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INFLUENCE OF MOSSES SAMPLE PREPARATION METHODOLOGY ON THE COEFFICIENT OF VARIATION (*CV*)

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The aim of the research carried out with the use of mosses was to assess the homogeneity of biological material depending on the place of sampling and the method of their preparation for exposure within the framework of active biomonitoring of urbanised areas. The research was carried out with the use of *Pleurozium schreberi* mosses, which was taken from three measurement sites in the Stobrawski Forest in the Opolskie Province. Mosses sampling sites varied in terms of exposure to heavy metal contamination by anthropogenic factors. In mosses samples selected heavy metals: Mn, Fe, Ni, Cu, Zn, Cd and Pb were determined by atomic absorption spectrometry (F-AAS). In the first stage of the study, 12 moss samples were taken from each of the 3 measurement points, from which only the green parts of moss gametophytes purified of mechanical impurities were mineralized. In the second stage of the study, green parts of gametophytes were additionally conditioned in demineralised water (κ = 0.5 μS/cm conductivity). In the next stage of the study, the influence of conditioning and averaging of mosses samples on the homogeneity of the material was checked. For comparison, the study was also carried out using brown parts of mosses gametophytes and whole plants. The results of the conducted studies were analyzed by determining coefficient of variation (*CV*). It was found that *Pleurozium schreberi* mosses are not homogeneous material. The *CV* coefficient of variation was influenced, among others, by the location of the sampling site and the level of mosses contamination of biological material, e.g. with heavy metals. Conditioning in demineralised water and averaging makes it much more homogeneous and the *CV* coefficient of variation value don't exceed 10 %. Only appropriate preparation and preparation of mosses allows their use in active biomonitoring of urban areas.

Keywords: *Pleurozium schreberi mosses, heavy metals, coefficient of variation*

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