

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>UKAS TESTING 1141</p>	<p align="center">ALcontrol Technichem</p> <p align="center">Issue No: 018 Issue date: 26 April 2005</p>	
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<p align="center">Testing performed at permanent laboratory premises</p>		

SUMMARY OF ACCREDITATION

ASBESTOS

Asbestos fibres in air
Fibre counting
Asbestos in bulk materials
Identification

ENVIRONMENTAL SAMPLES

Leachates
Anions
BOD/COD/TSS/TDS/pH/colour/
turbidity/conductivity
Non-metallic cations
Soils/sediments
Anions
Chlorinated solvents
MBAS/TOC/Kjeldahl nitrogen/phenols
MCERTS (soils)
Metals
Moisture/LOI/pH/calorific value
Non-chlorinated organic compounds
Non-metallic cations
Organic extractables
Polyaromatic hydrocarbons
Polychlorinated biphenyls
Water, drinking/potable
Anions
BOD/COD/TSS/TDS/pH/colour/
turbidity/conductivity
MBAS/TOC/Kjeldahl nitrogen/phenols
Metals
Non-chlorinated organic compounds
Non-metallic cations
Organic extractables
Polyaromatic hydrocarbons
Polychlorinated biphenyls
Water, waste
Anions
BOD/COD/TSS/TDS/pH/colour/
turbidity/conductivity
Chlorinated solvents
MBAS/TOC/Kjeldahl nitrogen/phenols
Metals
Non-chlorinated organic compounds
Non-metallic cations
Organic extractables
Polyaromatic hydrocarbons
Polychlorinated biphenyls

Waters, natural
Anions
BOD/COD/TSS/TDS/pH/colour/
turbidity/conductivity
Chlorinated solvents
MBAS/TOC/Kjeldahl nitrogen/phenols
Metals
Non-chlorinated organic compounds
Non-metallic cations
Organic extractables
Polyaromatic hydrocarbons
Polychlorinated biphenyls



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ASBESTOS FIBRES IN AIR	<u>Health and Hygiene</u> Fibre counting	Health and Safety Executive Methods for the Determination of Hazardous Substances in the series MDHS MDHS 39/4 : November 1995 Membrane Filter Method using Phase Contrast Microscopy (PCM)
ASBESTOS IN BULK MATERIALS including materials and products suspected of containing asbestos	Identification of: Amosite Chrysotile Crocidolite Fibrous Actinolite Fibrous Anthophyllite Fibrous Tremolite	MDHS 77 : June 1994 by Documented In-House Procedure 001 incorporating MDHS 77 using stereo-microscopy, polarised light microscopy, dispersion staining and phase contrast
SEDIMENTS SLUDGES SOILS	<u>Chemical Tests</u> Alkali and non-routine metals: - Iron Ammonia (exchangeable) Carbonates Leaching Test Method - Water extractable matter Moisture content Organic matter (Acidic dichromate oxidisable matter) Sulphate Sulphur (elemental) Solvent extractable matter	Documented In-House Methods identified by method number 062 by ICP 018 023 by acid decomposition and titration 004 021 by air drying oven 026 by wet oxidation 025 based on BS 1377 by gravimetric determination 025a and 016 by inductively coupled plasma spectroscopy (ICP-OES) 032 by High Performance Liquid Chromatography (HPLC) 012 by Gravimetry



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SEDIMENTS SLUDGES SOILS (cont'd) SEDIMENTS SLUDGES SOILS WATERS Raw and potable WASTE WATERS Untreated and treated domestic and industrial waste waters	<u>Chemical Tests (cont'd)</u>	
	Total petroleum hydrocarbons on as received soil (C8 - C40)	065 by GC-FID
	Total petroleum hydrocarbons on dried soils (C10 - C40)	041 by GC-FID
	Weight loss on ignition	019
	<u>Chemical Tests</u>	
	Anions (water soluble for soils) including: Chloride Nitrate Sulphate	011 by Ion Chromatography (IC)
	Chromium (Hexavalent)	007 by Colorimetry
	Cyanide (NaOH Soluble/Easily liberated)	017 by steam distillation
	Cyanide (NaOH Soluble/Total)	005 by steam distillation
	Cyanide - Complex - Free	061 by Skalar
	Electrical conductivity	033 by conductivity meter
	Fluoride (water soluble for soils)	056 by Ion Selective Electrode (ISE)
	Freon Extractable Matter (Hydrocarbon oils)	030 by IR



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SEDIMENTS SLUDGES SOILS WATERS Raw and potable WASTE WATERS Untreated and treated domestic and industrial waste waters (cont'd)	<p><u>Chemical Tests</u> (cont'd)</p> <p>Polynuclear Aromatic Hydrocarbons (PAH) including: Acenaphthalene Acenaphthene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(123cd)Pyrene Naphthalene Phenanthrene Pyrene</p> <p>Semivolatile Organic Compounds (SVOC's): 1,2,4-trichlorobenzene 1,2-dichlorobenzene 1,3-dichlorobenzene 1,4-dichlorobenzene 2,3,4,6-tetrachlorophenol 2,4,5-trichlorophenol 2,4,6-trichlorophenol 2,4-dichlorophenol 2,4-dimethylphenol 2,4-dinitrotoluene 2,6-dichlorophenol 2,6-dinitrotoluene 2-chloronaphthalene 2-chlorophenol 2-methylphenol 2-nitrophenol 4-chloro-3-methyl phenol 4-chlorophenyl phenyl ether 4-methylphenol 4-nitrophenol Acenaphthene Acenaphthylene Aniline Anthracene</p>	<p>022 by Gas Chromatography Mass Spectrometry (GC-MS)</p> <p>053S and 053W by Gas Chromatography Mass Spectrometry (GC-MS)</p>



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SEDIMENTS SLUDGES SOILS WATERS Raw and potable WASTE WATERS Untreated and treated domestic and industrial waste waters (cont'd)	<u>Chemical Tests</u> (cont'd) Semivolatile Organic Compounds (SVOC's): (cont'd) Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Anthraquinone Azobenzene Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroisopropyl)ether Bromo phenyl phenyl ether Butyl benzyl phthalate Diethyl phthalate Dimethylphthalate Fluorene Hexachlorobenzene Hexachlorobutadiene Hexachloroethane Isophorone Naphthalene Nitrobenzene n-nitroso-di-n-propyl-1-propanamine Phenol Benzo(k)fluoranthene Chrysene Di-n-butyl phthalate Fluoranthene Indeno (1,2,3-cd)pyrene Pentachlorophenol Phenanthrene Pyrene	
SOILS (only)	<u>Chemical Tests</u> Cyanide - Total - Thiocyanate Sulphur (elemental)	Documented In-House Method to meet the requirements of the Environment Agency MCERTS Performance Standard - chemical testing of soil 061 by Skalar 032 by High Performance Liquid Chromatography (HPLC)



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SOILS (only) (cont'd)	<u>Chemical Tests</u> (cont'd) Boron (water soluble) Sulphate (acid soluble) Polychlorinated Biphenyls (PCB's): PCB Congener 101 PCB Congener 118 PCB Congener 138 PCB Congener 153 PCB Congener 180 Polynuclear Aromatic Hydrocarbons (PAH) including: Acenaphthene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Fluoranthene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene pH Semivolatile Organic Compounds (SVOC's): 1,2,4-trichlorobenzene 1,2-dichlorobenzene 1,3-dichlorobenzene 1,4-dichlorobenzene 2,4,5-trichlorophenol 2,4,6-trichlorophenol 2,4-dichlorophenol 2,4-dimethylphenol 2,4-dinitrotoluene 2,6-dichlorophenol 2,6-dinitrotoluene 2-chloronaphthalene 2-chlorophenol	016 by Inductively Coupled Plasma Spectroscopy (ICP) 025a by Inductively Coupled Plasma Spectroscopy (ICP-OES) 039 by Gas Chromatography Mass Spectrometry (GC-MS) 022 by Gas Chromatography Mass Spectrometry (GC-MS) 009 by pH electrode 053S by Gas Chromatography Mass Spectrometry (GC-MS)



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
SOILS (only) (cont'd)	<u>Chemical Tests</u> (cont'd) Semivolatile Organic Compounds (SVOC's): (cont'd) 2-nitrophenol 4-chloro-3-methyl phenol 4-chlorophenyl phenyl ether 4-methylphenol Acenaphthene Acenaphthylene Anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Anthraquinone Azobenzene Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroisopropyl)ether Bromo phenyl phenyl ether Butyl benzyl phthalate Diethyl phthalate Dimethylphthalate Fluorene Hexachlorobenzene Hexachlorobutadiene Hexachloroethane Isophorone Naphthalene Nitrobenzene n-nitroso-di-n-propyl-1-propanamine Benzo(k)fluoranthene Chrysene Di-n-butyl phthalate Fluoranthene Phenanthrene Pyrene 2-nitroaniline 4-nitroaniline 2-methylnaphthalene dibenzofuran carbazole di-n-octyl phthalate dibenz(ah)anthracene	



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Assessment Manager : DH3 (1141TestPerm_018)



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WATERS Raw and potable WASTE WATERS Untreated and treated domestic and industrial waste waters	<u>Chemical Tests</u> Biological Oxygen Demand (BOD) Solvent Extractable Matter Mercury Suspended solids <input type="checkbox"/> Settleable solids <input type="checkbox"/> Total Organic Carbon (TOC) (dissolved organic carbon passing a 0.45 µm filter)	036 by oxygen specific electrode 013 by gravimetry 028 by Atomic Fluorescence 029 010 using TOC analyser
WATERS Raw and potable LEACHATES	<u>Chemical Tests</u> Ammonium Chemical Oxygen Demand (COD) Sulphide Sulphate	057 by ion selective 054 by colorimetry 055 by colorimetry 016 by inductively coupled plasma spectroscopy (ICP-OES)
WATERS Raw and Potable	<u>Chemical Tests</u> Characterisation and semi-quantitative estimation of cyclopentane extractable hydrocarbons	072 by LVI/GC/FID
	END	