

SURFACE WATER TESTING

Work instructions 2023/Round II.

1. General instructions

1.1. Sample storage

Analyses should be performed as soon as possible after arrival of samples and immediately after preparing the prescribed dilutions, if applicable. Samples should be stored unopened at $4 \pm 2^\circ\text{C}$ in the dark until analysis. Please follow the safety instructions for laboratory chemicals when handling samples. Samples should be treated as routine samples.

1.2. Sample preparation

Samples are preserved according to ISO 5667-3:2018 if applicable. For further information on preservation, please consult QualcoDuna Proficiency Testing Scheme - Scheme description. All parameters are present in soluble form, thus samples should not be filtered. Samples are either natural surface water of origin, to be analysed directly, or synthetic solutions which should be diluted by the factor prescribed prior to analysis.

Please remember to check sample pH before analysis.

Measurement results should be reported for the diluted samples in case of synthetic solutions, and for the original samples in case of natural surface water (where dilution is not prescribed).

2. Samples:

2.1. General parameters and elements:

2.1.1. Sample code: SW/BW-G/M-1, SW/BW-G/M-2 Dilution not required

Parameters:

Cl⁻, Ca, Mg, total hardness, Ni, Pb, Zn

2.1.2. Sample code: SW-M-1, SW-M-2

Dilution not required

Parameter:

Hg

2.2. Nutrients

2.2.1. Sample code: SW/BW-N-1, SW/BW-N-2

Dilution not required

Parameters and expected concentration ranges:

$\text{NH}_4^+\text{-N}$, $\text{NO}_3^-\text{-N}$, $\text{PO}_4^{3-}\text{-P}$

Attention! Please note that nutrient measurement results should be reported in nitrogen (N) or phosphorus (P).

2.3. Organic parameters

2.3.1. Sample code: SW/BW-Org-1, SW/BW-Org-2

Dilution factor: 50

Parameters and expected concentration ranges:

COD_{Mn}	2 – 10	mg/dm³
TOC	3 – 15	mg/dm³

Attention! COD_{Mn} and TOC analyses should be performed within 2 weeks from the time of arrival of samples to your laboratory.

2.3.2. Sample code: SW/BW-Org-3, SW/BW-Org-4

Dilution factor: 100

Parameter and expected concentration range:

MBAS	40 – 200	µg/dm³
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3. Reporting of results:

Participants are asked to report their expanded measurement uncertainty together with the measurement results using a coverage factor of $k = 2$, so that E_n numbers can be calculated during evaluation. E_n numbers help participants to assess the validity of their uncertainty estimation. Please make sure that expanded measurement uncertainties are reported in the **same unit of measurement** as the measurement results.

Results can be reported:

- **Electronically via our website** (www.qualcoduna.hu) using your personal login ID communicated earlier by e-mail. (Choose *Login to online services*, then go to *Reporting of results* to see the online data report forms. After required fields are filled in and data report form is sent, you will receive a confirmation that your data is received. This can be saved and printed for your later use. If you do not receive the confirmation, reporting of your results failed. In this case please try again.

- **By email** (info@qualcoduna.hu) or **using the data report form** available in pdf format on our website (see *Downloads*).

Reporting deadline: June 20, 2023.

Please make the appropriate rounding and report in the unit of measurement stated on data report forms. **Results reported after the above deadline or as „< LOD/LOQ” will be excluded from evaluation, results reported in inappropriate units of measurement will not be converted.** (Reference: ISO 13528:2022. Statistical methods for use in proficiency testing by interlaboratory comparisons.)

Please note that **in case zero (“0”) is reported** as measurement result, it is regarded as a valid result and is **evaluated accordingly**.

Budapest, May 02, 2023

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