

FORMULASI DAN UJI KELEMBABAN SEDIAAN FACIAL WASH CAIR EKSTRAK BIJI PINANG MUDA (*Areca catechu* L.)

ABSTRAK

Kulit berminyak merupakan kondisi dermatologis yang umum dijumpai pada remaja dan sering kali menyebabkan penurunan kelembaban alami kulit. Penggunaan pembersih wajah berbahan kimia sintetis dapat merusak lapisan pelindung kulit dan mengurangi hidrasi kulit. Biji pinang muda (*Areca catechu* L.) mengandung senyawa bioaktif flavonoid, fenolik, saponin, dan protocianidin yang berpotensi sebagai antioksidan serta mampu mempertahankan kelembaban kulit. Penelitian ini bertujuan untuk memformulasikan, mengevaluasi, dan menguji kemampuan melembabkan kulit dari sediaan facial wash cair ekstrak biji pinang muda. Ekstrak diperoleh melalui maserasi etanol 70% dengan rendemen 20,024%, kadar air 7,683%, dan kadar abu 3,059%. Sediaan diformulasikan dalam enam formula (F0–F5) dengan variasi konsentrasi ekstrak 0–1,25%. Hasil evaluasi menunjukkan seluruh formula homogen, pH fisiologis (4,72–5,82), tinggi busa 25,33–56,33 mm, viskositas 401–460 cps, dan daya sebar 3,53–6,53 cm. Uji stabilitas cycling test enam siklus menunjukkan seluruh formula stabil secara fisik. Uji iritasi pada 10 sukarelawan tidak menunjukkan adanya eritema maupun edema. Uji kelembaban selama lima hari menunjukkan peningkatan kelembapan kulit pada formula yang mengandung ekstrak dibandingkan kontrol, dengan F4 (1%) sebagai formula terbaik. Sediaan facial wash cair ekstrak biji pinang muda terbukti stabil, aman, dan mampu meningkatkan kelembaban kulit.

Kata Kunci: *Areca catechu* L., facial wash, formulasi, kelembaban kulit, ekstrak etanol

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ABSTRACT

*Oily skin is a common dermatological condition found in adolescents and often leads to a decrease in the skin's natural moisture. The use of synthetic chemical-based facial cleansers can damage the skin's protective barrier and reduce skin hydration. Young betel nut seeds (*Areca catechu* L.) contain bioactive compounds such as flavonoids, phenolics, saponins, and procyanidins, which have potential as antioxidants and can maintain skin moisture. This study aimed to formulate, evaluate, and test the moisturizing ability of liquid facial wash preparations from young betel nut seed extract. The extract was obtained through 70% ethanol maceration with a yield of 20.024%, moisture content of 7.683%, and ash content of 3.059%. The preparation was formulated into six formulas (F0–F5) with extract concentration variations of 0–1.25%. Evaluation results showed all formulas were homogeneous, with physiological pH (4.72–5.82), foam height of 25.33–56.33 mm, viscosity of 401–460 cps, and spreadability of 3.53–6.53 cm. Stability testing via six cycles of cycling test indicated all formulas were physically stable. Irritation testing on 10 volunteers showed no erythema or edema. Moisture testing over five days demonstrated an increase in skin moisture in formulas containing extract compared to the control, with F4 (1%) as the best formula. The liquid facial wash preparation from young betel nut seed extract proved stable, safe, and effective in improving skin moisture.*

Keywords: *Areca catechu* L., facial wash, formulation, skin moisture, ethanol extract