

ABSTRAK

Hidrokoloid berasal dari tanaman yang banyak diteliti sebagai eksipien bahan obat. Beberapa penelitian telah dikembangkan dalam pembuatan hidrokoloid dengan menambahkan Natrium bikarbonat dan lama waktu perendaman untuk mendapatkan hidrokoloid yang memiliki kemampuan sebagai pengemulsi. Penelitian ini bertujuan untuk mengukur pengaruh konsentrasi natrium bikarbonat dan waktu perendaman pada proses pembuatan hidrokoloid terubuk dan uji kualitasnya sebagai pengemulsi. Rancangan penelitian ini adalah quasi eksperimental, dimana pada penelitian ini akan dilakukan dengan proses pembuatan hidrokoloid berbahan terubuk, dan diuji kemampuan pengemulsinya dengan membuat sembilan kelompok perlakuan berdasarkan tiga variasi konsentrasi natrium bikarbonat dan tiga variasi waktu perendaman, tiap kelompok akan diuji kualitasnya pengemulsi meliputi pengukuran *Creaming Index* (CI) dan viskositas, uji batas – batas lapisan *Emulsifying Activity* (EA), pengukuran persen transmittan, uji homogenitas dan uji daya hantar. Hasil penelitian menunjukkan bahwa emulsi hidrokoloid terubuk seluruh kelompok perlakuan konsentrasi natrium bikarbonat dan waktu perendaman memiliki kemampuan sebagai pengemulsi dengan kualitas yang baik, dimana kualitas terbaik terdapat pada sampel perlakuan natrium bikarbonat 0% dan waktu perendaman 3 jam berdasarkan hasil uji *Creaming Index* (CI) dan *Emulsifying Activity* (EA).

Kata Kunci: hidrokoloid Terubuk, emulsi, creaming index (CI) dan uji emulsifying activity (EA). Kata Kunci: hidrokoloid Terubuk, emulsi, creaming index (CI) dan uji emulsifying activity (EA).

ABSTRACT

Hydrocolloids are polymers derived from plants that have been widely studied as excipient drugs. Several studies have been developed in making hydrocolloids by adding sodium bicarbonate and soaking for a long time to obtain hydrocolloids that have the ability to act as emulsifiers. This research aims to measure the effect of sodium bicarbonate concentration and soaking time on the process of making crushed hydrocolloids and testing their quality as an emulsifier. The design of this research is quasi-experimental, where this research will be carried out using the process of making crushed hydrocolloids, and its emulsifying ability will be tested by making nine treatment groups based on three variations of sodium bicarbonate concentration and three variations of soaking time, each group will be tested for the quality of the emulsifier including measuring Creaming. Index (CI) and viscosity, Emulsifying Activity (EA) layer limit test, percent transmittance measurement, homogeneity test and conductivity test. The results of the research showed that the crushed hydrocolloid emulsion in all groups treated with sodium bicarbonate concentration and soaking time had the ability to act as an emulsifier with good quality, where the best quality was found in samples treated with 0% sodium bicarbonate and a soaking time of 3 hours based on the results of the Creaming Index (CI) test and Emulsifying Activity (EA).

Keywords: *Emulsion; hydrocolloid; terubuk; creaming index; emulsifying activity.*

KARAWANG