INTISARI

Sifat fisik dan stabilitas fisik emulgel dipengaruhi oleh proses pencampuran yaitu kecepatan putar. Penelitian ini bertujuan untuk mengetahui signifikansi pengaruh kecepatan putar *mixer* terhadap sifat fisik dan stabilitas fisik emulgel anti *acne* ekstrak kulit buah manggis.

Jenis penelitian adalah eksperimental murni dengan lima variasi kecepatan putar yaitu 100, 300, 500, 700, dan 900 rpm. Sifat fisik yang diamati meliputi viskositas dan daya sebar sedangkan stabilitas fisik berfokus pada pergeseran viskositas setelah satu bulan penyimpanan. Data dianalisis dengan menggunakan program R 2.13.2 dengan uji ANOVA untuk data parametrik serta uji *Kruskal-wallis* untuk data nonparametrik. Analisis statistik dilakukan dengan taraf kepercayaan 95%. Organoleptis, iritasi, aktivitas antimikroba emulgel terhadap *Staphylococcus epidermidis*, bakteri penginduksi timbulnya jerawat juga diamati pada penelitian ini.

Hasil analisis data menunjukkan bahwa kecepatan putar berpengaruh signifikan terhadap viskositas dan daya sebar serta tidak berpengaruh signifikan terhadap pergeseran viskositas. Seluruh formula memenuhi persyaratan sifat fisik dan stabilitas fisik sesuai dengan kriteria.

Kata kunci: Ekstrak kulit buah manggis, emulgel, kecepatan putar

ABSTRACT

Physical properties and physical stability of emulgel are influenced by mixing process that is mixing rate. The aim of this study was to determine the effect of mixing rate on the physical properties and physical stability of anti acne emulgel of the mangosteen pericarp extract.

The study was pure experimental study with five variations of mixing rate, 100, 300, 500, 700, and 900 rpm. Physical properties observed were focused on viscosity and spreadabiliy while for physical stability was on viscosity shift after one month storage. Data were analyzed using R 2.13.2 program with ANOVA test for parametric data and Kruskal-wallis test for nonparametric data. Statistical analysis was performed at 95% confidence interval. Organoleptic, irritation, and antimicrobial activity of emulgel against Staphylococcus epidermidis, an acne inducing bacteria were also studied.

The result of this study showed that mixing rate was significantly affecting the viscosity and spreadability but not significantly affecting the viscosity shift. All of the formula was eligible the physical properties and physical stability in accordance with criteria.

***Keyword**: mangosteen pericarp extract, emulgel, mixing rate*