INTISARI

SULASTRI, 2014, OPTIMASI KOMPOSISI ASAM STEARAT DAN TRIETANOLAMIN SEBAGAI EMULGATOR DALAM KRIM EKSTRAK DAGING LIDAH BUAYA (*Aloe vera* Linn) SEBAGAI ANTIOKSIDAN DENGAN METODE *SIMPLEX LATTICE DESIGN*, SKRIPSI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Ekstrak daging lidah buaya berpotensi memiliki aktivitas antioksidan karena mengandung flavonoid dan vitamin C. Penelitian ini ekstrak diformulasikan menjadi sediaan krim. Tujuan penelitian ini adalah untuk mendapatkan formula optimum krim ekstrak daging lidah buaya dengan menggunakan emulgator yaitu asam stearat dan trietanolamin berdasarkan metode *Simplex Lattice Design.*

Ekstrak daging lidah buaya diperoleh dengan cara maserasi menggunakan pelarut etanol 96% kemudian diuapkan menggunakan evaporator untuk memperoleh ekstrak kental. Krim diformulasikan dengan 3 variasi kombinasi konsentrasi emulgator, yaitu asam stearat 100% (FI), asam stearat:trietanolamin 50% : 50% (FII), dan trietanolamin 100% (FIII). Krim diuji sifat fisiknya meliputi organoleptis, homogen, viskositas, daya sebar, pH, pergeseran viskositas, aktivitas antioksidan dengan metode DPPH. Formula optimum berdasarkan parameter sifat fisik yaitu: viskositas, daya sebar, pergeseran viskositas, menggunakan *softwere Design expert* versi 8.0.6. Formula optimum yang diperoleh dibuat krim dan di uji sifat fisiknya, serta dianalisis dengan menggunakan *uji-t.*

Dari formula optimum krim ekstrak daging lidah buaya, diperoleh proporsi asam stearat sebesar 1,157 % dan trietanolamin sebesar 2,843 %. Aktivitas antioksidan formula optimum krim ekstrak daging lidah buaya 10% sebesar 203,80 ppm.

Kata kunci : antioksidan, ekstrak daging lidah buaya (*Aloe vera* Linn), *Simplex Lattice Design*, krim.

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ABSTRACT

SULASTRI, 2014, OPTIMIZATION OF STEARIC ACID AND TRIETHANOLAMINE COMPOSITION AS EMULSIFIER IN EXTRACT PULP ALOE VERA (*Aloe vera* Linn) CREAM AS ANTIOXIDANT BY SIMPLEX LATTICE DESIGN METHOD, THESIS, SETIA BUDI UNIVERSITY, SURAKARTA.

Aloe vera pulp extract potentially has antioxidant activity because it contains flavonoids and vitamin C. The study, extract was formulated into a cream preparation. The purpose of this study was to obtain the optimum formula cream of aloe vera meat extract using triethanolamine and stearic acid emulsifier based on Simplex Lattice Design methods.

Aloe vera pulp extract obtained by maceration using 96% ethanol solvent was then evaporated using an evaporator to obtain a viscous extract. The cream were formulated with a combination of 3 varions emulsifier concentrations, 100% stearic acid (FI), stearic acid : triethanolamine 50% : 50% (FII), and 100% triethanolamine (FIII). The cream were tested for their physical properties including organoleptic, homogeneous, viscosity, dispersive power, pH, shifting viscosity, and the antioxidant activity by DPPH method. The formula optimum parameters was based on physical properties: viscosity, dispersive power, shifting viscosity, using softwere Design Expert version 8.0.6. The obtained optimum formula were made into cream and tested its physical properties and analyzed using t-test.

The optimum formula of aloe vera pulp extract cream, it was the obtained proportion of stearic acid 1,157 % and triethanolamine 2,843 %. The activity antioxidant optimum formula of aloe vera extract cream 10% was 203,80 ppm.

Keywords: antioxidants, extracts of aloe vera pulp (*Aloe vera* Linn), Simplex Lattice Design, cream.