

Kalay Wani (163307010067), Melissa Pratiwi Lubis (163307010068), 2019. ( *$\alpha$  - Amylase Inhibitory Activities of (Citrus Amblycarpa (Hassk.) Ochse) Ethanol Extract*). Supervisor: dr. Sofian Wijaya, MHA. Fakultas kedokteran. Universitas Prima Indonesia.

#### ABSTRACT

This research was conducted to determine the activity test of the extract of lime peel (*Citrus Amblycarpa*) with a concentration of 6, 25  $\mu\text{g} / \text{ml}$ , 12, 5  $\mu\text{g} / \text{ml}$ , 25  $\mu\text{g} / \text{ml}$ , 50 $\mu\text{g} / \text{ml}$ , 100 $\mu\text{g} / \text{ml}$ , 200 $\mu\text{g} / \text{ml}$  to the  $\alpha$ -amylase inhibitor. The purpose of this study was to observe the antidiabetic properties of lime peel extract (*Citrus Amblycarpa*) by observing the inhibitory activity of  $\alpha$ -amylase. This research was conducted with an experimental method with a post-test only design and sampling with a purposive sampling method. The activity test of lime extract (*Citrus Amblycarpa*) against  $\alpha$ -amylase inhibitors was carried out using a spectrophotometer observing the color changes that occur by measuring its absorbance. The results obtained in this study were carried out with the Post Hoc test. Then the analysis was continued with linear regression analysis to assess the IC<sub>50</sub> for the  $\alpha$ -amylase enzyme in the ethanol extract of lime peel (*Citrus Amblycarpa*). The results obtained in the form of lime peel extract (*Citrus Amblycarpa*) can inhibit  $\alpha$ -amylase at the highest concentration of 200  $\mu\text{g} / \text{ml}$  with inhibition percentage of 52, 88%. The IC<sub>50</sub> value of the extract of lime (*Citrus Amblycarpa*) against the  $\alpha$ -amylase enzyme was  $168.24 \pm 21.04 \mu\text{g} / \text{mL}$ .

Key words: lime peel extract,  $\alpha$ -amylase enzyme

Kalay Wani (163307010067), Melissa Pratiwi Lubis (163307010068), 2019. (*Uji Aktivitas Ekstrak Etanol Jeruk Limau (Citrus Amblycarpa (Hassk.) Ochse) Terhadap  $\alpha$ -Amilase Inhibitor*). Dosen Pembimbing: dr. Sofian Wijaya, MHA. Fakultas kedokteran. Universitas Prima Indonesia.

## ABSTRAK

Penelitian ini dilakukan untuk mengetahui uji aktifitas dari ekstrak kulit jeruk limau (*Citrus Amblycarpa*) dengan konsentrasi 6, 25  $\mu\text{g/ml}$ , 12, 5  $\mu\text{g/ml}$ , 25  $\mu\text{g/ml}$ , 50 $\mu\text{g/ml}$ , 100 $\mu\text{g/ml}$ , 200 $\mu\text{g/ml}$  terhadap  $\alpha$ -amilase inhibitor. Tujuan dari penelitian ini untuk mengamati sifat antidiabetes pada ekstrak kulit jeruk limau (*Citrus Amblycarpa*) dengan megamati aktifitas penghambatan terhadap  $\alpha$ -amilase. Penelitian ini dilakukan dengan metode eksperimental dengan design post-test only design dan pengambilan sampel dengan metode purposive sampling. Uji aktifitas ekstrak jeruk limau (*Citrus Amblycarpa*) terhadap  $\alpha$ -amilase inhibitor dilakukan dengan menggunakan spektrofotometer mengamati perubahan warna yang terjadi dengan mengukur absorbansinya. Hasil yang didapat pada penelitian ini yang dilakukan dengan uji Post Hoc, Kemudian analisa dilanjutkan dengan analisa regresi linear untuk menilai  $\text{IC}_{50}$  terhadap enzim  $\alpha$  - amilase pada ekstrak etanol kulit jeruk limau (*Citrus Amblycarpa*). Hasil yang didapat berupa ekstrak kulit limau (*Citrus Amblycarpa*) dapat menghambat  $\alpha$ -amilase pada konsentrasi tertinggi 200  $\mu\text{g/ml}$  dengan persentase penghambatan 52, 88%. Nilai  $\text{IC}_{50}$  dari ekstrak kulit jeruk limau (*Citrus Amblycarpa*) terhadap enzim  $\alpha$  - amilase adalah  $168.24 \pm 21.04 \mu\text{g/mL}$ .

Kata kunci : ekstrak kulit jeruk limau, enzim  $\alpha$ -amilase