

Freezing fish and fishery products

How to freeze fish and fishery products that are intended to be eaten raw or lightly cooked in food businesses and restaurants.

Why freezing is required

Fish parasites such as Anisakis larvae (parasitic worms) are a problem in certain species of wild fish including:

- salmon
- herring
- cod
- other fish species including monkfish

All fish and fishery products must be checked and any with visible parasites removed before the fishery product is sold. As well as being unsightly, if eaten alive, Anisakis larvae can cause human illness or allergic reactions in some people. Illness can include abdominal pain and nausea.

Cooking will kill the parasites. Freezing provides an alternative process for killing any parasites:

- that may be undetected in fish and fishery products
- that are not cooked prior to consumption

Our research shows that there is a low risk of parasites from farmed salmon.

The European Food Safety Authority (EFSA) [reviewed the evidence on the presence of parasites in wild and farmed fish in its Opinion of 2010](#). This Opinion sets out specific time and temperature treatments required to kill the parasites.

Fish freezing requirements

Freezing requirements apply to all food businesses that place fish and fishery products on the market such as restaurants, fish suppliers and fish buyers. This is to protect consumers from any harmful effects that might be caused by parasites that are naturally present in the fish.

Under food hygiene legislation, certain fishery products intended to be eaten raw need to be frozen before use.

These include:

- sushi
- sashimi
- cold smoked fish where the smoking process does not achieve a core temperature of 60°C for at least one minute

Any treated products where the processing treatment doesn't kill the parasites must also be frozen before consumption. These can include:

- gravlax

- carpaccio
- some pickled herring products
- some marinated fish products
- salted fishery products

For parasites other than trematodes the freezing treatment must consist of lowering the temperature in all parts of the product to at least either:

- -20°C for not less than 24 hours
- -35°C for not less than 15 hours

Some exemptions to the freezing requirements apply to fish reared under certain conditions with minimal risk of parasite infection.

Permitted exemptions from freezing requirements

Food businesses do not need to apply a freezing treatment to fishery products if they meet the conditions for exemption.

Conditions for exemptions

If fish and fishery products are heat treated at a temperature that will kill parasites before consumption. This temperature is 60°C for at least one minute for most parasites although trematodes may require a more stringent heat treatment to kill them.

We have authorised an exemption from freezing for wild catches. This requires evidence from epidemiological data showing that the fishing grounds of origin do not present a health hazard with regard to parasites. This applies where farmed fish have been cultured from embryos that are fed on a diet that cannot contain viable parasites.

For farmed fish, one of the following conditions also have to be met:

- embryos have been exclusively reared in an environment that is free from parasites
- the food business can verify that the fishery products do not present any health hazards in relation to parasites

Documentation requirements

When selling, you must provide information on the type of freezing process that the fish or fishery product has undergone. This must have been provided by the business carrying out the treatment.

The freezing process can be applied at the most appropriate point in the food chain. For example, once it is known whether the fresh fish is intended to be consumed raw or will be cooked. Commercial agreements between suppliers and customers can set out who takes responsibility for the freezing obligation.

If products are sold and intended for raw consumption without a freezing treatment, must be sourced from fishing grounds or fish farms that meet the exemption conditions.

Any freezing exemption declarations (including any approved procedures) must accompany each batch of farmed fish to be sold, either physically or electronically.

Products sold to the final consumer, do not need any documentation relating to the freezing exemption or treatment.

UK authorised freezing exemptions

Wild fish

There are no current UK authorised exemptions for wild fish. Parasites such as Anisakis are known to affect fish species in UK waters such as:

- cod
- mackerel
- herring
- monkfish

Farmed fish

There is a general freezing exemption for:

- Atlantic halibut
- Atlantic salmon
- rainbow trout

These species are reared using farming methods that have a minimal risk of parasite infection.

Fish that are reared using the same production method as salmon can also be approved for exemption. This process uses raised sea pens and fish are fed on a controlled artificial diet that cannot be infected with larval parasites. Equivalent production processes for freshwater systems may also qualify for exemption.

These are land based systems using tanks or ponds on-shore, not in the sea. They can provide alternative rearing conditions that would meet the freezing exemption conditions as they would be free from parasites.

We consider any future freezing exemptions for farmed fish reared using any other production methods on a case by case basis.

Buying

You can ask for the details of the treatments used by the supplier when buying a fish or a fishery product that would require a freezing treatment.

The seller should be able to confirm the details before you purchase.

If a freezing treatment has not been applied, you can carry out the freezing treatment yourself. You can find more information on what is legally required in the food safety management obligations for food businesses under [assimilated Regulation \(EC\) 852/2004](#).

There are more specific requirements in Annex III, Section VIII, Chapter V, para D of [assimilated Regulation \(EC\) 853/2004](#) (as amended by [assimilated Commission Regulation \(EU\) No 1276/2011](#)).

If there are no documents to show this information, assume that there has been no treatment applied.

Selling

When selling your product to another food business, you need to inform the buyer about the freezing treatments you have applied. Without this, the buyer won't know if they need to apply a freezing treatment themselves.

Importing from non-EU countries

If you are not applying a freezing treatment to an imported fish or fishery product, you need to check the source conditions meets the appropriate treatment exemptions.

The fishery product can come with verified documents from the exported country.

Get in touch

If you want to discuss any issues in this guidance, please email the relevant contact below.

England: LAHygieneEnquiries@food.gov.uk

Wales: food.policy.wales@food.gov.uk

Northern Ireland: infofsani@food.gov.uk