

INTISARI

Octaria, Santy., 2021, FORMULASI MASKER GEL *PEEL-OFF* EKSTRAK DAUN PEPAYA (*Carica papaya* L.) DENGAN VARIASI KONSENTRASI PVA DAN HPMC SERTA UJI TERHADAP BAKTERI PENYEBAB JERAWAT *Staphylococcus epidermidis*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Jerawat dapat disebabkan karena peradangan oleh bakteri *Staphylococcus epidermidis*. Ekstrak daun pepaya mengandung senyawa alkaloid dan flavonoid yang beraktivitas sebagai antibakteri, dapat diformulasi menjadi sediaan masker gel *peel-off*. Penelitian ini bertujuan untuk mengetahui pengaruh variasi dan konsentrasi terbaik polivinil alkohol (PVA) dan hidroksipropil metilselulosa (HPMC) terhadap mutu fisik sediaan, stabilitas serta aktivitas antibakteri terhadap bakteri *Staphylococcus epidermidis*.

Daun pepaya diekstraksi menggunakan metode maserasi dengan pelarut etanol 96%. Ekstrak kemudian dibuat sediaan masker gel *peel-off* dengan variasi konsentrasi PVA dan HPMC FI (12% : 1%), FII (10% : 2%), dan FIII (8% : 3%). Mutu fisik sediaan tiap formula diuji organoleptis, pH, homogenitas, daya sebar, daya lekat, viskositas, waktu mengering, stabilitas dan aktivitas antibakteri terhadap *Staphylococcus epidermidis*. Data dianalisa secara statistik menggunakan *Analysis of variance* (ANOVA) *one way*.

Variasi konsentrasi PVA dan HPMC yang digunakan mempengaruhi mutu fisik sediaan berupa penurunan nilai daya sebar, peningkatan waktu daya lekat, viskositas, waktu mengering, dan aktivitas antibakteri menurun. FI (PVA 12% dan HPMC 1%) merupakan formula terbaik yang bermutu fisik, stabilitas, dan aktivitas antibakteri yang baik berdasarkan uji mutu fisik dengan nilai daya sebar 3-5 cm, daya lekat lebih dari 1 detik, viskositas range 50-1000 dPas, waktu mengering 15-30 menit serta nilai daya hambat antibakteri sebesar $14,67 \pm 0,49$ mm.

Kata kunci : anti jerawat, HPMC, masker gel *peel-off*, PVA, *Staphylococcus epidermidis*

ABSTRACT

Octaria, Santy., 2021. PEEL OFF MASK FORMULATIONS OF PAPAYA LEAF EXTRACT (*Carica papaya* L.) WITH VARIATIONS OF PVA AND HPMC CONCENTRATION AND TESTING ON ACNE CAUSE BACTERIA, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Acne can be caused due to inflammation by the bacterium *Staphylococcus epidermidis*. Papaya leaf extract contains alkaloids and flavonoid compounds that act as antibacterial, can be formulated into a peel-off gel mask preparation. This study aims to determine the effect of variation and the best concentration of polyvinyl alcohol (PVA) and hydroxypropyl methylcellulose (HPMC) on the physical quality of the preparation, stability and antibacterial activity tests against *Staphylococcus epidermidis* bacteria.

Papaya leaves were extracted using the maceration method with 96% ethanol as solvent. The extract was then made into a peel-off gel mask preparation with varying concentrations of PVA and HPMC FI (12% : 1%), FII (10% : 2%), and FIII (8% : 3%). The physical quality of each formula was tested for organoleptic, pH, homogeneity, spreadability, adhesion, viscosity, drying time, stability and antibacterial activity against *Staphylococcus epidermidis*. The data were analyzed statistically using the One-way Analysis of variance (ANOVA).

Variations in the concentration of PVA and HPMC were used affect the physical quality of the preparation in the form of a decrease in spreadability value, increased adhesion time, viscosity, drying time, and decreased antibacterial activity. FI (PVA 12% and HPMC 1%) is the best formula that has good physical quality, stability, and antibacterial activity based on physical quality tests with a dispersion value of 3-5 cm, adhesion of more than 1 second, viscosity values ranging from 50-1000 dPas, the drying time is 15-30 minutes and the value of antibacterial inhibition $14,67 \pm 0,49$ mm.

Keywords : anti acne, HPMC, peel-off gel mask, PVA, *Staphylococcus epidermidis*