


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 17025:2005</p> | Marchwood Scientific Services Issue No: 048 Issue date: 20 March 2018 | |
| | 371 Millbrook Road West Southampton SO15 0HW | Contact: Mr K Pettit Tel: +44 (0) 23 8078 6979 E-Mail: karl.pettit@marchwood-scientific.co.uk Website: www.marchwood-scientific.co.uk |
| Testing performed by the Organisation at the locations specified below | | |

Locations covered by the organisation and their relevant activities

Laboratory locations:

| Location details | | Activity | Location code |
|---|--------------------------------------|--|---------------|
| Address 371 Millbrook Road West Southampton SO15 0HW | Local contact Mr K Pettit | Testing: Environmental Testing Stack Emissions Testing Food Testing Support Functions: Quality System Quality Audit administration | A |
| Address Unit 1A.2(A) North Road Marchwood Industrial Park Marchwood Southampton SO40 4BL | Local contact Mr J Fursman | Support Functions: Sample Reception Environmental Testing Waste (SRF/RDF) Testing | B |
| Address Unit 5 60 Smithfold Lane Worsley Manchester M28 0GP | Local contact Mr J Fursman | Support Functions: Sample Reception Waste (SRF/RDF) Testing | C |



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DETAIL OF ACCREDITATION

| Materials/Products tested | Type of test/Properties measured/Range of measurement | Standard specifications/ Equipment/Techniques used | Location Code |
|---|---|--|-------------------|
| <p>ASH DUST EFFLUENT FOLIAGE POLYURETHANE FILTERS SLUDGE SOILS 2,4D (2,4-Dichlorophenoxyacetic acid)</p> <p>Inorganic compounds used as ingredients in animal feeds and food</p> <p>Oils and grain as ingredients in animal feeds and food</p> <p>ANIMAL FEED, FOODS and FATTY FOODS (including fish, meat, dairy products, eggs)</p> <p>Inorganic compounds used as ingredients in animal feeds and food</p> | <p><u>Chemical Tests</u></p> <p><u>Poly Chlorinated Dibenzo-p-Dioxins (PCDD)</u> 2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD</p> <p><u>Poly Chlorinated Dibenzo Furans (PCDF)</u> 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF</p> <p><u>Arsenic, Cadmium, Mercury, Lead</u></p> | <p>Documented In-House Methods based on the following national, international and other recognised standards</p> <p>Documented in-house Method 2002 / 2002a, based on USEPA Method 1613. Gas Chromatography (GC) - High Resolution Mass Spectrometry(MS) using Labelled Internal Standards Following extraction by WI 3 2043/cleanup by 2044 for polyurethane filters, effluents, 2001 or 2005 and 2044 for foods, 1102 for solid foods/feed samples, 2042 for dairy and egg, 2043 and 2044 for 2,4D and 1102/2043 and 2044 for other sample types</p> <p>Documented in-house method WI-3050 using ICP Triple Quad Mass Spectrometry</p> | <p>A</p> <p>A</p> |



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| ASH DUST EFFLUENT FOLIAGE POLYURETHANE FILTERS SLUDGE SOILS Inorganic compounds used as ingredients in animal feeds and food Oils and grain as ingredients in animal feeds and food FOODS and FATTY FOODS (including fish, , meat, dairy products, eggs) | <u>Chemical Tests (cont'd)</u> <u>Poly Chlorinated Biphenyls (PCB's)</u> PCB-28 PCB-52 PCB-77 PCB-81 PCB-101 PCB-105 PCB-114 PCB-118 PCB-123 PCB-126 PCB-138 PCB-153 PCB-156 PCB-157 PCB-167 PCB-169 PCB-180 PCB-189 | Documented In-House Methods based on the following national, international and other recognised standards Documented In-House Method 2002 / 2002a using High Resolution Gas Chromatography Mass Spectrometry (GC/MS) following extraction 2043/cleanup by 2044 for polyurethane filters, effluents, 2001 or 2005 and 2044 for foods, 2042 for dairy and egg, and 1102/2043 and 2044 for other sample types (in accordance with BS EN 1948-4:2010 for PU filters) | A |



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| ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES | <u>Chemical Tests (cont'd)</u> | Documented In-House Methods based on the following national, international and other recognised standards | |
| Filters, probe and impinger rinses (acetone, toluene, and water), XAD-2 resin trap and tubes | <u>Poly Chlorinated Dibenzo-p-Dioxins (PCDD)</u> 2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD | BS EN 1948-2:2006, and BS EN 1948-3:2006 or US EPA Method 1613 Gas Chromatography (GC) High Resolution Mass Spectrometry (MS) using labelled internal Standards (in house method 2002 / 2002a) following extraction 2043 cleanup by 2044 | A |
| | <u>Poly Chlorinated Dibenzo Furans (PCDF)</u> 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF | BS EN 1948-2:2006, and BS EN 1948-3:2006 or US EPA Method 1613 Gas Chromatography (GC) High Resolution Mass Spectrometry (MS) using labelled internal Standards (in house method 2002 / 2002a)) following extraction 2043/ cleanup by 2044 | A |



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| <p>ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES (cont'd)</p> <p>Filters, probe and impinger rinses (acetone, toluene, and water), XAD-2 resin trap and tubes</p> | <p><u>Chemical Tests (cont'd)</u></p> <p><u>Poly Chlorinated Biphenyls (PCB's)</u></p> <p>PCB-28 PCB-52 PCB-77 PCB-81 PCB-101 PCB-105 PCB-114 PCB-118 PCB-123 PCB-126 PCB-138 PCB-153 PCB-156 PCB-157 PCB-167 PCB-169 PCB-180 PCB-189</p> | <p>Documented In-House Methods based on the following national, international and other recognised standards</p> <p>BS EN 1948-4:2010 Analysis by in-house method 2002 / 2002a by High Resolution Gas Chromatography Mass Spectrometry (GC/MS) following extraction 2043/ cleanup by 2044</p> | A |
| <p>NATURAL WATERS, SEAWATERS</p> | <p>AOX</p> | <p>Documented in house method 3023 using CL10-AOX analyser</p> | B |



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|--|---|---|---------------|
| FOODS Fruit Vegetables Dried fruit Cereals | Abamectin Acephate Acetamiprid Aldicarb Aldicarb sulfone Aldicarb sulfoxide Benazolin Bentazone Boscalid Bromoxynil Buprofezin Cadusafos Carbaryl Carbendazim Carbetamide Chloridazon Chlormequatchloride Chlorotoluron Chloroxuron Clopyralid Cyanazin 2,4-D 2,4-DB Dicamba Dichlorprop Dicotophos Diflubenzuron Diuron Fenoprop (2,4,5-TP) Fenuron Fluroxypyr Imidacloprid Ioxynil Isoproturon Linuron Lufenuron MCPA MCPB Mecarbam Mecoprop Mesotrione Metamitron Metazachlor Methabenzthiazuron Methamidaphos Methomyl | Documented in house method: QuEChERS Extraction (WI 2007) determination by LC-MS/MS (WI 2008) | A |



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| FOODS (cont'd) Fruit Vegetables Dried fruit Cereals | Monocrotophos Monuron Neburon Omethoate Oxamyl Picloram Prochloraz Propamocarb Propargite Propyzamide Simazine Spinosyn A Spinosyn D Spirotetramat 2,4,5-T Thiabendazole Thiacloprid Thiamethoxam 2,3,6-Trichlorobenzoic acid Triclopyr Trietazine | Documented in house method: QuEChERS Extraction (WI 2007) determination by LC-MS/MS (WI 2008) (cont'd) | A |
| FOODS Fruit Vegetables Dried fruit Cereals | Aldrin Biphenyl Bromopropylate Carbophenothion Chlorobenzilate Chlordane cis/trans Chlorpropham Chlorpyrifos-methyl Chlorthal-dimethyl Chlozolate Cyfluthrin (total isomers) lambda-Cyhalothrin Cypermethrin Cyphenothrin 2,4'-DDD (o,p'-DDD) 4,4'-DDD (p,p'-DDD) 2,4'-DDE (o,p'-DDE) 4,4'-DDE (p,p'-DDE) 2,4'-DDT (o,p'-DDT) 4,4'-DDT (p,p'-DDT) Deltamethrin Dichlobenil Dichlofenthion 2,6-dichlorobenzamide | Documented in house method: QuEChERS Extraction (WI 2007) determination by GC-MS/MS (WI 2008) | A |



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| FOODS (cont'd) Fruit Vegetables Dried fruit Cereals | Dicloran Dieldrin Dimefluthrin Diphenylamine Disulfoton alpha-Endosulphan beta-Endosulphan Endosulfan Sulphate Endrin Etridiazole Fenchlorphos Fenitrothion Fenvalerate Fipronil Flamprop Isopropyl Flucythrinate Fludioxonil Flumethrin Flutriafol Folpet Hexachlorobenzene alpha-HCH beta-HCH gamma-HCH delta-HCH Heptachlor Heptachlor-exo-epoxide Heptachlor-endo-epoxide Iodofenphos Iprodione Isazophos Isodrin Isofenphos Methoxychlor Mirex cis Nonachlor trans Nonachlor Parathion methyl Permethrin cis-isomer trans-isomer Phorate Procymidone Propazine Propetamphos Propham | Documented in house method: QuEChERS Extraction (WI 2007) determination by GC-MS/MS (WI 2008) (cont'd) | A |



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| FOODS (cont'd) Fruit Vegetables Dried fruit Cereals | Prothiofos Pymethanil Pyriproxifen Quintozene Sulfotep Tecnazene Tefluthrin Terbufos Tetradifon Thionazine Tolyfluanid Transfluthrin Triazophos Trifluralin Vinclozolin | Documented in house method: QuEChERS Extraction (WI 2007) determination by GC-MS/MS (WI 2008) (cont'd) | A |
| FOODS Fruit Vegetables Dried fruit Cereals | Alachlor Allethrin Atrazine Atrazine-desethyl Azinphos-ethyl Azinphos-methyl Azoxystrobin Benalaxyl Bifenthrin Bitertanol Bupirimate Carbofuran Chlorfenvinphos Chlorpyriphos Coumaphos Cyprodinil Desmetryne Diazinon Dichlorvos Difenconazole Dimethoate Dimethomorph Epoconazole Ethion Ethofumesate Ethoprophos Ethoxyquin Etrimphos Famphur | Documented in house method: QuEChERS Extraction (WI 2007) determination by LC-MS/MS or GC-MS/MS (WI 2008) | A |



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| FOODS (cont'd) Fruit Vegetables Dried fruit Cereals | Fenamiphos Fenarimol Fenbuconazol Fenhexamid Fenpropimorph Fenthion Fluazifop-p-butyl Flurochloridone Flusilazole Fonophos Furalaxyl Furathiocarb Heptenophos Hexaconazole Imazalil Indoxacarb Isoprocarb Kresoxim-methyl Malaixon Malathion Mepanipyrim Metalaxyl Methacrifos Methidathion Methiocarb Metolachor Metribuzin Mevinphos Monolinuron Myclobutanil Napropamide Nuarimol Ofurace Oxadixyl Paclobutrazole Parathion Penconazole Pendimethalin Phenthoate Phorat-sulfone Phosalone Phosmet Phosphamidon Pirimicarb Primiphos-ethyl Pirimiphos-methyl | Documented in house method: QuEChERS Extraction (WI 2007) determination by LC-MS/MS or GC-MS/MS (WI 2008) (cont'd) | A |



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|--|--|--|---------------|
| FOODS (cont'd) Fruit Vegetables Dried fruit Cereals | Profenophos Prometryn Propachlor Propanil Propiconazole Propoxur Pyrazophos Pyridaphenthion Quinalphos Tebuconazole Tebufenpyrad Terbuthylazine Terbuthylazine-desethyl Terbutryn Tetrachlorvinphos Tetramethrin Tolclofos-Methyl Triadimefon Triadimenol Tri-allate Trifloxystrobin Triflumizole | Documented in house method: QuEChERS Extraction (WI 2007) determination by LC-MS/MS or GC-MS/MS (WI 2008) (cont'd) | A |
| Fruit Fruit Products Cider Baby Food | Patulin | Documented in house method 2033 QuEChERS extraction Determination by LC-MS/MS | A |
| Fruit Vegetables Cereals Pulses Bread Vegetable oils | Glyphosate Glufosinate-ammonium Aminomethylphosphonic acid (AMPA) | Documented in house method 2030 Determination by LC-MS/MS | A |
| Fruit Dried Fruit Vegetables Cereals Pulses Tea Bread | Chlormequat Mepiquat | Documented in house method 2028 Determination by LC-MS/MS | A |
| High carbohydrate processed food products, coffee and coffee substitutes | Acrylamide | Documented in house method WI-2045 using LC-MS/MS, | A |



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| Animal muscle (all food producing species) Lamb kidney Pig Liver Fish Prawns Shellfish Milk Eggs Honey | <u>Sulphonamides</u> Sulfachlorpyridazine Sulfadiazine Sulfadimethoxine Sulfadoxin Sulfaguanidine Sulfamerazin Sulfamethazin Sulfamethazole Sulfamethoxazole Sulfamethoxypyridazine Sulfamonomethoxine Sulfamoxole Sulfapyridine Sulfaquinoxaline Sulfathiazole Sulfisoxazole | Documented in house method 2034 Determination by LC-MS/MS (following extraction by 2036 for honey, 2037 for milk and 2038 for eggs) | A |
| Animal muscle (all food producing species)Pig kidney Fish Prawns Milk Eggs Honey | Chloramphenicol Thiamphenicol | Documented in house method 2032 Determination by LC-MS/MS | A |
| Solid Recovered Fuels (SRF) Refuse Derived Fuel (RDF) | Moisture Ash Content Calorific Value (Gross Calorific Value) Net Calorific Value Oxygen | Documented in house method 3013 by Gravimetry based on BS EN 15414-3:2011 Documented in house method 3014 by Gravimetry based on BS EN 15403:2011 Documented in house method 3015 by Bomb Calorimetry based on BS EN 15400:2011 By Calculation By Calculation based on BS EN 15407:2011 | B, C B, C B, C B B |



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| Solid Recovered Fuels (SRF) Refuse Derived Fuel (RDF) (cont'd) | Sulfur, Chlorine, Fluorine, Bromine | Documented in house method 3021 by Ion Chromatography (following bomb calorimetry) based on BS EN 15408:2011 | C |
| | Chlorine | Documented in house method 3021 by Ion Chromatography (following bomb calorimetry) based on BS EN 15408:2011 | B |
| | Carbon, Hydrogen and Nitrogen | Documented in house method 3024 by Elemental Analyser based on BS EN 15407:2011 | C |
| | Biomass Content | Documented in house method 3009 by Dissolution, Gravimetry and Calculation based on BS EN 15440:2011 | C |
| | Volatile Matter | Documented in house method 3027 by Gravimetry based on BS EN 15402:2011 | C |
| Solid Biofuels (Biomass) | Moisture | Documented in house method 3013 by Gravimetry based on BS EN 18134-3:2015 | B, C |
| | Ash Content | Documented in house method 3014 by Gravimetry based on EN 14775:2009 | B, C |
| | Calorific Value (Gross Calorific Value) | Documented in house method 3015 by Bomb Calorimetry based on EN 14918:2009 | B, C |
| | Net Calorific Value | By Calculation | B |
| | Oxygen | By Calculation based on BS EN 16948:2015 | B |



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|--------------------------------------|---|---|---------------|
| Solid Biofuels (Biomass) (cont'd) | Sulfur, Chlorine | Documented in house method 3021 by Ion Chromatography (following bomb calorimetry) based on EN 16994:2016 | C |
| | Chlorine | Documented in house method 3021 by Ion Chromatography (following bomb calorimetry) based on EN 16994:2016 | B |
| | Carbon, Hydrogen and Nitrogen | Documented in house method 3024 by Elemental Analyser based on EN 16948:2015 | C |
| | Volatile Matter | Documented in house method 3027 by Gravimetry based on BS EN 15148:2009 | C |
| RECYCLED WASTE Trommel Fines | Loss on Ignition at 440°C | Documented in house method 3025 by Gravimetry in accordance with HMRC Excise Notice LFT1 27 March 2015 | B |

END