

**DEVELOPMENT OF PURSLANE (*Portulaca oleracea*) INCORPORATED SAUSAGE AND EVALUATION OF ITS QUALITY CHARACTERISTICS**

**B.M.T. Bandaranayake<sup>1</sup>, W.V.V.R. Weerasingha<sup>1</sup>, S.M.C. Himali<sup>2</sup> and K.M.S. Wimalasiri<sup>3</sup>**

<sup>1</sup>*Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.*

<sup>2</sup>*Department of Animal Science, Faculty of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka.*

<sup>3</sup>*Department of Food Science and Technology, Faculty of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka.*

The objective of this research was to develop a sausage with the incorporation of Purslane (*Portulaca oleracea*) to improve the nutritional aspects and other quality attributes of the product. Two different product types were prepared using dried Purslane powder and the ethanol extracted from the dried Purslane plants and compared with the control samples. Sausages were prepared by incorporating Purslane powder (0%, 2%, 3%, 4% w/w) and Purslane extract (0%, 1.7%, 2.5%, 3.5% w/w) by replacing the starch content of the sausage mixture. All sausage samples prepared were evaluated for product acceptance using thirty untrained panellists. Proximate analysis was carried out to determine protein, fat and moisture content of the sausages. Thiobarbituric acid reactive substances (TBARS) values, pH, colour, and microbiological analysis were conducted to evaluate the product quality attributes. The green colour of sausages was increased with increasing levels of incorporated Purslane. The 2% Purslane powder and 1.7% extract incorporation levels were identified as the best inclusion levels for the tested organoleptic properties of flavour, texture, odour and overall acceptability except for juiciness in both Purslane powder and extract incorporated sausages. Sausages made out of purslane extract showed significantly higher ( $p < 0.05$ ) fat and protein contents compared to the control sample and Purslane powder incorporated samples. There was no significant change in TBARS values among the treatments during the storage period of 10 days. The highest TBARS value (2.03 mg of Malondialdehyde  $\text{kg}^{-1}$ ) was observed in Purslane extract incorporated sausage during 10 days of storage. Results indicated that 2% of Purslane powder and 1.7% of its extract could be satisfactorily used without deteriorating the quality characteristics of the sausage products.

**Keywords:** Inclusion levels, Purslane extract, Purslane powder, Sausage