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Inorganic Chemistry Section
Report of Examination



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Attention: Rebecca Coppen

Final Report on 52 samples of soil received on 11/12/2014

<u>LAB ID</u>	<u>Client ID and Description</u>
14A0212 / 001	01A
14A0212 / 002	01B
14A0212 / 003	01C
14A0212 / 004	02A
14A0212 / 005	02B
14A0212 / 006	02C
14A0212 / 007	02D
14A0212 / 008	03A
14A0212 / 009	03B
14A0212 / 010	04A
14A0212 / 011	06A
14A0212 / 012	06A East
14A0212 / 013	06B East
14A0212 / 014	06C East
14A0212 / 015	06D East
14A0212 / 016	07A
14A0212 / 017	08A
14A0212 / 018	08B
14A0212 / 019	08C
14A0212 / 020	09A
14A0212 / 021	09B
14A0212 / 022	09C
14A0212 / 023	09D
14A0212 / 024	10A
14A0212 / 025	11A
14A0212 / 026	11B
14A0212 / 027	11C
14A0212 / 028	11D
14A0212 / 029	12A
14A0212 / 030	12B
14A0212 / 031	12C
14A0212 / 032	13A
14A0212 / 033	13B
14A0212 / 034	13C
14A0212 / 035	14A
14A0212 / 036	14B

<u>LAB ID</u>	<u>Client ID and Description</u>
14A0212 / 037	14C
14A0212 / 038	15A
14A0212 / 039	15B
14A0212 / 040	15C
14A0212 / 041	16A
14A0212 / 042	16B
14A0212 / 043	17A
14A0212 / 044	17B
14A0212 / 045	18A
14A0212 / 046	19A
14A0212 / 047	19B
14A0212 / 048	19C
14A0212 / 049	21A
14A0212 / 050	21B
14A0212 / 051	27A
14A0212 / 052	28A

Analyte Method Unit		EC (1:5) mS/m	pH (CaCl2)	Sand. fraction %	Silt. fraction %	Clay. fraction %	OrgC (W/B) %
Lab ID	Client ID						
14A0212/001	01A	220	8.5				1.39
14A0212/002	01B	160	8.4				0.30
14A0212/003	01C	120	8.2				1.43
14A0212/004	02A	27	8.3				1.11
14A0212/005	02B	16	8.0				1.63
14A0212/006	02C	480	8.5				1.60
14A0212/007	02D	440	8.7				0.97
14A0212/008	03A	210	8.0				2.85
14A0212/009	03B	97	8.7				1.45
14A0212/010	04A	61	8.1				1.56
14A0212/011	06A	1600	8.3				3.16
14A0212/012	06A East	66	8.2				1.13
14A0212/013	06B East	500	8.2				2.50
14A0212/014	06C East	1300	7.7				12.0
14A0212/015	06D East	620	8.1				3.21
14A0212/016	07A	80	6.7	85.0	8.0	7.0	9.16
14A0212/017	08A	2600	8.4				2.34
14A0212/018	08B	200	8.5				0.82
14A0212/019	08C	460	8.1				3.92
14A0212/020	09A	1300	9.3				0.96
14A0212/021	09B	270	8.2				1.15
14A0212/022	09C	87	8.2				2.10
14A0212/023	09D	650	8.2				4.43
14A0212/024	10A	140	6.2	78.5	12.0	9.0	12.7
14A0212/025	11A	70	6.3				1.66
14A0212/026	11B	220	8.1				4.47
14A0212/027	11C	250	8.2				2.68
14A0212/028	11D	160	8.2				3.48
14A0212/029	12A	340	8.3				3.85
14A0212/030	12B	88	8.1				2.38
14A0212/031	12C	790	8.3				2.15
14A0212/032	13A	350	8.1				4.85
14A0212/033	13B	240	8.5				5.83
14A0212/034	13C	210	8.0				5.60
14A0212/035	14A	61	7.6				6.64
14A0212/036	14B	180	8.3				2.28
14A0212/037	14C	120	8.5				4.36
14A0212/038	15A	130	8.0				2.75
14A0212/039	15B	110	8.6				4.84
14A0212/040	15C	390	8.1				9.10
14A0212/041	16A	220	8.1				7.12
14A0212/042	16B	850	7.7				7.78
14A0212/043	17A	1500	8.7				1.86
14A0212/044	17B	340	8.2				1.83
14A0212/045	18A	400	8.0				6.45
14A0212/046	19A	180	8.0				2.04
14A0212/047	19B	110	7.9				2.99
14A0212/048	19C	190	7.8				4.55

Analyte		EC	pH	Sand.	Silt.	Clay.	OrgC
Method		(1:5)	(CaCl2)	fraction	fraction	fraction	(W/B)
Unit		mS/m		%	%	%	%
Lab ID	Client ID						
14A0212/049	21A	190	7.8				1.91
14A0212/050	21B	29	8.1				0.63
14A0212/051	27A	120	8.0				3.63
14A0212/052	28A	39	8.3				2.51

Analyte		N	Al	B	Ca	Cd	Co
Method		(total)	(M3)	(M3)	(M3)	(M3)	(M3)
Unit		%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lab ID	Client ID						
14A0212/001	01A	0.153	<1	21	>5500	0.02	0.01
14A0212/002	01B	0.025	<1	3.0	>5500	0.02	0.01
14A0212/003	01C	0.125	<1	6.7	>5500	0.02	0.01
14A0212/004	02A	0.090	<1	5.2	>5500	0.02	0.01
14A0212/005	02B	0.124	<1	3.5	>5500	<0.01	0.01
14A0212/006	02C	0.142	<1	37	>5500	0.01	0.02
14A0212/007	02D	0.084	<1	13	>5500	0.02	<0.01
14A0212/008	03A	0.329	<1	12	>5500	0.02	0.02
14A0212/009	03B	0.119	<1	9.4	>5500	0.01	0.01
14A0212/010	04A	0.135	<1	5.4	>5500	0.01	0.01
14A0212/011	06A	0.294	<1	20	>5500	<0.01	0.03
14A0212/012	06A East	0.097	<1	3.7	>5500	0.02	0.01
14A0212/013	06B East	0.235	<1	15	>5500	<0.01	0.02
14A0212/014	06C East	0.818	<1	27	>5500	0.04	0.01
14A0212/015	06D East	0.293	<1	17	>5500	0.03	0.01
14A0212/016	07A	0.648	96	7.3	3100	<0.01	0.04
14A0212/017	08A	0.195	<1	37	>5500	0.02	0.02
14A0212/018	08B	0.079	<1	8.4	>5500	0.01	0.01
14A0212/019	08C	0.215	<1	29	>5500	0.01	0.01
14A0212/020	09A	0.079	<1	19	>5500	0.02	0.01
14A0212/021	09B	0.106	<1	9.4	>5500	0.02	0.02
14A0212/022	09C	0.164	<1	11	>5500	0.01	0.01
14A0212/023	09D	0.341	1	100	>5500	0.01	0.03
14A0212/024	10A	0.751	>550	2.8	1800	<0.01	0.34
14A0212/025	11A	0.137	<1	5.0	>5500	0.03	<0.01
14A0212/026	11B	0.491	<1	31	>5500	0.05	0.03
14A0212/027	11C	0.294	<1	25	>5500	0.03	0.01
14A0212/028	11D	0.317	<1	15	>5500	0.04	0.02
14A0212/029	12A	0.422	2	39	>5500	0.03	0.03
14A0212/030	12B	0.185	1	7.5	>5500	0.04	0.02
14A0212/031	12C	0.238	<1	15	>5500	0.02	0.03
14A0212/032	13A	0.450	<1	18	>5500	<0.01	0.02
14A0212/033	13B	0.418	<1	100	>5500	0.02	0.01
14A0212/034	13C	0.411	<1	12	>5500	0.02	<0.01
14A0212/035	14A	0.471	<1	15	>5500	0.03	<0.01
14A0212/036	14B	0.247	<1	41	>5500	<0.01	0.01
14A0212/037	14C	0.478	<1	100	>5500	<0.01	<0.01
14A0212/038	15A	0.230	<1	6.6	>5500	0.02	<0.01
14A0212/039	15B	0.384	<1	38	>5500	<0.01	0.01
14A0212/040	15C	0.616	2	34	>5500	0.01	0.01

Analyte		N	Al	B	Ca	Cd	Co
Method		(total)	(M3)	(M3)	(M3)	(M3)	(M3)
Unit		%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lab ID	Client ID						
14A0212/041	16A	0.613	<1	32	>5500	0.02	0.05
14A0212/042	16B	0.599	<1	11	>5500	0.04	0.09
14A0212/043	17A	0.160	<1	20	>5500	0.01	0.02
14A0212/044	17B	0.184	1	21	>5500	0.03	0.01
14A0212/045	18A	0.605	<1	15	>5500	0.03	0.01
14A0212/046	19A	0.179	<1	0.6	>5500	0.02	<0.01
14A0212/047	19B	0.277	<1	1.8	>5500	0.04	<0.01
14A0212/048	19C	0.310	<1	1.0	>5500	0.03	0.01
14A0212/049	21A	0.155	5	4.7	>5500	0.06	0.25
14A0212/050	21B	0.052	<1	1.2	>5500	0.04	0.01
14A0212/051	27A	0.228	<1	11	>5500	0.03	<0.01
14A0212/052	28A	0.194	<1	19	>5500	0.03	<0.01

Analyte		Cu	Fe	K	Mg	Mn	Mo
Method		(M3)	(M3)	(M3)	(M3)	(M3)	(M3)
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lab ID	Client ID						
14A0212/001	01A	<0.1	4	110	>1000	1.8	0.01
14A0212/002	01B	<0.1	10	19	>1000	1.4	<0.01
14A0212/003	01C	<0.1	10	48	>1000	2.1	<0.01
14A0212/004	02A	<0.1	8	46	>1000	1.6	<0.01
14A0212/005	02B	<0.1	6	26	>1000	2.0	<0.01
14A0212/006	02C	<0.1	1	300	>1000	1.2	<0.01
14A0212/007	02D	<0.1	4	210	>1000	1.9	0.02
14A0212/008	03A	<0.1	7	160	>1000	2.0	0.01
14A0212/009	03B	<0.1	9	97	>1000	1.7	<0.01
14A0212/010	04A	<0.1	10	57	>1000	1.6	<0.01
14A0212/011	06A	<0.1	5	>550	>1000	7.2	<0.01
14A0212/012	06A East	<0.1	6	36	>1000	2.9	<0.01
14A0212/013	06B East	<0.1	1	310	>1000	5.1	<0.01
14A0212/014	06C East	<0.1	3	>550	>1000	2.7	<0.01
14A0212/015	06D East	<0.1	1	470	>1000	3.8	<0.01
14A0212/016	07A	<0.1	260	>550	>1000	180	<0.01
14A0212/017	08A	0.1	1	>550	>1000	3.4	<0.01
14A0212/018	08B	<0.1	3	140	>1000	2.7	0.01
14A0212/019	08C	<0.1	2	190	>1000	12	<0.01
14A0212/020	09A	0.2	6	430	>1000	3.1	<0.01
14A0212/021	09B	<0.1	5	130	>1000	3.3	<0.01
14A0212/022	09C	<0.1	6	73	>1000	3.4	<0.01
14A0212/023	09D	<0.1	2	360	>1000	2.4	<0.01
14A0212/024	10A	0.2	120	150	890	13	<0.01
14A0212/025	11A	<0.1	8	53	>1000	2.7	<0.01
14A0212/026	11B	0.1	2	290	>1000	2.3	<0.01
14A0212/027	11C	<0.1	1	260	>1000	1.7	0.03
14A0212/028	11D	<0.1	5	230	>1000	2.6	<0.01
14A0212/029	12A	<0.1	2	250	>1000	2.9	<0.01
14A0212/030	12B	<0.1	8	120	>1000	2.0	<0.01
14A0212/031	12C	<0.1	4	330	>1000	2.0	0.02
14A0212/032	13A	<0.1	6	280	>1000	1.1	<0.01

Analyte		Cu	Fe	K	Mg	Mn	Mo
Method		(M3)	(M3)	(M3)	(M3)	(M3)	(M3)
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lab ID	Client ID						
14A0212/033	13B	0.1	1	360	>1000	1.0	<0.01
14A0212/034	13C	<0.1	3	160	>1000	2.0	<0.01
14A0212/035	14A	<0.1	6	110	>1000	2.4	<0.01
14A0212/036	14B	<0.1	2	110	>1000	1.4	<0.01
14A0212/037	14C	<0.1	1	230	>1000	1.2	<0.01
14A0212/038	15A	<0.1	2	64	>1000	3.6	<0.01
14A0212/039	15B	0.2	3	220	>1000	2.4	<0.01
14A0212/040	15C	<0.1	5	350	>1000	4.3	<0.01
14A0212/041	16A	0.1	4	410	>1000	5.9	<0.01
14A0212/042	16B	<0.1	23	360	>1000	12	0.02
14A0212/043	17A	0.1	4	440	>1000	2.9	<0.01
14A0212/044	17B	0.1	4	200	>1000	3.6	0.03
14A0212/045	18A	<0.1	20	350	>1000	4.8	0.05
14A0212/046	19A	<0.1	4	42	>1000	1.0	0.03
14A0212/047	19B	<0.1	6	61	>1000	1.6	0.02
14A0212/048	19C	<0.1	5	69	>1000	1.1	0.01
14A0212/049	21A	0.6	150	360	>1000	16	<0.01
14A0212/050	21B	<0.1	21	38	>1000	3.2	<0.01
14A0212/051	27A	0.1	6	120	>1000	2.2	<0.01
14A0212/052	28A	0.1	3	71	>1000	1.7	<0.01

Analyte		Na	Ni	P	S	Zn	As
Method		(M3)	(M3)	(M3)	(M3)	(M3)	(M3)
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lab ID	Client ID						
14A0212/001	01A	800	0.1	9	>250	0.2	0.3
14A0212/002	01B	210	0.1	9	>250	<0.1	0.2
14A0212/003	01C	670	0.1	31	>250	0.5	0.2
14A0212/004	02A	340	0.2	6	170	0.4	0.3
14A0212/005	02B	210	0.2	14	130	0.4	0.1
14A0212/006	02C	>1000	0.1	1	>250	0.3	0.3
14A0212/007	02D	>1000	0.1	1	>250	1.9	0.2
14A0212/008	03A	>1000	0.1	7	>250	0.4	0.1
14A0212/009	03B	>1000	0.2	5	190	0.3	0.1
14A0212/010	04A	590	0.1	8	190	0.4	0.1
14A0212/011	06A	>1000	0.1	2	>250	0.1	0.4
14A0212/012	06A East	380	0.1	9	>250	0.1	0.1
14A0212/013	06B East	>1000	0.1	2	>250	0.2	0.3
14A0212/014	06C East	>1000	0.1	11	>250	0.5	0.2
14A0212/015	06D East	>1000	0.1	1	>250	<0.1	0.3
14A0212/016	07A	>1000	0.5	10	81	<0.1	0.1
14A0212/017	08A	>1000	0.1	2	>250	0.1	0.4
14A0212/018	08B	>1000	0.1	6	>250	0.1	0.2
14A0212/019	08C	>1000	0.1	13	>250	0.2	0.2
14A0212/020	09A	>1000	0.1	2	>250	0.3	0.2
14A0212/021	09B	>1000	0.1	3	>250	<0.1	0.2
14A0212/022	09C	800	0.1	11	>250	0.2	0.1
14A0212/023	09D	>1000	0.1	14	>250	0.2	0.2
14A0212/024	10A	650	0.4	71	78	0.7	0.1

Analyte		Na	Ni	P	S	Zn	As
Method		(M3)	(M3)	(M3)	(M3)	(M3)	(M3)
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Lab ID	Client ID						
14A0212/025	11A	510	0.1	18	180	0.2	0.1
14A0212/026	11B	>1000	0.2	8	>250	0.2	0.3
14A0212/027	11C	>1000	0.1	2	>250	0.2	0.2
14A0212/028	11D	>1000	0.1	7	>250	0.3	0.2
14A0212/029	12A	>1000	0.1	8	>250	0.3	0.2
14A0212/030	12B	>1000	0.1	7	200	0.1	0.4
14A0212/031	12C	>1000	0.1	2	>250	1.0	0.3
14A0212/032	13A	>1000	0.1	5	>250	0.1	0.2
14A0212/033	13B	>1000	0.1	7	>250	0.3	0.5
14A0212/034	13C	>1000	0.1	23	>250	0.2	0.1
14A0212/035	14A	440	0.1	17	240	0.3	0.2
14A0212/036	14B	>1000	0.1	2	>250	<0.1	0.3
14A0212/037	14C	>1000	0.1	4	>250	<0.1	0.4
14A0212/038	15A	900	0.1	18	160	0.1	0.2
14A0212/039	15B	>1000	0.1	8	160	0.6	0.3
14A0212/040	15C	>1000	0.1	31	>250	0.5	0.3
14A0212/041	16A	>1000	0.2	12	>250	0.3	0.4
14A0212/042	16B	>1000	0.1	5	>250	3.2	0.3
14A0212/043	17A	>1000	0.1	1	>250	0.2	0.3
14A0212/044	17B	>1000	0.1	3	>250	0.2	0.1
14A0212/045	18A	>1000	0.2	10	>250	0.4	0.4
14A0212/046	19A	950	0.1	1	120	<0.1	0.2
14A0212/047	19B	850	0.1	2	150	0.3	0.1
14A0212/048	19C	>1000	0.2	1	140	0.7	0.2
14A0212/049	21A	>1000	0.8	5	>250	1.8	0.1
14A0212/050	21B	350	0.2	1	120	0.3	0.1
14A0212/051	27A	>1000	0.2	14	180	0.2	0.1
14A0212/052	28A	370	0.1	12	140	0.6	0.2

Analyte		Pb	Se	Gypsum	Salt	Ca	CaCO3
Method		(M3)	(M3)	calcS	calcNa	(ICPg)	(ICPg)
Unit		mg/kg	mg/kg	%	%	%	%
Lab ID	Client ID						
14A0212/001	01A	0.3	0.1	2.7	0.7	29.0	70.7
14A0212/002	01B	0.2	<0.1	1.9	0.5	28.1	69.1
14A0212/003	01C	0.4	0.1	1.3	0.7	27.9	69.0
14A0212/004	02A	0.2	0.2	1.0	0.7	30.9	76.6
14A0212/005	02B	0.2	0.1	1.0	0.6	30.7	76.0
14A0212/006	02C	0.2	0.1	1.6	1.6	27.1	66.7
14A0212/007	02D	0.2	0.2	1.4	1.5	28.7	70.9
14A0212/008	03A	0.3	0.3	1.4	1.0	26.6	65.7
14A0212/009	03B	0.3	0.1	1.1	0.9	28.5	70.5
14A0212/010	04A	0.2	0.1	1.0	0.6	24.5	60.8
14A0212/011	06A	0.4	0.1	3.3	4.2	28.4	69.0
14A0212/012	06A East	0.3	0.3	1.4	0.6	30.3	74.8
14A0212/013	06B East	0.3	<0.1	2.5	1.9	27.9	68.3
14A0212/014	06C East	0.5	<0.1	2.6	3.7	20.5	49.6
14A0212/015	06D East	0.5	0.2	2.9	2.3	26.3	64.0
14A0212/016	07A	<0.1	0.3	<1.0	0.5	0.9	2.0

Analyte Method Unit		Pb (M3) mg/kg	Se (M3) mg/kg	Gypsum calcS %	Salt calcNa %	Ca (ICPg) %	CaCO3 (ICPg) %
Lab ID	Client ID						
14A0212/017	08A	0.3	0.1	41	6.0	20.8	28.2
14A0212/018	08B	0.2	0.1	4.0	1.2	29.5	71.4
14A0212/019	08C	0.4	0.1	18	1.0	26.2	55.1
14A0212/020	09A	4.1	0.2	29	3.0	26.0	48.1
14A0212/021	09B	1.2	0.2	4.0	1.1	30.2	73.1
14A0212/022	09C	0.9	0.1	1.5	0.8	30.9	76.4
14A0212/023	09D	0.5	0.2	12	1.4	24.2	53.5
14A0212/024	10A	1.7	0.2	<1.0	0.5	0.8	1.9
14A0212/025	11A	0.4	0.1	1.1	0.7	30.0	74.3
14A0212/026	11B	0.5	0.2	1.3	1.0	24.9	61.5
14A0212/027	11C	2.2	0.2	1.5	1.0	24.7	60.8
14A0212/028	11D	0.3	0.2	1.1	1.0	26.5	65.6
14A0212/029	12A	0.4	0.2	1.5	1.2	24.8	61.0
14A0212/030	12B	0.3	0.2	1.0	0.8	28.2	69.8
14A0212/031	12C	0.3	0.3	1.7	2.2	27.1	66.7
14A0212/032	13A	0.5	0.2	1.1	1.1	27.2	67.2
14A0212/033	13B	0.2	0.1	1.0	1.1	17.3	42.6
14A0212/034	13C	0.4	0.1	1.0	0.9	27.8	68.9
14A0212/035	14A	0.5	0.1	1.0	0.5	27.2	67.4
14A0212/036	14B	0.3	0.2	1.6	0.7	26.7	65.8
14A0212/037	14C	0.4	0.2	1.1	0.7	23.0	56.8
14A0212/038	15A	0.4	0.1	1.0	0.7	29.6	73.3
14A0212/039	15B	0.6	0.1	1.0	0.9	26.4	65.4
14A0212/040	15C	0.7	0.1	1.2	1.5	24.3	60.0
14A0212/041	16A	10.1	0.1	2.9	1.1	22.6	54.8
14A0212/042	16B	0.6	0.2	2.2	2.4	27.3	66.9
14A0212/043	17A	0.4	0.2	16	3.4	25.1	53.3
14A0212/044	17B	0.5	0.1	9.1	0.9	29.5	68.4
14A0212/045	18A	0.7	0.3	1.2	1.4	27.3	67.6
14A0212/046	19A	0.1	<0.1	1.0	0.6	30.6	76.1
14A0212/047	19B	0.1	<0.1	1.0	0.4	32.4	80.5
14A0212/048	19C	0.2	0.1	1.0	0.6	31.0	76.9
14A0212/049	21A	0.9	<0.1	1.0	0.8	19.6	48.4
14A0212/050	21B	0.2	0.1	1.0	0.5	26.7	66.2
14A0212/051	27A	0.4	<0.1	1.0	0.8	27.3	67.7
14A0212/052	28A	0.4	<0.1	1.1	0.6	27.6	68.4

Analyte Method Unit		Mg (ICPg) %	MgCO3 (ICPg) %	Na (ICPg) %	S (ICPg) %	>0.075mm Sieve %
Lab ID	Client ID					
14A0212/001	01A	1.9	6.7	0.3	0.5	78.8
14A0212/002	01B	1.5	5.3	0.2	0.3	96.5
14A0212/003	01C	1.5	5.4	0.3	0.2	92.6
14A0212/004	02A	1.7	5.8	0.3	0.2	92.8
14A0212/005	02B	1.5	5.3	0.2	0.2	93.2
14A0212/006	02C	3.8	13.3	0.6	0.3	41.4
14A0212/007	02D	2.8	9.6	0.6	0.3	62.2
14A0212/008	03A	1.9	6.6	0.4	0.3	75.4

Analyte Method Unit		Mg (ICPg) %	MgCO3 (ICPg) %	Na (ICPg) %	S (ICPg) %	>0.075mm Sieve %
Lab ID	Client ID					
14A0212/009	03B	2.2	7.5	0.3	0.2	86.7
14A0212/010	04A	1.3	4.6	0.2	0.2	93.3
14A0212/011	06A	1.6	5.5	1.7	0.6	33.7
14A0212/012	06A East	1.6	5.5	0.2	0.3	94.7
14A0212/013	06B East	2.7	9.2	0.8	0.5	66.1
14A0212/014	06C East	1.9	6.7	1.5	0.5	59.9
14A0212/015	06D East	3.5	12.1	0.9	0.5	23.5
14A0212/016	07A	0.5	1.7	0.2	0.1	
14A0212/017	08A	2.7	9.3	2.4	7.6	42.6
14A0212/018	08B	1.4	4.8	0.5	0.7	90.8
14A0212/019	08C	1.6	5.4	0.4	3.3	76.7
14A0212/020	09A	1.7	5.9	1.2	5.4	67.6
14A0212/021	09B	1.9	6.6	0.4	0.7	86.8
14A0212/022	09C	1.6	5.4	0.3	0.3	88.4
14A0212/023	09D	3.4	11.7	0.6	2.2	58.6
14A0212/024	10A	0.3	1.0	0.2	0.1	
14A0212/025	11A	1.6	5.4	0.3	0.2	89.4
14A0212/026	11B	3.1	10.9	0.4	0.2	50.1
14A0212/027	11C	3.8	13.3	0.4	0.3	45.6
14A0212/028	11D	2.3	7.9	0.4	0.2	70.2
14A0212/029	12A	4.1	14.2	0.5	0.3	43.6
14A0212/030	12B	2.0	7.0	0.3	0.2	78.8
14A0212/031	12C	2.3	8.0	0.9	0.3	66.2
14A0212/032	13A	2.4	8.3	0.4	0.2	25.3
14A0212/033	13B	6.8	23.6	0.4	0.2	23.9
14A0212/034	13C	1.3	4.6	0.3	0.2	78.6
14A0212/035	14A	1.3	4.6	0.2	0.2	73.9
14A0212/036	14B	3.5	12.2	0.3	0.3	37.3
14A0212/037	14C	4.7	16.4	0.3	0.2	17.8
14A0212/038	15A	1.3	4.6	0.3	0.2	82.6
14A0212/039	15B	2.8	9.6	0.3	0.2	73.9
14A0212/040	15C	2.2	7.6	0.6	0.2	79.8
14A0212/041	16A	3.1	10.6	0.5	0.5	25.3
14A0212/042	16B	1.0	2.9	0.9	0.4	67.8
14A0212/043	17A	2.2	7.8	1.4	3.0	28.9
14A0212/044	17B	1.6	5.7	0.3	1.7	62.8
14A0212/045	18A	1.5	5.1	0.6	0.2	36.2
14A0212/046	19A	1.1	3.8	0.2	0.1	39.3
14A0212/047	19B	1.0	3.1	0.2	0.2	39.6
14A0212/048	19C	1.1	3.8	0.2	0.2	46.5
14A0212/049	21A	1.3	4.4	0.3	0.1	73.2
14A0212/050	21B	1.7	5.9	0.2	0.1	96.1
14A0212/051	27A	2.2	7.5	0.3	0.2	90.2
14A0212/052	28A	2.5	8.7	0.2	0.2	84.4

Analyte	Method	Description
EC	(1:5)	Electrical conductivity of 1:5 soil extract at 25 C by in-house method S02
pH	(CaCl2)	pH of 1:5 soil extract in 0.01M CaCl2 by in-house method S03
S	(ICPg)	Sulphur, S by ICPAES method P14
Na	(ICPg)	Sodium, Na by ICPAES method P14
Mg	(ICPg)	Magnesium, Mg by ICPAES method P14
MgCO3	(ICPg)	%MgCO3: Calculated from magnesium, soluble in 1M HCl, expressed on an air dried basis
Ca	(ICPg)	Calcium, Ca by ICP method P14
CaCO3	(ICPg)	%CaCO3: Calculated from calcium, soluble in 1M HCl, expressed on an air dried basis
Cd	(M3)	Cadmium, Cd extracted by Mehlich No 3 - method S42
Co	(M3)	Cobalt, Co extracted by Mehlich No 3 - method S42
Cu	(M3)	Copper, Cu extracted by Mehlich No 3 - method S42
Ca	(M3)	Calcium, Ca extracted by Mehlich No 3 - method S42
Al	(M3)	Aluminium, Al extracted by Mehlich No 3 - method S42
As	(M3)	Arsenic, As extracted by Mehlich No 3 - method S42
B	(M3)	Boron, B extracted by Mehlich No 3 - method S42
Mn	(M3)	Manganese, Mn extracted by Mehlich No 3 - method S42
Mo	(M3)	Molybdenum, Mo extracted by Mehlich No 3 - method S42
Fe	(M3)	Iron, Fe extracted by Mehlich No 3 - method S42
K	(M3)	Potassium, K extracted by Mehlich No 3 - method S42
Mg	(M3)	Magnesium, Mg extracted by Mehlich No 3 - method S42
P	(M3)	Phosphorus, P extracted by Mehlich No 3 - method S42
Pb	(M3)	Lead, Pb extracted by Mehlich No 3 - method S42
Na	(M3)	Sodium, Na extracted by Mehlich No 3 - method S42
Ni	(M3)	Nickel, Ni extracted by Mehlich No 3 - method S42
S	(M3)	Sulphur, S extracted by Mehlich No 3 - method S42
Se	(M3)	Selenium, Se extracted by Mehlich No 3 - method S42
Zn	(M3)	Zinc, Zn extracted by Mehlich No 3 - method S42
N	(total)	Nitrogen N, total by method S10
OrgC	(W/B)	Organic Carbon C, Walkley and Black method S09.
Salt	calcNa	Salt, NaCl calculated from Na determined by method P14
Gypsum	calcS	Gypsum, CaSO4.2H2O calculated from S determined by method P14
Clay.	fraction	Clay, less than 0.002mm by method S06. ref. Australian Standard AS1289.C6.3
Sand.	fraction	Sand, 0.02 to 2.0mm by method S06. ref. Australian Standard AS1289.C6.3
Silt.	fraction	Silt, 0.02 to 0.002mm by method S06. ref. Australian Standard AS1289.C6.3
>0.075mm	Sieve	0.075mm - 0.106mm fraction by wet sieving, method S07

The results apply only to samples as received. This report may only be reproduced in full.

Unless otherwise advised, the samples in this job will be disposed of after a holding period of 30 days from the report date shown below. Notes on Gypsum Analysis:

It is not possible to analyse directly for gypsum, which is the chemical compound $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$. Samples are analysed for sulphur, S, and gypsum is then calculated from this, with the assumption that all the sulphur is present in the sample as gypsum.

It is also possible to calculate the gypsum content from the calcium, Ca, content. However, some samples may contain calcium from both gypsum and lime, CaCO_3 , and these would give a higher result for gypsum calculated from calcium than for gypsum calculated from sulphur.

Although not common, there may also be sulphur present in the sample from a source other than gypsum, for example the mineral alunite, $\text{KAl}_3(\text{SO}_4)_2(\text{OH})_6$. If gypsum is calculated from sulphur, an incorrect high result is obtained, and a more accurate result is obtained from calcium.

The conversion factors are:

% gypsum = % sulphur, S $\times$ 5.37

% gypsum = % calcium, Ca $\times$ 4.30

(To calculate sulphur from gypsum, divide the gypsum content by 5.37).

Gypsum containing more than 2% sodium chloride may cause problems if used for agricultural purposes. You are advised to discuss this matter with your local Department of Agriculture adviser.

Multi-Element Soil Extraction
Universal Extractants (Mehlich No.3)

The Mehlich No.3 Test is an alternate soil test using universal extractants for multi-elemental analysis. Results obtained using the Mehlich 3 extractant are highly correlated with the standard "single element" soil tests currently used for a wide range of Western Australian soil types. The test provides information on the amount of plant-available nutrients including phosphorus, potassium, sulphur, calcium, magnesium, sodium, boron, copper, iron, manganese and zinc, in the soil. It can be used as a "screening" tool (see note below) to measure concentrations of cobalt, aluminium, molybdenum and toxic metals such as cadmium, lead, arsenic, selenium and nickel in soil. It is ideally suited to acid and neutral soils, the amounts of nutrients extracted being similar to those of other soil tests used in WA.

*Results that are reported as ">" are outside the linear range of the calibration and outside the scope of the method. This results should only be used as a guide and consideration should be given to a more specific test method if the actual "value" need to be determined, hence these results should only be used as a guide.

Bolland, Allen & Walton. Aust J Soil Research 2002.

Soil Chemical Methods, Australasia (Rayment & Lyons) 2010



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