

# Schedule of Accreditation



Organisation Name	Eurofins Environment Testing Ireland Ltd
Trading As	
INAB Reg No	138T
Contact Name	Henry McLaughlin
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Accreditation Standard	EN ISO/IEC 17025 T
Standard Version	2017
Date of award of accreditation	19/05/2003
Scope Classification	Biological and veterinary testing
Scope Classification	Chemical testing
Services available to the public <sup>1</sup>	

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

Sites from which accredited services are delivered		
(the detail of the accredited services delivered at each site are on the Scope of Accreditation)		
	Name	Address
1	Cork Laboratory	Hoffman Park, Little Island, Cork, Ireland, T45 PC80
2	Dublin Laboratory	Ringsend, Dublin, D4

# Scope of Accreditation

## Cork Laboratory

### Chemical Testing

Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (inc waters) - .01 Metal analysis	ICPMS Metals Trace/Dissolved <sup>1234</sup>	Aluminium (µg/l)	5-7500	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
		Antimony (µg/l)	0.1-30	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
		Arsenic (µg/l)	0.2-60	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
		Barium (µg/l)	1.77-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188

Beryllium (µg/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Boron (mg/l)	0.21-6	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Cadmium (µg/l)	0.1-30	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Calcium (mg/l)	1.08-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Chromium (µg/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Cobalt (µg/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Copper (mg/l)	0.6-9	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Iron (µg/l)	5-7500	.01 Water for potable and	ICP-MS	Documented In-house methods based:

		domestic purposes .99 Other waters Ground water Surface water		USEPA Method 200.8 (1999) Metals by ICP- MS. EW188
Lead (µg/l)	0.51-450	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP- MS. EW188
Magnesium (mg/l)	1.11-90	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP- MS. EW188
Manganese (µg/l)	1-1500	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP- MS. EW188
Mercury (µg/l)	0.03-6	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP- MS. EW188
Molybdenum (µg/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP- MS. EW188
Nickel (µg/l)	0.5-150	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP- MS. EW188
Potassium (mg/l)	0.15-60	.01 Water for potable and domestic purposes .99 Other waters	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-

		Ground water Surface water		MS. EW188
Selenium (µg/l)	0.2-60	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Sodium (µg/l)	1.5-450	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Strontium (ug/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Tin (µg/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Titanium (µg/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
Total Hardness by Calculation (mg/l CaCO3)	3-330	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Determination of Total Hardness	Documented In-house methods calculation based on APHA 2340B Determination of Total Hardness. EW188
Vanadium (µg/l)	1-300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188

		Zinc (µg/l)	1 - 300	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	ICP-MS	Documented In-house methods based: USEPA Method 200.8 (1999) Metals by ICP-MS. EW188
766 Environmental testing (inc waters) - .02 Biochemical oxygen demand	BOD <sup>134</sup>	BOD (mg/l)	1-1300	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent -Trade Waste - Treated/Effluent	5-day BOD/cBOD	Documented in-house methods based on: APHA 5210B (2012) EN1899-1:1998 Biochemical Oxygen Demand EW001
			1-1300	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent -Trade Waste - Treated/Effluent	5-day BOD/cBOD	Documented in-house methods based on: APHA 5210B (2012) EN1899-1:1998 Biochemical Oxygen Demand EW001
			1-1300	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent -Trade Waste - Treated/Effluent	5-day BOD/cBOD	Documented in-house methods based on: APHA 5210B (2012) EN1899-1:1998 Biochemical Oxygen Demand EW001
	cBOD <sup>134</sup>	cBOD (mg/l)	1-1300	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent -Trade Waste	5-day BOD/cBOD	Documented in-house methods based on: APHA 5210B (2012) EN1899-1:1998 Biochemical Oxygen Demand EW001

				- Treated/Effluent		
			1-1300	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent -Trade Waste - Treated/Effluent	5-day BOD/cBOD	Documented in-house methods based on: APHA 5210B (2012) EN1899-1:1998 Biochemical Oxygen Demand EW001
			1-1300	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent -Trade Waste - Treated/Effluent	5-day BOD/cBOD	Documented in-house methods based on: APHA 5210B (2012) EN1899-1:1998 Biochemical Oxygen Demand EW001
766 Environmental testing (inc waters) - .03 Chemical oxygen demand	Chemical Oxygen Demand by Closed Reflux Colorimetry <sup>134</sup>	COD(mg/l)	High Range 8-10,000	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Closed Reflux Colorimetry	Documented in-house methods based on: APHA 5220D (2012) closed Reflux Colorimetric. EW094
			High Range 8-10,000	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Closed Reflux Colorimetry	Documented in-house methods based on: APHA 5220D (2012) closed Reflux Colorimetric. EW094
			High Range 8-10,000	01 Waters for potable and domestic purposes .99 Other waters	Closed Reflux Colorimetry	Documented in-house methods based on: APHA 5220D (2012) closed Reflux

				Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade		Colorimetric. EW094
			Low Range 8-1,500	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Closed Reflux Colorimetry	Documented in-house methods based on: APHA 5220D (2012) closed Reflux Colorimetric. EW094
			Low Range 8-1,500	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Closed Reflux Colorimetry	Documented in-house methods based on: APHA 5220D (2012) closed Reflux Colorimetric. EW094
			Low Range 8-1,500	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Closed Reflux Colorimetry	Documented in-house methods based on: APHA 5220D (2012) closed Reflux Colorimetric. EW094
766 Environmental testing (inc waters) - .04 Organic	Acid Herbicides^1234	236 - Trichlorobenzoic, 24-D, 24-DB, Bentazone, Boscalid, Clopyralid, Dicamba, Dichloroprop,	0.01µg/L - 1 µg/L	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water	LCMSMS	Documented In-house methods based on: Test Method EO162; USEPA Method 538-1, USEPA Method 535



	Fluroxypyr, MCPA, MCPB, Mecoprop (MCP), Pentachlorophenol (PCP), Picloram, Triclopyr, Quinmerac, Bromoxynil, Ioxynil, 2,4,5-T, Bromacil				
Organochlorine Pesticides (OCP) and Polycyclic aromatic hydrocarbon (PAH)	Aldrin Benzo[a]pyrene Benzo[b]fluoranthene Benzo[ghi]perylene Benzo[k]fluoranthene Cypermethrin Dichlobenil Dieldrin Heptachlor Heptachlor Epoxide Indeno[123-cd] pyrene Pendimethalin (Penoxaline)	0.003 -0.2 µg/l	Drinking Water, Ground Water, Surface Water	SPE-GCMSMS	Documented In-House method based on US EPA Method 525.2 Determination Of Organic Compounds In Drinking Water By Liquid-Solid Extraction And Capillary Column Gas Chromatography/Mass Spectrometry (Revision 2.0)
Suite A (Organophosphorus Pesticides, Triazines, Urons and other pesticides)^1234	Chlorfeniphos, Diazinon, Atrazine, Propyzamide, Simazine, Chlorotoluron, Diuron, Isoproturon, Linuron, Chlopropham, Epoxiconazole, Diflufenican, Metaldehyde, Metazachlor,	0.01µg/L - 1 µg/L	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water	LCMSMS	Documented In-house methods based on: Test Method EO165; USEPA Method 538-1, USEPA Method 536
Total PAH (Calculation)	Total PAH	0.01 - 0.2 ug/l	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Total PAH by Calculation	Documented in-house methods based on: EO181

	Total Pesticides (Calculation)	Total Pesticides	0.01 - 1 ug/l	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Total Pesticides by Calculation	Documented in-house methods based on: EO196
766 Environmental testing (inc waters) - .05 Inorganic	Bromate by Ion Chromatography <sup>1234</sup>	Bromate (ug/l)	1-50	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Ion Chromatography	Documented in-house methods based on: USEPA 326.0 Ion Chromatography. EW137
			1-50	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Ion Chromatography	Documented in-house methods based on: USEPA 326.0 Ion Chromatography. EW137
			1-50	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Ion Chromatography	Documented in-house methods based on: USEPA 326.0 Ion Chromatography. EW137
			1-50	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Ion Chromatography	Documented in-house methods based on: USEPA 326.0 Ion Chromatography. EW137
			1-50	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Ion Chromatography	Documented in-house methods based on: USEPA 326.0 Ion Chromatography. EW137
	Conductivity Measurement <sup>1234</sup>	Conductivity (uS/cm)	100 - 12880	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent	Conductivity Meter	Documented in-house methods based on: APHA method 2510B EW153C

				- Treated/Effluent - Trade		
Dissolved Oxygen <sup>134</sup>	Dissolved Oxygen (mg/l)	1 - 10	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	DO Meter	Documented in-house methods based on: APHA 4500G Dissolved oxygen measurement EW043	
		1 - 10	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	DO Meter	Documented in-house methods based on: APHA 4500G Dissolved oxygen measurement EW043	
		1 - 10	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	DO Meter	Documented in-house methods based on: APHA 4500G Dissolved oxygen measurement EW043	
Fluoride <sup>1234</sup>	Flouride	0.1 to 2 mg/l	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Fluoride by IC	Documented in-house methods based on: USEPA Method 300.1 (1997). Flouride by IC. EW137	
		0.1 to 2 mg/l	01 Waters for potable and domestic purposes	Fluoride by IC	Documented in-house methods based on: USEPA Method 300.1	

				.99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade		(1997). Flouride by IC. EW137
			0.1 to 2 mg/l	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Flouride by IC	Documented in-house methods based on: USEPA Method 300.1 (1997). Flouride by IC. EW137
Gallery Plus Discrete Analyser Tests <sup>1234</sup>	Ammonia as N (mg/l N)	0.05- 0.5	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on: APHA 4500NH3G. EW175	
	Ammonia as NH3 by Calculation (mg/l NH3)	0.06-0.608	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on: APHA 4500NH3G. EW175	
	Ammonium as NH4 by Calculation (mg/l NH4)	0.06-0.644	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on: APHA 4500NH3G. EW175	
	Chloride (mg/l)	5-100	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:APHA4500-CL G (2012) EW175	

Colour (PtCo-Hazen)	5 - 50	.01 Water for potable and domestic purposes	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:APHA 2120C (2012) EW175
Fluoride (mg/l)	0.2-2	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:EPA340.3 EW175
	0.2-2	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:EPA340.3 EW175
	0.2-2	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:EPA340.3 EW175
	0.2-2	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:EPA340.3 EW175
	0.2-2	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:EPA340.3 EW175
Nitrate by Calculation (mg/l N)	1- 15	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 353.1.Rev 1 EW175
Nitrate by Calculation (mg/l NO3)	4.4-66	.01 Water for potable and	Autoanalyser Spectrophotometry	Documented in-house method by

		domestic purposes .99 Other waters Ground water Surface water		Autoanalyser Spectrophotometry based on:USEPA 353.1.Rev 1 EW175
Nitrite (mg/l N)	0.1-0.5	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:APHA 4500- NO2 (2012) EW175
Nitrite as NO2 by calculation (mg/l NO2)	0.33-1.6	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:APHA 4500- NO2 (2012) EW175
Orthophosphate-MRP (mg/l P)	0.05-0.5	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 365.1 EW175
Phosphate by Calculation (mg/l P2O5)	0.11-1.15	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 365.1 EW175
	0.11-1.15	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 365.1 EW175
	0.11-1.15	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 365.1 EW175
	0.11-1.15	.01 Water for potable and domestic purposes .99 Other waters	Autoanalyser Spectrophotometry	Documented in-house method by Autoanalyser Spectrophotometry

				Ground water Surface water		based on:USEPA 365.1 EW175
		0.11-1.15	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry		Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 365.1 EW175
	Phosphate by Calculation (mg/l PO4)	0.15-1.5	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry		Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 365.1 EW175
	Sulphate (mg/l)	1- 100	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry		Documented in-house method by Autoanalyser Spectrophotometry based on:APHA 4500- SO4 E EW175
	TON	1- 15	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Autoanalyser Spectrophotometry		Documented in-house method by Autoanalyser Spectrophotometry based on:USEPA 353.1.Rev 1 EW175
pH <sup>1234</sup>	pH (pH units)	4.00 - 10.00	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	pH Meter		Documented in-house methods based on: APHA method 2510B EW153B
Suspended Solids <sup>1234</sup>	Suspended Solids (mg/l)	5-1000	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent	Gravimetric		Documented in-house methods based on: APHA 2540D Suspended solids by Gravimetric analysis EW013

				- Treated/Effluent - Trade		
			5-1000	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Gravimetric	Documented in-house methods based on: APHA 2540D Suspended solids by Gravimetric analysis EW013
			5-1000	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Gravimetric	Documented in-house methods based on: APHA 2540D Suspended solids by Gravimetric analysis EW013
TOC/DOC <sup>1234</sup>	TOC/DOC (mg/l)	1 - 100	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	TOC analyzer	Documented in-house method based on: USEPA Method 415.3 Total Organic Carbon by Combustion Oxidation. EW123	
Total Dissolved Solids <sup>1234</sup>	TDS	15-1000 mg/l	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Total Dissolved Solids @180C	APHA 2540C (2012) Total Dissolved Solids at 180C EW046	
		15-1000 mg/l	01 Waters for potable and domestic purposes	Total Dissolved Solids @180C	APHA 2540C (2012) Total Dissolved Solids at 180C EW046	



				.99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade		
			15-1000 mg/l	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Total Dissolved Solids @180C	APHA 2540C (2012) Total Dissolved Solids at 180C EW046
	Total Kjeldahl Nitrogen <sup>134</sup>	Total Kjeldahl Nitrogen by Calculation (mg/l)	1-49	"01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade"	Nitrogen by calculation	Documented in-house methods based on: Nitrogen by calculation EW010
			1-49	"01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade"	Nitrogen by calculation	Documented in-house methods based on: Nitrogen by calculation EW010
	Total Kjeldahl Nitrogen <sup>134</sup>		1-49	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent	Nitrogen by calculation	Documented in-house methods based on: Nitrogen by calculation EW010

				- Treated/Effluent - Trade		
	Total Nitrogen <sup>1234</sup>	Total Nitrogen (mg/l)	1-150	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	TN Analyser	Documented in-house methods based on: APHA 4500NB (2012) by TN Analyser. EW140
			1-150	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	TN Analyser	Documented in-house methods based on: APHA 4500NB (2012) by TN Analyser. EW140
			1-150	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	TN Analyser	Documented in-house methods based on: APHA 4500NB (2012) by TN Analyser. EW140
			1-150	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	TN Analyser	Documented in-house methods based on: APHA 4500NB (2012) by TN Analyser. EW140
			1-150	01 Waters for potable and domestic purposes	TN Analyser	Documented in-house methods based on: APHA 4500NB (2012)

				.99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade		by TN Analyser. EW140
Total Phosphorus <sup>1234</sup>	Total Phosphorus (mg/l)	Potable Water 0.09 - 50 Surface Water 0.23 - 50 Ground Water 0.27 - 50 Trade Waste 0.06 - 50 Influent 0.22 -50 Effluent 0.06 -50	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Total Phosphorus by Ganimede	Documented in-house methods based on:APHA 4500 PJ Total Phosphorus by Ganimede. EW 146	
		Potable Water 0.09 - 50 Surface Water 0.23 - 50 Ground Water 0.27 - 50 Trade Waste 0.06 - 50 Influent 0.22 -50 Effluent 0.06 -50	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Total Phosphorus by Ganimede	Documented in-house methods based on:APHA 4500 PJ Total Phosphorus by Ganimede. EW 146	
		Potable Water 0.09 - 50 Surface Water 0.23 - 50 Ground Water 0.27 - 50 Trade Waste 0.06 - 50 Influent 0.22 -50 Effluent 0.06 -50	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Total Phosphorus by Ganimede	Documented in-house methods based on:APHA 4500 PJ Total Phosphorus by Ganimede. EW 146	
		Potable Water 0.09 - 50 Surface Water 0.23 - 50 Ground Water 0.27 - 50 Trade Waste 0.06 - 50 Influent 0.22 -50 Effluent 0.06 -50	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent	Total Phosphorus by Ganimede	Documented in-house methods based on:APHA 4500 PJ Total Phosphorus by Ganimede. EW 146	

		Influent 0.22 -50 Effluent 0.06 -50	- Treated/Effluent - Trade		
		Potable Water 0.09 - 50 Surface Water 0.23 - 50 Ground Water 0.27 - 50 Trade Waste 0.06 - 50 Influent 0.22 -50 Effluent 0.06 -50	01 Waters for potable and domestic purposes .99 Other waters Ground water Surface water Waste water - Untreated/Influent - Treated/Effluent - Trade	Total Phosphorus by Ganimede	Documented in-house methods based on:APHA 4500 PJ Total Phosphorus by Ganimede. EW 146
Turbidity Measurement <sup>134</sup>	Turbidity (NTU)	0.12 - 150	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	Turbidity Technique	Documented in-house methods based on: ISO 7027:1999 EW136
UV Spectrometry <sup>134</sup>	UV Absorbance (cm1)	0.014- 1	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	UV Spectrometry @254nm	Documented in-house methods based on: EW182 - USEPA 415.3, Standard method 5910B
		0.014- 1	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	UV Spectrometry @254nm	Documented in-house methods based on: EW182 - USEPA 415.3, Standard method 5910B
		0.014- 1	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	UV Spectrometry @254nm	Documented in-house methods based on: EW182 - USEPA 415.3, Standard method 5910B
	UV Transmittance (%)	10-96	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	UV Spectrometry @254nm	Documented in-house methods based on: EW182 - USEPA 415.3, Standard method 5910B
		10-96	.01 Water for potable and	UV Spectrometry @254nm	Documented in-house methods based on:

				domestic purposes .99 Other waters Ground water Surface water		EW182 - USEPA 415.3, Standard method 5910B
			10-96	.01 Water for potable and domestic purposes .99 Other waters Ground water Surface water	UV Spectrometry @254nm	Documented in-house methods based on: EW182 - USEPA 415.3, Standard method 5910B

## Dublin Laboratory

### Biological and Veterinary Testing

Biology/veterinary field - Tests	Test name	Technique	Matrix	Equipment	Std. reference	
804 Detection of bacterial, parasite, viral or fungal antigens using specific antibodies and appropriate techniques - .01 Slide agglutination,	Detection of Salmonella	Customer specified method based on selective enrichment	Constituents of the environment Solid waste Pasteurised Thermodigestion.		Method ref: 3242 Customer specified method Based on EA - The Microbiology of Sludge (2004) Part 8.	

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	Detection and enumeration of coliforms (MPN) Detection and enumeration of E.coli (MPN)	MPN Method by Colilert Technique.	Waters: potable, industrial, sewage, trade wastes, swimming pools and spas	Incubator & Colilert heat sealer.	Method Ref: 1201 Based on: IDEXX Colilert® 18 Test Kit – DST as described in The Microbiology of Drinking Water (2009) – Methods for the examination of waters and associated materials Part 4 – Methods for the isolation and enumeration of coliform bacteria and E.coli.	
	Detection and enumeration of enterococci	Membrane Filtration	Environmental water	Incubator	Method Ref: 1205 Based on: The Microbiology of Drinking Water (2012) – Methods for the examination of waters and associated materials Part 5 – Methods for the isolation and enumeration of enterococci	
	Enumeration of Pseudomonas aeruginosa by membrane filtration	Membrane Filtration	Waters: Environmental, swimming pool waters, endoscopy	Incubator	Method ref : 3231 based on The Microbiology of Recreational and	

					Environmental Waters (2015) – Part 7 – Methods for the isolation and enumeration of Aeromonas and Pseudomonas aeruginosa, Methods for the Examination of Waters and Associated Materials, Environment Agency.	
	Enumeration of Staphylococcus aureus by membrane filtration		Waters: Environmental, swimming pool waters	Incubator.	Method ref: 3230 based on The Microbiology of Recreational and Environmental Waters (2015) – Part 6 – Methods for the isolation and enumeration of Staphylococcus aureus, Methods for the Examination of Waters and Associated Materials, Environment Agency.	
	Isolation and enumeration of Clostridium perfringens in water by membrane filtration.		Waters: potable, environmental, surface.	Incubator.	Method Ref: 1214 Based on: The Microbiology of Drinking Water (2010) – Methods for the examination of waters and associated materials Part 6	
	Isolation and Enumeration of faecal coliforms in water by membrane filtration.		Waters: potable, industrial, sewage, trade wastes	Waterbath	Method Ref: 3221 Apha Standard Methods for examination of waters and waste waters (22nd Edition).	



	TVC @ 22°C for 72 hours TVC @ 37°C for 48 hours	Pour plate and spread technique	Waters: Potable, industrial	Incubator	Method Ref: 1208 Based on: The Microbiology of Drinking Water (2007) – Methods for the examination of waters and associated materials Part 7 – Methods for the enumeration of heterotrophic bacteria by pour and spread plate techniques	
	TVC at 30C 1-100cfu/100ml	Membrane Filtration	Endoscopy water	Incubator.	Method ref: 3234 Department of health – Choice of framework for local policy and procedures 01-06- Decontamination of flexible endoscopes The microbiology of drinking water 2013 part 7.	

Chemical Testing

Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (inc waters) - .01 Metal analysis	Aluminium Cadmium Chromium Copper Iron Lead Manganese Nickel Zinc	Aluminium Cadmium Chromium Copper Iron Lead Manganese Nickel Zinc	Aluminium 0.2 - 50 mg/l Cadmium 0.2 - 50 mg/l Chromium 0.2 - 50 mg/l Copper 0.2 - 50 mg/l Iron 0.2 - 50 mg/l Lead 0.2 - 50 mg/l Manganese 0.2 - 50 mg/l Nickel 0.2 - 50 mg/l Zinc 0.2 - 50 mg/l	Sewage influent & effluent	ICP OES	In house methods based on "APHA Standard Methods for the Examination of Water and Wastewater" 22nd Edition:2012 Ref: 3001 based on 3120B - ICP method
	Sodium Calcium Magnesium Potassium Hardness Boron Aluminium Cadmium Chromium Copper Iron Lead Manganese Nickel Zinc	Sodium Calcium Magnesium Potassium Hardness Boron Aluminium Cadmium Chromium Copper Iron Lead Manganese Nickel Zinc	Sodium 0.15-60 mg/l Calcium 0.1-60 mg/l Magnesium 0.15-60 mg/l Potassium 0.4-60 mg/l Hardness as CaCO <sub>3</sub> 33-369.9mg/l Hardness as Ca 13.4-160.8 mg/l Boron 0.05-1 mg/l Aluminium 5 – 1000 µg/l Cadmium 0.2 – 25 µg/l Chromium 0.9 – 250 µg/l Copper 2 – 1000 µg/l Iron 7.2 – 1000 µg/l Lead 1.7– 120 µg/l	Waters: potable, bore, surface	ICP OES	In house methods based on "APHA Standard Methods for Waters and Wastewater" 22nd Edition:2012 ICP-OES Method Ref: 3001 based on 3120B-ICP method

			Manganese 0.7 – 250 µg/l Nickel 0.5 – 100 µg/l Zinc 2.8 – 1000 µg/l			
	Total Phosphate	Total P	Total P 0.05 – 3 mg/l Total P 2-20 mg/l (Influent only)	Waters: potable, sewage influent, bore, surface	ICP OES	In house methods based on "APHA Standard Methods for Waters and Wastewater" 22nd Edition:2012 Method Ref: 3001 based on std method 4500-P.
766 Environmental testing (inc waters) - .02 Biochemical oxygen demand	BOD	BOD	Range 2-1000 mg/l O2	Waters: sewage (influent & effluent), surface	DO Meter	Method Ref: 1003 based on standard method 5210B
	BOD Range	BOD Range	2-7 mg/l O2 consumed (undiluted samples)	Waters: saline, surface	DO Meter	Method Ref: D/1003 based on standard method ref 5210D
766 Environmental testing (inc waters) - .03 Chemical oxygen demand	COD	COD	Range: 8-2000 mg/l	Waters: sewage (influent & effluent), trade wastes, saline, surface.		Method Ref: 1009 based on standard method ref 5220D
766 Environmental testing (inc waters) - .05 Inorganic	Alkalinity	Alkalinity	Alkalinity as CaCO3 30-3000 mg/l Alkalinity as HCO3 36.6-3660 mg/l	Waters: potable, sewage (influent & effluent), bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
	Alkalinity Ammonia Chloride Nitrate Ortho Phosphate Total Oxidised Nitrogen Sulphate	Alkalinity Ammonia Chloride Nitrate Ortho Phosphate Total Oxidised Nitrogen Sulphate	Alkalinity as CaCO3 30-1500 mg/l Ammonia as N 0.01-100 mg/l Ammonia as NH4 0.013-129 mg/l Chloride 10-500 mg/l Nitrate as N 2-100 mg/l Nitrate as NO3 8.9-443 mg/l Nitrite as N 0.005-2.0 mg/l Nitrite as NO2 0.066-	Waters: potable, bore, surface	Gallery Discrete Analyser	In house methods based on "APHA Standard Methods for Waters and Wastewater" 22nd Edition:2012 Colorimetric method using discrete analyser Method Ref: 3000 Turbidimetric method using discrete analyser:

		1.65 mg/l Ortho Phosphate 0.025-25 mg/l Total Oxidised Nitrogen as N 2-100 mg/l Total Oxidised Nitrogen as NO3 8.86-443 mg/l Sulphate 20-500 mg/l			3000
Ammonia	Ammonia	(High Range) Ammonia as N 1-100 mg/l Ammonia as NH4 1.29-129 mg/l	Waters: potable, sewage (influent & effluent), trade wastes, bore	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
		(Low Range) Ammonia as N 0.01- 2.5 mg/l Ammonia as NH4 0.013-3.23 mg/l	Waters: potable, sewage (influent & effluent), bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
Chloride	Chloride	(High Range) Chloride 50-10, 000 mg/l	Waters: potable, sewage (influent & effluent), bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
		(Low Range) Chloride 2-1000 µg/l	Waters: potable, sewage (effluent), bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
Colour apparant	Colour apparant	Colour 5-400 Hazen	Waters: potable, bore, surface	Aqualytic spectrophotometer	Standard Methods for the analysis of Water and Wastewater 22nd Edition: 2012 Ref method 2120C
Fluoride	Fluoride	0.1 - 5 mg/l	Waters: potable, bore, surface	Ion selective	Standard Methods for the analysis of Water and Wastewater 22nd Edition Method Ref: 30125 based on std ref 4500- FC
KJN	KJN	KJN by calculation	Sewage effluent	Calculation	Based on standard

					methods 4500N Method Ref: 3228
Monochloroamine by spectrophotometer	Monochloroamine	0.45-4.5 mg/l Monochloroamine  0.05-0.5 mg/L free ammonia	Potable water	HACH DR800	Method based on HACH Endophenol method for DR800.
Nitrite	Nitrite	(High Range) Nitrite as N 0.2-10 mg/l Nitrite as NO2 0.66-32.9 mg/l	Waters: potable, sewage (influent & effluent), trade wastes, bore	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
		(Low Range) Nitrate as N 2-200 mg/l Nitrate as NO3 8.86-886 mg/l	Waters: potable, sewage (influent & effluent), trade wastes, bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
		(Low Range) Nitrite as N 0.01-.10 mg/l Nitrite as NO2 0.033-0.329 mg/l	Waters: potable, sewage (effluent), bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
		High Range) Nitrate as N 10-500 mg/l Nitrate as NO3 44.30-2215 mg/l	Waters: sewage (influent & effluent), trade wastes, bore	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
Ortho Phosphate	Ortho Phosphate	Ortho Phosphate 0.5-25 mg/l (Low Range) Ortho Phosphate 2-200 mg/l (High Range)	Waters: potable, sewage (influent & effluent), trade, bore, surface  High range: Sewage (influent & effluent)	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
Ortho Phosphate Nitrite Chloride Total Oxidised Nitrogen Ammonia I Nitrate Total Oxidised	Ortho Phosphate Nitrite Chloride Total Oxidised Nitrogen Ammonia I Nitrate Total Oxidised	Ortho Phosphate as P 0.025-25 mg/l Nitrite as N 0.01-0.5 mg/l Nitrite as NO2 0.66-6.6 mg/l Chloride as Cl 50-5000 mg/l	Waters: sewage (influent & effluent), trade wastes, bore, surface	Gallery Discrete Analyser	In house methods based on "APHA Standard Methods for Waters and Wastewater" 22nd Edition:2012 Colorimetric

Nitrogen - Nitrite Nitrate Sulphate Alkalinity	Nitrogen - Nitrite Nitrate Sulphate Alkalinity	Total Oxidised Nitrogen as N 5-500 mg/l Total Oxidised Nitrogen as NO <sub>3</sub> 8.9-2215mg/l Ammonia As N 1-100 mg/l Ammonia as NH <sub>4</sub> 1.3-129mg/l Nitrate as N - calculated value 4.8-500 mg/L (Total Oxidised Nitrogen - Nitrite) Nitrate as NO <sub>3</sub> - calculated value 21.2-2215 mg/l (Total Oxidised Nitrogen-Nitrite) Sulphate 20-500 mg/l Alkalinity 30-1500 mg/l			Method Ref: 3000 using discrete analyser
Silica	Silica	Silica 0.5-25mg/l	Waters: potable, sewage (influent & effluent), trade wastes, bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
Sulphate	Sulphate	Sulphate 10-500 mg/l	Waters: potable, sewage (influent & effluent), trade wastes, bore, surface	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
Total Oxidised Nitrogen	Total Oxidised Nitrogen	(High Range) Total Oxidised Nitrogen [TON] as N 10-250 mg/l Total Oxidised Nitrogen [TON] as NO <sub>3</sub> 44.3-1107.5 mg/l	Waters: sewage (influent & effluent), trade wastes, bore	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243
		(Low Range) Total Oxidised Nitrogen [TON] as N	Waters: potable, sewage (influent & effluent), trade	Gallery Discrete Analyser	Gallery Discrete Analyser Method 3243

			2-100 mg/l Total Oxidised Nitrogen [TON] as NO3 8.86-443 mg/l	wastes, bore, surface		
	Total solids	Total solids	0.1 - 99 % 103°C	Soil Solid waste - sludge	Gravimetry	Methods Ref: 2086 based on Std ref 2540B
	Turbidity	Turbidity	Turbidity 0.1-150 NTU for surface water 0.1-150 NTU for potable water 0.1-150 NTU for ground water	Waters: potable, bore, surface	HACH DR800	In house methods based on "APHA Standard Methods for Waters and Wastewater" 22nd Edition:2012 Turbidimetric Method Ref: 3054 based on std method ref 2130B
767 Physical test/measurement - .01 pH	pH	pH	Range: 4-10	Waters: potable, sewage (influent & effluent), trade wastes, saline, surface.	pH Meter	In house methods based on "APHA Standard Methods for Waters and Wastewater" 22nd Edition:2012 Method Ref: 1041 based on standard method 4500-HB
767 Physical test/measurement - .02 Conductivity	Conductivity	Conductivity	Conductivity @ 20C 132 – 9030 µS /cm	Waters: potable, sewage (influent & effluent), surface	Conductivity Meter	In house methods based on "APHA Standard Methods for Waters and Wastewater" 22nd Edition:2012 Method Ref: 3011
767 Physical test/measurement - .03 Suspended Solids	Total Suspended Solids	Total Suspended Solids	Range: 2-300 mg/l	Waters: saline, surface	Gravimetry	Method Ref: 1049 based on standard method 2540D
			Range: 5-300 mg/l	Waters: sewage influent & effluent, trade wastes.	Gravimetry	In house methods based on "APHA Standard Methods for Waters and

						Wastewater" 22nd edition:2012 Standard method 2540D Method Ref: 1049
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