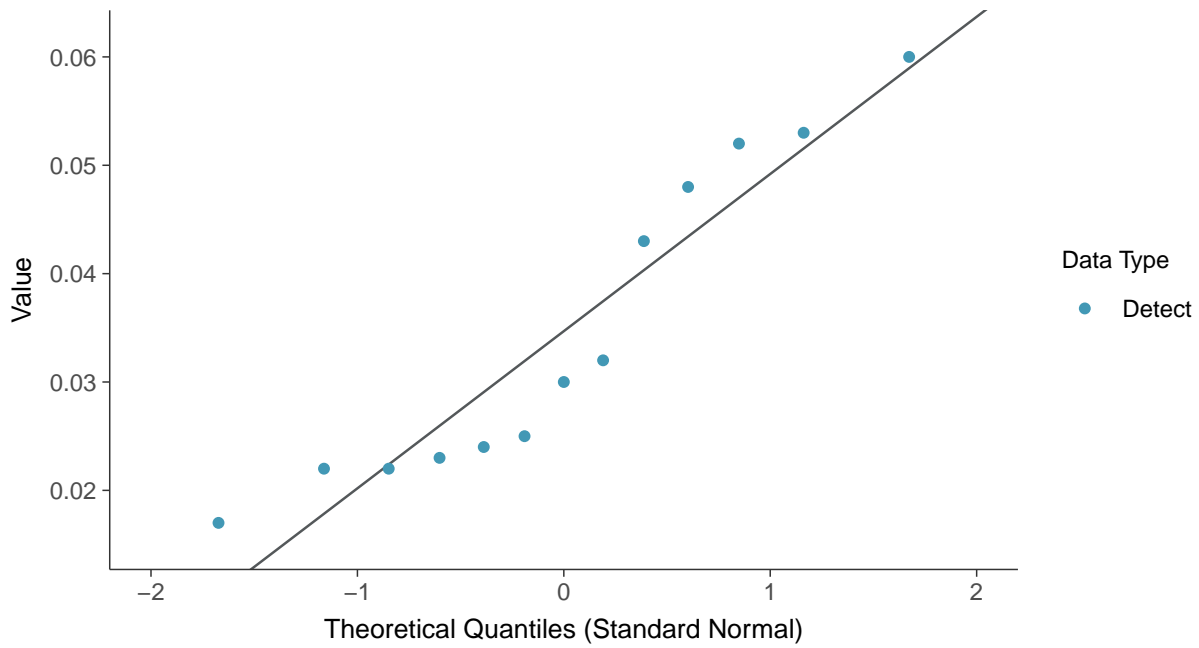
Barium, MW-12 (mg/L)





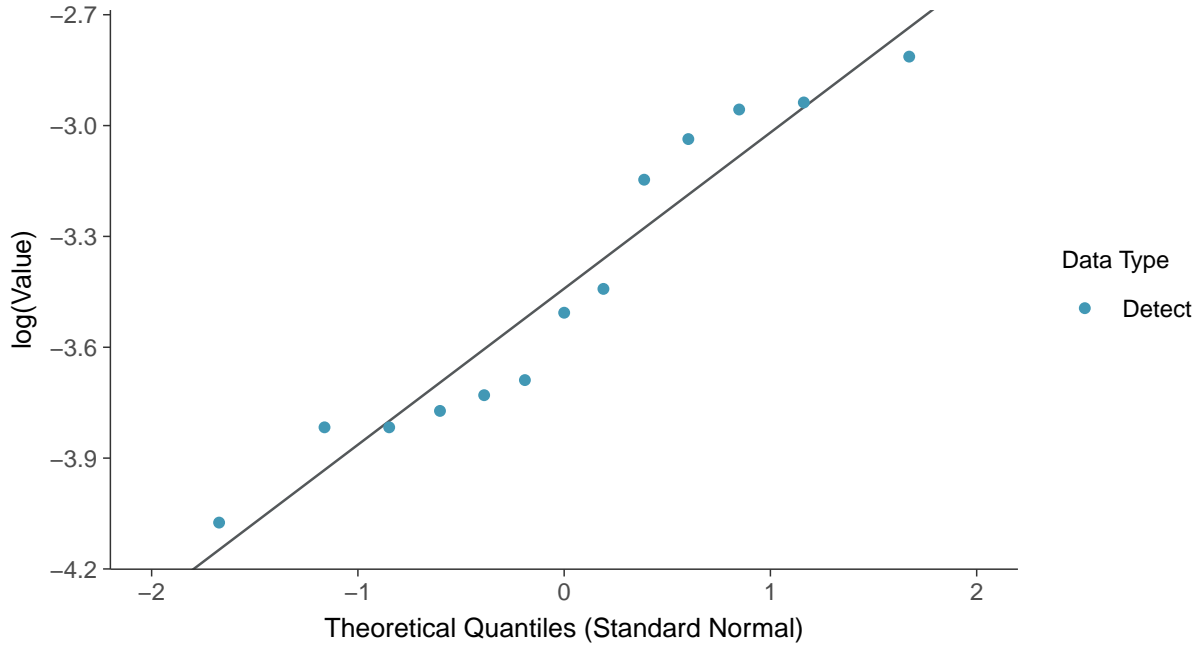
Normal Q-Q plot

Barium, MW-12 (mg/L)



Lognormal Q-Q plot

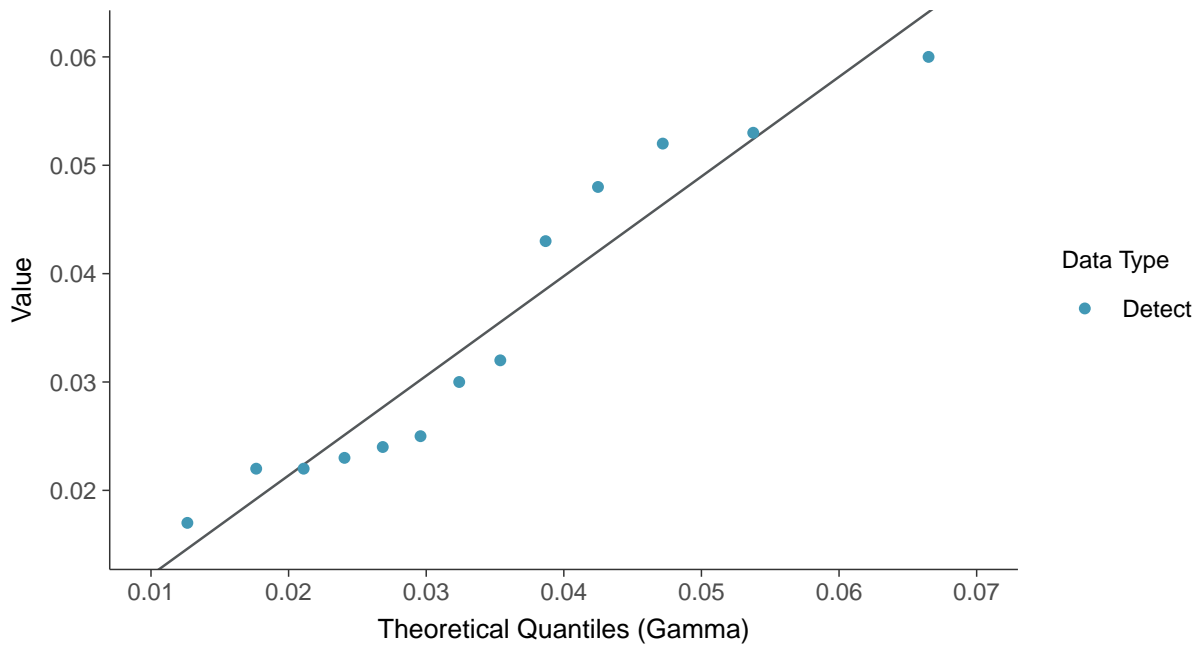
Barium, MW-12 (mg/L)





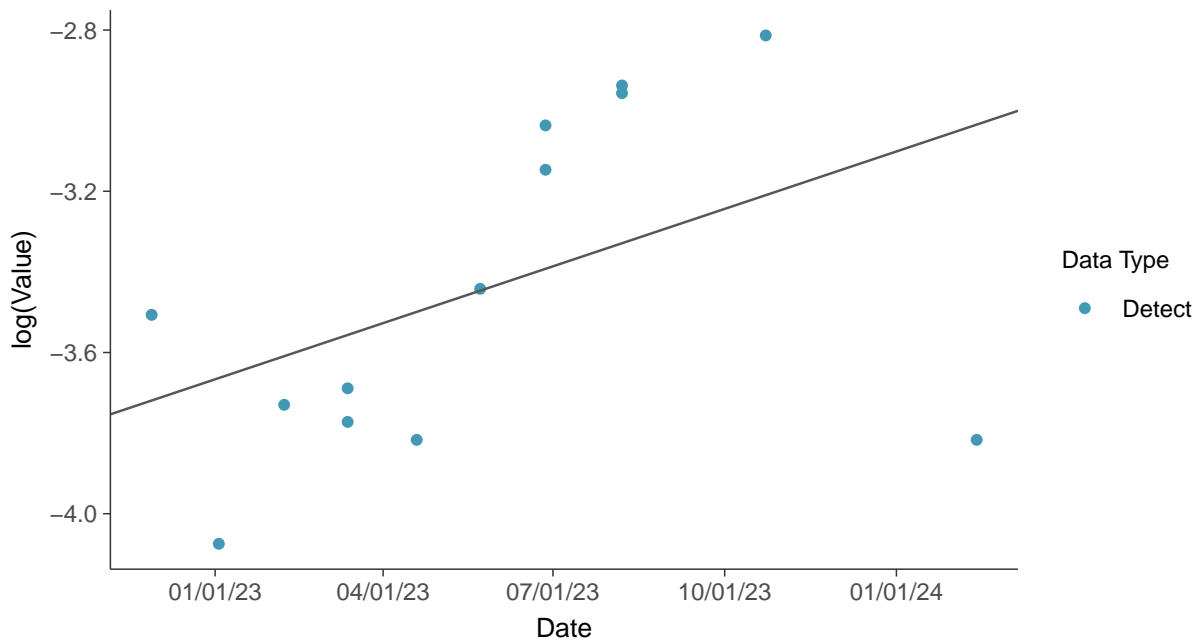
Gamma Q-Q plot

Barium, MW-12 (mg/L)



Trend Regression: Lognormal MLE

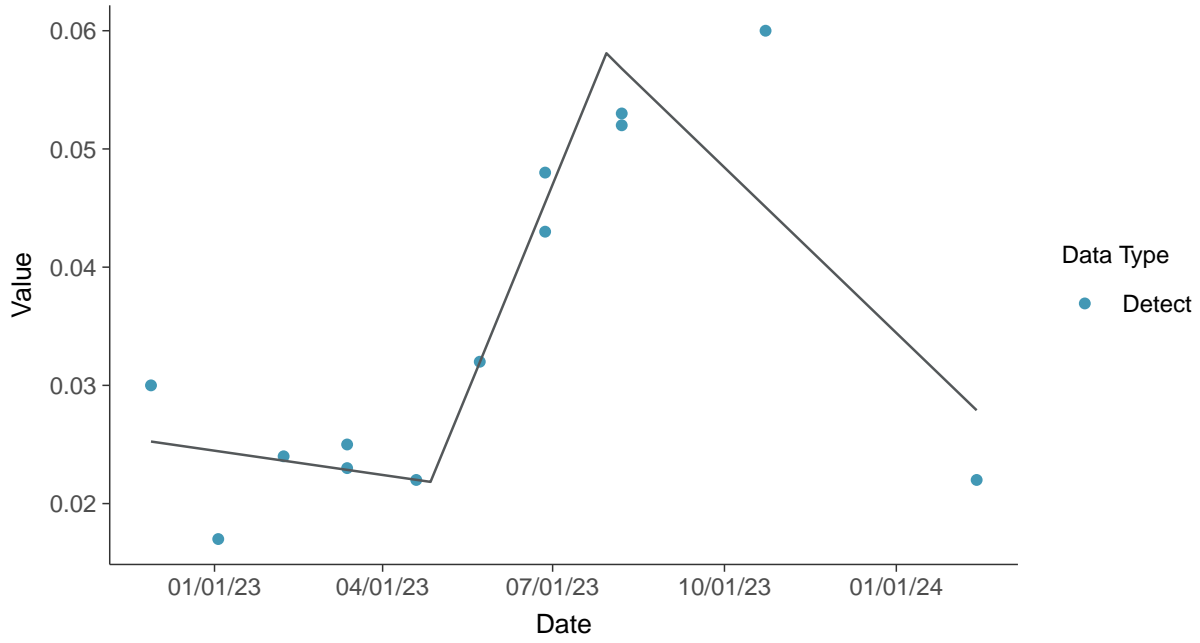
Barium, MW-12 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

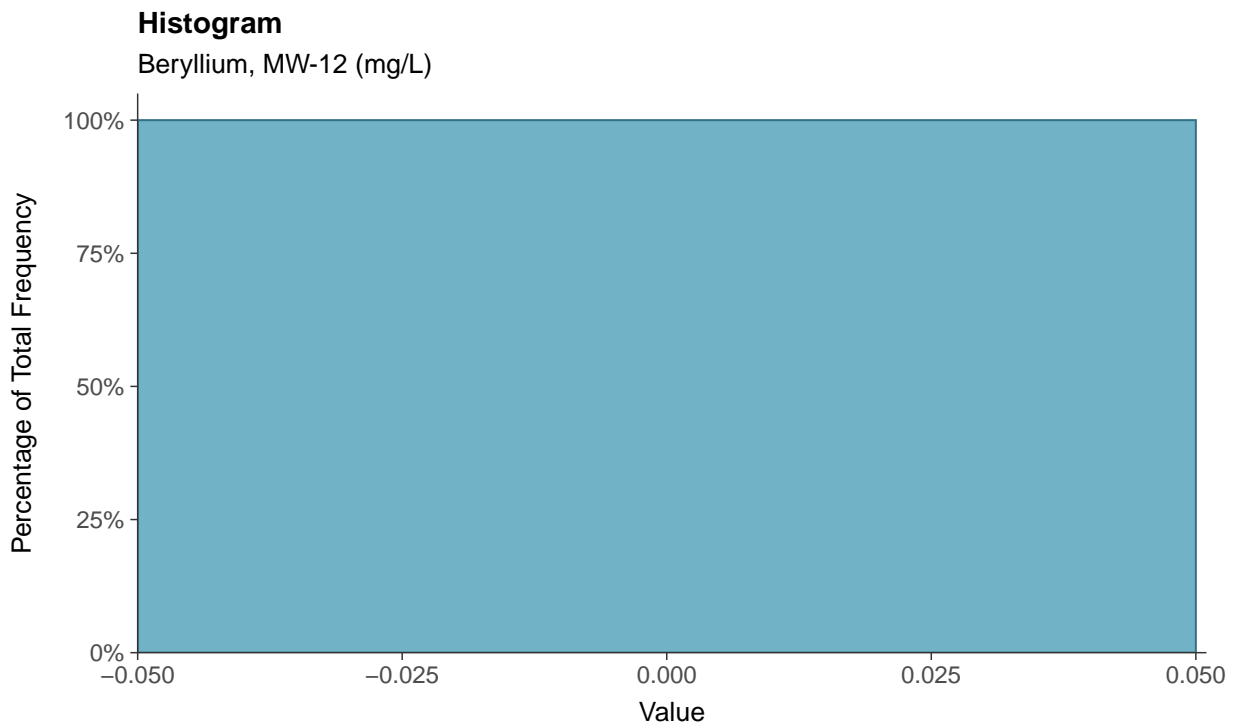
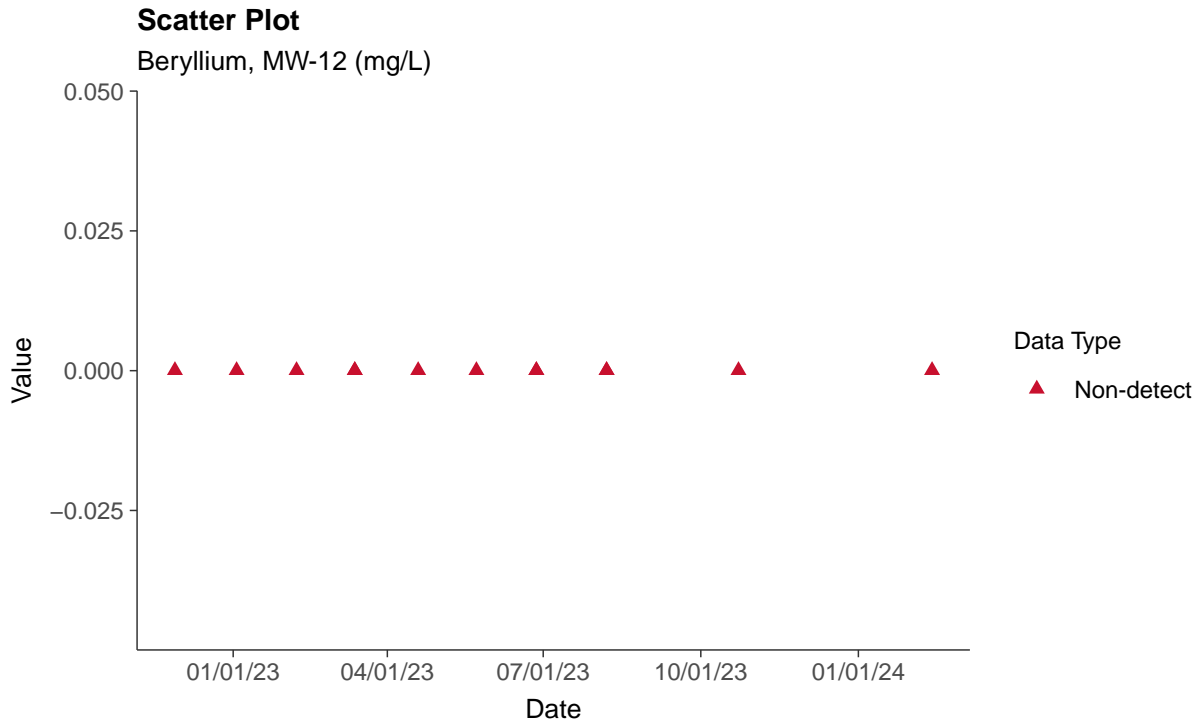
Barium, MW-12 (mg/L)





Appendix IV: Beryllium, MW-12

ID: 2_22_5_104





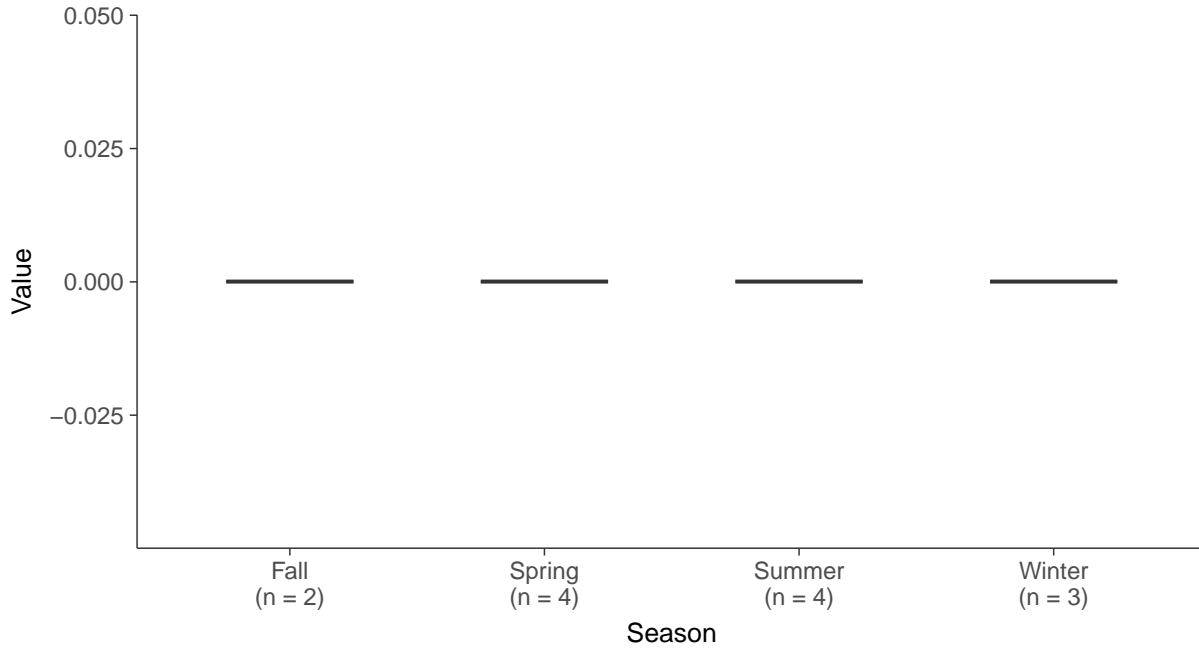
Boxplot

Beryllium, MW-12 (mg/L)



Boxplot by Season

Beryllium, MW-12 (mg/L)



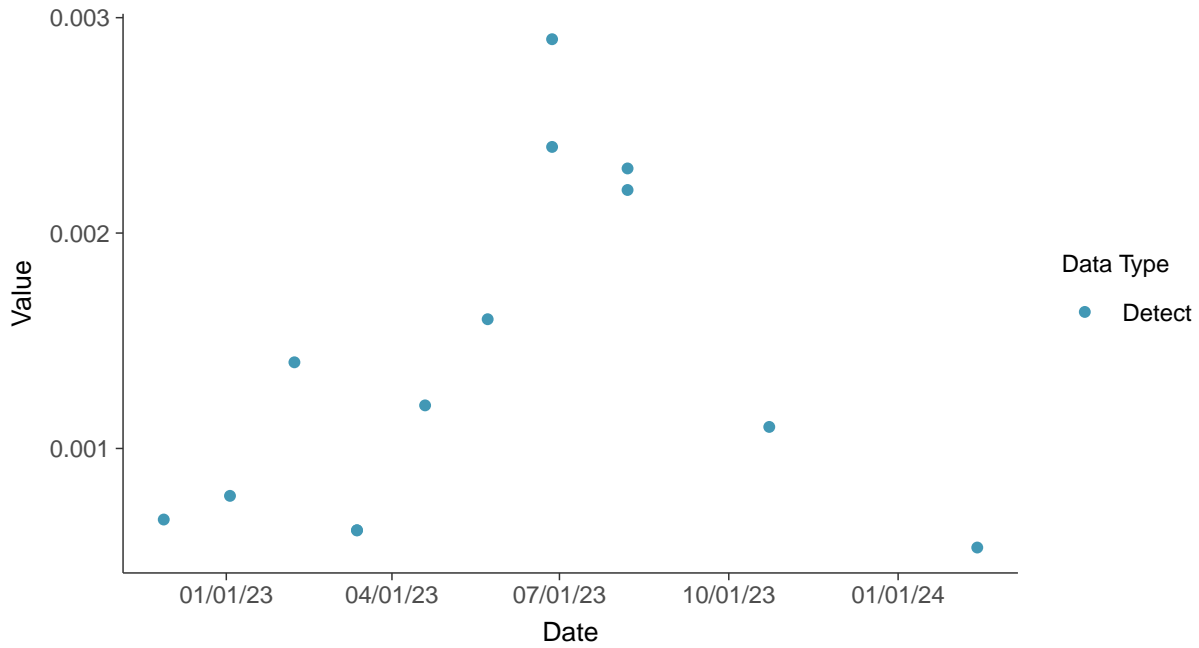


Appendix IV: Cadmium, MW-12

ID: 2_22_5_106

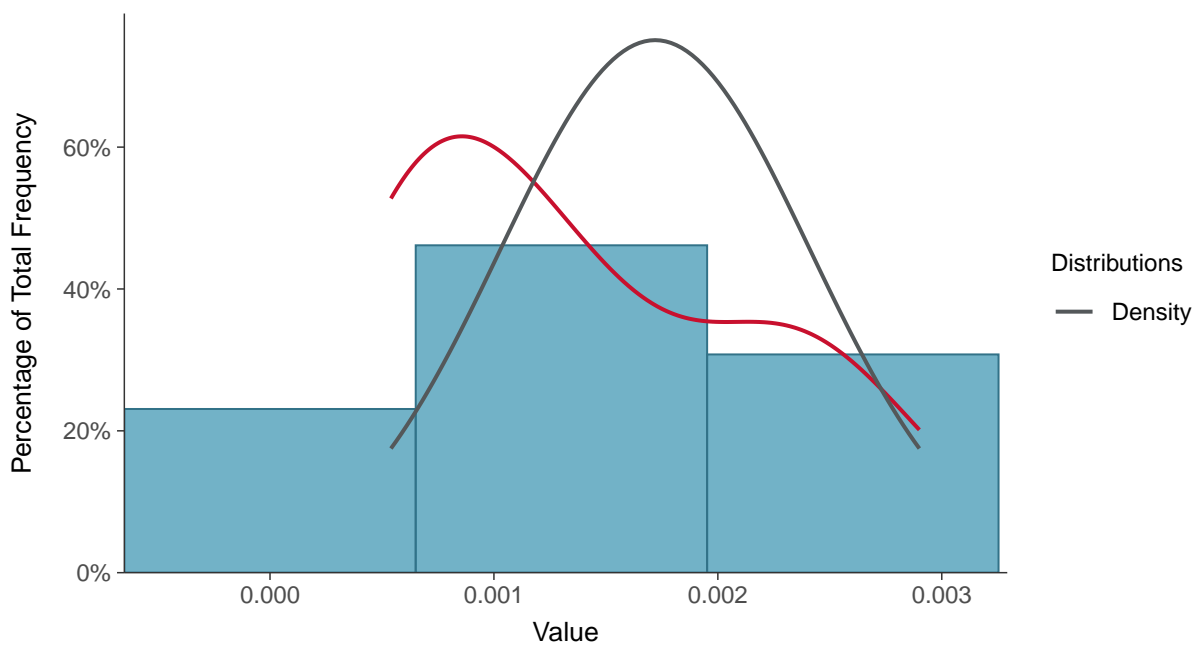
Scatter Plot

Cadmium, MW-12 (mg/L)



Histogram

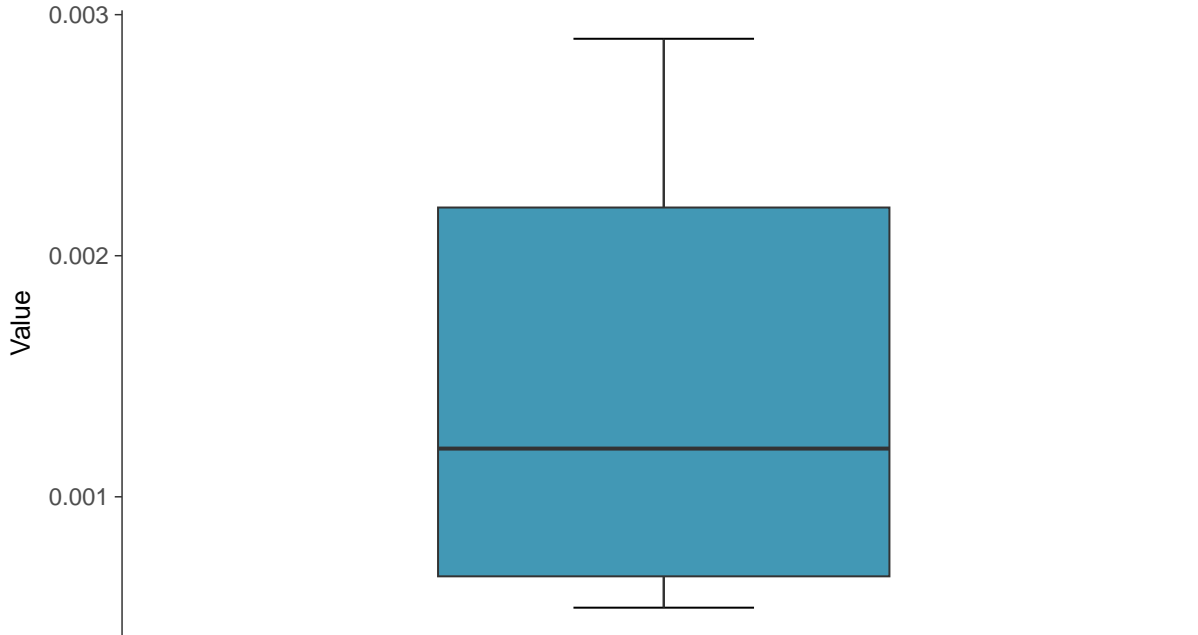
Cadmium, MW-12 (mg/L)





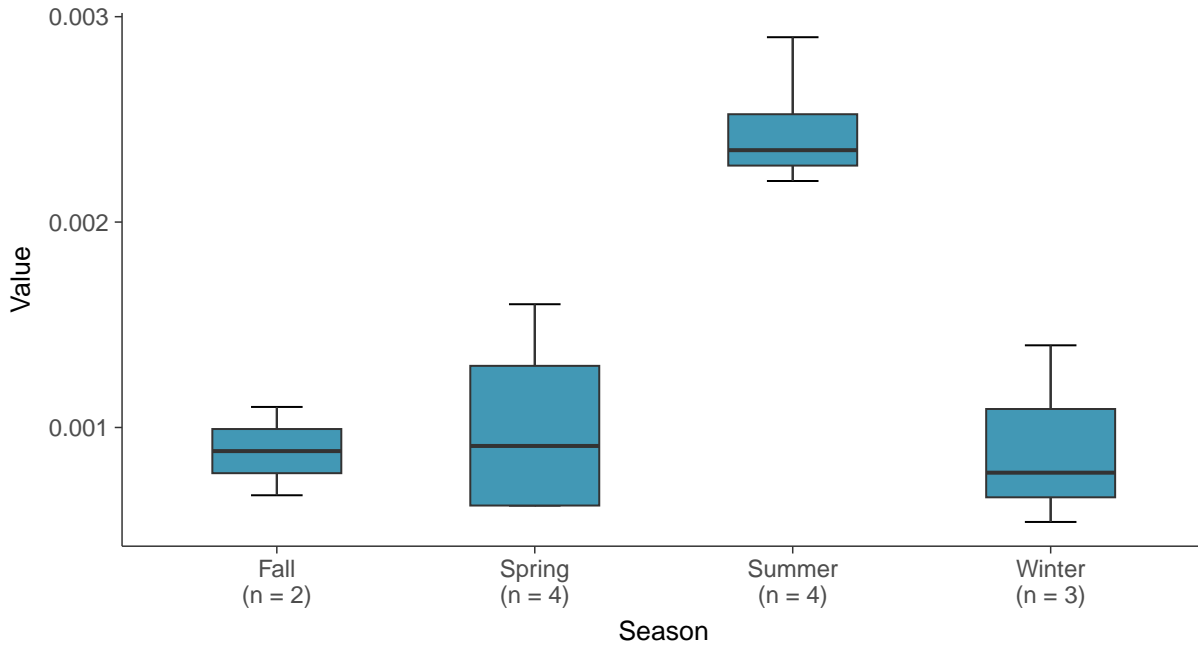
Boxplot

Cadmium, MW-12 (mg/L)



Boxplot by Season

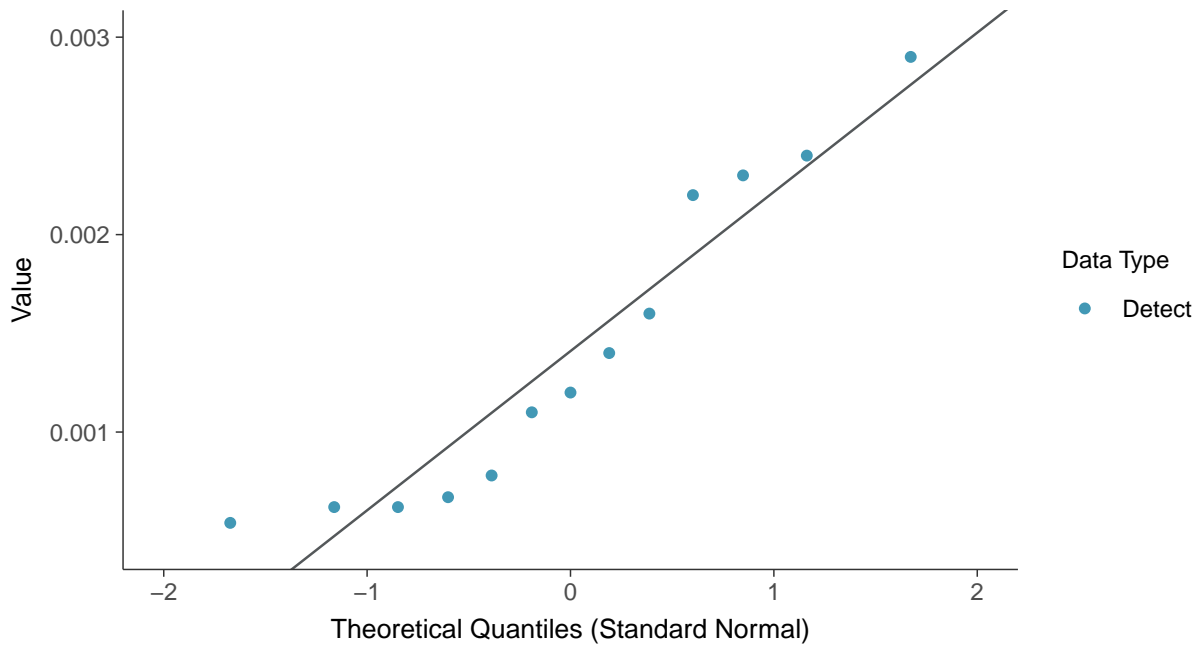
Cadmium, MW-12 (mg/L)





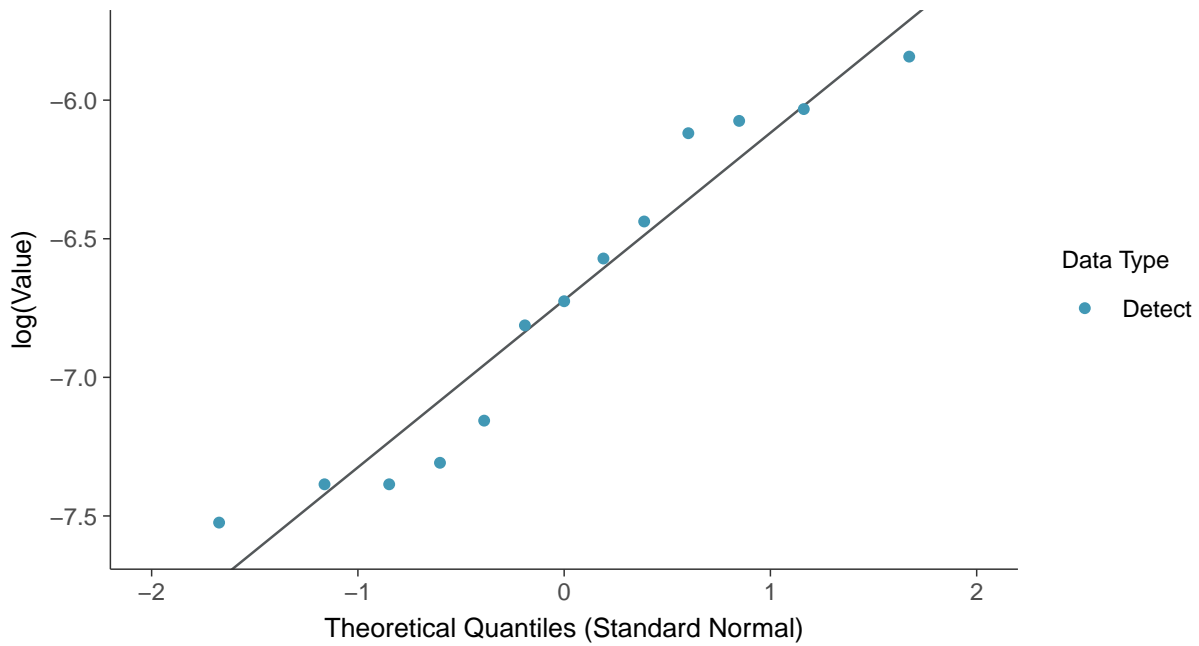
Normal Q-Q plot

Cadmium, MW-12 (mg/L)



Lognormal Q-Q plot

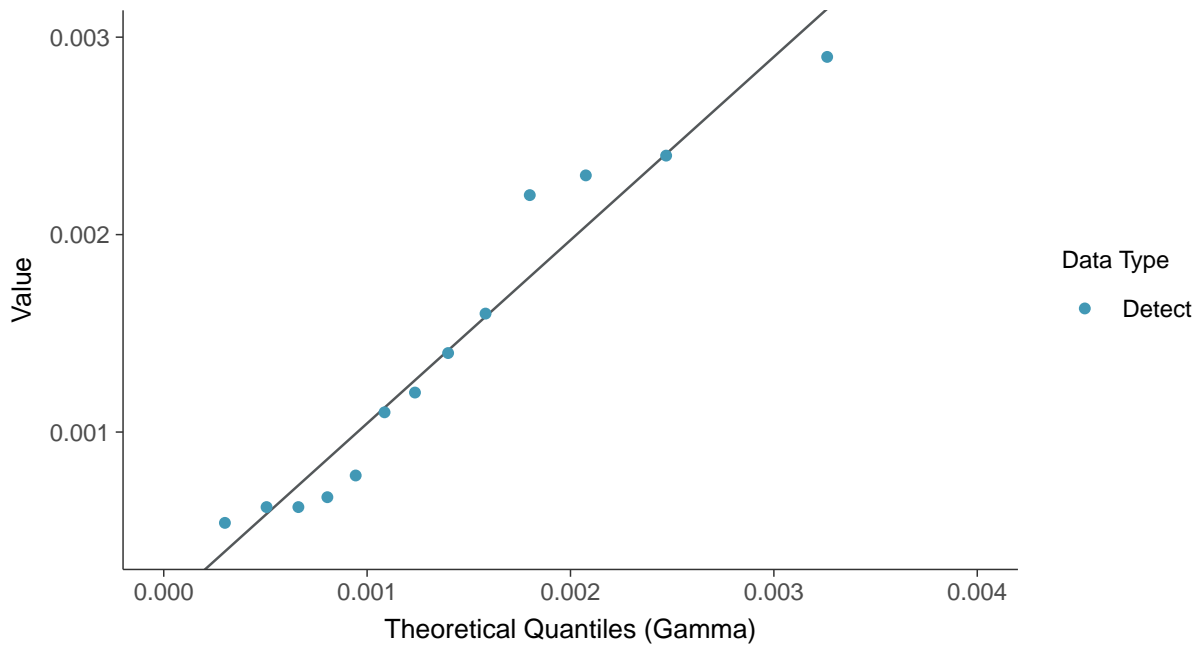
Cadmium, MW-12 (mg/L)





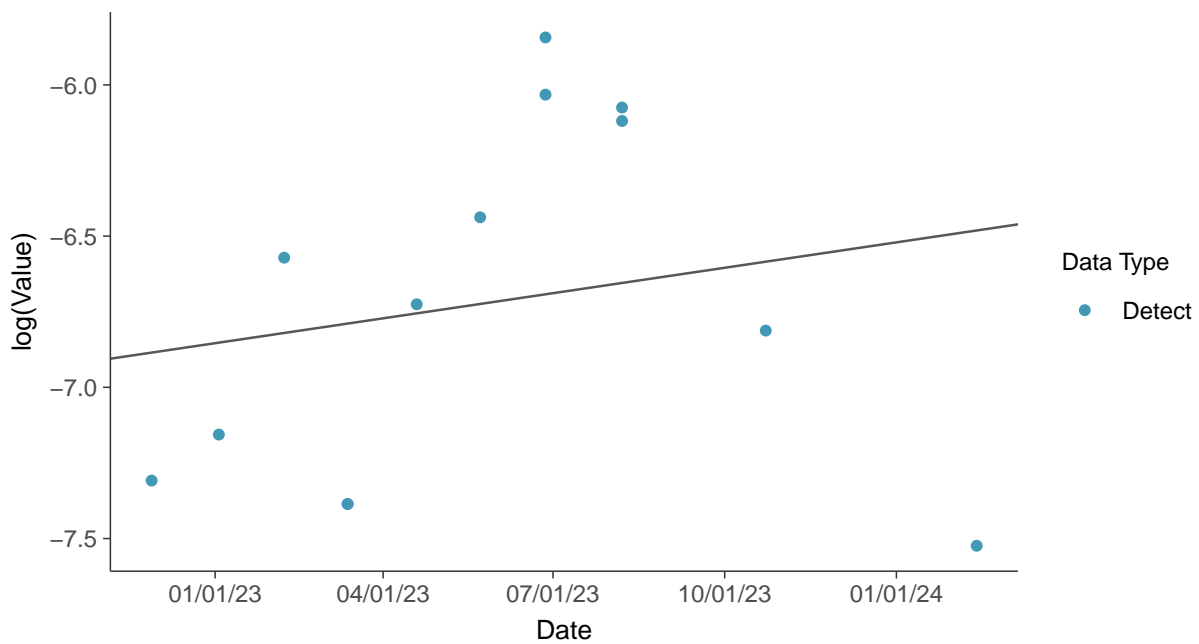
Gamma Q-Q plot

Cadmium, MW-12 (mg/L)



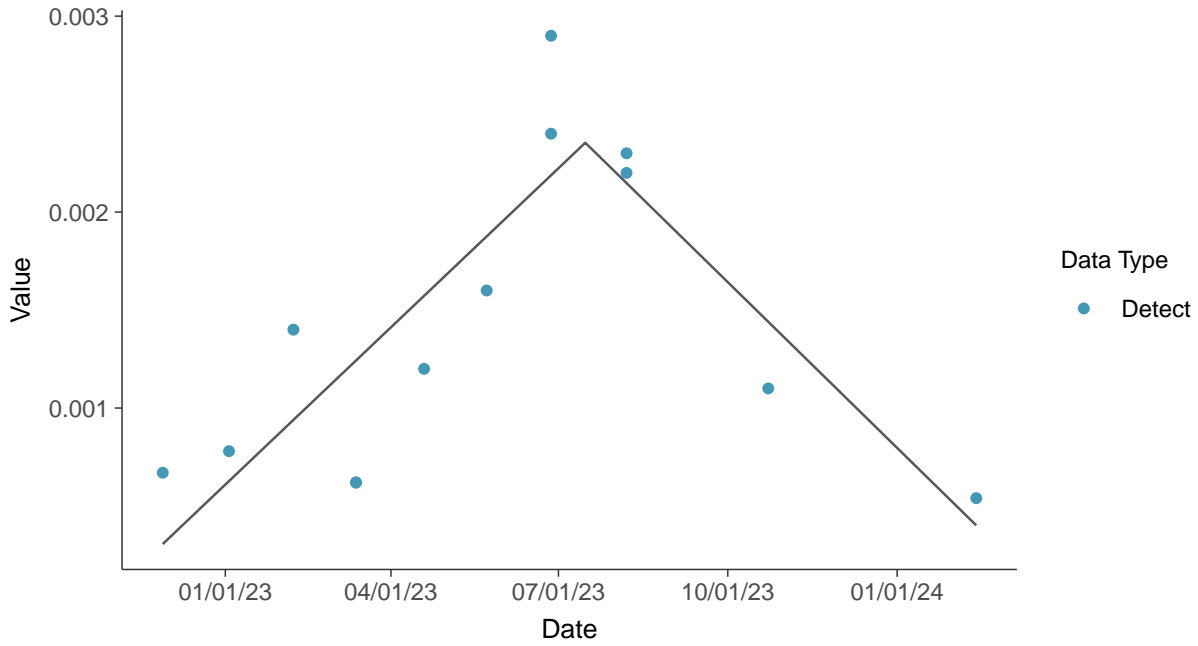
Trend Regression: Lognormal MLE

Cadmium, MW-12 (mg/L)

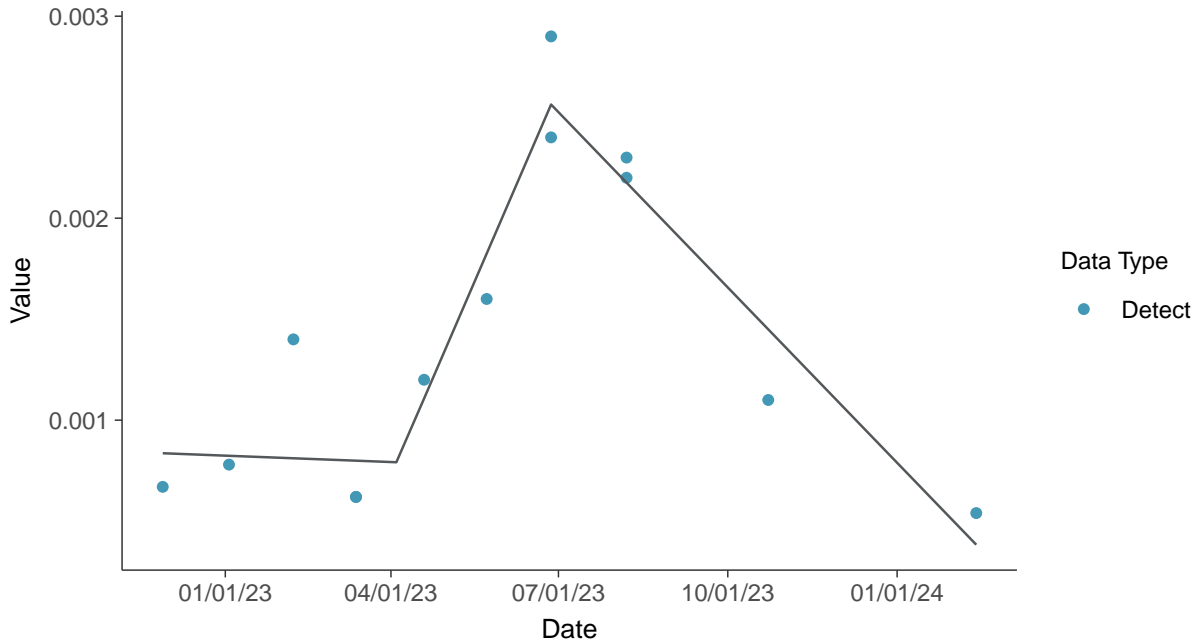




Trend Regression: Piecewise Linear-Linear
Cadmium, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cadmium, MW-12 (mg/L)



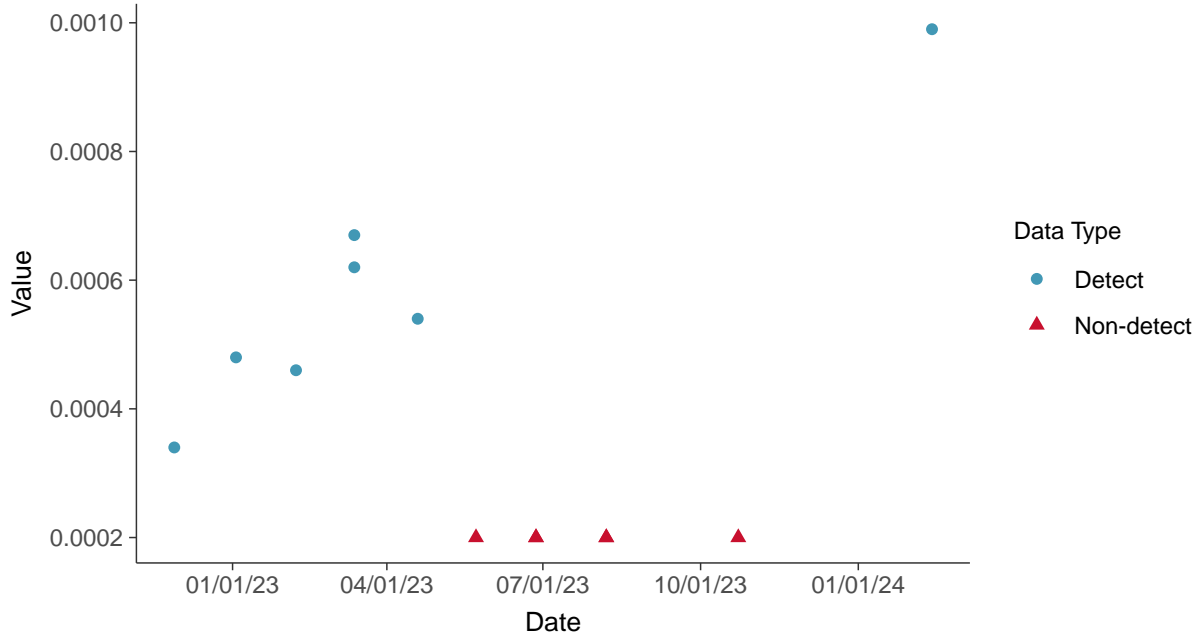


Appendix IV: Chromium, Total, MW-12

ID: 2_22_5_109

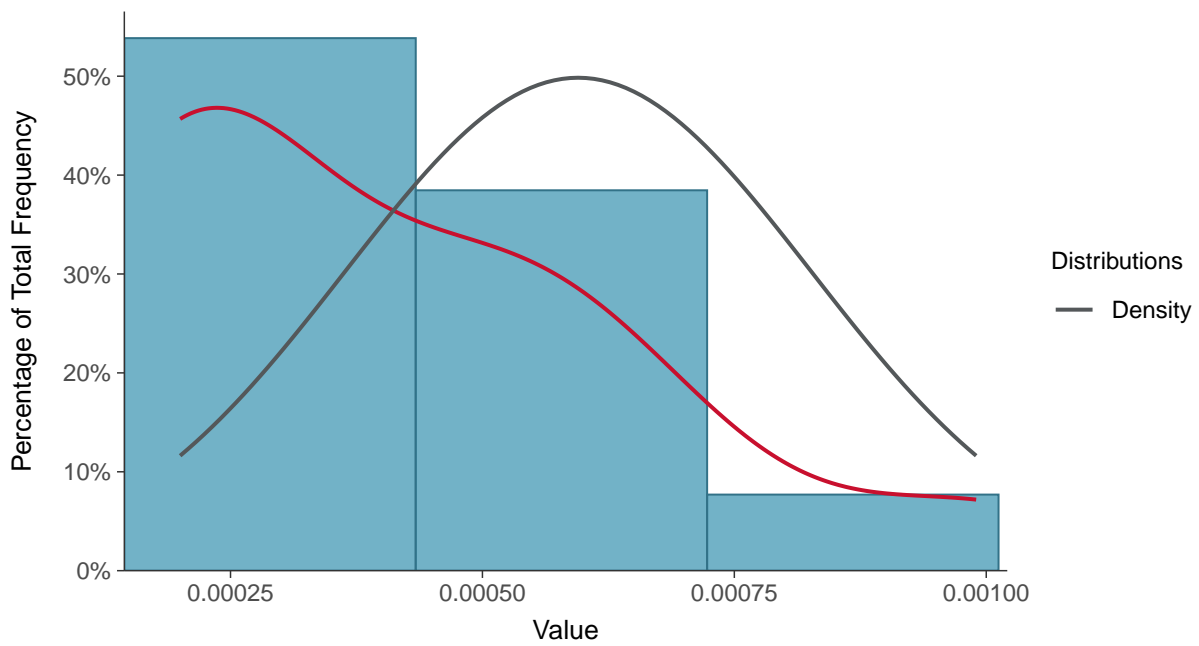
Scatter Plot

Chromium, Total, MW-12 (mg/L)



Histogram

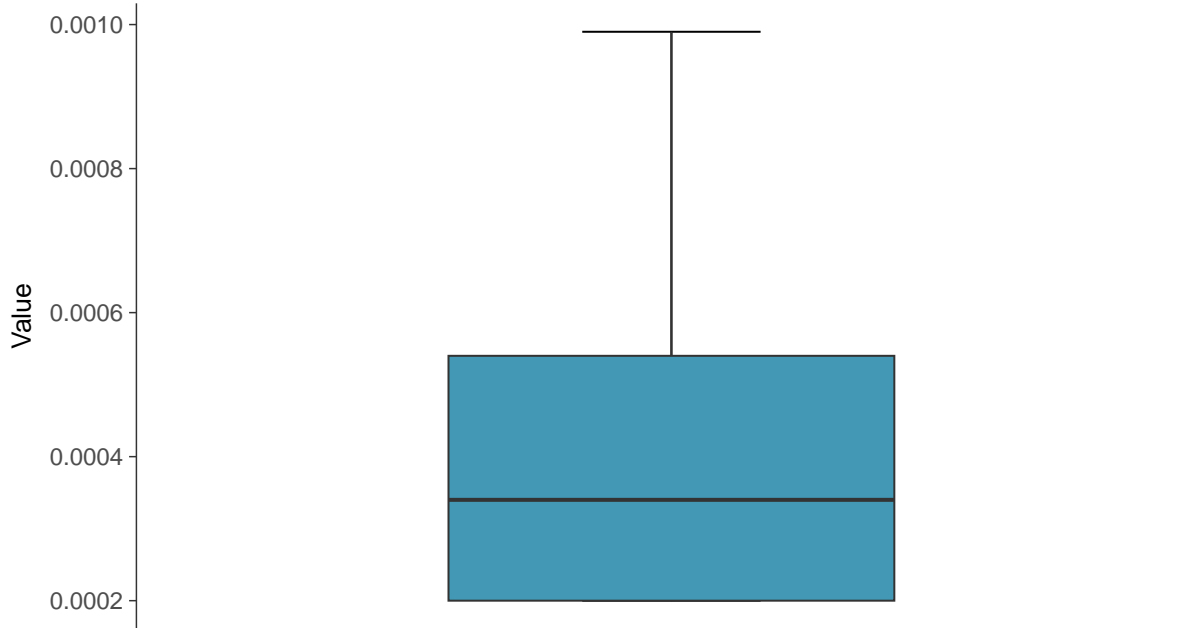
Chromium, Total, MW-12 (mg/L)





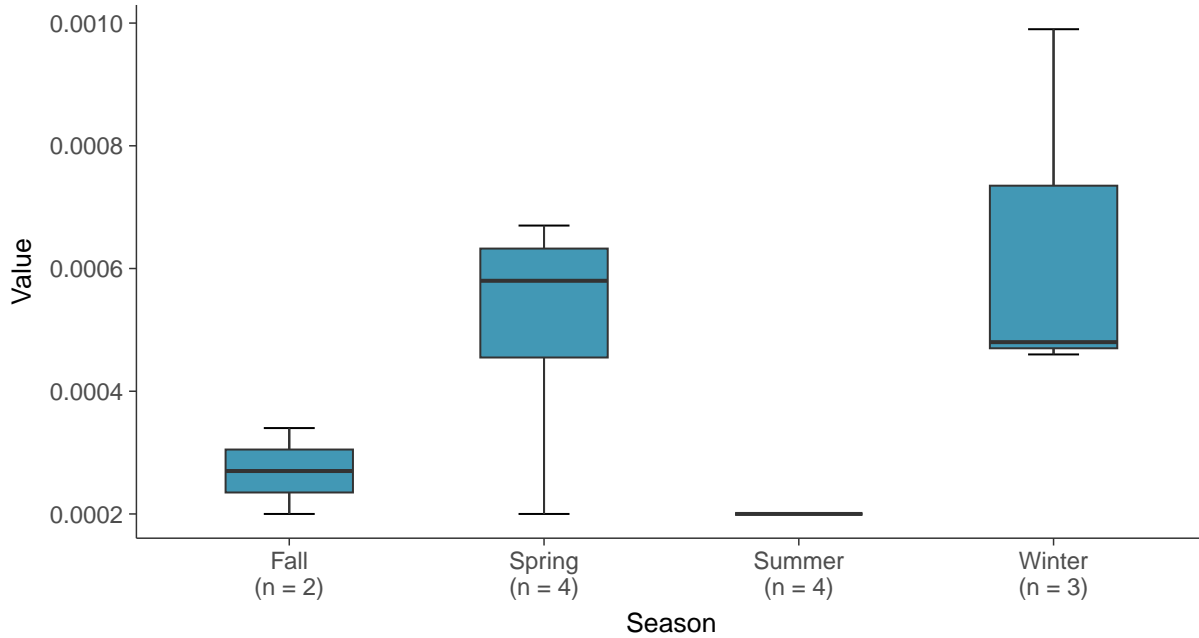
Boxplot

Chromium, Total, MW-12 (mg/L)



Boxplot by Season

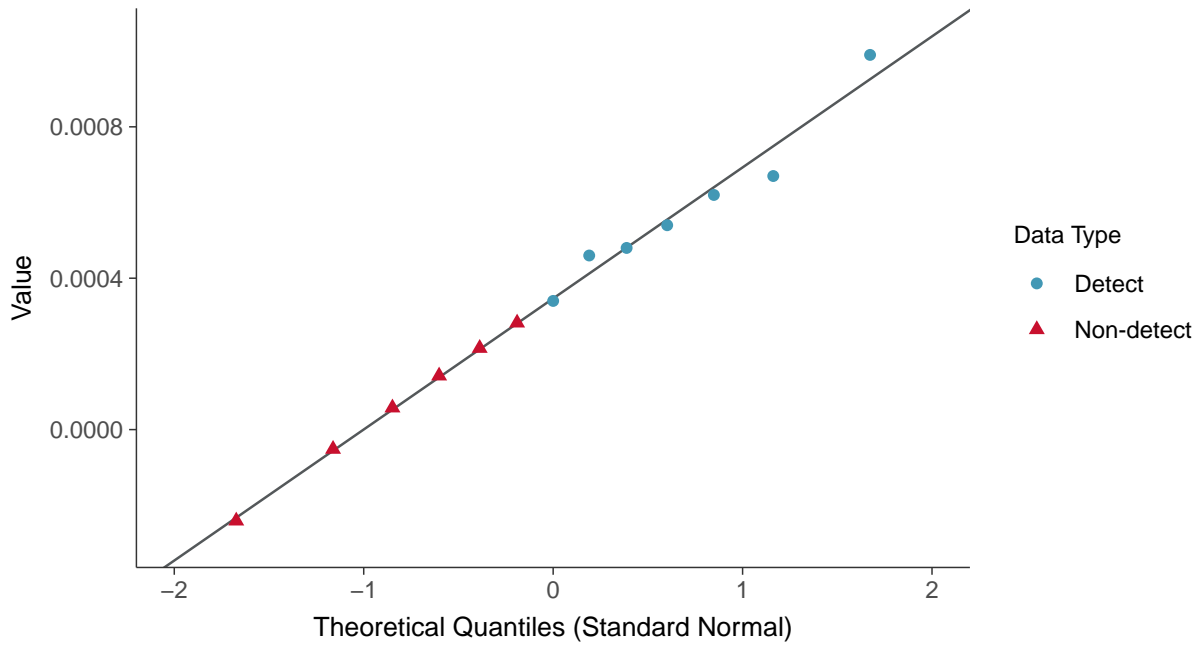
Chromium, Total, MW-12 (mg/L)





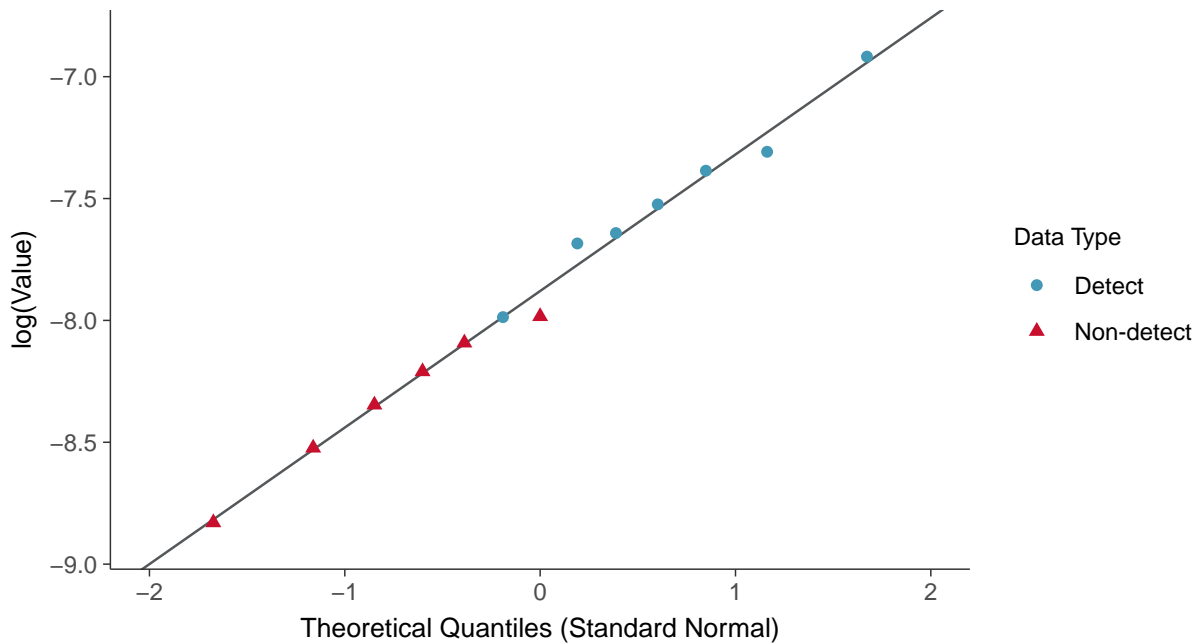
Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-12 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

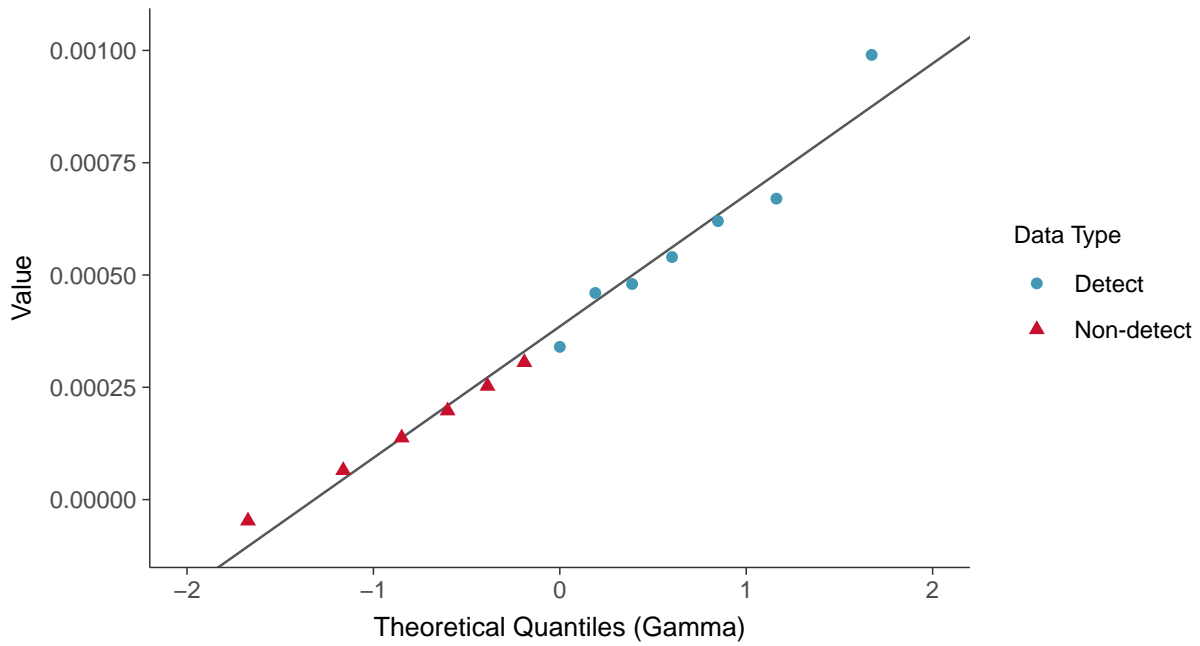
Chromium, Total, MW-12 (mg/L)





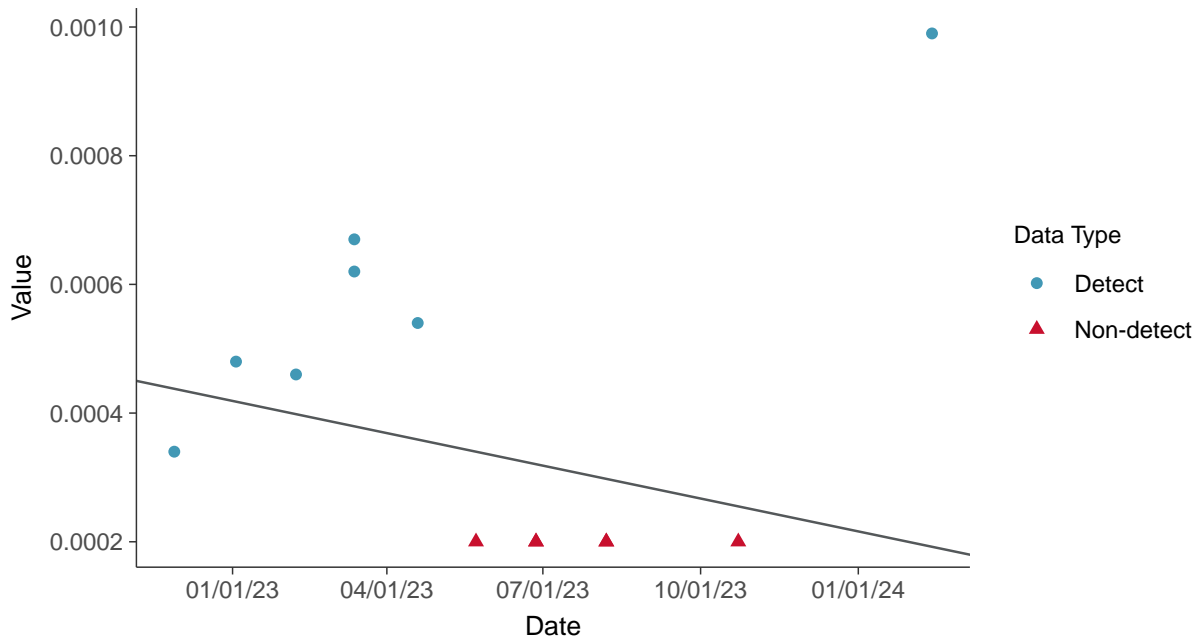
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-12 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

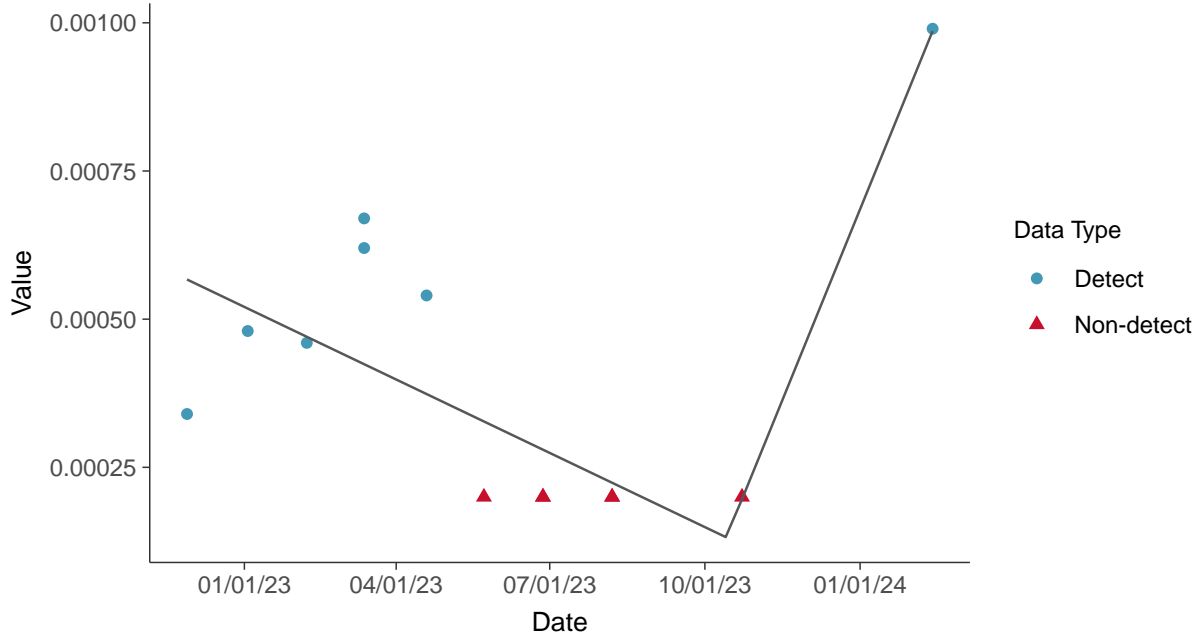
Chromium, Total, MW-12 (mg/L)





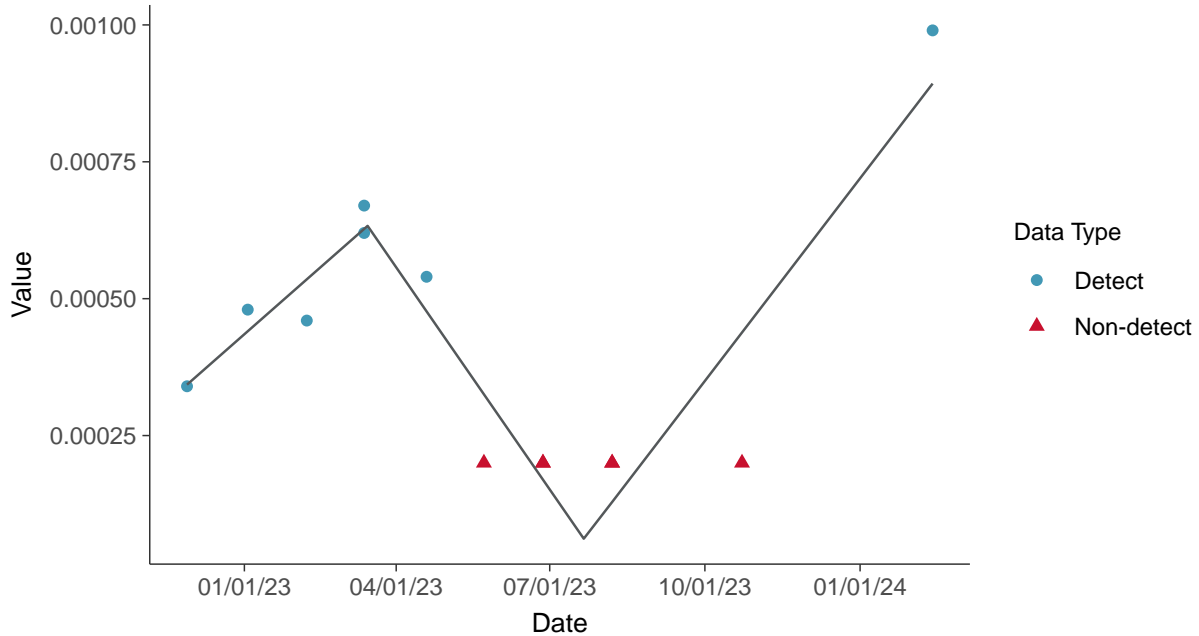
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-12 (mg/L)



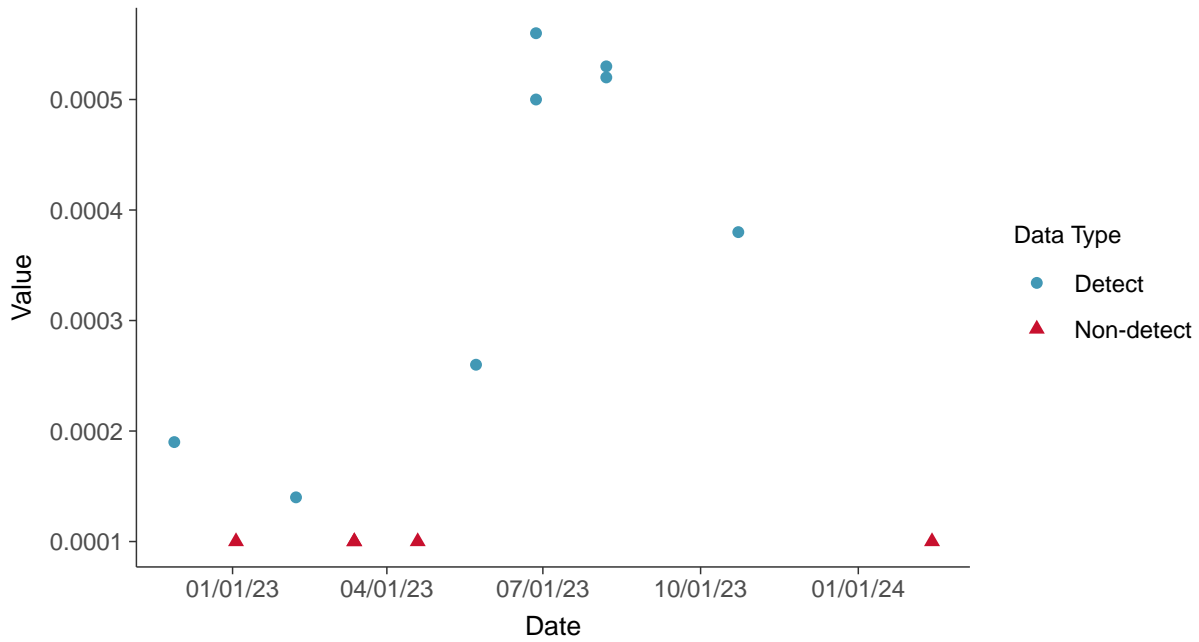


Appendix IV: Cobalt, MW-12

ID: 2_22_5_110

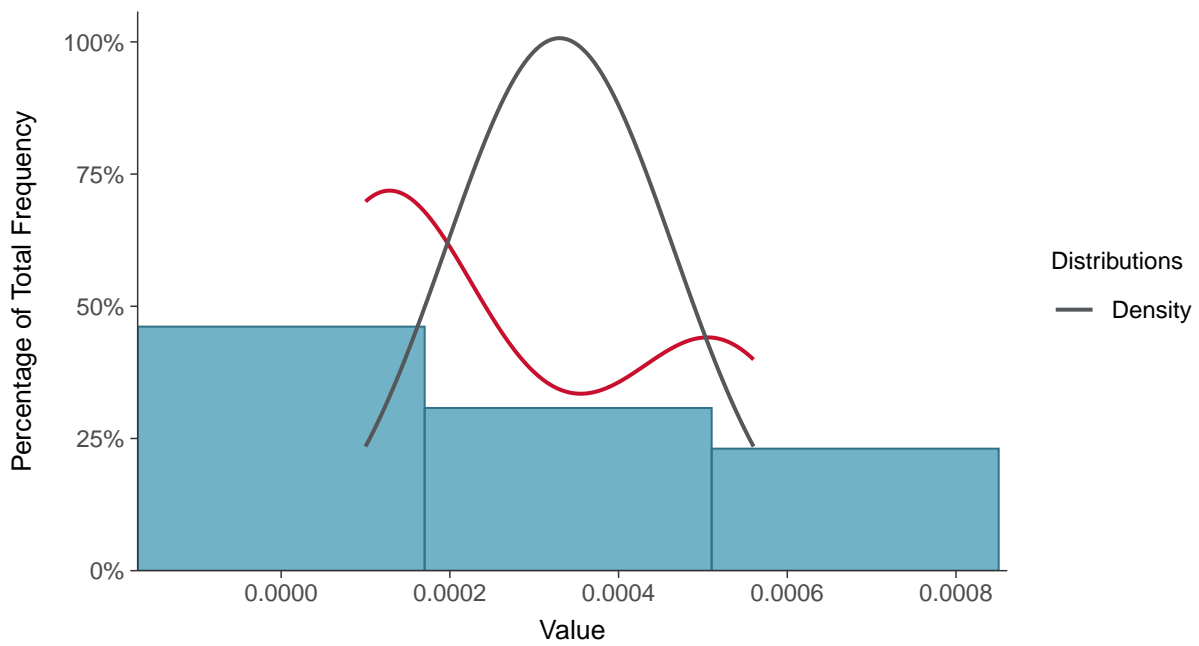
Scatter Plot

Cobalt, MW-12 (mg/L)



Histogram

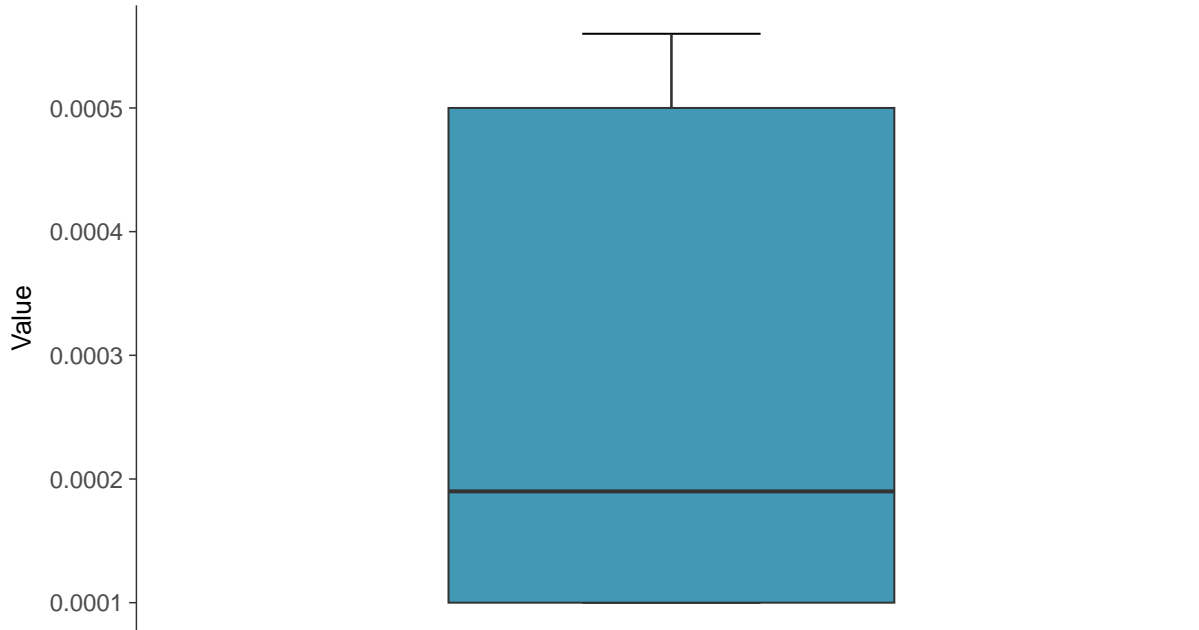
Cobalt, MW-12 (mg/L)





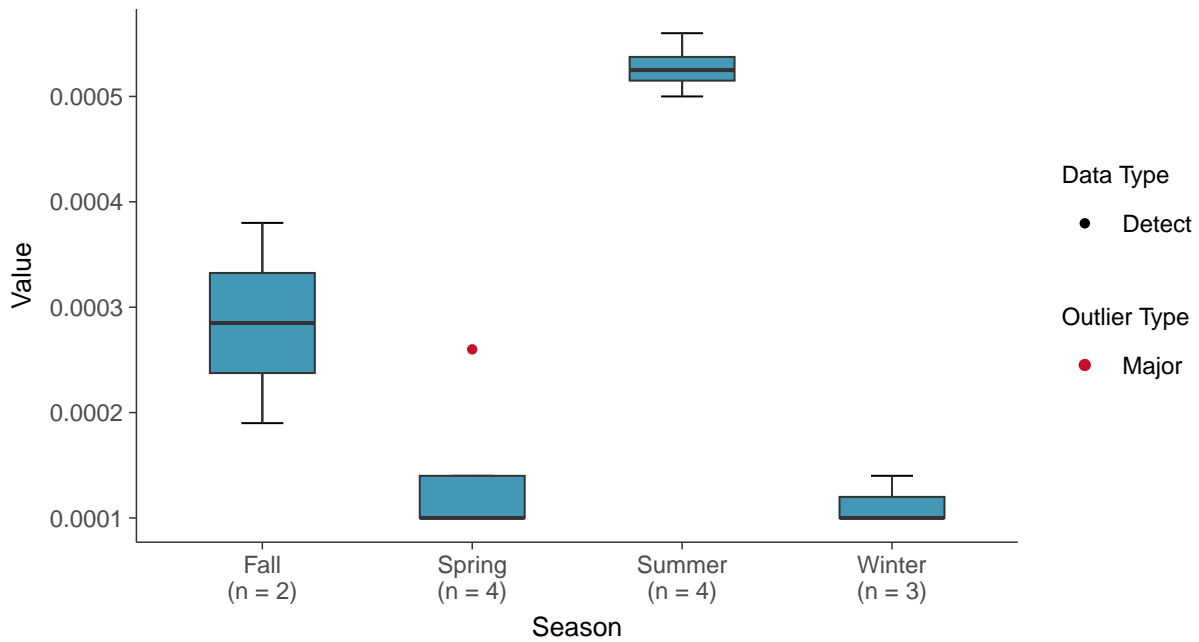
Boxplot

Cobalt, MW-12 (mg/L)



Boxplot by Season

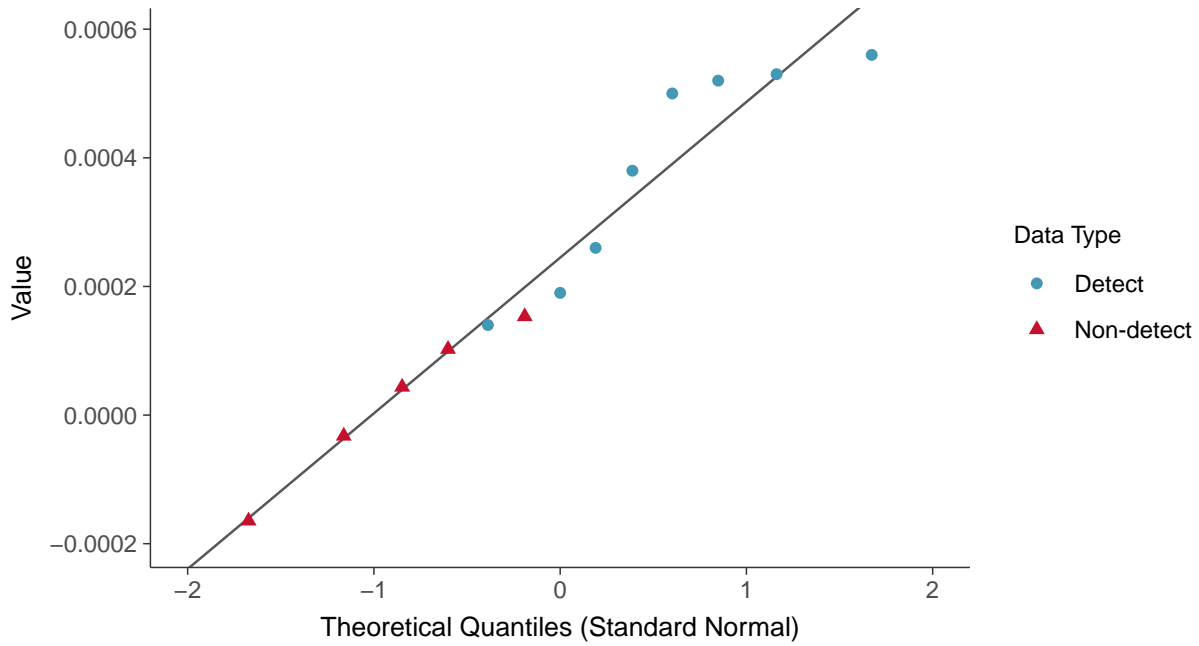
Cobalt, MW-12 (mg/L)





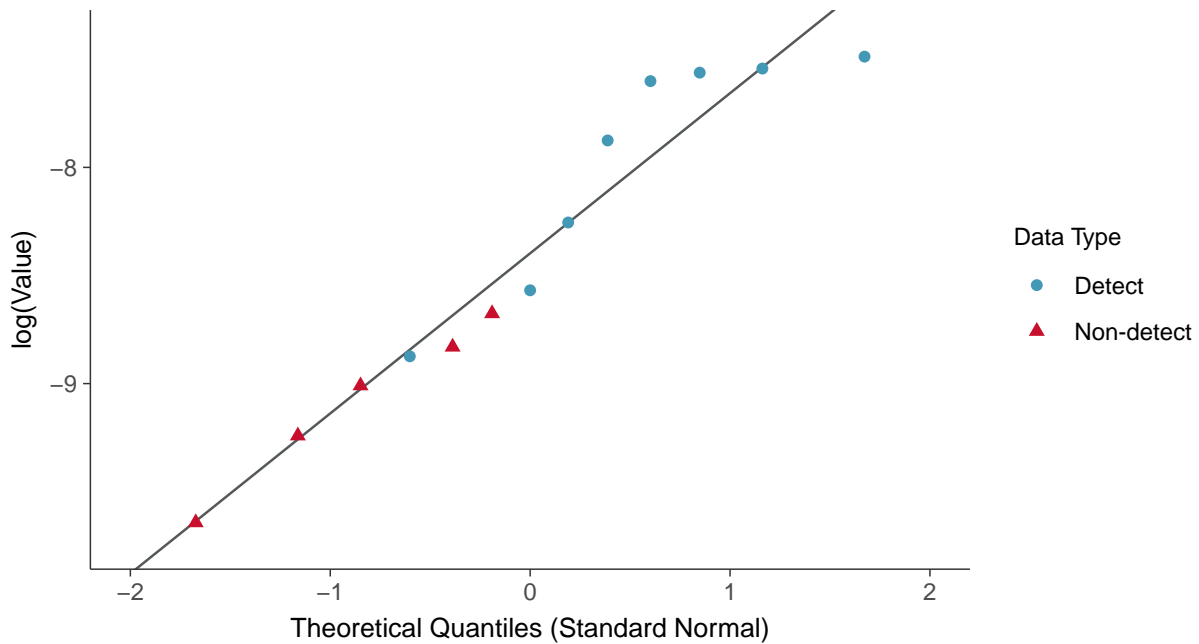
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-12 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

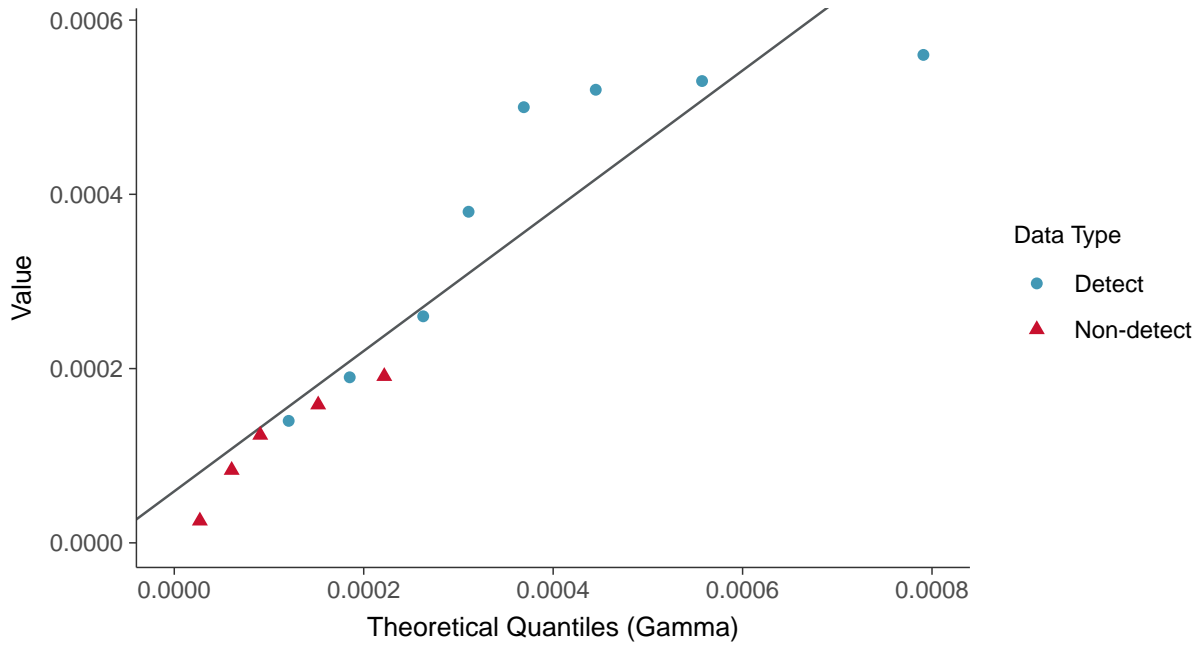
Cobalt, MW-12 (mg/L)





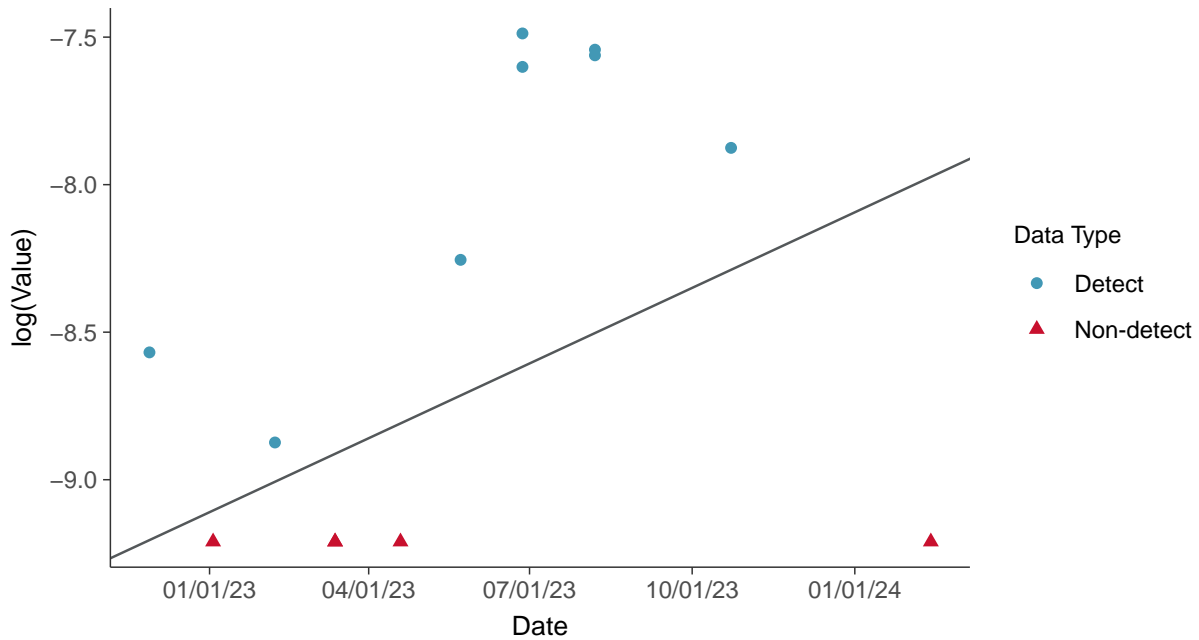
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-12 (mg/L)



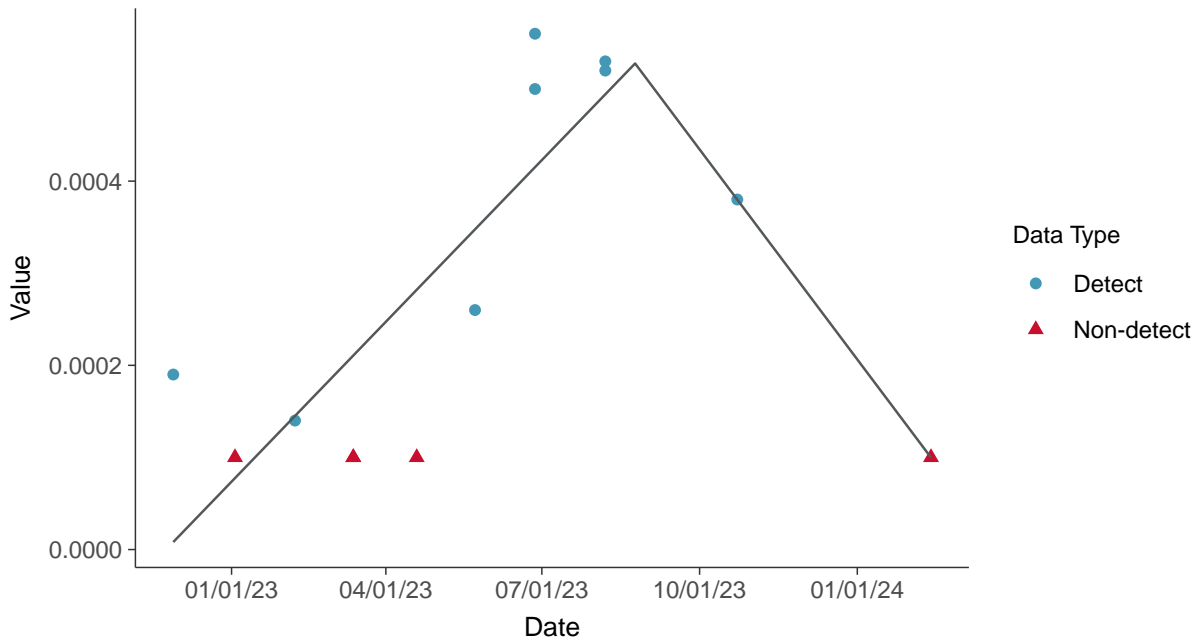
Trend Regression: Lognormal MLE

Cobalt, MW-12 (mg/L)

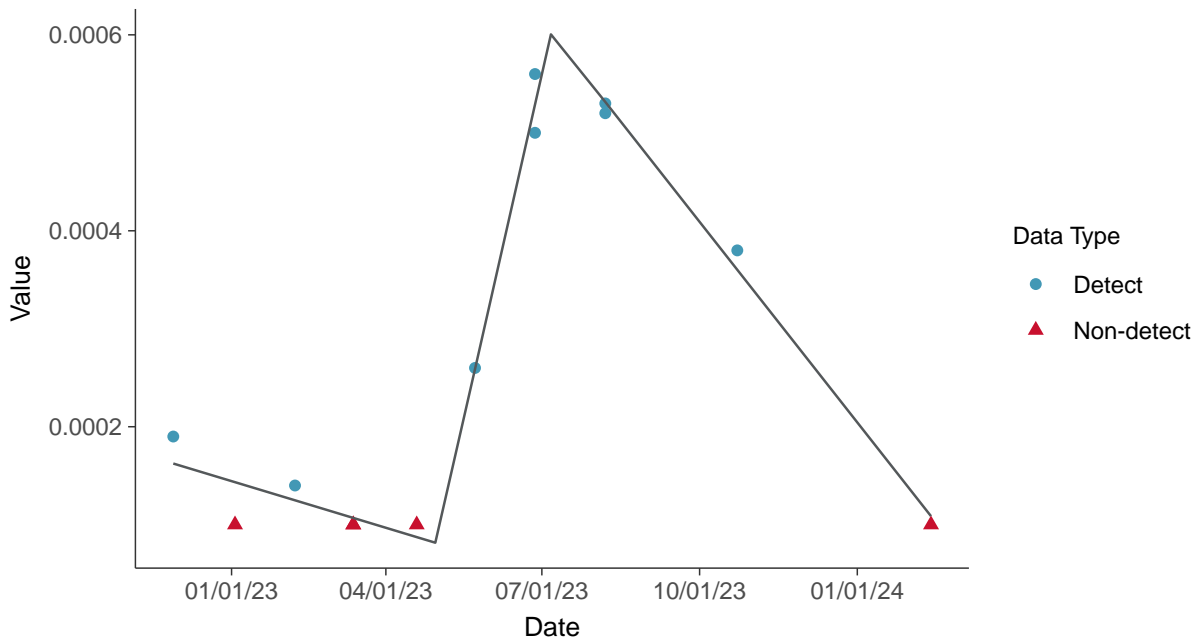




Trend Regression: Piecewise Linear-Linear
Cobalt, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Cobalt, MW-12 (mg/L)



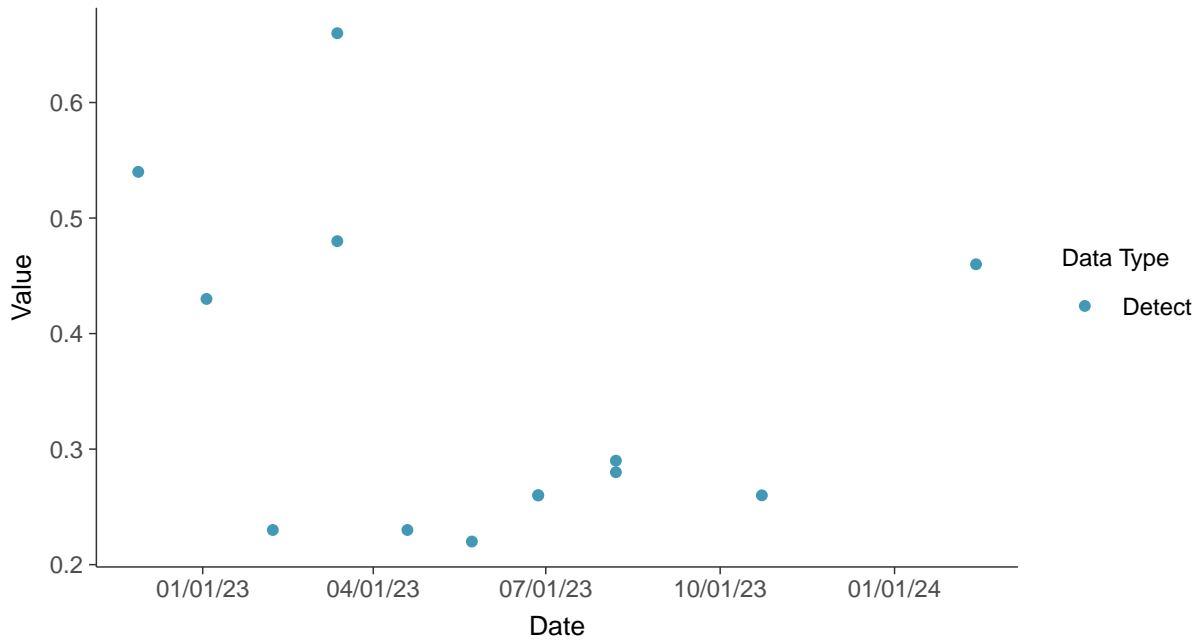


Appendix IV: Fluoride (App IV), MW-12

ID: 2_22_5_113

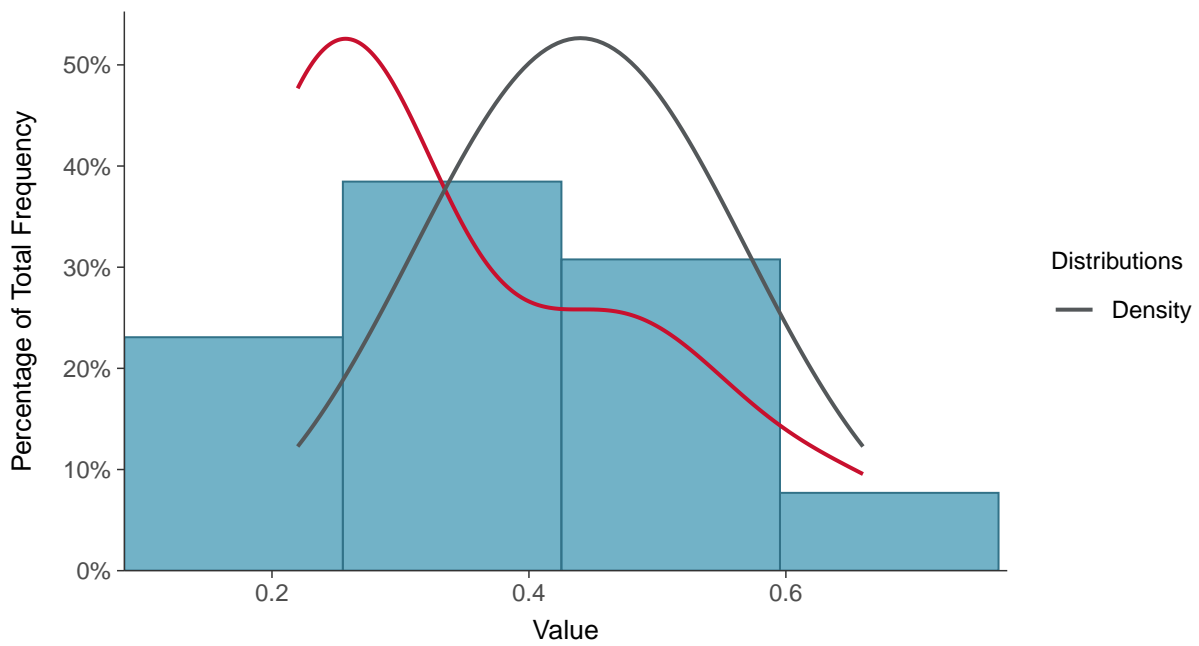
Scatter Plot

Fluoride (App IV), MW-12 (mg/L)



Histogram

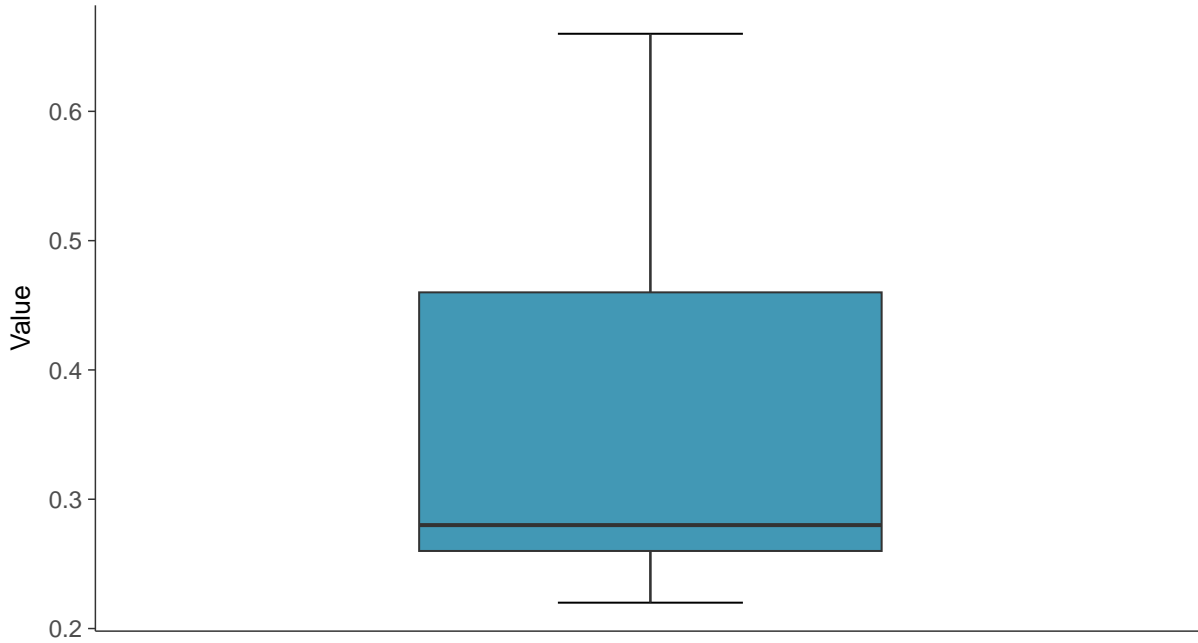
Fluoride (App IV), MW-12 (mg/L)





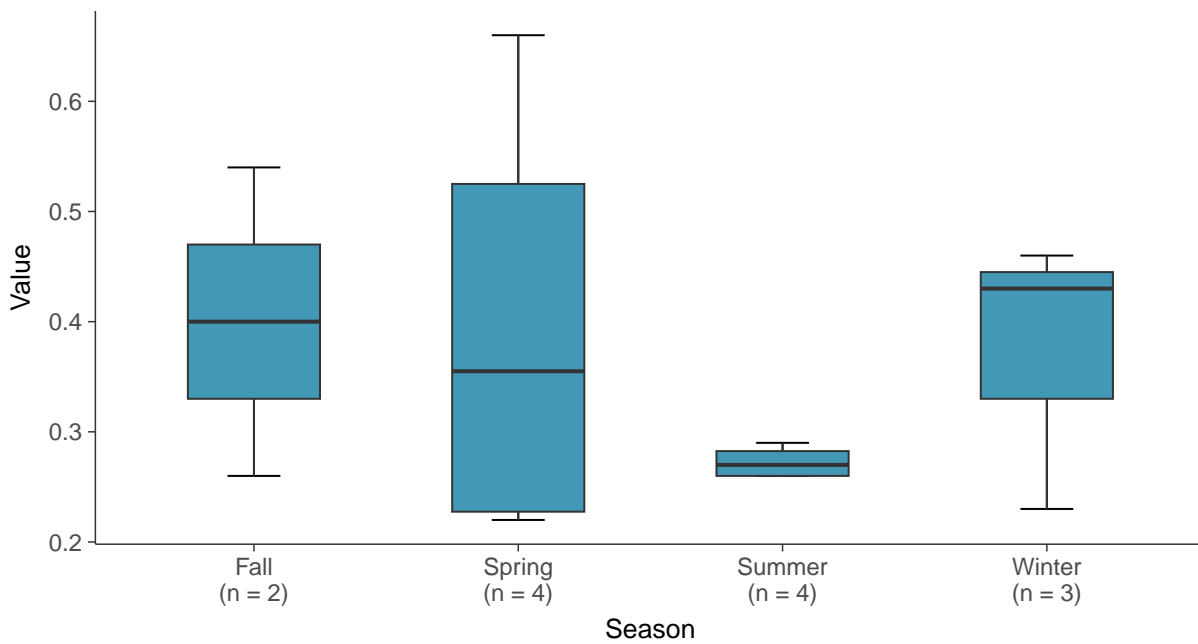
Boxplot

Fluoride (App IV), MW-12 (mg/L)



Boxplot by Season

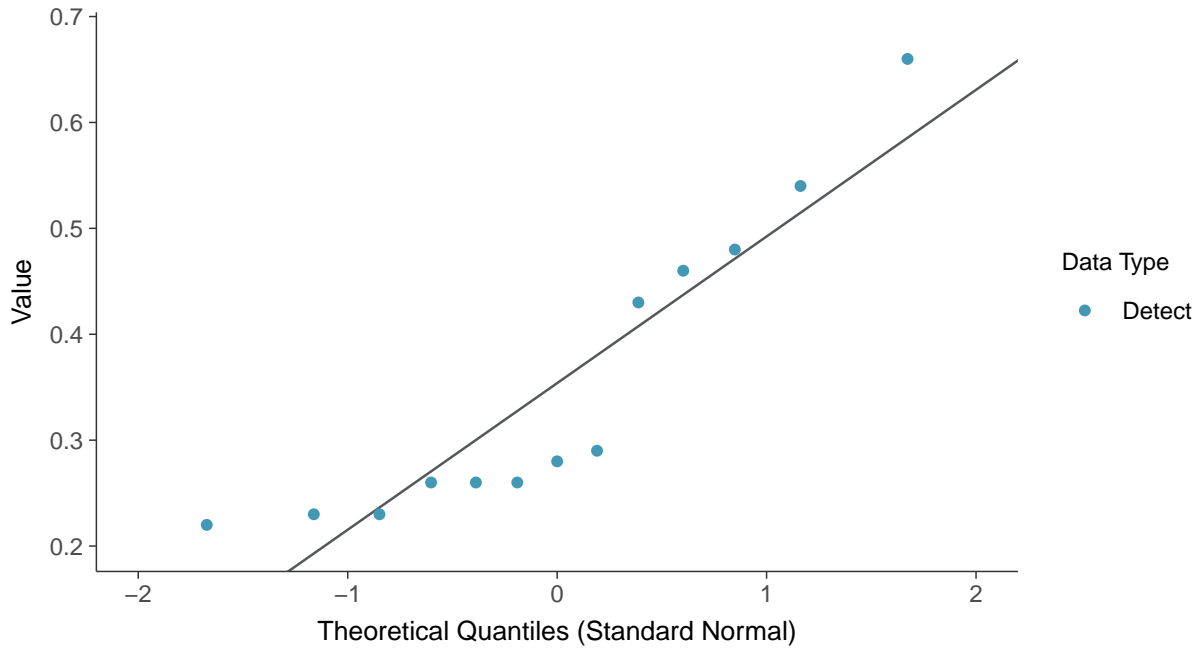
Fluoride (App IV), MW-12 (mg/L)





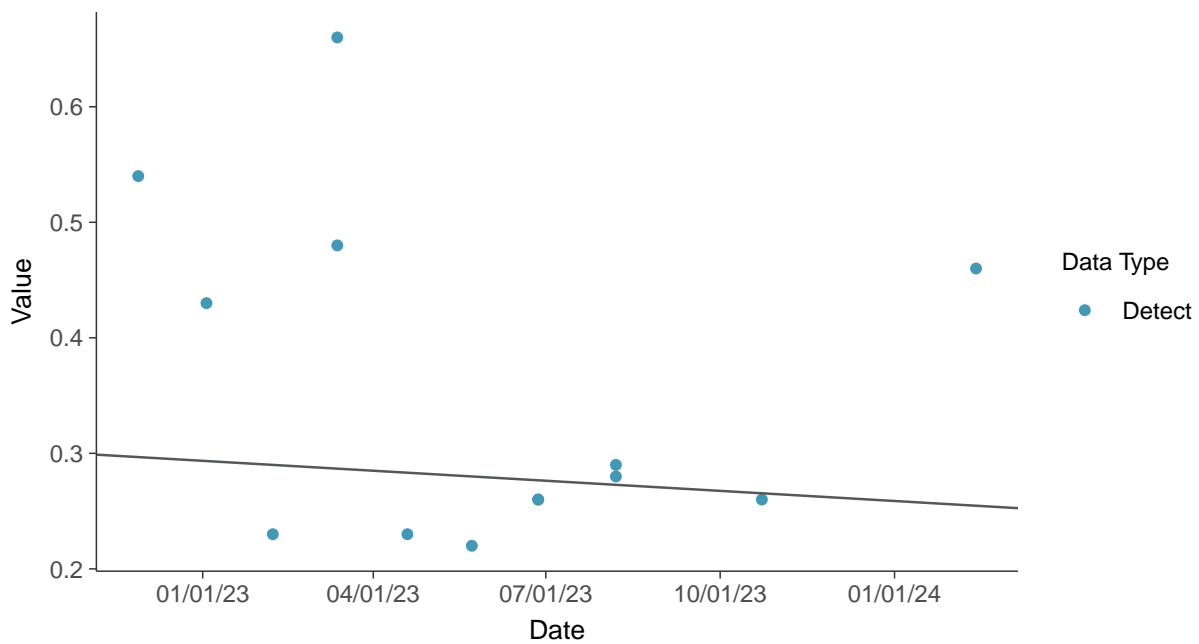
Normal Q-Q plot

Fluoride (App IV), MW-12 (mg/L)



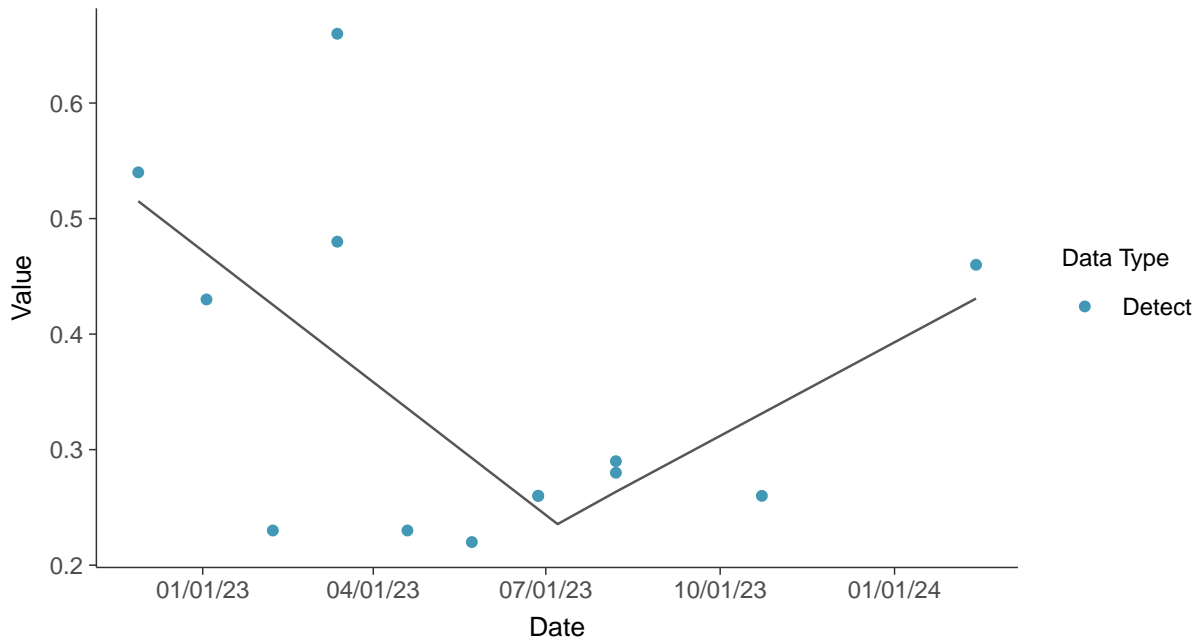
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride (App IV), MW-12 (mg/L)





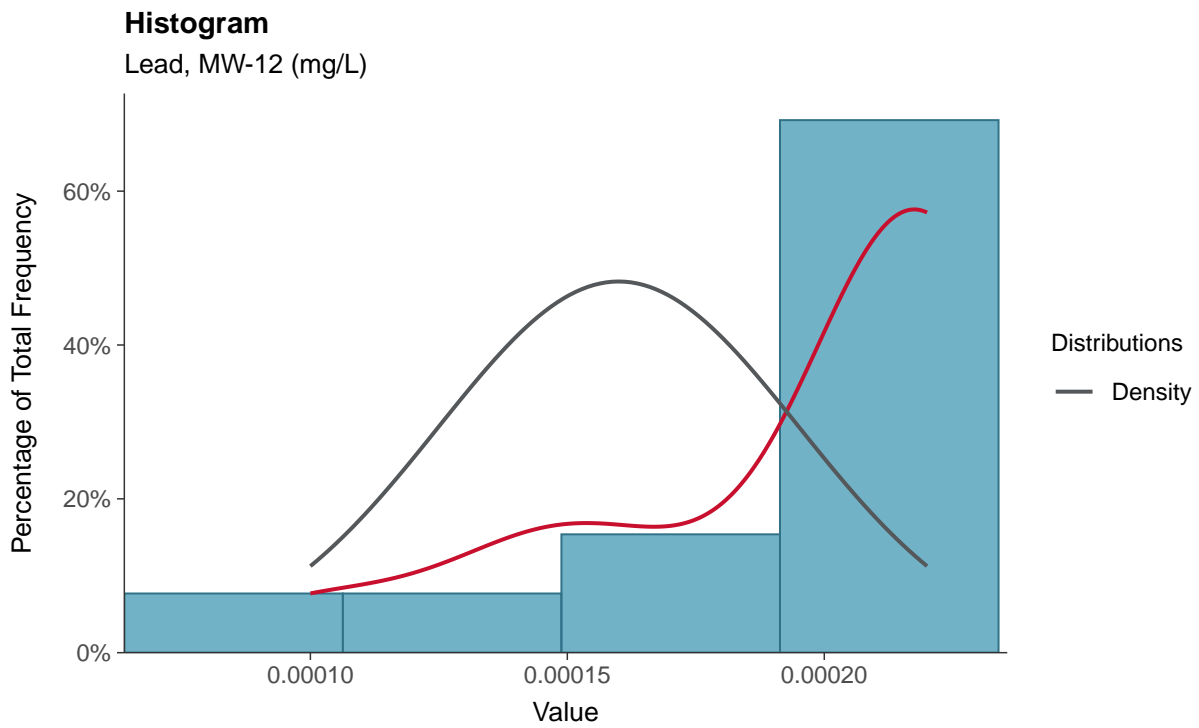
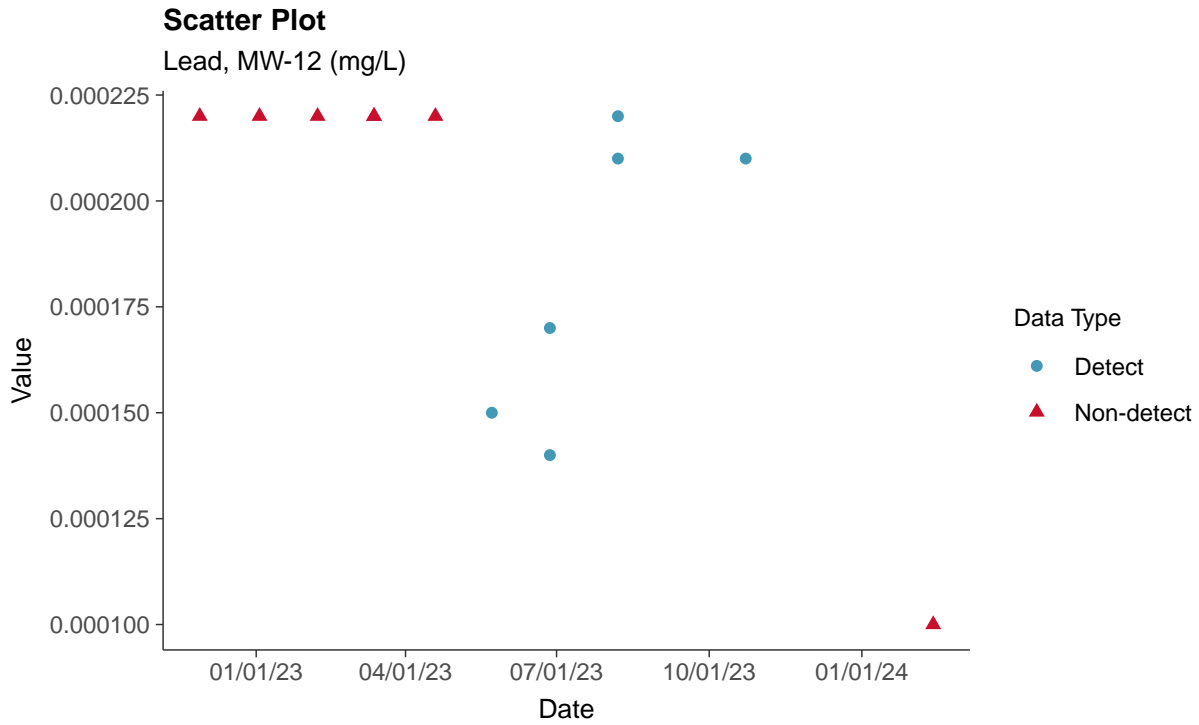
Trend Regression: Piecewise Linear-Linear
Fluoride (App IV), MW-12 (mg/L)





Appendix IV: Lead, MW-12

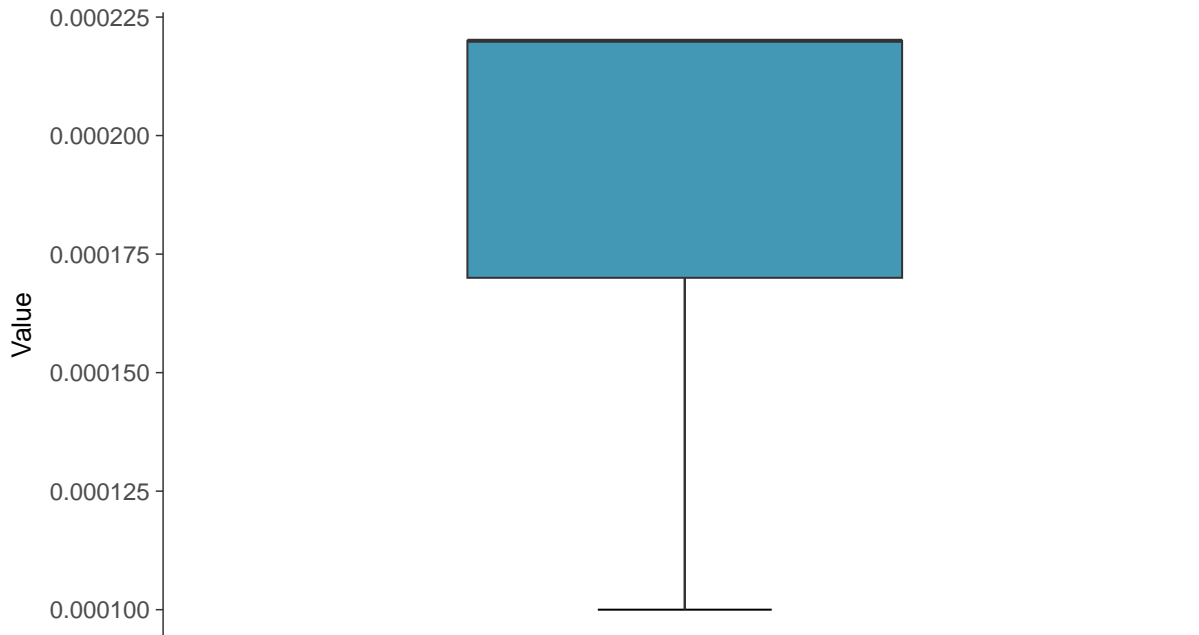
ID: 2_22_5_115





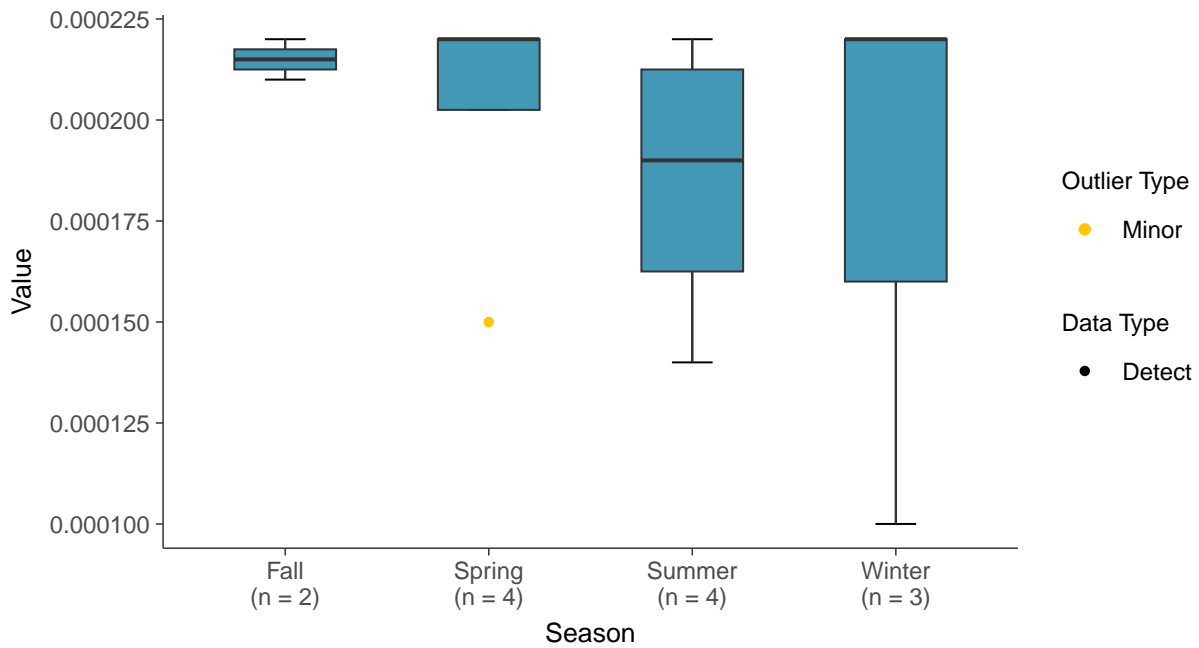
Boxplot

Lead, MW-12 (mg/L)



Boxplot by Season

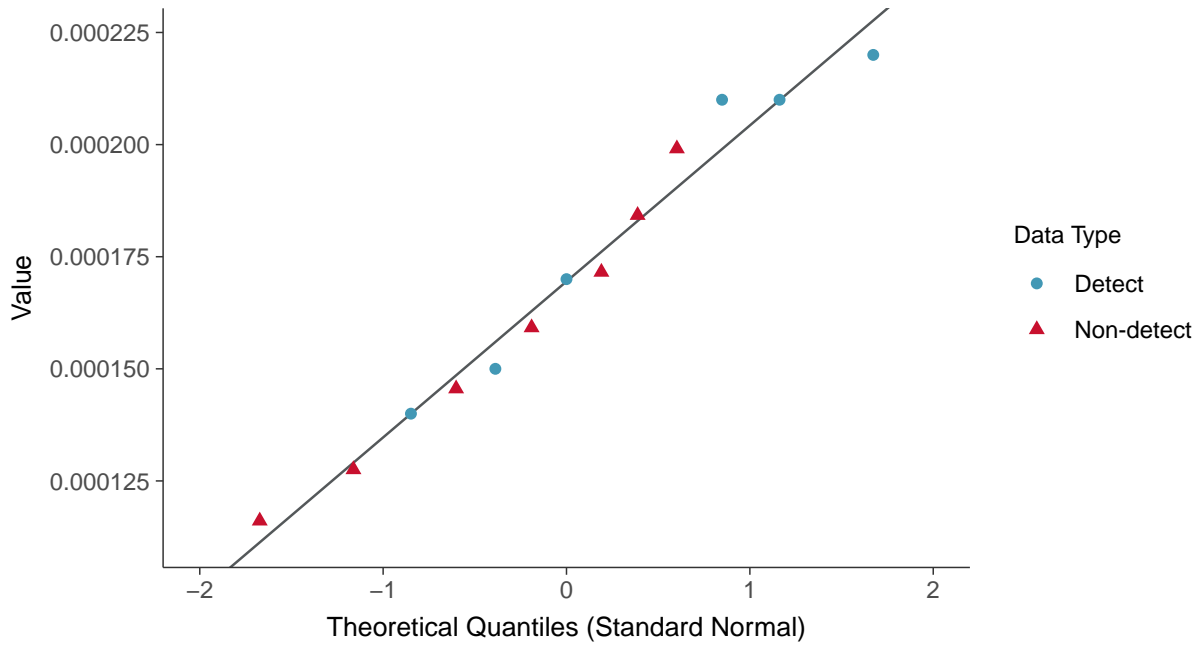
Lead, MW-12 (mg/L)





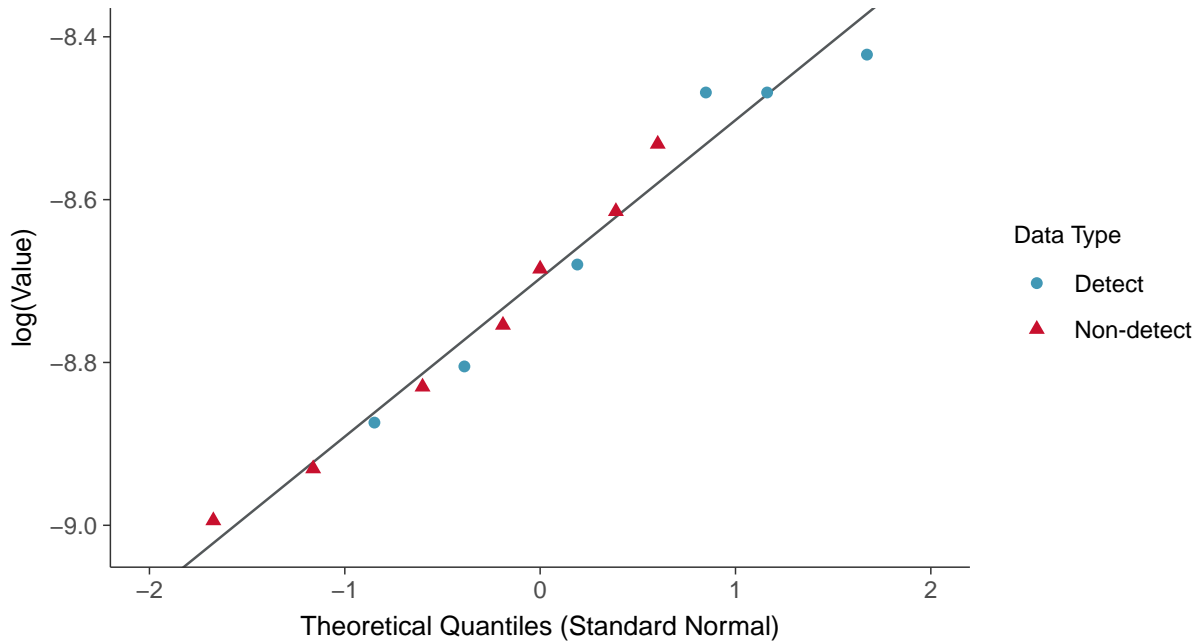
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-12 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

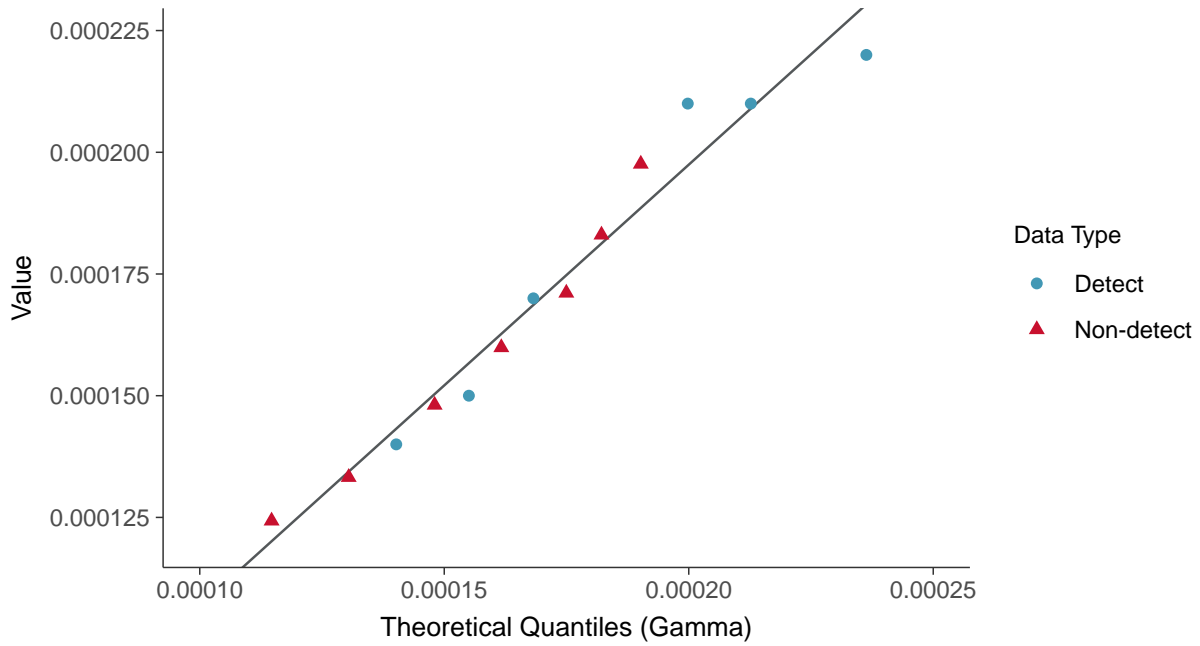
Lead, MW-12 (mg/L)





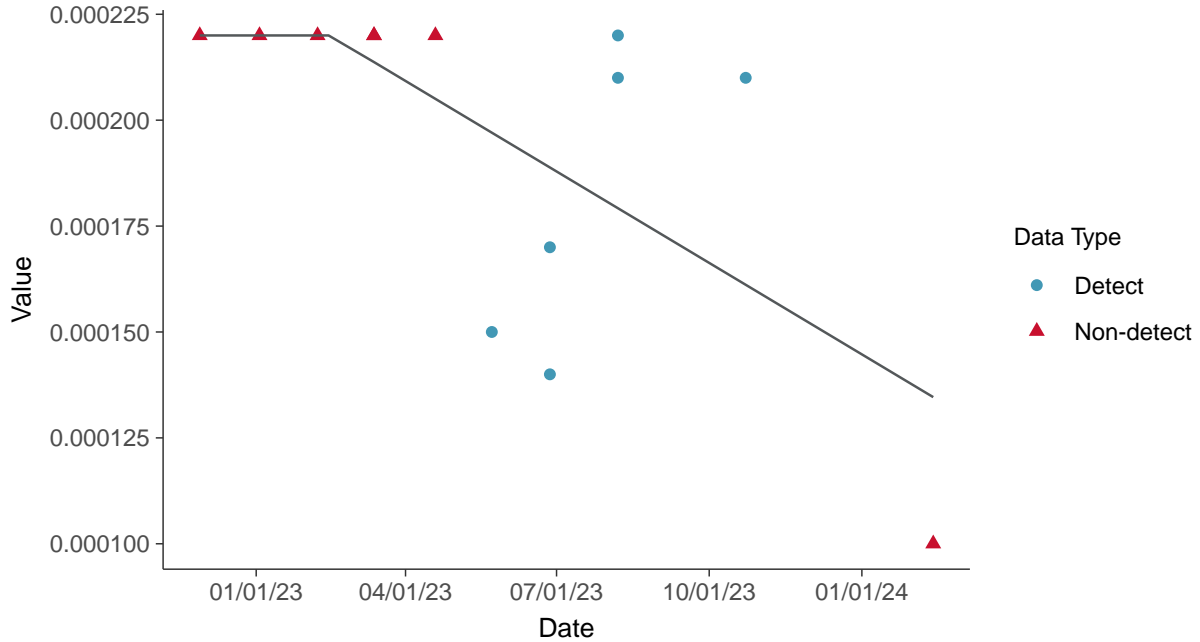
Gamma Q-Q plot using ROS Imputed Estimates

Lead, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear

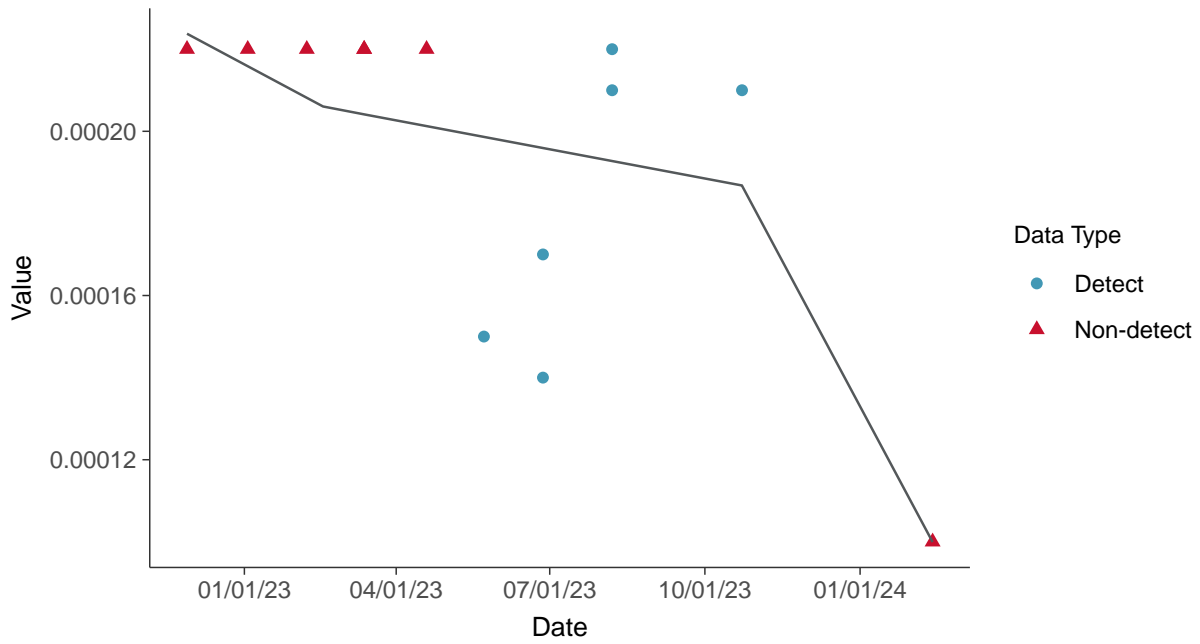
Lead, MW-12 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

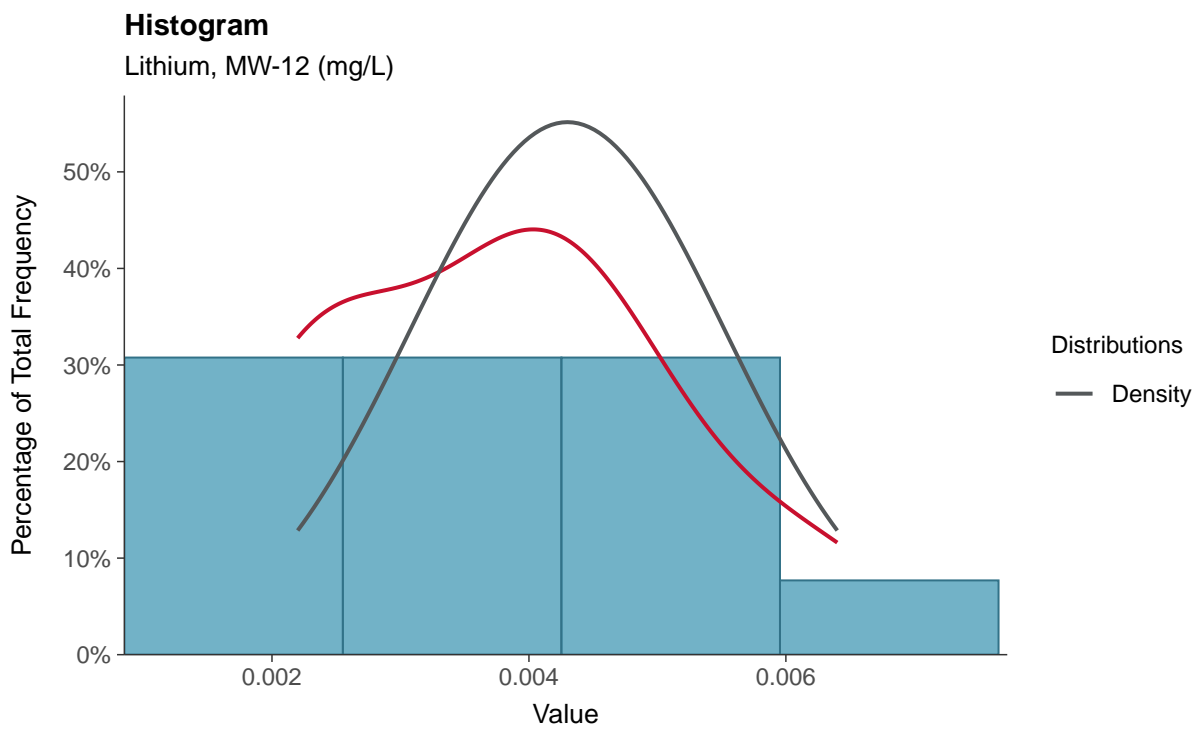
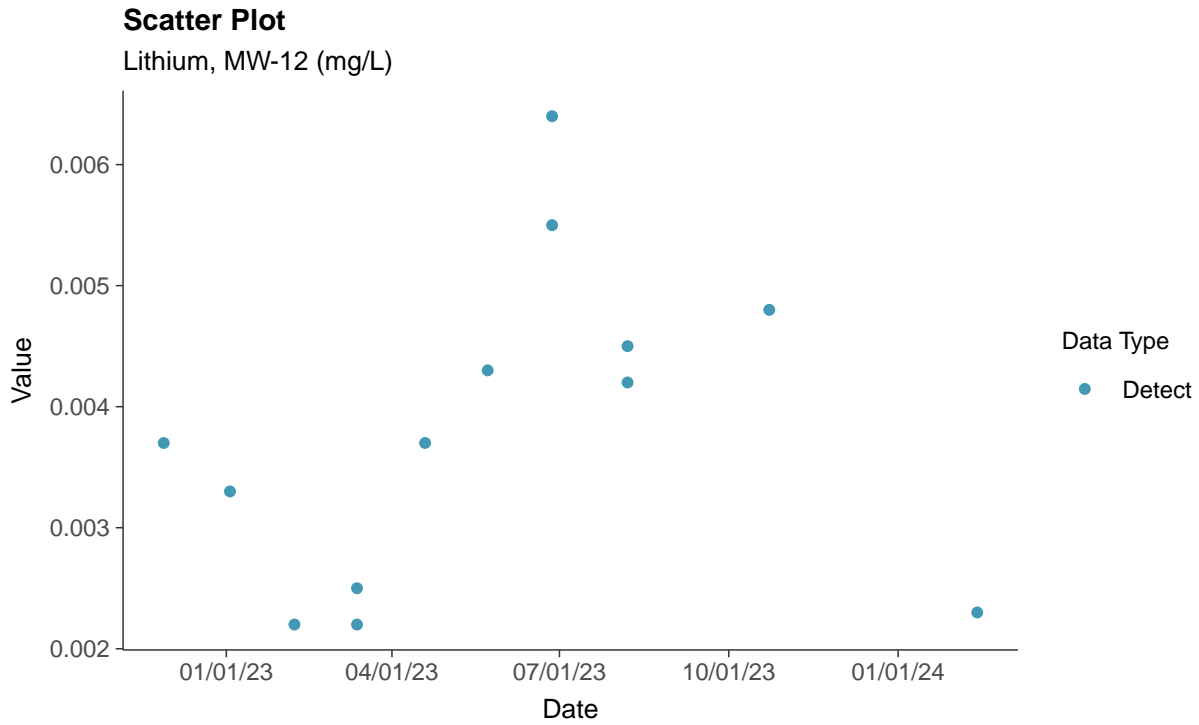
Lead, MW-12 (mg/L)





Appendix IV: Lithium, MW-12

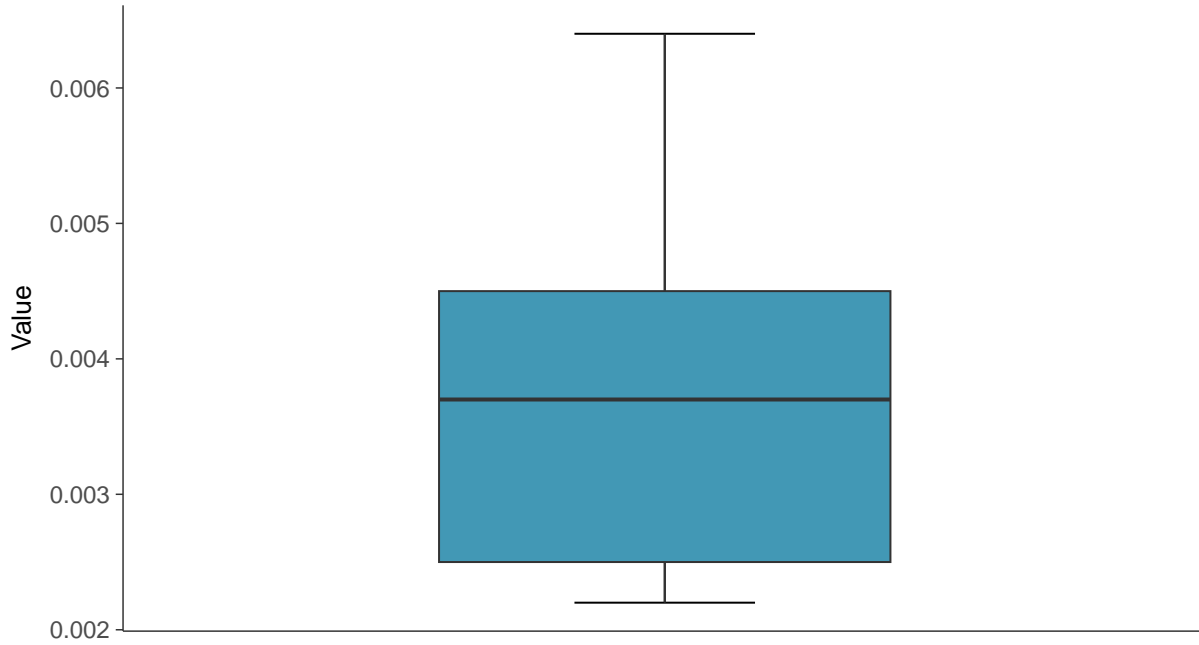
ID: 2_22_5_116





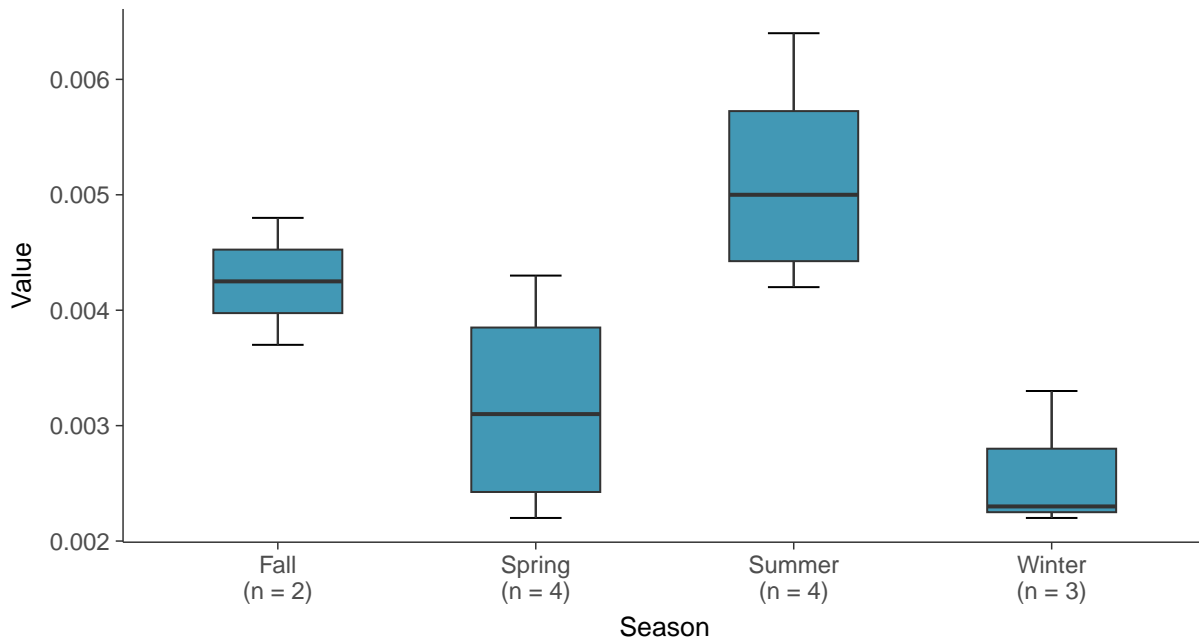
Boxplot

Lithium, MW-12 (mg/L)



Boxplot by Season

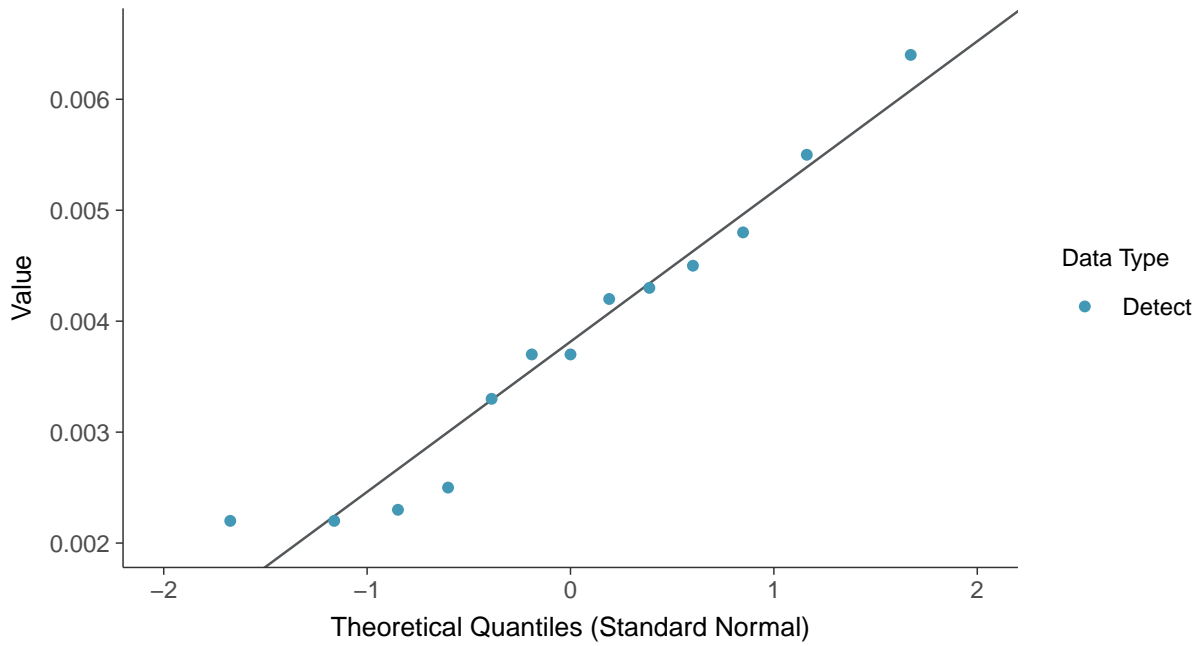
Lithium, MW-12 (mg/L)





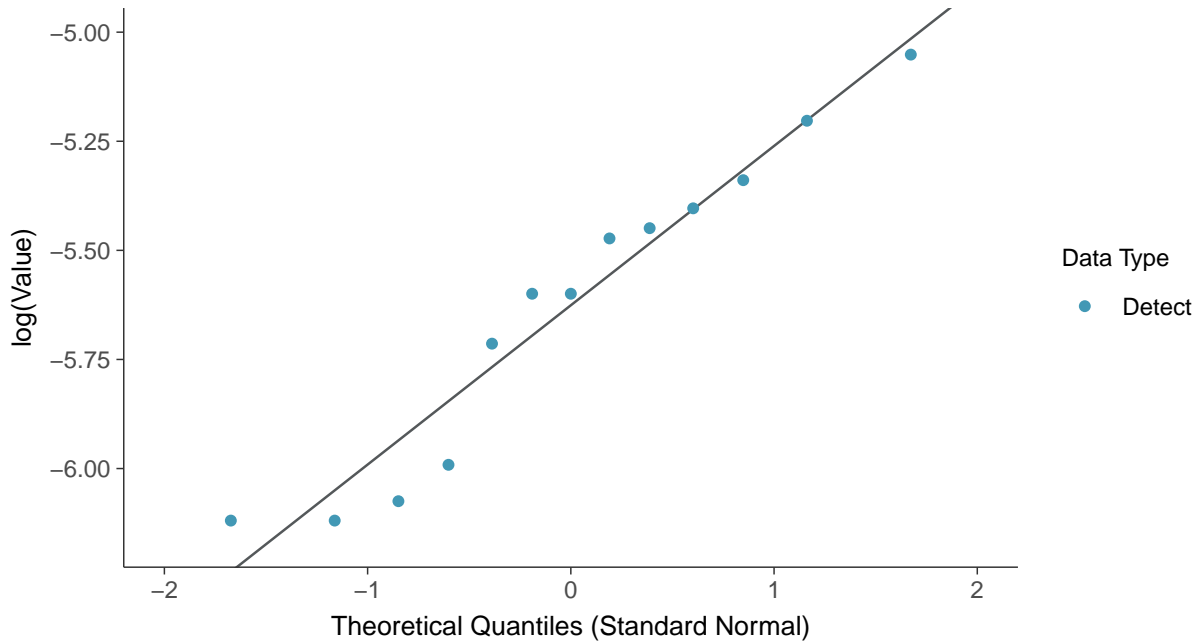
Normal Q-Q plot

Lithium, MW-12 (mg/L)



Lognormal Q-Q plot

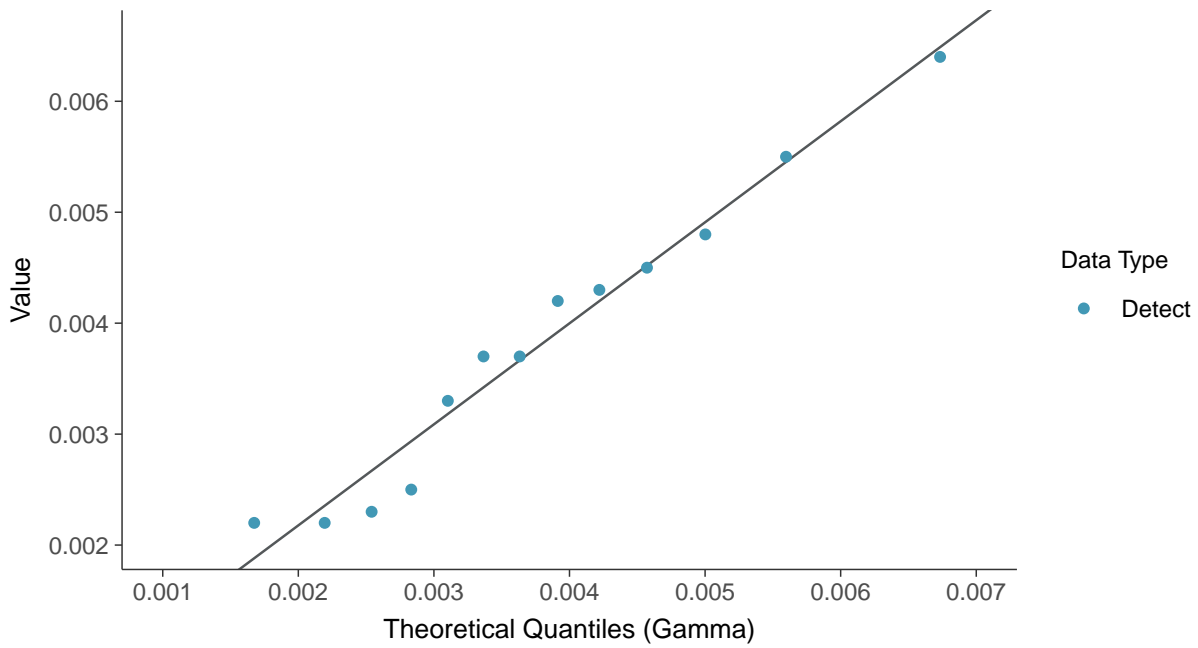
Lithium, MW-12 (mg/L)





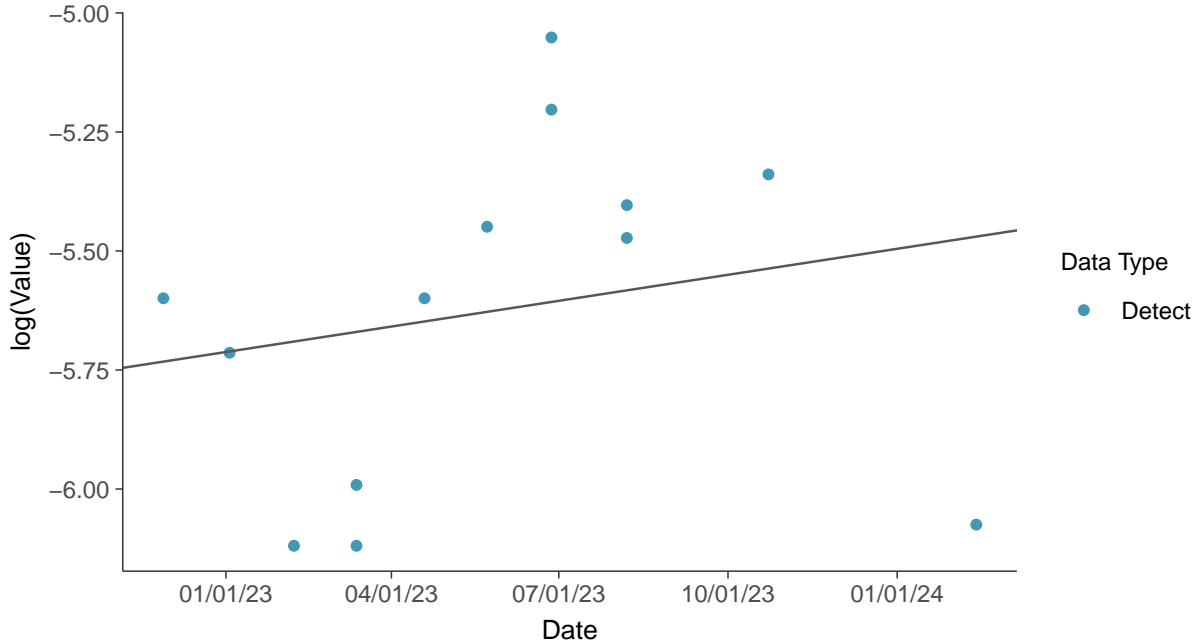
Gamma Q-Q plot

Lithium, MW-12 (mg/L)



Trend Regression: Lognormal MLE

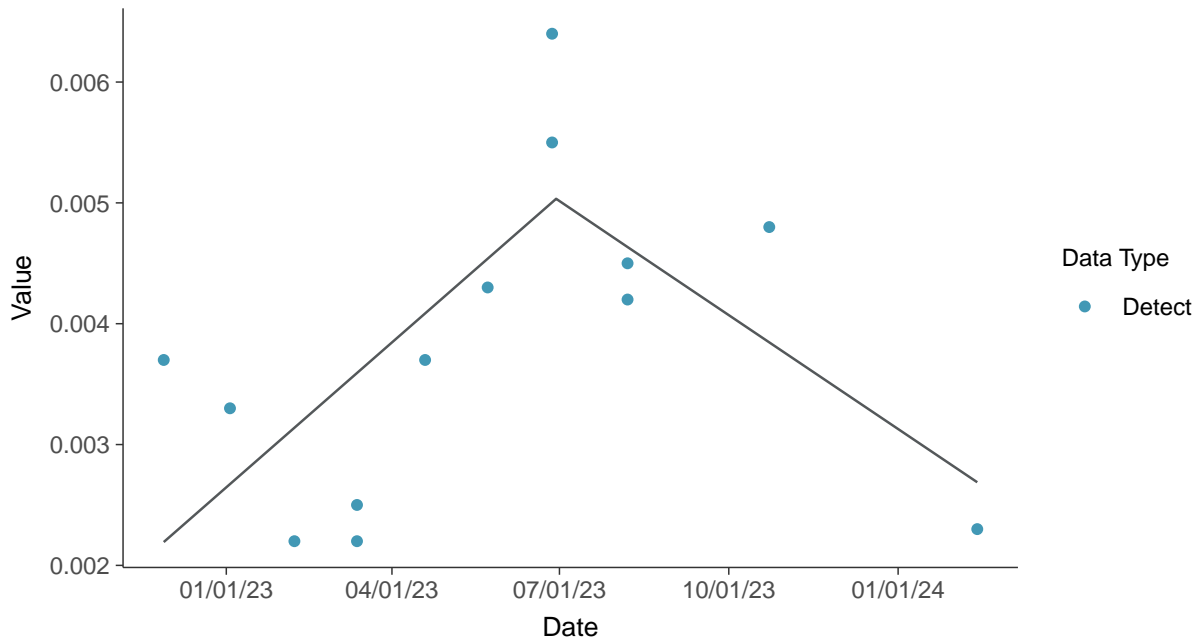
Lithium, MW-12 (mg/L)





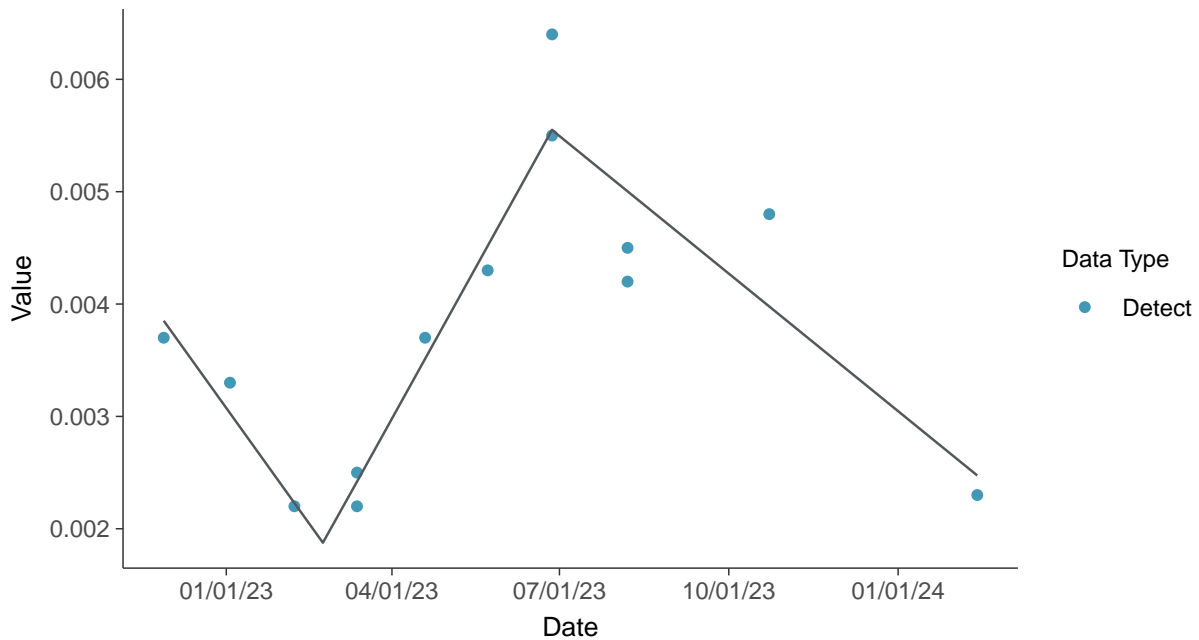
Trend Regression: Piecewise Linear-Linear

Lithium, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

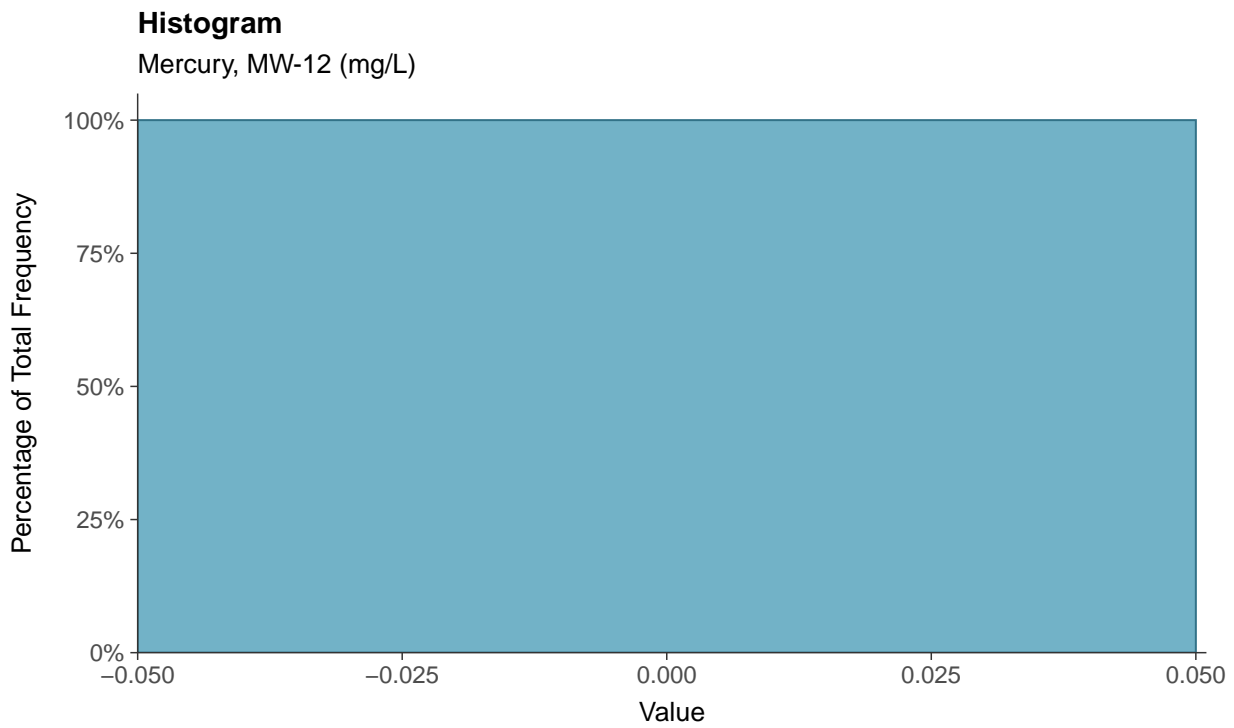
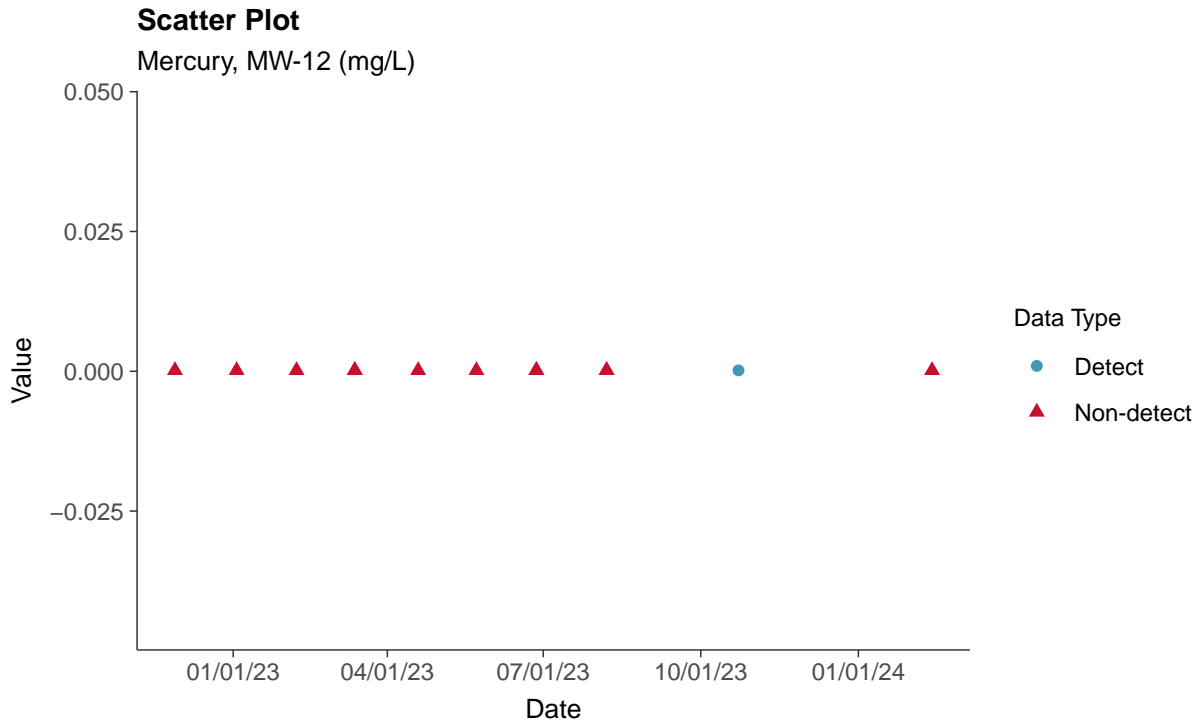
Lithium, MW-12 (mg/L)





Appendix IV: Mercury, MW-12

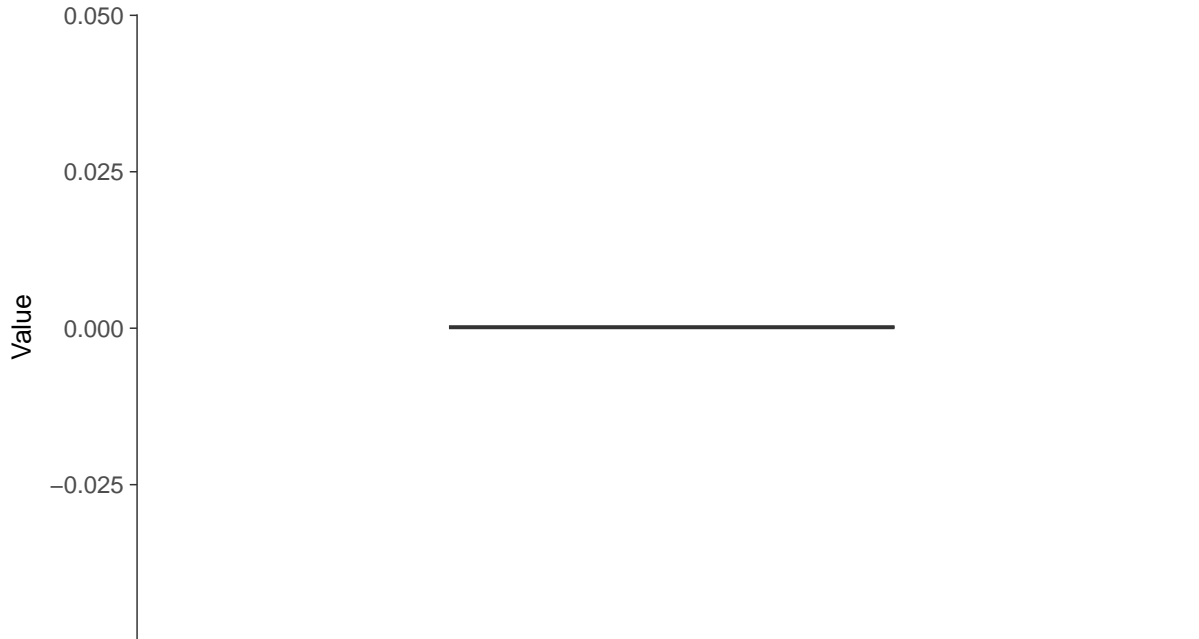
ID: 2_22_5_117





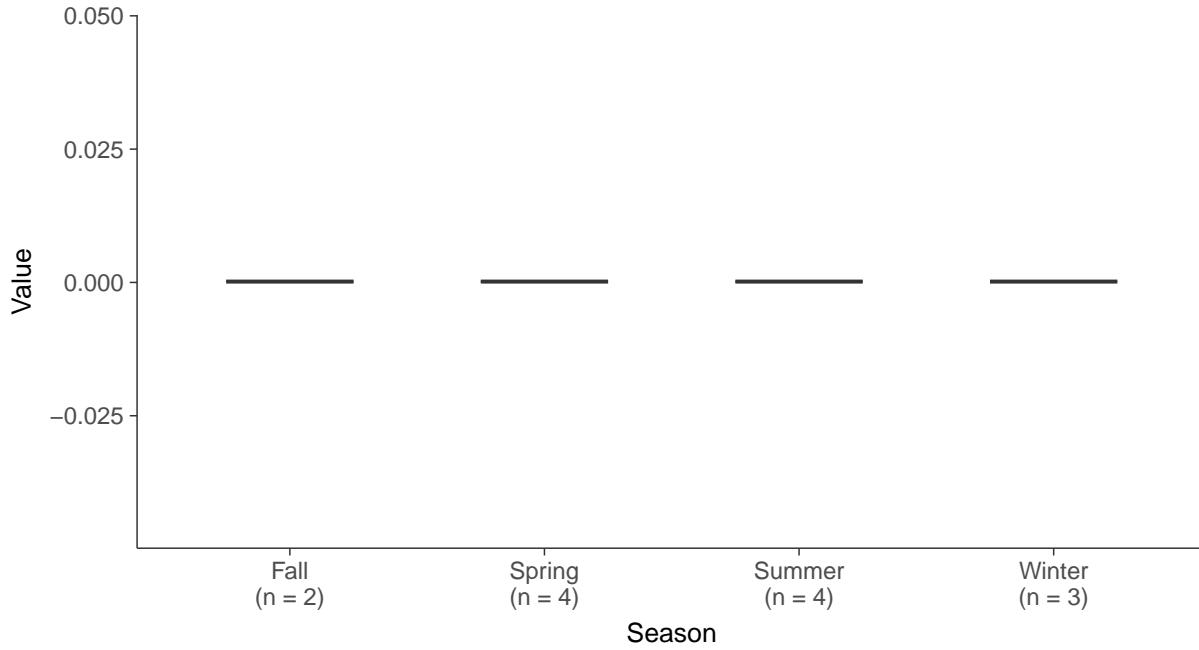
Boxplot

Mercury, MW-12 (mg/L)



Boxplot by Season

Mercury, MW-12 (mg/L)



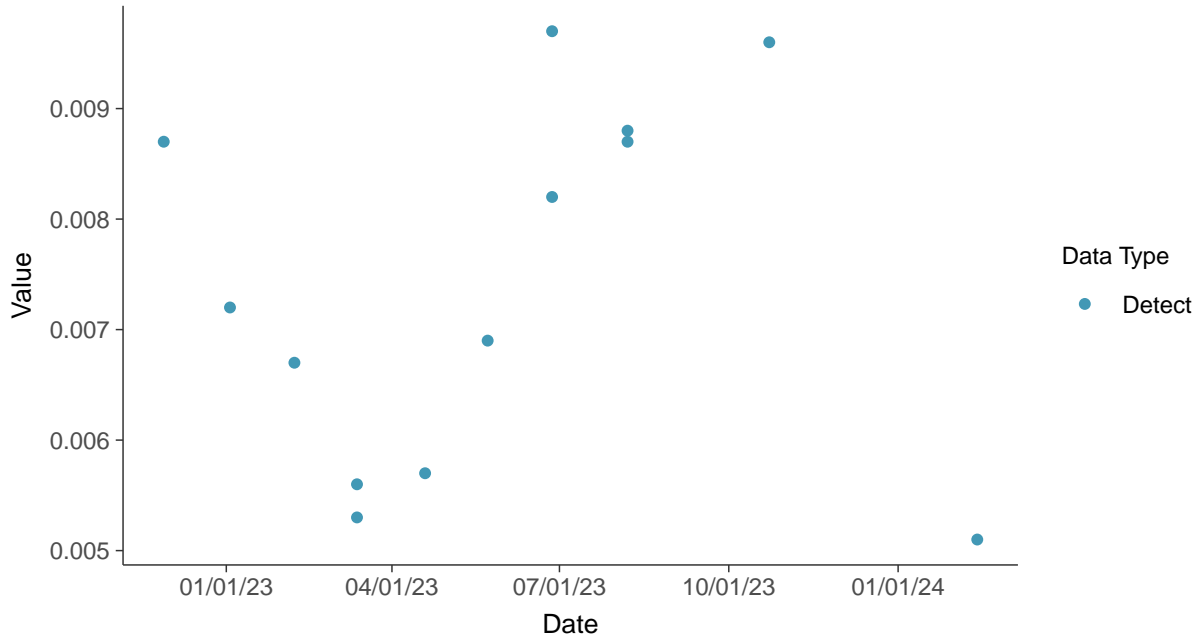


Appendix IV: Molybdenum, MW-12

ID: 2_22_5_118

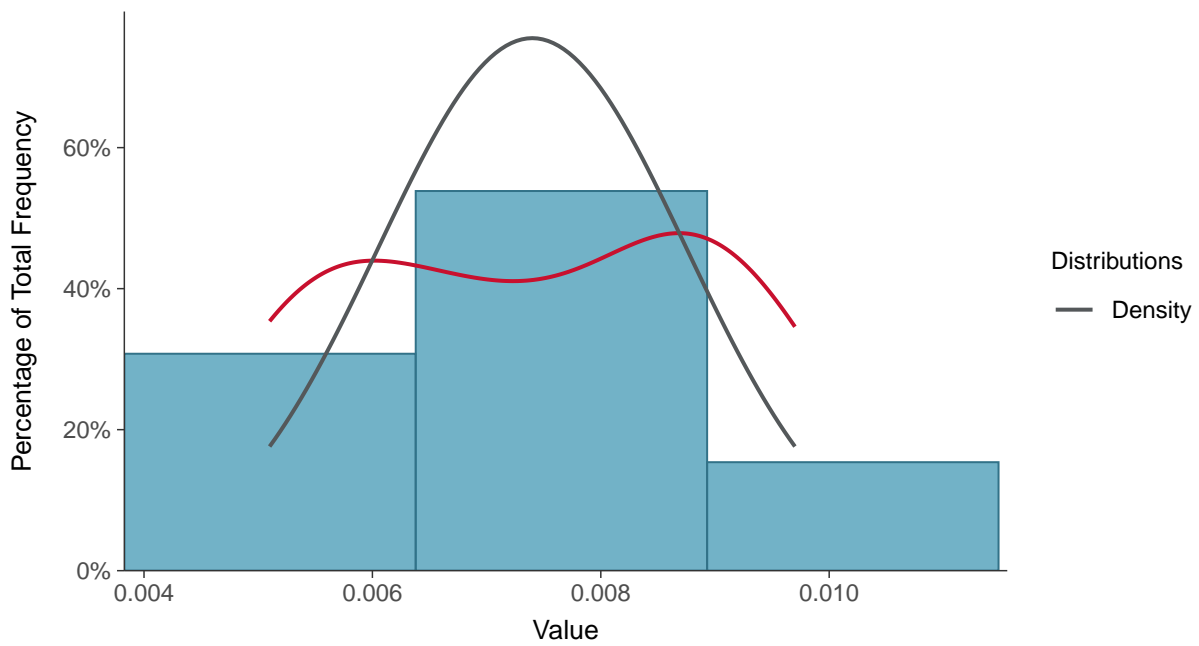
Scatter Plot

Molybdenum, MW-12 (mg/L)



Histogram

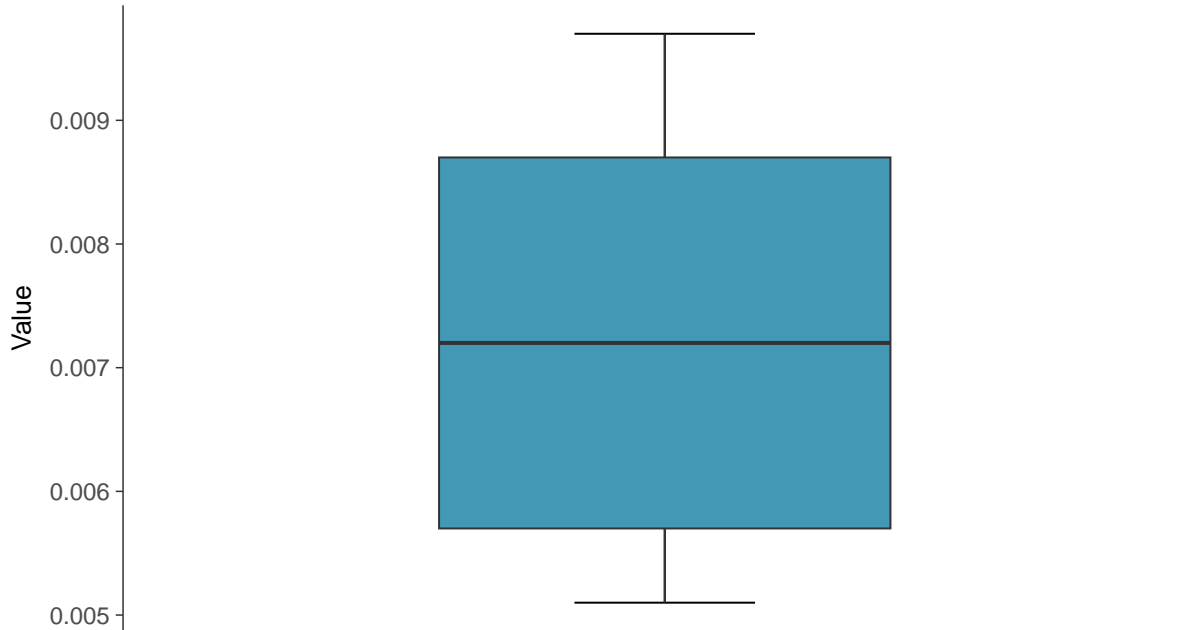
Molybdenum, MW-12 (mg/L)





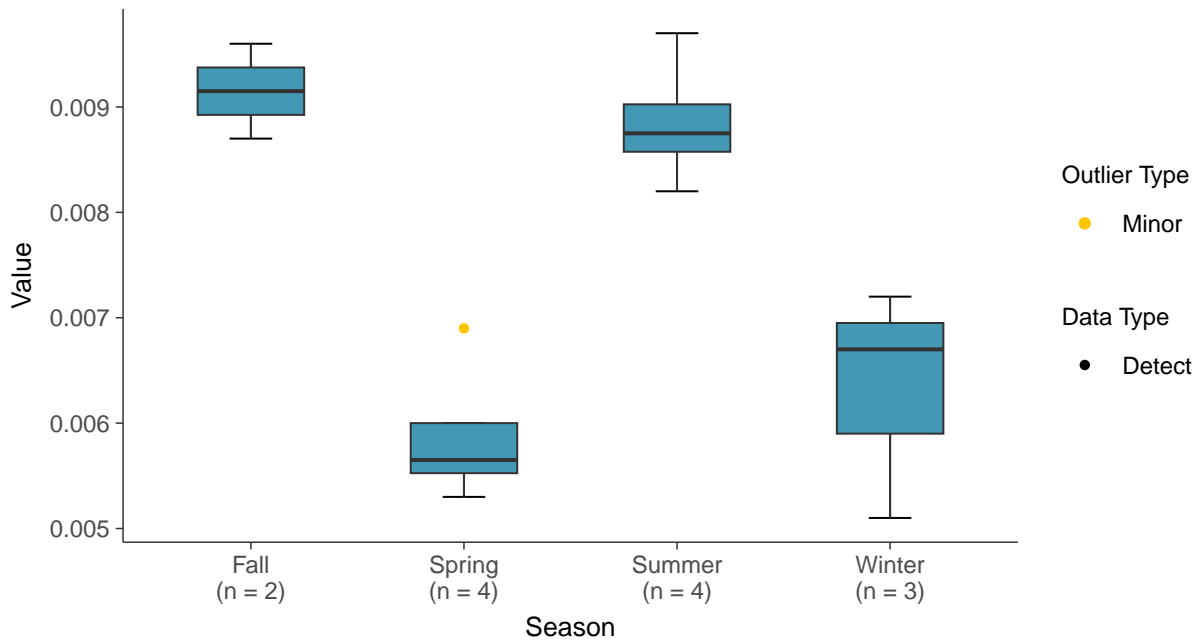
Boxplot

Molybdenum, MW-12 (mg/L)



Boxplot by Season

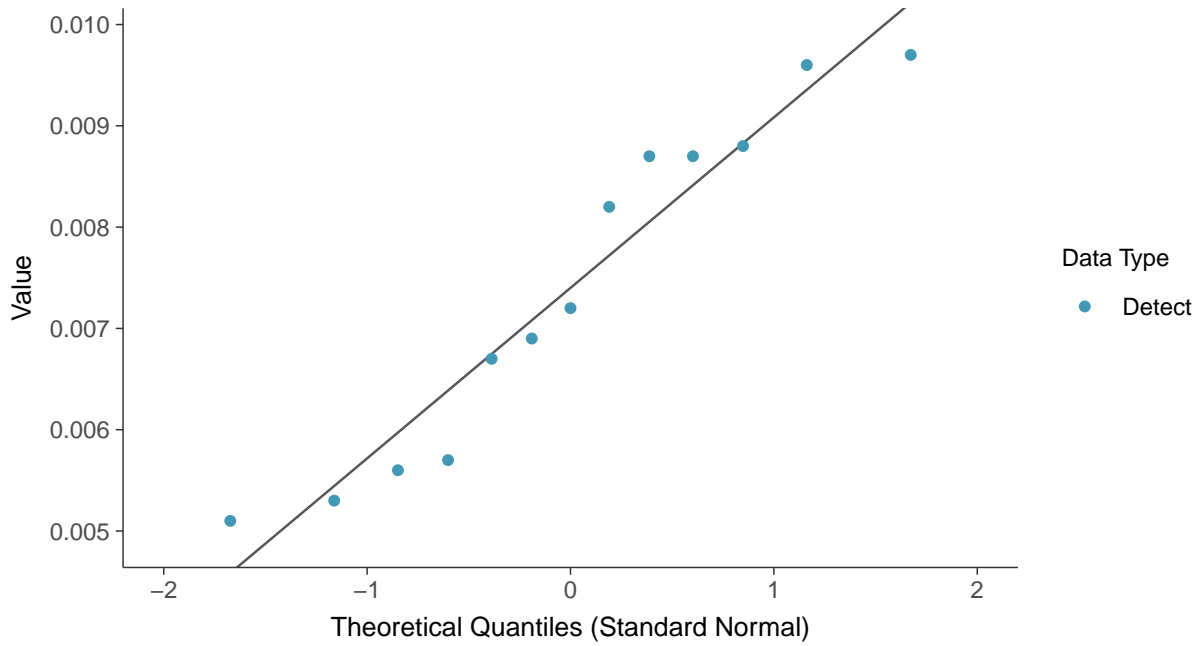
Molybdenum, MW-12 (mg/L)





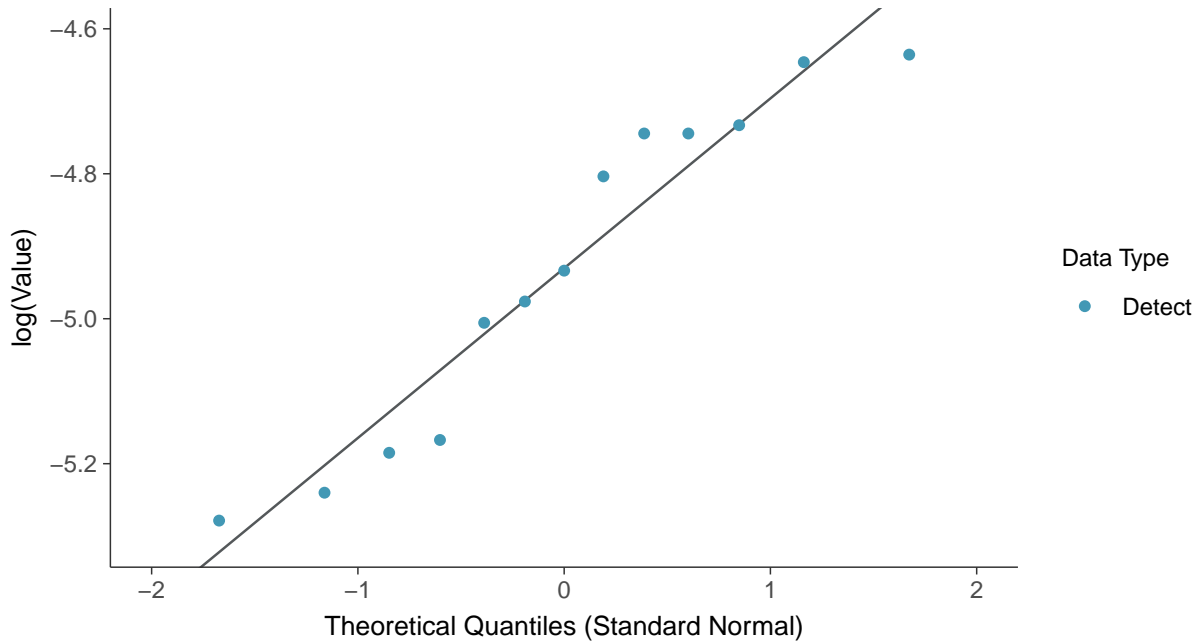
Normal Q-Q plot

Molybdenum, MW-12 (mg/L)



Lognormal Q-Q plot

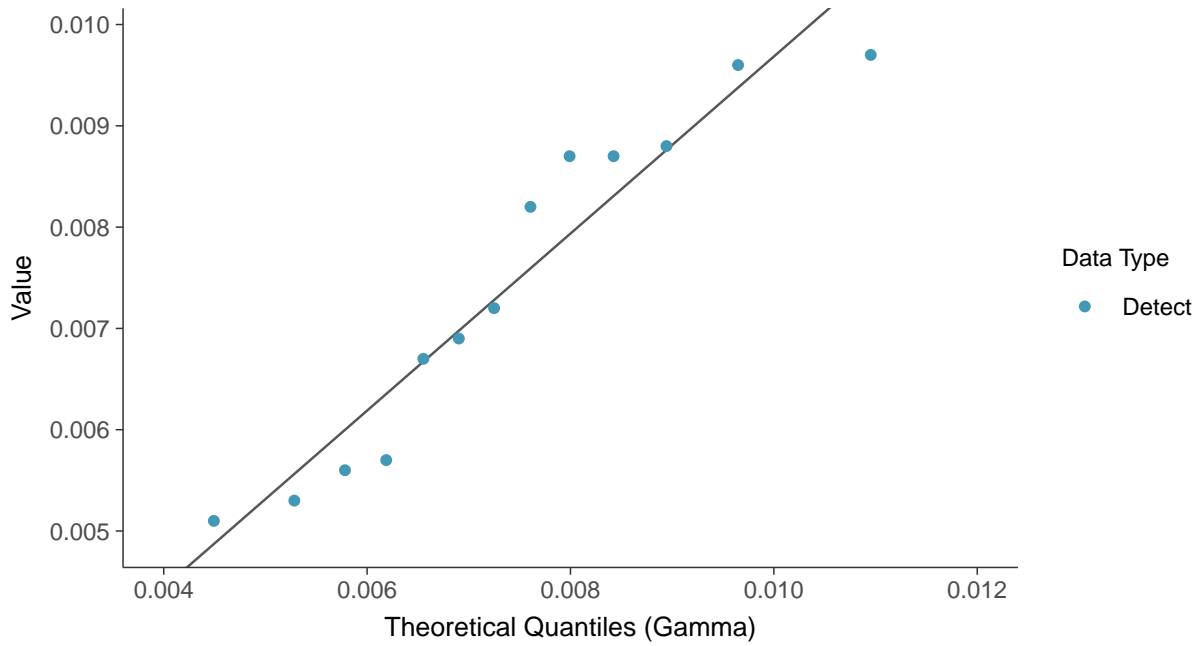
Molybdenum, MW-12 (mg/L)





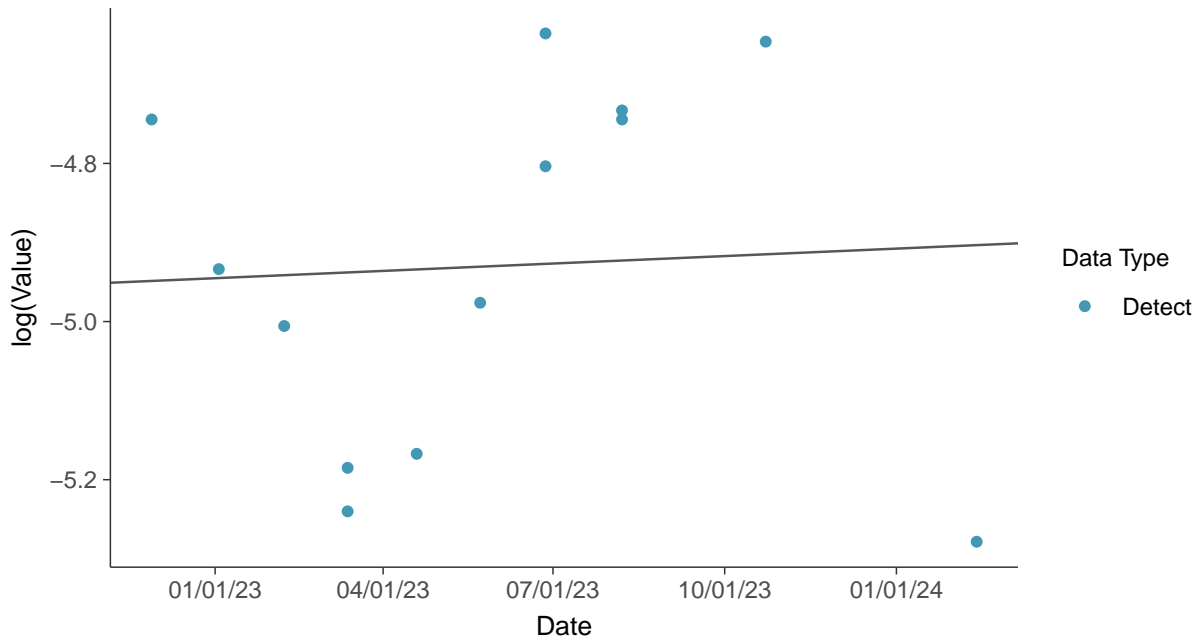
Gamma Q-Q plot

Molybdenum, MW-12 (mg/L)



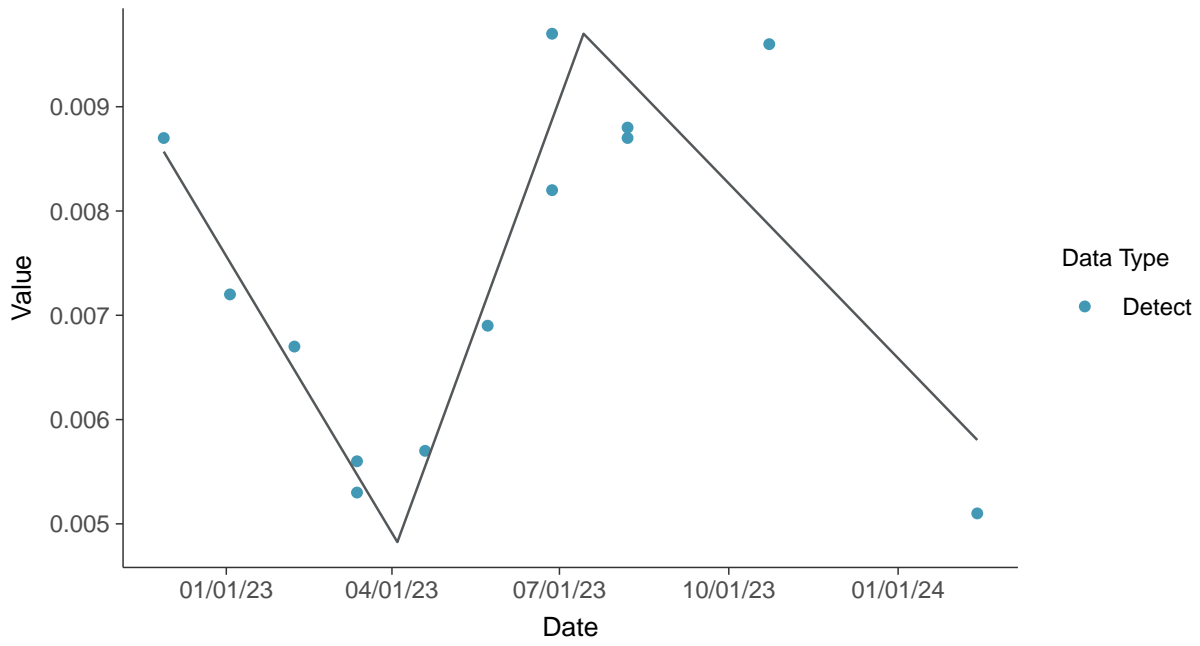
Trend Regression: Lognormal MLE

Molybdenum, MW-12 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear
Molybdenum, MW-12 (mg/L)



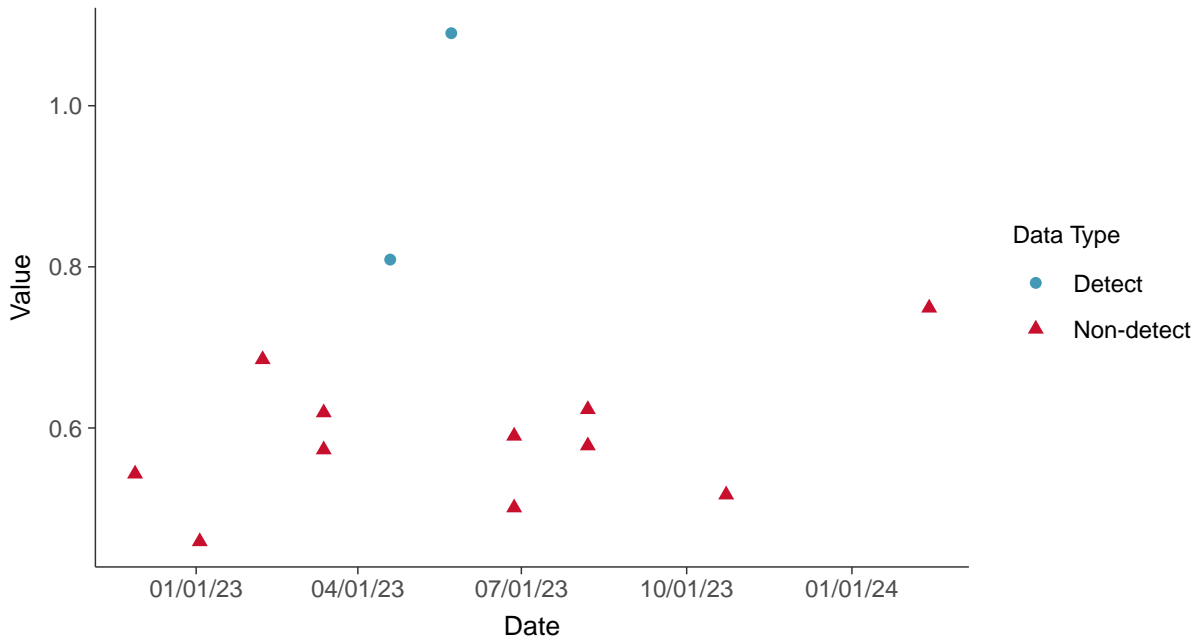


Appendix IV: Radium 226 and 228, MW-12

ID: 2_22_5_121

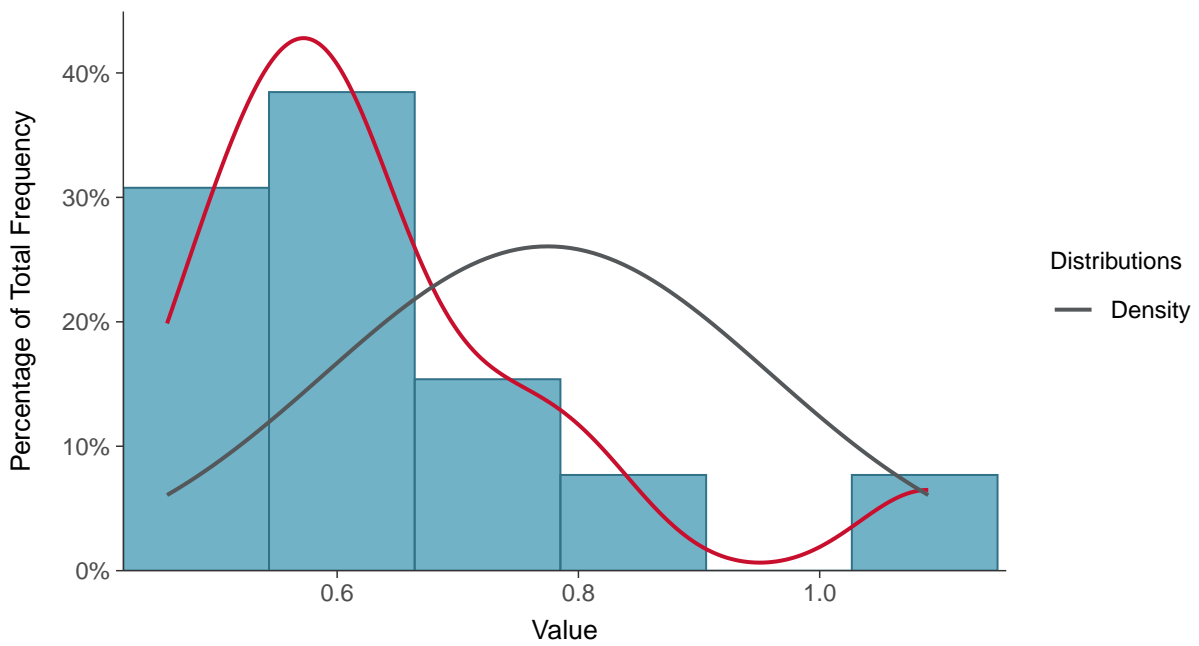
Scatter Plot

Radium 226 and 228, MW-12 (pCi/L)



Histogram

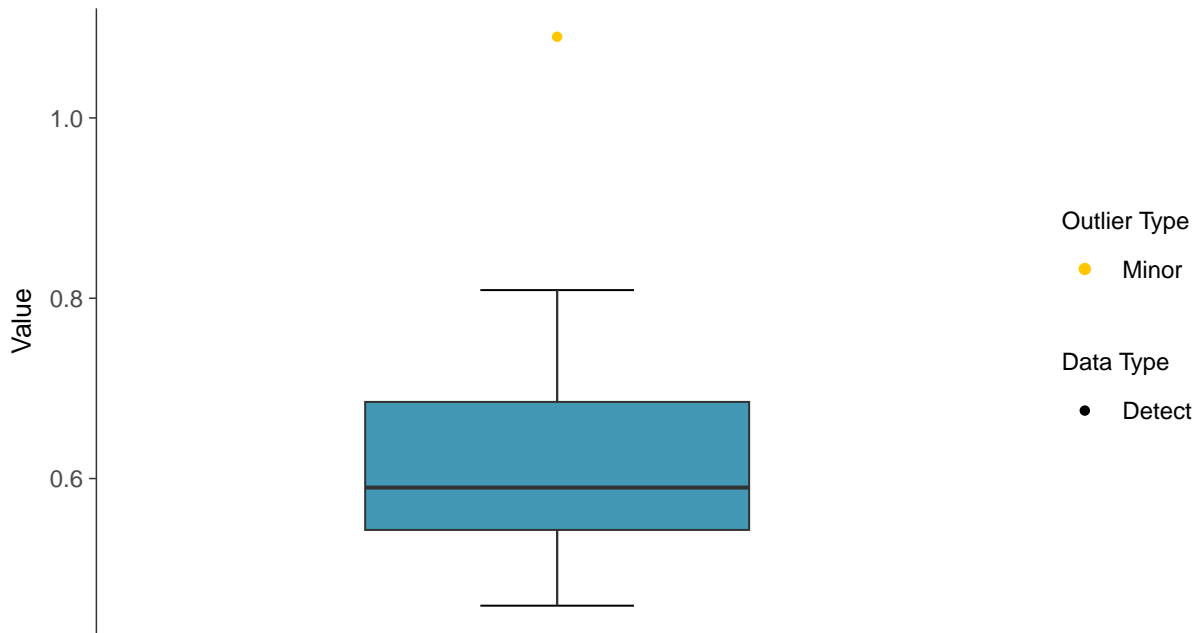
Radium 226 and 228, MW-12 (pCi/L)





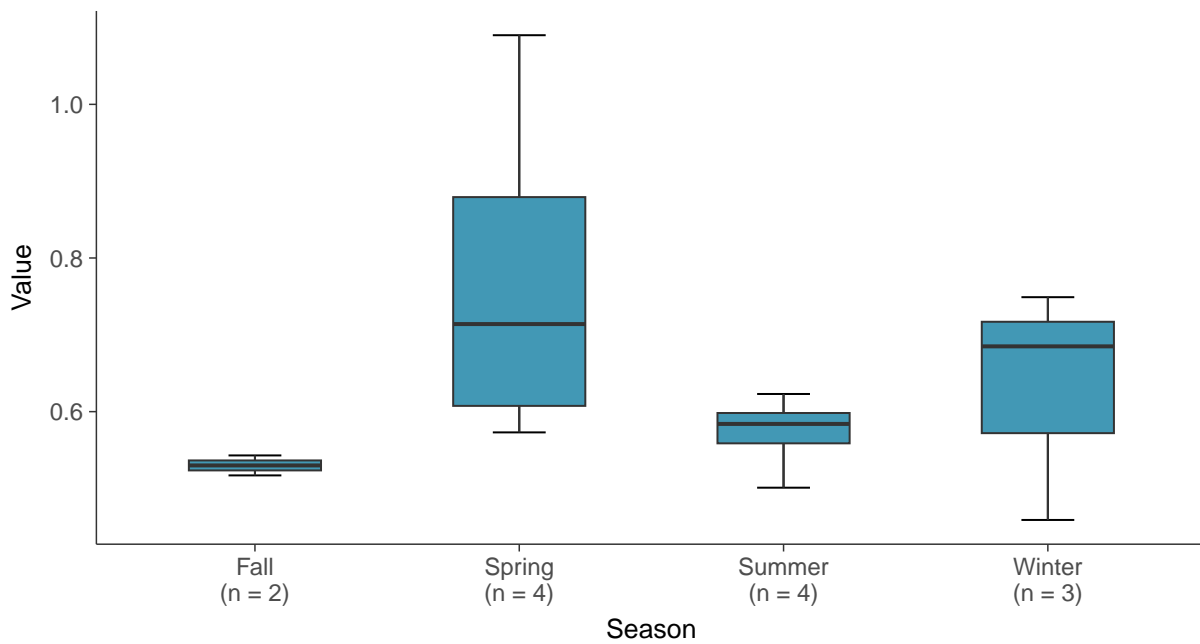
Boxplot

Radium 226 and 228, MW-12 (pCi/L)



Boxplot by Season

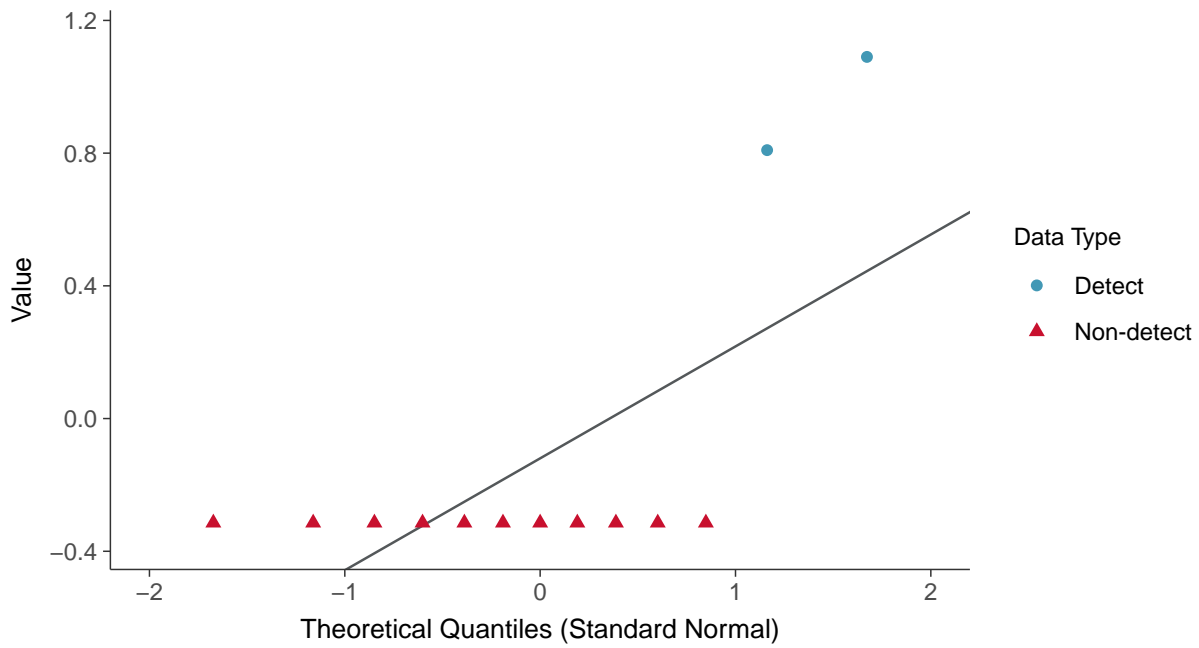
Radium 226 and 228, MW-12 (pCi/L)





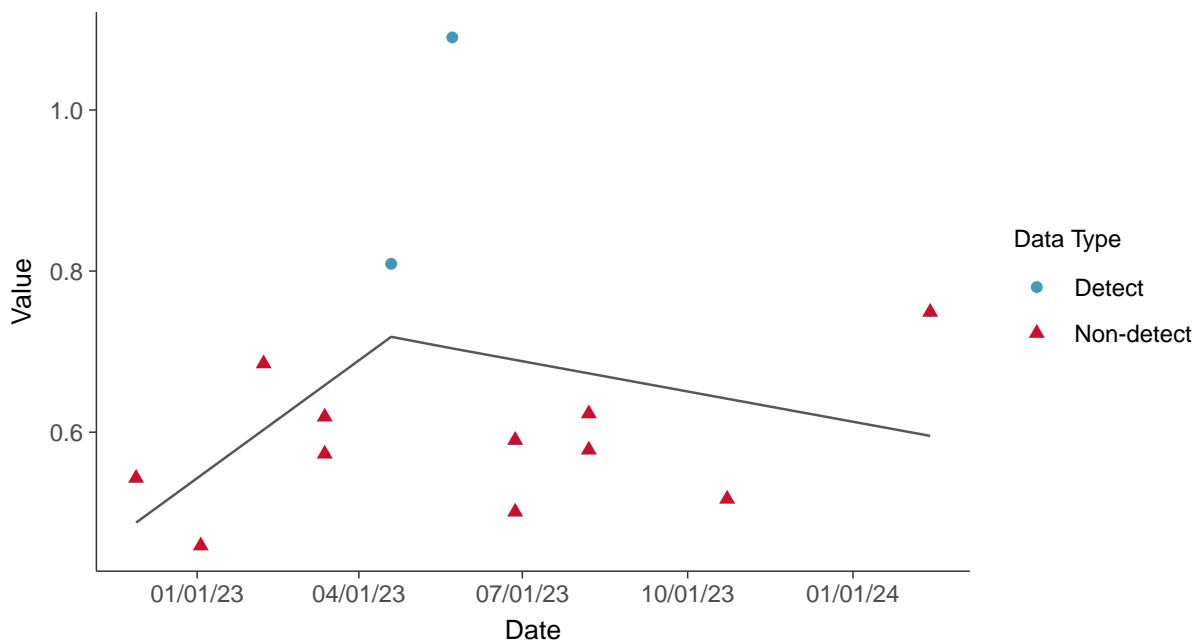
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-12 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-12 (pCi/L)



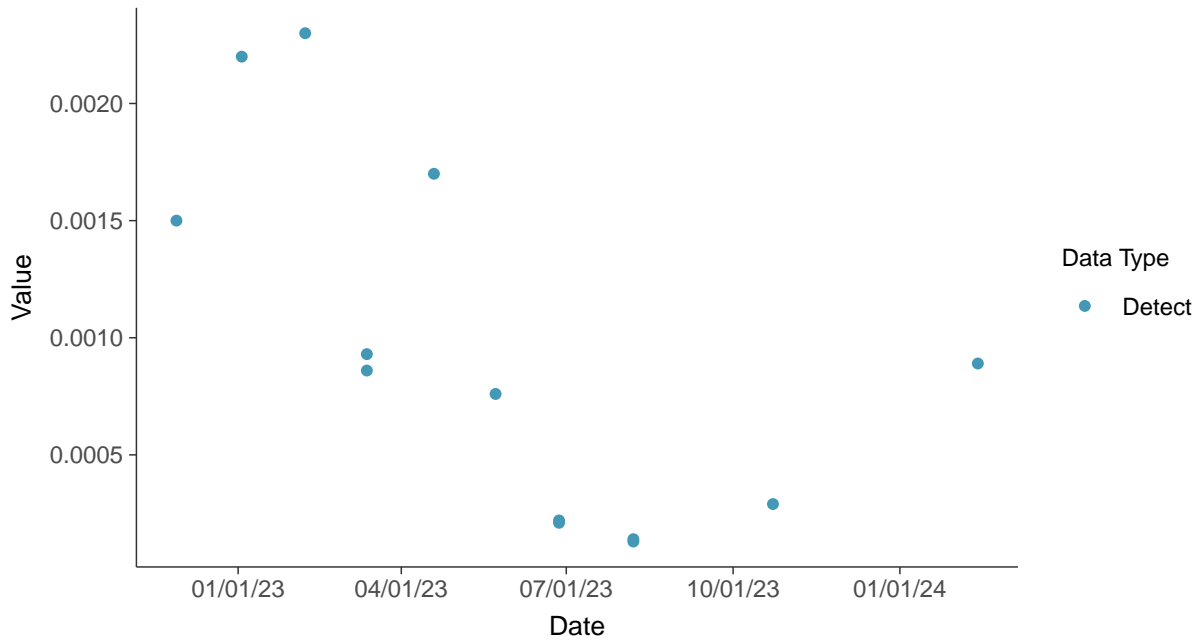


Appendix IV: Selenium, MW-12

ID: 2_22_5_122

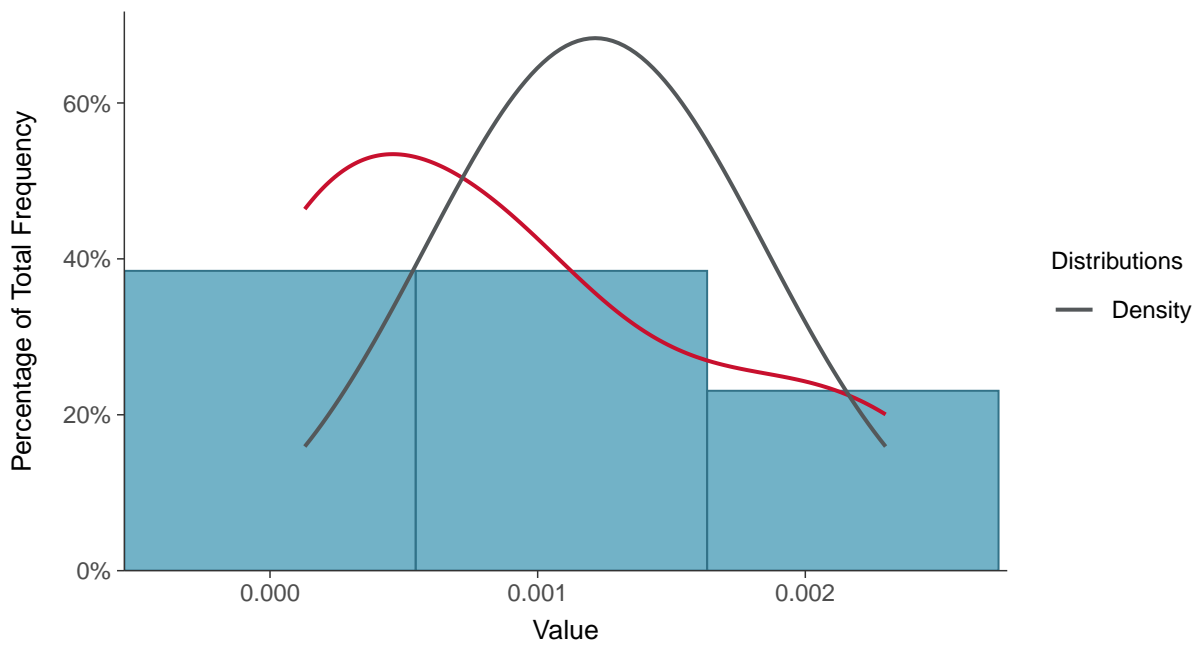
Scatter Plot

Selenium, MW-12 (mg/L)



Histogram

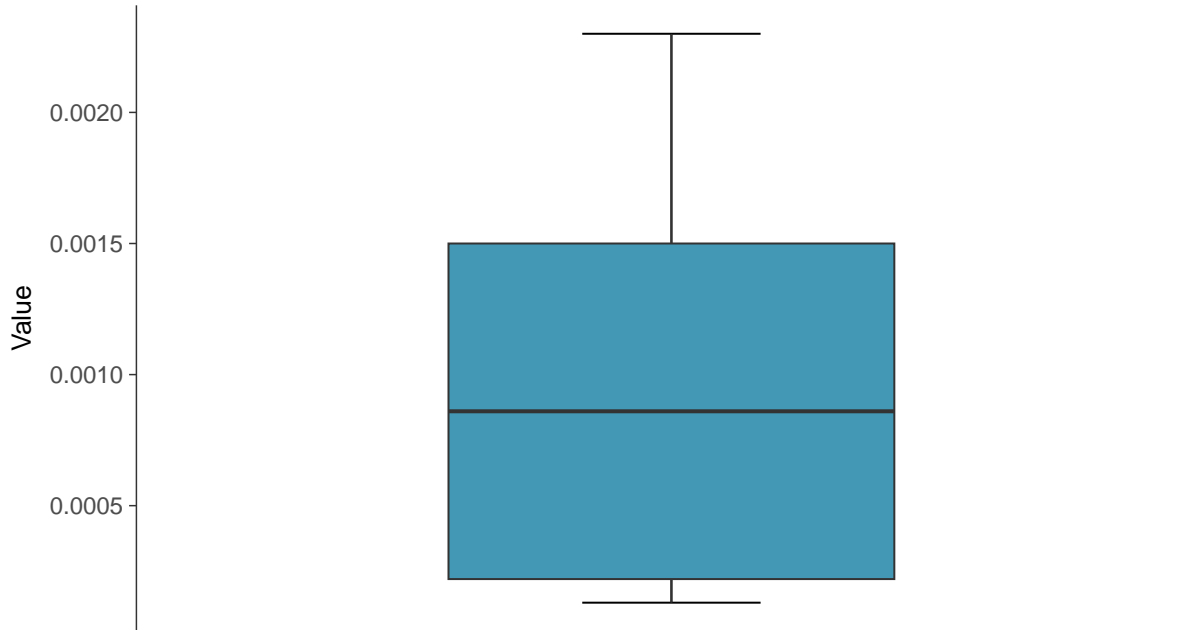
Selenium, MW-12 (mg/L)





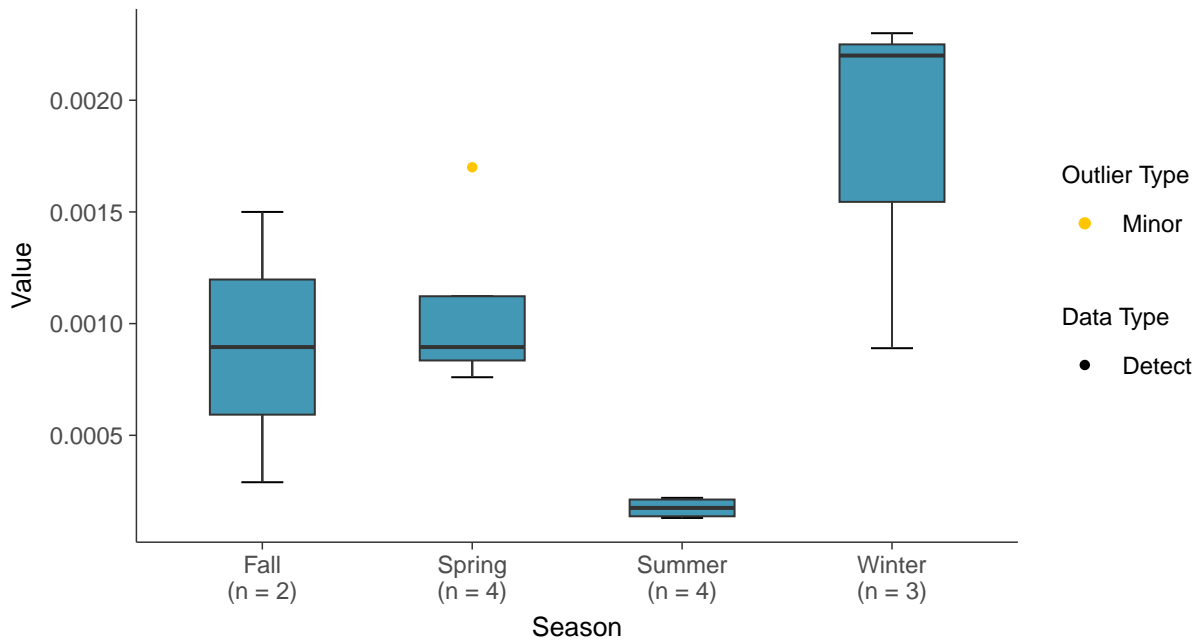
Boxplot

Selenium, MW-12 (mg/L)



Boxplot by Season

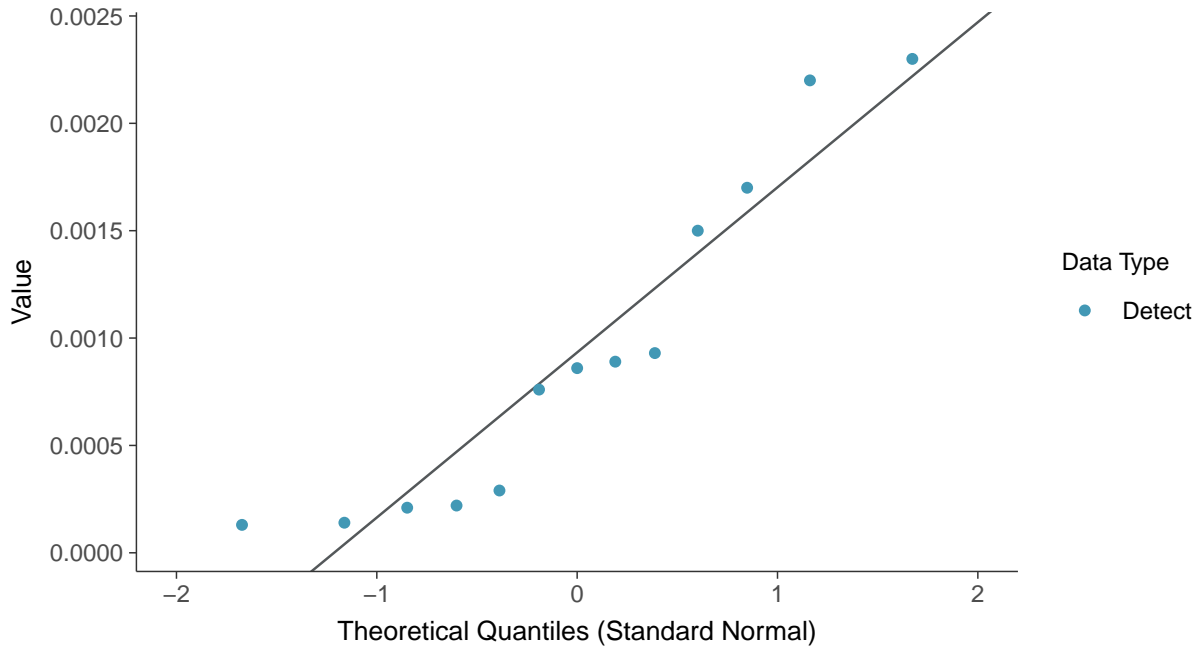
Selenium, MW-12 (mg/L)





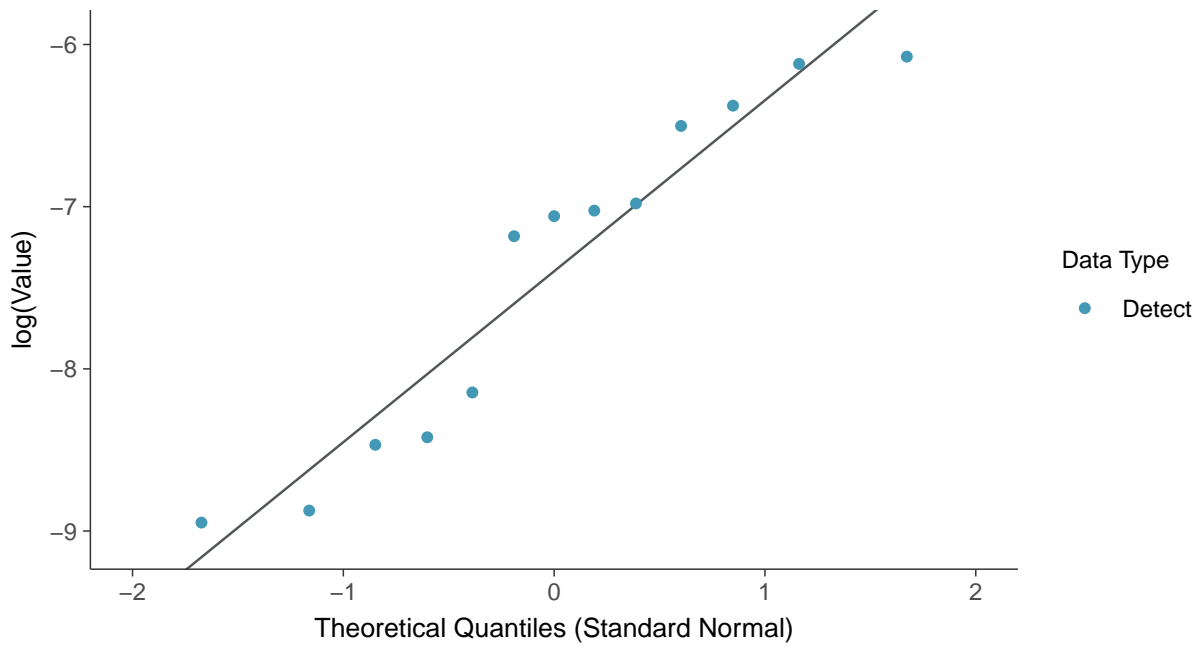
Normal Q-Q plot

Selenium, MW-12 (mg/L)



Lognormal Q-Q plot

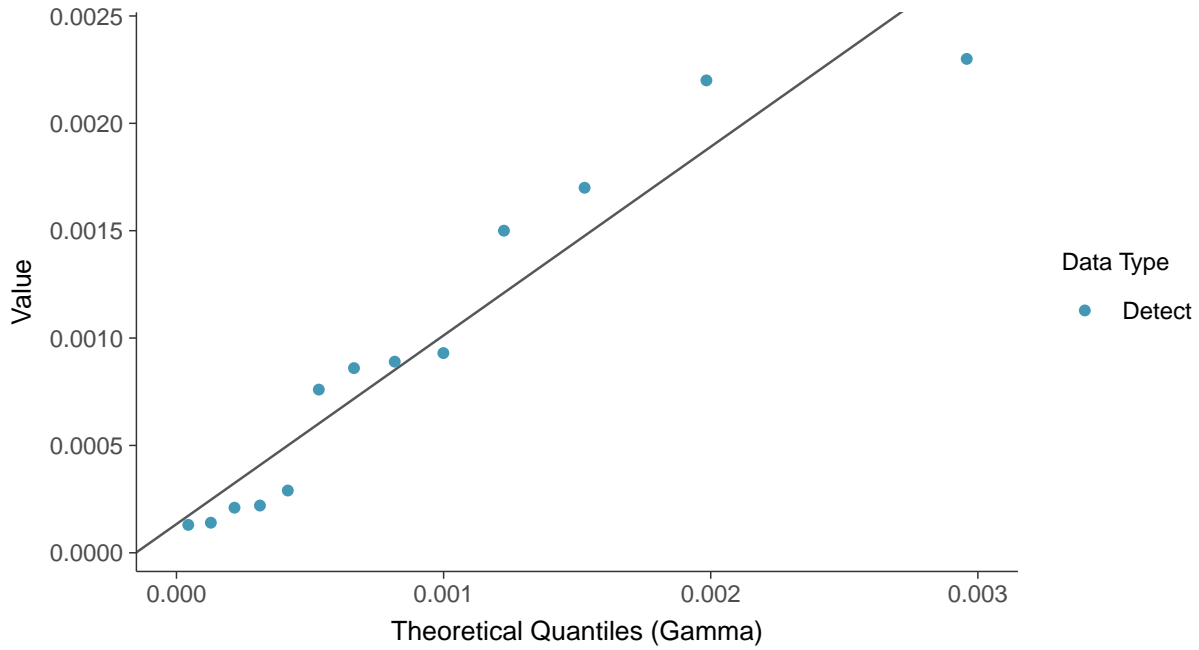
Selenium, MW-12 (mg/L)





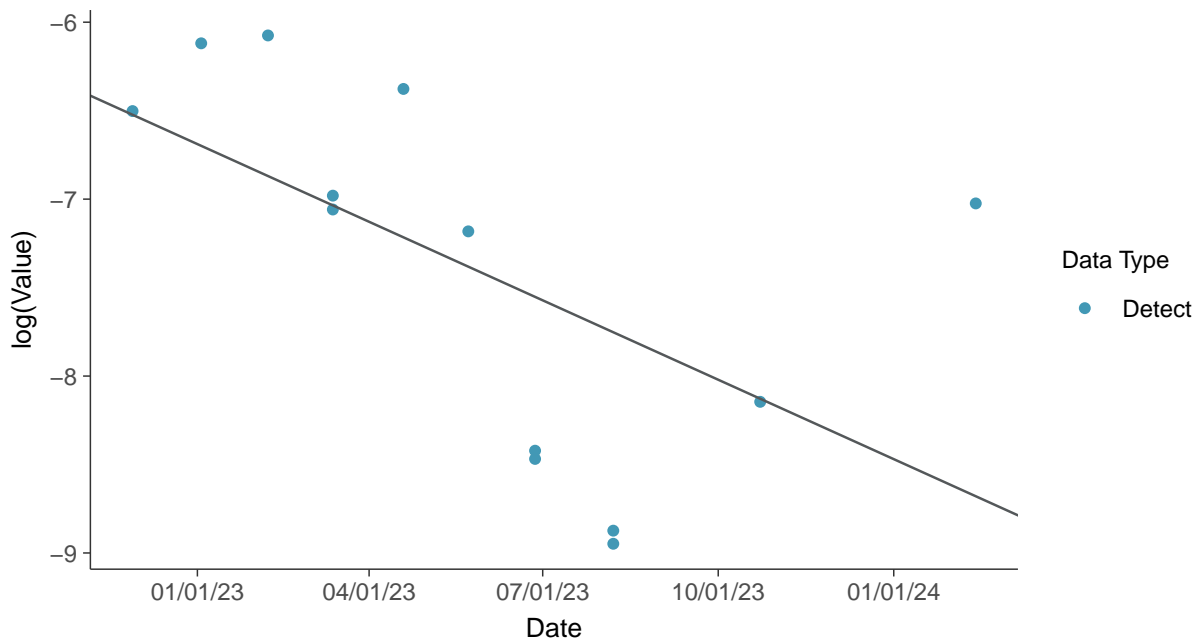
Gamma Q-Q plot

Selenium, MW-12 (mg/L)



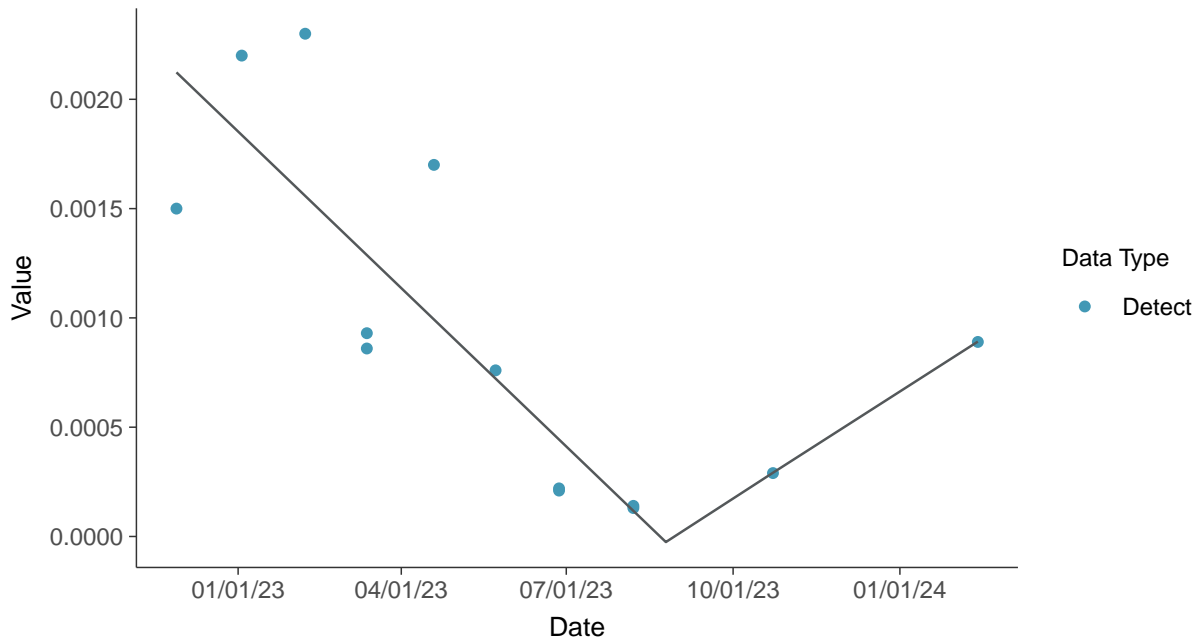
Trend Regression: Lognormal MLE

Selenium, MW-12 (mg/L)

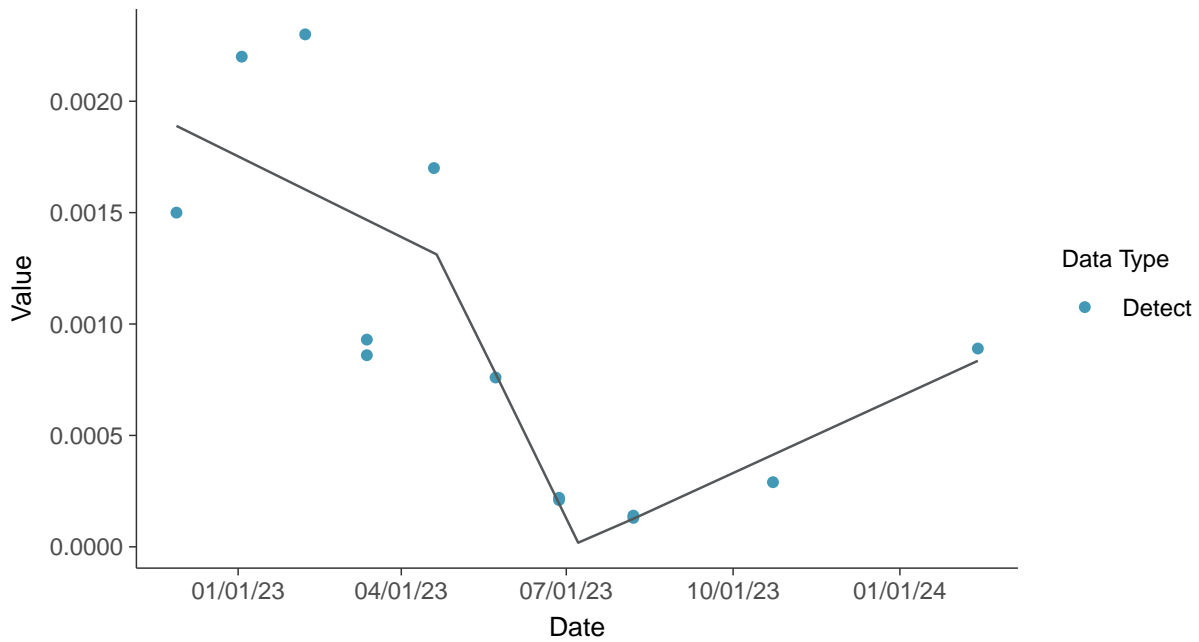




Trend Regression: Piecewise Linear-Linear
Selenium, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-12 (mg/L)



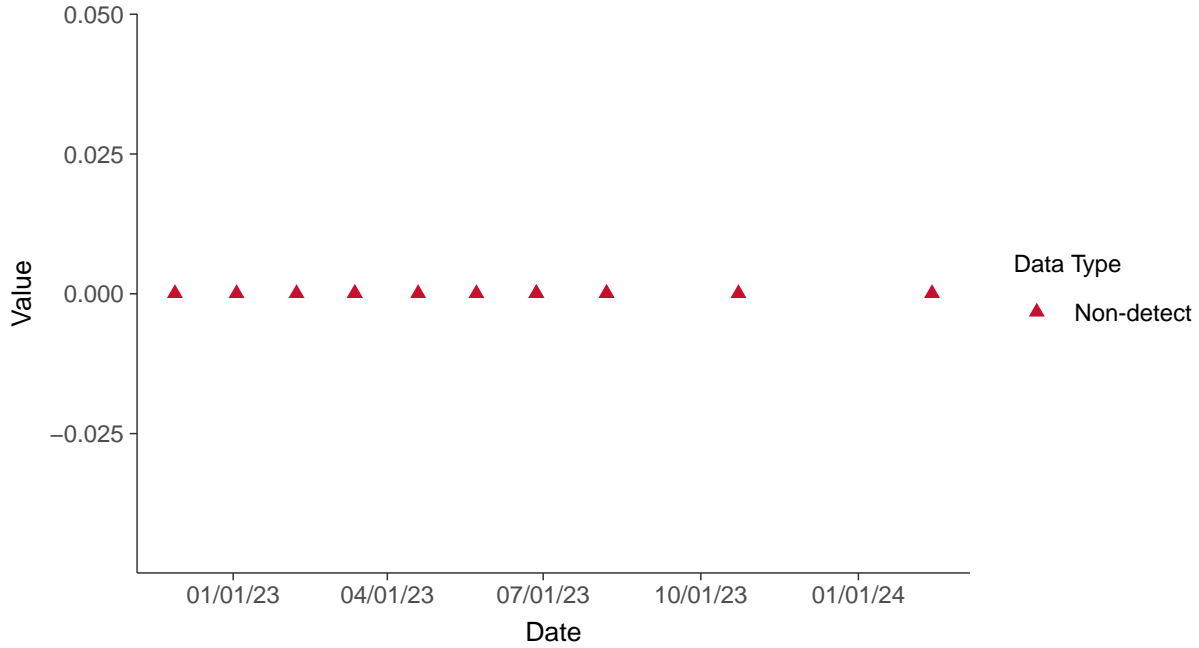


Appendix IV: Thallium, MW-12

ID: 2_22_5_125

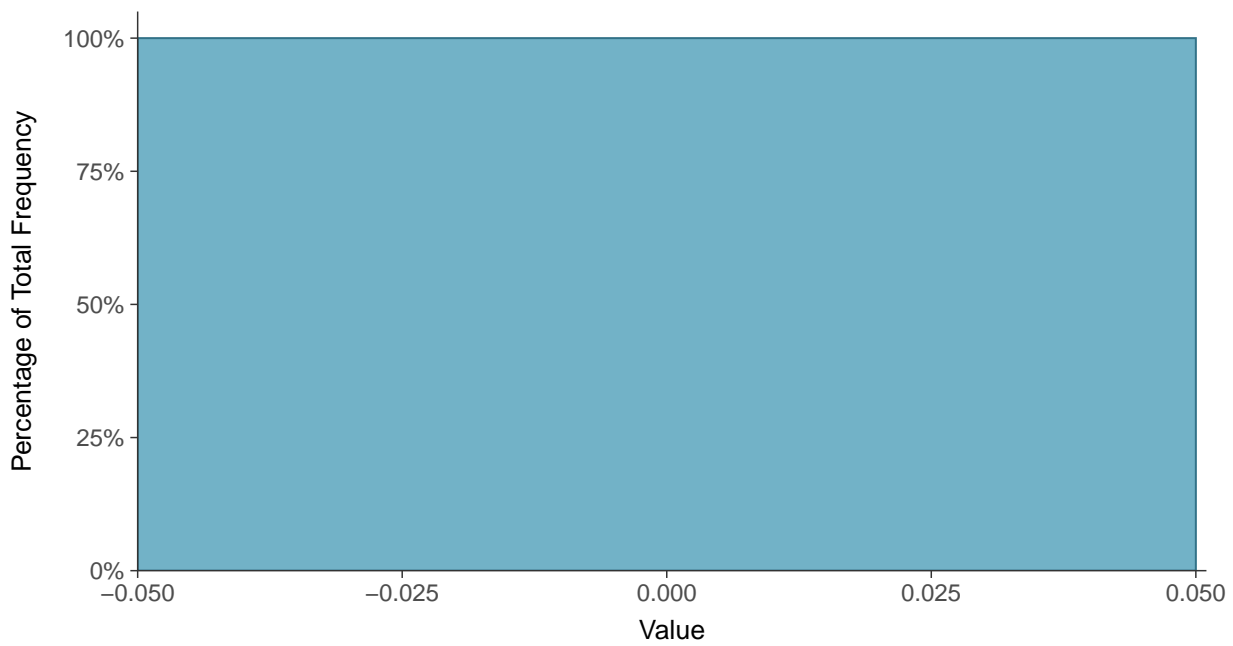
Scatter Plot

Thallium, MW-12 (mg/L)



Histogram

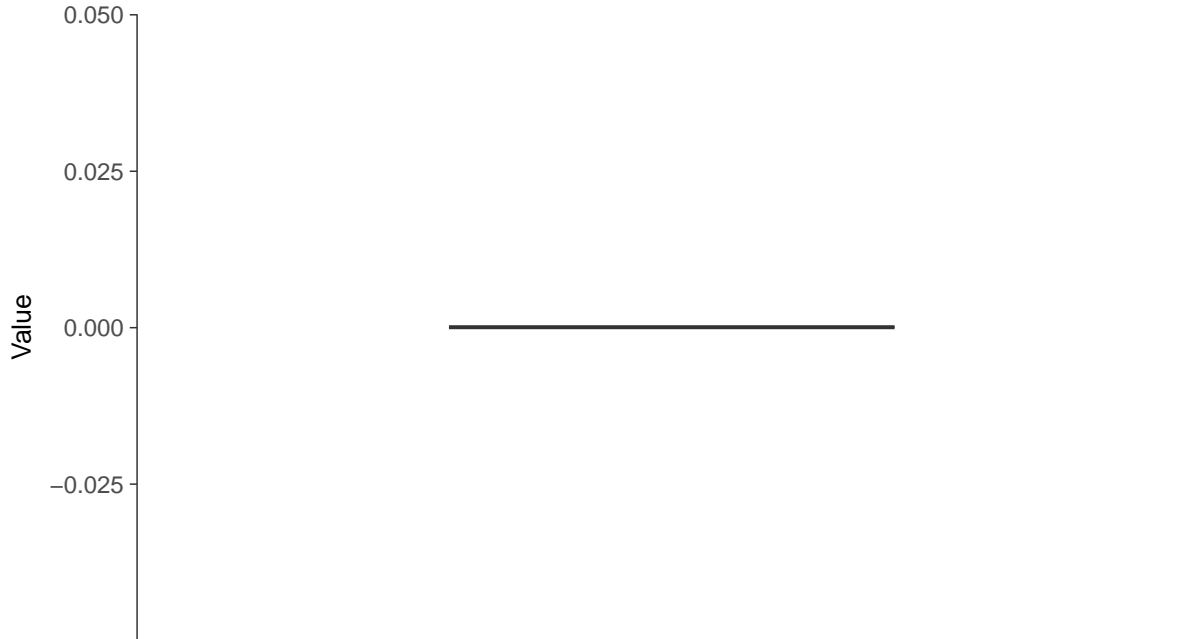
Thallium, MW-12 (mg/L)





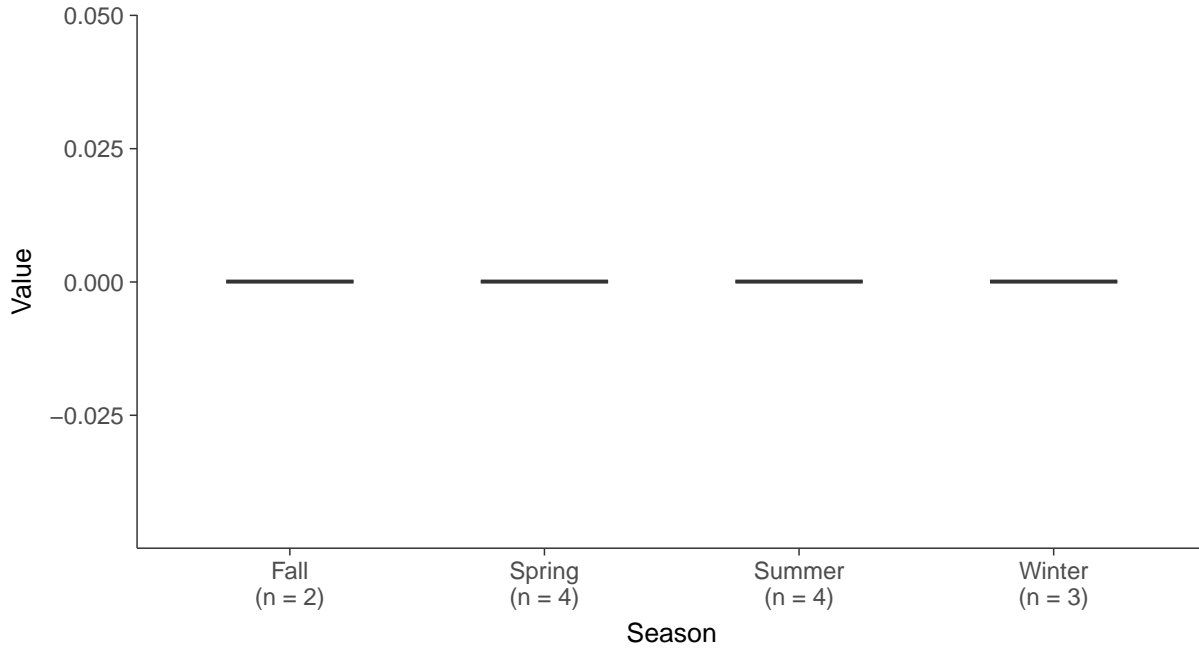
Boxplot

Thallium, MW-12 (mg/L)



Boxplot by Season

Thallium, MW-12 (mg/L)



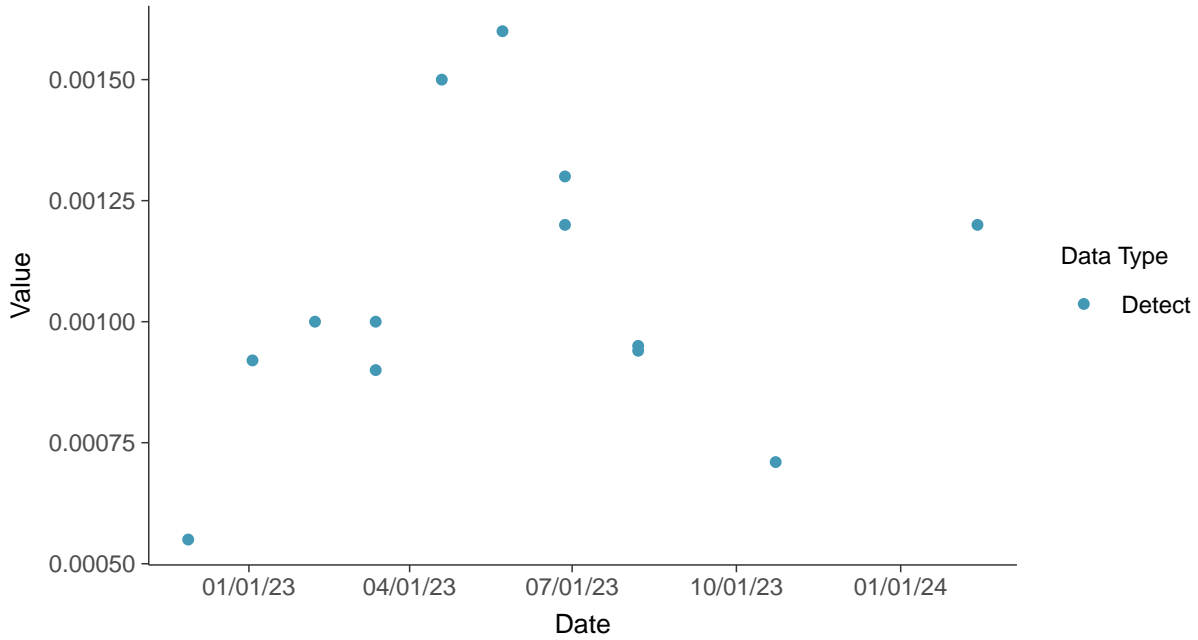


Part 115: Copper, MW-12

ID: 2_22_6_111

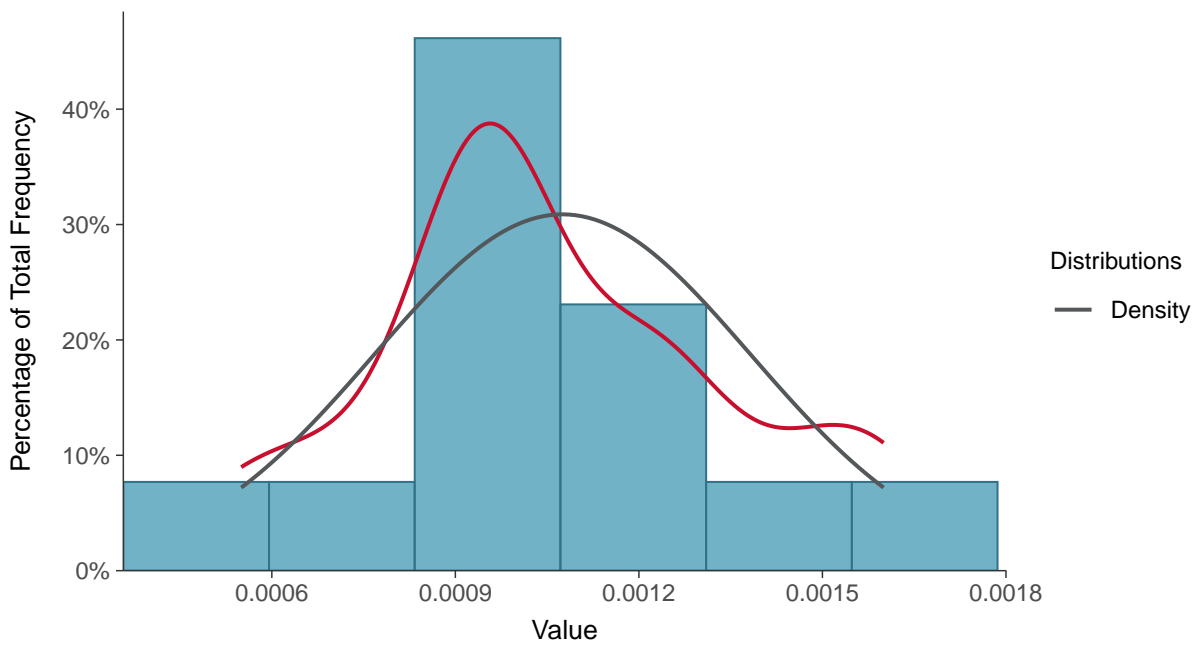
Scatter Plot

Copper, MW-12 (mg/L)



Histogram

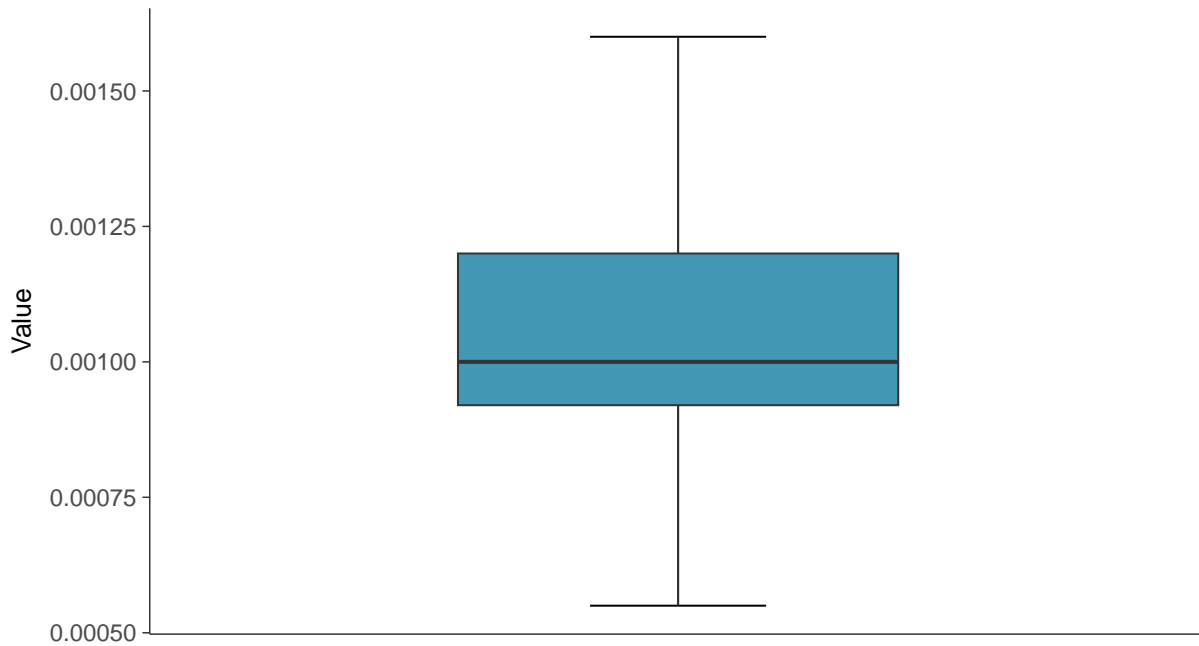
Copper, MW-12 (mg/L)





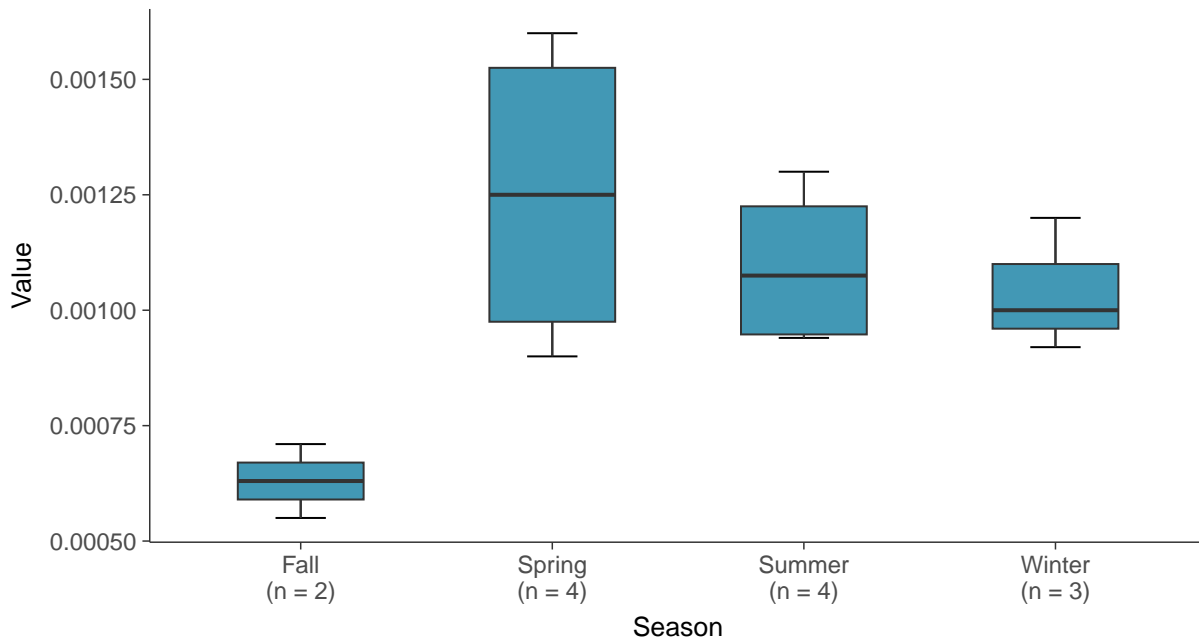
Boxplot

Copper, MW-12 (mg/L)



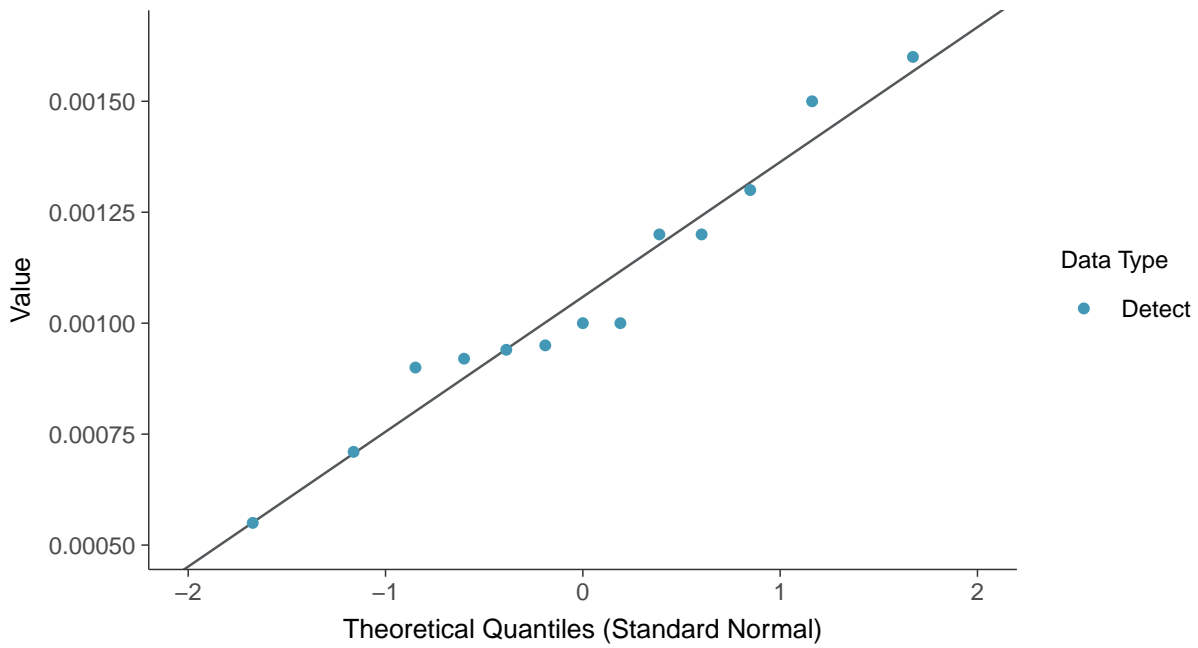
Boxplot by Season

Copper, MW-12 (mg/L)

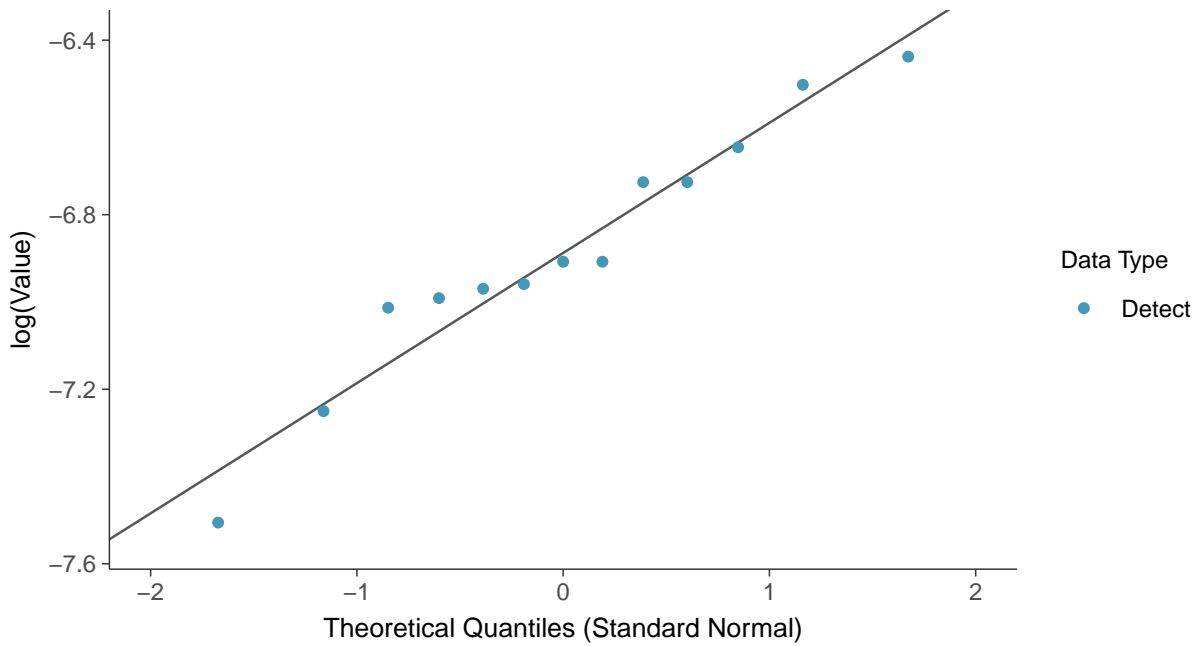




Normal Q-Q plot
Copper, MW-12 (mg/L)

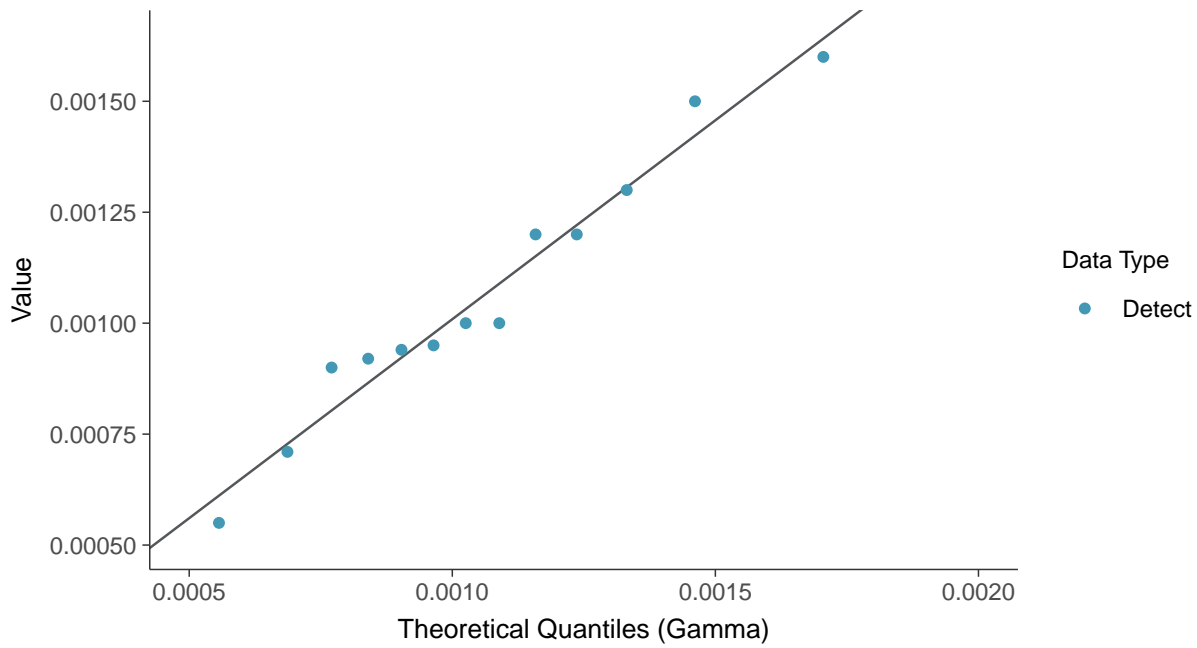


Lognormal Q-Q plot
Copper, MW-12 (mg/L)

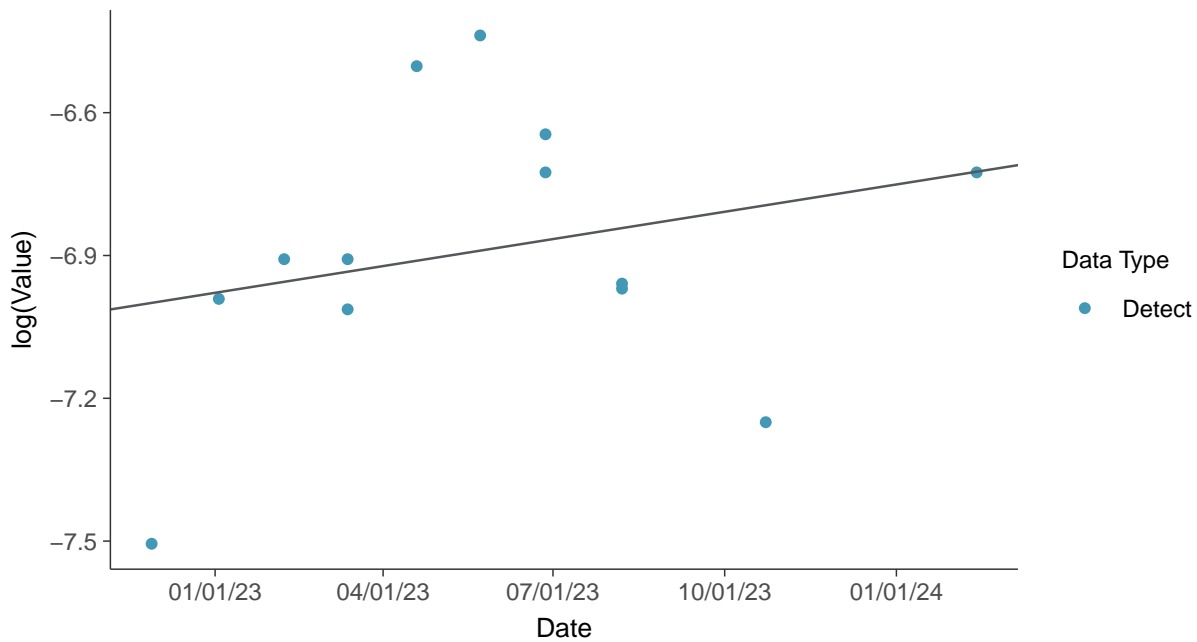




Gamma Q-Q plot
Copper, MW-12 (mg/L)



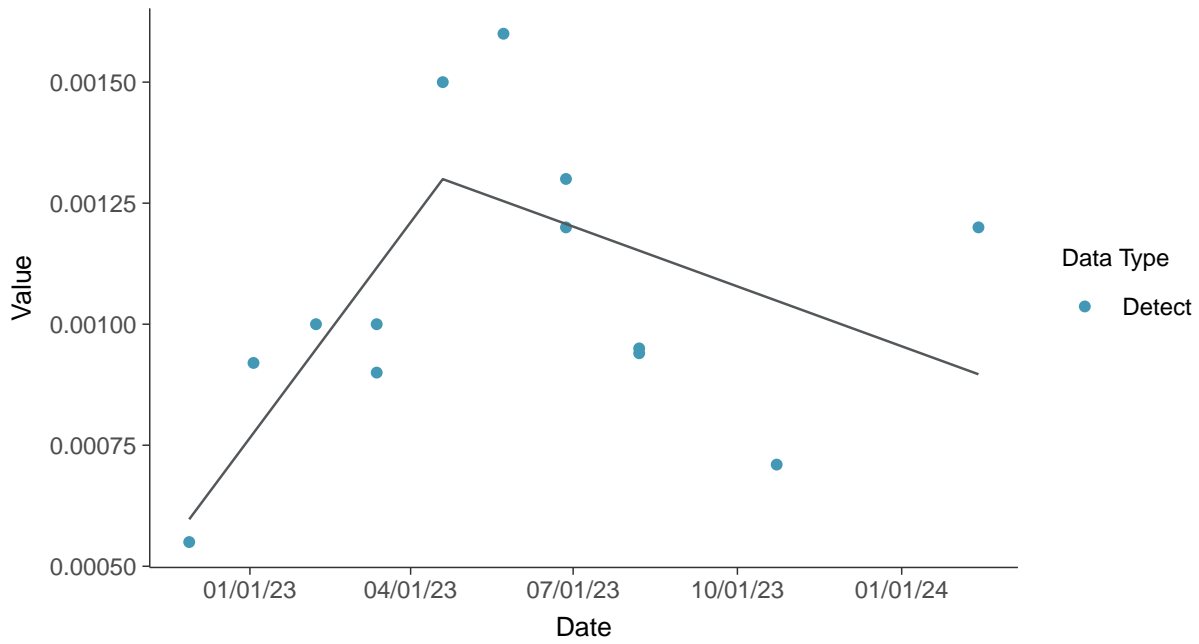
Trend Regression: Lognormal MLE
Copper, MW-12 (mg/L)





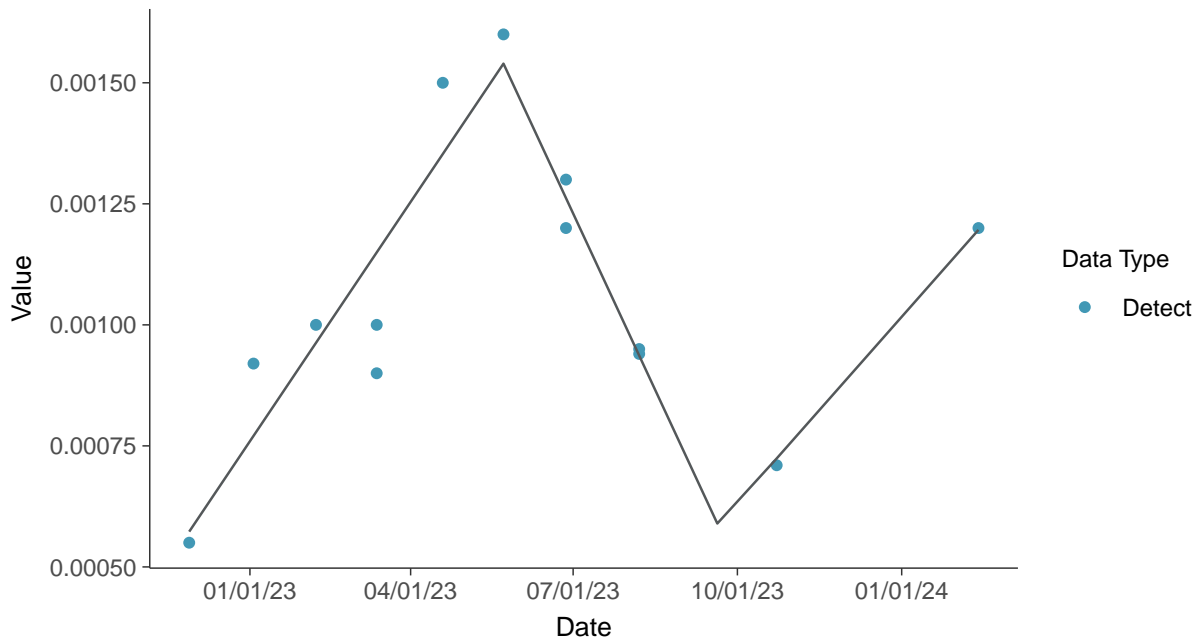
Trend Regression: Piecewise Linear-Linear

Copper, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-12 (mg/L)



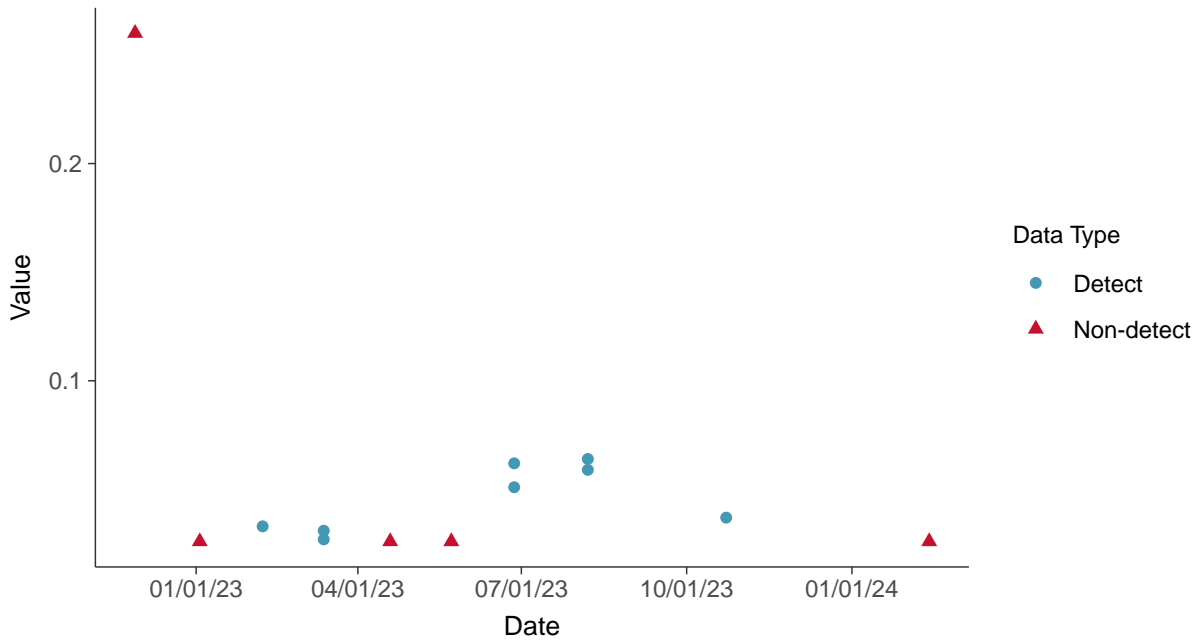


Part 115: Iron, MW-12

ID: 2_22_6_114

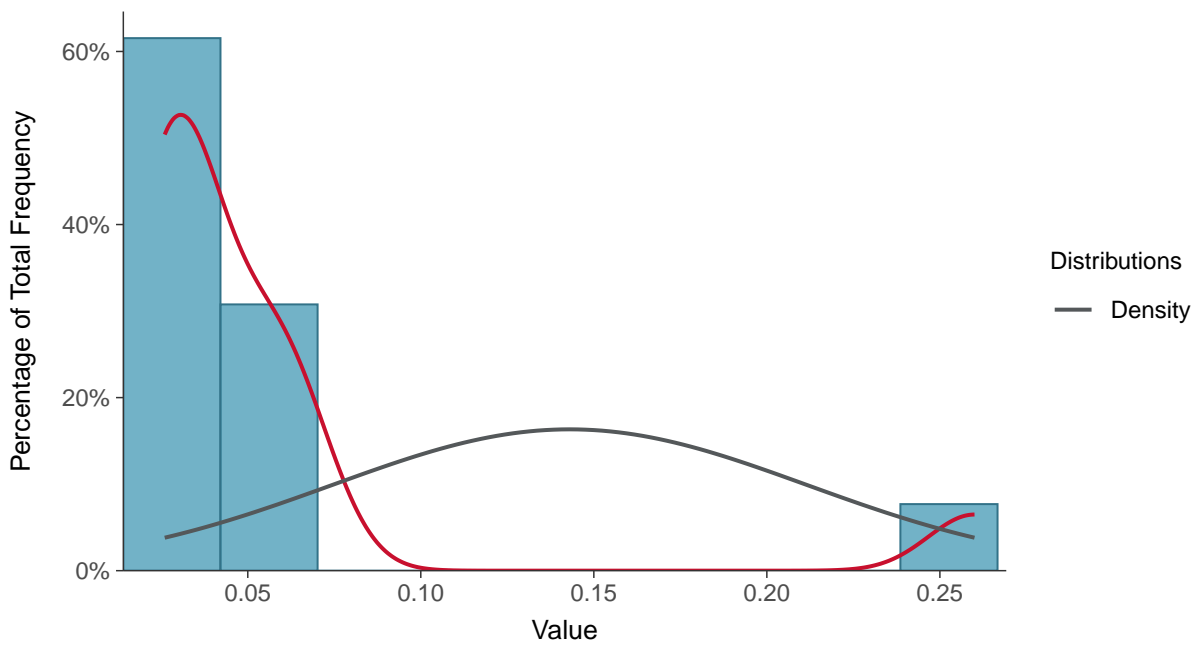
Scatter Plot

Iron, MW-12 (mg/L)



Histogram

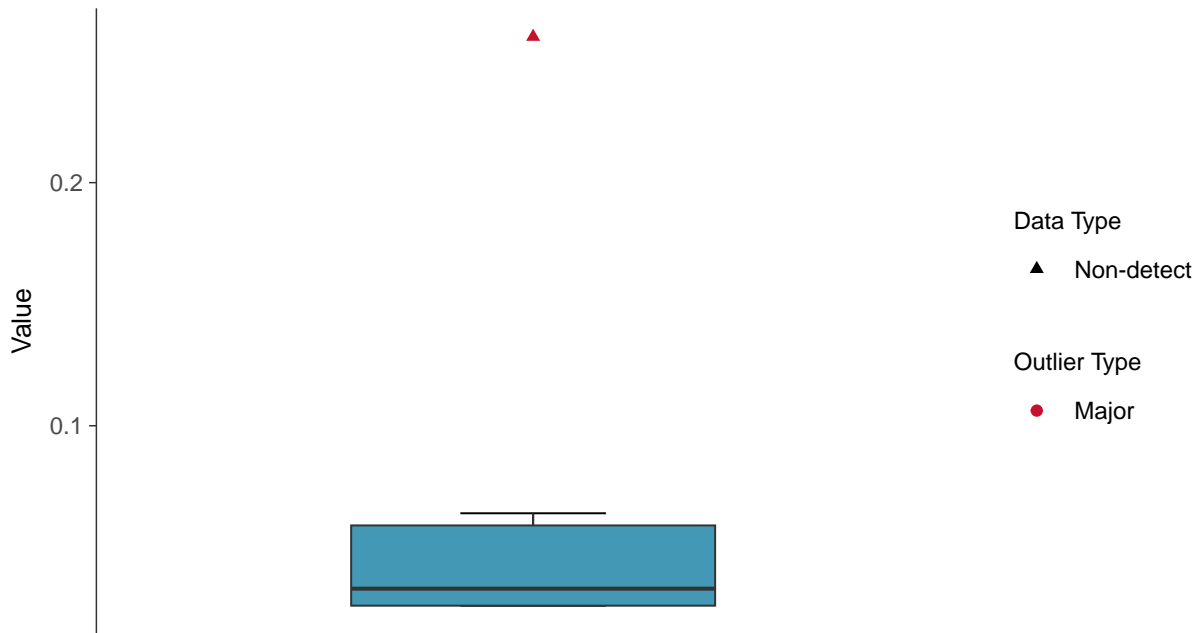
Iron, MW-12 (mg/L)





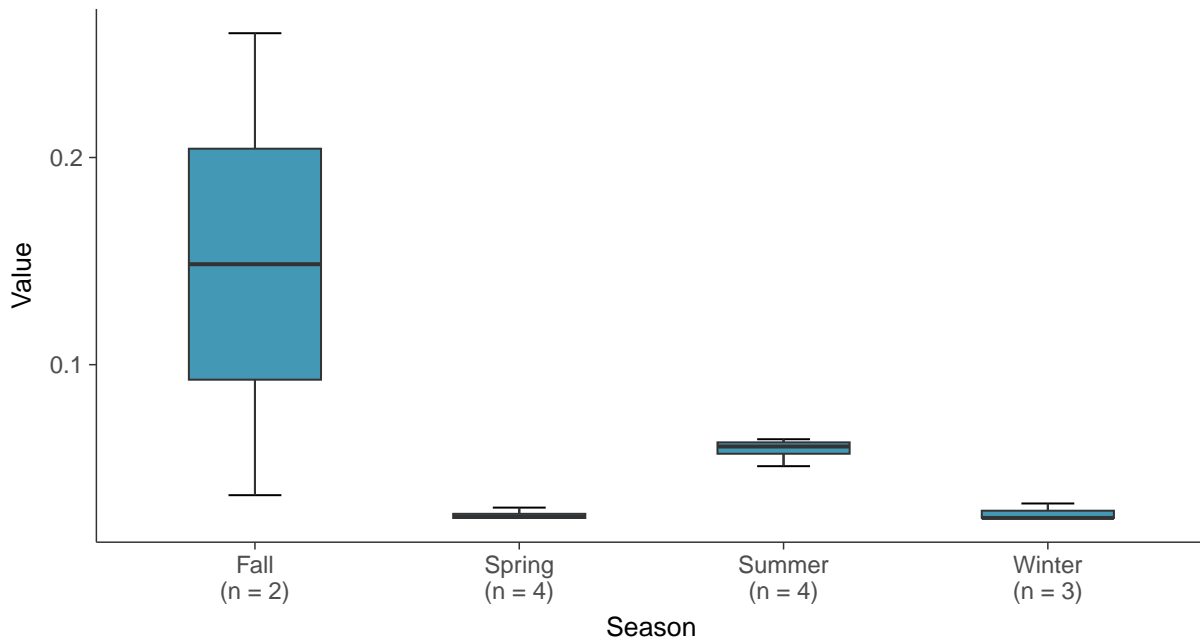
Boxplot

Iron, MW-12 (mg/L)



Boxplot by Season

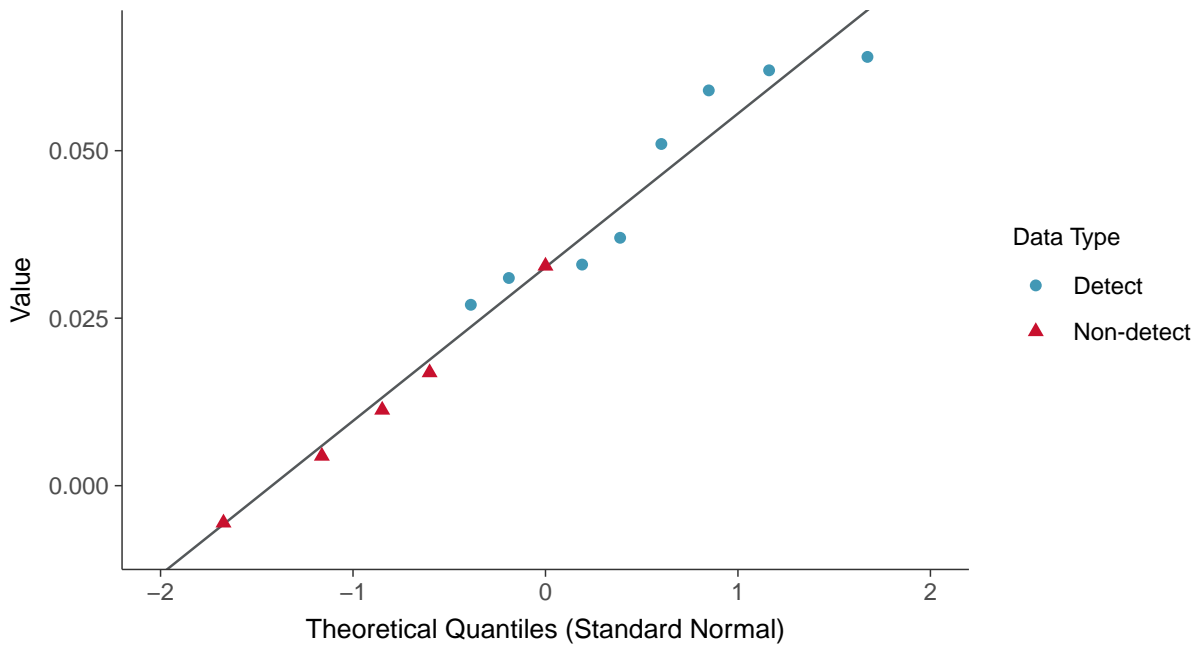
Iron, MW-12 (mg/L)





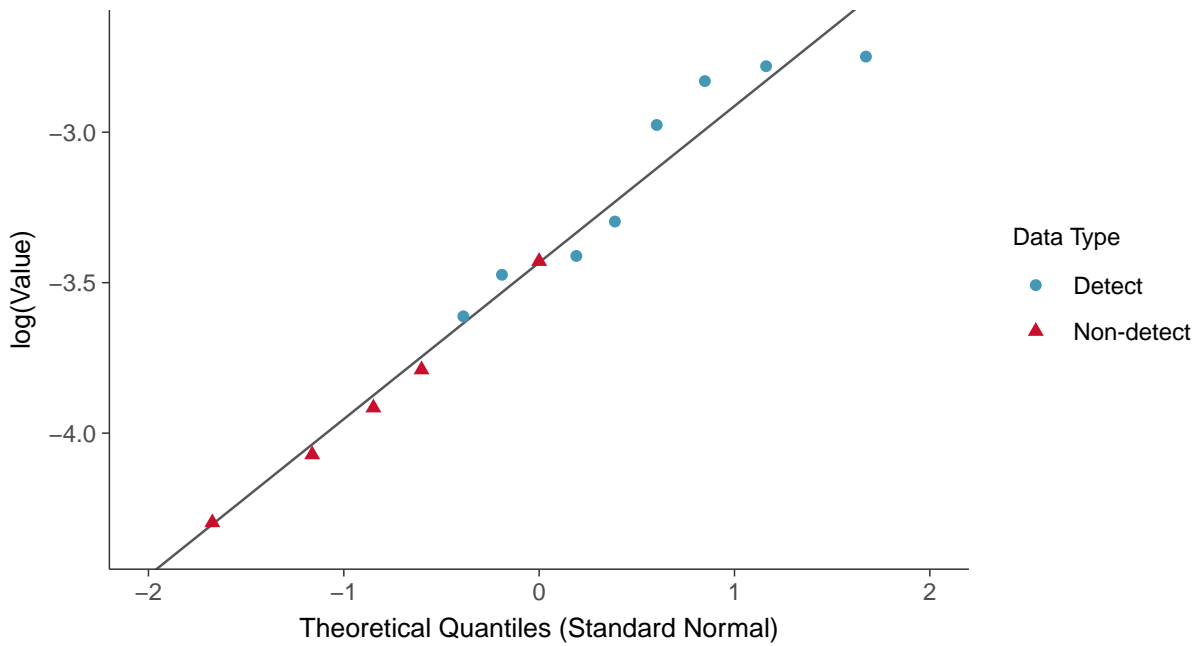
Normal Q-Q plot using ROS Imputed Estimates

Iron, MW-12 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

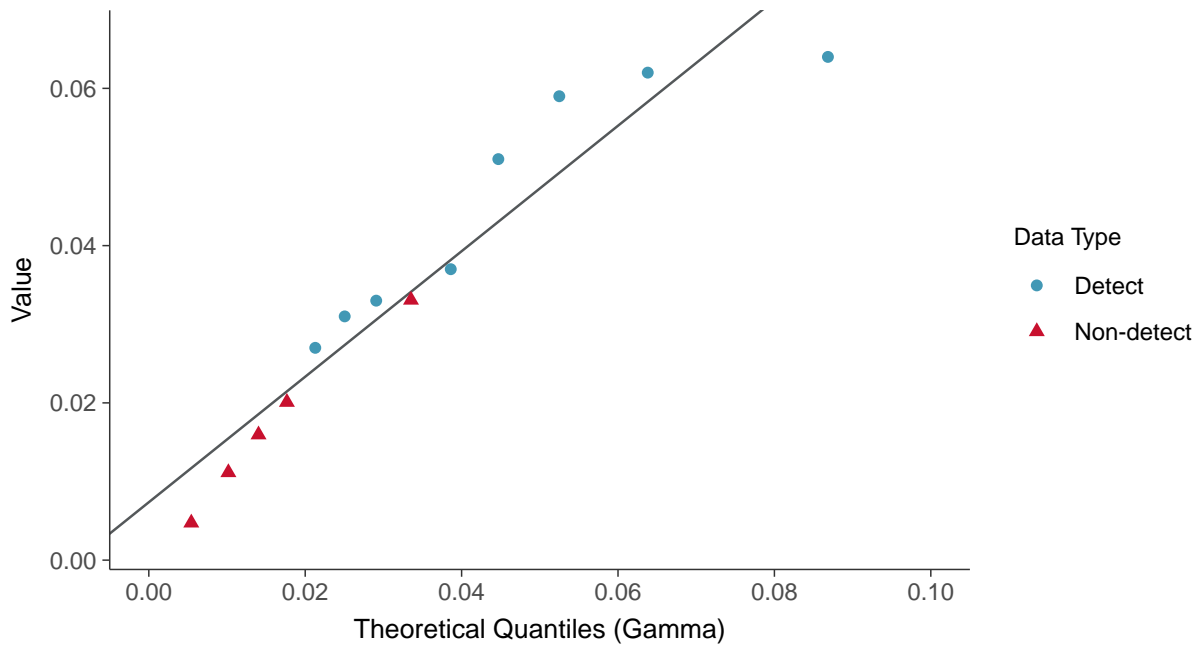
Iron, MW-12 (mg/L)





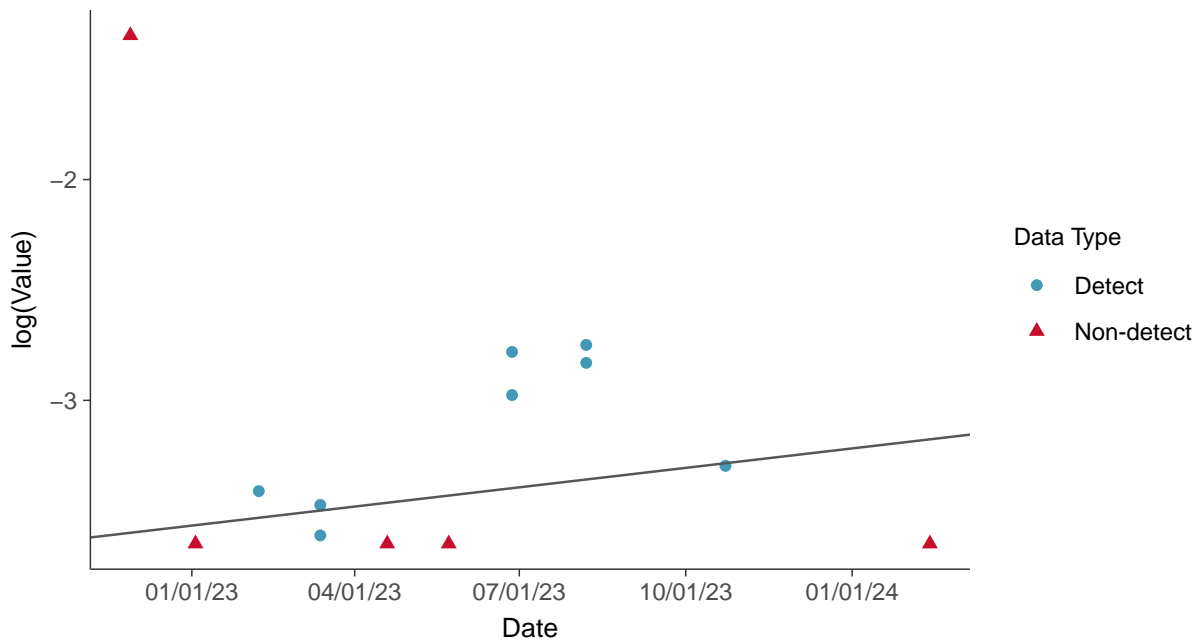
Gamma Q-Q plot using ROS Imputed Estimates

Iron, MW-12 (mg/L)



Trend Regression: Lognormal MLE

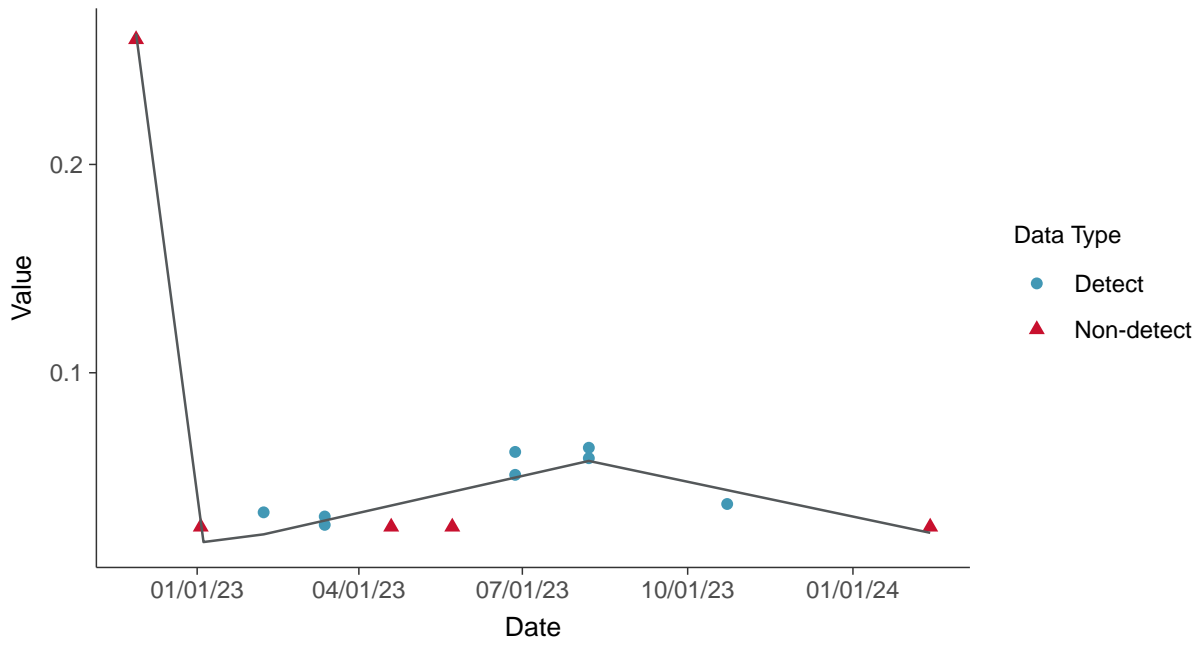
Iron, MW-12 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-12 (mg/L)



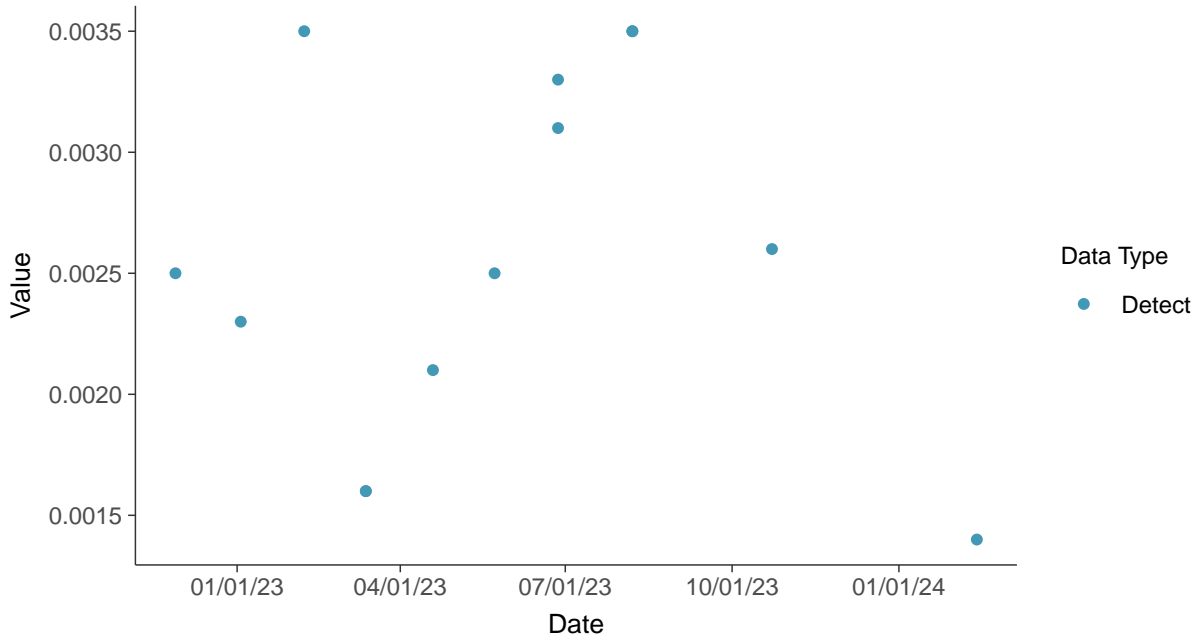


Part 115: Nickel, MW-12

ID: 2_22_6_119

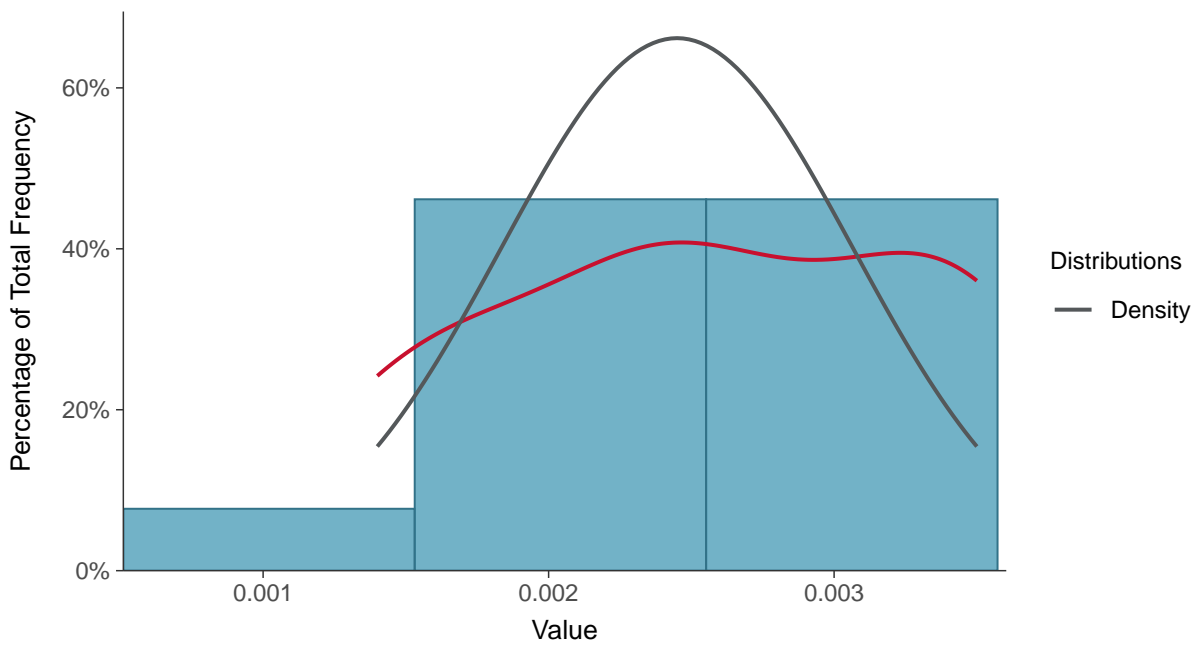
Scatter Plot

Nickel, MW-12 (mg/L)



Histogram

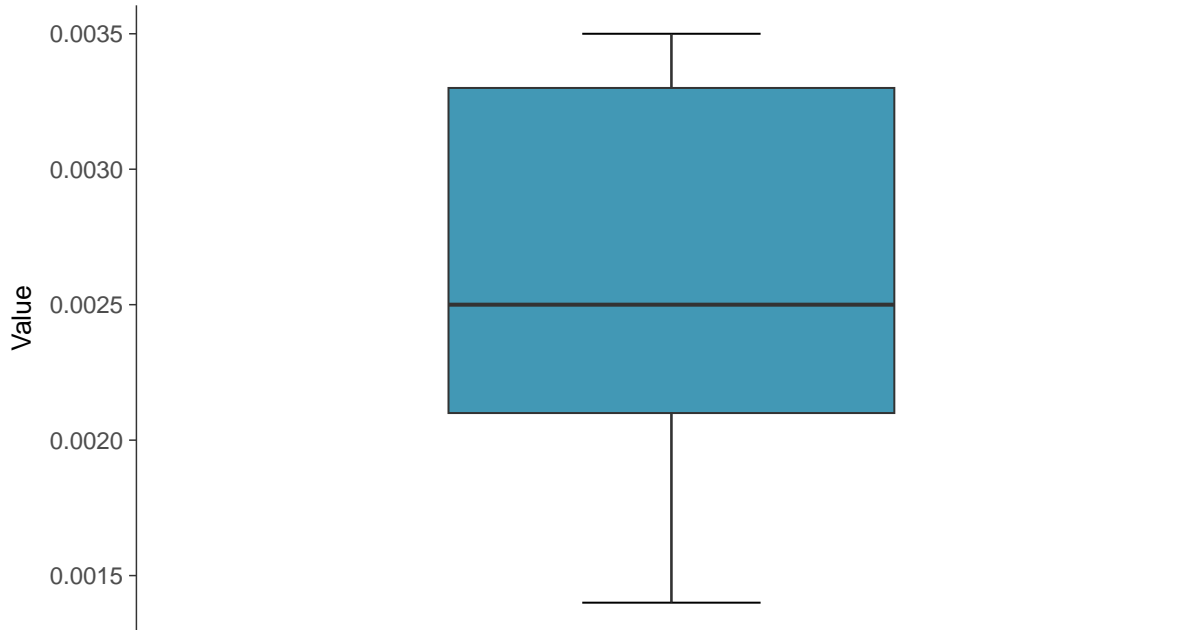
Nickel, MW-12 (mg/L)





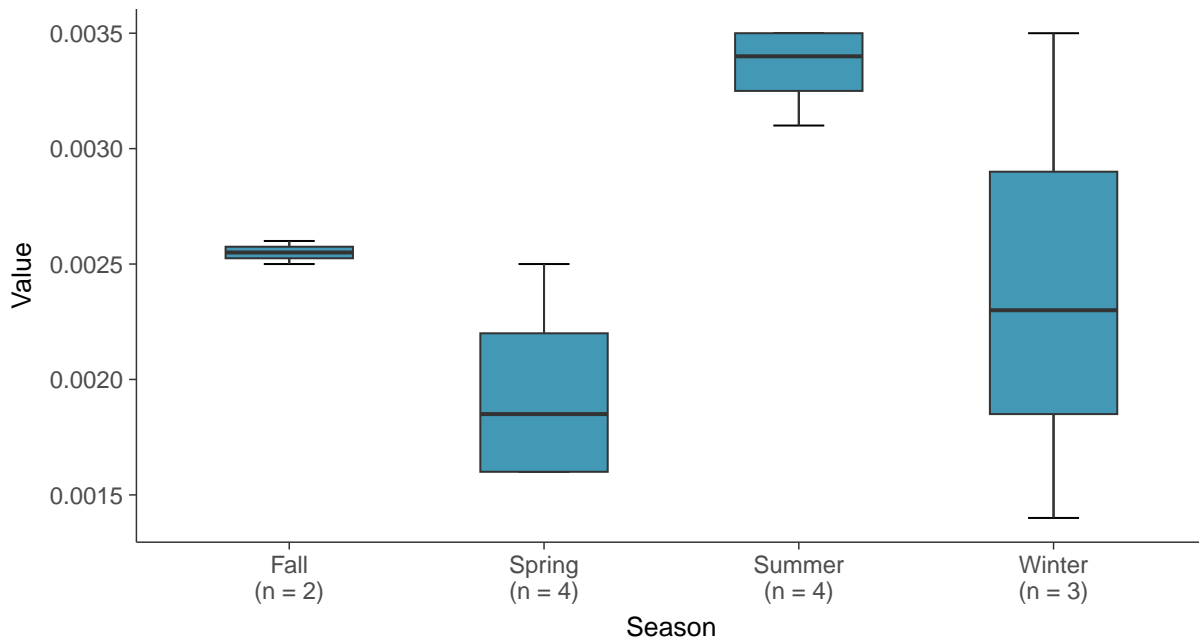
Boxplot

Nickel, MW-12 (mg/L)



Boxplot by Season

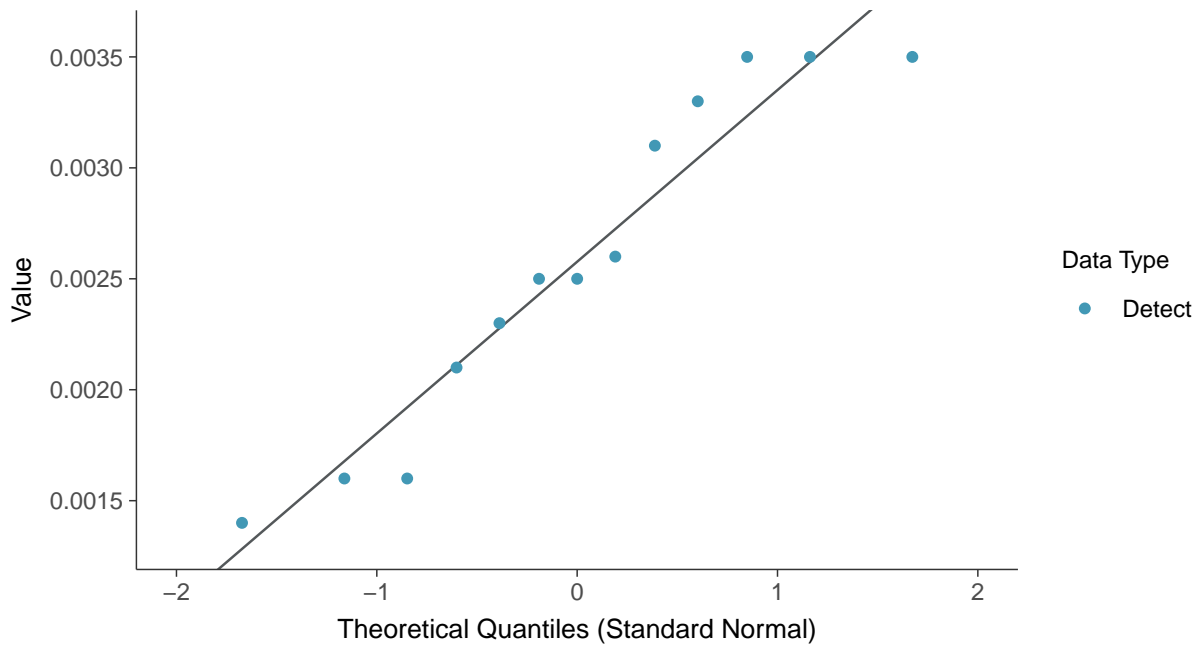
Nickel, MW-12 (mg/L)





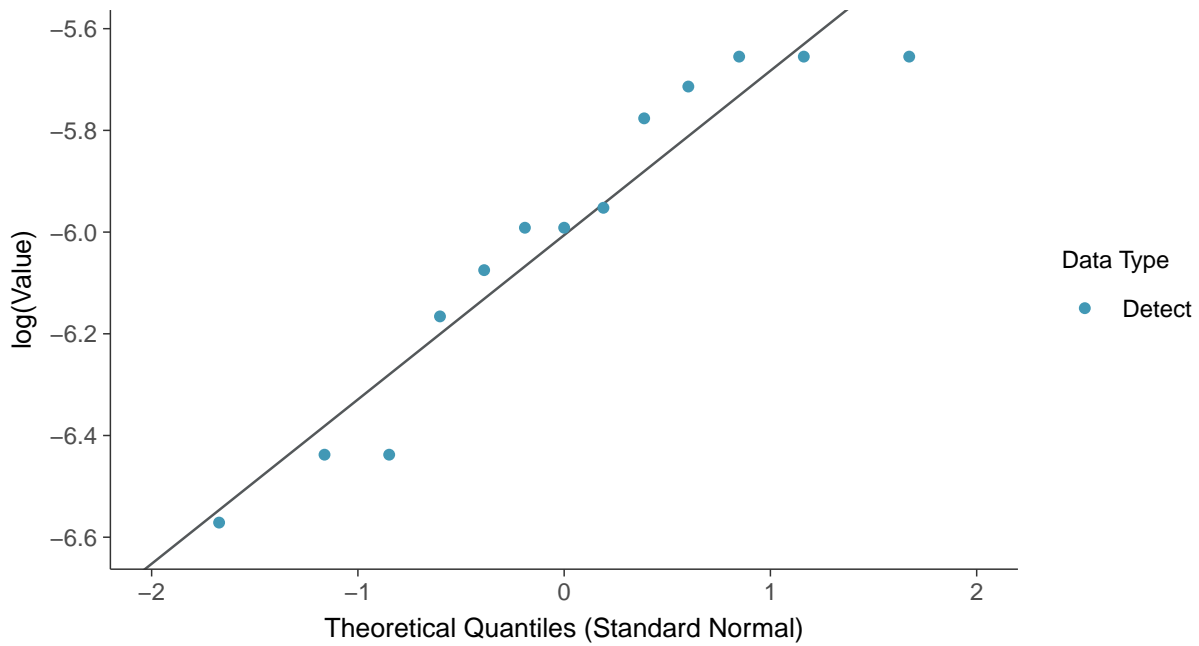
Normal Q-Q plot

Nickel, MW-12 (mg/L)



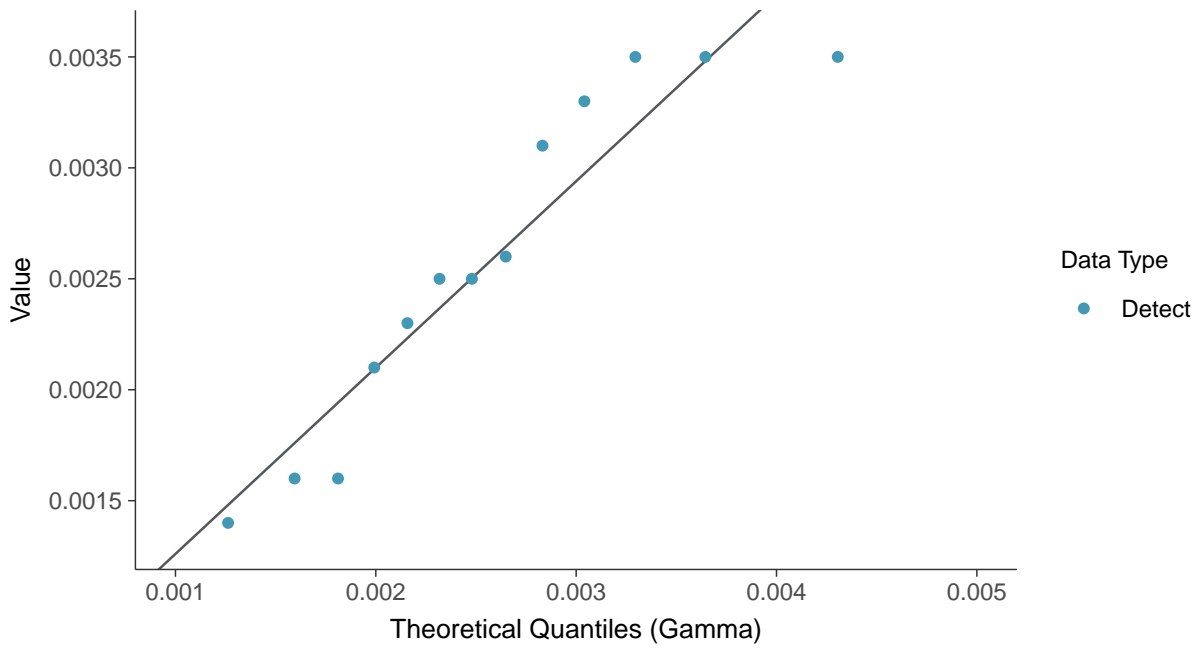
Lognormal Q-Q plot

Nickel, MW-12 (mg/L)

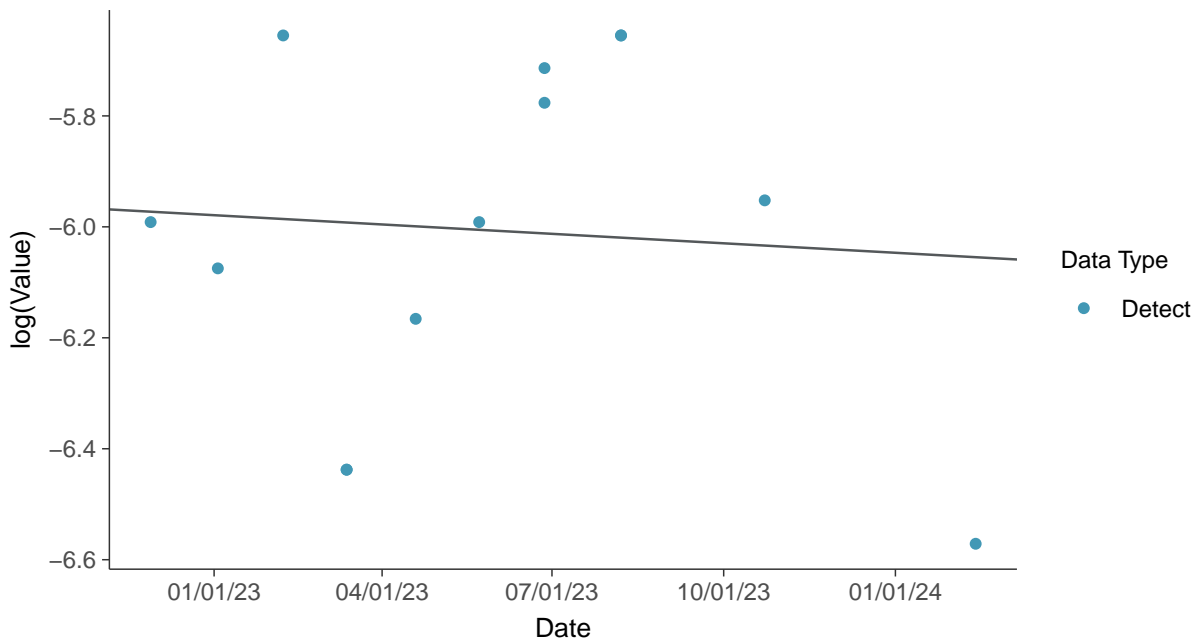




Gamma Q-Q plot
Nickel, MW-12 (mg/L)

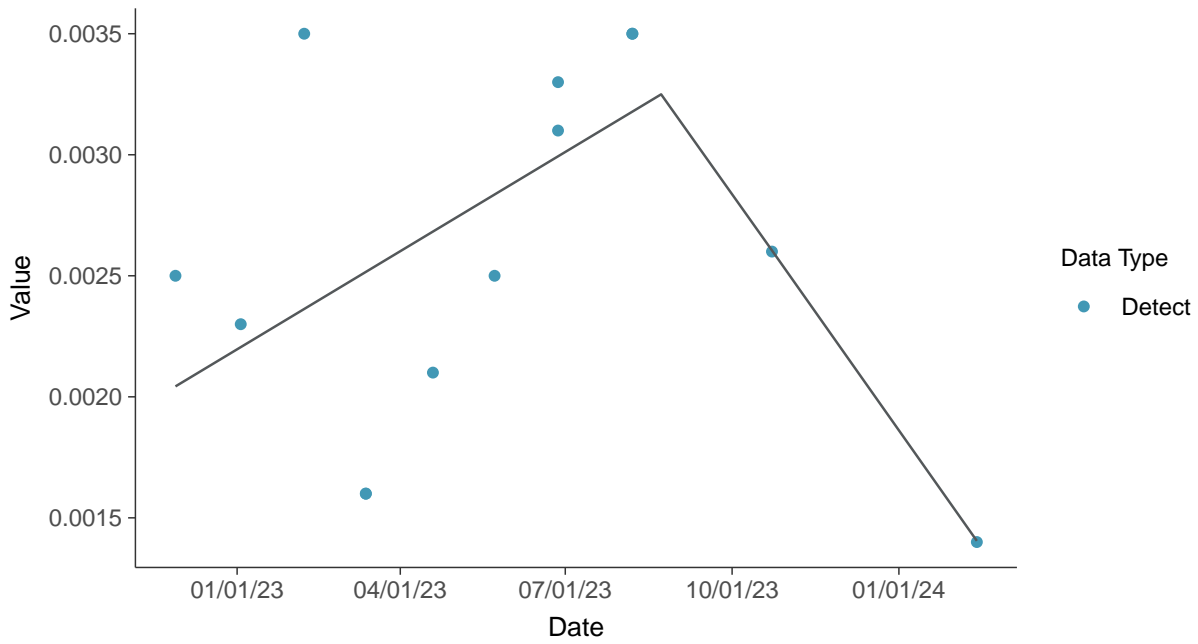


Trend Regression: Lognormal MLE
Nickel, MW-12 (mg/L)

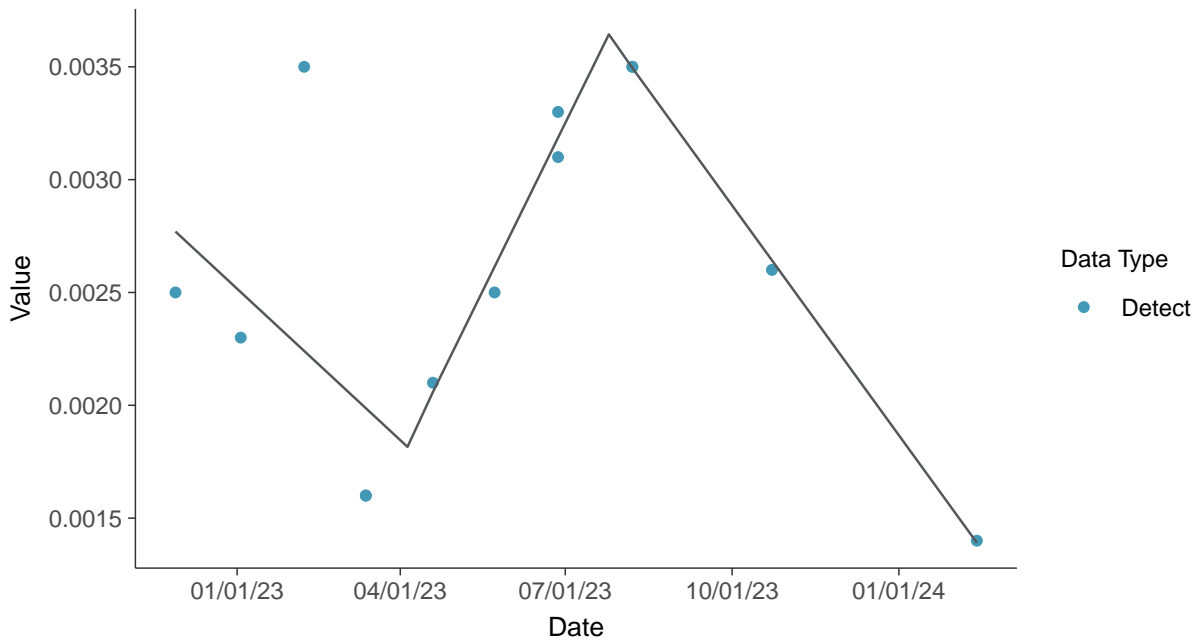




Trend Regression: Piecewise Linear-Linear
Nickel, MW-12 (mg/L)



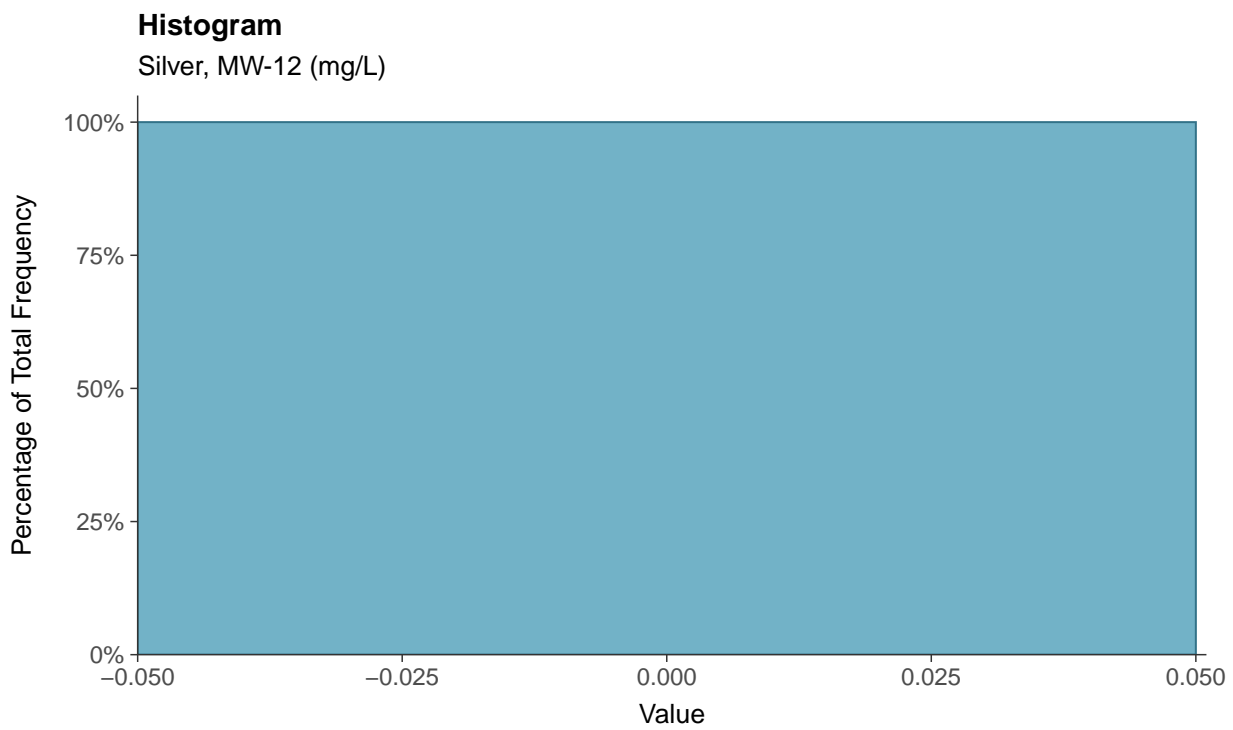
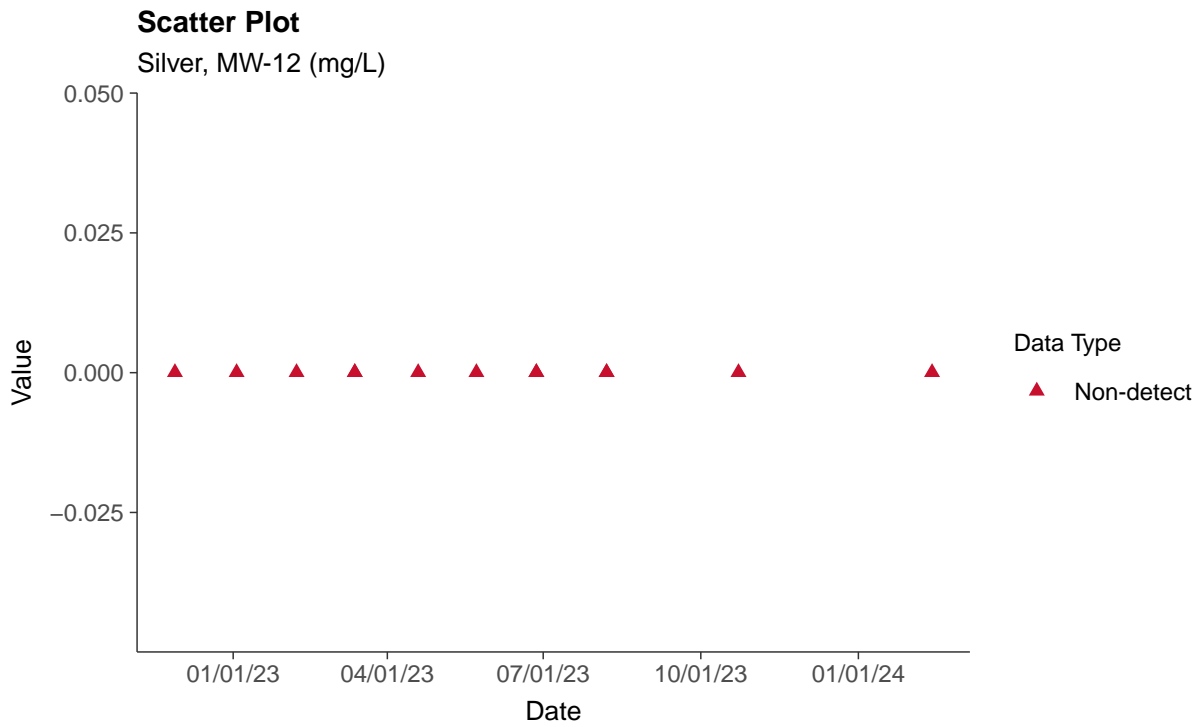
Trend Regression: Piecewise Linear-Linear-Linear
Nickel, MW-12 (mg/L)





Part 115: Silver, MW-12

ID: 2_22_6_123





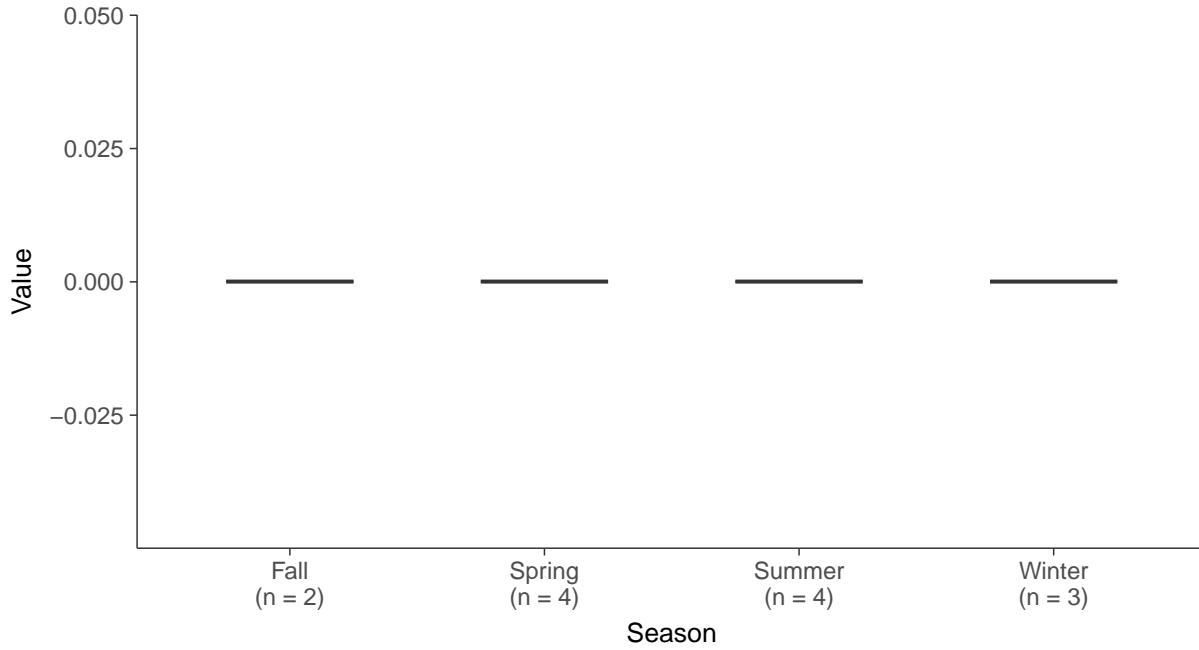
Boxplot

Silver, MW-12 (mg/L)



Boxplot by Season

Silver, MW-12 (mg/L)



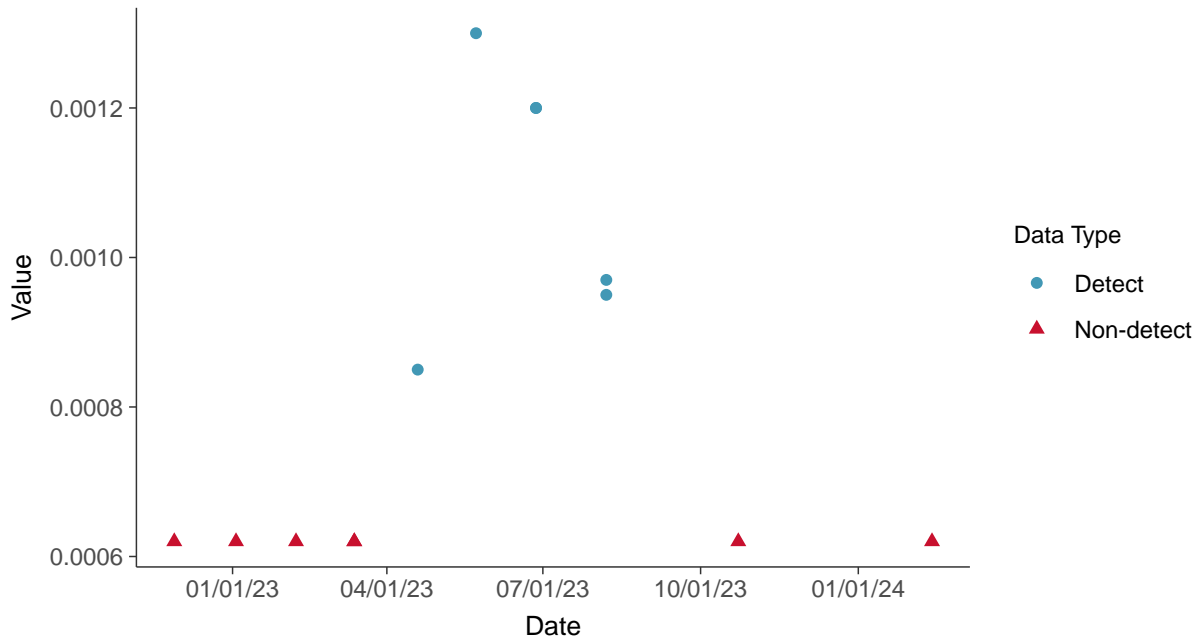


Part 115: Vanadium, MW-12

ID: 2_22_6_129

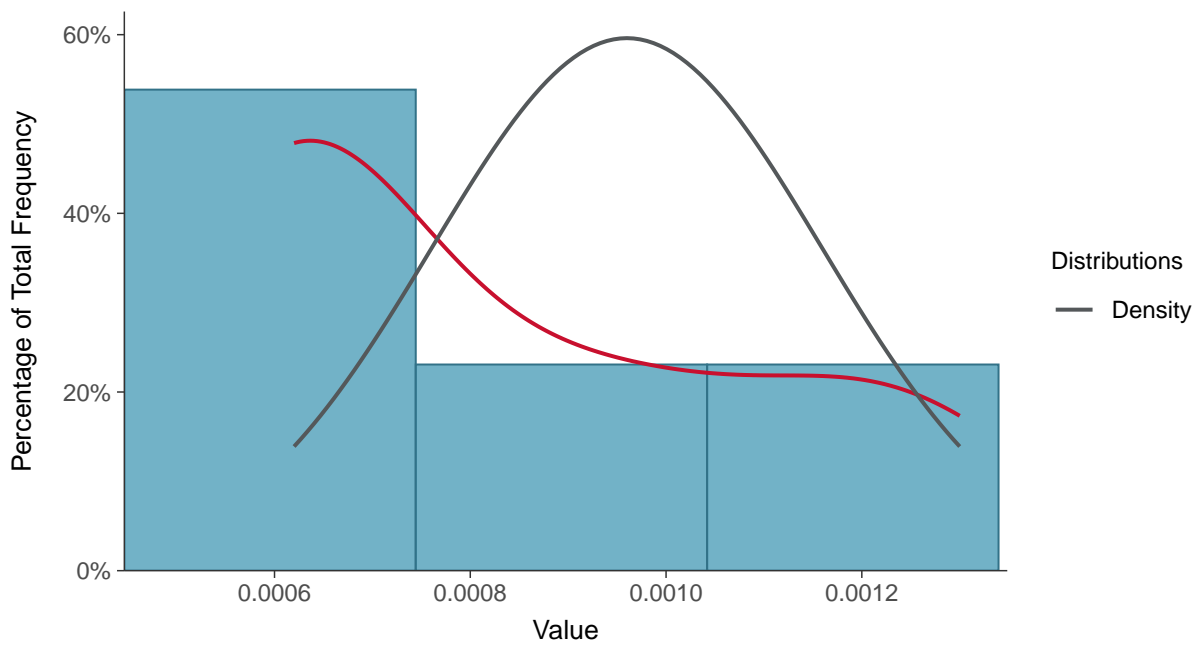
Scatter Plot

Vanadium, MW-12 (mg/L)



Histogram

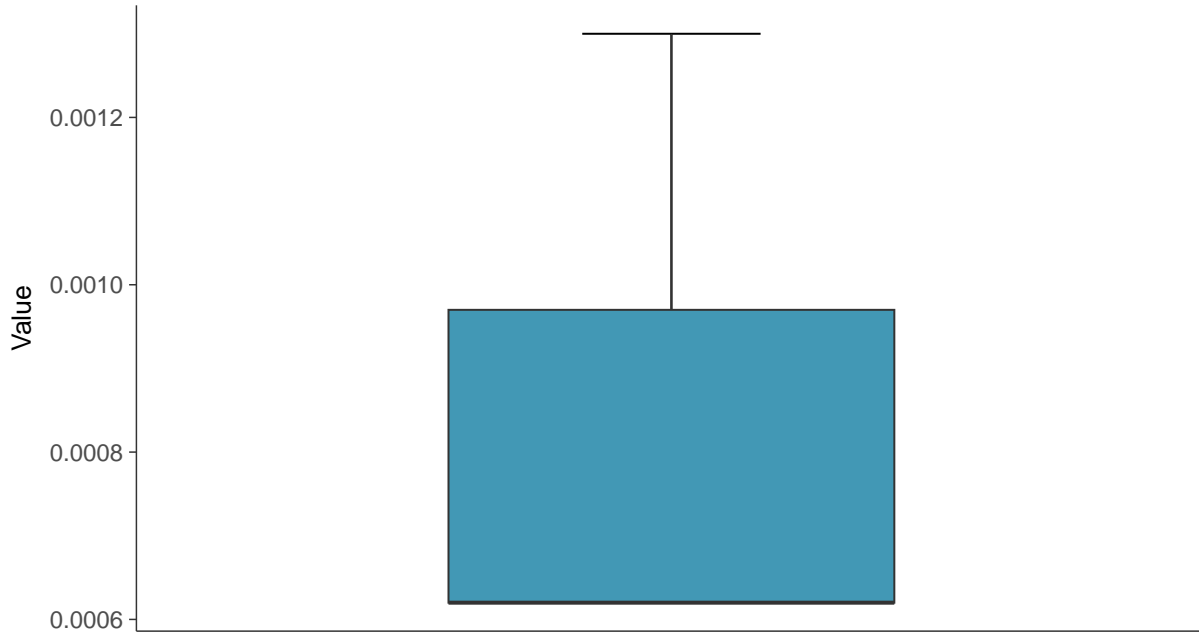
Vanadium, MW-12 (mg/L)





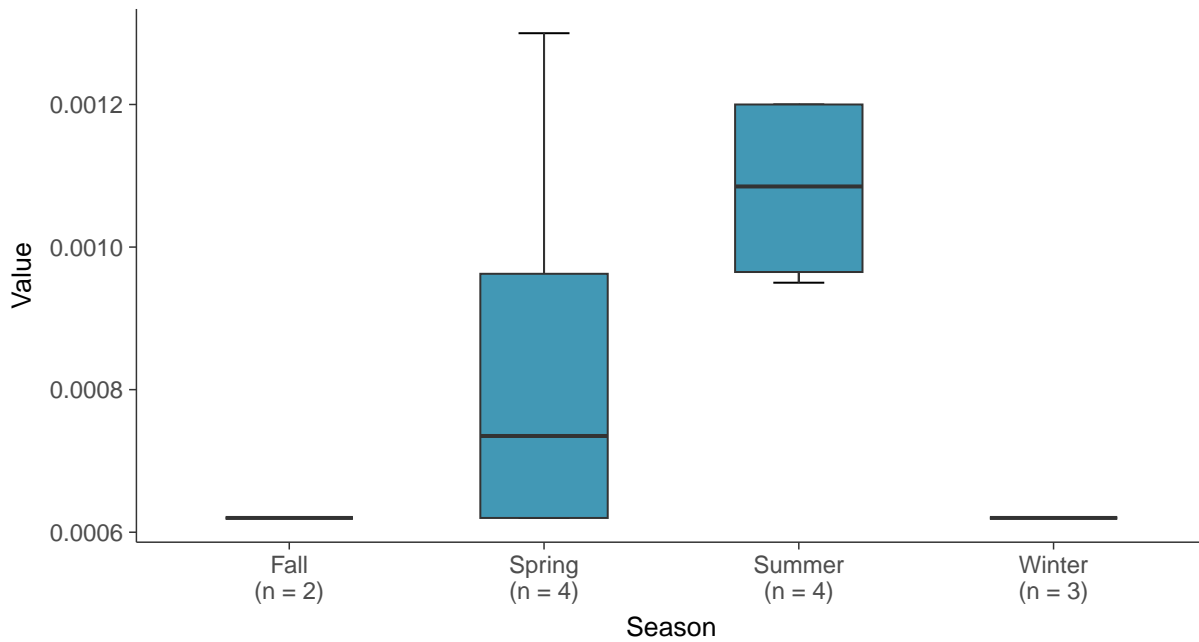
Boxplot

Vanadium, MW-12 (mg/L)



Boxplot by Season

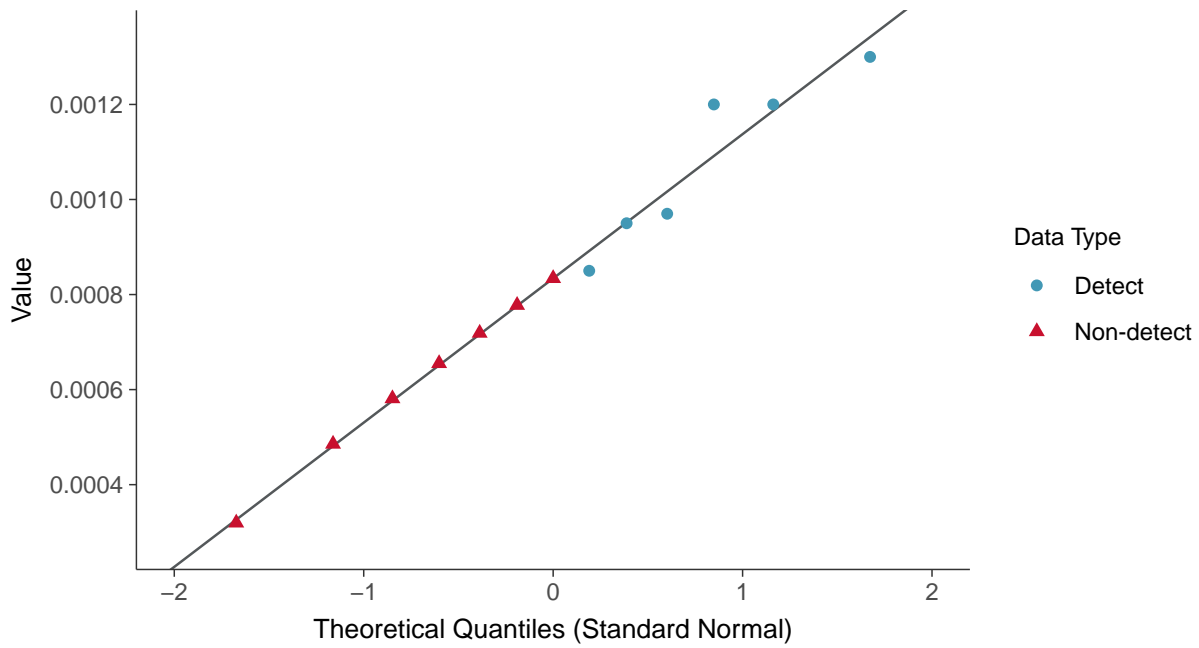
Vanadium, MW-12 (mg/L)





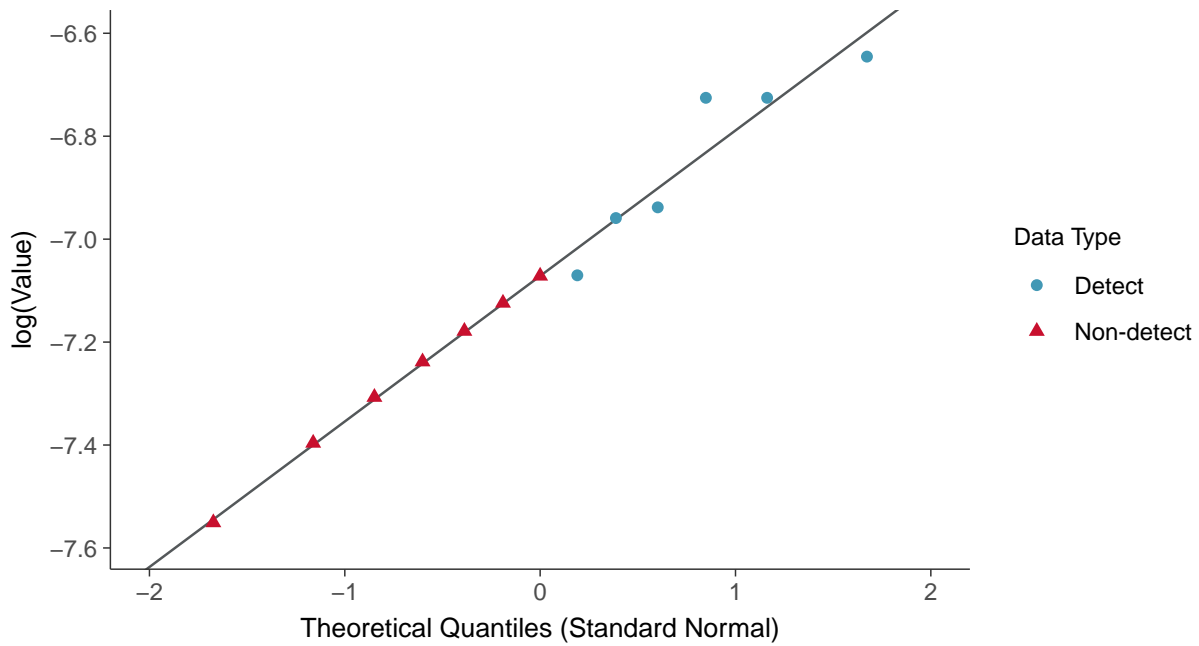
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-12 (mg/L)



Lognormal Q-Q plot using ROS Imputed Estimates

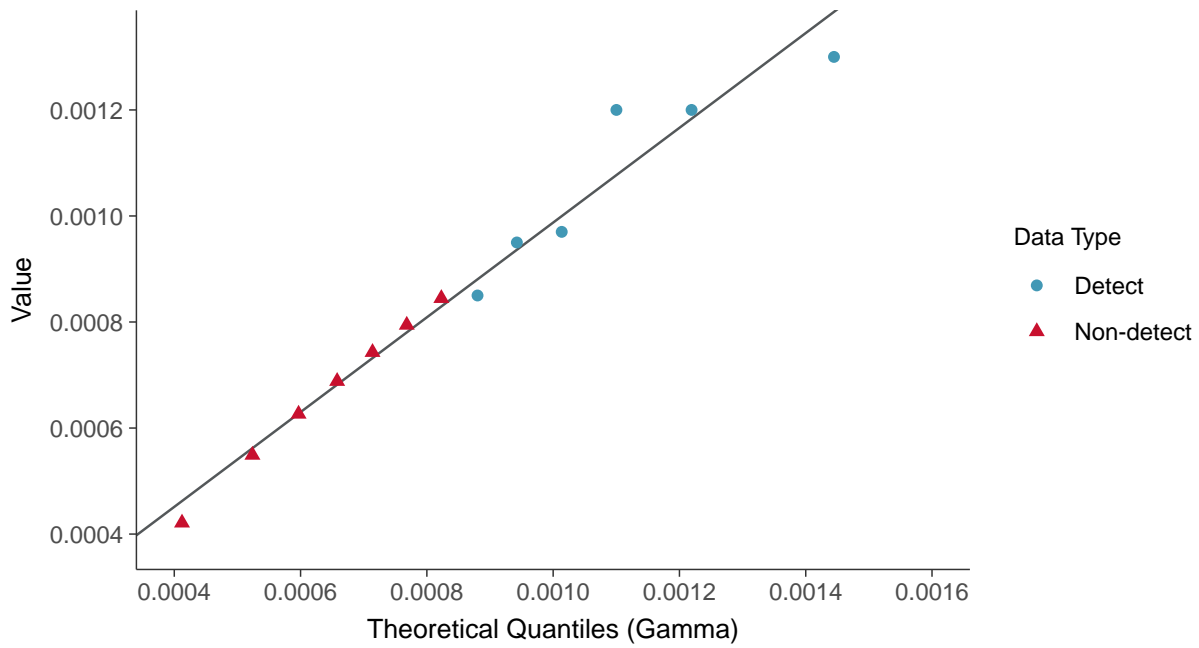
Vanadium, MW-12 (mg/L)





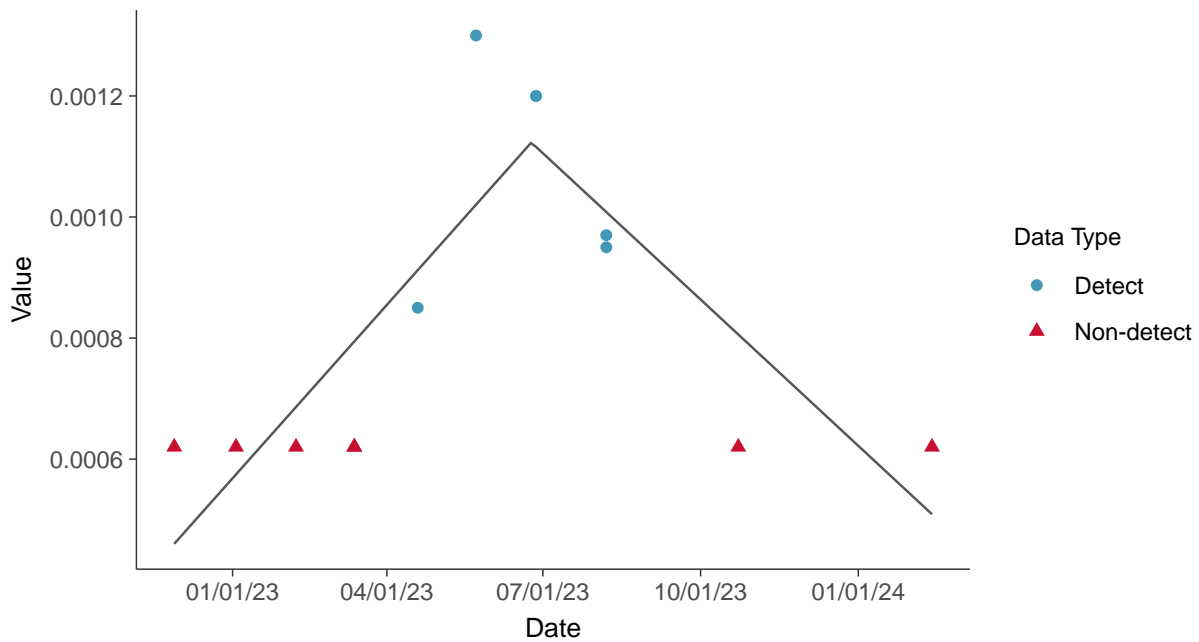
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear

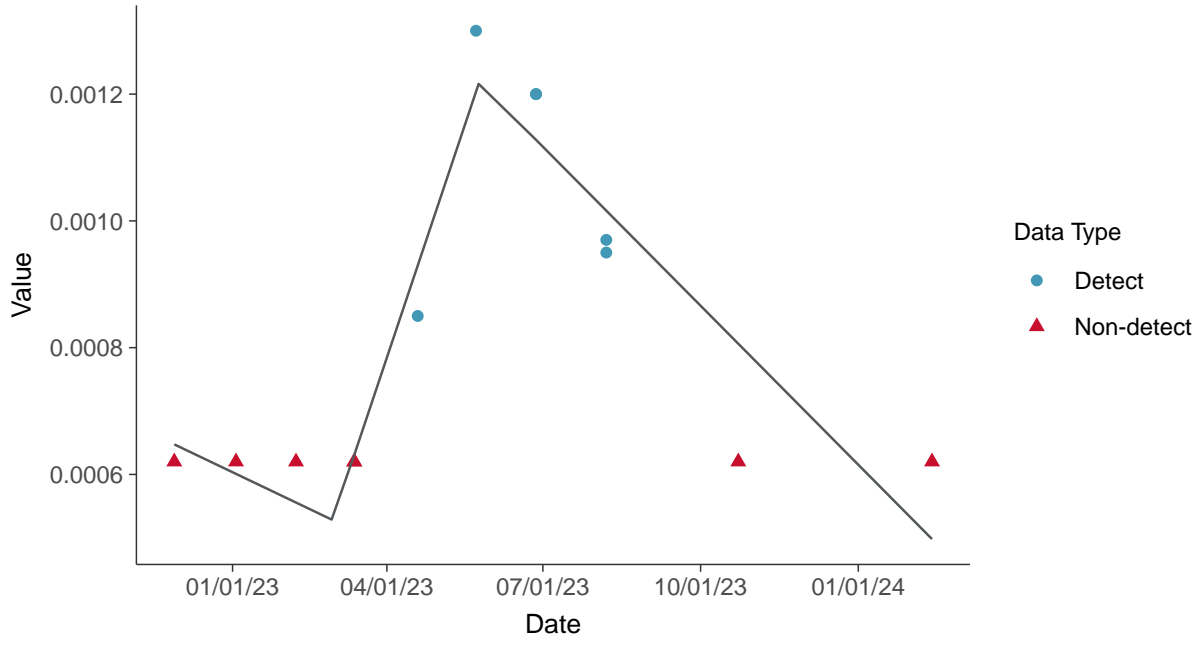
Vanadium, MW-12 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-12 (mg/L)



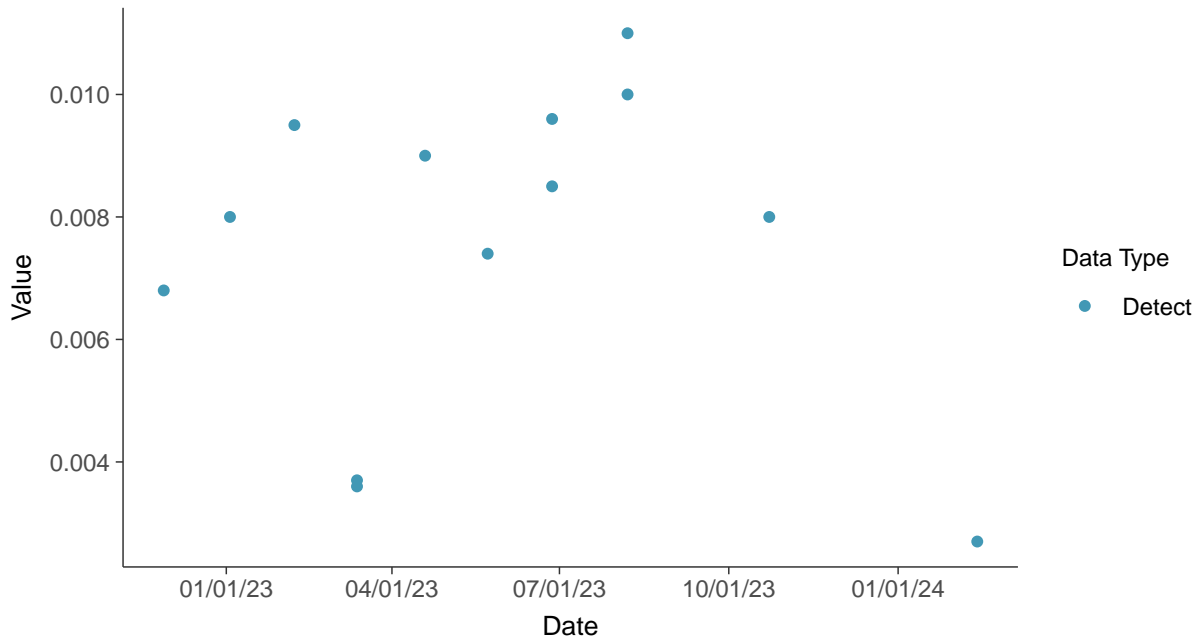


Part 115: Zinc, MW-12

ID: 2_22_6_130

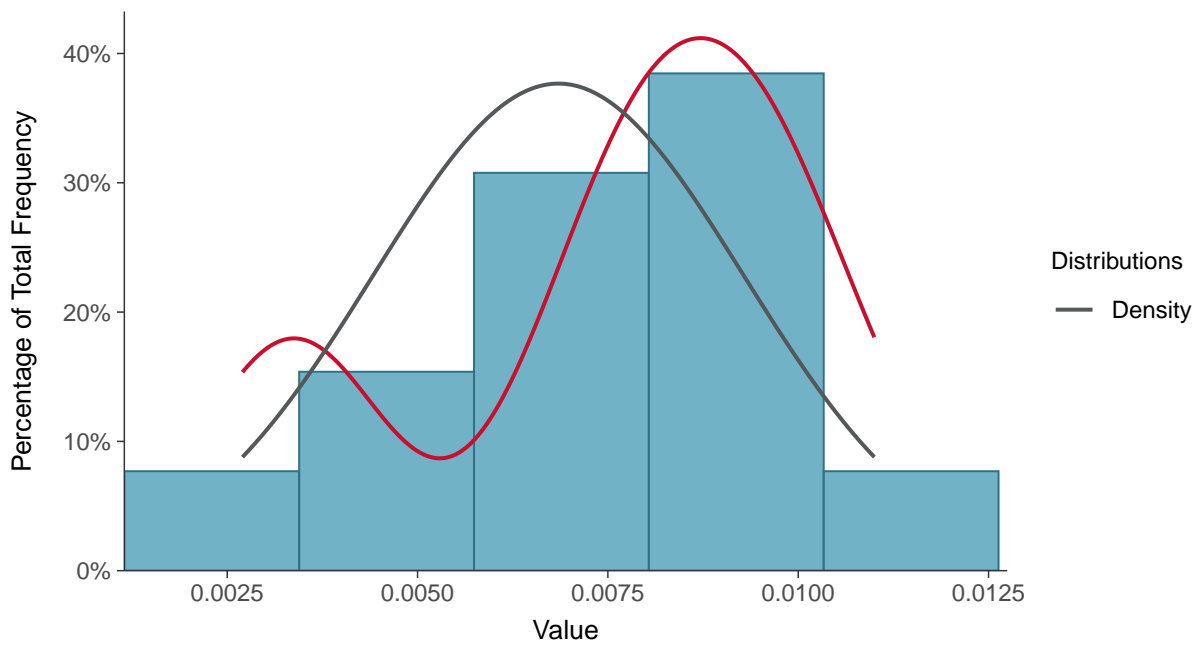
Scatter Plot

Zinc, MW-12 (mg/L)



Histogram

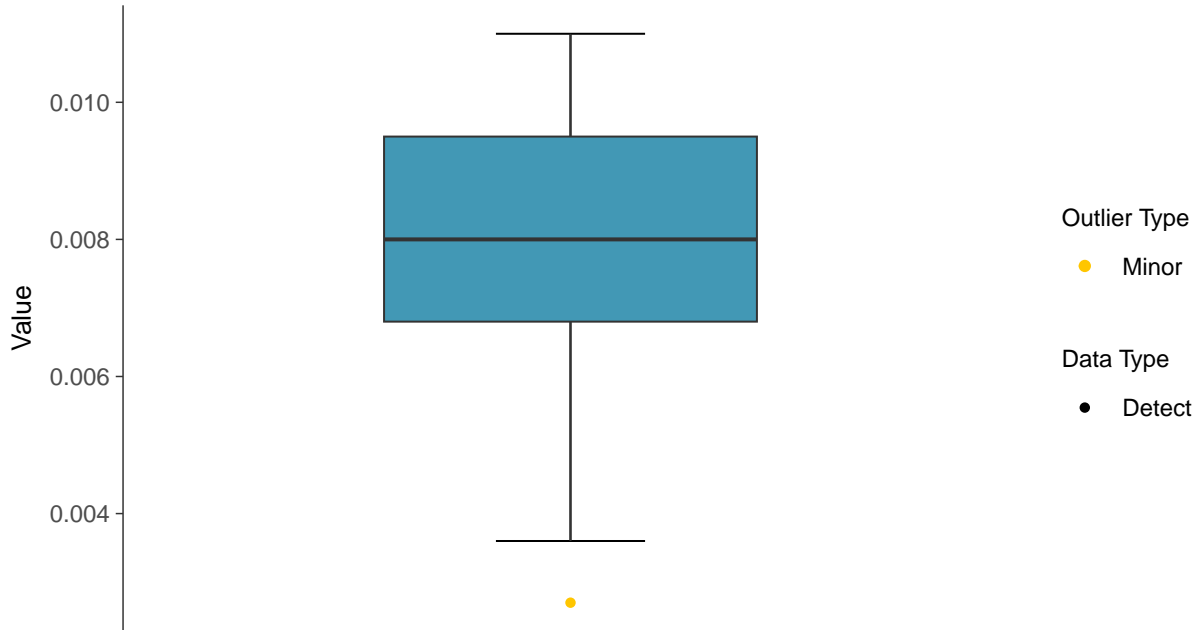
Zinc, MW-12 (mg/L)





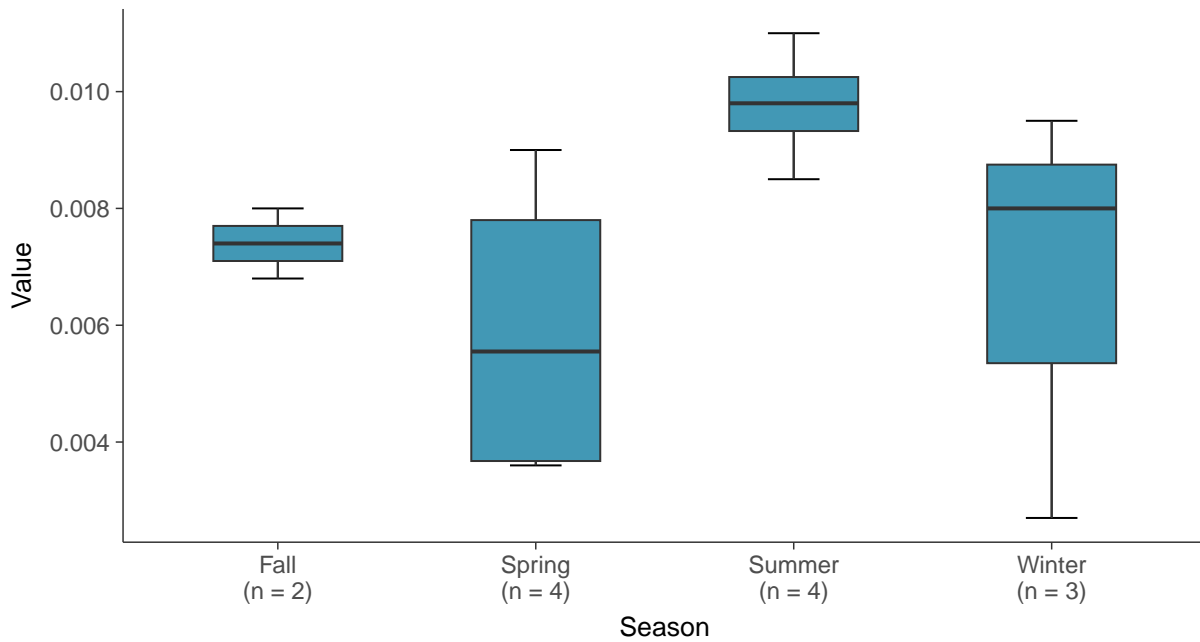
Boxplot

Zinc, MW-12 (mg/L)



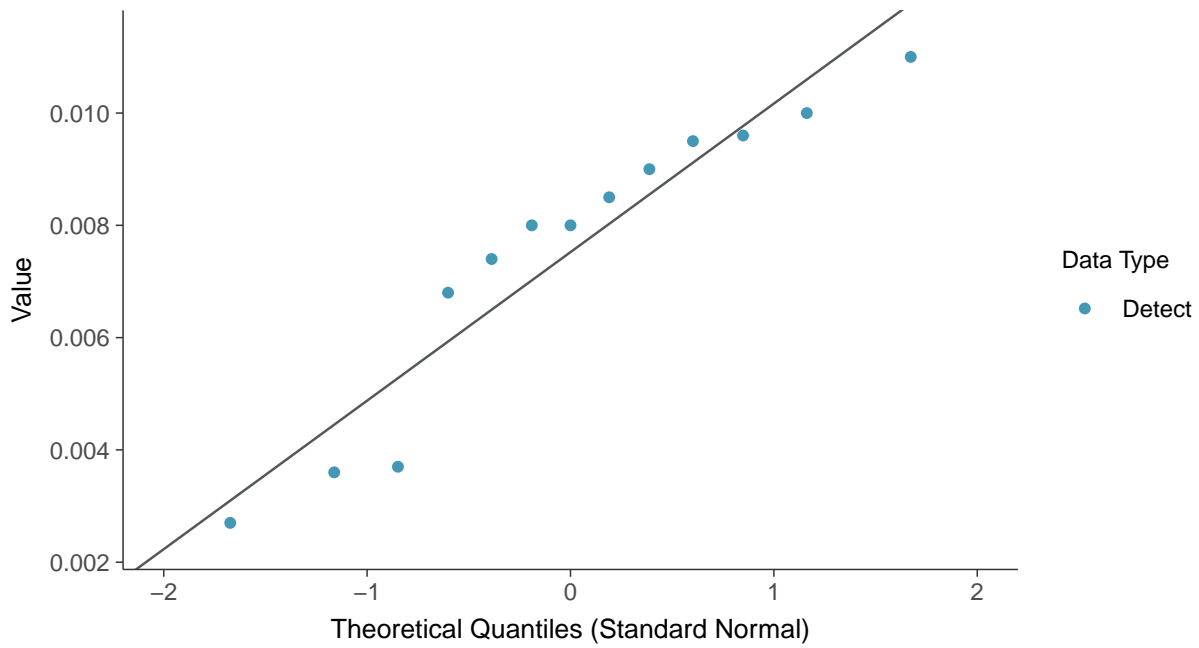
Boxplot by Season

Zinc, MW-12 (mg/L)

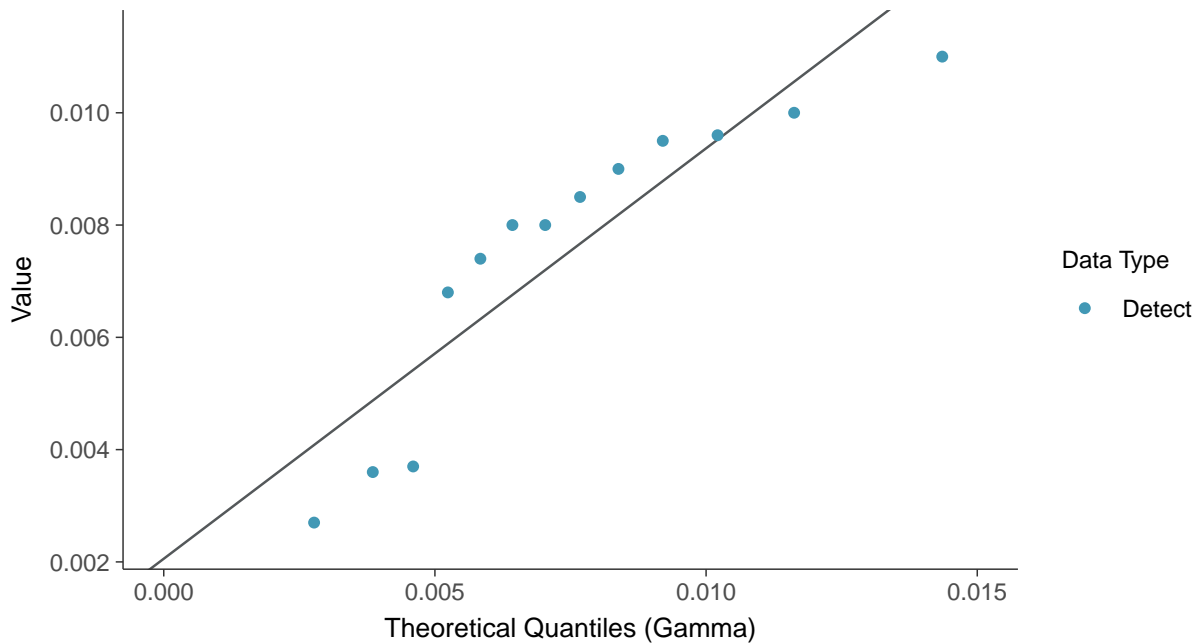




Normal Q-Q plot
Zinc, MW-12 (mg/L)



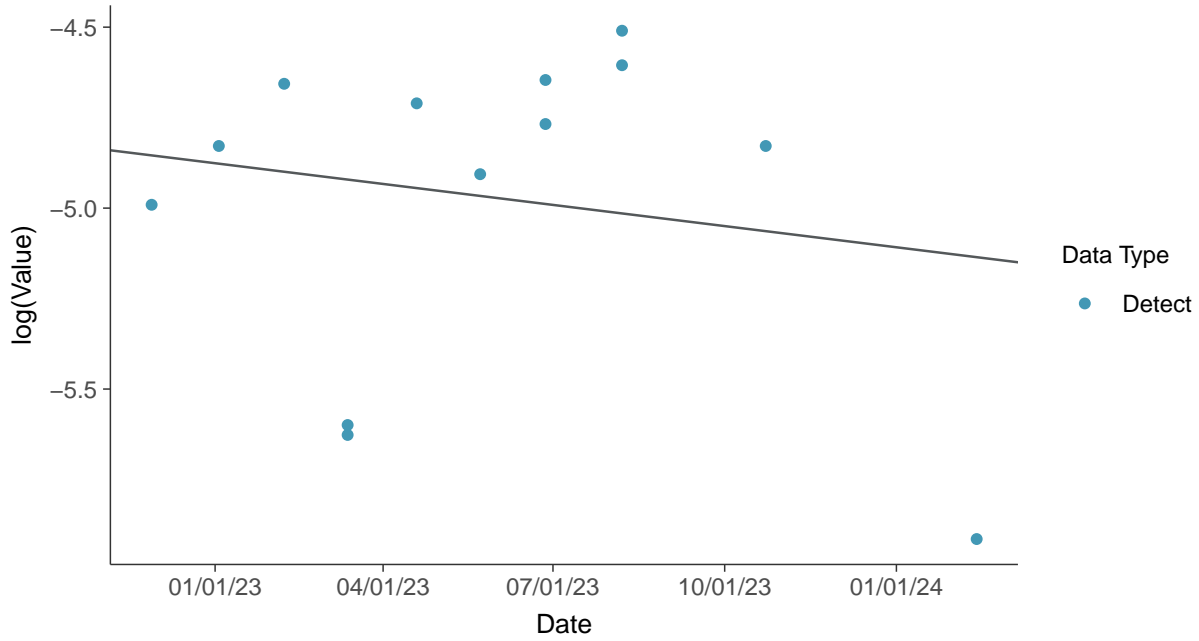
Gamma Q-Q plot
Zinc, MW-12 (mg/L)





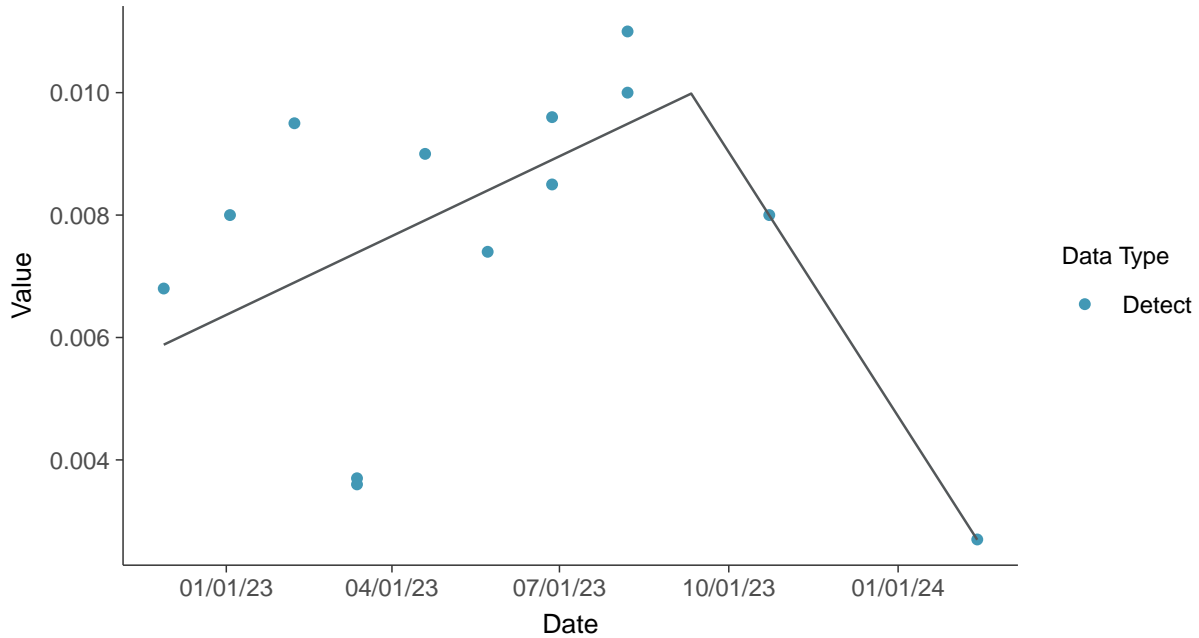
Trend Regression: Lognormal MLE

Zinc, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear

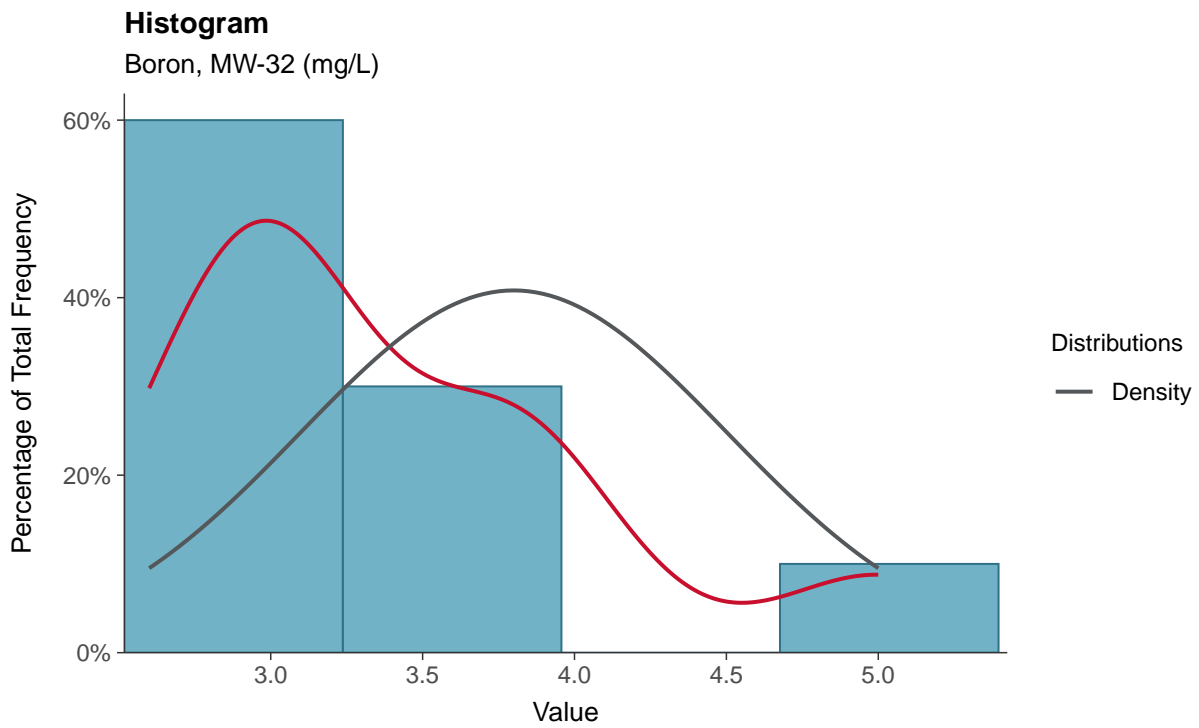
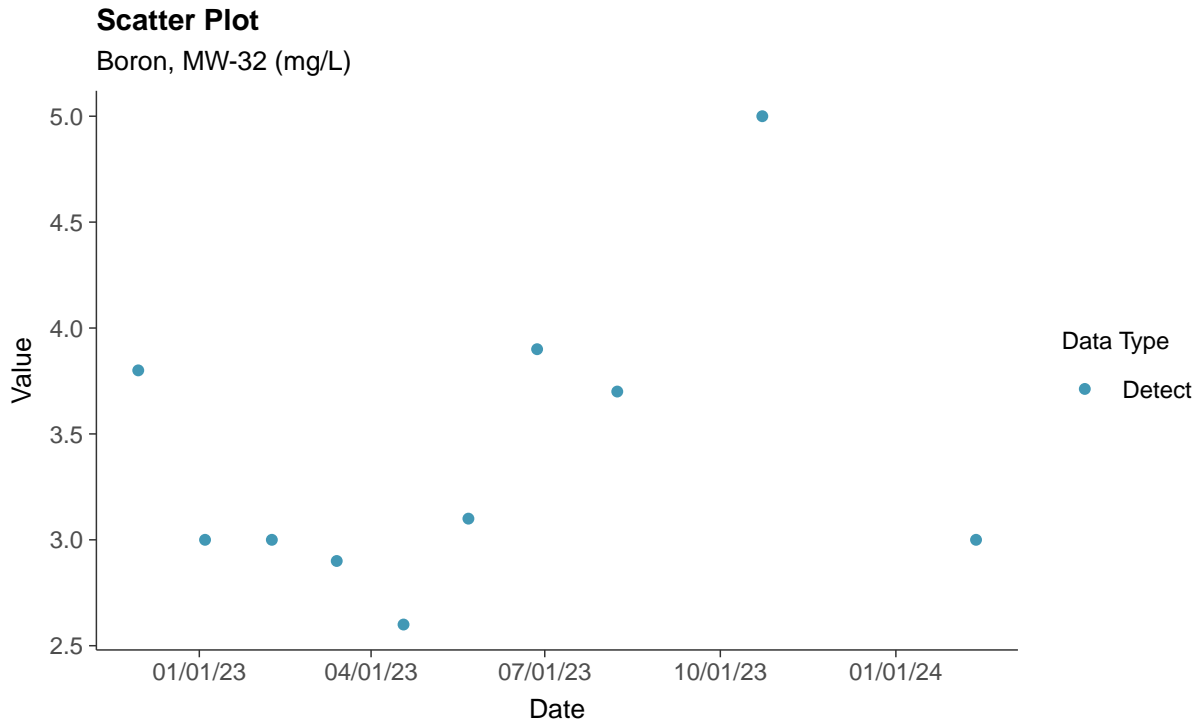
Zinc, MW-12 (mg/L)





Appendix III: Boron, MW-32

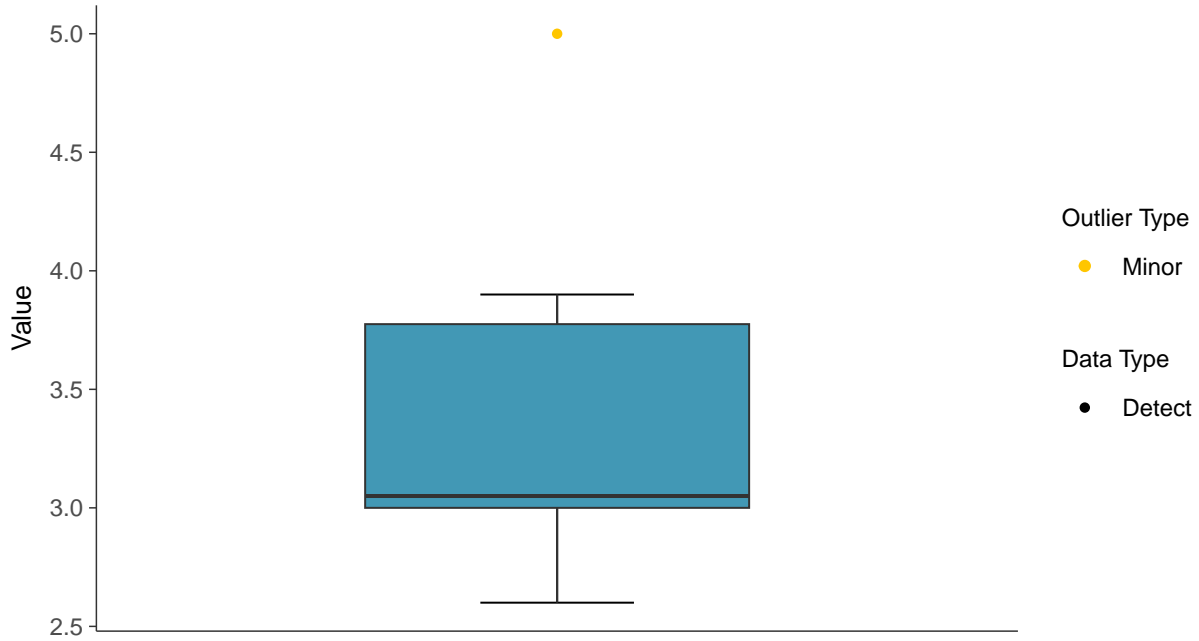
ID: 2_42_4_105





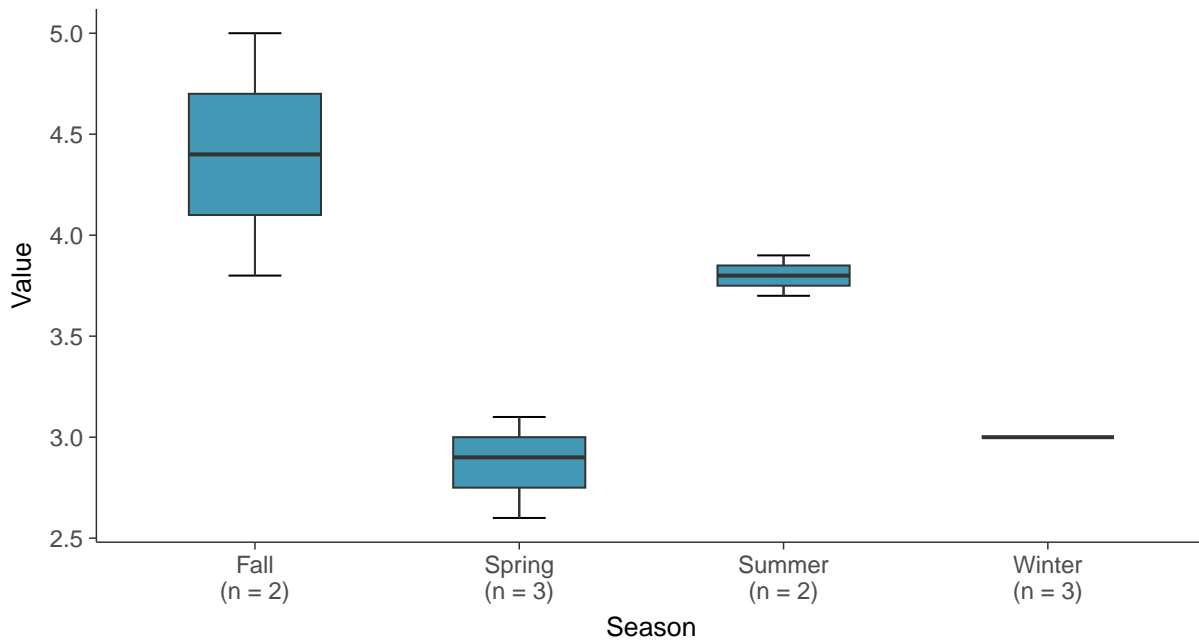
Boxplot

Boron, MW-32 (mg/L)



Boxplot by Season

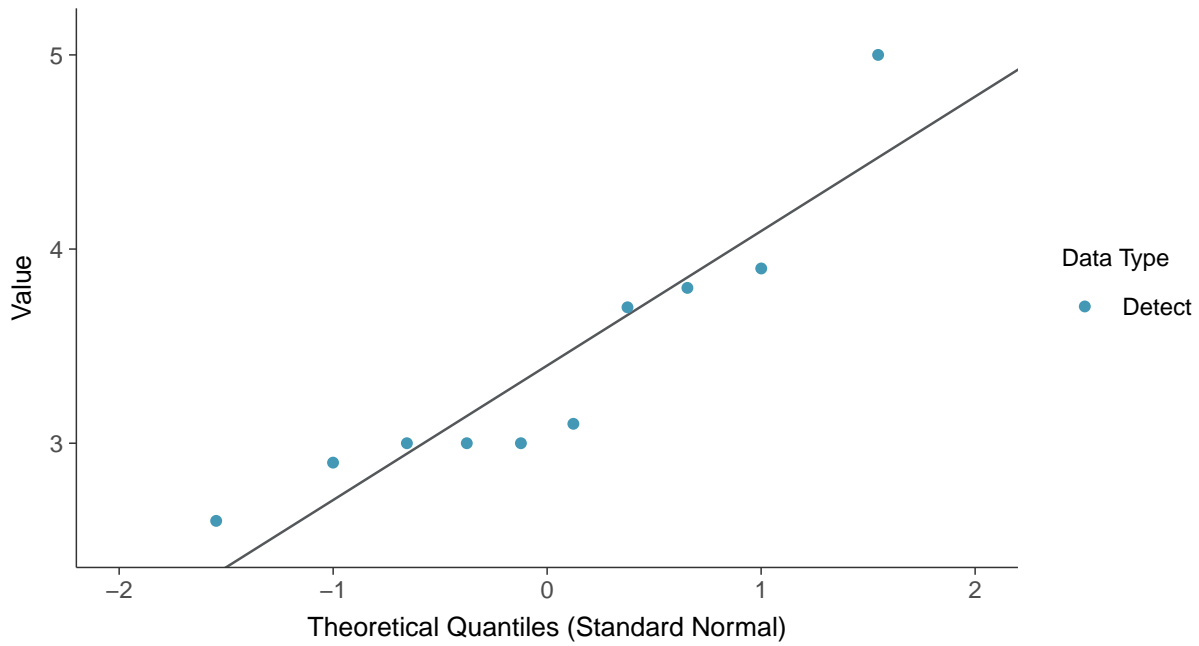
Boron, MW-32 (mg/L)





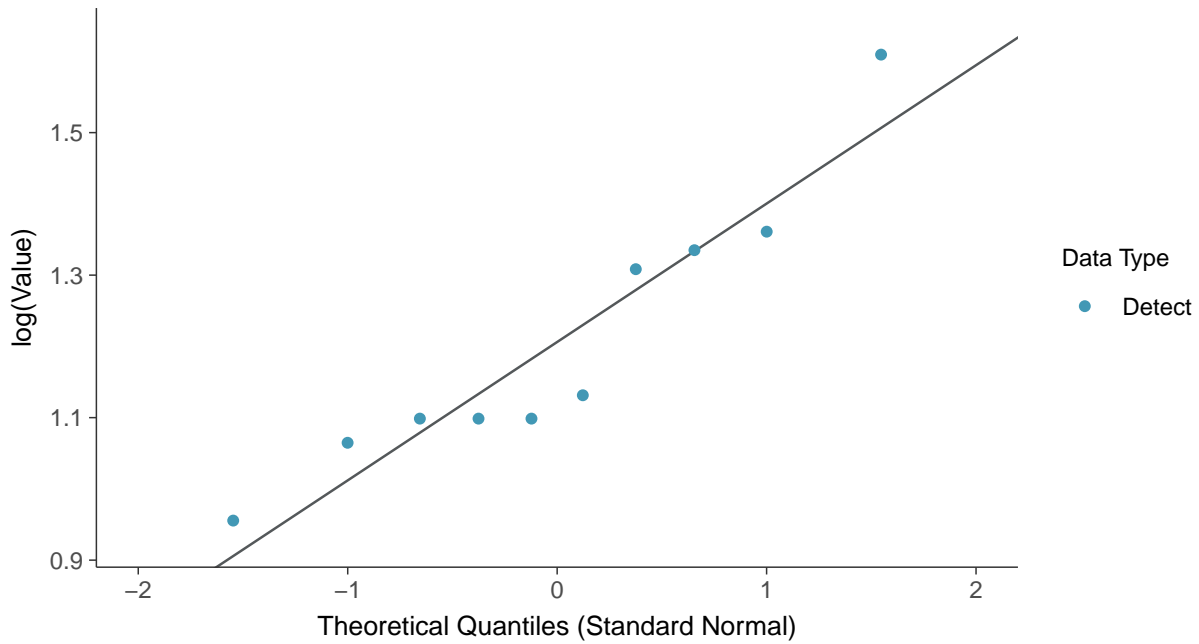
Normal Q-Q plot

Boron, MW-32 (mg/L)



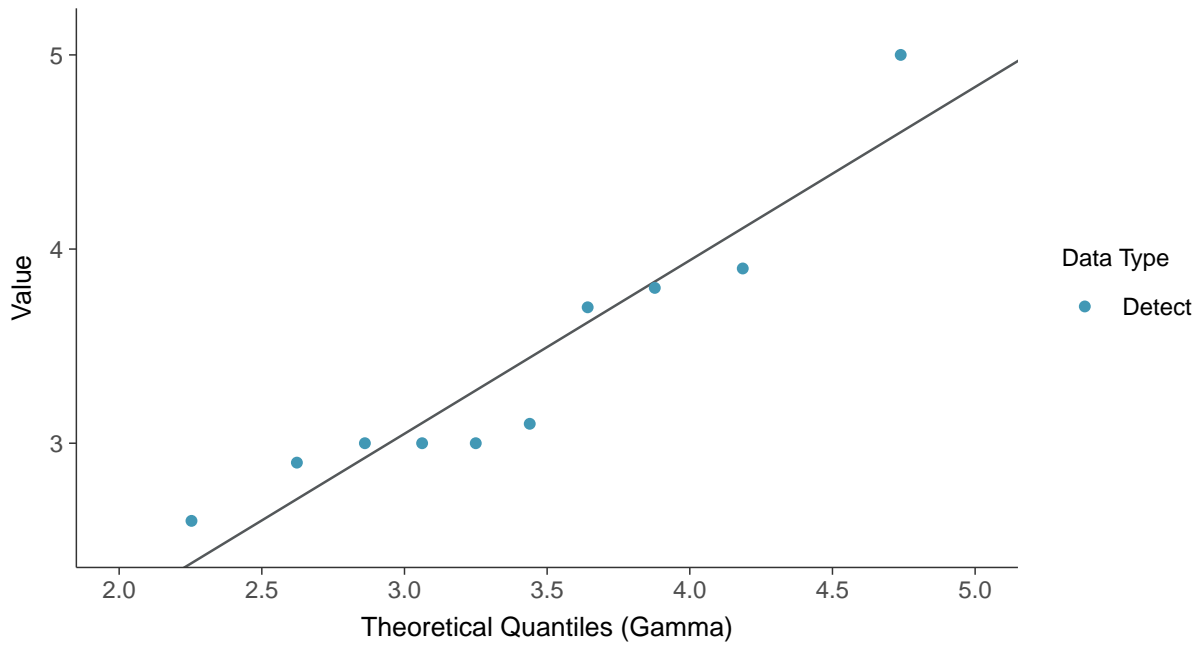
Lognormal Q-Q plot

Boron, MW-32 (mg/L)

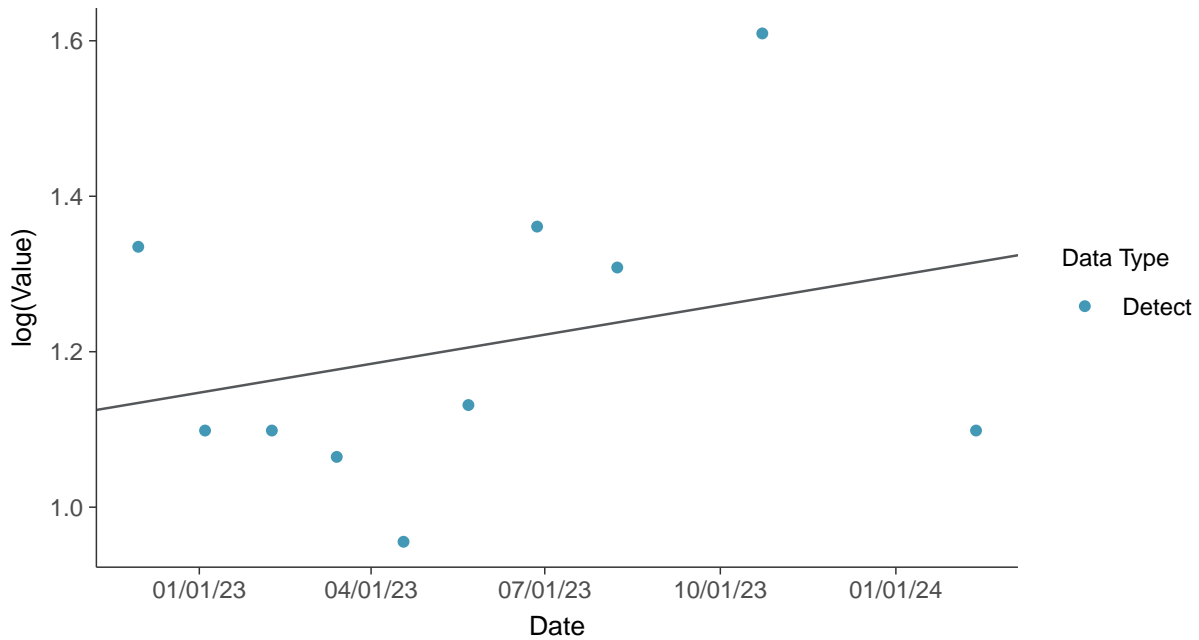




Gamma Q-Q plot
Boron, MW-32 (mg/L)



Trend Regression: Lognormal MLE
Boron, MW-32 (mg/L)



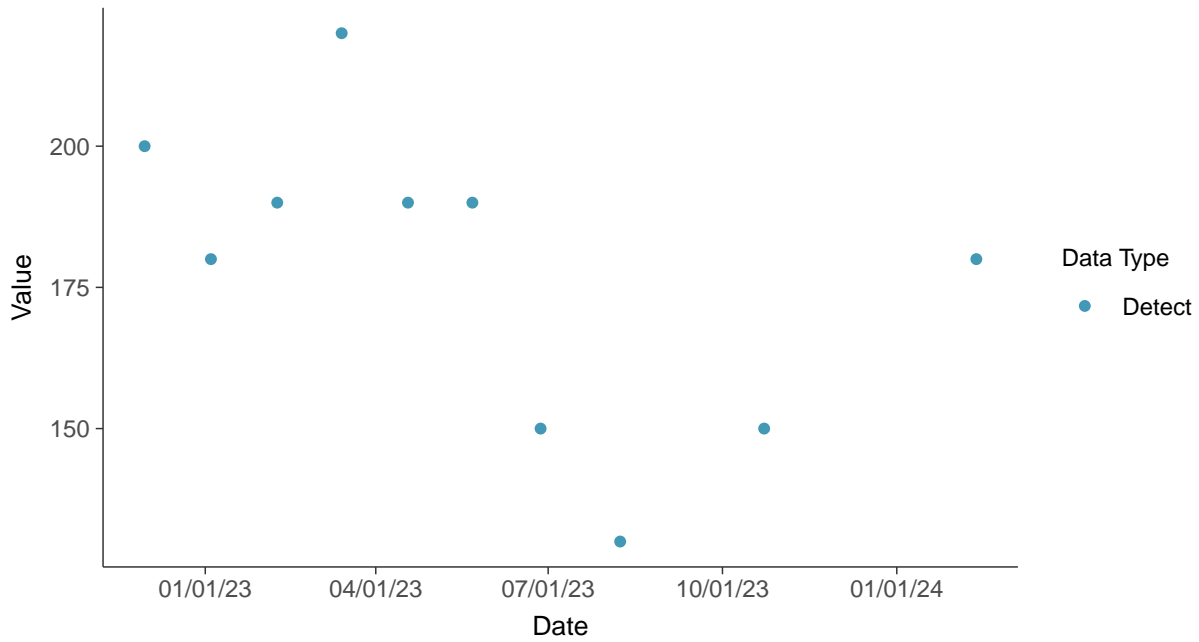


Appendix III: Calcium, MW-32

ID: 2_42_4_107

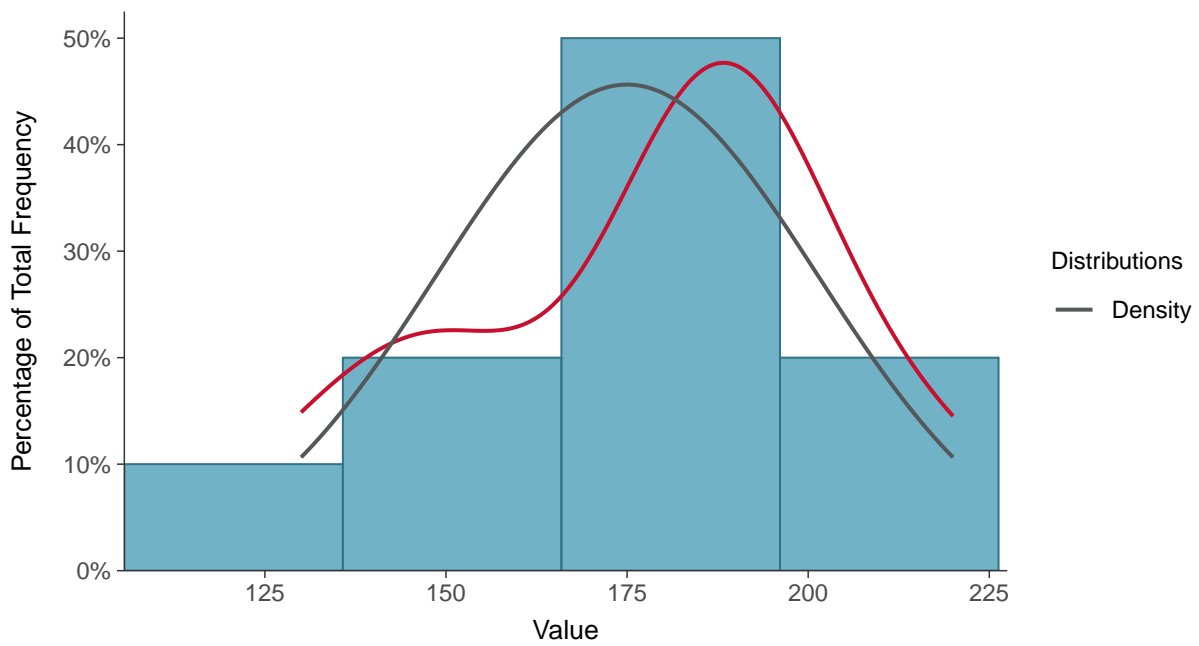
Scatter Plot

Calcium, MW-32 (mg/L)



Histogram

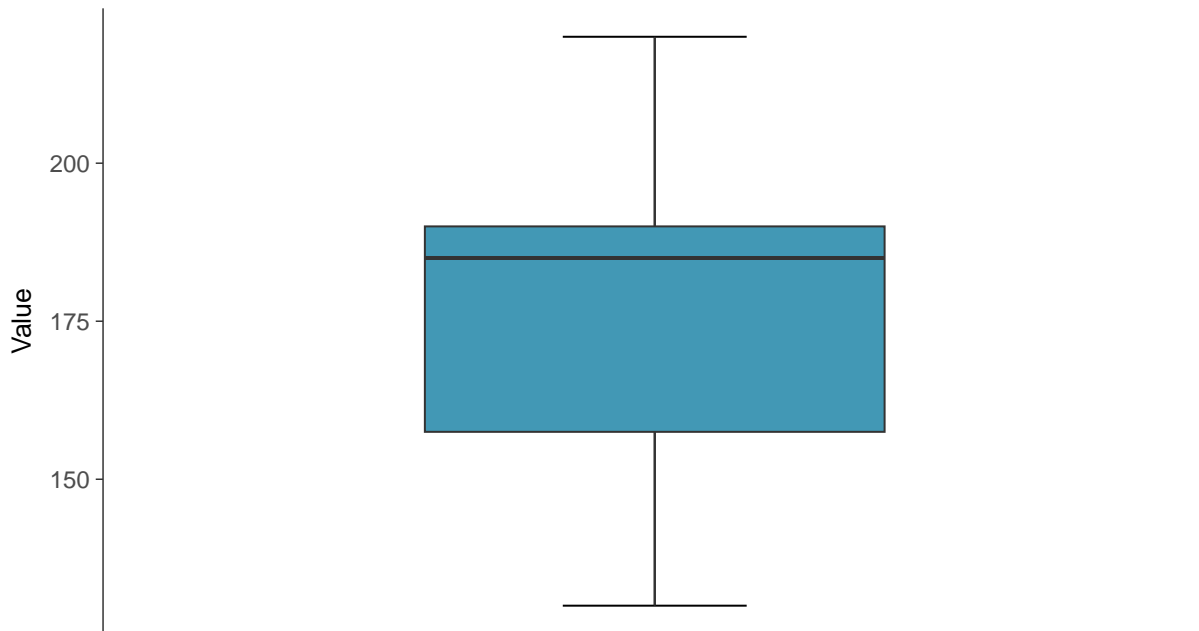
Calcium, MW-32 (mg/L)





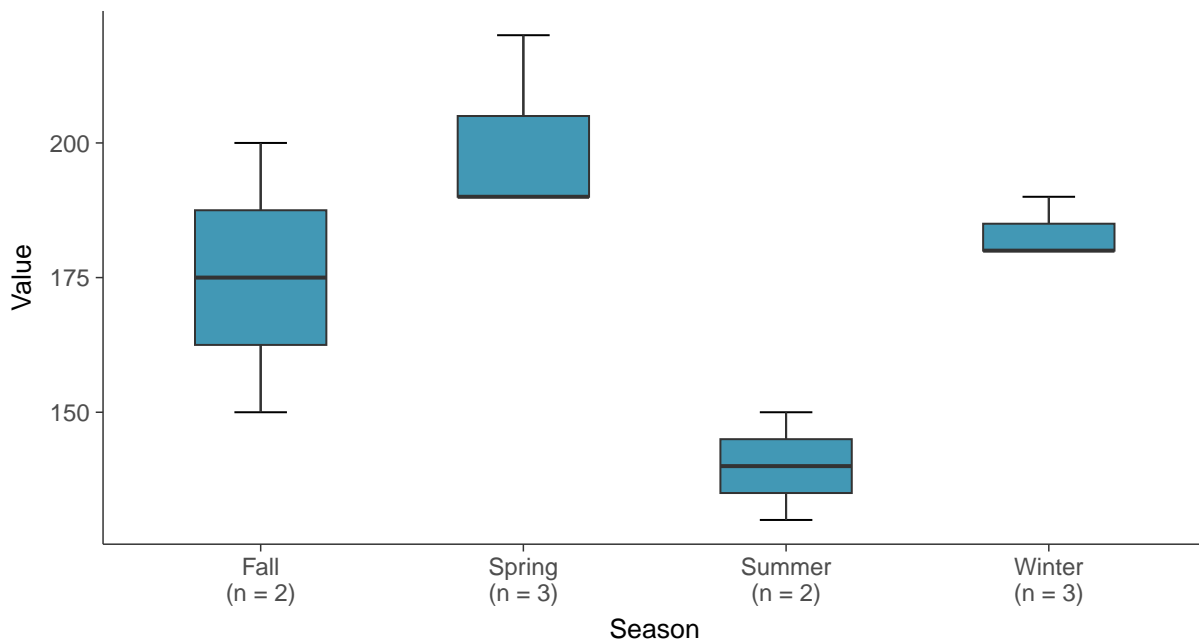
Boxplot

Calcium, MW-32 (mg/L)



Boxplot by Season

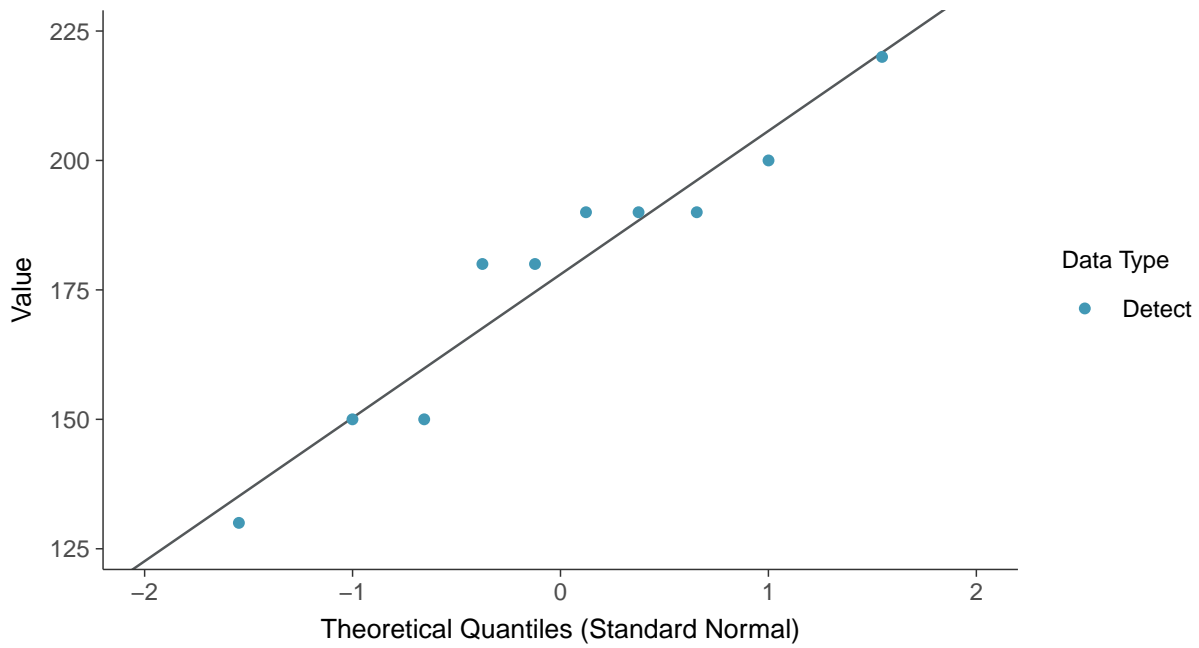
Calcium, MW-32 (mg/L)





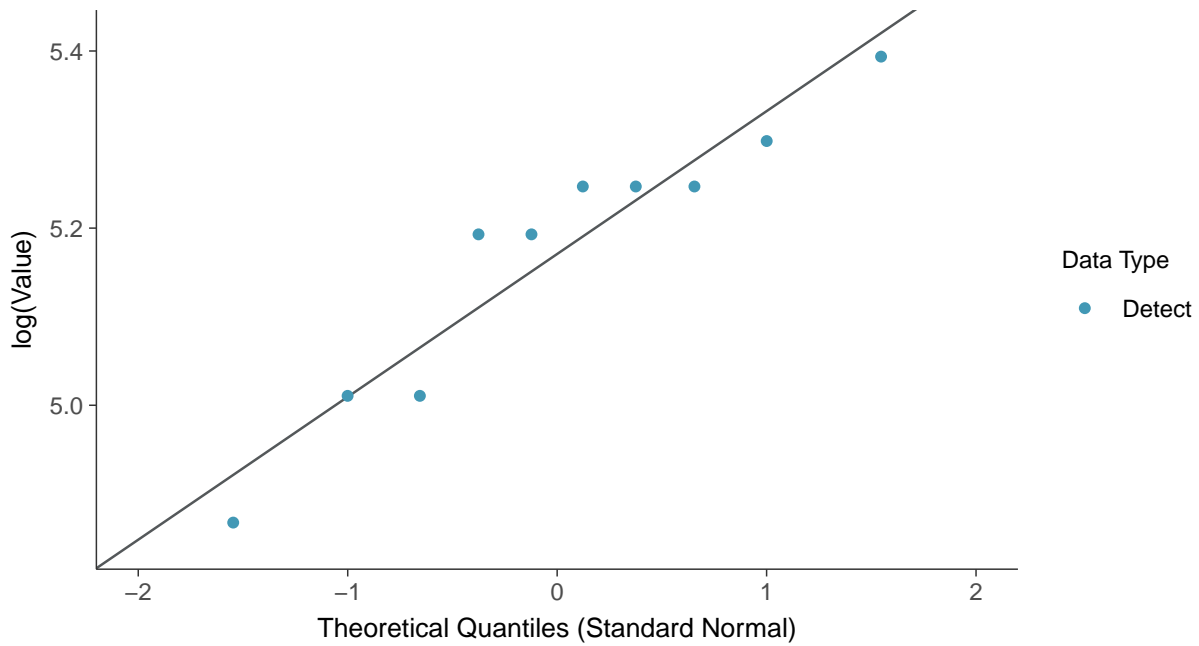
Normal Q-Q plot

Calcium, MW-32 (mg/L)



Lognormal Q-Q plot

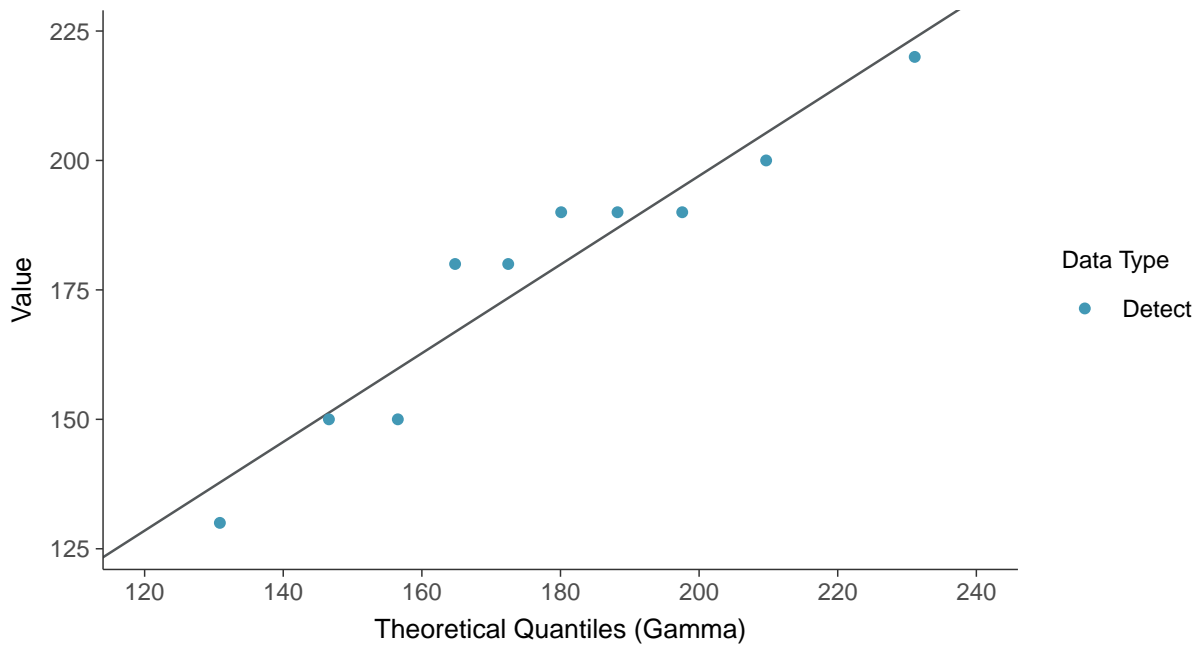
Calcium, MW-32 (mg/L)





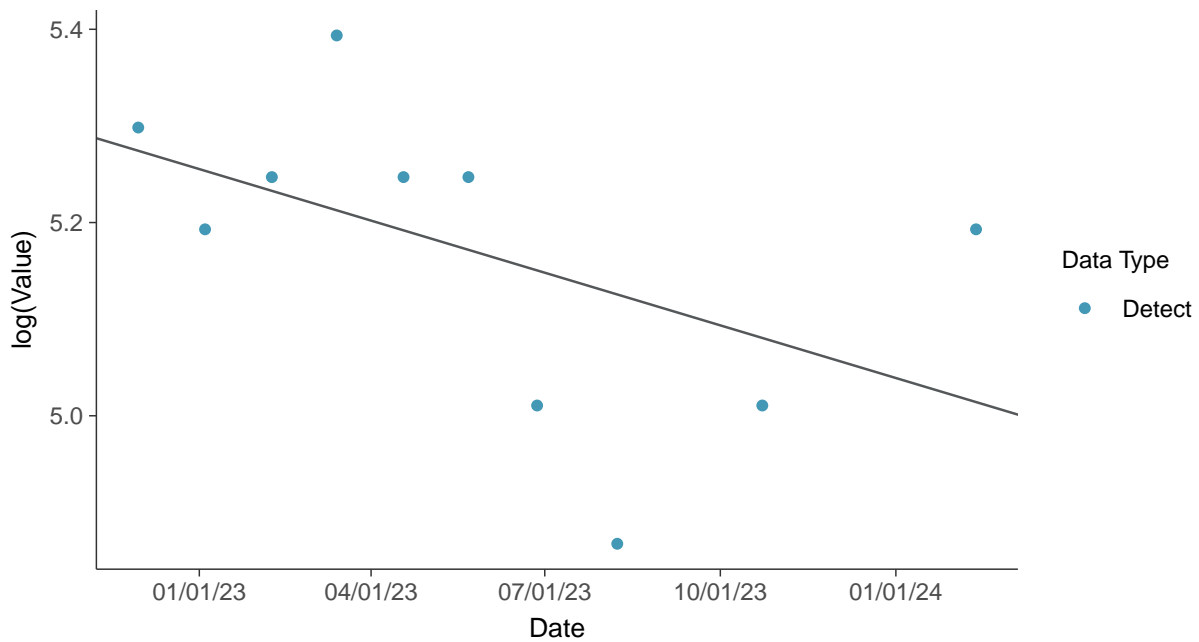
Gamma Q-Q plot

Calcium, MW-32 (mg/L)



Trend Regression: Lognormal MLE

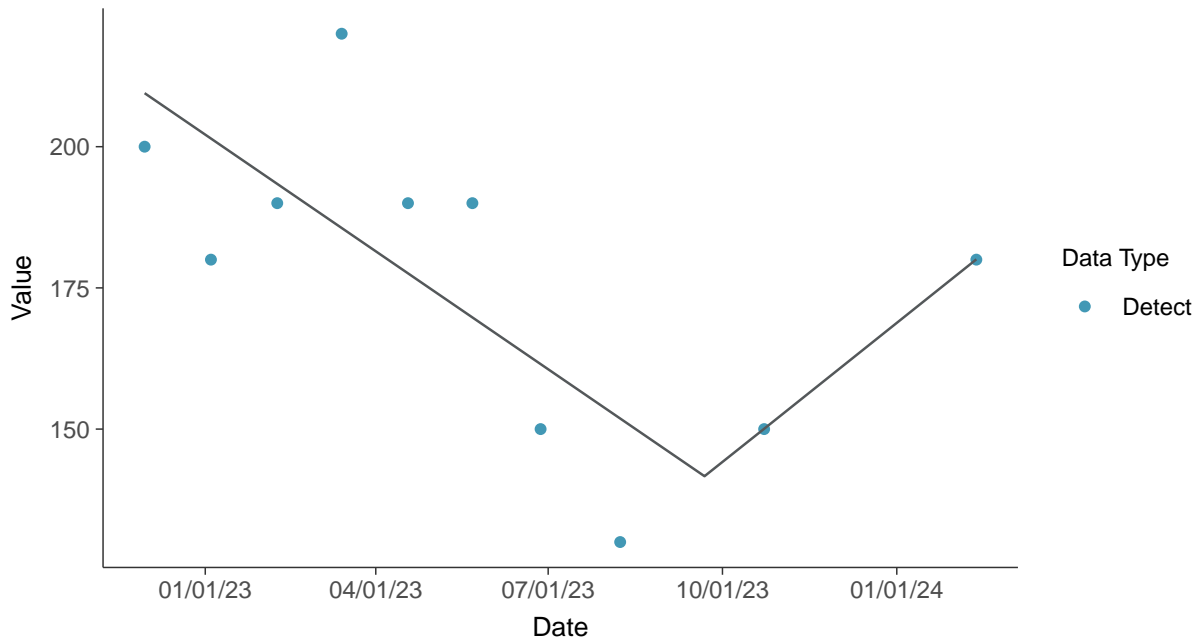
Calcium, MW-32 (mg/L)





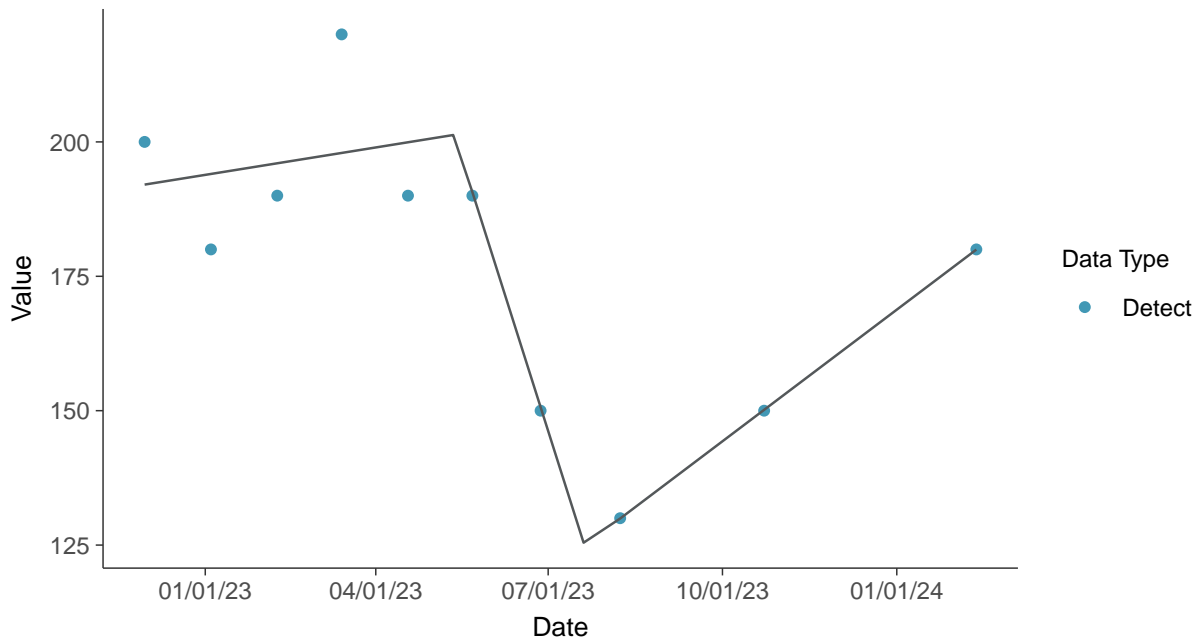
Trend Regression: Piecewise Linear-Linear

Calcium, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-32 (mg/L)



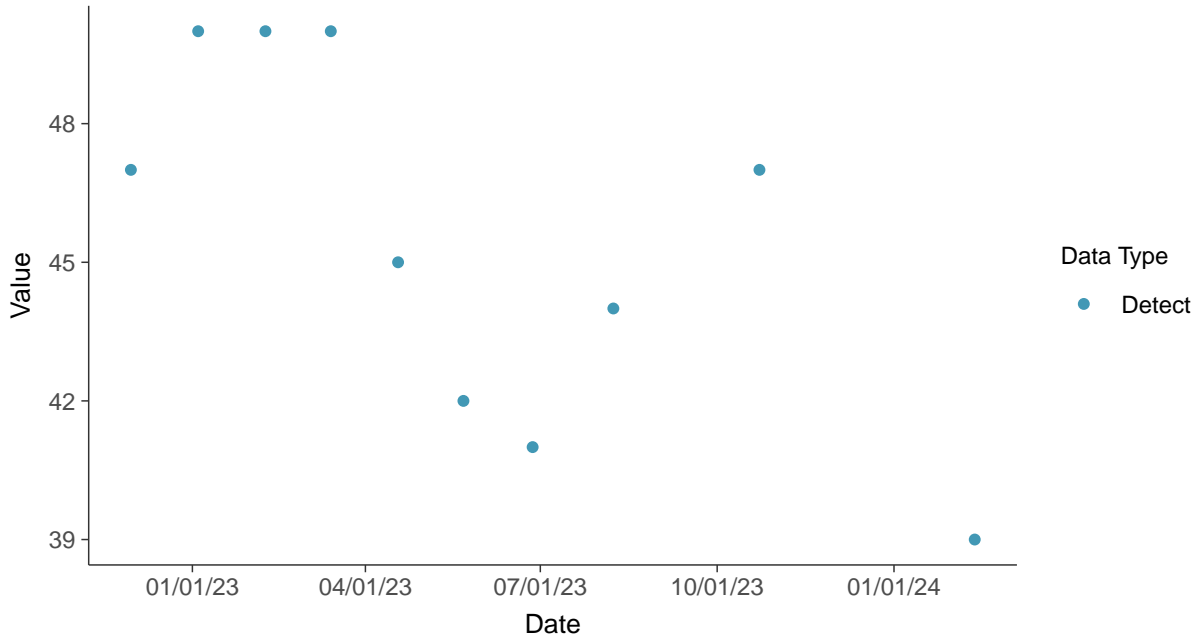


Appendix III: Chloride (as Cl), MW-32

ID: 2_42_4_108

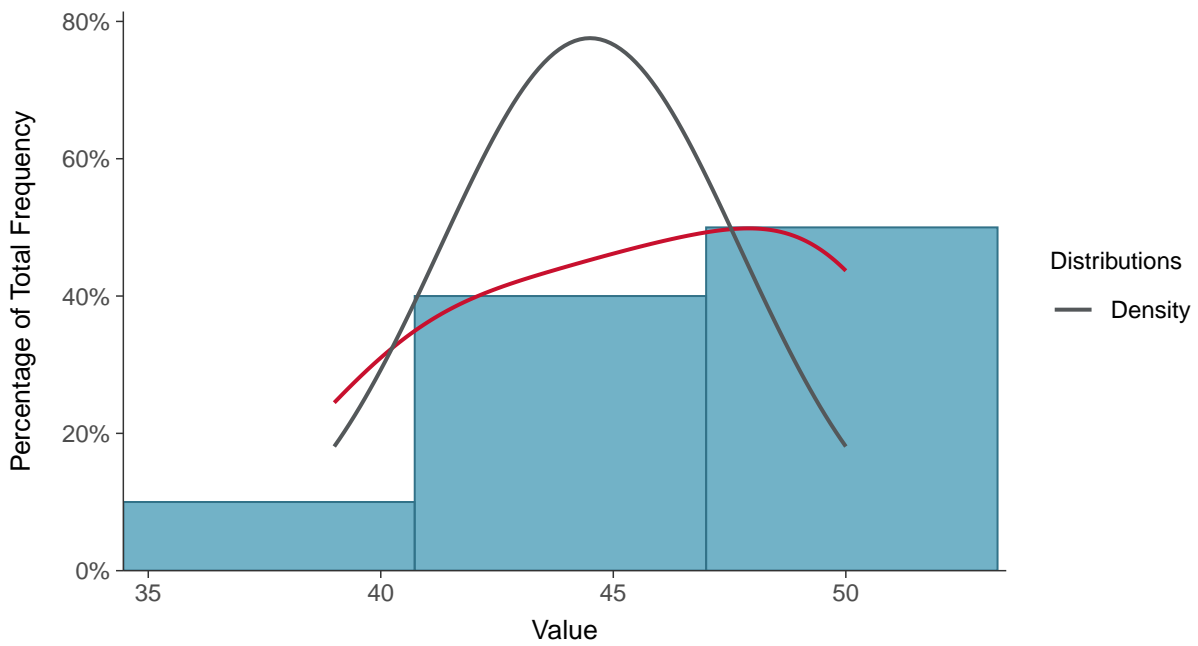
Scatter Plot

Chloride (as Cl), MW-32 (mg/L)



Histogram

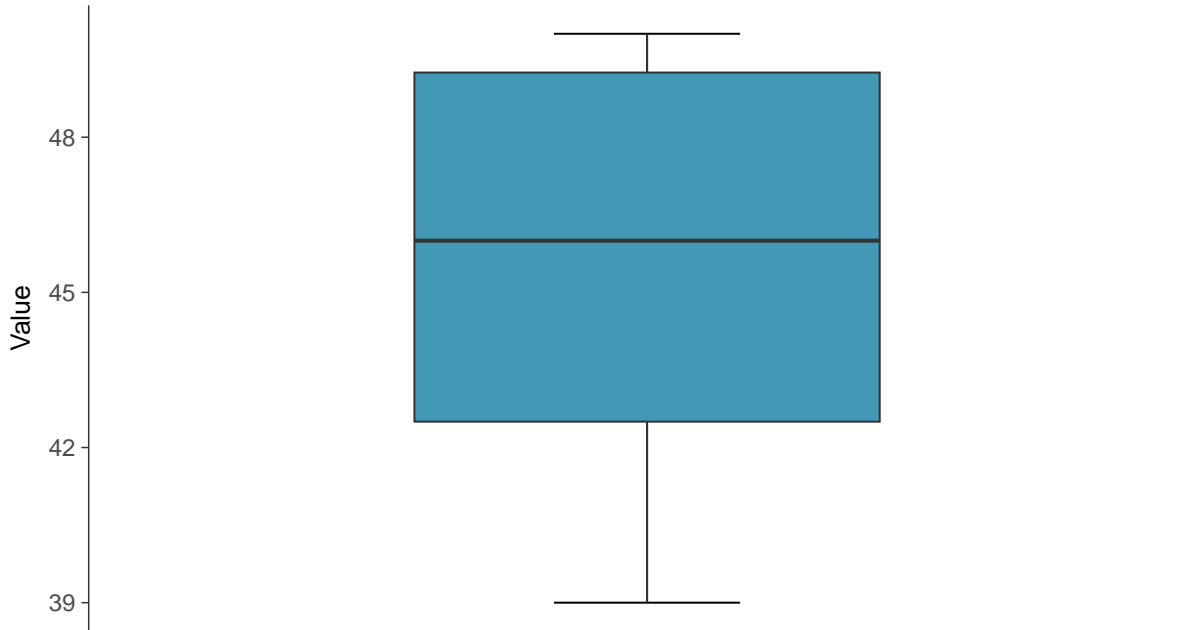
Chloride (as Cl), MW-32 (mg/L)





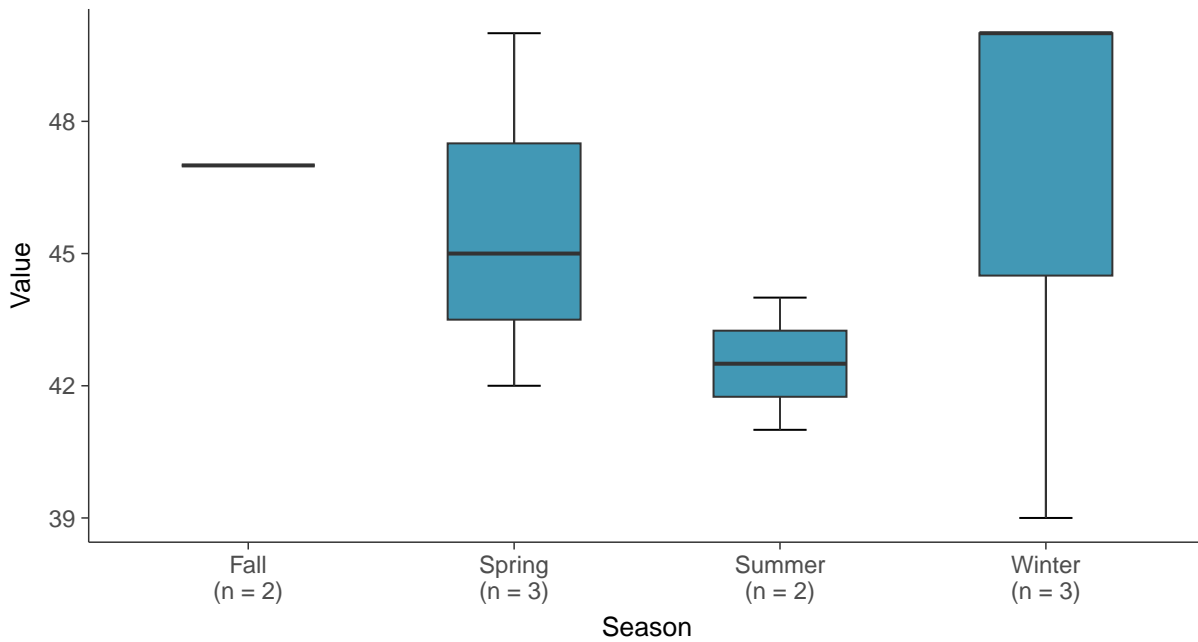
Boxplot

Chloride (as Cl), MW-32 (mg/L)



Boxplot by Season

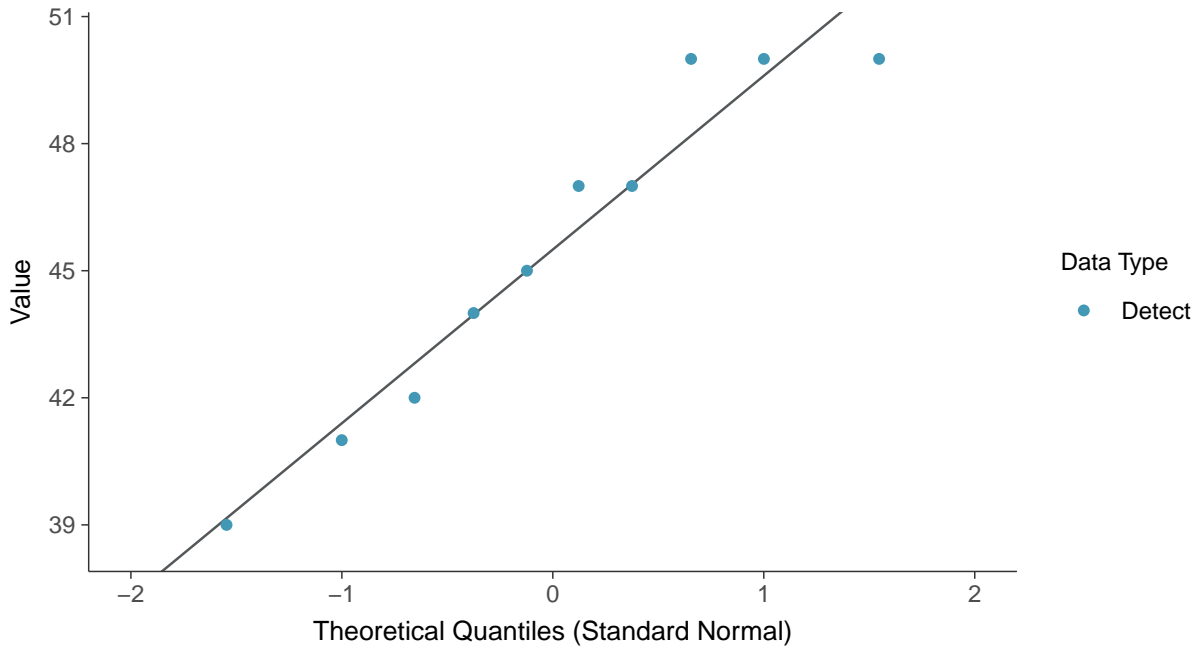
Chloride (as Cl), MW-32 (mg/L)





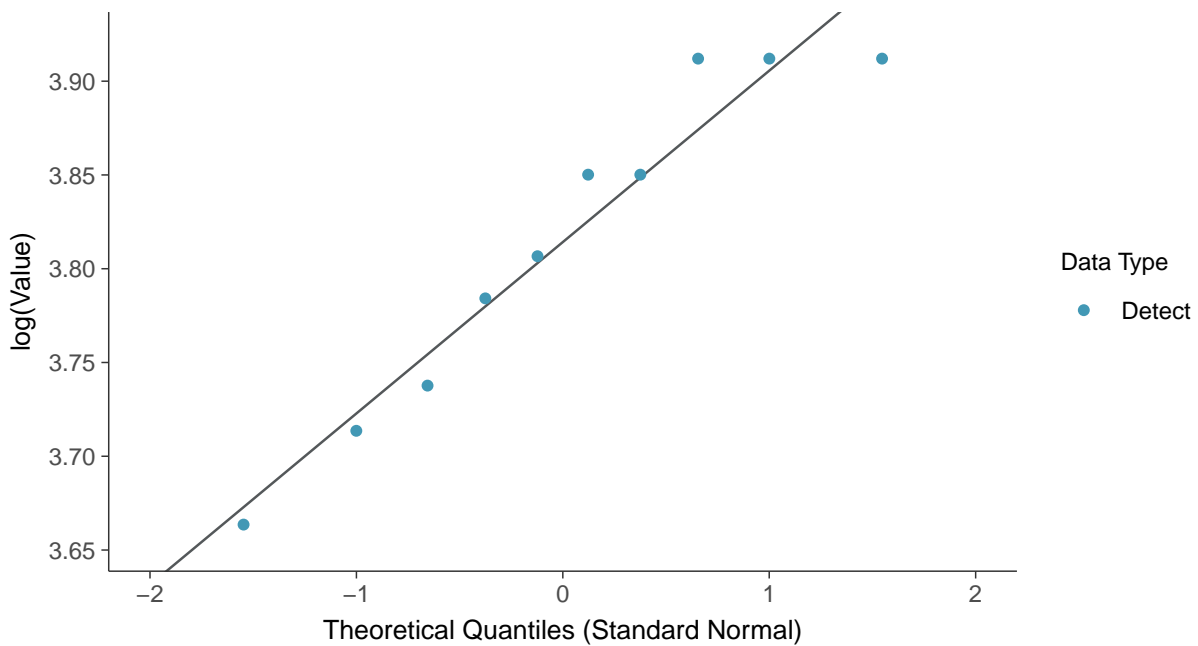
Normal Q-Q plot

Chloride (as Cl), MW-32 (mg/L)



Lognormal Q-Q plot

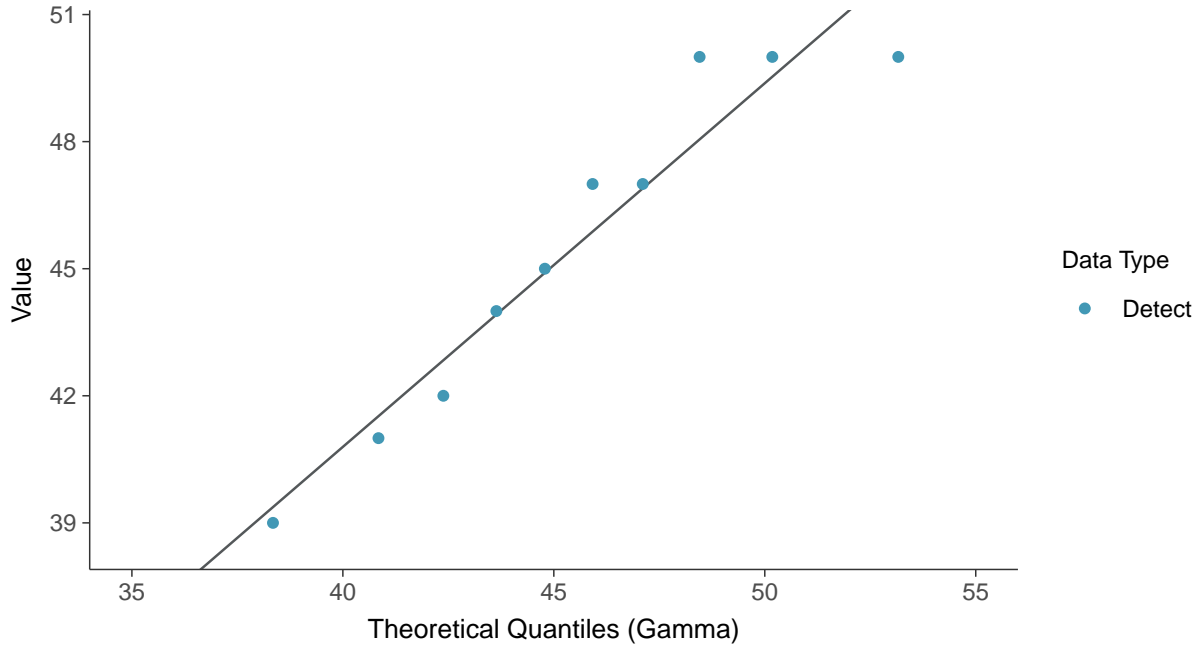
Chloride (as Cl), MW-32 (mg/L)





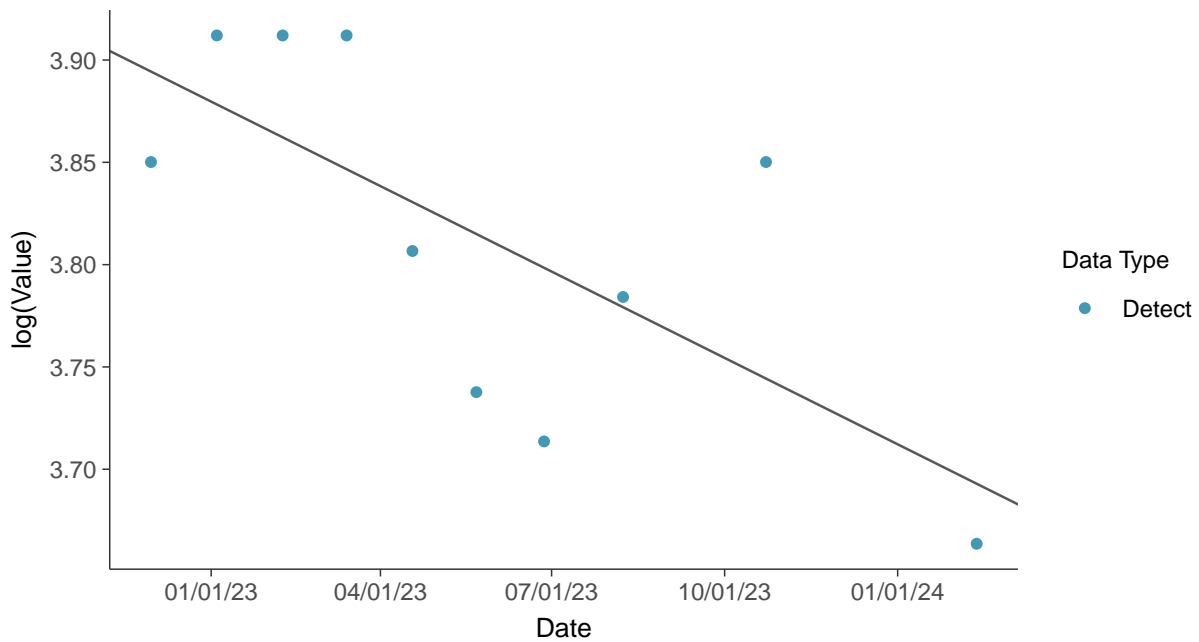
Gamma Q-Q plot

Chloride (as Cl), MW-32 (mg/L)



Trend Regression: Lognormal MLE

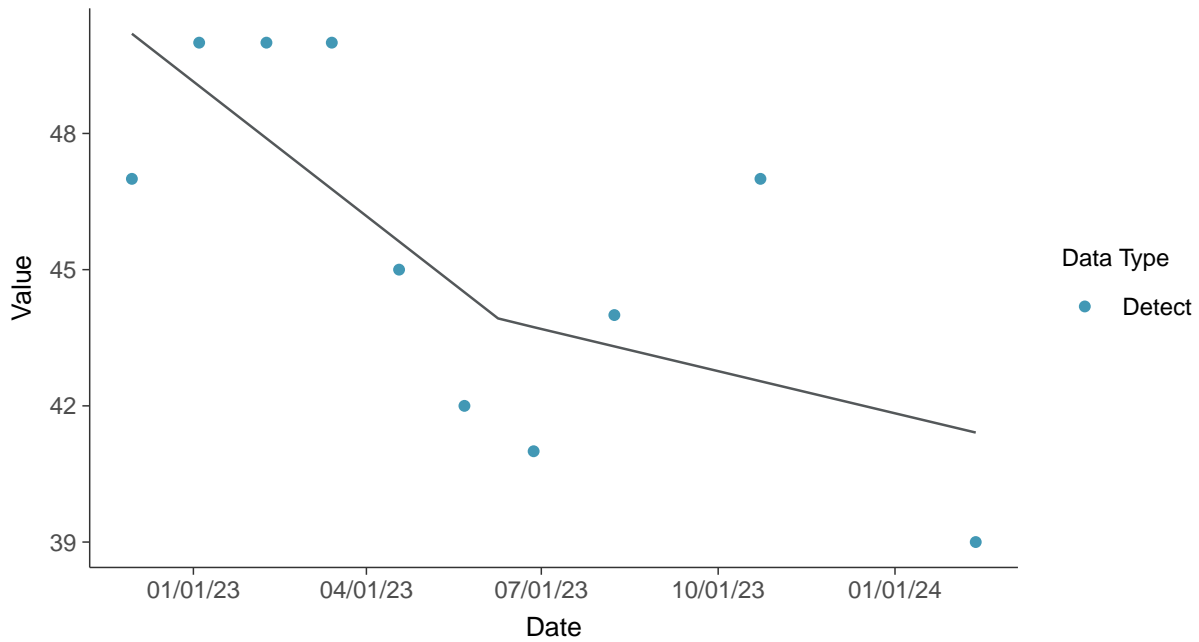
Chloride (as Cl), MW-32 (mg/L)





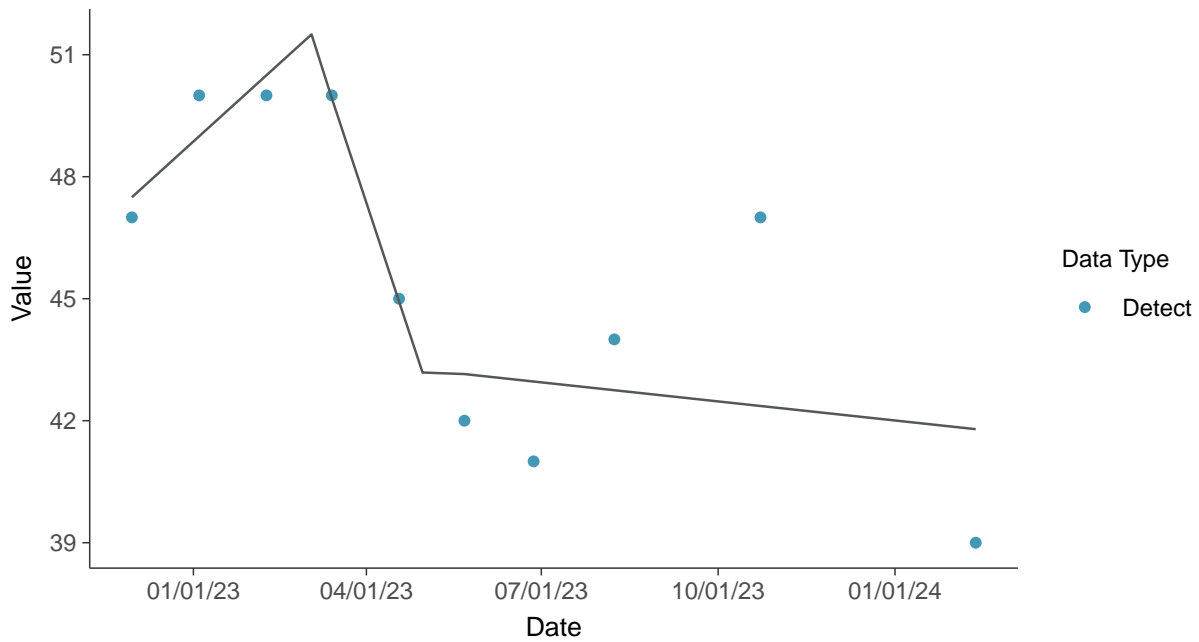
Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-32 (mg/L)



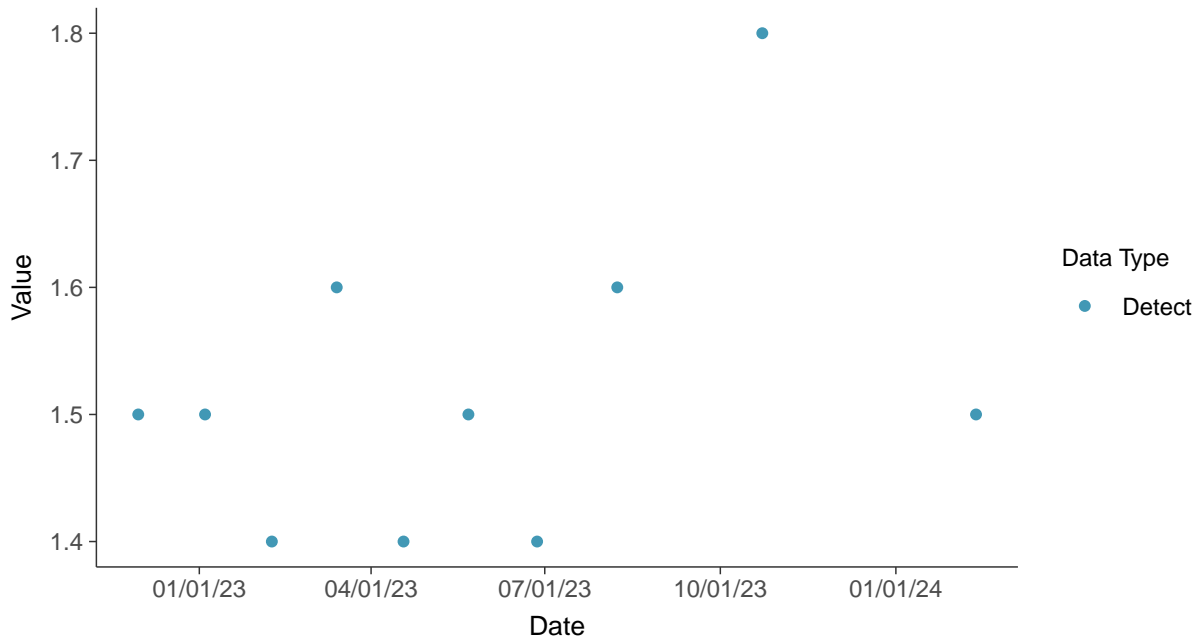


Appendix III: Fluoride, MW-32

ID: 2_42_4_112

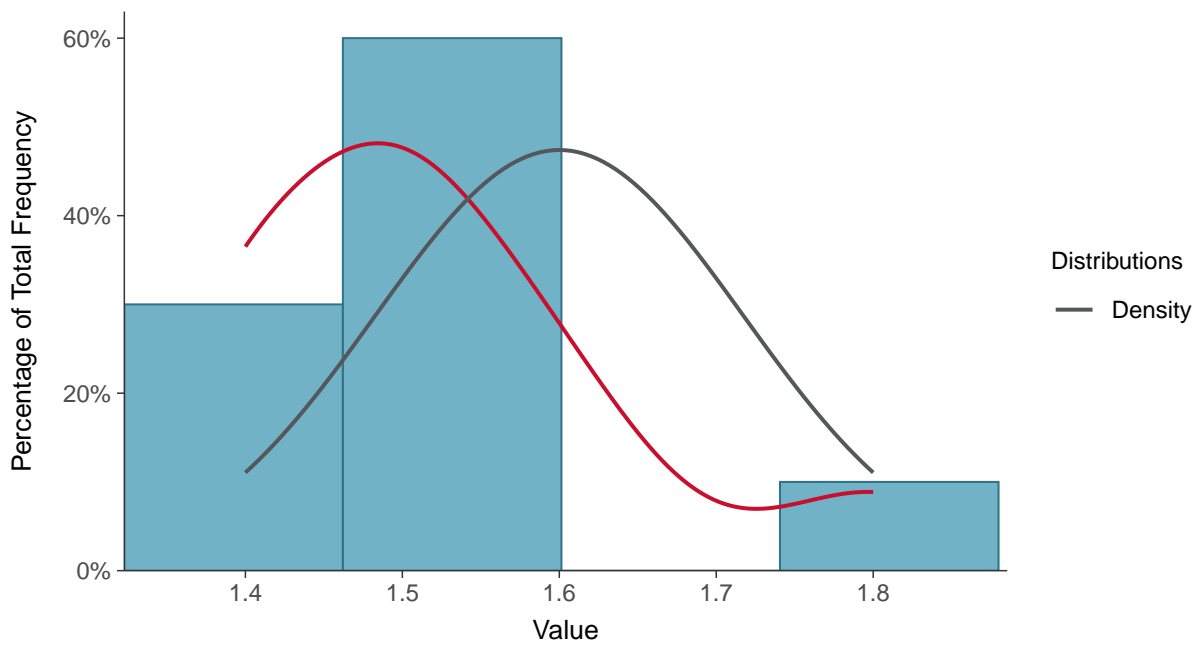
Scatter Plot

Fluoride, MW-32 (mg/L)



Histogram

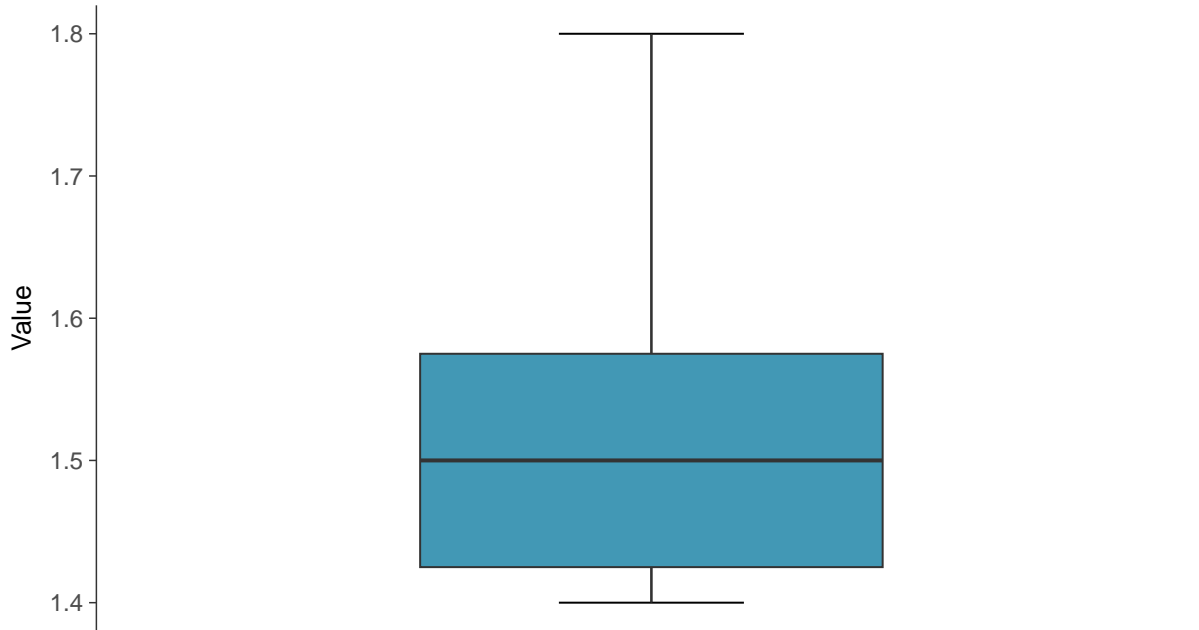
Fluoride, MW-32 (mg/L)





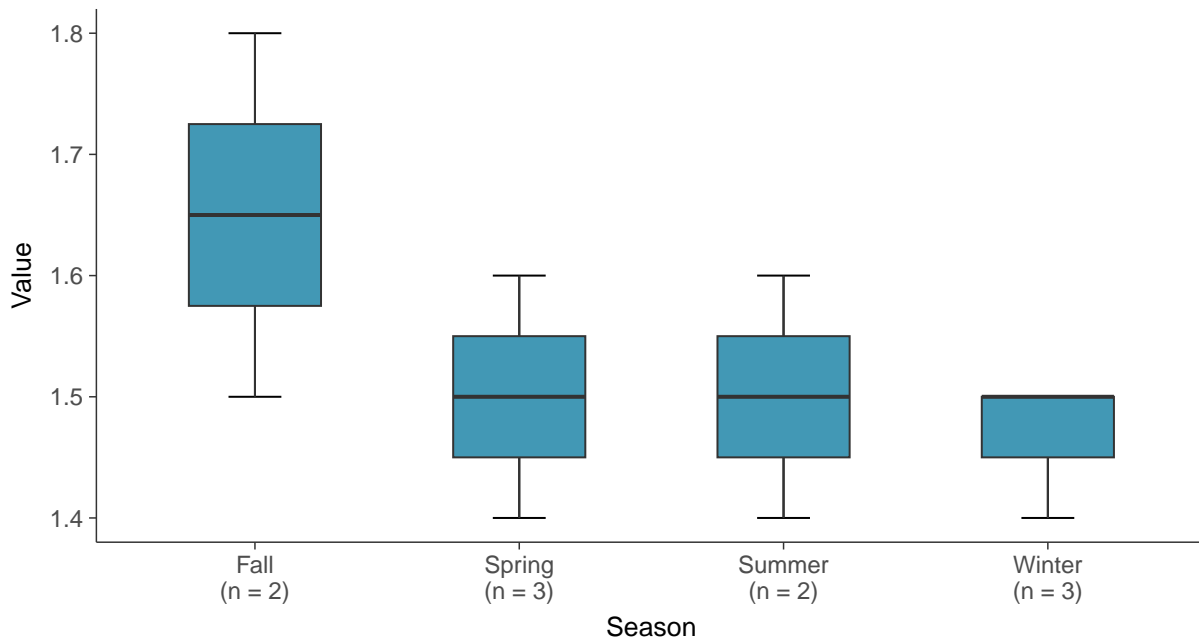
Boxplot

Fluoride, MW-32 (mg/L)



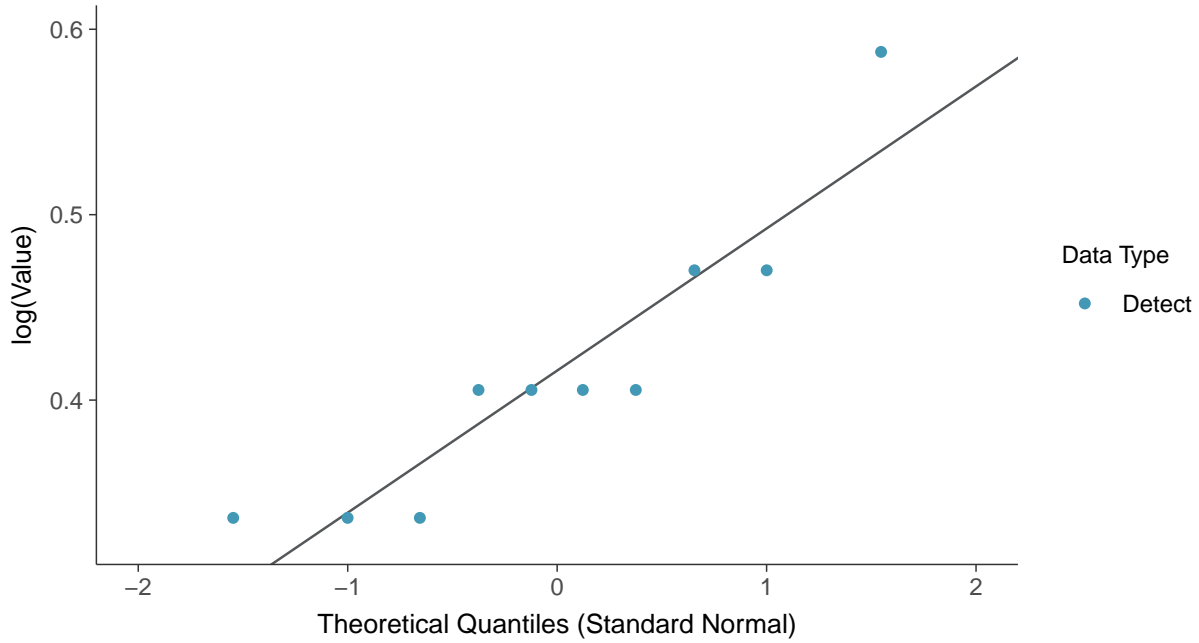
Boxplot by Season

Fluoride, MW-32 (mg/L)

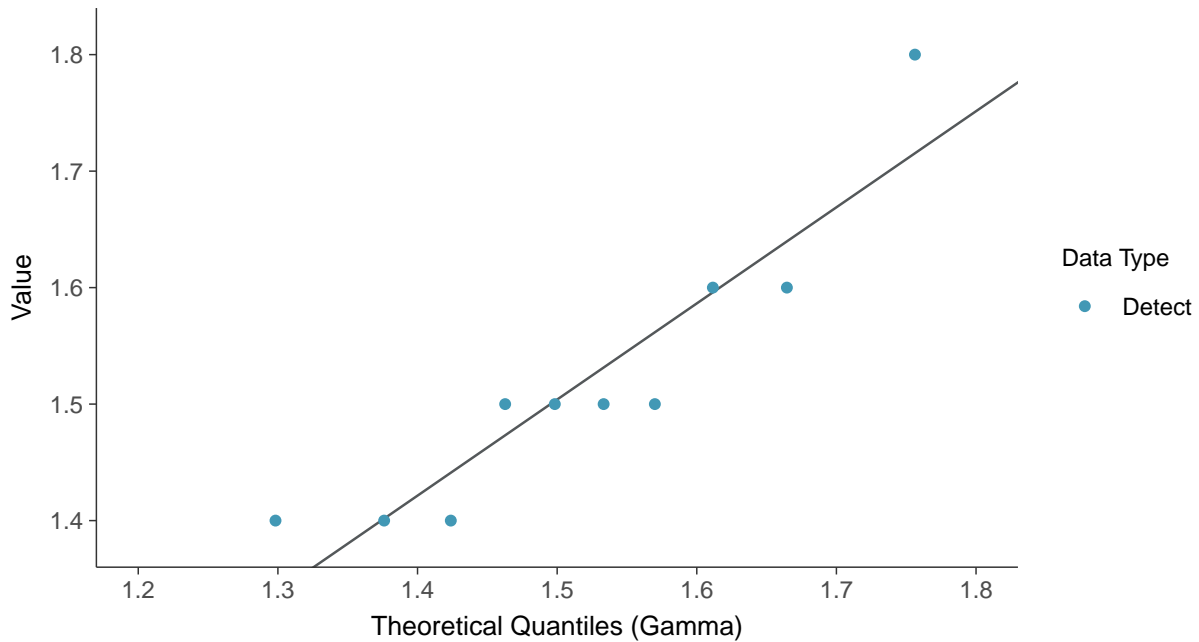




Lognormal Q-Q plot
Fluoride, MW-32 (mg/L)



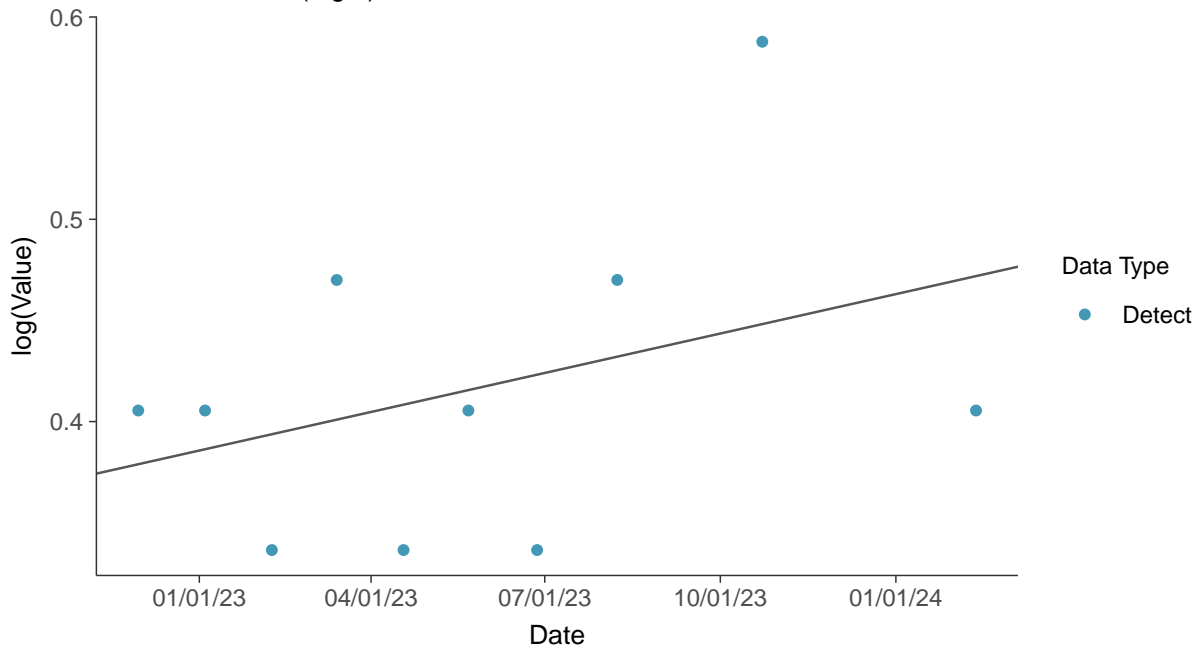
Gamma Q-Q plot
Fluoride, MW-32 (mg/L)





Trend Regression: Lognormal MLE

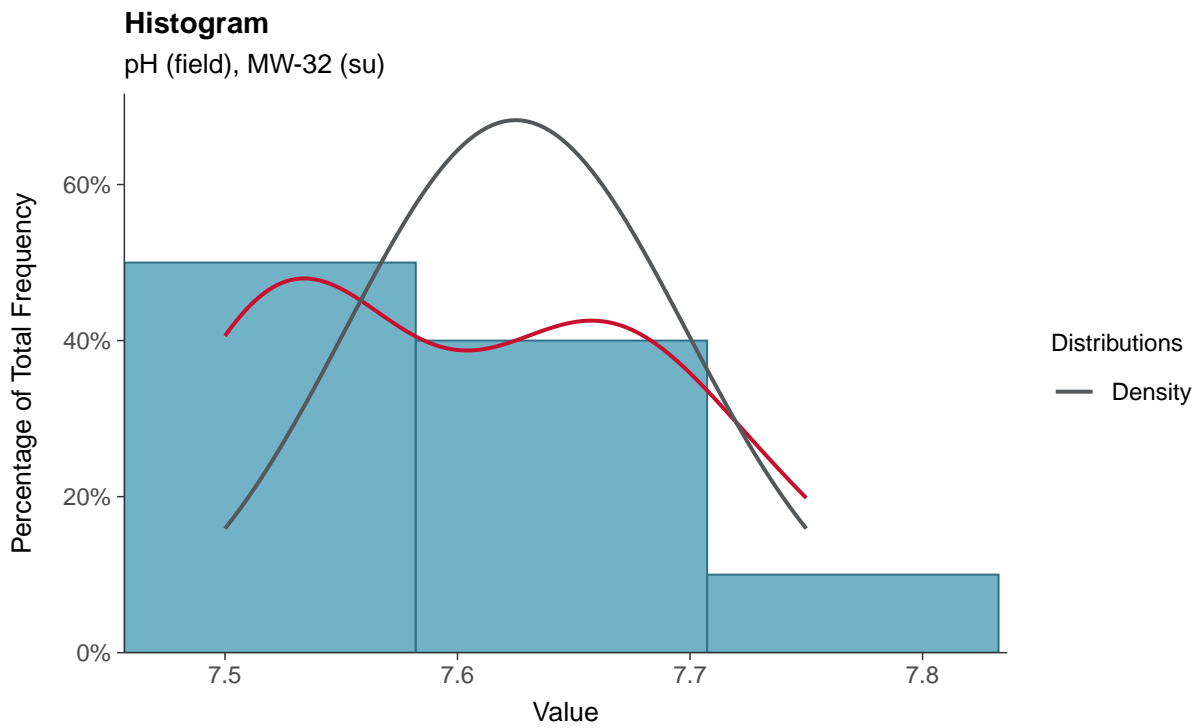
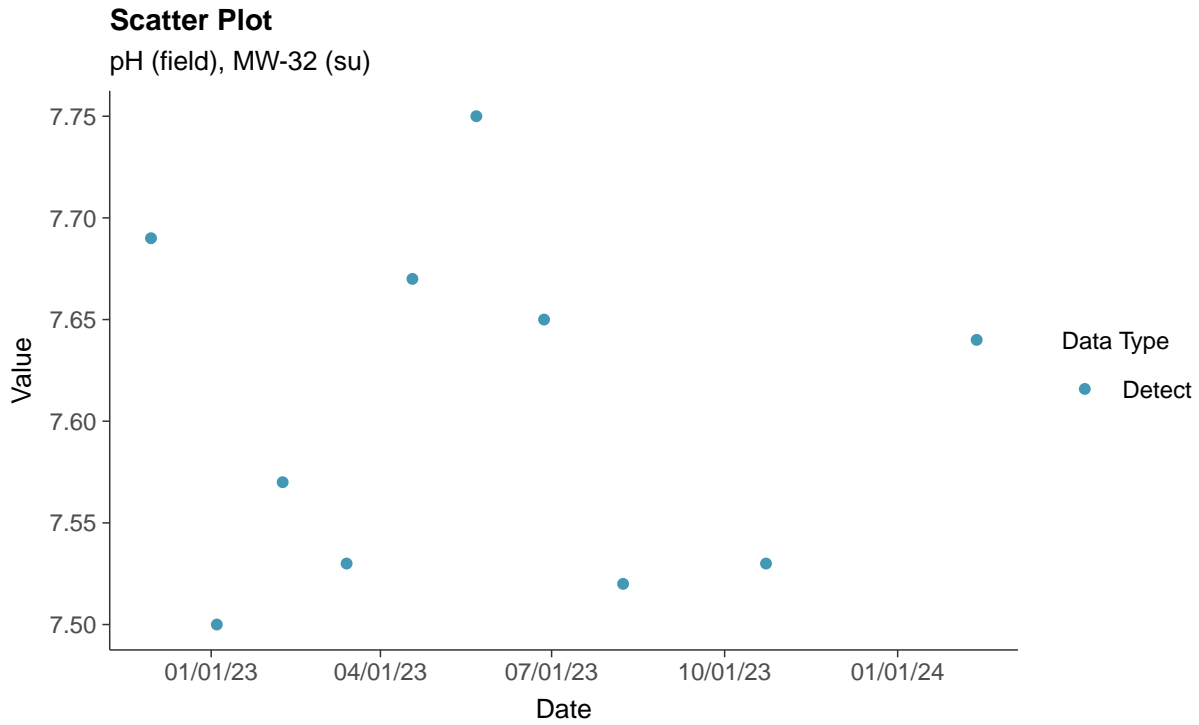
Fluoride, MW-32 (mg/L)





Appendix III: pH (field), MW-32

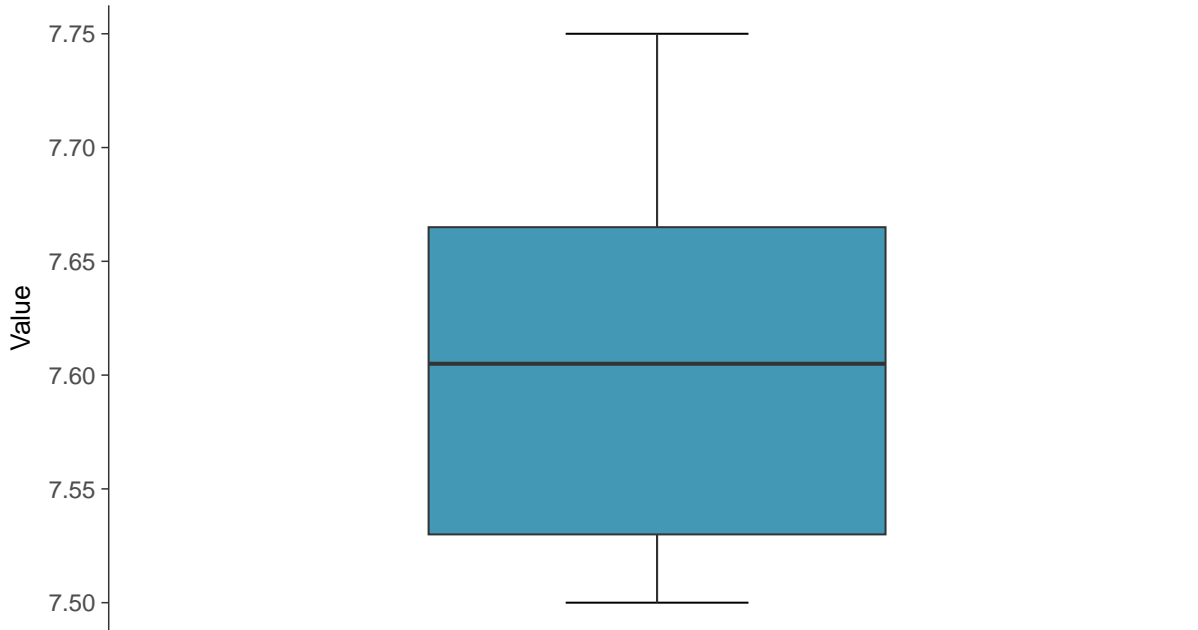
ID: 2_42_4_120





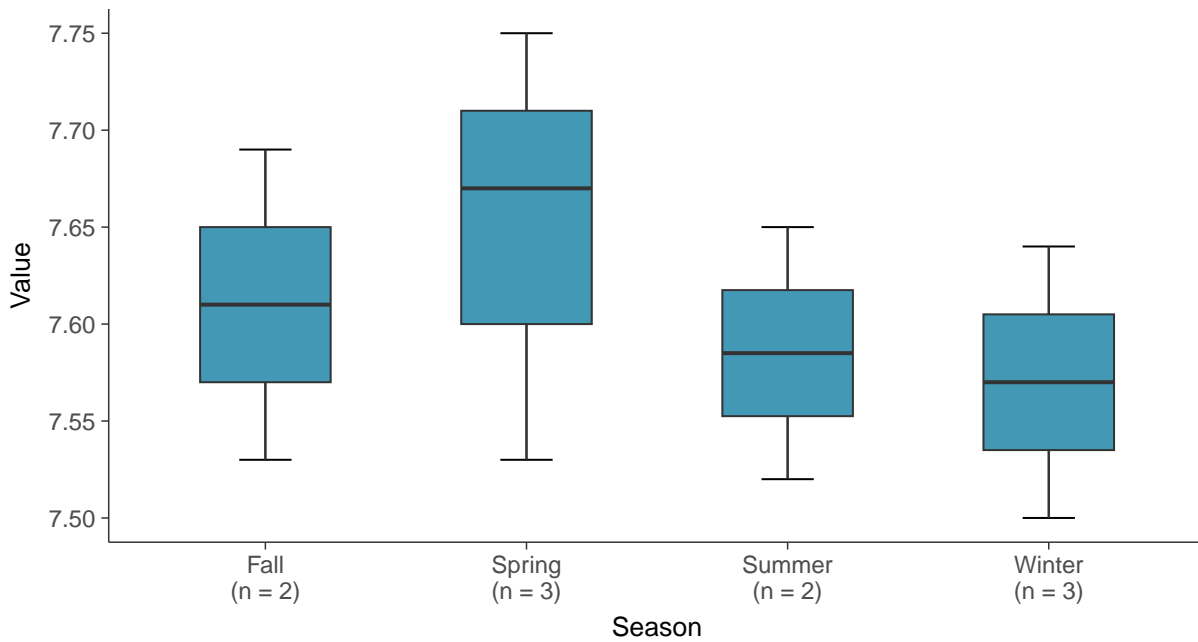
Boxplot

pH (field), MW-32 (su)



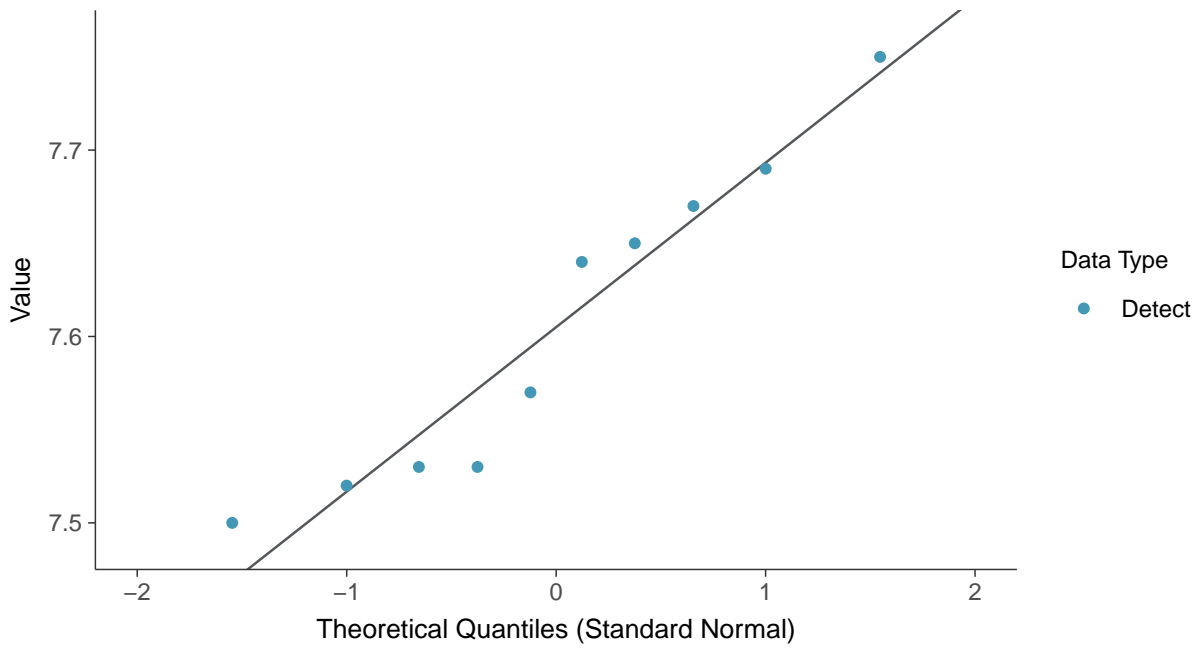
Boxplot by Season

pH (field), MW-32 (su)

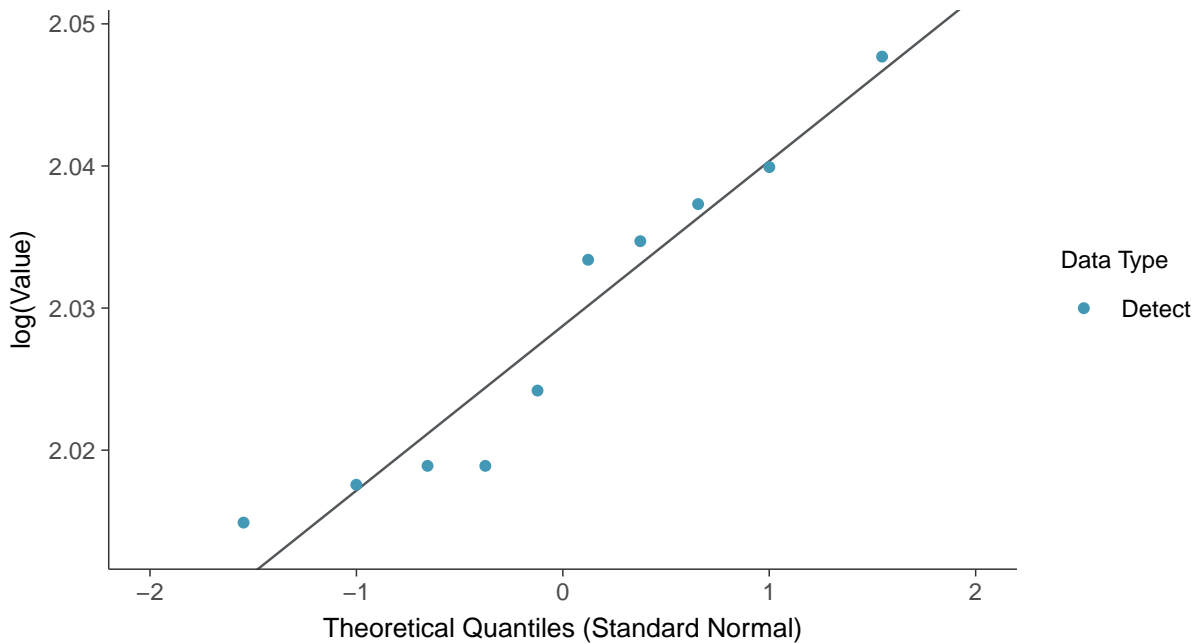




Normal Q-Q plot
pH (field), MW-32 (su)



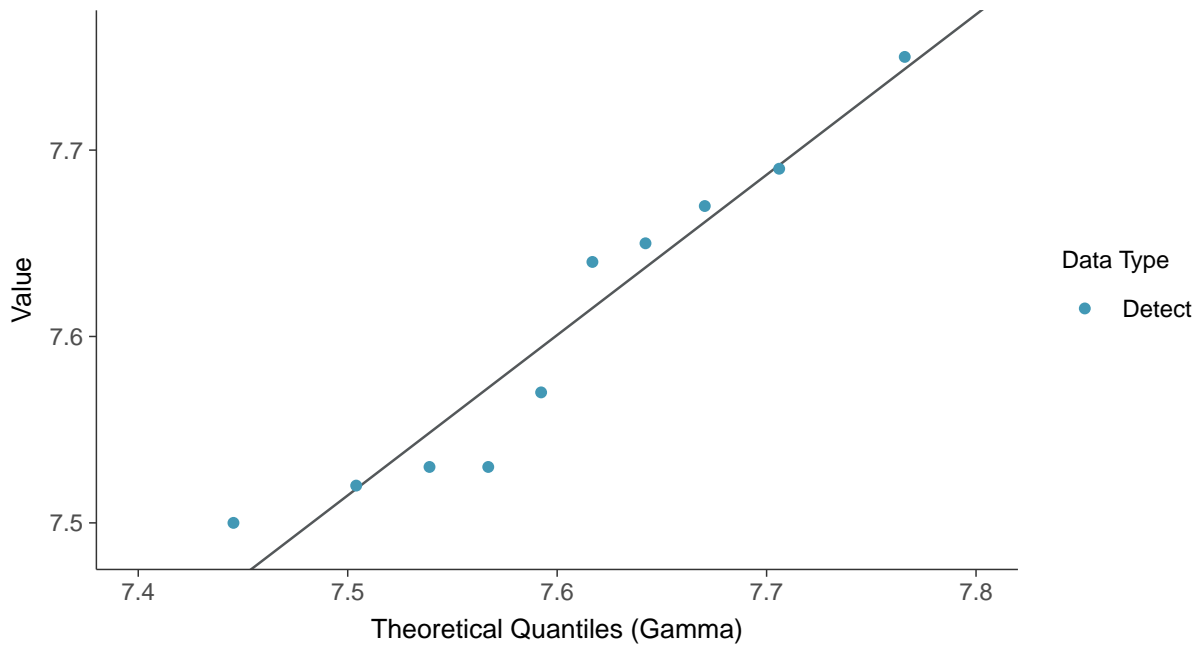
Lognormal Q-Q plot
pH (field), MW-32 (su)





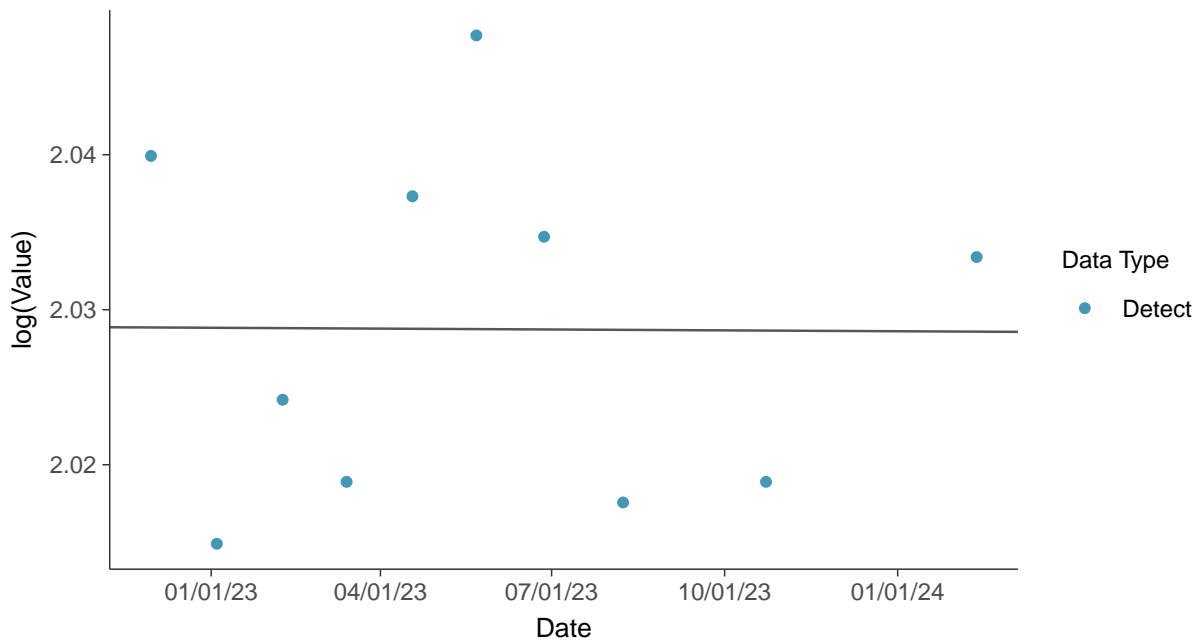
Gamma Q-Q plot

pH (field), MW-32 (su)



Trend Regression: Lognormal MLE

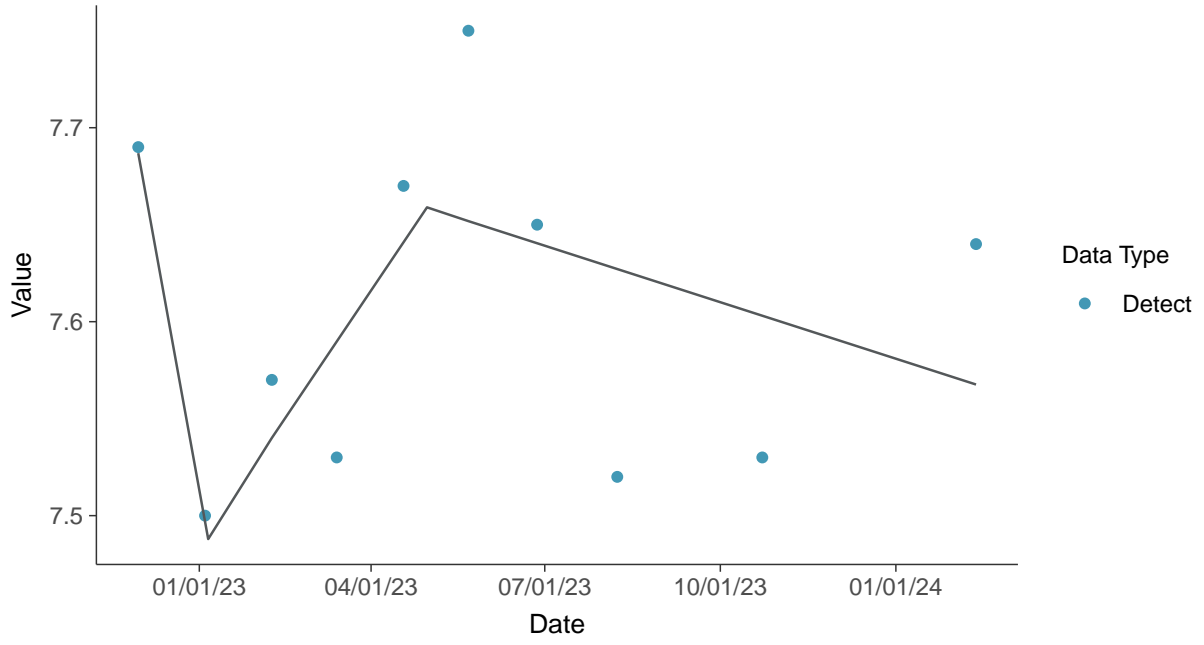
pH (field), MW-32 (su)





Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-32 (su)



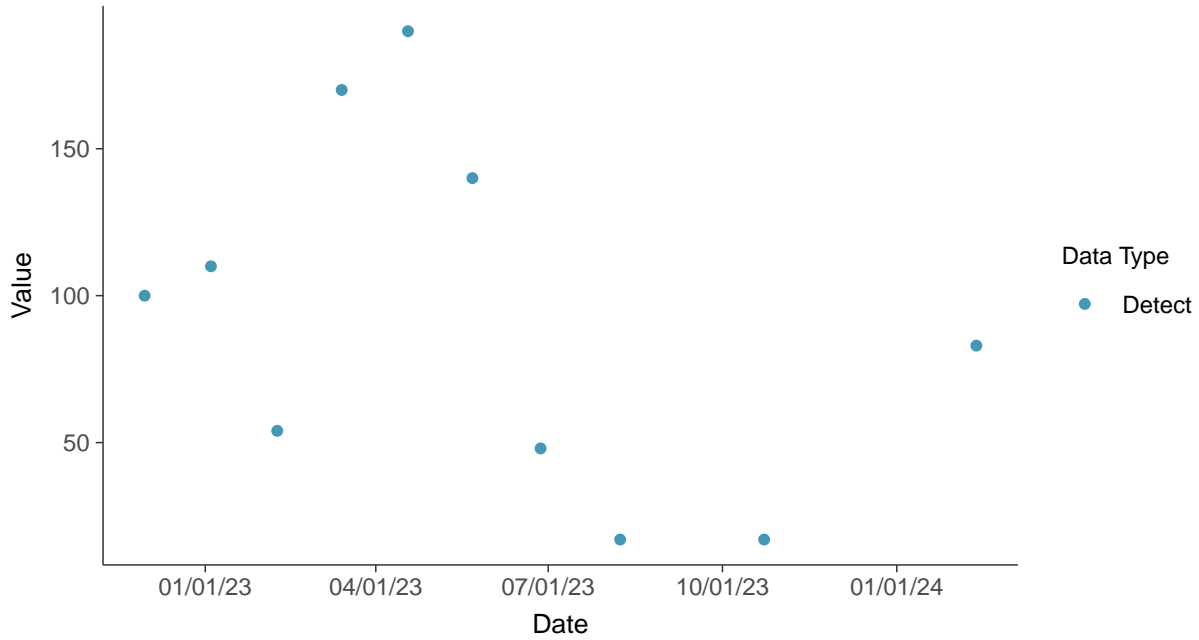


Appendix III: Sulfate (as SO₄), MW-32

ID: 2_42_4_124

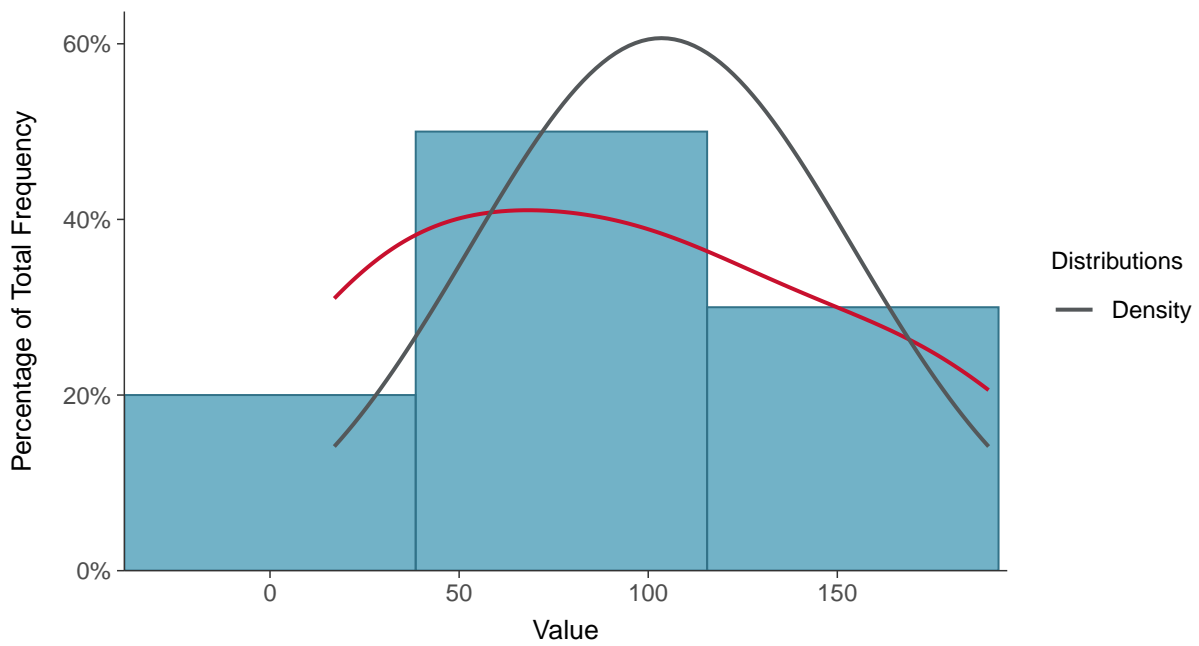
Scatter Plot

Sulfate (as SO₄), MW-32 (mg/L)



Histogram

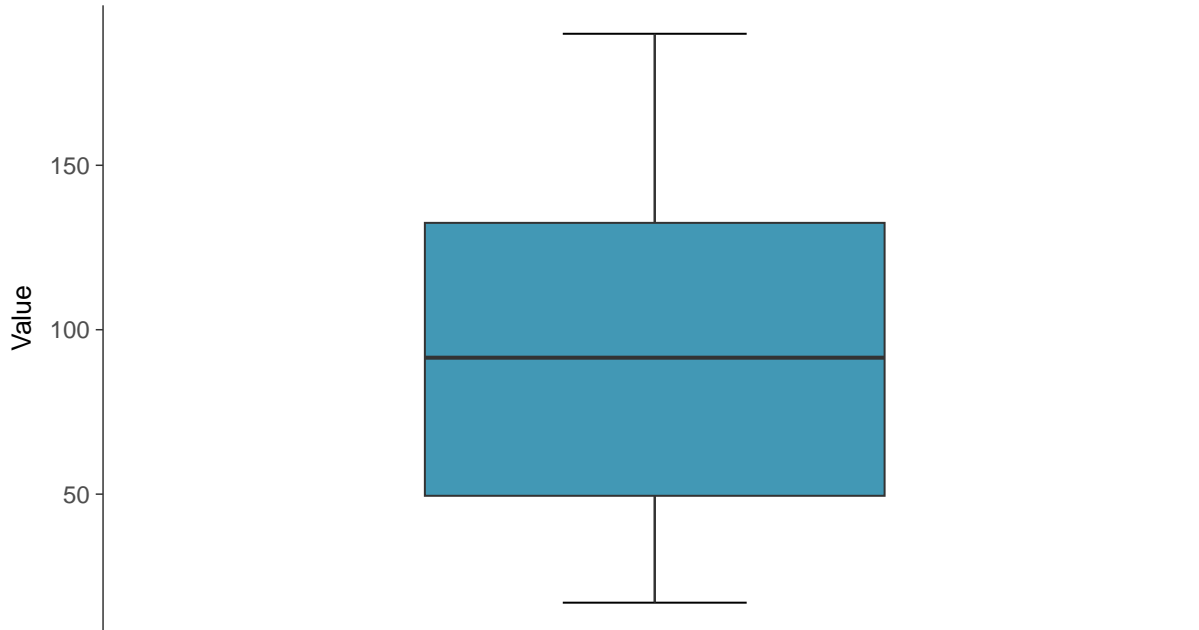
Sulfate (as SO₄), MW-32 (mg/L)





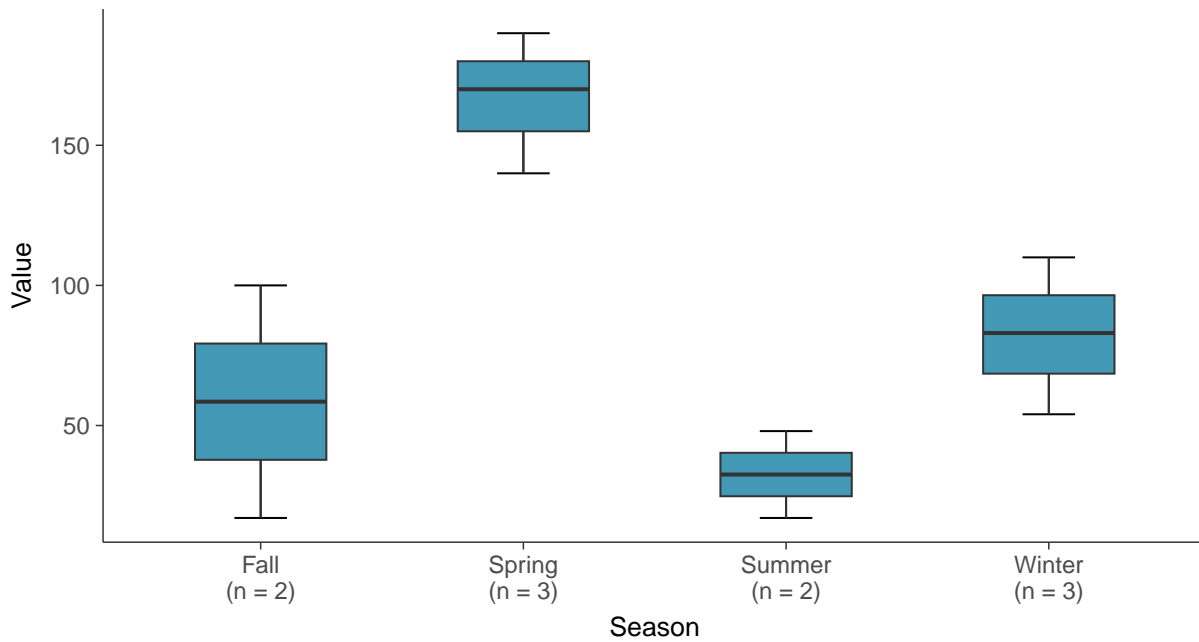
Boxplot

Sulfate (as SO₄), MW-32 (mg/L)



Boxplot by Season

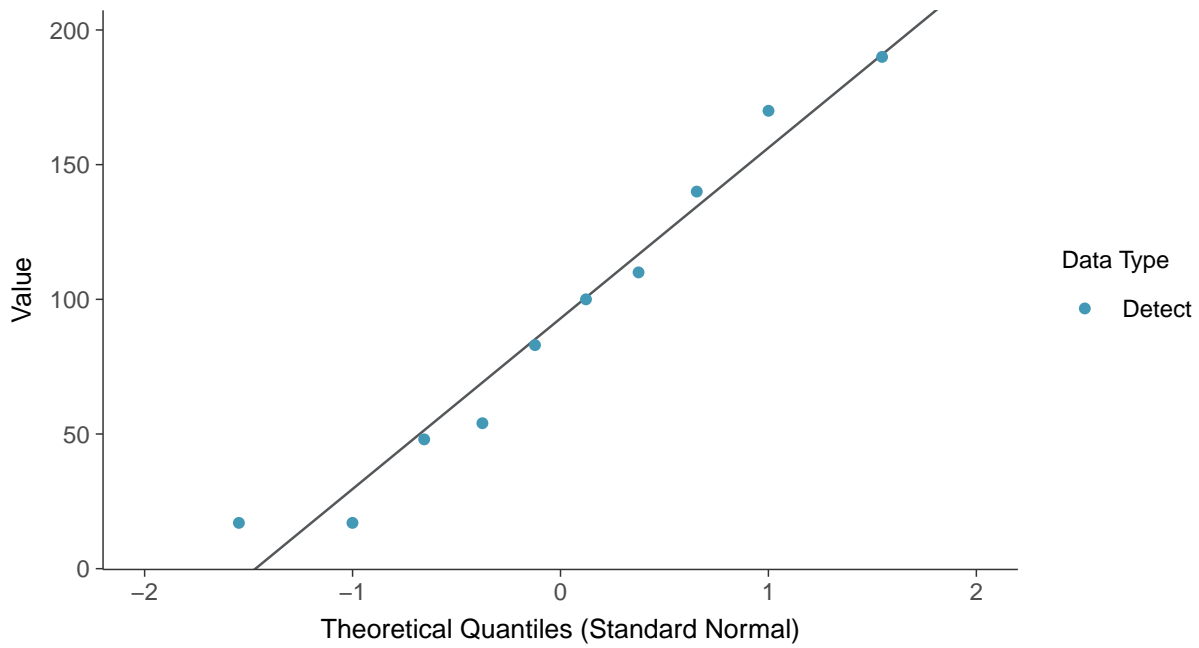
Sulfate (as SO₄), MW-32 (mg/L)





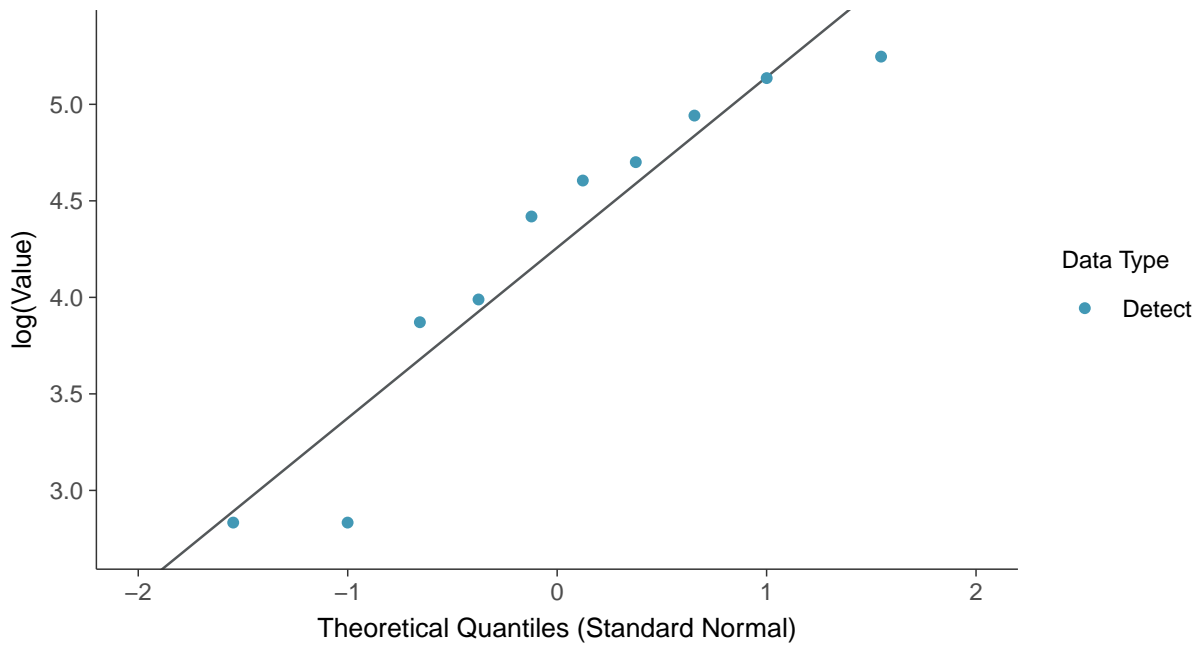
Normal Q-Q plot

Sulfate (as SO₄), MW-32 (mg/L)



Lognormal Q-Q plot

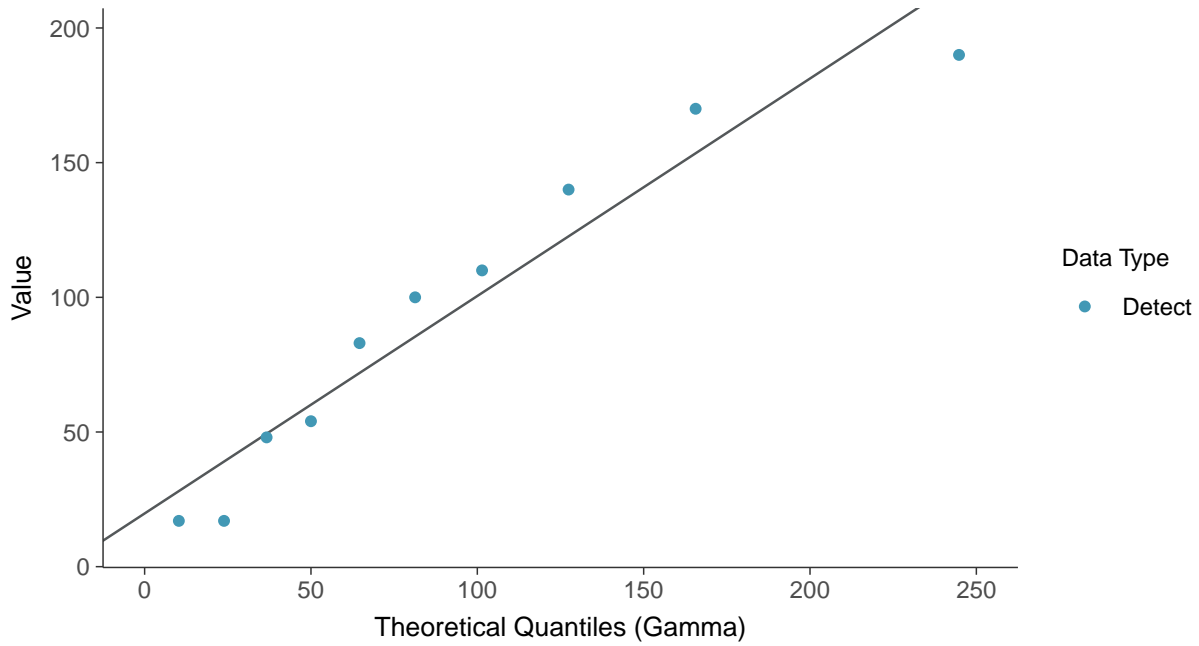
Sulfate (as SO₄), MW-32 (mg/L)





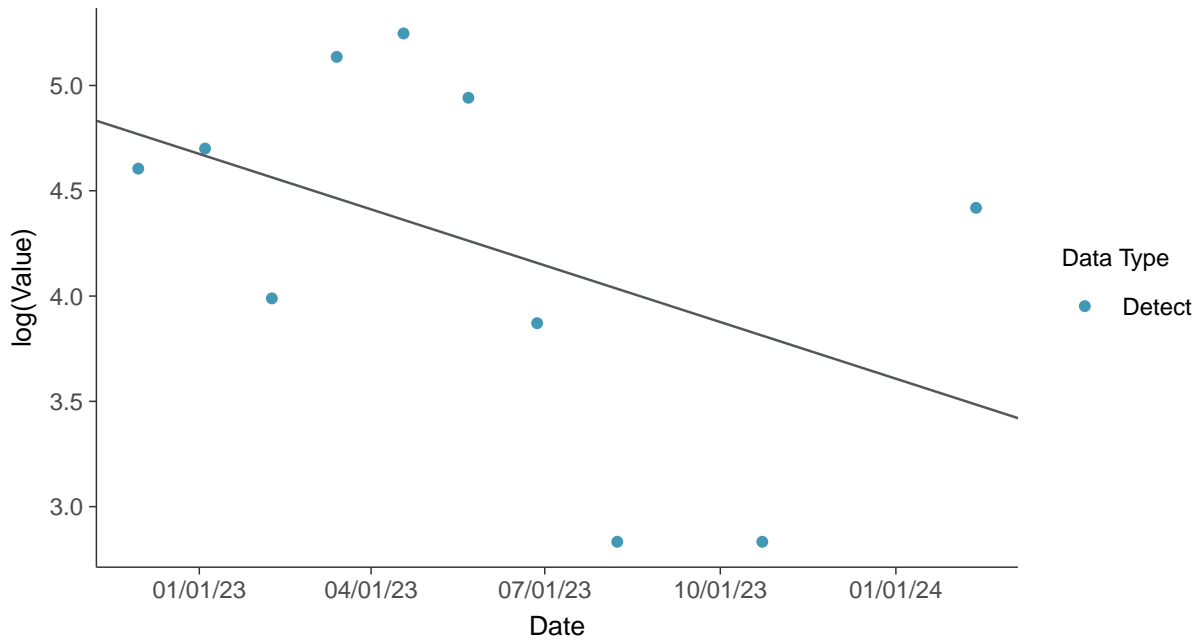
Gamma Q-Q plot

Sulfate (as SO₄), MW-32 (mg/L)



Trend Regression: Lognormal MLE

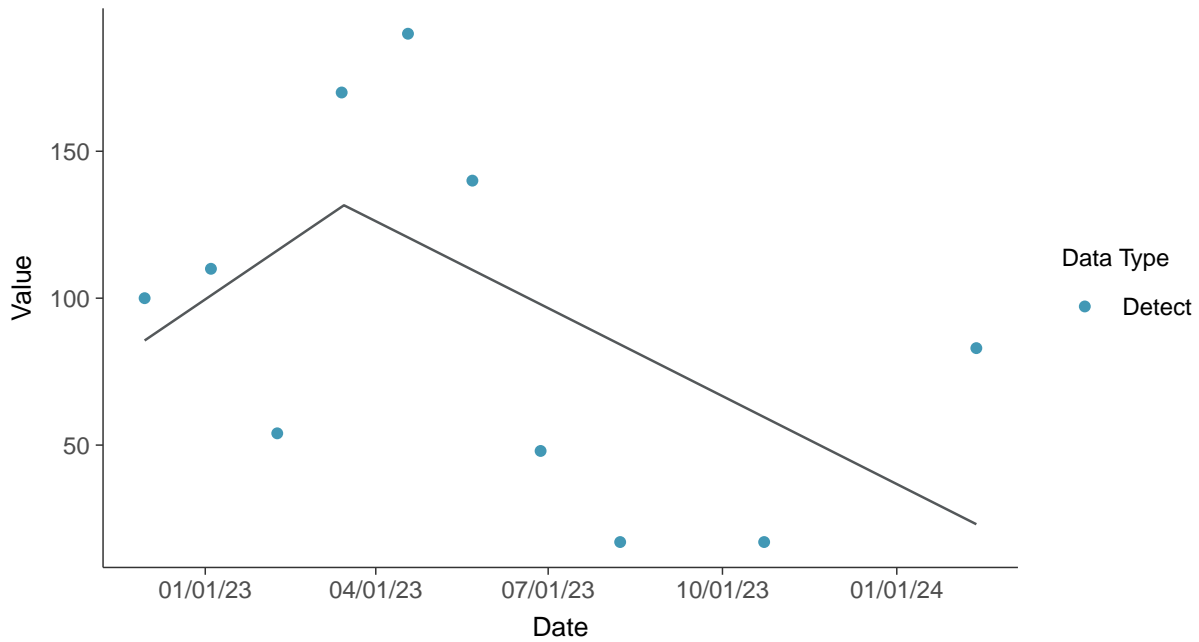
Sulfate (as SO₄), MW-32 (mg/L)





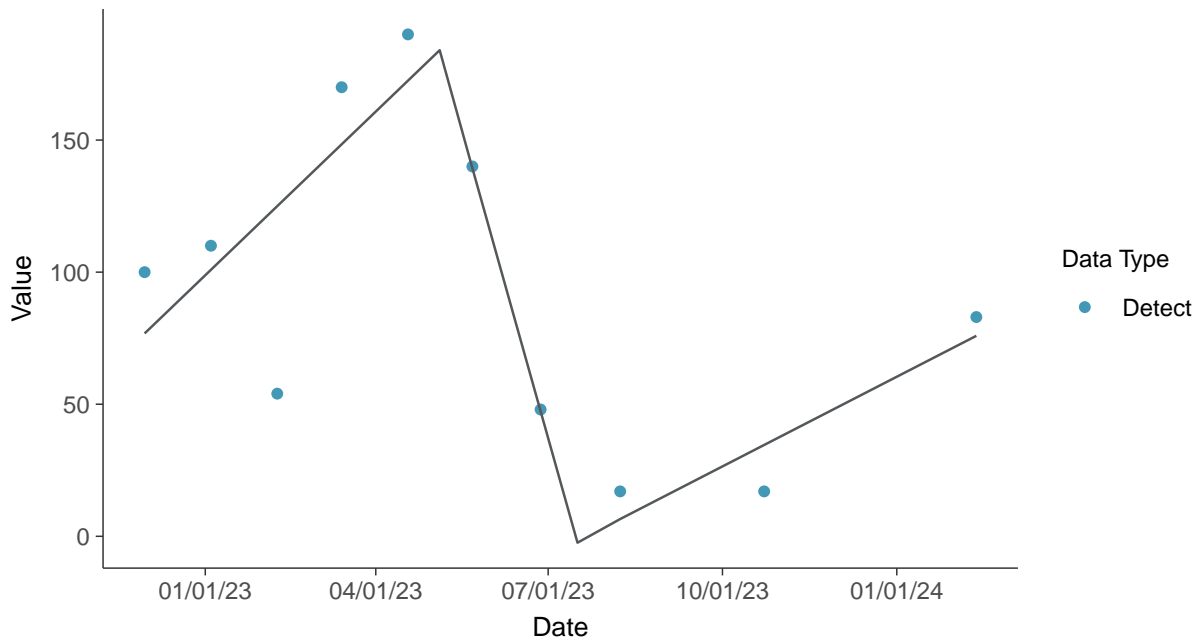
Trend Regression: Piecewise Linear-Linear

Sulfate (as SO4), MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO4), MW-32 (mg/L)



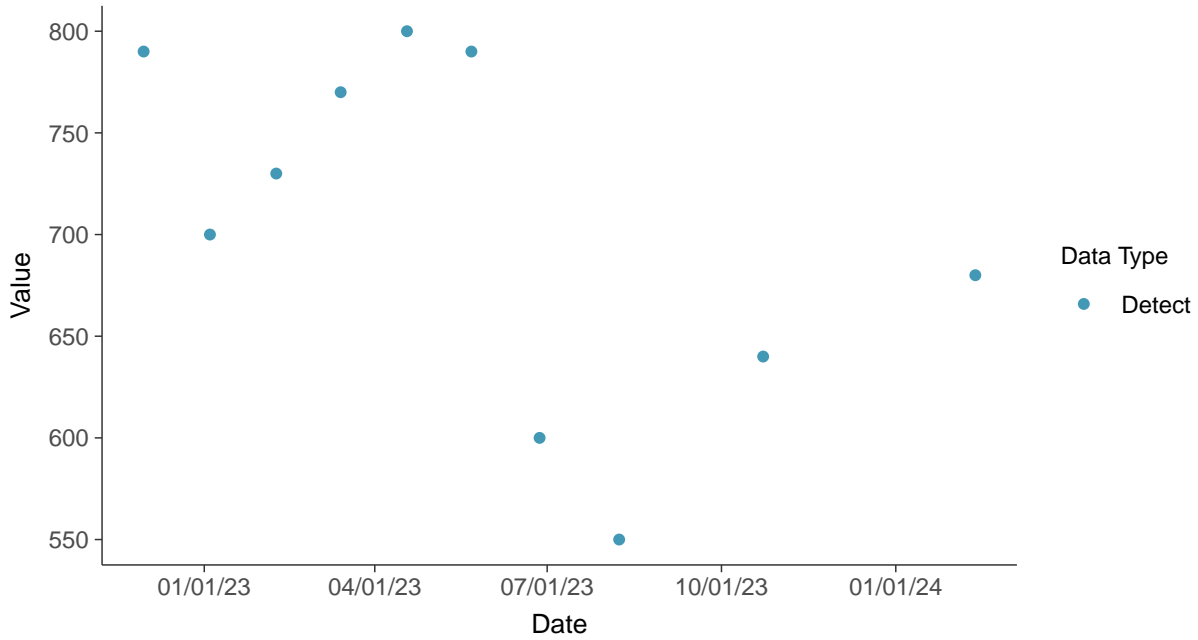


Appendix III: Total Dissolved Solids, MW-32

ID: 2_42_4_126

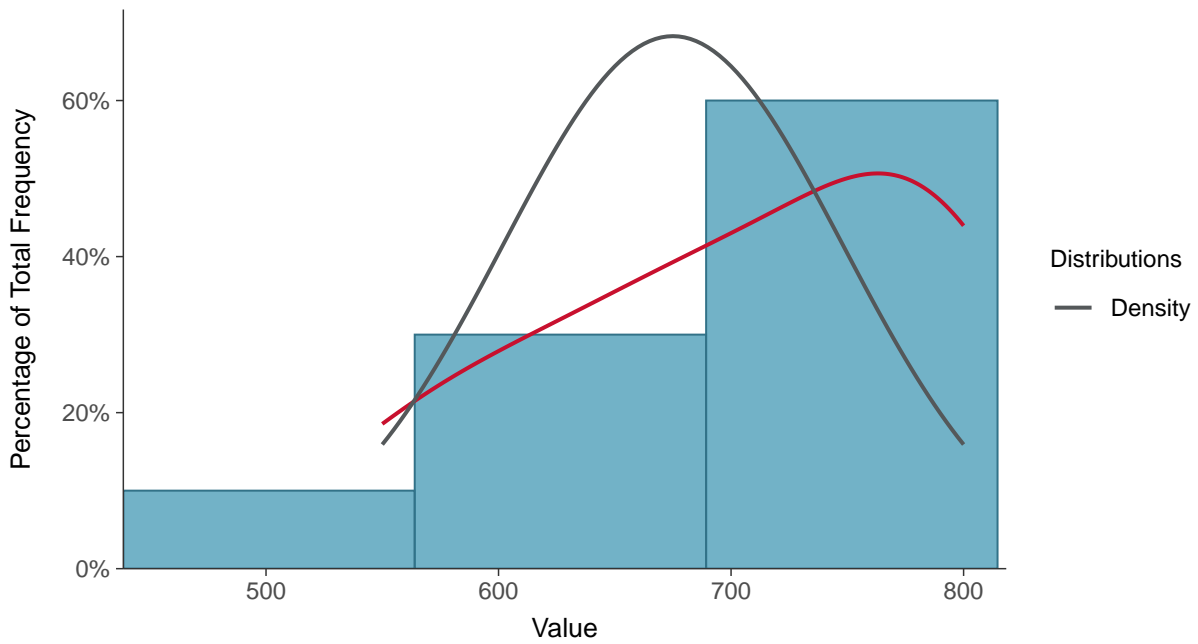
Scatter Plot

Total Dissolved Solids, MW-32 (mg/L)



Histogram

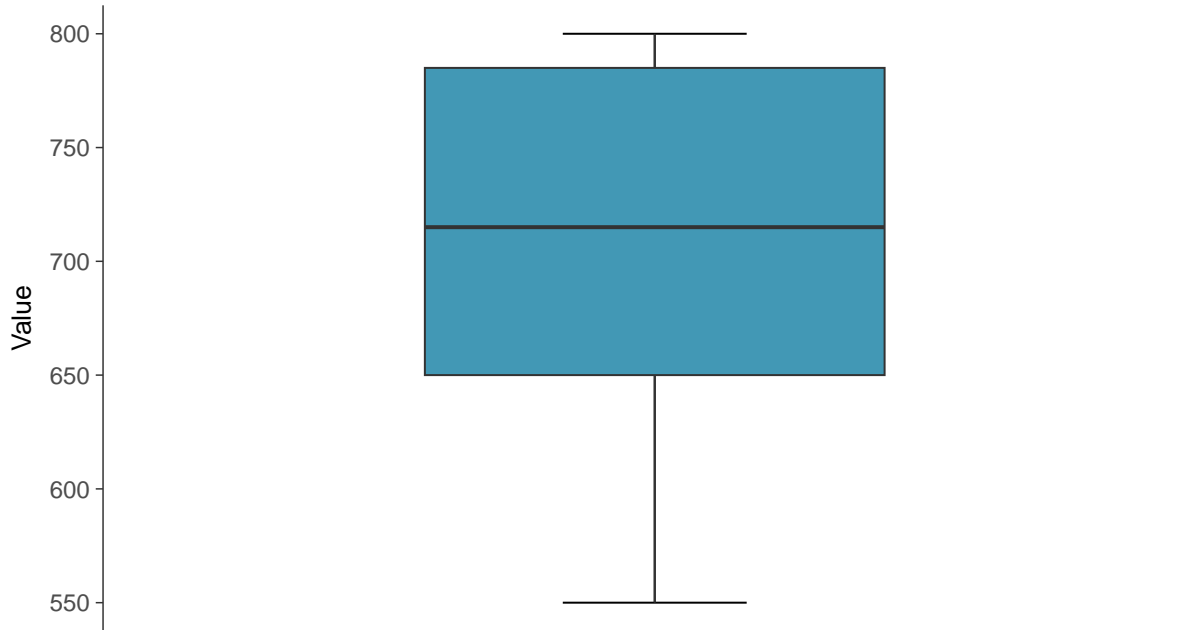
Total Dissolved Solids, MW-32 (mg/L)





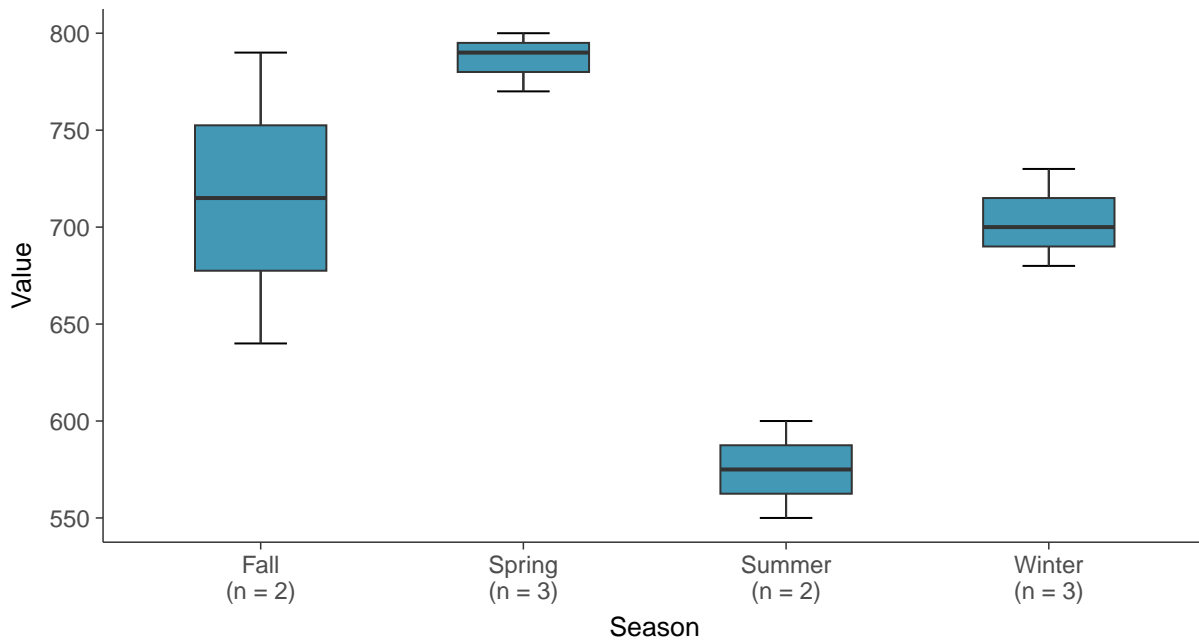
Boxplot

Total Dissolved Solids, MW-32 (mg/L)



Boxplot by Season

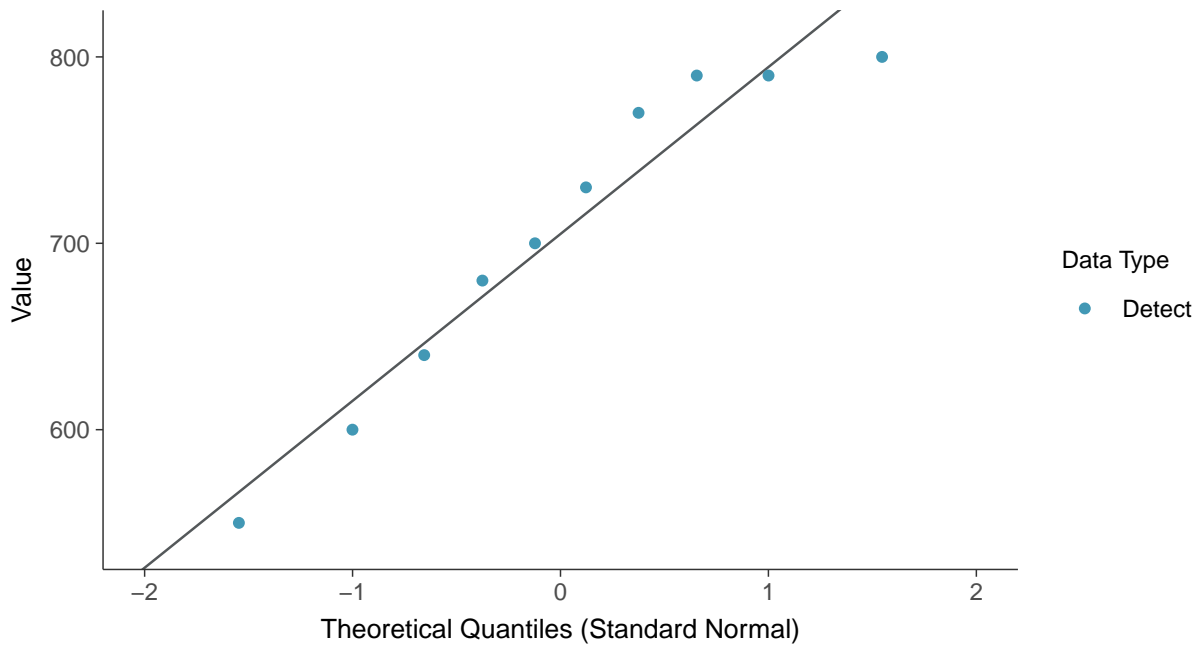
Total Dissolved Solids, MW-32 (mg/L)





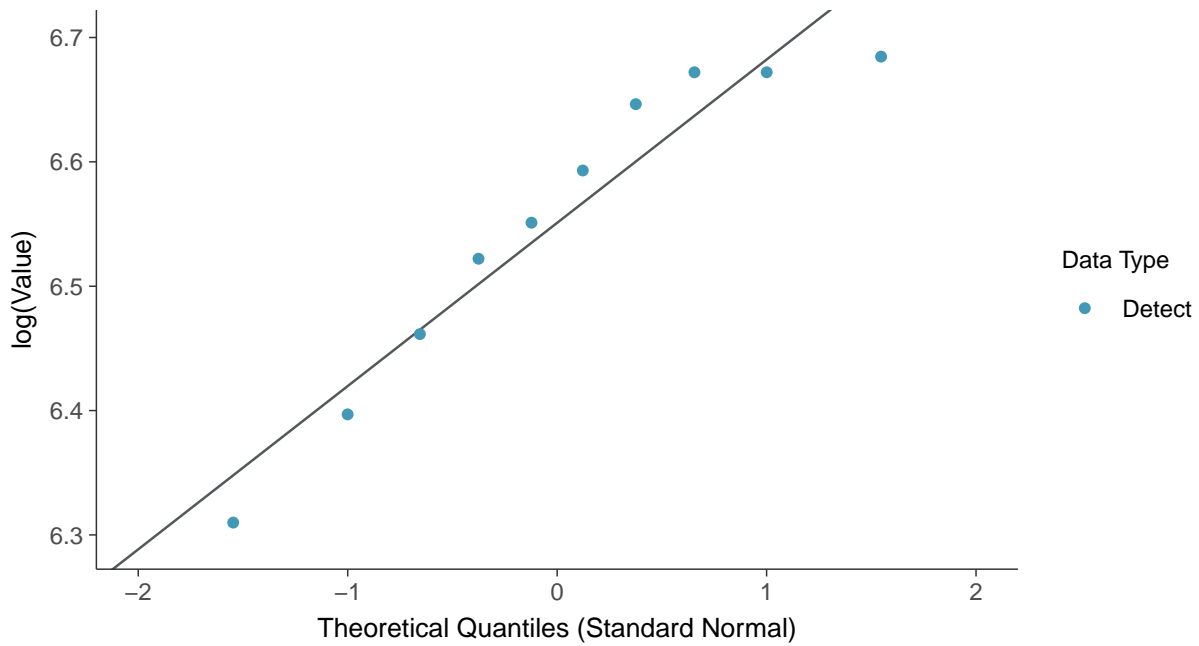
Normal Q-Q plot

Total Dissolved Solids, MW-32 (mg/L)



Lognormal Q-Q plot

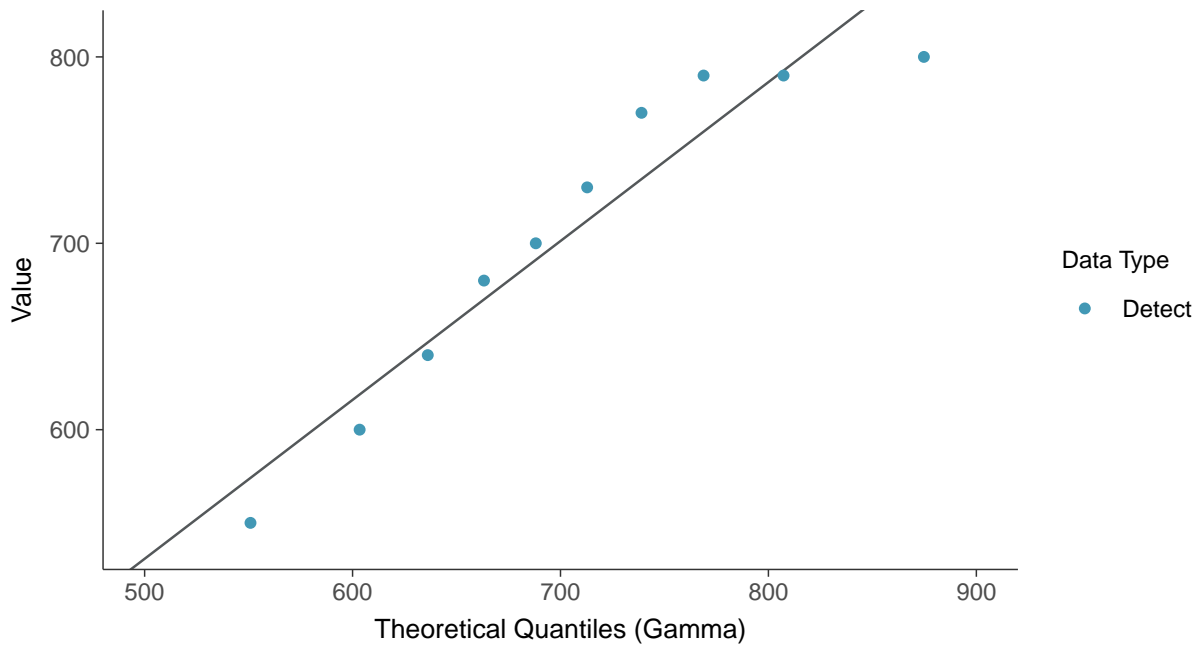
Total Dissolved Solids, MW-32 (mg/L)





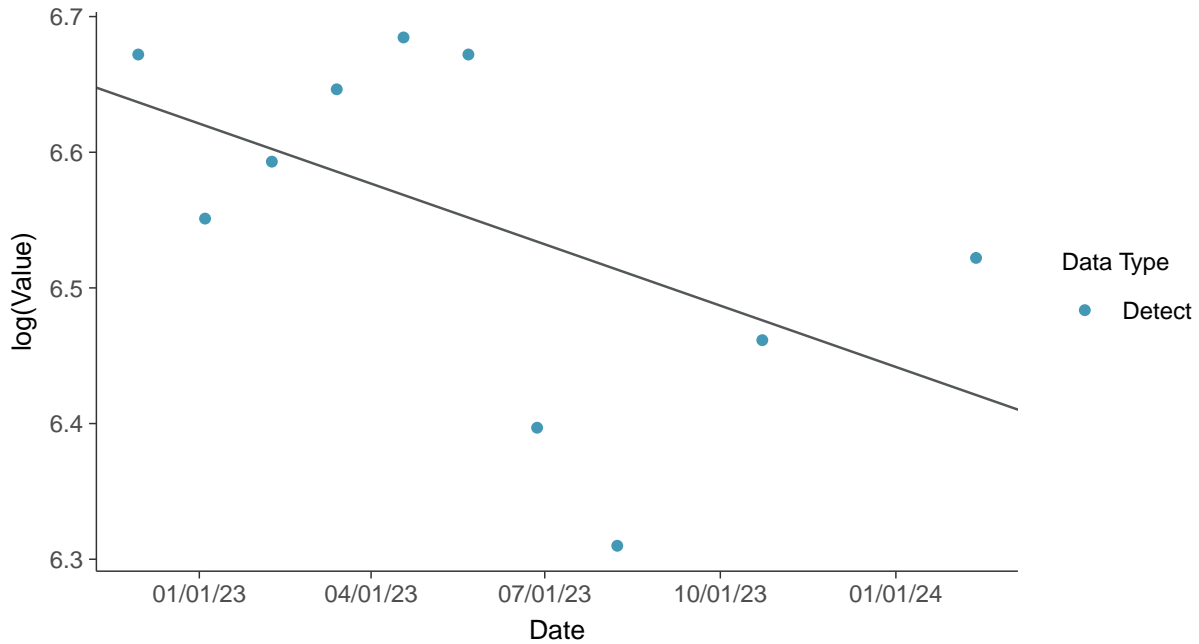
Gamma Q-Q plot

Total Dissolved Solids, MW-32 (mg/L)



Trend Regression: Lognormal MLE

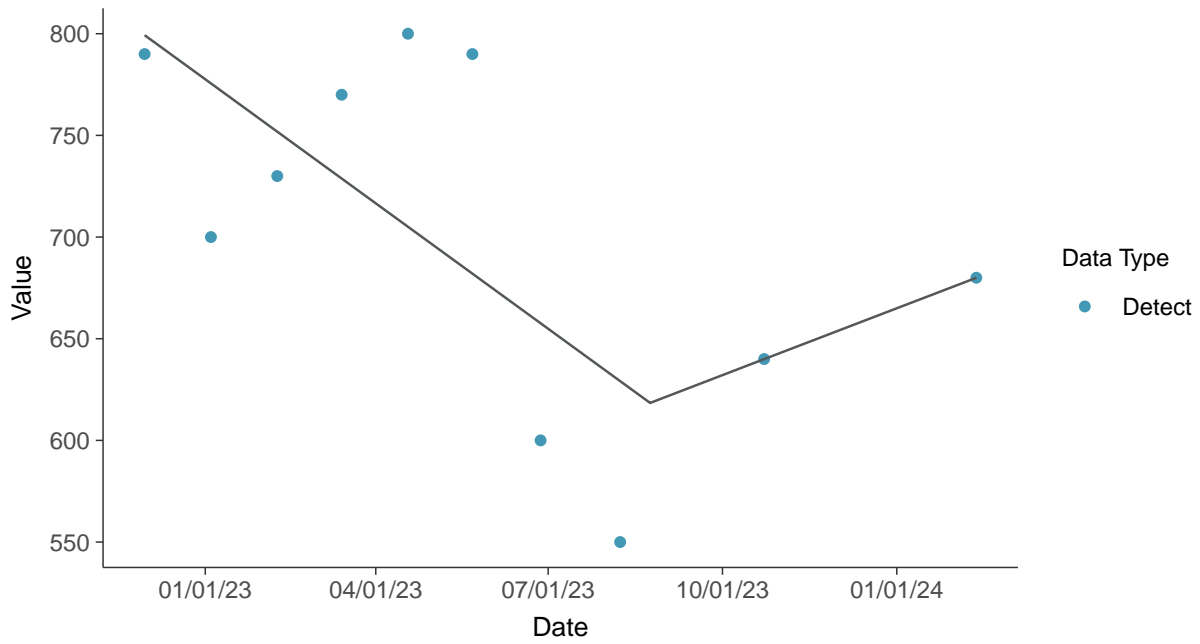
Total Dissolved Solids, MW-32 (mg/L)





Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-32 (mg/L)



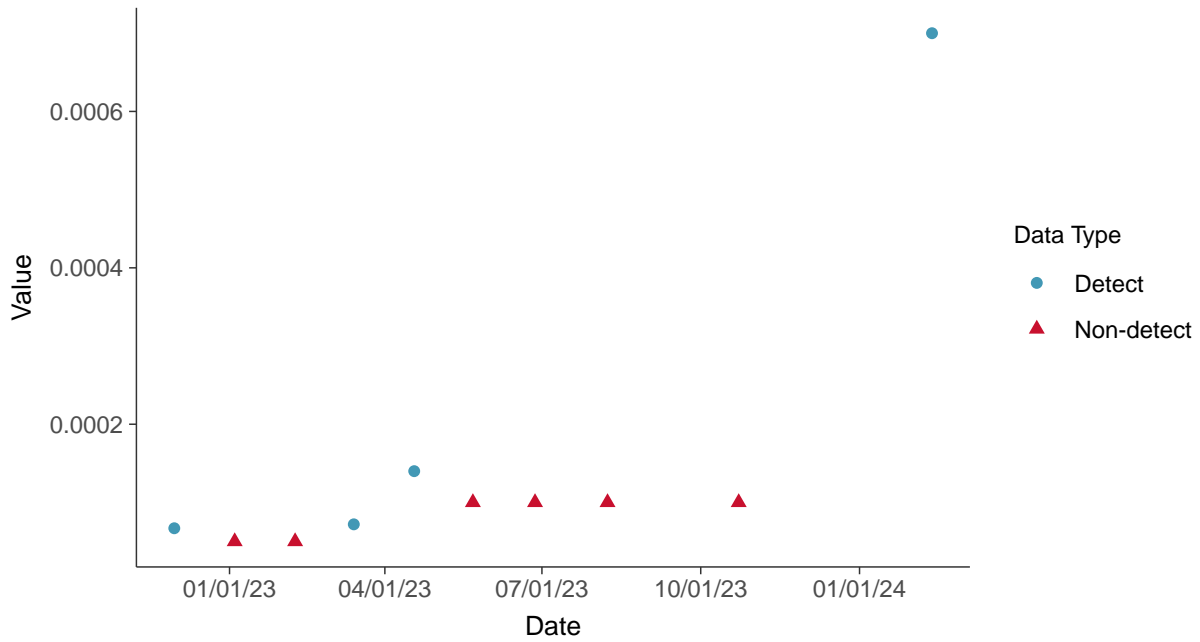


Appendix IV: Antimony, MW-32

ID: 2_42_5_101

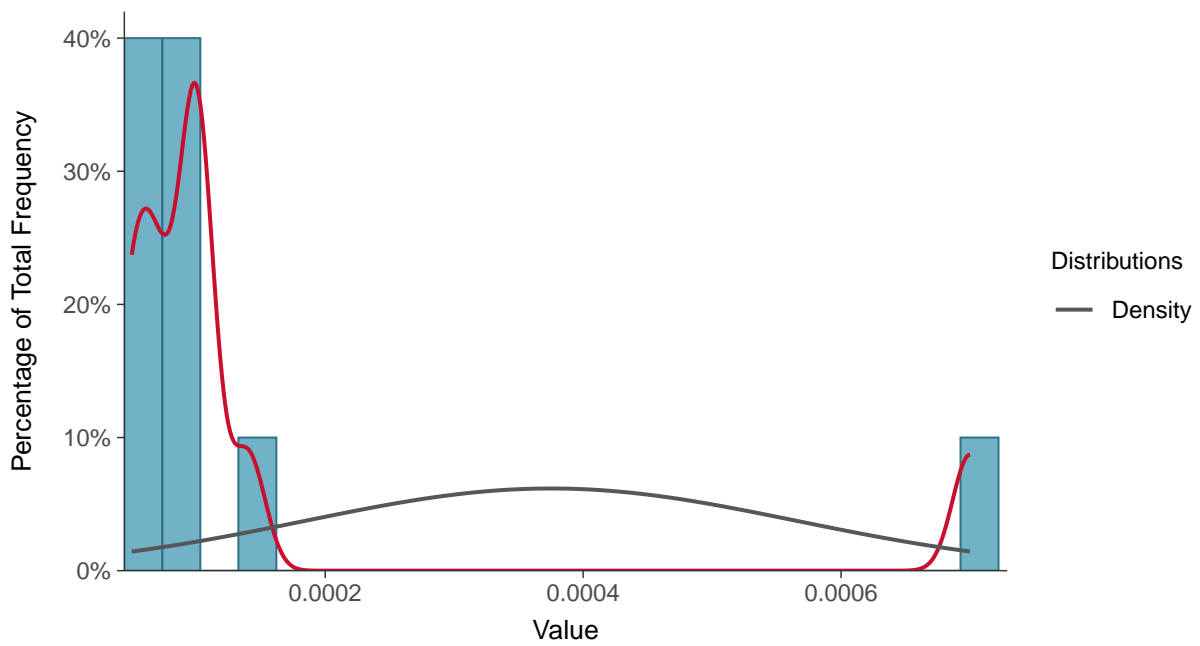
Scatter Plot

Antimony, MW-32 (mg/L)



Histogram

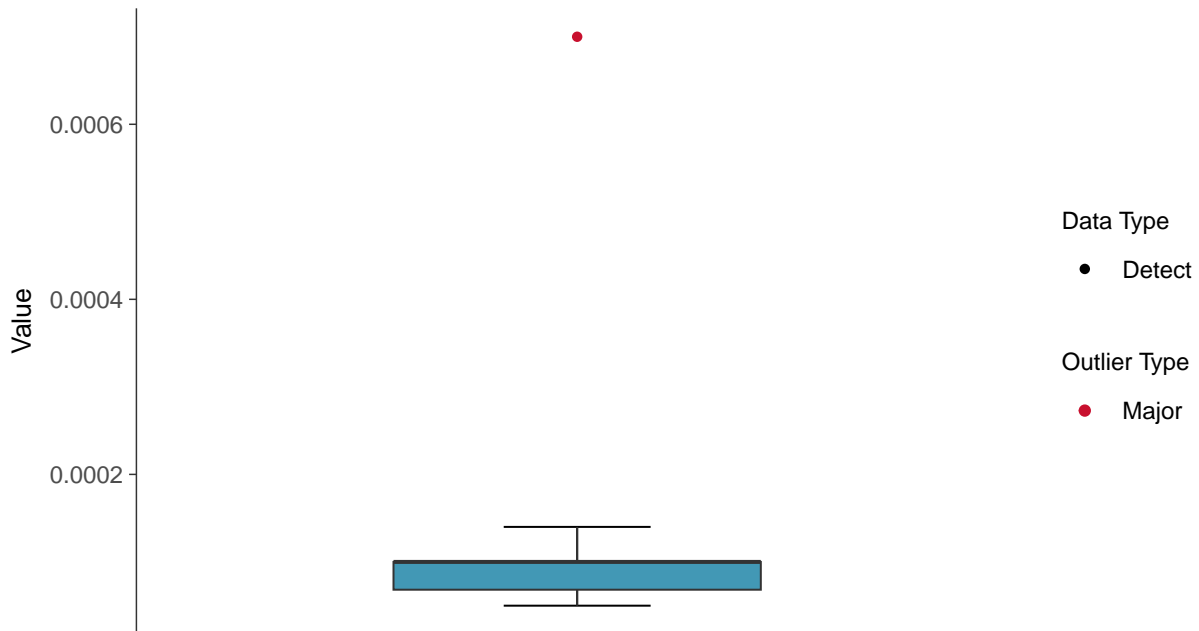
Antimony, MW-32 (mg/L)





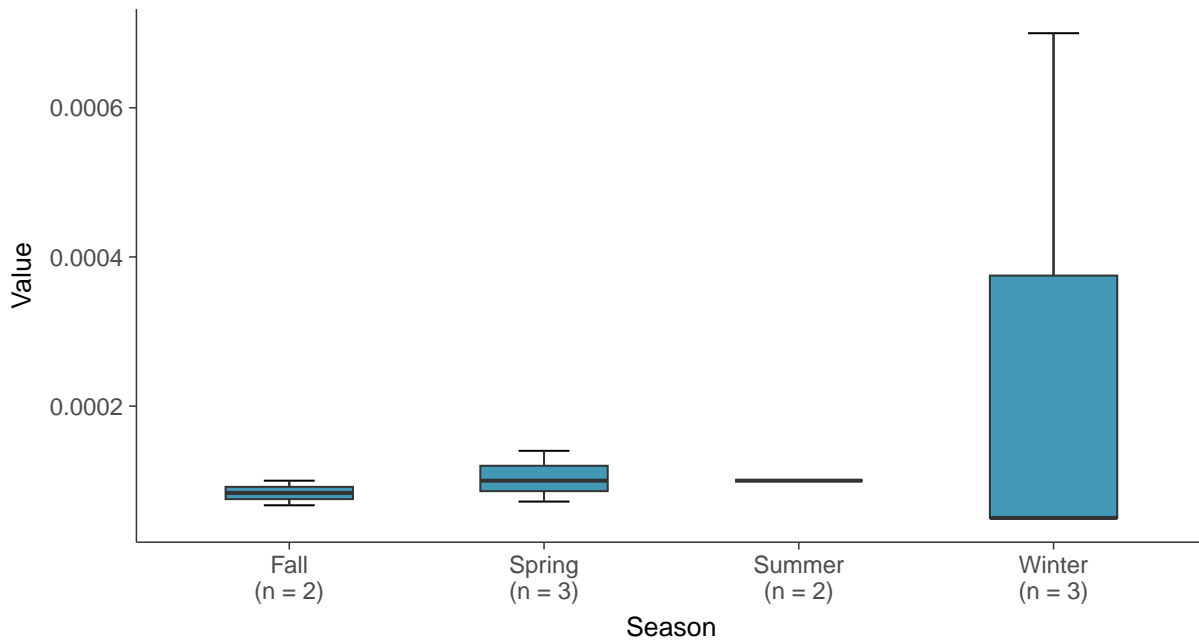
Boxplot

Antimony, MW-32 (mg/L)



Boxplot by Season

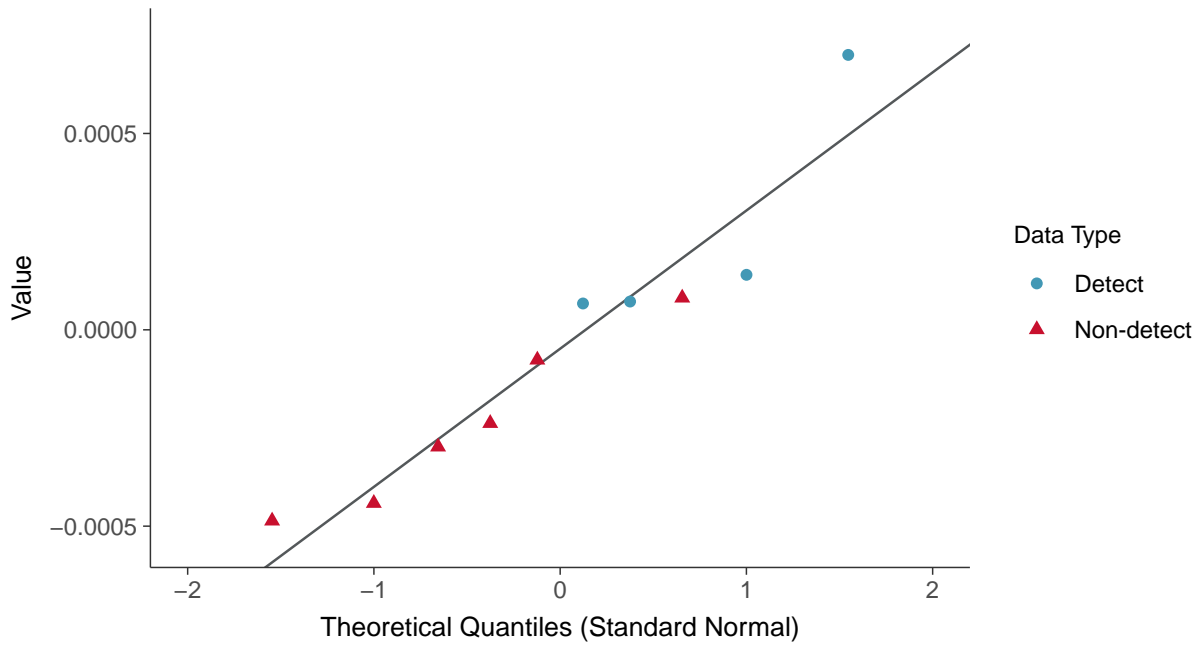
Antimony, MW-32 (mg/L)





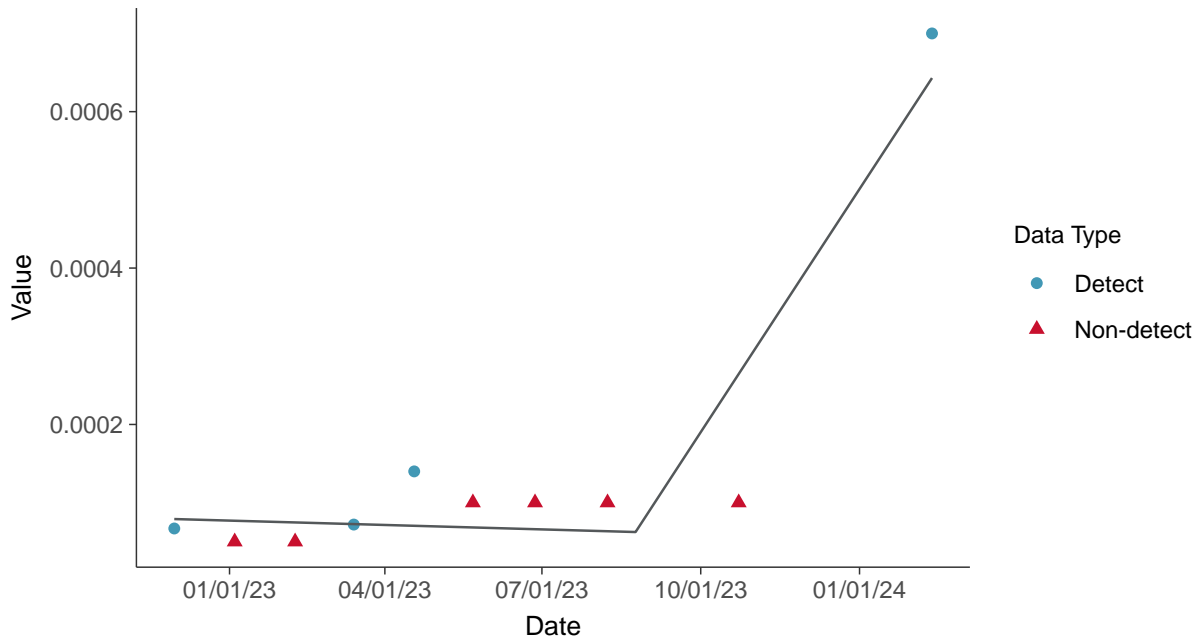
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear

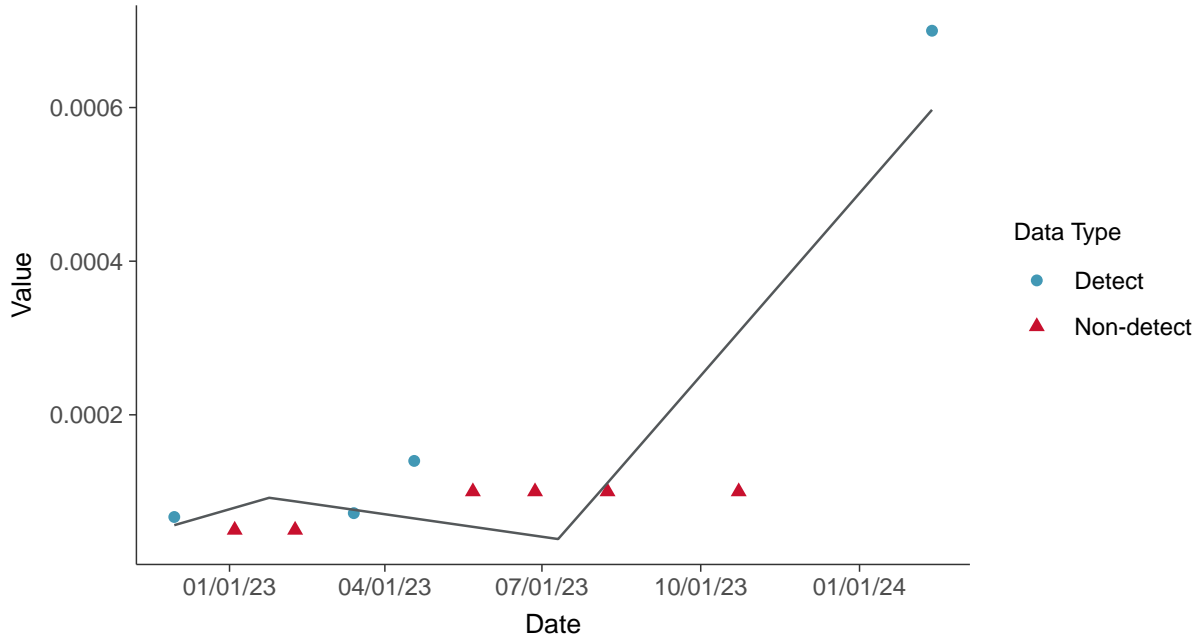
Antimony, MW-32 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-32 (mg/L)



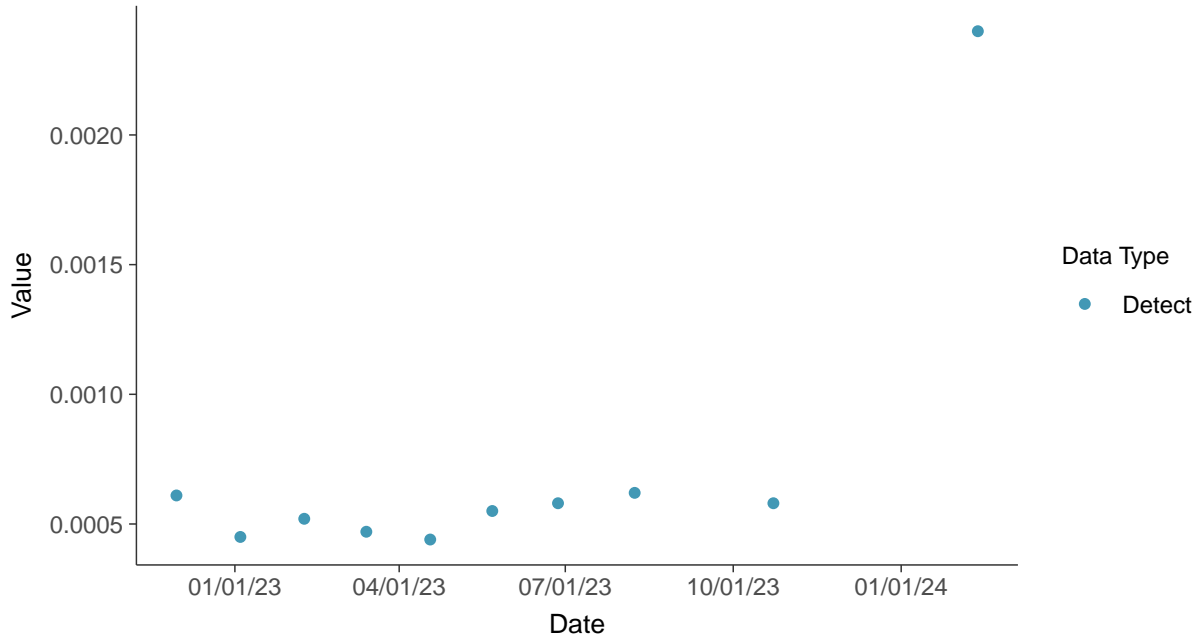


Appendix IV: Arsenic, MW-32

ID: 2_42_5_102

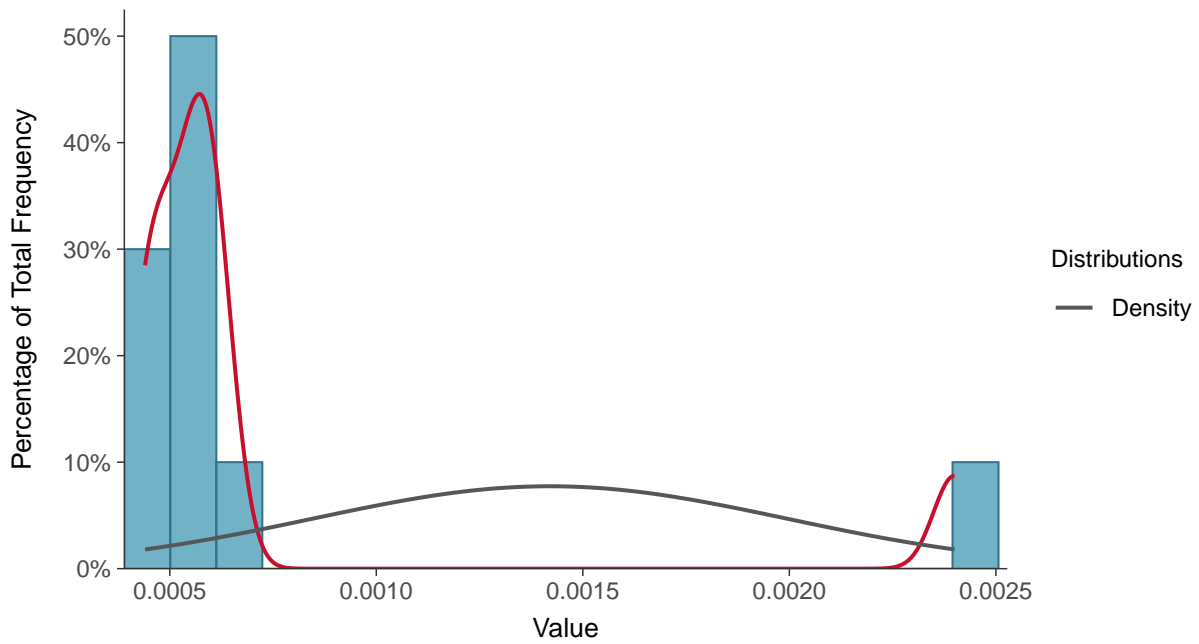
Scatter Plot

Arsenic, MW-32 (mg/L)



Histogram

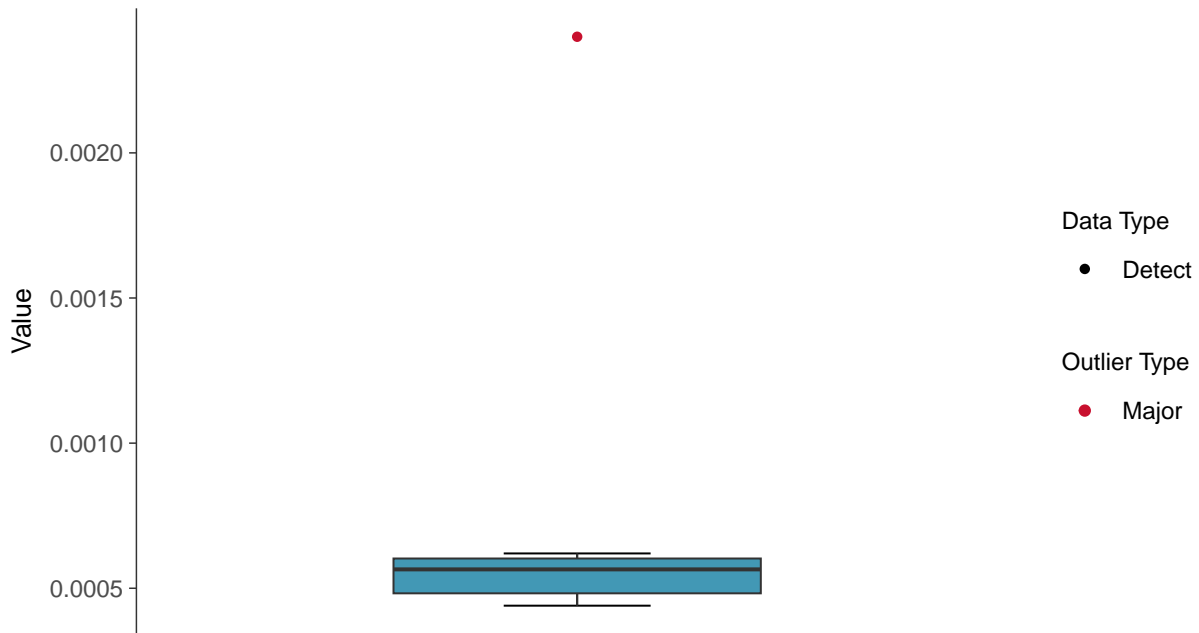
Arsenic, MW-32 (mg/L)





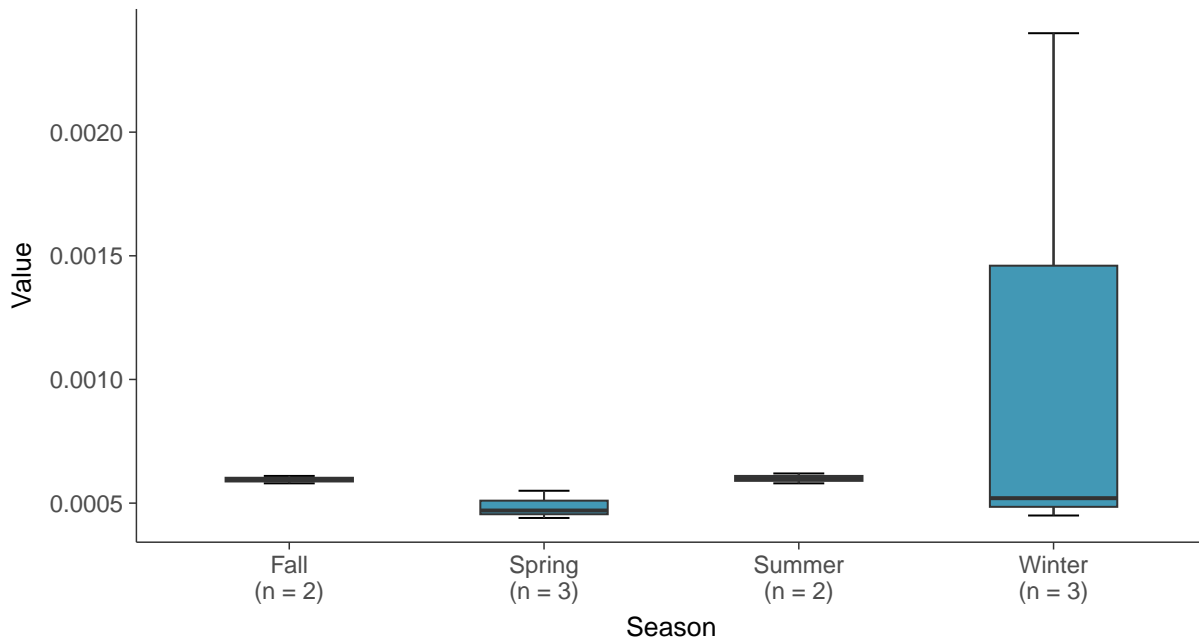
Boxplot

Arsenic, MW-32 (mg/L)



Boxplot by Season

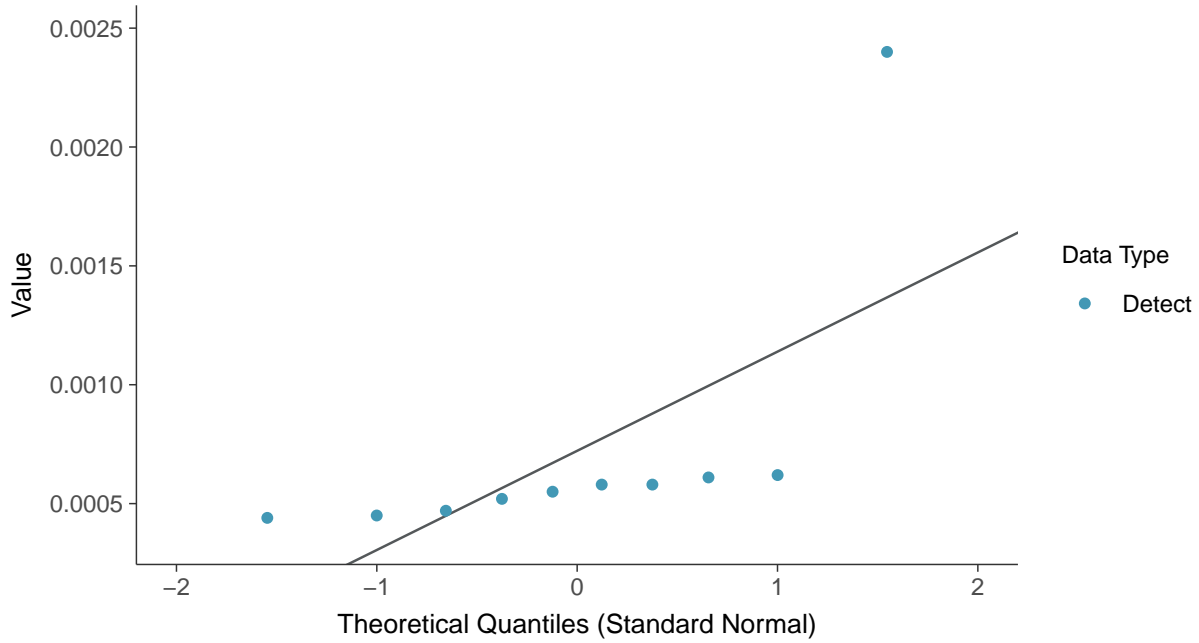
Arsenic, MW-32 (mg/L)





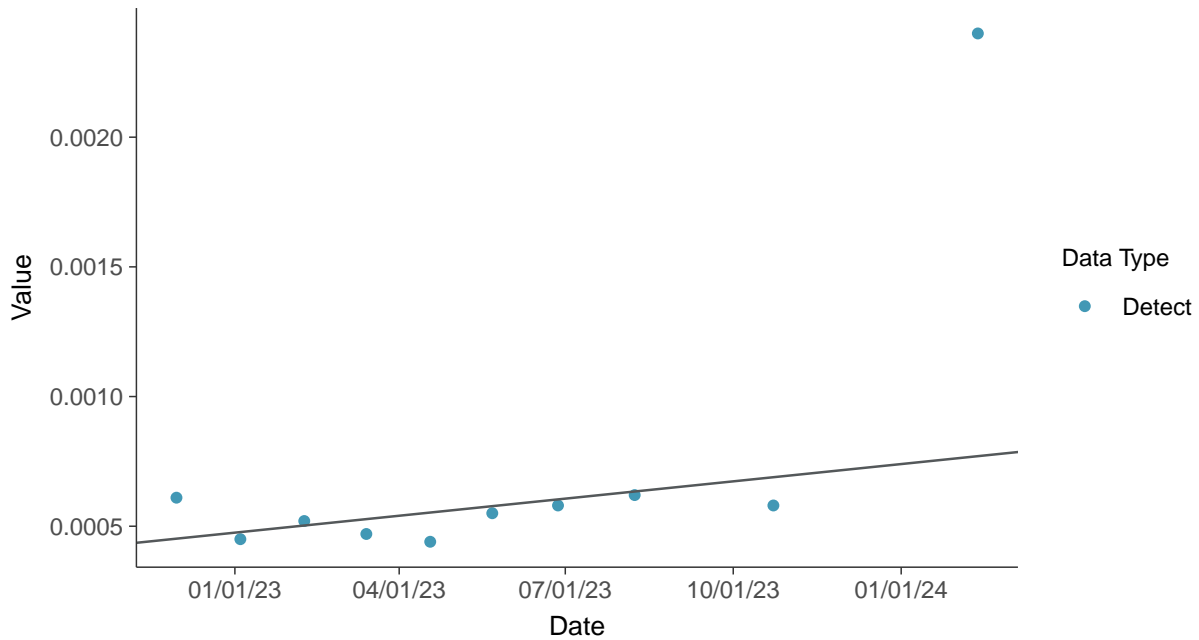
Normal Q-Q plot

Arsenic, MW-32 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

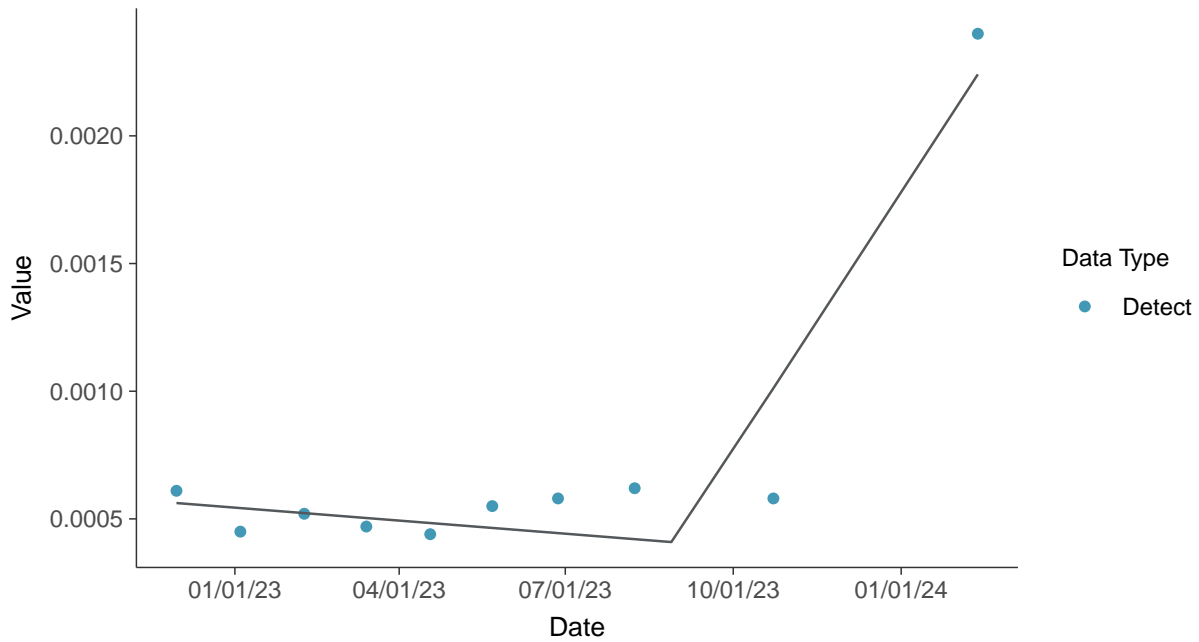
Arsenic, MW-32 (mg/L)





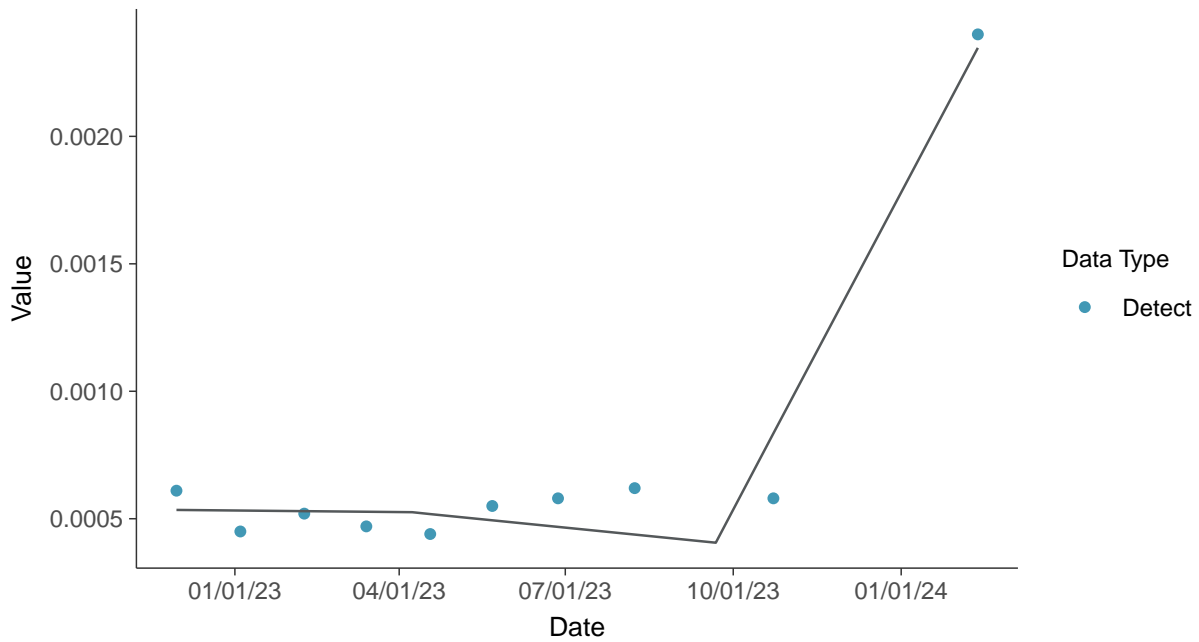
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-32 (mg/L)



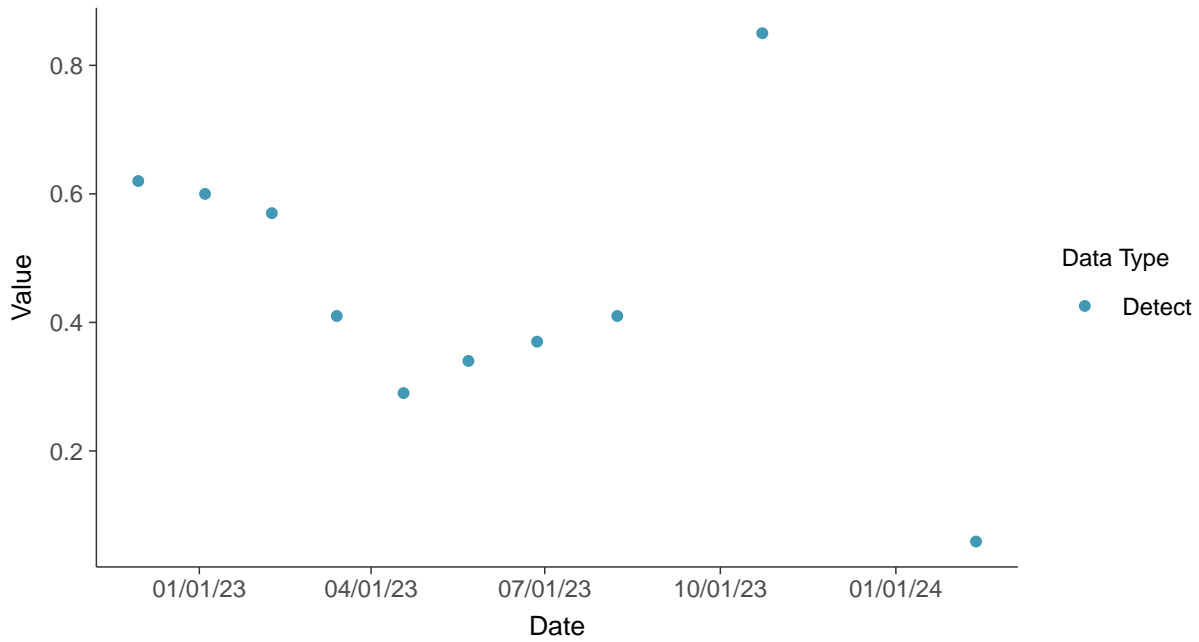


Appendix IV: Barium, MW-32

ID: 2_42_5_103

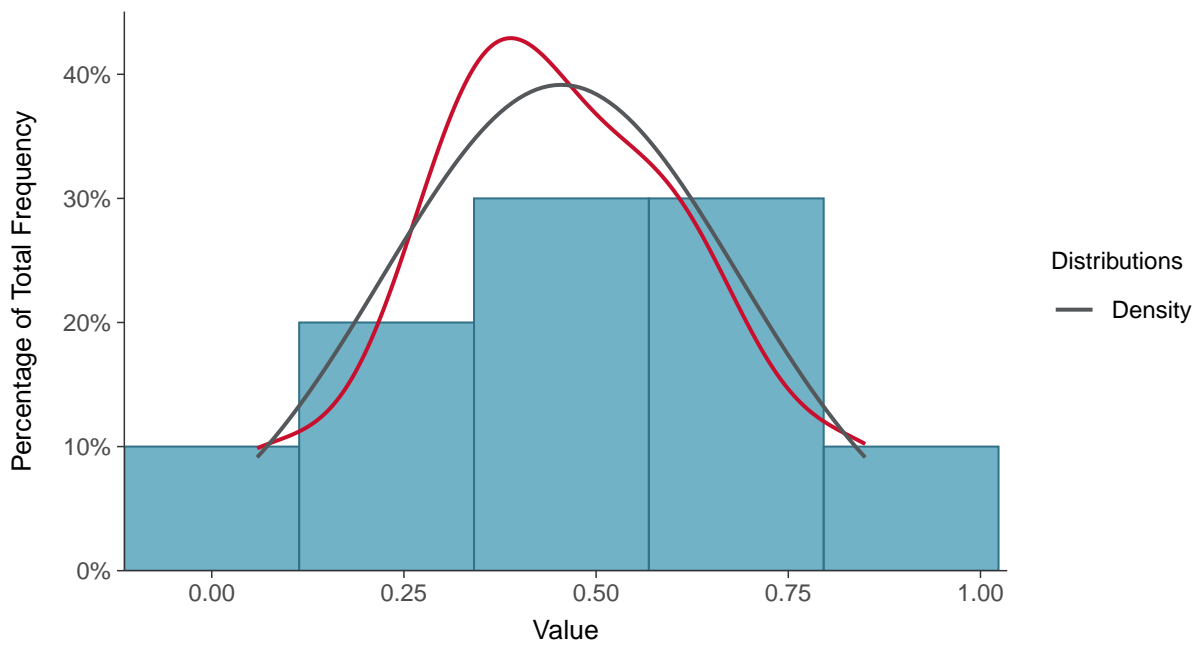
Scatter Plot

Barium, MW-32 (mg/L)



Histogram

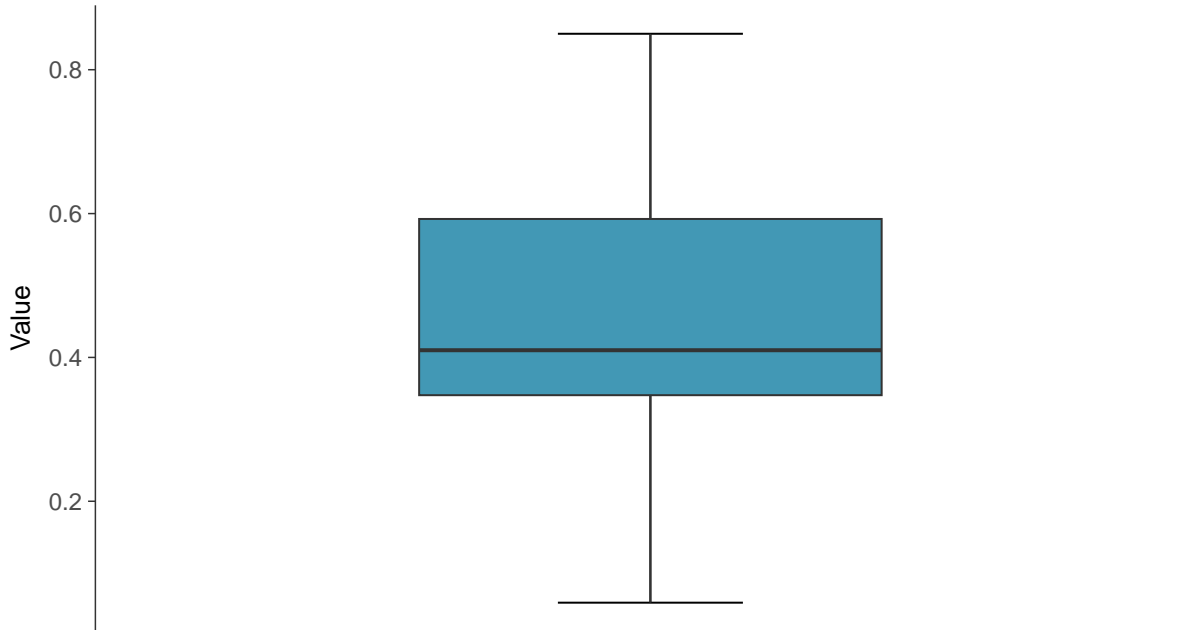
Barium, MW-32 (mg/L)





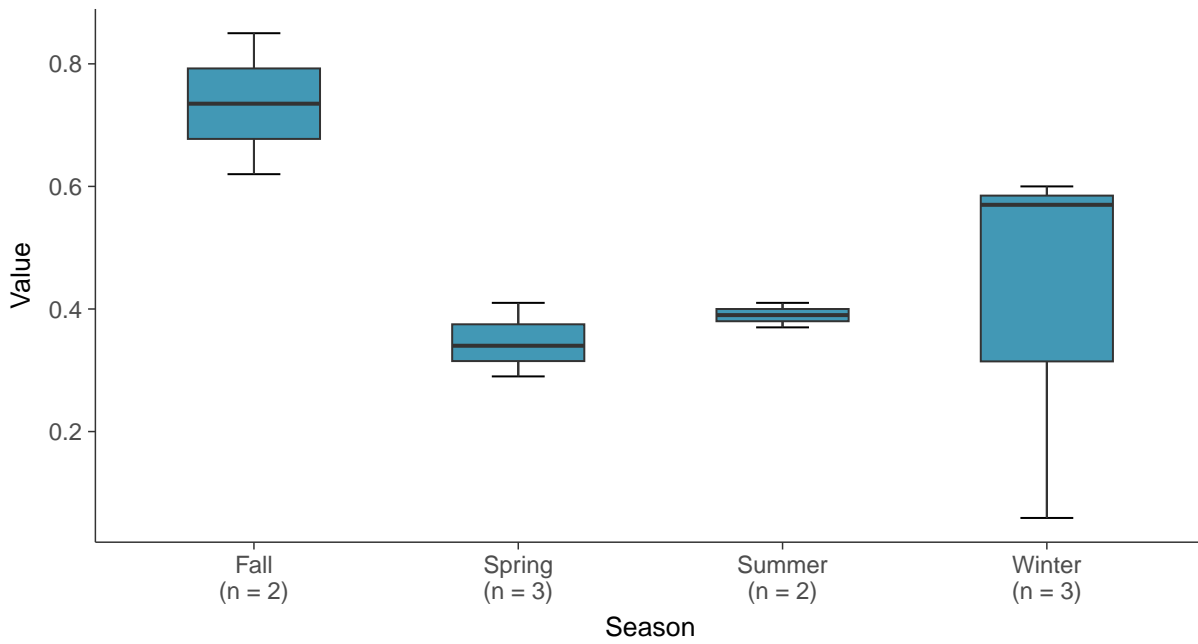
Boxplot

Barium, MW-32 (mg/L)



Boxplot by Season

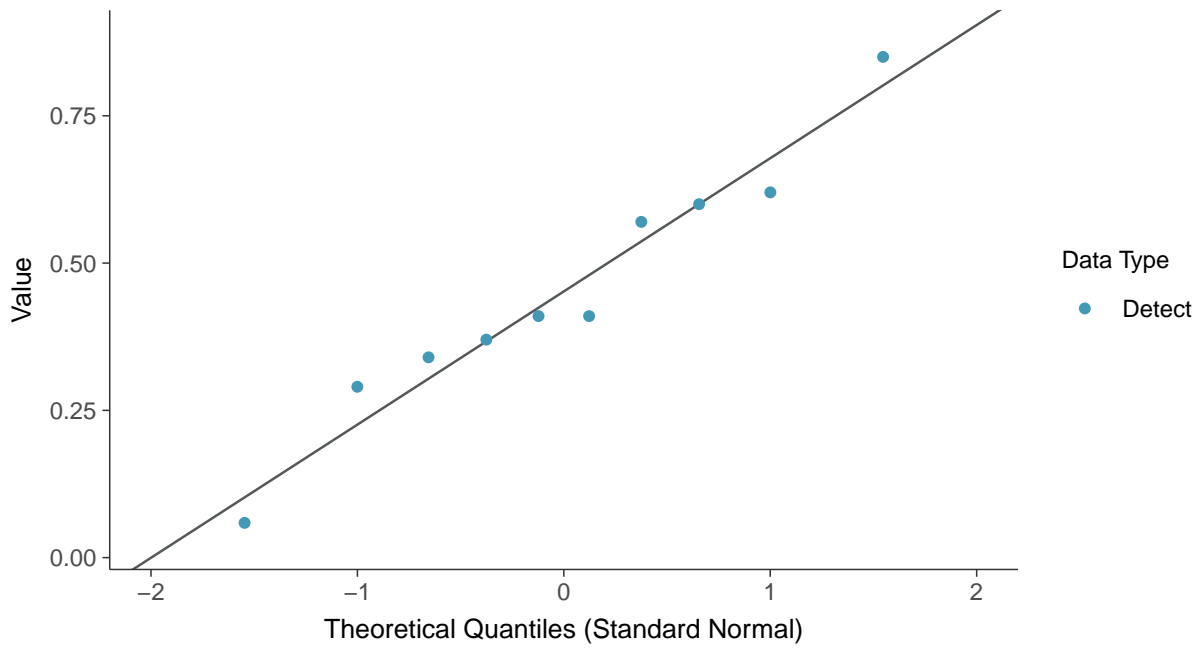
Barium, MW-32 (mg/L)





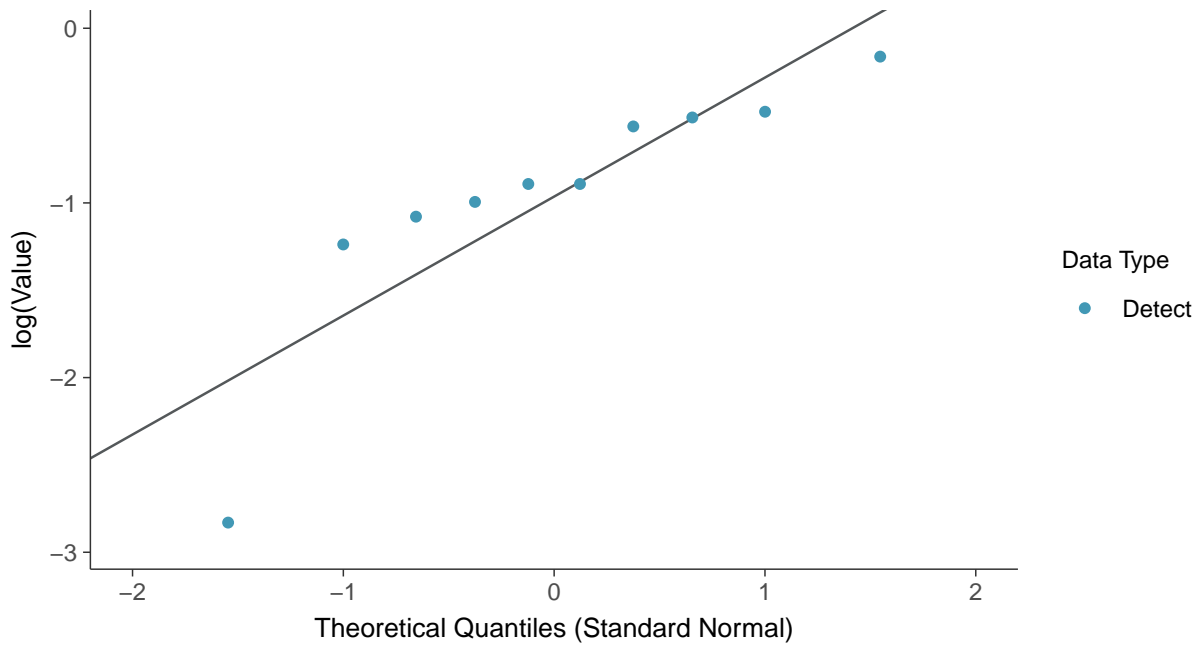
Normal Q-Q plot

Barium, MW-32 (mg/L)



Lognormal Q-Q plot

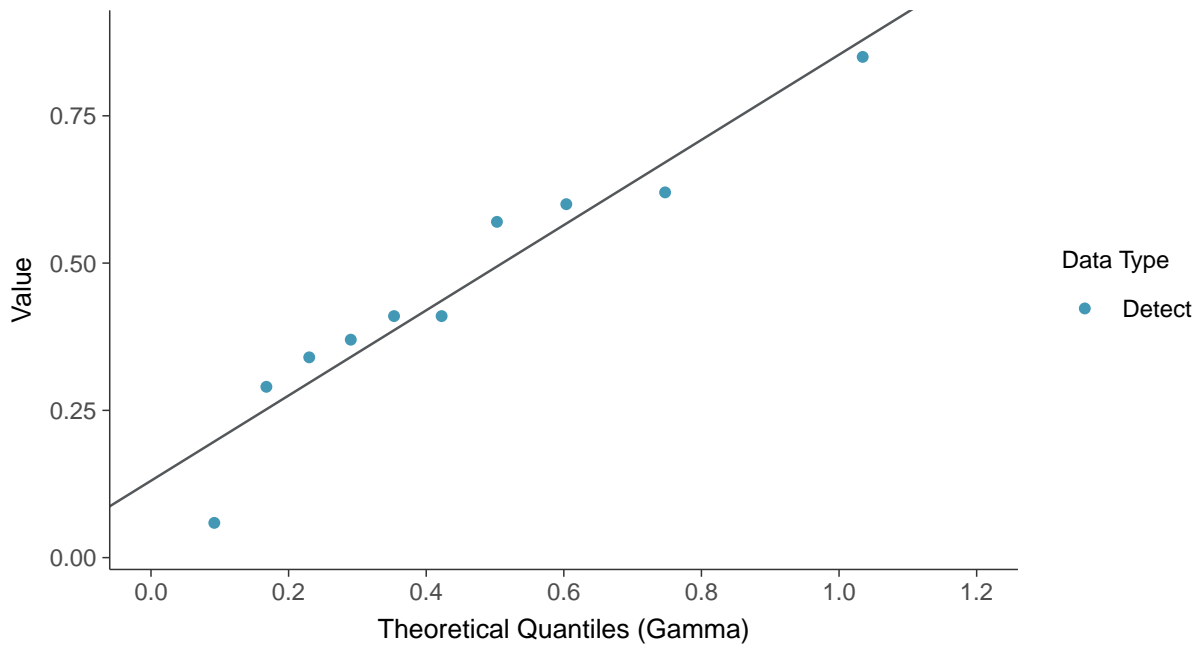
Barium, MW-32 (mg/L)





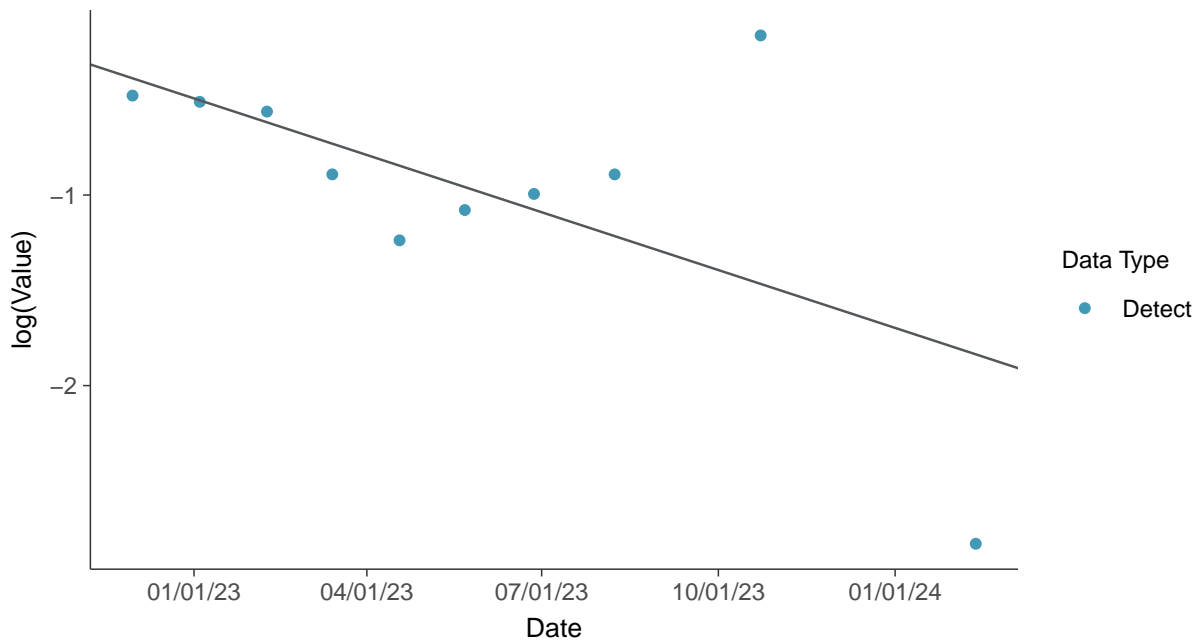
Gamma Q-Q plot

Barium, MW-32 (mg/L)



Trend Regression: Lognormal MLE

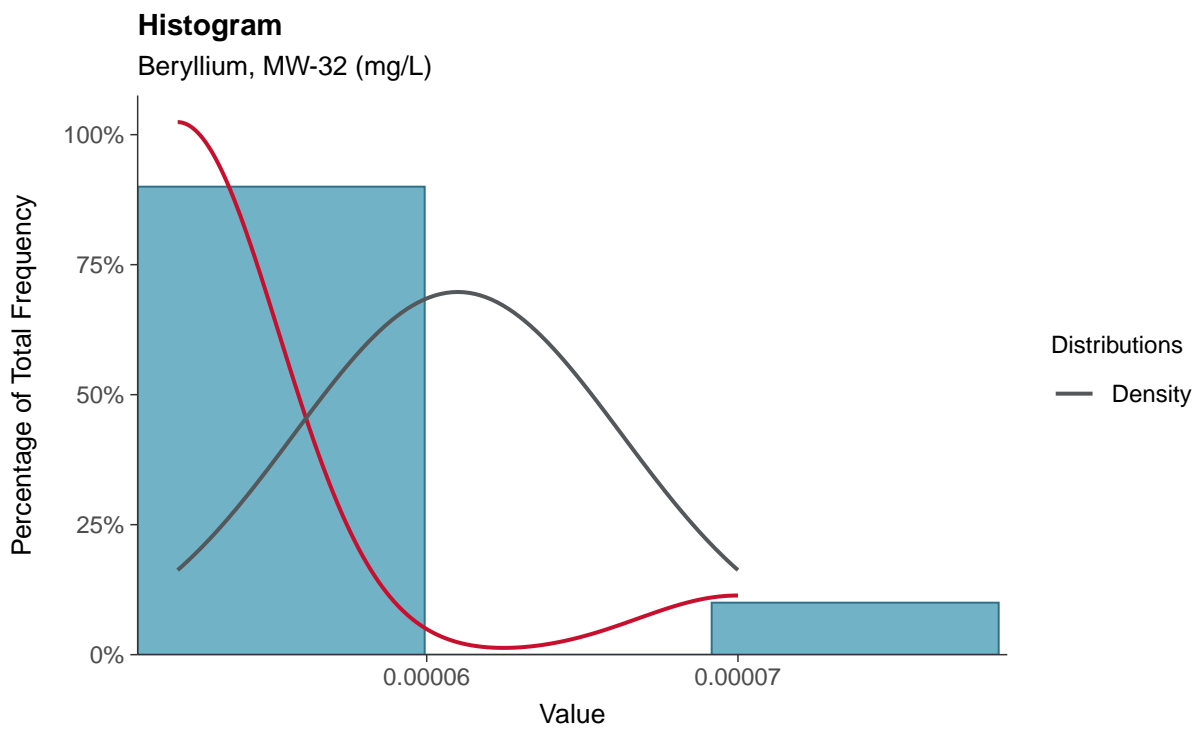
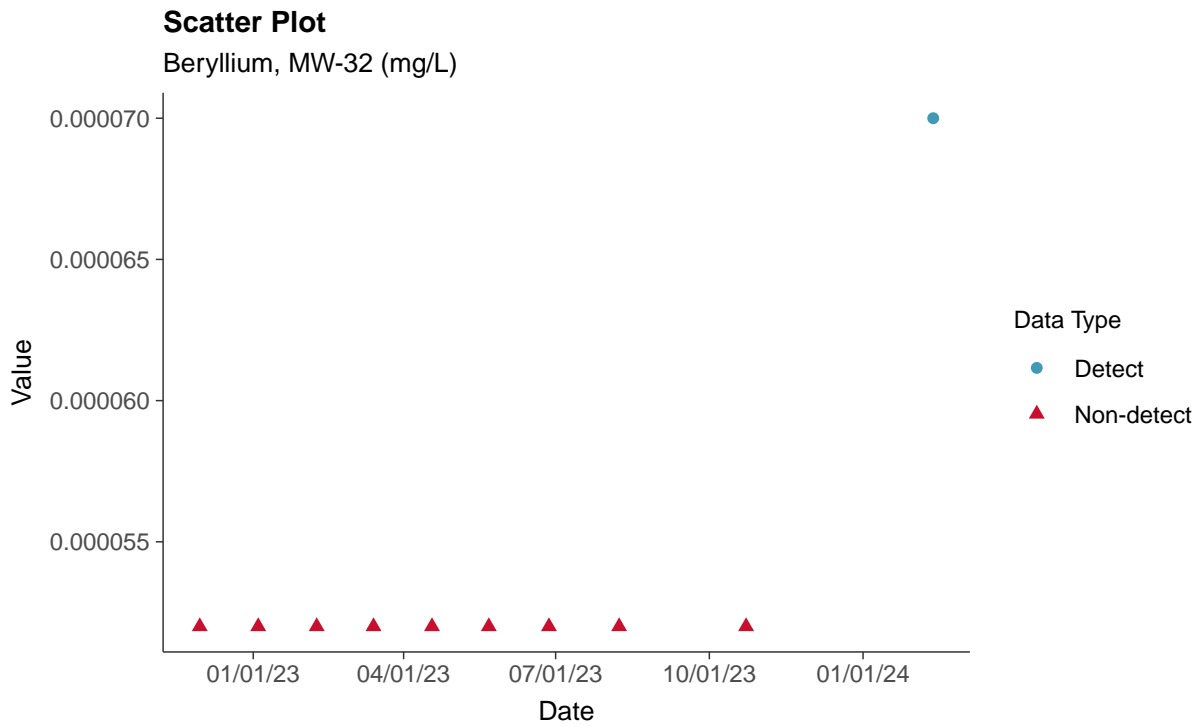
Barium, MW-32 (mg/L)





Appendix IV: Beryllium, MW-32

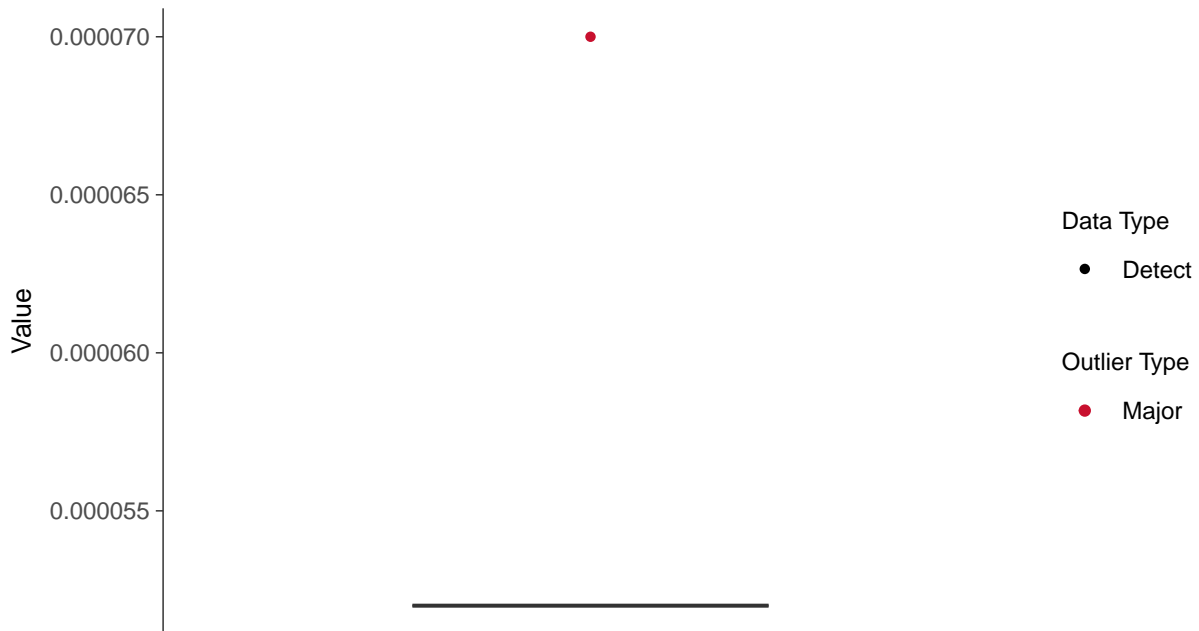
ID: 2_42_5_104





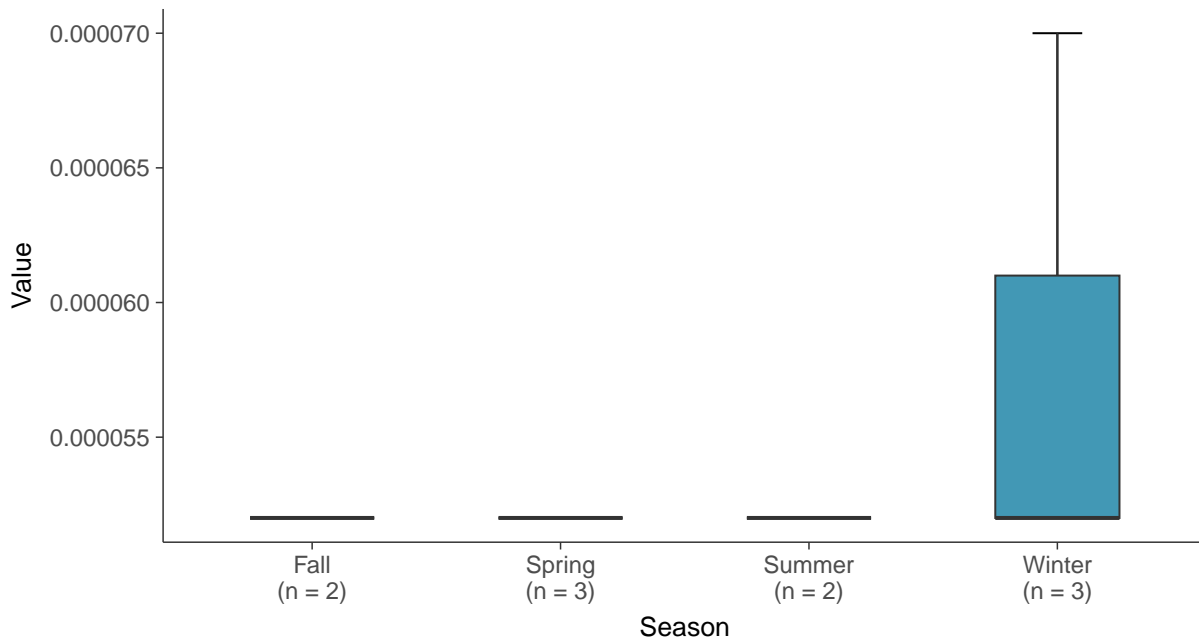
Boxplot

Beryllium, MW-32 (mg/L)



Boxplot by Season

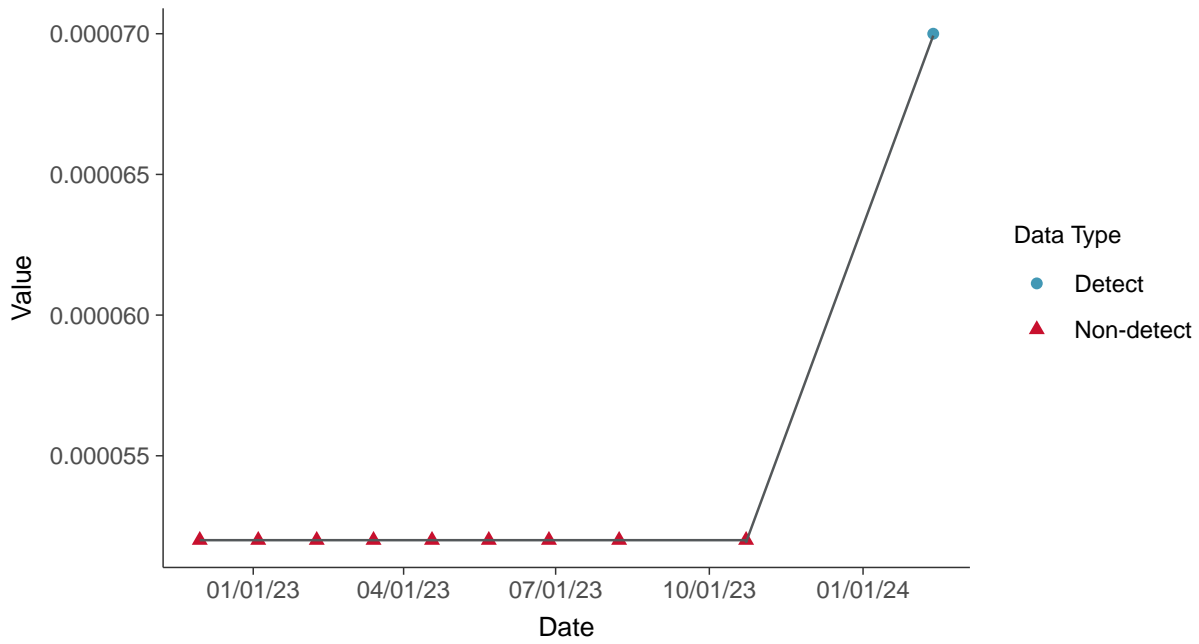
Beryllium, MW-32 (mg/L)





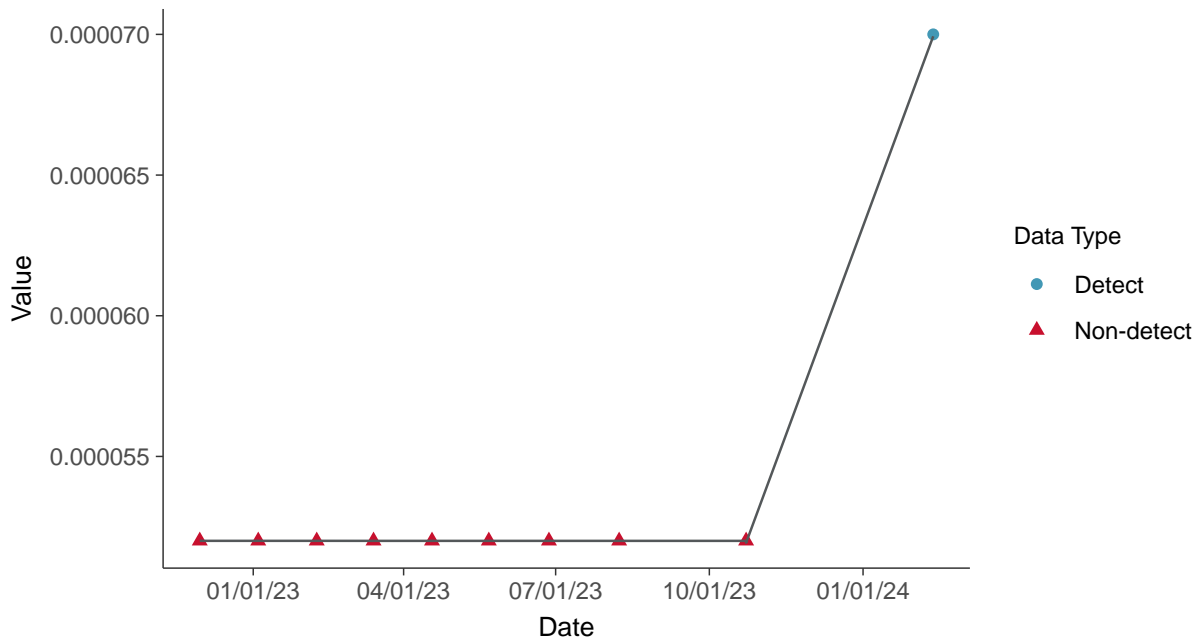
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-32 (mg/L)



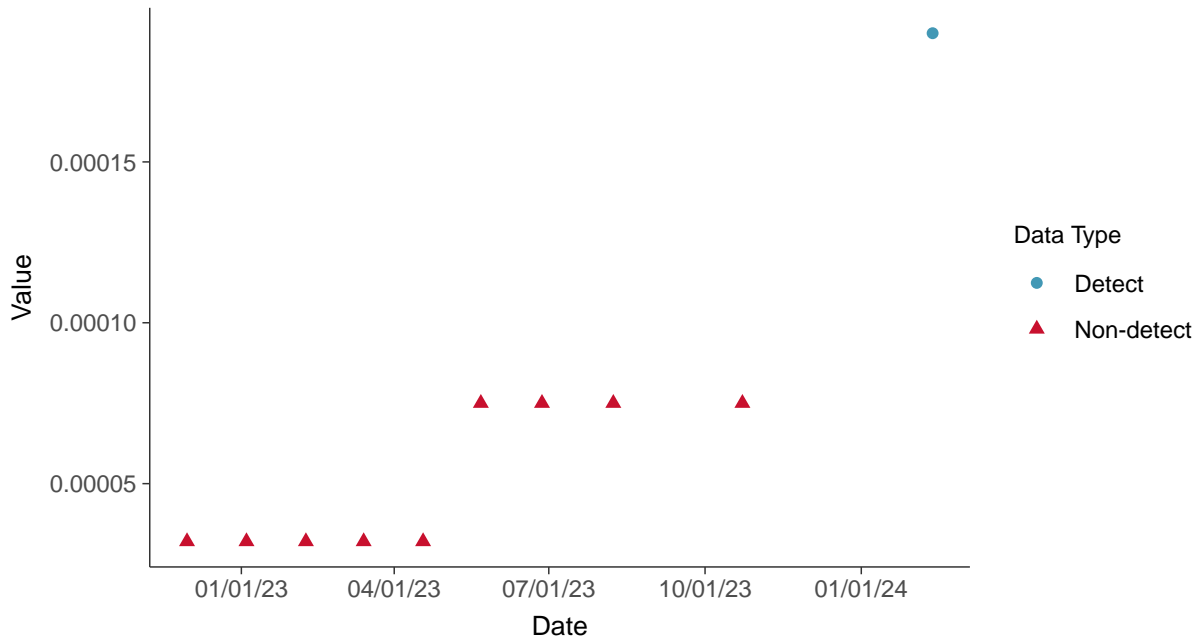


Appendix IV: Cadmium, MW-32

ID: 2_42_5_106

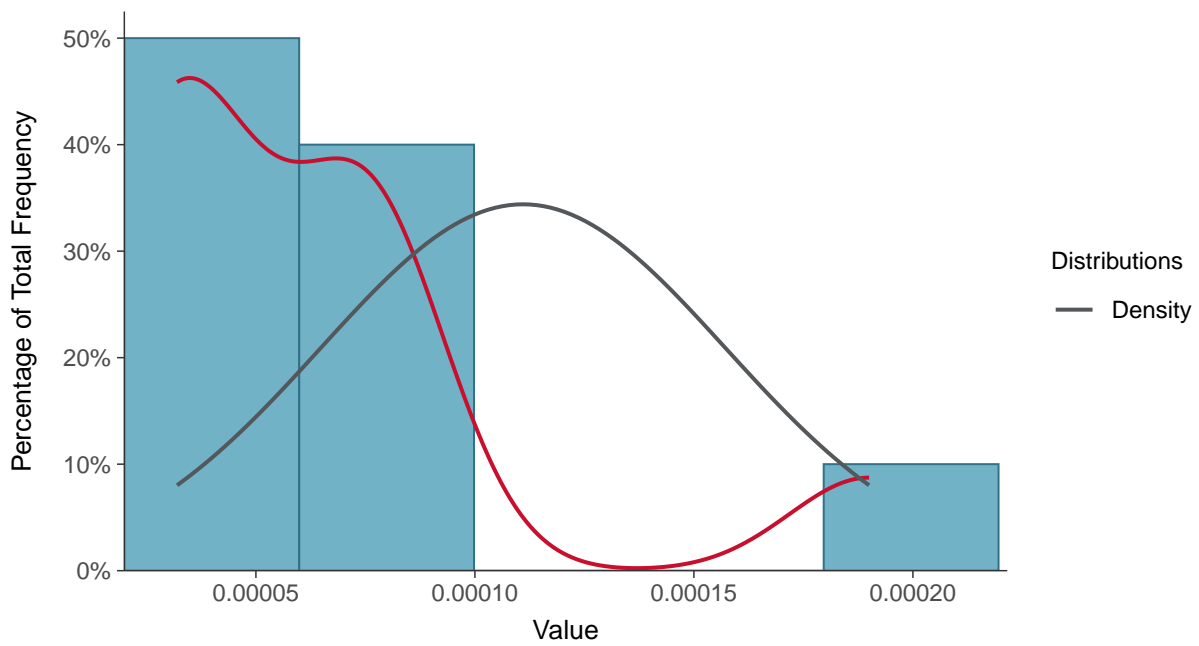
Scatter Plot

Cadmium, MW-32 (mg/L)



Histogram

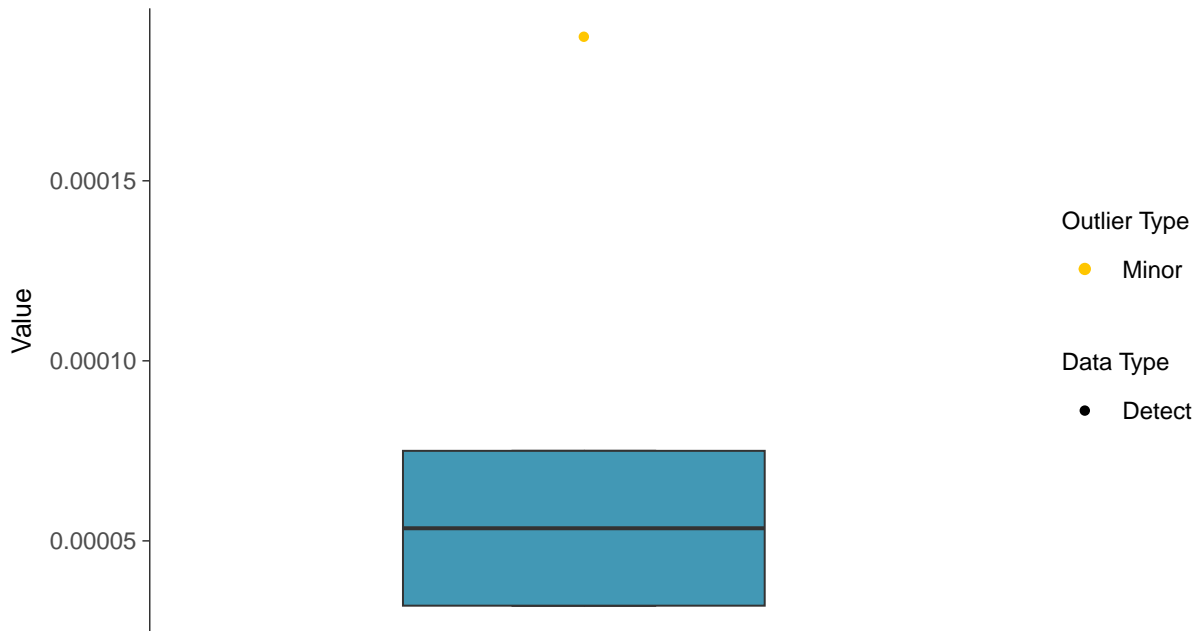
Cadmium, MW-32 (mg/L)





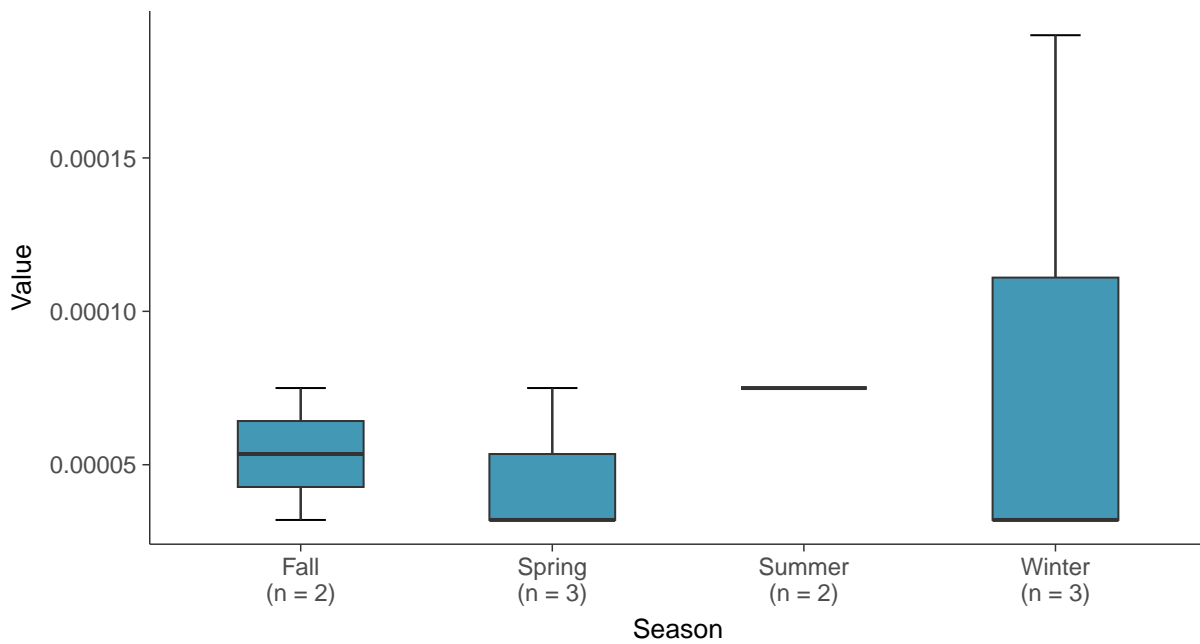
Boxplot

Cadmium, MW-32 (mg/L)



Boxplot by Season

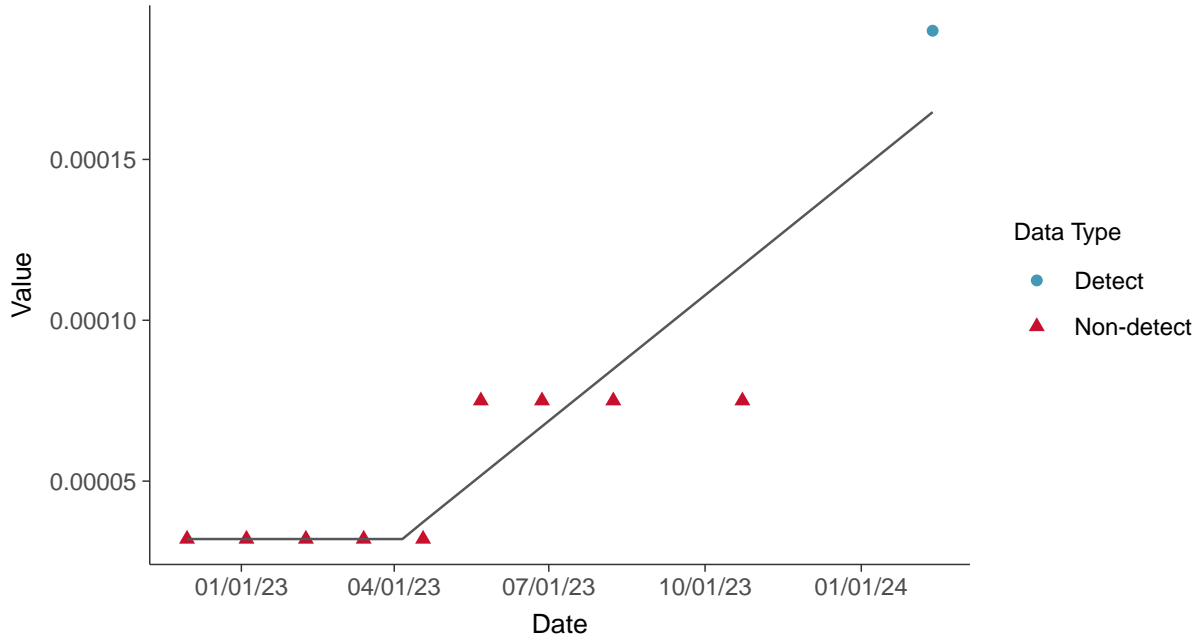
Cadmium, MW-32 (mg/L)





Trend Regression: Piecewise Linear-Linear

Cadmium, MW-32 (mg/L)



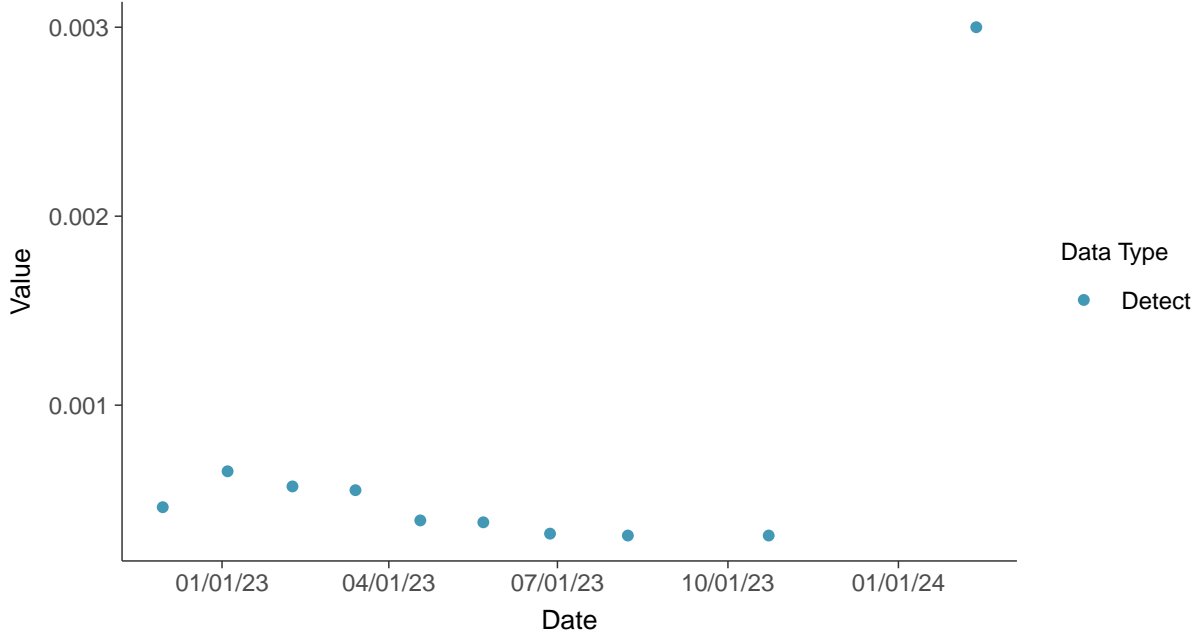


Appendix IV: Chromium, Total, MW-32

ID: 2_42_5_109

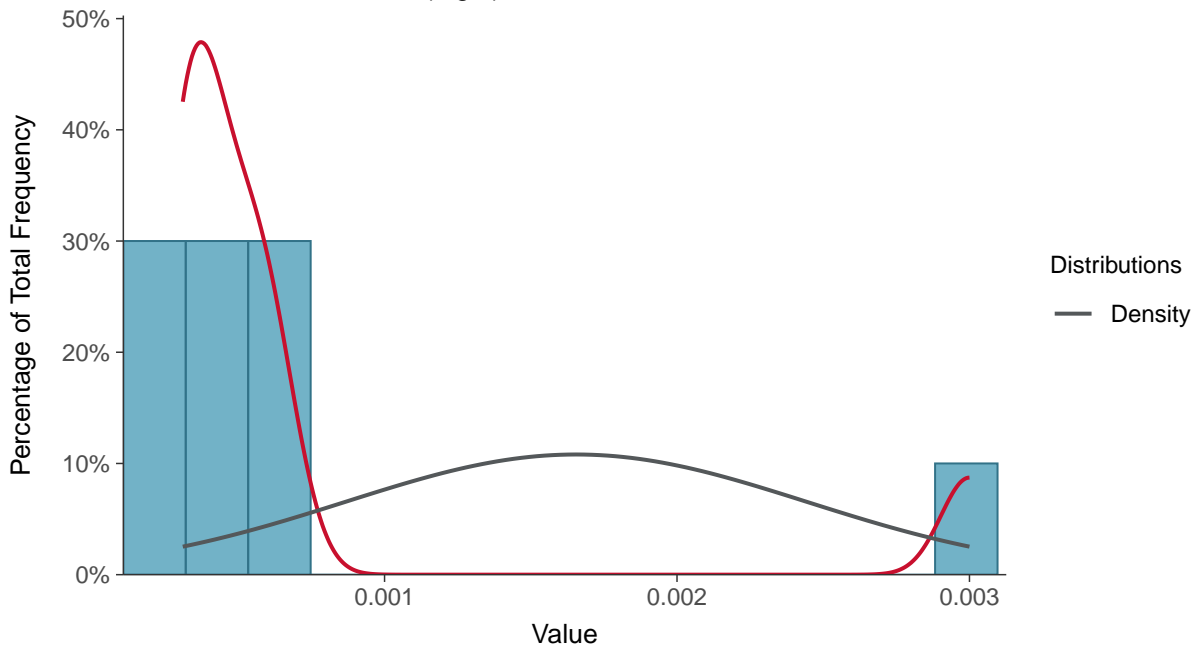
Scatter Plot

Chromium, Total, MW-32 (mg/L)



Histogram

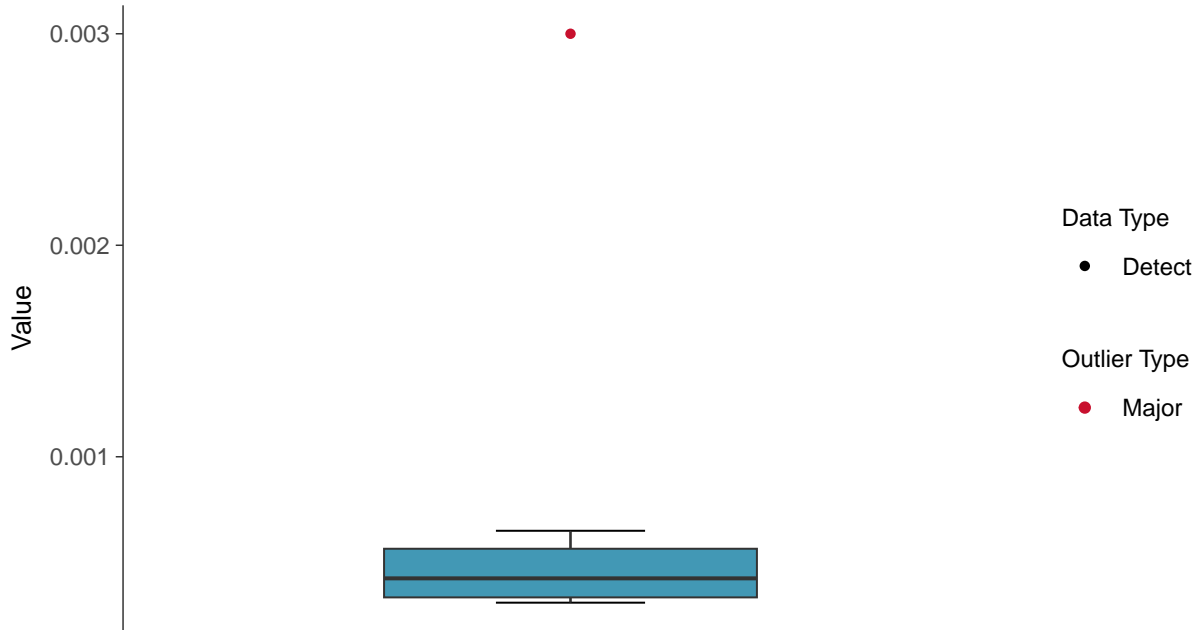
Chromium, Total, MW-32 (mg/L)





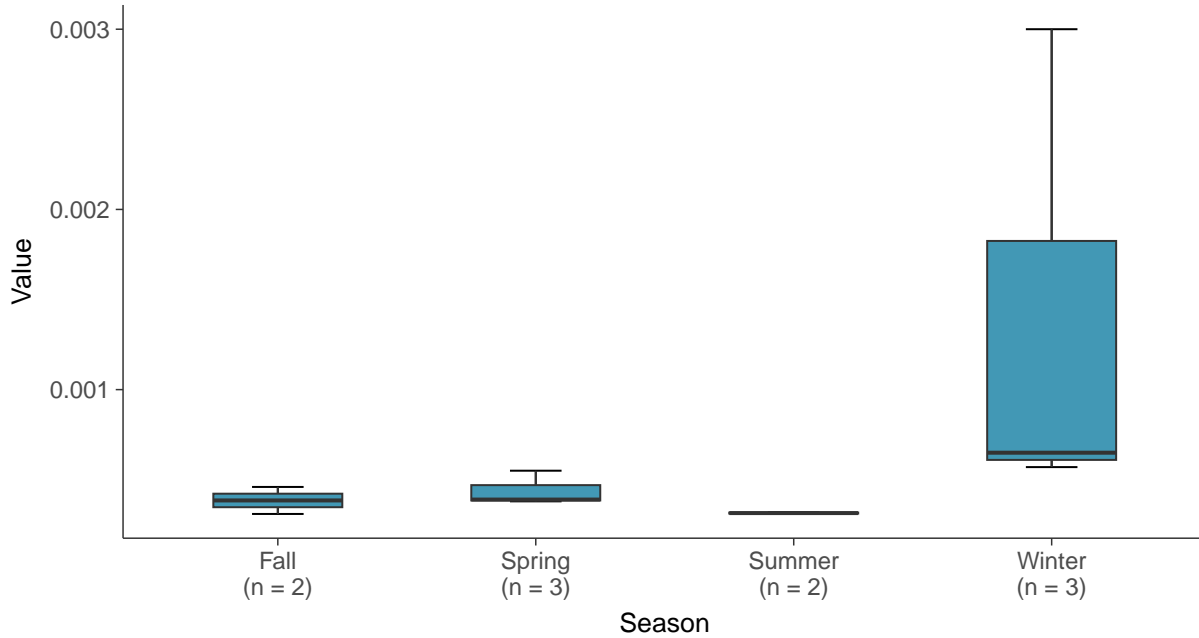
Boxplot

Chromium, Total, MW-32 (mg/L)



Boxplot by Season

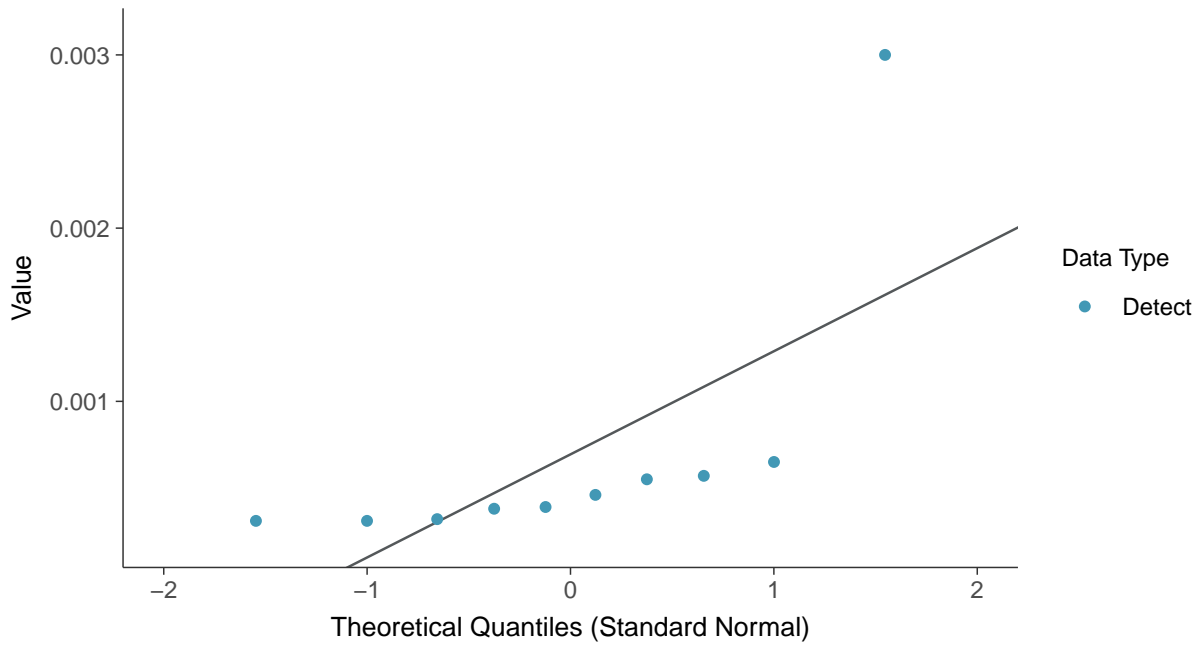
Chromium, Total, MW-32 (mg/L)





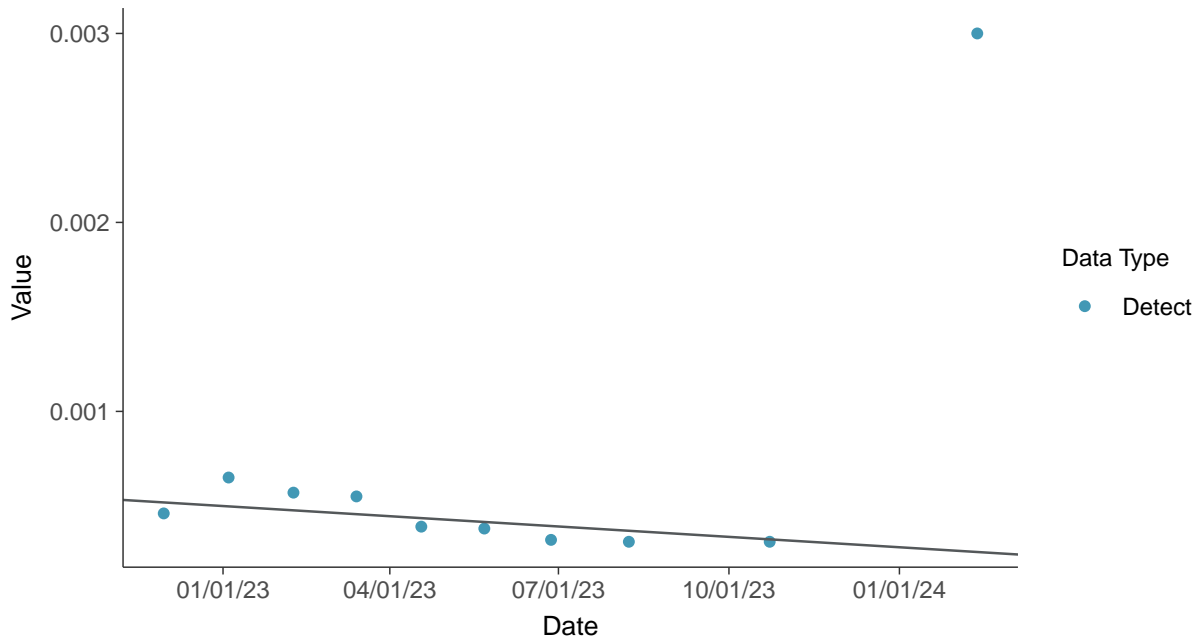
Normal Q-Q plot

Chromium, Total, MW-32 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

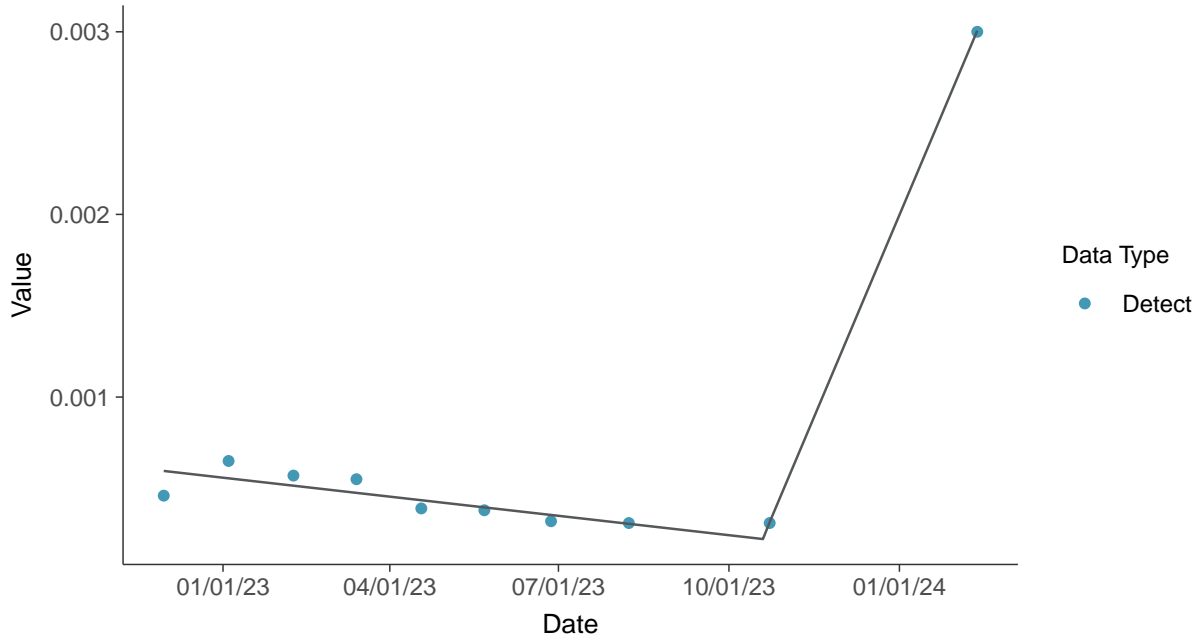
Chromium, Total, MW-32 (mg/L)





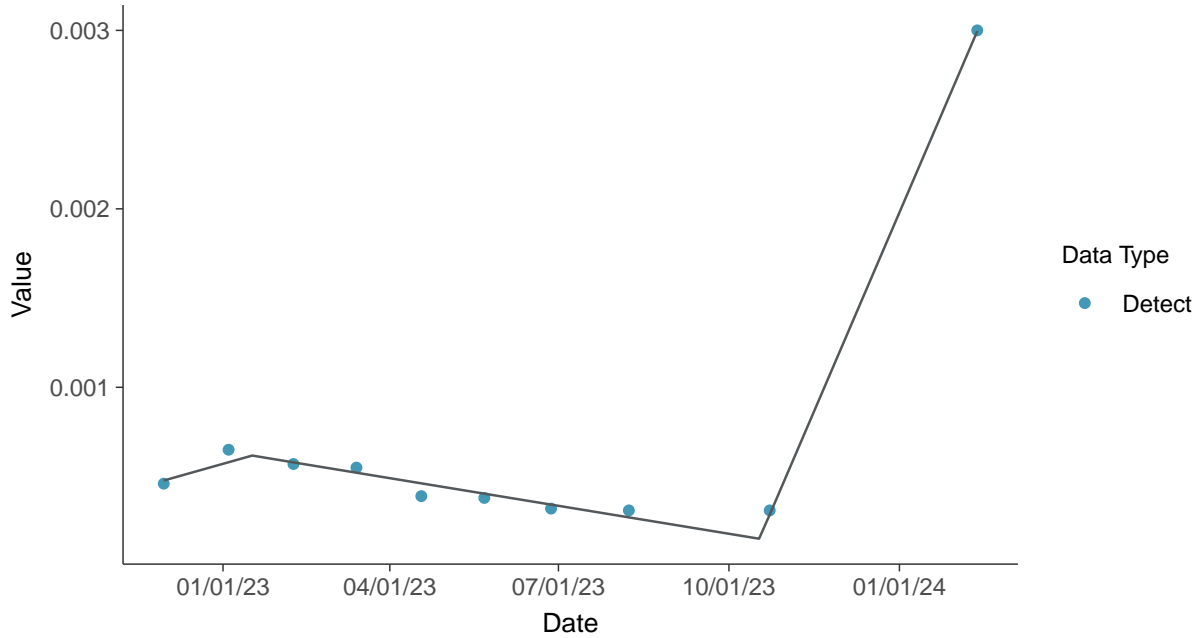
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-32 (mg/L)



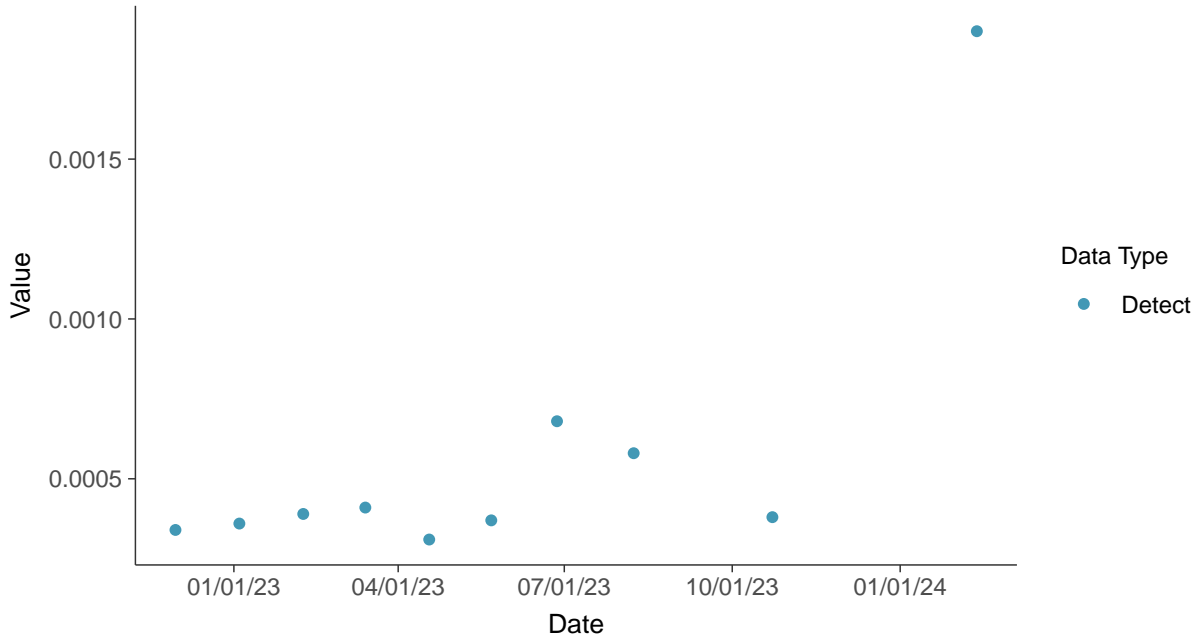


Appendix IV: Cobalt, MW-32

ID: 2_42_5_110

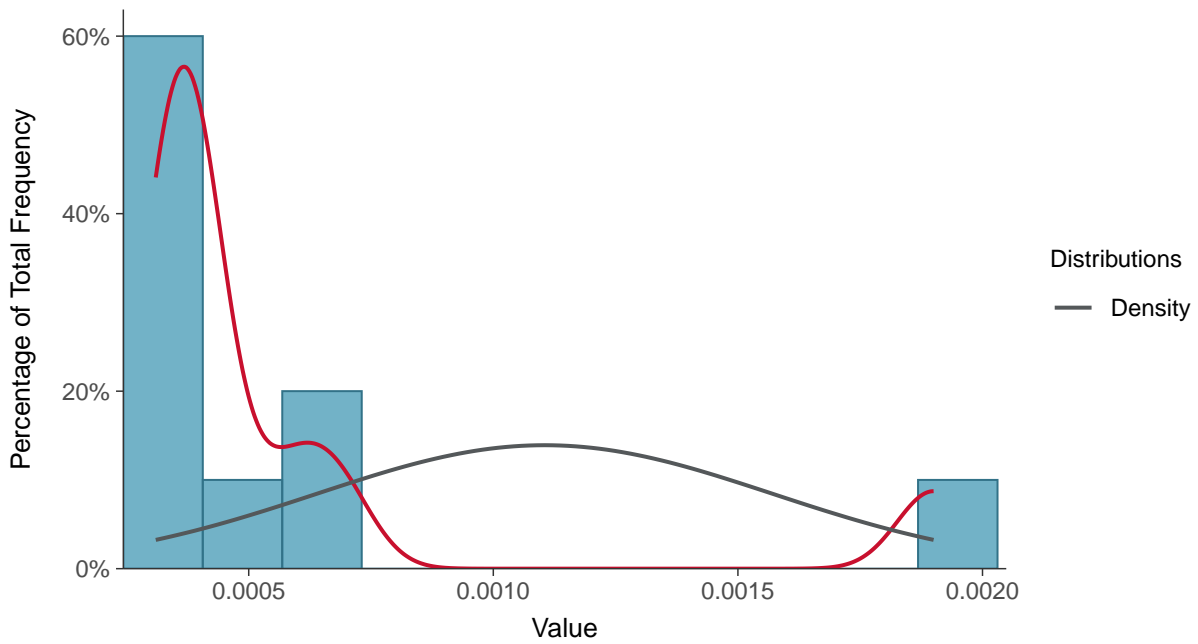
Scatter Plot

Cobalt, MW-32 (mg/L)



Histogram

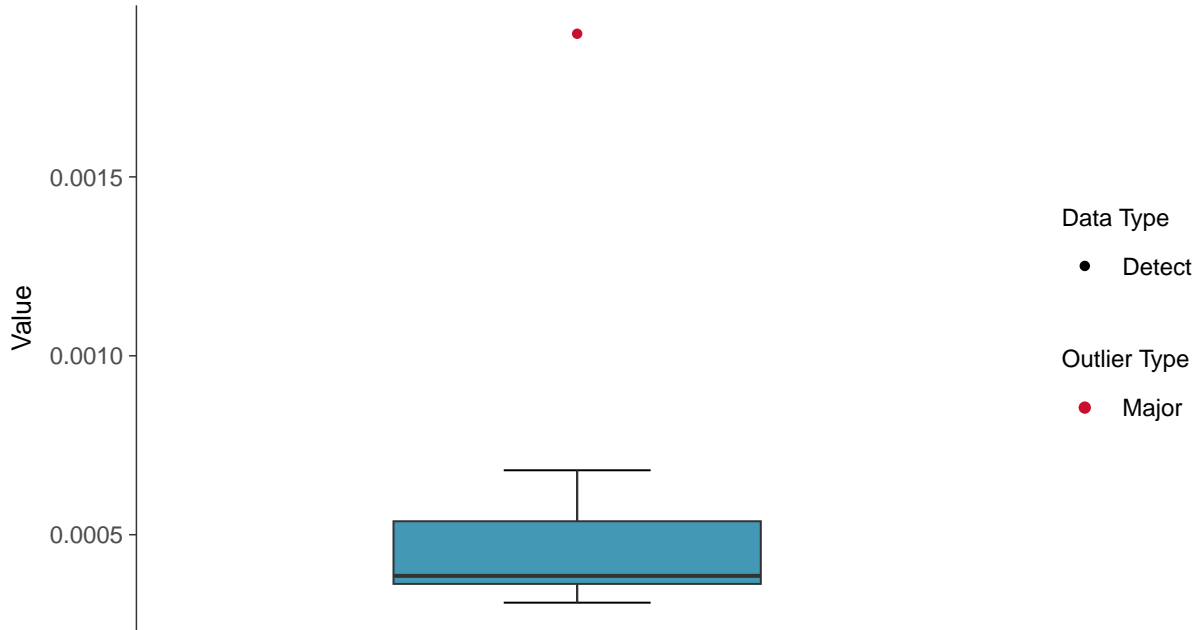
Cobalt, MW-32 (mg/L)





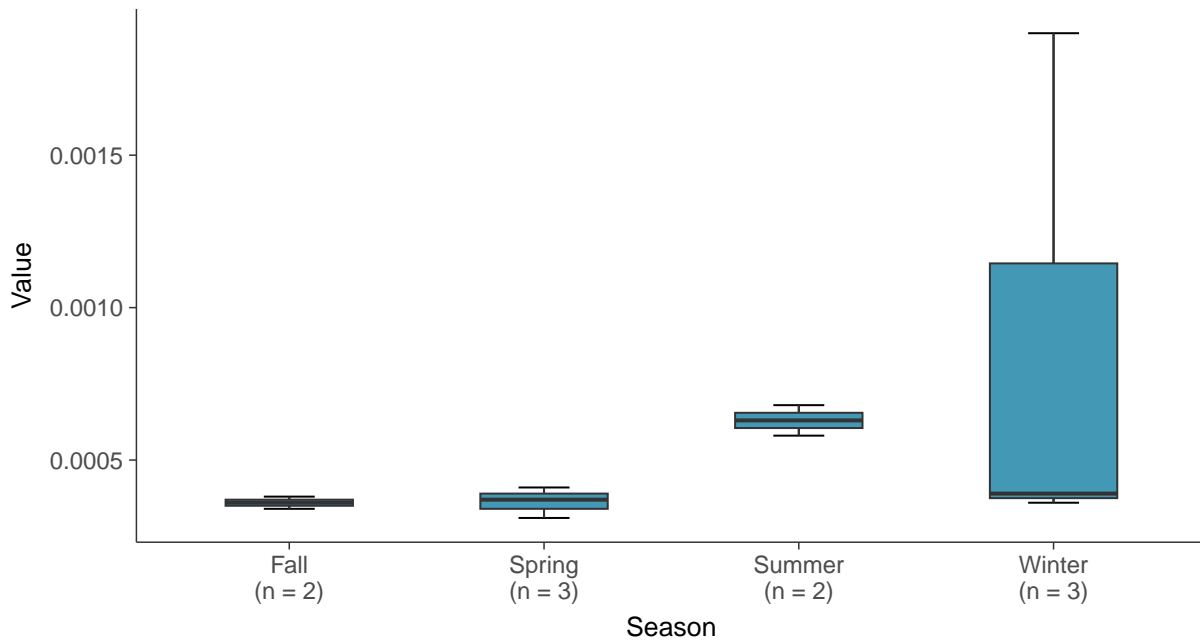
Boxplot

Cobalt, MW-32 (mg/L)



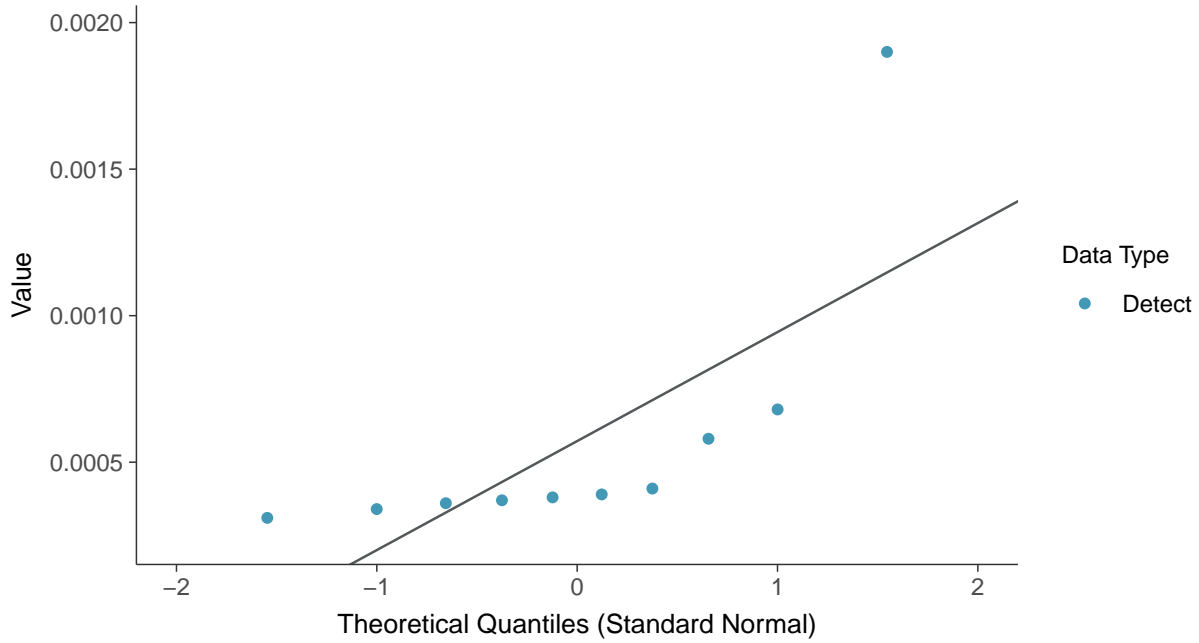
Boxplot by Season

Cobalt, MW-32 (mg/L)

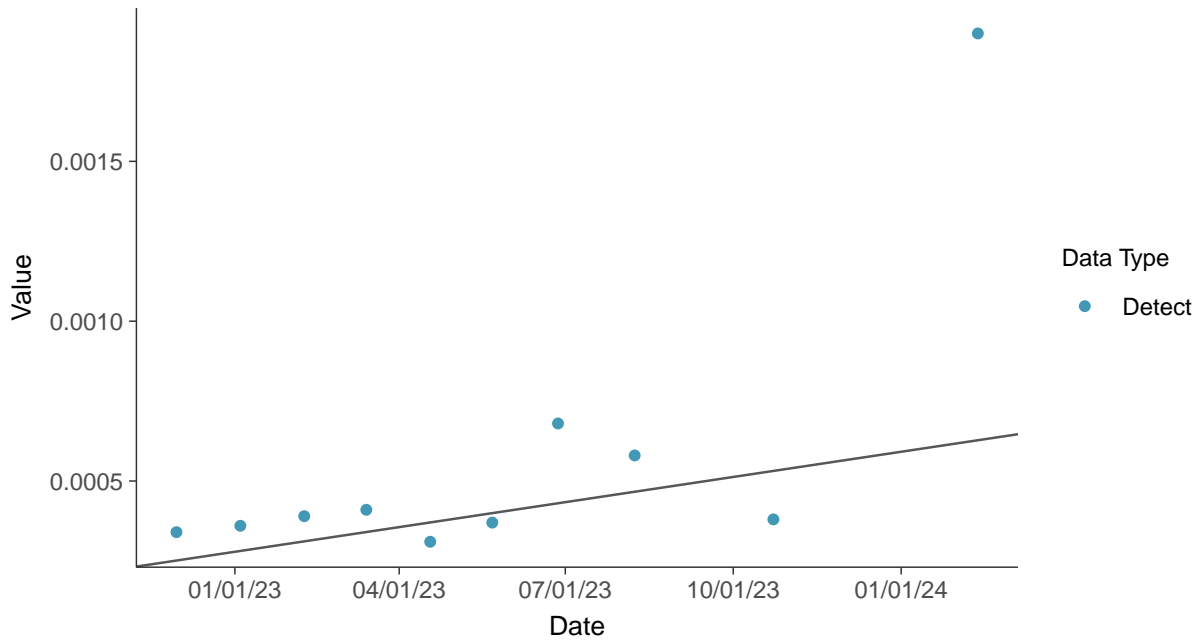




Normal Q-Q plot
Cobalt, MW-32 (mg/L)

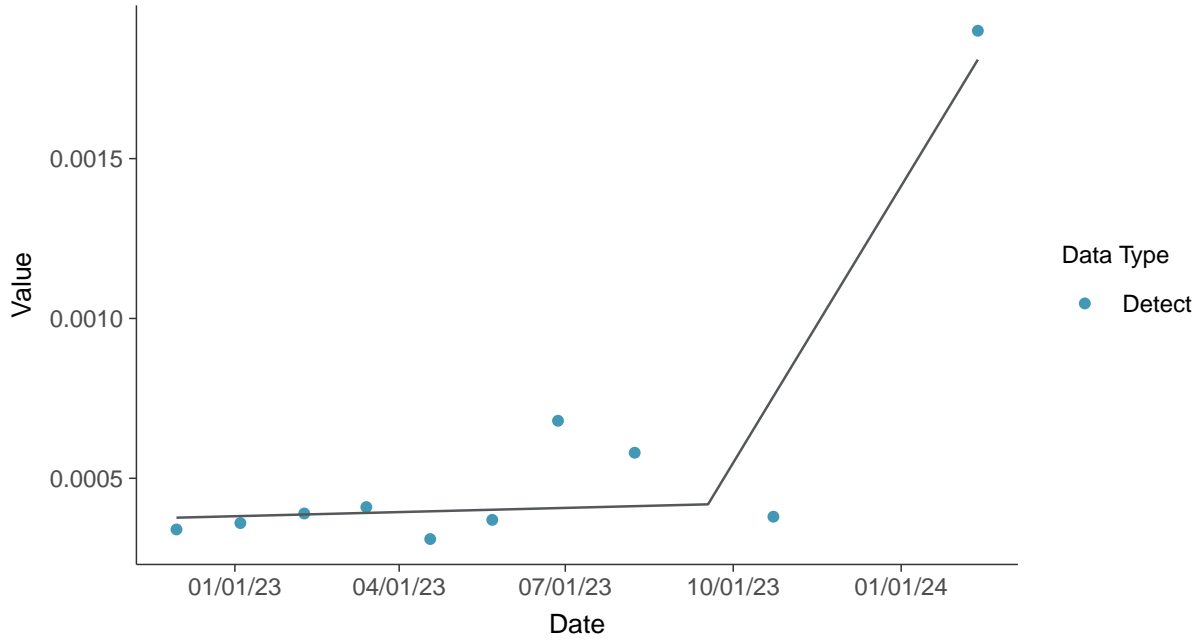


Trend Regression: Mann-Kendall/Theil-Sen Estimate
Cobalt, MW-32 (mg/L)





Trend Regression: Piecewise Linear-Linear
Cobalt, MW-32 (mg/L)



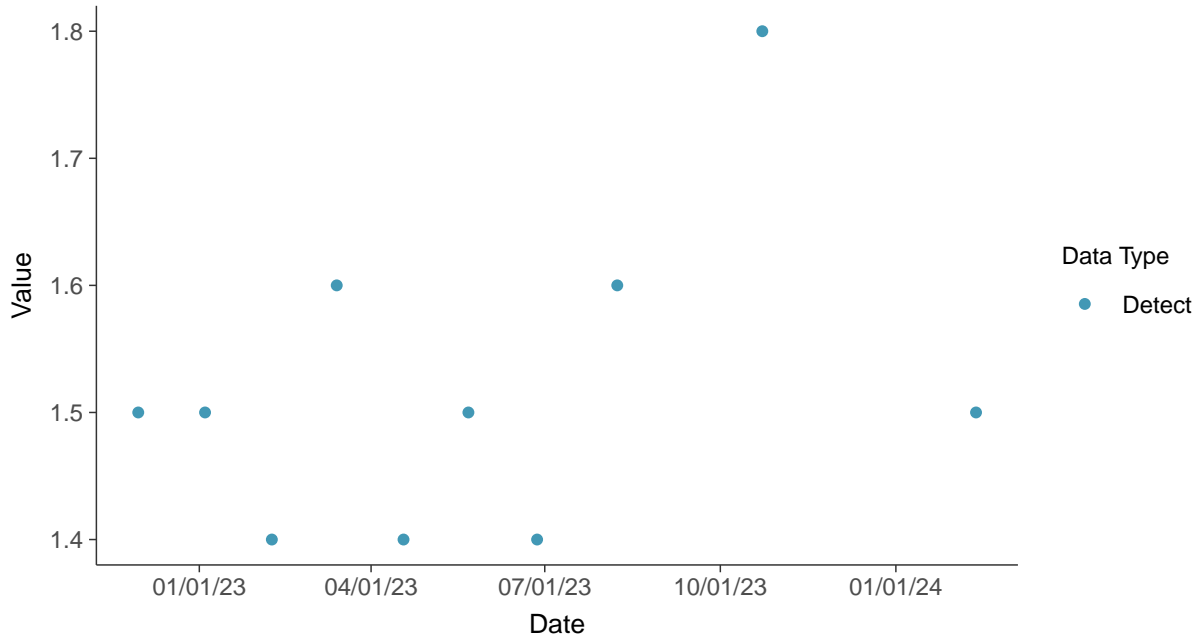


Appendix IV: Fluoride (App IV), MW-32

ID: 2_42_5_113

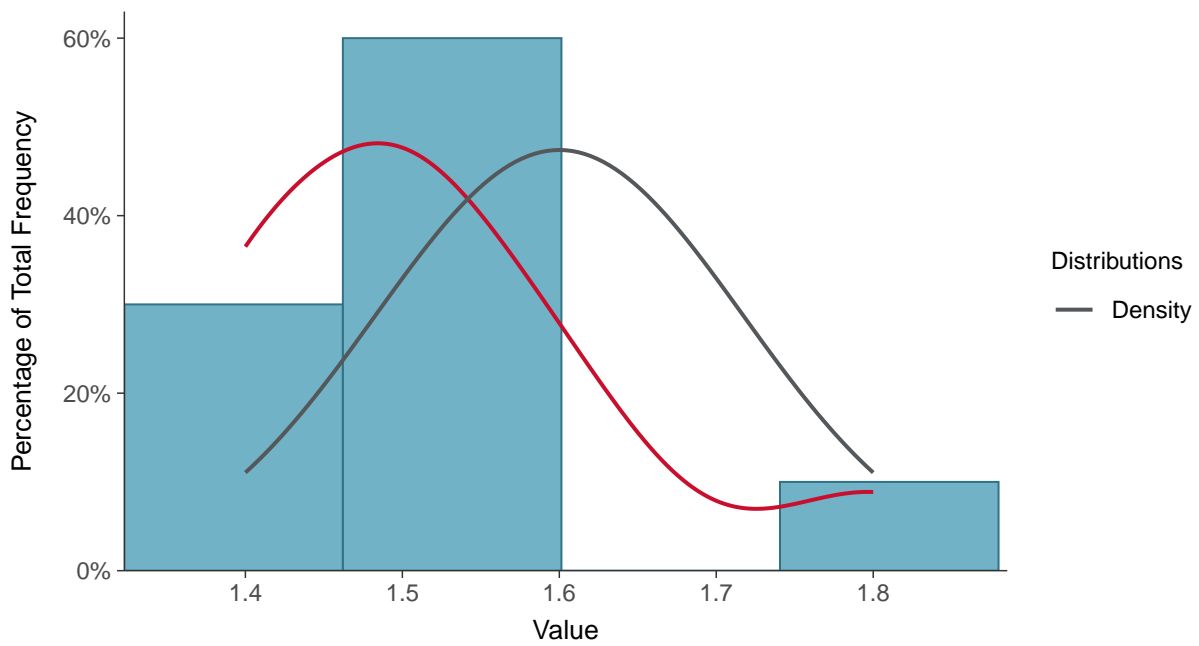
Scatter Plot

Fluoride (App IV), MW-32 (mg/L)



Histogram

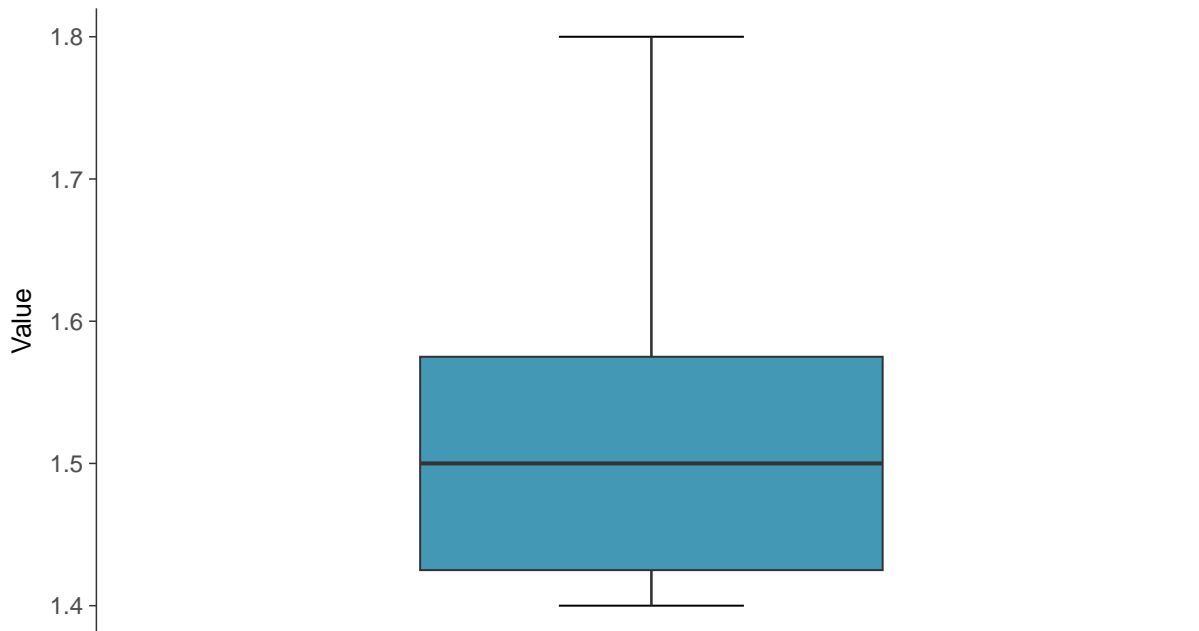
Fluoride (App IV), MW-32 (mg/L)





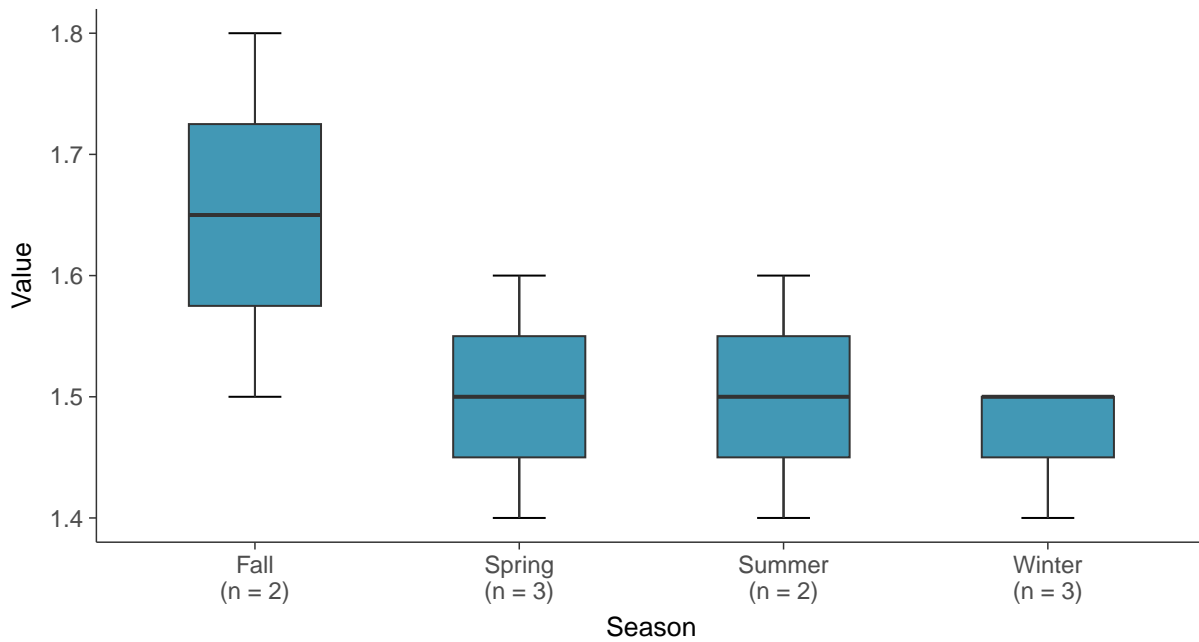
Boxplot

Fluoride (App IV), MW-32 (mg/L)



Boxplot by Season

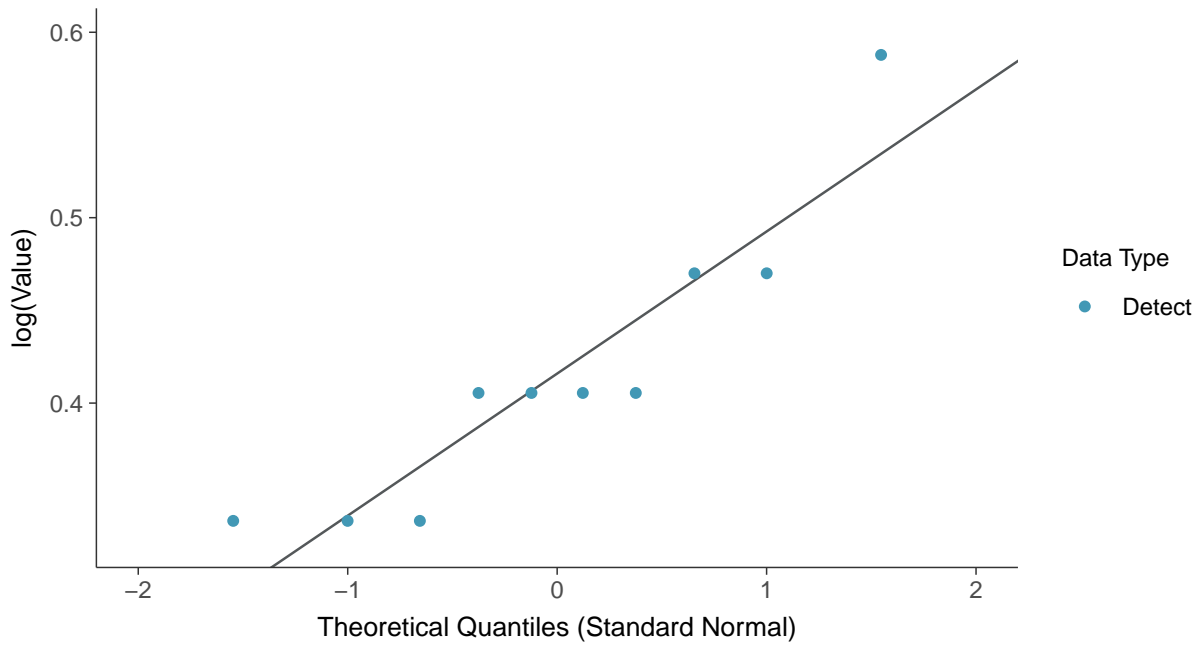
Fluoride (App IV), MW-32 (mg/L)





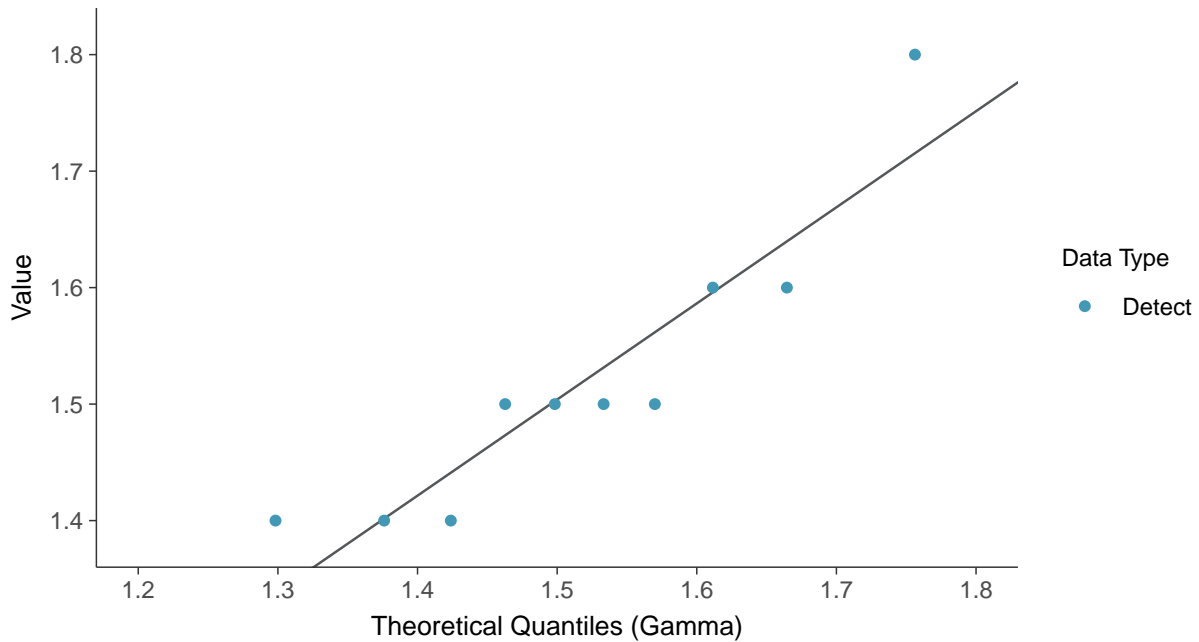
Lognormal Q-Q plot

Fluoride (App IV), MW-32 (mg/L)



Gamma Q-Q plot

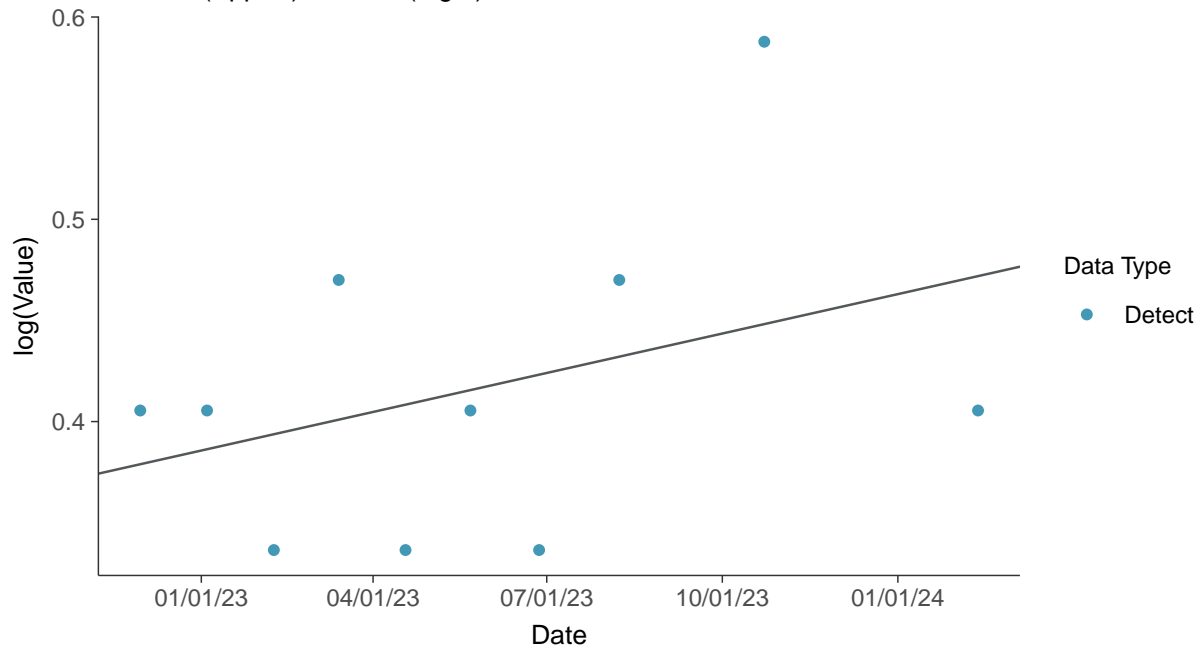
Fluoride (App IV), MW-32 (mg/L)





Trend Regression: Lognormal MLE

Fluoride (App IV), MW-32 (mg/L)



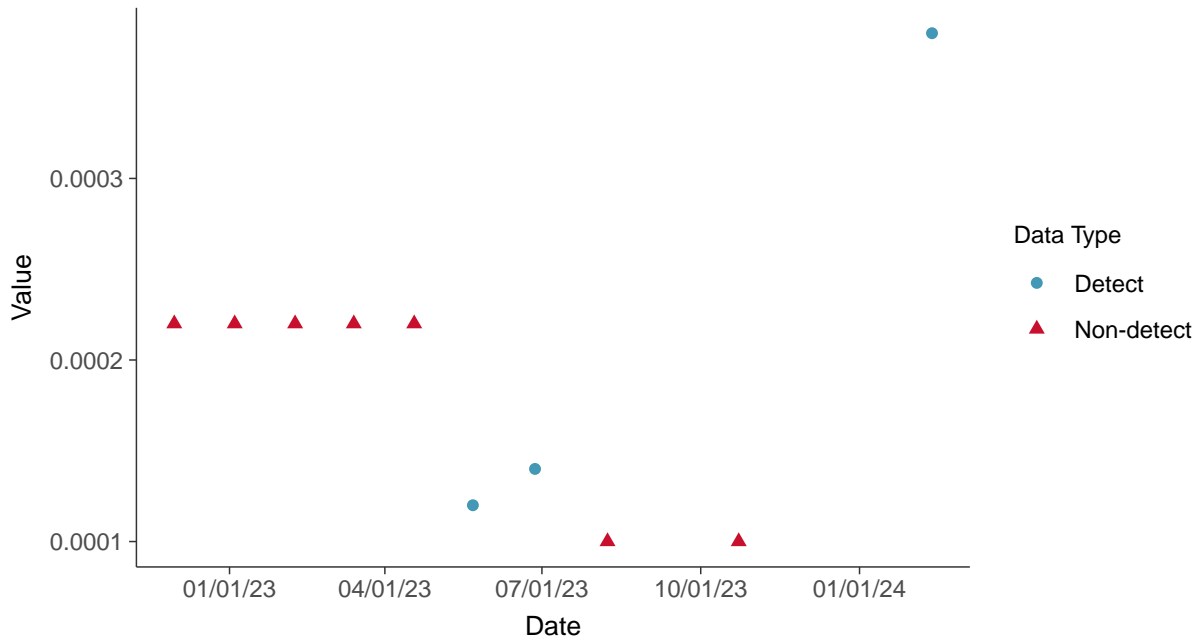


Appendix IV: Lead, MW-32

ID: 2_42_5_115

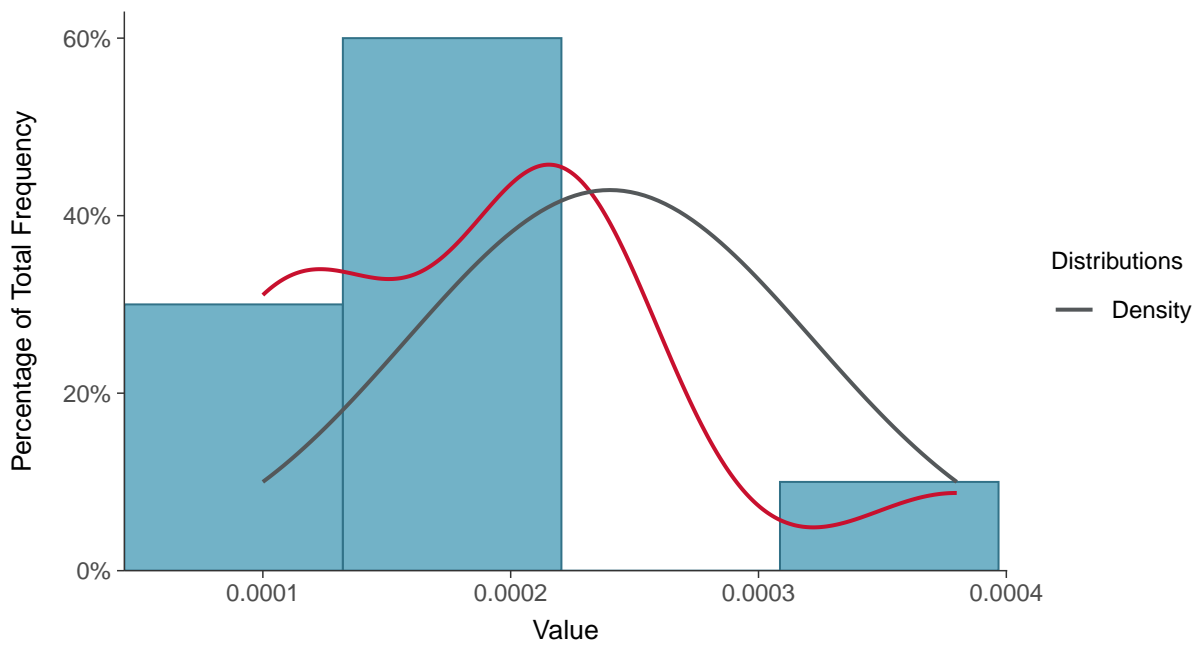
Scatter Plot

Lead, MW-32 (mg/L)



Histogram

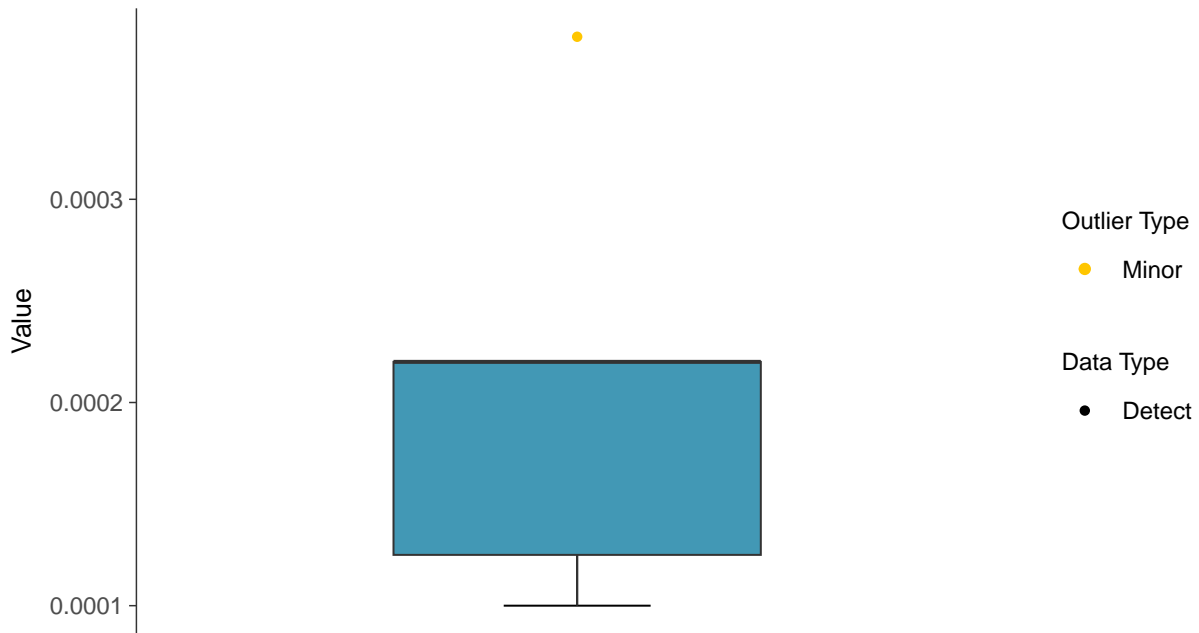
Lead, MW-32 (mg/L)





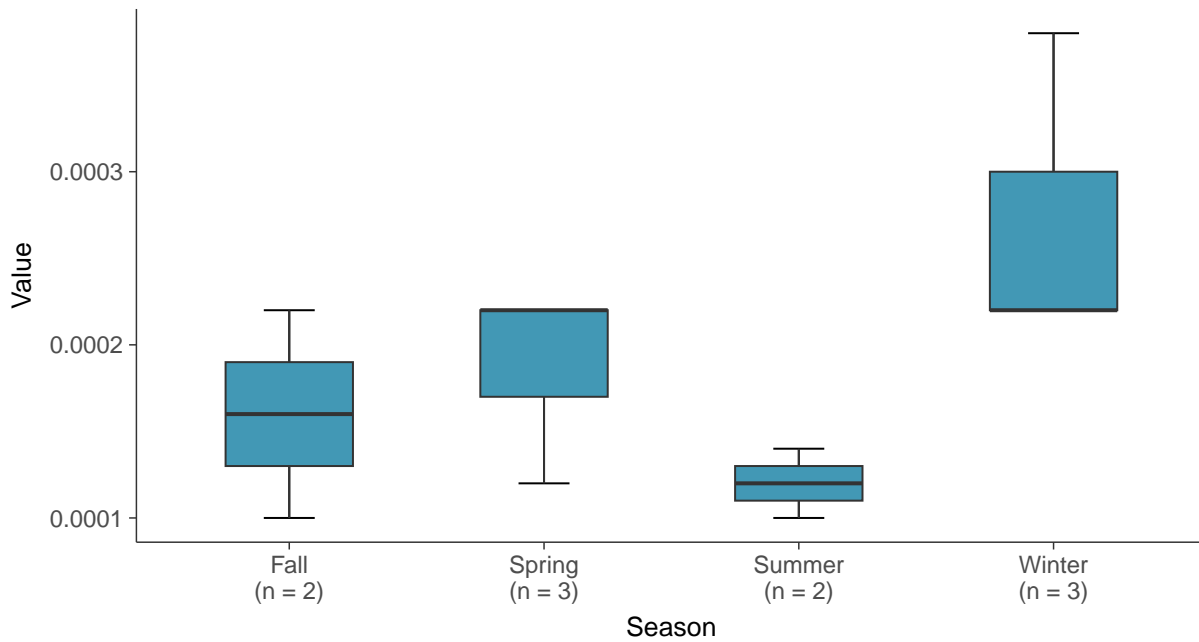
Boxplot

Lead, MW-32 (mg/L)



Boxplot by Season

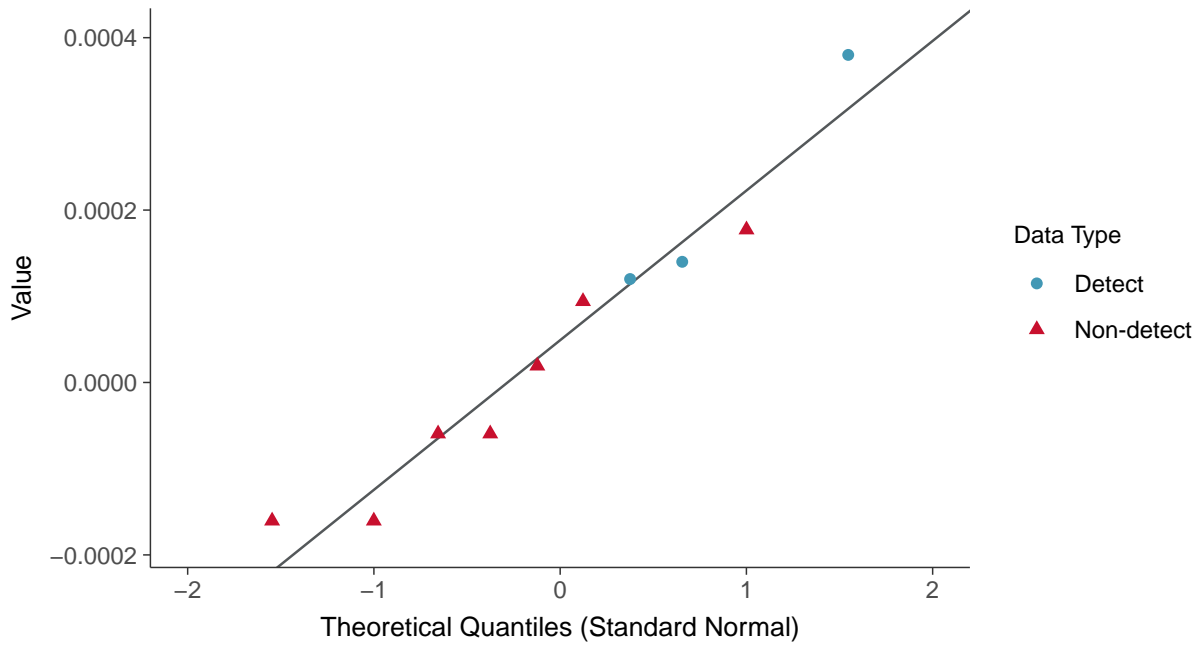
Lead, MW-32 (mg/L)





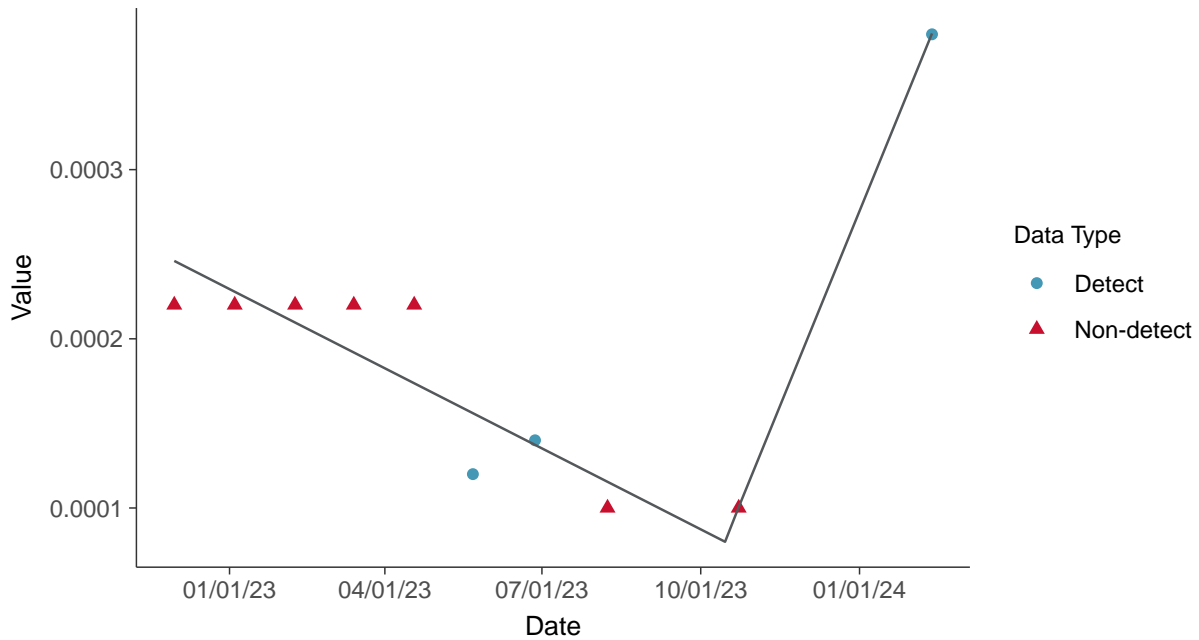
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear

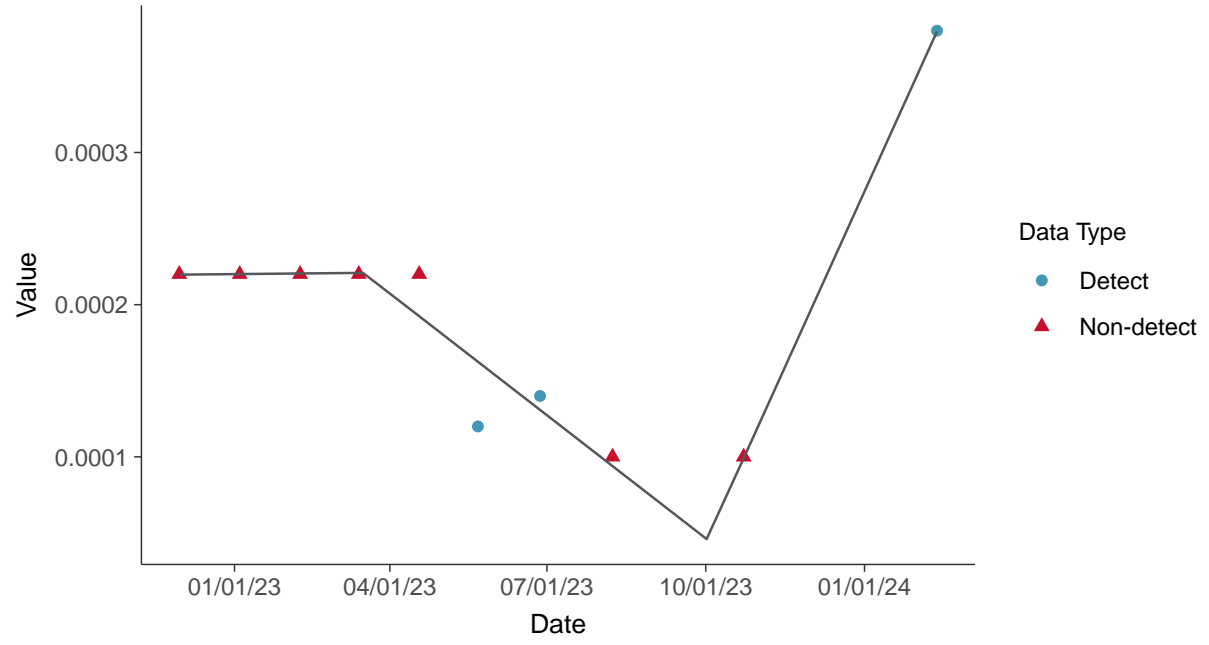
Lead, MW-32 (mg/L)





Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-32 (mg/L)



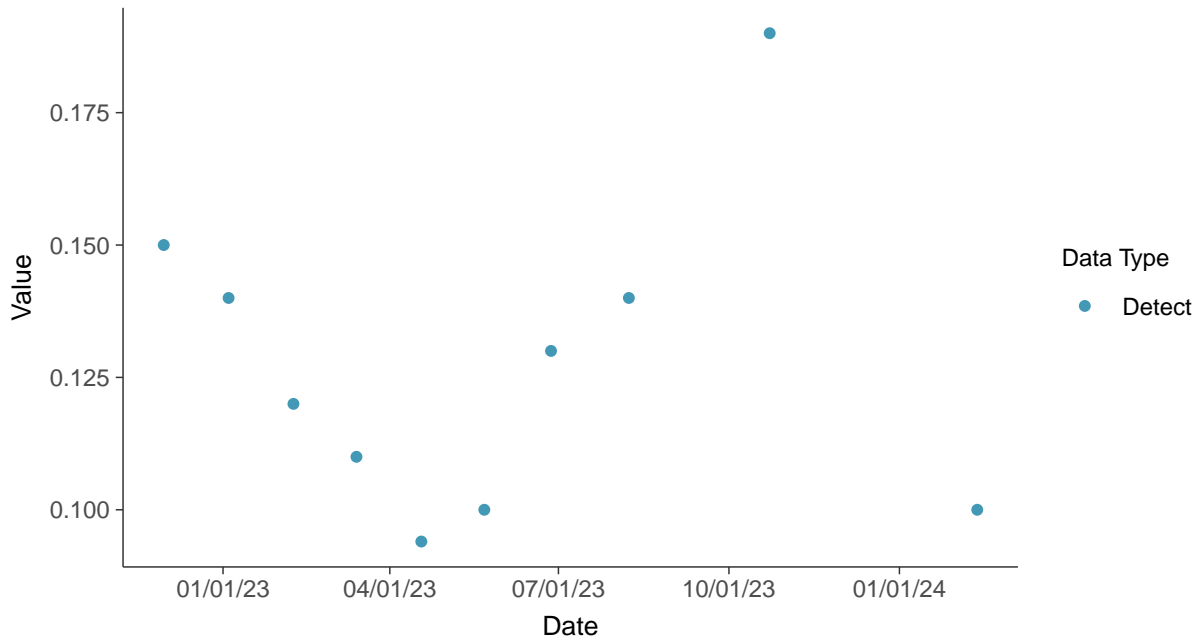


Appendix IV: Lithium, MW-32

ID: 2_42_5_116

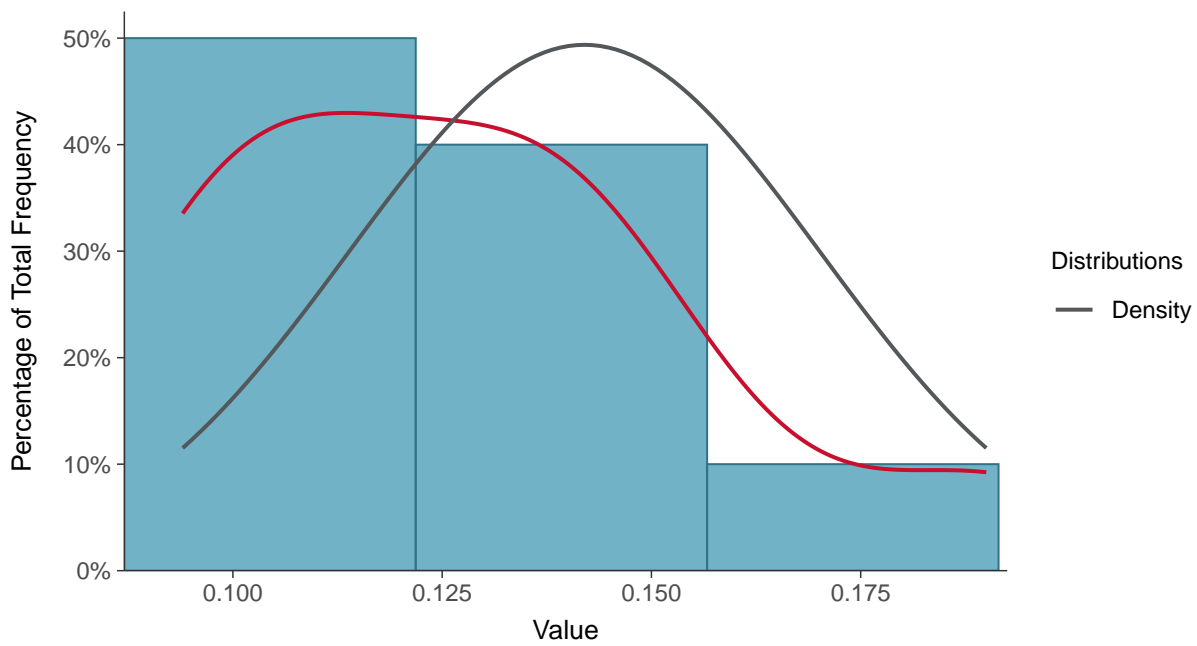
Scatter Plot

Lithium, MW-32 (mg/L)



Histogram

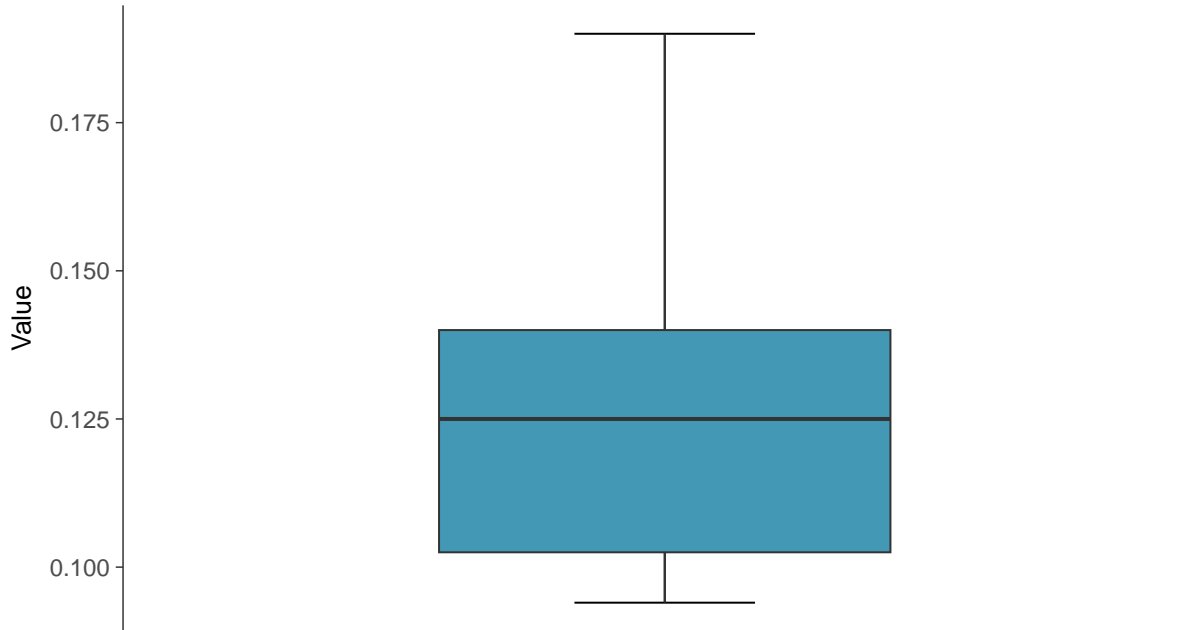
Lithium, MW-32 (mg/L)





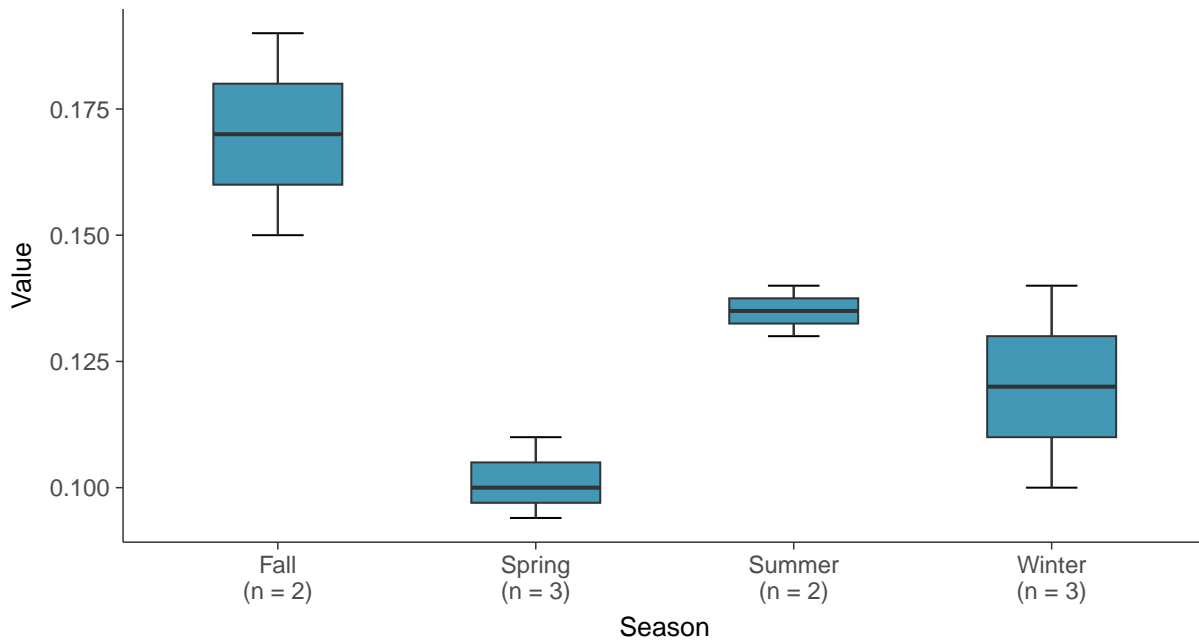
Boxplot

Lithium, MW-32 (mg/L)



Boxplot by Season

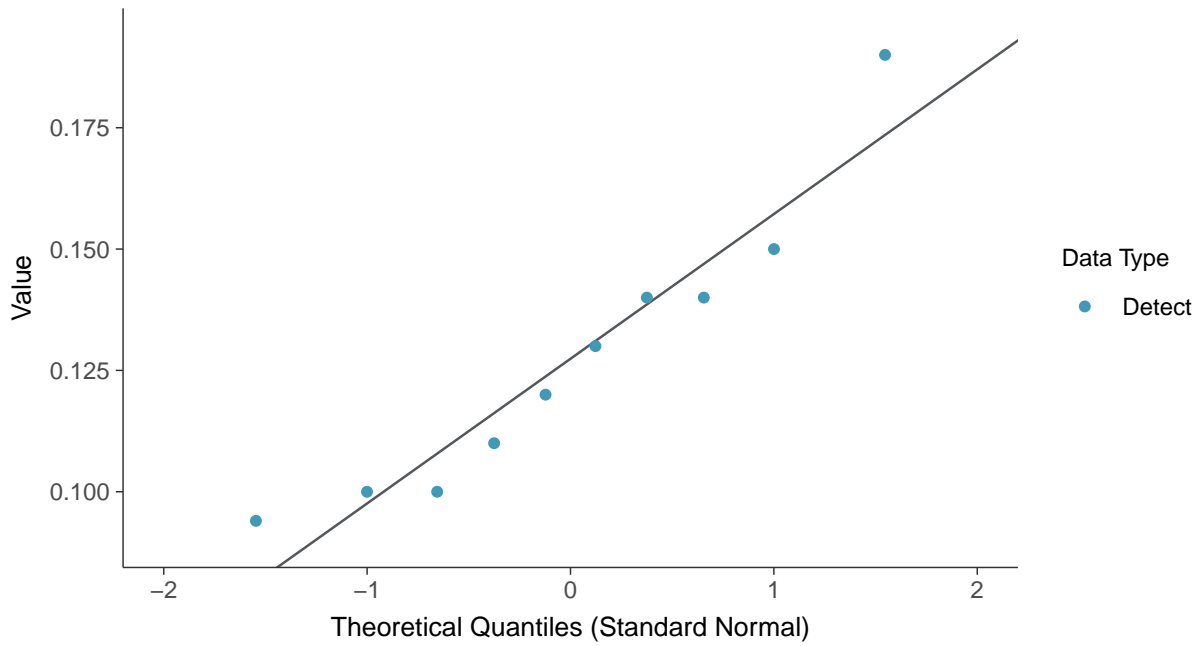
Lithium, MW-32 (mg/L)





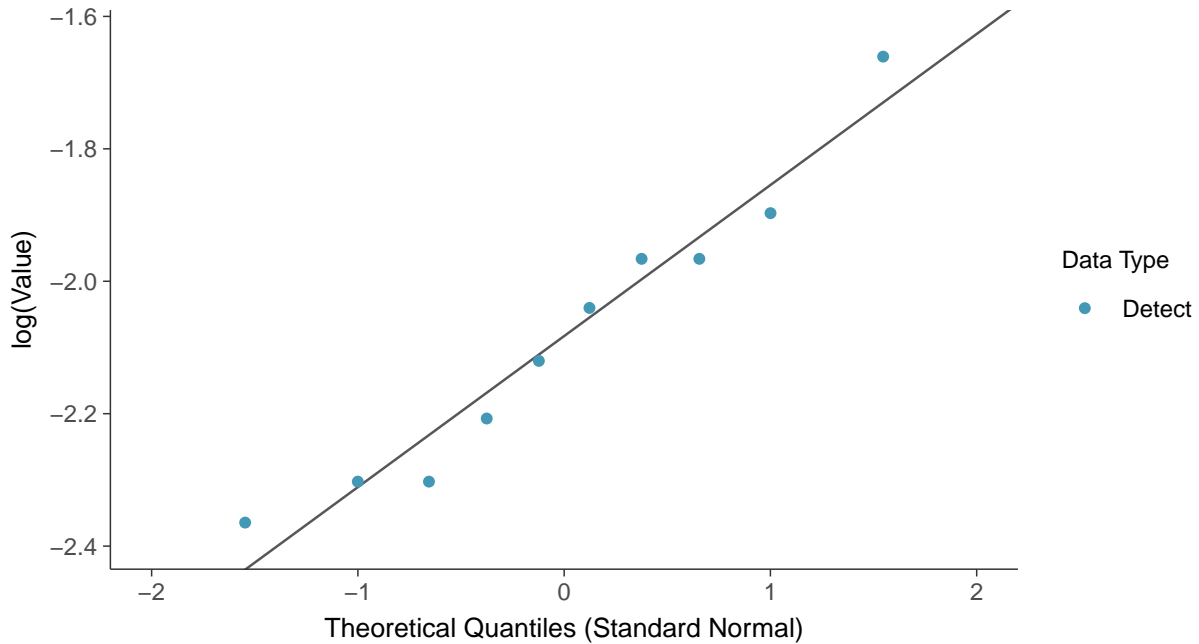
Normal Q-Q plot

Lithium, MW-32 (mg/L)



Lognormal Q-Q plot

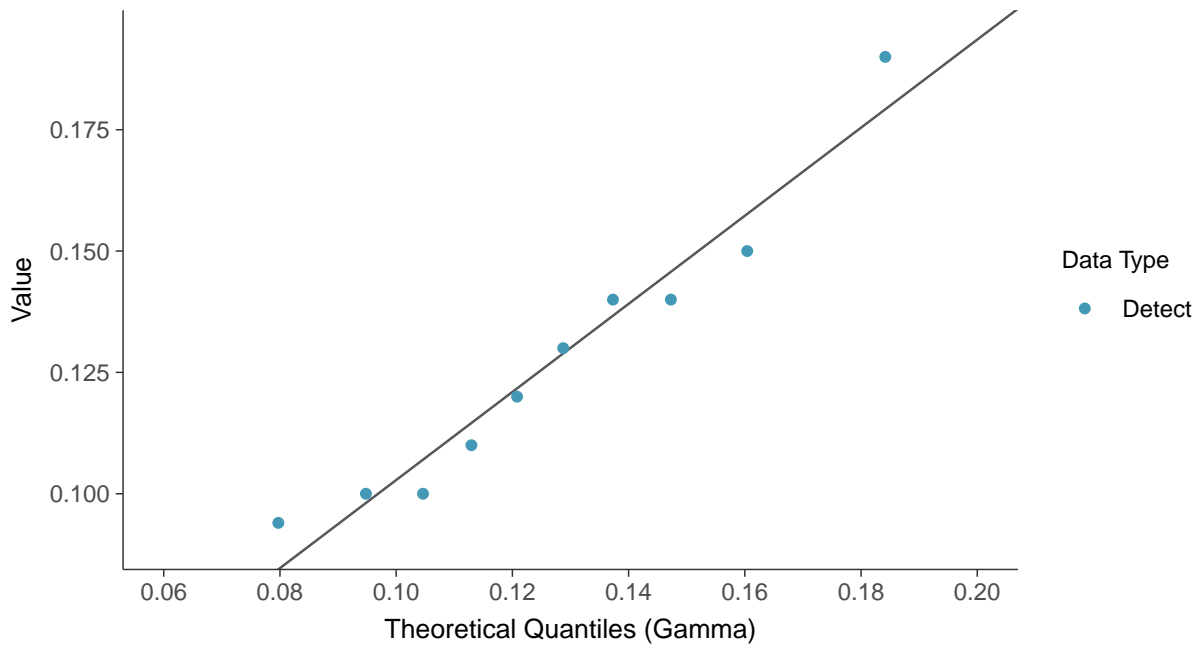
Lithium, MW-32 (mg/L)





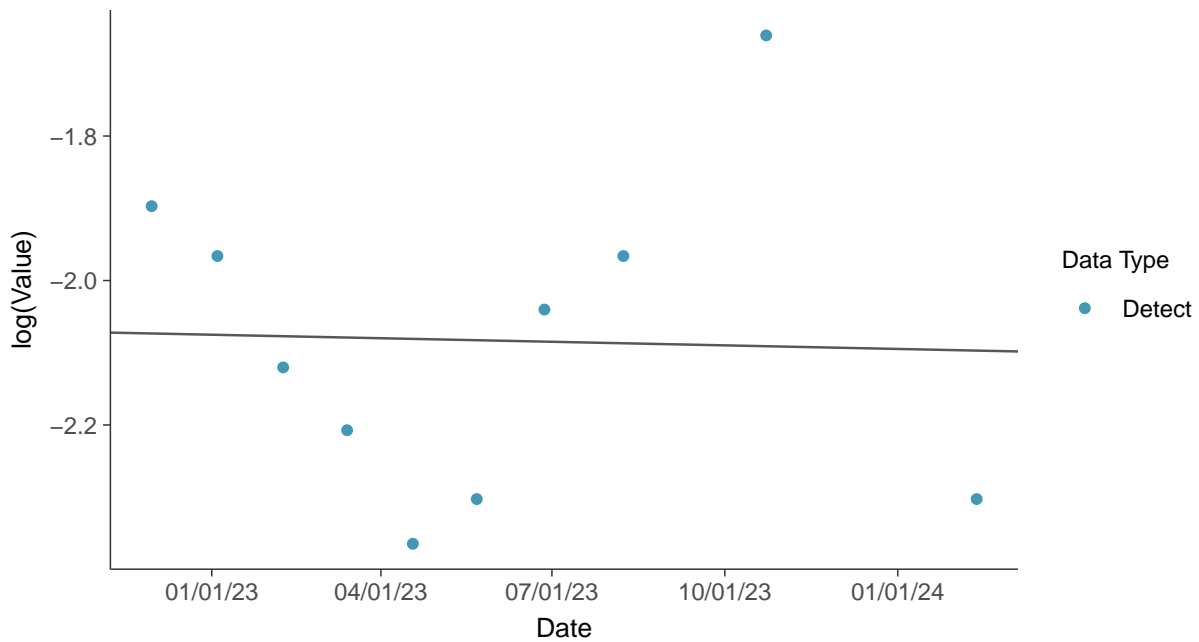
Gamma Q-Q plot

Lithium, MW-32 (mg/L)



Trend Regression: Lognormal MLE

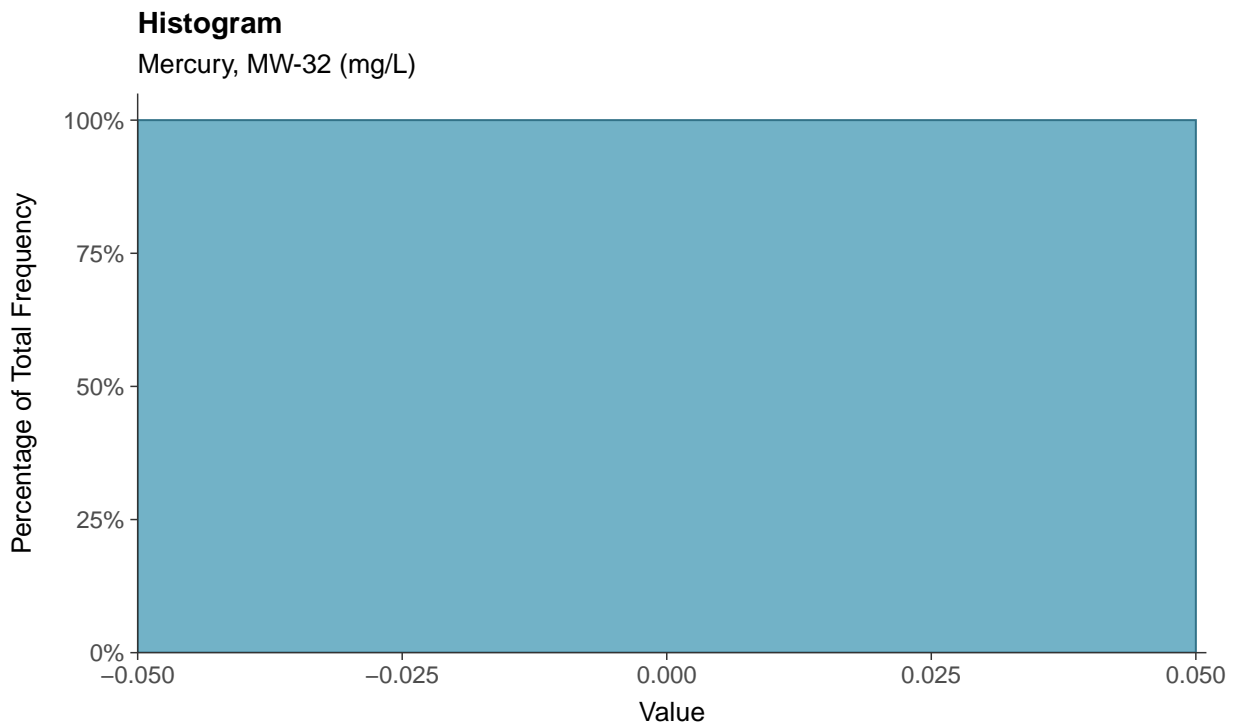
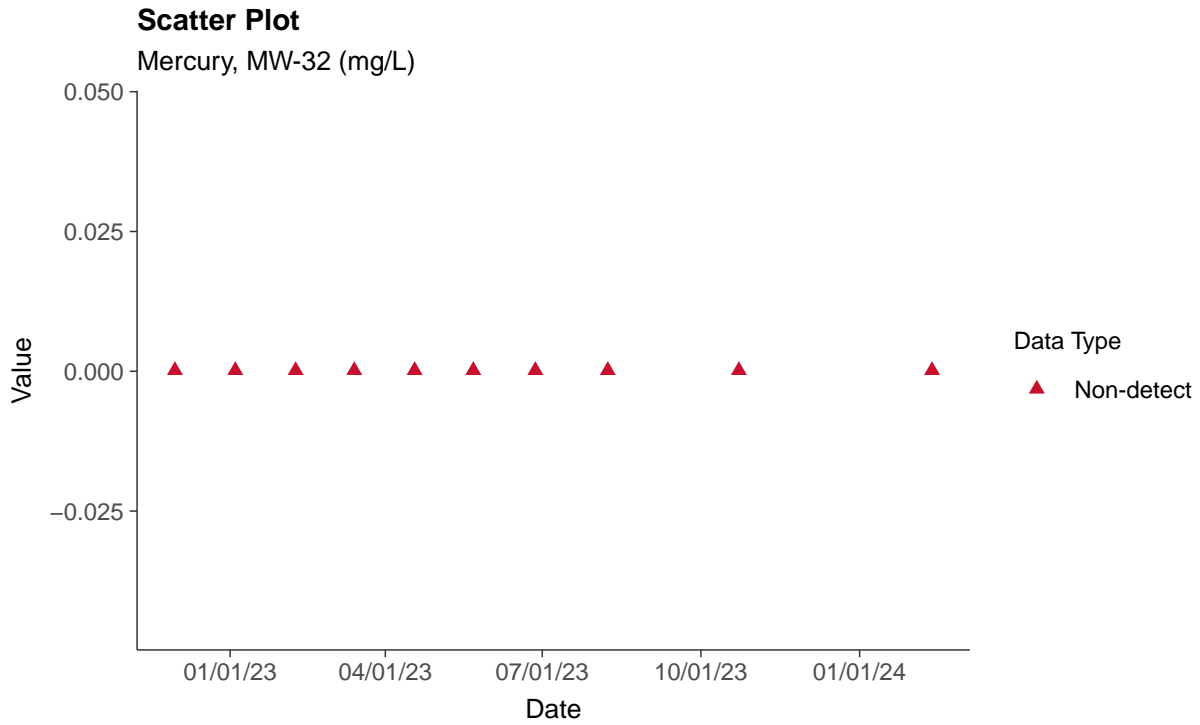
Lithium, MW-32 (mg/L)





Appendix IV: Mercury, MW-32

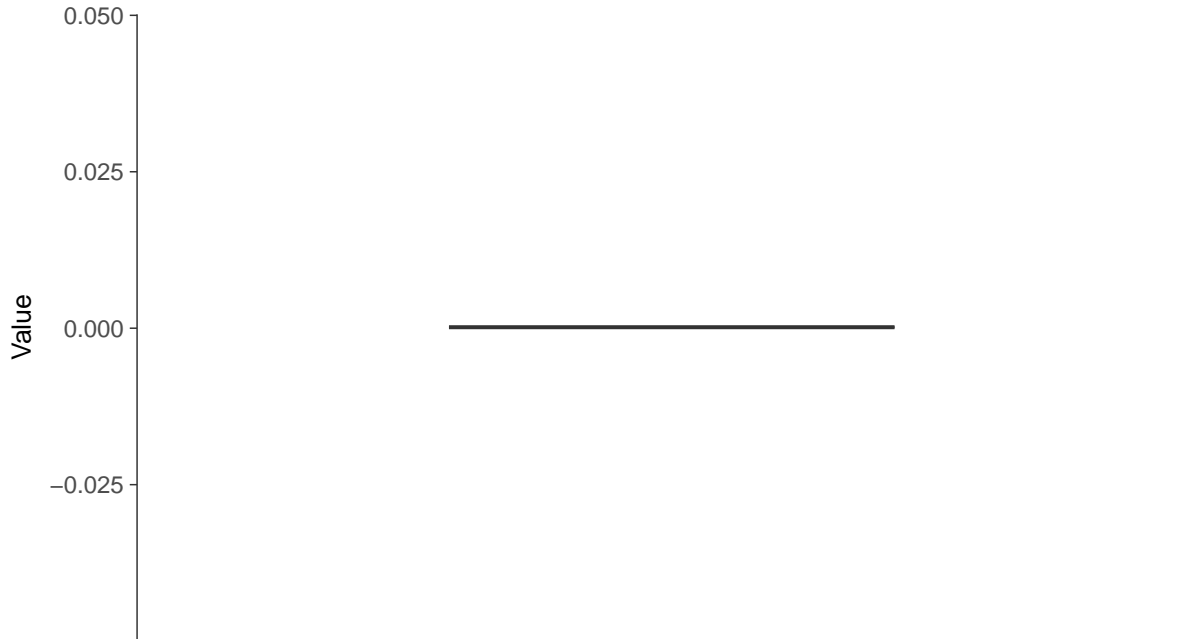
ID: 2_42_5_117





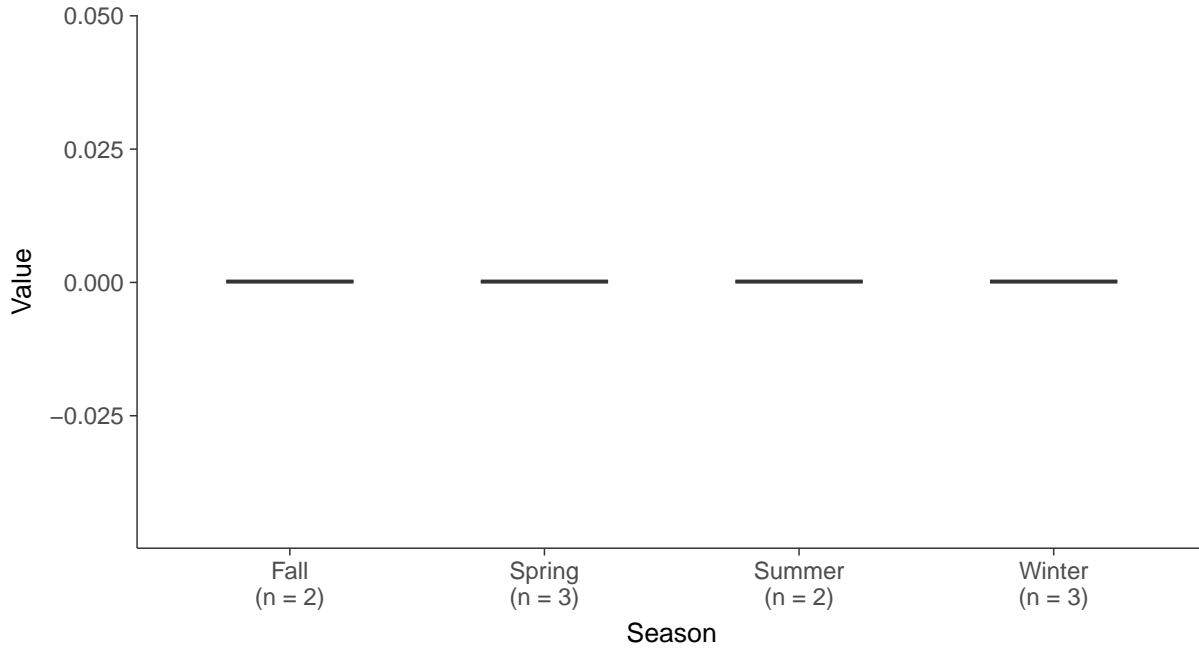
Boxplot

Mercury, MW-32 (mg/L)



Boxplot by Season

Mercury, MW-32 (mg/L)



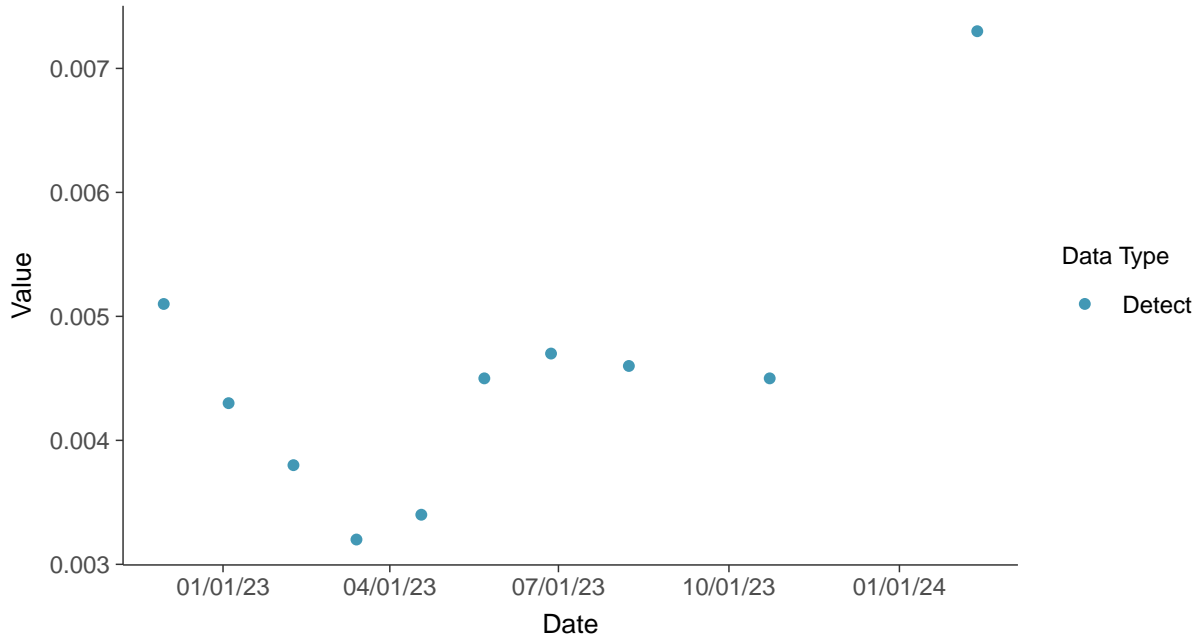


Appendix IV: Molybdenum, MW-32

ID: 2_42_5_118

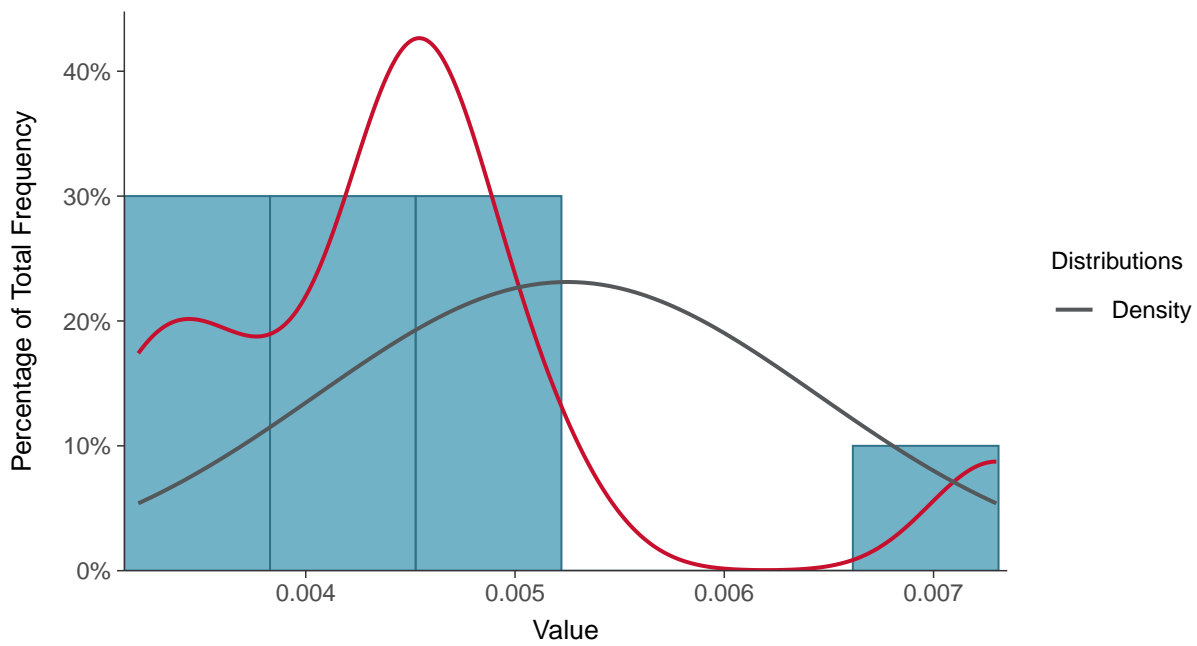
Scatter Plot

Molybdenum, MW-32 (mg/L)



Histogram

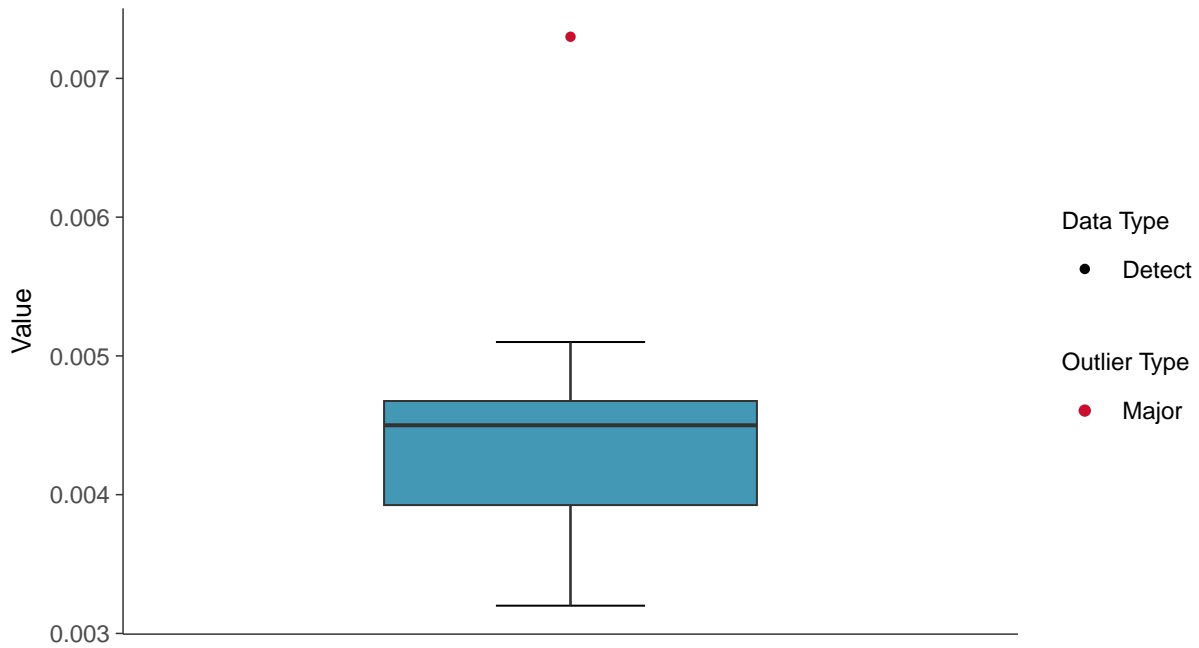
Molybdenum, MW-32 (mg/L)





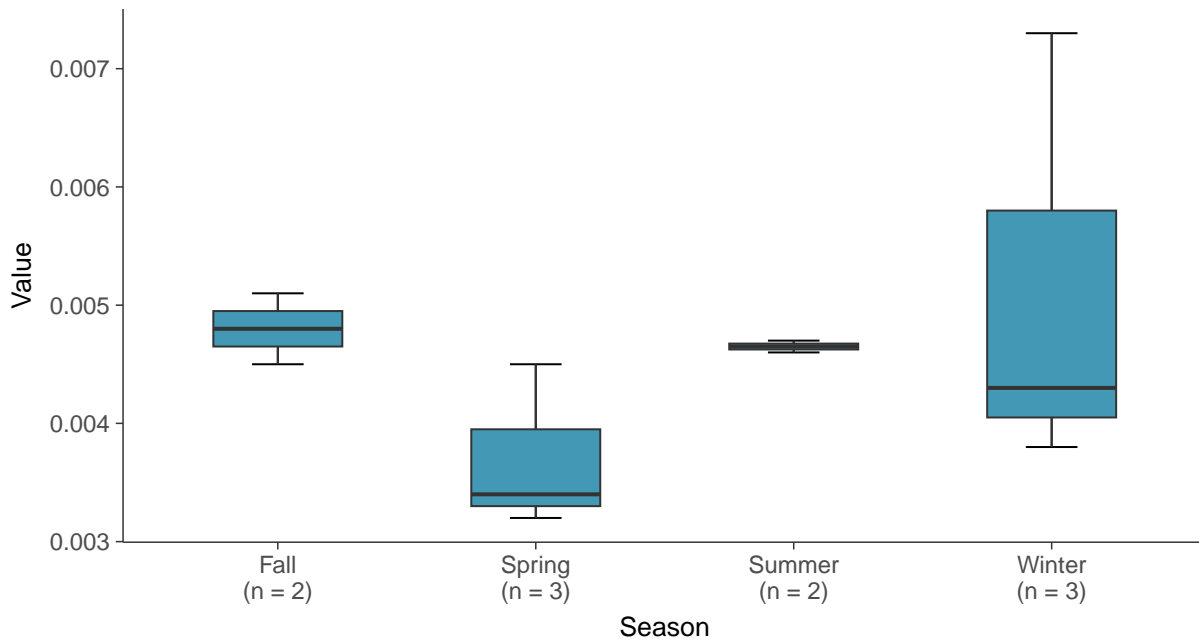
Boxplot

Molybdenum, MW-32 (mg/L)



Boxplot by Season

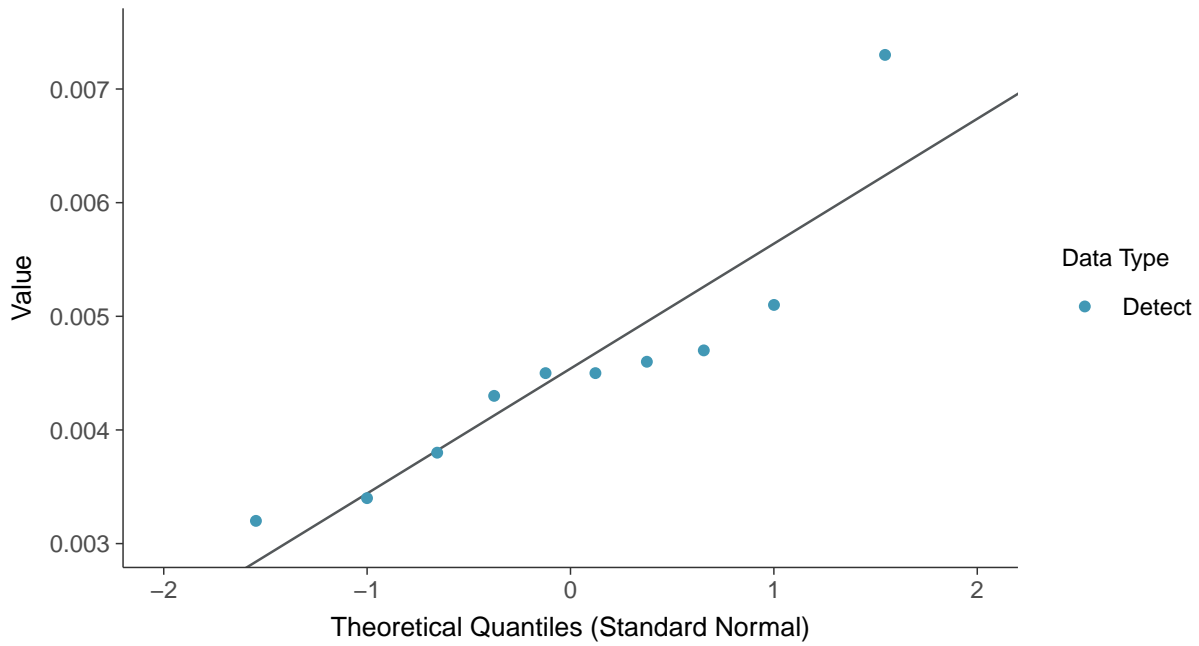
Molybdenum, MW-32 (mg/L)





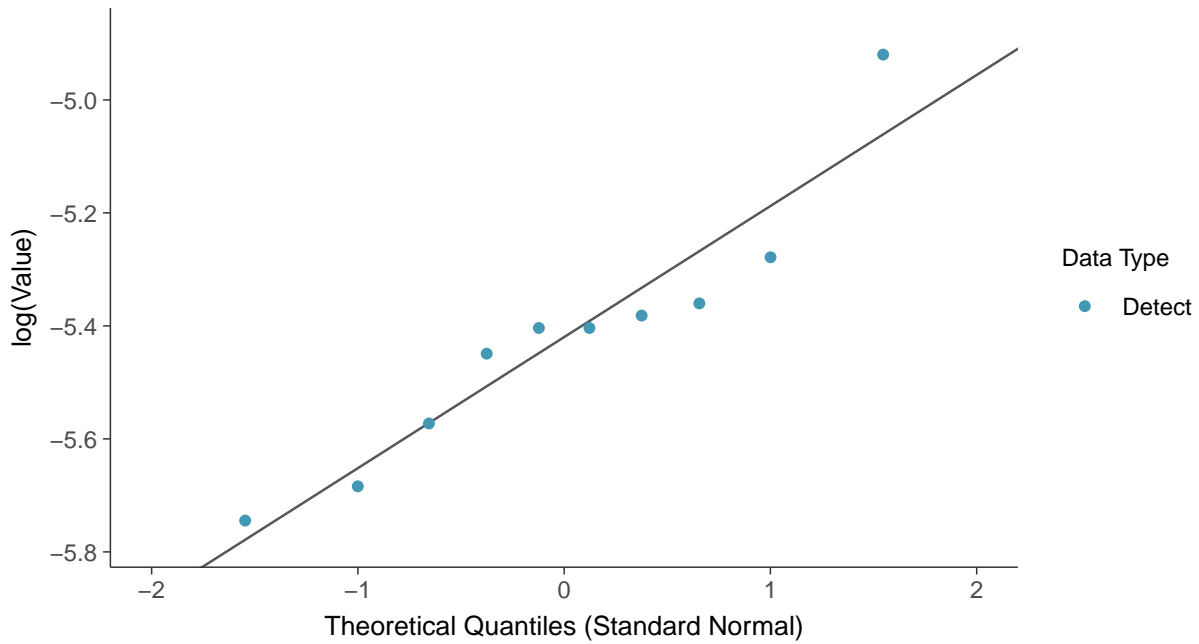
Normal Q-Q plot

Molybdenum, MW-32 (mg/L)



Lognormal Q-Q plot

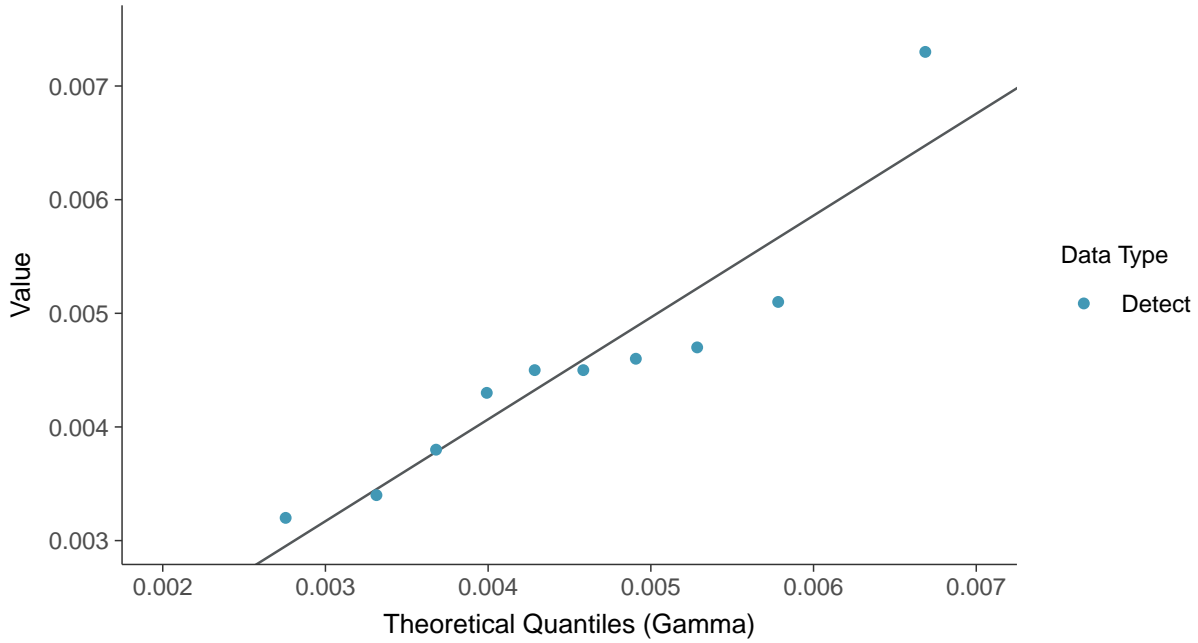
Molybdenum, MW-32 (mg/L)





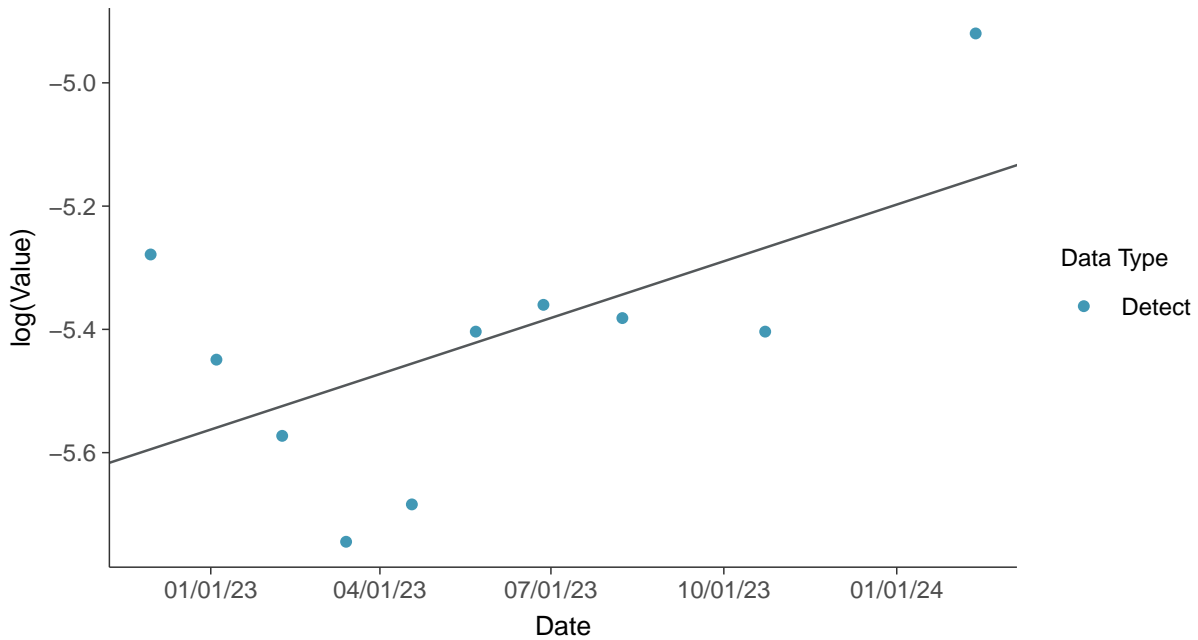
Gamma Q-Q plot

Molybdenum, MW-32 (mg/L)



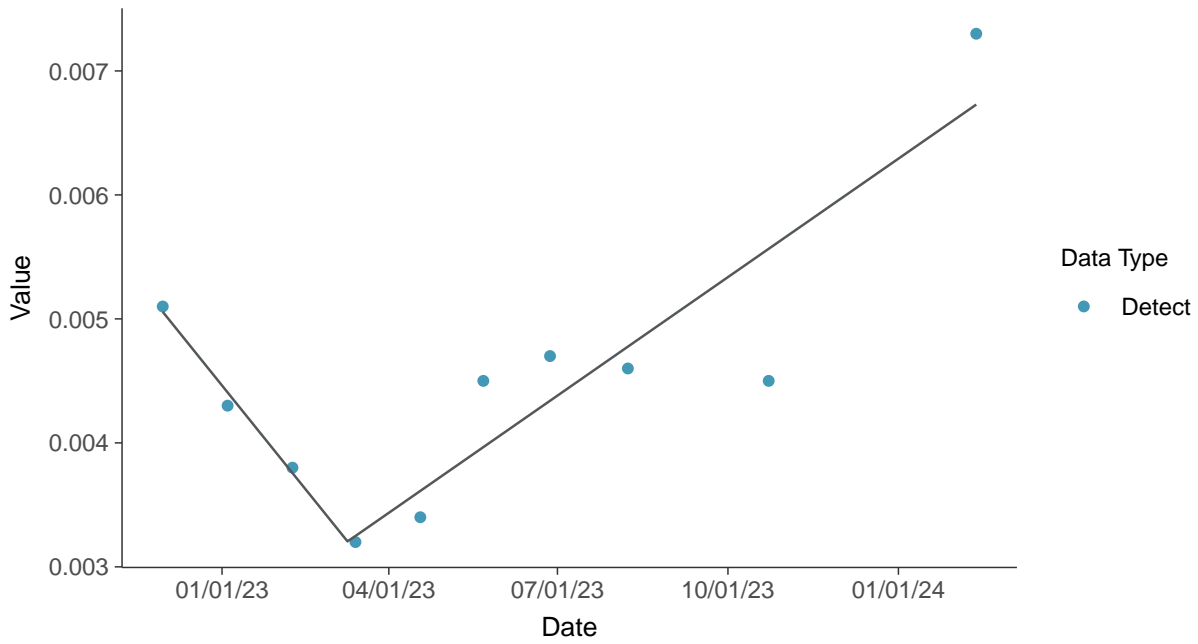
Trend Regression: Lognormal MLE

Molybdenum, MW-32 (mg/L)

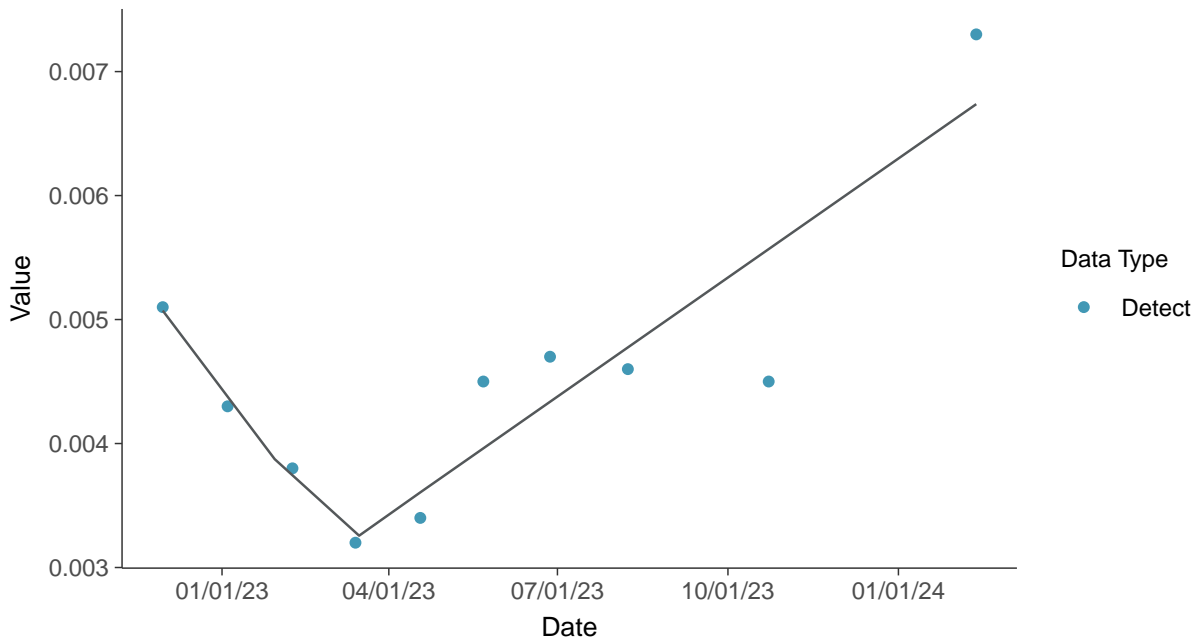




Trend Regression: Piecewise Linear-Linear
Molybdenum, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear
Molybdenum, MW-32 (mg/L)



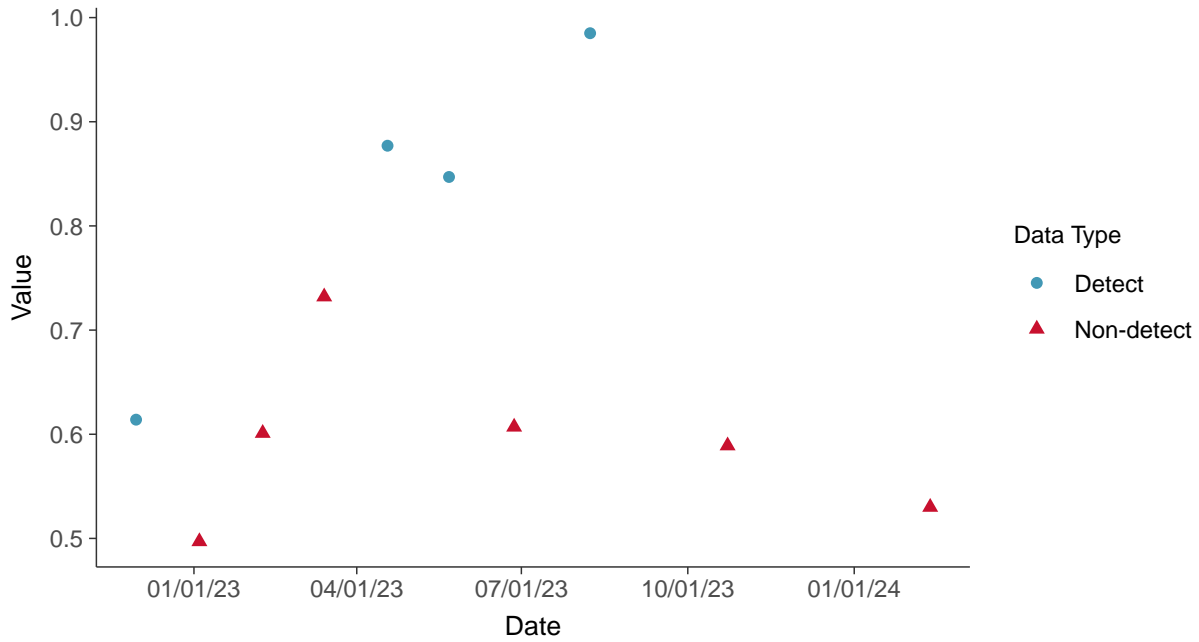


Appendix IV: Radium 226 and 228, MW-32

ID: 2_42_5_121

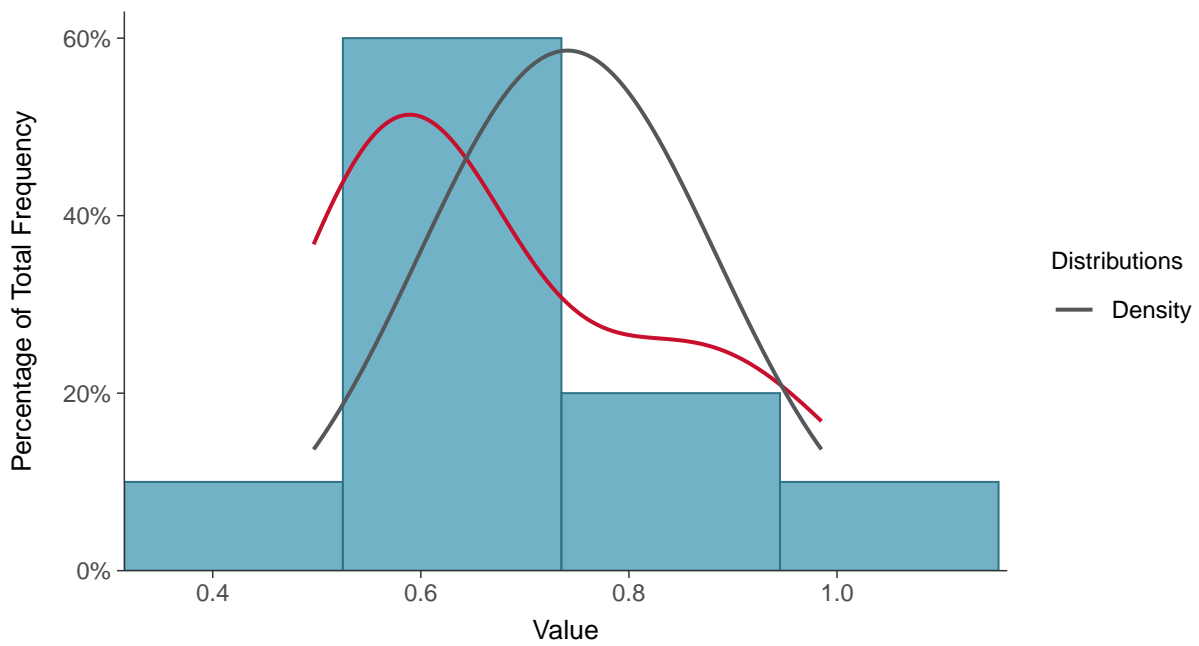
Scatter Plot

Radium 226 and 228, MW-32 (pCi/L)



Histogram

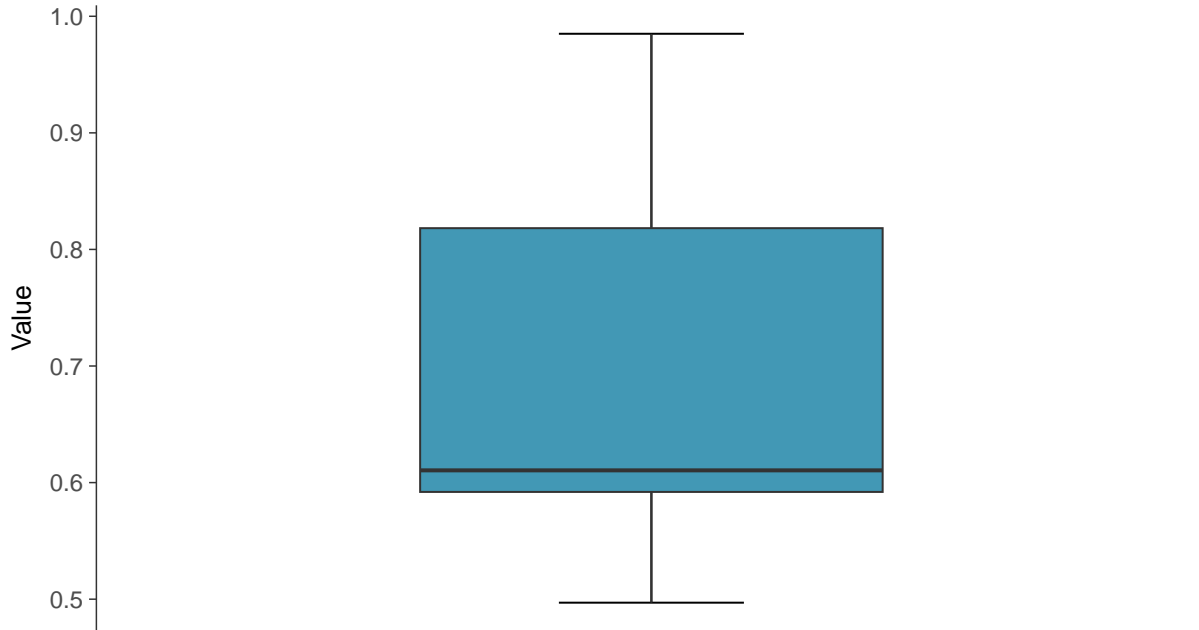
Radium 226 and 228, MW-32 (pCi/L)





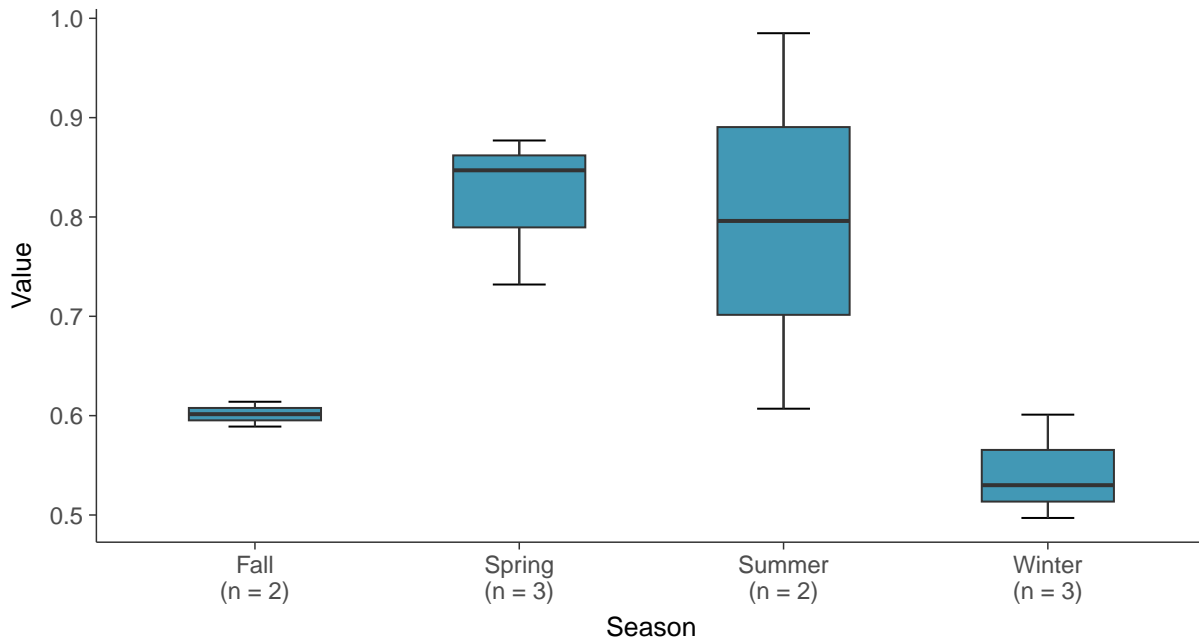
Boxplot

Radium 226 and 228, MW-32 (pCi/L)



Boxplot by Season

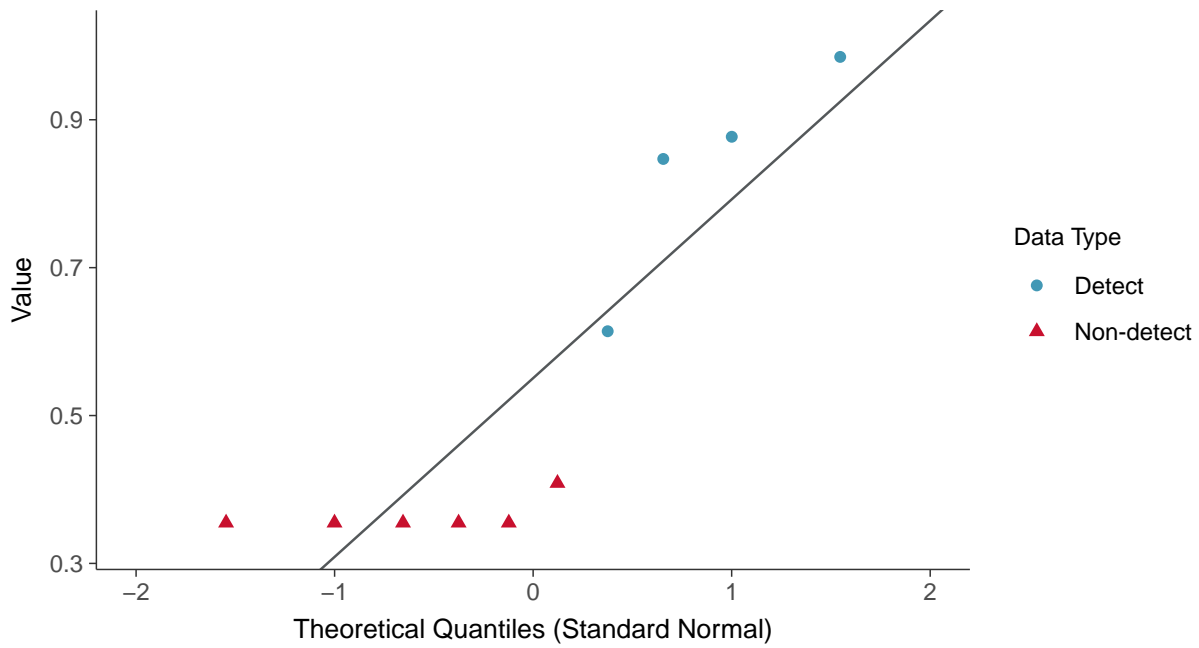
Radium 226 and 228, MW-32 (pCi/L)





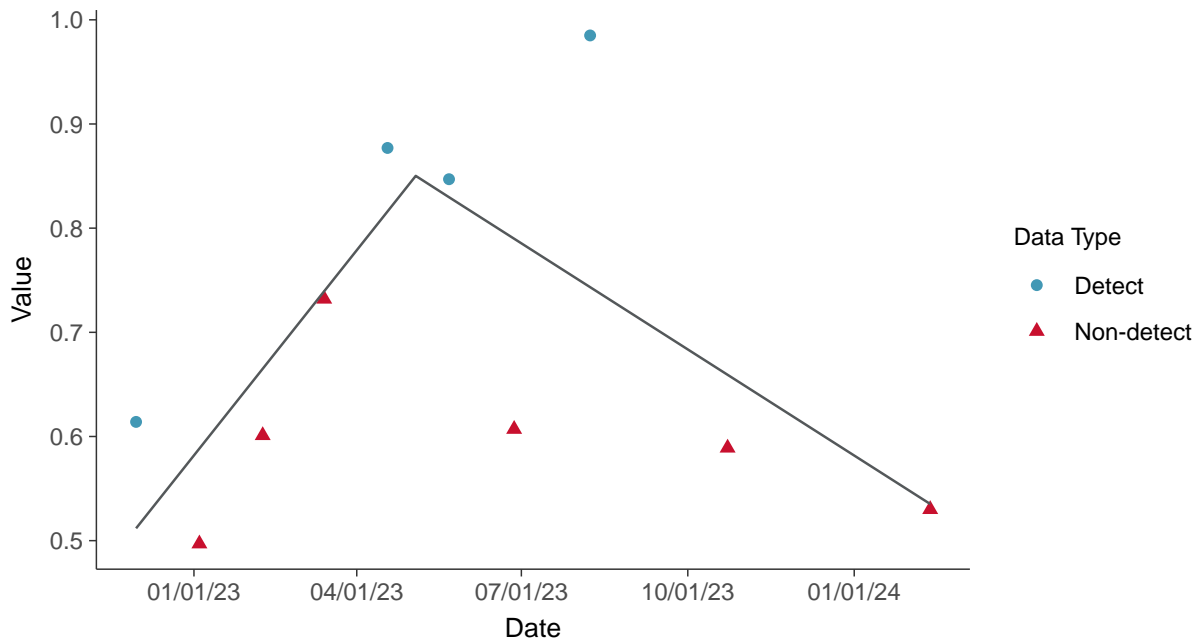
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-32 (pCi/L)



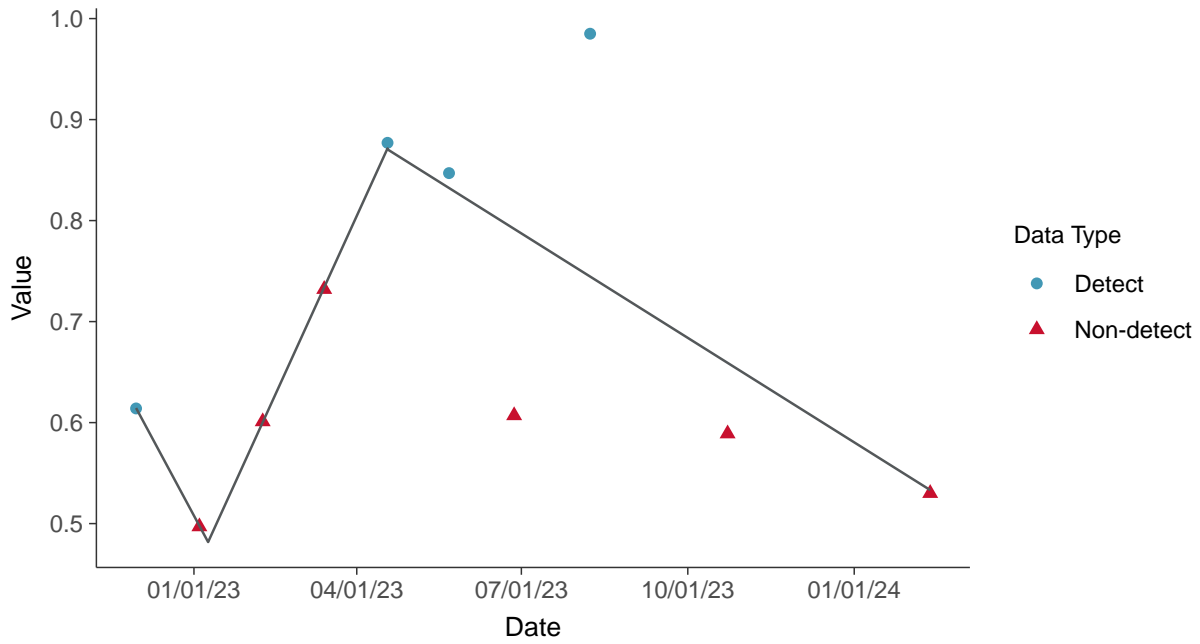
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-32 (pCi/L)





Trend Regression: Piecewise Linear-Linear-Linear
Radium 226 and 228, MW-32 (pCi/L)



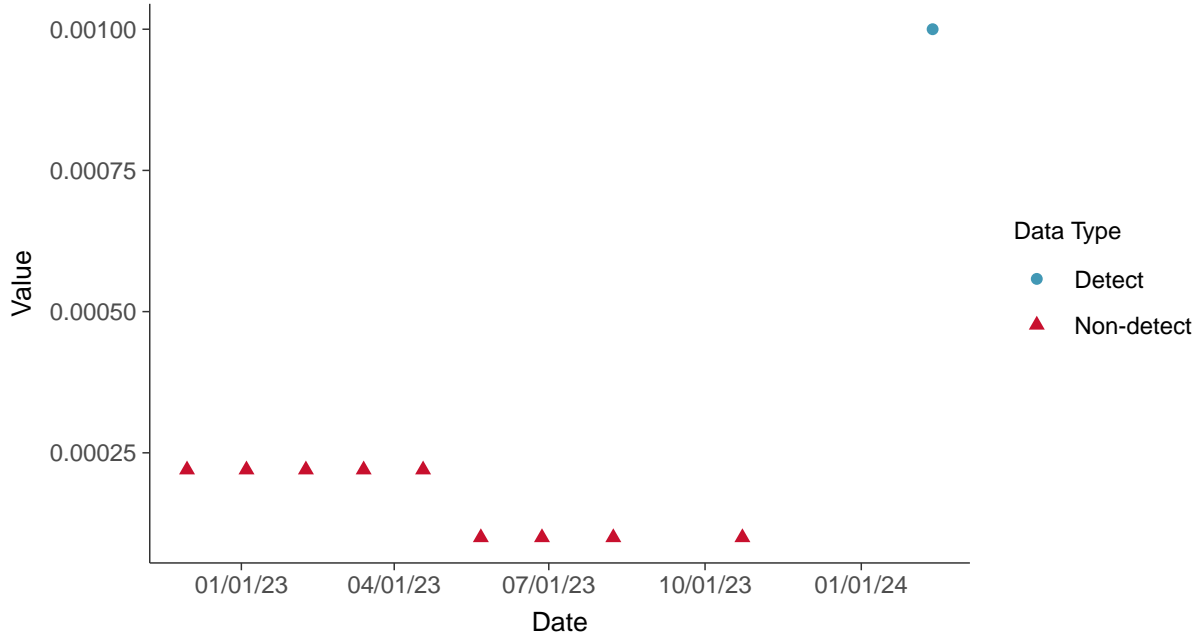


Appendix IV: Selenium, MW-32

ID: 2_42_5_122

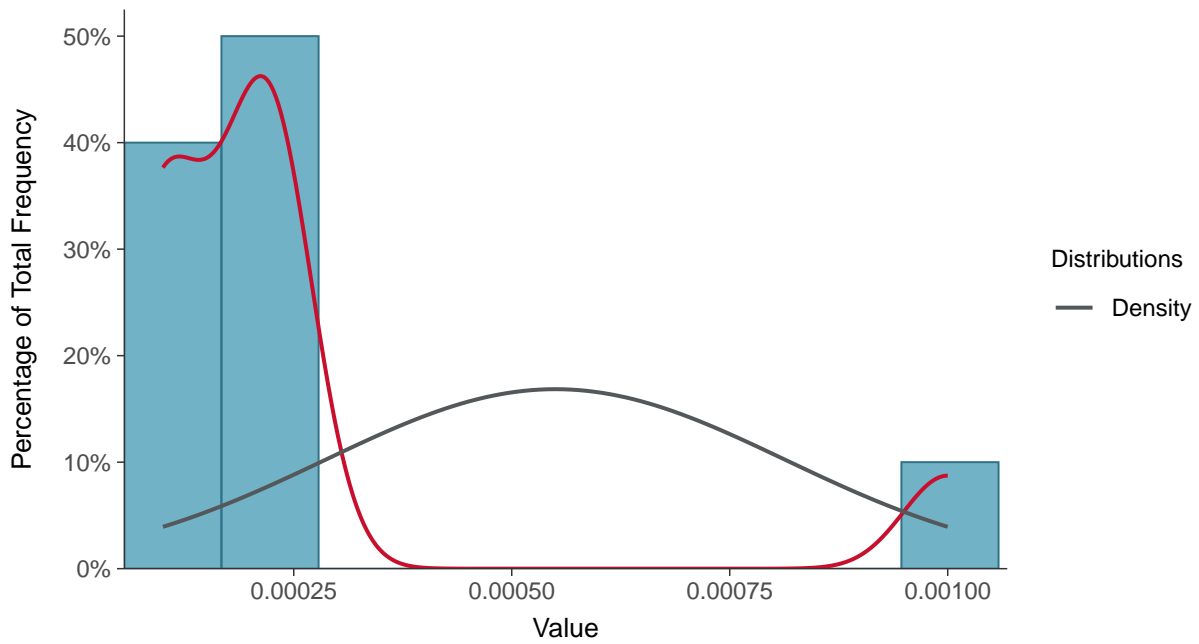
Scatter Plot

Selenium, MW-32 (mg/L)



Histogram

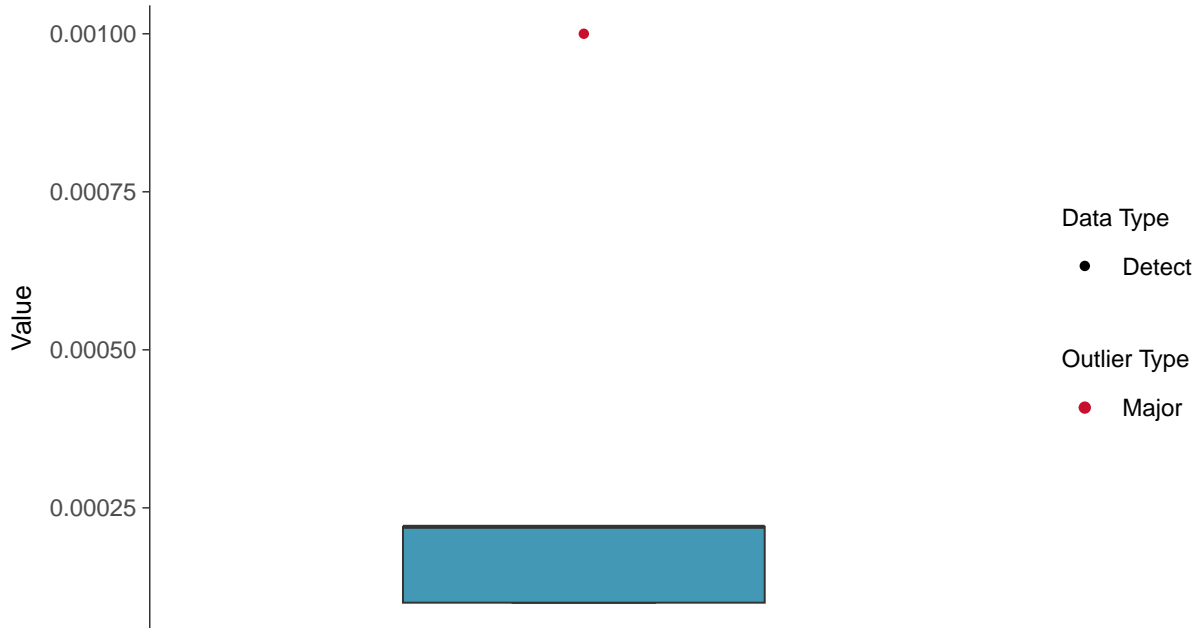
Selenium, MW-32 (mg/L)





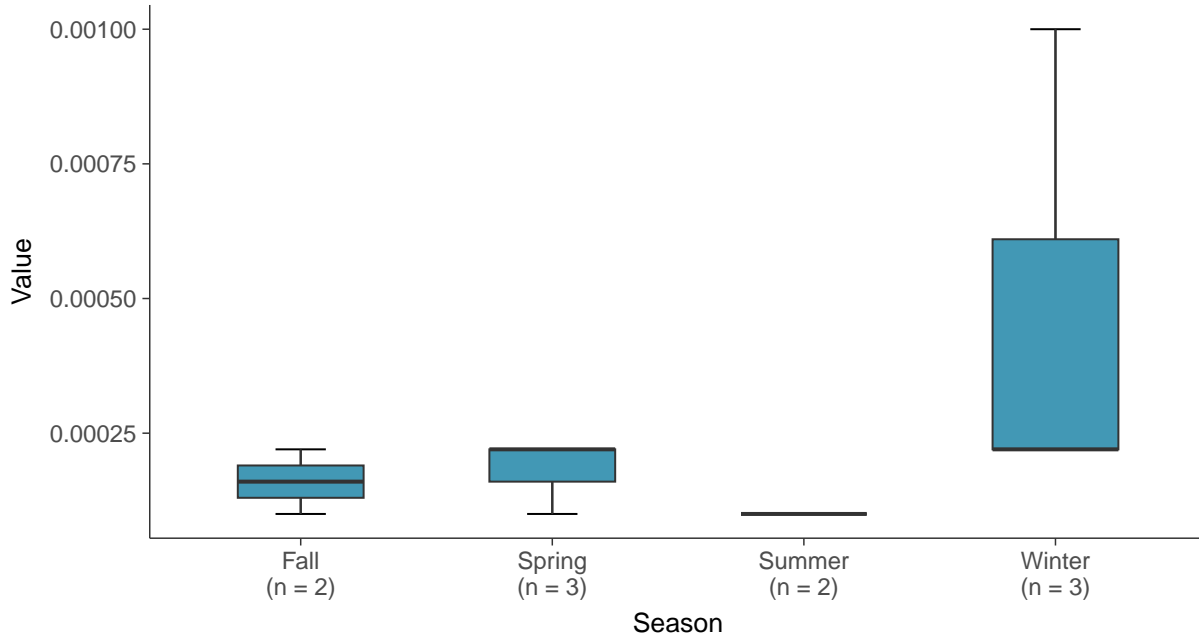
Boxplot

Selenium, MW-32 (mg/L)



Boxplot by Season

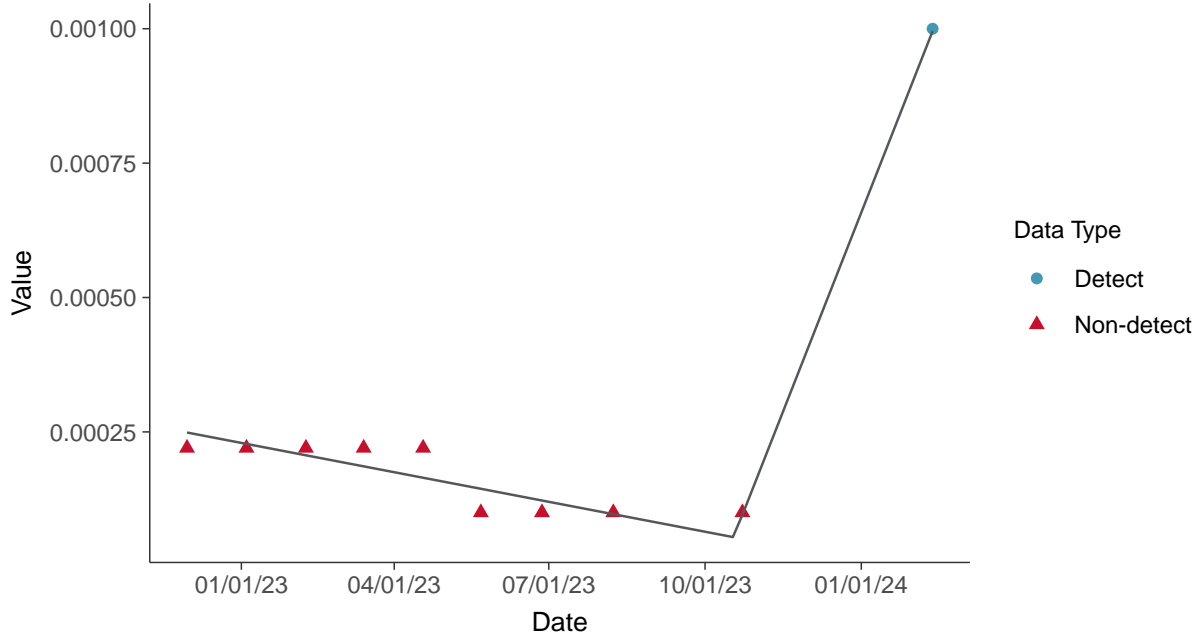
Selenium, MW-32 (mg/L)





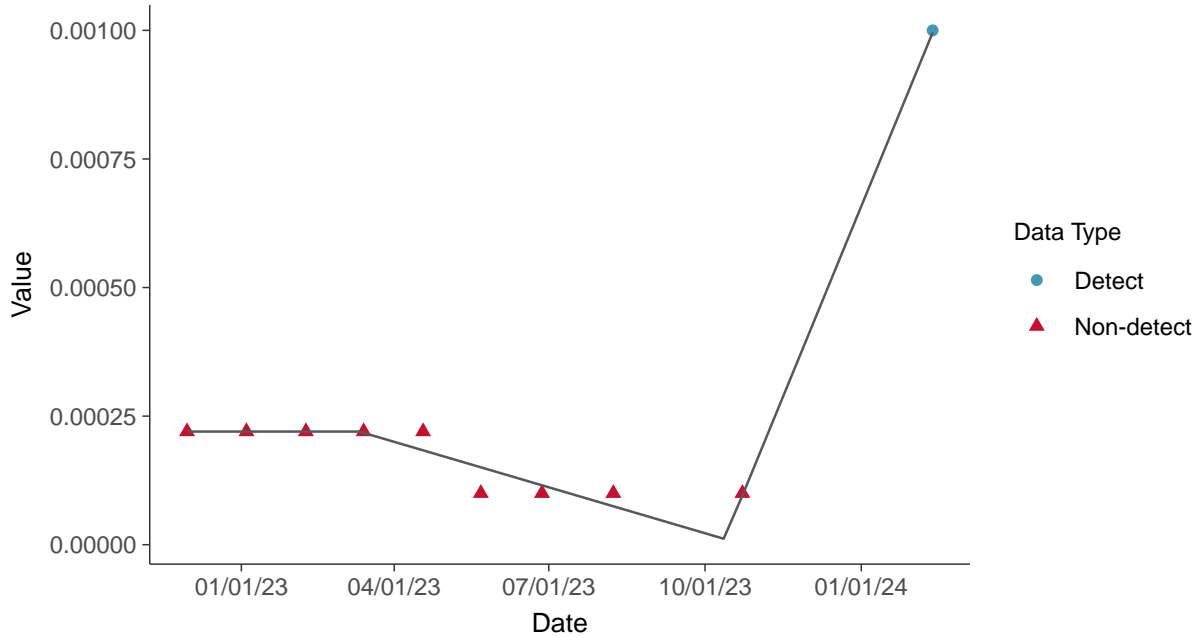
Trend Regression: Piecewise Linear-Linear

Selenium, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-32 (mg/L)



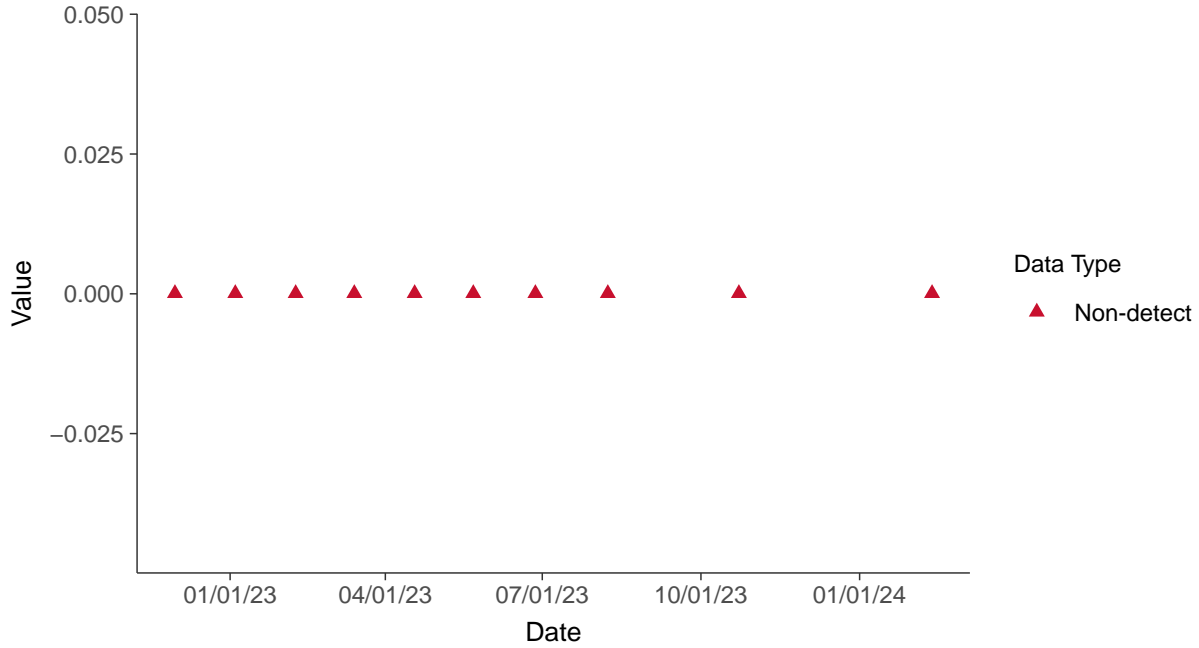


Appendix IV: Thallium, MW-32

ID: 2_42_5_125

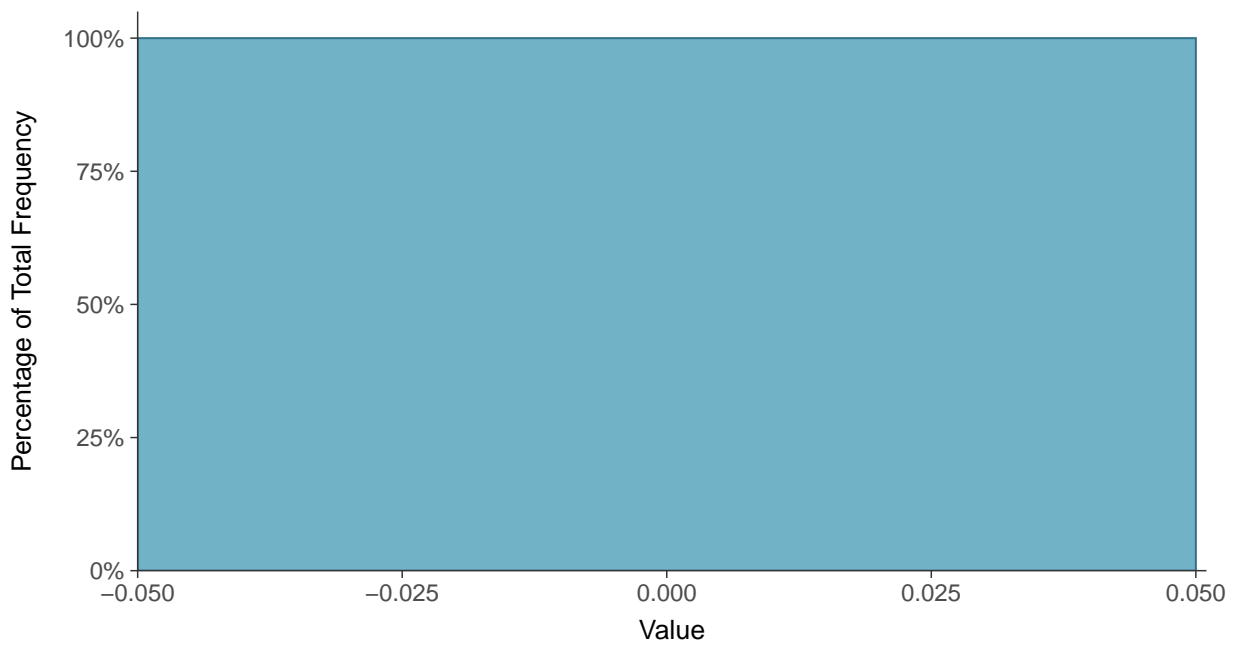
Scatter Plot

Thallium, MW-32 (mg/L)



Histogram

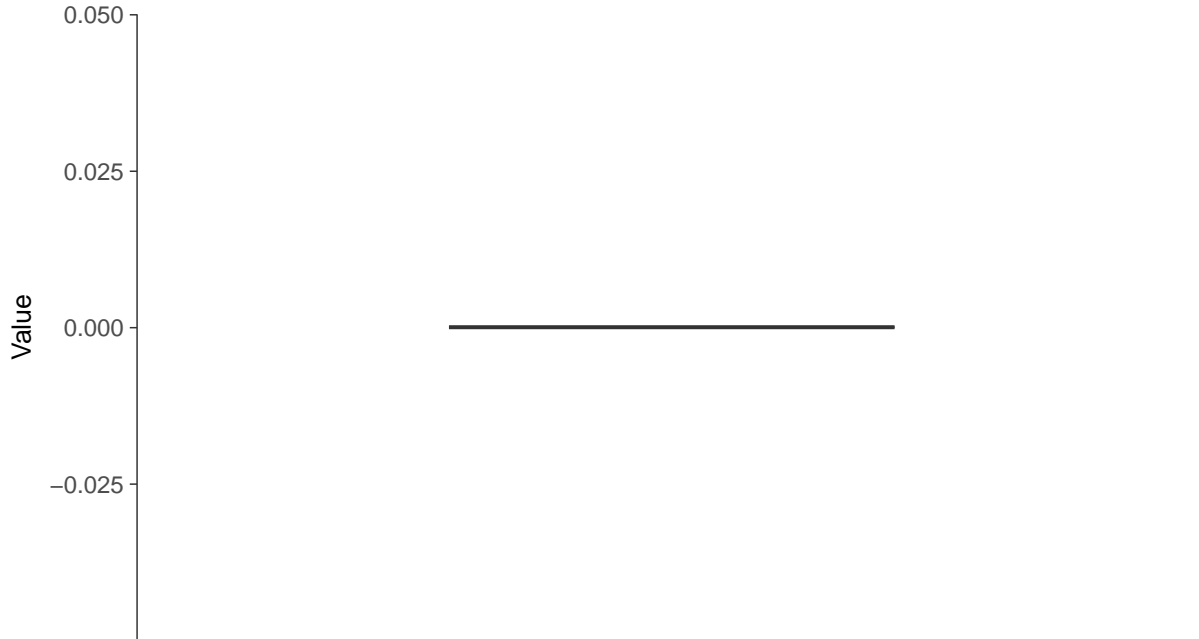
Thallium, MW-32 (mg/L)





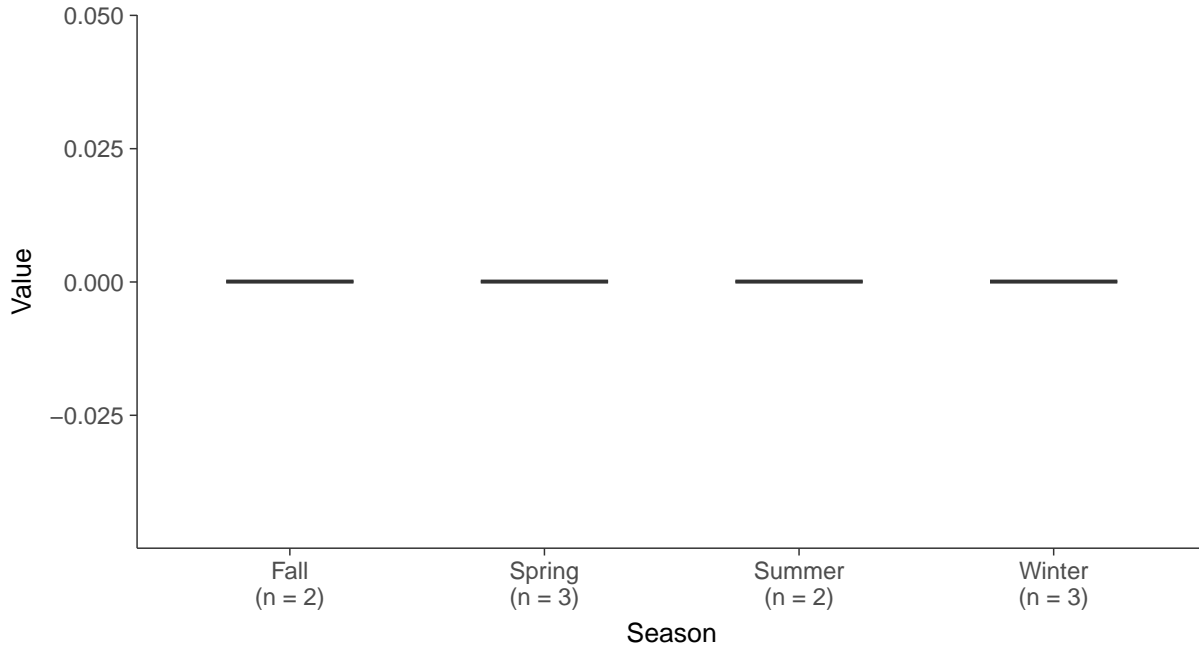
Boxplot

Thallium, MW-32 (mg/L)



Boxplot by Season

Thallium, MW-32 (mg/L)



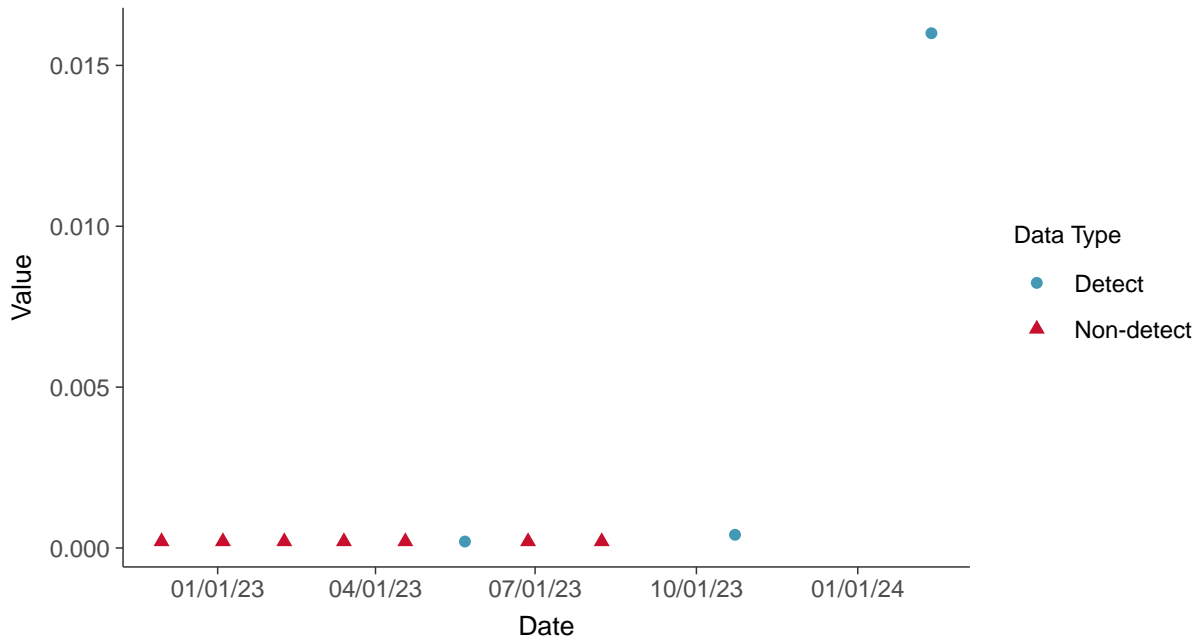


Part 115: Copper, MW-32

ID: 2_42_6_111

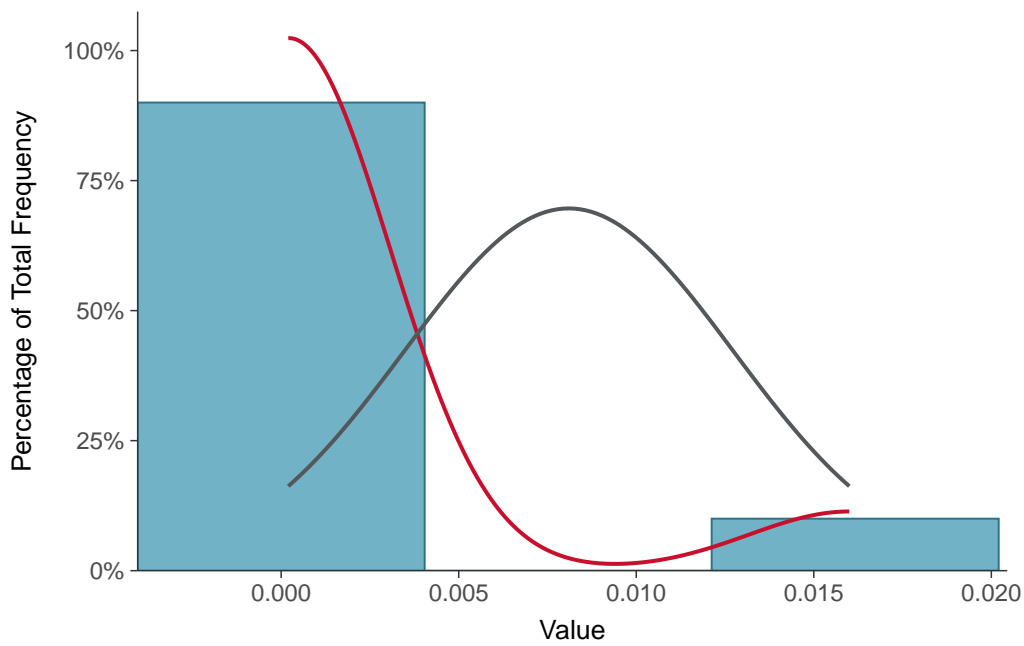
Scatter Plot

Copper, MW-32 (mg/L)



Histogram

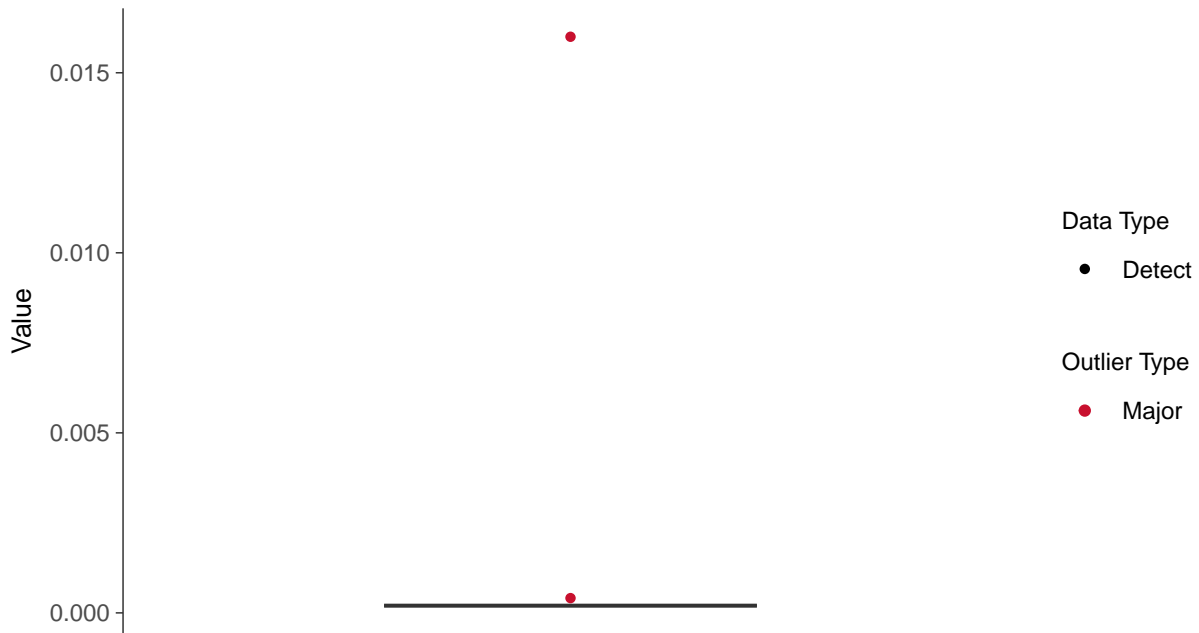
Copper, MW-32 (mg/L)





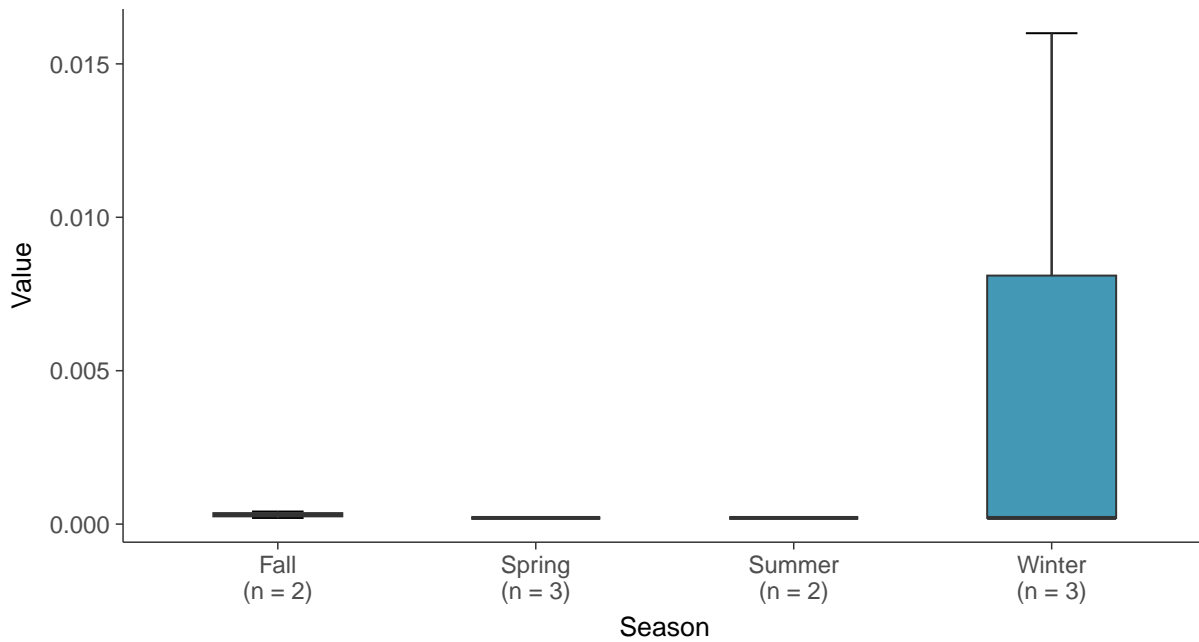
Boxplot

Copper, MW-32 (mg/L)



Boxplot by Season

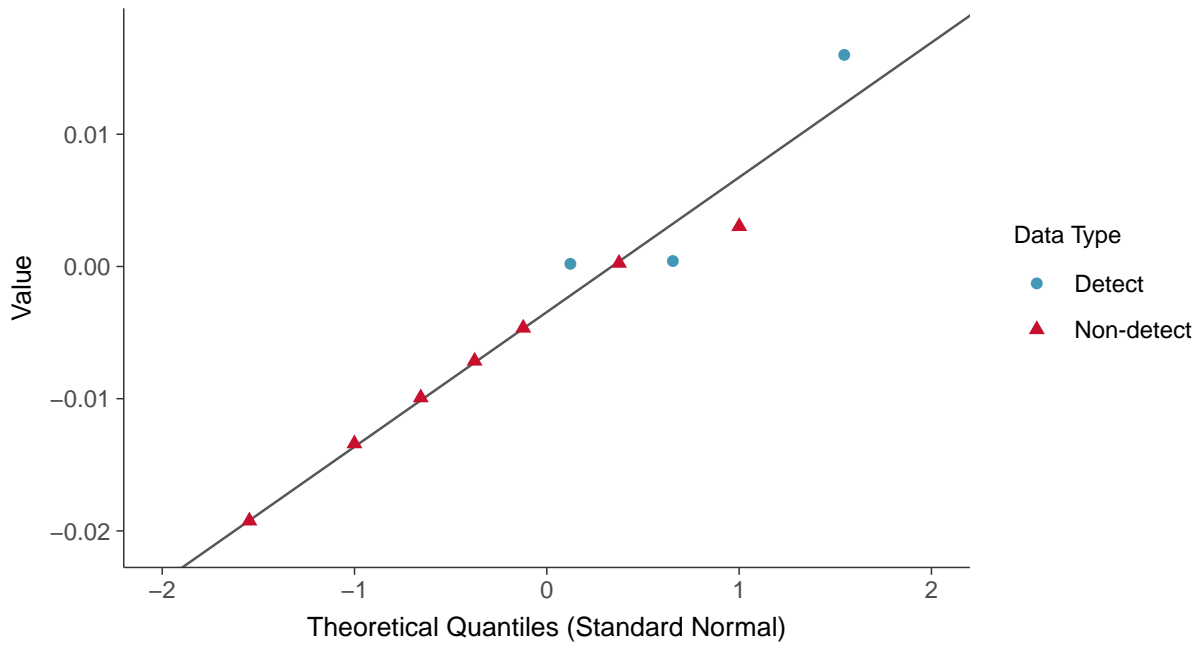
Copper, MW-32 (mg/L)





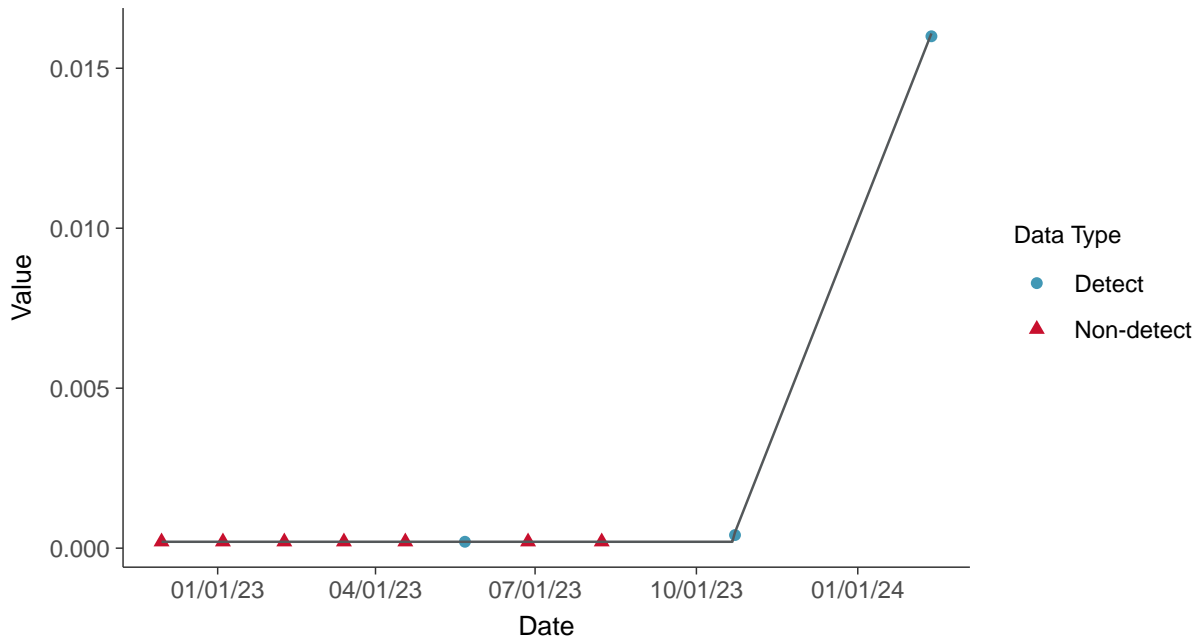
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear

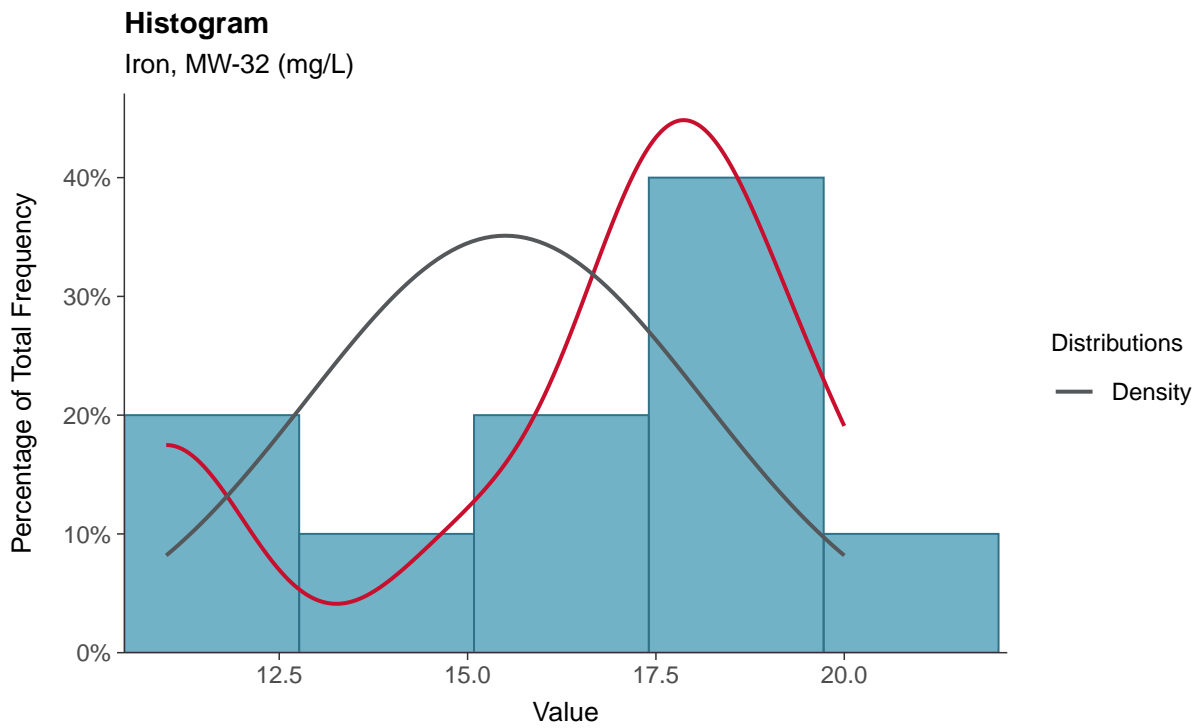
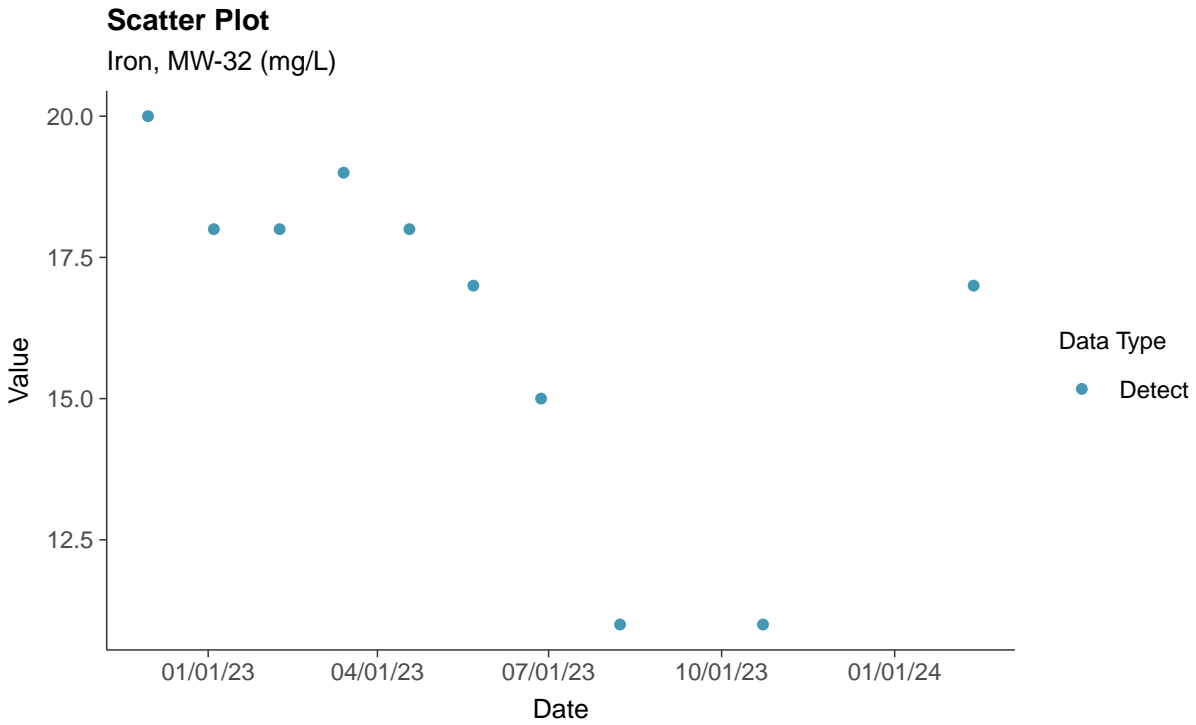
Copper, MW-32 (mg/L)





Part 115: Iron, MW-32

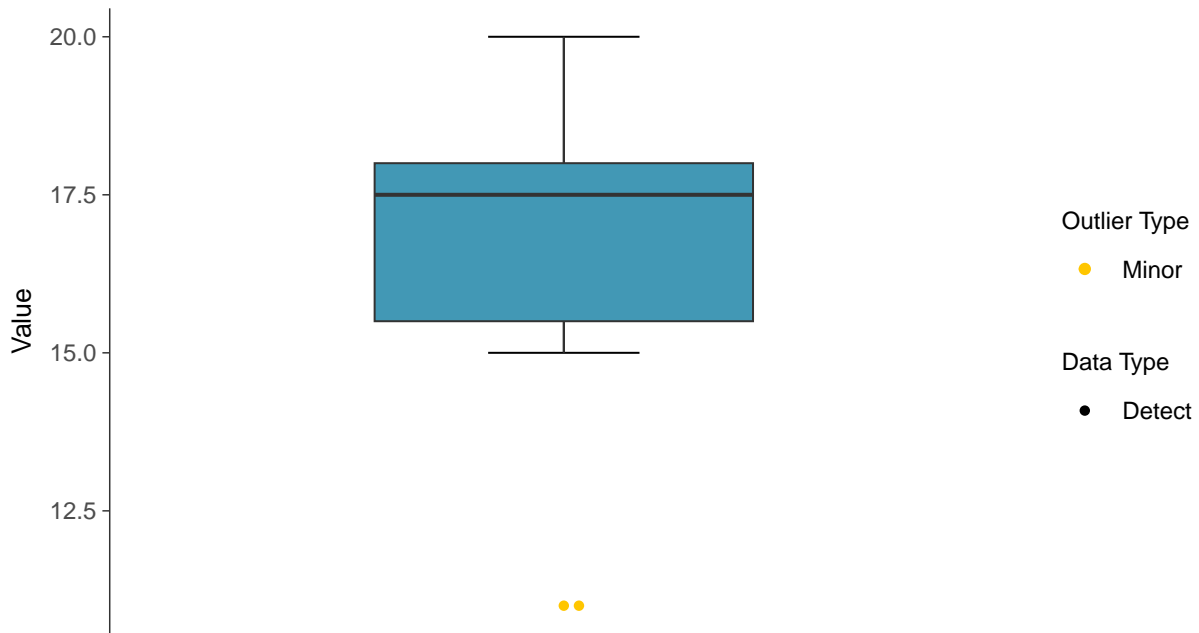
ID: 2_42_6_114





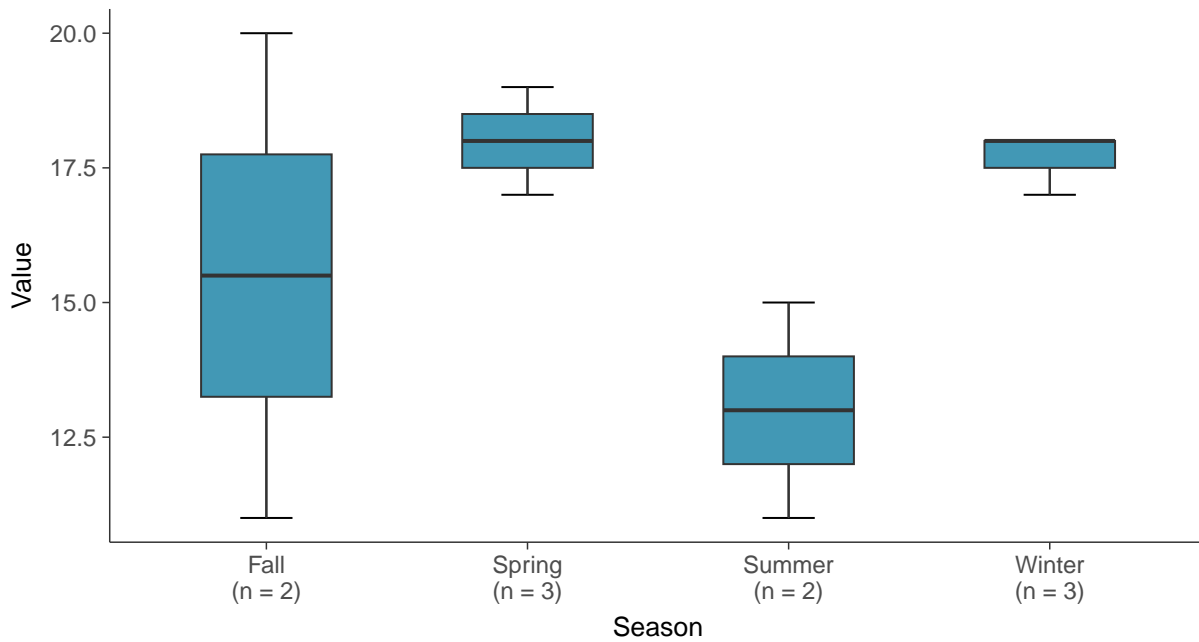
Boxplot

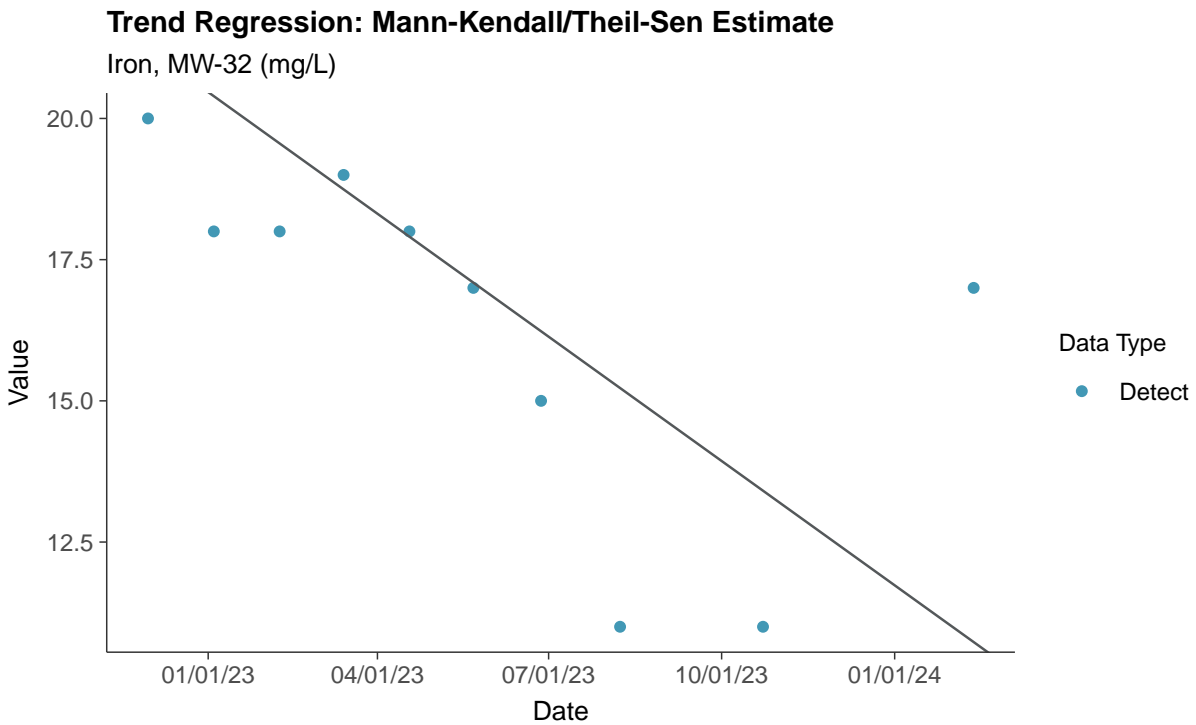
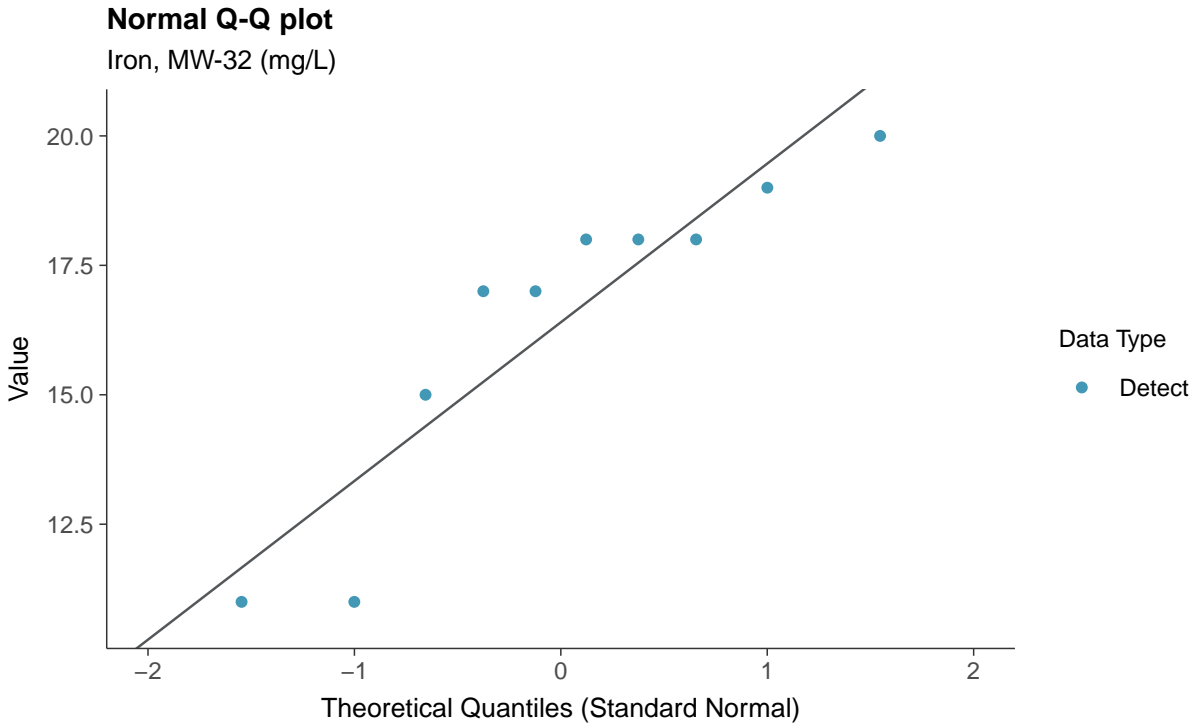
Iron, MW-32 (mg/L)



Boxplot by Season

Iron, MW-32 (mg/L)

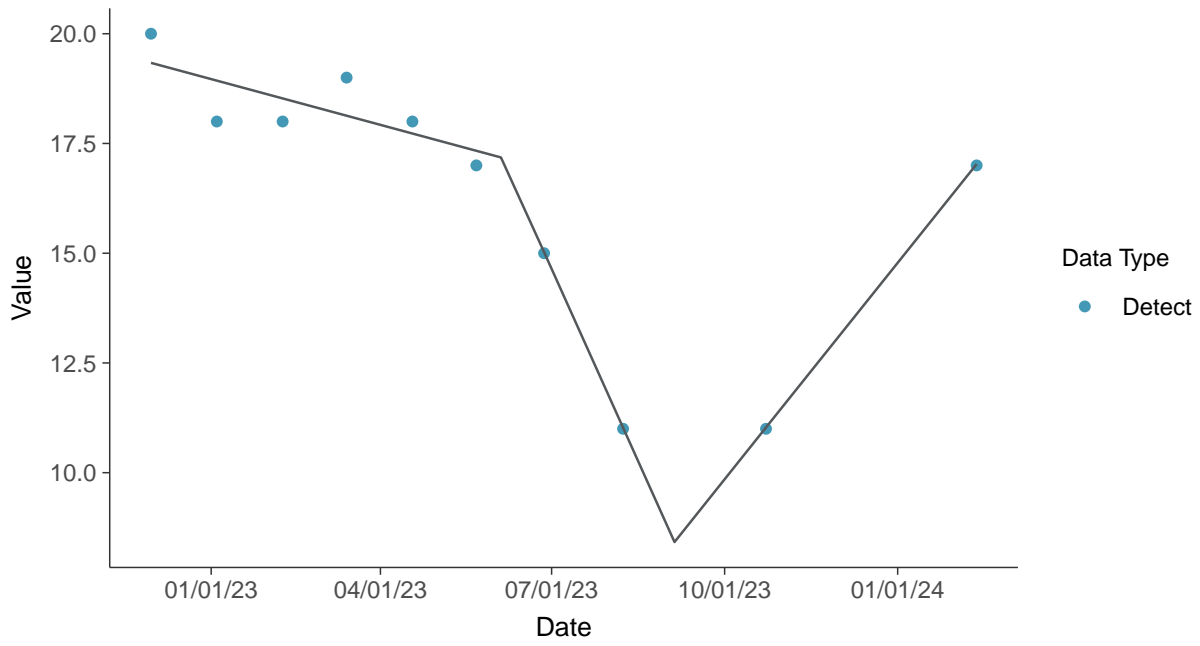






Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-32 (mg/L)



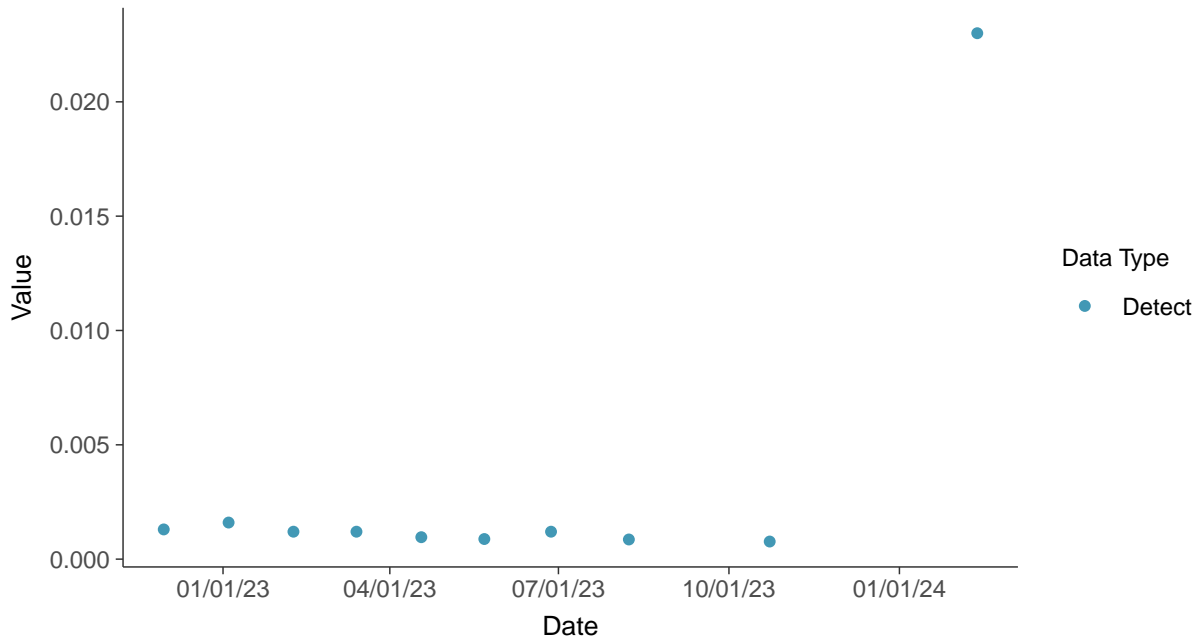


Part 115: Nickel, MW-32

ID: 2_42_6_119

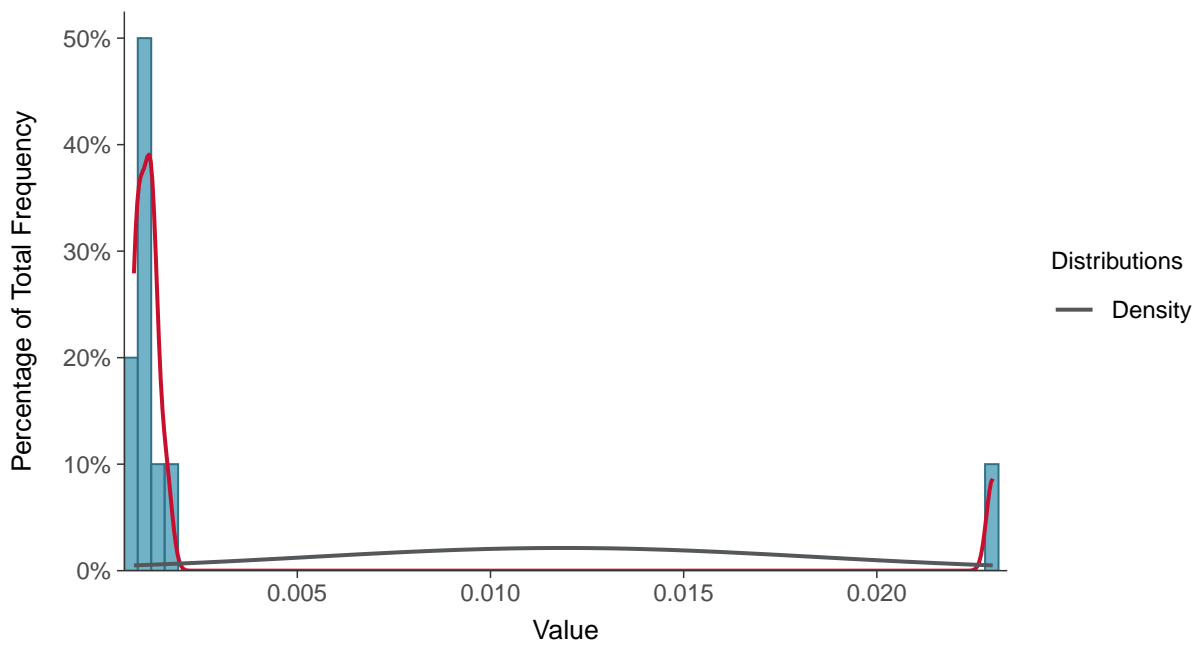
Scatter Plot

Nickel, MW-32 (mg/L)



Histogram

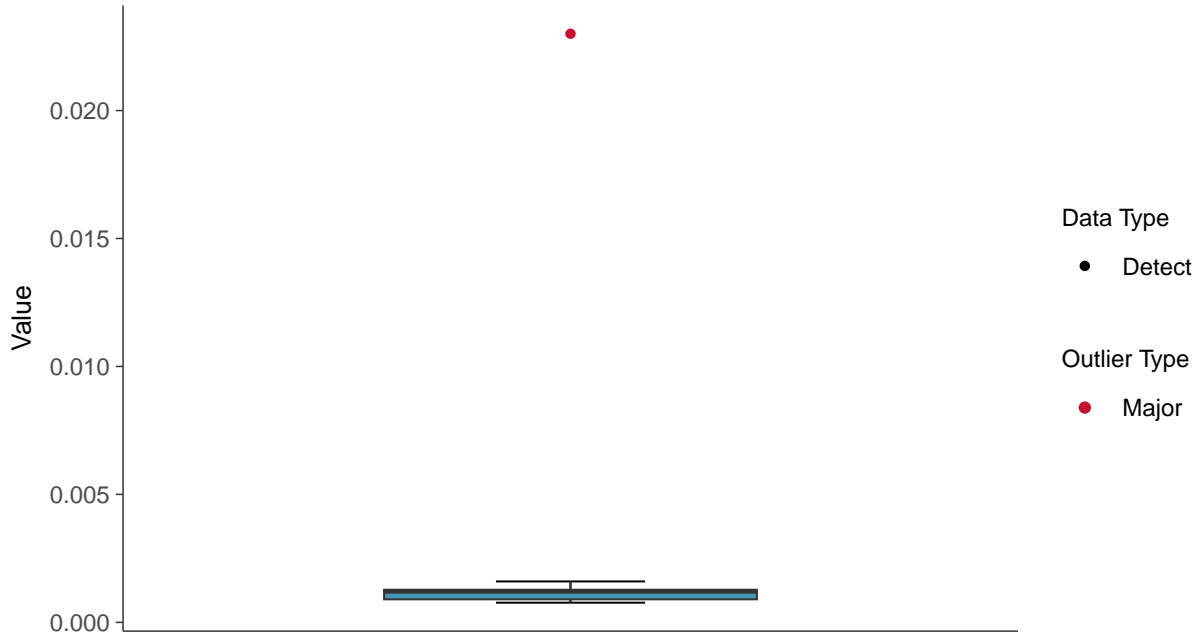
Nickel, MW-32 (mg/L)





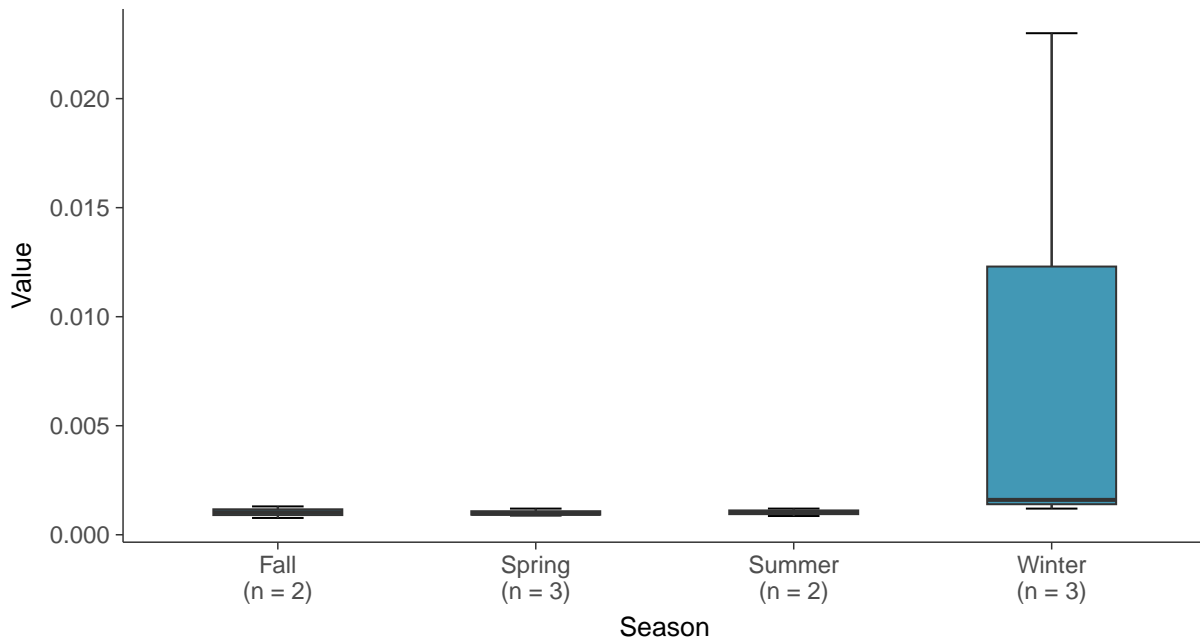
Boxplot

Nickel, MW-32 (mg/L)



Boxplot by Season

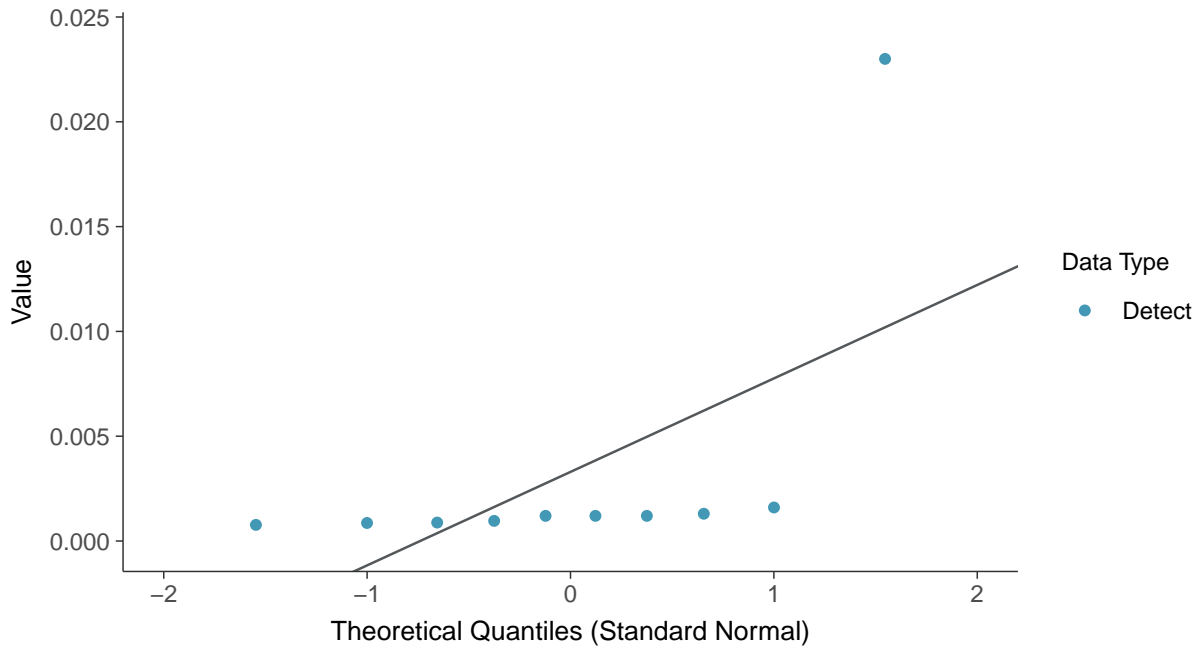
Nickel, MW-32 (mg/L)





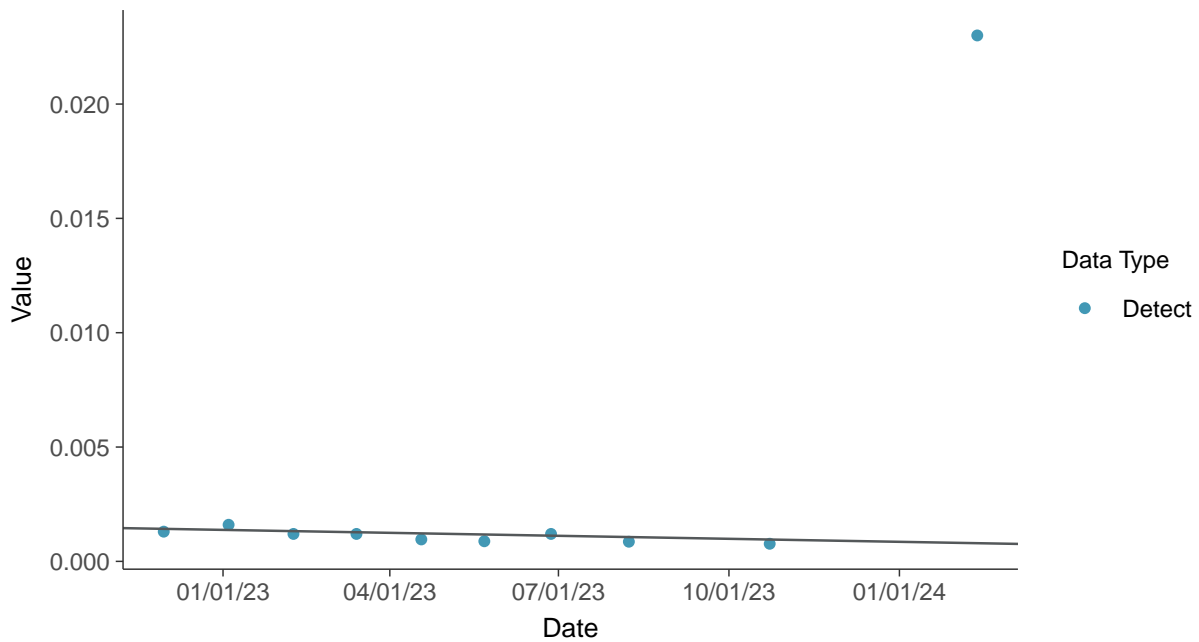
Normal Q-Q plot

Nickel, MW-32 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

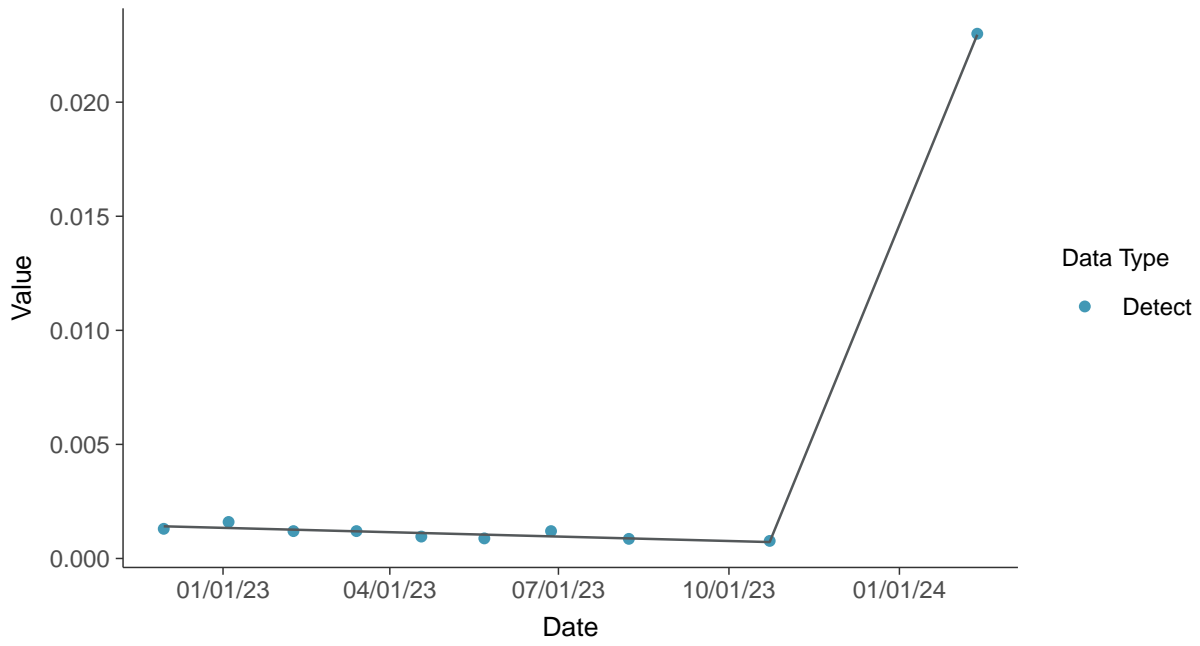
Nickel, MW-32 (mg/L)





Trend Regression: Piecewise Linear-Linear

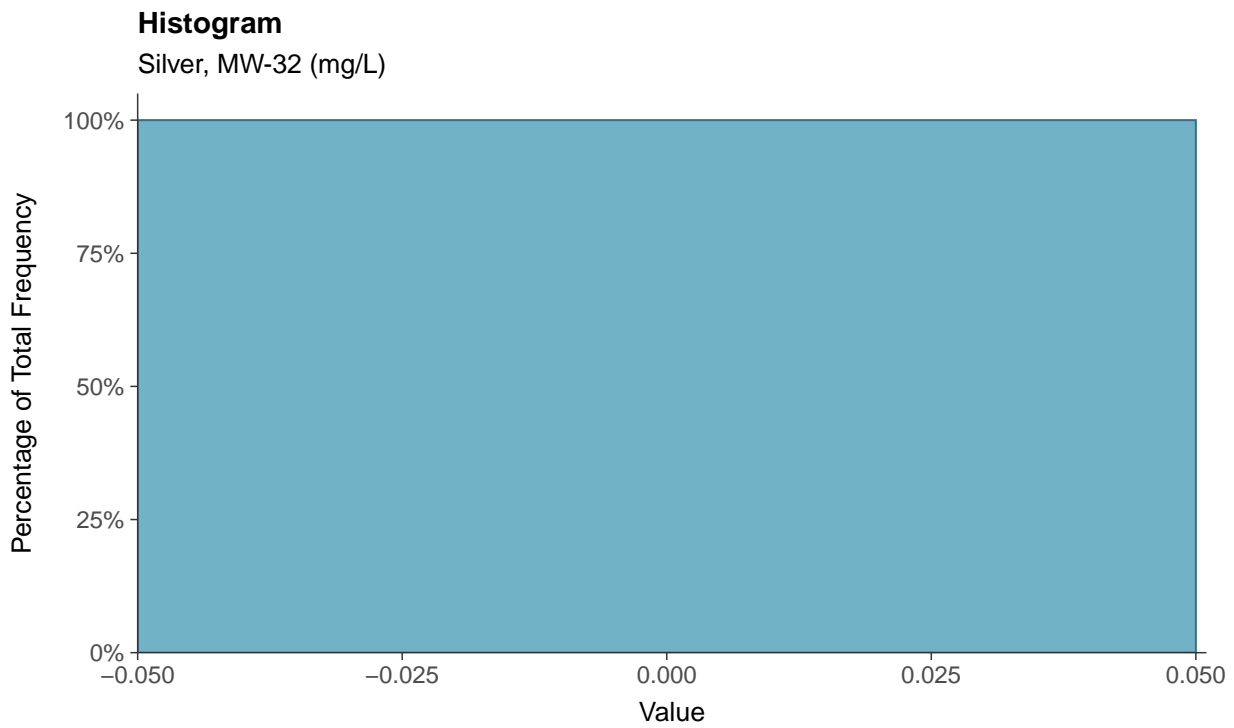
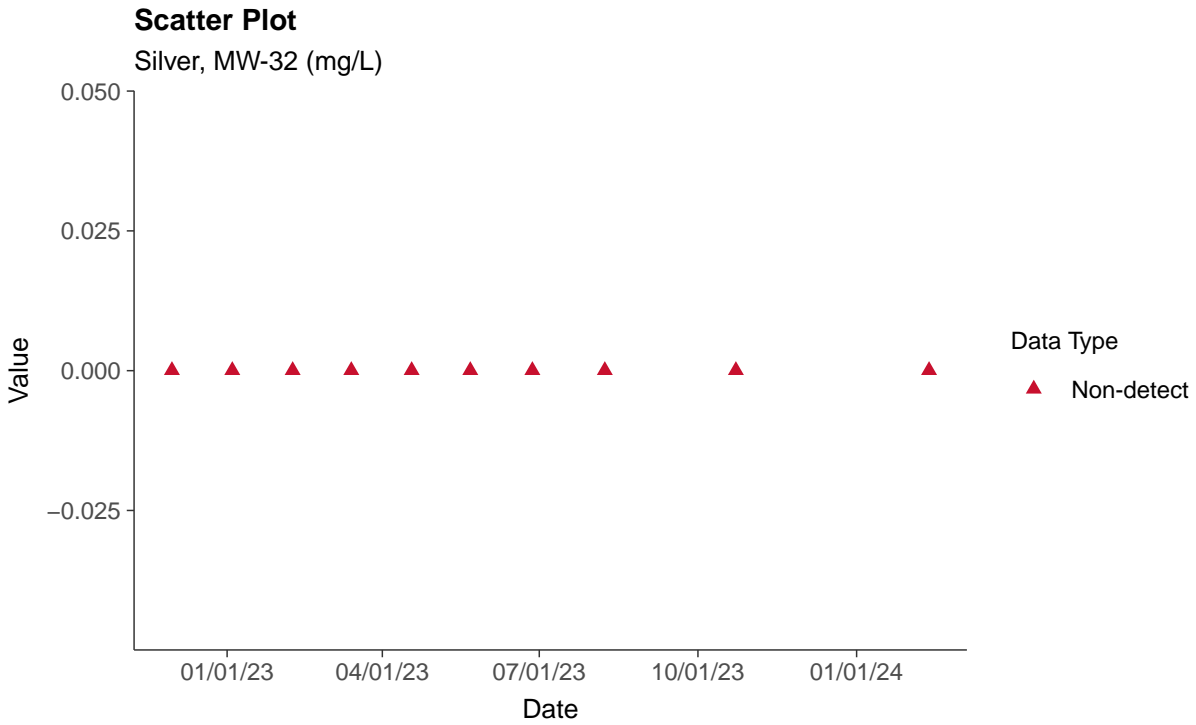
Nickel, MW-32 (mg/L)





Part 115: Silver, MW-32

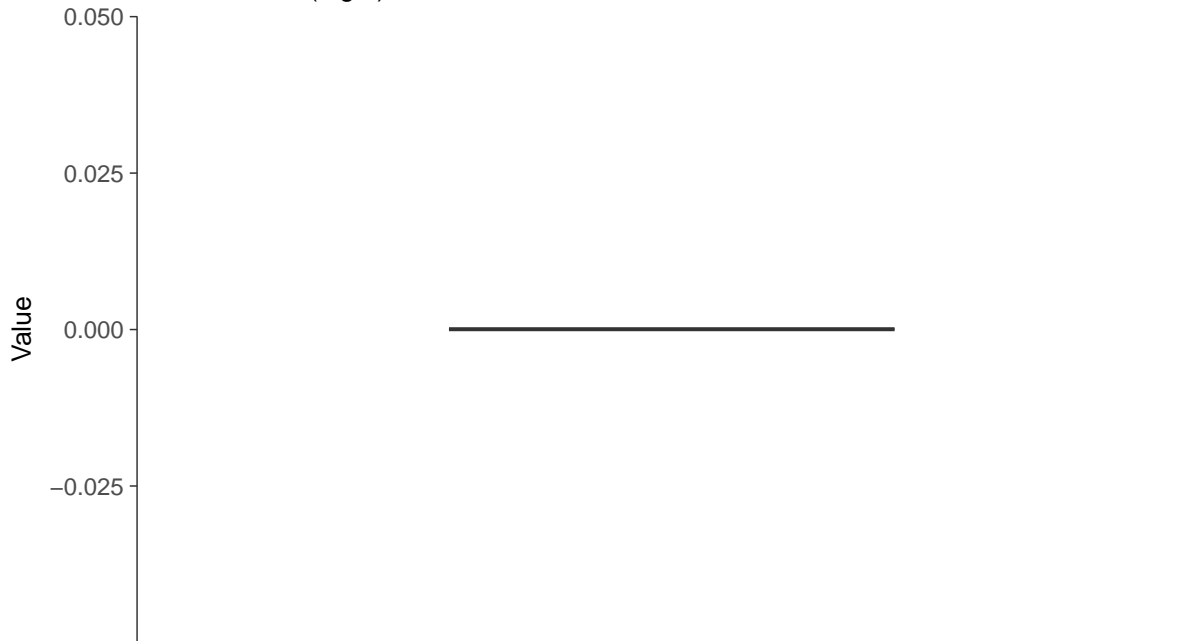
ID: 2_42_6_123





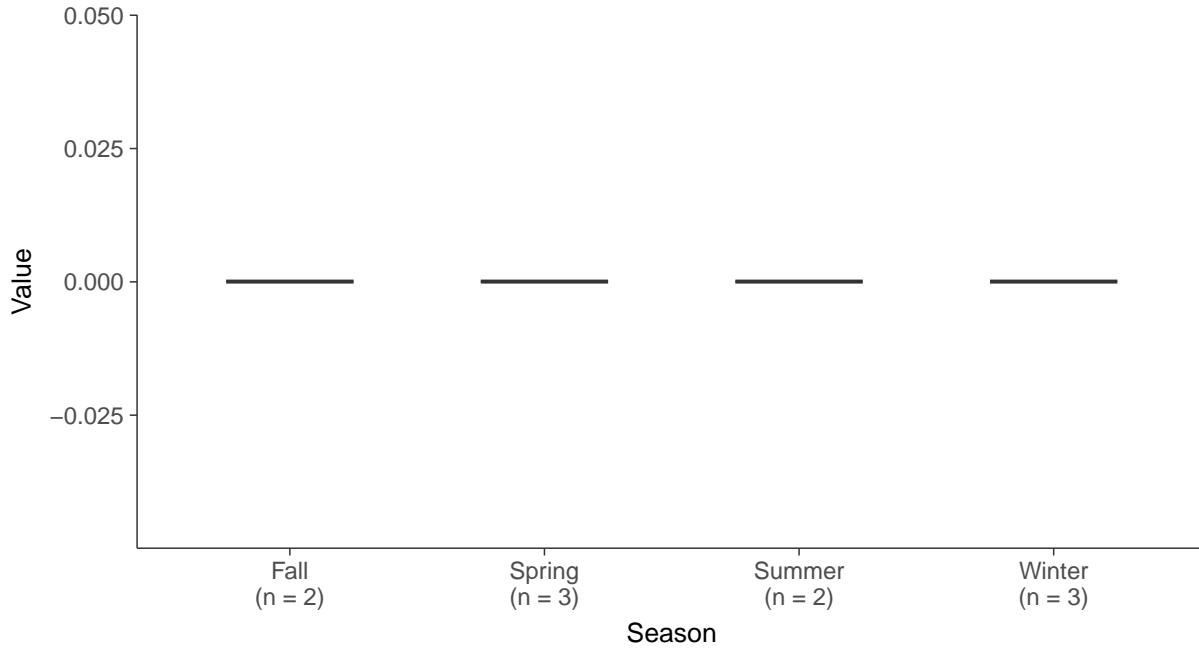
Boxplot

Silver, MW-32 (mg/L)



Boxplot by Season

Silver, MW-32 (mg/L)



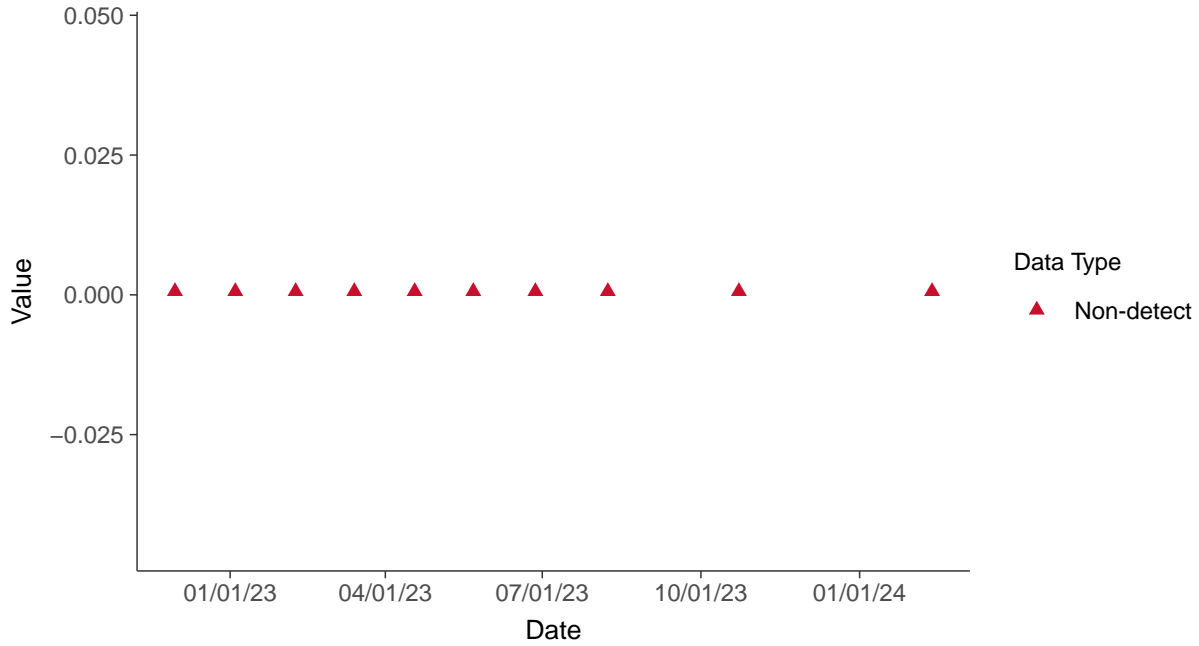


Part 115: Vanadium, MW-32

ID: 2_42_6_129

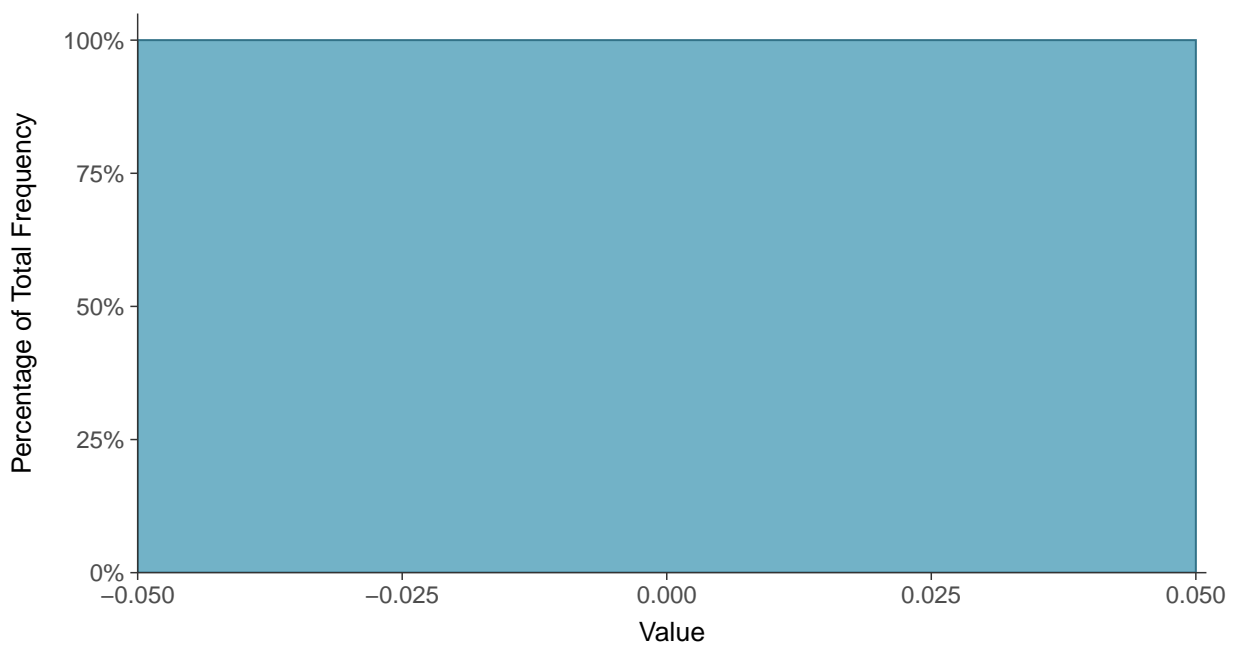
Scatter Plot

Vanadium, MW-32 (mg/L)



Histogram

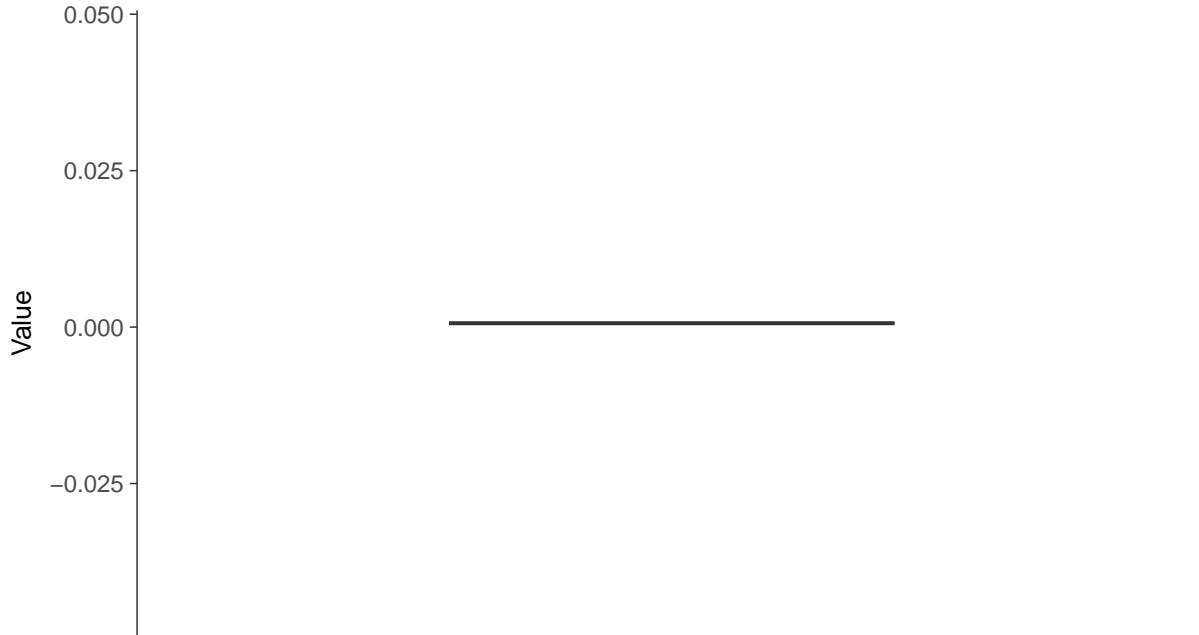
Vanadium, MW-32 (mg/L)





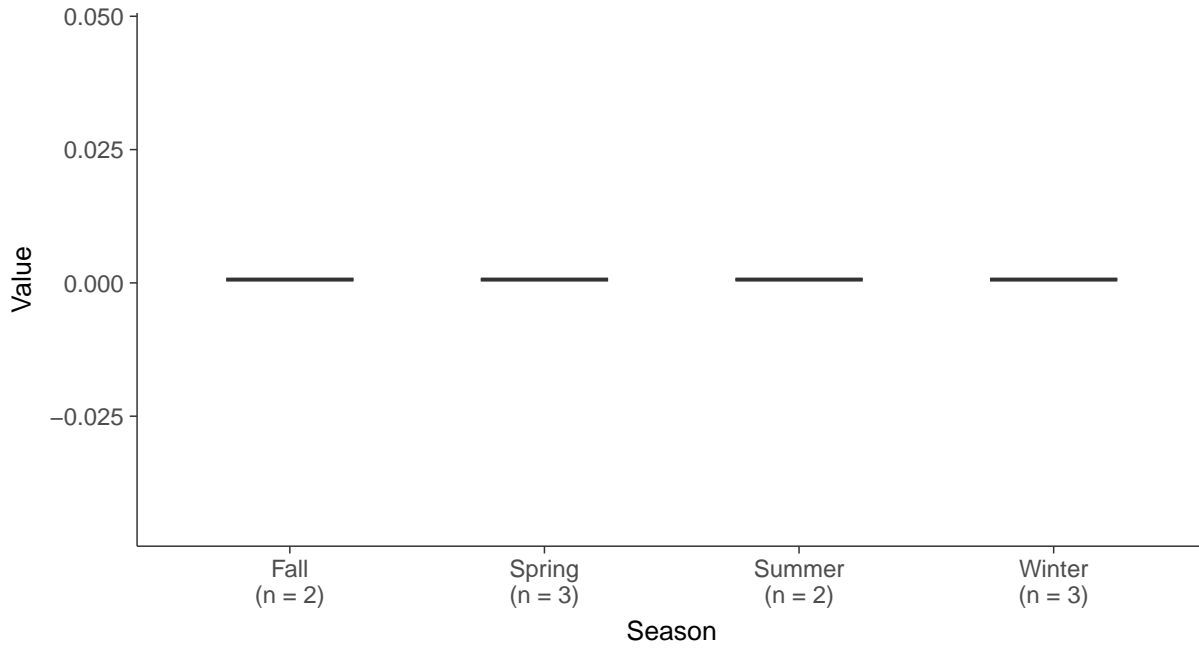
Boxplot

Vanadium, MW-32 (mg/L)



Boxplot by Season

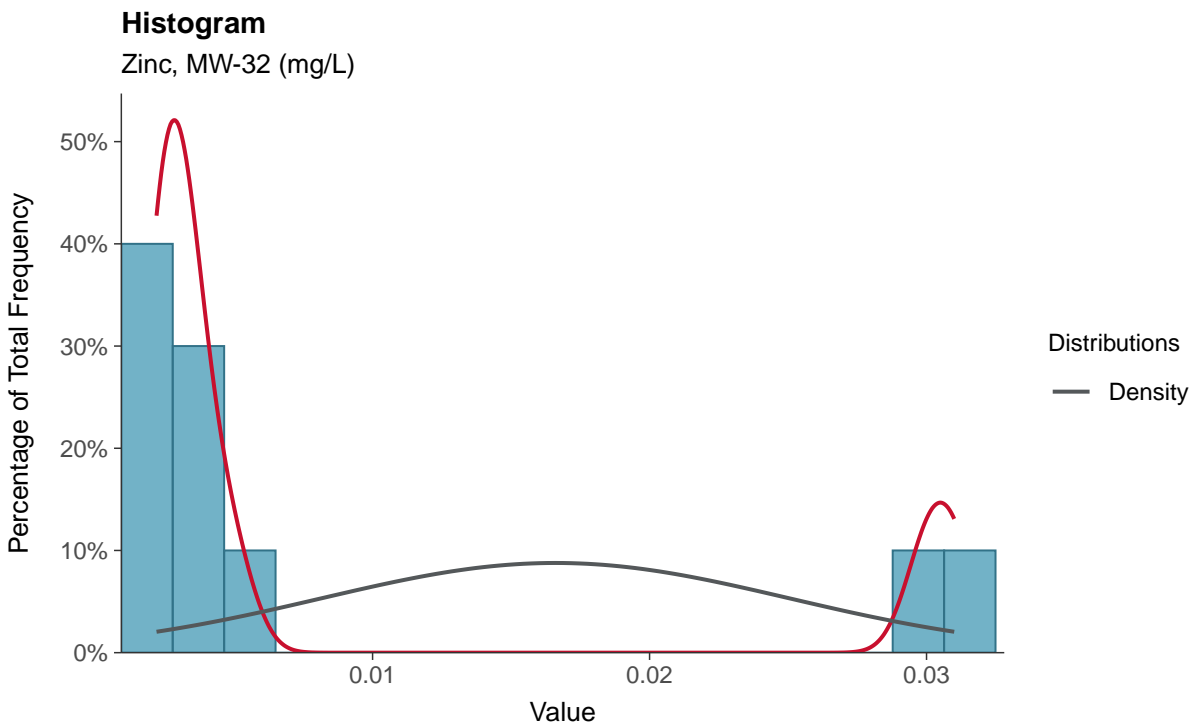
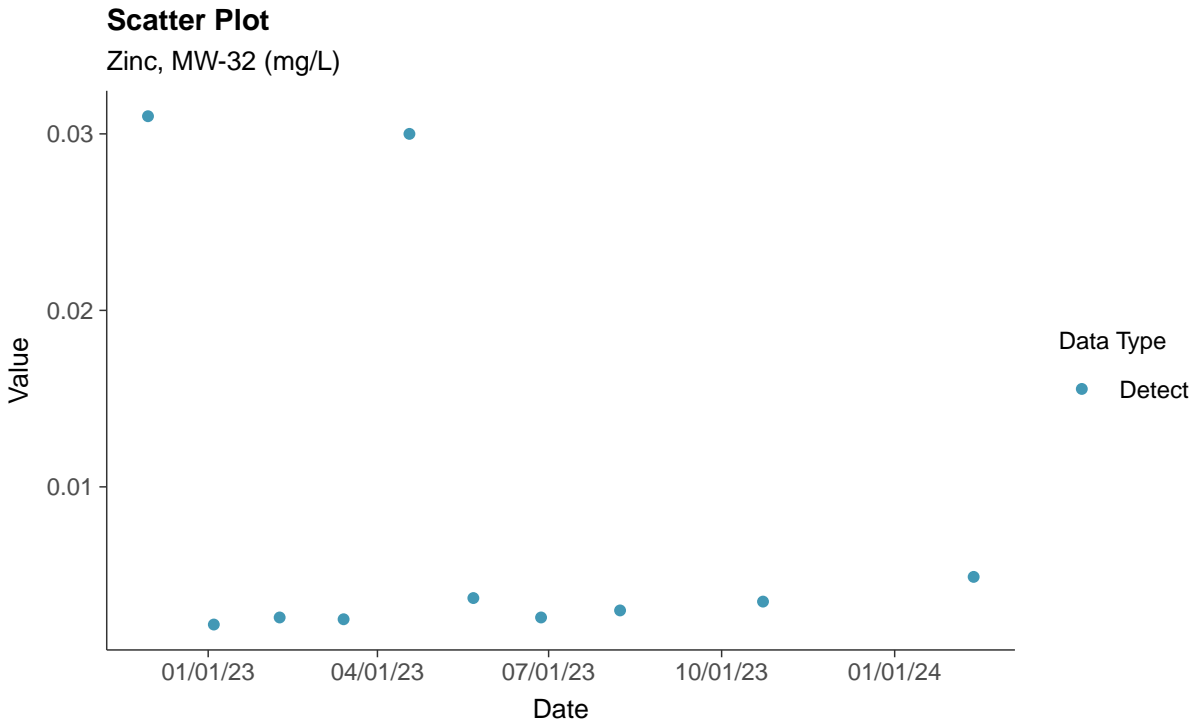
Vanadium, MW-32 (mg/L)





Part 115: Zinc, MW-32

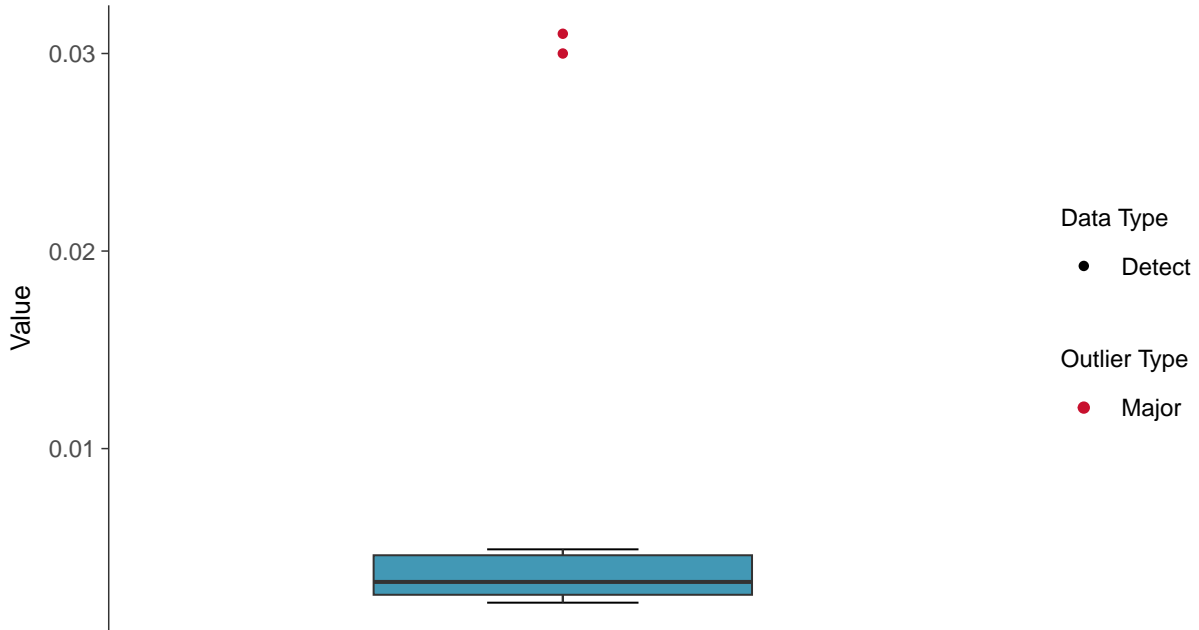
ID: 2_42_6_130





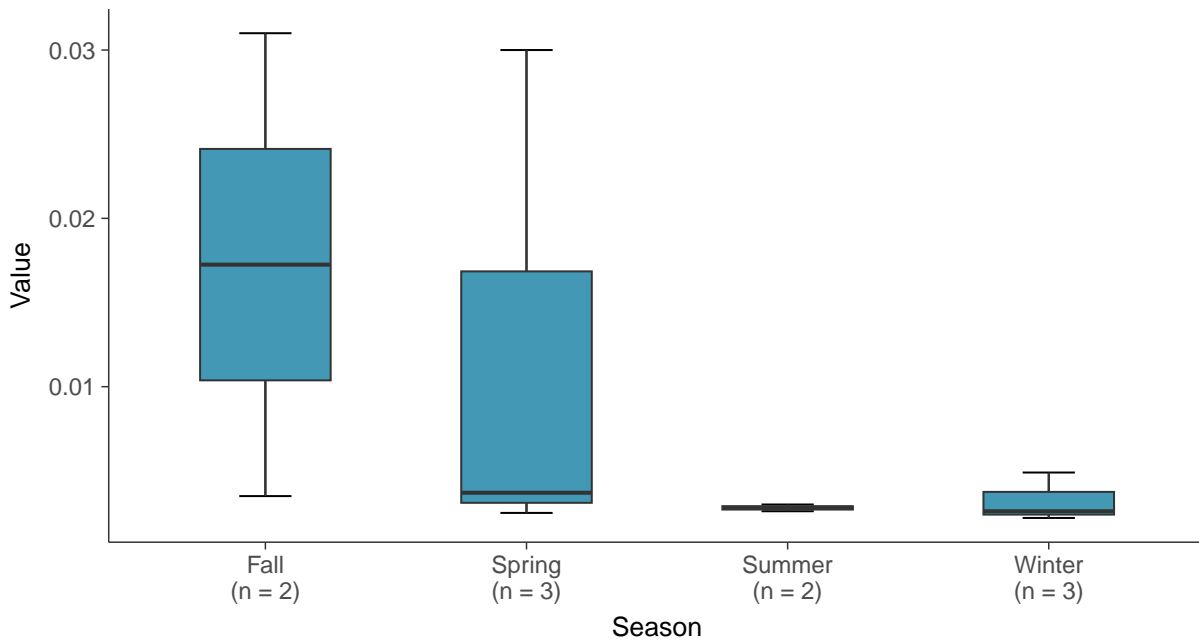
Boxplot

Zinc, MW-32 (mg/L)



Boxplot by Season

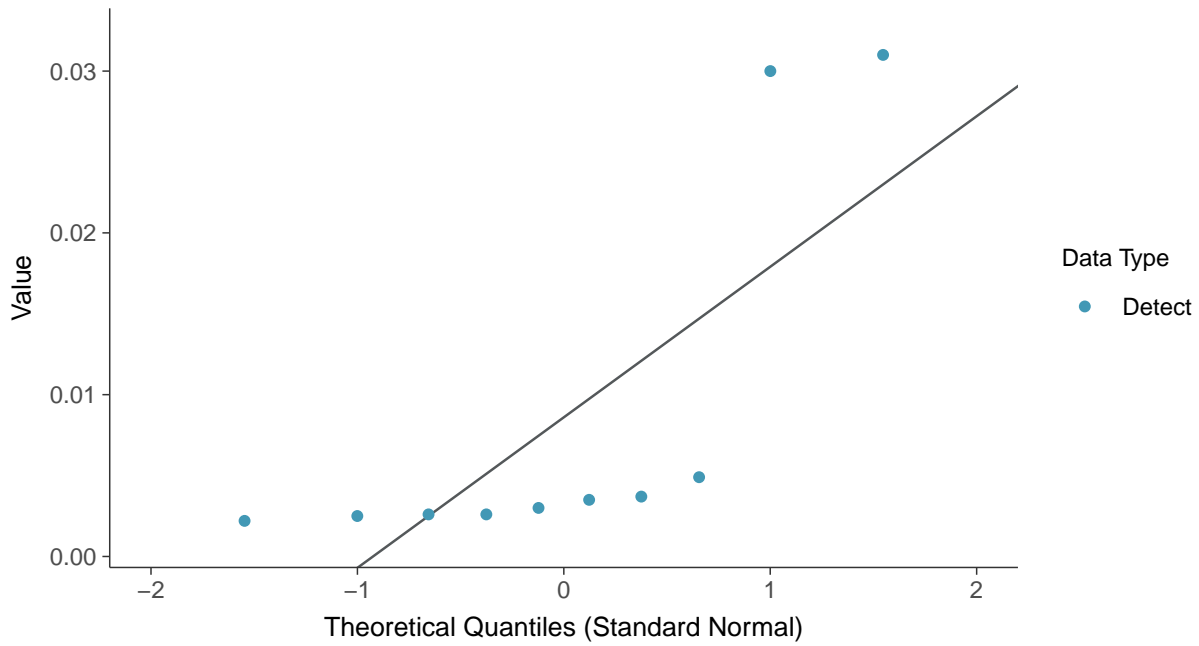
Zinc, MW-32 (mg/L)





Normal Q-Q plot

Zinc, MW-32 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Zinc, MW-32 (mg/L)

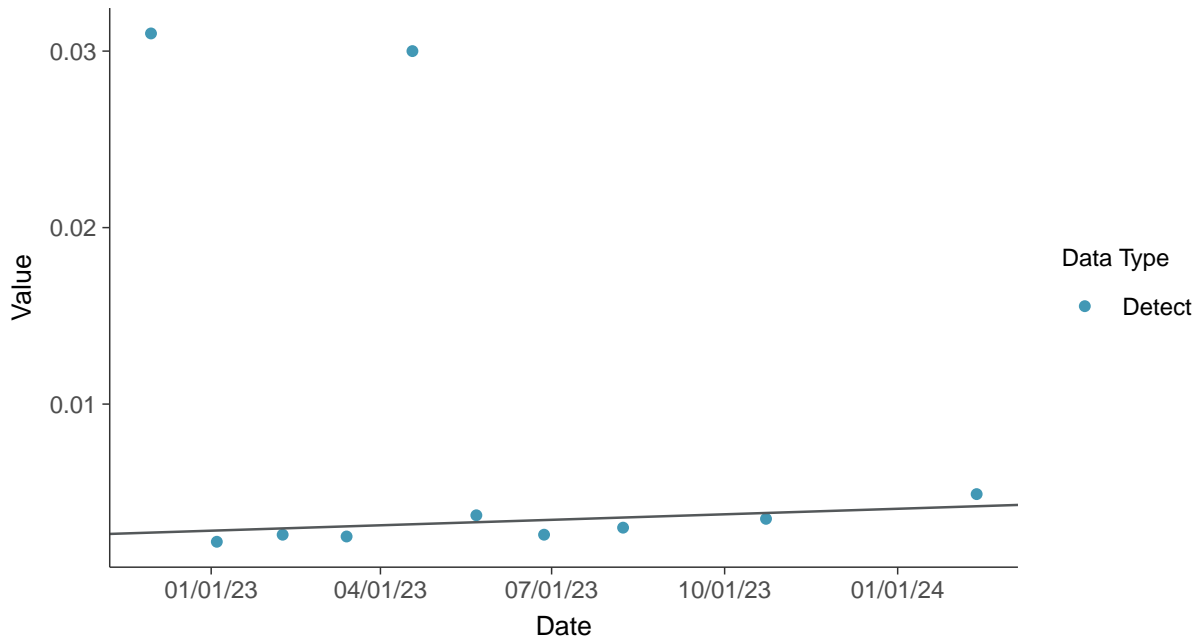




Table 1: Summary Statistics, Non-Detects Included

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_16_4_105	MW-06	Appendix III	Boron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	9.5	9.6	7.3	12	1.4	0.15	-0.0084	-0.032
1_16_4_107	MW-06	Appendix III	Calcium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	257	250	220	310	29	0.11	0.56	-0.74
1_16_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Normal	Normal	85	78	18	160	38	0.45	0.42	1.2
1_16_4_112	MW-06	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.98	1.4	0.16	0.14	0.58	-1.2
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	7.2	7.3	6.4	7.4	0.27	0.038	-2.9	8.8
1_16_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	10	1	10%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	10	9.5	0.41	20	7.6	0.75	-0.0017	-1.6
1_16_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-29 to 2024-02-13		Nonparametric	1210	1200	1100	1300	74	0.061	-0.17	-0.73
1_16_5_101	MW-06	Appendix IV	Antimony	mg/L	10	8	80%	2022-11-29 to 2024-02-13		Nonparametric	0.00021	0.00010	0.000050	0.00050	0.00018	0.87	0.90	-0.96
1_16_5_102	MW-06	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00067	0.00064	0.00047	0.0010	0.00016	0.24	1.0	0.72
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	1.4	1.4	0.99	1.6	0.17	0.12	-1.8	4.3
1_16_5_104	MW-06	Appendix IV	Beryllium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.000052	0.000052	0.000052	0.000054	0	0.012	3.2	10
1_16_5_106	MW-06	Appendix IV	Cadmium	mg/L	10	10	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00014	0.000075	0.000032	0.00038	0.00013	0.96	1.3	0.34
1_16_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0018	0.0018	0.0012	0.0030	0.00057	0.31	0.81	0.31
1_16_5_110	MW-06	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00057	0.00053	0.00035	0.00080	0.00014	0.25	0.20	-0.96
1_16_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.98	1.4	0.16	0.14	0.58	-1.2
1_16_5_115	MW-06	Appendix IV	Lead	mg/L	10	7	70%	2022-11-29 to 2024-02-13		Nonparametric	0.00045	0.00031	0.00010	0.0011	0.00037	0.82	1.2	0.27
1_16_5_116	MW-06	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.19	0.20	0.13	0.23	0.036	0.19	-0.57	-1.1
1_16_5_117	MW-06	Appendix IV	Mercury	mg/L	10	10	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_16_5_118	MW-06	Appendix IV	Molybdenum	mg/L	10	7	70%	2022-11-29 to 2024-02-13		Nonparametric	0.00069	0.00044	0.00025	0.0031	0.00087	1.3	2.9	8.8
1_16_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.89	0.84	0.62	1.9	0.38	0.42	2.6	7.5
1_16_5_122	MW-06	Appendix IV	Selenium	mg/L	10	5	50%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.00024	0.00022	0.00019	0.00047	0.000082	0.35	3.0	9.5
1_16_5_125	MW-06	Appendix IV	Thallium	mg/L	10	10	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00020	0.000076	0.000075	0.00038	0.00016	0.80	0.48	-2.3
1_16_6_111	MW-06	Part 115	Copper	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.00021	0.00020	0.00020	0.00028	0.000025	0.12	3.2	10
1_16_6_114	MW-06	Part 115	Iron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	19	18	14	31	5.3	0.27	1.6	2
1_16_6_119	MW-06	Part 115	Nickel	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00090	0.00091	0.00065	0.0012	0.00021	0.23	0.0058	-1.5
1_16_6_123	MW-06	Part 115	Silver	mg/L	10	10	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00013	0.000050	0.000050	0.00025	0.00010	0.79	0.48	-2.3
1_16_6_129	MW-06	Part 115	Vanadium	mg/L	10	10	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00064	0.0000063	0.010	3.2	10
1_16_6_130	MW-06	Part 115	Zinc	mg/L	10	2	20%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.017	0.0018	0.0012	0.094	0.033	2	2.0	3.2
1_17_4_105	MW-07	Appendix III	Boron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	11	11	10	13	0.84	0.074	0.39	0.37
1_17_4_107	MW-07	Appendix III	Calcium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	142	140	120	160	11	0.080	-0.48	0.55
1_17_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-30 to 2024-02-13		Nonparametric	14	14	13	15	0.74	0.053	0.17	-0.73
1_17_4_112	MW-07	Appendix III	Fluoride	mg/L	10	1	10%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.10	0.096	0.055	0.14	0.033	0.33	0.073	-1.8
1_17_4_120	MW-07	Appendix III	pH (field)	su	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.9	6.9	6.6	7.0	0.15	0.021	-1.1	0.63
1_17_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	24	23	15	33	6.8	0.28	0.10	-1.9
1_17_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Normal	Normal	620	635	470	720	78	0.13	-1.1	0.60
1_17_5_101	MW-07	Appendix IV	Antimony	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.000077	0.000086	0.000050	0.00010	0.000025	0.32	-0.18	-2.3
1_17_5_102	MW-07	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00021	0.00021	0.00013	0.00029	0.000041	0.19	-0.10	2.1
1_17_5_103	MW-07	Appendix IV	Barium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Normal	Normal	0.33	0.34	0.25	0.38	0.036	0.11	-1.5	3
1_17_5_104	MW-07	Appendix IV	Beryllium	mg/L	10	7	70%	2022-11-30 to 2024-02-13		Nonparametric	0.000055	0.000052	0.000052	0.000066	0.0000051	0.093	1.8	2.1
1_17_5_106	MW-07	Appendix IV	Cadmium	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.000053	0.000053	0.000032	0.000075	0.000023	0.42	0	-2.6
1_17_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00034	0.00032	0.00028	0.00042	0.000044	0.13	0.55	-0.45
1_17_5_110	MW-07	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00092	0.00096	0.00071	0.0011	0.00012	0.13	-0.63	-0.11

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_17_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	10	1	10%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.10	0.096	0.055	0.14	0.033	0.33	0.073	-1.8
1_17_5_115	MW-07	Appendix IV	Lead	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00010	0.00022	0.000063	0.40	0	-2.6
1_17_5_116	MW-07	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0062	0.0058	0.0031	0.010	0.0020	0.32	0.52	0.48
1_17_5_117	MW-07	Appendix IV	Mercury	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_17_5_118	MW-07	Appendix IV	Molybdenum	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00044	0.00044	0.00025	0.00062	0.00020	0.45	0	-2.6
1_17_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.1	0.98	0.67	2.4	0.50	0.47	2.2	5.6
1_17_5_122	MW-07	Appendix IV	Selenium	mg/L	10	8	80%	2022-11-30 to 2024-02-13		Nonparametric	0.00017	0.00022	0.00010	0.00023	0.000063	0.36	-0.48	-2.3
1_17_5_125	MW-07	Appendix IV	Thallium	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	NA	NA
1_17_6_111	MW-07	Part 115	Copper	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.00021	0.00020	0.00020	0.00027	0.000022	0.11	3.2	10
1_17_6_114	MW-07	Part 115	Iron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	15	15	13	19	2.1	0.13	0.56	-0.81
1_17_6_119	MW-07	Part 115	Nickel	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00065	0.00065	0.00065	0.00065	0	0	NA	NA
1_17_6_123	MW-07	Part 115	Silver	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.000050	0.000050	0.000050	0.000050	0	0	NA	NA
1_17_6_129	MW-07	Part 115	Vanadium	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
1_17_6_130	MW-07	Part 115	Zinc	mg/L	10	7	70%	2022-11-30 to 2024-02-13		Nonparametric	0.0053	0.0012	0.0012	0.025	0.0083	1.6	2.0	3.2
1_18_4_105	MW-08	Appendix III	Boron	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Normal	Normal	6.3	7.0	2.5	9.3	2.0	0.32	-0.67	0.052
1_18_4_107	MW-08	Appendix III	Calcium	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	140	145	120	160	14	0.10	-0.29	-1.4
1_18_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	26	26	17	35	5.8	0.22	-0.37	-0.35
1_18_4_112	MW-08	Appendix III	Fluoride	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Normal	Normal	0.89	1.0	0.40	1.3	0.29	0.32	-0.62	-0.75
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	2022-12-01 to 2024-02-13	Nonparametric	Nonparametric	7.2	7.3	6.2	7.5	0.35	0.049	-2.7	8.0
1_18_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	3	30%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	8	3.6	0.41	26	10	1.3	1.3	0.088
1_18_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	537	540	440	630	59	0.11	-0.043	-0.47
1_18_5_101	MW-08	Appendix IV	Antimony	mg/L	10	4	40%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00013	0.00010	0.000054	0.00028	0.000066	0.51	1.5	2.2
1_18_5_102	MW-08	Appendix IV	Arsenic	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.032	0.034	0.0069	0.050	0.015	0.48	-0.51	-1.0
1_18_5_103	MW-08	Appendix IV	Barium	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.2	0.98	1.5	0.17	0.14	0.037	-0.96
1_18_5_104	MW-08	Appendix IV	Beryllium	mg/L	10	10	100%	2022-12-01 to 2024-02-13		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	NA	NA
1_18_5_106	MW-08	Appendix IV	Cadmium	mg/L	10	10	100%	2022-12-01 to 2024-02-13		Nonparametric	0.000053	0.000053	0.000032	0.000075	0.000023	0.42	0	-2.6
1_18_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00093	0.00090	0.00061	0.0015	0.00026	0.28	1.1	1.6
1_18_5_110	MW-08	Appendix IV	Cobalt	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00051	0.00054	0.00034	0.00070	0.00013	0.26	-0.22	-1.5
1_18_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Normal	Normal	0.89	1.0	0.40	1.3	0.29	0.32	-0.62	-0.75
1_18_5_115	MW-08	Appendix IV	Lead	mg/L	10	7	70%	2022-12-01 to 2024-02-13		Nonparametric	0.00022	0.00016	0.00010	0.00086	0.00023	1.0	2.8	8.3
1_18_5_116	MW-08	Appendix IV	Lithium	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.11	0.11	0.063	0.14	0.025	0.23	-0.63	-0.23
1_18_5_117	MW-08	Appendix IV	Mercury	mg/L	10	10	100%	2022-12-01 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_18_5_118	MW-08	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0014	0.0015	0.00036	0.0028	0.00082	0.58	0.22	-0.84
1_18_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.61	2.1	0.45	0.39	0.93	0.64
1_18_5_122	MW-08	Appendix IV	Selenium	mg/L	10	5	50%	2022-12-01 to 2024-02-13	Nonparametric	Nonparametric	0.00020	0.00022	0.00014	0.00034	0.000060	0.30	1.2	2.2
1_18_5_125	MW-08	Appendix IV	Thallium	mg/L	10	10	100%	2022-12-01 to 2024-02-13		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	NA	NA
1_18_6_111	MW-08	Part 115	Copper	mg/L	10	5	50%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00028	0.00020	0.00020	0.00045	0.00010	0.37	0.81	-1.2
1_18_6_114	MW-08	Part 115	Iron	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	21	22	13	32	6	0.28	0.64	-0.012
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal	Gamma	0.0013	0.0011	0.00085	0.0026	0.00050	0.39	2.4	6.3
1_18_6_123	MW-08	Part 115	Silver	mg/L	10	10	100%	2022-12-01 to 2024-02-13		Nonparametric	0.000050	0.000050	0.000050	0.000050	0	0	NA	NA
1_18_6_129	MW-08	Part 115	Vanadium	mg/L	10	10	100%	2022-12-01 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
1_18_6_130	MW-08	Part 115	Zinc	mg/L	10	3	30%	2022-12-01 to 2024-02-13	Lognormal	Nonparametric	0.019	0.0016	0.0012	0.12	0.039	2.1	2.4	5.6

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_28_4_105	MW-18	Appendix III	Boron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.4	2.3	1.8	3.5	0.50	0.21	0.79	0.47
1_28_4_107	MW-18	Appendix III	Calcium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	341	350	240	450	66	0.19	-0.18	-0.56
1_28_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	22	22	16	28	3.8	0.17	-0.079	-1.0
1_28_4_112	MW-18	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	3.9	3.8	3.3	5.1	0.55	0.14	1.1	0.73
1_28_4_120	MW-18	Appendix III	pH (field)	su	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.2	7.2	7.0	7.3	0.075	0.010	-0.49	0.14
1_28_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	820	780	480	1200	225	0.27	0.66	-0.044
1_28_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1409	1400	1100	1800	217	0.15	0.51	-0.42
1_28_5_101	MW-18	Appendix IV	Antimony	mg/L	11	4	36%	2022-11-30 to 2024-02-13	Nonparametric	Nonparametric	0.00026	0.00014	0.00010	0.00050	0.00017	0.66	0.64	-1.5
1_28_5_102	MW-18	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.024	0.023	0.015	0.041	0.0077	0.32	0.92	1.0
1_28_5_103	MW-18	Appendix IV	Barium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.019	0.021	0.012	0.025	0.0049	0.25	-0.36	-1.7
1_28_5_104	MW-18	Appendix IV	Beryllium	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	NA	NA
1_28_5_106	MW-18	Appendix IV	Cadmium	mg/L	11	3	27%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00025	0.00022	0.000075	0.00044	0.00013	0.52	0.25	-1.2
1_28_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	11	10	91%	2022-11-30 to 2024-02-13		Nonparametric	0.00020	0.00020	0.00018	0.00025	0.000021	0.11	2	5.0
1_28_5_110	MW-18	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.0032	0.0023	0.0017	0.0060	0.0015	0.49	0.96	-0.62
1_28_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	3.9	3.8	3.3	5.1	0.55	0.14	1.1	0.73
1_28_5_115	MW-18	Appendix IV	Lead	mg/L	11	8	73%	2022-11-30 to 2024-02-13		Nonparametric	0.00037	0.00022	0.00014	0.0011	0.00028	0.75	2.0	4.7
1_28_5_116	MW-18	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.034	0.032	0.020	0.045	0.0085	0.25	-0.11	-1.4
1_28_5_117	MW-18	Appendix IV	Mercury	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_28_5_118	MW-18	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.014	0.013	0.0089	0.021	0.0043	0.31	0.72	-0.87
1_28_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	2022-11-30 to 2024-02-13		Nonparametric	0.68	0.62	0.48	1.3	0.22	0.33	2.1	4.8
1_28_5_122	MW-18	Appendix IV	Selenium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00049	0.00034	0.00015	0.0012	0.00036	0.75	0.82	-0.63
1_28_5_125	MW-18	Appendix IV	Thallium	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00019	0.000075	0.000075	0.00038	0.00015	0.83	0.66	-2
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Nonparametric	Nonparametric	0.00059	0.00047	0.00033	0.0015	0.00033	0.56	2.4	6
1_28_6_114	MW-18	Part 115	Iron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.5	5.8	4.3	10	1.7	0.27	0.86	0.075
1_28_6_119	MW-18	Part 115	Nickel	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0069	0.0056	0.0047	0.011	0.0025	0.36	0.81	-1.0
1_28_6_123	MW-18	Part 115	Silver	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00012	0.000050	0.000050	0.00025	0.00010	0.82	0.66	-2
1_28_6_129	MW-18	Part 115	Vanadium	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
1_28_6_130	MW-18	Part 115	Zinc	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.054	0.054	0.028	0.088	0.018	0.33	0.45	-0.47
1_29_4_105	MW-19	Appendix III	Boron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.0	1.9	1.5	2.6	0.39	0.19	0.34	-1.0
1_29_4_107	MW-19	Appendix III	Calcium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	481	485	360	550	53	0.11	-1.2	2.6
1_29_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	50	44	37	75	14	0.28	0.93	-0.67
1_29_4_112	MW-19	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.9	1.9	1.6	2.3	0.23	0.12	0.14	-0.88
1_29_4_120	MW-19	Appendix III	pH (field)	su	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.9	6.9	6.4	7.1	0.19	0.028	-1.8	4.3
1_29_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1033	1100	600	1300	228	0.22	-0.69	-0.24
1_29_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1960	2000	1600	2200	232	0.12	-0.59	-0.97
1_29_5_101	MW-19	Appendix IV	Antimony	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.00024	0.00010	0.000050	0.00072	0.00024	1.0	1.1	-0.21
1_29_5_102	MW-19	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0051	0.0055	0.0026	0.0073	0.0017	0.33	-0.30	-1.5
1_29_5_103	MW-19	Appendix IV	Barium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.041	0.040	0.030	0.050	0.0061	0.15	-0.12	-0.46
1_29_5_104	MW-19	Appendix IV	Beryllium	mg/L	10	3	30%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.000085	0.000067	0.000052	0.00026	0.000062	0.73	3	9.2
1_29_5_106	MW-19	Appendix IV	Cadmium	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00014	0.000075	0.000032	0.00038	0.00013	0.96	1.3	0.34
1_29_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	10	5	50%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00034	0.00028	0.00018	0.00088	0.00022	0.63	2.0	4.3
1_29_5_110	MW-19	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00053	0.00048	0.00013	0.00096	0.00025	0.48	0.085	-0.41

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_29_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.9	1.9	1.6	2.3	0.23	0.12	0.14	-0.88
1_29_5_115	MW-19	Appendix IV	Lead	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00050	0.00036	0.00010	0.0011	0.00044	0.87	0.65	-1.5
1_29_5_116	MW-19	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.094	0.094	0.073	0.11	0.011	0.12	-0.26	0.12
1_29_5_117	MW-19	Appendix IV	Mercury	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_29_5_118	MW-19	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Normal	Normal	0.0097	0.010	0.0039	0.013	0.0031	0.32	-1.0	0.20
1_29_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.86	0.92	0.55	1.2	0.25	0.29	-0.17	-2
1_29_5_122	MW-19	Appendix IV	Selenium	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.00025	0.00017	0.00010	0.0011	0.00030	1.2	3	9.0
1_29_5_125	MW-19	Appendix IV	Thallium	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00023	0.00023	0.000075	0.00038	0.00016	0.71	0	-2.6
1_29_6_111	MW-19	Part 115	Copper	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00028	0.00020	0.00020	0.0010	0.00025	0.90	3.2	10
1_29_6_114	MW-19	Part 115	Iron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	16	16	12	24	3.6	0.23	1.1	1.2
1_29_6_119	MW-19	Part 115	Nickel	mg/L	10	1	10%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0019	0.0016	0.0011	0.0032	0.00074	0.39	0.62	-1.1
1_29_6_123	MW-19	Part 115	Silver	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00013	0.000050	0.000050	0.00025	0.00010	0.79	0.48	-2.3
1_29_6_129	MW-19	Part 115	Vanadium	mg/L	10	10	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00087	0.00062	0.00062	0.0031	0.00078	0.90	3.2	10
1_29_6_130	MW-19	Part 115	Zinc	mg/L	10	8	80%	2022-11-30 to 2024-02-13		Nonparametric	0.0021	0.0012	0.0012	0.0059	0.0017	0.79	1.9	2.6
1_30_4_105	MW-20	Appendix III	Boron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.92	0.87	0.72	1.1	0.15	0.16	0.29	-1.8
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	2022-11-30 to 2024-02-13		Normal	125	130	58	170	27	0.22	-1.3	4.2
1_30_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	71	70	41	92	15	0.21	-0.30	0.48
1_30_4_112	MW-20	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-30 to 2024-02-13		Nonparametric	0.26	0.23	0.21	0.55	0.098	0.37	3.1	9.9
1_30_4_120	MW-20	Appendix III	pH (field)	su	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.3	7.3	7.1	7.5	0.12	0.016	-0.33	-1.3
1_30_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	69	78	19	120	33	0.48	-0.11	-1.1
1_30_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	682	660	570	770	62	0.092	0.15	-0.30
1_30_5_101	MW-20	Appendix IV	Antimony	mg/L	11	3	27%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00010	0.00010	0.000054	0.00016	0.000037	0.35	0.32	-0.85
1_30_5_102	MW-20	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0014	0.0013	0.0011	0.0017	0.00022	0.16	0.29	-1.5
1_30_5_103	MW-20	Appendix IV	Barium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.48	0.43	0.31	0.94	0.18	0.37	1.9	4.6
1_30_5_104	MW-20	Appendix IV	Beryllium	mg/L	11	10	91%	2022-11-30 to 2024-02-13		Nonparametric	0.000053	0.000052	0.000052	0.000059	0.000021	0.040	3.3	11
1_30_5_106	MW-20	Appendix IV	Cadmium	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.000052	0.000032	0.000032	0.000075	0.000022	0.44	0.21	-2.4
1_30_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	11	5	45%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00021	0.00020	0.00018	0.00029	0.000031	0.15	1.8	3.3
1_30_5_110	MW-20	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0013	0.0013	0.00095	0.0016	0.00020	0.15	-0.13	-0.23
1_30_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-30 to 2024-02-13		Nonparametric	0.26	0.23	0.21	0.55	0.098	0.37	3.1	9.9
1_30_5_115	MW-20	Appendix IV	Lead	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0021	0.0023	0.0013	0.0028	0.00053	0.25	-0.0015	-1.5
1_30_5_116	MW-20	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.062	0.062	0.029	0.083	0.015	0.24	-0.86	1.3
1_30_5_117	MW-20	Appendix IV	Mercury	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_30_5_118	MW-20	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0043	0.0041	0.0034	0.0051	0.00056	0.13	-0.013	-1.3
1_30_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.75	0.59	0.47	1.5	0.30	0.41	1.6	2.3
1_30_5_122	MW-20	Appendix IV	Selenium	mg/L	11	6	55%	2022-11-30 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.00018	0.00022	0.00010	0.00026	0.000059	0.32	-0.54	-1.6
1_30_5_125	MW-20	Appendix IV	Thallium	mg/L	11	10	91%	2022-11-30 to 2024-02-13		Nonparametric	0.000078	0.000075	0.000075	0.00011	0.000011	0.13	3.3	11
1_30_6_111	MW-20	Part 115	Copper	mg/L	11	1	9%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00030	0.00025	0.00020	0.00053	0.000099	0.33	1.4	1.7
1_30_6_114	MW-20	Part 115	Iron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	19	19	16	22	1.8	0.093	-0.29	-0.56
1_30_6_119	MW-20	Part 115	Nickel	mg/L	11	0	0%	2022-11-30 to 2024-02-13		Nonparametric	0.0087	0.0091	0.0061	0.0099	0.0013	0.15	-1.3	0.49
1_30_6_123	MW-20	Part 115	Silver	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.000050	0.000050	0.000050	0.000050	0	0	NA	NA
1_30_6_129	MW-20	Part 115	Vanadium	mg/L	11	11	100%	2022-11-30 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
1_30_6_130	MW-20	Part 115	Zinc	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Lognormal	Nonparametric	0.036	0.028	0.016	0.071	0.018	0.51	1.1	-0.15

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_40_4_105	MW-30	Appendix III	Boron	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	2.0	1.9	1.7	3.5	0.45	0.22	2.8	9.1
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	490	460	390	960	139	0.28	3.4	12
1_40_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	146	130	97	200	44	0.30	0.17	-2.1
1_40_4_112	MW-30	Appendix III	Fluoride	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	1.1	1.1	0.91	1.4	0.14	0.13	0.80	0.25
1_40_4_120	MW-30	Appendix III	pH (field)	su	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	7.0	7.2	6.5	7.2	0.25	0.036	-1.9	2.4
1_40_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	869	855	610	1000	106	0.12	-0.93	1.4
1_40_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	2257	2300	1800	2800	231	0.10	0.35	2.1
1_40_5_101	MW-30	Appendix IV	Antimony	mg/L	14	12	86%	2022-11-30 to 2024-02-12		Nonparametric	0.00024	0.00017	0.000050	0.00050	0.00020	0.83	0.41	-1.8
1_40_5_102	MW-30	Appendix IV	Arsenic	mg/L	14	3	21%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.00040	0.00042	0.00010	0.00070	0.00020	0.49	-0.020	-0.99
1_40_5_103	MW-30	Appendix IV	Barium	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.073	0.066	0.045	0.10	0.022	0.29	0.12	-1.7
1_40_5_104	MW-30	Appendix IV	Beryllium	mg/L	14	12	86%	2022-11-30 to 2024-02-12		Nonparametric	0.000086	0.000052	0.000052	0.00026	0.000075	0.88	2.1	3.2
1_40_5_106	MW-30	Appendix IV	Cadmium	mg/L	14	14	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00012	0.000075	0.000032	0.00038	0.00012	0.99	1.6	1.7
1_40_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0099	0.010	0.0049	0.014	0.0031	0.31	-0.35	-1.0
1_40_5_110	MW-30	Appendix IV	Cobalt	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.0015	0.0011	0.00053	0.0044	0.0013	0.82	1.7	1.6
1_40_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	1.1	1.1	0.91	1.4	0.14	0.13	0.80	0.25
1_40_5_115	MW-30	Appendix IV	Lead	mg/L	14	14	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00056	0.00050	0.00010	0.0011	0.00038	0.67	0.59	-1.2
1_40_5_116	MW-30	Appendix IV	Lithium	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.14	0.12	0.10	0.27	0.041	0.30	2.9	9.7
1_40_5_117	MW-30	Appendix IV	Mercury	mg/L	14	14	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_40_5_118	MW-30	Appendix IV	Molybdenum	mg/L	14	5	36%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0017	0.00096	0.00032	0.0036	0.0012	0.74	0.53	-1.7
1_40_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	14	8	57%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Nonparametric	0.66	0.61	0.44	0.91	0.16	0.24	0.39	-1.2
1_40_5_122	MW-30	Appendix IV	Selenium	mg/L	14	9	64%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00032	0.00022	0.00010	0.0011	0.00034	1.1	2.1	3.1
1_40_5_125	MW-30	Appendix IV	Thallium	mg/L	14	14	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00027	0.00038	0.000075	0.00038	0.00015	0.56	-0.67	-1.8
1_40_6_111	MW-30	Part 115	Copper	mg/L	14	11	79%	2022-11-30 to 2024-02-12		Nonparametric	0.00035	0.00020	0.00020	0.0010	0.00029	0.82	1.9	2.3
1_40_6_114	MW-30	Part 115	Iron	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	2.7	2.5	0.77	8.8	2.1	0.76	2.0	5.4
1_40_6_119	MW-30	Part 115	Nickel	mg/L	14	4	29%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0022	0.0018	0.00065	0.0045	0.0014	0.65	0.53	-1.2
1_40_6_123	MW-30	Part 115	Silver	mg/L	14	14	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00012	0.000050	0.000050	0.00025	0.000099	0.82	0.67	-1.8
1_40_6_129	MW-30	Part 115	Vanadium	mg/L	14	14	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00097	0.00062	0.00062	0.0031	0.00090	0.92	2.3	3.8
1_40_6_130	MW-30	Part 115	Zinc	mg/L	14	10	71%	2022-11-30 to 2024-02-12		Nonparametric	0.0027	0.0012	0.0012	0.0059	0.0021	0.77	0.72	-1.7
1_41_4_105	MW-31	Appendix III	Boron	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	4.5	4.4	3.6	5.4	0.58	0.13	0.097	-0.84
1_41_4_107	MW-31	Appendix III	Calcium	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	169	170	130	200	20	0.12	-0.48	0.86
1_41_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	103	100	92	120	8.9	0.086	0.62	-0.42
1_41_4_112	MW-31	Appendix III	Fluoride	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	4.8	4.7	4.5	5.2	0.25	0.053	0.56	-1.4
1_41_4_120	MW-31	Appendix III	pH (field)	su	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	7.8	7.8	7.7	8.0	0.094	0.012	0.43	0.87
1_41_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	173	170	72	250	65	0.37	-0.11	-1.3
1_41_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	816	810	730	940	63	0.077	0.61	0.18
1_41_5_101	MW-31	Appendix IV	Antimony	mg/L	10	5	50%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Nonparametric	0.000097	0.00010	0.000050	0.00013	0.000025	0.25	-0.64	-0.020
1_41_5_102	MW-31	Appendix IV	Arsenic	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0013	0.0012	0.0010	0.0018	0.00027	0.21	0.51	-0.89
1_41_5_103	MW-31	Appendix IV	Barium	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.16	0.15	0.12	0.23	0.037	0.23	0.82	-0.42
1_41_5_104	MW-31	Appendix IV	Beryllium	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.000052	0.000052	0.000052	0.000054	0	0.012	3.2	10
1_41_5_106	MW-31	Appendix IV	Cadmium	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.000054	0.000053	0.000032	0.000084	0.000024	0.44	0.049	-2.5
1_41_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0022	0.0022	0.0018	0.0029	0.00033	0.15	0.67	0.55
1_41_5_110	MW-31	Appendix IV	Cobalt	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.00018	0.00018	0.00013	0.00028	0.000042	0.23	1.4	2.8

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_41_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	4.8	4.7	4.5	5.2	0.25	0.053	0.56	-1.4
1_41_5_115	MW-31	Appendix IV	Lead	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.00018	0.00022	0.00010	0.00031	0.000075	0.41	0.10	-1.1
1_41_5_116	MW-31	Appendix IV	Lithium	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.050	0.052	0.039	0.056	0.0050	0.100	-1.3	1.9
1_41_5_117	MW-31	Appendix IV	Mercury	mg/L	10	10	100%	2022-12-01 to 2024-02-12		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
1_41_5_118	MW-31	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Nonparametric	Nonparametric	0.0013	0.0012	0.0011	0.0021	0.00034	0.25	1.7	2.0
1_41_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.74	0.68	0.50	1.2	0.25	0.33	1.4	0.76
1_41_5_122	MW-31	Appendix IV	Selenium	mg/L	10	5	50%	2022-12-01 to 2024-02-12	Nonparametric	Nonparametric	0.00024	0.00022	0.00011	0.00074	0.00018	0.78	2.8	8.3
1_41_5_125	MW-31	Appendix IV	Thallium	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.000076	0.000075	0.000075	0.000088	0.0000041	0.054	3.2	10
1_41_6_111	MW-31	Part 115	Copper	mg/L	10	8	80%	2022-12-01 to 2024-02-12		Nonparametric	0.00021	0.00020	0.00020	0.00027	0.000023	0.11	2.4	5.8
1_41_6_114	MW-31	Part 115	Iron	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Gamma	0.99	1.0	0.13	2.5	0.73	0.74	0.71	0.72
1_41_6_119	MW-31	Part 115	Nickel	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.00081	0.00065	0.00065	0.0023	0.00052	0.64	3.2	10
1_41_6_123	MW-31	Part 115	Silver	mg/L	10	10	100%	2022-12-01 to 2024-02-12		Nonparametric	0.000050	0.000050	0.000050	0.000050	0	0	NA	NA
1_41_6_129	MW-31	Part 115	Vanadium	mg/L	10	10	100%	2022-12-01 to 2024-02-12		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
1_41_6_130	MW-31	Part 115	Zinc	mg/L	10	7	70%	2022-12-01 to 2024-02-12		Nonparametric	0.0028	0.0012	0.0012	0.010	0.0033	1.2	1.8	1.9
2_11_4_105	MW-01R	Appendix III	Boron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	104	110	38	160	37	0.36	-0.084	-0.56
2_11_4_107	MW-01R	Appendix III	Calcium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	246	240	130	400	74	0.30	0.49	0.78
2_11_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Normal	Normal	137	150	49	210	49	0.36	-0.82	0.33
2_11_4_112	MW-01R	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	11	14	4.8	15	3.4	0.29	-0.77	-0.55
2_11_4_120	MW-01R	Appendix III	pH (field)	su	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	7.6	7.7	6.0	7.8	0.52	0.069	-3.2	10
2_11_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Normal	Gamma	491	540	8.8	980	295	0.60	-0.056	-0.58
2_11_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Lognormal; Normal	Normal	2345	2400	2100	2600	137	0.058	-0.17	0.42
2_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	11	3	27%	2022-11-29 to 2024-02-13	Lognormal	Lognormal	0.00044	0.00033	0.00022	0.0012	0.00029	0.67	2.0	4.4
2_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0017	0.0015	0.00073	0.0041	0.00092	0.54	1.9	5
2_11_5_103	MW-01R	Appendix IV	Barium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Lognormal	Lognormal	0.33	0.30	0.21	0.56	0.12	0.36	1.3	0.71
2_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00023	0.00021	0.00012	0.00036	0.000079	0.34	0.47	-0.80
2_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	11	7	64%	2022-11-29 to 2024-02-13		Nonparametric	0.00017	0.00011	0.000032	0.00038	0.00013	0.77	0.90	-0.91
2_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0040	0.0019	0.0013	0.022	0.0061	1.5	3.2	10
2_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.0019	0.0012	0.00081	0.0045	0.0013	0.68	1.5	1.2
2_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	11	14	4.8	15	3.4	0.29	-0.77	-0.55
2_11_5_115	MW-01R	Appendix IV	Lead	mg/L	11	2	18%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.0014	0.0011	0.00044	0.0053	0.0013	0.93	2.9	9.1
2_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.3	2.2	0.77	3.4	0.84	0.37	-0.17	-0.79
2_11_5_117	MW-01R	Appendix IV	Mercury	mg/L	11	11	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
2_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11	1	9%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0015	0.00077	0.00033	0.0056	0.0016	1.0	2.2	4.6
2_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.86	0.75	0.52	1.3	0.27	0.31	0.53	-1.3
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.00074	0.00063	0.00030	0.0018	0.00039	0.52	2.3	6.5
2_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	11	11	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00024	0.00038	0.000075	0.00038	0.00016	0.66	-0.21	-2.4
2_11_6_111	MW-01R	Part 115	Copper	mg/L	11	5	45%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00041	0.00022	0.00020	0.0013	0.00038	0.92	1.9	2.6
2_11_6_114	MW-01R	Part 115	Iron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.61	0.59	0.16	1.1	0.27	0.45	-0.023	0.072
2_11_6_119	MW-01R	Part 115	Nickel	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.0041	0.0021	0.0013	0.022	0.0060	1.5	3.1	10
2_11_6_123	MW-01R	Part 115	Silver	mg/L	11	11	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00012	0.000050	0.000050	0.00025	0.00010	0.82	0.66	-2
2_11_6_129	MW-01R	Part 115	Vanadium	mg/L	11	2	18%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.0016	0.0013	0.00062	0.0046	0.0013	0.80	1.5	1.7
2_11_6_130	MW-01R	Part 115	Zinc	mg/L	11	1	9%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.0053	0.0016	0.0012	0.014	0.0056	1.1	0.83	-1.4

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
2_12_4_105	MW-02	Appendix III	Boron	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	96	98	73	110	11	0.12	-0.76	0.75
2_12_4_107	MW-02	Appendix III	Calcium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	204	210	180	240	19	0.093	0.38	-0.14
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	134	140	67	150	24	0.18	-2.8	8.5
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	9	9.4	4.5	10	1.6	0.18	-2.8	8.4
2_12_4_120	MW-02	Appendix III	pH (field)	su	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.2	7.2	7.1	7.4	0.13	0.018	0.32	-0.94
2_12_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	10	6	60%	2022-11-28 to 2024-02-13		Nonparametric	0.76	0.41	0.41	2.2	0.57	0.76	2.1	4.6
2_12_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1800	1800	1600	2100	141	0.079	0.88	1.2
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00027	0.00021	0.00010	0.00063	0.00017	0.62	1.5	1.4
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.0079	0.0082	0.00044	0.012	0.0029	0.37	-1.8	5.6
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.50	0.49	0.38	0.73	0.095	0.19	1.5	3.6
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	10	1	10%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00030	0.00030	0.000052	0.00052	0.00014	0.46	-0.28	-0.14
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	10	7	70%	2022-11-28 to 2024-02-13		Nonparametric	0.00015	0.000075	0.000032	0.00049	0.00016	1.0	1.6	1.4
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Normal	Gamma	0.038	0.039	0.00038	0.068	0.021	0.55	-0.38	-0.63
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Normal	Gamma	0.0054	0.0062	0.00024	0.0089	0.0026	0.49	-0.68	0.029
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	9	9.4	4.5	10	1.6	0.18	-2.8	8.4
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	10	1	10%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0023	0.0022	0.00010	0.0041	0.0012	0.54	-0.12	-0.23
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.4	1.4	0.87	1.7	0.24	0.18	-0.64	0.42
2_12_5_117	MW-02	Appendix IV	Mercury	mg/L	10	10	100%	2022-11-28 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0069	0.0062	0.0038	0.011	0.0025	0.37	0.87	-0.53
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.9	1.7	0.69	3.4	0.87	0.45	0.19	-0.60
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0011	0.0011	0.00050	0.0018	0.00038	0.35	0.17	0.53
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	10	9	90%	2022-11-28 to 2024-02-13		Nonparametric	0.00022	0.000075	0.000075	0.00062	0.00020	0.91	0.98	-0.31
2_12_6_111	MW-02	Part 115	Copper	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0017	0.0018	0.00023	0.0026	0.00079	0.47	-0.54	-0.56
2_12_6_114	MW-02	Part 115	Iron	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	25	24	18	31	4.2	0.17	0.077	-0.73
2_12_6_119	MW-02	Part 115	Nickel	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Normal	Normal	0.021	0.020	0.00093	0.042	0.011	0.54	0.25	0.79
2_12_6_123	MW-02	Part 115	Silver	mg/L	10	10	100%	2022-11-28 to 2024-02-13		Nonparametric	0.00011	0.000050	0.000050	0.00025	0.000097	0.88	1.0	-1.2
2_12_6_129	MW-02	Part 115	Vanadium	mg/L	10	1	10%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0032	0.0034	0.00062	0.0067	0.0018	0.57	0.39	-0.082
2_12_6_130	MW-02	Part 115	Zinc	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.0071	0.0032	0.0019	0.025	0.0090	1.3	1.8	1.4
2_13_4_105	MW-03	Appendix III	Boron	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Normal	Normal	4.1	4.2	3.3	4.5	0.34	0.082	-1.9	4.2
2_13_4_107	MW-03	Appendix III	Calcium	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	377	385	290	430	39	0.10	-1.1	1.8
2_13_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal	Gamma	186	175	140	300	50	0.27	1.5	2.3
2_13_4_112	MW-03	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.69	0.60	0.52	1.6	0.32	0.47	3.1	9.6
2_13_4_120	MW-03	Appendix III	pH (field)	su	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	7.4	7.3	7.2	7.6	0.12	0.016	0.70	0.094
2_13_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	441	470	42	760	213	0.48	-0.38	0.15
2_13_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	2190	2300	1700	2300	197	0.090	-2.1	4.3
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	10	6	60%	2022-11-28 to 2024-02-14		Nonparametric	0.00027	0.00018	0.000087	0.00050	0.00019	0.72	0.34	-2.2
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00090	0.00094	0.00049	0.0012	0.00025	0.28	-0.70	-0.69
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Normal	Normal	0.37	0.40	0.13	0.50	0.10	0.27	-1.6	3.5
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	10	7	70%	2022-11-28 to 2024-02-14		Nonparametric	0.000083	0.000052	0.000052	0.00026	0.000069	0.83	2.3	5.2
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00014	0.000092	0.000032	0.00038	0.00013	0.93	1.3	0.31
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.0048	0.0047	0.0030	0.0073	0.0014	0.29	0.42	-0.75
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00080	0.00084	0.00037	0.0013	0.00034	0.43	0.062	-1.7

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.69	0.60	0.52	1.6	0.32	0.47	3.1	9.6
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00060	0.00050	0.00022	0.0011	0.00037	0.62	0.61	-1.3
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.042	0.040	0.033	0.065	0.0095	0.22	1.6	3.0
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00017	0.00016	0.00016	0.00024	0.000025	0.15	3.2	10
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	10	8	80%	2022-11-28 to 2024-02-14		Nonparametric	0.0010	0.00062	0.00025	0.0031	0.0011	1.1	1.6	1.1
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	1	10%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.75	1.9	0.40	0.33	0.74	-0.51
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	10	3	30%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00044	0.00041	0.00017	0.0011	0.00027	0.61	1.7	3.7
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00030	0.00038	0.000075	0.00038	0.00013	0.45	-1.2	-0.54
2_13_6_111	MW-03	Part 115	Copper	mg/L	10	5	50%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.00038	0.00024	0.00020	0.0010	0.00031	0.82	1.8	1.5
2_13_6_114	MW-03	Part 115	Iron	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Gamma	1.9	1.5	0.28	5.9	1.8	0.94	1.4	1.9
2_13_6_119	MW-03	Part 115	Nickel	mg/L	10	1	10%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.0029	0.0016	0.00085	0.015	0.0043	1.5	3.0	9.3
2_13_6_123	MW-03	Part 115	Silver	mg/L	10	10	100%	2022-11-28 to 2024-02-14		Nonparametric	0.00013	0.000050	0.000050	0.00025	0.00010	0.79	0.48	-2.3
2_13_6_129	MW-03	Part 115	Vanadium	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00093	0.00062	0.00062	0.0031	0.00079	0.85	2.9	8.5
2_13_6_130	MW-03	Part 115	Zinc	mg/L	10	6	60%	2022-11-28 to 2024-02-14		Nonparametric	0.0053	0.0015	0.0012	0.019	0.0071	1.3	1.6	1.0
2_14_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	4.0	4.0	3.5	4.7	0.30	0.073	0.59	1.9
2_14_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	360	355	310	410	31	0.087	0.19	-1.0
2_14_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	192	195	130	300	44	0.23	1.2	2.5
2_14_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	1.3	1.3	0.76	1.9	0.25	0.19	0.097	4.1
2_14_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	7.4	7.4	7.2	7.7	0.13	0.018	1.1	0.71
2_14_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	561	620	1.8	700	194	0.35	-2.5	7.1
2_14_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	1892	1900	1700	2100	138	0.073	0.18	-1.0
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	2022-11-28 to 2024-02-14		Nonparametric	0.00026	0.00018	0.000050	0.00050	0.00020	0.77	0.25	-2.1
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00085	0.00088	0.00046	0.0012	0.00028	0.32	-0.069	-1.3
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.15	0.12	0.10	0.46	0.099	0.66	3.4	12
2_14_5_104	MW-04	Appendix IV	Beryllium	mg/L	12	12	100%	2022-11-28 to 2024-02-14		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	NA	NA
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-28 to 2024-02-14		Nonparametric	0.00015	0.000075	0.000032	0.00038	0.00014	0.92	1.0	-0.74
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.0038	0.0037	0.0026	0.0060	0.0012	0.30	0.40	-1.2
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00051	0.00053	0.00018	0.00093	0.00022	0.42	0.34	-0.40
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	1.3	1.3	0.76	1.9	0.25	0.19	0.097	4.1
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	2022-11-28 to 2024-02-14		Nonparametric	0.00043	0.00036	0.00010	0.0011	0.00035	0.82	1.2	0.44
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.063	0.064	0.047	0.077	0.010	0.16	-0.29	-1.1
2_14_5_117	MW-04	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-28 to 2024-02-14		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.0010	0.00080	0.00037	0.0031	0.00077	0.76	2	4.9
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	1.2	1.2	0.66	1.6	0.29	0.25	-0.60	-0.74
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	12	6	50%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Nonparametric	0.00022	0.00022	0.00010	0.00043	0.00010	0.47	1.0	0.76
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-28 to 2024-02-14		Nonparametric	0.00023	0.00023	0.000075	0.00038	0.00016	0.70	0	-2.4
2_14_6_111	MW-04	Part 115	Copper	mg/L	12	11	92%	2022-11-28 to 2024-02-14		Nonparametric	0.00021	0.00020	0.00020	0.00027	0.000020	0.098	3.5	12
2_14_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	5.9	5.8	4.7	6.8	0.71	0.12	-0.17	-1.2
2_14_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Normal	Normal	0.014	0.013	0.0019	0.022	0.0055	0.39	-0.76	0.97
2_14_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	2022-11-28 to 2024-02-14		Nonparametric	0.00013	0.000050	0.000050	0.00025	0.00010	0.77	0.39	-2.3
2_14_6_129	MW-04	Part 115	Vanadium	mg/L	12	12	100%	2022-11-28 to 2024-02-14		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
2_14_6_130	MW-04	Part 115	Zinc	mg/L	12	8	67%	2022-11-28 to 2024-02-14		Nonparametric	0.0020	0.0012	0.0012	0.0059	0.0016	0.78	1.9	2.6

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
2_19_4_105	MW-09	Appendix III	Boron	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	5.8	5.9	4.9	6.9	0.56	0.097	0.14	0.37
2_19_4_107	MW-09	Appendix III	Calcium	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	343	330	230	430	70	0.20	-0.16	-1.5
2_19_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Lognormal	Lognormal	15	15	11	18	3	0.20	0.014	-2.0
2_19_4_112	MW-09	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.6	2.5	2.1	2.9	0.26	0.10	-0.29	-0.61
2_19_4_120	MW-09	Appendix III	pH (field)	su	11	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	7.3	7.2	7.1	7.5	0.11	0.015	1.7	2.7
2_19_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	372	450	83	650	210	0.57	-0.095	-1.8
2_19_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1273	1400	740	1600	303	0.24	-0.40	-1.2
2_19_5_101	MW-09	Appendix IV	Antimony	mg/L	11	6	55%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00020	0.00010	0.000050	0.00050	0.00017	0.85	1.1	-0.48
2_19_5_102	MW-09	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.0021	0.0023	0.0013	0.0027	0.00049	0.23	-0.97	-0.64
2_19_5_103	MW-09	Appendix IV	Barium	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.49	0.31	0.17	2.4	0.64	1.3	3.1	10
2_19_5_104	MW-09	Appendix IV	Beryllium	mg/L	11	10	91%	2022-11-28 to 2024-02-13		Nonparametric	0.000053	0.000052	0.000052	0.000058	0.0000018	0.034	3.3	11
2_19_5_106	MW-09	Appendix IV	Cadmium	mg/L	11	11	100%	2022-11-28 to 2024-02-13		Nonparametric	0.00012	0.000075	0.000032	0.00038	0.00013	1.1	1.6	1.2
2_19_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0025	0.0027	0.0016	0.0032	0.00062	0.25	-0.21	-1.9
2_19_5_110	MW-09	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00056	0.00058	0.00024	0.00099	0.00021	0.37	0.52	0.62
2_19_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.6	2.5	2.1	2.9	0.26	0.10	-0.29	-0.61
2_19_5_115	MW-09	Appendix IV	Lead	mg/L	11	11	100%	2022-11-28 to 2024-02-13		Nonparametric	0.00048	0.00022	0.00010	0.0011	0.00042	0.88	0.82	-1.2
2_19_5_116	MW-09	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.30	0.31	0.26	0.34	0.029	0.096	-0.32	-1.1
2_19_5_117	MW-09	Appendix IV	Mercury	mg/L	11	10	91%	2022-11-28 to 2024-02-13		Nonparametric	0.00036	0.00016	0.00016	0.0024	0.00068	1.9	3.3	11
2_19_5_118	MW-09	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.022	0.021	0.0097	0.033	0.0073	0.33	-0.16	-0.68
2_19_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	11	10	91%	2022-11-28 to 2024-02-13		Nonparametric	0.76	0.74	0.62	0.98	0.11	0.15	0.75	-0.18
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.00024	0.00024	0.00012	0.00029	0.000046	0.19	-1.8	4.6
2_19_5_125	MW-09	Appendix IV	Thallium	mg/L	11	11	100%	2022-11-28 to 2024-02-13		Nonparametric	0.00021	0.000075	0.000075	0.00038	0.00016	0.75	0.21	-2.4
2_19_6_111	MW-09	Part 115	Copper	mg/L	11	9	82%	2022-11-28 to 2024-02-13		Nonparametric	0.00022	0.00020	0.00020	0.00043	0.000069	0.31	3.2	10
2_19_6_114	MW-09	Part 115	Iron	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	20	19	15	25	3.5	0.17	0.20	-1.2
2_19_6_119	MW-09	Part 115	Nickel	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0020	0.0018	0.00072	0.0060	0.0015	0.74	2.0	4.6
2_19_6_123	MW-09	Part 115	Silver	mg/L	11	11	100%	2022-11-28 to 2024-02-13		Nonparametric	0.00010	0.000050	0.000050	0.00025	0.000093	0.89	1.2	-0.76
2_19_6_129	MW-09	Part 115	Vanadium	mg/L	11	11	100%	2022-11-28 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
2_19_6_130	MW-09	Part 115	Zinc	mg/L	11	7	64%	2022-11-28 to 2024-02-13		Nonparametric	0.0050	0.0012	0.0012	0.025	0.0083	1.7	2.1	3.1
2_20_4_105	MW-10	Appendix III	Boron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	16	14	4.5	28	8.3	0.52	0.27	-1.6
2_20_4_107	MW-10	Appendix III	Calcium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	255	220	160	460	81	0.32	1.7	3.7
2_20_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	204	160	92	430	105	0.52	1.2	0.58
2_20_4_112	MW-10	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	5.4	5.7	2.7	7.7	1.7	0.31	-0.24	-1.2
2_20_4_120	MW-10	Appendix III	pH (field)	su	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.9	7.8	7.0	8.8	0.43	0.055	0.45	2.6
2_20_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	555	490	140	950	294	0.53	0.080	-1.6
2_20_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1818	1800	1500	2400	232	0.13	1.5	4
2_20_5_101	MW-10	Appendix IV	Antimony	mg/L	11	7	64%	2022-11-29 to 2024-02-13		Nonparametric	0.00022	0.00013	0.000050	0.00050	0.00017	0.77	0.87	-0.57
2_20_5_102	MW-10	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00050	0.00038	0.00016	0.0011	0.00031	0.61	0.95	-0.057
2_20_5_103	MW-10	Appendix IV	Barium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.28	0.28	0.14	0.57	0.13	0.47	1.1	0.88
2_20_5_104	MW-10	Appendix IV	Beryllium	mg/L	11	5	45%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.000082	0.000054	0.000052	0.00022	0.000055	0.67	2.1	3.8
2_20_5_106	MW-10	Appendix IV	Cadmium	mg/L	11	11	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00014	0.000075	0.000032	0.00038	0.00013	0.90	1.3	0.55
2_20_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0039	0.0040	0.0013	0.0085	0.0023	0.59	0.91	0.15
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	2022-11-29 to 2024-02-13	Lognormal	Lognormal	0.00056	0.00040	0.00010	0.0018	0.00046	0.82	2.2	5.6

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
2_20_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	5.4	5.7	2.7	7.7	1.7	0.31	-0.24	-1.2
2_20_5_115	MW-10	Appendix IV	Lead	mg/L	11	9	82%	2022-11-29 to 2024-02-13		Nonparametric	0.00057	0.00050	0.00010	0.0011	0.00044	0.78	0.38	-1.9
2_20_5_116	MW-10	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.95	0.94	0.54	1.6	0.29	0.31	0.75	1.6
2_20_5_117	MW-10	Appendix IV	Mercury	mg/L	11	11	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
2_20_5_118	MW-10	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0036	0.0034	0.00080	0.0072	0.0018	0.49	0.64	0.82
2_20_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	2022-11-29 to 2024-02-13		Nonparametric	0.97	0.80	0.60	2.1	0.42	0.43	2.0	4.5
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.00038	0.00036	0.00022	0.00083	0.00017	0.44	2.2	5.9
2_20_5_125	MW-10	Appendix IV	Thallium	mg/L	11	11	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00024	0.00038	0.000075	0.00038	0.00016	0.66	-0.21	-2.4
2_20_6_111	MW-10	Part 115	Copper	mg/L	11	8	73%	2022-11-29 to 2024-02-13		Nonparametric	0.00034	0.00020	0.00020	0.0013	0.00033	0.97	2.9	8.6
2_20_6_114	MW-10	Part 115	Iron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	4.8	3.9	2.4	7.3	1.7	0.36	0.44	-1.4
2_20_6_119	MW-10	Part 115	Nickel	mg/L	11	5	45%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.00088	0.00076	0.00065	0.0018	0.00035	0.40	2.2	4.9
2_20_6_123	MW-10	Part 115	Silver	mg/L	11	11	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00014	0.000051	0.000050	0.00025	0.00010	0.74	0.21	-2.4
2_20_6_129	MW-10	Part 115	Vanadium	mg/L	11	10	91%	2022-11-29 to 2024-02-13		Nonparametric	0.00068	0.00062	0.00062	0.0013	0.00020	0.30	3.3	11
2_20_6_130	MW-10	Part 115	Zinc	mg/L	11	3	27%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.0047	0.0014	0.0012	0.014	0.0056	1.2	1.2	-0.74
2_21_4_105	MW-11	Appendix III	Boron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.3	6.0	1.5	13	4.1	0.66	0.47	-1.1
2_21_4_107	MW-11	Appendix III	Calcium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	266	270	130	380	83	0.31	-0.42	-0.79
2_21_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	72	72	52	95	15	0.20	0.085	-1.1
2_21_4_112	MW-11	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.62	0.53	0.21	1.4	0.42	0.68	0.81	-0.53
2_21_4_120	MW-11	Appendix III	pH (field)	su	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.3	7.3	7.2	7.5	0.074	0.010	0.28	-0.057
2_21_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	2	20%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	56	15	0.41	210	78	1.4	1.4	0.56
2_21_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1106	1100	680	1800	296	0.27	1.3	3.3
2_21_5_101	MW-11	Appendix IV	Antimony	mg/L	10	7	70%	2022-11-29 to 2024-02-13		Nonparametric	0.00021	0.00010	0.000050	0.00069	0.00022	1.1	1.6	1.7
2_21_5_102	MW-11	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0017	0.0014	0.00061	0.0041	0.00098	0.59	1.9	4.2
2_21_5_103	MW-11	Appendix IV	Barium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.67	0.59	0.36	1.2	0.25	0.38	0.99	1.0
2_21_5_104	MW-11	Appendix IV	Beryllium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.000056	0.000052	0.000052	0.000091	0.000012	0.22	3.2	10
2_21_5_106	MW-11	Appendix IV	Cadmium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.00017	0.000075	0.000032	0.00073	0.00022	1.3	2.2	4.7
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0016	0.00084	0.00045	0.0086	0.0025	1.5	3.0	9.3
2_21_5_110	MW-11	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00054	0.00050	0.00023	0.0012	0.00029	0.53	1.3	2.3
2_21_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.62	0.53	0.21	1.4	0.42	0.68	0.81	-0.53
2_21_5_115	MW-11	Appendix IV	Lead	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.0079	0.00080	0.00017	0.068	0.021	2.7	3.1	9.9
2_21_5_116	MW-11	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	0.076	0.064	0.0059	0.22	0.069	0.91	1.1	0.78
2_21_5_117	MW-11	Appendix IV	Mercury	mg/L	10	10	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
2_21_5_118	MW-11	Appendix IV	Molybdenum	mg/L	10	2	20%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0012	0.00098	0.00043	0.0029	0.00076	0.64	1.3	1.8
2_21_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.1	1.0	0.62	1.8	0.38	0.34	0.67	-0.52
2_21_5_122	MW-11	Appendix IV	Selenium	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.00026	0.00022	0.00014	0.00071	0.00016	0.63	2.7	8.0
2_21_5_125	MW-11	Appendix IV	Thallium	mg/L	10	10	100%	2022-11-29 to 2024-02-13		Nonparametric	0.00017	0.000075	0.000075	0.00038	0.00015	0.88	1.0	-1.2
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0023	0.00034	0.00020	0.019	0.0059	2.5	3.1	9.9
2_21_6_114	MW-11	Part 115	Iron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.8	6.4	3.6	11	2.7	0.40	0.32	-1.4
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.0020	0.0013	0.00065	0.0094	0.0026	1.3	3.1	9.5
2_21_6_123	MW-11	Part 115	Silver	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.000099	0.000050	0.000050	0.00025	0.000084	0.85	1.4	0.32
2_21_6_129	MW-11	Part 115	Vanadium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.019	0.0040	0.0012	0.10	0.031	1.7	2.4	5.9

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
2_22_4_105	MW-12	Appendix III	Boron	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.29	0.27	0.18	0.42	0.080	0.28	0.18	-1.3
2_22_4_107	MW-12	Appendix III	Calcium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	70	77	40	95	17	0.25	-0.25	-0.79
2_22_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	20	18	15	27	4.0	0.21	0.71	-0.92
2_22_4_112	MW-12	Appendix III	Fluoride	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.35	0.28	0.22	0.66	0.14	0.40	0.99	-0.16
2_22_4_120	MW-12	Appendix III	pH (field)	su	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.7	7.7	7.0	8.3	0.36	0.047	0.0016	-0.074
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal	Gamma	125	120	84	180	28	0.22	1.1	0.97
2_22_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	282	270	100	420	97	0.35	-0.17	-0.76
2_22_5_101	MW-12	Appendix IV	Antimony	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00065	0.00064	0.00035	0.0011	0.00024	0.37	0.50	-0.78
2_22_5_102	MW-12	Appendix IV	Arsenic	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0024	0.0024	0.0014	0.0035	0.00079	0.33	0.055	-1.7
2_22_5_103	MW-12	Appendix IV	Barium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.035	0.030	0.017	0.060	0.015	0.42	0.55	-1.3
2_22_5_104	MW-12	Appendix IV	Beryllium	mg/L	13	13	100%	2022-11-28 to 2024-02-13		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	NA	NA
2_22_5_106	MW-12	Appendix IV	Cadmium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0014	0.0012	0.00054	0.0029	0.00080	0.57	0.60	-1.0
2_22_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	13	6	46%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00041	0.00034	0.00020	0.00099	0.00025	0.61	1.1	0.88
2_22_5_110	MW-12	Appendix IV	Cobalt	mg/L	13	5	38%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00028	0.00019	0.00010	0.00056	0.00019	0.70	0.50	-1.7
2_22_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.35	0.28	0.22	0.66	0.14	0.40	0.99	-0.16
2_22_5_115	MW-12	Appendix IV	Lead	mg/L	13	7	54%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00019	0.00022	0.00010	0.00022	0.000040	0.21	-1.4	0.95
2_22_5_116	MW-12	Appendix IV	Lithium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0038	0.0037	0.0022	0.0064	0.0013	0.35	0.39	-0.47
2_22_5_117	MW-12	Appendix IV	Mercury	mg/L	13	12	92%	2022-11-28 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
2_22_5_118	MW-12	Appendix IV	Molybdenum	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0074	0.0072	0.0051	0.0097	0.0017	0.22	-0.048	-1.6
2_22_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	13	11	85%	2022-11-28 to 2024-02-13		Nonparametric	0.64	0.59	0.46	1.1	0.17	0.26	1.8	3.8
2_22_5_122	MW-12	Appendix IV	Selenium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	0.00093	0.00086	0.00013	0.0023	0.00077	0.83	0.69	-0.80
2_22_5_125	MW-12	Appendix IV	Thallium	mg/L	13	13	100%	2022-11-28 to 2024-02-13		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	NA	NA
2_22_6_111	MW-12	Part 115	Copper	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0011	0.0010	0.00055	0.0016	0.00029	0.28	0.30	-0.081
2_22_6_114	MW-12	Part 115	Iron	mg/L	13	5	38%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.056	0.033	0.026	0.26	0.063	1.1	3.3	11
2_22_6_119	MW-12	Part 115	Nickel	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0026	0.0025	0.0014	0.0035	0.00076	0.30	-0.17	-1.3
2_22_6_123	MW-12	Part 115	Silver	mg/L	13	13	100%	2022-11-28 to 2024-02-13		Nonparametric	0.000050	0.000050	0.000050	0.000050	0	0	NA	NA
2_22_6_129	MW-12	Part 115	Vanadium	mg/L	13	7	54%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00083	0.00062	0.00062	0.0013	0.00026	0.32	0.75	-1.1
2_22_6_130	MW-12	Part 115	Zinc	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Normal	Normal	0.0075	0.0080	0.0027	0.011	0.0026	0.35	-0.80	-0.49
2_42_4_105	MW-32	Appendix III	Boron	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	3.4	3.0	2.6	5.0	0.71	0.21	1.3	1.9
2_42_4_107	MW-32	Appendix III	Calcium	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	178	185	130	220	27	0.15	-0.46	-0.25
2_42_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	46	46	39	50	4	0.087	-0.29	-1.2
2_42_4_112	MW-32	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal	Gamma	1.5	1.5	1.4	1.8	0.12	0.081	1.3	2.2
2_42_4_120	MW-32	Appendix III	pH (field)	su	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	7.6	7.6	7.5	7.8	0.086	0.011	0.31	-1.3
2_42_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	93	92	17	190	61	0.65	0.29	-1.1
2_42_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	705	715	550	800	87	0.12	-0.59	-0.84
2_42_5_101	MW-32	Appendix IV	Antimony	mg/L	10	6	60%	2022-11-30 to 2024-02-12		Nonparametric	0.00015	0.00010	0.000050	0.00070	0.00020	1.3	3.0	9.5
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00072	0.00056	0.00044	0.0024	0.00059	0.82	3.1	9.7
2_42_5_103	MW-32	Appendix IV	Barium	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.45	0.41	0.059	0.85	0.22	0.48	0.077	0.66
2_42_5_104	MW-32	Appendix IV	Beryllium	mg/L	10	9	90%	2022-11-30 to 2024-02-12		Nonparametric	0.000054	0.000052	0.000052	0.000070	0.0000057	0.11	3.2	10
2_42_5_106	MW-32	Appendix IV	Cadmium	mg/L	10	9	90%	2022-11-30 to 2024-02-12		Nonparametric	0.000065	0.000053	0.000032	0.00019	0.000049	0.75	2.1	5.3
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00069	0.00042	0.00031	0.0030	0.00082	1.2	3.0	9.4
2_42_5_110	MW-32	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00057	0.00038	0.00031	0.0019	0.00048	0.84	2.8	8.4

(Table continues on next page)

^a Non-detects are excluded from goodness-of-fit tests.



Table 1: Summary Statistics, Non-Detects Included (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit ^a	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
2_42_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal	Gamma	1.5	1.5	1.4	1.8	0.12	0.081	1.3	2.2
2_42_5_115	MW-32	Appendix IV	Lead	mg/L	10	7	70%	2022-11-30 to 2024-02-12		Nonparametric	0.00019	0.00022	0.00010	0.00038	0.000084	0.43	0.99	1.7
2_42_5_116	MW-32	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.13	0.12	0.094	0.19	0.029	0.23	0.98	1.0
2_42_5_117	MW-32	Appendix IV	Mercury	mg/L	10	10	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	NA	NA
2_42_5_118	MW-32	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0045	0.0045	0.0032	0.0073	0.0011	0.25	1.6	3.9
2_42_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	10	6	60%	2022-11-30 to 2024-02-12		Nonparametric	0.69	0.61	0.50	0.98	0.16	0.24	0.74	-0.75
2_42_5_122	MW-32	Appendix IV	Selenium	mg/L	10	9	90%	2022-11-30 to 2024-02-12		Nonparametric	0.00025	0.00022	0.00010	0.0010	0.00027	1.1	2.9	8.7
2_42_5_125	MW-32	Appendix IV	Thallium	mg/L	10	10	100%	2022-11-30 to 2024-02-12		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	NA	NA
2_42_6_111	MW-32	Part 115	Copper	mg/L	10	7	70%	2022-11-30 to 2024-02-12		Nonparametric	0.0018	0.00020	0.00020	0.016	0.0050	2.8	3.2	10
2_42_6_114	MW-32	Part 115	Iron	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	16	18	11	20	3.1	0.19	-1.1	0.045
2_42_6_119	MW-32	Part 115	Nickel	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.0033	0.0012	0.00077	0.023	0.0069	2.1	3.2	10
2_42_6_123	MW-32	Part 115	Silver	mg/L	10	10	100%	2022-11-30 to 2024-02-12		Nonparametric	0.000050	0.000050	0.000050	0.000050	0	0	NA	NA
2_42_6_129	MW-32	Part 115	Vanadium	mg/L	10	10	100%	2022-11-30 to 2024-02-12		Nonparametric	0.00062	0.00062	0.00062	0.00062	0	0	NA	NA
2_42_6_130	MW-32	Part 115	Zinc	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.0086	0.0032	0.0022	0.031	0.012	1.3	1.8	1.4

^a Non-detects are excluded from goodness-of-fit tests.



Table 2: Summary Statistics, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_16_4_105	MW-06	Appendix III	Boron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	9.5	9.6	7.3	12	1.4	0.15	1.0	-0.0084	-0.032
1_16_4_107	MW-06	Appendix III	Calcium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	257	250	220	310	29	0.11	30	0.56	-0.74
1_16_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Normal	Normal	85	78	18	160	38	0.45	20	0.42	1.2
1_16_4_112	MW-06	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.98	1.4	0.16	0.14	0.15	0.58	-1.2
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	7.2	7.3	6.4	7.4	0.27	0.038	0.081	-2.9	8.8
1_16_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	10	1	10%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	11	9.6	0.98	20	7.3	0.65	9.5	-0.20	-1.4
1_16_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-29 to 2024-02-13		Nonparametric	1210	1200	1100	1300	74	0.061	74	-0.17	-0.73
1_16_5_101	MW-06	Appendix IV	Antimony	mg/L	10	8	80%	2022-11-29 to 2024-02-13		Nonparametric	0.00022	0.00022	0.000075	0.00036	0.00020	0.93	0.00021	NA	NA
1_16_5_102	MW-06	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00067	0.00064	0.00047	0.0010	0.00016	0.24	0.00012	1.0	0.72
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	1.4	1.4	0.99	1.6	0.17	0.12	0.15	-1.8	4.3
1_16_5_104	MW-06	Appendix IV	Beryllium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.000052	0.000052	0.000052	0.000052	NA	NA	0	NA	NA
1_16_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0018	0.0018	0.0012	0.0030	0.00057	0.31	0.00052	0.81	0.31
1_16_5_110	MW-06	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00057	0.00053	0.00035	0.00080	0.00014	0.25	0.00016	0.20	-0.96
1_16_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.98	1.4	0.16	0.14	0.15	0.58	-1.2
1_16_5_115	MW-06	Appendix IV	Lead	mg/L	10	7	70%	2022-11-29 to 2024-02-13		Nonparametric	0.00029	0.00027	0.00025	0.00035	0.000053	0.18	0.000030	1.5	NA
1_16_5_116	MW-06	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.19	0.20	0.13	0.23	0.036	0.19	0.044	-0.57	-1.1
1_16_5_118	MW-06	Appendix IV	Molybdenum	mg/L	10	7	70%	2022-11-29 to 2024-02-13		Nonparametric	0.00026	0.00026	0.00025	0.00027	0.000010	0.038	0.000015	0	NA
1_16_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.95	0.86	0.62	1.9	0.41	0.43	0.11	2.3	6.1
1_16_5_122	MW-06	Appendix IV	Selenium	mg/L	10	5	50%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.00026	0.00020	0.00019	0.00047	0.00012	0.47	0.000015	2.2	4.8
1_16_6_111	MW-06	Part 115	Copper	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.00028	0.00028	0.00028	0.00028	NA	NA	0	NA	NA
1_16_6_114	MW-06	Part 115	Iron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	19	18	14	31	5.3	0.27	2.2	1.6	2
1_16_6_119	MW-06	Part 115	Nickel	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0010	0.0010	0.00079	0.0012	0.00014	0.14	0.00015	-0.11	-0.90
1_16_6_130	MW-06	Part 115	Zinc	mg/L	10	2	20%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.020	0.0018	0.0012	0.094	0.036	1.8	0.00044	1.7	1.7
1_17_4_105	MW-07	Appendix III	Boron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	11	11	10	13	0.84	0.074	0.74	0.39	0.37
1_17_4_107	MW-07	Appendix III	Calcium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	142	140	120	160	11	0.080	15	-0.48	0.55
1_17_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-30 to 2024-02-13		Nonparametric	14	14	13	15	0.74	0.053	0.74	0.17	-0.73
1_17_4_112	MW-07	Appendix III	Fluoride	mg/L	10	1	10%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.11	0.11	0.068	0.14	0.031	0.29	0.044	-0.016	-2.1
1_17_4_120	MW-07	Appendix III	pH (field)	su	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.9	6.9	6.6	7.0	0.15	0.021	0.074	-1.1	0.63
1_17_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	24	23	15	33	6.8	0.28	8.9	0.10	-1.9
1_17_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Normal	Normal	620	635	470	720	78	0.13	37	-1.1	0.60
1_17_5_101	MW-07	Appendix IV	Antimony	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.000071	0.000071	0.000071	0.000071	NA	NA	0	NA	NA
1_17_5_102	MW-07	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00021	0.00021	0.00013	0.00029	0.000041	0.19	0.000030	-0.10	2.1
1_17_5_103	MW-07	Appendix IV	Barium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Normal	Normal	0.33	0.34	0.25	0.38	0.036	0.11	0.015	-1.5	3
1_17_5_104	MW-07	Appendix IV	Beryllium	mg/L	10	7	70%	2022-11-30 to 2024-02-13		Nonparametric	0.000061	0.000062	0.000055	0.000066	0.0000056	0.091	0.0000059	-0.78	NA
1_17_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00034	0.00032	0.00028	0.00042	0.000044	0.13	0.000052	0.55	-0.45
1_17_5_110	MW-07	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00092	0.00096	0.00071	0.0011	0.00012	0.13	0.000081	-0.63	-0.11
1_17_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	10	1	10%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.11	0.11	0.068	0.14	0.031	0.29	0.044	-0.016	-2.1
1_17_5_116	MW-07	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0062	0.0058	0.0031	0.010	0.0020	0.32	0.0015	0.52	0.48
1_17_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.1	1.1	0.67	2.4	0.54	0.48	0.35	1.9	4.5
1_17_5_122	MW-07	Appendix IV	Selenium	mg/L	10	8	80%	2022-11-30 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00010	0.00023	0.000092	0.56	0.000096	NA	NA
1_17_6_111	MW-07	Part 115	Copper	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.00027	0.00027	0.00027	0.00027	NA	NA	0	NA	NA
1_17_6_114	MW-07	Part 115	Iron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	15	15	13	19	2.1	0.13	2.2	0.56	-0.81
1_17_6_130	MW-07	Part 115	Zinc	mg/L	10	7	70%	2022-11-30 to 2024-02-13		Nonparametric	0.015	0.016	0.0035	0.025	0.011	0.73	0.013	-0.48	NA

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_18_4_105	MW-08	Appendix III	Boron	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Normal	Normal	6.3	7.0	2.5	9.3	2.0	0.32	0.89	-0.67	0.052
1_18_4_107	MW-08	Appendix III	Calcium	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	140	145	120	160	14	0.10	15	-0.29	-1.4
1_18_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	26	26	17	35	5.8	0.22	5.2	-0.37	-0.35
1_18_4_112	MW-08	Appendix III	Fluoride	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Normal	Normal	0.89	1.0	0.40	1.3	0.29	0.32	0.15	-0.62	-0.75
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	2022-12-01 to 2024-02-13	Nonparametric	Nonparametric	7.2	7.3	6.2	7.5	0.35	0.049	0.12	-2.7	8.0
1_18_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	3	30%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	11	5.6	1.7	26	10	0.93	5.8	0.78	-1.4
1_18_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	537	540	440	630	59	0.11	59	-0.043	-0.47
1_18_5_101	MW-08	Appendix IV	Antimony	mg/L	10	4	40%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00015	0.00014	0.000054	0.00028	0.000082	0.54	0.000078	0.67	-0.12
1_18_5_102	MW-08	Appendix IV	Arsenic	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.032	0.034	0.0069	0.050	0.015	0.48	0.018	-0.51	-1.0
1_18_5_103	MW-08	Appendix IV	Barium	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.2	0.98	1.5	0.17	0.14	0.22	0.037	-0.96
1_18_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00093	0.00090	0.00061	0.0015	0.00026	0.28	0.00030	1.1	1.6
1_18_5_110	MW-08	Appendix IV	Cobalt	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00051	0.00054	0.00034	0.00070	0.00013	0.26	0.00013	-0.22	-1.5
1_18_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Normal	Normal	0.89	1.0	0.40	1.3	0.29	0.32	0.15	-0.62	-0.75
1_18_5_115	MW-08	Appendix IV	Lead	mg/L	10	7	70%	2022-12-01 to 2024-02-13		Nonparametric	0.00040	0.00022	0.00011	0.00086	0.00041	1.0	0.00016	1.6	NA
1_18_5_116	MW-08	Appendix IV	Lithium	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.11	0.11	0.063	0.14	0.025	0.23	0.024	-0.63	-0.23
1_18_5_118	MW-08	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0014	0.0015	0.00036	0.0028	0.00082	0.58	0.0011	0.22	-0.84
1_18_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.3	1.2	0.74	2.1	0.43	0.32	0.37	0.70	0.86
1_18_5_122	MW-08	Appendix IV	Selenium	mg/L	10	5	50%	2022-12-01 to 2024-02-13	Nonparametric	Nonparametric	0.00019	0.00015	0.00014	0.00034	0.000086	0.46	0.000015	2.2	4.8
1_18_6_111	MW-08	Part 115	Copper	mg/L	10	5	50%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00036	0.00035	0.00021	0.00045	0.000095	0.27	0.00012	-0.92	0.72
1_18_6_114	MW-08	Part 115	Iron	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal; Normal	Normal	21	22	13	32	6	0.28	5.2	0.64	-0.012
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	2022-12-01 to 2024-02-13	Gamma; Lognormal	Gamma	0.0013	0.0011	0.00085	0.0026	0.00050	0.39	0.00027	2.4	6.3
1_18_6_130	MW-08	Part 115	Zinc	mg/L	10	3	30%	2022-12-01 to 2024-02-13	Lognormal	Nonparametric	0.026	0.0025	0.0013	0.12	0.046	1.7	0.0018	1.9	3.2
1_28_4_105	MW-18	Appendix III	Boron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.4	2.3	1.8	3.5	0.50	0.21	0.44	0.79	0.47
1_28_4_107	MW-18	Appendix III	Calcium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	341	350	240	450	66	0.19	44	-0.18	-0.56
1_28_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	22	22	16	28	3.8	0.17	4.4	-0.079	-1.0
1_28_4_112	MW-18	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	3.9	3.8	3.3	5.1	0.55	0.14	0.44	1.1	0.73
1_28_4_120	MW-18	Appendix III	pH (field)	su	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.2	7.2	7.0	7.3	0.075	0.010	0.059	-0.49	0.14
1_28_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	820	780	480	1200	225	0.27	178	0.66	-0.044
1_28_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1409	1400	1100	1800	217	0.15	296	0.51	-0.42
1_28_5_101	MW-18	Appendix IV	Antimony	mg/L	11	4	36%	2022-11-30 to 2024-02-13	Nonparametric	Nonparametric	0.00018	0.00013	0.00012	0.00032	0.000089	0.50	0.000015	1.2	-0.75
1_28_5_102	MW-18	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.024	0.023	0.015	0.041	0.0077	0.32	0.0089	0.92	1.0
1_28_5_103	MW-18	Appendix IV	Barium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.019	0.021	0.012	0.025	0.0049	0.25	0.0044	-0.36	-1.7
1_28_5_106	MW-18	Appendix IV	Cadmium	mg/L	11	3	27%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00027	0.00026	0.000089	0.00044	0.00013	0.47	0.00012	0.27	-0.95
1_28_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	11	10	91%	2022-11-30 to 2024-02-13		Nonparametric	0.00025	0.00025	0.00025	0.00025	NA	NA	0	NA	NA
1_28_5_110	MW-18	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.0032	0.0023	0.0017	0.0060	0.0015	0.49	0.00089	0.96	-0.62
1_28_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	3.9	3.8	3.3	5.1	0.55	0.14	0.44	1.1	0.73
1_28_5_115	MW-18	Appendix IV	Lead	mg/L	11	8	73%	2022-11-30 to 2024-02-13		Nonparametric	0.00021	0.00016	0.00014	0.00032	0.000099	0.48	0.000030	1.7	NA
1_28_5_116	MW-18	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.034	0.032	0.020	0.045	0.0085	0.25	0.010	-0.11	-1.4
1_28_5_118	MW-18	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.014	0.013	0.0089	0.021	0.0043	0.31	0.0030	0.72	-0.87
1_28_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	2022-11-30 to 2024-02-13		Nonparametric	0.87	0.73	0.62	1.3	0.35	0.40	0.17	1.5	NA
1_28_5_122	MW-18	Appendix IV	Selenium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00049	0.00034	0.00015	0.0012	0.00036	0.75	0.00027	0.82	-0.63
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Nonparametric	Nonparametric	0.00059	0.00047	0.00033	0.0015	0.00033	0.56	0.000059	2.4	6
1_28_6_114	MW-18	Part 115	Iron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.5	5.8	4.3	10	1.7	0.27	1.5	0.86	0.075

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_28_6_119	MW-18	Part 115	Nickel	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0069	0.0056	0.0047	0.011	0.0025	0.36	0.0013	0.81	-1.0
1_28_6_130	MW-18	Part 115	Zinc	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.054	0.054	0.028	0.088	0.018	0.33	0.021	0.45	-0.47
1_29_4_105	MW-19	Appendix III	Boron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.0	1.9	1.5	2.6	0.39	0.19	0.44	0.34	-1.0
1_29_4_107	MW-19	Appendix III	Calcium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	481	485	360	550	53	0.11	37	-1.2	2.6
1_29_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	50	44	37	75	14	0.28	8.9	0.93	-0.67
1_29_4_112	MW-19	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.9	1.9	1.6	2.3	0.23	0.12	0.22	0.14	-0.88
1_29_4_120	MW-19	Appendix III	pH (field)	su	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.9	6.9	6.4	7.1	0.19	0.028	0.12	-1.8	4.3
1_29_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1033	1100	600	1300	228	0.22	222	-0.69	-0.24
1_29_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1960	2000	1600	2200	232	0.12	296	-0.59	-0.97
1_29_5_101	MW-19	Appendix IV	Antimony	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.00072	0.00072	0.00072	0.00072	NA	NA	0	NA	NA
1_29_5_102	MW-19	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0051	0.0055	0.0026	0.0073	0.0017	0.33	0.0019	-0.30	-1.5
1_29_5_103	MW-19	Appendix IV	Barium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.041	0.040	0.030	0.050	0.0061	0.15	0.0059	-0.12	-0.46
1_29_5_104	MW-19	Appendix IV	Beryllium	mg/L	10	3	30%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.000070	0.000071	0.000057	0.000086	0.000010	0.14	0.000012	0.45	-0.48
1_29_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	10	5	50%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00035	0.00031	0.00027	0.00053	0.00011	0.30	0.000059	1.6	2.5
1_29_5_110	MW-19	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00053	0.00048	0.00013	0.00096	0.00025	0.48	0.00031	0.085	-0.41
1_29_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.9	1.9	1.6	2.3	0.23	0.12	0.22	0.14	-0.88
1_29_5_116	MW-19	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.094	0.094	0.073	0.11	0.011	0.12	0.0074	-0.26	0.12
1_29_5_118	MW-19	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Normal	Normal	0.0097	0.010	0.0039	0.013	0.0031	0.32	0.0022	-1.0	0.20
1_29_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.90	0.93	0.55	1.2	0.23	0.26	0.22	-0.66	-0.97
1_29_5_122	MW-19	Appendix IV	Selenium	mg/L	10	9	90%	2022-11-30 to 2024-02-13		Nonparametric	0.00012	0.00012	0.00012	0.00012	NA	NA	0	NA	NA
1_29_6_114	MW-19	Part 115	Iron	mg/L	10	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	16	16	12	24	3.6	0.23	3.7	1.1	1.2
1_29_6_119	MW-19	Part 115	Nickel	mg/L	10	1	10%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0018	0.0015	0.0011	0.0028	0.00062	0.35	0.00044	0.68	-1.2
1_29_6_130	MW-19	Part 115	Zinc	mg/L	10	8	80%	2022-11-30 to 2024-02-13		Nonparametric	0.0032	0.0032	0.0023	0.0042	0.0013	0.41	0.0014	NA	NA
1_30_4_105	MW-20	Appendix III	Boron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.92	0.87	0.72	1.1	0.15	0.16	0.12	0.29	-1.8
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Normal	Normal	125	130	58	170	27	0.22	15	-1.3	4.2
1_30_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	71	70	41	92	15	0.21	12	-0.30	0.48
1_30_4_112	MW-20	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Nonparametric	Nonparametric	0.26	0.23	0.21	0.55	0.098	0.37	0.030	3.1	9.9
1_30_4_120	MW-20	Appendix III	pH (field)	su	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.3	7.3	7.1	7.5	0.12	0.016	0.16	-0.33	-1.3
1_30_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	69	78	19	120	33	0.48	47	-0.11	-1.1
1_30_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	682	660	570	770	62	0.092	30	0.15	-0.30
1_30_5_101	MW-20	Appendix IV	Antimony	mg/L	11	3	27%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00011	0.00010	0.000054	0.00016	0.000044	0.41	0.000058	0.15	-1.9
1_30_5_102	MW-20	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0014	0.0013	0.0011	0.0017	0.00022	0.16	0.00030	0.29	-1.5
1_30_5_103	MW-20	Appendix IV	Barium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.48	0.43	0.31	0.94	0.18	0.37	0.089	1.9	4.6
1_30_5_104	MW-20	Appendix IV	Beryllium	mg/L	11	10	91%	2022-11-30 to 2024-02-13		Nonparametric	0.000059	0.000059	0.000059	0.000059	NA	NA	0	NA	NA
1_30_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	11	5	45%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00023	0.00021	0.00019	0.00029	0.000037	0.16	0.000030	1.1	0.59
1_30_5_110	MW-20	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0013	0.0013	0.00095	0.0016	0.00020	0.15	0.00015	-0.13	-0.23
1_30_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Nonparametric	Nonparametric	0.26	0.23	0.21	0.55	0.098	0.37	0.030	3.1	9.9
1_30_5_115	MW-20	Appendix IV	Lead	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0021	0.0023	0.0013	0.0028	0.00053	0.25	0.00074	-0.0015	-1.5
1_30_5_116	MW-20	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.062	0.062	0.029	0.083	0.015	0.24	0.013	-0.86	1.3
1_30_5_118	MW-20	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0043	0.0041	0.0034	0.0051	0.00056	0.13	0.00074	-0.013	-1.3
1_30_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.93	0.82	0.59	1.5	0.35	0.38	0.34	1.0	0.21
1_30_5_122	MW-20	Appendix IV	Selenium	mg/L	11	6	55%	2022-11-30 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.00014	0.00011	0.00010	0.00026	0.000067	0.47	0.000015	2.1	4.5
1_30_5_125	MW-20	Appendix IV	Thallium	mg/L	11	10	91%	2022-11-30 to 2024-02-13		Nonparametric	0.00011	0.00011	0.00011	0.00011	NA	NA	0	NA	NA

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_30_6_111	MW-20	Part 115	Copper	mg/L	11	1	9%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00031	0.00027	0.00023	0.00053	0.000098	0.32	0.000059	1.4	1.6
1_30_6_114	MW-20	Part 115	Iron	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Gamma; Lognormal; Normal	Normal	19	19	16	22	1.8	0.093	1.5	-0.29	-0.56
1_30_6_119	MW-20	Part 115	Nickel	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Nonparametric	Nonparametric	0.0087	0.0091	0.0061	0.0099	0.0013	0.15	0.00059	-1.3	0.49
1_30_6_130	MW-20	Part 115	Zinc	mg/L	11	0	0%	2022-11-30 to 2024-02-13	Lognormal	Nonparametric	0.036	0.028	0.016	0.071	0.018	0.51	0.0059	1.1	-0.15
1_40_4_105	MW-30	Appendix III	Boron	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	2.0	1.9	1.7	3.5	0.45	0.22	0.30	2.8	9.1
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	490	460	390	960	139	0.28	44	3.4	12
1_40_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	146	130	97	200	44	0.30	48	0.17	-2.1
1_40_4_112	MW-30	Appendix III	Fluoride	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	1.1	1.1	0.91	1.4	0.14	0.13	0.15	0.80	0.25
1_40_4_120	MW-30	Appendix III	pH (field)	su	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	7.0	7.2	6.5	7.2	0.25	0.036	0.10	-1.9	2.4
1_40_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	869	855	610	1000	106	0.12	119	-0.93	1.4
1_40_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	2257	2300	1800	2800	231	0.10	148	0.35	2.1
1_40_5_101	MW-30	Appendix IV	Antimony	mg/L	14	12	86%	2022-11-30 to 2024-02-12		Nonparametric	0.00023	0.00023	0.000057	0.00040	0.00024	1.1	0.00025	NA	NA
1_40_5_102	MW-30	Appendix IV	Arsenic	mg/L	14	3	21%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.00041	0.00040	0.00012	0.00070	0.00020	0.48	0.00025	0.21	-1.1
1_40_5_103	MW-30	Appendix IV	Barium	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.073	0.066	0.045	0.10	0.022	0.29	0.029	0.12	-1.7
1_40_5_104	MW-30	Appendix IV	Beryllium	mg/L	14	12	86%	2022-11-30 to 2024-02-12		Nonparametric	0.000082	0.000082	0.000053	0.00011	0.000040	0.49	0.000042	NA	NA
1_40_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0099	0.010	0.0049	0.014	0.0031	0.31	0.0031	-0.35	-1.0
1_40_5_110	MW-30	Appendix IV	Cobalt	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.0015	0.0011	0.00053	0.0044	0.0013	0.82	0.00031	1.7	1.6
1_40_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	1.1	1.1	0.91	1.4	0.14	0.13	0.15	0.80	0.25
1_40_5_116	MW-30	Appendix IV	Lithium	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.14	0.12	0.10	0.27	0.041	0.30	0.022	2.9	9.7
1_40_5_118	MW-30	Appendix IV	Molybdenum	mg/L	14	5	36%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0014	0.00082	0.00032	0.0036	0.0012	0.82	0.00041	1.3	0.34
1_40_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	14	8	57%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Nonparametric	0.70	0.69	0.44	0.91	0.18	0.26	0.21	-0.14	-1.6
1_40_5_122	MW-30	Appendix IV	Selenium	mg/L	14	9	64%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00017	0.00012	0.00011	0.00039	0.00012	0.70	0.000015	2.2	4.9
1_40_6_111	MW-30	Part 115	Copper	mg/L	14	11	79%	2022-11-30 to 2024-02-12		Nonparametric	0.00038	0.00037	0.00024	0.00054	0.00015	0.39	0.00019	0.40	NA
1_40_6_114	MW-30	Part 115	Iron	mg/L	14	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	2.7	2.5	0.77	8.8	2.1	0.76	1.8	2.0	5.4
1_40_6_119	MW-30	Part 115	Nickel	mg/L	14	4	29%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0023	0.0018	0.00070	0.0045	0.0015	0.64	0.0013	0.69	-1.3
1_40_6_130	MW-30	Part 115	Zinc	mg/L	14	10	71%	2022-11-30 to 2024-02-12		Nonparametric	0.0042	0.0050	0.0015	0.0053	0.0018	0.43	0.00030	-2	3.8
1_41_4_105	MW-31	Appendix III	Boron	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	4.5	4.4	3.6	5.4	0.58	0.13	0.59	0.097	-0.84
1_41_4_107	MW-31	Appendix III	Calcium	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	169	170	130	200	20	0.12	15	-0.48	0.86
1_41_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	103	100	92	120	8.9	0.086	10	0.62	-0.42
1_41_4_112	MW-31	Appendix III	Fluoride	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	4.8	4.7	4.5	5.2	0.25	0.053	0.22	0.56	-1.4
1_41_4_120	MW-31	Appendix III	pH (field)	su	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	7.8	7.8	7.7	8.0	0.094	0.012	0.067	0.43	0.87
1_41_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	173	170	72	250	65	0.37	89	-0.11	-1.3
1_41_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	816	810	730	940	63	0.077	74	0.61	0.18
1_41_5_101	MW-31	Appendix IV	Antimony	mg/L	10	5	50%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Nonparametric	0.00010	0.00012	0.000069	0.00013	0.000027	0.26	0.000015	-0.59	-2.6
1_41_5_102	MW-31	Appendix IV	Arsenic	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0013	0.0012	0.0010	0.0018	0.00027	0.21	0.00030	0.51	-0.89
1_41_5_103	MW-31	Appendix IV	Barium	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.16	0.15	0.12	0.23	0.037	0.23	0.037	0.82	-0.42
1_41_5_104	MW-31	Appendix IV	Beryllium	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.000054	0.000054	0.000054	0.000054	NA	NA	0	NA	NA
1_41_5_106	MW-31	Appendix IV	Cadmium	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.000084	0.000084	0.000084	0.000084	NA	NA	0	NA	NA
1_41_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0022	0.0022	0.0018	0.0029	0.00033	0.15	0.00030	0.67	0.55
1_41_5_110	MW-31	Appendix IV	Cobalt	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.00018	0.00018	0.00013	0.00028	0.000042	0.23	0.000037	1.4	2.8
1_41_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	4.8	4.7	4.5	5.2	0.25	0.053	0.22	0.56	-1.4
1_41_5_115	MW-31	Appendix IV	Lead	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.00031	0.00031	0.00031	0.00031	NA	NA	0	NA	NA
1_41_5_116	MW-31	Appendix IV	Lithium	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.050	0.052	0.039	0.056	0.0050	0.100	0.0037	-1.3	1.9

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_41_5_118	MW-31	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Nonparametric	Nonparametric	0.0013	0.0012	0.0011	0.0021	0.00034	0.25	0.00022	1.7	2.0
1_41_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.80	0.72	0.57	1.2	0.28	0.35	0.20	1.0	-0.88
1_41_5_122	MW-31	Appendix IV	Selenium	mg/L	10	5	50%	2022-12-01 to 2024-02-12	Nonparametric	Nonparametric	0.00025	0.00014	0.00011	0.00074	0.00027	1.1	0.000030	2.2	4.9
1_41_5_125	MW-31	Appendix IV	Thallium	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.000088	0.000088	0.000088	0.000088	NA	NA	0	NA	NA
1_41_6_111	MW-31	Part 115	Copper	mg/L	10	8	80%	2022-12-01 to 2024-02-12		Nonparametric	0.00025	0.00025	0.00023	0.00027	0.000028	0.11	0.000030	NA	NA
1_41_6_114	MW-31	Part 115	Iron	mg/L	10	0	0%	2022-12-01 to 2024-02-12	Gamma; Lognormal; Normal	Gamma	0.99	1.0	0.13	2.5	0.73	0.74	0.65	0.71	0.72
1_41_6_119	MW-31	Part 115	Nickel	mg/L	10	9	90%	2022-12-01 to 2024-02-12		Nonparametric	0.0023	0.0023	0.0023	0.0023	NA	NA	0	NA	NA
1_41_6_130	MW-31	Part 115	Zinc	mg/L	10	7	70%	2022-12-01 to 2024-02-12		Nonparametric	0.0065	0.0082	0.0014	0.010	0.0045	0.69	0.0027	-1.4	NA
2_11_4_105	MW-01R	Appendix III	Boron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	104	110	38	160	37	0.36	47	-0.084	-0.56
2_11_4_107	MW-01R	Appendix III	Calcium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	246	240	130	400	74	0.30	59	0.49	0.78
2_11_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Normal	Normal	137	150	49	210	49	0.36	30	-0.82	0.33
2_11_4_112	MW-01R	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	11	14	4.8	15	3.4	0.29	1.5	-0.77	-0.55
2_11_4_120	MW-01R	Appendix III	pH (field)	su	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	7.6	7.7	6.0	7.8	0.52	0.069	0.044	-3.2	10
2_11_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Normal	Gamma	491	540	8.8	980	295	0.60	356	-0.056	-0.58
2_11_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Lognormal; Normal	Normal	2345	2400	2100	2600	137	0.058	0	-0.17	0.42
2_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	11	3	27%	2022-11-29 to 2024-02-13	Lognormal	Lognormal	0.00045	0.00032	0.00022	0.0012	0.00034	0.76	0.00012	1.9	3.4
2_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0017	0.0015	0.00073	0.0041	0.00092	0.54	0.00059	1.9	5
2_11_5_103	MW-01R	Appendix IV	Barium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Lognormal	Lognormal	0.33	0.30	0.21	0.56	0.12	0.36	0.074	1.3	0.71
2_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00023	0.00021	0.00012	0.00036	0.000079	0.34	0.000074	0.47	-0.80
2_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	11	7	64%	2022-11-29 to 2024-02-13		Nonparametric	0.00016	0.00011	0.000062	0.00034	0.00013	0.80	0.000036	1.8	3.4
2_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0040	0.0019	0.0013	0.022	0.0061	1.5	0.00089	3.2	10
2_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.0019	0.0012	0.00081	0.0045	0.0013	0.68	0.00058	1.5	1.2
2_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	11	14	4.8	15	3.4	0.29	1.5	-0.77	-0.55
2_11_5_115	MW-01R	Appendix IV	Lead	mg/L	11	2	18%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.0015	0.0010	0.00044	0.0053	0.0015	0.98	0.00044	2.6	7.3
2_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.3	2.2	0.77	3.4	0.84	0.37	0.89	-0.17	-0.79
2_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11	1	9%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0013	0.00076	0.00033	0.0056	0.0016	1.2	0.00017	2.7	7.8
2_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.99	1.1	0.60	1.3	0.30	0.31	0.33	-0.43	-2.3
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.00074	0.00063	0.00030	0.0018	0.00039	0.52	0.00010	2.3	6.5
2_11_6_111	MW-01R	Part 115	Copper	mg/L	11	5	45%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00059	0.00037	0.00022	0.0013	0.00045	0.77	0.00019	1.0	-0.84
2_11_6_114	MW-01R	Part 115	Iron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.61	0.59	0.16	1.1	0.27	0.45	0.24	-0.023	0.072
2_11_6_119	MW-01R	Part 115	Nickel	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.0041	0.0021	0.0013	0.022	0.0060	1.5	0.00089	3.1	10
2_11_6_129	MW-01R	Part 115	Vanadium	mg/L	11	2	18%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.0019	0.0016	0.00067	0.0046	0.0014	0.73	0.0013	1.3	1.0
2_11_6_130	MW-01R	Part 115	Zinc	mg/L	11	1	9%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.0057	0.0017	0.0012	0.014	0.0057	1.0	0.00074	0.67	-1.8
2_12_4_105	MW-02	Appendix III	Boron	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	96	98	73	110	11	0.12	10	-0.76	0.75
2_12_4_107	MW-02	Appendix III	Calcium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	204	210	180	240	19	0.093	22	0.38	-0.14
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	134	140	67	150	24	0.18	0	-2.8	8.5
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	9	9.4	4.5	10	1.6	0.18	0.37	-2.8	8.4
2_12_4_120	MW-02	Appendix III	pH (field)	su	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.2	7.2	7.1	7.4	0.13	0.018	0.16	0.32	-0.94
2_12_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	10	6	60%	2022-11-28 to 2024-02-13		Nonparametric	1.3	1.0	0.86	2.2	0.63	0.49	0.18	1.9	3.5
2_12_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1800	1800	1600	2100	141	0.079	148	0.88	1.2
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00026	0.00019	0.00015	0.00063	0.00017	0.64	0.000059	2.2	5.2
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.0079	0.0082	0.00044	0.012	0.0029	0.37	0.00081	-1.8	5.6
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.50	0.49	0.38	0.73	0.095	0.19	0.059	1.5	3.6

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	10	1	10%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00033	0.00032	0.00015	0.00052	0.00011	0.35	0.00015	0.13	-0.34
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	10	7	70%	2022-11-28 to 2024-02-13		Nonparametric	0.00019	0.000046	0.000041	0.00049	0.00026	1.3	0.0000074	1.7	NA
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Normal	Gamma	0.038	0.039	0.00038	0.068	0.021	0.55	0.024	-0.38	-0.63
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Normal	Gamma	0.0054	0.0062	0.00024	0.0089	0.0026	0.49	0.0030	-0.68	0.029
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	9	9.4	4.5	10	1.6	0.18	0.37	-2.8	8.4
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	10	1	10%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0025	0.0024	0.0010	0.0041	0.0010	0.41	0.00089	0.35	-0.70
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.4	1.4	0.87	1.7	0.24	0.18	0.30	-0.64	0.42
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0069	0.0062	0.0038	0.011	0.0025	0.37	0.0016	0.87	-0.53
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.9	1.7	0.90	3.4	0.85	0.44	0.65	0.87	0.78
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0011	0.0011	0.00050	0.0018	0.00038	0.35	0.00019	0.17	0.53
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	10	9	90%	2022-11-28 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	NA	NA	0	NA	NA
2_12_6_111	MW-02	Part 115	Copper	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0017	0.0018	0.00023	0.0026	0.00079	0.47	0.0010	-0.54	-0.56
2_12_6_114	MW-02	Part 115	Iron	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	25	24	18	31	4.2	0.17	4.4	0.077	-0.73
2_12_6_119	MW-02	Part 115	Nickel	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Normal	Normal	0.021	0.020	0.00093	0.042	0.011	0.54	0.0074	0.25	0.79
2_12_6_129	MW-02	Part 115	Vanadium	mg/L	10	1	10%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0035	0.0035	0.0013	0.0067	0.0017	0.48	0.0013	0.48	0.29
2_12_6_130	MW-02	Part 115	Zinc	mg/L	10	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.0071	0.0032	0.0019	0.025	0.0090	1.3	0.0014	1.8	1.4
2_13_4_105	MW-03	Appendix III	Boron	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Normal	Normal	4.1	4.2	3.3	4.5	0.34	0.082	0.22	-1.9	4.2
2_13_4_107	MW-03	Appendix III	Calcium	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	377	385	290	430	39	0.10	37	-1.1	1.8
2_13_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal	Gamma	186	175	140	300	50	0.27	30	1.5	2.3
2_13_4_112	MW-03	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.69	0.60	0.52	1.6	0.32	0.47	0.044	3.1	9.6
2_13_4_120	MW-03	Appendix III	pH (field)	su	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	7.4	7.3	7.2	7.6	0.12	0.016	0.13	0.70	0.094
2_13_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	441	470	42	760	213	0.48	185	-0.38	0.15
2_13_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	2190	2300	1700	2300	197	0.090	0	-2.1	4.3
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	10	6	60%	2022-11-28 to 2024-02-14		Nonparametric	0.00018	0.00010	0.000087	0.00045	0.00018	0.96	0.000017	2	3.9
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00090	0.00094	0.00049	0.0012	0.00025	0.28	0.00024	-0.70	-0.69
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Normal	Normal	0.37	0.40	0.13	0.50	0.10	0.27	0.052	-1.6	3.5
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	10	7	70%	2022-11-28 to 2024-02-14		Nonparametric	0.000087	0.000057	0.000053	0.00015	0.000055	0.63	0.0000059	1.7	NA
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00011	0.00011	0.00011	0.00011	NA	NA	0	NA	NA
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.0048	0.0047	0.0030	0.0073	0.0014	0.29	0.0017	0.42	-0.75
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00080	0.00084	0.00037	0.0013	0.00034	0.43	0.00052	0.062	-1.7
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.69	0.60	0.52	1.6	0.32	0.47	0.044	3.1	9.6
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00022	0.00022	0.00022	0.00022	NA	NA	0	NA	NA
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.042	0.040	0.033	0.065	0.0095	0.22	0.0074	1.6	3.0
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00024	0.00024	0.00024	0.00024	NA	NA	0	NA	NA
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	10	8	80%	2022-11-28 to 2024-02-14		Nonparametric	0.00078	0.00078	0.00072	0.00085	0.000092	0.12	0.000096	NA	NA
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	1	10%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	1.2	1.0	0.75	1.9	0.42	0.35	0.36	0.84	-0.63
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	10	3	30%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00041	0.00042	0.00017	0.00062	0.00014	0.34	0.00012	-0.39	0.96
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.00018	0.00018	0.00018	0.00018	NA	NA	0	NA	NA
2_13_6_111	MW-03	Part 115	Copper	mg/L	10	5	50%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.00039	0.00025	0.00024	0.00091	0.00029	0.75	0.000015	2.2	4.9
2_13_6_114	MW-03	Part 115	Iron	mg/L	10	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Gamma	1.9	1.5	0.28	5.9	1.8	0.94	1.5	1.4	1.9
2_13_6_119	MW-03	Part 115	Nickel	mg/L	10	1	10%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.0029	0.0016	0.00085	0.015	0.0046	1.6	0.00030	3	8.8
2_13_6_129	MW-03	Part 115	Vanadium	mg/L	10	9	90%	2022-11-28 to 2024-02-14		Nonparametric	0.0012	0.0012	0.0012	0.0012	NA	NA	0	NA	NA
2_13_6_130	MW-03	Part 115	Zinc	mg/L	10	6	60%	2022-11-28 to 2024-02-14		Nonparametric	0.010	0.010	0.0019	0.019	0.0096	0.94	0.012	0.0094	-5.9

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_14_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	4.0	4.0	3.5	4.7	0.30	0.073	0.22	0.59	1.9
2_14_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	360	355	310	410	31	0.087	37	0.19	-1.0
2_14_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	192	195	130	300	44	0.23	37	1.2	2.5
2_14_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	1.3	1.3	0.76	1.9	0.25	0.19	0.15	0.097	4.1
2_14_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	7.4	7.4	7.2	7.7	0.13	0.018	0.067	1.1	0.71
2_14_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	561	620	1.8	700	194	0.35	81	-2.5	7.1
2_14_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	1892	1900	1700	2100	138	0.073	148	0.18	-1.0
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	2022-11-28 to 2024-02-14		Nonparametric	0.00020	0.00012	0.000071	0.00041	0.00018	0.91	0.000073	1.6	NA
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00085	0.00088	0.00046	0.0012	0.00028	0.32	0.00044	-0.069	-1.3
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	0.15	0.12	0.10	0.46	0.099	0.66	0.015	3.4	12
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.0038	0.0037	0.0026	0.0060	0.0012	0.30	0.0015	0.40	-1.2
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00051	0.00053	0.00018	0.00093	0.00022	0.42	0.00026	0.34	-0.40
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Nonparametric	Nonparametric	1.3	1.3	0.76	1.9	0.25	0.19	0.15	0.097	4.1
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.063	0.064	0.047	0.077	0.010	0.16	0.015	-0.29	-1.1
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	0.00084	0.00080	0.00037	0.0015	0.00043	0.51	0.00059	0.23	-1.7
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	1.3	1.3	0.66	1.6	0.26	0.21	0.26	-1.3	2.4
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	12	6	50%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Nonparametric	0.00026	0.00022	0.00013	0.00043	0.00013	0.47	0.00011	0.61	-1.8
2_14_6_111	MW-04	Part 115	Copper	mg/L	12	11	92%	2022-11-28 to 2024-02-14		Nonparametric	0.00027	0.00027	0.00027	0.00027	NA	NA	0	NA	NA
2_14_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Lognormal; Normal	Normal	5.9	5.8	4.7	6.8	0.71	0.12	0.74	-0.17	-1.2
2_14_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-02-14	Gamma; Normal	Normal	0.014	0.013	0.0019	0.022	0.0055	0.39	0.0059	-0.76	0.97
2_14_6_130	MW-04	Part 115	Zinc	mg/L	12	8	67%	2022-11-28 to 2024-02-14		Nonparametric	0.0037	0.0037	0.0015	0.0059	0.0019	0.51	0.0021	0	-1.0
2_19_4_105	MW-09	Appendix III	Boron	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	5.8	5.9	4.9	6.9	0.56	0.097	0.30	0.14	0.37
2_19_4_107	MW-09	Appendix III	Calcium	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	343	330	230	430	70	0.20	89	-0.16	-1.5
2_19_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Lognormal	Lognormal	15	15	11	18	3	0.20	4.4	0.014	-2.0
2_19_4_112	MW-09	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.6	2.5	2.1	2.9	0.26	0.10	0.30	-0.29	-0.61
2_19_4_120	MW-09	Appendix III	pH (field)	su	11	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	7.3	7.2	7.1	7.5	0.11	0.015	0.030	1.7	2.7
2_19_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	372	450	83	650	210	0.57	296	-0.095	-1.8
2_19_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1273	1400	740	1600	303	0.24	296	-0.40	-1.2
2_19_5_101	MW-09	Appendix IV	Antimony	mg/L	11	6	55%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00017	0.00011	0.000073	0.00037	0.00013	0.71	0.000055	1.2	0.32
2_19_5_102	MW-09	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.0021	0.0023	0.0013	0.0027	0.00049	0.23	0.00015	-0.97	-0.64
2_19_5_103	MW-09	Appendix IV	Barium	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.49	0.31	0.17	2.4	0.64	1.3	0.16	3.1	10
2_19_5_104	MW-09	Appendix IV	Beryllium	mg/L	11	10	91%	2022-11-28 to 2024-02-13		Nonparametric	0.000058	0.000058	0.000058	0.000058	NA	NA	0	NA	NA
2_19_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0025	0.0027	0.0016	0.0032	0.00062	0.25	0.00074	-0.21	-1.9
2_19_5_110	MW-09	Appendix IV	Cobalt	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00056	0.00058	0.00024	0.00099	0.00021	0.37	0.00018	0.52	0.62
2_19_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	2.6	2.5	2.1	2.9	0.26	0.10	0.30	-0.29	-0.61
2_19_5_116	MW-09	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.30	0.31	0.26	0.34	0.029	0.096	0.030	-0.32	-1.1
2_19_5_117	MW-09	Appendix IV	Mercury	mg/L	11	10	91%	2022-11-28 to 2024-02-13		Nonparametric	0.0024	0.0024	0.0024	0.0024	NA	NA	0	NA	NA
2_19_5_118	MW-09	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.022	0.021	0.0097	0.033	0.0073	0.33	0.010	-0.16	-0.68
2_19_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	11	10	91%	2022-11-28 to 2024-02-13		Nonparametric	0.79	0.79	0.79	0.79	NA	NA	0	NA	NA
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.00024	0.00026	0.00012	0.00029	0.000050	0.21	0.000030	-2.2	5.5
2_19_6_111	MW-09	Part 115	Copper	mg/L	11	9	82%	2022-11-28 to 2024-02-13		Nonparametric	0.00034	0.00034	0.00024	0.00043	0.00013	0.40	0.00014	NA	NA
2_19_6_114	MW-09	Part 115	Iron	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	20	19	15	25	3.5	0.17	4.4	0.20	-1.2
2_19_6_119	MW-09	Part 115	Nickel	mg/L	11	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0020	0.0018	0.00072	0.0060	0.0015	0.74	0.00089	2.0	4.6

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_19_6_130	MW-09	Part 115	Zinc	mg/L	11	7	64%	2022-11-28 to 2024-02-13		Nonparametric	0.012	0.0100	0.0015	0.025	0.012	1.0	0.012	0.30	-4.3
2_20_4_105	MW-10	Appendix III	Boron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	16	14	4.5	28	8.3	0.52	7.9	0.27	-1.6
2_20_4_107	MW-10	Appendix III	Calcium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	255	220	160	460	81	0.32	74	1.7	3.7
2_20_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	204	160	92	430	105	0.52	44	1.2	0.58
2_20_4_112	MW-10	Appendix III	Fluoride	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	5.4	5.7	2.7	7.7	1.7	0.31	2.1	-0.24	-1.2
2_20_4_120	MW-10	Appendix III	pH (field)	su	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.9	7.8	7.0	8.8	0.43	0.055	0.16	0.45	2.6
2_20_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	555	490	140	950	294	0.53	430	0.080	-1.6
2_20_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1818	1800	1500	2400	232	0.13	148	1.5	4
2_20_5_101	MW-10	Appendix IV	Antimony	mg/L	11	7	64%	2022-11-29 to 2024-02-13		Nonparametric	0.00017	0.00012	0.00011	0.00034	0.00011	0.65	0.000015	2	3.9
2_20_5_102	MW-10	Appendix IV	Arsenic	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00050	0.00038	0.00016	0.0011	0.00031	0.61	0.00025	0.95	-0.057
2_20_5_103	MW-10	Appendix IV	Barium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.28	0.28	0.14	0.57	0.13	0.47	0.074	1.1	0.88
2_20_5_104	MW-10	Appendix IV	Beryllium	mg/L	11	5	45%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00011	0.000082	0.000052	0.00022	0.000066	0.62	0.000042	1.2	0.55
2_20_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0039	0.0040	0.0013	0.0085	0.0023	0.59	0.0030	0.91	0.15
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	2022-11-29 to 2024-02-13	Lognormal	Lognormal	0.00061	0.00040	0.00029	0.0018	0.00046	0.76	0.00016	2.3	5.8
2_20_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	5.4	5.7	2.7	7.7	1.7	0.31	2.1	-0.24	-1.2
2_20_5_115	MW-10	Appendix IV	Lead	mg/L	11	9	82%	2022-11-29 to 2024-02-13		Nonparametric	0.00014	0.00014	0.00012	0.00017	0.000035	0.24	0.000037	NA	NA
2_20_5_116	MW-10	Appendix IV	Lithium	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.95	0.94	0.54	1.6	0.29	0.31	0.16	0.75	1.6
2_20_5_118	MW-10	Appendix IV	Molybdenum	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0036	0.0034	0.00080	0.0072	0.0018	0.49	0.0010	0.64	0.82
2_20_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	2022-11-29 to 2024-02-13		Nonparametric	1.5	1.4	0.97	2.1	0.56	0.38	0.57	0.84	NA
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.00041	0.00036	0.00028	0.00083	0.00017	0.40	0.000074	2.4	6.3
2_20_6_111	MW-10	Part 115	Copper	mg/L	11	8	73%	2022-11-29 to 2024-02-13		Nonparametric	0.00072	0.00049	0.00038	0.0013	0.00050	0.69	0.00016	1.6	NA
2_20_6_114	MW-10	Part 115	Iron	mg/L	11	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	4.8	3.9	2.4	7.3	1.7	0.36	1.0	0.44	-1.4
2_20_6_119	MW-10	Part 115	Nickel	mg/L	11	5	45%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.0011	0.00088	0.00076	0.0018	0.00039	0.36	0.00010	1.8	3.0
2_20_6_129	MW-10	Part 115	Vanadium	mg/L	11	10	91%	2022-11-29 to 2024-02-13		Nonparametric	0.0013	0.0013	0.0013	0.0013	NA	NA	0	NA	NA
2_20_6_130	MW-10	Part 115	Zinc	mg/L	11	3	27%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Nonparametric	0.0060	0.0022	0.0012	0.014	0.0061	1.0	0.0014	0.64	-2.2
2_21_4_105	MW-11	Appendix III	Boron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.3	6.0	1.5	13	4.1	0.66	4.6	0.47	-1.1
2_21_4_107	MW-11	Appendix III	Calcium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	266	270	130	380	83	0.31	74	-0.42	-0.79
2_21_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	72	72	52	95	15	0.20	16	0.085	-1.1
2_21_4_112	MW-11	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.62	0.53	0.21	1.4	0.42	0.68	0.41	0.81	-0.53
2_21_4_120	MW-11	Appendix III	pH (field)	su	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.3	7.3	7.2	7.5	0.074	0.010	0.052	0.28	-0.057
2_21_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	2	20%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	70	30	1.8	210	82	1.2	35	1.1	-0.48
2_21_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1106	1100	680	1800	296	0.27	170	1.3	3.3
2_21_5_101	MW-11	Appendix IV	Antimony	mg/L	10	7	70%	2022-11-29 to 2024-02-13		Nonparametric	0.00035	0.00028	0.000082	0.00069	0.00031	0.88	0.00029	0.97	NA
2_21_5_102	MW-11	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0017	0.0014	0.00061	0.0041	0.00098	0.59	0.00052	1.9	4.2
2_21_5_103	MW-11	Appendix IV	Barium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.67	0.59	0.36	1.2	0.25	0.38	0.24	0.99	1.0
2_21_5_104	MW-11	Appendix IV	Beryllium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.000091	0.000091	0.000091	0.000091	NA	NA	0	NA	NA
2_21_5_106	MW-11	Appendix IV	Cadmium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.00073	0.00073	0.00073	0.00073	NA	NA	0	NA	NA
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0016	0.00084	0.00045	0.0086	0.0025	1.5	0.00039	3.0	9.3
2_21_5_110	MW-11	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00054	0.00050	0.00023	0.0012	0.00029	0.53	0.00022	1.3	2.3
2_21_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.62	0.53	0.21	1.4	0.42	0.68	0.41	0.81	-0.53
2_21_5_115	MW-11	Appendix IV	Lead	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.011	0.0018	0.00017	0.068	0.025	2.3	0.0022	2.6	6.9
2_21_5_116	MW-11	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	0.076	0.064	0.0059	0.22	0.069	0.91	0.059	1.1	0.78
2_21_5_118	MW-11	Appendix IV	Molybdenum	mg/L	10	2	20%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0013	0.0014	0.00043	0.0029	0.00079	0.59	0.00077	1.0	1.4

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_21_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.62	1.8	0.42	0.36	0.51	0.33	-1.2
2_21_5_122	MW-11	Appendix IV	Selenium	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal	Gamma	0.00028	0.00021	0.00014	0.00071	0.00020	0.71	0.000074	2.3	5.4
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Lognormal	Nonparametric	0.0032	0.00047	0.00020	0.019	0.0070	2.2	0.00034	2.6	6.9
2_21_6_114	MW-11	Part 115	Iron	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Normal	6.8	6.4	3.6	11	2.7	0.40	3.3	0.32	-1.4
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	2022-11-29 to 2024-02-13	Nonparametric	Nonparametric	0.0020	0.0013	0.00065	0.0094	0.0026	1.3	0.00030	3.1	9.5
2_21_6_123	MW-11	Part 115	Silver	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.00014	0.00014	0.00014	0.00014	NA	NA	0	NA	NA
2_21_6_129	MW-11	Part 115	Vanadium	mg/L	10	9	90%	2022-11-29 to 2024-02-13		Nonparametric	0.00062	0.00062	0.00062	0.00062	NA	NA	0	NA	NA
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	2022-11-29 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.026	0.0085	0.0018	0.10	0.035	1.3	0.0099	1.9	3.9
2_22_4_105	MW-12	Appendix III	Boron	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.29	0.27	0.18	0.42	0.080	0.28	0.10	0.18	-1.3
2_22_4_107	MW-12	Appendix III	Calcium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	70	77	40	95	17	0.25	21	-0.25	-0.79
2_22_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	20	18	15	27	4.0	0.21	3	0.71	-0.92
2_22_4_112	MW-12	Appendix III	Fluoride	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.35	0.28	0.22	0.66	0.14	0.40	0.074	0.99	-0.16
2_22_4_120	MW-12	Appendix III	pH (field)	su	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	7.7	7.7	7.0	8.3	0.36	0.047	0.30	0.0016	-0.074
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal	Gamma	125	120	84	180	28	0.22	15	1.1	0.97
2_22_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	282	270	100	420	97	0.35	104	-0.17	-0.76
2_22_5_101	MW-12	Appendix IV	Antimony	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00065	0.00064	0.00035	0.0011	0.00024	0.37	0.00034	0.50	-0.78
2_22_5_102	MW-12	Appendix IV	Arsenic	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0024	0.0024	0.0014	0.0035	0.00079	0.33	0.0010	0.055	-1.7
2_22_5_103	MW-12	Appendix IV	Barium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.035	0.030	0.017	0.060	0.015	0.42	0.012	0.55	-1.3
2_22_5_106	MW-12	Appendix IV	Cadmium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0014	0.0012	0.00054	0.0029	0.00080	0.57	0.00086	0.60	-1.0
2_22_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	13	6	46%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00059	0.00054	0.00034	0.00099	0.00021	0.36	0.00012	1.2	2.2
2_22_5_110	MW-12	Appendix IV	Cobalt	mg/L	13	5	38%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.00038	0.00044	0.00014	0.00056	0.00017	0.44	0.00016	-0.47	-1.8
2_22_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Nonparametric	Nonparametric	0.35	0.28	0.22	0.66	0.14	0.40	0.074	0.99	-0.16
2_22_5_115	MW-12	Appendix IV	Lead	mg/L	13	7	54%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.00018	0.00019	0.00014	0.00022	0.000034	0.19	0.000037	-0.25	-2.5
2_22_5_116	MW-12	Appendix IV	Lithium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0038	0.0037	0.0022	0.0064	0.0013	0.35	0.0016	0.39	-0.47
2_22_5_117	MW-12	Appendix IV	Mercury	mg/L	13	12	92%	2022-11-28 to 2024-02-13		Nonparametric	0.00016	0.00016	0.00016	0.00016	NA	NA	0	NA	NA
2_22_5_118	MW-12	Appendix IV	Molybdenum	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0074	0.0072	0.0051	0.0097	0.0017	0.22	0.0022	-0.048	-1.6
2_22_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	13	11	85%	2022-11-28 to 2024-02-13		Nonparametric	0.95	0.95	0.81	1.1	0.20	0.21	0.21	NA	NA
2_22_5_122	MW-12	Appendix IV	Selenium	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Gamma	0.00093	0.00086	0.00013	0.0023	0.00077	0.83	0.00095	0.69	-0.80
2_22_6_111	MW-12	Part 115	Copper	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0011	0.0010	0.00055	0.0016	0.00029	0.28	0.00030	0.30	-0.081
2_22_6_114	MW-12	Part 115	Iron	mg/L	13	5	38%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.045	0.044	0.027	0.064	0.015	0.33	0.021	0.082	-2.2
2_22_6_119	MW-12	Part 115	Nickel	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Normal	0.0026	0.0025	0.0014	0.0035	0.00076	0.30	0.0012	-0.17	-1.3
2_22_6_129	MW-12	Part 115	Vanadium	mg/L	13	7	54%	2022-11-28 to 2024-02-13	Gamma; Lognormal; Normal	Nonparametric	0.0011	0.0011	0.00085	0.0013	0.00018	0.17	0.00019	-0.042	-2.1
2_22_6_130	MW-12	Part 115	Zinc	mg/L	13	0	0%	2022-11-28 to 2024-02-13	Gamma; Normal	Normal	0.0075	0.0080	0.0027	0.011	0.0026	0.35	0.0022	-0.80	-0.49
2_42_4_105	MW-32	Appendix III	Boron	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	3.4	3.0	2.6	5.0	0.71	0.21	0.44	1.3	1.9
2_42_4_107	MW-32	Appendix III	Calcium	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	178	185	130	220	27	0.15	15	-0.46	-0.25
2_42_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	46	46	39	50	4	0.087	5.9	-0.29	-1.2
2_42_4_112	MW-32	Appendix III	Fluoride	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal	Gamma	1.5	1.5	1.4	1.8	0.12	0.081	0.15	1.3	2.2
2_42_4_120	MW-32	Appendix III	pH (field)	su	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	7.6	7.6	7.5	7.8	0.086	0.011	0.11	0.31	-1.3
2_42_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	93	92	17	190	61	0.65	68	0.29	-1.1
2_42_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	705	715	550	800	87	0.12	111	-0.59	-0.84
2_42_5_101	MW-32	Appendix IV	Antimony	mg/L	10	6	60%	2022-11-30 to 2024-02-12		Nonparametric	0.00024	0.00011	0.000067	0.00070	0.00031	1.2	0.000054	1.9	3.7
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00072	0.00056	0.00044	0.0024	0.00059	0.82	0.000074	3.1	9.7
2_42_5_103	MW-32	Appendix IV	Barium	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.45	0.41	0.059	0.85	0.22	0.48	0.21	0.077	0.66

(Table continues on next page)



Table 2: Summary Statistics, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_42_5_104	MW-32	Appendix IV	Beryllium	mg/L	10	9	90%	2022-11-30 to 2024-02-12		Nonparametric	0.000070	0.000070	0.000070	0.000070	NA	NA	0	NA	NA
2_42_5_106	MW-32	Appendix IV	Cadmium	mg/L	10	9	90%	2022-11-30 to 2024-02-12		Nonparametric	0.00019	0.00019	0.00019	0.00019	NA	NA	0	NA	NA
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00069	0.00042	0.00031	0.0030	0.00082	1.2	0.00017	3.0	9.4
2_42_5_110	MW-32	Appendix IV	Cobalt	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.00057	0.00038	0.00031	0.0019	0.00048	0.84	0.000052	2.8	8.4
2_42_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal	Gamma	1.5	1.5	1.4	1.8	0.12	0.081	0.15	1.3	2.2
2_42_5_115	MW-32	Appendix IV	Lead	mg/L	10	7	70%	2022-11-30 to 2024-02-12		Nonparametric	0.00021	0.00014	0.00012	0.00038	0.00014	0.68	0.000030	1.7	NA
2_42_5_116	MW-32	Appendix IV	Lithium	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.13	0.12	0.094	0.19	0.029	0.23	0.030	0.98	1.0
2_42_5_118	MW-32	Appendix IV	Molybdenum	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Gamma; Lognormal; Normal	Normal	0.0045	0.0045	0.0032	0.0073	0.0011	0.25	0.00059	1.6	3.9
2_42_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	10	6	60%	2022-11-30 to 2024-02-12		Nonparametric	0.83	0.86	0.61	0.98	0.16	0.19	0.10	-1.1	2.1
2_42_5_122	MW-32	Appendix IV	Selenium	mg/L	10	9	90%	2022-11-30 to 2024-02-12		Nonparametric	0.0010	0.0010	0.0010	0.0010	NA	NA	0	NA	NA
2_42_6_111	MW-32	Part 115	Copper	mg/L	10	7	70%	2022-11-30 to 2024-02-12		Nonparametric	0.0055	0.00041	0.00020	0.016	0.0091	1.6	0.00031	1.7	NA
2_42_6_114	MW-32	Part 115	Iron	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	16	18	11	20	3.1	0.19	1.5	-1.1	0.045
2_42_6_119	MW-32	Part 115	Nickel	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.0033	0.0012	0.00077	0.023	0.0069	2.1	0.00041	3.2	10
2_42_6_130	MW-32	Part 115	Zinc	mg/L	10	0	0%	2022-11-30 to 2024-02-12	Nonparametric	Nonparametric	0.0086	0.0032	0.0022	0.031	0.012	1.3	0.0010	1.8	1.4



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal				Lognormal				Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value			
1_16_4_105	MW-06	Appendix III	Boron	mg/L	10	0	0%	0.95	0.68	0.20	0.31	0.94	0.55	0.23	0.15	0.22	>= 0.10	0.35	>= 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_16_4_107	MW-06	Appendix III	Calcium	mg/L	10	0	0%	0.94	0.58	0.19	0.35	0.95	0.68	0.18	0.50	0.19	>= 0.10	0.29	>= 0.10	0.11	Gamma; Lognormal; Normal	Normal
1_16_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.95	0.62	0.23	0.15	0.84	0.048	0.26	0.047	0.23	>= 0.10	0.50	>= 0.10	0.58	Gamma; Normal	Normal
1_16_4_112	MW-06	Appendix III	Fluoride	mg/L	10	0	0%	0.87	0.11	0.24	0.10	0.89	0.15	0.22	0.16	0.23	>= 0.10	0.51	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	0.57	0	0.39	0	0.56	0	0.40	0	0.40	< 0.01	2	< 0.01	0.040	Nonparametric	Nonparametric
1_16_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	10	1	10%	0.91	0.31	0.19	0.45	0.80	0.022	0.26	0.088	0.21	>= 0.10	0.62	>= 0.10	1.1	Gamma; Lognormal; Normal	Gamma
1_16_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.061		Nonparametric	
1_16_5_101	MW-06	Appendix IV	Antimony	mg/L	10	8	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1		Nonparametric	
1_16_5_102	MW-06	Appendix IV	Arsenic	mg/L	10	0	0%	0.92	0.32	0.25	0.076	0.96	0.75	0.21	0.23	0.23	>= 0.10	0.34	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	0.81	0.022	0.30	0.010	0.76	0.0050	0.32	0.0040	0.32	< 0.01	0.96	0.01 <= p < 0.05	0.13	Nonparametric	Nonparametric
1_16_5_104	MW-06	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_16_5_106	MW-06	Appendix IV	Cadmium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_16_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.91	0.26	0.22	0.20	0.93	0.45	0.20	0.33	0.21	>= 0.10	0.39	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
1_16_5_110	MW-06	Appendix IV	Cobalt	mg/L	10	0	0%	0.95	0.68	0.19	0.40	0.95	0.70	0.17	0.55	0.18	>= 0.10	0.31	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal
1_16_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.87	0.11	0.24	0.10	0.89	0.15	0.22	0.16	0.23	>= 0.10	0.51	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
1_16_5_115	MW-06	Appendix IV	Lead	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.18		Nonparametric	
1_16_5_116	MW-06	Appendix IV	Lithium	mg/L	10	0	0%	0.89	0.16	0.19	0.40	0.87	0.10	0.22	0.16	0.21	>= 0.10	0.58	>= 0.10	0.20	Gamma; Lognormal; Normal	Normal
1_16_5_117	MW-06	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_16_5_118	MW-06	Appendix IV	Molybdenum	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.038		Nonparametric	
1_16_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	0.68	0.0010	0.38	0.0010	0.80	0.032	0.32	0.018	0.34	< 0.01	0.88	0.01 <= p < 0.05	0.34	Nonparametric	Nonparametric
1_16_5_122	MW-06	Appendix IV	Selenium	mg/L	10	5	50%	0.63	0.0020	0.42	0.0050	0.67	0.0050	0.39	0.013	0.41	< 0.01	1.0	< 0.01	0.38	Nonparametric	Nonparametric
1_16_5_125	MW-06	Appendix IV	Thallium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_16_6_111	MW-06	Part 115	Copper	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_16_6_114	MW-06	Part 115	Iron	mg/L	10	0	0%	0.82	0.025	0.32	0.0040	0.89	0.15	0.28	0.027	0.29	0.01 <= p < 0.05	0.66	0.05 <= p < 0.10	0.24	Gamma; Lognormal	Gamma
1_16_6_119	MW-06	Part 115	Nickel	mg/L	10	3	30%	0.97	0.88	0.18	0.66	0.96	0.85	0.19	0.62	0.21	>= 0.10	0.24	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
1_16_6_123	MW-06	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_16_6_129	MW-06	Part 115	Vanadium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_16_6_130	MW-06	Part 115	Zinc	mg/L	10	2	20%	0.61	0	0.45	0	0.66	0.0010	0.42	0	0.46	< 0.01	1.6	< 0.01	1.8	Nonparametric	Nonparametric
1_17_4_105	MW-07	Appendix III	Boron	mg/L	10	0	0%	0.89	0.17	0.28	0.023	0.89	0.19	0.28	0.031	0.28	0.01 <= p < 0.05	0.70	0.05 <= p < 0.10	0.074	Gamma; Lognormal; Normal	Normal
1_17_4_107	MW-07	Appendix III	Calcium	mg/L	10	0	0%	0.93	0.48	0.23	0.14	0.92	0.37	0.24	0.089	0.24	>= 0.10	0.48	>= 0.10	0.082	Gamma; Lognormal; Normal	Normal
1_17_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.053		Nonparametric	
1_17_4_112	MW-07	Appendix III	Fluoride	mg/L	10	1	10%	0.85	0.074	0.21	0.28	0.85	0.085	0.19	0.46	0.21	>= 0.10	0.61	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
1_17_4_120	MW-07	Appendix III	pH (field)	su	10	0	0%	0.86	0.088	0.29	0.020	0.86	0.077	0.29	0.017	0.29	0.01 <= p < 0.05	0.72	0.05 <= p < 0.10	0.021	Gamma; Lognormal; Normal	Normal
1_17_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.89	0.19	0.22	0.20	0.90	0.22	0.19	0.42	0.21	>= 0.10	0.52	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
1_17_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.86	0.088	0.30	0.011	0.83	0.036	0.32	0.0040	0.32	< 0.01	0.85	0.01 <= p < 0.05	0.13	Normal	Normal
1_17_5_101	MW-07	Appendix IV	Antimony	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_5_102	MW-07	Appendix IV	Arsenic	mg/L	10	0	0%	0.93	0.43	0.22	0.18	0.90	0.20	0.23	0.13	0.21	>= 0.10	0.50	>= 0.10	0.21	Gamma; Lognormal; Normal	Normal
1_17_5_103	MW-07	Appendix IV	Barium	mg/L	10	0	0%	0.86	0.069	0.27	0.043	0.81	0.022	0.28	0.025	0.28	0.01 <= p < 0.05	0.80	0.01 <= p < 0.05	0.12	Normal	Normal
1_17_5_104	MW-07	Appendix IV	Beryllium	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.093		Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
1_17_5_106	MW-07	Appendix IV	Cadmium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric			
1_17_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.95	0.70	0.16	0.64	0.96	0.82	0.14	0.83	0.15	>= 0.10	0.24	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_17_5_110	MW-07	Appendix IV	Cobalt	mg/L	10	0	0%	0.91	0.28	0.20	0.30	0.89	0.16	0.22	0.19	0.22	>= 0.10	0.61	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
1_17_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	10	1	10%	0.85	0.074	0.21	0.28	0.85	0.085	0.19	0.46	0.21	>= 0.10	0.61	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
1_17_5_115	MW-07	Appendix IV	Lead	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_5_116	MW-07	Appendix IV	Lithium	mg/L	10	0	0%	0.97	0.94	0.14	0.86	0.98	0.97	0.16	0.68	0.13	>= 0.10	0.16	>= 0.10	0.33	Gamma; Lognormal; Normal	Normal
1_17_5_117	MW-07	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_5_118	MW-07	Appendix IV	Molybdenum	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	0.78	0.017	0.28	0.066	0.89	0.26	0.20	0.49	0.21	>= 0.10	0.50	>= 0.10	0.41	Gamma; Lognormal; Normal	Normal
1_17_5_122	MW-07	Appendix IV	Selenium	mg/L	10	8	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.59	NA	Nonparametric	
1_17_5_125	MW-07	Appendix IV	Thallium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_6_111	MW-07	Part 115	Copper	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_6_114	MW-07	Part 115	Iron	mg/L	10	0	0%	0.93	0.45	0.18	0.50	0.94	0.54	0.16	0.70	0.17	>= 0.10	0.30	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_17_6_119	MW-07	Part 115	Nickel	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_6_123	MW-07	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_6_129	MW-07	Part 115	Vanadium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_17_6_130	MW-07	Part 115	Zinc	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0	NA	Nonparametric	
1_18_4_105	MW-08	Appendix III	Boron	mg/L	10	0	0%	0.91	0.27	0.26	0.052	0.84	0.044	0.31	0.0080	0.30	0.01 <= p < 0.05	0.75	0.01 <= p < 0.05	0.39	Normal	Normal
1_18_4_107	MW-08	Appendix III	Calcium	mg/L	10	0	0%	0.89	0.16	0.26	0.053	0.88	0.13	0.26	0.048	0.28	0.01 <= p < 0.05	0.64	0.05 <= p < 0.10	0.10	Gamma; Lognormal; Normal	Normal
1_18_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.94	0.50	0.14	0.82	0.90	0.19	0.18	0.46	0.17	>= 0.10	0.46	>= 0.10	0.24	Gamma; Lognormal; Normal	Normal
1_18_4_112	MW-08	Appendix III	Fluoride	mg/L	10	0	0%	0.89	0.18	0.24	0.094	0.84	0.049	0.29	0.016	0.28	0.01 <= p < 0.05	0.79	0.01 <= p < 0.05	0.38	Normal	Normal
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	0.64	0	0.38	0	0.61	0	0.39	0	0.39	< 0.01	1.7	< 0.01	0.052	Nonparametric	Nonparametric
1_18_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	3	30%	0.82	0.069	0.28	0.11	0.90	0.36	0.16	0.86	0.21	>= 0.10	0.39	>= 0.10	1.1	Gamma; Lognormal; Normal	Gamma
1_18_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.96	0.82	0.15	0.73	0.96	0.78	0.17	0.54	0.16	>= 0.10	0.27	>= 0.10	0.11	Gamma; Lognormal; Normal	Normal
1_18_5_101	MW-08	Appendix IV	Antimony	mg/L	10	4	40%	0.96	0.84	0.19	0.73	0.99	0.98	0.13	0.98	0.16	>= 0.10	0.16	>= 0.10	0.59	Gamma; Lognormal; Normal	Normal
1_18_5_102	MW-08	Appendix IV	Arsenic	mg/L	10	0	0%	0.93	0.42	0.15	0.75	0.84	0.047	0.23	0.13	0.20	>= 0.10	0.54	>= 0.10	0.67	Gamma; Lognormal; Normal	Normal
1_18_5_103	MW-08	Appendix IV	Barium	mg/L	10	0	0%	0.95	0.65	0.16	0.62	0.94	0.60	0.16	0.65	0.15	>= 0.10	0.30	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
1_18_5_104	MW-08	Appendix IV	Beryllium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_18_5_106	MW-08	Appendix IV	Cadmium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_18_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.92	0.34	0.18	0.49	0.96	0.83	0.13	0.91	0.14	>= 0.10	0.25	>= 0.10	0.27	Gamma; Lognormal; Normal	Normal
1_18_5_110	MW-08	Appendix IV	Cobalt	mg/L	10	0	0%	0.89	0.16	0.21	0.25	0.86	0.069	0.23	0.15	0.23	>= 0.10	0.65	0.05 <= p < 0.10	0.28	Gamma; Lognormal; Normal	Normal
1_18_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.89	0.18	0.24	0.094	0.84	0.049	0.29	0.016	0.28	0.01 <= p < 0.05	0.79	0.01 <= p < 0.05	0.38	Normal	Normal
1_18_5_115	MW-08	Appendix IV	Lead	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0	NA	Nonparametric	
1_18_5_116	MW-08	Appendix IV	Lithium	mg/L	10	0	0%	0.93	0.42	0.21	0.26	0.89	0.16	0.25	0.080	0.24	>= 0.10	0.45	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal
1_18_5_117	MW-08	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_18_5_118	MW-08	Appendix IV	Molybdenum	mg/L	10	0	0%	0.94	0.61	0.14	0.84	0.90	0.23	0.24	0.11	0.22	>= 0.10	0.37	>= 0.10	0.72	Gamma; Lognormal; Normal	Normal
1_18_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	0.95	0.71	0.21	0.45	0.96	0.86	0.21	0.44	0.19	>= 0.10	0.26	>= 0.10	0.33	Gamma; Lognormal; Normal	Normal
1_18_5_122	MW-08	Appendix IV	Selenium	mg/L	10	5	50%	0.63	0.0020	0.42	0.0050	0.68	0.0050	0.39	0.013	0.41	< 0.01	0.97	< 0.01	0.38	Nonparametric	Nonparametric
1_18_5_125	MW-08	Appendix IV	Thallium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
1_18_6_111	MW-08	Part 115	Copper	mg/L	10	5	50%	0.91	0.49	0.23	0.50	0.87	0.25	0.28	0.21	0.26	>= 0.10	0.40	>= 0.10	0.30	Gamma; Lognormal; Normal	Nonparametric
1_18_6_114	MW-08	Part 115	Iron	mg/L	10	0	0%	0.92	0.36	0.25	0.068	0.95	0.68	0.20	0.28	0.22	>= 0.10	0.34	>= 0.10	0.28	Gamma; Lognormal; Normal	Normal
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	0.72	0.0020	0.28	0.023	0.85	0.062	0.22	0.17	0.24	>= 0.10	0.77	0.01 <= p < 0.05	0.32	Gamma; Lognormal	Gamma
1_18_6_123	MW-08	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_18_6_129	MW-08	Part 115	Vanadium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_18_6_130	MW-08	Part 115	Zinc	mg/L	10	3	30%	0.65	0.0010	0.40	0.0010	0.79	0.033	0.29	0.071	0.37	0.01 <= p < 0.05	0.94	0.01 <= p < 0.05	1.9	Lognormal	Nonparametric
1_28_4_105	MW-18	Appendix III	Boron	mg/L	11	0	0%	0.95	0.61	0.16	0.61	0.97	0.91	0.13	0.87	0.14	>= 0.10	0.21	>= 0.10	0.20	Gamma; Lognormal; Normal	Normal
1_28_4_107	MW-18	Appendix III	Calcium	mg/L	11	0	0%	0.95	0.68	0.16	0.59	0.93	0.42	0.20	0.26	0.18	>= 0.10	0.38	>= 0.10	0.20	Gamma; Lognormal; Normal	Normal
1_28_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.95	0.67	0.17	0.46	0.94	0.58	0.17	0.54	0.18	>= 0.10	0.32	>= 0.10	0.18	Gamma; Lognormal; Normal	Normal
1_28_4_112	MW-18	Appendix III	Fluoride	mg/L	11	0	0%	0.90	0.17	0.24	0.075	0.92	0.34	0.22	0.16	0.22	>= 0.10	0.44	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_28_4_120	MW-18	Appendix III	pH (field)	su	11	0	0%	0.93	0.46	0.24	0.085	0.93	0.44	0.24	0.080	0.24	0.05 <= p < 0.10	0.43	>= 0.10	0.010	Gamma; Lognormal; Normal	Normal
1_28_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.91	0.23	0.26	0.033	0.94	0.56	0.21	0.17	0.23	>= 0.10	0.40	>= 0.10	0.27	Gamma; Lognormal; Normal	Normal
1_28_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.94	0.47	0.24	0.066	0.95	0.63	0.22	0.16	0.22	>= 0.10	0.36	>= 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_28_5_101	MW-18	Appendix IV	Antimony	mg/L	11	4	36%	0.68	0.0020	0.39	0.0020	0.71	0.0050	0.36	0.0070	0.38	< 0.01	1.1	< 0.01	0.44	Nonparametric	Nonparametric
1_28_5_102	MW-18	Appendix IV	Arsenic	mg/L	11	0	0%	0.92	0.35	0.15	0.74	0.96	0.76	0.13	0.86	0.13	>= 0.10	0.25	>= 0.10	0.31	Gamma; Lognormal; Normal	Normal
1_28_5_103	MW-18	Appendix IV	Barium	mg/L	11	0	0%	0.88	0.093	0.23	0.12	0.87	0.072	0.23	0.11	0.24	0.05 <= p < 0.10	0.68	0.05 <= p < 0.10	0.27	Gamma; Lognormal; Normal	Normal
1_28_5_104	MW-18	Appendix IV	Beryllium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_28_5_106	MW-18	Appendix IV	Cadmium	mg/L	11	3	27%	0.92	0.46	0.16	0.77	0.92	0.46	0.17	0.71	0.15	>= 0.10	0.29	>= 0.10	0.53	Gamma; Lognormal; Normal	Normal
1_28_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	11	10	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_28_5_110	MW-18	Appendix IV	Cobalt	mg/L	11	0	0%	0.83	0.024	0.26	0.044	0.88	0.11	0.23	0.11	0.25	0.05 <= p < 0.10	0.68	0.05 <= p < 0.10	0.46	Gamma; Lognormal	Nonparametric
1_28_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.90	0.17	0.24	0.075	0.92	0.34	0.22	0.16	0.22	>= 0.10	0.44	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_28_5_115	MW-18	Appendix IV	Lead	mg/L	11	8	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.44	Nonparametric	Nonparametric
1_28_5_116	MW-18	Appendix IV	Lithium	mg/L	11	0	0%	0.92	0.32	0.18	0.44	0.92	0.31	0.19	0.31	0.20	>= 0.10	0.44	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal
1_28_5_117	MW-18	Appendix IV	Mercury	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_28_5_118	MW-18	Appendix IV	Molybdenum	mg/L	11	0	0%	0.88	0.098	0.21	0.19	0.92	0.29	0.16	0.59	0.18	>= 0.10	0.48	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
1_28_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.38	Nonparametric	Nonparametric
1_28_5_122	MW-18	Appendix IV	Selenium	mg/L	11	0	0%	0.85	0.043	0.22	0.14	0.89	0.12	0.20	0.29	0.20	>= 0.10	0.60	>= 0.10	0.78	Gamma; Lognormal; Normal	Normal
1_28_5_125	MW-18	Appendix IV	Thallium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	0.68	0	0.29	0.011	0.82	0.016	0.26	0.031	0.28	0.01 <= p < 0.05	1.1	< 0.01	0.42	Nonparametric	Nonparametric
1_28_6_114	MW-18	Part 115	Iron	mg/L	11	0	0%	0.93	0.38	0.20	0.28	0.96	0.78	0.17	0.45	0.19	>= 0.10	0.32	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal
1_28_6_119	MW-18	Part 115	Nickel	mg/L	11	0	0%	0.81	0.014	0.25	0.052	0.84	0.029	0.23	0.11	0.24	0.05 <= p < 0.10	0.83	0.01 <= p < 0.05	0.34	Gamma; Lognormal; Normal	Normal
1_28_6_123	MW-18	Part 115	Silver	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_28_6_129	MW-18	Part 115	Vanadium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_28_6_130	MW-18	Part 115	Zinc	mg/L	11	0	0%	0.96	0.80	0.18	0.36	0.97	0.91	0.15	0.67	0.17	>= 0.10	0.22	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal
1_29_4_105	MW-19	Appendix III	Boron	mg/L	10	0	0%	0.94	0.51	0.13	0.89	0.95	0.67	0.12	0.96	0.13	>= 0.10	0.26	>= 0.10	0.19	Gamma; Lognormal; Normal	Normal
1_29_4_107	MW-19	Appendix III	Calcium	mg/L	10	0	0%	0.91	0.30	0.18	0.49	0.87	0.10	0.20	0.28	0.17	>= 0.10	0.46	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_29_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.84	0.049	0.21	0.22	0.87	0.098	0.20	0.30	0.22	>= 0.10	0.67	0.05 <= p < 0.10	0.26	Gamma; Lognormal; Normal	Normal
1_29_4_112	MW-19	Appendix III	Fluoride	mg/L	10	0	0%	0.95	0.65	0.19	0.41	0.95	0.70	0.17	0.59	0.18	>= 0.10	0.31	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_29_4_120	MW-19	Appendix III	pH (field)	su	10	0	0%	0.83	0.031	0.24	0.094	0.81	0.022	0.25	0.082	0.25	0.05 <= p < 0.10	0.75	0.01 <= p < 0.05	0.028	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal				Lognormal				Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value			
1_29_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.92	0.39	0.22	0.21	0.89	0.16	0.24	0.10	0.24	>= 0.10	0.46	>= 0.10	0.25	Gamma; Lognormal; Normal	Normal
1_29_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.88	0.12	0.17	0.58	0.86	0.088	0.19	0.42	0.18	>= 0.10	0.53	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_29_5_101	MW-19	Appendix IV	Antimony	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_5_102	MW-19	Appendix IV	Arsenic	mg/L	10	0	0%	0.91	0.31	0.19	0.41	0.89	0.16	0.24	0.12	0.23	>= 0.10	0.50	>= 0.10	0.37	Gamma; Lognormal; Normal	Normal
1_29_5_103	MW-19	Appendix IV	Barium	mg/L	10	0	0%	0.97	0.88	0.15	0.79	0.96	0.78	0.13	0.90	0.13	>= 0.10	0.25	>= 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_29_5_104	MW-19	Appendix IV	Beryllium	mg/L	10	3	30%	0.96	0.84	0.17	0.77	0.97	0.90	0.16	0.82	0.18	>= 0.10	0.21	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
1_29_5_106	MW-19	Appendix IV	Cadmium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	10	5	50%	0.83	0.15	0.26	0.31	0.88	0.33	0.25	0.40	0.27	>= 0.10	0.44	>= 0.10	0.27	Gamma; Lognormal; Normal	Nonparametric
1_29_5_110	MW-19	Appendix IV	Cobalt	mg/L	10	0	0%	0.97	0.91	0.15	0.78	0.91	0.25	0.23	0.12	0.20	>= 0.10	0.32	>= 0.10	0.60	Gamma; Lognormal; Normal	Normal
1_29_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.95	0.65	0.19	0.41	0.95	0.70	0.17	0.59	0.18	>= 0.10	0.31	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_29_5_115	MW-19	Appendix IV	Lead	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_5_116	MW-19	Appendix IV	Lithium	mg/L	10	0	0%	0.94	0.59	0.15	0.78	0.93	0.49	0.14	0.81	0.14	>= 0.10	0.33	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_29_5_117	MW-19	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_5_118	MW-19	Appendix IV	Molybdenum	mg/L	10	0	0%	0.88	0.13	0.20	0.28	0.80	0.014	0.28	0.023	0.26	0.05 <= p < 0.10	0.79	0.01 <= p < 0.05	0.40	Gamma; Normal	Normal
1_29_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	0.91	0.43	0.22	0.36	0.88	0.21	0.27	0.14	0.26	>= 0.10	0.46	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
1_29_5_122	MW-19	Appendix IV	Selenium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_5_125	MW-19	Appendix IV	Thallium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_6_111	MW-19	Part 115	Copper	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_6_114	MW-19	Part 115	Iron	mg/L	10	0	0%	0.91	0.27	0.22	0.18	0.95	0.66	0.18	0.44	0.20	>= 0.10	0.32	>= 0.10	0.21	Gamma; Lognormal; Normal	Normal
1_29_6_119	MW-19	Part 115	Nickel	mg/L	10	1	10%	0.87	0.14	0.21	0.27	0.90	0.27	0.19	0.46	0.20	>= 0.10	0.50	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal
1_29_6_123	MW-19	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_6_129	MW-19	Part 115	Vanadium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_29_6_130	MW-19	Part 115	Zinc	mg/L	10	8	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.43	Nonparametric	
1_30_4_105	MW-20	Appendix III	Boron	mg/L	11	0	0%	0.83	0.027	0.25	0.060	0.85	0.049	0.24	0.069	0.25	0.05 <= p < 0.10	0.80	0.01 <= p < 0.05	0.16	Gamma; Lognormal; Normal	Normal
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	0.84	0.034	0.24	0.074	0.73	0.0010	0.30	0.0080	0.28	0.01 <= p < 0.05	1.1	< 0.01	0.27	Normal	Normal
1_30_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.92	0.30	0.22	0.13	0.88	0.12	0.18	0.37	0.20	>= 0.10	0.52	>= 0.10	0.23	Gamma; Lognormal; Normal	Normal
1_30_4_112	MW-20	Appendix III	Fluoride	mg/L	11	0	0%	0.52	0	0.41	0	0.62	0	0.35	0	0.38	< 0.01	1.9	< 0.01	0.27	Nonparametric	Nonparametric
1_30_4_120	MW-20	Appendix III	pH (field)	su	11	0	0%	0.92	0.30	0.24	0.065	0.92	0.29	0.24	0.065	0.26	0.05 <= p < 0.10	0.49	>= 0.10	0.016	Gamma; Lognormal; Normal	Normal
1_30_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.93	0.38	0.22	0.14	0.89	0.13	0.29	0.010	0.28	0.01 <= p < 0.05	0.58	>= 0.10	0.60	Gamma; Lognormal; Normal	Normal
1_30_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.90	0.18	0.18	0.39	0.90	0.20	0.17	0.52	0.18	>= 0.10	0.56	>= 0.10	0.092	Gamma; Lognormal; Normal	Normal
1_30_5_101	MW-20	Appendix IV	Antimony	mg/L	11	3	27%	0.89	0.23	0.20	0.49	0.90	0.26	0.19	0.53	0.21	>= 0.10	0.41	>= 0.10	0.44	Gamma; Lognormal; Normal	Normal
1_30_5_102	MW-20	Appendix IV	Arsenic	mg/L	11	0	0%	0.90	0.18	0.21	0.20	0.91	0.22	0.19	0.34	0.20	>= 0.10	0.51	>= 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_30_5_103	MW-20	Appendix IV	Barium	mg/L	11	0	0%	0.81	0.013	0.21	0.19	0.92	0.32	0.14	0.75	0.16	>= 0.10	0.46	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_30_5_104	MW-20	Appendix IV	Beryllium	mg/L	11	10	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_30_5_106	MW-20	Appendix IV	Cadmium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_30_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	11	5	45%	0.90	0.40	0.24	0.36	0.93	0.59	0.22	0.52	0.23	>= 0.10	0.32	>= 0.10	0.16	Gamma; Lognormal; Normal	Normal
1_30_5_110	MW-20	Appendix IV	Cobalt	mg/L	11	0	0%	0.93	0.42	0.22	0.15	0.92	0.35	0.25	0.060	0.24	0.05 <= p < 0.10	0.44	>= 0.10	0.16	Gamma; Lognormal; Normal	Normal
1_30_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.52	0	0.41	0	0.62	0	0.35	0	0.38	< 0.01	1.9	< 0.01	0.27	Nonparametric	Nonparametric
1_30_5_115	MW-20	Appendix IV	Lead	mg/L	11	0	0%	0.90	0.21	0.20	0.26	0.90	0.20	0.23	0.11	0.23	>= 0.10	0.54	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
1_30_5_116	MW-20	Appendix IV	Lithium	mg/L	11	0	0%	0.95	0.64	0.14	0.80	0.85	0.049	0.20	0.27	0.18	>= 0.10	0.44	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
1_30_5_117	MW-20	Appendix IV	Mercury	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_30_5_118	MW-20	Appendix IV	Molybdenum	mg/L	11	0	0%	0.95	0.65	0.15	0.65	0.95	0.65	0.15	0.65	0.17	>= 0.10	0.32	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_30_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	0.92	0.55	0.22	0.59	0.96	0.84	0.18	0.88	0.20	>= 0.10	0.25	>= 0.10	0.36	Gamma; Lognormal; Normal	Nonparametric
1_30_5_122	MW-20	Appendix IV	Selenium	mg/L	11	6	55%	0.69	0.0080	0.37	0.023	0.76	0.034	0.32	0.094	0.34	0.05 <= p < 0.10	0.79	0.01 <= p < 0.05	0.39	Gamma; Lognormal	Nonparametric
1_30_5_125	MW-20	Appendix IV	Thallium	mg/L	11	10	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_30_6_111	MW-20	Part 115	Copper	mg/L	11	1	9%	0.83	0.032	0.23	0.13	0.87	0.096	0.23	0.12	0.25	0.05 <= p < 0.10	0.62	0.05 <= p < 0.10	0.28	Gamma; Lognormal; Normal	Normal
1_30_6_114	MW-20	Part 115	Iron	mg/L	11	0	0%	0.94	0.52	0.18	0.40	0.93	0.45	0.18	0.42	0.19	>= 0.10	0.40	>= 0.10	0.095	Gamma; Lognormal; Normal	Normal
1_30_6_119	MW-20	Part 115	Nickel	mg/L	11	0	0%	0.81	0.011	0.32	0.0020	0.78	0.0050	0.34	0.0010	0.35	< 0.01	1.2	< 0.01	0.16	Nonparametric	Nonparametric
1_30_6_123	MW-20	Part 115	Silver	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_30_6_129	MW-20	Part 115	Vanadium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_30_6_130	MW-20	Part 115	Zinc	mg/L	11	0	0%	0.80	0.0080	0.35	0	0.88	0.091	0.29	0.012	0.32	< 0.01	0.94	0.01 <= p < 0.05	0.46	Lognormal	Nonparametric
1_40_4_105	MW-30	Appendix III	Boron	mg/L	14	0	0%	0.66	0	0.30	0.0010	0.76	0.0010	0.24	0.023	0.26	0.01 <= p < 0.05	1.2	< 0.01	0.18	Nonparametric	Nonparametric
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	0.52	0	0.40	0	0.63	0	0.34	0	0.36	< 0.01	2.1	< 0.01	0.21	Nonparametric	Nonparametric
1_40_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0	0%	0.79	0.0040	0.27	0.0070	0.81	0.0060	0.27	0.0060	0.28	< 0.01	1.3	< 0.01	0.31	Nonparametric	Nonparametric
1_40_4_112	MW-30	Appendix III	Fluoride	mg/L	14	0	0%	0.92	0.25	0.20	0.13	0.94	0.43	0.18	0.25	0.19	>= 0.10	0.45	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_40_4_120	MW-30	Appendix III	pH (field)	su	14	0	0%	0.69	0	0.30	0.0010	0.68	0	0.30	0.0010	0.30	< 0.01	1.9	< 0.01	0.037	Nonparametric	Nonparametric
1_40_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	14	0	0%	0.91	0.16	0.18	0.28	0.87	0.048	0.17	0.31	0.19	>= 0.10	0.52	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_40_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0	0%	0.93	0.35	0.20	0.15	0.94	0.42	0.19	0.20	0.18	>= 0.10	0.46	>= 0.10	0.10	Gamma; Lognormal; Normal	Normal
1_40_5_101	MW-30	Appendix IV	Antimony	mg/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4	NA	Nonparametric	
1_40_5_102	MW-30	Appendix IV	Arsenic	mg/L	14	3	21%	0.94	0.50	0.14	0.79	0.94	0.46	0.19	0.34	0.16	>= 0.10	0.28	>= 0.10	0.55	Gamma; Lognormal; Normal	Normal
1_40_5_103	MW-30	Appendix IV	Barium	mg/L	14	0	0%	0.87	0.037	0.19	0.18	0.88	0.060	0.17	0.31	0.18	>= 0.10	0.68	0.05 <= p < 0.10	0.30	Gamma; Lognormal; Normal	Normal
1_40_5_104	MW-30	Appendix IV	Beryllium	mg/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.52	NA	Nonparametric	
1_40_5_106	MW-30	Appendix IV	Cadmium	mg/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_40_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	14	0	0%	0.93	0.33	0.14	0.65	0.89	0.085	0.17	0.30	0.17	>= 0.10	0.50	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
1_40_5_110	MW-30	Appendix IV	Cobalt	mg/L	14	0	0%	0.69	0	0.36	0	0.85	0.024	0.28	0.0040	0.32	< 0.01	1.3	< 0.01	0.66	Nonparametric	Nonparametric
1_40_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	14	0	0%	0.92	0.25	0.20	0.13	0.94	0.43	0.18	0.25	0.19	>= 0.10	0.45	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_40_5_115	MW-30	Appendix IV	Lead	mg/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_40_5_116	MW-30	Appendix IV	Lithium	mg/L	14	0	0%	0.64	0	0.30	0.0010	0.78	0.0030	0.23	0.048	0.25	0.01 <= p < 0.05	1.3	< 0.01	0.24	Nonparametric	Nonparametric
1_40_5_117	MW-30	Appendix IV	Mercury	mg/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_40_5_118	MW-30	Appendix IV	Molybdenum	mg/L	14	5	36%	0.81	0.028	0.27	0.057	0.94	0.64	0.19	0.49	0.23	>= 0.10	0.47	>= 0.10	0.78	Gamma; Lognormal; Normal	Normal
1_40_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	14	8	57%	0.94	0.62	0.20	0.66	0.93	0.59	0.17	0.82	0.19	>= 0.10	0.30	>= 0.10	0.28	Gamma; Lognormal; Normal	Nonparametric
1_40_5_122	MW-30	Appendix IV	Selenium	mg/L	14	9	64%	0.61	0.0010	0.44	0.0020	0.66	0.0030	0.41	0.0050	0.44	< 0.01	1.1	< 0.01	0.53	Nonparametric	Nonparametric
1_40_5_125	MW-30	Appendix IV	Thallium	mg/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_40_6_111	MW-30	Part 115	Copper	mg/L	14	11	79%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.41	NA	Nonparametric	
1_40_6_114	MW-30	Part 115	Iron	mg/L	14	0	0%	0.80	0.0050	0.18	0.22	0.95	0.59	0.13	0.79	0.12	>= 0.10	0.34	>= 0.10	0.70	Gamma; Lognormal; Normal	Normal
1_40_6_119	MW-30	Part 115	Nickel	mg/L	14	4	29%	0.84	0.042	0.25	0.067	0.91	0.29	0.17	0.53	0.19	>= 0.10	0.49	>= 0.10	0.68	Gamma; Lognormal; Normal	Normal
1_40_6_123	MW-30	Part 115	Silver	mg/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
1_40_6_129	MW-30	Part 115	Vanadium	mg/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma		Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution						
								S-W		Lilliefors		S-W					Lilliefors		K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value	Stat.	p-Value
1_40_6_130	MW-30	Part 115	Zinc	mg/L	14	10	71%	NA	NA	NA	NA	NA	NA	NA	NA	0.61	Nonparametric					
1_41_4_105	MW-31	Appendix III	Boron	mg/L	10	0	0%	0.98	0.96	0.12	0.94	0.98	0.96	0.13	0.88	0.14	>= 0.10	0.16	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_41_4_107	MW-31	Appendix III	Calcium	mg/L	10	0	0%	0.95	0.68	0.22	0.18	0.93	0.45	0.24	0.10	0.24	>= 0.10	0.40	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_41_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.92	0.33	0.24	0.10	0.93	0.41	0.23	0.14	0.24	>= 0.10	0.45	>= 0.10	0.085	Gamma; Lognormal; Normal	Normal
1_41_4_112	MW-31	Appendix III	Fluoride	mg/L	10	0	0%	0.87	0.098	0.25	0.069	0.87	0.11	0.25	0.083	0.26	0.05 <= p < 0.10	0.66	0.05 <= p < 0.10	0.052	Gamma; Lognormal; Normal	Normal
1_41_4_120	MW-31	Appendix III	pH (field)	su	10	0	0%	0.96	0.74	0.17	0.59	0.96	0.76	0.17	0.60	0.16	>= 0.10	0.27	>= 0.10	0.012	Gamma; Lognormal; Normal	Normal
1_41_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.92	0.38	0.18	0.45	0.92	0.32	0.15	0.74	0.18	>= 0.10	0.32	>= 0.10	0.42	Gamma; Lognormal; Normal	Normal
1_41_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.95	0.66	0.14	0.82	0.96	0.77	0.13	0.88	0.13	>= 0.10	0.27	>= 0.10	0.076	Gamma; Lognormal; Normal	Normal
1_41_5_101	MW-31	Appendix IV	Antimony	mg/L	10	5	50%	0.84	0.17	0.32	0.095	0.83	0.15	0.33	0.075	0.35	0.05 <= p < 0.10	0.56	>= 0.10	0.28	Gamma; Lognormal; Normal	Nonparametric
1_41_5_102	MW-31	Appendix IV	Arsenic	mg/L	10	0	0%	0.93	0.43	0.17	0.57	0.94	0.55	0.15	0.76	0.16	>= 0.10	0.31	>= 0.10	0.20	Gamma; Lognormal; Normal	Normal
1_41_5_103	MW-31	Appendix IV	Barium	mg/L	10	0	0%	0.91	0.28	0.22	0.18	0.94	0.52	0.18	0.45	0.20	>= 0.10	0.36	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
1_41_5_104	MW-31	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_5_106	MW-31	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.95	0.64	0.14	0.83	0.96	0.81	0.15	0.75	0.16	>= 0.10	0.23	>= 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_41_5_110	MW-31	Appendix IV	Cobalt	mg/L	10	0	0%	0.89	0.16	0.22	0.19	0.95	0.63	0.18	0.47	0.19	>= 0.10	0.35	>= 0.10	0.21	Gamma; Lognormal; Normal	Normal
1_41_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.87	0.098	0.25	0.069	0.87	0.11	0.25	0.083	0.26	0.05 <= p < 0.10	0.66	0.05 <= p < 0.10	0.052	Gamma; Lognormal; Normal	Normal
1_41_5_115	MW-31	Appendix IV	Lead	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_5_116	MW-31	Appendix IV	Lithium	mg/L	10	0	0%	0.89	0.16	0.23	0.13	0.85	0.067	0.24	0.11	0.25	0.05 <= p < 0.10	0.58	>= 0.10	0.11	Gamma; Lognormal; Normal	Normal
1_41_5_117	MW-31	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_5_118	MW-31	Appendix IV	Molybdenum	mg/L	10	0	0%	0.73	0.0020	0.35	0.0010	0.77	0.0070	0.31	0.0070	0.32	< 0.01	1.1	< 0.01	0.22	Nonparametric	Nonparametric
1_41_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	0.80	0.044	0.28	0.10	0.83	0.090	0.23	0.33	0.25	>= 0.10	0.64	0.05 <= p < 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_41_5_122	MW-31	Appendix IV	Selenium	mg/L	10	5	50%	0.61	0.0010	0.45	0.0020	0.70	0.0090	0.40	0.0090	0.44	< 0.01	1.0	< 0.01	0.79	Nonparametric	Nonparametric
1_41_5_125	MW-31	Appendix IV	Thallium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_6_111	MW-31	Part 115	Copper	mg/L	10	8	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.11	Nonparametric	Nonparametric
1_41_6_114	MW-31	Part 115	Iron	mg/L	10	0	0%	0.92	0.38	0.16	0.68	0.88	0.12	0.24	0.10	0.19	>= 0.10	0.49	>= 0.10	1.0	Gamma; Lognormal; Normal	Gamma
1_41_6_119	MW-31	Part 115	Nickel	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_6_123	MW-31	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_6_129	MW-31	Part 115	Vanadium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
1_41_6_130	MW-31	Part 115	Zinc	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	Nonparametric	Nonparametric
2_11_4_105	MW-01R	Appendix III	Boron	mg/L	11	0	0%	0.96	0.79	0.16	0.62	0.92	0.28	0.17	0.50	0.16	>= 0.10	0.32	>= 0.10	0.42	Gamma; Lognormal; Normal	Normal
2_11_4_107	MW-01R	Appendix III	Calcium	mg/L	11	0	0%	0.97	0.92	0.12	0.94	0.98	0.95	0.16	0.62	0.14	>= 0.10	0.17	>= 0.10	0.31	Gamma; Lognormal; Normal	Normal
2_11_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.91	0.22	0.18	0.40	0.79	0.0060	0.28	0.018	0.24	0.05 <= p < 0.10	0.91	0.01 <= p < 0.05	0.48	Gamma; Normal	Normal
2_11_4_112	MW-01R	Appendix III	Fluoride	mg/L	11	0	0%	0.84	0.032	0.32	0.0030	0.81	0.012	0.30	0.0050	0.32	< 0.01	0.92	0.01 <= p < 0.05	0.35	Nonparametric	Nonparametric
2_11_4_120	MW-01R	Appendix III	pH (field)	su	11	0	0%	0.46	0	0.40	0	0.45	0	0.41	0	0.41	< 0.01	2.8	< 0.01	0.076	Nonparametric	Nonparametric
2_11_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.98	0.96	0.11	0.96	0.73	0.0010	0.28	0.013	0.21	>= 0.10	0.70	0.05 <= p < 0.10	1.3	Gamma; Normal	Gamma
2_11_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.88	0.10	0.29	0.010	0.88	0.099	0.30	0.0070	0.30	< 0.01	0.85	0.01 <= p < 0.05	0.059	Lognormal; Normal	Normal
2_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	11	3	27%	0.71	0.0030	0.38	0.0010	0.83	0.055	0.31	0.022	0.35	< 0.01	0.84	0.01 <= p < 0.05	0.60	Lognormal	Lognormal
2_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	11	0	0%	0.81	0.012	0.24	0.076	0.94	0.50	0.19	0.34	0.17	>= 0.10	0.42	>= 0.10	0.48	Gamma; Lognormal; Normal	Normal
2_11_5_103	MW-01R	Appendix IV	Barium	mg/L	11	0	0%	0.80	0.011	0.33	0.0010	0.88	0.10	0.29	0.012	0.31	< 0.01	0.77	0.01 <= p < 0.05	0.32	Lognormal	Lognormal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal				Lognormal				Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value			
2_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	11	0	0%	0.91	0.22	0.26	0.038	0.93	0.41	0.20	0.23	0.23	>= 0.10	0.46	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal
2_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	11	7	64%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.71	Nonparametric	
2_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.48	0	0.39	0	0.76	0.0030	0.24	0.080	0.30	0.01 <= p < 0.05	1.6	< 0.01	0.83	Lognormal	Nonparametric
2_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	11	0	0%	0.75	0.0020	0.28	0.019	0.87	0.075	0.23	0.11	0.25	0.05 <= p < 0.10	0.87	0.01 <= p < 0.05	0.57	Gamma; Lognormal	Nonparametric
2_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.84	0.032	0.32	0.0030	0.81	0.012	0.30	0.0050	0.32	< 0.01	0.92	0.01 <= p < 0.05	0.35	Nonparametric	Nonparametric
2_11_5_115	MW-01R	Appendix IV	Lead	mg/L	11	2	18%	0.64	0	0.34	0.0040	0.91	0.31	0.18	0.57	0.23	>= 0.10	0.71	0.05 <= p < 0.10	0.70	Gamma; Lognormal	Gamma
2_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	11	0	0%	0.95	0.61	0.14	0.81	0.90	0.19	0.18	0.43	0.16	>= 0.10	0.33	>= 0.10	0.44	Gamma; Lognormal; Normal	Normal
2_11_5_117	MW-01R	Appendix IV	Mercury	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11	1	9%	0.58	0	0.36	0.0010	0.85	0.059	0.28	0.029	0.32	< 0.01	1.2	< 0.01	0.77	Lognormal	Nonparametric
2_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	0.89	0.36	0.21	0.65	0.88	0.33	0.23	0.53	0.23	>= 0.10	0.39	>= 0.10	0.33	Gamma; Lognormal; Normal	Nonparametric
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	0.73	0.0010	0.30	0.0060	0.88	0.11	0.24	0.081	0.24	0.05 <= p < 0.10	0.84	0.01 <= p < 0.05	0.43	Gamma; Lognormal	Gamma
2_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_11_6_111	MW-01R	Part 115	Copper	mg/L	11	5	45%	0.82	0.083	0.29	0.13	0.88	0.27	0.24	0.35	0.26	>= 0.10	0.51	>= 0.10	0.74	Gamma; Lognormal; Normal	Nonparametric
2_11_6_114	MW-01R	Part 115	Iron	mg/L	11	0	0%	0.97	0.93	0.14	0.79	0.88	0.11	0.24	0.066	0.20	>= 0.10	0.42	>= 0.10	0.58	Gamma; Lognormal; Normal	Normal
2_11_6_119	MW-01R	Part 115	Nickel	mg/L	11	0	0%	0.48	0	0.41	0	0.76	0.0020	0.30	0.0070	0.37	< 0.01	1.6	< 0.01	0.81	Nonparametric	Nonparametric
2_11_6_123	MW-01R	Part 115	Silver	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_11_6_129	MW-01R	Part 115	Vanadium	mg/L	11	2	18%	0.83	0.044	0.29	0.024	0.92	0.36	0.17	0.59	0.21	>= 0.10	0.43	>= 0.10	0.69	Gamma; Lognormal	Gamma
2_11_6_130	MW-01R	Part 115	Zinc	mg/L	11	1	9%	0.73	0.0020	0.35	0.0010	0.75	0.0030	0.30	0.012	0.34	< 0.01	1.3	< 0.01	1.1	Nonparametric	Nonparametric
2_12_4_105	MW-02	Appendix III	Boron	mg/L	10	0	0%	0.92	0.40	0.17	0.53	0.90	0.23	0.19	0.38	0.19	>= 0.10	0.42	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
2_12_4_107	MW-02	Appendix III	Calcium	mg/L	10	0	0%	0.91	0.29	0.22	0.16	0.91	0.30	0.24	0.11	0.24	>= 0.10	0.49	>= 0.10	0.092	Gamma; Lognormal; Normal	Normal
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.56	0	0.40	0	0.51	0	0.41	0	0.42	< 0.01	2.2	< 0.01	0.24	Nonparametric	Nonparametric
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	0.59	0	0.35	0.0010	0.53	0	0.38	0	0.37	< 0.01	2.0	< 0.01	0.24	Nonparametric	Nonparametric
2_12_4_120	MW-02	Appendix III	pH (field)	su	10	0	0%	0.95	0.68	0.18	0.45	0.95	0.68	0.18	0.46	0.19	>= 0.10	0.29	>= 0.10	0.018	Gamma; Lognormal; Normal	Normal
2_12_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	10	6	60%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.43	Nonparametric	
2_12_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.92	0.39	0.20	0.31	0.94	0.54	0.19	0.42	0.19	>= 0.10	0.39	>= 0.10	0.077	Gamma; Lognormal; Normal	Normal
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	0.70	0.0040	0.29	0.069	0.84	0.098	0.23	0.34	0.25	>= 0.10	0.69	0.05 <= p < 0.10	0.50	Gamma; Lognormal; Normal	Normal
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	0.76	0.0050	0.34	0.0020	0.50	0	0.46	0	0.45	< 0.01	2.1	< 0.01	0.95	Nonparametric	Nonparametric
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	10	0	0%	0.88	0.13	0.21	0.24	0.94	0.54	0.18	0.50	0.18	>= 0.10	0.37	>= 0.10	0.18	Gamma; Lognormal; Normal	Normal
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	10	1	10%	0.98	0.98	0.13	0.94	0.96	0.80	0.17	0.60	0.14	>= 0.10	0.19	>= 0.10	0.38	Gamma; Lognormal; Normal	Normal
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4	Nonparametric	
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.96	0.76	0.17	0.53	0.62	0	0.33	0.0020	0.25	>= 0.10	0.99	0.01 <= p < 0.05	1.5	Gamma; Normal	Gamma
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	10	0	0%	0.95	0.64	0.18	0.45	0.67	0	0.29	0.015	0.25	>= 0.10	0.90	0.01 <= p < 0.05	1.1	Gamma; Normal	Gamma
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.59	0	0.35	0.0010	0.53	0	0.38	0	0.37	< 0.01	2.0	< 0.01	0.24	Nonparametric	Nonparametric
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	10	1	10%	0.96	0.76	0.14	0.91	0.96	0.80	0.13	0.92	0.13	>= 0.10	0.18	>= 0.10	0.44	Gamma; Lognormal; Normal	Normal
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	10	0	0%	0.94	0.60	0.17	0.57	0.90	0.23	0.20	0.34	0.19	>= 0.10	0.40	>= 0.10	0.19	Gamma; Lognormal; Normal	Normal
2_12_5_117	MW-02	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	10	0	0%	0.86	0.068	0.28	0.028	0.91	0.31	0.22	0.18	0.24	>= 0.10	0.55	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	0.92	0.51	0.29	0.12	0.95	0.75	0.22	0.45	0.26	>= 0.10	0.31	>= 0.10	0.45	Gamma; Lognormal; Normal	Normal
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	10	0	0%	0.94	0.60	0.18	0.50	0.91	0.25	0.23	0.13	0.20	>= 0.10	0.45	>= 0.10	0.39	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric			
2_12_6_111	MW-02	Part 115	Copper	mg/L	10	0	0%	0.94	0.52	0.16	0.63	0.80	0.013	0.23	0.14	0.22	>= 0.10	0.56	>= 0.10	0.74	Gamma; Lognormal; Normal	Normal
2_12_6_114	MW-02	Part 115	Iron	mg/L	10	0	0%	0.97	0.88	0.16	0.69	0.97	0.88	0.13	0.90	0.14	>= 0.10	0.20	>= 0.10	0.17	Gamma; Lognormal; Normal	Normal
2_12_6_119	MW-02	Part 115	Nickel	mg/L	10	0	0%	0.96	0.78	0.17	0.57	0.69	0.0010	0.35	0.0010	0.29	0.01 <= p < 0.05	0.78	0.01 <= p < 0.05	1.1	Normal	Normal
2_12_6_123	MW-02	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
2_12_6_129	MW-02	Part 115	Vanadium	mg/L	10	1	10%	0.96	0.76	0.15	0.84	0.93	0.46	0.19	0.49	0.16	>= 0.10	0.27	>= 0.10	0.55	Gamma; Lognormal; Normal	Normal
2_12_6_130	MW-02	Part 115	Zinc	mg/L	10	0	0%	0.59	0	0.43	0	0.75	0.0030	0.32	0.0060	0.38	< 0.01	1.6	< 0.01	0.95	Nonparametric	Nonparametric
2_13_4_105	MW-03	Appendix III	Boron	mg/L	10	0	0%	0.82	0.024	0.25	0.068	0.78	0.0090	0.27	0.036	0.26	0.05 <= p < 0.10	0.84	0.01 <= p < 0.05	0.088	Gamma; Normal	Normal
2_13_4_107	MW-03	Appendix III	Calcium	mg/L	10	0	0%	0.93	0.42	0.15	0.78	0.89	0.18	0.17	0.59	0.15	>= 0.10	0.42	>= 0.10	0.11	Gamma; Lognormal; Normal	Normal
2_13_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.84	0.045	0.27	0.040	0.90	0.23	0.22	0.19	0.23	>= 0.10	0.49	>= 0.10	0.24	Gamma; Lognormal	Gamma
2_13_4_112	MW-03	Appendix III	Fluoride	mg/L	10	0	0%	0.48	0	0.45	0	0.57	0	0.40	0	0.42	< 0.01	2.1	< 0.01	0.33	Nonparametric	Nonparametric
2_13_4_120	MW-03	Appendix III	pH (field)	su	10	0	0%	0.93	0.42	0.23	0.12	0.93	0.45	0.23	0.13	0.24	>= 0.10	0.44	>= 0.10	0.016	Gamma; Lognormal; Normal	Normal
2_13_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.98	0.96	0.14	0.87	0.76	0.0050	0.23	0.15	0.21	>= 0.10	0.59	>= 0.10	0.83	Gamma; Lognormal; Normal	Normal
2_13_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.65	0	0.32	0.0040	0.63	0	0.34	0.0020	0.33	< 0.01	1.7	< 0.01	0.098	Nonparametric	Nonparametric
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	10	6	60%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.78	Nonparametric	Nonparametric
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	10	0	0%	0.90	0.19	0.19	0.38	0.84	0.047	0.18	0.50	0.20	>= 0.10	0.63	0.05 <= p < 0.10	0.32	Gamma; Lognormal; Normal	Normal
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	10	0	0%	0.86	0.071	0.23	0.13	0.71	0.0010	0.28	0.030	0.27	0.01 <= p < 0.05	1.0	< 0.01	0.38	Normal	Normal
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.58	Nonparametric	Nonparametric
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.95	0.68	0.18	0.46	0.96	0.78	0.17	0.54	0.19	>= 0.10	0.25	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	10	0	0%	0.91	0.27	0.21	0.25	0.89	0.17	0.19	0.40	0.21	>= 0.10	0.51	>= 0.10	0.47	Gamma; Lognormal; Normal	Normal
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.48	0	0.45	0	0.57	0	0.40	0	0.42	< 0.01	2.1	< 0.01	0.33	Nonparametric	Nonparametric
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	10	0	0%	0.85	0.058	0.19	0.37	0.91	0.29	0.15	0.77	0.16	>= 0.10	0.43	>= 0.10	0.20	Gamma; Lognormal; Normal	Normal
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	10	8	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.12	Nonparametric	Nonparametric
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	1	10%	0.89	0.20	0.24	0.15	0.93	0.48	0.21	0.32	0.23	>= 0.10	0.38	>= 0.10	0.33	Gamma; Lognormal; Normal	Normal
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	10	3	30%	0.96	0.81	0.20	0.56	0.87	0.20	0.24	0.25	0.22	>= 0.10	0.40	>= 0.10	0.41	Gamma; Lognormal; Normal	Normal
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
2_13_6_111	MW-03	Part 115	Copper	mg/L	10	5	50%	0.61	0.0010	0.42	0.0040	0.67	0.0040	0.37	0.022	0.41	0.01 <= p < 0.05	1.0	< 0.01	0.57	Nonparametric	Nonparametric
2_13_6_114	MW-03	Part 115	Iron	mg/L	10	0	0%	0.86	0.069	0.18	0.45	0.95	0.64	0.15	0.73	0.15	>= 0.10	0.22	>= 0.10	1.0	Gamma; Lognormal; Normal	Gamma
2_13_6_119	MW-03	Part 115	Nickel	mg/L	10	1	10%	0.46	0	0.48	0	0.69	0.0010	0.36	0.0010	0.44	< 0.01	1.7	< 0.01	0.87	Nonparametric	Nonparametric
2_13_6_123	MW-03	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
2_13_6_129	MW-03	Part 115	Vanadium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
2_13_6_130	MW-03	Part 115	Zinc	mg/L	10	6	60%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3	Nonparametric	Nonparametric
2_14_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	0.95	0.63	0.16	0.53	0.96	0.77	0.15	0.66	0.15	>= 0.10	0.32	>= 0.10	0.073	Gamma; Lognormal; Normal	Normal
2_14_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	0.95	0.63	0.17	0.47	0.95	0.70	0.16	0.49	0.17	>= 0.10	0.32	>= 0.10	0.087	Gamma; Lognormal; Normal	Normal
2_14_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.91	0.21	0.18	0.33	0.96	0.78	0.15	0.60	0.15	>= 0.10	0.32	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
2_14_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	0.82	0.018	0.29	0.0050	0.79	0.0070	0.27	0.014	0.27	0.01 <= p < 0.05	1.1	< 0.01	0.21	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
2_14_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	0.86	0.050	0.20	0.20	0.87	0.058	0.20	0.22	0.19	>= 0.10	0.74	0.01 <= p < 0.05	0.018	Gamma; Lognormal; Normal	Normal
2_14_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.68	0	0.29	0.0070	0.40	0	0.44	0	0.42	< 0.01	3.1	< 0.01	1.7	Nonparametric	Nonparametric
2_14_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.92	0.33	0.16	0.50	0.93	0.35	0.16	0.55	0.17	>= 0.10	0.38	>= 0.10	0.073	Gamma; Lognormal; Normal	Normal
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.90		Nonparametric
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	0.91	0.20	0.15	0.64	0.90	0.14	0.18	0.31	0.17	>= 0.10	0.46	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	0.44	0	0.41	0	0.56	0	0.37	0	0.39	< 0.01	2.6	< 0.01	0.40	Nonparametric	Nonparametric
2_14_5_104	MW-04	Appendix IV	Beryllium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.86	0.050	0.23	0.071	0.86	0.045	0.23	0.092	0.23	>= 0.10	0.85	0.01 <= p < 0.05	0.30	Gamma; Lognormal; Normal	Normal
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	0.95	0.65	0.18	0.35	0.94	0.51	0.21	0.13	0.21	>= 0.10	0.37	>= 0.10	0.46	Gamma; Lognormal; Normal	Normal
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.82	0.018	0.29	0.0050	0.79	0.0070	0.27	0.014	0.27	0.01 <= p < 0.05	1.1	< 0.01	0.21	Nonparametric	Nonparametric
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	0.93	0.34	0.18	0.35	0.92	0.25	0.17	0.43	0.19	>= 0.10	0.42	>= 0.10	0.17	Gamma; Lognormal; Normal	Normal
2_14_5_117	MW-04	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	0.88	0.12	0.22	0.16	0.86	0.083	0.22	0.17	0.24	>= 0.10	0.63	0.05 <= p < 0.10	0.56	Gamma; Lognormal; Normal	Normal
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	0.89	0.16	0.20	0.33	0.80	0.015	0.25	0.078	0.23	>= 0.10	0.64	0.05 <= p < 0.10	0.25	Gamma; Lognormal; Normal	Normal
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	12	6	50%	0.87	0.24	0.24	0.31	0.93	0.56	0.20	0.63	0.22	>= 0.10	0.36	>= 0.10	0.48	Gamma; Lognormal; Normal	Nonparametric
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_6_111	MW-04	Part 115	Copper	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	0.94	0.45	0.16	0.55	0.94	0.44	0.14	0.72	0.15	>= 0.10	0.34	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
2_14_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	0.92	0.25	0.17	0.41	0.69	0.0010	0.28	0.010	0.22	>= 0.10	0.96	0.01 <= p < 0.05	0.65	Gamma; Normal	Normal
2_14_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_6_129	MW-04	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_6_130	MW-04	Part 115	Zinc	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.59		Nonparametric
2_19_4_105	MW-09	Appendix III	Boron	mg/L	11	0	0%	0.96	0.83	0.15	0.69	0.96	0.83	0.17	0.53	0.16	>= 0.10	0.28	>= 0.10	0.097	Gamma; Lognormal; Normal	Normal
2_19_4_107	MW-09	Appendix III	Calcium	mg/L	11	0	0%	0.92	0.29	0.21	0.22	0.92	0.29	0.21	0.17	0.22	>= 0.10	0.45	>= 0.10	0.21	Gamma; Lognormal; Normal	Normal
2_19_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.83	0.025	0.26	0.039	0.83	0.025	0.25	0.051	0.27	0.01 <= p < 0.05	0.85	0.01 <= p < 0.05	0.21	Lognormal	Lognormal
2_19_4_112	MW-09	Appendix III	Fluoride	mg/L	11	0	0%	0.94	0.59	0.14	0.75	0.94	0.51	0.16	0.56	0.15	>= 0.10	0.30	>= 0.10	0.10	Gamma; Lognormal; Normal	Normal
2_19_4_120	MW-09	Appendix III	pH (field)	su	11	0	0%	0.78	0.0060	0.35	0.0010	0.79	0.0070	0.34	0.0010	0.35	< 0.01	1.1	< 0.01	0.015	Nonparametric	Nonparametric
2_19_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.89	0.14	0.23	0.094	0.87	0.080	0.25	0.052	0.24	0.05 <= p < 0.10	0.63	0.05 <= p < 0.10	0.72	Gamma; Lognormal; Normal	Normal
2_19_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.89	0.16	0.21	0.20	0.88	0.12	0.23	0.11	0.23	>= 0.10	0.55	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal
2_19_5_101	MW-09	Appendix IV	Antimony	mg/L	11	6	55%	0.85	0.20	0.30	0.15	0.92	0.50	0.26	0.35	0.29	>= 0.10	0.39	>= 0.10	0.68	Gamma; Lognormal; Normal	Nonparametric
2_19_5_102	MW-09	Appendix IV	Arsenic	mg/L	11	0	0%	0.78	0.0060	0.38	0	0.75	0.0020	0.40	0	0.40	< 0.01	1.4	< 0.01	0.27	Nonparametric	Nonparametric
2_19_5_103	MW-09	Appendix IV	Barium	mg/L	11	0	0%	0.51	0	0.39	0	0.80	0.0090	0.26	0.036	0.33	< 0.01	1.4	< 0.01	0.75	Nonparametric	Nonparametric
2_19_5_104	MW-09	Appendix IV	Beryllium	mg/L	11	10	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_19_5_106	MW-09	Appendix IV	Cadmium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_19_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.87	0.071	0.19	0.33	0.86	0.063	0.22	0.15	0.22	>= 0.10	0.71	0.05 <= p < 0.10	0.26	Gamma; Lognormal; Normal	Normal
2_19_5_110	MW-09	Appendix IV	Cobalt	mg/L	11	0	0%	0.97	0.92	0.11	0.95	0.97	0.92	0.15	0.71	0.13	>= 0.10	0.17	>= 0.10	0.40	Gamma; Lognormal; Normal	Normal
2_19_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.94	0.59	0.14	0.75	0.94	0.51	0.16	0.56	0.15	>= 0.10	0.30	>= 0.10	0.10	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
2_19_5_115	MW-09	Appendix IV	Lead	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric			
2_19_5_116	MW-09	Appendix IV	Lithium	mg/L	11	0	0%	0.90	0.20	0.17	0.48	0.90	0.17	0.17	0.49	0.19	>= 0.10	0.48	>= 0.10	0.097	Gamma; Lognormal; Normal	Normal
2_19_5_117	MW-09	Appendix IV	Mercury	mg/L	11	10	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_19_5_118	MW-09	Appendix IV	Molybdenum	mg/L	11	0	0%	0.94	0.50	0.18	0.37	0.90	0.19	0.23	0.10	0.20	>= 0.10	0.46	>= 0.10	0.38	Gamma; Lognormal; Normal	Normal
2_19_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	11	10	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	0.76	0.0080	0.28	0.035	0.66	0.0010	0.34	0.0030	0.32	< 0.01	1.2	< 0.01	0.27	Nonparametric	Nonparametric
2_19_5_125	MW-09	Appendix IV	Thallium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_19_6_111	MW-09	Part 115	Copper	mg/L	11	9	82%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.41	NA	Nonparametric	
2_19_6_114	MW-09	Part 115	Iron	mg/L	11	0	0%	0.92	0.37	0.17	0.52	0.94	0.47	0.14	0.79	0.15	>= 0.10	0.35	>= 0.10	0.18	Gamma; Lognormal; Normal	Normal
2_19_6_119	MW-09	Part 115	Nickel	mg/L	11	0	0%	0.78	0.0060	0.24	0.078	0.96	0.74	0.16	0.59	0.18	>= 0.10	0.39	>= 0.10	0.62	Gamma; Lognormal; Normal	Normal
2_19_6_123	MW-09	Part 115	Silver	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_19_6_129	MW-09	Part 115	Vanadium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_19_6_130	MW-09	Part 115	Zinc	mg/L	11	7	64%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	NA	Nonparametric	
2_20_4_105	MW-10	Appendix III	Boron	mg/L	11	0	0%	0.90	0.18	0.22	0.14	0.92	0.30	0.17	0.48	0.20	>= 0.10	0.45	>= 0.10	0.59	Gamma; Lognormal; Normal	Normal
2_20_4_107	MW-10	Appendix III	Calcium	mg/L	11	0	0%	0.85	0.041	0.21	0.17	0.94	0.51	0.20	0.28	0.21	>= 0.10	0.44	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
2_20_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.85	0.040	0.26	0.033	0.93	0.38	0.20	0.26	0.23	>= 0.10	0.58	>= 0.10	0.47	Gamma; Lognormal	Gamma
2_20_4_112	MW-10	Appendix III	Fluoride	mg/L	11	0	0%	0.96	0.72	0.11	0.96	0.93	0.43	0.16	0.61	0.15	>= 0.10	0.28	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal
2_20_4_120	MW-10	Appendix III	pH (field)	su	11	0	0%	0.91	0.24	0.23	0.12	0.92	0.28	0.22	0.15	0.22	>= 0.10	0.57	>= 0.10	0.055	Gamma; Lognormal; Normal	Normal
2_20_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.91	0.24	0.20	0.27	0.91	0.26	0.18	0.41	0.20	>= 0.10	0.38	>= 0.10	0.64	Gamma; Lognormal; Normal	Normal
2_20_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.85	0.050	0.27	0.023	0.90	0.18	0.25	0.063	0.25	0.05 <= p < 0.10	0.56	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
2_20_5_101	MW-10	Appendix IV	Antimony	mg/L	11	7	64%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.54	NA	Nonparametric	
2_20_5_102	MW-10	Appendix IV	Arsenic	mg/L	11	0	0%	0.90	0.20	0.20	0.26	0.97	0.92	0.12	0.95	0.15	>= 0.10	0.21	>= 0.10	0.62	Gamma; Lognormal; Normal	Normal
2_20_5_103	MW-10	Appendix IV	Barium	mg/L	11	0	0%	0.90	0.16	0.21	0.17	0.94	0.57	0.14	0.80	0.15	>= 0.10	0.31	>= 0.10	0.46	Gamma; Lognormal; Normal	Normal
2_20_5_104	MW-10	Appendix IV	Beryllium	mg/L	11	5	45%	0.85	0.16	0.25	0.26	0.91	0.46	0.17	0.83	0.20	>= 0.10	0.37	>= 0.10	0.58	Gamma; Lognormal; Normal	Nonparametric
2_20_5_106	MW-10	Appendix IV	Cadmium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_20_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.90	0.19	0.17	0.51	0.95	0.67	0.17	0.47	0.17	>= 0.10	0.33	>= 0.10	0.60	Gamma; Lognormal; Normal	Normal
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	0.69	0.0010	0.27	0.042	0.86	0.082	0.25	0.074	0.27	0.01 <= p < 0.05	0.81	0.01 <= p < 0.05	0.57	Lognormal	Lognormal
2_20_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.96	0.72	0.11	0.96	0.93	0.43	0.16	0.61	0.15	>= 0.10	0.28	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal
2_20_5_115	MW-10	Appendix IV	Lead	mg/L	11	9	82%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.25	NA	Nonparametric	
2_20_5_116	MW-10	Appendix IV	Lithium	mg/L	11	0	0%	0.93	0.39	0.18	0.44	0.94	0.51	0.20	0.26	0.18	>= 0.10	0.36	>= 0.10	0.31	Gamma; Lognormal; Normal	Normal
2_20_5_117	MW-10	Appendix IV	Mercury	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_20_5_118	MW-10	Appendix IV	Molybdenum	mg/L	11	0	0%	0.95	0.70	0.23	0.12	0.91	0.24	0.21	0.18	0.17	>= 0.10	0.32	>= 0.10	0.58	Gamma; Lognormal; Normal	Normal
2_20_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.38	NA	Nonparametric	
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	0.71	0.0020	0.28	0.036	0.83	0.048	0.22	0.25	0.24	>= 0.10	0.78	0.01 <= p < 0.05	0.32	Gamma; Lognormal	Gamma
2_20_5_125	MW-10	Appendix IV	Thallium	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_20_6_111	MW-10	Part 115	Copper	mg/L	11	8	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.65	NA	Nonparametric	
2_20_6_114	MW-10	Part 115	Iron	mg/L	11	0	0%	0.88	0.11	0.23	0.089	0.92	0.28	0.19	0.31	0.22	>= 0.10	0.56	>= 0.10	0.37	Gamma; Lognormal; Normal	Normal
2_20_6_119	MW-10	Part 115	Nickel	mg/L	11	5	45%	0.77	0.031	0.34	0.027	0.83	0.11	0.33	0.038	0.35	0.01 <= p < 0.05	0.66	0.05 <= p < 0.10	0.32	Gamma; Lognormal	Gamma
2_20_6_123	MW-10	Part 115	Silver	mg/L	11	11	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma		Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution						
								S-W		Lilliefors		S-W					Lilliefors		K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value	Stat.	p-Value
2_20_6_129	MW-10	Part 115	Vanadium	mg/L	11	10	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric					
2_20_6_130	MW-10	Part 115	Zinc	mg/L	11	3	27%	0.71	0.0030	0.34	0.0060	0.78	0.015	0.25	0.14	0.29	0.05 <= p < 0.10	1.0	< 0.01	1.1	Gamma; Lognormal	Nonparametric
2_21_4_105	MW-11	Appendix III	Boron	mg/L	10	0	0%	0.91	0.31	0.19	0.41	0.93	0.47	0.19	0.42	0.18	>= 0.10	0.32	>= 0.10	0.76	Gamma; Lognormal; Normal	Normal
2_21_4_107	MW-11	Appendix III	Calcium	mg/L	10	0	0%	0.94	0.56	0.16	0.67	0.89	0.18	0.20	0.34	0.19	>= 0.10	0.44	>= 0.10	0.36	Gamma; Lognormal; Normal	Normal
2_21_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.95	0.73	0.15	0.75	0.95	0.65	0.14	0.84	0.15	>= 0.10	0.25	>= 0.10	0.21	Gamma; Lognormal; Normal	Normal
2_21_4_112	MW-11	Appendix III	Fluoride	mg/L	10	0	0%	0.88	0.12	0.22	0.17	0.91	0.28	0.18	0.51	0.20	>= 0.10	0.44	>= 0.10	0.71	Gamma; Lognormal; Normal	Normal
2_21_4_120	MW-11	Appendix III	pH (field)	su	10	0	0%	0.95	0.69	0.22	0.18	0.95	0.70	0.22	0.19	0.22	>= 0.10	0.35	>= 0.10	0.010	Gamma; Lognormal; Normal	Normal
2_21_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	2	20%	0.80	0.029	0.26	0.12	0.95	0.71	0.13	0.95	0.20	>= 0.10	0.29	>= 0.10	1.6	Gamma; Lognormal; Normal	Nonparametric
2_21_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.88	0.13	0.28	0.030	0.94	0.56	0.23	0.14	0.24	>= 0.10	0.41	>= 0.10	0.25	Gamma; Lognormal; Normal	Normal
2_21_5_101	MW-11	Appendix IV	Antimony	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1		Nonparametric
2_21_5_102	MW-11	Appendix IV	Arsenic	mg/L	10	0	0%	0.82	0.029	0.21	0.25	0.97	0.91	0.15	0.74	0.18	>= 0.10	0.33	>= 0.10	0.52	Gamma; Lognormal; Normal	Normal
2_21_5_103	MW-11	Appendix IV	Barium	mg/L	10	0	0%	0.93	0.45	0.20	0.27	0.98	0.97	0.15	0.76	0.17	>= 0.10	0.20	>= 0.10	0.36	Gamma; Lognormal; Normal	Normal
2_21_5_104	MW-11	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
2_21_5_106	MW-11	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.50	0	0.38	0	0.81	0.017	0.22	0.17	0.30	0.01 <= p < 0.05	1.3	< 0.01	0.86	Lognormal	Nonparametric
2_21_5_110	MW-11	Appendix IV	Cobalt	mg/L	10	0	0%	0.88	0.13	0.19	0.36	0.96	0.79	0.17	0.53	0.18	>= 0.10	0.30	>= 0.10	0.50	Gamma; Lognormal; Normal	Normal
2_21_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.88	0.12	0.22	0.17	0.91	0.28	0.18	0.51	0.20	>= 0.10	0.44	>= 0.10	0.71	Gamma; Lognormal; Normal	Normal
2_21_5_115	MW-11	Appendix IV	Lead	mg/L	10	3	30%	0.50	0	0.47	0	0.91	0.40	0.19	0.61	0.33	0.05 <= p < 0.10	0.82	0.01 <= p < 0.05	2.0	Gamma; Lognormal	Gamma
2_21_5_116	MW-11	Appendix IV	Lithium	mg/L	10	0	0%	0.90	0.22	0.16	0.64	0.94	0.54	0.17	0.59	0.13	>= 0.10	0.20	>= 0.10	1.2	Gamma; Lognormal; Normal	Gamma
2_21_5_117	MW-11	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
2_21_5_118	MW-11	Appendix IV	Molybdenum	mg/L	10	2	20%	0.90	0.28	0.20	0.49	0.94	0.60	0.21	0.36	0.20	>= 0.10	0.35	>= 0.10	0.63	Gamma; Lognormal; Normal	Normal
2_21_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	0.94	0.60	0.17	0.73	0.95	0.73	0.16	0.82	0.18	>= 0.10	0.24	>= 0.10	0.37	Gamma; Lognormal; Normal	Normal
2_21_5_122	MW-11	Appendix IV	Selenium	mg/L	10	3	30%	0.69	0.0030	0.33	0.020	0.86	0.14	0.28	0.11	0.31	0.05 <= p < 0.10	0.70	0.05 <= p < 0.10	0.54	Gamma; Lognormal	Gamma
2_21_5_125	MW-11	Appendix IV	Thallium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	0.50	0	0.45	0	0.81	0.053	0.30	0.064	0.36	0.01 <= p < 0.05	1.1	< 0.01	1.6	Lognormal	Nonparametric
2_21_6_114	MW-11	Part 115	Iron	mg/L	10	0	0%	0.92	0.39	0.15	0.71	0.93	0.42	0.17	0.56	0.17	>= 0.10	0.34	>= 0.10	0.41	Gamma; Lognormal; Normal	Normal
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	0.50	0	0.44	0	0.77	0.0070	0.28	0.025	0.35	< 0.01	1.5	< 0.01	0.74	Nonparametric	Nonparametric
2_21_6_123	MW-11	Part 115	Silver	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
2_21_6_129	MW-11	Part 115	Vanadium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	0.74	0.010	0.28	0.098	0.95	0.71	0.19	0.63	0.22	>= 0.10	0.37	>= 0.10	1.5	Gamma; Lognormal; Normal	Nonparametric
2_22_4_105	MW-12	Appendix III	Boron	mg/L	13	0	0%	0.94	0.46	0.17	0.41	0.94	0.46	0.19	0.20	0.19	>= 0.10	0.35	>= 0.10	0.28	Gamma; Lognormal; Normal	Normal
2_22_4_107	MW-12	Appendix III	Calcium	mg/L	13	0	0%	0.95	0.66	0.19	0.25	0.93	0.36	0.21	0.11	0.21	>= 0.10	0.34	>= 0.10	0.27	Gamma; Lognormal; Normal	Normal
2_22_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0	0%	0.88	0.083	0.21	0.13	0.90	0.16	0.20	0.15	0.21	>= 0.10	0.62	>= 0.10	0.20	Gamma; Lognormal; Normal	Normal
2_22_4_112	MW-12	Appendix III	Fluoride	mg/L	13	0	0%	0.84	0.019	0.29	0.0040	0.87	0.049	0.25	0.024	0.27	0.01 <= p < 0.05	0.88	0.01 <= p < 0.05	0.37	Nonparametric	Nonparametric
2_22_4_120	MW-12	Appendix III	pH (field)	su	13	0	0%	0.95	0.58	0.17	0.40	0.95	0.56	0.17	0.36	0.16	>= 0.10	0.37	>= 0.10	0.047	Gamma; Lognormal; Normal	Normal
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	0.86	0.035	0.27	0.0090	0.91	0.17	0.23	0.055	0.24	0.01 <= p < 0.05	0.68	0.05 <= p < 0.10	0.21	Gamma; Lognormal	Gamma
2_22_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0	0%	0.94	0.47	0.15	0.55	0.89	0.11	0.17	0.35	0.18	>= 0.10	0.44	>= 0.10	0.40	Gamma; Lognormal; Normal	Normal
2_22_5_101	MW-12	Appendix IV	Antimony	mg/L	13	0	0%	0.93	0.35	0.15	0.62	0.94	0.49	0.16	0.49	0.16	>= 0.10	0.34	>= 0.10	0.37	Gamma; Lognormal; Normal	Normal
2_22_5_102	MW-12	Appendix IV	Arsenic	mg/L	13	0	0%	0.90	0.13	0.20	0.14	0.90	0.12	0.18	0.28	0.19	>= 0.10	0.55	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal				Lognormal				Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value			
2_22_5_103	MW-12	Appendix IV	Barium	mg/L	13	0	0%	0.88	0.083	0.21	0.12	0.92	0.22	0.19	0.25	0.20	>= 0.10	0.60	>= 0.10	0.42	Gamma; Lognormal; Normal	Normal
2_22_5_104	MW-12	Appendix IV	Beryllium	mg/L	13	13	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_22_5_106	MW-12	Appendix IV	Cadmium	mg/L	13	0	0%	0.89	0.11	0.17	0.40	0.92	0.23	0.15	0.55	0.17	>= 0.10	0.47	>= 0.10	0.59	Gamma; Lognormal; Normal	Normal
2_22_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	13	6	46%	0.91	0.42	0.20	0.54	0.98	0.96	0.15	0.91	0.15	>= 0.10	0.23	>= 0.10	0.34	Gamma; Lognormal; Normal	Nonparametric
2_22_5_110	MW-12	Appendix IV	Cobalt	mg/L	13	5	38%	0.87	0.15	0.25	0.14	0.85	0.10	0.26	0.13	0.27	0.05 <= p < 0.10	0.58	>= 0.10	0.53	Gamma; Lognormal; Normal	Normal
2_22_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	13	0	0%	0.84	0.019	0.29	0.0040	0.87	0.049	0.25	0.024	0.27	0.01 <= p < 0.05	0.88	0.01 <= p < 0.05	0.37	Nonparametric	Nonparametric
2_22_5_115	MW-12	Appendix IV	Lead	mg/L	13	7	54%	0.87	0.22	0.28	0.15	0.87	0.22	0.28	0.14	0.30	>= 0.10	0.49	>= 0.10	0.19	Gamma; Lognormal; Normal	Nonparametric
2_22_5_116	MW-12	Appendix IV	Lithium	mg/L	13	0	0%	0.94	0.45	0.15	0.60	0.93	0.33	0.15	0.53	0.16	>= 0.10	0.36	>= 0.10	0.36	Gamma; Lognormal; Normal	Normal
2_22_5_117	MW-12	Appendix IV	Mercury	mg/L	13	12	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_22_5_118	MW-12	Appendix IV	Molybdenum	mg/L	13	0	0%	0.91	0.21	0.17	0.39	0.91	0.18	0.17	0.34	0.18	>= 0.10	0.49	>= 0.10	0.23	Gamma; Lognormal; Normal	Normal
2_22_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	13	11	85%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.21	NA	Nonparametric	
2_22_5_122	MW-12	Appendix IV	Selenium	mg/L	13	0	0%	0.88	0.066	0.19	0.20	0.90	0.13	0.20	0.18	0.18	>= 0.10	0.48	>= 0.10	1.0	Gamma; Lognormal; Normal	Gamma
2_22_5_125	MW-12	Appendix IV	Thallium	mg/L	13	13	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_22_6_111	MW-12	Part 115	Copper	mg/L	13	0	0%	0.96	0.76	0.20	0.19	0.95	0.68	0.18	0.30	0.16	>= 0.10	0.29	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
2_22_6_114	MW-12	Part 115	Iron	mg/L	13	5	38%	0.88	0.17	0.21	0.36	0.89	0.21	0.19	0.53	0.21	>= 0.10	0.50	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
2_22_6_119	MW-12	Part 115	Nickel	mg/L	13	0	0%	0.91	0.17	0.14	0.71	0.90	0.12	0.15	0.61	0.15	>= 0.10	0.49	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
2_22_6_123	MW-12	Part 115	Silver	mg/L	13	13	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_22_6_129	MW-12	Part 115	Vanadium	mg/L	13	7	54%	0.91	0.42	0.25	0.27	0.91	0.42	0.26	0.23	0.28	>= 0.10	0.43	>= 0.10	0.17	Gamma; Lognormal; Normal	Nonparametric
2_22_6_130	MW-12	Part 115	Zinc	mg/L	13	0	0%	0.90	0.11	0.19	0.24	0.81	0.010	0.25	0.026	0.23	0.05 <= p < 0.10	0.97	0.01 <= p < 0.05	0.45	Gamma; Normal	Normal
2_42_4_105	MW-32	Appendix III	Boron	mg/L	10	0	0%	0.86	0.069	0.26	0.047	0.90	0.22	0.25	0.076	0.26	0.05 <= p < 0.10	0.60	>= 0.10	0.19	Gamma; Lognormal; Normal	Normal
2_42_4_107	MW-32	Appendix III	Calcium	mg/L	10	0	0%	0.93	0.49	0.23	0.14	0.91	0.30	0.26	0.063	0.25	0.05 <= p < 0.10	0.53	>= 0.10	0.16	Gamma; Lognormal; Normal	Normal
2_42_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.92	0.34	0.17	0.56	0.92	0.33	0.16	0.62	0.18	>= 0.10	0.38	>= 0.10	0.089	Gamma; Lognormal; Normal	Normal
2_42_4_112	MW-32	Appendix III	Fluoride	mg/L	10	0	0%	0.84	0.045	0.26	0.046	0.86	0.072	0.25	0.068	0.26	0.05 <= p < 0.10	0.63	0.05 <= p < 0.10	0.078	Gamma; Lognormal	Gamma
2_42_4_120	MW-32	Appendix III	pH (field)	su	10	0	0%	0.92	0.34	0.21	0.25	0.92	0.34	0.21	0.25	0.22	>= 0.10	0.45	>= 0.10	0.011	Gamma; Lognormal; Normal	Normal
2_42_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.95	0.62	0.14	0.84	0.89	0.17	0.17	0.54	0.15	>= 0.10	0.31	>= 0.10	0.87	Gamma; Lognormal; Normal	Normal
2_42_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.92	0.34	0.17	0.55	0.91	0.27	0.17	0.56	0.19	>= 0.10	0.41	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
2_42_5_101	MW-32	Appendix IV	Antimony	mg/L	10	6	60%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	NA	Nonparametric	
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	0.47	0	0.47	0	0.61	0	0.40	0	0.43	< 0.01	2.0	< 0.01	0.49	Nonparametric	Nonparametric
2_42_5_103	MW-32	Appendix IV	Barium	mg/L	10	0	0%	0.97	0.89	0.18	0.51	0.79	0.012	0.25	0.066	0.20	>= 0.10	0.53	>= 0.10	0.73	Gamma; Lognormal; Normal	Normal
2_42_5_104	MW-32	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_42_5_106	MW-32	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.50	0	0.42	0	0.72	0.0020	0.26	0.047	0.34	< 0.01	1.5	< 0.01	0.67	Nonparametric	Nonparametric
2_42_5_110	MW-32	Appendix IV	Cobalt	mg/L	10	0	0%	0.56	0	0.33	0.0030	0.73	0.0020	0.31	0.0060	0.34	< 0.01	1.4	< 0.01	0.54	Nonparametric	Nonparametric
2_42_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.84	0.045	0.26	0.046	0.86	0.072	0.25	0.068	0.26	0.05 <= p < 0.10	0.63	0.05 <= p < 0.10	0.078	Gamma; Lognormal	Gamma
2_42_5_115	MW-32	Appendix IV	Lead	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.63	NA	Nonparametric	
2_42_5_116	MW-32	Appendix IV	Lithium	mg/L	10	0	0%	0.92	0.33	0.13	0.88	0.95	0.65	0.14	0.83	0.15	>= 0.10	0.28	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
2_42_5_117	MW-32	Appendix IV	Mercury	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_42_5_118	MW-32	Appendix IV	Molybdenum	mg/L	10	0	0%	0.85	0.052	0.24	0.093	0.92	0.34	0.20	0.33	0.21	>= 0.10	0.48	>= 0.10	0.23	Gamma; Lognormal; Normal	Normal
2_42_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	10	6	60%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.20	NA	Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
2_42_5_122	MW-32	Appendix IV	Selenium	mg/L	10	9	90%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric			
2_42_5_125	MW-32	Appendix IV	Thallium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric			
2_42_6_111	MW-32	Part 115	Copper	mg/L	10	7	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4	Nonparametric			
2_42_6_114	MW-32	Part 115	Iron	mg/L	10	0	0%	0.84	0.040	0.28	0.030	0.79	0.011	0.30	0.010	0.30	0.01 <= p < 0.05	0.95	0.01 <= p < 0.05	0.21	Nonparametric	Nonparametric
2_42_6_119	MW-32	Part 115	Nickel	mg/L	10	0	0%	0.40	0	0.50	0	0.58	0	0.36	0	0.46	< 0.01	2.5	< 0.01	0.99	Nonparametric	Nonparametric
2_42_6_123	MW-32	Part 115	Silver	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_42_6_129	MW-32	Part 115	Vanadium	mg/L	10	10	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
2_42_6_130	MW-32	Part 115	Zinc	mg/L	10	0	0%	0.57	0	0.42	0	0.70	0.0010	0.30	0.010	0.36	< 0.01	1.8	< 0.01	1.0	Nonparametric	Nonparametric

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



Table 4: Autocorrelation Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_16_4_105	MW-06	Appendix III	Boron	mg/L	10	0	0%	-0.054	0.84	
1_16_4_107	MW-06	Appendix III	Calcium	mg/L	10	0	0%	-0.0050	0.99	
1_16_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.35	0.20	
1_16_4_112	MW-06	Appendix III	Fluoride	mg/L	10	0	0%	0.20	0.47	
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	-0.053	0.85	
1_16_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	10	1	10%	0.065	0.82	
1_16_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.18	0.51	
1_16_5_101	MW-06	Appendix IV	Antimony	mg/L	10	8	80%	-0.50	0.16	
1_16_5_102	MW-06	Appendix IV	Arsenic	mg/L	10	0	0%	0.22	0.41	
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	0.29	0.30	
1_16_5_104	MW-06	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	
1_16_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.031	0.91	
1_16_5_110	MW-06	Appendix IV	Cobalt	mg/L	10	0	0%	0.12	0.66	
1_16_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.20	0.47	
1_16_5_115	MW-06	Appendix IV	Lead	mg/L	10	7	70%	-0.29	0.43	
1_16_5_116	MW-06	Appendix IV	Lithium	mg/L	10	0	0%	0.16	0.57	
1_16_5_118	MW-06	Appendix IV	Molybdenum	mg/L	10	7	70%	-0.50	0.17	
1_16_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	-0.22	0.45	
1_16_5_122	MW-06	Appendix IV	Selenium	mg/L	10	5	50%	-0.067	0.84	
1_16_6_111	MW-06	Part 115	Copper	mg/L	10	9	90%	NA	NA	
1_16_6_114	MW-06	Part 115	Iron	mg/L	10	0	0%	0.0017	1.0	
1_16_6_119	MW-06	Part 115	Nickel	mg/L	10	3	30%	0.29	0.35	
1_16_6_130	MW-06	Part 115	Zinc	mg/L	10	2	20%	-0.23	0.43	
1_17_4_105	MW-07	Appendix III	Boron	mg/L	10	0	0%	-0.31	0.26	
1_17_4_107	MW-07	Appendix III	Calcium	mg/L	10	0	0%	-0.56	0.043	*
1_17_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.57	0.038	*
1_17_4_112	MW-07	Appendix III	Fluoride	mg/L	10	1	10%	-0.35	0.21	
1_17_4_120	MW-07	Appendix III	pH (field)	su	10	0	0%	-0.034	0.90	
1_17_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.55	0.046	*
1_17_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-0.18	0.50	
1_17_5_101	MW-07	Appendix IV	Antimony	mg/L	10	9	90%	NA	NA	
1_17_5_102	MW-07	Appendix IV	Arsenic	mg/L	10	0	0%	-0.046	0.87	
1_17_5_103	MW-07	Appendix IV	Barium	mg/L	10	0	0%	0.24	0.38	
1_17_5_104	MW-07	Appendix IV	Beryllium	mg/L	10	7	70%	-0.40	0.27	
1_17_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.14	0.61	
1_17_5_110	MW-07	Appendix IV	Cobalt	mg/L	10	0	0%	0.11	0.68	
1_17_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	10	1	10%	-0.35	0.21	
1_17_5_116	MW-07	Appendix IV	Lithium	mg/L	10	0	0%	-0.35	0.20	
1_17_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	-0.47	0.11	
1_17_5_122	MW-07	Appendix IV	Selenium	mg/L	10	8	80%	-0.50	0.16	
1_17_6_111	MW-07	Part 115	Copper	mg/L	10	9	90%	NA	NA	
1_17_6_114	MW-07	Part 115	Iron	mg/L	10	0	0%	-0.0094	0.97	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_17_6_130	MW-07	Part 115	Zinc	mg/L	10	7	70%	-0.44	0.22	
1_18_4_105	MW-08	Appendix III	Boron	mg/L	10	0	0%	0.092	0.74	
1_18_4_107	MW-08	Appendix III	Calcium	mg/L	10	0	0%	0.33	0.22	
1_18_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.083	0.76	
1_18_4_112	MW-08	Appendix III	Fluoride	mg/L	10	0	0%	0.28	0.31	
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	0.080	0.77	
1_18_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	3	30%	-0.21	0.49	
1_18_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-0.36	0.19	
1_18_5_101	MW-08	Appendix IV	Antimony	mg/L	10	4	40%	-0.087	0.79	
1_18_5_102	MW-08	Appendix IV	Arsenic	mg/L	10	0	0%	0.40	0.14	
1_18_5_103	MW-08	Appendix IV	Barium	mg/L	10	0	0%	0.37	0.18	
1_18_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.26	0.34	
1_18_5_110	MW-08	Appendix IV	Cobalt	mg/L	10	0	0%	0.32	0.24	
1_18_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.28	0.31	
1_18_5_115	MW-08	Appendix IV	Lead	mg/L	10	7	70%	-0.095	0.79	
1_18_5_116	MW-08	Appendix IV	Lithium	mg/L	10	0	0%	0.21	0.44	
1_18_5_118	MW-08	Appendix IV	Molybdenum	mg/L	10	0	0%	0.32	0.25	
1_18_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	-0.51	0.10	
1_18_5_122	MW-08	Appendix IV	Selenium	mg/L	10	5	50%	-0.019	0.95	
1_18_6_111	MW-08	Part 115	Copper	mg/L	10	5	50%	0.24	0.48	
1_18_6_114	MW-08	Part 115	Iron	mg/L	10	0	0%	0.52	0.059	
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	-0.15	0.59	
1_18_6_130	MW-08	Part 115	Zinc	mg/L	10	3	30%	-0.28	0.36	
1_28_4_105	MW-18	Appendix III	Boron	mg/L	11	0	0%	0.41	0.12	
1_28_4_107	MW-18	Appendix III	Calcium	mg/L	11	0	0%	0.42	0.11	
1_28_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.51	0.055	
1_28_4_112	MW-18	Appendix III	Fluoride	mg/L	11	0	0%	0.51	0.054	
1_28_4_120	MW-18	Appendix III	pH (field)	su	11	0	0%	0.12	0.64	
1_28_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.15	0.57	
1_28_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.43	0.10	
1_28_5_101	MW-18	Appendix IV	Antimony	mg/L	11	4	36%	-0.39	0.21	
1_28_5_102	MW-18	Appendix IV	Arsenic	mg/L	11	0	0%	0.34	0.20	
1_28_5_103	MW-18	Appendix IV	Barium	mg/L	11	0	0%	0.42	0.11	
1_28_5_106	MW-18	Appendix IV	Cadmium	mg/L	11	3	27%	0.16	0.59	
1_28_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	11	10	91%	NA	NA	
1_28_5_110	MW-18	Appendix IV	Cobalt	mg/L	11	0	0%	0.65	0.014	*
1_28_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.51	0.054	
1_28_5_115	MW-18	Appendix IV	Lead	mg/L	11	8	73%	-0.66	0.071	
1_28_5_116	MW-18	Appendix IV	Lithium	mg/L	11	0	0%	0.32	0.23	
1_28_5_118	MW-18	Appendix IV	Molybdenum	mg/L	11	0	0%	0.38	0.15	
1_28_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	-0.65	0.075	
1_28_5_122	MW-18	Appendix IV	Selenium	mg/L	11	0	0%	0.32	0.22	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	0.22	0.40	
1_28_6_114	MW-18	Part 115	Iron	mg/L	11	0	0%	0.51	0.053	
1_28_6_119	MW-18	Part 115	Nickel	mg/L	11	0	0%	0.65	0.015	*
1_28_6_130	MW-18	Part 115	Zinc	mg/L	11	0	0%	0.29	0.27	
1_29_4_105	MW-19	Appendix III	Boron	mg/L	10	0	0%	-0.066	0.81	
1_29_4_107	MW-19	Appendix III	Calcium	mg/L	10	0	0%	0.33	0.22	
1_29_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.53	0.051	
1_29_4_112	MW-19	Appendix III	Fluoride	mg/L	10	0	0%	0.24	0.38	
1_29_4_120	MW-19	Appendix III	pH (field)	su	10	0	0%	-0.30	0.27	
1_29_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	-0.075	0.78	
1_29_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.62	0.023	*
1_29_5_101	MW-19	Appendix IV	Antimony	mg/L	10	9	90%	NA	NA	
1_29_5_102	MW-19	Appendix IV	Arsenic	mg/L	10	0	0%	0.20	0.46	
1_29_5_103	MW-19	Appendix IV	Barium	mg/L	10	0	0%	0.35	0.20	
1_29_5_104	MW-19	Appendix IV	Beryllium	mg/L	10	3	30%	0.35	0.25	
1_29_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	10	5	50%	-0.22	0.51	
1_29_5_110	MW-19	Appendix IV	Cobalt	mg/L	10	0	0%	0.61	0.026	*
1_29_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.24	0.38	
1_29_5_116	MW-19	Appendix IV	Lithium	mg/L	10	0	0%	0.027	0.92	
1_29_5_118	MW-19	Appendix IV	Molybdenum	mg/L	10	0	0%	0.025	0.93	
1_29_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	-0.31	0.32	
1_29_5_122	MW-19	Appendix IV	Selenium	mg/L	10	9	90%	NA	NA	
1_29_6_114	MW-19	Part 115	Iron	mg/L	10	0	0%	0.39	0.16	
1_29_6_119	MW-19	Part 115	Nickel	mg/L	10	1	10%	0.65	0.021	*
1_29_6_130	MW-19	Part 115	Zinc	mg/L	10	8	80%	-0.50	0.16	
1_30_4_105	MW-20	Appendix III	Boron	mg/L	11	0	0%	0.22	0.40	
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	0.21	0.43	
1_30_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.31	0.24	
1_30_4_112	MW-20	Appendix III	Fluoride	mg/L	11	0	0%	0.10	0.70	
1_30_4_120	MW-20	Appendix III	pH (field)	su	11	0	0%	-0.049	0.85	
1_30_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.59	0.026	*
1_30_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.52	0.047	*
1_30_5_101	MW-20	Appendix IV	Antimony	mg/L	11	3	27%	0.39	0.18	
1_30_5_102	MW-20	Appendix IV	Arsenic	mg/L	11	0	0%	0.34	0.19	
1_30_5_103	MW-20	Appendix IV	Barium	mg/L	11	0	0%	0.38	0.15	
1_30_5_104	MW-20	Appendix IV	Beryllium	mg/L	11	10	91%	NA	NA	
1_30_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	11	5	45%	0.027	0.93	
1_30_5_110	MW-20	Appendix IV	Cobalt	mg/L	11	0	0%	0.59	0.025	*
1_30_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.10	0.70	
1_30_5_115	MW-20	Appendix IV	Lead	mg/L	11	0	0%	0.34	0.20	
1_30_5_116	MW-20	Appendix IV	Lithium	mg/L	11	0	0%	0.14	0.61	
1_30_5_118	MW-20	Appendix IV	Molybdenum	mg/L	11	0	0%	0.58	0.027	*

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_30_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	0.048	0.89	
1_30_5_122	MW-20	Appendix IV	Selenium	mg/L	11	6	55%	-0.039	0.91	
1_30_5_125	MW-20	Appendix IV	Thallium	mg/L	11	10	91%	NA	NA	
1_30_6_111	MW-20	Part 115	Copper	mg/L	11	1	9%	0.086	0.75	
1_30_6_114	MW-20	Part 115	Iron	mg/L	11	0	0%	0.15	0.58	
1_30_6_119	MW-20	Part 115	Nickel	mg/L	11	0	0%	0.58	0.028	*
1_30_6_130	MW-20	Part 115	Zinc	mg/L	11	0	0%	0.12	0.66	
1_40_4_105	MW-30	Appendix III	Boron	mg/L	14	0	0%	-0.091	0.71	
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	-0.032	0.89	
1_40_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0	0%	0.83	0.00056	***
1_40_4_112	MW-30	Appendix III	Fluoride	mg/L	14	0	0%	0.099	0.68	
1_40_4_120	MW-30	Appendix III	pH (field)	su	14	0	0%	0.42	0.080	
1_40_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	14	0	0%	0.22	0.37	
1_40_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0	0%	0.036	0.88	
1_40_5_101	MW-30	Appendix IV	Antimony	mg/L	14	12	86%	-0.50	0.16	
1_40_5_102	MW-30	Appendix IV	Arsenic	mg/L	14	3	21%	0.25	0.34	
1_40_5_103	MW-30	Appendix IV	Barium	mg/L	14	0	0%	0.61	0.012	*
1_40_5_104	MW-30	Appendix IV	Beryllium	mg/L	14	12	86%	-0.50	0.16	
1_40_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	14	0	0%	0.43	0.074	
1_40_5_110	MW-30	Appendix IV	Cobalt	mg/L	14	0	0%	0.24	0.32	
1_40_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	14	0	0%	0.099	0.68	
1_40_5_116	MW-30	Appendix IV	Lithium	mg/L	14	0	0%	-0.20	0.40	
1_40_5_118	MW-30	Appendix IV	Molybdenum	mg/L	14	5	36%	0.54	0.058	
1_40_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	14	8	57%	-0.41	0.20	
1_40_5_122	MW-30	Appendix IV	Selenium	mg/L	14	9	64%	-0.013	0.97	
1_40_6_111	MW-30	Part 115	Copper	mg/L	14	11	79%	-0.54	0.14	
1_40_6_114	MW-30	Part 115	Iron	mg/L	14	0	0%	0.036	0.88	
1_40_6_119	MW-30	Part 115	Nickel	mg/L	14	4	29%	0.34	0.21	
1_40_6_130	MW-30	Part 115	Zinc	mg/L	14	10	71%	-0.028	0.94	
1_41_4_105	MW-31	Appendix III	Boron	mg/L	10	0	0%	0.32	0.24	
1_41_4_107	MW-31	Appendix III	Calcium	mg/L	10	0	0%	0.40	0.15	
1_41_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.0059	0.98	
1_41_4_112	MW-31	Appendix III	Fluoride	mg/L	10	0	0%	-0.034	0.90	
1_41_4_120	MW-31	Appendix III	pH (field)	su	10	0	0%	-0.036	0.90	
1_41_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.63	0.020	*
1_41_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-0.12	0.65	
1_41_5_101	MW-31	Appendix IV	Antimony	mg/L	10	5	50%	0.43	0.20	
1_41_5_102	MW-31	Appendix IV	Arsenic	mg/L	10	0	0%	0.28	0.31	
1_41_5_103	MW-31	Appendix IV	Barium	mg/L	10	0	0%	-0.20	0.47	
1_41_5_104	MW-31	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	
1_41_5_106	MW-31	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	
1_41_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.13	0.65	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_41_5_110	MW-31	Appendix IV	Cobalt	mg/L	10	0	0%	-0.33	0.23	
1_41_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.034	0.90	
1_41_5_115	MW-31	Appendix IV	Lead	mg/L	10	9	90%	NA	NA	
1_41_5_116	MW-31	Appendix IV	Lithium	mg/L	10	0	0%	0.077	0.78	
1_41_5_118	MW-31	Appendix IV	Molybdenum	mg/L	10	0	0%	-0.080	0.77	
1_41_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	-0.70	0.024	*
1_41_5_122	MW-31	Appendix IV	Selenium	mg/L	10	5	50%	-0.037	0.91	
1_41_5_125	MW-31	Appendix IV	Thallium	mg/L	10	9	90%	NA	NA	
1_41_6_111	MW-31	Part 115	Copper	mg/L	10	8	80%	-0.50	0.16	
1_41_6_114	MW-31	Part 115	Iron	mg/L	10	0	0%	0.46	0.093	
1_41_6_119	MW-31	Part 115	Nickel	mg/L	10	9	90%	NA	NA	
1_41_6_130	MW-31	Part 115	Zinc	mg/L	10	7	70%	-0.29	0.42	
2_11_4_105	MW-01R	Appendix III	Boron	mg/L	11	0	0%	0.14	0.61	
2_11_4_107	MW-01R	Appendix III	Calcium	mg/L	11	0	0%	-0.036	0.89	
2_11_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	-0.075	0.78	
2_11_4_112	MW-01R	Appendix III	Fluoride	mg/L	11	0	0%	0.18	0.49	
2_11_4_120	MW-01R	Appendix III	pH (field)	su	11	0	0%	-0.12	0.66	
2_11_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.098	0.71	
2_11_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.081	0.76	
2_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	11	3	27%	0.22	0.46	
2_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	11	0	0%	0.048	0.86	
2_11_5_103	MW-01R	Appendix IV	Barium	mg/L	11	0	0%	0.65	0.013	*
2_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	11	0	0%	0.25	0.34	
2_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	11	7	64%	-0.23	0.51	
2_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.00056	1.0	
2_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	11	0	0%	-0.24	0.37	
2_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.18	0.49	
2_11_5_115	MW-01R	Appendix IV	Lead	mg/L	11	2	18%	-0.16	0.58	
2_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	11	0	0%	0.12	0.65	
2_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11	1	9%	-0.062	0.82	
2_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	-0.71	0.036	*
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	0.027	0.92	
2_11_6_111	MW-01R	Part 115	Copper	mg/L	11	5	45%	-0.32	0.32	
2_11_6_114	MW-01R	Part 115	Iron	mg/L	11	0	0%	0.17	0.51	
2_11_6_119	MW-01R	Part 115	Nickel	mg/L	11	0	0%	-0.027	0.92	
2_11_6_129	MW-01R	Part 115	Vanadium	mg/L	11	2	18%	0.49	0.086	
2_11_6_130	MW-01R	Part 115	Zinc	mg/L	11	1	9%	0.28	0.31	
2_12_4_105	MW-02	Appendix III	Boron	mg/L	10	0	0%	0.13	0.63	
2_12_4_107	MW-02	Appendix III	Calcium	mg/L	10	0	0%	-0.20	0.46	
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.095	0.73	
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	-0.19	0.49	
2_12_4_120	MW-02	Appendix III	pH (field)	su	10	0	0%	-0.045	0.87	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_12_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	10	6	60%	-0.41	0.25	
2_12_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.056	0.84	
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	-0.096	0.76	
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	0.17	0.53	
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	10	0	0%	-0.10	0.71	
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	10	1	10%	0.42	0.14	
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	10	7	70%	-0.17	0.64	
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.14	0.61	
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	10	0	0%	0.061	0.82	
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.19	0.49	
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	10	1	10%	0.052	0.86	
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	10	0	0%	-0.12	0.67	
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	10	0	0%	0.56	0.039	*
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.28	0.38	
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	10	0	0%	-0.13	0.64	
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	10	9	90%	NA	NA	
2_12_6_111	MW-02	Part 115	Copper	mg/L	10	0	0%	-0.18	0.52	
2_12_6_114	MW-02	Part 115	Iron	mg/L	10	0	0%	0.068	0.80	
2_12_6_119	MW-02	Part 115	Nickel	mg/L	10	0	0%	0.28	0.31	
2_12_6_129	MW-02	Part 115	Vanadium	mg/L	10	1	10%	0.23	0.42	
2_12_6_130	MW-02	Part 115	Zinc	mg/L	10	0	0%	-0.20	0.46	
2_13_4_105	MW-03	Appendix III	Boron	mg/L	10	0	0%	-0.24	0.38	
2_13_4_107	MW-03	Appendix III	Calcium	mg/L	10	0	0%	-0.26	0.34	
2_13_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.20	0.48	
2_13_4_112	MW-03	Appendix III	Fluoride	mg/L	10	0	0%	-0.011	0.97	
2_13_4_120	MW-03	Appendix III	pH (field)	su	10	0	0%	-0.21	0.44	
2_13_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.26	0.35	
2_13_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.0026	0.99	
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	10	6	60%	-0.041	0.91	
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	10	0	0%	0.30	0.27	
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	10	0	0%	-0.56	0.042	*
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	10	7	70%	-0.67	0.068	
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.091	0.74	
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	10	0	0%	-0.046	0.87	
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.011	0.97	
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	10	9	90%	NA	NA	
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	10	0	0%	-0.013	0.96	
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	10	9	90%	NA	NA	
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	10	8	80%	-0.50	0.16	
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	1	10%	-0.53	0.062	
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	10	3	30%	0.14	0.65	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	10	9	90%	NA	NA	
2_13_6_111	MW-03	Part 115	Copper	mg/L	10	5	50%	-0.37	0.28	
2_13_6_114	MW-03	Part 115	Iron	mg/L	10	0	0%	0.59	0.032	*
2_13_6_119	MW-03	Part 115	Nickel	mg/L	10	1	10%	-0.084	0.77	
2_13_6_129	MW-03	Part 115	Vanadium	mg/L	10	9	90%	NA	NA	
2_13_6_130	MW-03	Part 115	Zinc	mg/L	10	6	60%	0.26	0.46	
2_14_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	0.22	0.40	
2_14_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	0.037	0.88	
2_14_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.28	0.28	
2_14_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	0.24	0.35	
2_14_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	0.32	0.22	
2_14_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.39	0.12	
2_14_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.088	0.73	
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	-0.65	0.073	
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	0.20	0.42	
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	-0.11	0.68	
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.10	0.69	
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	0.056	0.83	
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.24	0.35	
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	0.12	0.63	
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	0.13	0.63	
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	-0.045	0.87	
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	12	6	50%	0.047	0.88	
2_14_6_111	MW-04	Part 115	Copper	mg/L	12	11	92%	NA	NA	
2_14_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	0.26	0.31	
2_14_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	0.12	0.65	
2_14_6_130	MW-04	Part 115	Zinc	mg/L	12	8	67%	0.14	0.68	
2_19_4_105	MW-09	Appendix III	Boron	mg/L	11	0	0%	-0.096	0.72	
2_19_4_107	MW-09	Appendix III	Calcium	mg/L	11	0	0%	0.49	0.062	
2_19_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.58	0.029	*
2_19_4_112	MW-09	Appendix III	Fluoride	mg/L	11	0	0%	0.34	0.19	
2_19_4_120	MW-09	Appendix III	pH (field)	su	11	0	0%	0.047	0.86	
2_19_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.46	0.080	
2_19_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.55	0.036	*
2_19_5_101	MW-09	Appendix IV	Antimony	mg/L	11	6	55%	-0.32	0.34	
2_19_5_102	MW-09	Appendix IV	Arsenic	mg/L	11	0	0%	0.13	0.62	
2_19_5_103	MW-09	Appendix IV	Barium	mg/L	11	0	0%	0.093	0.73	
2_19_5_104	MW-09	Appendix IV	Beryllium	mg/L	11	10	91%	NA	NA	
2_19_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.31	0.24	
2_19_5_110	MW-09	Appendix IV	Cobalt	mg/L	11	0	0%	-0.11	0.67	
2_19_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.34	0.19	
2_19_5_116	MW-09	Appendix IV	Lithium	mg/L	11	0	0%	0.19	0.47	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_19_5_117	MW-09	Appendix IV	Mercury	mg/L	11	10	91%	NA	NA	
2_19_5_118	MW-09	Appendix IV	Molybdenum	mg/L	11	0	0%	0.49	0.062	
2_19_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	11	10	91%	NA	NA	
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	-0.012	0.97	
2_19_6_111	MW-09	Part 115	Copper	mg/L	11	9	82%	-0.50	0.16	
2_19_6_114	MW-09	Part 115	Iron	mg/L	11	0	0%	0.47	0.075	
2_19_6_119	MW-09	Part 115	Nickel	mg/L	11	0	0%	-0.091	0.73	
2_19_6_130	MW-09	Part 115	Zinc	mg/L	11	7	64%	-0.24	0.50	
2_20_4_105	MW-10	Appendix III	Boron	mg/L	11	0	0%	0.49	0.066	
2_20_4_107	MW-10	Appendix III	Calcium	mg/L	11	0	0%	0.25	0.34	
2_20_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.58	0.028	*
2_20_4_112	MW-10	Appendix III	Fluoride	mg/L	11	0	0%	0.44	0.095	
2_20_4_120	MW-10	Appendix III	pH (field)	su	11	0	0%	-0.0054	0.98	
2_20_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	0.22	0.41	
2_20_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.064	0.81	
2_20_5_101	MW-10	Appendix IV	Antimony	mg/L	11	7	64%	-0.36	0.30	
2_20_5_102	MW-10	Appendix IV	Arsenic	mg/L	11	0	0%	0.50	0.057	
2_20_5_103	MW-10	Appendix IV	Barium	mg/L	11	0	0%	0.38	0.15	
2_20_5_104	MW-10	Appendix IV	Beryllium	mg/L	11	5	45%	-0.40	0.22	
2_20_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.47	0.076	
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	-0.052	0.85	
2_20_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.44	0.095	
2_20_5_115	MW-10	Appendix IV	Lead	mg/L	11	9	82%	-0.50	0.16	
2_20_5_116	MW-10	Appendix IV	Lithium	mg/L	11	0	0%	-0.20	0.46	
2_20_5_118	MW-10	Appendix IV	Molybdenum	mg/L	11	0	0%	-0.014	0.96	
2_20_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	-0.59	0.11	
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	0.0030	0.99	
2_20_6_111	MW-10	Part 115	Copper	mg/L	11	8	73%	-0.66	0.071	
2_20_6_114	MW-10	Part 115	Iron	mg/L	11	0	0%	0.65	0.014	*
2_20_6_119	MW-10	Part 115	Nickel	mg/L	11	5	45%	-0.41	0.20	
2_20_6_129	MW-10	Part 115	Vanadium	mg/L	11	10	91%	NA	NA	
2_20_6_130	MW-10	Part 115	Zinc	mg/L	11	3	27%	0.023	0.94	
2_21_4_105	MW-11	Appendix III	Boron	mg/L	10	0	0%	0.48	0.078	
2_21_4_107	MW-11	Appendix III	Calcium	mg/L	10	0	0%	0.35	0.20	
2_21_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.38	0.17	
2_21_4_112	MW-11	Appendix III	Fluoride	mg/L	10	0	0%	0.34	0.21	
2_21_4_120	MW-11	Appendix III	pH (field)	su	10	0	0%	-0.067	0.81	
2_21_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	2	20%	0.48	0.11	
2_21_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-0.32	0.24	
2_21_5_101	MW-11	Appendix IV	Antimony	mg/L	10	7	70%	-0.60	0.10	
2_21_5_102	MW-11	Appendix IV	Arsenic	mg/L	10	0	0%	0.15	0.58	
2_21_5_103	MW-11	Appendix IV	Barium	mg/L	10	0	0%	0.31	0.26	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_21_5_104	MW-11	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	
2_21_5_106	MW-11	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.11	0.68	
2_21_5_110	MW-11	Appendix IV	Cobalt	mg/L	10	0	0%	-0.016	0.95	
2_21_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.34	0.21	
2_21_5_115	MW-11	Appendix IV	Lead	mg/L	10	3	30%	-0.17	0.59	
2_21_5_116	MW-11	Appendix IV	Lithium	mg/L	10	0	0%	0.31	0.25	
2_21_5_118	MW-11	Appendix IV	Molybdenum	mg/L	10	2	20%	0.27	0.35	
2_21_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	-0.45	0.13	
2_21_5_122	MW-11	Appendix IV	Selenium	mg/L	10	3	30%	-0.043	0.89	
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	-0.21	0.49	
2_21_6_114	MW-11	Part 115	Iron	mg/L	10	0	0%	0.43	0.12	
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	-0.067	0.81	
2_21_6_123	MW-11	Part 115	Silver	mg/L	10	9	90%	NA	NA	
2_21_6_129	MW-11	Part 115	Vanadium	mg/L	10	9	90%	NA	NA	
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	-0.012	0.97	
2_22_4_105	MW-12	Appendix III	Boron	mg/L	13	0	0%	0.36	0.15	
2_22_4_107	MW-12	Appendix III	Calcium	mg/L	13	0	0%	-0.028	0.91	
2_22_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0	0%	-0.090	0.72	
2_22_4_112	MW-12	Appendix III	Fluoride	mg/L	13	0	0%	0.14	0.56	
2_22_4_120	MW-12	Appendix III	pH (field)	su	13	0	0%	0.22	0.37	
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	0.069	0.78	
2_22_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0	0%	0.26	0.30	
2_22_5_101	MW-12	Appendix IV	Antimony	mg/L	13	0	0%	0.43	0.082	
2_22_5_102	MW-12	Appendix IV	Arsenic	mg/L	13	0	0%	0.60	0.016	*
2_22_5_103	MW-12	Appendix IV	Barium	mg/L	13	0	0%	0.57	0.021	*
2_22_5_106	MW-12	Appendix IV	Cadmium	mg/L	13	0	0%	0.64	0.0100	**
2_22_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	13	6	46%	0.059	0.85	
2_22_5_110	MW-12	Appendix IV	Cobalt	mg/L	13	5	38%	0.64	0.030	*
2_22_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	13	0	0%	0.14	0.56	
2_22_5_115	MW-12	Appendix IV	Lead	mg/L	13	7	54%	0.31	0.34	
2_22_5_116	MW-12	Appendix IV	Lithium	mg/L	13	0	0%	0.57	0.023	*
2_22_5_117	MW-12	Appendix IV	Mercury	mg/L	13	12	92%	NA	NA	
2_22_5_118	MW-12	Appendix IV	Molybdenum	mg/L	13	0	0%	0.42	0.094	
2_22_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	13	11	85%	-0.50	0.16	
2_22_5_122	MW-12	Appendix IV	Selenium	mg/L	13	0	0%	0.65	0.0087	**
2_22_6_111	MW-12	Part 115	Copper	mg/L	13	0	0%	0.44	0.076	
2_22_6_114	MW-12	Part 115	Iron	mg/L	13	5	38%	0.29	0.32	
2_22_6_119	MW-12	Part 115	Nickel	mg/L	13	0	0%	0.28	0.25	
2_22_6_129	MW-12	Part 115	Vanadium	mg/L	13	7	54%	-0.066	0.84	
2_22_6_130	MW-12	Part 115	Zinc	mg/L	13	0	0%	0.18	0.48	
2_42_4_105	MW-32	Appendix III	Boron	mg/L	10	0	0%	0.15	0.58	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 4: Autocorrelation Tests, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_42_4_107	MW-32	Appendix III	Calcium	mg/L	10	0	0%	0.54	0.050	
2_42_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.40	0.14	
2_42_4_112	MW-32	Appendix III	Fluoride	mg/L	10	0	0%	-0.032	0.91	
2_42_4_120	MW-32	Appendix III	pH (field)	su	10	0	0%	0.13	0.65	
2_42_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.49	0.072	
2_42_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.50	0.066	
2_42_5_101	MW-32	Appendix IV	Antimony	mg/L	10	6	60%	0.0040	0.99	
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	0.022	0.93	
2_42_5_103	MW-32	Appendix IV	Barium	mg/L	10	0	0%	-0.23	0.40	
2_42_5_104	MW-32	Appendix IV	Beryllium	mg/L	10	9	90%	NA	NA	
2_42_5_106	MW-32	Appendix IV	Cadmium	mg/L	10	9	90%	NA	NA	
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.050	0.85	
2_42_5_110	MW-32	Appendix IV	Cobalt	mg/L	10	0	0%	-0.031	0.91	
2_42_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.032	0.91	
2_42_5_115	MW-32	Appendix IV	Lead	mg/L	10	7	70%	-0.13	0.73	
2_42_5_116	MW-32	Appendix IV	Lithium	mg/L	10	0	0%	0.11	0.69	
2_42_5_118	MW-32	Appendix IV	Molybdenum	mg/L	10	0	0%	0.21	0.43	
2_42_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	10	6	60%	-0.092	0.79	
2_42_5_122	MW-32	Appendix IV	Selenium	mg/L	10	9	90%	NA	NA	
2_42_6_111	MW-32	Part 115	Copper	mg/L	10	7	70%	-0.16	0.66	
2_42_6_114	MW-32	Part 115	Iron	mg/L	10	0	0%	0.57	0.038	*
2_42_6_119	MW-32	Part 115	Nickel	mg/L	10	0	0%	-0.027	0.92	
2_42_6_130	MW-32	Part 115	Zinc	mg/L	10	0	0%	-0.16	0.56	

*** p < 0.001, ** p < 0.01, * p < 0.05



Table 5: Outlier Counts by Date

Date	Count
2022-11-28	1
2022-11-30	2
2023-01-03	6
2023-01-04	6
2023-01-05	1
2023-02-06	1
2023-02-08	3
2023-03-13	3
2023-03-14	1
2023-04-18	4
2023-05-23	2
2023-06-27	1
2023-06-28	2
2023-08-08	1
2023-10-24	5
2024-02-12	6
2024-02-13	12

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	10	2023-02-06	NA	6.4
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	10	2023-04-18	25	0.99
1_16_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	8	2023-03-14	NA	1.9
1_16_5_122	MW-06	Appendix IV	Selenium	mg/L	10	5	50%	5	2024-02-13	1	0.00047
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	10	2023-01-05	NA	6.2
1_18_5_122	MW-08	Appendix IV	Selenium	mg/L	10	5	50%	5	2024-02-13	1	0.00034
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	10	2024-02-13	1	0.0026
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	11	2023-08-08	1	0.0015
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	11	2023-06-28	1	58
1_30_4_112	MW-20	Appendix III	Fluoride	mg/L	11	0	0%	11	2022-11-30	25	0.55
1_30_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	11	2022-11-30	25	0.55
1_30_5_122	MW-20	Appendix IV	Selenium	mg/L	11	6	55%	5	2024-02-13	1	0.00026
1_40_4_105	MW-30	Appendix III	Boron	mg/L	14	0	0%	14	2023-03-13	50	3.5
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	14	2023-03-13	50	960
1_40_5_116	MW-30	Appendix IV	Lithium	mg/L	14	0	0%	14	2023-03-13	50	0.27
1_40_5_122	MW-30	Appendix IV	Selenium	mg/L	14	9	64%	5	2024-02-12	1	0.00039
1_40_6_130	MW-30	Part 115	Zinc	mg/L	14	10	71%	4	2023-06-27	1	0.0015
1_41_5_122	MW-31	Appendix IV	Selenium	mg/L	10	5	50%	5	2024-02-12	1	0.00074
2_11_4_120	MW-01R	Appendix III	pH (field)	su	11	0	0%	11	2023-01-03	NA	6.0
2_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	11	0	0%	11	2024-02-13	1	0.022

(Table continues on next page)



Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
2_11_5_115	MW-01R	Appendix IV	Lead	mg/L	11	2	18%	9	2023-06-28	5	0.0053
2_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11	1	9%	10	2024-02-13	1	0.0056
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	11	2024-02-13	1	0.0018
2_11_6_119	MW-01R	Part 115	Nickel	mg/L	11	0	0%	11	2024-02-13	1	0.022
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	10	2023-02-08	50	67
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	10	2023-02-08	50	4.5
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	7	2023-04-18	5	0.00063
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	10	2024-02-13	1	0.00044
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	10	7	70%	3	2023-10-24	1	0.00049
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	10	2023-02-08	50	4.5
2_13_4_112	MW-03	Appendix III	Fluoride	mg/L	10	0	0%	10	2023-01-04	5	1.6
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	10	6	60%	4	2023-04-18	5	0.00045
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	10	2023-01-04	5	1.6
2_13_6_111	MW-03	Part 115	Copper	mg/L	10	5	50%	5	2023-10-24	1	0.00091
2_13_6_119	MW-03	Part 115	Nickel	mg/L	10	1	10%	9	2023-01-04	1	0.015
2_14_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	12	2023-10-24	5	1.9
2_14_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	12	2023-01-04	5	1.8
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	12	2023-01-04	1	0.46
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	12	2023-10-24	5	1.9
2_19_5_103	MW-09	Appendix IV	Barium	mg/L	11	0	0%	11	2023-01-04	5	2.4
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	9	2023-05-23	1	0.00012
2_19_6_119	MW-09	Part 115	Nickel	mg/L	11	0	0%	11	2024-02-13	1	0.0060
2_20_5_101	MW-10	Appendix IV	Antimony	mg/L	11	7	64%	4	2023-04-18	5	0.00034
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	10	2023-05-23	1	0.0018
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	9	2024-02-13	1	0.00083
2_21_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	10	2023-10-24	4	1800
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	10	2023-01-03	1	0.0086
2_21_5_115	MW-11	Appendix IV	Lead	mg/L	10	3	30%	7	2023-01-03	1	0.068
2_21_5_122	MW-11	Appendix IV	Selenium	mg/L	10	3	30%	7	2024-02-13	1	0.00071
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	7	2023-01-03	1	0.019
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	10	2023-01-03	1	0.0094
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	7	2023-01-03	1	0.10
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	13	2022-11-28	25	180
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	10	2024-02-12	1	0.0024
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	10	2024-02-12	1	0.0030
2_42_5_110	MW-32	Appendix IV	Cobalt	mg/L	10	0	0%	10	2024-02-12	1	0.0019
2_42_6_119	MW-32	Part 115	Nickel	mg/L	10	0	0%	10	2024-02-12	1	0.023



Table 7: Trend Tests: Lognormal MLE and MK

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
1_16_4_105	MW-06	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00048	0.13	↔
1_16_4_107	MW-06	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00025	0.32	↔
1_16_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0036	0	↓
1_16_4_112	MW-06	Appendix III	Fluoride	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00033	0.27	↔
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	Nonparametric	MK	-0.00014	0.53	↔
1_16_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	10	1	10%	Parametric	Lognormal MLE	-0.0080	0.00097	↓
1_16_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Nonparametric	MK	-0.34	0.049	↔
1_16_5_102	MW-06	Appendix IV	Arsenic	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00028	0.58	↔
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	Nonparametric	MK	0	0.51	↔
1_16_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00086	0.18	↔
1_16_5_110	MW-06	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00079	0.14	↔
1_16_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00033	0.27	↔
1_16_5_116	MW-06	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00091	0.014	↔
1_16_6_114	MW-06	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00093	0.050	↔
1_16_6_119	MW-06	Part 115	Nickel	mg/L	10	3	30%	Parametric	Lognormal MLE	-0.0015	0.023	↔
1_16_6_130	MW-06	Part 115	Zinc	mg/L	10	2	20%	Nonparametric	MK	-0.0000026	0.14	↔
1_17_4_105	MW-07	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00013	0.43	↔
1_17_4_107	MW-07	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.0000071	0.97	↔
1_17_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Nonparametric	MK	-0.0030	0.077	↔
1_17_4_112	MW-07	Appendix III	Fluoride	mg/L	10	1	10%	Parametric	Lognormal MLE	-0.00035	0.69	↔
1_17_4_120	MW-07	Appendix III	pH (field)	su	10	0	0%	Parametric	Lognormal MLE	0.000012	0.80	↔
1_17_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.000066	0.92	↔
1_17_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00040	0.16	↔
1_17_5_102	MW-07	Appendix IV	Arsenic	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00028	0.56	↔
1_17_5_103	MW-07	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00027	0.30	↔
1_17_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00019	0.52	↔
1_17_5_110	MW-07	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	0.000019	0.95	↔
1_17_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	10	1	10%	Parametric	Lognormal MLE	-0.00035	0.69	↔
1_17_5_116	MW-07	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0011	0.11	↔
1_17_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	Parametric	Lognormal MLE	-0.00077	0.44	↔
1_17_6_114	MW-07	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00032	0.27	↔
1_18_4_105	MW-08	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00082	0.34	↔
1_18_4_107	MW-08	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00061	0.000018	↓
1_18_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.000084	0.88	↔
1_18_4_112	MW-08	Appendix III	Fluoride	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00070	0.42	↔
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	Nonparametric	MK	0.00042	0.074	↔
1_18_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	3	30%	Parametric	Lognormal MLE	-0.0060	0.20	↔
1_18_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00020	0.43	↔
1_18_5_101	MW-08	Appendix IV	Antimony	mg/L	10	4	40%	Parametric	Lognormal MLE	-0.0027	0.23	↔
1_18_5_102	MW-08	Appendix IV	Arsenic	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00034	0.82	↔
1_18_5_103	MW-08	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00070	0.0049	↓
1_18_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00087	0.12	↔
1_18_5_110	MW-08	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00066	0.28	↔

(Table continues on next page)



Table 7: Trend Tests: Lognormal MLE and MK (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
1_18_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00070	0.42	↔
1_18_5_116	MW-08	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00014	0.82	↔
1_18_5_118	MW-08	Appendix IV	Molybdenum	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0015	0.36	↔
1_18_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	Parametric	Lognormal MLE	-0.0017	0.17	↔
1_18_6_114	MW-08	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00089	0.13	↔
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00085	0.21	↔
1_18_6_130	MW-08	Part 115	Zinc	mg/L	10	3	30%	Nonparametric	MK	-0.0000026	0.41	↔
1_28_4_105	MW-18	Appendix III	Boron	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0012	0.000012	↑
1_28_4_107	MW-18	Appendix III	Calcium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00048	0.28	↔
1_28_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0000073	0.99	↔
1_28_4_112	MW-18	Appendix III	Fluoride	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00039	0.17	↔
1_28_4_120	MW-18	Appendix III	pH (field)	su	11	0	0%	Parametric	Lognormal MLE	0.000060	0.00021	↑
1_28_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00017	0.79	↔
1_28_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00052	0.10	↔
1_28_5_102	MW-18	Appendix IV	Arsenic	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00075	0.27	↔
1_28_5_103	MW-18	Appendix IV	Barium	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00037	0.55	↔
1_28_5_106	MW-18	Appendix IV	Cadmium	mg/L	11	3	27%	Parametric	Lognormal MLE	-0.0030	0.16	↔
1_28_5_110	MW-18	Appendix IV	Cobalt	mg/L	11	0	0%	Nonparametric	MK	-0.000012	0.015	↔
1_28_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00039	0.17	↔
1_28_5_116	MW-18	Appendix IV	Lithium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00073	0.20	↔
1_28_5_118	MW-18	Appendix IV	Molybdenum	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00059	0.39	↔
1_28_5_122	MW-18	Appendix IV	Selenium	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0017	0.33	↔
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	Nonparametric	MK	0	0.26	↔
1_28_6_114	MW-18	Part 115	Iron	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00035	0.55	↔
1_28_6_119	MW-18	Part 115	Nickel	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0018	0.0011	↓
1_28_6_130	MW-18	Part 115	Zinc	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0015	0.020	↔
1_29_4_105	MW-19	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.000081	0.85	↔
1_29_4_107	MW-19	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00037	0.13	↔
1_29_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0013	0.0027	↓
1_29_4_112	MW-19	Appendix III	Fluoride	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00041	0.083	↔
1_29_4_120	MW-19	Appendix III	pH (field)	su	10	0	0%	Parametric	Lognormal MLE	-0.0000060	0.93	↔
1_29_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00030	0.60	↔
1_29_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00062	0.0027	↓
1_29_5_102	MW-19	Appendix IV	Arsenic	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00071	0.40	↔
1_29_5_103	MW-19	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00040	0.23	↔
1_29_5_104	MW-19	Appendix IV	Beryllium	mg/L	10	3	30%	Parametric	Lognormal MLE	0.00076	0.094	↔
1_29_5_110	MW-19	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0033	0.00028	↓
1_29_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00041	0.083	↔
1_29_5_116	MW-19	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00067	0.00047	↓
1_29_5_118	MW-19	Appendix IV	Molybdenum	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0017	0.032	↔
1_29_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	Parametric	Lognormal MLE	-0.00029	0.75	↔
1_29_6_114	MW-19	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00081	0.052	↔
1_29_6_119	MW-19	Part 115	Nickel	mg/L	10	1	10%	Parametric	Lognormal MLE	-0.0020	0.000030	↓

(Table continues on next page)



Table 7: Trend Tests: Lognormal MLE and MK (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
1_30_4_105	MW-20	Appendix III	Boron	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.000061	0.87	↔
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00049	0.42	↔
1_30_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00075	0.11	↔
1_30_4_112	MW-20	Appendix III	Fluoride	mg/L	11	0	0%	Nonparametric	MK	-0.000079	0.38	↔
1_30_4_120	MW-20	Appendix III	pH (field)	su	11	0	0%	Parametric	Lognormal MLE	0.000013	0.73	↔
1_30_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0015	0.26	↔
1_30_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00023	0.26	↔
1_30_5_101	MW-20	Appendix IV	Antimony	mg/L	11	3	27%	Parametric	Lognormal MLE	0.000063	0.96	↔
1_30_5_102	MW-20	Appendix IV	Arsenic	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00016	0.66	↔
1_30_5_103	MW-20	Appendix IV	Barium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00072	0.30	↔
1_30_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	11	5	45%	Parametric	Lognormal MLE	-0.00019	0.71	↔
1_30_5_110	MW-20	Appendix IV	Cobalt	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00084	0.0016	↓
1_30_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	Nonparametric	MK	-0.000079	0.38	↔
1_30_5_115	MW-20	Appendix IV	Lead	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00049	0.41	↔
1_30_5_116	MW-20	Appendix IV	Lithium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00091	0.14	↔
1_30_5_118	MW-20	Appendix IV	Molybdenum	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00054	0.036	↔
1_30_6_111	MW-20	Part 115	Copper	mg/L	11	1	9%	Parametric	Lognormal MLE	0.0011	0.079	↔
1_30_6_114	MW-20	Part 115	Iron	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00023	0.26	↔
1_30_6_119	MW-20	Part 115	Nickel	mg/L	11	0	0%	Nonparametric	MK	-0.0000069	0.16	↔
1_30_6_130	MW-20	Part 115	Zinc	mg/L	11	0	0%	Nonparametric	MK	-0.000039	0.099	↔
1_40_4_105	MW-30	Appendix III	Boron	mg/L	14	0	0%	Nonparametric	MK	-0.00031	0.53	↔
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	Nonparametric	MK	-0.22	0.059	↔
1_40_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0	0%	Nonparametric	MK	-0.29	0.0013	↓
1_40_4_112	MW-30	Appendix III	Fluoride	mg/L	14	0	0%	Parametric	Lognormal MLE	0.0000079	0.98	↔
1_40_4_120	MW-30	Appendix III	pH (field)	su	14	0	0%	Nonparametric	MK	0.00035	0.18	↔
1_40_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.00033	0.19	↔
1_40_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.00022	0.27	↔
1_40_5_102	MW-30	Appendix IV	Arsenic	mg/L	14	3	21%	Parametric	Lognormal MLE	-0.0011	0.40	↔
1_40_5_103	MW-30	Appendix IV	Barium	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.0013	0.011	↔
1_40_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.0015	0.016	↔
1_40_5_110	MW-30	Appendix IV	Cobalt	mg/L	14	0	0%	Nonparametric	MK	0	0.74	↔
1_40_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	14	0	0%	Parametric	Lognormal MLE	0.0000079	0.98	↔
1_40_5_116	MW-30	Appendix IV	Lithium	mg/L	14	0	0%	Nonparametric	MK	-0.000054	0.16	↔
1_40_5_118	MW-30	Appendix IV	Molybdenum	mg/L	14	5	36%	Parametric	Lognormal MLE	-0.0010	0.54	↔
1_40_6_114	MW-30	Part 115	Iron	mg/L	14	0	0%	Parametric	Lognormal MLE	0.00080	0.57	↔
1_40_6_119	MW-30	Part 115	Nickel	mg/L	14	4	29%	Parametric	Lognormal MLE	-0.00084	0.64	↔
1_41_4_105	MW-31	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00036	0.20	↔
1_41_4_107	MW-31	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00033	0.20	↔
1_41_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00018	0.35	↔
1_41_4_112	MW-31	Appendix III	Fluoride	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.000073	0.54	↔
1_41_4_120	MW-31	Appendix III	pH (field)	su	10	0	0%	Parametric	Lognormal MLE	-0.0000097	0.73	↔
1_41_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0020	0.0064	↓
1_41_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00026	0.10	↔

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Table 7: Trend Tests: Lognormal MLE and MK (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
1_41_5_102	MW-31	Appendix IV	Arsenic	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00049	0.27	↔
1_41_5_103	MW-31	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00044	0.36	↔
1_41_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00040	0.20	↔
1_41_5_110	MW-31	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00070	0.12	↔
1_41_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.000073	0.54	↔
1_41_5_116	MW-31	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00040	0.060	↔
1_41_5_118	MW-31	Appendix IV	Molybdenum	mg/L	10	0	0%	Nonparametric	MK	0	0.22	↔
1_41_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	Parametric	Lognormal MLE	-0.00027	0.77	↔
1_41_6_114	MW-31	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0067	0	↓
2_11_4_105	MW-01R	Appendix III	Boron	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00058	0.51	↔
2_11_4_107	MW-01R	Appendix III	Calcium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00011	0.87	↔
2_11_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00062	0.54	↔
2_11_4_112	MW-01R	Appendix III	Fluoride	mg/L	11	0	0%	Nonparametric	MK	0	0.62	↔
2_11_4_120	MW-01R	Appendix III	pH (field)	su	11	0	0%	Nonparametric	MK	0.000036	1.0	↔
2_11_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0035	0.20	↔
2_11_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	Parametric	Lognormal MLE	0.000048	0.70	↔
2_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	11	3	27%	Parametric	Lognormal MLE	-0.00027	0.86	↔
2_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0010	0.29	↔
2_11_5_103	MW-01R	Appendix IV	Barium	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0017	0.00031	↑
2_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.000097	0.90	↔
2_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	11	0	0%	Nonparametric	MK	0.0000054	0.017	↔
2_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	11	0	0%	Nonparametric	MK	0.0000028	0.39	↔
2_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	Nonparametric	MK	0	0.62	↔
2_11_5_115	MW-01R	Appendix IV	Lead	mg/L	11	2	18%	Parametric	Lognormal MLE	0.0010	0.48	↔
2_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00073	0.43	↔
2_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11	1	9%	Nonparametric	MK	0	0.39	↔
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0016	0.035	↔
2_11_6_111	MW-01R	Part 115	Copper	mg/L	11	5	45%	Nonparametric	MK	0	0.22	↔
2_11_6_114	MW-01R	Part 115	Iron	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0016	0.17	↔
2_11_6_119	MW-01R	Part 115	Nickel	mg/L	11	0	0%	Nonparametric	MK	0.0000048	0.050	↔
2_11_6_129	MW-01R	Part 115	Vanadium	mg/L	11	2	18%	Parametric	Lognormal MLE	0.0037	0.0046	↑
2_11_6_130	MW-01R	Part 115	Zinc	mg/L	11	1	9%	Nonparametric	MK	-0.0000032	0.42	↔
2_12_4_105	MW-02	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00044	0.079	↔
2_12_4_107	MW-02	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.0000056	0.98	↔
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Nonparametric	MK	0	0.54	↔
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	Nonparametric	MK	0.0013	0.42	↔
2_12_4_120	MW-02	Appendix III	pH (field)	su	10	0	0%	Parametric	Lognormal MLE	0.000014	0.72	↔
2_12_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Parametric	Lognormal MLE	0.000011	0.95	↔
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	Parametric	Lognormal MLE	-0.00081	0.57	↔
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	Nonparametric	MK	-0.0000018	0.79	↔
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00030	0.45	↔
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	10	1	10%	Parametric	Lognormal MLE	-0.0026	0.10	↔
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0070	0.010	↔

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Table 7: Trend Tests: Lognormal MLE and MK (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0044	0.028	↔
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Nonparametric	MK	0.0013	0.42	↔
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	10	1	10%	Parametric	Lognormal MLE	-0.0051	0.032	↔
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.0000065	0.99	↔
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0015	0.020	↔
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	Parametric	Lognormal MLE	-0.00049	0.82	↔
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00032	0.72	↔
2_12_6_111	MW-02	Part 115	Copper	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0022	0.17	↔
2_12_6_114	MW-02	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.000056	0.89	↔
2_12_6_119	MW-02	Part 115	Nickel	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0053	0.0030	↓
2_12_6_129	MW-02	Part 115	Vanadium	mg/L	10	1	10%	Parametric	Lognormal MLE	-0.0016	0.40	↔
2_12_6_130	MW-02	Part 115	Zinc	mg/L	10	0	0%	Nonparametric	MK	-0.0000035	0.47	↔
2_13_4_105	MW-03	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00028	0.13	↔
2_13_4_107	MW-03	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.000048	0.85	↔
2_13_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0012	0.0041	↓
2_13_4_112	MW-03	Appendix III	Fluoride	mg/L	10	0	0%	Nonparametric	MK	-0.000090	0.42	↔
2_13_4_120	MW-03	Appendix III	pH (field)	su	10	0	0%	Parametric	Lognormal MLE	0.000029	0.40	↔
2_13_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	Parametric	Lognormal MLE	0.0020	0.27	↔
2_13_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Nonparametric	MK	0	1.0	↔
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0000036	1.0	↔
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00093	0.26	↔
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0010	0.093	↔
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00011	0.92	↔
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Nonparametric	MK	-0.000090	0.42	↔
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00088	0.020	↔
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	1	10%	Parametric	Lognormal MLE	-0.00082	0.25	↔
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	10	3	30%	Parametric	Lognormal MLE	0.0021	0.063	↔
2_13_6_114	MW-03	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0048	0.011	↔
2_13_6_119	MW-03	Part 115	Nickel	mg/L	10	1	10%	Nonparametric	MK	-0.0000026	0.24	↔
2_14_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00028	0.055	↔
2_14_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000056	0.78	↔
2_14_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0014	0.0000090	↓
2_14_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	Nonparametric	MK	0.00079	0.021	↔
2_14_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	-0.0000014	0.97	↔
2_14_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Nonparametric	MK	0.36	0.071	↔
2_14_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000045	0.98	↔
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00092	0.23	↔
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	Nonparametric	MK	0	0.67	↔
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00085	0.19	↔
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0016	0.083	↔
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Nonparametric	MK	0.00079	0.021	↔
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000025	0.95	↔
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	Parametric	Lognormal MLE	-0.00028	0.83	↔

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Table 7: Trend Tests: Lognormal MLE and MK (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	Parametric	Lognormal MLE	-0.0015	0.030	↔
2_14_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000063	0.82	↔
2_14_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0014	0.34	↔
2_19_4_105	MW-09	Appendix III	Boron	mg/L	11	0	0%	Parametric	Lognormal MLE	0.000032	0.88	↔
2_19_4_107	MW-09	Appendix III	Calcium	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00089	0.024	↔
2_19_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00040	0.38	↔
2_19_4_112	MW-09	Appendix III	Fluoride	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00019	0.41	↔
2_19_4_120	MW-09	Appendix III	pH (field)	su	11	0	0%	Nonparametric	MK	-0.000055	0.52	↔
2_19_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0031	0.020	↔
2_19_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0011	0.019	↔
2_19_5_102	MW-09	Appendix IV	Arsenic	mg/L	11	0	0%	Nonparametric	MK	0	0.46	↔
2_19_5_103	MW-09	Appendix IV	Barium	mg/L	11	0	0%	Nonparametric	MK	-0.00091	0.085	↔
2_19_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0011	0.019	↔
2_19_5_110	MW-09	Appendix IV	Cobalt	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00023	0.80	↔
2_19_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00019	0.41	↔
2_19_5_116	MW-09	Appendix IV	Lithium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00029	0.14	↔
2_19_5_118	MW-09	Appendix IV	Molybdenum	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0022	0.000022	↓
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	Nonparametric	MK	0	0.53	↔
2_19_6_114	MW-09	Part 115	Iron	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00010	0.80	↔
2_19_6_119	MW-09	Part 115	Nickel	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00086	0.53	↔
2_20_4_105	MW-10	Appendix III	Boron	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00040	0.77	↔
2_20_4_107	MW-10	Appendix III	Calcium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00028	0.67	↔
2_20_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	Parametric	Lognormal MLE	0.0011	0.31	↔
2_20_4_112	MW-10	Appendix III	Fluoride	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00026	0.74	↔
2_20_4_120	MW-10	Appendix III	pH (field)	su	11	0	0%	Parametric	Lognormal MLE	-0.000011	0.93	↔
2_20_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00096	0.51	↔
2_20_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00017	0.52	↔
2_20_5_102	MW-10	Appendix IV	Arsenic	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00095	0.50	↔
2_20_5_103	MW-10	Appendix IV	Barium	mg/L	11	0	0%	Parametric	Lognormal MLE	0.00025	0.81	↔
2_20_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00058	0.67	↔
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	Parametric	Lognormal MLE	-0.0022	0.22	↔
2_20_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00026	0.74	↔
2_20_5_116	MW-10	Appendix IV	Lithium	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00044	0.53	↔
2_20_5_118	MW-10	Appendix IV	Molybdenum	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.0037	0.000014	↓
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	Parametric	Lognormal MLE	0.0020	0.0088	↑
2_20_6_114	MW-10	Part 115	Iron	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00095	0.24	↔
2_20_6_119	MW-10	Part 115	Nickel	mg/L	11	5	45%	Parametric	Lognormal MLE	-0.00014	0.92	↔
2_20_6_130	MW-10	Part 115	Zinc	mg/L	11	3	27%	Nonparametric	MK	0	0.68	↔
2_21_4_105	MW-11	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00079	0.65	↔
2_21_4_107	MW-11	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00030	0.72	↔
2_21_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00038	0.41	↔
2_21_4_112	MW-11	Appendix III	Fluoride	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00063	0.70	↔
2_21_4_120	MW-11	Appendix III	pH (field)	su	10	0	0%	Parametric	Lognormal MLE	0	0.98	↔

(Table continues on next page)



Table 7: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_21_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	2	20%	Nonparametric	MK	-0.044	0.18	↔
2_21_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00048	0.40	↔
2_21_5_102	MW-11	Appendix IV	Arsenic	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00059	0.62	↔
2_21_5_103	MW-11	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00011	0.90	↔
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	Nonparametric	MK	0	0.59	↔
2_21_5_110	MW-11	Appendix IV	Cobalt	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0022	0.018	↔
2_21_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00063	0.70	↔
2_21_5_115	MW-11	Appendix IV	Lead	mg/L	10	3	30%	Parametric	Lognormal MLE	-0.0068	0.13	↔
2_21_5_116	MW-11	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00052	0.85	↔
2_21_5_118	MW-11	Appendix IV	Molybdenum	mg/L	10	2	20%	Parametric	Lognormal MLE	-0.0014	0.37	↔
2_21_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	Parametric	Lognormal MLE	-0.0010	0.21	↔
2_21_5_122	MW-11	Appendix IV	Selenium	mg/L	10	3	30%	Parametric	Lognormal MLE	0.0020	0.083	↔
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	Nonparametric	MK	0	0.46	↔
2_21_6_114	MW-11	Part 115	Iron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00049	0.60	↔
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	Nonparametric	MK	0	0.72	↔
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	Nonparametric	MK	-0.000044	0.057	↔
2_22_4_105	MW-12	Appendix III	Boron	mg/L	13	0	0%	Parametric	Lognormal MLE	0.00046	0.46	↔
2_22_4_107	MW-12	Appendix III	Calcium	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.00010	0.87	↔
2_22_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.000067	0.88	↔
2_22_4_112	MW-12	Appendix III	Fluoride	mg/L	13	0	0%	Nonparametric	MK	-0.000095	0.76	↔
2_22_4_120	MW-12	Appendix III	pH (field)	su	13	0	0%	Parametric	Lognormal MLE	0.000072	0.50	↔
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.0011	0.0048	↓
2_22_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.0012	0.15	↔
2_22_5_101	MW-12	Appendix IV	Antimony	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.0022	0.00032	↓
2_22_5_102	MW-12	Appendix IV	Arsenic	mg/L	13	0	0%	Parametric	Lognormal MLE	0.00070	0.35	↔
2_22_5_103	MW-12	Appendix IV	Barium	mg/L	13	0	0%	Parametric	Lognormal MLE	0.0015	0.064	↔
2_22_5_106	MW-12	Appendix IV	Cadmium	mg/L	13	0	0%	Parametric	Lognormal MLE	0.00091	0.49	↔
2_22_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	13	6	46%	Nonparametric	MK	0	0.33	↔
2_22_5_110	MW-12	Appendix IV	Cobalt	mg/L	13	5	38%	Parametric	Lognormal MLE	0.0028	0.28	↔
2_22_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	13	0	0%	Nonparametric	MK	-0.000095	0.76	↔
2_22_5_116	MW-12	Appendix IV	Lithium	mg/L	13	0	0%	Parametric	Lognormal MLE	0.00059	0.45	↔
2_22_5_118	MW-12	Appendix IV	Molybdenum	mg/L	13	0	0%	Parametric	Lognormal MLE	0.00010	0.84	↔
2_22_5_122	MW-12	Appendix IV	Selenium	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.0049	0.011	↔
2_22_6_111	MW-12	Part 115	Copper	mg/L	13	0	0%	Parametric	Lognormal MLE	0.00062	0.33	↔
2_22_6_114	MW-12	Part 115	Iron	mg/L	13	5	38%	Parametric	Lognormal MLE	0.00096	0.48	↔
2_22_6_119	MW-12	Part 115	Nickel	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.00019	0.80	↔
2_22_6_130	MW-12	Part 115	Zinc	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.00064	0.52	↔
2_42_4_105	MW-32	Appendix III	Boron	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00041	0.34	↔
2_42_4_107	MW-32	Appendix III	Calcium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00059	0.062	↔
2_42_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00046	0.0017	↓
2_42_4_112	MW-32	Appendix III	Fluoride	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00021	0.21	↔
2_42_4_120	MW-32	Appendix III	pH (field)	su	10	0	0%	Parametric	Lognormal MLE	0	0.98	↔
2_42_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0029	0.10	↔

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Table 7: Trend Tests: Lognormal MLE and MK (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_42_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.00049	0.053	↔
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	Nonparametric	MK	0	0.088	↔
2_42_5_103	MW-32	Appendix IV	Barium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.0033	0.014	↔
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	Nonparametric	MK	0	0.088	↔
2_42_5_110	MW-32	Appendix IV	Cobalt	mg/L	10	0	0%	Nonparametric	MK	0	0.049	↔
2_42_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	Parametric	Lognormal MLE	0.00021	0.21	↔
2_42_5_116	MW-32	Appendix IV	Lithium	mg/L	10	0	0%	Parametric	Lognormal MLE	-0.000054	0.92	↔
2_42_5_118	MW-32	Appendix IV	Molybdenum	mg/L	10	0	0%	Parametric	Lognormal MLE	0.0010	0.020	↔
2_42_6_114	MW-32	Part 115	Iron	mg/L	10	0	0%	Nonparametric	MK	-0.024	0.0079	↓
2_42_6_119	MW-32	Part 115	Nickel	mg/L	10	0	0%	Nonparametric	MK	-0.0000014	0.12	↔
2_42_6_130	MW-32	Part 115	Zinc	mg/L	10	0	0%	Nonparametric	MK	0.0000034	0.53	↔

Table 8: Trend Tests: Piecewise Linear-Linear

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
1_16_4_105	MW-06	Appendix III	Boron	mg/L	10	0	0%	-0.029	0.36	↔	-0.00077	0.88	↔	2023-02-16	0.34	↔
1_16_4_107	MW-06	Appendix III	Calcium	mg/L	10	0	0%	0.56	0.37	↔	-0.057	0.58	↔	2023-03-13	0.40	↔
1_16_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.73	0.089	↔	-0.13	0.086	↔	2023-03-09	0.86	↔
1_16_4_112	MW-06	Appendix III	Fluoride	mg/L	10	0	0%	-0.0029	0.42	↔	0.00011	0.86	↔	2023-03-03	0.31	↔
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	-0.0051	0.68	↔	0.00095	0.34	↔	2023-02-05	0.21	↔
1_16_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	10	1	10%	-0.0049	0.92	↔	-0.057	0.19	↔	2023-05-23	0.48	↔
1_16_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-0.16	0.69	↔	-0.64	0.10	↔	2023-06-27	0.60	↔
1_16_5_101	MW-06	Appendix IV	Antimony	mg/L	10	8	80%	0.0000013	0.63	↔	0	0.74	↔	2023-04-17	0.21	↔
1_16_5_102	MW-06	Appendix IV	Arsenic	mg/L	10	0	0%	-0.0000043	0.55	↔	0	0.29	↔	2023-01-23	0.25	↔
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	-0.0024	0.27	↔	0.00080	0.25	↔	2023-04-17	0.43	↔
1_16_5_104	MW-06	Appendix IV	Beryllium	mg/L	10	9	90%	0	0.050	↔	0	0.58	↔	2023-01-29	0.84	↔
1_16_5_106	MW-06	Appendix IV	Cadmium	mg/L	10	10	100%	0.0000012	0.83	↔	0	0.37	↔	2023-02-05	0.28	↔
1_16_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.0000087	0.50	↔	-0.0000028	0.22	↔	2023-02-12	0.29	↔
1_16_5_110	MW-06	Appendix IV	Cobalt	mg/L	10	0	0%	0	0.43	↔	-0.0000016	0.13	↔	2023-07-19	0.46	↔
1_16_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.0029	0.42	↔	0.00011	0.86	↔	2023-03-03	0.31	↔
1_16_5_115	MW-06	Appendix IV	Lead	mg/L	10	7	70%	0.0000062	0.72	↔	-0.0000014	0.31	↔	2023-02-05	0.20	↔
1_16_5_118	MW-06	Appendix IV	Molybdenum	mg/L	10	7	70%	0.0000056	0.65	↔	-0.0000047	0.25	↔	2023-04-17	0.23	↔
1_16_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	0.0043	0.64	↔	-0.0014	0.38	↔	2023-03-13	0.18	↔
1_16_5_122	MW-06	Appendix IV	Selenium	mg/L	10	5	50%	0	0.067	↔	0.0000024	0	↑	2023-10-21	0.99	↔
1_16_5_125	MW-06	Appendix IV	Thallium	mg/L	10	10	100%	0.0000027	0.72	↔	0	0.92	↔	2023-02-05	0.15	↔
1_16_6_111	MW-06	Part 115	Copper	mg/L	10	9	90%	0	0.17	↔	0	0	↑	2023-10-23	1.0	↔
1_16_6_114	MW-06	Part 115	Iron	mg/L	10	0	0%	-0.0015	0.94	↔	0.11	0.077	↔	2023-10-10	0.62	↔
1_16_6_119	MW-06	Part 115	Nickel	mg/L	10	3	30%	-0.0000026	0.12	↔	0	0.70	↔	2023-04-18	0.58	↔
1_16_6_123	MW-06	Part 115	Silver	mg/L	10	10	100%	0.0000018	0.72	↔	0	0.92	↔	2023-02-05	0.15	↔
1_16_6_129	MW-06	Part 115	Vanadium	mg/L	10	10	100%	0	0.013	↔	0	0.51	↔	2023-01-21	0.89	↔

(Table continues on next page)



Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
1_17_4_105	MW-07	Appendix III	Boron	mg/L	10	0	0%	-0.015	0.22	↔	0.0017	0.62	↔	2023-03-18	0.35	↔
1_17_4_107	MW-07	Appendix III	Calcium	mg/L	10	0	0%	0.024	0.81	↔	-0.020	0.81	↔	2023-06-21	0.022	↔
1_17_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.011	0.0033	↓	0.0050	0.037	↔	2023-06-17	0.87	↔
1_17_4_120	MW-07	Appendix III	pH (field)	su	10	0	0%	-0.00070	0.33	↔	0.0014	0.48	↔	2023-08-07	0.29	↔
1_17_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	-0.10	0.0067	↓	0.064	0.020	↔	2023-05-23	0.81	↔
1_17_5_101	MW-07	Appendix IV	Antimony	mg/L	10	9	90%	0	0.0032	↑	0	1.0	↔	2023-07-09	0.87	↔
1_17_5_102	MW-07	Appendix IV	Arsenic	mg/L	10	0	0%	0	0.52	↔	0	0.24	↔	2023-04-11	0.27	↔
1_17_5_103	MW-07	Appendix IV	Barium	mg/L	10	0	0%	-0.00026	0.60	↔	0.00023	0.16	↔	2023-04-17	0.32	↔
1_17_5_104	MW-07	Appendix IV	Beryllium	mg/L	10	7	70%	0	0.39	↔	0	0.67	↔	2023-08-07	0.16	↔
1_17_5_106	MW-07	Appendix IV	Cadmium	mg/L	10	10	100%	0	0.019	↔	0	1.0	↔	2023-07-30	0.79	↔
1_17_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	10	0	0%	0	0.53	↔	0	0.74	↔	2023-05-22	0.15	↔
1_17_5_110	MW-07	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000012	0.045	↔	-0.0000013	0.090	↔	2023-07-04	0.64	↔
1_17_5_115	MW-07	Appendix IV	Lead	mg/L	10	10	100%	0	0.019	↔	0	1.0	↔	2023-07-30	0.79	↔
1_17_5_116	MW-07	Appendix IV	Lithium	mg/L	10	0	0%	0.0000091	0.50	↔	-0.0000019	0.12	↔	2023-06-26	0.42	↔
1_17_5_118	MW-07	Appendix IV	Molybdenum	mg/L	10	10	100%	-0.0000019	0.019	↔	0	1.0	↔	2023-07-30	0.79	↔
1_17_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	0.0013	0.61	↔	-0.0034	0.65	↔	2023-08-07	0.13	↔
1_17_5_122	MW-07	Appendix IV	Selenium	mg/L	10	8	80%	0	0.0080	↓	0.0000012	0.042	↔	2023-09-25	0.79	↔
1_17_6_111	MW-07	Part 115	Copper	mg/L	10	9	90%	0	1.0	↔	0	0.45	↔	2023-03-22	0.17	↔
1_18_4_105	MW-08	Appendix III	Boron	mg/L	10	0	0%	0.082	0.19	↔	-0.0056	0.23	↔	2023-02-06	0.69	↔
1_18_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	0.22	0.26	↔	-0.027	0.085	↔	2023-02-06	0.63	↔
1_18_4_112	MW-08	Appendix III	Fluoride	mg/L	10	0	0%	0.010	0.050	↔	-0.0011	0.19	↔	2023-02-18	0.68	↔
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	0.0053	0.50	↔	0.000086	0.95	↔	2023-03-13	0.32	↔
1_18_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	3	30%	-0.093	0.10	↔	0.028	0.69	↔	2023-07-10	0.48	↔
1_18_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.076	0.88	↔	-0.29	0.48	↔	2023-06-26	0.12	↔
1_18_5_101	MW-08	Appendix IV	Antimony	mg/L	10	4	40%	0.0000015	0.30	↔	0	0.22	↔	2023-02-17	0.36	↔
1_18_5_102	MW-08	Appendix IV	Arsenic	mg/L	10	0	0%	0.00062	0.019	↔	-0.000080	0.049	↔	2023-02-09	0.75	↔
1_18_5_103	MW-08	Appendix IV	Barium	mg/L	10	0	0%	0.0030	0.60	↔	-0.0012	0.025	↔	2023-02-06	0.61	↔
1_18_5_106	MW-08	Appendix IV	Cadmium	mg/L	10	10	100%	0	0.019	↔	0	1.0	↔	2023-07-30	0.79	↔
1_18_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.0000082	0.30	↔	-0.0000018	0.017	↔	2023-02-06	0.68	↔
1_18_5_110	MW-08	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000050	0.020	↔	0	0.017	↔	2023-02-07	0.78	↔
1_18_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.010	0.050	↔	-0.0011	0.19	↔	2023-02-18	0.68	↔
1_18_5_115	MW-08	Appendix IV	Lead	mg/L	10	7	70%	0.0000031	0.76	↔	-0.0000012	0.15	↔	2023-02-06	0.32	↔
1_18_5_116	MW-08	Appendix IV	Lithium	mg/L	10	0	0%	0.0013	0.079	↔	-0.00013	0.032	↔	2023-01-24	0.75	↔
1_18_5_118	MW-08	Appendix IV	Molybdenum	mg/L	10	0	0%	-0.0000091	0.036	↔	0.0000066	0.20	↔	2023-07-09	0.62	↔
1_18_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	-0.0059	0.60	↔	-0.00048	0.80	↔	2023-02-07	0.14	↔
1_18_5_122	MW-08	Appendix IV	Selenium	mg/L	10	5	50%	0	0.0052	↓	0.0000017	0.00062	↑	2023-10-06	0.92	↔
1_18_6_111	MW-08	Part 115	Copper	mg/L	10	5	50%	0.0000021	0.41	↔	0	0.67	↔	2023-02-07	0.17	↔
1_18_6_114	MW-08	Part 115	Iron	mg/L	10	0	0%	-0.080	0.0020	↓	0.044	0.081	↔	2023-07-02	0.85	↔
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	-0.0000012	0.23	↔	0.000014	0.0019	↑	2023-10-16	0.88	↔
1_28_4_105	MW-18	Appendix III	Boron	mg/L	11	0	0%	-0.0015	0.69	↔	0.0043	0.0054	↑	2023-03-13	0.78	↔
1_28_4_107	MW-18	Appendix III	Calcium	mg/L	11	0	0%	-0.80	0.0065	↓	0.60	0.090	↔	2023-07-11	0.73	↔
1_28_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	-0.090	0.046	↔	0.021	0.099	↔	2023-03-18	0.61	↔

(Table continues on next page)



Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
1_28_4_112	MW-18	Appendix III	Fluoride	mg/L	11	0	0%	0.0058	0.0016	↑	-0.0098	0.025	↔	2023-09-17	0.82	↔
1_28_4_120	MW-18	Appendix III	pH (field)	su	11	0	0%	0.0018	0.40	↔	0.00028	0.11	↔	2023-02-07	0.69	↔
1_28_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	-9.5	0.012	↔	0.74	0.17	↔	2023-02-08	0.73	↔
1_28_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	-5.5	0.011	↔	0.39	0.44	↔	2023-03-19	0.77	↔
1_28_5_101	MW-18	Appendix IV	Antimony	mg/L	11	4	36%	0.0000011	0.55	↔	0	0.99	↔	2023-05-15	0.15	↔
1_28_5_102	MW-18	Appendix IV	Arsenic	mg/L	11	0	0%	-0.000087	0.59	↔	0.000042	0.15	↔	2023-03-06	0.29	↔
1_28_5_106	MW-18	Appendix IV	Cadmium	mg/L	11	3	27%	0	0.72	↔	0	0.74	↔	2023-05-21	0.052	↔
1_28_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	11	10	91%	0	0.10	↔	0	0.72	↔	2023-05-22	0.39	↔
1_28_5_110	MW-18	Appendix IV	Cobalt	mg/L	11	0	0%	-0.000029	0.00048	↓	0	0.92	↔	2023-04-18	0.92	↔
1_28_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.0058	0.0016	↑	-0.0098	0.025	↔	2023-09-17	0.82	↔
1_28_5_115	MW-18	Appendix IV	Lead	mg/L	11	8	73%	0.0000048	0.71	↔	0	0.48	↔	2023-02-07	0.14	↔
1_28_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	0.0015	0.33	↔	-0.0012	0.41	↔	2023-06-18	0.21	↔
1_28_5_122	MW-18	Appendix IV	Selenium	mg/L	11	0	0%	0	0.53	↔	0.0000053	0.040	↔	2023-08-07	0.58	↔
1_28_5_125	MW-18	Appendix IV	Thallium	mg/L	11	11	100%	0.0000021	0.77	↔	0	0.88	↔	2023-02-07	0.11	↔
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	0.0000030	0.036	↔	-0.0000039	0.28	↔	2023-08-08	0.55	↔
1_28_6_114	MW-18	Part 115	Iron	mg/L	11	0	0%	-0.045	0.00015	↓	0.010	0.00083	↑	2023-04-01	0.95	↔
1_28_6_119	MW-18	Part 115	Nickel	mg/L	11	0	0%	-0.000045	0.0024	↓	0	0.91	↔	2023-04-22	0.88	↔
1_28_6_123	MW-18	Part 115	Silver	mg/L	11	11	100%	0.0000014	0.77	↔	0	0.88	↔	2023-02-07	0.11	↔
1_28_6_130	MW-18	Part 115	Zinc	mg/L	11	0	0%	-0.00024	0.083	↔	0.000010	0.86	↔	2023-05-19	0.65	↔
1_29_4_105	MW-19	Appendix III	Boron	mg/L	10	0	0%	-0.0072	0.38	↔	0.0014	0.33	↔	2023-03-12	0.37	↔
1_29_4_107	MW-19	Appendix III	Calcium	mg/L	10	0	0%	-0.55	0.013	↔	0.45	0.36	↔	2023-08-07	0.69	↔
1_29_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.24	0.0033	↓	0.013	0.64	↔	2023-04-29	0.89	↔
1_29_4_112	MW-19	Appendix III	Fluoride	mg/L	10	0	0%	-0.0044	0.35	↔	-0.00014	0.85	↔	2023-02-28	0.41	↔
1_29_4_120	MW-19	Appendix III	pH (field)	su	10	0	0%	0.0013	0.54	↔	-0.00091	0.39	↔	2023-05-21	0.18	↔
1_29_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	-1.4	0.36	↔	0.77	0.69	↔	2023-07-15	0.19	↔
1_29_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-2.5	0.013	↔	0.92	0.38	↔	2023-08-06	0.79	↔
1_29_5_101	MW-19	Appendix IV	Antimony	mg/L	10	9	90%	0.0000025	0.49	↔	0	0.79	↔	2023-04-17	0.23	↔
1_29_5_103	MW-19	Appendix IV	Barium	mg/L	10	0	0%	-0.000097	0.19	↔	0.000015	0.49	↔	2023-04-17	0.54	↔
1_29_5_104	MW-19	Appendix IV	Beryllium	mg/L	10	3	30%	0.0000011	0.71	↔	0	0.35	↔	2023-02-07	0.20	↔
1_29_5_106	MW-19	Appendix IV	Cadmium	mg/L	10	10	100%	0.0000012	0.84	↔	0	0.37	↔	2023-02-07	0.28	↔
1_29_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	10	5	50%	-0.0000014	0.40	↔	0	0.79	↔	2023-05-22	0.27	↔
1_29_5_110	MW-19	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000068	0.32	↔	-0.0000020	0.0053	↓	2023-01-23	0.77	↔
1_29_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.0044	0.35	↔	-0.00014	0.85	↔	2023-02-28	0.41	↔
1_29_5_115	MW-19	Appendix IV	Lead	mg/L	10	10	100%	0.000011	0.52	↔	-0.0000023	0.12	↔	2023-02-07	0.43	↔
1_29_5_122	MW-19	Appendix IV	Selenium	mg/L	10	9	90%	0.0000042	0.76	↔	-0.0000015	0.18	↔	2023-02-07	0.29	↔
1_29_5_125	MW-19	Appendix IV	Thallium	mg/L	10	10	100%	0.0000041	0.27	↔	0	0.56	↔	2023-02-08	0.28	↔
1_29_6_111	MW-19	Part 115	Copper	mg/L	10	10	100%	0.0000042	0.73	↔	-0.0000010	0.27	↔	2023-02-07	0.23	↔
1_29_6_114	MW-19	Part 115	Iron	mg/L	10	0	0%	-0.028	0.46	↔	0.032	0.028	↔	2023-04-17	0.61	↔
1_29_6_119	MW-19	Part 115	Nickel	mg/L	10	1	10%	-0.0000086	0.036	↔	-0.0000014	0.62	↔	2023-05-22	0.74	↔
1_29_6_123	MW-19	Part 115	Silver	mg/L	10	10	100%	0.0000018	0.73	↔	0	0.92	↔	2023-02-07	0.15	↔
1_29_6_129	MW-19	Part 115	Vanadium	mg/L	10	10	100%	0.000013	0.73	↔	-0.0000032	0.27	↔	2023-02-07	0.23	↔
1_29_6_130	MW-19	Part 115	Zinc	mg/L	10	8	80%	0.000022	0.77	↔	-0.0000077	0.20	↔	2023-02-07	0.27	↔

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Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	-0.18	0.27	↔	0.073	0.74	↔	2023-06-28	0.20	↔
1_30_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.14	0.13	↔	-0.16	0.015	↔	2023-05-22	0.66	↔
1_30_4_112	MW-20	Appendix III	Fluoride	mg/L	11	0	0%	-0.0083	0.000014	↓	0.000032	0.60	↔	2023-01-08	0.97	↔
1_30_4_120	MW-20	Appendix III	pH (field)	su	11	0	0%	-0.00028	0.64	↔	0.0011	0.55	↔	2023-09-13	0.12	↔
1_30_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	1.0	0.45	↔	-0.16	0.13	↔	2023-01-21	0.35	↔
1_30_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.57	0.25	↔	-0.43	0.15	↔	2023-04-18	0.41	↔
1_30_5_101	MW-20	Appendix IV	Antimony	mg/L	11	3	27%	0	0.30	↔	0	0.49	↔	2023-04-17	0.38	↔
1_30_5_102	MW-20	Appendix IV	Arsenic	mg/L	11	0	0%	0.0000017	0.046	↔	-0.0000043	0.075	↔	2023-09-29	0.60	↔
1_30_5_103	MW-20	Appendix IV	Barium	mg/L	11	0	0%	-0.0068	0.0018	↓	0.00042	0.11	↔	2023-02-19	0.89	↔
1_30_5_104	MW-20	Appendix IV	Beryllium	mg/L	11	10	91%	0	0.25	↔	0	0.00012	↑	2023-09-19	0.96	↔
1_30_5_106	MW-20	Appendix IV	Cadmium	mg/L	11	11	100%	0	0.0093	↑	0	1.0	↔	2023-08-16	0.74	↔
1_30_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	11	5	45%	0	0.58	↔	0	0.37	↔	2023-02-06	0.25	↔
1_30_5_110	MW-20	Appendix IV	Cobalt	mg/L	11	0	0%	0.0000037	0.53	↔	-0.0000015	0.0072	↓	2023-02-06	0.67	↔
1_30_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	-0.0083	0.000014	↓	0.000032	0.60	↔	2023-01-08	0.97	↔
1_30_5_115	MW-20	Appendix IV	Lead	mg/L	11	0	0%	0.0000042	0.11	↔	-0.0000060	0.10	↔	2023-06-28	0.54	↔
1_30_5_116	MW-20	Appendix IV	Lithium	mg/L	11	0	0%	0.000056	0.28	↔	-0.00038	0.032	↔	2023-10-11	0.62	↔
1_30_5_118	MW-20	Appendix IV	Molybdenum	mg/L	11	0	0%	0.0000043	0.094	↔	-0.0000018	0.79	↔	2023-08-27	0.41	↔
1_30_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	-0.019	0.040	↔	0.00092	0.13	↔	2023-01-20	0.75	↔
1_30_5_122	MW-20	Appendix IV	Selenium	mg/L	11	6	55%	0	0.0061	↓	0.0000013	0.014	↔	2023-10-04	0.79	↔
1_30_5_125	MW-20	Appendix IV	Thallium	mg/L	11	10	91%	0	0.25	↔	0	0.00012	↑	2023-09-19	0.96	↔
1_30_6_111	MW-20	Part 115	Copper	mg/L	11	1	9%	-0.0000031	0.44	↔	0	0.12	↔	2023-01-07	0.36	↔
1_30_6_114	MW-20	Part 115	Iron	mg/L	11	0	0%	0.0034	0.90	↔	-0.0075	0.34	↔	2023-04-17	0.15	↔
1_30_6_119	MW-20	Part 115	Nickel	mg/L	11	0	0%	0.0000012	0.76	↔	-0.000014	0.0033	↓	2023-05-24	0.86	↔
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	1.3	0.53	↔	-0.74	0.16	↔	2023-03-12	0.21	↔
1_40_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0	0%	-0.49	0.000029	↓	0.068	0.60	↔	2023-07-12	0.89	↔
1_40_4_120	MW-30	Appendix III	pH (field)	su	14	0	0%	0.0031	0.28	↔	-0.00016	0.87	↔	2023-03-19	0.24	↔
1_40_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	14	0	0%	0.84	0.46	↔	-0.71	0.11	↔	2023-03-30	0.28	↔
1_40_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0	0%	0.64	0.64	↔	-1.9	0.13	↔	2023-06-26	0.24	↔
1_40_5_101	MW-30	Appendix IV	Antimony	mg/L	14	12	86%	0.0000021	0.13	↔	0	0.68	↔	2023-05-21	0.47	↔
1_40_5_102	MW-30	Appendix IV	Arsenic	mg/L	14	3	21%	-0.0000023	0.12	↔	0	0.54	↔	2023-04-25	0.37	↔
1_40_5_103	MW-30	Appendix IV	Barium	mg/L	14	0	0%	-0.00021	0.0073	↓	0.000100	0.40	↔	2023-07-27	0.62	↔
1_40_5_106	MW-30	Appendix IV	Cadmium	mg/L	14	14	100%	0.0000013	0.71	↔	0	0.28	↔	2023-02-05	0.30	↔
1_40_5_115	MW-30	Appendix IV	Lead	mg/L	14	14	100%	0.000013	0.0082	↑	-0.0000021	0.046	↔	2023-02-06	0.62	↔
1_40_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	14	8	57%	0.00089	0.64	↔	-0.00055	0.44	↔	2023-04-17	0.087	↔
1_40_5_122	MW-30	Appendix IV	Selenium	mg/L	14	9	64%	-0.0000014	0.30	↔	0.0000023	0.62	↔	2023-09-26	0.13	↔
1_40_5_125	MW-30	Appendix IV	Thallium	mg/L	14	14	100%	0.0000045	0.013	↔	0	0.34	↔	2023-02-20	0.66	↔
1_40_6_111	MW-30	Part 115	Copper	mg/L	14	11	79%	0.0000056	0.53	↔	-0.0000012	0.18	↔	2023-02-05	0.23	↔
1_40_6_114	MW-30	Part 115	Iron	mg/L	14	0	0%	0.034	0.26	↔	-0.011	0.14	↔	2023-03-12	0.33	↔
1_40_6_123	MW-30	Part 115	Silver	mg/L	14	14	100%	0.0000020	0.52	↔	0	0.68	↔	2023-02-05	0.21	↔
1_41_4_107	MW-31	Appendix III	Calcium	mg/L	10	0	0%	-0.21	0.053	↔	0.11	0.42	↔	2023-06-27	0.54	↔
1_41_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.16	0.40	↔	0.013	0.67	↔	2023-03-13	0.37	↔
1_41_4_112	MW-31	Appendix III	Fluoride	mg/L	10	0	0%	0.0024	0.17	↔	-0.0022	0.14	↔	2023-05-22	0.48	↔

(Table continues on next page)



Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
1_41_4_120	MW-31	Appendix III	pH (field)	su	10	0	0%	0.00047	0.53	↔	-0.00064	0.31	↔	2023-06-26	0.22	↔
1_41_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-0.60	0.21	↔	0.044	0.91	↔	2023-05-22	0.36	↔
1_41_5_101	MW-31	Appendix IV	Antimony	mg/L	10	5	50%	0	0.046	↔	0	0.40	↔	2023-03-30	0.71	↔
1_41_5_102	MW-31	Appendix IV	Arsenic	mg/L	10	0	0%	-0.000013	0.30	↔	0	0.98	↔	2023-01-12	0.38	↔
1_41_5_103	MW-31	Appendix IV	Barium	mg/L	10	0	0%	-0.00034	0.71	↔	-0.000014	0.93	↔	2023-03-13	0.13	↔
1_41_5_104	MW-31	Appendix IV	Beryllium	mg/L	10	9	90%	0	0.17	↔	0	0	↑	2023-10-22	1.0	↔
1_41_5_106	MW-31	Appendix IV	Cadmium	mg/L	10	9	90%	0	0.020	↔	0	0.62	↔	2023-07-19	0.80	↔
1_41_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.0000029	0.27	↔	0	0.80	↔	2023-05-22	0.27	↔
1_41_5_110	MW-31	Appendix IV	Cobalt	mg/L	10	0	0%	0	0.86	↔	0	0.34	↔	2023-02-06	0.28	↔
1_41_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	0.0024	0.17	↔	-0.0022	0.14	↔	2023-05-22	0.48	↔
1_41_5_115	MW-31	Appendix IV	Lead	mg/L	10	9	90%	0	1.0	↔	0	0.091	↔	2023-04-08	0.52	↔
1_41_5_116	MW-31	Appendix IV	Lithium	mg/L	10	0	0%	0.000017	0.28	↔	-0.000089	0.071	↔	2023-08-24	0.72	↔
1_41_5_118	MW-31	Appendix IV	Molybdenum	mg/L	10	0	0%	-0.000012	0.37	↔	0	0.94	↔	2023-02-03	0.52	↔
1_41_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	10	3	30%	0.0011	0.37	↔	-0.0024	0.49	↔	2023-08-08	0.27	↔
1_41_5_122	MW-31	Appendix IV	Selenium	mg/L	10	5	50%	0	0.025	↔	0.0000054	0.000016	↑	2023-10-15	0.98	↔
1_41_5_125	MW-31	Appendix IV	Thallium	mg/L	10	9	90%	0	0.17	↔	0	0	↑	2023-10-22	1.0	↔
1_41_6_111	MW-31	Part 115	Copper	mg/L	10	8	80%	0	0.83	↔	0	0.74	↔	2023-02-24	0.085	↔
1_41_6_114	MW-31	Part 115	Iron	mg/L	10	0	0%	-0.015	0.079	↔	-0.0032	0.034	↔	2023-02-17	0.86	↔
1_41_6_119	MW-31	Part 115	Nickel	mg/L	10	9	90%	0	0.17	↔	0.000015	0	↑	2023-10-22	1.0	↔
2_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	11	3	27%	0.0000032	0.34	↔	-0.0000013	0.32	↔	2023-04-17	0.31	↔
2_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	11	0	0%	-0.0000017	0.41	↔	0.000025	0.0060	↑	2023-10-16	0.78	↔
2_11_5_103	MW-01R	Appendix IV	Barium	mg/L	11	0	0%	-0.00077	0.17	↔	0.0012	0.00037	↑	2023-03-29	0.89	↔
2_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	11	0	0%	0	0.29	↔	0	0.37	↔	2023-09-09	0.27	↔
2_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	11	7	64%	0	0.48	↔	0	0.81	↔	2023-05-22	0.26	↔
2_11_5_115	MW-01R	Appendix IV	Lead	mg/L	11	2	18%	0.0000066	0.38	↔	-0.0000047	0.68	↔	2023-06-28	0.13	↔
2_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	0.0067	0.15	↔	-0.0010	0.27	↔	2023-02-10	0.41	↔
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	0	0.99	↔	0.0000096	0.0053	↑	2023-10-13	0.83	↔
2_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	11	11	100%	0.0000018	0.16	↔	0	0.65	↔	2023-05-09	0.43	↔
2_11_6_111	MW-01R	Part 115	Copper	mg/L	11	5	45%	-0.0000013	0.92	↔	0.0000018	0.14	↔	2023-01-19	0.35	↔
2_11_6_123	MW-01R	Part 115	Silver	mg/L	11	11	100%	0.0000016	0.68	↔	0	0.92	↔	2023-02-07	0.20	↔
2_11_6_129	MW-01R	Part 115	Vanadium	mg/L	11	2	18%	0.000013	0.026	↔	-0.0000083	0.28	↔	2023-07-24	0.63	↔
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.47	0.66	↔	0.086	0.32	↔	2023-02-07	0.23	↔
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	-0.026	0.71	↔	0.0071	0.23	↔	2023-02-07	0.25	↔
2_12_4_120	MW-02	Appendix III	pH (field)	su	10	0	0%	0.0030	0.27	↔	-0.00035	0.46	↔	2023-02-19	0.35	↔
2_12_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	10	6	60%	-0.0056	0.32	↔	-0.00034	0.90	↔	2023-04-25	0.33	↔
2_12_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.84	0.36	↔	-0.81	0.51	↔	2023-06-27	0.20	↔
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	0.0000025	0.20	↔	-0.0000012	0.075	↔	2023-04-17	0.56	↔
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	0.000013	0.13	↔	-0.000045	0.0046	↓	2023-07-15	0.85	↔
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	10	0	0%	-0.00035	0.14	↔	0.0028	0.0036	↑	2023-10-21	0.83	↔
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	10	1	10%	0.0000016	0.81	↔	0	0.63	↔	2023-01-07	0.053	↔
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	10	7	70%	0.0000012	0.34	↔	0	0.88	↔	2023-05-23	0.22	↔
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.000063	0.46	↔	-0.00028	0.27	↔	2023-08-13	0.49	↔

(Table continues on next page)



Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000086	0.40	↔	-0.000054	0.099	↔	2023-09-30	0.54	↔
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.026	0.71	↔	0.0071	0.23	↔	2023-02-07	0.25	↔
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	10	1	10%	0.000011	0.11	↔	-0.000014	0.032	↔	2023-06-03	0.67	↔
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	10	0	0%	0.000073	0.038	↔	-0.000019	0.0075	↓	2023-02-08	0.79	↔
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.0089	0.32	↔	-0.00052	0.95	↔	2023-04-18	0.33	↔
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	10	9	90%	0.0000032	0.73	↔	0	0.88	↔	2023-02-07	0.13	↔
2_12_6_111	MW-02	Part 115	Copper	mg/L	10	0	0%	0.0000037	0.30	↔	-0.000011	0.30	↔	2023-08-25	0.40	↔
2_12_6_119	MW-02	Part 115	Nickel	mg/L	10	0	0%	0.00027	0.42	↔	-0.000083	0.015	↔	2023-02-07	0.67	↔
2_12_6_123	MW-02	Part 115	Silver	mg/L	10	10	100%	0.0000023	0.26	↔	0	0.22	↔	2023-02-08	0.36	↔
2_12_6_129	MW-02	Part 115	Vanadium	mg/L	10	1	10%	0.000012	0.13	↔	-0.000034	0.14	↔	2023-09-22	0.52	↔
2_13_4_107	MW-03	Appendix III	Calcium	mg/L	10	0	0%	0.22	0.50	↔	-0.19	0.49	↔	2023-06-19	0.15	↔
2_13_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.84	0.022	↔	0.0046	0.98	↔	2023-04-18	0.76	↔
2_13_4_112	MW-03	Appendix III	Fluoride	mg/L	10	0	0%	-0.0037	0.42	↔	0.00015	0.91	↔	2023-04-06	0.27	↔
2_13_4_120	MW-03	Appendix III	pH (field)	su	10	0	0%	0.00086	0.36	↔	-0.00022	0.78	↔	2023-05-23	0.19	↔
2_13_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	4.1	0.042	↔	-1.4	0.031	↔	2023-04-17	0.77	↔
2_13_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	2.2	0.24	↔	-1.2	0.24	↔	2023-05-08	0.38	↔
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	10	6	60%	0.0000021	0.28	↔	0	0.88	↔	2023-04-24	0.31	↔
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	10	0	0%	-0.0000022	0.37	↔	0.0000014	0.29	↔	2023-05-22	0.30	↔
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	10	7	70%	0.0000010	0.75	↔	0	0.56	↔	2023-02-06	0.11	↔
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	10	9	90%	0.0000012	0.83	↔	0	0.31	↔	2023-02-06	0.32	↔
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.0000048	0.88	↔	-0.0000065	0.26	↔	2023-03-08	0.24	↔
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000014	0.88	↔	0	0.99	↔	2023-02-24	0.015	↔
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.0037	0.42	↔	0.00015	0.91	↔	2023-04-06	0.27	↔
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	10	9	90%	0.000012	0.077	↔	-0.0000020	0.096	↔	2023-02-08	0.59	↔
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	10	0	0%	-0.000075	0.56	↔	-0.000024	0.56	↔	2023-04-17	0.34	↔
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	10	9	90%	0	1.0	↔	0	0.45	↔	2023-03-21	0.16	↔
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	10	8	80%	0.000020	0.67	↔	-0.0000054	0.18	↔	2023-02-06	0.30	↔
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	1	10%	-0.016	0.28	↔	-0.00065	0.58	↔	2023-01-10	0.46	↔
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	10	3	30%	-0.0000014	0.52	↔	0.0000012	0.50	↔	2023-05-23	0.15	↔
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	10	9	90%	0.0000042	0.053	↔	0	0.49	↔	2023-02-21	0.71	↔
2_13_6_111	MW-03	Part 115	Copper	mg/L	10	5	50%	0.0000040	0.60	↔	0	0.90	↔	2023-02-07	0.081	↔
2_13_6_114	MW-03	Part 115	Iron	mg/L	10	0	0%	-0.021	0.0086	↓	0.0061	0.45	↔	2023-07-06	0.78	↔
2_13_6_123	MW-03	Part 115	Silver	mg/L	10	10	100%	0.0000017	0.71	↔	0	0.93	↔	2023-02-06	0.15	↔
2_13_6_129	MW-03	Part 115	Vanadium	mg/L	10	9	90%	0.000012	0.72	↔	-0.0000026	0.38	↔	2023-02-06	0.17	↔
2_14_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	0.59	0.35	↔	-0.12	0.28	↔	2023-03-13	0.34	↔
2_14_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	0.0012	0.35	↔	-0.00082	0.18	↔	2023-05-22	0.31	↔
2_14_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	3.2	0.12	↔	-0.18	0.76	↔	2023-04-18	0.60	↔
2_14_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	1.2	0.17	↔	-0.85	0.28	↔	2023-05-23	0.31	↔
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	0.0000019	0.31	↔	0	0.71	↔	2023-05-19	0.29	↔
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000026	0.31	↔	0	0.75	↔	2023-05-22	0.31	↔
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	-0.00089	0.52	↔	-0.000024	0.95	↔	2023-04-18	0.21	↔
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	0	0.47	↔	0	0.90	↔	2023-05-22	0.22	↔

(Table continues on next page)



Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	0	0.92	↔	-0.0000024	0.40	↔	2023-09-15	0.26	↔
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	0.0000077	0.59	↔	-0.0000015	0.21	↔	2023-02-06	0.25	↔
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	0.000060	0.12	↔	-0.00016	0.20	↔	2023-09-08	0.43	↔
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	0.0000030	0.80	↔	-0.0000022	0.53	↔	2023-04-18	0.059	↔
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	-0.00014	0.94	↔	-0.0021	0.22	↔	2023-06-02	0.33	↔
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	12	6	50%	-0.0000011	0.032	↔	0.0000012	0.014	↔	2023-06-10	0.68	↔
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	0.0000034	0.34	↔	0	0.80	↔	2023-02-07	0.18	↔
2_14_6_111	MW-04	Part 115	Copper	mg/L	12	11	92%	0	1.0	↔	0	0.39	↔	2023-04-23	0.15	↔
2_14_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	0.012	0.19	↔	-0.0042	0.13	↔	2023-03-28	0.40	↔
2_14_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	0.000039	0.17	↔	-0.000048	0.18	↔	2023-07-30	0.37	↔
2_14_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	0.0000019	0.42	↔	0	0.80	↔	2023-02-07	0.13	↔
2_19_4_107	MW-09	Appendix III	Calcium	mg/L	11	0	0%	1.2	0.11	↔	-0.055	0.80	↔	2023-04-10	0.61	↔
2_19_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	-0.027	0.014	↔	0.054	0.071	↔	2023-09-12	0.69	↔
2_19_4_112	MW-09	Appendix III	Fluoride	mg/L	11	0	0%	0.0027	0.00054	↑	-0.0054	0.0056	↓	2023-09-11	0.88	↔
2_19_4_120	MW-09	Appendix III	pH (field)	su	11	0	0%	0.0010	0.27	↔	-0.0010	0.054	↔	2023-05-22	0.49	↔
2_19_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	3.7	0.025	↔	-0.35	0.62	↔	2023-04-18	0.67	↔
2_19_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	5.3	0.077	↔	-0.36	0.67	↔	2023-04-17	0.68	↔
2_19_5_101	MW-09	Appendix IV	Antimony	mg/L	11	6	55%	0	0.85	↔	0.0000025	0.28	↔	2023-10-18	0.33	↔
2_19_5_102	MW-09	Appendix IV	Arsenic	mg/L	11	0	0%	-0.0000044	0.53	↔	0	0.94	↔	2023-04-17	0.19	↔
2_19_5_103	MW-09	Appendix IV	Barium	mg/L	11	0	0%	-0.0082	0.33	↔	0.00048	0.85	↔	2023-04-13	0.34	↔
2_19_5_104	MW-09	Appendix IV	Beryllium	mg/L	11	10	91%	0	0.27	↔	0	0.38	↔	2023-05-23	0.25	↔
2_19_5_106	MW-09	Appendix IV	Cadmium	mg/L	11	11	100%	0	0.52	↔	0.0000011	0.52	↔	2023-08-20	0.39	↔
2_19_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.000016	0.45	↔	-0.0000036	0.048	↔	2023-01-16	0.47	↔
2_19_5_110	MW-09	Appendix IV	Cobalt	mg/L	11	0	0%	0.0000036	0.36	↔	0	0.30	↔	2023-03-08	0.28	↔
2_19_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.0027	0.00054	↑	-0.0054	0.0056	↓	2023-09-11	0.88	↔
2_19_5_115	MW-09	Appendix IV	Lead	mg/L	11	11	100%	0.0000092	0.58	↔	-0.0000018	0.17	↔	2023-02-05	0.32	↔
2_19_5_116	MW-09	Appendix IV	Lithium	mg/L	11	0	0%	0.000035	0.78	↔	-0.00030	0.44	↔	2023-08-08	0.31	↔
2_19_5_118	MW-09	Appendix IV	Molybdenum	mg/L	11	0	0%	-0.000083	0.079	↔	-0.000015	0.49	↔	2023-05-22	0.73	↔
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	0	0.45	↔	0	0.51	↔	2023-05-22	0.18	↔
2_19_5_125	MW-09	Appendix IV	Thallium	mg/L	11	11	100%	0.0000033	0.31	↔	0	0.75	↔	2023-02-06	0.18	↔
2_19_6_111	MW-09	Part 115	Copper	mg/L	11	9	82%	0	0.17	↔	0	0.54	↔	2023-08-08	0.29	↔
2_19_6_114	MW-09	Part 115	Iron	mg/L	11	0	0%	0.058	0.23	↔	-0.015	0.32	↔	2023-03-14	0.30	↔
2_19_6_123	MW-09	Part 115	Silver	mg/L	11	11	100%	0	0.52	↔	0	0.88	↔	2023-04-17	0.24	↔
2_20_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.78	0.098	↔	-1.5	0.24	↔	2023-10-02	0.43	↔
2_20_4_112	MW-10	Appendix III	Fluoride	mg/L	11	0	0%	0.0071	0.37	↔	-0.024	0.30	↔	2023-09-19	0.28	↔
2_20_4_120	MW-10	Appendix III	pH (field)	su	11	0	0%	0.0032	0.39	↔	-0.0023	0.32	↔	2023-05-22	0.22	↔
2_20_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	-1.7	0.21	↔	4.5	0.25	↔	2023-10-02	0.33	↔
2_20_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	2.4	0.65	↔	-0.96	0.28	↔	2023-03-13	0.19	↔
2_20_5_101	MW-10	Appendix IV	Antimony	mg/L	11	7	64%	0.0000010	0.49	↔	0	0.73	↔	2023-04-18	0.18	↔
2_20_5_102	MW-10	Appendix IV	Arsenic	mg/L	11	0	0%	-0.0000034	0.81	↔	0	0.42	↔	2023-01-04	0.11	↔
2_20_5_103	MW-10	Appendix IV	Barium	mg/L	11	0	0%	-0.0020	0.21	↔	0.00080	0.093	↔	2023-04-17	0.52	↔
2_20_5_104	MW-10	Appendix IV	Beryllium	mg/L	11	5	45%	0	0.23	↔	0	0.27	↔	2023-07-29	0.31	↔

(Table continues on next page)



Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
2_20_5_106	MW-10	Appendix IV	Cadmium	mg/L	11	11	100%	0	0.45	↔	0	0.57	↔	2023-04-22	0.27	↔
2_20_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.000015	0.15	↔	-0.000026	0.38	↔	2023-08-10	0.37	↔
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	0.0000044	0.17	↔	-0.0000032	0.25	↔	2023-05-23	0.36	↔
2_20_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.0071	0.37	↔	-0.024	0.30	↔	2023-09-19	0.28	↔
2_20_5_115	MW-10	Appendix IV	Lead	mg/L	11	9	82%	0.000012	0.17	↔	-0.0000024	0.11	↔	2023-02-06	0.45	↔
2_20_5_116	MW-10	Appendix IV	Lithium	mg/L	11	0	0%	0.0012	0.38	↔	-0.0034	0.39	↔	2023-08-18	0.29	↔
2_20_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	0.0073	0.70	↔	-0.00099	0.51	↔	2023-02-05	0.13	↔
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	0	0.82	↔	0.0000027	0.071	↔	2023-08-27	0.75	↔
2_20_5_125	MW-10	Appendix IV	Thallium	mg/L	11	11	100%	0.0000043	0.22	↔	0	0.47	↔	2023-02-06	0.30	↔
2_20_6_111	MW-10	Part 115	Copper	mg/L	11	8	73%	0.0000015	0.55	↔	-0.0000012	0.60	↔	2023-05-23	0.092	↔
2_20_6_114	MW-10	Part 115	Iron	mg/L	11	0	0%	0.031	0.10	↔	-0.013	0.028	↔	2023-03-21	0.62	↔
2_20_6_119	MW-10	Part 115	Nickel	mg/L	11	5	45%	0.0000016	0.45	↔	-0.0000027	0.36	↔	2023-08-07	0.19	↔
2_20_6_123	MW-10	Part 115	Silver	mg/L	11	11	100%	0.0000021	0.65	↔	0	0.80	↔	2023-02-05	0.17	↔
2_20_6_129	MW-10	Part 115	Vanadium	mg/L	11	10	91%	0.0000015	0.43	↔	0	0.38	↔	2023-05-22	0.19	↔
2_21_4_105	MW-11	Appendix III	Boron	mg/L	10	0	0%	-0.072	0.13	↔	0.029	0.063	↔	2023-04-06	0.60	↔
2_21_4_107	MW-11	Appendix III	Calcium	mg/L	10	0	0%	1.6	0.29	↔	-0.50	0.092	↔	2023-03-13	0.51	↔
2_21_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.30	0.088	↔	0.053	0.30	↔	2023-03-29	0.59	↔
2_21_4_112	MW-11	Appendix III	Fluoride	mg/L	10	0	0%	-0.0072	0.17	↔	0.0027	0.12	↔	2023-04-03	0.51	↔
2_21_4_120	MW-11	Appendix III	pH (field)	su	10	0	0%	0.0014	0.69	↔	-0.00016	0.55	↔	2023-02-07	0.17	↔
2_21_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	2	20%	1.5	0.28	↔	-0.54	0.047	↔	2023-03-13	0.58	↔
2_21_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	3.3	0.64	↔	0.018	0.99	↔	2023-03-11	0.17	↔
2_21_5_101	MW-11	Appendix IV	Antimony	mg/L	10	7	70%	0	0.99	↔	0	0.55	↔	2023-05-22	0.099	↔
2_21_5_102	MW-11	Appendix IV	Arsenic	mg/L	10	0	0%	-0.000012	0.37	↔	0.0000026	0.54	↔	2023-04-17	0.31	↔
2_21_5_103	MW-11	Appendix IV	Barium	mg/L	10	0	0%	-0.0039	0.072	↔	0.0017	0.11	↔	2023-04-24	0.58	↔
2_21_5_104	MW-11	Appendix IV	Beryllium	mg/L	10	9	90%	0	0.53	↔	0	1.0	↔	2023-04-17	0.22	↔
2_21_5_106	MW-11	Appendix IV	Cadmium	mg/L	10	9	90%	-0.0000011	0.83	↔	0	0.74	↔	2023-03-13	0.095	↔
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.000022	0.55	↔	0	0.99	↔	2023-04-17	0.22	↔
2_21_5_110	MW-11	Appendix IV	Cobalt	mg/L	10	0	0%	0	0.62	↔	-0.0000016	0.49	↔	2023-08-07	0.29	↔
2_21_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.0072	0.17	↔	0.0027	0.12	↔	2023-04-03	0.51	↔
2_21_5_115	MW-11	Appendix IV	Lead	mg/L	10	3	30%	-0.00021	0.49	↔	-0.0000044	0.96	↔	2023-04-09	0.24	↔
2_21_5_116	MW-11	Appendix IV	Lithium	mg/L	10	0	0%	-0.0011	0.22	↔	0.00035	0.21	↔	2023-04-08	0.45	↔
2_21_5_118	MW-11	Appendix IV	Molybdenum	mg/L	10	2	20%	-0.000013	0.15	↔	0.0000013	0.63	↔	2023-04-05	0.54	↔
2_21_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	10	2	20%	0.00043	0.81	↔	-0.0033	0.54	↔	2023-08-08	0.25	↔
2_21_5_122	MW-11	Appendix IV	Selenium	mg/L	10	3	30%	0	0.11	↔	0.0000046	0.00016	↑	2023-10-11	0.95	↔
2_21_5_125	MW-11	Appendix IV	Thallium	mg/L	10	10	100%	0.0000035	0.26	↔	0	0.21	↔	2023-02-08	0.37	↔
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	-0.000055	0.52	↔	0	0.99	↔	2023-04-11	0.22	↔
2_21_6_114	MW-11	Part 115	Iron	mg/L	10	0	0%	-0.040	0.063	↔	0.022	0.057	↔	2023-04-19	0.64	↔
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	-0.000026	0.49	↔	0.0000013	0.91	↔	2023-04-17	0.24	↔
2_21_6_123	MW-11	Part 115	Silver	mg/L	10	9	90%	0	0.33	↔	0	0.26	↔	2023-04-18	0.32	↔
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	-0.00046	0.45	↔	-0.000045	0.67	↔	2023-03-13	0.43	↔
2_22_4_105	MW-12	Appendix III	Boron	mg/L	13	0	0%	-0.0042	0.20	↔	0.00031	0.19	↔	2023-01-05	0.32	↔
2_22_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0	0%	-0.037	0.46	↔	0.013	0.46	↔	2023-04-18	0.14	↔

(Table continues on next page)



Table 8: Trend Tests: Piecewise Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
2_22_4_112	MW-12	Appendix III	Fluoride	mg/L	13	0	0%	-0.0013	0.070	↔	0.00088	0.32	↔	2023-07-07	0.39	↔
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	-0.49	0.075	↔	-0.040	0.66	↔	2023-03-24	0.54	↔
2_22_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0	0%	0.45	0.24	↔	-1.4	0.017	↔	2023-08-06	0.54	↔
2_22_5_101	MW-12	Appendix IV	Antimony	mg/L	13	0	0%	0	0.73	↔	-0.0000017	0.098	↔	2023-05-22	0.45	↔
2_22_5_102	MW-12	Appendix IV	Arsenic	mg/L	13	0	0%	0.0000059	0.032	↔	-0.000013	0.13	↔	2023-09-30	0.51	↔
2_22_5_106	MW-12	Appendix IV	Cadmium	mg/L	13	0	0%	0.0000089	0.0035	↑	-0.0000092	0.015	↔	2023-07-15	0.73	↔
2_22_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	13	6	46%	-0.0000014	0.038	↔	0.0000070	0.0052	↑	2023-10-13	0.72	↔
2_22_5_110	MW-12	Appendix IV	Cobalt	mg/L	13	5	38%	0.0000019	0.0018	↑	-0.0000025	0.13	↔	2023-08-24	0.71	↔
2_22_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	13	0	0%	-0.0013	0.070	↔	0.00088	0.32	↔	2023-07-07	0.39	↔
2_22_5_115	MW-12	Appendix IV	Lead	mg/L	13	7	54%	0	1.0	↔	0	0.070	↔	2023-02-13	0.41	↔
2_22_5_116	MW-12	Appendix IV	Lithium	mg/L	13	0	0%	0.000013	0.028	↔	-0.000010	0.17	↔	2023-06-29	0.50	↔
2_22_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	13	11	85%	0.0016	0.31	↔	-0.00041	0.62	↔	2023-04-19	0.16	↔
2_22_5_122	MW-12	Appendix IV	Selenium	mg/L	13	0	0%	-0.0000080	0.0013	↓	0.0000053	0.39	↔	2023-08-24	0.72	↔
2_22_6_111	MW-12	Part 115	Copper	mg/L	13	0	0%	0.0000049	0.10	↔	-0.0000013	0.20	↔	2023-04-18	0.48	↔
2_22_6_119	MW-12	Part 115	Nickel	mg/L	13	0	0%	0.0000045	0.097	↔	-0.000011	0.23	↔	2023-08-22	0.43	↔
2_22_6_129	MW-12	Part 115	Vanadium	mg/L	13	7	54%	0.0000032	0.018	↔	-0.0000026	0.011	↔	2023-06-23	0.71	↔
2_22_6_130	MW-12	Part 115	Zinc	mg/L	13	0	0%	0.000014	0.11	↔	-0.000047	0.12	↔	2023-09-10	0.48	↔
2_42_4_107	MW-32	Appendix III	Calcium	mg/L	10	0	0%	-0.23	0.054	↔	0.27	0.37	↔	2023-09-21	0.56	↔
2_42_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.033	0.20	↔	-0.010	0.61	↔	2023-06-08	0.53	↔
2_42_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.44	0.61	↔	-0.33	0.25	↔	2023-03-15	0.28	↔
2_42_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	-0.68	0.099	↔	0.36	0.74	↔	2023-08-23	0.44	↔
2_42_5_101	MW-32	Appendix IV	Antimony	mg/L	10	6	60%	0	0.90	↔	0.0000047	0.00014	↑	2023-10-04	0.97	↔
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	0	0.48	↔	0.000016	0.0000022	↑	2023-10-22	0.99	↔
2_42_5_104	MW-32	Appendix IV	Beryllium	mg/L	10	9	90%	0	0.17	↔	0	0	↑	2023-10-22	1.0	↔
2_42_5_106	MW-32	Appendix IV	Cadmium	mg/L	10	9	90%	0	0.037	↔	0	0.0029	↑	2023-10-13	0.94	↔
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.0000012	0.017	↔	0.000024	0	↑	2023-10-19	0.99	↔
2_42_5_110	MW-32	Appendix IV	Cobalt	mg/L	10	0	0%	0	0.74	↔	0.000011	0.0022	↑	2023-10-05	0.92	↔
2_42_5_115	MW-32	Appendix IV	Lead	mg/L	10	7	70%	0	0.0071	↓	0.0000025	0.00056	↑	2023-10-15	0.92	↔
2_42_5_118	MW-32	Appendix IV	Molybdenum	mg/L	10	0	0%	-0.000019	0.16	↔	0.000010	0.0021	↑	2023-03-09	0.83	↔
2_42_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	10	6	60%	0.0012	0.10	↔	-0.0020	0.30	↔	2023-08-08	0.50	↔
2_42_5_122	MW-32	Appendix IV	Selenium	mg/L	10	9	90%	0	0.0084	↓	0.0000080	0.0000021	↑	2023-10-17	0.99	↔
2_42_6_111	MW-32	Part 115	Copper	mg/L	10	7	70%	0	0.17	↔	0.00014	0	↑	2023-10-21	1.0	↔
2_42_6_119	MW-32	Part 115	Nickel	mg/L	10	0	0%	-0.0000021	0.035	↔	0.00020	0	↑	2023-10-22	1.0	↔

Table 9: Trend Tests: Piecewise Linear-Linear-Linear

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
1_16_4_105	MW-06	Appendix III	Boron	mg/L	10	0	0%	-0.025	0.067	↔	0.018	0.12	↔	-0.034	0.026	↔	2023-04-17	2023-10-16	0.87	↔
1_16_4_107	MW-06	Appendix III	Calcium	mg/L	10	0	0%	0.72	0.25	↔	-0.27	0.31	↔	0.37	0.33	↔	2023-03-13	2023-10-05	0.64	↔

(Table continues on next page)



Table 9: Trend Tests: Piecewise Linear-Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
1_16_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.70	0.0017	↓	0.15	0.17	↔	-0.54	0.0040	↓	2023-04-12	2023-10-09	0.98	↔
1_16_4_120	MW-06	Appendix III	pH (field)	su	10	0	0%	-0.011	0.31	↔	0.0077	0.17	↔	-0.00079	0.51	↔	2023-02-05	2023-05-06	0.68	↔
1_16_5_101	MW-06	Appendix IV	Antimony	mg/L	10	8	80%	0.0000020	0.19	↔	-0.0000043	0.18	↔	0.0000037	0.11	↔	2023-05-22	2023-09-07	0.72	↔
1_16_5_102	MW-06	Appendix IV	Arsenic	mg/L	10	0	0%	-0.0000024	0.027	↔	0.0000028	0.015	↔	-0.0000038	0.0055	↓	2023-04-06	2023-10-22	0.95	↔
1_16_5_103	MW-06	Appendix IV	Barium	mg/L	10	0	0%	-0.0030	0.11	↔	0.0021	0.52	↔	-0.00098	0.66	↔	2023-04-18	2023-09-25	0.57	↔
1_16_5_104	MW-06	Appendix IV	Beryllium	mg/L	10	9	90%	0	0.0000026	↓	0	0.36	↔	0	0.75	↔	2023-01-04	2023-06-01	1.0	↔
1_16_5_106	MW-06	Appendix IV	Cadmium	mg/L	10	10	100%	0.0000014	0.12	↔	-0.0000027	0.50	↔	0.0000028	0.11	↔	2023-05-23	2023-09-11	0.73	↔
1_16_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.000015	0.34	↔	-0.000011	0.71	↔	-0.0000014	0.68	↔	2023-02-09	2023-04-20	0.38	↔
1_16_5_110	MW-06	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000024	0.71	↔	0	0.98	↔	-0.0000016	0.22	↔	2023-01-30	2023-08-07	0.51	↔
1_16_5_115	MW-06	Appendix IV	Lead	mg/L	10	7	70%	0.0000035	0.53	↔	-0.0000067	0.24	↔	0.0000043	0.44	↔	2023-04-17	2023-09-11	0.47	↔
1_16_5_116	MW-06	Appendix IV	Lithium	mg/L	10	0	0%	-0.00046	0.048	↔	0.00084	0.37	↔	-0.00055	0.15	↔	2023-05-23	2023-08-16	0.80	↔
1_16_5_118	MW-06	Appendix IV	Molybdenum	mg/L	10	7	70%	0.0000092	0.51	↔	-0.000013	0.34	↔	0.0000047	0.73	↔	2023-04-17	2023-09-14	0.40	↔
1_16_5_122	MW-06	Appendix IV	Selenium	mg/L	10	5	50%	0	1.0	↔	0	0.19	↔	0.0000024	0.000048	↑	2023-04-07	2023-10-16	0.99	↔
1_16_5_125	MW-06	Appendix IV	Thallium	mg/L	10	10	100%	0.0000017	0.28	↔	-0.0000039	0.24	↔	0.0000027	0.23	↔	2023-05-12	2023-09-01	0.58	↔
1_16_6_111	MW-06	Part 115	Copper	mg/L	10	9	90%	0	0.85	↔	0	0.36	↔	0	0.0031	↑	2023-01-30	2023-09-20	0.96	↔
1_16_6_114	MW-06	Part 115	Iron	mg/L	10	0	0%	0.082	0.22	↔	-0.056	0.082	↔	0.11	0.037	↔	2023-03-13	2023-08-31	0.88	↔
1_16_6_119	MW-06	Part 115	Nickel	mg/L	10	3	30%	-0.0000034	0.056	↔	0.0000070	0.27	↔	-0.0000016	0.20	↔	2023-05-16	2023-07-03	0.79	↔
1_16_6_123	MW-06	Part 115	Silver	mg/L	10	10	100%	0.0000011	0.28	↔	-0.0000025	0.24	↔	0.0000018	0.23	↔	2023-05-13	2023-09-01	0.58	↔
1_16_6_130	MW-06	Part 115	Zinc	mg/L	10	2	20%	-0.0012	0.52	↔	-0.000029	0.92	↔	-0.000067	0.91	↔	2023-01-03	2023-10-06	0.24	↔
1_17_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.031	0.75	↔	-0.22	0.0083	↓	0.065	0.0037	↑	2023-02-06	2023-04-27	0.95	↔
1_17_5_101	MW-07	Appendix IV	Antimony	mg/L	10	9	90%	0	0.66	↔	0	0.042	↔	0	0.68	↔	2023-02-14	2023-06-25	0.96	↔
1_17_5_102	MW-07	Appendix IV	Arsenic	mg/L	10	0	0%	0	0.34	↔	0	0.22	↔	0	0.48	↔	2023-04-17	2023-09-22	0.56	↔
1_17_5_103	MW-07	Appendix IV	Barium	mg/L	10	0	0%	-0.00044	0.25	↔	0.00062	0.40	↔	-0.00026	0.59	↔	2023-04-18	2023-09-22	0.56	↔
1_17_5_104	MW-07	Appendix IV	Beryllium	mg/L	10	7	70%	0	0.90	↔	0	0.69	↔	0	0.74	↔	2023-01-31	2023-08-07	0.17	↔
1_17_5_106	MW-07	Appendix IV	Cadmium	mg/L	10	10	100%	0	0.86	↔	0	0.076	↔	0	0.59	↔	2023-04-06	2023-06-15	0.95	↔
1_17_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	10	0	0%	0	0.41	↔	0	0.85	↔	0	0.71	↔	2023-05-27	2023-10-06	0.22	↔
1_17_5_110	MW-07	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000047	0.22	↔	0	0.59	↔	-0.0000020	0.12	↔	2023-01-19	2023-09-26	0.80	↔
1_17_5_115	MW-07	Appendix IV	Lead	mg/L	10	10	100%	0	0.86	↔	-0.0000020	0.076	↔	0	0.59	↔	2023-04-06	2023-06-15	0.95	↔
1_17_5_118	MW-07	Appendix IV	Molybdenum	mg/L	10	10	100%	0	0.86	↔	-0.0000061	0.076	↔	0	0.59	↔	2023-04-06	2023-06-15	0.95	↔
1_17_5_122	MW-07	Appendix IV	Selenium	mg/L	10	8	80%	0	1.0	↔	0	0.030	↔	0.0000012	0.054	↔	2023-03-11	2023-09-06	0.87	↔
1_17_6_111	MW-07	Part 115	Copper	mg/L	10	9	90%	0	0.64	↔	0	0.29	↔	0	0.24	↔	2023-02-18	2023-10-23	0.57	↔
1_17_6_114	MW-07	Part 115	Iron	mg/L	10	0	0%	-0.069	0.47	↔	0.043	0.38	↔	-0.0068	0.53	↔	2023-01-23	2023-05-22	0.53	↔
1_18_4_120	MW-08	Appendix III	pH (field)	su	10	0	0%	0.0056	0.38	↔	-0.00027	0.96	↔	0.00066	0.91	↔	2023-03-14	2023-09-21	0.33	↔
1_18_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	10	3	30%	0.0032	0.99	↔	-0.18	0.24	↔	0.041	0.61	↔	2023-03-13	2023-06-30	0.57	↔
1_18_5_101	MW-08	Appendix IV	Antimony	mg/L	10	4	40%	0	0.36	↔	0	0.31	↔	0	0.69	↔	2023-04-17	2023-09-22	0.49	↔
1_18_5_106	MW-08	Appendix IV	Cadmium	mg/L	10	10	100%	0	0.52	↔	0	0.067	↔	0	0.85	↔	2023-03-25	2023-06-03	0.96	↔
1_18_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.000011	0.028	↔	-0.0000069	0.35	↔	-0.0000010	0.25	↔	2023-02-09	2023-04-18	0.83	↔
1_18_5_110	MW-08	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000045	0.070	↔	0	0.84	↔	-0.0000012	0.078	↔	2023-02-07	2023-06-25	0.81	↔
1_18_5_115	MW-08	Appendix IV	Lead	mg/L	10	7	70%	0.0000075	0.36	↔	-0.0000063	0.16	↔	0	0.82	↔	2023-02-06	2023-05-10	0.73	↔
1_18_5_118	MW-08	Appendix IV	Molybdenum	mg/L	10	0	0%	0	0.92	↔	-0.000016	0.30	↔	0.0000080	0.18	↔	2023-03-14	2023-07-06	0.71	↔
1_18_5_122	MW-08	Appendix IV	Selenium	mg/L	10	5	50%	0	1.0	↔	0	0.025	↔	0.0000017	0.0012	↑	2023-03-22	2023-09-21	0.97	↔
1_18_6_111	MW-08	Part 115	Copper	mg/L	10	5	50%	0.0000014	0.24	↔	-0.0000019	0.40	↔	0.0000013	0.40	↔	2023-04-18	2023-08-30	0.50	↔

(Table continues on next page)



Table 9: Trend Tests: Piecewise Linear-Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
1_18_6_114	MW-08	Part 115	Iron	mg/L	10	0	0%	-0.15	0.25	↔	-0.055	0.095	↔	0.042	0.12	↔	2023-02-06	2023-07-11	0.90	↔
1_18_6_119	MW-08	Part 115	Nickel	mg/L	10	0	0%	0.000015	0.15	↔	-0.0000031	0.083	↔	0.000012	0.0083	↑	2023-01-08	2023-09-19	0.93	↔
1_18_6_130	MW-08	Part 115	Zinc	mg/L	10	3	30%	-0.0016	0.46	↔	0.00068	0.74	↔	-0.00021	0.34	↔	2023-01-16	2023-04-17	0.35	↔
1_28_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	-0.090	0.0010	↓	0.14	0.036	↔	-0.013	0.26	↔	2023-04-25	2023-07-10	0.93	↔
1_28_4_112	MW-18	Appendix III	Fluoride	mg/L	11	0	0%	0.0031	0.0073	↑	0.017	0.0085	↑	-0.0098	0.0012	↓	2023-05-29	2023-08-13	0.98	↔
1_28_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	-8.9	0.041	↔	0.27	0.85	↔	1.6	0.47	↔	2023-02-08	2023-09-17	0.75	↔
1_28_5_101	MW-18	Appendix IV	Antimony	mg/L	11	4	36%	0.0000019	0.14	↔	-0.0000045	0.056	↔	0.0000036	0.059	↔	2023-05-21	2023-09-06	0.76	↔
1_28_5_102	MW-18	Appendix IV	Arsenic	mg/L	11	0	0%	-0.000055	0.062	↔	0.00021	0.17	↔	-0.00015	0.026	↔	2023-05-22	2023-10-02	0.88	↔
1_28_5_103	MW-18	Appendix IV	Barium	mg/L	11	0	0%	-0.000087	0.076	↔	0.00016	0.051	↔	-0.000046	0.097	↔	2023-03-21	2023-06-29	0.81	↔
1_28_5_106	MW-18	Appendix IV	Cadmium	mg/L	11	3	27%	0.0000010	0.19	↔	-0.0000051	0.23	↔	0.0000026	0.12	↔	2023-06-12	2023-09-03	0.64	↔
1_28_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	11	10	91%	0	0.75	↔	0	0.49	↔	0	0.58	↔	2023-01-15	2023-05-21	0.46	↔
1_28_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.0031	0.0073	↑	0.017	0.0085	↑	-0.0098	0.0012	↓	2023-05-29	2023-08-13	0.98	↔
1_28_5_115	MW-18	Appendix IV	Lead	mg/L	11	8	73%	0.0000075	0.57	↔	-0.0000027	0.24	↔	0.0000024	0.57	↔	2023-02-07	2023-09-03	0.36	↔
1_28_5_116	MW-18	Appendix IV	Lithium	mg/L	11	0	0%	-0.00019	0.0041	↓	0.00018	0.0027	↑	-0.00017	0.0053	↓	2023-04-01	2023-08-25	0.94	↔
1_28_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	-0.0047	0.62	↔	0.0059	0.57	↔	-0.0012	0.23	↔	2023-01-21	2023-04-17	0.47	↔
1_28_5_122	MW-18	Appendix IV	Selenium	mg/L	11	0	0%	0.0000046	0.076	↔	-0.000019	0.021	↔	0.0000049	0.0028	↑	2023-04-14	2023-05-31	0.91	↔
1_28_5_125	MW-18	Appendix IV	Thallium	mg/L	11	11	100%	0.0000012	0.45	↔	-0.0000030	0.27	↔	0.0000029	0.20	↔	2023-05-21	2023-09-12	0.48	↔
1_28_6_111	MW-18	Part 115	Copper	mg/L	11	0	0%	0	0.81	↔	0.0000095	0.25	↔	-0.0000058	0.015	↔	2023-05-17	2023-08-07	0.80	↔
1_28_6_123	MW-18	Part 115	Silver	mg/L	11	11	100%	0	0.45	↔	-0.0000020	0.27	↔	0.0000019	0.20	↔	2023-05-21	2023-09-12	0.48	↔
1_29_4_107	MW-19	Appendix III	Calcium	mg/L	10	0	0%	-0.38	0.21	↔	-1.9	0.21	↔	0.65	0.23	↔	2023-06-27	2023-08-07	0.79	↔
1_29_4_112	MW-19	Appendix III	Fluoride	mg/L	10	0	0%	-0.0055	0.027	↔	0.0033	0.095	↔	-0.0036	0.086	↔	2023-03-22	2023-08-27	0.87	↔
1_29_5_101	MW-19	Appendix IV	Antimony	mg/L	10	9	90%	0.0000039	0.12	↔	-0.0000051	0.26	↔	0.0000036	0.26	↔	2023-04-29	2023-08-31	0.66	↔
1_29_5_102	MW-19	Appendix IV	Arsenic	mg/L	10	0	0%	-0.000020	0.053	↔	0.000054	0.022	↔	-0.000037	0.023	↔	2023-05-10	2023-08-25	0.90	↔
1_29_5_103	MW-19	Appendix IV	Barium	mg/L	10	0	0%	0.00012	0.59	↔	-0.00033	0.19	↔	0.000015	0.49	↔	2023-01-22	2023-03-13	0.71	↔
1_29_5_104	MW-19	Appendix IV	Beryllium	mg/L	10	3	30%	0.0000023	0.41	↔	-0.0000017	0.24	↔	0	0.65	↔	2023-02-07	2023-05-04	0.58	↔
1_29_5_106	MW-19	Appendix IV	Cadmium	mg/L	10	10	100%	0.0000015	0.11	↔	-0.0000027	0.50	↔	0.0000028	0.10	↔	2023-05-22	2023-09-11	0.73	↔
1_29_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	10	5	50%	0.0000082	0.085	↔	-0.000011	0.045	↔	0	0.85	↔	2023-02-07	2023-04-06	0.93	↔
1_29_5_110	MW-19	Appendix IV	Cobalt	mg/L	10	0	0%	0.0000046	0.15	↔	-0.0000033	0.037	↔	0	0.60	↔	2023-02-26	2023-10-15	0.89	↔
1_29_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.0055	0.027	↔	0.0033	0.095	↔	-0.0036	0.086	↔	2023-03-22	2023-08-27	0.87	↔
1_29_5_115	MW-19	Appendix IV	Lead	mg/L	10	10	100%	0.000013	0.063	↔	-0.0000082	0.019	↔	0.0000036	0.31	↔	2023-03-02	2023-08-19	0.86	↔
1_29_5_118	MW-19	Appendix IV	Molybdenum	mg/L	10	0	0%	-0.000032	0.064	↔	0.000079	0.29	↔	-0.000064	0.049	↔	2023-05-22	2023-08-24	0.85	↔
1_29_5_122	MW-19	Appendix IV	Selenium	mg/L	10	9	90%	0.0000100	0.12	↔	-0.0000085	0.43	↔	0	0.78	↔	2023-02-08	2023-05-08	0.70	↔
1_29_5_125	MW-19	Appendix IV	Thallium	mg/L	10	10	100%	0.0000035	0.047	↔	-0.0000032	0.049	↔	0.0000029	0.077	↔	2023-03-29	2023-09-10	0.84	↔
1_29_6_111	MW-19	Part 115	Copper	mg/L	10	10	100%	0.000011	0.25	↔	-0.000013	0.18	↔	0	0.75	↔	2023-02-07	2023-03-30	0.75	↔
1_29_6_119	MW-19	Part 115	Nickel	mg/L	10	1	10%	0.000012	0.19	↔	-0.000021	0.0048	↓	0	0.67	↔	2023-02-05	2023-05-03	0.97	↔
1_29_6_123	MW-19	Part 115	Silver	mg/L	10	10	100%	0.0000012	0.26	↔	-0.0000026	0.23	↔	0.0000018	0.22	↔	2023-05-11	2023-08-31	0.60	↔
1_29_6_129	MW-19	Part 115	Vanadium	mg/L	10	10	100%	0.000022	0.59	↔	-0.0000094	0.31	↔	0.0000023	0.75	↔	2023-02-04	2023-07-22	0.41	↔
1_29_6_130	MW-19	Part 115	Zinc	mg/L	10	8	80%	0.000036	0.39	↔	-0.000020	0.44	↔	0.0000016	0.91	↔	2023-02-08	2023-07-10	0.42	↔
1_30_4_105	MW-20	Appendix III	Boron	mg/L	11	0	0%	-0.0023	0.061	↔	0.0031	0.011	↔	-0.0034	0.016	↔	2023-03-28	2023-09-09	0.87	↔
1_30_4_107	MW-20	Appendix III	Calcium	mg/L	11	0	0%	0.40	0.22	↔	-0.73	0.38	↔	0.20	0.18	↔	2023-03-17	2023-06-27	0.67	↔
1_30_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	-0.12	0.43	↔	0.79	0.017	↔	-0.16	0.0039	↓	2023-03-10	2023-04-20	0.90	↔
1_30_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	1.1	0.00076	↑	-0.65	0.00015	↓	0.40	0.0084	↑	2023-02-14	2023-08-20	0.97	↔

(Table continues on next page)



Table 9: Trend Tests: Piecewise Linear-Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
1_30_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	11	0	0%	0.77	0.022	↔	-3.3	0.036	↔	0.34	0.19	↔	2023-05-21	2023-07-18	0.89	↔
1_30_5_101	MW-20	Appendix IV	Antimony	mg/L	11	3	27%	-0.0000013	0.32	↔	0.0000012	0.35	↔	0	0.23	↔	2023-01-20	2023-04-17	0.70	↔
1_30_5_102	MW-20	Appendix IV	Arsenic	mg/L	11	0	0%	-0.0000084	0.011	↔	0.0000031	0.00033	↑	-0.0000055	0.00042	↓	2023-01-19	2023-09-29	0.97	↔
1_30_5_103	MW-20	Appendix IV	Barium	mg/L	11	0	0%	-0.0068	0.0014	↓	0.0011	0.050	↔	-0.00098	0.19	↔	2023-02-27	2023-10-07	0.96	↔
1_30_5_104	MW-20	Appendix IV	Beryllium	mg/L	11	10	91%	0	0.74	↔	0	0.16	↔	0	0	↑	2023-04-15	2023-10-17	1.0	↔
1_30_5_106	MW-20	Appendix IV	Cadmium	mg/L	11	11	100%	0	0.57	↔	0	0.084	↔	0	0.69	↔	2023-03-28	2023-06-19	0.93	↔
1_30_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	11	5	45%	0	0.17	↔	0	0.12	↔	0	0.35	↔	2023-03-12	2023-06-05	0.66	↔
1_30_5_110	MW-20	Appendix IV	Cobalt	mg/L	11	0	0%	0.0000038	0.24	↔	-0.0000031	0.13	↔	0	0.68	↔	2023-02-24	2023-07-23	0.76	↔
1_30_5_115	MW-20	Appendix IV	Lead	mg/L	11	0	0%	-0.000020	0.22	↔	0.000010	0.070	↔	-0.0000062	0.027	↔	2023-01-14	2023-06-04	0.78	↔
1_30_5_116	MW-20	Appendix IV	Lithium	mg/L	11	0	0%	-0.00036	0.017	↔	0.00020	0.0053	↑	-0.00038	0.0020	↓	2023-02-13	2023-09-07	0.94	↔
1_30_5_118	MW-20	Appendix IV	Molybdenum	mg/L	11	0	0%	-0.0000032	0.43	↔	0.000018	0.015	↔	-0.0000035	0.16	↔	2023-04-17	2023-07-11	0.86	↔
1_30_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	11	6	55%	-0.019	0.073	↔	0.0016	0.30	↔	0.00020	0.94	↔	2023-01-22	2023-08-07	0.77	↔
1_30_5_122	MW-20	Appendix IV	Selenium	mg/L	11	6	55%	0	1.0	↔	-0.0000011	0.0041	↓	0.0000013	0.0045	↑	2023-04-04	2023-09-05	0.93	↔
1_30_6_111	MW-20	Part 115	Copper	mg/L	11	1	9%	-0.0000019	0.33	↔	0.0000016	0.19	↔	0	0.50	↔	2023-02-23	2023-08-06	0.62	↔
1_30_6_119	MW-20	Part 115	Nickel	mg/L	11	0	0%	0	1.0	↔	0.000012	0.70	↔	-0.000012	0.0053	↓	2023-01-04	2023-03-13	0.86	↔
1_30_6_130	MW-20	Part 115	Zinc	mg/L	11	0	0%	-0.0012	0.054	↔	0.00035	0.52	↔	-0.00012	0.043	↔	2023-01-14	2023-04-17	0.78	↔
1_40_4_107	MW-30	Appendix III	Calcium	mg/L	14	0	0%	2.0	0.36	↔	-1.6	0.21	↔	1.1	0.57	↔	2023-03-12	2023-10-03	0.36	↔
1_40_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	14	0	0%	-0.56	0.00065	↓	-0.12	0.83	↔	0.12	0.61	↔	2023-05-22	2023-10-04	0.90	↔
1_40_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	14	0	0%	-1.3	0.73	↔	1.5	0.78	↔	-2.0	0.16	↔	2023-02-10	2023-06-21	0.26	↔
1_40_5_101	MW-30	Appendix IV	Antimony	mg/L	14	12	86%	0.0000025	0.0020	↑	-0.0000095	0.0078	↓	0.0000036	0.016	↔	2023-06-24	2023-08-28	0.87	↔
1_40_5_102	MW-30	Appendix IV	Arsenic	mg/L	14	3	21%	-0.0000026	0.014	↔	0.0000042	0.34	↔	-0.0000038	0.068	↔	2023-05-30	2023-10-08	0.68	↔
1_40_5_104	MW-30	Appendix IV	Beryllium	mg/L	14	12	86%	0.0000020	0.091	↔	0	0.26	↔	0.0000010	0.28	↔	2023-02-06	2023-10-11	0.47	↔
1_40_5_106	MW-30	Appendix IV	Cadmium	mg/L	14	14	100%	0.0000013	0.028	↔	-0.0000028	0.28	↔	0.0000028	0.026	↔	2023-05-22	2023-09-07	0.71	↔
1_40_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	14	0	0%	-0.000054	0.00025	↓	0.00017	0.0017	↑	-0.000042	0.00099	↓	2023-05-17	2023-07-09	0.92	↔
1_40_5_115	MW-30	Appendix IV	Lead	mg/L	14	14	100%	0.000013	0.0038	↑	-0.0000050	0.026	↔	0.0000036	0.23	↔	2023-02-23	2023-10-07	0.79	↔
1_40_5_118	MW-30	Appendix IV	Molybdenum	mg/L	14	5	36%	0.000079	0.0030	↑	-0.000020	0.023	↔	0	0.84	↔	2023-01-07	2023-05-30	0.83	↔
1_40_5_122	MW-30	Appendix IV	Selenium	mg/L	14	9	64%	0.0000089	0.32	↔	-0.0000041	0.031	↔	0.0000043	0.27	↔	2023-02-05	2023-09-18	0.56	↔
1_40_6_111	MW-30	Part 115	Copper	mg/L	14	11	79%	0.0000089	0.26	↔	-0.0000046	0.13	↔	0.0000011	0.42	↔	2023-02-05	2023-06-18	0.54	↔
1_40_6_123	MW-30	Part 115	Silver	mg/L	14	14	100%	0.0000013	0.087	↔	-0.0000025	0.15	↔	0.0000018	0.14	↔	2023-04-29	2023-08-28	0.54	↔
1_40_6_129	MW-30	Part 115	Vanadium	mg/L	14	14	100%	0.000025	0.33	↔	-0.0000097	0.062	↔	0.0000055	0.61	↔	2023-02-05	2023-09-12	0.50	↔
1_41_4_105	MW-31	Appendix III	Boron	mg/L	10	0	0%	-0.0058	0.45	↔	0.012	0.14	↔	-0.0062	0.40	↔	2023-04-03	2023-08-26	0.63	↔
1_41_4_107	MW-31	Appendix III	Calcium	mg/L	10	0	0%	0.11	0.57	↔	-0.49	0.43	↔	0.16	0.11	↔	2023-03-14	2023-06-25	0.79	↔
1_41_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.16	0.058	↔	0.50	0.13	↔	-0.055	0.33	↔	2023-05-15	2023-06-27	0.75	↔
1_41_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.47	0.33	↔	-1.3	0.029	↔	0.70	0.16	↔	2023-03-30	2023-09-08	0.89	↔
1_41_5_101	MW-31	Appendix IV	Antimony	mg/L	10	5	50%	0	0.11	↔	0	0.74	↔	0	0.97	↔	2023-04-02	2023-10-21	0.71	↔
1_41_5_102	MW-31	Appendix IV	Arsenic	mg/L	10	0	0%	-0.0000088	0.019	↔	0.0000060	0.014	↔	-0.0000031	0.021	↔	2023-03-04	2023-07-05	0.93	↔
1_41_5_104	MW-31	Appendix IV	Beryllium	mg/L	10	9	90%	0	0.82	↔	0	0.38	↔	0	0.0029	↑	2023-01-23	2023-09-19	0.96	↔
1_41_5_106	MW-31	Appendix IV	Cadmium	mg/L	10	9	90%	0	0.72	↔	0	0.038	↔	0	0.49	↔	2023-03-12	2023-05-29	0.93	↔
1_41_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.0000016	0.85	↔	0.0000071	0.67	↔	-0.0000010	0.61	↔	2023-03-01	2023-05-21	0.38	↔
1_41_5_110	MW-31	Appendix IV	Cobalt	mg/L	10	0	0%	0	0.25	↔	0	0.50	↔	0.0000013	0.013	↔	2023-06-16	2023-10-16	0.85	↔
1_41_5_115	MW-31	Appendix IV	Lead	mg/L	10	9	90%	0	0.59	↔	-0.0000021	0.29	↔	0	0.71	↔	2023-05-22	2023-08-17	0.79	↔
1_41_5_116	MW-31	Appendix IV	Lithium	mg/L	10	0	0%	-0.0000098	0.85	↔	0.000048	0.55	↔	-0.000086	0.035	↔	2023-04-02	2023-08-01	0.76	↔

(Table continues on next page)



Table 9: Trend Tests: Piecewise Linear-Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
1_41_5_118	MW-31	Appendix IV	Molybdenum	mg/L	10	0	0%	-0.0000091	0.077	↔	0.0000055	0.41	↔	-0.0000019	0.44	↔	2023-03-17	2023-06-27	0.67	↔
1_41_5_122	MW-31	Appendix IV	Selenium	mg/L	10	5	50%	0	1.0	↔	0	0.13	↔	0.0000054	0.00039	↑	2023-02-25	2023-10-10	0.98	↔
1_41_5_125	MW-31	Appendix IV	Thallium	mg/L	10	9	90%	0	0.81	↔	0	0.38	↔	0	0.0029	↑	2023-01-22	2023-09-19	0.96	↔
1_41_6_111	MW-31	Part 115	Copper	mg/L	10	8	80%	0	0.35	↔	0	0.39	↔	0	0.39	↔	2023-05-21	2023-09-09	0.45	↔
1_41_6_119	MW-31	Part 115	Nickel	mg/L	10	9	90%	0	0.78	↔	-0.0000013	0.36	↔	0.000012	0.0023	↑	2023-03-03	2023-09-19	0.97	↔
2_11_4_105	MW-01R	Appendix III	Boron	mg/L	11	0	0%	-0.38	0.065	↔	0.60	0.019	↔	-1.1	0.0020	↓	2023-03-16	2023-09-30	0.92	↔
2_11_4_107	MW-01R	Appendix III	Calcium	mg/L	11	0	0%	0.68	0.069	↔	-1.0	0.023	↔	2.4	0.00087	↑	2023-03-23	2023-10-09	0.93	↔
2_11_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	-0.93	0.35	↔	0.54	0.025	↔	-1.5	0.0062	↓	2023-02-07	2023-10-16	0.86	↔
2_11_4_112	MW-01R	Appendix III	Fluoride	mg/L	11	0	0%	-0.060	0.012	↔	0.055	0.025	↔	-0.082	0.0061	↓	2023-03-23	2023-09-15	0.91	↔
2_11_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	1.6	0.24	↔	-5.6	0.11	↔	8.7	0.0071	↑	2023-04-18	2023-09-29	0.86	↔
2_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	11	3	27%	0.0000044	0.23	↔	-0.0000041	0.30	↔	0.0000025	0.53	↔	2023-04-17	2023-09-24	0.49	↔
2_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	11	0	0%	-0.000017	0.33	↔	0.0000012	0.72	↔	0.000023	0.012	↔	2023-01-21	2023-10-19	0.87	↔
2_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	11	0	0%	0	0.18	↔	0.0000044	0.083	↔	-0.0000011	0.043	↔	2023-05-10	2023-07-03	0.78	↔
2_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	11	7	64%	0.0000012	0.83	↔	0	1.0	↔	0.0000017	0.41	↔	2023-01-28	2023-10-17	0.31	↔
2_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	-0.060	0.012	↔	0.055	0.025	↔	-0.082	0.0061	↓	2023-03-23	2023-09-15	0.91	↔
2_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	11	0	0%	-0.0063	0.21	↔	0.017	0.017	↔	-0.023	0.0055	↓	2023-04-10	2023-09-18	0.89	↔
2_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11	1	9%	0.000010	0.18	↔	-0.000016	0.34	↔	0.000042	0.011	↔	2023-04-18	2023-09-22	0.85	↔
2_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	11	0	0%	0	0.93	↔	0	0.96	↔	0.0000097	0.019	↔	2023-01-12	2023-10-14	0.83	↔
2_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	11	11	100%	0.0000019	0.057	↔	-0.0000026	0.59	↔	0.0000023	0.22	↔	2023-06-09	2023-10-17	0.66	↔
2_11_6_111	MW-01R	Part 115	Copper	mg/L	11	5	45%	-0.0000027	0.72	↔	0.0000042	0.63	↔	0	0.84	↔	2023-02-09	2023-06-27	0.42	↔
2_11_6_114	MW-01R	Part 115	Iron	mg/L	11	0	0%	-0.00075	0.58	↔	-0.0078	0.34	↔	0.0056	0.092	↔	2023-06-10	2023-09-04	0.69	↔
2_11_6_123	MW-01R	Part 115	Silver	mg/L	11	11	100%	0.0000011	0.14	↔	-0.0000056	0.16	↔	0.0000011	0.14	↔	2023-05-22	2023-07-09	0.65	↔
2_11_6_130	MW-01R	Part 115	Zinc	mg/L	11	1	9%	-0.00037	0.057	↔	0.000094	0.33	↔	-0.000025	0.27	↔	2023-01-10	2023-04-18	0.71	↔
2_12_4_105	MW-02	Appendix III	Boron	mg/L	10	0	0%	-0.049	0.67	↔	0.28	0.59	↔	-0.029	0.76	↔	2023-04-18	2023-07-06	0.51	↔
2_12_4_107	MW-02	Appendix III	Calcium	mg/L	10	0	0%	0.048	0.77	↔	-0.71	0.41	↔	0.27	0.41	↔	2023-06-23	2023-08-18	0.36	↔
2_12_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.73	0.25	↔	0.34	0.57	↔	-0.050	0.76	↔	2023-02-08	2023-06-20	0.43	↔
2_12_4_112	MW-02	Appendix III	Fluoride	mg/L	10	0	0%	-0.058	0.38	↔	0.066	0.36	↔	0.00017	0.98	↔	2023-02-07	2023-04-03	0.60	↔
2_12_4_120	MW-02	Appendix III	pH (field)	su	10	0	0%	0.0016	0.16	↔	-0.0022	0.65	↔	0.0012	0.51	↔	2023-05-23	2023-09-30	0.50	↔
2_12_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	10	0	0%	0.64	0.93	↔	0.90	0.73	↔	-0.83	0.49	↔	2023-02-02	2023-06-26	0.20	↔
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	10	3	30%	0.0000031	0.079	↔	-0.0000049	0.46	↔	0	0.64	↔	2023-04-30	2023-06-27	0.66	↔
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	10	0	0%	-0.000017	0.79	↔	0.000031	0.19	↔	-0.000039	0.011	↔	2023-01-26	2023-06-05	0.88	↔
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	10	1	10%	0	0.33	↔	0.0000028	0.15	↔	-0.0000042	0.019	↔	2023-05-20	2023-10-05	0.83	↔
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	10	7	70%	0.0000014	0.88	↔	0	0.74	↔	0	0.93	↔	2023-02-04	2023-07-12	0.18	↔
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	10	0	0%	-0.0000027	0.88	↔	0.000043	0.63	↔	-0.000055	0.15	↔	2023-05-23	2023-08-29	0.63	↔
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	10	0	0%	-0.058	0.38	↔	0.066	0.36	↔	0.00017	0.98	↔	2023-02-07	2023-04-03	0.60	↔
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	10	1	10%	0.000029	0.49	↔	0.0000050	0.72	↔	-0.000014	0.075	↔	2023-01-18	2023-06-20	0.71	↔
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	10	0	0%	0.000080	0.0086	↑	-0.000066	0.018	↔	-0.0000093	0.13	↔	2023-02-28	2023-05-25	0.95	↔
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.012	0.25	↔	0.010	0.81	↔	-0.018	0.39	↔	2023-04-18	2023-08-03	0.54	↔
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	10	0	0%	-0.0000029	0.28	↔	0.0000053	0.33	↔	-0.000011	0.030	↔	2023-04-18	2023-10-23	0.79	↔
2_12_6_114	MW-02	Part 115	Iron	mg/L	10	0	0%	0.064	0.066	↔	-0.065	0.055	↔	0.12	0.011	↔	2023-03-31	2023-10-11	0.89	↔
2_12_6_123	MW-02	Part 115	Silver	mg/L	10	10	100%	0.0000012	0.21	↔	-0.0000040	0.34	↔	0	0.84	↔	2023-05-16	2023-07-12	0.59	↔
2_12_6_130	MW-02	Part 115	Zinc	mg/L	10	0	0%	-0.00045	0.31	↔	-0.0000035	0.96	↔	-0.000026	0.85	↔	2023-01-04	2023-10-03	0.41	↔

(Table continues on next page)



Table 9: Trend Tests: Piecewise Linear-Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
2_13_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.86	0.042	↔	0.39	0.55	↔	-0.35	0.43	↔	2023-05-08	2023-09-23	0.81	↔
2_13_4_120	MW-03	Appendix III	pH (field)	su	10	0	0%	0.0012	0.25	↔	-0.0032	0.52	↔	0.0014	0.44	↔	2023-06-13	2023-09-06	0.43	↔
2_13_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	4.4	0.027	↔	-2.7	0.36	↔	-0.62	0.75	↔	2023-04-24	2023-08-19	0.80	↔
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	10	6	60%	0.0000024	0.037	↔	-0.0000077	0.13	↔	0.0000041	0.047	↔	2023-06-20	2023-09-12	0.84	↔
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	10	0	0%	0.0000073	0.40	↔	-0.0000095	0.079	↔	0.0000016	0.16	↔	2023-02-02	2023-04-18	0.72	↔
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	10	7	70%	0.0000016	0.41	↔	0	0.59	↔	0	0.69	↔	2023-02-07	2023-07-19	0.27	↔
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	10	9	90%	0.0000014	0.21	↔	-0.0000026	0.26	↔	0.0000026	0.12	↔	2023-05-22	2023-09-07	0.72	↔
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	10	0	0%	-0.0000010	0.72	↔	0.0000077	0.24	↔	-0.0000082	0.092	↔	2023-05-17	2023-09-20	0.67	↔
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	10	9	90%	0.000012	0.072	↔	-0.0000049	0.089	↔	0.0000025	0.48	↔	2023-02-25	2023-09-23	0.79	↔
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	10	8	80%	0.000031	0.56	↔	-0.000015	0.39	↔	0	0.99	↔	2023-02-06	2023-06-21	0.45	↔
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	10	1	10%	-0.016	0.38	↔	0.0020	0.73	↔	-0.0015	0.57	↔	2023-01-24	2023-05-23	0.50	↔
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	10	3	30%	0.0000075	0.23	↔	-0.0000067	0.57	↔	0.0000018	0.22	↔	2023-02-07	2023-05-11	0.56	↔
2_13_6_111	MW-03	Part 115	Copper	mg/L	10	5	50%	0.0000057	0.54	↔	-0.0000016	0.78	↔	0.0000010	0.76	↔	2023-02-07	2023-07-19	0.15	↔
2_13_6_114	MW-03	Part 115	Iron	mg/L	10	0	0%	-0.022	0.061	↔	-0.00075	0.99	↔	0.0086	0.61	↔	2023-06-14	2023-10-01	0.78	↔
2_13_6_123	MW-03	Part 115	Silver	mg/L	10	10	100%	0.0000011	0.27	↔	-0.0000026	0.23	↔	0.0000018	0.23	↔	2023-05-13	2023-08-31	0.59	↔
2_13_6_129	MW-03	Part 115	Vanadium	mg/L	10	9	90%	0.000028	0.39	↔	-0.000024	0.19	↔	0.0000017	0.66	↔	2023-02-06	2023-04-25	0.59	↔
2_14_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.33	0.67	↔	-0.44	0.16	↔	-0.18	0.72	↔	2023-02-15	2023-08-09	0.61	↔
2_14_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	0.0017	0.045	↔	-0.0031	0.41	↔	0.0012	0.42	↔	2023-05-23	2023-09-15	0.61	↔
2_14_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	1.3	0.21	↔	-2.5	0.61	↔	0	1.0	↔	2023-06-17	2023-09-16	0.35	↔
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	0.0000026	0.0060	↑	-0.0000097	0.024	↔	0.0000035	0.037	↔	2023-06-23	2023-08-28	0.85	↔
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000036	0.048	↔	0.0000045	0.56	↔	-0.0000036	0.28	↔	2023-05-23	2023-09-17	0.57	↔
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	0.0000017	0.093	↔	-0.0000031	0.054	↔	0.0000028	0.059	↔	2023-05-22	2023-09-12	0.74	↔
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.000068	0.15	↔	-0.000036	0.45	↔	-0.0000022	0.63	↔	2023-01-17	2023-03-27	0.52	↔
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	-0.0000013	0.54	↔	0.0000029	0.36	↔	-0.0000029	0.35	↔	2023-05-22	2023-08-17	0.41	↔
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	0.0000043	0.20	↔	-0.0000067	0.18	↔	0.0000037	0.41	↔	2023-04-19	2023-09-06	0.51	↔
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	0	0.99	↔	0.00021	0.13	↔	-0.00016	0.21	↔	2023-05-21	2023-08-11	0.58	↔
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	-0.000020	0.61	↔	0.0000090	0.83	↔	-0.0000027	0.49	↔	2023-01-09	2023-04-18	0.14	↔
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	12	6	50%	-0.0000010	0.063	↔	0	0.84	↔	0.0000017	0.13	↔	2023-05-23	2023-09-29	0.70	↔
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	0.0000017	0.040	↔	-0.0000076	0.067	↔	0.0000027	0.10	↔	2023-06-21	2023-08-27	0.73	↔
2_14_6_111	MW-04	Part 115	Copper	mg/L	12	11	92%	0	0.59	↔	0	0.25	↔	0	0.27	↔	2023-02-13	2023-10-23	0.45	↔
2_14_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	0.000076	0.54	↔	0.000028	0.72	↔	-0.000047	0.26	↔	2023-02-07	2023-08-06	0.38	↔
2_14_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	0.0000011	0.18	↔	-0.0000026	0.053	↔	0.0000018	0.14	↔	2023-05-17	2023-09-03	0.65	↔
2_14_6_130	MW-04	Part 115	Zinc	mg/L	12	8	67%	-0.000087	0.22	↔	0.000025	0.73	↔	-0.0000064	0.36	↔	2023-01-13	2023-04-18	0.38	↔
2_19_4_107	MW-09	Appendix III	Calcium	mg/L	11	0	0%	1.1	0.0086	↑	-2.4	0.12	↔	0.98	0.093	↔	2023-06-18	2023-09-05	0.85	↔
2_19_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	0.058	0.24	↔	-0.070	0.0022	↓	0.029	0.0060	↑	2023-01-29	2023-06-03	0.93	↔
2_19_4_112	MW-09	Appendix III	Fluoride	mg/L	11	0	0%	0.0067	0.14	↔	0.0022	0.013	↔	-0.0051	0.011	↔	2023-01-17	2023-09-12	0.92	↔
2_19_4_120	MW-09	Appendix III	pH (field)	su	11	0	0%	0.0014	0.086	↔	-0.0026	0.46	↔	0.0000058	1.0	↔	2023-05-23	2023-09-01	0.63	↔
2_19_5_101	MW-09	Appendix IV	Antimony	mg/L	11	6	55%	0.0000021	0.10	↔	-0.0000044	0.099	↔	0.0000037	0.059	↔	2023-05-22	2023-09-06	0.76	↔
2_19_5_102	MW-09	Appendix IV	Arsenic	mg/L	11	0	0%	-0.0000069	0.13	↔	0.000014	0.14	↔	-0.0000071	0.24	↔	2023-05-14	2023-08-16	0.64	↔
2_19_5_104	MW-09	Appendix IV	Beryllium	mg/L	11	10	91%	0	0.16	↔	0	0.57	↔	0	0.89	↔	2023-05-23	2023-08-12	0.40	↔
2_19_5_106	MW-09	Appendix IV	Cadmium	mg/L	11	11	100%	0.0000016	0.055	↔	-0.0000025	0.46	↔	0.0000027	0.070	↔	2023-05-23	2023-09-11	0.75	↔
2_19_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	11	0	0%	0.000021	0.38	↔	-0.000010	0.63	↔	-0.0000021	0.42	↔	2023-01-20	2023-04-17	0.56	↔

(Table continues on next page)



Table 9: Trend Tests: Piecewise Linear-Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
2_19_5_110	MW-09	Appendix IV	Cobalt	mg/L	11	0	0%	0.0000050	0.13	↔	-0.0000049	0.61	↔	0	0.99	↔	2023-03-15	2023-05-23	0.44	↔
2_19_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	0.0067	0.14	↔	0.0022	0.013	↔	-0.0051	0.011	↔	2023-01-17	2023-09-12	0.92	↔
2_19_5_115	MW-09	Appendix IV	Lead	mg/L	11	11	100%	0.000012	0.12	↔	-0.0000048	0.21	↔	0.0000029	0.59	↔	2023-02-06	2023-08-23	0.58	↔
2_19_5_116	MW-09	Appendix IV	Lithium	mg/L	11	0	0%	-0.00025	0.33	↔	0.0014	0.23	↔	-0.00036	0.12	↔	2023-05-17	2023-06-27	0.60	↔
2_19_5_118	MW-09	Appendix IV	Molybdenum	mg/L	11	0	0%	-0.00010	0.031	↔	0.000067	0.39	↔	-0.000093	0.12	↔	2023-05-22	2023-09-20	0.86	↔
2_19_5_122	MW-09	Appendix IV	Selenium	mg/L	11	2	18%	0	0.31	↔	0	0.36	↔	0	0.74	↔	2023-05-22	2023-08-17	0.35	↔
2_19_5_125	MW-09	Appendix IV	Thallium	mg/L	11	11	100%	0.0000017	0.26	↔	-0.0000087	0.21	↔	0.0000017	0.19	↔	2023-05-20	2023-07-08	0.55	↔
2_19_6_111	MW-09	Part 115	Copper	mg/L	11	9	82%	0	0.68	↔	0.0000019	0.49	↔	0	0.100	↔	2023-05-11	2023-08-07	0.58	↔
2_19_6_114	MW-09	Part 115	Iron	mg/L	11	0	0%	0.060	0.0028	↑	-0.12	0.0036	↓	0.062	0.0096	↑	2023-05-07	2023-09-06	0.94	↔
2_19_6_119	MW-09	Part 115	Nickel	mg/L	11	0	0%	0.000018	0.12	↔	-0.000013	0.044	↔	0.000047	0.0011	↑	2023-03-04	2023-10-07	0.93	↔
2_19_6_123	MW-09	Part 115	Silver	mg/L	11	11	100%	0.0000012	0.13	↔	-0.0000025	0.12	↔	0.0000018	0.10	↔	2023-05-22	2023-09-02	0.71	↔
2_19_6_130	MW-09	Part 115	Zinc	mg/L	11	7	64%	-0.00057	0.059	↔	0.00011	0.62	↔	-0.000030	0.28	↔	2023-01-14	2023-04-15	0.73	↔
2_20_4_105	MW-10	Appendix III	Boron	mg/L	11	0	0%	-0.19	0.00044	↓	0.23	0.00066	↑	-0.10	0.00056	↓	2023-03-18	2023-07-19	0.98	↔
2_20_4_107	MW-10	Appendix III	Calcium	mg/L	11	0	0%	1.8	0.18	↔	-1.9	0.043	↔	0.86	0.092	↔	2023-03-13	2023-07-23	0.77	↔
2_20_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	11	0	0%	-1.2	0.017	↔	2.7	0.00021	↑	-1.5	0.0068	↓	2023-03-30	2023-08-08	0.97	↔
2_20_4_112	MW-10	Appendix III	Fluoride	mg/L	11	0	0%	-0.045	0.00084	↓	0.044	0.000088	↑	-0.023	0.00015	↓	2023-03-07	2023-07-12	0.98	↔
2_20_4_120	MW-10	Appendix III	pH (field)	su	11	0	0%	0.0046	0.20	↔	-0.0084	0.62	↔	0.0027	0.66	↔	2023-05-23	2023-09-10	0.40	↔
2_20_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	11	0	0%	2.0	0.28	↔	-9	0.35	↔	3.9	0.060	↔	2023-04-18	2023-07-16	0.74	↔
2_20_5_101	MW-10	Appendix IV	Antimony	mg/L	11	7	64%	0.0000017	0.11	↔	-0.0000037	0.45	↔	0.0000036	0.086	↔	2023-05-23	2023-09-09	0.68	↔
2_20_5_102	MW-10	Appendix IV	Arsenic	mg/L	11	0	0%	-0.0000018	0.091	↔	0.0000077	0.00010	↑	-0.0000062	0.00068	↓	2023-04-17	2023-09-01	0.98	↔
2_20_5_103	MW-10	Appendix IV	Barium	mg/L	11	0	0%	0.0045	0.33	↔	-0.0030	0.15	↔	0.00098	0.10	↔	2023-01-04	2023-04-25	0.69	↔
2_20_5_104	MW-10	Appendix IV	Beryllium	mg/L	11	5	45%	0	0.68	↔	0.0000017	0.17	↔	0	0.21	↔	2023-03-08	2023-05-23	0.55	↔
2_20_5_106	MW-10	Appendix IV	Cadmium	mg/L	11	11	100%	0.0000014	0.079	↔	-0.0000026	0.46	↔	0.0000027	0.074	↔	2023-05-23	2023-09-10	0.72	↔
2_20_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	11	0	0%	-0.000026	0.063	↔	0.000071	0.0043	↑	-0.000037	0.0019	↓	2023-04-09	2023-07-21	0.93	↔
2_20_5_110	MW-10	Appendix IV	Cobalt	mg/L	11	1	9%	-0.0000037	0.71	↔	0.000011	0.53	↔	-0.0000040	0.12	↔	2023-02-22	2023-05-22	0.51	↔
2_20_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	11	0	0%	-0.045	0.00084	↓	0.044	0.000088	↑	-0.023	0.00015	↓	2023-03-07	2023-07-12	0.98	↔
2_20_5_115	MW-10	Appendix IV	Lead	mg/L	11	9	82%	0.000012	0.045	↔	-0.000011	0.013	↔	0.0000021	0.27	↔	2023-03-10	2023-07-11	0.87	↔
2_20_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	11	8	73%	0.0047	0.50	↔	-0.015	0.42	↔	0.0011	0.72	↔	2023-04-16	2023-05-29	0.30	↔
2_20_5_122	MW-10	Appendix IV	Selenium	mg/L	11	2	18%	0.0000012	0.83	↔	-0.0000011	0.84	↔	0.0000015	0.030	↔	2023-01-15	2023-04-13	0.68	↔
2_20_5_125	MW-10	Appendix IV	Thallium	mg/L	11	11	100%	0.0000024	0.020	↔	-0.0000087	0.063	↔	0.0000017	0.053	↔	2023-05-12	2023-07-08	0.84	↔
2_20_6_111	MW-10	Part 115	Copper	mg/L	11	8	73%	-0.000011	0.51	↔	0.0000043	0.56	↔	-0.0000016	0.43	↔	2023-01-12	2023-05-22	0.26	↔
2_20_6_114	MW-10	Part 115	Iron	mg/L	11	0	0%	0.028	0.0085	↑	-0.039	0.055	↔	0.012	0.33	↔	2023-04-24	2023-09-08	0.88	↔
2_20_6_119	MW-10	Part 115	Nickel	mg/L	11	5	45%	-0.0000069	0.38	↔	0.0000099	0.22	↔	-0.0000026	0.25	↔	2023-02-23	2023-05-23	0.51	↔
2_20_6_123	MW-10	Part 115	Silver	mg/L	11	11	100%	0.0000013	0.12	↔	-0.0000057	0.16	↔	0.0000011	0.15	↔	2023-05-20	2023-07-08	0.65	↔
2_20_6_129	MW-10	Part 115	Vanadium	mg/L	11	10	91%	-0.0000016	0.76	↔	0.0000041	0.64	↔	-0.0000013	0.30	↔	2023-02-26	2023-05-22	0.31	↔
2_20_6_130	MW-10	Part 115	Zinc	mg/L	11	3	27%	-0.00035	0.13	↔	0.00011	0.60	↔	-0.000030	0.17	↔	2023-01-14	2023-04-17	0.60	↔
2_21_4_105	MW-11	Appendix III	Boron	mg/L	10	0	0%	-0.069	0.048	↔	0.068	0.24	↔	-0.035	0.37	↔	2023-05-03	2023-10-23	0.81	↔
2_21_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	10	0	0%	-0.31	0.0017	↓	0.25	0.038	↔	-0.23	0.016	↔	2023-04-27	2023-10-08	0.96	↔
2_21_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	10	2	20%	1.6	0.011	↔	-2.7	0.15	↔	-0.0056	0.99	↔	2023-04-18	2023-06-30	0.89	↔
2_21_5_101	MW-11	Appendix IV	Antimony	mg/L	10	7	70%	0	0.83	↔	-0.0000031	0.78	↔	0	0.95	↔	2023-05-23	2023-08-10	0.17	↔
2_21_5_102	MW-11	Appendix IV	Arsenic	mg/L	10	0	0%	-0.000015	0.20	↔	0.000012	0.58	↔	-0.0000098	0.51	↔	2023-04-28	2023-10-03	0.47	↔
2_21_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	10	0	0%	-0.000025	0.45	↔	0.000015	0.91	↔	-0.0000058	0.82	↔	2023-05-01	2023-07-25	0.23	↔

(Table continues on next page)



Table 9: Trend Tests: Piecewise Linear-Linear-Linear (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
2_21_5_116	MW-11	Appendix IV	Lithium	mg/L	10	0	0%	-0.0011	0.12	↔	0.0011	0.37	↔	-0.00065	0.45	↔	2023-05-08	2023-10-10	0.65	↔
2_21_5_118	MW-11	Appendix IV	Molybdenum	mg/L	10	2	20%	-0.000013	0.090	↔	0.000011	0.38	↔	-0.0000075	0.40	↔	2023-05-13	2023-09-21	0.69	↔
2_21_5_125	MW-11	Appendix IV	Thallium	mg/L	10	10	100%	0.0000019	0.21	↔	-0.0000062	0.32	↔	0	0.84	↔	2023-05-16	2023-07-12	0.60	↔
2_21_6_111	MW-11	Part 115	Copper	mg/L	10	3	30%	-0.000055	0.48	↔	0.000014	0.97	↔	-0.0000066	0.91	↔	2023-04-25	2023-08-07	0.22	↔
2_21_6_119	MW-11	Part 115	Nickel	mg/L	10	0	0%	-0.000027	0.42	↔	0.000017	0.90	↔	-0.0000037	0.89	↔	2023-05-06	2023-07-28	0.26	↔
2_21_6_123	MW-11	Part 115	Silver	mg/L	10	9	90%	0	0.31	↔	-0.0000019	0.32	↔	0	0.74	↔	2023-05-17	2023-09-05	0.50	↔
2_21_6_130	MW-11	Part 115	Zinc	mg/L	10	3	30%	-0.00043	0.39	↔	-0.000096	0.90	↔	-0.000015	0.96	↔	2023-03-14	2023-07-13	0.43	↔
2_22_4_105	MW-12	Appendix III	Boron	mg/L	13	0	0%	-0.0018	0.027	↔	0.0012	0.00069	↑	-0.0018	0.0037	↓	2023-03-08	2023-10-11	0.90	↔
2_22_4_107	MW-12	Appendix III	Calcium	mg/L	13	0	0%	-0.050	0.66	↔	0.37	0.098	↔	-0.49	0.017	↔	2023-05-21	2023-09-26	0.70	↔
2_22_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	13	0	0%	-0.044	0.10	↔	0.12	0.19	↔	-0.080	0.10	↔	2023-06-09	2023-09-26	0.58	↔
2_22_4_120	MW-12	Appendix III	pH (field)	su	13	0	0%	0.0072	0.22	↔	-0.0043	0.038	↔	0.0077	0.053	↔	2023-03-12	2023-09-23	0.69	↔
2_22_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	13	0	0%	-0.47	0.026	↔	0.42	0.20	↔	-0.41	0.13	↔	2023-05-17	2023-09-14	0.73	↔
2_22_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	13	0	0%	-1.1	0.12	↔	1.4	0.20	↔	-1.7	0.0023	↓	2023-03-22	2023-08-06	0.80	↔
2_22_5_102	MW-12	Appendix IV	Arsenic	mg/L	13	0	0%	-0.000014	0.0075	↓	0.000014	0.0000064	↑	-0.000013	0.00086	↓	2023-03-05	2023-08-27	0.97	↔
2_22_5_103	MW-12	Appendix IV	Barium	mg/L	13	0	0%	-0.000023	0.63	↔	0.00028	0.00034	↑	-0.00034	0.00033	↓	2023-04-14	2023-09-27	0.95	↔
2_22_5_106	MW-12	Appendix IV	Cadmium	mg/L	13	0	0%	0	0.96	↔	0.000021	0.0084	↑	-0.0000095	0.0034	↓	2023-04-05	2023-06-27	0.90	↔
2_22_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	13	6	46%	0.0000023	0.28	↔	-0.0000030	0.0015	↓	0.0000074	0.00044	↑	2023-03-12	2023-09-28	0.91	↔
2_22_5_110	MW-12	Appendix IV	Cobalt	mg/L	13	5	38%	0	0.067	↔	0.0000078	0.000100	↑	-0.0000022	0.0000054	↓	2023-04-30	2023-07-06	0.99	↔
2_22_5_116	MW-12	Appendix IV	Lithium	mg/L	13	0	0%	-0.000023	0.099	↔	0.000030	0.024	↔	-0.000013	0.0032	↓	2023-02-22	2023-06-26	0.88	↔
2_22_5_118	MW-12	Appendix IV	Molybdenum	mg/L	13	0	0%	-0.000029	0.0070	↓	0.000028	0.0069	↑	-0.000040	0.0029	↓	2023-03-18	2023-09-26	0.89	↔
2_22_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	13	11	85%	0.0022	0.066	↔	-0.0042	0.30	↔	0.0022	0.29	↔	2023-05-23	2023-09-06	0.52	↔
2_22_5_122	MW-12	Appendix IV	Selenium	mg/L	13	0	0%	0.000014	0.45	↔	-0.000010	0.017	↔	0.0000046	0.15	↔	2023-01-09	2023-08-05	0.80	↔
2_22_6_111	MW-12	Part 115	Copper	mg/L	13	0	0%	0.0000055	0.00070	↑	-0.0000079	0.055	↔	0.0000042	0.050	↔	2023-05-23	2023-09-19	0.87	↔
2_22_6_114	MW-12	Part 115	Iron	mg/L	13	5	38%	-0.0064	0.0000010	↓	0.00020	0.034	↔	-0.00018	0.029	↔	2023-01-05	2023-08-06	0.98	↔
2_22_6_119	MW-12	Part 115	Nickel	mg/L	13	0	0%	-0.0000075	0.25	↔	0.000016	0.13	↔	-0.000011	0.015	↔	2023-04-04	2023-07-25	0.71	↔
2_22_6_129	MW-12	Part 115	Vanadium	mg/L	13	7	54%	0	0.88	↔	0.0000090	0.079	↔	-0.0000027	0.0013	↓	2023-03-15	2023-05-23	0.91	↔
2_22_6_130	MW-12	Part 115	Zinc	mg/L	13	0	0%	-0.000027	0.51	↔	0.000035	0.023	↔	-0.000043	0.12	↔	2023-03-12	2023-08-11	0.69	↔
2_42_4_107	MW-32	Appendix III	Calcium	mg/L	10	0	0%	0.057	0.70	↔	-1.1	0.13	↔	0.27	0.075	↔	2023-05-11	2023-07-19	0.87	↔
2_42_4_120	MW-32	Appendix III	pH (field)	su	10	0	0%	-0.0054	0.24	↔	0.0015	0.50	↔	-0.00032	0.52	↔	2023-01-05	2023-04-30	0.44	↔
2_42_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	10	0	0%	0.69	0.15	↔	-1.6	0.11	↔	0.59	0.33	↔	2023-04-21	2023-08-23	0.78	↔
2_42_5_101	MW-32	Appendix IV	Antimony	mg/L	10	6	60%	0	0.30	↔	0	0.96	↔	0.0000053	0.00013	↑	2023-03-29	2023-10-22	0.99	↔
2_42_5_102	MW-32	Appendix IV	Arsenic	mg/L	10	0	0%	0	0.89	↔	0	0.87	↔	0.000014	0.0022	↑	2023-03-18	2023-09-28	0.97	↔
2_42_5_104	MW-32	Appendix IV	Beryllium	mg/L	10	9	90%	0	0.73	↔	0	0.36	↔	0	0.0018	↑	2023-04-05	2023-09-19	0.97	↔
2_42_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	10	0	0%	0.0000036	0.17	↔	-0.0000017	0.0092	↓	0.000024	0.0000039	↑	2023-01-11	2023-10-16	1.0	↔
2_42_5_115	MW-32	Appendix IV	Lead	mg/L	10	7	70%	0	1.0	↔	0	0.044	↔	0.0000025	0.0016	↑	2023-03-19	2023-09-30	0.96	↔
2_42_5_118	MW-32	Appendix IV	Molybdenum	mg/L	10	0	0%	-0.000021	0.51	↔	-0.000011	0.73	↔	0.000011	0.021	↔	2023-01-29	2023-03-21	0.83	↔
2_42_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	10	6	60%	-0.0033	0.63	↔	0.0039	0.29	↔	-0.0011	0.20	↔	2023-01-08	2023-04-18	0.60	↔
2_42_5_122	MW-32	Appendix IV	Selenium	mg/L	10	9	90%	0	1.0	↔	0	0.032	↔	0.0000080	0.000051	↑	2023-03-11	2023-10-11	0.99	↔
2_42_6_111	MW-32	Part 115	Copper	mg/L	10	7	70%	0	0.70	↔	0	0.33	↔	0.00014	0	↑	2023-01-06	2023-10-21	1.0	↔
2_42_6_114	MW-32	Part 115	Iron	mg/L	10	0	0%	-0.012	0.10	↔	-0.095	0.024	↔	0.054	0.0059	↑	2023-06-04	2023-09-04	0.97	↔