

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

November 2022

Version: 1

**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: Soil Material

Product Type	Soil	Soil	Soil	Soil
Product ID	444-C-1	652-C-1	619-C-1	650-C-1
Expiry Date	30 Jun 23	30 Jan 24	30 Jun 24	30 Jun 25
Sample Size	150g	150g	150g	150g
CaCl <sub>2</sub> Extractable B (mg/kg)		0.304	0.425	0.863
Colwell P (mg/kg)		225	11.5	64.3
Electrical Cond (dS/m)	0.159	0.0847		0.233
Exch Calcium (cmol+/kg)		3.75	0.729	15.0

Exch Magnesium (cmol+/kg)		0.733	0.496	4.79
Exch Potassium (cmol+/kg)		0.578	0.191	0.575
Exch Sodium (cmol+/kg)		0.0379	0.0520	0.0497
Ext Copper (mg/kg)		0.348	0.240	
Ext Iron (mg/kg)		232	211	84.6
Ext Manganese (mg/kg)	4.92	34.0	5.27	72.9
Ext Zinc (mg/kg)	0.474	4.52	1.21	
Organic Carbon W&B (%)		1.58	1.47	1.60
PBI Colwell (L/kg)				69.9
pH CaCl2 (pH units)		4.74	4.00	
pH Water (pH units)	7.54			6.47
Total Carbon (%)	0.720	1.76	1.64	1.88
Total Nitrogen (%)		0.197		0.188

**QC Material: Soil Material**

Matrix: Soil Material	Product ID	10595-QC	11124-QC	11125-QC	11128-QC	11127-QC
	Process Run	PR10024	PR10386	PR10160	PR10160	PR9660
	Expiry Date	30 Jun 25	30 Sep 25	30 Sep 25	31 Mar 26	30 Sep 26
	Sample Size	150g	150g	150g	150g	150g
	Acid P (mg/kg)	31.3	10.9	8.10	4.58	38.8
	Bray P (mg/kg)	19.4	3.96	3.54	0.537	3.72
	CaCl2 Extractable B (mg/kg)	0.678	0.160	0.200	1.65	3.36
	Colwell P (mg/kg)	30.3	9.30	5.77	4.82	7.14
	Electrical Cond (dS/m)	0.137	0.0410	0.412	0.228	2.64
	Exch Aluminium (cmol+/kg)	0.394	0.0160	0.200	0.0040	0.0040
	Exch Calcium (cmol+/kg)	3.23	2.25	0.450	41.4	36.4
	Exch Magnesium (cmol+/kg)	1.24	1.53	19.2	9.85	15.8
	Exch Potassium (cmol+/kg)	0.258	0.151	0.970	0.560	0.533
	Exch Sodium (cmol+/kg)	0.0800	0.197	11.1	0.842	10.8
	Ext Copper (mg/kg)	0.417	0.209	4.76	1.07	1.09
	Ext Iron (mg/kg)	367	54.6	48.5	7.64	7.90
	Ext Manganese (mg/kg)	49.0	25.2	5.30	49.3	21.3
	Ext Sulphur (mg/kg)	24.0	8.35	3.93	20.3	1795
	Ext Zinc (mg/kg)	3.85	0.900	2.23	0.500	0.588
	Olsen P (mg/kg)	20.4	3.50	1.55	1.68	2.53

	<b>Organic Carbon W&amp;B (%)</b>	3.88	0.473	0.140	1.07	0.525
	<b>PBI Colwell (L/kg)</b>	50.3	39.2	43.6	217	84.5
	<b>pH CaCl2 (pH units)</b>	4.00	5.37	4.76	7.68	7.88
	<b>pH Water (pH units)</b>	4.62	6.33	5.80	8.24	8.10
	<b>Total Carbon (%)</b>	4.18	0.454	0.173	1.67	0.790
	<b>Total Nitrogen (%)</b>	0.222	0.0440	0.0310	0.108	0.0330
	<b>Total Organic Carbon (%)</b>	4.13	0.460	0.161	1.28	0.567
	<b>Total Phosphorus (%)</b>	0.0130	0.0140	0.0100	0.0170	0.0140
	<b>Water Ext Cl (mg/kg)</b>	16.0	9.07	465	10.5	476