TO: Laboratories interested to participate in this interlaboratory comparison

INTERLABORATORY COMPARISON IAPAH 18/2020 – PAH measurements from indoor air samples

Proftest SYKE will organize in cooperation with Finnish Institute of Occupational Health an interlaboratory comparison (ILC) for the analysis of PAH compounds of the indoor air collected into XAD adsorbent tubes (Orbo 43) in March 2020.

The purpose of this interlaboratory comparison is to ensure the comparability and accuracy of the results of the participants. About 8 laboratories are expected to participate in this interlaboratory comparison. The organizing of this interlaboratory comparison is not included in the accreditation scope (www.finas.fi/sites/en), but the organizing will follow the procedures of the accredited schemes.

SAMPLE MATRICES

Synthetic sample on the XAD adsorbent tube (Orbo 43) and blank tube sample (Orbo 43).

TIMETABLE

Registration 24 January – 14 February 2020
Sample dispatch date 16 March 2020 (see Chapter 4 Sample delivery)
Analysis of the samples The samples should be analyzed latest on 20 March 2020 (see Chapter 5 Sample storage and analysis)
Reporting the participant results 16 – 25 March 2020

PARTICIPATION FEE

The participation fee is 400 € (+ VAT) including all measurements and samples. See detailed information in Chapter 9 Participation fee.

Helsinki, Finland 24 January 2020

Mirja Leivuori, Head of Unit, coordinator

Riitta Koivikko, Substitute for coordinator

ORGANIZING THE INTERLABORATORY COMPARISON

1 ORGANIZER
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Contact
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Subcontracting

2 SAMPLES AND MEASURANDS
The samples for this ILC include two synthetic XAD adsorbent tube samples (Orbo 43) and one tube blank sample for PAH measurements. Samples, measurands and concentration ranges are presented in Appendix 1.

3 REGISTRATION
The registration for this interlaboratory comparison is open until 14 February 2020.
The IAPAH test package ordered via the registration form includes synthetic samples IA1PAH, IA2PAH and the tube blank sample IA0PAH.
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@environment.fi.

4 SAMPLE DELIVERY
The sample dispatch day is Monday 16 March 2020.
If the sample package does not arrive latest on 18 March 2020, or there are missing and/or broken samples, please contact the provider immediately (proftest@environment.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 as well as following the given instructions by the organizer. Replicated analysis should not be done more than according to the method of analysis.

The samples should be analyzed shortly after their arrival, latest on 20 February 2020. In case this is not possible, in special occasions, e.g. late arrival of the sample package, the samples could be analyzed on Monday 23 February 2020. Please, inform the organizer, if there are any problems with the analysis.

6 REPORTING THE RESULTS

The participant results are reported to Proftest SYKE latest on Wednesday 25 March 2020. The results are reported via the electronic client interface Proftest WEB.

The results of the individual measurands analysed from the synthetic samples are reported from both sample tubes separately.

The results should be reported with one more decimal than the normal reporting protocol is in the laboratory. Further, a survey of the used analytical techniques and the identified compounds will be delivered to the participants. Survey should be filled together with the results reporting.

Proftest SYKE delivers the preliminary result report to the participants latest in the week 15 (6 – 9 April 2020). The final report will be published latest in August 2020 and it is then available on Proftest WEB and on 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

Either the calculated concentration, the result of the expert laboratory, the median or the mean of the reported results will be used as the assigned value for the measurand. The calculation of the assigned value is based on the results achieved according to the given guidelines. The evaluation of the results will be based on z scores. In special cases also Eₙ 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 400 € (+ VAT). Participation includes two synthetic samples in XAD adsorbent tubes and one tube blank. If the participant orders additional samples (restricted availability), they are charged 75 € (+ VAT) per sample.

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.

The invoice will be sent after the delivery of the preliminary result report.

10 APPENDICES

Appendix 1 Samples, measurands and concentration ranges.
## APPENDIX 1 Samples, measurands and concentration ranges

<table>
<thead>
<tr>
<th>Measurand</th>
<th>Sample</th>
<th>Sample code</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>Antraseeni (CAS No 120-12-7)</td>
<td>Synthetic sample XAD adsorbent tube (Orbo 43) (1 tube)</td>
<td>IA1PAH</td>
<td>5 - 500 ng/sample</td>
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<tr>
<td>Asenafteeni (CAS No 83-32-9)</td>
<td>Synthetic sample XAD adsorbent tube (Orbo 43) (1 tube)</td>
<td>IA2PAH</td>
<td>5 - 500 ng/sample</td>
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<tr>
<td>Asenaftyleeni (CAS No 208-96-8)</td>
<td>Tube blank in XAD adsorbent tube (Orbo 43) (1 tube)</td>
<td>IA0PAH</td>
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<tr>
<td>Fenantreeni (CAS No 85-01-8)</td>
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<td>Fluoranteeni (CAS No 206-44-0)</td>
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<td>Fluoreeni (CAS No 86-73-7)</td>
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<tr>
<td>1-Metyylinaftaleeni (CAS No 90-12-0)</td>
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<tr>
<td>2-Metyylinaftaleeni (CAS No 91-57-6)</td>
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<td>Naftaleeni (CAS No 91-20-3)</td>
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<td>Pyreeni (CAS No 129-00-0)</td>
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