

## Development of Chicken Burgers by Incorporating Kohila (*Lasia spinosa*) and Oyster Mushroom (*Pleurotus ostreatus*)

R.M.H. Tharangani<sup>†</sup>, A.K.I. Jayantha and H.W. Cyril

Department of Animal Science, University of Peradeniya, Sri Lanka

<sup>†</sup>htharangani@gmail.com

**Abstract:** Chicken burgers were prepared by incorporation of blanched Kohila (*Lasia spinosa*) and Oyster mushroom (*Pleurotus ostreatus*) with an objective of developing a low cost healthy meat product. The reference batch of chicken burgers (chicken meat, fat, bread-crumbs and other ingredients) were 60%, 20%, 4% and 16% of the formulation, respectively) was formulated by using bread-crumbs as the extender. In the experiment, bread-crumbs were replaced by Kohila and mushroom with different combinations, separately. Through sensory evaluations, (75% blanched Kohila and 25% bread-crumbs) T1, (75% blanched mushroom and 25% bread-crumbs) T2 and (50% blanched Kohila and 50% blanched mushroom) T3 were selected as the best extender formulations. Chicken burgers prepared by using these different extender formulations were subjected to nutritional properties analysis: Crude protein, fat and ash content by proximate analysis and keeping quality determination: pH using pH meter, rancidity using Thiobarbituric Acid Reactive Substances test (TBARS) and Water Holding Capacity (WHC) using filter paper method. Moreover, cost analysis was conducted. Based on the sensory evaluation test, T1 showed higher median values ( $p < 0.05$ ) for aroma, taste, appearance and overall acceptability. Protein, ash and fat contents of all three treatments were not significantly different. The moisture content of T2 was the highest ( $p < 0.05$ ). The fiber content of T1 was the highest ( $p < 0.05$ ) and followed by T3 and T2, respectively. A positive relationship showed between the added amount of Kohila and the fiber content. pH values of all three samples have increased during the storage only up to second week and then gradually decreased with storage time. Up to the second week of storage, WHC of all the treatments were increased significantly and then reduced with storage time. High WHC of the second week of storage were in agreement with high pH of the products at the corresponding storage time period. There was no significant difference among treatments in relation to the TBARS values but rancidity has increased during the storage period in all the treatments. The cost of production per burger of T1, T2 and T3 were Rs 6.04, Rs 6.58 and Rs 6.31, respectively. Therefore, Kohila can be used in burger production as an alternative for bread-crumbs up to 75% by improving the healthiness of the end product without any organoleptic failures while reducing the cost of production. Use of oyster mushroom is not economical as compared to the Kohila in chicken burger production.