

ABSTRACT

THE EFFECT OF SALT CONCENTRATION AND FERMENTATION TIME ON THE DOUGH VOLUME, WHITENESS, AND PH OF SWEET POTATO FLOUR (*Ipomoea batatas* Linn.)

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This study aimed at determining the optimum of salt concentration and fermentation time on the dough volume, whiteness, and pH of sweet potato flour. The study was designed using a randomized block design Complete (RAKL) with 2 factors. The first factor was the salt concentration with 3 levels: 1%, 3%, and 5%. The second factor was the fermentation time with 5 levels: 0, 2, 4, 6, and 8 days. The study was carried out with three replications. White sweet potato flour samples were then analyzed for the dough volume, whiteness, and pH. As supporting data, amylose content and structure of starch granules were also determined. The results showed that the salt concentration did not affect the dough volume and whiteness but there was no effect of fermentation time. Salt concentration and fermentation time affected pH of sweet potato flour. Sweet potato flour fermented on 2-8 days had bigger and whiter than non-fermented flour. Fermentation time caused pH decrease but amylose content increase. Structure of granule was not changed significantly, it was only no longer intact granule as long as fermentation time. The best treatment for raising the bigger

dough volume and the whitest color was 8 days fermentation of all salt concentration (1, 3, and 5%).

Keywords: fermentation, salt concentration, sweet potato (*Ipomoea batatas* Linn.)