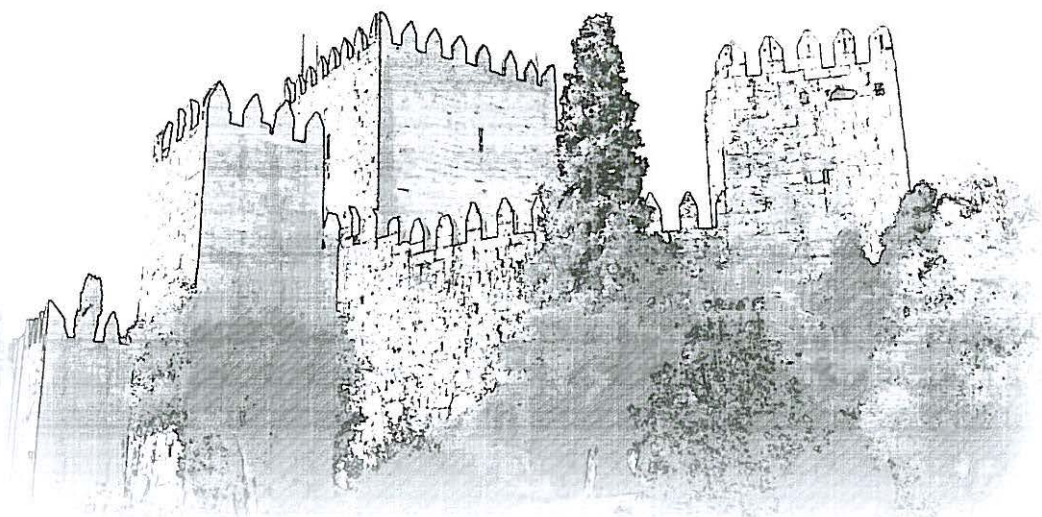


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of spearmint (*Mentha spicata* L.) or sage (*Salvia officinalis* L.) [2]. But, contrary to these both last mentioned brews, Cl⁻, NO₃⁻, PO₄⁻ and SO₄⁻ content was, respectively, 20, 40, 3 and 7 fold decreased in the DIS infusions studied here. Compared to spring water Oaza (Morzeszczyn, Poland) content of F⁻ and SO₄⁻ anions was increased by 3 to 32 and by 12 to 43 folds, respectively, in analyzed hawthorn infusions.

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Keywords: Anionic minerals, Hawthorn, Brews, Ion chromatography, Molecular nutrition

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P2P4 Effects of gamma irradiation on macro and microelements of *Boletus edulis* Bull.: Fr. and *Hydnum repandum* L.: Fr.

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Mushrooms are considered excellent sources of minerals, being necessary to know the levels of essential elements in the edible species [1]. Mineral elements are classified in macro (e.g., Ca, Mg, Na, K) and microelements (e.g., Fe, Cu, Mn, Zn) with functions that include maintaining acid-base balance, osmotic regulation, oxygen transport and enzymatic cofactors [2-3]. Mushrooms need special caution in their conservation. Accordingly, treatments such as gamma rays have been applied to improve their shelf life and reduce health hazards caused by pathogenic microorganisms [4]. In this work, gamma irradiation was applied to *Boletus edulis* Bull.: Fr. and *Hydnum repandum* L.: Fr. to assess the effects on the minerals composition. The fruiting bodies were collected in Trás-os-Montes (Northeast of Portugal) in November 2012. Fresh samples were irradiated in experimental equipment with four 60Co sources, at 1 and 2 kGy. The studied mushrooms presented high levels of macro and microelements. Up to the applied doses, some significant differences were observed. However, in most cases, changes did not follow a marked tendency, being more likely to be derived from the natural variability in mineral accumulation as a result of mushroom growth in different ecosystems. Hence, irradiation treatment, using gamma rays up to 2 kGy, is a suitable technique to disinfect and/or decontaminate wild mushrooms, independently of their species or physical state.

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Keywords: Wild mushrooms, Macroelements, Microelements, Gamma irradiation.

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P2P5 Hsian-tsao tea reduces hepatic triglyceride output and inhibits de novo lipogenesis by MAPK and AMPK activation

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Hsian-tsao (*Mesona procumbens* Hemsl.) is a popular herb in orient. This study aimed at investigating the hypolipidemic function, action mechanism and principles of Hsian-tsao tea (HT). HT were fractionated according to polarity, and three compounds including one new compound, mesopropic acid A and two known compounds, caffeic acid and kaempferol-3-O- β -D-glucopyranoside, were identified in the fractions displaying the most potent hypolipidemic activity. We first carried out an animal study by incorporating liophilised HT into atherogenic diet and feeding hamster for 6 wk. The serum triglyceride (TAG), cholesterol, VLDL-TAG and LDL-cholesterol in ADH group were significantly lower than those in the AD group ($P < 0.05$). Supplementation of HT did not affect liver lipids. In addition, HT reduces TAG output from hepatocytes via activation of MAPK-ERK and MAPK-JNK pathways, concomitantly activates AMPK signaling, without causing TAG accumulation in hepatocytes.

Keywords: Hsian-tsao; hypolipidemia; apoB; Hamster; HepG2 cells; mesopropic acid A.

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P2P6 Characterization of phenols in *Salvia elegans* and *Salvia greggii*

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Although *Salvia elegans* and *Salvia greggii* are commonly used in traditional medicine in North America [1] their main bioactive components remain unknown. The present study aims to identify the main phenolic components of these two plants. Aqueous extracts of both species were prepared according to the procedure described by Ferreira et al [2] and the total phenolic content of the extracts was evaluated through an adaptation of the Folin-Ciocalteu method [3]. Identification of the phenolic compounds was accom-