

**PENGARUH VARIASI PENCAMPURAN DAGING BUAH LONTAR
(*Borassus Flabellifer*) DAN JERUK MANIS (*Citrus Sinensis*) TEHADAP
SIFAT FISIK, SIFAT ORGANOLEPTIK DAN KADAR SERAT PANGAN
PADA MINUMAN *POPPING BOBA***

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ABSTRAK

Latar Belakang : Rendahnya konsumsi serat pada remaja dapat meningkatkan risiko kanker kolorektal. Buah lontar (*Borassus flabellifer*) dan jeruk manis merupakan sumber serat yang berpotensi dikembangkan menjadi pangan fungsional. Oleh karena itu, penelitian ini mengembangkan *popping* boba berbahan buah lontar dan jeruk manis sebagai alternatif minuman tinggi serat.

Tujuan : Untuk menghasilkan minuman *Popping* Boba dengan variasi pencampuran daging buah lontar dan jeruk manis yang tinggi akan serat pangan serta dapat diterima dari sifat fisik maupun organoleptiknya.

Metode : Penelitian ini menggunakan desain Rancangan Acak Lengkap (RAL) dengan 4 perlakuan variasi pencampuran buah lontar dan jeruk manis, yaitu F0 (100%:0%), F1 (85%:15%), F2 (75%:25%), dan F3 (65%:35%). Sifat fisik dianalisis secara deskriptif, sifat organoleptik menggunakan uji *Kruskal-Wallis*, dan kadar serat pangan menggunakan uji *One Way Anova*. Penelitian dilaksanakan pada April–Juni 2026.

Hasil : Semakin tinggi penambahan jeruk manis, warna *popping* boba semakin kuning, aroma semakin segar, dan rasa sedikit lebih manis, sedangkan tekstur tetap kenyal. Hasil uji organoleptik menunjukkan tidak terdapat pengaruh yang signifikan terhadap warna, aroma, rasa, dan tekstur ($P > 0,05$), namun perlakuan F3 (65% buah lontar : 35% jeruk manis) memperoleh tingkat kesukaan tertinggi. Kadar serat pangan total meningkat seiring penambahan jeruk manis, yaitu dari 4,64% (F0) menjadi 7,70% (F3).

Kesimpulan : Variasi pencampuran buah lontar dan jeruk manis berpengaruh terhadap sifat fisik dan kadar serat pangan total pada produk *popping* boba, namun tidak berpengaruh signifikan terhadap sifat organoleptik. Perlakuan terbaik diperoleh pada F3 (65% buah lontar : 35% jeruk manis) karena menghasilkan kadar serat pangan total tertinggi dan memiliki tingkat penerimaan yang baik oleh panelis.

Kata Kunci : *Popping* boba, buah lontar, jeruk manis, sifat fisik, organoleptik, serat pangan.

**THE EFFECT OF VARIATION IN MIXING LONTAR FRUIT PULP
(BORASSUS FLABELLIFER) AND SWEET ORANGE (CITRUS SINENSIS)
ON PHYSICAL PROPERTIES, ORGANOLEPTIC PROPERTIES, AND
DIETARY FIBER CONTENT IN POPPING BOBA BEVERAGE**

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ABSTRACT

Background: Low fiber consumption among adolescents can increase the risk of colorectal cancer. Lontar fruit (*Borassus flabellifer*) and sweet orange (*Citrus sinensis*) are sources of fiber with potential to be developed into functional foods. Therefore, this study developed popping boba made from lontar fruit and sweet orange as an alternative high-fiber beverage.

Objective: To produce a Popping Boba beverage with variations in the mixture of lontar fruit pulp and sweet orange that is high in dietary fiber and acceptable in terms of physical and organoleptic properties.

Method: This study employed a Completely Randomized Design (CRD) with 4 treatment variations of lontar fruit and sweet orange mixture, namely F0 (100%:0%), F1 (85%:15%), F2 (75%:25%), and F3 (65%:35%). Physical properties were analyzed descriptively, organoleptic properties were assessed using the Kruskal-Wallis test, and dietary fiber content was analyzed using One-Way ANOVA. The study was conducted from April to June 2026.

Results: The higher the proportion of sweet orange added, the yellower the color of the popping boba, the fresher the aroma, and the slightly sweeter the taste, while the texture remained chewy. The organoleptic test results showed no significant effect on color, aroma, taste, and texture ($P > 0.05$); however, treatment F3 (65% lontar fruit : 35% sweet orange) received the highest preference score. Total dietary fiber content increased with the addition of sweet orange, rising from 4.64% (F0) to 7.70% (F3).

Conclusion: Variations in the mixture of lontar fruit and sweet orange affected the physical properties and total dietary fiber content of the popping boba product, but did not significantly affect the organoleptic properties. The best treatment was F3 (65% lontar fruit : 35% sweet orange), as it produced the highest total dietary fiber content and demonstrated good acceptability among panelists.

Keywords: Popping boba, lontar fruit, sweet orange, physical properties, organoleptic, dietary fiber.