

# CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture  
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**STANDARD FOR STURGEON CAVIAR**

**CXS 291-2010**

**Adopted in 2010. Amended in 2013, 2018.**

## 1. SCOPE

This standard applies to granular sturgeon caviar of the fish of the *Acipenseridae* family.

## 2. DESCRIPTION

### 2.1. Definitions

The following definitions are used in this standard:

**Fish eggs:** non-ovulated eggs separated from the connective tissue of ovaries. Ovulated eggs may be used from aquacultured sturgeons.

**Caviar:** the product made from fish eggs of the *Acipenseridae* family by treating with food grade salt.

### 2.2 Product definition

The product is prepared from fish eggs of sturgeon fishes belonging to the *Acipenseridae* family (four genera *Acipenser*, *Huso*, *Pseudoscaphirhynchus* and *Scaphirhynchus* and hybrid species of these genera). The eggs are of about one size and evenly and characteristically coloured according to the species used. Colour can vary from light grey to black or from light yellow to yellowish grey. Brownish and greenish shades are permissible. The product is made with addition of salt and is intended for direct human consumption. The salt content of the product is equal or above 3 g/100g and below or equal to 5 g/100g in the end product.

### 2.3 Process definition

**2.3.1** The product, after suitable preliminary preparation of the caviar, shall be subject to treatment or conditions sufficient to prevent the growth of spore and non-spore forming pathogenic microorganisms and shall comply with the conditions laid down hereafter. Ovulated eggs are harvested after hormonal induction of ovulation of the female. The eggs are appropriately treated to remove adhesive layer and to harden the shell. If hormones are used to produce ovulated eggs, they should be approved for use by the competent authority having jurisdiction.

The product shall be prepared by salting fish eggs with food grade salt. During packaging, storage and retail, the product temperature is between +2 and +4°C, whereas for wholesale business, including storage and transportation, the temperatures are between 0° and -4°C. Freezing as well as frozen storage of caviar is not permitted unless the deterioration of quality is avoided.

The product shall be packed in:

- metal tins coated inside with stable food lacquer or enamel;
- glass jars;
- other suitable food-grade containers.

**2.3.2** Re-packaging of the product from larger to smaller containers under controlled conditions which maintain the quality and safety of the product shall be permitted. No mixing of caviar from different sturgeon species or lots shall be permitted.

## 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 3.1 Raw material

Caviar shall be prepared from fish eggs extracted from sound and wholesome sturgeons of biological species of the genera described in Section 2.2, which are of a quality fit to be sold fresh for human consumption.

### 3.2 Salt

Salt shall be of food grade quality and conform to all applicable Codex Standards.

### 3.3 Final product

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

Acidity regulators, antioxidants and preservatives listed in Table 3 of the *General Standard for Food Additives* (CXS 192-1995), are acceptable for use in foods conforming to this standard.

#### 5. CONTAMINANTS

5.1 The products covered by this Standard shall comply with the Maximum Levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995) and the maximum residue limits for pesticides and veterinary drugs established by the CAC. In addition, the following specific provisions apply:

5.2 For caviar obtained from ovulated eggs, the treatment of the fish (e.g. with hormones) and the subsequent level of residues in the final product shall be in conformity with the relevant provisions in sub-section 6.3.2 Veterinary Drugs of the *Code Of Practice for Fish and Fishery Products* (CXC 52-2003 section 6 – Aquaculture) in particular regarding the compliance with the MRL and the withdrawal time.

#### 6. HYGIENE

6.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1-1969) and other relevant Codex Codes of Practice.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CXG 21-1997).

6.3 The product shall not contain any other substance in amounts which may present a hazard to health in accordance with standards established by the Codex Alimentarius Commission.

6.4 The final product shall be free from any foreign material that poses a threat to human health.

#### 7. LABELLING

In addition to the provisions of the *Codex General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985) the following specific provisions apply:

##### 7.1 Name of the food

7.1.1 For the *Acipenseridae* family, the name of the food shall be “caviar” or “caviar” completed with the usual name (Beluga for *Huso huso*, Ossetra for *Acipenser guldenstaedtii* and *Acipenser persicus*, Sevruga for *Acipenser stellatus*), in accordance with the law and custom of the country in which the product is sold, in a manner not to mislead the consumer.

7.1.2 For sturgeons having no common names, the name may be supplemented with the identification code or the scientific name of the species in accordance with Annex A.

7.1.3 For hybrids the common name shall be supplemented with the word hybrid, and the parent sturgeon species may be shown according to Annex A.

7.1.4 For caviar obtained from ovulated eggs, the product name shall be “caviar from ovulated eggs”. The labelling shall be written in such a way as to avoid any risk of misleading consumers on the nature of the product.

##### 7.2 Storage instruction

The labelling shall include terms to indicate that the product shall be stored under appropriate time/temperature conditions.

##### 7.3 Repackaging

In case of repackaging of the product the facility registration code shall be identified.

##### 7.4 Labelling of non-retail containers

Each primary container shall be labelled with the number markings of the lot and the species.

Information specified above shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address as well as storage instructions shall always appear on the container. However, lot identification as well as the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

## **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 *General Guidelines on Sampling* (CXG 50-2004). A sample unit is the primary container.
- 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 Codex Alimentarius Commission.
- 8.1.3** Sampling of lots for pathogenic microorganisms and parasites shall be in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CXG 21-1997).

### **8.2 Sensory examination**

Samples taken for sensory and physical/chemical examination shall be assessed by person trained in such examination and in accordance with the *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CXG 31-1999).

### **8.3. Determination of net weight**

The net weight (excluding packaging material) of each sample unit in the sample lot shall be determined by deducting the weight of the empty container from the total weight.

### **8.4 Determination of salt content**

The determination of salt content is performed according to the method described in the *Standard for Salted Fish and Dried Salted Fish of the Gadidae Family of Fishes* (CXS 167- 1989).

## **9. DEFINITION OF DEFECTS**

The sample unit shall be considered as defective when it exhibits any of the properties defined in Sections 9.1- 9.4.

### **9.1 Foreign matter**

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, and is readily recognized without magnification; or is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing practices and sanitation practices.

### **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 fish reared in aquaculture), or contamination by foreign substances (such as fuel oil).

### **9.3 Consistency and condition**

- The presence of hard cover of caviar grains that is not easily chewable or tenuous.
- The breaking up of the outer membranes when attempting to separate the grains.
- The Presence of broken eggs or fluid.

### **9.4 Objectionable matter**

The presence of remnants of membranes and/or secreted fat in finished caviar.

## **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 9 does not exceed the acceptable number of the appropriate sampling plan given in the *General Guidelines on Sampling* (CXG 50-2004).
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, contaminants, hygiene and labelling requirements of Sections 4, 5, 6, and 7 are met.

## ANNEX A

Table .1 - IDENTIFICATION CODES OF STURGEON SPECIES

| 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              |
| <u><i>Pseudoscaphirhynchus fedtschenkoi</i></u>         | <u>FED</u>       |
| <u><i>Pseudoscaphirhynchus hermanni</i></u>             | <u>HER</u>       |
| <u><i>Pseudoscaphirhynchus kaufmanni</i></u>            | <u>KAU</u>       |
| <u><i>Scaphirhynchus platorhynchus</i></u>              | <u>PLA</u>       |
| <u><i>Scaphirhynchus albus suttkusi</i></u>             | <u>ALB</u>       |
| <u><i>Scaphirhynchus suttkus</i></u>                    | <u>SUS</u>       |
| <i>Hybrids: female species code x male species code</i> | <u>YYY x XXX</u> |