

## Reference Material and Inter-laboratory Quality Control Materials Product Summary

May 2017

Version: 2

**Assigned Values:** Values provided have been generated from an Inter-Laboratory Proficiency Programme (ILPP). The reference material values provided in this summary are the mean of the results after the exclusion of statistical outliers. The Assigned Range provided for the Inter-laboratory QC Materials is the range of test values available for purchase. Each Reference and QC Material comes with a Data Summary Sheet.

**Missing Values and Available Tests:** For Reference Materials where property values do not meet the statistical criteria, the summary values have not been provided. For this reason, not all tests will be available for every Reference Material of the same matrix. However, if there are 3 or more data points available, an Assigned Value will be provided with the corresponding QC material.

**Sample Sizes:** Available sample sizes are shown for reference materials.

### Reference Materials: Plant Material

Product Type	Alfalfa and Oat Straw	Spinach Leaves	Split Peas	Lucerne Chaff	Carrot Tuber	Olive Leaves	Maize Flour	Vetch	Carrot Foliage	Clover	Barley	Grass Hay (Southern)	Pea Straw	Kaffir Lime	Rice Leaves	Capsicum	Lentils
Product ID	13-C-4	14-C-2	10-C-3	12-C-5	16-C-2	4-C-3	11-C-4	20-C-3	5-C-3	17-C-3	15-C-4	19-C-3	18-C-2	26-C-2	38-C-2	27-C-2	28-C-2
Expiry Date	28 Oct 17	31 Oct 17	18 Feb 18	29 Apr 18	29 Apr 18	28 Oct 18	28 Oct 18	28 Oct 18	17 Feb 19	17 Feb 19	5 May 19	5 May 19	31 Oct 19	31 Oct 19	19 Jan 21	31 May 21	31 May 21
Sample Size (min)	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g	20g
Aluminium (mg/kg)	346	1,279	2.85	255	351	42.4	1.28	102	858	523	3.69	43.6	249	182	58.9	116	12.9
Boron (mg/kg)	24.8	41.6	7.63	28.6	23.0	17.8	2.45	25.0	31.6	48.3		10.3	22.8		6.86	53.1	6.99
Cadmium (µg/kg)	112	1,561		61.1	68.8		6.08			269	17.3	19.7	233	15.8	23.1	384	7.84
Calcium (%w/w)	1.01	1.39			0.327	0.601	0.0075		2.35	1.07	0.0297	0.317	1.01	1.58	0.303	2.24	0.0656



<b>Carbon (%w/w)</b>	44.5	39.4	43.6	43.3		50.3	44.0	44.1		44.7	43.3	43.0		44.7	41.6	39.8	43.6
<b>Chloride (mg/kg)</b>	5,146	4,916	606	7,203		2,654	395		25,998	9,240	1,455	17,746	1,526	689	5,051	7,117	1,045
<b>Cobalt (µg/kg)</b>	255	305	54.4	191	22.4			162	154	360	9.58	600	121		129	1,479	180
<b>Copper (mg/kg)</b>	18.0	9.20	6.94	5.97	4.09	7.36	1.41	5.93	15.6	11.4	3.85	4.72	2.65	51.3	5.90	129	8.28
<b>Iron (mg/kg)</b>		453	46.3	231		54.2	17.4	132	490	423				153	116	254	73.0
<b>Lead (µg/kg)</b>		444		119					325	419		49.8	201	216	44.0	99.9	16.1
<b>Magnesium (%w/w)</b>	0.207	0.571	0.0990	0.212	0.0884	0.0805	0.0927	0.215	0.356	0.297	0.0848	0.228	0.311	0.330	0.153	1.20	0.101
<b>Manganese (mg/kg)</b>	29.0	53.9	9.88	32.8	12.9	12.5		76.0	114	43.7	6.34	56.7	47.8	14.8	197	139	12.3
<b>Molybdenum (µg/kg)</b>	851	745	2,296	593	48.8	68.1	148		236	312	263	300		689	8,860		2,506
<b>Nitrate Nitrogen (mg/kg)</b>	259	1,927	8.59		25.8	8.02		21.2	2,759	11.5	4.86	6.68	5.98	408	5.69		
<b>Nitrogen (%w/w)</b>	2.66	4.68	3.47	3.34	0.784	1.85	1.19	3.47	3.20	2.78	1.54	1.63	1.00	3.14	2.61	3.75	3.94
<b>Phosphorus (%w/w)</b>	0.275	0.472	0.318	0.321	0.264	0.162	0.289	0.287	0.263	0.132	0.256		0.0603	0.257	0.279	0.308	0.282
<b>Potassium (%w/w)</b>	1.70	6.64	0.989	3.10	2.65	1.57	0.385	2.43	3.70	0.410	0.433	1.54	0.526	3.07	2.26	4.86	0.888
<b>Selenium (µg/kg)</b>	38.3	34.8	557	18.0	167	44.9		88.2	82.2			38.8	31.0	58.6	193	573	1,377
<b>Silicon (%w/w)</b>																	0.0066
<b>Sodium (mg/kg)</b>						520				13,988			607		46.6	78.5	11.3
<b>Sulphur (%w/w)</b>				0.335		0.131	0.0878	0.187	0.580	0.202	0.112	0.181	0.0881	0.250	0.174	0.506	0.180
<b>Zinc (mg/kg)</b>		93.5	30.3		14.6	17.3	20.4	29.3	38.5	26.7	23.4	15.6	8.52	18.4	22.5	37.4	37.4

**QC Material: Plant Material**

Matrix: Plant Material	Product ID	6547-QC	7021-QC	6112-QC	6561-QC
	Process Run	PR5366	PR5366	PR5366	PR5366
	Expiry Date	31 Oct 20	19 Jan 21	31 May 21	31 May 21
	Sample Size(s)	20g	20g	20g	20g
	<b>Aluminium (mg/kg)</b>	1.14	70.1	92.6	13.4
	<b>Boron (mg/kg)</b>	1.13	60.2	3.31	7.10
	<b>Cadmium (µg/kg)</b>	5.30	9.67	23.4	8.77
	<b>Calcium (%w/w)</b>	0.0460	2.26	0.329	0.0640
	<b>Carbon (%w/w)</b>	46.6	42.4	43.9	43.8
	<b>Chloride (mg/kg)</b>	514	3800	7370	1045
	<b>Cobalt (µg/kg)</b>	21.9	33.0	107	183
	<b>Copper (mg/kg)</b>	5.12	7.17	3.61	8.19
	<b>Iron (mg/kg)</b>	35.7	98.3	80.1	73.4
	<b>Lead (µg/kg)</b>	10.1	279	80.8	18.7
	<b>Magnesium (%w/w)</b>	0.119	0.375	0.209	0.102
	<b>Manganese (mg/kg)</b>	44.8	44.3	25.2	12.3
	<b>Molybdenum (µg/kg)</b>	265	196	559	2530
	<b>Nitrate Nitrogen (mg/kg)</b>	4.78	18.0	4.02	3.65
	<b>Nitrogen (%w/w)</b>	2.09	2.68	0.860	3.96
	<b>Phosphorus (%w/w)</b>	0.386	0.176	0.171	0.285
	<b>Potassium (%w/w)</b>	0.373	1.53	1.64	0.870

<b>Selenium (µg/kg)</b>	57.3	553	78.2	1435
<b>Silicon (%w/w)</b>	0.0150	0.132	0.201	0.0050
<b>Sodium (mg/kg)</b>	26.5	64.4	218	10.6
<b>Sulphur (%w/w)</b>	0.179	0.169	0.115	0.183
<b>Zinc (mg/kg)</b>	21.4	15.3	34.1	37.2