

## INTISARI

Tetrahidropentagamavunon-0 (THPGV-0) memiliki aktivitas antioksidan lebih baik dibandingkan vitamin E dengan perbandingan nilai  $IC_{50}$  THPGV-0 dan vitamin E yaitu 29,19 : 47,87  $\mu$ M. THPGV-0 diformulasikan dalam sediaan krim *o/w* menggunakan kombinasi asam stearat dan setil alkohol sebagai *thickening agent*. Penelitian ini bertujuan untuk mengetahui komposisi asam stearat dan setil alkohol sebagai *thickening agent* untuk menghasilkan sifat fisik optimum dan mengetahui sifat fisik formula optimum selama 4 minggu penyimpanan.

Penentuan formula optimum krim THPGV-0 dengan metode *Simplex Lattice Design* menggunakan *Design Expert* versi 7.1.5. Data viskositas, daya sebar, dan daya lekat formula optimum diverifikasi secara statistik menggunakan metode *One-Sample-t-Test* taraf kepercayaan 95%. Sifat fisik formula optimum selama 4 minggu penyimpanan dianalisis menggunakan *One-Way ANOVA* taraf kepercayaan 95%.

Formula optimum krim THPGV-0 terdiri dari 4% asam stearat dan 3% setil alkohol. Hasil verifikasi formula optimum menggunakan *One-Sample-t-Test* berdasarkan penelitian tidak berbeda dengan prediksi *Simplex Lattice Design* dengan nilai  $p > 0,05$  yaitu viskositas (0,804), daya sebar (0,583), dan daya lekat (0,263). Sifat fisik formula optimum krim THPGV-0 baik selama 4 minggu penyimpanan.

**Kata kunci :** THPGV-0, asam stearat, setil alkohol, *Simplex Lattice Design*

## ABSTRACT

*Tetrahidropentagamavunon-0 (THPGV-0) has an antioxidant activity greater than vitamine E, with a ratio based on  $IC_{50}$  value between THPGV-0 and vitamine E are 29,19 : 47,87  $\mu$ M. THPGV-0 formulated on cream with a combination of stearic acid and cetyl alcohol as a thickening agents. This research has a purposes to determined composition of stearic acid and cetyl alcohol as a thickening agents to produced optimum physical properties and the physical properties of optimum formula for 4 weeks of storage.*

*Determination of optimum formula THPGV-0 cream with a Simplex Lattice Design method using Design Expert version 7.1.5 program. Viscosity, spreading, and adhesive data from optimum formula were verified statistically using One Sample-t-Test level of 95%. Physical properties of optimum formula for 4 weeks of storage was analyzed using One-Way ANOVA level of 95%.*

*Optimum formula of THPGV-0 cream consists of 4% of stearic acid and 3% of cetyl alcohol. Verification results from optimum formula using One Sample-t-Test based on research didn't differ with the prediction of Simplex Lattice Design with a value of  $p > 0,05$  are the viscosity (0,804), spreading (0,583), and adhesive (0,263). Physical properties optimum formula of THPGV-0 cream was good during for 4 weeks of storage.*

**Keywords :** *THPGV-0, stearic acid, cetyl alcohol, Simplex Lattice Design*