

ABSTRAK

FORMULASI DAN UJI SEDIAAN FISIK GRANUL EFFERVESCENT EKSTRAK DAUN KELOR (*Moringa oleifera* L.) SEBAGAI ANTIOKSIDAN (Oleh Sarifah Ramlah; Pembimbing Apt. Wahyudin Bin Jamaludin, M.Si. & Cast Torizellia, S.S.T. Keb., M.Kes.,; 2022; 114 Halaman)

Sumber antioksidan alami banyak terdapat di tanaman salah satunya dari tanaman Daun Kelor. Daun Kelor (*Moringa oleifera* L.) diketahui memiliki kandungan mineral, asam amino, esensial, antioksidan seperti vitamin C vitamin E dan kaya akan metabolit sekunder lainnya yang merupakan sumber potensial yang berkhasiat bagi Kesehatan. Penelitian ini bertujuan untuk mengetahui kelarutan berdasarkan jumlah variasi konsentrasi asam basa terhadap granul *effervescent* ekstrak Daun Kelor dan untuk menentukan formula terbaik granul *effervescent* ekstrak daun Kelor berdasarkan evaluasi sifat fisik sediaan. Metode dalam penelitian ini adalah penelitian eksperimental, dengan granulasi basah. Untuk mengetahui stabilitas granul Effervescent dilakukan uji stabilitas selama 1 bulan, pada penelitian ini digunakan tiga rasio (asam sitrat, asam tartrat, dan natrium bikarbonat) yaitu 1:1:2,9; 1:2:2,5; 1:2:3,44; 1:2:3,5. Berdasarkan hasil penelitian didapat kadar lembab granul *effervescent* kisaran 3,36 – 5,82. Waktu alir Granul *Effervescent* kisaran 4,02- 4,69. Nilai θ sudut diam granul kisaran 20,53-25,380. Nilai indeks kompresibilitas kisaran 15,49 – 17,04. Ketinggian Buih granul *effervescent* kisaran 3,97-5,83. pH granul *effervescent* kisaran 5,40-6,13. Waktu larut granul *effervescent* kisaran 53,30-57,51. Nilai *acceptability* granul *effervescent* kisaran 3,05-3,5 untuk warna, nilai aroma kisaran 3 – 3,2. Dan nilai rasa kisaran 3 – 4,3. Sehingga dapat dilihat formula terbaik granul *effervescent* ekstrak daun Kelor (*Moringaoleifera* L.) terhadap sifat fisik sediaan adalah pada formula III. Hal ini berdasarkan hasil evaluasi uji yang dihasilkan lebih baik daripada formula I, II dan IV.

Kata Kunci : Antioksidan, Granul *Effervescent*, Daun kelor (*Moringa oleifera* L.)

ABSTRACT

FORMULATION AND PHYSICAL PREPARATION OF EFFERVESCENT GRANULES EXTRACT OF MORINGA LEAF (*Moringa oleifera* L.) AS ANTIOXIDANT (By Sarifah Ramlah; Supervisor Apt. Wahyudin BinJamaludin, M.Si. & Cast Torizellia, S.S.T. Keb.,M.Kes.,; 2022; 114 Halaman)

Many natural sources of antioxidants are found in plants, one of which is the Moringa Leaf plant. Moringa leaves (*Moringa oleifera* L.) are known to contain minerals, amino acids, essentials, and antioxidants such as vitamin C, and vitamin E and are rich in other secondary metabolites which are potential sources of health benefits. This study aims to determine the solubility based on the number of variations in the concentration of acid-base on the effervescent granules of Moringa leaf extract and to determine the best formula for the effervescent granules of Moringa leaf extract based on the evaluation of the physical properties of the preparation. The method in this research is experimental research, with wet granulation. To determine the stability of effervescent granules, a stability test was carried out for 1 month, in this study three ratios (citric acid, tartaric acid, and sodium bicarbonate) were used, namely 1:1:2,9; 1:2:2,5; 1:2:3,44; 1:2:3,5. Based on the results of the research, the moisture content of the effervescent granules ranged from 3.36 to 5.82. Effervescent granule flow time ranged from 4.02 to 4.69. The angle of repose of the granules ranges from 20.53-25.380. The compressibility index value is in the range of 15.49 – 17.04. The height of the effervescent granule froth ranged from 3.97 to 5.83. The pH of the effervescent granules ranged from 5.40 to 6.13. The dissolving time of effervescent granules ranged from 53.30 to 57.51. The acceptability value of effervescent granules is in the range of 3.05-3.5 for color, and the value of aroma is in the range of 3-3.2. And the taste value ranges from 3 to 4.3. So that it can be seen that the effervescent granule formula of Moringa leaf extract (*Moringa oleifera* L.) on the physical properties of the preparation is in formula III. This is based on the results of the test evaluation that is better than formulas I, II, and IV.

Keywords: Antioxidant, Granule effervescent, Moringa Leaf (*Moringa oleifera* L.)