

MW-67D Cis-1,2 DCE											
General Statistics											
Total Number of Observations					6	Number of Distinct Observations					5
Number of Detects					4	Number of Non-Detects					2
Number of Distinct Detects					3	Number of Distinct Non-Detects					2
Minimum Detect					0.33	Minimum Non-Detect					0.3
Maximum Detect					0.35	Maximum Non-Detect					0.71
Variance Detects					9.17E-05	Percent Non-Detects					33.33%
Mean Detects					0.338	SD Detects					0.00957
Median Detects					0.335	CV Detects					0.0284
Skewness Detects					0.855	Kurtosis Detects					-1.289
Mean of Logged Detects					-1.086	SD of Logged Detects					0.0282
Note: Sample size is small (e.g., <10), if data are collected using incremental sampling methodology (ISM) approach,											
refer also to ITRC Tech Reg Guide on ISM (ITRC 2020 and ITRC 2012) for additional guidance,											
but note that ITRC may recommend the t-UCL or the Chebyshev UCL for small sample sizes (n < 7).											
The Chebyshev UCL often results in gross overestimates of the mean.											
Refer to the ProUCL 5.2 Technical Guide for a discussion of the Chebyshev UCL.											
Normal GOF Test on Detects Only											
Shapiro Wilk Test Statistic					0.865	Shapiro Wilk GOF Test					
1% Shapiro Wilk Critical Value					0.687	Detected Data appear Normal at 1% Significance Level					
Lilliefors Test Statistic					0.283	Lilliefors GOF Test					
1% Lilliefors Critical Value					0.413	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					0.33	KM Standard Error of Mean					0.00864
90KM SD					0.0167	95% KM (BCA) UCL					N/A
95% KM (t) UCL					0.347	95% KM (Percentile Bootstrap) UCL					N/A
95% KM (z) UCL					0.344	95% KM Bootstrap t UCL					N/A
90% KM Chebyshev UCL					0.356	95% KM Chebyshev UCL					0.368
97.5% KM Chebyshev UCL					0.384	99% KM Chebyshev UCL					0.416
Gamma GOF Tests on Detected Observations Only											
A-D Test Statistic					0.428	Anderson-Darling GOF Test					
5% A-D Critical Value					0.657	Detected data appear Gamma Distributed at 5% Significance Level					

K-S Test Statistic				0.318	Kolmogorov-Smirnov GOF					
5% K-S Critical Value				0.394	Detected data appear Gamma Distributed at 5% Significance Level					
Detected data appear Gamma Distributed at 5% Significance Level										
Note GOF tests may be unreliable for small sample sizes										
Gamma Statistics on Detected Data Only										
k hat (MLE)				1670	k star (bias corrected MLE)				417.6	
Theta hat (MLE)				2.02E-04	Theta star (bias corrected MLE)				8.08E-04	
nu hat (MLE)				13357	nu star (bias corrected)				3341	
Mean (detects)				0.338						
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				0.313	Mean				0.333	
Maximum				0.35	Median				0.331	
SD				0.0123	CV				0.037	
k hat (MLE)				870.5	k star (bias corrected MLE)				435.4	
Theta hat (MLE)				3.82E-04	Theta star (bias corrected MLE)				7.64E-04	
nu hat (MLE)				10446	nu star (bias corrected)				5224	
Adjusted Level of Significance (β)										
Approximate Chi Square Value (N/A, α)					5057	Adjusted Chi Square Value (N/A, β)			4997	
95% Gamma Approximate UCL					0.344	95% Gamma Adjusted UCL			N/A	
Estimates of Gamma Parameters using KM Estimates										
Mean (KM)				0.33	SD (KM)				0.0167	
Variance (KM)				2.80E-04	SE of Mean (KM)				0.00864	
k hat (KM)				388.9	k star (KM)				194.6	
nu hat (KM)				4667	nu star (KM)				2335	
theta hat (KM)				8.48E-04	theta star (KM)				0.0017	
80% gamma percentile (KM)					0.35	90% gamma percentile (KM)			0.361	
95% gamma percentile (KM)					0.37	99% gamma percentile (KM)			0.388	
Gamma Kaplan-Meier (KM) Statistics										
Approximate Chi Square Value (N/A, α)					2224	Adjusted Chi Square Value (N/A, β)			2184	
95% KM Approximate Gamma UCL					0.347	95% KM Adjusted Gamma UCL			0.353	

Lognormal GOF Test on Detected Observations Only												
Shapiro Wilk Test Statistic				0.865	Shapiro Wilk GOF Test							
10% Shapiro Wilk Critical Value				0.792	Detected Data appear Lognormal at 10% Significance Level							
Lilliefors Test Statistic				0.284	Lilliefors GOF Test							
10% Lilliefors Critical Value				0.346	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				0.333	Mean in Log Scale						-1.101	
SD in Original Scale				0.0121	SD in Log Scale						0.0365	
95% t UCL (assumes normality of ROS data)				0.343	95% Percentile Bootstrap UCL						0.34	
95% BCA Bootstrap UCL				0.339	95% Bootstrap t UCL						0.343	
95% H-UCL (Log ROS)				N/A								
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution												
KM Mean (logged)				-1.11	KM Geo Mean						0.33	
KM SD (logged)				0.0518	95% Critical H Value (KM-Log)						N/A	
KM Standard Error of Mean (logged)				0.0268	95% H-UCL (KM -Log)						N/A	
KM SD (logged)				0.0518	95% Critical H Value (KM-Log)						N/A	
KM Standard Error of Mean (logged)				0.0268								
DL/2 Statistics												
DL/2 Normal					DL/2 Log-Transformed							
Mean in Original Scale				0.309	Mean in Log Scale						-1.213	
SD in Original Scale				0.0786	SD in Log Scale						0.336	
95% t UCL (Assumes normality)				0.374	95% H-Stat UCL						0.444	
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				0.347								
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.												