

HEAVY METAL CONTENT IN MOSSES FROM ANTARCTICA

by

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Antarctica is less exposed to human industrial activity than the rest of the world. This enables us to determine a comparative level for the research of environmental pollution in other regions of the Earth.

In the years 1987/1988, during the XII-th Polish Antarctic Expedition materials for determination of the levels of heavy metal were collected.

So far, heavy metal content in the samples of *Sanionia uncinata* have been determined.

Samples were collected on King George Island, in the areas of the Polish, Argentine, Chinese and Chilean Antarctic Stations. Some samples come from the area of the newly built (in 1988) Antarctic Station on Livingstone Island.

Lower concentrations of analysed elements were found in the materials collected from the grounds of the Spanish Station, namely: 7.9 ppm Cu, 22.7 ppm Zn, 45.8 ppm Mn, 0.42 ppm Cd, 1.63 ppm Pb, 1.79 ppm Ni. Content of these elements is similar to (Cu, Zn), or lower (Pb) than the content in the samples of *S. uncinata* from Southern Spitsbergen.

The highest content of heavy metals, accordingly 38.9 ppm Cu, 63.2 ppm Zn, 295.4 ppm Mn, 0.80 ppm Cd, 45.84 ppm Pb, 7.23 ppm Ni, was found in mosses from the Polish Antarctic Station. Still, these contents are lower, or similar to the corresponding contents from the Polish Station on Spitsbergen.

The results are fundamental to future monitoring studies.