

INTERNAL TECHNICAL ANNEX
WATER DEPARTMENT
PHYTOCONTROL ANALYTICS France

Version40 - 07December 2021

References :

Cofrac Technical Annex N° **1-1904 rev. 17**

Cofrac Technical Annex N° **1-6066 rev. 18**

PHYTOCONTROL LABORATORY (1)

Georges Besse II Science Park
180, Rue Philippe Maupas
30035 NIMES,
under accreditation number 1-1904

PHYTOCONTROL LABORATORY (2)

Georges Besse Science Park
70 Allée Graham Bell
30035 NIMES,
under accreditation number 1-6066

ANALYTICAL CHEMISTRY UNIT (Phytocontrol 1, Phytocontrol 2)

MICROBIOLOGY UNIT (Phytocontrol 2)

Water analysis

Scope of accreditation No. 1-1904

Scope of accreditation No. 1-6066

FLEX3 range

General scope

# Environment / Water quality / Physical and chemical analyses		Physico-chemical analysis of water - LAB GTA 05
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD
Freshwater Wastewater Natural mineral waters (*) Carbonated water (*)	Metals	Filtration Mineralization Analysis : ICP-MS LC-ICP-MS

Flexible scope FLEX3: The laboratory is recognised as competent, in the field covered by the general scope, to adopt any recognised method and to develop or implement any other method for which it has ensured validation.

(*) For natural mineral waters and carbonated waters the laboratory follows the guidelines "Analyses of carbonated waters and natural mineral waters" - reference: ANSES/LHN/LD-EMN-version 01-October 2014.

Detailed scope

# Environment / Water quality / Physico-chemical analyses		Physico-chemical analysis of water - LAB GTA 05	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters(*) Carbonated water(*)	Aluminium, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Gallium, Lithium, Manganese, Mercury, Molybdenum, Nickel, Lead, Strontium, Tellurium, Uranium, Vanadium, Zinc Calcium, Magnesium, Potassium, Sodium	(Filtration) (Nitric acid mineralisation) and determination by ICP/MS	NF EN ISO 1587-25 NF EN ISO 17294-2
Freshwater Natural mineral waters(*) Carbonated water(*)	Titanium, Silicon	(Filtration) (Nitric acid mineralisation) and determination by ICP/MS	Internal method MOC3/311
Freshwater Natural mineral waters(*) Carbonated water(*)	Selenium, Phosphorus, Silver, Zirconium, Tin, Thallium	(Filtration) (Nitric acid mineralisation) and determination by ICP/MS	NF EN ISO 1587-25 NF EN ISO 17294-2
Wastewater	Antimony, Silver, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Tin, Iron, Lithium, Manganese, Mercury, Molybdenum, Nickel, Lead, Selenium, Tellurium, Thallium, Uranium, Vanadium, Zinc Calcium, Magnesium, Phosphorus, Potassium, Sodium	(Filtration) (Nitric acid mineralisation) and determination by ICP/MS	NF EN ISO 15587-2 NF EN ISO 17294-2

Wastewater	Titanium	(Filtration) (Nitric acid mineralisation) and determination by ICP/MS	Internal method MOC3/311
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Flexible scope FLEX3: *The laboratory is recognised as competent, in the field covered by the general scope, to adopt any recognised method and to develop or implement any other method for which it has ensured validation.*

Comment:

For natural mineral waters and carbonated waters, the laboratory follows the guidelines (ANS/LHND/LD-EMN version 01-October 2014) "Analysis of carbonated waters and natural mineral waters".

Water analysis

Scope of accreditation No. 1 -6066

FLEX range1

Environment / Water quality / Sampling		Water sampling for physico-chemical and microbiological analysis - LAB GTA 29	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Water for human consumption	Sampling for physico-chemical and microbiological analysis Sampling - to the resource - in production - in distribution	Flash sampling (taking a single sample)	FD T 90-520 NF EN ISO 19458
Treated leisure water (swimming pool water...) Natural recreational waters	Sampling in view physico-chemical analyses and microbiological	Instantaneous sampling (taking a sample unique)	FD T 90-521 NF EN ISO 19458
Cooling tower water (IRDEFA)	Sampling for research of Legionella	Instantaneous sampling (taking a single sample)	FD T 90-522 NF EN ISO 19458 Circular Legionella n°2002/243 of 22/04/2002 Ministerial order, heading no. 2921
Cold and hot sanitary water	Sampling for research of Legionella	Instantaneous sampling (taking a single sample)	FD T 90-522 NF EN ISO 19458 Circular Legionella n° 2002/243 of 22/04/2002 Ministerial order of 01/02/2010 and Legionella Circular n°2010/448 of 21/12/2010
Continental surface waters (rivers, lakes, etc.)	Sampling in view physico-chemical analyses and microbiological	Instantaneous sampling (taking a single sample)	FD T 90-523-1 NF EN ISO 19458

Flexible scope FLEX1: The laboratory is recognised as competent to carry out sampling according to the referenced methods and their subsequent revisions.

FLEX range1

Environment / Water quality / Sampling		Water sampling for physico-chemical analysis - LAB GTA 29	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Groundwater	Sampling for physico-chemical analysis (environmental monitoring)	Instantaneous sampling (taking a single sample) at an equipped sampling point (e.g. AEP,...) and/or Instantaneous sampling (taking a single sample) at an unequipped sampling point (e.g. piezometer, well, spring, etc.)	FD T 90-523-3 FD T 90-520

Flexible scope FLEX1: The laboratory is recognised as competent to carry out sampling according to the referenced methods and their subsequent revisions.

FLEX range1

Environment / Water quality / Sampling		Physico-chemical testing of water on site - LAB GTA 29	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater	Dissolved oxygen	Luminescence method (LDO)	NF ISO 17289
Freshwater	Conductivity	Probe method	NF EN 27888
Freshwater	pH	Potentiometry Glass electrode method	NF EN ISO 10523
Freshwater	Free and total chlorine	Colorimetry	NF EN ISO 7393-2
Freshwater Saline and brackish waters	Turbidity	Secchi disk method	NF EN ISO 7027

Flexible scope FLEX1: The laboratory is recognised as competent to carry out sampling according to the referenced methods and their subsequent revisions.

FIXED range

Environment / Water quality / Sampling		Physico-chemical testing of water on site - LAB GTA 29	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater	Temperature	Probe method	Internal method MOC3/310
Freshwater	Isocyanuric acid	Colorimetric method	Internal method MOC3/327
Freshwater	Redox potential	Probe method	Internal method MOC3/364

Fixed scope: *The laboratory is recognised as competent to perform the tests in strict accordance with the methods mentioned in the scope of accreditation. Technical modifications of the procedure are not allowed.*

FLEX range1

Environment / Water quality / Physical and chemical analyses		Physico-chemical analysis of water - LAB GTA 05	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters (*) Carbonated water(*)	Total organic carbon Dissolved organic carbon	Chemical oxidation and IR detection	NF EN 1484
Freshwater	<u>Anions</u> : Chloride, Nitrate, Nitrite, Sulphate, Fluorides, Phosphates and Bromides	Ion chromatography	NF EN ISO 10304-1
Natural mineral waters(*)	<u>Anions</u> : Chloride, Nitrate, Nitrite, Sulphate, Fluorides, Phosphates and Bromides	Ion chromatography	NF EN ISO 10304-1
Carbonated water(*)	<u>Anions</u> : Nitrate, Sulphate, Fluorides, Phosphates and Bromides	Ion chromatography	NF EN ISO 10304-1
Freshwater Natural mineral waters(*) Carbonated water(*)	<u>Cations</u> : Ammonium, Calcium, Magnesium, Potassium, Sodium	Ion chromatography	NF EN ISO 14911
Freshwater	<u>Anions</u> : Chlorites, chlorates	Ion chromatography	NF EN ISO 10304-4
Freshwater Natural mineral waters(*) Carbonated water(*)	Carbonates, hydrogen carbonates	Volumetry	NF EN ISO 9963-1
Freshwater Natural mineral waters(*) Carbonated water(*)	Conductivity	Probe method	NF EN 27888
Freshwater Natural mineral waters(*) Carbonated water(*) Wastewater	pH	Potentiometry Glass electrode method	NF EN ISO 10523
Freshwater Natural mineral waters(*) Carbonated water(*)	Turbidity	Nephelometry	NF EN ISO 7027-1
Freshwater Natural mineral waters(*) Carbonated water(*)	Alkalinity	Volumetry	NF EN ISO 9963-1
Freshwater	Anionic surfactants	Continuous flow	NF EN ISO 16265
Freshwater Wastewater	Nitrogen Kjeldhal	Volumetry	NF EN 25663

Environment / Water quality / Physical and chemical analyses

Physico-chemical analysis of water - LAB GTA 05

SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters(*) Carbonated water(*)	Free and total cyanides	Continuous flow	NF EN ISO 14403-2
Freshwater Wastewater	BOD n	Electrochemistry	NF EN ISO 5815-1
Freshwater Wastewater	BOD n	Electrochemistry	NF EN 1899-2
Freshwater Wastewater	ST-DCO	Small-scale closed-tube method	ISO 15705
Freshwater Wastewater	Suspended solids	Gravimetry	NF EN 872
Freshwater	Phenol index	Continuous flow	NF EN ISO 14402
Freshwater	Dissolved silicates	Automated spectrometry	NF ISO 15923-1
Freshwater Wastewater Natural mineral waters(*) Carbonated water(*)	Nitrites	Automated spectrometry	NF ISO 15923-1
Freshwater Wastewater	Nitrates	Automated spectrometry	NF ISO 15923-1
Freshwater Wastewater Natural mineral waters(*) Carbonated water(*)	Ammonium	Automated spectrometry	NF ISO 15923-1
Freshwater Natural mineral waters(*) Carbonated water(*)	Chlorides	Automated spectrometry	NF ISO 15923-1
Freshwater Natural mineral waters(*) Carbonated water(*)	Dry residue	Gravimetry	NF T 90-029
Freshwater Natural mineral waters(*) Carbonated water(*)	Sulphates	Automated spectrometry	NF ISO 15923-1
Freshwater Natural mineral waters(*) Carbonated water(*)	Orthophosphate	Spectrophotometry	NF ISO 15923-1
Freshwater Natural mineral waters(*) Carbonated water(*)	Chromium VI	Automated spectrometry	ISO TS/5923-21

(*) For natural mineral waters and carbonated waters the laboratory follows the guidelines "Analyses of carbonated waters and natural mineral waters" - reference: ANSES/LHN/LD-EMN-version 01-October 2014.

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Environment / Water quality / Physical and chemical analyses

Physico-chemical analysis of water - LAB GTA 05

SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Wastewater	Low volatile lipophilic substances	Gravimetry	ISO 11349
Freshwater	Chlorophyll a and pheopigment index	Spectrophotometry	NF T 90-117

Flexible scope FLEX1: The laboratory is recognised as competent to perform the tests according to the referenced methods and their subsequent revisions.

FIXED range

Environment / Water quality / Physical and chemical analyses		Physico-chemical analysis of water - LAB GTA 05	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters(*) Carbonated water(*)	Hardness	Calculation	Internal method MOC3/321
Freshwater	Bromates	Ion chromatography	Internal method MOC3/329
Freshwater	Colour	Visible spectrometry	Internal method MOC3/353
Freshwater Wastewater Natural mineral waters(*) Carbonated water(*)	Total phosphorus	Spectrometry	Internal method MOC3/342
Freshwater	Conductivity at 20°C	Calculation after probe method	Internal method MOC3/367
Freshwater Wastewater Natural mineral water(*) Carbonated water(*)	Total nitrogen	Calculation	Internal method: MOC3/354

Fixed scope: The laboratory is recognised as competent to perform the tests in strict accordance with the methods mentioned in the scope of accreditation. Technical modifications of the procedure are not allowed.

(*) For natural mineral waters and carbonated waters the laboratory follows the guidelines "Analyses of carbonated waters and natural mineral waters" - reference: ANSES/LHN/LD-EMN-version 01-October 2014.

FLEX3 range

General scope

# Environment / Water quality / Physical and chemical analyses		Physico-chemical analysis of water - LAB GTA 05
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD
Freshwater Natural mineral waters (*) Carbonated water (*)	Organic compounds Inorganic compounds	Direct injection Filtration Bypass Extraction : Dynamic and static headspace In-line solid-liquid extraction Liquid-liquid extraction Analysis : LC- MS/MS GC-MS GC-MS/MS GC-FID

Flexible scope FLEX3: The laboratory is recognised as competent, in the field covered by the general scope, to adopt any recognised method and to develop or implement any other method for which it has ensured validation.

(*) For natural mineral waters and carbonated waters the laboratory follows the guidelines "Analyses of carbonated waters and natural mineral waters" - reference: ANSES/LHN/LD-EMN-version 01-October 2014.

Detailed scope

# Environment / Water quality / Physical and chemical analyses		Physico-chemical analysis of water - LAB GTA 05	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters (*) Carbonated water (*)	Various pesticides : 3,4,5-Trimethacarb , Acetamiprid, Aldicarb sulfoxide, Amidosulfuron, Aminocarb, Atraton, Atrazine, Atrazine deisopropyl, Atrazine desethyl, Azamethiphos, Azimsulfuron, Bensulfuron Methyl, Benthiavalicarb-isopropyl, Bupirimate, Buturon, Carbetamide, Carbofuran-3-hydroxy, Carboxin, Chlorantraniliprole, Chloridazon, Chlorotoluron, Chloroxuron, Chromafenozide, Cinosulfuron, Clothiandin, Coumatetralyl, Crotoxyphos, Cyanazine, Cyantraniliprole, Cycluron, Demeton-S, Demeton S methyl sulfone, Desmetryn, Difenamide, Dimethenamid, Dimethoate, Dinotefuran, Disulfoton-sulfone, Disulfoton-sulfoxide, Dodemorph, Ethametsulfuron-methyl, Ethidimuron, Ethiofencarb sulfone, Ethiofencarb sulfoxide, Ethirimol, Ethoxysulfuron, Fenamidone, Fenamiphos sulfoxide, Fensulfothion oxon, Fensulfothion oxon sulfone, Fenthion-oxon, Fenthion-oxon-sulfone, Fenthion-oxon-sulfoxide, Fenuron, Flamprop-methyl, Fluoxastrobin, Flurtamone, Fosthiazate, Fuberidazole, Imazamethabenz, Imazamethabenz-methyl, Imazaquin, Imidacloprid, IPPMU, Iprovalicarb Isazofos, Isoprothiolane, Isoxaben, Lenacil, Linuron, Mefenacet, Mephosfolan, Metalaxyl, Metamitron, Metazachlor, Methabenzthiazuron, Methiocarbe-sulfoxide, Metoxuron, Monolinuron, Monuron, N-(2,4 Di methyl phenyl formamide) N-(2.4dimethylphenyl-N-methyl) formamidine, NAD(1-naphthyl acetamide), Neburon, Norflurazon-desmethyl, , Ofurace, Omethoate, Oxadixyl, Oxsulfuron,	On-line solid-liquid extraction and LCMS/MS assay (filtration)	Internal method MOC3/324
Freshwater Natural mineral waters (*) Carbonated water (*)	Paraoxon-ethyl, Pethoxamid, Phorate-sulfoxide, Phosphamidon, Pirimicarb-desmethyl,	On-line solid-liquid extraction and LCMS/MS assay (filtration)	Internal method MOC3/324

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	Pirimicarb-formamido-desmethyl, Propamocarb, Propazine, Propoxur, Pyridafol, Pyroxsulam, Siduron, Simazine, Spirotetramate enol glucoside, Spiroxamine, Tebutam, Tebuthiuron, Terbufos-sulfoxide, Terbumeton desethyl, Terbutryn, Thiabendazole, Thiacloprid, Triasulfuron, Tricyclazole, Vamidothion, Warfarin		
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(*) For natural mineral waters and carbonated waters the laboratory follows the guidelines "Analyses of carbonated waters and natural mineral waters" - reference: ANSES/LHN/LD-EMN-version 01-October 2014.

Environment / Water quality / Physical and chemical analyses

Physico-chemical analysis of water - LAB GTA 05

SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters (*)	Various pesticides : 2,4 DDD, 2,4 DDT, 4,4 DDD, 2,4-DDE, 4,4'-DDE 4,4 dichlorobenzophenone, aclonifen, alachlor, aldrin, ametryne, Bifenox, bromophos ethyl, bromopropylate, butachlor, Carbophenothion, Carfentrazone ethyl, chlorbenside, Chlorfenapyr, chlorfenson, chlorobenzilate, chlorphenvinphos, chlorpropham, chlorpyrifos ethyl, chlorpyrifos methyl, chlorthiophos, clomazone, cyhalofop butyl, cyproconazol, cyprodinil, dichlofenthion, diclofop methyl, dicofol, dieldrin, diflufenicanil, dinitramine, endosulfan alpha, endosulfan beta, endosulfan sulfate, endrin, EPN, Ethion, Ethofumesate (R+S), Fenoxaprop ethyl (R+S), Fenpropimorph, Fenson, Fipronil, Fipronil desulfenil, Fipronil sulfide, Fluchloralin, Fludioxonil, Fluopicolide, Fluroxypir meptyl, Flusilazole, Flutolanil, Fonofos, haloxyfop methyl (R+S), HCB, HCH delta, HCH gamma Heptachlor (cis+trans), Heptachlor epoxide cis, Heptachlor epoxide trans, Isodrin, Isophenfos ethyl, Kresoxim methyl, Mepronil, MPCPS, Myclobutanil, Nitrothal isopropyl, Oxadiazon, Oxyfluorfen, PCB 028, PCB 052, PCB 101, PCB 118, PCB 180, penconazole, pentachloroaniline, piperonil butoxide, pirimiphos ethyl, pirimiphos methyl, pirimiphos methyl N desethyl, pretilachlor, profenofos, propyzamide, proquinazid, Pyrazophos, pyrimethanil, pyripoxifen, quinoxifen, Tetradifon, tetramethrin, Tetrasul, tolclofos methyl, transluthrin, triadimefon, triallate, trichloronate, Vinclozolin	Liquid-liquid extraction and determination by GC-MS/MS	Internal method MOC3/325
Carbonated water (*)	Various pesticides : 2.4 DDD, 2.4 DDT, 4.4 DDD, 4,4 dichlorobenzophenone, aclonifen, alachlor, aldrin, ametryne,	Liquid-liquid extraction and determination by GC-MS/MS	Internal method MOC3/325

Phytocontrol Analysis laboratory

	<p>bromophos ethyl, bromopropylate, butachlor, chlorbenside, chlofenson, chlorobenzilate, chlorphenvinphos, chlorpropham, chlorpyrifos ethyl, chlorpyrifos methyl, chlorthiophos, clomazone, cyhalofop butyl, cyproconazol, cyprodinil, dichlofenthion, diclofop methyl, dicofol, dieldrin, diflufenicanil, dinitramine, endosulfan alpha, endosulfan beta, endosulfan sulfate, endrin, fenpropimorph, fluchloralin, fluopicolide, fluroxypir meptyl, flusilazole, flutolanil, fonofos, haloxyfop methyl (R+S), HCB, hch delta, hch gamma, heptachlor, heptachlor epoxide, isodrin, Isophenfos ethyl, MPCPS, myclobutanil, isopropyl nitrothal, oxadiazon, oxyfluorfen, penconazole, pentachloroaniline, piperonil butoxide, pirimiphos methyl, pirimiphos methyl N desethyl, pretilachlor, profenofos, propyzamide, proquinazid, pyrimethanil, pyriproxifen, quinoxifen, Tetradifon, tetramethrin, tolclofos, methyl, transluthrin, triadimefon, triallate, trichloronate, Vinclozolin</p>		
Freshwater Natural mineral waters (*)	Glyphosate, AMPA, Glufosinate	FMOC-Cl bypass Liquid-liquid extraction and determination by LC-MS/MS	Internal method MOC3/330
Carbonated water (*)	Glyphosate, Glufosinate	FMOC-Cl bypass Liquid-liquid extraction and determination by LC-MS/MS	Internal method MOC3/330
Freshwater	Glyphosate, AMPA, Glufosinate, Fosetyl-aluminium	Direct injection and LC-MS/MS determination	Internal method MOC3/387

SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters (*)	Aromatic hydrocarbons polycyclic : 2-Methyl fluoranthene, acenaphtylene, benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, benzo (ghi) perylene, benzo (k) fluoranthene, Chrysene, fluoranthene, Indeno[1,2,3,-cd]pyrene pyrene	Liquid-liquid extraction and determination by GC-MS/MS	Internal method MOC3/325
Carbonated water (*)	Aromatic hydrocarbons polycyclic : 2-Methyl fluoranthene, acenaphtylene, benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, benzo (ghi) perylene, benzo (k) fluoranthene, Chrysene, fluoranthene, pyrene	Liquid-liquid extraction and determination by GC-MS/MS	Internal method MOC3/325
Freshwater Natural mineral waters (*)	Volatile organic compounds : 1,1,2-Trichloroethane 1,1,1,2-Tetrachloroethane 1,1-Dichloroethane 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (Z) 1,2-dichlorobenzene 1,3,5-Trichlorobenzene 1,3-Dichloro-1-propene (Z) 1,3-Dichloropropane 4-chlorotoluene Benzene, Bromobenzene, Bromodichloromethane, bromochloromethane, Bromoform, Chlorobenzene, Chloroform, Dibromochloromethane Dibromomethane, Isopropylbenzene, m+p-Xylene, o-Xylene, Styrene, Tetrachloroethylene, Toluene, Trichloroethylene, 1,2-Dibromo-3-chloropropane 1,2 dibromoethane 1,3-Dichloro-1-propene (E) 1,2 dichloropropane	Dynamic headspace and GC-MS/MS assay	Internal method MOC3/326

Carbonated water (*)	Volatile organic compounds : 1,1,2-Trichloroethane 1,1,1,2-Tetrachloroethane 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (Z) 1,2-dichlorobenzene 1,3,5-Trichlorobenzene 1,3-Dichloro-1-propene (Z) 1,3-Dichloropropane 4-Chlorotoluene Benzene, Bromobenzene, Bromodichloromethane, bromochloromethane, Chloroform, Dibromochloromethane Dibromomethane, Isopropylbenzene, o-Xylene, Styrene, Toluene, 1,2-Dibromo-3-chloropropane 1,2 dibromoethane 1,3-Dichloro-1-propene (E) 1,2 dichloropropane	Dynamic headspace and GC-MS/MS assay	Internal method MOC3/326
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater Natural mineral waters (*) Carbonated water (*)	Vinyl chloride	Headspace dynamic and determination by GC-MS/MS	Internal method MOC3/348
Freshwater Natural mineral waters (*) Carbonated water (*)	Dissolved acrylamide	Direct injection and LC-MS/MS determination	Internal method MOC3/328
Freshwater Natural mineral waters (*) Carbonated water (*)	Volatile Hydrocarbon Index	Dynamic headspace and GC-FID assay	NF T 90-124
Freshwater Natural mineral waters (*) Carbonated water (*)	Hydrocarbon Index C10-C40	Liquid-liquid extraction and GC-FID assay	NF EN ISO 9377-2
Freshwater	Chlordecone Chlordecone-5b-hydro	Direct injection and LC-MS/MS determination	MOC3/386
Freshwater	Chlorate, Perchlorate, Bromate	Extraction : Solid-liquid extraction Analysis : LC-MS/MS	Internal method MOC3/377

(*) For natural mineral waters and carbonated waters the laboratory follows the guidelines "Analyses of carbonated waters and natural mineral waters" - reference: ANSES/LHN/LD-EMN-version 01-October 2014.

SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater	17b-Estradiol, 4-Methyl benzotriazole, Acebutolol, Acetazolamide, 4-Chlorobenzoic acid, Mefenamic acid, Niflumic acid, Salicylic acid, Albendazole, Altrenogest, Amitriptyline, Androstenedione, Benzotriazole, Bezafibrate, Bithionol, Buflomedil, Bupivacaine, Caffeine, Carbamazepine, Carbamazepine Epoxide, clenbuterol, clindamycin, Cotinine, Diclofenac, Dicyclanil, Diethylstilbestrol, Doxepin, Dydrogesterone, Encazamene, Estrone, Ethylparaben, Fenbendazole, Fenofibrate, Fipronil sulfone, Florfenicol, Fluconazole, Flumequine, Gabapentin, Gemfibrozile, Hydrocortisone (Cortisol), Hydroxymetronidazole, Ifosfamide, Imipramine, Irbesartan, Isoquinoline, Ketoprofen, Ketorolac, Levamisole, Levonorgestrel, Lincomycin, Mepivacaine, Metformin, Metoprolol, Metronidazole, Nadolol, Naftidrofuryl, Naproxen, Norethisterone, O-desmethyltramadol, O-desmethylvenlafaxine, oxyclozanide, Paracetamol, Parconazole, Pentoxifylline, Phenazone, Phenytoin, Piroxicam, Prilocaine, Progesterone, Propyphenazone, Ramiprilat, Ranitidine, Sulfadiazine, Sulfamethazine, sulfamethizole, Sulfamethoxazole, Sulfamethoxazole-acetyl, Sulfapyridine,	Direct injection and LC-MS/MS determination	Internal method MOC3/372

	Sulfaquinoxaline, Testosterone, Ticlopidine, Timolol, Triclocarban, Triclosan, Trimethoprim, Venlafaxine		
Natural mineral waters (*)	17b-Estradiol, 4-Methyl benzotriazole, Acebutolol, Acetazolamide, 4-Chlorobenzoic acid, Mefenamic acid, Niflumic acid, Salicylic acid, Albendazole, Altrenogest, Amitriptyline, Androstenedione, Benzotriazole, Bezafibrate, Bithionol, Buflomedil, Bupivacaine, Caffeine, Carbamazepine, Carbamazepine Epoxide, clenbuterol, clindamycin, Cotinine, Diclofenac, Dicyclanil, Diethylstilbestrol, Doxepin, Dydrogesterone, Encazamene, Estrone, Ethylparaben, Fenbendazole, Fipronil sulfone, Florfenicol, Fluconazole, Flumequine, Gabapentin, Hydrocortisone (Cortisol), Hydroxymetronidazole, Ifosfamide, Imipramine, Irbesartan, Isoquinoline, Ketoprofen, Ketorolac, Levamisole, Levonorgestrel, Lincomycin, Mepivacaine, Metformin, Metoprolol, Metronidazole, Nadolol Naftidrofuryl, Naproxen, Norethisterone, O-desmethyltramadol, O-desmethylvenlafaxine, oxyclozanide, Paracetamol, Parconazole, Pentoxifylline, Phenazone, Phenytoin, Piroxicam, Prilocaine, Progesterone, Propyphenazone, Ramiprilat, Ranitidine, Sulfadiazine, Sulfamethazine, Sulfamethizole, Sulfamethoxazole, Sulfamethoxazole-acetyl, Sulfapyridine, Sulfaquinoxaline, Testosterone, Ticlopidine, Timolol, Triclocarban, Triclosan, Trimethoprim, Venlafaxine	Direct injection and LC-MS/MS determination	Internal method MOC3/372
Carbonated water (*)	Acebutolol, acetazolamide, 4-chlorobenzoic acid, niflumic acid, salicylic acid, altrenogest, amitriptyline, androstenedione, benzotriazole, bezafibrate, buflomedil, bupivacaine, cafeine, carbamazepine, Carbamazepine epoxide, Cotinine, Diclofenac, Dicyclanil, Diethylstilbestrol, Doxepin, Dydrogesterone, Encazamene, Estrone, Ethylparaben, Fenbendazole, Fenofibrate, Florfenicol, Fluconazole, Flumequine, Gabapentin, Hydrocortisone (Cortisol), Irbesartan, Isoquinoline, Ketoprofen, Ketorolac, Levamisole, Levonorgestrel, Lincomycin, Mepivacaine, Metformin, Metoprolol, Nadolol, Naftidrofuryl, Naproxen, Norethisterone, O-desmethyltramadol, O-desmethylvenlafaxine, Parconazole Pentoxifylline, Phenazone, Phenytoin, Prilocaine, Progesterone, Propyphenazone, Ramiprilat, Ranitidine, Sulfamethizole, Sulfamethoxazole, Sulfamethoxazole-acetyl, Testosterone, Ticlopidine, Triclocarban, Trimethoprim, Venlafaxine	Direct injection and LC-MS/MS determination	Internal method MOC3/372

Freshwater	<p>1-(3,4-dichlorophenyl)-3-methyluree, 1-(3,4-dichlorophenyl)uree, 1-(3-chloro-4-methylphenyl)uree, 2,4-D, 2,4-MCPA, 2-amino-N-isopropylbenzamide, Acetochlor ESA, Acifluorfen, Alachlor ESA, Aldicarb, Aldicarb sulfone, Allyxcarb, Amidithion, Amisulbrom, Atrazine, Atrazine desethyl, Atrazine desisopropyl, Benthiavalicarb, Brodifacoum, Bromoxynil, Cadusafos, Clothianidin, Cumyluron, Cymoxanil, Cyromazine, Cythioate, Daimuron, Dichlorprop, Dicrotophos, Dicyclanil, Difenacoum, Dimefuron, Dimethenamid ESA, Dimethenamid OXA, Dimethomorph, Dinoseb, Ethidimuron, Fenamidone, Fenchlorazole-ethyl, Fenhexamid, Fenothiocarb, Flonicamid, Fluazifop, Fluazinam, Flufenacet ESA, Fluometuron, Foramsulfuron, Haloxyfop, Imazalil, Ioxynil, Isoprocab, Isoproturon, Mecoprop, Mefluidide, Metalaxyl, Metamitron, Metconazole, Methamidophos, Metribuzin, Molinate, Naled, Naptalam, Oxydemeton-methyl, Primisulfuron-methyl, Prometon, Prometryn, Propachlor ESA, Propachlor OXA, Propamocarb, Propaquizafop, Propargite, Propazine 2-hydroxy, Prosulfuron, Pymetrozine, Pyraclofos, Pyrazosulfuron-ethyl, Pyrazoxyfen, Pyributicarb, Quinoclamine, Sebuthylazine, Sebuthylazine desethyl, Secbumeton, Simetryn, Sulfometuron-methyl, Tebutam, Teflubenzuron, Terbumeton, Terbumeton desethyl, Terbutylazine 2-hydroxy, Terbutylazine desethyl, Terbutylazine desethyl 2-hydroxy, Thidiazuron, Thiazafluron, Thiobencarb, Thiofanox sulfoxide, Thiophanate-ethyl, Thiophanate-methyl, Trichlorfon, Trietazin 2-hydroxy, Trietazin desethyl, Trietazine, Tritosulfuron, Warfarin</p>	Direct injection and LC-MS/MS determination	Internal method MOC3/378
Freshwater	<p>1,1-dichloro-1-propene ; 1,1,1,2-tetrachloroethane ; 1,1,1-trichloroethane ; 1,1,2-trichloroethane ; 1,1-dichloroethane ; 1,2 dibromoethane ; 1,2 dichloropropane ; 1,2,3-trichlorobenzene; 1,2,3-Trichloropropane ; 1,2,4-trichlorobenzene ; 1,2-Dibromo-3-chloropropane ; 1,2-dichlorobenzene ; 1,2-dichloroethane ; 1,2-Dichloroethene (E) ; 1,2-Dichloroethene (Z) ; 1,3,5-Trichlorobenzene ; 1,3-Dichloro-1-propene (E) ; 1,3-Dichloro-1-propene (Z) ; 1,3-dichlorobenzene ;</p>	Dynamic Headspace Extraction and GC-MS Analysis	Internal method: MOC3/381

	<p>1,3-Dichloropropane ; 1,4-dichlorobenzene ; 2-chlorotoluene ; 3-chlorotoluene ; 4-chlorotoluene ; benzene ; Bromobenzene ; bromochloromethane ; bromodichloromethane ; Bromoform ; chlorobenzene ; chloroform ; chloroprene ; Vinyl chloride ; dibromochloromethane ; dibromomethane ; ethylbenzene ; Furan ; hexachloroethane ; isopropylbenzene (cumene); Methylisothiocyanate ; o-xylene ; Styrene ; Tetrachlorethylene ; Carbon tetrachloride ; Toluene ; Trichloroethylene</p>		
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Range FLEX1

Environment / Water quality / Radioactivity measurements		Analysis of radionuclides in the environment, in products of animal origin and in foodstuffs intended for humans or animals - LAB GTA 35		
SUBJECT	NATURE OF THE ANALYSIS	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD	MEASURED QUANTITY AND SCOPE OF MEASUREMENT ACTIVITY
Freshwater	Overall α activity	Measurement of the overall α activity (in Pu equivalent ²³⁹) by scintillation counting in liquid medium after thermal preconcentration	NF EN ISO 11704	0.02 - 200 Bq/L

Freshwater	Overall β activity		Measurement of the overall β -activity (in Sr equivalent ⁹⁰ and ⁹⁰ Y) by counting scintillations in liquid medium after thermal preconcentration	NF EN ISO 11704	0.02 - 200 Bq/L
Freshwater	Radionuclides transmitters β	³ H	Measurement of tritium β activity by counting scintillations in liquid media	NF EN ISO 9698	0.5 - 10Bq/L ⁶
Freshwater	Radionuclides transmitters β	²²² Rn	Measurement of radon-222 activity by scintillation counting in liquid media	NF ISO 13164-4	0.5 - 1000 Bq/L

Range FLEX1

Environment / Water quality / Radioactivity measurements			Analysis of radionuclides in the environment, in products of animal origin and in foodstuffs intended for humans or animals - LAB GTA 35	
SUBJECT	NATURE OF THE ANALYSIS		PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater	Radionuclides transmitters β	^{40}K	Measurement of elemental potassium by ICP/MS then applying a coefficient using natural isotopy	NF EN ISO 17294-2
Freshwater	Radionuclides transmitters β	^{40}K	Measurement of elemental potassium by ion chromatography and then application of a coefficient using natural isotopy	NF EN ISO 14911
Freshwater	Overall residual β activity		Calculation of the overall residual β radioactivity index from the global β -radioactivity index and the total potassium concentration	Circular n° DGS/EA4/2007/232 of 13 June 2007

Flexible scope FLEX1: The laboratory is recognised as competent to perform the tests according to the referenced methods and their subsequent revisions.

FIXED range

Environment / Water quality / Microbiological analyses		Microbiological analysis of water - LAB GTA 23	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater	Escherichia coli and coliform bacteria	Membrane filtration Incubation at 36°C Colony count confirmed	NF EN ISO 9308-1-September 2000 (Repealed standard)

FIXED SCOPE: The laboratory is recognised as competent to perform the methods described in strict compliance with the recognised methods mentioned in the scope of accreditation

FLEX range1

Environment / Water quality / Microbiological analyses		Microbiological analysis of water - LAB GTA 23	
SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater	Micro-organisms revivable at 36°C	Incorporation seeding Incubation at 36°C Colony count	NF EN ISO 6222
Freshwater	Micro-organisms revivable at 22°C	Incorporation seeding Incubation at 22°C Colony count	NF EN ISO 6222
Freshwater	Intestinal Enterococci	Membrane filtration Incubation at 36°C Colony count confirmed	NF EN ISO 7899-2
Freshwater	Spores of sulphite-reducing anaerobic microorganisms	Destruction of vegetative forms Membrane filtration Incubation at 37°C under anaerobic conditions Enumeration of characteristic colonies	NF EN 26461-2

SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
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Freshwater	<i>Pseudomonas aeruginosa</i>	Membrane filtration Incubation at 36°C Enumeration of confirmed colonies	NF EN ISO 16266
Freshwater	Coagulase positive staphylococci	Membrane filtration Incubation at 36°C on Baird Parker selective medium - RPF Enumeration of confirmed colonies	NF T 90-412
Freshwater	Escherichia coli and coliform bacteria	Liquid plating Colorimetric and fluorimetric method Colilert®18 Determination of MPN	NF EN ISO 9308-2
Saline and brine water	Escherichia coli	Liquid plating Colorimetric method Colilert®18 Determining the MPN	NF EN ISO 9308-2
Freshwater Wastewater Saline and brackish water	Escherichia coli	Microplate plating Incubation at 44°C Confirmation of positive wells by fluorescence Determining the MPN	NF EN ISO 9308-3
	Intestinal Enterococci	Microplate plating Incubation at 44°C Confirmation of positive wells by fluorescence Determining the MPN	NF EN ISO 7899-1
Cold and hot sanitary water Cooling tower water (IRDEFA) Natural mineral waters	Legionella and Legionella pneumophila	Direct plating and after concentration by filtration then decontamination by acid treatment or. after concentration by filtration or centrifugation and then processing and seeding of part of the concentrate. Incubation at 36°C. Enumeration of Legionella and Legionella pneumophila by latex agglutination	NF T 90-431

SUBJECT	CHARACTERISTIC MEASURED OR RESEARCHED	PRINCIPLE OF THE METHOD	REFERENCE OF THE METHOD
Freshwater	Salmonella	<u>Qualitative method</u> Pre-enrichment Enrichments in liquid selective media Isolation on agar medium Confirmation	NF ISO 19250
Freshwater	Intestinal Enterococci	Colorimetric method Enterolert-DW [®]	IDX 33/03-10/13
Freshwater Saline and brine water	Intestinal Enterococci	Fluorimetric method Enterolert-E [®]	IDX 33/04-02/15

Flexible scope FLEX1: The laboratory is recognised as competent to perform the tests according to the referenced methods and their subsequent revisions.

Accreditation made compulsory in the French regulatory framework specified by the text referred to in the document Cofrac LAB INF 99 available on www.cofrac.fr.