

ABSTRACT

Maghfiroh, Evi. 2013. **The influence of concentration and long soaking in extract lemon (*Citrus aurantifolia* S.) To the quality content of Protein and the total of Microbe on white tofu.** Thesis, Department of Biology, Faculty of Science and Technology, the State Islamic University Maulana Malik Ibrahim of Malang. Biology Advisor: Ir. Liliek Harianie. AR,. MP,. Religion Advisor: Umaiyatus Syarifah, M. A.

Keywords: Tofu, Lemon, Quality (the protein content, and total of Microbe).

Tofu is a food that has a high protein and It is consumed by the public. Decreased levels of protein on food product mean a decrease in the quality of the products, especially Tofu. The high protein in tofu can be a good medium for microbial growth. A safe and easy alternative is applied by utilizing extract lemon which could delay the growth of microbe. Lemon contains citric acid which can delay the growth of microbe. In this study, the researcher uses the extract lemon (*Citrus aurantifolia* S.) in determining the quality of the tofu include the protein content and the total number of microbe. The purpose of this research is to know the influence of concentration and long soaking in the extract lemon (*Citrus aurantifolia* S.) to the quality of protein content and total number of microbe in white tofu.

This study uses Randomized Complete Design (RAL) factorial with two-factor treatment and 3 times repeat. The first factor is the concentration of the extract lemon that concentrations of 0%, 0.9%, 1.4% and 2.1%. The second factor is the long soaking namely soaking 1 day, 2 days and 3 days. The data analysis technique uses Two Way Anova and DMRT (Duncan Multiple Range Test) 5%, while organoleptic test is analyzed by using non-parametric statistical methods that is Kruskal Wallis Test.

Based on the research results is obtained average value of different protein content in several variety of concentration and long soaking shows that protein content progressively decrease that is because the protein in degraded so that protein content decreased. The average value of the highest protein content is at concentrations of 2.1% run at 3,083% in 1 day soaking, 1, 81% at 2 days soaking and 1.27% in 3 days soaking. While the average value of the total number of microbe in several variety of concentration and different of long soaking show that the longer soaking, then the total number of microbe increased because of the longer the soaked tofu then microbe in the tofu multiply quickly. The average value of the highest total number of microbe that is control run at 2.85 CfU/gram, and the lowest concentration of 2.1% on 1 day soaking, due to concentration at 2.1% more citric acid which is in extract lemon will tie up the growth of microbe. While the interaction of concentration and long soaking in extract lemon, the highest protein content of 3,0833%. The lowest total number of microbe of 0,4800 CfU/gram is gained on the interaction of the concentration in the extract lemon on the concentration of 2.1% and long soaking is in 1 day. The same goes for the highest of organoleptic test on texture and color at concentration 2,1%.of 1 day soaking.