

TRITERPENES, PHENOLICS AND HEPATOPROTECTIVE ACTIVITY

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Abstract

Compounds 1-8 were isolated from the aerial parts and roots of *Origanum syriacum* L. subsp. *sinaicum* Greuter and Burdet and *O. majorana* L. They were identified as β -sitosterol 1, four triterpene acids: ursolic acid 2, 3β -hydroxyurs-12-en-27-oic acid 3, 3α -hydroxyolean-12-en-27-oic acid 4, 2α -hydroxyursolic acid 5, a flavone: apigenin 6, a flavonol: quercetin 7 and a phenol acid: rosmarinic acid 8. Identification of these compounds was carried out on bases of physicochemical characters and spectroscopic analyses. The total flavonoid content, as determined colorimetrically, amounted to 0.92 % and 0.87 %, calculated as quercetin per dry weight in both species, respectively. Quantification of flavonoids and phenolic acids was carried out adopting HPLC technique. Major identified components in both species were caffeic, rosmarinic and ferulic acids. Acute toxicity studies showed that *O. syriacum* L. subsp. *sinaicum* Greuter and Burdet and *O. majorana* L. are safe having an LD 50 of up to 10 g/kg b.wt. of aqueous and ethanol extracts and 8.4 and 9.3 g/kg b.wt. of the volatile oils, respectively. Chronic toxicity studies showed safety of both herbs upon long term use. The aqueous and fractionated ethanol extracts of both herbs exhibited a pronounced hepatoprotective, as well as, hepatocurative activity.

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