

ABSTRACT

THE EFFECT OF STIRRING ON THE SOAKING PROCESS OF PORANG TUBERS IN 5% LIME SOLUTION ON OXALATE COMPOUND LEVELS

Sri Hana Lestiana

Porang tuber (Amorphophallus muelleri Blume) is a type of tuber with the Araceae family that grows in Indonesia, one of which is in Probolinggo Regency, East Java. Because of its high glucomannan content, porang tubers can be used as a source of carbohydrates to replace rice. In addition to the high glucomannan content, porang tubers also contain high oxalate compounds that can cause itching and irritation in the hand and mouth area.

Oxalate compounds in porang tubers can be reduced by soaking porang tubers in an acid solution, one example is lime solution. This is because lime is one of the organic acids that can penetrate the cell wall where calcium oxalate crystals are stored. Calcium oxalate crystals will be pushed out of the cell and dissolved with the soaking solution that will be wasted during the rinsing process.

*In addition, variations of stirring treatment were added during the soaking process. The results showed that soaking without stirring treatment resulted in 2,4127%*b/b* oxalate compound content. While in soaking with stirring treatment, the oxalate compound content was obtained smaller, namely 1,9521%*b/b*. This is because the stirring process can determine the solubility of a solute, the greater the stirring, the more substances are dissolved. So it can be concluded that the stirring treatment can reduce the levels of oxalate compounds better by 19,97%.*

Keywords: *porang tuber, oxalate compound, lime, stirring*