

ABSTRACT

Lifestyle and poor diet result in a high prevalence of the hypercholesterol disease in Indonesia. Compounds in okra seeds that have the potential to reduce cholesterol are alkaloids, flavonoids, phenols, proteins, terpenoids, Tannins, and sterols (Kumar, 2014). This research was done to determine the effect of okra seeds methanol extract on reducing blood total cholesterol levels in hypercholesterolemic mice.

This study was an experiment using animals which are male mice with initial body weight 27 - 30 g and age 2 - 3 months. The treatments given included P1 (negative control using aquadest), P2 (positive control using simvastatin), P3 (okra seeds methanol extract 500 mg/kg BW), P4 (okra seed methanol extract 1000 mg/kg BW) and P5 (okra seeds methanol extract 2000 mg/kg BW). The treatment was carried out for 14 days, then blood total cholesterol levels of mice were measured twice namely after administration of MDTL (High Fat Food Diet using cow fat and used cooking oil) on the 14th day and after administration of okra seeds methanol extract on the 28th day. Mice's blood total cholesterol levels were measured using the Easy Touch GCU 3 in 1 cholesterol strip. The data were analyzed using the One Way ANOVA test with a confidence level of 95% and continued with the Post Hoc test using Least Significant Different (LSD).

The results showed that the blood total cholesterol levels in P1 was increased 53.75 mg/dL, the blood total cholesterol levels in P2 was reduced 49 mg/dL, the blood total cholesterol levels in P3 was reduced 20.5 mg/dL, the blood total cholesterol levels in P4 was reduced 18 mg/dL and the blood total cholesterol levels in P5 was reduced 24.5 mg/dL. In this study, based on the One Way ANOVA test result with a significance level of 95% were obtained at 0,021 ($p < 0,05$) it can be concluded that the okra seeds methanol extract has the effect on reducing blood total cholesterol levels in hypercholesterolemic mice. The most effective concentration of okra seeds methanol extract on reducing blood total cholesterol levels in hypercholesterolemic mice is 2000 mg/kg BW.

Keywords: Hypercholesterolemic, Mice, Methanol Extract, Okra Seeds, Total Cholesterol,