



Agenda Item 6

CX/FFP 14/33/8 Add.1

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

Thirty-third Session

Bergen, Norway

17 – 21 February 2014

**PROPOSED DRAFT CODE OF PRACTICE ON THE PROCESSING OF SCALLOP MEAT
(At Step 3 of the Procedure)**

Comments submitted by Canada, Japan, Philippines and United States of America

CANADA

GENERAL COMMENTS

Canada opposes to the processing of fresh Scallop Meat or Roe-on Scallops with added water due to the lack of technological justification for intentionally adding water. Specific comments regarding this are offered below (sections X.2.2.3, X.3.2.7 and X.3.2.13).

SPECIFIC COMMENTS

X.2.1.1, 3rd sentence

Remove brackets: {During periods of high toxicity, toxins can accumulate at a hazardous level in roe-on scallops and preventive measures should be in place in accordance with the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008).}

Reason: This is in line with the Standard and should be included in the Code as guidance on control measures to address the risk of biotoxins in scallop roe.

X.2.2.3 Added water Undeclared or Exceeding Level Declared, 2nd paragraph,

Revise: In the case of scallop products processed with a solution of water and phosphate ~~or added water alone~~, proper processing controls should be in place to ensure that the amount of water added is consistent with the water declaration on the label (to avoid unfair trade practice or consumer fraud).

Reason: To remove reference to the production of fresh scallop with added water as an ingredient (as per general comments noted above).

Flowchart

Revise title of Step 13: Addition of solution of water and phosphates ~~or of water as an ingredient~~

Reason: As per general comments noted above.

X.3.1.1 Scallop Landing/Deck Dump (Processing Step 1), 3rd bullet

Remove brackets : {Preventive measures such as on-board biotoxin screening methods should be used when the intent is to produce scallop meat for which marine biotoxins cannot be excluded as a hazard.}

Reason: This is needed to control the risk of biotoxins in the case where biotoxins have not been excluded as a hazard.

X.3.1.3 Shucking (Processing Step 3), 2nd bullet

Remove brackets: {Dead scallops observed during shucking should be discarded because once a scallop dies biotoxins, if present in the viscera and roe, can migrate into the meat. In addition, the quality of the meat and roe in dead whole scallops may be unacceptable because the time of death is unknown.}

Reason: Removal of dead bivalves from processing is in line with sections 7 – Aquaculture production and Live and raw bivalve molluscs of the Code of Practice for Fish and Fishery Products.

X.3.1.4 Washing (Processing Step 4), last bullet

Revise: After washing, the scallops should be **pre-chilled** ~~immediately processed or refrigerated or iced and kept at the adequate temperature (temperature of melting ice).~~

Reason: There is no further processing done on the harvesting vessel beyond these steps.

X.3.1.5 Pre-chilling (Processing Step 5), 2nd bullet

Revise : Pre-chilling should include the immersion of the scallops in refrigerated or iced sea water **or salt water prepared from potable water and 3% food grade salt.**

Reason: To allow for the use of salted water other than sea water.

X.3.2.1 Scallop Reception (Processing Step 8),

2nd bullet, Remove brackets: {Whole scallops should be examined to assure they are all still alive, and any dead scallops should be discarded because once a scallop dies biotoxins, if present in the viscera and roe, can migrate into the meat. In addition, the quality of the meat and roe in dead whole scallops may be unacceptable because the time of death is unknown. (See section X.3.1.3).}

Reason: Removal of dead bivalves from processing is in line with sections 7 – Aquaculture production and Live and raw bivalve molluscs of the Code of Practice for Fish and Fishery Products.

5th bullet, Remove brackets: {For the marketing of roe-on scallops, a processor should have a process in place to ensure that the toxicity content meets the regulatory requirements of the official agency having jurisdiction over the harvest area. This could be accomplished by adhering to a toxin monitoring programs or end product testing.}

Reason: This is needed to control the risk of biotoxins that could be present in roe.

Delete section: **X.3.2.7 Addition of Water as an ingredient (Processing Step 13)**

Potential Hazards: Unlikely

Potential Defects: Inaccurate measurement of water and scallop quantity

Technical Guidance:

~~• When water is added as an ingredient to fresh scallop products, the amount of water and scallops to which the water is added should be controlled and accurately measured for labelling purposes.~~

Reason: As per general comments noted above.

X.3.2.13 Labelling (Processing Steps 19), 2nd bullet

Revise: When **a** solutions of water and phosphates **are is** used in the process ~~or water is added as an ingredient,~~ a system should be in place to ensure that ~~they are~~ **it is** properly and accurately declared on the label. (Also refer to subsection X.3.2.6, Addition of a Solution of Water and Phosphate ~~or subsection X.3.2.7. Addition of Water as an ingredient~~

Reason: As per general comments noted above.

JAPAN

Specific comments

Proposals for amendments and comments of Japan are described in *Italics and bold*.

Appendix II

TABLE OF CONTENTS

SECTION X Processing of Raw, Fresh and Quick Frozen Scallop Products

X. 3.2 Processing Establishment Facility Operations

Rationale: It should be consist with terminology used in General Principles of Food Hygiene (CAC/RCP 1-1969)

SECTION X PROCESSING OF FRESH AND QUICK FROZEN RAW SCALLOP PRODUCTS

Para 3

The commercial harvest practices of scallops can be quite variable. For instance, shucking can occur on board scallop vessels equipped for such operations or in on-shore processing establishment facilities. For long fishing voyages, scallops are shucked and washed on deck in totes with fresh saltwater or a fresh saltwater and ice solution, then drained, bagged and stored below deck with freshwater ice. The exposure time to water during washing and melting ice during storage can affect both the product quality and composition. For the product to meet international and/or regulatory standards aimed to prevent consumer fraud and unfair trade-practices in food trade (Rationale: editorial), scallopers and processors should have controls in place that prevent addition of freshwater to the product to the extent attainable and practical, using proper equipment and handling practices.

Para 4

This Code covers the preparation and handling of fresh Scallop Meat and Roe-on Scallops on board long haul harvesting vessels. It also covers the preparation and handling at the processing establishment facility of fresh Scallop Meat or Roe-on Scallops with or without added water and quick frozen Scallop Meat or Roe-on Scallops with or without added solution of water and phosphate. This code also addresses the control of unintentional and intentional addition of freshwater during processing and the addition of phosphate solutions to enhance water retention. The example of the flow diagram (Figure X. 1) will illustrate some of the common steps involved in the processing of scallop products.

X. 1 GENERAL ADDITION TO PRE-REQUISITE PROGRAMME

Section 3 - Pre-requisite programme gives the minimum requirements for good hygienic practices for a harvesting vessel and processing establishment facility prior to the application of hazard and defect analysis. In addition to the guidelines described in Section 3, the following should also be considered:

X. 2.2.3 Added water Undeclared or Exceeding Level Declared

It has been shown that freshwater in contact with scallop adductor muscle meat will increase its moisture content over time. Scallop adductor muscle can uptake and retain added water through several physical and chemical mechanisms exhibiting various degrees of water binding strength. The scallop adductor muscle meat should not be in contact with fresh water, including ~~melting~~-fresh water from melting ice (Rationale: to improve readability), for an amount of time greater than that required for preparation and processing otherwise the product will absorb excess water, which may be construed as an unfair trade practice or consumer fraud. Proper processing controls should be in place by the processor in order to avoid or limit any water uptake to that which is technologically avoidable.

X. 3.1 Operations

Scallop fishing may be either short haul or long haul and is differentiated by the time at sea and the distance of the fishing ground from the land based processing facility establishment. "Short haul voyages" are typically 1 - 2 days in the case of inshore wild caught fisheries and daily as in the case of aquaculture-controlled harvest. "Long haul offshore voyages" are typically up to 15 days, thus the scallops are shucked, washed, pre-chilled, drained and bagged on deck, then stored in iced or refrigerated storage below deck until the scallop vessel has landed on shore. This section is designed to augment the handling and processing of

fresh Scallop Meat and Roe-on Scallops on board long haul harvesting vessels. After landing, additional processing steps are generally done in the processing ~~facilities~~ establishments.

X. 3.1.5 Pre-chilling (Processing Step 5)

Technical Guidance – 4th bullet point:

- Water used for pre-chilling should be periodically replaced to minimise the bacterial load and ensure functional water temperature e. g. , $\leq 0\text{ }^{\circ}\text{C}$ ~~or $\leq 32\text{ }^{\circ}\text{F}$~~ .

Rationale: Codex uses Celsius temperature scale

X. 3.2 Processing ~~Establishment Facility~~ Operations

This section is designed to augment section 7.6 with additional information on the processing, at the processing establishment facility, of fresh Scallop Meat or Roe-on Scallops with or without added water and frozen Scallop Meat or Roe-on Scallops with or without added solution of water and phosphate.

X. 3.2.6 Addition of a Solution of Water and Phosphate (Processing Steps 13)

Technical Guidance – 1st bullet point:

- The quantity of phosphate solution added to scallops ~~should~~ **must** be limited to the lowest possible level necessary to accomplish the technological purpose (e. g. , moisture retention, preservative).

Rationale: In the Code of Practice, “must” should not be used.

X. 3.2.13 Labelling (Processing Steps 19)

Technical Guidance – 1st bullet point:

- Information declared on the label should comply with the provisions of the *Standard for Raw, Fresh and Quick Frozen Raw Scallop Products (under development)*. Labeling ~~should~~ **must** accurately describe the nature of the product so that consumers are not misled and can make an informed choice.

PHILIPPINES

General Comments

The Philippines acknowledges the work undertaken by the EWG led by Canada on the draft Code of Practice and presents the following suggestions for consideration:

Suggest:

X.2.2.2 Objectionable and Foreign Matter

Sand, silt, detritus and foreign matter may accompany harvested scallops from the natural environment to shipboard. If not properly rinsed away, sand and silt may become embedded between the fibers of the adductor muscle, commonly associated with muscle contraction at time of death. Excessive amounts of foreign matter could result in undesirable physical attributes in the final product that would be objectionable to consumers; ~~such as the grinding of teeth on sand and silt while chewing.~~

Justification:

Editorial for conciseness.

~~X.2.2.3 Added Water Undeclared or Exceeding Level Declared~~

Suggest:

X. 2.2.3 Excessive/Undeclared Added Water

Justification:

Editorial for clarity.

Suggest:

It has been shown that freshwater in contact with scallop adductor muscle meat will increase its moisture content over time. Scallop adductor muscle can uptake and retain added water through several physical and

chemical mechanisms exhibiting various degrees of water binding strength. ~~The scallop adductor muscle meat should not be in contact with fresh water, including melting fresh water ice, for an amount of time greater than that required for preparation and processing otherwise the product will absorb excess water, which may be construed as an unfair trade practice or consumer fraud. Proper processing controls should be in place by the processor in order to avoid or limit any water uptake to that which is technologically avoidable.~~

~~In the case of scallop products processed with a solution of water and phosphate or added water alone, proper processing controls should be in place to ensure that the amount of water added is consistent with the water declaration on the label (to avoid unfair trade practice or consumer fraud).~~

Proper processing controls should be in place for scallop products processed with a solution of water and phosphate or added water alone in order to avoid or limit any water uptake to that which is technologically avoidable and to ensure that the amount of water added is consistent with the declaration on the label (to avoid unfair trade practice or consumer fraud).

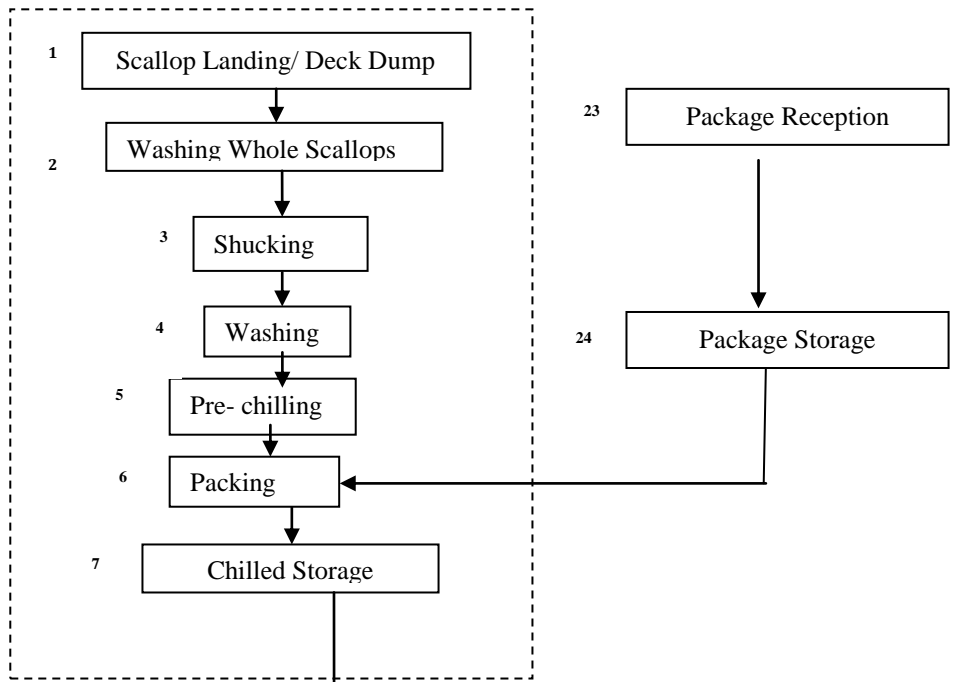
Justification:

For clarity and brevity.

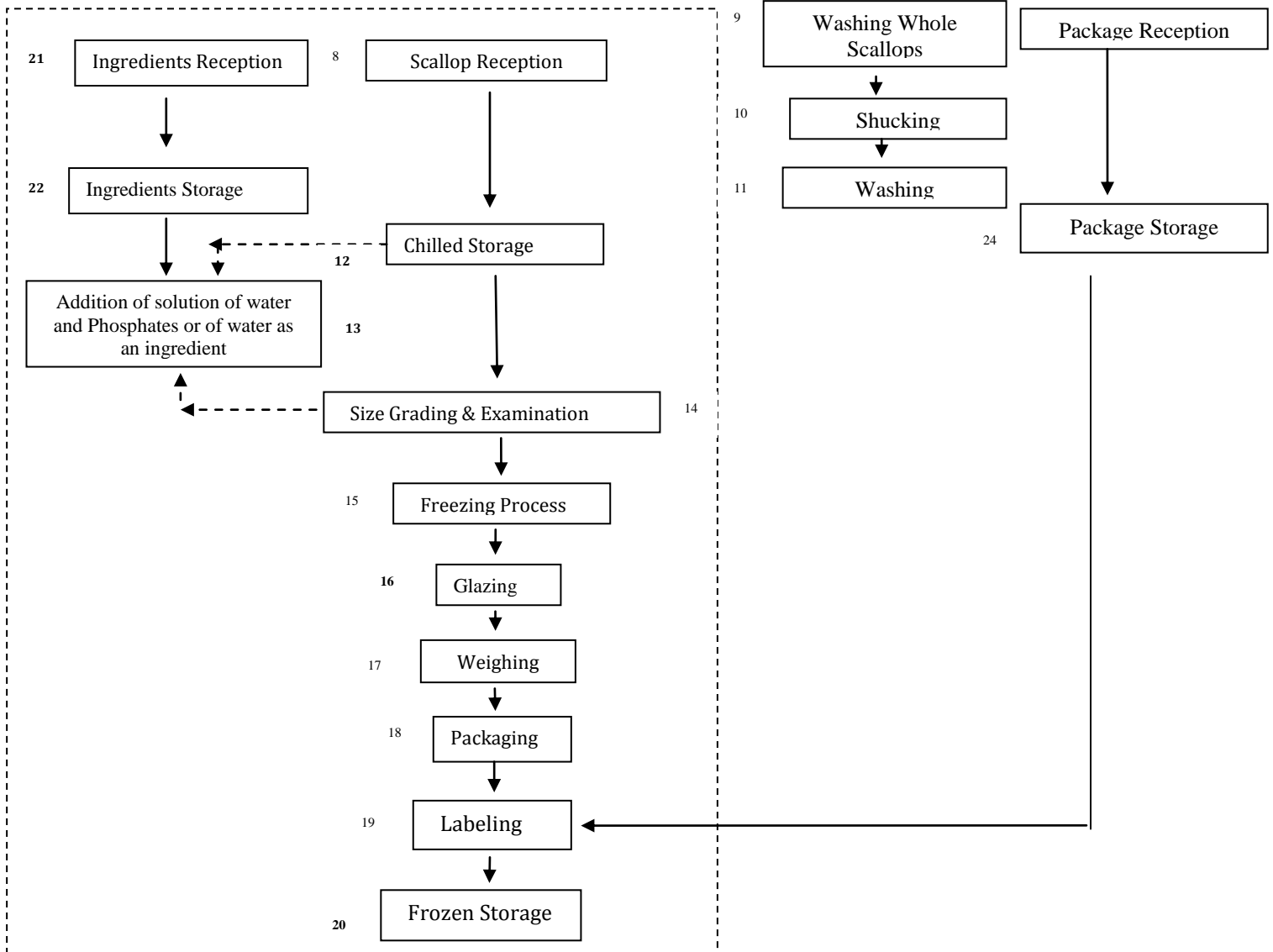
[Figure X.1]

Suggest:

Long Haul Harvesting Vessel Operations



Processing Facility Operations



Suggest:**X.3.1.1 Scallop Landing/Deck Dump (Processing Step 1)***Technical Guidance:*

- Live scallops should be collected from **sources that are approved by a shellfish authority to ensure that marine biotoxins are properly controlled.**
- **Live scallops must be handled and processed in accordance with hygienic standards and proper process controls to minimize food safety hazards.** and placed in clean storage containers without undue delay and with care to avoid contamination.
- [~~Preventive measures such as on-board biotoxin screening methods should be used when the intent is to produce scallop meat for which marine biotoxins cannot be excluded as a hazard.~~]

Justification:

The additional texts conform with Sec. 10.4.1.1 of CAC/RCP 52-2003. This preventive measure need not necessitate scallop catchers to install and operate costly laboratory/diagnostic equipment for on-board biotoxin screening that also requires technical expertise for the laboratory testing and thus may not be practicable.

Suggest:**X.3.1.2 Washing Whole Scallops (Processing Step 2)**

Editorial insert: **Technical Guidance:** before the bullets

Suggest:*Technical Guidance:*

- The ~~outsides~~ **surface** of the shells should be washed free of mud, detritus and sand.

Justification:

Editorial for clarity

Suggest:**X.3.1.3 Shucking (Processing Step 3)**

- **Only** ~~live~~ scallops should be shucked as soon as possible.
- Dead scallops ~~observed during shucking~~ should be discarded **because the time of death is unknown which may affect the quality of the meat and roe.** ~~because once a scallop dies biotoxins, if present in the viscera and roe, can migrate into the meat. In addition, may be unacceptable in dead whole scallops~~
- For Scallop Meat, care should be taken to ensure that the viscera and roe are completely removed.
- For Roe-on Scallops, care should be taken to ensure that the viscera are removed. ~~If biotoxins are present in the viscera,~~ Control measures should be in place to ensure the roe-on scallops are safe for human consumption (i.e. further sampling of the roe).
- ~~Care should be taken to insure that shucking tables, containers, and knives are properly cleaned and sanitized.~~
- The shucked scallops should ~~proceed immediately to the next steps to minimize their exposure to ambient temperatures above 4 °C~~ **be kept at 4 °C or lower.**

Justifications:

Editorials for clarity. Bullet 3 was rewritten to include ideas in bullets 4 and 5 to avoid redundancy. The concern on biotoxins is already taken care of by the technical guidance in X.3.1.1. Bullet 5 is a GMP, and thus should be omitted.

Suggest:**X.3.1.4 Washing (Processing Step 4)**

Potential Defects: Objectionable matter, foreign matter, Uptake of water not declared on label

Justification:

Editorial for clarity.

Suggest:

Technical Guidance:

- Clean sea water or potable salt water should be used to wash **shucked** scallops ~~after shucking~~ to remove any objectionable matter such as remains of viscera, shell fragments, sand, and foreign matter such as debris.
- After washing, the scallops should be immediately processed or refrigerated or iced and kept at ~~the adequate temperature (temperature of melting ice)~~ **4 °C or lower**.

Justification:

Editorial for clarity.

Suggest:**X.3.1.5 Pre-chilling (Processing Step 5)**

Potential Defects: ~~Undeclared added water~~ Excessive water uptake (applies to pre-chilling using freshwater), decomposition

Technical Guidance:

- Pre-chilling of the scallops should be employed to reduce the core temperature **at 4 °C or lower** prior to ~~being placed in~~ chilled storage. This step can minimize the amount of ice melt and consequently freshwater contact with the scallops during chilled storage. Rapid chilling will also minimize subsequent drip loss.

Justification:

Editorial for clarity.

Suggest:**X.3.1.7 Chilled Storage (Processing Step 7)**

Potential Defects: Decomposition, ~~Moisture (added water)~~ Water uptake, physical damage

Justification:

Editorial for clarity.

Suggest:**X.3.2.1 Scallop Reception (Processing Step 8)**

Potential Defects: Decomposition, ~~undeclared added water~~ Excessive water uptake, dead or injured scallops, parasites, objectionable matter, foreign matter

Justification:

Editorial for clarity.

Suggest:

Technical Guidance:

- **Refer to Sec X 3.1.3 for reception of live scallops**

- ~~Live scallops should be unloaded without undue delay and with care and adequately chilled to avoid contamination.~~
- ~~[Whole scallops should be examined to assure they are all still alive, and any dead scallops should be discarded because once a scallop dies biotoxins, if present in the viscera and roe, can migrate into the meat.~~

In addition, the quality of the meat and roe in dead whole scallops may be unacceptable because the time of death is unknown. (See section X.3.1.3.)

~~• Rough handling of live scallops should be avoided to minimize stress which could lead to the death of scallops prior to processing.~~

Justification:

Editorial for clarity.

• ~~[For the marketing of roe on scallops, a p~~**Processors** ~~should have a process in place to ensure that the toxicity content of incoming raw materials meets the regulatory requirements of the official agency having jurisdiction over the harvest area. This could be accomplished by adhering to a toxin monitoring program or end product testing.]~~

Justification:

Editorial for clarity.

X.3.2.6 Addition of a Solution of Water and Phosphate (Processing Steps 13)

Potential Defects: Excessive water uptake, off-flavours, textures and decomposition, incorrect application and formulation of phosphate solution

Justification:

Editorial for clarity.

X.3.2.8 Size Grading and Examination (Processing Step 14)

• ~~Scallops with an objectionable level of parasites should be culled from the lot.~~

Justification:

For consistency.

X.3.2.11 Weighing (Processing Step 17)

• Weighing Scales should be properly adjusted to account for the estimated glaze percentage and re-adjusted when glaze percentage change.

Justification:

For clarity.

Suggest:

X.3.2.14 Frozen Storage (Processing Step 20)

Insert **Technical Guidance** above the bullet points.

Justification:

Editorial

USA

General Comments

Biotoxins: We support the approach taken in Draft Code of Practice and Draft Standard where the risk assessment is used to determine if biotoxins are a significant hazard in scallop meat. The risk assessment should take into account the scallop species, and the processing method (i.e., shucked at sea or at shore-based facilities).

Paralytic shellfish poison (PSP) has never been detected in sea scallop meat shucked at sea (the largest scallop fishery). In addition, we are not aware of any data showing hazardous levels of domoic acid in the meat of any scallop species when the meat is shucked away from the roe in freshly harvested live scallops. PSP levels in the roe of freshly shucked live sea scallops can exceed the Codex limit (Degrasse et al 2013)¹.

¹ Degrasse S., et al. Paralytic shellfish toxins in the sea scallop *Placopecten magellanicus* on Georges Bank: Implications for an offshore roe-on and whole scallop fishery. Deep-SeaRes.II (2013)

However, it is well established from many years of data that even when sea scallop viscera and roe are highly toxic, the meat remains safe to consume without testing.

Fresh scallops with added water: We question including scallops with added water in the draft Standard and in this draft Code of Practice. This product cannot be exported to the U.S. or other countries where scallops with added water are considered adulterated. Trade in this product appears localized and limited. More importantly, the difficulty in labeling added water in fresh scallops has not been considered. Without freezing or using phosphates for water retention, substantial water will escape from chilled product during shipping and storage. Alternatively, the water content will increase if the product is packed on ice and the melt-water is not allowed to drain away. Under either condition, the labelled percentage added water will be inaccurate shortly after packaging, and will mislead consumers. Taking into account the labeling issue and limited legal trade, we recommend removing this product from consideration for the draft Code of Practice and Standard.

Specific Comments

SECTION X PROCESSING OF FRESH AND QUICK FROZEN RAW SCALLOP PRODUCTS, last paragraph, 2nd and 3rd sentences – edit as follows:

It also covers the preparation and handling at the processing facility of ~~fresh Scallop Meat or Roe on Scallops with or without added water and~~ quick frozen Scallop Meat or Roe-on Scallops with ~~or without~~ added solution of water and phosphate **[and fresh Scallop Meat or Roe-on Scallops with or without added water]**. This code also addresses the control of unintentional [and intentional] addition of freshwater during processing and the addition of phosphate solutions to enhance water retention.

Reason: The added solution and added water products are listed in addition to “fresh scallop meat and roe-on scallops” mentioned in the previous sentence, therefore using the words “or without added...” is incorrect and could cause confusion.

The commonly traded frozen product with phosphate solution should be listed before the less traded fresh product with added water.

If it is agreed to remove fresh scallops with added water (see general comment), the phrases in [brackets] should be removed.

X.2.1 Hazards, 3rd sentence – revise as follows:

Where marketing of roe-on scallops is concerned, this product should **also** meet the contaminants and relevant hygienic provisions outlined in the Standard for Live and Raw Bivalve Molluscs (CODEX STAN 292-2008).

Reason: Adding “also” will prevent confusion about which standards apply because only the Draft Scallop Standard is referenced in the previous sentence.

X.2.2.1 Parasites, 1st sentence – edit as follows:

Parasites are known to affect the respiratory system, organs and the connective tissue of organs (i.e., ~~Perkinsus~~ **Perkinsus** spp.) in bivalve molluscs.

Reason: Editorial

X.2.2.3 Added water Undeclared or Exceeding Level Declared, 1st paragraph, last sentence – edit as follows:

Proper processing controls should be in place by the processor in order to avoid or limit any water uptake to that which is technologically avoidable **unavoidable**.

Reason: Editorial – to use previous wording.

X.3.1 Long Haul Harvesting Vessel Operations, second to last sentence - modify as follows:

This section is designed to augment **Section 7.3 with additional information on** the handling and processing of fresh Scallop Meat and Roe-on Scallops on board long haul harvesting vessels.

Reason: To cite the section of the COP that is augmented.

X.3.1.1 Scallop Landing/Deck Dump – remove bracketed 3rd bullet:

~~{Preventive measures such as on board biotoxin screening methods should be used when the intent is to produce scallop meat for which marine biotoxins cannot be excluded as a hazard.}~~

Reason: The U.S. proposed this bullet, but it has been misunderstood and therefore could be read in a way which would provide erroneous guidance, so it should be completely deleted. The original bullet should be retained as follows:

When the intent is to produce roe-on scallops, on-board biotoxin screening methods may be used to prevent unnecessary harvest of scallops with contaminated roe. Regulatory authorities should monitor roe-on scallops for the presence of biotoxins.

U.S. harvesters of roe-on scallops use on-board screening strictly as a cost saving measure. On-board toxin screening is not a “preventive measure” and can never replace or augment shore-based testing by the competent authority. This cost saving technique is not applicable to scallop meat where the hazard is eliminated, unless the intent is to allow the scallops to die before shucking (see general comment).

X.3.1.3 Shucking, 2nd bullet, remove brackets and revise as follows:

~~{Dead scallops (**shell gapping and does not close**) observed during shucking should be discarded because once a scallop dies biotoxins, if present in the viscera and roe, can migrate into the meat. In addition, the quality of the meat and roe in dead whole scallops may be unacceptable because the time of death is unknown.}~~

Reason: It is generally recognized good hygienic practice to discard dead (gapping) molluscs because the meat deteriorates rapidly after death. The concept of toxin migration in dead scallops is a different issue and is covered in the 3rd bullet.

X.3.2.1 Scallop Reception, 2nd bullet – remove brackets, and edit as follows:

~~{Whole scallops should be examined to assure they are all still alive, and any dead scallops (**shell gapping and does not close**) should be discarded because once a scallop dies biotoxins, if present in the viscera and roe, can migrate into the meat. In addition, the quality of the meat and roe in dead whole scallops may be unacceptable because the time of death is unknown. (See section X.3.1.3).}~~

Reason: It is generally recognized good hygienic practice to discard dead (gapping) molluscs because the meat deteriorates rapidly after death. The concept of toxin migration in dead scallops is covered previously and is also addressed in our next comment for the 5th bullet.

X.3.2.1 Scallop Reception, 5th bullet – remove brackets and revise as follows:

~~{For the marketing of roe-on scallops, **or scallop meat shucked from dead scallops**, a processor should have a process in place to ensure that the toxicity content meets the regulatory requirements of the official agency having jurisdiction over the harvest area. This could be accomplished by adhering to a toxin monitoring programs or end product testing.}~~

Reason: To call attention to the potential biotoxins hazard that exists when attaining scallop meat from dead scallops, which does not exist when meat is attained from live scallops.

X.3.2.7 Addition of Water as an ingredient – we recommend removing this section.

Reason: See general comment. It is not possible to label accurately the percentage added water in fresh product. Adding water alone does not have a recognized legitimate technical function. Water added to replace lost natural juices or to add additional water weight is not retained without a water retention agent, and is immediately lost if cooked.