

MW-20M Cis-1,2 DCE												
General Statistics												
Total Number of Observations					12	Number of Distinct Observations					8	
Number of Detects					3	Number of Non-Detects					9	
Number of Distinct Detects					3	Number of Distinct Non-Detects					5	
Minimum Detect					0.31	Minimum Non-Detect					0.24	
Maximum Detect					0.81	Maximum Non-Detect					1.4	
Variance Detects					0.0721	Percent Non-Detects					75%	
Mean Detects					0.503	SD Detects					0.269	
Median Detects					0.39	CV Detects					0.534	
Skewness Detects					1.561	Kurtosis Detects					N/A	
Mean of Logged Detects					-0.775	SD of Logged Detects					0.502	
Warning: Data set has only 3 Detected Values.												
This is not enough to compute meaningful or reliable statistics and estimates.												
Normal GOF Test on Detects Only												
Shapiro Wilk Test Statistic					0.866	Shapiro Wilk GOF Test						
1% Shapiro Wilk Critical Value					0.753	Detected Data appear Normal at 1% Significance Level						
Lilliefors Test Statistic					0.33	Lilliefors GOF Test						
1% Lilliefors Critical Value					0.429	Detected Data appear Normal at 1% Significance Level						
Detected Data appear Normal at 1% Significance Level												
Note GOF tests may be unreliable for small sample sizes												
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs												
KM Mean					0.314	KM Standard Error of Mean					0.0608	
90KM SD					0.164	95% KM (BCA) UCL					N/A	
95% KM (t) UCL					0.423	95% KM (Percentile Bootstrap) UCL					N/A	
95% KM (z) UCL					0.414	95% KM Bootstrap t UCL					N/A	
90% KM Chebyshev UCL					0.496	95% KM Chebyshev UCL					0.579	
97.5% KM Chebyshev UCL					0.693	99% KM Chebyshev UCL					0.919	

Gamma GOF Tests on Detected Observations Only												
A-D Test Statistic					0.389	Anderson-Darling GOF Test						
5% A-D Critical Value					0.637	Detected data appear Gamma Distributed at 5% Significance Level						
K-S Test Statistic					0.34	Kolmogorov-Smirnov GOF						
5% K-S Critical Value					0.433	Detected data appear Gamma Distributed at 5% Significance Level						
Detected Data Not Gamma Distributed at 5% Significance Level												
Gamma Statistics on Detected Data Only												
k hat (MLE)					5.843	k star (bias corrected MLE)					N/A	
Theta hat (MLE)					0.0861	Theta star (bias corrected MLE)					N/A	
nu hat (MLE)					35.06	nu star (bias corrected)					N/A	
Mean (detects)					0.503							
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					0.01	Mean					0.133	
Maximum					0.81	Median					0.01	
SD					0.251	CV					1.881	
k hat (MLE)					0.403	k star (bias corrected MLE)					0.358	
Theta hat (MLE)					0.331	Theta star (bias corrected MLE)					0.373	
nu hat (MLE)					9.663	nu star (bias corrected)					8.581	
Adjusted Level of Significance (β)					0.029							
Approximate Chi Square Value (8.58, α)					3.076	Adjusted Chi Square Value (8.58, β)					2.595	
95% Gamma Approximate UCL					0.372	95% Gamma Adjusted UCL					N/A	
Estimates of Gamma Parameters using KM Estimates												
Mean (KM)					0.314	SD (KM)					0.164	
Variance (KM)					0.0268	SE of Mean (KM)					0.0608	

k hat (KM)				3.677	k star (KM)				2.813	
nu hat (KM)				88.25	nu star (KM)				67.52	
theta hat (KM)				0.0854	theta star (KM)				0.112	
80% gamma percentile (KM)				0.451	90% gamma percentile (KM)				0.565	
95% gamma percentile (KM)				0.671	99% gamma percentile (KM)				0.903	
Gamma Kaplan-Meier (KM) Statistics										
Approximate Chi Square Value (67.52, α)				49.61	Adjusted Chi Square Value (67.52, β)				47.27	
95% KM Approximate Gamma UCL				0.427	95% KM Adjusted Gamma UCL				0.449	
Lognormal GOF Test on Detected Observations Only										
Shapiro Wilk Test Statistic				0.917	Shapiro Wilk GOF Test					
10% Shapiro Wilk Critical Value				0.789	Detected Data appear Lognormal at 10% Significance Level					
Lilliefors Test Statistic				0.297	Lilliefors GOF Test					
10% Lilliefors Critical Value				0.389	Detected Data appear Lognormal at 10% Significance Level					
Detected Data appear Lognormal at 10% Significance Level										
Note GOF tests may be unreliable for small sample sizes										
Lognormal ROS Statistics Using Imputed Non-Detects										
Mean in Original Scale				0.206	Mean in Log Scale				-1.917	
SD in Original Scale				0.215	SD in Log Scale				0.799	
95% t UCL (assumes normality of ROS data)				0.318	95% Percentile Bootstrap UCL				0.312	
95% BCA Bootstrap UCL				0.342	95% Bootstrap t UCL				0.47	
95% H-UCL (Log ROS)				0.375						
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution										
KM Mean (logged)				-1.242	KM Geo Mean				0.289	
KM SD (logged)				0.361	95% Critical H Value (KM-Log)				1.986	
KM Standard Error of Mean (logged)				0.135	95% H-UCL (KM -Log)				0.383	
KM SD (logged)				0.361	95% Critical H Value (KM-Log)				1.986	
KM Standard Error of Mean (logged)				0.135						
DL/2 Statistics										

DL/2 Normal					DL/2 Log-Transformed							
Mean in Original Scale				0.293	Mean in Log Scale					-1.475		
SD in Original Scale				0.237	SD in Log Scale					0.701		
95% t UCL (Assumes normality)				0.416	95% H-Stat UCL					0.488		
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					0.423							
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.												