

**European Union comments on
Codex Circular letter CL 2022/47-CF**

Request for information on national sampling plans for methylmercury in fish or other contaminants in fish

*European Union Competence
European Union Vote*

Following the request for data or studies on the distribution of mercury laterally and from top (dorsal) to bottom (ventral) for tuna, shark, alfonsino, marlin, orange roughy and pink cusk eel, the European Union (EU) would like to inform that it has no such studies available.

Following the request to submit information on the Codex Members' sampling plans to further develop the sampling plan for methylmercury in fish, the European Union would like to submit the following information on the existing European Union sampling plans for mercury in fish, which can also be consulted in Regulation (EC) No 333/2007 (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1664547253349&uri=CELEX%3A32007R0333>).

i. How lots of fish that are not of comparable length or weight are sub-divided into sub-lots for sampling

Large lots shall be divided into sublots on the condition that the subplot may be separated physically in accordance with table 1. Taking into account that the weight of the lot is not always an exact multiple of the weight of the sublots, the weight of the subplot may exceed the mentioned weight by a maximum of 20 %.

Table 1

Subdivision of lots into sublots for products not traded in bulk consignments

Lot weight (ton)	Weight or number of sublots
≥ 15	15-30 tonnes
< 15	—

ii. How samples are taken

Number of incremental samples

For fish the aggregate sample shall be at least 1 kilogram. For fish, the minimum number of incremental samples to be taken from the lot or subplot shall be in accordance with Table 2.

Table 2

Minimum number of incremental samples to be taken from the lot or subplot of food, other than food supplements

Weight or volume of lot/sublot (in kilogram)	Minimum number of incremental samples to be taken
< 50	3
≥ 50 and ≤ 500	5
> 500	10

The incremental samples shall be of similar weight/volume.

For fish an incremental sample shall be at least 100 grams, resulting in an aggregate sample of at least about 1 kilogram.

Specific provisions for sampling of lots of fish containing whole fish of comparable size and/or weight

The number of incremental samples to be taken from the lot is set out in Table 2. The aggregate sample uniting all incremental samples shall be at least 1 kilogram.

- Where the lot to be sampled contains small fish (individual fish weighing < 1 kilogram), the whole fish is taken as incremental sample to form the aggregate sample. Where the resulting aggregate sample weighs more than 3 kilogram, the incremental samples may consist of the middle parts of the fish, weighing each at least 100 grams, forming the aggregate sample. The whole part to which the maximum level is applicable, is used for homogenisation of the sample.

The middle part of the fish is where the centre of gravity is. This is located in most cases at the dorsal fin (in case the fish has a dorsal fin) or halfway between the gill opening and the anus.

- Where the lot to be sampled contains larger fish (individual fish weighing ≥1 kilogram), the incremental sample consists of the middle part of the fish. Each incremental sample weighs at least 100 grams.

For fish of intermediate size (≥ 1 kilogram and < 6 kilogram) the incremental sample is taken as a slice of the fish from backbone to belly in the middle part of the fish.

For very large fish (≥ 6 kilogram), the incremental sample is taken from the right side (frontal view) dorso-lateral muscle meat in the middle part of the fish. Where the taking of such a piece of the middle part of the fish would result in a significant economic damage, the taking of three incremental samples of at least 350 grams each may be considered as being sufficient independent of the size of the lot or alternatively three incremental samples of at least 350 grams each from an equal part (175 grams) of the muscle meat close to the tail part and the muscle meat close to the head part of each fish may be considered as being sufficient independent of the size of the lot.';

Specific provisions for sampling of lots of fish containing whole fish of different size and/or weight

The provisions for sampling of lots of fish containing whole fish of comparable size and/or weight shall apply.

Where a size or weight class/category is predominant (about 80 % or more of the lot), the sample is taken from fish with the predominant size or weight. This sample is to be considered as being representative for the whole lot.

Where no particular size or weight class/category predominates, then it shall be ensured that the fish selected for the sample are representative for the lot. Specific guidance for such cases and examples are provided in 'Guidance document on sampling of whole fish of different size and/or weight' (https://food.ec.europa.eu/system/files/2022-05/cs_contaminants_sampling_guid-samp-fishes.pdf).

For batches of fishes of different size and/or weight, in case no particular size or weight class/category predominates, the following sample procedure is proposed:

- 1) In case the size and/or weight of the fishes present in the lot differs more than 50 % but less than 100 %: two separate representative samples are taken from each size or weight class/category within a lot.
- 2) In case the size and/or weight of the fishes present in the lot differs more than 100%: three separate representative samples are taken from each size or weight class/category within a lot.

The laboratory may perform a sequential analysis on the samples of the different size/weight classes/categories of one lot, whereby the sample representing the largest fishes is analysed first.

- In case the analytical result of this sample is compliant with the maximum level, the whole lot is considered to be compliant.
- In case the analytical result of this sample is exceeding the EU maximum level, then the sample taken from the medium size fishes is analysed.
 - o In case this analytical result is compliant then no analysis is necessary of the sample taken from the smallest size fishes (in case the lot is divided into three size classes).

- In case the analytical result of the sample of the medium size fishes is non-compliant with the EU maximum level, in case of three separate samples, then the sample from the smallest size fishes is analysed.

Based on the analytical results of one or more samples, the whole or parts of the lot can be accepted or rejected.

EXAMPLES

In case the size and/or weight of the fishes present in the lot differs more than 50 % but less than 100 %: two separate representative samples are taken from each size or weight class/category within a lot.

Example: 5 ton lot of fishes with weights from 2 kg to 3.5 kg.

A first aggregate sample is taken of the smaller sized (lot relative) fishes, which weigh about 2-2.75 kg: 10 incremental samples (fishes) are taken. Each incremental sample is constituted from the muscle meat of the middle part of the fish (slice backbone to belly, symmetrically taken around line B in Figure 1) and weighs about 100 grams. This results in one aggregate sample of about 1 kg to be homogenised and analysed separately.

A second aggregate sample is taken of the larger sized (lot relative) fishes, which weigh about 2.75 -3.5 kg : 10 incremental samples (fishes) are taken. Each incremental sample is constituted from the muscle meat of the middle part of the fish (slice backbone to belly, symmetrically taken around line B in Figure 1) and weighs about 100 grams. This results in one aggregate sample of about 1 kg to be homogenised and analysed separately

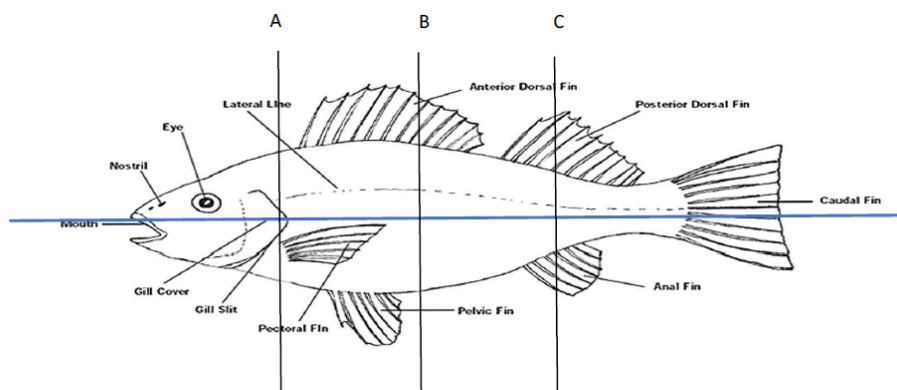


Figure 1: The different sections of a fish.

A) Laboratory performs a sequential analysis:

First the sample of the larger sized fishes is homogenised and analysed separately.

-In case the analytical result is compliant, the whole lot is compliant.

-In case the analytical result is non-compliant, as a second step the sample of the smaller sized fishes is homogenised and analysed separately.

-- In case the analytical result of the sample of the smaller sized fishes is non-compliant, the whole lot is non-compliant.

-- In case the analytical result of the sample of smaller sized fishes is compliant, then the smaller sized fishes (2-2.75 kg) have to be sorted out and these fishes are compliant. The remaining larger sized fishes (2.75-3.5 kg) are non-compliant.

B) Laboratory analyses both samples at the same time:

-In case both analytical results are compliant, the whole lot is compliant.

-In case both analytical results are non-compliant, the whole lot is non-compliant.

-In case the sample of the smaller sized fishes (2-2.75 kg) is compliant and the sample of the larger sized fishes (2.75-3.5 kg) not, then the smaller sized fishes (2-2.75 kg) have to be sorted out and these small sized fishes are compliant. The remaining larger sized fishes (2.75-3.5 kg) are non-compliant.

In case the size and/or weight of the fishes present in the lot differs more than 100%: three separate representative samples are taken from each size or weight class/category within a lot

Example: 10 ton lot of fishes with weights from 2 kg to 8 kg.

A first aggregate sample is taken of the smaller sized (lot relative) fishes, which weigh about 2-4 kg: 10 incremental samples (fishes) are taken, each incremental sample is constituted from the muscle meat of the middle part of the fish (slice backbone to belly, symmetrically taken around line B in Figure 1) and weighs about 100 grams. This results in one aggregate sample of about 1 kg, to be homogenised and analysed separately.

A second aggregate sample is taken of the fishes of medium size (lot relative) of about 4-6 kg: 10 incremental samples (fishes) are taken, each incremental sample is constituted from the muscle meat of the middle part of the fish (slice backbone to belly) and weighs about 100 grams. This results in one aggregate sample of about 1 kg, to be homogenised and analysed separately.

A third aggregate sample is taken of the larger sized (lot relative) fishes of about 6-8 kg: 3 incremental samples (fishes) are taken, each incremental sample is
-constituted of the right side dorso-lateral muscle meat in the middle part of the fish (symmetrically around line B in Figure 1 and above the horizontal line in Figure 1) and weighs about 350 grams. This results in one aggregate sample of about 1 kg to be homogenised and analysed separately.

OR

-constituted of equal parts of 175 grams of the muscled meat close to the tail part (the region around line C in Figure 1) and the muscle meat close to the head part of one fish (the region of line A in Figure 1) which are combined to form an incremental sample of about 350 grams per fish. This results in one aggregate sample of about 1 kg to be homogenised and analysed separately.

A) The laboratory performs a sequential analysis:

First the sample of the larger sized fishes (6-8 kg) is homogenised and analysed

separately.

-In case the analytical result is compliant, the whole lot is compliant

-In case the analytical result is non-compliant, as a second step the sample of the medium sized fishes (4-6 kg) is homogenised and analysed separately.

-- In case the analytical result of the sample of medium sized fishes (4-6 kg) is compliant, then the larger sized fishes (6-8 kg) have to be sorted out and these fishes (6-8 kg) are non-compliant. The remaining smaller (2-4 kg) and medium sized (4-6 kg) fishes are compliant.

-- In case the analytical result of the sample of medium sized fishes (4-6 kg) is non-compliant, as a third step the sample of the smaller sized fishes (2-4 kg) is homogenised and analysed.

-- -- In case the analytical result of the sample of smaller sized fishes (2-4 kg) is non-compliant, then the whole lot of fish is non-compliant

-- -- In case the analytical result of the sample of smaller sized fishes (2-4 kg) is compliant, then the smaller fishes (2-4 kg) have to be sorted out and these fishes (2-4 kg) are compliant. The remaining medium (4-6 kg) and larger sized fishes (6-8 kg) are not compliant.

B) The laboratory analyses all three samples at the same time

- In case all three analytical results are compliant, the whole lot is compliant.*
- In case all three analytical results are non-compliant, the whole lot is non-compliant.*
- In case the sample of the smaller fishes (2-4 kg) is compliant and the sample of the medium sized (4-6 kg) and larger fishes (6-8 kg) not, then the smaller fishes (2-4 kg) have to be sorted out and these fishes are compliant. The remaining medium sized (4-6 kg) and larger sized fishes (6-8 kg) are non-compliant.*
- In case the sample of the smaller (2-4 kg) and medium sized fishes (4-6 kg) is compliant and the sample of the larger sized fishes (6-8 kg) not, then the larger sized fishes (6-8 kg) have to be sorted out and these fishes (6-8 kg) are non-compliant. The remaining smaller (2-4 kg) and medium sized fishes (4-6 kg) are compliant.*

iii. where on the fish the sample is taken, both laterally and top (dorsal) to bottom (ventral)

- Where the lot to be sampled contains small fish (individual fish weighing < 1 kilogram), the whole fish is taken as incremental sample to form the aggregate sample. Where the resulting aggregate sample weighs more than 3 kilogram, the incremental samples may consist of the middle parts of the fish, weighing each at least 100 grams, forming the aggregate sample. The whole part to which the maximum level is applicable, is used for homogenisation of the sample.

The middle part of the fish is where the centre of gravity is. This is located in most cases at the dorsal fin (in case the fish has a dorsal fin) or halfway between the gill opening and the anus.

- Where the lot to be sampled contains larger fish (individual fish weighing ≥ 1 kilogram), the incremental sample consists of the middle part of the fish.

For fish of intermediate size (≥ 1 kilogram and < 6 kilogram) the incremental sample is taken as a slice of the fish from backbone to belly in the middle part of the fish.

For very large fish (≥ 6 kilogram), the incremental sample is taken from the right side (frontal view) dorso-lateral muscle meat in the middle part of the fish. Where the taking of such a piece of the middle part of the fish would result in a significant economic damage, the taking of three incremental samples of at least 350 grams each may be considered as being sufficient independent of the size of the lot or alternatively three incremental samples of at least 350 grams each from an equal part (175 grams) of the muscle meat close to the tail part and the muscle meat close to the head part of each fish may be considered as being sufficient independent of the size of the lot.’;

For further details see examples under point ii and figure 1.

iv. the tissues included in the sample (e.g., skin is removed, red muscle tissue should not be sampled, deboned);

The whole part to which the maximum level is applicable is used for homogenisation of the sample. In the EU this means that the fish meat is sampled without the skin, bones or viscera.

v. typical ranges of commercial lot sizes;

vi. typical size ranges of commercially harvested fish for which Codex MLs are established;

- tuna
- shark,
- alfonsino
- marlin

- orange roughy
- pink cusk-eel

vii. if reconditioning sub-lots is practical and feasible; reconditioning involves removing the length/weight class(es) that exceed the ML, so that the remainder of the lot of smaller fish are in compliance; and

For batches of fishes of different size and/or weight, in case no particular size or weight class/category predominates, the following sample procedure is proposed:

- 1) In case the size and/or weight of the fishes present in the lot differs more than 50 % but less than 100 %: two separate representative samples are taken from each size or weight class/category within a lot.
- 2) In case the size and/or weight of the fishes present in the lot differs more than 100%: three separate representative samples are taken from each size or weight class/category within a lot.

The laboratory may perform a sequential analysis on the samples of the different size/weight classes/categories of one lot, whereby the sample representing the largest fishes is analysed first.

- In case the analytical result of this sample is compliant with the maximum level, the whole lot is considered to be compliant.
- In case the analytical result of this sample is exceeding the EU maximum level, then the sample taken from the medium size fishes is analysed.
 - In case this analytical result is compliant then no analysis is necessary of the sample taken from the smallest size fishes (in case the lot is divided into three size classes).
 - In case the analytical result of the sample of the medium size fishes is non-compliant with the EU maximum level, in case of three separate samples, then the sample from the smallest size fishes is analysed.

Based on the analytical results of one or more samples, the whole or parts of the lot can be accepted or rejected. For further details see example under point ii.

viii. information on relevant risk management measures (e.g., catch, sorting) that could be incorporated in into the sampling plan.

Based on the analytical results of one or more samples of different size classes, the whole or parts of the lot can be accepted or rejected.