

Pengaruh penambahan karbomer terhadap stabilitas Fisik Krim X

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Abstrak

Tujuan penelitian ini adalah untuk mengetahui pengaruh penambahan karbomer terhadap stabilitas fisik Krim X. Konsentrasi penambahan karbomer dalam formula Krim X pada percobaan ini adalah 0,1%; 0,2%; 0,3%; 0,4% dan 0,5%. Pada masing-masing sampel, yaitu Krim X formula pembanding dan formula uji, dilakukan evaluasi fisik dan uji stabilitas. Uji stabilitas dilakukan pada penyimpanan suhu $40\pm 2^{\circ}\text{C}$ dengan kelembaban 75% selama 8 minggu. Parameter stabilitas yang diamati adalah organoleptis, pH, jarak lebur, viskositas, sifat alir dan diameter globul rata-rata.

Selama uji stabilitas, konsistensi krim pada formula pembanding, formula 1 dan 2 mengalami penurunan. Sedangkan pada formula 3, 4, dan 5 konsistensinya lebih stabil. Terjadi penurunan pH, jarak lebur dan viskositas, tetapi terjadi pembesaran ukuran diameter globul rata-rata dari keenam krim. Sifat alir dari keenam krim tidak mengalami perubahan yaitu tetap bersifat plastis tiksotropik, hanya terjadi efek pergeseran kurva yang disebabkan oleh penurunan viskositas. Hal ini berarti bahwa ada hubungan antara konsentrasi penambahan karbomer dengan stabilitas fisik krim X. Semakin meningkatnya konsentrasi karbomer yang ditambahkan dalam formula Krim X, maka semakin meningkat pula kestabilan fisiknya.

The essence of this research is to get the information of carbomer adding influence to physical stability of Cream X formula. Carbomer was added in the formulas on this trial for each concentration, they are 0.1%; 0.2%; 0.3%; 0.4%; and 0.5%. For each samples, reference formula and trial formula, were physical evaluated and stability tested. Stability test was done in temperature $40\pm 2^{\circ}\text{C}$ with relative humidity at 75% during 8 weeks.

The evaluation during stability test are organoleptic, pH measured, melting range, viscosity, rheology and globul diameter average. During stability test, the consistency of cream reference formula, formulas 1 and 2 had decreased. But on formulas 3, 4 and 5, the consistency was more stable. There were decrease of pH, melting range, and viscosity, but globul diameter average were increased in all of formulas Cream X. The rheology was stable, means it is an plastic thixotrophy system, but there was an effect of sliding curve because of viscosity had been decreased. It is means that there is a correlation between carbomer adding with physical stability of Cream X. Which increased concentration of carbomer adding in cream X formula made the creams more stable.