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THE EFFECT OF DRYING METHODS ON THE FUNCTIONAL AND SENSORY CHARACTERISTICS OF PUKURU A FERMENTED CASSAVA PRODUCT

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ABSTRACT

The paper describes the effect of oven, traditional and kiln drying methods for producing *pukuru* a fermented cassava ball. About 65% reduction in the drying time was observed using the kiln dryer compared to the traditional drying method. The range of residual moisture in the dried pukuru balls was 8.11 and 22.89% (db). Despite the shortened drying time, samples in the kiln had the lowest moisture levels (<14%) while those samples dried in the oven had the highest moisture contents (19.42-22.89%). Most of the functional characteristics of the pukuru flour were significantly ($P<0.05$) influenced by drying method. Pukuru flours from the traditional drying method had the highest % damaged starch, and highest water absorption and swelling power. The pasting characteristics of the flours were studied using a Brabender amylograph. The pasting temperature and gelatinization time ranged between 72 and 81^{0}C and, 25 and 33min, respectively. The flour produced from kiln dried balls had the highest paste viscosity (430 BU). The paste formation was delayed most in the traditional flour sample but was the most easily cooked taking 10 min to reach peak viscosity. The flour and the cooked dough from the oven drying method were rated higher than the kiln and the traditional sample in most of the sensory characteristics assessed by the panelist.

Keywords: Cassava, pukuru, fermented product, drying, functional, sensory, processing.