

**STABILITAS FISIKA-KIMIA KRIM SERBUK DAUN KELOR
(*Moringa oleifera*) DAN KRIM EKSTRAK KENTAL DAUN
KELOR (*Moringa oleifera*)**

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ABSTRAK

Penelitian ini bertujuan untuk melihat sediaan yang stabil dari krim serbuk daun kelor dan krim ekstrak kental daun kelor serta membandingkan besar kemampuan aktivitas antioksidan. Krim diformulasi dengan variasi bentuk bahan aktif yaitu formula 1 (krim basis), formula 2 (krim serbuk daun kelor) dan formula 3 (krim ekstrak kental daun kelor) yang disimpan pada suhu $26^{\circ}\text{C} \pm 2^{\circ}\text{C}$ / RH $63\% \pm 5\%$ selama 28 hari. Pengamatan parameter stabilitas fisika dan kimia dilakukan pada 0, 7, 14, 21 dan 28. Data hasil pengamatan stabilitas fisika meliputi parameter organoleptis, tipe emulsi, bobot jenis, ukuran partikel, ukuran droplet, daya sebar, viskositas dan sifat alir. Pengamatan stabilitas kimia meliputi pH dan data pengamatan kemampuan aktivitas antioksidan. Analisis dilakukan menggunakan *one-way* ANOVA ($\alpha = 0,01$). Hasil analisis deskriptif menunjukkan adanya ketidakstabilan pada parameter organoleptis (bau), ukuran droplet, ukuran partikel, viskositas dan pH. Kemampuan aktivitas antioksidan sebesar 45,94% untuk formula 1, 68,05% untuk formula 2 dan 93,19% untuk formula 3. Sehingga dapat ditarik kesimpulan bahwa krim serbuk daun kelor dan krim ekstrak kental daun kelor tidak stabil secara parameter stabilitas fisika maupun kimia (pH). Kemampuan aktivitas antioksidan krim ekstrak kental daun kelor lebih besar dibandingkan krim serbuk daun kelor.

Kata kunci : Stabilitas fisika, stabilitas kimia, krim, Kelor (*Moringa oleifera*)

PHYSICAL-CHEMICAL STABILITY OF MORINGA LEAF POWDER SCREAM (*Moringa oleifera*) AND MORINGA LEAF EXTRACT CREAM (*Moringa oleifera*)

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ABSTRACT

The aim of this study was to look at stable formulation of Moringa leaf powder cream and Moringa leaf extract cream and also to analyze the effect of time storage on physical and chemical stability of Moringa leaf powder cream and Moringa leaf extract cream. The cream has benefit as an antioxidant. Cream were formulated with variations the form of active ingredients namely formula 1 (cream base), formula 2 (cream of Moringa leaf powder) and formula 3 (cream of Moringa leaf extract) which is stored at $26^{\circ}\text{C} \pm 2^{\circ}\text{C}$ / RH $63\% \pm 5\%$ for 28 days. Observations of physical and chemical stability parameters were carried out at 0, 7, 14, 21 and 28. Data observed on physical stability included organoleptic parameters (color, smell, texture), emulsion type, density, particle size, droplet size, spreadability, viscosity and flow properties. Observation of chemical stability includes pH and the ability of antioxidant activity. Analysis was carried out using one-way ANOVA ($\alpha = 0.01$). The results showed instability on organoleptic parameters (smell), density, droplet size, particle size, spreadability, viscosity and pH. The ability of antioxidant activity was 45.94% for formula 1, 68.05% for formula 2 and 93.19% for formula 3. So, it can be concluded that the Moringa leaf powder cream and Moringa leaf extract cream were not stable in physical or chemical parameters stability. The ability antioxidant activity of Moringa leaf extract cream was higher than Moringa leaf powder cream.

Keywords : Physical stability, chemical stability, cream, *Moringa oleifera*