Inter-laboratory Quality Control Material Data Sheet

QC Material ID: 13961-QC-PR12922

Product Type: Soil

Issue Date: 19 June 2026

Expiry Date: 1 September 2028

Test Name	Methods	n Value	Assigned Value	Assigned Range
Acid P (mg/kg)	Extr Acid P 9G1 9G2 (mg/kg)	9	11.0	3.3 - 18.7
Air-Dry Moist Content (%)	Air-Dry Moisture Content 2A1 (%)	26	0.513	0.172 - 0.854
Ammonium Nitrogen (mg/kg)	Amm-N 7C1 7C2 (mg/kg) **	16	36.5	34.8 - 38.1
Aqua Regia Aluminium (mg/kg)	Aqua Regia Al 17B1 17B2 17C 1 (mg/kg)	14	7,770	846 - 14694
Aqua Regia Arsenic (mg/kg)	Aqua Regia As 17B1 17B2 17 C1 (mg/kg)	12	1.61	0.97 - 2.24
Aqua Regia Boron (mg/kg)	Aqua Regia B 17B1 17B2 17C 1 (mg/kg)	9	0.900	0.000 - 1.843
Aqua Regia Cadmium (mg/kg)	Aqua Regia Cd 17B1 17B2 17 C1 (mg/kg)	7	0.0250	0.0140 - 0.0360
Aqua Regia Calcium (mg/kg)	Aqua Regia Ca 17B1 17B2 17 C1 (mg/kg)	16	797	0 - 1862
Aqua Regia Chromium (mg/kg)	Aqua Regia Cr 17B1 17B2 17C 1 (mg/kg)	12	30.0	26.7 - 33.3
Aqua Regia Cobalt (mg/kg)	Aqua Regia Co 17B1 17B2 17 C1 (mg/kg)	13	11.7	10.8 - 12.6
Aqua Regia Copper (mg/kg)	Aqua Regia Cu 17B1 17B2 17 C1 (mg/kg)	16	6.85	4.77 - 8.93
Aqua Regia Iron (mg/kg)	Aqua Regia Fe 17B1 17B2 17 C1 (mg/kg)	12	13,000	11764 - 14136
Aqua Regia Lead (mg/kg)	Aqua Regia Pb 17B1 17B2 17 C1 (mg/kg)	14	9.52	7.92 - 11.12
Aqua Regia Magnesium (mg/kg)	Aqua Regia Mg 17B1 17B2 17 C1 (mg/kg)	16	1,070	714 - 1426
Aqua Regia Manganese (mg/kg)	Aqua Regia Mn 17B1 17B2 17 C1 (mg/kg)	11	343	319 - 367
Aqua Regia Molybdenum (mg/kg)	Aqua Regia Mo 17B1 17B2 17 C1 (mg/kg)	7	0.378	0.348 - 0.408

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Version 2

Aqua Regia Nickel (mg/kg)	Aqua Regia Ni 17B1 17B2 17C 1 (mg/kg)	12	6.16	3.94 - 8.38
Aqua Regia Phosphorus (mg/kg)	Aqua Regia P 17B1 17B2 17C 1 (mg/kg)	10	187	170 - 203
Aqua Regia Potassium (mg/kg)	Aqua Regia K 17B1 17B2 17C 1 (mg/kg)	15	1,220	508 - 1932
Aqua Regia Selenium (mg/kg)	Aqua Regia Se 17B1 17B2 17 C1 (mg/kg)	6	0.250	0.117 - 0.383
Aqua Regia Sodium (mg/kg)	Aqua Regia Na 17B1 17B2 17 C1 (mg/kg)	12	38.5	12.9 - 64.0
Aqua Regia Sulphur (mg/kg)	Aqua Regia S 17B1 17B2 17C 1 (mg/kg)	12	119	92 - 146
Aqua Regia Zinc (mg/kg)	Aqua Regia Zn 17B1 17B2 17 C1 (mg/kg)	16	20.0	14.9 - 25.0
Bray P (mg/kg)	Extr P Bray 9E1 9E2 (mg/kg)	8	9.20	6.19 - 12.21
CaCl2 Extractable B (mg/kg)	CaCl2 Extractable B 12C1 12C 2 (mg/kg)	9	0.223	0.190 - 0.256
Colwell P (mg/kg)	Extr P Colwell 9B1 9B2 (mg/kg)	17	10.2	6.0 - 14.4
Electrical Cond (dS/m)	Elec Cond 3A1 (dS/m)	28	0.0856	0.0744 - 0.0967
Exch Aluminium (cmol+/kg)	Exch Al 15G1 (cmol+/kg) **	9	0.484	0.434 - 0.534
Exch Calcium (cmol+/kg)	Exch Ca 15A1 (cmol+/kg) **	14	1.00	0.91 - 1.09
Exch Calcium (cmol+/kg)	Exch Ca 15D3 (cmol+/kg)	14	0.981	0.892 - 1.070
Exch Magnesium (cmol+/kg)	Exch Mg 15A1 (cmol+/kg) **	16	0.485	0.398 - 0.572
Exch Magnesium (cmol+/kg)	Exch Mg 15D3 (cmol+/kg)	15	0.478	0.425 - 0.531
Exch Potassium (cmol+/kg)	Exch K 15A1 (cmol+/kg) **	14	0.655	0.531 - 0.778
Exch Potassium (cmol+/kg)	Exch K 15D3 (cmol+/kg)	17	0.635	0.576 - 0.694
Exch Sodium (cmol+/kg)	Exch Na 15A1 (cmol+/kg) **	7	0.0360	0.0241 - 0.0479
Exch Sodium (cmol+/kg)	Exch Na 15D3 (cmol+/kg)	10	0.0355	0.0299 - 0.0411
Ext Copper (mg/kg)	Extr Cu 12A1 (mg/kg)	18	0.688	0.574 - 0.803
Ext Iron (mg/kg)	Extr Fe 12A1 (mg/kg)	20	96.3	33 - 160

Ext Manganese (mg/kg)	Extr Mn 12A1 (mg/kg)	15	120	111 - 129
Ext Potassium (mg/kg)	Extr K 18A1 (mg/kg)	10	314	210 - 417
Ext Silicon (mg/kg)	Extr Si 13D1 13D2 (mg/kg)	6	64.1	0.8 - 127.4
Ext Sulphur (mg/kg)	Extr S 10B1 10B2 10B3 (mg/kg)	9	14.7	11.1 - 18.3
Ext Sulphur (mg/kg)	Extr S 10D1 (mg/kg)	13	10.5	8.4 - 12.6
Ext Zinc (mg/kg)	Extr Zn 12A1 (mg/kg)	19	1.72	1.54 - 1.90
Ext Zinc (mg/kg)	Extr Zn 12D1 (mg/kg)	3	2.31	1.69 - 2.93
M3-Aluminium (mg/kg)	M3-Al 18F1 (mg/kg)	12	494	470 - 517
M3-Boron (mg/kg)	M3-B 18F1 (mg/kg)	11	0.122	0.000 - 0.273
M3-Calcium (mg/kg)	M3-Ca 18F1 (mg/kg)	15	208	175 - 241
M3-Copper (mg/kg)	M3-Cu 18F1 (mg/kg)	15	0.710	0.562 - 0.858
M3-Iron (mg/kg)	M3-Fe 18F1 (mg/kg)	16	130	107 - 152
M3-Magnesium (mg/kg)	M3-Mg 18F1 (mg/kg)	15	57.5	49.5 - 65.5
M3-Manganese (mg/kg)	M3-Mn 18F1 (mg/kg)	16	150	130 - 169
M3-Phosphorus (mg/kg)	M3-P ICP 18F1 (mg/kg)	14	40.0	34.4 - 45.7
M3-Potassium (mg/kg)	M3-K 18F1 (mg/kg)	14	245	226 - 264
M3-Sodium (mg/kg)	M3-Na 18F1 (mg/kg)	10	9.05	5.49 - 12.61
M3-Sulphur (mg/kg)	M3-S 18F1 (mg/kg)	13	18.9	15.6 - 22.2
M3-Zinc (mg/kg)	M3-Zn 18F1 (mg/kg)	14	2.08	1.85 - 2.30
Nitrate Nitrogen (mg/kg)	Nitrate N 7B1 7B2 (mg/kg)	13	10.5	7.5 - 13.5
Nitrate Nitrogen (mg/kg)	Nitrate N 7C1 7C2 (mg/kg)	14	10.8	10.0 - 11.5
Olsen P (mg/kg)	Extr P Olsen 9C1 9C2 (mg/kg)	13	4.86	3.26 - 6.46

Organic Carbon W&B (%)	Org C W&B 6A1 (%) **	11	1.05	0.93 - 1.17
PBI Colwell (L/kg)	PBI Colwell 9I2a 9I2b 9I2c (L/kg)	9	36.4	32.5 - 40.3
PBI Unadjusted (L/kg)	PBI Unadjusted 9I4a 9I4b 9I4c (L/kg)	10	38.4	28.5 - 48.3
pH CaCl2 (pH units)	pH CaCl2 4B1 4B2 4B3 4B4 (pH Units)	21	4.29	4.20 - 4.38
pH Water (pH units)	pH Water 4A1 4A3 (pH Units)	31	5.09	4.88 - 5.30
Total Carbon (%)	Total C 6B2 (%)	29	1.22	1.13 - 1.31
Total Nitrogen (%)	Total N 7A1 7A2 7A3 (%) **	8	0.112	0.100 - 0.124
Total Nitrogen (%)	Total N 7A5 (%)	24	0.112	0.094 - 0.130
Total Organic Carbon (%)	Total Org C 6B1 6B3 (%) **	16	1.21	1.15 - 1.26
Total Organic Matter (%)	Total Org Matter 6G1 (%)	5	3.00	2.20 - 3.80
Total Phosphorus (%)	Total P 9A1 9A3 Not Specified (%) **	9	0.0220	0.0190 - 0.0250
Water Ext Cl (mg/kg)	Water Ext Cl 5A1 5A2 5A3 (mg/kg)	12	11.0	8.0 - 14.0

** 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.