

عنوان مقاله:

Investigation of Chemical Composition of Oriental plane (*Platanus orientalis* L.) Hydrosol and its Effects on Tissue Damage Markers and Plasma Enzymes in Short-term Consumption

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خلاصه مقاله:

Oriental plane hydrosol (distillate), as a remedy for weight gain and asthma treatment is popular in ethnomedicine. Phytochemicals of medicinal plants could have side effects or serious damages. In this study, the oriental plane hydrosol was prepared by steam distillation. Also, three oriental plane hydrosol samples from different companies were purchased from herbal market to compare the constituents. The phytochemicals in hexane and chloroform extracts of the hydrosols were identified by GC-MS analysis. In order to investigate subacute toxicity, the hydrosol was given to groups of 6 of male mice at doses of 10, 50, 100, 300 or 500 μ l/ mouse/ twice a day by gavage for 14 consecutive days (subacute toxicity) or just for one day (acute toxicity). Serologic and pathologic samples were prepared. Chloroform extracts contained mostly (Z)- β -hexenol, thymol, carvacrol, camphor and the main constituents of hexane extracts include decane, dodecane and hexadecane. The results showed lack of serologic toxicity in subacute consumption of the hydrosol. In acute toxicity study, the levels of ALT, LDH, and BUN increased significantly. Other enzymes did not change significantly in compare to the control group. No significant pathologic damage was seen in heart or lung tissues, but the liver and kidney showed mild inflammation in acute toxicity study and inflammation in subacute toxicity studies. Determination of compounds which are responsible for the observed effects and especially safety of this hydrosol consumption for the longer periods can prevent side effects or possible toxicities.

کلمات کلیدی:

Aromatic water, Oriental Plane Distillate, *Platanus orientalis*, Toxicity

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