

# Accreditation Certificate

## Cork County Council

Wastewater Testing Laboratory, Inniscarra, Co. Cork

Testing Laboratory

Registration number: 016T

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: 01:10:2002

Date of last renewal of accreditation: 20:09:2007

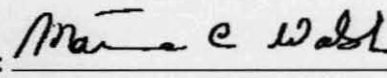
Expiry date of this certificate of accreditation: 01:10:2012

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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: 

Mr Tom Dempsey

Chairperson: 

Dr Máire Walsh

Issued on 23 June 2008

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

## CORK COUNTY COUNCIL

### Chemistry Testing Laboratory

**Initial Registration Date :** 25-April-1991  
**Postal Address:** Waste Water Laboratory  
**(Address of other locations as they apply)** Inniscarra  
Co. Cork  
**Telephone:** +353 (21) 4532700  
**Fax:** +353 (21) 4532777  
**E-mail:**  
**Contact Name:** Ms M Cherry  
**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/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



## Cork County Council 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>	<b>Chemical analysis:</b>	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
<b>.01 Waters for domestic purposes Surface and ground waters</b>	<b>Biochemical Oxygen Demand</b> 2 - 145,000 mg/l	CP No. 1 Membrane electrode
	<b>pH</b> 2 - 12	CP No. 5 Electrometry
	<b>Suspended Solids</b> 0.5 - 17,500 mg/l	CP No. 3 Gravimetric
	<b>Chemical Oxygen Demand</b> 21 - 135 mg/l 120 - 670,000 mg/l	CP No. 6 Reflux - colourmetric method
	<b>Total phosphorus</b> 0.2 - 5,300 mg/l	US-EPA Approved method/HACH Method CP No.20
	<b>Ammonia</b> 0.1 - 1,000 mg/l NH <sub>3</sub> - N	Documented in-house method CP22 by Konelab based on Method for the Examination of Waters and Associated Material HMSO:1981



# Scope of Accreditation



**Cork County Council  
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</b> Waters .01 Waters for domestic purposes <i>Surface and ground waters</i>	<p>Orthophosphate as P (Konelab) Range: 0.005-1.00 mg O-PO4 P/L High Range: 1000 mg O-PO4 P/L Method Detection Limit: 0.02 mg O-PO4 P/L</p> <p>Chloride (Konelab) Range: 25-250 mg/L Cl<sup>-</sup> High Range Conc.: 86,000 mg/L Cl<sup>-</sup> Method Detection Limit: 25 mg/L Cl<sup>-</sup></p> <p>Sulphate (Konelab) Range: 30-250 mg/L SO4/L High Range Conc.: 35,000 mg/L SO4/L Method Detection Limit: 30 mg SO4/L</p>	<p>CP No. 23 Ascorbic Acid Method</p> <p>CP No. 24 Ferricyanide Method</p> <p>CP No. 25 Documented in-house method by Konelab based on method for the examination of waters and waste waters and associated material HMSO: 1981</p>

# Scope of Accreditation



## Cork County Council 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>	Chemical analysis	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
<b>.05 Trade Wastes</b> <i>Industrial effluents</i> <i>Urban Wastewater</i> <i>Municipal Wastewater</i>	Biochemical Oxygen Demand 2 - 145,000 mg/l  pH 2 - 12  Suspended Solids 0.5 - 17,500 mg/l  Chemical Oxygen Demand 21 - 135 mg/l 120 - 670,000 mg/l  Total phosphorus 0.2 - 5,300 mg/l  Ammonia 0.1 - 1,000 mg/l NH3-N	CP No. 1 Membrane electrode  CP No. 5 Electrometry  CP No. 3 Gravimetric  CP No. 6 Reflux - colourmetric method  US-EPA Approved method/HACH Method CP No.20  Documented in-house method CP22 by Konelab based on Method for the Examination of Waters and Associated Material HMSO: 1981.

Notes  
1. APHA American Public Health Association, USA, 21<sup>st</sup> Edition

# Scope of Accreditation



## Cork County Council 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>	<b>Chemical analysis</b>	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
<b>.05 Trade Wastes</b> <i>Industrial effluents</i> <i>Urban Wastewater</i> <i>Municipal Wastewater</i>	Orthophosphate as P (Konelab) Range: 0.005 - 1.00 mg O-PO4 P/L High Range: 1000 mg O-PO4 P/L Method Detection Limit: 0.02 mg O-PO4 P/L	CP No. 1 Membrane electrode  CP No. 23 Ascorbic Acid Method
	Chloride (Konelab) Range: 25-250 mg/L Cl- High Range Conc.: 86,600 mg /L Cl- Method Detection Limit: 25mg / L Cl-	CP No. 24 Ferricyanide Method
	Sulphate (Konelab)) Range: 30-250 mg/L SO4 /L High Range Conc.: 35,000 mg/L SO4 /L Method Detection Limit: 30 mg SO4 /L	CP No. 25 Documented in-house method by Konelab based on method for the examination of waters and waste waters and associated material HMSO: 1981

**Notes**

1. APHA American Public Health Association, USA, 21<sup>st</sup> Edition

**Attachment E4 Whitegate Location 1  
combined secondary discharge at Farsid Table E4**

Sample Date	14/05/2009	
Sample	pipe discharge	Average
Sample Code	GT674	
Flow M <sup>3</sup> /Day	*	
pH	8.0	8.0
Temperature °C	*	*
Cond 20°C	673	673
SS mg/L	8	8
NH <sub>3</sub> mg/L	2.6	2.6
BOD mg/L	6	6
COD mg/L	<21	<21
TN mg/L	13.61	13.61
Nitrite mg/L	0.102	0.102
Nitrate mg/L	7.74	7.74
TP mg/L	0.46	0.46
O-PO4-P mg/L	0.36	0.36
SO4 mg/L	<30	<30
Phenols µg/L	<0.10	<0.10
Atrazine µg/L	<0.01	<0.01
Dichloromethane µg/L	<1	<1
Simazine µg/L	<0.01	<0.01
Toluene µg/L	<0.28	<0.28
Tributyltin µg/L	*	*
Xylenes µg/L	<1	<1
Arsenic µg/L	<0.96	<0.96
Chromium ug/L	<20	<20
Copper ug/L	<20	<20
Cyanide µg/L	<5	<5
Fluoride µg/L	566	566
Lead ug/L	<20	<20
Nickel ug/L	<20	<20
Zinc ug/L	<20	<20
Boron ug/L	2805	2805
Cadmium ug/L	<20	<20
Mercury µg/L	<0.2	<0.2
Selenium µg/L	2.6	2.6
Barium ug/L	<20	<20

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**Attachment E4 Whitegate (2) combined secondary  
discharge near Aghada Pier Table E4**

Sample Date	14/05/2009		
Sample	Effluent	Average	Kg/year
Sample Code	GT675		
Flow M <sup>3</sup> /Day	*	*	
pH	7.1	7.1	
Temperature °C	*	*	
Cond 20°C	16900	16900	
SS mg/L	28	28	
NH <sub>3</sub> mg/L	4.7	4.7	
BOD mg/L	44	44	
COD mg/L	110	110	
TN mg/L	12.74	12.74	
Nitrite mg/L	1.52	1.52	
Nitrate mg/L	2.16	2.16	
TP mg/L	2.57	2.57	
O-PO4-P mg/L	2.25	2.25	
SO4 mg/L	interference	interference	no result available
Phenols µg/L	<0.1	<0.1	
Atrazine µg/L	<0.01	<0.01	
Dichloromethane	<1	<1	
Simazine µg/L	<0.01	<0.01	
Toluene µg/L	<0.28	<0.28	
Tributyltin µg/L	*	*	
Xylenes µg/L	<1	<1	
Arsenic µg/L	<0.96	<0.96	
Chromium ug/L	<20	<20	
Copper ug/L	<20	<20	
Cyanide µg/L	<5	<5	
Fluoride µg/L	527	527	
Lead ug/L	<20	<20	
Nickel ug/L	<20	<20	
Zinc ug/L	<20	<20	
Boron ug/L	882	882	
Cadmium ug/L	<20	<20	
Mercury µg/L	<0.2	<0.2	
Selenium µg/L	30.5	30.5	
Barium ug/L	<20	<20	

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**Attachment E4 Whitegate (3) Primary discharge Table E4**

Sample Date	14/05/2009	
Sample	DISCHARGE	Average
Sample Code	GT677	
Flow M <sup>3</sup> /Day	*	
pH	7.5	7.5
Temperature °C	*	*
Cond 20°C	928	928
SS mg/L	437	437
NH <sub>3</sub> mg/L	31.6	31.6
BOD mg/L	213	213
COD mg/L	213	213
TN mg/L	61.8	61.8
Nitrite mg/L	<0.10	<0.10
Nitrate mg/L	<0.50	<0.50
TP mg/L	5.43	5.43
O-PO <sub>4</sub> -P mg/L	3.88	3.88
SO <sub>4</sub> mg/L	47.4	47.4
Phenols µg/L	<0.10	<0.10
Atrazine µg/L	<0.01	<0.01
Dichloromethane	<1	<1
Simazine µg/L	<0.01	<0.01
Toluene µg/L	<0.28	<0.28
Tributyltin µg/L	*	*
Xylenes µg/L	<1	<1
Arsenic µg/L	<0.96	<0.96
Chromium ug/L	<20	<20
Copper ug/L	<20	<20
Cyanide µg/L	5	5
Fluoride µg/L	468	468
Lead ug/L	<20	<20
Nickel ug/L	<20	<20
Zinc ug/L	<20	<20
Boron ug/L	<20	<20
Cadmium ug/L	<20	<20
Mercury µg/L	<0.2	<0.2
Selenium µg/L	12.6	12.6
Barium ug/L	<20	<20

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**Attachment E4 Whitegate Ambient location at Aghada Pier Table E4**

Sample Date	14/05/2009	Comments	
Sample	Coastal waters	Average	
Sample Code	GT678		
Flow M <sup>3</sup> /Day	*		
pH	8.1		8.1
Temperature °C	*		*
Cond 20°C	45800		45800
SS mg/L	32		32
NH <sub>3</sub> mg/L	0.6	saline interference	0.6
BOD mg/L	2		2
COD mg/L	36		36
TN mg/L	0.47		0.47
Nitrite mg/L	<0.10		<0.10
Nitrate mg/L	<0.50		<0.50
TP mg/L	<0.05		<0.05
O-PO <sub>4</sub> -P mg/L	<0.05		<0.05
SO <sub>4</sub> mg/L	interference	no result available	interference
Phenols µg/L	<0.10		<0.10
Atrazine µg/L	<0.01		<0.01
Dichloromethane	<1		<1
Simazine µg/L	<0.01		<0.01
Toluene µg/L	<0.28		<0.28
Tributyltin µg/L	*		*
Xylenes µg/L	<1		<1
Arsenic µg/L	2.0		2.0
Chromium ug/L	<20		<20
Copper ug/L	<20		<20
Cyanide µg/L	<5		<5
Fluoride µg/L	687	saline interference	687
Lead ug/L	<20		<20
Nickel ug/L	<20		<20
Zinc ug/L	<20		<20
Boron ug/L	<20		<20
Cadmium ug/L	<20		<20
Mercury µg/L	<0.2		<0.2
Selenium µg/L	8.8		8.8
Barium ug/L	<20		<20