



Document ISO/TC 147 **858**  
 Document ISO/TC 147/SC 2 **1781**  
 Document ISO/TC 147/SC 2/WG 77 **N 8**

Date: 2018-03-12

**INFORMATION**  
*for participation in the*  
**Interlaboratory trial for validation of ISO 21863**

**Water quality — Determination of alkylmercury compounds in water  
 — Method using gas chromatography-mass spectrometry (GC-MS)  
 after phenylation and solvent extraction**

Dear colleagues,

Thank you very much for your interest to participate in the interlaboratory trial for the validation of the future ISO 21863. Today we would like to give you some detailed information on the design and the timetable of the final trial which will be carried out in August 2018.

We would like to mention that our trial is a **validation exercise** and not a proficiency testing trial. Therefore, it is crucial that you adhere to the procedure described in ISO/CD 21863 revised. **The relevant document for the trial will be circulated later.**

Please find in the table below some further technical information for your kind attention and consideration when preparing your measurements.

<b>Item</b>	<b>Information</b>
<u>Number of planned participants:</u>	<b>More than 15</b>
<u>Relevant document:</u>	<b>ISO/CD 21863 revised            Water quality — Determination of alkylmercury compounds in water            — Method using gas chromatography-mass spectrometry (GC-MS)            after phenylation and solvent extraction</b>
<u>Deadline for expression of interest in participation</u>	<b>30 June 2018</b>
<u>Samples to be distributed:</u>	<b>30 September 2018</b>
<u>Deadline for submission of results:</u>	<b>31 December 2018</b>
<u>Participation fee:</u>	<b>Free of charge</b>

Item	Information
<u>Matrices:</u>	<p><b>Sample A:</b> River water</p> <p><b>Sample B:</b> Sea water</p> <p><b>Sample C:</b> Waste water</p> <p><b>3 different samples in total.</b> Samples were filtered through a 0,45 µm filter and preserved at about pH 1,4 with HCl.</p>
<u>Preservation:</u>	Samples should be stored by refrigeration when shipped and received.
<u>Reference substances (stock solutions):</u>	All laboratories will be provided with a stock solution for calibration (Table 1 below) and three spiking solutions to combine with the corresponding water samples. Each mixture contains known amounts of certified reference substances dissolved in methanol (or water containing 0,5 % acetic acid and 0,2 % HCl). Internal standard solution, poly(ethylene glycol) 300 solution, and check solution of phenylated alkylmercury for GC-MS performance will be also provided.
<u>Reporting of results:</u>	<p>The organizer of the trial will provide an electronic record sheet (EXCEL file). Results will be entered directly after measurement by the participants.</p> <p>Finally, participants are requested to give some <b>additional and/or general information about the measurements and procedural details.</b></p> <p>The file shall be e-mailed to the organizer.</p>
<u>Parameters to be determined:</u>	<p>See attached listing of parameters in Table 1.</p> <p>The measurement of all parameters is recommended but not obligatory for participation.</p> <p><b>Participants are requested to confirm procedural blank concentrations.</b></p>
<u>Replicates</u>	<b>Three independent replicates</b> per parameter are required
<u>Filtration:</u>	No filtration required. Filtered samples will be sent.
<u>Concentration range(s):</u>	<p>Spiking concentrations will be in the calibration range as shown in ISO/CD 21863, spike 1 will be added to sample A, spike 2 will be added to sample B, spike 3 will be added to sample C.</p> <p>Sample A: River water</p> <p>Sample B: Sea water</p> <p>Sample C: Waste water</p> <p>All analytes will be present (spiked) in quantifiable concentrations.</p>
<u>Evaluation:</u>	according to ISO 5725-2
<u>Report/certificate:</u>	The results of the trial will be reported in detail to all participants in an anonymous form. The participants can identify their own data via the laboratory code. Detailed tables and graphs will be delivered (e-mail with attached pdf files).

**Table 1 — Alkylmercury to be included in the interlab trial on ISO 21863**

Analyte	Formula	Abbreviation	CAS Registry No.
Methylmercury	CH <sub>3</sub> Hg <sup>+</sup>	MeHg	22967-92-6
Ethylmercury	C <sub>2</sub> H <sub>5</sub> Hg <sup>+</sup>	EtHg	-

**Contact details of the organizer:**

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Finally, I would like to express my warm thanks in advance for your kind willingness to help us to validate ISO 21863.

In the case of any questions, please do not hesitate to contact me by e-mail or phone.

Best regards

Hiroaki Tao, Convenor SC2/WG77