



## USE OF AQUATIC BRYOPHYTES AS BIOMONITORS FOR RADIOACTIVE STUDIES

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As a widespread water moss *Fontinalis antipyretica* is frequently used as a biomonitor for trace elements pollution in lakes and running waters

The purpose of this study is to use *Fontinalis antipyretica* as a tool for monitoring of radioactivity in waters from different rivers (Musalenska Bistriza Iskar Maritza etc) in Rila Mountain

The radioactivity of aquatic moss water samples and sediments were measured using HPG detector with the parameters FWHM 2keV at  $^{60}\text{Co}$  efficiency 35% with low background. The dose rate measurements ( $\mu\text{R/h}$ ) show different values according to the place of sampling and reflect the present ecological status of the river ecosystems.

The ongoing measurements will allow the absolute value of  $^{137}\text{Cs}$  in bryophytes to be determined and eventually some seasonal variations to be observed. A special interest is whether the measured activity is accidental or is as a consequence of a long time accumulation in the bryophytes. In this case they could probably be used for water purification.

On that basis the bryophytes could be used for controlling radioactivity of river ecosystems even in high-mountain difficult accessible places replacing the transportation of large volumes of water.

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