

## GROUNDWATER TESTING

### WORK INSTRUCTIONS

### YEAR 2026 PROGRAMME

### PT ID: QDJV-2

## 1. GENERAL INSTRUCTIONS

### 1.1. Storage of samples

Spike solutions must be stored unopened, in the **dark, under refrigerated conditions** ( $4 \pm 2^{\circ}\text{C}$ ), avoiding any cross-contamination. Samples shall be prepared within **one week after receipt**.

### 1.2. Sample preparation

To prepare the proficiency testing samples, fill a **1 dm<sup>3</sup> volumetric flask** halfway with tap water tap water, then for **PAH** analysis add **1 cm<sup>3</sup> isopropanol** and **1 cm<sup>3</sup> spike solution**.

For **PCB, EPH and BTEX** analyses add only **1 cm<sup>3</sup> spike solution**.

Fill to the mark and mix thoroughly. Prepare and measure the samples according to routine laboratory procedures.

It is recommended to use a 70 mm needle length Hamilton syringe for maximum recovery from CERTAN® capillary glass.

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**Measurement results shall be reported according to the participant laboratories' own methods and routine practices.**

**The use of corrections is not mandatory but allowed if applied in routine practice.**

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## 2. SAMPLES

### 2.1. FSZA-Org-1, FSZA-Org-2

Sample container: brown CERTAN® capillary glass

Sample volume: ~4 cm<sup>3</sup>

Solvent: acetonitrile

Sample ID	Dilution	Analytes	Expected range (±15%)
FSZA-Org-1	1000x 1 dm <sup>3</sup> volumetric flask: 1 cm <sup>3</sup> isopropanol + 1 cm <sup>3</sup> spike solution + fill to mark with tap water	acenaphthene	0.2– 1.2 µg/dm <sup>3</sup>
		acenaphthylene	
		anthracene	
		benzo(a)anthracene	
		benzo(a)pyrene	
		benzo(e)pyrene	
		benzo(b)fluoranthene	
		benzo(k)fluoranthene	
		benzo(g,h,i)perylene	
		dibenzo(a,h)anthracene	
		phenanthrene	
		fluoranthene	
		fluorene	
		indeno(1,2,3-cd)pyrene	
FSZA-Org-2	1000x 1 dm <sup>3</sup> volumetric flask: 1 cm <sup>3</sup> spike solution + fill to mark with tap water	chrysene	0.01 – 0.12 µg/dm <sup>3</sup>
		pyrene	
		PCB-28	
		PCB-52	
		PCB-101	
		PCB-118	
		PCB-138	
		PCB-153	
		PCB-180	

## 2.2. FSZA-Org-3, FSZA-Org-4

Sample container: brown CERTAN® capillary glass

Sample volume: ~4 cm<sup>3</sup>

Solvent: 20% n-pentane, 80% methanol

Sample ID	Dilution	Analytes	Expected range (±15%)
FSZA-Org-3	1000x 1 dm <sup>3</sup> volumetric flask: 1 cm <sup>3</sup> spike-solution +	EPH (C10-C40 range)	30 – 200 µg/dm <sup>3</sup>

## 2.3. FSZA-Org-5, FSZA-Org-6

Sample container: brown CERTAN® capillary glass

Sample volume: ~4 cm<sup>3</sup>

Solvent: methanol

Sample ID	Dilution	Analytes	Expected range (±15%)
FSZA-Org-5	1000x 1 dm <sup>3</sup> volumetric flask: 1 cm <sup>3</sup> spike-solution +	benzene	0.3 – 3.5 µg/dm <sup>3</sup>
		toluene	10 – 65 µg/dm <sup>3</sup>
		ethylbenzene	10 – 65 µg/dm <sup>3</sup>
		o-xylene	5 – 45 µg/dm <sup>3</sup>
FSZA-Org-6	fill to mark with tap water	m,p-xylene (sum)	10 – 65 µg/dm <sup>3</sup>
		o,m,p-xylene (total)	10 – 65 µg/dm <sup>3</sup>

### 3. SUBMISSION OF RESULTS

Participants are requested to report the measured values together with their **expanded measurement uncertainty** (coverage factor  $k = 2$ ), expressed in the **same unit** as the measurement results.

Results must be submitted electronically via [www.qualcoduna.hu](http://www.qualcoduna.hu) electronic submission portal.

#### Results submission steps:

- Open the website and select **Login to electronic services**.
- Log in to access the participant interface.
- Select Recording and viewing measurement results.
- After submission, a confirmation will be generated (save/print it).
- Keep and verify the confirmation.
- **Important:** if no confirmation appears, submission was not successful.

#### SUBMISSION DEADLINE: JULY 3, 2026 (FRIDAY)

Results submitted after the deadline, values marked with “<” or “>”, or results in different units will not be considered. (Reference: ISO 13528:2022. Statistical methods for use in proficiency testing by interlaboratory comparisons).

Reporting zero ("0") as a result will be considered a physically incorrect value and will be evaluated.

Budapest, 21<sup>st</sup> May, 2026

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

Dr. Norbert Mátrai  
Head of Department