

ABSTRAK

SEVIA NURHALIMAH. 2025. FORMULASI SEDIAAN GEL DAN UJI AKTIVITAS ANTIOKSIDAN EKSTRAK ETANOL DAUN SIRSAK (*Annona muricata* L.) DENGAN METODE SPEKTROFOTOMETRI UV-VIS, SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITA SETIA BUDI, SURAKARTA, Dibimbing oleh Dr. apt. Iswandi, S. Si., M.Farm dan apt. Anita Nilawati, S.Farm., M.Farm.

Daun sirsak mengandung senyawa alkaloid, saponin, tanin, terpenoid, dan flavonoid yang berpotensi sebagai antioksidan. Ekstrak daun sirsak diperoleh dengan metode maserasi menggunakan etanol 70% dan diformulasikan dalam sediaan gel dengan variasi konsentrasi propilen glikol, yaitu F1 (5%), F2 (10%), dan F3 (15%).

Sediaan gel diuji mutu fisiknya meliputi organoleptik, homogenitas, pH, viskositas, daya lekat, daya sebar, serta stabilitas menggunakan metode *cycling test*. Uji aktivitas antioksidan dilakukan dengan metode DPPH menggunakan spektrofotometri UV-Vis dan dianalisis secara statistik menggunakan *one way ANOVA*.

Hasil penelitian menunjukkan seluruh formula memenuhi persyaratan mutu fisik sebelum dan sesudah uji stabilitas. Formula 2 dengan 10% propilen glikol memiliki konsistensi paling ideal dan stabil. Ekstrak etanol daun sirsak memiliki aktivitas antioksidan sebesar 78,98 ppm yang tergolong kategori antioksidan kuat.

Kata kunci : daun sirsak, antioksidan, gel, propilen glikol, DPPH

ABSTRACT

SEVIA NURHALIMAH. 2025. FORMULATION OF GEL PREPARATION AND ANTIOXIDANT ACTIVITY TEST OF ETHANOL EXTRACT OF SOURSOP LEAVES (*Annona muricata* L.) USING UV-VIS SPECTROPHOTOMETRY METHOD, THESIS, UNDERGRADUATE PROGRAM IN PHARMACY, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA, Supervised by Dr. apt. Iswandi, S. Si., M.Farm and apt. Anita Nilawati, S.Farm., M.Farm.

Soursop leaves contain alkaloid, saponin, tannin, terpenoid, and flavonoid compounds that have antioxidant potential. Soursop leaf extract was obtained by maceration using 70% ethanol and formulated into a gel preparation with varying concentrations of propylene glycol, namely F1 (5%), F2 (10%), and F3 (15%).

The gel preparation was tested for its physical quality, including organoleptic properties, homogeneity, pH, viscosity, adhesiveness, spreadability, and stability using the cycling test method. Antioxidant activity was tested using the DPPH method with UV-Vis spectrophotometry and statistically analyzed using one-way ANOVA.

The research results show that all formulas meet the physical quality requirements before and after stability testing. Formula 2 with 10% propylene glycol has the most ideal and stable consistency. The ethanol extract of soursop leaves has antioxidant activity of 78.98 ppm, which is categorized as a strong antioxidant.

Keywords: soursop leaves, antioxidants, gel, propylene glycol, DPPH