

Test Group Summary Report

C22 OP Pesticides in Water

June 2021 PT Round

Issued: October 13, 2021

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1.0 The Proficiency Testing Report

The Proficiency Testing Report consists of two parts.

- *PTC Proficiency Testing Report*: This report contains participant-specific data and other confidential information. This report is emailed to participants at the end of the PT round.
- *Test Group Summary Report*: A Test Group Summary Report is created for each quantified test group at the end of the PT round. These reports contain more detailed information on the round than are found in the participant-specific PTC Proficiency Testing Report. These reports do not contain any confidential information and are made available on the PTC web site.

2.0 Definitions

The participant-specific PTC Proficiency Testing Report contains some terms that new participants may not be familiar with.

<i>Code:</i>	The registration code that is unique to each analyte that a participant is registered for.
<i>App:</i>	If a participant is accredited by CALA, this three-digit number is the appendix number that the accredited method is assigned to.
<i>N:</i>	The number of participants results that were used to calculate the summary statistics. This excludes qualified data (e.g., <) and any results that were flagged as outliers.
<i>Assigned:</i>	The Assigned Value is the robust mean of the reported results, outliers excluded. This is often referred to as the “target” value.
<i>$\pm U$:</i>	The uncertainty of the assigned value.
<i>Reported:</i>	The result reported by the participant.
<i>s:</i>	The Standard Deviation of Proficiency Assessment (SDPA). This value is used to determine the acceptance limits for the PT evaluation.
<i>z-Score:</i>	A value assigned to each reported result that is a measure of the degree to which it deviates from the Assigned Value.
<i>Score:</i>	The composite score of the four results reported for each analyte. It is normalized to a score out of 100.
<i>Bias:</i>	A flag assigned if bias is detected using the re-scaled z-score procedure.

3.0 Scoring System

Participant performance is evaluated for each proficiency testing sample by a quantitative method that is consistent with ISO/IEC 17043:2010 *Conformity assessment – General requirements for proficiency testing*, the *International Harmonized Protocol for Proficiency Testing of (Chemical) Analytical Laboratories* (2006), and ISO 13528:2015 *Statistical methods for use in proficiency testing by interlaboratory comparisons*.

The following is a brief description of the evaluation procedure used by PTC. The detailed evaluation procedure is described in PROC09 – PT Evaluation *Procedure*, which is available on the PTC website www.PTCanada.org).

3.1 HOMOGENEITY AND STABILITY ASSESSMENT

Homogeneity and stability are assessed using participant data. Regression analysis is performed on reported result against order of sample production (Homogeneity) and reported result against date of analysis (Stability). If the slope is significantly different than zero for either then the Standard Deviation of Proficiency Assessment (s) is increased to minimize the impact.

3.2 THE Z SCORE

A "z-score" is calculated for each reported result as follows:

$$z - Score = \frac{(x - \bar{X})}{SDPA} \quad \text{where: } \begin{array}{l} x = \text{participant result;} \\ \bar{X} = \text{the Assigned Value;} \\ SDPA = \text{the Standard Deviation for Proficiency Assessment.} \end{array}$$

The assigned value \bar{X} is generally estimated from the inter-laboratory Robust mean after outliers due to obvious gross errors (e.g., reported in wrong units) have been removed.

The Standard Deviation for Proficiency Assessment, s, is determined as follows:

- The inter-laboratory Robust standard deviation ($Stdev_{rob}$) is calculated using reported results, obvious outliers removed;
- The regression equation standard deviation ($Stdev_{reg}$) is estimated from regression equations derived from previous studies (see PROC11– *PT Regression Equations* for details);
- The SDPA is the higher of $Stdev_{rob}$ and $Stdev_{reg}$;
- When a laboratory reports its detection limit, s will be estimated using a pooled variance procedure that uses both the inter-laboratory data and the reported detection limit.

3.2 COMPOSITE (PT) SCORE

Since each PT round involves four or two separate samples of distinct concentration for each test, it is necessary to calculate a composite PT score for each test to determine overall performance. The composite score is calculated by first averaging the absolute z-scores for the four results and then calculating a final score as $100 + (-15 \times \text{avg } |z|)$.

Acceptable PT Scores equal or exceed 70.

3.3 IDENTIFYING BIAS

The proficiency testing report provides flags for bias. These are determined using the re-scaled z-score procedure.

$$RSZ = \frac{\sum z}{\sqrt{N}}$$

where z = the z -score
 N = the number of samples

Flags are assigned for each test group/parameter combination as follows:

$RSZ \geq -2$ and ≤ 2	no flag assigned
$RSZ > 2$	H (High)
$RSZ > 3$	VH (Very High)
$RSZ < -2$	L (LOW)
$RSZ < -3$	VL (Very Low)

3.4 DEVIATIONS FROM EVALUATION PROCEDURE

Other than changes to the Standard Deviation of Proficiency Assessment due to homogeneity or stability flags, any deviation from the published evaluation procedure is described on the cover page(s) of the final *PTC Proficiency Testing Report*.

4.0 PT Round Specific Data Summary

The following pages provide more detailed information about the PT round indicated in the cover page of this report than is found in the participant-specific PTC Proficiency Testing Report. The graphical representations and the statistical summaries are based upon the data after outliers have been removed.

4.1 SUMMARY STATISTICS

In addition to some of the statistics found in the customer reports, this table includes additional summary statistics such as Median, different measures of dispersion, the number of outliers removed, the number of results in the Questionable range ($|z|$ between 2 and 3) and the Unacceptable range ($z > 3$), and whether a data set was flagged for Homogeneity or Stability. This section also includes sorted scatter plots of the data for each sample.

4.2 z - SCORE PLOTS

The z -scores for each sample are ranked in increasing order and plotted. When the data is normally distributed, the plot should show a slight sigmoidal curve, with an equal number of points above zero as below. Each bar in these plots is colour-coded to indicate the analytical method used by the participant.

4.3 KERNEL DENSITY PLOTS

Kernel density plots are generated for each data set. These plots are a graphical way to represent the overall data distribution and are used to visualize possible deviations from normality and unimodality.

4.4 STABILITY AND HOMOGENEITY PLOTS

Plots of reported result against analysis date, and reported result against order of bottling are displayed, along with the regression line. These regression analyses are used to determine if the SDPA should be adjusted due to homogeneity or stability.

ATRAZINE

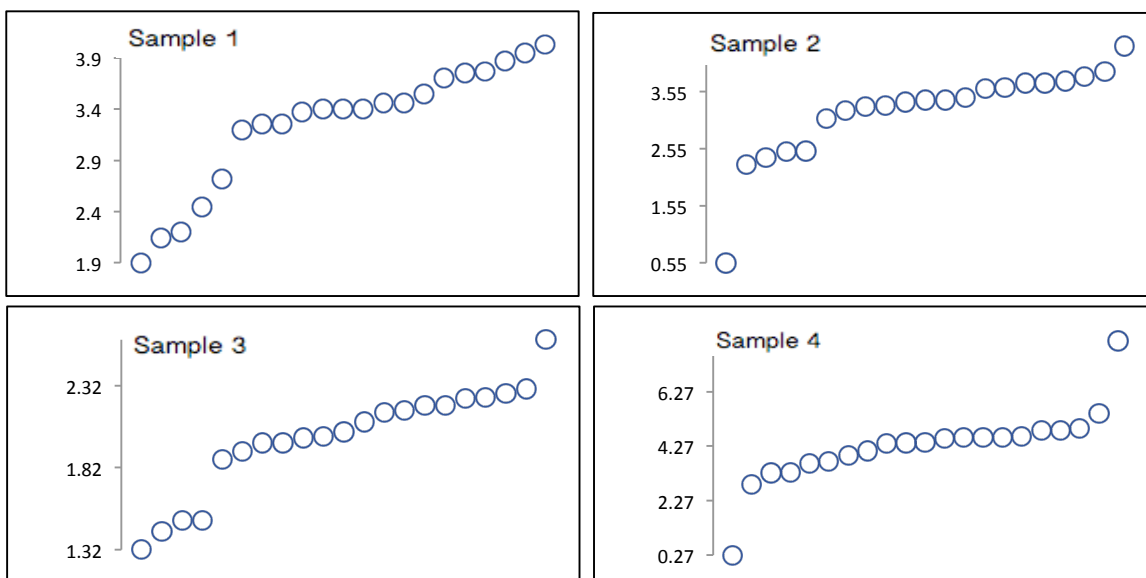
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	21	21	21	21
Median	3.40	3.40	2.04	4.40
Robust Mean	3.30	3.28	2.02	4.27
U	0.16	0.17	0.083	0.22
Robust Standard Deviation	0.594	0.634	0.304	0.816
Regression Standard Deviation	0.672	0.670	0.412	0.871
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	0.672	0.670	0.412	0.871
Outliers	0	0	0	0
$ z > 3.0$	0	1	0	2
$2 < z < 3$	1	0	0	0

Methods Used

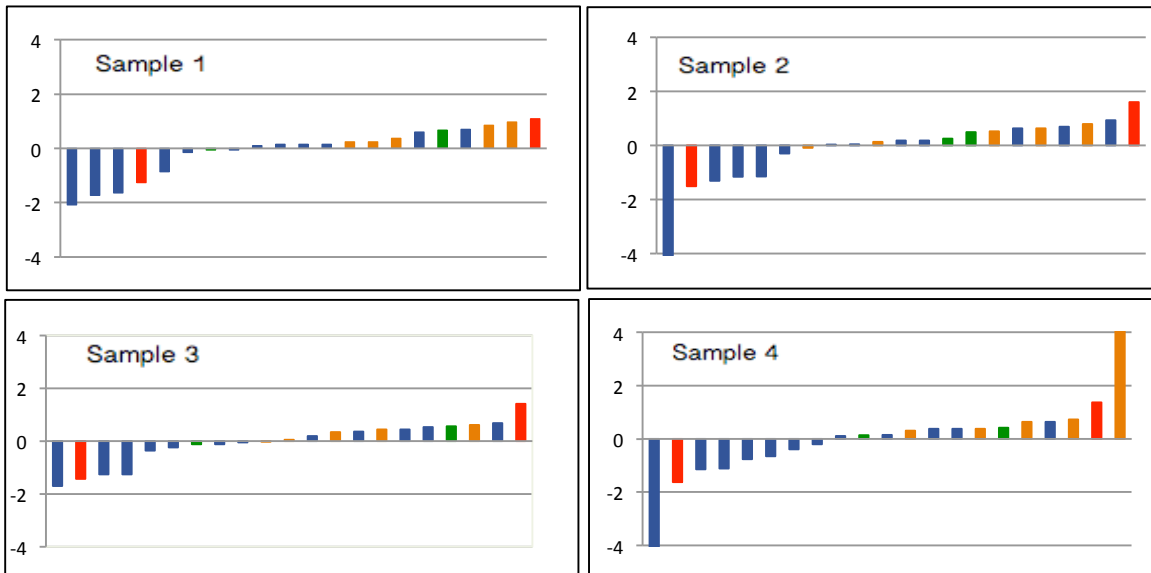
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	12	12	12	12
GC/MS/MS	2	2	2	2
HPLC	2	2	2	2
LC/MS/MS	5	5	5	5

All summary stats and the plots below are based on the data excluding any flagged outliers

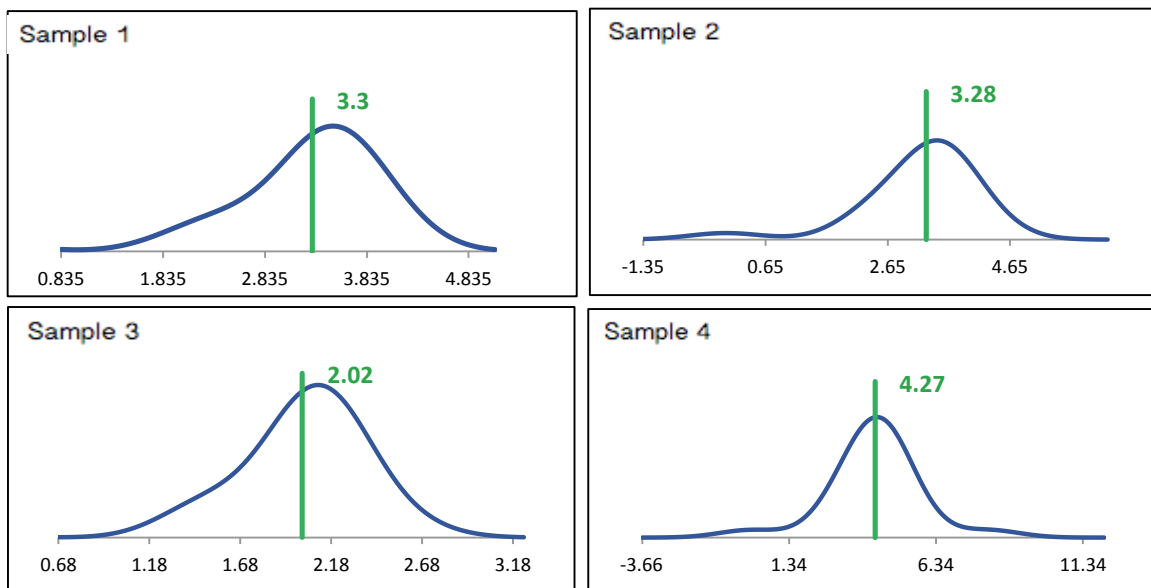


ATRAZINE

z-Score Plots

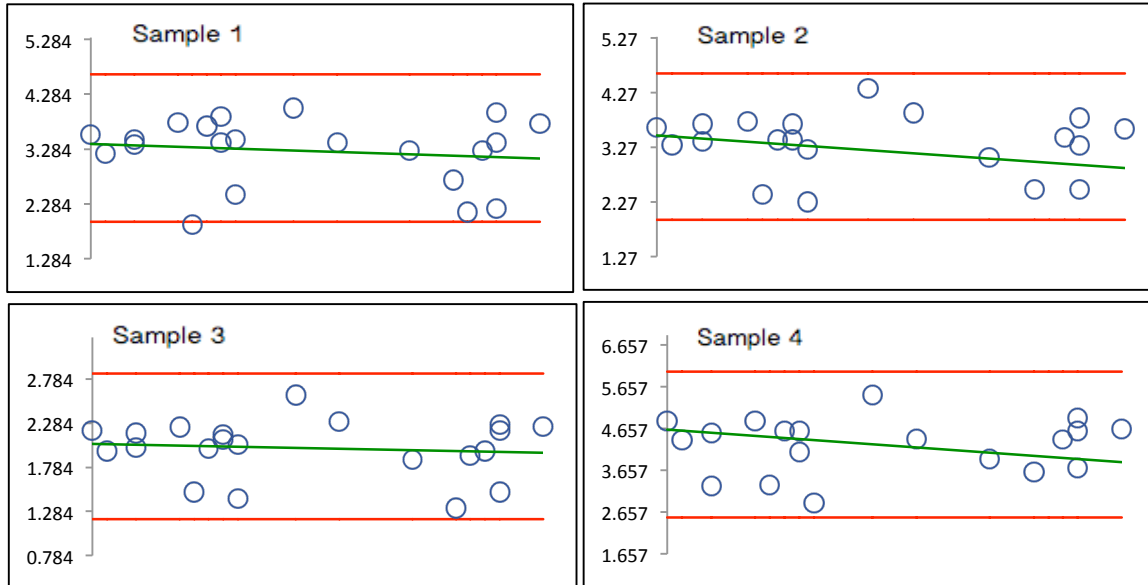


Kernel Density Plots



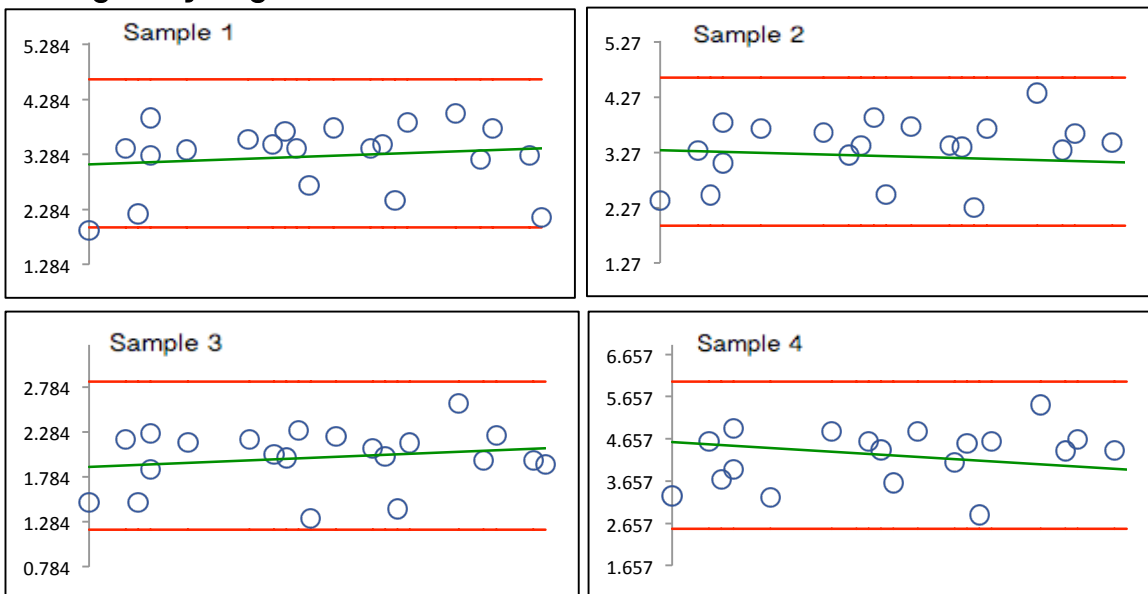
ATRAZINE

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

AZINPHOS-METHYL

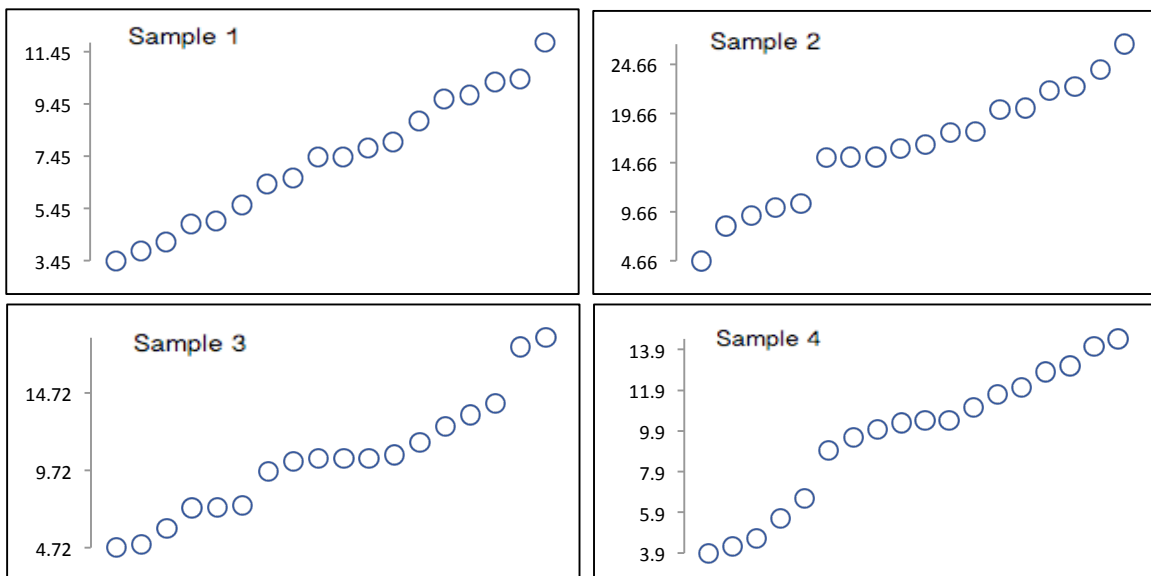
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	18	18	18	18
Median	7.41	16.3	10.5	10.4
Robust Mean	7.27	16.3	10.2	9.65
U	0.82	1.88	1.15	1.12
Robust Standard Deviation	2.79	6.38	3.90	3.80
Regression Standard Deviation	2.17	4.43	2.90	2.77
Stability Flag	Stability	Stability	Stability	
Homogeneity Flag				
Standard Deviation Used (SDPA)	4.21	10.5	6.26	3.80
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0

Methods Used

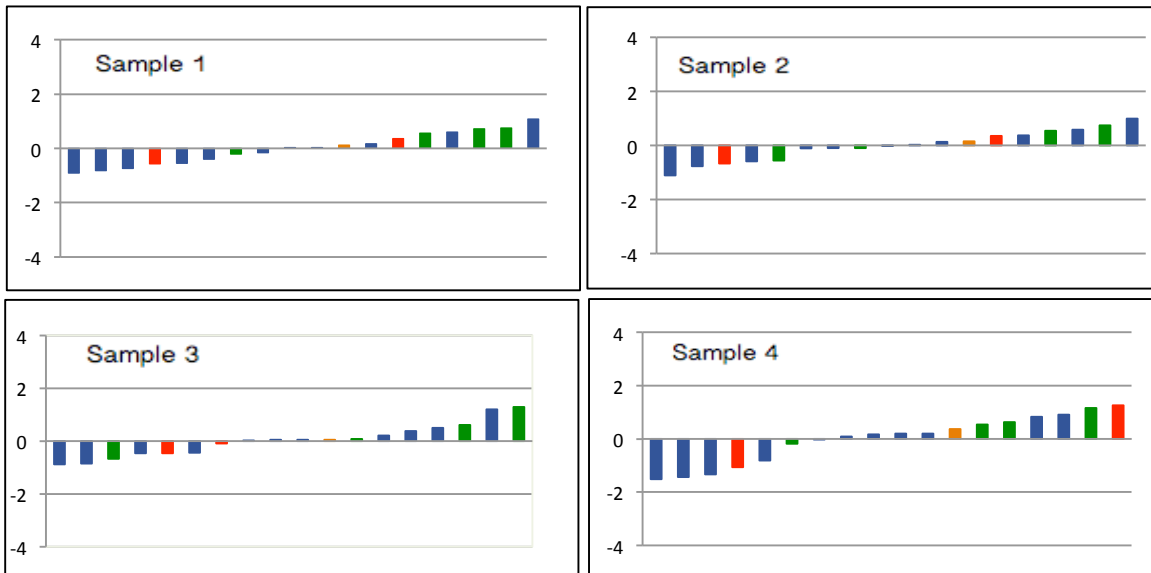
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	11	11	11	11
GC/MS/MS	2	2	2	2
LC/MS/MS	4	4	4	4
HPLC	1	1	1	1

All summary stats and the plots below are based on the data excluding any flagged outliers

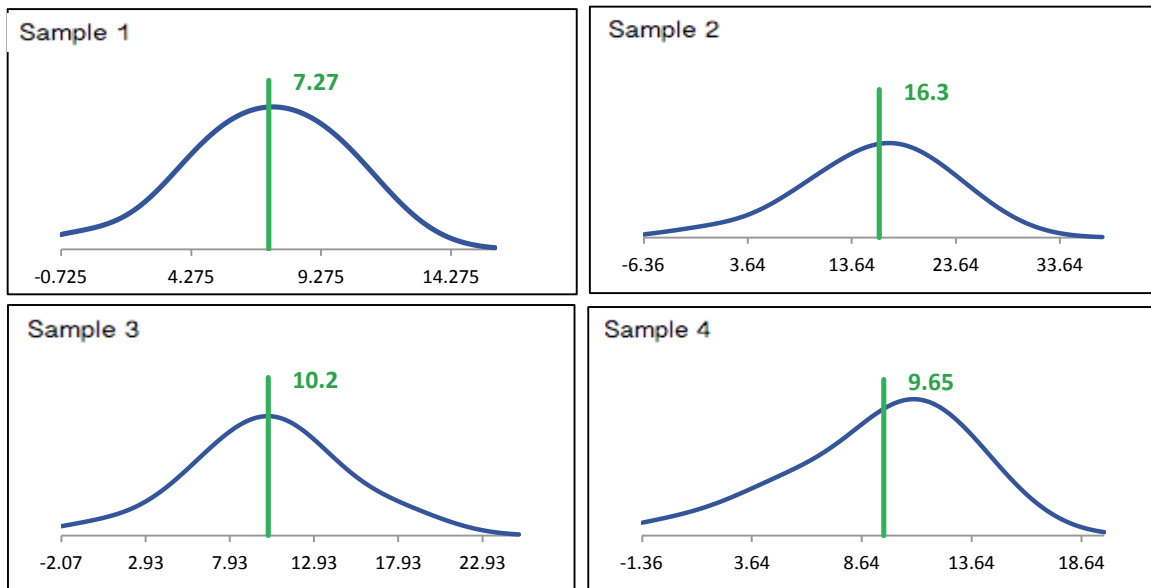


AZINPHOS-METHYL

z-Score Plots

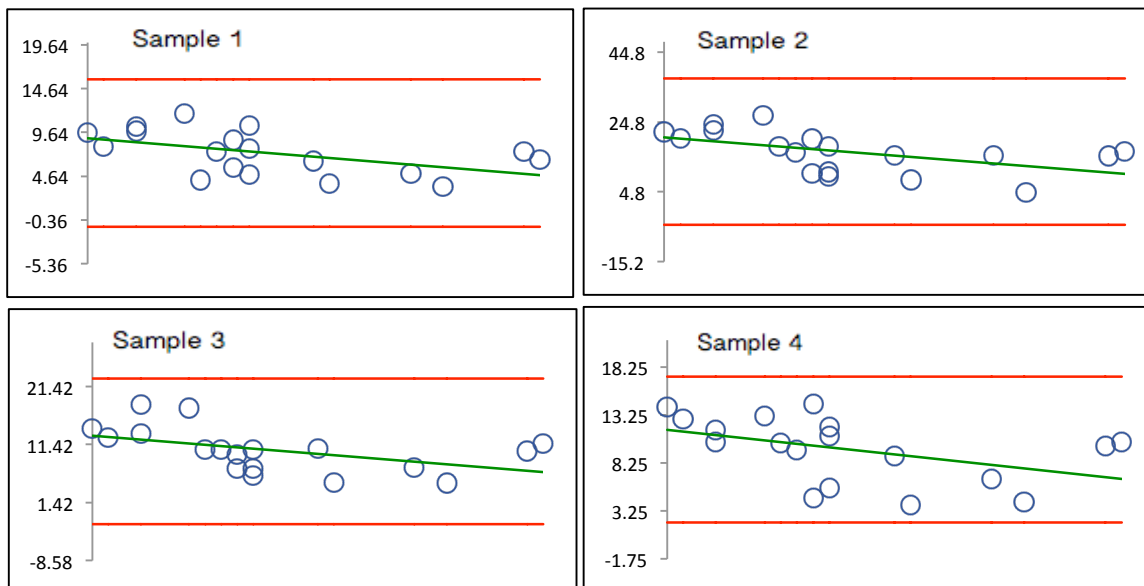


Kernel Density Plots



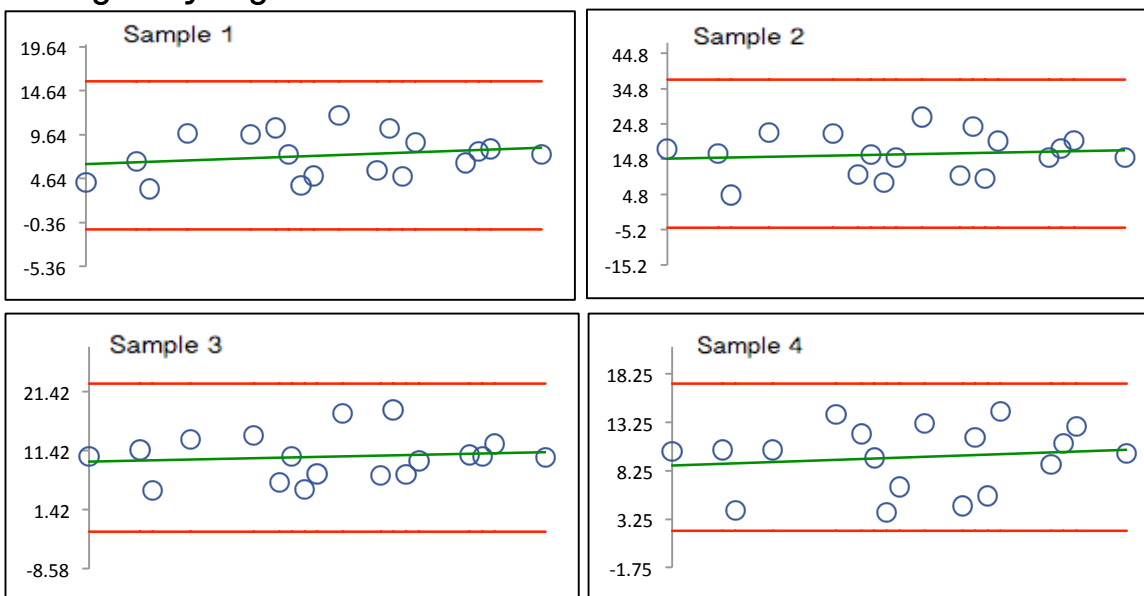
AZINPHOS-METHYL

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

BENDIOCARB

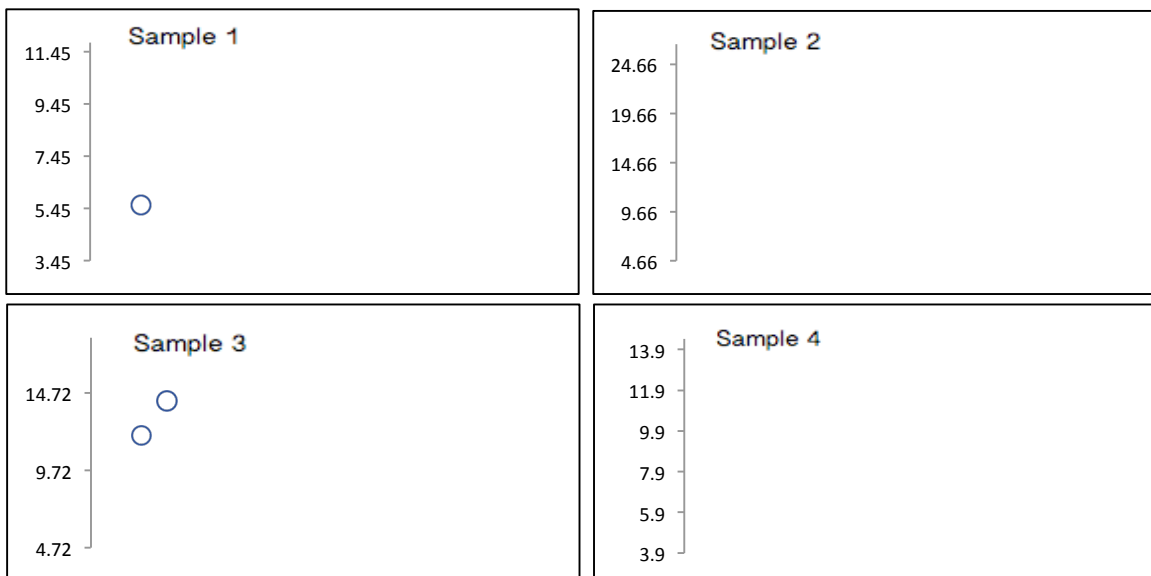
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	3	3	3	1
Median	5.57	30.0	12.0	2.2
Robust Mean	19.2	20.8	8.74	2.24
U	23.4	14.7	6.24	3.46
Robust Standard Deviation	32.4	20.4	8.65	2.77
Regression Standard Deviation	2.17	4.43	2.90	2.77
Stability Flag				#DIV/0!
Homogeneity Flag	Homogeneity			
Standard Deviation Used (SDPA)	53.2	20.4	8.65	#DIV/0!
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0

Methods Used

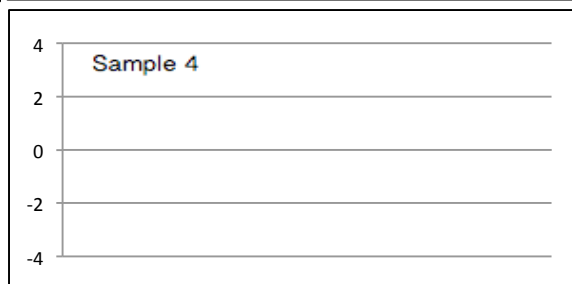
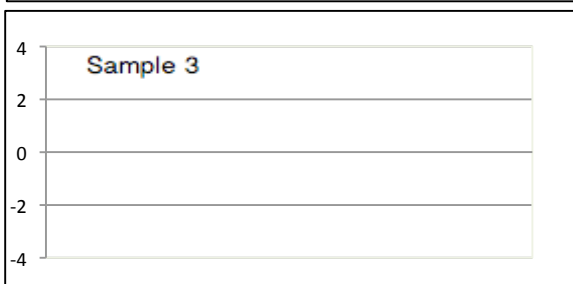
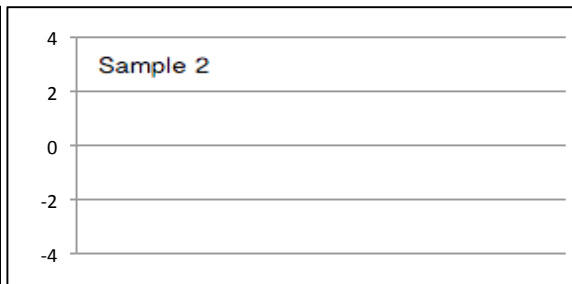
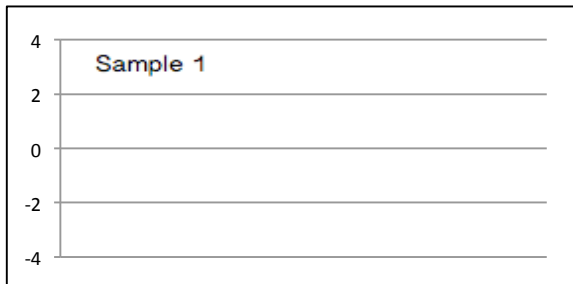
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	0	0	0	0
GC/MS/MS	0	0	0	0
LC/MS/MS	1	1	1	0
HPLC	2	2	2	1

All summary stats and the plots below are based on the data excluding any flagged outliers

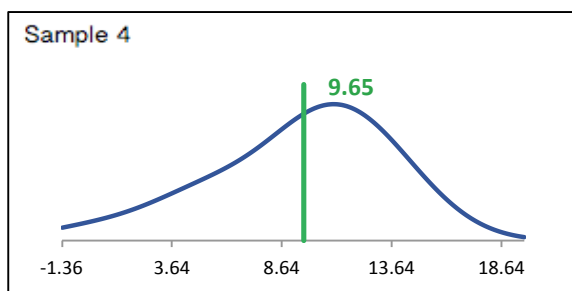
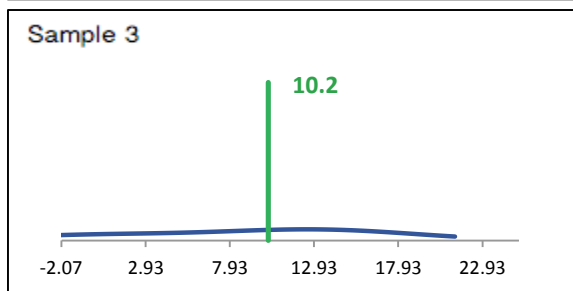
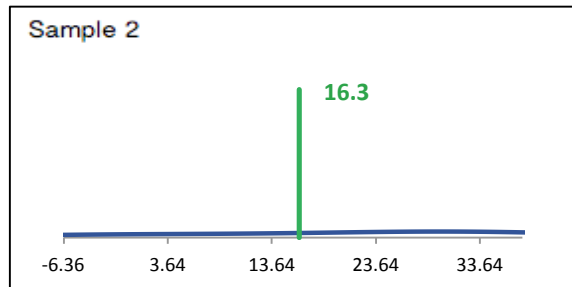
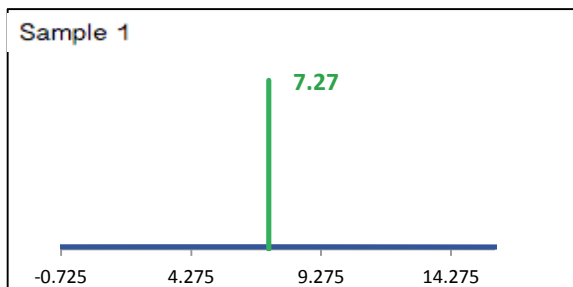


BENDIOCARB

z-Score Plots

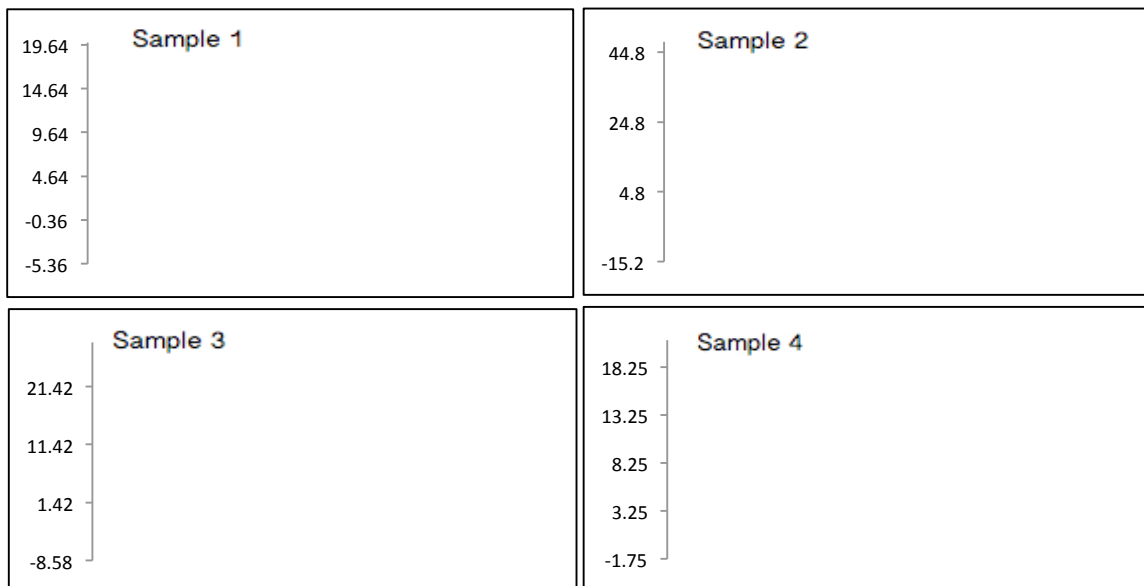


Kernel Density Plots



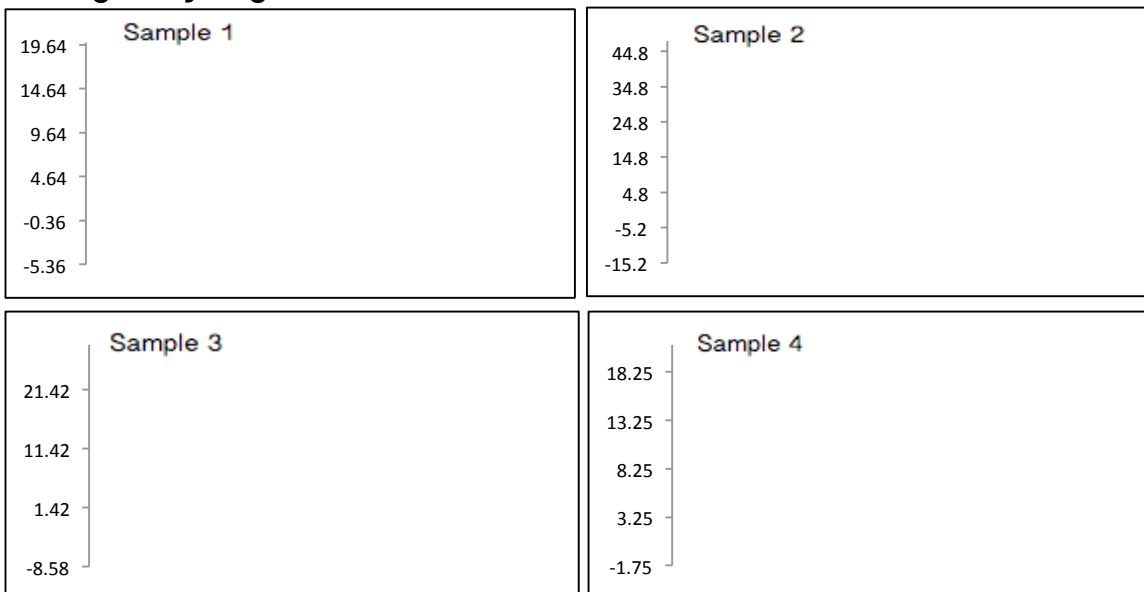
BENDIOCARB

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

CARBARYL

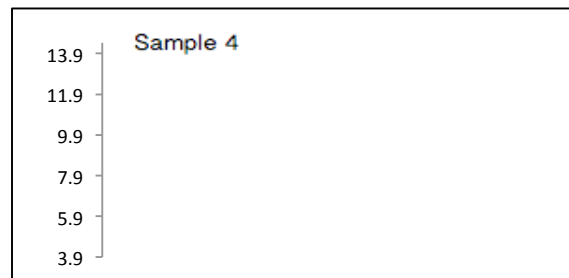
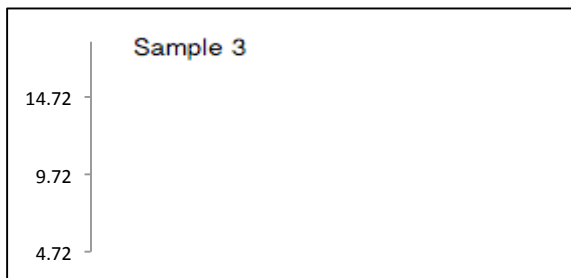
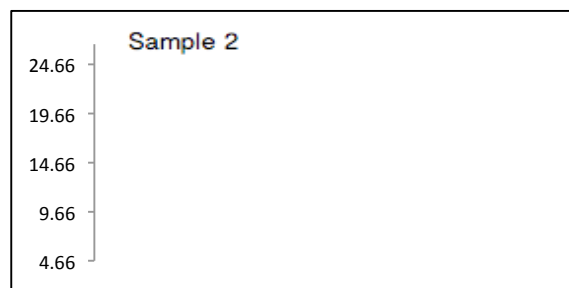
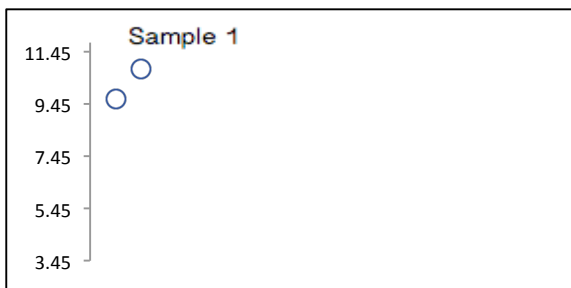
Summary Statistics

Statistic		Excluded C22-1	Excluded C22-2	Excluded C22-3	Excluded C22-4
N		3	2	2	2
Median		10.8	20.2	15.4	21.8
Robust Mean		16.7	20.2	15.4	21.8
U		9.2	26.3	20.2	27.8
Robust Standard Deviation		12.7	29.7	22.9	31.4
Regression Standard Deviation		5.09	6.15	4.72	6.65
Stability Flag			#DIV/0!	#DIV/0!	#DIV/0!
Homogeneity Flag					
Standard Deviation Used (SDPA)		12.7	#DIV/0!	#DIV/0!	#DIV/0!
Outliers		0	0	0	0
z >3.0		0	0	0	0
2< z <3		0	0	0	0

Methods Used

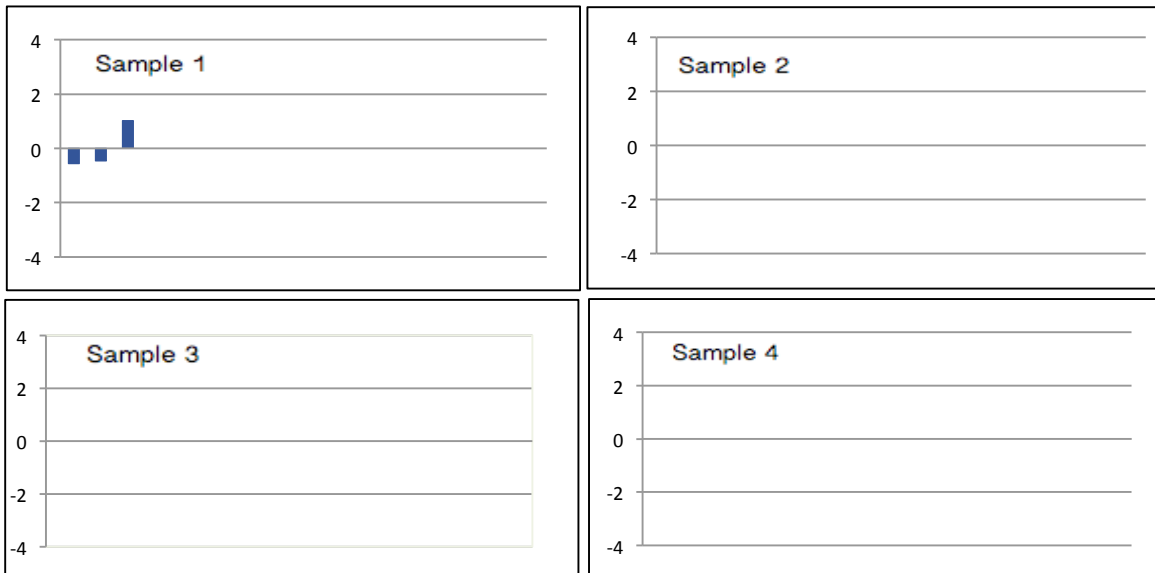
Method	C22-1	C22-2	C22-3	C22-4
LC/MS/MS	1	0	0	0
HPLC	1	1	1	1
GC/MS1	1	1	1	1

All summary stats and the plots below are based on the data excluding any flagged outliers

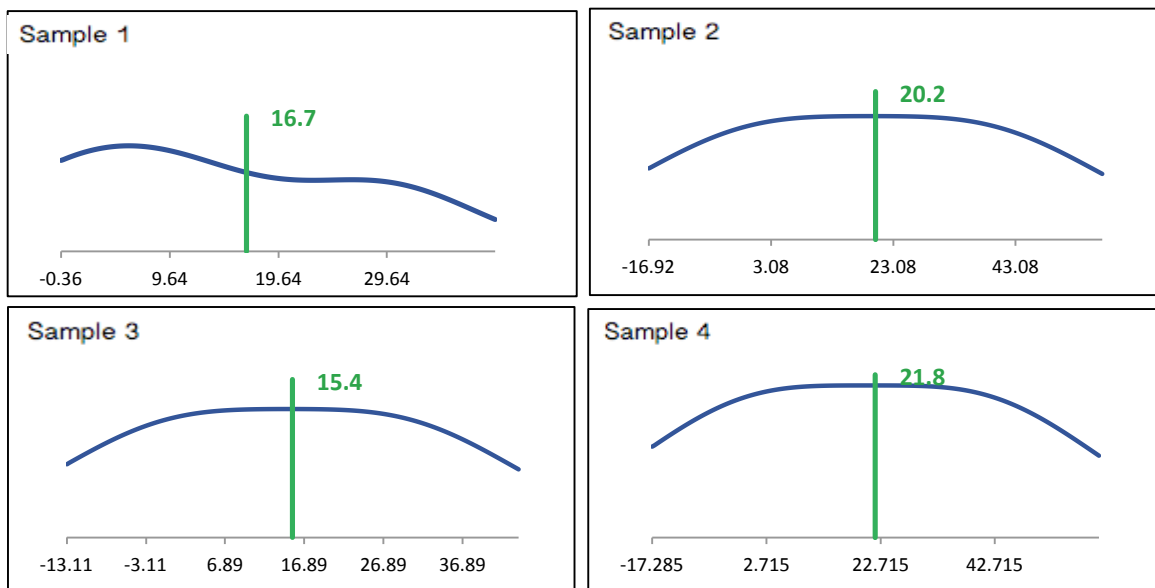


CARBARYL

z-Score Plots

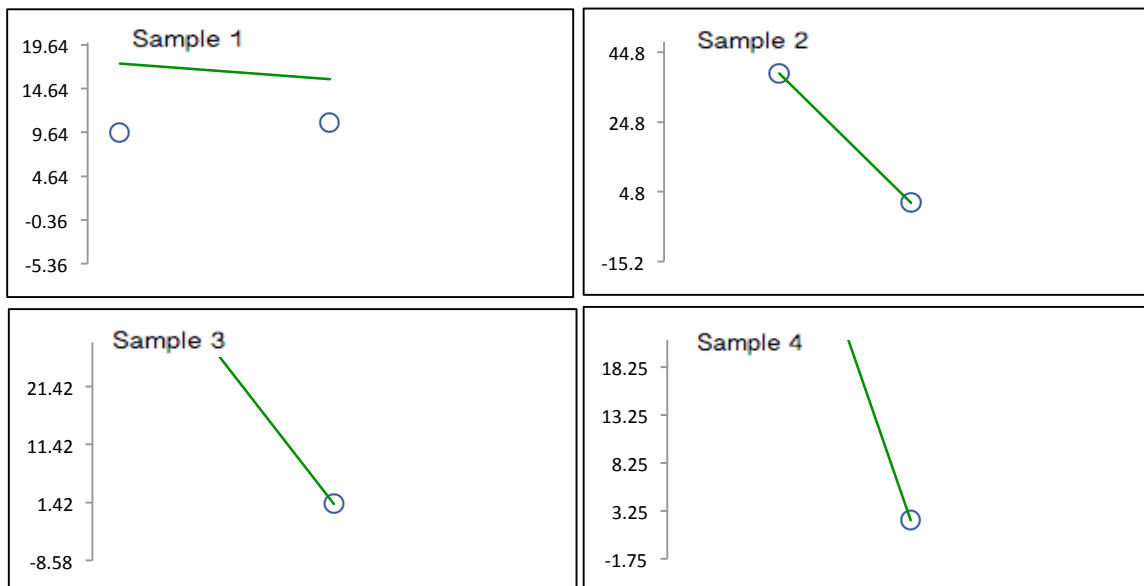


Kernel Density Plots



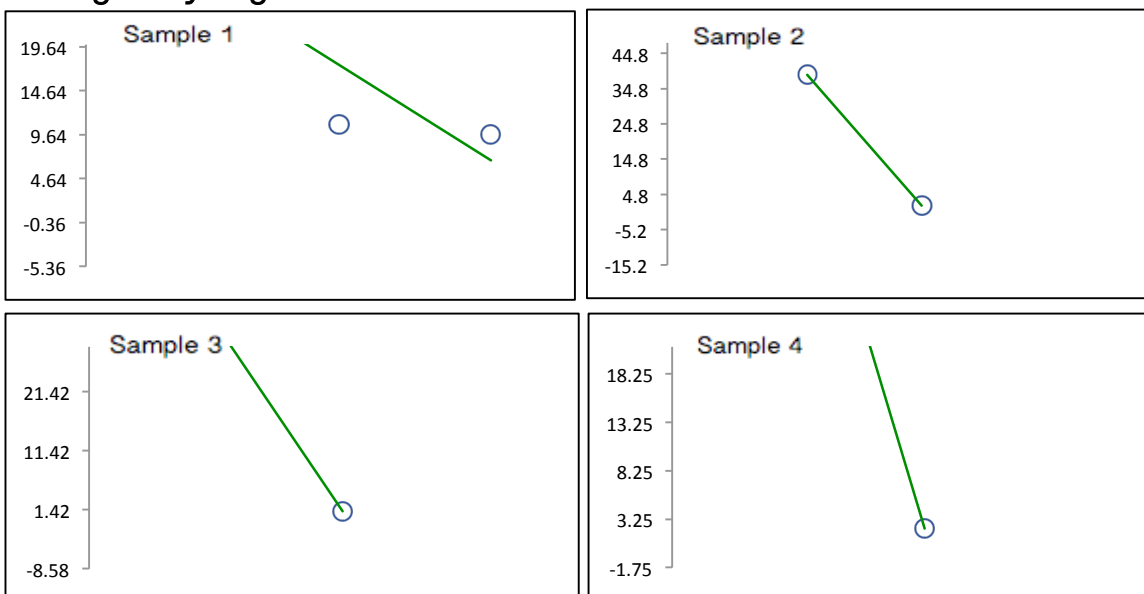
CARBARYL

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

CARBOFURAN

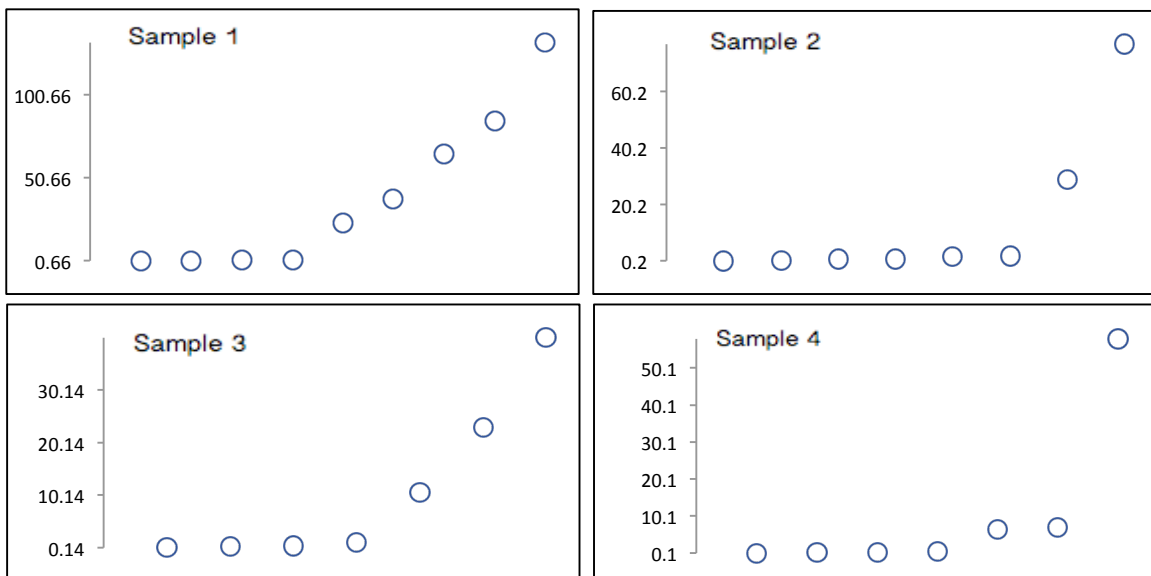
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	9	8	7	7
Median	23.2	1.23	1.12	0.530
Robust Mean	35.3	8.24	9.57	3.75
U	19.0	6.81	6.85	2.47
Robust Standard Deviation	45.5	15.4	14.5	5.2
Regression Standard Deviation	10.9	2.55	2.96	1.16
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	45.5	15.4	14.5	5.22
Outliers	0	0	0	0
$ z > 3.0$	0	1	0	1
$2 < z < 3$	1	0	1	0

Methods Used

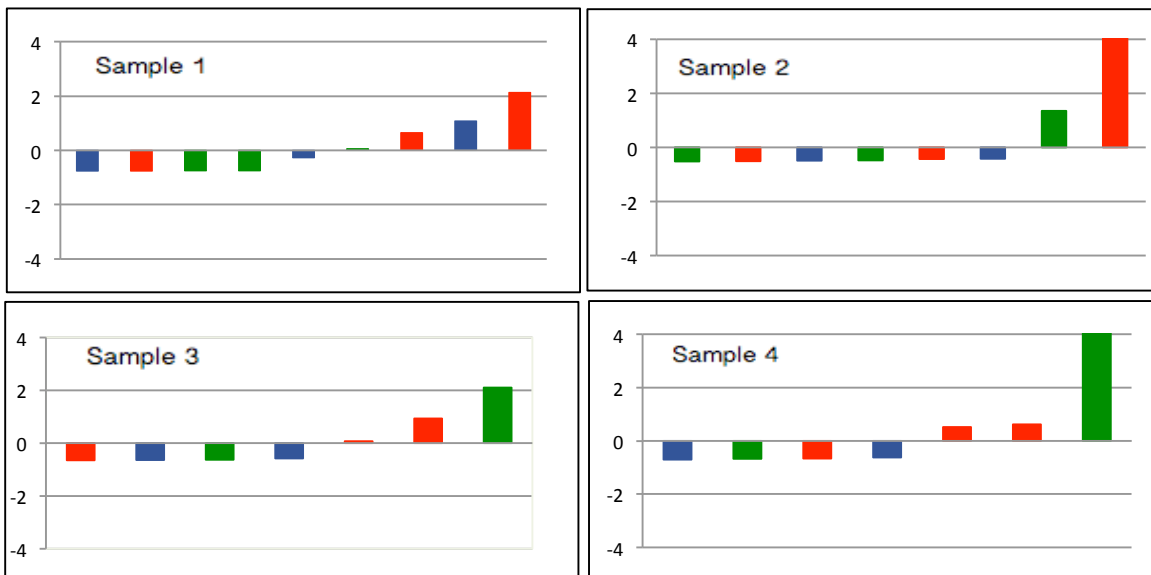
Method	C22-1	C22-2	C22-3	C22-4
LC/MS/MS	3	2	2	2
HPLC	3	3	3	3
GC/MS1	3	3	2	2

All summary stats and the plots below are based on the data excluding any flagged outliers

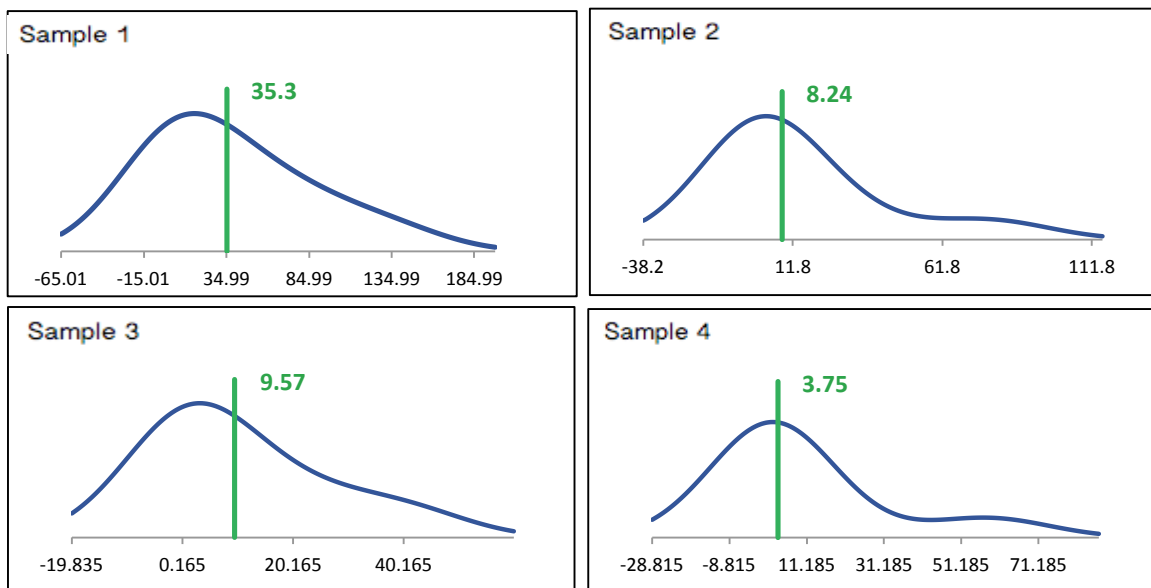


CARBOFURAN

z-Score Plots

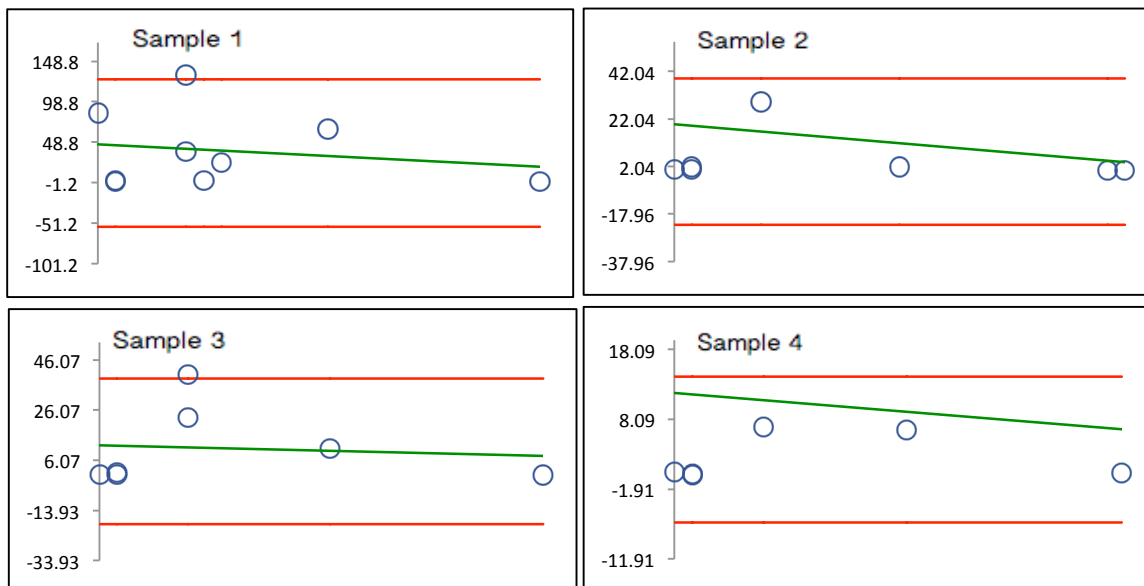


Kernel Density Plots



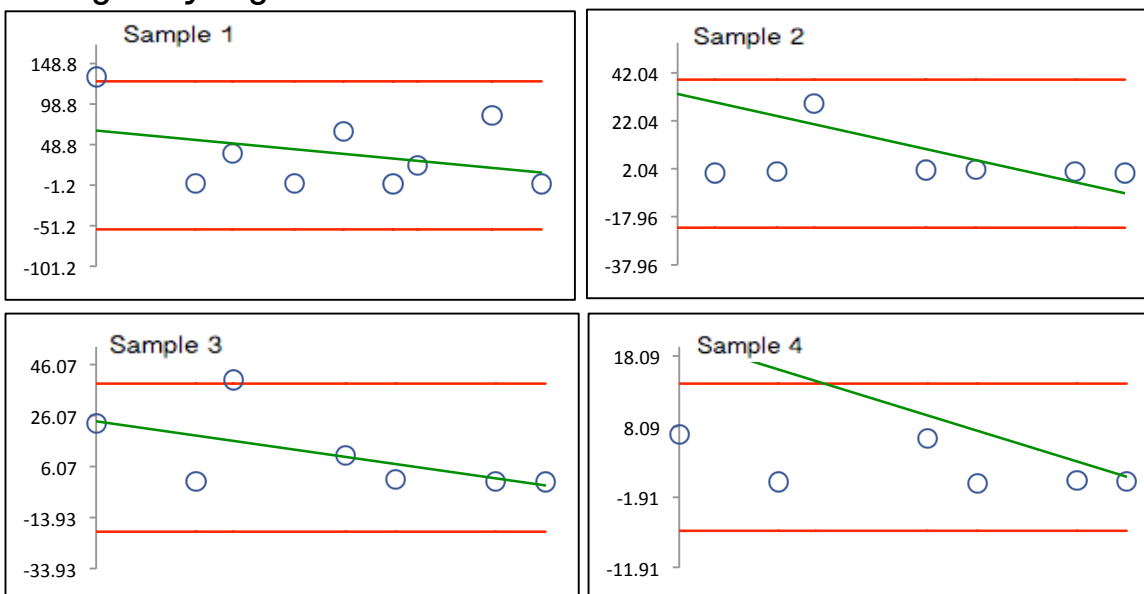
CARBOFURAN

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

CHLORPYRIFOS ETHYL

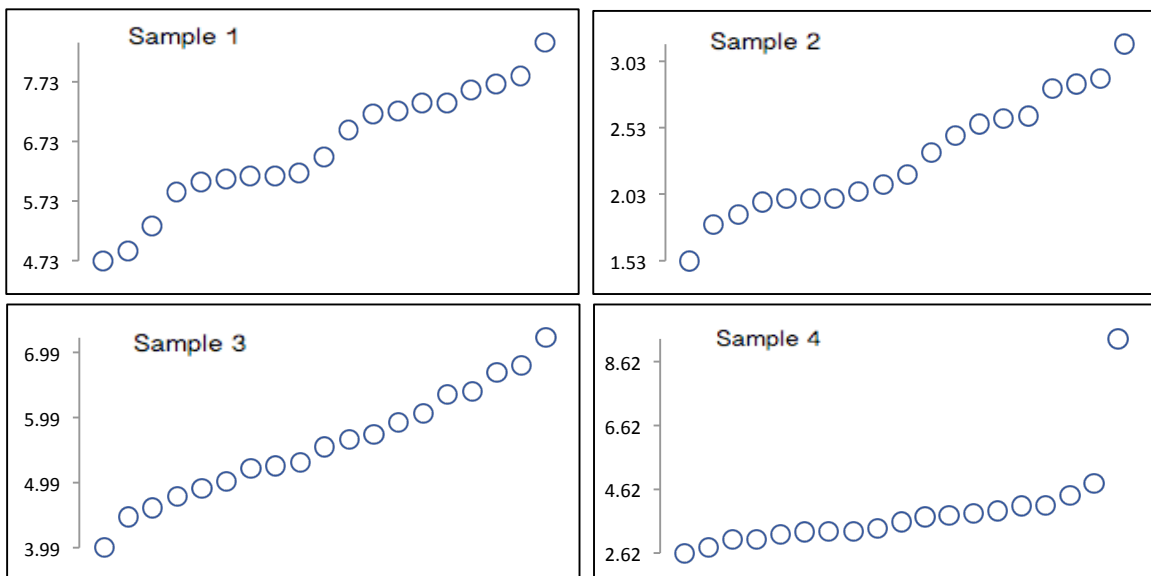
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	19	19	19	19
Median	6.47	2.18	5.54	3.60
Robust Mean	6.62	2.30	5.57	3.62
U	0.32	0.14	0.27	0.19
Robust Standard Deviation	1.12	0.478	0.935	0.665
Regression Standard Deviation	1.39	0.580	1.19	0.828
Stability Flag	Stability	Stability	Stability	
Homogeneity Flag				
Standard Deviation Used (SDPA)	1.78	0.694	1.29	0.828
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	1
$2 < z < 3$	0	0	0	0

Methods Used

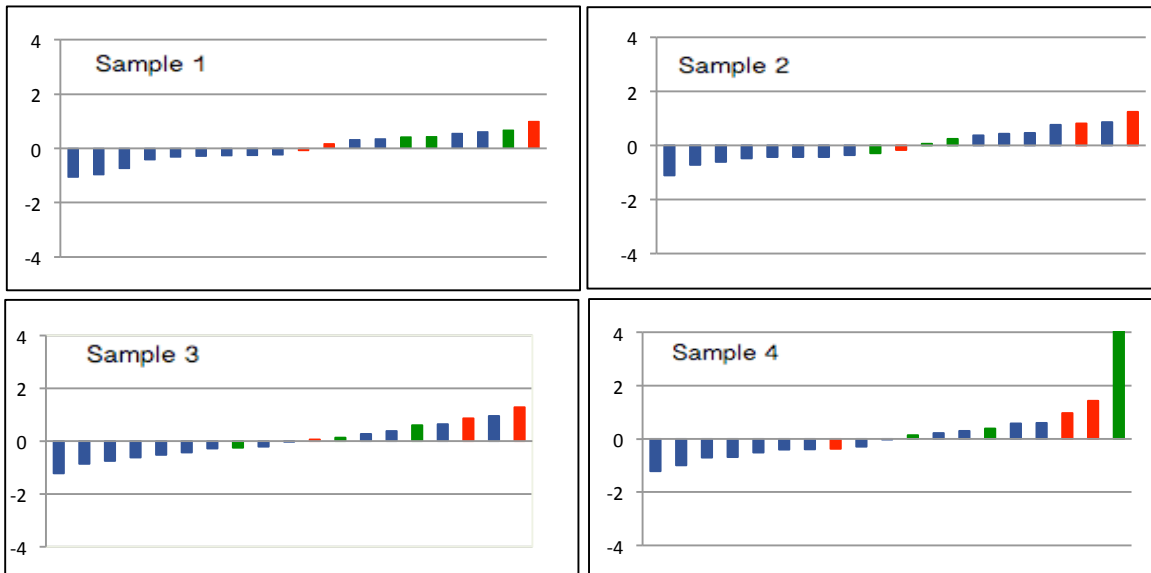
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	13	13	13	13
GC/MS/MS	3	3	3	3
LC/MS/MS	3	3	3	3

All summary stats and the plots below are based on the data excluding any flagged outliers

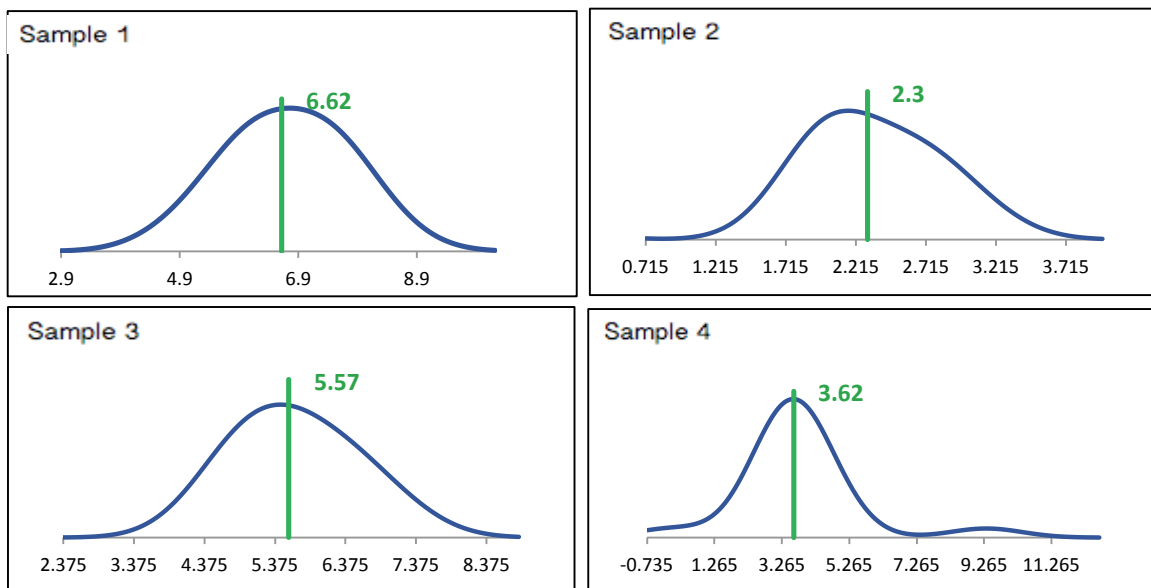


CHLORPYRIFOS ETHYL

z-Score Plots

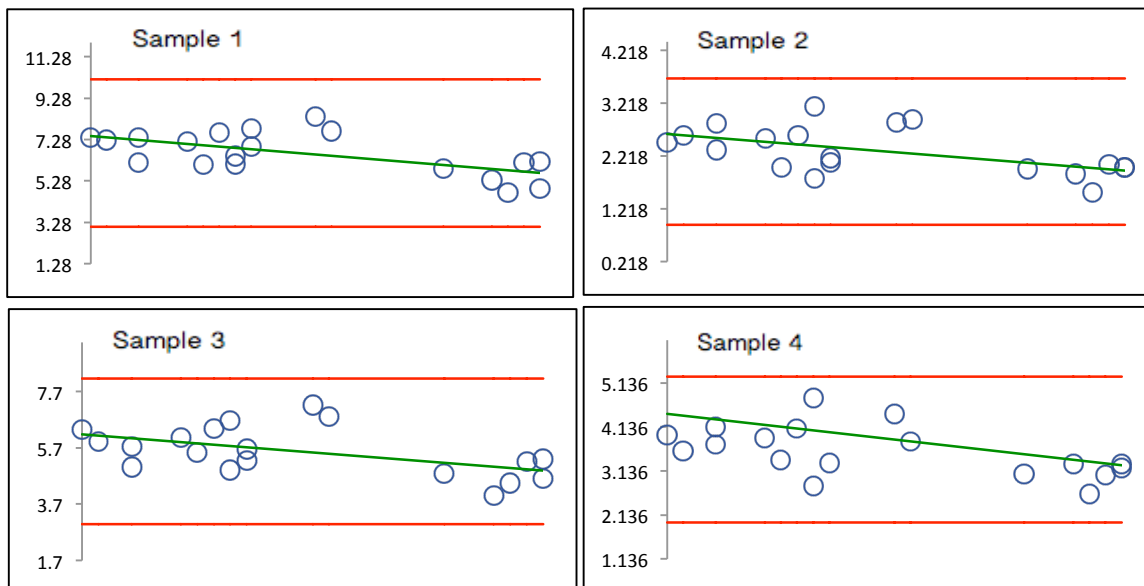


Kernel Density Plots



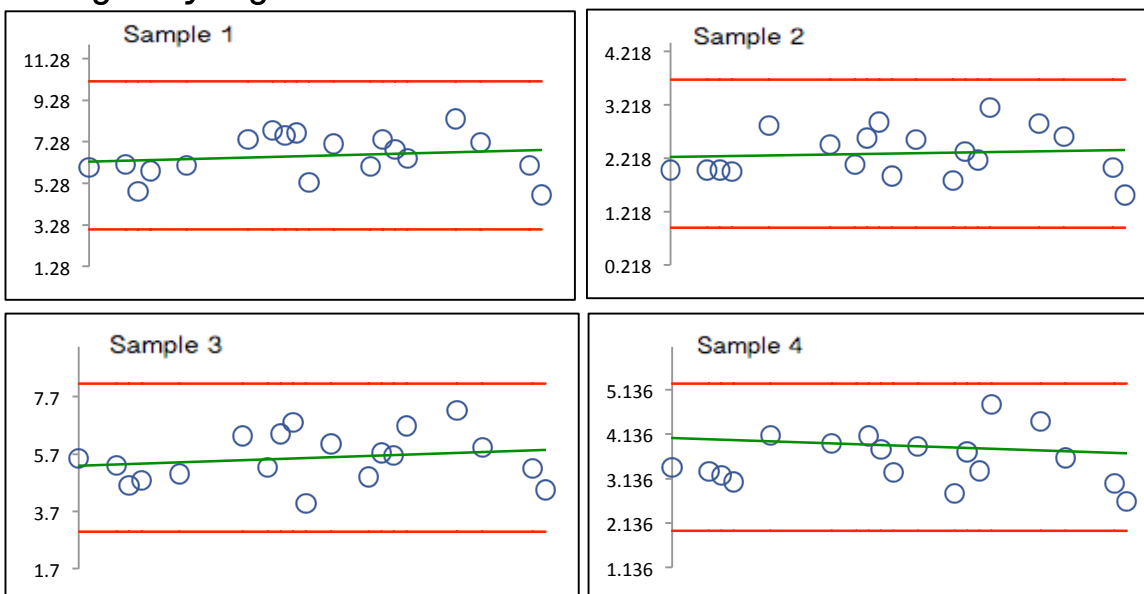
CHLORPYRIFOS ETHYL

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

CYANAZINE

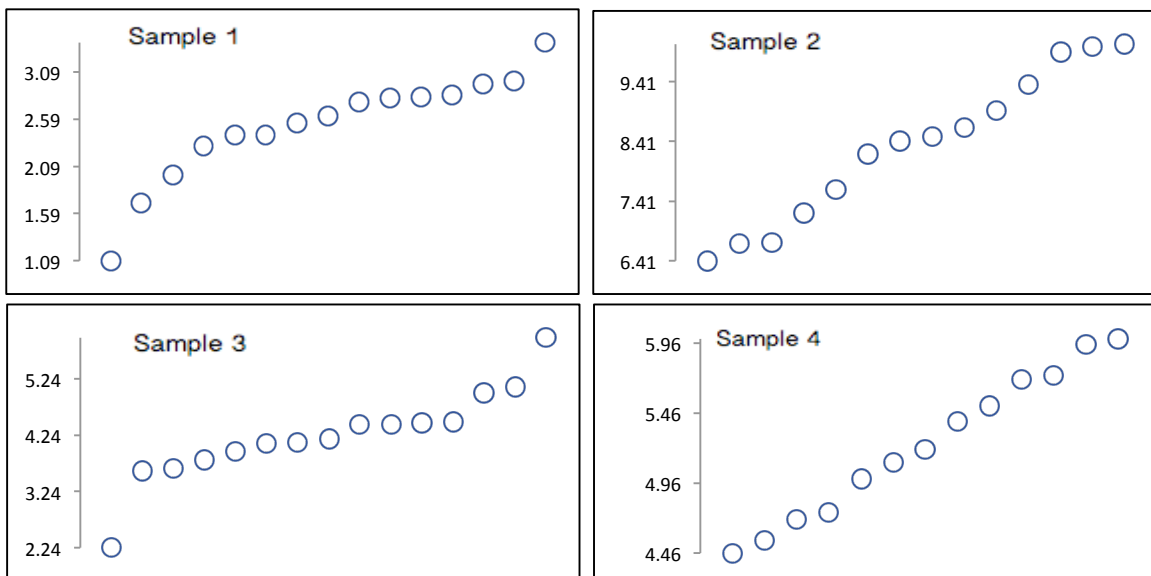
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	15	14	15	13
Median	2.62	8.46	4.17	5.20
Robust Mean	2.56	8.33	4.25	5.23
U	0.16	0.48	0.20	0.21
Robust Standard Deviation	0.50	1.43	0.632	0.596
Regression Standard Deviation	0.87	2.45	1.33	1.60
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	0.869	2.45	1.33	1.60
Outliers	0	0	0	1
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0

Methods Used

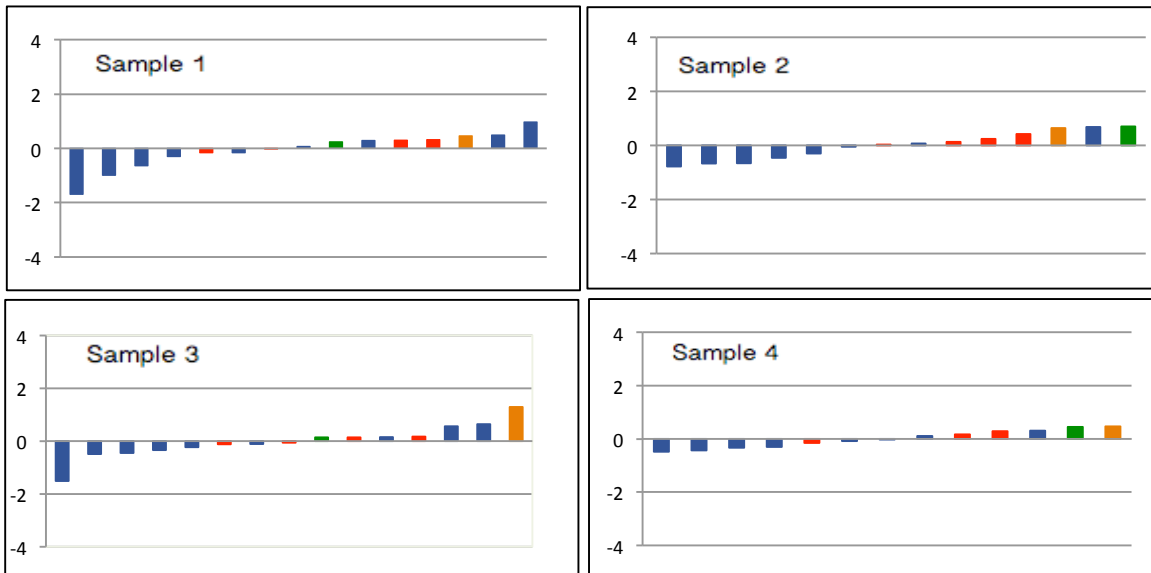
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	9	8	9	8
LC/MS/MS	4	4	4	3
HPLC	1	1	1	1
GC/MS/MS	1	1	1	1

All summary stats and the plots below are based on the data excluding any flagged outliers

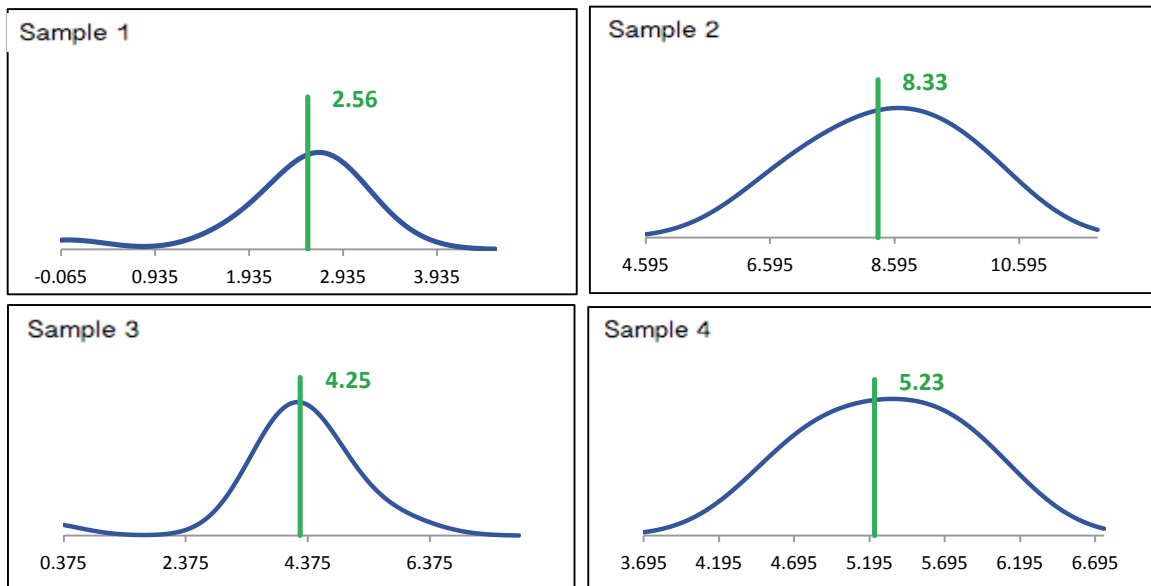


CYANAZINE

z-Score Plots

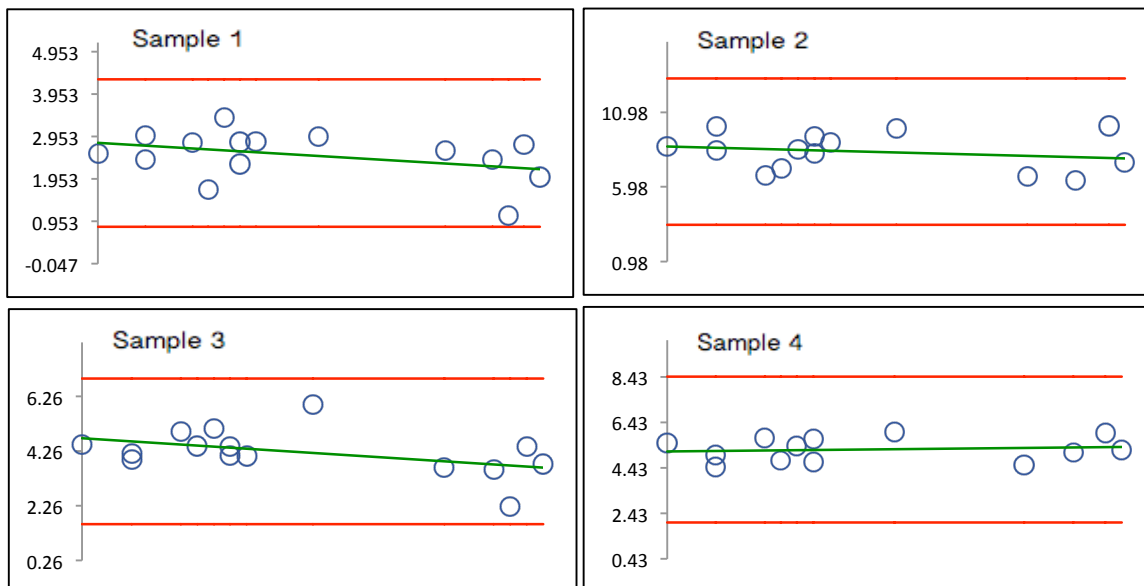


Kernel Density Plots



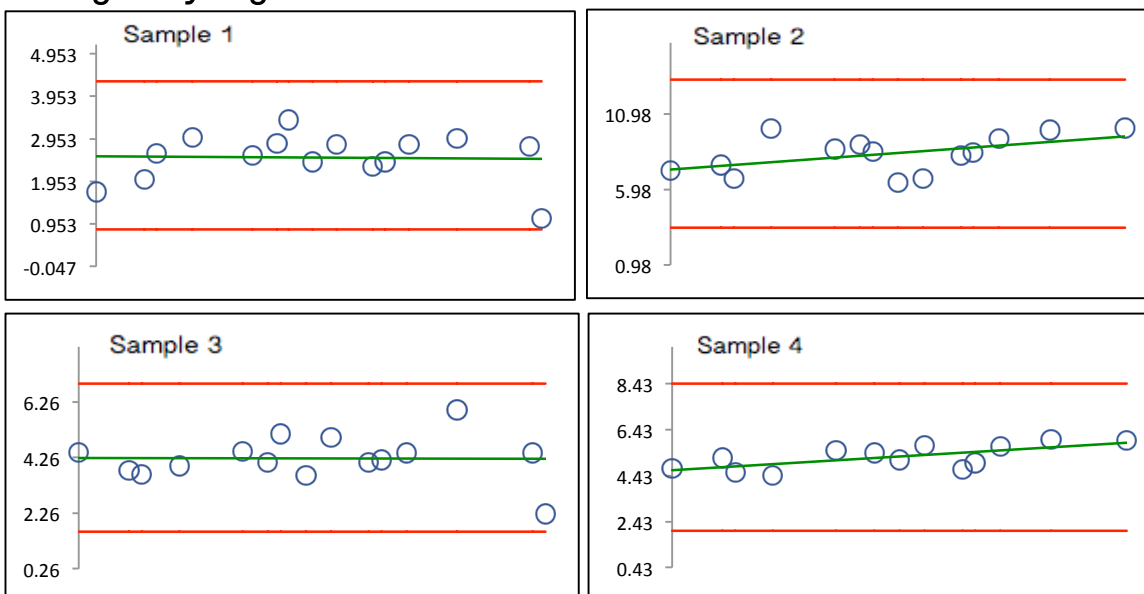
CYANAZINE

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

DIAZINON

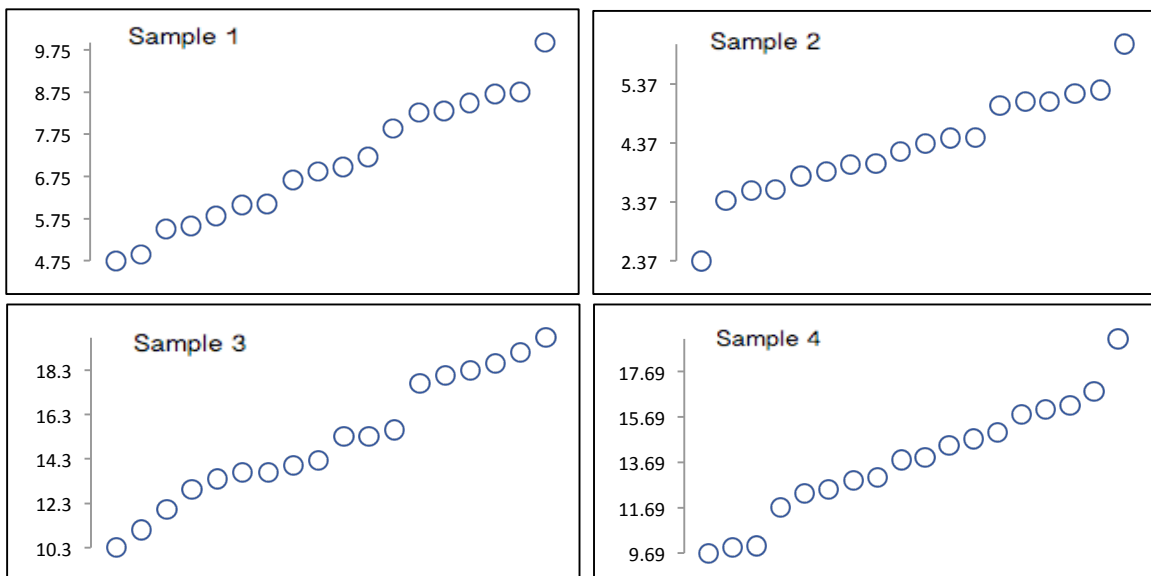
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	18	18	18	18
Median	6.93	4.29	14.8	13.8
Robust Mean	7.01	4.33	15.2	13.7
U	0.48	0.24	0.95	0.80
Robust Standard Deviation	1.63	0.826	3.23	2.72
Regression Standard Deviation	1.78	1.10	3.85	3.48
Stability Flag		Stability		
Homogeneity Flag				
Standard Deviation Used (SDPA)	1.78	1.34	3.85	3.48
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0

Methods Used

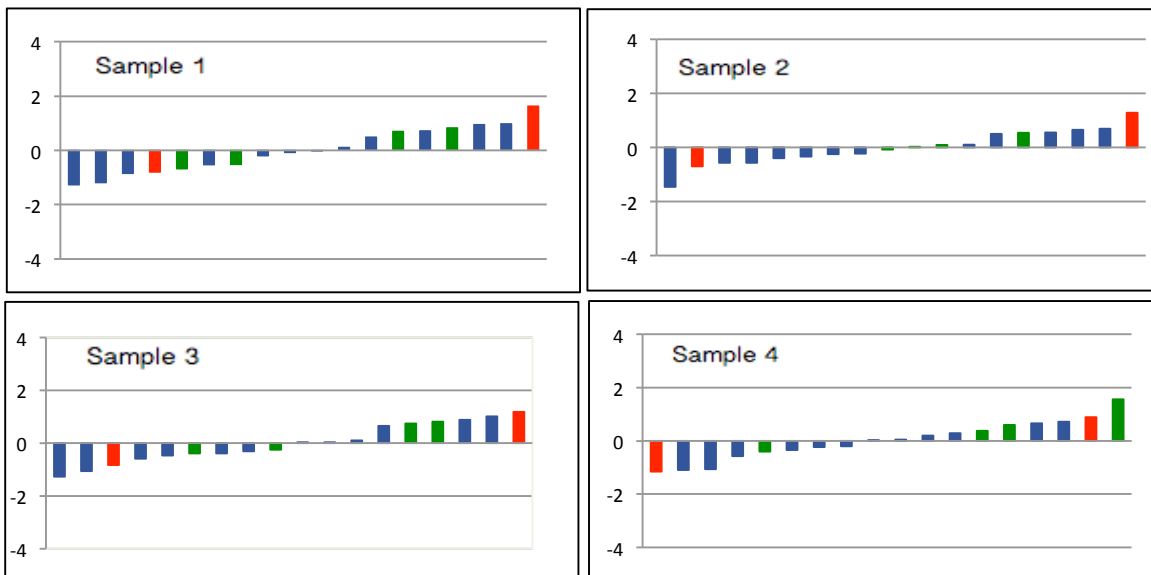
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	12	12	12	12
GC/MS/MS	2	2	2	2
LC/MS/MS	4	4	4	4

All summary stats and the plots below are based on the data excluding any flagged outliers

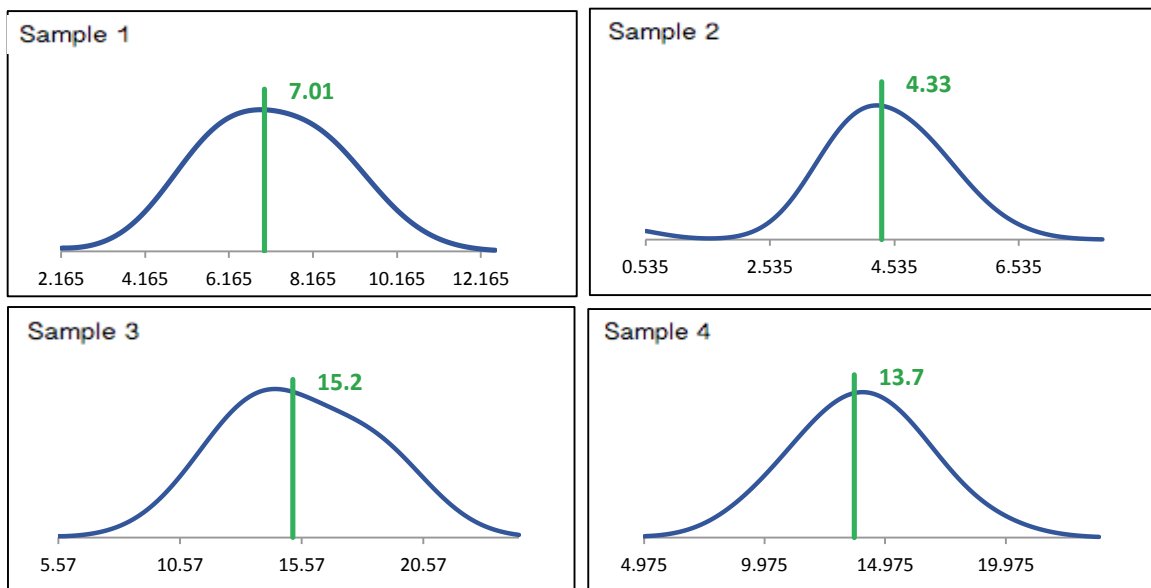


DIAZINON

z-Score Plots

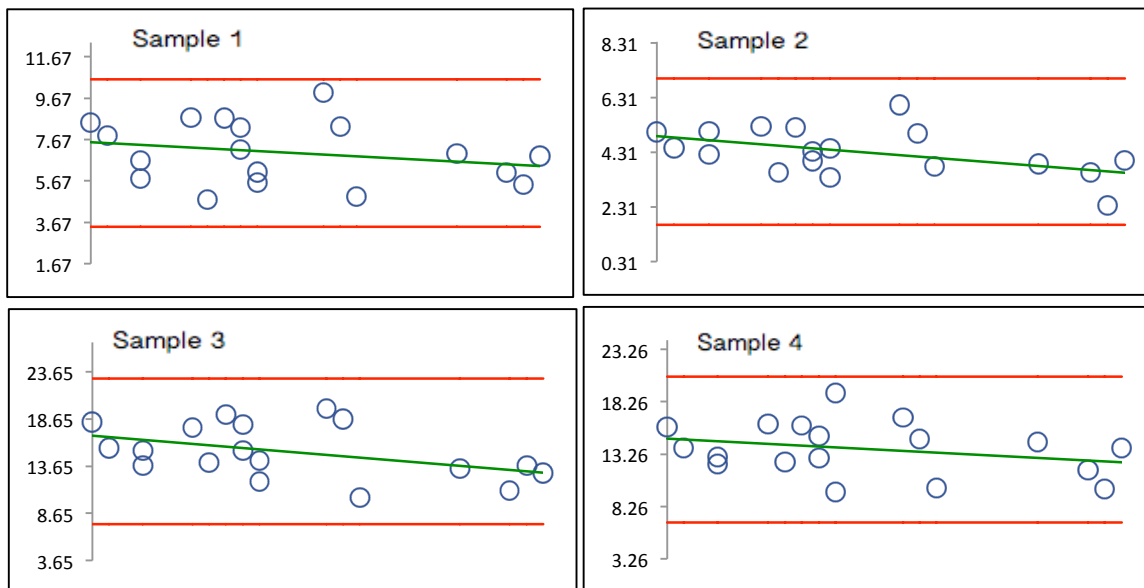


Kernel Density Plots



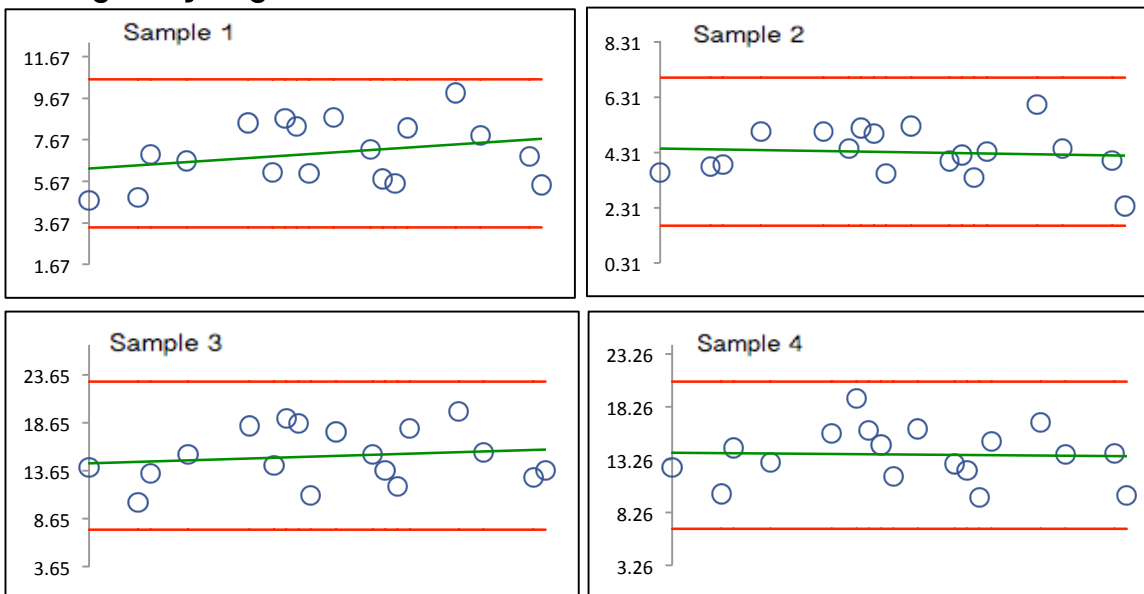
DIAZINON

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

DIMETHOATE

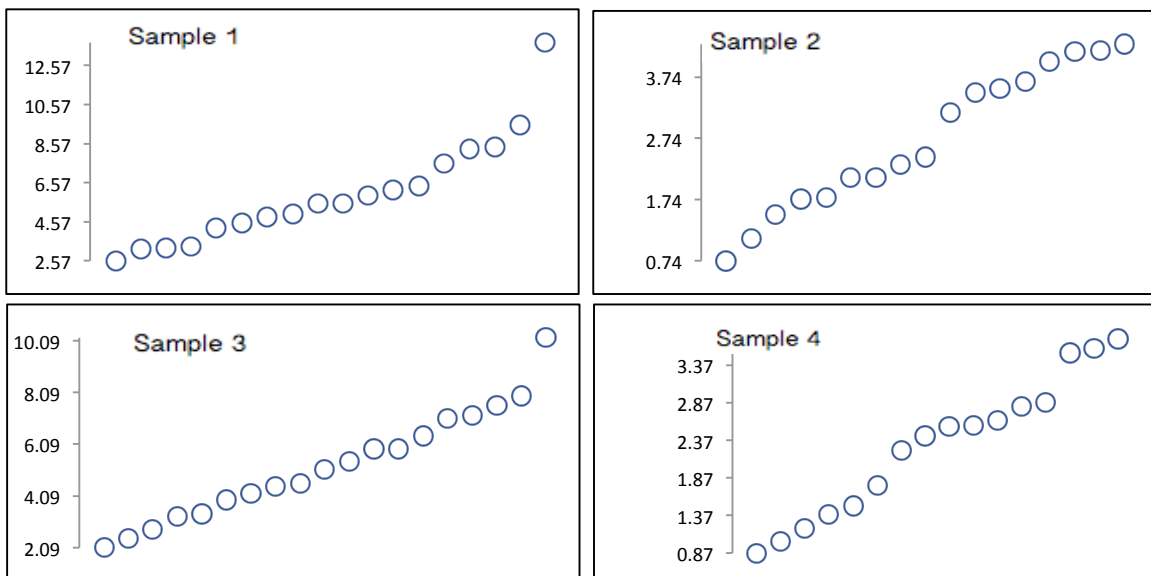
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	18	17	19	16
Median	5.51	2.43	5.10	2.50
Robust Mean	5.74	2.72	5.17	2.30
U	0.72	0.40	0.63	0.33
Robust Standard Deviation	2.44	1.310	2.19	1.05
Regression Standard Deviation	1.96	1.05	1.79	0.920
Stability Flag	Stability	Stability	Stability	Stability
Homogeneity Flag				
Standard Deviation Used (SDPA)	3.69	2.14	3.51	1.64
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	1	0	0	0

Methods Used

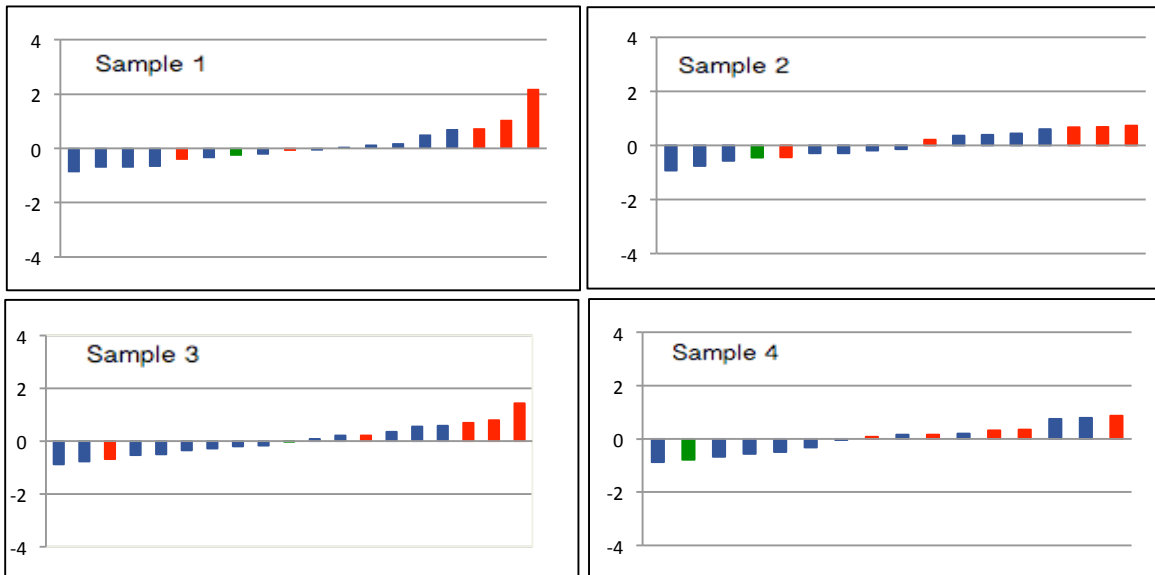
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	12	11	13	10
LC/MS/MS	5	5	5	5
GC/MS/MS	1	1	1	1

All summary stats and the plots below are based on the data excluding any flagged outliers

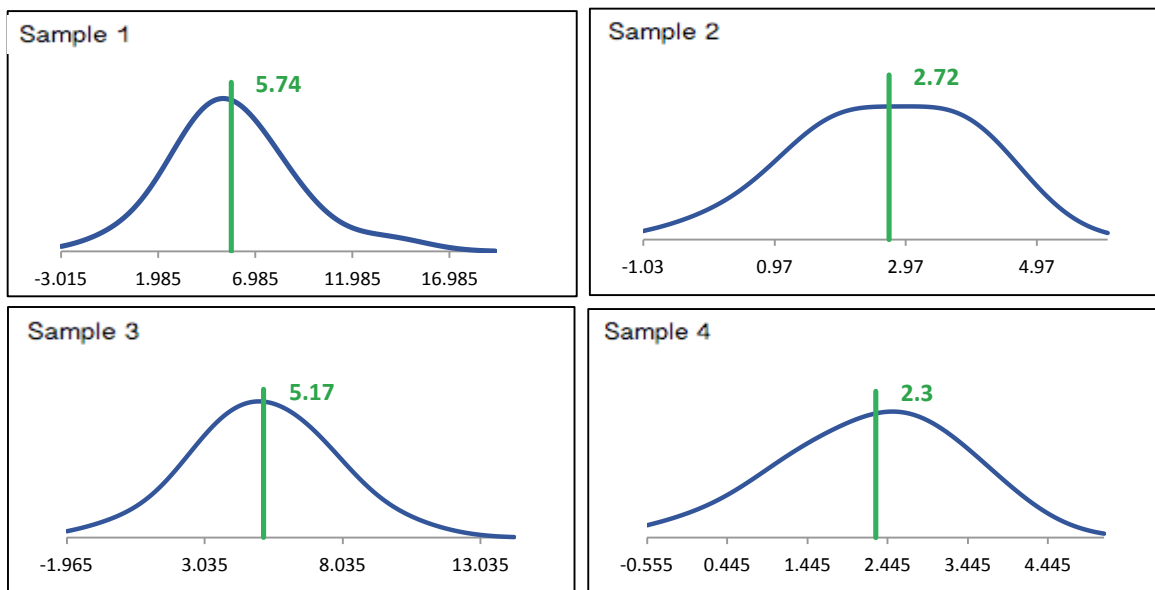


DIMETHOATE

z-Score Plots

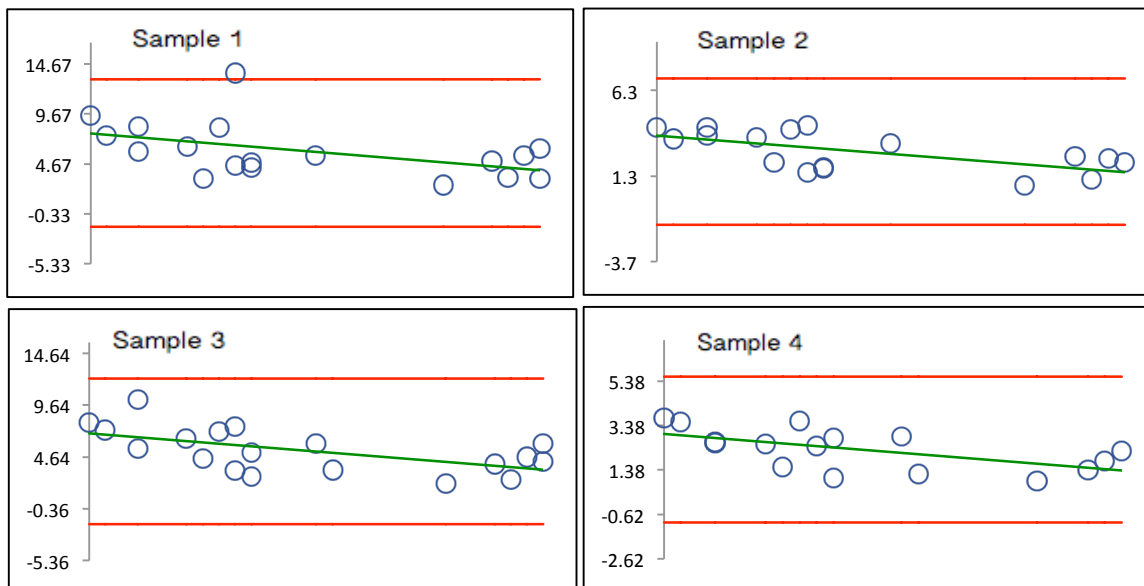


Kernel Density Plots



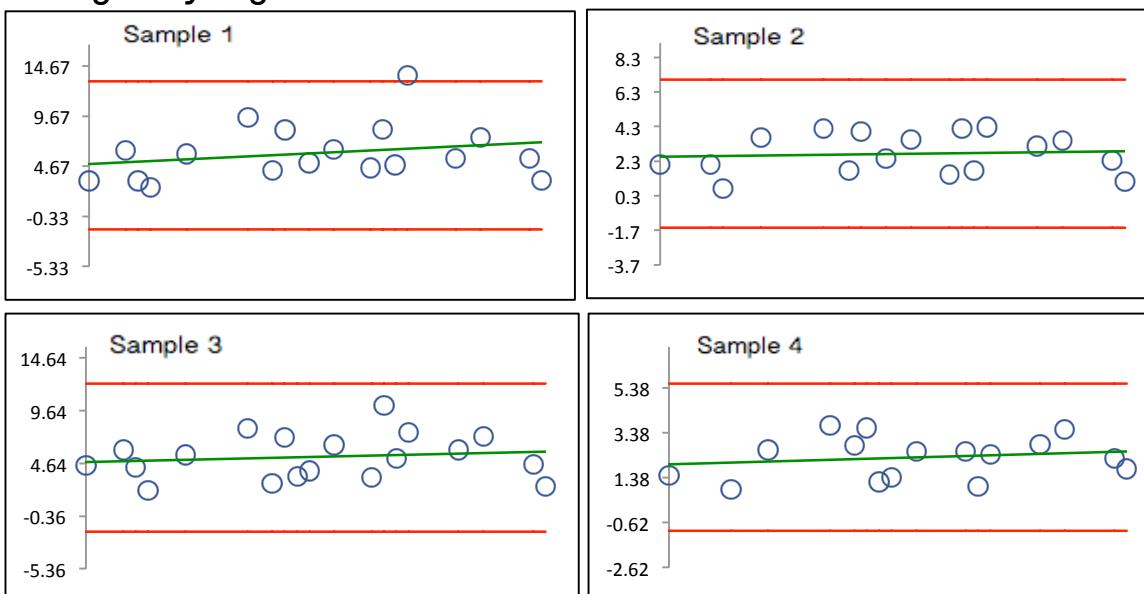
DIMETHOATE

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

DIURON

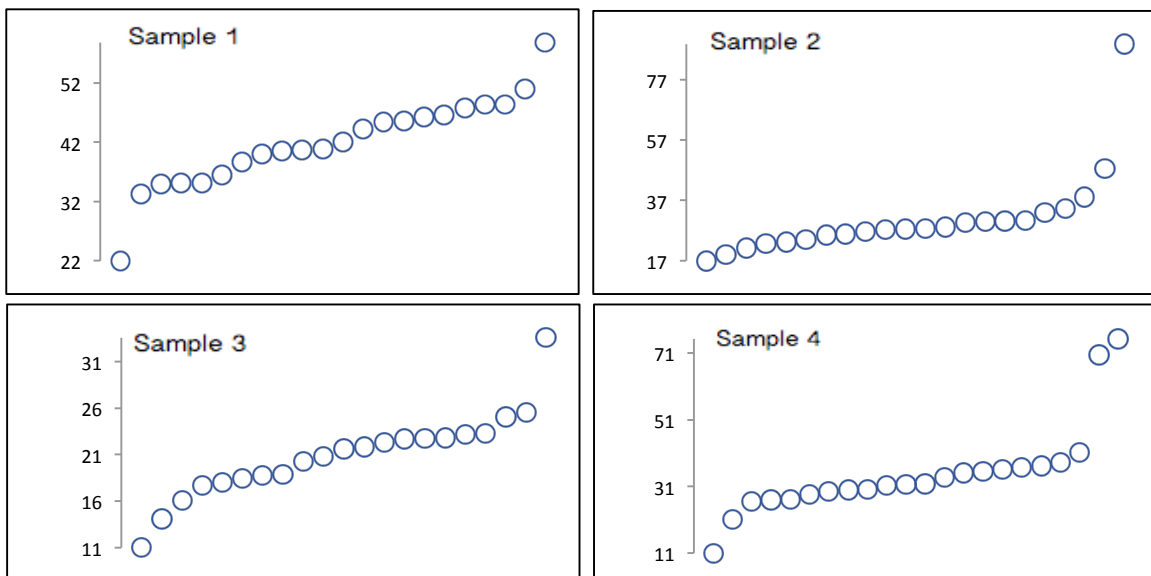
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	22	22	21	22
Median	41.5	27.6	21.6	31.7
Robust Mean	42.1	28.0	20.8	32.6
U	1.80	1.67	1.01	1.74
Robust Standard Deviation	6.75	6.26	3.70	6.52
Regression Standard Deviation	10.6	7.25	5.53	8.34
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	10.6	7.25	5.53	8.34
Outliers	0	0	1	0
$ z > 3.0$	0	1	0	2
$2 < z < 3$	0	1	1	1

Methods Used

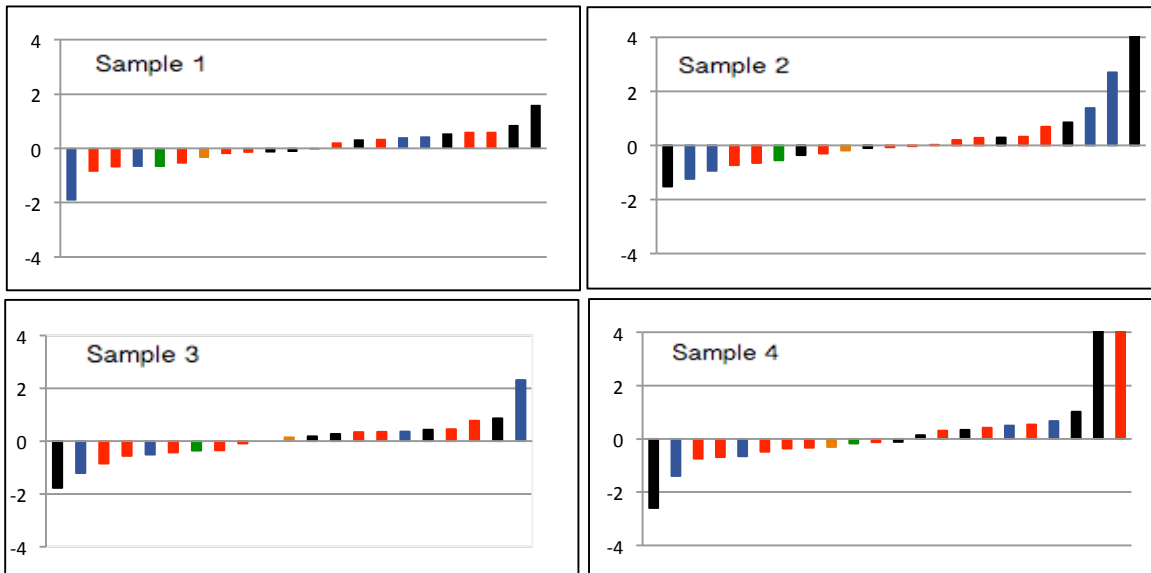
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	4	4	4	4
LC/MS/MS	10	10	10	10
GC/MSE	1	1	1	1
LC/MS	1	1	1	1
HPLC	6	6	5	6

All summary stats and the plots below are based on the data excluding any flagged outliers

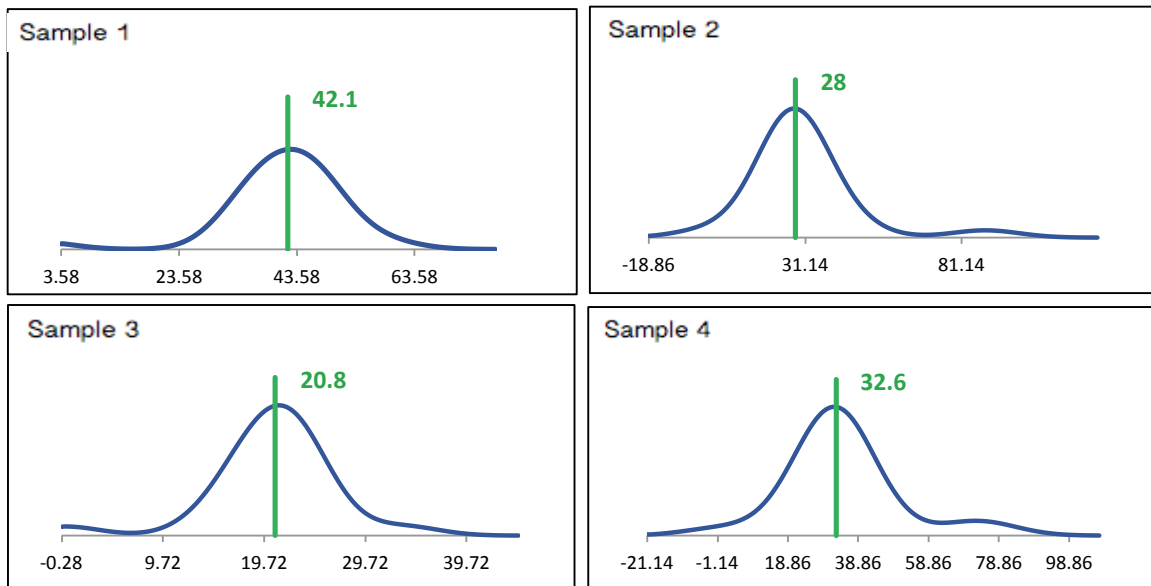


DIURON

z-Score Plots

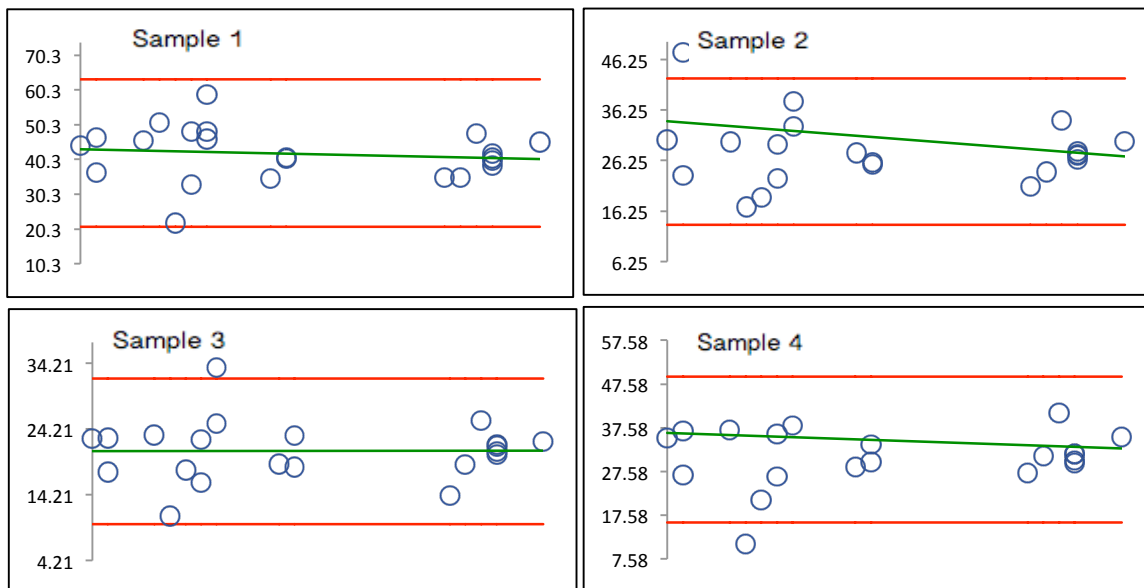


Kernel Density Plots



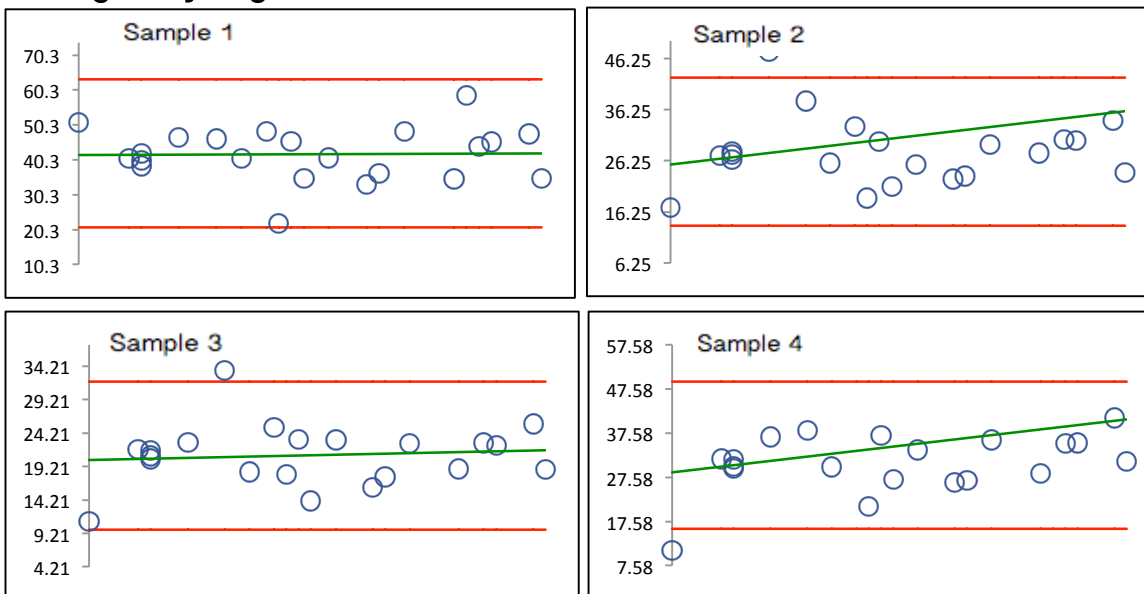
DIURON

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

MALATHION

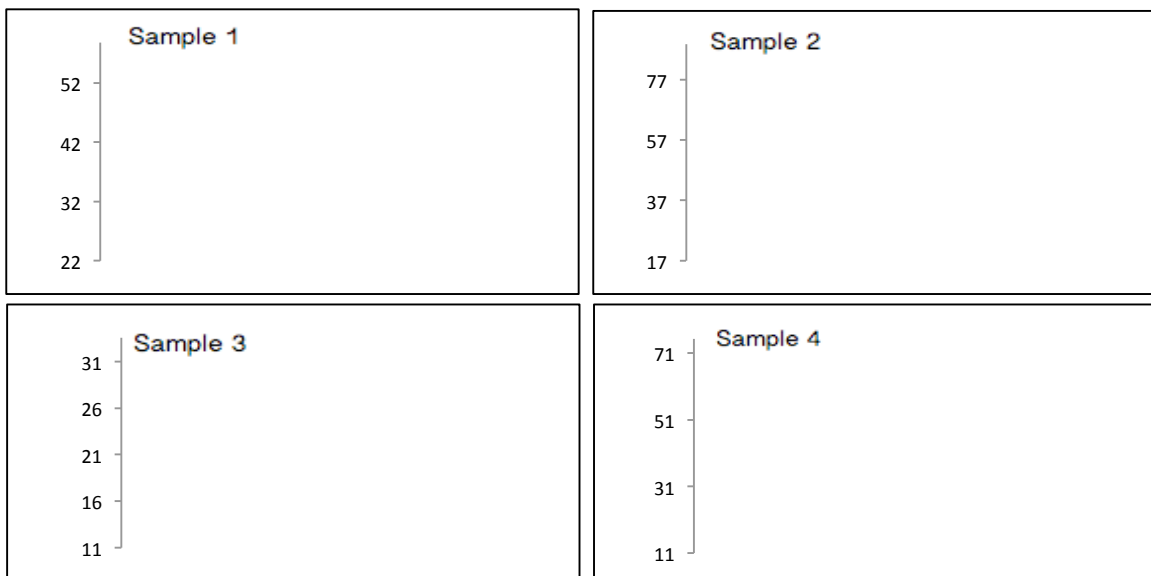
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	2	3	1	2
Median	2.18	3.14	2.94	2.26
Robust Mean	2.18	6.16	2.94	#DIV/0!
U	1.88	4.45	6.91	7.37
Robust Standard Deviation	2.13	6.17	5.53	8.34
Regression Standard Deviation	10.6	7.25	5.53	8.34
Stability Flag	#DIV/0!		#DIV/0!	#DIV/0!
Homogeneity Flag				
Standard Deviation Used (SDPA)	#DIV/0!	7.25	#DIV/0!	#DIV/0!
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0

Methods Used

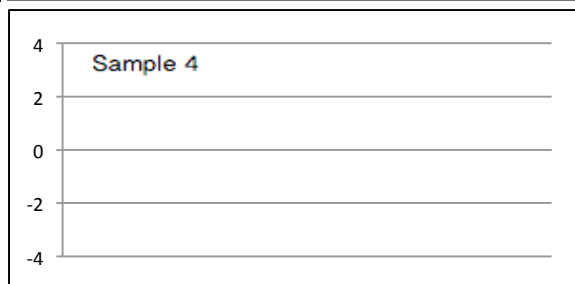
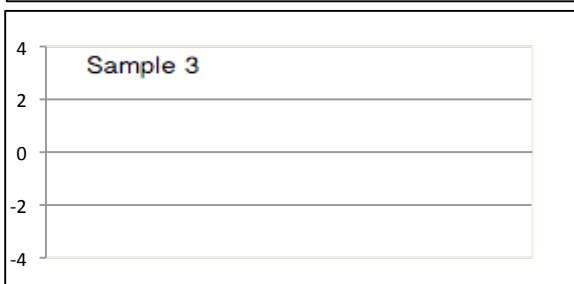
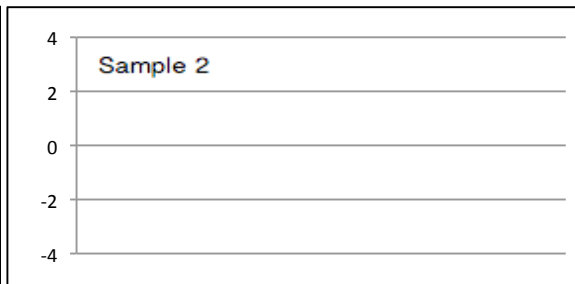
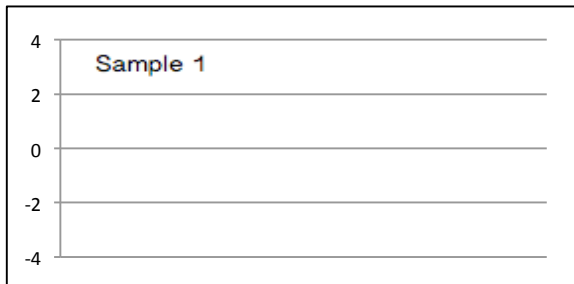
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	2	3	1	2
LC/MS/MS	0	0	0	0
GC/MSE	0	0	0	0
LC/MS	0	0	0	0
HPLC	0	0	0	0

All summary stats and the plots below are based on the data excluding any flagged outliers

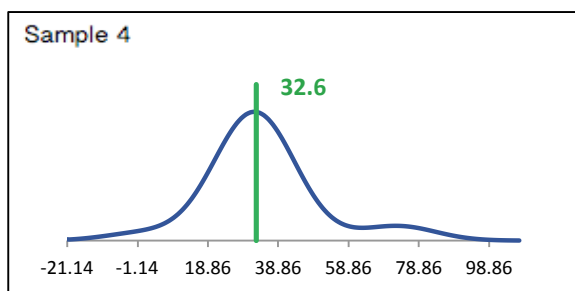
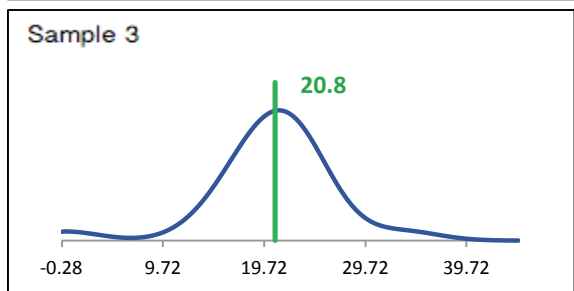
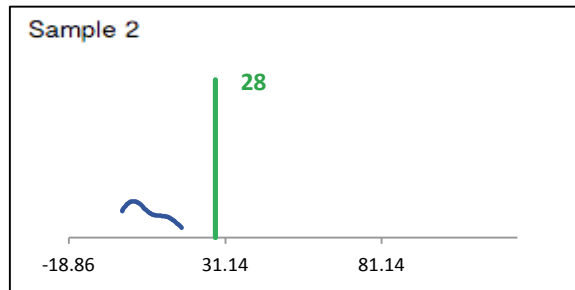
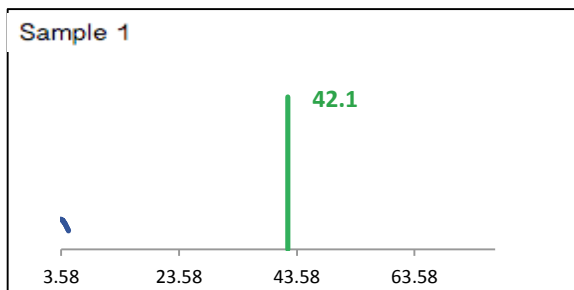


MALATHION

z-Score Plots

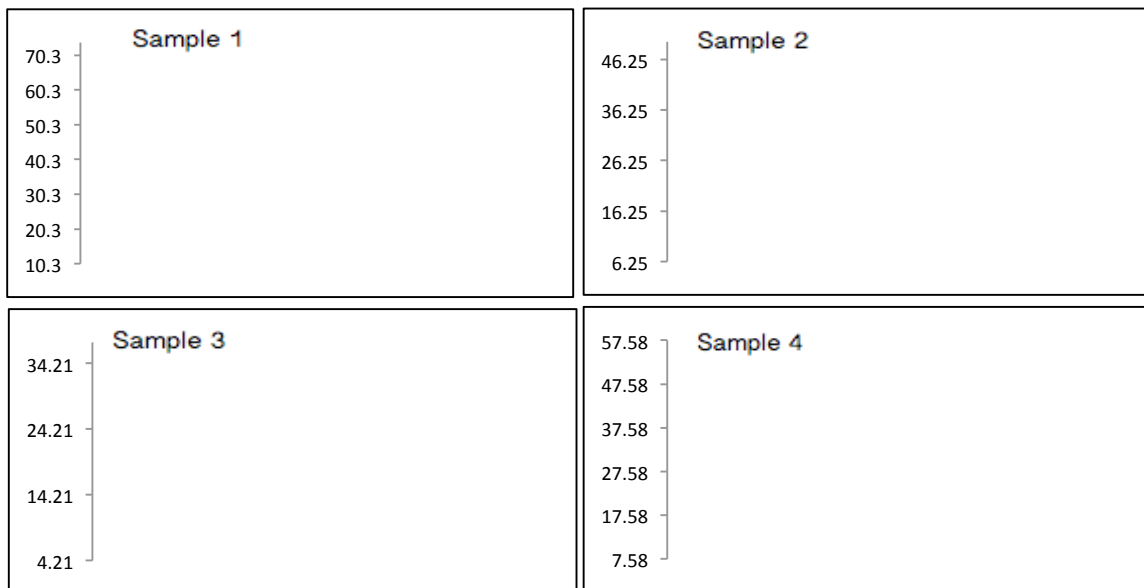


Kernel Density Plots



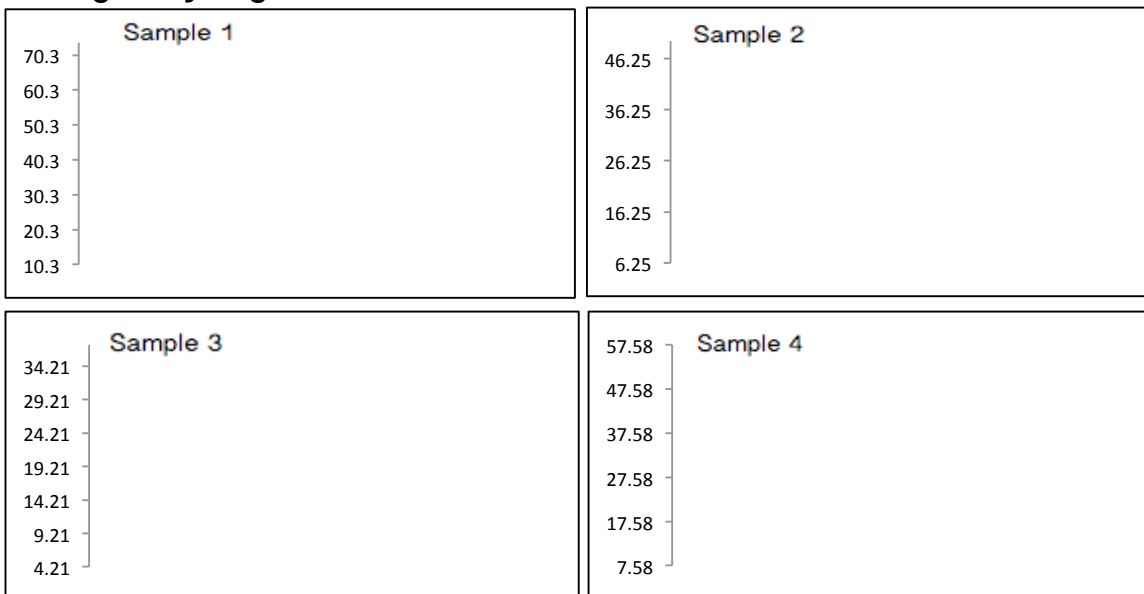
MALATHION

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

METOLACHLOR

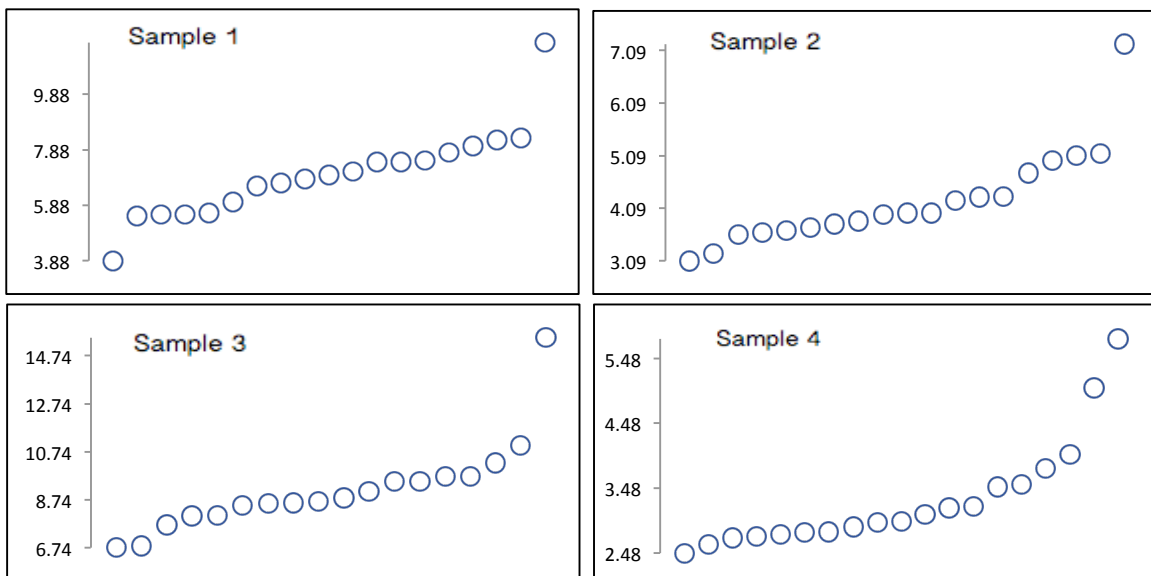
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	19	19	18	19
Median	6.98	4.00	8.74	2.97
Robust Mean	6.89	4.14	8.91	3.16
U	0.36	0.21	0.38	0.16
Robust Standard Deviation	1.25	0.731	1.29	0.567
Regression Standard Deviation	1.42	0.931	1.79	0.756
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	1.42	0.931	1.79	0.756
Outliers	0	0	1	0
$ z > 3.0$	1	1	1	1
$2 < z < 3$	1	0	0	1

Methods Used

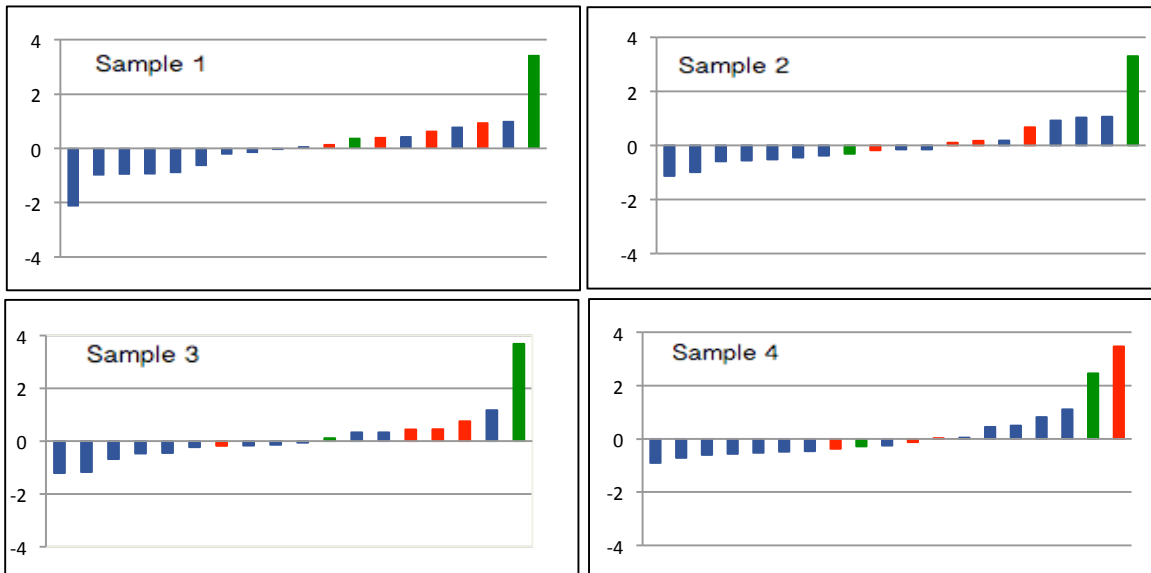
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	13	13	12	13
LC/MS/MS	4	4	4	4
GC/MS/MS	2	2	2	2

All summary stats and the plots below are based on the data excluding any flagged outliers

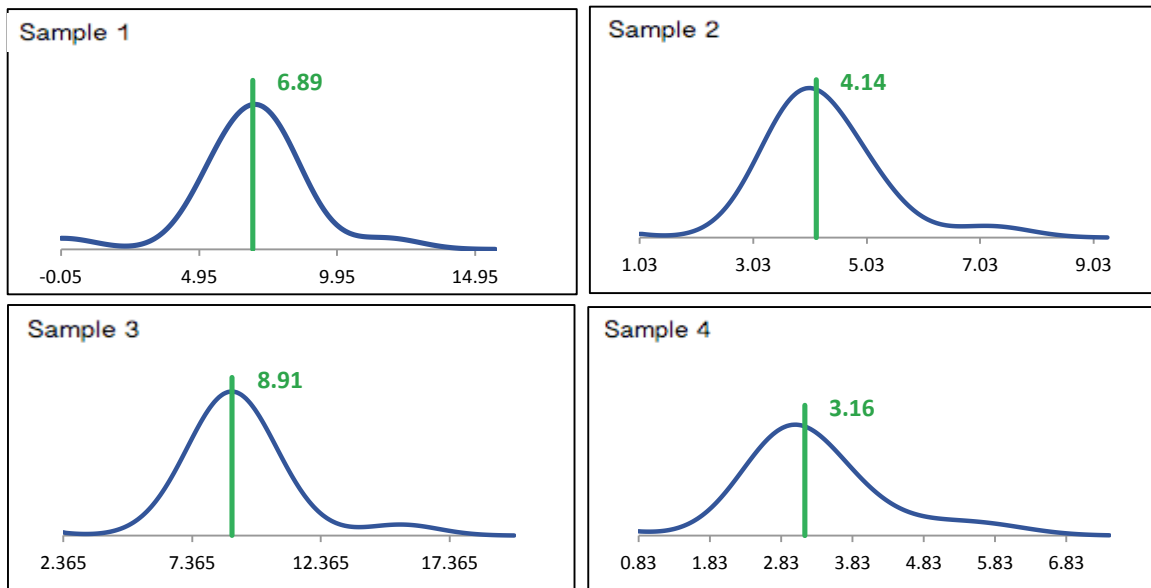


METOLACHLOR

z-Score Plots

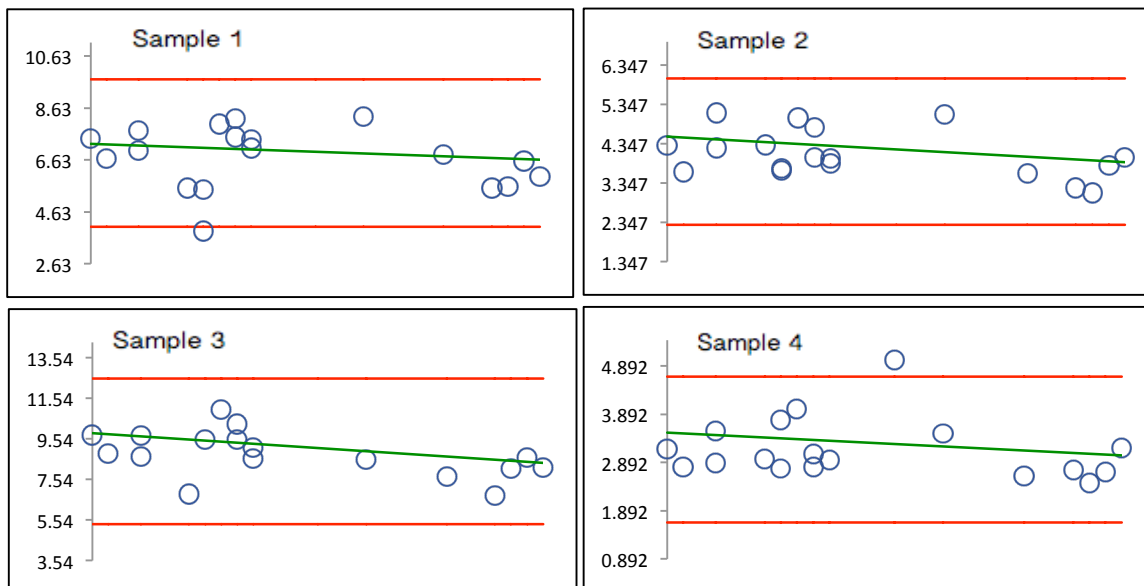


Kernel Density Plots



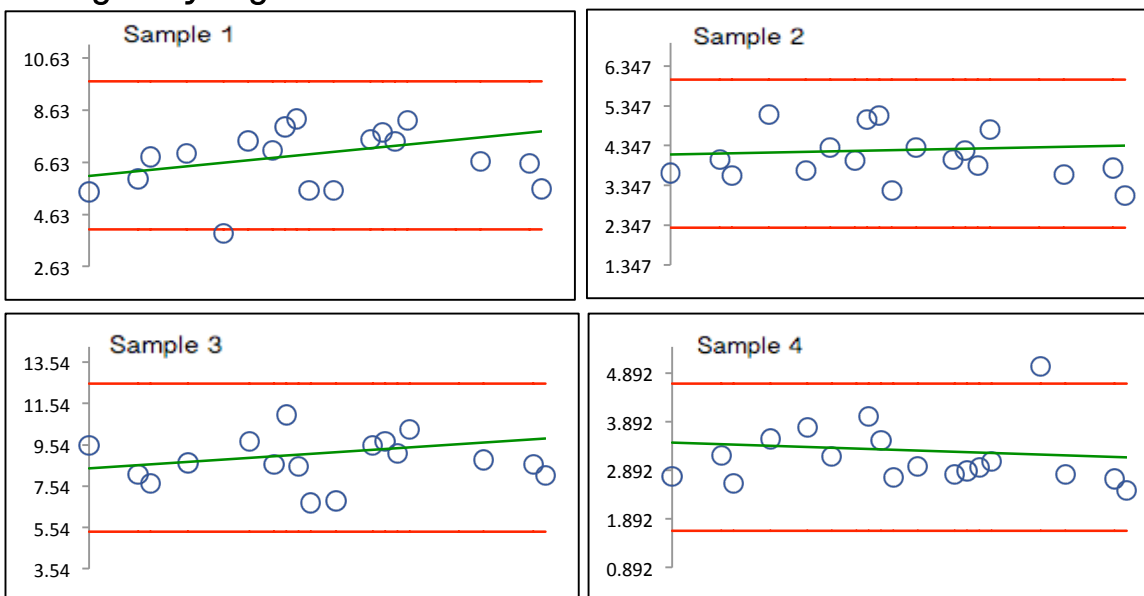
METOLACHLOR

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

METRIBUZIN

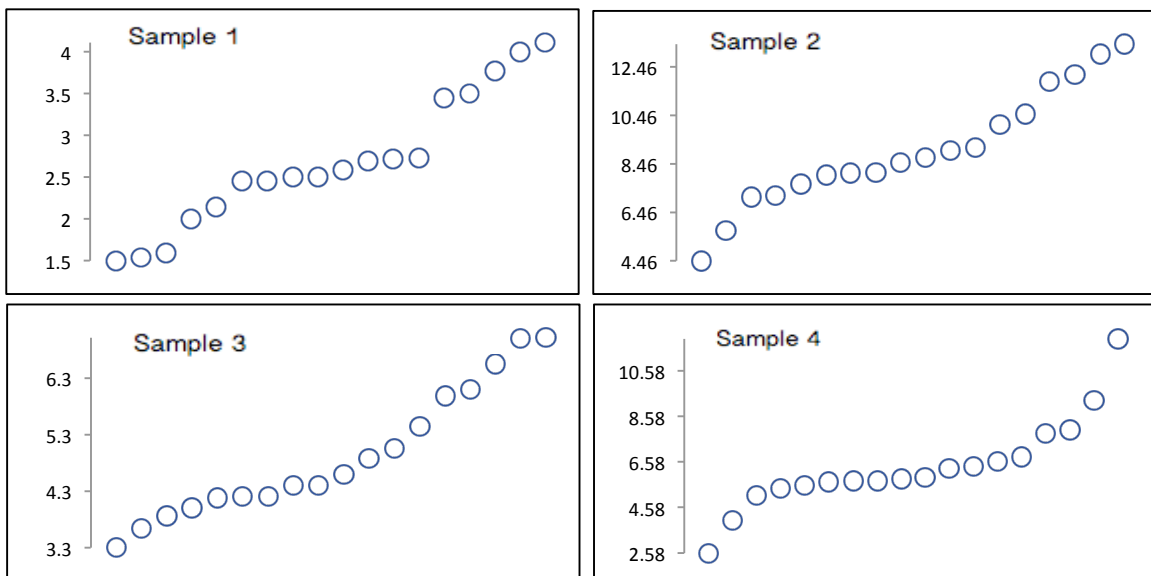
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	18	18	18	18
Median	2.54	8.60	4.50	5.87
Robust Mean	2.68	9.04	4.91	6.21
U	0.27	0.77	0.37	0.44
Robust Standard Deviation	0.904	2.62	1.26	1.50
Regression Standard Deviation	0.841	2.22	1.32	1.60
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	0.904	2.62	1.32	1.60
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	1
$2 < z < 3$	0	0	0	1

Methods Used

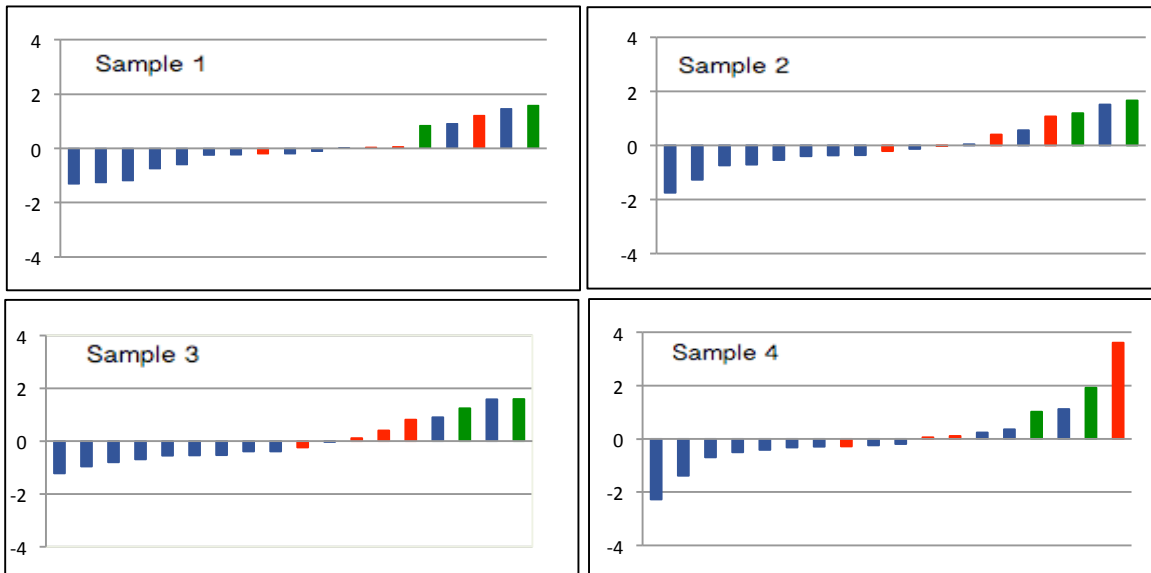
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	12	12	12	12
LC/MS/MS	4	4	4	4
GC/MS/MS	2	2	2	2

All summary stats and the plots below are based on the data excluding any flagged outliers

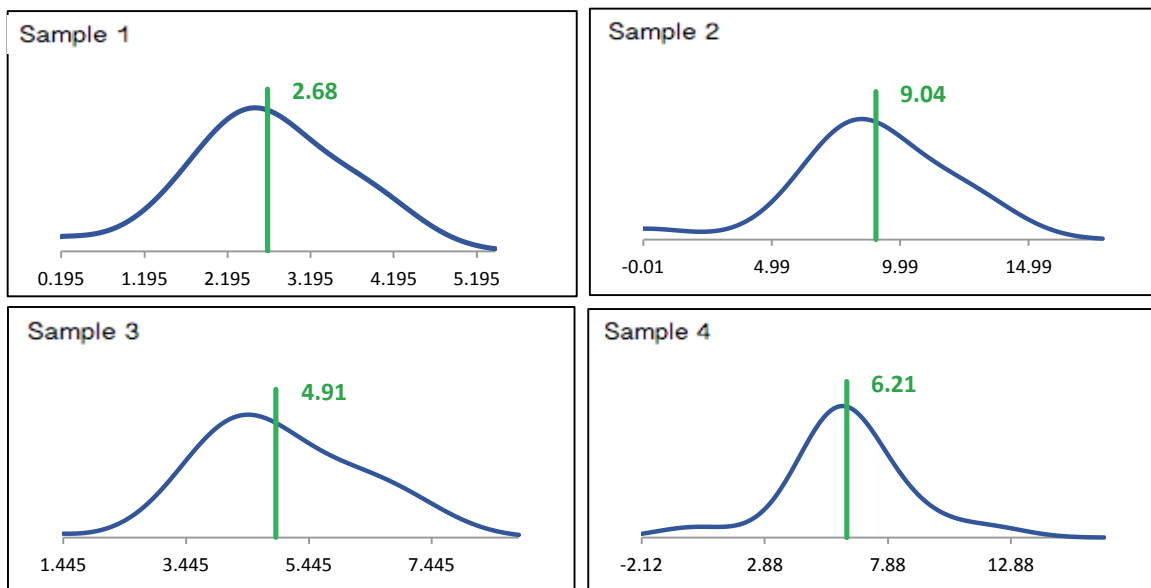


METRIBUZIN

z-Score Plots

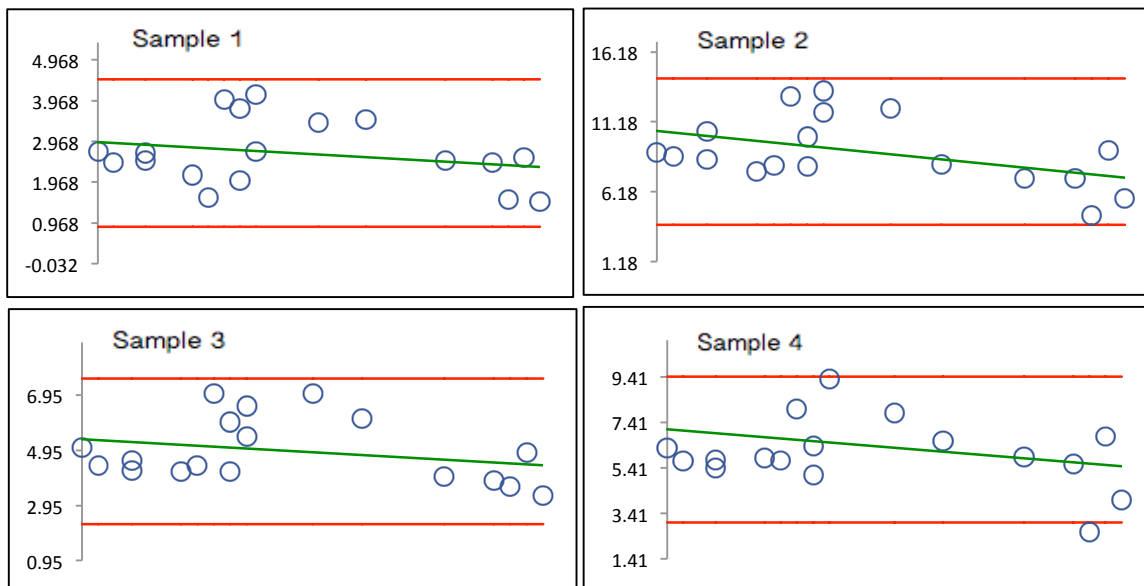


Kernel Density Plots



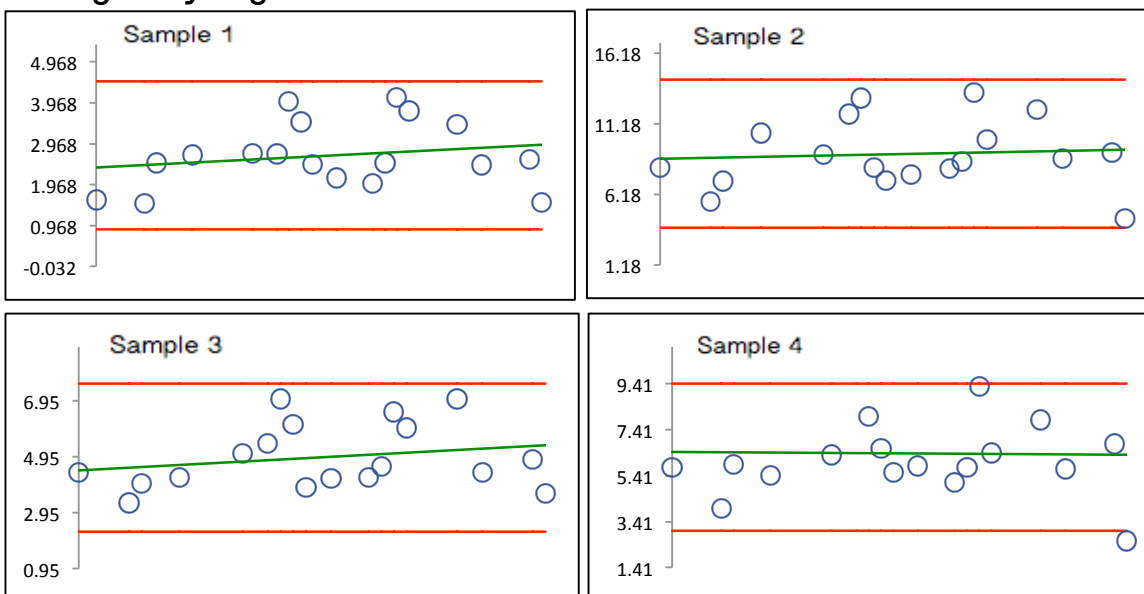
METRIBUZIN

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

PARATHION (ETHYL)

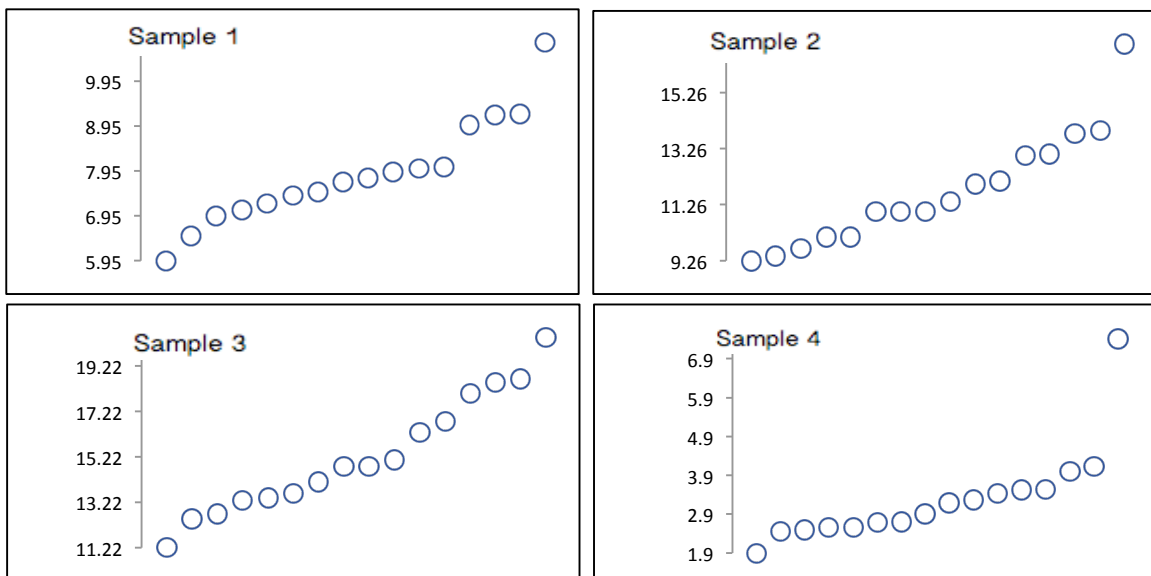
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	16	16	16	16
Median	7.75	11.2	14.8	3.05
Robust Mean	7.82	11.6	15.2	3.10
U	0.35	0.59	0.88	0.24
Robust Standard Deviation	1.12	1.90	2.82	0.759
Regression Standard Deviation	1.91	2.79	3.64	0.806
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	1.91	2.79	3.64	0.806
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	1
$2 < z < 3$	0	0	0	0

Methods Used

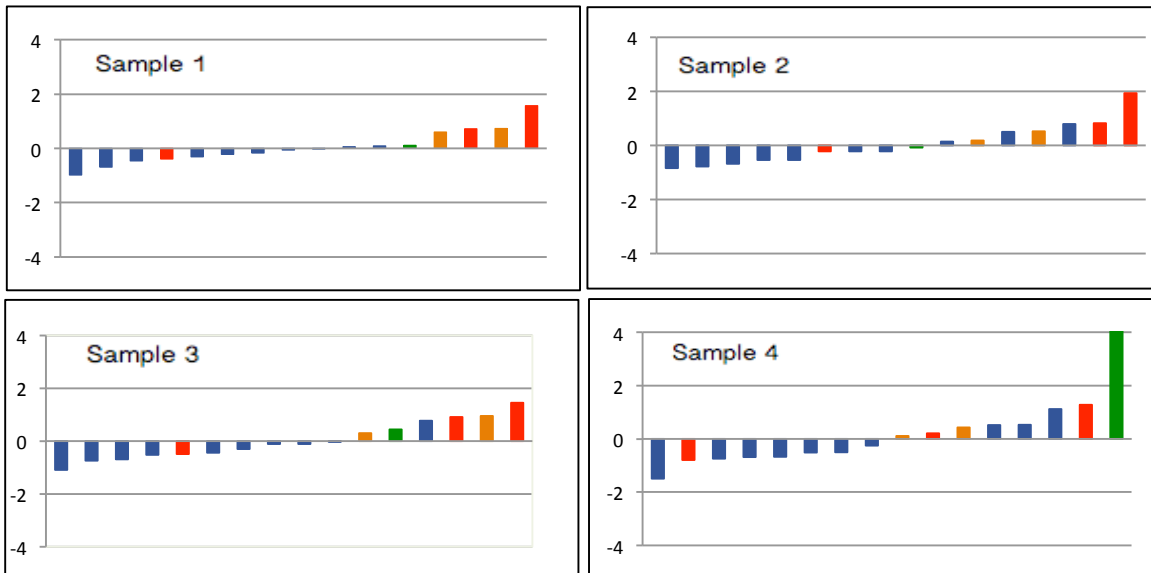
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	10	10	10	10
GC/MS/MS	3	3	3	3
GC/MSE	1	1	1	1
LC/MS/MS	2	2	2	2

All summary stats and the plots below are based on the data excluding any flagged outliers

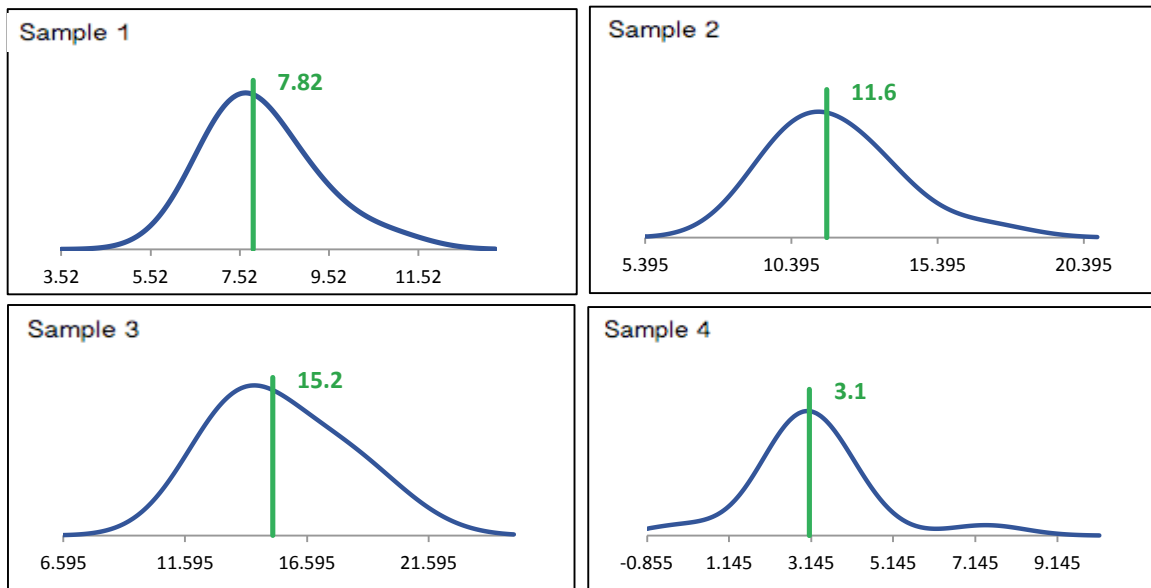


PARATHION (ETHYL)

z-Score Plots

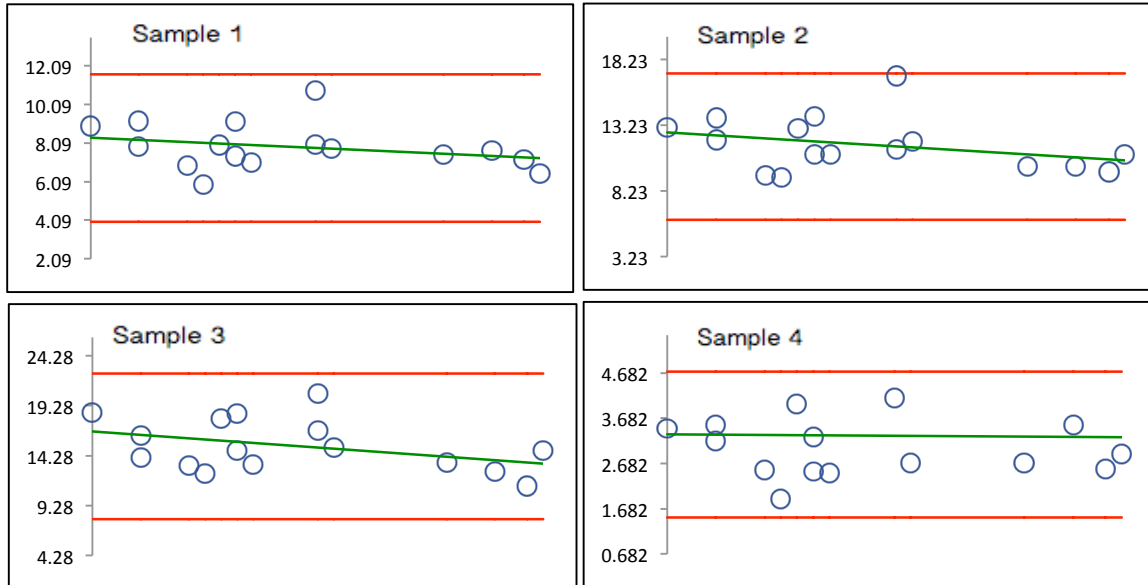


Kernel Density Plots



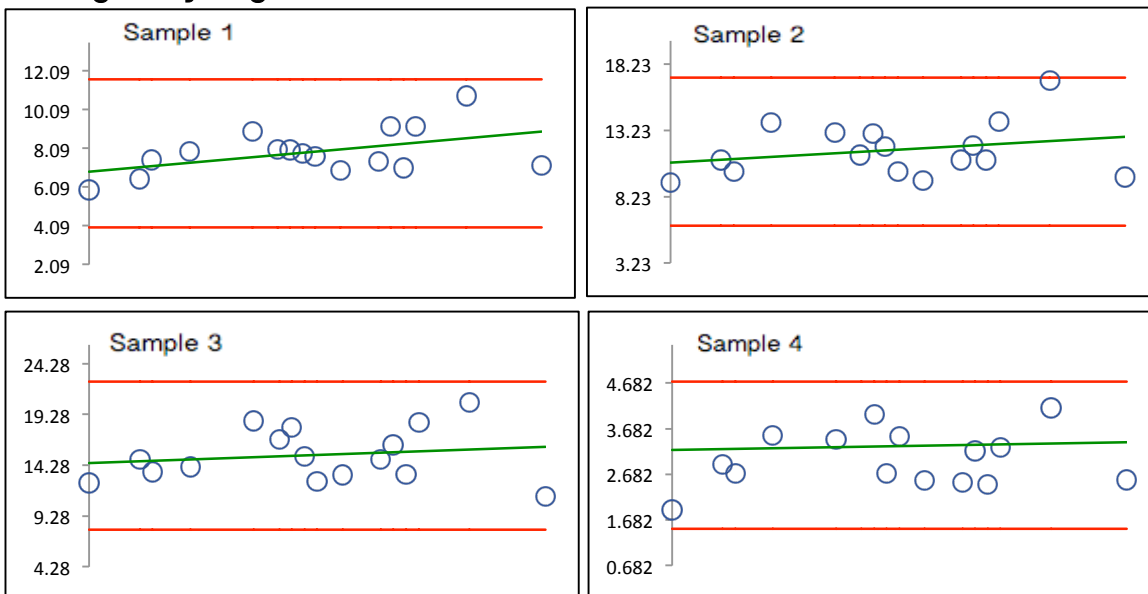
PARATHION (ETHYL)

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

PHORATE

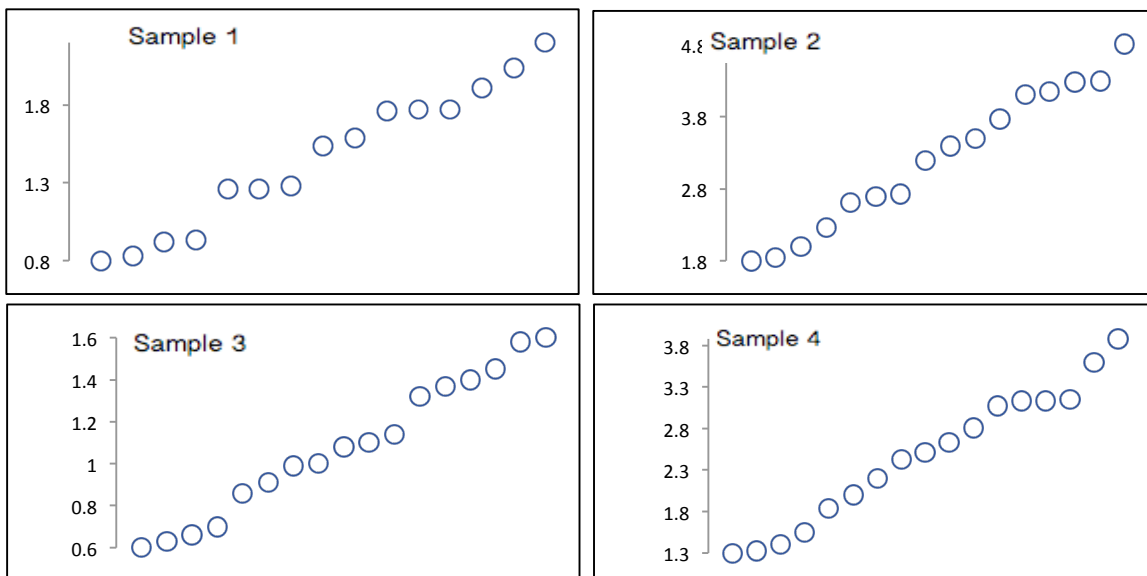
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	15	16	17	17
Median	1.54	3.30	1.08	2.51
Robust Mean	1.46	3.22	1.08	2.47
U	0.17	0.34	0.11	0.28
Robust Standard Deviation	0.517	1.10	0.375	0.911
Regression Standard Deviation	0.399	0.881	0.296	0.676
Stability Flag		Stability	Stability	Stability
Homogeneity Flag				
Standard Deviation Used (SDPA)	0.517	1.87	0.57	1.32
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0

Methods Used

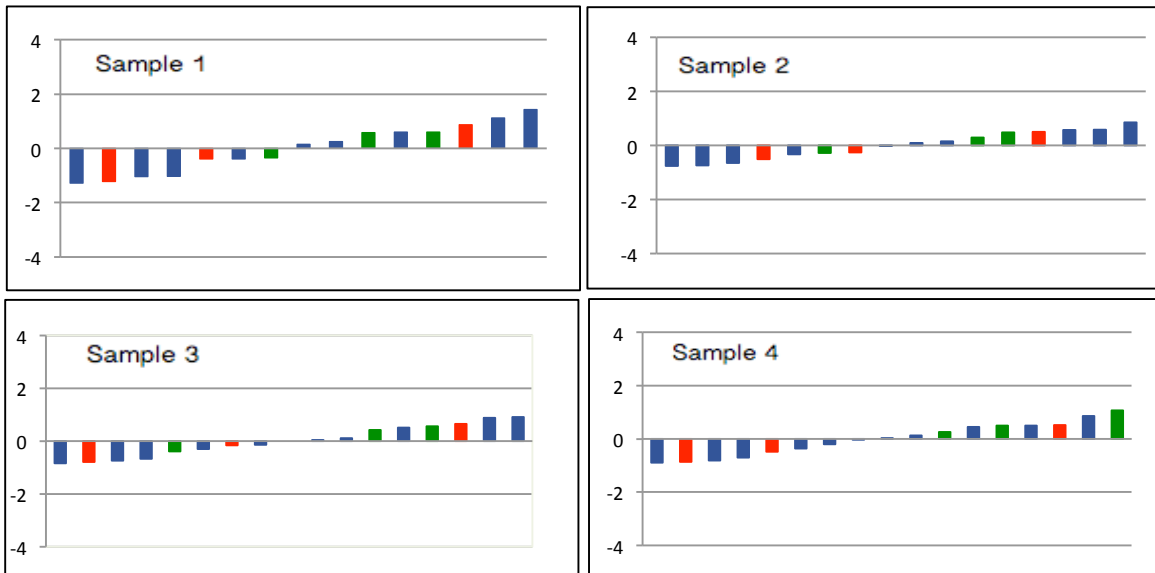
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	9	10	11	11
GC/MS/MS	3	3	3	3
LC/MS/MS	3	3	3	3

All summary stats and the plots below are based on the data excluding any flagged outliers

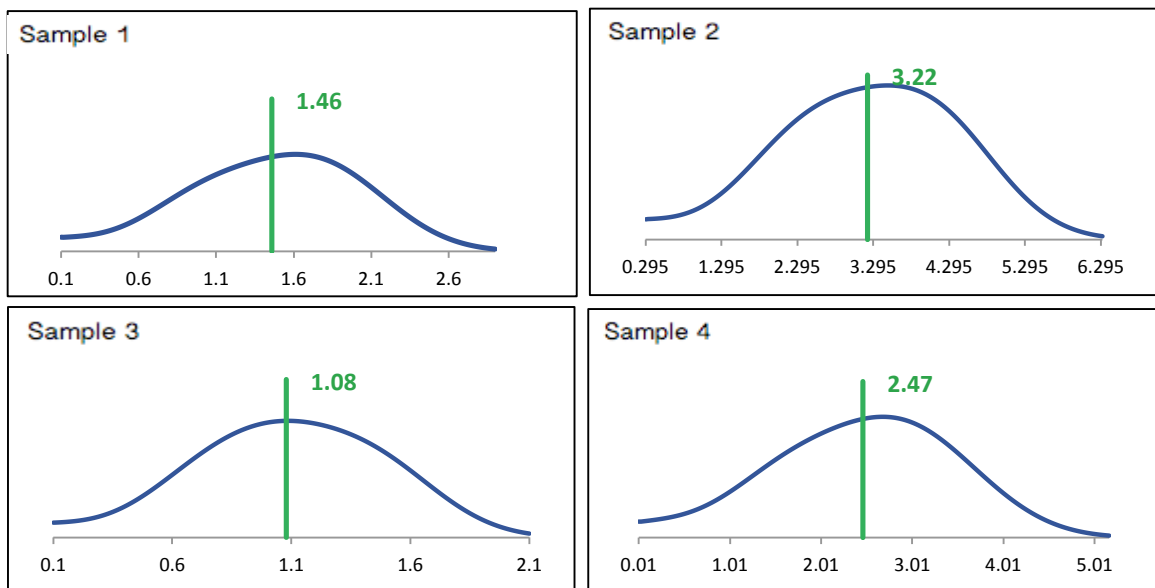


PHORATE

z-Score Plots

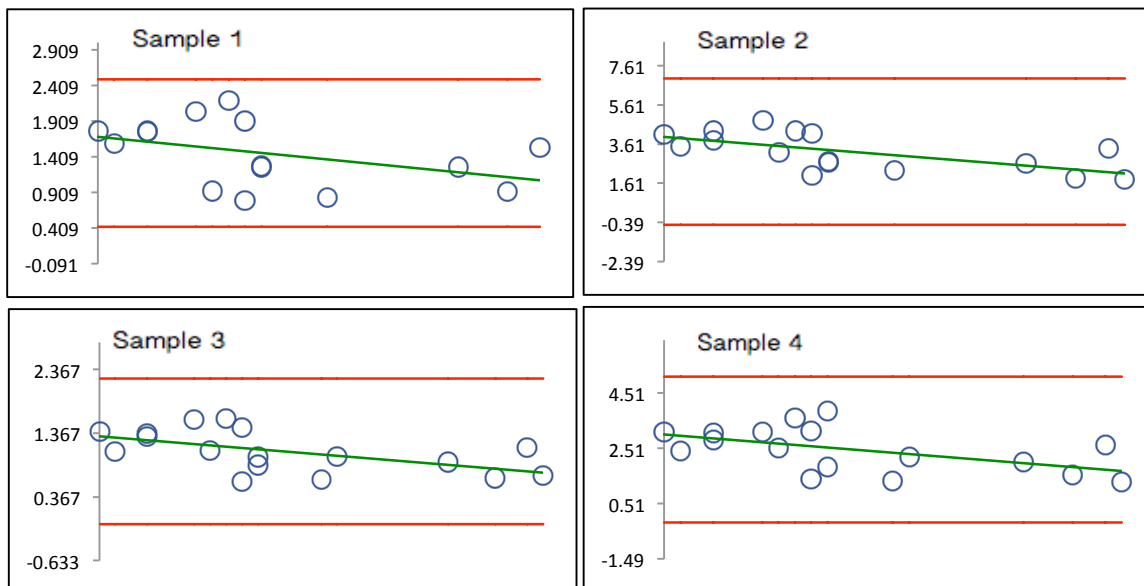


Kernel Density Plots



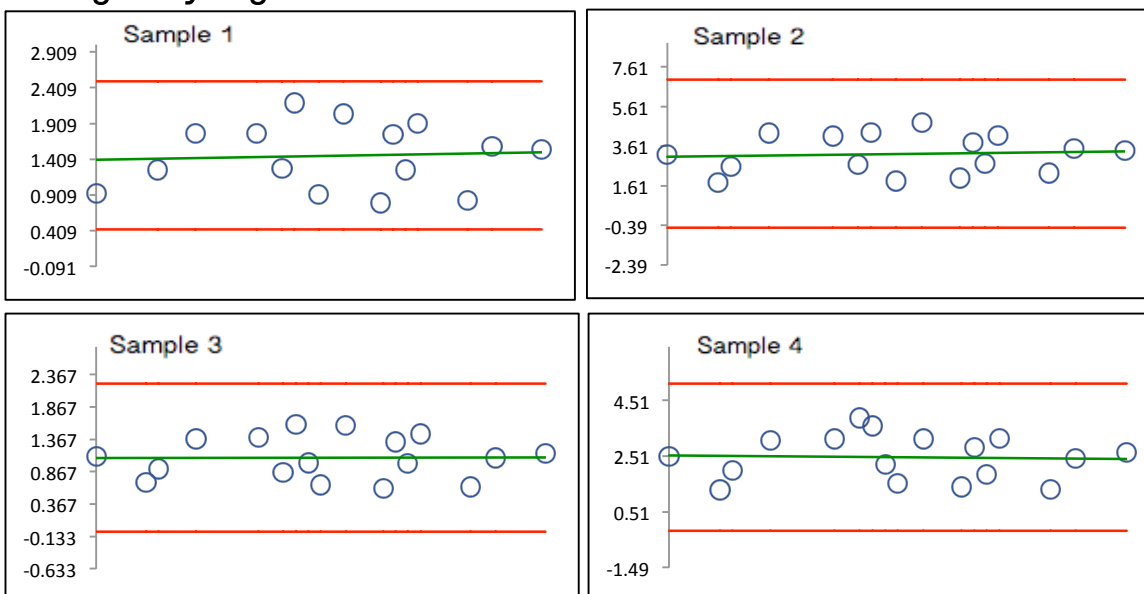
PHORATE

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

SIMAZINE

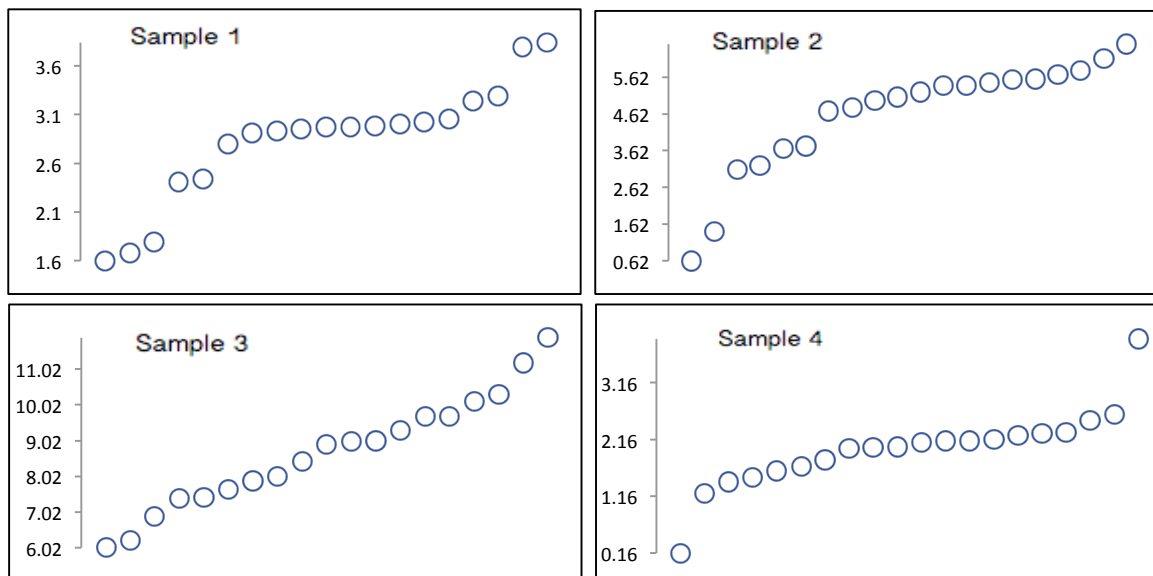
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	19	20	19	20
Median	2.97	5.15	8.91	2.07
Robust Mean	2.87	4.79	8.66	1.98
U	0.16	0.36	0.50	0.13
Robust Standard Deviation	0.553	1.29	1.73	0.473
Regression Standard Deviation	0.725	1.20	2.17	0.504
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	0.725	1.29	2.17	0.504
Outliers	1	0	1	0
$ z > 3.0$	0	1	0	2
$2 < z < 3$	0	1	0	0

Methods Used

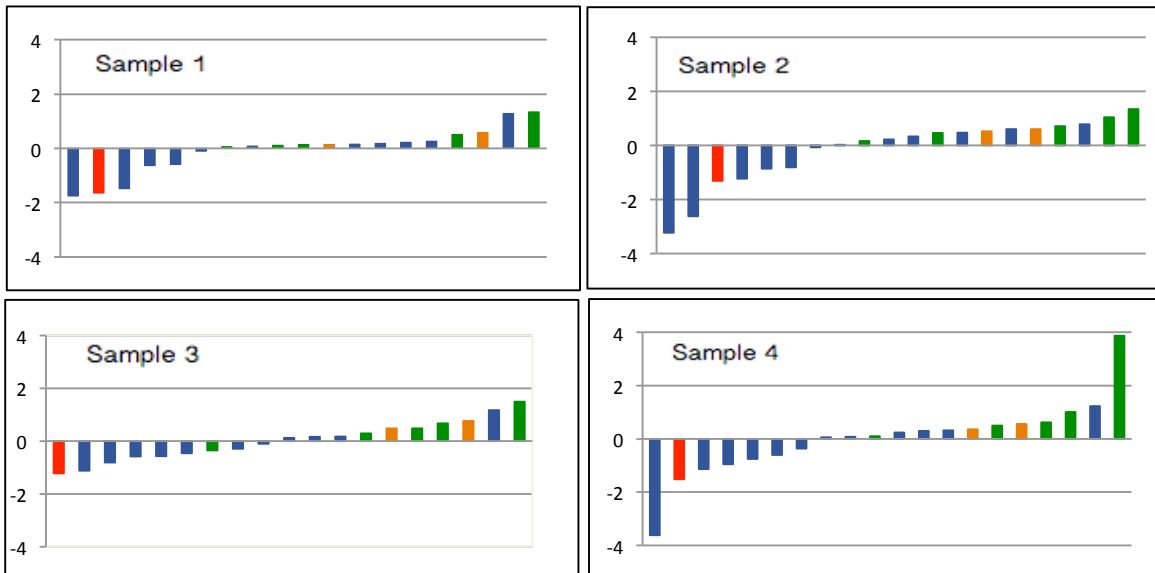
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	11	12	11	12
GC/MS/MS	1	1	1	1
LC/MS/MS	5	5	5	5
HPLC	2	2	2	2

All summary stats and the plots below are based on the data excluding any flagged outliers

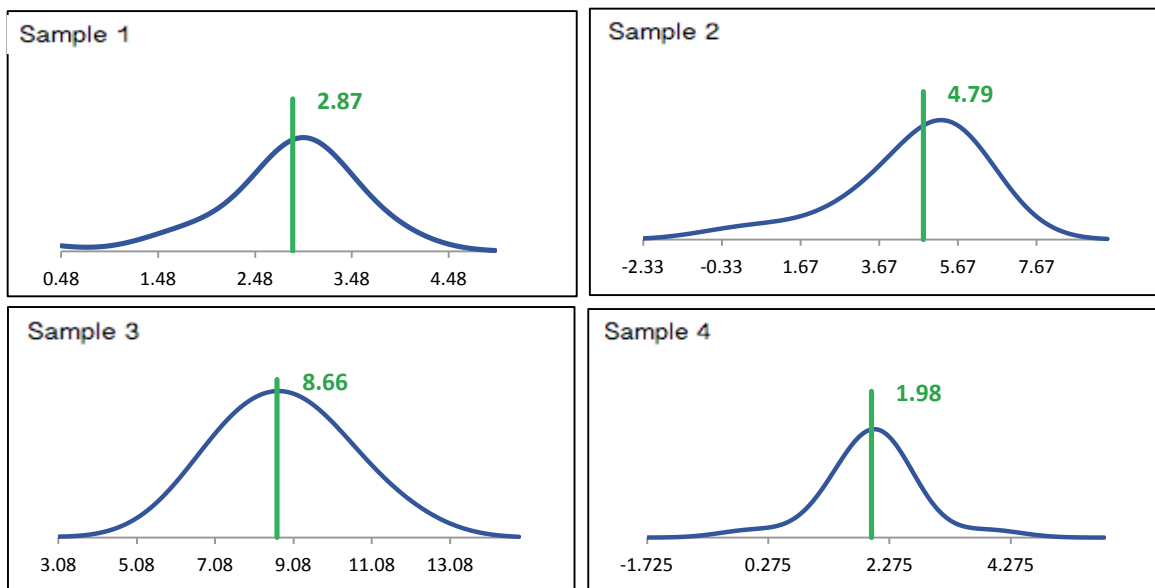


SIMAZINE

z-Score Plots

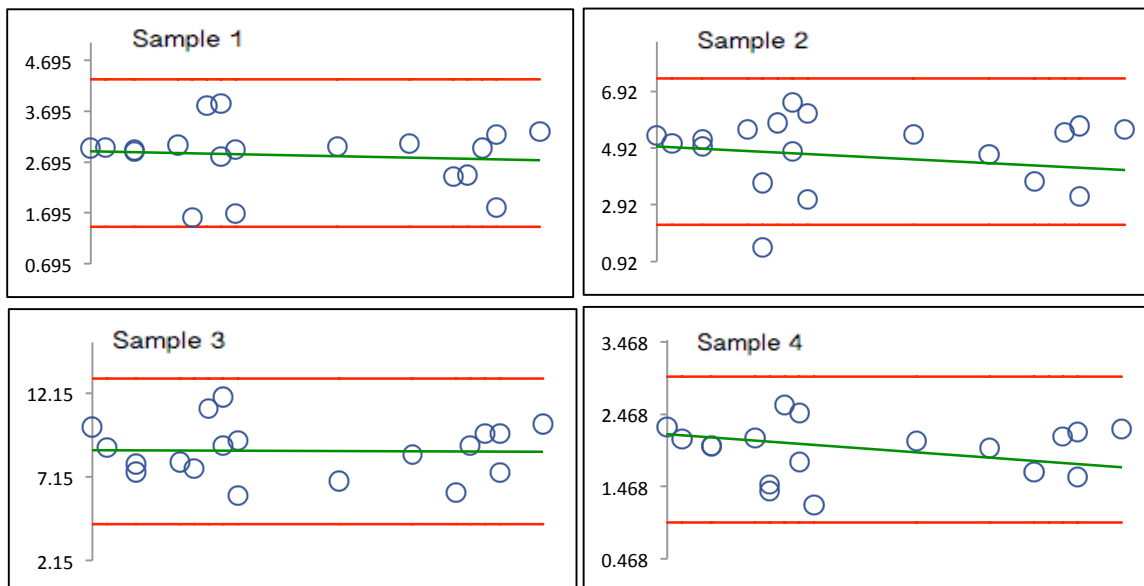


Kernel Density Plots



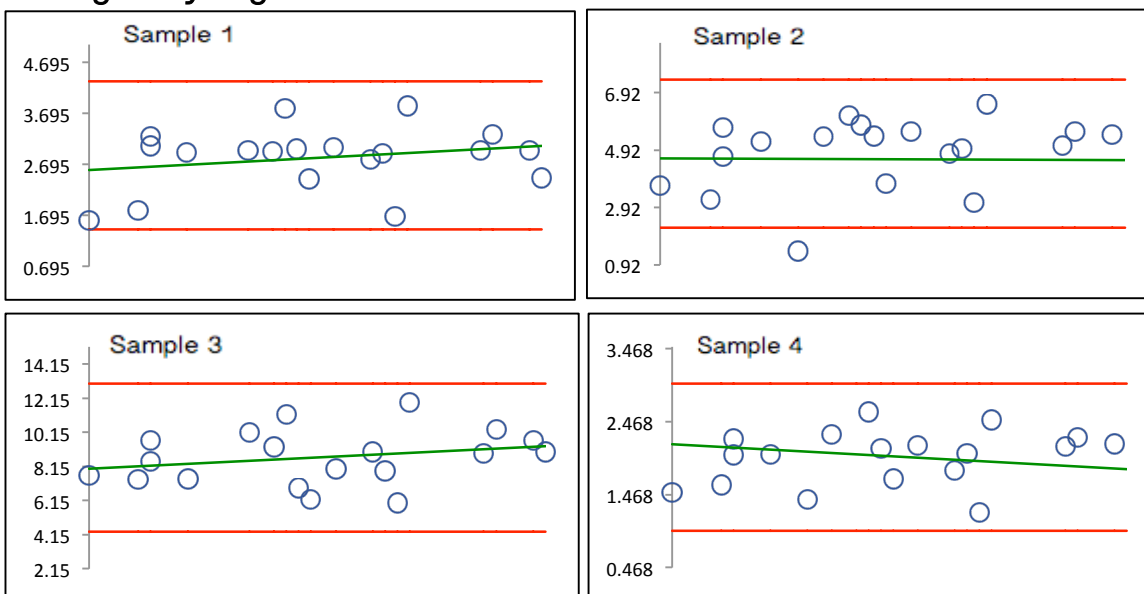
SIMAZINE

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

TERBUFOS

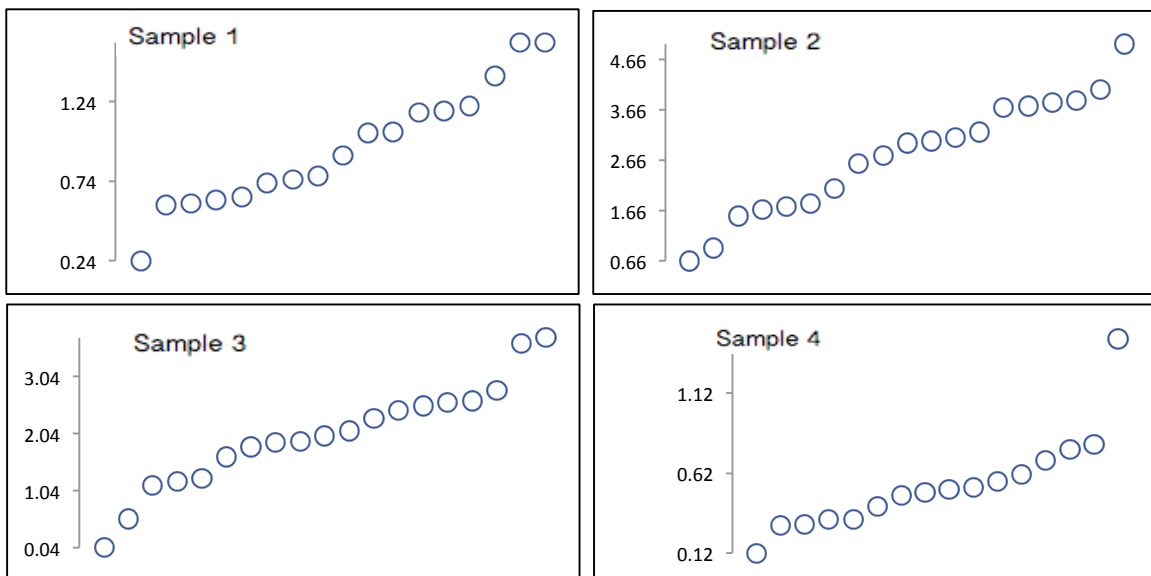
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	17	19	19	16
Median	0.900	3.00	2.00	0.510
Robust Mean	0.948	2.74	2.01	0.510
U	0.13	0.36	0.26	0.07
Robust Standard Deviation	0.412	1.24	0.899	0.227
Regression Standard Deviation	0.303	0.804	0.600	0.181
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	0.412	1.24	0.899	0.227
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	1
$2 < z < 3$	0	0	1	0

Methods Used

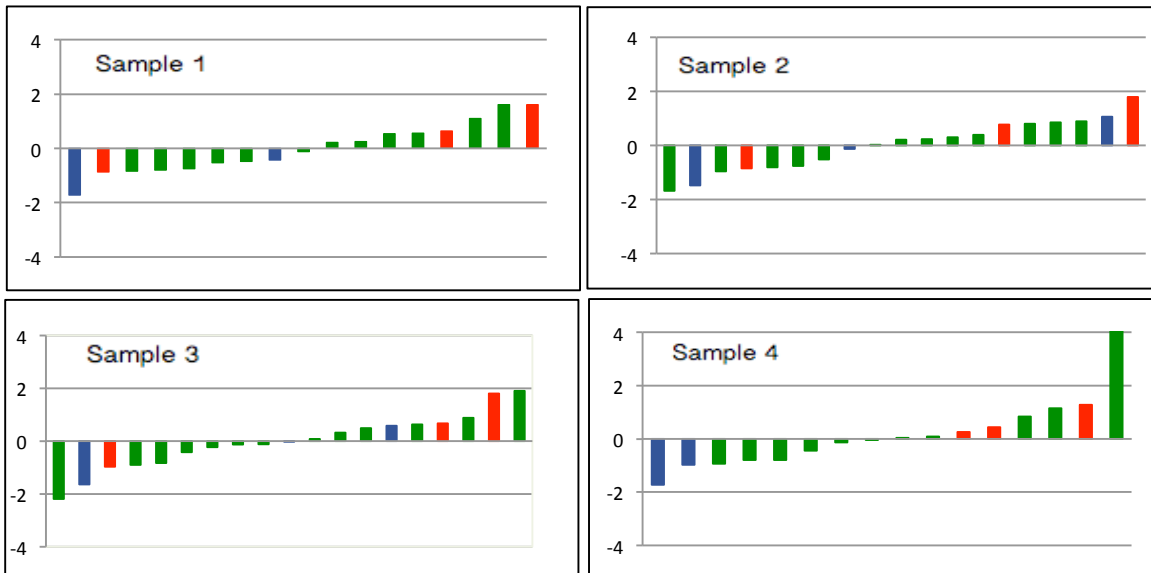
Method	C22-1	C22-2	C22-3	C22-4
GC/MS/MS	2	3	3	2
LC/MS/MS	3	3	3	3
GC/MS1	12	13	13	11

All summary stats and the plots below are based on the data excluding any flagged outliers

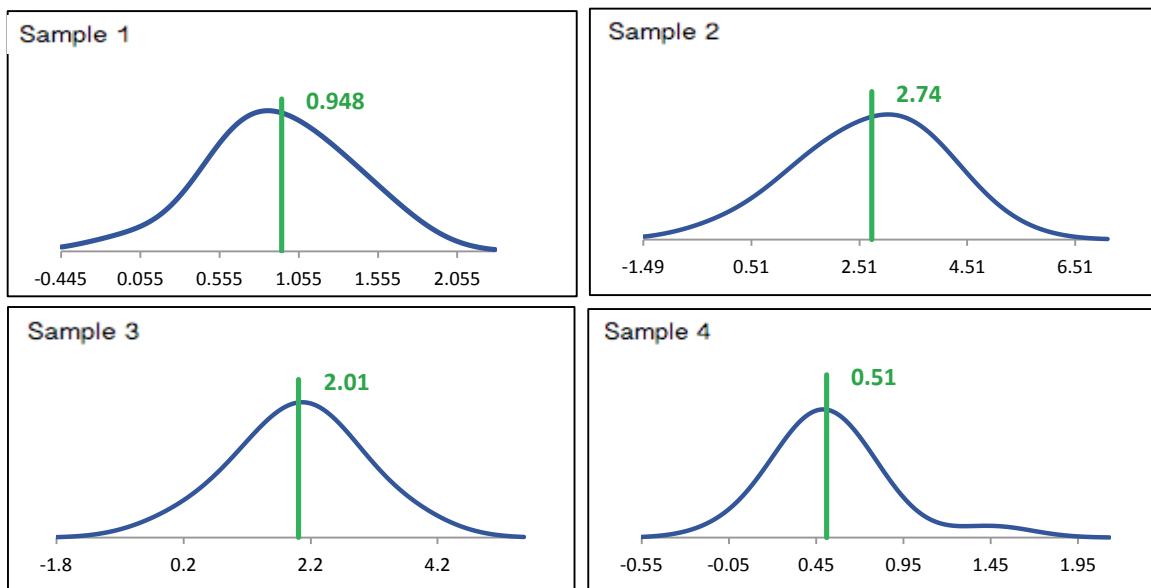


TERBUFOS

z-Score Plots

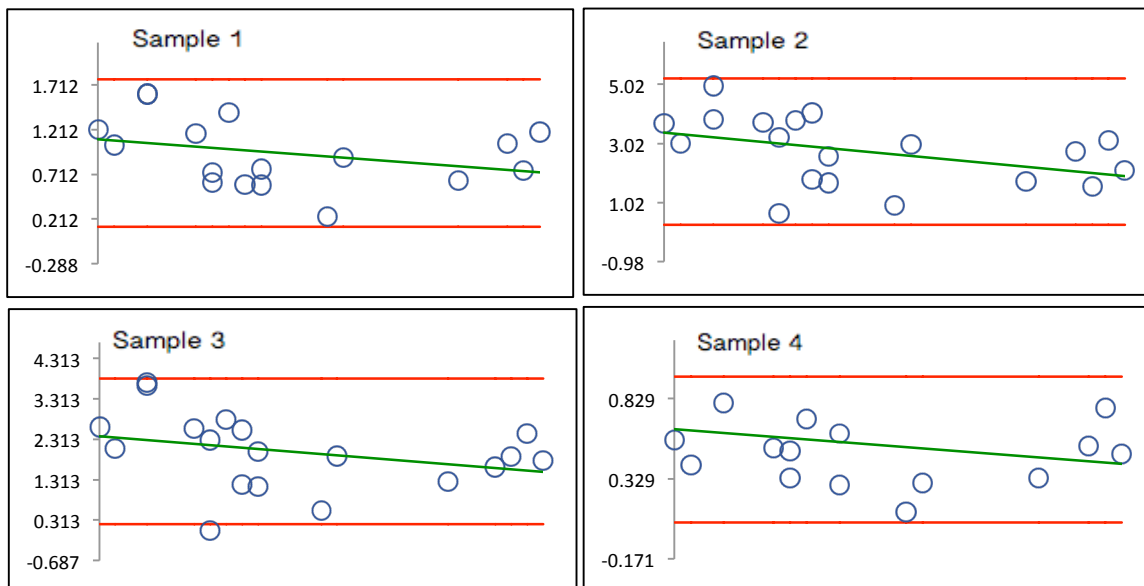


Kernel Density Plots



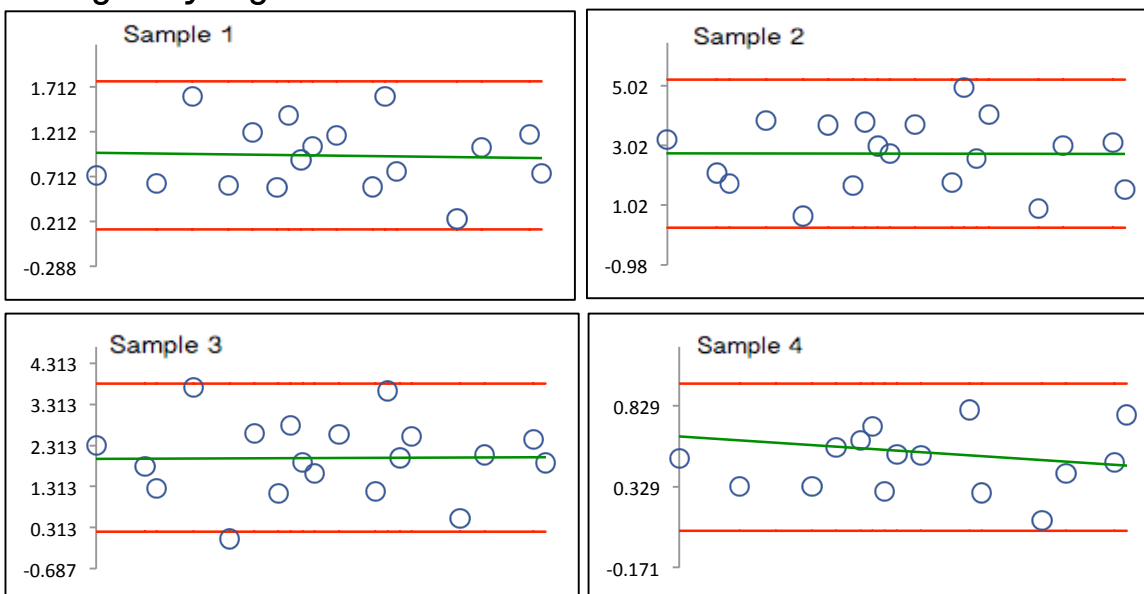
TERBUFOS

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).

TRIFLURALIN

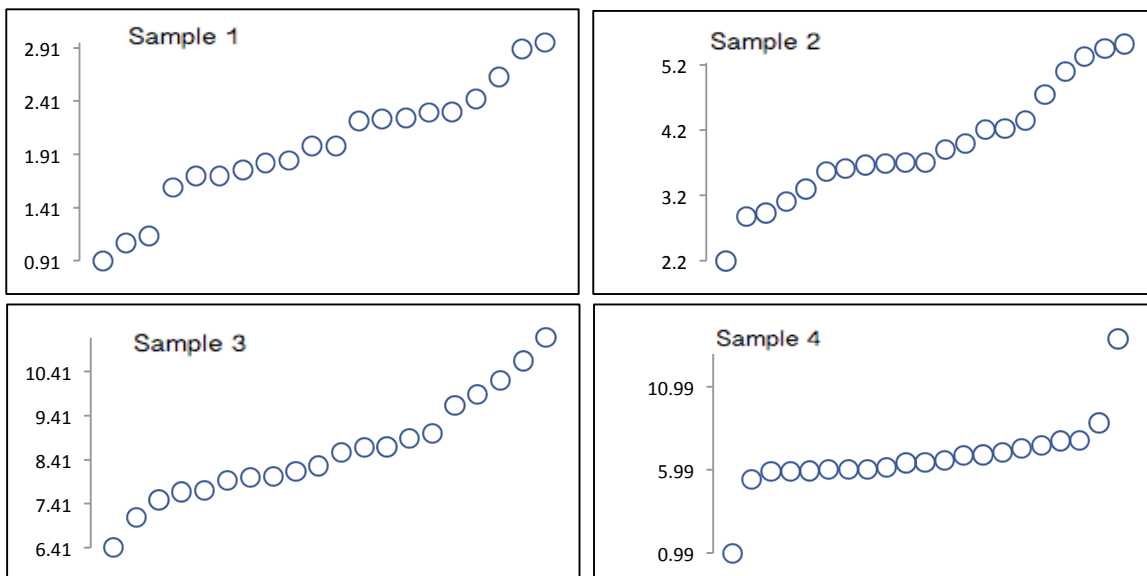
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	20	21	20	21
Median	1.99	3.70	8.42	6.43
Robust Mean	2.00	3.97	8.57	6.63
U	0.17	0.26	0.34	0.27
Robust Standard Deviation	0.607	0.958	1.22	0.983
Regression Standard Deviation	0.531	1.04	2.24	1.73
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA)	0.607	1.04	2.24	1.73
Outliers	1	0	1	0
$ z > 3.0$	0	0	0	2
$2 < z < 3$	0	0	0	0

Methods Used

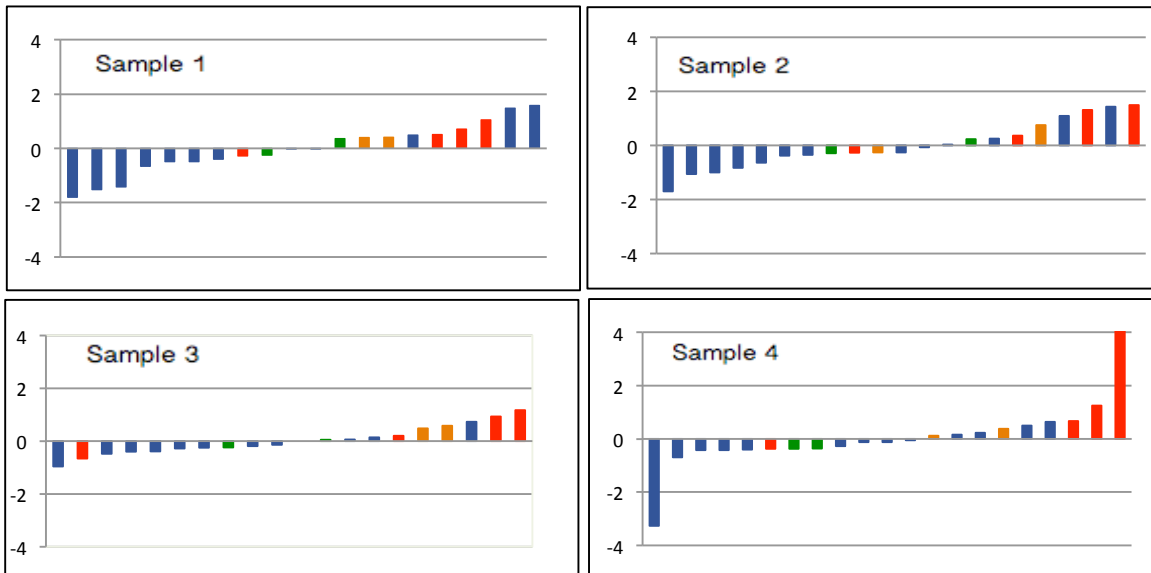
Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	12	13	12	13
GC/MS/MS	4	4	4	4
LC/MS/MS	2	2	2	2
GC/ECD-1	2	2	2	2

All summary stats and the plots below are based on the data excluding any flagged outliers

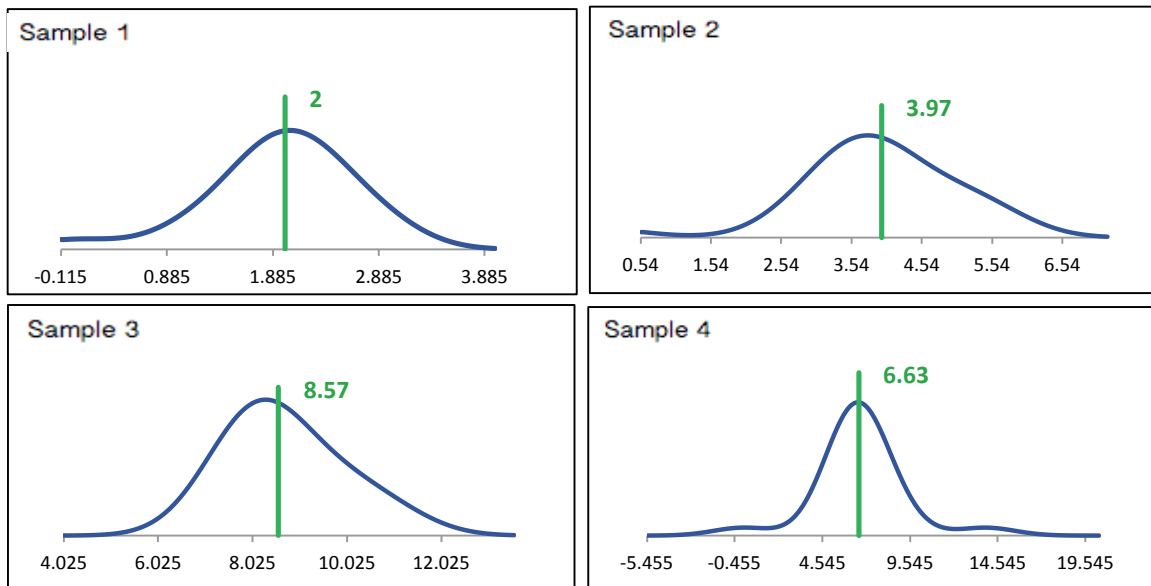


TRIFLURALIN

z-Score Plots

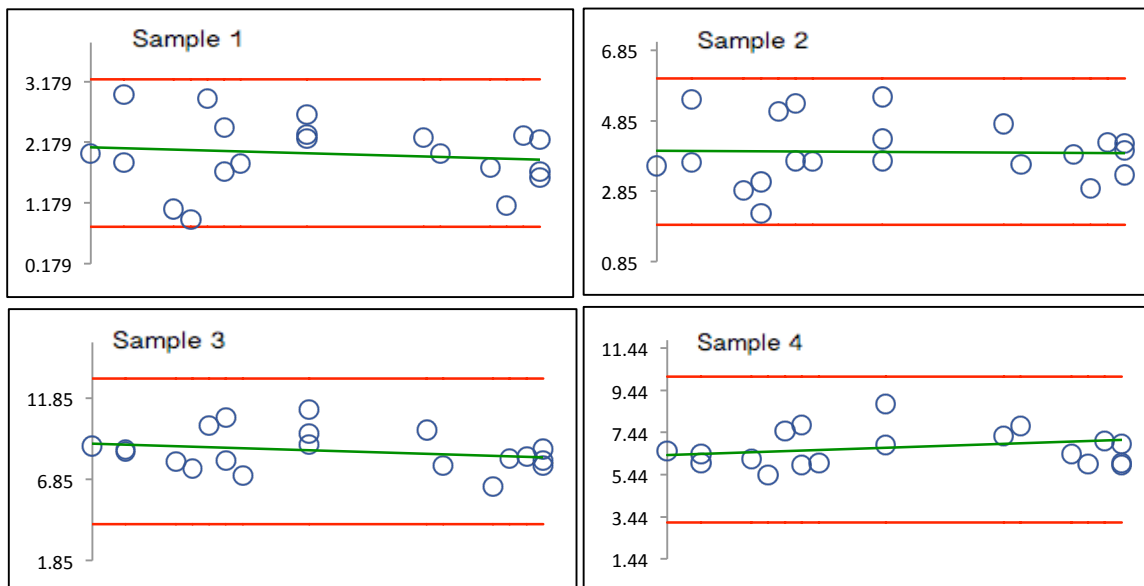


Kernel Density Plots



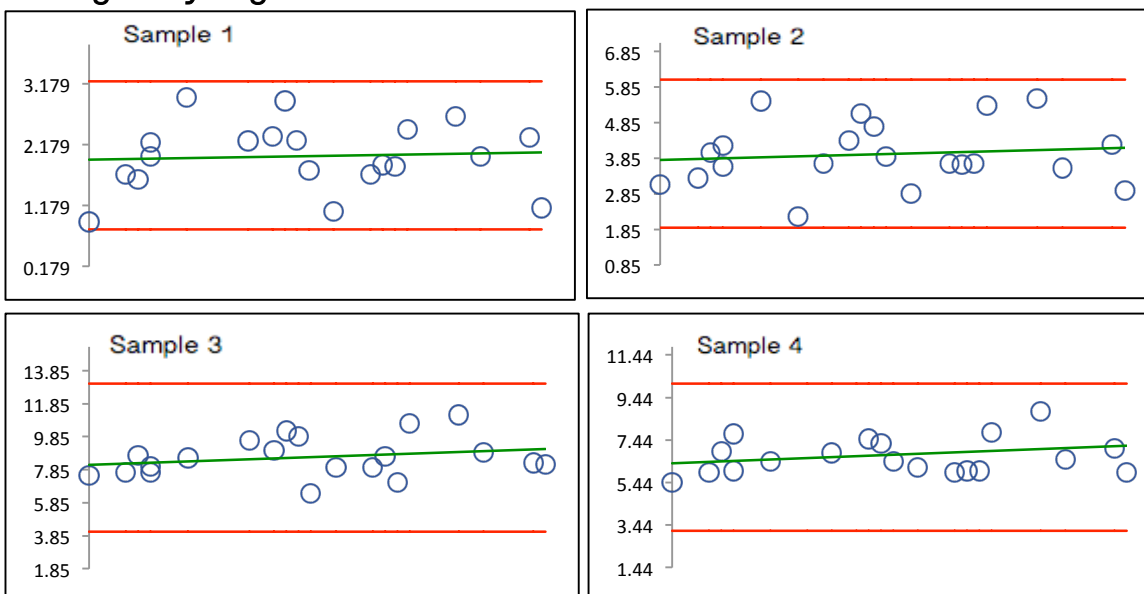
TRIFLURALIN

Stability Regression



Reported results (Y-axis) plotted against reported analysis date (X-axis)

Homogeneity Regression



Reported results (Y-axis) plotted against bottling order (X-axis).