

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
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WORLD
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ORGANIZATION

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Agenda Item 6

CX/FFP 03/7

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

Twenty-sixth Session
Ålesund, Norway, 13 - 17 October 2003

PROPOSED DRAFT CODE OF PRACTICE FOR FISH AND FISHERY PRODUCTS (SECTIONS 6, 7, 10 TO 15, 17 AND APPENDICES)

GOVERNMENT COMMENTS AT STEP 3 (Canada, Finland, Germany, Poland)

CANADA

General Comment:

1. At the 25th Session of the Codex Committee on Fish and Fishery Products (CCFFP), the Committee discussed the Draft Code of Practice for Fish and Fishery Products, specifically the sections at Step 6 and processing of frozen surimi and recommended that these sections be advanced to the Codex Alimentarius Commission for adoption at Step 8. A Working Group that met during the session revised the section on Bivalve Molluscs, while the other sections of the Code were left unchanged. These sections were returned to Step 3 for additional government comments. Canada submitted written comments for the 25th Session of the CCFFP (CX 02/5-Add.3). For ease of reference, our comments are repeated regarding specific sections that were not discussed. Canada is pleased to provide the following comments.

Specific Comments

AQUACULTURE PRODUCTION - SECTION 6

2. Section 6.3.2 - Veterinary Drugs

2nd bullet: Concerning the clause, “. . . with particular attention to withdrawal periods”, Canada believes that the proper control of withdrawal periods is the primary means of ensuring that veterinary drug residues meet regulatory and international requirements. Consequently, Canada is of the opinion that the issue of the “*withdrawal period*” should be given greater attention in this section. Consideration should be given to addressing the “*withdrawal period*” independently with specific technical guidance on how withdrawal can be controlled. Canada suggests the addition of the following bullet point: “**Prior to administering veterinary drugs, a system should be in place to monitor the application of the drug to ensure that the withdrawal time for the batch of treated fish can be verified.**”

MOLLUSCAN SHELLFISH - SECTION 7

3. Section 7.1 - General Remarks, Addition to Pre-requisite Programme

5th Paragraph, last sentence (beginning with “*Molluscan shellfish from waters . . .*”): Concerning the clause, “. . . long term relaying is required if there is a risk of viral contamination,” Canada’s distinction between the criteria used for “relaying” and “purification” is based on the load of faecal coliforms, an indicator of further sewage contamination (and, in turn, both bacterial and viral risk). Canada does not actually test for viral contamination. The risk of harmful bacteria and viral contamination are both assessed using faecal coliform indicators. When this indicator reveals a lower risk of contamination (viral and bacterial), purification is permissible. When the indicator shows a greater load, the risk of bacterial/viral contamination is considered greater and longer term relaying is necessary. Canada proposes that the circumstances for relaying should be broadened. The following wording is suggested: **“Purification is a short term process commonly used to reduce low levels of bacterial contamination, but long term relaying is required if there is a greater risk of contamination (both bacterial and viral).”**

4. Section 7.2.2 - Monitoring of growing areas

5th Paragraph (beginning with “In determining the public health suitability . . .”):

1st point: Concerning the clause: “*Classification/reclassification of growing areas by frequent monitoring of E. coli/faecal coliforms or total coliforms,*” Canada supports the classification/ reclassification of growing areas by monitoring of E. coli/faecal coliforms or total coliforms. However, we have a reservation with recommending “*frequent monitoring*” since it is unclear in this provision as to what “*frequent*” means. Therefore, Canada proposes an amendment that would allow competent authorities to develop a rate of monitoring of E. coli/faecal coliforms or total coliforms of growing areas that would be appropriate based on risk of contamination. The following wording is suggested: **“Classification/ reclassification of growing areas by the monitoring of E. coli/faecal coliforms or total coliforms at an appropriate frequency based on the risk of contamination.”**

3rd point: Concerning the clause: “*Closure/Reopening of growing areas by frequent monitoring of algae in seawater and biotoxins in bivalve molluscs,*” Canada recommends amending this clause and suggests the following wording: **“Closure/Reopening of growing areas by the monitoring of biotoxins in bivalve molluscs alone or in combination with the monitoring of algae in seawater at an appropriate frequency based on the risk of contamination.”** Biotxin monitoring can be effective when bivalve molluscs alone are sampled at an adequate number of sampling sites and at an adequate frequency allowing for accurate and timely closure and reopening decisions to be made.

PROCESSING OF QUICK FROZEN COATED FISH PRODUCTS - SECTION 10

5. When producing fish core, it is desirable to soften the frozen fish block and fillets slightly to facilitate sawing and forming. This is achieved by gradually raising the temperature of the fish block and fillets to -10°C to -15°C without thawing by a process known as tempering. While there are minimal concerns with potential hazards, care should be taken not to over soften the fish flesh. Excessive softening could lead to premature separation of the fish flesh or it could distort the shape of the fish core during sawing. For fish sticks, incorrect dimensions of fish core could result in nonconformity with its standard of identity as described in the Codex standard (Section 2.1.1). For this reason, Canada is of the view that, while the flow diagram and operation steps in this section are presented for illustrative purposes, adding a tempering step and discussing some of the potential defects and technical guidance associated with this step would be a helpful addition. If accepted, a tempering step could be added between Section 10.3.2 - Storage of Raw Material, Other Ingredients and Packaging Materials and Section 10.3.3 - Unwrapping, Unpacking. The following text is proposed:

Step title: Frozen Fish Block/Fillet Tempering

Potential Hazards: Unlikely

Potential Defects: Incorrect dimensions due to sawing of over softened fish flesh (applies to fish sticks)

Technical Guidance:

- **Depending on the use of the fish, the tempering of frozen fish blocks should be carried out in a manner which will allow the temperature of the fish to rise (to -10°C to -15°C) without**

thawing.

- **Tempering blocks of frozen fish in chilled storage is a slow process which usually requires at least 12 hours or more.**
- **Over softening of the outer layers is undesirable (poor performance during sawing) and could be avoided if chilled storage temperatures (0°C - 4°C) are used for tempering, and if fish blocks are stacked in layers.**

6. **Section 10.1 - General Addition to Pre-requisite Program**

3rd bullet, 1st sentence: Concerning the clause, “*if the whole process is run continuously, an adequate number of processing lines should be available to avoid interruptions and batch-wise processing,*” Canada questions the need for this provision since general guidance has been broadly covered by Section 3.2 - Facility Design and Construction. The last sentence states: “*The facility, therefore, should be designed to facilitate rapid processing and subsequent storage*” and sufficiently allows for different approaches to achieve this objective. To handle interruptions during processing, the installation of more than one processing line is not economically feasible and practical for many producers. Consideration should be given to deleting the 1st sentence. If accepted, the following editorial revision should be made to the 2nd sentence: “**If processing is interrupted, intermediate products . . . being further processed.**”

5th and 6th bullet: Canada suggests that the technical points regarding “*sawdust*” would be more appropriate in Section 10.3.4.1 - Sawing, particularly since the guidance provided in the 6th bullet could aid in minimizing the likelihood of decomposition (and/or rancidity).

7. **Section 10.2.1 - Hazards:**

For coated products, Canada recognizes the potential hazard of the growth of *Staphylococcus aureus* and *Bacillus cereus* as well as their toxin production during the storage of moist batter mixes. Food safety implications could result if these pathogens are not considered in a hazard analysis. An explanation of their relevance would be a useful addition in this section. The following text is proposed:

“The production and storage of batter for application to fish portions, fillets, etc., may involve either rehydration of a commercial batter mix or preparation from raw ingredients. Efficiency and volume requirements, particularly for a large operation, could result in a holding time for the batter prior to circulation and/or application to the product. *Staphylococcus aureus* may enter the batter either from the raw materials or from unsanitary conditions (eg. unclean hands, unsanitary pumping lines, dirty utensils). *Bacillus cereus* may be a contaminant of the carbohydrate component (eg. flour, starch) of the batter.

If moist batter is exposed to temperatures favorable for the growth of these microorganisms for a sufficient period of time, microbial growth and toxin formation may result. The toxins produced by *S. aureus* and *B. cereus* emetic type, are heat stable, and will not be destroyed by subsequent cooking of the product.”

Canada also notes that “*Section 5.3.2*” as stated incorrectly refers to the section on “Flow Diagrams”. For accuracy, it is suggested that this section should reference Section 5.3.3.1 - Identification of Hazards and Defects.

8. **Section 10.3.1.1 - Fish**

Potential Hazard - “Decomposition”: Canada notes that the Code has dealt with decomposition as a potential defect. For consistency, consideration should be given to move the term “decomposition” under the “Potential Defects” section.

9. **Section 10.3.4.1 - Sawing**

Potential Defect - “Irregularly shaped pieces or portions”:

Since the Codex Quick Frozen Fish Sticks (Fish Fingers), Fish Portions and Fish Fillets - Breaded or in Batter (Codex Stan 166 - 1989, Rev 1-1995) allow for fish portions to be any shape, weight or size (Section 2.1.2), Canada is of the opinion that this potential defect should apply specifically to fish sticks because the dimensions of a fish stick have been defined in the standard (Section 2.1.1).

3rd bullet: Canada would like to seek clarification on the purpose of the 3rd bullet which states: “*saw dust*”

must not collect on the saw table and must be collected in special containers.”

10. Section 10.3.6.1 - Wet Coating

Potential Hazard - “microbiological contamination of liquid coating material during storage or being pumped through pipes”: Canada is of the opinion that since the primary biological hazard in hydrated batter is contamination by *S. aureus* and *B. cereus*, these pathogens should be identified as potential hazards.

11. Section 10.3.9 - Packing and Labelling

Canada recommends that the reference to “Section 8.2.1 - Weighing” be included since the 2nd technical guidance point in this section specifically addresses net weight. This added guidance point calls greater attention to the packing operation and helps reduce under-packing that could lead to consumer fraud.

PROCESSING OF LOBSTERS AND CRABS - SECTION 13

12. Section 13.2 - General considerations for the Handling of Lobsters and Crabs

Chemical Hazards, Biotoxins Section: Canada recommends that the reference to PSP toxin in lobsters be clarified. Accumulation of PSP is generally limited to the hepato-pancreas (*Shumway, S.E, 1995*). This may also be the case for crabs identified in the first sentence and should be verified. For the last sentence, Canada suggests the following wording: “**PSP toxins have also been identified in the hepato-pancreas of lobsters.**”

TRANSPORT - SECTION 17

13. **Potential Defect - “Chemical Contamination (fuel)”**: Canada notes that existing Codex fish and fishery products standards refer to odour and flavour defects as “*persistent and distinct objectionable odours or flavours indicative of decomposition or rancidity or of feed*” and does not include fuel odours as a quality defect. Moreover, fuel contamination of foods is a potential human health concern; for example, chronic exposure to the more toxic compounds in fuels. Canada is of the opinion that, in instances where fuel contamination has been determined, the entire lot should be rejected. Therefore, Canada recommends that “chemical contamination (fuel)” be appropriately identified as a potential hazard.

14. Section 17.4 - For All Products

Canada recognizes that waste management is a fundamental principle of good hygienic practices. Stressing waste management during transport would help minimize the risk of contamination of products and contributes to maintaining clean conditions. This is particularly relevant to vehicles that are used for multiple deliveries on a given journey. In this situation, there is a greater likelihood for waste accumulation. Canada recommends addressing waste management in this section and would like to suggest the addition of the following technical guidance point: “**After unloading, the accumulation of waste should be avoided and it should be disposed of in a proper manner.**”

RETAIL - SECTION 18

15. Section 18.1 - Reception of Fish, Shellfish and Their Products at Retail: General Considerations

It has been stressed in Section 17.1 - Fresh, Refrigerated and Frozen Products that a recording thermometer should be used to monitor air temperature inside the cargo hold during transportation. Canada believes that where a transportation company or a transport sector has incorporated a system to assure that the appropriate product temperature requirements have been maintained during transportation, the examination of these records should be encouraged as a verification activity at reception. A technical guidance point should be added as follows: “**When a log of the cargo hold temperature for the transport vehicle or vessel is kept, records should be examined to verify adherence to temperature requirements.**”

2nd bullet: Concerning the clause “*determine that cooked ready to eat product has not been exposed to raw product or juices or live molluscan shellfish*”, it has been the experience of Canada that cooked, ready-to-eat products are generally pre-packaged and/or packed in containers. The packaging provides a physical barrier to prevent contamination. Canada is not aware of a situation where a cooked, ready-to-eat product would likely be exposed to raw product juices or live molluscan shellfish and would welcome a discussion on the

inclusion or modification of this technical guidance point.

16. Section 18.1.3 - Chilled Storage of Products at Retail

Last bullet: Canada supports the concept of developing a product rotation system by retailers to ensure consistent quality and safety of the fish and fishery products for the consumer. However, Canada is of the opinion that the principle of first-in/first-out may not apply in all cases. For instance, retailers will also need to consider in some cases, the overall sensory quality of the incoming lot and the production date or best before date on labels as well. Canada suggests that a product rotation should be appropriate to the product and offers the following revision: **“A proper product rotation system should be established. This system could be based on first in, first out usage, production date or best before date on labels, sensory quality of the lot, etc.”**

FINLAND

Section 6.

Point 6.3.1

The following bullet point should be reviewed again, taking into consideration the Regulation of animal by-products (EC) 1774/2002.

- Fresh or frozen fish, fish silage, offal from fish or animal slaughter and rejects from animal slaughterhouses should reach the fish farm in an adequate freshness

Point 6.3.4

We suggest an additional bullet point to point 6.3.4 as follows:

- Before harvesting fish should be kept fasting

The intestine of the fish should be empty before harvesting in order to keep the water clean during transportation and so that the oxygen consumption would be as low as possible.

Section 11.

Point 11.2.1

We suggest to modify point 11.2.1 as follows:

- Immediately after splitting, fish should be washed in plenty of running potable water or clean sea, lake or river water, to remove all blood from the fish;

In Finland we grow fish also in lakes and rivers, so there must be a possibility to wash fish in lake or river water too.

Point 11.4.1

We suggest an additional bullet point to point 11.4.1:

- Brine should not be reused or recycled between different production runs (batches)

There should also be a clear definition for the word “production run” or “batch”.

Point 11.4.2

We suggest to modify point 11.4.2 as follows:

- Apparatuses used for brine injection should be cleaned and disinfected daily and between production runs

“Regular intervals” should be replaced by a more accurate definition.

Section 12.

Point 12.1

We suggest to modify point 12.1 as follows:

- New brine should be prepared for each day of production and for each production run (or batch) from food grade salt;

The brine should be used only for a certain production run.

We also suggest to remove the following bullet point:

- If the brine is recycled a decontamination step should be instated

and replace it as follows:

- The brine used for a certain production run should be examined regularly to avoid any microbiological, chemical or physical contamination

The brine shouldn't be recycled between production runs and the brine used should be changed if it is not microbiologically clean and there is chemical or physical contamination.

Point 12.3

We suggest to modify the next paragraph as follows:

- Avoid contamination of *Listeria monocytogenes* by keeping the slicers and the conveyer belts clean and avoid any possibilities of bacterial growth.

GERMANY

The German delegation proposes to insert in the Code of Practice for fish and fishery products under section 11:

new sentence, new bullet under 11.4.2 Brine injection (Processing Steps 14):

- the reflux of injected brine into the reservoir should be avoided

POLAND

According to the document CL 2003/6-FFP Poland forwards comments on the Proposed Draft Code of Practice for Fish and Fishery Products (Sections at Step 3).

DEFINITIONS

2.6. (page 7) Sawing

The definition of the term (sawing) should not contain the word, which is described by the definition.

p. 2.7. Fatty fish and Lean fish

According to Polish standard PN-A-86770: 1999 *Fish and fishery products – Terminology* there are 4 definitions:

lean fish – less than 2% fat content in fish tissue

semi-fat fish – 2% - 7% fat content in fish tissue

fat fish – 7% - 15 % fat content in fish tissue

very fat fish – more 15% fat content in fish tissue.

SECTION 10 – PROCESSING OF QUICK-FROZEN COATED FISH PRODUCTS

Figure 10.1

Step 4 “Unpacking and unwrapping” needs completion: “→ Packaging materials”.

10.3.1.1. Fish

and 10.3.1.2. Other Ingredients

Technical Guidance:

During raw material reception usually sensory evaluation is used – it should be specified what kind of examination should be done with respect to possible or potential hazards and defects.

10.3.2.1. Fish (Frozen Storage)

Potential Hazards:

Add the following words: “ammonia contamination by cooling installation system”.

Technical Guidance:

1st dot: according to national law permitted fluctuations should be “not higher than to -15°C”.

5th dot: exchange of word order: “...cannot be eliminated or reduced to an acceptable level”.

10.3.2.2. Other Ingredients and Packaging Materials

According to flow diagram this section concerns only “Packaging materials”, other ingredients are covered by section 10.3.1.2.

10.3.3. Unwrapping, Unpacking

Potential Hazards:

“Contamination by personnel” is not a hazard, it is a cause/reason/source of hazard.

10.3.4.1. Sawing and

10.3.4.2. Forming

Potential Hazards:

It seems from technical guidance that a potential hazard of microbiological contamination is taken into account at this stage of the process – add to hazards.

Technical Guidance:

Add dot concerning metal as a hazard: “metal contamination should be controlled, preferably at the end of the process by using metal detector”.

Add to the end of the 1st dot: “adequate frequency of cleaning should be established”.

10.3.5. Separation of Pieces

Potential Hazards:

It seems that “foreign material” is rather unlikely hazard at this stage of the process.

Technical Guidance:

3rd dot: Before word “monitored” add “visually” as it is probably one possible method of monitoring at this stage of the process and delete words “foreign material (as a subsequence of above) and other hazards (as they are not specified - unlikely).

10.3.6. Coating

The name of this stage of the process is called “Battering and Breading “ in the flow diagram and “Coating/Wet coating/Dry coating” in the text description.

10.3.6.1. Wet Coating

Potential Hazards:

Add to potential hazards: “microorganisms growth caused by too long time and/or to high temperature of recirculated butter”.

10.3.6.2. Dry Coating

Potential Hazards:

“Mould” is not a hazard likely at this stage of the process – see section 10.3.1.2.

10.3.7. Pre-Frying

Potential Hazards:

“Over-oxidised oil” is also a chemical hazard.

10.3.8. Re-freezing

Potential Hazards:

“Foreign material” is rather unlikely hazard at this stage of the process.

10.3.9. Packing and Labelling

Potential Hazards:

“Contamination by personnel” can be a cause of hazard, e.g. microbiological contamination.

10.3.9.A.

After this stage “packaging and labelling” there is usually a metal detection stage or control measure with respect to parts of metal from sawing machines which is likely to occur in practice (see also p. 10.3.4.1).

10.3.10. Storage of End Products

Technical Guidance:

1st dot: after word “temperature” add “not higher than -18°C”

4th dot: at the end add “not higher than -15°C”.

10.3.11. Transport of End Product

Technical Guidance:

1st dot: use max fluctuations only “+3°C”, as “-3°C” is not a problem in this context.

SECTION 11 – PROCESSING OF SALTED FISH

Figure 11.1

Delete stages “Dry salting and Restacking” between 13 and 14 as these stages are doubled in the flow diagram.

11.2.1. Splitting, Washing and Rinsing (Processing Steps 7)

Potential Hazards (also other sections):

Parasites - this hazard occurs at 1st step of the process but it can be controlled at this stage of the process and also during other subsequent steps within the process. It should be pointed out in other sections that technical guidance concerns controls of hazard introduced to the process at 1st step. Otherwise current specifications suggest that this hazard can occur (can to be introduced to the process) at each stage of the process.

Similar situation is with microbiological pathogens specified at stages within 11.4., where it concerns “microbiological pathogens growth”, not contamination.

When histamine is mentioned it concerns histamine formation.

All sections: At all stages of the process (except sorting) chemical and physical contamination is mentioned within **potential hazards** as categories of hazards without specifications. At the same time **technical guidance** don't give information how to avoid, prevent, eliminate or reduce these kinds of hazards, thus it seems that maybe they are unlikely and it is not necessary to mention them. Similar situation is within potential defects.

11.4.1. Brining (Processing Steps 13)

Potential Hazards:

Delete “incorrect composition of brine” as it is a cause of hazard, not a hazard itself.