

## **Food safety guidelines for inshore fishing vessels**

This guide provides information for people who work on fishing vessels which supply product to New Zealand, or to export markets **and do not** operate under a registered Risk Management Programme or the Limited Processing Fishing Vessels Regulated Control Scheme.

### **Background**

Fish can become contaminated by micro-organisms, chemicals or foreign material which can all affect its safety or quality. Contamination can be avoided by following good procedures.

### **Specific things to consider:**

#### **Histamine poisoning**

Histamine is a toxin that forms in fish species with a high content of red muscle. It causes food poisoning in people who eat fish with high levels of the toxin. Several outbreaks of histamine poisoning have occurred in New Zealand. Histamine is not destroyed by cooking, smoking, or freezing fish so it must be prevented from forming in the first place.

#### **What causes it?**

Histamine production is affected by temperature – its production starts when temperatures get above 7°C in affected species. This occurs if fish are not chilled properly after being caught - even if they are still in the water attached to long lines and particularly with gill netting. Higher levels of histamine are more likely to occur in the summer.

#### **Which fish are affected?**

The following species may develop high levels of histamine if they are not adequately chilled soon after catching:

- kahawai
- kingfish
- mullet
- mackerel
- tuna
- trevally

#### **How can it be prevented?**

To prevent the development of histamine, chill fish quickly and keep it at chilled temperatures until it reaches the processing premises. Land the fish as soon as possible after they are caught and begin the chilling process immediately (don't leave them lying on the deck!).

Industry guidelines recommend that fish is stored at between -1 and 5 °C. The best way to achieve this is to completely surround the fish with ice.

Skippers are responsible for making sure that all crew are aware of and follow the procedures outlined in this guideline.

## **Design and construction of fishing vessels**

Fish handling or storage areas and all equipment used should be designed, constructed and maintained so that they are easy to keep clean. They should be made from materials that are either non-corrodible or are protected against corrosion by nontoxic surfaces.

## **Personal hygiene and health**

Food safety begins with personal hygiene. Fish handlers must keep themselves clean and wear clean protective clothing to prevent contaminating the product. People suffering from a foodborne illness (eg, diarrhoea and/or vomiting) should not carry out fish handling duties if there is a reasonable likelihood that they will contaminate the fish.

## **Cleaning**

Keep decks, storage areas, cool rooms and any other areas where fish are handled, clean and in good condition to minimise contamination of the fish.

### *Before fishing:*

Clean and sanitise all benches and equipment that come into contact with fish. Do this on the way to the fishing grounds using potable water (clean fresh water), or clean seawater sourced from outside the harbour.

### *After fishing:*

Clean all surfaces with clean seawater, using a detergent and sanitiser. Where possible, rinse with freshwater or clean seawater and allow to dry in the sun. Make sure the other areas of the vessel including the toilets, shower and wash basins are also cleaned.

## **Ice and brine**

Use potable water and food-grade salt to make the brine or ice or ensure the ice is sourced from an approved supplier. If you use seawater, make sure you source the water from outside the harbour. Store the ice in a clean container to prevent it becoming contaminated.

## **Monitoring storage temperatures**

Fish handlers on the fishing boat should have a way to check the temperature of stored fish. For example, fish stored in ice will be at a temperature of 5°C or less if melting ice surrounds the fish, so checking that melting ice is present is a satisfactory way to check that the temperature is correct.

## **Heading, gutting and washing fish**

Always perform processing tasks such as heading and gutting fish in a clean area to minimise contamination. Begin processing the fish as soon as possible after they are landed on the vessel, and transfer the processed fish immediately into chilled storage to maintain its quality and prevent deterioration. Use potable water for washing fish, or clean seawater if washing is done on board.

## **Chemicals**

Chemicals, including detergents and sanitisers should be stored in a way that prevents them from coming into contact with the fish.