

To: Laboratories participating in ProfTest Syke proficiency tests

Proficiency test WW 14/2024 – Wastewater analyses II

ProfTest Syke will organize a proficiency test (PT) for the analysis of alkalinity, conductivity, colour, N_{NH_4} , $N_{NO_2+NO_3}$, N_{tot} , P_{PO_4} , P_{tot} , and pH in wastewaters.

The purpose of this proficiency test is to ensure the comparability and accuracy of the results of the participants. About 50 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, pulp and paper industrial wastewater, and municipal wastewater.

Timetable


Registration	26 September – 25 October 2024	
Sample dispatch date (national participants)	26 November 2024 (see Chapter 4 <i>Sample delivery</i>)	
Analysis of the samples	N_{NH_4} , $N_{NO_2+NO_3}$, P_{PO_4}	28 November 2024
	pH, conductivity	28 November 2024
	Colour, alkalinity	28. – 29. November 2024
	N_{tot} , P_{tot}	at the latest on 9 December 2024
Reporting of the results	27 September – 9 December 2024	

Participation fee

The participation fee is **838 €** (+ 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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Analytical expert

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

2 Sample and measurands

The sample matrices in this proficiency test are: synthetic sample, pulp and paper industrial wastewater, and municipal wastewater. 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 **25 October 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 **26 November 2024**. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 27 November 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 and they are stabilised to room temperature before analysis.

Note! Conductivity samples are either analysed at a temperature of 25 °C or the results are reported as a value corresponding to a temperature of 25 °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 are 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 **9 December 2024**.

ProfTest Syke delivers the preliminary results report to the participants at the latest in the week 51 (16 – 20 December 2024). The final report will be published at the latest in March 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 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 **838 €** (+ VAT) including all measurements and samples. The basic fee is **455 €** (+ VAT) and the fees for each sample and measurand are as follows:

Alkalinity	28 €/sample	(2 samples)
Colour	20 €/sample	(3 samples)
N compounds	41 €/sample	(3 samples)
P compounds	28 €/sample	(3 samples)
pH, conductivity	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⁾ , container and <i>preservation</i>	Concentration range
Alkalinity	Synthetic sample	A1A	250 ml, plastic	0,2 – 2 mmol/l
	Municipal wastewater	V3A	<i>Not preserved at Syke.</i>	
N_{NH4}	Synthetic sample	A1N	app. 400 ml, glass <i>Autoclaved at Syke.</i>	> 0,5 mg/l
	Municipal wastewater	V3N	500 ml, plastic <i>Autoclaved at Syke.</i>	
N_{NO2+NO3}	Synthetic sample	A1N	app. 400 ml, glass <i>Autoclaved at Syke.</i>	> 0,5 mg/l
	Municipal wastewater	V3N	500 ml, plastic <i>Autoclaved at Syke.</i>	
N_{tot}	Synthetic sample	A1N	app. 400 ml, glass <i>Autoclaved at Syke.</i>	> 1 mg/l
	Pulp and paper industry wastewater	P2N	500 ml, plastic <i>Not preserved at Syke.</i>	> 1 mg/l
	Municipal wastewater	V3N	500 ml, plastic <i>Autoclaved at Syke</i>	> 2 mg/l
P_{PO4}	Synthetic sample	A1P	250 ml, plastic	> 0,05 mg/l
	Municipal wastewater	V3P	<i>Not preserved at Syke.</i>	
P_{tot}	Synthetic sample	A1P	250 ml, plastic	> 0,05 mg/l
	Pulp and paper industry wastewater	P2P	<i>Not preserved at Syke.</i>	
	Municipal wastewater	V3P		
pH	Synthetic sample	A1H	100 ml, glass	4 – 9 pH unit
	Pulp and paper industry wastewater	P2H	<i>Not preserved at Syke.</i>	
	Municipal wastewater	V3H		
Conductivity 25°C	Synthetic sample	A1J	100 ml, glass	2 – 800 mS/m
	Pulp and paper industry wastewater	P2H	<i>Not preserved at Syke.</i>	
	Municipal wastewater	V3H		
Colour	Synthetic sample	A1V	250 ml, plastic	10 – 500 mg/l, Pt
	Pulp and paper industry wastewater	P2V	<i>Not preserved at Syke.</i>	
	Municipal wastewater	V3V		

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

Sample codes (first letter showing sample matrix):

A = Synthetic sample

P = Pulp and paper industrial wastewater

V = Municipal wastewater