

DEVELOPMENT OF FISH SAUCE USING *MAL KORALIYA*

R.P.U. Karunasena¹, H.K.S. de Zoysa², P.H.P. Prasanna¹ and N.W.I.A. Jayawardana¹

¹ Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura

² Department of Biological Sciences, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Mihintale

A study was conducted to develop a fish sauce using “*Mal Koraliya*” (*Etroplus suratensis*). Minced fish was mixed with salt (3:1 and 3:2) and allowed to ferment in incubators for three months at four temperature levels (room temperature, 40, 50 and 60 °C). A Completely Randomized Design (CRD) was used with three replicates. Yield of fish sauce of each treatment was measured at two-week intervals and pH, total plate count, salt concentration and colour of the fish sauce were measured. A sensory evaluation was carried out to select the best treatment using 30 untrained panelists with a five-point hedonic scale. The highest fish sauce yield was recorded at 40 °C and room temperature, and the best fish to salt ratio was 3:1 ($p < 0.05$). Fish sauce yield, organic matter and dry matter contents were decreased during the fermentation period in all treatments, while ash and moisture percentages increased during the same period. During the fermentation period, pH and Brix° values were in the range of 5-6 and 31-36, respectively. The developed colour of all final six fish sauces were similar to colour of the commercial fish sauce. Aerobic plate count, anaerobic plate count, yeast and mold, *E. coli* colonies were found in acceptable range in the final product according to Sri Lankan standard (SLS). The results of this study clearly indicate that a good quality consumer acceptable fish sauce could be produced using *Etroplus suratensis*.

Keywords: Fish sauce, Mal koraliya, Sensory evaluation