

## **Development of Low-fat Chicken Meat Paste with Dried Bitter Gourd (*Momordica charantia*) Powder**

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Chicken meat paste is one of the value added products which is popular among consumers mainly due to convenience. However, considerable number of consumers in Sri Lanka believes that meat products cause harmful effects on human health mainly due to the fat content. Hence, the aim of this study was to develop a value added low-fat meat paste from cheap cuts of chicken meat by incorporating bitter gourd. Chicken meat from cheap cuts was boiled to an internal temperature of 70 °C and minced. Then, it was mixed with other ingredients to make the meat paste according to a recipe developed through preliminary trials. Treatments were prepared by incorporating dried bitter gourd powder (DBGP) prepared using oven drying method (50 °C/8 hrs) at 1.0, 1.5, 2.0, 2.5 and 3.0% (w/w). Meat paste with no DBGP was used as the control. All treatments were then pasteurized at 85 °C for 15 minutes. A sensory evaluation was conducted to select the two best concentration of DBGP to be added. Selected treatments and control were vacuum packed, and tested for the nutrient composition, physicochemical parameters, TBARS value, microbial quality, and antioxidant capacity over a one-month storage period under refrigerated condition (4 °C). Meat paste with 1.5% and 2% (w/w) DBGP had the best sensory qualities ( $p < 0.05$ ). Meat paste with 2% (w/w) DBGP contained the highest ash content (4.82%) and water holding capacity (81.62%), and the lowest fat content (2.16%), pH value (6.45%) and colour parameters ( $p < 0.05$ ). In addition, meat paste with 2% (w/w) DBGP showed the highest antioxidant capacity (41.82%) among the treatments ( $p < 0.05$ ). Based on TBARS value and microbial data, DBGP incorporated meat paste can be kept without deterioration for 30 days under 4 °C. Therefore, DBGP at 1.5% and 2% (w/w) can be recommended to produce low fat meat paste with better sensory properties.

*Keywords:* Bitter gourd, Physicochemical, Meat paste, Sensory, Antioxidant capacity