ABSTRACT

STUDY OF ANTIDIABETIC ACTIVITY OF NORI FROM PEGAGAN LEAF (*Centella asiatica*) AND SEAWEED COMBINATION (*Eucheuma cottonii*) IN ALLOXAN INDUCED MICE

By

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Diabetes mellitus is a disease with high glucose level in blood. This disease is hyperglycemic with other body metabolic disruption that is caused hormonal system damaging. Blood glucose level control can be done by using medical plants like pegagan leaf (*Centella asiatica*) and seaweed (*Eucheuma cottonii*). Pegagan leaf and seaweed can be made as nori, functional food. Nori is a food with the thin layer shape green blackish colored. This research is purposed to get the combination of pegagan leaf and seaweed that is produced nori with the best sensory characteristic and to find out the activity of nori antidiabetic from pegagan leaf and seaweed with the best sensory characteristic to some nori infusa dosages to the alloxan induced mice. This research has been done with the combination of pegagan leaf and seaweed comparison formulas, they are 90:10 (F1), 80:20 (F2), 70:30 (F3), 60:40 (F4), 50:50 (F5), 40:60 (F6), 30:70(F7), 20:80 (F8), and 10:90 ( F9). There was the best combination and done by blood glucose lever analysis and mice pancreas histology with some normal control nori infusa (K1), positive control (K2), negative control (K3), 50 dosage (K4), 100 (K5), 150
(K6), 200 (K7), 250 (K8), 300 (K9), and 350 mg/kg bb (K10). The combination of pegagan leaf and seaweed produced nori with the best sensory characteristics. The characteristics are: having slightly scented of pegagan leaf (2,83), slightlyly taste liked (3,27), texture liked (4,13), slightlyly color liked (3,57), and the overall acceptance of slightlyly liked (3,63). Nori infusa dosage from the best combination of pegagan leaf and seaweed is able to reduce blood glucose level of aloksan inducted mice and pancreas histology is 100 mg/kg bb dosage, the decrease of mice blood glucose is from 472 mg/dL becomes 169 mg/dL with the congestion pancreas condition or the increase of blood cell amount in blood vessel lumen.

Key words: antidiabetic, Centella asiatica, Eucheuma cottonii, nori, alloxan