ABSTRAK

Judul : Uji Inhibisi Enzim α-Glukosidase dan α-Amilase dari Ekstrak Etanol 70% Biji Jagung Ungu (*Zea mays var*. Ceratina Kulesh)

Nama : Desy Wulan Suci

Program studi : Farmasi

Buah jagung ungu (*Zea mays var*. Ceratina Kulesh) merupakan salah satu tanaman suku poaceae yang memiliki senyawa aktif alkaloid, flavonoid, saponin, tannin dan steroid atau triterpenoid. Tanaman ini diketahui memiliki aktivitas penghambatan enzim α-glukosidase dan α-amilase. Sampel buah jagung ungu yang diperoleh dari petani di Desa Panggung Rawi, Jombang, Kota Cilegon dideterminasi di Herbarium Jatinagor Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD. Hasil determinasi menyatakan buah jagung ungu memiliki nama latin yaitu *Zea mays var*. Ceratina Kulesh. Sampel dikeringkan dengan diangin-anginkan, hingga kering dan dibuat serbuk kasar dengan grinder. Sebanyak 600g simplisia serbuk kasar diekstraksi menggunakan metode maserasi dengan pelarut etanol 70%, dan diperoleh rendamen yaitu 12,98%. Skrining fitokimia terhadap ekstrak etanol 70% terdapat alkaloid, flavonoid, tannin, saponin, steroid atau trtiterpenoid. Berdasarkan nilai IC_{50} ekstrak etanol 70% biji jagung ungu mempunyai nilai IC_{50} sebesar 128963,4 ppm pada enzim α-glukosidase dan pada enzim α-amilase diperoleh hasil sebesar 9956,60 ppm. Hasil tersebut menunjukkan bahwa ekstrak biji jagung ungu memiliki penghambatan aktivitas enzim α-glukosidase dan α-amilase namun tidak sebaik dengan acarbose dengan spektrofotometer UV-Vis dengan panjang gelombang 410-516 nm.

Kata kunci : *Zea mays var*. Ceratina Kulesh, Maserasi, IC_{50}, Enzim α-glukosidase, Enzim α-amilase, Spektrofotometri UV-Vis

ABSTRACT

Title : Inhibition Test of Enzyme a-Glucosidase and α-Amylase from Ethanol Extract 70% Purple Corn Kernels (*Zea mays var*. Ceratina Kulesh)
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Purple corn (*Zea mays var*. Ceratina Kulesh) is one of the plants of the *Poaceae* family which contains various active compounds of alkaloids, flavonoids, saponins, tannins and steroids or triterpenoids. Purple corn has been shown to have α-glucosidase inhibitory assay and α-amylase inhibitory assay. Samples of purple corn taken from farmers in Panggung Rawi Village, Jombang, Cilegon City were determinated at the Jatinagor Herbarium Plant Taxonomy Laboratory, Department of Biology FMIPA UNPAD. The results of the determination stated that the purple corn fruit has a latin name, namely *Zea mays var*. Ceratina Kulesh. The sample is dried by aerating, to dry and coarse powdered with a grinder. A total of 600 g of coarse powder simplisia was extracted using the maceration method with a 70% ethanol solvent, and a soak of 12.98% was obtained. Phytochemical screening of 70% ethanol extract contains alkaloids, flavonoids, tannins, saponins, steroids or trtiterpenoids. Based on the IC_{50} value of ethanol extract, 70% of purple corn kernels have an IC_{50} value of 128963,4 ppm on the enzyme α-glucosidase and on the enzyme α-amylase a result of 9956,60 ppm was obtained. The results showed that purple corn seed extract had inhibition of the activity of the enzymes α-glucosidase and α-amylase but was not as good as that of acarbose with a UV-Vis spectrophotometer with a wavelength of 410-516 nm.

Keyword : *Zea mays var*. Ceratina Kulesh, Maceration, IC_{50}, Enzyme α-glukosidase, Enzyme α-amilase, Spektrofotometri UV-Vis