

PHYTOCHEMICAL INVESTIGATION OF HYDRODISTILLATION BY-PRODUCTS OF PLANTS OF THE GREEK FLORA

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Cretan lama is an innovative food supplement which contributes to strengthen the human body's defense. It is based on the unique biodiversity and the beneficial effects of plants of the Greek flora on human health and well-being. Cretan lama is produced by the hydrodistillation of three aromatic plants, Greek dittany (*Origanum dictamnus*), thyme (*Coridothymus capitatus*) and sage (*Salvia fruticosa*) [1,2]. Various by-products are produced during the procedure, among them hydrosols and aqueous plant extracts that contain bioactive polar substances and could be of further exploitation. The materials (hydrosols and aqueous plant extracts) were treated with resin chromatography and afterwards separated with CPC to isolate their main compounds. The chemical profile of the obtained extracts and fractions was determined using modern chromatographic and spectroscopic techniques (HPTLC, HPLC-DAD, LC-MS and NMR). The phytochemical study showed that especially the aqueous extracts were very rich in phenolic compounds and flavonoids. Their antioxidant properties were also evaluated and again the aqueous extracts and especially the fractions obtained after resin chromatography had low IC50 values. The study showed that the by-products had promising chemical profiles containing bioactive substances and could be developed to new innovative phytotherapeutic products and/or food supplements.

References

[1] Anastasaki M. et al., 2017. BMC Complement. Altern. Med., 17, Article number 466.

[2] Duijker G. et al., 2015. J. Ethnopharmacol., 163, 157-166.

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