16 December 2024

To: Laboratories participating in Proftest Syke proficiency tests

Proficiency test NW 02/2025 – Natural water analyses

Proftest Syke will organize a proficiency test for the analysis of chlorophyll *a*, colour, conductivity, N_{NH4}, $N_{NO2+NO3}$, N_{tot}, P_{PO4}, P_{tot}, pH, suspended solids, and turbidity in natural waters.

The purpose of this proficiency test is to ensure the comparability and accuracy of the results of the participants. About 35 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

Synthetic sample, brackish water, and river water.

Timetable

Registration	**16 December 2024 – 24 January 2025**	
Sample dispatch date (national participants)	18 February 2025 (see Chapter 4 *Sample delivery)*	
Analysis of the samples	Suspended solids	20 February 2025
	Chlorophyll *a*	20 February 2025
	N_{NH4}, $N_{NO2+NO3}$, P_{PO4}	20 February 2025
	pH, conductivity	20 February 2025
	Colour, turbidity	20 February 2025
	N_{tot}, P_{tot}	at latest on 5 March 2025
Reporting of the results	**19 February – 5 March 2025**	

Participation fee

The participation fee is **919 €** (+ VAT) including all measurements and samples.
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, finas.fi/sites/en).

FINAS Finnish Accreditation Service PT01 (EN ISO/IEC 17043)

Organizing the proficiency test

1 Organizer

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Contact

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

2 Sample and measurands

The sample matrices in this proficiency test are: synthetic sample, brackish water, and natural water (river 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.

3 Registration

The registration for this proficiency test is open until **24 January 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 proftest@syke.fi.

4 Sample delivery

The sample dispatch day for national participants is **18 February 2025**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 19 February 2025**, 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 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. Samples A1N, B2N and N3N are autoclaved and sample A1K is preserved with ethanol. All the other samples are not preserved. The samples are preserved immediately at the arrival if required by the participant´s normal procedure.

For the nutrient samples, the analyses are performed as duplicate determinations and two results are reported. For the other samples and measurements, no replicated analysis is done no more than according to the method of analysis or the instructions within the sample letter.

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 **5 March 2025**.

Proftest Syke delivers the preliminary results report to the participants latest in the week 12 (17 – 21 March 2025). The final report will be published at the latest in June 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 **919 €** (+ VAT) including all measurements and samples. The basic fee is **455 €** (+ VAT) and the fees for each sample and measurand are as follows:

Suspended solids	17 €/sample	(2 samples)
Chlorophyll *a*	36 €/sample	(3 samples)
N compounds	38 €/sample	(3 samples)
P compounds	28 €/sample	(3 samples)
pH, Conductivity	15 €/sample	(4 samples)
Colour, Turbidity	16 €/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 [1]	Sample volume [2] and container	Concentration range
Chlorophyll *a*	Synthetic sample	**A1K** [3]	30 ml, glass tube, *preserved with ethanol*	0,01 – 0,5 abs/cm
	Brackish water	**B2K**	1000 ml, plastic	1 – 50 µg/l
	River water	**N3K**		
Colour	Synthetic sample	**A1V**	250 ml, plastic	5 – 200 mg/l, Pt
	Brackish water	**B2S**	500 ml, plastic	
	River water	**N3S**		
Conductivity	Synthetic sample	**A1J**	100 ml, glass	2 – 1200 mS/m
	Brackish water	**B2H**		
	River water	**N3H**		
N_{NH4} **$N_{NO2+NO3}$** **N_{tot}**	Synthetic sample	**A1N** [3]	n. 400 ml, glass *autoclaved at Syke*	N_{NH4} > 10 µg/l $N_{NO2+NO3}$ > 100 µg/l N_{tot} > 100 µg/l
	Brackish water	**B2N** [3]		
	River water	**N3N** [3]		
P_{PO4} **P_{tot}**	Synthetic sample	**A1P**	250 ml, plastic	P_{PO4} > 5µg/l P_{tot} > 10 µg/l
	Brackish water	**B2P**		
	River water	**N3P**		
pH	Synthetic sample	**A1P**	100 ml, glass	5 – 9 pH unit
	Brackish water	**B2H**		
	River water	**N3H**		
Suspended solids	Synthetic sample	**A1SS**	500 ml, plastic	> 3 mg/l
	River water	**N3SS**	1000 ml, plastic	
Turbidity	Synthetic sample	**A1S**	250 ml, plastic	0.1 – 20 FNU
	Brackish water	**B2S**	500 ml, plastic	
	River water	**N3S**		

[1] Measurands with the same sample code will be analyzed from the same sample container.
[2] Please check the sample volume and in case needed, order additional samples.
[3] Sample A1K is preserved with ethanol. Samples A1N, B2N and N3N are autoclaved at Syke. All other samples are not preserved.

Sample codes (first letter showing sample matrix):
A = Synthetic sample
B = Brackish water
N = Natural water (River water)