


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>UKAS TESTING 1639</p> <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Tayside Scientific Services</h3> <p>Issue No: 029 Issue date: 16 March 2012</p>	
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<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ANIMAL FEEDINGSTUFFS	<u>Chemical Tests</u>	Documented In-House Methods identified by method number GAX based on SI 1999, No 1663 'The Feedingstuffs (Sampling and Analysis) Regulations
	Ash	GA 008
	Fibre	GA 010
	Moisture	GA 002
	Oil (total)	GA 004
		Documented In-House Method identified by method number
	Nitrogen and crude protein	PG 001 by Kjeldahl
	Nitrogen and Protein	PF082 using the Dumas Combustion method
	Aflatoxins B ₁ , B ₂ , G ₁ and G ₂	PF 059 using immuno-affinity column for clean-up followed by HPLC/Fluorescence detection
	Vitamins A and E	PF061 using High Performance Liquid Chromatography
Copper Iron Manganese Zinc	GA013 using Flame Atomic Absorption Spectrometry	



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ANIMAL FEEDINGSTUFFS (cont'd)	<u>Chemical Tests</u> (cont'd)	
	Cadmium Lead	GA012 using Flame Atomic Absorption Spectroscopy
	Arsenic Selenium	GA014 using Hydride Generation Atomic Absorption Spectrometry
COSMETIC PRODUCTS	Parabens methyl 4-hydroxybenzoate (methyl-paraben) ethyl 4-hydroxybenzoate (ethyl-paraben) isopropyl 4-hydroxybenzoate (iso-propyl paraben) propyl 4-hydroxyparabenzoate (propyl-paraben) butyl 4-hydroxybenzoate (butyl-paraben) isobutyl 4-hydroxybenzoate (iso-butyl paraben) benzyl 4-hydroxybenzoate (benzyl-paraben)	PC003 using reversed phase HPLC and diode array
	Total of listed Parabens	
	Preservatives: 2-phenoxyethanol 1-phenoxypropan-2-ol	
FERTILISERS	<u>Chemical Tests</u>	Documented In-House Method based on the Methods of SI 1996, No 1342 'The Fertilisers (Sampling and Analysis) Regulations', identified by method number, and Regulation EC 2003/2003
	Preparation of sample for analysis	HA001 (method 1)
	Ammoniacal nitrogen	HA002 (method 2)
	Total nitrogen	HA004 (method 8b)
		PF082 using the Dumas Combustion method
	Total phosphorus	HA005 (method 9a)



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FERTILISERS (cont'd)	<u>Chemical Tests (cont'd)</u> Phosphorus by neutral ammonium citrate extraction Phosphorus by water extraction Water-soluble potassium Neutralising value in liming materials <u>Health and Hygiene</u>	HA006 (method 9d) HA007 (method 9h) HA 008 (method 11) HA 009
ASBESTOS IN BULK MATERIALS including materials and products suspected of containing asbestos	Identification of: Amosite Chrysotile Crocidolite Fibrous Actinolite Fibrous Anthophyllite Fibrous Tremolite	HSG 248:February 2005 by Documented In-House procedure, PE007 using stereo-microscopy, polarised light microscopy and dispersion staining
FOODS	<u>Chemical Tests</u>	Methods documented in 'Analytical Methods Manual for VEMS' Association of Public Analysts and identified by method number or Documented In-House Methods identified by method number PFx
DAIRY PRODUCTS		
Cheese	Histamine	PF044 using HPLC
Cream	Sugars	VEMS F/0057
Ice cream	Ash	PF 013
Milk, Liquid	Acidity (titratable)	VEMS F/0131
	Antibiotics	PF070 using Copan or Delvo kit
	Fat	VEMS F/0008 using Gerber technique
	Freezing Point	PF 008 using Thermistor Cryoscope
	Peroxidase Activity	VEMS F/0028



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FOODS (cont'd)	<u>Chemical Tests</u> (cont'd)	
DAIRY PRODUCTS (cont'd)		
Milk, Liquid (cont'd)	Phosphatase Activity	PF071 using Flurophos
	Total solids	PF057 using Gravimetry
FAT	Butyric acid	VEMS F/0289
FATS and OILS	Peroxide value	VEMS F/0009
	Fatty acid profile	PF 051 GC/FID (analysis of fatty acids converted to fatty acid methyl esters)
	Free fatty acids	VEMS F/0010
FISH	Species identification	PF 015 by iso-electric focusing
	Histamine	PF044 using HPLC
FISH - FRESH and FROZEN, FISH PRODUCTS and PROCESSED FISH	Ash	PF 012
	Fat	PF 002
	Moisture	
	Fat	PF075 using gravimetry and Foss Soxtec system
	Moisture	
FLOUR PRODUCTS		
Bread	Moisture	VEMS F/0222
	Propionic acid	PF 049 by Gas chromatography (GC)
HONEY	Identification of Pollen Grains	PF 045 by light microscopy
	Moisture	VEMS F/0265 by refractometry
INTOXICATING LIQUOR		
Spirits	Alcohol	1) PF 021 by Density/Obscuration 2) PF 019 by density meter
	Congeners	VEMS F/0161 by GC



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FOODS (cont'd)	<u>Chemical Tests</u> (cont'd)	
MEAT - FRESH and FROZEN MEAT PRODUCTS and PROCESSED MEAT	Ash	PF 012
	Fat	PF 002
	Moisture	
	Fat	PF075 using gravimetry and Foss Soxtec system
	Moisture	
	Nitrogen and crude protein	PF 016
	Soya Protein	VEMS F/0292
	Sulphur dioxide	VEMS F/0308
FLESH FOODS and MEAT PRODUCTS	Total volatile nitrogen	VEMS F/0157
	Hydroxyproline	PF 011 based on BS 4401:Part 11:1995
	Calculation of apparent meat/fish content	PF 017
NUTS AND NUT PRODUCTS GRAINS AND SEEDS	Aflatoxins B ₁ , B ₂ , G ₁ and G ₂	PF 059 using immuno-affinity column for clean-up followed by HPLC/Fluorescence detection
CREAM	Acidity (titratable)	VEMS F/0251
	Fat	VEMS F/0216 by Gerber technique
SOFT DRINKS, LIQUID FOODS CONFECTIONERY AND HIGH SUGAR CONTENT PRODUCTS	Water-soluble Synthetic Food Colour: Amaranth (E123) Brilliant Blue (BFCE) Carmoisine (E122) Green S Ponceau 4R (E124) Quinoline Yellow Sunset yellow (E110) Tartrazine (E102)	PF 034 by HPLC



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FOODS (cont'd)	<u>Chemical Tests</u> (cont'd)	
FOODS, General (cont'd)	pH	PF 065 based on VEMS F0282
	Sodium	PF 052 by Flame Emission Spectrophotometry
	Soluble solids in food	PF079 using refractometry
	Sorbic acid	PF 050 by HPLC
	Sugars (fructose, glucose, sucrose, maltose, lactose)	PF077 using IC with pulsed amperometric detector
	Sulphur Dioxide	VEMS F/0308 and PF 060 using Gravimetric weighing
	Cadmium and Lead	PF085 using ashing followed by ICP-OES
	Vitamins A and E	PF 061 using High Performance Liquid Chromatography
	Vitamin C	PF074 using HPLC based on BS EN 14130:2003
	Water activity	PF 053 by hygrometer
	<u>Calculated values</u>	
	Apparent meat content	PF 056 based on APA guidelines
	Energy value	VEMS F/0381
	<u>Microbiological Tests</u>	Documented In-House Methods identified by method number PMFx based on/incorporating published procedures referenced by BS EN ISO Methods
	Detection:	
	<i>Campylobacter</i> spp	PMF 025 based on BS EN ISO 10272-1:2006
	<i>Escherichia coli</i> O157	PMF 014 based on BS EN ISO 16654:2001
	<i>Listeria monocytogenes</i>	PMF 024 based on BS EN ISO 11290-1:1998 (Amd 1)



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FOODS (cont'd)	<u>Chemical Tests</u> (cont'd)	
FOODS, General (cont'd)	<i>Salmonella</i> species	PMF 009 based on BS EN ISO 6579:2002
	Enumeration of <i>L monocytogenes</i> and other <i>Listeria</i> spp	PMF 021 based on BS EN ISO 11290:1998 (Amd 1)
	Enumeration of Yeasts and Moulds	PMF027 using Spread plate
Ready-to-eat prepared foods	Isolation and Enumeration: Colony Count at 30°C	PMF 015 based on BS 5763:Part 5:1981 using spiral plater
Ready-to-eat prepared foods	Isolation and Enumeration: <i>Bacillus cereus</i>	PMF 011 based on BS EN ISO 7932:1998
	<i>Clostridium perfringens</i>	PMF 008 based on BS EN 13401:1999
	<i>Enterobacteriaceae</i>	PMF 023 using Pour Plate based on BS EN ISO 21528-2:2004
	<i>Escherichia coli</i>	PMF 004 based on BS 5763:Part 13:1998
	<i>Staphylococcus aureus</i>	PMF 006 based on BS EN ISO 6888-1:1999
Shellfish	<i>Escherichia coli</i>	PMF026 using MPN
TOYS AND TOY PACKAGING	<u>Mechanical and Physical Properties</u>	
	4.x and 5.x refer to requirement clauses from BS EN 71-1:2005 + A9:2009	Documented in-house methods identified by method number PCx based on test method clauses (8.x) from BS EN 71-1:2005 + A9:2009
	4.5 Glass	PC031 (8.10)
	4.7 Edges	PC033 (8.11)
	4.8 Points and metallic wires a) and b)	PC034 (8.12)



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TOYS AND TOY PACKAGING (cont'd)	<u>Mechanical and Physical Properties</u> 4.x and 5.x refer to requirement clauses from BS EN 71-1:2005 + A9:2009 (cont'd) 4.22 Small balls 4.23 Magnets 5.1 General requirements a) 5.1 General requirements b) 5.2 Filling materials 5.7 Glass and porcelain 5.8 Shape and size of certain toys 5.10 Small balls 5.11 Play figures 5.13 Suction cups ¹ excluding 8.6 (tip over test) and 4.10.4 Springs ³ excluding 8.6 (tip over test) 8.8 Compression test 8.9 Soaking test	PC044 (8.32) PC031 (8.34 & 8.35) PC060 (8.2) PC061 referencing PC060 (8.2), PC040 (8.3), PC040 (8.4.2.1), PC040 (8.9), PC037 (8.5), PC037 (8.7), PC033 (8.10), PC031 (8.11), PC034 (8.12), PC042(8.8) PC062 (8.4.2.2) PC066 (8.10) PC067 (8.16) PC069 (8.32) PC070 (8.33) PC072 (8.32) PC042 (8.8) PC040 (8.9)
TOYS	<u>Chemical Tests</u> Soluble cadmium Soluble chromium Soluble lead	PC001 and PC020 based on BS EN 71:Part 3 1995 and in accordance with The Toys (Safety) Regulations using Electrothermal Atomic Absorption Spectrometry (ETAAS)



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<p>WATERS</p> <p>Private water supplies Potable waters</p>	<p>Examination for the purpose of enforcement of The Private Water Supplies (Scotland) Regulations 2006 (SI 2006/209), and Examination for the purpose of enforcement of The Water Supply (Water Quality) (Scotland) Regulations 2001 (SI 2001/207)</p> <p><u>Chemical Tests</u></p> <p>Ammonia</p> <p>Chloride, nitrate, nitrite</p> <p>Colour</p> <p>Conductivity</p> <p>Copper, Zinc</p> <p>Lead, Manganese</p> <p>pH</p> <p>Turbidity</p> <p><u>Microbiological Tests</u></p> <p>Enumeration of:</p> <p>Total coliforms and <i>E Coli</i></p> <p>Total coliforms and <i>E Coli</i></p> <p>Detection and enumeration of <i>enterococci</i></p>	<p>Methodology meeting the requirements of The Drinking Water Testing Specification</p> <p>Documented In-House Methods</p> <p>PW 034 using spectrophotometry</p> <p>PW026 using Ion Chromatography</p> <p>PW036 using Colorimetry</p> <p>PW013 using using conductivity meter</p> <p>PW005 using Flame AAS</p> <p>PW008 using Electrothermal vaporisation/AAS</p> <p>PW015 using pH Meter</p> <p>PW007 using Turbidity Meter</p> <p>Documented In-House Methods</p> <p>PMW008 based on the Microbiology of Drinking Water (2002):Part 4 using the colilert system</p> <p>PMW001 based on the Microbiology of Drinking Water (2002):Part 4 using membrane filtration</p> <p>PMW006 based on the Microbiology of Drinking Water 2006:Part 5 by membrane filtration</p>



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<p>WATERS (cont'd)</p> <p>Private water supplies Potable waters (cont'd)</p>	<p><u>Microbiological Tests</u> (cont'd)</p> <p>Isolation and enumeration of sporulated sulphite-reducing clostridia and clostridium perfringens</p> <p>Total Colony Count at 22 °C and 37 °C</p> <p>Total coliforms and <i>E Coli</i></p> <p>Detection and enumeration of <i>enterococci</i></p> <p>Isolation and enumeration of sporulated sulphite-reducing clostridia and clostridium perfringens</p> <p>Total Colony Count at 22 °C and 37 °C</p> <p><u>Chemical Tests and Physical Tests</u></p> <p>Alkalinity</p> <p>Conductivity</p>	<p>PMW007 based on The Microbiology of Drinking Water 2004:Part 6 using membrane filtration</p> <p>PMW003 based on the microbiology of drinking Water (2007):Part 7 - Methods for the enumeration of heterotrophic bacteria</p> <p>PMW001 based on the Microbiology of Drinking Water (2002):Part 4 using membrane filtration</p> <p>PMW006 based on the Microbiology of Drinking Water 2006:Part 5 by membrane filtration</p> <p>PMW007 based on The Microbiology of Drinking Water 2004:Part 6 using membrane filtration</p> <p>PMW003 based on the microbiology of drinking Water (2007):Part 7 - Methods for the enumeration of heterotrophic bacteria</p> <p>Documented In-House Methods identified by method number PWx based on/incorporating published procedures in the HMSO series 'Methods for the Examination of Water and Associated Materials' referenced by ISBN number and year</p> <p>PW 018 ISBN 011 751 601 5, 1981</p> <p>PW 013 ISBN 011 751 428 4, 1978</p>



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WATERS (cont'd)	<u>Chemical Tests and Physical Tests</u> (cont'd)	
Raw, potable and recreational waters (cont'd)	Hardness, total	PW 014 ISBN 011 751 600 7, 1981
	pH	PW 015 ISBN 011 751 428 4, 1978
	Turbidity	PW 007 ISBN 011 751 955 3, 1981
	Aluminium, Copper, Iron, Manganese, Zinc	PW040 using ICP-OES
	Barium, Boron, Calcium, Magnesium, Potassium, Phosphorus, Sodium, Sulphur Total Hardness & Sulphate by calculation	PW041 using ICP-OES
	Chromium Cobalt Lead Lithium Manganese Molybdenum Nickel Silver Strontium	PW 008 based on ISBN 011 752 003 9, 1987 and ISBN 011 752 095 0, 1988 by Electrothermal AAS
	Mercury	PW 029 using cold vapour atomic absorption spectrophotometry
WATERS Raw, potable and recreational waters WASTEWATERS	Bromide Chloride Fluoride Iodide Nitrate Nitrite Phosphate Sulphate	PW 026 ISBN 011 752 331 3, 1990 using Ion Chromatography



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WASTEWATERS Untreated and treated domestic and industrial wastewaters and leachates	Cadmium	PW 027 by Varian Model 220FS, Flame Atomic Absorption Spectrophotometer
	Copper	
	Iron	
	Lead	
	Manganese	
	Nickel	
	Zinc	
	Calcium	PW005 using Flame Atomic Absorption Spectrophotometer
	Chromium	PW 028 by Varian Model 220FS, Flame Atomic Absorption Spectrophotometer
	Magnesium	PW005 using Flame Atomic Absorption Spectrophotometer
	Potassium	PW 032 using Flame Atomic Absorption Spectrophotometer
	Sodium	
	Alkalinity (total)	PW 018 using Titrimetry
	Ammonia	PW034 using spectrophotometry
Biochemical Oxygen Demand (5 day)	PW 011 ISBN 011 752 212 0, 1988	
Chemical Oxygen Demand	PW 033 ISBN 011 751 915 4, 1986	
Conductivity	PW 013 using conductivity meter ISBN 011 751 428 4, 1978	
pH	PW 015 ISBN 011 751 428 4, 1978	
Solids, suspended	PW 016 ISBN 011 751 957 X, 1980	



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<p>WATERS</p> <p>Raw, potable and recreational waters</p>	<p><u>Microbiological Tests</u></p> <p>Isolation and Enumeration:</p> <p>Coliforms <i>Escherichia coli</i>]</p> <p>Colony Count at 22° and 37°</p> <p>Enterococci <i>Pseudomonas aeruginosa</i></p> <p>Detection: <i>Campylobacter</i> spp</p> <p>Legionella spp</p>	<p>Documented In-House Methods identified by method number PMWx, based on/incorporating published procedures in The Microbiology of Drinking Water (2002) - Methods for the Examination of Waters and Associated Materials - Report by the Environment Agency (MDW 2002)</p> <p>1) PMW 001 based on MDW 2009, Part 4A</p> <p>2) PMW 008 by Colilert System based on MDW 2009, Part 4D</p> <p>PMW 003 based on MDW 2002, Part 7</p> <p>PMW 006 using membrane filtration</p> <p>PMW 005 based on MDW 2002, Part 8</p> <p>PMF 025 based on MDW 2002 Part 10 and BS EN ISO 10272-1:2006</p> <p>PMW 002 based on ISO 11731:1998</p>
DIFFUSION TUBE SAMPLERS	Nitrogen dioxide	PE 002 by spectrophotometry
END		