

PROFICIENCY TESTING SCHEME

Annual Programme 2017



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PROFICIENCY TESTING PROGRAMME 2017

Interlaboratory comparison plays an important part in the adaptation, standardisation and validation of measurement techniques, as well as in the assessment of laboratories and the production of reference materials. Accredited laboratories also need it as proof of their analytical competence.

The testing laboratory for environmental, GMO and fuel analysis at the Environment Agency Austria (Umweltbundesamt GmbH) offers different interlaboratory comparisons which will take place during 2017. This will give you the opportunity to have your measurements verified by an external quality control programme.

The main facts of the process are:

- All interlaboratory comparisons are performed according to the specifications of OENORM EN ISO/IEC 17043.
- You will receive samples from us. These samples will be analysed in your laboratory.
- Your results will be submitted electronically by entering the test data online.
- DIN ISO 5725-2 and ISO 13528 will be used as the basis for the statistical analysis.
- The so-called “z score” will be used as assessment criterion for participant performance.
- You will receive a final report with the results of all participating laboratories in an aggregated and anonymised form. You will also receive a certificate of participation.

For any further questions please do not hesitate to contact us:

ringversuche@umweltbundesamt.at

HOW TO PARTICIPATE?

Choose the test you need. In our catalogue you will find proficiency tests performed either by the Umweltbundesamt GmbH or in cooperation with IFA-Tulln, a department of the University of Natural Resources and Life Sciences, Vienna and one of our partner laboratories.

If the registration form is submitted electronically (link on page 15) you will receive a confirmation e-mail containing all the relevant information.

Once you have paid the participation fee your registration will be completed and you will receive the samples as specified in our catalogue.

Here is a list of all proficiency tests which will be performed in 2017:

Programme	Matrices	Page
Metals and trace elements	Water	4
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Elements and arsenic species in rice	Rice	13
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BTEX & C5-C10	Ambient Air	14
CHC and BTEX & C5-C10	Ambient Air	15

As all proficiency tests in water (page 4 to 12) are handled by our partner IFA-Tulln (exempt from VAT) no VAT is charged.

For all other proficiency tests (waste, product, ambient air) we are obliged to charge VAT and reverse charge is applicable.

Description of Programme	
No M135	Metals and trace elements
List of substances:	Al, As, Pb, Cd, Cr, Fe, Cu, Mn, Ni, Hg, Se, U, Zn
Matrix:	Natural water
Samples:	2; 1 ground water sample, 1 surface water sample (partly fortified)
Sample dispatch:	07. February 2017
Closing date:	07. March 2017
Cost:	EUR 305,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Al, As, Pb, Cd, Cr, Fe, Cu, Mn, Ni, Hg, Se, U, Zn	275 ml	1	Plastic container	yes, with HNO ₃	yes

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Additional proficiency tests (synthetic samples) performed by our partner IFA-Tulln (registration www.ifatest.at)

		Sample dispatch	Closing date
No M136	Metals and trace elements	06. March 2017	31. March 2017
No M137	Metals and trace elements (additionally Ag, Ba Ce, Co, Li, Mo, Sb, Sn, V)	29. May 2017	23. June 2017
No M138	Metals and trace elements	04. September 2017	29. September 2017
No M139	Metals and trace elements	20. November 2017	15. December 2017

Description of Programme	
No N135	Nutrients/major ions
List of substances:	Total hardness, alkalinity, electrical conductivity (25°C), HCO_3^- , Ca^{2+} , Mg^{2+} , Na^+ , K^+ , NO_3^- , NO_2^- , NH_4^+ , Cl^- , SO_4^{2-} , o-PO_4^{3-} , B, DOC, total-P (dissolved, as PO_4^{3-}), total-N (N135 only)
Matrix:	Natural water
Samples:	2; 1 ground water sample, 1 surface water sample (partly fortified)
Sample dispatch:	07. February 2017
Closing date:	07. March 2017
Cost:	EUR 305,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Total hardness, alkalinity, electrical conductivity (25°C), HCO_3^- , Ca^{2+} , Mg^{2+} , Na^+ , K^+ , NO_3^- , NO_2^- , NH_4^+ , Cl^- , SO_4^{2-} , o-PO_4^{3-} , B, DOC, total-P (dissolved) and total-N (N135 only)	500 ml	2	Plastic container	no	yes

Recommended period to start the sample treatment: For NO_2^- , NH_4^+ , o-PO_4^{3-} we recommend analysis as quickly as possible after receipt of the samples.	$D_0 + 8$
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D_0 : Day the samples are sent to all participants (mostly Tuesdays)

Additional proficiency tests (synthetic samples) performed by our partner IFA-Tulln (registration www.ifatest.at)

		Sample dispatch	Closing date
No N136	Nutrients/major ions (additionally KMnO_4 -index (as O_2) acc. to EN ISO 8467 (H5) and total-Si (dissolved))	06. March 2017	31. March 2017
No N137	Nutrients/major ions	29. May 2017	23. June 2017
No N138	Nutrients/major ions (additionally easily liberatable cyanide acc. to DIN 38405-D13 (ISO 14403-2:2012;ISO 6703-2:1984))	04. September 2017	29. September 2017
No N139	Nutrients/major ions (additionally KMnO_4 -index (as O_2) acc. to EN ISO 8467 (H5))	20. November 2017	15. December 2017

Description of Programme	
No H97	Herbicides / pesticides
List of substances:	Atrazine, Desethylatrazine, Desisopropylatrazine, Simazine, Terbutylazine, Sebutlyazine, Desethylterbutylazine, Terbutryn, Desethyldeisopropylatrazine, 2,6-Dichlorobenzamide, Chloridazon, Desphenylchloridazon, Methyldephenylchloridazon, Diuron, Dimethylsulfamide (DMSA), Clopyralid, Metolachlor, Alachlor, Cyanazine, Prometryn, Propazine, Bromacil, Dimethenamide, Nicosulfurone
Matrix:	Natural water
Samples:	2; 1 ground water, 1 surface water
Sample dispatch:	28. February 2017
Closing date:	04. April 2017
Cost:	EUR 360,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Atrazine, Desethylatrazine, Desisopropylatrazine, Simazine, Terbutylazine, Sebutlyazine, Desethylterbutylazine, Terbutryn, Desethyldeisopropylatrazine, 2,6-Dichlorobenzamide, Chloridazon, Desphenylchloridazon, Methyldephenylchloridazon, Diuron, Dimethylsulfamide (DMSA), Clopyralid, Metolachlor, Alachlor, Cyanazine, Prometryn, Propazine, Bromacil, Dimethenamide, Nicosulfurone	300 ml or 1000 ml	2 2 or 4	Aluminium-container	no	yes

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No H98	Herbicides / pesticides
List of substances:	Bentazone, Metolachlor, Metolachlor ESA, Metolachlor OA, Alachlor, Alachlor ESA, Alachlor, OA, Metazachlor, Metazachlor ESA, Metazachlor OA, 2,4-D, Dicamba, Mecoprop, Dichlorprop, 2,4,5-Trichloro-phenoxyacetic acid, Glyphosate, AMPA, Glufosinate
Matrix:	Natural water
Samples:	2; 1 ground water, 1 surface water
Sample dispatch:	13. June 2017
Closing date:	18. July 2017
Cost:	EUR 360,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Bentazone, Metolachlor, Metolachlor ESA, Metolachlor OA, Alachlor, Alachlor ESA, Alachlor, OA, Metazachlor, Metazachlor ESA, Metazachlor OA, 2,4-D, Dicamba, Mecoprop, Dichlorprop, 2,4,5-Trichloro-phenoxyacetic acid, Glyphosate, AMPA, Glufosinate	300 ml or 1000 ml	2 2 or 4	Aluminium-container	no	yes

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No H99	Herbicides / pesticides
List of substances:	Aldrin, Chlordane, Dieldrin, Endrin, Endosulfan, Heptachlor, DDT, DDE, DDD, Lindane, Cyanazine, Prometryn, Propazine, Bromacil, Acetamiprid, Clothianidin, Dinotefurane, Imidacloprid, Nitenpyram, Thiacloprid, Thiamethoxam, Atrazine, Desethlyatrazine, Desisopropylatrazine
Matrix:	Natural water
Samples:	1 ground water, 1 synthetic water (partly fortified)
Sample dispatch:	17. October 2017
Closing date:	21. November 2017
Cost:	EUR 360,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Aldrin, Chlordane, Dieldrin, Endrin, Endosulfan, Heptachlor, DDT, DDE, DDD, Lindane, Cyanazine, Prometryn, Propazine, Bromacil, Acetamiprid, Clothianidin, Dinotefurane, Imidacloprid, Nitenpyram, Thiacloprid, Thiamethoxam, Atrazine, Desethlyatrazine, Desisopropylatrazine	300 ml or 1000 ml	2 2 or 4	Aluminium-container	no	yes

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No P18	Polycyclic aromatic hydrocarbons (PAH)
List of substances:	Naphthalene, Acenaphthene, Acenaphthylene, Fluorene, Anthracene, Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(ah)anthracene, Benzo(ghi)perylene, Indeno(1,2,3-cd)pyrene
Matrix:	Natural water
Samples:	2; 1 synthetic water (fortified), 1 ground water
Sample dispatch:	25. April 2017
Closing date:	23. May 2017
Cost:	EUR 360,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Naphthalene, Acenaphthene, Acenaphthylene, Fluorene, Anthracene, Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(ah)anthracene, Benzo(ghi)perylene, Indeno(1,2,3-cd)pyrene	1000 ml	2	Glass	no	yes

Recommended period to start the sample treatment:	D ₀ + 2
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No AZ4	Pharmaceuticals, industrial chemicals and artificial sweeteners
List of substances:	Diclofenac, Carbamazepine, Benzotriazole, Sulfamethoxazole, Acesulfame, Sucralose, Diazepam, Ibuprofen, Metoprolol, Sotalol, Cyclamate, Saccharine
Matrix:	Natural water
Samples:	2; 1 municipal waste water, 1 surface water
Sample dispatch:	09. May 2017
Closing date:	06. June 2017
Cost:	EUR 360,-

Technical Information					
Parameter to analyse	Bottles/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Diclofenac, Carbamazepine, Benzotriazole, Sulfamethoxazole, Acesulfame, Sucralose, Diazepam, Ibuprofen, Metoprolol, Sotalol, Cyclamate, Saccharine	1000 ml	2	Aluminium-container	no	yes

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No SP02	Sum parameters
List of sum parameters:	Hydrocarbon oil index and phenol index Optional: only hydrocarbon oil index possible
Matrix:	Natural water
Samples:	2; 1 synthetic water (fortified), 1 ground water
Sample dispatch:	30. May 2017
Closing date:	27. June 2017
Cost:	EUR 310,- (for hydrocarbon oil index and phenol index) EUR 190,- (for hydrocarbon oil index only)

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Hydrocarbon oil index	1000 ml	2	Glass	no	yes
Phenol index	1000 ml	2	Glass	yes, pH < 4 with H ₃ PO ₄	yes

Recommended period to start the sample treatment:	D ₀ + 2
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

In SP02, the extent of participation is selectable (hydrocarbon oil index and phenol index or hydrocarbon oil index only; selection of phenol index only is not possible). Evaluation of SP02 will be carried out in a joint report.

Description of Programme	
No CB03	Volatile halogenated hydrocarbons (VHH) and BTEX/MTBE
List of substances:	VHH: Bromodichloromethane, Dibromochloromethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Dichloromethane, Tetrachloroethene, Tetrachloromethane, Tribromomethane, 1,1,1-Trichloroethane, Trichloroethene, Trichloromethane; BTEX: Benzene, Toluene, Ethylbenzene, o-Xylene, sum of m-Xylene and p-Xylene; Methyl tertiary-butyl ether (MTBE)
Matrix:	Natural water
Samples:	2; 1 flowing surface water, 1 ground water (partly fortified)
Sample dispatch:	27. June 2017
Closing date:	25. July 2017
Cost:	EUR 590,- for VHH and BTEX/MTBE EUR 335,- for VHH or BTEX/MTBE

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
VHH: Bromodichloromethane, Dibromochloromethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Dichloromethane, Tetrachloroethene, Tetrachloromethane, Tribromomethane, 1,1,1-Trichloroethane, Trichloroethene, Trichloromethane; BTEX: Benzene, Toluene, Ethylbenzene, o-Xylene, sum of m-Xylene and p-Xylene; Methyl tertiary-butyl ether (MTBE)	600 ml	1	Aluminium-container	no	yes

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Additional proficiency tests (synthetic samples) performed by our partner IFA-Tulln (registration www.ifatest.at)

		Sample dispatch	Closing date
No C57	Volatile halogenated hydrocarbons (VHH)	03. April 2017	28. April 2017
No CB04	Volatile halogenated hydrocarbons (VHH) and/or BTEX/MTBE	02. October 2017	27. October 2017

In round CB03 and round CB04, the extent of participation is selectable (VHH, BTEX&MTBE or both). Evaluation of the round will be carried out in a joint report. The single price for VOC or BTEX/MTBE is EUR 335,-. The price for VHH and BTEX/MTBE is EUR 590,-.

Description of Programme	
No AB04	Waste acc to landfill directive (Austria) (total contents)
List of substances:	<u>solid:</u> Sb, As, Ba, Pb, Cd, Cr, Co, Cu, Mo, Ni, Hg, Se, Ag, V, Zn, Sn, TOC, hydrocarbon oil index, PAH (sum of 16 polycyclic aromatic hydrocarbons acc. to EPA), Benzo(a)pyrene
Matrix:	Waste
Samples:	1 solid sample
Sample dispatch:	19. September 2017
Closing date:	17. October 2017
Cost excl. VAT:	EUR 390,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
<u>Total content:</u> Sb, As, Ba, Pb, Cd, Cr, Co, Cu, Mo, Ni, Hg, Se, Ag, V, Zn, Sn, TOC, hydrocarbon oil index, sum of PAHs (EPA), Benzo(a)pyrene	Approx. 1kg	1	plastic container	no	no

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No S01	Elements and arsenic species in rice
List of substances:	Arsenic (total), As (III), As (V), inorganic Arsenic (sum of AsIII+AsV), Cd, Pb
Matrix:	rice
Samples:	1 solid sample
Sample dispatch:	07. November 2017
Closing date:	05. December 2017
Cost excl. VAT:	EUR 305,-

Technical Information					
Parameter to analyse	Bottle/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Arsenic (total), As (III), As (V), inorganic Arsenic (sum of AsIII+AsV), Cd, Pb	Approx. 25 g	1	plastic container	no	no

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No CL04	Chlorinated hydrocarbons (CHC)
List of substances:	Trichloromethane, 1,1,1-Trichloroethane, Trichloroethene, Tetrachloromethane, Tetrachloroethene, cis-1,2-Dichlorethene, trans-1,2-Dichlorethene
Matrix:	Ambient air
Samples:	1 (+ 1 unloaded tube)
Sample dispatch:	24. October 2017
Closing date:	21. November 2017
Cost excl. VAT:	EUR 390,-

Technical Information					
Parameter to analyse	Tubes/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
Trichloromethane, 1,1,1-Trichloroethane, Trichloroethene, Tetrachloromethane, Tetrachloroethene, cis-1,2-Dichlorethene, trans-1,2-Dichlorethene	-	1	activated charcoal tube	no	no

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Program	
No BL05	BTEX & C5-C10
List of substances:	BTEX: Benzene, Toluene, Ethylbenzene, sum of m-Xylene and p-Xylene, o-Xylene; C5-C10: n-Pentane, n-Hexane, n-Heptane, n-Octane, n-Nonane, n-Decane
Matrix:	Ambient air
Samples:	1 (+ 1 unloaded tube)
Sample dispatch:	24. October 2017
Closing date:	21. November 2017
Cost excl. VAT:	EUR 390,-

Technical Information					
Parameter to analyse	Tubes/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
BTEX: Benzene, Toluene, Ethyl-benzene, sum of m-Xylene and p-Xylene, o-Xylene; C5-C10: n-Pentane, n-Hexane, n-Heptane, n-Octane, n-Nonane, n-Decane	-	1	activated charcoal tube	no	no

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Description of Programme	
No CBL03	Chlorinated hydrocarbons (CHC) and BTEX & C5-C10
List of substances:	CHC: Trichloromethane, 1,1,1-Trichloroethane, Trichloroethene, Tetrachloromethane, Tetrachloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene; BTEX: Benzene, Toluene, Ethylbenzene, sum of m-Xylene and p-Xylene, o-Xylene; C5-C10: n-Pentane, n-Hexane, n-Heptane, n-Octane, n-Nonane, n-Decane
Matrix:	Ambient air
Samples:	2 (+ 1 unloaded tube)
Sample dispatch:	24. October 2017
Closing date:	21. November 2017
Cost excl. VAT:	EUR 680,-

Technical Information					
Parameter to analyse	Tubes/sample			Stabilisation	Refrigeration
	Volume	Number	Type		
CHC: Trichloromethane, 1,1,1-Trichloroethane, Trichloroethene, Tetrachloromethane, Tetrachloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene; BTEX: Benzene, Toluene, Ethylbenzene, sum of m-xylene and p-xylene, o-xylene; C5-C10: n-Pentane, n-Hexane, n-Heptane, n-Octane, n-Nonane, n-Decane	-	1	activated charcoal tube	no	no

Recommended period to start the sample treatment:	D ₀ + 8
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D₀: Day the samples are sent to all participants (mostly Tuesdays)

Electronic registration: www.umweltbundesamt.at/interlaboratory-comparison-test