

عنوان مقاله:

Physicochemical and antioxidative characteristics of Iranian pomegranate (*Punica granatum* L. cv. Rabbab-e-Neyriz) juice and comparison of its antioxidative activity with *Zataria multiflora* Boiss essential oil

محل انتشار:

گفتمان پژوهش دامپزشکی، دوره 5، شماره 4 (سال: 1393)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Pomegranate juice (PJ) and its products are directly used in foods due to their pleasant taste and palatability as well as preservative effects. In spite of useful effects of essential oils such as *Zataria multiflora* Boiss essential oil (ZEO) on prolonging shelf-life of foods, their application is restricted due to their vigorous taste and aroma. In the present study, physicochemical characteristics, chemical compositions and antioxidative activities of two Iranian native plants, PJ (Rabbab-e-Neyriz cultivar) and ZEO were investigated. ۲, ۲-diphenyl-۱-picrylhydrazyl (DPPH) radical scavenging and reducing power tests were used for measuring antioxidant activity. The level of total phenolic of them were also determined. Total soluble solids content, pH value, titratable acidity content and total anthocyanins content of PJ were also measured. Chemical compositions of ZEO were determined using Gas-chromatography, mass-spectrometry (GC-MS). The results of antioxidative tests indicated that the ZEO was significantly more potent ($p < 0.05$) than PJ. Also the phenolic content in ZEO (۲۶۲.۵۲ mg per g) was significantly higher ($p < 0.05$) than PJ (۱۵۴.۹۰ mg per ۱۰۰g). Chemical compositions analysis of ZEO indicated that its major components were carvacrol (۵۹.۱۷%), linalool (۲۳.۶۷%), trans-caryophyllene (۳.۰۷%) and carvacrol methyl ether (۲.۴۴%). In the present study, physicochemical and antioxidative characteristics of Rabbab-e-Neyriz PJ were determined for first time. It was also found that ZEO in comparison with PJ had higher antioxidative activity and total phenolic content.

کلمات کلیدی:

Antioxidative activity, Pomegranate juice, Shelf life, Taste and aroma, *Zataria multiflora* Boiss essential oil

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