

Test Group Summary Report

C22 OP Pesticides in Water

June 2020 PT Round

Issued: October 1, 2020

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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>±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. 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.PTCCanada.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:

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

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) is calculated using reported results, obvious outliers removed;
- The expected inter-laboratory standard deviation (s!) is estimated from regression equations derived from previous studies (see PROC11- *PT Regression Equations* for details);
- If s! is higher than stdev then s! is used in the z score equation;
- If s! is lower than stdev then stdev is used in the z score equation;
- 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.

Annex A Summary by Analyte

ATRAZINE

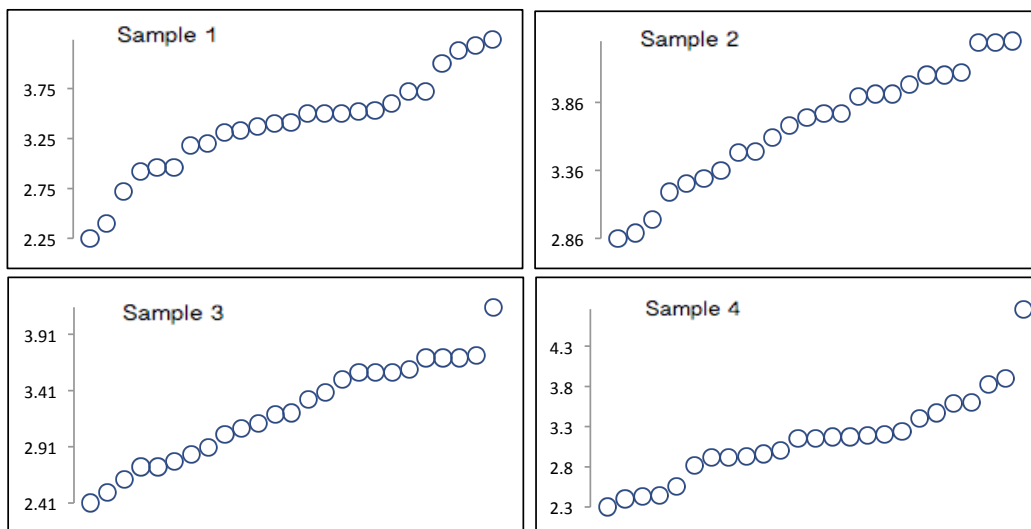
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	25	24	25	25
Median	3.41	3.77	3.21	3.15
Robust Mean	3.40	3.69	3.22	3.10
U	0.12	0.12	0.12	0.13
Robust Standard Deviation	0.496	0.479	0.494	0.515
Regression Standard Deviation	0.694	0.752	0.657	0.633
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	0.694	0.752	0.657	0.633
Outliers	0	1	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	1

Methods Used

Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	13	12	13	13
LC/MS/MS	5	5	5	5
GC/MSE	2	2	2	2
GC/MS/MS	1	1	1	1
LC/MS	1	1	1	1
HPLC	3	3	3	3

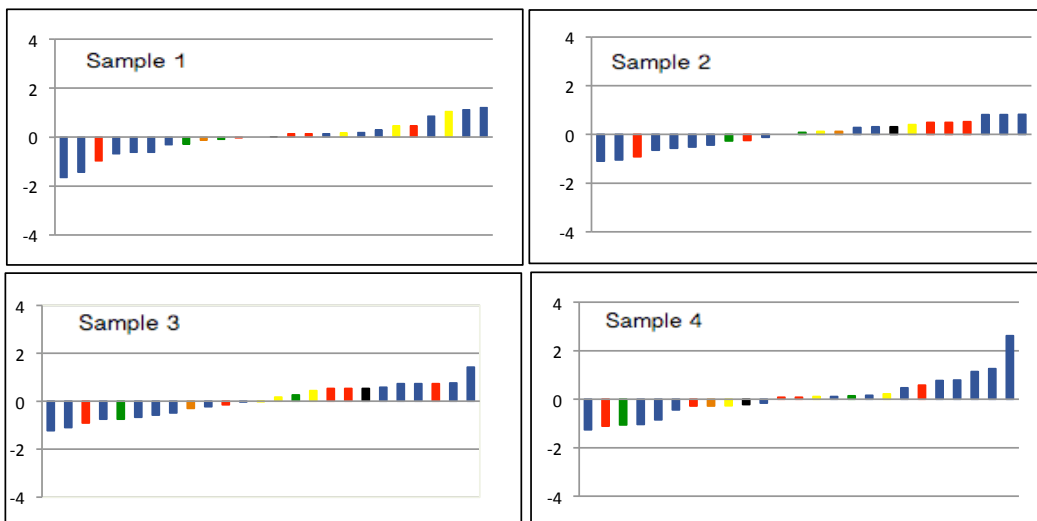
All summary stats and the plots below are based on the data excluding any flagged outliers



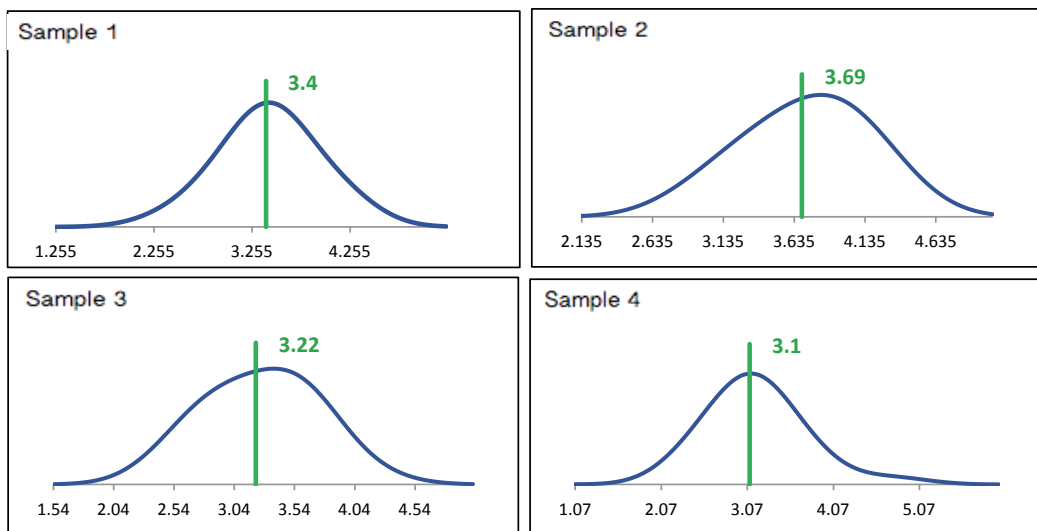
Annex A Summary by Analyte

ATRAZINE

z-Score Plots



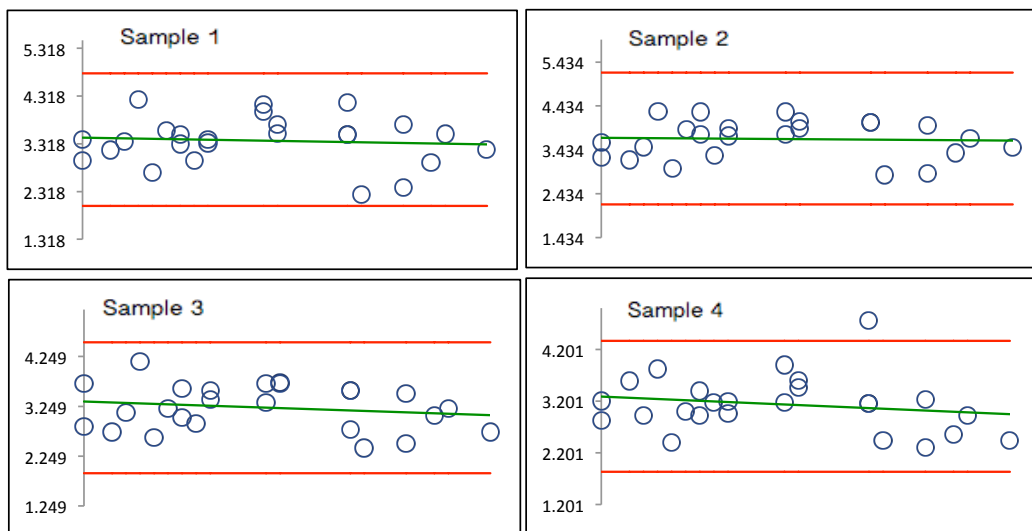
Kernel Density Plots



Annex A Summary by Analyte

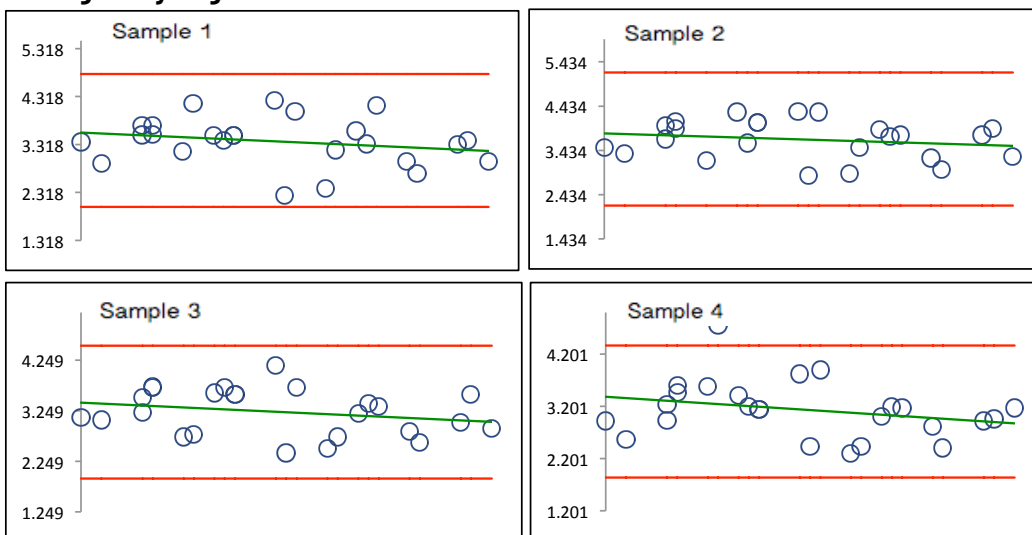
ATRAZINE

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).

Annex A Summary by Analyte

AZINPHOS-METHYL

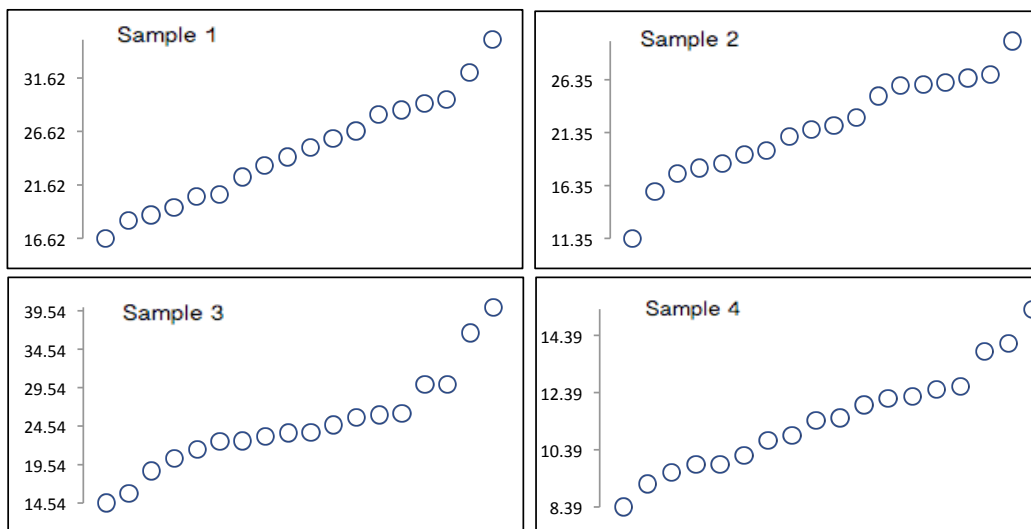
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	18	18	18	18
Median	24.7	21.8	23.7	11.5
Robust Mean	24.6	22.0	24.2	11.4
U	1.64	1.41	1.64	0.57
Robust Standard Deviation	5.57	4.79	5.56	1.93
Regression Standard Deviation	6.51	5.86	6.40	3.21
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	6.51	5.86	6.40	3.21
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	1	0

Methods Used

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

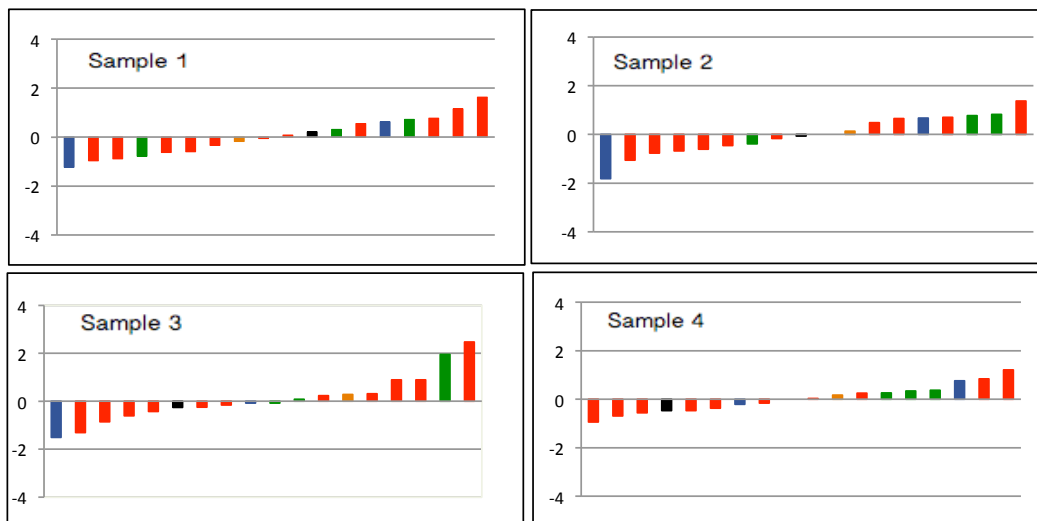
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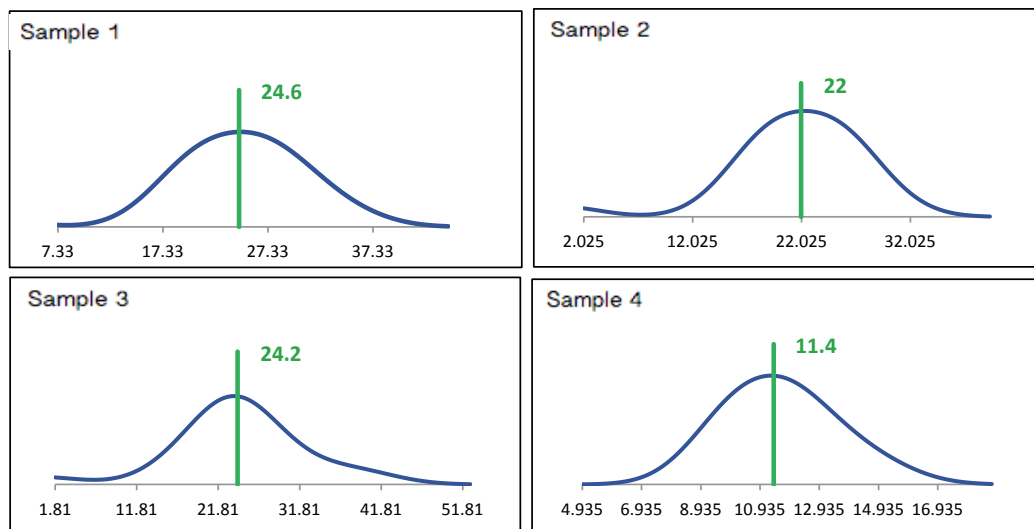
Annex A Summary by Analyte

AZINPHOS-METHYL

z-Score Plots



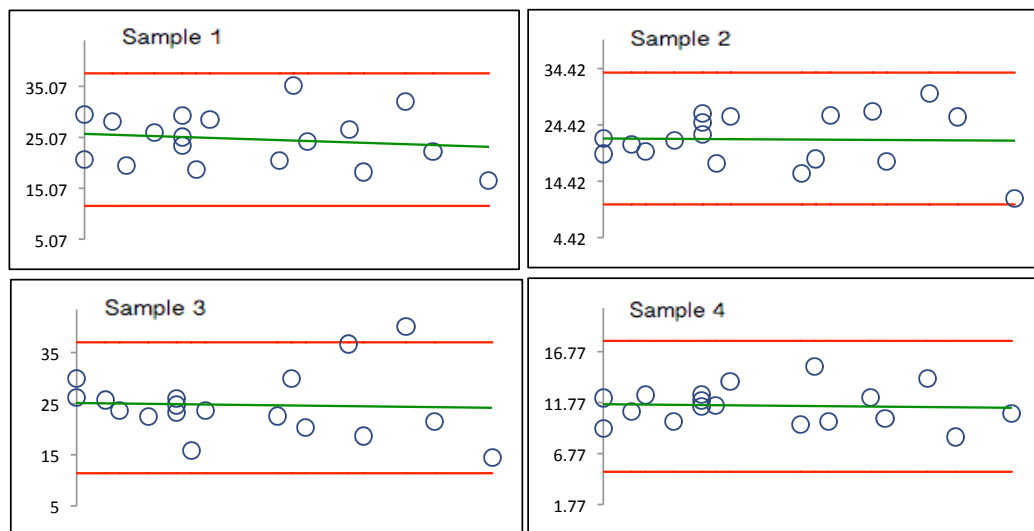
Kernel Density Plots



Annex A Summary by Analyte

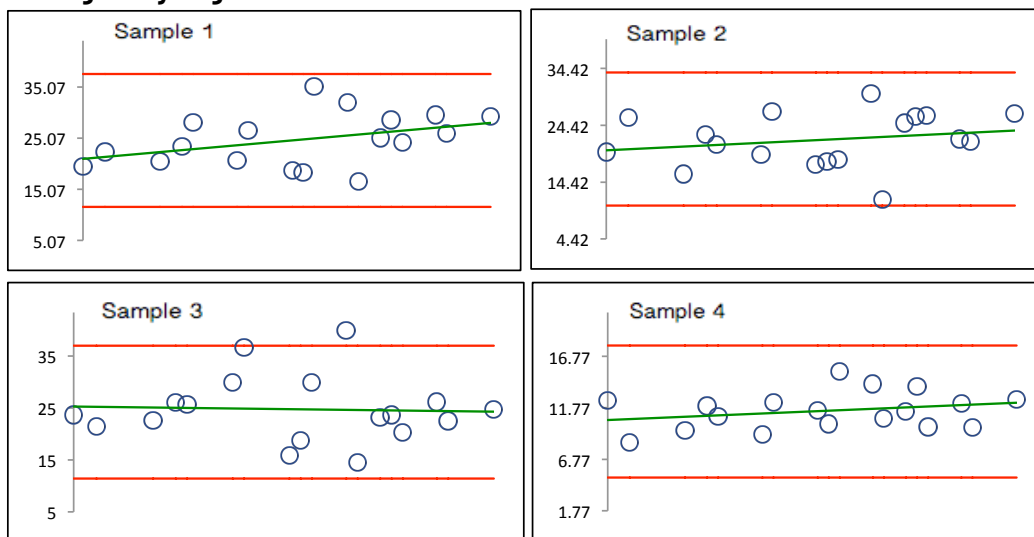
AZINPHOS-METHYL

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).

Annex A Summary by Analyte

BENDIOCARB

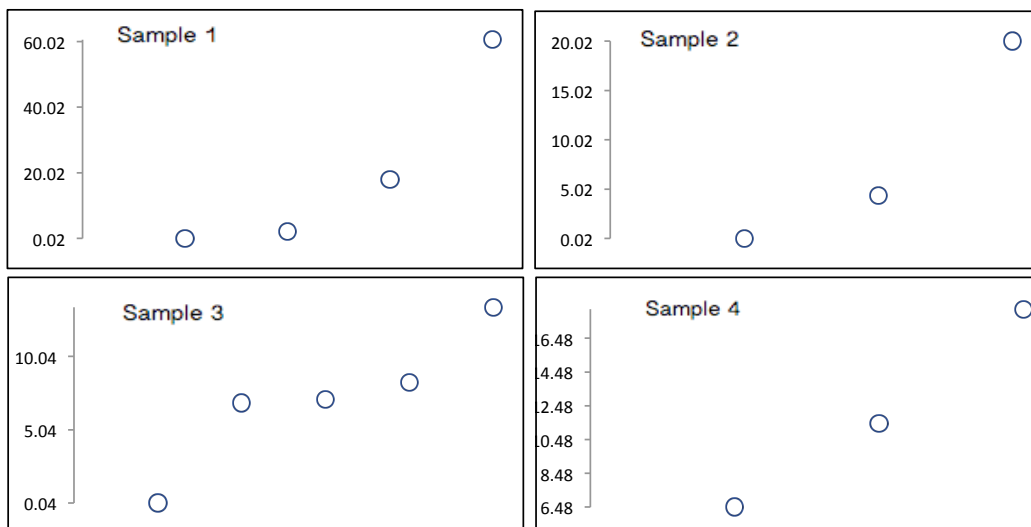
Summary Statistics

		Excluded	Excluded	Excluded	Excluded
		C22-1	C22-2	C22-3	C22-4
Statistic					
N		4	3	5	3
Median		10.0	4.36	7.08	11.4
Robust Mean		20.1	8.13	7.13	12.0
U		19.9	8.59	3.02	4.81
Robust Standard Deviation		31.9	11.9	5.41	6.67
Regression Standard Deviation		5.09	2.41	2.19	3.28
Stability Flag		Stability			
Homogeneity Flag					
Standard Deviation Used		63.6	11.9	5.41	6.67
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		2	1	2	1
HPLC		2	2	2	2
GC/MS1		0	0	1	0

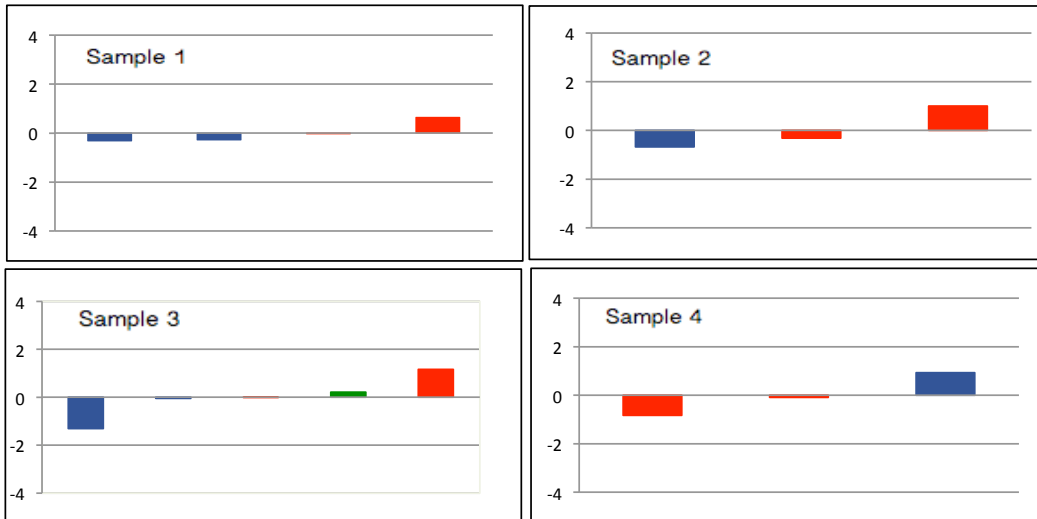
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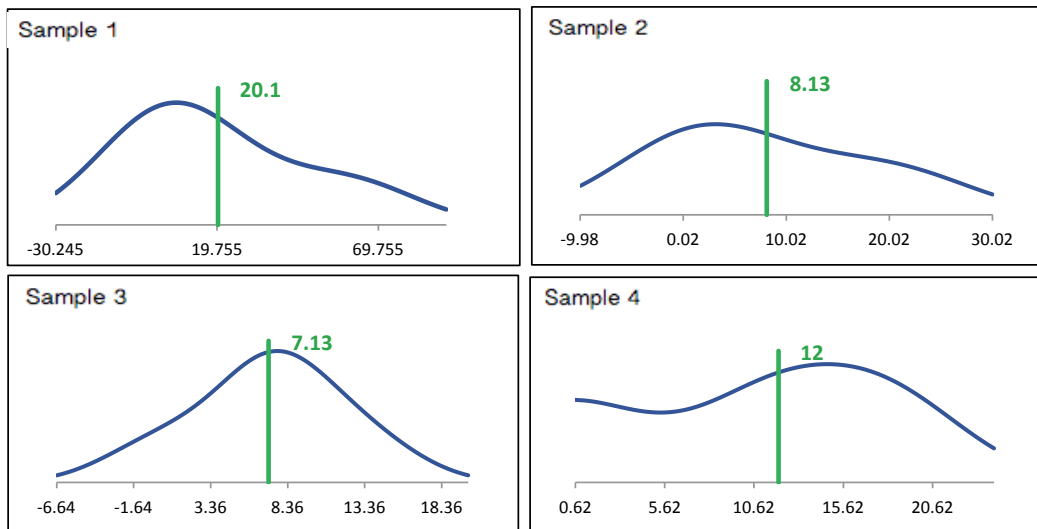
Annex A Summary by Analyte

BENDIOCARB

z-Score Plots



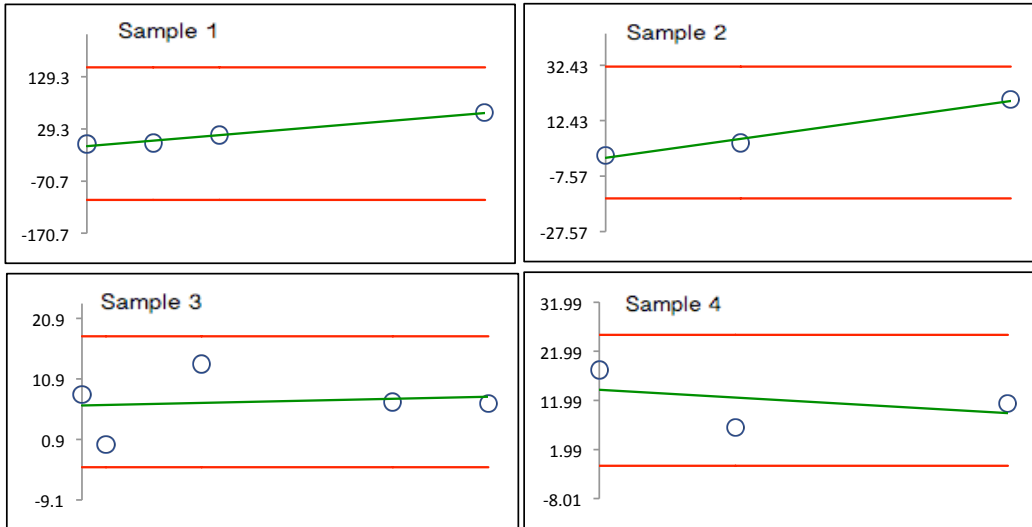
Kernel Density Plots



Annex A Summary by Analyte

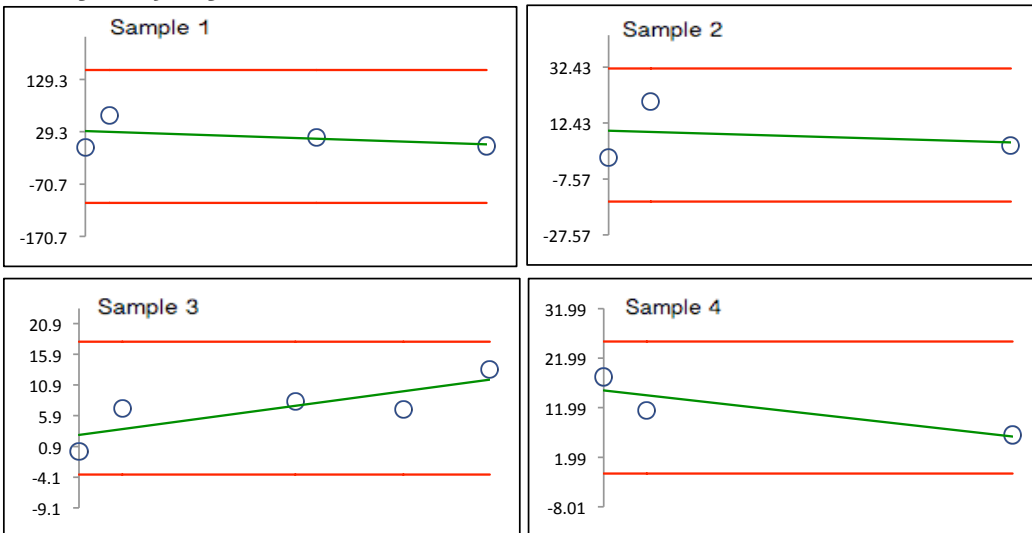
BENDIOCARB

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).

Annex A Summary by Analyte

CARBARYL

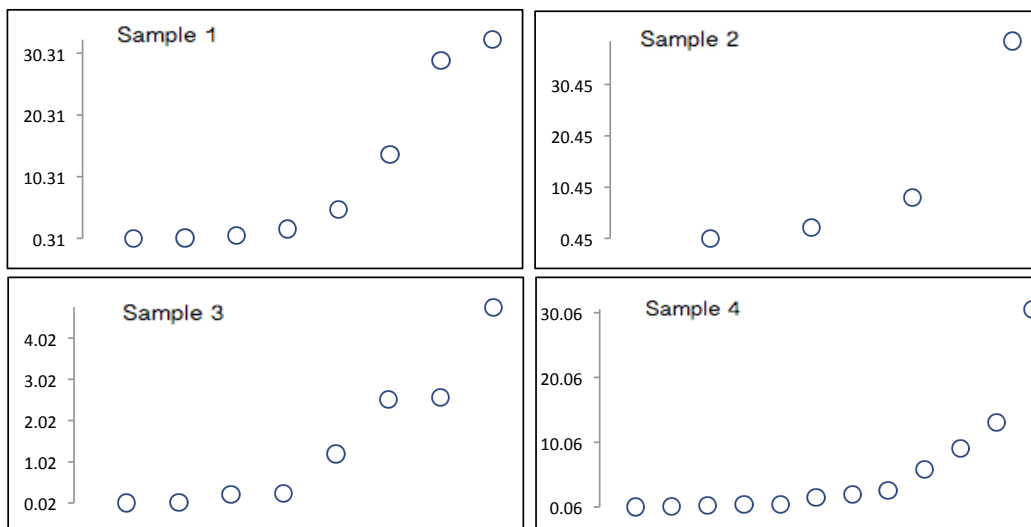
Summary Statistics

Statistic	Excluded			
	C22-1	C22-2	C22-3	C22-4
N	8	4	8	12
Median	3.39	5.48	0.730	1.76
Robust Mean	10.5	12.6	1.33	3.77
U	6.7	12.7	0.73	1.82
Robust Standard Deviation	15.1	20.3	1.66	5.04
Regression Standard Deviation	3.22	3.86	0.47	1.21
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	15.1	20.3	1.66	5.04
Outliers	1	1	1	1
$ 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/MS1		1	0	2	3
LC/MS		1	0	0	1
LC/MS/MS		4	1	3	5
HPLC		1	2	2	2
GC/MSE		1	1	1	1

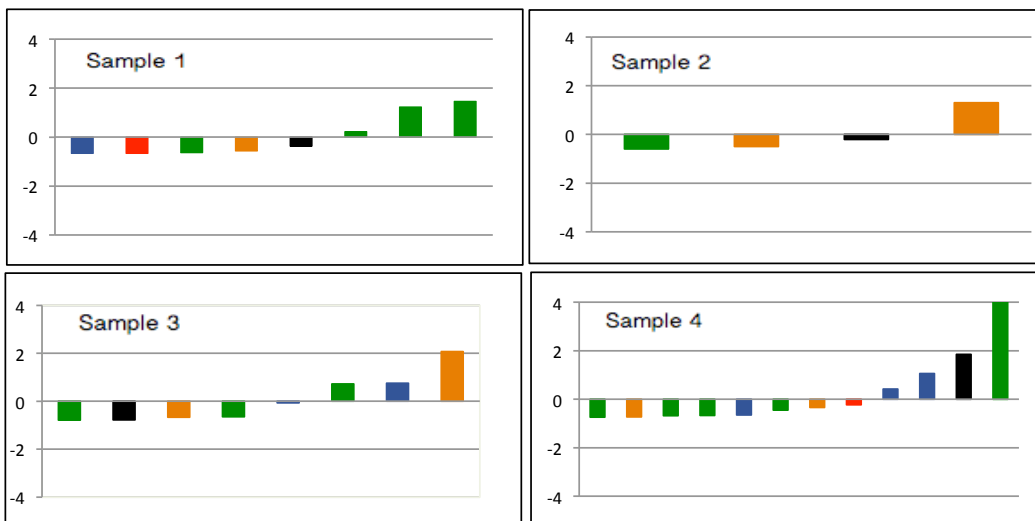
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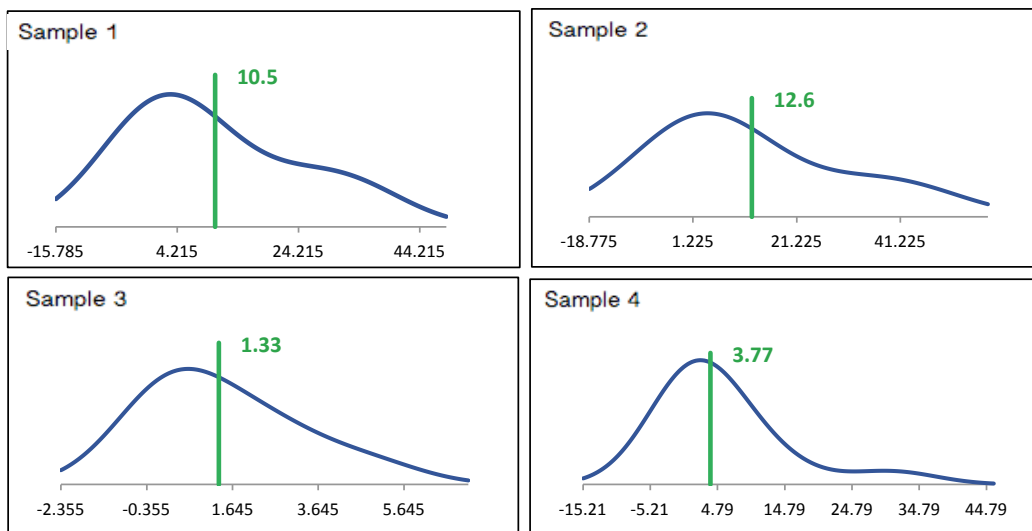
Annex A Summary by Analyte

CARBARYL

z-Score Plots



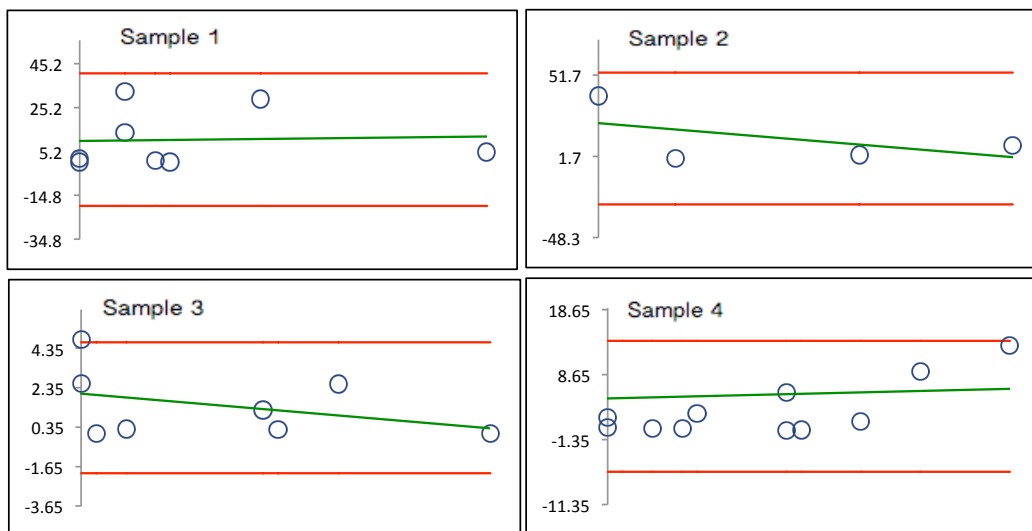
Kernel Density Plots



Annex A Summary by Analyte

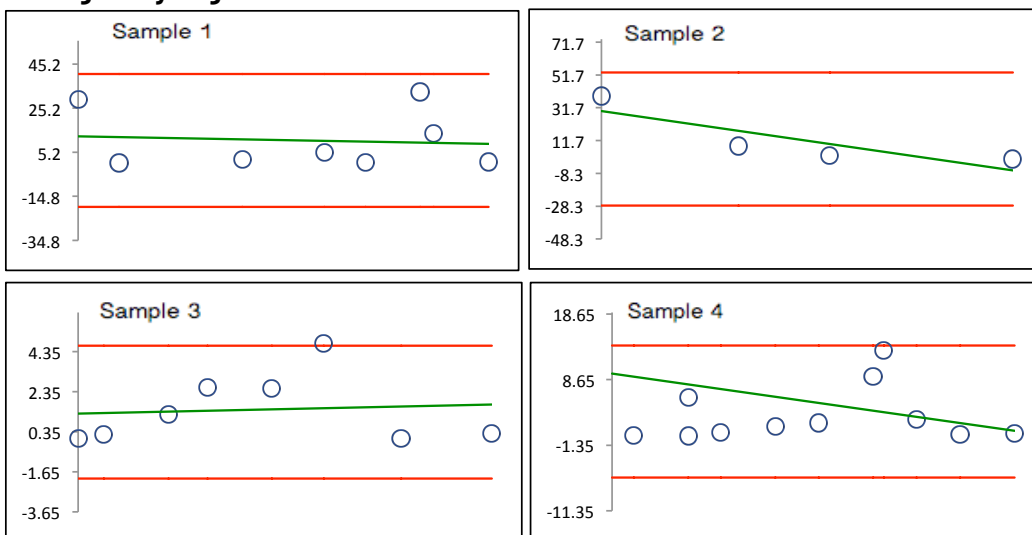
CARBARYL

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).

Annex A Summary by Analyte

CARBOFURAN

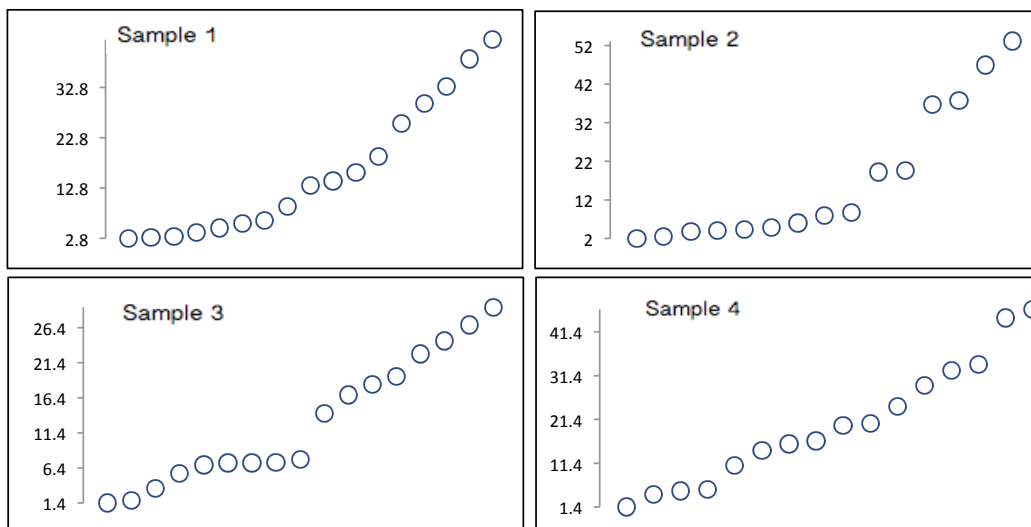
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	17	15	17	16
Median	13.3	7.90	7.59	18.2
Robust Mean	15.5	16.3	12.9	20.0
U	4.2	5.9	3.12	4.72
Robust Standard Deviation	14.0	18.2	10.3	15.1
Regression Standard Deviation	4.78	5.03	3.98	6.17
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	14.0	18.2	10.3	15.1
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	1	0	0

Methods Used

Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	5	4	5	5
LC/MS/MS	7	6	7	6
LC/MS	1	1	1	1
HPLC	3	3	3	3
GC/MSE	1	1	1	1

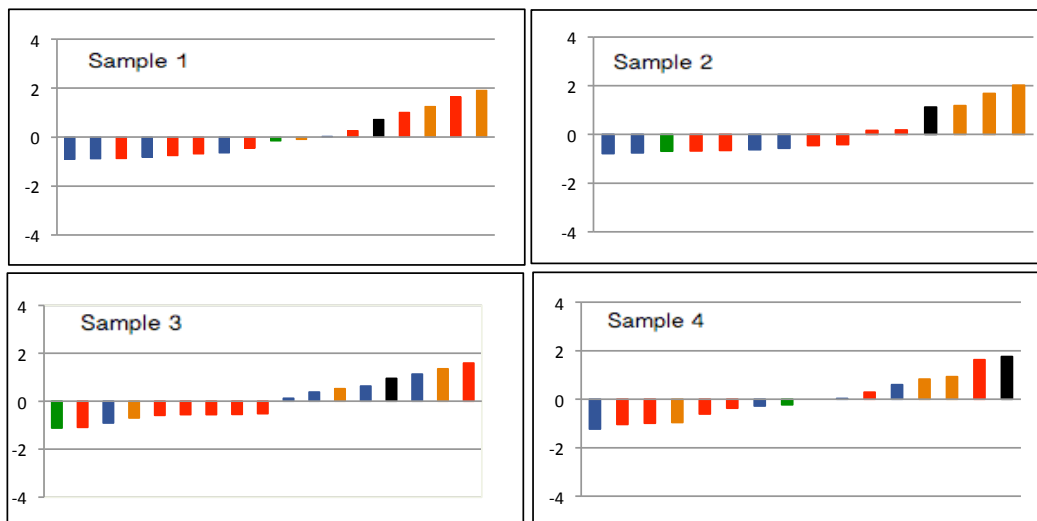
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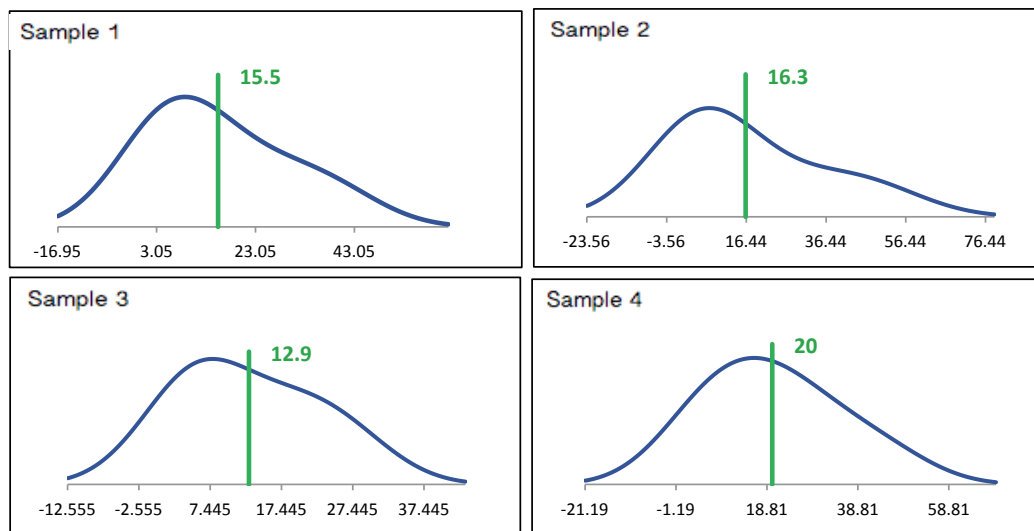
Annex A Summary by Analyte

CARBOFURAN

z-Score Plots



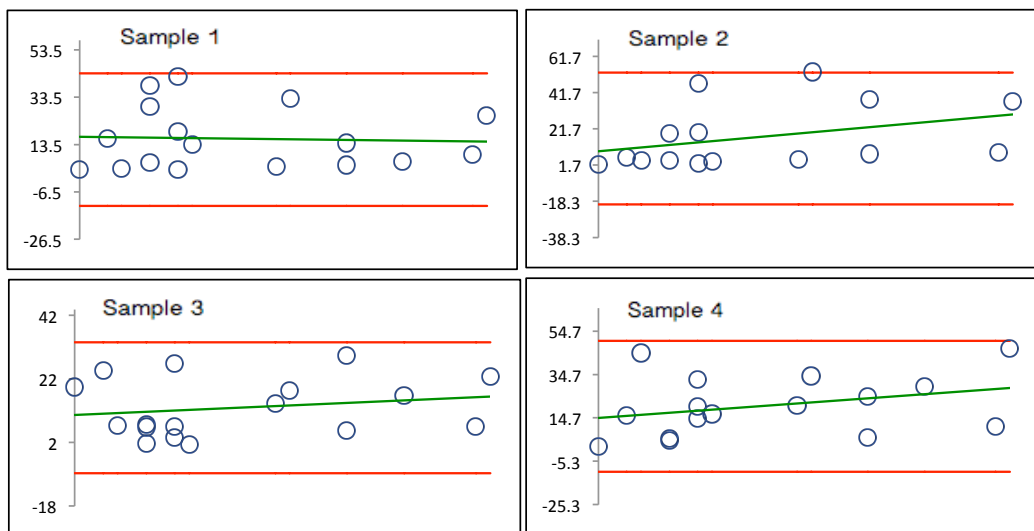
Kernel Density Plots



Annex A Summary by Analyte

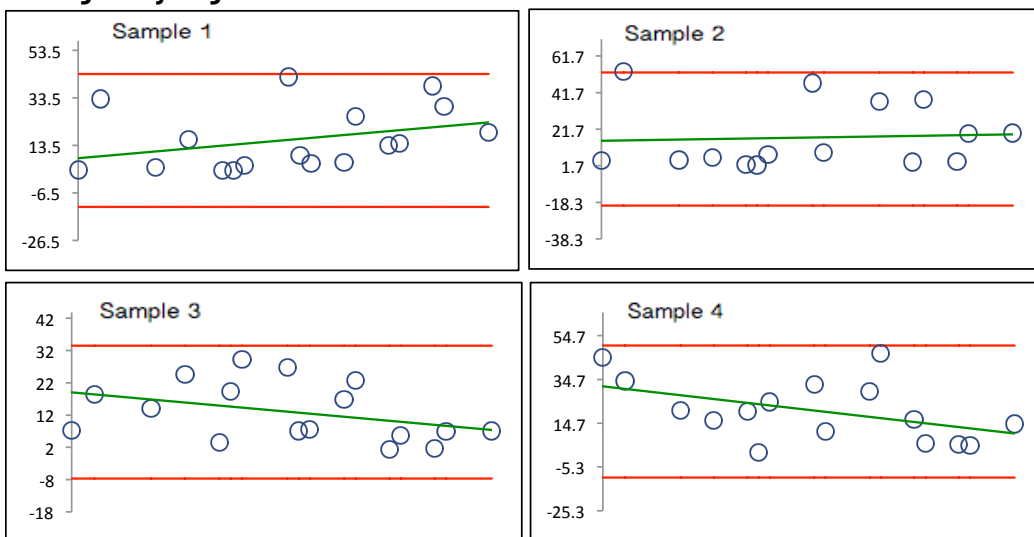
CARBOFURAN

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).

Annex A Summary by Analyte

CHLORPYRIFOS ETHYL

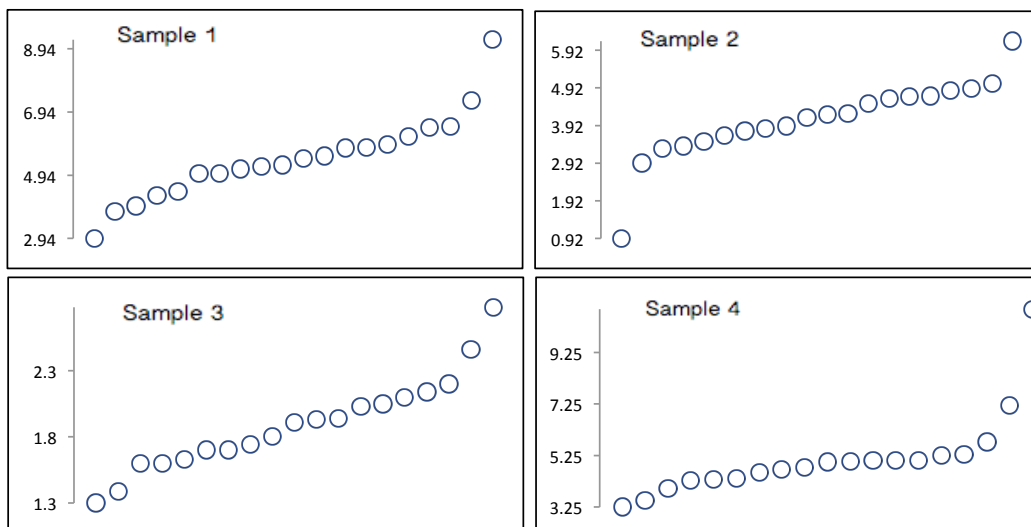
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	20	20	19	19
Median	5.36	4.17	1.91	5.00
Robust Mean	5.4	4.12	1.87	4.84
U	0.32	0.22	0.10	0.22
Robust Standard Deviation	1.15	0.800	0.336	0.777
Regression Standard Deviation	1.16	0.921	0.499	1.06
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	1.16	0.92	0.50	1.06
Outliers	0	0	1	1
$ z > 3.0$	1	1	0	1
$2 < z < 3$	1	1	0	1

Methods Used

Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	14	14	13	13
GC/MSE	2	2	2	2
LC/MS/MS	2	2	2	2
GC/MS/MS	2	2	2	2

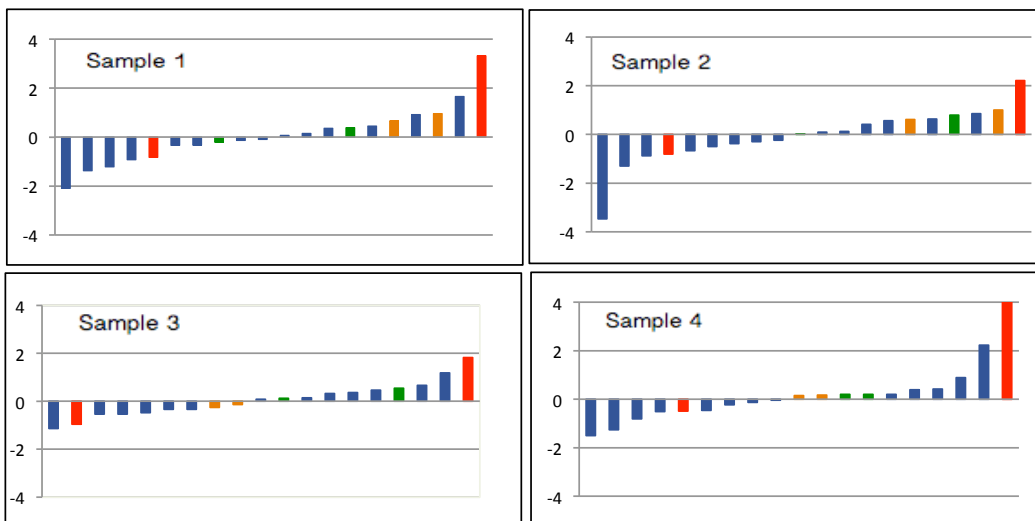
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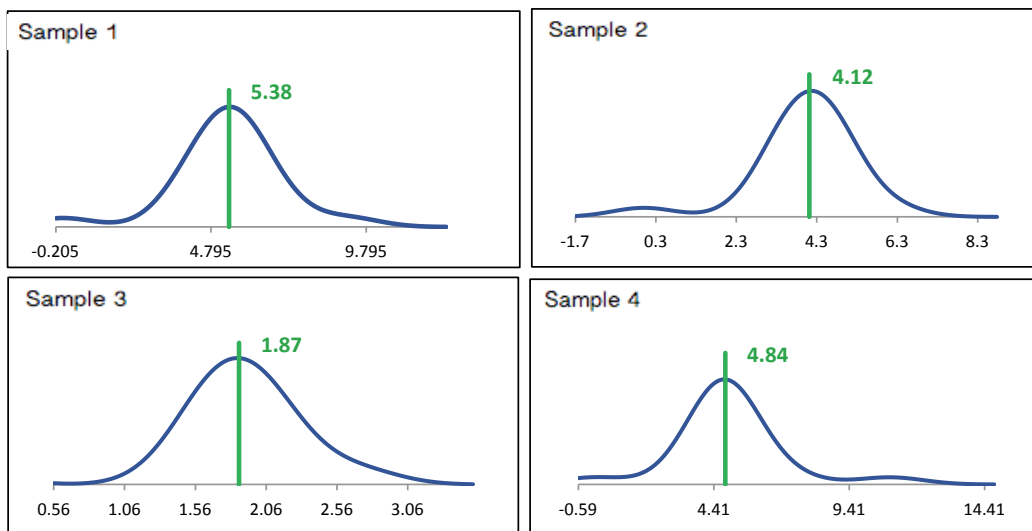
Annex A Summary by Analyte

CHLORPYRIFOS ETHYL

z-Score Plots



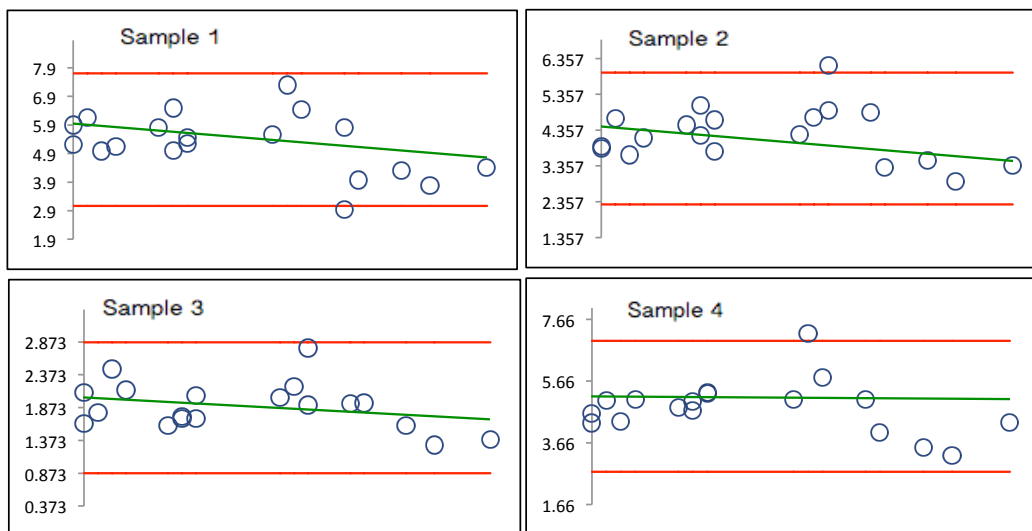
Kernel Density Plots



Annex A Summary by Analyte

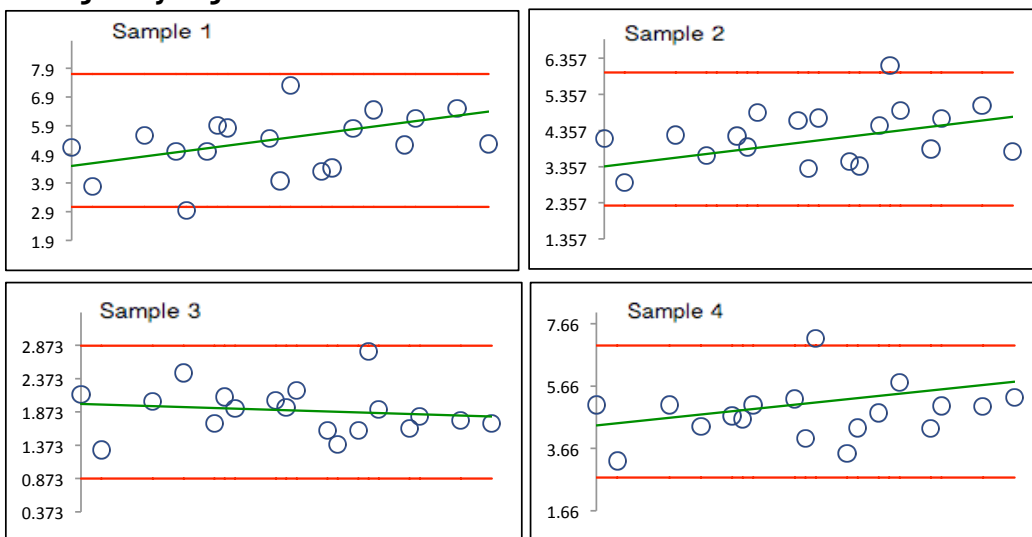
CHLORPYRIFOS ETHYL

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).

Annex A Summary by Analyte

CYANAZINE

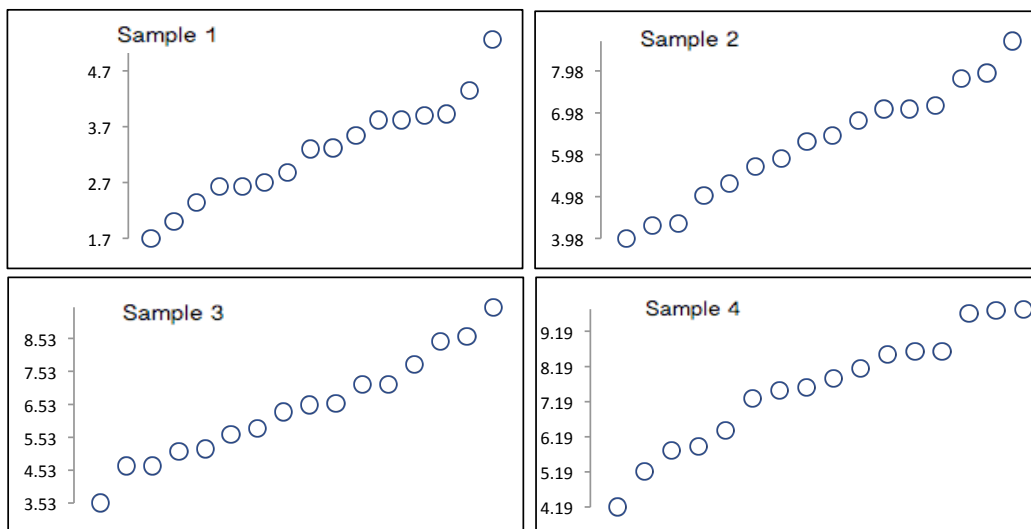
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	16	16	16	16
Median	3.31	6.37	6.41	7.73
Robust Mean	3.23	6.23	6.39	7.60
U	0.30	0.49	0.55	0.57
Robust Standard Deviation	0.947	1.57	1.77	1.81
Regression Standard Deviation	1.05	1.88	1.92	2.25
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	1.05	1.88	1.92	2.25
Outliers	1	1	1	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	9	9	9
LC/MS/MS	4	4	4	4
GC/MS/MS	1	1	1	1
GC/MSE	1	1	1	1
HPLC	1	1	1	1

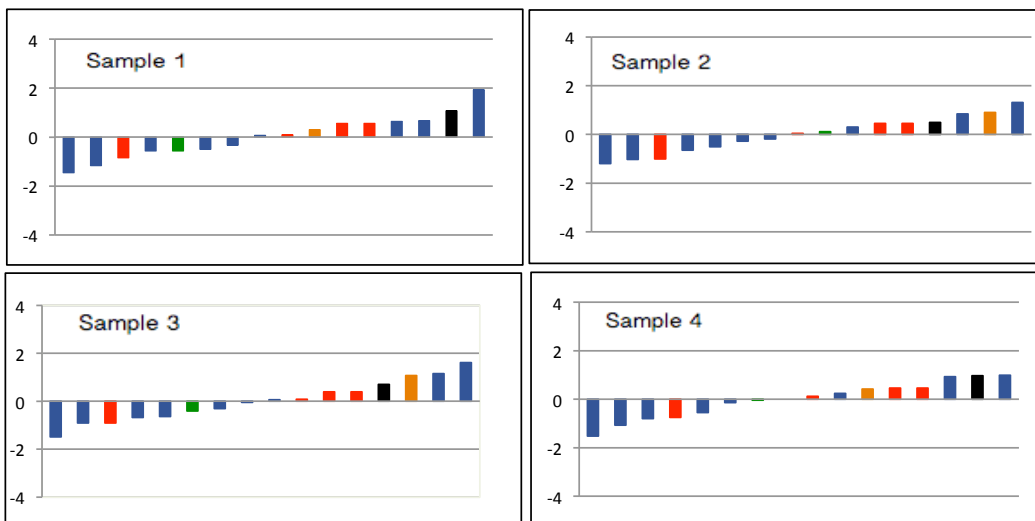
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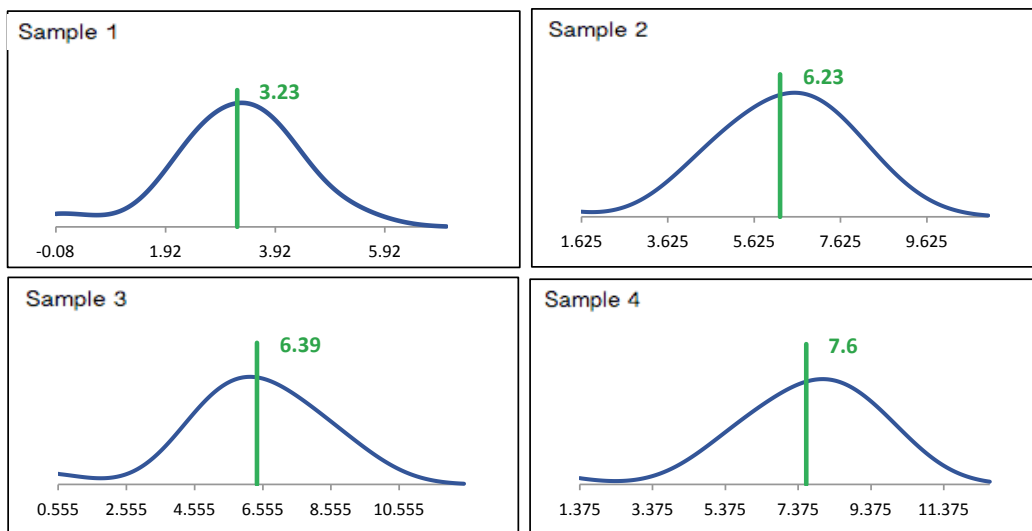
Annex A Summary by Analyte

CYANAZINE

z-Score Plots



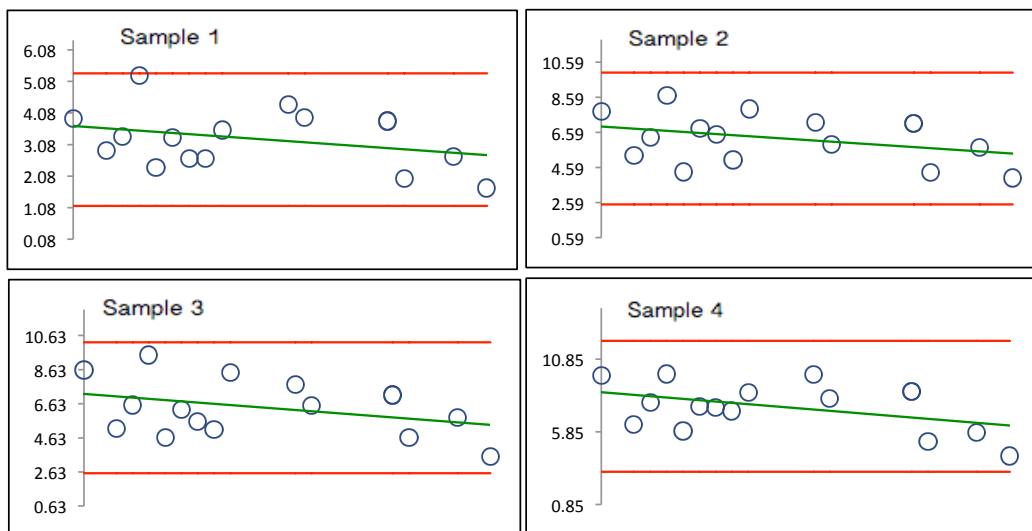
Kernel Density Plots



Annex A Summary by Analyte

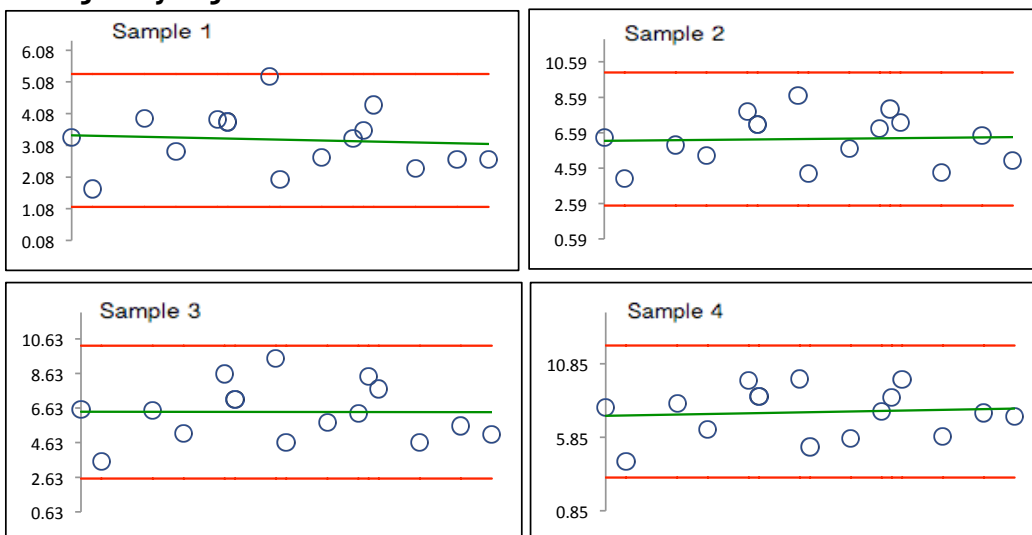
CYANAZINE

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).

Annex A Summary by Analyte

DIAZINON

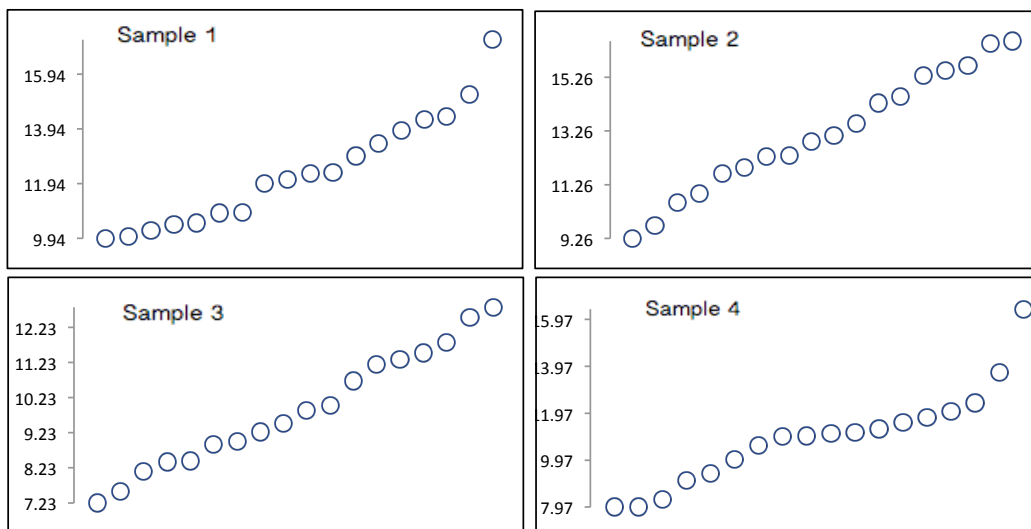
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	18	18	18	18
Median	12.2	13.0	9.67	11.1
Robust Mean	12.3	13.2	9.89	10.8
U	0.61	0.75	0.56	0.58
Robust Standard Deviation	2.06	2.55	1.90	1.96
Regression Standard Deviation	3.12	3.34	2.51	2.74
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	3.12	3.34	2.51	2.74
Outliers	1	1	1	1
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	1

Methods Used

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

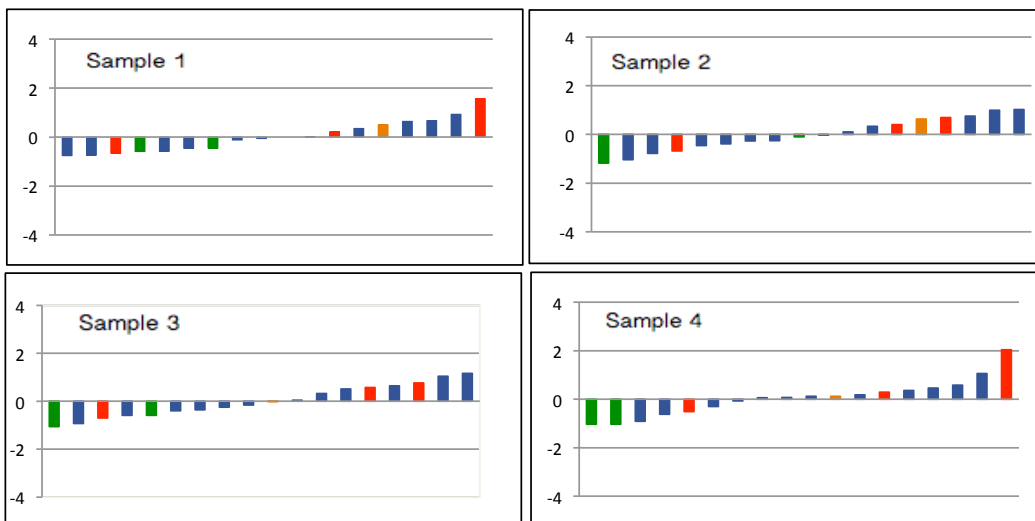
All summary stats and the plots below are based on the data excluding any flagged outliers



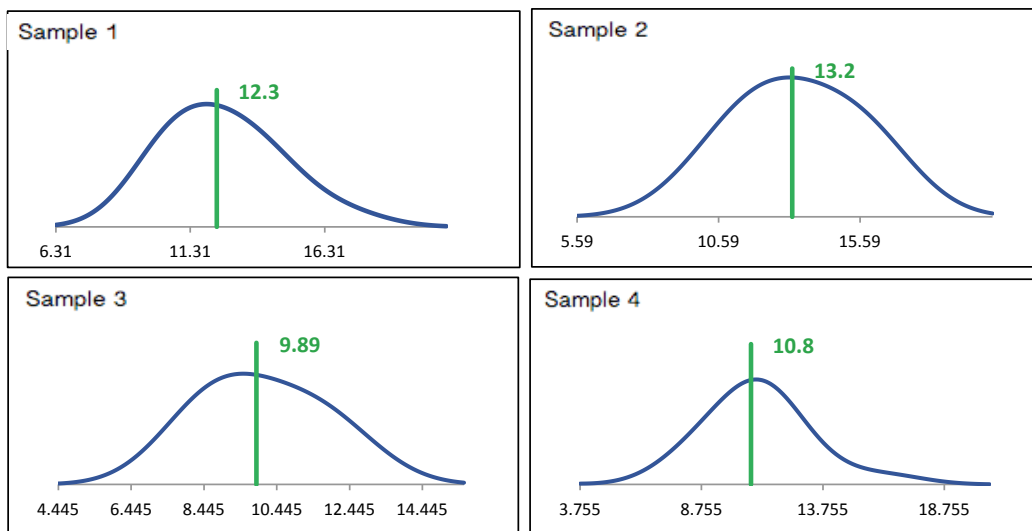
Annex A Summary by Analyte

DIAZINON

z-Score Plots



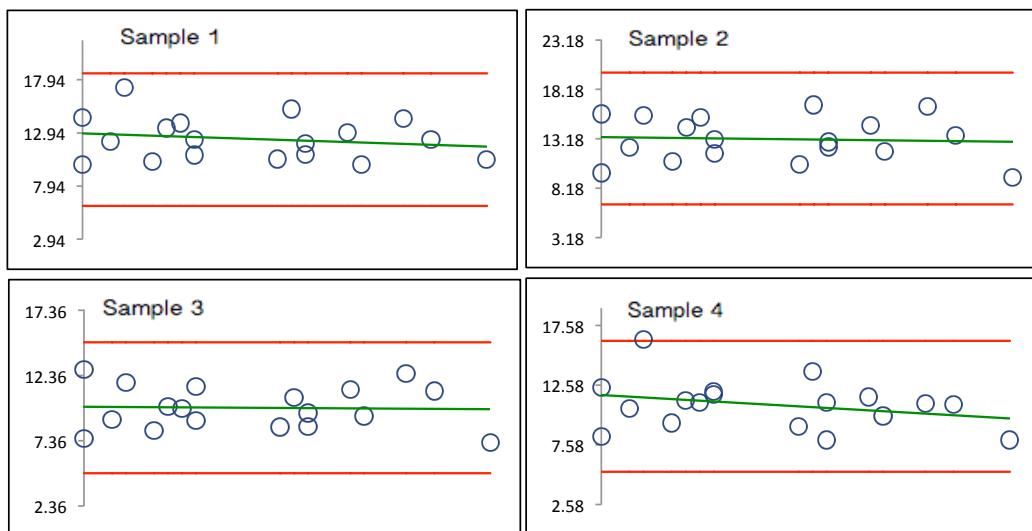
Kernel Density Plots



Annex A Summary by Analyte

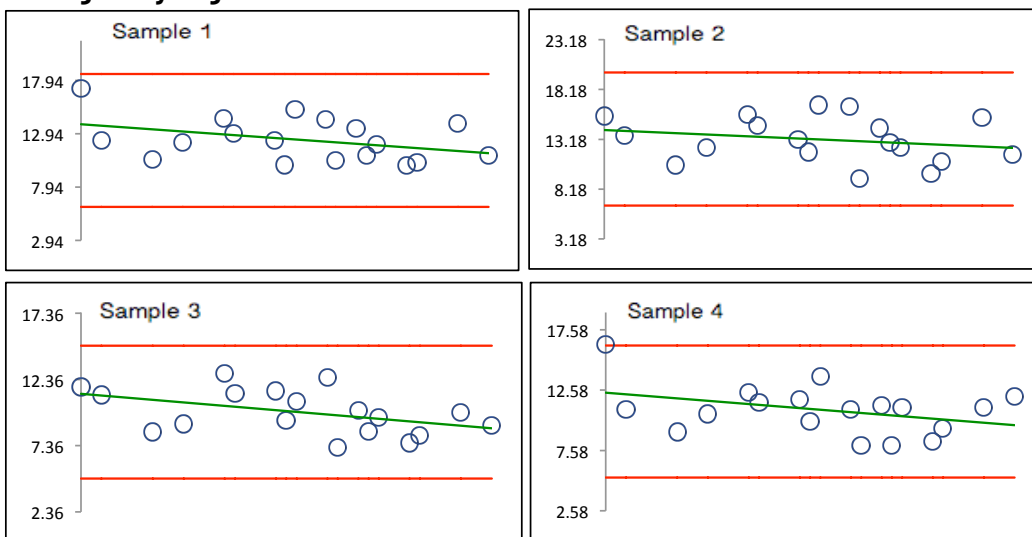
DIAZINON

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).

Annex A Summary by Analyte

DIMETHOATE

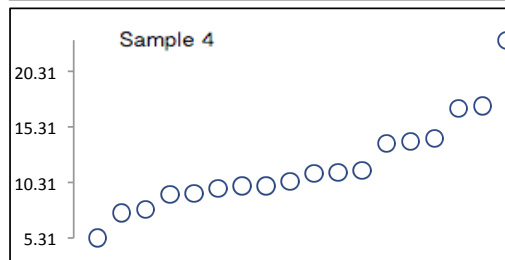
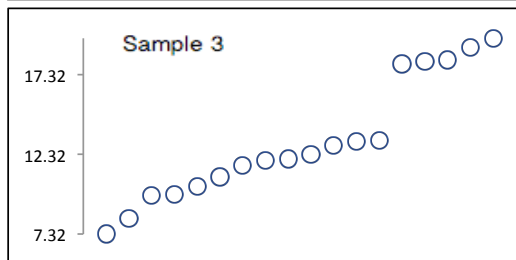
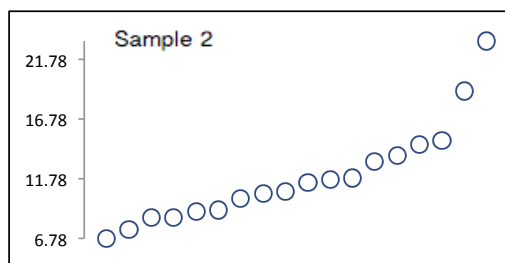
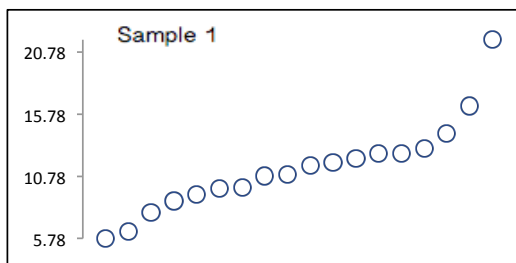
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	18	18	18	18
Median	11.3	11.1	12.2	10.8
Robust Mean	11.1	11.4	13.1	11.5
U	0.93	0.99	1.28	1.13
Robust Standard Deviation	3.14	3.37	4.35	3.85
Regression Standard Deviation	3.58	3.67	4.19	3.70
Stability Flag				
Homogeneity Flag	Homogeneity	Homogeneity		
Standard Deviation Used	6.81	6.91	4.35	3.85
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
LC/MS/MS	4	4	4	4
LC/MS	1	1	1	1

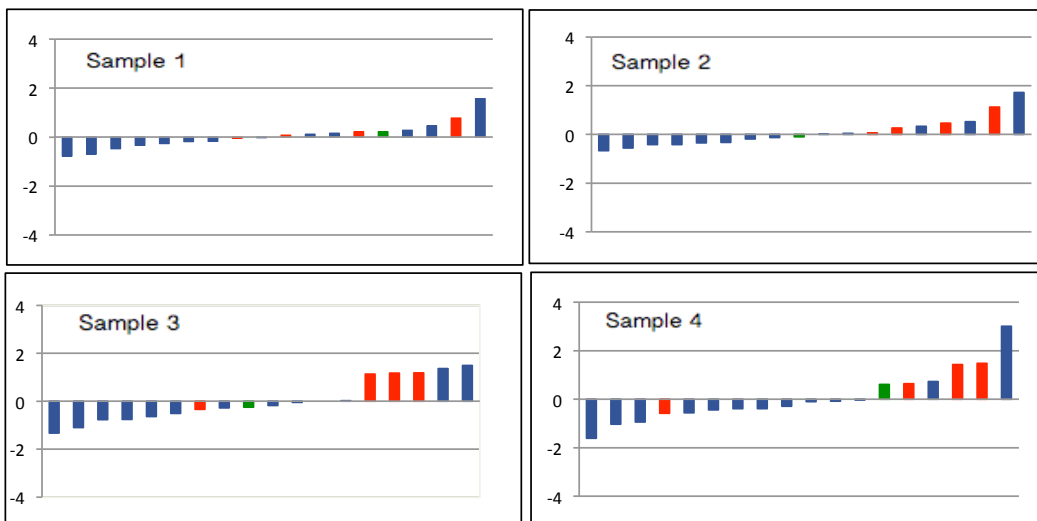
All summary stats and the plots below are based on the data excluding any flagged outliers



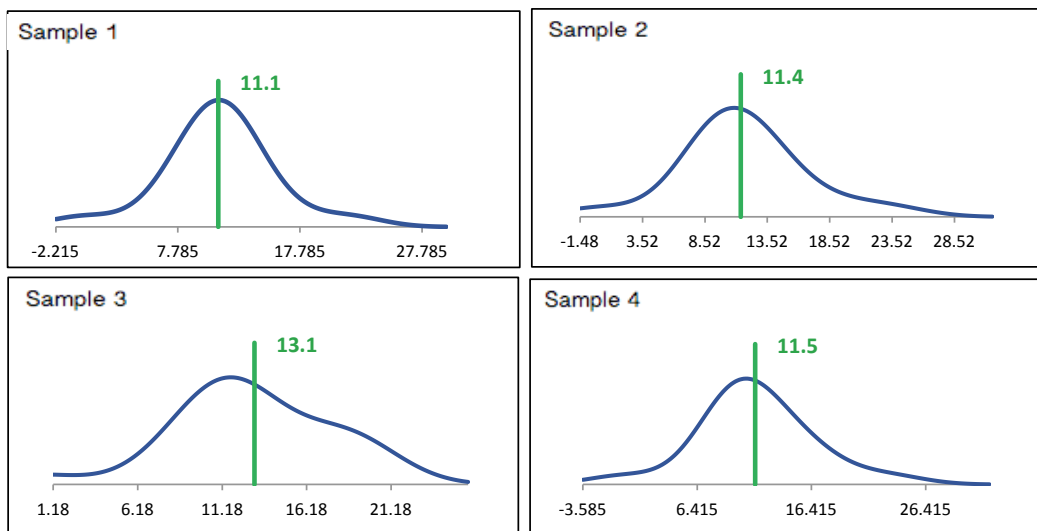
Annex A Summary by Analyte

DIMETHOATE

z-Score Plots



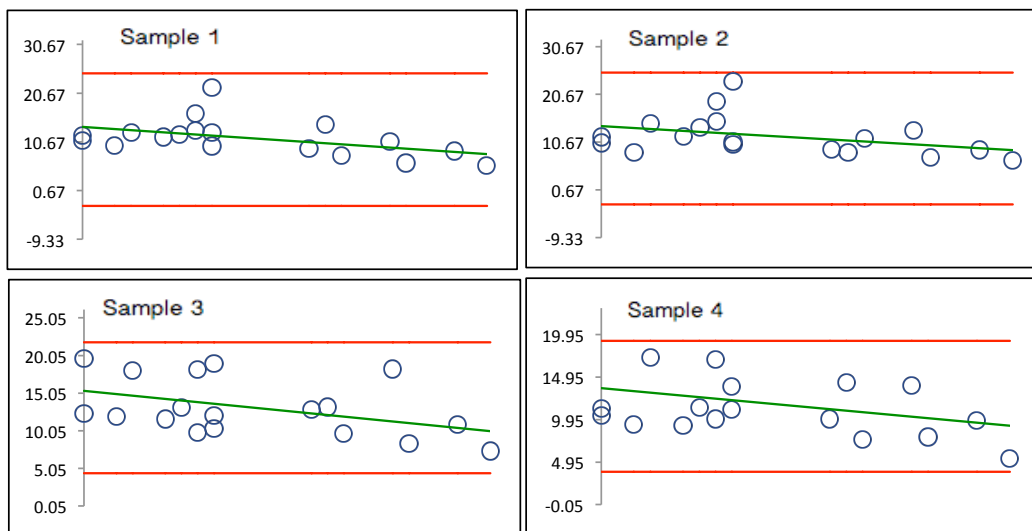
Kernel Density Plots



Annex A Summary by Analyte

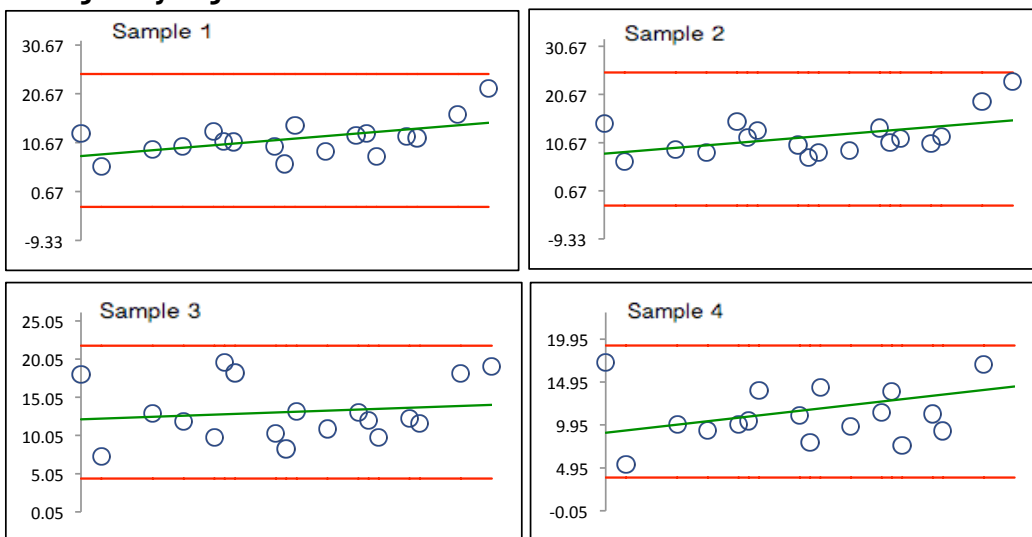
DIMETHOATE

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).

Annex A Summary by Analyte

DIURON

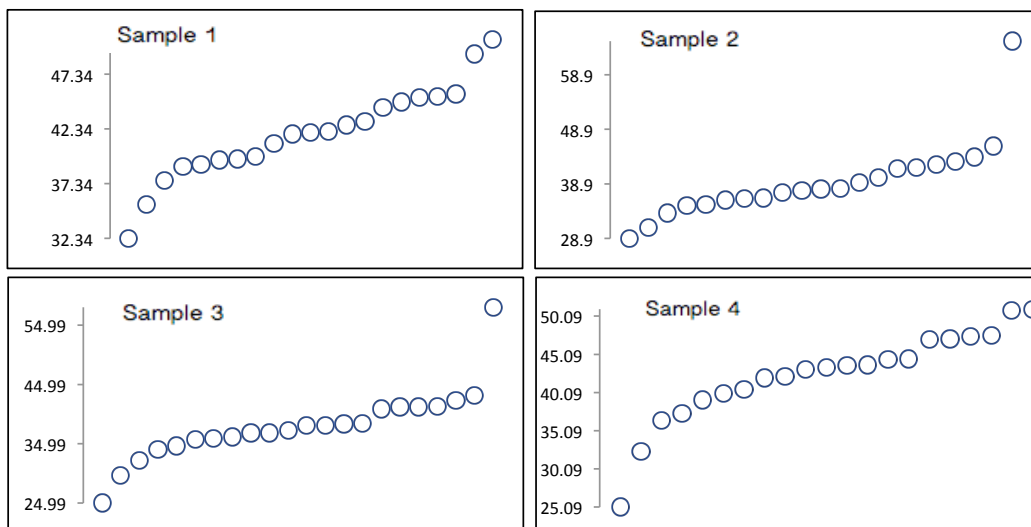
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	21	21	22	21
Median	42.0	37.9	37.7	43.4
Robust Mean	41.9	38.5	37.7	42.9
U	1.09	1.33	1.10	1.45
Robust Standard Deviation	3.98	4.89	4.14	5.33
Regression Standard Deviation	10.6	9.75	9.55	10.8
Stability Flag		Stability		
Homogeneity Flag				
Standard Deviation Used	10.6	10.00	9.55	10.8
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	1	1	0

Methods Used

Method	C22-1	C22-2	C22-3	C22-4
GC/MSE	2	2	2	2
LC/MS/MS	9	9	9	9
GC/MS1	3	3	3	3
HPLC	5	5	6	5
LC/MS	2	2	2	2

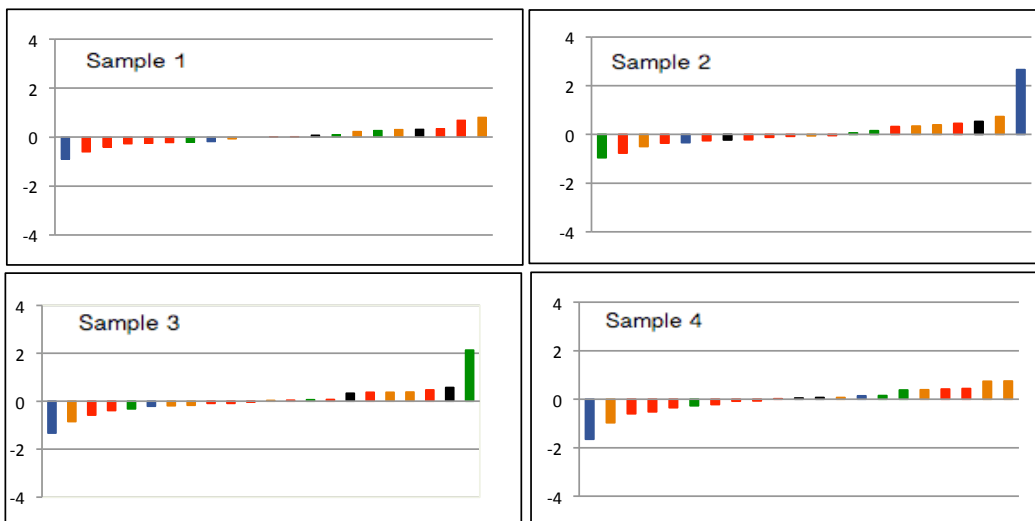
All summary stats and the plots below are based on the data excluding any flagged outliers



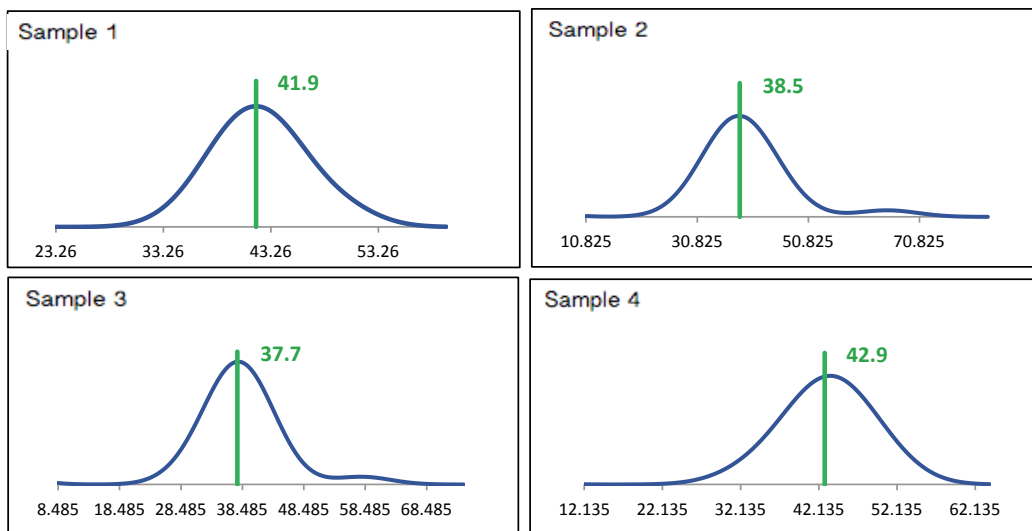
Annex A Summary by Analyte

DIURON

z-Score Plots



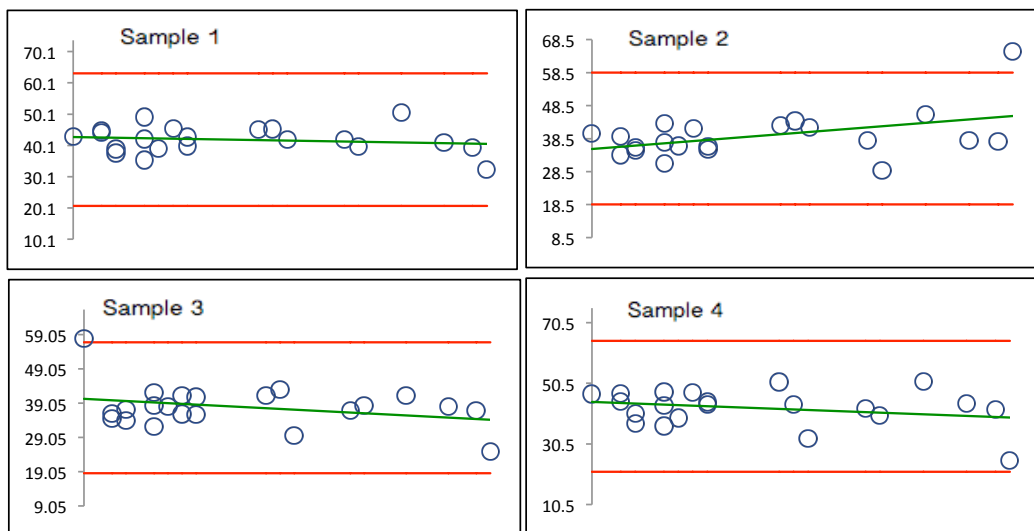
Kernel Density Plots



Annex A Summary by Analyte

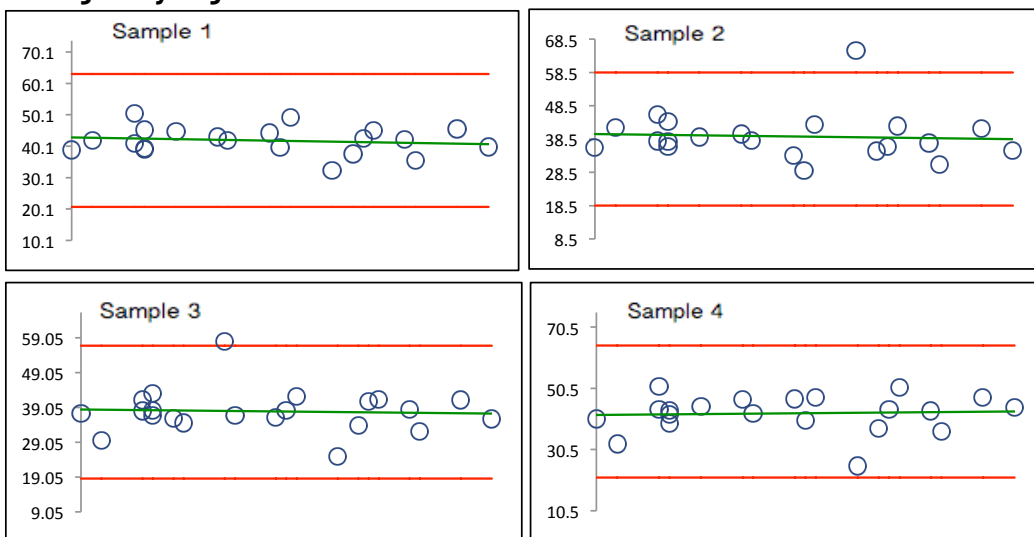
DIURON

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).

Annex A Summary by Analyte

MALATHION

Summary Statistics

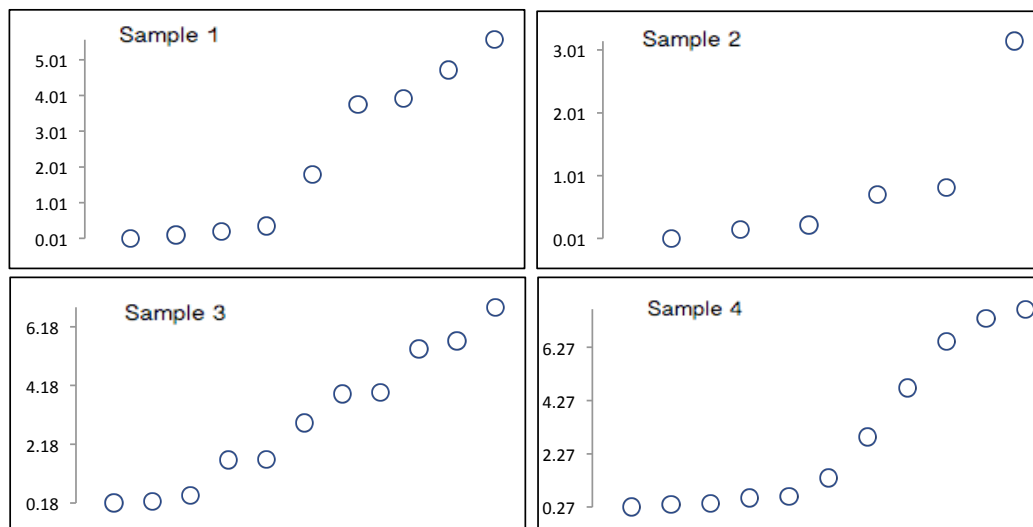
Excluded

Statistic	C22-1	C22-2	C22-3	C22-4
N	9	6	11	11
Median	1.80	0.465	2.90	1.36
Robust Mean	2.27	0.580	2.99	2.99
U	1.05	0.34	1.01	1.29
Robust Standard Deviation	2.53	0.660	2.67	3.43
Regression Standard Deviation	0.708	0.374	0.848	0.849
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	2.53	0.660	2.67	3.43
Outliers	1	1	1	1
$ z > 3.0$	0	1	0	0
$2 < z < 3$	0	0	0	0

Methods Used

Method	C22-1	C22-2	C22-3	C22-4
LC/MS/MS	1	1	2	1
GC/MSE	1	1	1	2
GC/MS1	5	2	6	7
GC/MS/MS	2	2	2	1

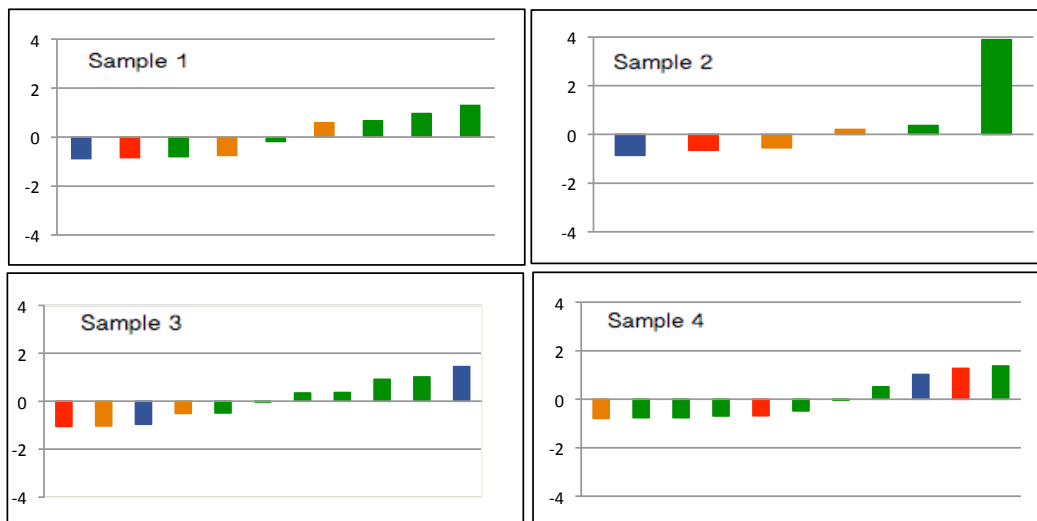
All summary stats and the plots below are based on the data excluding any flagged outliers



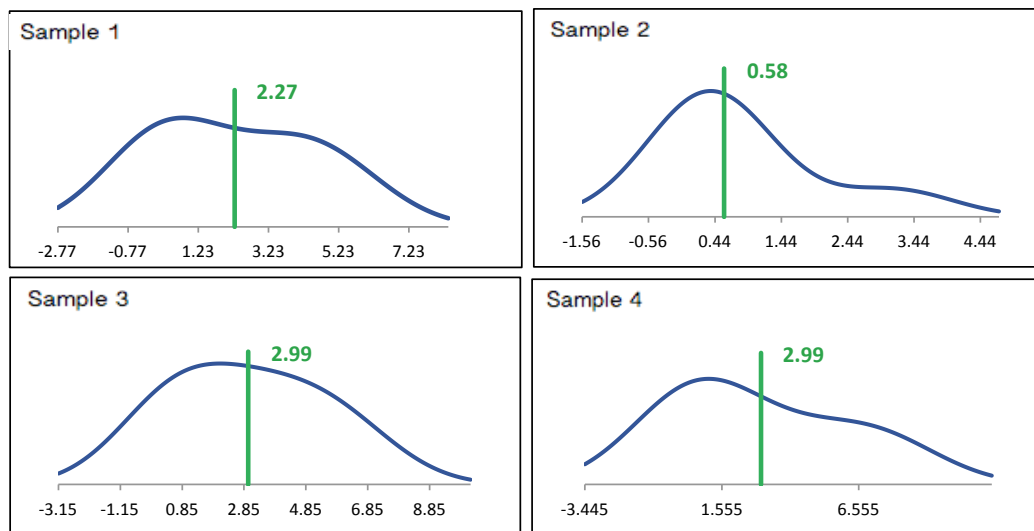
Annex A Summary by Analyte

MALATHION

z-Score Plots



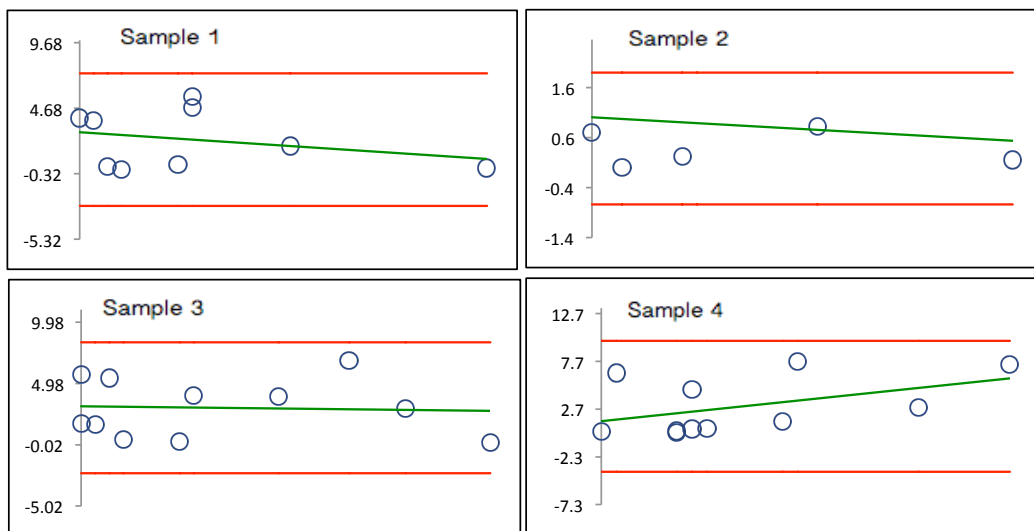
Kernel Density Plots



Annex A Summary by Analyte

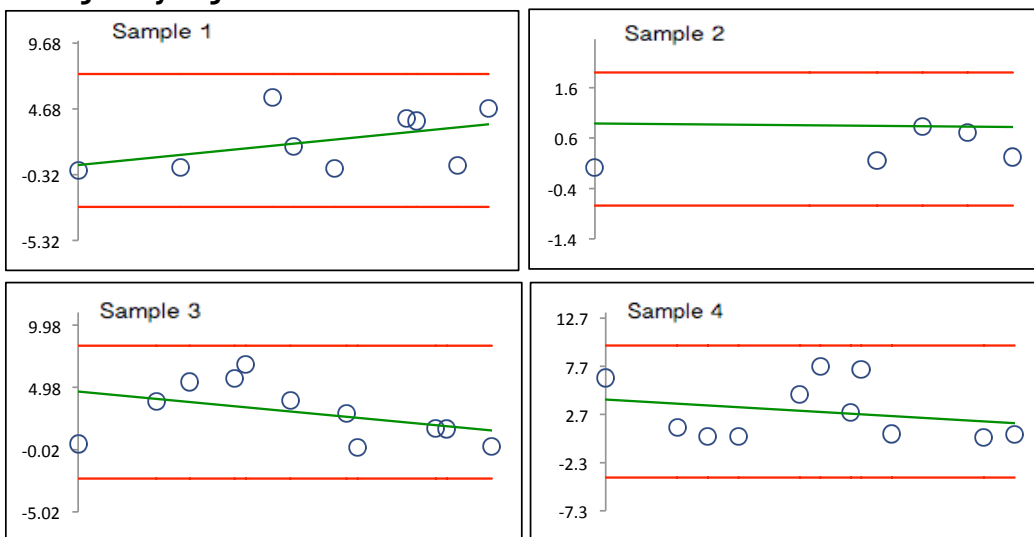
MALATHION

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).

Annex A Summary by Analyte

METOLACHLOR

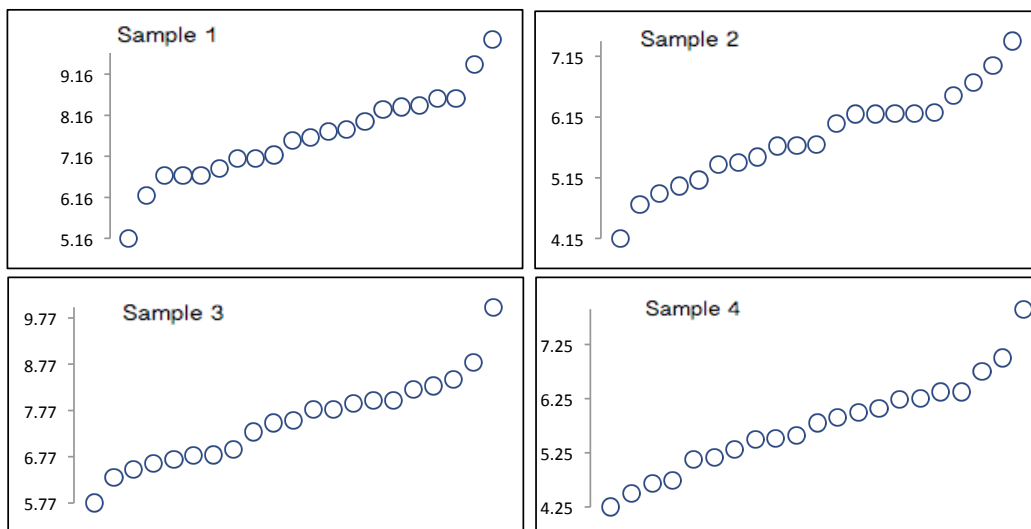
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	21	21	21	21
Median	7.61	5.69	7.56	5.80
Robust Mean	7.61	5.81	7.49	5.73
U	0.28	0.22	0.26	0.24
Robust Standard Deviation	1.04	0.811	0.938	0.891
Regression Standard Deviation	1.55	1.23	1.53	1.22
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	1.55	1.23	1.53	1.22
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
LC/MS/MS	4	4	4	4
GC/MSE	3	3	3	3
LC/MS	1	1	1	1
GC/MS/MS	1	1	1	1

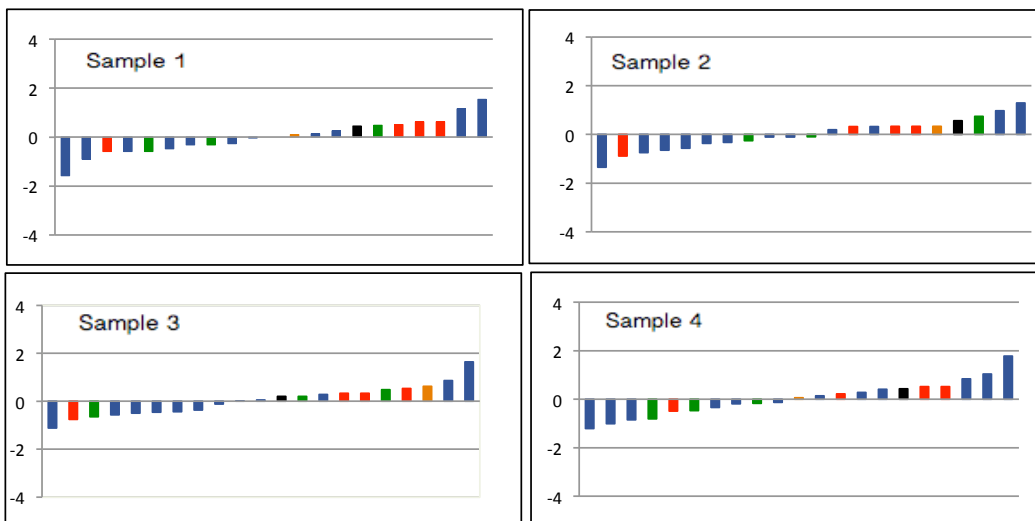
All summary stats and the plots below are based on the data excluding any flagged outliers



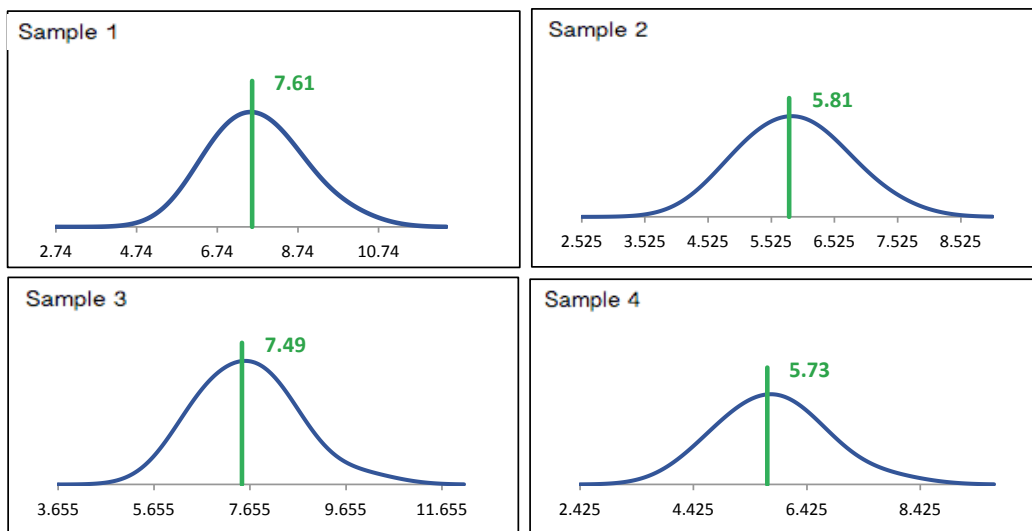
Annex A Summary by Analyte

METOLACHLOR

z-Score Plots



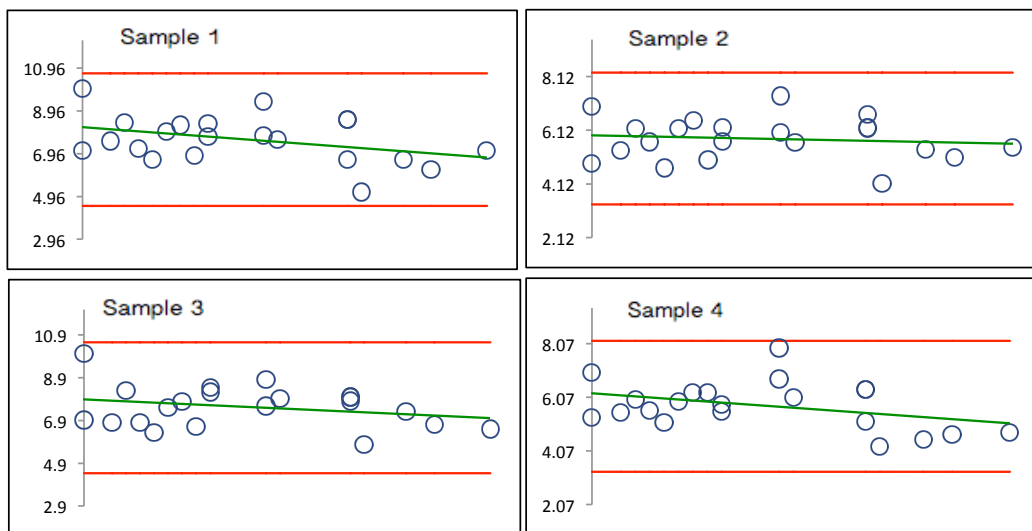
Kernel Density Plots



Annex A Summary by Analyte

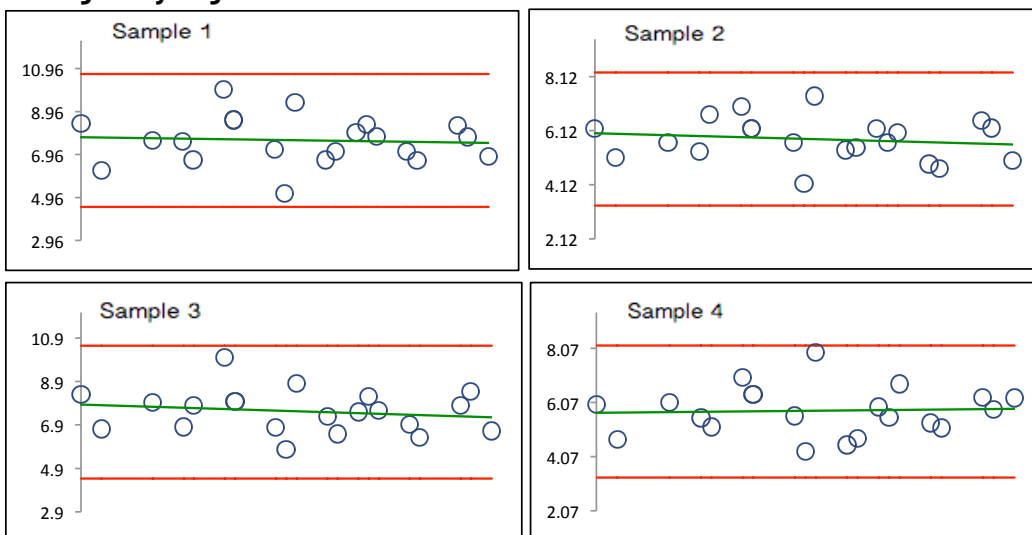
METOLACHLOR

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).

Annex A Summary by Analyte

METRIBUZIN

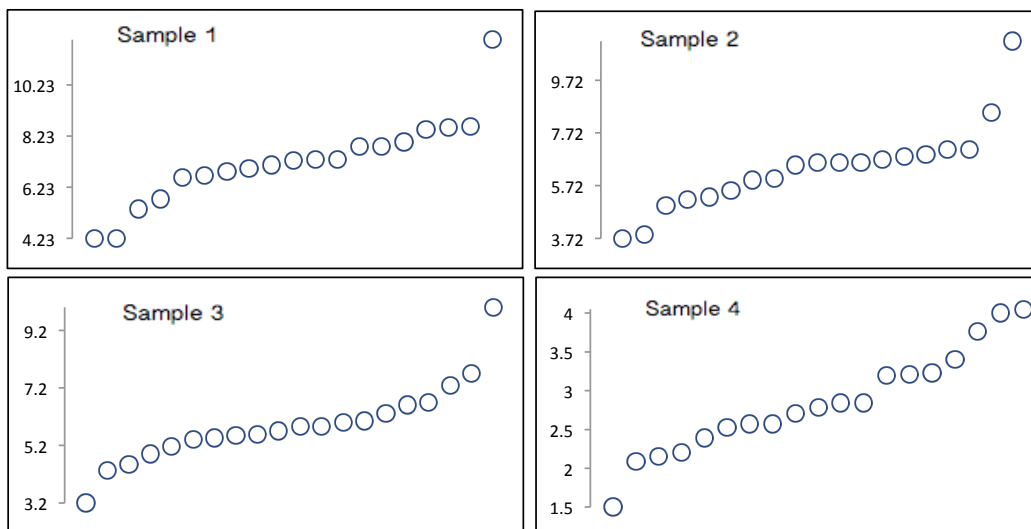
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	19	19	20	19
Median	7.28	6.58	5.78	2.78
Robust Mean	7.16	6.25	5.82	2.84
U	0.39	0.34	0.30	0.20
Robust Standard Deviation	1.35	1.19	1.08	0.695
Regression Standard Deviation	1.81	1.61	1.52	0.88
Stability Flag	Stability		Stability	
Homogeneity Flag				
Standard Deviation Used	3.05	1.61	2.09	0.88
Outliers	0	0	0	0
$ z > 3.0$	0	1	0	0
$2 < z < 3$	0	0	0	0

Methods Used

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

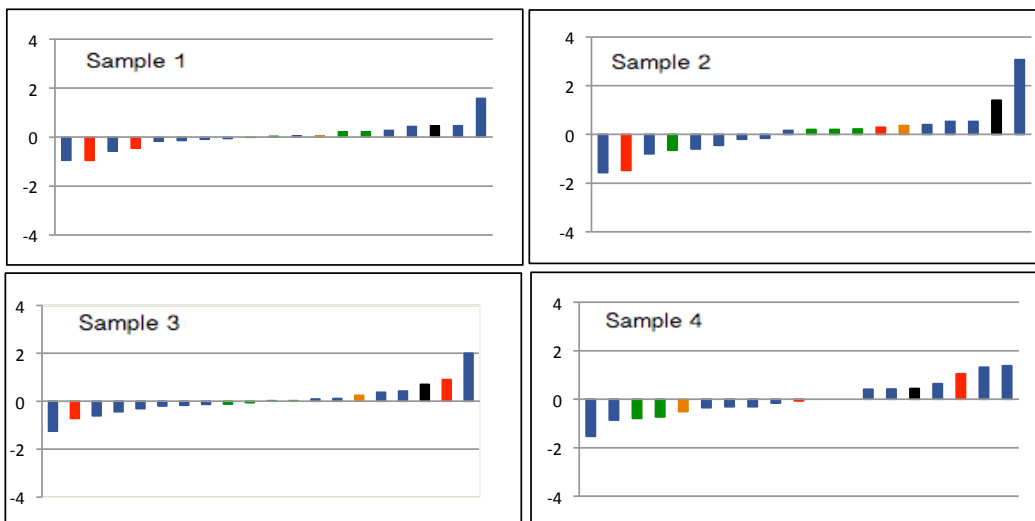
All summary stats and the plots below are based on the data excluding any flagged outliers



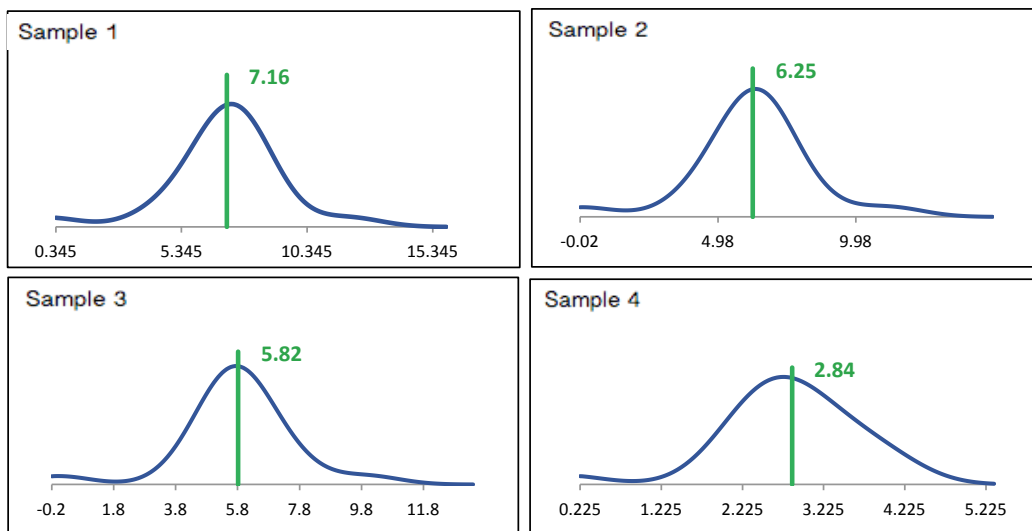
Annex A Summary by Analyte

METRIBUZIN

z-Score Plots



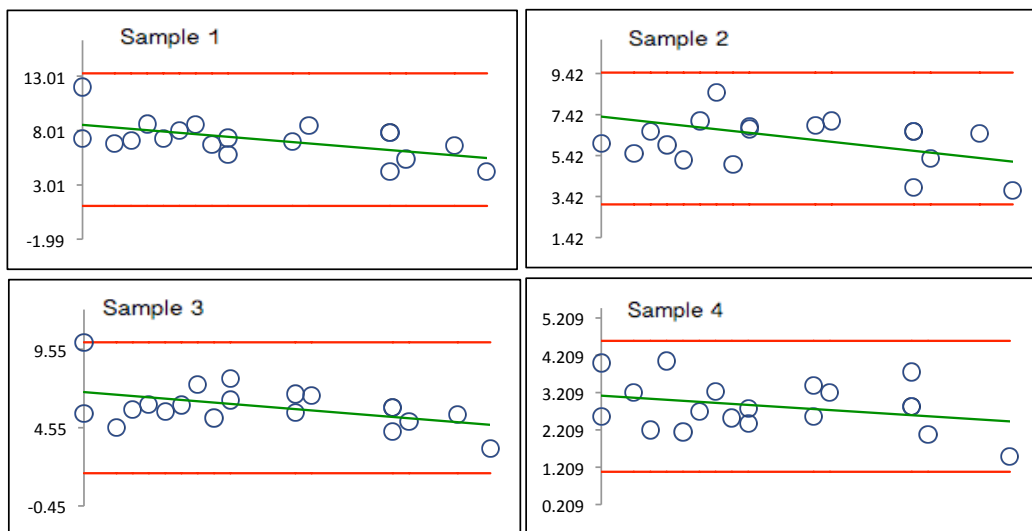
Kernel Density Plots



Annex A Summary by Analyte

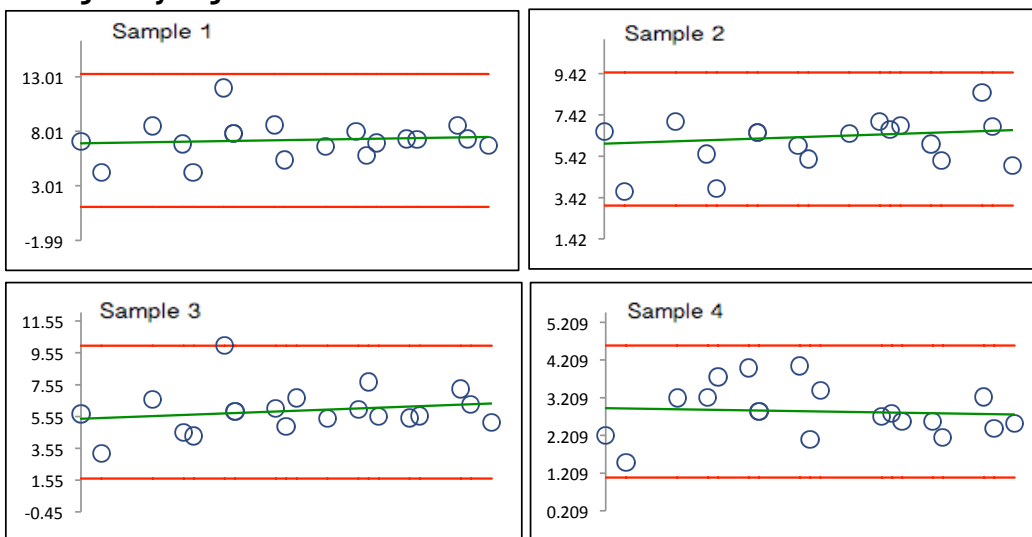
METRIBUZIN

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).

Annex A Summary by Analyte

PARATHION (ETHYL)

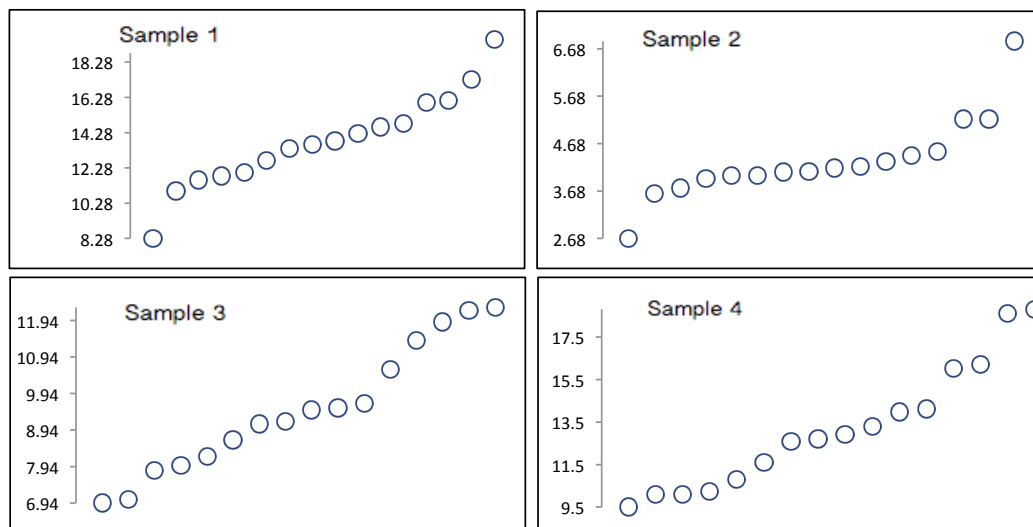
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	16	16	16	16
Median	13.7	4.13	9.34	12.8
Robust Mean	13.8	4.24	9.50	13.1
U	0.79	0.19	0.62	0.96
Robust Standard Deviation	2.52	0.616	1.99	3.06
Regression Standard Deviation	3.34	1.08	2.33	3.18
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	3.34	1.08	2.33	3.18
Outliers	1	1	1	1
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	1	0	0

Methods Used

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

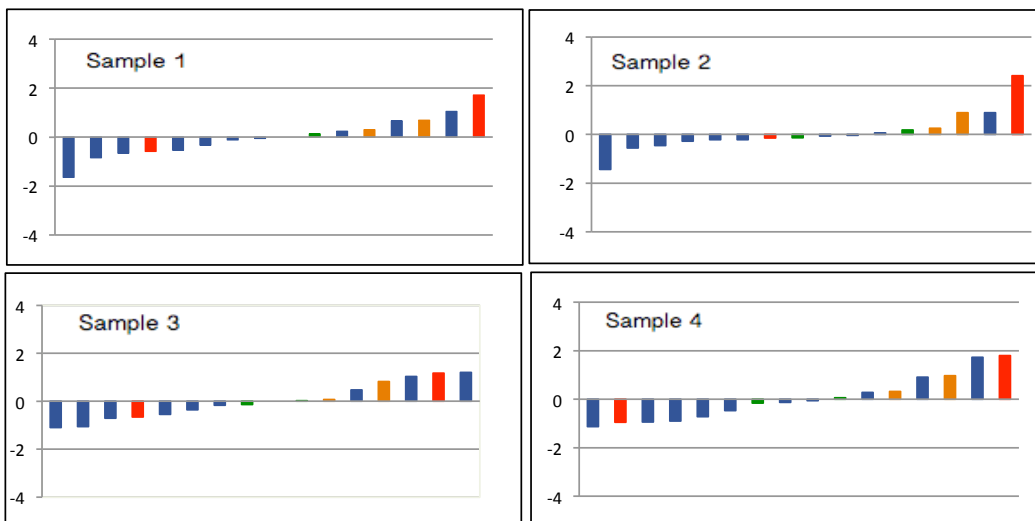
All summary stats and the plots below are based on the data excluding any flagged outliers



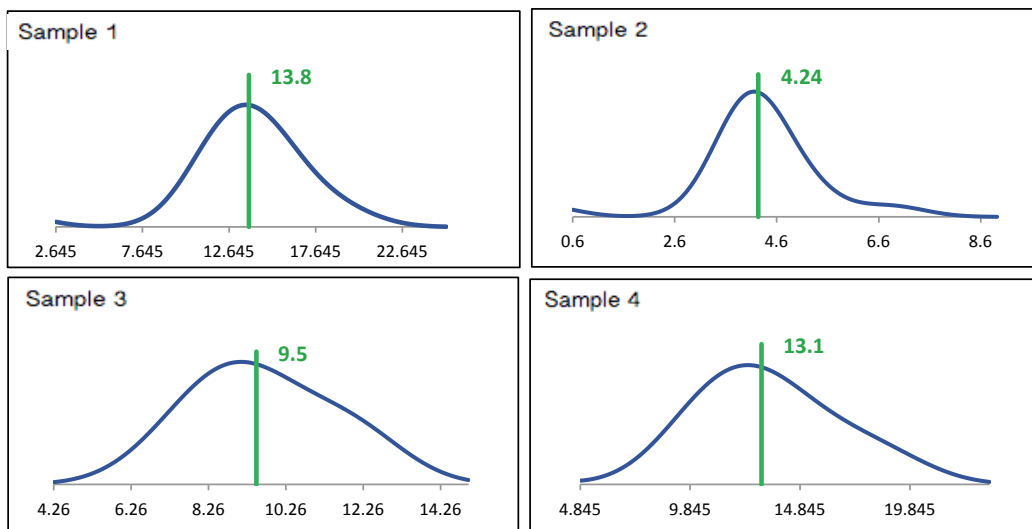
Annex A Summary by Analyte

PARATHION (ETHYL)

z-Score Plots



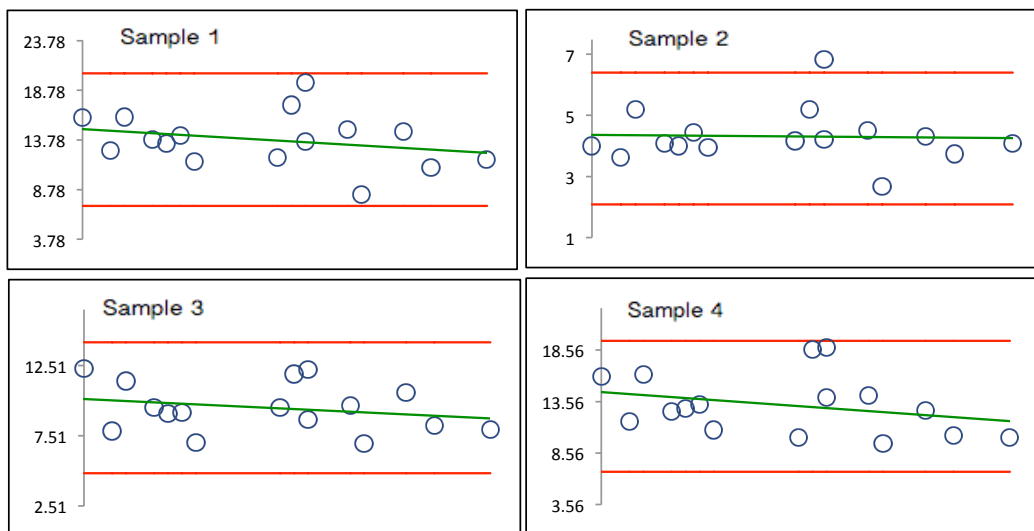
Kernel Density Plots



Annex A Summary by Analyte

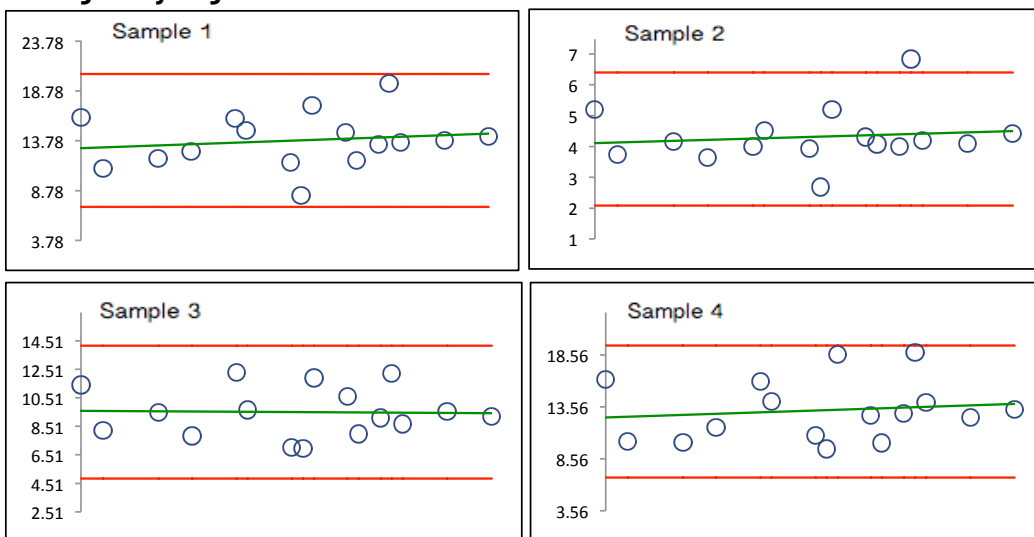
PARATHION (ETHYL)

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).

Annex A Summary by Analyte

PHORATE

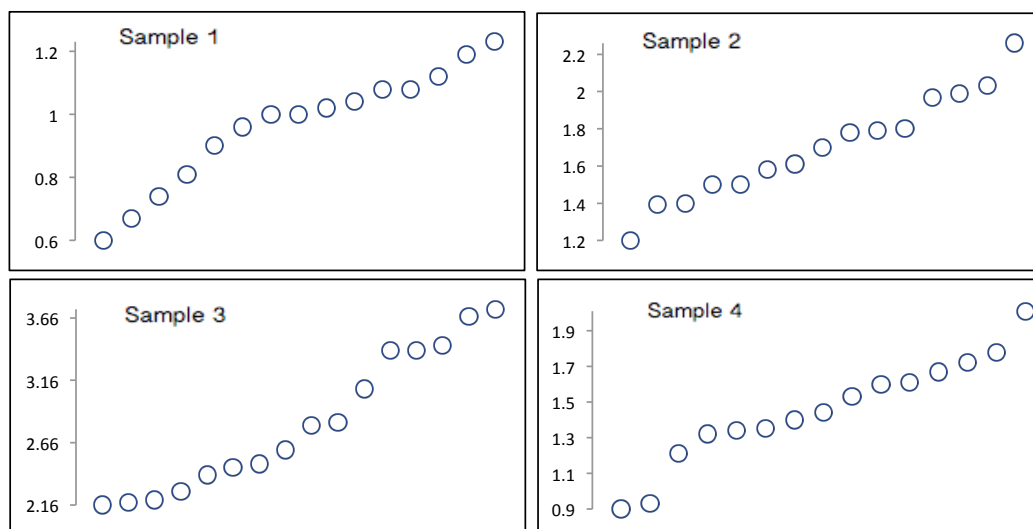
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	15	15	16	15
Median	1.00	1.70	2.70	1.44
Robust Mean	0.97	1.70	2.82	1.46
U	0.06	0.10	0.20	0.10
Robust Standard Deviation	0.200	0.301	0.633	0.301
Regression Standard Deviation	0.265	0.465	0.773	0.400
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	0.265	0.465	0.773	0.400
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	10	10	11	10
GC/MS/MS	2	2	2	2
LC/MS/MS	2	2	2	2
GC/MSE	1	1	1	1

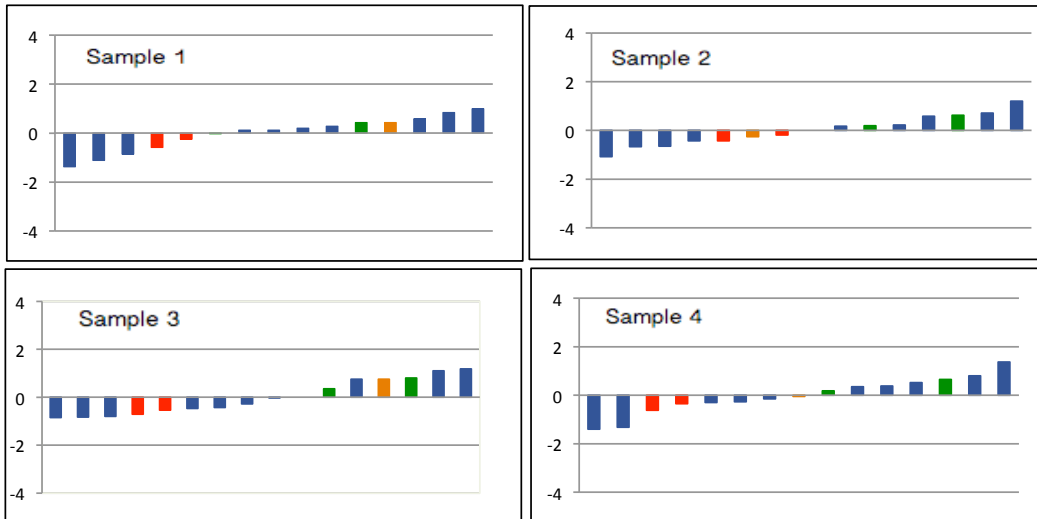
All summary stats and the plots below are based on the data excluding any flagged outliers



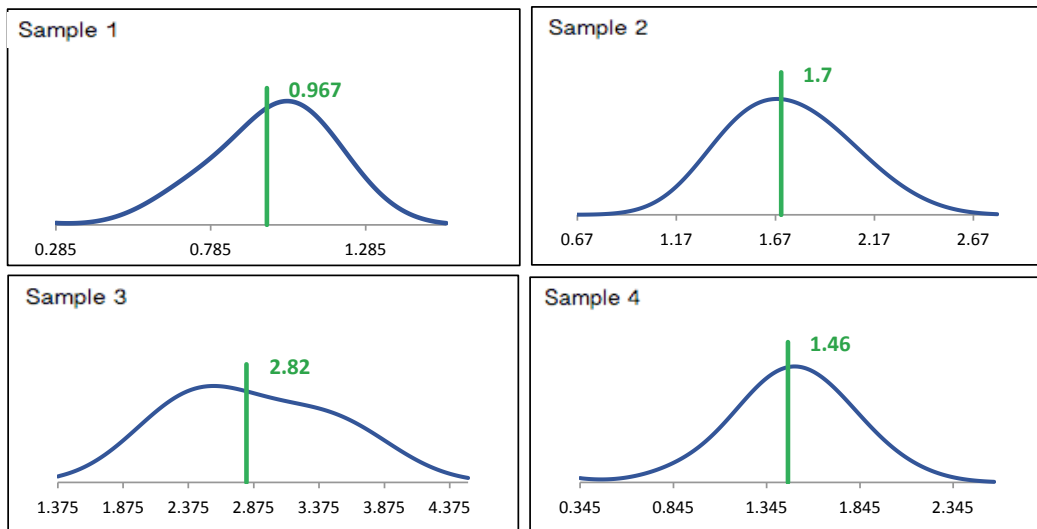
Annex A Summary by Analyte

PHORATE

z-Score Plots



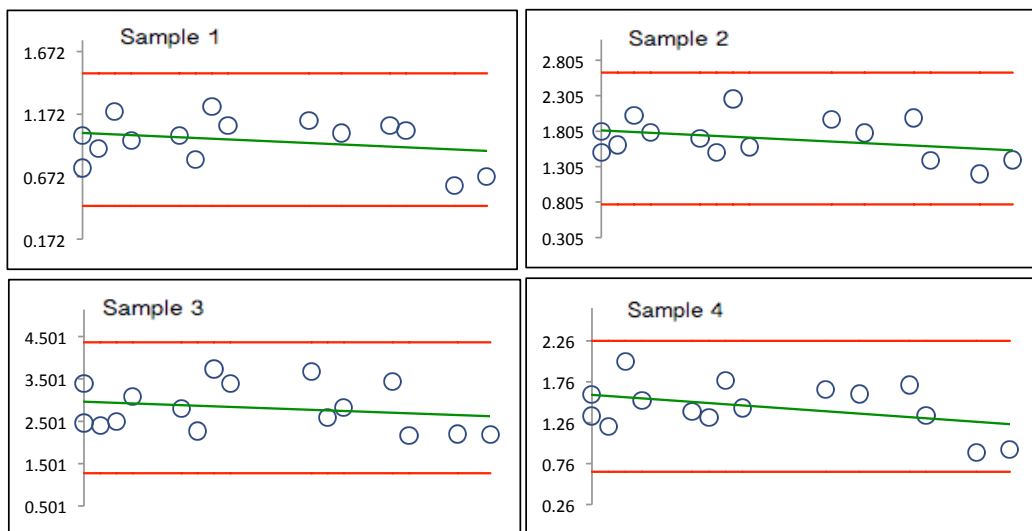
Kernel Density Plots



Annex A Summary by Analyte

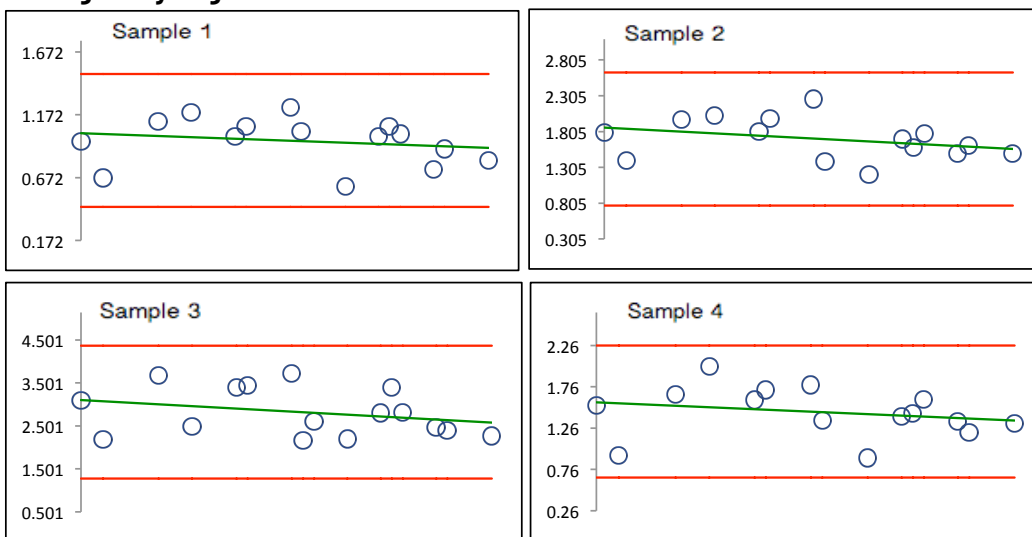
PHORATE

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).

Annex A Summary by Analyte

SIMAZINE

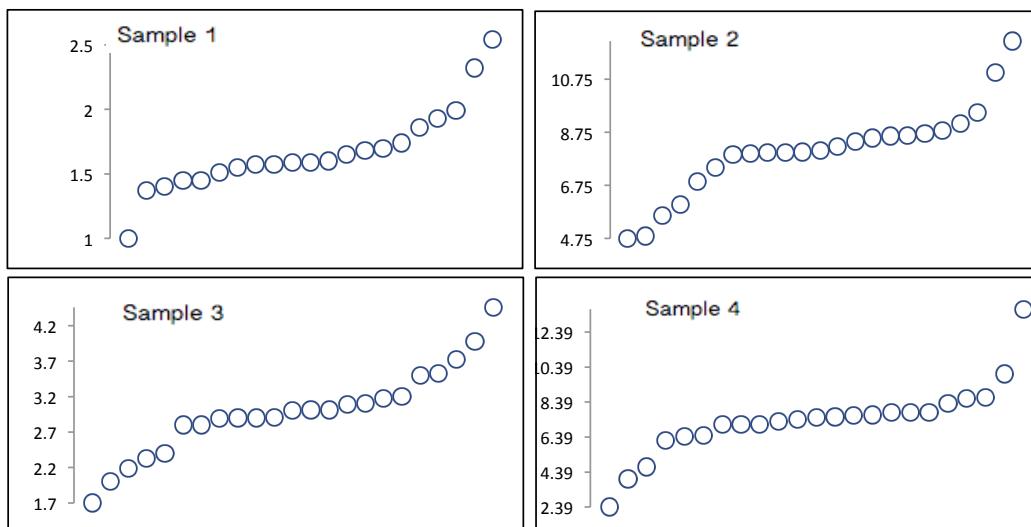
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	21	23	23	23
Median	1.59	8.05	3.00	7.53
Robust Mean	1.64	8.03	2.97	7.37
U	0.07	0.36	0.15	0.31
Robust Standard Deviation	0.242	1.38	0.580	1.17
Regression Standard Deviation	0.418	2.02	0.751	1.85
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	0.418	2.02	0.751	1.85
Outliers	0	0	0	0
$ z > 3.0$	0	0	0	1
$2 < z < 3$	1	1	0	1

Methods Used

Method	C22-1	C22-2	C22-3	C22-4
GC/MS1	10	11	11	11
GC/MSE	3	3	3	3
LC/MS/MS	4	5	5	5
LC/MS	1	1	1	1
HPLC	3	3	3	3

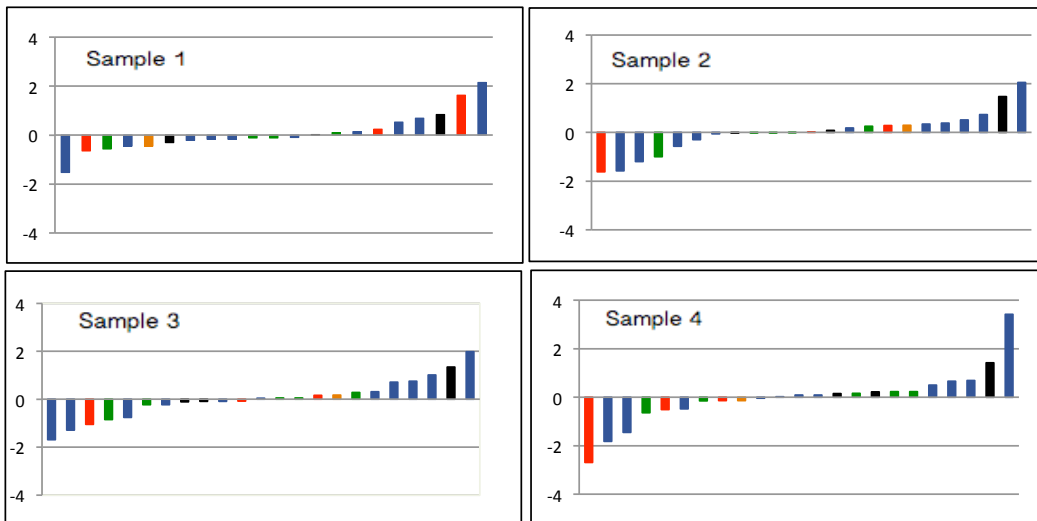
All summary stats and the plots below are based on the data excluding any flagged outliers



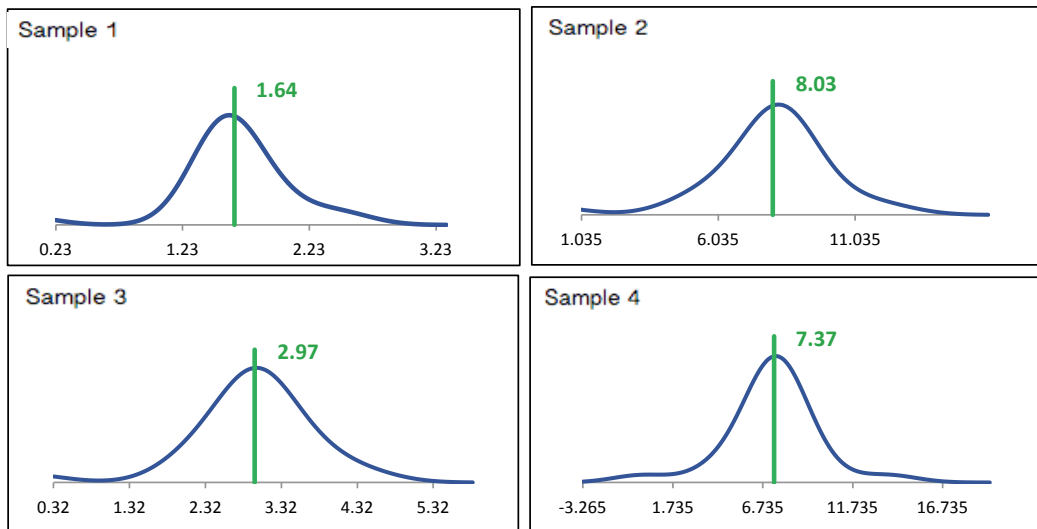
Annex A Summary by Analyte

SIMAZINE

z-Score Plots



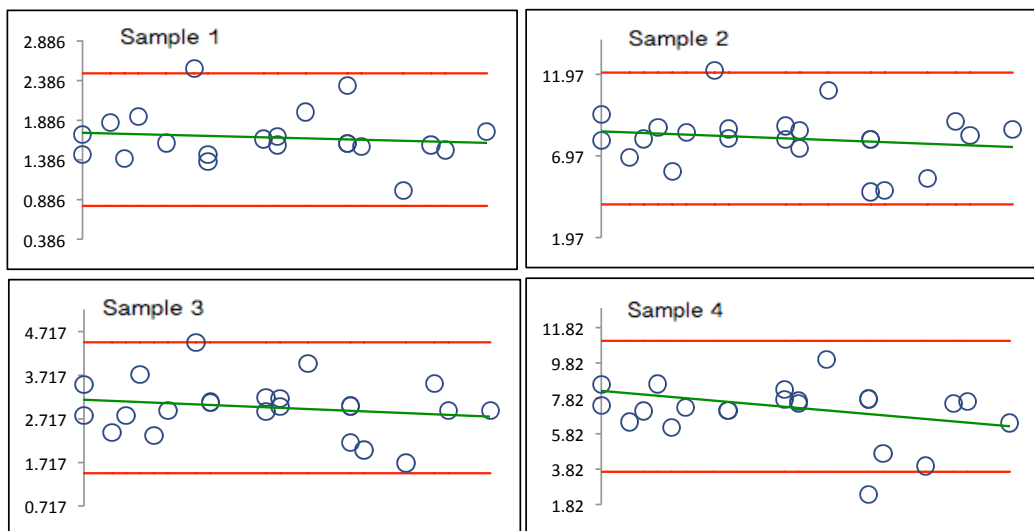
Kernel Density Plots



Annex A Summary by Analyte

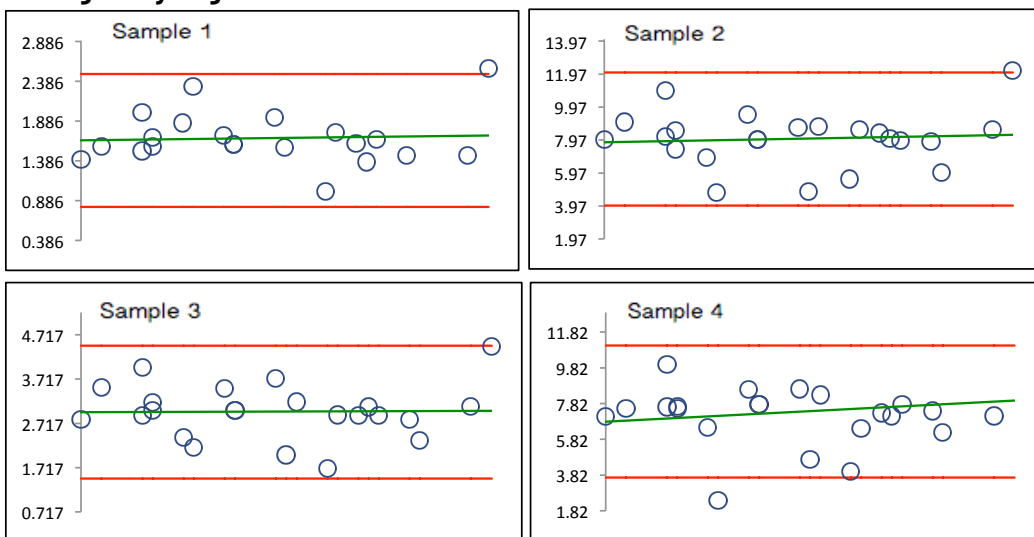
SIMAZINE

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).

Annex A Summary by Analyte

TERBUFOS

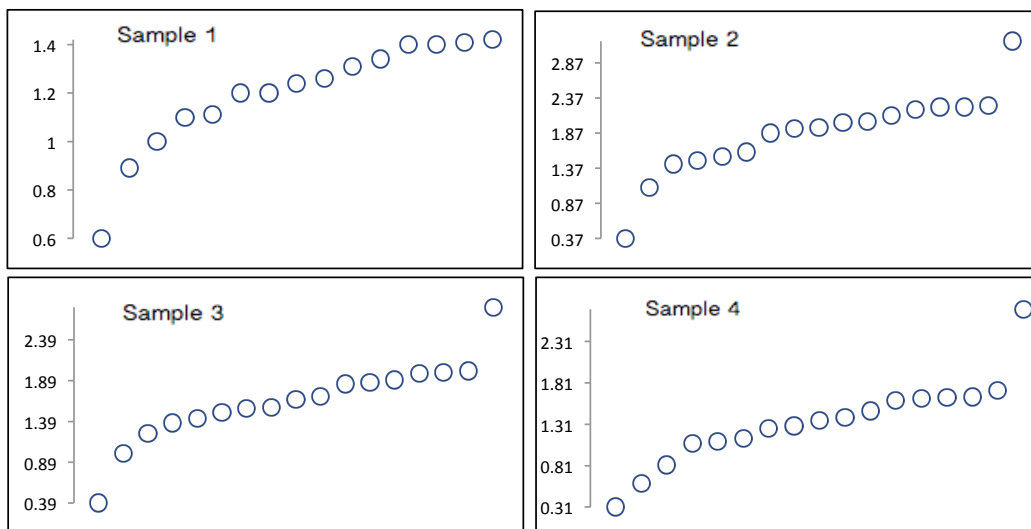
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	15	17	17	17
Median	1.24	1.95	1.66	1.36
Robust Mean	1.22	1.87	1.65	1.32
U	0.06	0.14	0.12	0.12
Robust Standard Deviation	0.196	0.455	0.386	0.408
Regression Standard Deviation	0.378	0.562	0.498	0.408
Stability Flag		Stability	Stability	Stability
Homogeneity Flag				
Standard Deviation Used	0.378	1.14	0.897	0.843
Outliers	2	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	10	11	11	11
GC/MSE	1	2	2	2
GC/MS/MS	2	2	2	2
LC/MS/MS	2	2	2	2

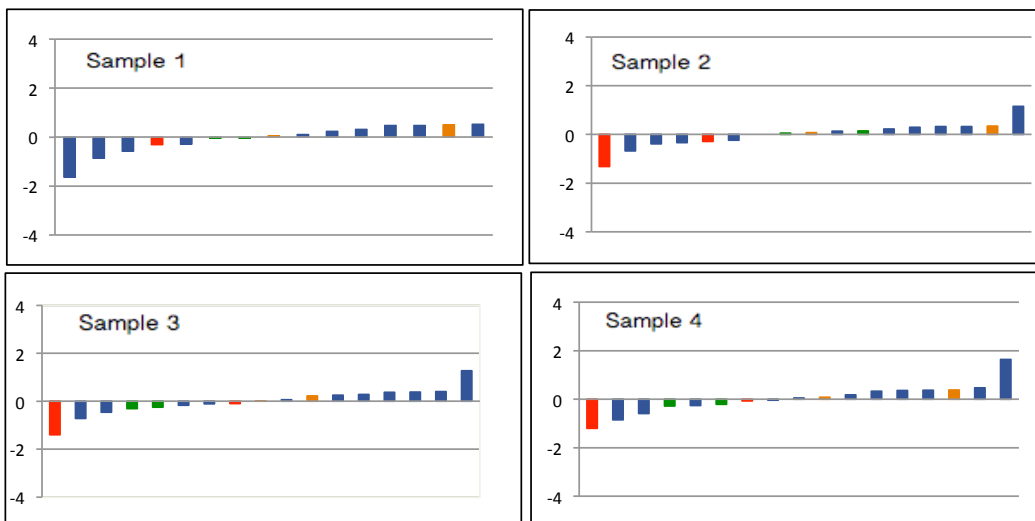
All summary stats and the plots below are based on the data excluding any flagged outliers



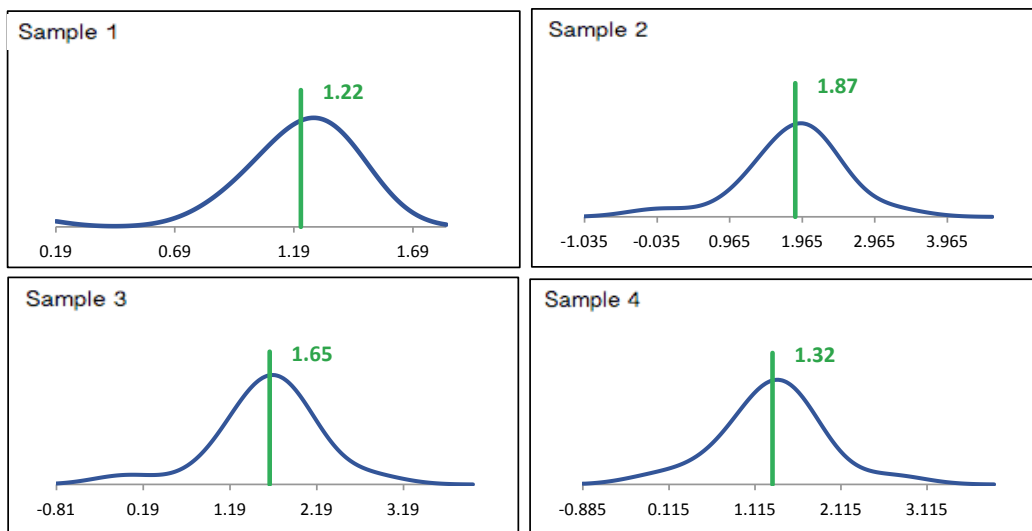
Annex A Summary by Analyte

TERBUFOS

z-Score Plots



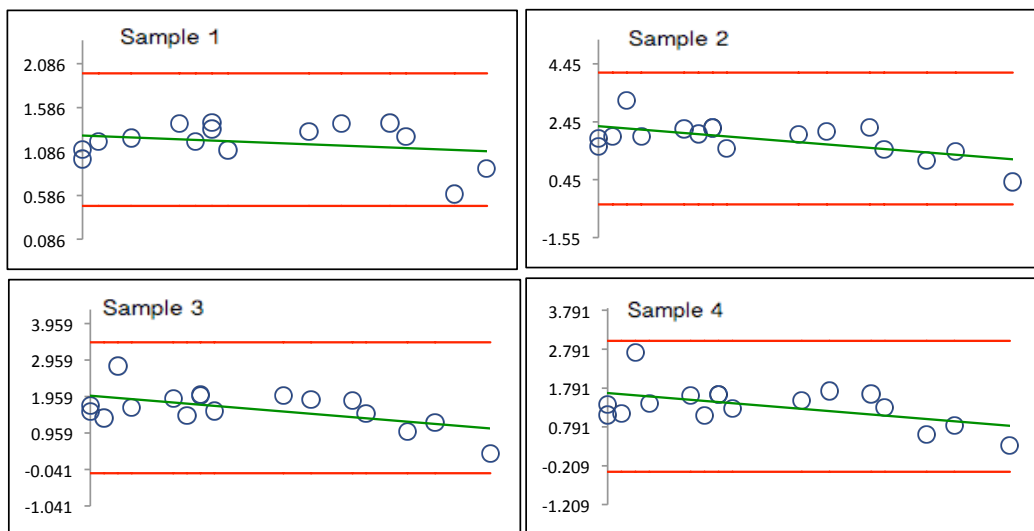
Kernel Density Plots



Annex A Summary by Analyte

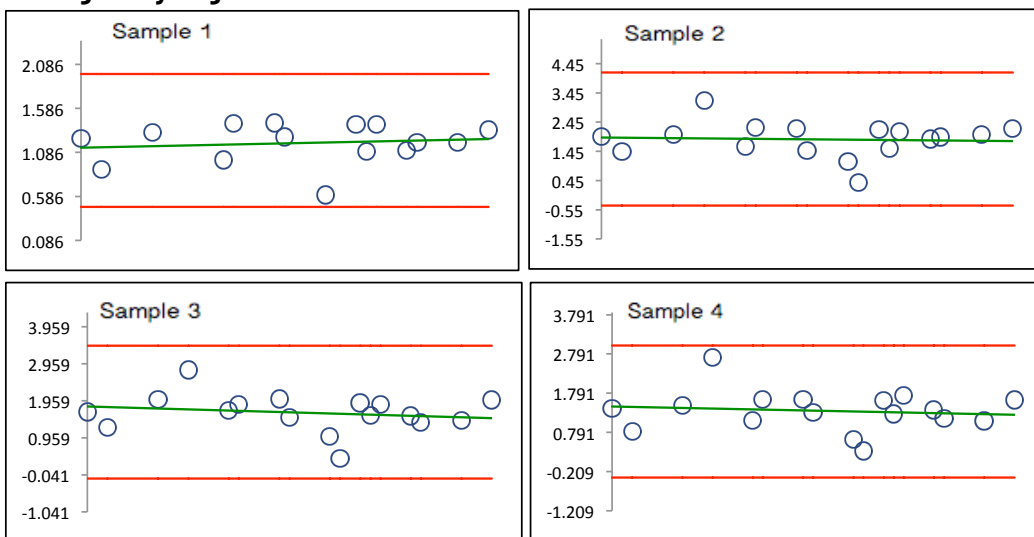
TERBUFOS

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).

Annex A Summary by Analyte

TRIFLURALIN

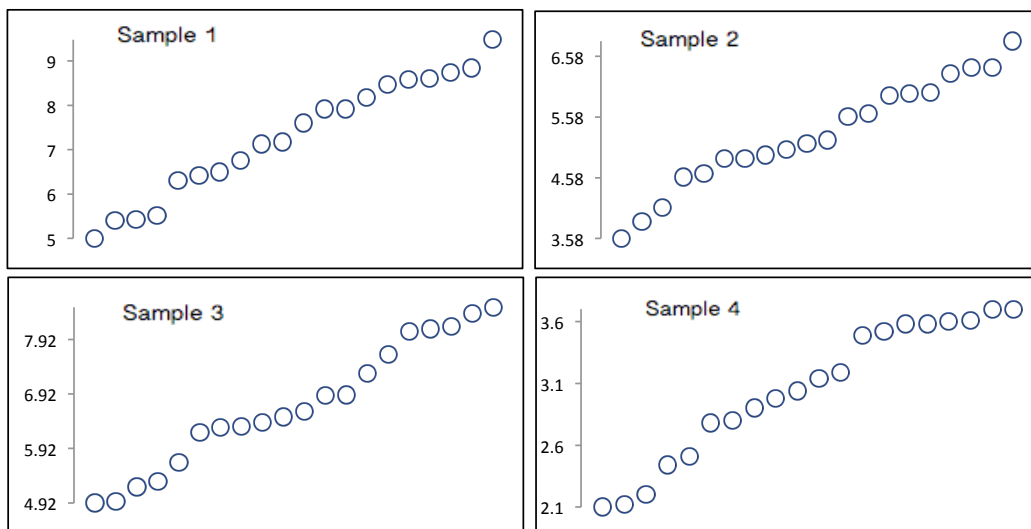
Summary Statistics

Statistic	C22-1	C22-2	C22-3	C22-4
N	20	20	20	20
Median	7.39	5.17	6.55	3.09
Robust Mean	7.30	5.31	6.72	3.05
U	0.42	0.27	0.37	0.17
Robust Standard Deviation	1.51	0.982	1.31	0.624
Regression Standard Deviation	1.91	1.39	1.76	0.805
Stability Flag				
Homogeneity Flag				
Standard Deviation Used	1.91	1.39	1.76	0.805
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
LC/MS/MS	2	2	2	2
GC/MSE	2	2	2	2
GC/MS/MS	2	2	2	2
GC/ECD-1	2	2	2	2

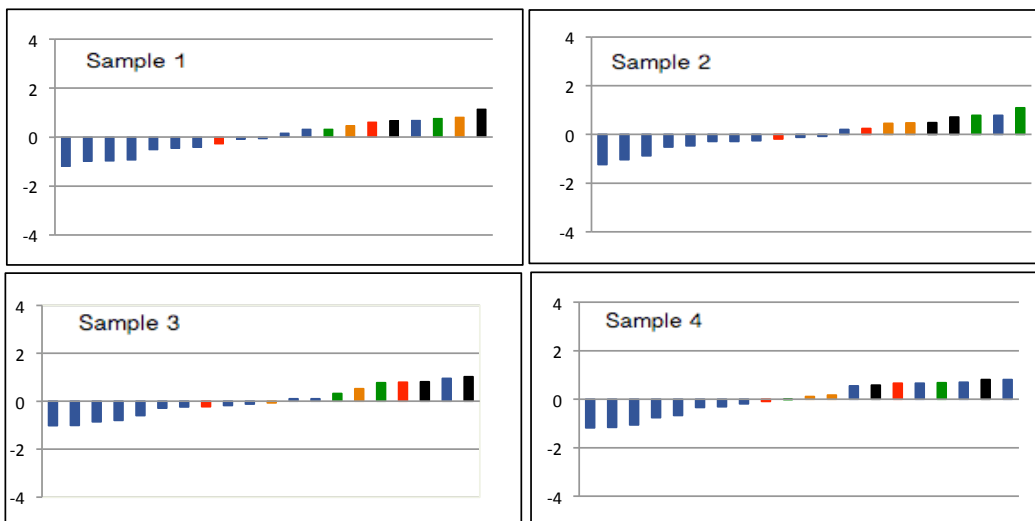
All summary stats and the plots below are based on the data excluding any flagged outliers



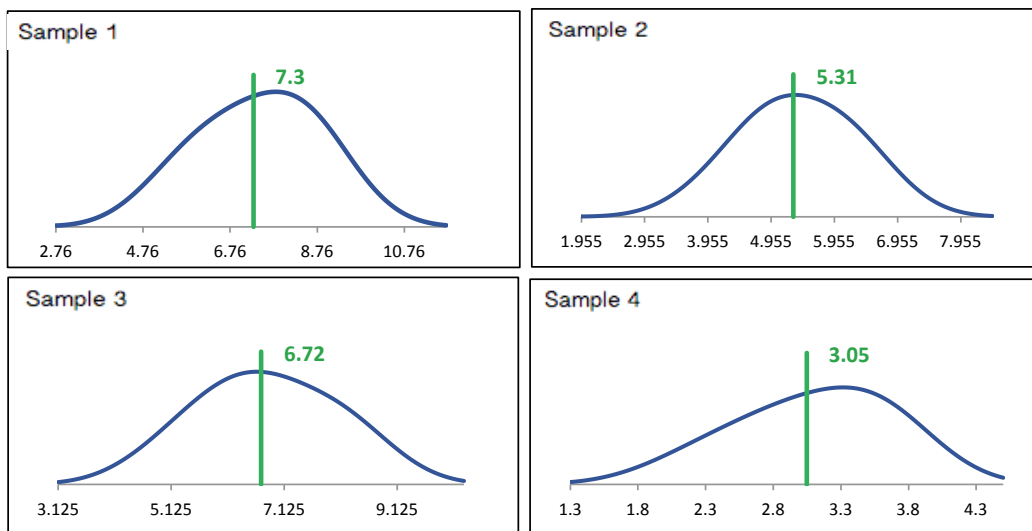
Annex A Summary by Analyte

TRIFLURALIN

z-Score Plots



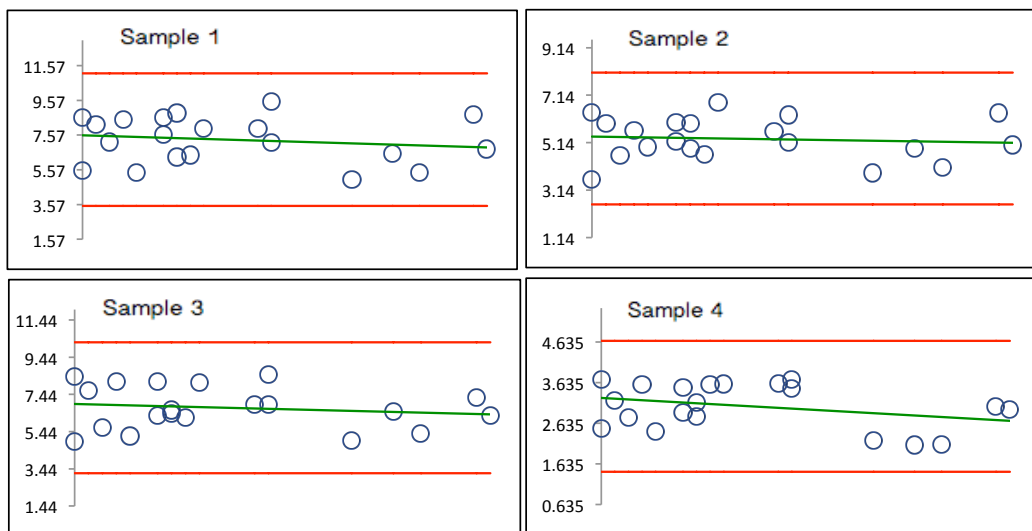
Kernel Density Plots



Annex A Summary by Analyte

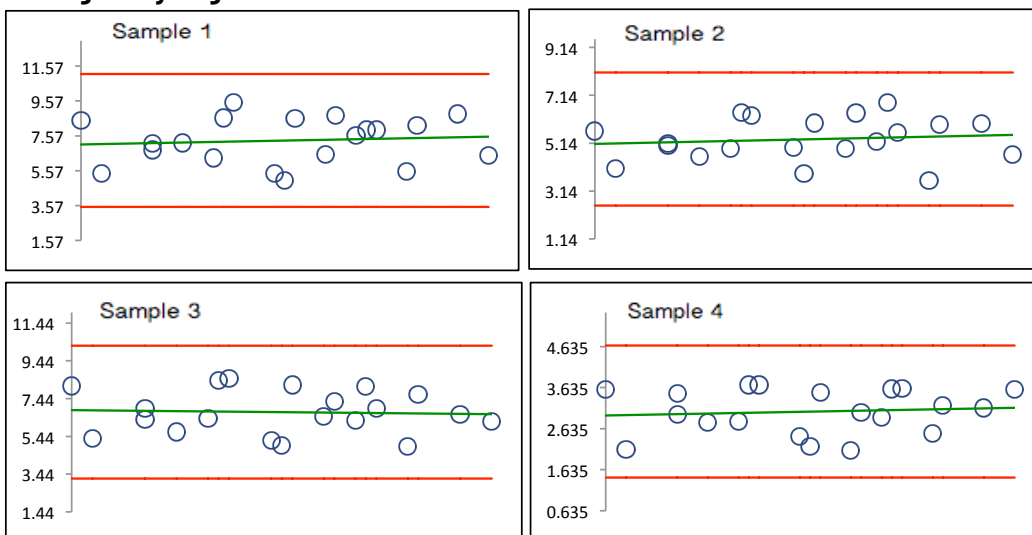
TRIFLURALIN

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).