

ABSTRAK

Ubi jalar ungu (*Ipomea batatas* Lamk) memiliki khasiat sebagai antioksidan serta antikanker. Penelitian ini bertujuan untuk memformulasikan ubi jalar ungu menjadi sediaan tablet *Effervescent* dengan menggunakan variasi kadar asam dan basanya untuk kemudian dilakukan analisis stabilitas mutu tablet *Effervescent* dari ekstrak ubi jalar ungu dengan variasi formula asam basa. Ekstrak kering ubi jalar ungu diekstraksi dengan metode maserasi menggunakan etanol 70% dan dikentalkan menggunakan *rotary evaporator* kemudian dikeringkan menggunakan manitol dan aerosil. Ekstrak dibuat menjadi 3 formula dengan variasi konsentrasi asam basa dengan metode granulasi kering. Uji karakteristik granul yang dilakukan meliputi uji pengetapan, uji waktu alir dan uji sudut diam granul, sedangkan uji karakteristik tablet meliputi uji keseragaman bobot, uji kekerasan, uji waktu larut dan uji derajat keasaman. Data yang diperoleh dibandingkan dengan Farmakope Indonesia dan literatur lain kemudian dianalisis menggunakan *One Way ANOVA* dengan taraf kepercayaan 95%. Hasil yang diperoleh menunjukkan penggunaan variasi konsentrasi asam basa berpengaruh terhadap stabilitas mutu fisik granul dan tablet *Effervescent* ubi jalar ungu yang meliputi pengetapan ($p=0,011$), laju alir ($p=0,001$), keseragaman bobot ($p=0,000$), kekerasan ($p=0,000$), waktu larut ($p=0,000$) dan juga pH ($p=0,011$) namun tidak berpengaruh terhadap sudut diam granul ($p=0,178$). Berdasarkan hasil penelitian dapat disimpulkan bahwa formula 1 (asam basa 40%) merupakan formula terbaik karena memenuhi persyaratan fisik granul dan tablet.

Kata kunci: asam basa, tablet *Effervescent*, ubi jalar ungu (*Ipomea batatas* L)

ABSTRACT

Ipomea batatas Lamk has antioxidant and anticancer properties. This study aims to formulate purple sweet potato into Effervescent tablet preparations by using variations of its acid and base level to analyze quality stability of effervescent tablet from purple sweet potato extracted with variation of acid base formula. Dry extract of purple sweet potato was extracted with maseration method using ethanol 70% and was thickened using rotary evaporator then was dried using mannitol and aerosil. The extract was made into 3 formulas with variation of acid-base concentration by dry granulation method. The granular characteristic that was carried out including the test of determination, flow time test and silent angle test. While tablet characteristic test included weight uniformity test, hardness test, soluble time test and acidity test. Data obtained were compared to Farmakope Indonesia' book and other literature then were analyzed using One Way ANOVA with 95% confidence level. The results showed that the use of acid-base concentration variation had an effect on the physical quality of granule and purple sweet potato Effervescent tablet that were consisted of the determination ($p=0,011$), flow rate ($p=0,001$), weight uniformity ($p=0,000$), hardness ($p=0,000$), solubility time ($p=0,000$) and also pH ($0,011$) but there was no effect on the granular diameter ($p=0,178$). Based on the results of research, it can be concluded that the formula 1 (acid base 40 %) is the best formula because it meets the physical requirements of granules and tablets.

Keywords: acid base, Effervescent tablet, purple sweet potato (*Ipomea batatas L*)