# Schedule of Accreditation



Organisation Name TMS Environment Ltd

Trading As

INAB Reg No 150T

Contact Name Marian Brady

Address 53 Broomhill Drive, Tallaght, Dublin, D24

Contact Phone No 01-4626710

Email mbrady@tmsenv.ie
Website http://www.tmsenv.ie
Accreditation Standard EN ISO/IEC 17025 T

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Scope Classification Chemical testing

Services available to the public<sup>1</sup> Yes

<sup>&</sup>lt;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	1 Head Office 53 Broomhill Drive, Tallaght, Dublin, D24						

# Scope of Accreditation

#### **Head Office**

#### **Chemical Testing**

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (inc waters)02 Biochemical oxygen demand	BOD	O2	1-15000 mg/l	Sewage trade	,	QP-CHEM-2016 based on APHA 5210
			<u> </u>	, ,		QP-CHEM-2016 based on APHA 5210

# **Head Office**

# **Chemical Testing**

#### Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (inc waters)03 Chemical oxygen demand	COD	O2	20-150000O2mg/L	Sewage, Trade	Spectophotometry	QP-CHEM-2065 based on APHA 5221
			5-1500 O2mg/l	Potable, Steam , Bore, Surface	Spectophotometry	QP-CHEM-2065 based on APHA 5220
766 Environmental testing (inc waters)04 Organic	Volatile Organic Compounds (VOCs)	1,1,1,2- Tetrachloroethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		1,1,1-Thrichloroethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		1,1,2,2- Tetrachloroethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		1,1.2-Trichloroethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		1,1-Dichloro-1-propene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		1,1-Dichloroethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		1,1-Dichloroethene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		1,2,3-Thrichloropropane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022

1,2,3-Trichlorobenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2,4-Trichlorobenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2,4-Trimethylbenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2-Dibromo-3- Chloropropane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2-Dibromoethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2-Dichloroethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2-Dichloroethene E	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2-Dichloroethene Z	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,2-Dichloropropane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,3,5-Trimethylbenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,3-Dichlorobenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,3-Dichloropropane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,3-Dichloropropene E	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022

1,3-Dichloropropene Z	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1,4-Dichlorobenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
1.2-Dichlorobenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
2-Chlorotoluene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
4-Chlorotoluene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Benzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Bromobenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Bromochloromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Bromodichloromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Chlorobenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Chloroethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Chloromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Cumene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022

Dibromochloromethan	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Dibromomethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Dichlorodifluoromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Dichloromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Ethylbenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Fluorotrichloromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Hexachloro-1,3- Butadiene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
m-Xylene + p-Xylene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Naphthalene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
n-Butylbenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
n-Propylbenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
o-Xylene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
sec-Butylbenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022

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Styrene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Tert-Butylbenzene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Tetrachloromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Toluene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
Total hexachlorocyclohexanes by calculation	0.3 to 10,000ug/L	Drinking Water Groundwater	GC, GCMS	QP-CHEM-2022
Total hexachlorocyclohexanes by calculation, with analysis in an accredited laboratory	range for analysis	Groundwater, Surface water, Sewage, Trade, potable, bore, steam	GC, GCMS	QP-CHEM-2022
Total trichlorobenzenes by calculation	0.3 to 10,000ug/L	Drinking Water Groundwater	GC, GCMS	QP-CHEM-2022
Total trichlorobenzenes by calculation, with analysis in an accredited laboratory	Range depends on accredited laboratory range for analysis	Groundwater, Surface water, Sewage, Trade, potable, bore, steam	GC, GCMS	QP-CHEM-2022
Total xylenes by calculation	0.3 to 10,000ug/L	Drinking Water Groundwater	GC, GCMS	QP-CHEM-2022
Total xylenes by calculation, with analysis in an accredited laboratory	Range depends on accredited laboratory range for analysis	Groundwater, Surface water, Sewage, Trade, potable, bore, steam	GC, GCMS	QP-CHEM-2022
Tribromomethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022

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		Trichloroethene	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		Trichloromethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		Vinylchloride	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		VOCs	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
766 Environmental testing (inc waters)05 Inorganic	Alkalinity	CaCO3	1.0 to 3000 mg/L	Potable, Steam , Bore, Surface		QP-CHEM-2012 based on APHA 2320B
	Ammonia	N	0.02-200 mg/l	Potable, steam,Bore, Surface Sewage Trade	Spectrometry	QP-CHEM-2037 based on APHA 4500 NH3F
	Chloride	CI	1-20000 mgCl/L	Potable, Steam , Bore, Surface, Sewage, Trade		QP-CHEM-2035 based on APHA 4500- CL B
	Colour	PT	1-50 Pt/I	Potable, Steam , Bore, Surface	Spectophotometry	QP-CHEM-2064 based on APHA 2120
	Fluoride	F	0.02-100 mg/l	Potable, Steam , Bore, Surface	Ion Selective Electrode	QP-CHEM-2036 based on APHA 4500- C
	Nitrate	Nitrate	1.00 -1000mg/I NO3	Potable, Steam, Bore, Surface, Sewage Trade	Ion Selective Electrode	QP-CHEM-2043 based on APHA 4500 NO3D
	Orthophosphate	P	0.02-160 mg/l	Potable Steam,Bore, Surface Sewage Trade	Spectrometry	QP-CHEM-2040 based on APHA 4500 PE
	Sulfate	Sulfate	2-1000mg/l	Potable, Steam , Bore, Surface		QP-CHEM-2050 based on APHA 4500E

			2-2000mg/l	Sewage, Trade	Turbidimetry	QP-CHEM-2050 based on APHA 4500E
	Turbidity	NTU	0.02 to 1000 NTU	Potable, Steam , Bore, Surface	Turbidity Meter	QP-CHEM-2014 based on APHA 2130B
767 Physical test/measurement01 pH	рН	рН	2-12 pH units	Potable, Steam , Bore, Surface, Sewage, Trade	pH Meter	QP-CHEM-2007 based on APHA 4500
767 Physical test/measurement02 Conductivity	Conductivity	Conductivity at 20C	100-12880 uS/cm	Potable, Steam , Bore, Surface, Sewage, Trade	Conductivity Meter	QP-CHEM-2008 based on APHA 2510B
		Conductivity at 25C by calculation	111 - 14,297 uS/cm	Potable, Steam, Bore, Groundwater, Surface water, Sewage, Trade	Conductivity Meter	QP-CHEM-2008 based on APHA 2510B
767 Physical test/measurement03 Suspended Solids	Suspended solids	Suspended solids	3-200mg/l	Potable, Steam , Bore, Surface	Gravimetric	QP-CHEM-2002 based on APHA 2540
			3-8000mg/l	Sewage, Trade	Gravimetric	QP-CHEM-2002 based on APHA 2540
770 Gases and aerosols07 Other gases and mixtures	Natural gas and biogas	C6+ Hydrocarbons	0.01 to 0.1% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
		Calculated values from composition Sooting index Incomplete combustion factor	Range depends on composition of gas	Natural gas and biogas		In-house method QP-CHEM-2107. Values calculated from composition and physical properties according to ISO 6976:1995 on a real or ideal gas basis assuming mixture is dry (free from water) Based on UK Statutory Instrument 1996 No.551 Gas Safety (Management)

				Regulation 1996 - Regulation 8 (Schedule 3) - Content and other Characteristics of Gas - Part III- Interpretation
Calculated values from composition gross calorific value net calorific value relative density density gross Wobbe index net Wobbe index molar mass compression factor	Range depends on composition of gas	Natural gas and biogas	Calculated	In-house method QP-CHEM-2107. Values calculated according ro ISO 6976:2016 on a real or ideal gas basis assuming mixture is dry (fre from water) Combustion properties can be expressed in units of the Joule (J) or in kilowatt hours (kWh)
Calculated values from composition Sooting index Incomplete combustion factor	Range depends on composition of gas	Natural gas and biogas	Calculated	In-house method QP-CHEM-2107. Values calculated from composition and physical properties according to ISO 6976:2016 on a real or ideal gas basis assuming mixture is dry (free from water) Based on UK Statutory Instrument 1996 No.551 Gas Safety (Management) regulation 1996 - Regulation 8 (Schedule 3) - Content and other Characteristics of Gas- Part III-Interpretation
Calculated values from composition superior calorific value inferior calorific value relative	Range depends on composition of gas	Natural gas and biogas	Calculated	In-house method QP- CHEM-2107. Values calculated according to ISO 6976:1995 on a

density density gross Wobble index net Wobble index molar mass compression factor				real or ideal gas basis assuming mixture is dry (free from water) Combustion properties can be expressed in units of the Joule (J) or in kilowatt hours (kWh)
Carbon dioxide	0.0154 to 2.5% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
Ethane	0.01849 to 12% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
Hydrocarbon dewpiont and Phase Diagram	Range depends on composition of gas	Natural gas and biogas	Calculated	In-house method QP- CHEM-21017 Calculated from composition in accordance with ISO23874
Hydrogen	0.0063 to 0.1017% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
Isobutane	0.00061 to 0.1% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
Isopentane	0.00061 to 1% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
Methane	0.30425 to 99.99% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
n-butane	0.00061 to 0.1% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in

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						accordance with ISO 6974
		Neopentane	0.00061 to 0.1% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
		n-hexane	0.00061 to 0.1% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
		Nitrogen	0.031 to 99.9992% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
		n-pentane	0.00061 to 0.1% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
		Oxygen	0.0123 to 0.9947% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
		Propane	0.00612 to 1.009% mol/mol	Natural gas and biogas	GC TCD and GC FID	In-house method QP- CHEM-2107 in accordance with ISO 6974
	Odorants in Natural Gas	Dimethyl Sulfide	0.03 to 3.94 µmol/mol 0.08 to 10 mg/m3	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 based as ASTM D5504-20 and ASTM D6228-19
		t-butyl mercaptan	0.06 to 2.71 µmol/mol 0.23 to 10 mg/m3	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 based as ASTM D5504-20 and ASTM D6228-19
782 Workplace environment and hazards - .03 Inspirable dust	Weighing Particulate Matter inhalable dust	dust	0.01-200 mg	Occupational	Gravimetric	QP-CHEM-2055 Method 14/4
782 Workplace environment and hazards - .04 Respirable dust	Weighing Particulate Matter respirable dust		0.01-200 mg	Occupational	Gravimetric	QP-CHEM-2055 Method 14/4

materials and products - Sul .03 Other tests	Sulfur Compounds in Natural Gas and biogas	Carbonyl Sulfide	0.63 to 10.14 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		Dimethyl Sulfide	0.03 to 3.94 µmol/mol 0.08 to 10 mg/m3	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		Ethyl mercaptan	0.64 to 10.23 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		Hydrogen Sulfide	0.62 to 9.95 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		Iso-propyl mercaptan	0.54 to 10.23 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		Methyl mercapton	0.62 to 9.88 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		n-butyl mercaptan	0.06 to 5.16 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		n-propyl mercaptan	0.64 to 10.26 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		t-butyl mercaptan	0.06 to 2.71 µmol/mol 0.23 to 10 mg/m3	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974
		Total Sulfur as S	2.41 to 38.62 µmol/mol	Gaseous Fuels	GC PFPD	In-house method QP- CHEM-2080 in accordance with ISO6974

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	Weighing Particulate Matter filters and rinses	dust	0.1 - 1000 mg	Industrial emissions	Gravimetric	QP-CHEM-2105 EN 13284-1 2002 & ISO 9096:2017
798 Sampling	Sampling of natural gas and biomethane using absorption in accordance with EN14791 and analysis in an accredited lab	Ammonia	Depends on accredited lab	Natural gas, biomethane	Sampling	QP-SITE-2013
	Sampling of natural gas and biomethane using adsorption in accordance with EN ISO 16017-1 and analysis in an accredited lab	Organics	Depends on accredited lab	Natural gas, biomethane	Sampling	QP-SITE-2016

# **Head Office**

# **Chemical Testing**

#### Category: B

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
770 Gases and aerosols04 Industrial fumes and emissions	Total Organic Carbon	TOC	0.2-1600mg/m3	Industrial emissions	Flame Ionisation Detector	QP_SITE-2025 based in EN12619
798 Sampling	Conductivity	Conductivity at 20C by calculation	10- 100,000uS/cm	Potable, Steam, Bore, Groundwater, Surface water, Sewage, Trade	Conductivity Meter	QP-MEAS-2009
		Conductivity at 25C	9-90000 uS/cm	Potable, Steam , Purged Well, Surface, Lakes	Conductivity Meter	QP-MEAS-2009
	Dissolved Oxygen	O2	0.01 - 20 mg/lO2	Potable, Steam , Purged Well, Surface, Lakes	DO Meter	QP-MEAS-2019
			0.01-200 % O2	Potable, Steam , Purged Well, Surface, Lakes	DO Meter	QP-MEAS-2019
			0.5-13 mg/l	Potable stream purged well surface lakes	DO Meter	QP-MEAS-2019
	Drinking Water Sampling	Water Sampling				Qp-SITE -6003 based on ISO 5667-5
	рН	рН	2-12 pH units	Potable, Steam , Purged Well, Surface, Lakes	pH Meter	QP-MEAS-2010 and 2011
	Purged Well sampling	water				QP-SITE-6002 based on ISO 5667-11
	Temperature	оС	0-40 C	Potable, Steam , Purged Well, Surface, Lakes	pH/Temp Meter	QP-MEAS- 2010 and 2011

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	Water sampling lakes,	water		QP-SITE-6001 based
	rivers, stream			on ISO 5667-4 & -6