

# XXII Encontro Nacional SPQ



SOCIEDADE  
PORTUGUESA  
DE QUÍMICA

1911-2011

**100 ANOS**

**100 anos**  
de Química  
em Portugal



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Universidade do Minho · Braga



Sociedade  
Portuguesa  
de Química



Universidade do Minho



Ano Internacional da  
**QUÍMICA**

2011

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## Phenolic profile in edible and non edible wild mushrooms from Northeast Portugal

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The implication of oxidative and nitrosative stress in the etiology and progression of several acute and chronic clinical disorders such as cancer, cardiovascular and neurodegenerative diseases, has led to the suggestion that natural antioxidants may have health benefits as prophylactic agents. Against this background, the possibility of including mushrooms, which contain significant amounts of bioactive phytochemicals, in our diets may provide desirable health benefits, beyond that of basic nutrition. Phenolic compounds might provide health benefits associated with reduced risk of chronic diseases which may relate to their ability to reduce agents by donating hydrogen and quenching singlet oxygen. It is our interest to characterize the phenolic composition of mushroom species and to understand if differences exist between the phenolic profile of edible and non edible species.

Therefore, analysis of phenolic compounds in seventeen Portuguese wild mushroom species was carried out by high-performance liquid chromatography coupled to photodiode array detection (HPLC-DAD). Protocatechuic, *p*-hydroxybenzoic, *p*-coumaric and cinnamic acid were found and quantified. *Fistulina hepatica* showed the highest phenolic acids concentration (111.72 mg/Kg, dw) due to the significant contribution of protocatechuic (67.62 mg/Kg) and *p*-hydroxybenzoic (41.92 mg/kg) acids [1]. The edible mushrooms analyzed could be directly used in the human diet to combat oxidative stress, while inedible species could represent a source of extractable phenolic compounds to be used as additives in the food industry or as components in pharmaceutical and cosmetic formulations, due to their well-known antioxidant properties.

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### References

[1] Vaz, J.A., Barros, L., Martins, A., Morais, J.S., Vasconcelos, M.H., Ferreira, I.C.F.R. LWT, 44 (2011), 343-346.