ABSTRACT

THE EFFECT OF SPRINGING SPEED IN THE PROCESS OF PORANG TUBERS IN 6% NaCl SOLUTION ON OXALATE LEVELS

(*Amorphophallus muelleri* Blume)

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Porang (*Amorphophallus muelleri* Blume) is one of the biological riches of Indonesian tubers belonging to the Araceae family. Porang plants have high economic value and are very profitable because they have a relatively high glucomannan content compared to other Amorphophallus varieties with levels reaching 15-65%. Glucomannan is a water-soluble food fiber which is a strong hydrocolloid and low in calories, so it has high potential to be developed in the food industry and the health sector. Apart from containing glucomannan which is very useful and has a high value, porang tubers also contain high calcium oxalate crystals.

Efforts to reduce oxalate levels can be carried out by several pre-treatments before processing such as washing, soaking, and heating using acid or salt solutions. Stirring treatment in the washing process is known to have an effect on the solubility of a compound. NaCl solution is known to dissolve oxalic acid and calcium oxalate in taro tubers and Belitung tubers. The porang tuber samples that have been obtained are washed and then the skin is peeled. cut in size 2x2 cm with a thickness of 0.5 cm then weighed $\pm$ 50 grams, soaked with stirring in 6% NaCl solution. The variations of the stirring speed used were 300, 500 and 700 rpm. then dried in the sun and used as filtrate to analyze the oxalate content using the permanganometric titration method. Researchers want to know whether the speed of stirring can affect the decrease in oxalate levels using 6% NaCl solvent. Based on the research results obtained, namely soaking for 15 minutes with a stirring speed of 300, 500 and 700 rpm gave a sequential decrease in oxalate levels, namely 47.3501%, 50.9385% and 35.6019%. The highest reduction results were obtained at a stirring speed of 500 rpm.

Keywords: Porang tuber, Stirring speed, Oxalate compounds, NaCl