

INTISARI

OCTAVIANI, M., 2022, PENGARUH HPMC TERHADAP MUTU FISIK DAN STABILITAS EMULGEL MINYAK ATSIRI BIJI JINTEN HITAM (*Nigellae sativae semen*) TERHADAP BAKTERI *Staphylococcus epidermidis*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI SURAKARTA.

Staphylococcus epidermidis berperan dalam patogenesis jerawat dengan cara memproduksi metabolit yang dapat bereaksi dengan sebum sehingga meningkatkan proses inflamasi. Tujuan penelitian untuk mengetahui pengaruh konsentrasi hpmc terhadap sifat fisik, stabilitas, dan aktivitas antibakteri terhadap bakteri *Staphylococcus epidermidis*.

Minyak atsiri biji jinten hitam didapatkan dari *Darjeeling* yang akan diidentifikasi berat jenis, indek bias, kelarutan dan GC-MS. Setelah itu diformulasikan menjadi emulgel dengan variasi konsentrasi basis gel hpmc 3%, 3,5% dan 4%. Emulgel diuji mutu fisik dan uji stabilitas. Uji aktivitas antibakteri dilakukan dengan metode difusi sumuran. Analisis data dengan menggunakan *One Way Anova*.

Hasil penelitian menunjukkan emulgel minyak atsiri biji jinten hitam memiliki mutu fisik dan yang baik pada organoleptis, homogenitas, pH, viskositas, daya sebar, daya lekat dan tipe emulsi serta memiliki aktivitas antibakteri terhadap *Staphylococcus epidermidis* dengan zona hambat pada konsentrasi basis gel hpmc 3%, 3.5%, dan 4% yaitu 19,25 mm, 17,43 mm dan 15,8 mm. Hasil penelitian menunjukkan konsentrasi basis gel hpmc 3% teraktif.

Kata Kunci : Emulgel, Jinten hitam, hpmc, *Staphylococcus epidermidis*

ABSTRACT

OCTAVIANI, M., 2022, EFFECT OF HPMC ON THE PHYSICAL QUALITY AND STABILITY OF BLACK CUMIN (*Nigellae sativae semen*) EMULGEL ESSENTIAL OIL EMULGEL ON *Staphylococcus epidermidis* BACTERIA, SKRIPSI, FACULTY OF PHARMACEUTICAL, SETIA BUDI UNIVERSITY, SURAKARTA.

Staphylococcus epidermidis plays a role in the pathogenesis of acne by producing metabolites that can react with sebum, thereby increasing the inflammatory process. The purpose of this study was to determine the effect of hpmc concentration on the physical properties, stability, and antibacterial activity of *Staphylococcus epidermidis* bacteria.

Black cumin seed essential oil was obtained from Darjeeling to be identified specific gravity, refractive index, solubility and GC-MS. After that it was formulated into an emulgel with variations in the concentration of hpmc gel base 3%, 3.5% and 4%. Emulgel was tested for physical quality and stability test. Antibacterial activity test was carried out by well diffusion method. Data analysis using One Way Anova.

The results showed that the black cumin seed essential oil emulgel had good physical quality and was good for organoleptic, homogeneity, pH, viscosity, spreadability, adhesion and emulsion type and had antibacterial activity against *Staphylococcus epidermidis* with inhibition zones at concentrations of 3%, 3.5%, and 4%, namely 19.25 mm, 17.43 mm and 15.8 mm. The results showed that the emulgel concentration of 3% was the most active.

Keyword : Emulgel, Black cumin, hpmc, *Staphylococcus epidermidis*