

Accreditation Certificate

Public Analyst's Laboratory - Cork

St. Finbarr's Hospital, Douglas Road, Cork.

Testing Laboratory

Registration number: **081T**

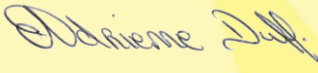
is accredited by the Irish National Accreditation Board (INAB) to undertake testing as detailed in the Schedule bearing the Registration Number detailed above, in compliance with the International Standard **ISO/IEC 17025:2005 2nd Edition** “*General Requirements for the Competence of Testing and Calibration Laboratories*”
(This Certificate must be read in conjunction with the Annexed Schedule of Accreditation)

Date of award of accreditation: **05:09:2002**

Date of last renewal of accreditation: **28:06:2017**

Expiry date of this certificate of accreditation: **28:06:2022**

This Accreditation shall remain in force until further notice subject to continuing compliance with INAB accreditation criteria, ISO/IEC 17025 and any further requirements specified by the Irish National Accreditation Board.

Manager: 

Dr Adrienne Duff

Chairperson: 

Mr Tom O'Neill

Issued on 28 June 2017

Organisations are subject to annual surveillance and are re-assessed every five years. The renewal date on this Certificate confirms the latest date of renewal of accreditation. To confirm the validity of this Certificate, please contact the Irish National Accreditation Board.

The INAB is a signatory of the European co-operation for Accreditation (EA) Testing Multilateral Agreement (MLA) and the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement.

Schedule of Accreditation



(Annex to Accreditation Certificate)

Permanent Laboratory:

Category A

PUBLIC ANALYST'S LABORATORY - CORK

Chemical Testing Laboratory

Initial Registration Date : 18-August-1997

Postal Address: Public Analyst's Laboratory
(Address of other locations St. Finbarr's Hospital
as they apply) Douglas Road
Cork

Telephone: +353 (21) 4923245

Fax: +353 (21) 4923367

E-mail: Fred.Davidson@hse.ie

Contact Name: Dr Fred Davidson

Facilities: Public testing service

Schedule of Accreditation



Permanent Laboratory:
Category A

THE IRISH NATIONAL ACCREDITATION BOARD (INAB) is the Irish body for the accreditation of organisations including laboratories.

Laboratory accreditation is available to testing and calibration facilities operated by manufacturing organisations, government departments, educational institutions and commercial testing/calibration services. Indeed, any organisation involved in testing, measurement or calibration in any area of technology can seek accreditation for the work it is undertaking.

Each accredited laboratory has been assessed by skilled specialist assessors and found to meet criteria which are in compliance with ISO/IEC 17025 or ISO/IEC 15189 (medical laboratories). Frequent audits, together with periodic inter-laboratory test programmes, ensure that these standards of operation are maintained.

Testing and Calibration Categories:

- Category A:** Permanent laboratory calibration and testing where the laboratory is erected on a fixed location for a period expected to be greater than three years.
- Category B:** Site calibration and testing that is performed by staff sent out on site by a permanent laboratory that is accredited by the Irish National Accreditation Board.
- Category C:** Site calibration and testing that is performed in a site/mobile laboratory or by staff sent out by such a laboratory, the operation of which is the responsibility of a permanent laboratory accredited by the Irish National Accreditation Board.
- Category D:** Site calibration and testing that is performed on site by individuals and organisations that do not have a permanent calibration/testing laboratory. Testing may be performed using
- portable test equipment
 - a site laboratory
 - a mobile laboratory or
 - equipment from a mobile or site laboratory

Standard Specification or Test Procedure Used:

The standard specification or test procedure that is accredited is the issue that is current on the date of the most recent visit, unless otherwise stated.

Glossary of Terms

Facilities:

- Public calibration/testing service:** Commercial operations which actively seek work from others.
- Conditionally available for public calibration/testing:** Established for another primary purpose but, more commonly than not, is available for outside work.
- Normally not available for public calibration/testing:** Unavailable for public calibration/testing more often than not.

Laboratory users wishing to obtain assurance that calibration or test results are reliable and carried out to the Irish National Accreditation Board criteria should insist on receiving an accredited calibration certificate or test report. Users should contact the laboratory directly to ensure that this scope of accreditation is current. INAB will, on request, verify the status and scope.

Scope of Accreditation



Public Analyst's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Foods .01 Dairy Products	Total Solids Content Range:2.00 to 14.50% w/w Cream 20.00 to 60.00% w/w	Documented In-house Methods based on:- Method 1/1 by loss on drying MAFF Bulletin 122 Annex 2 and AOAC 925.23, ISO 6731-1989
.01 Dairy Products	Milk: Fat content, Gerber method Range 0.50-8.00% Milk Non fat solids in milk, Range: 2.0-14.5% w/w	Method 1/2 BS 696,1989 Method 1/9 Doc. In-house based on MAFF Bulletin 122
.03 Meat and Meat Products game and poultry .08 Fruit and Vegetables .10 Non-Alcoholic beverages .11 Wine .12 Alcoholic beverages other than wine	Sulphur Dioxide Content,Iodine Method Range:25-3000mg/kg - Minced Meat 50-3000mg/kg - other foods	Method 1/3 Documented In-house Method based on "The Composition and Analysis of Foods, 9 th Edt. Pearson"
.08 Fruit and vegetables .03 Meat and meat products, game and poultry .04 Fish, Shellfish and Molluscs	Sulphur Dioxide Content, Tanner Method Range: 10-3000mg/kg - Minced Meat; Fish, Shellfish and Molluscs. 20-3000 mg/kg - Processed Meat/Dried Fruit	Method 1/4 LFRA Manual, 3 rd Ed, Issue 2

Scope of Accreditation



Public Analyst's Laboratory

Permanent Laboratory:

Category A

Chemical Testing Laboratory

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Foods .03 Meat and Meat Products, game and .04 poultry Fish shellfish and molluscs	Nitrogen/Protein Content, Kjeltec Method Range:0.5-12.0% (Nitrogen) Range:3.1- 75.0% (Protein)	Method 1/5 LFRA Manual, 3 rd Ed, Issue 2
.03 Meat and Meat Products, game and poultry	Ash Content Range:0.10-20.00% m/m	Method 1/6 Documented In-house based on ISO 936:1998
.03 Meat and Meat Products, game and poultry	Total Fat Content Range:1-60% m/m	Method 1/14 Ref: Documented In-house Tecator Method
.03 Meat and Meat Products, game and poultry	Water Content Range:From 5% upwards	Method 1/7 by loss on drying AOAC 950.46B, Leatherhead R.A. Manual, 3 rd Ed
.03 Meat and Meat Products, game and poultry	Hydroxyproline 0.05 - 1.5% m/m Collagen and Collagen / Protein ratio by Calculation	Method 1/13 by colorimeter In-house reference method. Based on ISO 3496; 1994 (E)

Scope of Accreditation



Public Analyst's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Foods .03 Meat and Meat Products, game and poultry .08 Fruit and Vegetables .18 Foodstuffs intended for nutritional uses	Determination of Nitrite and Nitrate in food products by Ion Chromatography. Ranges: Vegetables:100mg/kg-5000mg/kg Nitrate Baby foods and Meat Products:20mg/kg-200mg/kg Sodium Nitrite 20mg/kg-820mg/kg Sodium Nitrate	Method 3/18 documented In-house Procedure based on J. of AOAC Vol. 88, No. 6, 2005
.08 Fruit and vegetables	Ascorbic Acid Range:2-100 mg/100ml	Method 1/11 Documented In-house Method by titration based on Pearson 9 th Edition
.12 Alcoholic beverages (other than wine) .11 Wine	Alcohol Content, Distillation and Density Method Range:0.3-50.0% v/v	Method 2/3 AOAC Methods 982.10, 942.06, 920.57
.10 Non-alcoholic beverages	Benzoic Acid Content Range:2.5-900 mg/l	Method 3/2 In-house HPLC Method

Scope of Accreditation



Public Analyst's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Food		
.12 Alcoholic beverages (other than wine)	Sorbic Acid Content Ranges:2.0-900 mg/l;	Method 3/3 In-house HPLC Method
.15 Confectionery	Solid/Semi-Solid 20-3500 mg/kg	
.07 Cereals & Bakery Products		
.08 Fruit & Vegetables		
.10 Non-alcoholic beverages		
.11 Wine		

Scope of Accreditation



Public Analyt's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Food .10 Non-alcoholic Beverages	Acefulfam-K (ACE), Aspartame (ASP) & Saccharin (SAC) Content. Ranges: ACE 20-400 mg/l ASP 40-800 mg/l SAC 10-200 mg/l	Method 3/7 HPLC Method
.01 Dairy products	Vitamin A Content Range: 66-1459 IU/100 ml for liquid milk 329-7297 IU/100g for powdered milk	Method 3/9 HPLC Method based on International Dairy Federation Std. 142:1990
751 Food .01 Dairy products .18 Food for special nutritional uses .23 Vitamins in foods	Vitamin A Liquid Milk : Range 6 - 110 µg/100ml. Powdered Milk : 40 - 770 µg/100g.	In- house Method No 3/9 SHIMADZU HPLC WITH FLUORESCENCE DETECTOR
.15 Confectionery .10 Non-alcoholic Beverages .21 Others	Caffeine in Beverages and Food Range: 1-200 mg/l for liquids 0.1-12.00% w/w for solids	In-house HPLC Method 3/16
.07 Cereal and bakery Products .01 Dairy Products .23 Vitamins in Foods	Vitamin B2 in Milk, Infant Formulae and Breakfast Cereal Range:0.04-1.00 mg/100 ml (liquids) 0.4-10 mg/100 g (solids)	In-house HPLC Method 3/13

Scope of Accreditation



Public Analyt's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested		Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751	Foods		
.03	Meat and meat products	Glutamic Acid in Soups Sauces, Meat and Meat Products	Method 3/19 In-house validated method for extraction of glutamic acid from specified foods and quantitation by HPLC based on JOAC International Vol. 79, No. 3, p697-702
.06	Soups, broths and sauces	Crisps & Snack Foods. (Range of Measurement: 1 - 20g/kg)	
.16	Snacks		
.17	Prepared dishes		
.10	Non-alcoholic beverages	Quantitative determination of Water Soluble Colours	In House validated method 3/6
.15	Confectionery (water soluble only)	Content (1-50 mg/L - drinks, 2-50mg/kg - confectionery)	
.12	Alcoholic Beverages (other than wines)	Detection of: Indigo Carmine (1-25 mg/L - drinks, 10-25 mg/kg - confectionery), Quinoline Yellow, Red 2G, Brilliant Blue FCF, Erythrosine (Excluding soft drinks), Green S, Patent Blue V, Sunset Yellow, Carmoisine, Tartrazine, Amaranth, Ponceau 4R & Allura Red.	

Scope of Accreditation



Public Analyt's Laboratory

Chemical Testing Laboratory

Permanent Laboratory:

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Foods .10 Non-alcoholic beverages .11 Wine .12 Alcoholic beverages (other than wine)	Alcohol in beverages Range of measurement: 0.3% v/v - 50% v/v ethanol	Method 2/1 In house validated method using Gas Chromatography (Flame Ionisation Detector) based on AOAC Method Nos. 973.23 and 984.14
.07 Cereals and Bakery products .16 Nuts and nut products, snacks .21 Others	Qualitative detection of Soya Lectin and GTS 40-3-2 Soya (Roundup Ready®), LOD 0.1%	In house validated method 6/1 based on IS.EN.ISO24276:2006 and IS EN ISO 21569:2005 and Eur Food Res Technol (2001) 213:432-438 Berdal G.K. Holst-Jensen.A.
.15 Confectionary	Artificial Colours : Tartrazine, Amaranth, Quinoline Yellow, Ponceau 4R, Sunset Yellow, Allura Red, Red 2G, Carmoisine, Green S, Brilliant Blue FCF, Erythrosine, Patent Blue V. Range of Measurement for each parameter: 5 -20 mg/kg.	Method 3/61 In House developed HPLC Method

Scope of Accreditation



Public Analyt's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Foods .12 Alcoholic Beverages (spirits only)	Congeners in Alcoholic Beverages (Methanol, Ethylacetate, Propan-1-ol, 2-Methylpropan-1-ol, 2-Methylbutan-1-ol, 3-Methylbutan-1-ol) Range: 10mg/L - 500mg/L for each congener.	Laboratory Method No. 2/4: In-House Validated Gas Chromatographic method based on J.A.O.A.C. Int Vol. 82, No. 6, 1999
.10 Non-alcoholic Beverages (Fruit juices and fruit drinks) .18 Foods for Special Nutritional Uses .23 Vitamins in Foods	Vitamin C (Ascorbic Acid) Range: 2.0mg/100ml - 50mg/100ml for both fruit juices and fruit drinks Food Supplements Range 3- 60 mg/g	Laboratory Method No. 3/11; Documented In-House Validated HPLC method based on IS/EN 14130-:2003
.01 Dairy Products .23 Vitamins in Foods .18 Foods intended for special nutritional uses	Vitamin E (α -tocopherol) Range: Milk 1.4 - 25 mg/ L Ready Made Infant Formulae 1.4 - 25 mg/ L; Infant Formula Powders 10mg/kg-180mg/kg; Food Supplements 1.0 - 47.9 mg/g	Laboratory Method No. 3/20; Documented In-House Validated HPLC method based on IS/EN 12822:2000
.04 Shellfish & Molluscs	4-Hexylresorcinol Range 0.5mg/kg - 6mg/kg	Laboratory Method No. 3/47; Documented In-House Validated HPLC method based on J.A.O.A.C.Int.Vol. 83, No. 1, 2000

Scope of Accreditation



Public Analyt's Laboratory

Chemical Testing Laboratory

Permanent Laboratory:

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
751 Foods .07 Cereals and Bakery Products .16 Nut and nut products, snacks .21 Others	Maize Invertase Mon810 Maize, LOD 0.5% based on 0.5% (CRM Mon810) 35S and NOS Terminator (t-NOS) LOD 0.1% based on the detection of 35S and NOS in a 0.1% GTS 40-3-2 (Round up Ready Soya CRM)	Laboratory Method No. 6/1. Documented In-House validated method based on IS/EN/ISO 24276:2006 and IS/EN/ISO 21569:2005 and Eur Food Res Technol (2001) 213:432-438 Berdal G.K., Holst-Jensen A
.07 Cereals and Bakery Products .21 Others	Propionic Acid Range 20mg/kg - 4000mg/kg	Laboratory Method No. 3/53. Documented In-House validated HPLC method
.18 Foodstuffs intended for special nutritional uses	Nucleotides in Infant Formulae: (a) Cytidine-5-monophosphate, (b) Uridine-5-monophosphate, (c)Guanosine-5monophosphate, (d) Inosine-5-monophosphate, (e)Adenosine-5-monophosphate Range of measurement for each parameter : 1mg/100g - 18 mg/100g	Method No. 3/48 In House HPLC method based on J. Agriculture Food Chemistry 2008, 56 (16), 6863-6867; J. Liquid Chromatography & Related Technologies Volume 32(2009), Issue 18; J. Agriculture Food Chemistry 2009, 57 (16) 7254-7249; International Dairy Journal 17 (2007) 596 -605.

Scope of Accreditation



Public Analyt's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested		Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
752 .01	Residues in Foods and Agricultural Materials Elements (Pb, Cd, As, Hg)	<p>Arsenic, Cadmium, Mercury and Lead in Food and Drink</p> <p>Arsenic : Ranges :0.20-4.00 mg/kg solids, 0.05 -1.00 mg/kg liquids</p> <p>Cadmium : Ranges : 0.01-4.00 mg/kg solids, 0.01-1.00 mg/kg liquids</p> <p>Mercury : Ranges : 0.05-4.0mg/kg solids, 0.01-0.10 mg/kg liquids</p> <p>Lead : Ranges : 0.12-4.00 mg/kg solids, 0.03-1.00 mg/kg liquids.</p>	<p>Method 4/7</p> <p>In House Method using Thermo X series ICP-MS</p>
752 .01	Residues in Foods and Agricultural Materials Elements (Pb, Cd, As, Hg)	<p>Arsenic, Cadmium, Mercury and Lead in Food and Drink</p> <p>Arsenic : Ranges : 0.03-4.00 mg/kg solids/ semisolids, 0.01 -4.00 mg/kg liquids</p> <p>Cadmium : Ranges : 0.01-2.00 mg/kg solids, 0.01-1.00 mg/kg liquids</p> <p>Mercury : Ranges : 0.02-0.40mg/kg solids / semi-solids, 0.01- 0.40 mg/kg liquids</p> <p>Lead : Ranges : 0.02-2.00 mg/kg solids / semi-solids,0.01-2.00 mg/kg liquids.</p>	<p>Method 4/9</p> <p>In House Method using Agilent Technologies 7700 series ICP-MS</p>

Scope of Accreditation



Public Analyt's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
752 Residues in Foods and Agricultural Materials .01 Element Sn (Tin)	Tin in food Range: 5 - 250 mg/kg	Method No 4/4 In House Method using Agilent 7700 ICP-MS

Scope of Accreditation



Public Analyt's Laboratory Chemical Testing Laboratory

Permanent Laboratory:
Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters .01 Waters for potable and domestic purposes .06 Saline waters .07 Bore waters .99 Other waters - <i>wastewater</i>	Method 5/4 Turbidity in water Measurement Range: 0 - 200 NTU	In-house validated method based on Standard Methods for the examination of Water and Wastewater, American Public Health Association, 22 nd Edition, 2012, Section 2130
766 Waters .01 Waters for potable and domestic purposes	Metals in Water: Arsenic, Cadmium, Chromium, Nickel, Selenium Range 1- 50 µg/L Aluminium, Range 20 - 500 µg/L Lead Range 2-50 µg/L	Method No 5/36 In House Method using Agilent 7700 ICP-MS

Scope of Accreditation



Public Analyst's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters .01 Water for potable and domestic purposes	Fluoride Range: 200 - 2000 µg/l	Specific Ion Electrode Method based on SM 22 nd Edition 4500/F Method 5/1
	pH Measurement Range: 4.00 - 10.00 pH units	Electrometric method based on SM 22 nd Edition 4500/H+ Method 5/3
	Copper Range: 20 - 3000 µg/l	Method 5/30 AA Method based on S.M. 22 nd Edition 3111B
	Zinc Range: 20-800 µg/l	Method 5/31 AA Method based on S.M. 22 nd Edition 3111B
	Iron Range: 40 - 2000 µg/l	Based on Method 5/28 Documented In-house Method AA Method S.M. 22 nd Edition 3111B
	Manganese Range: 20 - 1000 µg/l	Method 5/29 AA Method based on S.M. 22 nd Edition 3111B

Scope of Accreditation



Public Analyst's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters .01 Water for potable and domestic purposes	Conductivity Range:5µS/cm-1999 mS/cm	Method 5/2 Conductivity Meter Method based on S.M. 22 nd Edition 2510
	Total Oxidised Nitrogen (T.O.N) Content Range:5.0-80 mg/l NO ₃	Method 5/10 Documented In-house Auto-analyser
	Ammonium Content Range:0.03-0.80 mg/l NH ₄	Method 5/10 Documented In-house Auto-analyser
	Nitrite Content Range:0.02-0.60 mg/l NO ₂	Method 5/10 Documented In-house Auto-analyser
	Chloride Content Range:3-300 mg/l	Method 5/10 Documented In-house Auto-analyser
	Total Hardness Content as CaCO ₃ Range:10-400 mg/l	Method 5/10 Documented In-house Auto-analyser
	Total Alkalinity Content as CaCO ₃ Range:10-350 mg/l	Method 5/10 Documented In-house Auto-analyser

Scope of Accreditation



Public Analyst's Laboratory

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters		
.01 Water for potable and domestic purposes	Colour in water Range: 2 - 100 mg/l Pt - Co	Method 5/5: UV/Vis Spectrophotometry In house documented method based on Standards for the examination of water and wastewater. APHA, 22 nd Edition, 2005, Section 2120.
.06 Saline waters		
.07 Bore waters		
.99 Other waters		
.01 Water for potable and domestic purposes	Sulphate content Range: 5mg/L - 350 mg/l SO ₄	Laboratory Method No. 5/9. Documented In-House Ion Chromatography method
.99 Other waters <i>Bottled waters</i>	Sodium Content Range: 1mg/L - 250 mg/l	Laboratory Method No. 5/43. Documented In-house Flame Emission Spectrophotometric method