

To: Laboratories participating in ProfTest Syke proficiency tests

Proficiency test RAD 05/2025 – Radon measurements in ground water

ProfTest Syke will organize a proficiency test (PT) for analysis of radon in ground water in co-operation with Radiation and Nuclear Safety Authority in Finland (STUK). Laboratories conducting radon measurements from drinking water are welcome to participate in this PT.


The radon ²²²Rn measurements are required in Drinking Water Directive (2013/51/EURATOM). Laboratories that provide these services may prove their competence by taking part in the PT. About 25 laboratories are expected to participate in this PT. The measurand and samples of this proficiency test are included in the Water chemistry scheme of the ProfTest Syke accreditation scope (finas.fi/sites/en).

Timetable


Registration	10 March 2025 – 11 April 2025
Sample dispatch date	6 May 2025 (see Chapter 4 <i>Sample delivery</i>)
Analysis of the samples	at latest on 9 May 2025
Reporting of the results	7 May – 12 May 2025

Participation fee

The participation fee is **650 €** (+ VAT) including all measurements and samples.
See detailed information in Chapter 9 *Participation fee*.



Päivi Grönroos,
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
Address: Mustialankatu 3, FI-00790 Helsinki, Finland
Email: profctest@syke.fi

Contact

Coordinator: Päivi Grönroos, tel. +358 295 252 174
Substitute for coordinator: Mirja Leivuori, tel. ++358 295 251 366
Email: firstname.lastname@syke.fi

Analytical expert

Maria Kaipainen
Radiation and Nuclear Safety Authority in Finland, STUK (T167, finas.fi/sites/en)
Email: firstname.lastname@stuk.fi

2 Samples and measurand

In this proficiency test each participant will receive two ground water samples (i.e. one sample set). The radon concentrations (^{222}Rn) in the samples are less than 2000 Bq/l.

3 Registration

The registration for this proficiency test is open until **11 April 2025**.

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 profctest@syke.fi.

With one order (sample code GR on the Order form), one sample set including both two samples are delivered to the participant. When placing an order for this PT, the sample volume required by the participant's method of analysis is to be selected (Preservation column on the Order form, e.g., Liquid scintillation count V=250, Gamma spectrometry V=1000 ml, Other method V=250 ml or 1000 ml). If samples are needed for more than one analysis method, separate orders must be placed (see Chapter 9 Participation fee).

4 Sample delivery

The sample dispatch day for national participants is **6 May 2025**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 7 May 2025**, or there are missing and/or broken sample containers, please contact the provider immediately (profctest@syke.fi). More contact details in Chapter 1 *Organizer*.

5 Sample storage and analysis

The samples are stored at 4 °C. Samples are analyzed within the laboratory where they are delivered to, and analyses are conducted according to the participant's normal procedures. Replicated analysis should not be done more than according to the method of analysis or the instructions within the sample letter.

The analysis should be performed **at the latest on 9 May 2025**.

6 Reporting the results

The participant results are reported to ProfTest Syke at the latest on **12 May 2025**.

ProfTest Syke delivers the preliminary results report to the participants latest in the week 21 (19 – 23 May 2025). The final report will be published at the latest in September 2025 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. 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 **650 € (+ VAT)** including one set of samples. The basic fee is **420 € (+ VAT)** and the fee for sample set is **230 € (+ VAT)**. The sample set contains both samples (GRn1 and GRn2) in a sample volume (250 ml or 1000 ml, Table 1). The sample volume is selected when placing the order (see Chapter 3 *Registration*).

If the participant orders additional sample sets for the same method of analysis or sample set(s) for various methods of analysis, 230 € (+ VAT) per additional sample set will be added to the participation fee. In the latter situation, separate orders must be placed, and the organizer will correct the total price upon acceptance of the order (Table 1).

If the participant wants to report additional results, the organizer (proftest@syke.fi) should be contacted. Needed additional result forms are created by the organizer. An additional 40 % of the basic fee is added to the price as results processing costs, i.e., 168 € (+ VAT) /additional result set. The organizer will correct the total price upon acceptance of the order (Table 1).

Table 1. Examples of the participation fees with the different order options.

Participant order, examples	Participation fee (+ VAT)
One sample set (sample volume 250 ml or 1000 ml), one set of results reported	650 €
Two sample set (same or different sample volumes), one set of results reported	650 € + 230 € = 880 €
Two sample set (same or different sample volumes) two sets of results reported	650 € + 230 € + 168 € = 1048 €

The invoice will be sent after the delivery of the preliminary results report.

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 samples.