


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>Accredited to ISO/IEC 17025:2017</p>	Urenco UK Limited (UUK)	
	Issue No: 042 Issue date: 20 July 2021	
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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
INDUSTRIAL PROCESS and ENVIRONMENTAL SAMPLES Gaseous effluent bubbler solutions Under Flexible Scope Accreditation	<u>Radiochemical and Chemical Analysis</u> Uranium Alpha Activity/Concentration Fluoride	Documented In-House Methods and Associated Instrument Operating Instruction (ASI) CLM 301 (ASI 46): Alpha spectrometry CLM 98: ISE
Aqueous Materials Process Liquids for further processing or discharge Nuclear site monitoring samples (waters/effluents) Under Flexible Scope Accreditation	Uranium Concentration Uranium 235 activity/ Uranium concentration Uranium 235 Enrichment Gross Alpha Activity relative to processed natural uranium Neptunium-237 Beta Activity of Uranium Daughters relative to Protactinium-234 Beta Activity Screening relative to Technetium-99 Protactinium-233	CLM 224 (ASI 64): ICP-OES CLM 155 (ASI 26): Gamma Spectrometry CLM 318 (ASI 49, ASI 66): ICP-MCMS CLM 198 (ASI 54): Liquid Scintillation CLM 314 (ASI 65): ICP-MS CLM 306 (ASI 28): Gas Proportional Counter CLM 148 (ASI 54): Liquid Scintillation CLM 172 (ASI 26): Gamma Spectrometry



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<p>INDUSTRIAL PROCESS and ENVIRONMENTAL SAMPLES (cont'd)</p> <p>Aqueous Materials Process Liquids for further processing or discharge Nuclear site monitoring samples (waters/effluents) Under Flexible Scope Accreditation (cont'd)</p>	<p><u>Radiochemical and Chemical Analysis</u> (cont'd)</p> <p>Gamma Activity Screening (Energy Range: 59.5 keV - 1691 keV)</p> <p>Range of Toxic Metals limited to: Aluminium (Al) Arsenic (As) Cadmium (Cd) Chromium (Cr) Copper (Cu) Iron (Fe) Lead (Pb) Nickel (Ni) Vanadium (V) Zinc (Zn)</p> <p>Citric acid strength</p> <p>pH</p> <p>Suspended Solids</p> <p>Chemical Oxygen Demand</p> <p>Uranium Alpha Activity/Concentration</p> <p>Fluoride</p> <p>Technetium-99</p> <p>Density</p>	<p>Documented In-House Methods and Associated Instrument Operating Instruction (ASI)</p> <p>CLM 176 (ASI 26): Gamma Spectrometry</p> <p>CLM 213 (ASI 64): ICP-OES</p> <p>CLM 93: Titrimetry</p> <p>CLM 175</p> <p>CLM 32: Filtration and gravimetric determination</p> <p>CLM 195: Spectrometry</p> <p>CLM 301 (ASI 46): Alpha spectrometry</p> <p>CLM 98: ISE</p> <p>CLM 191 or CLM 304 (ASI 54): Liquid Scintillation</p> <p>CLM 344 by Gravimetric Determination</p>



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INDUSTRIAL PROCESS and ENVIRONMENTAL SAMPLES (cont'd)	<u>Radiochemical and Chemical Analysis</u> (cont'd)	Documented In-House Methods and Associated Instrument Operating Instruction (ASI)
Acid leachable determinands from:- Solids for offsite disposal (eg Drigg) and Nuclear site monitoring samples (eg soils, silts, sludges, vegetation) and combustible waste Under Flexible Scope Accreditation	Uranium Alpha Activity/Concentration (including Isotopic Composition Uranium 234, Uranium 235/236, Uranium 238)	CLM 309 & CLM 301 (ASI 43, ASI 46): Alpha spectrometry
	Uranium 235 enrichment	CLM 318: ICP-MCMS
	Technetium-99	CLM 185 or CLM 184 (ASI 54): Liquid Scintillation
	Uranium Concentration	CLM 224 (ASI 64): ICP-OES
	Neptunium -237	CLM 315 or CLM 327 (ASI 65): ICP-MS
Filter Papers	Uranium Alpha Activity	CLM 193 (ASI 46): Alpha Spectrometry
Herbage, Soils, Silts, Sludges	Dry Weight (%)	CLM 174: Oven drying and gravimetric determination
Sodium Fluoride Pellets	Determination of acceptability	CLM 307: Specialist equipment
Sodium Fluoride/Alumina Absorption Materials	Uranium concentration & Enrichment	CLM 219 (ASI 64): ICP-OES & CLM 318 (ASI 49, ASI 66): ICP Mass Spectrometry
Activated Charcoal	Potential Hydrofluoric acid uptake capacity	CLM 320: by titrimetry
Charcoal	Uranium Alpha Activity/Concentration	CLM 309 (ASI 46): Alpha spectrometry
Filter Papers	Technetium-99	CLM 184 (ASI 54): Liquid Scintillation
Hydrocarbon oils for Incineration	Uranium Alpha Activity/Concentration	CLM 301 (ASI 46): Alpha spectrometry
Hydrocarbon and Perfluoropolyether Oils	Uranium 235 Concentration Screen	CLM 155 (ASI 26): Gamma Spectrometry



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INDUSTRIAL PROCESS SAMPLES	<u>Radiochemical and Chemical Analysis</u>	Documented In-House Methods and Associated Instrument Operating Instruction (ASI)
URANIUM HEXAFLUORIDE	Liquid sub-sampling	SOI:A29: Specialist Equipment
	Purity - UF ₆ assay	CLM 114: Titrimetry
	Uranium -232	CLM 104 (ASI 46): Alpha Spectrometry
	Uranium -234, Uranium-236	CLM 318 (ASI 49, ASI 66): ICP-MCMS
	Uranium-235	CLM 318 (ASI 49, ASI 66): ICP-MCMS
	Boron (B) Silicon (Si) Technetium (Tc)	CLM 237 (ASI 65) ICP-MS
BODY FLUIDS AND TISSUES		
Urine	Uranium Concentration	CLM 234 (ASI 65): ICP-MS
	Uranium-235 Enrichment	CLM 324 (ASI 65): ICP-MS

END