INTISARI

Emulsi adalah sediaan yang mengandung bahan obat cair atau larutan obat terdispersi dalam cairan pembawa, distabilkan dengan zat pengemulsi atau surfaktan yang cocok. Surfaktan sebagai salah satu zat pengemulsi bekerja dengan cara mengurangi tegangan antar permukaan antara fase internal dan fase eksternal.

Untuk mengetahui stabilitas fisik emulsi dengan surfaktan, telah dilakukan penelitian stabilitas fisik emulsi minyak ikan dengan campuran surfaktan Span 80®- Tween 80® dalam penyimpanan. Penelitian dilakukan mengikuti rancangan penelitian eksperimental sederhana acak lengkap pola searah.Dibuat 5 formula emulsi dengan perbandingan Span 80®- Tween 80® yang berbeda (F1 1:1, F2 1:2, F3 1:3, F4 2:1 dan F5 3:1), dan dilanjutkan dengan uji stabilitas fisik emulsi pada suhu 27°C yang meliputi pemisahan fase, analisis ukuran partikel, perubahan viskositas dan sifat alir, jenis emulsi dan sentrifugasi. Pengamatan stabilitas dilakukan selama 6 minggu. Data dianalisis secara statistik dengan analisa varian satu arah dan dilanjutkan dengan uji Scheffe taraf kepercayaan 95%.

Dari hasil penelitian diketahui bahwa kelima formula emulsi dapat mempertahankan stabilitas emulsi selama enam minggu penyimpanan, dan F3 dengan perbandingan Span 80®- Tween 80®1:3 lebih stabil dibandingkan keempat formula lainnya dengan pemisahan fase sebesar 96% emulsi stabil, viskositasnya tertinggi yaitu 1,0741 cP dan pertikelnya membesar secara stabil sampai ukuran maksimum. Sifat alir dari F 3 adalah tetap pseudoplastik dan tipe emulsi *m/a*.

ABSTRACT

Emulsion is a liquid dosage form with liquid drug substance or drug solution, dispersed into vehicle, stabilized by suitable surfactant. Surfactant as emulsifying substance reduces tension of the surface between the internal phase and the external phase.

To identify emulsion physical stability supported with surfactant, the research of physical stability of cod-liver oil with Span 80® – Tween 80® surfactant compositions in the storage had been done,using one way complete random simple research design. Five emulsion formulas had been made in difference compositions of Span 80® – Tween 80® (F1 1:1, F2 1:2, F3 1:3, F4 2:1, F5 3:1), and then tested with emulsion physical stability test at 27°C, i.e. phase separation, particle size analysis, viscosity changes, rheology type, emulsion type and sentrifugating separation. The emulsion stability was observed during six weeks. The data were analyzed statistically using one way anova and then continued by Scheffe test with 95% confident interval.

The study concluded that all formulas were able to keep the emulsion stability in six weeks storage and F 3 which had the composition of Span 80®-Tween 80® 1:3 was the most stable emulsion because the result in phase separation showed that 96% emulsion was stable, it had the highest viscosity 1.0741 cP and its particle growth was relatively stable until the maximum size. The type of the rheology of this formula was pseudoplastic and the type of the emulsion was oil in water (*o/w*).