

To: Laboratories participating in ProfTest Syke proficiency tests

Proficiency test ORG 13/2024 – PAH and PCB compounds and oil hydrocarbons in soil

ProfTest Syke will organize a proficiency test (PT) for the analysis of PAH and PCB compounds and oil hydrocarbons in contaminated 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 organizing of this proficiency test is included in the accreditation scope (finas.fi/sites/en) for PCB compounds and oil hydrocarbons.

Sample matrices

Synthetic sample and soil.

Timetable

Registration	4 September – 4 October 2024
Sample dispatch date (national participants)	5 November 2024 (see Chapter 4 <i>Sample delivery</i>)
Analysis of the samples	at the latest on 25 November 2024
Reporting of the results	6 November – 28 November 2024

Participation fee

The participation fee is **1060 € (+ 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).



Organizing the proficiency test

1 Organizer

Proftest Syke, Finnish Environment Institute Syke
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Email: proftest@syke.fi

Contact

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

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Subcontracting

KVVY Tutkimus Oy (T064, finas.fi/sites/en):
Sample pre-testing, homogeneity, and preservation testing,
as well as the necessary chemical analytics

2 Sample and measurands

The sample matrices in this proficiency test are: synthetic and soil samples. Samples, measurands, concentration ranges and sample preservations are presented in Appendix 1.

Note! Check the samples volumes and, in case needed, order additional samples.

3 Registration

The registration for this proficiency test is open until **4 October 2024**.

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 **5 November 2024**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

The initial weight of the samples (A1PAH, A2PCB, A3OIL) are delivered with the samples, together with the criterion for the accepted change of the weight. Additionally, the transportation temperature of the package will be controlled with the “Temperature” sample. **The participant shall reweight** the samples A1PAH, A2PCB, and A3OIL and **measure the temperature** of the “Temperature” sample **immediately after receiving the samples**.

If the sample package does not arrive **at the latest on 7 November 2024**, or there are missing and/or broken sample containers, please report those with the sample arrival form.

You can also contact the provider (profest@syke.fi). More contact details in Chapter 1 *Organizer*.

5 Sample storage and analysis

The soil sample (M4ORG) is stored at room temperature, other samples are stored at 4 °C. 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.

Timetable for sample analysis is on the first page of this letter.

6 Reporting the results

The participant results are reported to Profest Syke at the latest on **28 November 2024**.

Profest Syke delivers the preliminary result report to the participants latest in the week 50 (9 – 13 December 2024). The final report will be published at the latest in April 2025 and it is then available on ProfestWEB and on Profest Syke website (syke.fi/profest/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. Also, when needed, the result of the expert laboratory can be used as the assigned value. 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.

9 Participation fee

The participation fee is **1060 € (+ VAT)** including all measurements and samples. The basic fee is **490 € (+ VAT)** and the fees for each sample and measurand are as follows:

Sample	Price, € (+ VAT)
Synthetic sample (A1PAH), PAH compounds	130
Synthetic sample (A2PCB), PCB compounds	130
Synthetic sample (A3OIL), oil hydrocarbons (>C10-C21; >C21-C40; >C10-C40)	130
Soil (M4ORG), PAH and PCB compounds and oil hydrocarbons (>C10-C40)	180

The invoice will be sent after the delivery of the preliminary result 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.

Sample matrix/ Preservation	Measurands	Sample code	Sample volume/ Concentration range
Synthetic, PAH compounds in isooctane	Acenaphthene Acenaphthylene Anthracene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[ghi]perylene Benzo[k]fluoranthene Chrysene Dibenzo[a,h]anthracene Fluoranthene Fluorene Indeno[1,2,3-cd]pyrene Naphthalene Phenanthrene Pyrene Σ PAH ₁₆	A1PAH	4 ml / PAH < 1000 ng/ml Σ PAH ₁₆ < 3000 ng/ml
Synthetic, PCB compounds in isooctane	PCB-28 PCB-52 PCB-101 PCB-118 PCB-138 PCB-153 PCB-180 Σ PCB ₇	A2PCB	4 ml / PCB < 50 ng/ml Σ PCB ₇ < 250 ng/ml
Synthetic, OIL compounds in hexane	>C10 – C21 >C21 – C40 >C10 – C40	A3OIL	4 ml / 1 – 10 mg/ml
Contaminated soil	PAH (16 compounds and their sum) PCB (7 compounds and their sum) >C10-C21, >C21-C40, >C10-C40	M4ORG	50 g / PAH and PCB: < 800 µg/kg Σ PAH ₁₆ and Σ PCB ₇ : < 4000 µg/kg OIL: < 10000 mg/kg