

Circular sample 2022

A circular sample is a sample that allows laboratories in particular to compare their professional skills with each other. Officially, it is a test of the competence of laboratories, which takes place under the auspices of the Centre for Assessment of Laboratory Competence (ASLAB), in the field on which the given laboratory focuses (hydrobiological, microbiological, chemical, or radiochemical). The compliant laboratory subsequently obtains a certificate.

The last multiparametric circular sample in the field of hydrobiology was prepared at WRI TGM in Prague under the ASLAB auspices by RNDr. Ladislav Havel, CSc., and RNDr. Blanka Desortová, CSc., in 2019.

The opportunity to prepare a circular sample for the year 2022 was offered to me at the Determination Course of Copepods, which is organized every spring by a group of zooplankton specialists of the Czech Limnological Society (Limnospol). Due to the great interest in the sample from among the zooplankton specialists from the water management laboratories of the Povodí state enterprises, there was no reason to hesitate, and together with the Department of Ecology – Hydrobiology of Charles University in Prague and Limnospol, preparations began. First, I consulted Ing. Hana Kohoutová from ASLAB. Since it was supposed to be a sample focused exclusively on the qualitative determination of zooplankton, we agreed to evaluate a circular sample outside the ASLAB system. The preparation of the samples itself was preceded by a consultation with RNDr. Blanka Desortová, CSc., who has extensive experience with such samples. Species that were represented by a large number of individuals had to be selected for the samples. Simultaneously, it was necessary to separate these species from the original sample in which they were located, so that the resulting circular sample was as clean as possible and it was clear to the participants at a glance which species they were to determine. Part of the preparation for me was also the creation of an "advertising" sticker "Circular sample 2022", by which the laboratory or office could show their involvement in testing the circular sample. Once the samples were ready, one of them went to RNDr. Martin Černý, Ph.D., to the Department of Ecology – Hydrobiology, where my work was checked, and subsequently with the financial support of Limnospol (RNDr. Michal Šorf, Ph.D., bursar) I was able to send a sample and a sticker to all participants. Seven samples travelled to the water management laboratories of the state enterprises of the Vltava, Elbe, Ohře, Morava, and Odra basins. One went to Mendel University in Brno. The whole preparation took me about a month. Participants received their sample on 20 July 2022, and the deadline for submitting results was set for 30 September 2022.

Each sample contained 11 species, which consisted of representatives of *Cyclopoida*, *Calanoida*, water fleas (*Cladocera*), and *Rotifera*. The resulting evaluation was very varied. Only one laboratory identified all species correctly. Three labs achieved 91 %, one achieved 82 %, followed by three participants who were not as successful this year, achieving 64 % and 55 % success rates.

Finally, I would like to thank everyone who trusted me and helped me make this year's circular sample; at the same time, I look forward to a large participation in 2025.

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