

LABORATORY METHODS OF ANALYSIS

SOIL METHODS OF ANALYSIS

Analyses performed on soil dried at 40oC and ground to <2mm. (excluding moisture assay)

Analysis	Rayment & Lyons
Aluminium (Exchangeable)	15G1
Ammonium Nitrogen	7C2b
Boron	12C2
Buffer pH	16C1
Carbonate	
Calcium (Exchangeable Cation)	15D3
Potassium (Exchangeable Cation)	15D3
Magnesium (Exchangeable Cation)	15D3
Sodium (Exchangeable Cation)	15D3
Calcium (Exchangeable Cation with Soluble Salt wash)	15D1
Potassium (Exchangeable Cation with Soluble Salt wash)	15D1
Magnesium (Exchangeable Cation with Soluble Salt wash)	15D1
Sodium (Exchangeable Cation with Soluble Salt wash)	15D1
Chloride	5A2b
Colour (per Munsell colour charts)	
Electrical Conductivity	4A1
Mehlich 3 - P, Ca, Mg, Na, K, Fe, Cu, Mn, Zn, B, S, Al	18F1
Moisture (Percentage)	2B1
Nitrate Nitrogen	7C2b
Organic Carbon (Walkley & Black)	6A1
pH (1:5 CaCl ₂)	4B2
pH (1:5 water)	4A1
Phosphorus - Bray	9E2
Phosphorus - BSES	9G2
Phosphorus - Colwell	9B2
Phosphorus - CaCl ₂	
Phosphorus - Lactate	9D1
Phosphorus - Olsen	9C2a
Phosphorus Buffer Index (PBI)	9I2b
Potassium - Colwell	18A1
Potassium - Nitric	18C1
Course Sand, Fine Sand, Silt, Clay (%)	
Silicon - BSES	13D1
Silicon - CaCl ₂	
Slaking and Dispersion	
Sulphur - MCP	10B3
Sulphur - KCl40	10D1
Texture	
Total Nitrogen	7A2b
Total Phosphorus	9A3a
Copper (DTPA Trace Elements)	12A1
Iron (DTPA Trace Elements)	12A1
Manganese (DTPA Trace Elements)	12A1
Zinc (DTPA Trace Elements)	12A1
Zinc - HCl	18D1

SOIL CALCULATIONS

Analysis	Rayment & Lyons
Cation Exchange Capacity (CEC)	15J1
Calcium / Magnesium ratio	15M1
Percentage Aluminium Saturation	15O1
Exchangeable Sodium Percentage (ESP)	15N1
Electrical Conductivity of Saturated Extract (ECSE)	
Phosphorus Buffer Index (PBI)Colwell	9I2b

PLANT METHOD OF ANALYSIS

Analyses performed on plant tissue dried at 70oC and ground

Analysis
Chloride (Extractable)
Nitrate (Extractable)
Total Nitrogen
Total Elements - Boron, calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium, sulphur, zinc
Total Cobalt, Molybdenum, Selenium

References

Rayment, G.E., Lyons D.J. (2011) Soil Chemical methods - Australasia, CSIRO Publishing, 2011