INTISARI

Penelitian tentang pembuatan tablet ekstrak daun kepel secara kempa langsung dengan kombinasi Avicel PH 102® dan Di-Cafos® sebagai bahan pengisi-pengikat telah dilakukan. Tujuan penelitian untuk membuat tablet ekstrak daun kepel menggunakan Avicel PH 102® dan Di-Cafos® sebagai bahan pengisi-pengikat sehingga diperoleh tablet dengan sifat fisik yang memenuhi persyaratan dan melihat efek variasi Avicel PH 102® dan Di-Cafos® sebagai bahan pengisi-pengikat terhadap sifat fisik tablet.

Ekstrak daun kepel diperoleh dengan perkolasi kemudian dibuat tablet dengan cara kempa langsung yang menggunakan kombinasi Avicel PH 102® dan Di-Cafos® sebagai bahan pengisi-pengikat. Perbandingan Avicel PH 102® dan Di-Cafos® yang ditambahkan dalam formula, adalah Formula I (30% : 70%), Formula II (40% : 60%), Formula III (50% : 50%), Formula IV (60% : 40%), Formula V (70% : 30%). Bahan-bahan tersebut dicampur dengan bahan tambahan lain seperti bahan aktif, bahan penghancur, bahan pelicin. Campuran serbuk diuji sifat fisiknya, yaitu waktu alir, pengetapan, kandungan lembab. Tablet yang diperoleh diuji sifat fisiknya, yaitu keseragaman bobot, kekerasan, kerapuhan, daya serap, waktu hancur. Data yang diperoleh dianalisis secara statistika dengan analisis varian satu arah dan dilanjutkan uji *Scheffe* dengan taraf kepercayaan 95%.

Hasil penelitian menunjukkan bahwa semua formula memenuhi persyaratan sifat fisik tablet. Variasi komposisi Avicel PH 102® dan Di-Cafos® berefek pada sifat fisik (keseragaman bobot, kekerasan, daya serap, waktu hancur), kecuali kerapuhan. Hasil uji KLT menunjukkan bahwa zat aktif setelah proses pentabletan tidak mengalami perubahan.

Kata kunci: Ekstrak daun kepel, Kempa langsung, Avicel PH 102®, Di-Cafos®, Bahan pengisi, Bahan pengikat, Bahan pengisi-pengikat.

ABSTRACT

The research about production of *kepel* leaves extract tablet by direct compression with combination Avicel PH 102® and Di-Cafos® as the filler-binder had been done. The purposes of this experiment were to produced tablets of *kepel* leaves extract with Avicel PH 102® and Di-Cafos® as filler-binder which met the requirements of tablet physical properties and to observe the effect of the composition of Avicel PH 102® and Di-Cafos® as filler-binder of tablet physical properties.

The extract of the *kepel* leaves was extracted by percolation, then was prepared into tablets by direct compression with the combination of Avicel PH 102® and Di-Cafos® as filler-binder. The composition of Avicel PH 102® and Di-Cafos® on formulation i.e. Formula I (30%: 70%), Formula II (40%: 60%), Formula III (50%: 50%), Formula IV (60%: 40%), Formula V (70%: 30%). Those component were mixed with other ingredients such as the active ingredients, disintegrant, lubricant. The mixture were physically tested i.e. the flowabillity , tapping index, moisture content. The tablets were physically evaluated, include the weight uniformity, hardness, friabillity, water uptake, disintegration time. The data were analyzed theoretically and statistically using one-way ANOVA and for the significant differences they were analyzed by Scheffe test with confidential level at 95%.

The result indicated that all of the compositions met the requirements of tablet physical properties. Variation of the composition of Avicel PH 102® and Di-Cafos® affected most of the physical properties (weight uniformity, hardness, water uptake, disintegration time), except the friabillity. Moreover, the result of TLC analyzed showed that the active material contents were stabile during the preparation of the tablets.

Key words : *Kepel* leaves extract, Direct compression, Avicel PH 102®, Di-Cafos®, Filler, Binder, Filler-binder