

## INTISARI

**LIANA, K., 2016, PENGARUH VARIASI KONSENTRASI TRIETANOLAMIN DAN ASAM STEARAT TERHADAP MUTU FISIK KRIM ANTIOKSIDAN EKSTRAK DAUN MANGGIS (*Garcinia mangostana* L.) DENGAN METODE *FACTORIAL DESIGN*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.**

Manggis merupakan salah satu tanaman obat yang sudah terbukti memiliki aktivitas antioksidan. Penggunaan secara langsung ekstrak daun manggis dinilai kurang praktis, sehingga dibuat dalam bentuk sediaan krim. Penambahan bahan trietanolamin dan asam stearat digunakan sebagai basis krim. Penelitian ini bertujuan untuk mengetahui pengaruh variasi konsentrasi asam stearat dan trietanolamin terhadap mutu fisik sediaan krim dengan *factorial design* serta untuk mengetahui aktivitas antioksidan ekstrak dan krim.

Daun manggis diekstraksi dengan metode maserasi menggunakan pelarut etanol 70% hingga diperoleh ekstrak kental. Krim dibuat dalam empat formula dari variasi konsentrasi asam stearat dan trietanolamin berdasarkan *factorial design*. Krim yang dihasilkan diuji mutu fisiknya meliputi viskositas, daya sebar, daya lekat, pH dan aktivitas antioksidan. Untuk mengetahui pengaruh variasi konsentrasi asam stearat dan trietanolamin menggunakan *factorial design* program *Design Expert version 8.0.6.1*.

Hasil penelitian menunjukkan bahwa peningkatan konsentrasi asam stearat dan trietanolamin berpengaruh terhadap meningkatnya viskositas, meningkatnya daya lekat dan menurunnya daya sebar dan pH menurun. Hasil uji aktivitas antioksidan ekstrak, formula 1, A, B dan AB berturut-turut yaitu 11,614; 81,618; 84,566; 82,603; 84,586 ppm.

Kata kunci: krim ekstrak daun manggis, *factorial design*, asam stearat, trietanolamin, antioksidan.

## ABSTRACT

**LIANA, K., 2016, EFFECT OF VARIATIONS CONCENTRATION OF TRIETHANOLAMINE AND STEARIC ACID ON PHYSICAL QUALITY OF ANTIOXIDANT CREAM OF MANGOSTEEN (*Garcinia mangostana* L.) LEAVES EXTRACT WITH FACTORIAL DESIGN METHOD, THESIS, FACULTY OF PHARMACY, UNIVERSITY OF SETIA BUDI, SURAKARTA.**

Mangosteen is one of the medicinal plants which has been proven to have antioxidant activity. Direct use of mangosteen leaf extract as antioxidant was less practical, so was to made preparations into cream dosage form. The aim of this study was to know various concentration effect of triethanolamin and stearic acid the qualityproperties of the cream preparation with *factorial design*, as well as to fine out the antioxidant activity of the extract and cream.

Mangosteen leaves were extracted by maceration method using ethanol 70%to obtain a thick extracts. Cream was made into four formula of various concentration of stearic acid and triethanolamine based on factorial design. Cream produced is tested physical quality include viscosity, dispersive power, adhesivity, pH and antioxidant activity. Determine the effect of variation concentration of triethanolamine and stearic acid using *factorial design* program *Design Expert version 8.0.6.1*.

The results showed that stearic acid increased concentration and triethanolamine affected the increased viscosity, increased adhesivity and decreased dispersive power and pH decreased. The result of antioxidant activity test extracts, the formula I, A, B and AB respectively, were 11,614; 81,618; 84,566; 82,603; 84,586 ppm.

Keywords: mangosteen extract cream, *factorial design*, stearic acid, triethanolamine, antioxidant.