

INTISARI

Salah satu penyebab berbagai masalah kulit adalah radikal bebas. Antioksidan dipercaya dapat mencegah radikal bebas sehingga antioksidan banyak digunakan sebagai sediaan kosmetik. Jamur tiram sebagai bahan alam yang mengandung senyawa fenolik berpotensi menjadi kandidat bahan kosmetik antioksidan untuk kulit. Penelitian ini bertujuan untuk mengetahui formulasi sediaan losion antioksidan bahan alam jamur tiram dengan kombinasi cetareth 20 dan GMS sebagai emulgatornya.

Penelitian ini dilakukan dengan mengoptimasi cetareth 20 dan GMS dengan parameter uji karakteristik berupa daya sebar, daya lekat, dan viskositas. Formula optimum losion ditentukan menggunakan metode *Simplex Lattice Design* pada *software Design Expert* versi 13. Formula optimum diuji stabilitasnya menggunakan metode *freeze-thaw* enam siklus dan juga dilakukan uji iritasi terhadap hewan percobaan.

Didapatkan hasil bahwa cetareth 20 dan GMS berpengaruh pada peningkatan viskositas dan daya lekat serta penurunan daya sebar losion ekstrak etanol jamur tiram. Diperoleh formula optimum dengan konsentrasi cetareth 20 3,5% dan GMS 4,5%. Formula optimum menghasilkan viskositas 4934,70 cPoise, daya lekat 1,12 detik, dan daya sebar 5,32 cm. Formula optimum stabil selama uji stabilitas *freeze-thaw* enam siklus dan tidak bersifat iritasi pada kelinci albino.

Kata kunci: jamur tiram, cetareth 20, GMS, losion

ABSTRACT

One of the causes of various skin problems is free radicals. Antioxidants are believed to prevent free radicals so antioxidants are widely used as cosmetic preparations. Oyster mushroom as a natural ingredient that contains phenolic compounds has the potential to be a candidate for antioxidant cosmetic ingredients for the skin. This study aims to determine the formulation of oyster mushroom natural antioxidant lotion preparation with a combination of cetareth 20 and GMS as the emulsifier.

This research was conducted by optimizing cetareth 20 and GMS with characteristic test parameters such as spreadability, adhesion, and viscosity. The optimum formula of the lotion was determined using the Simplex Lattice Design method on Design Expert software version 13. The optimum formula was tested for stability using the six-cycle freeze-thaw method and also conducted irritation tests on experimental animals.

It was found that cetareth 20 and GMS had an effect on increasing viscosity and adhesion as well as reducing the spreadability of oyster mushroom ethanol extract lotion. The optimum formula was obtained with a concentration of cetareth 20 3,5% and GMS 4,5%. The optimum formula produced a viscosity of 4934,70 cPoise, adhesion of 1,12 seconds, and spreadability of 5,32 cm. The optimum formula was stable during the six-cycle freeze-thaw stability test and showed no irritation response on albino rabbits.

Key words: oyster mushroom, cetareth 20, GMS, lotion