

INTISARI

ASTRI NUR SHOLIKAH., 2022. PENGARUH VARIASI XANTHAN GUM DAN ASAM STEARAT TERHADAP MUTU FISIK SEDIAAN KRIM EKSTRAK DAUN KETUMBAR (*Coriandrum sativum* L.) SEBAGAI ANTIBAKTERI TERHADAP BAKTERI *Staphylococcus aureus* ATCC 25923. Dibimbing oleh apt. Dewi Ekowati, M.Sc. dan apt. Mamik Ponco Rahayu, S.Si., M.Si.

Jerawat termasuk kelainan kulit yang sering terjadi pada usia remaja. Daun ketumbar salah satu tanaman yang memiliki kandungan flavonoid, alkaloid, saponin, tanin sebagai antibakteri. Penggunaan secara langsung ekstrak daun ketumbar dinilai kurang praktis, sehingga dibuat dalam bentuk sediaan krim. Tujuan dari penelitian untuk mengetahui pengaruh kombinasi xanthan gum dan asam stearat pada sediaan krim ekstrak daun ketumbar terhadap mutu fisik dan aktivitas antibakteri terhadap bakteri *Staphylococcus aureus* ATCC 25923.

Ekstraksi menggunakan pelarut etanol 70%. Penelitian menggunakan bakteri *Staphylococcus aureus* ATCC 25923 dibagi kedalam 8 kelompok perlakuan yaitu 4 kontrol basis yang tidak mengandung ekstrak, variasi konsentrasi basis F1 asam stearat 4%; F2-F3 dengan variasi asam stearat : xanthan gum F2 (3:1%); F3 (2:2%); dan F4 xanthan gum 4%. Sediaan diuji mutu fisik meliputi organoleptis, homogenitas, pH, tipe sediaan, viskositas, daya sebar, daya lekat, stabilitas dan uji statistik terhadap aktivitas antibakteri pada *Staphylococcus aureus* ATCC 25923.

Variasi xanthan gum dan asam stearat pada sediaan krim ekstrak daun ketumbar secara statistik mempengaruhi mutu fisik dan stabilitas krim. Berdasarkan hasil uji statistik sediaan krim ekstrak daun ketumbar memiliki aktivitas antibakteri dan menghasilkan daya hambat paling baik terhadap *Staphylococcus aureus* ATCC 25923 yaitu formula 2 (3:1%) dengan nilai daya hambat $15,76 \pm 0,39$ mm.

Kata kunci: Daun ketumbar (*Coriandrum sativum* L.), variasi konsentrasi basis krim, antibakteri, *Staphylococcus aureus* ATCC 25923.

ABSTRACT

ASTRI NUR SHOLIKAH., 2022. THE EFFECT OF VARIATIONS OF XANTHAN GUM AND STEARIC ACID ON THE PHYSICAL QUALITY OF CORILAND LEAF EXTRACT (*Coriandrum sativum* L.) AS ANTIBACTERIA AGAINST THE BACTERIA OF *Staphylococcus aureus* ATCC 25923. Guided by apt. Dewi Ekowati, M. Sc. and apt. Mamik Ponco Rahayu, S.Si., M.Si.

Acne is a skin disorder that often occurs in teenagers. Coriander leaves are one of the plants that contain flavonoids, alkaloids, saponins, tannins as antibacterial. The direct use of coriander leaf extract is considered impractical, so it is made in the form of cream preparations. The aim of this study was to determine the effect of a combination of xanthan gum and stearic acid in the manufacture of coriander leaf extract cream on physical quality and to determine antibacterial activity against *Staphylococcus aureus* ATCC 25923.

Extraction using 70% ethanol solvent. The study used the *Staphylococcus aureus* ATCC 25923 bacteria which were divided into 8 treatment groups, namely 4 control bases that did not contain extracts, varying concentrations of 4% stearic acid F1 base; F2-F3 with variations of stearic acid: xanthan gum F2 (3:1%); F3 (2:2%); and F4 xanthan gum 4%. The preparations were tested for physical quality including organoleptic, homogeneity, pH, dosage type, viscosity, spreadability, adhesion, stability and statistical tests on antibacterial activity on *Staphylococcus aureus* ATCC 25923.

Variations of xanthan gum and stearic acid in coriander leaf extract cream statistically affect the physical quality and stability of the cream. Based on the statistical test results, coriander leaf extract cream has antibacterial activity and produces the best inhibition against *Staphylococcus aureus* ATCC 25923, namely formula 2 (3:1%) with an inhibition value of $15,76 \pm 0,39$ mm.

Keywords: Cilantro (*Coriandrum sativum* L.), variation in cream base concentration, antibacterial, *Staphylococcus aureus* ATCC 25923.