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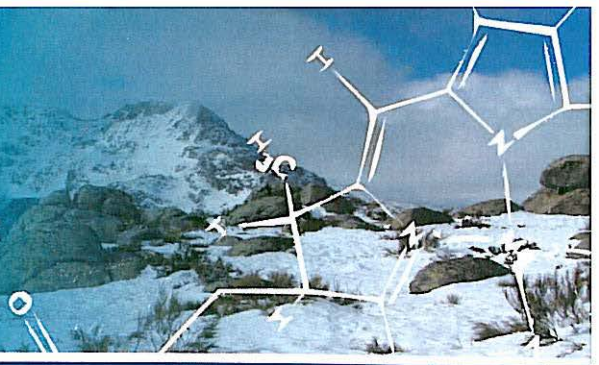

8º Encontro Nacional de CROMATOGRAFIA

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P.014. Chromatographic analysis of nutraceuticals in the wild mushroom *Suillus granulatus* from different origins

Filipa S. Reis[1,2],Vanessa Vieira[1,2], Lillian Barros[1,2], Anabela Martins[2], Dejan Stojković[3], Marina Soković[3], Ana Ćirić[3], Jasmina Glamočlija[3], Isabel C.F.R. Ferreira[1,2]*

[1]*Mountain Research Centre (CIMO), ESA, Polytechnic Institute of Bragança, Portugal*
[2]*School of Agriculture, Polytechnic Institute of Bragança, Portugal*
[3]*University of Belgrade, Department of Plant Physiology, Institute for Biological Research "Siniša Stanković", Belgrade, Serbia*
**iferreira@ipb.pt*

Wild-growing mushrooms consumption has been preferred to cultivated species in many countries of central and Eastern Europe and the majority of the collected mushrooms are used for pickers' own consumption. Hence, in recent times, the consumption of mushrooms has risen greatly, comprising a large number of species with excellent properties, being rich in protein and minerals and low in calories [1]. Another reason for the rise in consumption is the combination of their value as a food as well as their medicinal and nutraceutical values [2].

This work presents the profiles of fatty acids, free sugars and tocopherols of the wild species *Suillus granulatus* from Portugal and Serbia, comparing the results with each other. Fatty acids were determined by GC-FID and free sugars and tocopherols were analysed by HPLC coupled to a refraction index (RI) and fluorescence detector, respectively. The mentioned profiles did not differ much between both samples from this species. Concerning fatty acids, polyunsaturated fatty acids were found in higher percentages, being linoleic and α-linolenic acids the prevailing fatty acids found in the Portuguese sample, and oleic acid and linoleic acids the prevailing fatty acids quantified in the Serbian one. The free sugars profiles were also similar, once it was possible to quantify fructose, mannitol and trehalose in both species and the total concentration values were also identical (12.77 g/100 g dw for the Portuguese sample and 12.68 g/100 g dw for the Serbian species). Regarding tocopherols, the four isoforms of vitamin E (α-, β-, γ- and δ-tocopherol) were detected in the Serbian mushroom (219.92 μg/100g dw of total tocopherols); however the Portuguese sample did not reveal the presence of the γ-tocopherol isoform (294.94 μg/100g dw of total tocopherols).

With this work, we were able to confirm that mushrooms can be a source of nutraceuticals, such as unsaturated fatty acids, monosaccharides or

disaccharides, and vitamins. Despite chemical profiles being highly influenced by the environmental conditions, *Suillus granulatus* sample from two different countries presented similar profiles of the analyzed molecules.

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