

SURFACE WATER / BATHING WATER TESTING

WORK INSTRUCTIONS

2026. PROGRAMME

PT ID: QDJV-3

1. GENERAL REQUIREMENTS

1.1. Storage of PT items

Analyses should be performed **as soon as possible** after the PT item arrives and **immediately after the necessary dilutions** have been prepared.

PT items should be stored in a **dark place, unopened, refrigerated ($4 \pm 2^{\circ}\text{C}$) until processing**.

Regarding the handling of PT items, please follow the **safety rules** for laboratory chemicals and handle proficiency test items in the same way as the majority of routinely tested samples.

1.2. Processing of PT items

The PT items were preserved according to the ISO 5667-3:2024 standard in accordance with the properties of the parameters to be tested. For more information on **PT item preservation**, see the QualcoDuna proficiency testing „Program description 2026”. (**Annex 1**).

The parameters to be tested are present in **dissolved form**, the PT items **do not need to be filtered**.

From the contents of the containers, solutions should be prepared for analysis according to the dilution ratio indicated for the components to be tested.

Some of the PT items consists of real surface water and should be analysed directly without dilution.

The remaining PT items are prepared standard solutions, which must be diluted prior to analysis according to the dilution factors specified for the respective analytes.

Measured results shall be reported after applying the dilution factor specified for each parameter.

Please note the importance of **checking the pH** before starting the analyses.

2. PROFICIENCY TESTING ITEMS

2.1. PT item IDs and parameters

PT item ID	Dilution	Parameter	Expected concentration range ($\pm$ planned σ pt %)	Planned σ pt %
FSZ/FV-G/M-1 FSZ/FV-G/M-2	-	Cl⁻ (mg/dm ³)	Real surface water (spiked if necessary)	7
	-	Ca (mg/dm ³)	Real surface water (spiked if necessary)	5
	-	Mg (mg/dm ³)	Real surface water (spiked if necessary)	7
	-	total hardness (CaO mg/dm ³)	Real surface water (spiked if necessary)	5
	-	Ni (mg/dm ³)	Real surface water (spiked if necessary)	10
	-	Pb (mg/dm ³)	Real surface water (spiked if necessary)	10
	-	Zn (mg/dm ³)	Real surface water (spiked if necessary)	10

PT item ID	Dilution	Parameter	Expected concentration range ($\pm$ planned σ pt %)	Planned σ pt %
FSZ/FV-G/M-3 FSZ/FV-G/M-4	-	SO₄²⁻ (mg/dm ³)	Real surface water (spiked if necessary)	10
	-	K (mg/dm ³)	Real surface water (spiked if necessary)	7
	-	Na (mg/dm ³)	Real surface water (spiked if necessary)	7
	-	Fe (μg/dm ³)	Real surface water (spiked if necessary)	10
	-	Mn (μg/dm ³)	Real surface water (spiked if necessary)	10
	-	Al (μg/dm ³)	Real surface water (spiked if necessary)	10
	-	As (μg/dm ³)	Real surface water (spiked if necessary)	10
	-	Cd (μg/dm ³)	Real surface water (spiked if necessary)	10
	-	Cr (μg/dm ³)	Real surface water (spiked if necessary)	10
	-	Cu (μg/dm ³)	Real surface water (spiked if necessary)	10

PT item ID	Dilution	Parameter	Expected concentration range ($\pm$ planned σ pt %)	Planned σ pt %
FSZ/FV-N-1 FSZ/FV-N-2	-	$\text{NH}_4^+ \text{-N}$ (mg/dm ³)	Real surface water (spiked if necessary)	10
	-	$\text{NO}_3^- \text{-N}$ (mg/dm ³)	Real surface water (spiked if necessary)	7
	-	$\text{PO}_4^{3-} \text{-P}$ (mg/dm ³)	Real surface water (spiked if necessary)	7
Attention: Results for nutrient parameters must be reported as Nitrogen (N) and Phosphorus (P) concentrations, respectively!				

PT item ID	Dilution	Parameter	Expected concentration range ($\pm$ planned σ pt %)	Planned σ pt %
FSZ/FV-Org-3 FSZ/FV-Org-4	100x	MBAS	40 – 200 $\mu\text{g/dm}^3$	15

3. SUBMISSION OF RESULTS

Participants are asked to provide their **extended measurement uncertainty** in addition to the measured values (the extension factor: $k = 2$), and the extended measurement uncertainty values **should be in the same unit** as the measurement results.

The measurement results can be recorded electronically via the www.qualcoduna.hu website.

The **process of recording** is as follows:

- Open the www.qualcoduna.hu/en website and click on the *Login to online services* menu item.
- After entering the login name and password, the participants' personal electronic page will be opened.
- By clicking on the *Reporting of results* menu item, the data sheet announcing the results is available.
- After the successful submission of the measurement data, the system sends a confirmation that the recording has been made, which can be saved and printed.
- Keep the confirmation and check its data content.
- **Important:** If you don't see a confirmation, the **recording has not been made**. If the electronic communication of data is temporarily hindered, please contact us.

SUBMISSION DEADLINE: 7TH AUGUST 2026. (FRIDAY)

Values **marked "<" and ">"** submitted after the deadline cannot be taken into account in the evaluation, and the results given in units other than those on the data sheet **will not be recalculated**. (Reference: ISO 13528:2022. Statistical methods for use in proficiency testing by interlaboratory comparisons).

Please note that if the Participant enters **zero ("0")** as the test result, the value **will be considered** a physically incorrect result **and will be evaluated**.

Budapest, 30th June, 2026.

A handwritten signature in blue ink, appearing to read "Dr. Norbert Mátrai".

Dr. Norbert Mátrai
Head of Department