

To: Laboratories participating in ProfTest Syke proficiency tests

Proficiency test NW 03/2024 – Natural water analyses I

ProfTest Syke will organize a proficiency test (PT) for the analysis of alkalinity, conductivity, N_{NH_4} , $N_{NO_2+NO_3}$, N_{tot} , P_{PO_4} , $P_{PO_4, dissolved}$, P_{tot} , $P_{tot, dissolved}$, and pH 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	15 December 2023 – 26 January 2024	
Sample dispatch date (national participants)	20 February 2024 (see Chapter 4 <i>Sample delivery</i>)	
Analysis of the samples	Alkalinity	22 February 2024
	N_{NH_4} , $N_{NO_2+NO_3}$, P_{PO_4} , $P_{PO_4, dissolved}$	22 February 2024
	pH, conductivity	22 February 2024
	N_{tot} , P_{tot} , $P_{tot, dissolved}$	at the latest on 6 March 2024
Reporting the participant results	21 February – 6 March 2024	

Participation fee

The participation fee is **847 € (+ 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

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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 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 **26 January 2024**.

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 **20 February 2024**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 21 February 2024**, 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, all the other samples are not preserved. The samples are preserved immediately at the arrival if required by the participant's normal procedure.

The nutrient analyses are performed as replicate determinations and two results are reported. For the other samples and measurements, replicated analysis should be done no more than according to the method of analysis.

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 **6 March 2024**.

ProfTest Syke delivers the preliminary result report to the participants latest in the week 11 (11 – 15 March 2024). The final report will be published at the latest in June 2024 and it is then available via ProfTestWEB and via 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 **847 € (+ VAT)** including all measurements and samples. The basic fee is **455 € (+ VAT)** and the fees (+ VAT) for each sample and measurand are as follows:

Alkalinity	28 €/sample	(3 samples)
pH, conductivity	15 €/sample	(4 samples)
N compounds	38 €/sample	(3 samples)
P compounds	28 €/sample	(3 samples)
Dissolved P compounds	25 €/sample	(2 samples)

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.

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⁾ , container and preservation	Concentration range
Alkalinity	Synthetic sample	A1A	250 ml, plastic	0.02 – 3 mmol/l
	Brackish water	B2A	Not preserved at Syke.	
	River water	N3A		
Conductivity	Synthetic sample	A1J	100 ml, glass	2 – 1200 mS/m
	Brackish water	B2H	Not preserved at Syke.	
	River water	N3H		
N _{NH4} N _{NO2+NO3} N _{tot}	Synthetic sample	A1N	app. 400 ml, glass	N _{NH4} > 10 µg/l N _{NO2+NO3} > 100 µg/l N _{tot} > 100 µg/l
	Brackish water	B2N	Autoclaved at Syke.	
	River water	N3N		
P _{PO4} P _{tot}	Synthetic sample	A1P	250 ml, plastic	P _{PO4} > 5 µg/l P _{tot} > 10 µg/l
	Brackish water	B2P	Not preserved at Syke.	
	River water	N3P		
P _{PO4, dissolved} P _{tot, dissolved}	Brackish water	B4P	500 ml, plastic	P _{PO4, dissolved} > 5 µg/l P _{tot, dissolved} > 5 µg/l
	River water	N5P	Not preserved at Syke.	
pH	Synthetic sample	A1H	100 ml, glass	5 – 9 pH unit
	Brackish water	B2P	Not preserved at Syke.	
	River water	N3P		

¹⁾ Please check the sample volume and, in case needed, order additional samples.

Sample codes (first letter showing sample matrix):

A = Synthetic sample

B = Brackish water

N = River water