

## INTISARI

Penggunaan *suspending agent* dalam suspensi merupakan upaya untuk mempertahankan stabilitas fisik suspensi. Penelitian tentang stabilitas fisik suspensi sulfadiazin dengan *suspending agent* Methocel K 100 M Premium EP, bertujuan untuk mengetahui pengaruh penggunaan *suspending agent* dengan melihat adanya penurunan atau peningkatan stabilitas fisik suspensi. Penelitian yang dilakukan merupakan jenis penelitian eksperimental sederhana pola satu arah.

Untuk mengetahui pengaruh penggunaan *suspending agent* Methocel K 100 M Premium EP terhadap stabilitas fisik suspensi sulfadiazin, dibuat tiga macam formula. Formula I dengan *suspending agent* Natrium karboksimetilselulosa 1%, formula II dengan Methocel K 100 M Premium EP 1%, dan formula III dengan kombinasi Methocel K 100 M Premium EP- Tween 80 (3:7). Pengamatan dilakukan selama 6 minggu dengan setiap minggunya stabilitas fisik suspensi diamati yang meliputi rheologi, volume sedimentasi, redispersibilitas, dan mudah tidaknya suspensi dituang.

Hasil penelitian diperoleh, rheogram ketiga suspensi selama penyimpanan 6 minggu menghasilkan sistem yang semakin mudah mengalir. Formula II memberikan harga  $h_u/h_o=1$  yang stabil selama 6 minggu penyimpanan. Formula I dan III mengalami penurunan harga  $h_u/h_o$ , formula I  $h_u/h_o$  awal=1 sampai minggu VI  $h_u/h_o=0,43$ , dan formula III  $h_u/h_o$  awal=1 hingga minggu VI turun menjadi 0,85. Formula II relatif lebih cepat terdispersi dari pada formula I dan III, supaya dapat terdispersi kembali formula II hanya membutuhkan waktu 0,6 menit, formula I antara 0,6-2,67 menit, dan formula III antara 0,6-1,41 menit. Data penuangan memberikan hasil ketiga formula suspensi mudah dituang.

## ABSTRACT

The use of suspending agent of Methocel K 100 Premium EP is an effort to maintain the physical stability of suspension. Research of physical stability of suspension with suspending agent of Methocel K 100 M Premium EP is to know effects of the use of suspending agent with the fluctuation present in the physical stability of suspension. This is an experimental research of one direction pattern.

In order to compare the suspension physical stabilities, the study had been carried out. Formula I (FI) as the standard formula, was prepared used 1% carboxymethyl cellulose Sodium as the suspending agent, while formula II (FII) and formula III (FIII) used 1% methocel K 100 M Premium EP and the mixture of methocel K 100 M Premium EP-tween 80 (3:7), respectively. The suspension physical stabilities were observed every weeks for six weeks periods, and comprised of the determination of rheology, volume sedimentation, redispersibility, and time to pour.

The rheogram showed that all suspensions seemed to flow more easily week after week. The volume sedimentation, expressed as  $h_u/h_o$ , occurred the decreasing from after preparing to six weeks period of storage, excepted for F II. F I showed from 1 to 0,43, F II seemed to be constant, and F III from 1 to 0,85, respectively. The redispersibility studies resulted in F I took 0,60-2,67 minutes, F II 0,60 minutes, and F III 0,60-1,41 minutes respectively. The study of time to pour showed that all formulae were easily to pour