

To: Laboratories participating in ProfTest Syke proficiency tests

## Proficiency test LT 07/2024 Leaching behavior test for solid waste material: One stage batch leaching test

ProfTest Syke will organize a proficiency test (PT) for the laboratories conducting leaching tests for solid waste material in co-operation with KVVY Tutkimus Oy. In this PT the results of the one stage batch leaching test (EN 12457-2) are compared and evaluated. Following determinations are done from the leaching test eluates: metals (As, Ba, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, V, Zn), Cl<sup>-</sup>, F<sup>-</sup>, SO<sub>4</sub><sup>2-</sup>, DOC, pH, conductivity, and TDS.

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](https://www.finas.fi/sites/en)).

### Sample matrices

Fly ash from the combustion of coal, peat, and wood mixture material.

### Timetable

Registration	<b>27 March – 26 April 2024</b>
Sample dispatch date (national participants)	<b>28 May 2024</b> (see Chapter 4 <i>Sample delivery</i> )
Leaching test	at the latest by <b>26 July 2024</b>
Reporting the participant results	<b>29 May – 15 August 2024</b>

### Participation fee

The participation fee is **700 €** (+ VAT). 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, [www.finas.fi/sites/en](https://www.finas.fi/sites/en)).



## Organizing the proficiency test

### 1 Organizer

ProfTest Syke, Finnish Environment Institute (Syke)  
Address: Mustialankatu 3, FI-00790 Helsinki, Finland  
Email: [profTest@syke.fi](mailto:profTest@syke.fi)

#### Contact

Coordinator: Riitta Koivikko, tel. +358 295 251 750  
Substitute for coordinator: Mirja Leivuori, tel. +358 295 251 366  
Email: [firstname.lastname@syke.fi](mailto:firstname.lastname@syke.fi)

#### Cooperation partner

KVVY Tutkimus Oy (T064, [finas.fi/sites/en](https://finas.fi/sites/en))

#### Analytical experts

One stage batch leaching test Marika Kaasalainen (Regional State Administrative Agency for Western and Inland Finland, AVI)

Email: [firstname.lastname@avi.com](mailto:firstname.lastname@avi.com)

Anions (IC), DOC, pH and conductivity Virva Kinnunen (KVVY Tutkimus Oy)

Email: [firstname.lastname@kvvy.fi](mailto:firstname.lastname@kvvy.fi)

Metals Timo Sara-Aho (Syke)

Email: [firstname.lastname@syke.fi](mailto:firstname.lastname@syke.fi)

#### Subcontracting

KVVY Tutkimus Oy: Sample material pretesting and homogeneity testing and the needed chemical and physico-chemical analysis, and analytical expertise.

AVI: Analytical expertise

## 2 Sample and measurands

The method used in this proficiency test is one stage batch leaching test (L/S 10, EN 12457-2). The sample material is fly ash from the combustion of coal, peat, and wood mixture material. Particle size is < 4 mm according to the leaching test standard. One sample will be delivered to the participants (about 200 g per sample). Following determinations are done from the leaching test eluates: metals (As, Ba, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, V, Zn), Cl<sup>-</sup>, SO<sub>4</sub><sup>2-</sup>, F<sup>-</sup>, DOC, pH, conductivity, and TDS.

## 3 Registration

The registration for this proficiency test is open until **26 April 2024**.

Registration is done via the electronic client interface, ProfTestWEB: [www.p5.ymparisto.fi/Labtest/en](https://www.p5.ymparisto.fi/Labtest/en). If there are problems when using ProfTestWEB or you need username and password, please contact [profTest@syke.fi](mailto:profTest@syke.fi).

## 4 Sample delivery

The sample dispatch day for national participants is **28 May 2024**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 4 June 2024**, or there are missing and/or broken sample containers, please contact the provider immediately ([profctest@syke.fi](mailto:profctest@syke.fi)). More contact details in Chapter 1 *Organizer*.

## 5 Sample storage and analysis

The sample should be kept at room temperature in a dry place and protected from light. Sample is analysed within the laboratory where it is delivered to and analyses are conducted according to the participant's normal procedures.

**The one stage batch leaching test should be done latest by 26 July 2024.** One results per measurand is reported for the evaluation. Replicated analysis should not be done more than according to the method of analysis or the instructions within the sample letter.

## 6 Reporting the results

The participant results are reported to Profctest Syke at the latest on **15 August 2024**.

In the waste material used for the PT the concentration of some measurands could be below the limit of quantification. More detailed instructions for the result reporting are given in the cover letter of the samples. An electronic questionnaire (Webropol) of the analytical details according to the guidelines of the EN 16192:2011 shall be reported to Profctest Syke together with the results.

The preliminary results report will be distributed to the participants via ProfctestWEB at the latest in the week 35 (26 – 30 August 2024). The availability of the report will be informed to the participants. The final report will be published at the latest in December 2024 and it is then available on ProfctestWEB and on Profctest Syke website ([syke.fi/profctest/en](http://syke.fi/profctest/en)). The availability of the report will be informed to the participants.

## 7 Assigned values and evaluation of the results

Either 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 the result of the expert laboratory can be used as the assigned value when needed. 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 **700 € (+ VAT)**. If the participant orders additional samples, they are charged **175 €** each.

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 24 %. 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.