ABSTRACT

Amalia, Aniatul. 2014. Effect of Guava Juice (Psidium guajava) Against Blood Sugar Levels and Histology Pancreas mice (Mus musculus) were induced alloxan. Skripsi. Department of Biology, Faculty of Science and Technology of the State Islamic University (UIN) Maulana Malik Ibrahim Malang. Biology Supervisor: Kiptiyah, M.Si; Supervisor Religion: M. Imamudin, Lc, MA

Keywords: Diabetes mellitus, Guava (Psidium guajava), blood sugar levels, the pancreas Histology

Diabetes mellitus (DM) is a disease of the pancreas endrokin hormones, such as insulin and glucagon. Diabetes mellitus due to the decreased hormone insulin produced by the pancreas gland. The purpose of this study was to determine the effect of guava juice (Psidium guajava) on blood glucose levels and pancreatic histology of mice (Mus musculus) using alloxan-induced diabetes.

This study was an experimental study using a randomized block design (RBD) with 5 treatments and 5 replicates, treatment of mice used is the negative control (no treatment), positive control mice (diabetes without giving guava juice) and diabetic mice fed guava juice seeds with 3 different volumes, (1 is volume of 0.5 ml/mouse/day, volume 2 is 0.10 ml/mouse/day and 3 volume is 0.15 ml/mouse/day). Data were analyzed with covariance (ANCOVA) and if it shows no effect, then followed by LSD test 5%. To determine the degree of insulitis is done by calculating the rate of destruction of the islets of Langerhans in the scoring method. Then scores of pancreatic damage levels were analyzed by non-parametric Kruskal Wallis.

The results showed that there is the effect of guava juice (Psidium guajava) on blood glucose levels and pancreatic histology of mice (Mus musculus) with alloxan-induced diabetes. Giving guava juice (Psidium guajava) is effective in lowering blood sugar levels is the volume of 0.5 ml/mouse/day with blood sugar levels produced by 91mg/dl. While the provision of guava juice (Psidium guajava) is effectively repair damaged pancreas of mice (Mus musculus) alloxan-induced diabetes is the volume of 0.5 ml/mouse/day with the extent of damage $\frac{1}{4}$. 