

## WORK INSTRUCTIONS

### Distribution 2018/I.

#### General instructions

Samples in the package and respective determinants are as follows:

- SW-N-1 and SW-N-2: real surface water samples in 500 cm<sup>3</sup> plastic bottles for the analysis of NH<sub>4</sub><sup>+</sup>-N, NO<sub>3</sub><sup>-</sup>-N, organic N, total N, PO<sub>4</sub><sup>3-</sup>-P, total P (TP);
- SW-N/M-1 and SW-N/M-2: spike solutions (synthetic concentrates) in 20 cm<sup>3</sup> plastic containers containing NO<sub>2</sub><sup>-</sup>-N;
- WATER FOR DILUTION - NO<sub>2</sub><sup>-</sup>-N: simulated surface water in 500 cm<sup>3</sup> plastic bottles to be used for the dilution of NO<sub>2</sub><sup>-</sup>-N spike solutions SW-N/M-1 and SW-N/M-2;
- SW-Org-1 and SW-Org-2: spike solutions (synthetic concentrates) in 4,5 cm<sup>3</sup> amber capillary bottles for the analysis of lindane, atrazine and 4,4'-DDT.

Samples should be stored unopened at 4 ± 2°C in the dark until analysis. Appropriate measures should be taken to prevent cross-contamination. All constituents are present in soluble form, samples should not be filtered.

Samples should be analysed as soon as possible (in case of pesticides: within 1 week from the time of arrival to the laboratory) and immediately after opening sample containers. Samples should be analysed by the method routinely used in the laboratory.

Please follow the safety instructions for laboratory chemicals when handling samples.

#### Sample preparation and analysis

- SW-N-1 and SW-N-2: Samples are of real surface water of origin, pretreated and preserved according to the requirements of ISO 5667-3, i.e. by addition of sulphuric acid. Samples should be analysed directly. Please remember to adjust pH before analysis.
- SW-N/M-1 and SW-N/M-2: Spike solutions are preserved by addition of Hg(II)Cl<sub>2</sub>. Proficiency testing samples should be prepared in situ by adding spike solutions to water issued for dilution, which is simulated surface water, pretreated by bringing to boiling point. Preparation instructions: dilute an aliquot of spike solution by a factor of 50 (e.g. 1,0 cm<sup>3</sup> to 50 cm<sup>3</sup>) using "WATER FOR DILUTION - NO<sub>2</sub><sup>-</sup>-N". Measurement results should be reported for the samples prepared as above.

- SW-Org-1 and SW-Org-2: Solvent of the spike solutions is methanol. Proficiency testing samples should be prepared in situ by adding spike solutions to pesticides-free laboratory water (e.g. high purity water). Preparation instructions: dilute an aliquot of spike solution by a factor of 1000 (e.g. 0,5 cm<sup>3</sup> to 500 cm<sup>3</sup>) using pesticides-free laboratory water. Measurement results should be reported for the samples prepared as above and should be corrected with recovery values.

### 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 should be preferably reported **electronically via our webpage** ([www.qualcodanube.eu](http://www.qualcodanube.eu)) using your personal customer ID which has been communicated earlier by e-mail. It is also possible to report results by fax (+36-1-872-3806) or by e-mail ([info@qualcodanube.eu](mailto:info@qualcodanube.eu)) using the Data report form enclosed.

### Reporting deadline: 09 November, 2018

Please make the appropriate rounding and report in the unit of measurement indicated. Results reported after deadline or in inappropriate measurement units are not considered during evaluation, neither are results reported as zero or "< LOD/LOQ" (see ISO 13528:2015. "Statistical methods for use in proficiency testing by interlaboratory comparisons" for further reference).

Budapest, 11 September 2018

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