

**THE EFFECT OF THE CINNAMOMUM (*Cinnamomum Burmanii*)
ESSENTIAL OIL ON THE CELLS AMOUNT AND THE DIAMETER OF
ISLETS OF LANGERHANS PANCREATIC AT WHITE RAT INDUCED
WITH STREPTOZOTOCIN**

Reni Utami

ABSTRACT

The purpose of this research was to know the effect of the cinnamomum (*Cinnamomum burmannii*) essential oil on the cells amount and the diameter of islets of Langerhans pancreatic white rat (*rattus norvegicus*) with diabetes mellitus. This research using diabetic rat induced by streptozotocin intraperitoneally with single dose of 45 mg/kg BW. Samples consist of twenty rats were divided into five groups, negative control group (K-) was not induced by streptozotocin, which treatment by giving CMC Na 1%, positive control group (K+) was induced by streptozotocin without cinnamomum essential oil, group 1 (P1) was induced by streptozotocin and gave cinnamomum essential oil 100 mg/kgBW, group 2 (P2) was induced by streptozotocin and gave cinnamomum essential oil 200 mg/kgBW, group 3 (P3) was induced by streptozotocin and gave cinnamomum essential oil 400 mg/kgBW daily for 14 days period. The data have been described in the tabel form, analyzed with One Way Anova for normality of the data, furthermore analzed with Duncan test. The results of research indicate the cells amount and the diameter of islets of Langerhans pancreatic white rat that adding cinnamomum essential oil with dose 200 mg/kgBW (P2) was significantly higher ($p < 0,05$) than group 1 (P1), group 3 (P3) and positive control group (K+).

Keywords : Streptozotocin, cinnamomum essential oil, islet of Langerhans, diabetes mellitus.