

**FORMULASI DAN EVALUASI SEDIAAN SAMPO ANTI
KETOMBE
OPTIMASI KOMBINASI ZAT AKTIF KETOKONAZOL DAN EKSTRAK DAUN
KELOR SERTA KOMBINASI SURFAKTAN SLES DAN GLISERIN**

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ABSTRAK

Latar Belakang: Ketombe merupakan permasalahan pada kulit kepala yang dapat mengakibatkan rasa gatal serta berpotensi menjadi *dermatitis seboroik*. Oleh karena itu dikembangkan sediaan sampo anti ketombe dengan kombinasi surfaktan SLES dan gliserin.

Tujuan: Mengetahui kombinasi surfaktan terbaik menurut RSM, perbedaan uji fisik formula prediksi dan hasil observasi, dan aktivitas antijamur sediaan sampo terhadap jamur *Malassezia furfur*.

Metode: simplisia diekstraksi menggunakan metode maserasi dengan etanol 70%. Ekstrak diformulasikan menjadi sediaan sampo dengan variasi konsentrasi surfaktan. Optimasi formula dilakukan dengan *design expert* metode RSM. Sampo diuji sifat fisik, stabilitas, serta aktivitas antijamur.

Hasil: ekstrak etanol daun kelor tidak memiliki aktivitas antijamur. Formula terbaik yang disarankan oleh RSM adalah SLES 10% dan gliserin 30%. Tidak terdapat perbedaan yang signifikan antara hasil uji fisik formula prediksi RSM dan hasil observasi. Hasil sifat fisik sediaan berbentuk semi solid, berwarna putih, berbau floral, homogen, serta memiliki pH, viskositas, tinggi busa, dan daya sebar yang memenuhi syarat. Sediaan memiliki aktivitas antijamur terhadap jamur *Malassezia furfur*.

Kesimpulan: ekstrak daun kelor tidak memiliki aktivitas antijamur. Kombinasi surfaktan yang disarankan oleh RSM adalah SLES 10% dan gliserin 30%. Tidak terdapat perbedaan yang signifikan antara hasil uji fisik formula prediksi dan hasil observasi. Sediaan memiliki aktivitas antijamur.

Kata kunci: daun kelor, *Malassezia furfur*, SLES, gliserin, ketokonazol

**FORMULATION AND EVALUATION OF ANTI DANDRUFF
SHAMPOO WITH COMBINATION OF SLES AND
GLYCERIN SURFACTANS
OPTIMIZATION COMBINATION OF KETOCONAZOLE AND MORINGA
LEAF EXTRACT ACTIVE SUBSTANCE AND COMBINATION OF SLES AND
GLYCERIN SURFACTANS**

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ABSTRACT

Background: dandruff is a scalp problem that can cause itching and has the potential to become seborrheic dermatitis. Therefore, an anti-dandruff shampoo was developed with a combination of SLES and glycerin surfactant.

Aim: knowing the best combination of surfactants according to RSM, the difference in physical responses of the predicted formula and the observations, and the antifungal activity of the shampoo against *Malassezia furfur*.

Methods: the moringa leaf extract was extracted using maceration method with 70% ethanol. The extract was formulated into shampoo with variations in concentration of surfactant. Formula optimization was carried out using RSM method. The shampoo was tested for physical responses, stability, and antifungal activity.

Result: moringa leaf extract with ethanol did not have antifungal activity. The best formula recommended by RSM was 10% SLES and 30% glycerin. There was no significant difference between the physical responses of the predicted formula by RSM and the observation. Physical responses of shampoo are semisolid, white in color, floral in odor, homogeneous, and have pH, viscosity, foam stability, and spreadability that meet the requirements. Shampoo has antifungal activity against *Malassezia furfur*.

Conclusion: moringa leaf extract with ethanol did not have antifungal activity. The combination of surfactant recommended by RSM was 10% SLES and 30% glycerin. There was no significant difference between the physical responses of the predicted formula by RSM and the observation. Shampoo has antifungal activity.

Keywords: moringa leaves, *Malassezia furfur*, SLES, glycerin, ketoconazole