

عنوان مقاله:

Use of Garlic Essential Oil Nanoemulsion Encapsulated With Persian Gum on Antioxidant Activity, Shelf Life, and Sensory Properties of Sunflower Oil

محل انتشار:

هفتمین همایش بین المللی مطالعات میان رشته ای در صنایع غذایی و علوم تغذیه ایران (سال: 1402)

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خلاصه مقاله:

This study aimed to examine the impact of encapsulation by the nanoemulsion (NE) method of garlic essential oil (GEO) on the oxidation properties of sunflower oil. The effect of different GEO percentages on NE droplet size, encapsulation efficiency, antioxidant properties, stability, and turbidity was investigated in concentrations of ۲۲۲, ۴۲۲, and ۶۲۲ ppm. The droplet mean size of NEs varied from ۵۲.۰۵ to ۲۲۲.۲۲ nm. NEs were added to sunflower oil, and the oil's Peroxide, thiobarbituric acid, iodine, acid values, antioxidant properties, and sensory properties were measured at ۱, ۲۲, ۶۲, and ۰۲ days storage intervals. The results showed that from day ۳۲th to ۰۲th, the lowest amount of Peroxide, thiobarbituric acid, and acid values, and also the highest amount of antioxidant activity (lowest IC₅₀), were detected in the sample with the highest concentration of NE (۶۲۲ ppm) of garlic essential oil nanoemulsion encapsulated with Persian gum.

کلمات کلیدی:

.Antioxidant activity, Essential oil, Encapsulation, Nanoemulsion, Sunflower oil

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