

To: Laboratories participating in ProfTest Syke proficiency tests

Proficiency test LT 07/2023 Leaching behavior test for solid waste material: Two 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 two stage batch leaching test (EN 12457-3) 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⁻, SO₄²⁻, F⁻, 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 15 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).

Sample matrices

Fly ash from recycled fuel and wood.

Timetable


Registration	28 March – 27 April 2023
Sample dispatch date (national participants)	30 May 2023 (see Chapter 4 <i>Sample delivery</i>)
Leaching test	at the latest by 28 July 2023
Reporting the participant results	31 May – 14 August 2023

Participation fee

The participation fee is **650 €** (+ VAT). See detailed information in Chapter 9 *Participation fee*.



Riitta Koivikko,
Coordinator



Mirja Leivuori,
Head of Unit

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



Organizing the proficiency test

1 Organizer

Proftest Syke, Finnish Environment Institute Syke, Research infrastructure
Address: Mustialankatu 3, FI-00790 Helsinki, Finland
Email: 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

Cooperation partner

KVVY Tutkimus Oy (T064, finas.fi/sites/en)

Analytical experts

Two stage batch leaching test	Marika Kaasalainen (AFRY Finland Oy)
Email:	firstname.lastname@afry.com
pH and conductivity	Raija Ivalo (KVVY Tutkimus Oy)
Anions (IC), DOC	Suvi Pöyhönen (KVVY Tutkimus Oy)
Email:	firstname.lastname@kvvy.fi
Metals	Timo Sara-Aho (Syke)
Email:	firstname.lastname@syke.fi

Subcontracting

KVVY Tutkimus Oy: Sample material homogenization and dividing into subsamples, leaching test (pretest, homogeneity) and the needed chemical and physico-chemical analysis.

2 Sample and measurands

The method used in this proficiency test is two stage batch leaching test (L/S 2 and L/S 10, EN 12457-3). The sample is fly ash from recycled fuel and wood. Particle size is < 4 mm according to the leaching test standard. One sample will be delivered to the participants (about 250 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⁻, SO₄²⁻, F⁻, DOC, pH, conductivity, and TDS.

3 Registration

The registration for this proficiency test is open until **27 April 2023**.

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 **30 May 2023**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 2 June 2023**, 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 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 two stage batch leaching test should be done latest by 28 July 2023. 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 Proftest Syke at the latest on **14 August 2023**.

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 12457-3 shall be reported to Proftest Syke together with the results.

Proftest Syke delivers the preliminary result report to the participants latest in the week 34 (21 – 25 August 2023). The final report will be published at the latest in December 2023 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 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 **650 € (+ VAT)**. If the participant orders additional samples, they are charged **150 €** 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.