

Quality assessment of imported fish retailed in Sri Lanka

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The present study assessed the quality of selected varieties of imported fish by testing the concentration of formaldehyde, total volatile basic nitrogen (TVB-N) content and *Escherichia coli* (*E. coli*). The samples included four of Indo-Pacific sailfish (*Istiophorus platypterus*), five of blue mackerel (*Scomberaus tralasicus*), nine of bullet tuna (*Auxis rochei*), seven of sword fish (*Xiphias gladius*), seven of squids (*Loligodu vauceli*) and four of Indian Scad (*Decapterus russelli*) available in retail outlets in Gampaha District in Sri Lanka. Formaldehyde content was assessed only in sword fish, squids, Indian scad and bullet tuna species and showed values in the range of 0.917 to 3.34 mg/kg. There was a significant difference ($p < 0.05$) between the mean formaldehyde concentrations of swordfish and bullet tuna. All fish samples revealed formaldehyde concentration lower than specified limit of 5 mg/kg (Food Regulation No. 1646/19: Formaldehyde in fish, 2010). Mean TVB-N content of bullet tuna, squids, Indo-Pacific sail fish, sword fish, blue mackerel and Indian scad were 36.00, 6.65, 9.00, 20.60, 10.82 and 137.4 mg/100g, respectively and the mean values of these fish varieties were significantly different each other ($p < 0.05$). Majority of the imported fish samples (27/36) had *E. coli* levels of good quality (75.76%) according to ICMSF (1986) standards while the remaining fish (9/36) were marginally acceptable (24.24%).

Keywords: *E. coli*, formaldehyde, imported fish, total volatile basic nitrogen