

D-47: Histamine in tuna fish (*Katsuwonus pelamis*)

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Scombroid fish during spoilage is known to produce histamine which is considered to cause food poisoning in humans leading to nausea, vomiting, diarrhoea and many other complications. Tuna is a common variety of blood fish consumed in Sri Lanka.

Multi-day boats are commonly used for catching tuna, and these fishing operations extend up to 2 weeks. The fish caught are stored in ice during the fishing operation. In this study, fish samples collected from 5 visits, were examined at monthly intervals. One of the fish from each day's catch was used for the study. Over 25 fish collected during this period were examined for histamine content, total bacterial counts/g, *E. coli*/g and histamine decarboxylating organisms/g and hydrogen sulphide producers/g. The samples were also assessed by a taste panel for acceptability.

Only 3 samples had histamine at a level detectable, of which 2 were in the range 15-40 mg/100 while the third one had very high level of histamine indicating temperature abuse. None of the samples had histamine decarboxylating organisms except for the one with very high level of histamine. The total bacterial counts ranged from 10^2 - 10^4 /g for over 95% of the samples. About 50% of the samples had hydrogen sulphide producers in the range (10-100)/g. None of the samples were positive for *E. coli*.

The results of this study showed that fish caught in multi-day boats and stored up to 10 days in ice is safe for human consumption in relation to histamine levels.