

**OPTIMALISASI FORMULASI DAN EVALUASI LIMBAH SERBUK BIJI
DURIAN (*Durio zibethinus* L.) SEBAGAI EKSFOLIATOR DALAM *BODY
SCRUB* EKSTRAK RESIN JERNANG (*Daemonorops draco*)**

Safinatun Naja (2026)
Program Studi Sarjana Farmasi
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ABSTRAK

Perawatan kulit diperlukan untuk melindungi dari radikal bebas yang dapat mempercepat penuaan kulit. Salah satu upaya yang dilakukan adalah penggunaan *body scrub* berbahan alami. Limbah biji durian (*Durio zibethinus* L.) berpotensi dimanfaatkan sebagai eksfoliator, sedangkan resin jernang (*Daemonorops draco*) ditambahkan untuk melihat pengaruhnya terhadap karakteristik fisik sediaan dan memberikan warna alami. Penelitian ini bertujuan mengetahui konsentrasi serbuk biji durian yang optimal sebagai eksfoliator alami, menganalisis pengaruh resin jernang, serta mengevaluasi karakteristik *body scrub* dari kombinasi keduanya. *Body scrub* diformulasikan dengan variasi serbuk biji durian (0%, 5%, 10%, 15%) dan resin jernang (1%, 2%, 3%), lalu dievaluasi meliputi uji organoleptik, homogenitas, pH, daya lekat, daya sebar, viskositas, serta hedonik dengan analisis deskriptif dan statistik menggunakan SPSS melalui uji One Way ANOVA untuk parameter fisik, serta uji Friedman, Wilcoxon untuk data non-parametrik. Hasil menunjukkan formula yang optimal pada formulasi 3 (15% serbuk biji durian) merupakan eksfoliator terbaik, sedangkan formula 2 (2% resin jernang) memberikan kinerja paling baik untuk *body scrub* kombinasi dengan pH (F3: 5,28-5,30) dan (F2: 5,16-5,18), daya sebar (F3: 5,51-5,54 cm) dan (F2: 5,51-5,53 cm), daya lekat (F3: 6,04-6,31) dan (F2: 5,11-5,28), viskositas (F3: 14533-15233 cPs) dan (F2: 14533-14733 cPs). Secara keseluruhan, Formula 3 (15%) dinilai optimal sebagai eksfoliator yang telah di tentukan standar, sedangkan Formula 2 (2%) paling baik terhadap karakteristik fisik sediaan dan memberikan warna alami untuk sediaan, hasil ini juga dinilai dari dari tingkat kesukaan responden dan nilai uji evaluasi yang telah di tentukan, sehingga berpotensi dikembangkan lebih lanjut.

Kata kunci: *Body scrub*, serbuk biji durian, resin jernang, karakteristik fisik, uji hedonik

**OPTIMIZATION FORMULATION AND EVALUATION OF DURIAN SEED
POWDER WASTE (*Durio zibethinus* L.) AS AN EXFOLIATION IN A BODY
SCRUB WITH JERNANG RESIN EXTRACT (*Daemonorops draco*)**

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ABSTRACT

*Skin care is needed to protect against free radicals that can accelerate skin aging. One effort is the use of natural body scrubs. Durian seed waste (*Durio zibethinus* L.) has the potential to be used as an exfoliator, while jernang resin (*Daemonorops draco*) is added to see its effect on the physical characteristics of the preparation and provide natural color. This study aims to determine the optimal concentration of durian seed powder in the formulation as a natural exfoliator, analyze the effect of jernang resin, and evaluate the characteristics of the body scrub from the combination of the two. The body scrub was formulated with variations of durian seed powder (0%, 5%, 10%, 15%) and jernang resin (1%, 2%, 3%), then evaluated including organoleptic tests, homogeneity, pH, adhesiveness, spreadability, viscosity, and hedonic with descriptive and statistical analysis using SPSS through the One Way ANOVA test for physical parameters, and the Friedman, Wilcoxon test for non-parametric data. The results showed that the optimal formulation in formulation 3 (15% durian seed powder) was the best exfoliator, while formula 2 (2% jernang resin) provided the best performance for a combination body scrub with pH (F3: 5.28-5.30) and (F2: 5.16–5.18), spreadability (F3: 5.51-5.54 cm) and (F2: 5.51–5.53 cm), adhesion (F3: 6.04-6.31) and (F2: 5.11–5.28), viscosity (F3: 14533-15233 cPs) and (F2: 14533–14733 cPs). Overall, Formula 3 (15%) was considered optimal as an exfoliator that had been set as a standard, while Formula 2 (2%) was the best for the physical characteristics of the preparation and provided a natural color for the preparation, these results were also assessed from the level of respondent preference and the evaluation test values that had been determined, so that it has the potential to be developed further.*

Keywords: *Body scrub, durian seed powder, jernang resin, physical characteristics, hedonic test*

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