

**European Mountain lake Ecosystems: Regionalisation,
diaGnostics & socio-economic Evaluation**

EMERGE

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Sampling zooplankton

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The way of sampling zooplankton is the same as used previously in the AL:PE project and in MOLAR WP3. The aim is the assessment of species structure and abundance. See also EMERGE 07, Plankton food web sampling protocol.

1. Equipment and materials

- boat (inflatable or other), anchor, line
- plankton nets:
 - a. AL:PE net (1): quantitative pelagic net, Apstein type, #200 μm
 - b. AL:PE net (2): qualitative pelagic, #40 μm
 - c. (optional): AL:PE net (3): qualitative littoral, #100 μm
- formaldehyde, plastic bottles 100 - 250 ml

2. Sampling procedure

2.1 Large pelagic zooplankton, quantitatively (ZOO)

Quantitative sample from the open water, using the net (1). The boat will be anchored close to the maximum depth. Tow the net from the bottom to the surface. Try to get as close to the bottom as possible but avoid contamination of samples with the sediment. The towing speed should be about 0.3 m per second (time in seconds = length in m x 3). After each haul the inner surface of the net must be rinsed carefully by lowering the net (bucket closed) into the water. Then the contents of the bucket are emptied into a sampling bottle. Repeat until all animals are emptied into the bottle. Take several hauls in order to get rich material. Write down the towing length and the number of hauls per sample. Preserve with formaldehyde to the final concentration of 4%. The sampling bottle must be almost full. Label: ZOO, lake, date, Length (m), number of tows, net opening diameter (cm) - or: AL:PE (1) net, if you use a net supplied from Prague.

2.2 Pelagic zooplankton, all sizes, qualitatively

Qualitative sample using the net (2): take vertical and long oblique hauls in order to obtain a rich sample. Preserve with formaldehyde. Label: Lake, date, qualitative sample #40.

2.3 Littoral zooplankton, qualitatively (optional)

Qualitative sample using the net (3): throw the net repeatedly from the rocky shore and tow it along solid surfaces (rocks), partially touching them (but avoid losing the net by getting it caught on a rock). The sample will contain a certain amount of debris. Preserve like the previous sample and label: Lake, date, littoral.

Note: This is a sample from shallow water < 2 m.

Note to the preservation of all zooplankton samples

Preserve with formaldehyde to the final concentration of 4%. Do not leave too much air in the bottles, after preservation the bottles should be almost full. Be sure that all sampling bottles are tight and put the preserved samples into a plastic bag anyway. Good field bottles for 40% formaldehyde are plastic shampoo bottles - they use to be tight enough (check by pressing the bottle filled with water).