

TESTING OF DRINKING WATER

PROCESSING INSTRUCTIONS

PROGRAMME 2026

PT ID: QDJV-1

1. GENERAL REQUIREMENTS

1.1. Storage of samples

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

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

1.2. Processing of samples

The samples were preserved in accordance with the MSZ EN ISO 5667-3:2024 standard in accordance with the properties of the parameters to be tested (**Annex 1 of the Program Offer**).

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

The solutions in the vessels **should be prepared for analysis according to the dilution ratio** specified for the components to be tested.

The samples must be processed separately and individually.

2. SAMPLES

2.1. General parameters and elements:

2.1.1. Sample signal and parameters

Signs of patterns	Dilution	Parameters to be tested	Planned range ($\pm 10\%$)
IV-G/M-1 IV-G/M-2	100x	Calcium	30 - 160 mg/dm ³
		Mg	3 - 40 mg/dm ³
		Total hardness	50 - 250 CaO mg/dm ³
		As	3 - 25 $\mu\text{g}/\text{dm}^3$
		Ni	5 - 40 $\mu\text{g}/\text{dm}^3$
		Pb	4 - 30 $\mu\text{g}/\text{dm}^3$
		Zn	10 - 300 $\mu\text{g}/\text{dm}^3$

Organization organizing proficiency tests accredited by NAH under the number NAH-8-0003/2023.

Notes:

- **Analyses should be carried out** as soon as possible **after the sample has arrived**.
- Samples should be tested **from 100x dilution**, based on the table above.
- The measurement results shall be given **in relation to the concentration corresponding to the dilutions prescribed** for each parameter.
- The samples are artificial solutions made with ultrapure water, which **have been previously preserved with nitric acid** (Annex 1 of the Program Offer), setting and controlling the pH is the responsibility of the laboratory.

Signs of patterns	Dilution	Parameters to be tested	Planned range (±0.1 pH unit; ±7%)
		pH (20 °C)	pH Unit 5.0 - 9.0
IV-G-1 IV-G-2	50x	Conductivity (20 °C) 400 – 1600 µS/cm	

Notes:

- **Analyses should be carried out** as soon as possible **after the sample has arrived**.
- Samples should be tested uniformly **from a 50x dilution**, based on the table above.
- The measurement results shall be given **in relation to the concentration corresponding to the dilutions prescribed** for each parameter.
- The samples are artificial solutions made with ultrapure water, which **have not been preserved** in advance (Appendix 1 of the Program Offer), setting and controlling the pH is the responsibility of the laboratory.

Signs of patterns	Dilution	Parameters to be tested	Planned range (±7%)
	100x	Cl ⁻	50 – 200 mg/dm ³
IV-G-3	100x	SO ₄ ²⁻	50 – 200 mg/dm ³
IV-G-4	1000x (!)	K	2 – 20 mg/dm ³
	100x	Na	30 – 150 mg/dm ³

Notes:

- **Analyses should be carried out** as soon as possible **after the sample has arrived**.
- Samples **should be tested at 100x and 1000x dilution**, respectively, according to the table above.
- The measurement results shall be given **in relation to the concentration corresponding to the dilutions prescribed** for each parameter.
- The samples are artificial solutions made with ultrapure water, which **have been previously preserved with sulfuric acid** (Annex 1 of the Program Offer), setting and controlling the pH is the responsibility of the laboratory.

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Signs of patterns	Dilution	Parameters to be tested	Planned range (±10%)
IV-M-1 IV-M-2	50x	Fe	100 – 350 µg/dm ³
		Mn	10 – 150 µg/dm ³
		Al	50 – 220 µg/dm ³
		Ba	100 – 1000 µg/dm ³
		Cd	0.5 – 6 µg/dm ³
		Cr	5 – 50 µg/dm ³
		Cu	10 – 100 µg/dm ³

Notes:

- **Analyses should be carried out** as soon as possible **after the sample has arrived**.
- Samples should be tested uniformly **from a 50x dilution**, based on the table above.
- The measurement results shall be given **in relation to the concentration corresponding to the dilutions prescribed** for each parameter.
- The samples are artificial solutions made with ultrapure water, which **have been previously preserved with nitric acid** (Annex 1 of the Program Offer), setting and controlling the pH is the responsibility of the laboratory.

2.2. Nutrients

2.2.1. Sample signal and parameters

Signs of patterns	Dilution	Parameters to be tested	Planned range (±10%)
IV-N-1 IV-N-2	100x	NH ₄ ⁺	0.1 - 0.7 mg/dm ³
		NO ₃ ⁻	5 – 75 mg/dm ³
		PO ₄ ³⁻	0.1 - 1.2 mg/dm ³

Notes:

- **Analyses should be carried out** as soon as possible **after the sample has arrived**.
- Samples should be tested **from 100x dilution**, based on the table above.
- The measurement results shall be given **in relation to the concentration corresponding to the dilutions prescribed** for each parameter.
- The samples are artificial solutions made with ultrapure water, which **have been previously preserved with nitric acid and then sterilized** (Appendix 1 of the Program Offer), setting and controlling the pH is the responsibility of the laboratory.

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Signs of patterns	Dilution	Parameters to be tested	Planned range (±7-15%)
IV-N/M-1	100x	NO ₂ ⁻	0.05 – 1.0 mg/dm ³
IV-N/M-2	10.000x (!)	Hg	0.5 – 5.0 µg/dm ³

Notes:

- Analyses should be carried out as soon as possible after the sample has arrived.
- Samples should be tested from 100x and 10,000x dilution, respectively, according to the table above.
- The measurement results shall be given in relation to the concentration corresponding to the dilutions prescribed for each parameter.
- The samples are artificial solutions made with ultrapure water, which have not been preserved (Annex 1 of the Program Offer), setting and controlling the pH is the responsibility of the laboratory.

2.3. Organic pollutants

2.3.1. Sample Signal and Parameters

Signs of patterns	Dilution	Parameters to be tested	Planned range (±10%)
IV-Org-1	50x	KOps	1.0 - 9.0 mg/dm ³
IV-Org-2		TOC	2.0 - 15.0 mg/dm ³

Notes:

- Analyses should be carried out as soon as possible after the sample has arrived.
- Samples should be tested from 50x dilution, based on the table above.
- The measurement results shall be given in relation to the concentration corresponding to the dilutions prescribed for each parameter.
- The samples are artificial solutions made with ultrapure water, which have been previously preserved with sulphuric acid (Annex 1 of the Program Offer), setting and controlling the pH is the responsibility of the laboratory.

3. SUBMIT 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: 07 APRIL 2026 (TUESDAY)

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, 26 January 2026

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

Dr. Mátrai Norbert
Head of Department