Inter-laboratory Quality Control Material Data Sheet

QC Material ID: 13041-QC-PR12224

Product Type: Soil

Issue Date: 2 April 2026

Expiry Date: 30 June 2027

Test Name	Methods	n Value	Assigned Value	Assigned Range
Acid P (mg/kg)	Extr Acid P 9G1 9G2 (mg/kg)	8	35.6	34.9 - 36.3
Air-Dry Moist Content (%)	Air-Dry Moisture Content 2A1 (%)	23	6.18	5.38 - 6.98
Ammonium Nitrogen (mg/kg)	Amm-N 7C1 7C2 (mg/kg) **	19	4.56	3.97 - 5.15
Aqua Regia Aluminium (mg/kg)	Aqua Regia Al 17B1 17B2 17 C1 (mg/kg)	14	32,700	8385 - 57015
Aqua Regia Arsenic (mg/kg)	Aqua Regia As 17B1 17B2 17 C1 (mg/kg)	9	2.70	0.77 - 4.63
Aqua Regia Boron (mg/kg)	Aqua Regia B 17B1 17B2 17C 1 (mg/kg)	9	4.93	1.46 - 8.40
Aqua Regia Cadmium (mg/kg)	Aqua Regia Cd 17B1 17B2 17 C1 (mg/kg)	8	0.0265	0.0175 - 0.0355
Aqua Regia Calcium (mg/kg)	Aqua Regia Ca 17B1 17B2 17 C1 (mg/kg)	15	6,660	5859 - 7461
Aqua Regia Chromium (mg/kg)	Aqua Regia Cr 17B1 17B2 17 C1 (mg/kg)	14	37.7	21.2 - 54.2
Aqua Regia Cobalt (mg/kg)	Aqua Regia Co 17B1 17B2 17 C1 (mg/kg)	12	16.3	13.9 - 18.6
Aqua Regia Copper (mg/kg)	Aqua Regia Cu 17B1 17B2 17 C1 (mg/kg)	15	17.0	14.6 - 19.4
Aqua Regia Iron (mg/kg)	Aqua Regia Fe 17B1 17B2 17 C1 (mg/kg)	14	31,100	23984 - 38216
Aqua Regia Lead (mg/kg)	Aqua Regia Pb 17B1 17B2 17 C1 (mg/kg)	12	15.0	12.8 - 17.2
Aqua Regia Magnesium (mg/kg)	Aqua Regia Mg 17B1 17B2 17 C1 (mg/kg)	15	5,510	4383 - 6637
Aqua Regia Manganese (mg/kg)	Aqua Regia Mn 17B1 17B2 17 C1 (mg/kg)	16	972	898 - 1046
Aqua Regia Molybdenum (mg/kg)	Aqua Regia Mo 17B1 17B2 17 C1 (mg/kg)	9	0.158	0.000 - 0.497

Global Proficiency Ltd
10 Bisley Road, Enderley, Hamilton 3214, New Zealand
Unit 2/25 Mareno Road, Tullamarine, VIC 3043, Australia
p +64 7 850 4483 | +61 3 9089 1151
e sales@global-proficiency.com
w www.global-proficiency.com

Aqua Regia Nickel (mg/kg)	Aqua Regia Ni 17B1 17B2 17 C1 (mg/kg)	12	26.4	16.6 - 36.2
Aqua Regia Potassium (mg/kg)	Aqua Regia K 17B1 17B2 17C 1 (mg/kg)	13	3,320	1748 - 4892
Aqua Regia Selenium (mg/kg)	Aqua Regia Se 17B1 17B2 17 C1 (mg/kg)	6	0.325	0.000 - 0.836
Aqua Regia Sodium (mg/kg)	Aqua Regia Na 17B1 17B2 17 C1 (mg/kg)	12	549	457 - 641
Aqua Regia Sulphur (mg/kg)	Aqua Regia S 17B1 17B2 17C 1 (mg/kg)	5	76.0	73.9 - 78.1
Aqua Regia Zinc (mg/kg)	Aqua Regia Zn 17B1 17B2 17 C1 (mg/kg)	13	49.8	44.2 - 55.4
Bray P (mg/kg)	Extr P Bray 9E1 9E2 (mg/kg)	6	5.74	4.47 - 7.00
CaCl2 Extractable B (mg/kg)	CaCl2 Extractable B 12C1 12 C2 (mg/kg)	13	0.976	0.751 - 1.201
Colwell P (mg/kg)	Extr P Colwell 9B1 9B2 (mg/k g)	20	15.9	10.7 - 21.1
Electrical Cond (dS/m)	Elec Cond 3A1 (dS/m)	22	0.150	0.138 - 0.162
Exch Aluminium (cmol+/kg)	Exch Al 15G1 (cmol+/kg) **	10	0.0085	0.0000 - 0.0264
Exch Calcium (cmol+/kg)	Exch Ca 15E1 (cmol+/kg)	3	25.5	24.0 - 27.0
Exch Calcium (cmol+/kg)	Exch Ca 15A1 (cmol+/kg) **	13	27.0	24.3 - 29.7
Exch Calcium (cmol+/kg)	Exch Ca 15D3 (cmol+/kg)	15	26.6	23.9 - 29.3
Exch Magnesium (cmol+/kg)	Exch Mg 15E1 (cmol+/kg)	3	11.1	9.9 - 12.3
Exch Magnesium (cmol+/kg)	Exch Mg 15A1 (cmol+/kg) **	15	12.0	10.5 - 13.5
Exch Magnesium (cmol+/kg)	Exch Mg 15D3 (cmol+/kg)	14	11.7	10.5 - 12.9
Exch Potassium (cmol+/kg)	Exch K 15E1 (cmol+/kg)	3	0.950	0.911 - 0.989
Exch Potassium (cmol+/kg)	Exch K 15A1 (cmol+/kg) **	11	1.20	1.14 - 1.26
Exch Potassium (cmol+/kg)	Exch K 15D3 (cmol+/kg)	11	1.11	1.05 - 1.17
Exch Sodium (cmol+/kg)	Exch Na 15E1 (cmol+/kg)	3	1.55	1.49 - 1.61
Exch Sodium (cmol+/kg)	Exch Na 15A1 (cmol+/kg) **	16	1.78	1.44 - 2.12

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e sales@global-proficiency.com
w www.global-proficiency.com

Exch Sodium (cmol+/kg)	Exch Na 15D3 (cmol+/kg)	13	1.54	1.42 - 1.66
Ext Copper (mg/kg)	Extr Cu 12A1 (mg/kg)	21	1.26	1.08 - 1.44
Ext Iron (mg/kg)	Extr Fe 12A1 (mg/kg)	17	13.0	10.6 - 15.4
Ext Manganese (mg/kg)	Extr Mn 12A1 (mg/kg)	17	25.9	23.2 - 28.6
Ext Potassium (mg/kg)	Extr K 18A1 (mg/kg)	11	356	300 - 412
Ext Silicon (mg/kg)	Extr Si 13D1 13D2 (mg/kg)	6	1,740	1310 - 2170
Ext Sulphur (mg/kg)	Extr S 10B1 10B2 10B3 (mg/kg)	10	7.49	5.87 - 9.11
Ext Sulphur (mg/kg)	Extr S 10D1 (mg/kg)	11	6.50	5.02 - 7.98
Ext Zinc (mg/kg)	Extr Zn 12A1 (mg/kg)	16	0.271	0.146 - 0.395
Ext Zinc (mg/kg)	Extr Zn 12D1 (mg/kg)	4	1.50	1.11 - 1.88
M3-Aluminium (mg/kg)	M3-Al 18F1 (mg/kg)	17	884	745 - 1023
M3-Boron (mg/kg)	M3-B 18F1 (mg/kg)	13	1.26	0.79 - 1.73
M3-Calcium (mg/kg)	M3-Ca 18F1 (mg/kg)	14	5,150	4774 - 5516
M3-Copper (mg/kg)	M3-Cu 18F1 (mg/kg)	13	2.60	2.30 - 2.90
M3-Iron (mg/kg)	M3-Fe 18F1 (mg/kg)	16	109	81 - 136
M3-Magnesium (mg/kg)	M3-Mg 18F1 (mg/kg)	13	1,400	1341 - 1459
M3-Manganese (mg/kg)	M3-Mn 18F1 (mg/kg)	17	252	154 - 350
M3-Phosphorus (mg/kg)	M3-P ICP 18F1 (mg/kg)	15	14.7	11.7 - 17.7
M3-Potassium (mg/kg)	M3-K 18F1 (mg/kg)	16	392	322 - 462
M3-Sodium (mg/kg)	M3-Na 18F1 (mg/kg)	11	354	327 - 381
M3-Sulphur (mg/kg)	M3-S 18F1 (mg/kg)	14	10.9	6.1 - 15.6
M3-Zinc (mg/kg)	M3-Zn 18F1 (mg/kg)	15	0.890	0.564 - 1.216

Nitrate Nitrogen (mg/kg)	Nitrate N 7B1 7B2 (mg/kg)	9	5.00	4.70 - 5.30
Nitrate Nitrogen (mg/kg)	Nitrate N 7C1 7C2 (mg/kg)	16	4.90	4.44 - 5.36
Olsen P (mg/kg)	Extr P Olsen 9C1 9C2 (mg/kg)	14	6.28	4.91 - 7.66
Organic Carbon W&B (%)	Org C W&B 6A1 (%) **	8	0.573	0.529 - 0.618
PBI Colwell (L/kg)	PBI Colwell 9I2a 9I2b 9I2c (L/kg)	12	120	116 - 124
PBI Unadjusted (L/kg)	PBI Unadjusted 9I4a 9I4b 9I4c (L/kg)	5	117	114 - 120
pH CaCl2 (pH units)	pH CaCl2 4B1 4B2 4B3 4B4 (pH Units)	27	7.55	7.31 - 7.79
pH Water (pH units)	pH Water 4A1 4A3 (pH Units)	27	8.34	8.22 - 8.46
Total Carbon (%)	Total C 6B2 (%)	26	0.752	0.694 - 0.809
Total Nitrogen (%)	Total N 7A1 7A2 7A3 (%) **	9	0.0590	0.0442 - 0.0738
Total Nitrogen (%)	Total N 7A5 (%)	18	0.0620	0.0561 - 0.0679
Total Org C IR (%)	Total Org Carbon IR 6B4a 6B4b (%)	3	0.824	0.688 - 0.960
Total Organic Carbon (%)	Total Org C 6B1 6B3 (%) **	21	0.716	0.645 - 0.787
Total Organic Matter (%)	Total Org Matter 6G1 (%)	4	3.33	0.00 - 9.54
Total Phosphorus (%)	Total P 9A1 9A3 Not Specified (%) **	14	0.0170	0.0140 - 0.0200
Water Ext Cl (mg/kg)	Water Ext Cl 5A1 5A2 5A3 (mg/kg)	14	5.35	2.41 - 8.29

** 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



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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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