Appendix C

1,1,1-Trichloroethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,1,1-TCA\Data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C2	50	0.67	11	1.134	0.84	2.178	1.476	0.119	6.404	42.98	1.301

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C2	50	0.71	0.729	0.768	0.773	0.84	0.93	0.946	1.04	1.72	7.178

1,1,2-Trichloroethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,1,2-TCA\1,1,2-TCA.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.13	0.38	0.176	0.165	0.00184	0.0429	0.0222	3.089	11.54	0.244

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.14	0.149	0.15	0.15	0.165	0.188	0.19	0.2	0.25	0.341

1,1,2-Trichlorotrifluoroethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,1,2-TCTFA\1,1,2-TCTFA data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

1,1-Dichloroethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,1-DCA\1,1-DCA data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

1,1-Dichloroethene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,1-DCE\1,1-DCE data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.868	26.86	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.93	0.93	0.982	1.275	2.563

1,2,4-Trichlorobenzene

From File: 1,2,4-TCB.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

1,2,4-Trimethylbenzene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,2,4-TMB\1,2,4-TMB data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
1,2,4-TMB	50	0.67	17	2.233	1.05	8.952	2.992	0.467	3.331	12.59	1.34

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
1,2,4-TMB	50	0.719	0.767	0.828	0.863	1.05	1.875	2.14	4.91	8.665	13.57

1,2-Dibromoethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,2-DBA\1,2-DBA data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

1,2-Dichloroethane

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,2-DCA\1,2-DCA data.wst
Full Precision	OFF
Confidence Coefficient	0.95

C0

Raw Statistics

Number of Valid Observations	50
Number of Distinct Observations	36
Minimum	0.053
Maximum	2.1
Mean of Raw Data	0.374
Standard Deviation of Raw Data	0.446
Kstar	1.084
Mean of Log Transformed Data	-1.482
Standard Deviation of Log Transformed Data	0.966

Normal Distribution Test Results

Correlation Coefficient R	0.824
Shapiro Wilk Test Statistic	0.687
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	5.239E-13
Lilliefors Test Statistic	0.236
Lilliefors Critical (0.95) Value	0.125

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.97
A-D Test Statistic	1.955
A-D Critical (0.95) Value	0.776
K-S Test Statistic	0.186
K-S Critical(0.95) Value	0.129

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.931
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.00754
Lilliefors Test Statistic	0.146
Lilliefors Critical (0.95) Value	0.125

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,2-DCA\1,2-DCA data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C0	50	0.053	2.1	0.374	0.17	0.199	0.446	0.134	2.458	6.662	1.192

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C0	50	0.0675	0.0839	0.0942	0.11	0.17	0.478	0.572	0.82	1.155	2.051

Nonparametric Background Statistics for Full Data Sets

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,2-DCA\1,2-DCA data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Number of Bootstrap Operations	2000

C0

Some Non-Parametric Statistics

Number of Valid Observations	50
Number of Distinct Observations	36
Minimum	0.053
Maximum	2.1
Second Largest	2
Mean	0.374
Geometric Mean	0.227
First Quartile	0.11
Median	0.17
Third Quartile	0.478
SD	0.446
Variance	0.199
Coefficient of Variation	1.192
Skewness	2.458
Mean of Log-Transformed data	-1.482
SD of Log-Transformed data	0.966

Data do not follow a Discernable Distribution (0.05)

Non-Parametric Background Statistics

90% Percentile	0.82
95% Percentile	1.155
99% Percentile	2.051

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	0.23

95% BCA Bootstrap UTL with 50% Coverage	0.285
95% Percentile Bootstrap UTL with 50% Coverage	0.35

95% UPL	1.56
95% Chebyshev UPL	2.339

Upper Limit Based upon IQR	1.029

From File: C:\Documents and Settings\martichbj\Desktop\Data Stats\1,2-DCA\1,2-DCA data.wst

Summary Statistics for Raw Full Data Sets

Variable		NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
	AG	27	0.067	2.1	0.456	0.35	0.213	0.462	0.341	2.051	5.186	1.013
	DG	23	0.053	2	0.279	0.13	0.174	0.417	0.083	3.544	14.06	1.496

Percentiles for Raw Full Data Sets

Variable		NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
	AG	27	0.088	0.104	0.12	0.125	0.35	0.6	0.676	1.04	1.17	1.866
	DG	23	0.0554	0.0692	0.0862	0.0885	0.13	0.275	0.372	0.478	0.768	1.736

Lognormal Background Statistics for Full Data Sets

User Selected Options	
From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\1,2-DCA\1,2-DCA data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

AG

Log-Transformed Statistics

Number of Valid Observations	27
Number of Distinct Observations	23
Minimum	-2.703
Maximum	0.742
Second Largest	0.182
Mean	-1.212
First Quartile	-2.08
Median	-1.05
Third Quartile	-0.511
SD	0.943

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.949
5% Shapiro Wilk Critical Value	0.923

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

90% Percentile (z)	0.996
95% Percentile (z)	1.402
99% Percentile (z)	2.666
95% UPL	1.53
Tolerance Factor K	N/A
95% UTL with 50% Coverage	N/A

Some Nonparametric Background Statistics

95% Chebyshev UPL	2.506
95% Bootstrap BCA UTL with 50% Coverage	0.4
95% Percentile Bootstrap UTL with 50% Coverage	0.5

Nonparametric Background Statistics for Full Data Sets

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\1,2-DCA\1,2-DCA data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Number of Bootstrap Operations	2000

DG

Some Non-Parametric Statistics

Number of Valid Observations	23
Number of Distinct Observations	19
Minimum	0.053
Maximum	2
Second Largest	0.8
Mean	0.279
Geometric Mean	0.166
First Quartile	0.0885
Median	0.13
Third Quartile	0.275
SD	0.417
Variance	0.174
Coefficient of Variation	1.496
Skewness	3.544
Mean of Log-Transformed data	-1.798
SD of Log-Transformed data	0.914

Data do not follow a Discernable Distribution (0.05)

Non-Parametric Background Statistics

90% Percentile	0.478
95% Percentile	0.768
99% Percentile	1.736

95% UTL with 50% Coverage

Order Statistic	15
Achieved CC	0.953
UTL	0.17

95% BCA Bootstrap UTL with 50% Coverage	0.17
95% Percentile Bootstrap UTL with 50% Coverage	0.19

95% UPL	1.76
95% Chebyshev UPL	2.136

Upper Limit Based upon IQR	0.555

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Full Data Sets without NDs

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\1,2-DCA\1,2-DCA data.wst
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: AG

Background Data: DG

Raw Statistics

	Site	Background
Number of Valid Observations	27	23
Number of Distinct Observations	23	19
Minimum	0.067	0.053
Maximum	2.1	2
Mean	0.456	0.279
Median	0.35	0.13
SD	0.462	0.417
SE of Mean	0.0889	0.087

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Site or AOC <= Mean/Median of Background

Site Rank Sum W-Stat	805
WMW Test U-Stat	2.258
WMW Critical Value (0.050)	1.645
P-Value	0.012

Conclusion with Alpha = 0.05

Reject H0, Conclude Site > Background

P-Value < alpha (0.05)

1,2-Dichlorobenzene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,2-DCB\1,2-DCB data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

1,2-Dichloropropane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,2-DCP\1,2-DCP data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

1,3,5-Trimethylbenzene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,3,5-TMB\1,3,5-TMB data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	5.5	1.171	0.865	0.757	0.87	0.126	3.297	12.6	0.743

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.77	0.78	0.865	0.97	1.08	1.98	2.91	4.373

1,3-Butadiene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,3-Butadiene\1,3-butadiene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.92	0.835	0.147	0.383	0.126	4.848	26.73	0.417

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.835	0.93	0.932	0.991	1.275	2.563

1,3-Dichlorobenzene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,3-DCB\1,3-DCB data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

1,4-Dichlorobenzene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,4-DCB\1,4-DCB data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	36	2.143	0.835	37.62	6.133	0.126	4.982	24.45	2.862

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.835	0.93	0.946	1.05	2.615	31.59

1,4-Dioxane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\1,4-Dioxane\1,4-dioxane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

2-Butanone

From File: 2-butanone.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	6.7	32	9.908	8.5	21.39	4.625	1.26	3.391	12.7	0.467

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	7.1	7.29	7.6	7.7	8.5	9.625	9.84	13.2	17.65	29.06

2-Hexanone

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\2-Hexanone\2-hexanone data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.933	0.84	0.15	0.388	0.119	4.636	24.85	0.416

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.725	0.739	0.768	0.77	0.84	0.93	0.932	0.982	1.455	2.563

2-Propanol

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\2-Propanol\2-propanol data.wst
Full Precision	OFF
Confidence Coefficient	0.95

C0

Raw Statistics

Number of Valid Observations	50
Number of Distinct Observations	43
Minimum	3.1
Maximum	170
Mean of Raw Data	35.94
Standard Deviation of Raw Data	33.66
Kstar	1.204
Mean of Log Transformed Data	3.137
Standard Deviation of Log Transformed Data	1.02

Normal Distribution Test Results

Correlation Coefficient R	0.909
Shapiro Wilk Test Statistic	0.833
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	2.6966E-7
Lilliefors Test Statistic	0.165
Lilliefors Critical (0.95) Value	0.125

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.996
A-D Test Statistic	0.304
A-D Critical (0.95) Value	0.773
K-S Test Statistic	0.0766
K-S Critical(0.95) Value	0.128

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.988
Shapiro Wilk Test Statistic	0.96
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.156
Lilliefors Test Statistic	0.089
Lilliefors Critical (0.95) Value	0.125

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\2-Propanol\2-propanol data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C0	50	3.1	170	35.94	27	1133	33.66	28.17	1.813	4.341	0.937

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C0	50	4.27	5.56	7.86	11.25	27	46	56.2	76.5	94.85	145.5

Lognormal Background Statistics for Full Data Sets

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\2-Propanol\2-propanol data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

C0

Log-Transformed Statistics

Number of Valid Observations	50
Number of Distinct Observations	43
Minimum	1.131
Maximum	5.136
Second Largest	4.787
Mean	3.137
First Quartile	2.42
Median	3.296
Third Quartile	3.829
SD	1.02

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.96
5% Shapiro Wilk Critical Value	0.947

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

90% Percentile (z)	85.19
95% Percentile (z)	123.4
99% Percentile (z)	247.4
95% UPL	129.7
Tolerance Factor K	0.236
95% UTL with 50% Coverage	29.32

Some Nonparametric Background Statistics

95% Chebyshev UPL	184.1
95% Bootstrap BCA UTL with 50% Coverage	36
95% Percentile Bootstrap UTL with 50% Coverage	39

4-Ethyltoluene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\4-Ethyltoluene\4-ethyltoluene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	5.4	1.163	0.865	0.737	0.858	0.133	3.262	12.25	0.738

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.77	0.78	0.865	0.97	1.04	1.97	2.91	4.322

4-Methyl-2-pentanone

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\4-M-2-P\4-M-2-P data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.3	1.113	0.875	0.368	0.607	0.156	2.301	4.978	0.545

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.724	0.749	0.778	0.783	0.875	1	1.16	2.1	2.255	3.251

Acetone

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Acetone\Acetone data.wst
Full Precision	OFF
Confidence Coefficient	0.95

C0

Raw Statistics

Number of Valid Observations	50
Number of Distinct Observations	40
Minimum	16
Maximum	130
Mean of Raw Data	51.58
Standard Deviation of Raw Data	26.84
Kstar	3.92
Mean of Log Transformed Data	3.818
Standard Deviation of Log Transformed Data	0.508

Normal Distribution Test Results

Correlation Coefficient R	0.954
Shapiro Wilk Test Statistic	0.902
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	3.1846E-4
Lilliefors Test Statistic	0.115
Lilliefors Critical (0.95) Value	0.125

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.992
A-D Test Statistic	0.214
A-D Critical (0.95) Value	0.754
K-S Test Statistic	0.0603
K-S Critical(0.95) Value	0.126

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.997
Shapiro Wilk Test Statistic	0.979
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.695
Lilliefors Test Statistic	0.0585
Lilliefors Critical (0.95) Value	0.125

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Acetone\Acetone data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C0	50	16	130	51.58	46	720.1	26.84	23.72	1.181	1.425	0.52

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C0	50	19.45	23.9	29	30.5	46	65	71.2	83.4	102.8	130

Lognormal Background Statistics for Full Data Sets

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Acetone\Acetone data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

C0

Log-Transformed Statistics

Number of Valid Observations	50
Number of Distinct Observations	40
Minimum	2.773
Maximum	4.868
Second Largest	4.868
Mean	3.818
First Quartile	3.417
Median	3.828
Third Quartile	4.174
SD	0.508

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.979
5% Shapiro Wilk Critical Value	0.947

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

90% Percentile (z)	87.27
95% Percentile (z)	105
99% Percentile (z)	148.4
95% UPL	107.6
Tolerance Factor K	0.236
95% UTL with 50% Coverage	51.31

Some Nonparametric Background Statistics

95% Chebyshev UPL	169.7
95% Bootstrap BCA UTL with 50% Coverage	53
95% Percentile Bootstrap UTL with 50% Coverage	53

Acetonitrile

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Acetonitrile\Acetonitrile data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.971	0.835	0.255	0.505	0.119	3.807	14.67	0.52

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.715	0.739	0.768	0.77	0.835	0.93	0.932	1	1.81	3.2

Acrolein

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Acrolein\Acrolein data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	2.7	13	3.894	3.5	2.902	1.703	0.593	3.861	17.48	0.437

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	2.845	2.9	3.08	3.1	3.5	3.9	4	4.8	6.835	10.8

Acrylonitrile

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Acrylonitrile\Acrylonitrile data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Allyl Chloride

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Allyl chloride\Allyl chloride data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

alpha-Pinene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\alpha-Pinene\alpha-Pinene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

Raw

Raw Statistics

Number of Valid Observations	48
Number of Missing Values	2
Number of Distinct Observations	34
Minimum	0.83
Maximum	52
Mean of Raw Data	6.765
Standard Deviation of Raw Data	9.23
Kstar	1.003
Mean of Log Transformed Data	1.368
Standard Deviation of Log Transformed Data	0.993

Normal Distribution Test Results

Correlation Coefficient R	0.77
Shapiro Wilk Test Statistic	0.618
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	1.399E-14
Lilliefors Test Statistic	0.3
Lilliefors Critical (0.95) Value	0.128

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.946
A-D Test Statistic	1.711
A-D Critical (0.95) Value	0.777
K-S Test Statistic	0.199
K-S Critical(0.95) Value	0.131

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.981
Shapiro Wilk Test Statistic	0.952
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.0802
Lilliefors Test Statistic	0.118
Lilliefors Critical (0.95) Value	0.128

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\alpha-Pinene\alpha-Pinene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
LnROS_Pinene	50	0.429	52	6.535	3.75	83.02	9.112	3.089	3.284	12.92	1.394

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
LnROS_Pinene	50	0.985	1.1	1.5	1.65	3.75	5.5	9.48	13.1	24.65	41.22

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\alpha-Pinene\alpha-Pinene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

Pinene

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	2
Number of Detected Data	48
Minimum Detected	-0.186
Maximum Detected	3.951
Percent Non-Detects	4.00%
Minimum Non-detect	-0.0943
Maximum Non-detect	1.163
Mean of Detected data	1.368
SD of Detected data	0.993

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.952
5% Shapiro Wilk Critical Value	0.947

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	1.307
SD (Log Scale)	1.026
Tolerance Factor K	0.236
95% UTL 50% Coverage	4.706
95% UPL	20.99
90% Percentile (z)	13.76
95% Percentile (z)	19.98
99% Percentile (z)	40.2

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	1.306
SD in Log Scale	1.028
Mean in Orignal Scale	6.535
SD in Original Scale	9.112
95% UTL 50% Coverage	4.705
95% BCA UTL with 50% Coverage	4.9
95% Bootstrap (%) UTL with 50% Coverage	4.95
95% UPL (t)	21.06
90% Percentile (z)	13.79

95% Percentile (z)	20.03
99% Percentile (z)	40.37

Kaplan Meier (KM) Method

Mean	6.543
SD	9.015
SE of Mean	1.289
95% UTL 50% Coverage	8.669
95% KM Chebyshev UPL	46.23
95% KM UPL (t)	21.81
95% KM Percentile (z)	21.37

Bromodichloromethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\BDCM\BDCM data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.95	0.84	0.179	0.423	0.119	3.989	17.75	0.445

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.768	0.77	0.84	0.93	0.946	1	1.72	2.71

Benzene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Benzene\Benzene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

Raw

Raw Statistics

Number of Valid Observations	49
Number of Missing Values	1
Number of Distinct Observations	36
Minimum	0.35
Maximum	20
Mean of Raw Data	2.785
Standard Deviation of Raw Data	4.24
Kstar	0.78
Mean of Log Transformed Data	0.299
Standard Deviation of Log Transformed Data	1.105

Normal Distribution Test Results

Correlation Coefficient R	0.773
Shapiro Wilk Test Statistic	0.609
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	2.998E-15
Lilliefors Test Statistic	0.317
Lilliefors Critical (0.95) Value	0.127

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.965
A-D Test Statistic	3.66
A-D Critical (0.95) Value	0.789
K-S Test Statistic	0.212
K-S Critical(0.95) Value	0.131

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.947
Shapiro Wilk Test Statistic	0.88
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	4.0091E-5
Lilliefors Test Statistic	0.146
Lilliefors Critical (0.95) Value	0.127

Data not Lognormal at (0.05) Significance Level

From File: C:\Documents and Settings\martichbj\Desktop\Data Stats\Benzene\Benzene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
Benzene	50	0.14	20	2.732	0.895	17.75	4.213	0.645	2.551	6.457	1.542

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Benzene	50	0.38	0.46	0.508	0.52	0.895	2.5	3.28	8.36	12.1	17.55

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Benzene\Benzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

Benzene

Total Number of Data	50
Number of Non-Detect Data	1
Number of Detected Data	49
Minimum Detected	0.35
Maximum Detected	20
Percent Non-Detects	2.00%
Minimum Non-detect	0.14
Maximum Non-detect	0.14
Mean of Detected Data	2.785
SD of Detected Data	4.24
Mean of Log-Transformed Detected Data	0.299
SD of Log-Transformed Detected Data	1.105

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	1.3
Largest Non-detect at Order	1

95% UPL

95% UPL	13.9

Kaplan-Meier (KM) Method

Mean	2.736
SD	4.168
Standard Error of Mean	0.596
95% UTL 50% Coverage	3.72
95% KM Chebyshev UPL	21.09
95% KM UPL (t)	9.794
90% KM Percentile (z)	8.078
95% KM Percentile (z)	9.593
99% KM Percentile (z)	12.43

From File: C:\Documents and Settings\martichbj\Desktop\Data Stats\Benzene\Benzene data.wst

Summary Statistics for Raw Full Data Sets

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
AG	27	0.46	20	4.513	1.9	26.22	5.12	1.779	1.673	2.233	1.135
DG	23	0.14	1.4	0.642	0.52	0.0967	0.311	0.208	1.274	1.601	0.484

Percentiles for Raw Full Data Sets

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
AG	27	0.546	0.778	0.956	1.1	1.9	5.95	8.02	11.8	14.4	18.7
DG	23	0.353	0.38	0.464	0.475	0.52	0.745	0.79	1.054	1.37	1.4

Nonparametric Background Statistics for Full Data Sets

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Benzene\Benzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Number of Bootstrap Operations	2000

AG

Some Non-Parametric Statistics

Number of Valid Observations	27
Number of Distinct Observations	23
Minimum	0.46
Maximum	20
Second Largest	15
Mean	4.513
Geometric Mean	2.559
First Quartile	1.1
Median	1.9
Third Quartile	5.95
SD	5.12
Variance	26.22
Coefficient of Variation	1.135
Skewness	1.673
Mean of Log-Transformed data	0.94
SD of Log-Transformed data	1.088

Data appear Lognormal at 5% Significance Level

Non-Parametric Background Statistics

90% Percentile	11.8
95% Percentile	14.4
99% Percentile	18.7

95% UTL with 50% Coverage

Order Statistic	17
Achieved CC	0.939
UTL	3.1

95% BCA Bootstrap UTL with 50% Coverage	3.1
95% Percentile Bootstrap UTL with 50% Coverage	4

95% UPL	18
95% Chebyshev UPL	27.24

Upper Limit Based upon IQR	13.23

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Benzene\Benzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

DG

Total Number of Data	23
Number of Non-Detect Data	1
Number of Detected Data	22
Minimum Detected	0.35
Maximum Detected	1.4
Percent Non-Detects	4.35%
Minimum Non-detect	0.14
Maximum Non-detect	0.14
Mean of Detected Data	0.665
SD of Detected Data	0.298
Mean of Log-Transformed Detected Data	-0.487
SD of Log-Transformed Detected Data	0.389

Data appear Lognormal at 5% Significance Level

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	15
Achieved CC	0.953
UTL	0.64
Largest Non-detect at Order	1

95% UPL

95% UPL	1.4

Kaplan-Meier (KM) Method

Mean	0.651
SD	0.292
Standard Error of Mean	0.0623
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	1.951
95% KM UPL (t)	1.163
90% KM Percentile (z)	1.025
95% KM Percentile (z)	1.131
99% KM Percentile (z)	1.33

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Benzene\Benzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

DG

Total Number of Data	23
Number of Non-Detect Data	1
Number of Detected Data	22
Minimum Detected	0.35
Maximum Detected	1.4
Percent Non-Detects	4.35%
Minimum Non-detect	0.14
Maximum Non-detect	0.14
Mean of Detected Data	0.665
SD of Detected Data	0.298
Mean of Log-Transformed Detected Data	-0.487
SD of Log-Transformed Detected Data	0.389

Data appear Lognormal at 5% Significance Level

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	15
Achieved CC	0.953
UTL	0.64
Largest Non-detect at Order	1

95% UPL

95% UPL	1.4

Kaplan-Meier (KM) Method

Mean	0.651
SD	0.292
Standard Error of Mean	0.0623
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	1.951
95% KM UPL (t)	1.163
90% KM Percentile (z)	1.025
95% KM Percentile (z)	1.131
99% KM Percentile (z)	1.33

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Full Data Sets without NDs

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Benzene\Benzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: AG

Background Data: DG

Raw Statistics

	Site	Background
Number of Valid Observations	27	23
Number of Distinct Observations	23	18
Minimum	0.46	0.14
Maximum	20	1.4
Mean	4.513	0.642
Median	1.9	0.52
SD	5.12	0.311
SE of Mean	0.985	0.0648

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Site or AOC <= Mean/Median of Background

Site Rank Sum W-Stat	938.5
WMW Test U-Stat	4.857
WMW Critical Value (0.050)	1.645
P-Value	5.9716E-7

Conclusion with Alpha = 0.05

Reject H0, Conclude Site > Background

P-Value < alpha (0.05)

Benzyl Chloride

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Benzyl chloride\Benzyl chloride data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Bromoform

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Bromoform\Bromoform data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Bromomethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Bromomethane\Bromomethane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

C5 - C8 Aliphatics

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C5-C8 Aliphatics\C5-C8 Aliphatics data.'
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	45
Number of Missing Values	5
Number of Distinct Observations	33
Minimum	31
Maximum	500
Mean of Raw Data	131.1
Standard Deviation of Raw Data	119.1
Kstar	1.673
Mean of Log Transformed Data	4.569
Standard Deviation of Log Transformed Data	0.759

Normal Distribution Test Results

Correlation Coefficient R	0.863
Shapiro Wilk Test Statistic	0.741
Shapiro Wilk Critical (0.95) Value	0.945
Approximate Shapiro Wilk P Value	9.436E-10
Lilliefors Test Statistic	0.226
Lilliefors Critical (0.95) Value	0.132

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.964
A-D Test Statistic	1.462
A-D Critical (0.95) Value	0.764
K-S Test Statistic	0.149
K-S Critical(0.95) Value	0.134

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.978
Shapiro Wilk Test Statistic	0.937
Shapiro Wilk Critical (0.95) Value	0.945
Approximate Shapiro Wilk P Value	0.0238
Lilliefors Test Statistic	0.105
Lilliefors Critical (0.95) Value	0.132

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C5-C8 Aliphatics\C5-C8 Aliphatics data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	31	500	123.3	81	13435	115.9	59.3	1.973	3.43	0.94

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	33	34.9	41	46	81	160	182	224	414	480.4

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C5-C8 Aliphatics\C5-C8 Aliphatics data.'
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

C5-C8

Total Number of Data	50
Number of Non-Detect Data	5
Number of Detected Data	45
Minimum Detected	31
Maximum Detected	500
Percent Non-Detects	10.00%
Minimum Non-detect	33
Maximum Non-detect	130
Mean of Detected Data	131.1
SD of Detected Data	119.1
Mean of Log-Transformed Detected Data	4.569
SD of Log-Transformed Detected Data	0.759

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	94
Warning: Largest Non-detect at Order	36

95% UPL

95% UPL	454.5

Kaplan-Meier (KM) Method

Mean	121.8
SD	115.3
Standard Error of Mean	16.49
95% UTL 50% Coverage	149
95% KM Chebyshev UPL	629.2
95% KM UPL (t)	317
90% KM Percentile (z)	269.5
95% KM Percentile (z)	311.4
99% KM Percentile (z)	389.9

From File: C:\Documents and Settings\martichbj\Desktop\Data Stats\C5-C8 Aliphatics\C5-C8 Aliphatics data.wst

Summary Statistics for Raw Full Data Sets

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
AG	27	34	500	163.9	110	19335	139.1	88.95	1.374	0.722	0.849
DG	23	31	200	75.74	50	2690	51.86	26.69	1.265	0.508	0.685

Percentiles for Raw Full Data Sets

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
AG	27	42.5	46.6	62.6	76	110	200	208	402	457	489.6
DG	23	32.1	33	35	37	50	93.5	116.8	162	179	195.6

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\C5-C8 Aliphatics\C5-C8 Aliphatics data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

AG

Total Number of Data	27
Number of Non-Detect Data	1
Number of Detected Data	26
Minimum Detected	41
Maximum Detected	500
Percent Non-Detects	3.70%
Minimum Non-detect	34
Maximum Non-detect	34
Mean of Detected Data	168.8
SD of Detected Data	139.3
Mean of Log-Transformed Detected Data	4.845
SD of Log-Transformed Detected Data	0.75

Data appear Lognormal at 5% Significance Level

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	17
Achieved CC	0.939
UTL	120
Largest Non-detect at Order	1

95% UPL

95% UPL	484

Kaplan-Meier (KM) Method

Mean	164.1
SD	136.2
Standard Error of Mean	26.73
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	768.7
95% KM UPL (t)	400.7
90% KM Percentile (z)	338.7
95% KM Percentile (z)	388.2
99% KM Percentile (z)	481

DG

Total Number of Data	23
Number of Non-Detect Data	4
Number of Detected Data	19
Minimum Detected	31
Maximum Detected	200
Percent Non-Detects	17.39%
Minimum Non-detect	33
Maximum Non-detect	130
Mean of Detected Data	79.42
SD of Detected Data	53.14
Mean of Log-Transformed Detected Data	4.191
SD of Log-Transformed Detected Data	0.604

Data Follow Appr. Gamma Distribution at 5% Significance Level

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	15
Achieved CC	0.953
UTL	71
Warning: Largest Non-detect at Order	19

95% UPL

95% UPL	196

Kaplan-Meier (KM) Method

Mean	71.98
SD	50.05
Standard Error of Mean	10.77
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	294.8
95% KM UPL (t)	159.8
90% KM Percentile (z)	136.1
95% KM Percentile (z)	154.3
99% KM Percentile (z)	188.4

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects

User Selected Options	
From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\C5-C8 Aliphatics\C5-C8 Aliphatics data.wst
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: AG

Background Data: DG

Raw Statistics

	Site	Background
Number of Valid Data	27	23
Number of Non-Detect Data	1	4
Number of Detect Data	26	19
Minimum Non-Detect	34	33
Maximum Non-Detect	34	130
Percent Non detects	3.70%	17.39%
Minimum Detected	41	31
Maximum Detected	500	200
Mean of Detected Data	168.8	79.42
Median of Detected Data	110	66
SD of Detected Data	139.3	53.14

Wilcoxon-Mann-Whitney Site vs Background Test

All observations <= 130 (Max DL) are ranked the same

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Site or AOC <= Mean/Median of Background

Site Rank Sum W-Stat	773.5
WMW Test U-Stat	1.645
WMW Critical Value (0.050)	1.645
P-Value	0.05

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Site <= Background

P-Value >= alpha (0.05)

C9 – C10 Aromatics

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C9-C10 Aromatics\C9-C10 Aromatics da
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	20
Number of Missing Values	30
Number of Distinct Observations	14
Minimum	8.6
Maximum	70
Mean of Raw Data	19.9
Standard Deviation of Raw Data	16.36
Kstar	2.004
Mean of Log Transformed Data	2.76
Standard Deviation of Log Transformed Data	0.647

Normal Distribution Test Results

Correlation Coefficient R	0.847
Shapiro Wilk Test Statistic	0.725
Shapiro Wilk Critical (0.95) Value	0.905
Approximate Shapiro Wilk P Value	2.9039E-5
Lilliefors Test Statistic	0.268
Lilliefors Critical (0.95) Value	0.198

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.958
A-D Test Statistic	1.431
A-D Critical (0.95) Value	0.751
K-S Test Statistic	0.247
K-S Critical(0.95) Value	0.196

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.93
Shapiro Wilk Test Statistic	0.854
Shapiro Wilk Critical (0.95) Value	0.905
Approximate Shapiro Wilk P Value	0.00591
Lilliefors Test Statistic	0.218
Lilliefors Critical (0.95) Value	0.198

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C9-C10 Aromatics\C9-C10 Aromatics data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C9-C10	50	6.7	70	13.84	9.2	142.6	11.94	2.001	3.055	10.46	0.863

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C9-C10	50	7.19	7.67	8.14	8.4	9.2	12	15	23.9	37.85	58.73

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C9-C10 Aromatics\C9-C10 Aromatics da
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

C9-C10

Total Number of Data	50
Number of Non-Detect Data	30
Number of Detected Data	20
Minimum Detected	8.6
Maximum Detected	70
Percent Non-Detects	60.00%
Minimum Non-detect	6.7
Maximum Non-detect	32
Mean of Detected Data	19.9
SD of Detected Data	16.36
Mean of Log-Transformed Detected Data	2.76
SD of Log-Transformed Detected Data	0.647

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	9.5
Warning: Largest Non-detect at Order	46

95% UPL

95% UPL	43.7

Kaplan-Meier (KM) Method

Mean	13.18
SD	11.5
Standard Error of Mean	1.67
95% UTL 50% Coverage	15.89
95% KM Chebyshev UPL	63.79
95% KM UPL (t)	32.65
90% KM Percentile (z)	27.91
95% KM Percentile (z)	32.09
99% KM Percentile (z)	39.93

C9 – C12 Aliphatics

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C9-C12 Aliphatics\C9-C12 Aliphatics.ws
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	42
Number of Missing Values	8
Number of Distinct Observations	33
Minimum	17
Maximum	850
Mean of Raw Data	87.86
Standard Deviation of Raw Data	151.6
Kstar	1.014
Mean of Log Transformed Data	3.943
Standard Deviation of Log Transformed Data	0.867

Normal Distribution Test Results

Correlation Coefficient R	0.644
Shapiro Wilk Test Statistic	0.436
Shapiro Wilk Critical (0.95) Value	0.942
Approximate Shapiro Wilk P Value	2.220E-16
Lilliefors Test Statistic	0.373
Lilliefors Critical (0.95) Value	0.137

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.848
A-D Test Statistic	3.232
A-D Critical (0.95) Value	0.776
K-S Test Statistic	0.228
K-S Critical(0.95) Value	0.14

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.939
Shapiro Wilk Test Statistic	0.843
Shapiro Wilk Critical (0.95) Value	0.942
Approximate Shapiro Wilk P Value	2.7374E-4
Lilliefors Test Statistic	0.127
Lilliefors Critical (0.95) Value	0.137

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C9-C12 Aliphatics\C9-C12 Aliphatics.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C9-C12	50	14	850	76.58	33	19910	141.1	23.72	4.518	21.71	1.843

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C9-C12	50	15.45	16.9	21	22.25	33	72.75	83	100	195.5	722.6

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\C9-C12 Aliphatics\C9-C12 Aliphatics.ws
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

C9-C12

Total Number of Data	50
Number of Non-Detect Data	8
Number of Detected Data	42
Minimum Detected	17
Maximum Detected	850
Percent Non-Detects	16.00%
Minimum Non-detect	14
Maximum Non-detect	29
Mean of Detected Data	87.86
SD of Detected Data	151.6
Mean of Log-Transformed Detected Data	3.943
SD of Log-Transformed Detected Data	0.867

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	44
Largest Non-detect at Order	20

95% UPL

95% UPL	375.5

Kaplan-Meier (KM) Method

Mean	76.59
SD	139.7
Standard Error of Mean	19.99
95% UTL 50% Coverage	109.5
95% KM Chebyshev UPL	691.4
95% KM UPL (t)	313.1
90% KM Percentile (z)	255.6
95% KM Percentile (z)	306.3
99% KM Percentile (z)	401.5

From File: C:\Documents and Settings\martichbj\Desktop\Data Stats\C9-C12 Aliphatics\C9-C12 Aliphatics.wst

Summary Statistics for Raw Full Data Sets

Variable		NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
	AG	27	14	590	68.96	39	12374	111.2	31.13	4.294	20.06	1.613
	DG	23	15	850	85.57	32	29560	171.9	22.24	4.355	19.91	2.009

Percentiles for Raw Full Data Sets

Variable		NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
	AG	27	16.3	17	21	22	39	68	73	94.6	170	488.6
	DG	23	15.2	17	21.4	24	32	86.5	97	100	181	704.8

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\C9-C12 Aliphatics\C9-C12 Aliphatics.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

AG

Total Number of Data	27
Number of Non-Detect Data	4
Number of Detected Data	23
Minimum Detected	18
Maximum Detected	590
Percent Non-Detects	14.81%
Minimum Non-detect	14
Maximum Non-detect	17
Mean of Detected Data	78.17
SD of Detected Data	118.4
Mean of Log-Transformed Detected Data	3.919
SD of Log-Transformed Detected Data	0.812

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	17
Achieved CC	0.939
UTL	56
Largest Non-detect at Order	4

95% UPL

95% UPL	434

Kaplan-Meier (KM) Method

Mean	69.26
SD	109
Standard Error of Mean	21.45
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	553.2
95% KM UPL (t)	258.6
90% KM Percentile (z)	209
95% KM Percentile (z)	248.6
99% KM Percentile (z)	322.9

DG

Total Number of Data	23
Number of Non-Detect Data	4
Number of Detected Data	19
Minimum Detected	17
Maximum Detected	850
Percent Non-Detects	17.39%
Minimum Non-detect	15
Maximum Non-detect	29
Mean of Detected Data	99.58
SD of Detected Data	186.9
Mean of Log-Transformed Detected Data	3.972
SD of Log-Transformed Detected Data	0.952

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	15
Achieved CC	0.953
UTL	43
Largest Non-detect at Order	10

95% UPL

95% UPL	718

Kaplan-Meier (KM) Method

Mean	85.4
SD	168.2
Standard Error of Mean	36.03
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	834.3
95% KM UPL (t)	380.4
90% KM Percentile (z)	301
95% KM Percentile (z)	362.1
99% KM Percentile (z)	476.7

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\C9-C12 Aliphatics\C9-C12 Aliphatics.wst
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: AG

Background Data: DG

Raw Statistics

	Site	Background
Number of Valid Data	27	23
Number of Non-Detect Data	4	4
Number of Detect Data	23	19
Minimum Non-Detect	14	15
Maximum Non-Detect	17	29
Percent Non detects	14.81%	17.39%
Minimum Detected	18	17
Maximum Detected	590	850
Mean of Detected Data	78.17	99.58
Median of Detected Data	46	39
SD of Detected Data	118.4	186.9

Wilcoxon-Mann-Whitney Site vs Background Test

All observations <= 29 (Max DL) are ranked the same

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Site or AOC <= Mean/Median of Background

Site Rank Sum W-Stat	683.5
WMW Test U-Stat	-0.107
WMW Critical Value (0.050)	1.645
P-Value	0.543

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Site <= Background

P-Value >= alpha (0.05)

Carbon Disulfide

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Carbon disulfide\Carbon disulfide data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	6.7	32	9.168	8.25	14.72	3.837	1.26	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	7.1	7.29	7.6	7.7	8.25	9.275	9.3	9.82	12.75	25.63

Carbon Tetrachloride

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Carbon tetrachloride\Carbon Tetrachloride data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.939	0.85	0.152	0.39	0.119	4.541	23.99	0.415

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.715	0.739	0.768	0.773	0.85	0.93	0.946	1	1.5	2.563

cis-1,2-Dichloroethene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\cDCE\cDCE data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

cis-1,3-Dichloropropene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\cDCP\cDCP data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Trichlorofluoromethane (CFC 11)

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\CFC 11\CFC11 data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	45
Number of Missing Values	5
Number of Distinct Observations	18
Minimum	0.84
Maximum	5.3
Mean of Raw Data	1.583
Standard Deviation of Raw Data	0.916
Kstar	4.549
Mean of Log Transformed Data	0.353
Standard Deviation of Log Transformed Data	0.423

Normal Distribution Test Results

Correlation Coefficient R	0.808
Shapiro Wilk Test Statistic	0.668
Shapiro Wilk Critical (0.95) Value	0.945
Approximate Shapiro Wilk P Value	4.770E-12
Lilliefors Test Statistic	0.288
Lilliefors Critical (0.95) Value	0.132

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.902
A-D Test Statistic	4.251
A-D Critical (0.95) Value	0.753
K-S Test Statistic	0.272
K-S Critical(0.95) Value	0.132

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.896
Shapiro Wilk Test Statistic	0.804
Shapiro Wilk Critical (0.95) Value	0.945
Approximate Shapiro Wilk P Value	1.2809E-7
Lilliefors Test Statistic	0.251
Lilliefors Critical (0.95) Value	0.132

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\CFC 11\CFC11 data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
CFC11	50	0.84	5.3	1.596	1.2	0.823	0.907	0.222	2.309	5.632	0.568

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
CFC11	50	0.989	1	1.1	1.1	1.2	1.775	1.92	2.66	3.6	4.614

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\CFC 11\CFC11 data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

CFC11

Total Number of Data	50
Number of Non-Detect Data	5
Number of Detected Data	45
Minimum Detected	0.84
Maximum Detected	5.3
Percent Non-Detects	10.00%
Minimum Non-detect	0.98
Maximum Non-detect	3.2
Mean of Detected Data	1.583
SD of Detected Data	0.916
Mean of Log-Transformed Detected Data	0.353
SD of Log-Transformed Detected Data	0.423

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	1.3

Warning: Largest Non-detect at Order 46

95% UPL

95% UPL	3.735

Kaplan-Meier (KM) Method

Mean	1.531
SD	0.878
Standard Error of Mean	0.126
95% UTL 50% Coverage	1.738
95% KM Chebyshev UPL	5.395
95% KM UPL (t)	3.017
90% KM Percentile (z)	2.656
95% KM Percentile (z)	2.975
99% KM Percentile (z)	3.573

1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\CFC 114\CFC-114 data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Dichlorodifluoromethane (CFC 12)

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\CFC 12\CFC12 data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	49
Number of Missing Values	1
Number of Distinct Observations	10
Minimum	1.4
Maximum	2.7
Mean of Raw Data	2.008
Standard Deviation of Raw Data	0.213
Kstar	84.12
Mean of Log Transformed Data	0.692
Standard Deviation of Log Transformed Data	0.108

Normal Distribution Test Results

Correlation Coefficient R	0.952
Shapiro Wilk Test Statistic	0.931
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.00854
Lilliefors Test Statistic	0.17
Lilliefors Critical (0.95) Value	0.127

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.953
A-D Test Statistic	1.517
A-D Critical (0.95) Value	0.748
K-S Test Statistic	0.168
K-S Critical(0.95) Value	0.126

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.951
Shapiro Wilk Test Statistic	0.929
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.00693
Lilliefors Test Statistic	0.17
Lilliefors Critical (0.95) Value	0.127

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\CFC 12\CFC12 data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
raw	49	1.4	2.7	2.008	2	0.0453	0.213	0.148	0.186	2.468	0.106

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
raw	49	1.7	1.8	1.8	1.9	2	2.1	2.1	2.2	2.2	2.604

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\CFC 12\CFC12 data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

CFC12

Total Number of Data	50
Number of Non-Detect Data	1
Number of Detected Data	49
Minimum Detected	1.4
Maximum Detected	2.7
Percent Non-Detects	2.00%
Minimum Non-detect	3.2
Maximum Non-detect	3.2
Mean of Detected Data	2.008
SD of Detected Data	0.213
Mean of Log-Transformed Detected Data	0.692
SD of Log-Transformed Detected Data	0.108

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	2.1
Warning: Largest Non-detect at Order	50

95% UPL

95% UPL	2.59

Kaplan-Meier (KM) Method

Mean	2.008
SD	0.211
Standard Error of Mean	0.0304
95% UTL 50% Coverage	2.058
95% KM Chebyshev UPL	2.936
95% KM UPL (t)	2.365
90% KM Percentile (z)	2.278
95% KM Percentile (z)	2.355
99% KM Percentile (z)	2.498

Chlorobenzene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Chlorobenzene\Chlorobenzene data.wsl

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Chloroethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Chloroethane\Chloroethane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Chloroform

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Chloroform\Chloroform data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	18
Number of Missing Values	32
Number of Distinct Observations	14
Minimum	1.1
Maximum	5.2
Mean of Raw Data	2.406
Standard Deviation of Raw Data	1.252
Kstar	3.885
Mean of Log Transformed Data	0.766
Standard Deviation of Log Transformed Data	0.476

Normal Distribution Test Results

Correlation Coefficient R	0.926
Shapiro Wilk Test Statistic	0.85
Shapiro Wilk Critical (0.95) Value	0.897
Approximate Shapiro Wilk P Value	0.00785
Lilliefors Test Statistic	0.208
Lilliefors Critical (0.95) Value	0.209

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.971
A-D Test Statistic	0.498
A-D Critical (0.95) Value	0.743
K-S Test Statistic	0.162
K-S Critical(0.95) Value	0.204

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.978
Shapiro Wilk Test Statistic	0.943
Shapiro Wilk Critical (0.95) Value	0.897
Approximate Shapiro Wilk P Value	0.37
Lilliefors Test Statistic	0.131
Lilliefors Critical (0.95) Value	0.209

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Chloroform\Chloroform data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
CFM	50	0.67	5.2	1.428	0.93	1.12	1.058	0.237	2.253	5.062	0.741

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
CFM	50	0.715	0.767	0.78	0.815	0.93	1.725	2.02	2.73	3.55	5.151

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Chloroform\Chloroform data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

CFM

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	32
Number of Detected Data	18
Minimum Detected	0.0953
Maximum Detected	1.649
Percent Non-Detects	64.00%
Minimum Non-detect	-0.4
Maximum Non-detect	0.642
Mean of Detected data	0.766
SD of Detected data	0.476

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.943
5% Shapiro Wilk Critical Value	0.897

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	-0.263
SD (Log Scale)	0.841
Tolerance Factor K	0.236
95% UTL 50% Coverage	0.937
95% UPL	3.191
90% Percentile (z)	2.257
95% Percentile (z)	3.064
99% Percentile (z)	5.434

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	-0.154
SD in Log Scale	0.78
Mean in Orignal Scale	1.204
SD in Original Scale	1.176
95% UTL 50% Coverage	1.03
95% BCA UTL with 50% Coverage	0.77
95% Bootstrap (%) UTL with 50% Coverage	0.77
95% UPL (t)	3.212
90% Percentile (z)	2.33

95% Percentile (z)	3.093
99% Percentile (z)	5.265

Kaplan Meier (KM) Method

Mean	1.571
SD	0.962
SE of Mean	0.14
95% UTL 50% Coverage	1.798
95% KM Chebyshev UPL	5.805
95% KM UPL (t)	3.2
95% KM Percentile (z)	3.153

Chloromethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Chloromethane\Chloromethane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.923	0.835	0.146	0.383	0.119	4.865	26.87	0.415

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.715	0.739	0.768	0.77	0.835	0.93	0.932	1	1.275	2.563

Cumene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Cumene\Cumene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Cyclohexane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Cyclohexane\Cyclohexane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	1.3	6.8	2.236	1.8	1.528	1.236	0.297	2.514	6.083	0.553

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	1.4	1.49	1.58	1.6	1.8	2.225	2.44	3.81	5.055	6.555

Dibromochloromethane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\DBCM\DBCM data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.928	0.835	0.15	0.387	0.119	4.691	25.39	0.417

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.768	0.77	0.835	0.93	0.932	1	1.41	2.563

1,2-Dibromo-3-chloropropane

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\DBCP\DBCP data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

d-Limonene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\d-Limonene\d-Limonene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

C0

Raw Statistics

Number of Valid Observations	50
Number of Distinct Observations	33
Minimum	3.2
Maximum	230
Mean of Raw Data	28.97
Standard Deviation of Raw Data	40.7
Kstar	1.147
Mean of Log Transformed Data	2.897
Standard Deviation of Log Transformed Data	0.891

Normal Distribution Test Results

Correlation Coefficient R	0.72
Shapiro Wilk Test Statistic	0.545
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0
Lilliefors Test Statistic	0.27
Lilliefors Critical (0.95) Value	0.125

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.9
A-D Test Statistic	2.296
A-D Critical (0.95) Value	0.775
K-S Test Statistic	0.176
K-S Critical(0.95) Value	0.128

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.977
Shapiro Wilk Test Statistic	0.954
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.0897
Lilliefors Test Statistic	0.116
Lilliefors Critical (0.95) Value	0.125

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\d-Limonene\d-Limonene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C0	50	3.2	230	28.97	16	1656	40.7	10.38	3.645	14.5	1.405

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C0	50	4.23	7.15	10.8	11	16	27.5	34	46.4	94.8	200.6

Lognormal Background Statistics for Full Data Sets

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\d-Limonene\d-Limonene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

C0

Log-Transformed Statistics

Number of Valid Observations	50
Number of Distinct Observations	33
Minimum	1.163
Maximum	5.438
Second Largest	5.136
Mean	2.897
First Quartile	2.398
Median	2.773
Third Quartile	3.314
SD	0.891

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.954
5% Shapiro Wilk Critical Value	0.947

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

90% Percentile (z)	56.8
95% Percentile (z)	78.52
99% Percentile (z)	144.1
95% UPL	81.98
Tolerance Factor K	0.236
95% UTL with 50% Coverage	22.37

Some Nonparametric Background Statistics

95% Chebyshev UPL	208.1
95% Bootstrap BCA UTL with 50% Coverage	21
95% Percentile Bootstrap UTL with 50% Coverage	22.5

Ethanol

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethanol\Ethanol data.wst
Full Precision	OFF
Confidence Coefficient	0.95

C0

Raw Statistics

Number of Valid Observations	50
Number of Distinct Observations	40
Minimum	69
Maximum	5900
Mean of Raw Data	986.3
Standard Deviation of Raw Data	1078
Kstar	1.092
Mean of Log Transformed Data	6.399
Standard Deviation of Log Transformed Data	1.046

Normal Distribution Test Results

Correlation Coefficient R	0.855
Shapiro Wilk Test Statistic	0.75
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	1.096E-10
Lilliefors Test Statistic	0.197
Lilliefors Critical (0.95) Value	0.125

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.982
A-D Test Statistic	0.406
A-D Critical (0.95) Value	0.776
K-S Test Statistic	0.0889
K-S Critical(0.95) Value	0.129

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.994
Shapiro Wilk Test Statistic	0.977
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.638
Lilliefors Test Statistic	0.0737
Lilliefors Critical (0.95) Value	0.125

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethanol\Ethanol data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C0	50	69	5900	986.3	625	1161081	1078	659.7	2.532	8.44	1.093

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C0	50	120	130	198	287.5	625	1375	1420	2020	2930	4822

Lognormal Background Statistics for Full Data Sets

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethanol\Ethanol data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

C0

Log-Transformed Statistics

Number of Valid Observations	50
Number of Distinct Observations	40
Minimum	4.234
Maximum	8.683
Second Largest	8.216
Mean	6.399
First Quartile	5.66
Median	6.437
Third Quartile	7.226
SD	1.046

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.977
5% Shapiro Wilk Critical Value	0.947

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

90% Percentile (z)	2296
95% Percentile (z)	3356
99% Percentile (z)	6844
95% UPL	3530
Tolerance Factor K	0.236
95% UTL with 50% Coverage	769.2

Some Nonparametric Background Statistics

95% Chebyshev UPL	5730
95% Bootstrap BCA UTL with 50% Coverage	780
95% Percentile Bootstrap UTL with 50% Coverage	860

Ethyl Acetate

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethyl Acetate\Ehtyl acetate data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	45
Number of Missing Values	5
Number of Distinct Observations	33
Minimum	1.6
Maximum	40
Mean of Raw Data	11.43
Standard Deviation of Raw Data	9.902
Kstar	1.477
Mean of Log Transformed Data	2.084
Standard Deviation of Log Transformed Data	0.86

Normal Distribution Test Results

Correlation Coefficient R	0.914
Shapiro Wilk Test Statistic	0.826
Shapiro Wilk Critical (0.95) Value	0.945
Approximate Shapiro Wilk P Value	8.5417E-7
Lilliefors Test Statistic	0.18
Lilliefors Critical (0.95) Value	0.132

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.987
A-D Test Statistic	0.929
A-D Critical (0.95) Value	0.767
K-S Test Statistic	0.138
K-S Critical(0.95) Value	0.134

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.986
Shapiro Wilk Test Statistic	0.953
Shapiro Wilk Critical (0.95) Value	0.945
Approximate Shapiro Wilk P Value	0.11
Lilliefors Test Statistic	0.12
Lilliefors Critical (0.95) Value	0.132

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethyl Acetate\Ehtyl acetate data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
EA	50	1.6	40	10.59	6.3	94.73	9.733	6.153	1.47	1.559	0.919

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
EA	50	1.8	2.27	3.5	3.725	6.3	14.5	16	25	31.3	38.53

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethyl Acetate\Ehtyl acetate data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

EA

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	5
Number of Detected Data	45
Minimum Detected	0.47
Maximum Detected	3.689
Percent Non-Detects	10.00%
Minimum Non-detect	0.47
Maximum Non-detect	1.841
Mean of Detected data	2.084
SD of Detected data	0.86

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.953
5% Shapiro Wilk Critical Value	0.945

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	1.905
SD (Log Scale)	0.993
Tolerance Factor K	0.236
95% UTL 50% Coverage	8.492
95% UPL	36.11
90% Percentile (z)	23.99
95% Percentile (z)	34.42
99% Percentile (z)	67.73

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	1.927
SD in Log Scale	0.957
Mean in Orignal Scale	10.47
SD in Original Scale	9.823
95% UTL 50% Coverage	8.606
95% BCA UTL with 50% Coverage	10.25
95% Bootstrap (%) UTL with 50% Coverage	10.25
95% UPL (t)	34.69
90% Percentile (z)	23.4

95% Percentile (z)	33.12
99% Percentile (z)	63.56

Kaplan Meier (KM) Method

Mean	10.5
SD	9.7
SE of Mean	1.388
95% UTL 50% Coverage	12.79
95% KM Chebyshev UPL	53.2
95% KM UPL (t)	26.93
95% KM Percentile (z)	26.46

Ethylbenzene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethylbenzene\Ethylbenzene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	47
Number of Missing Values	3
Number of Distinct Observations	38
Minimum	0.18
Maximum	11
Mean of Raw Data	1.68
Standard Deviation of Raw Data	2.085
Kstar	1.002
Mean of Log Transformed Data	-0.025
Standard Deviation of Log Transformed Data	1.025

Normal Distribution Test Results

Correlation Coefficient R	0.819
Shapiro Wilk Test Statistic	0.689
Shapiro Wilk Critical (0.95) Value	0.946
Approximate Shapiro Wilk P Value	5.455E-12
Lilliefors Test Statistic	0.239
Lilliefors Critical (0.95) Value	0.129

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.972
A-D Test Statistic	1.366
A-D Critical (0.95) Value	0.777
K-S Test Statistic	0.159
K-S Critical(0.95) Value	0.133

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.988
Shapiro Wilk Test Statistic	0.962
Shapiro Wilk Critical (0.95) Value	0.946
Approximate Shapiro Wilk P Value	0.211
Lilliefors Test Statistic	0.093
Lilliefors Critical (0.95) Value	0.129

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethylbenzene\Ethylbenzene data.wst

Summary Statistics for Raw Full Dataset

Variable		NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
	EB	50	0.17	11	1.589	0.775	4.212	2.052	0.778	2.682	8.706	1.291

Percentiles for Raw Full Dataset

Variable		NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
	EB	50	0.18	0.209	0.326	0.408	0.775	2.125	2.42	3.96	5.965	8.599

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Ethylbenzene\Ethylbenzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

EB

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	4
Number of Detected Data	46
Minimum Detected	-1.715
Maximum Detected	2.398
Percent Non-Detects	8.00%
Minimum Non-detect	-1.772
Maximum Non-detect	-0.151
Mean of Detected data	-0.0222
SD of Detected data	1.036

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.961
5% Shapiro Wilk Critical Value	0.945

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	-0.183
SD (Log Scale)	1.152
Tolerance Factor K	0.236
95% UTL 50% Coverage	1.093
95% UPL	5.86
90% Percentile (z)	3.647
95% Percentile (z)	5.542
99% Percentile (z)	12.15

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	-0.185
SD in Log Scale	1.156
Mean in Orignal Scale	1.575
SD in Original Scale	2.06
95% UTL 50% Coverage	1.091
95% BCA UTL with 50% Coverage	1
95% Bootstrap (%) UTL with 50% Coverage	1.045
95% UPL (t)	5.887
90% Percentile (z)	3.657

95% Percentile (z)	5.566
99% Percentile (z)	12.24

Kaplan Meier (KM) Method

Mean	1.581
SD	2.036
SE of Mean	0.291
95% UTL 50% Coverage	2.061
95% KM Chebyshev UPL	10.54
95% KM UPL (t)	5.028
95% KM Percentile (z)	4.929

From File: C:\Documents and Settings\martichbj\Desktop\Data Stats\Ethylbenzene\Ethylbenzene data.wst

Summary Statistics for Raw Full Data Sets

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
AG	27	0.31	11	2.416	1.4	6.109	2.472	1.364	1.97	4.507	1.023
DG	23	0.17	2.5	0.619	0.48	0.339	0.582	0.356	2.003	4.114	0.94

Percentiles for Raw Full Data Sets

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
AG	27	0.409	0.46	0.766	0.79	1.4	2.9	3.7	5.92	6.1	9.726
DG	23	0.18	0.18	0.204	0.215	0.48	0.665	0.704	1.46	1.59	2.302

Nonparametric Background Statistics for Full Data Sets

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Ethylbenzene\Ethylbenzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Number of Bootstrap Operations	2000

AG

Some Non-Parametric Statistics

Number of Valid Observations	27
Number of Distinct Observations	22
Minimum	0.31
Maximum	11
Second Largest	6.1
Mean	2.416
Geometric Mean	1.564
First Quartile	0.79
Median	1.4
Third Quartile	2.9
SD	2.472
Variance	6.109
Coefficient of Variation	1.023
Skewness	1.97
Mean of Log-Transformed data	0.447
SD of Log-Transformed data	0.952

Data appear Gamma Distributed at 5% Significance Level

Non-Parametric Background Statistics

90% Percentile	5.92
95% Percentile	6.1
99% Percentile	9.726

95% UTL with 50% Coverage

Order Statistic	17
Achieved CC	0.939
UTL	2.3

95% BCA Bootstrap UTL with 50% Coverage	2.3
95% Percentile Bootstrap UTL with 50% Coverage	2.4

95% UPL	9.04
95% Chebyshev UPL	13.39

Upper Limit Based upon IQR	6.065

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Ethylbenzene\Ethylbenzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

DG

Total Number of Data	23
Number of Non-Detect Data	3
Number of Detected Data	20
Minimum Detected	0.18
Maximum Detected	2.5
Percent Non-Detects	13.04%
Minimum Non-detect	0.17
Maximum Non-detect	0.18
Mean of Detected Data	0.686
SD of Detected Data	0.597
Mean of Log-Transformed Detected Data	-0.662
SD of Log-Transformed Detected Data	0.748

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	15
Achieved CC	0.953
UTL	0.53
Largest Non-detect at Order	3

95% UPL

95% UPL	2.32

Kaplan-Meier (KM) Method

Mean	0.62
SD	0.569
Standard Error of Mean	0.122
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	3.152
95% KM UPL (t)	1.617
90% KM Percentile (z)	1.348
95% KM Percentile (z)	1.555
99% KM Percentile (z)	1.943

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Full Data Sets without NDs

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Ethylbenzene\Ethylbenzene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: AG

Background Data: DG

Raw Statistics

	Site	Background
Number of Valid Observations	27	23
Number of Distinct Observations	22	20
Minimum	0.31	0.17
Maximum	11	2.5
Mean	2.416	0.619
Median	1.4	0.48
SD	2.472	0.582
SE of Mean	0.476	0.121

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Site or AOC <= Mean/Median of Background

Site Rank Sum W-Stat	903.5
WMW Test U-Stat	4.175
WMW Critical Value (0.050)	1.645
P-Value	1.4880E-5

Conclusion with Alpha = 0.05

Reject H0, Conclude Site > Background

P-Value < alpha (0.05)

Hexachlorobutadiene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\HXCB\HXCB data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

m,p-Xylenes

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\m&p-Xylenes\m&p-Xylenes data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	33
Number of Missing Values	17
Number of Distinct Observations	29
Minimum	1.5
Maximum	50
Mean of Raw Data	8.745
Standard Deviation of Raw Data	10.4
Kstar	1.049
Mean of Log Transformed Data	1.665
Standard Deviation of Log Transformed Data	0.979

Normal Distribution Test Results

Correlation Coefficient R	0.83
Shapiro Wilk Test Statistic	0.704
Shapiro Wilk Critical (0.95) Value	0.931
Approximate Shapiro Wilk P Value	7.0119E-8
Lilliefors Test Statistic	0.243
Lilliefors Critical (0.95) Value	0.154

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.977
A-D Test Statistic	1.191
A-D Critical (0.95) Value	0.773
K-S Test Statistic	0.173
K-S Critical(0.95) Value	0.157

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.933
Shapiro Wilk Critical (0.95) Value	0.931
Approximate Shapiro Wilk P Value	0.0532
Lilliefors Test Statistic	0.124
Lilliefors Critical (0.95) Value	0.154

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\m&p-Xylenes\m&p-Xylenes data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
m&p-x	50	1.5	50	6.454	2.65	81.45	9.025	1.705	3.045	11.06	1.398

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
m&p-x	50	1.5	1.5	1.6	1.7	2.65	6.6	8.92	16.2	24.2	39.71

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\m&p-Xylenes\m&p-Xylenes data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

m&p-x

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	17
Number of Detected Data	33
Minimum Detected	0.405
Maximum Detected	3.912
Percent Non-Detects	34.00%
Minimum Non-detect	0.405
Maximum Non-detect	1.841
Mean of Detected data	1.665
SD of Detected data	0.979

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.933
5% Shapiro Wilk Critical Value	0.931

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	1.073
SD (Log Scale)	1.167
Tolerance Factor K	0.236
95% UTL 50% Coverage	3.85
95% UPL	21.09
90% Percentile (z)	13.05
95% Percentile (z)	19.94
99% Percentile (z)	44.17

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	0.953
SD in Log Scale	1.315
Mean in Orignal Scale	6.025
SD in Original Scale	9.237
95% UTL 50% Coverage	3.538
95% BCA UTL with 50% Coverage	3.35
95% Bootstrap (%) UTL with 50% Coverage	3.8
95% UPL (t)	24.03
90% Percentile (z)	13.98

95% Percentile (z)	22.55
99% Percentile (z)	55.22

Kaplan Meier (KM) Method

Mean	6.306
SD	8.989
SE of Mean	1.291
95% UTL 50% Coverage	8.426
95% KM Chebyshev UPL	45.88
95% KM UPL (t)	21.53
95% KM Percentile (z)	21.09

Methyl Methacrylate

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Methyl Meth\Methyl Meth data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	1.3	6.3	1.836	1.7	0.568	0.754	0.297	4.804	26.38	0.411

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	1.4	1.49	1.5	1.5	1.7	1.9	1.9	2	2.495	5.075

Methylene Chloride

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Methylene chloride\Methylene chloride c
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	19
Number of Missing Values	31
Number of Distinct Observations	19
Minimum	0.83
Maximum	170
Mean of Raw Data	19.43
Standard Deviation of Raw Data	43.31
Kstar	0.382
Mean of Log Transformed Data	1.379
Standard Deviation of Log Transformed Data	1.656

Normal Distribution Test Results

Correlation Coefficient R	0.69
Shapiro Wilk Test Statistic	0.497
Shapiro Wilk Critical (0.95) Value	0.901
Approximate Shapiro Wilk P Value	3.1139E-8
Lilliefors Test Statistic	0.364
Lilliefors Critical (0.95) Value	0.203

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.96
A-D Test Statistic	2.128
A-D Critical (0.95) Value	0.82
K-S Test Statistic	0.301
K-S Critical(0.95) Value	0.212

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.923
Shapiro Wilk Test Statistic	0.843
Shapiro Wilk Critical (0.95) Value	0.901
Approximate Shapiro Wilk P Value	0.00457
Lilliefors Test Statistic	0.242
Lilliefors Critical (0.95) Value	0.203

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Methylene chloride\Methylene chloride data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
MC	50	0.67	170	7.948	0.93	771.5	27.78	0.237	5.009	26.35	3.495

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
MC	50	0.71	0.739	0.778	0.783	0.93	1.45	2.12	8.95	28.55	135.7

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Methylene chloride\Methylene chloride c
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

MC

Total Number of Data	50
Number of Non-Detect Data	31
Number of Detected Data	19
Minimum Detected	0.83
Maximum Detected	170
Percent Non-Detects	62.00%
Minimum Non-detect	0.67
Maximum Non-detect	3.2
Mean of Detected Data	19.43
SD of Detected Data	43.31
Mean of Log-Transformed Detected Data	1.379
SD of Log-Transformed Detected Data	1.656

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	0.98
Warning: Largest Non-detect at Order	43

95% UPL

95% UPL	65.9

Kaplan-Meier (KM) Method

Mean	7.901
SD	27.51
Standard Error of Mean	3.997
95% UTL 50% Coverage	14.39
95% KM Chebyshev UPL	129
95% KM UPL (t)	54.48
90% KM Percentile (z)	43.15
95% KM Percentile (z)	53.15
99% KM Percentile (z)	71.89

Methyl tert-Butyl Ether

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\MTBE\MTBE data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Naphthalene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Naphthalene\Naphthalene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	40
Number of Missing Values	10
Number of Distinct Observations	33
Minimum	0.18
Maximum	130
Mean of Raw Data	3.725
Standard Deviation of Raw Data	20.48
Kstar	0.32
Mean of Log Transformed Data	-0.757
Standard Deviation of Log Transformed Data	1.074

Normal Distribution Test Results

Correlation Coefficient R	0.371
Shapiro Wilk Test Statistic	0.172
Shapiro Wilk Critical (0.95) Value	0.94
Approximate Shapiro Wilk P Value	0
Lilliefors Test Statistic	0.51
Lilliefors Critical (0.95) Value	0.14

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.699
A-D Test Statistic	10.98
A-D Critical (0.95) Value	0.851
K-S Test Statistic	0.419
K-S Critical(0.95) Value	0.151

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.78
Shapiro Wilk Test Statistic	0.646
Shapiro Wilk Critical (0.95) Value	0.94
Approximate Shapiro Wilk P Value	4.516E-11
Lilliefors Test Statistic	0.206
Lilliefors Critical (0.95) Value	0.14

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Naphthalene\Naphthalene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
Naph	50	0.14	130	3.017	0.355	335.9	18.33	0.23	7.067	49.96	6.075

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Naph	50	0.155	0.17	0.18	0.21	0.355	0.51	0.572	0.821	1.32	67.23

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Naphthalene\Naphthalene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

Naph

Total Number of Data	50
Number of Non-Detect Data	10
Number of Detected Data	40
Minimum Detected	0.18
Maximum Detected	130
Percent Non-Detects	20.00%
Minimum Non-detect	0.14
Maximum Non-detect	0.38
Mean of Detected Data	3.725
SD of Detected Data	20.48
Mean of Log-Transformed Detected Data	-0.757
SD of Log-Transformed Detected Data	1.074

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	0.39
Largest Non-detect at Order	29

95% UPL

95% UPL	1.68

Kaplan-Meier (KM) Method

Mean	3.017
SD	18.14
Standard Error of Mean	2.599
95% UTL 50% Coverage	7.297
95% KM Chebyshev UPL	82.89
95% KM UPL (t)	33.74
90% KM Percentile (z)	26.27
95% KM Percentile (z)	32.86
99% KM Percentile (z)	45.23

From File: C:\Documents and Settings\martichbj\Desktop\Data Stats\Naphthalene\Naphthalene data.wst

Summary Statistics for Raw Full Data Sets

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
AG	27	0.14	1.9	0.528	0.39	0.176	0.419	0.237	1.941	3.976	0.793
DG	23	0.15	130	5.939	0.24	731.4	27.04	0.133	4.796	23	4.554

Percentiles for Raw Full Data Sets

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
AG	27	0.17	0.176	0.236	0.265	0.39	0.61	0.722	0.992	1.38	1.796
DG	23	0.151	0.164	0.18	0.18	0.24	0.41	0.432	0.556	0.634	101.5

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Naphthalene\Naphthalene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

AG

Total Number of Data	27
Number of Non-Detect Data	4
Number of Detected Data	23
Minimum Detected	0.21
Maximum Detected	1.9
Percent Non-Detects	14.81%
Minimum Non-detect	0.14
Maximum Non-detect	0.18
Mean of Detected Data	0.591
SD of Detected Data	0.424
Mean of Log-Transformed Detected Data	-0.713
SD of Log-Transformed Detected Data	0.596

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	17
Achieved CC	0.939
UTL	0.51
Largest Non-detect at Order	4

95% UPL

95% UPL	1.74

Kaplan-Meier (KM) Method

Mean	0.535
SD	0.406
Standard Error of Mean	0.0798
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	2.335
95% KM UPL (t)	1.239
90% KM Percentile (z)	1.055
95% KM Percentile (z)	1.202
99% KM Percentile (z)	1.478

DG

Total Number of Data	23
Number of Non-Detect Data	6
Number of Detected Data	17
Minimum Detected	0.18
Maximum Detected	130
Percent Non-Detects	26.09%
Minimum Non-detect	0.15
Maximum Non-detect	0.38
Mean of Detected Data	7.964
SD of Detected Data	31.45
Mean of Log-Transformed Detected Data	-0.818
SD of Log-Transformed Detected Data	1.522

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	N/A

95% UTL with 50% Coverage

Order Statistic	15
Achieved CC	0.953
UTL	0.37

Warning: Largest Non-detect at Order 16

95% UPL

95% UPL	104.1

Kaplan-Meier (KM) Method

Mean	5.935
SD	26.45
Standard Error of Mean	5.685
95% UTL 50% Coverage	N/A
95% KM Chebyshev UPL	123.7
95% KM UPL (t)	52.33
90% KM Percentile (z)	39.83
95% KM Percentile (z)	49.44
99% KM Percentile (z)	67.47

Wilcoxon-Mann-Whitney Site vs Background Comparison Test for Data Sets with Non-Detects

User Selected Options	
From File	C:\Documents and Settings\martichbj\Desktop\Data Stats\Naphthalene\Naphthalene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Site or AOC Mean/Median Less Than or Equal to Background Mean/Median (Form 1)
Alternative Hypothesis	Site or AOC Mean/Median Greater Than Background Mean/Median

Area of Concern Data: AG

Background Data: DG

Raw Statistics

	Site	Background
Number of Valid Data	27	23
Number of Non-Detect Data	4	6
Number of Detect Data	23	17
Minimum Non-Detect	0.14	0.15
Maximum Non-Detect	0.18	0.38
Percent Non detects	14.81%	26.09%
Minimum Detected	0.21	0.18
Maximum Detected	1.9	130
Mean of Detected Data	0.591	7.964
Median of Detected Data	0.5	0.36
SD of Detected Data	0.424	31.45

Wilcoxon-Mann-Whitney Site vs Background Test

All observations <= 0.38 (Max DL) are ranked the same

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Site or AOC <= Mean/Median of Background

Site Rank Sum W-Stat	768
WMW Test U-Stat	1.538
WMW Critical Value (0.050)	1.645
P-Value	0.0621

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Site <= Background

P-Value >= alpha (0.05)

n-Butyl Acetate

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Butyl Acetate\n-Butyl acetate data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	31
Number of Missing Values	19
Number of Distinct Observations	23
Minimum	0.83
Maximum	14
Mean of Raw Data	2.882
Standard Deviation of Raw Data	2.681
Kstar	1.724
Mean of Log Transformed Data	0.77
Standard Deviation of Log Transformed Data	0.731

Normal Distribution Test Results

Correlation Coefficient R	0.833
Shapiro Wilk Test Statistic	0.715
Shapiro Wilk Critical (0.95) Value	0.929
Approximate Shapiro Wilk P Value	3.1207E-7
Lilliefors Test Statistic	0.222
Lilliefors Critical (0.95) Value	0.159

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.952
A-D Test Statistic	1.088
A-D Critical (0.95) Value	0.76
K-S Test Statistic	0.194
K-S Critical(0.95) Value	0.16

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.969
Shapiro Wilk Test Statistic	0.931
Shapiro Wilk Critical (0.95) Value	0.929
Approximate Shapiro Wilk P Value	0.0552
Lilliefors Test Statistic	0.175
Lilliefors Critical (0.95) Value	0.159

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Butyl Acetate\n-Butyl acetate data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
BA	50	0.69	14	2.173	1.3	5.364	2.316	0.712	3.201	13.45	1.066

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
BA	50	0.744	0.779	0.838	0.853	1.3	2.475	3.34	4.37	5.675	10.72

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Butyl Acetate\n-Butyl acetate data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

BA

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	19
Number of Detected Data	31
Minimum Detected	-0.186
Maximum Detected	2.639
Percent Non-Detects	38.00%
Minimum Non-detect	-0.371
Maximum Non-detect	1.163
Mean of Detected data	0.77
SD of Detected data	0.731

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.931
5% Shapiro Wilk Critical Value	0.929

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	0.188
SD (Log Scale)	0.97
Tolerance Factor K	0.236
95% UTL 50% Coverage	1.517
95% UPL	6.239
90% Percentile (z)	4.184
95% Percentile (z)	5.952
99% Percentile (z)	11.53

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	0.176
SD in Log Scale	0.969
Mean in Orignal Scale	1.965
SD in Original Scale	2.41
95% UTL 50% Coverage	1.499
95% BCA UTL with 50% Coverage	1.3
95% Bootstrap (%) UTL with 50% Coverage	1.3
95% UPL (t)	6.153
90% Percentile (z)	4.129

95% Percentile (z)	5.871
99% Percentile (z)	11.36

Kaplan Meier (KM) Method

Mean	2.113
SD	2.299
SE of Mean	0.331
95% UTL 50% Coverage	2.655
95% KM Chebyshev UPL	12.23
95% KM UPL (t)	6.006
95% KM Percentile (z)	5.895

n-Heptane

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Heptane\n-Heptane data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	31
Number of Missing Values	19
Number of Distinct Observations	25
Minimum	0.71
Maximum	20
Mean of Raw Data	3.293
Standard Deviation of Raw Data	3.608
Kstar	1.469
Mean of Log Transformed Data	0.848
Standard Deviation of Log Transformed Data	0.794

Normal Distribution Test Results

Correlation Coefficient R	0.774
Shapiro Wilk Test Statistic	0.629
Shapiro Wilk Critical (0.95) Value	0.929
Approximate Shapiro Wilk P Value	7.3984E-9
Lilliefors Test Statistic	0.237
Lilliefors Critical (0.95) Value	0.159

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.908
A-D Test Statistic	0.802
A-D Critical (0.95) Value	0.763
K-S Test Statistic	0.135
K-S Critical(0.95) Value	0.16

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.977
Shapiro Wilk Test Statistic	0.952
Shapiro Wilk Critical (0.95) Value	0.929
Approximate Shapiro Wilk P Value	0.212
Lilliefors Test Statistic	0.125
Lilliefors Critical (0.95) Value	0.159

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Heptane\n-Heptane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
Hep	50	0.69	20	2.412	1.1	9.372	3.061	0.511	4.181	22.31	1.269

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Hep	50	0.739	0.769	0.838	0.87	1.1	3.175	3.32	4.98	5.965	13.92

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Heptane\n-Heptane data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

Hep

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	19
Number of Detected Data	31
Minimum Detected	-0.342
Maximum Detected	2.996
Percent Non-Detects	38.00%
Minimum Non-detect	-0.371
Maximum Non-detect	1.163
Mean of Detected data	0.848
SD of Detected data	0.794

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.952
5% Shapiro Wilk Critical Value	0.929

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	0.225
SD (Log Scale)	1.035
Tolerance Factor K	0.236
95% UTL 50% Coverage	1.599
95% UPL	7.223
90% Percentile (z)	4.718
95% Percentile (z)	6.87
99% Percentile (z)	13.91

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	0.207
SD in Log Scale	1.046
Mean in Orignal Scale	2.211
SD in Original Scale	3.15
95% UTL 50% Coverage	1.574
95% BCA UTL with 50% Coverage	1.2
95% Bootstrap (%) UTL with 50% Coverage	1.5
95% UPL (t)	7.225
90% Percentile (z)	4.697

95% Percentile (z)	6.868
99% Percentile (z)	14.01

Kaplan Meier (KM) Method

Mean	2.325
SD	3.058
SE of Mean	0.44
95% UTL 50% Coverage	3.046
95% KM Chebyshev UPL	15.79
95% KM UPL (t)	7.503
95% KM Percentile (z)	7.355

n-Hexane

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Hexane\n-Hexane data.wst

Full Precision OFF

Confidence Coefficient 0.95

raw

Raw Statistics

Number of Valid Observations	31
Number of Missing Values	19
Number of Distinct Observations	23
Minimum	0.8
Maximum	19
Mean of Raw Data	5.387
Standard Deviation of Raw Data	5.715
Kstar	1.007
Mean of Log Transformed Data	1.16
Standard Deviation of Log Transformed Data	1.032

Normal Distribution Test Results

Correlation Coefficient R	0.879
Shapiro Wilk Test Statistic	0.76
Shapiro Wilk Critical (0.95) Value	0.929
Approximate Shapiro Wilk P Value	2.7710E-6
Lilliefors Test Statistic	0.292
Lilliefors Critical (0.95) Value	0.159

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.965
A-D Test Statistic	1.632
A-D Critical (0.95) Value	0.773
K-S Test Statistic	0.263
K-S Critical(0.95) Value	0.162

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.958
Shapiro Wilk Test Statistic	0.895
Shapiro Wilk Critical (0.95) Value	0.929
Approximate Shapiro Wilk P Value	0.00543
Lilliefors Test Statistic	0.221
Lilliefors Critical (0.95) Value	0.159

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Hexane\n-Hexane data.wsl

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
HX	50	0.75	19	3.745	1.5	24.61	4.961	0.993	1.998	3.036	1.325

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
HX	50	0.775	0.799	0.878	0.91	1.5	3.2	6.14	11.3	15.55	19

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Hexane\n-Hexane data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

HX

Total Number of Data	50
Number of Non-Detect Data	19
Number of Detected Data	31
Minimum Detected	0.8
Maximum Detected	19
Percent Non-Detects	38.00%
Minimum Non-detect	0.75
Maximum Non-detect	3.2
Mean of Detected Data	5.387
SD of Detected Data	5.715
Mean of Log-Transformed Detected Data	1.16
SD of Log-Transformed Detected Data	1.032

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	1.9
Warning: Largest Non-detect at Order	37

95% UPL

95% UPL	17.35

Kaplan-Meier (KM) Method

Mean	3.658
SD	4.948
Standard Error of Mean	0.711
95% UTL 50% Coverage	4.826
95% KM Chebyshev UPL	25.44
95% KM UPL (t)	12.04
90% KM Percentile (z)	9.999
95% KM Percentile (z)	11.8
99% KM Percentile (z)	15.17

n-Nonane

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Nonane\n-Nonane data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	19
Number of Missing Values	31
Number of Distinct Observations	16
Minimum	0.79
Maximum	39
Mean of Raw Data	4.098
Standard Deviation of Raw Data	8.532
Kstar	0.82
Mean of Log Transformed Data	0.786
Standard Deviation of Log Transformed Data	0.882

Normal Distribution Test Results

Correlation Coefficient R	0.574
Shapiro Wilk Test Statistic	0.36
Shapiro Wilk Critical (0.95) Value	0.901
Approximate Shapiro Wilk P Value	8.313E-10
Lilliefors Test Statistic	0.41
Lilliefors Critical (0.95) Value	0.203

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.789
A-D Test Statistic	2.277
A-D Critical (0.95) Value	0.772
K-S Test Statistic	0.261
K-S Critical(0.95) Value	0.205

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.902
Shapiro Wilk Test Statistic	0.832
Shapiro Wilk Critical (0.95) Value	0.901
Approximate Shapiro Wilk P Value	0.00242
Lilliefors Test Statistic	0.151
Lilliefors Critical (0.95) Value	0.203

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Nonane\n-Nonane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
Non	50	0.67	39	2.156	0.93	29.24	5.408	0.245	6.718	46.52	2.508

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Non	50	0.71	0.748	0.778	0.795	0.93	1.8	2.1	3.02	3.985	22.29

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Nonane\n-Nonane data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

Non

Total Number of Data	50
Number of Non-Detect Data	31
Number of Detected Data	19
Minimum Detected	0.79
Maximum Detected	39
Percent Non-Detects	62.00%
Minimum Non-detect	0.67
Maximum Non-detect	3.2
Mean of Detected Data	4.098
SD of Detected Data	8.532
Mean of Log-Transformed Detected Data	0.786
SD of Log-Transformed Detected Data	0.882

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	1
Warning: Largest Non-detect at Order	46

95% UPL

95% UPL	4.57

Kaplan-Meier (KM) Method

Mean	2.057
SD	5.364
Standard Error of Mean	0.779
95% UTL 50% Coverage	3.322
95% KM Chebyshev UPL	25.67
95% KM UPL (t)	11.14
90% KM Percentile (z)	8.931
95% KM Percentile (z)	10.88
99% KM Percentile (z)	14.54

n-Octane

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Octane\n-Octane data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	20
Number of Missing Values	30
Number of Distinct Observations	13
Minimum	0.82
Maximum	12
Mean of Raw Data	1.865
Standard Deviation of Raw Data	2.437
Kstar	1.658
Mean of Log Transformed Data	0.339
Standard Deviation of Log Transformed Data	0.605

Normal Distribution Test Results

Correlation Coefficient R	0.607
Shapiro Wilk Test Statistic	0.398
Shapiro Wilk Critical (0.95) Value	0.905
Approximate Shapiro Wilk P Value	1.0374E-9
Lilliefors Test Statistic	0.379
Lilliefors Critical (0.95) Value	0.198

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.768
A-D Test Statistic	2.666
A-D Critical (0.95) Value	0.753
K-S Test Statistic	0.267
K-S Critical(0.95) Value	0.196

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.839
Shapiro Wilk Test Statistic	0.723
Shapiro Wilk Critical (0.95) Value	0.905
Approximate Shapiro Wilk P Value	2.6574E-5
Lilliefors Test Statistic	0.206
Lilliefors Critical (0.95) Value	0.198

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Octane\n-Octane data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
Oct	50	0.67	12	1.329	0.925	2.637	1.624	0.222	6.06	39.88	1.222

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Oct	50	0.71	0.748	0.78	0.823	0.925	1.175	1.32	2.03	2.3	7.688

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\n-Octane\n-Octane data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

Oct

Total Number of Data	50
Number of Non-Detect Data	30
Number of Detected Data	20
Minimum Detected	0.82
Maximum Detected	12
Percent Non-Detects	60.00%
Minimum Non-detect	0.67
Maximum Non-detect	3.2
Mean of Detected Data	1.865
SD of Detected Data	2.437
Mean of Log-Transformed Detected Data	0.339
SD of Log-Transformed Detected Data	0.605

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	0.98

Warning: Largest Non-detect at Order 49

95% UPL

95% UPL	2.705

Kaplan-Meier (KM) Method

Mean	1.247
SD	1.586
Standard Error of Mean	0.23
95% UTL 50% Coverage	1.621
95% KM Chebyshev UPL	8.229
95% KM UPL (t)	3.933
90% KM Percentile (z)	3.28
95% KM Percentile (z)	3.856
99% KM Percentile (z)	4.937

n-Propylbenzene

From File: n-Propylbenzene.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	1.002	0.85	0.24	0.49	0.119	3.184	10.86	0.489

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.768	0.773	0.85	0.93	0.972	1.51	1.81	3.004

o-Xylene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\o-Xylene\o-Xylene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	21
Number of Missing Values	29
Number of Distinct Observations	19
Minimum	0.9
Maximum	16
Mean of Raw Data	3.929
Standard Deviation of Raw Data	3.628
Kstar	1.543
Mean of Log Transformed Data	1.059
Standard Deviation of Log Transformed Data	0.775

Normal Distribution Test Results

Correlation Coefficient R	0.862
Shapiro Wilk Test Statistic	0.755
Shapiro Wilk Critical (0.95) Value	0.908
Approximate Shapiro Wilk P Value	6.9809E-5
Lilliefors Test Statistic	0.25
Lilliefors Critical (0.95) Value	0.193

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.971
A-D Test Statistic	0.662
A-D Critical (0.95) Value	0.756
K-S Test Statistic	0.158
K-S Critical(0.95) Value	0.192

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.981
Shapiro Wilk Test Statistic	0.957
Shapiro Wilk Critical (0.95) Value	0.908
Approximate Shapiro Wilk P Value	0.46
Lilliefors Test Statistic	0.11
Lilliefors Critical (0.95) Value	0.193

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\o-Xylene\o-Xylene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
o-X	50	0.67	16	2.194	0.935	7.719	2.778	0.319	3.219	12.42	1.267

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
o-X	50	0.719	0.749	0.78	0.823	0.935	2.375	2.88	5.19	7.61	12.47

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\o-Xylene\o-Xylene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

o-X

Log-Transformed Statistics	
Total Number of Data	50
Number of Non-Detect Data	29
Number of Detected Data	21
Minimum Detected	-0.105
Maximum Detected	2.773
Percent Non-Detects	58.00%
Minimum Non-detect	-0.4
Maximum Non-detect	1.163
Mean of Detected data	1.059
SD of Detected data	0.775

Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.957
5% Shapiro Wilk Critical Value	0.908

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	-0.0282
SD (Log Scale)	1.08
Tolerance Factor K	0.236
95% UTL 50% Coverage	1.254
95% UPL	6.052
90% Percentile (z)	3.88
95% Percentile (z)	5.744
99% Percentile (z)	11.99

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	-0.17
SD in Log Scale	1.184
Mean in Orignal Scale	1.858
SD in Original Scale	2.923
95% UTL 50% Coverage	1.116
95% BCA UTL with 50% Coverage	1.05
95% Bootstrap (%) UTL with 50% Coverage	1.2
95% UPL (t)	6.266
90% Percentile (z)	3.848

95% Percentile (z)	5.917
99% Percentile (z)	13.26

Kaplan Meier (KM) Method

Mean	2.178
SD	2.737
SE of Mean	0.397
95% UTL 50% Coverage	2.824
95% KM Chebyshev UPL	14.23
95% KM UPL (t)	6.813
95% KM Percentile (z)	6.68

Tetrachloroethene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\PCE\PCE data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	42
Number of Missing Values	8
Number of Distinct Observations	37
Minimum	0.045
Maximum	3.9
Mean of Raw Data	0.611
Standard Deviation of Raw Data	1.019
Kstar	0.564
Mean of Log Transformed Data	-1.543
Standard Deviation of Log Transformed Data	1.344

Normal Distribution Test Results

Correlation Coefficient R	0.769
Shapiro Wilk Test Statistic	0.585
Shapiro Wilk Critical (0.95) Value	0.942
Approximate Shapiro Wilk P Value	4.848E-13
Lilliefors Test Statistic	0.378
Lilliefors Critical (0.95) Value	0.137

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.95
A-D Test Statistic	4.339
A-D Critical (0.95) Value	0.805
K-S Test Statistic	0.279
K-S Critical(0.95) Value	0.143

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.929
Shapiro Wilk Test Statistic	0.809
Shapiro Wilk Critical (0.95) Value	0.942
Approximate Shapiro Wilk P Value	1.0399E-5
Lilliefors Test Statistic	0.18
Lilliefors Critical (0.95) Value	0.137

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\PCE\PCE data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
PCE	50	0.034	3.9	0.52	0.099	0.914	0.956	0.0793	2.265	4.035	1.837

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
PCE	50	0.0445	0.0459	0.0506	0.061	0.099	0.238	0.348	2.31	2.765	3.557

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\PCE\PCE data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

PCE

Total Number of Data	50
Number of Non-Detect Data	8
Number of Detected Data	42
Minimum Detected	0.045
Maximum Detected	3.9
Percent Non-Detects	16.00%
Minimum Non-detect	0.034
Maximum Non-detect	0.051
Mean of Detected Data	0.611
SD of Detected Data	1.019
Mean of Log-Transformed Detected Data	-1.543
SD of Log-Transformed Detected Data	1.344

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	0.14
Largest Non-detect at Order	11

95% UPL

95% UPL	3.035

Kaplan-Meier (KM) Method

Mean	0.521
SD	0.946
Standard Error of Mean	0.135
95% UTL 50% Coverage	0.744
95% KM Chebyshev UPL	4.686
95% KM UPL (t)	2.123
90% KM Percentile (z)	1.733
95% KM Percentile (z)	2.077
99% KM Percentile (z)	2.722

Propene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Propene\Propene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	48
Number of Missing Values	2
Number of Distinct Observations	41
Minimum	0.94
Maximum	850
Mean of Raw Data	26.16
Standard Deviation of Raw Data	122.1
Kstar	0.413
Mean of Log Transformed Data	1.734
Standard Deviation of Log Transformed Data	1.214

Normal Distribution Test Results

Correlation Coefficient R	0.399
Shapiro Wilk Test Statistic	0.198
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0
Lilliefors Test Statistic	0.454
Lilliefors Critical (0.95) Value	0.128

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.7
A-D Test Statistic	7.167
A-D Critical (0.95) Value	0.832
K-S Test Statistic	0.322
K-S Critical(0.95) Value	0.137

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.937
Shapiro Wilk Test Statistic	0.895
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	2.3501E-4
Lilliefors Test Statistic	0.122
Lilliefors Critical (0.95) Value	0.128

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Propene\Propene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
PPN	50	0.75	850	25.14	5.95	14327	119.7	5.486	6.955	48.84	4.761

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
PPN	50	0.945	1.29	1.86	2.175	5.95	8.65	11	18.1	35.3	471.7

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Propene\Propene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

PPN

Total Number of Data	50
Number of Non-Detect Data	2
Number of Detected Data	48
Minimum Detected	0.94
Maximum Detected	850
Percent Non-Detects	4.00%
Minimum Non-detect	0.75
Maximum Non-detect	0.77
Mean of Detected Data	26.16
SD of Detected Data	122.1
Mean of Log-Transformed Detected Data	1.734
SD of Log-Transformed Detected Data	1.214

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	6.5
Largest Non-detect at Order	2

95% UPL

95% UPL	60.95

Kaplan-Meier (KM) Method

Mean	25.15
SD	118.5
Standard Error of Mean	16.93
95% UTL 50% Coverage	53.1
95% KM Chebyshev UPL	546.8
95% KM UPL (t)	225.8
90% KM Percentile (z)	177
95% KM Percentile (z)	220
99% KM Percentile (z)	300.8

Styrene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Styrene\Styrene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	17
Number of Missing Values	33
Number of Distinct Observations	14
Minimum	0.85
Maximum	2.9
Mean of Raw Data	1.549
Standard Deviation of Raw Data	0.659
Kstar	5.19
Mean of Log Transformed Data	0.355
Standard Deviation of Log Transformed Data	0.414

Normal Distribution Test Results

Correlation Coefficient R	0.942
Shapiro Wilk Test Statistic	0.874
Shapiro Wilk Critical (0.95) Value	0.892
Approximate Shapiro Wilk P Value	0.0302
Lilliefors Test Statistic	0.235
Lilliefors Critical (0.95) Value	0.215

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.965
A-D Test Statistic	0.752
A-D Critical (0.95) Value	0.741
K-S Test Statistic	0.202
K-S Critical(0.95) Value	0.21

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.961
Shapiro Wilk Test Statistic	0.904
Shapiro Wilk Critical (0.95) Value	0.892
Approximate Shapiro Wilk P Value	0.104
Lilliefors Test Statistic	0.177
Lilliefors Critical (0.95) Value	0.215

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Styrene\Styrene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
Sty	50	0.67	3.2	1.168	0.925	0.357	0.597	0.185	1.92	2.98	0.511

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Sty	50	0.735	0.759	0.806	0.823	0.925	1.2	1.34	2.21	2.355	3.053

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Styrene\Styrene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

Sty

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	33
Number of Detected Data	17
Minimum Detected	-0.163
Maximum Detected	1.065
Percent Non-Detects	66.00%
Minimum Non-detect	-0.4
Maximum Non-detect	1.163
Mean of Detected data	0.355
SD of Detected data	0.414

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.904
5% Shapiro Wilk Critical Value	0.892

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	-0.394
SD (Log Scale)	0.64
Tolerance Factor K	0.236
95% UTL 50% Coverage	0.784
95% UPL	1.993
90% Percentile (z)	1.532
95% Percentile (z)	1.933
99% Percentile (z)	2.99

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	-0.398
SD in Log Scale	0.616
Mean in Orignal Scale	0.833
SD in Original Scale	0.646
95% UTL 50% Coverage	0.777
95% BCA UTL with 50% Coverage	0.602
95% Bootstrap (%) UTL with 50% Coverage	0.641
95% UPL (t)	1.905
90% Percentile (z)	1.479

95% Percentile (z)	1.849
99% Percentile (z)	2.814

Kaplan Meier (KM) Method

Mean	1.096
SD	0.502
SE of Mean	0.074
95% UTL 50% Coverage	1.215
95% KM Chebyshev UPL	3.305
95% KM UPL (t)	1.946
95% KM Percentile (z)	1.922

Trichloroethene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\TCE\TCE data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	22
Number of Missing Values	28
Number of Distinct Observations	20
Minimum	0.042
Maximum	5.2
Mean of Raw Data	0.61
Standard Deviation of Raw Data	1.16
Kstar	0.525
Mean of Log Transformed Data	-1.58
Standard Deviation of Log Transformed Data	1.415

Normal Distribution Test Results

Correlation Coefficient R	0.717
Shapiro Wilk Test Statistic	0.536
Shapiro Wilk Critical (0.95) Value	0.911
Approximate Shapiro Wilk P Value	3.4514E-8
Lilliefors Test Statistic	0.336
Lilliefors Critical (0.95) Value	0.189

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.951
A-D Test Statistic	1.555
A-D Critical (0.95) Value	0.798
K-S Test Statistic	0.243
K-S Critical(0.95) Value	0.195

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.953
Shapiro Wilk Test Statistic	0.9
Shapiro Wilk Critical (0.95) Value	0.911
Approximate Shapiro Wilk P Value	0.0272
Lilliefors Test Statistic	0.203
Lilliefors Critical (0.95) Value	0.189

Data not Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\TCE\TCE data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
TCE	50	0.034	5.2	0.294	0.048	0.656	0.81	0.0148	5.026	28.51	2.754

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
TCE	50	0.0355	0.0379	0.041	0.042	0.048	0.0955	0.224	0.582	1.3	3.681

Nonparametric Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\TCE\TCE data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1

TCE

Total Number of Data	50
Number of Non-Detect Data	28
Number of Detected Data	22
Minimum Detected	0.042
Maximum Detected	5.2
Percent Non-Detects	56.00%
Minimum Non-detect	0.034
Maximum Non-detect	0.096
Mean of Detected Data	0.61
SD of Detected Data	1.16
Mean of Log-Transformed Detected Data	-1.58
SD of Log-Transformed Detected Data	1.415

Data do not follow a Discernable Distribution (0.05)

Nonparametric Background Statistics

Tolerance Factor K	0.236

95% UTL with 50% Coverage

Order Statistic	30
Achieved CC	0.941
UTL	0.057
Warning: Largest Non-detect at Order	38

95% UPL

95% UPL	1.66

Kaplan-Meier (KM) Method

Mean	0.292
SD	0.803
Standard Error of Mean	0.116
95% UTL 50% Coverage	0.481
95% KM Chebyshev UPL	3.826
95% KM UPL (t)	1.651
90% KM Percentile (z)	1.321
95% KM Percentile (z)	1.612
99% KM Percentile (z)	2.159

trans-1,2-Dichloroethene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\tDCE\tDCE data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

trans-1,3-Dichloropropene

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\tDCP\tDCP data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.67	3.2	0.917	0.825	0.147	0.384	0.126	4.87	26.88	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.71	0.729	0.76	0.77	0.825	0.928	0.93	0.982	1.275	2.563

Tetrahydrofuran

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\THF\THF data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	15
Number of Missing Values	35
Number of Distinct Observations	15
Minimum	0.8
Maximum	4.8
Mean of Raw Data	2.63
Standard Deviation of Raw Data	1.392
Kstar	2.668
Mean of Log Transformed Data	0.807
Standard Deviation of Log Transformed Data	0.622

Normal Distribution Test Results

Correlation Coefficient R	0.975
Shapiro Wilk Test Statistic	0.928
Shapiro Wilk Critical (0.95) Value	0.881
Approximate Shapiro Wilk P Value	0.348
Lilliefors Test Statistic	0.111
Lilliefors Critical (0.95) Value	0.229

Data appear Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.959
A-D Test Statistic	0.387
A-D Critical (0.95) Value	0.743
K-S Test Statistic	0.138
K-S Critical(0.95) Value	0.223

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.965
Shapiro Wilk Test Statistic	0.909
Shapiro Wilk Critical (0.95) Value	0.881
Approximate Shapiro Wilk P Value	0.184
Lilliefors Test Statistic	0.17
Lilliefors Critical (0.95) Value	0.229

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\THF\THF data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
THF	50	0.67	4.8	1.447	0.9	1.299	1.14	0.17	1.801	2.122	0.788

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
THF	50	0.74	0.76	0.78	0.803	0.9	1.55	2.02	3.24	4.185	4.702

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\THF\THF data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

THF

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	35
Number of Detected Data	15
Minimum Detected	-0.223
Maximum Detected	1.569
Percent Non-Detects	70.00%
Minimum Non-detect	-0.4
Maximum Non-detect	1.163
Mean of Detected data	0.807
SD of Detected data	0.622

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.909
5% Shapiro Wilk Critical Value	0.881

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	-0.323
SD (Log Scale)	0.85
Tolerance Factor K	0.236
95% UTL 50% Coverage	0.884
95% UPL	3.054
90% Percentile (z)	2.152
95% Percentile (z)	2.931
99% Percentile (z)	5.233

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	-0.442
SD in Log Scale	0.938
Mean in Orignal Scale	1.069
SD in Original Scale	1.278
95% UTL 50% Coverage	0.802
95% BCA UTL with 50% Coverage	0.536
95% Bootstrap (%) UTL with 50% Coverage	0.536
95% UPL (t)	3.148
90% Percentile (z)	2.139

95% Percentile (z)	3.008
99% Percentile (z)	5.702

Kaplan Meier (KM) Method

Mean	1.356
SD	1.116
SE of Mean	0.164
95% UTL 50% Coverage	1.619
95% KM Chebyshev UPL	6.27
95% KM UPL (t)	3.246
95% KM Percentile (z)	3.192

Toluene

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Toluene\Toluene data.wst
Full Precision	OFF
Confidence Coefficient	0.95

raw

Raw Statistics

Number of Valid Observations	49
Number of Missing Values	1
Number of Distinct Observations	41
Minimum	1.5
Maximum	130
Mean of Raw Data	18.69
Standard Deviation of Raw Data	24.52
Kstar	0.938
Mean of Log Transformed Data	2.34
Standard Deviation of Log Transformed Data	1.06

Normal Distribution Test Results

Correlation Coefficient R	0.806
Shapiro Wilk Test Statistic	0.669
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	2.730E-13
Lilliefors Test Statistic	0.249
Lilliefors Critical (0.95) Value	0.127

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.973
A-D Test Statistic	1.703
A-D Critical (0.95) Value	0.78
K-S Test Statistic	0.181
K-S Critical(0.95) Value	0.13

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.987
Shapiro Wilk Test Statistic	0.963
Shapiro Wilk Critical (0.95) Value	0.947
Approximate Shapiro Wilk P Value	0.215
Lilliefors Test Statistic	0.114
Lilliefors Critical (0.95) Value	0.127

Data appear Lognormal at (0.05) Significance Level

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Toluene\Toluene data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
Tol	50	0.87	130	18.33	8.25	595.5	24.4	7.339	2.767	9.141	1.331

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Tol	50	1.88	3.14	4.48	5	8.25	24.5	29.2	49.2	59.85	109.9

Lognormal Background Statistics for Data Sets with Non-Detects

User Selected Options	
From File	P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Toluene\Toluene data.wst
Full Precision	OFF
Confidence Coefficient	95%
Coverage	50%
Different or Future K Values	1
Number of Bootstrap Operations	2000

Tol

Log-Transformed Statistics

Total Number of Data	50
Number of Non-Detect Data	1
Number of Detected Data	49
Minimum Detected	0.405
Maximum Detected	4.868
Percent Non-Detects	2.00%
Minimum Non-detect	-0.139
Maximum Non-detect	-0.139
Mean of Detected data	2.34
SD of Detected data	1.06

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.963
5% Shapiro Wilk Critical Value	0.947

Data appear Lognormal at 5% Significance Level

Background Statistics Assuming Lognormal Distribution

DL/2 Substitution Method

Mean (Log Scale)	2.277
SD (Log Scale)	1.141
Tolerance Factor K	0.236
95% UTL 50% Coverage	12.76
95% UPL	67.25
90% Percentile (z)	42.05
95% Percentile (z)	63.64
99% Percentile (z)	138.5

Note: DL/2 is not a recommended method.

Log ROS Method

Mean in Log Scale	2.285
SD in Log Scale	1.119
Mean in Orignal Scale	18.33
SD in Original Scale	24.41
95% UTL 50% Coverage	12.8
95% BCA UTL with 50% Coverage	10.4
95% Bootstrap (%) UTL with 50% Coverage	11.5
95% UPL (t)	65.34
90% Percentile (z)	41.23

95% Percentile (z)	61.9
99% Percentile (z)	132.7

Kaplan Meier (KM) Method

Mean	18.34
SD	24.15
SE of Mean	3.451
95% UTL 50% Coverage	24.04
95% KM Chebyshev UPL	124.7
95% KM UPL (t)	59.23
95% KM Percentile (z)	58.07

Vinyl Chloride

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\VC\VC data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	0.034	0.096	0.0442	0.042	1.1604E-4	0.0108	0.00593	3.145	11.95	0.244

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	0.0355	0.0369	0.038	0.038	0.042	0.046	0.047	0.049	0.0636	0.0852

Vinyl Acetate

From File: P:\8469 (DEQ)\Indoor Air Study\Technical Evaluation\Data Stats\Vinyl acetate\Vinyl acetate data.wst

Summary Statistics for Raw Full Dataset

Variable	NumObs	Minimum	Maximum	Mean	Median	Variance	SD	MAD/0.675	Skewness	Kurtosis	CV
C1	50	6.7	32	9.3	8.35	15.12	3.888	1.186	4.617	24.69	0.418

Percentiles for Raw Full Dataset

Variable	NumObs	5%ile	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
C1	50	7.1	7.29	7.68	7.7	8.35	9.3	9.32	10	14.55	25.63