

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS



WORLD
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Agenda Item 10

CX/FFP 03/11

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

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

PROPOSED DRAFT STANDARD FOR STURGEON CAVIAR (Prepared by the Russian Federation)

The 25th Session of the Committee on Fish and Fishery Products agreed to undertake new work on the elaboration of a Proposed Draft Standard for Sturgeon Caviar, subject to the approval of the Commission as new work. It was agreed that the Russian Federation would prepare a Proposed Draft Standard for consideration by the next session and several delegations offered to assist in the development of the standard (ALINORM 03/18, para. 140). This new work was approved by the 26th Session of the Codex Alimentarius Commission (ALINORM 03/41, para. 138, Appendix VIII).

The Russian Federation prepared a first draft and sent it to the countries that had expressed an interest in the development of the standard. Comments were received from Germany and the Islamic Republic of Iran, and the Proposed Draft was amended in view of the comments received, as indicated in the introductory section in Annex 1.

The Proposed Draft Standard, as presented in Annex 2 is hereby circulated for comments at Step 3 and consideration by the Committee

Governments and international organizations wishing to provide comments should do so in writing, preferably by email, to Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme – FAO, Viale delle Terme di Caracalla - 00100 Rome, Italy, Fax: +39 (06) 5705 4593, E-mail: codex@fao.org, with a copy to Codex Contact Point, Norwegian Food Control Authority, P.O. Box 8187 Dep. 0034 Oslo, Norway, Fax: +47.23.21.70.01, E-mail: ccffp@snt.no, **before 15 September 2003**.

EXPLANATION OF THE PROPOSED DRAFT CODEX STANDARD FOR GRANULAR STURGEON CAVIAR¹

This draft has been revised to take into account the suggestion by Germany and the Islamic Republic of Iran.

Scope

Section 1 and further in the text: the suggested extension of the standard to pressed and pasteurized caviar was declined since the standard is being developed for granular sturgeon only (Iran).

2.1.1 and further in the text: the suggestion to replace the word "fish" with "sturgeon fish species" is accepted in part since the use of the term "sturgeon" is inequitable because it is fish species of the sturgeon family that are used for the production of caviar (Iran).

2.1.2 The suggestion to extend the term "granular caviar" only to the product made out of the Caspian basin fish was declined since the meaning of the term reflects the main property of the final product, i.e. the state of eggs being granular which is achieved thanks to the techniques used (Iran).

2.1.1 The suggestion to indicate the sturgeon family in the Latin language was accepted (Iran).

Section 2, para. 2.1 was supplemented with the definitions "primary container" and "secondary container"; the definition of "salt" was disregarded since it is a chemical indicator (Iran).

2.2 Table 1. Fish species will be specified at CCFFP; the other species not listed in the Table are shovelnose and paddlefish not covered by the standard (Iran).

The name of sturgeon species are given in italics (Germany).

2.2 Table 1. The names of fish species in the English language were taken out. Latin names remain since most of the species have no generally accepted names in the English language (Germany).

Table 1 agrees with Table B (Annex B) since Table B in the section "labelling" implies identification coding of sturgeon species (Germany).

The suggestion from Iran to combine 2.3 and 2.4 was not accepted since they are presented in keeping with the instructions given by the authorities of Codex Alimentarius Commission.

2.3.2 was supplemented with the requirement to prevent foreign admixtures from getting in during repackaging, as follows: "as well as foreign admixtures" (Iran).

2.4 In respect of large lots of eggs the technique of manufacturing granular caviar envisages the storage time of granular caviar of up to 8 hours before processing; it should be kept in refrigerators at -1°C to +2°C. The technological guidelines require that the minimum time of storage prior to the delivery of the raw material for processing should not be limited and may be optional, including 30 minute period which is envisaged by the regulatory documents of Iran.

3.1 The list of sturgeon species presented in Table 1 should be discussed and adopted at the CCFFP session because representatives of other states are to confirm which species of sturgeon are, or are not being used for granular caviar, including the cultured sturgeon (Germany).

3.3.1 Table 2 on lowering the content of salt in caviar. This suggestion should be founded scientifically: a lower weight share of salt could decrease the quality and safety of granular caviar (Germany).

5.3 Table 3. The rules as regards the content of chemical pollutants are given pursuant to the requirements of the sanitary - epidemiological rules and limits found in 2.3.2.1078-01 "Hygiene safety and food value requirements" adopted in Russia which are coordinated with the rules effective in CIS countries, as well as in WHO and Codex Alimentarius Commission. The Table 3 data quoted by Iran cannot be taken for comparison with sturgeon species characteristics since they relate to different biological items (Crustaceans and bivalve mollusks).

5.3 Table 3 At the suggestion of Germany editorial changes were made in the names of heavy metals.

¹ Prepared by the Russian Federation

6.3 Table 4 contains scientifically grounded sanitary/hygienic limits for microbiological characteristics of the granular caviar of sturgeon fish species according to 2.3.2.1078-01 "Hygiene safety and food value requirements. Sanitary - epidemiological rules and limits" (Russia) which correspond to the rules of WHO and Codex Alimentarius Commission (Iran)

Section 7. the requirements are explained with due regard to the suggestion made by Iran , though drafted in the format agreed to at the discussion of the draft international standard by the Interstate Technical Committee TK 300 "Fishery Products for food, forage and industrial purposes and their packing" of the Eurasian Council of Standards, Metrology and Certification (EACC).

As regards the use of the words "caviar" and "kaviar" (Germany), in our view we ought to use the former term as being more accurate.

Para. 7 envisages marking the product with a different name to agree with the laws and traditions of the importing country (Germany).

Section 8. Methods of pollution study should be discussed at CCFFP. Paragraph 6.4 of the Draft refers to the principles of establishment and application of microbiological criteria to food products in accordance with CAC/GL 21-1997 (Iran): sampling techniques and monitoring of the other characteristics are to be discussed at CCFFP (Iran).

The structure, format of the text and contents of the Draft International Standard CODEX STAN have been made in conformity with the international standard GOST 7442-2002 "Granular sturgeon caviar. Technical conditions" which is in force in the party states of the Eurasian Council for Standardization, Metrology and Certification. Revision of the drafting of these paragraphs should be discussed at CCFFP (Germany).

PROPOSED DRAFT STANDARD FOR GRANULAR STURGEON CAVIAR

1. SCOPE

This standard shall apply to granular sturgeon caviar.

2. DESCRIPTION

2.1. DEFINITIONS

The following definitions are used in this standard:

2.1.1 Caviar-grain: product obtained from fish ovary by separating the eggs from the connective tissue of ovary.

Note: ovary is assumed to mean female ovary with eggs.

2.1.2 Granular caviar: The product made from caviar-grain of fish of the sturgeon family by treating with salt or mixture of salt with a food additive.

2.1.3 Potable water: Fresh water suitable for human consumption.

Note: The quality of drinking water shall not be less than the Standard requirements contained in the latest edition of the WHO “International Guidelines for Drinking Water Quality”.

2.1.4 Food additive: Natural or synthesized substances, compounds intentionally included in food products for the purpose of their preservation and/or imparting to them special characteristics.

2.1.5 Caviar lot: An amount of caviar taken from one biological fish species, treated in the same manner and packed in similar containers by the same producer for delivery to the same customer.

2.1.6 Biological species: Any fish species, subspecies or its separate population.

2.1.7 Foreign admixtures: Any matter not derived from caviar and readily recognizable without magnification, or present at a level determined by any method including magnification, that indicates non-compliance with sanitation standards and rules.

2.1.8 Aquaculture: Rearing and growing of aquatic organisms in order to obtain biological product.

2.1.9 Decomposition: Persistent objectionable odour and/or flavour caused by deterioration of the product.

2.1.10 Primary package: (primary container). Metal cans or glass jars in which caviar is packed directly.

2.1.11 Secondary package: (secondary container). Package containing one or several primary containers.

2.2. Product Definition

The product is prepared from the caviar-grain of sturgeon fishes belonging to the following biological species shown in Table 1

Table 1

Denomination of sturgeon fishes Scientific names
<i>Huso huso</i>
<i>Huso dauricus</i>
<i>Acipenser naccarii</i>
<i>Acipenser transmontanus</i>
<i>Acipenser schrenki</i>

Denomination of sturgeon fishes Scientific names
<i>Acipenser sturio</i>
<i>Acipenser baerii baikalensis</i>
<i>Acipenser sinensis</i>
<i>Acipenser dabryanus</i>
<i>Acipenser persicus</i>
<i>Acipenser brevirostrum</i>
<i>Acipenser fulvescens</i>
<i>Acipenser oxyrhynchus</i>
<i>Acipenser oxyrhynchus desotoi</i>
<i>Acipenser medirostris</i>
<i>Acipenser baerii</i>
<i>Acipenser micadoi</i>
<i>Acipenser stellatus</i>
<i>Acipenser ruthenus</i>
<i>Acipenser nudiiventris</i>

The product is made with, or without food additives, and is intended for direct human consumption.

2.3 Process Definition

2.3.1 The product shall be prepared by using appropriate preliminary processing of caviar-grain to be salted with edible salt, with or without food additives, packed in containers, and chilled to the temperatures so as to maintain the quality during storage, transportation and marketing.

The product shall be packed in:

- metal tins coated inside with stable food lacquer or enamel;
- glass jars.

Freezing of product shall not be permitted.

2.3.2 Industrial re-packaging of the product from larger to smaller containers under controlled conditions shall be permitted without mixing caviar from different species (including from the same species but different in colour). The product shall be packaged so as to minimize the time that the caviar remains unpacked in order to prevent its warming and secondary microbial contamination, as well as foreign admixtures.

2.4 HANDLING PRACTICE

- Granular caviar is produced from fish ovary reached maturation stage IV and extracted from living sturgeon fishes without impairing their integrity, and under stringent sanitary conditions without disturbing the entirety of fish ovary. The roe is separated from the connective tissue of ovary. When the roe is delivered in large quantities it is kept until processing in closed containers in a refrigerating chamber at a temperature from minus 1°C to plus 2° C for no more than 8 h.
- Caviar-grain is sorted by quality, colour and size. Before salting it is washed out in clean cooled water to remove clots of blood, squashed eggs and film pieces. Washed roe is immediately directed to the vibrating sieve for draining the remained water. Then it is treated with edible salt with/without preservatives. All the above mentioned technological operations shall be performed without delay to avoid microbial spoiling.
- Preparation of granular caviar shall comply with the International Code of Practice for Sturgeon Caviar (to be elaborated).

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

Granular caviar shall be prepared from ovaries extracted from live sturgeons of the biological species described in Section 2.2, which are of a quality necessary for human consumption.

3.2 Other Ingredients

Potable water and salt shall be of food grade quality and conform to all applicable Codex Standards.

3.2 Final Product

3.3.1 By its sensory and chemical characteristics the product shall comply with the requirements prescribed in Table 2

Table 2

Index	Characteristics and norms
Appearance	Eggs of one size
Color	Even and characteristic of roe from the given biological species: from light gray to black, or from light yellow to yellowish gray. Yellowish and brownish shades are permissible
Consistence and state	Eggs can be easily separated from each other
Taste and odour	Characteristic of roe from the given biological species; without foreign taste and odour
Salt, %	3.5 – 5.0
Foreign admixtures	Unacceptable

3.3.2 The product shall meet the requirements of the present Standard, when a lot examined in accordance with the requirements described in Section 10 complies with the provisions set out in Section 9.

The product shall be examined by the methods given in Section 8.

4. FOOD ADDITIVES

4.1 The use of food additives approved by the health authority of the importing country is permitted (to be additionally developed)

4.2 A complete list of permitted food additives shall be approved by the Codex Committee for Food Additives and Contaminants.

5. CONTAMINANTS

5.1 The product shall be free from any matter that may pose a threat to human health.

5.2 The following provisions in respect of contaminants, other than pesticide residues, are subject to endorsement by the Codex Committee on Food Additives and Contaminants.

5.3 Under the control of granular caviar with the use of adopted methods of analysis and sampling, the product shall not contain contaminants exceeding the norms listed in **Table 3**

Table 3

Substances	Admissible levels in mg/kg, not over
<u>Heavy metals:</u>	
Lead	1.0
Arsenic	1.0
Cadmium	1.0
Mercury	0.2
<u>Pesticides:</u>	
Hexachlorocyclohexane (α , β , γ -isomers)	0.2
DDT and its metabolites	2.0
Polychlorinated biphenyls	2.0
<u>Radionuclides:</u>	
Caesium-137	130 Bk/kg
Strontium-90	100 Bk/kg

6. HYGIENE

6.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the requirements of the appropriate sections of the Recommended International Code of Practice:

- General Principles of Food Hygiene (CAC/RCP 1-1985, Rev. 2, 1997) and
- the International Code of Practice for Sturgeon Caviar (to be elaborated).

6.2 The following provisions in respect of the food hygiene of this product are subject to endorsement by the Codex Committee on Food Hygiene.

6.3 Caviar shall be free from microorganisms exceeding the amounts given in **Table 4**

Table 4

Indicators	Level
Mesophilous aerobic and facultative anaerobic microorganisms in 1 g of product, SPC, not more than	1·10 ⁴
Mold in 1 g of product, SPC, not more than	50
Yeast in 1 g of product, SPC, not more than	50
Colibacilli, in 1 g of product	not allowed
Staphylococcus aureus, in 1 g of product	not allowed
Clostridium (sulfite reducing), in 1 g of product	not allowed
Pathogenic, incl. Salmonella, in 25 g of product	not allowed

6.4 The product should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. LABELLING

7.1 Marking of the product and the name of granular caviar shall be in accordance with the provisions of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991).

The name of the product shown on the label shall be “Granular caviar” or “Caviar”, and may precede or follow the common or established name of the biological species of sturgeon in compliance with the laws and traditions of the country where the product is distributed to avoid misleading of the customer. The information on the salient feature (characteristic) of caviar (granular) may be placed in the immediate vicinity of the product name.

7.2 The following provisions in respect of the labelling of this product are subject to endorsement by the Codex Committee on Food Labelling:

The package shall bear clear directions for the regime and time of keeping the product, including the following information:

- the name of the biological species of fish in English; e.g. beluga, kaluga, sturgeon, sevruga and sterlet;
- the storage time should be calculated as from the date of making, and the marking should include the “storage time”, and a reference to the place of the label where the date of making is shown.

The information on the salt share index, e.g. malossol, should be shown in the label when the weight share of salt in the product shown is less than 3.5%.

It is allowed to show the information on the container of granular caviar at one or several places, suitably legibly, as well as to use the background on the labels, or on lithographed containers, according to the species of raw material, as follows: blue for beluga and kaluga, yellow for sturgeon, red for sevruga, green for starlet in accordance with the information in Annex C.

7.3. The granular caviar of sturgeons should be labelled for identification with disposable sticker labels according to the CITES guidelines for a uniform system of labelling caviar for trade or identification:

- information on the source of caviar: not to be given for “wild” sturgeons; for aquaculture – grown fish the label should read “Aquaculture product” (to be marked near the biological name of the species);
- the three-letter code for the biological species according to Annex B should be given as a sign over the line on the level of the upper edge of script, with the name of the fish in English, e.g. beluga^{hus}, sturgeon^{per}, sturgeon^{guc};
- the two-letter Alpha – 2 code of the country of origin in Latin according to ISO 3166-97;
- international standard code;
- data on the food value of product in accordance with the guidelines for marking of food products CAC/GL 2-1985 (Rev. 1-1993);
- the official registration code (up to four symbols – xxxx) of the producing plant, or code of the caviar repackaging plant; when caviar is repackaged in the importing country the code should include the two-letter ISO code, and the official registration code of the plant, e.g. when the granular caviar is repackaged in France: FR – xxxx;
- the date of making the product should be marked as a sequence of digits; one digit for the ten day period, two digits for the month, the last digit of the year for the year.

8. SAMPLING, EXAMINATION AND ANALYSES

8.1 Sampling

8.1.1 Sampling of lots for examination of the product shall be in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) (CODEX STAN 233-1969).

A lot of granular caviar shall mean a volume of product prepared in accordance with Section 2.1.5.

8.1.2 Sampling of lots for examination of net weight shall be carried out in accordance with an appropriate sampling plan meeting the criteria established by the CAC.

8.2 The methods of analysis and sampling described hereunder are to be endorsed by the Codex Committee on Methods of Analysis and Sampling.

8.2.1. Sensory and Physical/Chemical Examination

Samples taken for sensory and physical/chemical examination shall be assessed by experts trained in such examination and in accordance with methods elaborated in Sections 8.2.1- 8.2.2 and the Codes of Practice for the Sensory Evaluation of Caviar and Caviar Products (to be developed).

8.2.2. Determination of Net Weight

The net weight of each sample unit shall be determined in accordance with the following procedure:

1. container filled with the product shall be swept dry and weighed;
2. container shall be opened, and freed from caviar;
3. empty container with a lid, (and packing material, if available), cleaned of the product, washed and dried, shall be weighed;
4. subtract the weight of the empty container with a lid (and packing material, if available) from the weight of the container with the product, and determine the net weight of product.

8.2.3. The weight share of salt shall be determined using the method developed for salted fish.

9. DEFINITION OF DEFECTS

The sample unit shall be considered as defective when it exhibits any of the properties defined in Sections 9.1-9.3.

9.1 Foreign admixtures

The presence in the sample unit of any matter which has not been derived from sturgeon eggs, does not pose a threat to human health, is readily recognized without magnification; or when it is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing practices and sanitation rules.

9.2 Odour and Flavour

The product affected by persistent and distinct objectionable odour and/or flavour indicative of decomposition, oxidation, or taste of feed (in sturgeon reared in aquaculture), or contamination by foreign substances (such as fuel oil).

9.3 Consistency and Condition

Hard cover of caviar grains is not easily chewable, or tenuous, destroyed when the grains are separated from one another.

10. LOT ACCEPTANCE

A lot shall be considered as meeting the requirements of this standard when:

- 1. The total number of defectives as classified according to Section 8 does not exceed the acceptable number of the appropriate sampling plan given in the Sampling Plans for Prepackaged Foods (AQL – 6.5) (CODEX STAN 233-1969).
- 2. The average net weight of all sample units is not less than the declared weight, provided no individual container is less than 95% of the declared weight.
- 3. The Food Additives, Hygiene, Packing and Labelling requirements of Sections 4, 2.3, 5, 6, 7 and 8 are met.

SENSORY AND PHYSICAL EXAMINATION

The samples used for sensory evaluation should not be same as that used for other examination.

1. Examine the sample unit for foreign matter, bones and discolouration.
2. Assess the odour in the uncooked sample in accordance with the Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories (CAC/GL 31-1999).
3. Assess the flavour in cooked sample in accordance with the Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories (CAC/GL 31-1999).

IDENTIFICATION CODES OF STURGEON SPECIES

Table B.1

Denomination of sturgeon fishes Scientific names	Code
<i>Huso huso</i>	HUS
<i>Huso dauricus</i>	DAU
<i>Acipenser naccari</i>	NAC
<i>Acipenser transmontanus</i>	TRA
<i>Acipenser schrenkii</i>	SCH
<i>Acipenser sturio</i>	STU
<i>Acipenser baerii baikalensis</i>	BAI
<i>Acipenser sinensis</i>	SIN
<i>Acipenser dabryanus</i>	DAB
<i>Acipenser persicus</i>	PER
<i>Acipenser brevirostrum</i>	BVI
<i>Acipenser fulvescens</i>	FUL
<i>Acipenser oxyrhynchus</i>	OXY
<i>Acipenser oxyrhynchus desotoi</i>	DES
<i>Acipenser gueldenstaedtii</i>	GUE
<i>Acipenser medirostris</i>	MED
<i>Acipenser baerii</i>	BAE
<i>Acipenser micadoi</i>	MIK
<i>Acipenser stellatus</i>	STE
<i>Acipenser ruthenus</i>	RUT
<i>Acipenser nudiiventris</i>	NUD

INFORMATION ANNEX

Figure 1



Figure 2



Figure 8

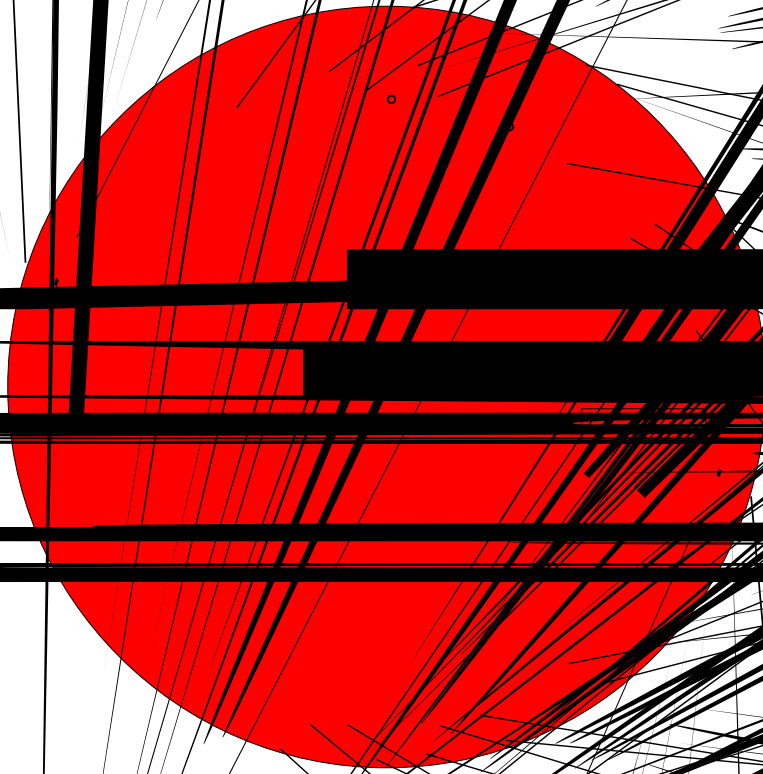


Figure 9

