

To: Laboratories participating in ProfTest Syke proficiency tests

Proficiency test NW 06/2024 – Natural water II

ProfTest Syke will organize a proficiency test (PT) for the analysis of oxygen, chlorophyll α , salinity, SiO₂, TIC and TOC in natural waters.

The purpose of this proficiency test is to ensure the comparability and accuracy of the results of the participants. About 30 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	14 March – 12 April 2024
Sample dispatch date (national participants)	14 May 2024 (see Chapter 4 <i>Sample delivery</i>)
Analysis of the samples	Oxygen, chlorophyll a, TIC 16 May 2024 Salinity, SiO ₂ , TOC at the latest on 24 May 2024
Reporting of the results	15 May – 27 May 2024

Participation fee

The participation fee is **830 €** (+ 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

Coordinator: Päivi Grönroos, tel. +358 295 252 174
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Analytical experts

Oxygen, chlorophyll <i>a</i> , SiO ₂ , TIC, TOC	Mika Sarkkinen (Syke), tel. +358 295 251 620
Salinity	Riikka Mattsson (Syke), tel. +358 295 251 016

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, brackish water and river water. Samples, measurands, concentration ranges and sample preservations are presented in Appendix 1. Sample A1K is a synthetic chlorophyll *a* sample in ethanol. The sample is used to check the spectrophotometer absorbance. The laboratories using fluorometer will get an external assurance for spectrophotometer, which is used in calibration of the fluorescence spectrophotometer.

NOTE! The shipment includes an extra sample “Temperature” (water) to monitor the temperature inside the package during transport. The participants measure the temperature of this sample immediately at the package arrival.

Check the samples volumes and, in case needed, order additional samples. Choose the right type of preservation for TOC samples when placing your order.

3 Registration

The registration for this proficiency test is open until **12 April 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 **14 May 2024**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 15 May 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.**

Chlorophyll *a* sample A1K is preserved with ethanol. Oxygen samples are preserved according to standard EN 25813. Preservation acid for TOC samples is to be selected upon registration. Other samples are not preserved. Samples are preserved immediately after arrival if the participant's analytical method requires it.

For the samples and measurements, replicated analysis should be 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 **27 May 2024**.

Proftest Syke delivers the preliminary result report to the participants latest in the week 24 (10 – 14 June 2024). The final report will be published at the latest in October 2024 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 **830 €** (+ VAT) including all measurements and samples. The basic fee is **450 €** (+ VAT) and the fees for each sample and measurand are as follows:

Oxygen	25 €/sample	(2 samples)
Chlorophyll <i>a</i>	40 €/ sample	(3 samples)
Salinity	20 €/ sample	(2 samples)
SiO ₂	20 €/sample	(3 samples)
TIC	22 €/sample	(2 samples)
TOC	22 €/sample	(3 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.

Measurand	Sample matrix	Sample code	Sample volume ¹⁾ and container	Concentration range and preservation
Oxygen O₂	Brackish water	B2O	circa 100 ml, glass	5–40 mg/l <i>Preservation:</i> <i>EN 25813</i>
	River water	N3O		
Chlorophyll <i>a</i>	Synthetic sample	A1K	30 ml, glass tube	0.01-0.5 abs/cm
	Brackish water	B2K	1000 ml, plastic	1–50 µg/l
	River water	N3K		
Salinity	Synthetic sample	A1S	250 ml, plastic	0.5–8 PSU
	Brackish water	B2S		
SiO₂	Synthetic sample	A1P	250 ml, plastic	0.5–40 mg/l
	Brackish water	B2P		
	River water	N3P		
TIC	Synthetic sample	A1T	24 ml, gas tight glass tube	1–10 mg/l
	River water	N3T		
TOC	Synthetic sample	A1C	125 ml, plastic	1–20 mg/l <i>Preservation ²⁾:</i> <i>1 ml 2 mol/l HCl/100 ml or</i> <i>1 ml 2 mol/l H₃PO₄/100 ml</i>
	Brackish water	B2C		
	River water	N3C		

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

²⁾ Please choose the preservation acid when ordering samples.

Sample codes (first letter showing sample matrix):

A = Synthetic sample

B = Brackish water

N = Natural water (river water)