

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ



سَلَامَةُ الْمَأْكَلِ وَالشَّرَابِ
مَنْعَةُ الْمَرَضِ وَالْجُرْحِ
تَرْبِيَةُ الْجَسَدِ وَتَحْقِيقُ
تَرْبِيَةِ الْجَسَدِ

National Standard for Carbon Monoxide Treated Fish

مَرْسُومٌ: MFDA-FCSTAN 03-2017

تَمْرِينٌ: مَرْسُومٌ 2017

مَرْسُومٌ: مَرْسُومٌ 2017
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1. גידולי סרטני לא מוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע, "גידולי סרטני לא מוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" (National Standard for Carbon Monoxide Treated Fish) א.ת.ו.
2. גידולי סרטני ממוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע, "גידולי סרטני ממוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" א.ת.ו.
3. גידולי סרטני המיוצרים באמצעות טיפול במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע:
 - "הוראות לשימוש במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" (EC Regulation No. 1881/2006)
 - "הוראות לשימוש במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" (EC Regulation No. 2073/2005)
 - GRAS מוסמכים (GRN) 188, 22 בספטמבר 2005
 - GRAS מוסמכים (GRN) 167, 1 באוקטובר 2005
 - GRAS מוסמכים (GRN) 143, 6 בינואר 2004
 - GRAS מוסמכים (GRN) 83, 29 ביולי 2001
 - "הוראות לשימוש במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" (CODEX STAN 193-1995)
 - "הוראות לשימוש במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" (CAC/RCP 1-1969, Rev, 4-2003)
 - "הוראות לשימוש במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" (MFDA-FCD STAN 4-2014 (Rev. 1 – 2016))
 - "הוראות לשימוש במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" (2007/182/ FS 1)
4. גידולי סרטני המיוצרים באמצעות טיפול במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע, "גידולי סרטני המיוצרים באמצעות טיפול במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" א.ת.ו.
5. גידולי סרטני המיוצרים באמצעות טיפול במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע, "גידולי סרטני המיוצרים באמצעות טיפול במוסמכים לשימוש כמזון לילדים ונשים בהריון או נשים חשופות לזרע" א.ת.ו.

NATIONAL STANDARD FOR CARBON MONOXIDE TREATED FISH

MFDA-FCD STAN 03-2017

1 SCOPE

This standard applies to Carbon Monoxide (CO) treated fresh-chilled fish and fresh-frozen fish intended for human consumption or further processing.

2 DEFINITION

Fresh-chilled fish: fish or fishery products that have received no preserving treatment other than chilling

Fresh-frozen-fish: Fish that have been subjected to a freezing process sufficient to reduce the temperature of the whole product to a level low enough to preserve the inherent quality of the fish, and maintained at this low temperature.

Carbon monoxide (CO) treated fish: Fish that are treated with CO gas in order to retain its 'fresh' red color for a longer period of time or to convert the brown color to a desirable red color.

3 PRODUCT SPECIFICATIONS

- 3.1 Products treated with CO must follow the requirements of the importing country for its specific levels. Where CO level is not declared by the importing country, CO level in final product must not exceed 5.5 mg per pound or 12 mg/kg.
- 3.2 Histamine level of the carbon monoxide treated fish shall not exceed 50ppm, based on the average of the sample unit tested.
- 3.3 The final product of fresh fish shall conform to the color and condition scores of 50 to 30 as described in Table 1 and Table 2 respectively.

Table 1. Point score system for grading fish based on color

A. Color Scores
<p>1. Very good (50)</p> <ul style="list-style-type: none"> a. Meat is translucent, glossy. b. Colors are bright red (reddish) c. Fat is clearly visible
<p>2. Good (40)</p> <ul style="list-style-type: none"> a. Meat is little translucent, and less glossy. b. Colors are less bright red (reddish). c. Fat just visible in outer layers.
<p>3. Medium (30)</p> <ul style="list-style-type: none"> a. Meat is translucent, and has lost its gloss. b. Colors are a little dull, may appear a little brownish. c. No fat visible in outer layers.
<p>4. Poor (20)</p> <ul style="list-style-type: none"> a. The meat is almost opaque, no gloss. b. The color of the meat is distinctively brownish, and dull. c. There is no visible fat in the outer layers; the meat is the same color throughout.
<p>5. Very poor (10)</p> <ul style="list-style-type: none"> a. The meat is opaque. b. The color of the meat is brown, whitish or grey. c. No fat visible in the outer layers.

Table 2. Point score system for grading fish based on condition

B. Condition scores
<p>1. Very good (50)</p> <ul style="list-style-type: none"> a. No apparent defects/damage (no rips, tears, cuts and abrasions) b. Scales intact. c. Fish looks as though it has just been lifted from the water, natural body colors bright. d. Flesh at notch very firm, springs back quickly on pressing lightly with fingertips. No soft spots present on carcass surface.
<p>2. Good (40)</p> <ul style="list-style-type: none"> a. Slight defects/damage; there are a few minor rips, tears, cuts and abrasions. b. Some scales loss. c. Body colors are little dull. d. Flesh at notch springs back slowly on pressing lightly with fingertips. One or two very small soft spots present on carcass surface.
<p>3. Medium (30)</p> <ul style="list-style-type: none"> a. Noticeable defects/damage; a maximum of two rips, tears, cuts, abrasions which could affect the meat yield. b. Small patches of scales lost. c. Body colors dull/dark. d. Flesh at notch less firm, does not spring back fully on pressing lightly with fingertips. Several small spots present on carcass surface.
<p>4. Poor</p> <ul style="list-style-type: none"> a. More than two rips, tears, cuts or abrasions, which could affect the meat yield. b. Large patches of scales lost. c. Body colors dark. d. Bleaching, red staining very apparent. e. Flesh at notch soft, does not spring back at all on pressing lightly with fingertips. Large soft areas on carcass surface.
<p>5. Very poor</p> <ul style="list-style-type: none"> a. Severe body damage, distortion. b. Severe scale loss. c. Body colors dark. d. Severe bleaching, staining. e. Flesh at notch very soft, falling apart. Carcass surface breaking up. f. Meat has evidence of parasite or disease.

3.4 The final product shall conform to the following microbiological quality requirements in Table 3 and Heavy metal levels in Table 4.

Table 3: Microbiological quality requirements

Microorganism	n	c	m	M
Total viable count, cfu/g	5	3	10 ⁵	10 ⁷
<i>Escherichia coli</i> , cfu/g	5	2	1	10
<i>Staphylococcus aureus</i> (coagulase +), cfu/g	5	2	10 ²	10 ³
<i>Salmonella</i> spp. /25g	5	0	0	-
<i>Listeria monocytogenes</i>	5	0	0	-
<i>Vibrio parahaemolyticus</i> , cfu/g	5	2	10 ²	10 ³
<i>Vibrio cholera</i>	5	0	0	-
<i>Clostridium botulinum</i>	5	0	0	-
Visible parasites	5	0	0	-

Legend:

n – number of sample units selected from a lot of food to be examined

m – acceptable level of microorganism determined by a specific method; the values are generally based on levels that are achievable under GMP

M – level which when exceeded in one or more samples would cause the lot to be rejected as this indicates the potential health hazard or imminent spoilage

c – maximum allowable number of defective or marginally acceptable units

Table 4. Acceptable levels of heavy metals in fish

Heavy metal	Maximum level
Lead	0.3 ppm (0.3 mg/kg)
Cadmium	0.1 ppm (0.1 mg/kg)
Mercury	1.0 ppm (1 mg/kg)

4. PACKAGING AND LABELLING

- 4.1. The product shall be packaged in appropriate food grade containers. Packaging can be done individually or in bulk. No instance should mixed species be packed in bulk.
- 4.2. Labeling requirements shall comply with the “National Standard for Labelling Prepackaged Food” (Number: MFDA-FCD STAN 4-2014 (Rev. 1 – 2016))
- 4.3. In addition to the National Standard for Labelling Prepackaged Food the following requirements are mandatory.
 - 4.3.1. The label shall contain text stating:
 - a) “This product is Carbon monoxide (CO) treated”
 - b) “Color is not an accurate indicator of freshness”

5. ESTABLISHMENTS FOR CO-TREATMENT

- 5.1 Establishment shall comply with the General Regulation for Food Establishments and Services (2007/182/ FS 1).
- 5.2 HACCP based system shall be implemented in the establishment.

6. INSPECTION OF ESTABLISHMENTS

- 6.1 Food business operators are obliged to undergo any inspection carried out in accordance with this standard and to assist staff of the competent authority in accomplishing of their tasks.
- 6.2 Audits of production facilities for CO treatment shall be performed not less than twice per year.
- 6.3 The product samples shall be collected for analysis during the inspections.

7. ANALYSIS OF PRODUCTS

- 7.1 In addition to official samples; the following laboratory testing shall be carried out by the processor or producer
 - 7.1.1 Samples representing the export shipments shall be analyzed for Carbon monoxide levels.
 - 7.1.2 Histamine analysis shall be performed on samples representing all CO treated products in accordance with the criteria laid down by the Competent Authority.
 - 7.1.3 Microbiological Analysis shall be performed periodically as laid down by the Competent Authority.

7.2 When requested by the Competent Authority the exporter shall make arrangements for Inspectors to collect samples at the border.

8. PRODUCT CERTIFICATION FOR EXPORT CONSIGNMENTS

8.1 Following documents shall be sent to Competent Authority to declare the CO-treated products in order to obtain Food Stuff certificate for Carbon monoxide treated fish.

- a) Request for Food Stuff certificate
- b) Carbon monoxide treatment declaration by the exporter
- c) Packing List
- d) Histamine analysis report
- e) Carbon monoxide analysis report of the product.

9. PRODUCT RECALL

9.1 The exporter shall ensure effective procedures are in place to deal with any food safety hazard and to enable the complete, rapid recall of any implicated lot of the export product from the border or on market.

9.2 Recalled product(s) shall be held under supervision of concerned official authorities until they are destroyed.