

عنوان مقاله:

study of optimization extraction process effect from some sour orange cultivars during ripening time by maceration .method and its antioxidant activity

محل انتشار:

دومین کنگره بین المللی و بیست و پنجمین کنگره ملی علوم و صنایع غذایی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

In this study, the effect of extraction by different solvents (ethanol, methanol, ethanol/water (50:50), methanol/water (50:50), and water) as maceration method on the antioxidant properties of raw and ripened extracts are evaluated to clear the best extraction method for optimal use of this by-product. Total phenolic content is measured due to the Folin-Ciocalteu method and antioxidant activities of each extract are evaluated with the 2,2-diphenyl-1-picrylhydrazyl (DPPH), b-carotene bleaching, oxidative stability indexes. The highest amount of phenolic compounds is found in ethanol-water extraction (2000 ppm). Different extracts showed significantly different antioxidant activity ($p < 0.05$). The highest value was 944 $\mu\text{g}/\text{mg}$ gallic acid equivalent that belonged to ripened sample. The highest DPPH activity also was found in ethanol-water extracts 82%, in b-carotene system and also OSI test the highest values were respectively 81.52% and 6.30 h. The lowest values, not only in DPPH test but also in other tests were belong to water solvent extracts from raw sample. It showed there are three important values which have important effects on optimization of the antioxidant activity: solvent and antioxidant nature and being ripened and raw

کلمات کلیدی:

maceration, radical inhibition strength, total phenolic compounds

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<https://civilica.com/doc/873544>

