


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Centre for Ecology & Hydrology</h3> <p>Issue No: 010 Issue date: 08 July 2011</p>	
	<p>Lancaster Environment Centre Library Avenue Bailrigg Lancaster LA1 4AP</p>	<p>Contact: Mr D Sleep Tel: +44 (0)1524 595800 Fax: +44 (0)1524 61536 E-Mail: dsleep@ceh.ac.uk Website: www.ceh.ac.uk/products/facilities/index.html</p>
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
ENVIRONMENTAL SAMPLES Ground waters, surface waters	<p><u>Chemical Analysis</u></p> <p>Metals: Aluminium (Al) Calcium (Ca) Iron (Fe) Magnesium (Mg) Potassium (K) Sodium (Na)</p> <p>Trace Metals: Aluminium (Al) Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Cadmium (Cd) Caesium (Cs) Chromium (Cr) Cobalt (Co) Copper (Cu) Iron (Fe) Lead (Pb) Lithium (Li) Manganese (Mn) Molybdenum (Mo) Nickel (Ni) Rubidium (Rb) Scandium (Sc) Selenium (Se) Strontium (Sr) Titanium (Ti) Tungsten (W) Uranium (U) Vanadium (V) Zinc (Zn)</p>	<p>Documented In-House Methods: SOP 3104/SOP 3502 by ICP-OES</p> <p>SOP 3105/SOP 3504 by ICP-MS</p>



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ENVIRONMENTAL SAMPLES	<u>Chemical Analysis</u>	Documented In-House Methods:
Groundwaters, surface waters (cont'd)	Conductivity	SOP 3106 by conductivity meter
	pH	SOP 3110 by combination electrode
	Ammonium (NH ₄ -N)	SOP 3115b and SOP 3515 by Colorimeter
	Mercury	SOP 3133 by Cold Vapour Atomic Fluorescence Spectrometer
Ground waters, surface waters	Chloride (Cl) Nitrate (NO ₃) Nitrite(NO ₂) Sulphate (SO ₄) Fluoride (F) Bromide (Br)	SOP 3149 by Ion Chromatography
Biota, Vegetation, Soils and Sediments	% Dry Loss on Ignition	SOP 3101 by gravimetry
Biota, Vegetation, Soils, Sediments and Particulates from Waters	Total Carbon (C) and Nitrogen (N)	SOP 3102 by Elemental Analyser
Biota, Vegetation and Soils	δ ¹⁵ N	SOP 2102/SOP 2501 and SOP 2104/SOP 2502 by Elemental Analyser and Isotope Ratio Mass Spectrometer
	δ ¹³ C	SOP 2101/SOP 2501 and SOP 2103/SOP 2502 by Elemental Analyser and Isotope Ratio Mass Spectrometer
Carbon Dioxide (CO ₂) in air	δ ¹³ C	SOP 2105/SOP 2503 by Trace Gas Preconcentrator and Isotope Ratio Mass Spectrometer



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ENVIRONMENTAL SAMPLES Biota, Vegetation, Soils, Sediments, Ground waters, surface waters Foodstuffs - Fish. Other materials within density range: 0.1g ml ⁻¹ - 1.2 g ml ⁻¹ Waters (Natural, Freshwaters) Soils, Sediments, Vegetation, Biota Ground waters, surface waters Soils, Sediments, Vegetation, Biota	<u>Radiochemical Analysis</u> Gamma Emitting nuclides Energy Range: 59.5 keV - 1836 keV Plutonium isotopes; Pu ²³⁹⁺²⁴⁰ , Pu ²³⁸ Americium isotopes; Am ²⁴¹ Technetium isotopes; Tc ⁹⁹	Documented In House methods SOP 4505/SOP 4504 by high resolution gamma spectrometry SOP 4107/4507 by alpha spectrometry SOP 4110 by liquid scintillation counting
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