

# Test Group Summary Report

## C71 Pesticides in Cannabis

### October 2023

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**Issued: November 27, 2023**

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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 is 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 (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 – *Conformity assessment- General requirements for the competence of proficiency testing providers*, 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](http://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.

$$RSZ = \frac{\sum z}{\sqrt{N}} \quad \text{where } \begin{array}{l} z = \text{the z- score} \\ N = \text{the number of samples} \end{array}$$

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

$RSZ \geq -2$ and $\leq 2$	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.

### 4.5 BOX-AND-WHISKER PLOTS

Box-and-Whisker plots are another way to display the distribution of the data. The box denotes the first and third quartile and the whiskers are the 5<sup>th</sup> and 95<sup>th</sup> percentile.

### 4.6 HISTORIC COMPARISON PLOT

The Historic Comparison Plot is a plot of robust mean against robust standard deviation for the previous ten PT rounds as well as the current PT round. This plot can be used to identify possible changes in the sample formulation.

## ACEPHATE

## Summary Statistics

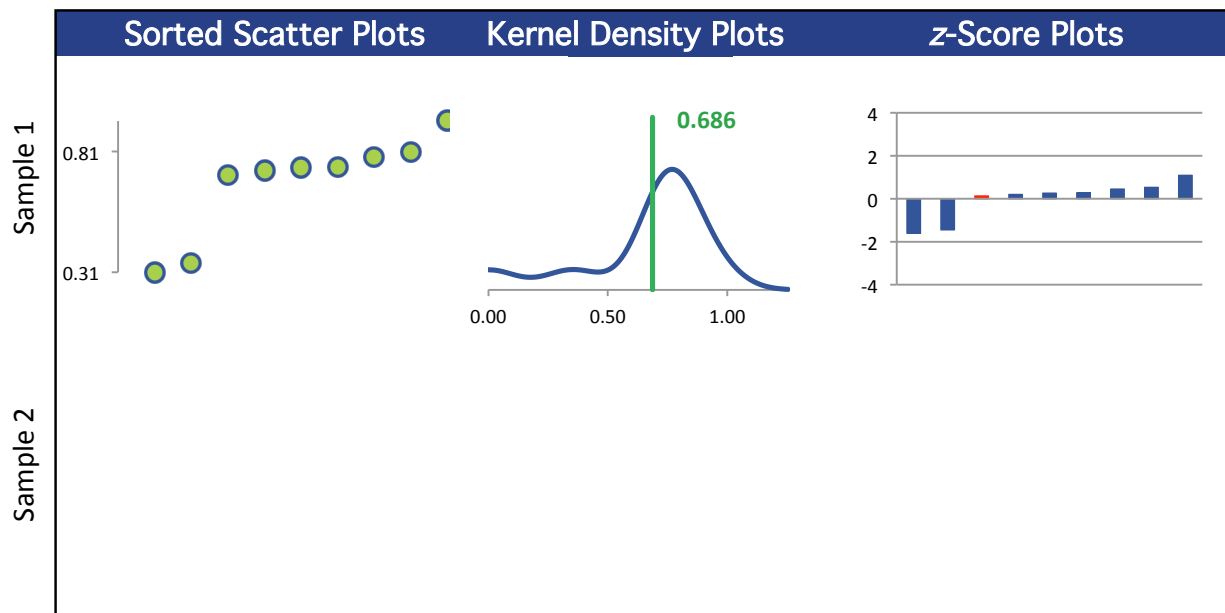
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	9	0	0	0
Median $\mu\text{g/g}$	0.746			
Robust Mean $\mu\text{g/g}$	0.686			
U $\mu\text{g/g}$	0.0967			
Robust Standard Deviation $\mu\text{g/g}$	0.232			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.232			
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	0	0	0

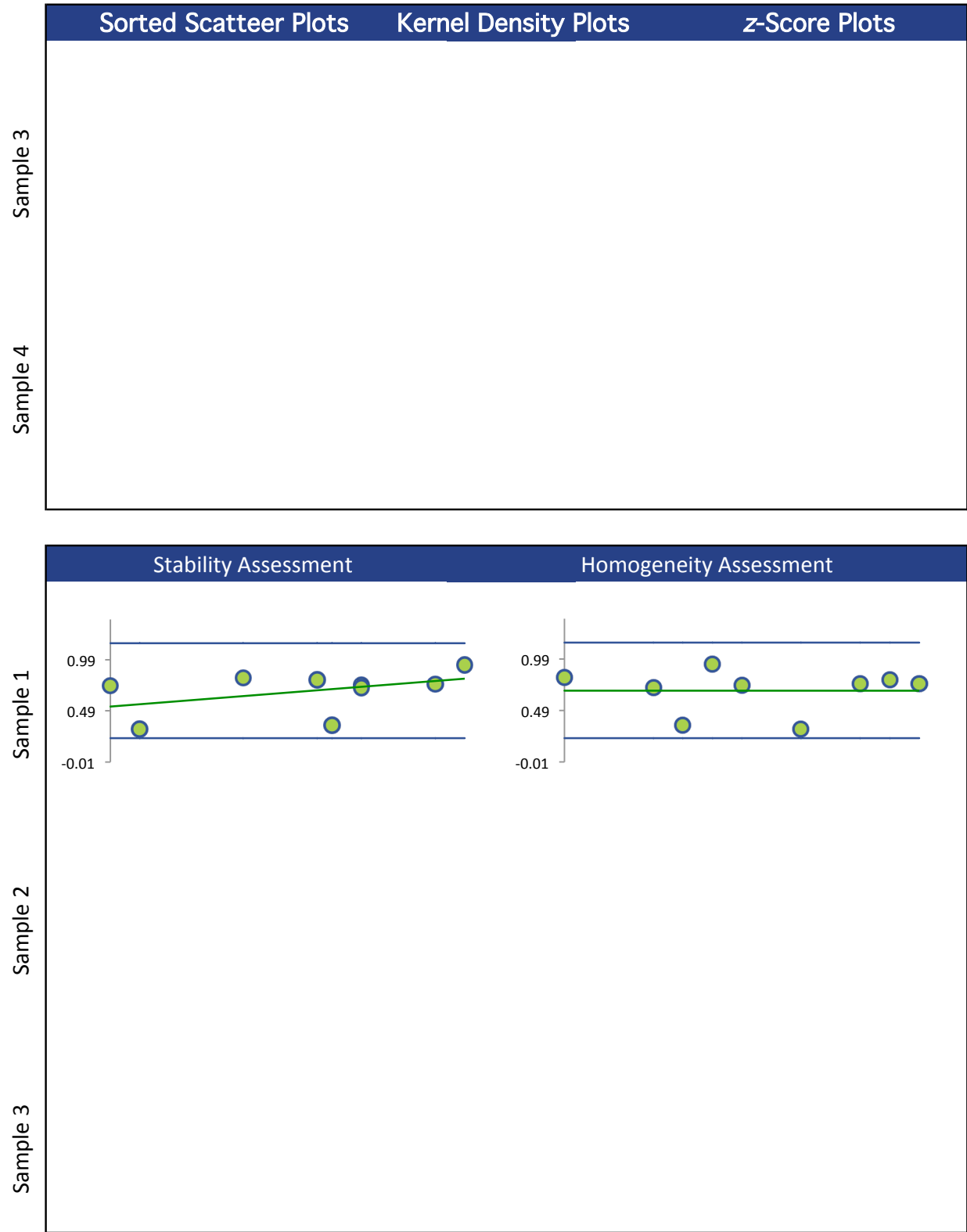
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	0	0	0
LC/MS (Red)	1	0	0	0

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

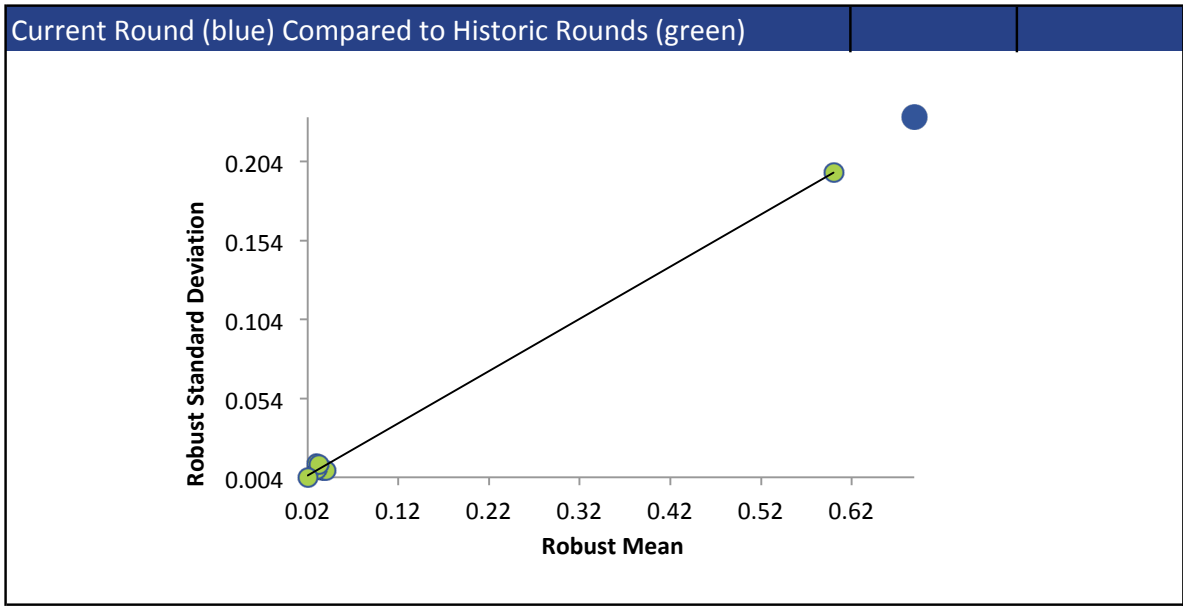
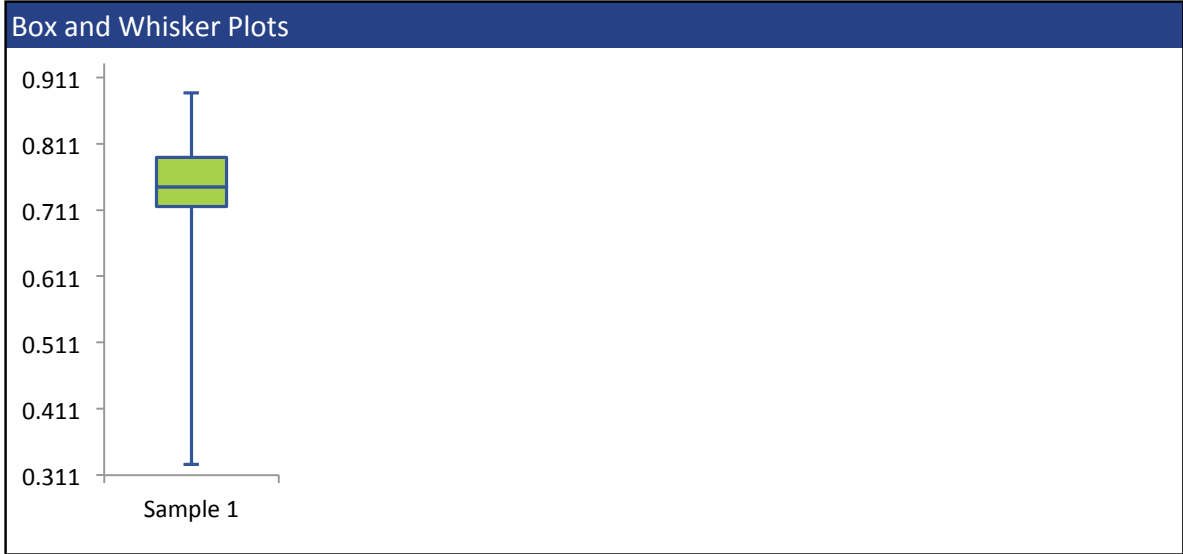


ACEPHATE



ACEPHATE

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	





## ALDICARB

## Summary Statistics

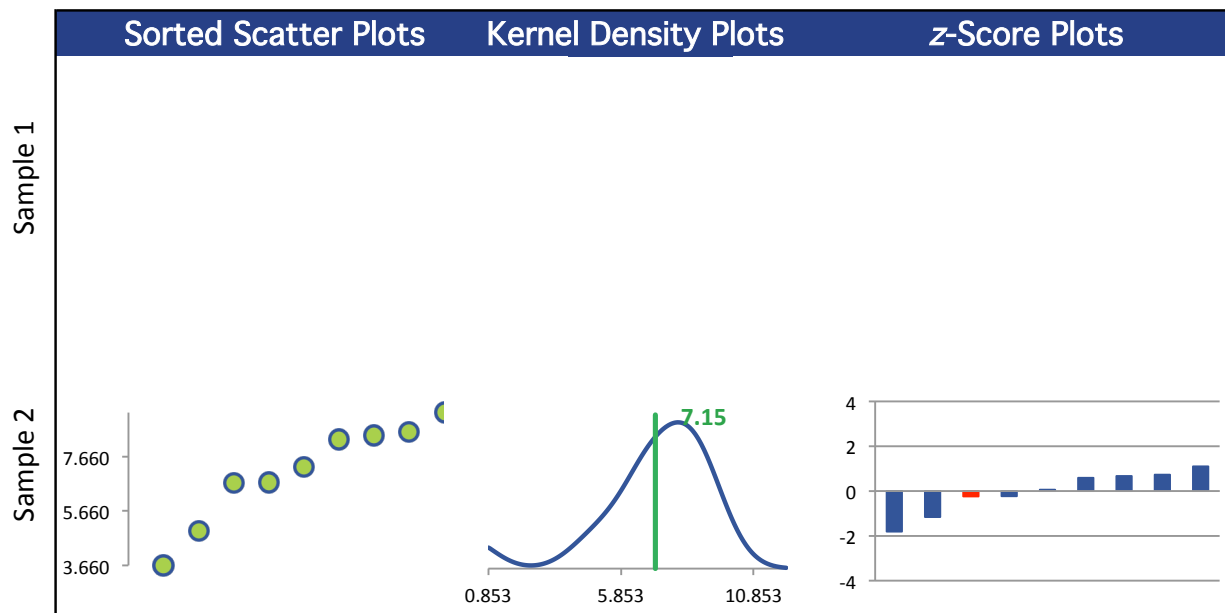
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	9	0	0
Median $\mu\text{g/g}$		7.27		
Robust Mean $\mu\text{g/g}$		7.15		
U $\mu\text{g/g}$		0.804		
Robust Standard Deviation $\mu\text{g/g}$		1.93		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		1.93		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	0	0	0

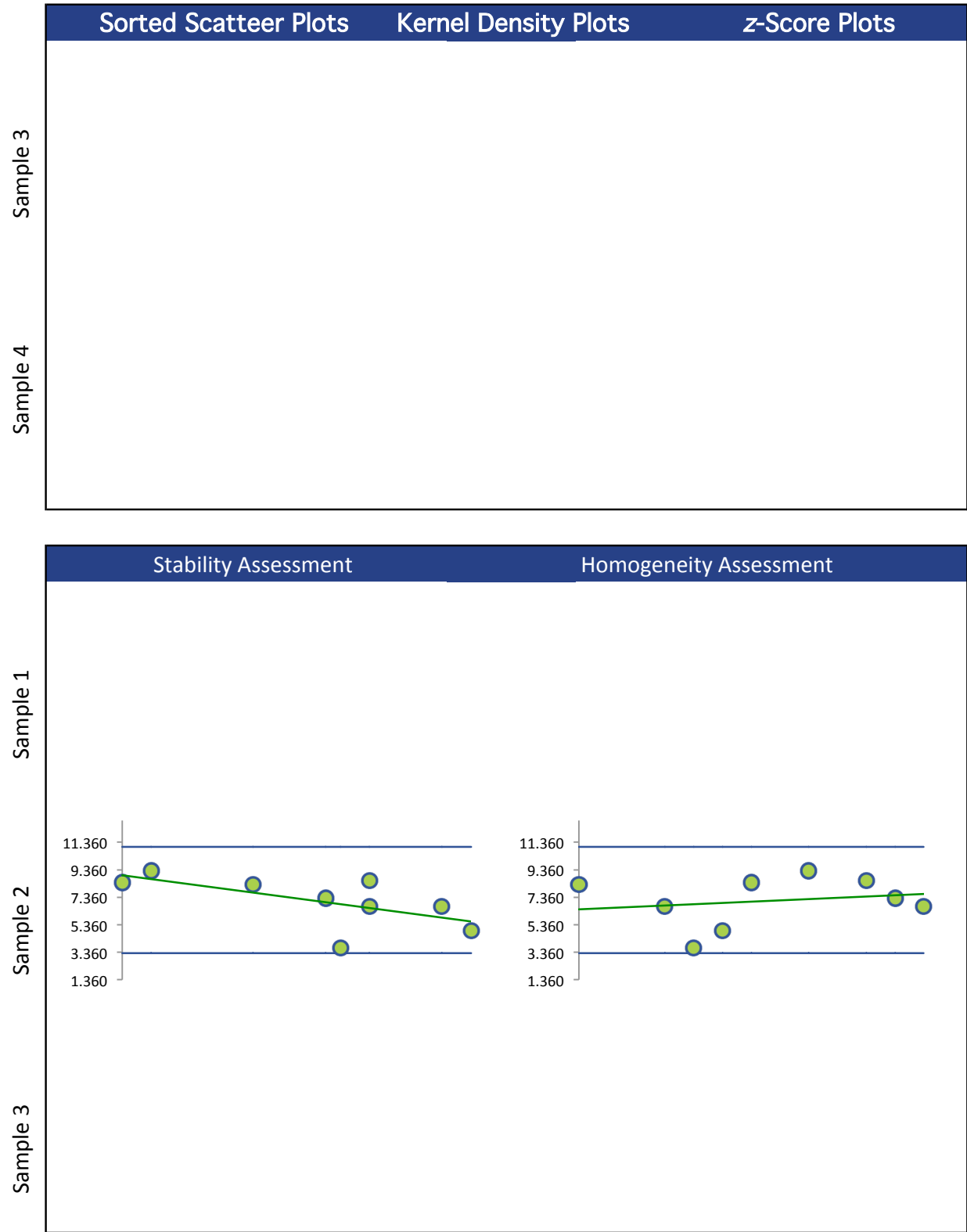
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	8	0	0
LC/MS (Red)	0	1	0	0

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

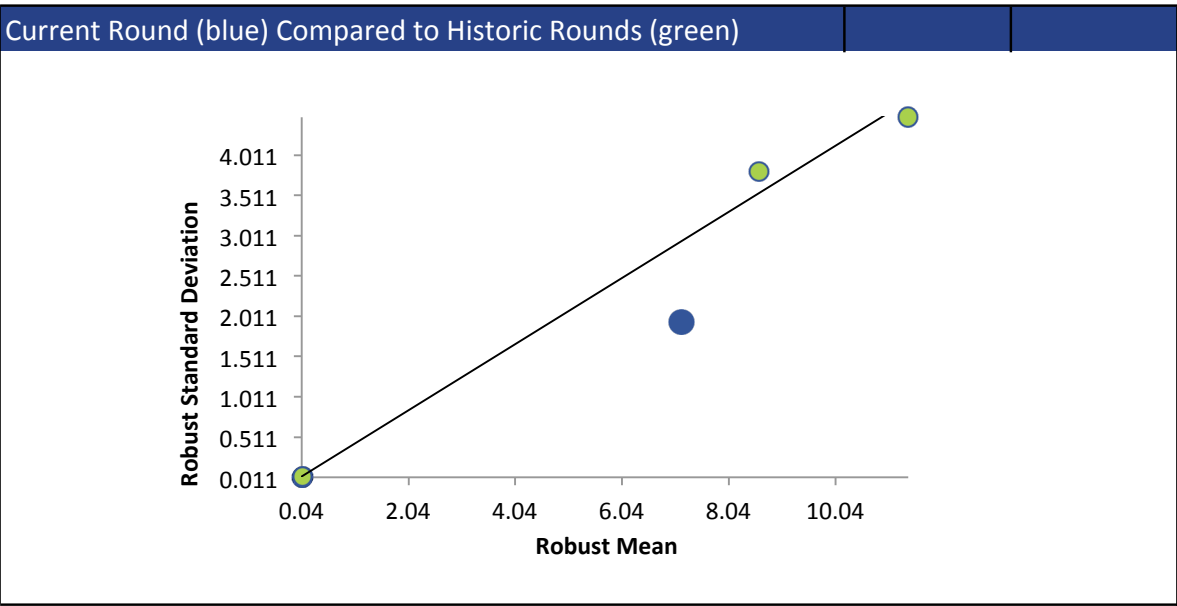
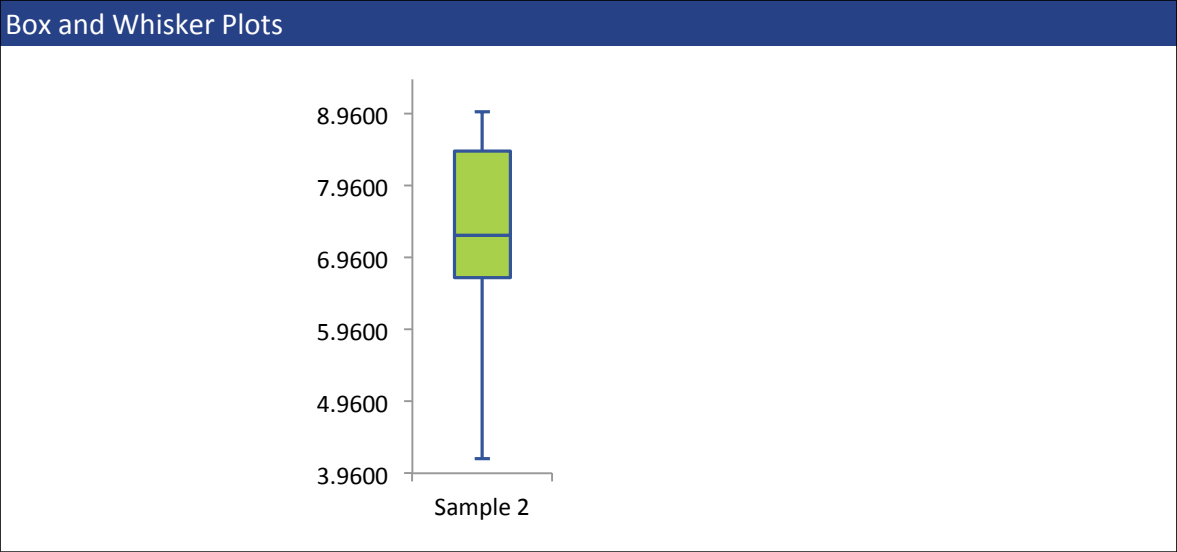


ALDICARB



ALDICARB

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## AZOXYSTROBIN

## Summary Statistics

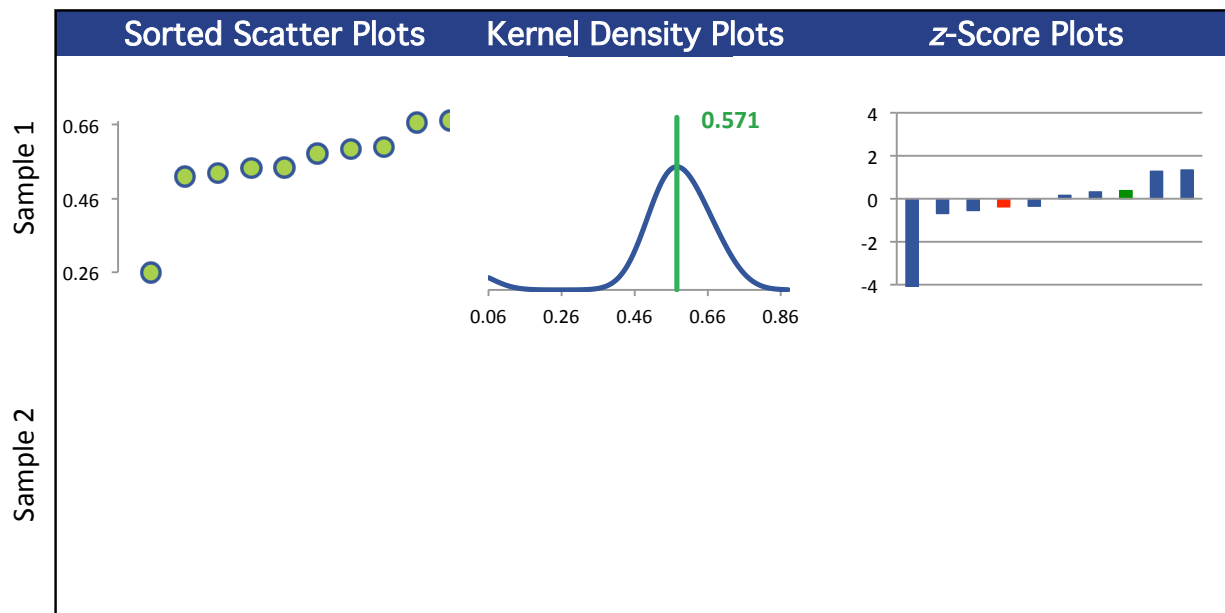
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.564			
Robust Mean $\mu\text{g/g}$	0.571			
U $\mu\text{g/g}$	0.0293			
Robust Standard Deviation $\mu\text{g/g}$	0.0741			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.0741			
Outliers	0	0	0	0
$ z  > 3.0$	1	0	0	0
$2 <  z  < 3$	0	0	0	0

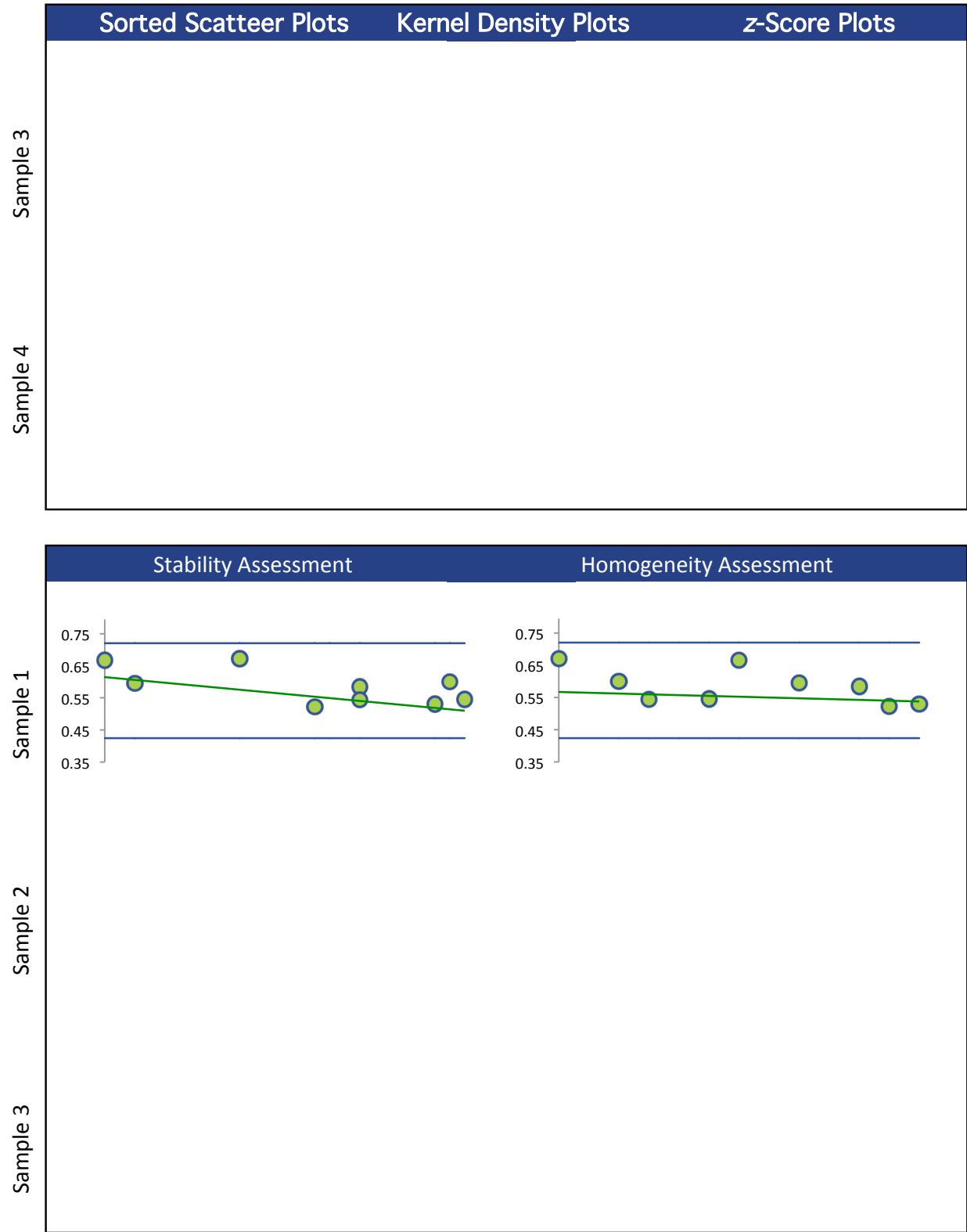
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	0	0	0
LC/MS (Red)	1	0	0	0
GC/MS/MS (Green)	1	0	0	0

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

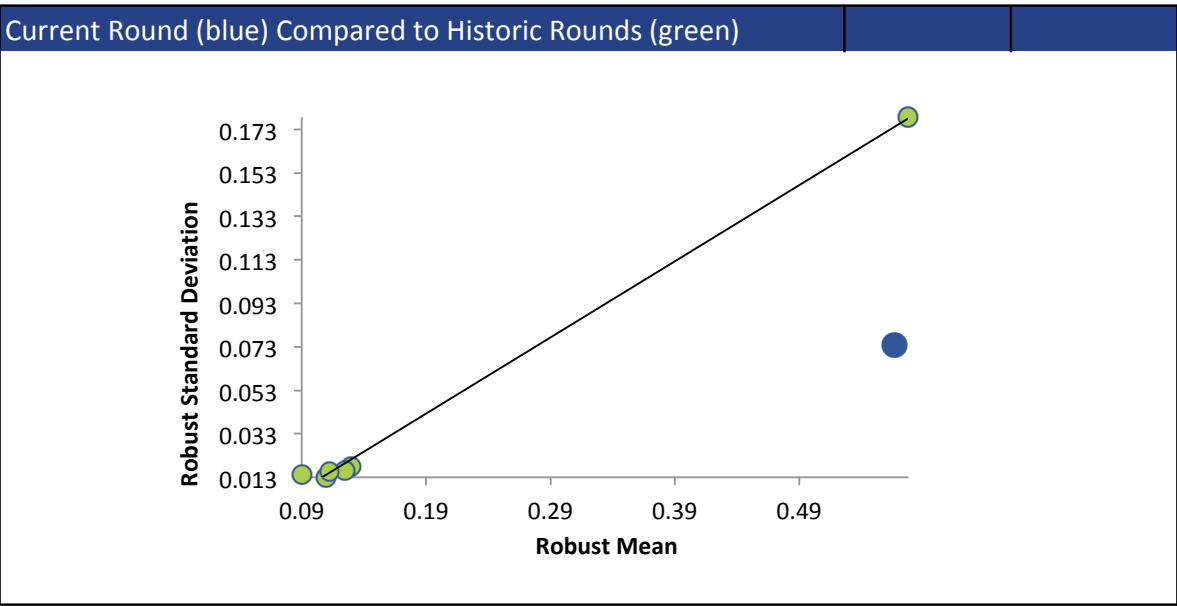


AZOXYSTROBIN



AZOXYSTROBIN

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## BIFENAZATE

## Summary Statistics

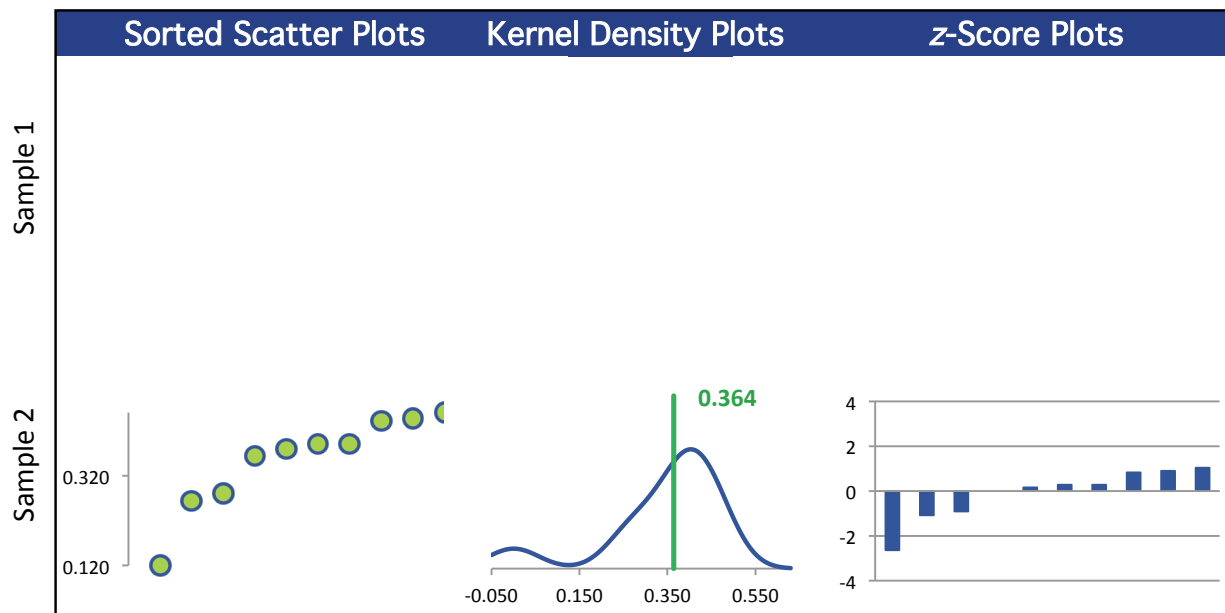
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.385		
Robust Mean $\mu\text{g/g}$		0.364		
U $\mu\text{g/g}$		0.0366		
Robust Standard Deviation $\mu\text{g/g}$		0.0925		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.0925		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	1	0	0

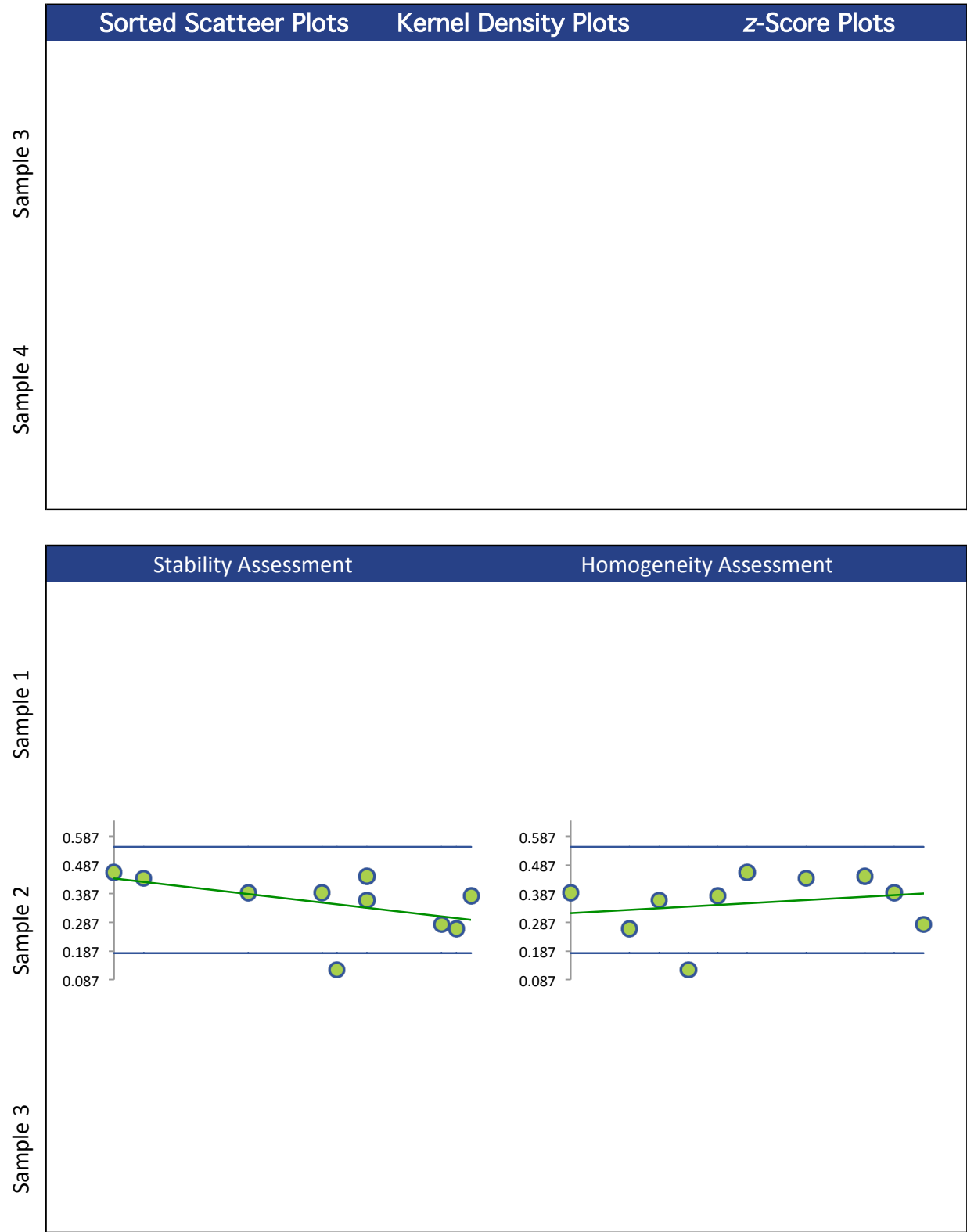
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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



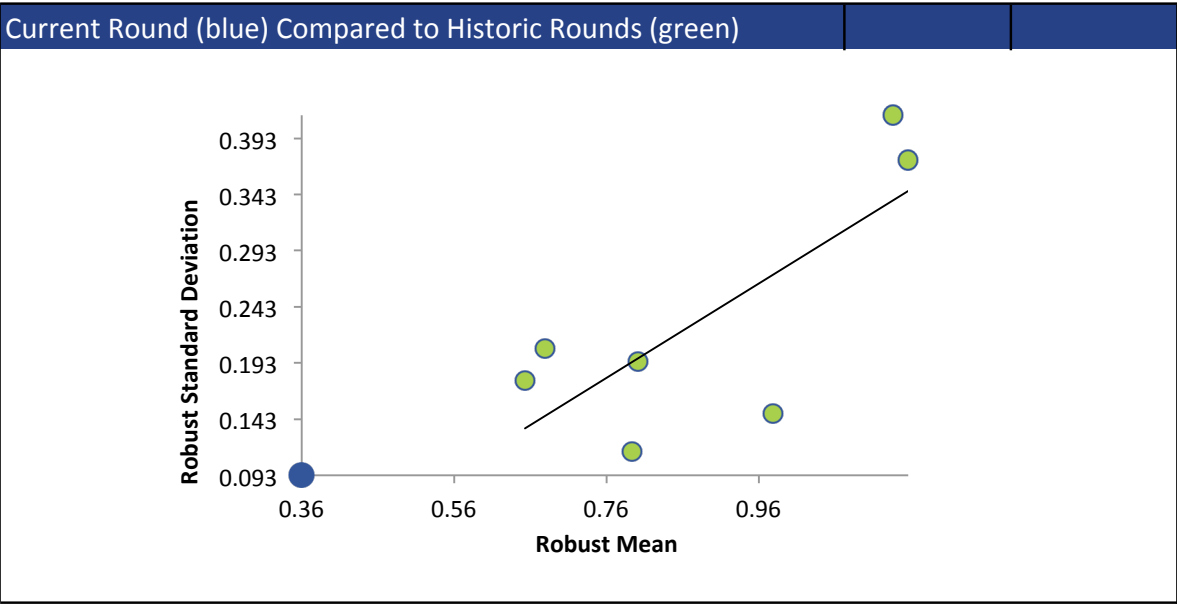
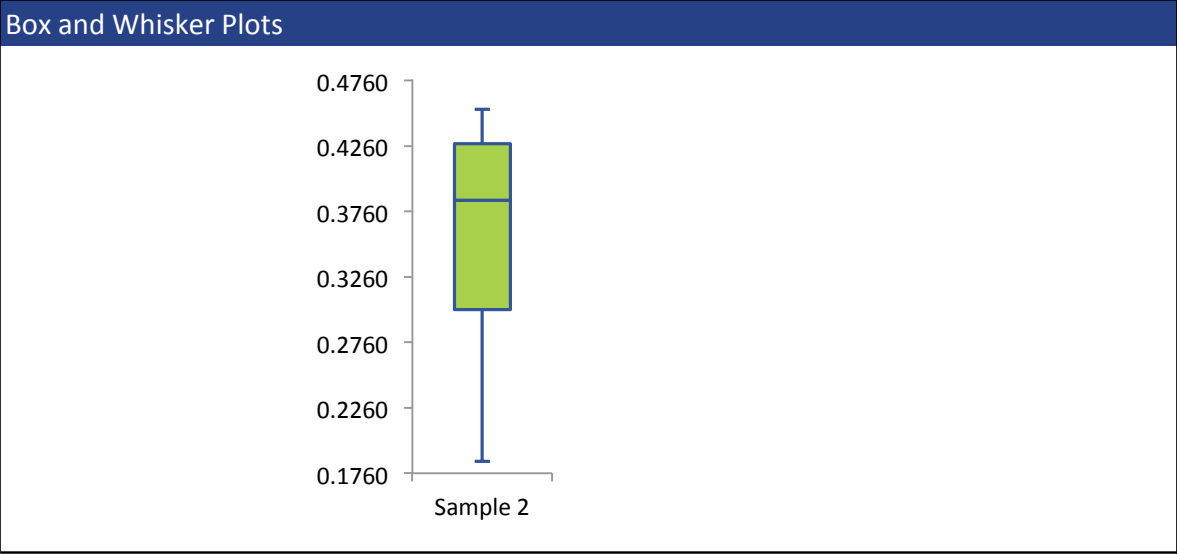
BIFENAZATE





BIFENAZATE

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## BOSCALID

## Summary Statistics

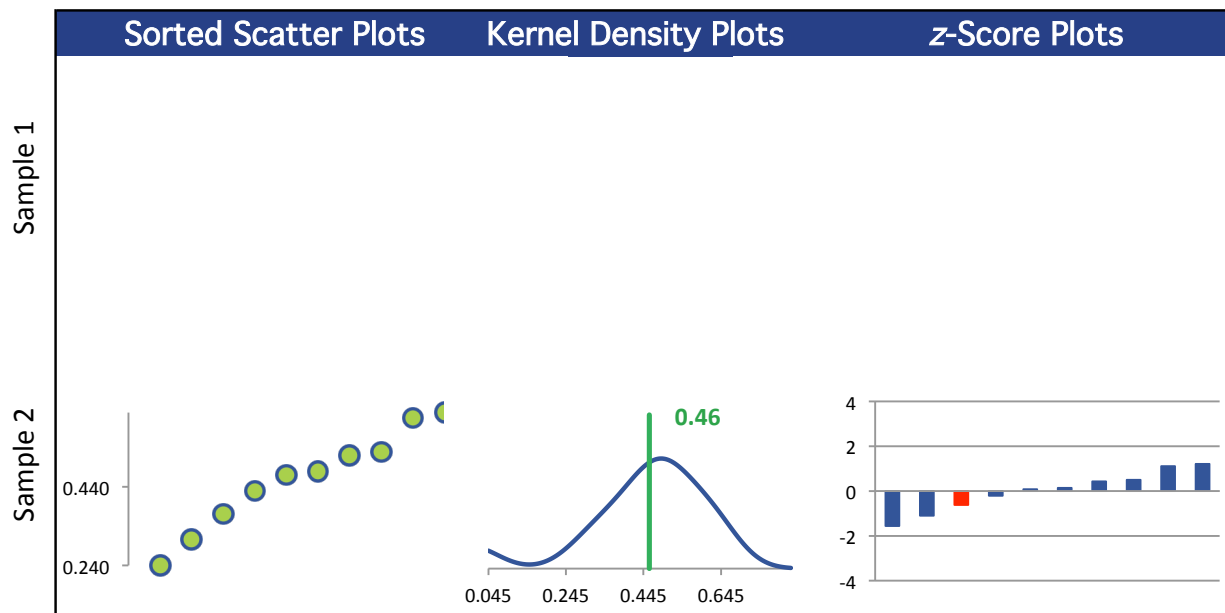
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.475		
Robust Mean $\mu\text{g/g}$		0.460		
U $\mu\text{g/g}$		0.0557		
Robust Standard Deviation $\mu\text{g/g}$		0.141		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.141		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	0	0	0

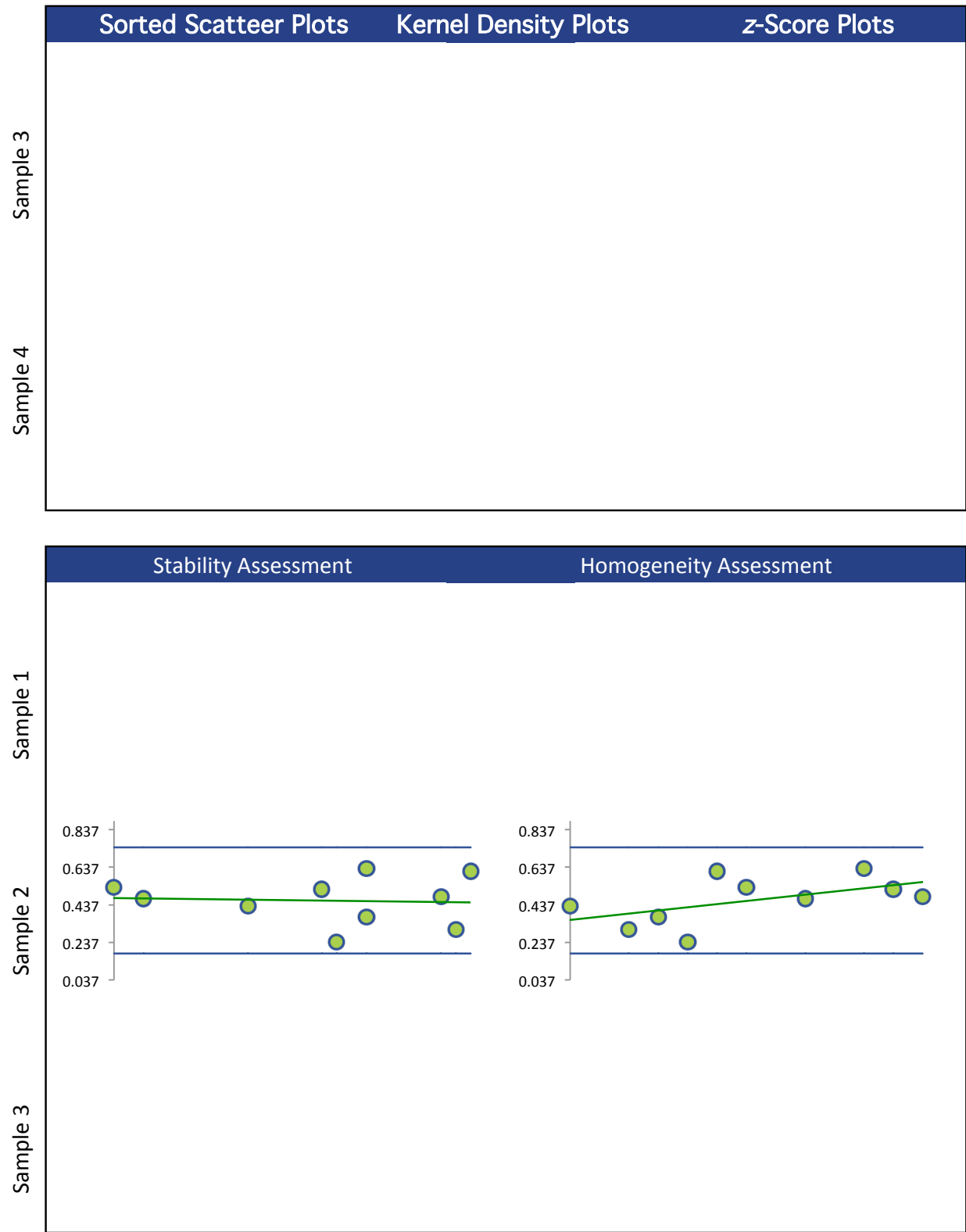
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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



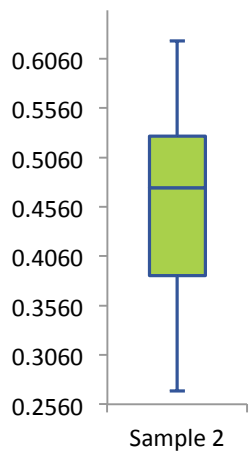
BOSCALID



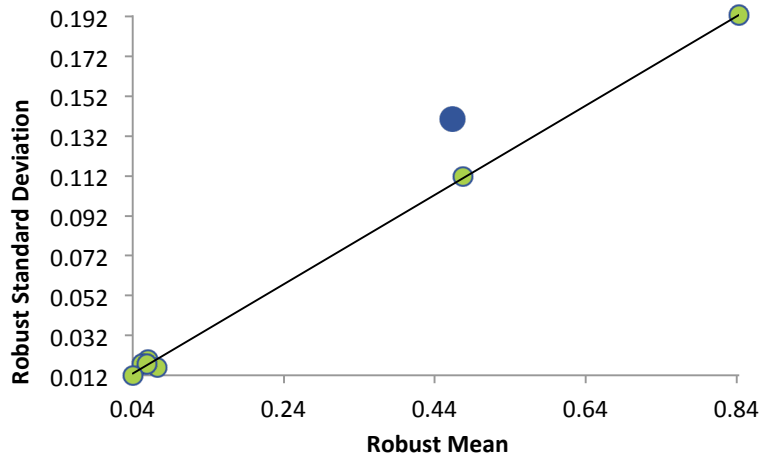
BOSCALID

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	

Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



## CARBARYL

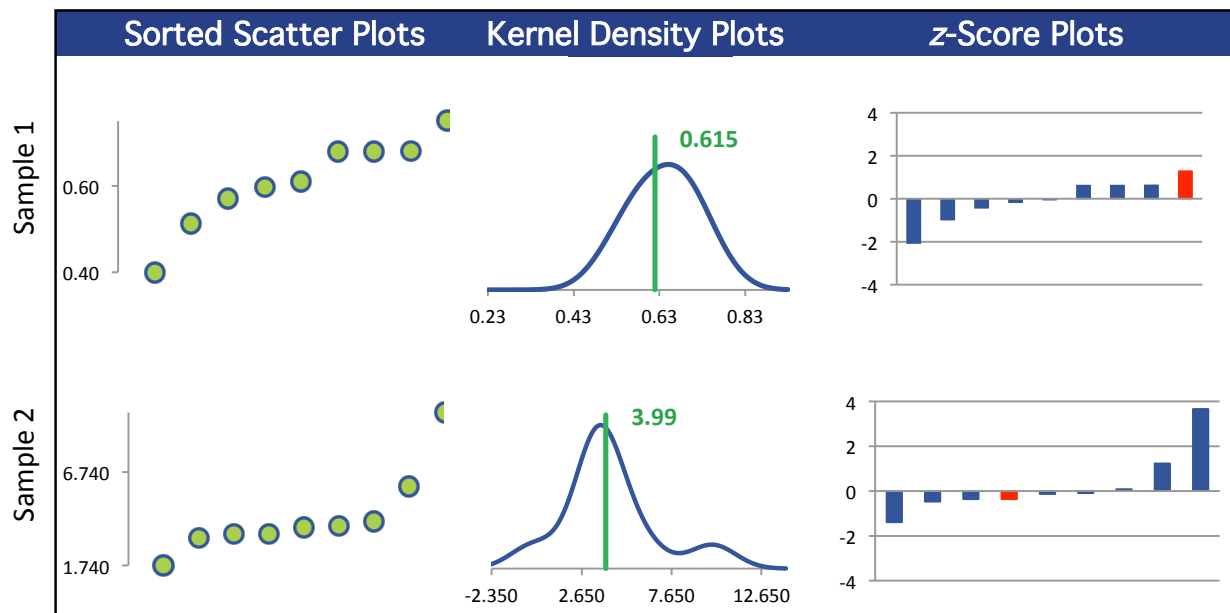
## Summary Statistics

Statistic	C71-1	C71-2	C71-3	C71-4
N	9	9	0	0
Median $\mu\text{g/g}$	0.610	3.78		
Robust Mean $\mu\text{g/g}$	0.615	3.99		
U $\mu\text{g/g}$	0.0433	0.675		
Robust Standard Deviation $\mu\text{g/g}$	0.104	1.62		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.104	1.62		
Outliers	1	0	0	0
$ z  > 3.0$	0	1	0	0
$2 <  z  < 3$	1	0	0	0

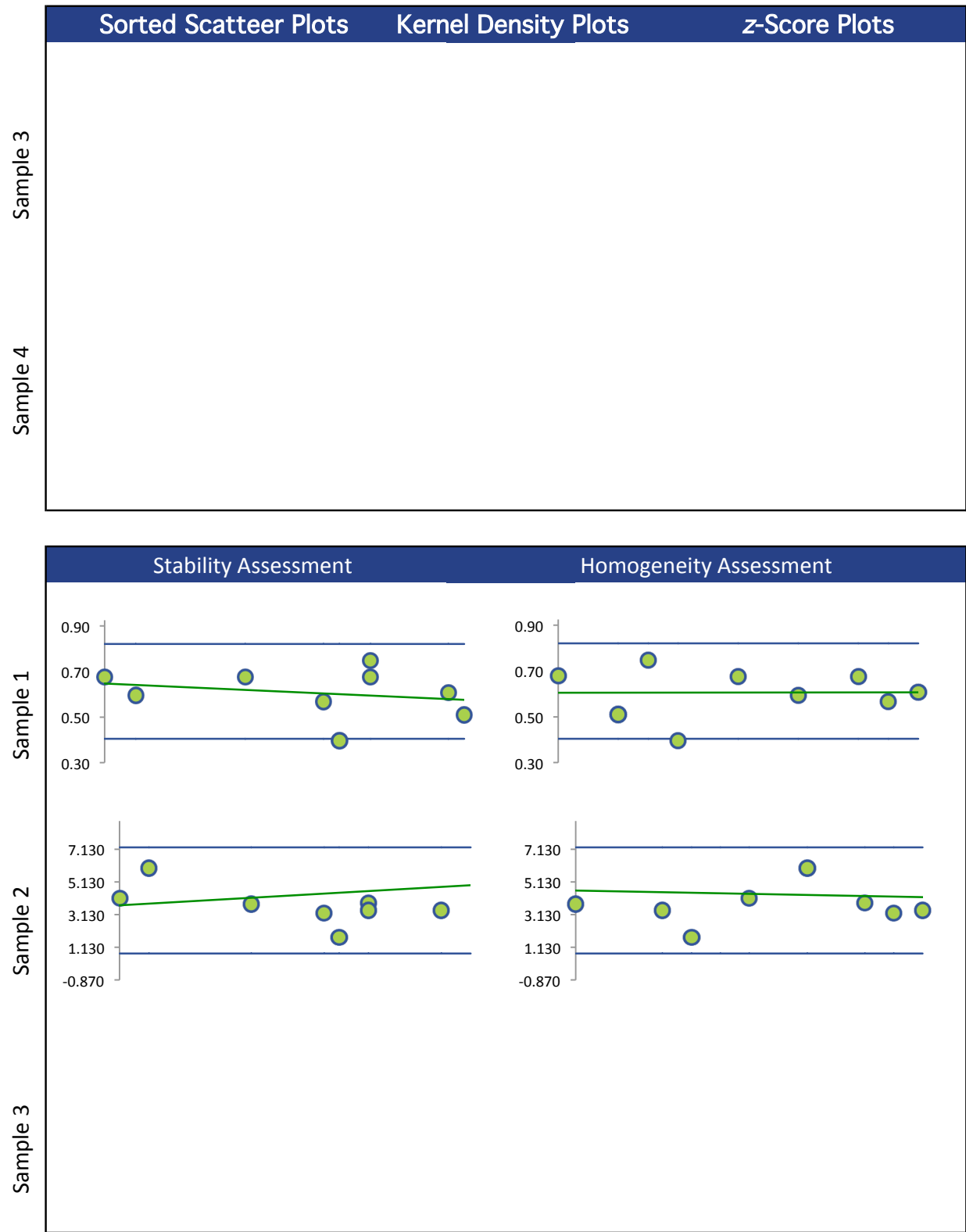
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	8	0	0
LC/MS (Red)	1	1	0	0

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

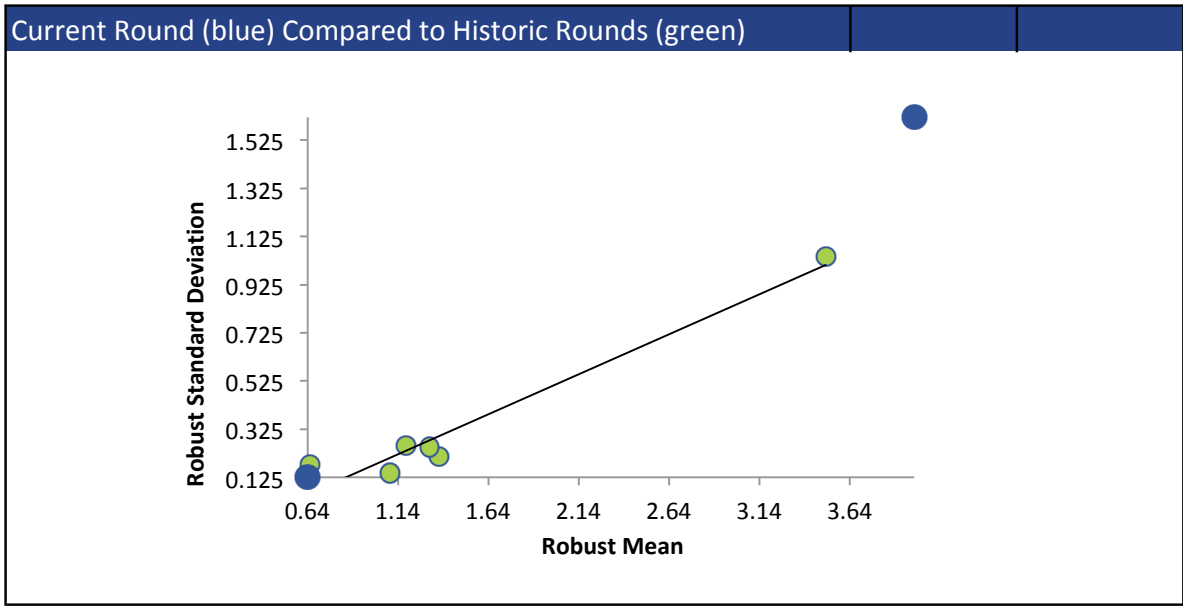
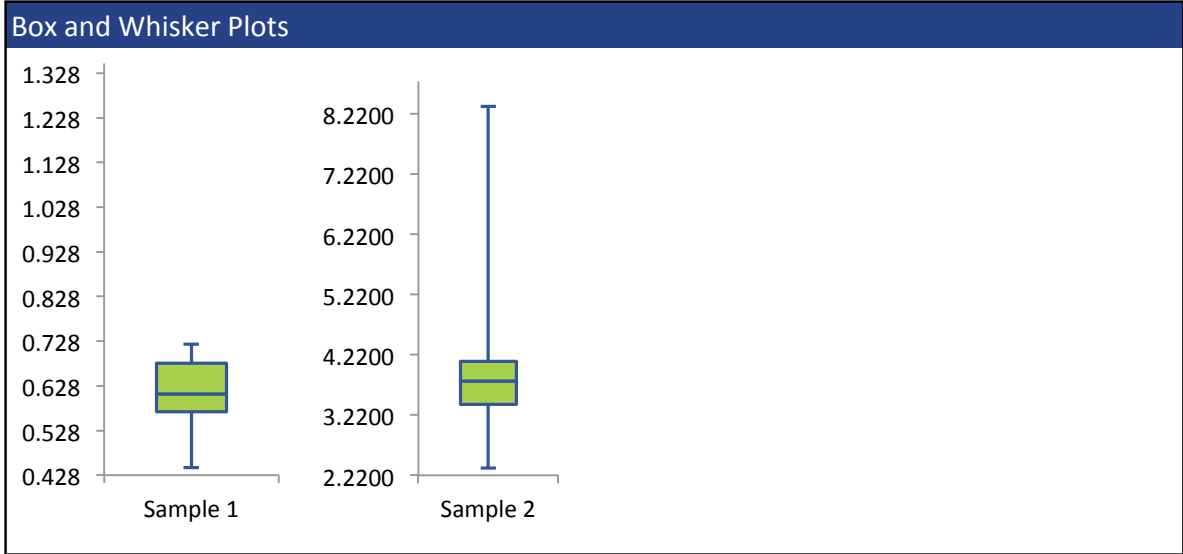


CARBARYL



CARBARYL

Sample 4	Stability Assessment	Homogeneity Assessment
	<p>Stability assessments are regression analysis of reported result against date of analysis.</p> <p>Homogeneity assessments are regression analysis of reported result against bottling order.</p>	



## CARBOFURAN

## Summary Statistics

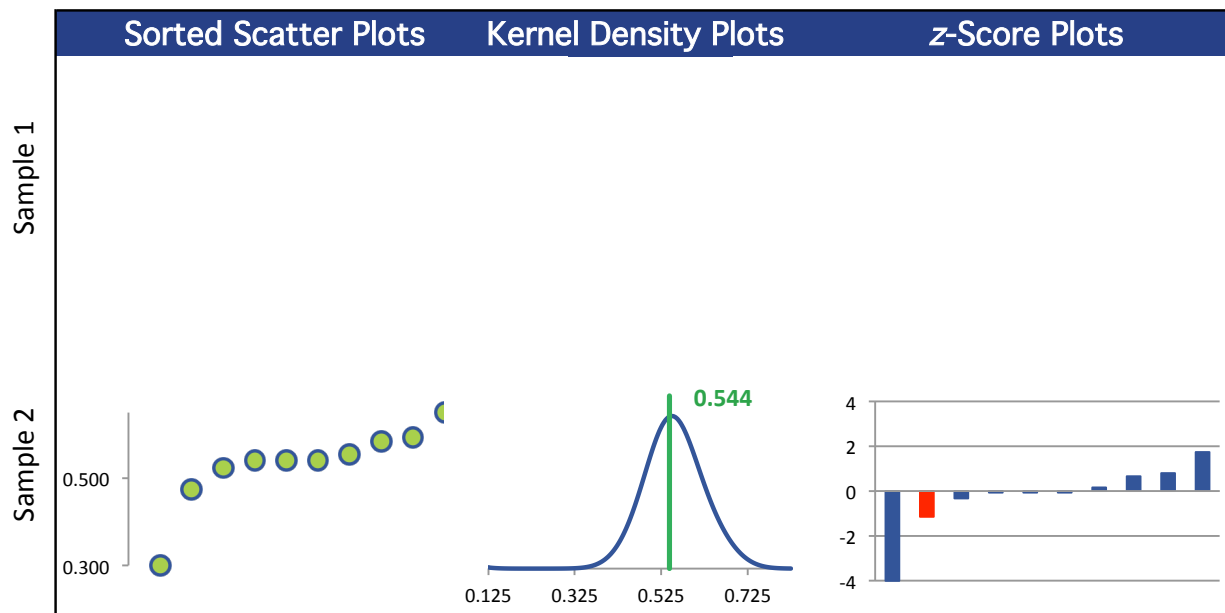
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.540		
Robust Mean $\mu\text{g/g}$		0.544		
U $\mu\text{g/g}$		0.0241		
Robust Standard Deviation $\mu\text{g/g}$		0.0609		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.0609		
Outliers	0	0	0	0
$ z  > 3.0$	0	1	0	0
$2 <  z  < 3$	0	0	0	0

## Methods Used

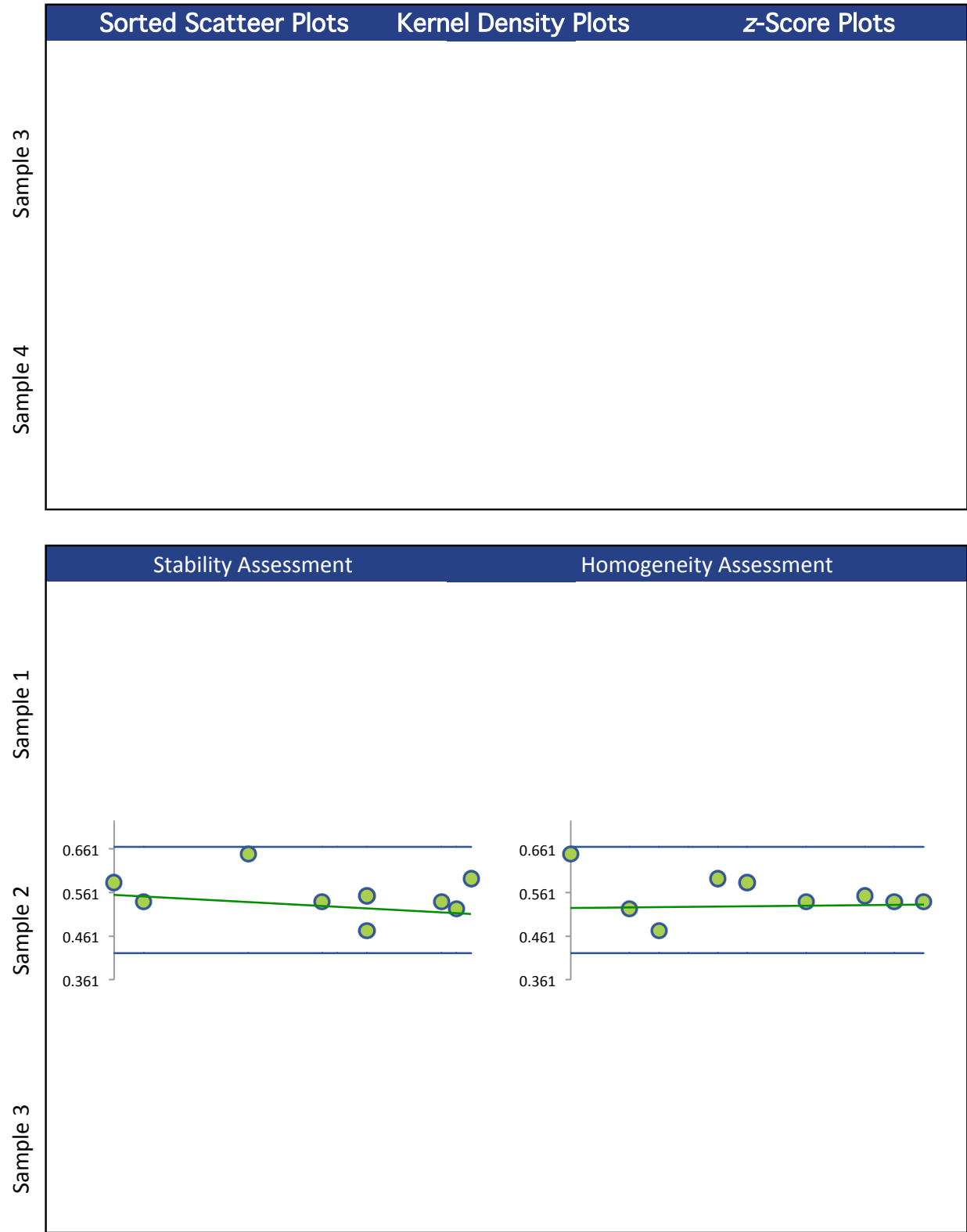
Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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



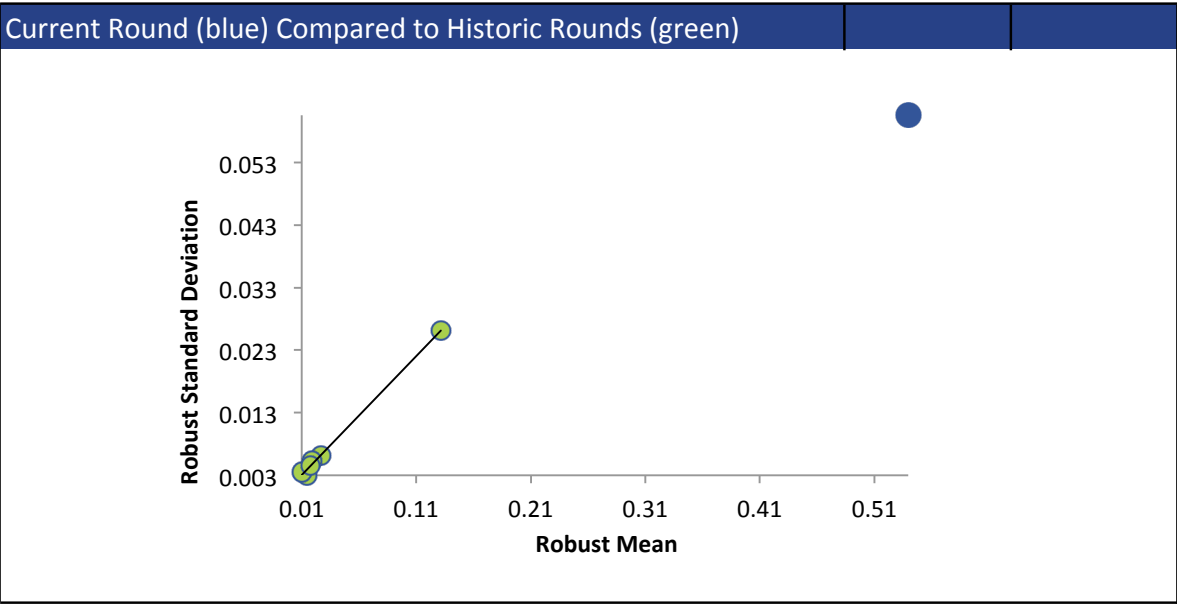
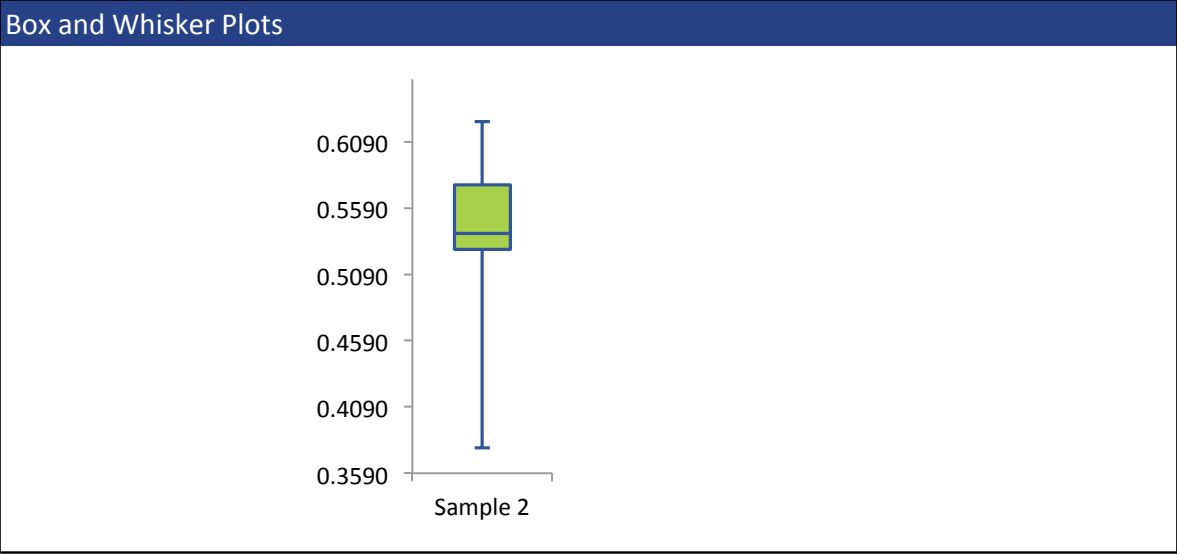


CARBOFURAN



CARBOFURAN

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## DIAZINON

## Summary Statistics

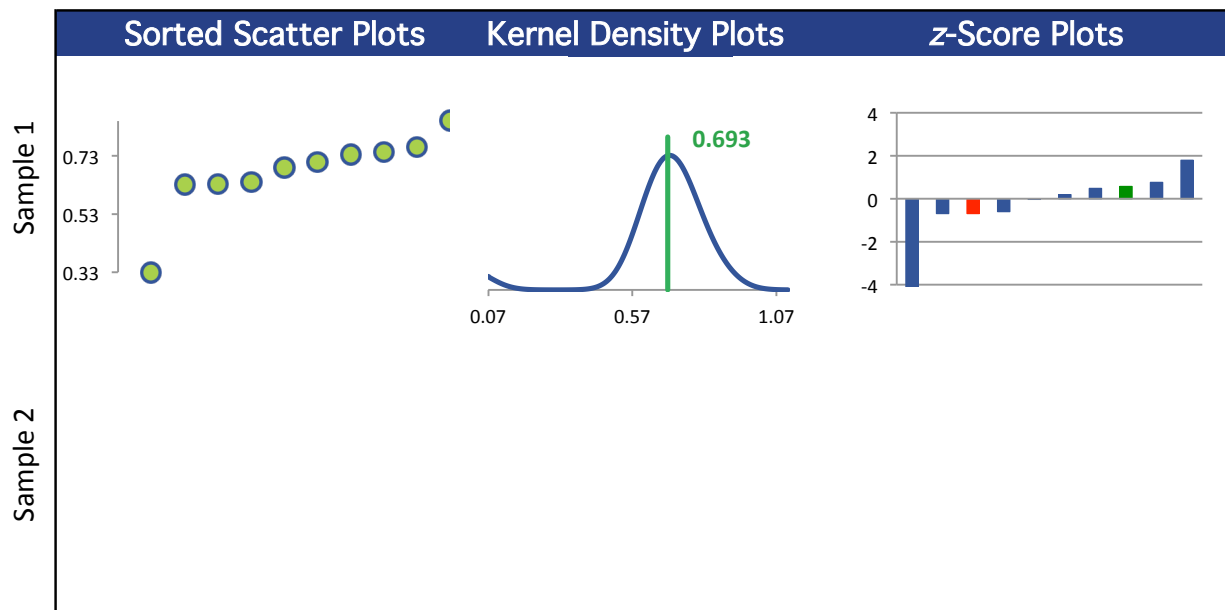
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.700			
Robust Mean $\mu\text{g/g}$	0.693			
U $\mu\text{g/g}$	0.0347			
Robust Standard Deviation $\mu\text{g/g}$	0.0877			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.0877			
Outliers	0	0	0	0
$ z  > 3.0$	1	0	0	0
$2 <  z  < 3$	0	0	0	0

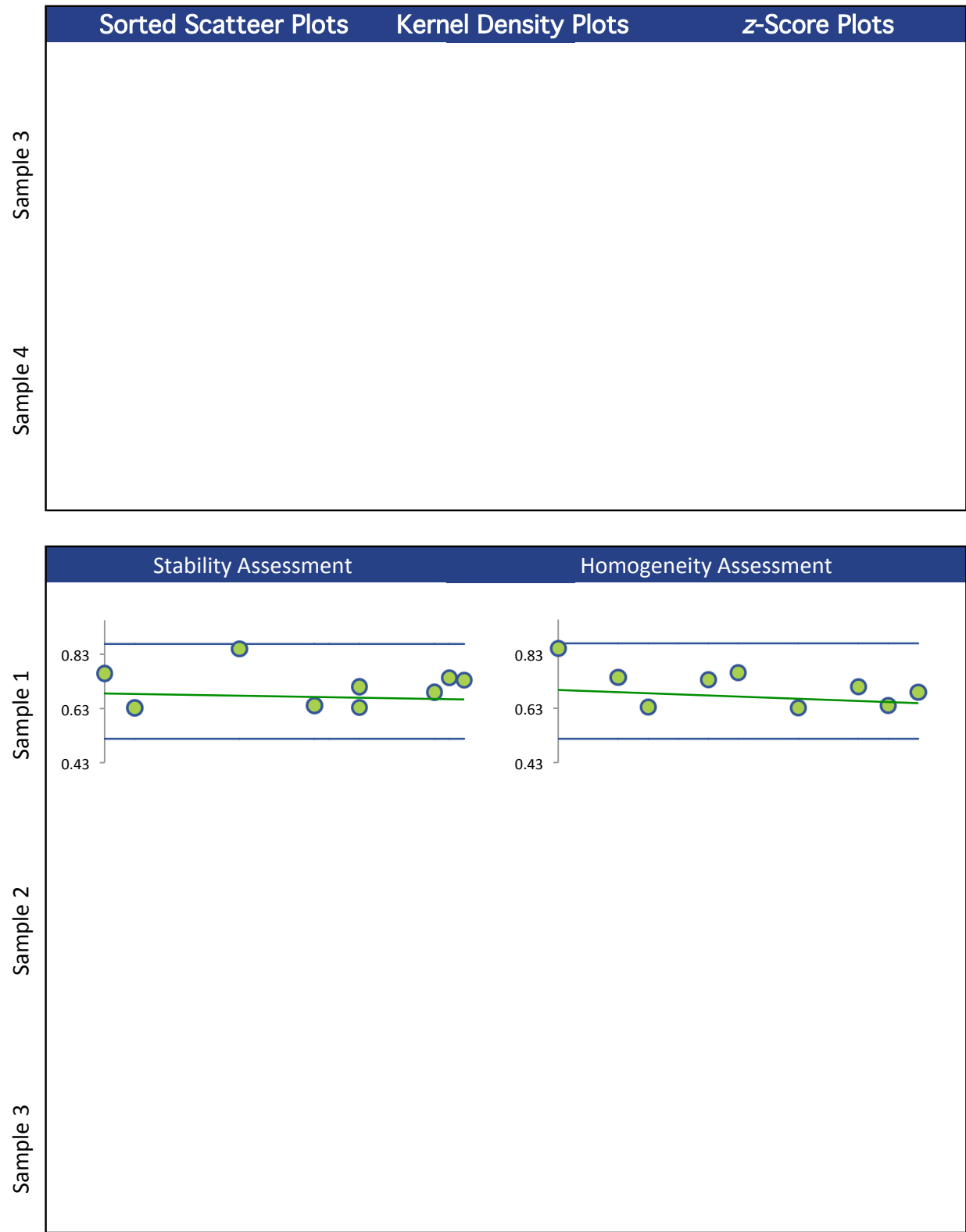
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	0	0	0
LC/MS (Red)	1	0	0	0
GC/MS/MS (Green)	1	0	0	0

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



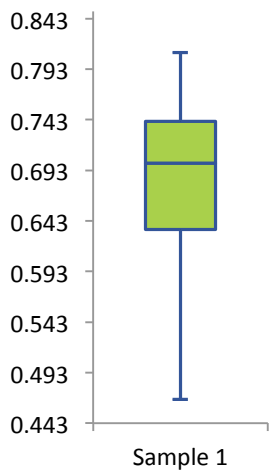
DIAZINON



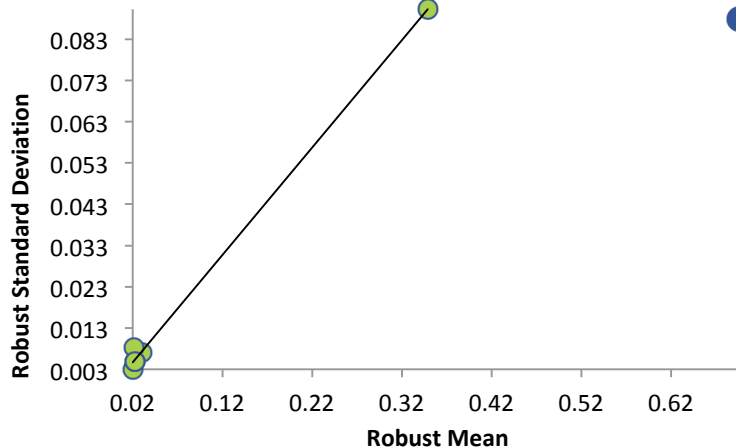
DIAZINON

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	

Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



## DICHLORVOS (DDVP)

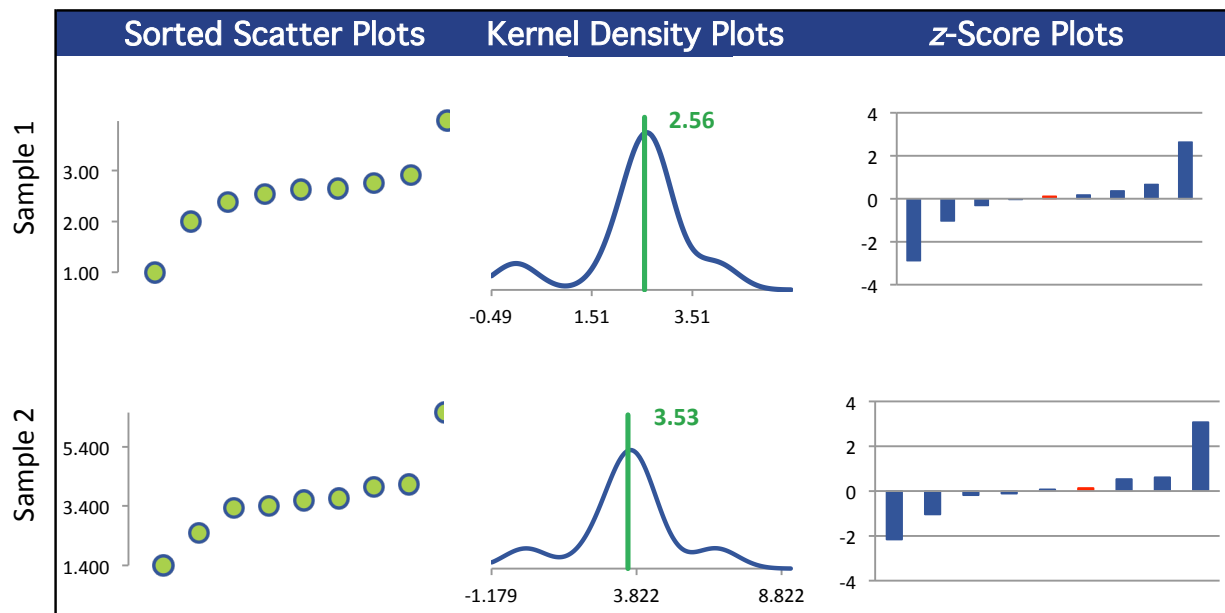
## Summary Statistics

Statistic	C71-1	C71-2	C71-3	C71-4
N	9	9	0	0
Median $\mu\text{g/g}$	2.63	3.60		
Robust Mean $\mu\text{g/g}$	2.56	3.53		
U $\mu\text{g/g}$	0.225	0.411		
Robust Standard Deviation $\mu\text{g/g}$	0.539	0.987		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.539	0.987		
Outliers	0	0	0	0
$ z  > 3.0$	0	1	0	0
$2 <  z  < 3$	2	1	0	0

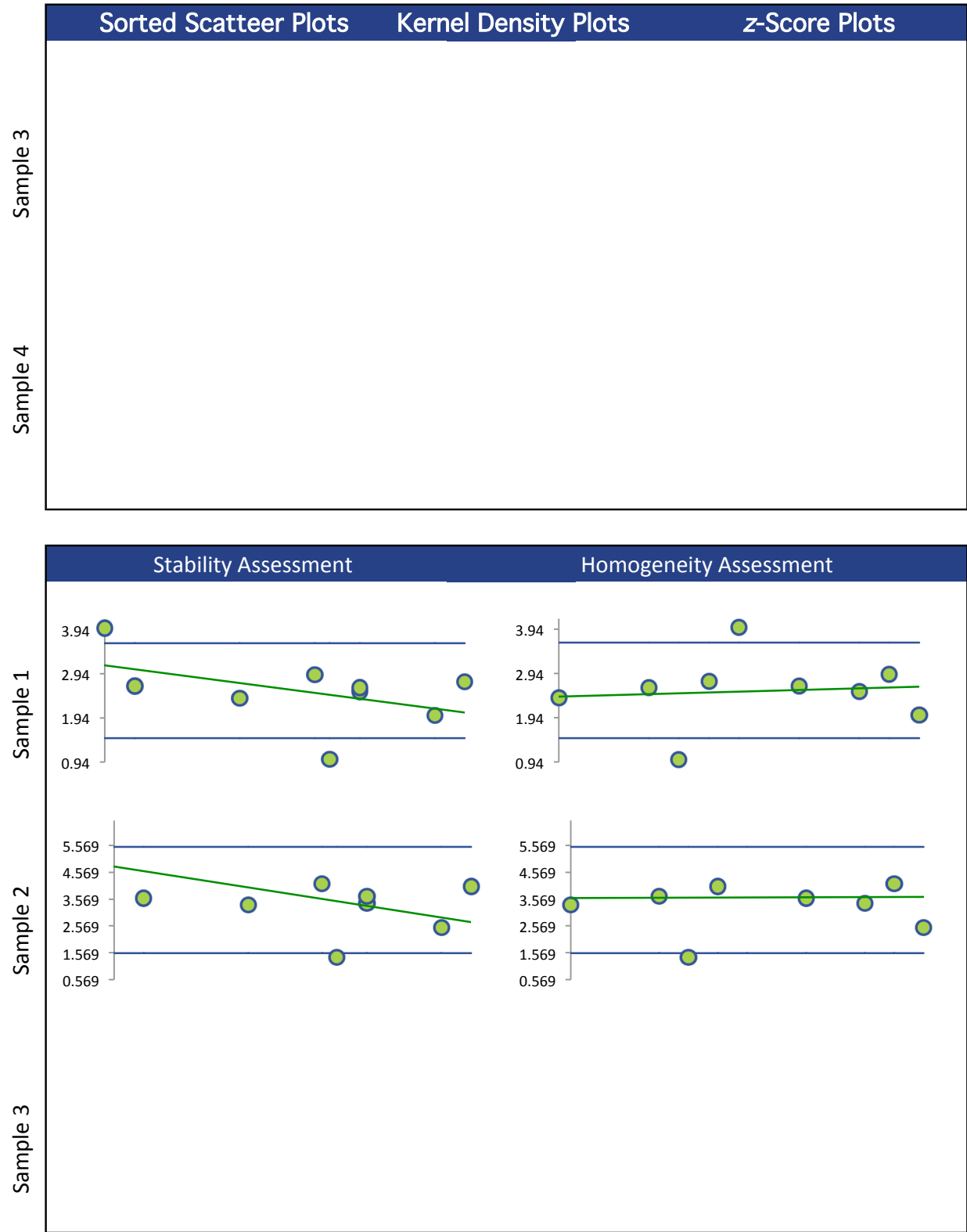
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	8	0	0
LC/MS (Red)	1	1	0	0

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

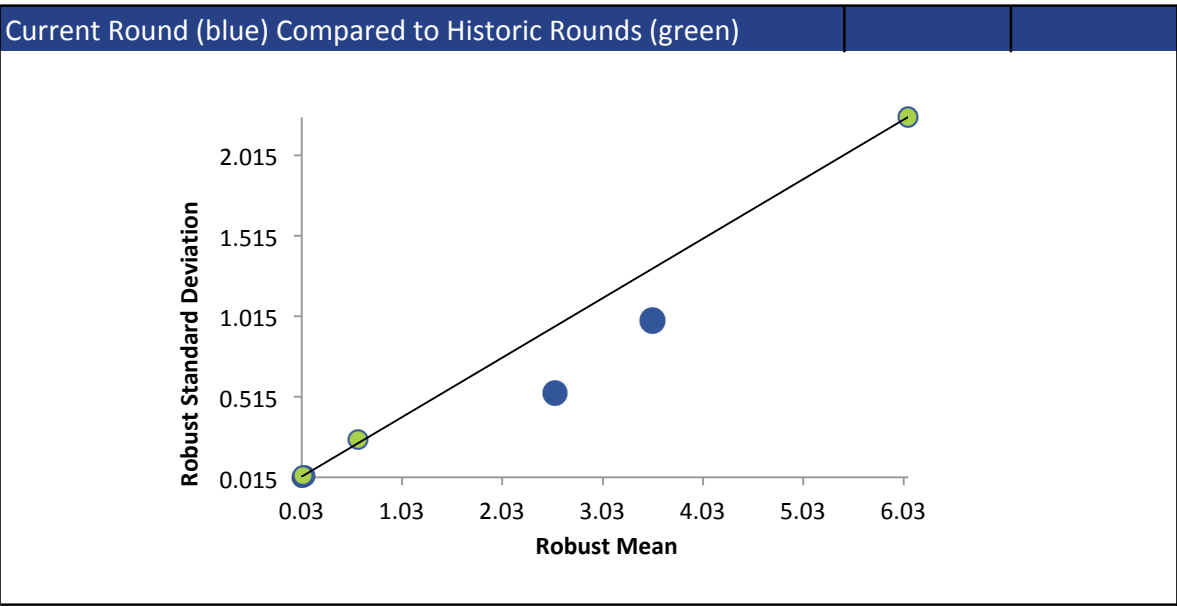
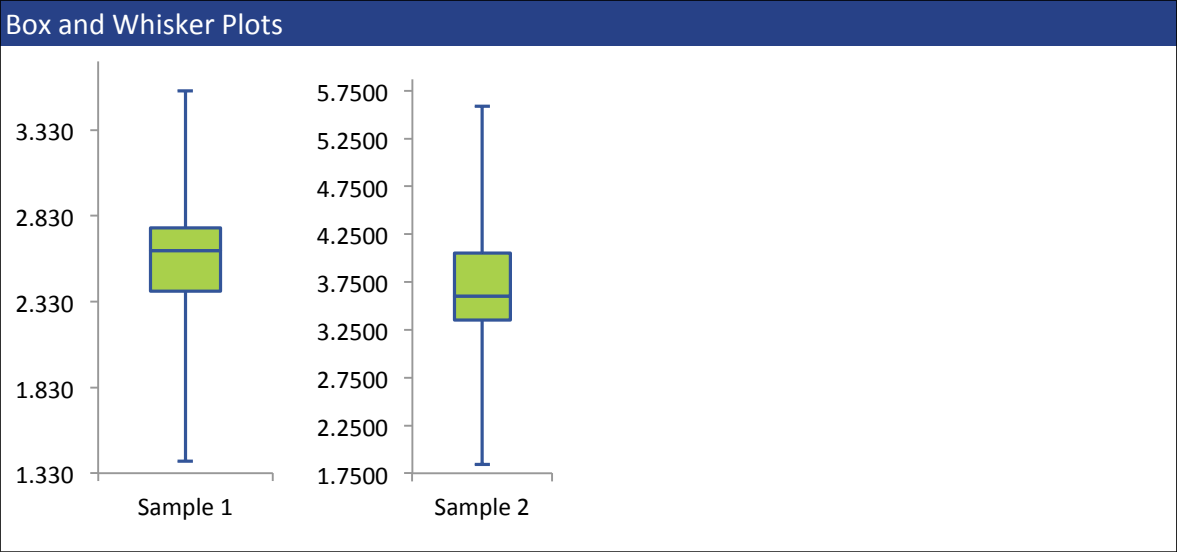


DICHLORVOS (DDVP)



DICHLORVOS (DDVP)

Stability Assessment		Homogeneity Assessment	
Sample 4			
	Stability assessments are regression analysis of reported result against date of analysis. Homogeneity assessments are regression analysis of reported result against bottling order.		





## DIMETHOATE

## Summary Statistics

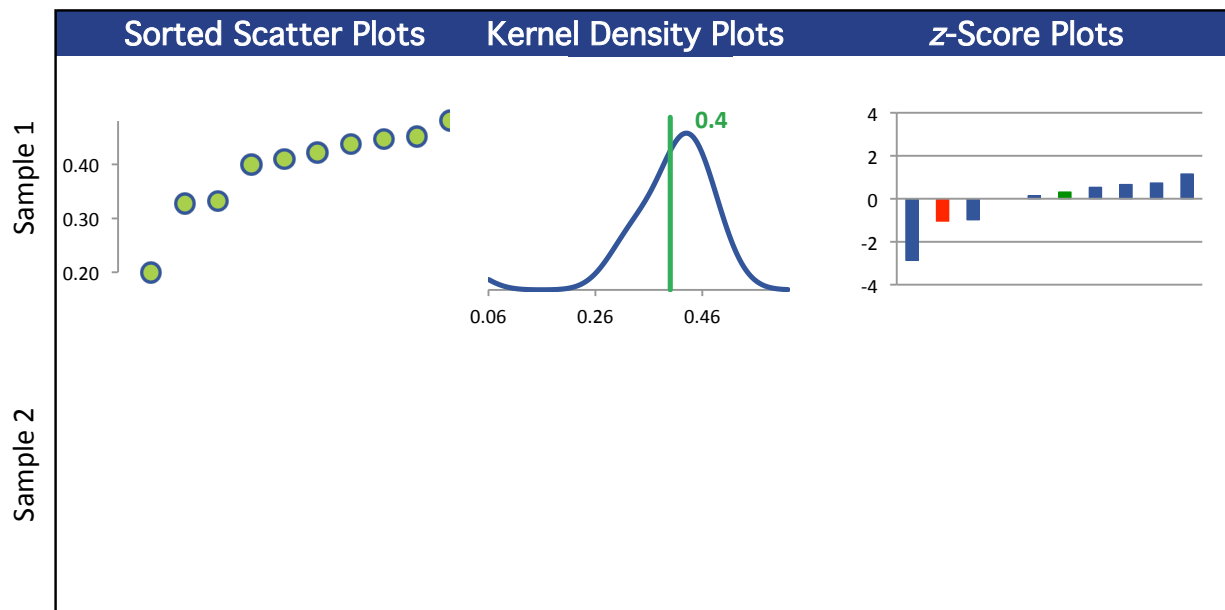
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.416			
Robust Mean $\mu\text{g/g}$	0.400			
U $\mu\text{g/g}$	0.0276			
Robust Standard Deviation $\mu\text{g/g}$	0.0698			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.0698			
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	1	0	0	0

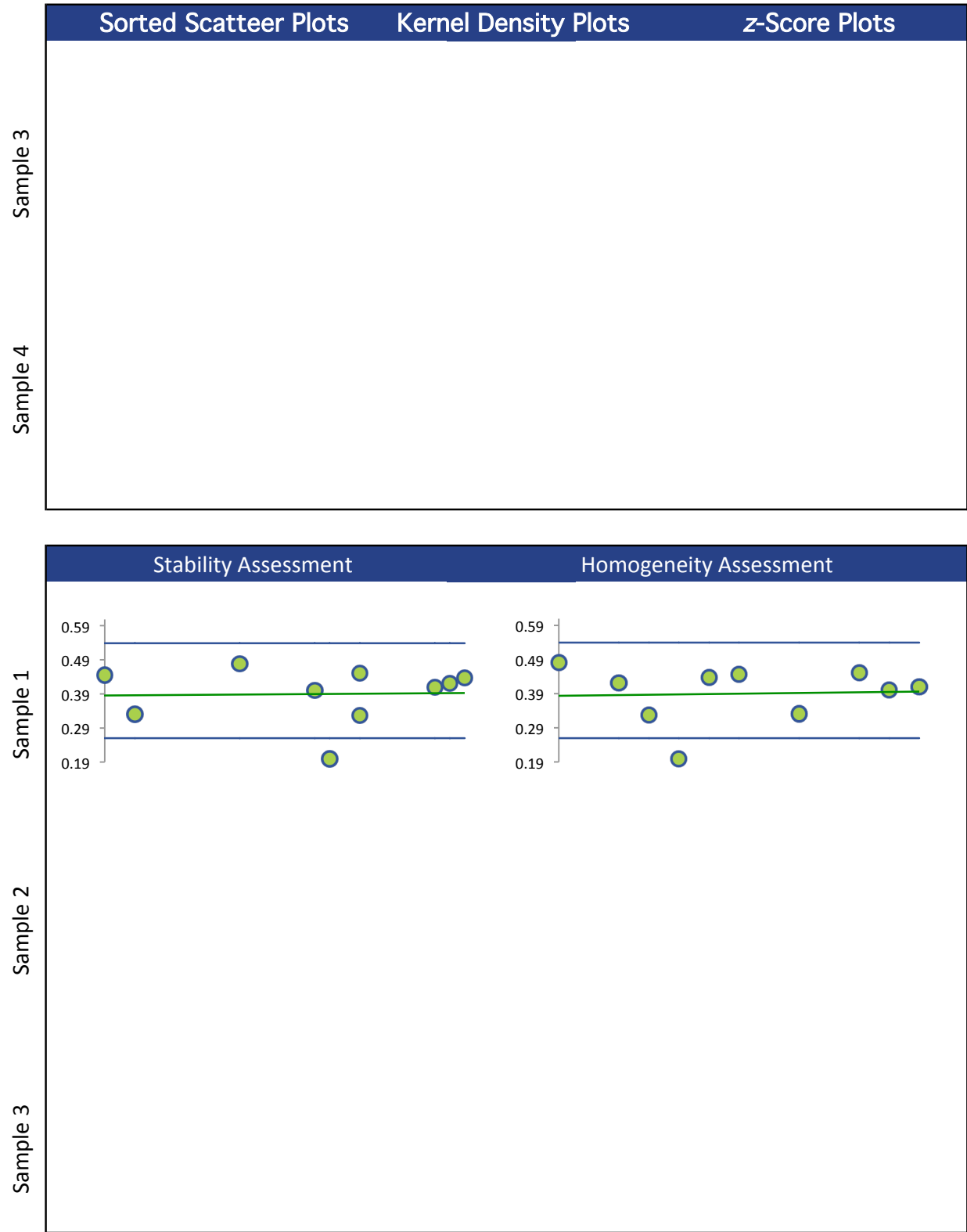
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	0	0	0
LC/MS (Red)	1	0	0	0
GC/MS/MS (Green)	1	0	0	0

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

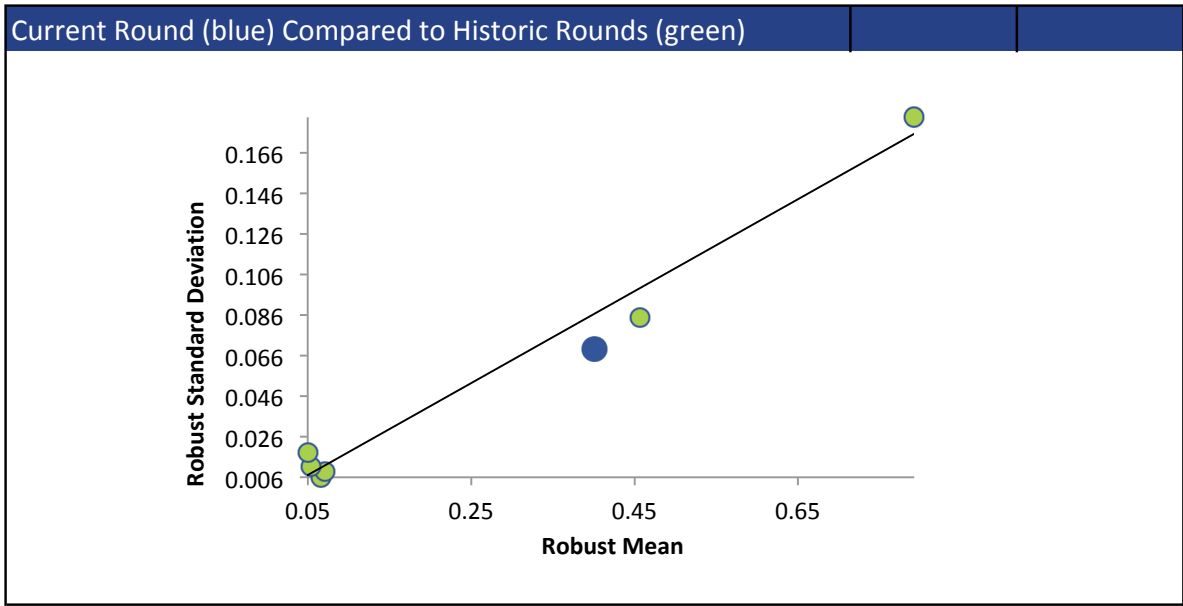
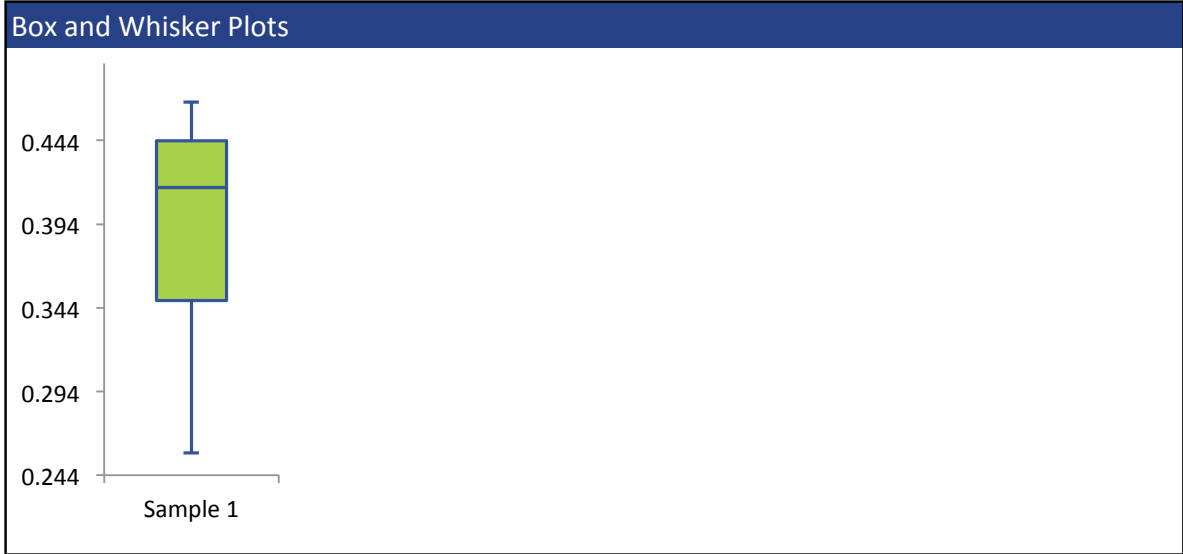


DIMETHOATE



DIMETHOATE

Stability Assessment		Homogeneity Assessment	
Sample 4			
	Stability assessments are regression analysis of reported result against date of analysis. Homogeneity assessments are regression analysis of reported result against bottling order.		



## ETHOPROPHOS

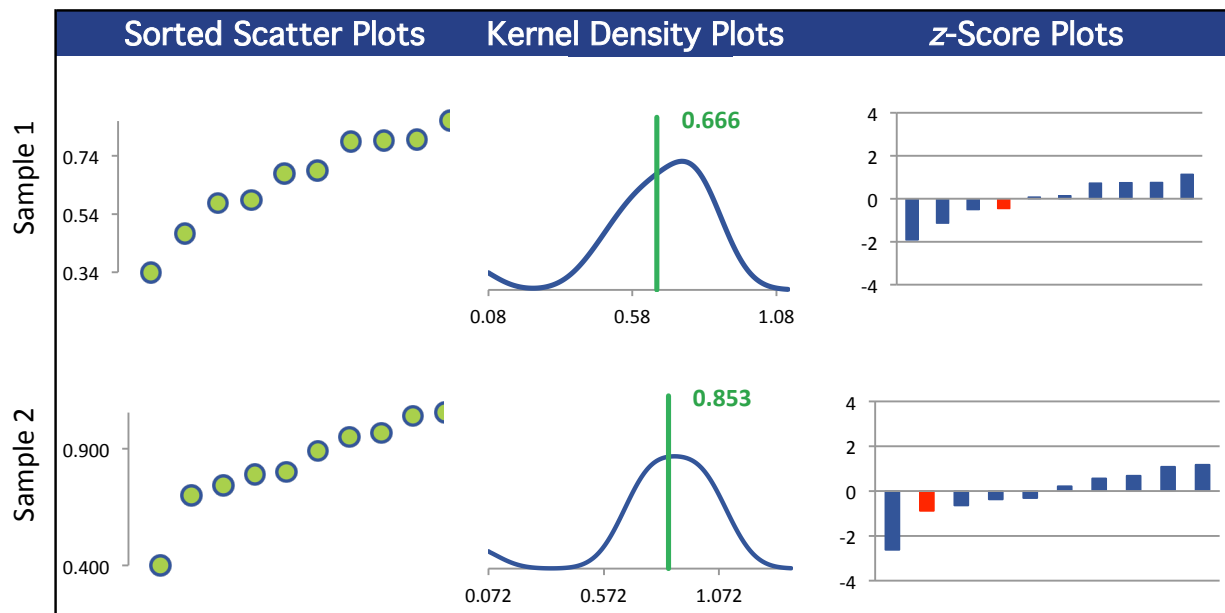
## Summary Statistics

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	10	0	0
Median $\mu\text{g/g}$	0.685	0.845		
Robust Mean $\mu\text{g/g}$	0.666	0.853		
U $\mu\text{g/g}$	0.0672	0.0684		
Robust Standard Deviation $\mu\text{g/g}$	0.170	0.173		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.170	0.173		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	1	0	0

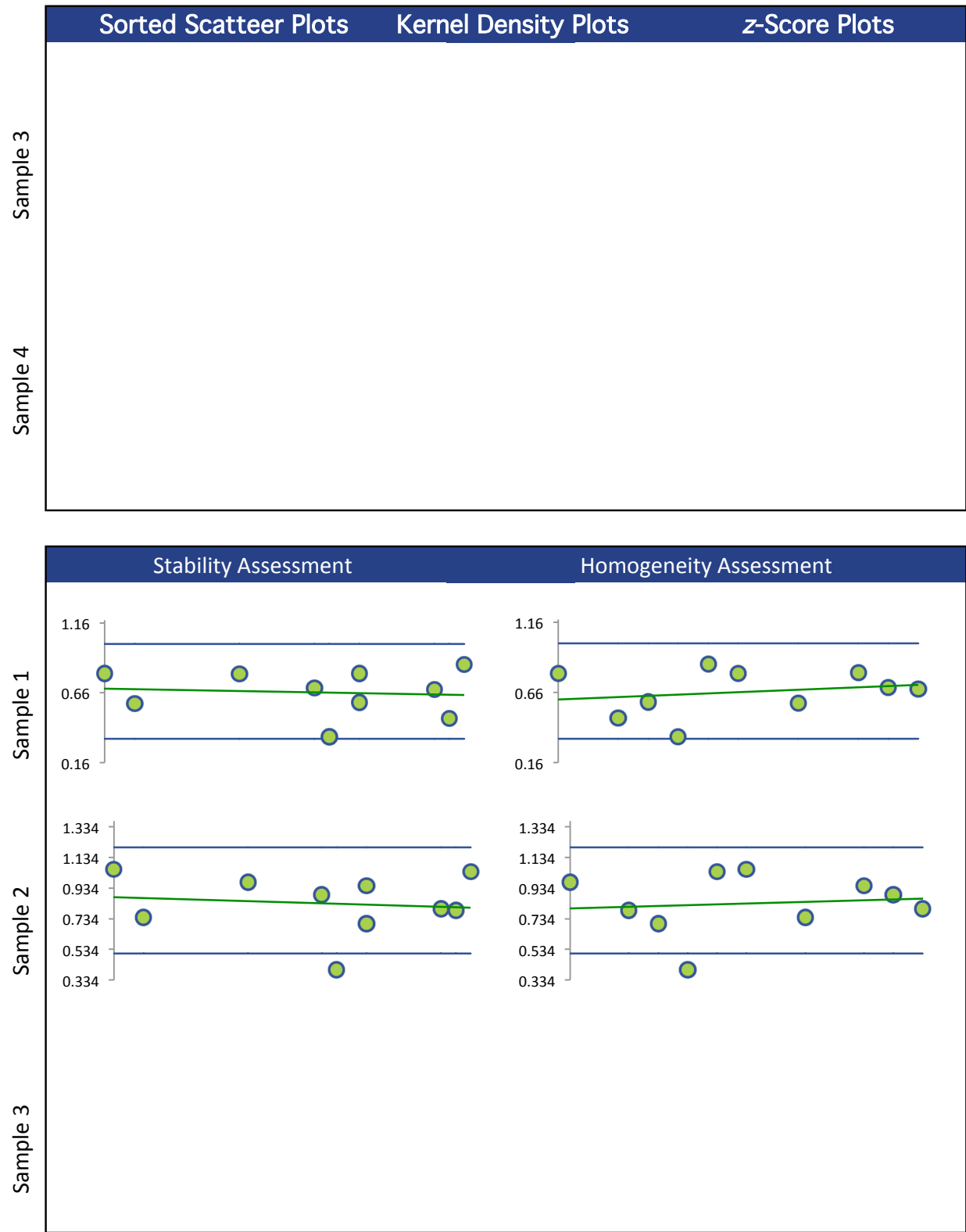
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	9	9	0	0
LC/MS (Red)	1	1	0	0

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

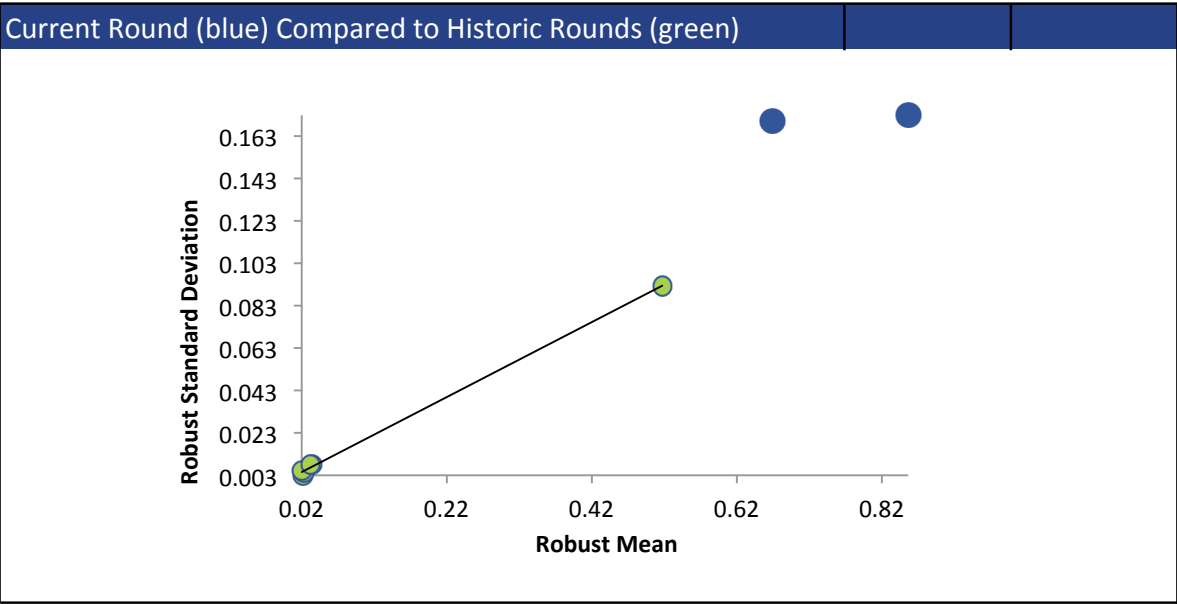
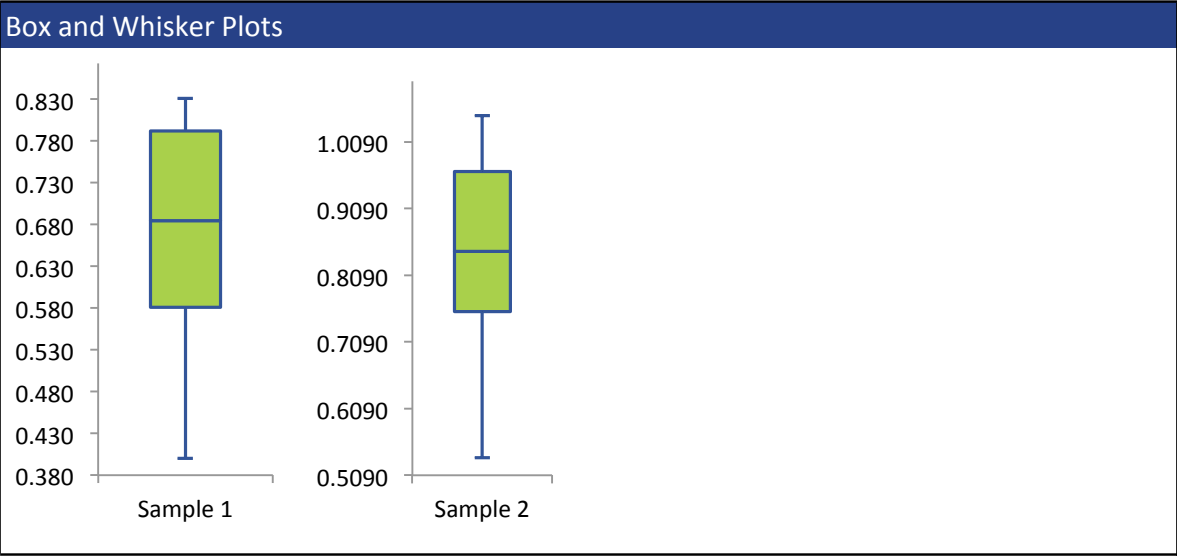


ETHOPROPHOS



ETHOPROPHOS

	Stability Assessment	Homogeneity Assessment
Sample 4	<p>Stability assessments are regression analysis of reported result against date of analysis.</p> <p>Homogeneity assessments are regression analysis of reported result against bottling order.</p>	



## ETOXAZOLE

## Summary Statistics

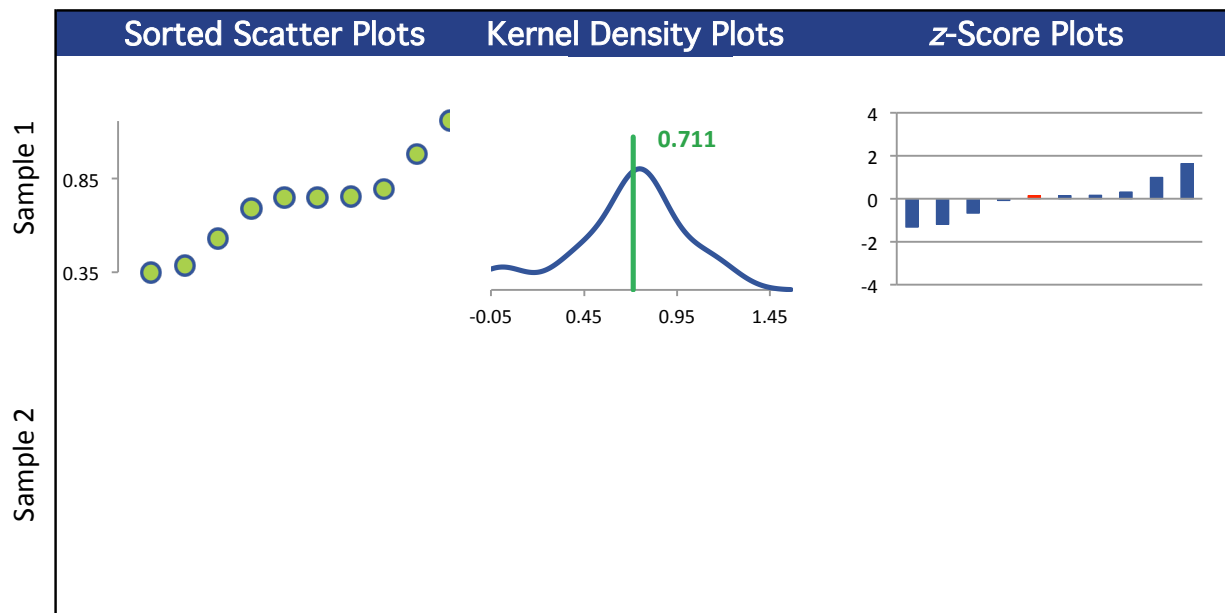
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.750			
Robust Mean $\mu\text{g/g}$	0.711			
U $\mu\text{g/g}$	0.108			
Robust Standard Deviation $\mu\text{g/g}$	0.273			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.273			
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	0	0	0

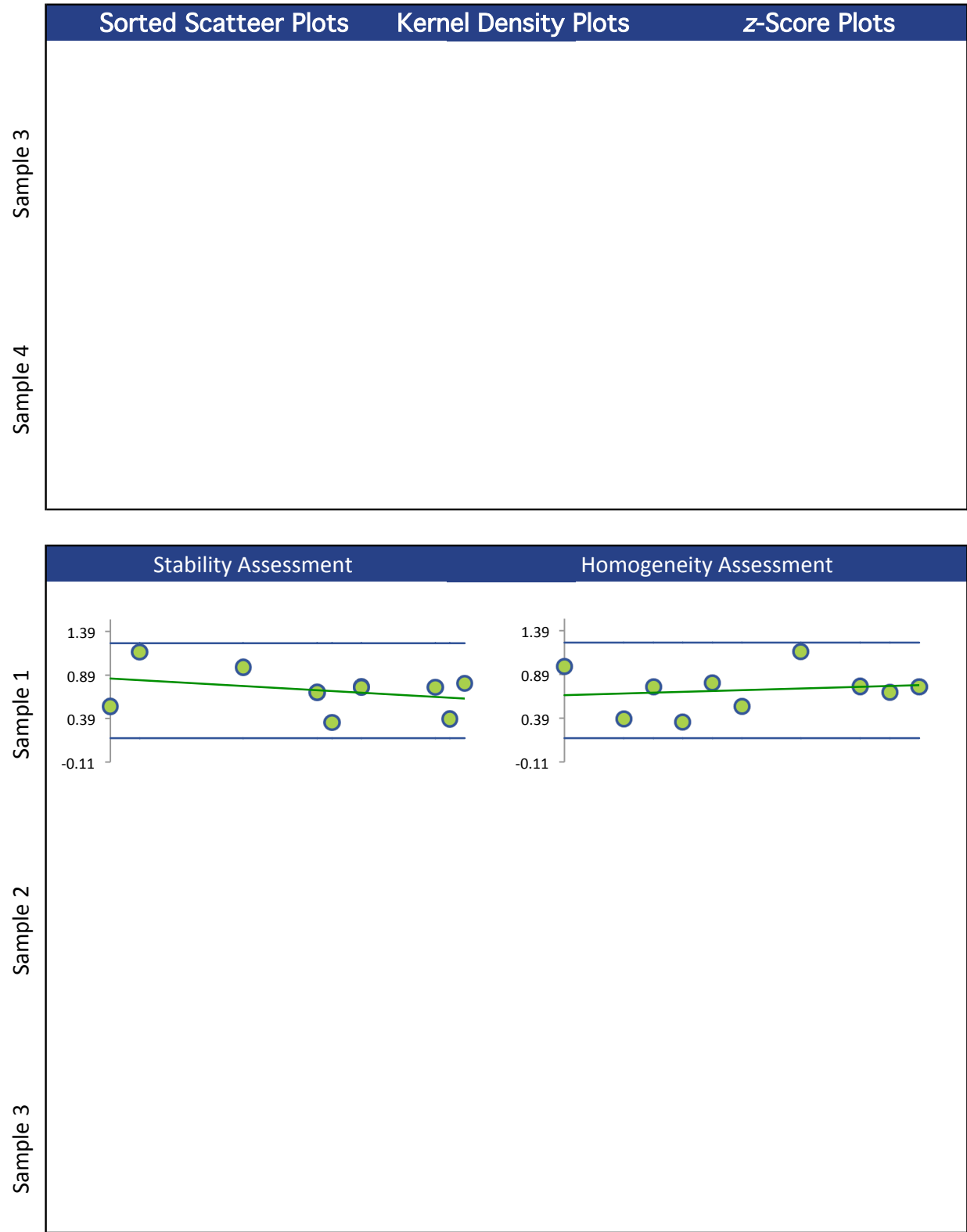
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	9	0	0	0
LC/MS (Red)	1	0	0	0

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



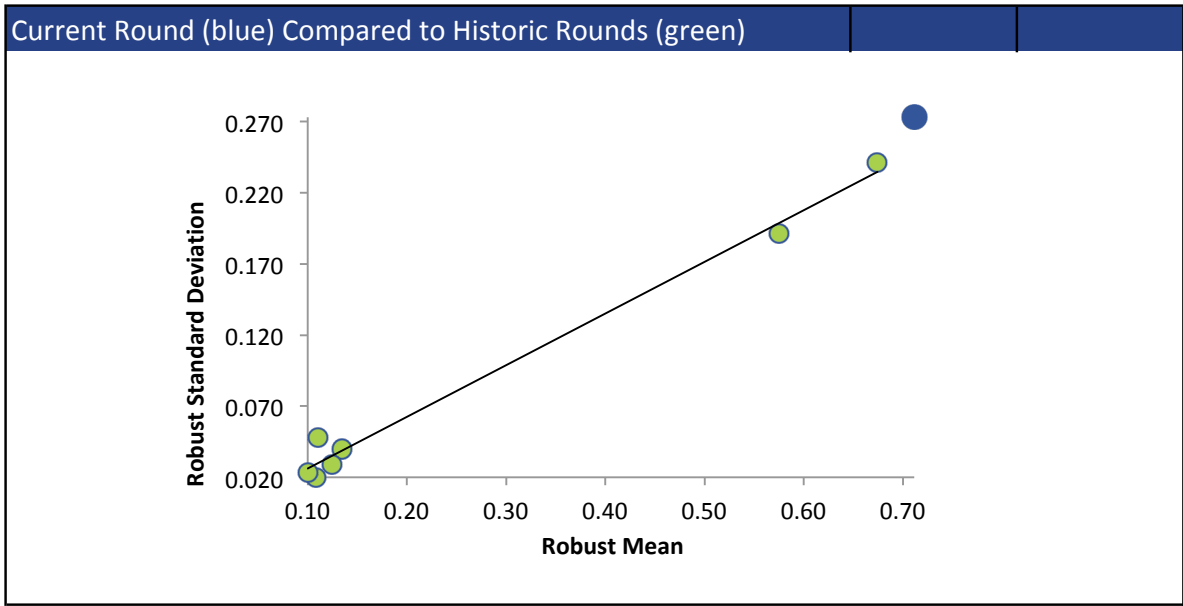
ETOXAZOLE





ETOXAZOLE

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## FIPRONIL

## Summary Statistics

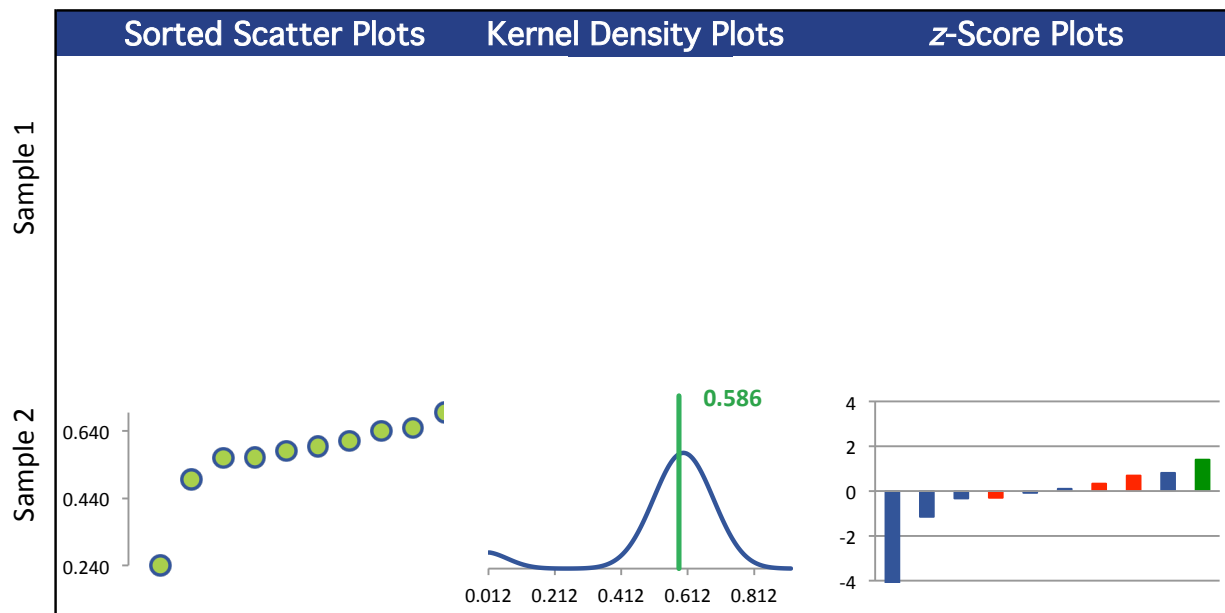
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.587		
Robust Mean $\mu\text{g/g}$		0.586		
U $\mu\text{g/g}$		0.0309		
Robust Standard Deviation $\mu\text{g/g}$		0.0782		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.0782		
Outliers	0	0	0	0
$ z  > 3.0$	0	1	0	0
$2 <  z  < 3$	0	0	0	0

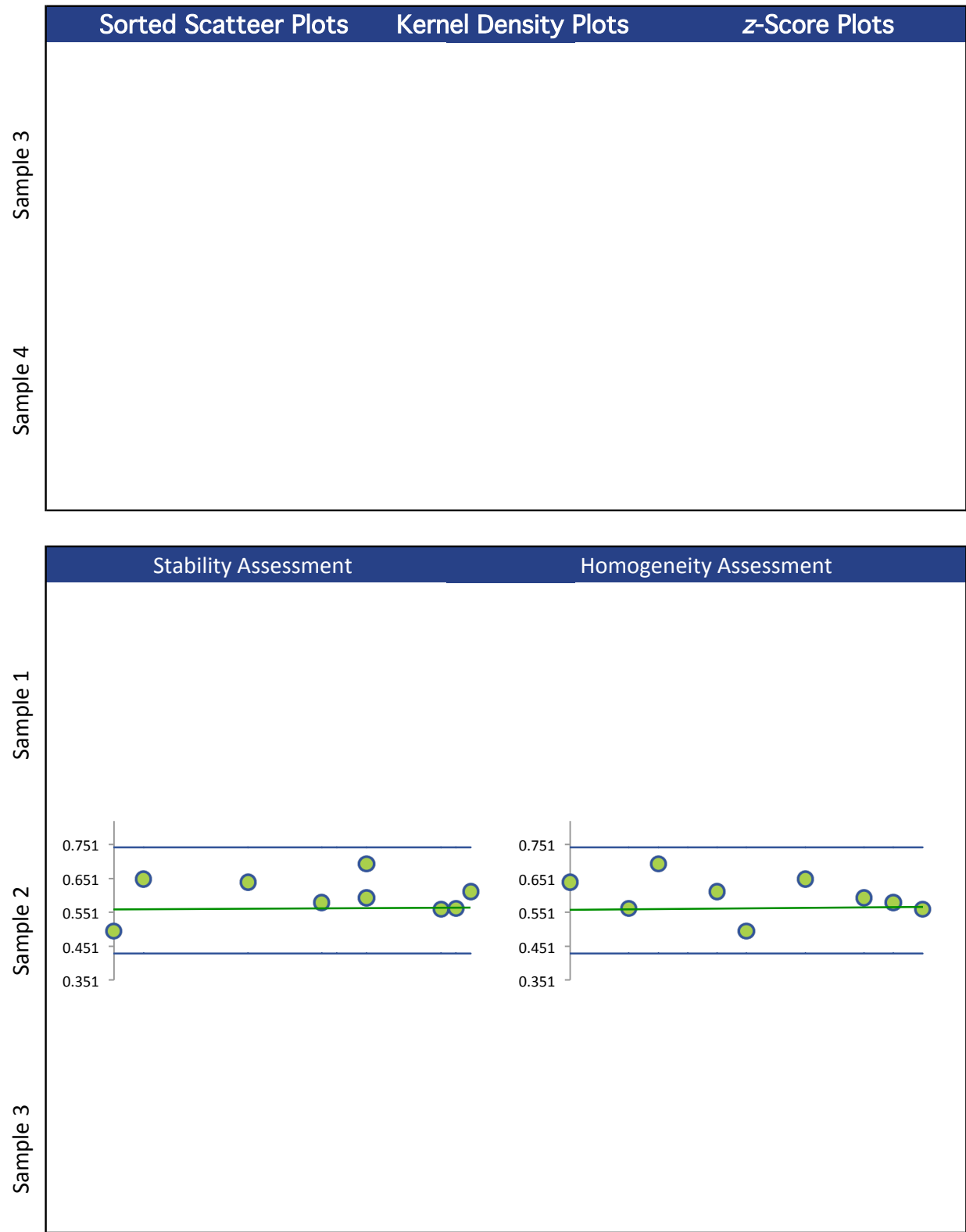
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	6	0	0
GC/MS/MS (Red)	0	3	0	0
LC/MS (Green)	0	1	0	0

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

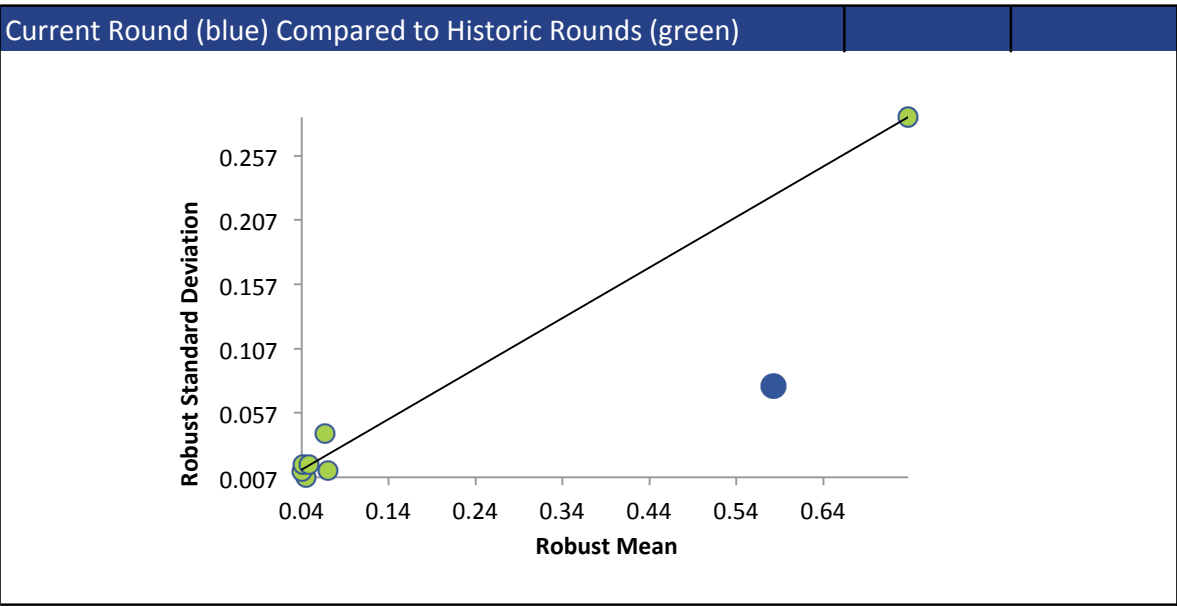
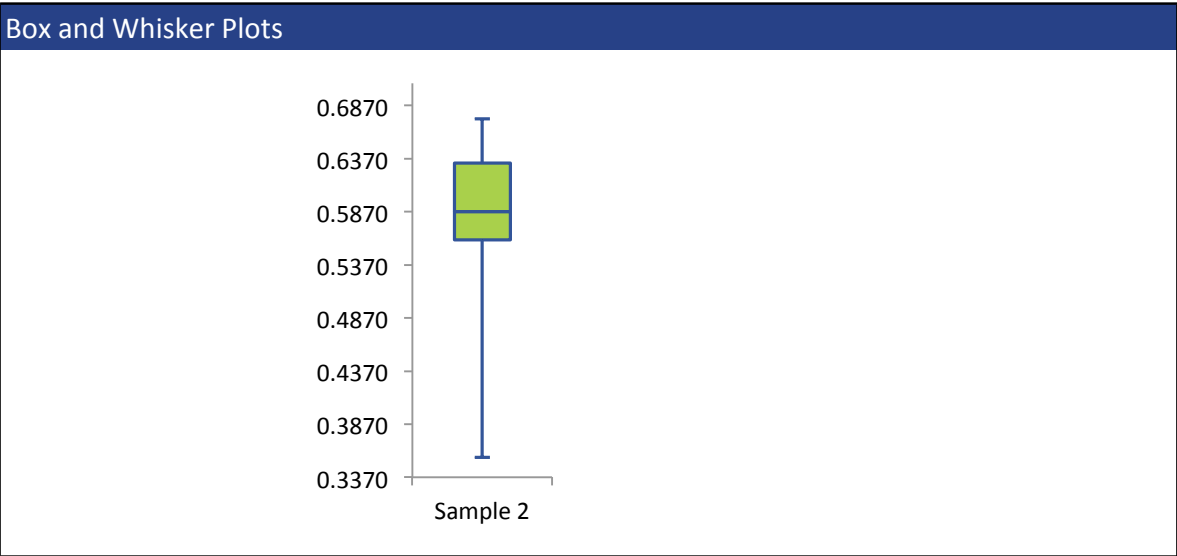


FIPRONIL



FIPRONIL

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## FLUDIOXONIL

## Summary Statistics

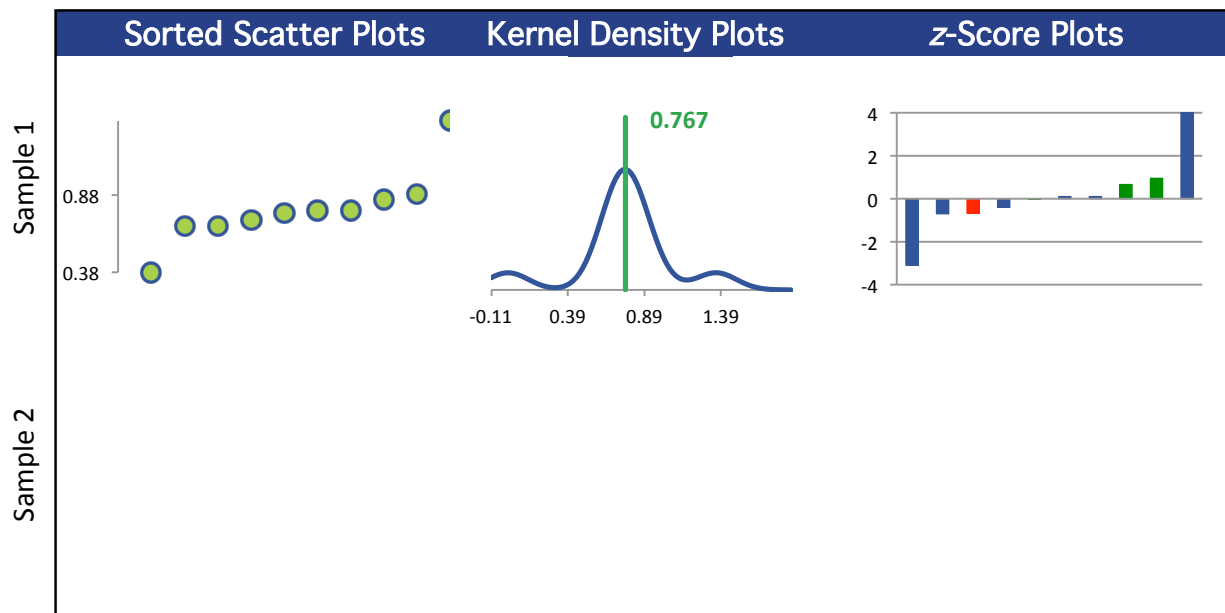
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.772			
Robust Mean $\mu\text{g/g}$	0.767			
U $\mu\text{g/g}$	0.0494			
Robust Standard Deviation $\mu\text{g/g}$	0.125			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.125			
Outliers	0	0	0	0
$ z  > 3.0$	2	0	0	0
$2 <  z  < 3$	0	0	0	0

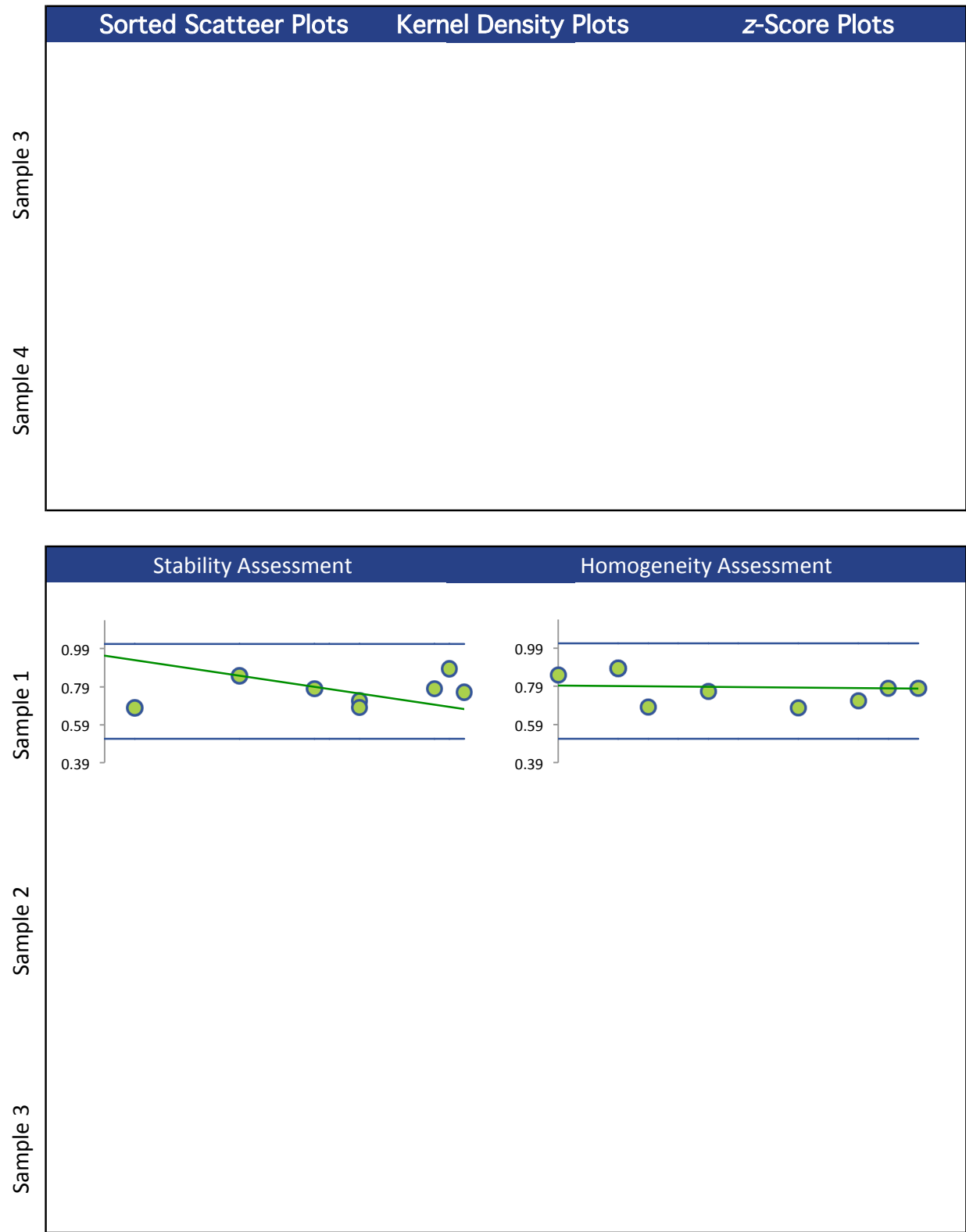
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	6	0	0	0
LC/MS (Red)	1	0	0	0
GC/MS/MS (Green)	3	0	0	0

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

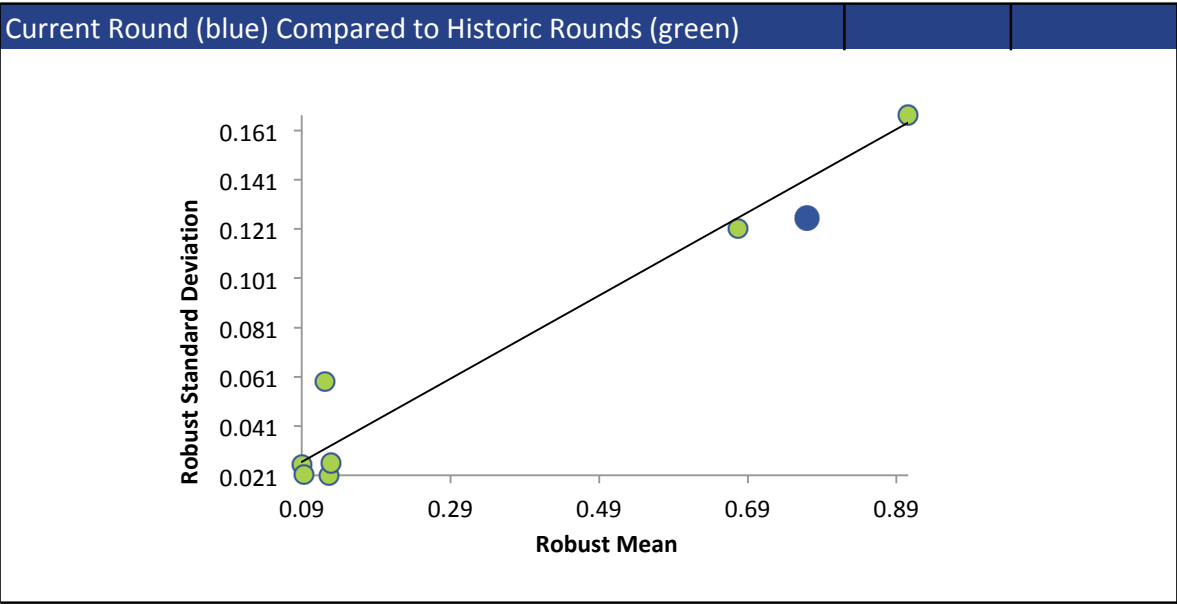


FLUDIOXONIL



FLUDIOXONIL

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## IMIDACLOPRID

## Summary Statistics

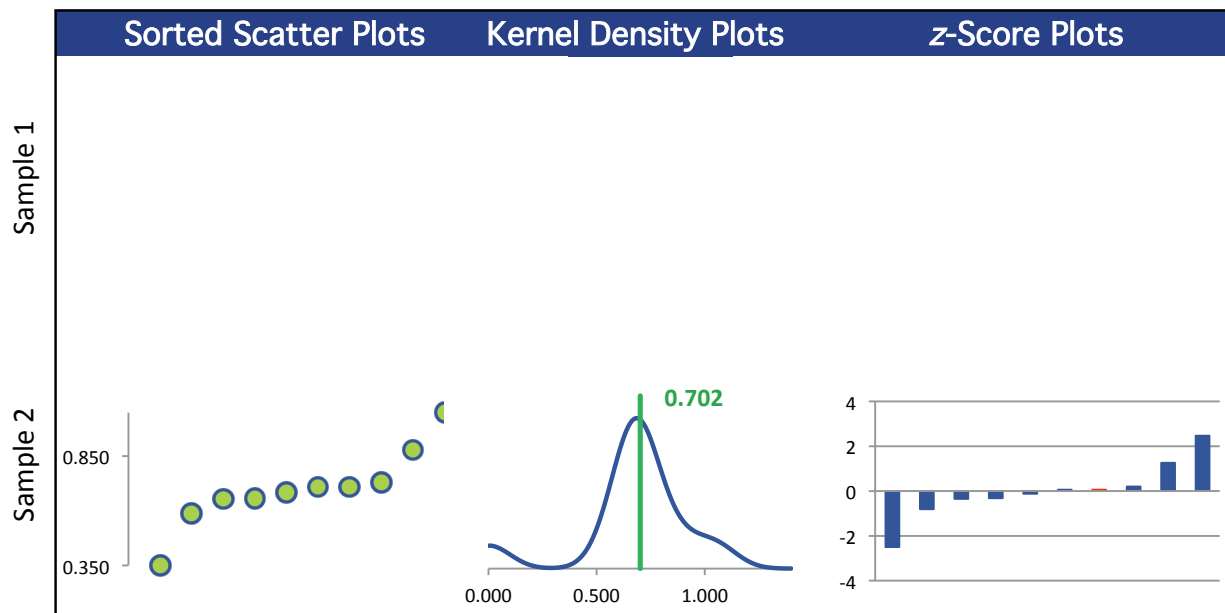
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.698		
Robust Mean $\mu\text{g/g}$		0.702		
U $\mu\text{g/g}$		0.0557		
Robust Standard Deviation $\mu\text{g/g}$		0.141		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.141		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	2	0	0

## Methods Used

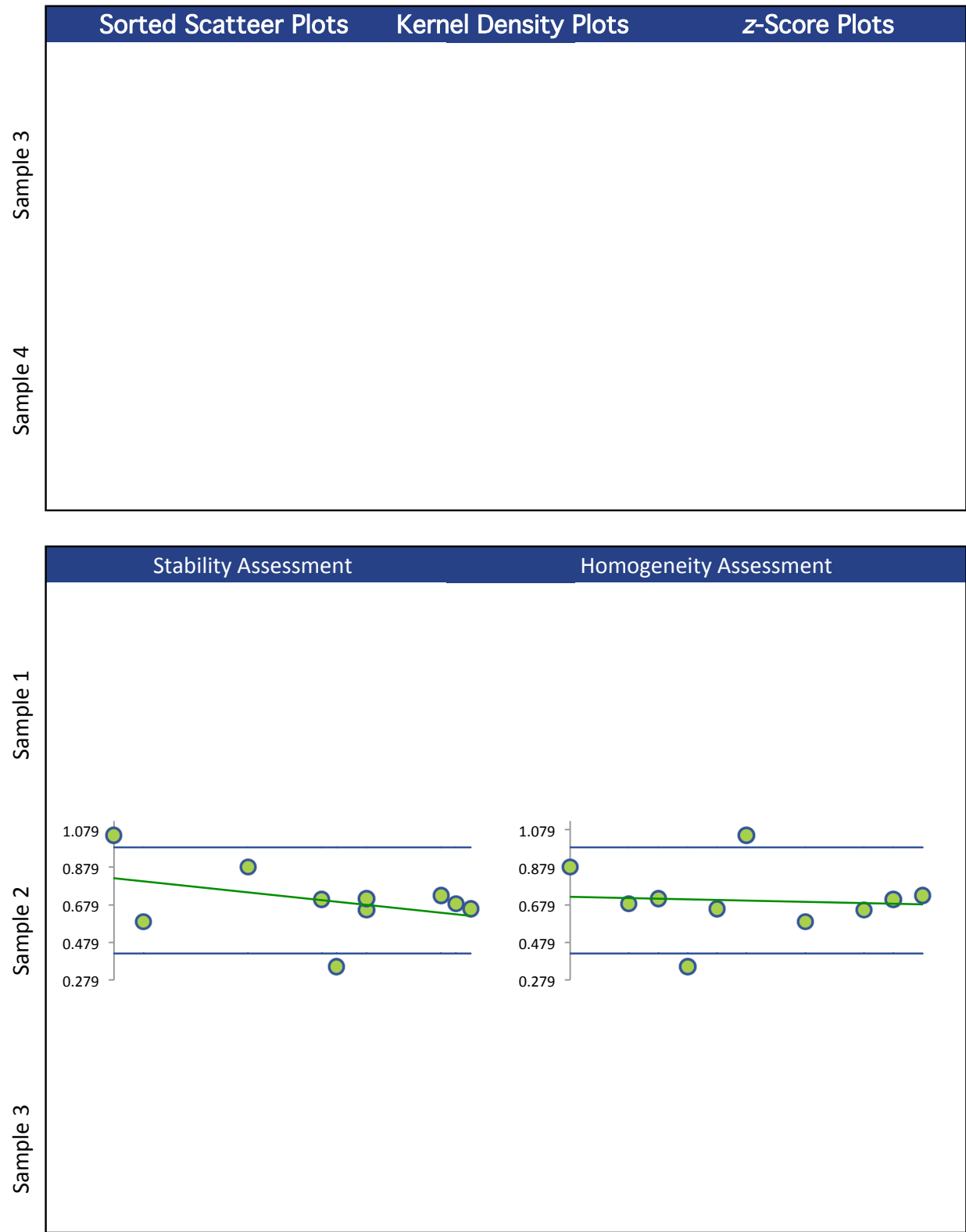
Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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



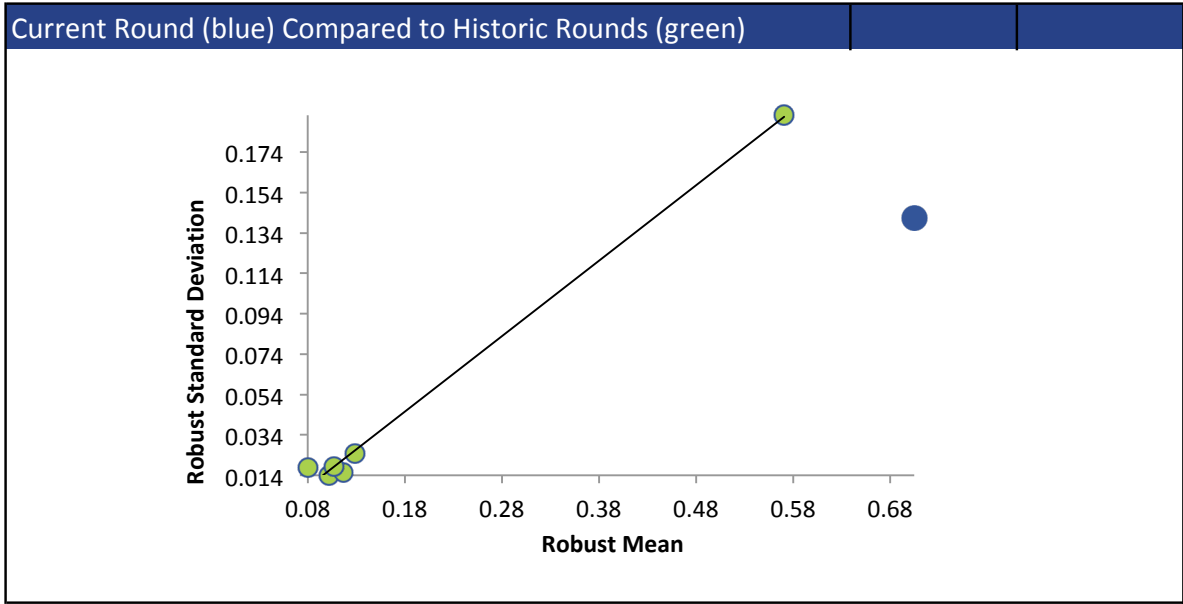
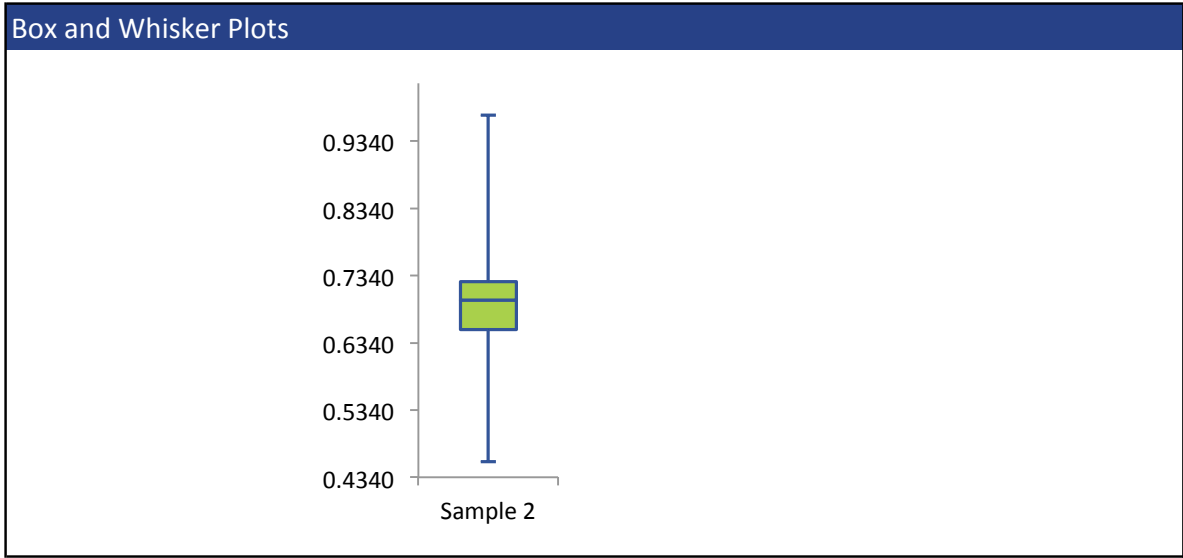


IMIDACLOPRID



IMIDACLOPRID

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## MALATHION

## Summary Statistics

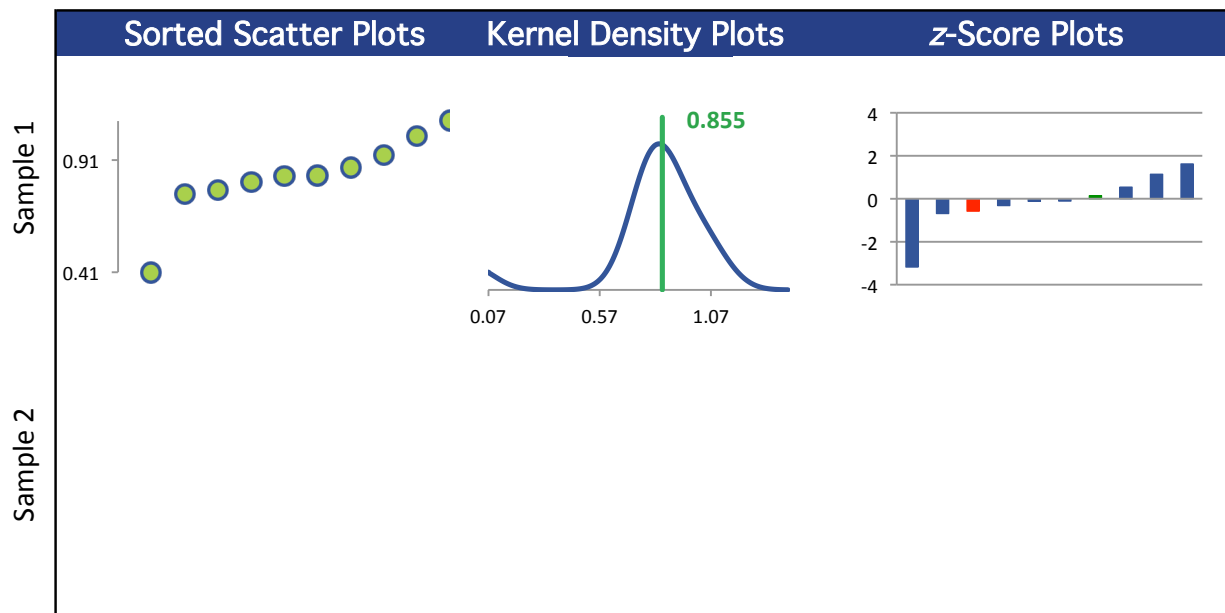
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.839			
Robust Mean $\mu\text{g/g}$	0.855			
U $\mu\text{g/g}$	0.0553			
Robust Standard Deviation $\mu\text{g/g}$	0.140			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.140			
Outliers	0	0	0	0
$ z  > 3.0$	1	0	0	0
$2 <  z  < 3$	0	0	0	0

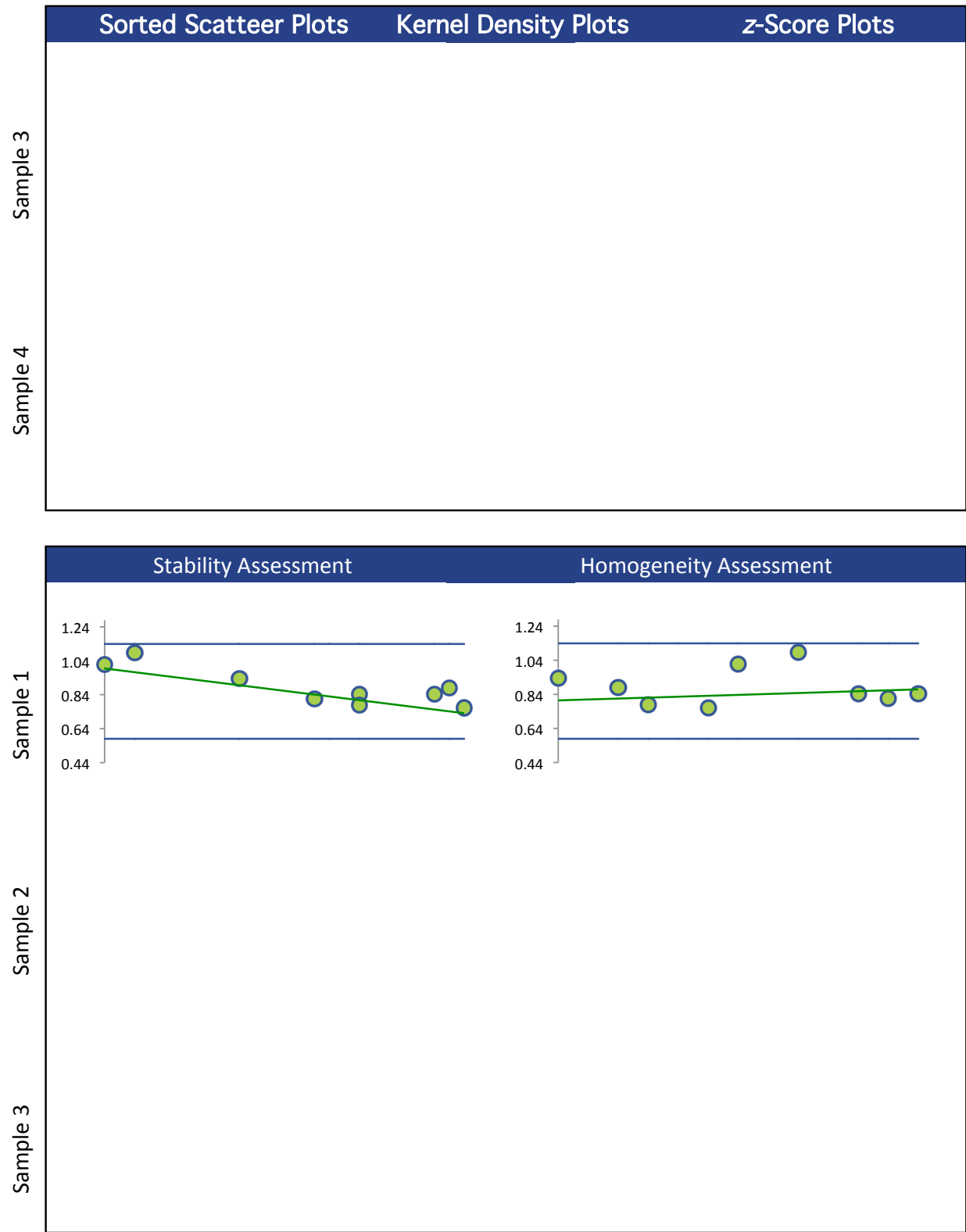
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	0	0	0
LC/MS (Red)	1	0	0	0
GC/MS/MS (Green)	1	0	0	0

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

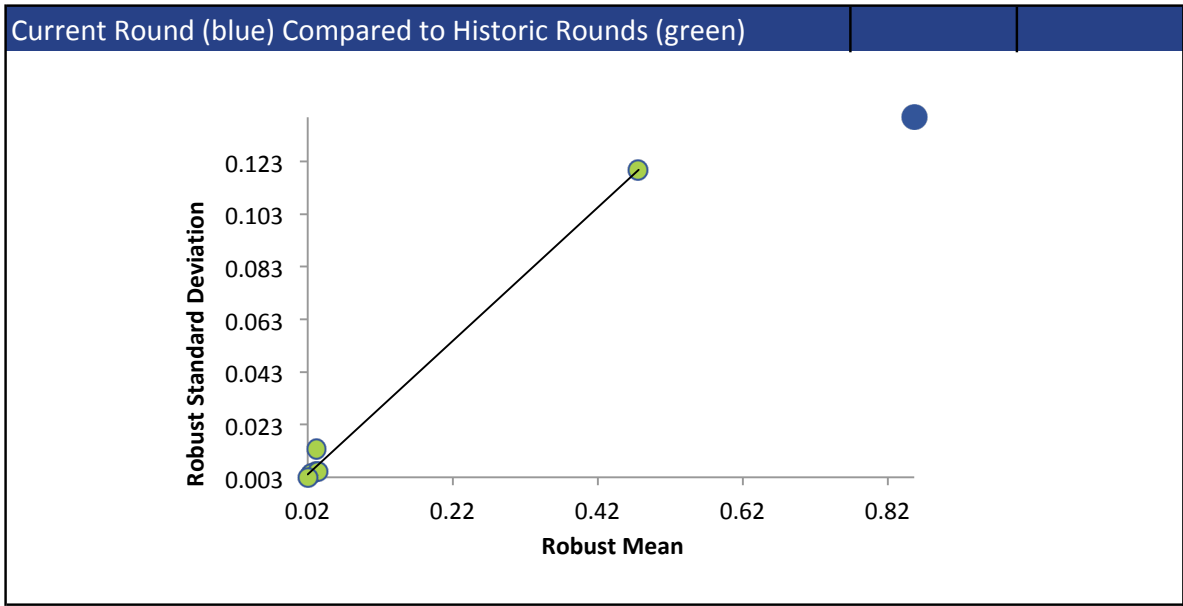
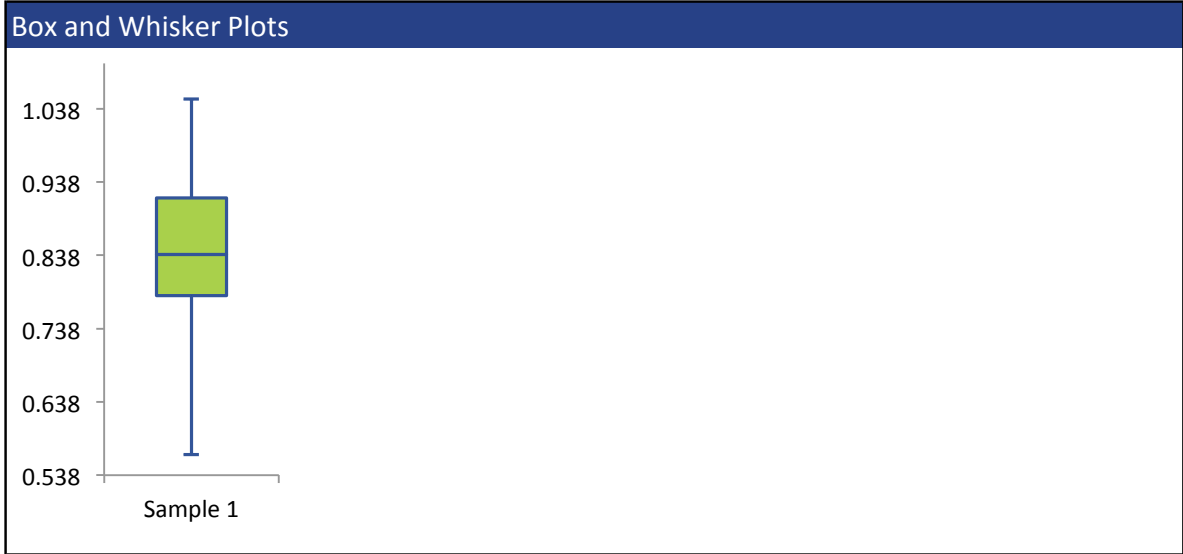


MALATHION



MALATHION

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## METALAXYL

## Summary Statistics

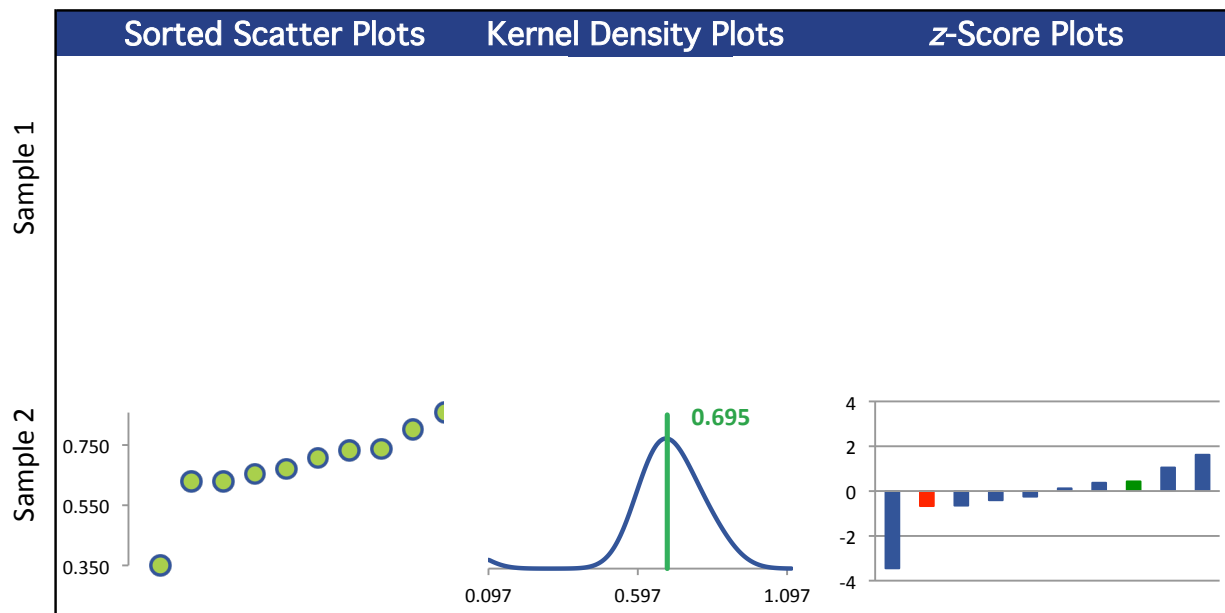
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.689		
Robust Mean $\mu\text{g/g}$		0.695		
U $\mu\text{g/g}$		0.0395		
Robust Standard Deviation $\mu\text{g/g}$		0.0999		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.0999		
Outliers	0	0	0	0
$ z  > 3.0$	0	1	0	0
$2 <  z  < 3$	0	0	0	0

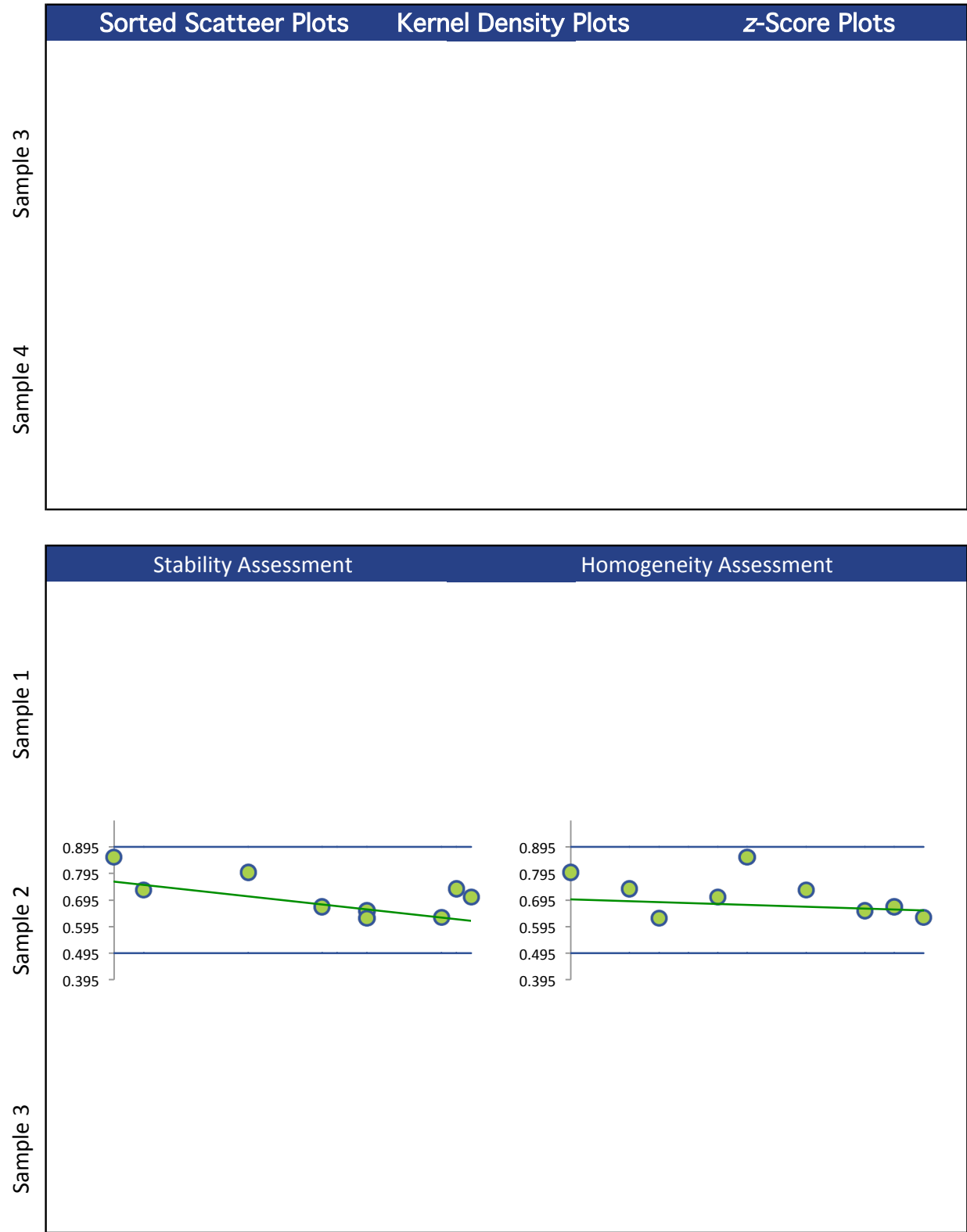
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	8	0	0
LC/MS (Red)	0	1	0	0
GC/MS/MS (Green)	0	1	0	0

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

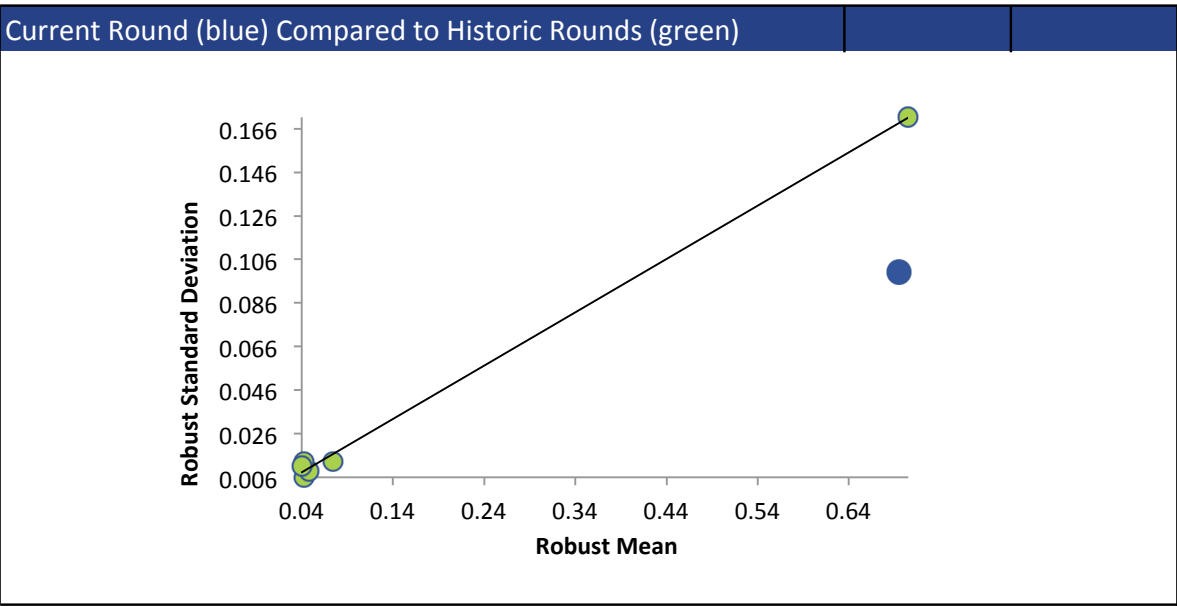
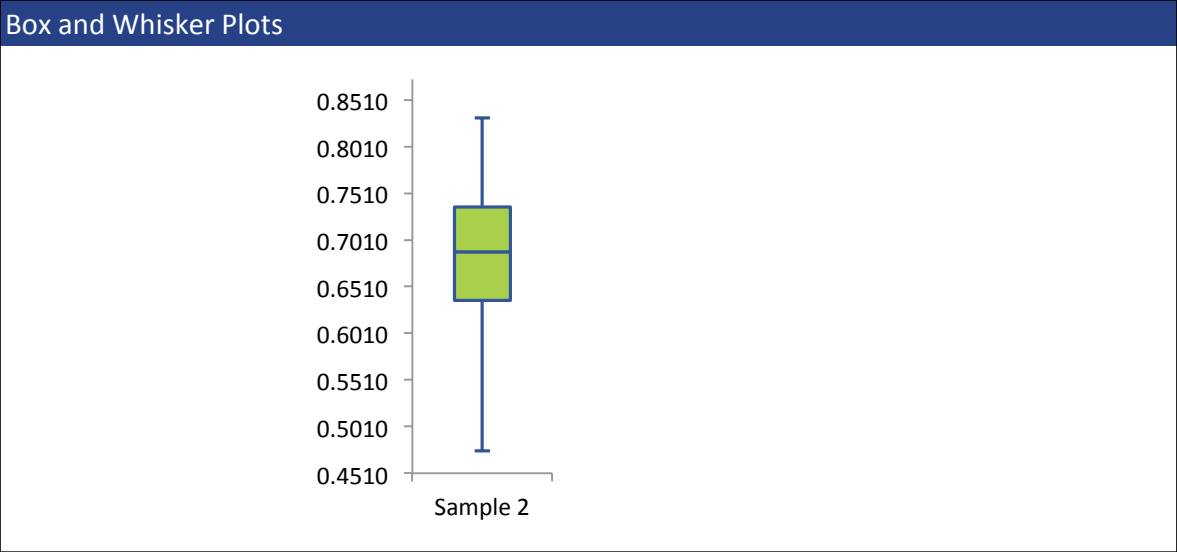


METALAXYL



METALAXYL

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	





## METHIOCARB

## Summary Statistics

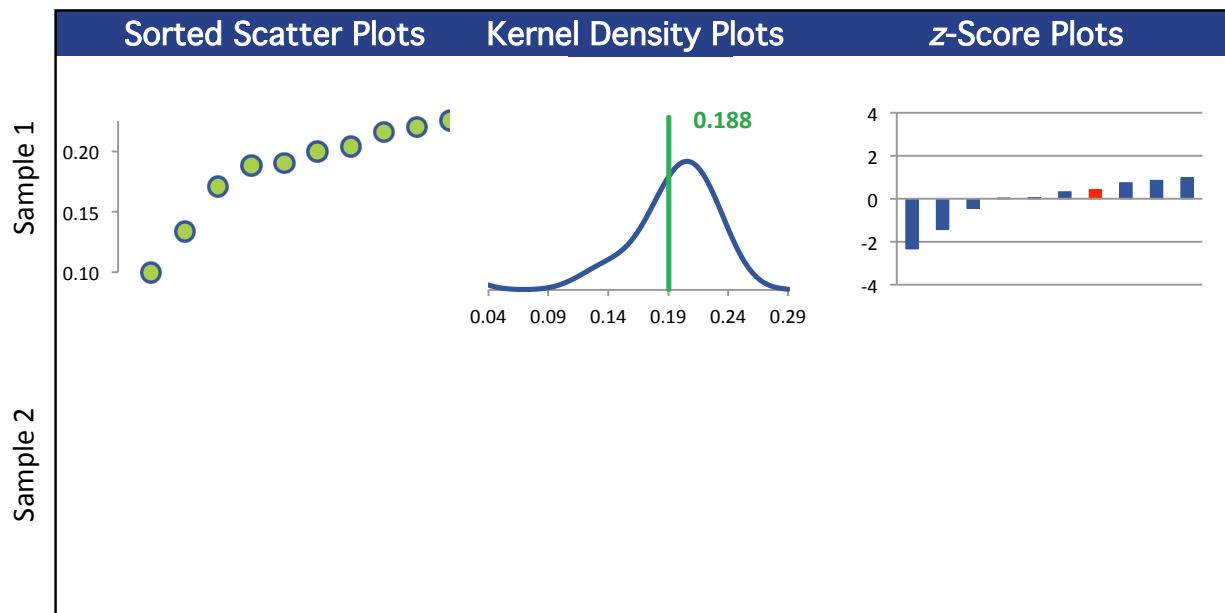
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.195			
Robust Mean $\mu\text{g/g}$	0.188			
U $\mu\text{g/g}$	0.0149			
Robust Standard Deviation $\mu\text{g/g}$	0.0378			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.0378			
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	1	0	0	0

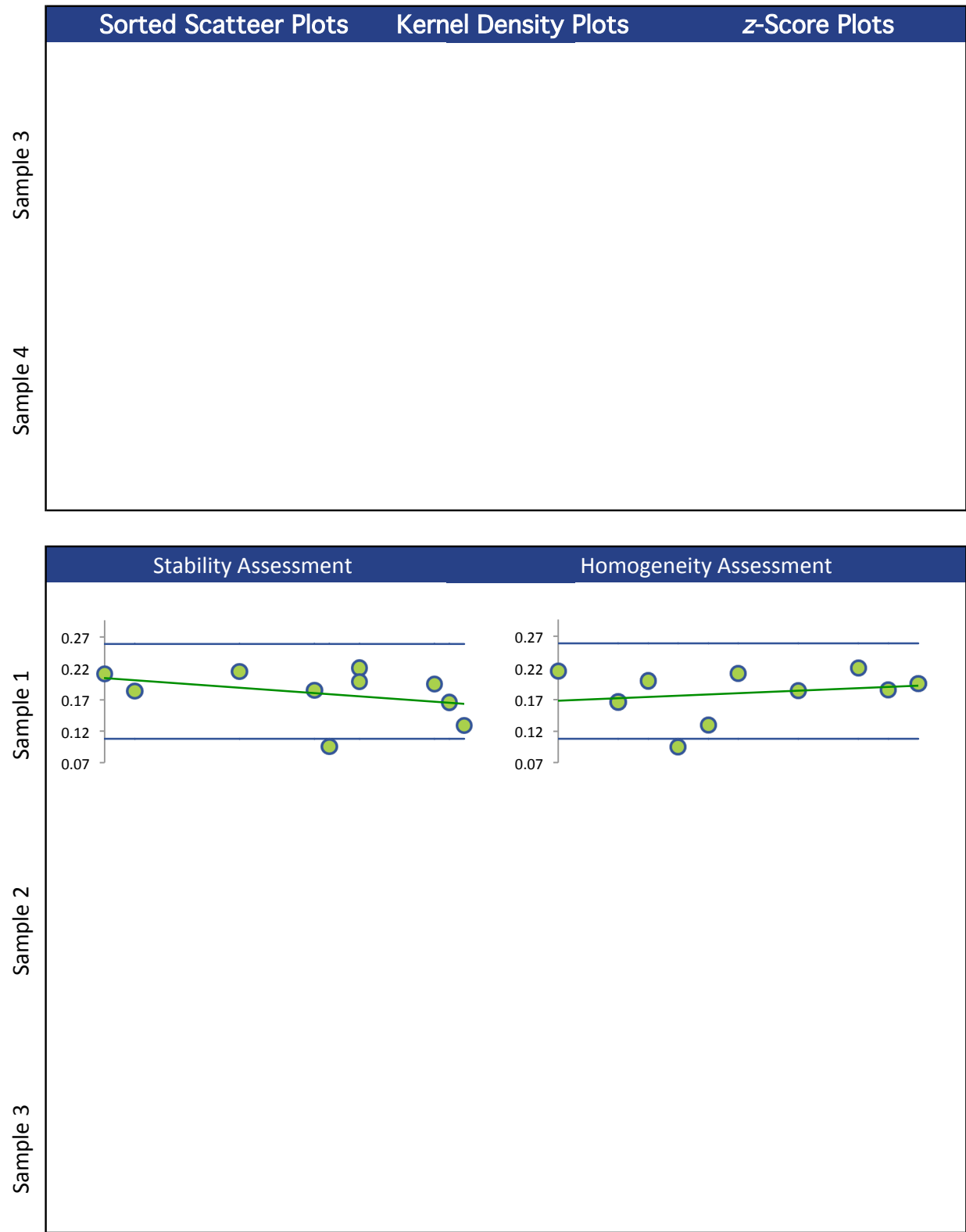
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	9	0	0	0
LC/MS (Red)	1	0	0	0

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



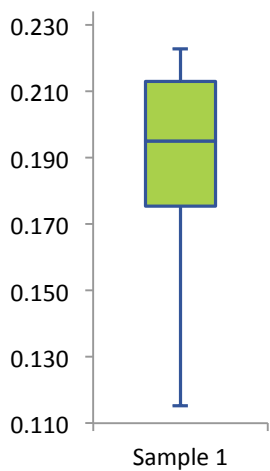
METHIOCARB



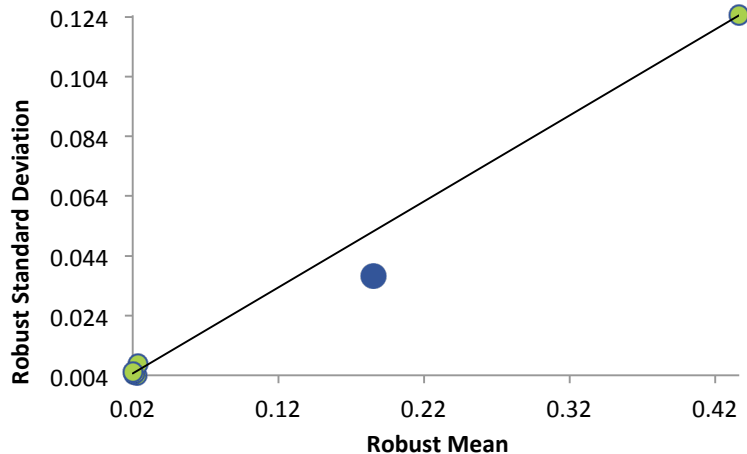
METHIOCARB

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	

Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



## METHOMYL

## Summary Statistics

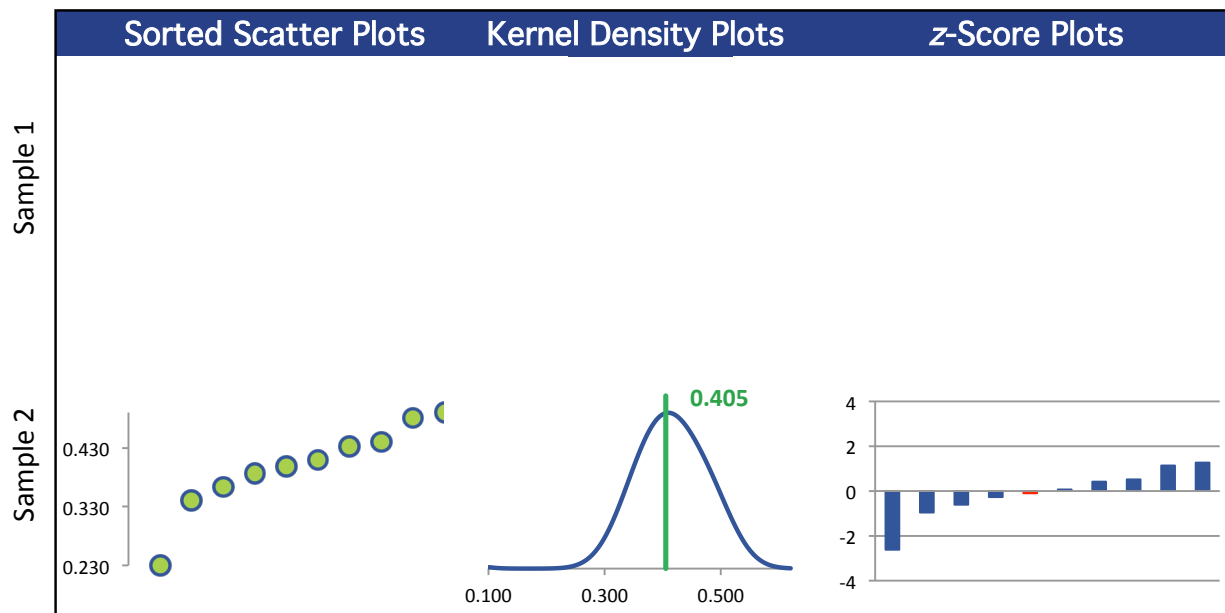
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.404		
Robust Mean $\mu\text{g/g}$		0.405		
U $\mu\text{g/g}$		0.0264		
Robust Standard Deviation $\mu\text{g/g}$		0.0668		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.0668		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	1	0	0

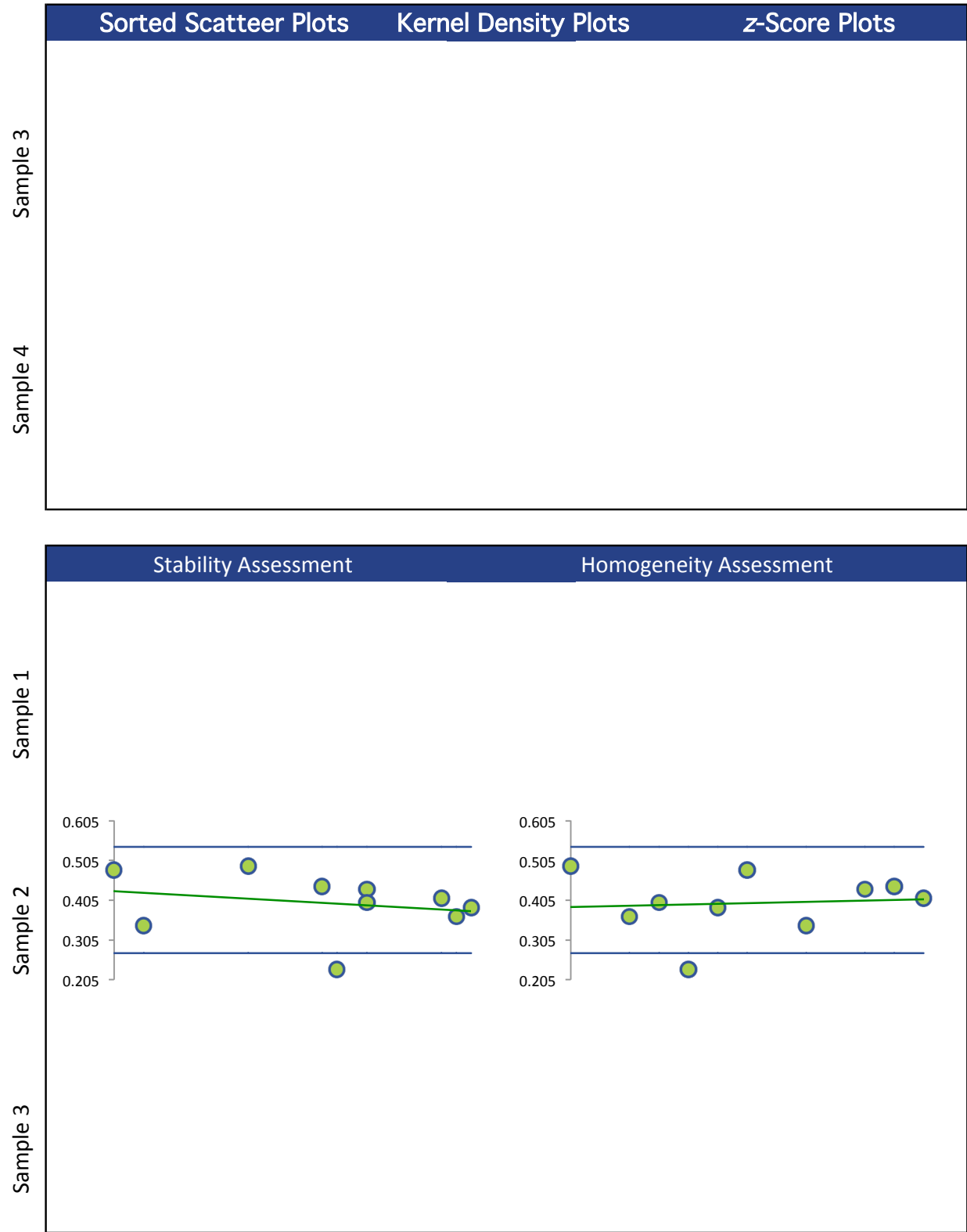
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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

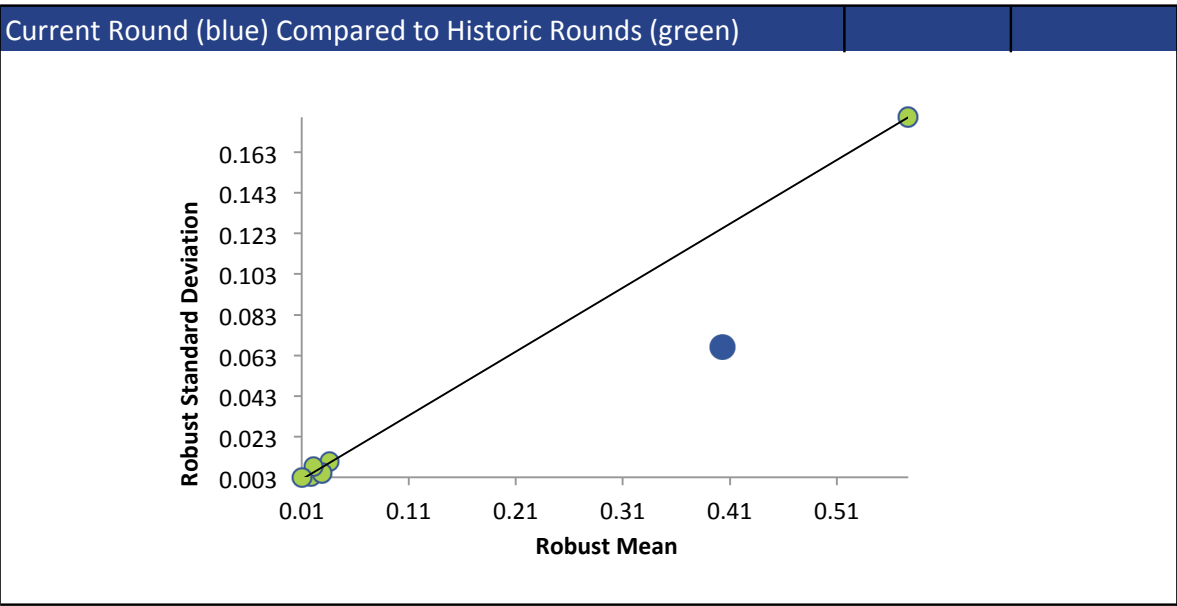
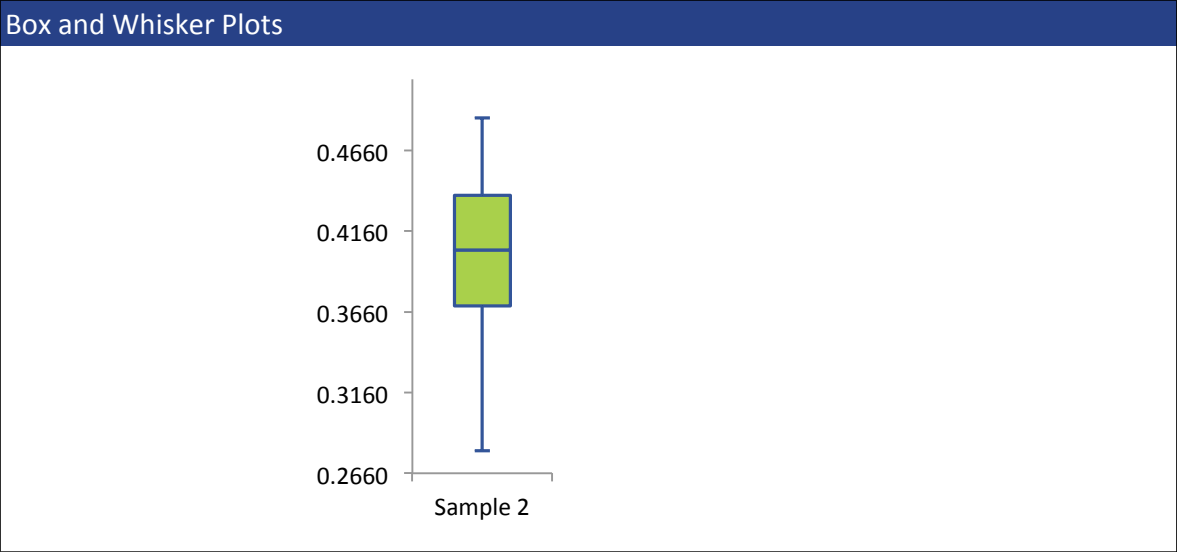


METHOMYL



METHOMYL

Sample 4	Stability Assessment	Homogeneity Assessment
	<p>Stability assessments are regression analysis of reported result against date of analysis.</p> <p>Homogeneity assessments are regression analysis of reported result against bottling order.</p>	



## MYCLOBUTANIL

## Summary Statistics

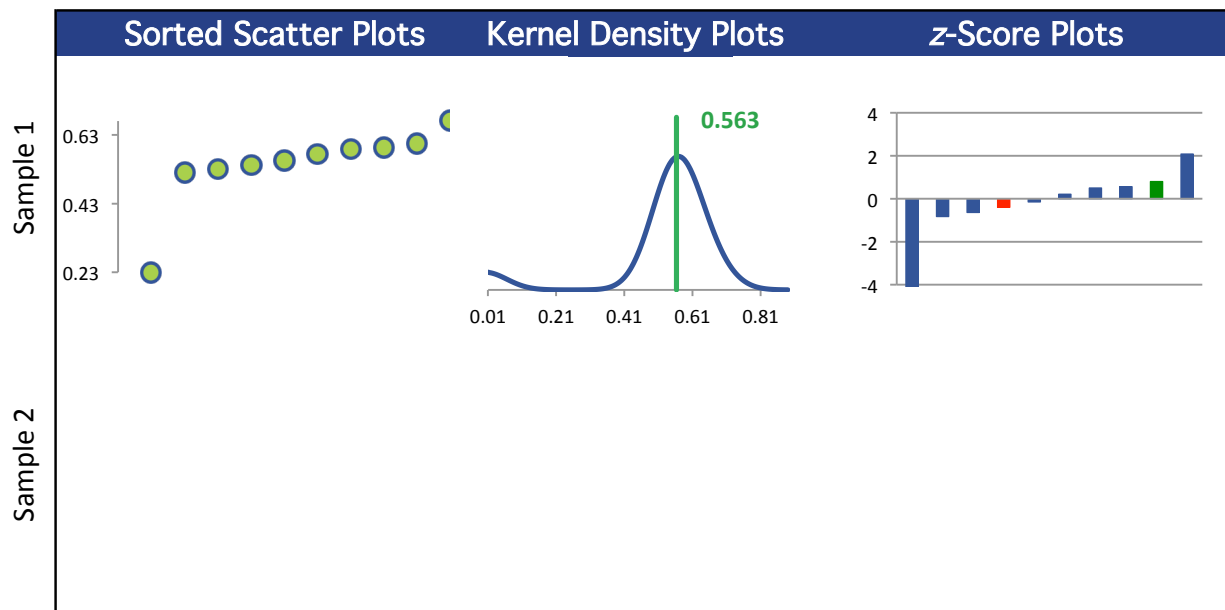
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.565			
Robust Mean $\mu\text{g/g}$	0.563			
U $\mu\text{g/g}$	0.0204			
Robust Standard Deviation $\mu\text{g/g}$	0.0515			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.0515			
Outliers	0	0	0	0
$ z  > 3.0$	1	0	0	0
$2 <  z  < 3$	1	0	0	0

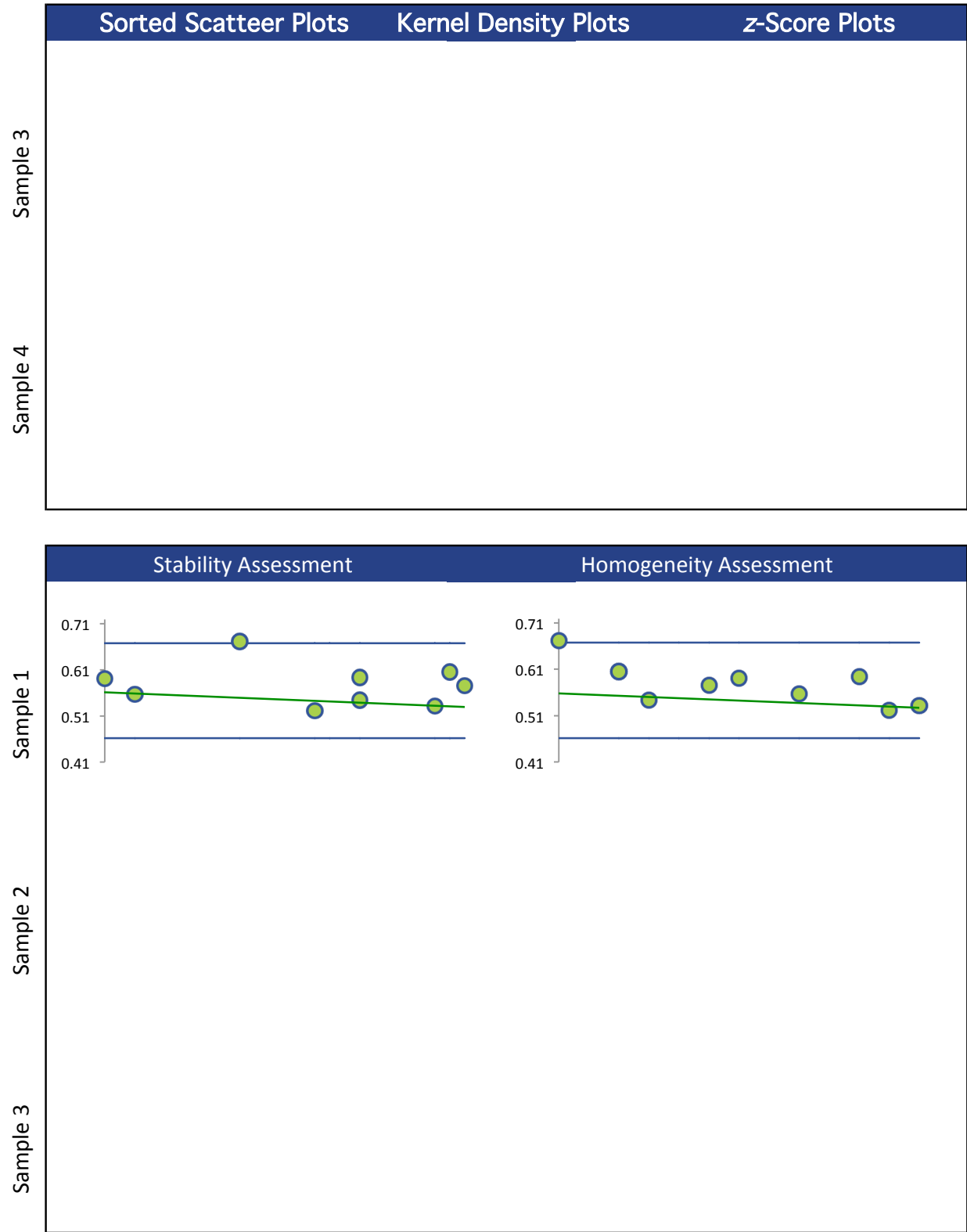
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	8	0	0	0
LC/MS (Red)	1	0	0	0
GC/MS/MS (Green)	1	0	0	0

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



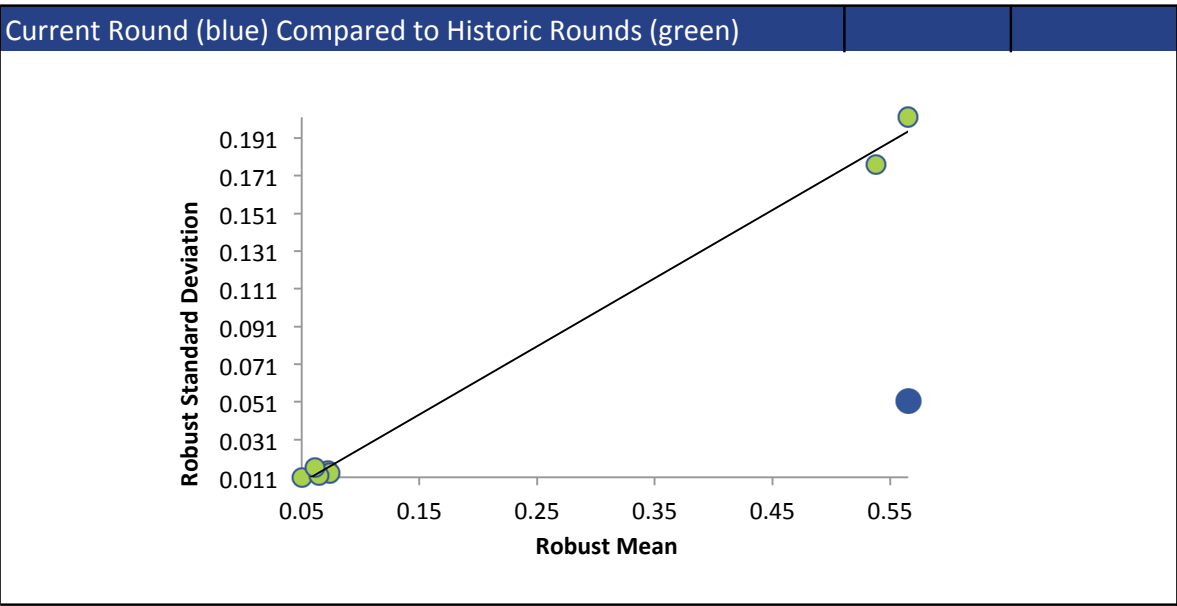
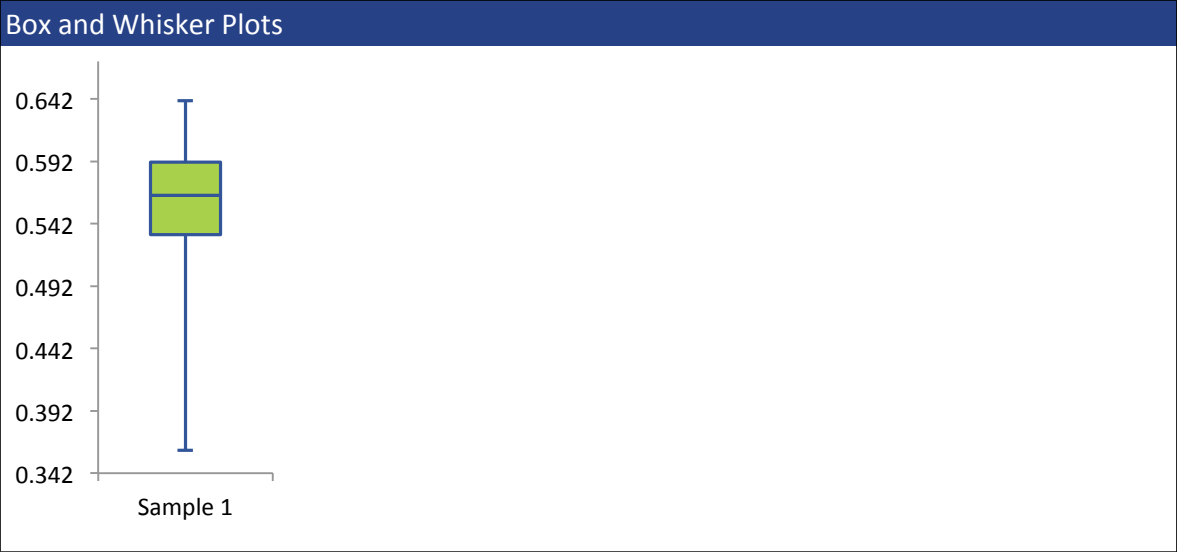
MYCLOBUTANIL





MYCLOBUTANIL

	Stability Assessment	Homogeneity Assessment
Sample 4	<p>Stability assessments are regression analysis of reported result against date of analysis.</p> <p>Homogeneity assessments are regression analysis of reported result against bottling order.</p>	



## OXAMYL

## Summary Statistics

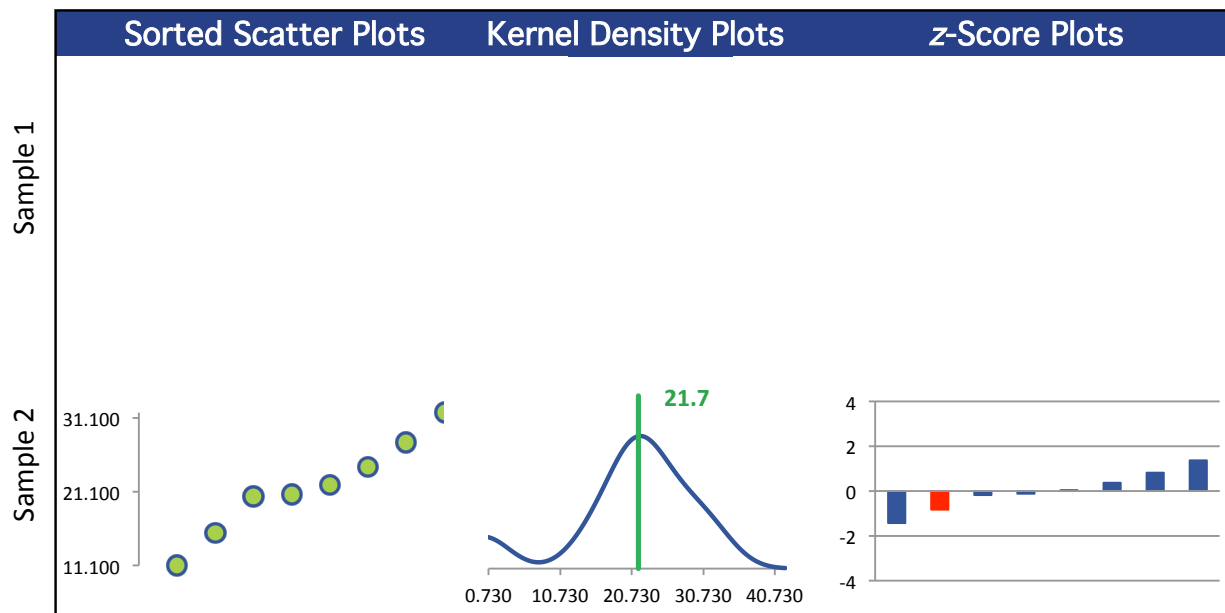
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	8	0	0
Median $\mu\text{g/g}$		21.4		
Robust Mean $\mu\text{g/g}$		21.7		
U $\mu\text{g/g}$		3.28		
Robust Standard Deviation $\mu\text{g/g}$		7.42		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		7.42		
Outliers	0	1	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	0	0	0

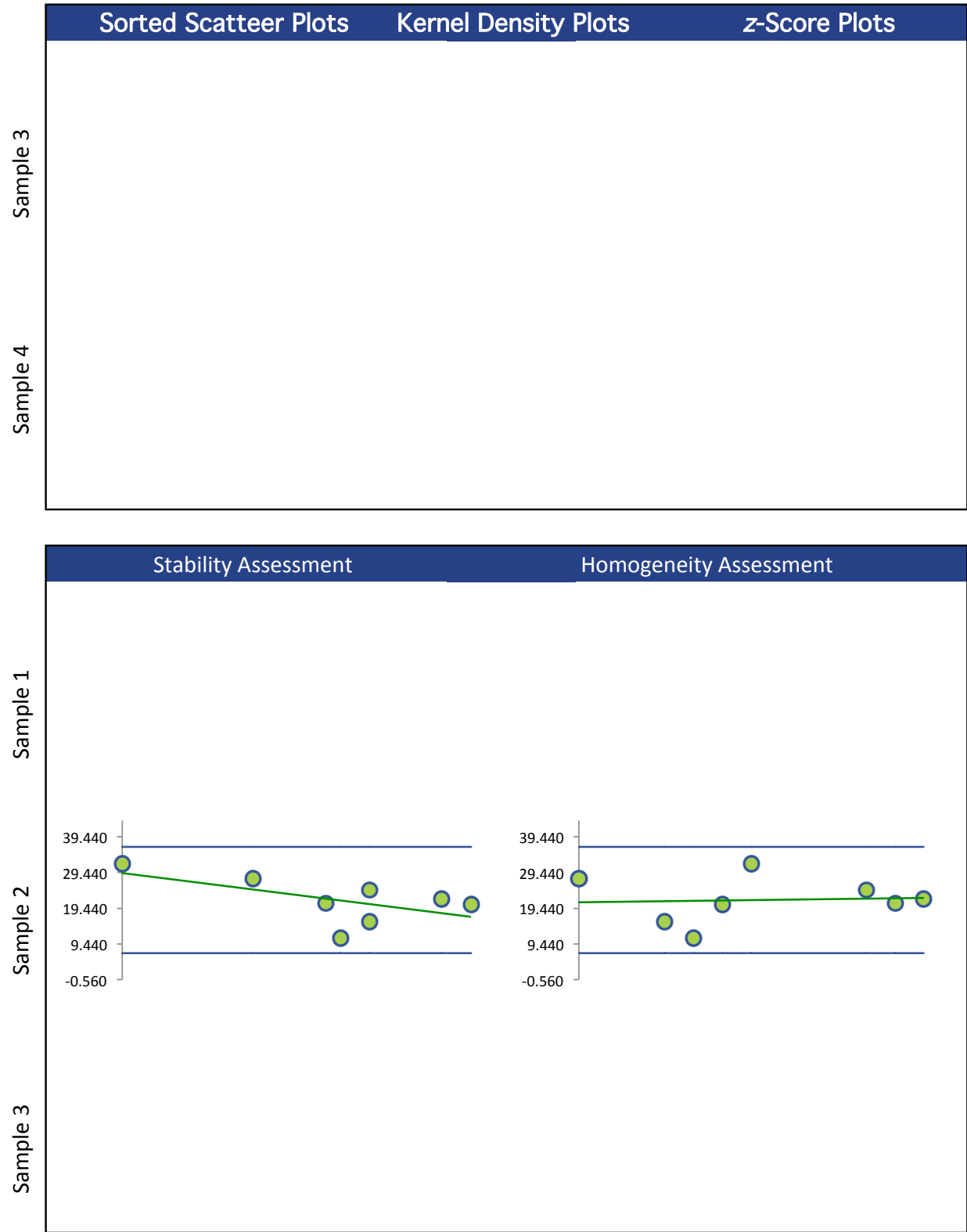
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	7	0	0
LC/MS (Red)	0	1	0	0

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

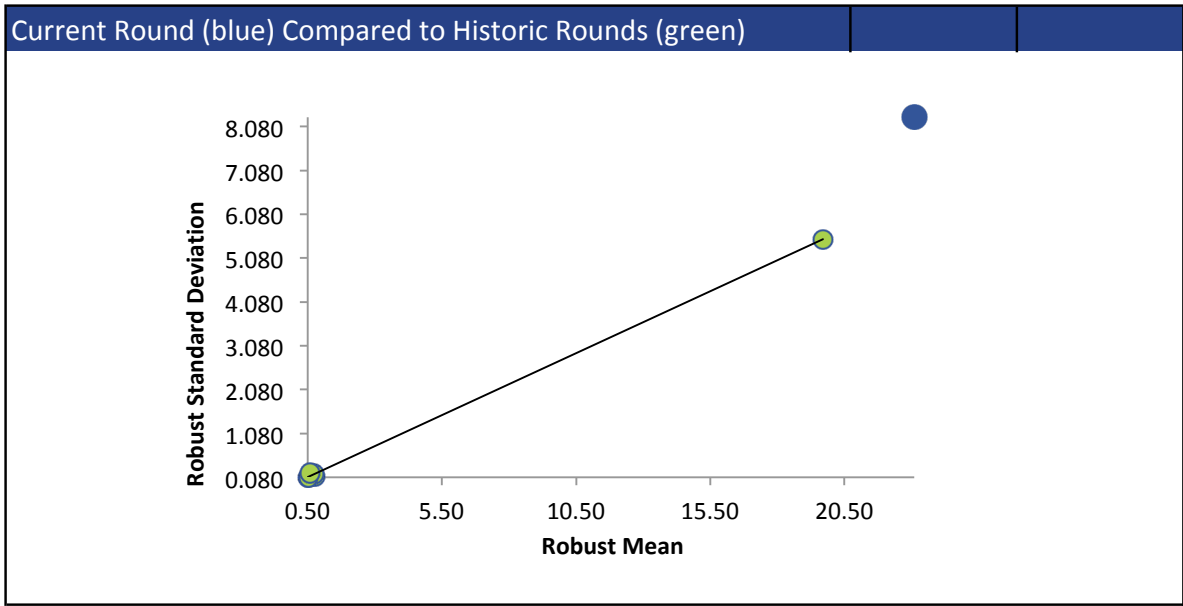
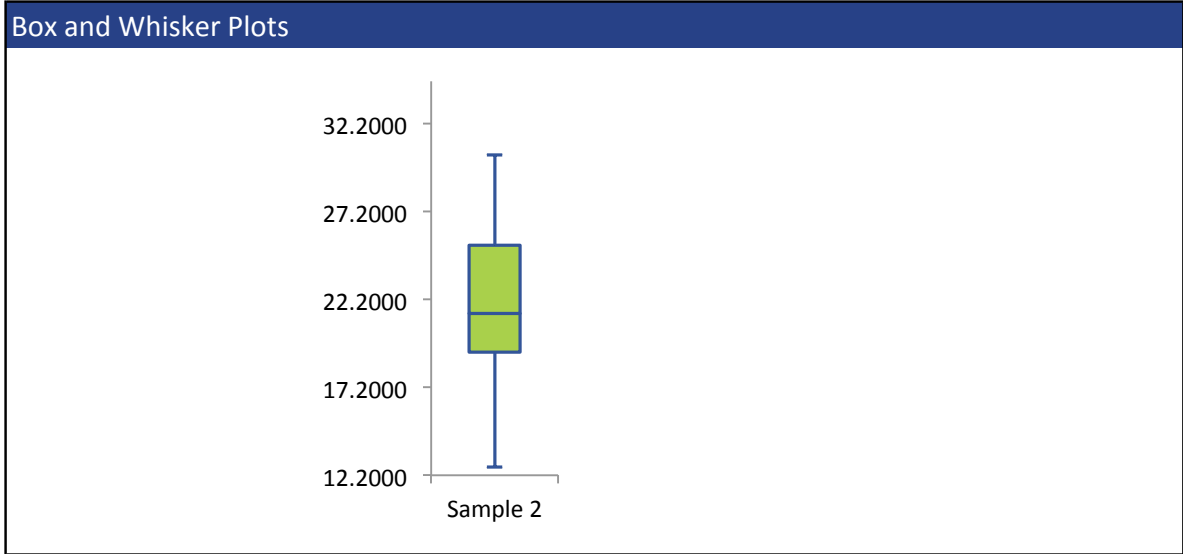


OXAMYL



OXAMYL

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## PACLOBUTRAZOL

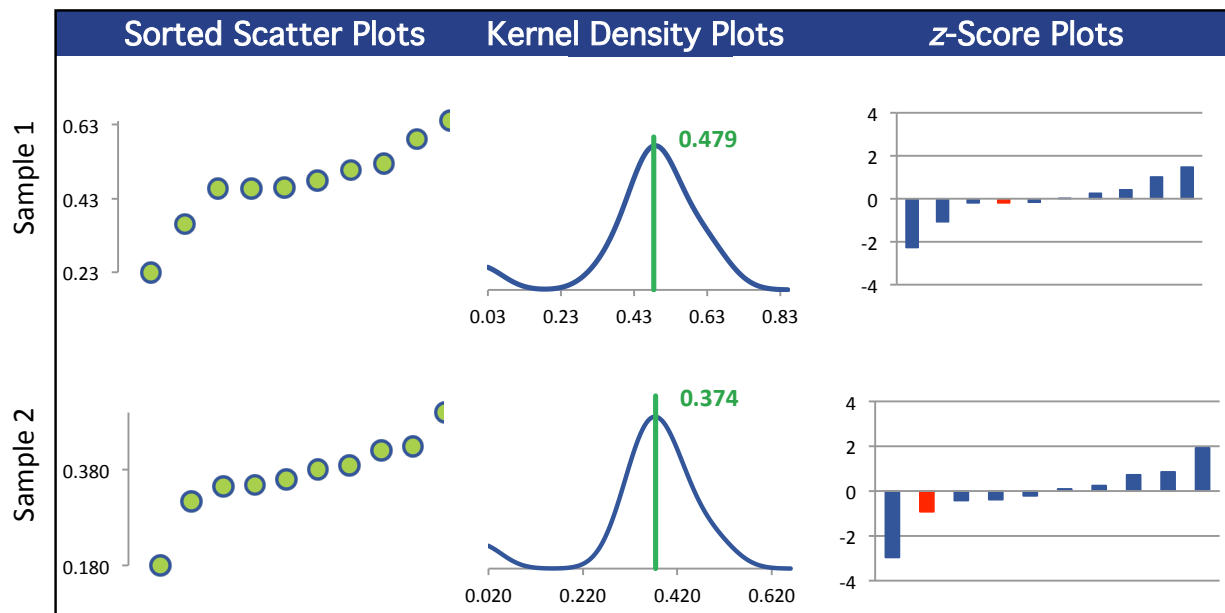
## Summary Statistics

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	10	0	0
Median $\mu\text{g/g}$	0.470	0.370		
Robust Mean $\mu\text{g/g}$	0.479	0.374		
U $\mu\text{g/g}$	0.0431	0.0259		
Robust Standard Deviation $\mu\text{g/g}$	0.109	0.0655		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.109	0.0655		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	1	1	0	0

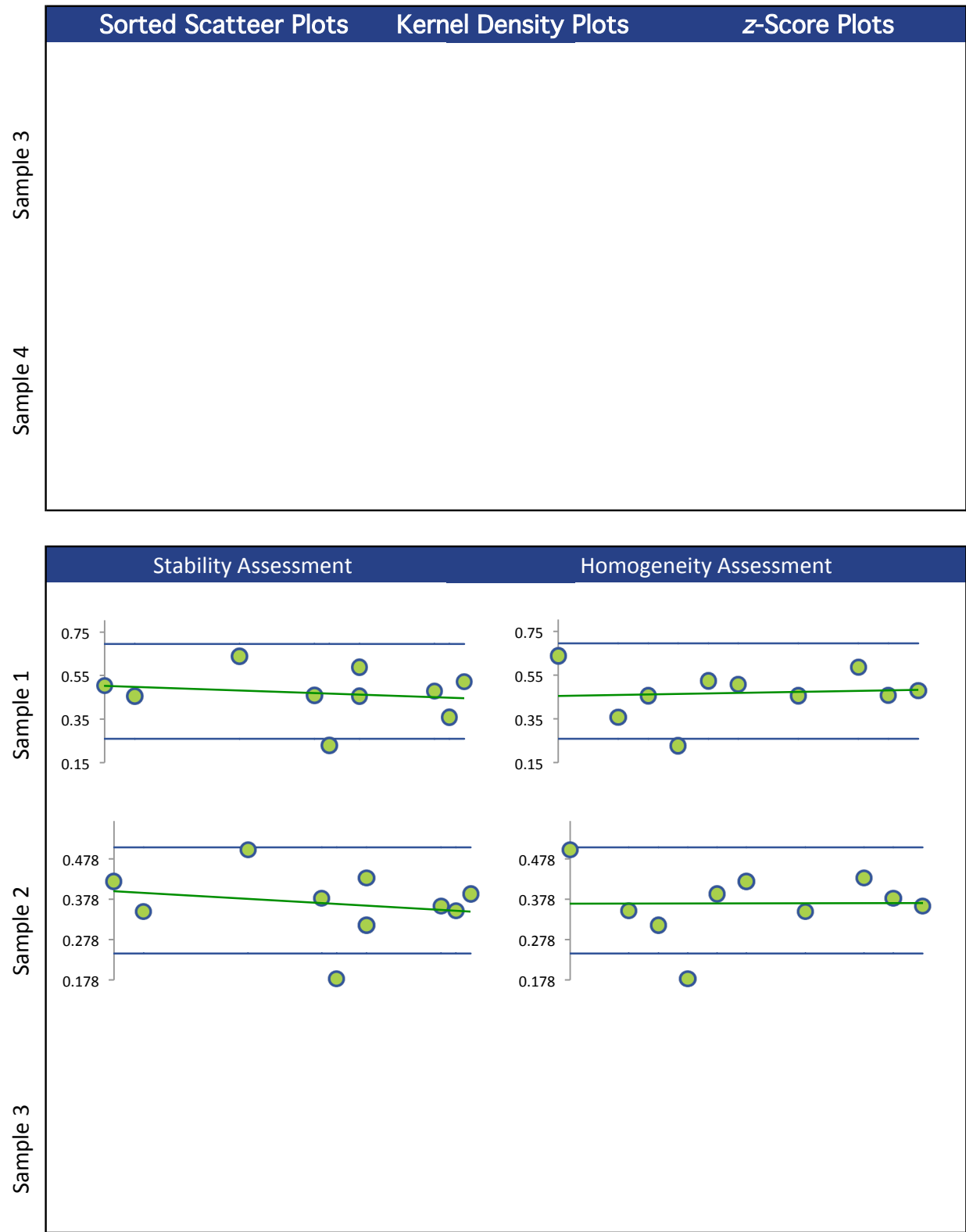
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	9	9	0	0
LC/MS (Red)	1	1	0	0

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



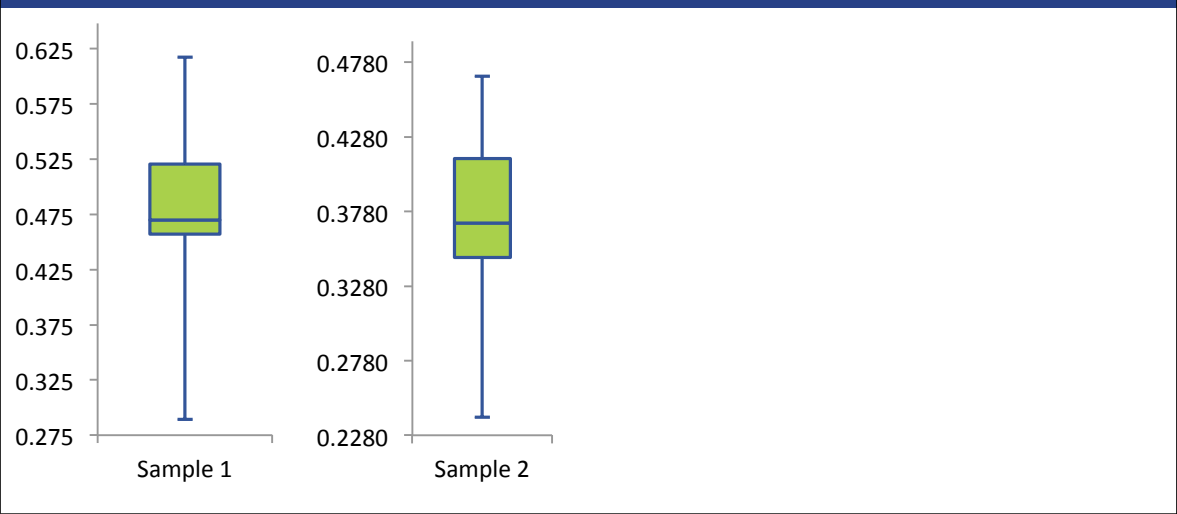
PACLOBUTRAZOL



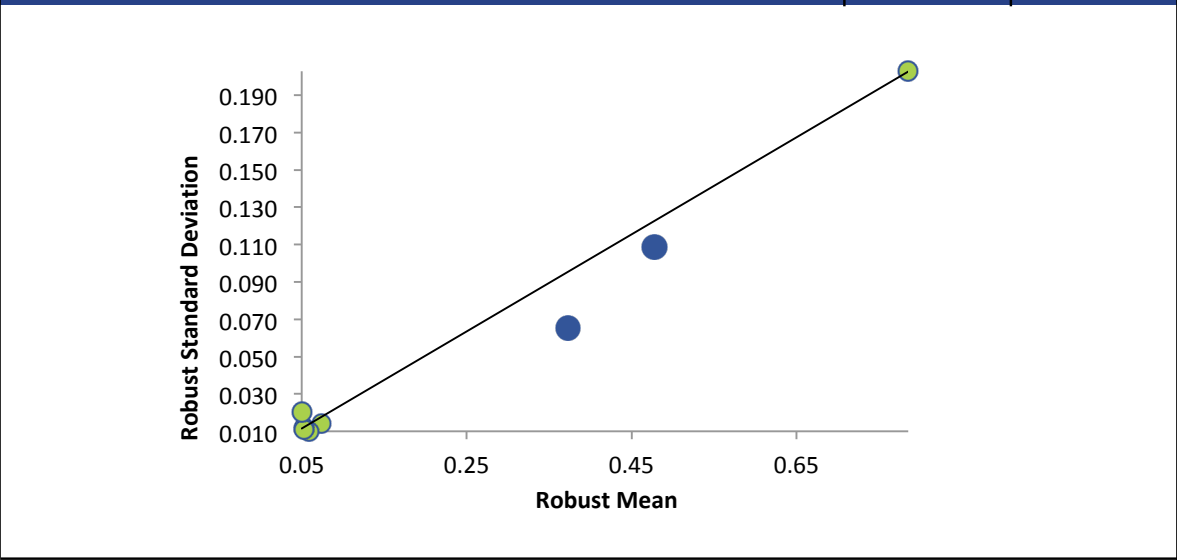
PACLOBUTRAZOL

Stability Assessment		Homogeneity Assessment	
Sample 4			
	Stability assessments are regression analysis of reported result against date of analysis. Homogeneity assessments are regression analysis of reported result against bottling order.		

Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



## PROPOXUR (BAYGON)

## Summary Statistics

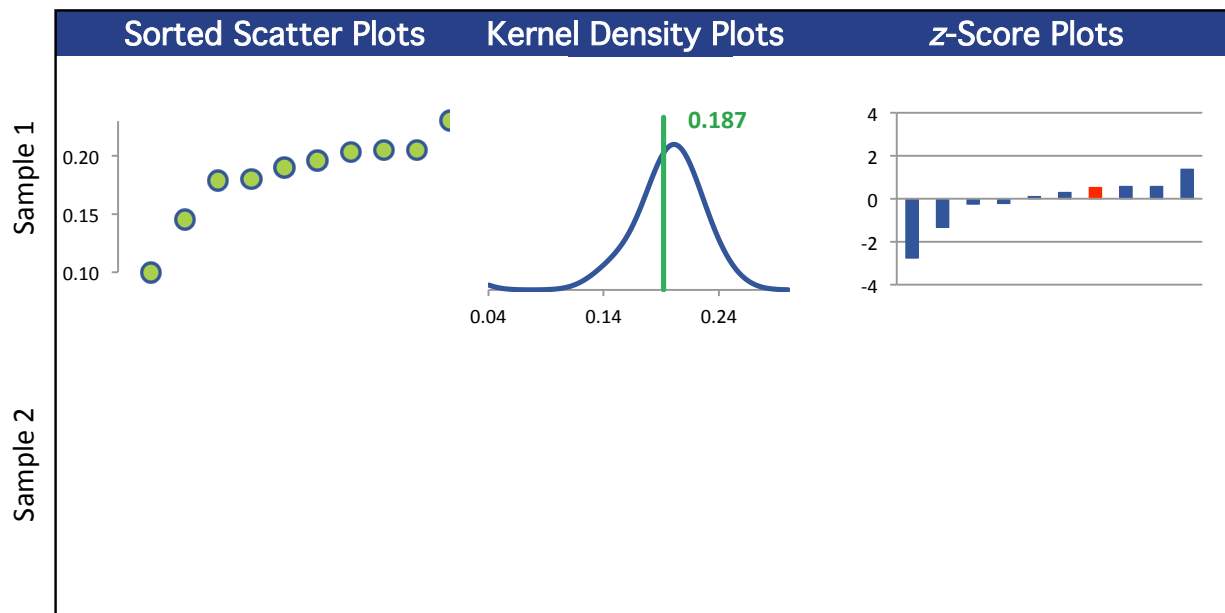
Not Spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	10	0	0	0
Median $\mu\text{g/g}$	0.193			
Robust Mean $\mu\text{g/g}$	0.187			
U $\mu\text{g/g}$	0.0125			
Robust Standard Deviation $\mu\text{g/g}$	0.0315			
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$	0.0315			
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	1	0	0	0

## Methods Used

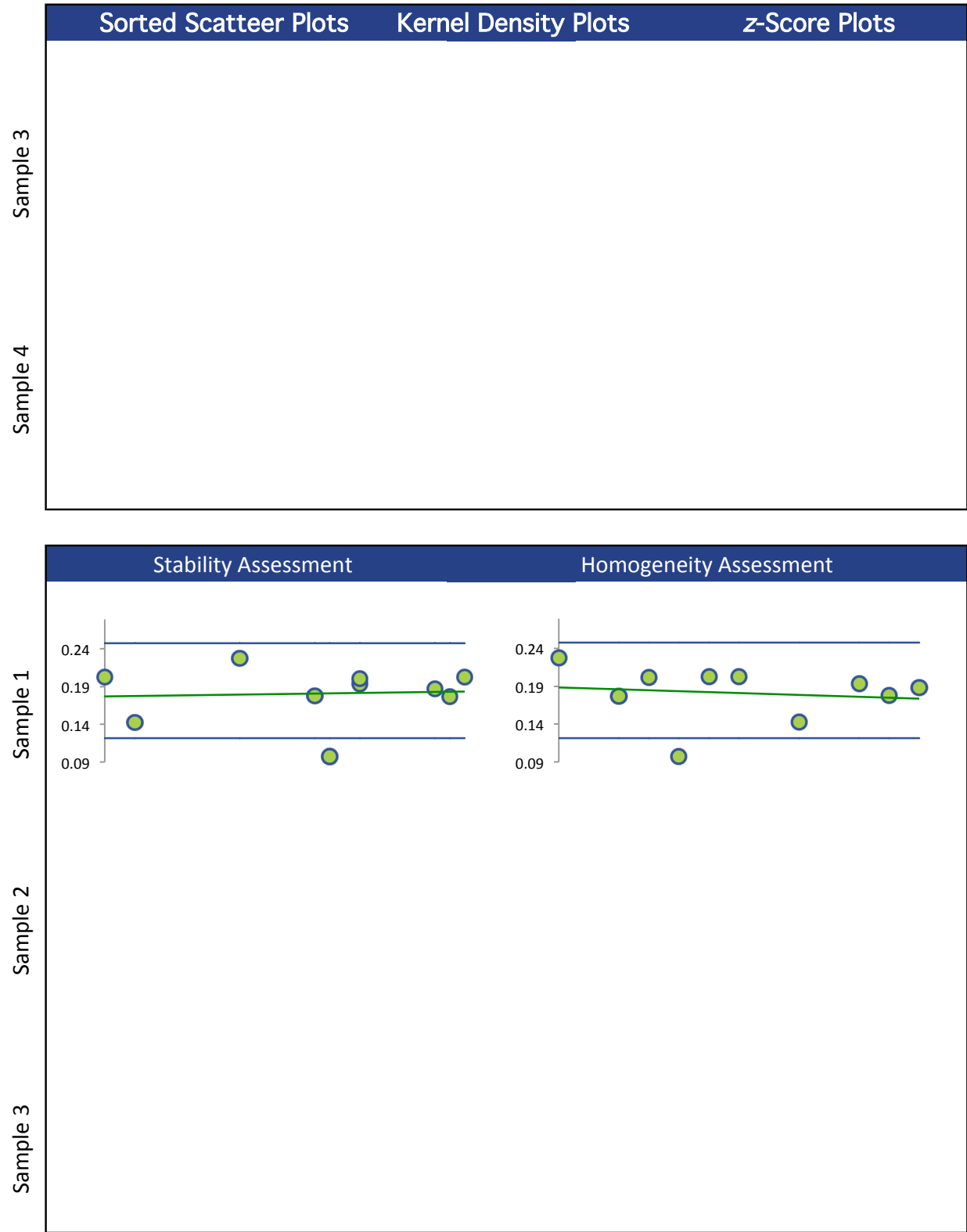
Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	9	0	0	0
LC/MS (Red)	1	0	0	0

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



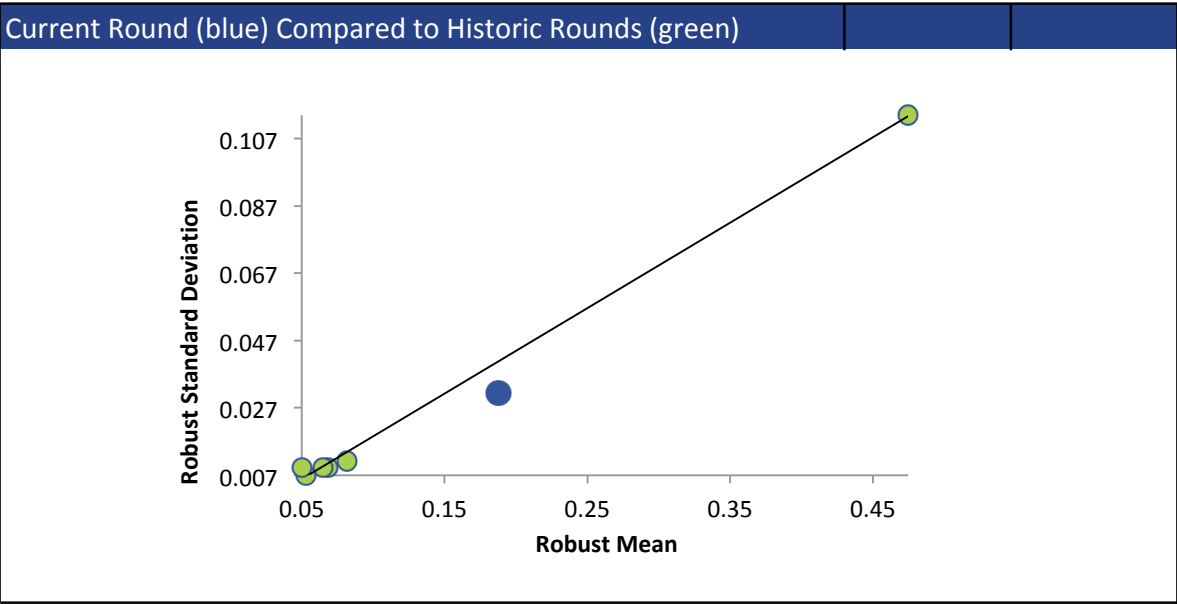


PROPOXUR (BAYGON)



PROPOXUR (BAYGON)

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## SPIROMESIFEN

## Summary Statistics

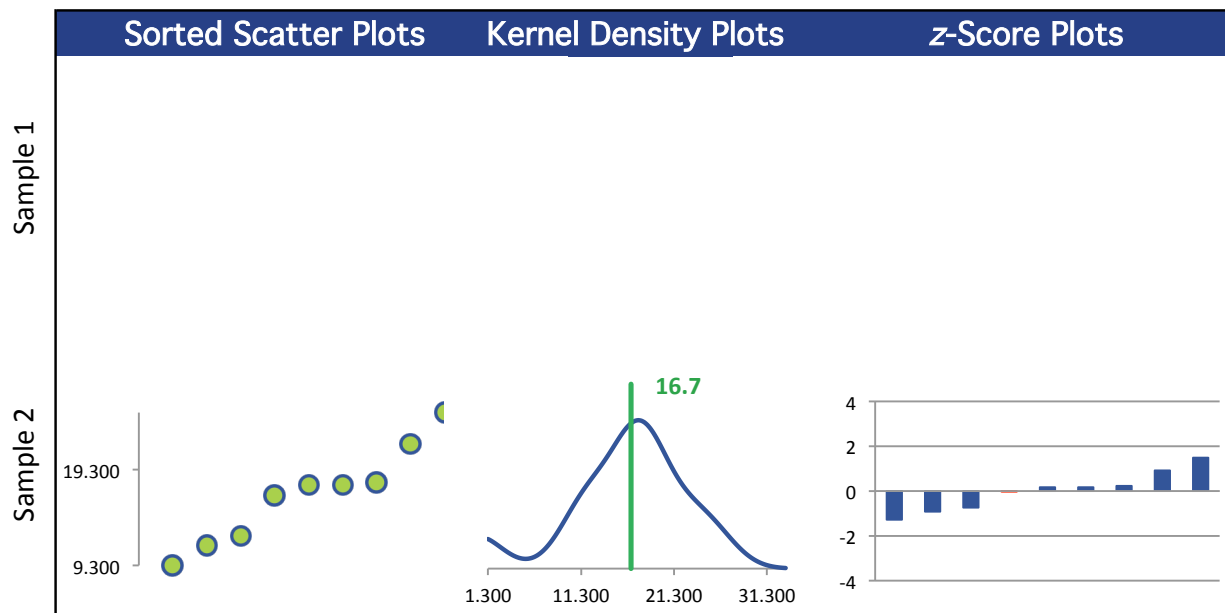
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	9	0	0
Median $\mu\text{g/g}$		17.7		
Robust Mean $\mu\text{g/g}$		16.7		
U $\mu\text{g/g}$		2.40		
Robust Standard Deviation $\mu\text{g/g}$		5.76		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		5.76		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	0	0	0

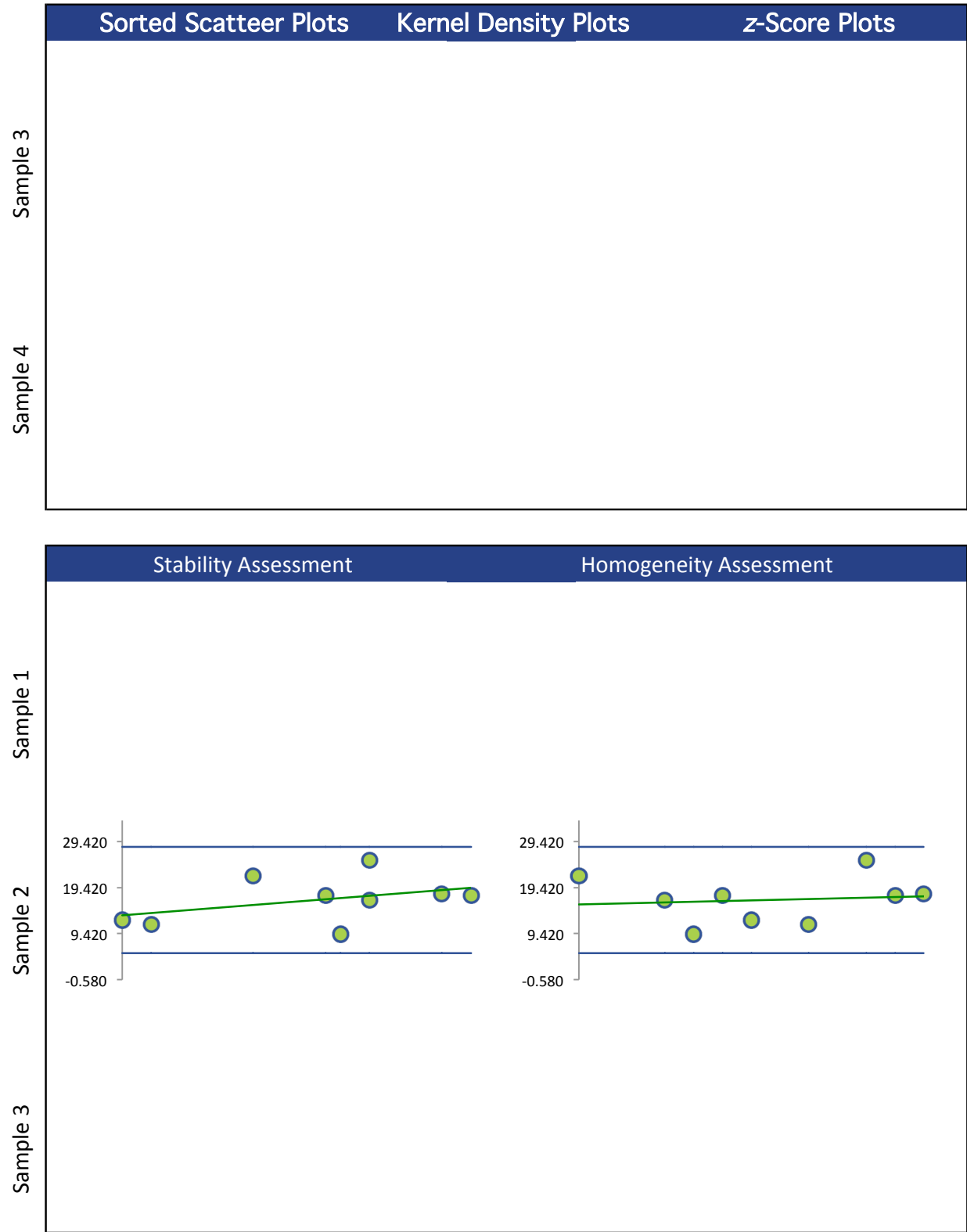
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	8	0	0
LC/MS (Red)	0	1	0	0

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

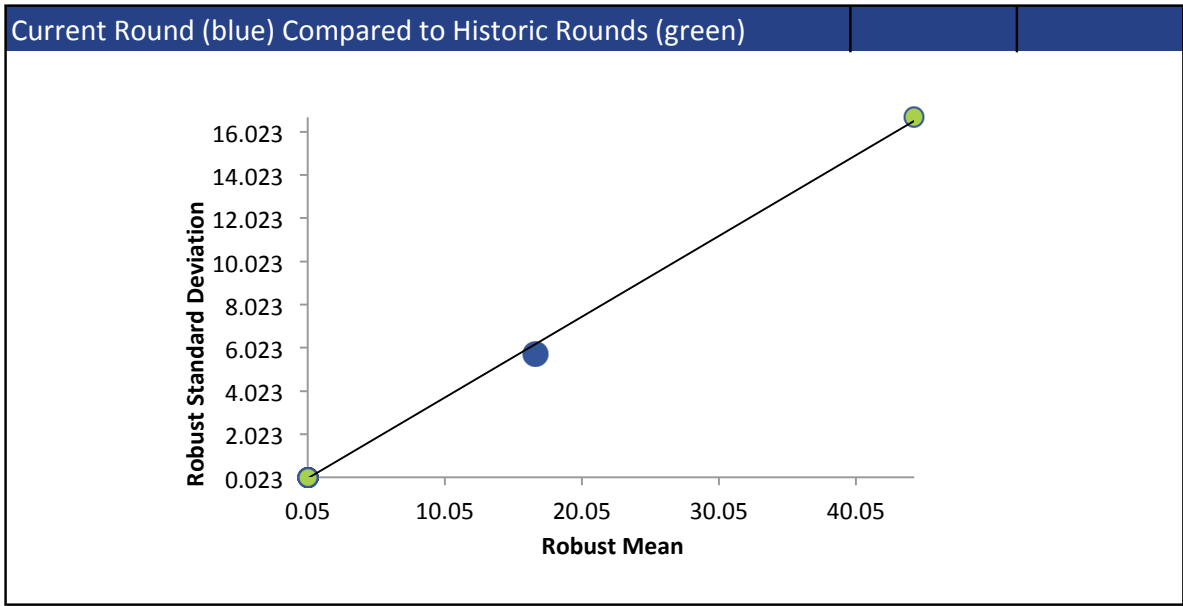
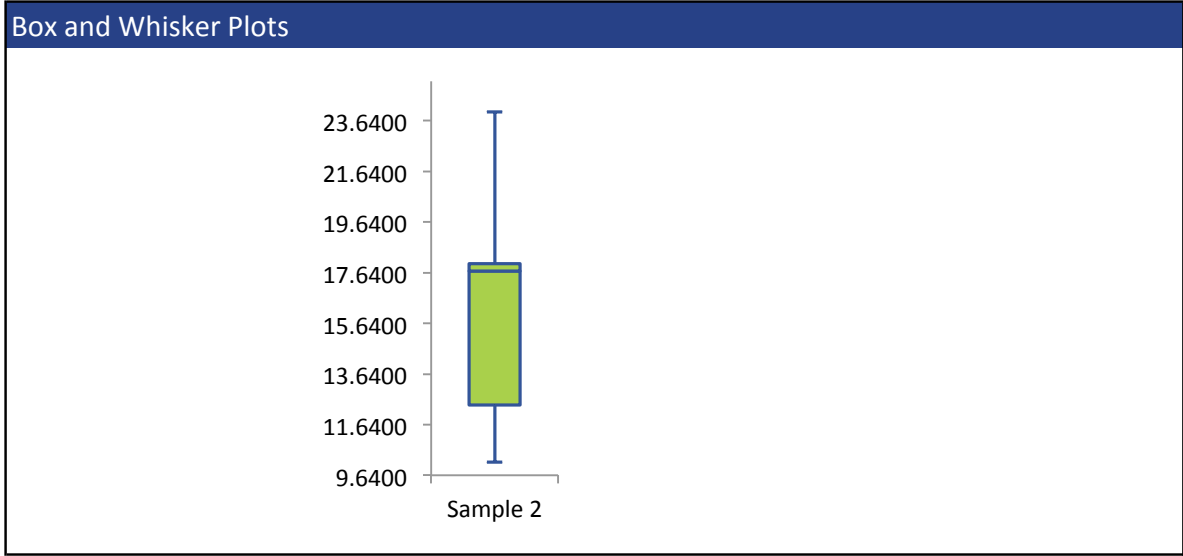


SPIROMESIFEN



SPIROMESIFEN

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	



## SPIROTETRAMAT

## Summary Statistics

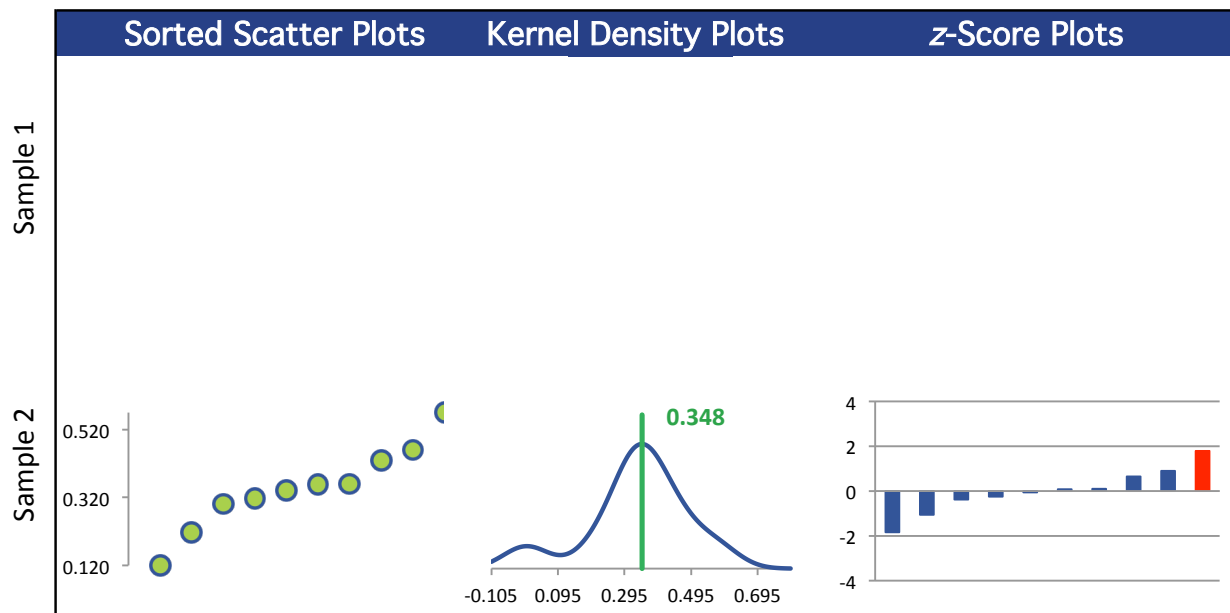
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.349		
Robust Mean $\mu\text{g/g}$		0.348		
U $\mu\text{g/g}$		0.0490		
Robust Standard Deviation $\mu\text{g/g}$		0.124		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.124		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	0	0	0

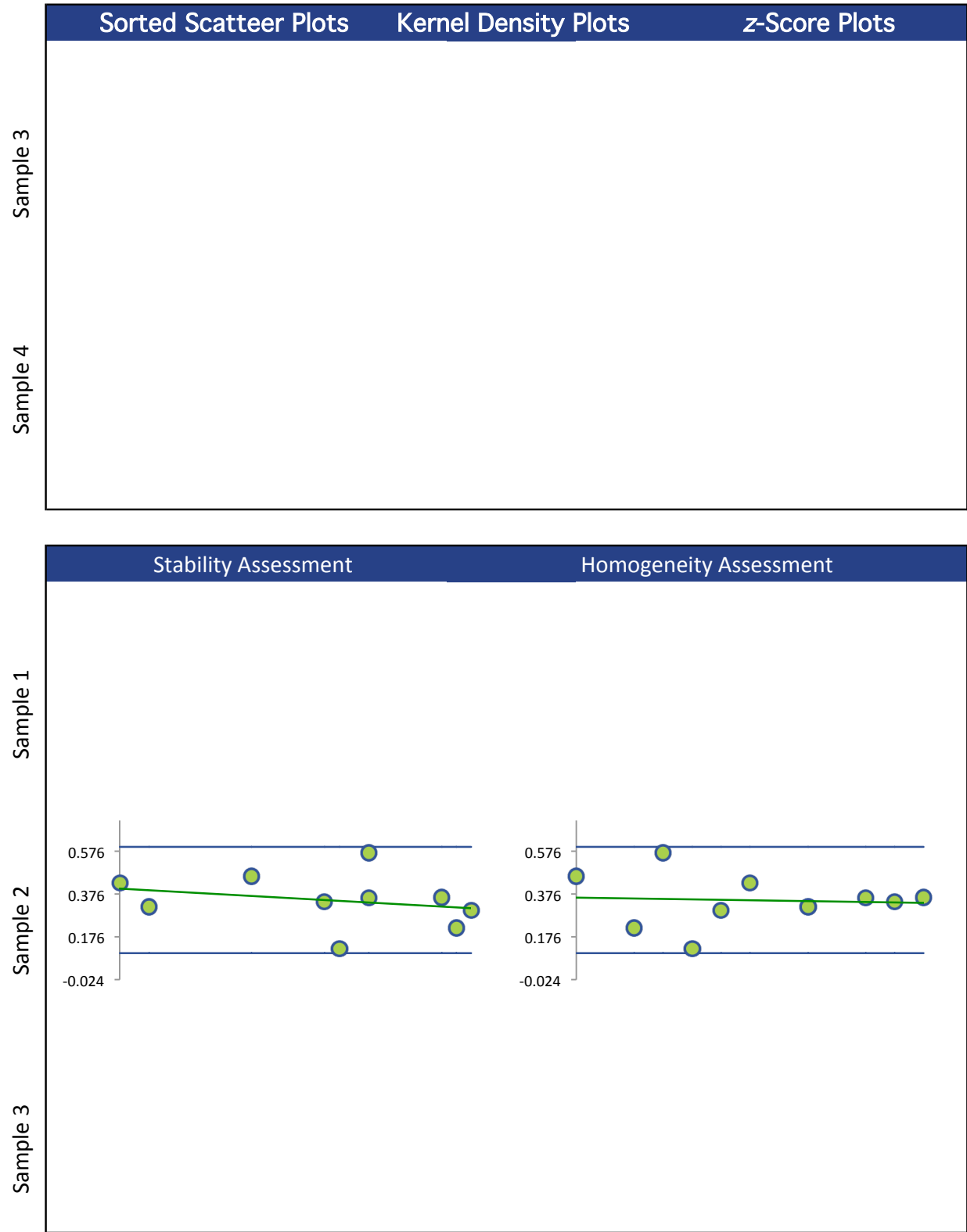
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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

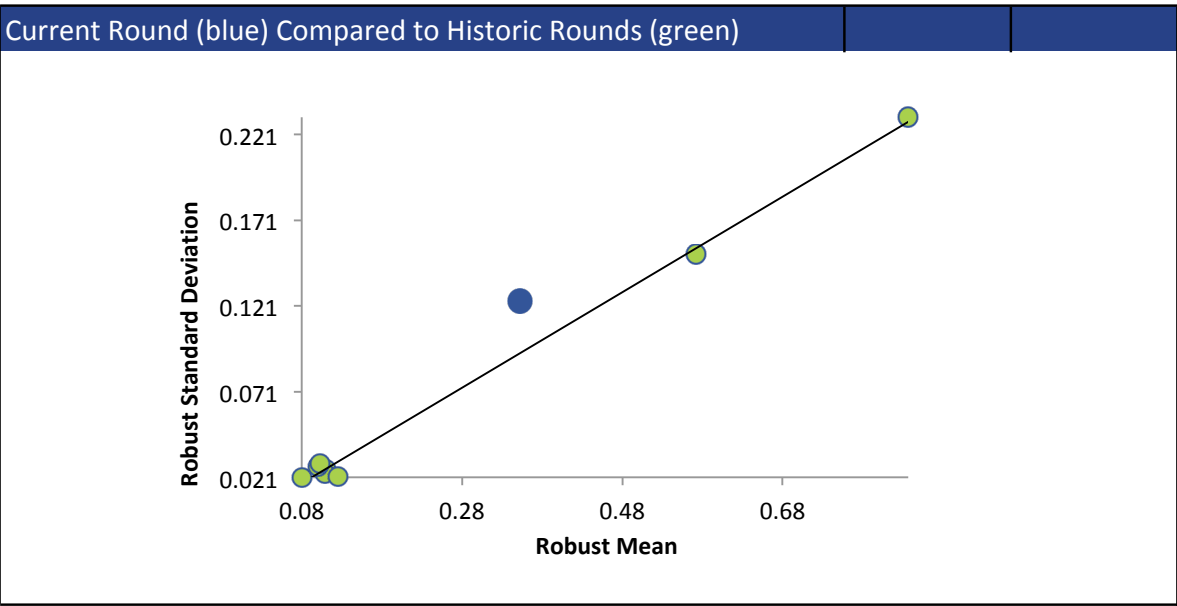
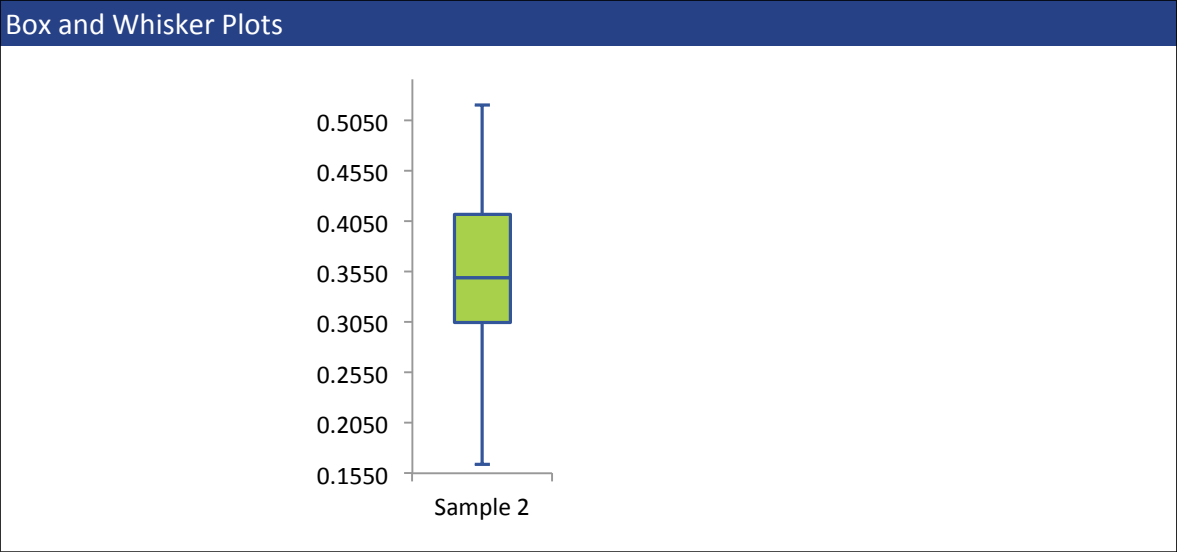


SPIROTETRAMAT



SPIROTETRAMAT

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	





## THIAMETHOXAM

## Summary Statistics

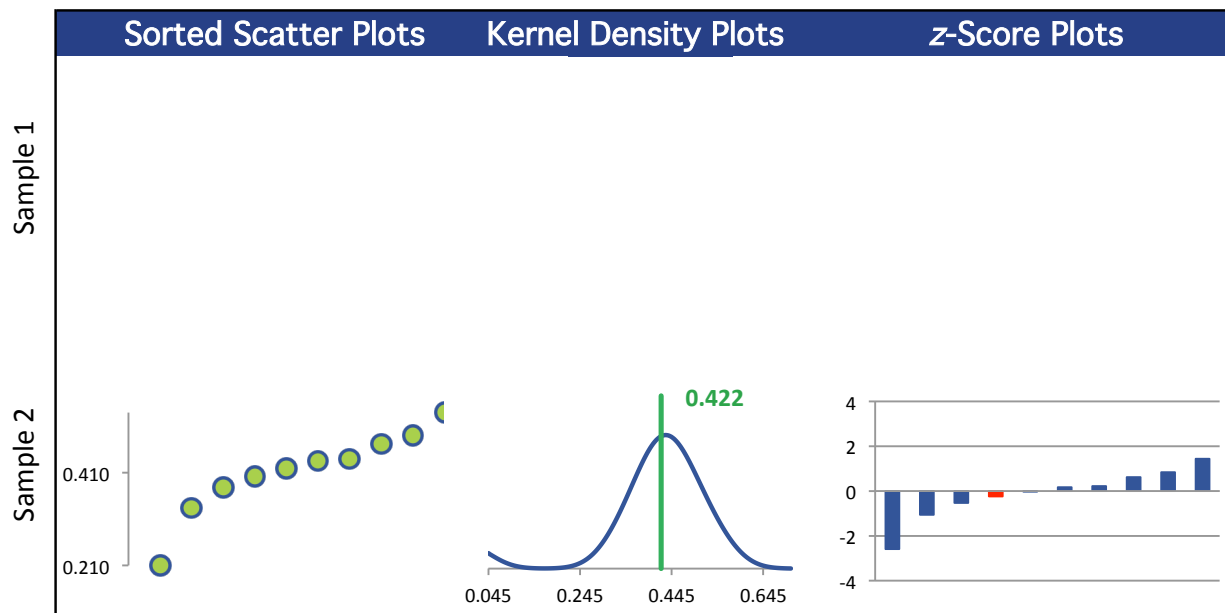
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.428		
Robust Mean $\mu\text{g/g}$		0.422		
U $\mu\text{g/g}$		0.0323		
Robust Standard Deviation $\mu\text{g/g}$		0.0817		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.0817		
Outliers	0	0	0	0
$ z  > 3.0$	0	0	0	0
$2 <  z  < 3$	0	1	0	0

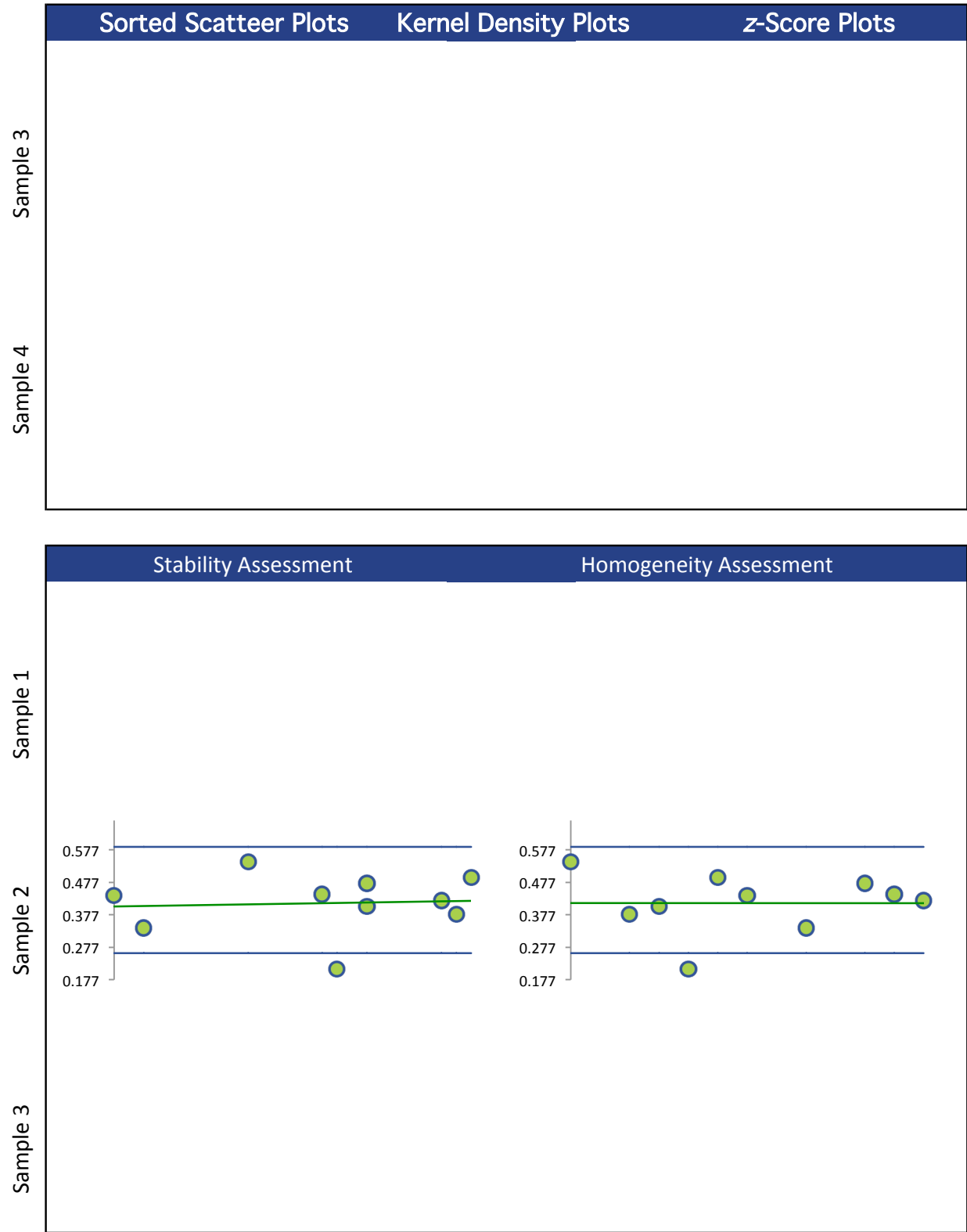
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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



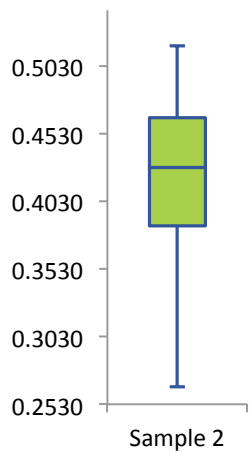
THIAMETHOXAM



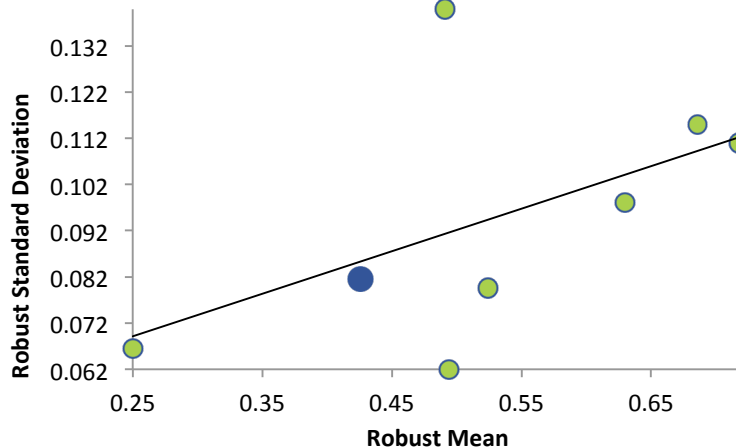
THIAMETHOXAM

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	

Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



## TRIFLOXYSTROBIN

## Summary Statistics

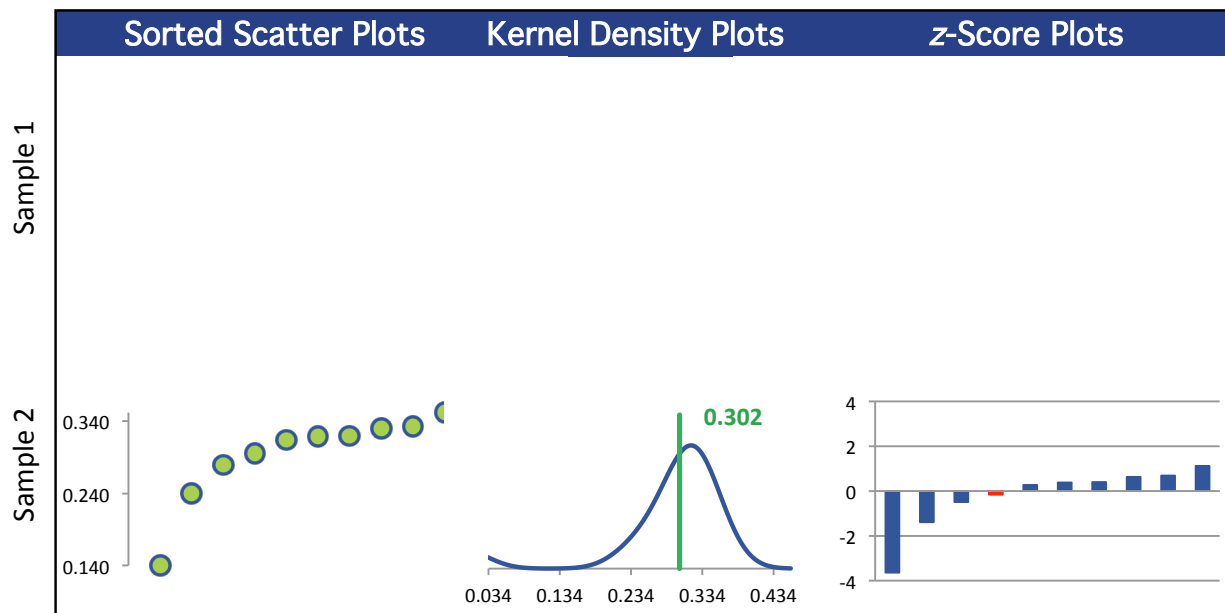
Not spiked

Statistic	C71-1	C71-2	C71-3	C71-4
N	0	10	0	0
Median $\mu\text{g/g}$		0.317		
Robust Mean $\mu\text{g/g}$		0.302		
U $\mu\text{g/g}$		0.0176		
Robust Standard Deviation $\mu\text{g/g}$		0.0445		
Regression Standard Deviation $\mu\text{g/g}$				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) $\mu\text{g/g}$		0.0445		
Outliers	0	0	0	0
$ z  > 3.0$	0	1	0	0
$2 <  z  < 3$	0	0	0	0

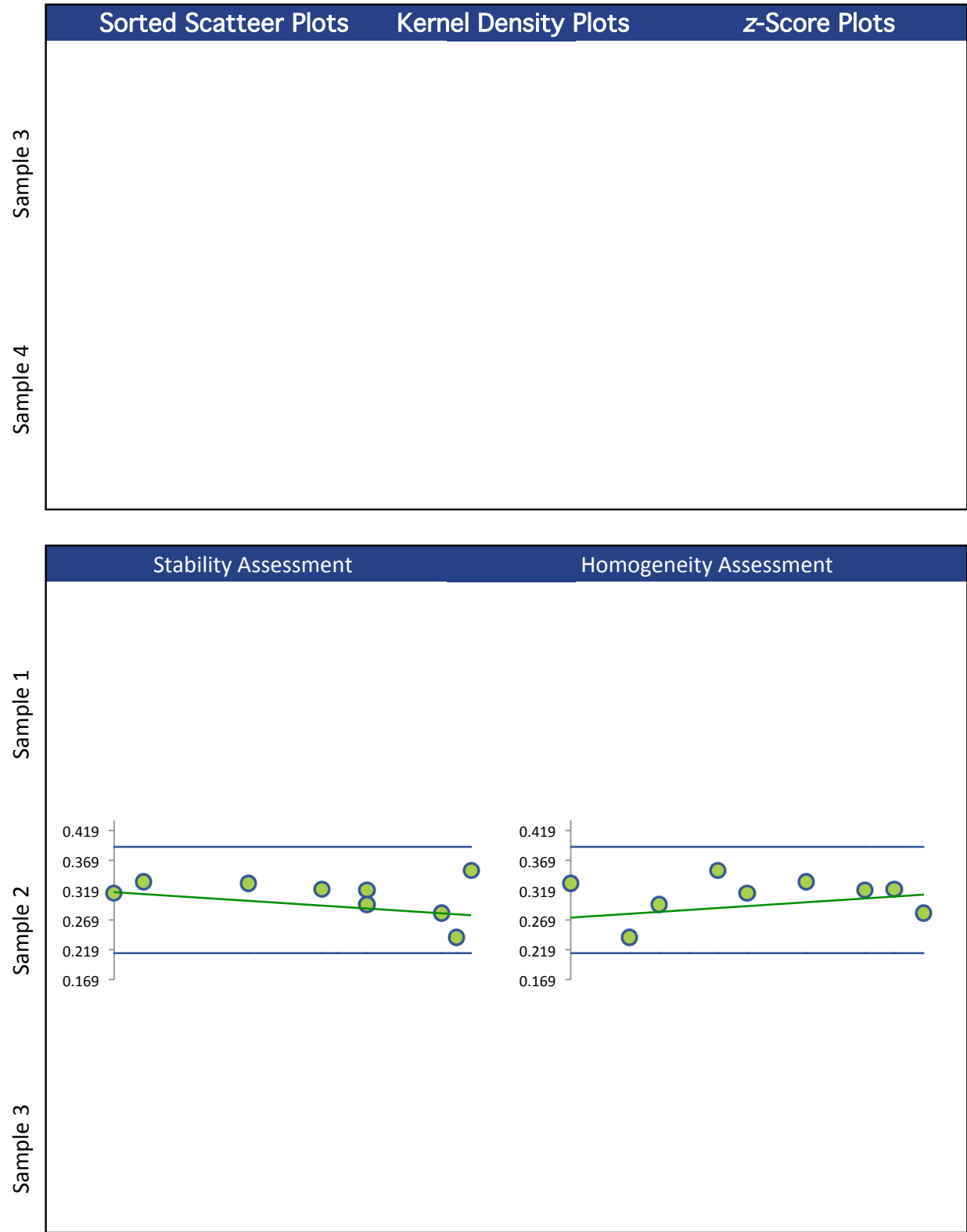
## Methods Used

Method	C71-1	C71-2	C71-3	C71-4
LC/MS/MS (Blue)	0	9	0	0
LC/MS (Red)	0	1	0	0

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



TRIFLOXYSTROBIN



TRIFLOXYSTROBIN

Sample 4	Stability Assessment	Homogeneity Assessment
	<div>Stability assessments are regression analysis of reported result against date of analysis.</div> <div>Homogeneity assessments are regression analysis of reported result against bottling order.</div>	

