ABSTRACT

SUSI INDARIANI. Antihyperglycemic Activities of Functional Drink Based on Java Tea (Orthosiphon aristatus Bl. Miq) in Streptozotocin Induced Diabetic Mice. Under directions of C.HANNY WIJAYA and MIN RAHMINIWATI.

Diabetes is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can lead to serious complications and premature death. Antioxidant compounds in functional drinks such as flavonoid may offer some protection against the early stage of diabetic mellitus and the development of complications.

The objective of this study was to investigate the antihyperglycemic effects of functional drinks based on java tea with different variety of java tea (white and purple flowers) and addition ginger extract in functional drink formulas on streptozotocin induced diabetic mice. These results indicated that the administration of functional drinks that added java tea with white flowers and ginger extracts in diabetic mice can inhibit a more stable the increasing of blood glucose level and its can inhibited the rate of pancreatic beta cells damage. TLC profile and HPLC analysis show that the bioactive compounds in the extract ingredient are sinensetin, 6-gingerol, 8-gingerol, 10-gingerol, 6-shogaol, curcumin, desmethoxycurcumin, brazilin, hesperidin and naringin.

Keywords: antihyperglycemic, functional drinks, java tea, streptozotocin