

Characterization of Sweet Potato Flour (*Ipomea batatas* L.) var. Shiroyutaka and Assesment of the potential as Alternative Carbohydrate Source For Food Product

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Abstract

This research was aimed to characterize sweet potato flour var. shiroyutaka and assessment of its potential as alternative carbohydrate source on food product. Characterization was conducted on flour processed from sweet potato var. shiroyutaka harvested at four months was characteristic, these included whiteness degree and water absorption of the flour, ratio of amylose-amylopectin, form and size of starch granule, and starch digestibility. The research showed that whiteness degree and water absorption of the flour were 78,82% (0,52) and 1,25 g/g (0,12) respectively. The ratio of amylose-amylopectin, gelatinization temperature, maximum viscosity and invitro starch digest ability were 69.82%: 30.18%, 78-90⁰C and 84,78% respectively. The granule of its starch was round form and with size 2-4 micron. The main potential of the flour is related with its specific characteristics which were the amylose-amylopectin ratio, the starch amylograph profile, form and size of starch granule, and the starch digest ability. These parameters implied that, the flour should be utilized in the production specific food products.

Key words : *sweet potato flour, amylose, gelatinization, digest ability, water absorption*