

Schedule of Accreditation



Organisation Name	Public Analyst's Laboratory Dublin
Trading As	
INAB Reg No	99T
Contact Name	Rosemary Hayden
Address	Sir Patrick Dun's, Lr. Grand Canal Street, Dublin, Dublin
Contact Phone No	01-661 2022
Email	rosemary.hayden@hse.ie
Website	http://www.publicanalystdublin.ie
Accreditation Standard	ISO 17025 T
Date Initially Awarded	19/12/2002
Scope Classification	Biological and veterinary testing
Scope Classification	Chemical testing

Services available to the public¹

¹ 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)	
Name	Address
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	
803 Culture of organisms in liquid or agar based culture media with visual or instrument monitoring for growth - .01 Culture of bacteria	SOP PALM 0001 SOP PALM 0001 (S)	Aerobic colony count (pour plate) at 30°C for 72 hours. Aerobic colony count (spiral plate) at 30°C for 72 hours.	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		Based on I.S. EN ISO 4833-1:2013 Based on I.S. EN ISO 4833-2:2013 & AC:2014	
	SOP PALM 0003(S)	Enumeration of presumptive Bacillus cereus using Bacillus cereus agar.	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		Based on ISO 7932:2004	
	SOP PALM 0004	Detection of salmonella spp	Cereals and bakery products Fruit and vegetables Herbs and spices Alcoholic beverages (other than wine) – Cream Liquers Ices and desserts Confectionery Nuts and nut products Prepared dishes Dairy products Eggs and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs		Based on I.S. EN ISO 6579:2002 Amd. 1 2007	

		Soups, broths and sauces Surfaces Stick swabs			
SOP PALM 0005	Enumeration of Escherichia coli in food products using TEMPO EC(E coli) test	Dairy products Eggs and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Soups, broths and sauces Confectionery Cereals and bakery products Prepared dishes Surfaces Stick swabs		Based on TEMPO EC AFNOR validation BIO 12/13-02/05	
SOP PALM 0006	Enumeration of Clostridium perfringens	Dairy products Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Fruit and vegetables Prepared dishes Soups, broths and sauces		Based on I.S. EN ISO 7937:2004	
SOP PALM 0009	Enumeration of Enterobacteriaceae	Dairy products Eggs and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Soups broths and sauces Fruits and vegetables Confectionery Prepared dishes Alcoholic beverages (other than wine) – Cream liqueurs Surfaces Stick swabs		Based on ISO 21528-2:2004	
SOP PALM 0011	Enumeration of viable aerobic mesophilic flora using TEMPO AC	Dairy Products Egg & egg products Meat & meat products, game and poultry Fish, shellfish & molluscs Cereals and bakery products Fruit & vegetables Prepared dishes Surfaces Stick swabs		Based on TEMPO AC® AFNOR validation BIO 12/35-05/13	

SOP PALM 0017	Detection of <i>Listeria monocytogenes</i> and <i>Listeria spp</i>	Dairy products Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Cereals & Bakery Fruit and vegetables Prepared dishes		Based on I.S. EN ISO 11290-1:2017	
SOP PALM 0018(S)	Enumeration of <i>Listeria spp</i> and <i>L. monocytogenes</i>	Dairy products Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Fruit and vegetables Prepared dishes		Based on I.S. EN ISO 11290-2:2017	
SOP PALM 0023	Detection of <i>Campylobacter spp</i>	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		Based on I.S. EN ISO 10272-1:2017	
SOP PALM 0026	Enumeration of β -glucuronidasepositive <i>E.coli</i> by colony count at 44°C using TBX	Egg and egg products Meat and meat products, game and poultry Fish, shellfish and molluscs Cereals and bakery products Cocoa and cocoa preparations, coffee and tea Prepared dishes Dairy products Soups, Broths and Sauces Confectionery Surfaces Stick Swabs		Based on ISO 16649-2:2001	
SOP PALM 0028	Detection and enumeration of <i>Vibrio parahaemolyticus</i> (Surface – spread/spiral)	Fish, shellfish and molluscs		Based on ISO 21782-1:2017	
SOP PALM 0061	Enumeration of coagulase-positive staphylococci by RPF technique	Egg and egg products Meat and meat products, game and poultry		Based on I.S. EN ISO 6888-2:1999 Amd.1 2003	

		Fish, shellfish and molluscs Fruit and vegetables Prepared dishes			
SOP PALM 0062	Detection and Enumeration of thermotolerant Campylobacter spp. in water by the membrane filtration method	Potable waters Swimming pools and spas Environmental waters		Based on ISO 17995:2005	
SOP PALM 0100	Detection and enumeration of coliforms bacteria and E.coli in water by membrane filtration	Potable waters Environmental waters		Based on the Microbiology of Drinking Water 2009, Part 4A	
SOP PALM 0102	Detection and enumeration of Enterococci in water by membrane filtration	Potable waters Swimming pools and spas Environmental waters		Based on ISO 7899-2:2000	
SOP PALM 0103	Detection of Salmonella spp in water	Potable waters Swimming pools and spas Environmental waters		Based on ISO 19250:2010. Water Quality - Detection of Salmonella spp.	
SOP PALM 0104	Detection and enumeration of sulphite reducing clostridia and Cl. perfringens in water by membrane filtration.	Potable waters Swimming pools and spas Environmental waters		Based on the Microbiology of Drinking Water 2015, Part 6	
SOP PALM 0106	Detection and enumeration of Ps. aeruginosa in water by membrane filtration	Swimming pools and spas Potable Waters		Based on the Microbiology of Drinking Water 2015, Part 8	
SOP PALM 0107	Enumeration of heterotrophic bacteria colony count technique at 22°C or 37°C	Potable waters Swimming pools and spas		Based on the ISO 6222:1999	
SOP PALM 0108	Chromogenic/ Fluorogenic MPN enumeration of coliform and E. coli using Colilert Quanti-Tray MPN.	Environmental waters Potable waters Swimming pools and spas		Based on ISO 9308-2:2012	
SOP PALM 0111	Coliforms and E.coli by membrane filtration	Potable Waters	ISO 9308-1 (2014)	SOP PALM 0111	
SOP PALM 3000	Enumeration of aerobic mesophilic bacteria	Cosmetics		Based on ISO 21149:2006	
SOP PALM 3001	Detection of Ps. Aeruginosa	Cosmetics		Based on ISO 22717:2006	
SOP PALM 3002	Detection of Staphylococcus aureus	Cosmetics		Based on ISO 22718:2015	

	SOP PALM 3006	Detection of Escherichia coli by standard plating methods	Cosmetics		SOP PALM 3006 based on ISO 21150:2015	
	SOP PALM 4001	Elfa Detection of Salmonella spp using VIDAS SLM Kit.	Dairy Products Egg 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 liqueur) Ices and desserts Confectionary Nuts and nut products Prepared dishes Surfaces Stick swabs		Based on AFNOR VIDAS Salmonella (VIDAS SLM) method BIO 12/1-04/94 Screening method. Cultural and confirmation aspects based on I.S. EN ISO 6579:2002 Amd. 1 2007	
	SOP PALM 4011	ELFA Detection of Salmonella spp using VIDAS SLM kit.	Potable waters Swimming pools and spas Environmental waters		Based on AFNOR VIDAS Salmonella method BIO 12/1-04/94 - (renewed 2018). ISO 19250:2010, Water quality - Detection of Salmonella spp. for cultural and confirmation.	
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	Enumeration of yeasts and moulds in products with water activity greater than 0.95	Cereals and bakery products Fruit & vegetables Non-alcoholic beverages Soups, broths and sauces Alcoholic beverages (other than wine) – Cream liqueurs		Based on ISO 21527-1:2008	
	SOP PALM 0080	Enumeration of yeasts and moulds in products with water activity less than or equal to 0.95	Cereals and bakery products		Based on ISO 21527-2:2008	
	SOP PALM 3003	Enumeration of yeasts and	Cosmetics		Based on ISO 16212:2008	

		moulds				
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	Enumeration of yeasts and moulds in products with water activity greater than 0.95 by standard plating	Cereals and bakery products Fruit and vegetables Non alcoholic beverages Soups broths and sauces Alcoholic beverages (other than wine) – Cream liqueurs		SOP PALM 0025 based on ISO 21527-1:2008	
	SOP PALM 0080	Enumeration of yeasts and moulds in products with water activity less than or equal to 0.95	Cereals and bakery products		Based on ISO 21527-2:2008	
	SOP PALM 3003	Enumeration of yeasts and moulds	Cosmetic products		Based on ISO 16212:2017	
805 Detection and/or identification of bacterial, parasite, fungal and viral nucleic acids using appropriate techniques - .03 Nucleic acid amplification tests, CE marked commercial systems	SOP PALM 0110	Legionella pneumophila and Legionella spp by qPCR	Sanitary Water (Water from hot water systems)		SOP PALM 0110	

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
710 Materials testing - .03 Chemical analysis	SOP PALC 0039 ¹	Epoxidised soybean oil (ESBO)	3.0% - 50% w/w	PVC Gasket	GC-MS	based on Castle, L., Sharman, M., and Gilbert, J. A.O.A.C. No.6., 71, 1183-1186
	SOP PALC 0089 ¹	Bisphenol A	1-1000 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	Based on Bisphenol A Draft Validation Report, October 2009, EURL, Ispra
	SOP PALC 0092	Primary Aromatic Amines (PAAs) Aniline (ANL) 4,4'-Methylenedianiline (4,4'-MDA)	0.00025-0.025 mg/kg (analysed as 3% acetic acid solution, results obtained must be corrected for the surface area of the individual utensil under analysis) 0.00025-10.0 mg/kg (analysed as 3% acetic acid solution, results obtained must be corrected for the surface area of the individual utensil under analysis) *Total PAAs: 0-20.05 mg/kg (*Note: based on lower bound calculation)	Polyamide Kitchen Utensils	UPLC-MS/MS	Based on Mortensen, S.K.; Trier, X.T; Foverskov, A; Petersen, J.H: Specific determination of 20 primary aromatic amines in aqueous food simulants by liquid chromatography – electrospray ionization tandem mass spectrometry, J. Chromatogr. A 1091, (2005) 40-50
	SOP PALC 0094 ^{1 2}	Residual melamine	0.25-250 mg/kg food simulant (analysed as 3% acetic acid solution, results obtained must be corrected for the surface area of the individual utensil under analysis)	Melamine kitchenware	UPLC-MS/MS	Based on I.S.EN13130-1:2004, Waters application note 7200022823EN, Oct 2008
	SOP PALC 0112 ^{1 3}	Lead and Cadmium	Ceramics: 0.2-40.0 mg/l (lead) 0.02-2.0 mg/l (Cadmium) (Analysed as 4% Acetic Acid solution, results obtained must be	Ceramics Glass articles	By inductively coupled plasma mass spectroscopy	Based on Commission Directive 2005/31/EC and 84/500/EEC

			corrected for surface area of the individual non fill article under analysis) Glass articles: 0.003 – 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)			
	SOP PALC 0117 ¹	Residual formaldehyde	3-30 mg/kg food simulat (analysed as 3% acetic acid solution, results obtained must be corrected for the surface area of the individual utensil under analysis)	Melamine kitchenware	UV spectrophotometry	Based on Determination of formaldehyde in food simulants I.S. CEN/TS 13130-23:2005
	SOP PALCW 0024 ¹	Hexafluorosilicic Acid (HFSA)	HFSA in Aqueous solution (10-35%)	Misc Materials and products	By Titrimetry	Based on I.S. EN 12175:2013
751 Food testing - .01 Migratory substances	SOP PALC 0039 ^{1 3}	Epoxidised soybean oil (ESBO)	30-12000mg/kg	Food Simulant	GC-MS	based on Castle, L., Sharman, M., and Gilbert, J. A.O.A.C. No.6., 71, 1183-1186
			3-1000mg/kg	Jarred foods including infant foods.	GC-MS	based on Castle, L., Sharman, M., and Gilbert, J. A.O.A.C. No.6., 71, 1183-1186
	SOP PALC 0116	Photoinitiators	Food: 0.06mg/kg – 100.0 mg/kg Packaging: 0.2 to 450 mg/dm ²	Food Packaging	GC-MS	SOP PALC 0116 based on Thermo scientific application note “Analysis of benzophenone and 4-hydroxybenzophenone in breakfast cereal, 2012”.
	SOP PALC 0119	Perfluoroalkylated substances (PFAS)	1–100 µg/kg	Fish	UPLC-MS/MS	Based on Perfluorinated compounds in foodstuffs in Switzerland RAPA 2011
751 Food testing - .03 Compositional analysis	SOP PALC 0001 ^{1 3}	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.
			2-50% v/v	Wine Alcoholic beverages (other than wine)	Distillation and pycnometry	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	Fructose, glucose and sucrose	Fructose 0.1-20.0% w/v Glucose 0.1-20.0% w/v Sucrose 0.1-20.0% w/v *Total Sugars 0-60.0% w/v based on lower bound calculations	Non-alcoholic beverages (drinks and juices)	HPLC with refractive index detection	SOP PALC 0005
SOP PALC 0005 ¹		0.1 - 50% w/w Total sugars 0-80% w/w based on lower bound calculations	Honey	HPLC with refractive index detection	
SOP PALC 0005 ¹³		Fructose 0.1-10.0% w/v Glucose 0.1-10.0% w/v Sucrose 0.1-10.0% w/v *Total Sugars 0-30.0% w/v based on lower bound calculations	Non-alcoholic beverages (fruit juices)	HPLC with refractive index detection	
SOP PALC 0008 ¹³	Benzoic acid and sorbic acid	Benzoic acid 10-500 mg/l Sorbic acid 10-500 mg/l	Non-alcoholic beverages	HPLC	Based on VEMS Method, Code: F/0290, June, 1994
SOP PALC 0009 ¹³		Benzoic acid 50–3000 mg/kg Sorbic acid 50–3000 mg/kg	Dairy products Fats and Oils Soups broths and sauces Cereals & bakery products Fruit and vegetables Confectionery	Steam distillation and HPLC	Based on VEMS Method, Code: F/0290, June, 1994
SOP PALC 0011 ¹³	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 10-240 mg/kg Cider 10-200mg/l Cordials 10-250 mg/l Parsnips 10-3000 mg/kg Beer 10-50 mg/l Mustard 10-52 mg/kg 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) Mustard Olives Additive premixes Jam/Dessert Syrup/ fruit filling for pastry	Distillation and titrimetry	Based on VEMS Method, Code: F/0360, May 1994
SOP PALC 0015 ¹³	Nitrate	50–7500 mg/kg	Fruit and vegetables	Anion exchange HPLC	Based on I.S. EN 12014-2:1997
SOP PALC 0016 ¹³	Aspartame, acesulfame-K and saccharin	Aspartame 40–800 mg/l Acesulfame-K 20–400 mg/l Saccharin 10–200 mg/l	Non-alcoholic beverages	HPLC	Based on HPLC in Food Analysis, Ed. R. Macrae, 2nd Edition, 1988, P197-207

SOP PALC 0017	Tyramine, putrescine, cadaverine, histamine, agmatine, phenylethylamine, spermidine and spermine **1,2,3	Tyramine: 10–1000 mg/kg (1) 10-4000 mg/kg (2) Putrescine: 10–1000 mg/kg (1) 10-4000 mg/kg (2) Cadaverine: 10–1000 mg/kg (1) 10-4000 mg/kg (2) Histamine: 10–1000 mg/kg (1) 10-4000 mg/kg (2) Agmatine: 10-1000 mg/kg (1) 10-4000 mg/kg (2) Phenylethylamine: 10–1000 mg/kg (1) 10-4000 mg/kg (2) Spermidine: 10–1000 mg/kg (1) 10-4000 mg/kg (2) Spermine: 10–1000 mg/kg (1) 10-4000mg/kg (2)	1. Fish, shellfish and fish products inc molluscs 2. Soups (fish), broths and sauces	HPLC and fluorescence detection	Based on SOP for Biogenic Amines by HPLC, Torry Research Station, MAFF, Scotland
SOP PALC 0025 ^{1 3}	Caffeine	Instant Coffee 0.1-5 g/kg Liquid Samples 20-350 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	Non-alcoholic beverages Cocoa and Cocoa preparations, coffee, tea. Food Supplements	HPLC and UV detection	Based on ISO 20481:2008(E)
SOP PALC 0026 ^{1 3}	Sucralose	Alcoholic and non-alcoholic beverages 5-300 mg/l Yoghurts 40-800 mg/kg Jams and dessert jellies 40 -800 mg/kg Sauces 40-800 mg/kg Confectionery: 200 mg/kg - 2,000 mg/kg Syrups: 40 mg/kg – 2,100 mg/kg Popcorn: 100-400mg/kg	Dairy products Non-alcoholic beverages Alcoholic beverages (other than wine) Ices and desserts Sauces, jams and desserts Confectionery Syrups Popcorn	HPLC and refractive index detection	Based on TDS for Splenda, Tate and Lyle.
SOP PALC 0028 ^{1 3}	Nitrite and nitrate (expressed as sodium nitrite and sodium nitrate)	Meat and meat products, game and poultry: 10-1,000 mg/kg Brines: 100-2,500 mg/kg	Meat and meat products, game and poultry Brines	Anion exchange HPLC	Based on I.S. EN 12014-4:2005
SOP PALC 0054 ^{1 3}	Aspartame, acesulfame-K and saccharin	Dairy products, Soups, broths and sauces, Ices, desserts and Confectionery: Aspartame 40-1000 mg/kg Acesulfame-K 10-	Dairy products Soups, broths and sauces Ices and desserts Confectionery Chewing gum Chocolate powder-type products	HPLC	Based on I.S. EN 12856:1999

		1000 mg/kg Saccharin 10-200 mg/kg Chewing Gum: Aspartame: 500 – 10,000 mg/kg Acesulfame K: 250 – 5,000 mg/kg Saccharin: 120 – 2,500 mg/kg Chocolate powder-type products: Aspartame: 40-800 mg/kg Acesulfame K: 20-400 mg/kg Saccharin: 10-200 mg/kg			
SOP PALC 0057 ¹	5-hydroxymethylfurfural (HMF)	10-2166 mg/kg	Confectionery Honey	HPLC with UV detection	Honey Commission, 2009.
SOP PALC 0086 ¹	Moisture	10-30%	Honey	By refractometer	Based on Harmonised Methods of the International Honey Commission, 2009.
SOP PALC 0091 ^{1 3}	Melamine	1.48-5 mg/kg for soy products, milk powder	Soy products Milk powder	By UPLC-MS/MS	Based on Waters application note 720002823EN
SOP PALC 0113 ¹	Diastase number	2.5 - 30 Diastase number	Honey	By Phadebas	Based on Harmonised Methods of the International Honey Commission, 2009.
SOP PALC 0119 ^{1 3}	Perfluoralkylated substances (PFAS)	1-100 pg/kg	Fish	UPLC-MS/MS	Based on Perfluorinated compounds in Foodstuffs in Switzerland, RAFA 2011
SOP PALC 0121 ^{1 3}	Coumarin	Bakery products: 1-100 mg/kg Breakfast cereals: 2-50 mg/kg Food Supplements (Liquid): 2.5 - 50 mg/kg Food Supplements (Solid): 5-15,000 mg/kg Confectionery: 10 - 50mg/kg	Cereals and bakery products. Food supplements (liquid) Food supplements (solid) Confectionery	By HPLC with UV detection.	Based on Anal. Methods 2011, 3, 414. Scotter et al.
SOP PALC 0128 ^{1 2 3}	6 Antioxidants Propyl gallate Octyl gallate Dodecyl gallate Tertiary-butylhydroquinone (TBHQ) Butylated hydroxyanisole (BHA) Butylated hydroxytoluene (BHT)	Chewing Gum (20-800 mg/kg) Nut Products (4 mg/kg - 80 mg/kg) Cereals (Range (4 mg/kg – 200 mg/kg) Oil food supplements (20 mg/kg - 800 mg/kg)	Chewing gum Nut Products Cereals Oil food supplements	By gradient high performance liquid chromatography with UV detection	Based on IUPAC method 2.642
SOP PALC 0129 ^{1 3}	Safrole	0.1 – 2.0 mg/kg	Cola-type beverages	GC-MS	SOP PALC 0129 (in house procedure)
SOP PALC 0134 ^{1 2 3}	Citrinin	25 -4,000 µg/kg	Food supplements based on rice fermented with red	By UPLC-MS/MS	SOP PALC 0134

			yeast <i>Monascus purpureus</i>		
SOP PALC 0135 ^{1 2 3}	Steviol Glycosides (Rebaudioside A and Stevioside)	Rebaudioside A: 10-400 mg/l (3.3 - 132 mg/l steviol equivalents) Stevioside: 10-400 mg/l (4-160 mg/l steviol equivalents)	Non-alcoholic beverages	By HPLC	Based on FAO JECFA Monographs 10(2010) P. 17-21
SOP PALC 0137 ^{1 3}	Quassin	0.05-1.0 mg/kg	Non-alcoholic beverages	By HPLC	Based on Anal. Methods 2011, 3, 414. Scotter et al.
SOP PALC 0138 ¹	Taurine	5-100 mg/L	Infant formula and Follow on formula	By HPLC with UV detection	Based on J. Liquid Chrom. and Related Technology; 20(8) 1269-1278 (1997)
SOP PALC 0139 ^{1 3}	Determination of tropane alkaloids (TAs)	Atropine 0.1 - 250 µg/kg Scopolamine 0.1 - 25 µg/kg	Cereals	UPLC-MS/MS	Based on EURL Mycotoxins SOP
SOP PALC 0143	Hydroxymethylfurfural (HMF) Methylglyoxal (MGO) Dihydroxyacetone (DHA)	Hydroxymethylfurfural (HMF) 10-200 mg/kg Methylglyoxal (MGO) 20-640 mg/kg Dihydroxyacetone (DHA) 50-3,200 mg/kg	Honey	UPLC-TUV	Based on The quantitation of HMF in Australian <i>Leptospermum</i> honeys, J. Pharmacognosy and Phytotherapy
SOP PALC 0149 ^{1 2 3}	Steviol Glycosides (Rebaudioside A and Stevioside)	Chocolate: Rebaudioside A: 60-1,500 mg/kg (20 - 500 mg/kg steviol equivalents) Stevioside: 60-1,100 mg/kg (24-440 mg/kg steviol equivalents) Other Confectionery: Rebaudioside A: 80-2,000 mg/kg (26 - 660 mg/kg steviol equivalents) Stevioside: 80-2,000 mg/kg (30-800 mg/kg steviol equivalents) Sauces and Canned Vegetables in sauce: Rebaudioside A: 37 – 750 mg/kg (12 –250 mg/kg expressed as steviol equivalents) Stevioside: 40 – 600 mg/kg (16 – 240 mg/kg expressed as steviol equivalents).	Chocolate Other confectionery Sauces Canned vegetables in sauce	By HPLC	Based on FAO JECFA Monographs 10(2010) P. 17-21

SOP PALC 0151 ^{1 3}	Fructose, glucose and sucrose	Fructose 5-1000 mg/l Glucose 5-1000 mg/l Sucrose 5-1000 mg/l *Total Sugars: 0-3000 mg/l (*Note: based on lower bound calculation)	Alcoholic beverages Spirits	By HPLC with electrochemical detection	SOP PALC 0151
SOP PALC 0153 ^{1 3}	Quassin	0.1 – 2.0 mg/kg	Bakery wares	HPLC -UV	SOP PALC 0153 based on Anal. Methods 2011, 3, 414. Scotter et al.
SOP PALC 0154 ^{1 2 3}	Congeners in alcoholic beverages	Ranges for the below are as follows: 10 mg/l – 250 mg/l 2.5-62.5 g/hL @ 100% vol Ethanal Ethyl Acetate Acetal 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 Ranges for the below are as follows: 2.1 -370 g/hL @ 100% vol Higher alcohols (sum of propan-1-ol, butan-1-ol, butan-2-ol, 2-methyl propan-1-ol, 2-methyl butan-1-ol, 3-methyl butan-1-ol expressed as 2-methyl propan-1-ol). Ranges for the below are as follows: 0.9-85.9 g/hL @ 100% vol Aldehydes (sum of ethanal and acetal expressed as ethanal)	Alcoholic beverages - spirits	By GC	SOP PALC 0154
SOP PALC 0156	Cyclamic Acid	25 – 500 mg/l	Non-alcoholic beverages	HPLC -UV	SOP PALC 0156 based on Food Anal. Methods (2014) 7:1400–1406 (Tenghao Liu et al).
SOP PALC 0170	Epigallocatechin-3-gallate (EGCG)	1,000 – 290,000 mg/kg	Food Supplements	HPLC -UV	SOP PALC 0170 based on J AOAC Int. 2013 96(5): 933-941

751 Food testing - .05 Speciation	SOP PALC 0158 ^{1 3}	Inorganic Arsenic	Fish Tissue: 0.01–0.5mg/kg Rice and Rice Products: 0.04 – 1mg/kg Cheese: 0.04 – 1mg/kg Seaweed : 0.02 – 100 mg/kg Seafood: 0.01 – 0.5 mg/kg Milk: 0.01 – 0.3 mg/l Fruit and Vegetable Juices: 0.01 – 0.3mg/litre Bread : 0.01 – 1.0 mg/kg	Fish Tissue Rice & Rice Products Cheese Seaweed Seafood Milk Fruit and Vegetable Juices Bread	HPLC-ICP-MS PerkinElmer LC200-PerkinElmer Nexlon 300D or PerkinElmer ElanDRCII	SOP PALC 0158 based on I.S. EN 16802:2016
752 Chemical residue testing - .02 Elements	SOP PALC 0097 ¹	Lead	2.0-50 µg/100ml	Whole blood	By graphite furnace AA spectrophotometry	SOP PALC 0097
	SOP PALC 0099 ¹	Copper	50.0-197.4 µg/100 ml	Serum	By flame AA spectrophotometry.	SOP PALC 0099
	SOP PALC 0101 ¹	Zinc	50.0-182.4 µg/100 ml	Serum	By flame AA spectrophotometry.	SOP PALC 0101
	SOP PALC 0104 ¹	Copper	10.0-400 µg/l	Urine	By flame AA spectrophotometry.	SOP PALC 0104
	SOP PALC 0132 ¹	Manganese	4.3 – 37.7 µg/l	Blood	Graphite furnace atomic absorption spectrophotometer - PerkinElmer AAnalyst800	SOP PALC 0132
	SOP PALC 0141 ¹	Copper	25 -200 mg/100ml	Serum	Inductively coupled plasma mass spectrometer – PerkinElmer Nexlon 300D PerkinElmer ElanDRCII	SOP PALC 0141 based on a Poster from the Mayo Clinic
		Selenium	25 - 156 µg /litre	Serum	Inductively coupled plasma mass spectrometer – PerkinElmer Nexlon 300D PerkinElmer ElanDRCII	SOP PALC 0141 based on a Poster from the Mayo Clinic
		Zinc	25 – 183 mg/100ml	Serum	Inductively coupled plasma mass spectrometer – PerkinElmer Nexlon 300D PerkinElmer ElanDRCII	SOP PALC 0141 based on a Poster from the Mayo Clinic
	SOP PALC 0147 ¹	Lead	1.0 – 80µg /100ml	Whole Blood	Inductively coupled plasma mass spectrometer – PerkinElmer NexION 300D	SOP PALC 0147
		Manganese	2.5 – 400 µg/l	Whole Blood	Inductively coupled plasma mass spectrometer – PerkinElmer NexION 300D	SOP PALC 0147
Mercury		1 – 40µg /l	Whole Blood	Inductively coupled plasma mass	SOP PALC 0147	

					spectrometer – PerkinElmer NexION 300D	
752 Chemical residue testing - .03 Mycotoxins	SOP PALC 0018 ^{1 3}	Ochratoxin A	Cereals, Coffee, Dried fruit, Paprika, Chocolate, Chilli, Liquorice, Black/White pepper, Nutmeg, Ginger, Tumeric, Mixed spices, Cocoa, Rice, Green Coffee: 1-60 µg/kg Baby foods 0.2-30 µg/kg Red/White grape juice and Red/White wine, Sparkling and rose wine: 0.2-6 µg/L Beer 0.2-3 µg/L	Mycotoxins Cereal products Dried fruits Wine Beer Coffee Baby food Liquorice Spices Grape juice Chocolate Cocoa Rice Rose and sparkling wine Green coffee	HPLC and fluorescence detection	Based on Application notes from R-Biopharm Rhone Ltd.
	SOP PALC 0022 ^{1 3}	Zearalenone	Cereals 20-400 µg/kg Cereal-based baby foods 20–400 µg/kg Maize Oil 20-1,000 µg/kg	Mycotoxins Cereals, Cereal-based baby foods Maize Oil	Immunoaffinity column extraction and HPLC with fluorescence detection	Based on Application notes from R-Biopharm Rhone Ltd.
	SOP PALC 0031 ^{1 3}	Aflatoxins B1, B2, G1 and G2	Cereals, seeds, nut products, dried fruit and dried fruit products: Individually 0.2-20.0 µg/kg *Total Aflatoxins: 0-80 µg/kg Shelled nuts Individually 0.2-25.0 µg/kg *Total Aflatoxins 0-100.0 µg/kg Nuts and groundnuts in shell Individually 0.2-40.0 µg/kg *Total Aflatoxins 0-160 µg/kg Spices Individually 0.2-30.0 µg/kg *Total Aflatoxins 0-120 µg/kg Baby foods 0.05 - 20µg/kg (B1 only) Chocolate: 1.0 – 20 µg/kg *Total Aflatoxins 0-80 µg/kg	Mycotoxins Cereals, nut products, dried fruit and dried fruit products products, shelled nuts, nuts, groundnuts, spices, seeds, baby foods and chocolate.	Immunoaffinity column extraction and HPLC.	
	SOP PALC 0045 ^{1 3}	Patulin	10-200 µg/kg - Non alcoholic beverages (Apple juices, apple smoothies) 10-250 µg/kg - Alcoholic beverages (Ciders)	Non-alcoholic beverages Apple Juice Apple smoothies Alcoholic beverages Ciders Others - Baby foods	UPLC with UV or MS/MS detection	Based on Romer Application brief, 2nd Feb 2007. LC-MS/MS confirmation.

			5 – 25 µg/kg - Others (Baby foods)			
	SOP PALC 0074 ¹	T-2 and HT-2 toxins	T-2 4-800 µg/kg HT-2 4-800 µg/kg *Sum of T-2 and HT-2 0-1,600 µg/kg. (*Note: based on lower bound calculation)	Mycotoxins Cereals	UPLC-MS/MS	SOP PALC 0074
	SOP PALC 0076 ^{1 3}	Fumonisin	Fumonisin B1 50- 7780 µg/kg Fumonisin B2 50- 8010 µg/kg Fumonisin B3 50-400 µg/kg *Total Fumonisins 0- 16,190 µg/kg (*Note: based on lower bound calculation)	Maize-based foods and baby foods	By immunoaffinity column extraction and HPLC with fluorescence detection	Based on Application notes from R-Biopharm Rhone Ltd.
	SOP PALC 0077 ¹	Aflatoxin M1	Milk powder 0.02- 0.75 µg/kg Milk 0.025-0.33 µg/l	Milk powder Milk	By HPLC and fluorescence detection.	Based on Application notes from R-Biopharm Rhone Ltd.
	SOP PALC 0081 ^{1 3}	Deoxynivalenol	Deoxynivalenol 50-4,000 µg/kg	Cereals, cereal based baby food, pasta	By HPLC and fluorescence detection	Based on Application notes from R-Biopharm Rhone Ltd.
	SOP PALC 0157	Diacetoxy-scirpenol 3 Acetyl-deoxynivalenol 15 Acetyl- deoxynivalenol Deoxynivalenol Sterigmatocystein T-2 toxin HT-2 toxins Sum of T-2 and HT-2 toxins	Diacetoxy-scirpenol: 10–250 µg/kg 3 Acetyl- deoxynivalenol: 10– 250 µg/kg 15 Acetyl- deoxynivalenol: 10– 250 µg/kg Deoxynivalenol: 50– 2000 µg/kg Sterigmatocystein: 5– 125 µg/kg T-2 toxin: 10–1000 µg/kg HT-2 toxin: 10–1000 µg/kg Sum of T-2 and HT-2 toxins: 0–2000 µg/kg	Cereals	UPLC-MS/MS	SOP PALC 0157
752 Chemical residue testing - .05 Organic contaminants	SOP PALC 0032 ¹	Acrylamide	20-2500 µg/kg	Food	GC-MS	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 ^{1 2}	Furan	Solid foods (µg/kg) Furan 5 - 10000 2-methylfuran 11 - 55000 3-methylfuran 1 - 3500 2-ethylfuran 0.5 - 3500 2,5-dimethylfuran	Solids foods Liquid foods	Headspace GC-MS	Based on U.S. Food and Drug Administration (US FDA) Centre for Food Safety and Applies Nutrition (CFSAN) Determination of furan in foods May 7 2004 http://www.cfsan.fda.gov/

		<p>1 - 3500</p> <p>Liquid foods (µg/L)</p> <p>Furan</p> <p>5 - 1000</p> <p>2-methylfuran</p> <p>11 - 55000</p> <p>3-methylfuran</p> <p>1 - 3500</p> <p>2-ethylfuran</p> <p>0.5 - 3500</p> <p>2,5-dimethylfuran</p> <p>1 - 3500</p>			~dms/furan.html
SOP PALC 0075 ^{1 2 3}	<p>Polycyclic aromatic hydrocarbons (PAHs):</p> <p>Cyclopenta[cd]pyrene</p> <p>Benz[a]anthracene</p> <p>Chrysene</p> <p>5-Methylchrysene</p> <p>Benzo[b]fluoranthene</p> <p>Benzo[j]fluoranthene</p> <p>Benzo[k]fluoranthene</p> <p>Benzo[a]pyrene</p> <p>Indeno[1,2,3-cd]pyrene</p> <p>Dibenzo[a,h]anthracene</p> <p>Benzo[ghi]perylene</p> <p>Dibenzo[a,l]pyrene</p> <p>Dibenzo[a,e]pyrene</p> <p>Dibenzo[a,i]pyrene</p> <p>Dibenzo[a,h]pyrene</p>	<p>Meat and meat products, game and poultry</p> <p>Smoked meat:</p> <p>Individual PAHs 0.9-20.0 µg/kg</p> <p>*Sum of PAH4 0-80.0 µg/kg</p> <p>Heat treated meat:</p> <p>Individual PAHs 0.5-25.0 µg/kg</p> <p>*Sum of PAH4 0-100.0 µg/kg</p> <p>Fish, shellfish and molluscs</p> <p>Smoked fish:</p> <p>Individual PAHs 0.9-20.0 µg/kg</p> <p>*Sum of PAH4 0-80.0 µg/kg</p> <p>Fats and oils:</p> <p>Individual PAHs 0.9-20.0 µg/kg</p> <p>*Sum of PAH4 0-80.0 µg/kg</p> <p>Cereals and bakery products (Flour):</p> <p>Individual PAHs 0.05-5 µg/kg</p> <p>*Sum of PAH4 0-20.00 µg/kg</p> <p>Herbs and spices:</p> <p>Individual PAHs 0.9-30.0 µg/kg</p> <p>*Sum of PAH4 0-120.0 µg/kg</p> <p>Cocoa and Cocoa preparations, coffee, tea</p> <p>Raw beverages:</p> <p>Individual PAHs 1.0-10.0 µg/kg</p> <p>*Sum of PAH4 0-40.0 µg/kg</p> <p>Brewed beverages:</p> <p>Individual PAHs 0.2-2.0</p>	<p>Meat and meat products, game and poultry</p> <p>Smoked meat</p> <p>Heat treated meat</p> <p>Fish, shellfish and molluscs</p> <p>Smoked fish</p> <p>Fats and oils</p> <p>Cereals and bakery products</p> <p>- Flour</p> <p>Herbs and spices</p> <p>Cocoa and Cocoa preparations, coffee, tea</p> <p>Raw beverages</p> <p>Brewed beverages</p> <p>Cocoa beans and derived products</p> <p>Foodstuffs intended for special nutritional uses</p> <p>Infant formula</p> <p>Baby foods</p> <p>Food supplements</p>	GC-MS	

			<p>*Sum of PAH4 0-8.0 µg/kg</p> <p>Cocoa beans and derived products: Individual PAHs 0.5-29.0 µg/kg fat *Sum of PAH4 0-116.0 µg/kg fat</p> <p>Foodstuffs intended for special nutritional uses (Infant formula ,Baby foods): Individual PAHs 0.2-20.0 µg/kg *Sum of PAH4 0-80.0 µg/kg</p> <p>Food Supplements: Individual PAHs 0.9-200.0 µg/kg *Sum of PAH4 0-800.0 µg/kg</p> <p>*Note: ranges for Sum PAH4 based on lower bound calculation</p>			
	SOP PALC 0127	3-monochloropropane-1,2-diol	8.4 to 1000 µg/kg DM(dry Matter)	Soy sauce and hydrolysed vegetable protein (HVP)	GC-MS	SOP PALC 0127 based on I.S. EN 14573:2004 Foodstuffs- Determination of 3-Monochloropropane-1,2-Diol by GC/MS
	SOP PALC 0140	Monochloropropanediol (MCPDE) and Glycidol esters (GE)	<p>Liquid infant formula (IF) & follow on formula (FOF) 2.0 - 130 µg/kg for MCPDEs and 2.0 - 170 µg/kg for GEs</p> <p>Powder IF & FOF 15 - 1300 µg/kg for MCPDEs and 15 - 1700 µg/kg for GEs</p> <p>Fats and Oils: 100 - 20000 µg/kg for MCPDEs and 100 - 20000 µg/kg for GEs</p>	Liquid and powdered infant formula & follow-on formula Fats and Oils	GC-MS	Based on 1.1 AOCS Official Method Cd 29a-13.
766 Environmental testing (inc waters) - .05 Inorganic	SOP PALCW 0005 ^{1 3}	Fluoride and sulphate	<p>Waters for potable and domestic purposes: Sulphate 5-250 mg/l Fluoride 0.10-1.75 mg/l</p> <p>Misc Materials and Products Fluoride 10.9% HFSA solution</p>	<p>Waters for potable and domestic purposes</p> <p>Misc Materials and products</p>	<p>By reagent free ion chromatography (RFIC)</p> <p>Reagent free Ion Chromatography</p>	Based on I.S. EN 12175:2013

SOP PALCW 0006 ^{1 2 3}	Total metals	<p>Waters for potable and domestic purposes: Chromium 4-80 Cr µg/l Cadmium 2-40 µg/l Lead 2-40 µg/l Nickel 2-40 µg/l Copper 0.1-2.0 mg/l Sodium 2-200 mg/l Calcium 2-200 mg/l Potassium 0.10-2.0 mg/l Magnesium 0.10-2.0 mg/l Aluminium 50-400 µg/l Antimony 2-40 µg/l Arsenic 2-40 µg/l Selenium 2-40 µg/l Manganese 20-400 µg/l Boron 100-2000 µg/l Iron 50-750 µg/l Zinc 20 – 400µg/l</p> <p>Misc Materials and Products: Antimony 40-9250 µg/l Arsenic 40-46200 µg/l Cadmium 40-4630 µg/l Chromium 40-46200 µg/l Lead 40-46200 µg/l Nickel 40-46200 µg/l Selenium 40-9250 µg/l</p>	<p>Waters for potable and domestic purposes</p> <p>Misc Materials and products</p>	<p>By inductively coupled plasma/mass spectrometry (ICP-MS)</p> <p>Using ICP-MS</p>	Based on I.S. EN 12175:2013
SOP PALCW 0019 ^{1 3}	Conductivity	20-1270µS/cm at 20°C	Waters for potable and domestic purposes	Jenway Conductivity meter	Based on Jenway conductivity meter operation.
SOP PALCW 0020 ^{1 3}	Turbidity	(NTU) 0.5-400	Waters for potable and domestic purposes	Hach Turbidimeter	Based on Hach Turbidimeter Method.
SOP PALCW 0021 ^{1 2 3}	Nutrients	<p>Ammonium (as NH4) 0.064-1.15mg/l Chloride (Cl) 10-250mg/l Nitrite (NO2) 0.164-1.313mg/l Nitrate (NO3) 6.64 - 50.91mg/l Sulphate (SO4) 8-250mg/l Alkalinity (HCO3) 50-300mg/l Total Hardness (CaCO3) 50-300 mg/l Colour (Pt-Co units) 10-90 mg/l</p>	Waters for potable and domestic purposes	Using Thermoscientific Aquakem 250 discrete analyser	Thermoscientific Aquakem 250 discrete analyser manual
SOP PALCW 0022 ^{1 3}	pH	pH 4-10	Waters for potable and domestic purposes	Jenway pH meter	Based on Jenway pH meter operation

	SOP PALCW 0023 ^{1 3}	Mercury	Waters for potable and domestic purposes = 0.5 - 5.0 µg/L Misc Material and Products = 100-1200 µg/l	Waters for potable and domestic purposes Misc Materials and products	By Cold Vapour Atomic Absorption spectrophotometry	Based on I.S. EN 12175:2013
767 Physical test/measurement - .01 pH	SOP PALC 0115 ¹	pH and Acidity	3.0-7.0 - pH 5-50 mEq/kg - Acidity	Honey	Autotitrator	As above Honey Commission, 2009.
	SOP PALC 0160	pH	2.0 - 5.0 pH units	Non alcoholic beverages (drinks and juices)	pH Meter	SOP PALC 0160
767 Physical test/measurement - .02 Conductivity	SOP PALC 0114 ¹	Conductivity	0.1-1.6 mS.cm-1 7 - 200 µS/cm (Vodka)	Honey Vodka	Conductivity Meter	Honey Commission, 2009.
767 Physical test/measurement - .03 Suspended Solids	SOP PALC 0118 ¹	Insoluble matter	0.01-0.11 g/100 g	Honey	Gravimetric Determination	Based on Harmonised Methods of the International Honey Commission, 2009.

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.