# INTISARI

Penyakit kardiovaskular merupakan penyakit penyebab utama kematian di seluruh dunia. Salah satu tata laksana terapi pada penanganan *stroke* ini yakni *asetosal*. *Asetosal* merupakan antiplatelet. *Asetosal* yang beredar di pasaran berbentuk tablet konvensional. Tablet konvensional memiliki banyak kekurangan yakni kesulitan dalam menelan. *Fast Disintegrating Tablet (FDT)* merupakan solusi yang tepat dipilih untuk menanggulangi kelemahan tersebut. *FDT* memiliki kelebihan yakni dapat terdisintegrasi cepat dan tidak memerlukan air sehingga cocok untuk pasien yang kesulitan dalam menelan. Tujuan penelitian ini adalah untuk mengetahui pengaruh *superdisintegrant crospovidone* dan *filler-binder* Pearlitol 400DC terhadap sifat fisik *FDT asetosal*, mengetahui perbandingan kadar optimum *superdisintegrant crospovidone* dan *filler-binder* Pearlitol 400DC dalam formula *FDT asetosal*, dan mengetahui hasil uji fisik *FDT asetosal*.

Penelitian ini merupakan penelitian eksperimental. *Asetosal* dibuat tablet dengan perbandingan sesuai dengan hasil *Design Expert 13*. Campuran massa siap kempa diuji *in-process control* untuk mengetahui sifat alir dan kompresibilitas granul. Selanjutnya, dilakukan penabletan dan diuji sifat fisik tablet. Data hasil sifat fisik diuji menggunakan *Simplex Lattice Design* (SLD) dan uji ANOVA untuk memperoleh formula optimum. Hasil pengujian verifikasi dibandingkan signifikansinya dengan uji *t-test* dengan taraf kepercayaan 95%.

Hasil penelitian menunjukkan bahwa *crospovidone* dominan berpengaruh terhadap kecepatan alir, sudut diam, kerapuhan dan rasio absorpsi *FDT*. Sedangkan, Pearlitol 400DC berpengaruh terhadap kekerasan, waktu hancur, dan waktu pembasahan. Kesimpulan penelitian ini yakni kombinasi *superdisintegrant crospovidone* sebesar 2,5 % dan *filler binder* Pearlitol 400DC sebesar 63,5 % terhadap bobot tablet dapat memberikan sifat fisik optimum *asetosal.*

**Kata kunci : *asetosal*, tablet, *crospovidone*, Pearlitol**

# ABSTRACT

Cardiovascular disease is the leading cause of death worldwide. One of the therapeutic procedures in stroke management is acetosal. Acetosals are antiplatelets. Acetosals on the market are in the form of conventional tablets. Conventional tablets have many drawbacks, namely difficulty in swallowing. Fast Disintegrating Tablet (*FDT*) is the right solution chosen to overcome these weaknesses. *FDT* has the advantage that it can disintegrate quickly and does not require water making it suitable for patients who have difficulty swallowing. The purpose of this study was to determine the effect of *superdisintegrant crospovidone* and *filler-binder* Pearlitol 400DC on the physical properties of *FDT* acetosal, determine the comparison of optimal levels of *superdisintegrant crospovidone* and *filler-binder* Pearlitol 400DC in the formula *FDT* acetosal, and determine the results of the physical test *FDT* acetosal.

This study is an experimental study. Acetosal made tablets with a comparison according to the results of Design Expert 13. The ready-pressed mass mixture was tested in-process control to determine the flow properties and compressibility of the granules. Next, the measurement is carried out and tested for the physical properties of the tablets. Physical properties data are tested using Simplex Lattice Design (SLD) and ANOVA test to obtain the optimum formula. The results of the verification test were compared in significance with the t-test with a confidence level of 95%.

The results showed that crospovidone predominantly affects flow velocity, rest angle, brittleness and FDT absorption ratio. Meanwhile, Pearlitol 400DC affects hardness, crushing time, and wetting time. The conclusion of this study is that the combination of superdisintegrant crospovidone by 2.5% and Pearlitol 400DC filler binder by 63.5% on tablet weight can provide optimum physical properties of acetosal.

Keywords : acetosal, tablet, *crospovidone*, Pearlitol