

ABSTRAK

Munika C., 2022, FORMULASI DAN UJI AKTIVITAS SEDIAAN SERUM EKSTRAK ETANOL DAUN TEH HIJAU (*Camelia sinensis* L.) TERHADAP BAKTERI *Staphylococcus epidermidis* PENYEBAB JERAWAT, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETI A BUDI, SURAKARTA.

Jerawat merupakan kondisi abnormal kulit akibat kelebihan produksi kelenjar minyak. Salah satu pemicu peradangan pada jerawat adalah bakteri *Staphylococcus epidermidis*. Daun teh Hijau (*Camellia sinensis* L.) mengandung katekin dan flavonoid yang mampu menghambat pertumbuhan bakteri. Tujuan dari penelitian ini adalah untuk memformulasi sediaan serum ekstrak daun teh hijau dengan mutu fisik yang baik dan menguji aktivitasnya terhadap bakteri *Staphylococcus epidermidis*.

Ekstraksi daun teh hijau menggunakan metode maserasi dengan pelarut etanol 70%. Ekstrak daun teh hijau konsentrasi 8% diformulasikan dalam bentuk sediaan serum dengan variasi *gelling agent* carbopol 0,25%, 0,5%, 0,75%, dan 1 %, serta bahan penyusun lainnya seperti gliserin, metil paraben, trietanolamin dan aquadest. Sediaan serum diuji mutu fisik (organoleptis, homogenitas, pH, viskositas, dan daya sebar) dan diuji stabilitasnya dengan metode *cycling test*. Pengujian aktivitas antibakteri dilakukan menggunakan metode difusi cakram. Hasil uji mutu fisik dan pengujian aktivitas antibakteri sediaan dianalisis menggunakan program *SPSS Statistic 21* dengan *one way Anova* dan *Post Hoc*.

Hasil penelitian menunjukkan variasi konsentrasi carbopol berpengaruh terhadap sifat fisik dan aktivitas antibakteri sediaan serum. Formula sediaan serum ekstrak etanol daun teh hijau dengan carbopol 0,75% memenuhi sifat fisik yang terbaik dan memiliki aktivitas antibakteri terhadap bakteri *Staphylococcus epidermidis* penyebab jerawat.

Kata kunci : jerawat, daun teh hijau, carbopol, serum, antibakteri

ABSTRACT

Munika C., 2022, FORMULATION AND ACTIVITY TEST OF GREEN TEA LEAF (*Camellia sinensis* L.) ETHANOL EXTRACT SERUM AGAINST BACTERIA OF *Staphylococcus epidermidis* CAUSES OF ACNE, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Acne is an abnormal condition of the skin due to overproduction of oil glands. One of the triggers of inflammation in acne is the bacterium *Staphylococcus epidermidis*. Green tea leaves (*Camellia sinensis* L.) contain catechins and flavonoids that can inhibit bacterial growth. The purpose of this study was to formulate a serum preparation of green tea leaf extract with good physical quality and to test its activity against *Staphylococcus epidermidis* bacteria.

Extraction of green tea leaves using maceration method with 70% ethanol as solvent. Green tea leaf extract with a concentration of 8% was formulated in the form of serum with various gelling agent carbopol 0.25%, 0.5%, 0.75%, and 1%, as well as other constituents such as glycerin, methyl paraben, triethanolamine and aquadest. The serum preparations were tested for physical quality (organoleptic, homogeneity, pH, viscosity, and dispersibility) and tested for stability using the cycling test method. Antibacterial activity testing was carried out using the disc diffusion method. The results of the physical quality test and the antibacterial activity test of the preparation were analyzed using the *SPSS Statistic 21* program with *one way Anova* and *Post Hoc*.

The results of research showed that the variation of carbopol concentration affected the physical quality and antibacterial activity of serum preparations. The formula for serum preparation of green tea leaf ethanol extract with carbopol 0.75% meet the best physical quality and had antibacterial activity against the bacteria *Staphylococcus epidermidis* that causes acne.

Keywords : acne, green tea leaves, carbopol, serum, antibacterial