CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 5 **CX/FFP 15/34/6 Add.3**

Original language only

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

Thirty-fourth Session

Ålesund, Norway

19 – 24 October 2015

PROPOSED DRAFT CODE OF PRACTICE FOR FISH AND FISHERY PRODUCTS (SECTION ON STURGEON CAVIAR)

Comments of Brazil, Canada, China

BRAZIL

X.5 **Laying induction**: there is no Technical Guidance for this Potential Defects: Quality deterioration.

X.6.**Anaesthesia for big fish**: there is no Technical Guidance for any Potential Defects listed.

X.8. **Treatment of eggs by shell improving methods**: there is no Technical Guidance for any Potential Defects listed.

X.9. **Washing and draining the eggs**: add physical contamination as Potential defects to be consistency with the second bullet of the Technical Guidance

CANADA

General Comments

Canada appreciates the work of Iran in preparing the *Proposed Draft Code of Practice for Fish and Fishery Products – section on Sturgeon Caviar* (at step 3 of the procedure) and continues to support the advancement of this Code of Practice in the Codex Step procedure. Canada supports the overall direction of the draft. The specific comments below focus largely on clarification and consistency in the text.

Specific Comments

Figure x.1 Example flowchart for caviar production

Box 15

Title

Revise**:** ~~Measuring and~~ b**B**lending ~~of fish eggs, salt & additives~~ **and grading**

Reason: The title should be a brief outline of this section. The full actions and guidance for this step are outlined in section X.15. Grading is mentioned at this step in Section X.15.

Microbial Hazards

***2nd paragraph, 2nd sentence*:**

Revise: These pathogens are controlled by an adequate quantity of salt (product salt content ≥ 3g/100g ~~and ≤ 5g/100g,~~**;** ≥ 5% **salt** in the water phase**;** ~~or~~ a water activity of < 0.97) and ~~proper~~ cold storage temperatures **of** ≤ 4°C.

Reason: Only the minimum level of salt necessary to control *C. botulinum* should be provided. The upper limit provided is in relation to the effect on product quality and not the control of *C. botulinum*. Editorial.

X.1 live fish reception

9th bullet

Revise: In the case of fresh fish, the fish should be stored under refrigeration or in cold **potable or** ~~and~~ clean water.

Reason: In consideration of the statements made in the third and fourth sentences of the “chemical hazards” section (page 1) and for consistency throughout the text.

X.10 Ingredients reception

2nd bullet

Revise: … show no visible sign of contamination with dirt, oil~~, bilge~~ or other extraneous materials.

Reason: The commonly understood definition of the term “bilge” is: *“the bottom part of the inside of a ship or boat”* (as per the Merriam-Webster dictionary, http://www.merriam-webster.com/dictionary/bilge). We suggest that this term be removed to avoid confusion.

X.12 Reception of packaging materials

Title

Revise: ~~Reception of packaging materials~~ **Packaging reception**

Reason: To align with Figure X.1.

X.13 Storage of packaging materials

Title

Revise: ~~Storage of packaging materials~~ Packaging storage

Reason: To align with Figure X.1.

X.15 Measuring and blending fish eggs, salt and additives

Title

Revise**:** ~~Measuring and~~ b**B**lending ~~of fish eggs, salt & additives~~ **and grading**

Reason: The title should be a brief outline of this section. The full actions and guidance for this step are outlined in the section. Grading is mentioned in the last bullet of section X.15.

5th bullet

Revise: To prevent the growth and toxin production by non-proteolytic *Clostridium botulinum*, the quantity of salt added should result in at least 5% water phase salt or a water activity of **≦ <** 0.97.

Reason: As per Austin 2001, the inhibitory NaCl concentration for non-proteolytic *C. botulinum* strains (i.e., Group II) is 5% while the minimum water activity for growth is 0.97. For the water activity, use of < 0.97 will also create consistency with the second sentence, second paragraph of the ‘Microbial Hazards’ section.

Austin, J.W. (2001). *Clostridium botulinum.* In : Food Microbiology: Fundamentals and Frontiers, 2nd Edition. Edited by M.P. Doyle et al., ASM Press, Washington, D.C. (p. 330)

X.16 Extra saltwater removal

3rd bullet

Revise: ~~The salt content should remain ≥ 5% in the water phase or a water activity of ≤ 0.97~~.

4th bullet

Revise: ~~In addition,~~ ~~t~~**T**he salt content ~~shall~~ **should** be ~~equal to or above~~ ≥ 3g/100g and ~~below or equal to 5g/100g~~ **result in ≥ 5% salt in the water phase or a water activity of <0.97**.

Reason: Both the 3rd and 4th bullets should be combined to avoid duplication and enhance clarity.

X.17 Caviar packing

3rd bullet

Revise: ~~Air exhausting and~~ **Vacuum** sealing of cans or jars should be performed by trained personnel to ensure that air is fully removed from cans/jars to inhibit the growth of aerobic micro-organisms as well as fat oxidation.

Reason: Editorial to align with commonly recognized terminology.

4th bullet

Revise:

During the ~~exhausting~~ **vacuum sealing** process, the cans/jars should be kept clean from salt water than leaves the cans/jars.

Reason: Editorial to align with commonly recognized terminology.

X.18 Cooling and maturation

2nd bullet

Revise: Laboratory check should be performed for proper caviar salt content (e.g.**,** by water phase **salt determination, by water activity measurements,** by weight**,** as appropriate) after maturation is complete.

Reason: These are the type of analyses that could be performed in order to confirm that the caviar is meeting the parameters under X15 and X16.

X.20 Weighing and labelling

2nd bullet

Delete text in bracket**:** ~~[Pasteurization treatment or a reference to pasteurization should be indicated on the label]~~.

Reason : The provisions of the *Codex General Standard for the Labelling of Pre-packaged Foods* (CODEX STAN 1-1985) and the Standard for Sturgeon Caviar does not require this. The COP is not meant to introduce labelling requirements.

X.21 Cold Storage

7th bullet

Revise: Containers of caviar should be periodically checked ~~regarding air existence~~ **for loss of vacuum** and any affected containers should ~~be re-exhausted or~~ rejected.

Reason: To align with recognized terminology. For pasteurized caviar, the loss of vacuum is a critical defect. Loss of vacuum can result in the growth of aerobic bacteria during cold storage so it is not advisable to attempt to vacuum seal these containers a second time.

CHINA

1. General consideration:

Microbial hazards: Ovaries located in the belly cavity and remain sterile station.

Comments: Ovaries contains small amount of microorganisms, not sterile station. It should be strengthen microorganism control.

2. General consideration and X.16 Removing excess salts

Comments: These pathogenic bacteria can be controlled by adding enough salt in the eggs (3g/100g<salt content<5g/100g). X.16: salt content in aqueous solution >5% or water activity <0.97. We suggested that the salt content of the final products was changed from “3% <salt content<5%” to “2% <salt content<5%”.

Reasons: The addition of salt can not only inhibit the reproduction of pathogenic bacteria, prolong the shelf life, but also play a role in forming flavors. In order to meet the requirement of healthy foods and improve the product quality, the limit of salt content should be changed to 2 grams /100 grams. Therefore, the salt content of caviar product standards should be revised from currently “3 g / 100 grams to 5 grams per 100 grams” to “2 grams / 100 grams to 5 grams per 100 grams.

3. General consideration:

Chemical hazards:

Comments: The risk alteration of anesthetic and inducing hormone should be added.

4. X.5 Laying induction

Comments:

(1) Potential hazards: The risk alteration of inducing hormone should be added.

(2) Technical guidance: If hormones are used to induce ovulation (or to assist in the release of eggs), the hormones should have undergone regulatory assessment and be approved for use, for the purpose of food production, by the competent authorities having jurisdiction. One sentence should be added behind it. The sentence was “Approved name of the hormone and its safety limits should be listed to prevent and control the use of unauthorized drug risk. At the same time, induced ovulation should be strictly limited to the natural ovulation eggs”.

Reasons: Approved name of the hormone and its safety limits should be listed to prevent and control the use of unauthorized drug risk. At the same time, induced ovulation should be strictly limited to the natural ovulation eggs. Successful induced sturgeon (natural ovulation) can take eggs using minimally invasive surgery (in vivo or in vitro small caliber wound, there is generally no more than 1 inch, slight suture treatment).

5. X.6 Anaesthesia for big fish

Comments:

(1) Potential hazards: The risk alteration of anaesthetics should be added.

(2) Technical guidance: If anaesthetics are used, their use must be approved for sturgeon intended for human consumption by the competent authorities having jurisdiction. One sentence should be added behind it. The sentence was “the name of anaesthetics should be listed to prevent unauthorized hazards”.

Reasons: The name of anaesthetics should be listed to prevent unauthorized hazards.

6. X.7 Micro caesarean or hand stripping

Comments: Hand stripping was suggested to be deleted, and the subsequence processing procedure of sturgeon Caviar was modified.

Reasons: From the aspect of animal welfare, manual large caliber (generally require 4 inch - 6 inch diameter, large area suture) methods to get eggs was objected to protect these sturgeon which are failed to induce natural ovulation. Furthermore, these operations will also induce man-made pollution.

7. X.8 Treatment of eggs by shell improving methods

Comments: Shell texturizing agents are not permitted in accordance with the standard for sturgeon caviar. Physical methods such as heat were suggested to improve the shell texture.

Reasons: Shell improvement of eggs will not be happened until the chemical agents contact directly with the eggs. During the processing, these chemicals will penetrate the eggs and result in chemical pollution and residues. In the standard of sturgeon caviar, Shell texturizing agents do not allowed to use. Physical methods such as heat were suggested to improve the shell texture.