Inter-laboratory Quality Control Material Data Sheet

QC Material ID: 13955-QC-PR12224

Product Type: Soil

Issue Date: 2 April 2026

Expiry Date:

Test Name	Methods	n Value	Assigned Value	Assigned Range
Acid P (mg/kg)	Extr Acid P 9G1 9G2 (mg/kg)	11	24.3	1.5 - 47.1
Air-Dry Moist Content (%)	Air-Dry Moisture Content 2A1 (%)	25	2.89	1.88 - 3.90
Ammonium Nitrogen (mg/kg)	Amm-N 7C1 7C2 (mg/kg) **	22	4.96	3.63 - 6.29
Aqua Regia Aluminium (mg/kg)	Aqua Regia Al 17B1 17B2 17C 1 (mg/kg)	14	20,300	3793 - 36707
Aqua Regia Arsenic (mg/kg)	Aqua Regia As 17B1 17B2 17 C1 (mg/kg)	11	5.39	3.58 - 7.20
Aqua Regia Boron (mg/kg)	Aqua Regia B 17B1 17B2 17C 1 (mg/kg)	8	4.84	1.94 - 7.73
Aqua Regia Cadmium (mg/kg)	Aqua Regia Cd 17B1 17B2 17 C1 (mg/kg)	6	0.0334	0.0276 - 0.0392
Aqua Regia Calcium (mg/kg)	Aqua Regia Ca 17B1 17B2 17 C1 (mg/kg)	15	2,620	2027 - 3213
Aqua Regia Chromium (mg/kg)	Aqua Regia Cr 17B1 17B2 17C 1 (mg/kg)	11	67.0	57.2 - 76.8
Aqua Regia Cobalt (mg/kg)	Aqua Regia Co 17B1 17B2 17 C1 (mg/kg)	13	14.4	12.6 - 16.2
Aqua Regia Copper (mg/kg)	Aqua Regia Cu 17B1 17B2 17 C1 (mg/kg)	11	22.3	20.8 - 23.8
Aqua Regia Iron (mg/kg)	Aqua Regia Fe 17B1 17B2 17 C1 (mg/kg)	12	33,000	29738 - 36262
Aqua Regia Lead (mg/kg)	Aqua Regia Pb 17B1 17B2 17 C1 (mg/kg)	11	12.0	10.8 - 13.2
Aqua Regia Magnesium (mg/kg)	Aqua Regia Mg 17B1 17B2 17 C1 (mg/kg)	11	3,220	2923 - 3517
Aqua Regia Manganese (mg/kg)	Aqua Regia Mn 17B1 17B2 17 C1 (mg/kg)	16	717	662 - 771
Aqua Regia Molybdenum (mg/kg)	Aqua Regia Mo 17B1 17B2 17 C1 (mg/kg)	10	0.762	0.043 - 1.482

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Aqua Regia Nickel (mg/kg)	Aqua Regia Ni 17B1 17B2 17C 1 (mg/kg)	10	33.3	28.1 - 38.4
Aqua Regia Potassium (mg/kg)	Aqua Regia K 17B1 17B2 17C 1 (mg/kg)	13	2,370	591 - 4149
Aqua Regia Selenium (mg/kg)	Aqua Regia Se 17B1 17B2 17 C1 (mg/kg)	7	0.700	0.000 - 1.501
Aqua Regia Sodium (mg/kg)	Aqua Regia Na 17B1 17B2 17 C1 (mg/kg)	12	250	207 - 293
Aqua Regia Sulphur (mg/kg)	Aqua Regia S 17B1 17B2 17C 1 (mg/kg)	8	101	91 - 111
Aqua Regia Zinc (mg/kg)	Aqua Regia Zn 17B1 17B2 17 C1 (mg/kg)	16	38.5	25.5 - 51.5
Bray P (mg/kg)	Extr P Bray 9E1 9E2 (mg/kg)	8	5.70	3.20 - 8.21
CaCl2 Extractable B (mg/kg)	CaCl2 Extractable B 12C1 12C 2 (mg/kg)	14	1.10	0.89 - 1.31
Colwell P (mg/kg)	Extr P Colwell 9B1 9B2 (mg/kg)	16	13.8	10.2 - 17.3
Electrical Cond (dS/m)	Elec Cond 3A1 (dS/m)	24	0.127	0.120 - 0.135
Exch Aluminium (cmol+/kg)	Exch Al 15G1 (cmol+/kg) **	8	0.0095	0.0000 - 0.0231
Exch Calcium (cmol+/kg)	Exch Ca 15E1 (cmol+/kg)	3	8.70	8.40 - 9.00
Exch Calcium (cmol+/kg)	Exch Ca 15A1 (cmol+/kg) **	14	8.65	8.01 - 9.29
Exch Calcium (cmol+/kg)	Exch Ca 15D3 (cmol+/kg)	10	8.65	8.47 - 8.82
Exch Magnesium (cmol+/kg)	Exch Mg 15E1 (cmol+/kg)	3	5.84	5.34 - 6.34
Exch Magnesium (cmol+/kg)	Exch Mg 15A1 (cmol+/kg) **	16	5.82	5.05 - 6.59
Exch Magnesium (cmol+/kg)	Exch Mg 15D3 (cmol+/kg)	14	5.90	5.31 - 6.49
Exch Potassium (cmol+/kg)	Exch K 15E1 (cmol+/kg)	3	0.678	0.636 - 0.720
Exch Potassium (cmol+/kg)	Exch K 15A1 (cmol+/kg) **	10	0.707	0.686 - 0.728
Exch Potassium (cmol+/kg)	Exch K 15D3 (cmol+/kg)	13	0.733	0.677 - 0.789
Exch Sodium (cmol+/kg)	Exch Na 15E1 (cmol+/kg)	3	0.702	0.696 - 0.708
Exch Sodium (cmol+/kg)	Exch Na 15A1 (cmol+/kg) **	16	0.746	0.618 - 0.873



Exch Sodium (cmol+/kg)	Exch Na 15D3 (cmol+/kg)	15	0.693	0.628 - 0.758
Ext Copper (mg/kg)	Extr Cu 12A1 (mg/kg)	19	1.74	1.50 - 1.98
Ext Iron (mg/kg)	Extr Fe 12A1 (mg/kg)	17	27.7	25.0 - 30.4
Ext Manganese (mg/kg)	Extr Mn 12A1 (mg/kg)	19	79.0	71.0 - 87.0
Ext Potassium (mg/kg)	Extr K 18A1 (mg/kg)	10	287	243 - 331
Ext Silicon (mg/kg)	Extr Si 13D1 13D2 (mg/kg)	6	708	538 - 877
Ext Sulphur (mg/kg)	Extr S 10B1 10B2 10B3 (mg/kg)	7	21.2	20.6 - 21.8
Ext Sulphur (mg/kg)	Extr S 10D1 (mg/kg)	12	15.2	12.8 - 17.6
Ext Zinc (mg/kg)	Extr Zn 12A1 (mg/kg)	13	0.835	0.761 - 0.909
Ext Zinc (mg/kg)	Extr Zn 12D1 (mg/kg)	4	1.50	1.43 - 1.58
M3-Aluminium (mg/kg)	M3-Al 18F1 (mg/kg)	16	734	636 - 831
M3-Boron (mg/kg)	M3-B 18F1 (mg/kg)	10	0.986	0.930 - 1.042
M3-Calcium (mg/kg)	M3-Ca 18F1 (mg/kg)	16	1,740	1547 - 1933
M3-Copper (mg/kg)	M3-Cu 18F1 (mg/kg)	17	2.70	2.23 - 3.17
M3-Iron (mg/kg)	M3-Fe 18F1 (mg/kg)	17	121	85 - 157
M3-Magnesium (mg/kg)	M3-Mg 18F1 (mg/kg)	15	715	671 - 759
M3-Manganese (mg/kg)	M3-Mn 18F1 (mg/kg)	17	190	146 - 234
M3-Phosphorus (mg/kg)	M3-P ICP 18F1 (mg/kg)	11	10.0	8.46 - 11.54
M3-Potassium (mg/kg)	M3-K 18F1 (mg/kg)	13	264	249 - 279
M3-Sodium (mg/kg)	M3-Na 18F1 (mg/kg)	12	161	146 - 175
M3-Sulphur (mg/kg)	M3-S 18F1 (mg/kg)	13	18.8	16.1 - 21.5
M3-Zinc (mg/kg)	M3-Zn 18F1 (mg/kg)	13	1.30	1.00 - 1.60

Nitrate Nitrogen (mg/kg)	Nitrate N 7B1 7B2 (mg/kg)	11	3.90	3.01 - 4.79
Nitrate Nitrogen (mg/kg)	Nitrate N 7C1 7C2 (mg/kg)	19	3.78	2.95 - 4.61
Olsen P (mg/kg)	Extr P Olsen 9C1 9C2 (mg/kg)	13	4.60	2.82 - 6.38
Organic Carbon W&B (%)	Org C W&B 6A1 (%) **	11	0.730	0.573 - 0.887
PBI Colwell (L/kg)	PBI Colwell 9I2a 9I2b 9I2c (L/kg)	13	89.4	77.8 - 101.0
PBI Unadjusted (L/kg)	PBI Unadjusted 9I4a 9I4b 9I4c (L/kg)	9	85.1	73.5 - 96.7
pH CaCl2 (pH units)	pH CaCl2 4B1 4B2 4B3 4B4 (pH Units)	21	6.60	6.51 - 6.69
pH Water (pH units)	pH Water 4A1 4A3 (pH Units)	32	7.24	6.98 - 7.49
Total Carbon (%)	Total C 6B2 (%)	30	0.876	0.803 - 0.949
Total Nitrogen (%)	Total N 7A1 7A2 7A3 (%) **	8	0.0686	0.0590 - 0.0782
Total Nitrogen (%)	Total N 7A5 (%)	23	0.0720	0.0631 - 0.0809
Total Org C IR (%)	Total Org Carbon IR 6B4a 6B4b (%)	3	0.830	0.533 - 1.127
Total Organic Carbon (%)	Total Org C 6B1 6B3 (%) **	21	0.862	0.767 - 0.957
Total Organic Matter (%)	Total Org Matter 6G1 (%)	4	2.98	0.00 - 7.49
Total Phosphorus (%)	Total P 9A1 9A3 Not Specified (%) **	13	0.0260	0.0242 - 0.0278
Water Ext Cl (mg/kg)	Water Ext Cl 5A1 5A2 5A3 (mg/kg)	18	20.1	15.1 - 25.2

** n Values < 8 are indicative only and should be used with caution*

*** These methods should be reported on an oven dried basis (105°C) by using the formula given in method 2A1 of Rayment and Lyons 2011.*

Instructions for use: Due to possible moisture reabsorption, re-dry the sample at 40°C to constant weight prior to analysis

Description: 150g+ irradiated, packaged in plastic jar

Homogeneity: This QC material has been assessed as homogeneous for use in an Inter-Laboratory Proficiency Study

Stability: An expiry period consistent with the shelf life of the product, experience, and technical advice has been applied



Storage: Keep samples at a stable temperature < 25°C (eg in air conditioned storage). Reseal containers after each use. Do not store in sunlight.

Values: The *Assigned Value* is the consensus median from an inter-laboratory proficiency round excluding outliers; *n Values* are the number of results used to calculate the assigned value. The *Assigned Range* is 2 standard deviations of *n Values*.

Methods: Multiple methods were used in the preparation of these assigned values.

