


# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

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

 <p>0605</p> <p>Accredited to ISO/IEC 17025:2005</p>	<b>RPS Environmental Management Ltd trading as RPS Laboratories</b>	
	<b>Issue No: 070    Issue date: 20 May 2019</b>	
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<b>Testing performed at the above address only</b>		

### DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
BODY FLUIDS	<u>Chemical Analysis</u>	
Blood	Lead	Documented In-House Method L9 using Furnace Atomic Absorption
ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES	<u>Chemical Tests</u>	Documented In-House Methods based on the following national, international and other recognised standards
Sorbent tubes (silica gel)	Acetaldehyde, formaldehyde, glutaraldehyde, propionaldehyde, butraldehyde, benzaldehyde, valeraldehyde, hexanal, heptanal	NIOSH 2016 using HPLC UV analysis (A40)
Sorbent tubes (XAD 7)	Phenol, m,p-cresol, o-cresol, m,p-xylene, o-xylene	NIOSH 2546 using GC FID analysis (P1)
Sorbent tubes (Activated carbon)	Determination of Volatile Organic Compounds  <b><i>The organisation holds a flexible scope of accreditation for this test. Please contact the organisation for details of the individual compounds they can analyse using this method.</i></b>	PD CEN/TS 13649:2014 using solvent extraction and GC FID analysis (O8) and quality manual section 27



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ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES (cont'd)  Sorbent tubes (Activated carbon)	<u>Chemical Tests</u> (cont'd)  Determination of Volatile Organic Compounds, specifically:  Acetone Benzene n-Butanol 2-Butanone 2-Butoxy ethanol 2-Butoxyethyl acetate Butyl Acetate tert-Butyl Methyl Ether Cyclohexanone Decane Dichloromethane Dodecane Enflurane Ethanol Ethyl Acetate Ethylene oxide (3M3551) Ethylbenzene 2-Ethyl toluene 3,4-Ethyl toluene Halothane Heptane Hexane Isoflurane Limonene Methanol 1-Methoxy 2-Propanol 4-Methyl-2-Pentanone (MIBK) Nonane Octane 2-Propanol Propyl Benzene Propylene glycol methyl ether acetate Sevoflurane Styrene Tetrachloroethylene Tetrahydrofuran Toluene	Documented In-House Methods based on the following national, international and other recognised standards (cont'd)  PD CEN/TS 13649:2014 using solvent extraction and GC FID analysis (O8)



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ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES (cont'd)	<u>Chemical Tests</u> (cont'd)	Documented In-House Methods based on the following national, international and other recognised standards (cont'd)
Sorbent tubes (Activated carbon) (cont'd)	Determination of Volatile Organic Compounds, specifically: (cont'd)  Trichloroethylene 1,2,3-Trimethylbenzene 1,2,4-Trimethylbenzene 1,3,5-Trimethyl benzene xylene m xylene o xylene p Octane	PD CEN/TS 13649:2014 using solvent extraction and GC FID analysis (O8)
Sorbent Tubes (Activated Carbon)	Vinyl Chloride Chloromethane Chloroethane	Documented In-House Method based on PD CEN/TS 13649:2014 and OSHA 07 using GC-MS analysis (M124)
Impinger Solutions (sulphuric acid)	Ammonia	BS EN 14791:2017 using IC analysis (A6)
Impinger Solutions (sodium hydroxide or sulphuric acid)	Hydrogen chloride(HCl) Hydrogen bromide (HBr) Hydrogen fluoride (HF) Chlorine (Cl <sub>2</sub> ) Bromine (Br <sub>2</sub> )	US EPA Method 26 using IC analysis (C27)
Impinger Solutions (hydrogen peroxide)	Sulphur Dioxide	BS EN 14791:2017 using IC analysis (C27)



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ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES (cont'd)	<u>Chemical Tests</u> (cont'd)	Documented In-House Methods based on the following national, international and other recognised standards (cont'd)
Impinger Solutions (water)	Formaldehyde	US EPA method 316 using spectrophotometric analysis (M103)
Impinger Solutions (sodium hydroxide)	Hydrogen Chloride	BS EN 1911-3:2010 using IC analysis (C27)
Impinger Solutions (cadmium sulphate and zinc acetate)	Hydrogen fluoride	BS ISO 15713:2006 (modified) using IC analysis (C27)
Impinger Solutions (nitric acid)	Hydrogen sulphide	USEPA Method 11 by titrimetry (M120)
Impinger Solutions (nitric acid/hydrogen peroxide, sulphuric acid/potassium permanganate, nitric acid/potassium dichromate)	Mercury	MID 14385 (BS EN 14385:2004, BS EN 13211:2001 and BS EN 1483:2007 [withdrawn]) using microwave and HF digestion followed by: CV-AFS analysis (M112)
Filters, probe rinses (nitric acid), impinger solutions (nitric acid / hydrogen peroxide)	Trace elements (Heavy Metals)	BS EN 14385:2004 using microwave and HF digestion followed by ICP-MS analysis (M31) and quality manual section 27
	<p><b><i>The organisation holds a flexible scope of accreditation for this test.</i></b></p> <p><b><i>Please contact the organisation for details of the individual elements they can analyse using this method.</i></b></p>	



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<p>ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES (cont'd)</p> <p>Filters, probe rinses (nitric acid), impinger solutions (nitric acid / hydrogen peroxide)</p> <p>Impinger solutions (Potassium permanganate)</p> <p>Filters</p> <p>Filter Papers and Rinse Solutions</p>	<p><u>Chemical Tests</u> (cont'd)</p> <p>Metals including: Arsenic, Beryllium, Cadmium, Cobalt, Chromium, Copper, Manganese, Nickel, Lead, Antimony, Selenium, Tin, Thallium, Vanadium, Iron, Zinc, Gallium, Strontium, Rubidium, Caesium</p> <p>Oxides of Nitrogen (NO, NO<sub>2</sub>, NO<sub>3</sub>)</p> <p>Isocyanates - TDI, MDI, HDI</p> <p><u>Physical Testing</u></p> <p>Weighing of Particulate Matter</p>	<p>Documented In-House Methods based on the following national, international and other recognised standards (cont'd)</p> <p>BS EN 14385:2004 using microwave and HF digestion followed by ICP-MS analysis (M31)</p> <p>USEPA 7d (May 1990) (C27)</p> <p>Documented In-house Method M119 based on US OSHA47 and OSHA42, and US EPA CTM 036A using HPLC Diode array in accordance with MCERTS Stacks requirements</p> <p>BS EN 13284-1:2017 (D9)</p>



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POLLUTANTS AND EFFLUENTS: ATMOSPHERIC Diffuse pollutants from workplace atmospheres	<u>Chemical Analysis</u>	Documented In-House Methods based on the following national, international and other recognised standards (cont'd)
PTFE Filters	Sulphuric Acid	Documented in-house method M126 based on BS ISO 21438-1:2007 using Ion Chromatography
IOM dual fraction head	Total and Respirable Dust	Documented In-house method D1 by gravimetric analysis based on MDHS 14/4
XAD-7 air sampling tube	Phenol Cresol Xylenol	Documented In-house method P1 by GC/FID analysis based on NIOSH 2546
Silica gel tubes	Hydrofluoric acid Hydrochloric acid Hydrobromic acid Phosphoric acid Nitric acid Sulphuric acid	Documented In-House Method C27 based on NIOSH 7903 (Aug 1994 - Withdrawn) using Ion Chromatography
	Ammonia	Documented In-House Method A6 based on NIOSH 6016 (May 1996) using Ion Chromatography
	Ethanolamine Methylamine Diethylamine Dimethylamine Trimethylamine	Documented In-house method A1 by IC analysis
Anasorb 747	Sulphur dioxide	Documented In-House Method C27 based on OSHA ID-200 (Apr 1992) using Ion Chromatography
Filters (PVC )	Total Quartz in respirable airborne dust  Total Cristobalite in respirable airborne dust  Total Crystalline Silica in respirable airborne dust.	Documented In-House Method M130 based on MDHS 101/2 (February 2015) using FT-IR Analysis



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POLLUTANTS AND EFFLUENTS: ATMOSPHERIC Diffuse pollutants from workplace atmospheres (cont'd)	<u>Chemical Analysis</u> (cont'd)	Documented In-House Methods based on the following national, international and other recognised standards (cont'd)
Silica gel tubes	Acetaldehyde, Formaldehyde, Glutaraldehyde, Propionaldehyde Butraldehyde, Benzaldehyde, Valeraldehyde, Hexanal, Heptanal	Documented In-House Method A40 based on NIOSH 2016 using High Performance Liquid Chromatography
Impingers or passive samplers	Acetaldehyde, Formaldehyde, Glutaraldehyde, Propionaldehyde, Butraldehyde, Ben zaldehyde, Valeraldehyde, Hexanal, Heptanal	Documented In-House Method A40 using High Performance Liquid Chromatography
Filters and/or impingers	Rubber Fume	Documented In-House Method C16 based on MDHS 47/2 (1999) using Gravimetric techniques and solvent extraction
Toluene/1-(2-methoxyphenyl)- piperazine treated filters, impingers	Isocyanates MDI, HDI, HDI, IPDI	Documented In-House Method I3 based on MDHS 25/3 (Jan 1999) using High Pressure Liquid chromatography
Filters	Total and Respirable Dust	Documented In-House Method D1 based on MDHS 14/4 (2000) using Gravimetric techniques
Filters (MCE) and/or impingers	Metals: Aluminium Antimony Arsenic Barium Beryllium Bismuth Cadmium Chromium Cobalt Copper Indium Iron Lead Lithium Magnesium Molybdenum	Documented In-House Method M24 using Inductively Coupled Plasma - Emission Spectroscopy



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POLLUTANTS AND EFFLUENTS: ATMOSPHERIC Diffuse pollutants from workplace atmospheres (cont'd)	<u>Chemical Analysis</u> (cont'd)	Documented In-House Methods based on the following national, international and other recognised standards (cont'd)
Filters (MCE) and/or impingers (cont'd)	Metals (cont'd):  Manganese Nickel Phosphorous Selenium Strontium Tellurium Thallium Tin Vanadium Zinc	Documented In-House Method M24  based on NIOSH 7300 (Aug 1994) using Inductively Coupled Plasma - Emission Spectroscopy (cont'd)
MCE filters	Metals:  Aluminium Antimony Arsenic Barium Beryllium Bismuth Cadmium Chromium Cobalt Copper Iron Indium Lead Magnesium Manganese Moybdenum Nickel Phosphorous Selenium Strontium Tellurium Thallium Tin Titamium Vanadium Zinc	Documented In-House Method M24 using ICP-MS





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<p>POLLUTANTS AND EFFLUENTS: ATMOSPHERIC Diffuse pollutants from workplace atmospheres (cont'd)</p> <p>Activated charcoal tubes and passive samplers</p>	<p><u>Chemical Analysis</u> (cont'd)</p> <p>Determination of airborne organic compounds:</p> <p><b><i>The organisation holds a flexible scope of accreditation for this test. Please contact the organisation for details of the individual compounds they can analyse using this method.</i></b></p>	<p>Documented In-House Methods based on the following national, international and other recognised standards (cont'd)</p> <p>Documented In-House Method O8 and quality manual section 27 based on OSHA 07 (May 2000)/ PD CEN/TS 13649:2014 using solvent desorption followed by capillary column gas chromatography with flame ionisation detector</p>
<p>Activated charcoal tubes and passive samplers</p>	<p>Determination of airborne organic compounds specifically:</p> <ul style="list-style-type: none"> <li>Acetone</li> <li>Benzene</li> <li>n-Butanol</li> <li>2-Butanone</li> <li>2-Butoxy ethanol</li> <li>2-Butoxyethyl acetate</li> <li>Butyl Acetate</li> <li>tert-Butyl Methyl Ether</li> <li>Cyclohexanone</li> <li>Decane</li> <li>Dichloromethane</li> <li>Enflurane</li> </ul>	<p>Documented In-House Method O8 based on OSHA 07 (May 2000)/ PD CEN/TS 13649:2014 using solvent desorption followed by capillary column gas chromatography with flame ionisation detector</p>



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<p>POLLUTANTS AND EFFLUENTS: ATMOSPHERIC Diffuse pollutants from workplace atmospheres (cont'd)</p> <p>Activated charcoal tubes and passive samplers (cont'd)</p>	<p><u>Chemical Analysis</u> (cont'd)</p> <p>Determination of airborne organic compounds specifically: (cont'd)</p> <p>Ethanol Ethyl Acetate Ethylene oxide (3M3551) Ethylbenzene 2-Ethyl toluene 3,4-Ethyl toluene Halothane Heptane Hexane Isoflurane Limonene Methanol 1-Methoxy 2-Propanol 4-Methyl-2-Pentanone (MIBK) Nonane 2-Propanol Propyl Benzene Propylene glycol methyl ether acetate Sevoflurane Styrene Tetrachloroethylene Tetrahydrofuran Toluene Trichloroethylene 1,2,3-Trimethylbenzene 1,2,4-Trimethylbenzene 1,3,5-Trimethyl benzene xylene m xylene o xylene p Octane</p>	<p>Documented In-House Methods based on the following national, international and other recognised standards (cont'd)</p> <p>Documented In-House Method O8 based on OSHA 07 (May 2000)/ PD CEN/TS 13649:2014 using solvent desorption followed by capillary column gas chromatography with flame ionisation detector</p>



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<p>POLLUTANTS AND EFFLUENTS: ATMOSPHERIC Diffuse pollutants from workplace atmospheres (cont'd)</p> <p>Activated charcoal tubes and passive samplers - Anasorb 747</p> <p>3M-3551 passive badges</p> <p>Activated charcoal tubes and passive samplers</p> <p>Molecular Sieve Adsorbent Tubes</p>	<p><u>Chemical Analysis</u> (cont'd)</p> <p>Methanol</p> <p>Ethylene Oxide</p> <p>Vinyl Chloride Chloromethane Chloroethane</p> <p>Nitrous Oxide</p>	<p>Documented In-House Methods based on the following national, international and other recognised standards (cont'd)</p> <p>Documented In-House Method O8 based on OSHA 91 using solvent desorption followed by capillary column gas chromatography with flame ionisation detector</p> <p>Documented In-House Method O8 using solvent desorption followed by capillary column gas chromatography with flame ionisation detector</p> <p>Documented In-House Method based on PD CEN/TS 13649:2014 and OSHA 07 using GC-MS analysis (M124)</p> <p>Documented In-House Method M 121 using Thermal Desorption and Gas Chromatography with Electro Chemical Detector (ATD-GC-ECD)</p>



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<p>WATER</p> <p>Deionised water</p> <p>Surface water, sewage (treated and untreated)</p> <p>MARINE SEDIMENTS</p> <p>Marine Sediments - (Dried and ground by customer – as received)</p>	<p><u>Chemical Analysis</u></p> <p>Determination of anions: Bromide Chloride Fluoride Nitrate Nitrite Phosphate Sulphate</p> <p>Tributyl Tin</p> <p>Metals, specifically:</p> <p>Aluminium Arsenic Barium Cadmium Chromium Copper Iron Lead Lithium Manganese Nickel Scandium Tin Strontium Vanadium Zinc Mercury</p>	<p>Documented In-House Methods</p> <p>Documented In-House Method C27 using Ion Chromatography</p> <p>Documented In-House Method M128 using GC-ICP-MS</p> <p>Documented in house method M129 by total microwave digestion followed by ICP-MS and AFS analysis</p>



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<p>MARINE SEDIMENTS (cont'd)</p> <p>Marine Sediments - (Dried and ground by customer – as received)</p>	<p><u>Chemical Analysis</u></p> <p>Metals, specifically:</p> <p>Aluminium Arsenic Barium Cadmium Chromium Copper Iron Lead Manganese Nickel Scandium Strontium Vanadium Zinc Mercury</p>	<p>Documented In-House Methods</p> <p>Documented in house method M132 by partial microwave digestion using 50% nitric acid or Aqua Regia followed by ICP-MS and AFS analysis</p>
END		