Inter-laboratory Quality Control Material Data Sheet

QC Material ID: 13956-QC-PR12922

Product Type: Soil

Issue Date: 19 June 2026

Expiry Date: 11 September 2028

Test Name	Methods	n Value	Assigned Value	Assigned Range
Acid P (mg/kg)	Extr Acid P 9G1 9G2 (mg/kg)	9	632	543 - 721
Air-Dry Moist Content (%)	Air-Dry Moisture Content 2A1 (%)	23	0.900	0.470 - 1.330
Ammonium Nitrogen (mg/kg)	Amm-N 7C1 7C2 (mg/kg) **	21	118	82 - 154
Aqua Regia Aluminium (mg/kg)	Aqua Regia Al 17B1 17B2 17 C1 (mg/kg)	14	5,050	597 - 9493
Aqua Regia Arsenic (mg/kg)	Aqua Regia As 17B1 17B2 17 C1 (mg/kg)	9	3.67	3.31 - 4.03
Aqua Regia Boron (mg/kg)	Aqua Regia B 17B1 17B2 17C 1 (mg/kg)	11	4.39	2.97 - 5.81
Aqua Regia Cadmium (mg/kg)	Aqua Regia Cd 17B1 17B2 17 C1 (mg/kg)	10	0.0934	0.0637 - 0.1230
Aqua Regia Calcium (mg/kg)	Aqua Regia Ca 17B1 17B2 17 C1 (mg/kg)	16	4,640	3958 - 5322
Aqua Regia Chromium (mg/kg)	Aqua Regia Cr 17B1 17B2 17 C1 (mg/kg)	14	13.0	7.7 - 18.3
Aqua Regia Cobalt (mg/kg)	Aqua Regia Co 17B1 17B2 17 C1 (mg/kg)	14	1.63	0.48 - 2.77
Aqua Regia Copper (mg/kg)	Aqua Regia Cu 17B1 17B2 17 C1 (mg/kg)	16	15.8	13.1 - 18.4
Aqua Regia Iron (mg/kg)	Aqua Regia Fe 17B1 17B2 17 C1 (mg/kg)	15	5,720	4267 - 7173
Aqua Regia Lead (mg/kg)	Aqua Regia Pb 17B1 17B2 17 C1 (mg/kg)	10	30.9	29.9 - 31.9
Aqua Regia Magnesium (mg/kg)	Aqua Regia Mg 17B1 17B2 17 C1 (mg/kg)	16	969	776 - 1162
Aqua Regia Manganese (mg/kg)	Aqua Regia Mn 17B1 17B2 17 C1 (mg/kg)	16	62.2	52.0 - 72.4
Aqua Regia Molybdenum (mg/kg)	Aqua Regia Mo 17B1 17B2 17 C1 (mg/kg)	11	0.615	0.416 - 0.814

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Aqua Regia Nickel (mg/kg)	Aqua Regia Ni 17B1 17B2 17 C1 (mg/kg)	12	6.95	3.33 - 10.56
Aqua Regia Phosphorus (mg/kg)	Aqua Regia P 17B1 17B2 17C 1 (mg/kg)	9	763	701 - 825
Aqua Regia Potassium (mg/kg)	Aqua Regia K 17B1 17B2 17C 1 (mg/kg)	15	1,860	1475 - 2245
Aqua Regia Selenium (mg/kg)	Aqua Regia Se 17B1 17B2 17 C1 (mg/kg)	8	0.314	0.000 - 0.702
Aqua Regia Sodium (mg/kg)	Aqua Regia Na 17B1 17B2 17 C1 (mg/kg)	10	493	473 - 512
Aqua Regia Sulphur (mg/kg)	Aqua Regia S 17B1 17B2 17C 1 (mg/kg)	12	715	578 - 851
Aqua Regia Zinc (mg/kg)	Aqua Regia Zn 17B1 17B2 17 C1 (mg/kg)	14	49.0	43.9 - 54.2
Bray P (mg/kg)	Extr P Bray 9E1 9E2 (mg/kg)	7	189	106 - 272
CaCl2 Extractable B (mg/kg)	CaCl2 Extractable B 12C1 12 C2 (mg/kg)	14	2.18	1.50 - 2.87
Colwell P (mg/kg)	Extr P Colwell 9B1 9B2 (mg/k g)	20	267	186 - 347
Electrical Cond (dS/m)	Elec Cond 3A1 (dS/m)	31	1.16	1.04 - 1.28
Exch Aluminium (cmol+/kg)	Exch Al 15G1 (cmol+/kg) **	12	0.0356	0.0000 - 0.1352
Exch Calcium (cmol+/kg)	Exch Ca 15A1 (cmol+/kg) **	14	9.70	8.25 - 11.16
Exch Calcium (cmol+/kg)	Exch Ca 15D3 (cmol+/kg)	11	8.98	8.56 - 9.40
Exch Magnesium (cmol+/kg)	Exch Mg 15A1 (cmol+/kg) **	13	3.70	3.40 - 4.00
Exch Magnesium (cmol+/kg)	Exch Mg 15D3 (cmol+/kg)	14	3.51	3.35 - 3.67
Exch Potassium (cmol+/kg)	Exch K 15A1 (cmol+/kg) **	11	4.08	3.72 - 4.44
Exch Potassium (cmol+/kg)	Exch K 15D3 (cmol+/kg)	16	4.03	3.66 - 4.40
Exch Sodium (cmol+/kg)	Exch Na 15A1 (cmol+/kg) **	13	1.93	1.72 - 2.14
Exch Sodium (cmol+/kg)	Exch Na 15D3 (cmol+/kg)	15	1.77	1.56 - 1.98
Ext Copper (mg/kg)	Extr Cu 12A1 (mg/kg)	16	3.63	3.22 - 4.03
Ext Iron (mg/kg)	Extr Fe 12A1 (mg/kg)	19	179	96 - 262

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Ext Manganese (mg/kg)	Extr Mn 12A1 (mg/kg)	19	24.9	20.7 - 29.1
Ext Potassium (mg/kg)	Extr K 18A1 (mg/kg)	8	1,630	1482 - 1778
Ext Silicon (mg/kg)	Extr Si 13D1 13D2 (mg/kg)	4	234	200 - 268
Ext Sulphur (mg/kg)	Extr S 10B1 10B2 10B3 (mg/kg)	9	189	162 - 216
Ext Sulphur (mg/kg)	Extr S 10D1 (mg/kg)	12	177	149 - 205
Ext Zinc (mg/kg)	Extr Zn 12A1 (mg/kg)	17	18.0	15.6 - 20.4
Ext Zinc (mg/kg)	Extr Zn 12D1 (mg/kg)	3	30.6	25.9 - 35.3
M3-Aluminium (mg/kg)	M3-Al 18F1 (mg/kg)	15	332	282 - 382
M3-Boron (mg/kg)	M3-B 18F1 (mg/kg)	13	1.96	1.49 - 2.43
M3-Calcium (mg/kg)	M3-Ca 18F1 (mg/kg)	13	2,190	1864 - 2516
M3-Copper (mg/kg)	M3-Cu 18F1 (mg/kg)	14	3.93	3.73 - 4.14
M3-Iron (mg/kg)	M3-Fe 18F1 (mg/kg)	15	406	329 - 483
M3-Magnesium (mg/kg)	M3-Mg 18F1 (mg/kg)	14	485	435 - 535
M3-Manganese (mg/kg)	M3-Mn 18F1 (mg/kg)	12	31.6	30.5 - 32.8
M3-Phosphorus (mg/kg)	M3-P ICP 18F1 (mg/kg)	14	365	328 - 402
M3-Potassium (mg/kg)	M3-K 18F1 (mg/kg)	14	1,590	1452 - 1718
M3-Sodium (mg/kg)	M3-Na 18F1 (mg/kg)	15	440	369 - 511
M3-Sulphur (mg/kg)	M3-S 18F1 (mg/kg)	15	184	160 - 208
M3-Zinc (mg/kg)	M3-Zn 18F1 (mg/kg)	15	24.9	21.9 - 27.9
Nitrate Nitrogen (mg/kg)	Nitrate N 7B1 7B2 (mg/kg)	9	0.500	0.000 - 1.140
Nitrate Nitrogen (mg/kg)	Nitrate N 7C1 7C2 (mg/kg)	17	0.309	0.000 - 0.875
Olsen P (mg/kg)	Extr P Olsen 9C1 9C2 (mg/kg)	13	88.5	76.9 - 100.1



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Organic Carbon W&B (%)	Org C W&B 6A1 (%) **	13	3.31	2.39 - 4.23
PBI Colwell (L/kg)	PBI Colwell 9I2a 9I2b 9I2c (L/kg)	12	95.4	84.3 - 106.6
PBI Unadjusted (L/kg)	PBI Unadjusted 9I4a 9I4b 9I4c (L/kg)	10	49.8	39.6 - 60.0
pH CaCl2 (pH units)	pH CaCl2 4B1 4B2 4B3 4B4 (pH Units)	27	6.96	6.72 - 7.20
pH Water (pH units)	pH Water 4A1 4A3 (pH Units)	32	7.50	7.22 - 7.78
Total Carbon (%)	Total C 6B2 (%)	25	3.69	3.36 - 4.02
Total Nitrogen (%)	Total N 7A1 7A2 7A3 (%) **	9	0.323	0.279 - 0.367
Total Nitrogen (%)	Total N 7A5 (%)	20	0.318	0.294 - 0.342
Total Organic Carbon (%)	Total Org C 6B1 6B3 (%) **	18	3.58	3.22 - 3.94
Total Organic Matter (%)	Total Org Matter 6G1 (%)	5	7.21	5.43 - 8.99
Total Phosphorus (%)	Total P 9A1 9A3 Not Specified (%) **	9	0.0791	0.0669 - 0.0913
Water Ext Cl (mg/kg)	Water Ext Cl 5A1 5A2 5A3 (mg/kg)	19	892	750 - 1034

** 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.

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