ABSTRAK

ZAHRA LATIFA., 2024, FORMULASI DAN UJI AKTIVITAS ANTIBAKTERI SEDIAAN KRIM EKSTRAK DAUN SAWO MANILA (*Manilkara zapota L.*) DENGAN VARIASI KOMBINASI TRIETANOLAMIN (TEA) & ASAM STEARAT TERHADAP *Staphylococcus aureus ATCC* 25923 Dibimbing oleh Dr. apt. OPSTARIA SAPTARINI, M.Si. dan Apt. SITI AISIYAH, M.Sc.

Daun sawo manila (*Manilkara zapota* L.) mengandung saponin, tanin, dan flavonoid yang bermanfaat. Reaksi asam stearat dengan trietanolamin (TEA) menghasilkan garam trietanolamin stearate sebagai emulgator stabil. Penelitian ini bertujuan untuk mengkaji pengaruh variasi formulasi TEA dan asam stearat terhadap mutu fisik, stabilitas sediaan, serta aktivitas antibakteri terhadap *Staphylococcus aureus.*

Ekstrak daun sawo manila diperoleh melalui metode maserasi menggunakan etanol 96%. Krim dibuat dalam tiga formula dengan konsentrasi ekstrak 10%, serta variasi trietanolamin (TEA) dan asam stearat masing-masing: formula I (TEA 2%, asam stearat 10%), formula II (TEA 3%, asam stearat 11%), dan formula III (TEA 4%, asam stearat 12%). Kontrol negatif berupa krim tanpa ekstrak dan kontrol positif menggunakan krim vancomycin. Pengujian meliputi organoleptik, pH, daya sebar, daya lekat, homogenitas, viskositas, tipe krim, cycling test, dan aktivitas antibakteri. Data diameter zona hambat dan formula dianalisis menggunakan ANOVA *One Way* dengan SPSS.

Hasil sediaan dilakukan uji mutu fisik dan stabilitas selanjutnya dievaluasi dilakukan analisis data, sudah memenuhi persyaratan untuk uji organoleptik, homogenitas, pH, daya sebar, daya lekat, tipe emulsi dan stabilitas sediaan. Sediaan hari ke 1 dan hari ke 12 tidak terdapat perbedaan yang signifikan sedangkan pada uji stabilitas sediaan terdapat perbedaan yang signifikan. Sediaan krim ekstrak daun sawo manila dengan variasi konsentrasi asam stearat 10% adalah konsentrasi yang paling baik pada uji mutu fisiknya serta pada pengujian aktivitas antibakteri yang paling baik dengan diameter zona hambat 30,11 cm.

Kata Kunci : Sawo Manila (*manilkaara zapota* L.), Asam Stearat, *Staphylococcus aureus*

ABSTRACT

ZAHRA LATIFA., 2024, FORMULATION AND ANTIBACTERIAL ACTIVITY TEST OF SAWO MANILA (Manilkara zapota L.) LEAF EXTRACT CRYM ANIMALS WITH VARIATIONS OF TRIETANOLAMIN (TEA) & STEARAT ACID COMBINATIONS AGAINST Staphylococcus aureus ATCC 25923 Dibimbing oleh Dr. apt. OPSTARIA SAPTARINI, M.Si. dan Apt. SITI AISIYAH, M.Sc.

Manila sapodilla leaves (Manilkara zapota L.) contain beneficial saponins, tannins and flavonoids. The reaction of stearic acid with triethanolamine (TEA) produces triethanolamine stearate salt as a stable emulgator. This study aims to examine the effect of variations in TEA and stearic acid formulations on physical quality, preparation stability, and antibacterial activity against Staphylococcus aureus.

Sawo manila leaf extract was obtained through maceration method using 96% ethanol. The cream was prepared in three formulas with 10% extract concentration, as well as variations of triethanolamine (TEA) and stearic acid respectively: formula I (2% TEA, 10% stearic acid), formula II (3% TEA, 11% stearic acid), and formula III (4% TEA, 12% stearic acid). Negative control was cream without extract and positive control was vancomycin cream. Tests included organoleptic, pH, spreadability, stickiness, homogeneity, viscosity, cream type, cycling test, and antibacterial activity. Inhibition zone diameter data and formulas were analyzed using One Way ANOVA with SPSS.

The results of the preparation were carried out physical quality and stability tests and then evaluated for data analysis, meeting the requirements for organoleptic, homogeneity, pH, spreadability, adhesion, emulsion type and dosage stability tests. Day 1 and day 12 preparations did not have significant differences while in the preparation stability test there were significant differences. Manila sapodilla leaf extract cream preparation with 10% stearic acid concentration variation is the best concentration in the physical quality test and in the best antibacterial activity test with the strongest inhibition zone diameter 30,11 cm.

Keywords: Manila sapodilla (manilkara zapota) *Staphylococcus aureus*, Stearic Acid)