OPTIMIZATION PROCESS OF VACUUM FRYING OF BEEF CHIPS

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ABSTRACT

Beef is meat derived from cattle which has a high and balance nutrient amount. Beef production in Mentawai is relatively high. It usually consumed freshly by consumers, however beef is the most perishable product which has a high moisture content. Frying beef in high temperature can harm the beef nutrition and will cause oxidation process, which can make rancidity of product. Therefore beef processing which makes beef has a long self life without nutritional damage need to be detected. One of the suitable processing is called vacuum frying. Vacuum frying will reduce the oxidation process and nutritional damage because frying is done in vacuum and lower temperatures. Processing beef chips by vacuum frying also will promote meat product diversification. The objectives of this research were to assess the affect of temperature and time of vacuum frying to quality of beef chips, determine the best temperature and frying time to produce beef chips, and determine the cost of beef chips production. The experimental design used randomized block factorial design, with three levels of temperature and frying time. Beef was fried with temperature of 80, 90 and 100°C and frying time of 70, 80, 90 minutes. Physochemical analysis was conducted to determine the quality of beef chips. The organoleptic test using hedonic test was conducted to determine the acceptance level of beef chips by panelist. As a result, different combination of temperature and time frying increased the fat content and decreased the water content, yield and hardness. The temperature and frying time also influenced to the quality characteristic of beef chips. The best temperature and time frying to produce beef chips were 90°C and 70 minutes, respectively.

Key words: Beef chips, vacuum frying, frying temperature, frying time