Ministry for Primary Industries
Manatū Ahu Matua

Guidance Document

Mercury Certification Guide

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Title

Guidance Document: Mercury Certification Guide

Document history

Current Version Date	Section Changed	Change(s) Description
November 2011	All	Replacement of IAIS 002.2 Mercury Certification Circular 1995.
19 December 2016	All	Changed to MPI format and updated FSANZ references.
1 November 2018		Updated the contact details.
10 July 2024	All	Updated to include mercury data to 29 May 2024

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1 Introduction

This Mercury Certification Guide (Guide) is intended to assist exporters by providing information about mercury levels in fish for official assurance purposes, using data from the National Chemical Residues Programme (NCRP).

The New Zealand wild-capture fish NCRP began in the 1970's and was continued through into the mid-1980's. Sampling resumed in 1993 and has continued a regular basis since. The categorisation of the fish species in this Guide is based on the mercury data from the programme from the 1970's to 29 May 2024[1]. The data was analysed using a one-tailed one proportion z-test with a 95% confidence interval (further elaboration can be found here) for any species with more than 10 data points.

2 Official Assurance

Where an Official Assurance specifies a limit for mercury, this Guide can assist with determining whether that limit will safely be met. If this Guide shows that the mercury level in a particular species cannot be met using the NCRP data, the exporter will need to carry out consignment-based sampling and testing to demonstrate compliance.

2.1 Classification System

To assist with official assurances, species are divided into three categories depending on the level of mercury detected in samples taken under the NCRP:

(1) Those species which are known to have a mercury level of 0.5 ppm or less;

(2) Those species which are known to have a mercury level between 0.5 and 1.0 ppm; and

(3) Those species which are known to exceed 1.0 ppm.

Tables in Part 4 categorise New Zealand commercial fish species accordingly.

3 Adding Species

Where exporters believe a species should be added to a particular category, they can contact MPI (contact details on page 1) providing data or reasons for inclusion. MPI will consider, in consultation with Seafood Standards Council, whether the species should be added to the NCRP. The results of the official monitoring programme will determine appropriate categorisation.

4 Categories based on mercury levels

The following tables categorise New Zealand commercial fish species based on their mercury levels.

[1] Farmed BMS is not included in this Guide.

4.1 Species known to be 0.5 ppm or below

Table 1: Species that can be certified with mercury levels up to 0.5 ppm

Common Name	Scientific Name
Albacore tuna	*Thunnus alalunga*
Anchovy	*Engraulis australis*
Antarctic toothfish	*Dissostichus mawsoni*
Arrow squid	*Nototodarus gouldi*
	+Nototodarus sloanii
Barracouta	*Thyrsites atun*
Black oreo	*Allocyttus niger*
Blue cod	*Parapercis colias*
Blue mackerel	*Scomber australasicus*
Blue moki	*Latridopsis ciliaris*
Blue mussel	*Mytilus galloprovincialis (Mytilus edulis aoteanus)*
Brill	*Colistium guntheri*
Butterfish	*Odax pullus*
Common warehou	*Seriolella brama*
Dredge oyster	*Ostrea chilensis*
Elephant fish	*Callorhinchus milii*
Frostfish	*Lepidopus caudatus*
Hoki	*Macruronus novaezelandiae*
Jack mackerel	*Trachurus novaezelandiae*
	+Trachurus declivis
	+Trachurus murphyi
	+Trachurus spp.
Javelin fish	*Lepidorhynchus denticulatus*
John dory	*Zeus faber*
Kahawai	*Arripis trutta*
	+Arripis xylabion
Leatherjacket	*Meuschenia scaber*
Lemon sole	*Pelotretis flavilatus*
Longfin eel	*Anguilla dieffenbachii*
Monkfish	*Kathetostoma giganteum*
	+Kathetostoma spp.
New Zealand greenshell mussel	*Perna canaliculus*
Orange perch	*Lepidoperca aurantia*
Pacific oyster	*Magallana gigas (Crassostrea gigas)*
Paddle crab	*Ovalipes catharus*
Parore	*Girella tricuspidata*
Paua	*Haliotis iris*
Pilchard	*Sardinops sagax*
Quinnat salmon	*Oncorhynchus tshawytscha*
Ray's bream	*Brama brama*
Red baitfish	*Emmelichthys nitidus*
Red cod	*Pseudophycis bachus*
Red gurnard	*Chelidonichthys kumu*
Scampi	*Metanephrops challengeri*
Sea perch	*Helicolenus barathri*
	+Helicolenus spp.
Shortfin eel	*Anguilla australis*
Silver warehou	*Seriolella punctata*
Silverside	*Argentina elongata*

Common Name	Scientific Name
Skipjack tuna	*Katsuwonus pelamis*
Smooth oreo	*Pseudocyttus maculatus*
Snapper	*Pagrus auratus (Chrysophrys auratus)*
Sole	*Peltorhamphus novaezeelandiae*
Southern blue whiting	*Micromesistius australis*
Spiny rock lobster	*Jasus edwardsii*
Sprats	*Sprattus antipodum* *+Sprattus muelleri*
Tarakihi	*Nemadactylus macropterus*
White warehou	*Seriolella caerulea*

4.2 Species known to have mercury levels between 0.5 and 1.0 ppm

Table 2: Species that can be certified with mercury levels up to 1.0 ppm[1]

Common Name	Scientific Name
Bluenose	*Hyperoglyphe antarctica*
Broadbill swordfish	*Xiphias gladius*
Dark ghost shark	*Hydrolagus novaezelandiae* *+Hydrolagus spp.*
Hake	*Merluccius australis*
Hapuku	*Polyprion oxygeneios* *+Polyprion spp.*
Lookdown dory	*Cyttus traversi*
New Zealand rough skate + New Zealand smooth skate	*Zearaja nasuta (Dipturus nasutus)* *+Dipturus innominatus*
Orange roughy	*Hoplostethus atlanticus*
Pale ghost shark	*Hydrolagus bemisi* *+Hydrolagus spp.*
Patagonian toothfish	*Dissostichus eleginoides*
Ribaldo	*Mora moro*
Rig	*Mustelus lenticulatus (M. antarcticus)*
Trevally	*Pseudocaranx dentex*
Yellowtail kingfish	*Seriola ialandi*

[1] fish species that are highlighted have been re-categorised during this amendment.

4.3 Fish species known to be greater than 1.0 ppm

Table 3: Species known to have mercury levels above 1.0 ppm[1]

Common Name	Scientific Name
Alfonsino	*Beryx splendens*
Cardinal fish	*Epigonus telescopus*
Gemfish	*Rexea solandri* *+Rexea spp*
Ling	*Genypterus blacodes*
School shark	*Galeorhinus galeus*
Southern bluefin tuna	*Thunnus maccoyii*
Striped marlin	*Tetrapturus audax*

[1] fish species that are highlighted have been re-categorised during this amendment.

Appendix One

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

A recognised laboratory with the required tests in the laboratory's scope of recognition must be used for 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.