FORMULASI DAN EVALUASI SEDIAAN NUTRASETIKAL PERMEN *JELLY* LIMBAH KULIT SALAK (*Salacca zalacca*) DENGAN VARIASI KONSENTRASI GELATIN

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ABSTRAK

Salak pondoh (*Salacca zalacca*) banyak dibudidayakan di Indonesia, sehingga menghasilkan limbah kulit salak melimpah. Kulit salak mengandung alkaloid, flavonoid, dan tanin berpotensi dikembangkan sebagai sediaan nutrasetikal dengan aktivitas antioksidan dan penurun kadar gula darah. Penelitian ini bertujuan memformulasi dan mengevaluasi permen *jelly* limbah kulit salak dengan variasi konsentrasi gelatin 15%, 20%, dan 25%. Evaluasi meliputi uji organoleptik, pH, dan kadar air yang dianalisis deskriptif, serta uji hedonik yang dianalisis statistik (*Friedman* dan *Wilcoxon Signed-Rank* dengan koreksi *Bonferroni*). Hasil menunjukkan peningkatan konsentrasi gelatin memengaruhi organoleptik, menghasilkan tekstur kenyal dan warna menarik, sementara aroma dan rasa khas salak cenderung menurun namun normal. Nilai pH berkisar 5,33 hingga 5,41 dan kadar air berturut-turut 18,5%, 15,5%, 12,5% sesuai SNI No. 3547-2-2008. Uji hedonik menunjukkan formula 3 (gelatin 25%) paling disukai pada tekstur dan warna ($p < 0,05$). Kesimpulannya, formula 3 merupakan formula terbaik dan berpotensi dikembangkan sebagai sediaan nutrasetikal permen *jelly* limbah kulit salak.

Kata Kunci: Kulit Salak, Nutrasetikal, Permen *Jelly*, Gelatin

FORMULATION AND EVALUATION OF NUTRACEUTICAL PREPARATION JELLY CANDY SNAKE FRUIT PEEL WASTE (Salacca zalacca) WITH VARYING GELATIN CONCENTRATIONS

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ABSTRACT

Salak pondoh (Salacca zalacca) is widely cultivated in Indonesia, producing abundant peel waste containing alkaloids, flavonoids, and tannins with antioxidant and antihyperglycemic potential. This study aimed to formulate and evaluate nutraceutical jelly candy from snake fruit peel waste using gelatin concentrations of 15%, 20%, and 25%. Evaluations included organoleptic, pH, and moisture content tests analyzed descriptively, and hedonic tests analyzed statistically using Friedman and Wilcoxon Signed-Rank methods. Results showed that increasing gelatin concentration improved organoleptic properties, yielding a chewy texture and appealing color, while the characteristic aroma and taste of snake fruit slightly decreased but remained acceptable. The pH values ranged from 5.33 to 5.41, and moisture content was 18.5%, 15.5%, and 12.5%, respectively, complying with SNI No. 3547-2-2008. Hedonic analysis revealed that Formula 3 (25% gelatin) was most preferred for texture and color ($p < 0.05$). In conclusion, Formula 3 is the optimal formulation and has potential to be developed as nutraceutical jelly candy.
Keywords: *Snake Fruit Peel, Nutraceutical, Jelly Candy, Gelatin*