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Evaluation of basidiocarps of wood decay mushrooms *Ganoderma sp.* with FTIR ATR spectroscopy

Genus *Ganoderma* consist of a number of species including traditional Asian medicinal mushrooms, which have been cultivated for centuries due to their content of biologically active compounds such as sterols, proteins and polysaccharides. They possess antioxidant, antitumor and other biological activities and stimulate human immune system. This is the main reason why *Ganoderma* mushrooms are used in cosmetic products, as food supplements and medicated foods. There is about hundreds of species of *Ganoderma*. The most famous are *G. linzhi*, *G. applanatum* or *G. recinaceum* [1]. As there is a high diversity between *Ganoderma* species, it is very important to evaluate individual basidiocarps according to their composition, morphological parts (base, stem or pileus) and the stage of growth. One of the simple ways of identification is the use of FTIR ATR spectroscopy as a non-destructive fast screening method combined with multivariate statistics [2]. This work is devoted to the evaluation and characterisation of *Ganoderma* basidiocarps with the combination of ATR-FTIR spectroscopy and statistical discrimination methods like PCA or HCA. Obtained results confirmed significant differences in composition of bases, stems and pilei of various *Ganoderma* species at different stages of development. This analytical approach can be used for effective screening of *Ganoderma* basidiocarps according to their composition.

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