INTISARI

Sifat fisik sediaan gel dapat dipengaruhi oleh beberapa faktor, salah satunya yaitu bahan aktif. Tetrahidropentagamavunon-0 (THPGV-0) mempunyai aktivitas antioksidan. Aktivitas antioksidan THPGV-0 dalam sediaan gel bergantung pada konsentrasi THPGV-0. Penelitian bertujuan untuk mengetahui pengaruh variasi konsentrasi THPGV-0 terhadap sifat fisik dan aktivitas antioksidan sediaan gel.

Senyawa THPGV-0 hasil sintesis, diisolasi dan diidentifikasi. Formula gel dibuat dengan variasi konsentrasi THPGV-0 (0,000%, 0,020%, 0,024% dan 0,030%) dan gel vitamin E sebagai kontrol positif. Uji sifat fisik meliputi organoleptis, homogenitas dan pH yang dipaparkan secara deskriptif, sementara viskositas, daya sebar dan daya lekat dianalisis menggunakan uji *Saphiro-Wilk* dan *one-way* ANOVA dengan taraf kepercayaan 95%. Aktivitas antioksidan diuji dengan metode penangkapan radikal bebas DPPH (*Diphenylpicrylhydrazil)* dan metode reduksi ion feri. Persen penangkapan radikal DPPH dan persen FRAP (*Ferric Reducing Antioxidant Power*) gel dibandingkan pada masing-masing seri konsentrasi yang sama.

Hasil penelitian menunjukkan bahwa variasi konsentrasi THPGV-0 tidak berpengaruh terhadap organoleptis, homogenitas, pH dan tidak berpengaruh signifikan ($p>0,05$) terhadap viskositas (0,379), daya sebar (0,08) dan daya lekat (0,181). Konsentrasi THPGV-0 yang meningkat berpengaruh terhadap aktivitas antioksidan yang ditunjukkan dengan meningkatnya persen penangkapan radikal DPPH dan persen FRAP antar sediaan gel pada seri konsentrasi yang sama.

Kata kunci : Tetrahidropentagamavunon-0 (THPGV-0), gel, sifat fisik, antioksidan

ABSTRACT

Gel can be affected by other additives. Increasing the concentration of a substance causing an increase in viscosity.Viscosity affects dispersive power and adhesion. Total phenol group on tetrahidropentagamavunon-0 (THPGV-0) is proportional to the antioxidant activity. The study aims to determine the effect of variations in the concentration of THPGV-0 toward the physical properties and antioxidant activity gel formulation.

Crude product of THPGV-0 was isolated and identified. Gel compositions were made by variation concentration of THPGV-0 (0%, 0,02%, 0,024% and 0,03%) and vitamin E gel as a positive control. Physical properties of the gel such as organoleptic, homogenity and pH were analyzed descriptively while viscosity, dispersive power and adhesion were analyzed by *Saphiro-Wilk* test and *one-way* ANOVA test with a 95% confidence level. The antioxidant activity was tested by *Diphenylpicrylhydrazil* (DPPH) radical scavenging method and *Ferric Reducing Antioxidant Power*(FRAP) method. % DPPH-radical scavenging and % FRAP were compared at the same concentrations of gel.

The results showed that variations in the concentration of THPGV-0 as active ingredients did not cause differences in the organoleptic, homogenity and pH also did not cause significant differences ($p>0,05$) in the viscosity(0.379), dispersive power (0,08) and adhesion (0.181). The increase in the concentration of THPGV-0 gave different results on antioxidant activity as indicated by the increasing of % DPPH-radical scavenging and % FRAP between gel at the same concentration.

Keywords : Tetrahidropentagamavunon-0 (THPGV-0), gel, physical properties, antioxidant