

# Drexler Bioaccessibility Report

## Laboratory of Environment and Geological Sciences, University of Colorado, Boulder

Project Name: Sudbury Soils Study

Run #:	1	Date:	06/12/2006	Operator:	Rice		
Postion in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	510D		0.85287	1.549	11:55	12:55	1.664
2	514D		1.02068	1.549	11:55	12:55	1.645
3	522D		0.97787	1.566	11:55	12:55	1.801
4	524D		0.89989	1.566	11:55	12:55	1.646
5	529D		0.96665	1.566	11:55	12:55	1.76
6	530D		0.61481	1.566	11:55	12:55	1.648
7	547D		0.91935	1.566	11:55	12:55	1.669
8	564D-DUP		0.90815	1.566	11:55	12:55	1.701
9	564D		0.92664	1.566	11:55	12:55	1.708
10	574D		1.03996	1.566	11:55	12:55	1.69

Project Name: Sudbury Soils Study

Run #:	2	Date:	06/12/2006	Operator:	Rice		
Postion in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	PROCESS BLANK			1.508	12:15	1:15	1.405
2	BLANK-SPIKE			1.508	12:15	1:15	1.462
3	602D		0.64709	1.508	12:15	1:15	1.559
4	605D		1.02847	1.508	12:15	1:15	1.551
5	605D-SPK		1.02705	1.508	12:15	1:15	1.541
6	610D		0.98505	1.508	12:15	1:15	1.657
7	612D		0.84624	1.508	12:15	1:15	1.608
8	614D		1.0116	1.508	12:15	1:15	1.538
9	614D-DUP		1.00288	1.508	12:15	1:15	1.535
10	614D-SPK		1.00737	1.508	12:15	1:15	1.524

# Drexler Bioaccessibility Report

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Project Name: Sudbury Soils Study

Run #: 3      Date: 06/12/2006      Operator: Rice

Postion in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	615D		0.84969	1.504	12:35	1:35	1.571
2	616D		1.00238	1.504	12:35	1:35	1.636
3	617D		1.01601	1.504	12:35	1:35	1.603
4	618D		1.00169	1.504	12:35	1:35	1.612
5	619D		1.00176	1.504	12:35	1:35	1.652
6	620D		1.01395	1.504	12:35	1:35	1.613
7	621D		1.01635	1.504	12:35	1:35	1.699
8	NIST2710-1		1.02081	1.504	12:35	1:35	1.563
9	PROCESS BLANK-2			1.504	12:35	1:35	1.533
10	BLANK-SPIKE-2			1.504	12:35	1:35	1.52

Project Name: Sudbury Soils Study

Run #: 4      Date: 06/12/2006      Operator: Rice

Postion in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	518D		0.21741	1.504	12:35	1:35	1.563
2	521D		0.53396	1.504	12:35	1:35	1.585
3	541D		0.58891	1.504	12:35	1:35	1.614
4	572D		0.1783	1.504	12:35	1:35	1.557
5							
6							
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# Drexler Bioaccessibility Report

## Laboratory of Environment and Geological Sciences, University of Colorado, Boulder

Project Name: Sudbury Soils Study

Run #:	5	Date:	06/12/2006	Operator:	Rice		
Postion in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	501S		1.00494	1.539	2:00	3:00	1.589
2	502S		1.01455	1.539	2:00	3:00	1.584
3	506S		1.00345	1.539	2:00	3:00	1.581
4	511S		1.01614	1.539	2:00	3:00	1.568
5	512S		0.9999	1.539	2:00	3:00	1.569
6	513S		1.0133	1.539	2:00	3:00	1.565
7	514S		1.01221	1.564	1:45	2:45	1.674
8	516S		1.02308	1.564	1:45	2:45	1.634
9	517S		1.0022	1.564	1:45	2:45	1.632
10	519S		1.01658	1.564	1:45	2:45	1.625

Project Name: Sudbury Soils Study

Run #:	6	Date:	06/12/2006	Operator:	Rice		
Postion in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	519S-DUP		1.01213	1.564	1:45	2:45	1.62
2	519S-SPK		1.01403	1.539	2:00	3:00	1.566
3	PROCESS -BLANK			1.564	1:45	2:45	1.574
4	BLANK-SPK			1.539	2:00	3:00	1.538
5	520S		1.00189	1.564	1:45	2:45	1.606
6	521S		1.00179	1.564	1:45	2:45	1.601
7	522S		1.00111	1.539	2:00	3:00	1.607
8	523S		1.00324	1.539	2:00	3:00	1.577
9							
10							

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## Laboratory of Environment and Geological Sciences, University of Colorado, Boulder

Project Name: Sudbury Soils Study

Run #: 7      Date: 06/12/2006      Operator: Rice

Position in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	525S		1.00461	1.53	12:25	1:25	1.54
2	526S		1.00391	1.53	12:25	1:25	1.534
3	529S		1.01056	1.53	12:25	1:25	1.533
4	530S		1.01452	1.53	12:25	1:25	1.535
5	531S		1.01241	1.53	12:25	1:25	1.538
6	533S		1.01891	1.53	12:25	1:25	1.538
7	533S-DUP		1.00458	1.53	12:25	1:25	1.542
8	533S-SPK		1.00912	1.53	12:25	1:25	1.53
9	PROCESS -BLANK 3			1.53	12:25	1:25	1.521
10	BLANK-SPK 3			1.53	12:25	1:25	1.507

Project Name: Sudbury Soils Study

Run #: 8      Date: 06/12/2006      Operator: Rice

Position in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	NIST 2711-1		1.01384	1.509	1:50	2:50	1.639
2	534S		1.01934	1.509	1:50	2:50	1.567
3	541S		1.01652	1.509	1:50	2:50	1.535
4	551S		1.00267	1.509	1:50	2:50	1.532
5	552S		1.00256	1.509	1:50	2:50	1.546
6	553S		1.00495	1.509	1:50	2:50	1.541
7	554S		1.00924	1.509	1:50	2:50	1.54
8	560S		1.00894	1.509	1:50	2:50	1.541
9	561S		1.01259	1.509	1:50	2:50	1.54
10	563S		1.01735	1.509	1:50	2:50	1.54

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## Laboratory of Environment and Geological Sciences, University of Colorado, Boulder

Project Name: Sudbury Soils Study

Run #: 9      Date: 06/12/2006      Operator: Rice

Position in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	565S		1.00152	1.517	10:45	11:45	1.534
2	565S DUP		1.00286	1.517	10:45	11:45	1.532
3	566S SPK		1.00131	1.517	10:45	11:45	1.514
4	PROCESS-BLANK 4			1.517	10:45	11:45	1.521
5	BLANK SPIKE 4			1.517	10:45	11:45	1.508
6	566S		1.00283	1.517	10:45	11:45	1.528
7	570S		1.0036	1.517	10:45	11:45	1.545
8	581S		1.00376	1.517	10:45	11:45	1.549
9	582S		1.00204	1.517	10:45	11:45	1.528
10	584S		1.00127	1.517	10:45	11:45	1.545

Project Name: Sudbury Soils Study

Run #: 10      Date: 06/12/2006      Operator: Rice

Position in rack	Sample name	Lab#	Wt. Grams	pH start	Starting time	Stopping time	pH stop
1	593S		1.00127	1.517	12:40	1:40	1.518
2	596S		1.00169	1.517	12:40	1:40	1.522
3	599S		1.00065	1.503	12:40	1:40	1.508
4	602S		1.00124	1.503	12:40	1:40	1.521
5	607S		1.00147	1.503	12:40	1:40	1.517
6	602S DUP		1.00183	1.503	12:40	1:40	1.521
7	607S SPK		1.00208	1.503	12:40	1:40	1.507
8	PROCESS-BLANK 5			1.503	12:40	1:40	1.495
9	BLANK SPIKE 5			1.503	12:40	1:40	1.483
10							

# Drexler Bioaccessibility Report

**TABLE 2 . Preliminary Summary Of In Vitro Bioassay Results**

Sample	ID	Pb in <250µ bulk soil ug/kg	mass soil (g)	calc Pb #1	ICP Pb (ug/l)	solution amt (l)	% Relative Pb Bioavailabilit
510D	182479.038	0.85287	155.63		1292.6865	0.1	83
514D	62662.8061	1.02068	63.96		541.411	0.1	85
522D	97094.599	0.97787	94.95		808.215	0.1	85
524D	85021.316	0.89989	76.51		537.2105	0.1	70
529D	137674.262	0.96665	133.08		1137.969	0.1	86
530D	443036.831	0.61481	272.38		2186.6445	0.1	80
547D	115359.598	0.91935	106.06		946.381	0.1	89
564D-DUP	52697.0993	0.90815	47.86		487.464	0.1	102
564D	52904.9888	0.92664	49.02		485.557	0.1	99
574D	89581.9567	1.03996	93.16		784.7975	0.1	84
602D	110403.907	0.64709	71.44		694.66	0.1	97
605D	22954.0197	1.02847	23.61		247.947	0.1	105
610D	97124.9562	0.98505	95.67		628.7385	0.1	66
612D	36606.8557	0.84624	30.98		252.1705	0.1	81
614D	69378.1712	1.0116	70.18		529.3795	0.1	75
614D-DUP	70286.8646	1.00288	70.49		557.616	0.1	79
615D	61925.9904	0.84969	52.62		391.698	0.1	74
616D	82136.8998	1.00238	82.33		663.211	0.1	81
617D	62665.8733	1.01601	63.67		436.0725	0.1	68
618D	91583.1625	1.00169	91.74		714.576	0.1	78
619D	102834.173	1.00176	103.02		792.0535	0.1	77
620D	100222.457	1.01395	101.62		811.0485	0.1	80
621D	65182.2449	1.01635	66.25		511.061	0.1	77
518D	155240.979	0.21741	33.75		239.679	0.1	71
521D	305457.673	0.53396	163.10		1316.135	0.1	81
541D	92124.9886	0.58891	54.25		499.546	0.1	92
572D	62066.1234	0.1783	11.07		92.813	0.1	84
501S	92423.0934	1.00494	92.88		507.969	0.1	55
502S	145023.003	1.01455	147.13		784.294	0.1	53
506S	98557.5106	1.00345	98.90		727.549	0.1	74
511S	18920.5232	1.01614	19.23		132.268	0.1	69
512S	120047.758	0.9999	120.04		885.611	0.1	74
513S	55470.3947	1.0133	56.21		396.76	0.1	71
514S	104954.145	1.01221	106.24		604.512	0.1	57
516S	140178.186	1.02308	143.41		951.1115	0.1	66
517S	52534.8164	1.0022	52.65		289.6365	0.1	55
519S	36473.1071	1.01658	37.08		222.249	0.1	60
519S-DUP	37182.9084	1.01213	37.63		236.419	0.1	63
520S	33456.0866	1.00189	33.52		226.4595	0.1	68
521S	76396.4324	1.00179	76.53		571.316	0.1	75
522S	179427.563	1.00111	179.63		759.5915	0.1	42
523S	213687.563	1.00324	214.38		1251.05	0.1	58
525S	33313.0561	1.00461	33.47		203.8085	0.1	61
526S	18519.7562	1.00391	18.59		174.722	0.1	94
529S	20882.3834	1.01056	21.10		172.612	0.1	82
530S	46907.6271	1.01452	47.59		388.179	0.1	82
531S	15882.912	1.01241	16.08		148.9225	0.1	93
533S	82188.7565	1.01891	83.74		613.8795	0.1	73
533S-DUP	82510.9818	1.00458	82.89		632.328	0.1	76
534S	198946.325	1.01934	202.79		1385.4565	0.1	68
541S	4568.65418	1.01652	4.64		91.163	0.1	Re-analyze
551S	17006.5203	1.00267	17.05		146.6855	0.1	86
552S	26293.9537	1.00256	26.36		189.295	0.1	72
553S	24068.0079	1.00495	24.19		185.8335	0.1	77
554S	46996.2714	1.00924	47.43		284.506	0.1	60
560S	15244.8656	1.00894	15.38		126.0845	0.1	82
561S	147154.627	1.01259	149.01		1082.3775	0.1	73
563S	40101.6767	1.01735	40.80		312.426	0.1	77
565S	41754.2625	1.00152	41.82		321.4395	0.1	77
565S DUP	43205.1122	1.00286	43.33		339.5485	0.1	78
566S	24210.8224	1.00283	24.28		183.9185	0.1	76
570S	44315.4441	1.0036	44.47		293.601	0.1	66
581S	56758.1939	1.00376	56.97		280.1145	0.1	49
582S	11514.8578	1.00204	11.54		71.282	0.1	62
584S	310752.536	1.00127	311.15		2559.512	0.1	82
593S	7054.77845	1.00127	7.06		46.595	0.1	66
596S	27943.8254	1.00169	27.99		188.083	0.1	67
599S	24450.3102	1.00065	24.47		143.7025	0.1	59
602S	80494.9703	1.00124	80.59		636.5195	0.1	79
607S	17029.4276	1.00147	17.05		117.1565	0.1	69
602S DUP	83460.4678	1.00183	83.61		593.497	0.1	71
NIST 2711-1	1162000	1.01384	1178.08		19093.0405	0.1	162
NIST2710-1	5532000	1.02081	5647.12		37584.7295	0.1	67

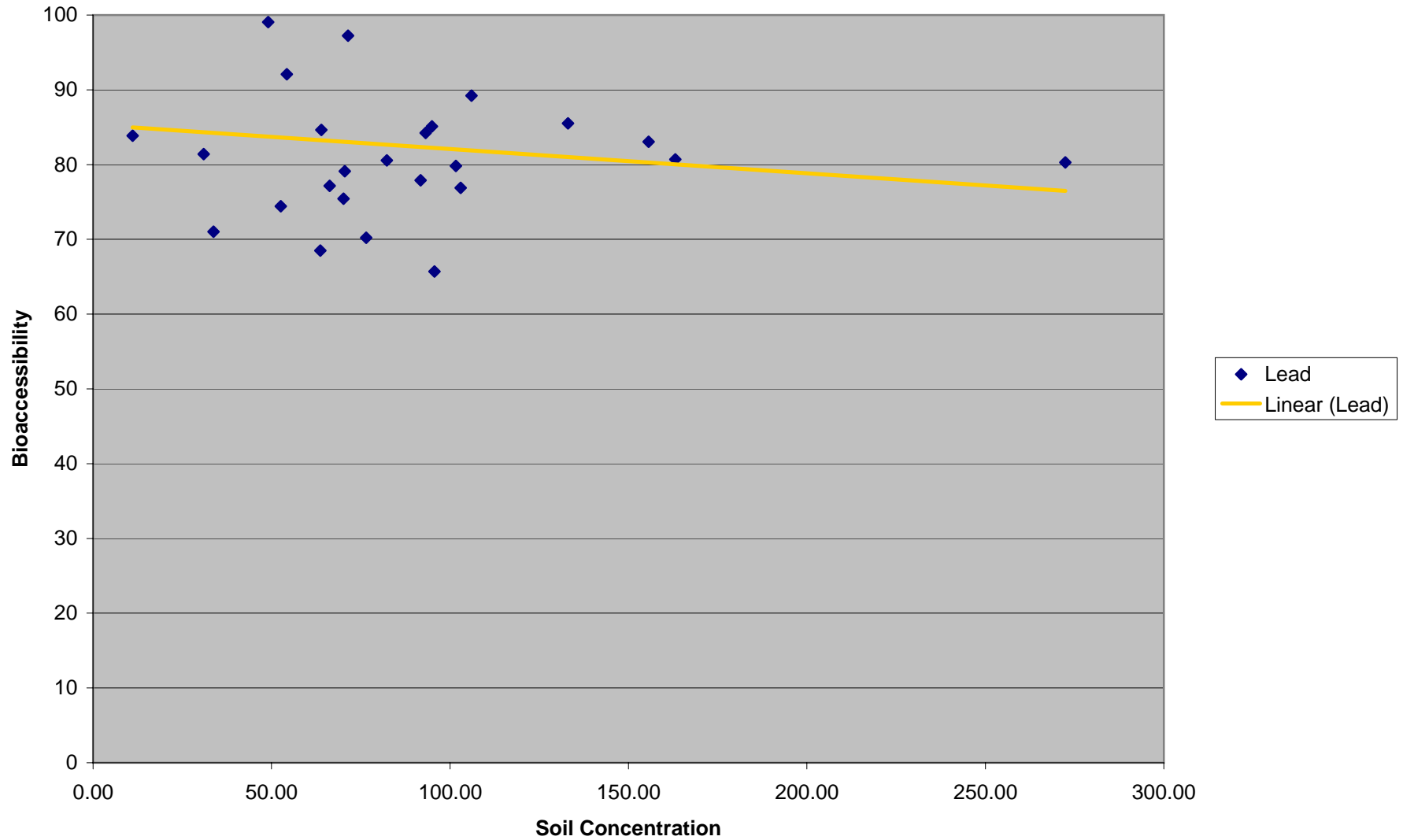
27 n

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Re-analyze

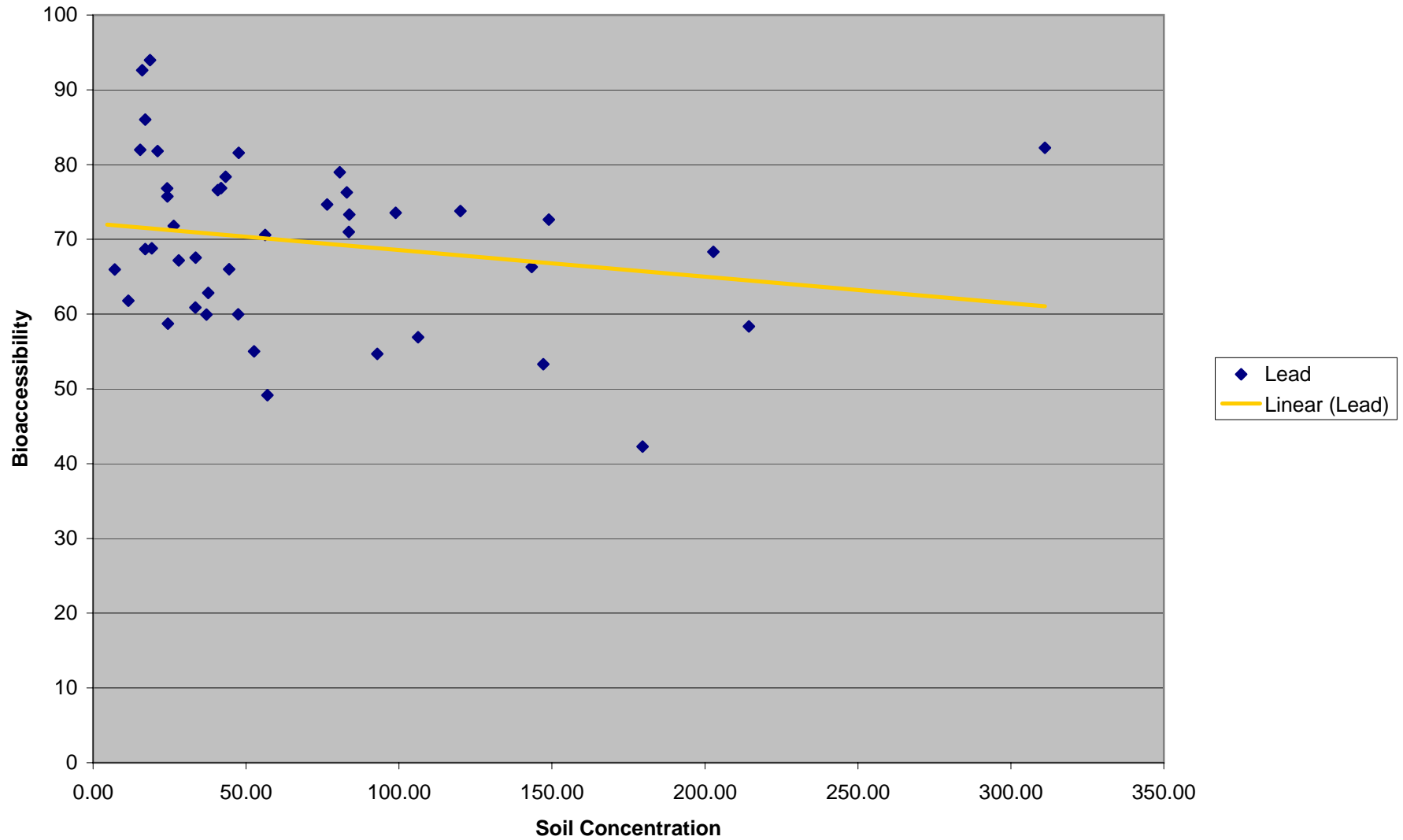
# Drexler Bioaccessibility Report

## Drexler Dust



# Drexler Bioaccessibility Report

## Drexler Soil





# Drexler Bioaccessibility Report

**Data File**

Variable: 55

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	45	Shapiro-Wilk Test Statistic	0.801625
Number of Unique Samples	29	Shapiro-Wilk 5% Critical Value	0.945
Minimum	0	Data not normal at 5% significance level	
Maximum	94		
Mean	66.6	95% UCL (Assuming Normal Distribution)	
Median	69	Student's-t UCL	71.15021
Standard Deviation	18.1664		
Variance	330.0182		
Coefficient of Variation	0.272769		
Skewness	-2.17424		

Gamma Statistics Not Available

Lognormal Statistics Not Available

95% Non-parametric UCLs

CLT UCL	71.05441
Adj-CLT UCL (Adjusted for skewness)	70.11653
Mod-t UCL (Adjusted for skewness)	71.00392
Jackknife UCL	71.15021
Standard Bootstrap UCL	71.06576
Bootstrap-t UCL	70.51018
Hall's Bootstrap UCL	70.48928
Percentile Bootstrap UCL	70.64444
BCA Bootstrap UCL	70
95% Chebyshev (Mean, Sd) UCL	<b>78.40428</b>
97.5% Chebyshev (Mean, Sd) UCL	83.512
99% Chebyshev (Mean, Sd) UCL	93.54513

**RECOMMENDATION**

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

# Drexler Bioaccessibility Report

**Data File**

Variable: 83

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	28	Shapiro-Wilk Test Statistic	0.706281
Number of Unique Samples	22	Shapiro-Wilk 5% Critical Value	0.924
Minimum	0	Data not normal at 5% significance level	
Maximum	105		
Mean	79.60714	95% UCL (Assuming Normal Distribution)	
Median	81	Student's-t UCL	85.52137
Standard Deviation	18.37337		
Variance	337.5807		
Coefficient of Variation	0.230801		
Skewness	-3.00141		

Gamma Statistics Not Available

Lognormal Statistics Not Available

95% Non-parametric UCLs	
CLT UCL	85.31847
Adj-CLT UCL (Adjusted for skewness)	83.21403
Mod-t UCL (Adjusted for skewness)	85.19312
Jackknife UCL	85.52137
Standard Bootstrap UCL	85.28656
Bootstrap-t UCL	84.27384
Hall's Bootstrap UCL	84.00649
Percentile Bootstrap UCL	84.5
BCA Bootstrap UCL	83.60714
95% Chebyshev (Mean, Sd) UCL	94.74229
97.5% Chebyshev (Mean, Sd) UCL	101.2913
99% Chebyshev (Mean, Sd) UCL	114.1555

**RECOMMENDATION**

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

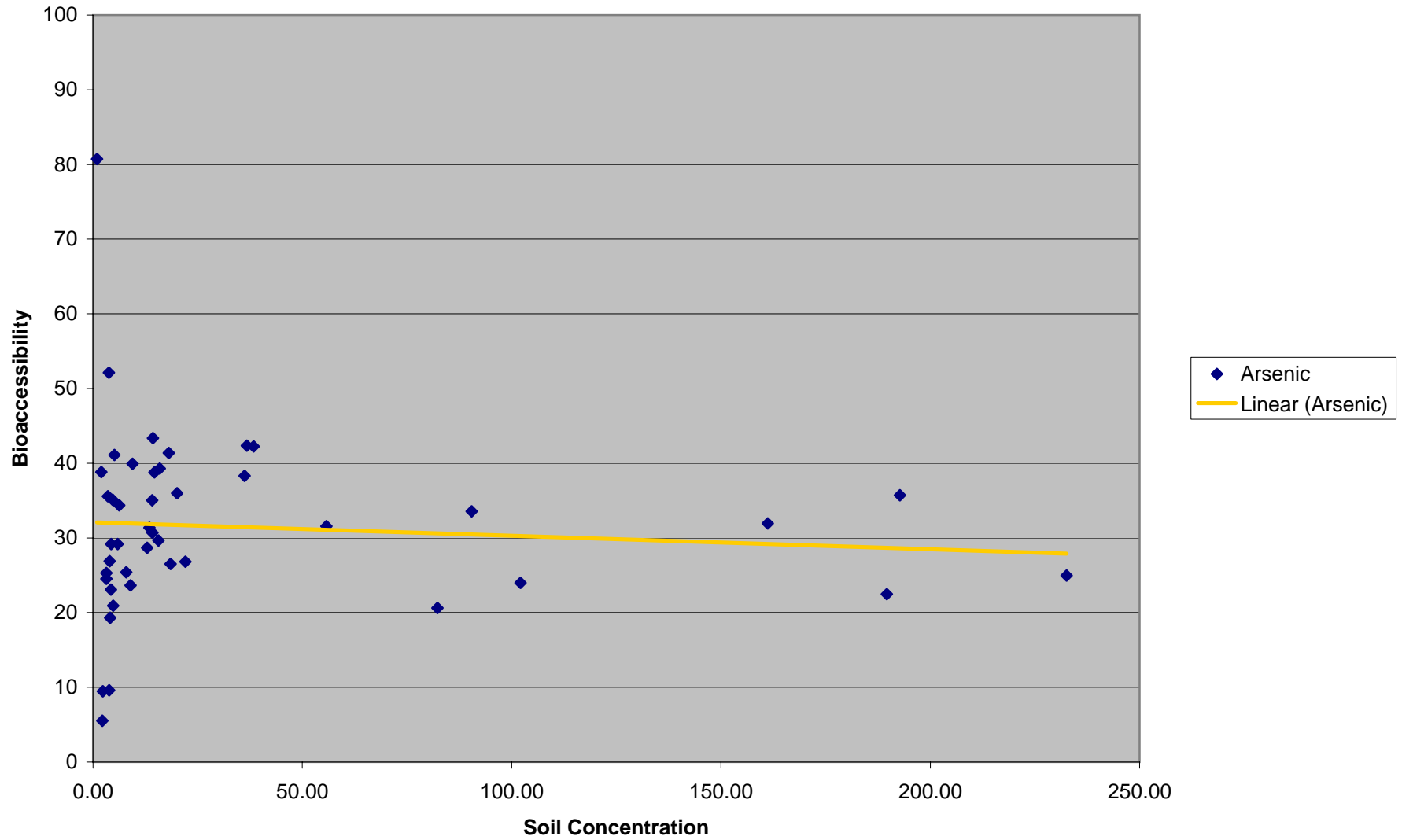
# Drexler Bioaccessibility Report

**TABLE 2. Preliminary Summary Of In Vitro Bioassay Results**

Sample	ID	As in <250u bulk soil ug/kg	mass soil (g)	calc As #1	ICP As (ug/l)	solution amt (l)	% Relative As Bioavailabili
510D	49367.7404	0.85287	42.10		148.302	0.1	35
514D	27256.261	1.02068	27.82		104.74	0.1	38
522D	12240.2478	0.97787	11.97		76.6645	0.1	64
524D	6538.36886	0.89989	5.88		31.886	0.1	54
529D	11864.9981	0.96665	11.47		52.171	0.1	45
530D	11620.6599	0.61481	7.14		38.236	0.1	54
547D	10730.2693	0.91935	9.86		40.0135	0.1	41
564D-DUP	42984.3416	0.90815	39.04		113.9115	0.1	29
564D	43206.7136	0.92664	40.04		113.2635	0.1	28
574D	30030.6013	1.03996	31.23		117.09	0.1	37
602D	4956.88138	0.64709	3.21		24.9385	0.1	78
605D	20118.9503	1.02847	20.69		65.0095	0.1	31
610D	3670.96305	0.98505	3.62		22.9145	0.1	63
612D	13877.4597	0.84624	11.74		40.0665	0.1	34
614D	7208.2486	1.0116	7.29		37.1875	0.1	51
614D-DUP	7971.76704	1.00288	7.99		37.538	0.1	47
615D	5462.36003	0.84969	4.64		22.238085	0.1	48
616D	13450.2959	1.00238	13.48		64.82715	0.1	48
617D	5645.33377	1.01601	5.74		16.770725	0.1	29
618D	8241.46133	1.00169	8.26		35.157283	0.1	43
619D	8269.4687	1.00176	8.28		34.128417	0.1	41
620D	11994.783	1.01395	12.16		39.483088	0.1	32
621D	5937.05034	1.01635	6.03		24.3929695	0.1	40
518D	31866.7837	0.21741	6.93		13.440325	0.1	19
521D	26114.9226	0.53396	13.94		55.947288	0.1	40
541D	13568.3874	0.58891	7.99		26.659943	0.1	33
572D	9144.42259	0.1783	1.63		2.421612	0.1	15
501S	81850.735	1.00494	82.26		169.625691	0.1	21
502S	186898.658	1.01455	189.62		426.19024	0.1	22
506S	20017.5901	1.00345	20.09		72.26978	0.1	36
511S	4731.08018	1.01614	4.81		10.062153	0.1	21
512S	22064.8549	0.99999	22.06		59.1353675	0.1	27
513S	3819.1074	1.0133	3.87		3.721976	0.1	10
514S	89352.94	1.01221	90.44		303.5657625	0.1	34
516S	18086.8243	1.02308	18.50		49.0615125	0.1	27
517S	55638.1091	1.0022	55.76		176.126925	0.1	32
519S	36157.4958	1.01658	36.76		155.6933625	0.1	42
519S-DUP	37937.3668	1.01213	38.40		162.2049	0.1	42
520S	6270.23543	1.00189	6.28		21.597225	0.1	34
521S	15907.077	1.00179	15.94		62.5779375	0.1	39
522S	232280.866	1.00111	232.54		580.305375	0.1	25
523S	160672.711	1.00324	161.19		515.0028	0.1	32
525S	12848.7441	1.00461	12.91		37.016	0.1	29
526S	3523.87104	1.00391	3.54		12.591	0.1	36
529S	7880	1.01056	7.96		20.2405	0.1	25
530S	9286	1.01452	9.42		37.603	0.1	40
531S	3171	1.01241	3.21		7.8775	0.1	25
533S	14399	1.01891	14.67		56.893	0.1	39
533S-DUP	14248	1.00458	14.31		62.077	0.1	43
534S	189116.354	1.01934	192.77		688.2035	0.1	36
541S	941.299957	1.01652	0.96		7.725	0.1	81
551S	1962.70497	1.00267	1.97		7.641	0.1	39
552S	4269.29584	1.00256	4.28		9.8835	0.1	23
553S	5878.69846	1.00495	5.91		17.244	0.1	29
554S	17925.4288	1.00924	18.09		74.879	0.1	41
560S	3184.19718	1.00894	3.21		8.1315	0.1	25
561S	13974.1007	1.01259	14.15		49.56	0.1	35
563S	8830.49403	1.01735	8.98		21.254	0.1	24
565S	4093.96961	1.00152	4.10		7.909	0.1	19
565S DUP	4299.3586	1.00286	4.31		12.576	0.1	29
566S	3804.73417	1.00283	3.82		19.8895	0.1	52
570S	15551.3604	1.0036	15.61		46.2975	0.1	30
581S	101723.476	1.00376	102.11		244.9935	0.1	24
582S	2312.52873	1.00204	2.32		2.195	0.1	9
584S	36145.5656	1.00127	36.19		138.6985	0.1	38
593S	2196.25492	1.00127	2.20		1.2145	0.1	6
596S	4679.18763	1.00169	4.69		16.452	0.1	35
599S	3953.16199	1.00065	3.96		10.636	0.1	27
602S	13435.0939	1.00124	13.45		42.1915	0.1	31
607S	5090.31994	1.00147	5.10		20.9485	0.1	41
602S DUP	14176.8274	1.00183	14.20		43.6115	0.1	31
NIST2710-1	626000	1.02081	639.03		2970.45639	0.1	46
NIST 2711-1	105000	1.01384	106.45		709.7505	0.1	67

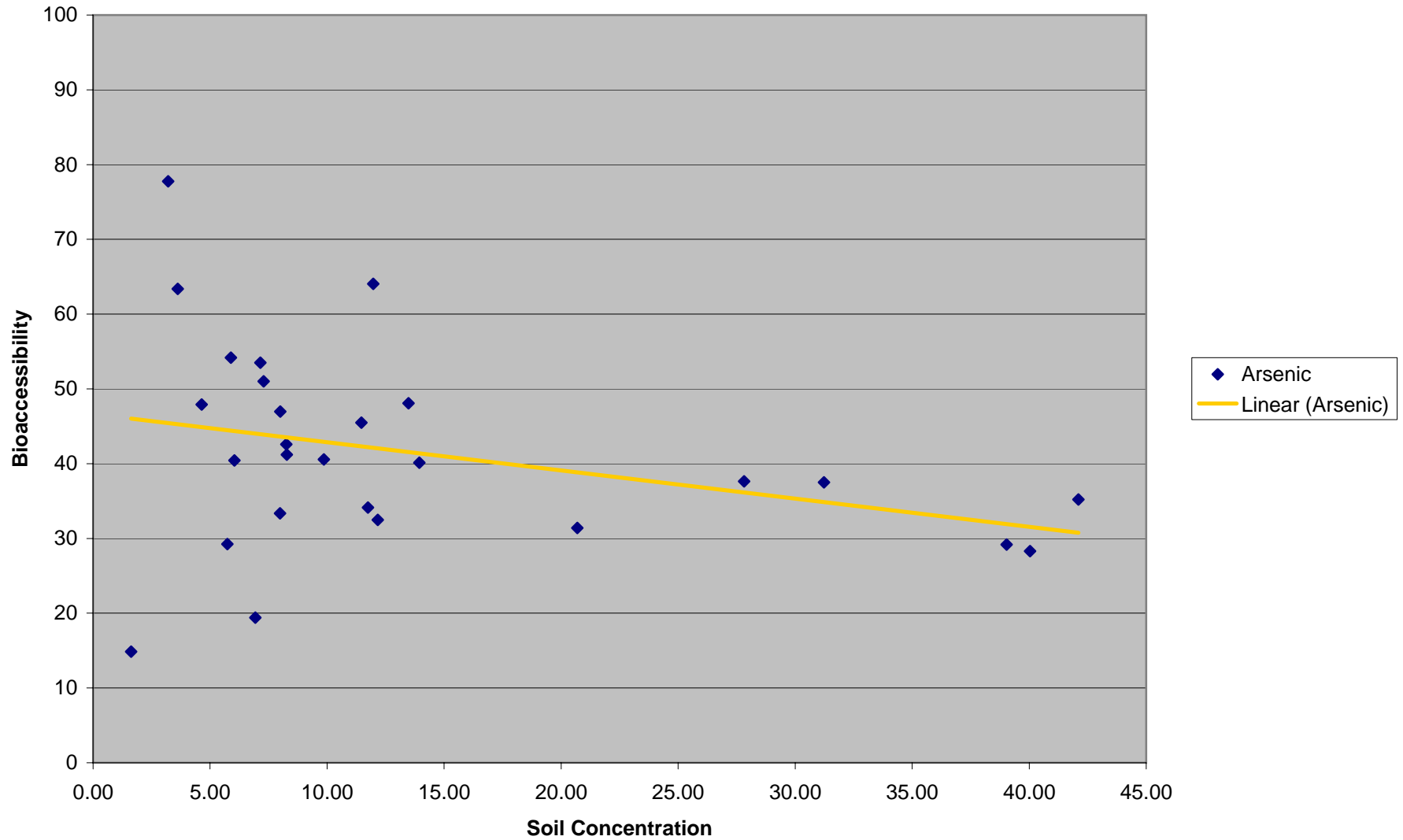
# Drexler Bioaccessibility Report

## Drexler Soil



# Drexler Bioaccessibility Report

## Drexler Dust



# Drexler Bioaccessibility Report

Data File

Variable: 21

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	45	Shapiro-Wilk Test Statistic	0.91919
Number of Unique Samples	26	Shapiro-Wilk 5% Critical Value	0.945
Minimum	0	Data not normal at 5% significance level	
Maximum	81	95% UCL (Assuming Normal Distribution)	
Mean	30.8	Student's-t UCL	34.0212
Median	31		
Standard Deviation	12.86044		
Variance	165.3909		
Coefficient of Variation	0.417547		
Skewness	0.851224		

Gamma Statistics Not Available

Lognormal Statistics Not Available

### 95% Non-parametric UCLs

CLT UCL	33.95338
Adj-CLT UCL (Adjusted for skewness)	34.21332
Mod-t UCL (Adjusted for skewness)	34.06175
Jackknife UCL	34.0212
Standard Bootstrap UCL	33.92868
Bootstrap-t UCL	34.16625
Hall's Bootstrap UCL	35.02366
Percentile Bootstrap UCL	33.88889
BCA Bootstrap UCL	33.95556
95% Chebyshev (Mean, Sd) UCL	39.15654
97.5% Chebyshev (Mean, Sd) UCL	42.77242
99% Chebyshev (Mean, Sd) UCL	49.87511

### RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

# Drexler Bioaccessibility Report

Data File

Variable: 35

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	28	Shapiro-Wilk Test Statistic	0.978814
Number of Unique Samples	23	Shapiro-Wilk 5% Critical Value	0.924
Minimum	0	Data are normal at 5% significance level	
Maximum	78	95% UCL (Assuming Normal Distribution)	
Mean	39.89286	Student's-t UCL	44.92351
Median	40		
Standard Deviation	15.62841		
Variance	244.2474		
Coefficient of Variation	0.39176		
Skewness	-0.04089		

Gamma Statistics Not Available

Lognormal Statistics Not Available

	95% Non-parametric UCLs	
	CLT UCL	44.75092
	Adj-CLT UCL (Adjusted for skewness)	44.72653
	Mod-t UCL (Adjusted for skewness)	44.9197
	Jackknife UCL	44.92351
	Standard Bootstrap UCL	44.52383
	Bootstrap-t UCL	44.9554
	Hall's Bootstrap UCL	44.88678
	Percentile Bootstrap UCL	44.5
	BCA Bootstrap UCL	44.46429
	95% Chebyshev (Mean, Sd) UCL	52.76683
	97.5% Chebyshev (Mean, Sd) UCL	58.33741
	99% Chebyshev (Mean, Sd) UCL	69.27974

**RECOMMENDATION**

Data are normal (0.05)

Use Student's-t UCL

# Drexler Bioaccessibility Report

**TABLE 2 . Preliminary Summary Of In Vitro Bioassay Results**

Sample	Ni in <250u bulk soil ug/kg	mass soil (g)	calc As #1	ICP As (ug/l)	solution amt (l)	% Relative As Bioavailable
510D	2721974.7	0.85287	2321.49	6546.976	0.1	28
514D	502420.579	1.02068	512.81	1512.838	0.1	30
518D	711321.483	0.21741	154.65	388.930205	0.1	25
521D	1362925.77	0.53396	727.75	1342.421508	0.1	18
522D	969947.659	0.97787	948.48	3791.152	0.1	40
524D	178120.513	0.89989	160.29	619.227	0.1	39
529D	313375.299	0.96665	302.92	744.105	0.1	25
530D	377274.44	0.61481	231.95	592.7585	0.1	26
541D	628189.466	0.58891	369.95	636.14845	0.1	17
547D	217566.92	0.91935	200.02	834.058	0.1	42
564D	97829.1247	0.92664	90.65	337.287	0.1	37
564D-DUP	101188.306	0.90815	91.89	344.1235	0.1	37
572D	93330.6434	0.1783	16.64	38.130569	0.1	23
574D	408509.506	1.03996	424.83	1019.845	0.1	24
602D	472472.189	0.64709	305.73	863.3465	0.1	28
605D	125531.849	1.02847	129.11	506.1095	0.1	39
610D	172161.176	0.98505	169.59	458.104	0.1	27
612D	167241.362	0.84624	141.53	404.078	0.1	29
614D	592297.365	1.0116	599.17	1142.838	0.1	19
614D-DUP	578719.3	1.00288	580.39	1204.864	0.1	21
615D	124882.626	0.84969	106.11	383.3679355	0.1	36
616D	562737.006	1.00238	564.08	1474.42611	0.1	26
617D	169386.687	1.01601	172.10	509.8434725	0.1	30
618D	341306.71	1.00169	341.88	976.995642	0.1	29
619D	290892.308	1.00176	291.40	810.388293	0.1	28
620D	424550.622	1.01395	430.47	1258.856432	0.1	29
621D	361826.028	1.01635	367.74	740.708085	0.1	20
501S	847891.026	1.00494	852.08	4974.973259	0.1	58
502S	750901.253	1.01455	761.83	3979.70699	0.1	52
506S	1203164	1.00345	1207.31	5072.709549	0.1	42
511S	119648.64	1.01614	121.58	425.136111	0.1	35
512S	915383.109	0.9999	915.29	3710.962548	0.1	41
513S	55669.9975	1.0133	56.41	121.955104	0.1	22
514S	1975989.16	1.01221	2000.12	7444.911825	0.1	37
516S	736309.687	1.02308	753.30	4038.566025	0.1	54
517S	402121.396	1.0022	403.01	1334.607788	0.1	33
519S	358447.87	1.01658	364.39	1284.146175	0.1	35
519S-DUP	364442.721	1.01213	368.86	1352.952413	0.1	37
520S	124476.576	1.00189	124.71	752.500125	0.1	60
521S	759611.655	1.00179	760.97	4567.806263	0.1	60
522S	2436860.34	1.00111	2439.57	11169.73845	0.1	46
523S	2346992.98	1.00324	2354.60	7132.996162	0.1	30
525S	241588.518	1.00461	242.70	759.99656	0.1	31
526S	78341.2721	1.00391	78.65	359.942	0.1	46
529S	98748.8789	1.01056	99.79	531.923	0.1	53
530S	416141.095	1.01452	422.18	2631.835	0.1	62
531S	79359.2008	1.01241	80.34	297.976	0.1	37
533S	652973.83	1.01891	665.32	2313.119	0.1	35
533S-DUP	659952.803	1.00458	662.98	2317.812	0.1	35
534S	1463057.2	1.01934	1491.35	5035.68352	0.1	34
541S	19731.5518	1.01652	20.06	161.245504	0.1	80
551S	32752.5943	1.00267	32.84	92.317568	0.1	28
552S	222005.126	1.00256	222.57	794.489472	0.1	36
553S	177229.7	1.00495	178.11	599.385024	0.1	34
554S	510622.943	1.00924	515.34	2532.759936	0.1	49
560S	52485.6356	1.00894	52.95	161.066304	0.1	30
561S	403099.047	1.01259	408.17	1134.773696	0.1	28
563S	303579.243	1.01735	308.85	2011.693824	0.1	65
565S	147346.146	1.00152	147.57	609.579712	0.1	41
565S DUP	152309.279	1.00286	152.74	588.422912	0.1	39
566S	206233.124	1.00283	206.82	345.817024	0.1	17
570S	420734.947	1.0036	422.25	1658.409536	0.1	39
581S	593020.124	1.00376	595.25	3155.231296	0.1	53
582S	48125.612	1.00204	48.22	134.819776	0.1	28
584S	1160260.97	1.00127	1161.73	4201.793344	0.1	36
593S	23951.3818	1.00127	23.98	32.144896	0.1	13
596S	136036.749	1.00169	136.27	598.01728	0.1	44
599S	83232.0624	1.00065	83.29	226.648128	0.1	27
602S	776950.883	1.00124	777.91	2845.40704	0.1	37
602S DUP	157097.555	1.00183	157.39	542.203648	0.1	34
607S	785395.721	1.00147	786.55	2751.250432	0.1	35



# Drexler Bioaccessibility Report

Data File

Variable: 58

	<b>Raw Statistics</b>		<b>Normal Distribution Test</b>
Number of Valid Samples	44	Shapiro-Wilk Test Statistic	0.951903
Number of Unique Samples	26	Shapiro-Wilk 5% Critical Value	0.944
Minimum	13	Data are normal at 5% significance level	
Maximum	80		
Mean	40.18182	95% UCL (Assuming Normal Distribution)	
Median	37	Student's-t UCL	43.52894
Standard Deviation	13.20724		
Variance	174.4313	<b>Gamma Distribution Test</b>	
Coefficient of Variation	0.328687	A-D Test Statistic	0.630953
Skewness	0.724085	A-D 5% Critical Value	0.748894
<b>Gamma Statistics</b>		K-S Test Statistic	0.123517
k hat	9.36688	K-S 5% Critical Value	0.133292
k star (bias corrected)	8.74338	Data follow gamma distribution at 5% significance level	
Theta hat	4.289776	95% UCLs (Assuming Gamma Distribution)	
Theta star	4.595685	Approximate Gamma UCL	43.78893
nu hat	824.2854	Adjusted Gamma UCL	43.91638
nu star	769.4175		
Approx.Chi Square Value (.05)	706.0368	<b>Lognormal Distribution Test</b>	
Adjusted Level of Significance	0.044545	Shapiro-Wilk Test Statistic	0.957115
Adjusted Chi Square Value	703.9877	Shapiro-Wilk 5% Critical Value	0.944
<b>Log-transformed Statistics</b>		Data are lognormal at 5% significance level	
Minimum of log data	2.564949	95% UCLs (Assuming Lognormal Distribution)	
Maximum of log data	4.382027	95% H-UCL	44.32641
Mean of log data	3.639086	95% Chebyshev (MVUE) UCL	49.59062
Standard Deviation of log data	0.342659	97.5% Chebyshev (MVUE) UCL	53.61006
Variance of log data	0.117415	99% Chebyshev (MVUE) UCL	61.50549
		95% Non-parametric UCLs	
		CLT UCL	43.45683
		Adj-CLT UCL (Adjusted for skewness)	43.68907
		Mod-t UCL (Adjusted for skewness)	43.56517
		Jackknife UCL	43.52894
		Standard Bootstrap UCL	43.40297
		Bootstrap-t UCL	43.86052
<b>RECOMMENDATION</b>		Hall's Bootstrap UCL	43.91761
Data are normal (0.05)		Percentile Bootstrap UCL	43.5
		BCA Bootstrap UCL	43.63636
Use Student's-t UCL		95% Chebyshev (Mean, Sd) UCL	48.86068
		97.5% Chebyshev (Mean, Sd) UCL	52.61603
		99% Chebyshev (Mean, Sd) UCL	59.99268

# Drexler Bioaccessibility Report

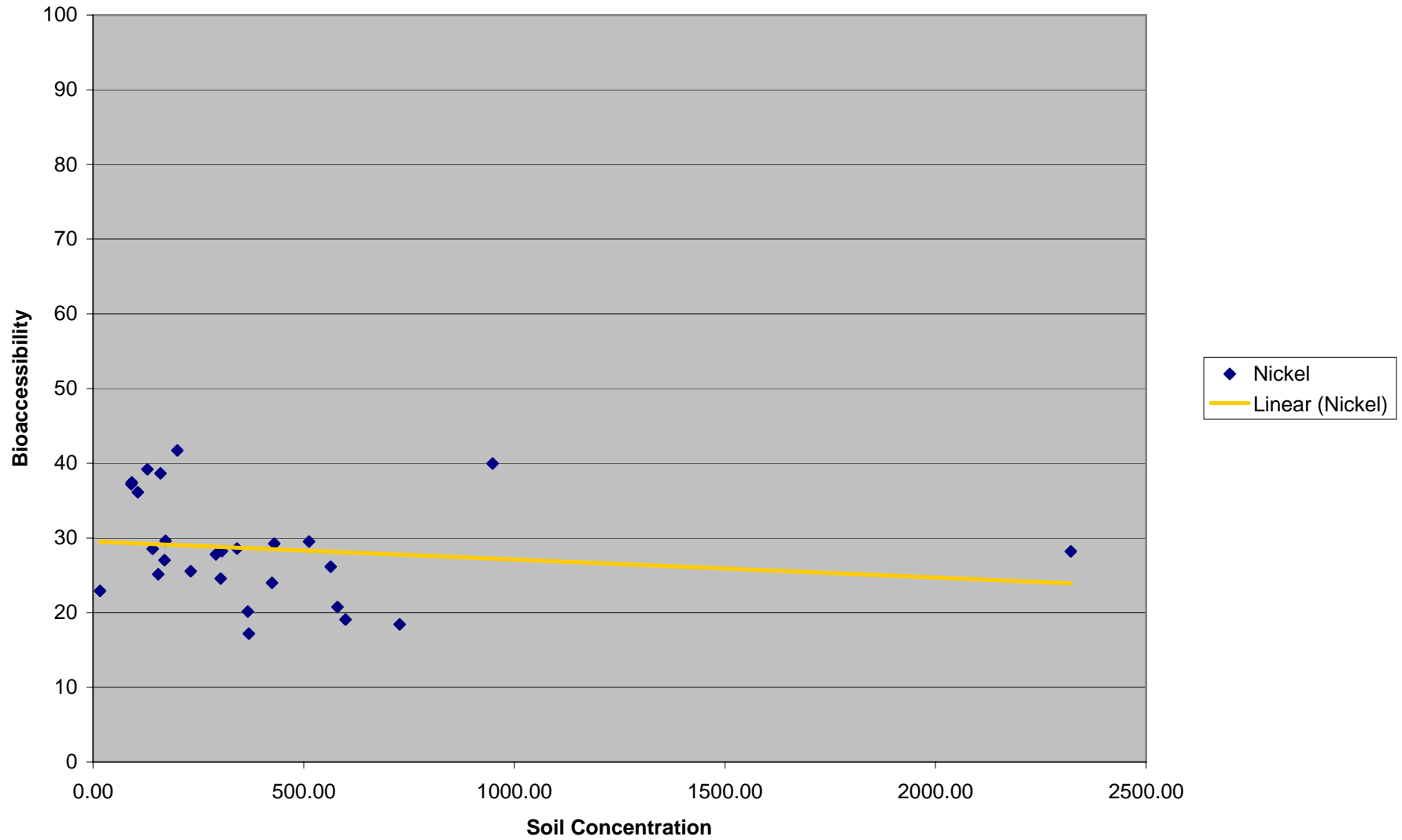
Data File

Variable: 28

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	27	Shapiro-Wilk Test Statistic	0.945299
Number of Unique Samples	18	Shapiro-Wilk 5% Critical Value	0.923
Minimum	17	Data are normal at 5% significance level	
Maximum	42		
Mean	28.59259	95% UCL (Assuming Normal Distribution)	
Median	28	Student's-t UCL	30.90696
Standard Deviation	7.050692	Gamma Distribution Test	
Variance	49.71225	A-D Test Statistic	0.431644
Coefficient of Variation	0.246592	A-D 5% Critical Value	0.743855
Skewness	0.313408	K-S Test Statistic	0.130391
Gamma Statistics		K-S 5% Critical Value	0.167913
k hat	16.9674	Data follow gamma distribution at 5% significance level	
k star (bias corrected)	15.10682	95% UCLs (Assuming Gamma Distribution)	
Theta hat	1.685149	Approximate Gamma UCL	31.08037
Theta star	1.892694	Adjusted Gamma UCL	31.24661
nu hat	916.2396	Lognormal Distribution Test	
nu star	815.7685	Shapiro-Wilk Test Statistic	0.956441
Approx. Chi Square Value (.05)	750.4718	Shapiro-Wilk 5% Critical Value	0.923
Adjusted Level of Significance	0.0401	Data are lognormal at 5% significance level	
Adjusted Chi Square Value	746.4789	95% UCLs (Assuming Lognormal Distribution)	
Log-transformed Statistics		95% H-UCL	31.25679
Minimum of log data	2.833213	95% Chebyshev (MVUE) UCL	34.68345
Maximum of log data	3.73767	97.5% Chebyshev (MVUE) UCL	37.31366
Mean of log data	3.32339	99% Chebyshev (MVUE) UCL	42.48019
Standard Deviation of log data	0.250526	95% Non-parametric UCLs	
Variance of log data	0.062763	CLT UCL	30.8245
		Adj-CLT UCL (Adjusted for skewness)	30.91195
		Mod-t UCL (Adjusted for skewness)	30.9206
		Jackknife UCL	30.90696
		Standard Bootstrap UCL	30.77031
		Bootstrap-t UCL	30.94728
RECOMMENDATION		Hall's Bootstrap UCL	30.94388
Data are normal (0.05)		Percentile Bootstrap UCL	30.7037
		BCA Bootstrap UCL	30.92593
Use Student's-t UCL		95% Chebyshev (Mean, Sd) UCL	34.50721
		97.5% Chebyshev (Mean, Sd) UCL	37.06647
		99% Chebyshev (Mean, Sd) UCL	42.09364

# Drexler Bioaccessibility Report

## Drexler Dust





# Drexler Bioaccessibility Report

**TABLE 2 . Preliminary Summary Of In Vitro Bioassay Results**

Sample	Ni in <250u bulk soil ug/kg	mass soil (g)	calc As #1	ICP As (ug/l)	solution amt (l)	% Relative As Bioavailable
510D	88721.87	0.85287	75.67	196.394	0.1	26
514D	54063.11	1.02068	55.18	130.2045	0.1	24
518D	66649.82	0.21741	14.49	26.9286125	0.1	19
521D	68686.04	0.53396	36.68	120.907808	0.1	33
522D	147350.53	0.97787	144.09	304.548	0.1	21
524D	8277.34	0.89989	7.45	19.502	0.1	26
529D	37340.79	0.96665	36.10	126.971	0.1	35
530D	24284.71	0.61481	14.93	38.1185	0.1	26
541D	37170.09	0.58891	21.89	41.675335	0.1	19
547D	11832.99	0.91935	10.88	28.1165	0.1	26
564D	8400.84	0.92664	7.78	28.7175	0.1	37
564D-DUP	8646.02	0.90815	7.85	29.2055	0.1	37
572D	11311	0.1783	2.02	6.427597	0.1	32
574D	18636.21	1.03996	19.38	40.88	0.1	21
602D	16196.60	0.64709	10.48	25.969	0.1	25
605D	10467.81	1.02847	10.77	34.224	0.1	32
610D	9072.29	0.98505	8.94	29.8555	0.1	33
612D	9655.76	0.84624	8.17	18.7225	0.1	23
614D	33647.2728	1.0116	34.04	69.475	0.1	20
614D-DUP	34012.7434	1.00288	34.11	67.5445	0.1	20
615D	10626.1711	0.84969	9.03	36.837452	0.1	41
616D	23635.1223	1.00238	23.69	77.761528	0.1	33
617D	12685.4033	1.01601	12.89	41.30499	0.1	32
618D	21041.2685	1.00169	21.08	61.616572	0.1	29
619D	18318.1467	1.00176	18.35	56.1216645	0.1	31
620D	24210.8231	1.01395	24.55	86.299872	0.1	35
621D	18851.3245	1.01635	19.16	50.639785	0.1	26
501S	52453.8456	1.00494	52.71	175.508331	0.1	33
502S	43708.4066	1.01455	44.34	115.6529	0.1	26
506S	38952.3033	1.00345	39.09	81.897548	0.1	21
511S	7373.40082	1.01614	7.49	11.696949	0.1	16
512S	26610.5861	0.9999	26.61	61.396657	0.1	23
513S	6899.46896	1.0133	6.99	8.526464	0.1	12
514S	107514.994	1.01221	108.83	304.7010125	0.1	28
516S	22557.3653	1.02308	23.08	72.7443125	0.1	32
517S	21321.7324	1.0022	21.37	51.9910125	0.1	24
519S	23891.2255	1.01658	24.29	81.872675	0.1	34
519S-DUP	23529.733	1.01213	23.82	83.3947625	0.1	35
520S	6769.12998	1.00189	6.78	17.3460625	0.1	26
521S	23495.7118	1.00179	23.54	84.817875	0.1	36
522S	125320.886	1.00111	125.46	362.014475	0.1	29
523S	113541.723	1.00324	113.91	217.7759875	0.1	19
525S	11075.4862	1.00461	11.13	28.692567	0.1	26
526S	5952.84	1.00391	5.98	22	0.1	37
529S	8073.31	1.01056	8.16	24	0.1	30
530S	12389.09	1.01452	12.57	49	0.1	39
531S	5711.56	1.01241	5.78	13	0.1	22
533S	23507.09	1.01891	23.95	46	0.1	19
533S-DUP	23387.70	1.00458	23.49	47.24797	0.1	20
534S	74370.40	1.01934	75.81	179.22297	0.1	24
541S	2284.13	1.01652	2.32	12.642925	0.1	54
551S	4513.07	1.00267	4.53	7.939342	0.1	18
552S	12974.67	1.00256	13.01	31.558216	0.1	24
553S	10240.38	1.00495	10.29	34.276733	0.1	33
554S	15012.86	1.00924	15.15	32.092515	0.1	21
560S	6600.59	1.00894	6.66	16.48997	0.1	25
561S	18883.67	1.01259	19.12	60.270679	0.1	32
563S	13034.14	1.01735	13.26	36.184812	0.1	27
565S	10521.57	1.00152	10.54	26.505195	0.1	25
565S DUP	10748.43	1.00286	10.78	25.724722	0.1	24
566S	8738.13	1.00283	8.76	13.191976	0.1	15
570S	15815.42	1.0036	15.87	32.493585	0.1	20
581S	33101.89	1.00376	33.23	114.77517	0.1	35
582S	7435.02	1.00204	7.45	8.811093	0.1	12
584S	34678.66	1.00127	34.72	78.408263	0.1	23
593S	6400.13	1.00127	6.41	6.619499	0.1	10
596S	8456.37	1.00169	8.47	13.648827	0.1	16
599S	6522.37	1.00065	6.53	16.078758	0.1	25
602S	23990.00	1.00124	24.02	55.727985	0.1	23
602S DUP	6647.17	1.00183	6.66	20.11343	0.1	30
607S	24404.31	1.00147	24.44	51.690547	0.1	21

# Drexler Bioaccessibility Report

**TABLE 2 . Preliminary Summary Of In Vitro Bioassay Results**

Sample	Ni in <250u bulk soil ug/kg	mass soil (g)	calc As #1	ICP As (ug/l)	solution amt (l)	% Relative As Bioavailablifit
510D	1740878.94	0.85287	1484.74	5174.4925	0.1	35
514D	348067.076	1.02068	355.27	1606.0685	0.1	45
518D	483129.649	0.21741	105.04	453.87421	0.1	43
521D	1328097.91	0.53396	709.15	2340.339696	0.1	33
522D	639415.496	0.97787	625.27	2302.8205	0.1	37
524D	234187.187	0.89989	210.74	1142.678	0.1	54
529D	369435.398	0.96665	357.11	1442.829	0.1	40
530D	496163.665	0.61481	305.05	1293.432	0.1	42
541D	589907.285	0.58891	347.40	1020.170179	0.1	29
547D	326965.336	0.91935	300.60	1929.027	0.1	64
564D	202094.005	0.92664	187.27	1216.3685	0.1	65
564D-DUP	209653.899	0.90815	190.40	1234.693	0.1	65
572D	167407.142	0.1783	29.85	154.332593	0.1	52
574D	553792.968	1.03996	575.92	2855.901	0.1	50
602D	623564.127	0.64709	403.50	1503.0385	0.1	37
605D	151677.867	1.02847	156.00	726.266	0.1	47
610D	257826.15	0.98505	253.97	935.2685	0.1	37
612D	179376.643	0.84624	151.80	604.0175	0.1	40
614D	487644.066	1.0116	493.30	2286.7925	0.1	46
614D-DUP	500349.077	1.00288	501.79	2372.5205	0.1	47
615D	117787.165	0.84969	100.08	540.801713	0.1	54
616D	529751.098	1.00238	531.01	2767.529424	0.1	52
617D	157271.013	1.01601	159.79	799.7834875	0.1	50
618D	308370.259	1.00169	308.89	1510.071878	0.1	49
619D	292064.099	1.00176	292.58	1286.399724	0.1	44
620D	422876.56	1.01395	428.78	2366.24736	0.1	55
621D	348331.656	1.01635	354.03	1272.508415	0.1	36
501S	834597.021	1.00494	838.72	5990.860071	0.1	71
502S	1002192.07	1.01455	1016.77	8343.52106	0.1	82
506S	2032223.16	1.00345	2039.23	18772.57073	0.1	92
511S	145272.107	1.01614	147.62	1161.125121	0.1	79
512S	977074.729	0.9999	976.98	7166.035607	0.1	73
513S	52399.06	1.0133	53.10	302.200832	0.1	57
514S	1263976.44	1.01221	1279.41	6120.175913	0.1	48
516S	477624.92	1.02308	488.65	3586.585763	0.1	73
517S	311086.771	1.0022	311.77	1831.497525	0.1	59
519S	288328.021	1.01658	293.11	1846.996125	0.1	63
519S-DUP	295391.693	1.01213	298.97	1926.252413	0.1	64
520S	124289.014	1.00189	124.52	966.892875	0.1	78
521S	981351.423	1.00179	983.11	9698.411288	0.1	99
522S	1984983.84	1.00111	1987.19	10638.31958	0.1	54
523S	1617762.38	1.00324	1623.00	7286.632275	0.1	45
525S	211974.931	1.00461	212.95	1540.35622	0.1	72
526S	53038.47	1.00391	53.25	335.542524	0.1	63
529S	67348.2668	1.01056	68.06	439.05519	0.1	65
530S	469569.762	1.01452	476.39	4195.712736	0.1	88
531S	73883.3101	1.01241	74.80	573.226308	0.1	77
533S	1028202.41	1.01891	1047.65	8640.799244	0.1	82
533S-DUP	1018479.52	1.00458	1023.14	8690.58773	0.1	85
534S	1296015.98	1.01934	1321.08	7481.806074	0.1	57
541S	15659.2711	1.01652	15.92	238.308714	0.1	150
551S	23287.4139	1.00267	23.35	127.351476	0.1	55
552S	126943.021	1.00256	127.27	564.435408	0.1	44
553S	130410.078	1.00495	131.06	745.4835	0.1	57
554S	421379.965	1.00924	425.27	2885.915346	0.1	68
560S	42920.966	1.00894	43.30	209.725092	0.1	48
561S	286491.042	1.01259	290.10	1696.24692	0.1	58
563S	422000.688	1.01735	429.32	3704.874534	0.1	86
565S	179198.286	1.00152	179.47	1330.332192	0.1	74
565S DUP	185961.821	1.00286	186.49	1290.326118	0.1	69
566S	168469.783	1.00283	168.95	1073.44647	0.1	64
570S	393995.066	1.0036	395.41	3019.861584	0.1	76
581S	455113.842	1.00376	456.83	2216.176098	0.1	49
582S	31644.1768	1.00204	31.71	147.769026	0.1	47
584S	1515938.07	1.00127	1517.86	11789.08436	0.1	78
593S	15689.885	1.00127	15.71	53.148198	0.1	34
596S	158050.089	1.00169	158.32	1034.766174	0.1	65
599S	86560.0683	1.00065	86.62	472.933026	0.1	55
602S	1117084.15	1.00124	1118.47	9435.506094	0.1	84
602S DUP	250549.609	1.00183	251.01	2038.431786	0.1	81
607S	1146173.82	1.00147	1147.86	9297.454542	0.1	81

# Drexler Bioaccessibility Report

**TABLE 2 . Preliminary Summary Of In Vitro Bioassay Results**

Sample	Ni in <250u bulk soil ug/kg	mass soil (g)	calc As #1	ICP As (ug/l)	solution amt (l)	% Relative As Bioavailablifit
510D	14812.5481	0.85287	12.63	17.734	0.1	14
514D	1303.38872	1.02068	1.33	5.1905	0.1	39
518D	3310.2204	0.21741	0.72	DL	0.1	
521D	14526.6647	0.53396	7.76	DL	0.1	
522D	1571.18514	0.97787	1.54	9.25	0.1	60
524D	1647.45134	0.89989	1.48	7.3585	0.1	50
529D	1145.40478	0.96665	1.11	7.575	0.1	68
530D	3986.82212	0.61481	2.45	9.438	0.1	39
541D	3993.87848	0.58891	2.35	0.275	0.1	1
547D	1228.85849	0.91935	1.13	DL	0.1	
564D	1486.05288	0.92664	1.38	7.604	0.1	55
564D-DUP	774.964945	0.90815	0.70	11.1725	0.1	159
572D	2484.21841	0.1783	0.44	DL	0.1	
574D	1976.96694	1.03996	2.06	19.215	0.1	93
602D	4278.71641	0.64709	2.77	7.1775	0.1	26
605D	1411.99693	1.02847	1.45	12.679	0.1	87
610D	1527.63173	0.98505	1.50	8.313	0.1	55
612D	4019.12687	0.84624	3.40	22.7675	0.1	67
614D	3098.38404	1.0116	3.13	6.422	0.1	20
614D-DUP	2685.50711	1.00288	2.69	2.8745	0.1	11
615D	999.200151	0.84969	0.85	0.553	0.1	7
616D	5443.07756	1.00238	5.46	4.4955	0.1	8
617D	720.484314	1.01601	0.73	3.003	0.1	41
618D	3425.91855	1.00169	3.43	DL	0.1	
619D	3672.66151	1.00176	3.68	9.2965	0.1	25
620D	6107.10121	1.01395	6.19	4.7525	0.1	8
621D	4016.58215	1.01635	4.08	9.2085	0.1	23
501S	2872.41613	1.00494	2.89	1.0945	0.1	4
502S	3610.57274	1.01455	3.66	DL	0.1	
506S	8347.71551	1.00345	8.38	4.688	0.1	6
511S	1419.72379	1.01614	1.44	2.9485	0.1	20
512S	4035.06545	0.9999	4.03	6.5305	0.1	16
513S	277.428246	1.0133	0.28	DL	0.1	
514S	2975.0981	1.01221	3.01	2.8705	0.1	10
516S	1423.14451	1.02308	1.46	4.3805	0.1	30
517S	1142.41068	1.0022	1.14	5.403	0.1	47
519S	866.849002	1.01658	0.88	1.3185	0.1	15
519S-DUP	1138.78915	1.01213	1.15	DL	0.1	
520S	1070.07954	1.00189	1.07	0.8695	0.1	8
521S	5398.02982	1.00179	5.41	2.92	0.1	5
522S	6105.2032	1.00111	6.11	1.9175	0.1	3
523S	3375.69041	1.00324	3.39	3.964	0.1	12
525S	DL	1.00461	#VALUE!	DL	0.1	
526S	DL	1.00391	#VALUE!	DL	0.1	
529S	DL	1.01056	#VALUE!	DL	0.1	
530S	2337.7659	1.01452	2.37	DL	0.1	
531S	DL	1.01241	#VALUE!	DL	0.1	
533S	2259.26914	1.01891	2.30	DL	0.1	
533S-DUP	2098.81597	1.00458	2.11	DL	0.1	
534S	2194.07992	1.01934	2.24	DL	0.1	
541S	DL	1.01652	#VALUE!	DL	0.1	
551S	DL	1.00267	#VALUE!	DL	0.1	
552S	DL	1.00256	#VALUE!	DL	0.1	
553S	DL	1.00495	#VALUE!	DL	0.1	
554S	DL	1.00924	#VALUE!	DL	0.1	
560S	DL	1.00894	#VALUE!	DL	0.1	
561S	DL	1.01259	#VALUE!	DL	0.1	
563S	495.997727	1.01735	0.50	DL	0.1	
565S	DL	1.00152	#VALUE!	DL	0.1	
565S DUP	DL	1.00286	#VALUE!	0.359	0.1	
566S	DL	1.00283	#VALUE!	DL	0.1	
570S	345.174597	1.0036	0.35	DL	0.1	
581S	DL	1.00376	#VALUE!	DL	0.1	
582S	DL	1.00204	#VALUE!	DL	0.1	
584S	6204.32084	1.00127	6.21	DL	0.1	
593S	DL	1.00127	#VALUE!	DL	0.1	
596S	DL	1.00169	#VALUE!	DL	0.1	
599S	DL	1.00065	#VALUE!	DL	0.1	
602S	4741.24053	1.00124	4.75	DL	0.1	
602S DUP	483.029438	1.00183	0.48	DL	0.1	
607S	5141.63557	1.00147	5.15	DL	0.1	

# Drexler Bioaccessibility Report

	Co ppb	Ni ppb	Cu ppb	Se ppb	As ppb	Pb ppb
501S	52453.84558	847891	834597	2872.416	81850.73	92423.09
502S	43708.4066	750901.3	1002192	3610.573	186889.7	145023
506S	38952.30329	1203164	2032223	8347.716	20017.59	98557.51
511S	7373.40021	110848.6	1452723	1419.724	4731.08	18020.52
512S	26610.58608	915833.1	97704.7	4035.065	22064.85	120047.8
513S	6899.468962	55670	52399.06	277.4282	3819.107	55470.39
514S	107514.9941	1975989	1263976	2975.098	89352.34	104954.1
516S	2257.36532	786309.7	477624.9	1423.146	19996.82	14019.2
517S	21321.73244	402121.4	311086.8	1142.411	55638.11	52534.82
519S	23891.2255	358447.9	288328	866.849	36157.5	36473.11
519S-DUP	23529.73299	364442.7	295391.7	1138.789	37937.37	37182.91
520S	6768.129676	124476.6	124289	1070.08	6270.235	33456.09
521S	23495.71177	759611.7	981351.4	5398.03	15907.08	76396.43
522S	125320.8861	2436860	1998984	6105.203	232290.9	179427.6
523S	113541.7225	2349993	1611762	3375.69	160672.7	213687.6
525S	11075.48616	241588.5	211974.9	DL	12845.74	33313.06
526S	5952.84	78341.27	53038.47	DL	3523.871	18519.76
529S	8073.31	98748.88	87348.27	DL	7879.505	20882.38
530S	12389.09	416141.1	469569.8	2337.766	6285.81	46307.63
531S	5711.56	79359.2	73883.31	DL	3171.303	15882.91
533S	23507.09	652973.8	1028202	2259.269	14399.02	82188.76
533S-DUP	23387.70	659552.8	1018490	2098.816	14248.45	82510.98
534S	74370.40	1463957	1298016	2194.08	189116.4	198946.3
541S	2284.13	19731.55	15569.27	DL	941.3	4568.654
551S	4613.07	32752.59	3287.41	DL	1962.705	17006.52
552S	12974.67	22205.1	128493	DL	4269.296	26293.95
553S	10240.38	177229.7	130410.1	DL	5878.698	24068.01
554S	15012.86	510622.9	421380	DL	17925.43	46996.27
560S	6600.59	52465.64	42920.97	DL	3184.197	15244.87
561S	18883.67	403099	286491	DL	13974.1	147154.6
563S	13034.14	303579.2	422000.7	495.9977	8830.494	40101.68
565S	10521.57	147346.1	179198.3	DL	4093.97	41754.26
565S-DUP	10748.43	152309.3	185961.8	DL	4299.359	43205.11
566S	6738.13	206233.1	168498.8	DL	3804.734	24210.92
570S	15815.42	420734.9	393995.1	345.1746	15551.36	44315.44
581S	33101.89	593020.1	455113.8	DL	107723.5	56758.19
582S	7435.02	48125.61	51644.18	DL	2312.529	11514.86
584S	34678.66	1160261	1515938	6204.321	36145.57	310752.5
593S	6400.13	23951.38	15689.88	DL	2196.255	7054.778
596S	8456.37	136036.7	158050.1	DL	4679.188	27943.83
599S	6522.37	6322.06	66560.71	DL	3953.162	24450.31
602S	23990.00	776950.9	1117084	4741.241	13435.09	80494.97
607S	6647.17	157097.6	250549.6	483.0294	5090.32	17029.43
602S-DUP	24404.31	785395.7	1146174	5141.636	14176.83	83460.47
510D	89721.87	2721975	1746970	14812.55	49367.74	152479
514D	54063.11	502420.6	348067.1	1303.389	27526.26	62662.81
518D	66649.82	711321.5	483129.6	3310.22	31866.78	155241
521D	68986.04	1362929	1328096	14526.66	26114.32	305457.7
522D	147363.53	890947.7	639415.3	1571.185	12340.25	97094.6
524D	8277.34	178120.5	234187.2	1647.451	6538.369	85021.32
529D	37340.79	313375.3	369435.4	1145.405	11865	138764.3
530D	24284.71	377274.4	419617.3	3986.822	11620.66	44308.8
541D	37170.09	628189.5	589907.3	3993.878	13568.39	92124.99
547D	11832.99	217566.9	326965.3	1228.858	10730.27	115359.6
564D-DUP	8400.84	97829.12	202094	1486.053	42984.34	52697.1
564D	8646.02	101188.3	206653.9	774.9549	43266.71	52004.99
572D	11311	93330.64	167407.1	2484.218	9144.423	62066.12
574D	18636.21	408509.5	553793	1976.967	30030.6	89581.96
602D	16196.60	47272.22	263564.1	4278.716	4956.881	110403.9
605D	10467.81	125531.8	151673.9	1411.997	20195.85	22954.02
610D	9072.29	172161.2	257826.1	1527.632	3670.963	97124.96
612D	9655.76	167241.4	179376.6	4019.127	13877.46	36906.86
614D	33647.27276	592297.4	467844.1	3098.384	7236.249	69378.17
614D-DUP	34012.74338	578719.3	500340.1	2685.507	7971.767	70286.86
615D	10626.17107	124882.6	117787.2	999.2002	5462.36	61925.99
616D	23635.12227	562737	529751.1	5443.078	13450.3	82196.9
617D	12885.4033	169386.7	157271	720.4943	5645.334	62865.87
618D	21041.26851	341306.7	308370.3	3425.919	8241.461	91583.16
619D	18318.14667	290892.3	292064.1	3672.662	8269.469	102834.2
620D	24210.82305	424650.6	422876.5	6107.101	11994.78	100222.5
621D	18651.32454	361828	348336.1	4016.882	6937.05	85192.24
622D	4989.244933	7275.048	1638810	560.77	362411.7	3570720
NIST7210-1	4869.51	10462	61394.23	DL	52079.4	1096419
NIST 2711-1						

**MDL** 0.01097222 0.039322 0.03675 0.084769 0.096292 0.013903

**QA/QC**

	Co	Ni	Cu	Se	As	Pb
Standard 1	50	50	50	50	50	50
Standard 2	99.51783	89.86391	99.72697	98.96741	99.53666	100.1736
Standard 3	499.34218	499.8666	499.8747	500.4986	500.5271	499.98
200 ppb	199.60155	198.9456	197.8291	195.0912	191.9583	200.7382
10 ppb	9.93662	9.34896	9.30047	9.11781	9.06991	9.66409
Standard Check 150 ppb	146.069417	145.4877	143.2434	152.9798	152.6777	154.1462
Blank	0.0157263	0.008296	0.026496	-0.00495	0.04285	0.01465
Interference Check 1020/820/510/110/210/60	1051.956778	850.8625	508.1597	111.3677	223.0774	63.85954
Standard Check 150 ppb	153.8843007	150.5638	148.6053	150.7308	156.4696	153.8642
Blank	0.0081933	0.010882	0.021166	0.00193	0.02979	0.0088
Standard Check 150 ppb	151.5930411	155.4949	148.1542	151.7534	152.9745	156.2376
Blank	0.0125457	0.020841	0.028672	-0.04589	-0.0181	0.01284
Standard Check 150 ppb	154.0026246	149.0151	148.8175	155.7332	155.4008	153.8829
Blank	0.0113299	0.020493	0.043266	-0.05819	0.0108	0.01162
Standard Check 150 ppb	155.059612	157.0112	151.8616	152.2226	156.9704	154.4258
Blank	0.0137268	0.019363	0.04304	-0.00283	-0.00317	0.01124
Standard Check 150 ppb	157.1985897	150.2991	150.3376	144.7264	151.1855	153.9036
Blank	0.0153729	0.022739	0.047132	0.01035	-0.03022	0.01892
1000 ppb	1024.150968	1048.022	968.7315	1032.321	1026.232	974.0637
Standard Check 150 ppb	156.5900334	155.3299	151.5431	146.0836	149.8893	153.8191
Blank	0.0186802	0.048253	0.050549	0.00474	0.05014	0.02118
Interference Check 1020/820/510/110/210/60	1115.324364	904.3727	520.5168	112.2904	229.6938	63.56742
Standard 1	50	50	50	50	50	50
Standard 2	100.29341	99.52	99.37432	99.48459	99.7292	99.01381
Standard 3	499.99463	501.1583	500.9312	500.3035	501.1268	500.501
200 ppb	196.32205	187.7116	191.0056	200.8909	198.5065	195.3301
10 ppb	10.33444	9.8934	9.92929	10.24139	9.92743	10.02059
Standard Check 150 ppb	152.4088375	153.4355	153.5446	154.3537	155.8827	155.3214
Blank	0.011153	0.00248	0.01037	-0.04059	0.01914	0.00323
Interference Check 1020/820/510/110/210/60	1045.466963	844.2818	516.6978	110.1606	220.7467	60.50979
Standard Check 150 ppb	152.0440515	154.5473	151.8936	148.8895	149.8884	156.4745
Blank	0.009653	0.01235	0.00205	-0.50431	0.02531	0.00515
Standard Check 150 ppb	150.35631	152.3226	146.4881	149.2716	150.3041	147.4995
Blank	0.0086165	-0.00497	0.00439	-0.51933	0.0461	0.00436
Standard Check 150 ppb	151.2137895	150.5444	147.303	144.903	149.6495	146.9638
Blank	0.012464	0.01081	0.01335	-0.49781	-0.03871	0.00731
Standard Check 150 ppb	150.0287785	150.3599	147.5039	145.3183	146.9042	143.2088
Blank	0.0125875	0.01118	0.01782	-0.54608	0.00301	0.00626
Interference Check 1020/820/510/110/210/60	1053.846505	838.7456	505.5826	106.5275	217.0586	59.71249

BLANK-SPK-1 0/0/0/0/5000/5000 -0.25575 -3.11504 0.241335 0.524 4599.631 5165.893  
 BLANK-SPK-2 0/0/0/0/5000/5000 -0.39153 -1.10205 -1.38431 -3.731 4978.547 5402.604  
 BLANK-SPK-3 0/0/0/0/5000/5000 0.957125 3.939 -0.961 -23.423 4507.407 5147.526  
 BLANK-SPK-4 0/0/0/0/5000/5000 1.383675 11.0725 -1.22 -30.2565 4397.867 4971.553  
 BLANK-SPK-5 0/0/0/0/5000/5000 2.349825 12.0135 -0.596 -34.0375 -1.8875 73.628 Sample not spiked!

533S 475.891575 13219.19 20815.55 45.738 291.5025 1663.879  
 533S-SPK 482.904475 13275.61 21297.66 55.636 3700.044 6497.666  
 566S SPK 173.486625 4275.239 3404.932 -23.3765 3660.388 5491.754  
 566S 175.5315 4142.811 3384.221 -11.0605 76.4295 486.347

605D 212.65566 2550.205 3081.366 28.695 408.7205 466.3155  
 605D-SPK 206.307015 2452.498 2987.865 21.158 4546.142 3950.097  
 614D 681.707205 12000.18 9879.864 62.7745 146.042 1405.63 Sample not spiked!  
 614D-SPK 683.61417 11449.41 9820.501 61.808 148.273 1413.256

519S 485.679945 7286.815 5861.363 17.622 735.0385 741.4545  
 519S-SPK 449.049105 7341.545 5763.502 23.48 4768.014 5883.733



# Drexler Bioaccessibility Report

	Co ppb	Ni ppb	Cu ppb	Se ppb	As ppb	Pb ppb
501S	1175.0633	4574.9733	5990.86	1.0945	169.6257	501.969
502S	115.6529	3979.707	8343.52	DL	426.1902	794.294
506S	81.897548	5072.7095	18772.57	4.888	72.26978	727.549
511S	11.686949	425.3811	1161.125	2.8485	10.02215	132.268
512S	11.396657	3710.9629	7168.036	6.5305	59.13537	885.611
513S	8.528464	121.9551	302.2008	DL	3.721976	396.76
514S	304.7101	7444.9118	6120.176	2.8705	303.5658	604.512
516S	12.744313	4038.566	3586.596	4.3005	49.05151	951.1115
517S	15.991013	1334.6078	1831.488	5.403	176.1289	289.6365
519S-DUP	81.872675	1284.1462	1846.996	1.3185	155.6934	222.249
519S-DUP	63.394763	1382.9524	1929.252	DL	162.2049	296.419
520S	17.346083	752.50013	966.8929	0.8695	21.59723	226.4595
521S	64.817875	4567.8063	9698.411	2.32	62.57794	571.316
522S	392.01448	11169.738	10939.32	1.9175	593.3054	793.9515
523S	217.77599	7132.9962	7286.632	3.964	515.0028	1251.05
525S	28.692567	759.9956	1540.356	DL	37.016	203.8085
526S	22	389.942	335.5405	DL	12.591	174.722
529S	24	531.923	439.0552	DL	20.2405	172.612
530S	49	2631.835	4195.713	DL	37.603	388.179
531S	13	297.976	573.2303	DL	7.8775	148.9235
533S	46	2313.119	8640.799	DL	56.893	613.8795
533S-DUP	47.24797	2317.812	8690.588	DL	62.077	632.329
534S	179.22297	6035.0835	7481.806	DL	688.2039	1385.457
541S	12.642925	161.2455	238.3087	DL	7.725	91.163
551S	7.939342	92.317588	127.3515	DL	7.641	146.6855
552S	31.556216	794.4997	564.4354	DL	9.8835	189.295
553S	34.276733	639.38502	745.4835	DL	17.244	185.8335
554S	32.092515	2632.7599	2885.915	DL	74.879	284.506
561S	10.48997	181.0969	209.7251	DL	6.1315	126.0845
561S	60.270679	1134.7737	1698.247	DL	49.56	1092.378
563S	36.184812	2011.6938	3704.875	DL	21.254	312.426
565S	26.505195	609.57971	1350.332	DL	7.939	321.4395
565S-DUP	25.724722	608.6291	1290.326	0.359	12.676	339.5485
566S	13.191976	345.81702	1073.446	DL	19.8895	183.9185
570S	32.493595	1688.4099	3019.862	DL	46.2975	293.601
581S	114.71517	9155.2313	2216.178	DL	244.9935	393.1145
582S	8.811093	134.81978	147.769	DL	2.195	71.282
584S	76.402626	4201.7933	11789.08	DL	138.6985	2559.512
593S	6.619499	92.144986	63.1482	DL	1.2145	46.595
596S	13.648827	598.01728	1034.766	DL	16.452	188.083
599S	16.078755	226.48819	472.933	DL	10.636	143.7025
602S	65.579855	2945.407	9435.508	DL	42.1915	636.5195
607S	20.11343	542.20365	2038.432	DL	20.9485	117.1565
602S-DUP	51.690542	2751.2504	9297.455	DL	43.6115	593.497
510D	199.394	6545.976	5174.493	17.734	148.302	1923.887
514D	130.2045	1512.838	1606.069	5.1905	104.74	541.411
518D	26.928618	388.9021	453.8742	DL	13.44033	239.679
521D	120.90781	1342.4215	2340.34	DL	55.94729	516.135
522D	304.548	3791.152	2302.621	9.25	76.6645	808.215
524D	19.502	619.227	1142.678	7.3585	31.886	537.2105
526D	126.971	744.105	1442.829	7.275	52.171	1137.969
530D	38.1185	592.7595	1293.432	9.439	38.236	2186.645
541D	41.673335	638.14845	1020.17	0.275	26.65994	499.546
547D	28.1165	834.058	1929.027	DL	40.0135	946.381
564D	28.7175	337.287	1216.369	7.604	113.2035	485.357
564D-DUP	29.2055	344.1235	1234.693	11.1725	113.9115	487.464
572D	4.427597	38.130598	154.3326	DL	2.421612	92.813
574D	40.69	1019.845	2655.901	19.215	117.09	784.7975
602D	25.969	863.3465	1503.039	7.1775	24.9385	694.66
605D	34.224	506.1095	726.266	12.679	65.0095	247.947
610D	29.8555	458.104	925.2695	6.313	22.9145	629.5485
612D	18.7225	404.078	604.0175	22.7675	40.0665	252.1705
614D	69.475	1142.838	2286.793	6.422	37.1875	529.3795
614D-DUP	67.5445	1204.864	2372.521	2.8745	37.638	537.616
615D	36.837452	383.36794	540.8017	0.553	22.23809	391.698
616D	77.761528	1474.4281	2767.529	4.4955	64.82715	663.211
617D	41.30499	609.84347	799.7835	3.003	16.77073	630.0725
618D	61.616572	976.99564	1510.072	DL	35.15728	714.576
619D	56.121665	810.38829	1286.4	9.2965	34.12842	792.0535
620D	65.239972	1258.9564	2366.247	4.7529	39.48329	811.0485
623D	50.639785	740.70909	1272.508	9.2085	24.39297	511.061
513S-SPK	47.79712	2377.152	8742.107	DL	1978.598	3044.5
NIST 2711-1	49.486187	611.415	618.5867	DL	709.7505	1093.04
MDL	0.0042204	0.0100382	0.048457	0.183796	0.07187	0.003309
NIST2710-1	22.15577	14.55498	18959.9	6.139	2970.456	37564.73

**QA/QC**

Standard 1	50	50	50	50	50	50
Standard 2	100.31336	100.31922	100.0751	99.79587	100.3039	99.72146
Standard 3	499.44221	500.03816	500.1859	500.1014	499.999	500.7099
200 ppb	307.17716	198.67378	195.1625	201.2814	195.4773	193.466
10 ppb	10.14336	9.91224	9.70926	10.28828	9.8737	9.63668
Standard Check 150 ppb	146.0512	148.80368	146.4971	150.7692	152.5452	148.2723
Blank	0.0069	0.0087	0.0099	0.0566	0.1121	0.00702
Interference Check 1020/820/510/10/210/60	1064.3506	862.77173	514.9674	110.0094	221.419	60.76318
Standard Check 150 ppb	152.21466	150.84324	147.7384	151.1089	152.5982	147.7356
Blank	0.0065	0.0018	0.01659	0.1303	0.09451	0.0111
Standard Check 150 ppb	156.9015	145.82574	147.8726	149.9127	155.3582	150.5999
Blank	0.00922	-0.00413	-0.00284	0.24971	0.09491	0.00946
Interference Check 1020/820/510/10/210/60	1065.6652	858.8368	507.0242	109.7965	218.5942	60.30565
Standard 1	50	50	50	50	50	50
Standard 2	100.02727	99.34976	99.53766	99.34905	99.96421	99.92667
Standard 3	499.85509	500.58880	500.4972	500.6240	500.9701	500.5459
200 ppb	209.65	198.84052	200.0285	196.5656	198.4638	191.3025
10 ppb	10.10871	9.91115	9.82266	10.02869	9.89595	9.2831
Standard Check 150 ppb	152.49448	150.92016	147.34849	146.302	149.0828	143.4476
Blank	0.0135991	0.0040759	0.013616	-0.03238	-0.02107	0.01593
Interference Check 1020/820/510/10/210/60	1119.65	882.16588	543.4418	109.0585	231.0461	60.34546
Standard Check 150 ppb	154.90382	152.83012	154.7251	148.3024	151.7626	150.9793
Blank	0.0098866	-0.0040327	0.002149	0.14701	0.06127	0.01382
Standard Check 150 ppb	152.52887	153.79686	151.3164	152.5031	149.0679	146.8794
Blank	0.009598	-0.0120705	0.014898	0.05421	0.050915	0.01256
Standard Check 150 ppb	155.85509	151.96301	150.9622	144.912	149.6251	147.5031
Blank	0.0134588	0.0061523	0.014498	-0.08155	0.013894	0.01503
Standard Check 150 ppb	151.58031	152.81897	151.9917	150.8475	149.2758	151.0442
Blank	0.014208	0.0094973	0.034598	0.02177	0.027905	0.01606
Interference Check 1020/820/510/10/210/60	1080.1646	879.85044	547.2915	110.3723	225.0917	59.83118
Standard 1	50	50	50	50	50	50
Standard 2	100.70227	100.67798	100.5539	100.0243	100.163	99.84662
Standard 3	500.59942	500.63398	500.9882	500.514	501.1785	500.4602
200 ppb	190.71785	190.50264	195.3067	197.314	198.4122	199.2403
10 ppb	9.3247	9.84483	9.85669	9.85491	9.80692	9.8187
Standard Check 150 ppb	141.73293	148.9768	146.0703	145.0187	146.2296	151.1292
Blank	0.0115801	0.0096331	0.066622	-0.17531	0.09004	0.01281
Interference Check 1020/820/510/10/210/60	1033.1973	629.89033	499.99176	107.9054	216.3502	59.58613
Standard Check 150 ppb	148.51812	148.86058	148.8897	147.9456	154.1442	154.0428
Blank	0.0098009	0.0038993	0.070256	-0.17443	0.04223	0.0108
Standard Check 150 ppb	152.47119	154.69999	150.7125	147.1155	152.04	150.5723
Blank	0.0083441	0.0094438	0.074987	-0.20488	0.06972	0.01186
Standard Check 150 ppb	153.49051	153.52955	151.3905	148.7183	151.8712	153.4334
Blank	0.0112853	0.004247	0.10519	-0.22122	0.04268	0.01209
Standard Check 150 ppb	152.95447	150.70698	150.3798	150.2058	153.246	154.3011
Blank	0.0110824	0.0106534	0.074115	-0.31893	0.02541	0.01361
Interference Check 1020/820/510/10/210/60	1029.5667	618.34122	490.6653	107.4972	214.073	60.51889

BLANK-SPIKE-1 0/0/0/2500/2500	0.0785	-0.637	-0.161	6.915	2611.231	2516.787
BLANK-SPIKE-2 0/0/0/2500/2500	0.056394	-3.521	2.485314	2.2875	2272.079	2451.731
BLANK-SPIKE-3 0/0/0/2500/2500	0.0948125	-3.524825	2.150363	-6.7325	2299.889	2494.616
BLANK-SPIKE-4 0/0/0/2500/2500	0.466784	1.228992	5.104624	-18.7005	2376.504	2544.366
BLANK-SPIKE-5 0/0/0/2500/2500	0.458665	1.438974	4.236564	-12.808	2332.804	2527.509
BLANK-SPIKE-6 0/0/0/2500/2500	0.435184	0.664384	4.996908	-14.424	2364.088	2520.142

605D	34.224	506.1095	726.266	12.679	65.0095	247.947
605D-SPK	39.7335	523.7965	755.045	11.181	2514.225	2766.939
614D	69.475	1142.838	2286.793	6.422	37.1875	529.3795
614D-SPK	73.7635	1197.7425	2347.704	3.9285	2401.875	2694.247
519S	81.872675	1284.1462	1846.996	1.3185	155.6934	222.249
519S-SPK	79.403388	1281.9632	1861.061	1.293	1999.718	2589.938
533S	46.15058	2313.119	8640.799	-9.566		