



Mercury Certification Guide

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Title

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1 Introduction

This guidance is intended to assist exporters with mercury in seafood official assurances.

A number of countries can be provided with a mercury level official assurance clause. The level will be stated in the relevant country's overseas market access requirements (OMAR). The mercury content of commercial fish in New Zealand varies depending on a number of factors, including the species.

MPI pursuant to Animal Products (Regulated Control Scheme—Contaminant Monitoring and Surveillance) Regulations 2004, has a national monitoring plan which has enabled fish species to be classified based on known mercury levels.

2 Classification System

In order to assist with official assurances, a system has been developed which divides species into three categories depending on its mercury status.

- (1) Those species which can be safely certified as meeting importing countries requirements with regard to mercury of 0.5ppm; and
- (2) Those species which can be safely certified as meeting importing countries requirements with regard to mercury of 1.0ppm; and
- (3) Those species which are known to exceed 1.0ppm.

Tables in Appendix one categorise New Zealand commercial fish species.

When is sampling required?

Where official assurances that include the mercury clause are provided for a fish species that does not meet the stated level in a country's OMAR, then sampling is required as per appendix two, to enable official assurances.

If the official assurance does not include the mercury clause then no sampling is required.

3 Adding Species

Where exporters believe a species should be added to a particular appendix one category they can apply to MPI providing data and/or reasons for inclusion. MPI will consider, in consultation with Seafood Standards Council, whether the species should be added to the *mercury in fish monitoring programme*. The results of the official monitoring programme will determine appropriate listing.

4 Appendix One

The following tables list the NZ commercial fish species and categorised mercury levels.

4.1 Fish Species Known to be 0.5 ppm or Below

These species can be certified at 0.5ppm for countries that require certification at this level.

Common Name	Scientific Name
Anchovy	<i>Engraulis australis</i>
Barracouta	<i>Thyrsites atun</i>
Bream - Ray's	<i>Brama brama</i>
Brill	<i>Colistium guntheri</i>
Butterfish	<i>Odax pullus</i>
Cockle	<i>Austrovenus stutchburyi</i>
Cod - Blue	<i>Parapercis colias</i>
Cod - Red	<i>Pseudophycis bachus</i>
Crab - Paddle	<i>Ovalipes catharus</i>
Dory - John	<i>Zeus faber</i>
Eel - Conger	<i>Conger verreauxi</i>
Eel - Long Finned	<i>Anguilla dieffenbachii</i>
Eel - Short Finned	<i>Anguilla australis</i>
Elephant Fish	<i>Callorhynchus milii</i>
Flounder - Black	<i>Rhombosolea retiaria</i>
Flounder - Sand	<i>Rhombosolea plebeia</i>
Frostfish	<i>Lepidopus caudatus</i>
Gemfish	<i>Rexea solandri</i>
Gurnard	<i>Chelidonichthys kumu</i>
Hoki	<i>Macruronus novaezelandiae</i>
Javelin Fish	<i>Lepidorhynchus denticulatus</i>
Kahawai	<i>Arripis trutta</i>
Leather Jacket	<i>Meuschenia scaber</i>
Lobster - Rock	<i>Jasus edwardsii</i>
Mackerel - Blue	<i>Scomber australasicus</i>
Mackerel - Jack	<i>Trachurus novaezelandiae</i>
Mackerel - Jack	<i>Trachurus declivis</i>
Mackerel - Jack	<i>Trachurus murphyi</i>
Moki- Blue	<i>Latridopsis ciliaris</i>
Monkfish	<i>Kathetostoma giganteum</i>
Mussel - Blue	<i>Mytilus galloprovincialis</i>
Mussel - Green Lipped	<i>Perna canaliculus</i>
Oreo - Black	<i>Allocyttus niger</i>
Oreo - Smooth	<i>Pseudocottus maculatus</i>
Oyster - Pacific	<i>Crassostrea gigas</i>
Oyster - Dredge	<i>Tiostrea chilensis</i>
Oyster - Rock	<i>Saccostrea cucullata</i>
Parore	<i>Girella tricuspidata</i>
Paua - Blackfoot	<i>Haliotis iris</i>
Paua - Yellowfoot	<i>Haliotis australis</i>
Perch - Orange	<i>Lepidoperca spp. (Lepidoperca aurantia)</i>
Perch - Sea	<i>Helicolenus barathri</i>
Pilchard	<i>Sardinops sagax</i>

Common Name	Scientific Name
Pipi	<i>Paphies australis</i>
Queen Scallop	<i>Zygochlamys delicatula</i>
Red Baitfish	<i>Emmelichthys nitidus</i>
Salmon - Quinnat	<i>Oncorhynchus tshawytscha</i>
Scallop	<i>Pecten novaezelandiae</i>
Shark - Dark Ghost	<i>Hydrolagus novaezelandiae</i>
Shark - Pale Ghost	<i>Hydrolagus bemisi</i>
Silverside	<i>Argentina elongata</i>
Skip Jack	<i>Katsuwonus pelamis</i>
Snapper	<i>Pagrus auratus</i>
Sole - Common or New Zealand	<i>Peltorhamphus novaezeelandiae</i>
Sole - Lemon	<i>Pelotretis flavilatus</i>
Southern Blue Whiting	<i>Micromesistius australis</i>
Sprat	<i>Sprattus antipodium</i>
Sprat	<i>Sprattus muelleri</i>
Squid - Arrow	<i>Nototodarus gouldi</i>
Squid - Arrow	<i>Nototodarus sloanii</i>
Tarakihi	<i>Nemadactylus macropterus</i>
Toothfish - Antarctic	<i>Dissostichus mawsoni</i>
Toothfish - Patagonian	<i>Dissostichus eleginoides.</i>
Trevally	<i>Pseudocaranx dentex</i>
Tuna - Albacore	<i>Thunnus alalunga</i>
Warehou - Blue	<i>Seriolella brama</i>
Warehou - Silver	<i>Seriolella punctata</i>
Warehou - White	<i>Seriolella caerulea</i>
Whitebait	<i>Galaxias spp.</i>

4.2 Fish Species Known to be 1.0 ppm or Below

These species can be certified at 1.0 ppm for countries that require certification at this level.

Common Name	Scientific Name
Alfonsino	<i>Beryx splendens</i>
Anchovy	<i>Engraulis australis</i>
Barracouta	<i>Thyrstites atun</i>
Bluenose	<i>Hyperoglyphe antarctica</i>
Bream - Ray's	<i>Brama brama</i>
Brill	<i>Colistium guntheri</i>
Butterfish	<i>Odax pullus</i>
Cockle	<i>Austrovenus stutchburyi</i>
Cod - Blue	<i>Parapercis colias</i>
Cod - Red	<i>Pseudophycis bachus</i>
Crab - Paddle	<i>Ovalipes catharus</i>
Dogfish - Lucifer	<i>Etmopterus Lucifer</i>
Dogfish - Spiny	<i>Squalus acanthias</i>
Dory - John	<i>Zeus faber</i>
Dory - Lookdown	<i>Cyttus traversi</i>
Eel - Conger	<i>Conger verreauxi</i>
Eel - Long Finned	<i>Anguilla dieffenbachii</i>
Eel - Short Finned	<i>Anguilla australis</i>

Common Name	Scientific Name
Elephant Fish	<i>Callorinchus milii</i>
Flounder - Black	<i>Rhombosolea retiaria</i>
Flounder - Sand	<i>Rhombosolea plebeia</i>
Frostfish	<i>Lepidopus caudatus</i>
Gemfish	<i>Rexea solandri</i>
Groper - Bass	<i>Polyprion americanus</i>
Groper - Hapuku	<i>Polyprion oxygeneios</i>
Gurnard	<i>Chelidonichthys kumu</i>
Hake	<i>Merluccius australis</i>
Hoki	<i>Macruronus novaezealandiae</i>
Javelin Fish	<i>Lepidorhynchus denticulatus</i>
Kahawai	<i>Arripis trutta</i>
Kingfish - Yellowtail	<i>Seriola lalandi</i>
Leather Jacket	<i>Meuschenia scaber</i>
Ling	<i>Genypterus blacodes</i>
Lobster - Rock	<i>Jasus edwardsii</i>
Mackerel - Blue	<i>Scomber australasicus</i>
Mackerel - Jack	<i>Trachurus novaezealandiae</i>
Mackerel - Jack	<i>Trachurus declivis</i>
Mackerel - Jack	<i>Trachurus murphyi</i>
Moki- Blue	<i>Latridopsis ciliaris</i>
Monkfish	<i>Kathetostoma giganteum</i>
Mussel - Blue	<i>Mytilus galloprovincialis</i>
Mussel - Green Lipped	<i>Perna canaliculus</i>
Orange Roughy	<i>Hoplostethus atlanticus</i>
Oreo - Black	<i>Allocyttus niger</i>
Oreo - Smooth	<i>Pseudocyttus maculatus</i>
Oyster - Pacific	<i>Crassostrea gigas</i>
Oyster - Dredge	<i>Tiostrea chilensis lutaria</i>
Oyster - Rock	<i>Saccostrea glomerata</i>
Parore	<i>Girella tricuspidata</i>
Paua - Blackfoot	<i>Haliotis iris</i>
Paua - Yellowfoot	<i>Haliotis australis</i>
Perch - Orange	<i>Lepidoperca spp. (Lepidoperea)</i>
Perch - sea	<i>Helicolenus barathri</i>
Pilchard	<i>Sardinops sagax</i>
Pipi	<i>Paphies australis</i>
Queen scallop	<i>Zygochlamys delicatula</i>
Red Baitfish	<i>Emmelichthys nitidus</i>
Ribaldo	<i>Mora moro</i>
Rig	<i>Mustelus lenticulatus</i>
Salmon - Quinna	<i>Oncorhynchus tshawytscha</i>
Scallop	<i>Pecten novaezealandiae</i>
Shark - Dark Ghost	<i>Hydrolagus novaezealandiae</i>
Shark - Pale Ghost	<i>Hydrolagus bemisi</i>
Silverside	<i>Argentina elongata</i>
Skate	<i>Raja innominata</i>
Skate	<i>Raja nasuta</i>
Skip Jack	<i>Katsuwonus pelamis</i>
Snapper	<i>Pagrus auratus</i>
Sole - Common or New Zealand	<i>Peltorhamphus novaezealandiae</i>
Sole - Lemon	<i>Pelotretus flavilatus</i>
Southern Blue Whiting	<i>Micromesistius australis</i>

Common Name	Scientific Name
Sprat	<i>Sprattus antipodum</i>
Sprat	<i>Sprattus muelleri</i>
Squid - Arrow	<i>Nototodarus gouldi</i>
Squid - Arrow	<i>Nototodarus sloanii</i>
Swordfish - Broadbill	<i>Xiphias gladius</i>
Tarakihi	<i>Nemadactylus macropterus</i>
Toothfish - Antarctic	<i>Dissostichus mawsoni</i>
Toothfish - Patagonian	<i>Dissostichus eleginoides.</i>
Trevally	<i>Pseudocaranx dentex</i>
Tuna - Albacore	<i>Thunnus alalunga</i>
Warehou - Blue	<i>Seriolella brama</i>
Warehou - Silver	<i>Seriolella punctata</i>
Warehou - White	<i>Seriolella caerulea</i>
Whitebait	<i>Galaxias spp.</i>

4.3 Fish Species Known to be Greater than 1.0 ppm

These species are known to be above 1.0 ppm.

Common Name	Scientific Name
Black Cardinal Fish	<i>Epigonus telescopus</i>
Dogfish - Northern Spiny	<i>Squalus mitsukurii</i>
Dogfish - Owston's Spiny	<i>Centroscymnus owstonii</i>
Dogfish - Shovelnose	<i>Deania calcea</i>
Marlin - Striped	<i>Tetrapturus audax</i>
Shark - Mako	<i>Isurus oxyrinchus</i>
Shark - School	<i>Galeorhinus galeus</i>
Shark - Seal	<i>Dalatias licha</i>
Tuna - Southern Bluefin	<i>Thunnus maccoyii</i>

5 Appendix Two

5.1 Fish Mercury Sampling and Analysis

Where the sampling of fish for mercury testing is required to support official assurances, the requirements of standard 1.4.1 clause 3 (2) [S19-7] of Australia New Zealand Food Standards Code is used as guidance. Five samples from each consignment is an acceptable sample size option. If there is more than one species of fish that needs to be tested, five samples of each species shall be taken.

It is important to note that age and catch area can have a significant bearing on the levels of mercury in the fish.

Taking samples

- (1) Sampling should ideally be undertaken as the shipping container is being loaded but can be taken prior to loading.
- (2) One fillet or at least 50 g of fish should be removed from each randomly selected carton.
- (3) Details should be recorded on the sampling sheet e.g. vessel/ voyage/ catch area and/or consignment details.
- (4) The sample placed in a numbered plastic bag and sealed with tape.
- (5) The carton labelled with the sample number and sampling date.
- (6) The sampled carton should be taped and can be returned to the consignment.

The random selection of cartons and the taking of samples can be performed by or under the supervision of a person nominated by the operator. This person should be competent in sampling and the random selection process.

Stored consignments

Samples may be taken from a stored consignment, but the consignment must be separated and identified so that the contents of the container can be verified at the time of loading. Only lots or consignments from which samples have been taken may be loaded into the shipping container.

Multiple consignments

Where operators are sending out several small consignments from a bulk stock of fish, samples may be drawn from the bulk stock of fish and one certificate used to cover several consignments. The bulk stock shall be stored and identified so that after samples have been taken from the bulk stock, no cartons of fish shall be added to the bulk stock. If any cartons of fish are added to the bulk stock, the bulk stock of fish shall be sampled again and the samples tested for mercury.

Note certain countries may not allow this so check the relevant country OMAR.

Identification of the consignment or bulk stock of fish

Sufficient details about the consignment should be recorded, at the time of sampling, so that it can be demonstrated that the sample was taken from a particular consignment or bulk stock of fish. The information should be sufficient to clearly identify the sampled lot of fish and could include:

- the type of fish
- packing dates
- the quantity (e.g. number of cartons)

- any marks or identification (e.g. shipping marks/brand name/lot numbers)
- the vessel/voyage/catch area details
- the MPI container seal number
- the container number.

Dispatch of samples

The sampling form should be checked for the presence of all details.

If the container is closed and sealed after sampling, the MPI seal number should be recorded on the sampling form.

The samples should be dispatched in an insulated container with the sampling form to the laboratory. The laboratory should be advised when the samples have been dispatched.

Laboratory

The laboratory used for analysis shall be LAS approved for the testing of mercury in fish.

The results sheet needs to contain details about the consignment from the sampling sheet.

Interpretation of the analysis.

As per standard S19-7 of Australia New Zealand Food Standards Code.