INTISARI

Hampir 90% bahan baku obat, baik zat aktif maupun bahan tambahan (eksipien) di Indonesia didapatkan melalui impor dari luar negeri, padahal sumber daya Indonesia dapat dikembangkan. Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan bahan pengikat amilum ubi jalar (*Ipomoea batatas* L) dalam berbagai konsentrasi terhadap sifat fisik granul, tablet dan profil disolusi tablet paracetamol.

Pada penelitian ini menggunakan penelitian eksperimental dengan *design post-test only control group* yaitu menggunakan lima formula amilum ubi jalar putih dan tablet paracetamol merk dagang sebagai kontrol positif. Formula yang digunakan yaitu konsentrasi 5%, 10%, 15%, 20%, dan 25%. Kemudian dilakukan uji granulasi, keseragaman bobot, kekerasan, kerapuhan, disintegrasi dan disolusi.

Hasil penelitian menunjukkan bahwa tablet paracetamol dengan bahan pengikat amilum ubi jalar putih yang dibuat memenuhi persyaratan fisik sesuai standar Farmakope Indonesia. Tablet paracetamol yang dihasilkan berwarna putih, memenuhi persyaratan ketika dilakukan pemeriksaan fisik meliputi uji granulasi, keseragaman bobot, kerapuhan, namun pada uji kekerasan didapatkan formula yang memenuhi persyaratan farmakope yaitu pada formula 1 (5%), uji waktu hancur dan disolusi formulasi yang memenuhi syarat adalah formula 1,2,3 (5%,10% dan 15%). Berdasarkan uji analasis *Anova dan Kruskal wallis* didapatkan terjadinya perbedaan signifikan antar kelompok perlakuan pada uji pengetapan granul, keseragaman bobot, kekerasan, kerapuhan, disintegrasi dan disolusi ($p<0,05$), kemudian dilanjutkan uji *Mann-Whitney* dan tidak terjadi perbedaan signifikan antar kelompok pada uji waktu alir dan sudut diam ($p>0,05$).

Kesimpulan dalam penelitian ini adalah konsentrasi amilum ubi jalar putih (*Ipomoea batatas* L) terhadap sifat fisik granul, tablet dan profil disolusi tablet paracetamol dengan konsentrasi 5% sampai 10%.

Kata kunci : Amilum Ubi Jalar, Tablet, Paracetamol

ABSTRACT

Almost 90% ingredients of medicine, both active substances and additives (excipients) in Indonesia are imported from in fact Indonesian resources can be developed. This research was aimed to determine the effect of the use of sweet potato (*Ipomoea batatas* L) starch binder in various concentrations on physical properties of granule, tablet, and dissolution profile of paracetamol.

This research was experimental research with post-test only control group design using five formulae of (*Ipomoea batatas* L) starch and trademark paracetamol tablet as (positive control). The were used formula which were used were the concentrations of 5%, 10%, 15%, 20%, and 25%. It was done through granulation, weight uniformity, hardness, fragility, disintegration, and dissolution test.

The result showed that paracetamol tablet with (*Ipomoea batatas* L) starch binder made fulfilled the physical requirements as Indonesian Pharmacopoeia Standard. The resulting paracetamol tablet was white, fulfilling the requirements when the physical examination was done through granulation, weight uniformity, and fragility test, but in the hardness test, the formula which fulfilled the pharmacopoeia requirements was formula 1 (5%), the crushed timing and formulation dissolution test which fulfilled the requirements were formula 1, 2, 3 (5%, 10% and 15%). Based on analytical test of *Anova* and *Kruskal wallis*, there was significant difference among treatment groups on granule, weight uniformity, hardness, fragility, disintegration and dissolution determination test ($p < 0.05$), followed by Mann-Whitney test in which there was no significant difference among groups on the test of flow time and point of rest ($p > 0.05$).

The conclusion in this research was the concentration of white sweet potato starch (*Ipomoea batatas* L) on physical properties of granule, tablet, and paracetamol tablet dissolution profile had the concentrations of 5% to 10%.

Keywords: Sweet Potato Starch, Tablet, Paracetamol