FATE OF IODINE DURING COOKING OF COMMON SEA-WATER FISH IN SRI LANKA

S.S.L.W. Liyanage, S.P. Deraniyagala and A. Bamunuarachchi
Dept. of Chemistry, University of Sri Jayewardenepura.

Sea-food is known to be rich in iodine. However reports on research carried out on iodine content in fish in Sri Lanka could not be traced. In our continuing effort to compile data on iodine levels of Sri Lanka food and the effect of cooking on the iodine content, we report the preliminary findings obtained in respect of common sea-water fish.

Fish samples were subjected to alkaline dry ashing and the iodine content was determined by iodide catalyzed reduction of Ce(IV) by As(III) in acidic media.

Iodine content was determined in six fish species and one species of dried fish. These include Scomberomorus commerson (seer), Sphyma trades (shark), Katsuwonus pelemis (balaya), Sardinell fimbriata (salaya), Auxis thazard (alagoduwa), Pineeus monodon (prawns) and dried fish (salaya). This study revealed that seer (57.4±0.1μg/100g) and prawns (62.3±0.1μg/100g) contain a significantly higher iodine content than other varieties (25-31μg/100g). There was no significant variation in iodine content between the fish species collected from the same area and those collected from different areas.

The concentration of iodine in seer and balaya in the three common forms of cooking (boiling, curry/ambultiyal and frying) expressed as the mean in μg/100g is given below i) balaya (rawfish 29.1, boiled fish 16.8/water 13.0, ambulthiyal 18.2/gravy 9.4, fried fish 20.6/oil 2.3) ii) seer (raw fish 57.4, boiled fish 34.8/water 22.4, cooked fish 35.00/gravy 27.0, fried fish 38.4/oil 10.0). These results reveal that the highest nutritional value (on the basis of iodine) of fish could be retained (fish gravy is consumed unlike boiled water and fried oil) by preparing fish in the traditional curry/ambulthiyal form.

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