Inter-laboratory Quality Control Material Data Sheet

QC Material ID: 13952-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)	8	673	638 - 707
Air-Dry Moist Content (%)	Air-Dry Moisture Content 2A1 (%)	28	7.87	5.96 - 9.78
Ammonium Nitrogen (mg/kg)	Amm-N 7C1 7C2 (mg/kg) **	21	16.0	13.3 - 18.7
Aqua Regia Aluminium (mg/kg)	Aqua Regia Al 17B1 17B2 17C 1 (mg/kg)	14	46,600	26140 - 67060
Aqua Regia Arsenic (mg/kg)	Aqua Regia As 17B1 17B2 17 C1 (mg/kg)	9	1.24	0.29 - 2.19
Aqua Regia Boron (mg/kg)	Aqua Regia B 17B1 17B2 17C 1 (mg/kg)	11	10.3	0.0 - 22.5
Aqua Regia Cadmium (mg/kg)	Aqua Regia Cd 17B1 17B2 17 C1 (mg/kg)	9	0.0830	0.0326 - 0.1334
Aqua Regia Calcium (mg/kg)	Aqua Regia Ca 17B1 17B2 17 C1 (mg/kg)	15	20,100	17431 - 22769
Aqua Regia Chromium (mg/kg)	Aqua Regia Cr 17B1 17B2 17C 1 (mg/kg)	14	110	86 - 133
Aqua Regia Cobalt (mg/kg)	Aqua Regia Co 17B1 17B2 17 C1 (mg/kg)	12	33.3	29.3 - 37.4
Aqua Regia Copper (mg/kg)	Aqua Regia Cu 17B1 17B2 17 C1 (mg/kg)	14	32.0	29.5 - 34.5
Aqua Regia Iron (mg/kg)	Aqua Regia Fe 17B1 17B2 17 C1 (mg/kg)	14	54,500	46049 - 62951
Aqua Regia Lead (mg/kg)	Aqua Regia Pb 17B1 17B2 17 C1 (mg/kg)	9	5.00	4.53 - 5.47
Aqua Regia Magnesium (mg/kg)	Aqua Regia Mg 17B1 17B2 17 C1 (mg/kg)	15	17,000	13145 - 20855
Aqua Regia Manganese (mg/kg)	Aqua Regia Mn 17B1 17B2 17 C1 (mg/kg)	16	902	823 - 980
Aqua Regia Molybdenum (mg/kg)	Aqua Regia Mo 17B1 17B2 17 C1 (mg/kg)	9	0.170	0.000 - 0.475

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Version 2

Aqua Regia Nickel (mg/kg)	Aqua Regia Ni 17B1 17B2 17C 1 (mg/kg)	12	90.8	74.4 - 107.1
Aqua Regia Potassium (mg/kg)	Aqua Regia K 17B1 17B2 17C 1 (mg/kg)	12	4,920	3778 - 6062
Aqua Regia Selenium (mg/kg)	Aqua Regia Se 17B1 17B2 17 C1 (mg/kg)	6	0.390	0.000 - 1.108
Aqua Regia Sodium (mg/kg)	Aqua Regia Na 17B1 17B2 17 C1 (mg/kg)	7	1,690	1660 - 1720
Aqua Regia Sulphur (mg/kg)	Aqua Regia S 17B1 17B2 17C 1 (mg/kg)	8	145	127 - 162
Aqua Regia Zinc (mg/kg)	Aqua Regia Zn 17B1 17B2 17 C1 (mg/kg)	15	79.4	68.1 - 90.7
Bray P (mg/kg)	Extr P Bray 9E1 9E2 (mg/kg)	7	3.00	0.09 - 5.91
CaCl2 Extractable B (mg/kg)	CaCl2 Extractable B 12C1 12C 2 (mg/kg)	14	1.95	1.03 - 2.87
Colwell P (mg/kg)	Extr P Colwell 9B1 9B2 (mg/kg)	21	53.7	45.4 - 62.0
Electrical Cond (dS/m)	Elec Cond 3A1 (dS/m)	31	0.547	0.470 - 0.624
Exch Aluminium (cmol+/kg)	Exch Al 15G1 (cmol+/kg) **	10	0.0062	0.0000 - 0.0196
Exch Calcium (cmol+/kg)	Exch Ca 15E1 (cmol+/kg)	3	29.6	26.3 - 32.9
Exch Calcium (cmol+/kg)	Exch Ca 15A1 (cmol+/kg) **	14	39.5	37.6 - 41.5
Exch Calcium (cmol+/kg)	Exch Ca 15D3 (cmol+/kg)	11	36.8	33.5 - 40.1
Exch Magnesium (cmol+/kg)	Exch Mg 15E1 (cmol+/kg)	3	29.0	25.1 - 32.9
Exch Magnesium (cmol+/kg)	Exch Mg 15A1 (cmol+/kg) **	13	31.2	30.0 - 32.4
Exch Magnesium (cmol+/kg)	Exch Mg 15D3 (cmol+/kg)	10	30.6	29.3 - 31.9
Exch Potassium (cmol+/kg)	Exch K 15E1 (cmol+/kg)	3	1.47	1.44 - 1.50
Exch Potassium (cmol+/kg)	Exch K 15A1 (cmol+/kg) **	14	2.10	1.95 - 2.25
Exch Potassium (cmol+/kg)	Exch K 15D3 (cmol+/kg)	14	1.89	1.58 - 2.21
Exch Sodium (cmol+/kg)	Exch Na 15E1 (cmol+/kg)	3	5.90	5.43 - 6.37
Exch Sodium (cmol+/kg)	Exch Na 15A1 (cmol+/kg) **	11	6.05	5.84 - 6.26



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Exch Sodium (cmol+/kg)	Exch Na 15D3 (cmol+/kg)	15	5.92	5.06 - 6.78
Ext Copper (mg/kg)	Extr Cu 12A1 (mg/kg)	18	2.73	2.53 - 2.94
Ext Iron (mg/kg)	Extr Fe 12A1 (mg/kg)	22	32.8	15.1 - 50.4
Ext Manganese (mg/kg)	Extr Mn 12A1 (mg/kg)	21	30.2	24.0 - 36.4
Ext Potassium (mg/kg)	Extr K 18A1 (mg/kg)	8	546	530 - 562
Ext Silicon (mg/kg)	Extr Si 13D1 13D2 (mg/kg)	6	2,490	1808 - 3172
Ext Sulphur (mg/kg)	Extr S 10B1 10B2 10B3 (mg/kg)	11	47.6	39.9 - 55.3
Ext Sulphur (mg/kg)	Extr S 10D1 (mg/kg)	12	38.7	33.8 - 43.5
Ext Zinc (mg/kg)	Extr Zn 12A1 (mg/kg)	19	1.55	1.28 - 1.82
Ext Zinc (mg/kg)	Extr Zn 12D1 (mg/kg)	4	0.885	0.188 - 1.582
M3-Aluminium (mg/kg)	M3-Al 18F1 (mg/kg)	16	841	725 - 957
M3-Boron (mg/kg)	M3-B 18F1 (mg/kg)	15	2.72	1.86 - 3.58
M3-Calcium (mg/kg)	M3-Ca 18F1 (mg/kg)	14	11,800	11009 - 12491
M3-Copper (mg/kg)	M3-Cu 18F1 (mg/kg)	17	3.58	2.81 - 4.35
M3-Iron (mg/kg)	M3-Fe 18F1 (mg/kg)	15	163	136 - 190
M3-Magnesium (mg/kg)	M3-Mg 18F1 (mg/kg)	12	4,210	4012 - 4398
M3-Manganese (mg/kg)	M3-Mn 18F1 (mg/kg)	17	96.3	60.1 - 132.5
M3-Phosphorus (mg/kg)	M3-P ICP 18F1 (mg/kg)	16	34.3	27.2 - 41.4
M3-Potassium (mg/kg)	M3-K 18F1 (mg/kg)	12	630	555 - 704
M3-Sodium (mg/kg)	M3-Na 18F1 (mg/kg)	15	1,310	1073 - 1547
M3-Sulphur (mg/kg)	M3-S 18F1 (mg/kg)	16	48.8	36.3 - 61.3
M3-Zinc (mg/kg)	M3-Zn 18F1 (mg/kg)	14	3.00	2.51 - 3.49



Nitrate Nitrogen (mg/kg)	Nitrate N 7B1 7B2 (mg/kg)	10	53.8	51.1 - 56.5
Nitrate Nitrogen (mg/kg)	Nitrate N 7C1 7C2 (mg/kg)	17	51.2	41.4 - 61.0
Olsen P (mg/kg)	Extr P Olsen 9C1 9C2 (mg/kg)	15	20.0	16.7 - 23.3
Organic Carbon W&B (%)	Org C W&B 6A1 (%) **	13	1.13	0.89 - 1.37
PBI Colwell (L/kg)	PBI Colwell 9I2a 9I2b 9I2c (L/kg)	13	242	218 - 266
PBI Unadjusted (L/kg)	PBI Unadjusted 9I4a 9I4b 9I4c (L/kg)	9	226	202 - 250
pH CaCl2 (pH units)	pH CaCl2 4B1 4B2 4B3 4B4 (pH Units)	25	7.90	7.78 - 8.02
pH Water (pH units)	pH Water 4A1 4A3 (pH Units)	32	8.42	8.21 - 8.63
Total Carbon (%)	Total C 6B2 (%)	28	1.80	1.58 - 2.02
Total Nitrogen (%)	Total N 7A1 7A2 7A3 (%) **	10	0.0962	0.0731 - 0.1193
Total Nitrogen (%)	Total N 7A5 (%)	24	0.102	0.088 - 0.116
Total Organic Carbon (%)	Total Org C 6B1 6B3 (%) **	23	1.40	1.16 - 1.64
Total Organic Matter (%)	Total Org Matter 6G1 (%)	4	4.80	0.00 - 11.76
Total Phosphorus (%)	Total P 9A1 9A3 Not Specified (%) **	17	0.108	0.084 - 0.132
Water Ext Cl (mg/kg)	Water Ext Cl 5A1 5A2 5A3 (mg/kg)	16	64.8	55.0 - 74.5

** 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.