Australasian Soil and Plant Analysis Council Inc.

ASPAC Plant Proficiency Testing Program Report

2007-08

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Foreword

This annual report is the fifth in the upgraded inter-laboratory proficiency program (ILPP) for plant chemical tests, the first being the 2004-2005 report. It covers three "rounds" each of four specially prepared samples sent to as many as 41 participants in November 2007, in February 2008 and in April 2008. A similar annual program for soils (reported separately) operated over the same time period.

Members of ASPAC's Laboratory Proficiency Committee, the membership of which is listed on page iv of this report, oversaw the program. The ASPAC Executive is grateful to all of those who contributed to the report, inclusive of staff of Proficiency Services Limited (now called Global Proficiency Ltd), our service provider in New Zealand.

The ASPAC Executive also appreciates the effort and commitment made by participating laboratories. By participating they share a commitment to and responsibility for measurement quality.

Ms Teresa Fowles
ASPAC Chairperson

Acknowledgements

LandCare Research (New Zealand) is thanked for the sample homogeneity testing they undertook for who are now Global Proficiency Ltd (GPL). Operational staff of GPL are thanked for their inputs.

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Contents

Page

Your Notes

1. Introduction

The Australasian Soil and Plant Analysis Council Inc (ASPAC) commenced its not-for-profit ILPPs and issued its first soil program report in 1993. Its ILPPs specifically target soil and plant chemical laboratories in the Australasian region, although there are no restrictions on who can participate. A service provider operates the programs for ASPAC under contract.

ILPPs support ASPAC's overall goals to:

- promote excellence in all aspects of soil and plant analysis
- encourage and promote the adoption of preferred methods and protocols used in soil and plant analysis within Australasia.

More details on ASPAC can be obtained from its public web site at www.aspac-australasia.com. The site includes ASPAC's Strategic Plan and the names of its elected and appointed office holders.

Published ASPAC plant ILPP reports are dated 1994, 1996, 1998, 1999, 2000, 2001, 2002, 2004-05, 2005-06 and 2006-07 in chronological order of completion. All to and including 2002 were conducted and reported through an Australian provider as discrete entities, based on six homogeneous samples of dried and ground plant materials and subsequent laboratory analysis for a comprehensive range of plant chemical tests, mostly for total elements.

This is the fourth annual report from ASPAC's new, upgraded plant ILPP that commenced in 2004 and now operates out of New Zealand through PSL. The program is a composite of three "rounds", each of four homogeneous samples of dried and ground plant materials. Laboratory participants (Appendix 1) receive individual electronic progress reports of their results (relative to other participating laboratories) for all tests performed in each of these "rounds". They also receive from the service provider a consolidated, individual annual summary report on their measurement performance relative to others.

This annual program report consolidates (for ASPAC members and the public record) the three "rounds" that occurred in November 2007, in February 2008 and in April 2008. It also records program methodology, summary statistics, and a listing of "raw" data by test and laboratory for the three "rounds". In addition, the report includes an outline of how ASPAC periodically confers performance-based, method-specific certification to laboratories that regularly participate. To respect confidentiality, the cross-reference between laboratory name and laboratory identification number is not included. However, ASPAC's public web site lists the laboratories certified as proficient for specific tests for the most recently completed program year. ASPAC is committed to update information on certified tests and certifications for participating laboratories soon after completion of each annual program for both plants and soils.

2. Program Details

2.1 Responsibilities

PSL was contracted by ASPAC as the plant ILPP provider for 2007-08. Accordingly, PSL had responsibility on a "round-by round" basis for sourcing and preparing samples and for the timely supply of samples to participating laboratories. They also undertook data collation and statistical analysis and "round-by-round" reporting for ASPAC and assembled the summary and "raw" data provided in Section 3 and Appendix 4, respectively. PSL is a proficiency service provider accredited to *ISO Guide 43-1 Part 1: "Development and operation of proficiency testing schemes*".

Members of ASPAC's LPC had responsibility to implement and resolve matters of policy and to provide guidance on technical matters specific to soil and plant chemical testing both to PSL and to laboratory participants. The LPC also undertook statistical checks and audits for quality control purposes, participated in a Technical Advisory Group operated by PSL, and contributed to training workshops. ASPAC, through members of its LPC or via its state representatives, may contact managers of laboratories with poor analytical performance to ensure a measurement improvement program is commenced. Laboratories are encouraged to seek help from ASPAC if they are shown to be operating at levels of measurement performance below their peers.

Participants receive a unique, confidential laboratory number, subsequently used to identify the origin of each result presented in program reports and lists of results. Typically, this identification number carries forward from one annual program to the next, although there are exceptions.

2.2 Plant program participation

Forty-one laboratories arranged to participate in the ASPAC plant ILPP in 2007-08, but numbers of reported results varied by "round" and plant test. The most commonly reported test with an average of 35 laboratories across the three "rounds" were calcium (Ca), magnesium (Mg) and potassium (K), with sodium (Na) and phosphorus (P) on 34, and copper (Cu), iron (Fe), manganese (Mn) and zinc (Zn) on 33. The least frequently reported tests were silicon (Si), selenium (Se), lead (Pb), and cadmium (Cd), with averages of 6, 10, 12 and 13 laboratories, respectively. There was a noticeable increase (1-3) in the number of laboratories reporting the ultra-traces Cd, Co, Pb and Mo compared to previous years. The counts for each test and sample are given in Table 1 and in Section 3.

Contact details for laboratories that submitted results for any test in one or more of the three rounds are provided in Appendix 1.

2.3 Tests and methods

Three proficiency "rounds" for plant materials – each comprising four samples of <0.5mm particle size – were offered for the 2007-08 program. Participants were invited to analyse each sample using methods normally employed in their laboratory. The number of tests was limited to 21 as in 2006-07, and are as listed in Table 1, noting that participants were not obliged or required to submit results for all tests. In order to permit a meaningful statistical analysis, a minimum of six participating laboratories was required for any one test.

Table 1. Plant tests (total elements), elemental symbols, units and the arithmetic average numbers of results per round submitted by participating laboratories in the ASPAC 2007-08 Plant ILPP

2007-08 Plant tests	Symbol	Units	Number of participants		
			Nov 07	Feb 08	Apr 08
Aluminium	Al	mg/kg	25	22	23
Boron	B	mg/kg	29	28	28
Cadmium	Cd	mg/kg	15	11	12
Calcium	Ca	%	36	33	35
Carbon	C	%	16	16	16
Chloride	Cl	%[A]	21	18	19
Cobalt	Co	mg/kg	20	18	17

2007-08 Plant tests	Symbol	Units	Number of participants		
			Nov 07	Feb 08	Apr 08
Copper	Cu	mg/kg	34	30	33
Iron	Fe	mg/kg	34	30	32
Lead	Pb	mg/kg	13	11	11
Magnesium	Mg	%	36	33	36
Manganese	Mn	mg/kg	35	31	32
Molybdenum	Mo	mg/kg	23	20	18
Nitrogen	N	%	32	32	31
Phosphorus	P	%	35	32	34
Potassium	K	%	36	32	36
Selenium	Se	mg/kg	13	9	8
Silicon	Si	%	7	6	6
Sodium	Na	%	35	32	34
Sulfur	S	%	30	29	27
Zinc	Zn	mg/kg	35	31	33

[A] Units of mg/kg are preferred for concentrations < 0.01%

All of the listed tests were understood to be true total concentrations in the plant material and reported on a 65°C oven dry basis, not on an "as received" basis. However it is possible that Al, Fe and Si results may only reflect total acid digestible concentrations and not recover refractory forms of these analytes.

2.4 Sample preparation and identification

Before distribution to participants, potential samples were assessed for homogeneity. Specifically, 10 containers of each sample were selected at random from the sub-sampled batch according to the principles described by Thompson and Wood (1993)[1]. These sub-samples were then tested in duplicate for plant total N, using Dumas combustion. The tests were conducted in an ISO 17025 accredited laboratory.

Results from the homogeneity testing were subsequently statistically assessed according to ISO REMCO Protocol N231 "*Harmonised Proficiency Testing Protocol*" of January 1992. Variations between samples were such that all sample batches were considered to meet homogeneity criteria suited to proficiency testing. Examples of the homogeneity data and statistical assessments are summarised in Appendix 2.

In addition to testing for homogeneity, the plant samples were irradiated or otherwise rendered biologically benign to comply with international and/or national biosecurity regulations or requirements[2].

[1] Thompson, M and Wood, R. (1993). International harmonized protocol for proficiency testing of (chemical) analytical laboratories. *Journal of AOAC International* ***76*** (4), 926 – 940.

[2] Rayment, G.E (2006). Australian efforts to prevent the accidental movement of pests and diseases in soil and plant samples. *Commun. Soil Sci. Plant Anal.,* **37**, 2107-2117.

Ultimately, the samples used in the three "rounds" of the 2007-08 program were distributed and coded as follows: November 2007 – ASP 101-104; February 2008 – ASP 11-14; and April 2008 – ASP 41-44. The association between sample code and sample type is provided in Table 2.

Table 2. Sample identification numbers and sample types included in the ASPAC 2007-08 plant ILPP

Sample ID	*Sample Type*	*Origin*
ASP 101	Lucerne Hay	NZ
ASP 102	Maize Meal	NZ
ASP 103	Split Peas	NZ
ASP 104	Pine Needles	NZ
ASP 11	Eucalyptus Leaves	NZ
ASP 12	Grape Petiole	North America
ASP 13	Wheat	NZ
ASP 14	Hay	North America
ASP 41	Whole Oats	NZ
ASP 42	Red Lentils	NZ
ASP 43	Peavine & Clover	NZ
ASP 44	Meadow Mix	NZ

2.5 Data analysis and periodic reporting

Laboratory results, after submission to PSL, were entered into a database and independently checked for data transfer accuracy prior to data processing. The non-parametric assessment of laboratory performance for each sample and method was performed by an iterative statistical procedure similar to that used in WEPAL inter-laboratory proficiency programs of Wageningen University. This procedure[3,4] is suited to datasets of as few as six to eight laboratories, although larger laboratory populations are best. An outline of the "median / MAD" statistical procedure is provided in Appendix 3, with terms described in Table 3.

[3] Rayment, G.E., Miller, R.O. and Sulaeman, E. (2000). Proficiency testing and other interactive measures to enhance analytical quality in soil and plant laboratories. *Commun. Soil Sci. Plant Anal.* ***31***, 1513-1530.

[4] Whitehouse, M.W. (1987). Medians and MADs - Statistical methodology used at Wageningen, The Netherlands, for interlaboratory comparisons in the plant exchange program. Ag. Chem. Br. Report, ACU87/36. 10 pp. (Qld Dept. Primary Ind., Brisbane.)

Table 3. Statistical terms and their meanings in the context of this ASPAC annual report

Statistical term	*Meaning and/or derivation*
Count or number	Original population size.
Maximum i	The highest of a range of values, based on the initial data set.
Minimum i	The lowest of a range of values, based on the initial data set.
Median	The median is the score at the 50th percentile. It is the middle observation of a sequentially sorted array of numbers, except in the case of an even sample size. Here it is the arithmetic mean of the two observations in the middle of the sorted array of observations. The median of a reasonably sized array of numbers is insensitive to extreme scores.
Mean[A]	The arithmetic mean (or average) is the sum of the values of a variable divided by their number. It represents the point in a distribution of measurements about which the summed deviations equals zero. The arithmetic mean is sensitive to extreme measurements.
MAD	The Median of the Absolute Deviations, calculated as the median of the absolute values of the observations minus their median.
Interquartile range (IQR)	This is calculated by subtracting the score at the 25th percentile (referred to as the first quartile; Q_1) from the score at the 75th percentile (the third quartile; Q_3). This value is affected by the assumptions made in the calculation of the first and third quartiles, particularly for low population sizes. Moreover, these differences exist within and across statistical software packages. Prior to the 2004-05 rounds, ASPAC used the algorithm employed by EXCEL and some others. From the 2004-05 program, the algorithm employed has been that of SAS Method 4[5]. In summary, IQR = Q_3-Q_1.
Normalized IQR	This equates to IQR x 0.7413, where the latter is a normalizing factor.
Robust % CV[6]	The robust coefficient of variation (Robust % CV) = (100 x normalised IQR / median). For simplicity, the Robust %CV shown is for the initial results, and for "final" population of results for a test after the removal of "outliers" and perhaps "stragglers", usually following one or two iterations. Note that for Interim Reports, this term is estimated as = (100*MAD*1.483)/ Median, separately for "i" and "f" datasets.
Letter "i" and the letter "f" associated with medians, means, MADs, IQR and Robust %CVs.	The letter "i" relates to the initial data set. The letter "f" relates to the "final" data set, generated after one or two iterations typically after removal of laboratories with statistical "outliers" (if any), and statistical "stragglers" (if any).

A When the mean is greater than the median, the distribution is positively skewed. When the mean is lower than the median, the distribution is negatively skewed.

5 SAS Procedure Guide

6 "Guide to NATA Proficiency Testing". 27 pp. (National Association of Testing Authorities, Australia, December 1997).

In addition to medians and MADs, other statistical parameters (also described in Table 3) were calculated before and following the omission of non-conforming results. The "raw" data submitted by participating laboratories on a test-by-test basis are documented in Appendix 4, sometimes after rounding only for table formatting purposes.

Results submitted by each laboratory were expected to have three significant figures, unless protocol or common sense dictated otherwise. For example, the program accepted data where it was common to report measured concentrations to the nearest second decimal point, such as 0.01 mg/kg or 0.01 %, rather than to three significant figures. However, the program (like others internationally) did not accept as a numeric value a result reported as less than (<) or greater than (>) a specified number. In cases where the expected value was below the laboratory's lower limit of reporting, the expectation was that the laboratory would report a value half way between that value and zero. For high values, dilution was the expected option.

Interim reports for each "round", summarizing measurement performance relative to the performance of all laboratories that undertook the same test/s, were routinely and quickly emailed to participants. The main purpose of these Interim Reports was to provide timely feedback and to enable laboratories to take prompt remedial action where appropriate. Interim reports also provided an opportunity to correct for any data-transfer and data-processing misinterpretations. In addition, a Newsletter from the service provider went to all participating laboratories. Its main purpose was to assist in the interpretation of interim reports. Also included in the Service-providers Newsletter was information about upcoming events and operational administration of the program.

Laboratories that participated in the 2007-08 plant ILPP all received from PSL (on behalf of ASPAC) a laboratory specific, confidential, Annual Summary Report. Each laboratory's data for the 12 plant samples, the aggregate data from all participants, other relevant statistical data, and whether or not the test/s received ASPAC Certification (if applicable), were provided. The laboratory code number was included.

2.6 ASPAC's criteria for certification of laboratories for plant tests

Subject to satisfactory measurement performance typically for 12 samples across three sequential "rounds", across a twelve-month period, ASPAC awards participating laboratories with a printed, signed and dated *Certificate of Proficiency.* The *Certificate of Proficiency* identifies performance for each test that met criteria set by ASPAC. Certification applies when a laboratory incurs no more than <u>four</u> demerit points for the 12 samples.

Demerit points (if any) were allocated through the identification of "outliers" and "stragglers" by the "median / MAD" statistical procedure mentioned earlier in this report. Appendix 3 provides details on how outliers and stragglers were identified. Two demerit points were allocated to each statistical "outlier", while a statistical "straggler" was allocated one demerit point. As no sample result could be both an "outlier" and a "straggler", a maximum of two demerit points is all that could accrue per sample for a specific test.

For any single "round" of four samples, three (3) was set as the maximum number of demerit points for a specific test. This was done so that unsatisfactory measurement for a test in one "round" did not in itself result in failure to be certified for that test across the three "rounds" in the designated 12-month period.

If a "round" was missed, the maximum number of three demerit points for every test in that "round" was allocated, unless very special circumstances applied and was known or advised expeditiously to ASPAC's LPC

through its Convenor. When the explanation was accepted, performance from the three most recently completed “rounds” was used to assess eligibility for certification.

Finally, when less than six laboratories submitted results for a particular test and/or sample, proficiency assessments could not be made statistically with an acceptable level of confidence and hence certification for the specific tests could not be granted.

ASPAC’s *Certificates of Proficiency* are only issued on completion of each annual program of three “rounds”. Nowadays, ASPAC provides details of certified laboratories by test on its public web site. Certifications obtained in the 2007-08 Plants’ program remain valid until superseded by findings from the corresponding 2008-09 ILPP.

3. Summary Statistics

This section (continued overleaf) provides summary information and data (sometimes rounded only for table formatting purposes) on a test-by-test basis (alphabetical) for each of the 12 samples used across three “rounds” in 2007-08. The tabulations include values relevant to the iterative “median / MAD” procedure plus other parametric and robust statistics. For the meaning or derivation of the terms used in the tabulated summaries, see Table 3 and Appendix 3. All data are expressed on a dry weight basis.

2007-08: Aluminium (mg Al/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	25	25	25	25	22	22	22	22	23	23	23	23
Minimum i	15.5	0.75	1.13	202	59.3	42.7	7.11	53.1	10	5.79	499	98.9
Maximum i	78	63	60	312	118	105	39.6	98.1	223	183	960	438
Median i	26	6.81	10.5	279	84.85	63.3	19.85	76.4	14.2	8.6	702	146
Mean i	31.4	9.18	13	272	86.2	65.2	21.4	77.2	25	18.5	702	159
MAD i	6.8	4.99	3.77	18	5.95	8.35	2.65	6.4	2.2	2.38	69	14
IQR i	9.79	6.37	5.63	28.8	10.2	14	5.76	11.2	4.82	5.26	119	17.9
Robust CV% i	38	94	54	10	12	22	29	15	34	61	17	12
Median f	25.7	4.05	9.46	281	83.6	61.8	19.7	76.4	13.4	8.57	702	144
Mean f	26.9	5.44	10.4	278	84.3	63.3	19.9	77.2	13.8	9.05	702	146
MAD f	5.51	3.14	3.46	15	4.4	6.6	2.2	6.4	1.4	2.07	69	13.2
IQR f	8.62	4.83	4.8	25.9	8.67	11.9	3.37	11.2	2.8	3.18	119	18.9
Robust CV% f	34	120	51	9.2	10	19	17	15	21	37	17	13
Outliers	3	1	2	1	3	1	4	0	4	3	0	1
Stragglers	0	2	0	1	0	0	0	0	1	0	0	0

2007-08: Boron (mg B/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	29	29	29	29	28	28	28	28	27	28	28	28
Minimum i	1.59	0.2	0.746	1.64	16.1	27.1	0.422	5.32	0.001	1.18	8.9	4.32
Maximum i	49.8	39.9	34.5	55.2	39.2	84	15.3	41.9	9.16	11.3	24	8020
Median i	16.1	2	7.41	16	21.5	41.6	3.1	17.8	2.24	4.88	13.8	9.88
Mean i	17.4	3.93	8.91	18.4	21.8	42.5	4.14	18.1	2.63	4.87	13.8	296
MAD i	1.1	0.89	0.84	1.3	1.55	2.95	0.81	1.2	0.56	0.90	1.33	1
IQR i	1.58	1.82	1.92	2.44	2.19	3.97	1.27	2.04	0.87	1.46	1.82	1.51
Robust CV% i	9.8	91	26	15	10	9.5	41	11	39	30	13	15
Median f	16	1.66	7.2	15.8	21.3	41.7	2.93	17.9	2.23	4.88	13.8	9.82
Mean f	15.8	1.74	7.16	16.2	20.9	41.9	2.89	17.6	2.2	4.76	13.2	9.81
MAD f	0.6	0.54	0.61	1.2	1.3	2.4	0.64	1.1	0.46	0.87	1.2	0.78
IQR f	0.94	0.81	1.02	1.74	1.89	3.56	0.98	1.78	0.68	1.26	1.7	1.35
Robust CV% f	5.9	49	14	11	8.9	8.5	33	10	31	26	12	14
Outliers	4	4	6	4	2	2	4	4	3	2	1	4
Stragglers	5	2	1	0	0	1	0	0	1	0	1	1

2007-08: Cadmium (mg Cd/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	15	14	15	15	11	11	11	11	12	12	12	12
Minimum i	0.026	0.001	0.004	0.189	0.011	0.057	0.03	0.054	0.0001	0.001	0.034	0.001
Maximum i	0.8	0.9	0.4	0.3	0.091	0.195	0.118	0.247	15.4	18.7	23.9	50.3
Median i	0.068	0.010	0.015	0.242	0.034	0.165	0.101	0.221	0.008	0.008	0.066	0.033
Mean i	0.114	0.0763	0.043	0.246	0.036	0.154	0.092	0.198	1.29	1.58	2.05	4.22
MAD i	0.012	0.008	0.006	0.026	0.009	0.021	0.013	0.008	0.006	0.003	0.01	0.013
IQR i	0.017	0.014	0.015	0.037	0.016	0.053	0.028	0.04	0.011	0.006	0.019	0.022
Robust CV% i	25	150	99	15	46	32	28	18	130	74	29	67
Median f	0.067	0.003	0.011	0.242	0.033	0.168	0.102	0.223	0.007	0.008	0.064	0.031
Mean f	0.065	0.007	0.011	0.246	0.031	0.164	0.098	0.224	0.010	0.008	0.066	0.026
MAD f	0.011	0.002	0.003	0.026	0.007	0.018	0.012	0.004	0.006	0.002	0.007	0.010
IQR f	0.017	0.008	0.005	0.037	0.013	0.03	0.020	0.007	0.008	0.004	0.015	0.021
Robust CV% f	25	270	40	15	39	18	20	3.1	120	51	23	67
Outliers	1	2	2	0	1	1	1	3	1	2	1	2
Stragglers	0	1	3	0	0	0	0	0	0	0	0	0

2007-08: Calcium (%Ca)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	36	36	36	36	33	33	33	33	35	35	35	35
Minimum i	1.15	0.0001	0.008	0.188	0.7	1.36	0.07	1.15	0.014	0.002	0.795	0.44
Maximum i	1.576	0.044	0.405	2.24	1.02	2.18	0.25	1.55	0.79	0.311	9.04	4.50
Median i	1.35	0.004	0.046	0.246	0.829	1.65	0.153	1.37	0.073	0.032	0.904	0.537
Mean i	1.34	0.008	0.054	0.301	0.834	1.65	0.152	1.37	0.095	0.041	1.14	0.661
MAD i	0.065	0.002	0.003	0.014	0.044	0.08	0.009	0.066	0.005	0.002	0.046	0.033
IQR i	0.094	0.005	0.0043	0.020	0.063	0.119	0.016	0.099	0.007	0.004	0.06	0.050
Robust CV% i	7	130	9.3	8.2	7.6	7.2	10	7.2	9.1	11	6.6	9.2
Median f	1.35	0.003	0.046	0.246	0.828	1.65	0.153	1.37	0.073	0.032	0.903	0.534
Mean f	1.34	0.003	0.046	0.248	0.828	1.63	0.153	1.37	0.073	0.031	0.904	0.54
MAD f	0.065	0.001	0.002	0.011	0.044	0.075	0.007	0.066	0.004	0.002	0.042	0.031
IQR f	0.094	0.001	0.001	0.016	0.063	0.117	0.011	0.099	0.006	0.002	0.064	0.047
Robust CV% f	7	39	8.1	6.3	7.7	7.1	7.4	7.2	8.3	7.9	7.1	8.8
Outliers	0	9	4	4	1	1	3	0	6	10	2	2
Stragglers	0	2	1	1	0	0	0	0	1	0	0	0

2007-08: Carbon (%C)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	16	16	16	16	16	16	16	16	16	16	16	16
Minimum i	29.6	24.6	31.2	34.4	0.39	0.265	0.25	0.41	41.6	41.3	39.8	40.4
Maximum i	49.4	53.4	52.2	53.4	54.3	47.8	50.6	48.7	51.8	52.9	49.6	50.4
Median i	43.9	43.5	43.8	49.2	51.8	40.0	44.6	44	44.4	42.9	43.1	43.7
Mean i	42.9	42.5	43	48.3	48.5	37.7	41.7	41.4	44.5	43.5	43.1	43.8
MAD i	1.1	0.96	0.95	1.1	0.8	1.55	1.15	1.1	1.74	1.3	1.06	0.87
IQR i	2.53	2.17	2.22	1.94	1.54	1.74	2.32	1.83	2.7	1.93	1.48	1.39
Robust CV% 1	5.8	5	5.1	3.9	3	4.4	5.2	4.2	6.1	4.5	3.4	3.2
Median f	43.9	43.6	43.8	49.4	51.8	40	44.7	44	44.5	42.7	43	43.6
Mean f	43.4	43.2	43.4	49.2	51.7	39.7	44	43.8	44.5	42.9	42.6	43.4
MAD f	1	0.61	0.7	1	0.7	1	1.1	0.9	1.74	1.09	1.01	0.86
IQR f	2.43	1.45	1.56	1.63	1.19	1.67	2.06	1.5	2.7	1.93	1.33	1.29
Robust CV% f	5.5	3.3	3.6	3.3	2.3	4.2	4.6	3.4	6.1	4.5	3.1	3
Outliers	2	2	2	1	1	2	2	1	0	1	1	1
Stragglers	0	1	1	0	0	0	0	1	0	0	0	0

2007-08: Chloride (%Cl)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	21	21	21	21	18	18	18	18	19	19	19	19
Minimum i	0.22	0.013	0.016	0.13	0.213	0.292	0.361	0.318	0.016	0.028	0.722	0.685
Maximum i	5.32	0.44	0.366	2.1	0.501	0.772	0.544	0.629	0.605	0.83	7.83	7.782
Median i	0.583	0.05	0.05	0.223	0.294	0.396	0.432	0.41	0.056	0.098	0.861	0.77
Mean i	0.797	0.070	0.073	0.331	0.3	0.41	0.432	0.419	0.095	0.147	1.22	1.13
MAD i	0.033	0.006	0.012	0.019	0.012	0.017	0.024	0.014	0.006	0.013	0.041	0.031
IQR i	0.059	0.011	0.019	0.038	0.021	0.024	0.045	0.022	0.018	0.02	0.047	0.041
Robust CV% i	10	21	37	17	7.2	6	10	5.4	32	20	5.5	5.3
Median f	0.583	0.05	0.048	0.223	0.295	0.397	0.43	0.41	0.054	0.092	0.858	0.756
Mean f	0.575	0.050	0.046	0.224	0.297	0.395	0.426	0.412	0.053	0.094	0.852	0.759
MAD f	0.027	0.003	0.010	0.016	0.01	0.016	0.024	0.013	0.003	0.008	0.034	0.02
IQR f	0.043	0.002	0.016	0.030	0.013	0.023	0.044	0.020	0.005	0.013	0.047	0.033
Robust CV% f	7.4	5	33	14	4.3	5.4	10	4.8	8.9	14	5.4	4.4
Outliers	3	6	3	3	3	2	1	2	5	4	1	1
Stragglers	0	4	0	1	0	0	0	0	1	1	0	1

2007-08: Cobalt (mg Co/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	20	20	19	20	18	18	18	18	17	17	17	17
Minimum i	0.141	0.001	0.001	0.419	0.048	0.118	0.021	0.131	0.003	0.196	0.138	0.015
Maximum i	1	1	1	1.003	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Median i	0.317	0.011	0.049	0.833	0.108	0.21	0.05	0.272	0.041	0.292	0.308	0.07
Mean i	0.329	0.066	0.099	0.789	0.167	0.263	0.156	0.32	0.137	0.362	0.378	0.143
MAD i	0.0295	0.004	0.009	0.076	0.022	0.054	0.0115	0.044	0.009	0.023	0.049	0.009
IQR i	0.06	0.013	0.011	0.175	0.035	0.087	0.029	0.068	0.017	0.047	0.083	0.018
Robust CV% i	19	110	23	21	33	41	58	25	42	16	27	26
Median f	0.319	0.009	0.048	0.836	0.105	0.202	0.048	0.267	0.034	0.292	0.306	0.071
Mean f	0.318	0.010	0.047	0.809	0.106	0.207	0.046	0.258	0.035	0.296	0.31	0.071
MAD f	0.021	0.004	0.004	0.069	0.02	0.048	0.008	0.032	0.008	0.020	0.030	0.004
IQR f	0.034	0.005	0.008	0.119	0.032	0.082	0.014	0.053	0.011	0.033	0.051	0.005
Robust CV% f	11	58	16	14	31	40	30	20	32	11	17	7.5
Outliers	3	4	4	1	1	1	4	1	3	2	2	4
Stragglers	1	1	3	0	0	0	0	1	0	1	1	3

2007-08: Copper (mg Cu/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	34	34	34	34	30	30	30	30	33	33	33	33
Minimum i	0.5	0.001	1.99	0.143	2.3	7.38	1.2	6.86	0.2	4.74	2.93	4.25
Maximum i	10.3	2.74	9.11	8	10.7	23.2	3.33	10.4	10	43.3	40.3	37.1
Median i	4.80	1.19	7.49	5.76	5.64	19.2	1.92	8.98	4.55	10.1	7.08	8.71
Mean i	4.85	1.15	7.26	5.45	5.77	19.1	2.04	8.82	4.39	11.8	8.36	9.33
MAD i	0.371	0.115	0.405	0.365	0.291	1	0.222	0.37	0.42	0.71	0.57	0.71
IQR i	0.606	0.195	0.615	0.573	0.471	1.61	0.343	0.586	0.549	1.12	0.823	1.14
Robust CV% i	13	16	8.2	9.9	8.3	8.3	18	6.5	12	11	12	13
Median f	4.81	1.2	7.52	5.79	5.65	19.3	1.87	8.99	4.56	10	7	8.71
Mean f	4.86	1.18	7.59	5.81	5.61	19.4	1.85	8.89	4.44	9.97	7	8.54
MAD f	0.33	0.1	0.37	0.333	0.216	0.95	0.173	0.3	0.17	0.467	0.493	0.53
IQR f	0.584	0.137	0.558	0.448	0.319	1.52	0.242	0.526	0.355	0.749	0.63	0.845
Robust CV% f	12	11	7.4	7.7	5.6	7.9	13	5.9	7.8	7.5	9	9.7
Outliers	4	8	4	4	5	2	4	2	8	5	6	7
Stragglers	0	1	0	0	1	0	1	1	1	1	0	1

2007-08: Iron (mg Fe/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	34	34	34	34	30	30	30	30	32	32	32	32
Minimum i	49.5	4.52	8.5	8.73	51.0	16.4	25.1	1.23	23.3	41.3	44.2	49.5
Maximum i	79.7	34.6	63.5	86.7	80.4	80	50.4	418	70.7	80.2	610	132
Median i	68	15	53.7	78.0	68.5	63.6	41	140	44.6	67.2	504	96.6
Mean i	67.4	15.4	49.6	75.9	68.7	61.7	39.3	145	45.1	65.8	492	96
MAD i	4.44	1.49	4.5	4.9	4.35	4.7	3.45	6.37	5.15	4.85	45	9.9
IQR i	6.73	2.54	9.14	7.84	7.51	7.41	6.95	10.1	7.62	7.02	64.1	15.1
Robust CV% i	9.9	17	17	10	11	12	17	7.2	17	10	13	16
Median f	68	15	54.7	78.4	68.6	64.4	41	140	44.6	69	505	98.1
Mean f	67.9	15.2	54.1	78.7	69.3	63.9	39.8	140	44.9	69.7	506	97.6
MAD f	4.38	0.9	3.27	4.39	4.3	4.65	3.3	2.9	4.75	4.2	45	9.9
IQR f	6.55	1.26	4.89	6.8	7.23	7.02	6.75	4.89	7.43	7.56	63.8	15
Robust CV% f	9.6	8.4	8.9	8.7	11	11	16	3.5	17	11	13	15
Outliers	1	7	4	2	1	1	1	5	2	4	1	1
Stragglers	0	6	2	0	0	1	0	3	0	1	0	0

2007-08: Lead (mg Pb/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	13	13	12	13	11	11	11	11	11	11	11	10
Minimum i	0.002	0.002	0.001	0.008	0.108	0.001	0.019	1.63	0.044	0.002	0.142	0.044
Maximum i	0.699	0.353	0.672	0.579	0.817	0.665	0.504	3.71	1.94	0.3	0.572	0.315
Median i	0.117	0.031	0.048	0.131	0.225	0.31	0.12	1.98	0.138	0.104	0.38	0.104
Mean i	0.186	0.106	0.14	0.2	0.323	0.324	0.204	2.11	0.322	0.12	0.373	0.141
MAD i	0.073	0.026	0.046	0.045	0.11	0.126	0.101	0.14	0.08	0.084	0.07	0.031
IQR i	0.16	0.16	0.177	0.172	0.188	0.22	0.225	0.225	0.123	0.169	0.12	0.080
Robust CV% i	140	520	370	130	84	71	190	11	89	160	32	77
Median f	0.095	0.024	0.045	0.12	0.22	0.31	0.12	1.96	0.132	0.104	0.38	0.086
Mean f	0.114	0.027	0.048	0.10	0.274	0.324	0.204	1.95	0.159	0.12	0.373	0.099
MAD f	0.051	0.012	0.021	0.025	0.098	0.126	0.101	0.115	0.074	0.084	0.07	0.02
IQR f	0.079	0.018	0.040	0.038	0.173	0.22	0.225	0.195	0.112	0.169	0.12	0.042
Robust CV% f	83	77	88	32	78	71	190	10	85	160	32	48
Outliers	2	4	2	2	1	0	0	1	1	0	0	2
Stragglers	0	0	1	2	0	0	0	0	0	0	0	0

2007-08: Magnesium (%Mg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	36	36	36	36	33	33	33	33	36	36	36	36
Minimum i	0.195	0.066	0.083	0.007	0.125	0.6	0.058	0.033	0.068	0.045	0.09	0.155
Maximum i	0.299	0.095	0.11	0.632	0.678	2.33	1.02	1.73	1.2	0.84	1.36	1.445
Median i	0.226	0.082	0.099	0.066	0.145	0.685	0.096	0.264	0.126	0.081	0.138	0.182
Mean i	0.228	0.081	0.098	0.080	0.162	0.73	0.123	0.305	0.155	0.121	0.17	0.218
MAD i	0.012	0.003	0.004	0.003	0.007	0.037	0.006	0.012	0.006	0.003	0.005	0.008
IQR i	0.018	0.005	0.006	0.005	0.012	0.056	0.008	0.023	0.010	0.006	0.008	0.012
Robust CV% i	8.2	5.7	6.1	7.6	7.9	8.1	8.9	8.6	8.2	7.2	5.8	6.6
Median f	0.225	0.082	0.099	0.0662	0.143	0.685	0.096	0.264	0.126	0.081	0.138	0.182
Mean f	0.225	0.081	0.099	0.066	0.144	0.68	0.096	0.266	0.127	0.081	0.139	0.183
MAD f	0.010	0.003	0.004	0.003	0.006	0.037	0.006	0.012	0.006	0.003	0.005	0.008
IQR f	0.016	0.004	0.006	0.004	0.010	0.055	0.008	0.017	0.009	0.004	0.007	0.011
Robust CV% f	7	5.5	6	6.7	6.9	8	8.5	6.6	7.1	5.7	5.1	6.1
Outliers	1	2	1	4	2	1	2	3	2	5	4	1
Stragglers	1	1	0	0	1	0	0	0	0	1	0	0

2007-08: Manganese (mg Mn/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	35	35	35	35	31	31	31	31	32	32	32	32
Minimum i	54.9	2.12	5.2	121	604	73.1	57.7	28.7	28.5	6.92	16.5	28.3
Maximum i	175	8.99	50.9	321	818	134	92.8	73.7	55.9	16.6	97.1	72.5
Median i	62.6	3.73	9.22	267	691	83	81.5	32	46.25	13.7	83.9	59.3
Mean i	64.9	3.93	10.5	265	698	85.9	81	33.9	45.6	13.6	80.7	58.5
MAD i	3	0.27	0.723	11.4	43	4.3	2.8	1.5	1.5	0.7	3.9	2.95
IQR i	4.67	0.511	0.941	18.1	68.2	8.52	4.6	3.19	2.28	1.07	7.05	4.52
Robust CV% i	7.5	14	10	6.8	9.9	10	5.6	10	4.9	7.8	8.4	7.6
Median f	61.8	3.71	9.22	267	691	82.5	81.4	31.8	46.3	13.7	84.8	59.3
Mean f	61.6	3.78	9.33	267	698	82.6	81	32.4	46.4	13.9	84.3	59.1
MAD f	2.9	0.21	0.541	11	43	3.1	2.6	1.2	0.7	0.7	3	2.9
IQR f	4.71	0.363	0.899	16.5	68.2	5.3	4.41	2.59	1.07	0.85	5.23	4.37
Robust CV% f	7.6	9.8	9.8	6.2	9.9	6.4	5.4	8.2	2.3	6.2	6.2	7.4
Outliers	1	3	3	2	0	2	3	1	8	3	2	2
Stragglers	0	1	0	0	0	0	0	1	2	0	1	0

2007-08: Molybdenum (mg Mo/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	23	23	23	23	20	20	20	20	18	18	18	18
Minimum i	0.399	0.002	4.37	0.016	0.013	0.17	0.159	0.521	0.419	0.702	0.135	0.165
Maximum i	10.8	10.8	8.21	10.8	10	10	10	10	1.28	1.17	10	10
Median i	0.557	0.135	6	0.1	0.069	0.268	0.382	0.894	0.624	0.842	0.232	0.232
Mean i	1.07	0.666	5.9	0.64	0.744	0.81	0.86	1.38	0.699	0.875	0.823	0.845
MAD i	0.056	0.037	0.33	0.054	0.049	0.066	0.104	0.076	0.119	0.078	0.062	0.044
IQR i	0.161	0.128	0.489	0.136	0.12	0.171	0.157	0.121	0.226	0.131	0.079	0.107
Robust CV% i	29	95	8.2	140	170	64	41	14	36	16	34	46
Median f	0.54	0.13	6	0.078	0.049	0.25	0.343	0.894	0.594	0.843	0.206	0.221
Mean f	0.54	0.13	5.93	0.094	0.066	0.259	0.34	0.882	0.643	0.875	0.206	0.224
MAD f	0.026	0.018	0.315	0.027	0.024	0.035	0.1	0.045	0.094	0.078	0.04	0.038
IQR f	0.04	0.025	0.465	0.058	0.061	0.059	0.158	0.082	0.168	0.131	0.064	0.059
Robust CV% f	7.4	19	7.8	75	120	23	46	9.2	28	16	31	27
Outliers	5	6	3	3	4	3	2	3	1	0	3	4
Stragglers	2	2	0	2	1	2	0	3	1	0	0	0

2007-08: Nitrogen (%N)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	32	32	32	32	32	32	32	32	31	31	31	31
Minimum i	2.43	1.02	2.91	1.72	0.0001	0.075	0.013	0.030	0.005	0.0002	0.016	0.004
Maximum i	3.39	1.59	4.68	2.24	2.72	1.25	1.4	3.22	2.07	4.99	2.13	1.86
Median i	2.81	1.34	3.70	1.86	2.44	0.985	1.10	2.80	1.87	4.34	1.82	1.62
Mean i	2.83	1.35	3.69	1.89	2.35	0.947	1.06	2.71	1.82	4.22	1.79	1.59
MAD i	0.08	0.045	0.125	0.055	0.105	0.055	0.06	0.105	0.09	0.135	0.09	0.08
IQR i	0.115	0.113	0.185	0.107	0.139	0.094	0.083	0.152	0.155	0.2	0.163	0.148
Robust CV% i	4.1	8.5	5	5.8	5.7	9.5	7.5	5.4	8.3	4.6	9	9.2
Median f	2.81	1.32	3.7	1.86	2.46	0.991	1.11	2.8	1.87	4.34	1.82	1.62
Mean f	2.82	1.3	3.68	1.88	2.45	0.99	1.1	2.8	1.88	4.37	1.85	1.64
MAD f	0.055	0.03	0.112	0.055	0.095	0.032	0.05	0.09	0.09	0.123	0.085	0.08
IQR f	0.098	0.052	0.185	0.078	0.141	0.052	0.053	0.141	0.15	0.191	0.152	0.137
Robust CV% f	3.5	3.9	5	4.2	5.7	5.2	5.3	5	8	4.4	8.3	8.5
Outliers	3	4	2	2	2	5	5	3	1	3	1	1
Stragglers	3	5	0	0	0	3	0	0	0	0	0	0

2007-08: Phosphorus (%P)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	35	35	35	35	32	32	32	32	34	34	34	34
Minimum i	0.21	0.181	0.273	0.011	0.061	0.26	0.093	0.179	0.188	0.197	0.133	0.212
Maximum i	0.282	0.26	0.373	0.232	0.199	0.4	0.176	0.816	0.424	0.448	0.295	0.339
Median i	0.241	0.21	0.325	0.186	0.147	0.346	0.128	0.259	0.328	0.320	0.215	0.242
Mean i	0.243	0.211	0.327	0.184	0.145	0.342	0.128	0.273	0.327	0.32	0.217	0.247
MAD i	0.011	0.012	0.015	0.008	0.007	0.016	0.006	0.008	0.012	0.012	0.009	0.01
IQR i	0.017	0.017	0.022	0.013	0.012	0.024	0.010	0.013	0.019	0.017	0.013	0.016
Robust CV% i	7.1	8.1	6.8	6.8	8.4	6.9	8	4.9	5.8	5.4	6	6.4
Median f	0.241	0.21	0.325	0.186	0.147	0.348	0.127	0.259	0.328	0.321	0.215	0.239
Mean f	0.243	0.21	0.327	0.187	0.145	0.347	0.126	0.258	0.328	0.32	0.215	0.24
MAD f	0.011	0.012	0.015	0.008	0.006	0.014	0.006	0.007	0.010	0.011	0.007	0.008
IQR f	0.017	0.017	0.022	0.011	0.011	0.024	0.009	0.011	0.016	0.016	0.012	0.013
Robust CV% f	7.1	7.9	6.8	6	7.6	6.9	7.6	4.2	5	5	5.5	5.5
Outliers	0	1	0	3	4	2	3	6	3	2	3	3
Stragglers	0	0	0	0	1	0	0	0	1	0	2	1

2007-08: Potassium (%K)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	36	36	36	36	32	32	32	32	36	36	36	36
Minimum i	0.047	0.005	0.019	0.020	0.577	2.08	0.848	1.52	0.184	0.51	0.981	0.722
Maximum i	3.13	0.566	1.26	1.28	0.971	2.75	1.32	2.09	3.76	8.77	16.9	14.0
Median i	2.54	0.266	0.965	0.981	0.677	2.43	1.03	1.76	0.384	0.911	1.70	1.46
Mean i	2.41	0.278	0.953	0.967	0.689	2.42	1.06	1.76	0.478	1.12	2.12	1.76
MAD i	0.128	0.024	0.055	0.044	0.033	0.12	0.05	0.1	0.030	0.043	0.065	0.095
IQR i	0.202	0.034	0.085	0.075	0.048	0.178	0.12	0.137	0.046	0.074	0.1	0.136
Robust CV% i	8.1	13	8.8	7.6	7.1	7.3	12	7.8	12	8.1	5.9	9.3
Median f	2.51	0.262	0.965	0.981	0.676	2.43	1.03	1.76	0.381	0.91	1.69	1.46
Mean f	2.49	0.267	0.973	0.98	0.674	2.42	1.04	1.76	0.383	0.902	1.69	1.43
MAD f	0.108	0.019	0.055	0.029	0.034	0.12	0.05	0.1	0.024	0.034	0.045	0.065
IQR f	0.18	0.032	0.073	0.043	0.052	0.178	0.085	0.137	0.042	0.051	0.069	0.1
Robust CV% f	7.2	12	7.6	4.4	7.7	7.3	8.3	7.8	11	5.6	4.1	6.9
Outliers	3	5	4	6	2	0	3	0	5	6	9	4
Stragglers	0	1	0	3	0	0	0	0	0	1	1	2

2007-08: Selenium (mg Se/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	13	13	13	13	9	9	9	9	8	8	8	8
Minimum i	0.008	0.0001	0.169	0.021	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Maximum i	1.33	2.05	3.6	3.6	0.858	0.22	0.207	0.245	0.307	0.222	0.2	0.32
Median i	0.08	0.064	0.828	0.111	0.049	0.07	0.019	0.116	0.073	0.044	0.032	0.155
Mean i	0.224	0.286	0.994	0.449	0.184	0.091	0.039	0.116	0.113	0.076	0.055	0.147
MAD i	0.065	0.024	0.182	0.081	0.018	0.007	0.012	0.055	0.030	0.023	0.021	0.078
IQR i	0.223	0.153	0.339	0.173	0.191	0.053	0.017	0.0858	0.14	0.093	0.042	0.123
Robust CV% i	280	240	41	160	390	76	88	74	190	210	130	79
Median f	0.062	0.046	0.823	0.073	0.04	0.067	0.015	0.116	0.062	0.036	0.025	0.155
Mean f	0.076	0.048	0.777	0.109	0.043	0.067	0.018	0.116	0.054	0.035	0.034	0.147
MAD f	0.048	0.004	0.145	0.043	0.009	0.004	0.011	0.055	0.024	0.016	0.014	0.078
IQR f	0.074	0.008	0.27	0.105	0.019	0.007	0.017	0.086	0.044	0.030	0.031	0.123
Robust CV% f	120	18	33	140	47	11	110	74	72	82	120	79
Outliers	3	5	1	2	2	3	1	0	2	2	1	0
Stragglers	0	2	0	0	0	0	0	0	0	0	0	0

2007-08: Silicon (%Si)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 10 3	ASP 10 4	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	7	7	7	7	6	6	6	6	6	6	6	6
Minimum i	0.006	0.0001	0.0001	0.01	0.013	0.020	0.046	0.088	0.009	0.001	0.105	0.044
Maximum i	0.074	0.037	0.042	0.077	0.070	0.045	0.568	0.752	0.537	0.033	0.9	1.26
Median i	0.01	0.002	0.001	0.013	0.023	0.032	0.156	0.210	0.252	0.004	0.519	0.691
Mean i	0.028	0.010	0.008	0.030	0.030	0.032	0.235	0.302	0.274	0.009	0.476	0.621
MAD i	0.004	0.0015	0.001	0.003	0.009	0.009	0.101	0.12	0.208	0.002	0.253	0.373
IQR i	0.035	0.014	0.005	0.035	0.021	0.015	0.293	0.324	0.342	0.011	0.429	0.64
Robust CV% i	350	560	380	270	91	47	190	150	140	310	83	93
Median f	0.009	0.002	0.001	0.012	0.023	0.032	0.156	0.211	0.252	0.002	0.519	0.691
Mean f	0.008	0.002	0.001	0.012	0.030	0.032	0.235	0.302	0.274	0.0023	0.476	0.621
MAD f	0.001	0.001	0.0004	0.001	0.009	0.009	0.101	0.12	0.208	0.001	0.253	0.373
IQR f	0.002	0.002	0.001	0.002	0.021	0.015	0.293	0.324	0.342	0.002	0.429	0.64
Robust CV% f	25	100	85	15	91	47	190	150	140	150	83	93
Outliers	2	2	2	2	0	0	0	0	0	1	0	0
Stragglers	1	0	0	1	0	0	0	0	0	1	0	0

2007-08: Sodium (%Na)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	35	34	35	35	32	32	32	32	34	33	34	34
Minimum i	0.029	0.0001	0.0005	0.019	0.17	0.09	0.008	0.01	0.002	0.0001	0.074	0.084
Maximum i	0.16	0.025	0.05	0.06	0.286	0.197	0.11	0.109	0.429	0.141	0.9	1.175
Median i	0.041	0.002	0.003	0.026	0.207	0.120	0.012	0.018	0.005	0.002	0.096	0.127
Mean i	0.046	0.004	0.007	0.028	0.207	0.124	0.019	0.023	0.019	0.010	0.122	0.157
MAD i	0.003	0.0013	0.0016	0.002	0.016	0.008	0.0015	0.002	0.001	0.001	0.006	0.009
IQR i	0.004	0.0036	0.0036	0.0043	0.023	0.012	0.005	0.004	0.002	0.003	0.008	0.014
Robust CV% i	11	220	140	17	11	9.8	41	22	31	190	7.6	11
Median f	0.041	0.001	0.002	0.026	0.206	0.119	0.01	0.018	0.005	0.001	0.096	0.127
Mean f	0.042	0.0014	0.0022	0.026	0.203	0.118	0.010	0.018	0.005	0.0014	0.096	0.126
MAD f	0.003	0.001	0.001	0.002	0.014	0.006	0.001	0.002	0.001	0.0004	0.004	0.006
IQR f	0.004	0.001	0.0015	0.003	0.022	0.009	0.002	0.003	0.001	0.0007	0.006	0.012
Robust CV% f	9	110	75	11	11	7.9	16	16	21	74	5.8	9
Outliers	4	6	8	5	1	3	7	4	5	5	6	4
Stragglers	0	3	2	0	1	1	3	2	2	4	1	1

2007-08: Sulfur (%S)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 10	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	30	30	30	30	29	29	29	29	27	27	27	27
Minimum i	0.151	0.024	0.075	0.012	0.108	0.093	0.088	0.181	0.022	0.087	0.134	0.072
Maximum i	0.316	0.13	0.224	0.142	49.7	38.5	42.1	43	1.03	1.64	1.80	1.31
Median i	0.291	0.096	0.189	0.128	0.174	0.151	0.106	0.259	0.151	0.196	0.226	0.174
Mean i	0.28	0.095	0.185	0.119	1.88	1.48	1.55	1.73	0.182	0.247	0.288	0.214
MAD i	0.015	0.006	0.01	0.006	0.01	0.01	0.006	0.017	0.009	0.011	0.011	0.01
IQR i	0.023	0.010	0.015	0.009	0.015	0.016	0.009	0.027	0.013	0.016	0.021	0.016
Robust CV% i	7.8	10	7.8	7.1	8.7	11	8.7	10	8.8	7.9	9.2	8.9
Median f	0.292	0.096	0.189	0.128	0.173	0.151	0.104	0.259	0.149	0.196	0.225	0.174
Mean f	0.288	0.096	0.189	0.128	0.173	0.153	0.105	0.263	0.149	0.2	0.227	0.173
MAD f	0.016	0.006	0.01	0.004	0.008	0.008	0.007	0.016	0.006	0.01	0.011	0.008
IQR f	0.022	0.009	0.014	0.006	0.012	0.013	0.009	0.021	0.010	0.014	0.016	0.013
Robust CV% f	7.6	9.7	7.6	5.2	6.7	8.8	9.3	8.3	7	7.2	7.2	7.6
Outliers	2	2	1	4	5	3	2	2	5	4	4	5
Stragglers	0	0	0	0	0	1	0	0	1	0	0	0

2007-08: Zinc (mg Zn/kg)

Statistical parameters	Plant sample identification and values											
	October 2007 (Round 107)				*January 2008 (Round 307)*				*April 2008 (Round 507)*			
	ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
No of results	35	35	35	35	31	31	31	31	33	33	33	33
Minimum i	20	11.2	31.5	51.8	14.3	65.6	9	11.1	11.8	24.6	13.7	14.2
Maximum i	30.5	20	53.8	76	33.2	110	19.1	45.2	26.3	57.2	32.3	34.8
Median i	24.1	14	37	61.4	22.3	76.3	11.8	30	18.2	41.8	22	23.8
Mean i	24.3	14.5	37.8	61.9	22.9	78.1	12.5	29.9	18.3	41.9	22	24
MAD i	1.3	1	2	3.6	1.4	4	0.8	1.7	1.7	2.3	1.6	2
IQR i	1.93	1.56	3.11	6.6	2.15	6.67	1.58	2.37	2.63	3.37	2.22	2.82
Robust CV% i	8	11	8.4	11	9.6	8.7	13	7.9	14	8.1	10	12
Median f	24.1	13.9	36.9	61.4	22.2	76.3	11.8	30	17.8	41.8	22	23.7
Mean f	24.1	14	37	61.5	22.3	76.4	11.9	30.1	17.7	41.9	22	23.6
MAD f	1.2	0.8	1.8	3.55	1.1	3.7	0.65	1.5	1.2	2	1.4	1.85
IQR f	1.83	1.24	2.89	6.25	1.48	5.67	1.19	2.37	2	3.14	1.96	2.78
Robust CV% f	7.6	8.9	7.8	10	6.7	7.4	10	7.9	11	7.5	8.9	12
Outliers	1	2	2	1	3	2	4	2	2	4	4	3
Stragglers	0	1	0	0	1	0	1	0	2	0	0	0

4. Comments on Measurement Performance

A detailed evaluation of measurement performance is beyond the scope of this report. Such evaluations are typically made at ASPAC Workshops and in other national and international fora. However, it is appropriate to make a few observations.

Firstly, the summaries in Section 3 showed some examples of skewed data for silicon and lead in particular; i.e. there were quite large differences at times between the median and mean values reported by laboratories. This emphasised the importance of using medians and MADs, which are less influenced by 'rogue' results in small data sets.

Secondly, the median robust % CVs across the 12 samples, after the removal of "outliers" and "stragglers", ranged from 3.5 to 92%. This covered the 21 tests reported by a minimum of six laboratories. Table 4 provides the identity of the six best and six worst tests, with their corresponding median robust %CVs. There were some "round-by-round" fluctuations in measurement performance by test, but total C always had the lowest robust %CVs and Si the highest. Numbers in brackets in Table 4 show corresponding performances in 2006-07. Generally there was no real change in the performance in 2007-08 with %CVs similar to 2006-07. Overall, and as occurred in 2006-07, 11 of the 21 tests had median CVs of <10%; with another three being <15%. Silicon is consistently the worst performing test and this shows there is still a major issue with the methodologies used by the seven participating laboratories.

Thirdly, the median robust %CV across the 21 tests on a sample-by-sample basis ranged from 7.6% (ASP 101) to 13% (ASP 14), with a grand median for the 12 samples of 8.4%. Sample ASP 14 was sourced and prepared for analysis in North America as compared to the other samples sourced and prepared locally by the proficiency provider. Data for ASP 14 in Appendix 2 suggest the sample was sufficiently homogenous for inclusion in the program.

Table 4. The six best performed and worst performed plant chemical tests in 2007-08, based on median percent robust coefficients of variation after the removal of "outliers" and "stragglers". Numbers in brackets show corresponding performance data for 2006-07.

Best (Lowest Robust %CVs)	
Plant test	***%CV***
Carbon	3.5 (4.4)
Nitrogen	5.1 (6.1)
Chloride	6.4 (8.7)
Phosphorus	6.4 (6.6)
Magnesium	6.6 (5.8)
Manganese	6.9 (6.8)

Worst (Highest Robust %CVs)	
Plant test	***%CV***
Cobalt	18 (32)
Molybdenum	25 (27)
Cadmium	32 (22)
Selenium	76 (50)
Lead	78 (54)
Silicon	92 (110)

Appendix 1: Laboratories in ASPAC's Plant ILPP, 2007-08

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Appendix 2: Summary examples of homogeneity data and statistical assessments for plant samples used in the ASPAC Plant ILPP, 2007-08.

Sample name		ASP 101	ASP 102	ASP 103	ASP 104	ASP 11	ASP 12	ASP 13	ASP 14	ASP 41	ASP 42	ASP 43	ASP 44
Test Method		Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N
Sample 1	replicate 1	3.60	1.43	3.96	1.91	2.44	0.796	1.10	3.10	1.98	4.61	1.74	1.64
	replicate 2	3.50	1.38	3.91	2.03	2.43	0.846	1.10	3.06	1.94	4.64	1.71	1.58
Sample 2	replicate 1	3.50	1.43	3.97	1.95	2.5	0.818	1.11	2.96	1.99	4.64	1.77	1.63
	replicate 2	3.50	1.42	3.92	2.00	2.52	0.825	1.11	2.98	1.91	4.57	1.69	1.58
Sample 3	replicate 1	3.60	1.44	3.98	1.95	2.46	0.859	1.10	3.03	2.02	4.69	1.80	1.53
	replicate 2	3.50	1.40	3.90	1.99	2.43	0.756	1.09	3.00	1.93	4.69	1.75	1.56
Sample 4	replicate 1	3.60	1.42	3.94	1.95	2.5	0.859	1.12	3.07	1.97	4.68	1.74	1.56
	replicate 2	3.40	1.44	3.93	2.00	2.46	0.880	1.11	3.00	1.93	4.66	1.70	1.54
Sample 5	replicate 1	3.50	1.44	3.93	2.02	2.51	0.848	1.13	3.03	1.95	4.55	1.79	1.55
	replicate 2	3.60	1.41	3.93	2.04	2.46	0.808	1.08	3.00	1.96	4.63	1.76	1.55
Sample 6	replicate 1	3.60	1.44	3.86	2.02	2.52	0.834	1.09	2.96	1.99	4.64	1.78	1.61
	replicate 2	3.50	1.39	3.94	2.01	2.45	0.839	1.08	3.00	1.91	4.59	1.83	1.56
Sample 7	replicate 1	3.50	1.46	3.95	1.98	2.48	0.779	1.12	2.94	1.97	4.62	1.77	1.57
	replicate 2	3.50	1.43	3.92	2.02	2.49	0.857	1.13	3.06	1.93	4.65	1.75	1.57
Sample 8	replicate 1	3.60	1.43	3.95	2.02	2.50	0.810	1.13	2.99	1.92	4.54	1.74	1.54
	replicate 2	3.40	1.41	3.84	2.02	2.44	0.842	1.10	2.89	1.90	4.60	1.78	1.55
Sample 9	replicate 1	3.50	1.46	3.90	2.01	2.47	0.797	1.21	2.91	2.02	4.58	1.80	1.55
	replicate 2	3.60	1.42	3.92	2.00	2.48	0.776	1.12	3.09	1.97	4.57	1.74	1.53
Sample 10	replicate 1	3.50	1.39	3.90	2.05	2.46	0.881	1.11	2.88	1.98	4.61	1.80	1.57
	replicate 2	3.60	1.43	3.90	2.02	2.46	0.847	1.11	2.93	1.87	4.64	1.76	1.59
Mean		3.53	1.424	3.922	1.998	2.474	0.828	1.1125	2.995	1.952	4.619	1.759	1.568
Analytical SD		0.0837	0.0263	0.0397	0.0333	0.0256	0.0346	0.0244	0.0594	0.0452	0.0333	0.0339	0.0222
Sampling SD		0.0532	0.0129	0.0204	0.0079	0.0117	0.0028	0.0131	0.0265	0.0217	0.0299	0.0124	0.0202
SD of proficiency data		0.1762	0.0445	0.166	0.0815	0.141	0.047	0.074	0.133	0.1334	0.1816	0.126	0.1186
Homogeneity index		0.302	0.2892	0.1227	0.0973	0.0830	0.0587	0.1765	0.199	0.1623	0.1645	0.0984	0.1699
Status		**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**
F-statistic		0.1905	0.5194	0.473	1.1132	1.4194	1.0127	1.5733	1.3965	0.5403	2.6152	1.2669	2.6559
F critical		3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02
F-statistic < F critical		**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**

Note: All samples were assessed using ISO REMCO N231.

Appendix 3: Statistical procedures used by ASPAC for its Plant ILPP

Refer to Table 3 for a description of most statistical terms and their meaning. Of most significance is the "median / MAD" non-parametric, iterative procedure for identifying "outliers" (††) and "stragglers" (†) within datasets for particular tests and samples from multiple (typically 6 or greater) laboratories. See references in the body of the report for more details. The median is regarded as a good estimate of the true mean (μ), while the MAD; ie. the median of the absolute deviations from the median, is regarded as a good estimate of the standard deviation (@).

After tabulating the data with a separate column for each sample result and a separate row for each laboratory, calculations were applied iteratively. Each iteration operated at an action level of [(X- μ)/f@] (called the "ASPAC Score" for convenience) > 2, where "X" is the value reported by the laboratory (one replicate assumed), "μ" is the median of the population of values, and "f@" is a code for the Gaussian distribution of the sample size "n", approximated by (0.7722 + 1.604/n * t, with t = the Student's "t" for 2.5% (two-tailed) with n-1 degrees of freedom. Excluding any case when a laboratory reported no result (or a non-numeric value), the laboratories at first iteration with an "ASPAC score" > 2 were rated as "outliers" (††).

Following their removal (if any), the remaining population of laboratory data was subject to a second iteration involving a recalculation of the "ASPAC score". Where this was again >2, the relevant laboratories were rated as "stragglers" (†).

Further iterations can be undertaken if the sample is targeted for upgrading to the status of a reference, only to converge the mean and the median, thereby providing a more likely "correct" reference result.

The other statistics summarised in Table 3 were calculated on the same populations of data. However, only the first (i) and second (final; f) values appear in the data summaries in Section 3.

Appendix 4: "Raw" program data for the 12 samples across three "rounds"

These tabulations list, in alphabetical order, the "raw" data provided by participating laboratories for each method, with unnecessary precision removed after completion of statistical tests only to assist data presentation. Statistical "outliers" and "stragglers" are indicated by †† and †, respectively. All results are on an oven dry basis

Method Codes shown in Appendix 4 are explained in Tables 5 and 6.

Table 5. ASPAC Codes to allow the laboratory to record the preparation, extraction and/or digestion techniques used for each plant test/element reported in ASPAC's Inter-laboratory Proficiency Program. A separate ASPAC Code (see Table 6) is required to identify the relevant instrumental and/or analytical finishes.

Preparation / Extraction / Digestion Technique	ASPAC MIC Code
Dry Ashing with HF, and uptake in HCl	AA
Dry Ashing with HF, and uptake in HNO_3	AB
Dry Ashing with HF, and uptake in H_2SO_4	AC
Dry Ashing without HF, and uptake in HCl	AD
Dry Ashing without HF, and uptake in HNO_3	AE
Dry Ashing without HF, and uptake in H_2SO_4	AF
Extraction with acid(s)	BA
Extraction with water	BB
Finely-divided dry sample	CA
Microwave digestion - closed system with HF, and final medium H_2SO_4	DA
Microwave digestion - closed system with HF, and final medium HNO_3 and/or HCl	DB
Microwave digestion - closed system with HF, and final medium $HClO_4$	DC
Microwave digestion - closed system without HF, and final medium H_2SO_4	DD
Microwave digestion - closed system without HF, and final medium HNO_3 and/or HCl	DE
Microwave digestion - closed system without HF, and final medium HClO4	DF
Microwave digestion - open system with HF, and final medium H_2SO_4	DG
Microwave digestion - open system with HF, and final medium HNO_3 and/or HCl	DH
Microwave digestion in open system with HF, and final medium $HClO_4$	DI
Microwave digestion - open system with HF, and final medium HNO_3 / peroxide	DJ
Microwave digestion - open system without HF, and final medium H_2SO_4	DK
Microwave digestion - open system without HF, and final medium HNO_3 and /or HCl	DL
Microwave digestion - open system without HF, and final medium $HClO_4$	DM
Microwave digestion - open system without HF, and final medium HNO_3 / peroxide	DN
Pellet (fused)	EA
Pellet (pressed powder)	EB
Schoeniger combustion with Pt and O_2 , with uptake in HCl	FA
Schoeniger combustion with Pt and O_2 , with uptake in HNO_3	FB
Wet digestion - open system with HF, and final medium H_2SO_4	GA
Wet digestion - open system with HF, and final medium HNO_3 and /or HCl	GB
Wet digestion - open system with HF, and final medium $HClO_4$	GC
Wet digestion - open system with HF, and final medium HNO_3 / peroxide	GD
Wet digestion - open system without HF, and final medium H_2SO_4 (includes Kjeldahl – not quantitative for NO_3)	GE
Wet digestion - open system without HF, and final medium H_2SO_4 (includes Kjeldahl – quantitative for NO_3)	GF
Wet digestion - open system without HF, and final medium HNO_3 and /or HCl	GG
Wet digestion - open system without HF, and final medium $HClO_4$	GH
Wet digestion - open system without HF, and final medium HNO_3 / peroxide	GI
Wet digestion - open system without HF —diacid (HNO_3 , $HClO_4$)	GJ
Wet digestion - open system without HF — triacid (HNO_3 , H_2SO_4, $HClO_4$)	GK
Others	ZZ

Table 6. ASPAC Codes to allow the laboratory to record the instrumental and/or analytical finishes associated with each plant test/element reported in the Inter-laboratory Proficiency Program. A separate ASPAC Code (see Table 5) is required to identify the relevant preparation/extraction/digestion techniques.

Instrumental and/or analytical finish	ASPAC MIC Code
AAS-ETA: [Atomic Absorption Spectrophotometry Electro-Thermal Atomisation] background correction, without chemical modifier	01
AAS-ETA with deuterium background correction, without chemical modifier	02
AAS-ETA with Zeeman background correction, without chemical modifier	03
AAS-ETA with pulsed hollow cathode lamp background correction, without chemical modifier	04
AAS-ETA without background correction, with chemical modifier	05
AAS-ETA with deuterium background correction, with chemical modifier	06
AAS-ETA with Zeeman background correction, with chemical modifier	07
AAS-ETA with pulsed hollow cathode lamp background correction, with chemical modifier	08
AAS-Flame, without background correction, using air-acetylene	09
ASS – carbon rod –graphite furnace	10
AAS-Flame with deuterium background correction, using air-acetylene	11
AAS-Flame with Zeeman background correction, using air-acetylene	12
AAS-Flame with pulsed hollow cathode lamp background correction, using air-acetylene	13
AAS-Flame without background correction, using N_20-acetylene	14
AAS-Flame with deuterium background correction, using N_20-acetylene	15
AAS-Flame with Zeeman background correction, using N_20-acetylene	16
AAS-Flame with pulsed hollow cathode lamp background correction, using N_20-acetylene	17
Chromatography	18
Cold vapour technology	19
Flame emission	20
Gravimetric	21
Hydride technology and similar	22
ICP-AES	23
ICP-MS	24
Infrared — near-range (NIR)	25
Infrared — mid-range (MIR)	26
Ion selective electrode	27
Ion chromatography	28
Neutron activation analysis	29
Spectrophotometry (manual)	30
Spectrophotometry (auto; segmented flow, FIA, DA, etc)	31
Titrimetric	32
Turbidimetric / or Nephelometric	33
Voltammetry (direct)	34
Voltammetry (stripping)	35
X-ray fluorescence	36
Dumas (eg. Leco)	37
Others (specify)	38

Lab. Code #	Method Codes	Reported data on Aluminum (mg Al/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L005	GI-23	43		7.6		17		261																	
L008	GG-23	20.9		1.82		12.8		254		80.2		57.9		27.4		70.2		13.4		7.6		567		140	
L009	GJ-23	19.2		8.11		16.2		234		68.6		53.6		24.3		62.3		32.2	††	14.5		506		116	
L011	GJ-23	34.1		12.2		15.3		274		91.1		77.2		21.8		78.5		16.3		9.56		845		151	
L013	DN-23	22		3		9		256		88		73.5		27.5		81.5		10		6		769		138	
L016	GJ-23	26.5		1.61		7.82		296		82.2		58.9		21		73.8		13.4		6.12		889		184	
L017	DE-23	27		1		6		312		93		65		20		83		16		10		913		167	
L019	AE-24	55.6	††	8.3		12.9		281										18.8		28.9	††	563		142	
L022	DE-23	25.5		4.5		10.5		269		94		68		22		74		13.4		8.6		702		146	
L023	DN-23	24.4		3.59		8.37		297		93.3		82.5		19.7		88.7		24	††	6.2		960		170	
L024	AD-23	15.5		1.66		6.21		223		78.5		61.8		20.8		95		12		9.06		650		132	
L026	GI-23	22.4		2.69		6.73		309		83.6		53.8		17.4		66.1		13.5		8.6		633		152	
L028	DE-23	26		13		13		311		97		80		13		82		12		12		722		148	
L030	GJ-23	16.9		0.75		1.13		285		83.6		42.7		16.7		77		12		6.39		707		140	
L032	GJ-23	58.6	††	8.11		9.12		275		67		48.4		18		65.7									
L034	GG-23	21.7		3.56		8.13		284		79.4		56.3		18.1		65.6		15.7		7.12		550		138	
L036	GJ-23	25.8		7.89		5.75		291		86.2		64.8		19.6		87.9		11.1		5.79		736		159	
L040	DE-23	25.1		1.46		9.46		286		81.6		68.4		18.5		74.3		12.3		7.85		608		138	
L044	GG-23	35.8		21.8	†	13.1		202	††	118	††	105	††	36	††	93.9		223	††	183	††	659		438	††
L046	GJ-23	42.5		25	†	25.6	††	292										15.1		8.53		669		130	
L079	GJ-23	18.9		0.82		5.71		279		79.2		56.1		17		75.8		12.8		6.6		865		162	
L097	DE-23	32.8		6.81		17.9		302		89.1		60.6		15.3		73.5		14.2		13.7		742		170	
L133	BA-23	31.9		12.7		13.2		273		59.3	††	45.3		7.11	††	53.1		16.5		11.0		717		98.9	
L135	DN-23	34.3		8.46		14.4		245		117	††	88.8		31.0	††	98.1		20.7	†	15.9		668		162	
L156	GI-23	78	††	63	††	60	††	210	†	86.1		65.1		39.6	††	78.8		26	††	31.5	††	499		125	

Lab. Code #	Method Codes	Reported data on Boron (mg B/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L005	GI-23	33	††	2		12	††	47	††	23.6		46		12.4	††	41.9	††	7.07	††	7.77		9.95		7.7	
L008	GG-23	13.6		0.66		6.95		14.7		22.4		46		2.28		16.8		2.69		6.2		15.5		11.2	
L009	DE-23	16.7		2.61		7.41		15.4		20.3		37		2.3		16.2		1.43		3.96		12.7		9.23	
L011	GJ-23	27.4	††	11.3	††	13.6	††	19		17.6		31.3	†	3.53		11	††	3.01		4.51		12.2		8020	††
L013	DN-23	12.5	†	0.9		5.8		13.5		19.1		38.4		3.1		15.6		1.4		4		12.5		8.8	
L016	GI-23	16.4		1.3		7.33		17		22.2		41.4		2.56		17.8		2.12		5.13		14.8		11	
L018	GJ-23	15.7		1.4		7.2		15.8		22.9		44.4		3.8		18.6		2.4		5.3		14.8		10.5	
L019	AE-23	15		1.16		4.95		14.9		28.5	††	39.3		4.25		16.8		2.23		2.08		13.9		9.04	
L022	DE-23	16.2		2.2		7.8		16.8		21.5		42.1		3.1		19.1		2.38		5.32		14.2		10.2	
L023	DN-23	13.7		3.7		7.19		14.6		20.8		42.4		2.17		16.9				3.5		9.4		6.3	†
L024	AD-23	1.59	††	0.22		0.75	††	1.64	††	19.4		41.2		9.4	††	17.9		2.12		2.67		12.5		9.82	
L026	GI-23	17.2		2.73		8.25		17.0		23.2		44.7		4.07		19.9		4.37	†	6.2		16.9		12.1	
L028	DE-23	16.1		2.2		6.9		15.8		22.1		44.8		2.2		19.2		2		2		12.3		8.9	
L030	GJ-23	19.2	†	5.68	††	12.2	††	19.8		20.4		43.4		3.03		17		3.39		6.93		13.6		9.05	
L032	GG-23	18.5		3.66		9.27		17.3		21.9		41.5		3.73		18.6									
L034	GG-23	16.3		2.1		8.18		16.7		21.9		43		2.71		18.3		2.95		4.86		14.1		9.94	
L036	BA-23	15.5		1.33		7.14		18.2		18.7		40.1		1.08		14.4		2.24		4.54		13.1		9.76	
L040	DE-23	15.9		1.73		7.81		16		21		41.3		3.54		19		2.34		4.89		14.5		10.2	
L046	GJ-23	12.7	†	0.5		4.95		14.5										9.16	††	11.3	††	19	†	14.6	††
L064	GJ-30	15.1		3.54		17.2	††	25.3	††	19.9		41.7		2.82		20.5		2.23		5.22		13.8		4.32	††
L079	GJ-23	16.1		6.75	††	8		14.4		16.1		27.1	††	0.42		5.32	††	0.001	††	5.74		10		7.87	
L080	GJ-30	15.1		5.36	†	9.52		15.7		19.8		32.3		9.6	††	18.2		0.67		3.2		24	††	19.2	††
L084	GJ-30	19.8	†	4.9	†	10.7	†	19.6		21.5		50.4		15.3	††	15		2.9		6.6		8.9		9.8	
L097	DE-23	15.7		1.67		7.72		16.5		23.3		44.8		3.26		19		2.48		5.13		13.8		10.1	
L100	GJ-23	11.9	†	1.66		5.73		12.6		18.1		33.6		2.42		15.3		1.68		3.63		10.1		7.64	
L133	BA-23	49.8	††	39.9	††	34.5	††	55.2	††	39.2	††	84	††	5.06		26.6	††	0.83		1.18	††	14.4		9.13	
L135	DN-23	14.9		1.46		6.71		14.9		24		46.5		2.16		18.5		1.77		4.16		13.9		10.9	
L139	AD-23	16.1		1.11		7.13		18		22		41.1		3.45		17.4		2.16		4.73		15.4		10.9	
L156	GI-23	17		0.2		5.5		15		20		39.8		2.2		16.4		3.09		5.52		16.8		11.8	

Lab. Code #	Method Codes	Reported data on Cadmium (mg Cd/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L008	GG-24	0.08		0.018		0.034	†	0.242		0.046		0.189		0.118		0.228		0.014		0.011		0.079		0.04	
L009	GJ-23	0.066		0.032	†	0.015		0.236		0.091	††	0.17		0.118		0.223		0.016		0.0074		0.072		0.033	
L011	GJ-23	0.069		0.015		0.015		0.238		0.036		0.184		0.098		0.219		0.01		0.01		0.062		0.033	
L016	GJ-24	0.062		0.002		0.009		0.249		0.032		0.163		0.103		0.222									
L019	AE-24	0.056		0.013		0.012		0.216										0.025		0.015		0.069		0.012	
L023	DN-24	0.078				0.03	†	0.28																	
L024	AD-03	0.026		0.058	††	0.045	††	0.189		0.011		0.057	††	0.03	††	0.054	††	0.004		0.008		0.041		0.007	
L028	DE-24	0.076		0.007		0.017		0.271		0.037		0.195		0.106		0.247		0.007		0.223	††	0.096		0.045	
L030	GJ-24	0.068		0.003		0.01		0.229		0.034		0.186		0.101		0.221		0.0001		0.002		0.059		0.020	
L032	GG-24	0.047		0.002		0.009		0.191		0.025		0.114		0.076		0.174	††								
L036	GJ-23	0.055		0.001		0.011		0.23		0.047		0.157		0.114		0.229		0.005		0.008		0.064		0.038	
L040	DE-24	0.076		0.002		0.012		0.279		0.028		0.165		0.091		0.205		0.005		0.006		0.061		0.029	
L044	GG-23																	15.4	††	18.7	††	23.9	††	50.3	††
L079	GJ-23	0.05		0.001		0.004		0.246		0.013		0.113		0.058		0.16	††	0.001		0.001		0.034		0.001	
L133	BA-23	0.094		0.018		0.029	†	0.291										0.020		0.006		0.087		0.010	††
L156	GI-23	0.8	††	0.9	††	0.4	††	0.3																	

ab. Code #	Method Codes	Reported data on Calcium (%Ca w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	AD-09	1.3		0.01	††	0.046		0.246										0.111	††	0.061	††	0.962		0.611	
L005	GI-23	1.34		0.003		0.043		0.244		0.821		1.57		0.162		1.28		0.07		0.033		0.992		0.602	
L007	ZZ-38	1.39		0.014	††	0.055		0.257										0.091	†	0.06	††	0.876		0.445	
L008	GG-23	1.18		0.005		0.041		0.223		0.823		1.72		0.16		1.42		0.07		0.03		0.858		0.526	
L009	GJ-23	1.29		0.006		0.047		0.23		0.821		1.65		0.096	††	1.35		0.07		0.029		0.813		0.503	
L011	GJ-23	1.26		0.009	†	0.053		0.232		0.744		1.55		0.136		1.19		0.072		0.034		0.861		0.508	
L012	GE-11	1.38		0.028	††	0.058	††	0.327	††	0.873		1.72		0.25	††	1.53		0.103	††	0.044	††	0.993		0.611	
L013	DN-23	1.25		0.003		0.042		0.24		0.798		1.57		0.148		1.31		0.067		0.024	††	0.893		0.53	
L016	GI-23	1.37		0.003		0.046		0.255		0.836		1.55		0.148		1.29		0.079		0.033		0.954		0.594	
L017	DE-23	1.55		0.001		0.05		0.26		0.81		1.6		0.15		1.35		0.07		0.03		0.92		0.57	
L018	GJ-23	1.43		0.004		0.049		0.267		0.908		1.75		0.172		1.47		0.083		0.036		0.974		0.596	
L019	AE-23	1.18		0.004		0.042		0.198	†	0.783		1.45		0.13		1.24		0.077		0.033		0.928		0.526	
L022	DE-23	1.35		0.009	†	0.045		0.239		0.88		1.68		0.155		1.37		0.073		0.032		0.93		0.54	
L023	DN-23	1.43		0.003		0.046		0.24		0.874		1.76		0.147		1.49		0.078		0.032		1		0.62	
L024	AD-23	1.23		0.001		0.035	†	0.231		0.89		1.71		0.177		1.52		0.065		0.029		0.935		0.586	
L026	GI-23	1.35		0.004		0.042		0.242		0.829		1.63		0.151		1.39		0.07		0.029		0.931		0.57	
L028	DE-23	1.42		0.01	††	0.047		0.256		0.841		1.76		0.16		1.45		0.073		0.032		0.877		0.528	
L030	GJ-23	1.35		0.002		0.047		0.271		0.829		1.55		0.157		1.44		0.067		0.028		0.795		0.467	
L032	GG-23	1.3		0.005		0.041		0.235		0.813		1.56		0.14		1.34									
L034	GG-23	1.36		0.005		0.047		0.263		0.942		1.7		0.165		1.4		0.078		0.033		0.968		0.565	
L035	AD-13	1.15		0.001		0.008	††	0.26		0.762		1.56		0.135		1.22		0.064		0.015	††	0.85		0.52	
L036	GJ-23	1.38		0.003		0.046		0.251		0.785		1.53		0.153		1.3		0.076		0.031		0.89		0.544	
L040	DE-23	1.41		0.004		0.046		0.253		0.861		1.73		0.149		1.39		0.071		0.029		0.828		0.465	
L042	GF-14	1.37		0.003		0.04		0.245		0.767		1.62		0.137		1.45		0.073		0.032		0.837		0.586	
L044	GG-23	1.4		0.011	††	0.049		0.262		0.888		1.7		0.172		1.31		0.097	††	0.051	††	1.12	††	0.792	††
L046	GJ-23	1.4		0.004		0.045		0.25										0.065		0.026		0.803		0.458	
L064	GJ-11	1.28		0.038	††	0.053		0.189	††	0.865		1.78		0.176		1.34		0.078		0.072	††	0.955		0.528	
L079	GJ-23	1.35		0.003		0.044		0.241		0.881		1.66		0.159		1.43		0.074		0.031		0.906		0.55	
L080	GJ-13	1.58		0.0001		0.018	††	0.188	††	1.02	††	2.18	††	0.07	††	1.55		0.014	††	0.002	††	0.904		0.44	
L084	GJ-14	1.44		0.003		0.048		0.27		0.817		1.64		0.157		1.35		0.095	††	0.032		0.903		0.525	
L097	DE-23	1.28		0.01	††	0.044		0.242		0.849		1.66		0.156		1.4		0.084		0.034		0.889		0.537	
L100	GJ-23	1.24		0.002		0.041		0.226		0.761		1.74		0.151		1.37		0.071		0.030		0.878		0.527	
L133	BA-23	1.24		0.044	††	0.405	††	2.24	††	0.707		1.6		0.14		1.36		0.79	††	0.311	††	9.04	††	4.50	††
L135	DN-23	1.35		0.005		0.047		0.253		0.915		1.68		0.164		1.44		0.078		0.034		0.957		0.592	
L139	AD-23	1.27		0.003		0.047		0.274		0.826		1.47		0.153		1.26		0.077		0.033		0.88		0.53	
L156	GI-23	1.27		0.01	††	0.04		0.23		0.7		1.36		0.13		1.15		0.064		0.021	††	0.893		0.534	

Lab. Code #	Method Codes	Reported data on Carbon (%C w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L008	CA-37	41.3		43.6		43.8		46.7		53.3		41.7		45.6		46.2		45.6		44.3		43.4		44.4	
L009	CA-37	41.5		40.5		40.5		47.1		49.4		37.3		41.1		41.4		41.7		41.4		40.9		41.8	
L011	CA-21	49.4	††	53.4	††	52.2	††	53.4		50.9		47.8	††	50.6	††	48.7	†	51.8		52.9	††	49.6	††	50.4	††
L013	CA-37	44.8		43.6		43.8		50.8		54.3		41.8		46.6		46.2		46.7		44.7		45.2		45.5	
L018	CA-37																	46.5		45.2		44.2		44.6	
L019	CA-37	41.2		41.4		41.5		48.2		50.2		38.1		41.5		42.2		41.6		41.6		39.8		40.4	
L022	CA-37	29.6	††	24.6	††	31.2	††	34.4	††																
L023	CA-37	44.1		43.4		44.6		49.1		51.9		40.1		44.7		44.4									
L028	CA-37	44.4		43.7		43.7		49.4		52.3		40.6		45.2		44.9		44.7		43.1		43.2		43.9	
L030	CA-37																	42.3		41.3		42		43.1	
L032	CA-37	42.4		41.5		41.7		48.3		50.2		38.2		42.3		42.1		41.8		41.6		41.3		42	
L036	CA-37	45		44.4		44.2		49.8		52.6		40.4		45.8		44.3		46.2		44.2		43.8		44.6	
L040	CA-37	43.9		43.5		43.1		48.5		51.2		39.8		44.6		44		44.8		43.4		43.2		44	
L042	CA-37	44.7		44.6		44.8		50.4		51.7		39.8		44.7		44		43.4		41.9		43		43.5	
L045	CA-37	41.3		39.7	†	39.9	†	47.4		0.391	††	0.26	††	0.253	††	0.406	††	43.6		42.7		43.0		43.6	
L046	CA-37									51.8		38.2		42.6		42.7		42.7		42.0		42.0		42.7	
L079	CA-37	43.9		43.2		43.2		49.4		52.5		40.3		44.8		44.5									
L097	CA-37	43.7		44.2		44.9		50.4		52		40.3		43.5		43.7		45		43.7		43.1		44.1	
L156	CA-37	45		44.6		44.4		49.7		51.6		38.6		43.6		43.1		44.2		42.4		41.6		42.7	

Lab. Code #	Method Codes	Reported data on Chloride (%Cl w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP		ASP		ASP		ASP		ASP		ASP		ASP		ASP		ASP		ASP		ASP		ASP	
		101		102		103		104		11		12		13		14		41		42		43		44	
L005	GE-31	0.22	††	0.05		0.08		0.13	††																
L009	BB-32	0.84	††	0.104	††	0.215	††	0.612	††	0.501	††	0.772	††	0.544	††	0.629	††	0.124	††	0.298	††	0.966		0.872	†
L011	BB-32	0.631		0.013	††	0.02		0.257		0.272		0.378		0.381		0.41		0.016	††	0.028	††	0.792		0.71	
L013	CA-27	0.55		0.05		0.05		0.22		0.29		0.38		0.43		0.41		0.1	††	0.11		0.8		0.73	
L016	BA-23	0.583		0.06	†	0.066		0.223										0.054		0.085		0.829		0.739	
L018	BB-32	0.601		0.063	†	0.062		0.242		0.317		0.414		0.455		0.415		0.056		0.083		0.861		0.749	
L022	BB-31	0.571		0.052		0.041		0.295	†	0.305		0.402		0.443		0.425		0.054		0.093		0.87		0.78	
L023	BB-38	0.59		0.12	††	0.11	††	0.26		0.29		0.4		0.51		0.42		0.05		0.082		0.925		0.791	
L026	BB-31	0.559		0.049		0.038		0.207		0.294		0.38		0.408		0.396		0.074	†	0.112		0.876		0.776	
L028	BB-31	0.59		0.02	††	0.02		0.21		0.3		0.41		0.45		0.45		0.05		0.09		0.82		0.77	
L030	BB-32	0.527		0.051		0.052		0.223		0.282		0.348		0.385		0.376		0.04		0.075		0.722		0.685	
L032	BB-31	0.516		0.040	†	0.033		0.205		0.305		0.429		0.391		0.393									
L034	BA-32	0.586		0.045		0.046		0.229		0.295		0.394		0.434		0.408		0.062		0.103		0.869		0.756	
L036	EB-36	0.639		0.02	††	0.016		0.281		0.33		0.392		0.442		0.422		0.057		0.088		0.874		0.77	
L040	BB-32	0.629		0.049		0.058		0.26		0.3		0.399		0.414		0.402		0.056		0.098		0.884		0.772	
L064	BB-27	0.582		0.053		0.058		0.171		0.223	††	0.402		0.462		0.46		0.064		0.133	†	0.82		0.84	
L097	BA-32	0.579		0.052		0.049		0.227		0.288		0.379		0.423		0.404		0.052		0.1		0.828		0.736	
L100	BA-32	0.533		0.052		0.056		0.218		0.264		0.379		0.394		0.382		0.054		0.101		0.772		0.685	
L133	BB-28	5.32	††	0.44	††	0.366	††	2.1	††									0.605	††	0.83	††	7.83	††	7.782	††
L135	BB-32	0.477		0.036	†	0.04		0.163		0.213	††	0.292	††	0.361		0.318	††	0.186	††	0.193	††	0.97		0.866	
L139	BB-31	0.613		0.044		0.048		0.216		0.326		0.437		0.454		0.426		0.043		0.088		0.855		0.753	

Lab. Code #	Method Codes	Reported data on Cobalt (mg Co/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L008	GG-24	0.333		0.008		0.053		0.849		0.118		0.363		0.048		0.319		0.041		0.35		0.357		0.074	
L009	GJ-23	0.279		0.015		0.048		0.754		0.080		0.129		0.044		0.231		0.047		0.271		0.294		0.067	
L011	GJ-23	0.252		0.059	††	0.035		0.73		0.163		0.154		0.137	††	0.209		0.119	††	0.196	†	0.202		0.1	†
L013	DN-23	0.3		0.01		0.05		0.78		0.091		0.173		0.065		0.259		0.061		0.285		0.34		0.085	
L016	GJ-24	0.32		0.007		0.046		0.861		0.093		0.172		0.058		0.27									
L017	DE-23	1	††	1	††	1	††	1		1.2	††	1.2	††	1.2	††	1.2	††	1.2	††	1.2	††	1.2	††	1.2	††
L019	AE-24	0.248		0.02		0.04		0.614										0.025		0.275		0.282		0.033	†
L022	DE-24	0.31		0.03	††	0.055		0.81		0.105		0.202		0.048		0.295		0.041		0.315		0.405		0.071	
L023	DN-24	0.35		0.015				0.88																	
L024	AD-03	0.141	††	0.013		0.019	†	0.61		0.048		0.125		0.044		0.131		0.017		0.271		0.138	†	0.029	††
L028	DE-24	0.362		0.008		0.049		0.905		0.113		0.316		0.034		0.28		0.034		0.292		0.303		0.07	
L030	GJ-24	0.342		0.005		0.043		0.836		0.102		0.218		0.052		0.243		0.049		0.291		0.311		0.076	
L032	GG-24	0.162	††	0.009		0.11	††	0.626		0.058		0.134		0.024		0.166									
L034	GG-23	0.326		0.027	†	0.019	†	0.843		0.11		0.237		0.055		0.288		0.043		0.3		0.308		0.074	
L040	DE-24	0.317		0.005		0.04		0.941		0.133		0.275		0.06		0.319		0.033		0.246		0.257		0.061	
L044	GG-23									0.143		0.237		0.129	††	0.441	†								
L079	GJ-23	0.32		0.014		0.082	†	0.83		0.125		0.263		0.048		0.264		0.003		0.245		0.288		0.015	††
L097	DE-24	0.317		0.009		0.049		0.89		0.094		0.165		0.03		0.275		0.031		0.308		0.33		0.067	
L133	BA-23	0.2	†	0.001		0.001	††	0.6										0.517	††	0.618	††	0.758	††	0.298	††
L135	DN-23	0.415		0.051	††	0.091	††	1.003		0.159		0.245		0.697	††	0.359		0.032		0.376		0.409		0.069	
L139	AD-23	0.291		0.01		0.052		0.419	††	0.072		0.118		0.037		0.218		0.034		0.318		0.247		0.05	†

Lab. Code #	Method Codes	Reported data on Copper (mg Cu/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	AD-09	4.88		0.15	††	7.55		5.75										0.2	††	9.3		5.9		4.45	††
l005	GI-23	5.6		1.2		7.8		6.4		5.66		19.6		2.44		9.2		4.05		10.1		6.46		7.75	
L007	ZZ-38	0.499	††	0.001	††	1.99	††	1.0	††									0.25	††	8.75		6		4.25	††
L008	GG-24	4.43		1.09		7.18		5.63		6.11		21.1		3.33	††	9.05		4.61		11.2		7.69		8.68	
L009	GJ-23	4.44		1.27		7.18		5.81		5.83		18.4		2.62	†	8.86		4.55		9.68		7.52		8.58	
L011	GJ-23	4.69		1.07		7.08		5.56		5.7		19.1		2.14		8.29		4.13		9.32		6.99		7.81	
L013	DN-23	4.4		1.3		6.8		5.2		5.23		18.2		1.95		8.46		4		9.5		6.8		8	
L016	GI-23	5.06		1.24		7.9		6.12		5.67		19.3		1.82		9.07		4.91		11		7.51		9.62	
L017	DE-23	6		1		8		8	††	7	††	21		1.2		9		10	††	14	††	10	††	12	††
L018	GJ-23	4.81		1.22		8.08		6.13		6.12		22		1.97		9.71		5.1		11.5		7.8		9.4	
L019	AE-24	10.3	††	2.74	††	8.08		6.11		10.7	††	20.5		3	††	8.31		9.16	††	43.3	††	40.3	††	37.1	††
L022	DE-23	5		1.3		7.68		6.47		5.54		19.1		1.93		8.98		4.46		10.1		7.28		8.7	
L023	DN-23	4.99		1.12		9.11	††	6.05		5.36		20.9		1.68		9.1		4.6		10		6.9		9.4	
L024	AD-23	4.12		0.80	†	6.91		5.14		5.93		19.8		2.83	††	9.39		3.82		10.2		7.78		9.2	
L026	GI-23	4.96		1.32		8.37		6.16		5.46		19.4		1.92		9.21		4.66		10.9		8.03		9.57	
L028	DE-23	5.6		0.9		8.5		6.7		6.4		23.2	††	2.1		10.4	†	4.6		10.6		6.8		8.5	
L030	GJ-23	4.48		1.08		7.1		5.77		5.61		19.8		1.8		9.29		3.84		8.8		6.51		7.32	
L032	GG-23	4.4		1.05		7.31		5.42		5.12		17.9		1.72		8.33									
L034	GG-23	4.65		1.25		7.56		5.69		5.71		19.2		1.82		8.94		4.57		9.66		6.67		8	
L035	AD-11																	2.74	††	9.27		6.91		6.45	
L036	GJ-23	5.26		1.49		7.89		6.35		5.19		19		1.88		8.5		4.32		9.84		7.05		8.76	
L040	DE-23	5.31		1.25		8.52		6.46		5.67		20.9		2.06		9.24		4.62		10.5		7.08		8.71	
L042	GI-09	6.5	††	2.4	††	8.9		6.6																	
L044	GG-23	1.66	††	0.688	††	2.4	††	2.14	††	2.3	††	7.38	††	1.38		6.86	††	1.07	††	4.74	††	2.93	††	6.36	†
L046	GJ-23	4.55		1.2		7.34		5.83										4.31		9.39		6.69		8.08	
L064	GJ-11	4.99		0.41	††	7.07		5.82		10.2	††	17.2		2.17		8.52		5		17.2	††	7.87		8.91	
L079	GJ-23	4.8		1.16		7.54		5.93		5.68		20.3		1.81		9.32		4.53		10.4		7.61		9.24	
L080	GJ-13	3.86		2.04	††	5.63	††	4.83		5.4		18.6		3.32	††	9.56		7.3	††	12.6	†	10.8	††	13.3	††
L084	GJ-09	5.28		1.02		7.5		5.75		4.8		18		1.61		8.3		3.58		8.53		6.05		7.12	
L097	DE-23	4.6		1.22		7.4		5.69		6.03		20.2		2.2		8.94		4.59		10		7.49		8.86	
L100	GJ-23	4.72		1.3		7.48		5.72		5.35		16.6		1.87		8.56		4.66		10.4		7.33		8.98	
L133	BA-23	5.28		1.18		7.15		0.14	††	3.79	††	18.3		1.56		7.79		5.62	†	28.6	††	10.4	††	12.6	††
L135	DN-23	4.53		1.06		7.28		5.45		5.63		20.7		1.70		9.02		4.30		10.0		7.00		8.90	
L139	AD-23	4.47		0.267	††	7.57		4.82		4.54	†	18.4		1.56		7.54	††	2	††	10.1		5.16		4.38	††
L156	GI-23	5.7		1.2		7		4.8		5.49		19.2		1.94		8.99		4.66		10.1		12.6	††	9.08	

Lab. Code #	Method Codes	Reported data on Iron (mg Fe/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	AD-09	72.5		7.77	††	41.9		74.9										50.3		66.9		590		109	
l005	GI-23	58		10	†	24	††	72		58.5		45.4	†	29.9		109	††	33.2		41.3	††	479		71.7	
L007	ZZ-38	49.5	††	7.99	††	34.7	††	53.9	††									23.3	††	44.5	††	342		49.5	††
L008	GG-23	61.2		13.4		54.5		73.1		64.3		59.8		44.3		139		41.8		66.5		494		94.8	
L009	GJ-23	69.3		30.4	††	61.2		86.7		78		68		50.4		138		70.7	††	80.2		513		114	
L011	GJ-23	74.7		19.3	†	58.4		86.7		75.9		67.5		39.4		141		56.2		76.9		530		101	
L013	DN-23	56		9.7	†	37	†	68.5		67.6		58		45.1		144		43.1		64.4		499		89.2	
L016	GJ-23	70.2		15		53.7		80.9		65.8		58.6		46		140		54.7		72.7		565		115	
L017	DE-23	78		16		58		82		70		58		37		155		56		75		599		113	
L018	GJ-23	71.6		15.9		58		83.4		75.7		80		47		159	†	58.4		79		597		108	
L019	AE-24	78.1		15.1		56.3		85.2		63.7		68		30		132		50.1		80		4789		110	
L022	DE-23	66		20	†	54		78		68		63		41		141		42		69		504		89	
L023	DN-23	62.8		15.4		53.7		79.7		70		64.2		33.4		145		48		72		610		110	
L024	AD-23	62		21.2	††	8.5	††	77.7		60.2		49.3		41.7		418	††	50.6		72.2		566		99.9	
L026	GI-23	64		13.6		51.2		77.1		67.2		58.5		34.8		141		39.7		70.8		529		98.5	
L028	DE-23	67.9		14.5		57.7		84.8		70.6		65.1		34.9		139		40.2		64.8		518		87.8	
L030	GJ-23	69.1		8.07	††	46.3		73		80.4		78.3		43.6		174	††	44.7		60.2		483		98.1	
L032	GJ-23	58.5		14.1		46.5		68.5		59.3		16.4	††	40.9		125									
L034	GG-23	62.6		14.7		49.8		72.3		61.4		54.4		33.4		124	†	37.8		64.5		453		82	
L035	AD-13	74.8		10.9	†	30.7	††	86.1		68.4		71		42.2		141		34.8		48.8	†	44.2	††	87.2	
L036	GJ-23	70.7		15.3		52.9		77.9		66.3		59.6		41.8		136		40.8		63		499		93.2	
L040	DE-23	70.4		14.8		58.4		84.6		69.8		67.1		38.3		139		42.6		70.9		592		95.2	
L042	GI-09	68		15		55		82																	
L044	GG-23	73.6		34.6	††	37.2	†	8.73	††	76.1		64.5		44.2		140		37.9		44.7	††	355		132	
L046	GJ-23	70.6		18.3		63.5		79.2										46.2		61.9		482		84	
L064	GJ-11	72.5		4.52	††	44.1		75.2		80.3		68		43.7		132		47.7		44.4	††	340		107	
L079	GJ-23	68		13.2		52		77.5		73.9		70.1		44.6		164	†	48.5		68.4		565		99.5	
L080	GJ-13	63.6		18.8		56.3		67.8		64		61.2		30.3		139		45.8		75		550		106	
L084	GJ-09	79.7		19.9	†	60.4		85.7		68.6		61.9		43.1		153		52		67		518		85	
L097	DE-23	62.6		16.3		52.1		84.4		66.7		53.5		30.9		128		40.2		69.4		505		94.8	
L100	GJ-23	64.3		15.6		55.4		76		70.4		75.8		38.6		145		44.4		67.5		489		89.5	
L133	BA-23	64.6		14.4		45.9		82.1		51.0	††	50.2		25.1	††	111	††	30.2		63.4		430		79.8	
L135	DN-23	68.9		16.2		56.1		78.7		79.2		66.4		42.7		148		50.0		75.4		564		103	
L156	GI-23	66		14		61		76		70.5		67.9		41		1.23	††	39.9		64.9		460		76.5	

Lab. Code #	Method Codes	Reported data on Lead (mgPb /kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L008	GG-24	0.129		0.029		0.045		0.123		0.225		0.365		0.12		1.94		0.125		0.079		0.512		0.142	
L009	GJ-23	0.699	††	0.353	††	0.672	††	0.579	††	0.817	††	0.665		0.504		2.07		0.234		0.069		0.424		0.151	
L011	GJ-23	0.151		0.022		0.046		0.131		0.386		0.331		0.25		2.2		0.218		0.104		0.572		0.315	††
L019	AE-24	0.117		0.031		0.024		0.086										0.138		0.113		0.325		0.081	
L022	DE-24	0.095		0.08		0.06		0.135		0.215		0.24		0.05		1.98		0.105		0.02		0.31		0.12	
L023	DN-24	0.074		0.024				0.12																	
L024	AD-03	0.002		0.036		0.051		0.008		0.563		0.551		0.365		3.71	††	0.263		0.251		0.142			
L028	DE-24	0.31		0.31	††	0.31	††	0.31	†	0.31		0.31		0.31		1.84		0.3		0.3		0.42		0.3	††
L030	GJ-24	0.066		0.012		0.003		0.095		0.197		0.247		0.081		1.92		0.069		0.002		0.38		0.085	
L032	GG-24	0.044		0.006		0.001		0.078		0.183		0.184		0.064		1.78									
L040	DE-24	0.233		0.002		0.001		0.154		0.108		0.184		0.062		1.99		0.097		0.009		0.34		0.087	
L079	GJ-23	0.038		0.227	††	0.2		0.336	†	0.115		0.001		0.019		1.63		0.044		0.248		0.201		0.044	
L133	BA-23	0.46	††	0.24	††	0.262	†	0.448	††	0.437		0.481		0.422		2.143		1.94	††	0.12		0.472		0.08	

Lab. Code #	Method Codes	Reported data on Magnesium (%Mg w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	AD-09	0.203		0.072		0.088		0.049	††									0.114		0.071		0.117	††	0.165	
I005	GI-23	0.212		0.083		0.105		0.076		0.158		0.731		0.101		0.295		0.13		0.088		0.143		0.176	
L007	ZZ-38	0.259		0.095	††	0.107		0.079	††									0.126		0.079		0.138		0.168	
L008	GG-23	0.198		0.071	†	0.09		0.058		0.141		0.718		0.097		0.272		0.125		0.08		0.135		0.182	
L009	GJ-23	0.195		0.078		0.093		0.065		0.132		0.624		0.09		0.234		0.123		0.080		0.124		0.166	
L011	GJ-23	0.221		0.075		0.095		0.064		0.138		0.648		0.085		0.239		0.12		0.079		0.136		0.172	
L012	GE-11	0.264	†	0.09		0.106		0.069		0.149		0.702		0.102		0.298		0.139		0.085		0.143		0.19	
L013	DN-23	0.205		0.075		0.09		0.06		0.135		0.63		0.09		0.251		0.122		0.078		0.137		0.175	
L016	GI-23	0.228		0.083		0.1		0.067		0.141		0.649		0.092		0.253		0.136		0.086		0.144		0.193	
L017	DE-23	0.25		0.09		0.11		0.07		0.15		0.67		0.09		0.27		0.13		0.08		0.14		0.19	
L018	GJ-23	0.242		0.087		0.107		0.07		0.161		0.725		0.104		0.289		0.142		0.092		0.147		0.195	
L019	AE-23	0.232		0.081		0.099		0.063		0.14		0.638		0.088		0.033	††	0.143		0.093	†	0.155		0.19	
L022	DE-23	0.232		0.083		0.095		0.063		0.154		0.685		0.099		0.275		0.128		0.086		0.144		0.186	
L023	DN-23	0.222		0.078		0.102		0.067		0.143		0.736		0.096		0.258		0.14		0.084		0.15		0.2	
L024	AD-23	0.226		0.076		0.094		0.065		0.175	††	0.769		0.118		0.316	††	0.115		0.076		0.146		0.206	
L026	GI-23	0.234		0.083		0.099		0.067		0.148		0.688		0.095		0.274		0.13		0.083		0.142		0.192	
L028	DE-23	0.248		0.082		0.106		0.071		0.146		0.703		0.098		0.281		0.125		0.082		0.133		0.178	
L030	GJ-23	0.222		0.08		0.096		0.066		0.154		0.684		0.096		0.294		0.111		0.072		0.12		0.159	
L032	GG-23	0.208		0.074		0.0907		0.632	††	0.139		0.618		0.088		0.252									
L034	GG-23	0.231		0.084		0.101		0.068		0.152		0.7		0.1		0.275		0.136		0.086		0.146		0.196	
L035	AD-13	0.21		0.08		0.1		0.07		0.134		0.601		0.058	††	0.238		0.12		0.078		0.131		0.174	
L036	GJ-23	0.234		0.083		0.102		0.069		0.143		0.651		0.094		0.261		0.127		0.078		0.133		0.183	
L040	DE-23	0.225		0.086		0.103		0.068		0.141		0.689		0.095		0.264		0.125		0.081		0.136		0.18	
L042	GF-09	0.228		0.085		0.101		0.059		0.678	††	2.33	††	1.02	††	1.73	††	0.14		0.098	††	0.126		0.21	
L044	GG-23	0.224		0.083		0.102		0.007	††	0.162		0.722		0.109		0.259		0.068	††	0.045	††	0.09	††	0.176	
L046	GJ-23	0.226		0.0778		0.098		0.0663										0.11		0.068	††	0.114	††	0.155	
L064	GJ-11	0.242		0.083		0.093		0.063		0.125		0.656		0.102		0.263		0.133		0.084		0.138		0.188	
L079	GJ-23	0.25		0.084		0.103		0.068		0.163		0.731		0.105		0.299		0.126		0.081		0.141		0.183	
L080	GJ-13	0.299	††	0.066	††	0.083	††	0.056		0.148		0.723		0.088		0.269		0.113		0.84	††	0.142		0.189	
L084	GJ-14	0.24		0.079		0.096		0.063		0.147		0.676		0.096		0.277		0.121		0.08		0.138		0.177	
L097	DE-23	0.213		0.084		0.095		0.066		0.145		0.713		0.096		0.26		0.13		0.079		0.133		0.181	
L100	GJ-23	0.215		0.079		0.0951		0.063		0.141		0.676		0.094		0.259		0.126		0.081		0.137		0.182	
L133	BA-23	0.212		0.076		0.092		0.064		0.127		0.645		0.087		0.256		1.2	††	0.79	††	1.36	††	1.44	††
L135	DN-23	0.223		0.081		0.099		0.066		0.171	†	0.723		0.106		0.288		0.139		0.091		0.152		0.208	
L139	AD-23	0.221		0.087		0.103		0.07		0.134		0.647		0.093		0.255		0.132		0.084		0.136		0.182	
L156	GI-23	0.22		0.08		0.1		0.07		0.13		0.6		0.08		0.23		0.122		0.073		0.135		0.176	
L157	AE-13																	0.126		0.081		0.134		0.173	

Lab. Code #	Method Codes	Reported data on Manganese (mg Mn/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	AD-09	65.6		3.35		8.5		267										48.1		13.7		90.7		66.3	
l005	GI-23	56		3.2		8.2		236		662		75.3		80.6		30.7		44.8		13		75.9		52.4	
L007	Not Specified	175	††	8.99	††	50.9	††	321	††																
L008	GG-23	58.9		3.59		9.22		255		710		90.2		87.4		36.8		45.9		13.7		83.3		59.5	
L009	GJ-23	56		4.65		13.1	††	258		644		78.7		81.5		30.7		46		14.1		81.8		59	
L011	GJ-23	63.1		4.11		9.68		263		689		83		75.2		30.9		46.4		15.1		86.5		59.6	
L013	DN-23	57		4.8	††	10		245		643		77.9		80.3		29.9		44.7		13.5		82.4		57.8	
L016	GI-23	62.6		3.88		9.72		280		716		83.1		83.4		32.4		52.4	††	15.6		91.5		66.9	
L017	DE-23	69		4		10		297		774		80		79		31		46		14		84		60	
L018	GJ-23	65.1		3.9		10.3		295		774		90.5		92.4	††	35.4		55.9	††	16.6	††	94		67.1	
L019	AE-24	64.6		4.49		8.73		277		646		83		72.7		32		50.2	†	15.9		72.5		56.8	
L022	DE-23	60.6		3.7		9.7		278		705		82.5		81.3		32.1		46.1		13.5		85		59.7	
L023	DN-23	60.5		3.71		9.96		280		682		81.1		84.3		33		51	†	15		86		65	
L024	AD-23	55.4		3.62		8.5		242		611		74.9		76.4		31		38.6	††	12.1		76.7		55	
L026	GI-23	63.5		3.54		9.21		272		697		84.9		83.8		33.6		48		14.4		87.6		62.1	
L028	DE-23	67.9		3.85		10.4		297		734		90.3		86.2		34.6		46.1		13.5		85.4		62.2	
L030	GJ-23	64.7		2.86		7.64		267		749		84.7		83.9		37.7	†	39.1	††	11.3		79.2		52.6	
L032	GG-23	54.9		3.3		8.45		251		648		73.1		73.7		73.7	††								
L034	GG-23	57.8		3.73		9.16		259		651		77.6		77.8		30.5		43.8		13.2		75.6		56	
L035	AD-13	61		2.12	††	5.2	††	248		702		85.6		57.7	††	31.3		31	††	9.81	††	16.5	††	28.3	††
L036	GJ-23	64.3		3.59		9.46		269		646		80.1		80.9		31.3		47.1		13.5		86.9		60.5	
L040	DE-23	58.3		3.64		8.94		264		724		80.5		83.6		32.3		46.3		13.5		79.6		57.5	
L042	GI-09	68		4		10		282																	
L044	GG-23	62.6		3.89		8.92		270		683		82.3		81.9		28.7		28.5	††	6.92	††	52.7	††	56.3	
L046	GJ-23	60.6		3.41		9.14		264										38.4	††	11.2		70.6	†	48.5	
L064	GJ-11	60.5		4.24		8.72		231		691		131	††	84.6		35.3		46.8		12.5		93.3		72.5	††
L079	GJ-23	64.5		3.51		9.1		266		763		91		90.8		35.9		52.5	††	15.7		97.1		68.1	
L080	GJ-13	63		4.4		10.2		288		743		91.6		84		35		45.3		14.8		88		61.8	
L084	GJ-09	69.9		4.2		10.5		282		665		85.4		82.5		33.8		46.2		13.7		85.4		56.4	
L097	DE-23	58.9		4.73	†	9.25		277		758		84.5		81.9		31.8		48		13.9		84.8		59.7	
L100	GJ-23	56.5		3.55		9.05		260		675		134	††	78.8		30.7		46.6		13.7		80.8		57.7	
L133	BA-23	59.6		3.32		8.47		251		604		79.8		76.2		31.8		45.4		14.4		83.8		51.7	
L135	DN-23	63.7		3.9		9.79		278		818		91.9		92.8	††	35.9		48.7		16.1		86.6		65.2	
L139	AD-23	57.3		4.41		10.6		121	††	775		74.9		75.7		29.9		47.6		14.5		75.8		52.3	
L156	GI-23	63		3.5		9.2		267		656		78		78.3		30.5		46.4		13.9		83.6		59.1	

Lab. Code #	Method Codes	Reported data on Molybdenum (mg Mo/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L008	GG-24	0.567		0.131		6.02		0.07		0.14		0.33		0.507		0.943		0.595		0.808		0.262		0.234	
L009	GJ-23	0.945	††	0.732	††	6.38		1.08	††	0.682	††	0.751	††	1.07	††	1.14	†	1.28	††	1.17		0.709	††	0.759	††
L011	GJ-23	0.559		0.112		5.7		0.08		0.2	†	0.294		0.415		0.766		0.961		0.883		0.245		0.264	
L013	DN-23	0.51		0.09		5.95		0.07		0.015		0.215		0.445		0.826		0.78		0.78		0.14		0.17	
L016	GJ-24	0.537		0.131		5.87		0.061		0.03		0.24		0.44		0.836									
L017	DE-23	10.8	††	10.8	††	6		10.8	††	10	††	10	††	10	††	10	††	1		1		10	††	10	††
L018	GJ-23	0.5		0.3	††	6.3		0.1																	
L019	AE-24	1.25	††	0.355	††	5.18		0.581	††	1.25	††	0.425		0.3		0.733		0.742		0.856		1.02	††	0.858	††
L022	DE-24	0.52		0.13		5.67		0.075		0.06		0.25		0.325		0.935		0.592		0.92		0.24		0.23	
L023	DN-24	0.65		0.16		6.6		0.082																	
L024	AD-23	0.543		0.002	†	8.21	††	0.024		0.148		0.465	†	0.416		2.31	††	1.01	†	0.967		0.304		0.3	
L028	DE-24	0.61		0.17		6.36		0.17		0.17		0.17		0.17		0.9		0.56		0.8		0.17		0.21	
L030	GJ-24	0.545		0.111		5.64		0.075		0.049		0.258		0.417		0.919		0.505		0.763		0.206		0.201	
L032	GG-24	0.613		0.123		4.64	††	0.161		0.034		0.232		0.224		0.86									
L034	GG-23	0.514		0.172		6.02		0.143		0.107		0.197		0.242		0.889		0.69		0.948		0.223		0.277	
L036	GJ-23	0.462		0.135		4.85		0.253		1.76	††	0.617	††	0.442		0.598	†	0.583		0.75		0.142		0.179	
L040	DE-24	0.515		0.112		6.29		0.046		0.025		0.221		0.229		0.933		0.526		0.829		0.16		0.188	
L079	GJ-23	0.42		0.08		4.37	††	0.03		0.013		0.279		0.35		0.811		0.722		0.702		0.168		0.212	
L097	DE-24	0.557		0.145		6.03		0.133		0.041		0.251		0.159		0.899		0.503		0.81		0.192		0.23	
L133	BA-23	0.896	††	0.285	††	5.63		0.263	†	0.074		0.484	†	0.536		0.62	†	0.419		1.16		0.246		0.471	††
L135	DN-23	0.731	†	0.257	†	6.41		0.314	†	0.064		0.353		0.336		1.10		0.654		0.859		0.256		0.269	
L139	AD-23	0.399	†	0.087		5.67		0.016		0.025		0.172		0.174		0.521	††	0.453		0.742		0.135		0.165	
L156	GI-23	0.9	††	0.7	††	6		0.1																	

Lab. Code #	Method Codes	Reported data on Nitrogen (%N w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	GE-32	2.73		1.33		3.29		1.82										1.82		3.64	††	1.68		1.54	
L005	GE-31	3.39	††	1.59	††	4.68	††	2.24	††																
L007	ZZ-38	3.06	†	1.54	††	3.79		2.02										1.89		4.99	††	1.74		1.62	
L008	CA-37	2.86		1.26		3.71		1.78		2.36		0.91		1.01		2.83		1.84		4.39		1.82		1.58	
L009	CA-37	2.73		1.29		3.72		1.84		2.33		0.974		1.1		2.78		1.65		4.07		1.71		1.54	
L011	GJ-23	2.75		1.23		3.53		1.79		2.34		0.97		1.06		2.72		1.8		4.22		1.78		1.56	
L012	GE-30	2.43	††	1.32		2.91	††	1.76		2.51		1.16	†	1.12		2.91									
L013	CA-37	2.78		1.28		3.62		1.86		2.61		1.05		1.17		3.02		2.03		4.79		1.98		1.7	
L016	CA-37	2.86		1.35		3.65		1.87		2.33		0.957		1.15		2.72		1.82		4.51		1.88		1.69	
L017	GE-31									2.33		0.98		1.05		2.75									
L018	CA-37	2.87		1.36		3.89		1.93		2.6		1.02		1.12		2.96		2		4.62		1.98		1.74	
L019	CA-37	3.01		1.35		3.79		1.98		2.47		1.07		1.17		2.98		1.87		4.41		1.95		1.66	
L022	CA-37	2.81		1.29		3.62		1.9		2.39		0.96		1.12		2.79		1.86		4.27		1.89		1.67	
L023	CA-37	2.8		1.47	†	3.95		1.92		2.71		1.25	††	1.4	††	3.22	††	1.97		4.47		2.13		1.86	
L024	GF-32	2.45	††	1.22		3.36		1.72		2.3		0.906		1.04		2.61		1.75		4.03		1.76		1.49	
L026	GE-31	2.7		1.31		3.61		1.89		2.46		0.974		1.08		2.74		1.86		4.3		1.84		1.66	
L028	GE-31	2.8		1.2		3.43		1.72		2.19		0.7	††	0.75	††	2.26	††	1.96		4.49		1.86		1.62	
L030	CA-37	2.84		1.31		3.43		1.83		2.45		0.86		1.01		2.8		1.68		4.14		1.65		1.44	
L032	CA-37	2.75		1.32		3.59		1.85		2.42		1		1.1		2.8		1.81		4.33		1.81		1.62	
L034	GE-31	2.61		1.23		3.56		1.74		2.09		0.77	††	0.99		2.53		1.73		4.17		1.69		1.45	
L035	GF-38																	2.07		4.17		1.79		1.73	
L036	GF-31	2.89		1.48	†	3.99		2.04		2.51		0.991		1.11		2.91		2.02		4.42		1.87		1.74	
L040	CA-37	2.9		1.35		3.75		1.84		2.46		1.02		1.13		2.84		1.9		4.35		1.82		1.6	
L042	CA-37	2.91		1.34		3.81		1.86		2.52		1.02		1.12		2.92		1.87		4.43		1.82		1.61	
L044	GE-32	2.77		1.32		3.5		1.81		1.89	††	1.05		1.06		2.6									
L045	CA-37	2.91		1.35		3.56		1.92		2.48		1.05		1.24		2.89		1.98		4.34		1.98		1.78	
L046	CA-37									2.43		1.03		1.11		2.76		1.79		4.27		1.80		1.56	
L064	GE-30	2.76		1.02	††	3.59		1.9		2.72		0.812	†	1.02		2.7		1.79		4.25		1.73		1.48	
L079	CA-37	2.92		1.47	†	3.85		2.02		2.57		1.07		1.21		2.94									
L084	GE-30	2.78		1.34		3.76		1.85		2.43		0.99		1.07		2.64		1.78		4.22		1.73		1.47	
L097	CA-37	2.89		1.47	†	3.81		2		2.55		1.15	†	1.18		2.89		2.01		4.46		1.96		1.75	
L100	CA-37	3.06	†	1.47	†	3.89		2.06		2.67		0.953		1.37	††	3.15		2		4.52		2.08		1.84	
L133	BB-38									0	††	0.075	††	0.01	††	0.03	††	0.01	††	0	††	0.02	††	0	††
L135	GF-27	3.06	†	1.56	††	4.04		2.13	††	2.271		0.644	††	0.76	††	2.47		2.07		4.64		2.0		1.792	
L139	CA-37	2.78		1.29		3.69		1.88		2.4		0.945		1.03		2.75		2		4.69		1.96		1.74	
L156	CA-37	2.81		1.36		3.76		1.85		2.46		1		1.13		2.88		1.88		4.33		1.82		1.6	

Lab. Code #	Method Codes	Reported data on Phosphorus (%P w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	GE-30	0.255		0.194		0.32		0.179										0.31		0.3		0.202		0.221	
l005	GI-23	0.21		0.181		0.306		0.186		0.162		0.358		0.139		0.816	††	0.362		0.354		0.232		0.262	
L007	ZZ-38	0.256		0.224		0.336		0.194										0.341		0.362		0.24		0.277	†
L008	GG-23	0.221		0.192		0.304		0.171		0.142		0.353		0.129		0.263		0.318		0.306		0.208		0.234	
L009	GJ-30	0.282		0.249		0.373		0.232	††	0.179	††	0.4		0.163	††	0.304	††	0.41	††	0.309		0.27	††	0.301	††
L011	GJ-23	0.23		0.197		0.317		0.176		0.135		0.324		0.109		0.223	††	0.314		0.312		0.208		0.232	
L012	GE-30	0.26		0.26	††	0.35		0.22	††	0.173	†	0.379		0.176	††	0.32	††								
L013	DN-23	0.22		0.195		0.31		0.18		0.149		0.347		0.132		0.259		0.33		0.322		0.211		0.235	
L016	GI-23	0.252		0.218		0.339		0.192		0.147		0.34		0.127		0.254		0.355		0.348		0.23		0.261	
L017	DE-23	0.26		0.23		0.35		0.2		0.14		0.34		0.12		0.25		0.32		0.32		0.22		0.25	
L018	GJ-23	0.25		0.217		0.339		0.193		0.159		0.371		0.138		0.274		0.352		0.345		0.224		0.253	
L019	AE-23	0.226		0.193		0.298		0.166		0.13		0.315		0.113		0.235		0.316		0.313		0.215		0.234	
L022	DE-23	0.241		0.211		0.309		0.194		0.152		0.333		0.131		0.259		0.326		0.329		0.215		0.237	
L023	DN-23	0.241		0.185		0.337		0.172		0.137		0.369		0.11		0.267		0.35		0.33		0.23		0.26	
L024	AD-23	0.259		0.227		0.36		0.204		0.133		0.312		0.125		0.267		0.333		0.339		0.249	†	0.282	††
L026	GI-23	0.239		0.204		0.317		0.184		0.15		0.346		0.131		0.263		0.324		0.324		0.224		0.252	
L028	DE-23	0.268		0.227		0.37		0.204		0.154		0.364		0.134		0.277		0.342		0.336		0.206		0.243	
L030	GJ-23	0.222		0.199		0.302		0.174		0.137		0.328		0.113		0.234		0.294		0.292		0.189		0.218	
L032	GG-23	0.229		0.194		0.303		0.185		0.147		0.328		0.121		0.25									
L034	GG-23	0.238		0.207		0.319		0.184		0.15		0.353		0.131		0.262		0.318		0.323		0.217		0.239	
L036	GJ-23	0.253		0.217		0.336		0.196		0.145		0.349		0.127		0.257		0.33		0.308		0.221		0.242	
L040	DE-23	0.262		0.221		0.355		0.2		0.153		0.324		0.127		0.266		0.314		0.321		0.215		0.244	
L042	GF-31	0.248		0.238		0.353		0.197		0.144		0.34		0.127		0.252		0.329		0.322		0.198		0.233	
L044	GG-23	0.239		0.198		0.321		0.189		0.153		0.351		0.136		0.238		0.188	††	0.197	††	0.133	††	0.223	
L046	GJ-23	0.229		0.198		0.326		0.183										0.285	†	0.279		0.186	†	0.212	
L064	GJ-30	0.235		0.21		0.273		0.179		0.135		0.329		0.119		0.252		0.338		0.33		0.222		0.239	
L079	GJ-23	0.252		0.205		0.314		0.186		0.154		0.361		0.134		0.272		0.326		0.308		0.224		0.253	
L080	GJ-30	0.24		0.216		0.345		0.011	††	0.118	††	0.376		0.104		0.244		0.289		0.29		0.188		0.217	
L084	GJ-30	0.249		0.214		0.336		0.182		0.136		0.351		0.122		0.256		0.335		0.326		0.215		0.229	
L097	DE-23	0.237		0.227		0.325		0.191		0.149		0.352		0.133		0.259		0.334		0.319		0.211		0.241	
L100	GJ-23	0.23		0.2		0.313		0.176		0.141		0.306		0.129		0.261		0.324		0.319		0.211		0.238	
L133	BB-38	0.246		0.205		0.303		0.175		0.061	††	0.278	††	0.093	††	0.179	††	0.33		0.296		0.218		0.248	
L135	DN-23	0.25		0.212		0.332		0.193		0.199	††	0.361		0.138		0.273		0.345		0.343		0.23		0.268	
L139	AD-23	0.236		0.22		0.338		0.201		0.151		0.337		0.133		0.257		0.424	††	0.448	††	0.295	††	0.339	††
L156	GI-23	0.23		0.21		0.3		0.19		0.13		0.26	††	0.12		0.2	††	0.317		0.313		0.208		0.238	
L157	GE-31																	0.311		0.31		0.21		0.243	

Lab. Code #	Method Codes	Reported data on Potassium (%K w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	GE-09	2.44		0.229		0.798		0.939										0.433		1.12	††	1.68		1.53	
l005	GI-23	2.68		0.298		1.15		1.24	††	0.783		2.75		1.19		1.92		0.345		0.938		2.08	††	1.65	
L007	ZZ-38	3.13	††	0.428	††	1.22	††	1.21	††									0.506	††	1.17	††	1.4	††	1.75	†
L008	GG-23	2.26		0.252		0.911		0.881		0.656		2.52		1.07		1.79		0.376		0.879		1.65		1.43	
L009	GJ-23	2.31		0.234		0.839		0.889		0.791		2.31		1.06		1.66		0.329		0.805		1.63		1.36	
L011	GJ-23	2.31		0.317		0.952		0.967		0.677		2.26		0.93		1.57		0.459		0.912		1.59		1.16	†
L012	GE-11	2.73		0.289		1.03		1.04		0.847	††	2.39		1.32	††	1.88		0.345		0.76	†	1.45	††	1.2	
L013	DN-23	2.16		0.219		0.819		0.836	†	0.577		2.201		0.92		1.56		0.354		0.841		1.56		1.31	
L016	GI-23	2.52		0.254		0.958		0.981		0.675		2.38		1.03		1.71		0.413		0.954		1.82		1.55	
L017	DE-23	2.76		0.29		1.07		1.05		0.63		2.31		0.98		1.66		0.37		0.9		1.7		1.48	
L018	GJ-23	2.59		0.272		1.02		1		0.704		2.59		1.13		1.85		0.416		0.99		1.78		1.5	
L019	AE-23	2.55		0.275		1.02		1.01		0.582		2.35		0.85		1.57		0.388		0.776		1.65		0.93	††
L022	DE-23	2.51		0.269		0.941		0.952		0.71		2.44		1.02		1.76		0.38		0.92		1.72		1.46	
L023	DN-23	2.74		0.246		1.16		1.08		0.671		2.55		1.2		1.83		0.42		1		1.9	†	1.6	
L024	AD-09	0.05	††	0.005	††	0.019	††	0.02	††	0.608		2.55		1.07		1.81		0.35		0.907		1.73		1.48	
L026	GI-23	2.54		0.254		0.932		0.954		0.657		2.44		1.01		1.76		0.357		0.88		1.71		1.46	
L028	DE-23	2.76		0.274		1.05		1.05		0.677		2.56		1.15		1.94		0.391		0.993		1.64		1.4	
L030	GJ-23	2.86		0.321		1.13		1.16	††	0.709		2.72		1.16		1.92		0.363		0.876		1.68		1.35	
L032	GG-23	2.49		0.244		0.932		0.981		0.642		2.32		0.98		1.69									
L034	GG-23	2.56		0.24		0.986		0.999		0.717		2.53		1.12		1.83		0.392		0.932		1.72		1.46	
L035	AD-20	2.27		0.28		0.91		0.94		0.582		2.19		0.91		1.55		0.388		0.826		1.54		1.35	
L036	GJ-23	2.25		0.256		0.973		1.01		0.653		2.14		0.99		1.66		0.418		0.893		1.67		1.45	
L040	DE-23	2.51		0.257		0.964		0.973		0.696		2.49		1.02		1.82		0.364		0.849		1.74		1.45	
L042	GF-09	2.51		0.29		1.02		1.04		0.678		2.33		1.02		1.73		0.421		0.946		1.67		1.48	
L044	GG-23	2.29		0.239		0.854		0.898		0.622		2.28		1.01		1.58		0.184	††	0.51	††	0.98	††	0.72	††
L046	GJ-23	1.55	††	0.263		0.87		0.852	†									0.364		0.743	††	1.37	††	1.18	
L064	GJ-11	2.4		0.548	††	1.04		1.13	†	0.769		2.65		1.03		1.93		0.424		0.975		1.99	††	1.3	
L079	GJ-23	2.5		0.26		0.969		0.952		0.686		2.52		1.07		1.82		0.386		0.917		1.74		1.48	
L080	GJ-13	2.45		0.108	††	0.671	††	0.644	††	0.704		2.60j		1.27	††	2.09		0.23	††	0.954		2.32	††	2.11	††
L084	GE-20	2.61		0.34	†	1.03		1.01		0.71		2.43		1.03		1.69		0.4		0.91		1.67		1.38	
L097	DE-23	2.46		0.282		0.949		0.988		0.662		2.42		1.06		1.74		0.387		0.916		1.76		1.5	
L100	GJ-23	2.4		0.566	††	1.26	††	1.28	††	0.971	††	2.43		1.32	††	1.82		0.657	††	1.16	††	1.77		1.61	
L133	BA-23	2.51		0.289		0.966		0.97										3.76	††	8.77	††	16.9	††	14.0	††
L135	DN-23	2.35		0.261		0.939		0.934		0.739		2.60		1.16		1.93		0.326		0.782		1.61		1.25	
L139	AD-23	2.31		0.231		0.928		0.982		0.658		2.26		0.98		1.65		0.352		0.914		1.75		1.46	
L156	GI-23	2.53		0.31		1.01		0.98		0.6		2.08		0.92		1.52		0.381		0.902		1.73		1.45	
L157	AE-20																	0.376		0.87		1.96	††	1.22	

Lab. Code #	Method Codes	Reported data on Selenium (mg Se/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L009	GJ-23	0.075		0	†	0.738		0.164		0.858	††	0.22	††	0.207	††	0.245		0.307	††	0.177	††	0.2	††	0.32	
L011	GJ-23	0.124		0.194	††	0.817		0.172		0.495	††	0.196	††	0.031		0.056		0.273	††	0.222	††	0.039		0.222	
L013	GJ-22	0.01		0.05		0.72		0.03		0.049		0.064		0.019		0.163		0.065		0.035		0.017		0.17	
L016	GJ-24	0.008		0.047		0.828		0.021		0.031		0.062		0.011		0.116									
L019	AE-24	0.111		0.087	†	0.193		0.111										0.031		0.019		0.025		0.05	
L022	DE-24	0.08		0.04		0.585		0.03		0.04		0.07		0.03		0.125		0.09		0.065		0.08		0.14	
L032	GG-24	0.015		0.044		1.01		0.032		0.056		0.063		0.011		0.171									
L040	DE-24	0.421	††	0.064		0.169		0.073		0.088		0.072		0.032		0.047		0.058		0.037		0.059		0.065	
L044	GG-23	1.33	††	2.05	††	0.9		1.04	††																
L079	GJ-23	0.05		0.25	††	1.21		0.28		0.001		0.001	††	0.001		0.001		0.001		0.001		0.001		0.001	
L097	DE-24	0.032		0.043		0.85		0.034		0.038		0.073		0.007		0.116		0.081		0.051		0.02		0.211	
L133	AE-23	0.4	††	0.6	††	3.6	††	3.6	††																
L156	GI-23	0.25		0.25	††	1.3		0.25																	

Lab. Code #	Method Codes	Reported data on Silicon (%Si w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L009	DE-23	0.009		0.002		0.0014		0.013		0.021		0.020		0.080		0.093		0.087		0.001		0.154		0.146	
L011	ZZ-23	0.056	††	0.037	††	0.042	††	0.059	††	0.070		0.039		0.417		0.455		0.517		0.033	††	0.536		0.83	
L017	DE-23	0.01		0		0		0.01																	
L019	AE-23	0.006		0.002		0.001		0.012		0.026		0.034		0.046		0.105		0.009		0.005		0.105		0.044	
L036	EB-36	0.03	†	0.001		0.001		0.027	†	0.035		0.045		0.568		0.752		0.537		0.002		0.9		1.26	
L040	DE-23	0.009		0.004		0.002		0.013		0.016		0.03		0.232		0.316		0.417		0.001		0.502		0.552	
L133	BA-23	0.074	††	0.02	††	0.008	††	0.077	††	0.013		0.021		0.064		0.088		0.079		0.010	†	0.66		0.891	

Lab. Code #	Method Codes	Reported data on Sodium (%Na w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	AD-09	0.036		0.007	††	0.004		0.022										0.01	††	0.006	†	0.083		0.115	
l005	GI-23	0.033		0.006	†	0.01	††	0.026		0.187		0.1		0.01		0.016		0.005		0.001		0.079	†	0.108	
L007	ZZ-38	0.084	††	0.015	††	0.015	††	0.05	††									0.013	††	0.014	††	0.125	††	0.149	
L008	GG-23	0.035		0		0.001		0.023		0.206		0.126		0.013		0.019		0.005		0.001		0.092		0.127	
L009	GJ-23	0.040		0.001		0.002		0.027		0.286	††	0.179	††	0.015	†	0.020		0.006		0.001		0.092		0.127	
L011	GJ-23	0.040		0.003		0.003		0.025		0.192		0.114		0.013		0.018		0.006		0.003		0.098		0.125	
L012	GE-11	0.052		0		0.009	††	0.032		0.263	†	0.197	††	0.108	††	0.109	††	0.012	††	0.003		0.088		0.102	
L013	DN-23	0.041		0		0.001		0.026		0.185		0.117		0.009		0.016		0.005		0		0.108		0.128	
L016	GI-23	0.04		0		0.001		0.026		0.224		0.116		0.010		0.016		0.005		0		0.103		0.144	
L017	DE-23	0.05		0.001		0.001		0.03		0.21		0.12		0.01		0.02		0.04	††	0.04	††	0.09		0.13	
L018	GJ-23	0.044		0.001		0.004		0.028		0.232		0.13		0.012		0.019		0.007		0.003		0.102		0.138	
L019	AE-23	0.044		0.002		0.003		0.019		0.175		0.11		0.025	††	0.03	††	0.007		0.048	††	0.094		0.088	††
L022	DE-23	0.04		0.001		0.002		0.027		0.18		0.121		0.012		0.018		0.005		0.001		0.102		0.14	
L023	DN-23	0.036				0.001		0.024		0.206		0.115		0.011		0.017		0.004				0.11		0.13	
L024	AD-23	0.036		0.006	†	0.002		0.023		0.191		0.142		0.031	††	0.032	††	0.006		0.005	†	0.131	††	0.174	††
L026	GI-23	0.040		0		0.001		0.024		0.208		0.117		0.01		0.016		0.004		0.001		0.093		0.127	
L028	DE-23	0.041		0.003		0.003		0.025		0.209		0.122		0.01		0.018		0.002	†	0.002		0.09		0.125	
L030	GJ-23	0.039		0.001		0.002		0.029		0.219		0.103		0.012		0.019		0.005		0.001		0.081		0.109	
L032	GG-23	0.038		0.001		0.002		0.025		0.198		0.107		0.009		0.015									
L034	GG-23	0.04		0		0.001		0.023		0.216		0.123		0.01		0.017		0.005		0		0.095		0.127	
L035	AD-20	0.16	††	0.002		0.05	††	0.06	††	0.224		0.191	††	0.034	††	0.042	††	0.008	†	0.022	††	0.121	††	0.157	†
L036	GJ-23	0.044		0.006	†	0.006	†	0.026		0.216		0.121		0.01		0.017		0.005		0.001		0.096		0.133	
L040	DE-23	0.052		0.001		0.003		0.03		0.196		0.129		0.11	††	0.02		0.005		0.001		0.094		0.115	
L042	GI-09	0.044		0.001		0.005		0.028																	
L044	GG-23	0.029	††	0.007	††	0.01	††	0.021		0.178		0.095		0.018	††	0.02		0.005		0.005	†	0.134	††	0.084	††
L046	GJ-23	0.054	††	0.002		0.035	††	0.033										0.008		0.004		0.1		0.129	
L064	GJ-11	0.052		0.018	††	0.028	††	0.036	††	0.183		0.115		0.012		0.019		0.006		0.001		0.074	††	0.111	
L079	GJ-23	0.043		0.001		0.001		0.024		0.236		0.13		0.011		0.018		0.004		0		0.098		0.135	
L080	GJ-13	0.046		0.003		0.006	†	0.031		0.217		0.131		0.019	††	0.026	†	0.005		0.002		0.1		0.133	
L084	GJ-20	0.044		0.001		0.001		0.026		0.199		0.119		0.014	†	0.022		0.004		0.001		0.095		0.127	
L097	DE-23	0.037		0.001		0.001		0.025		0.209		0.119		0.01		0.016		0.005		0.001		0.096		0.129	
L100	GJ-23	0.040		0.002		0.003		0.026		0.215		0.126		0.01		0.016		0.006		0.002		0.101		0.136	
L133	BA-23	0.045		0.011	††	0.022	††	0.035	††	0.172		0.101		0.010		0.015		0.429	††	0.141	††	0.9	††	1.175	††
L135	DN-23	0.044		0.004		0.005		0.035	††	0.237		0.129		0.017	†	0.025		0.007		0.005	†	0.097		0.118	
L139	AD-23	0.042		0.025	††	0.001		0.026		0.199		0.113		0.009		0.023		0.004		0.001		0.096		0.117	
L156	GI-23									0.17		0.09	†	0.008		0.01	†	0.005		0.002		0.093		0.124	

Lab. Code #	Method Codes	Reported data on Sulfur (%S w/w)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L008	GG-23	0.257		0.088		0.172		0.113		0.182		0.176		0.11		0.288		0.14		0.192		0.232		0.173	
L009	GJ-23	0.261		0.089		0.182		0.118		0.162		0.144		0.102		0.247		0.135		0.191		0.215		0.162	
L011	GJ-23	0.298		0.097		0.195		0.125		0.169		0.15		0.097		0.234		0.146		0.194		0.222		0.161	
L013	DN-23	0.27		0.085		0.18		0.12		0.164		0.139		0.099		0.242		0.143		0.19		0.214		0.161	
L016	GJ-23	0.292		0.097		0.192		0.127		0.169		0.149		0.104		0.25		0.16		0.209		0.237		0.18	
L017	DE-23	0.3		0.13	††	0.19		0.13		0.17		0.14		0.1		0.24		0.19	††	0.26	††	0.32	††	0.22	††
L018	GJ-23	0.297		0.102		0.199		0.128		0.188		0.162		0.111		0.272		0.162		0.215		0.233		0.177	
L019	CA-37	0.31		0.11		0.214		0.142		0.245	††	0.18		0.13	††	0.285		0.183	†	0.23		0.248		0.188	
L022	DE-23	0.291		0.098		0.189		0.128		0.18		0.155		0.109		0.265		0.151		0.208		0.236		0.175	
L023	DN-23	0.308		0.107		0.224		0.141		0.19		0.162		0.112		0.291		0.17		0.21		0.25		0.19	
L024	GG-23	0.305		0.092		0.19		0.125		0.185		0.167		0.116		0.3		0.022	††	0.086	††	0.215		0.134	††
L026	GI-23	0.292		0.096		0.191		0.129		0.174		0.151		0.109		0.271		0.157		0.206		0.243		0.182	
L028	DE-23	0.316		0.11		0.214		0.138		0.178		0.156		0.111		0.275		0.152		0.2		0.215		0.17	
L030	GJ-23	0.284		0.096		0.189		0.129		0.171		0.15		0.098		0.257		0.139		0.185		0.21		0.162	
L032	GG-23	0.27		0.092		0.185		0.127		0.174		0.139		0.103		0.256									
L034	GG-23	0.276		0.096		0.184		0.122		0.177		0.159		0.112		0.276		0.143		0.204		0.224		0.167	
L036	GJ-23	0.308		0.103		0.203		0.133		0.175		0.151		0.104		0.259		0.149		0.191		0.22		0.172	
L040	DE-23	0.299		0.097		0.199		0.128		0.156		0.149		0.106		0.256		0.143		0.186		0.216		0.164	
L044	GG-23	0.244		0.089		0.163		0.012	††	0.162		0.151		0.094		0.235									
L045	CA-37	0.151	††	0.024	††	0.075	††	0.04	††	49.7	††	38.5	††	42.1	††	43.0	††	0.144		0.091	††	0.134	††	0.072	††
L046	GJ-23	0.302		0.103		0.206		0.137										0.128		0.17		0.199		0.149	
L064	BA-30	0.291		0.089		0.168		0.134		0.171		0.167		0.12		0.254		0.261	††	0.233		0.299	††	0.23	††
L079	GJ-23	0.31		0.09		0.182		0.121		0.198		0.188	†	0.114		0.308		0.153		0.194		0.244		0.183	
L084	GJ-30	0.267		0.081		0.179		0.089	††	0.109	††	0.136		0.088		0.254		0.096	††	0.181		0.211		0.175	
L097	DE-23	0.276		0.102		0.192		0.127		0.18		0.155		0.112		0.267		0.157		0.204		0.226		0.174	
L100	GJ-23	0.276		0.093		0.186		0.12		0.166		0.141		0.104		0.261		0.146		0.189		0.225		0.167	
L133	BA-23	0.284		0.088		0.164		0.079	††	0.108	††	0.141		0.088		0.225		1.03	††	1.64	††	1.80	††	1.31	††
L135	DN-23	0.299		0.106		0.203		0.132		0.223	††	0.208	††	0.129		0.312		0.161		0.215		0.243		0.191	
L139	CA-37	0.186	††	0.098		0.179		0.135		0.157		0.093	††	0.09		0.181	††	0.155		0.196		0.236		0.181	
L156	GI-23	0.27		0.1		0.17		0.13		0.15		0.15		0.1		0.21									

Lab. Code #	Method Codes	Reported data on Zinc (mg Zn/kg)																							
		October 2007 (Round 107)								*January 2008 (Round 307)*								*April 2008 (Round 507)*							
		ASP 101		ASP 102		ASP 103		ASP 104		ASP 11		ASP 12		ASP 13		ASP 14		ASP 41		ASP 42		ASP 43		ASP 44	
L002	AD-09	23.9		12.2		33.7		58.4										19.9		41.3		22.6		28.2	
l005	GI-23	22		20	††	38		68		33.2	††	77.7		18.9	††	33.5		26.3	††	54.2	††	20.3		32.7	††
L007	ZZ-38	27.7		12.4		39.9		67.2										25.8	††	40.8		23.5		19	
L008	GG-24	22		11.2		32.4		52.4		26.3		96.4	††	15.8	††	32.8		18.7		42.3		23.6		24.4	
L009	GJ-23	25.2		16.6		43.3		67		25.8		72.9		15.1	††	29.7		19.4		43.6		28.5	††	30.6	
L011	GJ-23	27.6		17.7	†	41.3		66.3		23.2		79.2		13.5		29.4		21		44.3		24.2		26.1	
L013	DN-23	20		12		31.5		54.5		20.5		68.1		11.1		27		16.8		39.5		21.1		21.9	
L016	GI-23	24.1		14		36.8		62.6		23.1		74.5		11.8		28.5		18.9		43.8		23.6		25.5	
L017	DE-23	24		13		37		67		19		69		9	†	27		17		42		22		23	
L018	GJ-23	24.2		14.7		39		63.7		23.7		79.9		12.6		30.3		20.5		47.4		23.8		25.3	
L019	AE-24	22.7		14.5		36.9		51.8		27	†	80		13		33.5		12.9		29.7	††	14.6	††	14.2	††
L022	DE-23	24		14.5		34		60.9		23.3		76.3		11.5		30		18.2		43.3		22.6		23.8	
L023	DN-23	22.8		13.4		38		60.6		21.4		73.9		11		31.7		19		43		22		24	
L024	AD-23	30.5	††	19.4	††	46.8	††	76	††	32.3	††	110	††	19.1	††	45.2	††	24.6	†	57.2	††	32.3	††	34.8	††
L026	GI-23	24.3		15		37.1		61.8		24.3		80.3		13		31.7		18.5		44.1		23.4		25.5	
L028	DE-23	25.9		14.7		41.1		68.2		22.6		82.2		12.2		30.5		18.4		40.8		21.4		23.5	
L030	GJ-23	20.9		13.2		35.6		61.3		22		85		10.7		30		15.9		37.9		19.6		21.4	
L032	GG-23	21.9		12.6		32.3		56.3		21.8		70.4		11.1		11.1	††								
L034	GG-23	23.1		13.8		35.3		57.9		23.4		74.7		11.6		29.9		17		39		19.8		21.6	
L035	AD-13	24.8		12.9		35.3		61.9		22.3		80.8		11		30.1		16.2		37.4		20.9		21.8	
L036	GJ-23	23.1		13.4		35.6		61.4		22.5		76.3		11.9		30		18.9		41.8		22.5		24.6	
L040	DE-23	25.4		13.8		40.3		67.3		21.7		77.1		11.8		30.6		17.6		40.5		20.2		22.2	
L042	GI-11	27		16		42		68																	
L044	GG-23	21.4		12.4		34.1		55.8		21.9		72		11.7		28.9		12.4		24.6	††	13.7	††	20.5	
L046	GJ-23	24.2		14.3		53.8	††	65										16.3		35		21.5		22	
L064	GJ-11	23.5		13.1		34.1		57.4		19.8		75.7		11.5		27.9		17.4		43.4		24		25.5	
L079	GJ-23	22.7		14		36.9		60.3		22.2		72.9		11.7		28.8		21.5		49.6		25.4		27.4	
L080	GJ-13	24.2		13.8		38		64.2		22		84.8		11.4		30		11.8	†	38.4		17.3		19.1	
L084	GJ-11	25.7		14.2		36.4		58.1		22		81.9		13.4		35.2		16.7		40.4		22.2		25.1	
L097	DE-23	24.5		16.9		39.5		67.7		24.5		82.2		13.6		31.7		20.2		46		24.1		25.8	
L100	GJ-23	28		14.2		37.7		59.4		19.3		73		10.1		27.7		17.8		39.3		20.9		22.7	
L133	BA-23	24.6		17.1		34.6		58.8		18.6		69.3		11.8		27.4		12.9		40.9		21.1		20.6	
L135	DN-23	23.1		13.7		36.9		59.8		25.4		85.9		13.2		33.8		17.6		43.7		22.8		24.3	
L139	AD-23	24.1		15.2		38.7		57.2		14.3	††	73.8		12		28.5		20.6		46.9		21.3		21.5	
L156	GI-23	26		16		38		63		20.4		65.6		11.1		25.4		16.2		39.6		19.3		21.8	