

ABSTRACT

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“EFFECT OF HYDROCOLLOID TYPES AND CONCENTRATIONS ON OIL UPTAKE AND MOISTURE LOSS OF DEEP-FRIED COATED BREADFRUIT (*ARTOCARPUS ALTILIS*)”

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Fried breadfruit is a street snack popular in Indonesia. However like all fried foods, it can increase the risk of diseases such as diabetes and coronary disease. Using hydrocolloid as coating for fried breadfruit are able to reduce the oil uptake. The main objective of this research was to determine the effect of hydrocolloid types and concentration in reducing oil uptake and moisture loss in fried breadfruit. Three different hydrocolloids were used: CMC, HPMC, and Xanthan Gum. Each hydrocolloid was tested in different concentration levels: 0.50, 0.75, 1.00, 1.25, and 1.50%. Batter added with Xanthan Gum 1.50% exhibited highest viscosity at 10260.0 ± 198.0 cP. Fried coated breadfruit added with Xanthan Gum 0.5 and 1.25% shows the lowest moisture loss at 11.5099 ± 0.9077 and $13.6998 \pm 3.4609\%$, respectively, which were not significantly different. Both results were significantly lower than control, which has the highest moisture loss of $29.1932 \pm 0.3913\%$. The lowest oil uptake was achieved by adding 1.5% HPMC and 0.5% CMC in batter at 7.0977 ± 0.0120 and $8.0332 \pm 0.4027\%$, respectively, which were not significantly different. Both treatment were significantly lower than control at $15.6683 \pm 0.4027\%$. Sensory evaluation shows no significant difference on crispiness between control and HPMC 1.5%. Thus, addition of 1.5% HPMC on batter is recommended since it is able to reduce the oil uptake of fried coated breadfruit.

Keywords: breadfruit, deep frying, coating, hydrocolloid, oil uptake

Reference: 36 (1996 - 2016)