# Accredited Method Details

| Parameter | Method Used | Range | Limit of Detection |
|---|---|---|---|
| pH of Soil / Water | SOP 2004 Hydrogen ion selective electrode | pH 4 – 10 | 4 pH units |
| SMP pH of Soil | SOP 2002 Hydrogen ion selective electrode | pH 4 – 10 | 4 pH units |
| SMP pH of Soil | SOP 2121 Skalar Automated pH Meter | pH 4 – 10 | 4 pH units |
| Organic Matter – Soil | SOP 2007 Furnace | 0.1 – 99.9% | 0.1% |
| Morgans Phosphorus – Soil | SOP 2008 Extraction / Colourimetry | 1 – 20 mg/l | 1 mg/l |
| Morgans Phosphorus - Soil | SOP 2040 Extraction / Colourimetry Konelab | 1 – 250 mg/l | 1 mg/l |
| Morgans Potassium - Soil | SOP 2009 Extraction / Flame Photometry | 25 – 200 mg/l | 25 mg/l |
| Morgans Potassium - Soil | SOP 2120 ICP-OES | 25 – 200 mg/l | 25 mg/l |
| Extractable Magnesium | SOP 2120 ICP-OES | 25 – 200 mg/l | 25 mg/l |
| Morgans Magnesium | SOP 2127 Spectrophotometric technique | 25 – 300 mg/l | 25 mg/l |
| Morgans Phosphorus - Soil | SOP 2127 Spectrophotometric technique | 1 – 100 mg/l | 1 mg/l |
| Morgans Potassium - Soil | SOP 2127 Spectrophotometric technique | 25 – 300 mg/l | 25 mg/l |
| COD – Low Range | SOP 2005 Digestion / Colourimetry | 1 – 150 mg/l | 1 mg/l |
| COD – High Range | SOP 2005 Digestion / Colourimetry | 50 – 5000 mg/l | 50 mg/l |
| BOD | SOP 2006 DO Probe | 1 – 1000 mg/L | 1 mg/l |
| Ammonia / Ammonium | SOP 2057 Colourimetry – Konelab | 0.01 – 20 as N / 0.01 – 24.4 as NH3 / 0.01 – 25.80 mg/l as NH4 | 0.01 mg/l |
| Total Suspended Solids | SOP 2016 Gravimetric | 1- 1000mg/l | 1 mg/l |
| Turbidity | SOP 2022 Turbidity Meter | 0.02 – 1000 NTU | 0.02 NTU |
| Alkalinity | SOP 2064 Colourimetry – Konelab | 1 – 1000 mg/l | 1 mg/l |
| Chloride | SOP 2065 Colourimetry – Konelab | 1 – 500 mg/l | 1 mg/l |
| Sulphate | SOP 2062 Colourimetry – Konelab | 2.5 – 500 mg/l | 2.5 mg/l |
| Ortho Phosphate | SOP 2061 Colourimetry – Konelab | 0.01 – 10 mg/l PO4/ 0.01 3.26 mg/l P | 0.01 mg/l |
| Ortho Phosphate | SOP 2026 UV Spec | 0.05 – 1.00 mg/l | 0.05 mg/l |
| Conductivity | SOP 2076 Electrometry | 10 -1999 $\mu scm^{-1}$ | 10 µS/cm |
| Total Oxidised Nitrogen (TON) | SOP 2058 Colourimetry – Konelab | 0.5 – 50 mg/l | 0.5 mg/l |
| Nitrite | SOP 2059 Colourimetry – Konelab | 0.03 – 16.5 mg/l as N / 0.1 – 5 mg/l as NO2 | 0.03 mg/l |
| Nitrate | SOP 2060 Colourimetry – Konelab | 0.5 – 50 mg/l as N / 2.2 – 220 mg/l as NO3 | 0.5 mg/l |
| Colour | SOP 2063 Colourimetry – Konelab | 1 – 500 Pt Co | 1 Pt Co |
| Total Nitrogen | SOP 2075 Persulfate Digestion | 0.5 – 25 mg/l | 0.5 mg/l |
| Fluoride | SOP 2069 Colourimetry – Konelab | 0.125 – 1.5 mg/l | 0.125 mg/l |
| Total Phosphorus | SOP 2126 ICP-MS | 0.01 – 2 mg/l | 0.01 mg/l |
| Aluminium | SOP 2125 ICP-MS | 10 – 500 µg/l | 10 µg/l |
| Cadmium | SOP 2125 ICP-MS | 0.5 – 100 µg/l | 0.5 µg/l |
| Calcium | SOP 2125 ICP-MS | 0.5 – 200 mg/l | 0.5 mg/l |
| Chromium | SOP 2125 ICP-MS | 0.5 – 500 µg/l | 0.5 µg/l |
| Copper | SOP 2125 ICP-MS | 10 – 500 µg/l | 10 µg/l |
| Iron | SOP 2125 ICP-MS | 10 – 500 µg/l | 10 µg/l |
| Lead | SOP 2125 ICP-MS | 1 – 100 µg/l | 1 µg/l |
| Magnesium | SOP 2125 ICP-MS | 0.5 – 200 mg/l | 0.5 mg/l |
| Manganese | SOP 2125 ICP-MS | 5 – 500 µg/l | 5 µg/l l |
| Nickel | SOP 2125 ICP-MS | 2 – 100 µg/l | 2 µg/l |
| Potassium | SOP 2125 ICP-MS | 1 – 200 mg/l | 1 mg/l |
| Sodium | SOP 2125 ICP-MS | 0.5 – 200 mg/l | 0.5 mg/l |
| Hardness as CaCO3 (by calculation) | SOP 2024 ICP-MS | 1 -911 mg/l | 1 mg/l |
| Coliforms and *E.coli* | SOP 2090 Colilert-18 | N/A | 0 MPN * |
| Enterococci | SOP 2114 Enterolert-DW | N/A | 0 MPN * |

* - Note: A result of 0 MPN equates to a result of not detected per volume tested.
Uncertainty of Measurement is available upon request, for all INAB accredited tests however is not taken into account for reported results.

Please refer to the IAS website for further details on method specifications.