

Soil	Soil 2005-106			Soil 2005-107			Soil 2005-108			Soil 2005-109			Soil 2005-110		
	Analysis	Units	n	Median	MAD	Lab ¹	Median	MAD	Lab	Median	MAD	Lab	Median	MAD	Lab
Salinity -SP															
Sat. Paste Moisture	%	36		30.1	1.3		29.4	3.4		57.9	7.1		29.5	2.8	
pH - sp	Unit	48		7.52	0.12		7.80	0.10		7.60	0.10		6.59	0.10	
Ece - sp	dS/m	49		1.25	0.14		2.30	0.23		1.16	0.17		0.65	0.06	
HCO ₃ - sp	mmol/L	16		3.54	1.02		1.22	0.29		4.88	1.31		1.76	0.34	
Ca - sp	mmol/L	39		9.31	1.02		8.2	1.0		10.0	1.27		2.75	0.45	
Mg - sp	mmol/L	39		1.62	0.17		1.7	0.3		2.06	0.26		1.14	0.18	
Na - sp	mmol/L	38		1.50	0.18		12.9	1.5		0.44	0.21		1.52	0.21	
SAR - sp	value	33		0.63	0.07		6.0	0.3		0.20	0.10		1.08	0.14	
Cl - sp	mmol/L	27		2.01	0.40		5.6	0.6		0.33	0.12		2.17	0.43	
SO ₄ - sp	mmol/L	27		1.85	0.23		6.9	0.5		1.90	0.20		1.42	0.16	
NO ₃ - sp	mmol/L	18		4.84	1.18		8.5	2.2		3.2	2.09		0.16	0.14	
B - sp	mg/L	19		0.14	0.020		0.46	0.040		0.11	0.010		0.150	0.030	
Soil EC															
Soil EC (1:1)	(dS/m)	39		0.40	0.070		0.75	0.08		0.58	0.11		0.20	0.040	
Soil EC (1:2)	(dS/m)	52		0.27	0.04		0.48	0.06		0.37	0.05		0.13	0.02	
Soil pH															
pH (1:1)	Unit	99		7.80	0.10		8.12	0.09		7.83	0.09		6.87	0.11	
pH (1:2)	Unit	42		7.90	0.14		8.33	0.13		7.92	0.12		6.91	0.16	
pH (1:1) 0.01M CaCl ₂	Unit	25		7.41	0.11		7.74	0.14		7.54	0.14		6.30	0.13	
pH (1:2) 0.01M CaCl ₂	Unit	17		7.40	0.10		7.63	0.13		7.56	0.10		6.30	0.11	
Buffer pH															
SMP Buffer pH	Unit	51		7.50	0.04		7.55	0.05		7.50	0.04		7.16	0.06	
Adams-Evans Buf pH	Unit	10		7.86	0.01		7.80	0.03		7.83	0.03		7.75	0.04	
Woodruff Buf. pH	Unit	18		7.05	0.05		7.10	0.03		7.19	0.02		6.90	0.05	
Mehlich Buf. pH	Unit	4		6.71	0.06		6.76	0.08		6.83	0.07		6.46	0.03	
Titratable Acidity	cmol/kg	0		-	-		-	-		-	-		-	-	

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NAEP Program
North American Proficiency Testing

2005 North American Proficiency Testing Program

2nd Quarter Report August 17, 2005



Laboratory ID
6002

Soil	Units	n	Median	MAD	Lab ¹	Median	MAD	Lab	Median	MAD	Lab	Median	MAD	Lab
Soil 2005-101	Soil 2005-102	Soil 2005-103	Soil 2005-104	Soil 2005-105										
Nitrate (NO₃-N)														
Cd. Rd.	mg/kg	74	29.2	1.9		42.1	2.4		66.8	9.7		4.3	0.85	
ISE	mg/kg	26	28.5	6.0		39.6	10.7		63.8	26.7		4.3	2.1	
CTA	mg/kg	5	29.8	1.0		40.3	1.1		72.5	2.7		7.1	0.85	
Ion Chromatography	mg/kg	5	30.0	2.3		39.3	3.3		73.8	4.8		5.2	0.90	
Other	mg/kg	6	29.9	7.1		45.0	5.8		61.0	20.0		5.3	1.2	
NH ₄ - N (KCl Extr.)	mg/kg	57	4.0	0.62		1.2	0.70		22.5	3.5		7.7	1.0	
Phosphorus & Sulfur														
PO ₄ -P Bray P1 (1:10)	mg/kg	61	82.0	8.0		24.0	4.0		2.0	1.0		26.3	3.7	
PO ₄ -P Bray P1 (1:7)	mg/kg	9	65.0	7.9		13.6	2.7		1.5	0.5		23.0	1.7	
PO ₄ -P Olsen/Bicarb	mg/kg	69	49.0	6.0		6.0	1.5		8.8	1.8		13.6	1.6	
PO ₄ -P AB-DTPA	mg/kg	3	54.2	17.3		4.9	2.7		4.7	0.2		12.6	6.8	
PO ₄ -P M. Morgan	mg/kg	6	68.2	8.2		54.0	8.0		17.5	2.8		6.1	0.6	
PO ₄ -P M. Kewlona	mg/kg	3	78.0	0.8		18	0.9		18.8	1.2		24.0	1.0	
PO ₄ -P Strg Bray P-2	mg/kg	13	257	38.0		236	21		15.0	13.0		36.0	6.0	
PO ₄ -P Water Soluble	mg/kg	7	11.0	5.8		3.7	1.9		2.0	1.1		1.6	1.2	
SO ₄ -S (PO ₄ Extr.)	mg/kg	49	12.0	3.1		44	8.8		14.5	5.8		9.0	2.3	
Ammonium Ace. Bases														
K	mg/kg	99	282	15		400	26		205	51		367	59	
Ca	mg/kg	97	3385	438		3512	595		5928	1078		1122	145	
Mg	mg/kg	96	159	17		232	25.5		417	72		163	21	
Na	mg/kg	73	32	6.0		292	30		18.0	7.0		35	6.7	
K - Bray (1:10)	mg/kg	6	244	11		311	22		118	13		278	22	
K - Bicarb.	mg/kg	8	245	17		250	13		188	23		347	23.0	
K - Modified Morgan	mg/kg	5	209	23		212	24		161	15		335	32.5	
Ca Modified Morgan	mg/kg	3	4953	440		6150	559		30574	773		1180	37	
Al KCL Extr.	mg/kg	5	0.0	0.0		0.00	0.00		0.00	0.00		1.1	1.1	

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NAAPT Program
North American Proficiency Testing

2005 North American Proficiency Testing Program 2nd Quarter Report August 17, 2005



Society of American Chemists

Laboratory ID

6002

Soil	Soil 2005-106	Soil 2005-107	Soil 2005-108	Soil 2005-109	Soil 2005-110							
Analysis	Units	n	Median	MAD	Lab ¹	Median	MAD	Lab	Median	MAD	Lab	
Mehlich-1 Multi Element												
Soil Scoop Mass	g	8	5.00	0.00	5.00	0.00	5.00	0.00	5.00	0.00	5.00	0.00
P	mg/kg	9	138	6.3	179	16.2	10.2	2.7	17.2	3.1	85.0	38
K	mg/kg	9	198	15.9	161	20.2	78	16	268	43	201	58
Ca	mg/kg	9	4499	476	4404	586	5403	668	851	574	1515	845
Mg	mg/kg	9	184	7	252	19	360	38.5	138	40.0	573	181
Mn	mg/kg	8	22.1	2.0	2.8	0.51	1.6	0.65	15.3	4.0	24.1	2.2
Zn	mg/kg	8	3.85	0.41	0.31	0.08	0.07	0.05	5.45	1.23	2.08	0.22
Mehlich-3 Multi-Element												
Soil Scoop Mass	g	31	2.27	0.27	2.15	0.23	1.40	0.32	1.61	0.40	1.23	0.37
Scoop Volume	mL	19	1.18	0.08	1.18	0.05	1.18	0.08	1.18	0.08	1.18	0.08
Colorimetric												
P	mg/kg	25	100	6.8	30.5	3.9	23.3	4.8	28.2	3.0	160	28
ICP												
P	mg/kg	43	106	5.3	30.0	3.0	23.6	3.4	29.6	2.7	173	24
K	mg/kg	52	306	17	429	32	180	28	347	45	221	27
Ca	mg/kg	52	4490	306	4797	410	10728	2190	1100	163	1426	196
Mg	mg/kg	52	210	13	335	28	557	74.0	165	18.7	420	52.7
Na	mg/kg	37	33.0	6.0	315	33	22.0	7.9	33.7	9.4	17.3	6.3
S	mg/kg	33	21.0	3.9	58	6.9	27.1	6.6	16.0	3.1	33.0	7.0
Al	mg/kg	29	295	79	177	83	27.0	14	818	118	1593	88
Zn	mg/kg	43	6.05	0.55	0.96	0.24	4.65	0.64	6.23	0.88	2.40	0.33
Mn	mg/kg	40	73.3	6.3	113	20.2	187	32.5	37.4	6.6	32.2	3.8
Fe	mg/kg	41	79.0	9.8	27.1	6.1	65.0	10.6	62.2	10.2	100	9.0
Cu	mg/kg	42	2.36	0.26	2.58	0.36	4.06	0.76	0.88	0.18	13.8	1.3
B	mg/kg	34	1.01	0.21	1.70	0.30	3.85	0.65	0.60	0.17	0.80	0.22

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NAPT Program
North American Proficiency Testing

2005 North American Proficiency Testing Program

2nd Quarter Report August 17, 2005



Laboratory ID
6002

Soil	Soil 2005-106	Soil 2005-107	Soil 2005-108	Soil 2005-109	Soil 2005-110									
Analysis	Units	n	Median	MAD	Lab ¹	Median	MAD	Lab	Median	MAD	Lab	Median	MAD	Lab
Micronutrients														
Zn - DTPA	mg/kg	77	1.68	0.13	0.24	0.06	1.71	0.40	3.15	0.55	0.80	0.18		
Mn - DTPA	mg/kg	67	4.0	0.66	1.30	0.55	3.6	1.5	6.0	1.5	2.7	0.82		
Fe - DTPA	mg/kg	69	5.8	0.86	1.19	0.21	8.5	1.8	6.6	1.3	10.4	3.3		
Cu - DTPA	mg/kg	69	0.80	0.10	0.70	0.13	1.31	0.31	0.22	0.06	5.82	1.83		
Zn - HCl	mg/kg	8	7.2	0.85	1.5	0.25	0.14	0.04	6.47	0.79	3.40	0.60		
Mn-H ₃ PO ₄	mg/kg	11	14.3	4.2	2.0	1.1	2.30	1.29	11.3	1.8	18.0	3.0		
Cl - Ca(NO ₃) ₂ Extr.	mg/kg	19	22.6	3.4	62	9.6	4.0	1.0	19.8	4.2	16.1	5.1		
B - Hot Water	mg/kg	54	0.50	0.13	1.15	0.26	1.05	0.35	0.57	0.13	0.50	0.11		
B - DTPA-Sorb	mg/kg	11	0.44	0.06	1.07	0.09	1.42	0.08	0.27	0.03	0.24	0.07		
Soil Organic Matter														
Soil Kjeldahl N	%	24	0.065	0.009	0.031	0.005	0.513	0.024	0.089	0.009	0.258	0.016		
Soil TN (combustion)	%	42	0.070	0.009	0.035	0.006	0.532	0.024	0.094	0.006	0.255	0.015		
Soil TOC (combustion)	%	35	0.66	0.03	0.38	0.03	7.51	0.51	1.19	0.03	2.99	0.07		
SOM - Walkley-Black	%	50	1.07	0.11	0.48	0.08	7.73	2.21	2.10	0.29	4.31	0.71		
SOM - LOI (Raw Values)	%	78	1.39	0.15	1.07	0.23	9.83	0.59	2.64	0.24	7.35	0.40		
CaCO ₃ Content	%	18	1.25	0.27	1.51	0.31	14.8	1.5	0.25	0.23	1.92	0.89		
CEC - Displacement	cmol/kg	27	10.9	1.2	12.1	1.3	32.0	5.50	12.0	1.8	20.9	3.97		
- Estimation	cmol/kg	14	19.7	1.8	22.8	1.6	34.7	4.6	8.6	1.1	13.1	2.9		
Scoop Density	mg/cm ³	11	1.36	0.11	1.22	0.08	0.78	0.14	0.90	0.15	0.71	0.11		
Particle Size Analysis														
Sand 2000 - 50 um	%	54	65.0	3.0	63.6	3.1	29.9	6.0	45.0	3.0	22.0	5.8		
Silt 50 - 2 um	%	54	27.0	3.0	15.5	2.5	47.8	4.9	33.0	4.1	61.2	6.9		
Clay 2 - 0 um	%	53	9.0	2.0	21.6	2.3	22.0	4.0	22.5	4.5	16.0	5.4		

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