20 June 2022

To: Laboratories participating in Proftest SYKE interlaboratory comparisons

Interlaboratory comparison AOX 07/2022 – AOX in natural water and waste water

Proftest SYKE will organize interlaboratory comparison for the analysis of AOX in natural water and pulp and paper waste waters.

The purpose of this interlaboratory comparison is to ensure the comparability and accuracy of the results of the participants. About 5 laboratories are expected to participate in this interlaboratory test. This intercomparison will be executed only if there are at least 5 participants. The organizing of this interlaboratory comparison is not included in the accreditation scope but its organizing follows the principles of accredited activities.

Sample matrices

Synthetic sample, natural water sample and pulp and paper industrial waste water sample.

Timetable

Registration	**20 June – 6 July 2022**
Sample dispatch date (national participants)	30 August 2022 (see Chapter 4 *Sample delivery*)
Analysis of the samples	13 September 2022 at latest
Reporting of the results	**31 August – 13 September 2022**

Participation fee

The participation fee is **750 €** (+ VAT) including all measurements and samples.
See detailed information in Chapter *9 Participation fee.*

Mirja Leivuori, Head of Unit

Riitta Koivikko, coordinator

Proftest SYKE is proficiency testing provider PT01 (EN ISO/IEC 17043:2010) accredited by FINAS (Finnish Accreditation Service, www.finas.fi/sites/en).

Organizing the interlaboratory comparison

1 Organizer

Proftest SYKE, Finnish Environment Institute SYKE, Laboratory Centre
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Contact

Coordinator: Mirja Leivuori, tel. +358 295 251 366

Substitute for coordinator: Riitta Koivikko, tel. +358 295 251 750

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Analytical expert

Sonja Latvakoski, Metropolilab Oy, *firstname.lastname@metropolilab.fi*

Subcontracting Analytical expert and AOX analysis, Metropolilab Oy (T058, www.finas.fi/sites/en)

2 Samples and measurands

Sample matrices in this interlaboratory comparison are: synthetic sample, natural water sample and pulp and paper industry waste 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 laboratory intercomparison is open until 6 July 2022.

Registration is done via the electronic client interface, ProftestWEB: https://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 30 August 2022. To ensure timely arrival, the samples are dispatched earlier for participants abroad.

If the sample package does not arrive **at the latest on 2 September 2022**, 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 are preserved with nitric acid. The analyses are performed as duplicate determinations and two results are reported. For the other samples and measurements, no 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 **13 September 2022**.

Proftest SYKE delivers the preliminary result report to the participants at the latest in the week 39 (26 – 30 September 2022). The final report will be published at the latest in January 2023 and it is then available via ProftestWEB and via Proftest SYKE website (*www.syke.fi/proftest/en*). The availability of the report will be informed to the participants.

7 Assigned values and evaluation of the results

Result of the expert laboratory is used as the assigned value. Also either the calculated concentration (synthetic samples) or the robust mean, the median, or the mean of the results reported by the participants can 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. 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 **750 €** (+ VAT) including all measurements and samples. The basic fee is **450 €** (+ VAT) and the fee for each sample is 100 € according to the participant's order.

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 is the samples.

10 Appendices

Appendix 1 Samples, measurands, concentration ranges and preservations

Appendix 1. Samples, measurands, concentration ranges and preservations

Testisuure	Sample type	Sample code	Sample volume [1], container and preservation	Concentration range
AOX	Synthetic sample	**A1A**	500 ml glass *preserved in SYKE: 2,5 ml 2 mol/l HNO_3/500 ml, pH<2*	A1A: 0.05 – 0.50 mg/l N3A: 0.05 – 1 mg/l P2A: 0.2 - 3 mg/l
	Natural water	**N3A**		
	Pulp and paper industry wastewater	**P2A**		

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

Sample codes (first letter showing sample matrix):
A = Synthetic sample
N = Natural water (river water)
P = Pulp and paper industry waste water