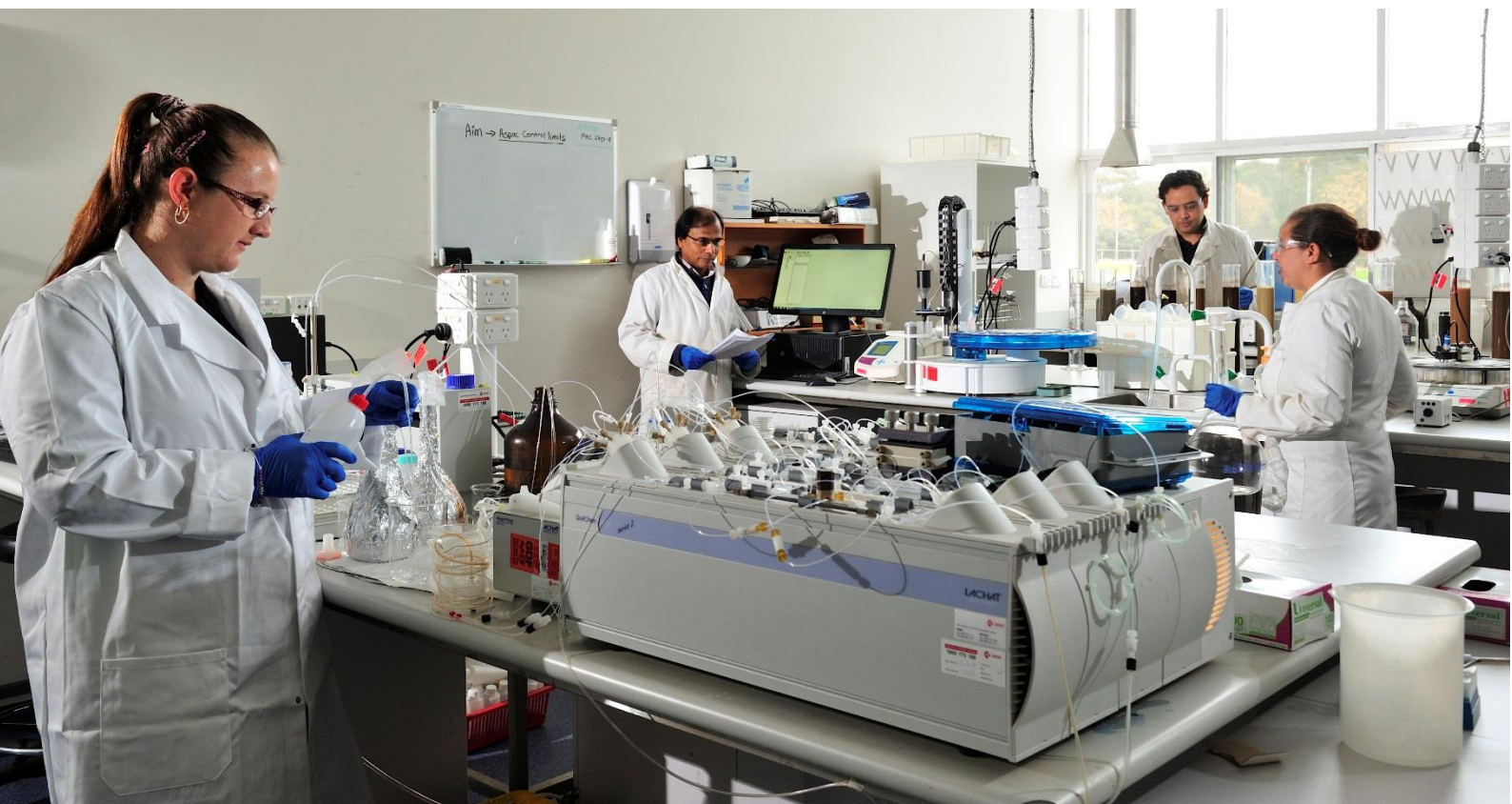


SALIS laboratory soil test methods

Soil physical and chemical analysis



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Introduction

This document contains a complete list of the physical and chemical laboratory soil test methods described and useable in the NSW Soil and Land Information System (SALIS). SALIS' laboratory soil test method descriptions and codes are standardised on the National set as documented by the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Some minor additions to cater for test methods not described in the National set have been made to accommodate methods that are not included in the National set (some are historical and no longer used, some are not included, and others are insufficiently documented to allow their results to be reliably assigned to a National test method).

Background

Soil testing involves the analysis of soil samples to determine their characteristics, such as texture, stability, plant nutrients, fertility, acidity or alkalinity, or toxicities and contaminants. The results from soil testing can be important for many purposes, ranging from agricultural and horticultural productivity through geotechnical and engineering to environmental forensics. Soil tests can answer a variety of questions, such as:

1. Does this soil have the right properties to grow a profitable crop, sustain livestock, or for revegetation after development or disturbance?
2. What fertilizer or ameliorants should I apply, and how much, to get the best yields for my crops without contaminating the soil?
3. Will building foundations or engineered soil structures such as dams or banks remain stable if I build them out of this soil material?
4. Does this soil present an environmental hazard because of its unusual characteristics, such as salinity or Acid Sulphate Soil potential?
5. Is this soil vulnerable to erosion by wind or water, and will it cause a downstream water pollution or sedimentation risk?
6. Does this soil represent a health hazard due to contamination with noxious chemicals or pollutants, such as lead, herbicides or pesticides?

Office of Environment and Heritage (OEH) manages many thousands of soil test results from across NSW in the NSW Soil and Land Information System (SALIS), and makes them available through eSPADE.

OEH Environmental Protection Science branch operates the Soil Health and Archive environmental monitoring and general-purpose soil testing laboratory located at Yanco, as well as specialised forensic services at Lidcombe. For more information, contact:

Environment Protection Science Branch
Contaminants and Risk Section
Phone: +61 2 9995 5000 (switchboard)
Email: info@environment.nsw.gov.au

SALIS does not hold specific information about site contamination. The NSW Environmental Protection Authority (EPA) holds a public record of contaminated sites and can advise on the assessment and management of contaminated land. For more information about contaminated sites, contact:

NSW Environmental Protection Authority
Phone: 131 555
Email: info@environment.nsw.gov.au
Website: [Contaminated land](#)

Chemical tests

The great majority of methods listed below are described in Rayment, G.E. and Lyons, D.J. 2011, *Soil chemical methods – Australasia*, CSIRO Publishing, Collingwood, Victoria, which documents the Nationally recognised suite of soil chemical tests. A small number of additional method codes have been specified for methods used by some suppliers of laboratory soil test data to SALIS that are not contained in this publication. In addition a number of submethods have been defined for tests which deliver multiple results - these are identified by an additional code identifying their analyte.

Moisture content

Chapter	Method code	Method name	Units	Notes
Moisture Content [R&L ch. 2]	2A1	Air-dry moisture content	%	
Moisture Content [R&L ch. 2]	2B1	As received moisture content	%	
Moisture Content [R&L ch. 2]	2C1	Moisture content - 10 mm tension	%	
Moisture Content [R&L ch. 2]	2D1	Moisture content - approximate saturation paste	%	

Electrical conductivity

Chapter	Method code	Method name	Units	Notes
Electrical Conductivity [R&L ch. 3]	3A1	Electrical conductivity (EC) of 1:5 soil/water extract	dS/m	
Electrical Conductivity [R&L ch. 3]	3B1	Estimated soluble salt concentration	%	
Electrical Conductivity [R&L ch. 3]	3C1	Estimated soil ionic strength	mM	
Electrical Conductivity [R&L ch. 3]	3D1	Redox potential (Eh; field)	mV	

pH

Chapter	Method code	Method name	Units	Notes
pH [R&L ch. 4]	4A1	pH of 1:5 soil/water suspension	pH	
pH [R&L ch. 4]	4A2	pH of 1:1 soil/water suspension	pH	
pH [R&L ch. 4]	4A3	pH of 1:2.5 soil/water suspension	pH	

Chapter	Method code	Method name	Units	Notes
pH [R&L ch. 4]	4B1	pH of 1:5 soil/0.01M CaCl ₂ extract - direct (without stirring during measurement)	pH	
pH [R&L ch. 4]	4B2	pH of 1:5 soil/0.01M CaCl ₂ extract - following method 4A1 (without stirring during measurement)	pH	
pH [R&L ch. 4]	4B3	pH of 1:5 soil/0.01M CaCl ₂ extract - direct (with stirring during measurement)	pH	
pH [R&L ch. 4]	4B4	pH of 1:5 soil/0.01M CaCl ₂ extract - following method 4A1 (with stirring during measurement)	pH	
pH [R&L ch. 4]	4B5	pH of 1:5 soil/0.01M CaCl ₂ extract equivalent, by MIR reflectance spectroscopy	pH	
pH [R&L ch. 4]	4C1	pH of 1:5 soil/0.01M KCl extract - direct (without stirring during measurement)	pH	
pH [R&L ch. 4]	4C2	pH of 1:5 soil/0.01M KCl extract - following method 4A1 (without stirring during measurement)	pH	
pH [R&L ch. 4]	4C3	pH of 1:5 soil/0.01M KCl extract - direct (with stirring during measurement)	pH	
pH [R&L ch. 4]	4C4	pH of 1:5 soil/0.01M KCl extract - following method 4A1 (with stirring during measurement)	pH	
pH [R&L ch. 4]	4D1	pH of NaF suspension and 'reactivity class'	pH	
pH [R&L ch. 4]	4E1	pH of H ₂ O ₂ extract	pH	
pH [R&L ch. 4]	4F1	Delta pH	±pH	
pH [R&L ch. 4]	4G1	Field determination of pH	pH	

Soluble chloride

Chapter	Method code	Method name	Units	Notes
Soluble Chloride [R&L ch. 5]	5A1	Chloride - 1:5 soil/water extract, potentiometric titration	mg/kg	
Soluble Chloride [R&L ch. 5]	5A2a	Chloride - 1:5 soil/water extract, automated colour	mg/kg	
Soluble Chloride [R&L ch. 5]	5A2b	Chloride - 1:5 soil/water extract, flow injection analysis	mg/kg	

Chapter	Method code	Method name	Units	Notes
Soluble Chloride [R&L ch. 5]	5A3a	Chloride - 1:5 soil/water extract, ion chromatography (chemical suppression of eluent conductivity)	mg/kg	
Soluble Chloride [R&L ch. 5]	5A3b	Chloride - 1:5 soil/water extract, ion chromatography (single-column with electronic suppression of eluent conductivity)	mg/kg	
Soluble Chloride [R&L ch. 5]	5A4	Chloride - 1:5 soil/water extract, ICPAES	mg/kg	

Carbon

Chapter	Method code	Method name	Units	Notes
Organic Carbon [R&L ch. 6]	6A1	Organic C - Walkley and Black	%	
Organic Carbon [R&L ch. 6]	6B1	Total organic C - Heanes wet oxidation	%	
Organic Carbon [R&L ch. 6]	6B2	Total organic C - Dumas high-temperature combustion	%	
Organic Carbon [R&L ch. 6]	6B2a	Total organic C - Dumas high-temperature combustion, volumetric (no soil pretreatment)	%	
Organic Carbon [R&L ch. 6]	6B2b	Total organic C - Dumas high-temperature combustion, infrared/thermal conductivity detection (no soil pretreatment)	%	
Organic Carbon [R&L ch. 6]	6B3	Total organic C - Dumas high-temperature combustion, infrared/thermal conductivity detection (with prior physical removal of charcoal and chemical removal of carbonates)	%	
Organic Carbon [R&L ch. 6]	6B4	Total organic C - infrared diffuse reflectance spectroscopy	%	
Organic Carbon [R&L ch. 6]	6B4a	Total organic C - NIR reflectance spectroscopy	%	
Organic Carbon [R&L ch. 6]	6B4b	Total organic C - MIR reflectance spectroscopy	%	
Organic Carbon [R&L ch. 6]	6C1	Particulate organic C	%	
Organic Carbon [R&L ch. 6]	6D1	Pyrophosphate-extractable C	%	
Organic Carbon [R&L ch. 6]	6E1	KMnO ₄ oxidisable C	%	

Chapter	Method code	Method name	Units	Notes
Organic Carbon [R&L ch. 6]	6F1	Charcoal C	%	
Organic Carbon [R&L ch. 6]	6G1	Total organic matter, organic C and carbonate by loss-on-ignition	%	

Nitrogen

Chapter	Method code	Method name	Units	Notes
Nitrogen [R&L ch. 7]	7A1	Total soil N, semi-micro Kjeldahl - steam distillation	%	
Nitrogen [R&L ch. 7]	7A2a	Total soil N, semi-micro Kjeldahl - automated colour, continuous segmented flow	%	
Nitrogen [R&L ch. 7]	7A2b	Total soil N, semi-micro Kjeldahl - automated colour, flow injection analysis	%	
Nitrogen [R&L ch. 7]	7A3	Total soil N (where nitrate >20 mg N/kg) - steam distillation	%	
Nitrogen [R&L ch. 7]	7A4	Total soil N (where nitrate >20 mg N/kg) - automated colour, continuous segmented flow/flow injection analysis	%	
Nitrogen [R&L ch. 7]	7A5	Total soil N - Dumas high-temperature combustion	%	
Nitrogen [R&L ch. 7]	7A6	Total soil N - infrared diffuse reflectance spectroscopy	%	
Nitrogen [R&L ch. 7]	7A6a	Total soil N - NIR diffuse reflectance spectroscopy	%	
Nitrogen [R&L ch. 7]	7A6b	Total soil N - MIR diffuse reflectance spectroscopy	%	
Nitrogen [R&L ch. 7]	7B1a	Water-soluble nitrate N - automated colour, continuous segmented flow	mg/kg	
Nitrogen [R&L ch. 7]	7B1b	Water-soluble nitrate N - automated colour, flow injection analysis	mg/kg	
Nitrogen [R&L ch. 7]	7B2	Water-soluble nitrate N - ion chromatography	mg/kg	
Nitrogen [R&L ch. 7]	7C1a	Ammonium N (in presence or absence of nitrite) - steam distillation	mg/kg	
Nitrogen [R&L ch. 7]	7C1b	(Nitrate + nitrite) N - steam distillation	mg/kg	
Nitrogen [R&L ch. 7]	7C1c	(Ammonium + nitrate + nitrite) N - steam distillation	mg/kg	

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Chapter	Method code	Method name	Units	Notes
Nitrogen [R&L ch. 7]	7C1d	(Ammonium + nitrate) N, in presence of nitrite - steam distillation	mg/kg	
Nitrogen [R&L ch. 7]	7C1e	Nitrate N, in presence of nitrite - steam distillation	mg/kg	
Nitrogen [R&L ch. 7]	7C1f	Nitrate N, in absence of nitrite - steam distillation	mg/kg	
Nitrogen [R&L ch. 7]	7C1g	(Ammonium + nitrate) N, in absence of nitrite - steam distillation	mg/kg	
Nitrogen [R&L ch. 7]	7C1h	Nitrite N - steam distillation	mg/kg	
Nitrogen [R&L ch. 7]	7C2a_NH4_N	Ammonium N - 2 M KCl, automated colour, continuous segmented flow	mg/kg	
Nitrogen [R&L ch. 7]	7C2a_NO3_N	Nitrate N - 2 M KCl, automated colour, continuous segmented flow	mg/kg	
Nitrogen [R&L ch. 7]	7C2b_NH4_N	Ammonium N - 2 M KCl, automated colour, flow injection analysis	mg/kg	
Nitrogen [R&L ch. 7]	7C2b_NO2_N	Nitrite N - 2 M KCl, automated colour, flow injection analysis	mg/kg	
Nitrogen [R&L ch. 7]	7C2b_NO3_N	Nitrate N - 2 M KCl, automated colour, flow injection analysis	mg/kg	
Nitrogen [R&L ch. 7]	7C2c_NH4_N	Ammonium N - 2 M KCl, automated colour, flow injection analysis	mg/kg	
Nitrogen [R&L ch. 7]	7D1a	Potentially mineralisable N, hot KCl extraction (PMNKCl) - automated colour, continuous segmented flow	mg/kg	
Nitrogen [R&L ch. 7]	7D1b	Potentially mineralisable N, hot KCl extraction (PMNKCl) - automated colour, flow injection analysis	mg/kg	
Nitrogen [R&L ch. 7]	7D1c	Potentially mineralisable N, hot KCl extraction (PMNKCl) - NIR diffuse reflectance spectroscopy	mg/kg	
Nitrogen [R&L ch. 7]	7D2a	Potentially mineralisable N, anaerobic incubation - automated colour, continuous segmented flow	mg/kg	
Nitrogen [R&L ch. 7]	7D2b	Potentially mineralisable N, anaerobic incubation - automated colour, flow injection analysis	mg/kg	

Carbon/Nitrogen ratio

Chapter	Method code	Method name	Units	Notes
Carbon/Nitrogen Ratio [R&L ch. 8]	8A1	Total organic C/total N ratio	%	
Carbon/Nitrogen Ratio [R&L ch. 8]	8B1	Organic C - Walkley and Black/total N ratio	%	

Phosphorus

Chapter	Method code	Method name	Units	Notes
Phosphorus [R&L ch. 9]	9A1	Total P - X-ray fluorescence	%	
Phosphorus [R&L ch. 9]	9A2	Total P - Na ₂ CO ₃ fusion	%	
Phosphorus [R&L ch. 9]	9A3a	Kjeldahl P - automated colour, flow injection analysis/continuous segmented flow	%	
Phosphorus [R&L ch. 9]	9A3b	Kjeldahl P - ICPAES	%	
Phosphorus [R&L ch. 9]	9B1	Bicarbonate-extractable P (Colwell P) - manual colour	mg/kg	
Phosphorus [R&L ch. 9]	9B2	Bicarbonate-extractable P (Colwell P) - automated colour, continuous segmented flow/flow injection analysis	mg/kg	
Phosphorus [R&L ch. 9]	9C1	Olsen-extractable P - manual colour	mg/kg	
Phosphorus [R&L ch. 9]	9C2a	Olsen-extractable P - automated colour, continuous segmented flow	mg/kg	
Phosphorus [R&L ch. 9]	9C2b	Olsen-extractable P - automated colour, flow injection analysis	mg/kg	
Phosphorus [R&L ch. 9]	9D1	Lactate-extractable P - manual colour	mg/kg	
Phosphorus [R&L ch. 9]	9E1	Fluoride-extractable P (Bray 1 P) - manual colour	mg/kg	
Phosphorus [R&L ch. 9]	9E2	Fluoride-extractable P (Bray 1 P) - continuous segmented flow/flow injection analysis, automated colour	mg/kg	
Phosphorus [R&L ch. 9]	9F1	CaCl ₂ -extractable P - manual colour	µg/kg	
Phosphorus [R&L ch. 9]	9F2	CaCl ₂ -extractable P - continuous segmented flow/flow injection analysis, automated colour	µg/kg	

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Chapter	Method code	Method name	Units	Notes
Phosphorus [R&L ch. 9]	9G1	Acid-extractable P - manual colour	mg/kg	
Phosphorus [R&L ch. 9]	9G2	Acid-extractable P - continuous segmented flow/flow injection analysis, automated colour	mg/kg	
Phosphorus [R&L ch. 9]	9H1	Anion storage capacity	%	
Phosphorus [R&L ch. 9]	9I1	Phosphate sorption index	Other	
Phosphorus [R&L ch. 9]	9I2a	P buffer index (Colwell P) - Murphy and Riley	mg/kg	
Phosphorus [R&L ch. 9]	9I2b	P buffer index (Colwell P) - ICPAES	mg/kg	
Phosphorus [R&L ch. 9]	9I2c	P buffer index (Colwell P) - Vanadate	mg/kg	
Phosphorus [R&L ch. 9]	9I3a	P buffer index (Olsen P) - Murphy and Riley	mg/kg	
Phosphorus [R&L ch. 9]	9I3b	P buffer index (Olsen P) - ICPAES	mg/kg	
Phosphorus [R&L ch. 9]	9I3c	P buffer index (Olsen P) - Vanadate	mg/kg	
Phosphorus [R&L ch. 9]	9I4a	P buffer index (unadjusted) - Murphy and Riley	mg/kg	
Phosphorus [R&L ch. 9]	9I4b	P buffer index (unadjusted) - ICPAES	mg/kg	
Phosphorus [R&L ch. 9]	9I4c	P buffer index (unadjusted) - Vanadate	mg/kg	
Phosphorus [R&L ch. 9]	9J1a	Equilibrium P concentration from phosphate sorption curve - manual colour	µg/kg	
Phosphorus [R&L ch. 9]	9J1b	P buffer capacity from phosphate sorption curve - manual colour	mg/kg/log 10 µg/L	
Phosphorus [R&L ch. 9]	9J2a	Equilibrium P concentration from phosphate sorption curve - continuous segmented flow/flow injection analysis, automated colour	µg/kg	
Phosphorus [R&L ch. 9]	9J2b	P buffer capacity from phosphate sorption curve - continuous segmented flow/flow injection analysis, automated colour	mg/kg/log 10 µg/L	
Phosphorus [R&L ch. 9]	9K1a	Mehlich 3-P saturation ratio, colorimetric estimate of P	Other	Unit-less index value
Phosphorus [R&L ch. 9]	9K1b	Mehlich 3-P saturation ratio, ICPAES estimate of P	Other	Unit-less index value
Phosphorus [R&L ch. 9]	9K2	Colwell P/P buffer index (Colwell P) ratio	mg/kg	

Chapter	Method code	Method name	Units	Notes
Phosphorus [R&L ch. 9]	9Z1	Fluoride-extractable P (Bray 2-P) - manual colour	mg/kg	

Sulfur

Chapter	Method code	Method name	Units	Notes
Sulfur [R&L ch. 10]	10A1	Total S - X-ray fluorescence	%	
Sulfur [R&L ch. 10]	10A2	Total soil S - high-temperature combustion	%	
Sulfur [R&L ch. 10]	10B1	Calcium phosphate-extractable S - manual distillation	mg/kg	
Sulfur [R&L ch. 10]	10B2	Calcium phosphate-extractable S - automated distillation	mg/kg	
Sulfur [R&L ch. 10]	10B3	Calcium phosphate-extractable S - ICPAES	mg/kg	
Sulfur [R&L ch. 10]	10B4	Calcium phosphate-extractable S - ion chromatography	mg/kg	
Sulfur [R&L ch. 10]	10C1	Calcium phosphate-extractable S - ICPAES and charcoal	mg/kg	
Sulfur [R&L ch. 10]	10D1	Extractable S - KCl, 40 degrees C	mg/kg	

Gypsum

Chapter	Method code	Method name	Units	Notes
Gypsum [R&L ch. 11]	11A1	Total gypsum	%	
Gypsum [R&L ch. 11]	11A2	Total gypsum, MIR reflectance spectroscopy	%	

Micronutrients

Chapter	Method code	Method name	Units	Notes
Micronutrients [R&L ch. 12]	12A1_CU	DTPA-extractable Cu, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12A1_FE	DTPA-extractable Fe, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12A1_MN	DTPA-extractable Mn, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12A1_ZN	DTPA-extractable Zn, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12B1_CU	Ammonium bicarbonate/EDTA-	mg/kg	

Chapter	Method code	Method name	Units	Notes
		extractable Cu, ICPAES or AAS		
Micronutrients [R&L ch. 12]	12B1_ZN	Ammonium bicarbonate/EDTA-extractable Zn, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12C1	CaCl ₂ -extractable B - manual colour	mg/kg	
Micronutrients [R&L ch. 12]	12C2	CaCl ₂ -extractable B - ICPAES	mg/kg	
Micronutrients [R&L ch. 12]	12D1_CU	0.1 M HCl-extractable Cu, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12D1_FE	0.1 M HCl-extractable Fe, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12D1_MG	0.1 M HCl-extractable Mg, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12D1_ZN	0.1 M HCl-extractable Zn, ICPAES or AAS	mg/kg	
Micronutrients [R&L ch. 12]	12E1	CaCl ₂ -extractable Mo	mg/kg	

Extractable Iron, Aluminium and Silicon

Chapter	Method code	Method name	Units	Notes
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13A1_AL	Oxalate-extractable Al, ICPAES, AAS or FES	mg/kg	
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13A1_FE	Oxalate-extractable Fe, ICPAES, AAS or FES	mg/kg	
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13A1_SI	Oxalate-extractable Si, ICPAES, AAS or FES	mg/kg	
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13B1_AL	Pyrophosphate-extractable Al, ICPAES, AAS or FES	mg/kg	
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13B1_FE	Pyrophosphate-extractable Fe, ICPAES, AAS or FES	mg/kg	
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13C1_AL	Citrate/dithionate-extractable Al, ICPAES, AAS or FES	mg/kg	
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13C1_FE	Citrate/dithionate-extractable Fe, ICPAES, AAS or FES	mg/kg	

Chapter	Method code	Method name	Units	Notes
Silicon [R&L ch. 13]				
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13D1	Acid-extractable soil Si - automated colour	mg/kg	
Extractable Iron, Aluminium & Silicon [R&L ch. 13]	13D2	Acid-extractable soil Si - ICPAES	mg/kg	

Saturation Extract

Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14A1_CA	Soluble Ca - saturation extract, filter suction	mg/L	
Saturation Extract [R&L ch. 14]	14A1_K	Soluble K - saturation extract, filter suction	mg/L	
Saturation Extract [R&L ch. 14]	14A1_MG	Soluble Mg - saturation extract, filter suction	mg/L	
Saturation Extract [R&L ch. 14]	14A1_NA	Soluble Na - saturation extract, filter suction	mg/L	
Saturation Extract [R&L ch. 14]	14A2_CA	Soluble Ca - saturation extract, automatic extractor	mg/L	
Saturation Extract [R&L ch. 14]	14A2_K	Soluble K - saturation extract, automatic extractor	mg/L	
Saturation Extract [R&L ch. 14]	14A2_MG	Soluble Mg - saturation extract, automatic extractor	mg/L	
Saturation Extract [R&L ch. 14]	14A2_NA	Soluble Na - saturation extract, automatic extractor	mg/L	
Saturation Extract [R&L ch. 14]	14A3_CA	Ca - saturated extract, AAS	dS/m	
Saturation Extract [R&L ch. 14]	14A3_K	K - saturated extract, AAS	dS/m	
Saturation Extract [R&L ch. 14]	14A3_MG	Mg - saturated extract, AAS	dS/m	
Saturation Extract [R&L ch. 14]	14A3_NA	Na - saturated extract, AAS	dS/m	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14A4_CA	Soluble Ca - saturation extract, centrifuge, Gillman	mg/L	
Saturation Extract [R&L ch. 14]	14A4_K	Soluble K - saturation extract, centrifuge, Gillman	mg/L	
Saturation Extract [R&L ch. 14]	14A4_MG	Soluble Mg - saturation extract, centrifuge, Gillman	mg/L	
Saturation Extract [R&L ch. 14]	14A4_NA	Soluble Na - saturation extract, centrifuge, Gillman	mg/L	
Saturation Extract [R&L ch. 14]	14B1	Electrical conductivity/SE (EC/SE)	dS/m	
Saturation Extract [R&L ch. 14]	14B1a	Electrical conductivity - saturation extract, filter suction (14A1), mixing (2C1)	dS/m	
Saturation Extract [R&L ch. 14]	14B1b	Electrical conductivity - saturation extract, filter suction (14A1), wetting (2D1)	dS/m	
Saturation Extract [R&L ch. 14]	14B1c	Electrical conductivity - saturation extract, automatic extractor (14A2), mixing (2C1)	dS/m	
Saturation Extract [R&L ch. 14]	14B1d	Electrical conductivity - saturation extract, automatic extractor (14A2), wetting (2D1)	dS/m	
Saturation Extract [R&L ch. 14]	14B1e	Electrical conductivity - saturation extract, centrifuge, closed system (14A3), mixing (2C1)	dS/m	
Saturation Extract [R&L ch. 14]	14B1f	Electrical conductivity - saturation extract, centrifuge, closed system (14A3), wetting (2D1)	dS/m	
Saturation Extract [R&L ch. 14]	14B1g	Electrical conductivity - saturation extract, centrifuge, Gillman (14A4), mixing (2C1)	dS/m	
Clay Dispersion [McK et al ch. 14]	14B1h	Electrical conductivity - saturation extract, centrifuge, Gillman (14A4), wetting (2D1)	dS/m	
Saturation Extract [R&L ch. 14]	14B1i	Electrical conductivity/SE (ECe)	dS/m	
Saturation Extract [R&L ch. 14]	14C1a	pH - saturation extract, filter suction (14A1), mixing (2C1)	pH	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14C1b	pH - saturation extract, filter suction (14A1), wetting (2D1)	pH	
Saturation Extract [R&L ch. 14]	14C1c	pH - saturation extract, automatic extractor (14A2), mixing (2C1)	pH	
Saturation Extract [R&L ch. 14]	14C1d	pH - saturation extract, automatic extractor (14A2), wetting (2D1)	pH	
Saturation Extract [R&L ch. 14]	14C1e	pH - saturation extract, centrifuge, closed system (14A3), mixing (2C1)	pH	
Saturation Extract [R&L ch. 14]	14C1f	pH - saturation extract, centrifuge, closed system (14A3), wetting (2D1)	pH	
Saturation Extract [R&L ch. 14]	14C1g	pH - saturation extract, centrifuge, Gillman (14A4), mixing (2C1)	pH	
Saturation Extract [R&L ch. 14]	14C1h	pH - saturation extract, centrifuge, Gillman (14A4), wetting (2D1)	pH	
Saturation Extract [R&L ch. 14]	14D1a	Bicarbonate - saturation extract, potentiometric titration, filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1b	Bicarbonate - saturation extract, potentiometric titration, filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1c	Bicarbonate - saturation extract, potentiometric titration, automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1d	Bicarbonate - saturation extract, potentiometric titration, automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1e	Bicarbonate - saturation extract, potentiometric titration, centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1f	Bicarbonate - saturation extract, potentiometric titration, centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1g	Bicarbonate - saturation extract, potentiometric titration, centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1h	Bicarbonate - saturation extract, potentiometric titration, centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14D1i	Carbonate - saturation extract, potentiometric titration, filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1j	Carbonate - saturation extract, potentiometric titration, filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1k	Carbonate - saturation extract, potentiometric titration, automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1l	Carbonate - saturation extract, potentiometric titration, automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1m	Carbonate - saturation extract, potentiometric titration, centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1n	Carbonate - saturation extract, potentiometric titration, centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1o	Carbonate - saturation extract, potentiometric titration, centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D1p	Carbonate - saturation extract, potentiometric titration, centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2a	Bicarbonate - saturation extract, indicator method, filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2b	Bicarbonate - saturation extract, indicator method, filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2c	Bicarbonate - saturation extract, indicator method, automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2d	Bicarbonate - saturation extract, indicator method, automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2e	Bicarbonate - saturation extract, indicator method, centrifuge, closed system (14A3), mixing (2C1)	cmol/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14D2f	Bicarbonate - saturation extract, indicator method, centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2g	Bicarbonate - saturation extract, indicator method, centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2h	Bicarbonate - saturation extract, indicator method, centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2i	Carbonate - saturation extract, indicator method, filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2j	Carbonate - saturation extract, indicator method, filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2k	Carbonate - saturation extract, indicator method, automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2l	Carbonate - saturation extract, indicator method, automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2m	Carbonate - saturation extract, indicator method, centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2n	Carbonate - saturation extract, indicator method, centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2o	Carbonate - saturation extract, indicator method, centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14D2p	Carbonate - saturation extract, indicator method, centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E1a	Chloride - saturation extract, potentiometric titration, filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E1b	Chloride - saturation extract, potentiometric titration, filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E1c	Chloride - saturation extract, potentiometric titration,	cmol/L	

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Chapter	Method code	Method name	Units	Notes
		automatic extractor (14A2), mixing (2C1)		
Saturation Extract [R&L ch. 14]	14E1d	Chloride - saturation extract, potentiometric titration, automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E1e	Chloride - saturation extract, potentiometric titration, centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E1f	Chloride - saturation extract, potentiometric titration, centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E1g	Chloride - saturation extract, potentiometric titration, centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E1h	Chloride - saturation extract, potentiometric titration, centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2a1	Chloride - saturation extract, IC (chemical suppression of eluent conductivity), filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2a2	Chloride - saturation extract, IC (chemical suppression of eluent conductivity), filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2a3	Chloride - saturation extract, IC (chemical suppression of eluent conductivity), automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2a4	Chloride - saturation extract, IC (chemical suppression of eluent conductivity), automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2a5	Chloride - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2a6	Chloride - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2a7	Chloride - saturation extract, IC (chemical suppression of eluent conductivity),	cmol/L	

Chapter	Method code	Method name	Units	Notes
		centrifuge, Gillman (14A4), mixing (2C1)		
Saturation Extract [R&L ch. 14]	14E2a8	Chloride - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b1	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b2	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b3	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b4	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b5	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b6	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b7	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E2b8	Chloride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14E3a	Chloride - saturation extract, ICPAES, filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E3b	Chloride - saturation extract, ICPAES, filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E3c	Chloride - saturation extract, ICPAES, automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E3d	Chloride - saturation extract, ICPAES, automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E3e	Chloride - saturation extract, ICPAES, centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E3f	Chloride - saturation extract, ICPAES, centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E3g	Chloride - saturation extract, ICPAES, centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14E3h	Chloride - saturation extract, ICPAES, centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F1a	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F1b	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F1c	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), automatic extractor (14A2), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F1d	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F1e	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), centrifuge, closed system (14A3), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F1f	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F1g	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), centrifuge, Gillman (14A4), mixing (2C1)	mg/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14F1h	Sulfate S - saturation extract, ICPAES (plus P and soluble cations), centrifuge, Gillman (14A4), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2a	Sulfate S - saturation extract, turbidimetric, filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2b	Sulfate S - saturation extract, turbidimetric, filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2c	Sulfate S - saturation extract, turbidimetric, automatic extractor (14A2), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2d	Sulfate S - saturation extract, turbidimetric, automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2e	Sulfate S - saturation extract, turbidimetric, centrifuge, closed system (14A3), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2f	Sulfate S - saturation extract, turbidimetric, centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2g	Sulfate S - saturation extract, turbidimetric, centrifuge, Gillman (14A4), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F2h	Sulfate S - saturation extract, turbidimetric, centrifuge, Gillman (14A4), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F3a	Sulfate S - saturation extract, gravimetric, filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F3b	Sulfate S - saturation extract, gravimetric, filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F3c	Sulfate S - saturation extract, gravimetric, automatic extractor (14A2), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F3d	Sulfate S - saturation extract, gravimetric, automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F3e	Sulfate S - saturation extract, gravimetric, centrifuge, closed system (14A3), mixing (2C1)	mg/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14F3f	Sulfate S - saturation extract, gravimetric, centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F3g	Sulfate S - saturation extract, gravimetric, centrifuge, Gillman (14A4), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F3h	Sulfate S - saturation extract, gravimetric, centrifuge, Gillman (14A4), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4a	Sulfate S - saturation extract, automated colour, filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4b	Sulfate S - saturation extract, automated colour, filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4c	Sulfate S - saturation extract, automated colour, automatic extractor (14A2), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4d	Sulfate S - saturation extract, automated colour, automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4e	Sulfate S - saturation extract, automated colour, centrifuge, closed system (14A3), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4f	Sulfate S - saturation extract, automated colour, centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4g	Sulfate S - saturation extract, automated colour, centrifuge, Gillman (14A4), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14F4h	Sulfate S - saturation extract, automated colour, centrifuge, Gillman (14A4), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14F5a1	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5a2	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5a3	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), automatic extractor (14A2), mixing (2C1)	cmol/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14F5a4	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5a5	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5a6	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5a7	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5a8	Sulfate S - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5b1	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5b2	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5b3	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5b4	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5b5	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, closed system (14A3), mixing (2C1)	cmol/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14F5b6	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5b7	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14F5b8	Sulfate S - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1a	Fluoride - saturation extract, specific ion electrode, filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1b	Fluoride - saturation extract, specific ion electrode, filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1c	Fluoride - saturation extract, specific ion electrode, automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1d	Fluoride - saturation extract, specific ion electrode, automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1e	Fluoride - saturation extract, specific ion electrode, centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1f	Fluoride - saturation extract, specific ion electrode, centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1g	Fluoride - saturation extract, specific ion electrode, centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G1h	Fluoride - saturation extract, specific ion electrode, centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2a1	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), filter suction (14A1), mixing (2C1)	cmol/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14G2a2	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2a3	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2a4	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), automatic extractor (14A2), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2a5	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2a6	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2a7	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2a8	Fluoride - saturation extract, IC (chemical suppression of eluent conductivity), centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2b1	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), filter suction (14A1), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2b2	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), filter suction (14A1), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2b3	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), automatic extractor (14A2), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2b4	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity),	cmol/L	

Chapter	Method code	Method name	Units	Notes
		automatic extractor (14A2), wetting (2D1)		
Saturation Extract [R&L ch. 14]	14G2b5	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, closed system (14A3), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2b6	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, closed system (14A3), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2b7	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, Gillman (14A4), mixing (2C1)	cmol/L	
Saturation Extract [R&L ch. 14]	14G2b8	Fluoride - saturation extract, IC (single-column with electronic suppression of eluent conductivity), centrifuge, Gillman (14A4), wetting (2D1)	cmol/L	
Saturation Extract [R&L ch. 14]	14H1a_CA	Soluble Ca - saturation extract, filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1a_K	Soluble K - saturation extract, filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1a_MG	Soluble Mg - saturation extract, filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1a_NA	Soluble Na - saturation extract, filter suction (14A1), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1b_CA	Soluble Ca - saturation extract, filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1b_K	Soluble K - saturation extract, filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1b_MG	Soluble Mg - saturation extract, filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1b_NA	Soluble Na - saturation extract, filter suction (14A1), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1c_CA	Soluble Ca - saturation extract, automatic extractor (14A2), mixing (2C1)	mg/L	

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Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14H1c_K	Soluble K - saturation extract, automatic extractor (14A2), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1c_MG	Soluble Mg - saturation extract, automatic extractor (14A2), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1c_NA	Soluble Na - saturation extract, automatic extractor (14A2), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1d_CA	Soluble Ca - saturation extract, automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1d_K	Soluble K - saturation extract, automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1d_MG	Soluble Mg - saturation extract, automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1d_NA	Soluble Na - saturation extract, automatic extractor (14A2), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1e_CA	Soluble Ca - saturation extract, centrifuge, closed system (14A3), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1e_K	Soluble K - saturation extract, centrifuge, closed system (14A3), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1e_MG	Soluble Mg - saturation extract, centrifuge, closed system (14A3), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1e_NA	Soluble Na - saturation extract, centrifuge, closed system (14A3), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1f_CA	Soluble Ca - saturation extract, centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1f_K	Soluble K - saturation extract, centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1f_MG	Soluble Mg - saturation extract, centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1f_NA	Soluble Na - saturation extract, centrifuge, closed system (14A3), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1g_CA	Soluble Ca - saturation extract, centrifuge, Gillman (14A4), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1g_K	Soluble K - saturation extract, centrifuge, Gillman (14A4), mixing (2C1)	mg/L	

Chapter	Method code	Method name	Units	Notes
Saturation Extract [R&L ch. 14]	14H1g_MG	Soluble Mg - saturation extract, centrifuge, Gillman (14A4), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1g_NA	Soluble Na - saturation extract, centrifuge, Gillman (14A4), mixing (2C1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1h_CA	Soluble Ca - saturation extract, centrifuge, Gillman (14A4), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1h_K	Soluble K - saturation extract, centrifuge, Gillman (14A4), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1h_MG	Soluble Mg - saturation extract, centrifuge, Gillman (14A4), wetting (2D1)	mg/L	
Saturation Extract [R&L ch. 14]	14H1h_NA	Soluble Na - saturation extract, centrifuge, Gillman (14A4), wetting (2D1)	mg/L	

Ion-Exchange Properties

Chapter	Method code	Method name	Units	Notes
Exchangeable Calcium [R&L ch. 15, part 2]	15A1_CA	Exchangeable Ca - 1 M NH ₄ Cl at pH 7.0, no pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15A1_ECEC	Effective Cation Exchange Capacity - 1 M NH ₄ Cl at pH 7.0, no pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15A1_K	Exchangeable K - 1 M NH ₄ Cl at pH 7.0, no pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15A1_MG	Exchangeable Mg - 1 M NH ₄ Cl at pH 7.0, no pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15A1_NA	Exchangeable Na - 1 M NH ₄ Cl at pH 7.0, no pretreatment for soluble salts	cmol/kg	
Exchangeable Aluminium [R&L ch. 15, part 6]	15A2_AL	Exchangeable Al - 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	meq/100 g	
Exchangeable Calcium	15A2_CA	Exchangeable Ca - 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	

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Chapter	Method code	Method name	Units	Notes
[R&L ch. 15, part 2]				
Ion-Exchange [R&L ch. 15, part 1]	15A2_ECEC	Effective Cation Exchange Capacity - 1M NH ₄ Cl @ pH 7, pretreatment for soluble salts	meq/100 g	
Exchangeable Potassium [R&L ch. 15, part 5]	15A2_K	Exchangeable K - 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15A2_MG	Exchangeable Mg - 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15A2_NA	Exchangeable Na - 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15A3_CA	Exchangeable Ca - 1 M NH ₄ Cl at pH 7.0, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15A3_K	Exchangeable K - 1 M NH ₄ Cl at pH 7.0, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15A3_MG	Exchangeable Mg - 1 M NH ₄ Cl at pH 7.0, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15A3_NA	Exchangeable Na - 1 M NH ₄ Cl at pH 7.0, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15B1_CA	Exchangeable Ca - 1 M NH ₄ Cl at pH 7.0, filtering/washing, no pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15B1_CEC	Cation exchange capacity - 1 M NH ₄ Cl at pH 7.0, filtering/washing, no pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15B1_K	Exchangeable K - 1 M NH ₄ Cl at pH 7.0, filtering/washing, no pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium	15B1_MG	Exchangeable Mg - 1 M NH ₄ Cl at pH 7.0,	cmol/kg	

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Chapter	Method code	Method name	Units	Notes
[R&L ch. 15, part 3]		filtering/washing, no pretreatment for soluble salts		
Exchangeable Sodium [R&L ch. 15, part 4]	15B1_NA	Exchangeable Na - 1 M NH ₄ Cl at pH 7.0, filtering/washing, no pretreatment for soluble salts	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15B2_CA	Exchangeable Ca - 1 M NH ₄ Cl at pH 7.0, filtering/washing, pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15B2_CEC	Cation exchange capacity - 1 M NH ₄ Cl at pH 7.0, filtering/washing, pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15B2_K	Exchangeable K - 1 M NH ₄ Cl at pH 7.0, filtering/washing, pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15B2_MG	Exchangeable Mg - 1 M NH ₄ Cl at pH 7.0, filtering/washing, pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15B2_NA	Exchangeable Na - 1 M NH ₄ Cl at pH 7.0, filtering/washing, pretreatment for soluble salts	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15B3_CA	Exchangeable Ca - 1 M NH ₄ Cl at pH 7.0, filtering/washing, adjusted for soluble Na ⁺	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15B3_CEC	Cation exchange capacity - 1 M NH ₄ Cl at pH 7.0, filtering/washing, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15B3_K	Exchangeable K - 1 M NH ₄ Cl at pH 7.0, filtering/washing, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15B3_MG	Exchangeable Mg - 1 M NH ₄ Cl at pH 7.0, filtering/washing, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15B3_NA	Exchangeable Na - 1 M NH ₄ Cl at pH 7.0, filtering/washing, adjusted for soluble Na ⁺	cmol/kg	

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Chapter	Method code	Method name	Units	Notes
Exchangeable Calcium [R&L ch. 15, part 2]	15C1_CA	Exchangeable Ca - alcoholic 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15C1_CEC	Cation exchange capacity - alcoholic 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15C1_K	Exchangeable K - alcoholic 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15C1_MG	Exchangeable Mg - alcoholic 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15C1_NA	Exchangeable Na - alcoholic 1 M NH ₄ Cl at pH 7.0, pretreatment for soluble salts	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15C2_CA	Exchangeable Ca - by MIR diffuse reflectance spectroscopy	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15C2_CEC	Cation exchange capacity - by MIR diffuse reflectance spectroscopy	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15C2_MG	Exchangeable Mg - by MIR diffuse reflectance spectroscopy	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15D1_CA	Exchangeable Ca - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, manual leach	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15D1_CEC	Cation exchange capacity - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, manual leach	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15D1_K	Exchangeable K - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, manual leach	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15D1_MG	Exchangeable Mg - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, manual leach	cmol/kg	

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Chapter	Method code	Method name	Units	Notes
Exchangeable Sodium [R&L ch. 15, part 4]	15D1_NA	Exchangeable Na - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, manual leach	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15D2_CA	Exchangeable Ca - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, automatic extractor	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15D2_CEC	Cation exchange capacity - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, automatic extractor	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15D2_K	Exchangeable K - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, automatic extractor	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15D2_MG	Exchangeable Mg - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, automatic extractor	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15D2_NA	Exchangeable Na - 1 M NH ₄ OAc at pH 7.0, pretreatment for soluble salts, automatic extractor	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15D3_CA	Exchangeable Ca - 1 M NH ₄ OAc at pH 7.0, rapid method, no pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15D3_CEC	Cation Exchange Capacity - 1 M NH ₄ OAc at pH 7.0, rapid method, no pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15D3_K	Exchangeable K - 1 M NH ₄ OAc at pH 7.0, rapid method, no pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15D3_MG	Exchangeable Mg - 1 M NH ₄ OAc at pH 7.0, rapid method, no pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15D3_NA	Exchangeable Na - 1 M NH ₄ OAc at pH 7.0, rapid method, no pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15E1_AEC	Anion exchange capacity - compulsive exchange, no pretreatment for soluble salts	cmol/kg	

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Chapter	Method code	Method name	Units	Notes
Exchangeable Aluminium [R&L ch. 15, part 6]	15E1_AL	Exchangeable Al - compulsive exchange, no pretreatment for soluble salts	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15E1_CA	Exchangeable Ca - compulsive exchange, no pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15E1_CEC	Cation exchange capacity - compulsive exchange, no pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15E1_K	Exchangeable K - compulsive exchange, no pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15E1_MG	Exchangeable Mg - compulsive exchange, no pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15E1_NA	Exchangeable Na - compulsive exchange, no pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15E2_AEC	Anion exchange capacity - compulsive exchange, pretreatment for soluble salts	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15E2_CA	Exchangeable Ca - compulsive exchange, pretreatment for soluble salts	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15E2_CEC	Cation exchange capacity - compulsive exchange, pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15E2_K	Exchangeable K - compulsive exchange, pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15E2_MG	Exchangeable Mg - compulsive exchange, pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15E2_NA	Exchangeable Na - compulsive exchange, pretreatment for soluble salts	cmol/kg	

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Chapter	Method code	Method name	Units	Notes
Ion-Exchange [R&L ch. 15, part 1]	15E3_AEC	Anion exchange capacity - compulsive exchange, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15E3_CA	Exchangeable Ca - compulsive exchange, adjusted for soluble Na ⁺	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15E3_CEC	Cation exchange capacity - compulsive exchange, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15E3_K	Exchangeable K - compulsive exchange, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15E3_MG	Exchangeable Mg - compulsive exchange, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15E3_NA	Exchangeable Na - compulsive exchange, adjusted for soluble Na ⁺	cmol/kg	
Exchangeable Calcium [R&L ch. 15, part 2]	15F1_CA	Exchangeable Ca - 0.01 M AgTU ⁺ , no pretreatment for soluble salts	cmol/kg	
Exchangeable Potassium [R&L ch. 15, part 5]	15F1_K	Exchangeable K - 0.01 M AgTU ⁺ , no pretreatment for soluble salts	cmol/kg	
Exchangeable Magnesium [R&L ch. 15, part 3]	15F1_MG	Exchangeable Mg - 0.01 M AgTU ⁺ , no pretreatment for soluble salts	cmol/kg	
Exchangeable Sodium [R&L ch. 15, part 4]	15F1_NA	Exchangeable Na - 0.01 M AgTU ⁺ , no pretreatment for soluble salts	cmol/kg	
Exchangeable Aluminium [R&L ch. 15, part 6]	15F2_AL	Exchangeable Al - 0.01 M AgTU ⁺	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15F3_CEC	Cation exchange capacity - 0.01 M AgTU ⁺	cmol/kg	
Exchangeable Aluminium	15G1_AL	Exchangeable Al - 1 M KCl	cmol/kg	

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Chapter	Method code	Method name	Units	Notes
[R&L ch. 15, part 6]				
Exchangeable Aluminium [R&L ch. 15, part 6]	15G1_EX_ACID	Exchangeable acidity - 1 M KCl	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15G1_H	Exchangeable H - 1 M KCl	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15H1	Exchangeable acidity - triethanolamine	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15I1	Cation exchange capacity - distillation of NH ₄	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15I2	Cation exchange capacity - automated determination of NH ₄	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15I3	Cation exchange capacity - automated determination of NH ₄ and Cl	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15I4	Cation exchange capacity - titration of NH ₄ and Cl	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15J1	Effective cation exchange capacity	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15K1	Cation exchange capacity - pH 8.2	cmol/kg	
Ion-Exchange [R&L ch. 15, part 1]	15L1	Base saturation percentage	%	
Ion-Exchange [R&L ch. 15, part 1]	15M1_CA_K	Base cation saturation ratios - Ca/K	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_CA_MG	Base cation saturation ratios - Ca/Mg	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_CA_NA	Base cation saturation ratios - Ca/Na	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_K_CA	Base cation saturation ratios - K/Ca	Ratio	

Chapter	Method code	Method name	Units	Notes
Ion-Exchange [R&L ch. 15, part 1]	15M1_K_MG	Base cation saturation ratios - K/Mg	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_K_NA	Base cation saturation ratios - K/Na	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_MG_CA	Base cation saturation ratios - Mg/Ca	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_MG_K	Base cation saturation ratios - Mg/K	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_MG_NA	Base cation saturation ratios - Mg/Na	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_NA_CA	Base cation saturation ratios - Na/Ca	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_NA_K	Base cation saturation ratios - Na/K	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15M1_NA_MG	Base cation saturation ratios - Na/Mg	Ratio	
Ion-Exchange [R&L ch. 15, part 1]	15N1	Exchangeable sodium percentage	%	
Ion-Exchange [R&L ch. 15, part 1]	15O1	Al saturation percentage	%	

Micronutrients

Chapter	Method code	Method name	Units	Notes
Micronutrients [R&L ch. 12]	15Z1_CA	Exchangeable Ca - water soluble, 1:5 soil:water, AAS	mg/kg	
Micronutrients [R&L ch. 12]	15Z1_CEC	Water soluble cations, 1:5 soil:water, AAS	mg/kg	
Micronutrients [R&L ch. 12]	15Z1_K	Exchangeable K - water soluble, 1:5 soil:water, AAS	mg/kg	
Micronutrients [R&L ch. 12]	15Z1_MG	Exchangeable Mg - water soluble, 1:5 soil:water, AAS	mg/kg	
Micronutrients [R&L ch. 12]	15Z1_NA	Exchangeable Na - water soluble, 1:5 soil:water, AAS	mg/kg	

Lime requirement

Chapter	Method code	Method name	Units	Notes
Lime requirement [R&L ch. 16]	16A1	Calculated lime rate - from exchangeable Al	kg/ha 10 cm	
Lime requirement [R&L ch. 16]	16B1	Calculated lime rate - Cregan	kg/ha 10 cm	
Lime requirement [R&L ch. 16]	16C1	Lime requirement - Mehlich single buffer	t/ha 20 cm	
Lime requirement [R&L ch. 16]	16D1	Lime requirement - Dunn titration curves	t/ha 20 cm	

Total miscellaneous elements

Chapter	Method code	Method name	Units	Notes
Total Miscellaneous Elements [R&L ch. 17]	17A1_AL	Total Al - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_AS	Total As - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_CA	Total Ca - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_CO	Total Co - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_CR	Total Cr - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_CU	Total Cu - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_FE	Total Fe - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_K	Total K - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous	17A1_MG	Total Mg - X-ray fluorescence spectroscopy	% or mg/kg	

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Chapter	Method code	Method name	Units	Notes
Elements [R&L ch. 17]				
Total Miscellaneous Elements [R&L ch. 17]	17A1_MN	Total Mn - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_NI	Total Ni - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_PB	Total Pb - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_SI	Total Si - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_SR	Total Sr - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_TI	Total Ti - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_V	Total V - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A1_ZN	Total Zn - X-ray fluorescence spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_AL	Total Al - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_AS	Total As - microwave- assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_CA	Total Ca - microwave- assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_CO	Total Co - microwave- assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_CR	Total Cr - microwave- assisted digestion, with determination by atomic spectroscopy	% or mg/kg	

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Chapter	Method code	Method name	Units	Notes
Total Miscellaneous Elements [R&L ch. 17]	17A2_CU	Total Cu - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_FE	Total Fe - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_K	Total K - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_MG	Total Mg - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_MN	Total Mn - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_NI	Total Ni - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_PB	Total Pb - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_SI	Total Si - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_SR	Total Sr - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_TI	Total Ti - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_V	Total V - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17A2_ZN	Total Zn - microwave-assisted digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_AL	Pseudo-total Al - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	

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Chapter	Method code	Method name	Units	Notes
Total Miscellaneous Elements [R&L ch. 17]	17B1_CA	Pseudo-total Ca - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_CD	Pseudo-total Cd - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_CO	Pseudo-total Co - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_CR	Pseudo-total Cr - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_CU	Pseudo-total Cu - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_FE	Pseudo-total Fe - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_K	Pseudo-total K - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_MG	Pseudo-total Mg - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_MN	Pseudo-total Mn - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_MO	Pseudo-total Mo - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_NI	Pseudo-total Ni - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_P	Pseudo-total P - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_PB	Pseudo-total Pb - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	

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Chapter	Method code	Method name	Units	Notes
Total Miscellaneous Elements [R&L ch. 17]	17B1_S	Pseudo-total S - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B1_ZN	Pseudo-total Zn - reverse aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_AG	Pseudo-total Ag - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_AL	Pseudo-total Al - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_AS	Pseudo-total As - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_B	Pseudo-total B - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_BA	Pseudo-total Ba - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_BE	Pseudo-total Be - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_CA	Pseudo-total Ca - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_CD	Pseudo-total Cd - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_CO	Pseudo-total Co - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	

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Chapter	Method code	Method name	Units	Notes
Total Miscellaneous Elements [R&L ch. 17]	17B2_CR	Pseudo-total Cr - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_CU	Pseudo-total Cu - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_FE	Pseudo-total Fe - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_HG	Pseudo-total HG - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_K	Pseudo-total K - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_MG	Pseudo-total Mg - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_MN	Pseudo-total Mn - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_MO	Pseudo-total Mo - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_NA	Pseudo-total Na - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_NI	Pseudo-total Ni - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_P	Pseudo-total P - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	

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Chapter	Method code	Method name	Units	Notes
Total Miscellaneous Elements [R&L ch. 17]	17B2_PB	Pseudo-total Pb - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_S	Pseudo-total S - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_SB	Pseudo-total Sb - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_SE	Pseudo-total Se - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17B2_ZN	Pseudo-total Zn - reverse aqua regia block digestion of sludges, soils and sediments, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_AL	Pseudo-total Al - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_AS	Pseudo-total As - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_CD	Pseudo-total Cd - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_CO	Pseudo-total Co - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_CR	Pseudo-total Cr - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_CU	Pseudo-total Cu - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	

Chapter	Method code	Method name	Units	Notes
Total Miscellaneous Elements [R&L ch. 17]	17C1_FE	Pseudo-total Fe - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_HG	Pseudo-total Hg - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_MN	Pseudo-total Mn - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_NI	Pseudo-total Ni - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_P	Pseudo-total P - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_PB	Pseudo-total Pb - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_S	Pseudo-total S - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_SE	Pseudo-total Se - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	
Total Miscellaneous Elements [R&L ch. 17]	17C1_ZN	Pseudo-total Zn - conventional aqua regia block digestion, with determination by atomic spectroscopy	% or mg/kg	

Miscellaneous extractable elements

Chapter	Method code	Method name	Units	Notes
Extractable Elements [R&L ch. 18]	18A1	Bicarbonate-extractable K	mg/kg	
Extractable Elements [R&L ch. 18]	18B1	Hydrochloric acid-extractable K	mg/kg	

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Chapter	Method code	Method name	Units	Notes
Extractable Elements [R&L ch. 18]	18C1	Boiling 1.0 M nitric acid-extractable K	mg/kg	
Extractable Elements [R&L ch. 18]	18D1	0.1 M CaCl ₂ -extractable Cd	mg/kg	
Extractable Elements [R&L ch. 18]	18E1	0.01 M CaCl ₂ -extractable Cd	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_AL	Mehlich 3-extractable Al	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_B	Mehlich 3-extractable B	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_CA	Mehlich 3-extractable Ca	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_CU	Mehlich 3-extractable Cu	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_FE	Mehlich 3-extractable Fe	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_K	Mehlich 3-extractable K	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_MG	Mehlich 3-extractable Mg	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_MN	Mehlich 3-extractable Mn	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_NA	Mehlich 3-extractable Na	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_P	Mehlich 3-extractable P	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_S	Mehlich 3-extractable S	mg/kg	
Extractable Elements [R&L ch. 18]	18F1_ZN	Mehlich 3-extractable Zn	mg/kg	
Extractable Elements [R&L ch. 18]	18F2	Mehlich 3-extractable P - colour finish	mg/kg	
Extractable Elements [R&L ch. 18]	18G1	Reserve soil K by copper-modified sodium tetraphenylboron extraction	mg/kg	

Alkaline earth carbonates

Chapter	Method code	Method name	Units	Notes
Carbonates [R&L ch. 19]	19A1	Carbonates - rapid titration	%	
Carbonates [R&L ch. 19]	19B1	Carbonates by pressure change - manometric	%	
Carbonates [R&L ch. 19]	19B2	Carbonates by pressure change - transducer	%	
Carbonates [R&L ch. 19]	19C1a	Spot field test for the presence of soil carbonates with dilute HCl - bedrock and bedrock fragments	Present/Absent	
Carbonates [R&L ch. 19]	19C1b	Spot field test for the presence of soil carbonates with dilute HCl - carbonate concretions	Present/Absent	
Carbonates [R&L ch. 19]	19C1c	Spot field test for the presence of soil carbonates with dilute HCl - soil matrix	Present/Absent	
Carbonates [R&L ch. 19]	19D1	Field test for soil carbonates	Other	
Carbonates [R&L ch. 19]	19Z1	Water soluble carbonate and bicarbonate	Other	Using pressure transducer.
Carbonates [R&L ch. 19]	19Z2	Water soluble carbonate	Other	
Carbonates [R&L ch. 19]	19Z3	Water soluble bicarbonate	Other	

Acid Sulfate Soil

Chapter	Method code	Method name	Units	Notes
Acid Sulfate Soil [R&L ch. 20]	20A1	Chromium reducible S	%	
Acid Sulfate Soil [R&L ch. 20]	20B1	SPOCAS acid trail - titratable actual acidity	M/tonne	
Saturation Extract [R&L ch. 14]	20C1	SPOCAS acid trail - titratable peroxide acidity and Net (excess) Acid Neutralising Capacity	M/tonne	
Acid Sulfate Soil [R&L ch. 20]	20D1_CA	1 M KCl-extractable Ca	%	
Acid Sulfate Soil [R&L ch. 20]	20D1_MG	1 M KCl-extractable Mg	%	
Acid Sulfate Soil [R&L ch. 20]	20D1_S	1 M KCl-extractable S	%	

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Chapter	Method code	Method name	Units	Notes
Acid Sulfate Soil [R&L ch. 20]	20E1_CA	1 M KCl-extractable Ca after peroxide oxidation	%	
Acid Sulfate Soil [R&L ch. 20]	20E1_MG	1 M KCl-extractable Mg after peroxide oxidation	%	
Acid Sulfate Soil [R&L ch. 20]	20E1_S	1 M KCl-extractable S after peroxide oxidation	%	
Acid Sulfate Soil [R&L ch. 20]	20F1	Sulphur - 4 M HCl extraction, ICPAES finish	%	
Acid Sulfate Soil [R&L ch. 20]	20F2	Sulphur - 4 M HCl extraction, ion chromatography finish	%	
Acid Sulfate Soil [R&L ch. 20]	20G1	Peroxide residual acid soluble Sulphur	%	
Acid Sulfate Soil [R&L ch. 20]	20H1	Acid neutralising capacity - acid reacted and back titration	%	
Acid Sulfate Soil [R&L ch. 20]	20I1_CA	Ca acid neutralising capacity - from SPOCAS	%	
Acid Sulfate Soil [R&L ch. 20]	20I1_MG	Mg acid neutralising capacity - from SPOCAS	%	
Acid Sulfate Soil [R&L ch. 20]	20J1a	Field approximation of ASS hazard - titratable actual acidity	mol/m ³	
Acid Sulfate Soil [R&L ch. 20]	20J1b	Field approximation of ASS hazard - total sulphidic acidity	mol/m ³	
Acid Sulfate Soil [R&L ch. 20]	20J1c	Field approximation of ASS hazard - residual quick neutralising capacity	mol/m ³	
Acid Sulfate Soil [R&L ch. 20]	20K1a	Quick field approximations of ASS - field texture	Other	
Acid Sulfate Soil [R&L ch. 20]	20K1b	Quick field approximations of ASS - field pH	Other	
Acid Sulfate Soil [R&L ch. 20]	20K1c	Quick field approximations of ASS - field pH following H ₂ O ₂ oxidation	Other	
Acid Sulfate Soil [R&L ch. 20]	20K1d	Quick field approximations of ASS - lime rate via 'look up'	Other	

Physical laboratory soil tests

The great majority of methods listed below are described in McKenzie, N.J., Coughlan, K.J. and Cresswell, H.P. 2002, *Soil physical measurement and interpretation for land evaluation*, CSIRO Publishing, Collingwood, Victoria, which documents the Nationally recognised suite of soil physical tests. A small number of additional method codes have been specified for methods used by some suppliers of laboratory soil test data to SALIS that are not contained in this publication. In addition a number of submethods have been defined for tests which deliver multiple results – these are identified by an additional code identifying their analyte.

Bulk Density and Pore Space Relations

Chapter	Method code	Method name	Units	Notes
BD and Pore Space Relations [McK et al ch. 3]	503.01	Bulk density, intact small core	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.02	Bulk density Vertic properties, extruded small core	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.03	Bulk density Intact clod	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.04	BD Field excavation and water replacement	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.05	PSA Volumetric coarse fragment content	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.06	BD (fine earth and coarse fragments)	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.07	Volume of porous coarse fragments	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.08	Bulk density of fine earth	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.09	Total pore space	t/m ³	
BD and Pore Space Relations [McK et al ch. 3]	503.99	Particle density	t/m ³	

Soil water characteristic

Chapter	Method code	Method name	Units	Notes
Soil Water Characteristic [McK et al ch. 4]	504.01	SWC suction plate or table	Other	

Soil Water Characteristic [McK et al ch. 4]	504.02_FC	Field Capacity, SWC pressure plate	cm ³ /cm ³
Soil Water Characteristic [McK et al ch. 4]	504.02_PWP	Permanent Wilt Point, SWC pressure plate	cm ³ /cm ³
Soil Water Characteristic [McK et al ch. 4]	504.03	SWC Filter paper	Other
Soil Water Characteristic [McK et al ch. 4]	504.99	Oven-dry moisture content	cm ³ /cm ³

Water repellence

Chapter	Method code	Method name	Units	Notes
Water Repellence [McK et al ch. 5]	505.01	Water repellence	Other	Set of values - see McKenzie et al., p.87
Water Repellence [McK et al ch. 5]	505.99	Water repellence - done in the lab using field methodology	s	number of seconds for drop of water to infiltrate
Water Repellence [McK et al ch. 5]	507.01	Field saturated HC twin ring	mm/hr	
Water Repellence [McK et al ch. 5]	508.01	Field unsaturated HC tens infiltrometer	mm/hr	
Water Repellence [McK et al ch. 5]	509.01	Field saturated HC well permeameter	mm/hr	

Hydraulic conductivity

Chapter	Method code	Method name	Units	Notes
Hydraulic Conductivity [McK et al ch. 6]	510.01	Saturated hydraulic conductivity - constant potential, large cores	mm/hr	
Hydraulic Conductivity [McK et al ch. 6]	510.02	Saturated hydraulic conductivity - constant potential, large cores, very permeable soil	mm/hr	
Hydraulic Conductivity [McK et al ch. 6]	510.03	Saturated hydraulic conductivity - constant potential, large cores, very impermeable soil	mm/hr	
Hydraulic Conductivity [McK et al ch. 6]	510.04	Unsaturated hydraulic conductivity - constant potential, large cores	mm/hr	
Hydraulic Conductivity [McK et al ch. 6]	510.05	Unsaturated hydraulic conductivity - constant potential, small cores	mm/hr	

Hydraulic Conductivity [McK et al ch. 6]	510.99	Saturated hydraulic conductivity - falling head method	mm/hr
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Emerson dispersion test

Chapter	Method code	Method name	Units	Notes
Emerson Dispersion Test [McK et al ch. 13]	513.01	Emerson dispersion test	Other	
Emerson Dispersion Test [McK et al ch. 13]	513.96	Slaking - Incitec Pivot	Other	
Emerson Dispersion Test [McK et al ch. 13]	513.97	Dispersion Index - Incitec Pivot	Other	Based on Emerson 1967 and Loveday and Pyle 1973. Worked and un-worked boluses tested at 2 hr and 20 hr. Four results summed to create an index between 0 to 16. Test ratings are: 0, Nil; 1, Slight; 2, Moderate; 3, Strong; and 4, Complete.
Emerson Dispersion Test [McK et al ch. 13]	513.98	Emerson aggregate test SCS method	Other	
Emerson Dispersion Test [McK et al ch. 13]	513.99	Emerson Aggregate Test	Other	

Clay dispersion

Chapter	Method code	Method name	Units	Notes
Clay Dispersion [McK et al ch. 14]	514.01	Clay dispersion	Other	8-class system (see McKenzie et al., pp.205-6, Hazelton & Murphy, pp.94-95): classes 1, 2, 2a, 2b, 3, 3a, 3b and 3c.
Clay Dispersion [McK et al ch. 14]	514.02	Simplified clay dispersion	Other	8-class system (see McKenzie et al., pp.205-6, Hazelton & Murphy, pp.94-95): classes 1, 2, 2a, 2b, 3, 3a, 3b and 3c.
Clay Dispersion [McK et al ch. 14]	514.03	Dispersive potential	kPa	

Chapter	Method code	Method name	Units	Notes
Clay Dispersion [McK et al ch. 14]	514.04	Mechanical dispersive potential	kPa	
Clay Dispersion [McK et al ch. 14]	514.97	Agg stability high energy moisture char	%	
Clay Dispersion [McK et al ch. 14]	514.98	Agg stability wet sieve	%	
Clay Dispersion [McK et al ch. 14]	514.99	Dispersion percentage	%	

Size distributions of Dry Soil Aggregates

Chapter	Method code	Method name	Units	Notes
Dry Soil Aggregates [McK et al ch. 15]	515.01	Dry aggregate distribution	%	
Dry Soil Aggregates [McK et al ch. 15]	515.99	Wind erodible aggregate percentage	%	

Non-Dispersed Particle Size Analysis

Chapter	Method code	Method name	Units	Notes
Non-Dispersed Particle Size Analysis [McK et al ch. 16]	516.01_CL	Non-dispersed PSA clay	%	
Non-Dispersed Particle Size Analysis [McK et al ch. 16]	516.01_CS	Non-dispersed PSA coarse sand	%	
Non-Dispersed Particle Size Analysis [McK et al ch. 16]	516.01_FS	Non-dispersed PSA fine sand	%	
Non-Dispersed Particle Size Analysis [McK et al ch. 16]	516.01_GR	Non-dispersed PSA gravel	%	
Non-Dispersed Particle Size Analysis	516.01_SI	Non-dispersed PSA silt	%	

[McK et al ch.
16]

Particle Size Analysis

Chapter	Method code	Method name	Units	Notes
Particle Size Analysis [McK et al ch. 17]	517.01_CL	PSA clay, no pretreatments	%	
Particle Size Analysis [McK et al ch. 17]	517.01_CS	PSA coarse sand, no pretreatments	%	
Particle Size Analysis [McK et al ch. 17]	517.01_FS	PSA fine sand, no pretreatments	%	
Particle Size Analysis [McK et al ch. 17]	517.01_GR	PSA gravel, no pretreatments	%	
Particle Size Analysis [McK et al ch. 17]	517.01_SI	PSA silt, no pretreatments	%	
Particle Size Analysis [McK et al ch. 17]	517.02_CL	PSA clay, organic matter removed	%	
Particle Size Analysis [McK et al ch. 17]	517.02_CS	PSA coarse sand, organic matter removed	%	
Particle Size Analysis [McK et al ch. 17]	517.02_FS	PSA fine sand, organic matter removed	%	
Particle Size Analysis [McK et al ch. 17]	517.02_GR	PSA gravel, organic matter removed	%	
Particle Size Analysis [McK et al ch. 17]	517.02_SI	PSA silt, organic matter removed	%	
Particle Size Analysis [McK et al ch. 17]	517.03_CL	PSA clay, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.03_CS	PSA coarse sand, soluble salts removed	%	

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Chapter	Method code	Method name	Units	Notes
Particle Size Analysis [McK et al ch. 17]	517.03_FS	PSA fine sand, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.03_GR	PSA gravel, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.03_SI	PSA silt, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.04_CL	PSA clay, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.04_CS	PSA coarse sand, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.04_FS	PSA fine sand, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.04_GR	PSA gravel, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.04_SI	PSA silt, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.05_CL	PSA clay, Fe/Al oxides removed	%	
Particle Size Analysis [McK et al ch. 17]	517.05_CS	PSA coarse sand, Fe/Al oxides removed	%	
Particle Size Analysis [McK et al ch. 17]	517.05_FS	PSA fine sand, Fe/Al oxides removed	%	
Particle Size Analysis [McK et al ch. 17]	517.05_GR	PSA gravel, Fe/Al oxides removed	%	
Particle Size Analysis [McK et al ch. 17]	517.05_SI	PSA silt, Fe/Al oxides removed	%	

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Chapter	Method code	Method name	Units	Notes
Particle Size Analysis [McK et al ch. 17]	517.06_CL	PSA clay, Fe/Al and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.06_CS	PSA coarse sand, Fe/Al and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.06_FS	PSA fine sand, Fe/Al and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.06_GR	PSA gravel, Fe/Al and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.06_SI	PSA silt, Fe/Al and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.07_CL	PSA clay, Fe/Al and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.07_CS	PSA coarse sand, Fe/Al and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.07_FS	PSA fine sand, Fe/Al and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.07_GR	PSA gravel, Fe/Al and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.07_SI	PSA silt, Fe/Al and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.08_CL	PSA clay, Fe/Al, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.08_CS	PSA coarse sand, Fe/Al, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.08_FS	PSA fine sand, Fe/Al, OM and soluble salts removed	%	

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Chapter	Method code	Method name	Units	Notes
Particle Size Analysis [McK et al ch. 17]	517.08_GR	PSA gravel, Fe/Al, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.08_SI	PSA silt, Fe/Al, OM and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.09_CL	PSA clay, carbonate removed	%	
Particle Size Analysis [McK et al ch. 17]	517.09_CS	PSA coarse sand, carbonate removed	%	
Particle Size Analysis [McK et al ch. 17]	517.09_FS	PSA fine sand, carbonate removed	%	
Particle Size Analysis [McK et al ch. 17]	517.09_GR	PSA gravel, carbonate removed	%	
Particle Size Analysis [McK et al ch. 17]	517.09_SI	PSA silt, carbonate removed	%	
Particle Size Analysis [McK et al ch. 17]	517.10_CL	PSA clay, carbonate and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.10_CS	PSA coarse sand, carbonate and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.10_FS	PSA fine sand, carbonate and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.10_GR	PSA gravel, carbonate and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.10_SI	PSA silt, carbonate and OM removed	%	
Particle Size Analysis [McK et al ch. 17]	517.11_CL	PSA clay, carbonate and soluble salts removed	%	

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Chapter	Method code	Method name	Units	Notes
Particle Size Analysis [McK et al ch. 17]	517.11_CS	PSA coarse sand, carbonate and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.11_FS	PSA fine sand, carbonate and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.11_GR	PSA gravel, carbonate and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.11_SI	PSA silt, carbonate and soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.12_CL	PSA clay, carbonate and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.12_CS	PSA coarse sand, carbonate and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.12_FS	PSA fine sand, carbonate and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.12_GR	PSA gravel, carbonate and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.12_SI	PSA silt, carbonate and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.13_CL	PSA clay, carbonate, OM, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.13_CS	PSA coarse sand, carbonate, OM, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.13_FS	PSA fine sand, carbonate, OM, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.13_GR	PSA gravel, carbonate, OM, soluble salts removed	%	

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Chapter	Method code	Method name	Units	Notes
Particle Size Analysis [McK et al ch. 17]	517.13_SI	PSA silt, carbonate, OM, soluble salts removed	%	
Particle Size Analysis [McK et al ch. 17]	517.14_CL	PSA clay, carbonate, OM and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.14_CS	PSA coarse sand, carbonate, OM and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.14_FS	PSA fine sand, carbonate, OM and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.14_GR	PSA gravel, carbonate, OM and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.14_SI	PSA silt, carbonate, OM and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.15_CL	PSA clay, carb., sol. salts and Fe/Al removed]	%	
Particle Size Analysis [McK et al ch. 17]	517.15_CS	PSA coarse sand, carb., sol. salts and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.15_FS	PSA fine sand, carb., sol. salts and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.15_GR	PSA gravel, carb., sol. salts and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.15_SI	PSA silt, carb., sol. salts and Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.16_CL	PSA clay, carb., OM, sol. salts, Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.16_CS	PSA coarse sand, carb., OM, sol. salts, Fe/Al removed	%	

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Chapter	Method code	Method name	Units	Notes
Particle Size Analysis [McK et al ch. 17]	517.16_FS	PSA fine sand, carb., OM, sol. salts, Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.16_GR	PSA gravel, carb., OM, sol. salts, Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.16_SI	PSA silt, carb., OM, sol. salts, Fe/Al removed	%	
Particle Size Analysis [McK et al ch. 17]	517.99_CL	PSA clay - hydrometer	%	
Particle Size Analysis [McK et al ch. 17]	517.99_CS	PSA coarse sand - hydrometer	%	
Particle Size Analysis [McK et al ch. 17]	517.99_FS	PSA fine sand - hydrometer	%	
Particle Size Analysis [McK et al ch. 17]	517.99_GR	PSA gravel - hydrometer	%	
Particle Size Analysis [McK et al ch. 17]	517.99_SI	PSA silt - hydrometer	%	
Particle Size Analysis [McK et al ch. 17]	517.99_ST	PSA stone - hydrometer	%	
Particle Size Analysis [McK et al ch. 17]	517.99_ZL	PSA silty loam - hydrometer	%	

Soil shrinkage

Chapter	Method code	Method name	Units	Notes
Soil Shrinkage [McK et al ch. 18]	518.01	Linear shrinkage	%	
Soil Shrinkage [McK et al ch. 18]	518.02	Coefficient of Linear shrinkage	%	

Chapter	Method code	Method name	Units	Notes
Soil Shrinkage [McK et al ch. 18]	518.03	Modified linear shrinkage	%	
Soil Shrinkage [McK et al ch. 18]	518.99	Volume expansion	%	

Liquid and plastic limits

Chapter	Method code	Method name	Units	Notes
Liquid and Plastic limits [McK et al ch. 19]	519.01	Liquid limit Casagrande	%	
Liquid and Plastic limits [McK et al ch. 19]	519.02	Liquid limit Drop cone	%	
Liquid and Plastic limits [McK et al ch. 19]	519.03	Plastic limit	%	Plastic limit according to standard AS 1289.3.2.1 of 2009.

Soil strength via penetrometer

Chapter	Method code	Method name	Units	Notes
Soil Strength via Penetrometer [McK et al ch. 20]	520.01	Soil strength	kPa	

Modulus of rupture

Chapter	Method code	Method name	Units	Notes
Modulus of Rupture [McK et al ch. 21]	521.01	Soil strength	kPa	

Unified soil classification

Chapter	Method code	Method name	Units	Notes
Unified Soil Classification	550.01	Unified Soil Classification System (lab)	Other	Classification describing texture and grain size of a soil, using a set of two-letter symbols. Described as part of Standard practice for classification of soils for engineering

				purposes (Unified Soil Classification System) under standard ASTM D2487.
Unified Soil Classification	550.02	Unified Soil Classification System (field)	Other	Classification describing texture and grain size of a soil, using a set of two-letter symbols. Described as part of Standard practice for classification of soils for engineering purposes (Unified Soil Classification System) under standard ASTM D2487.

Munsell colour notation

Chapter	Method code	Method name	Units	Notes
Munsell colour notation [Sample]	551.01	Munsell Colour Notation	Other	Soil colour system described in Munsell soil-color charts (Munsell 2012); further information at munsell.com . Older versions of this schema (e.g., Oyama and Takehara 1967) should not be used.

Colour

Chapter	Method code	Method name	Units	Notes
Colour [Incitec Pivot - Sample]	551.02	Field Colour - Incitec Pivot	Other	Colour allocated by Incitec Pivot using dry-milled soil with selected Munsell soil-color charts (Munsell 2012). The charts used are 2.5YR, 5YR, 7.5YR and 10YR. Soils are then classified as one of the nine types.

Field texture

Chapter	Method code	Method name	Units	Notes
Field texture [McDonald et al. 1990 - Sample]	552.01	Field Texture - McDonald	Other	Uses set of values for description of soil texture, as documented in NCST (2009).

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Field texture [Incitec Pivot - Sample]	552.02	Field Texture - Incitec Pivot	Other	Adapted by Incitec Pivot from NCST (2009) and Northcote (1984).
Field texture [SALIS, handbook - Sample]	552.03	Field Texture - Northcote	Other	Uses set of values for description of soil texture, as documented in Northcote (1984).

ASWAT dispersion

Chapter	Method code	Method name	Units	Notes
ASWAT Dispersion Test	ASWAT	Dispersion - ASWAT 10min + 2hr	Other	Similar method to Emerson Aggregate Test (EAT) but with different results. 10 min and 2 hr dispersion results summed, with 8 added to result for dispersed aggregates, to produce a scoring system from 0 to 16. A result of 0 indicates no dispersion, whilst a result of 16 indicates severe dispersion. See Field et al. (1997).
ASWAT Dispersion Test	ASWAT20	Dispersion - ASWAT 20hr	Other	See Field et al. (1997) for further details.

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