



SafeFish News:

Food Safety – Essential Knowledge for Seafood Businesses

The recent food safety incident in Bali where tragically two people died, most likely as a result of Scombroid Fish Poisoning associated with a seafood meal, highlights the need to understand and manage food safety risks in all seafood businesses. While the likelihood of a food safety incident is extremely rare according to media reports at the time, (the likelihood of two people dying from Scombroid Fish Poisoning is estimated to be about 20 million to one) the consequences can be quite devastating. Often the effects of an incident are felt by the whole sector not just the business involved.

SafeFish has been working with the seafood industry to address high priority food safety issues in a strategic manner. This has improved trade and market access and built capability in Australia to deal with seafood food safety issues as they arise. SafeFish has a number of publications and fact sheets about the major food safety risks associated with seafood. We thought it was timely to remind people that these resources exist to help you assess and manage the food safety risks in your business and as it is topical we have provided some facts and information about Scombroid Fish Poisoning in this issue.

What is Scombroid Fish Poisoning?

Scombroid Fish Poisoning is caused by ingestion of histamine, a product of the degradation of the amino acid histidine. Histidine is found in the muscles of some fish species and can be degraded to histamine by enzymatic action of some naturally occurring bacteria.

Which types of fish can be implicated?

Scombridae are the family of fish such as tuna and mackerel, which are traditionally considered to present the highest risk (hence the name Scombroid Fish Poisoning). However, other species have also been associated with histamine poisoning; e.g. anchovies, sardines, Yellowtail kingfish, Amberjack and Australian salmon, Mahi Mahi and Escolar.

Does Scombroid Fish Poisoning occur in Australia?

In Australia, 38 outbreaks of Scombroid Fish Poisoning were reported between 1988 and 2010. Both domestically harvested and imported fish have been implicated with disease. Illnesses occurred from seafood consumed both from restaurants and also from in home settings.

What are the symptoms?

Initial symptoms resemble some allergic reactions including: sweating, nausea, headache and tingling or a peppery sensation in the mouth and throat. Other symptoms include urticarial rash (hives), localised skin inflammation, vomiting, diarrhoea, abdominal cramps, flushing of the face and low blood pressure. Severe symptoms include blurred vision, severe respiratory distress and swelling of the tongue.

What can be done to manage Histamine in seafood?

Histamine levels can increase over a wide range of storage temperatures. However, histamine production is highest over 21.8 °C. Once the enzyme is present in the fish, it can continue to produce histamine at refrigeration temperatures. Thus, rapid chilling of fish immediately after death, followed by good temperature control in the supply chain is the most appropriate control mechanism.

What is happening Internationally?

Histamine risk management guidelines are currently under review by the Codex Committee of Fish and Fishery Products. Discussion is centred on the appropriateness of the current maximum levels, the potential inclusion of safety factors to take into account sensitive individuals and children, sampling strategies to test for histamine in batches of seafood, the usefulness of a separate decomposition limit, and whether or not different products should have different maximum allowable levels. SafeFish is actively engaged in this discussion, and is providing technical support to the Australian delegate at the upcoming Codex Committee on Fish and Fish Products (CCFFP) meeting.

For more information on Scombroid Fish Poisoning visit <http://safefish.com.au/>

If you would like to provide input into the histamine discussion at CCFFP, please contact the SafeFish Chair alison.turnbull@sa.gov.au