

## Reference Material and Inter-laboratory Quality Control Materials Product Summary

February 2025

Version: 1

**Assigned Values:** Values provided have been generated from an Inter-Laboratory Proficiency Programme (ILPP). The reference material values provided in this summary are the mean of the results after the exclusion of statistical outliers. The Assigned Range provided for the Inter-laboratory QC Materials is the range of test values available for purchase. Each Reference and QC Material comes with a Data Summary Sheet.

**Missing Values and Available Tests:** For Reference Materials where property values do not meet the statistical criteria, the summary values have not been provided. For this reason, not all tests will be available for every Reference Material of the same matrix. However, if there are 3 or more data points available, an Assigned Value will be provided with the corresponding QC material.

**Sample Sizes:** Available sample sizes are shown for reference materials.

*Ordering Reference Materials and/or Quality Control Materials, acknowledges you have read and understood our terms and conditions. These can be found at: <https://www.global-proficiency.com/terms-conditions>*

### Reference Materials: Soil Material

| Product Type                    | Soil      | Soil      |
|---------------------------------|-----------|-----------|
| Product ID                      | 803-C-1   | 804-C-1   |
| Expiry Date                     | 31 Jan 27 | 30 Jun 27 |
| Sample Size                     | 150g      | 150g      |
| Electrical Cond (dS/m)          | 0.0684    | 0.345     |
| Exch Magnesium (cmol+/kg)       | 1.09      |           |
| Exch Potassium (cmol+/kg)       | 0.744     | 0.750     |
| pH CaCl <sub>2</sub> (pH units) | 4.12      | 6.74      |



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|                                 |        |        |
|---------------------------------|--------|--------|
| <b>pH Water (pH units)</b>      |        | 7.32   |
| <b>Total Carbon (%)</b>         | 0.945  | 2.12   |
| <b>Total Nitrogen (%)</b>       | 0.0801 | 0.137  |
| <b>Total Organic Carbon (%)</b> |        | 2.13   |
| <b>Total Phosphorus (%)</b>     | 0.0413 | 0.0224 |

**QC Material: Soil Material**

| Matrix: Soil Material                   | Product ID  | 12905-QC  | 10593-QC  | 13039-QC  | 13957-QC  | 14160-QC  | 15204-QC  | 13958-QC  | 13959-QC  | 13964-QC  | 13965-QC  |
|---|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|   | Process Run | PR10728   | PR11750   | PR10728   | PR10916   | PR11750   | PR11750   | PR11098   | PR11098   | PR11403   | PR11403   |
|   | Expiry Date | 31 Jan 27 | 31 Mar 27 | 30 Jun 27 | 05 Jun 28 | 01 Sep 28 | 01 Sep 28 | 11 Sep 28 | 11 Sep 28 | 01 Mar 29 | 01 Mar 29 |
|   | Sample Size | 150g      | 150g      | 150g      | 150g      | 150g      | 150g      | 150g      | 150g      | 150g      | 150g      |
| Acid P (mg/kg)                          | 42.3        | 21.0      | 90.0      | 10.1      | 54.8      | 320       | 53.3      | 6.20      | 46.8      | 168       |           |
| Bray P (mg/kg)                          | 20.3        | 7.00      | 36.3      | 7.82      | 8.93      | 32.0      | 13.2      | 1.87      | 33.4      | 61.3      |           |
| CaCl <sub>2</sub> Extractable B (mg/kg) | 0.523       | 0.660     | 0.810     | 0.500     | 2.62      | 3.33      | 0.521     | 1.05      | 0.204     | 1.34      |           |
| Colwell P (mg/kg)                       | 52.5        | 54.7      | 45.9      | 14.8      | 71.8      | 373       | 29.0      | 16.0      | 34.5      | 92.2      |           |
| Electrical Cond (dS/m)                  | 0.0680      | 0.178     | 0.340     | 0.0940    | 0.122     | 0.280     | 0.322     | 0.529     | 0.264     | 0.161     |           |
| Exch Aluminium (cmol+/kg)               | 0.983       | 0.493     | 0.0100    | 0.454     | 0.0760    | 0.562     | 0.0120    | 0.0110    | 0.0370    | 0.0150    |           |
| Exch Calcium (cmol+/kg)                 | 1.80        | 4.35      | 7.81      | 1.65      | 3.75      | 14.4      | 13.6      | 23.0      | 4.03      | 6.92      |           |
| Exch Magnesium (cmol+/kg)               | 1.14        | 1.63      | 1.80      | 0.916     | 0.910     | 2.01      | 2.13      | 6.99      | 0.540     | 3.20      |           |
| Exch Potassium (cmol+/kg)               | 0.745       | 0.143     | 0.744     | 0.145     | 0.376     | 0.656     | 0.277     | 1.73      | 0.815     | 1.00      |           |
| Exch Sodium (cmol+/kg)                  | 0.110       | 0.132     | 0.854     | 0.152     | 0.0600    | 0.149     | 0.330     | 0.704     | 0.0410    | 0.357     |           |
| Ext Copper (mg/kg)                      | 2.03        | 1.22      | 1.60      | 0.408     | 1.74      | 4.56      | 1.03      | 3.30      | 0.530     | 0.788     |           |
| Ext Iron (mg/kg)                        | 78.3        | 157       | 134       | 390       | 43.8      | 270       | 99.2      | 84.5      | 56.1      | 49.7      |           |
| Ext Manganese (mg/kg)                   | 194         | 83.8      | 9.50      | 7.22      | 15.0      | 35.4      | 8.48      | 22.9      | 70.3      | 31.9      |           |
| Ext Sulphur (mg/kg)                     | 27.0        | 52.9      | 56.6      | 15.9      | 182       | 119       | 97.0      | 213       | 30.3      | 13.2      |           |
| Ext Zinc (mg/kg)                        | 3.58        | 5.14      | 15.1      | 2.44      | 7.30      | 37.7      | 9.32      | 12.4      | 2.24      | 12.4      |           |
| Olsen P (mg/kg)                         | 17.5        | 13.6      | 18.2      | 8.40      | 17.9      | 80.8      | 11.9      | 5.61      | 15.8      | 40.1      |           |
| Organic Carbon W&B (%)                  | 0.768       | 2.21      | 1.89      | 1.83      | 2.40      | 7.56      | 1.51      | 1.23      | 1.05      | 1.53      |           |
| PBI Colwell (L/kg)                      | 97.7        | 283       | 60.3      | 71.0      | 875       | 1050      | 82.0      | 153       | 36.0      | 49.5      |           |



|                                 |        |       |        |        |       |       |        |        |        |        |
|---------------------------------|--------|-------|--------|--------|-------|-------|--------|--------|--------|--------|
| <b>pH CaCl2 (pH units)</b>      | 4.09   | 4.41  | 6.74   | 4.39   | 4.91  | 4.54  | 7.66   | 7.40   | 5.20   | 6.67   |
| <b>pH Water (pH units)</b>      | 4.88   | 4.85  | 7.30   | 5.06   | 5.43  | 4.99  | 8.12   | 7.75   | 5.70   | 7.32   |
| <b>Total Carbon (%)</b>         | 0.939  | 2.43  | 2.10   | 1.97   | 2.82  | 8.98  | 1.66   | 1.48   | 1.20   | 1.70   |
| <b>Total Nitrogen (%)</b>       | 0.0760 | 0.220 | 0.134  | 0.115  | 0.214 | 0.670 | 0.110  | 0.154  | 0.119  | 0.150  |
| <b>Total Organic Carbon (%)</b> | 0.902  | 2.38  | 2.06   | 1.87   | 2.80  | 8.80  | 1.57   | 1.33   | 1.20   | 1.65   |
| <b>Total Phosphorus (%)</b>     | 0.0420 | 0.102 | 0.0220 | 0.0080 | 0.244 | 0.429 | 0.0170 | 0.0180 | 0.0230 | 0.0370 |
| <b>Water Ext Cl (mg/kg)</b>     | 8.16   | 14.7  | 183    | 24.5   | 15.6  | 23.0  | 39.8   | 16.2   | 15.7   | 32.3   |