Fapas

Water and Environmental (LEAP)

Proficiency Testing Programme

2017

Proficiency Testing from fera

eurofins

Contents

Who We Are

Fapas is the leading global provider of proficiency testing schemes, quality control samples and reference materials in the food sector, offering products throughout the year.

Proficiency testing in an independent check of your laboratory procedures providing you with a completely confidential assessment of your capability. Not only does participation in the relevant testing schemes allow you to demonstrate your systems and the technical ability of your staff, it will also help you gain and maintain ISO/17025 accreditation.

Established in 1990, we are an experienced, accredited provider of proficiency tests for the food and water, environmental chemistry and microbiology sectors. Taking part in our proficiency tests provides you with the confidence in your laboratory equipment, methods and staff, and assurance that you are delivering the quality results required by your customers.

We provide our participants with a confidential service that allows you to participate at a level that suits you; there is no minimum number of proficiency tests that you must take part in each year. Our system provides an easy reporting facility via our website and our comprehensive reports, which receive rigorous statistical analysis, contain method comparisons.

We also offer quality control samples and reference materials from selected food chemistry proficiency tests which can be purchased easily through our website throughout the year.

Our four Fapas proficiency testing schemes cover food chemistry, food microbiology, GM and water and environmental analysis.

Fapas Proficiency Tests

Proficiency Testing in Water and Environmental

Proficiency testing is an essential part of laboratory quality procedures. Taking part gives you confidence in your laboratory equipment, methods and staff, and assurance that you are delivering the quality results demanded by your customers.

The Fapas Water and Environmental Scheme assesses the performance of laboratories in water and environmental testing sectors. The scheme satisfies the UK Drinking Water Inspectorate (DWI) requirements for the Water Supply (Water Quality) Regulation 2010: Regulation 16, Appendix 1 for both chemical and microbiological parameters.

There are ten areas available under Fapas Water and Environmental: drinking water chemistry; microbiology; parasitology; chemical contamination emergency; taste & odour chemical identification; high salinity water; Legionella; soil chemistry; waste water chemistry; and surface water chemistry.

Participation can be at a level that suits your business – from taking part in one of our scheduled tests, through to company-specific closed tests.

Results from each proficiency test receive rigorous statistical analysis, ensuring you have clear feedback on your performance. Comprehensive reports provide information on analytical methods used by other participants. We can provide problem-solving consultancy on your laboratory procedures if required.

Participation in Fapas is easy. Arrangements can be made through our network of agents, or via our website, www.fapas.com. Fapas Food Chemistry follows international guidelines for proficiency testing and is accredited by UKAS to ISO/IEC 17043.

Drinking Water Chemistry

Mainly real drinking water samples for the analysis of inorganics, metals and organics.

Analyte Groups	Analytes	Water Type	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)
1 Major Inorganic Components	sodium potassium chloride calcium magnesium alkalinity total hardness total phosphorus fluoride sulphate	Real drinking water	5.0 – 50 mg/l 0.3 – 3.0 mg/l 6.0 – 50 mg/l 10 – 150 mg/l 1.0 – 15 mg/l 30 – 300 mg HCO_3/l 30 – 130 mg Ca/l 100 – 3000 µg P/l 150 – 1800 µg/l 8.0 – 100 mg/l	1 litre
2 Routine Components	nitrite nitrate ammonium TOC PI colour (filtered) SR phosphate pH turbidity conductivity @ 20^0C	Real drinking water	0.02 – 0.6 mg NO_2/l 2.0 – 60 mg NO_3/l 0.1 – 0.6 mg NH_4/l 0.2 – 5.0 mg/l 0.2 – 5.0 mg/l 0.2 – 20 HAZEN 10 – 1500 µg P/l 6.0 – 10.0 pH units 0.05 – 4.0 NTU 100 – 600 µS/cm @ 20^0C	
3 Routine Metals	cadmium lead iron manganese aluminium copper zinc nickel chromium	Real drinking water	0.5 – 7.0 µg/l 1.0 – 20 µg/l 20 – 400 µg/l 10 – 75 µg/l 20 – 300 µg/l 50 – 2000 µg/l 50 – 500 µg/l 5.0 – 30 µg/l 5.0 – 50 µg/l	500 ml

Drinking Water Chemistry (continued)

Analyte Groups	Analytes	Water Type	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)
4 Non-Routine Metals	mercury barium boron arsenic selenium antimony silver strontium lithium cobalt vanadium molybdenum tin beryllium	Standard concentrates or standard solutions in ultra-pure water	0.1 – 2.0 µg/l 100 – 1000 µg/l 200 – 1500 µg/l 1.0 – 15 µg/l 1.0 – 15 µg/l 0.5 – 7.5 µg/l 1.0 – 20 µg/l 50 – 500 µg/l 10 – 100 µg/l 3.0 – 30 µg/l 3.0 – 30 µg/l 3.0 – 30 µg/l 1.0 – 100 µg/l 2.0 – 10 µg/l	500 ml
5 Inorganic Disinfection By-products	bromide bromate chlorite chlorate	Standard solution in ultra-pure water	5 – 200 µg/l 1.0 – 20 µg/l 1.0 – 200 µg/l 1.0 – 1000 µg/l	125 ml
6 Trihalomethanes /Chlorinated Solvents	chloroform dichloromethane bromodichloromethane dibromochloromethane bromoform trichloroethene tetrachloroethene carbon tetrachloride 1,2-dichloroethane 1,2,3-trichlorobenzene 1,2,4-trichlorobenzene 1,3,5-trichlorobenzene hexachlorobutadiene 1,1,1-trichloroethane	Ultra-pure water + spiking concentrate in methanol	2.0 – 100 µg/l 2.0 – 40 µg/l 2.0 – 50 µg/l 2.0 – 50 µg/l 2.0 – 50 µg/l 0.5 – 10 µg/l 0.5 – 10 µg/l 0.5 – 4.0 µg/l 0.5 – 4.0 µg/l 0.1 – 2.0 µg/l 0.1 – 2.0 µg/l 0.1 – 2.0 µg/l 0.01 – 0.15 µg/l 0.1 – 2.0 µg/l	1 litre
7 Polycyclic Aromatic Hydrocarbons	anthracene fluoranthene benzo (b) fluoranthene benzo (k) fluoranthene, naphthalene benzo (a) pyrene benzo (ghi) perylene indeno (1,2,3-cd) pyrene	Real drinking water + spiking concentrate in methanol	0.005 – 0.05 µg/l 0.01 – 0.10 µg/l 0.003 – 0.050 µg/l 0.003 – 0.050 µg/l 0.005 – 0.050 µg/l 0.002 – 0.020µg/l 0.010 – 0.070 µg/l 0.010 – 0.070 µg/l	1 litre

Drinking Water Chemistry (continued)

Analyte Groups	Analytes	Water Type	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)
8 OP Pesticides	alachlor	Real drinking water + spiking concentrate in methanol	0.01 – 0.15 µg/l	1 litre
	azinphos-ethyl		0.01 – 0.15 µg/l	
	azinphos-methyl		0.01 – 0.15 µg/l	
	dichlorvos		0.01 – 0.15 µg/l	
	fenitrothion		0.01 – 0.15 µg/l	
	malathion		0.01 – 0.15 µg/l	
	mevinphos		0.01 – 0.15 µg/l	
	chlorofenvinphos		0.01 – 0.15 µg/l	
	chlorpyrifos		0.01 – 0.15 µg/l	
	diazinon		0.01 – 0.15 µg/l	
	fenthion		0.01 – 0.15 µg/l	
	parathion-ethyl		0.01 – 0.15 µg/l	
	parathion-methyl		0.01 – 0.15 µg/l	
	cypermethrin		0.01 – 0.15 µg/l	
	propetamphos		0.01 – 0.15 µg/l	
9 Acid Herbicides	MCPA	Real drinking water + spiking concentrate in methanol	0.01 – 0.15 µg/l	1 litre
	MCPB		0.01 – 0.15 µg/l	
	2,4-D		0.01 – 0.15 µg/l	
	dichlorprop		0.01 – 0.15 µg/l	
	dicamba,		0.01 – 0.15 µg/l	
	2,4-DB		0.01 – 0.15 µg/l	
	bentazone		0.01 – 0.15 µg/l	
	mecoprop		0.01 – 0.15 µg/l	
	propyzamide		0.01 – 0.15 µg/l	
	ioxynil		0.01 – 0.15 µg/l	
	bromoxynil		0.01 – 0.15 µg/l	
	triclopyr		0.01 – 0.15 µg/l	
	clopyralid		0.01 – 0.15 µg/l	
	fluroxypyr		0.01 – 0.15 µg/l	
	2,3,6-TBA		0.01 – 0.15 µg/l	
	2,4,5-T		0.01 – 0.15 µg/l	
	dichlobenil		0.01 – 0.15 µg/l	
	bromacil		0.01 – 0.15 µg/l	
	metazachlor		0.01 – 0.15 µg/l	
	propachlor		0.01 – 0.15 µg/l	
	benazolin		0.01 – 0.15 µg/l	
	metaldehyde		0.01 – 0.15 µg/l	

Drinking Water Chemistry (continued)

Analyte Groups	Analytes	Water Type	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)
10 OC Pesticides	endrin	Real drinking water + spiking concentrate in methanol	0.01 – 0.15 µg/l	1 litre
	dieldrin		0.006 – 0.05 µg/l	
	Aldrin		0.006 – 0.05 µg/l	
	p,p' DDT		0.01 – 0.15 µg/l	
	o,p'-DDT		0.01 – 0.15 µg/l	
	p,p'-DDE		0.01 – 0.15 µg/l	
	o,p'-DDE		0.01 – 0.15 µg/l	
	p,p'-DDD		0.01 – 0.15 µg/l	
	o,p-DDD (TDE)		0.01 – 0.15 µg/l	
	hexachlorocyclohexane (alpha)		0.01 – 0.15 µg/l	
	hexachlorocyclohexane (beta)		0.01 – 0.15 µg/l	
	hexachlorocyclohexane (delta)		0.01 – 0.15 µg/l	
	lindane (gamma HCH)		0.01 – 0.15 µg/l	
	trifluralin		0.01 – 0.15 µg/l	
	alpha endosulphan		0.01 – 0.15 µg/l	
	beta endosulphan		0.01 – 0.15 µg/l	
	Hexachlorobenzene		0.01 – 0.15 µg/l	
	heptachlor		0.006 – 0.04 µg/l	
	heptachlor epoxide (total),		0.006 – 0.04 µg/l	
	pentachlorobenzene		0.01 – 0.15 µg/l	
	pendimethalin		0.01 – 0.15 µg/l	

Drinking Water Chemistry (continued)

Analyte Groups	Analytes	Water Type	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)
11 BTEX	benzene toluene ethylbenzene styrene o-xylene m-xylene p-xylene m+p xylene total xylene	Real drinking water + spiking concentrate in methanol	0.1 – 1.5 µg/l 0.2 – 4.0 µg/l 0.2 – 4.0 µg/l 0.2 – 4.0 µg/l 0.2 – 4.0 µg/l 0.2 – 4.0 µg/l 0.2 – 4.0 µg/l 0.2 – 8.0 µg/l 0.5 – 12.0 µg/l	1 litre
12 Chlorine	total & free chlorine	Concentrate for dilution up to 1 litre	0.5 – 3.0 mg/l	3 ml
15 Triazines and Urea Herbicides	isoproturon diuron linuron chlortoluron monuron methabenzthiazuron diflufenican metamitron simazine atrazine propazine cyanazine trietazine prometryn terbutryn ametryn carbetamide pirimicarb	Real drinking water + spiking concentrate in methanol	0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l 0.01 – 0.15 µg/l	1 litre
16 Total Cyanide	total cyanide	Concentrate for dilution up to 1 litre	0.01 – 0.10 mg/l	3 ml
17 Haloacetic Acids	monochloroacetic acid (MCA) dichloroacetic acid (DCA) trichloroacetic acid (TCA) Monobromoacetic acid (MBA) dibromoacetic acid (DBA)	Ultra-pure water + spiking concentrate in methanol	5.0 – 50 µg/l 5.0 – 50 µg/l 5.0 – 50 µg/l 5.0 – 50 µg/l 5.0 – 50 µg/l	1 litre

Drinking Water Chemistry Timetable September to December 2016

distribution	DWC006	DWC007	DWC008	DWC009	DWC010
date	19/09/2016	27/09/2016	14/11/2016	21/11/2016	05/12/2016
Group 1					
Group 2					
Group 3					
Group 4					
Group 5					
Group 6					
Group 7					
Group 8					
Group 9					
Group 10					
Group 11					
Group 12					
Group 15					
Group 16					

Closing date for registrations for Groups 9, 12, 15 & 16 is **four** weeks before the start dates for these tests.
Closing date for registrations for all other Groups is **two** weeks before the start date of these tests

Drinking Water Chemistry Timetable January to April 2017

distribution	DWC011	DWC012	DWC013	DWC014	DWC015
date	16/01/2017	23/01/2017	13/02/2017	27/03/2017	11/04/2017
Group 1		DWC0105		DWC0106	
Group 2		DWC0205		DWC0206	
Group 3		DWC0305		DWC0306	
Group 4		DWC0403			
Group 5		DWC0503			
Group 6			DWC0604		
Group 7			DWC0704		
Group 8			DWC0804		
Group 9					DWC0903
Group 10	DWC1004				DWC1005
Group 11	DWC1104				DWC1105
Group 12		DWC1203			
Group 15	DWC1502				
Group 16		DWC1603			
Group 17					

Closing date for registrations for Groups 9, 12, 15, 16 & 17 is **four** weeks before the start dates for these tests.
Closing date for registrations for all other Groups is **two** weeks before the start date of these tests

Drinking Water Chemistry Timetable May to December 2017

distribution	DWC016	DWC017	DWC018	DWC019	DWC020	DWC021	DWC022	DWC023	DWC024
date	22/05/2017	30/05/2017	10/07/2017	24/07/2017	14/08/2017	25/09/2017	09/10/2017	13/11/2017	20/11/2017
Group 1	DWC0107		DWC0108			DWC0109		DWC0110	
Group 2	DWC0207		DWC0208			DWC0209		DWC0210	
Group 3	DWC0307		DWC0308			DWC0309		DWC0310	
Group 4	DWC0404		DWC0405					DWC0406	
Group 5	DWC0504		DWC0505					DWC0506	
Group 6		DWC0605			DWC0606				DWC0607
Group 7		DWC0705			DWC0706				DWC0707
Group 8		DWC0805			DWC0806				DWC0807
Group 9							DWC0904		
Group 10				DWC1006			DWC1007		
Group 11				DWC1106			DWC1107		
Group 12	DWC1204		DWC1205					DWC1206	
Group 15				DWC1503					
Group 16	DWC1604		DWC1605					DWC1606	
Group 17		DWC1701							DWC1702

Closing date for registrations for Groups 9, 12, 15, 16 & 17 is **four** weeks before the start dates for these tests.
Closing date for registrations for all other Groups is **two** weeks before the start date of these tests

Drinking Water Microbiology

The 2016 samples are solid tablets and the 2017 samples supplied are lyophilised vials, both of which require reconstituting with your laboratory's own sterile deionised (or distilled) water to 1 litre before analysis. Depending on your order up to four samples may be supplied for each distribution:

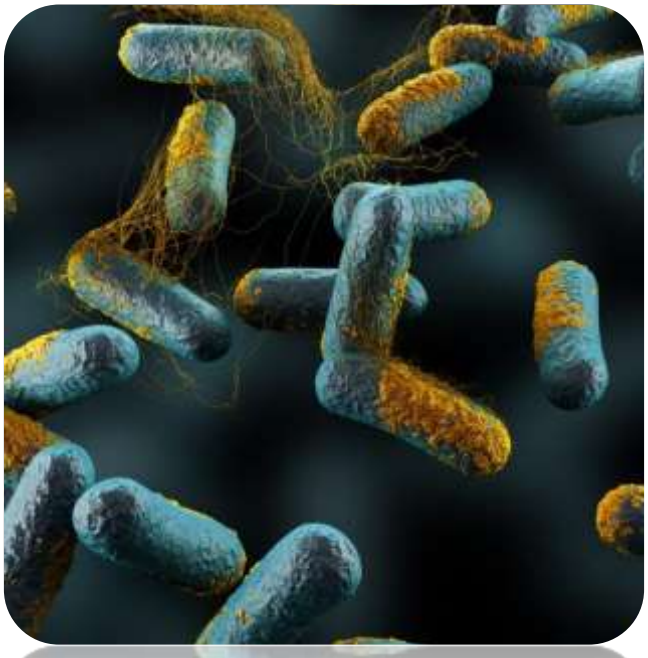
Sample A: For Total Coliforms & *Escherichia coli*, this sample contains *Escherichia coli* and another coliform organism.

Sample B: For Colony Count (22°C/3 days), Colony Count (37°C/2 days).

Sample C **2016**: For Enterococci together with *Clostridium perfringens** **OR** *Pseudomonas aeruginosa*. *NB another Clostridium/Pseudomonas species may be added to test laboratories' ability to confirm *Clostridium perfringens* **/** *Pseudomonas aeruginosa*.

Sample C **2017**: For Enterococci together with *Clostridium perfringens** **AND** *Pseudomonas aeruginosa*. *NB another Clostridium/Pseudomonas species may be added to test laboratories' ability to confirm *Clostridium perfringens* / *Pseudomonas aeruginosa*.

Organism Identification: This is a nutrient agar slope (2016) or lyophilised vial (2017) which requires rehydrating with a growth broth (e.g. nutrient broth), which has been inoculated with a Gram negative rod-shaped organism **but please note**, occasionally a Gram positive organism may be used. The organism chosen is one which is routinely recovered from water.



Drinking Water Microbiology Timetable: September to December 2016

	Distribution Number and Dispatch Date			
	DWM005	DWM006	DWM007	DWM008
Test	13/09/2016	11/10/2016	08/11/2016	06/12/2016
Total coliforms and *Escherichia coli*				
Colony Counts (22ºC/3 days)				
Colony Counts (37ºC/2 day)				
Enterococci				
Clostridium perfringens				
Pseudomonas aeruginosa				
Organism Identification				

Closing date for registrations is **five** weeks before the start date of these tests

Drinking Water Microbiology Timetable: January to May 2017

	Distribution Number and Dispatch Date				
	DWM009	DWM010	DWM011	DWM012	DWM013
Test	10/01/2017	14/02/2017	14/03/2017	18/04/2017	16/05/2017
Total coliforms and *Escherichia coli*		DWM0110	DWM0111	DWM0112	DWM0113
Colony Counts (22ºC/3 days)		DWM0210	DWM0211	DWM0212	DWM0213
Colony Counts (37ºC/2 day)		DWM0210	DWM0211	DWM0212	DWM0213
Enterococci		DWM0310	DWM0311	DWM0312	DWM0313
Clostridium perfringens		DWM0310	DWM0311	DWM0312	DWM0313
Pseudomonas aeruginosa		DWM0310	DWM0311	DWM0312	DWM0313
Organism Identification			DWM0404		

Closing date for registrations is **four** weeks before the start date of these tests

Drinking Water Microbiology Timetable: June to December 2017

	Distribution Number and Dispatch Date					
	DWM014	DWM015	DWM016	DWM017	DWM018	DWM019
Test	13/06/2017	18/07/2017	12/09/2017	10/10/2017	07/11/2017	05/12/2017
Total coliforms and *Escherichia coli*	DWM0114	DWM0115	DWM0116	DWM0117	DWM0118	DWM0119
Colony Counts (22ºC/3 days)	DWM0214	DWM0215	DWM0216	DWM0217	DWM0218	DWM0219
Colony Counts (37ºC/2 day)	DWM0214	DWM0215	DWM0216	DWM0217	DWM0218	DWM0219
Enterococci	DWM0314	DWM0315	DWM0316	DWM0317	DWM0318	DWM0319
Clostridium perfringens	DWM0314	DWM0315	DWM0316	DWM0317	DWM0318	DWM0319
Pseudomonas aeruginosa	DWM0314	DWM0315	DWM0316	DWM0317	DWM0318	DWM0319
Organism Identification	DWM0405			DWM0406		

Closing date for registrations is **four** weeks before the start date of these tests

Drinking Water Taste & Odour Chemical Identification

This programme is aimed at testing the capabilities of a laboratory to analyse a chemically contaminated drinking water sample for completely unknown compound(s) which may produce a taste or odour.

Participating laboratories should NOT undertake any taste (organoleptic) testing as the samples supplied may contain toxic chemicals

Participants will be sent a drinking water sample contaminated with chemical(s) known to produce taste and odour problems, together with a corresponding 'blank' drinking water sample. Please note, the 'blank' sample is supplied solely to allow the laboratory to compare the background matrix of the contaminated drinking water.

Participants are required to submit responses to the following questions:

- What taste and odour producing chemical(s) are in the drinking water?
  *NB participants should **not** undertake any taste (organoleptic) testing*
- What is your estimated detection limit for this chemical?
- Where may this chemical have originated from?
- What methods were used to detect the taste and odour contaminant(s)?

Results must be e-mailed or faxed to Fapas®. The closing date for submission of results will be 3 weeks from the start date for the exercise.

Once per year a Discussion Forum is held at Fera, York, to discuss the outcomes of each taste and odour contamination test. The meeting is an important opportunity for participants to share information on detecting the contaminant(s) present. The cost for participating in the meeting is included in the price for participation in this test, with a maximum of 2 people per organisation attending. Chatham House Rules apply at these discussion forums.

Drinking Water Taste & Odour Chemical Identification Timetable: September 2016 to December 2017

		Test Details
dispatch date	**distribution number**	**test**
17/07/2017	TOCHEM06	Taste & Odour Chemical Identification

Closing date for registrations is **two** weeks before the start date for this test

Contaminated Drinking Water Samples, labelled TASTE & ODOUR CHEMICAL CONTAMINATION:

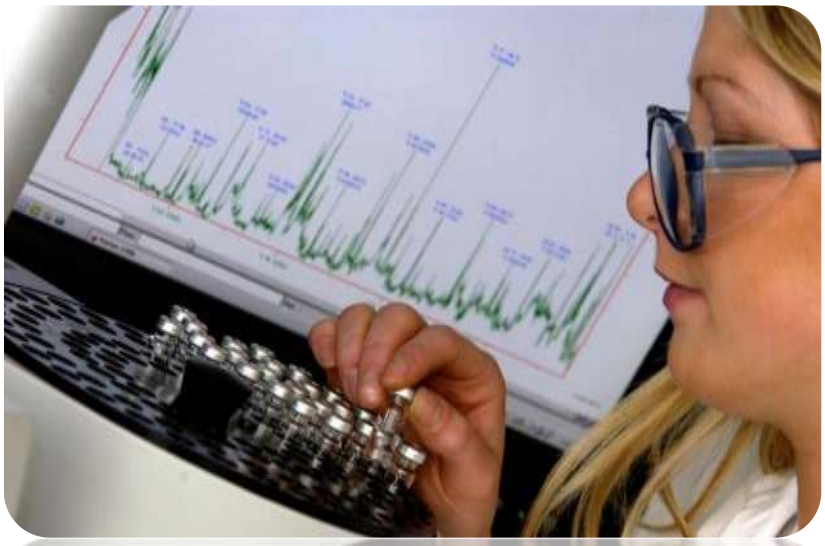
- 2 x 1 litre glass bottles for analysis of 'organics'

*NB participants should **not** undertake any taste (organoleptic) testing on this sample*

Blank Drinking Water Samples, labelled BLANK:

- 2 x 1 litre glass bottles for analysis of 'organics'

*NB participants should **not** undertake any taste (organoleptic) testing on this sample*



Drinking Water Parasitology

Suspension A is a suspension of Cryptosporidium and/or Giardia in phosphate buffered saline (PBS). Approximately 1 ml is supplied. Samples may be prepared either from commercially available concentrates or formalin fixed faecal material. Participants are required to count the oocysts and cysts by fluorescence microscopy and/or any other technique that they routinely use.

Suspension B is a PBS Cryptosporidium oocyst and/or Giardia suspension. Approximately 1 ml is supplied. This suspension is added to 10 litres of tap water by the participants and then processed by the laboratory's routine analytical method.

Drinking Water Parasitology Timetable September to December 2016

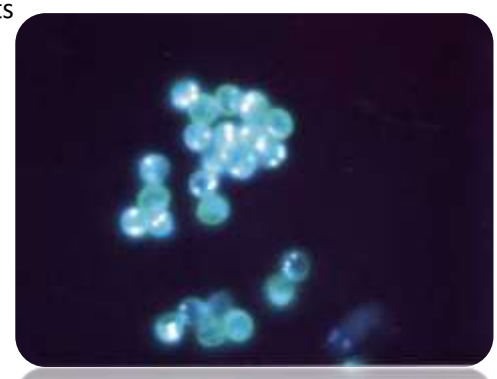
	Distribution Number and Date of Dispatch	
	DWP003	**DWP004**
Tests	**13/09/2016**	**08/11/2016**
Suspension A		
Suspension B		

Closing date for registrations is **two** weeks before the start date of these tests

Drinking Water Parasitology Timetable: January to December 2017

	Distribution Number and Date of Dispatch					
	DWP005	**DWP006**	**DWP007**	**DWP008**	**DWP009**	**DWP010**
Tests	**10/01/2017**	**14/03/2017**	**16/05/2017**	**18/07/2017**	**12/09/2017**	**07/11/2017**
Suspension A	DWP0105	DWP0106	DWP0107	DWP0108	DWP0109	DWP0110
Suspension B	DWP0205	DWP0206	DWP0207	DWP0208	DWP0209	DWP0210

Closing date for registrations is **two** weeks before the start date of these tests



Drinking Water Emergency Scenario

This programme is aimed at testing the capabilities of a laboratory to analyse a completely unknown chemically contaminated drinking water sample on an emergency short-term rapid screening basis.

Participants will be sent an incident scenario, which will detail how the possible chemical contamination may have occurred, together with contaminated drinking water samples, corresponding 'blank' drinking water samples and a sample to be tested for gross alpha and beta radioactivity. Please note, the 'blank' sample is supplied solely to allow the laboratory to compare the background matrix of the contaminated drinking water.

For a laboratory to gain maximum benefit from participation it is absolutely crucial that laboratory staff have no advance warning of the test.

Participants are required to submit responses to the following questions:

- Is there any significant contamination of the drinking water?
- If so, what is in the water? and the approximate concentration(s)
- Do you have any analytical information that you feel would help the water company to decide if this water could be safely used for non-drinking purposes (e.g. bathing, washing, laundry etc.)
- What methods were used to detect the contaminant(s)?
- Were any screening tests used?

Results must be e-mailed or faxed to Fapas. The closing date for submission of results is 7 days from the start date for the exercise.

Laboratories will be informed by e-mail within 1 day of the closing date of the list of contaminants knowingly added to the test samples.

Once per year a Discussion Forum is held at Fera, York, to discuss the outcomes of each emergency test. The meeting is an important opportunity for participants to share information on detecting the contaminants present. The cost for participating in the meeting is included in the price for participation in these tests, maximum of 2 people per organisation attending. Chatham House Rules apply at these discussion forums.

Drinking Water Emergency Scenario Timetable: October 2016 to December 2017

		Test Details
dispatch date	**distribution number**	**test**
May 2017	EMY34	Contamination Incident
October 2017	EMY35	Contamination Incident

Closing date for registrations is **two** weeks before the start date of these tests

Contaminated Drinking Water Samples, labelled CONTAMINATION INCIDENT:

- 2 x 1 litre glass bottles for analysis of 'organics'
- 1 x 1 litre PET bottle for analysis of 'physicals'
- 1 x 250 ml polypropylene bottle for analysis of 'metals'
  NB this sample is acidified (0.1M nitric acid)

Blank Drinking Water Samples, labelled BLANK:

- 2 x 1 litre glass bottles for analysis of 'organics'
- 1 x 1 litre PET bottle for analysis of 'physicals'
- 1 x 250 ml polypropylene bottle for analysis of 'metals'
  NB this sample is acidified (0.1M nitric acid)

Radioactivity Drinking Water Sample, labelled RADIOACTIVITY:

- 1 x 500 ml PET bottle only to be tested for gross alpha and beta levels at above 1 Bq/l. NB this sample is acidified (0.1M nitric acid)

Environmental Legionella

Two lyophilised vials which require reconstitution with laboratories own sterile deionised (or distilled) water to 1litre before analysis. Participants are required to report results qualitatively, indicating whether *Legionella* spp. is detected or not detected and identify the species present. Quantitative results are requested to be expressed in cfu/l.

Environmental Legionella Timetable: October 2016 to December 2017

date	11/10/2016	18/04/2017	10/10/2017
***Legionella* spp**		LG0103	LG0104

Closing date for registrations is **four** weeks before the start date of these tests

Environmental Waste Water Chemistry

The test materials supplied are standard concentrates or standard solutions.

All Groups, except 2 & 4 require dilution with your laboratory's reagent water before analysis. Full instructions regarding this dilution step will be provided.

When diluted the test materials will contain levels of contaminants usually, found in wastewater / effluent samples.

The volume of concentrate supplied is given below together with the dilution required.

Analyte Groups	Analytes	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)	Dilution Required
1	BOD 5-day COD TOC	6.0 – 250 mg/l 6.0 – 250 mg/l 6.0 – 250 mg/l	20 ml	to 1 l
2	Dissolved Solids @ 180 °C Suspended Solids Total Solids	23 – 675 mg/l 23 – 675 mg/l 23 – 675 mg/l	500 ml	no dilution required
3	Nitrate (N) Nitrite (N) Ammonia (N) Chloride Orthophosphate (P) Sulphate (SO_4) Total Phosphorus (P) Kjeldahl Nitrogen (N) Total Nitrogen (N)	0.5 – 50 mg/l 0.2 – 10 mg/l 0.2 – 20 mg/l 10.0 – 500 mg/l 1.0 – 100 mg/l 10.0 – 500 mg/l 0.2 – 5 mg/l 2.0 – 50 mg/l 2.0 – 50 mg/l	4 x 60ml	to 1 l
4	pH Electrical Conductivity @ 25°C	1.0 – 13.0 pH units 200 – 2000 µS/cm @ 25°C	2 x 125 ml	no dilution required

Environmental Waste Water Chemistry (continued)

Analyte Groups	Analytes	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)	Dilution Required
5 Trace Metals 1	Aluminium Arsenic Beryllium Cadmium Chromium (Total) Cobalt Copper Iron Lead Manganese Mercury Nickel Selenium Vanadium Zinc	200 – 4000 µg/l 70 – 900 8 – 900 8 – 750 17 – 1000 28 – 1000 40 – 900 200 – 4000 70 – 3000 70 – 4000 2 – 30 80 – 3000 90 – 2000 55 – 2000 100 – 2000	20 ml	to 1 l
6 Trace Metals 2	Antimony Barium Boron Molybdenum Silver Strontium Thallium	95 – 900 µg/l 100 – 2500 800 – 2000 60 – 600 26 – 600 30 – 300 60 – 900	20 ml	to 1 l
7	Hexavalent Chromium	45 – 880 µg/l	20 ml	to 1 l
8	Alkalinity Calcium Total Hardness Magnesium Potassium Sodium	10 – 120 (as $CaCO_3$) mg/l 3.5 – 110 mg/l 17 – 675 (as $CaCO_3$) mg/l 2 – 40 mg/l 4 – 40 6 – 100	2 x 20 ml	to 1 l
9	Bromide Fluoride	1 – 10 mg/l 0.3 – 4	20 ml	to 1 l
10	Oil & Grease Suitable for EPA 1664, SM 5520B and other gravimetric methods (NOT suitable for IR methods)	10 – 100 mg/l	2 ml	to 1 l
11	Cyanide (Total)	0.1 to 1 mg/l	2 ml	to 1 l
12	Total Sulphide	1 – 10 mg/l	20 ml	to 1 l
13	Settleable Solids (Volumetric test using Imhoff cone)	5 – 100 ml/l	25 g	to 1 l
14	Dissolved Oxygen Dissolved Oxygen (Winkler)	1.0 to 100 mg/l	2 ml	to 1 l

Environmental Waste Water Chemistry (continued)

Analyte Groups	Analytes	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)	Dilution Required
15 VOC 1	Benzene	8 – 120 µg/l	2 ml	to 100 ml
	1,2-Dichlorobenzene	8 – 100		
	1,3-Dichlorobenzene	9 – 125		
	1,4-Dichlorobenzene	8 – 115		
	Ethylbenzene	9 – 100		
	Methyl tert-butyl ether (MTBE)	15 – 100		
	Naphthalene	8 – 190		
	Toluene	7 – 100		
	1,2,4-Trimethylbenzene	8 – 100		
	1,3,5-Trimethylbenzene	8 – 100		
	m+p-Xylene	8 – 300		
	o-xylene	8 – 300		
	Total Xylene	20 – 300		

Environmental Waste Water Chemistry Timetable: October 2016 to December 2017

distribution	WW003	WW004	WW005	WW006	WW007	WW008	WW009
date	24/10/2016	21/02/2017	04/04/2017	20/06/2017	07/08/2017	17/10/2017	04/12/2017
Group 1		WW0104	WW0105	WW0106	WW0107	WW0108	WW0109
Group 2		WW0204	WW0205	WW0206	WW0207	WW0208	WW0209
Group 3		WW0304	WW0305	WW0306	WW0307	WW0308	WW0309
Group 4		WW0404	WW0405	WW0406	WW0407	WW0408	WW0409
Group 5		WW0504	WW0505	WW0506	WW0507	WW0508	WW0509
Group 6		WW0604	WW0605	WW0606	WW0607	WW0608	WW0609
Group 7		WW0704	WW0705	WW0706	WW0707	WW0708	WW0709
Group 8		WW0804	WW0805	WW0806	WW0807	WW0808	WW0809
Group 9		WW0904	WW0905	WW0906	WW0907	WW0908	WW0909
Group 10		WW1004	WW1005	WW1006	WW1007	WW1008	WW1009
Group 11		WW1104	WW1105	WW1106	WW1107	WW1108	WW1109
Group 12		WW1204	WW1205	WW1206	WW1207	WW1208	WW1209
Group 13		WW1304	WW1305	WW1306	WW1307	WW1308	WW1309
Group 14		WW1404	WW1405	WW1406	WW1407	WW1408	WW1409
Group 15		WW1504	WW1505	WW1506	WW1507	WW1508	WW1509

Closing date for registrations is **two** weeks (for Groups 3 & 4) and **four** weeks (for Groups 1, 2 & 5-15) before the start date of these tests.

Environmental High Salinity Water Chemistry

Full volume simulated seawater samples made using NaCl with salinity of 3.5%.

Analyte Groups	Analytes	Concentration Ranges (approx)	Volume Supplied (approx)
1 Complex Nutrients	Kjeldahl nitrogen, total (TKN) Nitrogen, total Phosphorus, total	1.5-35 mg/L 1.5-35 mg/l 0.5-10 mg/l	500 ml
2 Simple Nutrients	Ammonia as N Nitrate as N Nitrate+nitrite as N Nitrite as N Orthophosphate as P	0.650-19.0 mg/l 0.250-40.0 mg/l 0.250-40.0mg/l 0.400-4.00 mg/l 0.500-5.50 mg/l	500 ml
3 Minerals	Calcium, Ca Magnesium, Mg Potassium, K Alkalinity as CaCO3 Conductivity (25ºC) Hardness, total as CaCO3 pH	25-110 mg/l 2-40 mg/l 4-40 mg/l 10-100000 mg/l 0.00-100 S/cm 8.7-275 mg/l 5-10 units	500 ml
4 Trace Metals 1	Aluminium Arsenic Beryllium Cadmium Chromium Cobalt Copper Iron Lead Manganese Mercury Nickel Selenium	0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l 0-10000 µg/l	500 ml
5 Trace Metals 2	Antimony, Sb Barium, Ba Boron, B Molybdenum, Mo Silver, Ag Strontium, Sr Thallium, Tl Tin, Sn Titanium, Ti	95-900 µg/l 100-2500 µg/l 800-2000 µg/l 60-600 µg/l 26-600 µg/l 30-300 µg/l 60-900 µg/l 1000-5000 µg/l 80-300 µg/l	500 ml

Environmental High Salinity Water Chemistry Timetable: November 2016 to December 2017

distribution	HS003	HS004	HS005
date	01/11/2016	28/06/2017	29/11/2017
Group 1		HS0104	HS0105
Group 2		HS0204	HS0205
Group 3		HS0304	HS0305
Group 4		HS0404	HS0405
Group 5		HS0504	HS0505

Closing date for registrations is **four** weeks before the start date of these tests

Environmental Soil Chemistry

Analytes	Concentration Ranges (approx, after dilution)	Volume Supplied (approx)	Dilution Required
Cadmium	1.0 – 400 mg/kg	6 – 8 g	no dilution required
Lead	10 – 2000 mg/kg		
Chromium	10 – 500 mg/kg		
Arsenic	1 – 500 mg/kg		
Barium	30 – 2500 mg/kg		
Nickel	1 – 200 mg/kg		
Copper	2 – 200 mg/kg		
Zinc	10 – 200 mg/kg		
Mercury	0.1 – 200 mg/kg		

Analytical data for Certification was obtained using USEPA SW846, 3rd edition methods 3050 (hot block) and 3051 (microwave) using **nitric acid** extraction. Analysis was carried out according to USEPA methods 6010 (ICP-EOS), 6020 (ICP-MS) and 7000 (AES). Note that nitric acid extraction is not as rigorous as aqua regia. If your laboratory method employs aqua regia to analyse soil samples for metals then these samples may not be suitable.

Environmental Soil Chemistry Timetable 2017

		Test Details
dispatch date	**distribution number**	**test**
05/07/2017	**SL0104**	SL0104

Closing date for registrations is **four** weeks before the start date of this test

Environmental Surface Water Chemistry

The surface water provided will be sourced from a clean river, reservoir or lake.

Analyte Groups	Analytes	Water Type	Concentration Ranges (approx)	Volume Supplied (approx)
1 Major Inorganic Components	sodium potassium chloride calcium magnesium alkalinity total hardness total phosphorus fluoride sulphate	surface water	5.0 – 50 mg/l 0.3 – 3.0 mg/l 6.0 – 50 mg/l 10 – 150 mg/l 1.0 – 15 mg/l 30 – 300 mg HCO_3/l 30 – 130 mg Ca/l 100 – 3000 µg P/l 150 – 1800 µg/l 5.0 – 100 mg/l	1 litre + spiking conc
2 Routine Components	nitrite nitrate ammonium TOC PI colour (filtered)* SR phosphate pH turbidity* conductivity @ 20^0C	surface water	0.02 – 0.6 mg NO_2/l 2.0 – 60 mg NO_3/l 0.1 – 0.6 mg NH_4/l 0.2 – 5.0 mg/l 0.2 – 5.0 mg/l 0.2 – 30 HAZEN 1.0 – 1500 µg P/l 6.0 – 10.0 pH units 0.05 – 10.0 NTU 100 – 600 µS/cm @ 20^0C	
3 Metals (in 0.5% Nitric Acid)	iron manganese copper aluminium zinc silver barium boron strontium lithium	surface water	15 – 400 µg/l 10 – 70 µg/l 20 – 700 µg/l 10 – 500 µg/l 20 – 700 µg/l 2 – 15 µg/l 10 – 700 µg/l 25 – 1500 µg/l 10 – 1000 µg/l 10 – 100 µg/l	500 ml + spiking conc

*These analytes are only available for the 2017 programme.

Environmental Surface Water Chemistry (continued)

The surface water provided will be sourced from a clean river, reservoir or lake.

Analyte Groups	Analytes	Water Type	Concentration Ranges (approx)	Volume Supplied (approx)
4 Toxic Metals (in 0.5% Nitric Acid)	cadmium	surface water	0.2 – 7.0 µg/l	500 ml + spiking conc
	lead		1 – 25 µg/l	
	nickel		3 – 30 µg/l	
	selenium		1.0 – 15 µg/l	
	arsenic		1.0 – 15 µg/l	
	antimony		0.5 – 7.0 µg/l	
	mercury		0.1 – 2.0 µg/l	
	cobalt		2.0 – 30 µg/l	
	vanadium		2.0 – 30 µg/l	
	chromium		3.0 – 60 µg/l	
	molybdenum		2.0 – 30 µg/l	
	tin		1.0 – 100 µg/l	
	beryllium		1.0 – 10 µg/	

Environmental Surface Water Chemistry Timetable: October 2016 to December 2017

distribution	SW002	SW003	SW004
date	**17/10/2016**	**06/03/2017**	**11/09/2017**
Group 1		SW0103	SW0104
Group 2		SW0203	SW0204
Group 3		SW0303	SW0304
Group 4		SW0403	SW0404

Closing date for registrations is **two** weeks before the start date of these tests.

Round No.	Courier	Programme name	Round Price	Extra Material Price
DWC0105	x	LEAP CHEM: 2017	123.00	60.00
DWC0106	x	LEAP CHEM: 2017	123.00	60.00
DWC0107	x	LEAP CHEM: 2017	123.00	60.00
DWC0108	x	LEAP CHEM: 2017	123.00	60.00
DWC0109	x	LEAP CHEM: 2017	123.00	60.00
DWC0110	x	LEAP CHEM: 2017	123.00	60.00
DWC0205	x	LEAP CHEM: 2017	123.00	60.00
DWC0206	x	LEAP CHEM: 2017	123.00	60.00
DWC0207	x	LEAP CHEM: 2017	123.00	60.00
DWC0208	x	LEAP CHEM: 2017	123.00	60.00
DWC0209	x	LEAP CHEM: 2017	123.00	60.00
DWC0210	x	LEAP CHEM: 2017	123.00	60.00
DWC0305	x	LEAP CHEM: 2017	185.00	60.00
DWC0306	x	LEAP CHEM: 2017	185.00	60.00
DWC0307	x	LEAP CHEM: 2017	185.00	60.00
DWC0308	x	LEAP CHEM: 2017	185.00	60.00
DWC0309	x	LEAP CHEM: 2017	185.00	60.00
DWC0310	x	LEAP CHEM: 2017	185.00	60.00
DWC0403	x	LEAP CHEM: 2017	270.00	60.00
DWC0404	x	LEAP CHEM: 2017	270.00	60.00
DWC0405	x	LEAP CHEM: 2017	270.00	60.00
DWC0406	x	LEAP CHEM: 2017	270.00	60.00
DWC0503	x	LEAP CHEM: 2017	185.00	60.00
DWC0504	x	LEAP CHEM: 2017	185.00	60.00
DWC0505	x	LEAP CHEM: 2017	185.00	60.00
DWC0506	x	LEAP CHEM: 2017	185.00	60.00
DWC0604	x	LEAP CHEM: 2017	238.00	60.00
DWC0605	x	LEAP CHEM: 2017	238.00	60.00
DWC0606	x	LEAP CHEM: 2017	238.00	60.00
DWC0607	x	LEAP CHEM: 2017	238.00	60.00
DWC0704	x	LEAP CHEM: 2017	238.00	60.00
DWC0705	x	LEAP CHEM: 2017	238.00	60.00
DWC0706	x	LEAP CHEM: 2017	238.00	60.00
DWC0707	x	LEAP CHEM: 2017	238.00	60.00
DWC0804	x	LEAP CHEM: 2017	238.00	60.00
DWC0805	x	LEAP CHEM: 2017	238.00	60.00
DWC0806	x	LEAP CHEM: 2017	238.00	60.00
DWC0807	x	LEAP CHEM: 2017	238.00	60.00
DWC0903	x	LEAP CHEM: 2017	278.00	60.00
DWC0904	x	LEAP CHEM: 2017	278.00	60.00
DWC1004	x	LEAP CHEM: 2017	238.00	60.00
DWC1005	x	LEAP CHEM: 2017	238.00	60.00
DWC1006	x	LEAP CHEM: 2017	238.00	60.00
DWC1007	x	LEAP CHEM: 2017	238.00	60.00
DWC1104	x	LEAP CHEM: 2017	238.00	60.00
DWC1105	x	LEAP CHEM: 2017	238.00	60.00

DWC1106	x	LEAP CHEM: 2017	238.00	60.00
DWC1107	x	LEAP CHEM: 2017	238.00	60.00
DWC1203	x	LEAP CHEM: 2017	109.00	60.00
DWC1204	x	LEAP CHEM: 2017	109.00	60.00
DWC1205	x	LEAP CHEM: 2017	109.00	60.00
DWC1206	x	LEAP CHEM: 2017	109.00	60.00
DWC1502	x	LEAP CHEM: 2017	278.00	60.00
DWC1503	x	LEAP CHEM: 2017	278.00	60.00
DWC1603	x	LEAP CHEM: 2017	109.00	60.00
DWC1604	x	LEAP CHEM: 2017	109.00	60.00
DWC1605	x	LEAP CHEM: 2017	109.00	60.00
DWC1606	x	LEAP CHEM: 2017	109.00	60.00
DWC1701	x	LEAP CHEM: 2017	279.00	60.00
DWC1702	x	LEAP CHEM: 2017	279.00	60.00
DWM0109	x	LEAP MICRO: 2017	100.00	40.00
DWM0110	x	LEAP MICRO: 2017	100.00	40.00
DWM0111	x	LEAP MICRO: 2017	100.00	40.00
DWM0112	x	LEAP MICRO: 2017	100.00	40.00
DWM0113	x	LEAP MICRO: 2017	100.00	40.00
DWM0114	x	LEAP MICRO: 2017	100.00	40.00
DWM0115	x	LEAP MICRO: 2017	100.00	40.00
DWM0116	x	LEAP MICRO: 2017	100.00	40.00
DWM0117	x	LEAP MICRO: 2017	100.00	40.00
DWM0118	x	LEAP MICRO: 2017	100.00	40.00
DWM0119	x	LEAP MICRO: 2017	100.00	40.00
DWM0209	x	LEAP MICRO: 2017	100.00	40.00
DWM0210	x	LEAP MICRO: 2017	100.00	40.00
DWM0211	x	LEAP MICRO: 2017	100.00	40.00
DWM0212	x	LEAP MICRO: 2017	100.00	40.00
DWM0213	x	LEAP MICRO: 2017	100.00	40.00
DWM0214	x	LEAP MICRO: 2017	100.00	40.00
DWM0215	x	LEAP MICRO: 2017	100.00	40.00
DWM0216	x	LEAP MICRO: 2017	100.00	40.00
DWM0217	x	LEAP MICRO: 2017	100.00	40.00
DWM0218	x	LEAP MICRO: 2017	100.00	40.00
DWM0219	x	LEAP MICRO: 2017	100.00	40.00
DWM0309	x	LEAP MICRO: 2017	100.00	40.00
DWM0310	x	LEAP MICRO: 2017	100.00	40.00
DWM0311	x	LEAP MICRO: 2017	100.00	40.00
DWM0312	x	LEAP MICRO: 2017	100.00	40.00
DWM0313	x	LEAP MICRO: 2017	100.00	40.00
DWM0314	x	LEAP MICRO: 2017	100.00	40.00
DWM0315	x	LEAP MICRO: 2017	100.00	40.00
DWM0316	x	LEAP MICRO: 2017	100.00	40.00
DWM0317	x	LEAP MICRO: 2017	100.00	40.00
DWM0318	x	LEAP MICRO: 2017	100.00	40.00
DWM0319	x	LEAP MICRO: 2017	100.00	40.00
DWM0403	x	LEAP MICRO: 2017	100.00	40.00
DWM0404	x	LEAP MICRO: 2017	100.00	40.00

DWM0405	x	LEAP MICRO: 2017	100.00	40.00
DWM0406	x	LEAP MICRO: 2017	100.00	40.00
DWP0105	x	LEAP PARA: 2017	161.00	80.00
DWP0106	x	LEAP PARA: 2017	161.00	80.00
DWP0107	x	LEAP PARA: 2017	161.00	80.00
DWP0108	x	LEAP PARA: 2017	161.00	80.00
DWP0109	x	LEAP PARA: 2017	161.00	80.00
DWP0110	x	LEAP PARA: 2017	161.00	80.00
DWP0205	x	LEAP PARA: 2017	161.00	80.00
DWP0206	x	LEAP PARA: 2017	161.00	80.00
DWP0207	x	LEAP PARA: 2017	161.00	80.00
DWP0208	x	LEAP PARA: 2017	161.00	80.00
DWP0209	x	LEAP PARA: 2017	161.00	80.00
DWP0210	x	LEAP PARA: 2017	161.00	80.00
EMY34	x	LEAP EMY: 2017	854.00	854.00
EMY35	x	LEAP EMY: 2017	854.00	854.00
HS0104	x	LEAP High Salinity: 2017	224.00	105.00
HS0105	x	LEAP High Salinity: 2017	224.00	105.00
HS0204	x	LEAP High Salinity: 2017	224.00	105.00
HS0205	x	LEAP High Salinity: 2017	224.00	105.00
HS0304	x	LEAP High Salinity: 2017	266.00	154.00
HS0305	x	LEAP High Salinity: 2017	266.00	154.00
HS0404	x	LEAP High Salinity: 2017	224.00	105.00
HS0405	x	LEAP High Salinity: 2017	224.00	105.00
HS0504	x	LEAP High Salinity: 2017	224.00	105.00
HS0505	x	LEAP High Salinity: 2017	224.00	105.00
LG0103	x	LEAP LEGION: 2017	175.00	70.00
LG0104	x	LEAP LEGION: 2017	175.00	70.00
SL0104	x	LEAP SOIL: 2017	220.00	160.00
SW0103	x	LEAP SURFACE: 2017	123.00	60.00
SW0104	x	LEAP SURFACE: 2017	123.00	60.00
SW0203	x	LEAP SURFACE: 2017	123.00	60.00
SW0204	x	LEAP SURFACE: 2017	123.00	60.00
SW0303	x	LEAP SURFACE: 2017	238.00	60.00
SW0304	x	LEAP SURFACE: 2017	238.00	60.00
SW0403	x	LEAP SURFACE: 2017	270.00	60.00
SW0404	x	LEAP SURFACE: 2017	270.00	60.00
TOCHEM06	x	LEAP TOCHEM: 2017	698.00	698.00
WW0104	x	LEAP EFF: 2017	97.00	80.00
WW0105	x	LEAP EFF: 2017	97.00	80.00
WW0106	x	LEAP EFF: 2017	97.00	80.00
WW0107	x	LEAP EFF: 2017	97.00	80.00
WW0108	x	LEAP EFF: 2017	97.00	80.00
WW0109	x	LEAP EFF: 2017	97.00	80.00
WW0204	x	LEAP EFF: 2017	109.00	80.00
WW0205	x	LEAP EFF: 2017	109.00	80.00
WW0206	x	LEAP EFF: 2017	109.00	80.00
WW0207	x	LEAP EFF: 2017	109.00	80.00
WW0208	x	LEAP EFF: 2017	109.00	80.00

WW0209	x	LEAP EFF: 2017	109.00	80.00
WW0304	x	LEAP EFF: 2017	116.00	80.00
WW0305	x	LEAP EFF: 2017	116.00	80.00
WW0306	x	LEAP EFF: 2017	116.00	80.00
WW0307	x	LEAP EFF: 2017	116.00	80.00
WW0308	x	LEAP EFF: 2017	116.00	80.00
WW0309	x	LEAP EFF: 2017	116.00	80.00
WW0404	x	LEAP EFF: 2017	102.00	80.00
WW0405	x	LEAP EFF: 2017	102.00	80.00
WW0406	x	LEAP EFF: 2017	102.00	80.00
WW0407	x	LEAP EFF: 2017	102.00	80.00
WW0408	x	LEAP EFF: 2017	102.00	80.00
WW0409	x	LEAP EFF: 2017	102.00	80.00
WW0504	x	LEAP EFF: 2017	135.00	80.00
WW0505	x	LEAP EFF: 2017	135.00	80.00
WW0506	x	LEAP EFF: 2017	135.00	80.00
WW0507	x	LEAP EFF: 2017	135.00	80.00
WW0508	x	LEAP EFF: 2017	135.00	80.00
WW0509	x	LEAP EFF: 2017	135.00	80.00
WW0604	x	LEAP EFF: 2017	127.00	80.00
WW0605	x	LEAP EFF: 2017	127.00	80.00
WW0606	x	LEAP EFF: 2017	127.00	80.00
WW0607	x	LEAP EFF: 2017	127.00	80.00
WW0608	x	LEAP EFF: 2017	127.00	80.00
WW0609	x	LEAP EFF: 2017	127.00	80.00
WW0704	x	LEAP EFF: 2017	91.00	80.00
WW0705	x	LEAP EFF: 2017	91.00	80.00
WW0706	x	LEAP EFF: 2017	91.00	80.00
WW0707	x	LEAP EFF: 2017	91.00	80.00
WW0708	x	LEAP EFF: 2017	91.00	80.00
WW0709	x	LEAP EFF: 2017	91.00	80.00
WW0804	x	LEAP EFF: 2017	82.00	70.00
WW0805	x	LEAP EFF: 2017	82.00	70.00
WW0806	x	LEAP EFF: 2017	82.00	70.00
WW0807	x	LEAP EFF: 2017	82.00	70.00
WW0808	x	LEAP EFF: 2017	82.00	70.00
WW0809	x	LEAP EFF: 2017	82.00	70.00
WW0904	x	LEAP EFF: 2017	87.00	80.00
WW0905	x	LEAP EFF: 2017	87.00	80.00
WW0906	x	LEAP EFF: 2017	87.00	80.00
WW0907	x	LEAP EFF: 2017	87.00	80.00
WW0908	x	LEAP EFF: 2017	87.00	80.00
WW0909	x	LEAP EFF: 2017	87.00	80.00
WW1004	x	LEAP EFF: 2017	73.00	70.00
WW1005	x	LEAP EFF: 2017	73.00	70.00
WW1006	x	LEAP EFF: 2017	73.00	70.00
WW1007	x	LEAP EFF: 2017	73.00	70.00
WW1008	x	LEAP EFF: 2017	73.00	70.00
WW1009	x	LEAP EFF: 2017	73.00	70.00

WW1104	x	LEAP EFF: 2017	97.00	80.00
WW1105	x	LEAP EFF: 2017	97.00	80.00
WW1106	x	LEAP EFF: 2017	97.00	80.00
WW1107	x	LEAP EFF: 2017	97.00	80.00
WW1108	x	LEAP EFF: 2017	97.00	80.00
WW1109	x	LEAP EFF: 2017	97.00	80.00
WW1204	x	LEAP EFF: 2017	116.00	80.00
WW1205	x	LEAP EFF: 2017	116.00	80.00
WW1206	x	LEAP EFF: 2017	116.00	80.00
WW1207	x	LEAP EFF: 2017	116.00	80.00
WW1208	x	LEAP EFF: 2017	116.00	80.00
WW1209	x	LEAP EFF: 2017	116.00	80.00
WW1304	x	LEAP EFF: 2017	116.00	80.00
WW1305	x	LEAP EFF: 2017	116.00	80.00
WW1306	x	LEAP EFF: 2017	116.00	80.00
WW1307	x	LEAP EFF: 2017	116.00	80.00
WW1308	x	LEAP EFF: 2017	116.00	80.00
WW1309	x	LEAP EFF: 2017	116.00	80.00
WW1404	x	LEAP EFF: 2017	109.00	80.00
WW1405	x	LEAP EFF: 2017	109.00	80.00
WW1406	x	LEAP EFF: 2017	109.00	80.00
WW1407	x	LEAP EFF: 2017	109.00	80.00
WW1408	x	LEAP EFF: 2017	109.00	80.00
WW1409	x	LEAP EFF: 2017	109.00	80.00
WW1504	x	LEAP EFF: 2017	119.00	80.00
WW1505	x	LEAP EFF: 2017	119.00	80.00
WW1506	x	LEAP EFF: 2017	119.00	80.00
WW1507	x	LEAP EFF: 2017	119.00	80.00
WW1508	x	LEAP EFF: 2017	119.00	80.00
WW1509	x	LEAP EFF: 2017	119.00	80.00

(All prices additional German tax.)

Technical Information

Protocols

- Protocol part 1: Generic
  [English] [Espanol]
- Protocol part 5: Fapas Water & Environmental
  [English] [Espanol]

Other technical documents

- Example Report
- On line results submission instructions [English] [Espanol]
- Terms & Conditions

ISO Accreditation

The Fapas proficiency testing schemes are accredited by UKAS, Proficiency Testing Provider No. 0009.

- UKAS Accreditation Certificate

This accreditation confirms that we comply with the requirements of International Standard ISO/IEC 17043:2010.

In addition, Fera is accredited by other external bodies to other internationally recognised standards including ISO 9001:2008.

- Fera's Quality Documentation

Fapas (and other proficiency testing schemes) does not award accreditation. That is the responsibility of national accreditation bodies. A list of national and international accreditation bodies can be found at www.fasor.com/iso25. Results of proficiency testing are used by laboratory accreditation bodies as part of the process to assess the ability of laboratories to perform analytical tests for which accreditation is required.