

Production of drum-dried jackfruit (*Artocarpus heterophyllus*) powder with different concentration of soy lecithin and gum arabic

ABSTRACT

The aim of the present study was to determine the optimum concentration of soy lecithin and gum arabic in producing drum-dried jackfruit (*Artocarpus heterophyllus*) powder using response surface methodology (RSM). Jackfruit puree was dried using a double drum drier set at 1 rpm, drum clearance of 0.01 in., and steam pressure of 2.3 bar. Soy lecithin and gum arabic were incorporated into jackfruit puree at different concentrations ranged from 1% to 5% and 5% to 15%, respectively. Soy lecithin and gum arabic were significant factors (at 95% confidence level) for moisture content, bulk density, Hunter L, a, b values and hedonic test during drum drying of jackfruit. A second-order polynomial model was found for each of the significant response. The jackfruit puree formulation to produce a good quality powder could be obtained by incorporating 2.65% of soy lecithin and 10.28% of gum arabic into the jackfruit puree (40% v/w water).

Keyword: Jackfruit (*Artocarpus heterophyllus*), Response surface methodology, Drum drying, Soy lecithin, Gum arabic