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ILS Limited

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Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
BEVERAGES	Chemical and Physical Tests	Documented In-House Methods:-
Beers, wines and spirits (and foodstuffs)	Determination of ethanol content (0.01 - 50% v/v)	30.18 using gas chromatography with flame ionisation detection (GC-FID)
Beers, wines and spirits	Alcohol	30.105 using steam distillation
	Sorbic acid	30.112 using gas chromatography by FID
Wines	Volatile Acid as 'Acetic Acid'	30.124 using steam distillation
Liquids	Density/specific gravity/original gravity/present gravity/residual gravity	30.107 using Anton Paar densitometer
	Chloride	30. 129 using Potentiometric Titration
	Ochratoxin A	30.76 by HPLC with Fluorescence Detection
	Nitrate/Nitrite	30.53 by anion exchange chromatography

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ANIMAL FEEDS	Microbiological Tests	Documented In-House Methods:-
	Detection:	
	Salmonella spp and species identification	11.08 using selective enrichment in RVS broth and plating on XLD and BGA to meet the requirements of the Animal By Products Regulations (ABPR) 2005
	Presumptive Enterobacteriaceae	10.60 based on BS ISO 21528-2:2004 in accordance with the Animal By Products Regulations (ABPR) 2005
ENVIRONMENTAL SWABS	Microbiological Tests	Documented In-House Methods:-
	Detection:	
	Listeria spp and species identification	1) 11.14 using Buffered Listeria Enrichment Broth and plating on Oxford agar. (CCFRA Technical Manual No 43, 5th Edition 2007, Methods 3.2.4 & 3.2.7) 2) 11.24 using Half Fraser Broth and Buffered Listeria Enrichment Broth followed by Clearview ELISA. (CCFRA Technical Manual No 43, 5th Edition 2007, Method 3.2.7)
	Salmonella spp and species identification	1) 11.08 based on ISO 6579:2002 using single selective enrichment in RV Broth and plating on XLD and BGA 2) 11.26 based on BS EN ISO 6579:2002
	Enumeration:	
	Coliforms	10.50 based on BS ISO 4832:2006
	Presumptive Enterobacteriaceae	10.60 based on BS ISO 21528-2:2004

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ENVIRONMENTAL SWABS (cont'd)	Microbiological Tests (cont'd)	Documented In-House Methods:-
	Enumeration:	
	Escherichia coli	a) Customer specified method 11.01 based on BS 5763-13:1998
	Escherichia coli (ß-glucuronidase positive)	b) 11.29 based on BS ISO 16649-1:2001 using membrane method
	Presumptive Enterococci (Group D)	11.04
	Coagulase positive *Staphylococci*	11.05 based on BS EN ISO 6888-1:1999 using latex kit for confirmation
	Total viable count (mesophilic)	10.01 based on BS EN ISO 4833:2003
FOOD and FOOD PRODUCTS	Chemical and Physical Tests	Documented In-House Methods:-
	Vitamins:	Documented In-house methods using Turbidimetric Microbiological Assay
	B6 (Pyridoxine)	30.114
	B12 Cyanocobalamin	30.117
	B3 (Nicotinic Acid)	30.119
	B5 (Pantothenic Acid)	30.121
	Folic Acid	30.116
	Biotin	30.120
	Acidity	30.63 by titrimetry
	Ash	30.05 using gravimetric method
	Ash plus moisture	30.03
	Available carbohydrate	30.15
	Chloride as sodium chloride	30.09 using titrimetric method
	Cholesterol	30.97 using gas chromatography

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOOD and FOOD PRODUCTS (cont'd)	Chemical and Physical Tests (cont'd)	Documented In-House Methods:-
	Dietary fibre	1) 30.37 using modified Englyst method by gas chromatography
		2) 30.44 AOAC method using Sigma Total Dietary Fibre (AOAC) Kit
	ERH/A_w	30.59 using Novasina Thermoconstanter
	Elemental analysis:	
	Arsenic	30.23 using hydride generation - atomic absorption spectroscopy
	Calcium	30.27 using flame atomic absorption spectroscopy
	Copper	30.29 using flame atomic absorption spectroscopy
	Iron	30.26 using flame atomic absorption spectroscopy
	Lead	30.22 using flame atomic absorption spectroscopy
	Magnesium	30.99 using flame atomic absorption spectroscopy
	Potassium	30.21 using flame atomic absorption
	Sodium	30.20 using flame atomic absorption spectroscopy
	Zinc	30.28 using flame atomic absorption spectroscopy
	Fat	1) 30.07 - Werner-Schmid
		2) 30.08 - Rose Gottlieb
		3) 30.83 by NMR

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOOD and FOOD PRODUCTS (cont'd)	Chemical and Physical Tests (cont'd)	Documented In-House Methods:-
	Elemental analysis:	
	Total Fat	30.134 using Acid Hydrolysis using Soxcap/soxtec extraction
	Fatty acid profile	30.16 using gas chromatography
	Hydroxyproline (collagen)	30.68 colorimetric, based on BS 4401 Part II 1995
	Meat content (apparent), energy value and total carbohydrates	30.14 by calculation
	Moisture	1) 30.02 by gravimetric method
		2) 30.04 - Dean and Stark
		3) 30.83 by microwave drying
	Moisture by vacuum	30.93 using gravimetric method
	Nitrite	30.10 using colorimetry
	Nitrate / Nitrite	30.53 by anion exchange chromatography
	Nitrogen/protein	30.86 Dumas method using Leco FP-2000
	Phosphate (phosphorous)	30.48 using colorimetric method
	pH value	30.60 using electrometric method
	Refractometer solids	30.41 by refractometer
	Saccharin	30.109 using high performance liquid chromatography
	Selenium, Arsenic Mercury	30.135 using atomic fluorescence 30.136 using atomic fluorescence
	Sorbic acid	30.73 using high performance liquid chromatography

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOOD and FOOD PRODUCTS (cont'd)	Chemical and Physical Tests (cont'd)	Documented In-House Methods:-
	Elemental analysis:	
	Starch - native and chemically modified	30.13 using enzyme hydrolysis and titrimetry (Lane and Eynon)
	Sugars - total	30.12 using titrimetry (Lane and Eynon)
	Vitamins A, E	30.54 by HPLC using UV/VIS
	Vitamin C	30.57 by HPLC using UV/VIS
DAIRY PRODUCTS	Low level Lactose	30.137 using Ion Chromatography
Cereals, Nuts, Spices and Dried fruit	Aflatoxin B_1, B_2, G_1, G_2	30.46 with HPLC Fluorescence Detection
	Ochratoxin A	30.76 by HPLC Fluorescence Detection
Cooked Meat & Meat Products	Meat Species	30.126 using ELISA
Uncooked Meat, Meat Products & Milk	Meat Species	30.84 using ELISA
FOODS AND BEVERAGES	Inorganic anions - choride - nitrate - sulphate - phosphate	30.67 using anion exchange chromatography
	Casein/milk protein	30.81 by ELISA method
	Total sugars for the purposes of the Food Labelling Regulations 1996	30.65 by HPLC
	Sulphur dioxide	i) 30.79 by distillation ii) 30.80 by DIHM based on Monier Williams method
Black and white pepper	Piperine	30.61 based on BS 4585-12: 1983, ISO 5564: 1982

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOOD and FOOD PRODUCTS (cont'd)	Chemical and Physical Tests (cont'd)	Documented In-House Methods:-
RAW and COOKED FOODSTUFFS	Peanut content	STM 30.58 using Biokits Peanut Assay kit
	Almond content	STM 30.131 using Biokits Almond Assay kit
	Hazelnut content	STM 30.132 using Biokits Hazelnut Assay kit
	Gluten	STM 30.56 using Biokits Gluten Assay kit
FISH, CHEESE, WINE	Histamine	30.133 using ELISA
FOODS and FOOD PRODUCTS	Microbiological Tests	Documented In-House Methods:-
	Detection:	
	Escherichia coli O157	1) 11.27 based on BS EN ISO 16654-2001 using IMS technique (Dynalbeads) 2) 11.19 – In-house method using selective enrichment in modified EC medium and plating on Sorbitol MacConkey and CT-SMAC agars.

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOODS and FOOD PRODUCTS	Microbiological Tests Detection:	Documented In-House Methods:-
	Listeria spp and species identification	1) 11.24 using Half Fraser Broth and Buffered Listeria Enrichment Broth followed by Clearview ELISA. (CCFRA Technical Manual No 43, 5th Edition 2007, Method 3.2.7) 2) 11.14 using Buffered Listeria Enrichment Broth and plating on Oxford agar (CCFRA Technical Manual No 43, 5th Edition 2007, Methods 3.2.4 & 3.2.7) 3) 11.35 customer specified method using Buffered Listeria Enrichment Broth and plating on Oxford agar 4) 11.25 using selective enrichment in Buffered Listeria Enrichment Broth and plating onto Oxford agar. (FDA Bacteriological Analytical Manual January 2003)
FOODS and FOOD PRODUCTS (excluding raw meats)	*Salmonella* spp and species identification	1) 11.26 based on BS EN ISO 6579:2002 2) 11.08 – In-house method based on ISO 6579:2002using single selective enrichment in RV Broth and plating on XLD and BGA
	Campylobacter spp	11.16 based on BS EN ISO 10272-1:2006
	Vibrio parahaemolyticus	11.15 based on Practical Food Microbiology, 3rd Edition, 2003, Method 2
	Coliforms	10.52 based on Practical Food Microbiology, 3rd edition, 2003, Method 4 using LTSB
	Escherichia coli	11.03 based on Practical Food Microbiology, 3rd edition, 2003, Method 4 using LTSB

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOODS and FOOD PRODUCTS (cont'd)	Microbiological Tests (cont'd)	Documented In-House Methods:-
	Enumeration:	
	Bacillus cereus	11.10 based on HPA Standard Method F15, issue 1 using PEMBA agar
	Presumptive Clostridia - sulphite reducing	11.06 based on BS ISO 15213:2003
	Presumptive and confirmed *Clostridium perfringens*	11.07 based on CCFRA Technical Manual No 43, 5th Edition 2007, Method 3.6.1
	Coliforms	1) 10.50 based on BS ISO 4832:2006
		2) 10.51 based on ISO 4831:2006, by Most Probable Number
	Presumptive *Enterobacteriaceae*	10.60 based on BS ISO 21528-2:2004
	Escherichia coli	1) Customer specified method 11.01 based on BS 5763-13:1998
	Escherichia coli (ß-glucuronidase positive)	2) 11.29 based on BS ISO 16649-1: 2001 using membrane method
	Presumptive Enterococci (Group D)	11.04
	Lactic acid bacteria	11.13 based on BS EN ISO 15214:1998
	Listeria spp and species identification	11.18 based on Practical Food Microbiology, 3rd Edition, 2003, Method 3
	Pseudomonas spp	11.09 based on BS 7857-1:1996
	Spore count (aerobic)	11.12 based on CCFRA Technical Manual No 43, 5th Edition 2007, Method 1.2.1
	Spore count (anaerobic)	11.23 based on CCFRA Technical Manual No 43, 5th Edition 2007, Method 1.2.1

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FOODS and FOOD PRODUCTS (cont'd)	Microbiological Tests (cont'd)	Documented In-House Methods:-
	Enumeration:	
	Coagulase positive Staphylococci	11.05 based on BS EN ISO 6888-1:1999 using latex kit for confirmation
	Total viable count (mesophilic)	10.01 based on BS EN ISO 4833:2003 using PCA or MPCA
	Total viable count (thermophilic)	10.02 based on CCFRA Technical Manual No 43, 5th Edition 2007, Method 1.1.1 using PCA, MPCA or Dextrose Tryptone agar.
	Total viable count (anaerobic mesophilic)	10.03 based on CCFRA Technical Manual No 43, 5th Edition 2007, Method 1.1.1 using Fastidious Anaerobe agar or Reinforced Clostridial agar Pour Plate
	Total viable count (anaerobic thermophilic)	10.04 based on CCFRA Technical Manual No 43, 5th Edition 2007, Method 1.1.1.1 using Fastidious Anaerobe agar Pour Plate
	Yeasts and Moulds	10.70 based on ISO 7954:1987 & CCFRA Technical Manual No 43, 5th Edition 2007, Method 2.1 is in lab's method using RBCA agar
MEDICAL EQUIPMENT	Microbiological Tests	
	(as appropriate for the product category as detailed in relevant pharmacopoeial monograph)	Specifications and methods detailed in the British Pharmacopoeia (BP), the European Pharmacopoeia (EP), and the US Pharmacopoeia (USP), supplemented by in house documented procedures
	Sterility test	ILS 13.01 USP by direct inoculation
	Bacterial endotoxins	12.05 by Limulus test using gel clot in accordance with BP/EP/USP
	Antibiotic assay	12.01 by large plate assay

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
PHARMACEUTICAL PRODUCTS	<u>Microbiological Tests</u>	
	(as appropriate for the product category as detailed in relevant pharmacopoeial monograph)	Specifications and methods detailed in the British Pharmacopoeia (BP), the European Pharmacopoeia (EP), and the US Pharmacopoeia (USP), supplemented by in house documented procedures
	Efficacy of antimicrobial preservatives	1) 13.03 in accordance with EP/BP 2) 13.04 in accordance with USP
	Microbial contamination	1) 13.05 in accordance with EP/BP 2) 13.06 in accordance with USP
	Microbial examination of non-sterile products	13.35 in accordance with harmonised EP/USP method
	Sterility	13.01 in accordance with EP/BP/USP- Membrane Filtration or Direct Inoculation
	Bacterial endotoxins	12.05 by Limulus test using gel clot
WATER (Potable, Process)	<u>Microbiological Tests</u>	Documented In House Methods based on The Microbiology of Drinking Water (MDW) Environment Agency
	Enumeration of:	
	Clostridium perfringens and Sulphite Reducing Clostridia	13.20 using membrane filtration, based on MDW 2004, Part 6
	Colony Count at 22°C & 37°C	13.07 by pour plate, based on MDW 2007, Part 7
	Faecal Streptococci	13.18 using membrane filtration, based on MDW 2002, Part 5
	Pseudomonas aeruginosa	13.19 using membrane filtration, based on MDW 2002, Part 8
	Coliforms & E. coli	11.30 using Colilert, based on MDW 2002, Part 4

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
WATER (Potable, Process) (cont'd)	Microbiological Tests	Documented In House Methods based on The Microbiology of Drinking Water (MDW) Environment Agency
	Detection of:	
	Legionella spp and identification of *Legionella pneumophila* sero group 1 and groups 2-14	Documented In-House Method 13.08 based on BS 6068-4.12:1998; ISO 1731:1998
	Salmonella spp and species identification	Documented In House Method 13.21 based on "The Microbiology of Drinking Water 2004"
FOODS AND FOODSTUFFS (unspecified)	Qualitative screening for genetically modified plant material:	
	Round- up- Ready Soya Maximiser Maize 35S Promoter Gene NOS Terminator Gene	Documented In-House Methods Nos. 30.123 / 30.127 / 30.128 using extraction, multiplication and electrophoresis of DNA
END		