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Histamine content and histamine producing bacteria in fresh water fish in Lanka

Fish tend to decompose due to the action of biogenic amines. Histamine is the main amine causing toxicity due to fish poisoning. It is produced by the decarboxylation of histidine by microorganism of the family Enterobacteriaceae. The present study was initiated as no study has been done on the histamine content and histidine decarboxylating bacteria found in fresh water fish.

Samples *Heteropneuses fossilis* (E. Stinging cat fish), *Glossogobius giuris* (E. Bar eyed goby). *Oreochromis mossambicus* (E. Tilapai), *Mystus kelatius* (E. Gobby), *Osphronemus groramy* (E. Giant goramy) and dried fish from *Oreochromis mossamibicus* (E. Tilapia), *Anabas testudineus* (E. Climbing perch), *Osphronemus gormy* were analysed for histamine content.

The methanolic extract of fish was passed through an anon exchange column and the eluate was reacted with o-phthalaldehyde. The condensate was analysed for histamine using spectrofluorometer. It was observed that *Heteropneuses fossilis* had the highest concentration of histamine (6.60 ± %.92 mg / 100g flesh). The histamine content in dried fish was higher than fresh fish.

Samples *Labeo rohita* (E. Rohu), *Ospphronemus goramy*, *Oreochromis mossambicus*, *Etroplus moculatus* (E. Orange chromide), *Heteropneustes fossilis*, *Glossogobius giuris* were analyzed for histamine producing bacteria. Bacteria of the family Enterobacteriaceae was isolated from fish using violet-red bile-glucose-agar and inoculated into Niven's medium. Histamine production was detected by the Niven's medium turning purple. All the samples tested were positive for Enterobacteriaceae. Histamine producing bacteria were detected in 33.33% of the samples of *Osphronemus goramy*. *Heteroneustes fossilis*, while others had 66.66% histamine producing bacteria.