

To the participants in the laboratory intercomparisons within the European Monitoring and Evaluation Programme (EMEP).

Your ref.: [...]

Our ref.: KAP/O-7726-QA

Kjeller, 23.09.2025

Laboratory Intercomparisons within EMEP

Please find enclosed samples for the “43rd Intercomparison of methods within EMEP” and / or “EMEP Analytical Intercomparison of Heavy Metals in Precipitation 2025”

Deadline for reporting of results is December 18th 2025

Further information regarding samples and reporting of results is available on the webpage:
<https://emep-ccc.nilu.no/intercomparison>

Yours sincerely,

Katrine Aspmo Pfaffhuber
Senior Scientist



Samples distributed to the participants

☐ **Sample type B:**

6 synthetic samples (two blanks included) for determination of SO_2 and HNO_3 on impregnated filters. The filters, Whatman 40, have been impregnated with 300 μl 1.0 M KOH/10% glycerol in methanol. Different amounts of H_2SO_4 solution and a nitrate salt solution have been added to the filters. Results should be reported as $\mu\text{g S/filter}$ for SO_2 and $\mu\text{g N/filter}$ for HNO_3 .

☐ **Sample type C:**

4 synthetic samples for determination of NO_2 . The samples consist of solutions of nitrite that are **to be diluted according to the enclosed instructions**. Results should be reported as $\mu\text{g N/mL}$.

☐ **Sample type G:**

4 synthetic precipitation samples. The samples consist of deionized water, containing different amounts of sulphate, nitrate, ammonium, strong acid, magnesium, sodium, chloride, calcium and potassium. Results for K, Na, Mg, Cl, Ca should be reported in mg/L , SO_4 as mg S/L , NH_4 and NO_3 as mg N/L , pH in pH units and conductivity in $\mu\text{S/cm}$.

☐ **Sample type H:**

4 synthetic precipitation samples. The samples consist of 0.5% HNO_3 and different amounts of Cr, Ni, Cu, Zn, As, Cd and Pb. Results should be reported in $\mu\text{g/L}$.

☐ **Sample type J:**

6 synthetic samples (two blanks included) for determination of NH_3 by a wet chemical method on impregnated filters. The filters, Whatman 40, have been impregnated with 300 μl 3% oxalic acid in methanol and different amounts of an ammonium salt solution have been added to the filters. Results should be reported as $\mu\text{g N/filter}$.

The bottles and petri dishes are labelled for sample identification.

Analysis

The samples should be analyzed for the same constituents, and in the same way as the routine samples collected at your EMEP stations. Only one result should be reported for each of the parameters.

Thank you for your co-operation.

Encl.: Special instruction for the synthetic samples for nitrogen dioxide

Special instructions for the synthetic samples for nitrogen dioxide; sample type C

Since the different laboratories in this intercomparison use different methods for absorbing nitrogen dioxide, samples C1–C4 distributed are to be diluted to match the laboratories own matrix solutions.

Therefore, 1 part of the sample solutions C1–C4 should be diluted with 9 parts of your calibration matrix before the analysis.

In this intercomparison, we want the results to be reported as the concentration of NO₂-N in µg/mL in the **10 times diluted** sample.