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Title: Effect of Cooking on the nutritional properties of two small indigenous fishes of Eastern Himalayas, Manipur, India

Ch Sarojnalini and W Sarjubala Devi
Manipur University, India

The effect of cooking methods (frying, steaming and curried) on the nutritional quality of two small indigenous fishes viz., *Amblypharyngodon mola* and *Esomus danricus* of the Eastern Himalayas were determined. Cooking significantly increased the contents of protein and ash in the two small fishes. The maximum protein content was recorded in curried *A.mola* (20.77%). The lowest lipid content was found in the steamed *E. danricus* (0.83%) and highest lipid was obtained in fried *E.danricus* (41.56%). A significant ($p<0.05$) reduction in moisture content was observed in all different cooking methods *A.mola* and *E.danricus*. The lowest moisture content was recorded in fried *A.mola* (22.50%) and highest moisture was found in raw *A.mola* (74.69%). The carbohydrate values of two raw fishes were 3.98% and 5.62%. The energy values of two raw samples were 149.2 and 143.26Kcal/100g. The higher energy values were found in fried samples of the two fishes. The studied fishes have antioxidant property and highest activity was obtained in curried *A.mola* (0.11µg/ml). The ranges of polyunsaturated fatty acids such as Docosahexanoic, Eicosapentaenoic, Arachidonic, Linolenic and Linoleic acids were 0.12-2.91mg/100g, 0.04-0.73mg/100g, 0.07-2.03mg/100g, 0.22-3.7mg/100g and 1.01-2.30mg/100g respectively. The results indicate that cooking methods had considerable effects on proximate composition, antioxidant property and polyunsaturated fatty acids. The study showed that the small indigenous fishes are good sources of protein, energy, polyunsaturated fatty acid and antioxidative compounds. Therefore consumption of small size fishes could found high energy and prevent the deficiency of malnutrition, cardiovascular disorders and brain function in the developing countries, because the ratio of n:3/n:6 is a marker of the biomedical significance for fish oils.

Biography

Chungkham Sarojnalini was born on 1st Feb. 1958. B.Sc. Zoology honour Gauhati University 1979; M.Sc. In Life Sciences Fishery specialization J.N.U Centre, Imphal 1982; Ph.D in Fish and Fisheries in Manipur University 1989. Working as an associate professor in department of life sciences Manipur University. Published 40 international and national paper in peer review journal. Her research interested areas are Biochemical aspects of fresh and processed fishes of plain and hill stream fishes. Dr. Sarojnalini was reviewer of the European food research and Technology, SPRINGER. Life member of the Journal of food Science & Technology, Mysore., Life member of the Fisheries Technologists (India), Cochin., Member, Inland Fishery Society of India., Member Zoological Society of India., Aquatic Biodiversity Conservation Society, India, Lucknow., Member Ichthyological Society Of Japan.

sarojnalini.ch@gmail.com

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