

ABSTRACT

Nihayah, Irfatun. 2015. Influence of Starter Concentration On The Quality of Cow's Milk Kefir And Its Utilization As Lowering Cholesterol Levels of Mouse. Thesis. Biology Department. Faculty of Science and Technology. Islamic University of Maulana Malik Ibrahim Malang. Advisor of Biology: Anik Ma'unatin, M.P. Advisor of Religion: Mujahidin Ahmad, M.Sc.

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Milk is one of the natural ingredients that have a high nutrition. Cow's milk is commonly used in making of fermented milk product such as kefir because there are many nutrients in the milk for growth of microorganisms. Cholesterol disease is a disease that must be worried because cholesterol disease makes negative impacts on the body. Activities of fermented lactic acid bacteria on kefir produce competitive compound of HMG CoA so that cholesterol synthesis is inhibited. Aim of this research is to know the influence of giving cow's milk kefir in lowering blood cholesterol of mouse (*Mus musculus*) by different timing variation.

This research is held in two phases. The first phase of research is using experimental research with 1 factor, starter concentration. This phase is held by using randomized block design with 4 treatments and 4 repetitions. The applied treatments are C1 (starter concentration 2%), C2 (starter concentration 3%), C3 (starter concentration 4%) and C4 (starter concentration 5%). The second phase is to know influence of giving best quality of kefir on lowering blood cholesterol of mouse. The treatments are K- and K+ (Control), T1 (giving kefir for 5 days), T2 (giving kefir for 10 days) and T3 (giving kefir for 15 days).

This research shows that on average value of pH 4,9-5,5, viscosity 311,5-358,75 cP, fat 2,7-3,2%, protein 4,6-6,07%, amount of lactic acid 0,2-0,8% and microbial viability $4,5 \times 10^8$ - $4,1 \times 10^9$ CFU. The result shows that concentration influences on quality of kefir. Result of the second phase shows average of lowering blood cholesterol of mouse (*Mus musculus*) is 158 mg/dL for 5 days. 188 mg/dL for 10 days dan 118,5 mg/dL for 15 days. The result shows that giving kefir of cow's milk influences on lowering cholesterol level of mouse's blood (*Mus musculus*).