

To: Laboratories participating in ProfTest Syke proficiency tests

Proficiency test VOC 12/2026 – VOC measurements in water and soil

ProfTest Syke will organize a proficiency test for the analysis of volatile organic compounds (VOC) in water and soil. The purpose of this proficiency test is to ensure the comparability and accuracy of the results of the participants. About 10 laboratories are expected to participate in this proficiency test. The measurands and samples of this proficiency test are included in the Organic chemistry scheme of the ProfTest Syke accreditation scope (finas.fi/sites/en).

Sample matrices

Synthetic sample, drinking water, natural water, and soil.

Timetable

Registration	8 September – 9 October 2026
Sample dispatch date	16 November 2026 (see Chapter 4 <i>Sample delivery</i>)
Analysis of the samples	at the latest on 20 November 2026
Reporting of the results	17 – 24 November 2026

Participation fee

The participation fee is **1 200 € (+ VAT)** including all measurements and samples. See detailed information in Chapter 9 *Participation fee*.



Riitta Koivikko,
Coordinator



Mirja Leivuori,
Group manager

ProfTest Syke is proficiency testing provider PT01
(EN ISO/IEC 17043:2010) accredited by FINAS
(Finnish Accreditation Service, finas.fi/sites/en).



ProfTest Syke guide for participants is available on ProfTest Syke website (syke.fi/proftest/en).

ProfTestWEB is the electronic client interface for ProfTest Syke proficiency tests wwwp5.ymparisto.fi/Labtest/en. Within the pages, instructions are available on every page. A short *Getting started* manual is available on ProfTestWEB front page.

Organizing the proficiency test

1 Organizer

Proftest Syke, Finnish Environment Institute Syke
Address: Mustialankatu 3, FI-00790 Helsinki, Finland
Email: proftest@syke.fi

Contact

Coordinator: Riitta Koivikko, tel. +358 295 251 750
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Analytical expert

Jari Nuutinen (Syke), tel. +358 295 251 467
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Subcontracting

In this proficiency test, the pre-analyses as well as homogeneity and stability analyses will be conducted by a subcontracting laboratory. More information about the subcontracting will be given in the sample letter.

2 Sample and measurands

The sample matrices in this proficiency test are: synthetic sample, drinking water, natural water, and soil. Samples, measurands, concentration ranges, and sample preservations are presented Appendix 1.
Note! Check the sample volumes and, in case needed, order additional samples.

3 Registration

The registration for this proficiency test is open until **9 October 2026**.

Registration is done via the electronic client interface, ProftestWEB: wwwp5.ymparisto.fi/Labtest/en. If there are problems when using ProftestWEB or you need username and password, please contact proftest@syke.fi.

4 Sample delivery

The sample dispatch day for national participants is **16 November 2026**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

The initial weight of the synthetic sample A1V and soil sample S4V are delivered with the samples, together with the criterion for the accepted change of the weight. The shipment also includes an extra sample “**Temperature**” (water) to monitor the temperature inside the package. **The participants shall reweight the samples A1V and S4V and measure the temperature** of the “Temperature” sample **immediately at the package arrival**.

If the sample package does not arrive **at the latest on 17 November 2026**, or there are missing and/or broken sample containers, please contact the provider immediately (proftest@syke.fi). More contact details in Chapter 1 *Organizer*.

5 Sample storage and analysis

The samples are stored at 4 °C and stabilized at the room temperature before measurements. Samples are analysed within the laboratory where they are delivered to, and analyses are conducted according to the participant's normal procedures.

The analyses are performed as duplicate determinations and two results are reported.

The analyses are to be done at the latest on 20 November 2026.

6 Reporting the results

The participant results are reported to ProfTest Syke at the latest on **24 November 2026**.

ProfTest Syke delivers the preliminary results report to the participants latest in the week 49 (30 November – 4 December 2026). The final report will be published at the latest in April 2027 and it is then available on ProfTestWEB and on ProfTest Syke website (syke.fi/proftest/en). The availability of the report will be informed to the participants.

7 Assigned values and evaluation of the results

Either the calculated concentration (synthetic samples) or the robust mean, the median, or the mean of the results reported by the participants will be used as the assigned value for the measurand. The calculation of the assigned value is based on the results reported according to the given guidelines. The evaluation of the results will be based on z scores. The preliminary standard deviation for proficiency assessment will be given in the cover letter of the sample. In special cases also E_n or D% scores can be used for the performance evaluation.

8 Confidentiality

The results of participants are treated anonymously. The participants' results and the preliminary results report of the round are confidential and should not be shared with third parties during the implementation of the round.

9 Participation fee

The participation fee is **1 200 € (+ VAT)** including all measurements and samples. The basic fee is **500 € (+ VAT)** and the fees for each sample and measurand are as follows:

Sample	Price, € (+ VAT)
Synthetic sample A1V	170
Drinking water D2V	170
Natural water N3V	170
Soil sample S4V	190

The invoice will be sent after the delivery of the preliminary results report. If the participant orders additional samples, they are charged according to the prices listed above.

Note! In Finland VAT is 25,5 %. Further, if the invoicing address or any other additional information has to be corrected after the invoicing, the extra handling cost will be charged. The participant is also responsible for possible custom clearance or customs fee of the sample.

10 Appendices

Appendix 1 Samples, measurands, concentration ranges, and preservations.

Appendix 1. Samples, measurands, concentration ranges and preservations.

Table 1. Samples, concentration ranges, and sample preservations. For measurands, see table 2.

Sample matrix / preservation	Sample ¹⁾	Sample volume / Concentration range
Synthetic sample, <i>in methanol</i>	A1V	circa 4 ml / < 15 µg/ml per compound
Drinking water	D2V	250 ml / < 100 µg/l per compound
Natural water	N3V	250 ml / < 100 µg/l per compound
Soil: <i>Sample is wetted with water (4 ml) and preserved with methanol (21 ml)</i>	S4V	20 g / > 0.1 mg/kg ²⁾ per compound

¹⁾ Sample codes (first letter showing sample matrix):

A = Synthetic sample

D = Drinking water

N = Natural water

S = Soil

²⁾ The amount of dry soil is 20 g (4 ml water and 21 ml methanol are added). Results are to be reported as dry weight basis.

Table 2. Measurands. Note! Not all measurands are necessarily present in all samples.

Oxygenates	ETBE, Ethyl- <i>tert</i> -butylether MTBE, Methyl- <i>tert</i> -butylether TAME, <i>tert</i> -Amyl methyl ether TBA, <i>tert</i> -Butanol DIPE, Diisopropyl ether
Aromatic VOC compounds (BTEXS)	Benzene Ethylbenzene m/p-Xylene o-Xylene Styrene Toluene
Chlorinated VOC compounds	1,1-Dichloroethene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,2,4-Trichlorobenzene 1,4-Dichlorobenzene Bromodichloromethane Bromoform Dibromochloromethane <i>cis</i> -1,2-Dichloroethene Dichloromethane Tetrachloroethene Tetrachloromethane <i>trans</i> -1,2-Dichloroethene Trichloroethene Trichloromethane (Chloroform) Vinyl chloride