

TO: Laboratories providing measurements of radon

PROFICIENCY TEST RAD 06/2021 – Radon 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 by liquid scintillation counting or by gamma spectrometry can participate in this PT.

The radon ^{222}Rn 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 30 laboratories are expected to participate in this PT. The organizing of this test is included in the accreditation scope (www.finas.fi/sites/en).

TIMETABLE

Registration	15 March 2021 – 16 April 2021
Sample dispatch date (national participants)	18 May 2021 (see Chapter 4 <i>Sample delivery</i>)
Analyses of the samples	at the latest on 21 May 2021
Reporting the participant results	18 May 2021 – 24 May 2021

PARTICIPATION FEE

The participation fee is **570 €** (+ VAT), when ordering one sample set.
See detailed information in Chapter 9 *Participation fee*.



Mirja Leivuori,
Head of Unit, coordinator



Päivi Grönroos,
Substitute for coordinator

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, Laboratory Centre

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Contact

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Analytical experts, co-operation partner and expert laboratory

Tarja Heikkinen and Reko Simola

Radiation and Nuclear Safety Authority in Finland, STUK (T167, www.finas.fi/sites/en)

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2 SAMPLES AND MEASURANDS

In this proficiency test each participant will receive two ground water samples (i.e. sample set). In one the radon concentration is high (GRn1; 1000–5000 Bq/l) and the other the radon concentration is lower (GRn2; <1000 Bq/l).

3 REGISTRATION

The registration for this proficiency test is open until 16 April 2021.

Registration is done via the electronic client interface, ProftestWEB: <https://wwwp5.ymparisto.fi/Labtest/en>.

If there are problems when using ProftestWEB or you need username and password, please contact proftest@syke.fi.

With one order (sample code **GR** on the Order form), one sample set including two samples bare delivered to the participant for either liquid scintillation counting or gamma spectrometric determination. When placing an order for this PT, the participant is to select their measuring procedure (*Preservation* column on the Order form), which defines the volume of the delivered samples (Liquid scintillation count, V=250 ml or Gamma spectrometry, V=1000 ml). If samples are needed for both methods of analysis, two separate orders have to be placed (see Chapter 9 *Participation fee*).

4 SAMPLE DELIVERY

The sample dispatch day for national participants is **18 May 2021**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the samples do not arrive **at the latest on 19 May 2021**, or there are missing and/or broken sample containers, please contact the provider immediately (proftest@syke.fi). More contact details in Chapter 1 *Organizer*.

Shipments abroad also contain a temperature logger for control of temperature during transport. Participants return the temperature logger to the organizer according to instructions in the sample letter.

5 SAMPLE STORAGE AND ANALYSIS

The 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. 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 21 May 2021**.

6 REPORTING THE RESULTS

The participant results are reported to ProfTest SYKE **at the latest on 24 May 2021**.

ProfTest SYKE delivers the preliminary result report to the participants at the latest in the week 23 (7 – 11 June 2021). The final report will be published at the latest in September 2021 and it is then available on ProfTestWEB and on ProfTest SYKE website (www.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. 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 samples. 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 **570 € (+ VAT)** including one set of samples. The basic fee is **370 € (+ VAT)** and the fee for sample set is **200 € (+ VAT)**. The sample set contains both samples (GRn1 and GRn2) in a sample volume (250 ml or 1000 ml, Table 1) according to the selected analytical method. The analytical method (and 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 both methods of analysis, 200 € (+ 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. 148 € (+ 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	570 €
Two sample set (same or different sample volumes), one set of results reported	570 € + 200 € = 770 €
Two sample set (same or different sample volumes) two sets of results reported	570 € + 200 € + 148 € = 918 €

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 samples.