

MW-101S Cis-1,2 DCE												
General Statistics												
Total Number of Observations					14	Number of Distinct Observations					11	
Number of Detects					11	Number of Non-Detects					3	
Number of Distinct Detects					11	Number of Distinct Non-Detects					1	
Minimum Detect					0.18	Minimum Non-Detect					0.3	
Maximum Detect					0.7	Maximum Non-Detect					0.3	
Variance Detects					0.0238	Percent Non-Detects					21.43%	
Mean Detects					0.442	SD Detects					0.154	
Median Detects					0.46	CV Detects					0.349	
Skewness Detects					0.0935	Kurtosis Detects					-0.325	
Mean of Logged Detects					-0.88	SD of Logged Detects					0.39	
Normal GOF Test on Detects Only												
Shapiro Wilk Test Statistic					0.975	Shapiro Wilk GOF Test						
1% Shapiro Wilk Critical Value					0.792	Detected Data appear Normal at 1% Significance Level						
Lilliefors Test Statistic					0.124	Lilliefors GOF Test						
1% Lilliefors Critical Value					0.291	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					0.386	KM Standard Error of Mean					0.0474	
90KM SD					0.169	95% KM (BCA) UCL					0.484	
95% KM (t) UCL					0.47	95% KM (Percentile Bootstrap) UCL					0.475	
95% KM (z) UCL					0.464	95% KM Bootstrap t UCL					0.472	
90% KM Chebyshev UCL					0.528	95% KM Chebyshev UCL					0.592	
97.5% KM Chebyshev UCL					0.682	99% KM Chebyshev UCL					0.857	
Gamma GOF Tests on Detected Observations Only												
A-D Test Statistic					0.23	Anderson-Darling GOF Test						
5% A-D Critical Value					0.73	Detected data appear Gamma Distributed at 5% Significance Level						
K-S Test Statistic					0.137	Kolmogorov-Smirnov GOF						
5% K-S Critical Value					0.256	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)					8.067	k star (bias corrected MLE)				5.927	
Theta hat (MLE)					0.0548	Theta star (bias corrected MLE)				0.0745	
nu hat (MLE)					177.5	nu star (bias corrected)				130.4	
Mean (detects)					0.442						
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					0.133	Mean				0.387	
Maximum					0.7	Median				0.38	
SD					0.175	CV				0.453	
k hat (MLE)					4.743	k star (bias corrected MLE)				3.774	
Theta hat (MLE)					0.0815	Theta star (bias corrected MLE)				0.102	
nu hat (MLE)					132.8	nu star (bias corrected)				105.7	
Adjusted Level of Significance (β)					0.0312						
Approximate Chi Square Value (105.68, α)					82.96	Adjusted Chi Square Value (105.68, β)				80.29	
95% Gamma Approximate UCL					0.492	95% Gamma Adjusted UCL				0.509	
Estimates of Gamma Parameters using KM Estimates											
Mean (KM)					0.386	SD (KM)				0.169	
Variance (KM)					0.0286	SE of Mean (KM)				0.0474	
k hat (KM)					5.21	k star (KM)				4.142	
nu hat (KM)					145.9	nu star (KM)				116	
theta hat (KM)					0.074	theta star (KM)				0.0931	
80% gamma percentile (KM)					0.53	90% gamma percentile (KM)				0.64	
95% gamma percentile (KM)					0.741	99% gamma percentile (KM)				0.956	
Gamma Kaplan-Meier (KM) Statistics											
Approximate Chi Square Value (115.96, α)					92.1	Adjusted Chi Square Value (115.96, β)				89.28	
95% KM Approximate Gamma UCL					0.486	95% KM Adjusted Gamma UCL				0.501	
Lognormal GOF Test on Detected Observations Only											

Shapiro Wilk Test Statistic			0.945	Shapiro Wilk GOF Test					
10% Shapiro Wilk Critical Value			0.876	Detected Data appear Lognormal at 10% Significance Level					
Lilliefors Test Statistic			0.15	Lilliefors GOF Test					
10% Lilliefors Critical Value			0.231	Detected Data appear Lognormal at 10% Significance Level					
Detected Data appear Lognormal at 10% Significance Level									
Lognormal ROS Statistics Using Imputed Non-Detects									
Mean in Original Scale			0.39	Mean in Log Scale				-1.037	
SD in Original Scale			0.17	SD in Log Scale				0.468	
95% t UCL (assumes normality of ROS data)			0.471	95% Percentile Bootstrap UCL				0.464	
95% BCA Bootstrap UCL			0.461	95% Bootstrap t UCL				0.482	
95% H-UCL (Log ROS)			0.513						
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution									
KM Mean (logged)			-1.059	KM Geo Mean				0.347	
KM SD (logged)			0.475	95% Critical H Value (KM-Log)				2.008	
KM Standard Error of Mean (logged)			0.133	95% H-UCL (KM -Log)				0.506	
KM SD (logged)			0.475	95% Critical H Value (KM-Log)				2.008	
KM Standard Error of Mean (logged)			0.133						
DL/2 Statistics									
DL/2 Normal				DL/2 Log-Transformed					
Mean in Original Scale			0.379	Mean in Log Scale				-1.098	
SD in Original Scale			0.184	SD in Log Scale				0.552	
95% t UCL (Assumes normality)			0.466	95% H-Stat UCL				0.535	
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			0.47						
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.									