PLC 8 – INTERCALIBRATION OF CHEMICAL ANALYSES

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PLC-8 INTERCALIBRATION

Parameters

- Nutrients: NO_2-N, NO_3-N, total-N, PO_4-P, total-P
- Heavy metals: Cd, Cr, Cu, Ni, Pb, Zn, Hg

Samples

- Natural samples of waste water and fresh water
- Spiked sample (known amount added)

PLC-8 INTERCALIBRATION

Participants

- Estimated number of laboratories: 20 (1-2 from each CP)
  (In PLC7-intercalib: 20 labs for freshwater and 27 labs for waste water)

Economy

- HELCOM: Sample preparation and documentation, statistic data processing and reporting
- Laboratories pay: Analysis
- Fee for participation if number of participants exceeds 20?

DATA HANDLING

- Data must be quality assured before submitting
- Data below detection limit will not be included in the statistical analyses
- Outliers will not be included in the statistical evaluation (identified by Cochran and Grubbs outlier test)
- Each laboratory/component: related standard deviation, deviation from assigned value and Z-score
- Each component (across laboratories): outlier test, summary of statistical parameters

The report content and structure will be as in "Report in the HELCOM PLC7 intercalibration"

RECOMMENDATIONS FROM PLC7-INTERCALIBRATION

- It was not clear whether laboratories had reported limit of quantification (LQ) or limit of detection (LD)
  - Guidance on how to report results will be included in the template for the reporting
- Spike of waste water samples for nutrients in order to have concentrations on a robust level as it was the case for nutrients in fresh water
  - The sample will be spiked if the levels are assessed to be too low
- The concentration of metals was for some laboratories much higher than in natural samples
  - Information about concentration level will be given

RECOMMENDATIONS FROM PLC7-INTERCALIBRATION

- Conservation of fresh water samples for metals with acid in order to improve stability
  - Fresh water samples will be conserved with improved acidification
- Autoclave of fresh water in order to secure stability as waste water
  - Both waste water and fresh water will be autoclaved

DRAFT TIMESCHEDULE

- Deadline for registration* for participation: week 44, 2020
- DCE will send samples by DHL: week 3, 2021
- Laboratories report their results to DCE: week 6, 2021
- Draft statistical report on the lab results to the laboratories and PLC-8 group: week 9, 2021
- Draft full report equal to PCL7 report for commenting by the PLC-8 group: week 11, 2021
- Comments are handled by DCE
- Final report to PLC-8 group and upload on DCE-website: 2 weeks after DCE has received comments from the PLC-8 group

* The registration **must** include name, email and phone number of the contact person (DHL needs the information when samples are to be delivered)

QUESTIONS TO BE ANSWERED BY THE MEETING

- Should laboratories pay a fee for participation if the number exceeds the budget?
  - If yes – according to which the principles?
  - If no – must the number of participants be detemined by the budget, or is it possible to find alternative financing?
- Comments on the autoclave of fresh water samples?
- Comments on the timeschedule?
- Comments on the report content?

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