

ABSTRACT

COMPARISON OF STIRRING TREATMENT IN THE PROCESS OF SOAKING PORANG TUBERS IN 5% ACETIC ACID SOLUTION ON THE CONTENT OF OXALATE COMPOUNDS

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Porang tuber (*Amorphophallus muelleri* Blume) is a type of tuber from the Aracaceae family which has high economic value because it contains 15% - 64% glucomannan which can be used as a raw material for food and health. Glucomannan is beneficial for health because of its anti-obesity, antihyperglycemic, anti-hypercholesterolemic activities, laxative effect, prebiotic activity, and anti-inflammatory activity. Because of the above, porang tubers are a functional food that can not only function as a source of energy and nutrition but also perform physiological functions needed to maintain health. The use of porang as a food ingredient in Indonesia is constrained by the content of oxalate compounds which cause various complaints, from Mild pain in the form of itching and irritation on parts of the body, which can also cause health problems, especially in the kidneys.

This research aims to reduce the levels of oxalate compounds in porang tubers by soaking porang tubers that have been cut 2 X 2 cm with a thickness of 0.5 cm in 5% acetic acid solution as a soaking solution. The research was carried out with various treatments with stirring and without stirring. Furthermore, the porang tubers were dried in the sun, ground to a powder, then analyzed for the content of oxalate compounds using the permanganometri method.

Based on the results of the research, it was found that in the 500rpm stirring treatment during immersion in 5% acetic acid solution, the levels of oxalate compounds decreased by 49,0653%, whereas in the treatment without stirring, it was obtained decrease of 33,5226%. From the results above, the decrease in the levels of oxalate compounds in the stirring treatment during the soaking process were greater than without stirring, and the results of the t test it was found that the stirring treatment had a significant effect.

Keywords: porang tubers, stirring, oxalic compounds, acetic acid