

MW-101S TCE											
General Statistics											
Total Number of Observations					14	Number of Distinct Observations					12
Number of Detects					12	Number of Non-Detects					2
Number of Distinct Detects					11	Number of Distinct Non-Detects					1
Minimum Detect					0.32	Minimum Non-Detect					0.3
Maximum Detect					0.76	Maximum Non-Detect					0.3
Variance Detects					0.0231	Percent Non-Detects					14.29%
Mean Detects					0.538	SD Detects					0.152
Median Detects					0.57	CV Detects					0.283
Skewness Detects					-0.0522	Kurtosis Detects					-1.379
Mean of Logged Detects					-0.66	SD of Logged Detects					0.299
Normal GOF Test on Detects Only											
Shapiro Wilk Test Statistic					0.928	Shapiro Wilk GOF Test					
1% Shapiro Wilk Critical Value					0.805	Detected Data appear Normal at 1% Significance Level					
Lilliefors Test Statistic					0.206	Lilliefors GOF Test					
1% Lilliefors Critical Value					0.281	Detected Data appear Normal at 1% Significance Level					
Detected Data appear Normal at 1% Significance Level											
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
KM Mean					0.504	KM Standard Error of Mean					0.0442
90KM SD					0.158	95% KM (BCA) UCL					0.574
95% KM (t) UCL					0.582	95% KM (Percentile Bootstrap) UCL					0.575
95% KM (z) UCL					0.576	95% KM Bootstrap t UCL					0.585
90% KM Chebyshev UCL					0.636	95% KM Chebyshev UCL					0.696
97.5% KM Chebyshev UCL					0.78	99% KM Chebyshev UCL					0.943
Gamma GOF Tests on Detected Observations Only											
A-D Test Statistic					0.431	Anderson-Darling GOF Test					
5% A-D Critical Value					0.731	Detected data appear Gamma Distributed at 5% Significance Level					
K-S Test Statistic					0.231	Kolmogorov-Smirnov GOF					
5% K-S Critical Value					0.245	Detected data appear Gamma Distributed at 5% Significance Level					
Detected data appear Gamma Distributed at 5% Significance Level											

Gamma Statistics on Detected Data Only											
k hat (MLE)					12.83	k star (bias corrected MLE)				9.677	
Theta hat (MLE)					0.0419	Theta star (bias corrected MLE)				0.0555	
nu hat (MLE)					307.9	nu star (bias corrected)				232.2	
Mean (detects)					0.538						
Gamma ROS Statistics using Imputed Non-Detects											
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
For such situations, GROS method may yield incorrect values of UCLs and BTVs											
This is especially true when the sample size is small.											
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
Minimum					0.206	Mean				0.494	
Maximum					0.76	Median				0.49	
SD					0.179	CV				0.362	
k hat (MLE)					7.304	k star (bias corrected MLE)				5.787	
Theta hat (MLE)					0.0676	Theta star (bias corrected MLE)				0.0853	
nu hat (MLE)					204.5	nu star (bias corrected)				162	
Adjusted Level of Significance (β)					0.0312						
Approximate Chi Square Value (162.03, α)					133.6	Adjusted Chi Square Value (162.03, β)				130.2	
95% Gamma Approximate UCL					0.599	95% Gamma Adjusted UCL				0.615	
Estimates of Gamma Parameters using KM Estimates											
Mean (KM)					0.504	SD (KM)				0.158	
Variance (KM)					0.0251	SE of Mean (KM)				0.0442	
k hat (KM)					10.11	k star (KM)				7.992	
nu hat (KM)					283.1	nu star (KM)				223.8	
theta hat (KM)					0.0498	theta star (KM)				0.063	
80% gamma percentile (KM)					0.644	90% gamma percentile (KM)				0.741	
95% gamma percentile (KM)					0.828	99% gamma percentile (KM)				1.007	
Gamma Kaplan-Meier (KM) Statistics											
Approximate Chi Square Value (223.77, α)					190.2	Adjusted Chi Square Value (223.77, β)				186	
95% KM Approximate Gamma UCL					0.593	95% KM Adjusted Gamma UCL				0.606	
Lognormal GOF Test on Detected Observations Only											

Shapiro Wilk Test Statistic				0.919	Shapiro Wilk GOF Test							
10% Shapiro Wilk Critical Value				0.883	Detected Data appear Lognormal at 10% Significance Level							
Lilliefors Test Statistic				0.229	Lilliefors GOF Test							
10% Lilliefors Critical Value				0.223	Detected Data Not Lognormal at 10% Significance Level							
Detected Data appear Approximate Lognormal at 10% Significance Level												
Lognormal ROS Statistics Using Imputed Non-Detects												
Mean in Original Scale				0.497	Mean in Log Scale						-0.76	
SD in Original Scale				0.173	SD in Log Scale						0.376	
95% t UCL (assumes normality of ROS data)				0.579	95% Percentile Bootstrap UCL						0.573	
95% BCA Bootstrap UCL				0.568	95% Bootstrap t UCL						0.586	
95% H-UCL (Log ROS)				0.615								
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution												
KM Mean (logged)				-0.738	KM Geo Mean						0.478	
KM SD (logged)				0.326	95% Critical H Value (KM-Log)						1.916	
KM Standard Error of Mean (logged)				0.0911	95% H-UCL (KM -Log)						0.6	
KM SD (logged)				0.326	95% Critical H Value (KM-Log)						1.916	
KM Standard Error of Mean (logged)				0.0911								
DL/2 Statistics												
DL/2 Normal					DL/2 Log-Transformed							
Mean in Original Scale				0.482	Mean in Log Scale						-0.837	
SD in Original Scale				0.198	SD in Log Scale						0.527	
95% t UCL (Assumes normality)				0.576	95% H-Stat UCL						0.671	
DL/2 is not a recommended method, provided for comparisons and historical reasons												
Nonparametric Distribution Free UCL Statistics												
Detected Data appear Normal Distributed at 1% Significance Level												
Suggested UCL to Use												
95% KM (t) UCL					0.582							
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.												
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												