INTISARI

Oksibenzon dan titanium dioksida dikenal sebagai senyawa aktif yang memiliki perlindungan terhadap sinar *ultra violet.* Oksibenzon dan titanium dioksida dibuat dalam bentuk sediaan krim agar mudah diaplikasikan sehari-hari. Tujuan penelitian ini yaitu mengoptimasi sediaan krim *w/o* oksibenzon dan titanium dioksida dengan variasi span 80 dan cera alba.

Delapan *run* krim *w/o* oksibenzon dan titanium dioksida diformulasi dengan variasi cera alba dan span 80. Evaluasi sifat fisik meliputi organoleptis, homogenitas, viskositas, daya sebar, daya lekat, pH, tipe emulsi, dan rasio pemisahan. Hasil penelitian tersebut selanjutnya dianalisis menggunakan metode *simplex lattice design* dengan *software Design Expert*® versi 9.0.4 untuk memperoleh formula optimum. Stabilitas fisik formula optimum krim diamati selama penyimpanan 4 minggu. Pengujian nilai SPF secara *in vivo* dilakukan pada kelinci betina galur *New Zealand White* terinduksi senyawa 8-metoksipsoralen menurut Draelos dan Thaman (2006).

Hasil penelitian menghasilkan formula optimum krim *w/o* oksibenzon dan titanium dioksida dengan proporsi 19% cera alba dan 11% span 80. Formula optimum krim selama penyimpanan 4 minggu menghasilkan sediaan krim yang stabil pada respon sifat fisik viskositas, daya lekat dan daya sebar. Pengujian aktivitas tabir surya secara *in vivo* krim *w/o* oksibenzon dan titanium dioksida menghasilkan nilai SPF 12.

Kata kunci : oksibenzon, titanium dioksida, tabir surya, *in vivo*

ABSTRACT

Oxybenzone and titanium dioxide are known as active compounds which have protection against ultra violet light. Oxybenzone and titanium dioxide are made in the form of available cream in order to be easily applicated everyday. The aim of this research is to optimize available cream w/o oxybenzone and titanium dioxide with span 80 and cera alba variation.

Eight run cream w/o oxybenzone and titanium dioxide are formulated with span 80 and cera alba variation. Physical characteristic evaluation include organolepty, homogenity, viscocity, power of spread, power of stick (adhesiveness), pH, emulsion type, and separating ratio. Then the result of the research is analyzed using simplex lattice design with software design expert® 9.0.4 version method to get optimum formula. The physical stability of optimum formula cream is observed during four weeks storage. The result of SPF value with in vivo way is done to the New Zealand White breed female rabbit induction 8-methoxypsoralen according to Draelos and Thaman (2006)

The result of the research is optimum formula cream w/o oxybenzone and titanium dioxide with 19% cera alba and 11% span 80 proportion. Optimum formula cream during 4 weeks storage produces available cream stable on viscosity physical characteristic response, power of spread, and power of stick. The trial of sun screen activity with in vivo way cream w/o oxybenzone and titanium dioxide give result 12 SPF value.

The keyword : oxybenzone, titanium dioxide, sun screen, in vivo