

# Accreditation Certificate

## Dublin City Council

Central Laboratory, Eblana House, 68-70 Marrowbone Lane, Dublin 8

### Testing Laboratory

Registration number: **079T**

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 2<sup>nd</sup> Edition** “*General Requirements for the Competence of Testing and Calibration Laboratories*”  
***(This Certificate must be read in conjunction with the Annexed Schedule of Accreditation)***

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Date of award of accreditation: **15:11:2002**


Date of last renewal of accreditation: **30:07:2017**

Expiry date of this certificate of accreditation: **30:07:2022**

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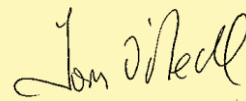
This Accreditation shall remain in force until further notice subject to continuing compliance with INAB accreditation criteria, ISO/IEC 17025 and any further requirements specified by the Irish National Accreditation Board.

Manager:



Dr Adrienne Duff

Chairperson:



Mr Tom O'Neill

Issued on 30<sup>th</sup> July 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

## DUBLIN CITY COUNCIL Central Laboratory

### Chemistry & Biological Testing Laboratory

**Initial Registration Date :** 18-August-1997  
**Postal Address:** Central Laboratory  
**(Address of other locations as they apply)** Eblana House  
68-70 Marrowbone Lane  
Dublin 8  
**Telephone:** +353 (1) 2224333  
**Fax:** +353 (1) 4544797  
**E-mail:** seanp.walsh@dublincity.ie  
**Contact Name:** Mr Seán Walsh  
**Facilities:** Normally not available for Public testing

# 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 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
- (a) portable test equipment
  - (b) a site laboratory
  - (c) a mobile laboratory or
  - (d) 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



## Dublin City Council Central 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
<b>766 Waters</b>  .01 Waters for potable and domestic purposes  .99 <i>Other water</i> Surface waters	Determination of Fluoride by Ion Selective Electrode (0.05 to 1.0 mg/L F <sup>-</sup> )	SOP 016 Fluorides in Waters, Effluents, Sludges, Plants and Soils (HSMSO 1982) and Metrohm 900 Touch Control Operating Manual
<b>766. Waters</b>  .01 Waters for potable and domestic purposes	pH (1 - 14 pH units)  Conductivity (8- 102,100µS/cm)	The measurement of electrical conductivity and the laboratory determination of the ph value of natural, treated and waste waters (HMSO 1978) Standard Methods for the Examination of Water and Wastewater, 22 <sup>nd</sup> Edition, 2012 (APHA-AWWA-WEF)  SOP 006M  SOP 007M

# Scope of Accreditation



## Dublin City Council Central 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
<p><b>766 Waters</b></p> <p>.01 Waters for potable and domestic purposes</p>	<p>Determination of Colour (1-500 Hazen)</p> <p>Turbidity (0.1-100 NTU)</p>	<p>SOP 001d Colour and Turbidity of Waters (HMSO 1981)</p> <p>SOP 002T Determination of Turbidity by Turbiquant. Based on Standard Methods for the Examination of Water and Waste Waters, 22<sup>nd</sup> Edition, 2012 (APHA-AWWA-WEF)</p>

# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Water</b>  .01 Waters for potable and domestic purposes	Determination of Nutrients by Discrete Analysis  Ammonia (0.03 mg/L to 453 mg/L as N)  Total Oxidised Nitrogen (0.09 mg/L to 4004 mg/L as N)  Nitrite (0.003 mg/L to 100 mg/L as N)  Nitrate by calculation (0.09 mg/L to 4004 mg/L)  Soluble Reactive Phosphorus (as P) (0.03 mg/L to 500 mg/L)	Standard Methods for the Examination of Water & Waste Water 22nd Edition 2012 (APHA-AWWA-WEF) & Aquachem Reference Manual, Programme Version 6; Manual Version E, 5.4.2004  SOP 022k / SOP 750k (Using Discrete Analysis)  SOP 033k / SOP 750k (Using Discrete Analysis)  SOP 021k / SOP 750k (Using Discrete Analysis)  SOP 020k / SOP 750k (Using Discrete Analysis)  SOP 025k / SOP 750k (Using Discrete Analysis)

# Scope of Accreditation



## Dublin City Council Central 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	
<b>766 Waters</b>	Determination of Nutrients on Gallery plus	Documented In house method based on: "Standard Methods for the Examination of Water and Wastewater", 22 <sup>nd</sup> Edition, 2012 (APHA-AWWA-WEF), Gallery Plus Reference Manual and User Guide and SOP 750G Operation of Gallery Plus Analyser	
.01 Waters for potable and domestic purposes			
.99 Other Waters <i>Rivers</i> <i>Lakes</i>	Nitrite as N 0.005 mg/l to 0.250 mg/l (0.005 mg/l to 10.00 mg/l by dilution)		SOP 021G
	Ammonia as N 0.01 mg/l to 0.50 mg/l (0.01 mg/l to 20.00 mg/l by dilution)		SOP 022G
	Reactive P as P 0.01 mg/l to 0.50 mg/l (0.01 mg/l to 20.00 mg/l by dilution)		SOP 025G
	TON as N 0.10 mg/l to 5.00 mg/l (0.1 mg/l to 200.00 mg/l by dilution)	SOP 033G	
	Nitrate as N 0.1 mg/l to 5.00 mg/l (0.1 mg/l N to 200.00 mg/l by dilution)	SOP 020G	

# Scope of Accreditation



## Dublin City Council Central 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 .06 Saline Waters	<p>Determination of Nutrients in Saline Waters using Skalar San ++ Continuous flow analyser.</p> <p>Silicate as SiO<sub>2</sub> 50 µg/l to 2000 µg/l (50 µg/l to 80,000 µg/l by dilution)</p> <p>Ammonia as N 10 µg/l to 500 µg/l (10 µg/l to 20,000 µg/l by dilution)</p> <p>Reactive P as P 10 µg/l to 500 µg/l (10 µg/l to 20,000 µg/l by dilution)</p> <p>TON as N 40 µg/l to 2000 µg/l (40 µg/l to 80,000 µg/l by dilution)</p>	<p>SOP's 750S – Operation of the Skalar San analyser,</p> <p>SOP 010S Determination of Silicates in saline water;</p> <p>SOP 022S Determination of Ammonia in saline water;</p> <p>SOP 025S Determination of Orthophosphate in saline water;</p> <p>SOP 033S Determination of TON in saline water.</p>
.99 Other Waters Surface Waters	<p>Determination of Silica on Gallery Plus analyser</p> <p>0.20 to 20 mg/L SiO<sub>2</sub> (0.20 to 100 mg/L by Dilution)</p>	SOP 010G



# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Water</b>	Determination of Metals by ICP-OES:	Standard Methods for the Examination of Water and Wastewater 22nd Edition 2012 (APHA-AWWA)
.01 Waters for potable and domestic purposes	Boron (32 - 2,000 µg/L)	SOP m950/SOP 752
	Determination of Metals by ICP-OES, with Vapour Generation: Mercury (0.17 - 50 µg/L)	SOP m952 /SOP m996/SOP 752
	Determination of Metals by ICP-OES, with Pneumatic nebuliser: Aluminium (1 - 20,000 µg/L) Iron (1 - 20,000 µg/L) Manganese (0.4 - 20,000 µg/L) Copper (0.5 - 20,000 µg/L) Cadmium (0.3 - 20,000 µg/L) Chromium (0.4 - 20,000 µg/L) Zinc (4 - 20,000 µg/L) Nickel (2 - 20,000 µg/L) Lead (3 - 20,000 µg/L)	SOP m993 / SOP 752

# Scope of Accreditation



## Dublin City Council Central 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	Determination of Boron (10 µg/L to 2000 µg/L)	Documented in-house methods based on: The Examination of Water & Waste Water 22nd Edition 2012 (APHA-AWWA-WEF)
766 Water .01 Waters for potable and domestic purposes	Total Phosphorus (as P) (0.01 mg/L to 0.20 mg/L)	SOP 026d Ganimede P Laboratory Analyser Operating Manual, 2003
.01 Waters for potable and domestic purposes .05 Trade wastes .99 Other waters <i>Rivers</i> <i>Surface waters</i>	Determination of Total Cyanide (5 - 100 µg/L CN <sup>-</sup> )	Documented in-house methods based on: Methods for the examination of waters and associated materials: The determination of cyanide in water and associated materials (2007). (Environment Agency) SOP 043s

# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Water</b>  .01 Waters for potable and domestic purposes  .04 Sewage  .08 Waste water treatment plant effluent (WWTP effluent)	Determination of Total Organic Carbon (0.42 to 10 mg/L TOC)  Determination of Total Organic Carbon (5 to 1000 mg/L TOC)	Documented in-house methods based on:  The Examination of Water & Waste Water 22nd Edition 2012 (APHA-AWWA-WEF)  SOP 015A (using the IL 550 TOC-TN analyser)  SOP 015A (using the IL 550 TOC-TN analyser)
<b>766 Waters</b> .06 Saline Waters .99 Other waters <i>Rivers</i> <i>Lakes</i>	Determination of Silicates (0.40 to 300 mg/L SiO <sub>2</sub> )	SOP 010c (Using Flow Injection Analysis)  Lachel operating manual for the QuikChem automated ion analyser continuum series, 1998 and Method 31-114-27-1-A, 5.4.2001

# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Water</b>	Purgeable Organic Compounds:	Measurement of purgeable organic compounds in water by capillary column GC/MS (US EPA Method 524.3, Version 1.0, June 2009)
.01 Waters for potable and domestic purposes		
.99 Other Waters <i>Rivers</i>	Chloroform (2 - 120 µg/L) Bromodichloromethane (1 - 120 µg/L) Dibromochloromethane (1 - 120 µg/L) Bromoform (2 - 120 µg/L) 1,2-Dichloroethane (0.08 - 4 µg/L) Benzene (0.02 - 4 µg/L) Trichloroethene (0.04 - 12 µg/L) Tetrachloroethene (0.06 - 12 µg/L)	SOP t005

# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Waters</b>  .01 Waters for potable and domestic purposes  .99 Other Waters <i>Rivers</i> <i>Lakes</i> <i>Surface Waters</i>	Determination of Metals by ICP-MS  Aluminium 1 to 2000 µg/l Iron 1 to 2000 µg/l Zinc 5 to 2000 µg/l Copper 1 to 2000 µg/l Chromium 0.1 to 200 µg/l Manganese 0.1 to 200 µg/l Arsenic 0.1 to 200 µg/l Cobalt 0.5 to 200 µg/l Nickel 0.5 to 200 µg/l Beryllium 0.1 to 200 µg/l Selenium 0.5 to 200 µg/l Molybdenum 1 to 200 µg/l Antimony 0.5 to 200 µg/l Barium 1 to 200 µg/l Cadmium 0.1 to 200 µg/l Strontium 0.5 to 200 µg/l Vanadium 0.1 to 200 µg/l Lead 0.1 to 200 µg/l Calcium 0.05 mg/L to 20 mg/L Magnesium 0.01 mg/L to 20 mg/L Potassium 0.4 mg/L to 20 mg/L Sodium 0.05 mg/L to 20 mg/L	Documented in-house method based on 'Standard Methods for the Examination of Water and Wastewater', 22 <sup>nd</sup> Edition (APHA-AWWA-WEF) And Agilent 7700 Series User Manual  SOP m997

# Scope of Accreditation



## Dublin City Council Central 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 Water		
.04 Sewage	Chemical Oxygen Demand (10 - 100,000 mg/L)	SOP 014 Chemical Oxygen demand (Dichromate value) of polluted and waste waters -Standard Methods, 22 <sup>nd</sup> Edition, 2012; Introduction to COD (HACH Chemical Company; AOAC Official Methods of Analysis, 15 <sup>th</sup> Ed., 1992
.05 Trade Wastes		
.08 Waste water treatment plant effluent (WWTP effluent)	Suspended Solids (5 - 40,000 mg/L)	SOP 037 Suspended settleable and total dissolved solids in waters and effluents (HMSO 1980)
.99 Other Waters <i>Rivers</i> <i>Surface Waters</i> <i>Leachates</i>	Biochemical Oxygen (CBOD <sub>5</sub> ) Demand (1 - 10,000 mg/L)	SOP 013 ( c ) 5-day Biochemical Oxygen Demand (CBOD <sub>5</sub> ) with dissolved Oxygen in waters (HMSO 1988, amendments)

# Scope of Accreditation



## Dublin City Council Central 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 .99 Other Waters <i>Surface</i>	Biochemical Oxygen Demand (1 - 10,000 mg/L)	SOP 013 5-day Biochemical Oxygen Demand (BOD <sub>5</sub> ) with dissolved oxygen in waters (HMSO 1988, amendments)
766 Waters .06 Saline Waters	Determination of Saline Biochemical Oxygen Demand (1 - 8 mg/L)	SOP 013d Methods for the Examination of Water and Associated Material (HMSO, 1979) and Examination of Water and Associated Materials 5-day Biochemical Oxygen Demand 2 <sup>nd</sup> Edition (HMSO 1988)
766 Waters .04 Sewage .05 Trade Wastes .08 Waste water treatment plant effluent (WWTP effluent) .99 Other Waters <i>Rivers</i>	pH (1 -14 pH Units)  Conductivity (8-102,100 µS/cm)	The measurement of electrical conductivity and the laboratory determination of the pH value of natural, treated and waste waters (HMSO 1978) and Standard Methods for the Examination of Water and Wastewater, 22 <sup>nd</sup> Edition, 2012. (APHA-AWWA-WEF) SOP 006M  SOP 007M

# Scope of Accreditation



## Dublin City Council Central 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
<p><b>766 Waters</b></p> <p>.99 Other Waters <i>Sludge</i></p>	<p>Turbidity (0.1-100 NTU)</p>	<p>SOP 002T Determination of Turbidity by Turbiquant. Based on Standard Methods for the Examination of Water and Waste Waters, 22<sup>nd</sup> Edition, 2012 (APHA-AWWA-WEF).</p>



# Scope of Accreditation



## Dublin City Council Central 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		Standard Methods 22 <sup>nd</sup> Edition and Aquakem Reference Manual, Prog Version 6; Manual Version E, 5.4.2004
.04 Sewage		SOP 022K / SOP 750k (Using Discrete Analysis)
Trade Wastes	Ammonia 0.03 mg/L to 453 mg/L as N	SOP 033K / SOP 750k (Using Discrete Analysis)
Waste water treatment plant effluent	Total Oxidised Nitrogen 0.09 mg/L to 4004 mg/L	SOP 021K / SOP 750k (Using Discrete Analysis)
.05 (WWTP effluent)	Nitrite 0.003 mg/L to 100 mg/L	SOP 020k / SOP 750k (Using Discrete Analysis)
.08 Other Waters	Nitrate by calculation 0.09mg/L to 4004 mg/L	SOP 025K / SOP 750k (Using Discrete Analysis)
Rivers	Soluble Reactive Phosphorus 0.03 mg/L to 500 mg/L as P	
.99		

# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Waters</b> .04 Sewage .05 Trade Wastes .08 Waste water treatment plant effluent (WWTP effluent) 99 Other Waters <i>Rivers</i>	Determination of metals by ICP-OES, with Pneumatic nebuliser: Aluminium (6 - 20,000 µg/L) Iron (6 - 20,000 µg/L) Manganese (2 - 20,000 µg/L) Copper (6 - 20,000 µg/L) Cadmium (2 - 20,000 µg/L) Chromium (2 - 20,000 µg/L) Zinc (6 - 20,000 µg/L) Nickel (6 - 20,000 µg/L) Lead (10 - 20,000 µg/L)	The Examination of Water and Wastewater 22 <sup>nd</sup> Edition, 2012 (APHA-AWWA-WEF) SOP m993/SOP m995/ SOP752
<b>766 Waters</b> .04 Sewage .08 Waste water treatment plant effluent (WWTP effluent) .99 Other Waters <i>Rivers</i> <i>Surface Waters</i>	Total Phosphorus (as P) 0.05 mg/L to 100 mg/L	SOP 026 Ganimede P Laboratory Analyser Operating Manual, 2003

# Scope of Accreditation



## Dublin City Council Central 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	Determination of Metals by ICP-MS	Documented in-house method based on ‘Standard Methods for the Examination of Water and Wastewater’, 22 <sup>nd</sup> Edition (APHA-AWWA-WEF) And Agilent 7700 Series User Manual  SOP m997
.05 Trade Wastes	Aluminium 34 µg/l to 250mg/l Iron 13 µg/l to 250 mg/l Zinc 14 µg/l to 250 µg/l	
.99 Other Waters <i>Leachate</i>	Copper 12 µg/l to 250 mg/l Chromium 2 µg/l to 25 mg/l Manganese 3 µg/l to 25 mg/l Arsenic 1µg/l to 25 mg/l Cobalt 1µg/l to 25 mg/l Nickel 2 µg/l to 25 mg/l Beryllium 2µg/l to 25 mg/l Selenium 3 µg/l to 25 mg/l Molybdenum 2 µg/l to 25 mg/l Antimony 2 µg/l to 25 mg/l Barium 2µg/l to 25 mg/l Cadmium 2 µg/l to 25 mg/l Strontium 3 µg/l to 25 mg/l Vanadium 2 µg/l to 25 mg/l Lead 2 µg/l to 25 mg/l Calcium 0.5 mg/L to 2500 mg/L Magnesium 0.1 mg/L to 2500 mg/L Potassium 0.40 mg/L to 2500 mg/L Sodium 0.4 mg/L to 2500 mg/L Silver 0.5 µg/L to 500 µg/l	

# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Waters</b>	Operation of ICS 3000 Reagent Free Ion Chromatography system for Anion analysis	The Examination of Water and Wastewater 22nd Edition 2012 (APHA-AWWA-WEF) and Dionex Application notes 154- Determination of Inorganic Anions in Environmental Waters, 2008 and Dionex Application notes 171- Determination of Dis-infection By-Product Anions and Bromide in Drinking Water, 2008.
.01 Waters for potable and domestic purposes	Bromate (2.5 to 50 µg/L) Chloride (5.0 to 25000 mg/L) Sulphate (5.0 to 25000 mg/L) Fluoride (0.10 to 1.0 mg/L)	
.08 Waste water treatment plant effluent (WWTP effluent)	Chloride (1.0 to 25000 mg/L) Sulphate (1.0 to 25000 mg/L)  Chloride (1.0 to 25000 mg/L) Sulphate (1.0 to 25000 mg/L)	SOP 775
.05 Trade wastes	Chloride (1.0 to 25000 mg/L) Sulphate (1.0 to 25000 mg/L)	
.99 Other Waters <i>Surface Waters</i>		
.04 Sewage	Determination of Total Nitrogen (0.46 - 1000 mg/L N) by Ganimede-N Analyser.	SOP 052G Ganimede N Laboratory Analyser Operating Manual, 2011.
.05 Trade wastes		
.08 Waste water treatment plant effluent (WWTP effluent)		
.99 Other Waters <i>Surface Waters</i>		

# Scope of Accreditation



## Dublin City Council Central 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
<b>766 Waters</b>  .04 Sewage .05 Trade Wastes .08 Waste water treatment plant effluent (WWTP effluent)	Determination of Fats, Oils and Greases 10-1000 mg/l (10 - 20,000 mg/l by dilution)	SOP027 Documented in-house procedure based on 'The Determination of Oils, Fats and Greases in Wastewater by filtration, solvent extraction and gravimetry'. (HMSO, London 1987) and Standard Methods for the Examination of Water and Wastewater, 22 <sup>nd</sup> Edition APHA-AWWA-WEF, 2012
<b>766 Waters</b>  .01 Waters for potable and domestic purposes .99 Other Waters <i>Surface Waters</i>	Determination of Total Alkalinity using Metrohm Autotitrator 5 - 500 mg/l CaCO <sub>3</sub>  Determination of Total Hardness using Metrohm Autotitrator 5 - 500 mg/l CaCO <sub>3</sub>	SOP 065M Documented in-house method based on Standard Methods for the Examination of Water and Wastewater, 22 <sup>nd</sup> Edition APHA-AWWA-WEF, 2012 and Metrohm Ion Selective Electrode Manual  SOP 011M Documented in-house method based on Standard Methods for the Examination of Water and Wastewater, 22 <sup>nd</sup> Edition APHA-AWWA-WEF, 2012 and Metrohm Ion Selective Electrode Manual

# Scope of Accreditation



## Dublin City Council Central Laboratory Biological 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
<b>870 Waters, including effluents</b> .11 Bacteriological condition of potable water .13 Bacteriological condition of sewage .14 Bacteriological condition of trade wastes .15 Bacteriological condition of swimming pools and spas .16 Bacteriological condition of environmental waters including Saline bathing water .25 Waste water treatment plant effluent (WWTP effluent)	Enumeration of coliforms (colilert)  Enumeration of <i>E.coli</i> (colilert)	Documented in-house methods based on:  The Microbiology of Drinking Water (2009) -Part 4- Methods for the isolation and enumeration of Coliform bacteria and <i>Escherichia coli</i> , Environment Agency  SOP 290d  SOP 291d  Water quality - Enumeration of <i>Escherichia coli</i> and coliform bacteria Part 2: Most probable number method. ISO 9308-2:2012

# Scope of Accreditation



## Dublin City Council Central Laboratory Biological 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
<b>870 Waters, including effluents</b>  .13 Bacteriological condition of sewage .14 Bacteriological condition of trade wastes .15 Bacteriological condition of swimming pools and spas .16 Bacteriological condition of environmental waters .25 Waste water treatment plant effluent (WWTP effluent) .99 Other Waters <i>Saline Waters</i>	Enumeration of faecal coliforms (membrane filtration)	Documented in-house methods based on:  Standard Methods 22 <sup>nd</sup> Edition , 2012 and The Microbiology of Drinking Water (2009) -Part 4- Methods for the isolation and enumeration of Coliform bacteria and Escherichia coli, Environment Agency  SOP 291





# Scope of Accreditation



## Dublin City Council Central Laboratory Biological 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
<p><b>870 Waters, including effluents</b></p> <p>.11 Bacteriological condition of potable water</p> <p>.15 Bacteriological condition of swimming pools and spas</p> <p>.16 Bacteriological condition of environmental waters</p>	<p>Isolation and enumeration of Clostridium perfringens</p>	<p>Documented in-house methods based on:</p> <p>Standard Test Method for the Detection and Enumeration of Clostridium perfringens from Water and extracted Sediments by Membrane Filtration (MF) ASTM D5916-96 (2002).</p> <p>SOP 285 Based on S.I. No.122 of 2014. European Union (Drinking Water) Regulation 2014. Government Supplies Agencies. Dublin</p>
<p>.25 Waste water treatment plant effluent (WWTP effluent)</p>	<p>Enumeration of Faecal Coliforms in Effluent Water by a defined substrate MPN technique (Colilert)</p>	<p>SOP 291f Water quality - Enumeration of <i>Escherichia coli</i> and coliform bacteria Part 2: Most probable number method. ISO 9308-2:2012 Warden. P.S., Monique C., DeSarno E., Volk., E &amp; Brady. J.E. <i>Evaluation of Colilert 18 for Detection and Enumeration of Fecal Coliform Bacteria in Waste Water using the U.S Environmental Protection Agency Alternative Test Procedure Protocol.</i> Journal of APAC International. Vol 94.No.5.2011</p>

# Scope of Accreditation



## Dublin City Council Central Laboratory Biological 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
<b>870 Waters, including effluents</b> .11 Potable waters .15 Swimming pools and spas .16 Bacteriological condition of environmental waters	Concentration of <i>Cryptosporidium/ Giardia</i> (oo)cysts from bulk water samples.  Recovery of <i>Cryptosporidium/Giardia</i> (oo)cysts from Filta Max Filters.  Enumeration of <i>Cryptosporidium/Giardia</i> (oo)cysts.	Documented in-house methods (SOP's) based on: SOP 293, 294, 298 and SOP 299 1) USEPA Method 1623: <i>Cryptosporidium &amp; Giardia</i> in water by filtration IMS/FA , Version EPA-815-R-05-002, Dec. 2005 and The Microbiology of Drinking Water (2010)-Part 14- Methods for the isolation, identification and enumeration of <i>Cryptosporidium</i> oocysts and <i>Giardia</i> cysts, Environment Agency.

# Scope of Accreditation



## Dublin City Council Central Laboratory Biological 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
<b>870 Waters, including effluents</b>  .99 Other Waters <i>Saline</i>	Enumeration of <i>E.coli</i> in Marine Bathing Water by a defined substrate MPN technique (Colilert)	Documented in-house methods based on:  The Microbiology of Drinking Water (2009) Part 4 - methods for the isolation and enumeration of coliform bacteria and <i>Escherichia coli</i> , Environment Agency.  SOP 291m
<b>819 Microbiological tests on other materials</b>  .99 Other Materials <i>Sewage Sludge</i> (Treated and Untreated)	Enumeration of <i>E.coli</i> in sewage sludge (treated and untreated) (Colilert Method)	Documented in-house method based on the Microbiology of Sludge - Part 2 (2003) and the Microbiology of Drinking Water Part 3 (2002) Environment Agency  SOP 291e