

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK



7541

Accredited to
ISO/IEC 17025:2017

**James Hutton Ltd –
a commercial subsidiary of the James Hutton Institute**

Issue No: 025 Issue date: 13 June 2025

**Craigiebuckler
Aberdeen
AB15 8QH**

**Contact: Dr Carol-Ann Craig
Tel: +44 (0)1224 395113
E-Mail: carol-ann.craig@hutton.ac.uk
Website: www.huttonltd.com**

Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
BIOLOGICAL MATERIALS	<u>Chemical Tests</u> Moisture Content and Loss of Material on Ignition Isotopes: ^{13}C , ^{15}N , Total Carbon, Total Nitrogen Qualitative identification / composition	Documented In-House Methods DM007 using Gravimetry AM002 using Continuous Flow Isotope Ratio Mass Spectrometry (CF-IRMS) FM001 using Fourier Transform - Infra Red Spectroscopy (FTIR)
BOTANICAL MATERIAL AND ANIMAL FEEDINGSTUFFS	<u>Chemical Tests</u> Total Carbon and Total Nitrogen <u>Isotopic Tests</u> Isotopes: ^{13}C , ^{15}N , Total Carbon and Total Nitrogen	Documented In-House Methods DM001 using Elemental Analyser / Dumas Combustion Documented In-House Methods AM002 using Continuous Flow Isotope Ratio Mass Spectrometry (CF-IRMS)



7541
Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

James Hutton Ltd
- a commercial subsidiary of the James Hutton Institute
Issue No: 025 Issue date: 13 June 2025

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CHEMICAL PRODUCTS, CHEMICALS: ORGANIC CHEMICALS: INORGANIC	<u>Chemical Tests</u> Qualitative identification / composition Qualitative identification / characterisation Quantitative estimation of phase composition <u>Isotopic Tests</u> Isotopes: ¹³ C, ¹⁵ N, Total Carbon and Total Nitrogen	Documented In-House Methods EM001 using Scanning Electron Microscopy (SEM) FM001 using FTIR GM001 and GM003 using XRD EM002 using EDS and SEM GM004 using X-ray Diffraction (XRD) Documented In-House Methods AM002 using Continuous Flow Isotope Ratio Mass Spectrometry (CF-IRMS)
FIBRE PRODUCTS – NATURAL / ARTIFICIAL	<u>Chemical Tests</u> Qualitative identification / composition	Documented In-House Methods EM001 using SEM FM001 using FT-IR EM002 using SEM and Energy Dispersing Spectroscopy (EDS)
PLASTICS AND PRODUCTS	<u>Chemical Tests</u> Qualitative identification / composition	Documented In-House Methods FM001 using FTIR



7541
Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

James Hutton Ltd
- a commercial subsidiary of the James Hutton Institute
Issue No: 025 Issue date: 13 June 2025

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ROCKS / GEOLOGICAL MATERIALS, SEDIMENTS AND SOILS, CLAY AND CLAY PRODUCTS	<u>Geological Tests</u>	Documented In-House Methods
	Semi-quantitative mineralogical composition	GM005 using XRD
	Qualitative identification / characterisation	GM001 and GM003 using XRD FM001 using FTIR EM001 using SEM EM002 using EDS and SEM
	Quantitative estimation of mineralogical composition	GM002 and GM004 using X-ray Diffraction (XRD)
ROCKS / GEOLOGICAL MATERIALS, SEDIMENTS AND SOILS	Cation Exchange Capacity using Cobalt Hexamine Trichloride	GM006 by colorimetry using a Discrete Analyser
	<u>Isotopic Tests</u>	Documented In-House Methods
SEDIMENTS AND SOILS	Isotopes: Sr	AM005 using Thermal Ionisation Mass Spectrometry (TIMS)
	<u>Chemical Tests</u>	Documented In-House Methods
	Exchangeable cations: Ca, Mg, Na, K	DM004 Extraction Procedure BM014 using ICP-OES
	Moisture Content and Loss of Material on Ignition	DM007 using Gravimetry
	Total Carbon and Total Nitrogen	DM001 using Elemental Analyser / Dumas Combustion
	pH	DM006 using Glass Electrode
	<u>Isotopic Tests</u>	Documented In-House Methods
	Isotopes: ¹³ C and ¹⁵ N	AM002 using Continuous Flow Isotope Ratio Mass Spectrometry (CF-IRMS)
	Total Carbon	
	Total Nitrogen	



7541
Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

James Hutton Ltd
- a commercial subsidiary of the James Hutton Institute
Issue No: 025 Issue date: 13 June 2025

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
MARINE SEDIMENTS	<u>Chemical Tests</u> Tributyltin (TBT) PCBs: PCB28 PCB52 PCB101 PCB118 PCB153 PCB180 PCB186	CM006 by GCMS CM007 by GCMS
WATER / WATERS	<u>Chemical Tests</u> Anions: chloride, nitrate and sulphate pH	Documented In-House Methods BM002 using Ion Chromatography DM006 using Glass Electrode
WATERS (and soil extracts)	<u>Chemical Tests</u> Conductivity Total Organic Carbon (TOC) Total Nitrogen (TN) <u>Isotopic Tests</u> Isotopes: Sr	Documented In-House Methods DM012 by Glass Electrode BM019 using Non-dispersive Infra-Red Spectroscopy and Chemiluminescence Documented In-House Methods AM005 using Thermal Ionisation Mass Spectrometry (TIMS)



7541
Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

James Hutton Ltd
- a commercial subsidiary of the James Hutton Institute
Issue No: 025 Issue date: 13 June 2025

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
CHEMICAL PRODUCTS Glacial Acetic Acid	Analysis using the following techniques: pH Presence / Absence of acetates Clarity Colour Freezing Point Presence/Absence of reducing substances Chloride Sulphate Residue Iron Titration Assay	In-House Method BM024 based upon European Pharmacopeia 11.0, monograph 0590 (01/2017) By pH Electrode (DM006) By Precipitation By Turbidimeter By Comparison By Potassium permanganate reaction By Silver Nitrate reaction By Barium Chloride reaction By Evaporation By Citric Acid & Monoglycolic Acid reaction By Manual and Automated methods



7541

Accredited to
ISO/IEC 17025:2017

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

James Hutton Ltd

- a commercial subsidiary of the James Hutton Institute

Issue No: 025 Issue date: 13 June 2025

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>FLEXIBLE SCOPE ENCOMPASSING: ROCKS / GEOLOGICAL MATERIALS, SEDIMENTS, SOILS, ANIMAL TISSUE, LEACHATES, WATERS, CHEMICAL PRODUCTS (Liquids, Solids, Organic, Inorganic) ANIMAL FEEDINGSTUFFS, BOTANICAL MATERIAL, CROPS</p> <p>FLEXIBLE SCOPE: NON-TURBID WATER AND WATER BASED SAMPLES</p>	<p><u>Chemical Tests</u></p> <p>Inorganic elements <i>The organisation holds a flexible scope of accreditation for these tests. Please contact the organisation for details of the further individual determinands they can analyse using this method.</i></p> <p>Inorganic analytes <i>The organisation holds a flexible scope of accreditation for these tests. Please contact the organisation for details of the further individual determinands they can analyse using this method.</i></p>	<p>Documented In-House Method by acid digestion method DM009 and Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES), Developed and Validated according to Method BM014 (flexible scope)</p> <p>Documented In-House Method acid digestion method DM009 and by Inductively Coupled Plasma – Mass Spectrometry (ICP-MS), Developed and Validated according to Method BM015 (flexible scope)</p> <p>Documented In-House Method by discrete colorimetric analyser, developed and validated according to Method BM023 (flexible scope)</p>
END		