

Schedule of Accreditation



Organisation Name	TMS Environment Ltd
Trading As	
INAB Reg No	150T
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Accreditation Standard	EN ISO/IEC 17025 T
Standard Version	2017
Date of award of accreditation	16/02/2004
Scope Classification	Biological and veterinary testing
Scope Classification	Chemical testing
Services available to the public ¹	Yes

¹ 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	Head Office	53 Broomhill Drive, Tallaght, Dublin, D24

Scope of Accreditation

Head Office

Biological and Veterinary Testing

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	Enumeration of E Coli	E Coli	NA	Water, Marine, Bathing, Swimming pools Spas, Lagoons Lakes	Membrane Filtration
	Enumeration of Enterococci	Enterococci	NA	Water, Marine, Bathing, Swimming pools Spas, Lagoons Lakes	Membrane Filtration

Chemical Testing

Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (incl. waters) - .02 Biochemical oxygen demand	BOD	O2	1-15000 mg/l	Sewage trade	5 day incubation and DO meter	QP-CHEM-2016 based on APHA 5210
			1-300 mg/l	Potable, steam, Bore, Surface Water	5 day incubation and DO Meter	QP-CHEM-2016 based on APHA 5210
766 Environmental testing (incl. waters) - .03 Chemical oxygen demand	COD		20-150000O2mg/L	Sewage, Trade	Spectrophotometry	QP-CHEM-2065 based on APHA 5221
			5-1500 O2mg/l	Potable, Steam, Bore, Surface	Spectrophotometry	QP-CHEM-2065 based on APHA 5220
766 Environmental testing (incl. 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-Trichloropropane	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
Dibromochloromethane	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
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 depends on 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,	GC, GCMS	QP-CHEM-2022

				potable, bore, steam		
		Tribromomethane	0.3 to 100ug/L (extended by dilution)	Drinking Water Groundwater	Head Space GCMS	QP-CHEM-2022
		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	Potentiometric Titration	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
	Analysis of inorganics by spectrophotometry	Free cyanide	5 to 120ug/L CN (extended by dilution)	Treated Sewage Effluent	Spectrophotometry	In-house method QP-CHEM-2072 based on APHA 4500-CN- E. Colorimetric Method
		Total Hardness	5 to 300mg/L CaCO3 (extended by dilution)	Surface water and Sewage	Auto analyser - Spectrophotometry	In-house method QP-CHEM-2109 based on APHA 2340 A
	Auto-analyser Analysis of inorganics by spectrophotometry	Ammonia	0.01 - 200 mg/L NH3-N (extended by dilution)	Bore, groundwater, surface water	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
			0.01 - 240 mg/L NH3 (extended by dilution)	Bore, groundwater, surface water	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
			0.01 - 257 mg/L NH4 (extended by dilution)	Bore, groundwater, surface water	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F

	0.02 - 200 mg/L NH3-N (extended by dilution)	Sewage	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.024 - 240 mg/L NH3 (extended by dilution)	Sewage	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.026 - 257 mg/L NH4 (extended by dilution)	Sewage	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.05 - 200 mg/L NH3-N (extended by dilution)	Potable	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.06 - 240 mg/L NH3 (extended by dilution)	Potable	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.06 - 257 mg/L NH4 (extended by dilution)	Potable	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.1 - 200 mg/L NH3-N (extended by dilution)	Trade effluent	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.1 - 240 mg/L NH3 (extended by dilution)	Trade effluent	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
	0.13 - 257 mg/L NH4 (extended by dilution)	Trade effluent	Calculation	Inhouse method QP-CHEM-2037 based on APHA 4500 NH3 F
Chloride	1 to 50,000mg/L (extended by dilution)	Bore, Groundwater, Surface water, Sewage, Trade	Auto analyser - Spectrophotometry	QP-CHEM-2013 based on APHA 4500E
Fluoride	0.5 – 100 mg/L F	Bore, Groundwater, Surface water, Sewage, Trade	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2013 based on APHA 4500-F-
Nitrate by calculation	0.05 - 100 mg/L NO3-N (extended by dilution)	Groundwater, Surface water, Sewage	Calculation	QP-CHEM-2045 based on APHA 4500 NO3-H

	0.22 - 440mg/L NO3-NO3 (extended by dilution)	Groundwater, Surface water, Sewage	Calculation	QP-CHEM-2045 based on APHA 4500 NO3-H
Nitrite	0.002 - 1.6 mg/L NO2-N	Groundwater, Surface water, Sewage,	Auto analyser - Spectrophotometry	QP-CHEM-2045 based on APHA 4500 NO2-B
Nitrite by calculation	0.007 – 5.25mg/L NO2-NO2	Groundwater, Surface water, Sewage	Calculation	QP-CHEM-2045 based on APHA 4500 NO2-B
orthophosphate	0.002 - 200 mg/L PO4-P	Ground water, Trade effluent	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
	0.006 - 600 mg/L PO4-PO4	Ground water, Trade effluent	Calculation	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
	0.008 - 200 mg/L PO4-P	Surface water	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
	0.01 - 200 mg/L PO4-P	Potable	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
	0.024 - 600 mg/L PO4-PO4	Surface water	Calculation	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
	0.03 - 600 mg/L PO4-PO4	Potable	Calculation	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
	0.04 - 200 mg/L PO4-P	Sewage	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
	0.12 - 600 mg/L PO4-PO4	Sewage	Calculation	Inhouse method QP-CHEM-2040 based on APHA 4500-P E
Sulfate	2—5000 mg /L SO4	Surface water, groundwater	Auto analyser - Spectrophotometry	Inhouse method QP-CHEM-2013 based on APHA 4500-SO42-
Total Oxidised Nitrogen (TON)	0.05 - 100 mg/L (extended by dilution)	Groundwater, Surface water, Sewage	Auto analyser - Spectrophotometry	QP-CHEM-2045 based on APHA 4500

	Chloride	Cl	1-20000 mgCl/L	Potable, Steam, Bore, Surface, Sewage, Trade	Titration	QP-CHEM-2035 based on APHA 4500-CL B
	Colour	PT	1-50 Pt/l	Potable, Steam, Bore, Surface	Spectrophotometry	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/l 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	Turbidimetry	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/measurement - .01 pH	pH	pH	2-12 pH units	Potable, Steam, Bore, Surface, Sewage, Trade	pH Meter	QP-CHEM-2007 based on APHA 4500
767 Physical test/measurement - .02 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/measurement - .03 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 aerosols - .07 Other gases and mixtures	Identification of carbon dioxide	Carbon dioxide	N/A	Gases	GC TCD and GC FID	In house method QP-CHEM 2110 based on European Pharmacopoeia
	Identification of carbon monoxide	Carbon monoxide	N/A	Gases	GC TCD and GC FID	In house method QP-CHEM 2110 based on European Pharmacopoeia
	Identification of hydrogen	Hydrogen	N/A	Gases	GC TCD and GC FID	In house method QP-CHEM 2110 based on European Pharmacopoeia
	Identification of nitrogen	Nitrogen	N/A	Gases	GC TCD and GC FID	In house method QP-CHEM 2110 based on European Pharmacopoeia
	Identification of oxygen	Oxygen	N/A	Gases	GC TCD and GC FID	In house method QP-CHEM 2110 based on European Pharmacopoeia
	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 to ISO 6976:2016 on a 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)
		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 density density gross Wobble index net Wobble index molar	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 real or ideal gas basis assuming mixture is dry (free from water)

mass compression factor				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 dewpoint 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 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
	Natural gas and biogas analysis	C6+ hydrocarbons	0 to 0.1%	Natural gas and biogas	GC TCD and GC FID	In-house method QP-CHEM-2107 in accordance with ISO 6974:4, ISO 6974:5, ISO 6974:6 and calculation from the sum of all hydrocarbons containing 6 carbons or greater.
		GNI Odour Index	0.4 to 2.5	Natural gas and biogas	GC PFPD	Calculated using In-house method QP-CHEM-2080 from measured values of dimethyl sulfide and tertiary butyl mercaptan

		Total Inerts	0 to 100%	Natural gas and biogas	GC TCD and GC FID	Calculation of total Inert gases from the sum of detected levels of helium, argon, oxygen, nitrogen and carbon dioxide using In-house method QP-CHEM-2107 in accordance with ISO 6974:4, ISO 6974:5, ISO 6974:6 .
		Total Sulfur	0 to 100%	Natural gas and biogas	GC PFPD	Calculated using in-house method QP-CHEM-2080 from the determination of sulfur compounds using GCPFPD
	Odorants in Natural Gas	Dimethyl Sulfide	0.03 to 3.94 $\mu\text{mol/mol}$ 0.08 to 10 mg/m ³	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 $\mu\text{mol/mol}$ 0.23 to 10 mg/m ³	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			0.01-200 mg	Occupational	Gravimetric	QP-CHEM-2055 Method 14/4
797 Miscellaneous materials and products - .03 Other tests	Analysis of a range of Sulfur Compounds in Natural Gas and biogas	Carbonyl Sulfide	0.63 to 10.14 $\mu\text{mol/mol}$	Gaseous Fuels	GC PFPD	In-house method QP-CHEM-2080 in accordance with ISO6974
		Dimethyl Sulfide	0.03 to 3.94 $\mu\text{mol/mol}$ 0.08 to 10 mg/m ³	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 mercaptan	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
	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	Ammonia	Depends on accredited lab	Natural gas, biomethane	Sampling	QP-SITE-2013

	EN14791 and analysis in an accredited lab					
	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

Chemical Testing

Category: B

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
770 Gases and aerosols - .04 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	Bathing water sampling			Coastal water	Grabs	QP-SITE-6012 based on ISO 5667-3 and ISO 19458
	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/IO2	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
	pH	pH	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	oC	0-40 C	Potable, Steam, Purged Well, Surface, Lakes	pH/Temp Meter	QP-MEAS- 2010 and 2011
	Waste water sampling			Influent & effluent	Grabs	QP-SITE-6004 based on ISO 5667-10
	Water sampling lakes, rivers, stream	water				QP-SITE-6001 based on ISO 5667-4 & -6