ABSTRAK

Latar Belakang: Indonesia terletak di daerah khatulistiwa, dimana paparan sinar UV matahari sangat kuat. Hal ini menimbulkan dampak negatif bagi kulit seperti penuaan dini hingga kanker kulit. Tabir surya dapat mencegah dampak buruk tersebut. Daun stevia mengandung flavonoid, tannin, alkaloid, dan terpenoid yang dapat melindungi kulit dari paparan sinar UV. Sediaan emulgel dipilih karena memiliki daya lekat yang lebih baik, segar ketika digunakan, dan tidak menyumbat pori-pori. Karbopol digunakan karena dapat memberikan daya sebar yang lebih baik serta tidak menimbulkan larutan koloida dalam air sehingga sediaan menjadi keruh dibandingkan CMC-Na.
Tujuan: Mengetahui dampak variasi konsentrasi karbopol 940 terhadap sifat fisik dan nilai SPF sediaan emulgel tabir surya esktrak etanol 70% daun stevia serta mengetahui perbedaan stabilitas fisik sediaan emulgel tabir surya ekstrak etanol 70% daun stevia pada siklus 0 dan siklus 6.
Metode: Daun stevia diekstraksi menggunakan metode maserasi menggunakan etanol 70% selama 4x24 jam. Hasil ekstraksi diformulasikan menjadi sediaan emulgel tabir surya dengan variasi konsentrasi karbopol 940 0,75%; 1,0%; dan 1,25%. Sediaan tersebut dilakukan uji sifat dan stabilitas fisik serta uji nilai SPF secara *in vitro* menggunakan spektrofotometer UV-Vis.
Hasil: Ekstrak etanol 70% daun stevia memiliki nilai SPF sebesar 32,52. Sediaan emulgel tabir surya ekstrak etanol 70% daun stevia memiliki nilai SPF untuk F1 sebesar 24,34, F2 sebesar 19,59, dan F3 sebesar 16.41. Variasi konsentrasi karbopol 940 mempengaruhi sifat fisik dan nilai SPF sediaan.
Kesimpulan: Emulgel tabir surya ekstrak etanol 70% daun stevia memiliki aktivitas tabir surya kategori sedang (>15).

Kata kunci: *Daun stevia, emulgel, SPF, tabir surya, karbopol*

ABSTRACT

Background: Indonesia located in the equatorial region which is exposed a lot of UV that can have negative effects on the skin, such as premature aging and skin cancer. This can be prevented by using sunscreen. Stevia leaves contain flavonoids, tannin, alkaloid, and terpenoid which can protect skin from UV exposure. The emulgel was chosen because has better adhesion, fresh when used, and doesn't clog pores. Carbopol is used because can provide better spreadability and doesn't create colloidal solutions in water that make the preparations cloudy compared to CMC-Na.
Aim: To determine the impact of variations concentration carbopol 940 on the physical properties and SPF value of sunscreen emulgel from 70% etanol extract stevia leaves and to determine the differences in physical stability of sunscreen emulgel from 70% ethanol extract stevia leaves in cycle 0 and 6.
Methods: Stevia leaves were extracted using maceration method using 70% ethanol for 4x24 hours. The results were formulated into sunscreen emulgel with various concentratrions Carbopol 940 0,75%; 1,0%; and 1,25%. The emulgel sunscreen were tested for physical properties, stability, and SPF value in vitro using UV-Vis spectrophotometer.
Results: The 70% ethanol extract stevia leaves has SPF value of 32,52. The emulgel sunscreen of 70% ethanol extract of stevia leaves has SPF value for F1 24,34, F2 19,59, and F3 16,41. Variations concentration Carbopol 940 affect the physical properties and SPF value.
Conclusion: Emulgel sunscreen with 70% ethanol extract stevia leaves has moderate (>15) sunscreen activity.

Key words: *Stevia leaves, emulgel, SPF, sunscreen, carbopol*