

## عنوان مقاله:

Comparative Effects of Hibiscus Leaves and Potato Peel Extracts on Characteristics of Fermented Orange Juice

## محل انتشار:

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## نویسندگان:

A.R.E. El-Hadary - Food Science Department, Faculty of Agriculture, Zagazig University, Zagazig, Egypt, ۴۴۵۱۱

A.M. Sulieman - Food Science Department, Faculty of Agriculture, Zagazig University, Zagazig, Egypt, ۴۴۵۱۱

G.A. El-Shorbagy - Food Science Department, Faculty of Agriculture, Zagazig University, Zagazig, Egypt, ۴۴۵۱۱

## خلاصه مقاله:

Background: Fermented foods are gaining interest because of their ability to improve health, as well as their good taste, and the desire of many to eat them. This investigation aimed to enhance the chemical and physical properties, sensory evaluation, and shelf life of fermented orange juice by adding liquid hibiscus leave (*Hibiscus sabdariffa*) and potato peel (*Solanum tuberosum*) extracts. Methods: The extracts of hibiscus leaves and potato peel were added to fermented orange juice, and the samples were divided into five parts. Two parts with different concentrations of hibiscus leave extracts (۵%, FHL۵ and ۱۰%, FHL۱۰), and the other two parts with different concentrations of potato peel extracts (۵%, FPP۵ and ۱۰%, FPP۱۰). The Fifth part was fermented orange juice without any additives (PC). Then, they were estimated for the acidity, total solid solution, viscosity, carbohydrates, vitamin C, antioxidants profile, color, total microbial count, and sensory evaluation during storage time at  $4 \pm 2$  °C. Statistical analysis was done by IBM SPSS version ۲۵.۰ software. Results: The results showed no significant mean difference ( $p > 0.05$ ) between samples in acidity. FHL۱۰ registered the highest values in total solid solution, vitamin C, antioxidants profile, and sensory evaluation, while FPP۱۰ registered the highest values in viscosity and total microbial count. Also, FPP۱۰ registered the highest values in overall acceptability ( $8.85 \pm 0.24$ ,  $8.78 \pm 0.26$ ,  $8.71 \pm 0.26$ , and  $8.78 \pm 0.26$  at zero, 7th, 14th, and 21st days of storage time, respectively) followed by FPP۵ with no significant mean difference values ( $p > 0.05$ ). Conclusion: The extracts of hibiscus leaves and potato peel can improve acceptability and shelf life of fermented orange juice summarized in the enhancement vitamin content, antioxidants profile, color, and sensory properties. DOI:

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## کلمات کلیدی:

Antioxidants, Hibiscus, Fermentation, Colony Count, Microbial, Citrus

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