



Agriculture Laboratory Proficiency (ALP) Program

Performance Analysis Report - Test Cycle 28

CTS Lab Code: U6291A

Web Code: FQP3HU for Analysis #801

Analysis # 801: Soil Properties

Test Code	Analysis	Units	Samples	Lab Mean	Grand Median	MAD	95% Conf Interval	WithinLab Performance, k	WithinLab Avg STD	Labs Rpt
101	Saturated Paste Moisture	Percent	SRS1511	25.4	28.4	2.35	21.5 - 35.2	0.99	1.1	22
			SRS1512	39.6	41.3	2.50	34.1 - 48.6	0.26	1.1	22
			SRS1513	21.8 X	26.4	1.32	22.5 - 30.2	0.20	0.9	22
			SRS1514	37.6	40.8	2.86	32.5 - 49.1	0.34	1.0	22
			SRS1515	36.1	40.7	3.47	30.6 - 50.7	0.08	0.9	22
102	pH - sp	Unit	SRS1511	5.12	5.38	0.13	5.01 - 5.74	1.17	0.08	24
			SRS1512	6.22	6.35	0.12	6.00 - 6.69	0.63	0.09	24
			SRS1513	5.85	6.06	0.10	5.78 - 6.34	1.76	0.07	24
			SRS1514	6.83	6.89	0.09	6.63 - 7.14	0.26	0.08	24
			SRS1515	4.99	5.14	0.08	4.92 - 5.36	0.44	0.05	24
103	ECe - sp	dS/m	SRS1511	0.73	0.70	0.047	0.56 - 0.84	0.29	0.04	26
			SRS1512	0.68	0.60	0.06	0.42 - 0.78	1.22	0.05	26
			SRS1513	0.73	0.70	0.042	0.57 - 0.82	1.52	0.04	26
			SRS1514	1.03	1.00	0.10	0.71 - 1.29	0.91	0.07	25
			SRS1515	1.37	1.30	0.07	1.09 - 1.50	0.55	0.08	25
126	NO3-N Cd. Rd.	mg/kg	SRS1511	20.3	19.4	0.95	16.6 - 22.1	0.78	0.6	37
			SRS1512	22.9	23.1	1.33	19.3 - 27.0	0.30	1.1	37
			SRS1513	21.8	17.8	2.17	11.5 - 24.1	0.69	1.0	37
			SRS1514	36.7	43.5	5.76	26.8 - 60.2	3.52 X	1.9	37
			SRS1515	62.6	63.3	2.80	55.1 - 71.4	0.58	2.0	36
134	PO4-P Olsen/Bicarb (1:20)	mg/kg	SRS1511	11.6	13.4	1.93	7.8 - 19.0	0.36	0.8	30
			SRS1512	5.60	7.17	1.49	2.85 - 11.49	0.32	0.63	30
			SRS1513	17.5	17.2	2.70	9.4 - 25.1	0.17	1.9	30
			SRS1514	27.3	32.0	4.84	18.0 - 46.0	0.07	2.0	30
			SRS1515	26.2	27.3	1.67	22.5 - 32.2	0.33	1.5	30
140	K Ammonium Acetate	mg/kg	SRS1511	90.4	84.0	5.24	68.8 - 99.2	0.63	3.6	41
			SRS1512	333.9	336.6	29.0	252.5 - 420.8	0.56	13.4	41
			SRS1513	35.4	31.3	4.00	19.7 - 42.9	0.06	17.0	41
			SRS1514	172.7	178.7	24.1	108.9 - 248.5	1.18	7.0	41
			SRS1515	408.7	405.9	23.9	336.5 - 475.3	0.09	34.2	41
141	Ca Ammonium Acetate	mg/kg	SRS1511	539.0	590.0	48.8	448.4 - 731.6	0.35	27.9	39
			SRS1512	2,065.7	2,283.2	128.9	1,909.4 - 2,657.0	0.37	90.8	39
			SRS1513	462.8	446.8	41.2	327.5 - 566.2	0.09	31.5	39
			SRS1514	1,597.7	1,958.0	232.4	1,284.1 - 2,631.9	0.81	92.8	39
			SRS1515	1,747.3	1,960.4	113.7	1,630.6 - 2,290.3	0.12	74.3	39
142	Mg Ammonium Acetate	mg/kg	SRS1511	81.3	91.8	6.49	73.0 - 110.6	0.30	4.7	38
			SRS1512	362.7	365.6	26.8	287.8 - 443.4	0.72	14.0	38
			SRS1513	41.4	48.3	7.65	26.1 - 70.4	0.53	4.8	38
			SRS1514	515.6	551.7	69.0	351.5 - 751.8	1.20	18.1	38
			SRS1515	698.9	693.9	48.1	554.5 - 833.4	0.12	28.3	38
143	Na Ammonium Acetate	mg/kg	SRS1511	28.3	16.9	3.96	5.4 - 28.4	0.86	3.4	30
			SRS1512	50.6	41.6	5.00	27.1 - 56.1	0.92	5.3	30
			SRS1513	19.7	10.7	3.42	0.8 - 20.6	0.94	2.7	30
			SRS1514	18.6	9.72	3.20	0.43 - 19.01	0.41	3.2	30
			SRS1515	26.5 X	13.1	3.33	3.4 - 22.7	1.10	2.8	30



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Test Code	Analysis	Units	Samples	Lab Mean	Grand Median	MAD	95% Conf Interval	WithinLab Performance, k	WithinLab Avg STD	Labs Rpt
145	K- Bicarb.	mg/kg	SRS1511	70.0	71.3	0.95	68.5 - 74.0	0.22	4.6	4
			SRS1512	225.3	228.0	3.61	217.5 - 238.5	0.48	9.9	4
			SRS1513	28.3	28.5	0.72	26.4 - 30.6	0.40	3.8	4
			SRS1514	133.0	149.2	9.96	120.3 - 178.1	0.20	9.8	4
			SRS1515	270.7	269.2	2.00	263.4 - 275.0	0.38	12.2	4
169	Zn - DTPA	mg/kg	SRS1511	0.88	0.61	0.15	0.18 - 1.04	0.65	0.05	38
			SRS1512	1.06	1.03	0.17	0.53 - 1.53	0.55	0.06	38
			SRS1513	0.77	0.69	0.14	0.28 - 1.11	0.23	0.06	38
			SRS1514	8.95	8.88	1.23	5.32 - 12.45	1.50	0.35	38
			SRS1515	0.33	0.37	0.08	0.15 - 0.59	0.27	0.04	38
170	Mn - DTPA	mg/kg	SRS1511	20.8	17.0	2.41	10.0 - 24.0	0.82	0.7	33
			SRS1512	8.02	4.53	2.07	0.00 - 10.53	0.09	3.55	33
			SRS1513	9.92	7.56	1.14	4.24 - 10.88	0.09	1.36	33
			SRS1514	5.73	2.85	1.36	0.00 - 6.78	0.67	0.40	33
			SRS1515	95.4	85.3	6.61	66.2 - 104.5	1.02	2.5	33
171	Fe - DTPA	mg/kg	SRS1511	122.6	106.7	21.6	44.1 - 169.2	0.38	8.0	34
			SRS1512	14.6	14.7	2.78	6.7 - 22.8	0.47	2.0	34
			SRS1513	12.5	12.0	2.62	4.4 - 19.6	0.20	10.7	34
			SRS1514	13.4	14.7	3.67	4.1 - 25.4	0.97	1.2	34
			SRS1515	52.7	51.5	9.18	24.9 - 78.1	0.84	1.8	34
172	Cu - DTPA	mg/kg	SRS1511	1.32	1.10	0.22	0.46 - 1.74	0.51	0.11	32
			SRS1512	0.50	0.55	0.09	0.29 - 0.81	0.17	0.11	32
			SRS1513	0.15	0.13	0.027	0.05 - 0.20	0.04	0.13	31
			SRS1514	0.47	0.47	0.09	0.22 - 0.73	0.20	0.08	32
			SRS1515	1.33	1.27	0.22	0.64 - 1.91	1.27	0.13	32



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Laboratory Performance Summary - Soil Properties

Performance Review of Laboratory-Sample Biases

z-scores calculated using Lab Median and mean average deviation
(numbers closer to zero indicate closer agreement with other laboratories and
scores outside limits in red)

Test Code	Analysis	SRS1511	SRS1512	SRS1513	SRS1514	SRS1515
101	Saturated Paste Moisture	-1.24	-0.69	-3.43	-1.14	-1.33
102	pH - sp	-2.03	-1.07	-2.22	-0.64	-2.02
103	ECe - sp	0.66	1.26	0.83	0.30	1.00
126	NO3-N Cd. Rd.	1.00	-0.15	1.85	-1.17	-0.23
134	PO4-P Olsen/Bicarb (1:20)	-0.91	-1.05	0.09	-0.97	-0.66
140	K Ammonium Acetate	1.22	-0.09	1.03	-0.25	0.12
141	Ca Ammonium Acetate	-1.04	-1.69	0.39	-1.55	-1.87
142	Mg Ammonium Acetate	-1.61	-0.11	-0.90	-0.52	0.10
143	Na Ammonium Acetate	2.87	1.79	2.65	2.78	4.02
145	K- Bicarb.	-1.35	-0.74	-0.23	-1.63	0.75
169	Zn - DTPA	1.79	0.21	0.52	0.05	-0.52
170	Mn - DTPA	1.57	1.69	2.06	2.12	1.52
171	Fe - DTPA	0.74	-0.04	0.21	-0.35	0.13
172	Cu - DTPA	1.01	-0.60	1.00	0.02	0.26