10 June 2026

To: Laboratories participating in Proftest Syke proficiency tests

Proficiency test DW 09/2026 – Drinking water analyses

Proftest Syke will organise a proficiency test (PT) for the analysis of COD_{Mn}, Fe, Mn, chloride, fluoride, sulphate, pH, conductivity 25 °C, NH_4^+, NO_2^-, NO_3^-, Ca, K, Mg, Na, and hardness in drinking water and in raw water.

The purpose of this proficiency test is to ensure the comparability and accuracy of the results of the participants. About 40 laboratories are expected to participate in this proficiency test. The measurands and samples of this proficiency test are included in the Water chemistry scheme of the Proftest Syke accreditation scope (finas.fi/sites/en).

Sample matrices

Synthetic sample, drinking water, and raw water.

Timetable

Registration	**10 June – 12 August 2026**	
Sample dispatch date	8 September 2026 (see Chapter 4 *Sample delivery)*	
Analysis of the samples	COD_{Mn}, pH, conductivity 25 °C	10 September 2026
	NO_2^-, NO_3^-, NH_4^+	at the latest on 11 September 2026
	Ca, K, Mg, Na, hardness	at the latest on 21 September 2026
	Cl^-, F^-, SO_4^-	at the latest on 21 September 2026
	Fe, Mn	at the latest on 21 September 2026
Reporting of the results	**8 – 22 September 2026**	

Participation fee

The participation fee is **1059 €** (+ 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 (SFS-EN ISO/IEC 17043:2023) accredited by FINAS (Finnish Accreditation Service, finas.fi/sites/en).

Proftest Syke guide for participants is available on Proftest Syke website (syke.fi/proftest/en).

ProftestWEB is the electronic client interface for Proftest Syke proficiency tests wwwp5.ymparisto.fi/Labtest/en. Within the pages, instructions are available on every page. A short *Getting started* manual is available on ProftestWEB front page.

Organising the proficiency test

1 Organiser

Proftest Syke, Finnish Environment Institute Syke
Address: Mustialankatu 3, FI-00790 Helsinki, Finland
Email: proftest@syke.fi

Contact

Coordinator: Päivi Grönroos, tel. +358 295 252 174
Substitute for coordinator: Riitta Koivikko, tel. +358 295 251 750
Email: firstname.lastname@syke.fi

Analytical experts

COD_{Mn}, Cl^-, F^-, SO_4^{2-}, pH, conductivity 25 °C, N compounds	Mika Sarkkinen (Syke), tel. +358 295 251 620
Ca, K, Mg, Na, hardness, Fe, Mn	Timo Sara-Aho (Syke), tel. +358 295 251 618

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Expert laboratory Finnish Environment Institute, Oulu and Helsinki (T003, finas.fi/sites/en)

2 Sample and measurands

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

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

Note! The Fe/Mn samples can be ordered as preserved in sulfuric acid or nitric acid. Please choose the right type of preservation when placing your order.

3 Registration

The registration for this proficiency test is open until **12 August 2026**.

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 **8 September 2026**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 9 September 2026**, or there are missing and/or broken sample containers, please contact the provider immediately (proftest@syke.fi). More contact details in Chapter 1 *Organiser*.

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.

For the samples and measurements, replicated analyses should not be performed more than what is required by the laboratory's normal practice.

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

6 Reporting the results

The participant results are reported to Proftest Syke at the latest on **22 September 2026**.

Note! N compounds are reported as NH_4^+, NO_2^- and NO_3^- (not as nitrogen).

Proftest Syke delivers the preliminary result report to the participants latest in the week 41 (5 – 9 October 2026). The final report will be published at the latest in January 2027 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. The participants' results and the preliminary results report of the round are confidential and should not be shared with third parties during the implementation of the round.

9 Participation fee

The participation fee is **1059 €** (+ VAT) including all measurements and samples. The basic fee is **465 €** (+ VAT) and the fees for each sample and measurand are as follows:

Ca, K, Mg, Na, hardness	50 €/ sample	(3 samples)
Cl^-, SO_4^{2-}	25 €/ sample	(3 samples)
COD_{Mn}	25 €/ sample	(3 samples)
F^-	18 €/ sample	(3 samples)
Fe, Mn	25 €/ sample	(3 samples)
N compounds	35 €/ sample	(3 samples)
pH, conductivity 25 °C	15 €/sample	(4 samples)

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

Measurands	Sample matrix	Sample code	Sample volume [1] and container	Concentration range and *preservation*
Ca **K** **Mg** **Na** **Hardness**	Synthetic sample	**A1K**	500 ml, Plastic	A1K: Ca, K, Mg, Na > 0.1 mg/l D2K: Ca, K, Mg > 1.0 mg/l Na 1–200 mg/l G3K: Ca, K, Mg, Na > 0.1 mg/l Hardness > 0.1 mmol/l
	Drinking water	**D2K**		
	Raw water	**G3K**		
Cl^- **SO_4^{2-}** as sulphate [2]	Synthetic sample	**A1S**	500 ml, Plastic	A1S: Cl^- > 10 mg/l, SO_4^{2-} > 5 mg/l D2S: 3–250 mg/l G3S: > 3 mg/l
	Drinking water	**D2S**		
	Raw water	**G3S**		
COD_{Mn}	Synthetic sample	**A1C**	250 ml, Plastic	A1C: > 2 mg/l D2C: 2–5 mg/l G3C: > 2 mg/l *Samples are preserved:* *2.5 ml 4 mol/l H_2SO_4/250 ml*
	Drinking water	**D2C**		
	Raw water	**G3C**		
F^-	Synthetic sample	**A1F**	250 ml, Plastic	A1F: > 1 mg/l D2F: 0.2–1.5 mg/l G3F: > 0.2 mg/l
	Drinking water	**D2F**		
	Raw water	**G3F**		
Fe **Mn**	Synthetic sample	**A1Fe**	250 ml, Plastic	A1Fe: Fe, Mn > 20 µg/l D2Fe: Fe 20–200 µg/l Mn 20–50 µg/l G3Fe: Fe > 20 µg/l, Mn > 50 µg/l *Samples are preserved: [3]* *with 2.5 ml 4 mol/l H_2SO_4/250 ml* *or* *with 1.25 ml conc. HNO_3/250 m*
	Drinking water	**D2Fe**		
	Raw water	**G3Fe**		
NH_4^+ as ammonium [2] **NO_2^-** as nitrite [2] **NO_3^-** as nitrate [2]	Synthetic sample	**A1N**	400 ml, Glass	**NH_4^+** A1N: > 0.1 mg/l D2N: 0.05–0.50 mg/l G3N: > 0.05 mg/l **NO_2^-** A1N: > 0.05 mg/l D2N: 0.05–0.50 mg/l G3N: > 0.003 mg/l **NO_3^-** A1N: > 4 mg/l D2N: 2–50 mg/l G3N: > 0.8 mg/l *Samples are autoclaved at Syke.*
	Drinking water	**D2N**		
	Raw water	**G3N**		
pH	Synthetic sample	**A1P**	100 ml, Glass	A1P: 5–9 pH unit D2PJ: 6.5–9.5 pH unit G3PJ: 4.5–9 pH unit
	Drinking water	**D2PJ**		
	Raw water	**G3PJ**		
Conductivity 25 °C	Synthetic sample	**A1J**	100 ml, Glass	A1J: 200–500 µS/cm D2PJ: 100–2500 µS/cm G3PJ: > 30 µS/cm
	Drinking water	**D2PJ**		
	Raw water	**G3PJ**		

[1] Please check the sample volume and, in case needed, order additional samples.
[2] Results are reported as compounds (not as sulphur or nitrogen).
[3] Please choose the preservation acid when ordering samples.

Sample codes (first letter showing sample matrix):
A = Synthetic sample
D = Drinking water
G = Raw water (ground water)