INTISARI

BULAN, A.S., FORMULASI EKSTRAK BUAH JAMBU BIJI (*Psidium guajava* L.) SEBAGAI *LOTION* ANTIOKSIDAN, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Ekstrak buah jambu biji putih (*Psidium guajava* L.) memiliki aktivitas antioksidan, karena memiliki kandungan kuersetin yang termasuk senyawa flavonoid. Pemanfaatan buah jambu biji selama ini terbatas untuk jus atau langsung dimakan. Penelitian ini dikembangkan dengan membuat sediaan *lotion* agar pemanfaatannya lebih maksimal sebagai antioksidan. Dipilih *lotion* karena banyak digunakan untuk sediaan kosmetik dan untuk mengetahui apakah *lotion* dari ekstrak buah jambu biji dapat berkhasiat sebagai antioksidan.

Ekstrak kental buah jambu biji diperoleh dari hasil ekstraksi menggunakan metode penyarian maserasi dengan pelarut etanol 70% yang kemudian diuapkan. Ekstrak kental buah jambu biji dibuat sediaan *lotion* dalam 3 seri konsentrasi berbeda. Ketiga formula diuji daya sebar, daya lekat, dan viskositas. Penentuan aktifitas antioksidan pada *lotion* dilakukan dengan metode DPPH (1,1-difenil 2-pikrilhidrazil) menggunakan pembanding rutin, yang hasilnya dihitung dengan nilai *Inhibitory Concentration* (IC_{50}) melalui analisis probit.

Hasil dari *lotion* ekstrak buah jambu biji menunjukkan adanya aktivitas antioksidan. Hari ke-2 nilai IC_{50} formula I (18,5%) 257,63 ppm, formula II (20,5%) 154,63 ppm, dan formula III (22,5%) 131,83 ppm. Minggu ke-4 nilai IC_{50} formula I (18,5%) 274,45 ppm, formula II (20,5%) 208,02 ppm, dan formula III (22,5%) 155,001 ppm. Formula yang memiliki aktivitas antioksidan tertinggi adalah formula III dengan konsentrasi ekstrak 22,5% pada minggu pertama memiliki nilai IC_{50} sebesar 131,83 ppm.

Kata kunci : *Psidium guajava* L., DPPH (1,1-difenil 2-pikrilhidrazil), *lotion*, antioksidan, *Inhibitory Concentration* (IC_{50})

ABSTRACT

BULAN, A.S, FORMULATION OF GUAVA (*Psidium guajava* L.) FRUIT EXTRACT AS ANTIOXIDANT LOTION, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

White guava (*Psidium guajava*, L.) fruit extract has antioxidant activity, because it contains quercetin, a flavonoid compound. Utilization of guava fruit so far is limited for juice or eaten directly. This study was developed to make lotion preparations for maximum utilization as an antioxidant. Lotion is chosen because it is widely used for cosmetic preparations, and to find out whether the lotion from guava fruit extracts can be efficacious as an antioxidant.

Thick extract of guava fruit was obtained by maceration method with ethanol 70% which then evaporated. The extract was made lotion preparation in 3 different series of concentrations. The three formulas were tested for its dispersive, adhesion, and viscosity. Determination of antioxidant activity in lotion was conducted by DPPH (1,1-diphenyl-2 pikrilhidrazil) using routine comparison, and the results were calculated by Inhibitory Concentration (IC_{50}) value via probit analysis.

The results of guava fruit extract lotion showed antioxidant activity. At day-2 IC_{50} value of formula I (18.5%) was 257.63 ppm, formula II (20.5%) 154.63 ppm, and formula III (22.5%) was 131.83 ppm. At week-4 the IC_{50} value of formula I (18.5%) was 274.45 ppm, formula II (20.5%) was 208.02 ppm, and formula III (22.5%) was 155.001 ppm. Formula with the highest antioxidant activity was formula III with concentration of 22.5% at the first week with IC_{50} value of 131.83 ppm.

Keywords: *Psidium guajava* L., DPPH (1,1-diphenyl-2 pikrilhidrazil), lotion, antioxidant, Inhibitory Concentration (IC_{50})