

# Schedule of Accreditation



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Trading As	Health Service Executive - Public Analyst's Laboratory, Dublin
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Scope Classification	Biological and Veterinary Testing
Scope Classification	Chemical Testing
Services available to the public <sup>1</sup>	

<sup>1</sup> Refer to document on interpreting INAB Scopes of Accreditation

Sites from which accredited services are delivered		
(the detail of the accredited services delivered at each site are on the Scope of Accreditation)		
	<b>Name</b>	<b>Address</b>
1	Head Office	Sir Patrick Dun's, Lr. Grand Canal Street, Dublin, D2

# Scope of Accreditation

## Head Office

### Biological and Veterinary Testing

Category: A

Biology/veterinary field - Tests	Test name	Technique	Matrix	Equipment	Std. reference	
801 Macroscopic examination and description	SOP PALM 0029 Determination of water activity in food	Dew point technique	Food	AQUALAB Water Activity Meter Series 4TE	ISO 18787:2017	
803 Culture of organisms in liquid or agar based culture media with visual or instrument monitoring for growth - .01 Culture of bacteria	PALM 0010 Enumeration of Enterobacteriaceae and Escherichia coli by Rebecca EB	Standard plate method - surface plate count	Food products intended for human consumption (broad range)	Standard microbiological equipment	AFNOR validated alternative to ISO 21528-2:2017 (AES 10/07-01/08) and ISO 16649-2:2001 (AES 10/06-01/08)	
	SOP PALM 0001 **3 Enumeration of microorganisms - Aerobic colony count at 30°C for 72 hours  SOP PALM 0001 (S) **3 Enumeration of microorganisms -	Colony count technique - pour plate method  (S) = Surface plate technique - spiral plate method	Dairy products Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Fruit and vegetables Prepared dishes	Standard	I.S. EN ISO 4833-1:2013/Amd.1:2022  I.S. EN ISO 4833-2:2013 & AC:2014 & Amd.1 2022	

Aerobic colony count at 30°C for 72 hours.		Environmental swabs - Stick swabs			
SOP PALM 0003(S) **3 Enumeration of presumptive Bacillus cereus using BCA	(S) = Surface plate technique - spiral plate method	Dairy products Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Cereals and bakery products Fruit and vegetables Prepared dishes	Standard	Based on ISO 7932:2004/Amd.1:2020 & LC 2020	
SOP PALM 0004 **3 Detection of salmonella spp in food	Standard culture method	Dairy products Eggs and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Soups, broths and sauces Cereals and bakery products Fruit and vegetables Herbs and spices Alcoholic beverages (other than wine) – Cream Liqueurs Ices and desserts Confectionery Nuts and nut products Prepared dishes Foodstuffs intended for particular	Standard	I.S. EN ISO 6579:2017/Amd.1:2020	

		nutritional uses Environmental swabs - Stick swabs			
SOP PALM 0006 **3 Enumeration of Clostridium perfringens in food	Pour plate method	Dairy products Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Soups, broths and sauces Fruit and vegetables Prepared dishes	Standard	I.S. EN ISO 7937:2004	
SOP PALM 0009 **3 Enumeration of Enterobacteriaceae by the colony count technique (without resuscitation)	Standard pour plate method	Dairy products Eggs and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Soups broths and sauces Fruits and vegetables Alcoholic beverages (other than wine) – Cream liqueurs Confectionery Prepared dishes	Standard	ISO 21528-2:2017	
SOP PALM 0017 **3 Detection of Listeria monocytogenes and Listeria spp	Standard culture method	Dairy products Egg and egg products Meat and meat products, game and	Standard	I.S. EN ISO 11290-1:2017	

		poultry Fish, shellfish and molluscs Cereals and bakery products Fruit and vegetables Prepared dishes Environmental swabs - Stick and sponge swabs			
SOP PALM 0018(S) **3 Enumeration of Listeria spp and L. monocytogenes	(S) = Surface plate technique - spread plate method	Dairy products Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Fruit and vegetables Prepared dishes	Standard	I.S. EN ISO 11290-2:2017	
SOP PALM 0023 **3 Detection of Campylobacter spp	Standard culture method	Dairy Products, Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Fruit and vegetables Prepared dishes Surfaces - Stick Swabs	Standard	I.S. EN ISO 10272-1:2017/Amd.1:2023 Version 2.01 Procedure A	
SOP PALM 0026 **3 Enumeration of $\beta$ -glucuronidase positive E.coli by colony count at 44°C using TBX	Standard pour plate method	Dairy products Egg and egg products Meat and meat products, game and poultry	Standard	ISO 16649-2:2001	

		Fish, shellfish and molluscs Soups, Broths and Sauces Confectionery Cereals and bakery products Cocoa and cocoa preparations, coffee and tea Prepared dishes Fruit and vegetables			
SOP PALM 0027 Enumeration of $\beta$ -glucuronidase positive Escherichia coli by Most Probable Number (MPN) technique **3	MPN technique, direct culture	Fish, shellfish and molluscs	Standard	I.S. EN ISO 16649-3:2015/Corr.2016	
SOP PALM 0028 **3 Detection and enumeration of Vibrio parahaemolyticus	Detection method: standard culture method  Enumeration method: Surface plate technique - spread and spiral plate method	Fish, shellfish and molluscs	Standard	Based on ISO 21872-1:2017/Amd.1:2023	
SOP PALM 0061 **3 Enumeration of coagulase-positive Staphylococci by RPF technique	Standard pour plate method	Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Soups, broths and sauces Cereals and bakery	Standard	I.S. EN ISO 6888-2:2021	

		products Fruit and vegetables Prepared dishes			
SOP PALM 0102 Detection and enumeration of Enterococci in water by membrane filtration	Membrane filtration	Potable waters Swimming pools and spas Environmental waters	Membrane filtration manifold and associated standard equipment	Based on I.S. EN ISO 7899-2:2000	
SOP PALM 0104 Detection and enumeration of Sulphite Reducing Clostridia and Clostridium perfringens in water		Potable waters Swimming pools and spas Environmental waters	Membrane filtration manifold and standard associated equipment	Based on Microbiology of Drinking Water 2021, Part 6	
SOP PALM 0106 Detection and enumeration of Pseudomonas aeruginosa in water		Swimming pools and spas Potable Waters	Membrane filtration manifold and associated standard equipment	Based on Microbiology of Drinking Water (2015), Part 8,B and Microbiology of Recreational and Environmental Water (2015) Part 7,C	
SOP PALM 0107 Enumeration of heterotrophic bacteria -colony count technique at 22°C or 37°C	Standard pour plate method	Potable waters Swimming pools and spas	Standard	Based on I.S. EN ISO 6222:1999	
SOP PALM 0108 Enumeration of Coliforms and E. coli in water using Colilert IDEXX Quanti-Tray™ MPN	MPN method	Environmental waters Potable waters Swimming pools and spas	Standard	ISO 9308-2:2012	

SOP PALM 0111 Detection and enumeration of Coliforms and E.coli in water with low bacterial background flora by membrane filtration	Membrane filtration	Potable waters	Membrane filtration manifold and associated equipment	ISO 9308-1:2014 /AMD.1:2016	
SOP PALM 0112 Enumeration of Legionella in water		Potable waters	Membrane filtration manifold and associated equipment	ISO 11731:2017, Membrane filtration on plate: procedures 5 and 7. Filtration with washing procedures 8 and 9	
SOP PALM 3000 Enumeration of Aerobic Mesophilic Bacteria in cosmetic products	Standard pour plate method	Cosmetic products Impregnated/coated wipes and masks	Standard Microbiological Equipment	ISO 21149:2017/Amd 1:2022	
SOP PALM 3001 Detection of Pseudomonas aeruginosa in cosmetic products	Standard culture method	Cosmetic products Impregnated/coated wipes and masks	Standard Microbiological Equipment	ISO 22717:2015/Amd 1: 2022	
SOP PALM 3002 Detection of Staphylococcus aureus in cosmetic products		Cosmetic products Impregnated/coated wipes and masks	Standard Microbiological Equipment	ISO 22718:2015/Amd 1:2022	
SOP PALM 3006 Detection of Escherichia coli in cosmetic products		Cosmetic products Impregnated/coated wipes and masks	Standard microbiological equipment	ISO 21150:2015/Amd 1:2022	
SOP PALM 4001 **3 Detection of Salmonella spp. using an automated	Elfa Detection using VIDAS SLM Kit	Dairy Products Egg and egg products Meat and meat	Biomerieux VIDAS system	AFNOR VIDAS Salmonella (VIDAS SLM) method BIO 12/1-04/94 Screening method. Cultural and	

	enzyme-linked fluorescent immunoassay system (VIDAS)		products, game and poultry Fish, shellfish and molluscs Soups, broths and sauces Cereals and bakery products Fruit and vegetables Herbs and spices Alcoholic beverages other than wine (Cream liqueur) Ices and desserts Confectionery Nuts and nut products Prepared dishes Environmental swabs - Stick swabs Foodstuffs intended for particular nutritional uses		confirmation aspects - I.S. EN ISO6579:2017/Amd.1:2020	
803 Culture of organisms in liquid or agar based culture media with visual or instrument monitoring for growth - .02 Culture of fungi	SOP PALM 0025 **3 Enumeration of yeasts and moulds in products with water activity greater than 0.95	Standard plate count - spread plate method	Cereals and bakery products Fruit and vegetables Non-alcoholic beverages Soups, broths and sauces Alcoholic beverages (other than wine)	Standard	ISO 21527-1:2008	
	SOP PALM 0080 **3 Enumeration of yeasts and moulds in products with water activity less than or		Cereals and bakery products	Standard	ISO 21527-2:2008	

	equal to 0.95					
	SOP PALM 3003 Enumeration of Yeasts & Mould in Cosmetic Products	Standard pour plate method	Cosmetic products Impregnated/coated wipes and masks	Standard Microbiological Equipment	ISO 16212:2017/Amd.1:2022	
	SOP PALM 3007 Detection of Candida albicans in cosmetic products	Standard culture method	Cosmetic products Impregnated/coated wipes and masks	Standard microbiological equipment	ISO 18416:2015/Amd 1:2022	
803 Culture of organisms in liquid or agar based culture media with visual or instrument monitoring for growth - .04 Culture of yeasts	SOP PALM 0025 **3 Enumeration of yeasts and moulds in products with water activity greater than 0.95	Standard plate count - spread plate method	Cereals and bakery products Fruit and vegetables Non alcoholic beverages Soups, broths and sauces Alcoholic beverages (other than wine)	Standard	ISO 21527-1:2008	
	SOP PALM 0080 **3 Enumeration of yeasts and moulds in products with water activity less than or equal to 0.95	Standard plate counts - spread plate method	Cereals and bakery products	Standard	ISO 21527-2:2008	
	SOP PALM 3003 Enumeration of Yeasts and Moulds in cosmetic products	Standard pour plate method	Cosmetic products Impregnated/coated wipes and masks	Standard Microbiological Equipment	ISO 16212:2017/Amd 1:2022	

## Head Office

### Chemical Testing

Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
710 Materials testing - .03 Chemical analysis	SOP PALC 0117 - The determination of the specific migration of formaldehyde from kitchenware by UV/Vis spectrophotometry **1 2 3 4	Residual formaldehyde	3.0 to 30.0 mg/kg Food simulant (analysed in 3% acetic acid solution, results obtained must be corrected for the surface area of the individual article under analysis)	Melamine kitchenware	UV/Vis spectrophotometry	Based on the determination of formaldehyde in food simulants I.S. CEN/TS 13130-23:2005
	SOP PALC 0039 - The determination of Epoxidised Soybean Oil in Food, Food simulant and PVC Gasket **1 2 3 4	Epoxidised soybean oil (ESBO)	3.0 % to 50 % w/w	PVC Gasket	GC-MS	In-house procedure based on Castle, L., Sharman, M., and Gilbert, J. A.O.A.C. No.6., 71, 1183-1186
	SOP PALC 0089 - The determination of bisphenol A in food contact materials and foodstuffs by HPLC and fluorescence detection **1 2 3 4	Bisphenol A	1 to 1000 µg/kg (analysed in 50% aqueous ethanol food simulant, results obtained must be corrected for the surface area of the individual article under analysis)	Food Contact Materials	HPLC and Fluorescence Detection	In house test procedure
	SOP PALC 0090 - The determination of plasticisers in PVC, Oil Food Simulant and Food **1 2 3 4	Plasticisers: diisooctyl phthalate (DIOP), diisononyl cyclohexanedicarboxylate (DINCH), diisononyl phthalate (DINP),	0.02 to 35 % w/w	PVC	GC-MS	In-house test method

	diisodecyl phthalate (DIDP)				
	Plasticisers: dimethyl adipate (DMA), diethyl adipate (DEA), dimethyl phthalate (DMP), diethyl phthalate (DEP), dimethyl sebacate (DMS), triethylcitrate (TEC), diethyl sebacate (DES), diisobutyl phthalate (DIBP), dibutyl phthalate (DBP), dihexyl phthalate (DHP), benzyl butyl phthalate (BBP), dicyclohexyl phthalate (DCHP), diethylhexyl phthalate (DEHP), dioctyl terephthalate (DOTP/DETP), diallyl phthalate (DAP), diethyl sebacate (DES), dibutyl sebacate (DBS), tributylacetyl citrate (TBAC), diethylhexyl adipate (DEHA) di-n-octyl phthalate (DNOP) and diethylhexyl sebacate (DEHS)	0.005 to 35 % w/w	PVC	GC-MS	In-house test procedure
SOP PALC 0092 - The determination of the specific migration of primary aromatic amines (PAAs) from plastic kitchen utensils by UPLC-electrospray ionisation-tandem	Primary Aromatic Amines (PAAs): 2,4-Diaminoanisole 4,4'-Diaminodiphenylmethane (4,4'-methylenedianiline) 4,4'-Oxydianiline 4,4'-Benzidine Aniline	0.1 to 1,000,000 µg/kg for 2,4-Diaminoanisole 4,4'-Oxydianiline Aniline o-Anisidine (2-methoxyaniline) o-Toluidine (2-	Plastic Kitchen Utensils	UPLC-MS/MS	In-house test procedure

MS/MS **1 2 3 4	o-Anisidine (2-methoxyaniline) o-Toluidine (2-aminotoluene) 1,4-Phenylenediamine 4,4'-Methylene-bis(2-methylaniline) o-Dianisidine (3,3'-dimethoxybenzidine) 2,4 Dimethylaniline 2,4-Diaminotoluene 2-Methoxy-5-methylaniline 4-Chloroaniline 2,4,5-Trimethylaniline 2,6 Dimethylaniline 4,4'-Diaminodiphenyl sulphide 2-Naphthylamine 4-Aminobiphenyl 4-Chloro-2-methylaniline 2-Methyl-5-nitroaniline 4-Aminoazobenzene 3,3'-Dichlorobenzidine (3,3'-dichlorobiphenyl-4,4'-ylenediamine) 4,4'-Methylene-bis-(2-chloroaniline) (2,2'-dichloro-4,4'-methylene-dianiline) o-Aminoazotoluene (4-amino-2',3'-dimethylazobenzene) Total PAAs	aminotoluene) 4,4'-Methylene-bis(2-methylaniline) o-Dianisidine (3,3'-dimethoxybenzidine) 2,4 Dimethylaniline 2,4-Diaminotoluene 2-Methoxy-5-methylaniline 4-Chloroaniline 2,4,5-Trimethylaniline 2,6 Dimethylaniline 4,4'-Diaminodiphenyl sulphide 2-Naphthylamine 4-Aminobiphenyl 4-Chloro-2-methylaniline  0.2 to 1,000,000 µg/kg for 4,4'-Diaminodiphenylmethane (4,4'-methylenedianiline) 4,4'-Benzidine o-Tolidine 4-Aminoazobenzene 3,3'-Dichlorobenzidine (3,3'-dichlorobiphenyl-4,4'-ylenediamine) 4,4'-Methylene-bis-(2-chloroaniline) (2,2'-dichloro-4,4'-methylene-dianiline) o-Aminoazotoluene (4-amino-2',3'-dimethylazobenzene)  0.5 to 1,000,000 µg/kg			
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		1,4-Phenylenediamine 2-Methyl-5-nitroaniline  *Total PAAs: 0 to 26,000,000 µg/kg (*Note: based on lower bound calculation)			
SOP PALC 0094 - The determination of the specific migration of melamine from kitchenware by UPLC-electrospray ionisation-tandem MS/MS **1 2 3 4	Residual melamine	0.25 to 250 mg/kg food simulant (analysed as 3% acetic acid solution, results obtained must be corrected for the surface area of the individual article under analysis)	Melamine kitchenware	UPLC-MS/MS	Based on I.S.EN13130-1:2004
SOP PALC 0112 - The determination of the migration of cadmium and lead from ceramic and glass articles by Inductively Coupled Plasma Mass Spectroscopy **1 2 3 4	Lead and Cadmium	Ceramics: 0.2 to 40.0 mg/l (lead) 0.02 to 2.0 mg/l (Cadmium)(Analysed as 4% Acetic Acid solution, results obtained must be corrected for surface area of the individual non fill article under analysis). Glass articles: 0.003 to 0.20 mg/litre - Lead and Cadmium(analysed as 4% Acetic Acid, results obtained must be corrected for surface area of the individual non fill article under analysis)	Ceramics Glass articles	By ICP-MS	In-house test procedure
SOP PALC 0123 The determination of the specific migration of chromium and nickel from metal kitchen	Chromium and Nickel	Chromium 20 - 2000 µg/l Nickel 10 - 1000 µg/l (Analysed as 4% Acetic acid, results obtained must be corrected for the	Metal kitchen utensils	ICP-MS	In-house test procedure

utensils by ICPMS **1 2 3 4		surface area of the individual article under analysis)			
SOP PALC 0171 - The determination of the specific migration of metals from plastic kitchen ware by ICPMS **1 2 3 4	Aluminium Nickel	Aluminium: 0.025 to 1.50 mg/kg Nickel: 0.003 to 0.15 mg/kg (Analysed as 3% Acetic acid, results obtained must be corrected for the surface area of the individual article under analysis)	Plastic kitchen ware	ICP-MS	In-house test method
	Copper	0.100 to 6.0 mg/kg (Analysed as 3% Acetic acid, results obtained must be corrected for the surface area of the individual article under analysis)	Plastic kitchen ware	ICP-MS	In-house test method
	Iron	1.000 to 60.0 mg/kg (Analysed as 3% Acetic acid, results obtained must be corrected for the surface area of the individual article under analysis)	Plastic kitchen ware	ICP-MS	In-house test method
	Lithium	0.025 to 1.50 mg/kg (Analysed as 3% Acetic acid, results obtained must be corrected for the surface area of the individual article under analysis)	Plastic kitchen ware	ICP-MS	In-house test method
	Manganese	0.025 to 1.50 mg/kg (Analysed as 3% Acetic acid, results obtained must be corrected for the	Plastic kitchen ware	ICP-MS	In-house test method

		surface area of the individual article under analysis)			
	Zinc	0.100 to 6.0 mg/kg (Analysed as 3% Acetic acid, results obtained must be corrected for the surface area of the individual article under analysis)	Plastic kitchen ware	ICP-MS	In-house test method
SOP PALC 0171 The determination of the specific migration of metals from plastic kitchen ware by ICPMS **1 2 3 4	Barium	0.025 - 1.50 mg/kg (Analysed as 3% Acetic acid, results obtained must be corrected for the surface area of the individual article under analysis)	Plastic kitchen ware	ICP-MS	In-house test method
SOP PALC 0194 The determination of Perfluoralkylated substances in paper and board by LC-MS/MS **1 2 3 4	Perfluorobutanoic acid (PFBA) Perfluoropentanoic acid (PFPeA) Perfluorohexanoic acid (PFHxA) Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorodecanoic acid (PFDA) Perfluoroundecanoic acid (PFUnDA) Perfluorododecanoic acid (PFDoDA) Perfluorotriadecanoic acid (PFTrDA) Perfluorotetradecanoic	5 to 150 µg/kg	Paper and Cardboard	LC-MS/MS	In-house test procedure

		acid (PFTeDA) Perfluorohexadecanoic acid (PFHxDA) Perfluorobutane sulfonic acid (PFBS) Perfluorohexane sulfonic acid (PFHxS) Perfluorooctane sulfonic acid (PFOS) Perfluorodecane sulfonic acid (PFDS)				
	SOP PALCW 0024 The determination of the strength of hexafluorosilicic acid **1 2 3 4	Hexafluorosilicic Acid (HFSA)	HFSA in Aqueous solution (10 - 35%)	Misc Materials and products	By titrimetry	Based on I.S. EN 12175:2022
751 Food testing - .01 Migratory substances	SOP PALC 0039 - The determination of Epoxidised Soybean Oil in Food, Food simulant and PVC Gasket **1 2 3 4	Epoxidised soybean oil (ESBO)	3 to 1000mg/kg	Jarred foods including infant foods	GC-MS	In-house test procedure based on Castle, L., Sharman, M., and Gilbert, J. A.O.A.C. No.6., 71, 1183-1186
			30 to 12000 mg/kg	Food Simulant	GC-MS	In-house test procedure based on Castle, L., Sharman, M., and Gilbert, J. A.O.A.C. No.6., 71, 1183-1186
	SOP PALC 0116 - The determination of photo initiators in packaging and food by GC-MS **1 2 3 4	Photoinitiators Benzophenone (BP) Isopropylthioxanthone (ITX)	Food: 0.06 to 100.0 mg/kg Packaging: 0.2 to 450 mg/dm <sup>2</sup>	Food and Food Packaging	GC-MS	In-house test procedure based on Thermo scientific application note 'Analysis of benzophenone and 4-hydroxybenzophenone in breakfast cereal, 2012'
	SOP PALC 0119 The determination of	Perfluoroalkylated substances:	1 to 100 µg/kg for Perfluorobutanoic acid	Fish	UPLC-MS/MS	In-house test procedure

<p>certain perfluoroalkylated substances in fish by ultra performance liquid chromatography (UPLC) and tandem mass spectrometry (MS/MS) **1 2 3 4</p>	<p>Perfluorobutanoic acid (PFBA) Perfluoropentanoic acid (PFPeA) Perfluorobutane sulfonic acid (PFBS) Perfluorohexanoic acid (PFHxA) Perfluorohexane sulfonic acid (PFHxS) Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorooctane sulfonic acid (PFOS) Perfluorononanoic acid (PFNA) Perfluorodecanoic acid (PFDA) Perfluoroundecanoic acid (PFUnDA) Perfluorodecane sulfonic acid (PFDS) Perfluorododecanoic acid (PFDoDA) Perfluorotetradecanoic acid (PFTeDA) Sum of PFOS, PFOA, PFNA and PFHxS</p>	<p>(PFBA) and Perfluorotetradecanoic acid (PFTeDA)  0.5 to 100 µg/kg for Perfluoropentanoic acid (PFPeA) and Perfluorodecane sulfonic acid (PFDS)  0.1 to 100 µg/kg for all other analytes  *Sum of PFOS, PFOA, PFNA, PFHxS 0 to 400 µg/kg (*Note: based on lower bound calculation)</p>			
<p>SOP PALC 0181 - The determination of plasticisers in food by LC-MS/MS *1 2 3 4</p>	<p>Diethyl adipate (DEA) Dimethyl sebacate (DMS) Diethyl sebacate (DES) Dibutyl sebacate (DBS) Dimethyl phthalate (DMP)</p>	<p>6.0 to 300 mg/kg (for each analyte except DBP and BBP)  0.3 to 12 mg/kg (DBP)</p>	<p>Food</p>	<p>LC-MS/MS</p>	<p>In-house test procedure</p>

		Diethyl phthalate (DEP) Diallyl phthalate (DAP) Diisobutyl phthalate (DiBP) Dibutyl phthalate (DBP) Benzyl butyl phthalate (BBP) Dicyclohexyl phthalate (DCHP) Diisononyl phthalate (DINP) Diisodecyl phthalate (DIDP) Triethyl citrate (TEC) Tributylacetyl citrate (TBAC) Diisononyl cyclohexanedicarboxylate (DINCH)	3.0 to 160 mg/kg (BBP)			
	SOP PALC 0191 The determination of styrene in food and food packaging by HS-SPME-GC-MS/MS. **1234	Styrene	2.0 - 500 µg/kg Food Packaging (by article filling)  0.004- 1.00 mg/kg Food Packaging (by immersion)	Food Packaging	HS-SPME-GC-MS/MS	In-house test procedure
	SOP PALC 0191 The determination of styrene in food and packaging by HS-SPME-GC-MS/MS		1 - 250 µg/kg	Food	HS-SPME-GC-MS/MS	In-house test procedure
751 Food testing - .03 Compositional analysis	SOP PALC 0001 -The determination of percentage alcohol by volume in drinks **1 2 3 4	Alcohol by volume in drinks	2.5 - 70% v/v	Wine Alcoholic beverages (other than wine)	Distillation and electronic densimetry	Based on Commission Regulation (EC) No. 2870/2000 of 19/12/2000, as amended, laying down Community reference

						methods for analysis of spirit drinks.
SOP PALC 0005 - The determination of fructose, glucose and sucrose in selected food and drink samples by UPLC or HPLC with RI detection **1 2 3 4	Fructose, glucose, sucrose, total sugars	Honey: Fructose: 5.0-50.0% w/w Glucose: 5.0-50.0% w/w Sucrose: 5.0-50.0% w/w *Total Sugars 0-80.0% w/w (*Note: based on lower bound calculation)  Juices: Fructose: 0.1-10.0% w/v or g/100mL Glucose: 0.1-10.0% w/v or g/100mL Sucrose: 0.1-10.0% w/v or g/100mL *Total Sugars 0-30.0% w/v or g/100mL  Other drinks: Fructose: 0.1-20.0% w/v or g/100mL Glucose: 0.1-20.0% w/v or g/100mL Sucrose: 0.1-20.0% w/v or g/100mL *Total Sugars 0-60.0% w/v or g/100mL  (*Note: based on lower bound calculation)	Honey, Juices, Other Drinks	UPLC or HPLC with Refractive Index detection	In-house test procedure	
SOP PALC 0008 - The determination of benzoic acid and sorbic acid in non-	Benzoic acid and sorbic acid	Benzoic acid 10 - 1000 mg/l Sorbic acid 10 - 1000 mg/l	Non-alcoholic beverages	HPLC/PDA	In-house test procedure	

alcoholic beverages by high performance liquid chromatography **1 2 3 4					
SOP PALC 0009 - The determination of benzoic acid and sorbic acid in foods by steam distillation and high performance liquid chromatography **1 2 3 4		Benzoic acid 50 - 3000 mg/kg Sorbic acid 50 - 4000 mg/kg	Dairy products Fats and Oils Soups broths and sauces Cereals & bakery products Fruit and vegetables Confectionery Hummus and similar products	Steam distillation and HPLC/PDA	In-house test procedure
SOP PALC 0011 - The determination of sulphur dioxide in food and beverages by distillation and titrimetry **1 2 3 4	Sulphur dioxide	Meat products 10 - 1000 mg/kg Dried fruit 10 - 2000mg/kg Wine 10 - 160 mg/l Raw potatoes 10 - 1000 mg/kg Raw crustaceans 10 - 300 mg/kg Cider 10 - 200mg/l Cordials 10 - 250 mg/l Parsnips 10 - 3000 mg/kg Beer 10 - 50 mg/l Olives 10 - 100 mg/kg Additive premixes 10 - 25000 mg/kg Jam/Dessert Syrup/ fruit filling for pastry: 10 - 400 mg/kg	Meat and meat products, game and poultry Fish, Shellfish and molluscs Fruit and vegetables Non-alcoholic beverages Wine Alcoholic beverages (other than wine) Olives Additive premixes Jam/Dessert	Distillation and titrimetry	In-house test procedure

			Syrup/ fruit filling for pastry		
SOP PALC 0015 - The determination of nitrate in vegetables by anion exchange high performance liquid chromatography **1 2 3 4	Nitrate	50 – 7500 mg/kg	Fruit and vegetables	Anion exchange HPLC	In-house test procedure
SOP PALC 0016 - The determination of aspartame, acesulfame-K and saccharin in non-alcoholic beverages by ultra performance liquid chromatography **1 2 3 4	Aspartame, acesulfame-K and saccharin	Aspartame 40 – 800 mg/l Acesulfame-K 20 – 400 mg/l Saccharin 10 – 200 mg/l	Non-alcoholic beverages	UPLC	In-house test procedure
SOP PALC 0017 - The determination of biogenic amines in fish and fish products by HPLC and fluorescence detection **1 2 3 4	Biogenic Amines (Tyramine, putrescine, cadaverine, histamine, agmatine, phenylethylamine, spermidine and spermine)	Tyramine: 10 to 1000 mg/kg (1) 10 to 4000 mg/kg (2) Putrescine: 10 to 1000 mg/kg (1) 10 to 4000 mg/kg (2) Cadaverine: 10 to 1000 mg/kg (1) 10 to 4000 mg/kg (2) Histamine: 10 to 1000 mg/kg (1) 10 to 4000 mg/kg (2) Agmatine: 10 to 1000 mg/kg (1) 10 to 4000 mg/kg (2) Phenylethylamine: 10 to 1000 mg/kg (1) 10 to 4000 mg/kg (2) Spermidine: 10 to 1000 mg/kg (1) 10 to 4000 mg/kg (2) Spermine: 10 to	1. Fish, shellfish and fish products inc molluscs 2. Soups (fish), broths and sauces	HPLC and fluorescence detection	In-house test procedure

		1000 mg/kg (1) 10 to 4000 mg/kg (2)			
SOP PALC 0025 - The determination of caffeine in foodstuffs by HPLC and UV detection **1 2 3 4	Caffeine	Instant Coffee 0.1 - 5 g/kg Liquid Samples 20 - 2000 mg/l Solid and liquid food supplements: Solid tablet 25,000 - 500,000mg/kg Powder 3,000 - 20,000 mg/kg Gel/liquid 10 - 6,000 mg/kg Capsule 10,000 - 500,000 mg/kg Solid Food 50 - 4,000 mg/kg	Non-alcoholic beverages Cocoa and Cocoa preparations, coffee, tea. Food Supplements Solid Foods	HPLC/PDA	In-house test procedure
SOP PALC 0026 - The determination of sucralose by HPLC and RI detection **1 2 3 4	Sucralose	Alcoholic and non-alcoholic beverages 5 to 300 mg/l Yoghurts 40 to 800 mg/kg Jams and dessert jellies 40 to 800 mg/kg Sauces 40 to 800 mg/kg Confectionery: 200 mg/kg to 2,000 mg/kg Syrups: 40 mg/kg to 2,100 mg/kg Popcorn: 100 to 400 mg/kg Fine bakery wares: 60 to 400 mg/kg Meat products: 30 to 150 mg/kg Total Diet Replacement Products: 40 to 400 mg/kg	Dairy products Non-alcoholic beverages Alcoholic beverages (other than wine) Ices and desserts Sauces, jams and desserts Confectionery Syrups Popcorn Fine bakery wares, Meat products, Total Diet Replacement Products	HPLC and refractive index detection	In-house test procedure
SOP PALC 0028 - The determination of	Nitrite and nitrate	Nitrite (as nitrite ion) Meat and meat products,	Meat and meat products, game	Anion exchange HPLC	In-house test procedure

<p>nitrite and nitrate (expressed as nitrite &amp; nitrate ions) in meat and meat products and curing brines by anion-exchange high performance liquid chromatography **1 2 3 4</p>		<p>game and poultry: 6.7 - 670 mg/kg          Brines: 67 - 1675 mg/kg,          Processed cereal-based foods and baby foods for infants and young children: 20 - 300 mg/kg,          cheese: 6.7 - 268 mg/kg,          cheese milks 3.4 - 67 mg/kg,          tuna 3.4 – 33.5 mg/kg</p> <p>Nitrate (as nitrate ion)          Meat and meat products, game and poultry: 7.3 - 730 mg/kg          Brines: 73 - 1825 mg/kg,          Processed cereal-based foods and baby foods for infants and young children: 20 - 300 mg/kg,          cheese: 7.3 - 292 mg/kg,          cheese milks 3.7 - 73 mg/kg,          tuna 3.7 – 36.5 mg/kg</p>	<p>and poultry          Brines,          Processed cereal-based foods and baby foods for infants and young children,          cheese, cheese milks, tuna</p>		
<p>SOP PALC 0054 - The determination of aspartame, acesulfame-K and saccharin in selected foodstuffs by ultra performance liquid chromatography **1 2 3 4</p>	<p>Aspartame, acesulfame-K and saccharin</p>	<p>Dairy products, Soups, broths and sauces, Ices, desserts and Confectionery:          Aspartame 40 to 1000 mg/kg          Acesulfame-K 10 to 1000 mg/kg          Saccharin 10 to 200 mg/kg          Chewing Gum:          Aspartame: 500 to 10,000 mg/kg          Acesulfame K: 250 to</p>	<p>Dairy products          Soups, broths and sauces          Ices and desserts          Confectionery          Chewing gum          Chocolate powder type products          Fine Bakery</p>	<p>UPLC and UV Detection</p>	<p>In-house test procedure</p>

		5,000 mg/kg Saccharin: 120 to 2,500 mg/kg Chocolate powder type products: Aspartame: 40 to 800 mg/kg Acesulfame K: 20 to 400 mg/kg Saccharin: 10 - 200 mg/kg Fine Bakery Wares Aspartame: 80 to 400 mg/kg Acesulfame K: 40 to 400 mg/kg Saccharin: 20 to 200 mg/kg Meat Products: Aspartame: 20 to 100 mg/kg Acesulfame K: 10 to 50 mg/kg Saccharin: 5 to 25 mg/kg Total Diet replacement Products: Aspartame: 80-800 mg/kg Acesulfame K: 40-400 mg/kg Saccharin: 20-200 mg/kg	Wares, Meat Products, Total Diet replacement Products		
SOP PALC 0057 - The determination of the 5- hydroxymethylfurfural (HMF) content of honey by HPLC with UV detection **1 2 3 4	5-hydroxymethylfurfural (HMF)	10 to 2166 mg/kg	Honey	HPLC with UV detection	In-house test procedure
SOP PALC 0086 - The determination of the water content of honey by refractive index using a hand- held refractometer **1 2 3 4	Moisture	10.0 to 30.0%	Honey	Refractometer	In-house test procedure

SOP PALC 0091 - The determination of melamine in foodstuffs by UPLC-electrospray ionisation-tandem MS/MS **1 2 3 4	Melamine	Milk powder: 0.025 to 15.0 mg/kg	Milk powder	UPLC-MS/MS	In-house test procedure
SOP PALC 0113 - The determination of the diastase activity of honey with Phadebas® by UV/Vis spectrophotometry **1 2 3 4	Diastase number	2.5 to 30.0 Diastase number	Honey	Phadebas with UV/Vis Spectrophotometry	In-house test procedure
SOP PALC 0121 - The Determination of Coumarin in Foodstuffs by Gradient High Performance Liquid Chromatography with UV Detection **1 2 3 4	Coumarin	Bakery products: 1 to 100 mg/kg Breakfast cereals: 2 to 50 mg/kg Food Supplements (Liquid): 2.5 to 50 mg/kg Food Supplements (Solid): 5 to 15,000 mg/kg Confectionery: 10 to 50 mg/kg	Cereals and bakery products Food supplements (liquid) Food supplements (solid) Confectionery	HPLC with UV detection	In-house test procedure
SOP PALC 0128 - The Determination of Selected Antioxidants in Foodstuffs by Gradient High Performance Liquid Chromatography **1 2 3 4	Propyl gallate Tertiary-butylhydroquinone (TBHQ) Butylated hydroxyanisole (BHA) Butylated hydroxytoluene (BHT)	Chewing gum (20 to 800 mg/kg) Nut Products (4 to 80 mg/kg) Cereals (Range (4 to 200 mg/kg) Oil food supplements (20 to 800 mg/kg) Soup/ Sauce (5 mg/kg - 40 mg/kg equivalent to 25-200mg/kg expressed on fat for a product with 20% fat) Meat Products (11 to 220 mg/kg - BHT Only)	Chewing gum Nut Products Cereals Oil food supplements, Soup/Sauce Meat Products	Gradient high performance liquid chromatography with UV detection	In-house test procedure

SOP PALC 0134 - The determination of citrinin (CIT) in red yeast rice supplements by ultra performance liquid chromatography (UPLC) and tandem mass spectrometry (MS/MS) **1 2 3 4	Citrinin	25 to 4,000 µg/kg	Food supplements based on rice fermented with red yeast <i>Monascus purpureus</i>	UPLC-MS/MS	In-house test procedure
SOP PALC 0135 - The Determination of Steviol Glycosides (Rebaudioside A & Stevioside) in foodstuffs by gradient high performance liquid chromatography with UV detection **1 2 3 4	Steviol Glycosides (Rebaudioside A and Stevioside)	Rebaudioside A: 10 to 400 mg/l (3.3 to 132 mg/l steviol equivalents) Stevioside: 10 to 400 mg/l (4 to 160 mg/l steviol equivalents)	Non-alcoholic beverages See SOP PALC 0149 for solid food analysis	By HPLC/PDA	In-house test procedure
SOP PALC 0138 - The Determination of Taurine in Infant Formula and Follow-On Formula by High Performance Liquid Chromatography with UV Detection **1 2 3 4	Taurine	5 to 100 mg/L	Infant formula and Follow on formula	By HPLC/PDA	In-house test procedure
SOP PALC 0139 - The determination of tropane alkaloids in cereal and cereal products by UPLC-electrospray ionisation-tandem	Tropane alkaloids (TAs) (Atropine and Scopolamine)	Atropine: 0.1 to 250 µg/kg Scopolamine: 0.1 to 25 µg/kg	Cereal based baby food	UPLC-MS/MS	In-house test procedure

MS/MS **1 2 3 4					
SOP PALC 0143 - The determination of 1,3-Dihydroxyacetone (DHA), Methylglyoxal (MGO) and Hydroxymethylfurfural (HMF) in honey by derivatisation and Ultra High Performance Liquid Chromatography (UPLC) with UV detection **1 2 3 4	1,3-Dihydroxyacetone (DHA), Methylglyoxal (MGO), Hydroxymethylfurfural (HMF)	Hydroxymethylfurfural (HMF) 3 to 250 mg/kg Methylglyoxal (MGO) 16 to 640 mg/kg 1,3- Dihydroxyacetone (DHA) 50 to 3,200 mg/kg	Honey	UPLC-UV	In-house test procedure
SOP PALC 0149 - The determination of Steviol Glycosides (Rebaudioside A & Stevioside) in foodstuffs by gradient high performance liquid chromatography with UV detection **1 2 3 4	Steviol Glycosides (Rebaudioside A and Stevioside)	Chocolate: Rebaudioside A: 60 to 1,500 mg/kg (20 - 500 mg/kg stevioequivalents) Stevioside: 60 to 1,100 mg/kg (24 to 440 mg/kg steviol equivalents) Other Confectionery: Rebaudioside A: 80 to 2,000 mg/kg (26 to 660 mg/kg steviol equivalents) Stevioside: 80 to 2,000 mg/kg (30 to 800 mg/kg steviol equivalents) Sauces and Canned Vegetables in sauce: Rebaudioside A: 37 to 750 mg/kg (12 to 250 mg/kg expressed as steviol equivalents) Stevioside: 40 to 600 mg/kg (16 to	Chocolate Other confectionery Sauces Canned vegetables in sauce Ice cream See SOP PALC 0135 for non- alcoholic beverage analysis	By HPLC	In-house test procedure

		240 mg/kg expressed as steviol equivalents) Ice cream: Rebaudioside A: 40 to 640 mg/kg (15 to 210 mg/kg expressed as steviol equivalents) Stevioside: 35 to 625 mg/kg (15 to 250 mg/kg expressed as steviol equivalents)			
SOP PALC 0151 - The determination of fructose, glucose and sucrose in spirit drinks by HPLC with ECD detection **1 2 3 4	Fructose, glucose, sucrose, total sugars	Fructose: 5 to 1000 mg/l Glucose: 5 to 1000 mg/l Sucrose: 5 to 1000 mg/l *Total Sugars: 0 to 3000 mg/l (*Note: based on lower bound calculation)	Alcoholic beverages Spirits	HPLC with electrochemical detection	In-house test procedure
SOP PALC 0154 The determination of congeners in alcoholic beverages **1 2 3 4	Congeners in alcoholic beverages	Ethanal, Ethyl Acetate, Acetal, (Range:10 mg/l - 250 mg/l, or, 2.5 - 62.5 g/h L @ 100% vol)  Methanol, Butan-2-ol, Propan-1-ol, Butan-1-ol, 2-methyl propan-1-ol, 2-methyl butan-1-ol, 3-methyl butan-1-ol, (Range: 10 mg/l - 750 mg/l, or, 2.5 – 187.5 g/h L @ 100% vol)  Higher alcohols (sum of propan-1-ol, butan-1-ol, butan-2-ol, 2-methyl propan-1-ol, 2-methylbutan-1-ol, 3-methyl butan-1-ol expressed as 2-methyl	Alcoholic beverages - spirits	By GC	In-house test procedure

		propan-1-ol) (Range: 2.1 - 1,109 g/hL @ 100% vol)  Aldehydes (sum of ethanal and acetal expressed as ethanal) (Range: 0.9 - 85.9 g/hL @ 100% vol)			
SOP PALC 0156 - The determination of cyclamic acid in non-alcoholic beverages by HPLC with UV detection **1 2 3 4	Cyclamic Acid	25 to 500 mg/l	Non-alcoholic beverages	HPLC-UV	In-house test procedure
SOP PALC 0165 The determination of $\Delta^9$ -Tetrahydrocannabinol and its precursors in hemp-based products by UPLC-electrospray ionisation-tandem MS/MS **1 2 3 4	Cannabinoids ( $\Delta^9$ -Tetrahydrocannabinol ( $\Delta^9$ -THC), $\Delta^8$ -Tetrahydrocannabinol ( $\Delta^8$ -THC), $\Delta^9$ -Tetrahydrocannabinolic acid ( $\Delta^9$ -THCA), $\Delta^9$ -Tetrahydrocannabivarin ( $\Delta^9$ -THCV), Cannabidiol (CBD), Cannabinolic acid (CBDA), Cannabidivarin (CBDV), Cannabinol (CBN), Cannabigerol (CBG), Cannabigerolic acid (CBGA), and Cannabichromene (CBC))	$\Delta^9$ -Tetrahydrocannabinol ( $\Delta^9$ -THC): 0.5 to 750 mg/kg $\Delta^8$ -Tetrahydrocannabinol ( $\Delta^8$ -THC): 0.5 to 250 mg/kg $\Delta^9$ -Tetrahydrocannabinolic acid ( $\Delta^9$ -THCA): 0.5 to 250 mg/kg $\Delta^9$ -Tetrahydrocannabivarin ( $\Delta^9$ -THCV): 0.5 to 250 mg/kg Cannabidiol (CBD): 0.5 to 50000 mg/kg Cannabinolic acid (CBDA): 0.5 to 10000 mg/kg Cannabidivarin (CBDV):	Hemp oils and CBD oils	UPLC-MS/MS	In-house test procedure

		0.5 to 350 mg/kg Cannabinol (CBN): 0.5 to 250 mg/kg Cannabigerol (CBG): 0.5 to 300 mg/kg Cannabigerolic acid (CBGA): 0.5 to 250 mg/kg Cannabichromene (CBC): 0.5 - 1000 mg/kg			
SOP PALC 0166 - The determination of hydrocyanic acid in foods by ultra performance liquid chromatography with fluorescence detection **1 2 3 4	Hydrocyanic Acid	Marzipan and Nougat: 5 to 100 mg/kg Fruit 0.5 to 10 mg/kg Alcoholic Beverages: 2.5 to 50 mg/kg Apricot Kernels, Nuts, Seeds, Cassava Flour and Similar matrices 2.0 to 2500 mg/kg	Marzipan and Nougat, Fruit, Alcoholic Beverages, Apricot Kernels, Nuts, Seeds, Cassava Flour and Similar matrices	UPLC/Fluorescence detection	SOP PALC 0166 based on I.S. EN 16160:2012, Animal feeding stuffs - Determination of Hydrocyanic acid by HPLC
SOP PALC 0170 - The determination of Epigallocatechin-3-gallate (EGCG) in Food Supplements by HPLC with UV detection **1 2 3 4	Epigallocatechin-3-gallate (EGCG)	1,000 to 290,000 mg/kg (solid food supplements) 160-1600 mg/kg (liquid food supplements)	Food Supplements	HPLC -UV	In-house procedure
SOP PALC 0180 - The Determination of Glycyrrhizic Acid by High Performance Liquid Chromatography with UV Detection **1234	Glycyrrhizic Acid	25 to 2000 mg/kg	Confectionery	HPLC-UV	In-house test procedure
SOP PALC 0182 - The determination of Monacolin K in Food	Monacolin K	0.8 to 60 mg/g	Red Yeast Rice Supplements	UPLC-UV	In-house test procedure

Supplements based on Rice fermented with Red Yeast <i>Monascus purpureus</i> by UPLC with UV Detection **1 2 3 4					
SOP PALC 0184 The determination of theobromine in foodstuffs by HPLC with UV detection **1234		10-250 mg/kg (dairy products)  10-5670 mg/kg (confectionery)  5-200 mg/kg (Non-alcoholic beverages)	Food	HPLC/PDA	In-house test procedure
SOP PALC 0185 - The determination of Quinine in alcoholic and non-alcoholic beverages by ultra performance liquid chromatography with fluorescence detection **1234	Quinine	Alcoholic beverages: 10 to 400 mg/kg Non-alcoholic beverages: 10 to 200 mg/kg	Alcoholic beverages Non-alcoholic beverages	UPLC and Fluorescence	In-house test procedure
SOP PALC 0187 - The determination of Flavourings in Foodstuffs by GC-MS **1 2 3 4	Beta Asarone, Menthofuran, Pulegone, Thujone	Beta Asarone 0.1 to 1.5 mg/kg, Menthofuran 15 to 150 mg/kg, Pulegone 15 to 120 mg/kg, Thujone 1 to 10 mg/kg	Alcoholic beverages	GC-MS	In-house test procedure
	Estragole, Methyl Eugenol, Safrole, Pulegone	Estragole 0.7 to 20 mg/kg, Methyl Eugenol 0.1 to 2 mg/kg, Safrole 0.1 to 3 mg/kg Pulegone 1 to 15 mg/kg	Non-alcoholic beverages	GC-MS	In-house test procedure
	Menthofuran Pulegone	Chocolate: Menthofuran 20 to 150 mg/kg,	Chocolate, Mint confectionery/	GC-MS	In-house test procedure

			Pulegone 20 to 150 mg/kg  Mint confectionery/ chewing gum: Menthofuran 10 to 1000 mg/kg, Pulegone 10 to 1000 mg/kg  Desserts: Pulegone 6 to 120 mg/kg	chewing gum, Desserts		
		Methyl Eugenol, Safrole	Methyl Eugenol 1 to 20 mg/kg, Safrole 1 to 20 mg/kg	Soups and sauces	GC-MS	In-house test procedure
751 Food testing - .05 Speciation	SOP PALC 0158 - The determination of inorganic arsenic species in food extracted with acid/peroxide by HPLC/ICPMS **1 2 3 4	Inorganic Arsenic	Rice: 0.03-1.00 mg/kg. Rice Products, Cheese and Seaweed products: 0.04 to 1.00 mg/kg. Bread: 0.01-1.00 mg/kg. Fish and seafood: 0.008- 0.500 mg/kg. Milk: 0.01-0.30 mg/kg. Fruit and vegetable juices: 0.008-0.300 mg/kg. Seaweed: 0.02-100 mg/kg. Baby food and infant formulae powder: 0.008- 0.200 mg/kg. Infant formula liquid: 0.004-0.200 mg/kg. Seaweed Food Additives: 0.01-1.00 mg/kg	Rice, Rice products, Cheese and Seaweed, Bread, Fish and seafood, Milk, Fruit and vegetable juices, Seaweed, Baby food and infant formulae powder, Infant formula liquid, Seaweed Food Additives.	HPLC-ICP-MS	In-house test procedure
	SOP PALC 0158 The determination of inorganic arsenic		0.008 - 0.300 mg/kg	Fruit Juice	HPLC/ICP-MS	In house test procedure

	species in food extracted with acid/peroxide by HPLC/ICPMS					
			0.008 - 0.500 mg/kg	Fish and Seafood	HPLC/ICP-MS	In-house test procedure
			0.01 - 1.00 mg/kg	Seaweed Food Additives	HPLC/ICP-MS	In-house test procedure
			Baby food and Infant Formulae Powder: 0.008 - 0.200 mg/kg Liquid Infant Formulae: 0.004 - 0.200 mg/kg	Baby food and Infant Formulae Powder and Liquid	HPLC/ICP-MS	In house test procedure
			Rice: 0.03 - 1.00 mg/kg	Rice	HPLC/ICP-MS	In-house test porcedure
	SOP PALC 0176 - The determination of methylmercury in food by HPLC-ICPMS **1 2 3 4	Methylmercury	Fish: 0.04 to 5.50 mg/kg Seafood: 0.04-5.00 mg/kg	Fish Seafood	HPLC-ICP-MS	In-house test procedure
752 Chemical residue testing - .02 Elements	SOP PALC 0097 - The determination of lead in whole blood by Graphite Furnace atomic absorption spectrophotometry **1 2 3 4	Lead	2.0 to 50.0 µg/100ml	Whole blood	Graphite furnace AA	In-house test procedure
	SOP PALC 0099 - The determination of copper in plasma and serum by flame atomic absorption spectrophotometry **1 2 3 4	Copper	25 to 250 µg/100ml	Serum, Plasma	Flame AAS	In-house test procedure

SOP PALC 0101 - The determination of zinc in plasma and serum by flame atomic absorption spectrophotometry **1 2 3 4	Zinc	25 to 250 µg/100ml	Plasma, Serum	Flame AAS	In-house test procedure
SOP PALC 0104 - The determination of copper in urine by flame atomic absorption spectrophotometry **1 2 3 4	Copper	10 to 400 µg/l	Urine	Flame AAS	In-house test procedure
SOP PALC 0132 - The determination of manganese in whole blood by Graphite Furnace Atomic Absorption Spectrophotometry **1 2 3 4	Manganese	4.3 to 37.7 µg/l	Blood	Graphite furnace AAS	In-house test procedure
SOP PALC 0141 - The determination of Copper, Selenium and Zinc in Plasma and Serum by Inductively Coupled Plasma-Mass Spectrometry **1 2 3 4	Copper	25 to 250 µg/100 ml	Plasma, Serum	ICP-MS	In-house test procedure
SOP PALC 0141 - The determination of Copper, Selenium and Zinc in Plasma and Serum by Inductively	Selenium	25 to 250 µg/l	Plasma, Serum	ICP-MS	In-house test procedure

	Coupled Plasma-Mass Spectrometry **1 2 3 4					
	SOP PALC 0141 - The determination of Copper, Selenium and Zinc in Plasma and Serum by Inductively Coupled Plasma- Mass Spectrometry **1 2 3 4	Zinc	25 to 250 µg/100ml	Plasma, Serum	ICP-MS	In-house test procedure
	SOP PALC 0147 - - The determination of manganese, mercury, lead, chromium and cobalt in whole blood by inductively coupled plasma mass spectrometry **1 2 3 4	Manganese	2.5 to 400 µg/l	Whole Blood	ICP-MS	In-house test procedure
	SOP PALC 0147 - The determination of manganese, mercury, lead, chromium and cobalt in whole blood by inductively coupled plasma mass spectrometry **1 2 3 4	Lead	1.0 - 80 µg/100ml	Whole Blood	ICP-MS	In-house test procedure
		Mercury	1.0 to 40 µg/l	Whole Blood	ICP-MS	In-house test procedure
752 Chemical residue testing - .03 Mycotoxins	SOP PALC 0018 - The determination of ochratoxin A in foodstuffs by immunoaffinity column extraction and high	Ochratoxin A	Cereals, Coffee, Dried fruit (vine), Paprika, Chocolate, Chilli, Liquorice, Black/White pepper, Nutmeg, Ginger, Turmeric, Mixed spices,	Cereal products, Dried fruits, Wine, Beer, Coffee, Baby food, Liquorice,	Immunoaffinity column extraction and HPLC with fluorescence detection	In-house test procedure

	performance liquid chromatography (HPLC) with fluorescence detection **1 2 3 4		Cocoa, Rice, Green Coffee, Sunflower seeds, Cumin, Tea (Herbal, Black), Pumpkin Seeds: 1 to 60 µg/kg  Dried Herbs, Pistachio 1 -100 µg/kg  Baby foods 0.2 to 30 µg/kg  Dried Fruit (other) 0.2 to 20 µg/kg  Red/White grape juice and Red/White wine, Sparkling and rose wine: 0.2 to 6 µg/l  Beer 0.2 to 3 µg/l	Spices, Grape juice, Chocolate, Cocoa, Rice, Rose and sparkling wine, Green coffee, Sunflower seeds, Cumin, Tea (Herbal, Black), Pumpkin Seeds, Dried herbs and Pistachio.		
	SOP PALC 0022 - The determination of zearalenone in cereals, baby food, and maize oil by immunoaffinity column extraction and HPLC with fluorescence detection **1 2 3 4	Zearalenone	Cereals: 20 to 400 µg/kg Cereal-based baby foods: 10 to 400 µg/kg Maize Oil: 20 to 1,000 µg/kg	Cereals, Cereal-based baby foods, Maize Oil	Immunoaffinity column extraction and HPLC with fluorescence detection	In-house test procedure
	SOP PALC 0031 - The determination of aflatoxins in food by Immunoaffinity Column	Aflatoxins B1, B2, G1 and G2	Cereals, seeds, nut products, dried fruit and dried fruit products: Individually 0.2 to 20.0 µg/kg *Total Aflatoxins: 0 to 80 µg/kg	Cereals, nut products, dried fruit and dried fruit products, shelled nuts,	Immunoaffinity column extraction and HPLC-FLD	In-house test procedure

<p>Extraction, and High Performance Liquid Chromatography **1 2 3 4</p>		<p>Shelled nuts Individually 0.2 to 25.0 µg/kg *Total Aflatoxins 0 to 100.0 µg/kg</p> <p>Nuts and groundnuts in shell Individually 0.2 to 40.0 µg/kg *Total Aflatoxins 0 to 160 µg/kg</p> <p>Spices Individually 0.2 to 30.0 µg/kg *Total Aflatoxins 0 to 120 µg/kg</p> <p>Chocolate: 1.0 to 20 µg/kg *Total Aflatoxins 0 to 80 µg/kg</p> <p>Baby foods 0.05 to 20µg/kg (B1 only)</p>	<p>nuts, groundnuts, spices, seeds, baby foods and chocolate.</p>		
<p>SOP PALC 0045 - The determination of patulin in apple products, juices and smoothies and ciders by SPE extraction and quantification by UPLC with ultraviolet or tandem mass spectrometric detection **1 2 3 4</p>	<p>Patulin</p>	<p>SOP PALC 0045 A: 10 - 200 µg/kg - Apple juices, apple smoothies</p> <p>SOP PALC 0045 B: 10 - 250 µg/kg - Ciders, 5 – 25 µg/kg - Baby foods</p>	<p>Non-alcoholic beverages Apple Juice Apple smoothies Alcoholic beverages Ciders Others - Baby foods</p>	<p>UPLC with UV or MS/MS detection</p>	<p>In-house test procedure</p>
<p>SOP PALC 0074 - The determination of T-2 and HT-2 toxins in cereals, animal feed and baby food by</p>	<p>T-2 and HT-2 toxins Sum of T-2 and HT-2</p>	<p>Cereals, animal feed: T-2: 4 to 800 µg/kg HT-2: 4 to 800 µg/kg *Sum of T-2 and HT-2 0 to 1,600 µg/kg</p>	<p>Cereals, animal feed, baby food</p>	<p>UPLC-MS/MS</p>	<p>In-house test procedure</p>

UPLC-MS/MS **1 2 3 4		Baby food: T-2: 1 to 20 µg/kg HT-2: 1 to 20 µg/kg *Sum of T-2 and HT-2 0 to 40 µg/kg (*Note: based on lower bound calculation)			
SOP PALC 0076 - The determination of fumonisins B1, B2 and B3 in cereals and cereal products by immunoaffinity column extraction and high performance liquid chromatography (HPLC) **1 2 3 4	Fumonisin	Fumonisin B1: 50 to 7780 µg/kg Fumonisin B2: 50 to 8010 µg/kg Fumonisin B3: 50 to 400 µg/kg *Total Fumonisin: 0 to 16,190 µg/kg (*Note: based on lower bound calculation)	Cereal-based foods and baby foods	Immunoaffinity column extraction and HPLC with fluorescence detection	In-house test procedure
SOP PALC 0077 - The determination of aflatoxin M1 in milk and milk powder by HPLC and fluorescence detection **1 2 3 4	Aflatoxin M1	Milk: 0.025 to 0.33 µg/l Milk powder: 0.02 to 0.75 µg/kg	Milk, milk powder	Immunoaffinity column extraction and HPLC with fluorescence detection	In-house test procedure
SOP PALC 0081 - The determination of deoxynivalenol in cereal, pasta and baby food products by immunoaffinity column extraction and high performance liquid chromatography (HPLC) **1 2 3 4	Deoxynivalenol	50 to 4,000 µg/kg	Cereals, cereal based baby food, pasta	Immunoaffinity column extraction and HPLC with fluorescence detection	In-house test procedure

	SOP PALC 0157 - The determination of type A and B trichothecene mycotoxins in foodstuffs by UPLC-electrospray ionisation - tandem MS/MS **1 2 3 4	Trichothecenes: Diacetoxyscirpenol (DAS), 3-Acetyl-deoxynivalenol (3AcDON), 15-Acetyldeoxynivalenol (15 AcDON), Deoxynivalenol (DON), Sterigmatocystein (STC), T-2 toxin, HT-2 toxin, Sum of T-2 and HT-2	Diacetoxyscirpenol: 10.0 to 250.0 µg/kg, 3-Acetyl-deoxynivalenol: 10.0 to 250.0 µg/kg, 15-Acetyl-deoxynivalenol: 10.0 to 250.0 µg/kg, Deoxynivalenol: 50.0 to 2000.0 µg/kg, Sterigmatocystein: 5.0 - 125.0 µg/kg, T-2 toxin: 10.0 to 1000.0 µg/kg, HT-2 toxin: 10.0 to 1000.0 µg/kg, *Sum of T-2 and HT-2 toxins: 0.0 to 2000.0 µg/kg (*Note: based on lower bound calculations)	Cereals	UPLC-MS/MS	In-house test procedure
752 Chemical residue testing - .05 Organic contaminants	SOP PALC 0032 - The determination of Acrylamide in food **1 2 3 4	Acrylamide	20 to 2500 µg/kg	Food	GC-MS	In-house test procedure based on Castle, L., Determination of Acrylamide Monomer in Mushrooms Grown on Polyacrylamide Gel. J. Agric. Food Chem. 1993, 41, 1261–1263.
	SOP PALC 0041 - The Determination of Furan and Certain Analogues in Foods	Furan, 2-methylfuran, 3-methylfuran, 2-ethylfuran, 2,5-dimethylfuran	Food including brewed coffee (µg/kg or ug/L) Furan 5 to 10000	Food Coffee	Headspace GC-MS	In-house test procedure based on U.S. Food and Drug Administration (US FDA)

by Headspace GC-MS **1 2 3 4		2-methylfuran 0.8 to 310 3-methylfuran 0.8 to 210  Coffee (µg/kg) Furan 5 to 10000 2-methylfuran 11.5 to 55000 3-methylfuran 1 to 3500 2-ethylfuran 0.5 to 3500 2,5-dimethylfuran 1 to 3500			Centre for Food Safety and Applies Nutrition (CFSAN) Determination of furan in foods May 7 2004 <a href="http://www.cfsan.fda.gov/~dms/furan.html">http://www.cfsan.fda.gov/~dms/furan.html</a>
SOP PALC 0041 The determination of furan and certain analogues in food by HS-GC-MS. **1234	Furan and certain analogues		Coffee	HS-GC-MS	In-house test procedure
SOP PALC 0075 - The determination of polycyclic aromatic hydrocarbons in foods by GC-MS **1 2 3 4	Polycyclic aromatic hydrocarbons (PAHs): Cyclopenta[cd]pyrene Benzo[a]anthracene Chrysene 5-Methylchrysene Benzo[b]fluoranthene Benzo[j]fluoranthene Benzo[k]fluoranthene Benzo[a]pyrene Indeno[1,2,3-cd]pyrene	Meat and meat products, game and poultry:  Smoked meat: Individual PAHs 0.9 to 20.0 µg/kg *Sum of PAH4 0 to 80.0 µg/kg  Heat treated meat: Individual PAHs 0.5 to 25.0 µg/kg*Sum of PAH4	Meat and meat products, game and poultry Smoked meat Heat treated meat Fish, shellfish and molluscs Smoked fish Fats and oils Cereals and	GC-MS	In-house test procedure

	<p>Dibenzo[a,h]anthracene  Benzo[ghi]perylene  Dibenzo[a,l]pyrene  Dibenzo[a,e]pyrene  Dibenzo[a,i]pyrene  Dibenzo[a,h]pyrene</p>	<p>0 to 100.0 µg/kg</p> <p>Fish, shellfish and molluscs:</p> <p>Smoked fish: Individual PAHs 0.9 to 20.0 µg/kg  *Sum of PAH4 0 to 80.0 µg/kg</p> <p>Crustaceans: 0.5 µg/kg to 50 µg/kg.</p> <p>Bivalve molluscs (fresh, chilled, frozen or smoked): 0.5 µg/kg to 50 µg/kg.</p> <p>Fats and oils: Individual PAHs 0.9 to 20.0 µg/kg  *Sum of PAH4 0 to 80.0 µg/kg</p> <p>Cereals and bakery products (Flour): Individual PAHs 0.05 to 5 µg/kg *Sum of PAH4 0 to 20.00 µg/kg</p> <p>Herbs and spices: Individual PAHs 0.9 to 30.0 µg/kg*Sum of PAH4 0 to 120.0 µg/kg</p> <p>Cocoa and Cocoa preparations, coffee, tea  Raw beverages: Individual PAHs 1.0 to 10.0 µg/kg *Sum of</p>	<p>bakery products  - Flour  Herbs and spices  Cocoa and Cocoa preparations, coffee, tea  Raw beverages  Brewed beverages  Cocoa beans and derived products  Foodstuffs intended for special nutritional uses  Infant formula  Baby foods  Food supplements,  Smoked cheese</p>		
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		<p>PAH4 0 to 40.0 µg/kg</p> <p>Brewed beverages: Individual PAHs 0.2 to 2.0*Sum of PAH4 0 to 8.0 µg/kg</p> <p>Cocoa beans and derived products: Individual PAHs 0.5 to 29.0 µg/kg fat *Sum of PAH4 0 to 116.0 µg/kg fat</p> <p>Foodstuffs intended for special nutritional uses (Infant formula ,Baby foods): Individual PAHs 0.2 to 10.0 µg/kg *Sum of PAH4 0 to 40.0 µg/kg</p> <p>Food Supplements: Individual PAHs 0.9 to 200.0 µg/kg *Sum of PAH4 0 to 800.0 µg/kg</p> <p>Smoked cheese: 0.5 to 50 ug/kg for all PAHs *Sum of PAH4 0 to 200.0 µg/kg</p> <p>*Note: ranges for Sum PAH4 based on lower bound calculation</p>			
SOP PALC 0110 - The determination of Ergot Alkaloids in	Ergometrine, Ergometrinine, Ergosine, Ergosinine, Ergocornine,	'ine' compounds: 2.5 to 1000 µg/kg	Cereals, Cereal products	UPLC-MS/MS	In-house test procedure

cereals and cereal based products by UPLC-electrospray ionisation -tandem MS/MS **1 2 3 4	Ergocorninine, $\alpha$ -Ergocryptine, $\alpha$ -Ergocryptinine, Ergotamine, Ergotaminine, Ergocristine, Ergocristinine	'inine' compounds: 1.25 to 1000 $\mu\text{g}/\text{kg}$			
SOP PALC 0127 - The determination of 3-monochloropropane-1,2-diol in food by GC-MS **1 2 3 4	3-monochloropropane-1,2-diol	8.4 to 1000 $\mu\text{g}/\text{kg}$ DM (dry Matter)	Soy sauce and hydrolysed vegetable protein (HVP)	GC-MS	In-house test procedure based on I.S. EN 14573:2004 Foodstuffs - Determination of 3-Monochloropropane-1,2-Diol by GC/MS
SOP PALC 0130 - The determination of pyrrolizidine alkaloids and tropane alkaloids in foodstuffs by UPLC-electrospray ionisation-tandem MS/MS **1 2 3 4	Pyrrolizidine Alkaloids (PA): Echimidine (Em), Echimidine-N-oxide (Em-ox), Erucifoline (Er), Erucifoline-N-oxide (Er-ox), Europine (Eu), Europine-N-oxide (Eu-ox), Heliotrine (Ht), Heliotrine-N-oxide (Ht-ox), Intermedine (Im), Intermedine-N-oxide (Im-ox), Jacobine (Jb), Jacobine-N-oxide (Jb-ox), Lasiocarpine (Lc), Lasiocarpine-N-oxide (Lc-ox), Lycopsamine (Ly), Lycopsamine-N-oxide (Ly-ox), Monocrotaline (Mc), Monocrotaline-N-oxide (Mc-ox), Retrorsine (Rt), Retrorsine-N-oxide (Rt-ox), Senkirkine (Sk), Senecionine (Sn), Senecionine-N-oxide (Sn-	SOP PALC 0130 A Black tea: 10 to 900 $\mu\text{g}/\text{kg}$ for each analyte *Sum of PAs: 0 to 23400 $\mu\text{g}/\text{kg}$  SOP PALC 0130 B Cumin: 10 to 1200 $\mu\text{g}/\text{kg}$ for each analyte (except Tropane Alkaloids) *Sum of PAs: 0 to 31200 $\mu\text{g}/\text{kg}$  SOP PALC 0130 C Herbs: 10 to 2000 $\mu\text{g}/\text{kg}$ for Echinatine, Indicine N-oxide, Integerrimine N-oxide, Intermedine N-oxide & Lycopsamine N-oxide, Retrorsine N-oxide, Senkirkine	Black tea, Cumin, Herbs	UPLC-MS/MS	In-house test procedure

	<p>ox), Seneciphylline (Sp), Seneciphylline-N-oxide (Sp-ox), Trichodesmine (Td), Sum of PAs</p> <p>(Note: The following compounds co-elute under the analytical conditions of the method and are quantified together: intermedine, lycopsamine and indicine; Intermedine N-oxide and lycopsamine N-oxide; senecionine N-oxide and senecivernine N-oxide)</p> <p>Tropane Alkaloids: Atropine and Scopolamine (black tea only)</p>	<p>10 to 5000 µg/kg for all other analytes (except Tropane Alkaloids)</p> <p>*Sum of PAs: 0 to 127,000 µg/kg</p> <p>(*Note: based on lower bound calculations)</p>			
<p>SOP PALC 0140 The determination of Monochloropropanediol Esters (MCPDE) and Glycidol Esters (GE) by GC-MS or GC-MS/MS *1 2 3 4</p>	<p>Monochloropropanediol Esters (MCPDE) and Glycidol Esters (GE)</p>	<p>Liquid infant formula (IF) and follow-on formula (FOF): 2.0-130 µg/kg for MCPDEs and 2.0-170 µg/kg for GEs</p> <p>Powdered IF and FOF: 15-1300 µg/kg for MCPDEs and 15-1700 µg/kg for GEs</p> <p>Fats &amp; Oils: 100-20000 µg/kg for MCPDEs and 100-20000 µg/kg for GEs</p>	<p>Liquid and powdered infant formula (IF) and follow-on formula (FOF) Food Fats &amp; Oils</p>	<p>GC-MS or GC-MS/MS</p>	<p>In house test procedure based on 1.1 AOCS Official Method Cd 29a-13</p>

		Food: 6-1200 µg/kg			
SOP PALC 0161 - The determination of fatty acids in food for infants and young children, milk and milk products **1 2 3 4	Erucic Acid	Individual fatty acids: 0.1 to 100 % For erucic acid: 1 to 100 g/kg or 0.1% to 10%	Food for infants and young children, milk and milk products	GC-FID	In-house test procedure based on National Standard of the People's Republic of China GB 5413.27 - 2010
SOP PALC 0162 - The determination of fatty acids in oils and fats and the oils and fats extracted from food. **1 2 3 4		0.2 to 100 % for fatty acids generally 2 to 100 g/kg fatty acids for erucic acid	Oils and fats, mustards and the oils and fats extracted from food.	GC-FID	In-house test procedure based on ISO 12966 parts 1 - 4
SOP PALC 0174 - The determination of acrylamide food by LC-MS/MS **1 2 3 4	Acrylamide	15 to 4650 µg/kg	Food	LC-MS/MS	In-house test procedure based on ISO 16618:2015
SOP PALC 0178 Method for the official control of mineral oil aromatic hydrocarbons (MOAH) and mineral oil saturated hydrocarbons (MOSH) content in infant formula **1234	MOAH-C10-50	Infant formula: 1-10mg/kg  Chocolate, Stock cubes: 1-100 mg/kg	Infant formula Chocolate Stock Cubes	LC-GC with FID detection	EURL-SOP yet to be published
	MOSH-C10-50	Infant formula: 5-10mg/kg Chocolate, Stock cubes: 3-300 mg/kg	Infant formula Chocolate Stock Cubes	LC-GC with FID detection	EURL-SOP yet to be published
SOP PALC 0186 - The determination of monochloro propane-1,2-diols in food by	2-MCPD 3-MCPD	2- and 3-MCPD: 1 to 200 µg/kg for liquid infant formula and follow-on formula	Liquid infant formula and follow-on formula	GC-MS or GC-MS/MS	In house test procedure. The method has been tested and validated at the EU Reference

GC-MS or GC-MS/MS **1234		2- and 3-MCPD: 5 to 200 µg/kg for powder infant formula and follow-on formula 2- and 3-MCPD: 25 to 1000 µg/kg for oils and fats 2- and 3-MCPD: 5 to 500 µg/kg for general food	Powder infant formula and follow-on formula Oil and fats General food		Laboratory for Processing Contaminants.
SOP PALC 0193 - The determination of Glycoalkaloids in potato and potato products by UPLC-MS/MS **1 2 3 4	Glycoalkaloids: α-solanine, α-chaconine, solanidine	Unprocessed Products: 1.25 to 250 mg/kg α-chaconine 1.25 to 250 mg/kg α-solanine 0.25 to 50 mg/kg Solanidine  Processed Products: 1 to 250 mg/kg α-chaconine 1 to 250 mg/kg α-solanine 0.2 to 50 mg/kg Solanidine  Crisps 1 to 270 mg/kg α-chaconine 1 to 258 mg/kg α-solanine 0.2 to 50 mg/kg Solanidine	Food	LC-MS/MS	In-house test procedure
SOP PALC0130C The determination of	Pyrrolizidine alkaloids		Herbs	UPLC-MS/MS	In-house test procedure

	pyrrolizidine alkaloids in herbs by UPLC-electrospray ionisation-tandem MS/MS **1 2 3 4					
766 Environmental testing (inc waters) - .05 Inorganic	SOP PALCW 0005 - The determination of anions in aqueous samples by reagent free ion chromatography **1 2 3 4	Fluoride	Waters for potable and domestic purposes: Fluoride 0.10 to 1.75 mg/l Misc Materials and Products Fluoride 10.9% HFSA solution	Waters for potable and domestic purposes  Misc. Materials and products	By reagent free ion chromatography (RFIC)	In-house test procedure
	SOP PALCW 0006 - The determination of metals in aqueous samples by inductively coupled plasma/mass spectrometry (ICP-MS) **1 2 3 4	Total metals	Waters for potable and domestic purposes: Chromium 4 to 80 Cr µg/l Cadmium 1 to 40 µg/l Lead 2 to 40 µg/l Nickel 2 to 40 µg/l Copper 0.1 to 2.0 mg/l Sodium 2 to 200 mg/l Calcium 2 to 40 mg/l Potassium 0.10 to 2.0 mg/l Magnesium 0.10 to 2.0 mg/l Aluminium 20 to 400 µg/l Antimony 1 to 40 µg/l Arsenic 2 to 40 µg/l Selenium 2 to 40 µg/l Manganese 10 to 400 µg/l Boron 100 to 2000 µg/l Iron 20 to 750 µg/l Zinc 20 to 400 µg/l Misc Materials and Products: Antimony 40 to 9250 µg/l Arsenic 40 to 46200 µg/l Cadmium 40 to 4630 µg/l Chromium 40 to 46200 µg/l Lead 40 to 46200 µg/l Nickel 40	Waters for potable and domestic purposes  Misc Materials and products	By inductively coupled plasma/mass spectrometry (ICP-MS)	In-house test procedure

		to 46200 µg/l Selenium 40 to 9250 µg/l			
SOP PALCW 0019 - The measurement of conductivity of waters for potable and domestic purposes **1 2 3 4	Conductivity	20 to 1270 µS/cm at 20°C	Waters for potable and domestic purposes	Jenway conductivity meter	In-house test procedure
SOP PALCW 0021 - The determination of analytes in water samples by photometric analysis **1 2 3 4	Nutrients	Ammonium (as NH <sub>4</sub> ) 0.07 to 1.15mg/l Chloride (Cl) 10 to 250mg/l Nitrite (NO <sub>2</sub> ) 0.164 to 1.313mg/l Nitrate (NO <sub>3</sub> ) 6.64 to 50.91mg/l Sulphate (SO <sub>4</sub> ) 8 to 250mg/l Alkalinity (HCO <sub>3</sub> ) 50 to 300mg/l Total Hardness (CaCO <sub>3</sub> ) 50 to 300mg/l Colour (Pt-Co units) 10 to 90 mg/l	Waters for potable and domestic purposes	Using Thermoscientific Aquakem 250 discrete analyser	In-house test procedure
SOP PALCW 0022 - The measurement of pH of waters for potable and domestic purposes **1 2 3 4	pH	pH 4 to 10	Waters for potable and domestic purposes	Jenway pH meter	In-house test procedure
SOP PALCW 0023 - The determination of mercury in aqueous samples by cold vapour atomic absorption spectrophotometry **1 2 3 4	Mercury	Waters for potable and domestic purposes = 0.3 to 5.0 µg/l Misc. Material and Products = 100 to 1200 µg/l	Waters for potable and domestic purposes Misc. Materials and products	By Cold Vapour Atomic Absorption spectrophotometry	In-house test procedure

767 Physical test/measurement - .01 pH	SOP PALC 0115 - The determination of the pH and free acidity of honey by titration to pH 8.30 or equivalence point **1 2 3 4	pH and Acidity	pH: 3.5 to 8.0 pH units Acidity: 5 to 50 mEq/kg	Honey	Autotitrator and pH meter	In-house test procedure
	SOP PALC 0160 - The determination of the pH of soft drinks, energy drinks and fruit juices **1 2 3 4	pH	2.00 to 5.00 pH units	Non alcoholic beverages (Drinks and juices)	pH Meter	In-house test procedure
767 Physical test/measurement - .02 Conductivity	SOP PALC 0114 - The determination of the electrical conductivity of honey and vodka **1 2 3 4	Conductivity	Honey: 0.1 to 1.6 mS/cm Vodka: 7 to 200 $\mu$ S/cm	Honey, Vodka	Conductivity Meter	In-house test procedure
767 Physical test/measurement - .03 Suspended Solids	SOP PALC 0118 - The determination of insoluble matter in honey **1 2 3 4	Insoluble matter	0.01 to 0.11 g/100 g	Honey	Gravimetric Determination	In-house test procedure

*The laboratory has been awarded flexible scope in the scope classifications as noted in the scope document and in accordance with the laboratories approved and documented procedures.*

*Note 1 - Range may be extended for the test*

*Note 2 – New parameters / tests may be added*

*Note 3 – New matrices may be added*

*Note 4 – Changes to equipment / kits where the underlying methodology does not change*

*For further details please refer to the laboratories 'Master list of Flexible scope changes', available directly from the laboratory.*