

INTISARI

Suspensi sulfadiazin memerlukan suspending agent yang cocok agar tetap stabil dan terdispersi baik dalam penyimpanan yang relatif lama. Tujuan penelitian ini untuk mengetahui pengaruh *suspending agent* Methocel E5 Premium EP (Methocel) terhadap stabilitas fisik suspensi. Penelitian yang dilakukan merupakan penelitian eksperimental sederhana pola satu arah.

Untuk mengetahui pengaruh penggunaan Methocel terhadap stabilitas fisik suspensi sulfadiazin dibuat 3 macam formula. Formula I (F.I) sebagai pembanding, yaitu suspensi sulfadiazin dengan *suspending agent* Natrium karboksimetilselulosa, formula II (F.II) dengan *suspending agent* Methocel, dan formula III (F.III) dengan *suspending agent* kombinasi Methocel-Tween 80(2:1). Pengamatan dilakukan selama 6 minggu pada temperatur kamar dengan melihat sifat alir dalam bentuk rheogram, volume sedimentasi, redispersibilitas, dan kemudahan dituang.

Hasil uji rheogram F.I menghasilkan sistem yang sukar mengalir dibandingkan awal pembuatan, sedangkan F.II dan F.III menghasilkan sistem yang semakin mudah mengalir. Ketiga formula dalam penyimpanan mengalami penurunan harga h_u/h_o . F.I mengalami penurunan dari 1 sampai 0,43, F.II dari 1 sampai 0,83, dan F.III dari 1 sampai 0,64. F.II tetap terdispersi baik selama penyimpanan yang ditunjukkan dengan harga h_u/h_o yang relatif paling tinggi. Pada uji redispersibilitas dan kemudahan dituang menunjukkan, ketiga formula sangat mudah digojok dan dituang. Waktu yang dibutuhkan untuk terdispersi pada F.I = $\pm 1,71$ menit, F.II = $\pm 1,20$ menit dan F.III = $\pm 1,35$ menit.

ABSTRACT

Sulfadiazin suspension needs an appropriate suspending agent in order to be stable and well dispersed in a long storage. This research purposed to know the influence of Methocel E5 Premium EP (Methocel) suspending agent toward the suspension physical stability. This research was a simple experiment with one way pattern.

To know the influence of the use of Methocel toward the sulfadiazin suspension physical stability, there were three formulas. Formula I (F.I) as the standard formula, that was sulfadiazin suspension with Carboxymethylcellulose sodium suspending agent, formula II (F.II) was with Methocel suspending agent, and formula III (F.III) was with combination of Methocel-Tween 80 (2:1) suspending agent. The observation was done for about 6 weeks in a room temperature by looking at streaming characteristic in a rheogram form, volume of sedimentation, redispersibility, and then pouring it.

The F.I rheogram test result showed that there was a difficult streaming system if it was comparing with the first production, and for F.II and F.III resulted in an easier streaming system. Those three formulas in the storage had got h_u/h_o value decreasing. F.I had got decreasing from 1 to 0.43, F.II had got decreasing from 1 to 0.83, and F.III had got decreasing from 1 to 0.64. F.II was still dispersed well in the time of storage which was showed by relatively the highest value of h_u/h_o . In the redispersibility test and then pouring, it showed that those three formulas were easy to be shaken and poured. The needed time to disperse in F.I was about 1.71 minutes, F.II was about 1.20 minutes, and F.III was about 1.35 minutes.