

ABSTRACT

The goal of this work was to determine the contents of two main alkaloid types of *Psilocybe* species occurring in the Czech Republic. Correct identification of species was checked by mycology specialist. Qualitative and quantitative determination of substances contained in three collected species of the genus *Psilocybe* was carried out by LC–MSⁿ (LIT).

Samples were mainly collected in the north and northeast Bohemia. Three species of *Psilocybe* were found. The most found species were *P. serbica* var. *bohemica* then *P. semilanceata* and only one deposit of *P. serbica* var. *arcana*. Total of 35 deposits within eighteen locations. From qualitative point of view, the two main alkaloids were confirmed in all samples. Quantitative results for content of psilocin and psilocybin (in this order) are: *P. bohemica* 0,005 – 0,152 %, 0,000 – 0,048 %; *P. semilanceata* 0,087 – 0,337 %, 0,000 – 0,005 %; *P. arcana* 0,018 – 0,031 %, 0,003 – 0,022 %. Results in all locations are similar and rather dependent on the fungi type. Our results are based on dry mass. This work brought fundamental knowledge for future optimisation of analytical methods and assumptions for the project extension of other locations and determination of content of minority substances alongside the content of majority substances.

