

ABSTRACT

THE EFFECT OF HEATING ON THE APPEARANCE OF STARCH GRANULES, ANTHOCYANIN CONTENT, ANTIOXIDANT CAPACITY AND THE RATE OF ENZYMATIC HYDROLYSIS OF MODIFIED PURPLE SWEET POTATO FLOUR

By

LELY SURYATI

Purple sweet potatoes (*Ipomea batatas* L. Poir) are rich in carbohydrate and anthocyanins. Anthocyanins are beneficial to health because they function as antioxidants. Processing purple sweet potato into flour is one alternative to preserve sweet potatoes. However native sweet potato flour has poor functional properties, therefore physical modification through heating at 90°C in a rotary cooker at 0, 15, 30, 45 60 and 75 min was aimed to improve its functionality. This experiment was arranged in a complete randomized design with four replications. The results showed that various heating time had influence the appearance of starch granule observed using SEM, the rate of enzymatic hydrolysis and anthocyanin content but did not affect the antioxidant capacity. The best treatment to maintain the content of anthocyanin was found on heating for 30 min treatment, and the anthocyanin content was 66,24%.

Keywords : anthocyanin, antioxidants, modified purple sweet potato flour, SEM.