

**Table A.4**  
**Censored Probability Plot Correlation Coefficient**  
**Arsenic Concentrations Detected in Glen Rose Formation Limestone**  
**Camp Stanley Storage Activity, Texas**

Order(i)	Uniform Order	Normal Order		
	Statistic Medians	Statistic Medians	$M_i - M_{avg}$	$(M_i - M_{avg})^2$
i	$m_i$	$M_i$		
1	0.03102	-1.86607	-1.66490	2.772
2	0.07523	-1.43791	-1.23674	1.530
3	0.11994	-1.17528	-0.97410	0.949
4	0.16465	-0.97551	-0.77433	0.600
5	0.20937	-0.80862	-0.60744	0.369
6	0.25408	-0.66171	-0.46053	0.212
7	0.29879	-0.52788	-0.32670	0.107
8	0.34351	-0.40291	-0.20174	0.041
9	0.38822	-0.28397	-0.08279	0.007
10	0.43293	-0.16892	0.03226	0.001
11	<del>0.47764</del>	<del>0.05607</del>	<del>0.14511</del>	<del>0.021</del>
12	<del>0.52236</del>	<del>0.05607</del>	<del>0.25725</del>	<del>0.066</del>
13	<del>0.56707</del>	<del>0.16892</del>	<del>0.37009</del>	<del>0.137</del>
14	0.61178	0.28397	0.48514	0.235
15	<del>0.65649</del>	<del>0.40291</del>	<del>0.60409</del>	<del>0.365</del>
16	0.70121	0.52788	0.72905	0.532
17	<del>0.74592</del>	<del>0.66171</del>	<del>0.86288</del>	<del>0.745</del>
18	<del>0.79063</del>	<del>0.80862</del>	<del>1.00980</del>	<del>1.020</del>
19	<del>0.83535</del>	<del>0.97551</del>	<del>1.17668</del>	<del>1.385</del>
20	0.88006	1.17528	1.37646	1.895
21	0.92477	1.43791	1.63909	2.687
22	0.96898	1.86607	2.06725	4.274
Total:			13.408	
$M_{avg} =$		-0.2012		

Lognormal			
Ln of Ordered Concentrations (mg/kg)			
$\ln(x_{(i)})$	$X_i - X_{avg}$	$(X_i - X_{avg})^2$	$(X_i - X_{avg}) * (M_i - M_{avg})$
-0.274436846	-0.700	0.491	1.166200
-0.105360516	-0.531	0.282	0.657187
-0.061875404	-0.488	0.238	0.475266
0	-0.426	0.181	0.329885
0.029558802	-0.396	0.157	0.240831
0.139761942	-0.286	0.082	0.131833
0.182321557	-0.244	0.059	0.079618
0.246860078	-0.179	0.032	0.036145
0.576613364	0.151	0.023	-0.012467
0.647103242	0.221	0.049	0.007132
0.693147181	0.267	0.071	0.038762
0.741937345	0.316	0.100	0.081266
0.741937345	0.316	0.100	0.116917
0.741937345	0.316	0.100	0.153262
0.741937345	0.316	0.100	0.190839
0.779324877	0.353	0.125	0.257573
0.78845736	0.362	0.131	0.312734
0.78845736	0.362	0.131	0.365980
0.78845736	0.362	0.131	0.426465
0.993251773	0.567	0.322	0.780759
1.036736885	0.611	0.373	1.001009
1.458615023	1.033	1.066	2.134617
Sum:		2.854	5.890992
$X_{avg} =$		0.4260	
$r =$		0.952299	

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**Probability Plot Correlation Coefficient<sup>a,b</sup>**

$$r = \frac{\sum_{i=1}^n (X_i - X_{avg}) * (M_i - M_{avg})}{\sqrt{\sum_{i=1}^n (X_i - X_{avg})^2 * \sum_{i=1}^n (M_i - M_{avg})^2}}$$

$M_i = \Phi^{-1}(m_i) =$  ith Normal order statistic median  
where  $\Phi^{-1} =$  inverse of standard Normal cumulative distribution  
 $= f(z, 0, 1)^{-1} = \sqrt{2p} e^{z^2/2}$

$$m_i = \begin{cases} 1 - (.5)^{1/n} & \text{for } i = 1 \\ (i - .3175) / (n + .365) & \text{for } 1 < i < n \\ (.5)^{1/n} & \text{for } i = n \end{cases}$$

$M_{avg} =$  average of  $M_i$   
 $X_{avg} =$  average of  $X_i$