

عنوان مقاله:

The effect of osmotic dehydration on mass transfer and color changes in zucchini during the process of deep frying

محل انتشار:

کنفرانس بین المللی مهندسی و علوم کاربردی (سال: 1394)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

This study was conducted to investigate the effect of different frying conditions on oil content and moisture of fried zucchini, and the impact of osmotic dehydration process before frying on final reduction of oil absorption in fried zucchini and its qualitative characteristics. For this purpose, osmotic dehydration of samples was conducted at two levels of 20 and 25% of salt solution at temperatures of 20 and 40°C together with the control sample. Zucchini was fried after initial treatment at temperatures of 150, 170 and 190°C in three replications. Using data analysis by statistical equations, the most suitable conditions for processing fried zucchini in this study was determined as frying temperature of 170°C, salt water concentration of 25%, and osmotic dehydration temperature of 40°C. In terms of color changes, increasing and reducing L led to a desirable golden color in the fried product. The results of this study suggest that by using osmotic dehydration with salt-water solution as a pre-process, a better product with less oil and more desired color can be achieved.

کلمات کلیدی:

Deep frying, zucchini, osmotic dehydration, color changes, oil absorption

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