Inter-laboratory Quality Control Material Data Sheet

QC Material ID: 12905-QC-PR10728

Product Type: Soil

Issue Date: 29 July 2026

Expiry Date: 31 January 2027

Test Name	Methods	n Value	Assigned Value	Assigned Range
Acid P (mg/kg)	Extr Acid P 9G1 9G2 (mg/kg)	13	42.3	26.9 - 57.7
Air-Dry Moist Content (%)	Air-Dry Moisture Content 2A1 (%)	31	1.65	1.23 - 2.07
Ammonium Nitrogen (mg/kg)	Amm-N 7C2 (mg/kg) **	20	7.45	6.41 - 8.48
Aqua Regia Aluminium (mg/kg)	Aqua Regia Al 17B1 17B2 17 C1 (mg/kg)	15	15,000	6697 - 23303
Aqua Regia Arsenic (mg/kg)	Aqua Regia As 17B1 17B2 17 C1 (mg/kg)	14	6.01	3.43 - 8.58
Aqua Regia Boron (mg/kg)	Aqua Regia B 17B1 17B2 17C 1 (mg/kg)	12	4.22	0.00 - 9.02
Aqua Regia Cadmium (mg/kg)	Aqua Regia Cd 17B1 17B2 17 C1 (mg/kg)	8	0.0465	0.0320 - 0.0610
Aqua Regia Calcium (mg/kg)	Aqua Regia Ca 17B1 17B2 17 C1 (mg/kg)	17	477	367 - 587
Aqua Regia Chromium (mg/kg)	Aqua Regia Cr 17B1 17B2 17 C1 (mg/kg)	17	46.2	37.0 - 55.4
Aqua Regia Cobalt (mg/kg)	Aqua Regia Co 17B1 17B2 17 C1 (mg/kg)	15	20.6	17.6 - 23.6
Aqua Regia Copper (mg/kg)	Aqua Regia Cu 17B1 17B2 17 C1 (mg/kg)	17	23.7	19.8 - 27.6
Aqua Regia Iron (mg/kg)	Aqua Regia Fe 17B1 17B2 17 C1 (mg/kg)	16	36,900	32106 - 41594
Aqua Regia Lead (mg/kg)	Aqua Regia Pb 17B1 17B2 17 C1 (mg/kg)	16	15.4	12.3 - 18.5
Aqua Regia Magnesium (mg/kg)	Aqua Regia Mg 17B1 17B2 17 C1 (mg/kg)	18	1,520	868 - 2172
Aqua Regia Manganese (mg/kg)	Aqua Regia Mn 17B1 17B2 17 C1 (mg/kg)	17	679	617 - 741
Aqua Regia Molybdenum (mg/kg)	Aqua Regia Mo 17B1 17B2 17 C1 (mg/kg)	13	0.630	0.058 - 1.202

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Aqua Regia Potassium (mg/kg)	Aqua Regia K 17B1 17B2 17C 1 (mg/kg)	16	2,150	588 - 3702
Aqua Regia Selenium (mg/kg)	Aqua Regia Se 17B1 17B2 17 C1 (mg/kg)	8	0.956	0.00 - 2.09
Aqua Regia Silicon (mg/kg)	Aqua Regia Si 17B1 17B2 17 C1 (mg/kg)	8	712	0 - 1655
Aqua Regia Sodium (mg/kg)	Aqua Regia Na 17B1 17B2 17 C1 (mg/kg)	14	77.1	20.1 - 134.0
Aqua Regia Sulphur (mg/kg)	Aqua Regia S 17B1 17B2 17C 1 (mg/kg)	12	97.4	68 - 127
Aqua Regia Zinc (mg/kg)	Aqua Regia Zn 17B1 17B2 17 C1 (mg/kg)	18	40.4	30.3 - 50.5
Bray P (mg/kg)	Extr P Bray 9E1 9E2 (mg/kg)	10	20.3	16.4 - 24.2
CaCl2 Extractable B (mg/kg)	CaCl2 Extractable B 12C1 12 C2 (mg/kg)	17	0.523	0.336 - 0.710
Colwell P (mg/kg)	Extr P Colwell 9B1 9B2 (mg/k g)	17	52.5	44.5 - 60.5
Electrical Cond (dS/m)	Elec Cond 3A1 (dS/m)	33	0.0676	0.0605 - 0.0747
Exch Aluminium (cmol+/kg)	Exch Al 15G1 (cmol+/kg) **	16	0.983	0.682 - 1.283
Exch Calcium (cmol+/kg)	Exch Ca 15D3 (cmol+/kg)	16	1.65	1.50 - 1.80
Exch Calcium (cmol+/kg)	Exch Ca 15A1 (cmol+/kg) **	16	1.80	1.47 - 2.13
Exch Calcium (cmol+/kg)	Exch Ca 15E1 (cmol+/kg)	3	1.74	0.97 - 2.51
Exch Magnesium (cmol+/kg)	Exch Mg 15A1 (cmol+/kg) **	17	1.14	1.02 - 1.26
Exch Magnesium (cmol+/kg)	Exch Mg 15E1 (cmol+/kg)	3	1.12	0.91 - 1.33
Exch Magnesium (cmol+/kg)	Exch Mg 15D3 (cmol+/kg)	16	1.11	1.02 - 1.19
Exch Potassium (cmol+/kg)	Exch K 15A1 (cmol+/kg) **	16	0.727	0.591 - 0.863
Exch Potassium (cmol+/kg)	Exch K 15E1 (cmol+/kg)	3	0.745	0.606 - 0.884
Exch Potassium (cmol+/kg)	Exch K 15D3 (cmol+/kg)	17	0.717	0.643 - 0.791
Exch Sodium (cmol+/kg)	Exch Na 15A1 (cmol+/kg) **	12	0.110	0.085 - 0.135
Exch Sodium (cmol+/kg)	Exch Na 15E1 (cmol+/kg)	3	0.0823	0.0209 - 0.1437

Exch Sodium (cmol+/kg)	Exch Na 15D3 (cmol+/kg)	13	0.110	0.104 - 0.116
Ext Copper (mg/kg)	Extr Cu 12A1 (mg/kg)	21	2.03	1.88 - 2.18
Ext Iron (mg/kg)	Extr Fe 12A1 (mg/kg)	19	78.3	57.2 - 99.4
Ext Manganese (mg/kg)	Extr Mn 12A1 (mg/kg)	25	194	152 - 236
Ext Potassium (mg/kg)	Extr K 18A1 (mg/kg)	11	333	300 - 366
Ext Silicon (mg/kg)	Extr Si 13D1 13D2 (mg/kg)	6	188	0 - 405
Ext Sulphur (mg/kg)	Extr S 10B1 10B2 10B3 (mg/kg)	10	27.0	19.0 - 35.0
Ext Sulphur (mg/kg)	Extr S 10D1 (mg/kg)	11	12.4	10.3 - 14.5
Ext Zinc (mg/kg)	Extr Zn 12A1 (mg/kg)	19	2.47	2.26 - 2.68
Ext Zinc (mg/kg)	Extr Zn 12D1 (mg/kg)	3	3.58	2.93 - 4.23
M3-Aluminium (mg/kg)	M3-Al 18F1 (mg/kg)	16	760	643 - 877
M3-Boron (mg/kg)	M3-B 18F1 (mg/kg)	11	0.209	0.117 - 0.301
M3-Calcium (mg/kg)	M3-Ca 18F1 (mg/kg)	15	336	300 - 372
M3-Copper (mg/kg)	M3-Cu 18F1 (mg/kg)	16	2.39	2.02 - 2.76
M3-Iron (mg/kg)	M3-Fe 18F1 (mg/kg)	17	231	172 - 290
M3-Magnesium (mg/kg)	M3-Mg 18F1 (mg/kg)	15	137	116 - 158
M3-Manganese (mg/kg)	M3-Mn 18F1 (mg/kg)	16	226	182 - 270
M3-Phosphorus (mg/kg)	M3-P ICP 18F1 (mg/kg)	14	32.7	25.8 - 39.5
M3-Potassium (mg/kg)	M3-K 18F1 (mg/kg)	14	275	236 - 314
M3-Sodium (mg/kg)	M3-Na 18F1 (mg/kg)	13	25.8	22.8 - 28.8
M3-Sulphur (mg/kg)	M3-S 18F1 (mg/kg)	14	24.4	20.0 - 28.8
M3-Zinc (mg/kg)	M3-Zn 18F1 (mg/kg)	16	3.23	2.66 - 3.81



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Nitrate Nitrogen (mg/kg)	Nitrate N 7B1 7B2 (mg/kg)	15	8.91	7.16 - 10.66
Nitrate Nitrogen (mg/kg)	Nitrate N 7C2 (mg/kg)	19	9.21	8.14 - 10.28
Olsen P (mg/kg)	Extr P Olsen 9C1 9C2 (mg/kg)	21	17.5	13.1 - 21.9
Organic Carbon W&B (%)	Org C W&B 6A1 (%) **	16	0.768	0.619 - 0.918
PBI Colwell (L/kg)	PBI Colwell 9I2a 9I2b 9I2c (L/kg)	16	97.7	85.8 - 109.6
PBI Olsen (L/kg)	PBI Olsen 9I3a 9I3b 9I3c (L/kg)	4	105	88 - 122
PBI Unadjusted (L/kg)	PBI Unadjusted 9I4a 9I4b 9I4c (L/kg)	9	89.0	85.4 - 92.6
pH CaCl2 (pH units)	pH CaCl2 4B1 4B2 4B3 4B4 (pH Units)	29	4.09	3.94 - 4.24
pH Water (pH units)	pH Water 4A1 4A3 (pH Units)	35	4.88	4.64 - 5.12
Total Carbon (%)	Total C 6B2 (%)	23	0.939	0.877 - 1.001
Total Nitrogen (%)	Total N 7A5 (%)	30	0.0764	0.0546 - 0.0982
Total Nitrogen (%)	Total N 7A1 7A2 7A3 (%) **	9	0.0740	0.0503 - 0.0977
Total Org C IR (%)	Total Org Carbon IR 6B4a 6B4b (%)	5	0.860	0.445 - 1.275
Total Organic Carbon (%)	Total Org C 6B1 6B3 (%) **	21	0.902	0.801 - 1.003
Total Phosphorus (%)	Total P 9A1 9A3 Not Specified (%) **	21	0.0416	0.0345 - 0.0487
Water Ext Cl (mg/kg)	Water Ext Cl 5A1 5A2 5A3 (mg/kg)	18	8.16	3.57 - 12.76

** 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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