

CW-2 Cis-1,2 DCE												
General Statistics												
Total Number of Observations					12	Number of Distinct Observations					12	
Number of Detects					10	Number of Non-Detects					2	
Number of Distinct Detects					10	Number of Distinct Non-Detects					2	
Minimum Detect					0.78	Minimum Non-Detect					0.3	
Maximum Detect					6.1	Maximum Non-Detect					0.71	
Variance Detects					3.934	Percent Non-Detects					16.67%	
Mean Detects					2.761	SD Detects					1.983	
Median Detects					2.5	CV Detects					0.718	
Skewness Detects					0.68	Kurtosis Detects					-0.82	
Mean of Logged Detects					0.749	SD of Logged Detects					0.8	
Normal GOF Test on Detects Only												
Shapiro Wilk Test Statistic					0.877	Shapiro Wilk GOF Test						
1% Shapiro Wilk Critical Value					0.781	Detected Data appear Normal at 1% Significance Level						
Lilliefors Test Statistic					0.199	Lilliefors GOF Test						
1% Lilliefors Critical Value					0.304	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					2.351	KM Standard Error of Mean					0.593	
90KM SD					1.947	95% KM (BCA) UCL					3.317	
95% KM (t) UCL					3.415	95% KM (Percentile Bootstrap) UCL					3.293	
95% KM (z) UCL					3.325	95% KM Bootstrap t UCL					3.715	
90% KM Chebyshev UCL					4.128	95% KM Chebyshev UCL					4.934	
97.5% KM Chebyshev UCL					6.051	99% KM Chebyshev UCL					8.246	
Gamma GOF Tests on Detected Observations Only												
A-D Test Statistic					0.46	Anderson-Darling GOF Test						
5% A-D Critical Value					0.735	Detected data appear Gamma Distributed at 5% Significance Level						
K-S Test Statistic					0.212	Kolmogorov-Smirnov GOF						
5% K-S Critical Value					0.27	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)					2.027	k star (bias corrected MLE)				1.486	
Theta hat (MLE)					1.362	Theta star (bias corrected MLE)				1.858	
nu hat (MLE)					40.55	nu star (bias corrected)				29.72	
Mean (detects)					2.761						
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				2.303	
Maximum					6.1	Median				1.75	
SD					2.089	CV				0.907	
k hat (MLE)					0.628	k star (bias corrected MLE)				0.527	
Theta hat (MLE)					3.666	Theta star (bias corrected MLE)				4.372	
nu hat (MLE)					15.07	nu star (bias corrected)				12.64	
Adjusted Level of Significance (β)					0.029						
Approximate Chi Square Value (12.64, α)					5.65	Adjusted Chi Square Value (12.64, β)				4.955	
95% Gamma Approximate UCL					5.15	95% Gamma Adjusted UCL				5.872	
Estimates of Gamma Parameters using KM Estimates											
Mean (KM)					2.351	SD (KM)				1.947	
Variance (KM)					3.791	SE of Mean (KM)				0.593	
k hat (KM)					1.458	k star (KM)				1.149	
nu hat (KM)					34.98	nu star (KM)				27.57	
theta hat (KM)					1.613	theta star (KM)				2.046	
80% gamma percentile (KM)					3.738	90% gamma percentile (KM)				5.231	
95% gamma percentile (KM)					6.708	99% gamma percentile (KM)				10.1	
Gamma Kaplan-Meier (KM) Statistics											
Approximate Chi Square Value (27.57, α)					16.59	Adjusted Chi Square Value (27.57, β)				15.31	
95% KM Approximate Gamma UCL					3.906	95% KM Adjusted Gamma UCL				4.234	
Lognormal GOF Test on Detected Observations Only											

Shapiro Wilk Test Statistic			0.888	Shapiro Wilk GOF Test					
10% Shapiro Wilk Critical Value			0.869	Detected Data appear Lognormal at 10% Significance Level					
Lilliefors Test Statistic			0.193	Lilliefors GOF Test					
10% Lilliefors Critical Value			0.241	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			2.355	Mean in Log Scale				0.437	
SD in Original Scale			2.029	SD in Log Scale				1.027	
95% t UCL (assumes normality of ROS data)			3.407	95% Percentile Bootstrap UCL				3.339	
95% BCA Bootstrap UCL			3.401	95% Bootstrap t UCL				3.634	
95% H-UCL (Log ROS)			6.567						
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution									
KM Mean (logged)			0.424	KM Geo Mean				1.527	
KM SD (logged)			1.005	95% Critical H Value (KM-Log)				2.924	
KM Standard Error of Mean (logged)			0.306	95% H-UCL (KM -Log)				6.136	
KM SD (logged)			1.005	95% Critical H Value (KM-Log)				2.924	
KM Standard Error of Mean (logged)			0.306						
DL/2 Statistics									
DL/2 Normal				DL/2 Log-Transformed					
Mean in Original Scale			2.343	Mean in Log Scale				0.38	
SD in Original Scale			2.043	SD in Log Scale				1.141	
95% t UCL (Assumes normality)			3.402	95% H-Stat UCL				8.352	
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			3.415						
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.									