ABSTRACT

THE EFFECT OF LONG BREWING TIME KRATOM LEAVES (Mitragyna Speciosa) Using 70ºC WATER TEMPERATURE ON ANTIOXIDANT ACTIVITY IF TESTED WITH THE DPPH METODH

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Health problems that are quite widely faced by the people of Indonesia are exposure to free radicals, this problem arises due to changes in lifestyle that people live now. Free radicals cause problems for human health such as cancer, therefore the body needs one compound that can ward off free radicals, namely antioxidants. One source of natural antioxidants can come from kratom leaves (Mitragyna Speciosa). The purpose of this study was to determine the effect of the length of time brewing kratom leaves (Mitragyna Speciosa) antioxidant activity if tested using the DPPH method.

This test was carried out by taking kratom leaf powder as much as 2 grams and brewed with 70oC water with a time of 5 minutes, 10 minutes, 15 minutes, 20 minutes, 25 minutes and repeated 3 times. From the data taken, it can be known that the absorbance results are the greater the sample concentration, the smaller the absorbance value obtained and the damping percentage value will be greater. Based on the results of research that has been carried out as much as 3x, R2 results were obtained in replication 1 and 2 0.9429 and replication 3 obtained results of 0.6142, and the results of SD calculations, RSD for each replication are 5 minutes: 6.137 SD: 0.5865 RSD: 0.0955%, 10 minutes: 8.068 SD: 2.5961 RSD: 0.3217%, 15 minutes: 11.646 SD: 3.8336 RSD: 0.3291%, 20 minutes: 16.321 SD: 5.9083 RSD : 0.3620, 25 minutes : 15.592 SD : 3.9288 RSD : 0.2519%. This shows no effect of brewing time with antioxidant activity. Furthermore, further research can be done on brewing validation.

Keywords: DPPH, Kratom Leaf (Mitragyna Speciosa), Spectrophotometry Vis.