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Wilton Place
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*Permanent Laboratory:
Category A*

Schedule of Accreditation

Environmental Laboratory Services Ltd.

Chemical Testing Laboratory

Initial Registration Date : 09/12/1999

Postal Address: Acorn Business Campus,
Mahon Industrial Park,
Blackrock,
Cork

Telephone: 353-(0)21-4536141

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Facilities: Public testing service

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THE IRISH NATIONAL ACCREDITATION BOARD (INAB) is the Irish organisation 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 undertaking 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 interlaboratory test programmes, ensure that these standards of operation are maintained.

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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.

Environmental Laboratory Services Ltd.

Chemical Testing Laboratory



Permanent Laboratory:
Category A

SCOPE OF ACCREDITATION

NAB Classification number Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766.01 Potable Water	COD 8-1500 mg/l	Documented in-house methods TM 00010, closed Reflux Colorimetric
766.99 Other waters <i>Ground water Surface water Waste water</i>	Orthophosphate 0.2-2mg/l PH 0.3 – 14 PH Units Ammonia 0.0089-10mg/l Phosphate 0.001-mg/l Chloride 1-250 mg/l Nitrate 0.054-50 mg/l Nitrite 0.002-1 mg/l	TM00007, Ascorbic Acid EW019 – Electrometric measurement EWOC3 Ammonia by Autoanalyser Spectrophotometry EWO07 Phosphate by Autoanalyser Spectrophotometry EWO15 Chloride by Autoanalyser Spectrophotometry EWO34 Nitrate by Autoanalyser Spectrophotometry EWO35 Nitrite by Autoanalyser Spectrophotometry

Environmental Laboratory Services Ltd.

Chemical Testing Laboratory



Permanent Laboratory:
Category A

SCOPE OF ACCREDITATION

NAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used																																																																		
776.01 Potable Water 766.99 Other waters <i>Ground water</i> <i>Surface water</i>	<p>SI439 Potable Water Metals</p> <table> <tbody> <tr><td>Aluminium</td><td>6.2 – 500µg/l</td></tr> <tr><td>Antimony</td><td>0.28 – 10µg/l</td></tr> <tr><td>Arsenic</td><td>0.04 – 20 µg/l</td></tr> <tr><td>Boron</td><td>0.014 – 2mg/l</td></tr> <tr><td>Cadmium</td><td>0.02 – 10 µg/l</td></tr> <tr><td>Chromium</td><td>0.16 - 100µg/l</td></tr> <tr><td>Copper</td><td>4.3 - 4000µg/l</td></tr> <tr><td>Iron</td><td>5.8 - 500µg/l</td></tr> <tr><td>Lead</td><td>0.2 - 30µg/l</td></tr> <tr><td>Manganese</td><td>0.03 - 100µg/l</td></tr> <tr><td>Mercury</td><td>0.009 - 2µg/l</td></tr> <tr><td>Nickel</td><td>0.8 - 50µg/l</td></tr> <tr><td>Selenium</td><td>0.58 - 20µg/l</td></tr> <tr><td>Sodium</td><td>0.1 – 50mg/l</td></tr> </tbody> </table> <p>Other Metals</p> <table> <tbody> <tr><td>Barium</td><td>0.2 - 100µg/l</td></tr> <tr><td>Calcium</td><td>0.5 – 100mg/l</td></tr> <tr><td>Cobalt</td><td>0.2 - 100µg/l</td></tr> <tr><td>Magnesium</td><td>0.1 – 20mg/l</td></tr> <tr><td>Molybdenum</td><td>0.04 - 100µg/l</td></tr> <tr><td>Phosphorus</td><td>0.006 – 3.265mg/l</td></tr> <tr><td>Potassium</td><td>0.1 – 20mg/l</td></tr> <tr><td>Strontium</td><td>0.3 - 100µg/l</td></tr> <tr><td>Tin</td><td>0.15 - 100µg/l</td></tr> <tr><td>Vanadium</td><td>0.1 - 100µg/l</td></tr> <tr><td>Zinc</td><td>2.6 - 100µg/l</td></tr> </tbody> </table> <p>SI439 Potable Water VOCs</p> <table> <tbody> <tr><td>Benzene</td><td>0.09-35 µg/l</td></tr> <tr><td>1,2-Dichloroethane</td><td>0.06-35 µg/l</td></tr> <tr><td>Tetrachloroethene</td><td>0.08-35 µg/l</td></tr> <tr><td>Trichloroethene</td><td>0.1-35 µg/l</td></tr> </tbody> </table> <p>SI439 Potable Water THM's</p> <table> <tbody> <tr><td>Chloroform</td><td>0.87-35 µg/l</td></tr> <tr><td>Bromoform</td><td>0.92-35 µg/l</td></tr> <tr><td>Dibromochloromethane</td><td>0.78-35 µg/l</td></tr> <tr><td>Bromodichloromethane</td><td>1.27-35 µg/l</td></tr> </tbody> </table> <p>Volatile Organic Compounds See Appendix 1</p>	Aluminium	6.2 – 500µg/l	Antimony	0.28 – 10µg/l	Arsenic	0.04 – 20 µg/l	Boron	0.014 – 2mg/l	Cadmium	0.02 – 10 µg/l	Chromium	0.16 - 100µg/l	Copper	4.3 - 4000µg/l	Iron	5.8 - 500µg/l	Lead	0.2 - 30µg/l	Manganese	0.03 - 100µg/l	Mercury	0.009 - 2µg/l	Nickel	0.8 - 50µg/l	Selenium	0.58 - 20µg/l	Sodium	0.1 – 50mg/l	Barium	0.2 - 100µg/l	Calcium	0.5 – 100mg/l	Cobalt	0.2 - 100µg/l	Magnesium	0.1 – 20mg/l	Molybdenum	0.04 - 100µg/l	Phosphorus	0.006 – 3.265mg/l	Potassium	0.1 – 20mg/l	Strontium	0.3 - 100µg/l	Tin	0.15 - 100µg/l	Vanadium	0.1 - 100µg/l	Zinc	2.6 - 100µg/l	Benzene	0.09-35 µg/l	1,2-Dichloroethane	0.06-35 µg/l	Tetrachloroethene	0.08-35 µg/l	Trichloroethene	0.1-35 µg/l	Chloroform	0.87-35 µg/l	Bromoform	0.92-35 µg/l	Dibromochloromethane	0.78-35 µg/l	Bromodichloromethane	1.27-35 µg/l	<p><u>EM 130</u> – Metals by ICP-MS</p> <p><u>EO 025</u> - Determination of volatile organic carbons in water by purge and trap GC/MS</p>
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Appendix 1 VOLATILE ORGANIC COMPOUNDS

No .	Analyte	Range
6	Bromomethane	0.09 - 35 ug/l
9	Ethyl Ether/Diethyl Ether	0.12 - 35 ug/l
10	11 Dichloroethene	0.15 - 35 ug/l
12	Iodomethane/Methyl Iodide	0.06 - 35 ug/l
13	Carbon Disulphide	0.07 - 35 ug/l
14	Allyl Chloride	0.14 - 35 ug/l
15	Methylene Chloride/DCM	2.33 - 35 ug/l
16	2-Propenenitrile/Acrylonitrile	1.78 - 35 ug/l
17	Chlormethyl Cyanide/Chloroacetonitrile	0.04 - 35 ug/l
20	Hexachlorobutadiene	0.08 - 35 ug/l
21	Trans-1,2 Dichloroethene	0.10 - 35 ug/l
22	MtBE	0.05 - 35 ug/l
23	11 Dichloroethane	0.09 - 35 ug/l
24	22 Dichloropropene	0.07 - 35 ug/l
25	Cis-12 Dichloroethene	0.07 - 35 ug/l
27	Methyl Acrylate	2.06 - 35 ug/l
28	Bromoform	0.07 - 35 ug/l
30	Tetrahydrofuran	2.83 - 35 ug/l
32	111 Trichloroethane	0.08 - 35 ug/l
33	1-Chlorobutane	0.08 - 35 ug/l
34	Carbon Tetrachloride	0.08 - 35 ug/l
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40	Dichloropropene	0.10 - 35 ug/l
41	12 Dichloropropene	0.08 - 35 ug/l

No .	Analyte	Range
51	13 Dichloropropane	0.06 - 35 ug/l
52	2 Hexanone	0.79 - 35 ug/l
54	12 Dibromoethane	0.07 - 35 ug/l
55	Chlorobenzene	0.08 - 35 ug/l
56	1112 Tetrachloroethane	1.27 - 35 ug/l
57	Ethyl Benzene	0.10 - 35 ug/l
58	m & p Xylene	0.09 - 35 ug/l
59	O Xylene	0.10 - 35 ug/l
60	Stryene	1.64 - 35 ug/l
62	Isopropyl Benzene	0.10 - 35 ug/l
63	Bromobenzene	0.07 - 35 ug/l
64	1122 Tetrachloroethane	0.06 - 35 ug/l
65	123 Trichloropropene	1.28 - 35 ug/l
67	Propyl Benzene	0.11 - 35 ug/l
68	2-Chlorotoluene	0.11 - 35 ug/l
69	4 Chlorotoluene	0.08 - 35 ug/l
70	135 Trimethylbenzene	0.10 - 35 ug/l
71	Tert Butyl Benzene	0.09 - 35 ug/l
72	124 Trimethylbenzene	0.09 - 35 ug/l
73	Sec Butyl Benzene	0.11 - 35 ug/l
74	13 Dichlorobenzene	0.09 - 35 ug/l
75	P Isopropyltoluene	0.12 - 35 ug/l
76	14 Dichlorobenzene	0.09 - 35 ug/l

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			ug/l
41	Dibromomethane	0.10 - 35 ug/l	
42	Methyl Methacrylate	0.09 - 35 ug/l	
44	13 Dichloropropene, cis	1.30 - 35 ug/l	
45	MIBK/4 Methyl 2 Pentanone	1.90 - 35 ug/l	
46	Toluene	0.11 - 35 ug/l	
47	13 Dichloropropene,trans	1.19 - 35 ug/l	
48	Ethyl Methacrylate	1.26 - 35 ug/l	
49	112 Trichloroethane	0.06 - 35 ug/l	
77	12 Dichlorobenzene	0.08 - 35 ug/l	
78	N Butyl Benzene	0.12 - 35 ug/l	
79	Hexachloroethane	2.36 - 35 ug/l	
80	12 Dibromo 3 Chloropropane	1.47 - 35 ug/l	
81	124 Trichlorobenzene	0.07 - 35 ug/l	
82	Naphthalene	1.71 - 35 ug/l	
83	123 Trichlorobenzene	0.09 - 35 ug/l	

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