

**Shapiro-Wilk Test of Normality**  
**Chromium Detected in Crawford and Bexar Stony Soils**  
**Camp Stanley Storage Activity, Texas**

Number of Samples, n	Ordered Concentrations	Reverse Ordered Concentrations	Difference			In of Ordered Concentrations	In of Reverse Ordered Concentrations	Difference		
	x(i)	x(n-i+1)	x(n-i+1)-x(i)	a(n-i+1) <sup>a</sup>	b(i) <sup>b</sup>	ln x(i)	ln x(n-i+1)	ln x(n-i+1)- ln x(i)	a(n-i+1) <sup>a</sup>	b(i) <sup>b</sup>
1	2.40	19.00	16.6	0.5739	9.53	0.88	2.94	2.07	0.5739	1.19
2	3.60	15.20	11.6	0.3291	3.82	1.28	2.72	1.44	0.3291	0.47
3	3.90	11.00	7.1	0.2141	1.52	1.36	2.40	1.04	0.2141	0.22
4	4.80	7.10	2.3	0.1224	0.28	1.57	1.96	0.39	0.1224	0.05
5	5.70	5.70	0	0.0399	0.00	1.74	1.74	0.00	0.0399	0.00
6	5.70	5.70	0		b= 15.15	1.74	1.74	0.00		b= 1.93
7	7.10	4.80	-2.3			1.96	1.57	-0.39		
8	11.00	3.90	-7.1		W <sup>c</sup> = 0.847	2.40	1.36	-1.04		W <sup>c</sup> = 0.960
9	15.20	3.60	-11.6		(0.05,10)= 0.842	2.72	1.28	-1.44		W(0.05,10)= 0.842
10	19.00	2.40	-16.6		Normality= Normal	2.94	0.88	-2.07		Normality= <b>Lognormal</b>

\*\*\* Distribution is lognormal because of higher W value.

<sup>a</sup> From An Analysis of Variance Test for Normality (complete samples), by S.S. Shapiro and M.B. Wilk, Biometrika, vol. 52, pp. 591-611.

<sup>b</sup>  $b(i) = [x(n-i+1) - x(i)] * a(n-i+1)$

<sup>c</sup>  $W = b*b/S*S*n$