Schedule of Accreditation

Organisation Name	Saotharlann Chonamara Teo
Trading As	Complete laboratory solutions
INAB Reg No	108T
Contact Name	Sharon Deeney Curran
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Accreditation Standard	EN ISO/IEC 17025 T
Standard Version	2017
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, Ireland
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 condition of industrial waters Micro tests for factory hygiene purposes	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
	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 23500-3:2024 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 MODW (2010) Part 14 and U.S EPA Method 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)	Direct filtration, Acid treatment and Inoculation of selective media	Factory Hygiene Surfaces	N/A	CLS 100 Based on ISO 11731:2017 Procedure 7, Matrix A
			Waters: Industrial waters (treated, recirculating)	N/A	CLS 100 Based on ISO 11731:2017 Procedure 7, Matrix A
	Detection of Campylobacter spp	Resuscitation	Confectionary Dairy products Eggs and Egg 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	N/A	CLS 181 Based on ISO 10272-1:2017/Amd 1:2023 - Procedure A

	Detection of E.coli 0157	Factory Hygiene Surfaces	N/A	CLS 11 Based on ISO 16654:2001/ Amd 2:2023
	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/ Amd 2:2023
		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 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 4 Based on IS EN ISO 11290-1:2017

	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 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	N/A	CLS 164 Based on AES ALOA One Day (AFNOR cert AES 10/03-09/00)

			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 Prepared Dishes	N/A	CLS 2 Based on ISO 6579-1:2017/Amd 1:2020
			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	N/A	CLS 8 Based on ISO 4832:2006

			Products Confectionary Fruit and Vegetables Animal Feed Pet Foods Factory Hygiene Surfaces		
	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 Sauces Cereals and Bakery Products Fruit and Vegetables Confectionary Prepared Dishes Animal Feed Meat and Meat Products game and poultry Factory Hygiene Surfaces	N/A	CLS 197 Based on ISO/TS 10272-2:2017/Amd1:2023
	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	N/A	CLS 7 Based on ISO 15213-2:2023

		Products Confectionary Fruit and Vegetables Animal Feed Pet Foods		
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 Soups, Broths and Sauces Prepared Dishes	N/A	CLS 3 Based on IS EN ISO 6888-1:2022
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 16649-2:2001
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 Factory Hygiene Surfaces Soups, Broths and Sauces Prepared Dishes	N/A	CLS 21 based on IS EN ISO 21528-2:2017
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	N/A	CLS 42 Based on the Microbiology of Drinking Water (2012) Part 5 (a)

			Effluents		
	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 Molluscs Prepared Dishes Soups, Broths and Sauces	N/A	CLS 6 Based on IS EN ISO 11290-2:2017
	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/ Amd1:2022
		TVC @ 22°C - pour plate	non alcoholic beverages Fish, Shellfish and Molluscs Dairy products Meat and Meat Products game and poultry	N/A	CLS 47 based on IS EN ISO 4833-2:2013 Cor 1:2014, Amd1:2022

			Eggs and Egg products Confectionary Fruit and Vegetables Animal Feed Pet Foods		
	Enumeration of Micro organisms at 30°C	TVC @ 30°C – pour 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 15 based on IS EN ISO 4833-1:2013/ Amd 1:2022
		TVC @ 30°C - 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	N/A	CLS 46 based on IS EN ISO 4833-2:2013 Cor 1:2014/Amd 1:2022

			beverages Factory Hygiene Surfaces Meat surfaces Product contact surfaces Prepared dishes Soups, broths and Sauces		
	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, Amd 1:2022
		TVC @ 37°C - spread plate	Non-alcoholic beverages	N/A	CLS 50 Based on IS EN ISO 4833-1:2013/Amd 1:2022
	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 Waters: Potable water Waters: Environmental water	N/A	CLS 44 Based on the Microbiology of Drinking water Part 8 (2015)	
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) and ISO 9308:2014/Amd 1:2016	
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	N/A	CLS 132 In House Method	

			Fish, Shellfish and Molluscs 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)	Phosphate in Saline Waters and Phosphate low levels in Surface Waters	Phosphate	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	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

			and Domestic Purposes		
	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 effluent (WWTP effluent) Waters for Potable and Domestic Purposes	ICP-MS	Documented in house method based on USEPA 200.8 ICP-MS CLS 129

	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) 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
	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	ICP-MS	Documented in house method based on

			(surface waters) Waste water treatment plants effluent (WWTP effluent) Waters for Potable and Domestic Purposes		USEPA 200.8 ICP-MS CLS 129
	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	DO Probe	Documented in house method based on APHA standard methods for the

				Sewage Trade wastes Waters for potable and domestic purposes Waste water treatment plants effluent (WWTP effluent)		examination of water and waste 24th edition, 2020 (unless otherwise stated) CLS 12 Measurement of Oxygen consumed over 5 days (APHA 5210B)
	BOD using automated system	BOD	1-3000 mg/l	Influent, Effluent, Surface Water, Ground Water and Saline Water	Automated BOD Analyser	Standard Methods for the Examination of Water and Wastewater, 24th ed. 2023. CLS214
	cBOD using automated system	cBOD	1-3000 mg/l	Influent, Effluent, Surface Water, Ground Water and Saline Water	Automated cBOD Analyser	Standard Methods for the Examination of Water and Wastewater, 24th ed. 2023 CLS214
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 24th edition, 2023
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
	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 Treatment plants Effluent (WWTP effluent)	GC-FID	CLS 147 Method based on USEPA 8015B
	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
	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 (g,h,i) 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 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		2-50 µg/l 0.5-50 µg/l 0.5-50 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

Trihalomethanes (THM) 1,1-Dichloroethane		and Domestic Purposes		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	4-50 µg/l 0.1-50 µg/l 0.1-50 µg/l	Bore waters Other waters (surface waters)	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to

	Trihalomethanes (THM) 1,2-dibromoethane (EDB)		Waters for Potable and Domestic Purposes	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)	0.5-50 µg/l	Bore waters Other waters	GC/MS Based on USEPA 524.3 adapted from

including Trihalomethanes (THM) 1-chlorobutane (n-butyl chloride)		(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) 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)	2-50 µg/l 0.5-50 µg/l 0.5-50 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

	Bromomethane (methyl bromide)	and Domestic Purposes		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) 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	1-50 µg/l 0.5-50 µg/l 0.5-50 µg/l	Bore waters Other waters (surface waters)	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to

Trihalomethanes (THM) Dichlorodifluoromethane (CFC-12)		Waters for Potable and Domestic Purposes		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)	4-60 µg/l	Bore waters Other waters	GC/MS	Based on USEPA 524.3 adapted from

	including Trihalomethanes (THM) m/p-xylene		(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) 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) including Trihalomethanes (THM) Methyl tert-butyl ether (MTBE)	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) 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) Tert-amyl ether ether (TAEE)	1-50 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) 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	GC/MS	Based on USEPA 524.3 adapted from Purge and Trap to Headspace injection

			and Domestic Purposes		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)	1-50 µg/l	Bore waters Other waters	GC/MS	Based on USEPA 524.3 adapted from

	including Trihalomethanes (THM)4-isopropyltoluene (p-cymene)		(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)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 24th edition, 2023. 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 24th edition, 2023. 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 24th edition, 2023. Documented in-house method CLS 195
	Chloride	2.0 to 30,000 mg/L Cl	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 36 Colorimetric determination and adapted for discrete analyser Standard Methods 24th edition 2023 (APHA 4500-CL E)
	Colour	4.0 - 500 mg/l(PT Co)	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes	DR5000	In house method CLS 29 Based on Standard methods for examination of water and waste water 24th

			Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes		edition, 2023 (APHA 2120 C)
Dissolved Organic Carbon	DOC	1-100 mg/l	Other Water (Surface Waters) Waters for Potable and Domestic Purposes	TOC Analyser	CLS 150 Total Organic Carbon (NPOC) and Dissolved Organic Carbon (DOC) USEPA Method 415.3
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 24th edition, 2023 (APHA 5520 A and D)
Fluoride	Fluoride	0.2 - 1.5 mg/l	Bore waters Other waters (surface waters) Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Konelab	Standard Methods for Examination of Water and Waste water 24th ed. 2023. CLS 213
Nitrate		0.1 - 500 mg/L NO_3-N	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants	Konelab	Konelab CLS 39 Calculated value

			effluents (WWTP) Waters for Potable and Domestic Purposes		
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 24th edition, 2023 (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 24th edition, 2023 (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 24th edition, 2023 (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 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 24th edition, 2023 (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 24th edition, 2023 (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	Konelab	Konelab CLS 77 Std Methods 22nd Ed 2012, Colorimetric determination and adapted for discrete analyser, Standard Methods for the

			treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes		Examination of Water and Wastewater 24th edition, 2023 (APHA - 2340 C)
	Total Nitrogen	0.5 - 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 152 based on ASTM D5176-08 (reapproved 2015) For total chemically bound nitrogen in water by 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 415.3 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 24th edition, 2023 (APHA 2130 B)
767 Physical test/measurement - .01 pH	pH	4-10	Bore waters Other waters (surface waters) Saline waters Sewage Trade Wastes Waste water treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes	Ph Probe	CLS 26 Measurement of electromotive force by electrode to determine Hydrogen ion concentration, Standard Methods for the Examination of Water and Wastewater 24th 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 24th edition, 2023 (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	Filtration apparatus	CLS 13 Based on Standard Methods for the Examination of Water and Wastewater 24th edition, 2023 . Increase in sample filter Dried at 103 -

				treatment plants effluents (WWTP) Waters for Potable and Domestic Purposes		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