

INTISARI

Temulawak termasuk jenis temu-temuan yang mempunyai banyak khasiat. Granul *effervescent* dipilih sebagai alternatif bentuk sediaan karena dapat memberikan sensasi yang menyegarkan, nyaman, mudah digunakan, dan penyiapan larutan dengan dosis obat yang tepat dapat dilakukan dalam waktu seketika. Penelitian ini bertujuan untuk mengetahui apakah granul *effervescent* yang dihasilkan dapat memenuhi persyaratan uji sifat fisik granul *effervescent* yang berlaku, mengetahui efek yang paling dominan dalam menentukan masing-masing sifat fisik granul *effervescent*, dan mencari komposisi optimum yang dapat menghasilkan granul *effervescent* yang baik.

Penelitian ini dilakukan berdasarkan metode desain faktorial, dengan 2 faktor dan 2 level. Sifat fisik granul *effervescent* yang diuji untuk melihat faktor yang paling dominan adalah kecepatan alir, kandungan lembab, dan waktu larut. Uji sifat fisik tersebut digunakan untuk menentukan area komposisi optimum formula granul *effervescent* yang dihasilkan.

Hasil penelitian menunjukkan bahwa granul *effervescent* yang dihasilkan memenuhi persyaratan uji kecepatan alir, kandungan lembab, dan waktu larut. Natrium bikarbonat berpengaruh dominan terhadap semua sifat fisik granul *effervescent*. Pada level yang diteliti diperoleh area komposisi optimum campuran asam sitrat-asam tartrat dan natrium bikarbonat yang menghasilkan granul *effervescent* dengan sifat fisik yang dikehendaki.

Kata kunci : asam sitrat, asam tartrat, natrium bikarbonat, granul *effervescent*, ekstrak rimpang temulawak, metode desain faktorial

ABSTRACT

Turmeric was claimed of having many indications. *Effervescent* granules were chosen as the alternative of dosage form because *effervescent* granules gave the fresh sensation, comfortable, easy to use, and preparation of liquid with accurate dosage could be done as soon as possible. This research was aimed to find out whether *effervescent* granules which was produced could fulfill the requirement of valid *effervescent* granules' physical properties test, to know the most dominant effect in defining each of *effervescent* granules' physical properties, and to find out the optimum composition which could produce good *effervescent* granules.

This research was done according to factorial design method, with two factors and two levels. The *effervescent* granules' physical properties that are tested to find out the most dominant factors are flow rate, moisture content, and dissolution time. These physical properties tests were used to get to know the most optimum composition area of granules formula produced.

The result of this research showed that *effervescent* granules which were produced had fulfilled the test requirement of flow rate, moisture content, and dissolution time. sodium bicarbonate had a dominant effect toward the entire physical properties of *effervescent* granules. At this researched level, the optimum composition of combination between citric acid-tartaric acid and sodium bicarbonate which was produced a certain physical properties of *effervescent* granules was found.

Keywords: citric acid, tartaric acid, sodium bicarbonate, *effervescent* granules, turmeric extract, factorial design method.