



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

Thirty-Second Session

Bali, Indonesia

1 – 5 October 2012

Proposed Draft Code of Practice on the Processing of Scallop Meat

COMMENTS AT STEP 3

(Ghana, USA)

GHANA

Comment: SECTION X Processing of Fresh and Quick Frozen Raw Scallop Meat [with or without roe]

We agree with the proposed text and recommend that the square bracket is removed.

Comment: [X.3.2.4 Application of Additives to Scallop Meat]

We agree with the proposed text and recommend that the food additives used should comply with the Codex General Standard on Food Additives (GSFA).

Comment: SECTION 2 DEFINITION

We propose that, “sac” be deleted from the definition of roe on scallop. The sentence should now read:

Roe on scallop is the scallop adductor muscle meat and the roe ~~sac~~ remaining after the viscera has been completely detached from the scallop shell.

Rationale: The roe is of interest and not the empty sac.

Comment: Section X Paragraph 4, 2nd Second Sentence

We suggest that the use of polyphosphate treatment be avoided during processing.

“This section will also address the use of freshwater ~~and polyphosphate treatment~~ during processing.”

Rationale: Polyphosphates bind added water to the product and this would result in potential consumer fraud, misleading the consumer and an unfair trade practice.

Comment: X.2.2 Defects

We recommend that the title of the reference standard be stated correctly as

“...the Proposed Draft Codex Standard for **Fresh** Quick Frozen Raw Scallop Adductor Muscle Meat (*under development*).”

Comment: X.2.2.3 “Added water”

We propose that the proposed text in square brackets be deleted.

~~[The use of polyphosphates in scallops during processing will bind added water and if used improperly, can potentially lead to consumer fraud and unfair trade practices.]~~ Proper processing controls should be in place by the processor to ensure that water is not added to the extent that it is technologically avoidable ~~and that polyphosphate~~ and water use meets international and regulatory standards. (i.e. GMP's must be properly followed by the processor).

Rationale: The use of polyphosphates is discouraged. However concerning consumer fraud and unfair trade practices, the clause provides sufficient information.

Comment: X.3.2.1 Scallop Reception (Processing Step 7)

We recommend the deletion of "For example" and the insertion of "This" at the beginning of the next sentence as follows,

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. ~~For example,~~ **This** could be accomplished by, but not limited to, adherence to monitoring programs or end product testing

Comment: X.3.2.9 Labelling (Processing Steps 15)

We propose that the text in the square bracket be deleted as

~~[Where polyphosphate was used in the process, a system should be in place to ensure that this additive is properly declared on the label.]~~

Rationale: This text is no longer relevant as the use of polyphosphate in processing scallops is unacceptable and has been indicated in earlier sections of the document

UNITED STATES OF AMERICA

General comment: Consideration of the Code of Practice could wait until after the *Draft Standard for Quick Frozen Scallop Adductor Muscle Meat* is finalized because the provisions for added water and roe-on scallops are unfinished and will need to carry over into the Code of Practice.

The comments below assume that the Code of Practice will be expanded to include roe-on scallops and products containing added solutions of water and phosphates.

Suggested new text is shown in bold.

Title: Modify the Title as follows:

PROPOSED DRAFT CODE OF PRACTICE FOR THE PROCESSING OF FRESH AND QUICK FROZEN RAW SCALLOP MEAT ~~[WITH OR WITHOUT ROE],~~ **ROE-ON SCALLOPS, AND SCALLOP PRODUCTS WITH ADDED SOLUTIONS OF WATER AND PHOSPHATES.**

Reason:

- These are different products that need to be clearly listed and differentiated.
- "Roe-on scallops" is the term defined in Section 2, Definitions, and the common term in use.
- "Scallop meat (or roe-on scallops) with added solution of water and phosphates" is the name we propose for these products for the Scallop Standard.

SECTION 2 - DEFINITIONS

[Roe-on scallop] - Remove brackets and modify as follows:

Roe on Scallop is the scallop adductor muscle meat and the **attached** roe ~~sac~~ remaining after the **shell and all other** viscera ~~has have~~ been completely ~~detached~~ **from the scallop shell removed.**

Reason:

- The roe sac should remain attached to the meat.
- The ovary and testes are organs and, by definition, are viscera.
- The viscera are removed from the final product, not just from the shell.

- We agree with Kenya that the term “sac” should be removed.

Scallop Meat – Revise as follows:

Scallop Meat is the **scallop** adductor muscle meat remaining after the **shell and all viscera (including and roe)** have been completely ~~detached from the scallop shell~~ **removed**.

Reason: See second and third bullets under the “roe-on scallops” definition comment above.

Shucking – Revise as follows:

Shucking is the process of removing the adductor muscle meat ~~and completely detaching the viscera or viscera and roe~~ from the shell of live scallops **and completely detaching the viscera (including roe) in the case of scallop meat, or completely detaching the viscera except for the roe in the case of roe-on scallops**.

Reason: See second and third bullets under the “roe-on scallops” definition comment above.

SECTION X

Heading - Revise as follows, and make similar changes throughout the document where the term “scallop meat(s)” is used and where references to roe-on scallops and water-added products should also be included (perhaps use: “products covered in this section”).

SECTION X PROCESSING OF FRESH AND QUICK FROZEN RAW SCALLOP MEAT ~~(WITH OR WITHOUT ROE)~~, ROE-ON SCALLOPS, AND SCALLOP PRODUCTS WITH ADDED SOLUTIONS OF WATER AND PHOSPHATES.

Reason: See comment for ‘Title’ above.

First paragraph, last sentence – Revise as follows:

However, within the scope of this Code of Practice it is not possible to give details of critical limits, monitoring, record keeping and verification for each of the steps since these are specific to particular hazards and defects **and to the control measures used**.

Reason: The hazards and defects are common; it is the variety of control measures that prevents the inclusion of detailed guidance.

Third paragraph, second sentence – Revise as follows:

For instance, shucking **of live scallops** can occur either on board fishing vessels equipped for such operations or in processing facilities.

Reason: It is important to reiterate that scallops must be alive when shucked because of the hazard of biotoxin migration from the viscera (including roe) into the adductor muscle in dead scallops. This is particularly relevant for land based processing of whole scallops, which may have undergone mishandling on-board the harvest vessel. (See definition for ‘Shucking’)

Third paragraph, last sentence – Revise as follows:

For the product to meet international and/or regulatory standards aimed to prevent consumer fraud and unfair trade practices, scallop fishers and processors should have ~~proper~~ controls in place ~~with particular attention paid to limit excessive~~ **that prevent** addition of freshwater to the product **to the extent attainable and practical, using proper equipment and handling practices**.

Reason: To clarify the expectation. The term *limit excessive addition* could be misinterpreted.

Last paragraph, second sentence – Change “polyphosphate” to “**phosphate**” (throughout the document), remove brackets, and revise as follows:

This section will also address the **proper** use of freshwater **during processing**, and ~~polyphosphate~~ **the addition of phosphate solutions to replenish drip-loss and enhance water holding capacity** ~~treatment during processing~~.

Reason:

- To differentiate the unintentional addition of fresh water, from the intentional addition of phosphate solutions.
- Other types of phosphates, other than polyphosphates, are permitted. The term “Phosphates” is used in the *General Standard for Food Additives* for phosphates. This change is recommended throughout the document.

X.1 GENERAL ADDITION TO PRE-REQUISITE PROGRAMME**Second bullet** – Revise as follows:

- ~~If~~ Scallops ~~are~~ shucked at sea aboard the harvesting vessel ~~they~~ should be thoroughly rinsed with clean sea water to minimize sand, shell, detritus and foreign material in the finished product.

Reason: The term “if” is unnecessary. Scallops are commonly shucked at sea. Shucking at sea is required for some scallop fisheries as a biotoxin control.

Add new bullets – as follows:

- **Seawater used for onboard washing and pre-chilling must be from clean, open sea areas and not be contaminated by the water pumping system or improper location of the intake.**
- **Linen bags used to contain shucked scallop meat on ice aboard harvesting vessels should be clean and in good repair.**

Reason: These address some of the hygienic problems aboard a harvesting vessel.

X.2 IDENTIFICATION OF HAZARDS AND DEFECTS**X.2.1 Hazards, first paragraph, last sentence** – Remove brackets.

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

Reason:

- This provision reflects the previous CCFPP decision that the hazard characteristics of roe-on scallops align more closely with whole bivalve molluscs than with scallop meat.
- This provision is needed to align the provisions for raw and frozen roe-on scallops, should they end up in different standards.

X.2.1.1 Marine Biotoxins – Revise paragraph as follows:

Marine biotoxins such as DSP, PSP or ASP are generally not a food safety concern in **properly processed commercial** scallop adductor muscle meat alone and therefore do not pose a human health risk. Scientific data ~~regarding the contamination of scallop meat with biotoxins are limited.~~ ~~Never the less, some scientific and monitoring data~~ have shown **PSP, ASP and DSP** contamination in scallops, ~~although mainly concentrated in the viscera and roe.~~ **In addition, biotoxins may accumulate in migrate into the adductor muscle if viscera and roe are not removed from the scallop while alive, or if whole or roe-on scallops are frozen.** ~~While scientific information regarding biotoxin contamination in scallop meat is limited,~~ **Nevertheless, scientific information is still limited for some scallop species and toxins, and** the hazard analysis will need to consider marine biotoxins as a potential hazard. This hazard will be excluded or included based upon the species, **processing methods**, and the available country specific scientific evidence data for toxins in that species.

Reason:

- The third sentence appears to contradict the first sentence with respect to the hazard in scallop meat.

- To explain when scallop meat can have a biotoxin hazard.
- We are aware of many scientific studies finding high domoic acid or saxitoxin in scallop viscera/roe, while absent or negligible in the meat.
- We are not aware of any studies showing biotoxin levels naturally exceeding regulatory limits in scallop meat properly isolated from the viscera of whole live commercial species.
- For sea scallops (*Placopecten magellanicus*), it is well established that the meat can be safely consumed without testing even when the roe is hot with PSP.
- We note that it is important to know the detailed methodology used in biotoxin studies because if the meat tested is from fresh roe-on scallops (that are no longer alive), or from whole or roe-on scallops that have been frozen, toxins may have migrated from the viscera/roe into the meat.

X.2.2.2 Excessive Viscera, Sand, Detritus and Foreign Matter – Separate into two sections with revisions as follows:

X.2.2.2 Excessive Viscera, Sand, Detritus and Foreign Matter

Sand, ~~fine gravel~~ silt, detritus and foreign matter may accompany harvested scallops from the natural environment to shipboard. If not properly rinsed away, sand and ~~fine gravel~~ silt may become embedded between the fibers of the adductor muscle, **commonly associated with muscle contractions at time of death**. Excessive amounts of ~~viscera~~ and 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**.

X.2.2.[3] Viscera

During the shucking of scallops ~~meat~~, incomplete removal of the viscera ~~and other parts of the intestine from the scallop meat~~ could occur. ~~In addition,~~ Incomplete removal of viscera (**including roe**) may result in health hazards from biotoxins and pathogens **normally associated with whole bivalves**.

Reason:

- The term “excessive” should not be used for viscera because any viscera present raise a potential biotoxin hazard.
- Viscera are not foreign material, and do not fit with the other items listed.
- Sand and silt (rather than small gravel) cause the objectionable grinding which is commonly encountered when chewing scallops.

X.2.2.3 “Added water”:

First paragraph – Revise as follows:

It has been shown that freshwater in contact with scallop adductor muscle meat will increase its moisture content over time. ~~This is because the adductor muscle of a scallop is made up of parallel strands of fibers that can absorb water through capillary action.~~ **Scallop adductor muscle can absorb and retain added water through several physical and chemical mechanisms exhibiting various degrees of water binding strength.** If scallop adductor muscle meat has been in contact with fresh water, including melting fresh water ice, for an amount of time greater than ~~that~~ **the minimum** required for preparation and processing ~~under good manufacturing practices~~, the product will absorb excess water, which may be construed as an unfair trade practice or consumer fraud. {The use of polyphosphates **solutions** in scallops during processing will bind added water and if used **and/or labelled** improperly, can potentially lead to consumer fraud and unfair trade practices.}

Reason:

- Capillary action is one mechanism but the amount of water involved is limited. It is loosely bound water, unlike the water bound through direct interaction with hydrophilic moieties on proteins, which probably accounts for far more of the added water.

- The standard allows the addition of phosphate solutions, providing the label clearly indicates the product characteristics and percentage content.

Second paragraph – Revise as follows:

Proper processing controls should be in place by the processor to ensure that water is not added to the extent that it is technologically avoidable ~~and that polyphosphate} and water solution~~ use meets international ~~and regulatory~~ standards. (i.e. e.g., ~~GMP's must be properly followed by the processor~~ *Codex Standard for Fresh and Quick Frozen Scallop Adductor Muscle Meat; Codex Code of Practice for Fish and Fishery Products*). The processor should ensure that labelling is not misleading for the consumer.

Reason:

- The specific “Good Manufacturing Practices” have not been identified.
- The Codex Scallop Codes of Practice are essentially the international good manufacturing practices for scallops.

X.3 PROCESSING OPERATIONS

X.3.1, last sentence – Revise as follows:

Products are kept chilled by the application of freshwater ice and placed in appropriate **iced or** refrigerated storage.

Reason: Iced storage is the norm in the U.S., not refrigerated storage.

X.3.1.1 Scallop Landing/Deck Dump (Processing Step 1) – Revise the *Potential Hazards* and add the following two *Technical Guidance* bullets:

Potential Hazards: ~~Not likely~~ ***Presence of marine biotoxin***

Technical Guidance:

- **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 must subsequently confirm if the roe-on scallops that passed the harvester’s screening test are free of biotoxins and allowed for sale.**
- **Once a scallop dies, biotoxins can migrate from contaminated viscera into the normally uncontaminated meat. Dead scallops should be discarded for both safety and quality reasons.**

Reason:

- Deck dump can be used as a control point to prevent unnecessary further harvest of scallops that have contaminated roe.
- Where only scallop adductor muscle meat is shucked from the whole scallop, biotoxins are still a potential hazard in dead scallops because of possible toxin migration from the viscera.

X.3.1.2 Shucking (Processing Step 2), Potential Defects – Add ‘dead animals’:

Potential Defects: Remaining viscera, dead animals

Reason: Death can occur if scallops on deck are not rapidly shucked or chilled.

X.3.1.2 Shucking (Processing Step 2):

First bullet – Revise as follows:

- Live scallops should be eviscerated as soon as possible. If biotoxins are present in the viscera, ~~this may help~~ **complete removal of the viscera in freshly harvested live animals** prevents toxin migration into the adductor muscle.

Reason: Fluid leakage or diffusion during decomposition can transport water soluble toxins, which are held compartmentalized in live tissue, into other tissues.

Third bullet – Remove brackets and revise as follows:

- Care should be taken to ensure that the viscera (**including roe if applicable**), and connective tissue ~~and roe [(if applicable)]~~ are completely removed from the scallop meat.

Reason: Roe is viscera. Consistency is needed to prevent confusion about which parts of the scallop have a biotoxin hazard.

Forth bullet – Move to X.3.2.1, Scallop Reception:

- ~~Scallop meat shucked at sea should be unloaded without undue delay and placed in chilled storage until processing occurs.~~

Reason: This is good guidance, but out of sequence and may imply that the meat will not be chilled until offloaded.

X.3.1.3 Washing with Sea Water (Processing Step 3), Potential Defects – Change “*excess added water*” to “*moisture (added water)*”

Reason: The phrase “moisture (added water)” is used in subsections X.3.1.4 and X.3.1.6. The term “excess” may suggest a lack of effort to minimize added water.

X.3.1.4 Pre-Chilling (Processing Step 4):

Potential Hazards – Change “*Microbial growth and/or recontamination*” to “***Microbial contamination***” throughout the document.

Reason: This is the simplified terminology used for the Smoked Fish Code of Practice to cover both growth and contamination. The term “recontamination” may imply that the product was previously contaminated and then decontaminated.

Technical Guidance, second bullet – Modify as follows:

- Pre-chilling involves the immersion of the scallop meat in refrigerated **or iced** sea water for a specified period of time.

Reason: Iced seawater is commonly used.

X.3.1.5 Packing for Chilled Storage (Processing Steps 5, 20, 21) – Remove last two bullets:

- ~~[Containers should be impermeable or designed to minimize water uptake in scallop meat to the extent possible provided it does not result in quality loss in the product]~~

OR

- ~~[If the container is not impermeable, it should be necessary to put an impervious film between the ice and the container to avoid water uptake]~~

Reason: This might not be a best practice since the rinsing and continued cooling effect of melting ice would be lost. In addition, an anaerobic environment could develop leading to *Clostridium botulinum* growth and toxin production. We would prefer to add a recommendation in the next section to minimize the time that scallop meats are exposed to melting freshwater ice, i.e., by not extending trips.

X.3.1.6 Chilled Storage (Processing Step 6):

Potential Defects – Add “**physical damage**”.

Reason: Physical damage can occur if the containers/bags are inappropriately stacked in chilled storage.

Technical Guidance – Add bullet at follows:

- **Containers should be appropriately stacked to facilitate thermal exchange and prevent scallop damage.**

Reason: This repeats technical guidance in the previous section (Packing), but it also applies to Chilled Storage.

Technical Guidance – Add bullet at follows:

- **The time that scallop meats are exposed to melting freshwater ice should be minimized; i.e., by not extending trips.**

Reason: Ice water seepage is necessary to maintain acceptable quality; however, ice water is absorbed by scallop meats, which can lead to consumer fraud and quality issues. Even if measuring added water for labeling purposes was practical aboard a vessel, it would not reflect the drip loss and replacement of natural scallop juices with ice water, particularly during longer trips.

X.3.2 Processing of Quick Frozen Scallop Meat – Modify introductory sentence as follows:

This section is designed to augment the Processing of Fresh Scallop Meat On Board a Long Haul Harvesting Vessel section with additional operation steps pertaining specifically to the processing of quick frozen scallop meat **at a shore-based facility**.

Reason: It appears that this section is intended to cover shore-based processing. This may be unclear because products may be processed (frozen) and packaged at sea.

X.3.2.1 Scallop Reception (Processing Step 7):

Potential Defects – Add “**Dead whole scallops**”

Reason: Rough handling, or a prolonged trip, could cause dead scallops that should not be processed.

Technical Guidance

Add bullet - moved from X.3.1.2 at the first position:

- **Scallop meat shucked at sea should be unloaded without undue delay and placed in chilled storage until processing occurs.**

Reason: Better fit here. (See X.3.1.2)

Add Bullet – in the second position:

- **Whole scallops intended for shucking at the shore-based processing facility should be examined to assure they are all remain alive, and any dead scallops should be discarded. Dead scallops may have quality problems and may require biotoxin control due to possible toxin migration from the viscera into the meat.**

Reason: Product safety and quality.

Third bullet, fourth line - Edit as follows:

- workmanship (e.g., ~~excessive presence of viscera/roe~~ **(other than roe in the case of adductor muscle meat only roe-on scallops)**);

Reason: Clarity. Even small amounts of viscera require consideration of the biotoxin hazard.

Third bullet, sixth line - Edit as follows:

- presence of **excessive** parasites;

Reason: Parasites are an unavoidable defect. The level and visibility of parasites in scallops is not usually objectionable, and none are known to present a safety hazard.

Fourth 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. For example, this could be accomplished by, but not limited to, adherence to monitoring programs or end product testing.}

Reason: To note the probable biotoxin control requirements of the local regulatory authority.

X.3.2.2 Chilled Storage (Processing Step 8) – We question if the technical guidance in this subsection should differ from the technical guidance for on-board Chilled Storage (X.3.1.6), particularly for use of ice.

X.3.2.4 Application of Additives to Scallop Meat (Processing Steps 10, 18, 19)

Remove the brackets from this section because the Draft Scallop Standard now allows the use of phosphates. Consider replacing the word “Additives” with “**Phosphates**” because phosphates are the only additive permitted by the Draft Standard.

Potential Defects – Revise as follows:

Potential Defects: Excess water, off-flavours and textures, decomposition

Reason:

- Excessive phosphate treatments result in off-flavor and objectionable texture.
- Decomposition may be significant during an excessively long unrefrigerated phosphate soak.

Technical Guidance:

Second bullet – Revise as follows:

- ~~The application of phosphates should not result in more than a small increase in moisture that can occur under good manufacturing practices without the use of phosphates.~~
Phosphates should not be applied excessively for the purpose of bulking up the measured net weight of the final product. If polyphosphates are used, a processor should develop a process for its application in order to consistently achieve beneficial functional goals.

Reason:

- The Scallop Standard now recognizes that the use of phosphate solutions will generally result in significant (measurable) added water.
- Guidance should be included in this Code of Practice and not passed on to unspecified good manufacturing practices.
- Phosphates should not be used for the sole purpose of increasing the weight of the final product.

Add bullet - after the second bullet as follows:

- **The application of phosphate solutions for any recognized purpose (e.g., drip-loss replacement, moisture retention during thawing/cooking, preservation, sensory improvement) will result in the binding of additional water from the phosphate solution into the scallop meat. The amount of added water will vary depending on the process, species and condition of the meat, but is generally measurable. Processing records of lot weights directly before and directly after phosphate treatment are used to calculate the percent added solution for labelling purposes. The package labelling and marketing names for scallop products with added solutions of water and phosphates should be in conformance with the *Codex Standard for Fresh and Quick Frozen Raw Scallop (Pectinidae) Adductor Muscle Meat*.**

Reason: To provide guidance needed to be in compliance with the Draft Scallop Standard.

Third bullet – Revise as follows:

- ~~Poly~~**P**hosphates should be **food grade and** blended in the proper proportions and should adhere to the appropriately validated contact time. The amount of water absorbed by the scallop meat will increase with soaking time.

Reason: Sometimes less expensive industrial grade phosphates are used.

Fourth bullet – Revise as follows:

- Additives **use** should comply with the requirements of the Codex General Standard for Food Additives and the Proposed Draft Standard for Quick Frozen Raw Scallop Adductor Muscle Meat.}]

Reason: To include the provisions for appropriate use of additives, in addition to the specific additives allowed.

X.3.2.5 Size Grading:

Comment: We suggest renaming this section “**Grading and Examination**”

Reason: Grading for defects, in addition to size, should occur at this step.

Potential Defects - Add the following: “**improper size variation, unacceptable color variation**”.

Reason: These defects can be addressed at this stage of production.

Technical Guidance: Add the following bullets:

- **Gray or black adductor meat, which indicates that the scallop was dead at the time of shucking and is likely decomposed and may present a biotoxin hazard, should be culled from the lot.**
- **Care should be taken to ensure that scallops are not subject to temperature abuse during the grading and examination process. Containers of graded and examined scallops should be kept cool to ensure that the internal temperature approaches that of melted ice.**

Reason: These potential hazards and defects should have appropriate technical guidance as to how to control them.

X.3.2.7 Glazing (Processing Step 13), Technical Guidance – Delete the technical guidance section.

Reason: The Technical Guidance listed is essentially the same as the first bullet under Section 8.3.2 Glazing, already cited.

X.3.2.8 Weighing, Technical Guidance – Add the following bullets:

- **Net weight is often obtained by weighing glazed scallops and accounting for the weight of the glaze. For that reason, glaze levels should be routinely determined to ensure that proper net weights are obtained.**
- **Scales should be properly adjusted to account for the estimated glaze percentage and re-adjusted when glaze percentages change.**

Reason: Glaze should not be included in the net weight of the final product. This guidance is not adequately covered in 8.3.2 (Glazing) or 8.2.1 (Weighing)

X.3.2.9 Labelling (Processing Steps 15):

Potential Defects – Modify as follows:

Potential Defects: *Incorrect labelling, undeclared additive, undeclared or inaccurately declared added water*

Reason: The Draft Scallop Standard has provisions for labelling percentage added solution of water and phosphates that need to be accurately labeled. (See subsection X.3.2.4 above).

Technical Guidance, second bullet – Remove brackets and revise as follows:

{Where polyphosphate solutions are used in the process, a system should be in place to ensure that this additive is they are properly and accurately declared on the label.} (Also refer to subsection X.3.2.4, **Application of Additives to Scallop Meat**)

Reason: The label needs to include the water in the solution, not just the phosphate. The percentage added solution needs to be accurately measured and declared. Related guidance is included in the suggested new bullet for subsection X.3.2.4.

X.3.2.10 Packaging (Processing Steps 18, 19, 20, 21), Potential Defects – Revise as follows:

Potential Defects: *Not likely Dehydration, development of rancid odors and flavours*

Reason: Related defects are listed in X.3.2.11 for improper freezing. These defects are also related to packaging, and could be listed here as well.

X.3.2.11 Frozen Storage (Processing Step 17), Potential Defects – Add rancid flavors as follows: “development of rancid odors **and flavors**”

Reason: The defect of rancid flavors is also applicable.

APPENDIX ‘X, OPTIONAL FINAL PRODUCT REQUIREMENTS – SCALLOP MEAT [TO BE COMPLETED] – Modify bullet as follows:

- Varying colour (i.e., light orange verses milk white): In the spring, sea scallops have orange-colored roe ~~that can bleed into the~~ **and** adductor muscle. This cosmetically different product known as "pumpkins" in the scallop industry may not be preferred in some markets.

Reason: The term “bleed” may be misunderstood to include transfer of biotoxins. Only the pigment color is transferred to the adductor muscle.