Schedule of Accreditation

Organisation Name	Saotharlann Chonamara Teo
Trading As	Complete laboratory solutions
INAB Reg No	108T
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Accreditation Standard	EN ISO/IEC 17025 T
Date of award of accreditation	15/09/1999
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	Rosmuc Site , Conemarra Co Galway	Rosmuc, Galway, Galway
2	Head Office	Rosmuc, Connemara, Galway
3	CLS Galway	UNIT 2, 3 and 8, IDA Enterprise Park,, Tuam Road, Galway

Scope of Accreditation

CLS Galway

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	Bioburden of Medical Devices	Incubation and enumeration of microorganisms.	Tests on human pharmaceutical and biological products. Bacteria, Yeasts and Moulds only	N/A	CLS 210 - ISO 11737-1:2018/AMD 1: 2021 Sterilization of health care products - Microbiological methods - Part 1: Determination of a population of microorganisms on products
	Dual Incubation and Enumeration of TSA Plates	Plate count	Factory Hygiene Surfaces Factory Hygiene Air	N/A	CLS 190 In house method
	Endotoxin testing of Medical Devices	Kinetic Assay	Tests on human pharmaceutical and biological products.	N/A	CLS 211 -ANSI/AAMI St72 - Bacterial endotoxin test methodologies, routine monitoring and alternative batch testing.
	Endotoxin Testing on Purified Water using Gel clot Method	Gel Clot	Tests on human pharmaceutical and biological products endotoxin tests	N/A	CLS 185 Based on ANSI/AAMI ST 72:2019 Bacterial Endotoxin test methodologies,routine monitoring and alternatives to batch testing
	Endotoxin Testing on Purified Water, Renal Water and Endoscopy Water using Kinetic Turbidimetric Method	Kinetic Turbidimetric Method	Tests on human pharmaceutical and biological products endotoxin tests	N/A	CLS 186 Based on ANSI/AAMI ST 72:2019 Bacterial Endotoxin test methodologies,routine monitoring and alternatives to batch testing, USP (85) Bacterial Endotoxin Test
	Enumeration of Micro-organisms Colony count technique at 22°C, 30°C and 37°C in water	Spread plate	waters: Bacteriological condition of potable waters waters: Bacteriological	N/A	CLS 95 based on the Microbiology of Drinking water part 7 (2020)- Methods for the enumeration of Heterotrophic bacteria by pour plate and spread techniques

			condition of industrial waters Micro tests for factory hygiene purposes		
	Enumeration of Total Coliforms and E.coli	Colilert	Waters: Factory hygiene Waters: Industrial waters Waters: Potable water Waters: Environmental Waters	N/A	CLS 33 Based on the Microbiology of Drinking Water part 4 (d) (2016)
	Enumeration of Total Viable Counts at 22°C, 35°C and 37°C	pour plate	Waters: Industrial waters	N/A	CLS 160 fluid monitoring membrane filtration based on ISO 23500-3:2019 Water for Haemodialysis, USP 1230 Water for Haemodialysis
	Enumeration of TVC at 30°C using Membrane Filtration	Membrane Filtration	Waters: Industrial waters	N/A	CLS 171 Based on ISO 15883-1:2006/Amd 1:2014 Washer Disinfectors Part 1 and ISO 15883-4:2018 Washer Disinfectors - Part 4
	Incubation and Enumeration of SDA Plates at 22.5°C	Plate count	Factory Hygiene Surfaces Factory Hygiene Air	N/A	CLS 187 In house method
	Incubation and Enumeration of TSA Plates at 32.5°C		Factory Hygiene Surfaces Factory Hygiene Air	N/A	CLS 188 in house method

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	Aluminium	2 - 500 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Antimony	Antimony	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Arsenic	Arsenic	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Barium	Barium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Beryllium	Beryllium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Boron	Boron	10 - 500 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Cadmium	Cadmium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Calcium	Calcium	3 - 300 mg/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Chromium	Chromium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on

					USEPA 200.8 ICP-MS CLS 129
Cobalt	Drinking Water	0.5 - 250 ug/l	Cobalt	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Copper	Copper	1 - 500 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Iron	Iron	10 - 500 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Lead	Lead	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Magnesium	Magnesium	0.8 - 80 mg/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Waste Water	0.8 - 80 mg/l	Magnesium	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Manganese	Manganese	5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Molybdenum	Molybdenum	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Nickel	Nickel	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Potassium	Potassium	0.5 - 50 mg/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

	Selenium	Selenium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Silver	Silver	0.5 - 125 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Sodium	Sodium	1 - 100 mg/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Strontium	Strontium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Tellurium	Tellurium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Thallium	Thallium	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Tin	Tin	0.5 - 250 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Zinc	Zinc	5 - 500 ug/l	Drinking Water	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

Biological and Veterinary Testing

Category: A

Biology/veterinary field - Tests	Test name	Technique	Matrix	Equipment	Std. reference	
802 Preparation of films on slides followed by microscopic examination with or without fixation and staining with dyes as required - .02 Microscopic examination for parasites	Detection and Enumeration of Cryptosporidium oocysts	Filta Max	Waters: enumeration of Free living Protoza Waters: Environmental waters Waters: Potable water	Filta Max	CLS 139 Based on US EPA 1623.1:2012	
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 Legionella species in water and the detection of Legionella pneumophila, serogroups 1 and 2-14 and presumptive spp(not legionella pneumophilia 1 -14) using Matrices A & B; Procedure 1-14; Culture Media A-C.	Concentration, Heat treatment, Acid treatment and Inoculation of selective media	Factory Hygiene Surfaces	N/A	CLS 100 Based on ISO 11731:2017	
	Detection and Enumeration of Legionella species in water and the detection of Legionella pneumophila, serogroups 1 and 2-14 and presumptive spp(not legionella pneumophilia 1 -14) using Matrices A & B; Procedures 1-14; Culture Media A-C.		Waters: Industrial waters (treated, recirculating)	N/A	CLS 100 Based on ISO 11731:2017	
	Detection of Campylobacter spp	Resuscitation	Confectionary Dairy products Eggs and Egg	N/A	CLS 181 Based on ISO 10272-1:2017	

			products Fish, Shellfish and Mollusks Fruit and Vegetables Meat and Meat products, game and poultry Cereals and bakery products Factory Hygiene Surfaces Prepared dishes Soups, broths and Sauces			
	Detection of E.coli 0157		Factory Hygiene Surfaces	N/A	CLS 11 Based on ISO 16654:2001	
	Detection of Ecoli 0157		Cereals and Bakery products Dairy Products Factory hygiene surfaces Meat and Meat products, game and poultry Prepared dishes Soups, Broths and Sauces	N/A	CLS 11 based on ISO 16654:2001	
			Cereals and Bakery products Dairy Products Factory hygiene surfaces Meat and Meat products, game and poultry Prepared dishes Soups, Broths and Sauces	N/A	CLS 159 Based on Reveal for Ecoli 0157 20 hour system	
	Detection of Listeria monocytogenes		Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry	N/A	CLS 4 Based on IS EN ISO 11290-1:2017	

		Eggs and Egg products Cereals and Bakery Products Confectionary Fruit and Vegetables Animal Feed Pet Foods Factory Hygiene Surfaces Soups, Broths and Sauces Prepared Dishes			
	Detection of listeria monocytogenes by ALOA One Day Method	Animal feeder Cereals and Bakery Products Confectionary Dairy products Eggs and Egg products Factory Hygiene Surfaces Fish, Shellfish and Molluscs Fruit and Vegetables Meat and Meat products, game and poultry Cereals and bakery products Factory Hygiene Surfaces Meat surfaces Product contact surfaces Soups, broths and Sauces	N/A	CLS 163 Based on AES ALOA One Day (AFNOR cert AES 10/03-09/00)	
	Detection of listeria species by ALOA One Day Method	Cereals and Bakery Products Confectionary Dairy products Eggs and Egg	N/A	CLS 164 Based on AES ALOA One Day (AFNOR cert AES 10/03-09/00)	

			products Fish, Shellfish and Mollusks Fruit and Vegetables Meat and Meat products, game and poultry Cereals and bakery products Factory Hygiene Surfaces Meat surfaces Product contact surfaces Prepared dishes Soups, broths and Sauces			
	Detection of salmonella		Meat Surfaces Product contact surfaces Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry Eggs and Egg products Cereals and Bakery Products Confectionary Fruit and Vegetables Animal Feed Pet Foods Factory Hygiene Surfaces 'Factory Hygiene Surfaces and Environmental Swabs for poultry Primary Production' Soups, Broths and Sauces	N/A	CLS 2 Based on ISO 6579-1:2017/Amd 1:2020	

		Prepared Dishes			
		Waters: Factory hygiene Waters: Industrial waters Waters: Potable water	N/A	CLS 45 Based on the Microbiology of Drinking Water (2006) Part 9	
Enumeration of Total Coliforms	Pour Plate	Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry Eggs and Egg products Cereals and Bakery Products Confectionary Fruit and Vegetables Animal Feed Pet Foods Factory Hygiene Surfaces	N/A	CLS 8 Based on ISO 4832:2006	
Enumeration of Clostridium perfringens	Membrane Filtration	Waters: Factory hygiene Waters: Industrial waters Waters: Potable water Waters: Environmental Waters Including Effluents	N/A	CLS 43 Based on the Microbiology of Drinking Water (2021) Part 6 (b)	
Enumeration of Campylobacter species in food	Spread Plate	Dairy products Eggs and Egg products Meat and Meat Products game and poultry Fish, Shellfish and Molluscs Soups, Broths and	N/A	CLS 197 Based on ISO/TS 10272-2:2017	

			Sauces Cereals and Bakery Products Fruit and Vegetables Confectionary Prepared Dishes Animal Feed Meat and Meat Products game and poultry Factory Hygiene Surfaces			
	Enumeration of Clostridium Perfringens	pour plate	non alcoholic beverages Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry Eggs and Egg products Cereals and Bakery Products Confectionary Fruit and Vegetables Animal Feed Pet Foods	N/A	CLS 7 Based on ISO 7937:2004	
	Enumeration of Coagulase positive Staphylococci	Spread Plate	Cereals and Bakery Products Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry Eggs and Egg products Confectionary Fruit and Vegetables Animal Feed Pet Foods Factory Hygiene Surfaces	N/A	CLS 3 Based on IS EN ISO 6888-1:1999 Amd 1:2003 & A2: 2019 & LC 2019	

		Soups, Broths and Sauces Prepared Dishes			
Enumeration of E.coli		Dairy products Meat and Meat Products game and poultry Eggs and Egg products Cereals and Bakery Products Confectionary Fruit and Vegetables Animal Feed Pet Foods Factory Hygiene Surfaces Soups, Broths and Sauces Prepared Dishes	N/A	CLS 198 Based on ISO 16649-1:2018	
Enumeration of E.coli using an MPN method	MPN (5 tubes, 3 dilutions)	Fish, Shellfish and Molluscs	N/A	CLS 92 Based on Cefas Protocol Issue 1, 29/06/2020 Enumeration of Ecoli in Molluscan Bivalve Shellfish and ISO 16649-3:2015	
Enumeration of Enterobacteriaceae	Pour Plate	Meat Surfaces Product contact surfaces Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry Eggs and Egg products Cereals and Bakery Products Confectionary Fruit and Vegetables Animal Feed Pet Foods	N/A	CLS 21 based on IS EN ISO 21528-2:2017	

		Factory Hygiene Surfaces Soups, Broths and Sauces Prepared Dishes			
Enumeration of Enterobacteriaceae (Single Plate)	pour plate (single plate)	Animal feed Dairy products Eggs and Egg products Meat and meat products, game and poultry Fish, Shellfish and Molluscs Fruit and Vegetables Pet Foods	N/A	CLS 134 In House Method	
Enumeration of Enterococci	Membrane Filtration	Waters: Environmental Waters Including Effluents	N/A	CLS 42 Based on the Microbiology of Drinking Water (2012) Part 5 (a)	
		Waters: Factory hygiene Waters: Industrial waters Waters: Potable water Waters: Environmental Waters Including Effluents	N/A	CLS 42 Based on the Microbiology of Drinking Water (2012) Part 5 (a)	
Enumeration of Listeria Species including Listeria Monocytogenes	Resuscitation	Confectionery Dairy products Eggs and Egg products Fruit and Vegetables Meat and Meat products, game and poultry Cereals and bakery products Factory Hygiene Surfaces Fish, Shellfish and	N/A	CLS 6 Based on IS EN ISO 11290-2:2017	

		Molluscs Prepared Dishes Soups, Broths and Sauces			
Enumeration of micro organisms at 22°C	Spread Plate	Fish, Shellfish and Molluscs	N/A	CLS 48 Based on IS EN ISO 4833-2:2013 Cor 1:2014	
		non alcoholic beverages Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry Eggs and Egg products Confectionary Fruit and Vegetables Animal Feed Pet Foods	N/A	CLS 48 based on IS EN ISO 4833-2:2013 Cor 1:2014	
	TVC @ 22°C - pour plate	non alcoholic beverages Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry Eggs and Egg products Confectionary Fruit and Vegetables Animal Feed Pet Foods	N/A	CLS 47 based on IS EN ISO 4833-2:2013 Cor 1:2014	
Enumeration of Micro organisms at 30°C	TVC @ 30°C – pour plate	Animal feed Confectionery Dairy products Eggs and Egg	N/A	CLS 15 based on IS EN ISO 4833-1:2013	

			products Fish, Shellfish and Mollusks Fruit and Vegetables Meat and Meat products, game and poultry Pet foods Cereals and bakery products Non-alcoholic beverages Factory Hygiene Surfaces Meat surfaces Product contact surfaces Prepared dishes Soups, broths and Sauces			
		TVC @ 30℃ - spread plate	Animal feed Confectionery Dairy products Eggs and Egg products Fish, Shellfish and Mollusks Fruit and Vegetables Meat and Meat products, game and poultry Pet foods Cereals and bakery products Non-alcoholic beverages Factory Hygiene Surfaces Meat surfaces Product contact surfaces Prepared dishes Soups, broths and Sauces	N/A	CLS 46 based on IS EN ISO 4833-2:2013 Cor 1:2014	

	Enumeration of micro organisms at 37°C	TVC @ 37°C - pour plate	Animal feed Confectionery Dairy products Eggs and Egg products Fish, Shellfish and Molluscs Fruit and Vegetables Meat and Meat products, game and poultry Pet foods Non-alcoholic beverages	N/A	CLS 49 Based on IS EN ISO 4833-1:2013	
		TVC @ 37°C - spread plate	Non-alcoholic beverages	N/A	CLS 50 Based on IS EN ISO 4833-1:2013	
	Enumeration of Presumptive Bacillus cereus	Spread Plate	Dairy products Meat and Meat Products game and poultry Eggs and Egg products Cereals and Bakery Products Confectionary Fruit and Vegetables Animal Feed Pet Foods Soups, Broths and Sauces Prepared Dishes	N/A	CLS 20 Based on IS EN ISO 7932:2004/Amd:2020	
	Enumeration of Presumptive Pseudomonas SPP		non alcoholic beverages Meat and Meat Products game and poultry	N/A	CLS 22 Based on ISO 13720:2010	
	Enumeration of Pseudomonas aeruginosa	Membrane Filtration	Waters: Factory hygiene Waters: Industrial waters	N/A	CLS 44 Based on the Microbiology of Drinking water Part 8 (2015)	

		Waters: Potable water Waters: Environmental water			
Enumeration of ß-glucuronidase positive E.coli:Colony Count Technique at 44°C using 5-bromo-4-chloro-3-indolyl-ß-D-glucuronide	Pour Plate	Dairy products Eggs and Egg products Meat and Meat Products game and poultry Fish, Shellfish and Molluscs Soups, Broths and Sauces Cereals and bakery products Fruit and Vegetables Confectionary Prepared Dishes Animal Feed	N/A	CLS 198 Based on ISO 16649-2:2018	
Enumeration of Total Coliforms and E.coli	Colilert	Waters: Factory hygiene Waters: Industrial waters Waters: Potable water	N/A	CLS 33 Based on the Microbiology of Drinking Water (2016) Part 4 (d)	
	Membrane Filtration	Waters: Factory hygiene Waters: Industrial waters Waters: Potable water Waters: Environmental waters including effluents	N/A	CLS 16 Based on the Microbiology of Drinking Water (2016) Part 4 (a)	
Enumeration of TVC at 22°C, 30°C and at 37°C (Single plate)	Pour Plate (single plate)	Animal feed Dairy products Eggs and Egg products Factory Hygiene Surfaces Fish, Shellfish and Molluscs	N/A	CLS 132 In House Method	

			Fruit and Vegetables Meat and Meat products, game and poultry Pet foods Non-alcoholic beverages			
		Spread Plate (single plate)	Dairy products Eggs and Egg products Meat and Meat Products game and poultry Fish, Shellfish and Molluscs Fruit and Vegetables Non-alcoholic Beverages Pet Foods Animal Feed	N/A	CLS 133 In House Method	
	Enumeration of TVCs (Air Settlement plates)	Plate count	Factory Hygiene Air	N/A	CLS 82 In house method	
	Enumeration of TVCs contact plates	Contact Plates	Factory Hygiene Surfaces	N/A	CLS 80 Based on ISO 18593:2018	
	Enumeration of Yeast and Mould	Plate count	Factory Hygiene Air	N/A	CLS 130 In House Method	
		Spread Plate	Cereals and Bakery products Dairy products Factory Hygiene Surfaces Fruit and Vegetables Non-alcoholic beverages Prepared dishes	N/A	CLS 1 Based on ISO 21527-1 and 2:2008	
	Membrane Filtration Method using Chromocult Agar	Membrane Filtration	Waters: Potable water	N/A	CLS 199 Based on ISO 9308-1:2014 Detection and Enumeration of Total Coliforms and E.coli in water with low bacterial Flora	

Chemical Testing

Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (inc waters)	Ammonia in Saline Waters by spectrophotometry	Ammonia	0.010 -1.00mg/l as N	Saline	Spectrophotometer	CLS 202
	Nitrate in Saline Waters by spectrophotometry	Nitrate	0.003 - 1.0 mg/l as N	Saline	Spectrophotometer	CLS 203
	Nitrite in Saline Waters by spectrophotometry	Nitrite	0.003 -0.10 mg/l as N	Saline	Spectrophotometer	CLS 204
	Phosphate in Saline Waters and Phosphate low levels in Surface Waters	Phosphate	0.003 - 0.40 mg/l as P	Saline	Spectrophotometer	CLS 205
			0.003 - 0.40 mg/l as P	Surface	Spectrophotometer	CLS 205
766 Environmental testing (inc waters) - .01 Metal analysis	Aluminium		2 µg - 10,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Antimony		0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

	Arsenic	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Barium	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Beryllium	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Boron	10 µg - 10,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Cadmium	0.5 µg - 5,000µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

			effluent (WWTP effluent) Waters for Potable and Domestic Purposes		
	Calcium	3 mg - 3,000 mg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Chromium	0.5 µg - 5,000µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Cobalt	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Copper	1 µg - 10,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

ICPM Metals	Mercury	0.05-2.5ug/l	Waste Water	ICPMS	CLS 129/USEP A 200.8
ICPMS Metals		0.05-2.5ug/l	Drinking Water	ICPMS	CLS 129/USEP A 200.8
		0.05-2.5ug/l	Ground Water	ICPMS	CLS 129/USEP A 200.8
		0.05-2.5ug/l	Surface Water	ICPMS	CLS 129/USEP A 200.8
	Silver	0.5-125ug/l	Ground Water	ICPMS	CLS 129/USEP A 200.8
		0.5-125ug/l	Surface Water	ICPMS	CLS 129/USEP A 200.8
		0.5-125ug/l	Waste Water	ICPMS	CLS 129/USEP A 200.8
Iron		10 µg - 10,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Lead		0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
Magnesium		0.8 mg - 800 mg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

			and Domestic Purposes		
	Manganese	5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Molybdenum	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Nickel	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Potassium	0.5 mg - 500 mg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Selenium	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters)	ICP-MS	Documented in house method based on

			Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes		USEPA 200.8 ICP-MS CLS 129
	Sodium	1 mg - 1,000 mg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Strontium	5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Tellurium	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Thallium	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

			and Domestic Purposes		
	Tin	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Vanadium	0.5 µg - 5,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
	Zinc	5 µg - 10,000 µg/L	Bore Waters Other waters (surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129
766 Environmental testing (inc waters) - .02 Biochemical oxygen demand	Biochemical Oxygen Demand	1-7,000 mg/L	Bore waters Other waters (surface waters) Saline waters Sewage Trade wastes Waters for potable and domestic purposes Waste water treatment plants effluent (WWTP effluent)	DO Probe	Documented in house method based on APHA standard methods for the examination of water and waste 23rd edition, 2017 (unless otherwise stated) CLS 12 Measurement of Oxygen consumed over 5 days (APHA 5210B)

766 Environmental testing (inc waters) - .03 Chemical oxygen demand	Chemical Oxygen Demand	10 - 30,000 mg/L	Bore waters Other waters (surface waters) Saline waters Sewage Trade wastes Waters for potable and domestic purposes Waste water treatment plants effluent (WWTP effluent)	DR5000	CLS 52 Based on Hach Procedures Manual 9th Edition 1999 and standard methods for the examination of water and wastewater 23rd edition, 2017
766 Environmental testing (inc waters) - .04 Organic	Benzene	10-10,000 µg/L	Bore Waters Other waters (surface waters) Saline waters Trade wastes Waters for Potable and domestic purposes	GC-FID	In house method CLS 148 based on USEPA 8015B
	Ethylbenzene	10-10,000 µg/L	Bore Waters Other waters (surface waters) Saline waters Trade wastes Waters for Potable and domestic purposes	GC-FID	In house method CLS 148 based on USEPA 8015B
	o-Xylene	10-10,000 µg/L	Bore Waters Other waters (surface waters) Saline waters Trade wastes Waters for Potable and domestic purposes	GC-FID	In house method CLS 148 based on USEPA 8015B
	t-butyl methyl ether	10-10,000 µg/L	Bore Waters Other waters (surface waters) Saline waters Trade wastes Waters for Potable and domestic purposes	GC-FID	In house method CLS 148 based on USEPA 8015B

Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aliphatics >nC_{10}-nC_{12}	10-50 µg/l 1-10 mg/kg 4-50 µg/l	Other waters (surface waters) Soils: sandy soils Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aliphatics >nC_{12}-nC_{16}	6-100 µg/l 0.5-20 µg/l 6-100 µg/l	Other waters (surface waters) Soils: Sandy Soils Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aliphatics >nC_{16}-nC_{21}	6-150 µg/l 3-30 mg/kg 4-200 µg/l	Other waters (surface waters) Soils: Sandy Soils Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aliphatics >nC_{21}-nC_{35}	21-350 µg/l 3.5-70 mg/kg 35-350 µg/l	Other waters (surface waters) Soils: Sandy soils Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aliphatics >nC_{35}-nC_{4}	12-150 µg/l 3-30 mg/kg 12-150 µg/l	Other waters (surface waters) Soils: Sandy Soils Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aliphatics nC_{8}-nC_{10}	10-50 µg/l 1-10 mg/kg 5-50 µg/l	Other waters (surface waters) Soils: sandy soils Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196

Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aromatics >C_{10}-C_{12}	10-100 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
	20-100 µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196
	2-20 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aromatics >C_{12}-C_{16}	2-20 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
	6-100 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
	8-100µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aromatics >C_{16}-C_{21}	2-40 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
	8-200 µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196
	8-200 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aromatics >C_{21}-C_{35}	20-250 µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196

			20-250 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
			5-50 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
	Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aromatics >C_{35}-C44		12-150 µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196
			3-30 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
			9-150 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
	Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Aromatics C_8-C_{10}		2-40 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
	Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Total Aliphatics and Aromatics C_8-C_{44}		132 - 1825 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
			133-1650 µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196
			28-370 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
	Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FID Total Aromatics C_8-C_{44}		16-200 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196

		68-800 µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196
		69-1000 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
	Aliphatic, Aromatic Fractionation including Carbon Banding and mineral oil by determination by GC-GC-FIDTotal Aliphatics nC_8-nC_{44} (Mineral oil)	12-170 mg/kg	Soils: Sandy soils	GC GC-FID	Documented in house method CLS 196
		63-825 µg/l	Waters for Potable and Domestic Purposes	GC GC-FID	Documented in house method CLS 196
		65-850 µg/l	Other waters (surface waters)	GC GC-FID	Documented in house method CLS 196
	Benzene	0.01mg/kg to 20 mg/kg	Sediments	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
		0.01mg/kg to 20 mg/kg	Sediments Soils (Loam, Sand and Peat)	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
	Ethylbenzene	0.01mg/kg to 20 mg/kg	Sediments	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
		0.01mg/kg to 20 mg/kg	Sediments Soils (Loam, Sand and Peat)	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
	Extractable Hydrocarbons by GC-FID Diesel Range and Lube Oil (C_8- C_{40})	10-10,000 µg/L 10-10,000 µg/L 10-10,000 µg/L 10-10,000 µg/L 10-10,000 µg/L 10-10,000 µg/L 200-10,000 µg/L	Bore Waters Other waters (surface waters) Saline waters Sewage Trade wastes Waters for Potable and Domestic Purposes Waste Water	GC-FID	CLS 147 Method based on USEPA 8015B

				Treatment plants Effluent (WWTP effluent)		
			200 mg/kg to 2,000 mg/kg 50 mg/kg to 2,000 mg/kg 50 mg/kg to 2,000 mg/kg	Peat Sediments Soils (Loam, and Sand)	GC-FID	In house method CLS 156 and CLS 147 Method adapted from 8015B
	m / p- Xylene		0.02 mg/kg to 40 mg/kg	Sediments	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
			0.02 mg/kg to 40 mg/kg	Sediments Soils (Loam, Sand and Peat)	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
			20 - 20,000 µg/L	Bore Waters Other waters (surface waters) Saline waters Trade wastes Waters for Potable and domestic purposes	GC-FID	In house method CLS 148 based on USEPA 8015B
	o-Xylene		0.01mg/kg to 20 mg/kg	Sediments	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
			0.01mg/kg to 20 mg/kg	Sediments Soils (Loam, Sand and Peat)	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
	PAH by HPLC	Polycylic Aromatic Hydrocarbons (sum of 4)	0.04-1.6ug/l	Drinking Water	Calculation based on HPLC	CLS 149/ISO 17993 and Agilent 1200 User Manual
	Petrol Range Organics (PRO) (C5 to C12)		0.1mg/kg to 169 mg/kg	Sediments	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B

		0.1mg/kg to 169 mg/kg	Soils (Loam, Sand and Peat)	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
		10-56,250 µg/L	Bore Waters	GC-FID	In house method CLS 148 based on USEPA 8015B
		10-56,250 µg/L	Other waters (surface waters)	GC-FID	In house method CLS 148 based on USEPA 8015B
		10-56,250 µg/L	Saline Waters	GC-FID	In house method CLS 148 based on USEPA 8015B
		10-56,250 µg/L	Trade Wastes	GC-FID	In house method CLS 148 based on USEPA 8015B
		10-56,250 µg/L	Waters for Potable and Domestic Purposes	GC-FID	In house method CLS 148 based on USEPA 8015B
	Polycyclic Aromatic Hydrocarbon by HPLC Acenaphthene	10 - 400 ng/l	Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
	Polycyclic Aromatic Hydrocarbon by HPLC Acenaphylene	50 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
	Polycyclic Aromatic Hydrocarbon by HPLC Anthracene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
	Polycyclic Aromatic Hydrocarbon by HPLC Benzo (a) fluoranthene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
	Polycyclic Aromatic Hydrocarbon by HPLC Benzo (a) pyrene	10 - 400 ng/l 5 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
	Polycyclic Aromatic Hydrocarbon by HPLC Benzo (b) fluoranthene	10 - 400 ng/l	Other waters	HPLC	CLS 149 Based onISO 17993 and Agilent

				12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Benzo (g,h,i) perylene	10 - 400 ng/l	Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Benzo (k) fluoranthene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Dibenzo (a,h) anthracene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Fluorene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Fluroanthene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Indeno (1,2,3-cd) perylene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Naphthalene	50 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Phenanthrene	10 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual
Polycyclic Aromatic Hydrocarbon by HPLC Pyrene	50 - 400 ng/l	Other waters Waters for Potable and Domestic Purposes	HPLC	CLS 149 Based onISO 17993 and Agilent 12000 series G1321A user manual

	t-butyl methyl ether		0.01mg/kg to 20 mg/kg	Sediments	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
			0.01mg/kg to 20 mg/kg	Sediments Soils (Loam, Sand and Peat)	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
	Toluene		0.01mg/kg to 20 mg/kg	Sediments	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
			0.01mg/kg to 20 mg/kg	Sediments Soils (Loam, Sand and Peat)	GC-FID	In house method CLS 157 and CLS 148 based on USEPA 8015B
			10-10,000 µg/L	Bore Waters Other waters (surface waters) Saline waters Trade wastes Waters for Potable and domestic purposes	GC-FID	In house method CLS 148 based on USEPA 8015B
	Total Extractable Petroleum Hydrocarbons by GC-FID TPH (>nC5 to C44)		20 - 10,000 µg/l	Bore Waters Other waters (surface waters)	GC-FID	Based on USEPA 8015B modified. Documented in house method CLS 193
	VOC by GCMSD	Chloroform Bromodichloromethane Dibromochloromethane Bromoform Total Trihalomethanes (THMs)	1 - 200 ug/l 0.5 - 200 ug/l 0.1 - 200 ug/l 0.1 - 200 ug/l 1.7 - 800 ug/l	Drinking Water	GCMSD	CLS 183/USEPA 524.3
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,1,1,2-Tetrachloroethane		2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,1,1-trichloroethane	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,1,2,2-tetrachloroethane	4-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,1,2-trichloroethane	2-50 µg/l 0.5-50µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,1-Dichloroethane	2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,1-dichloroethene	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,1-dichloropropene	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2,3-trichlorobenzene	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2,3-trichloropropane	1-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2,4-trichlorobenzene	4-50 µg/l 0.5-50 µg/l 0.5-50µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2,4-trimethylbenzene	4-50 µg/l 2-50 µg/l 2-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2-dibromoethane (EDB)	4-50 µg/l 0.1-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2-dichlorobenzene	4-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2-dichloroethane	0.2-50 µg/l 0.5-50 µg/l 0.1-50 µg/l	Bore waters Other Waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,2-dichloropropane	1-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,3,5 trimethylbenzene (mesitylene)	4-50 µg/l 2-50 µg/l 2-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,3-butadiene	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1,3-dichloropropane	1-50 µg/l 0.5-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 1-chlorobutane (n-butyl chloride)	0.5-50 µg/l	Bore waters Other waters (surface waters)) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 2-chlorotoluene	4-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) 4-chlorotoluene	4-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) benzene	2-50 µg/l 0.1-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

Volatile Organic compounds (VOC) including Trihalomethanes (THM) bromobenzene	2-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) bromochloromethane	0.2-50 µg/l 2-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) bromodichloromethane	0.2-50 µg/l 2-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore Waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Bromomethane (methyl bromide)	2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Carbon disulfide	2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Carbontetrachloride (tetrachloromethane)	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

	Volatile Organic compounds (VOC) including Trihalomethanes (THM) Chlorodifluoromethane (CFC-22)	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) Cis-1,2-dichloroethene	2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) Cis-1,3-dichloropropene	0.5-50 µg/l 1-50 µg/l	Bore waters Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) dibromethane	2-50 µg/l	Bore Waters	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) dibromochloromethane	2-50 µg/l 0.5-50 µg/l 0.1-50 µg/l	Bore Waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) Dichlorodifluoromethane (CFC-12)	1-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
	Volatile Organic compounds (VOC) including Trihalomethanes (THM) Diethyl ether (ether ether)	2-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

Volatile Organic compounds (VOC) including Trihalomethanes (THM) Diisopropyl ether (DIPE)	2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) ethylbenzene	0.5-50 µg/l 2-50 µg/l 2-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) hexachlorobutadiene	2-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) hexachloroethane	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Iodomethane (methyl iodide)	4-50 µg/l 0.1-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) m/p-xylene	4-60 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Methyl acetate	5-50 µg/l	Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC)	2-50 µg/l	Bore waters Other waters	GC/MS	Based on USEPA 524.3 adapted from

including Trihalomethanes (THM) Methyl tert-butyl ether (MTBE)		(surface waters) Waters for Potable and Domestic Purposes		Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) naphthalene	4-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) n-butylbenzene	4-50 µg/l 2-50 µg/l 2-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) n-propylbenzene	4-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) o-xylene	2-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) pentachloroethane	4-50 µg/l 2-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) styrene	2-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM)	1-50 µg/l 5-50 µg/l 5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection

Tert-amyl ether ether (TAEE)		and Domestic Purposes		Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Tert-amyl methyl ether (TAME)	0.2-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) tetrachloroethene	0.5-50 µg/l 0.1-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Tetrahydrofuran	2-50 µg/l 5-50 µg/l 5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) toluene	2-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Trans-1,3-dichloropropene	1-50 µg/l	Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) trichloroethene	2-50 µg/l 0.1-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Trichlorofluoromethane (CFC-11)	1-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

Volatile Organic compounds (VOC) including Trihalomethanes (THM) Trichloromethane (Bromoform)	2-50 µg/l 0.5-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Trichloromethane (chloroform)	2-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM) Vinyl chloride	0.5-50 µg/l 0.1-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM)4-isopropyltoluene (p-cymene)	1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM)Ethyl tert-butyl ether (ETBE)	1-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM)Tert-butylbenzene	4-50 µg/l 1-50 µg/l 1-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183
Volatile Organic compounds (VOC) including Trihalomethanes (THM)Trans-1,2-dichloroethene	0.5-50 µg/l	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection Documented in-house procedure CLS 183

766 Environmental testing (inc waters) - .05 Inorganic	Alkalininty	10-500 mg/l as $CaCO_3$	Bore Waters Other waters (surface waters) Waters for potable and domestic purposes	Mettler Toledo DL50 Titrator	Standard Methods examination of water and waste water 23rd edition, 2017. Documented in-house method CLS 195
	Ammonia	0.005 to 600 mg/L NH_3-N	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 40 Salicylate method based on Methods for the examination of water and associated Materials, Ammonia in waters,1981
	Ammonia as NH_4	0.01 - 1290 mg/L NH_4	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 40 Salicylate method based on Methods for the examination of water and associated Materials, Ammonia in waters,1981
	Bicarbonate by calculation	10-500 mg/l as $CaCO_3$	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	Mettler Toledo DL50 Titrator	Standard Methods examination of water and waste water 23rd edition, 2017. Documented in-house method CLS 195
	Carbonate by calculation	10-500 mg/l as $CaCO_3$	Bore waters Other waters (surface waters) Waters for Potable and Domestic Purposes	Mettler Toledo DL50 Titrator	Standard Methods examination of water and waste water 23rd edition, 2017. Documented in-house method CLS 195
	Chloride	2.0 to 30,000 mg/L Cl	Bore waters Other waters (surface waters)	Konelab	Konelab CLS 36 Colorimetric determination and

			Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes		adapted for discrete analyser (APHA 4500-CL E)
	Colour	4.0 - 500 mg/l(PT Co)	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	DR5000	In house method CLS 29 Based on Standard methods for examination of water and waste water 23rd edition, 2017 (APHA 2120 C)
	Fats, oils and greases	5 to 10,000 mg/L	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Soxhlet extractor	CLS 25 Increase in weight after sample filtration and Soxhlet extraction Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA 5520 A and D)
	Nitrate	0.1 - 500 mg/L NO_3-N	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 39 Calculated value

Nitrite	0.005 to 10 mg/L NO_2-N	Bore waters Other waters (surface waters Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 37 Colorimetric determination and adapted for discrete analyser, Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA 4500-NO_2 B)
Nitrite as NO_2	0.017 - 33 mg/L	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 37 Colorimetric determination and adapted for discrete analyser, Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA 4500-NO_2 B)
Orthophosphate	0.03 to 6,140 mg/L PO_4	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 35 Colorimetric determination and adapted for discrete analyser, Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA 4500-PE)
Phosphorus	0.01 to 2,000 mg/L PO_4-P	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants	Konelab	Konelab CLS 35 Colorimetric determination and adapted for discrete analyser, Standard Methods for the Examination of Water and Wastewater 23rd

			effluents (WWTP) Waters for Potable and Domestic Purposes		edition, 2017 (APHA 4500-PE)
	Sulphate	5-3,000 mg/L SO_4	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 88 Based on Sulphate in waters Effluents and Soils 2nd Edition (1998) Method E.
	TON	0.1 - 500 mg/L NO_3-N	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 38 Colorimetric determination and adapted for discrete analyser, Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA 4500-NO_3 -H)
	Total Hardness	20-3,000 mg/L $CaCO_3$	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Konelab CLS 77 Std Methods 22nd Ed 2012, Colorimetric determination and adapted for discrete analyser, Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA - 2340 C)
	Total Nitrogen	0.5 - 1000 mg/L	Bore waters Other waters (surface waters) Saline waters Sewage	TOC-V CPN/CPN TOC analyser	CLS 152 based on ASTM D5176-08 (reapproved 2015) For total chemically bound nitrogen in water by

			Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes		pyrolysis and chemiluminescence detection
	Total Organic Carbon (NPOC)	1 - 1000 mg/L	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	TOC-V CPN/CPN TOC analyser	CLS 150 Based on USEPA 415.1 and Shimadzu User Manual for TOC V-CPH/CPN
	Total Phosphorus	0.05 - 1000 mg/L PO_4-P	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Macherey-Nagel Spectrophotometer	CLS 151 Based on ISO 6878-2004 D11 (Macherey Nagel)
	Turbidity	0.2 - 4000 NTU	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	HACH 2100N Turbidimeter.	In house method CLS 30 Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA 2130 B)
767 Physical test/measurement - .01 pH	pH	4-10	Bore waters Other waters	Ph Probe	CLS 26 Measurement of electromotive force

				(surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes		by electrode to determine Hydrogen ion concentration, Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 (APHA 4500 - H+B)
767 Physical test/measurement - .02 Conductivity	Conductivity at 20°C		5 - 12,730 µS/cm	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Conductivity Meter	CLS 67 method based on Standard methods for the examination of water and wastewater 23rd edition, 2017 (APHA-2510 B)
767 Physical test/measurement - .03 Suspended Solids	Suspended Solids		2 to 15,000 mg/L	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Filtration apparatus	CLS 13 Based on Standard Methods for the Examination of Water and Wastewater 23rd edition, 2017 . Increase in sample filter Dried at 103 - 105°C. (APHA 2540 D)
798 Sampling	Water Sampling of Lakes, Rivers and Lagoons (with subsequent analysis by ISO accredited laboratory)			Other waters (surface waters)	Grab, Rod, Bucket and Van Dorn	CLS WI 135 Based on ISO 5667-4:2016 and ISO 5667-6:2014

Chemical Testing

Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (inc waters) - .04 Organic	VOC by GCMSD	Chloroform Bromodichloromethane Dibromochloromethane Bromoform Chloroform Bromodichloromethane Dibromochloromethane Bromoform Sum of Tri and Tetrachloroethene	1 - 200 ug/l 0.5 - 200 ug/l 0.5 - 200 ug/l 0.5 - 200 ug/l 2 - 200 ug/l 2 - 200 ug/l 2 - 200 ug/l 2 - 200 ug/l 0.2 - 100 ug/l	Surface Water Surface Water Surface Water Surface Water Ground Water Ground Water Ground Water Ground Water Drinking Water	GCMSD	CLS 183/USEPA 524.3