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STUDI AKTIVITAS SEDUHAN “TEH HITAM” DAUN SIRSAK SEBAGAI ANTIDIABETES
(xxi + 160 pages, 6 tables, 39 figures, 55 appendices)

Soursop leaves (Annona muricata) contain Phenolic compound which are beneficial for human health. These Phenolic compound act as antidiabetic agents due to their ability to inhibit α-glucosidase enzyme, which further leads to prevent an increase of blood glucose. Soursop leaves that was used in this research was soursop leaves that processed “black tea”. The aim of this research was to study the effect of two combination treatments i.e temperature and steeping time on antidiabetic activity soursop leaves “black tea” extract. The extraction of soursop leaves “black tea” was performed using water, then treated with different temperature: 80, 90, and 100 °C and steeping time: 15, 30, and 45 minutes. The inhibitory effect was analyzed using enzyme assay. The result showed that soursop leaves “black tea” and fresh soursop leaves contain flavonoid, tannin and triterpenoid. Furthermore, the IC₅₀ of soursop leaves “black tea” was significantly different (P<0,05) with Acarbose which indicated that soursop leaves extract had potential as antidiabetic treatment. Soursop leaves antidiabetic activity was found to be stable in various temperature and steeping time. However, different temperature caused significant increase (p<0,05) to phenolic compared to fresh soursop leaves. The research showed that combination of temperature 80 °C with steeping time 15 minutes had the lowest IC₅₀ had the optimum antidiabetic activity. Considering the stability of soursop leaves “black tea” in various temperature and steeping time, soursop leaves “black tea” can be further processed into food suitable for people with diabetes.

Keywords: α-glucosidase, antidiabetic, black tea, inhibitory activity, soursop leaves inhibitory activity

References: 99 (1966-2014)