

# FORMULASI DAN EVALUASI SIFAT FISIK SEDIAAN *BODY SCRUB* SERBUK BIJI KOPI ROBUSTA (*Coffea canephora* Pierre)

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## INTISARI

**Latar Belakang:** Kulit rentan rusak akibat sinar matahari, polusi, dan penumpukan sel kulit mati. Salah satu perawatan yang dapat dilakukan adalah eksfoliasi menggunakan *body scrub*. *Body scrub* berbahan alami lebih diminati karena minim iritasi. Biji kopi robusta (*Coffea canephora* Pierre) mengandung kafein dan asam klorogenat yang berpotensi sebagai eksfoliator. Variasi konsentrasi serbuk kopi dapat memengaruhi sifat fisik krim *body scrub*.

**Tujuan Penelitian:** Untuk mengevaluasi dan mengetahui pengaruh perbedaan penambahan konsentrasi serbuk biji kopi robusta terhadap sifat fisik krim *body scrub*.

**Metode Penelitian:** Formulasi krim dilakukan dengan lima variasi konsentrasi (0%, 1%, 2%, 3% dan 4%). Evaluasi meliputi organoleptis, pH, viskositas, daya sebar, dan daya lekat.

**Hasil Penelitian:** Warna krim bervariasi dari putih susu hingga coklat tua berdasarkan peningkatan konsentrasi serbuk. pH menurun dari  $6,43 \pm 0,05$  menjadi  $4,76 \pm 0,05$ , viskositas meningkat dari  $7860,0 \pm 111,35$  cP menjadi  $19440,0 \pm 208,80$  cP, daya sebar menurun dari  $7,24 \pm 0,38$  cm menjadi  $3,48 \pm 0,09$  cm, dan daya lekat meningkat dari  $4,12 \pm 0,05$  detik menjadi  $5,23 \pm 0,20$  detik. Analisis statistik menunjukkan adanya perbedaan yang signifikan ( $p < 0,05$ ) pada seluruh parameter fisik antar formula.

**Kesimpulan:** Semakin tinggi konsentrasi serbuk kopi robusta, semakin rendah pH dan daya sebar, serta semakin tinggi viskositas dan daya lekat.

**Kata Kunci:** *Body scrub*, *Coffea canephora*, kopi robusta

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# FORMULATION AND PHYSICAL CHARACTERISTICS EVALUATION OF BODY SCRUB CONTAINING ROBUSTA COFFEE BEAN POWDER (*Coffea canephora* Pierre.)

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## ABSTRACT

**Background:** The skin is prone to damage caused by sun exposure, pollution, and the accumulation of dead skin cells. One method of skin care is regular exfoliation using a body scrub. Natural-based body scrubs are increasingly favored due to their lower risk of irritation. Robusta coffee beans (*Coffea canephora* Pierre) contain active compounds such as caffeine and chlorogenic acid that have potential as exfoliating agents. Variations in the concentration of coffee powder may affect the physical properties of the body scrub cream.

**Objective:** To evaluate and determine the effect of differences in the addition of robusta coffee bean powder concentrations on the physical properties of body scrub cream To evaluate and determine the effect of different concentrations of robusta coffee bean powder on the physical properties of the body scrub cream.

**Method:** The body scrub cream was formulated with five different concentrations of robusta coffee bean powder: 0%, 1%, 2%, 3%, and 4%. Evaluations were conducted on organoleptic properties, pH, viscosity, spreadability, and adhesion.

**Result:** The color of the cream varied from milky white to dark brown as the concentration of coffee powder increased. The pH decreased from  $6.43 \pm 0.05$  to  $4.76 \pm 0.05$ , viscosity increased from  $7860.0 \pm 111.35$  cP to  $19440.0 \pm 208.80$  cP, spreadability decreased from  $7.24 \pm 0.38$  cm to  $3.48 \pm 0.09$  cm, and adhesion increased from  $4.12 \pm 0.05$  seconds to  $5.23 \pm 0.20$  seconds. Statistical analysis revealed significant differences ( $p < 0.05$ ) in all physical parameters among the formulations.

**Conclusion:** Higher concentrations of robusta coffee bean powder decreased pH and spreadability, while increasing viscosity and adhesion.

**Keywords:** Body scrub, *Coffea canephora*, Robusta coffee

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