

Uji Stabilitas Dan Uji Iritasi Akut Dermal Serum Wajah Ekstrak Daun Jambu Biji (*Psidium Guajava L.*)

Septya Dwi Salsabillah

Prodi S1 Farmasi

INTISARI

Daun jambu biji (*Psidium guajava L.*) memiliki kandungan metabolit sekunder meliputi senyawa flavonoid, alkaloid, tanin dan saponin yang berperan sebagai penghambat stres oksidatif akibat radikal bebas sehingga penuaan dini dapat teratasi. Tujuan penelitian ini untuk memformulasikan sediaan serum wajah dari ekstrak daun jambu biji dengan 3 variasi konsentrasi ekstrak kemudian ditentukan formula optimum dengan dievaluasi mutu fisik seluruh sediaan. Formula optimum dievaluasi stabilitas fisik dan dilakukan uji iritasi akut dermal. Metode penelitian dimulai dari pembuatan ekstrak daun jambu biji menggunakan etanol 70% dan diskriminasi fitokimia meliputi flavonoid, alkaloid, saponin dan tanin. Ekstrak daun jambu biji kemudian diformulasikan ke dalam sediaan serum wajah dengan variasi konsentrasi ekstrak yaitu 1%, 3% dan 5% dan dievaluasi mutu fisik untuk mencari formula optimum sediaan. Setelah didapat formula optimum dievaluasi stabilitas fisik selama 6 siklus dengan *cycling test* dan diuji iritasi akut dermal pada hewan kelinci. Hasil ekstrak etanol 70% daun jambu biji berwarna coklat tua dengan bau khas. Skrining fitokimia menunjukkan ekstrak daun jambu biji mengandung senyawa flavonoid, alkaloid, saponin dan tanin. Formula optimum sediaan adalah formula 2 yang mengandung 3% ekstrak daun jambu biji dengan hasil evaluasi mutu fisik organoleptik, homogenitas, pH, viskositas, daya sebar dan daya lekat memenuhi persyaratan. Hasil uji stabilitas fisik menunjukkan sediaan serum wajah ekstrak daun jambu biji stabil selama penyimpanan. Pengujian iritasi akut dermal menunjukkan nilai indeks iritasi primer 0,0 yang berarti tidak mengiritasi kulit. Dari hasil yang diperoleh, dapat disimpulkan bahwa sediaan sediaan serum wajah ekstrak daun jambu biji berpotensi untuk dikembangkan sebagai sediaan kosmetik.

Kata kunci : Daun Jambu Biji, uji stabilitas, uji iritasi akut dermal, serum wajah.

Stability Test and Acute Dermal Irritation Test Face Serum Guava Leaf Extract (Psidium guajava L.)

Septya Dwi Salsabillah

Bachelor of pharmacy

ABSTRACT

Guava leaves (*Psidium guajava* L.) contain secondary metabolites including flavonoids, alkaloids, tannins and saponins which act as inhibitors of oxidative stress caused by free radicals so that premature aging can be overcome. The aim of this research was to formulate a facial serum preparation from guava leaf extract with 3 variations of extract concentration, then determine the optimum formula by evaluating the physical quality of the entire preparation. The optimum formula was evaluated for physical stability and an acute dermal irritation test was carried out. The research method started from making guava leaf extract using 70% ethanol and screening for phytochemicals including flavonoids, alkaloids, tannins and saponins. The guava leaf extract was then formulated into a facial serum preparation with varying extract concentrations, namely 1%, 3% and 5% and the physical quality was evaluated to find the optimum formulation for the preparation. After obtaining the optimum formula, physical stability was evaluated for 6 cycles with a cycling test and tested for acute dermal irritation in rabbits. The results of the 70% ethanol extract of guava leaves are dark brown with a distinctive odor and taste. Phytochemical screening shows that guava leaf extract contains flavonoids, alkaloids, tannins and saponins. The optimum formulation of the preparation is formula 2 which contains 3% guava leaf extract with the evaluation results of organoleptic physical quality, homogeneity, pH, viscosity, spreadability and adhesiveness meeting the requirements. The results of the physical stability test showed that the guava leaf extract facial serum preparation was stable during storage. Dermal acute irritation testing shows a primary irritation index value of 0.0, which means it does not irritate the skin. From the results obtained, it can be concluded that the guava leaf extract facial serum preparation has the potential to be developed as a cosmetic preparation.

Keywords : *Psidium guajava* L., stability test, dermal acute irritation test, face serum.