



Document ISO/TC 147 N 845
Document ISO/TC 147/SC 2 N 1713
Document ISO/TC 147/SC 2/WG 74 N 11

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INFORMATION
for participation in the
Interlaboratory trial for validation of ISO 21675

Water quality — Determination of polyfluorinated alkyl substances (PFAS) in water — Method using solid phase extraction and liquid chromatography-tandem mass spectrometry (LC-MS/MS)

Dear colleagues,

Thank you very much for your interest to participate in the interlaboratory trial for the validation of the future ISO 21675. Today we would like to give you some detailed information on the design and the timetable of the final trial which will be carried out in November 2017.

We would like to mention again that our trial is a **validation exercise** and not a proficiency testing trial. Therefore, it is crucial that you adhere to the procedure described in ISO/CD 21675 revised. **The relevant document for the trial will be circulated later.**

Please find in the table below some further technical information for your kind attention and consideration when preparing your measurements.

Item	Information
<u>Number of planned participants:</u>	More than 15
<u>Relevant document:</u>	ISO/CD 21675 revised Water quality — Determination of polyfluorinated alkyl substances (PFAS) in water — Method using solid phase extraction and liquid chromatography-tandem mass spectrometry (LC-MS/MS)
<u>Deadline for expression of interest in participation</u>	30 September 2017
<u>Samples to be distributed:</u>	15 November 2017
<u>Deadline for submission of results:</u>	15 January 2018
<u>Participation fee:</u>	Free of charge
<u>Matrices:</u>	Sample A: Drinking water Sample B: Drinking water Sample C: River water

Item	Information
	<p><u>Sample C:</u> Sea water</p> <p><u>Sample E:</u> Waste water</p> <p><u>Sample F:</u> Waste water</p> <p>6 different samples in total</p>
<u>Preservation:</u>	Samples should be stored by refrigeration when shipped and received.
<u>Reference solutions and labelled stock solution:</u>	<p>All laboratories will be provided with reference solutions for calibration (Table 1 and Table 2 below) and labelled stock solution (internal standard substances). Spiking solution (internal standard substances) for water samples.</p> <p>Each mixture contains known amounts of certified reference substances dissolved in methanol.</p>
<u>Reporting of results:</u>	<p>The organiser of the trial will provide an electronic record sheet (EXCEL file).</p> <p>Results will be entered directly after measurement by the participants.</p> <p>Finally, participants are requested to give some “General Information” about the measurements.</p> <p>The file shall be e-mailed to the organizer.</p>
<u>Parameters to be determined:</u>	<p>See attached listing of parameters in Table 1 and Table 2.</p> <p>The measurement of all parameters is recommended but not obligatory for participation.</p> <p>Participants are requested to confirm procedural blank concentrations.</p>
<u>Replicates</u>	Three independent replicates per parameter are required
<u>Filtration:</u>	No filtration
<u>Concentration range(s):</u>	<p>Spiking concentrations will be in the calibration range as shown in ISO/CD 21675.</p> <p>All analytes will be present (spiked) in quantifiable concentrations.</p>
<u>Evaluation:</u>	according to ISO 5725-2
<u>Report/certificate:</u>	<p>The results of the trial will be reported in detail to all participants in an anonymous form. The participants can identify their own data via the laboratory code. Detailed tables and graphs will be delivered (mail with pdf files).</p>
<u>Date of delivery of the results to WG 74:</u>	To be defined

Table 1 — Analytes determinable to be included in the interlab trial on ISO 21675

Analyte	Formula	Abbreviation	CAS-RN ^a
Perfluoro- <i>n</i> -butanesulfonic acid	C ₄ HF ₉ O ₃ S	PFBS	375-73-5
Perfluoro- <i>n</i> -hexanesulfonic acid	C ₆ HF ₁₃ O ₃ S	PFHxS	355-46-4
Perfluoro- <i>n</i> -heptanesulfonic acid	C ₇ HF ₁₅ O ₃ S	PFHpS	375-92-8
Perfluoro- <i>n</i> -octanesulfonic acid	C ₈ HF ₁₇ O ₃ S	PFOS	1763-23-1
Perfluoro- <i>n</i> -decanesulfonic acid	C ₁₀ HF ₂₁ O ₃ S	PFDS	335-77-3
Perfluorooctanesulfonamide	C ₈ H ₂ F ₁₇ NO ₂ S	FOSA	754-91-6
<i>N</i> -methyl perfluorooctanesulfonamide	C ₉ H ₄ F ₁₇ NO ₂ S	<i>N</i> -MeFOSA	31506-32-8
<i>N</i> -ethyl perfluorooctanesulfonamide	C ₁₀ H ₆ F ₁₇ NO ₂ S	<i>N</i> -EtFOSA	4151-50-2
<i>N</i> -methyl perfluorooctanesulfonamidoacetic acid	C ₁₁ H ₆ F ₁₇ NO ₄ S	<i>N</i> -MeFOSAA	2355-31-9
<i>N</i> -ethyl perfluorooctanesulfonamidoacetic acid	C ₁₂ H ₈ F ₁₇ NO ₄ S	<i>N</i> -EtFOSAA	2991-50-6
Perfluoro- <i>n</i> -butanoic acid	C ₄ HF ₇ O ₂	PFBA	375-22-4
Perfluoro- <i>n</i> -pentanoic acid	C ₅ HF ₉ O ₂	PFPeA	2706-90-3
Perfluoro- <i>n</i> -hexanoic acid	C ₆ HF ₁₁ O ₂	PFHxA	307-24-4
Perfluoro- <i>n</i> -heptanoic acid	C ₇ HF ₁₃ O ₂	PFHpA	375-85-9
Perfluoro- <i>n</i> -octanoic acid	C ₈ HF ₁₅ O ₂	PFOA	335-67-1
Perfluoro- <i>n</i> -nonanoic acid	C ₉ HF ₁₇ O ₂	PFNA	375-95-1
Perfluoro- <i>n</i> -decanoic acid	C ₁₀ HF ₁₉ O ₂	PFDA	335-76-2
Perfluoro- <i>n</i> -undecanoic acid	C ₁₁ HF ₂₁ O ₂	PFUnDA	2058-94-8
Perfluoro- <i>n</i> -dodecanoic acid	C ₁₂ HF ₂₃ O ₂	PFDoDA	307-55-1
Perfluoro- <i>n</i> -tridecanoic acid	C ₁₃ HF ₂₅ O ₂	PFTTrDA	72629-94-8
Perfluoro- <i>n</i> -tetradecanoic acid	C ₁₄ HF ₂₇ O ₂	PFTeDA	376-06-7
Perfluoro- <i>n</i> -hexadecanoic acid	C ₁₆ HF ₃₁ O ₂	PFHxDA	67905-19-5
Perfluoro- <i>n</i> -octadecanoic acid	C ₁₈ HF ₃₅ O ₂	PFOcDA	16517-11-6
8:2 Fluorotelomer alcohol	C ₁₀ H ₅ F ₁₇ O	8:2 FTOH	678-39-7
8:2 Fluorotelomer unsaturated carboxylic acid	C ₁₀ H ₂ F ₁₆ O ₂	8:2 FTUCA	70887-84-2
8:2 Polyfluoroalkyl phosphate diester	C ₂₀ H ₉ F ₃₄ O ₄ P	8:2 diPAP	678-41-1
^a CAS: Chemical Abstract Services Registry Number			

Table 2 — Additional analytes determinable to be included in the interlab trial on ISO 21675

Analyte	Formula	Abbreviation	CAS-RN ^a
6:2 Fluorotelomer sulfonic acids	C ₈ H ₅ F ₁₃ O ₃ S	6:2 FTS	27619-97-2
8:2 Fluorotelomer sulfonic acids	C ₁₀ H ₅ F ₁₇ O ₃ S	8:2 FTS	39108-34-4
2,3,3,3-Tetrafluoro-2 (heptafluoropropoxy) propanoic acid	C ₈ ClF ₁₆ KO ₄ S	HFPO-DA (GenX)	26131-32-8
3H-Perfluoro-3-[(3-methoxy-propoxy) propanoic acid	C ₇ HF ₁₃ O ₄	ADONA	958445-44-8
2-(6-chloro-1,1,2,2,3,3,4,4,5,5,6,6-dodecafluorohexoxy)-1,1,2,2-tetrafluoroethanesulfonate	C ₈ HClF ₁₆ O ₄ S	9Cl-PF3ONS (isomer in F-53B)	73606-19-6

^a CAS: Chemical Abstract Services Registry Number

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Finally, we would like to express our warm thanks on behalf of the convenor and the members of the WG 74 "PFAS LC-MS/MS" for your kind willingness to help us to validate the future standard ISO 21675.

We wish you best success!

In the case of any questions, please don't hesitate to contact us by e-mail or phone.

Best regards

Sachi Taniyasu, Project Leader and
 Eric Reiner, Convenor SC 2/WG 74