



# 10º Encontro Nacional de Cromatografia

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COM O ALTO PATROCÍNIO DE SUA EXCELÊNCIA



*O Presidente da República*

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10º Encontro de Cromatografia

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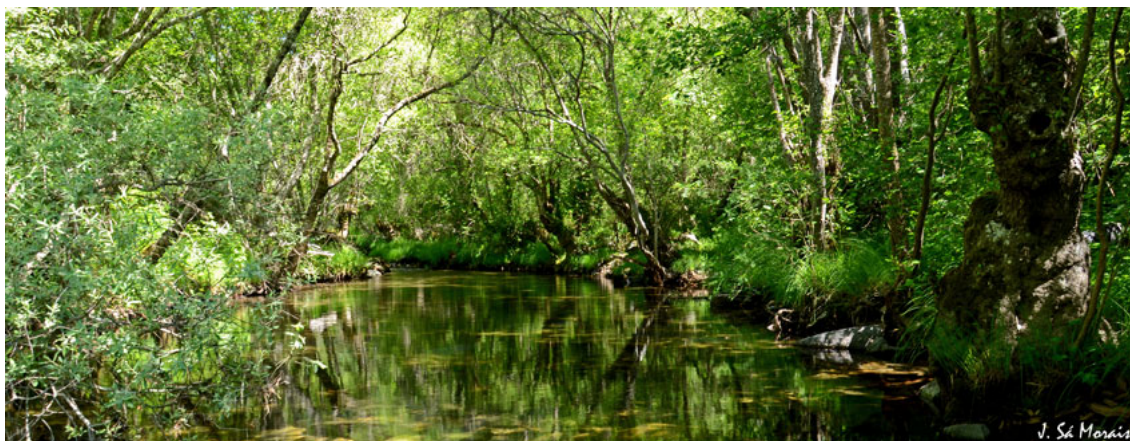
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## PC-36

# Wild mushrooms as a possible source of nutraceuticals – Use of chromatographic techniques to obtain the species chemical profile

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Although mushrooms use has been reported for thousands of years, it has only been in recent years that the consumption of mushrooms has increased, mainly due to the increasing awareness that a stable and balanced diet exerts a key role in normal body functioning and sustaining health [1]. Indeed, some authors consider mushrooms as “inherent functional foods” [2].

This work presents the profiles of fatty acids, tocopherols and phenolic acids of two wild species from the genus *Suillus*, namely *S. granulatus* and *S. luteus*. Fatty acids were determined by GC-FID, tocopherols were analysed by HPLC coupled to a fluorescence detector, and phenolic acids by HPLC-PDA.

Oleic and linoleic acids were the prevailing fatty acids detected in both species (31 – 57% of total fatty acids). Regarding the tocopherols profile, the main vitamers quantified in *S. granulatus* were the  $\beta$ - and  $\delta$ -tocopherols (175 and 102  $\mu\text{g}/100\text{ g dw}$ , respectively), while the main vitamer found in *S. luteus* was  $\gamma$ -tocopherol (337  $\mu\text{g}/100\text{ g dw}$ ). Gallic and *p*-hydroxybenzoic acids, as also the related compound cinnamic acid, were identified in *S. granulatus* (0.1 – 0.5  $\text{mg}/100\text{ g dw}$ ); protocatechuic acid was the only phenolic acid detected in *S. luteus* (0.5  $\text{mg}/100\text{ g dw}$ ), as well as the related compound cinnamic acid (0.4  $\text{mg}/100\text{ g dw}$ ).

With this work, we were able to confirm that mushrooms can be a source of nutraceuticals, such as unsaturated fatty acids, vitamins and phenolic compounds. We could also conclude that species from the same genus, can present a similar chemical profile, but since mushrooms are highly influenced by the environmental conditions, the samples may present some differences between them.

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