

عنوان مقاله:

بررسی تنوع فیتوشیمیایی عصاره اتانولی پوست درخت *Fraxinus excelsior* L. در رویشگاه های مختلف جنگل های هیرکانی در استان مازندران

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خلاصه مقاله:

Fraxinus excelsior L. is a forest species with versatile biological and medicinal activities that its extracts are used as a model for making new compounds in the treatment of various human diseases. In this study, in order to investigate how the biochemical characteristics of this forest species are affected by environmental conditions, four habitats of Perchink, Amreh, Alandan and Qarnsara with an altitude of ۲۰۰ to ۱۴۰۰ meters, were selected in Tajan and Siahroud watersheds located in Mazandaran province. In each habitat, skin samples were taken from ۳ trees (repeated) in summer. Ethanol extracts were obtained by maceration and were analyzed by GC/MS and the physical and chemical properties of the soil samples were measured. The most important compounds of extracts were included: benzeneethanol (۳۰.۳۳-۵۱.۳۵%), d-allose (۶.۲۰-۳۱.۷۲%), scopoletin (۱۴.۶۵-۲۶.۸۳%), tyrosol acetate (۵.۳۷-۹.۰۶%), carvacrol (۰-۴.۹۳%), homovanillyl alcohol (۳.۸۴- ۶.۵۳%) which increased with increasing altitude. Also, there was negative relationship between the identified compounds and soil nutrients. Among them, only polyphenol tyrosol acetate behaved differently from the other compounds in a way that showed a negative relationship with the altitude factor and a positive correlation with the amount of carbon and absorbable phosphorus in the soil. Also, the chemical composition of d-allose was not observed in Perchink habitat. These results were showed that the chemical properties of this tree skin are affected by habitat conditions, which caused increases the species' resistance to pathogens. As a result, considering that the amount of active ingredients in this species was higher at higher altitudes and the presence of these compounds increases the resistance to pathogens, it seems planting this species is more productive at higher altitudes to achieve multiple goals in afforestation.

کلمات کلیدی:

اسکوپولتین، پوست، زبان گنجشک، کارواکرول، مازندران

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