# Schedule of Accreditation United Kingdom Accreditation Service

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



2531

Accredited to ISO/IEC 17025:2017

**DH9 7YB** 

#### **Chemtech Environmental Limited**

Issue No: 055 Issue date: 14 August 2024

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#### Testing performed at the above address only

#### **DETAIL OF ACCREDITATION**

DETAIL OF ACCIVEDITATION					
Materials/Products tested	Type of test/Properties Standard specification measured/Range of measurement Equipment/Techniques of test/Properties				
SOILS	Chemical Tests	Documented In-House Methods based on BS 1377:Part 3:1990			
	Loss on ignition at 440°C	Method CE006			
	pH value	Method CE004			
	Acid soluble sulphate	Method CE062 by ICP-OES			
	Water soluble sulphate (2:1)	Method CE061 by ICP-OES			
	Anions (chloride, nitrate sulphate,)	Method CE193 2:1 Water soluble anions by Ion Chromatography			
		Documented In-House Methods based on Standing Committee of Analysts Methods (HMSO) ISBN as follows:			
	Water soluble boron	Method CE063 by ICP-OES			
	Electrical conductivity	Method CE007 (ISBN 011 751428 4)			
	Thiocyanate	Method CE145 (ISBN 011 751934 X)			
	BTEX:	Method CE 267 using headspeace GC-FID			
	Benzene Toluene Ethylbenzene (m+p)-Xylene o-Xylene				

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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used		
SOILS (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on Standing Committee of Analysts Methods (HMSO) ISBN as follows:		
	Extractable Petroleum Hydrocarbons (EPH) in the range, with banding	Method CE033 by GC-FID		
	>C10-C40 >C10-C44 >C10-C12 >C10-C20 >C10-C21 >C10-C25 >C10-C28 >C12-C16 >C16-C21 >C16-C35 >C20-C40 >C21-C35 >C21-C40 >C25-C40 >C35-C40 >C35-C44 DRO (>C10-C25) MRO (>C25-C40)			

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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SOILS (cont'd)	<u>Chemical Tests</u> (cont'd)	Documented In-House Methods based on Standing Committee of Analysts Methods (HMSO) ISBN as follows:
	Polyaromatic Hydrocarbons Naphthalene, Acenaphthylene Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene Pyrene Chrysene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(b)fluoranthene Benzo(a)pyrene, Indeno(1,2,3,c,d)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene	Method CE087 by GCMS
	Elemental Sulphur	Method CE034 by HPLC
	рН	Method CE004
	Acid soluble sulphate	Method CE062 by ICP-OES
	Water soluble sulphate (2:1)	Method CE061 by ICP-OES
	Anions: Chloride Sulphate Total oxidised nitrogen Nitrite Nitrate (by calculation)	Method CE261 by discrete analyser
	Ammonia-N (as NH3 and as NH4 by calculation)	Method CE262 by discrete analyser

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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SOILS (cont'd)	<u>Chemical Tests</u> (cont'd)	Documented In-House Methods based on Standing Committee of Analysts Methods (HMSO) ISBN as follows:
	Metals Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium Selenium Tin Vanadium Zinc	Method CE 264 by ICP-OES

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Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
Chemical Tests (cont'd)	Documented In-House Methods to meet the requirements of the Environment Agency MCERTS performance standard - chemical testing of soil
рН	Method CE004
Acid soluble sulphate	Method CE062 by ICP-OES
Water soluble sulphate (2:1)	Method CE061 by ICP-OES
Thiocyanate	Method CE145 by Colorimetry
Polyaromatic Hydrocarbons Naphthalene Acenaphthylene Acenaphthene Phenanthrene Fluoranthene Pyrene Chrysene Benzo(k)fluoranthene Benzo(b)fluoranthene Indeno(1,2,3,c,d)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	Method CE087 by GCMS
Polychlorinated biphenyls (PCB) PCB 28 PCB 52 PCB 101 PCB 118 PCB 138 PCB 153 PCB 180 Total PCBs (7 Congeners)	Method CE137 by GCMS
	measured/Range of measurement  Chemical Tests (cont'd)  pH  Acid soluble sulphate  Water soluble sulphate (2:1)  Thiocyanate  Polyaromatic Hydrocarbons Naphthalene Acenaphthylene Acenaphthene Phenanthrene Fluoranthene Pyrene Chrysene Benzo(k)fluoranthene Benzo(b)fluoranthene Indeno(1,2,3,c,d)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene  Polychlorinated biphenyls (PCB) PCB 28 PCB 52 PCB 101 PCB 118 PCB 138 PCB 153 PCB 150

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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used		
SOILS (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods to meet the requirements of the Environment Agency MCERTS performance standard - chemical testing of soil		
	Extractable Petroleum Hydrocarbons (EPH) in the range, with banding	Method CE033 by GC-FID		
	>C10-C40 >C10-C44 >C10-C12 >C10-C20 >C10-C21 >C10-C25 >C10-C28 >C12-C16 >C16-C21 >C16-C35 >C20-C40 >C21-C35 >C21-C40 >C25-C40 >C28-C40 DRO (>C10-C25) MRO (>C25-C40)			
	Elemental Sulphur	Method CE034 by HPLC		
	Metals Arsenic Beryllium Cadmium Cobalt Copper Nickel Zinc	Method CE 264 by ICP-OES		

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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	
WATERS	Chemical Tests		
Groundwater, surface water, leachate from landfill, leachate prepared from soil, effluent	pH value	Method CE213	
		Documented In-House Methods based on Standing Committee of Analysts Methods (HMSO) ISBN as follows:	
Groundwater, surface water, leachate from landfill, leachate prepared from soil, effluent	Ammonia	Method CE012 by Colorimetry (ISBN 011 751613 9)	
Groundwater, surface water, leachate from landfill, leachate prepared from soil, effluent	Electrical conductivity	Method CE214 (ISBN 011 751428 4)	
Groundwater, surface water, leachate from landfill, leachate prepared from soil, effluent	Alkalinity	Method CE 035 (ISBN 011 751601 5)	
Surface water, landfill leachate and industrial effluent	Chemical Oxygen Demand (Total, Settled, Filtered)	Method CE037	
industrial emdent	Settled, Filtered)	(ISBN 011 751915 4)	
Groundwater, surface water, leachate from landfill, leachate prepared from soil, effluent	BTEX and MTBE Benzene Toluene Ethylbenzene m&p-Xylene o-Xylene MTBE 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	Method CE266 by HS GC-FID	

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WATERS (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods based on BS 1377:Part 3:1990	
Groundwater, surface water, leachate from landfill, effluent	Suspended solids	Method CE 038 (ISBN011 751957 X)	
Groundwater, surface water, leachate from landfill	Chromium (hexavalent)	Method CE050 by Colorimetry	
Groundwater, leachate prepared from soil, effluent	Anions (fluoride, chloride, bromide, nitrite, nitrate, sulphate, phosphate)	Method CE049 by Ion Chromatography	
Groundwater, surface water	Thiocyanate	Method CE014 by Colorimetry (ISBN 011 751934 X)	
		Documented In-House Methods based on Standing Committee of Analysts Methods (HMSO) ISBN as follows:	
Groundwater, Surface water, Prepared leachates, Landfill leachates and Effluent	Dissolved metals See Appendix 1 for the list of Metals and matrices covered	Method CE 265 by ICP-MS	
	Chloride Fluoride Sulphate Phosphate Total Oxidised Nitrogen Nitrite Nitrate (by calculation) Ammonia-N (as NH <sub>3</sub> and NH <sub>4</sub> by calculation) Chromium VI Alkalinity  See Appendix 2 for the list of Determinands, Method Codes and	Methods CE 257, 258, 259 and 260 by discrete analyser	
	Matrices covered		
	END		

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#### Appendix 1

Scope of Metals in Groundwater, Surface water, Prepared leachates, Landfill leachates and Effluent determined by Method CE 265 by ICP-MS

	Ground	Surface	Prepared	Landfill	
Metal	water	water	leachates	leachates	Effluent
Aluminium	N	Υ	N	N	N
Arsenic	Υ	Υ	Υ	N	Υ
Barium	Υ	Υ	Υ	N	Υ
Cadmium	Υ	Υ	Υ	N	Υ
Chromium	Υ	Υ	Υ	N	Υ
Cobalt	Υ	Υ	Υ	Υ	Υ
Copper	Υ	Υ	Υ	Ν	Υ
Iron	Υ	Υ	N	N	N
Lead	Υ	Υ	Υ	Ν	Υ
Magnesium	Υ	Υ	Υ	Υ	Υ
Manganese	Υ	Υ	Υ	N	Υ
Nickel	Υ	Υ	Υ	Υ	Υ
Potassium	Υ	Υ	Υ	Υ	N
Selenium	Υ	Υ	Υ	Ν	Υ
Sodium	Υ	N	Υ	N	N
Strontium	Υ	Υ	Υ	N	N
Sulphur	Υ	Υ	Υ	Υ	N
Titanium	Υ	Υ	Υ	Υ	Υ
Vanadium	Υ	Υ	Υ	Ν	Υ
Zinc	Υ	Υ	Υ	Ν	Υ

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#### Appendix 2

Scope of determinands in Groundwater, Surface water, Prepared leachates, Landfill leachates and Effluent determined by Methods CE 257, 258, 259 and 260 by discrete analyser

Anion	In house method	Ground Water	Surface Water	Effluent	Prepared Leachate	Landfill leachate
Chloride	CE257	Υ	Υ	Υ	Y	Υ
Fluoride	CE257	Υ	Y	Υ	Y	Υ
Sulphate	CE257	Υ	N	Υ	Υ	Υ
Phosphate	CE257	Υ	Υ	Υ	Υ	N
Total Oxidised Nitrogen	CE257	Y	Y	Y	Y	Y
Nitrite	CE257	Υ	Y	Υ	Y	Υ
Nitrate (by calculation)	CE257	Y	Y	Y	Y	Y
Ammonia-N (as NH3 and as NH4 by calculation)	CE258	Y	Y	Y	Y	Y
Chromium VI	CE259	Υ	Y	Υ	Υ	Υ
Alkalinity	CE260	Υ	Υ	N	Y	N

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