

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
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WORLD
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Agenda Item 5a

CX/PFV 10/25/5
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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES**

**25th Session
Bali, Indonesia,
25 – 29 October 2010**

**PROPOSED DRAFT CODEX STANDARD FOR CANNED MUSHROOMS
(Revision of CODEX STAN 55-1981)
(N01-2009)
(AT STEP 3)**

Codex Members and Observers wishing to submit comments on this proposal, including possible economic implications, should do so in conformity with the *Uniform Procedure for the Elaboration of Codex Standards and Related Texts* (Codex Alimentarius Procedural Manual) before **16 July 2010**. Comments should be addressed:

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BACKGROUND

1. The 24th Session of the Committee on Processed Fruits and Vegetables agreed to initiate new work on the revision of the *Standard for Canned Mushrooms* (CODEX STAN 55-1981) and to include the revised text as an Annex to the *Standard for Certain Canned Vegetables* (CODEX STAN 297-2009). The Committee further agreed to entrust the revision to an electronic Working Group chaired by France in order to present a revised document for consideration by the next session of the Committee.¹ The 32nd Session of the Commission approved the revision of the Standard as new work for the Committee².

2. The Working Group revised the Standard as contained in Annex I with a view to its inclusion as an Annex to the *Standard for Certain Canned Vegetables* upon completion of the revision. Provisions in CODEX STAN 55-1981 that are common to canned vegetables, as laid down in the body of CODEX STAN 297-2009, are not reproduced in Annex I. Further details on the rationale of the revision can be found in Annex II. The List of Participants is presented in Annex III.

¹ ALINORM 09/32/27, paras. 36, 108, 109.

² ALINORM 09/32/REP, App. VI.

3. In addition, the 20th Session of the Committee on Methods of Analysis and Sampling advised commodity committees to consider replacing Codex Methods of Analysis and Sampling (CAC/RMs) with more modern methods as appropriate and to replace the CAC/RM numbers with the original literature references, if possible, and when the original reference was not available, the full text of the method should be included.^{3 4} The Committee is invited to consider whether CAC/RM 44-1972 – Determination of washed drained weight (for canned mushrooms in sauce packs) should be kept as such or be replaced by a more updated method developed by a recognized international organization.

Request for comments

4. Codex Members and Observers are invited to comment on the *proposed draft Codex Standard for Canned Mushrooms (revision of CODEX STAN 55-1981 for inclusion as an Annex to the Standard for Certain Canned Vegetables CODEX STAN 297-2009)* as directed above. In making comments, particular attention should be paid to those provisions in square brackets that may need further discussion by the Committee.

³ ALINORM 97/23, para. 52.

⁴ ALINORM 97/23A, para. 44.

PROPOSED DRAFT ANNEX ON MUSHROOMS
(revision of CODEX STAN 55-1981 for inclusion as an Annex to the
Standard for Certain Canned Vegetables CODEX STAN 297-2009)

In addition to the general provisions applicable to canned vegetables,
the following specific provisions apply:

1. DESCRIPTION

1.1 PRODUCT DEFINITION

The name “mushrooms” stands for the product prepared from fresh mushrooms conforming with the characteristics of any suitable cultivated varieties (cultivars) of the genus *Agaricus (Psalliota)*, including *A. bisporus*, which mushrooms shall be in good condition and after cleaning and trimming shall be sound.

1.2 COLOUR TYPE

1.2.1 White or cream.

1.2.2 Brown.

1.3 STYLES

1.3.1 **Buttons** - Whole mushrooms, with attached stems not exceeding [5 mm] [10/15 mm] in length, measured from the bottom of the veil.

1.3.2 **Sliced Buttons** - Buttons cut into slices 2 mm to 6 mm thick, of which not less than 50% are cut parallel to the axis of the mushroom.

1.3.3 **Whole** - Whole mushrooms, with attached stems cut to a length not exceeding the diameter of the cap, measured from the bottom of the veil.

1.3.4 **Sliced or Sliced Whole** - Mushrooms cut into slices [2] [3] mm to [8] [10] mm thick, of which not less than 50% are cut with regular thickness, parallel to the axis of the mushroom.

1.3.5 **Random Sliced** - Mushrooms cut into slices of varying thickness and in which the slices may deviate materially from cuts approximately parallel to the axis of the mushroom.

1.3.6 **Quarters** - Mushrooms cut into four approximately even parts.

1.3.7 **Stems and Pieces (Cut)** - Pieces of caps and stems of irregular sizes and shapes. The percentage of stems do not exceed 80% [50%].

1.3.8 **Grilling** - Selected open-veiled mushrooms not exceeding 40 mm in diameter, with attached stems not exceeding the diameter of the cap, measured from the bottom of the veil scar.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Other Permitted Ingredients

Juice exuding from the mushrooms.

2.2 QUALITY CRITERIA

2.2.1 Colour

The liquid packing medium in shall be either clear or slightly turbid and light yellow [to light brown in colour].

OR

[The liquid packing medium, in conformity with Section 3.1.3. of the Codex Standard for Certain Canned Vegetables (CODEX STAN 297-2009), should be either clear for white or creams mushrooms or light brown for brown varieties].

2.2.2 Texture

The mushrooms shall be firm and substantially intact.

2.2.3 Defects and Allowances (new or modified provisions into brackets)

[a) Defects in shape - spotted mushrooms: a mushroom is spotted when it presents a dark brown to brown spot of a diameter upper to 3 mm or when it is very speckled (more of 10 blackheads). [5%] [10%] by weight;

b) Traces of casing material: mushroom or piece of mushroom on which remains a part of root and/or soil and/or grit, or any other extraneous matter, whether of mineral or organic origin, of more than 2 mm in diameter attached or not to the mushroom. [4 %] by weight.

c) Open mushroom for “buttons” and “whole mushrooms”: a mushroom is opened if small strips are visible on at least half of the circumference and if the distance between the cap and the stem is upper to 4 mm: 10% by count.

d) Broken mushroom or pieces of mushroom or mushrooms with detached caps or stems - for “buttons”, “whole mushrooms” and “grilling mushrooms”: mushroom which is missing at least the quarter of the cap, caps and only stems: 5%.]

2.2.4 Uniformity

For styles in general, 10%, by count, of the units for the respective style may exceed the specified stem length or size.

3. FOOD ADDITIVES

3.1 ANTIOXIDANTS, PRESERVATIVES OR SEQUESTRANTS

INS No.	Name of the Food Additive	Maximum Level
385	Calcium disodium ethylenediaminetetraacetate	200 mg/kg

4. WEIGHTS AND MEASURES

4.1 MINIMUM DRAINED WEIGHT

The drained weight of the product shall be not less than [53%] [50%] of the weight of distilled water at 20°C which the sealed container will hold when completely filled.

5. LABELLING

5.1 Name of the Product

The following styles shall be included as part of the name or in close proximity to the name: “Buttons”, “Sliced Buttons”, “Whole”, “Sliced” or “Sliced Whole”, “Random Sliced”, “Quarters”, “Stems and Pieces (Cut)”, “Grilling”, as appropriate.

6. METHODS OF ANALYSIS AND SAMPLING**DETERMINATION OF WASHED DRAINED WEIGHT
(CAC/RM 44-1972)**

(For canned mushrooms in sauce packs)

1. DEFINITION

Washed drained weight expressed % m/m solid contents after washing with hot water, as determined by the procedure described below.

2. MATERIALS**2.1 Specifications for circular sieves**

Fine mesh U.S. sieve No. 50¹ 20 cm (8 inches) diameter. The meshes of such sieves are made by so weaving wire as to form square openings of 0.30 mm by 0.30 mm.

3. PROCEDURE

3.1 Weigh the unopened can.

3.2 Open the can and wash the contents on to a tared fine mesh sieve.

3.3 Wash the contents of the sieve under the running cold water and then wash with running hot water until free of adhering substances.

3.4 Spread the mushrooms after washing over the bottom of the sieve and drain for 5 minutes and then weigh.

3.5 Weigh the empty dried can and determine the net contents (or total product weight).

4. CALCULATION AND EXPRESSION OF RESULTS

Calculate the % m/m drained weight on the net contents (or total product weight).

¹ To be replaced by the corresponding ISO sieve when ISO international Standard is available.

EXPLANATORY NOTES ON THE REVISED STANDARD

GENERAL CONSIDERATIONS

The revised Standard as currently proposed is based on CODEX STAN 55-1981 and the comments received from Brazil, Kenya, South Africa and the United States of America. The structure of the sections follows the format of the Annexes to the Standard for Certain Canned Vegetables (CODEX STAN 297-2009) as the revision aims at incorporating the revised text as an Annex to this Standard.

SPECIFIC CONSIDERATIONS

1-1 COMMENTS AND CONSIDERATIONS ON THE EXISTING STANDARD IN RELATION TO THE ANNEX FOR MUSHROOMS

Note: The section numbers correspond to CODEX STAN 55-1981 and do not always match with the revised text in the proposed draft Annex due to the deletion of a number of sections in the original Standard.

Section 1.1: The section was re-organized to make it more in line with the way the scope is presented in the annexes of the Standard for Certain Canned Vegetables.

Sections 1.1(b) and 1.7 – “juice exuding from the mushrooms”

Section 1.1(b): The references to “water” and “other suitable liquid medium, seasonings, and other ingredients” are not necessary in view of the general provisions for packing medium applicable to canned vegetables (see section 2.1.2(a) of the Standard for Certain Canned Vegetables). However, it is necessary to retain the provision “juice exuding from the mushrooms” as this process is regularly used by the industry.

Section 1.7: Some processed fruit and vegetable standards contain provisions for types of pack which usually refer to “solid pack” (without or [very] little packing medium) or “regular pack” (with packing medium) as recognized in the Guidelines for Packing Media for Canned Fruits (CAC/GL 51-2003). The way the section is described relates more to the type of packing medium and not the type of pack. This may reflect common industry and/or trading practices in canned mushrooms at the time of the adoption of the Standard (1981). The general provisions for packing media applicable to canned vegetables, as set out in section 3.1.3 of the Standard for Certain Canned Vegetables, can apply to canned mushrooms, consequently, the types of “packing media” listed in sections 1.7.2 to 1.7.7 were deleted while retaining the provision “juice exuding from the mushrooms”.

In view of the above, the provision “juice exuding from the mushrooms” was relocated under a new section 2.1.1 (see *Other Permitted Ingredients* of the proposed draft Annex).

Section 1.1(c): This provision was deleted as already covered by the general provisions applicable to canned vegetables (see section 2.1.3 of the Standard for Certain Canned Vegetables).

Section 1.2: This section was deleted as already included in section 1.1 of the proposed draft Annex.

Section 1.3: This section remains unchanged (see section 1.2 of the proposed draft Annex).

Section 1.4: Some provisions were changed through sections 1.4.1 to 1.4.8 (see section 1.3 of the proposed draft Annex). A number of figures were bracketed for further discussion by the Committee.

Sections 1.4.9 and 1.5: These sections were deleted as already covered by the general provisions for other styles applicable to canned vegetables provide for in section 2.2.1 of the Standard for Certain Canned Vegetables.

Section 1.6: This provision was transferred to the Section on Essential Composition and Quality Factors as more appropriate (see new section 2.2.4 *Uniformity* in the proposed draft Annex).

Section 2.2: Provisions for colour (2.2.1.1) and flavour (2.2.2) were removed as already covered by section 3.2.1 of the Standard for Certain Canned Vegetables. However, it is important to maintain the provision in section 2.2.1.2 for the packing medium, as an abnormal colour of the liquid medium is an indication of fraud (see section 2.2.1 of the proposed draft Annex).

Section 2.2.3: The first paragraph is maintained, because the firmness and the intactness are important characteristics for this product. Mushrooms are fragile, even if they are fresh, and if the raw material is already damaged, this default is found again in the canned product (see section 2.2.2. in the proposed draft Annex).

Section 2.2.4: This section was revised by including the last two paragraphs from section 2.2.3 as more related to defects and their tolerances. A new section on definitions and allowances were included to account for defects in shape, traces of casing material, open mushroom, broken mushroom (see *new section 2.2.3 Definition of Defects and Allowances* of the proposed draft Annex).

Sections 2.2.5 and 2.2.6: These sections were deleted as already covered by the general provisions applicable to canned vegetables (see sections 3.3 and 3.4 of the Standard for Certain Canned Vegetables).

Section 3: This Section should be revised and simplified in light of the general provisions for additives applicable to canned vegetables (section 4 of the Standard for Certain Canned Vegetables) and the provisions in the General Standard for Food Additives (CODEX STAN 192-1995) in regard to Food Category 04.2.2.4 *canned or bottled (pasteurized) or retort pouch vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweeds*. As a general rule, the relevant sections of the Procedural Manual, in particular the food additive provisions in the relations between Commodity Committees and General Subject Committees and the Format for Codex Commodity Standards should be taken into account when proposing additives for a given product.

The following adjustments were made in this Section in light of the above paragraph:

- Provisions for ascorbic acid, citric acid and monosodium glutamate if used as acidity regulators are already listed in Table 3 of the GSFA and therefore covered by the statement in Section 4.1 of the Standard for Certain Canned Vegetables. As a result, they are not reproduced in the proposed draft Annex.
- Calcium disodium ethylene diamine tetraacetates (EDTA) is used for Food Category 04.2.2.4 of the GSFA at 365 mg/kg. The Committee needs to determine:
 - the need for EDTA as an additive specific to canned mushrooms as not covered by the general provisions of the Standard for Certain Canned Vegetables,
 - the technological function, i.e. antioxidant, preservative or sequestrant, and
 - the maximum level to perform the technological function. Safe maximum levels for use have already been set in the GSFA, however, the Committee may propose a more adequate level from the point of view of the technological need.
- Vegetable gums, pectins, alginates and modified starches are generally used as stabilizers, thickeners or emulsifiers. These additives are not necessary for canned mushrooms in packing media as defined by the Standard for Certain Canned Vegetables. In addition, starches and alginates could be used for the purpose of fraud.
- Caramel colours (for use in sauces) are not necessary for canned mushrooms in packing media as defined by the Standard for Certain Canned Vegetables.

Sections 4 and 5: Deleted as already covered by the general provisions applicable to canned vegetables as set out in sections 5 and 6 of the Standard for Certain Canned Vegetables.

Section 6: Provisions from sections 6.1.1 to 6.1.3 and 6.1.4.3 were deleted as already covered by the general provisions applicable to canned vegetables as set out in sections 7.1.1 – 7.1.3 and 7.1.4.2 of the Standard for Certain Canned Vegetables. Section 6.1.4 on minimum drained weight was revised in light of the revision of the section on types of pack (packing media) (see section 4.1 of the proposed draft Annex).

Section 7: Sections 7.1.2.2 and 7.1.2.3 were deleted as already covered by the general provisions applicable to canned vegetables as set out in sections 8.2.3 and 8.2.5 of the the Standard for Certain Canned Vegetables. Section 7.1.2.1 was maintained as specific to canned mushrooms (see section 5 of the proposed draft Annex).

Section 7.2: This section was deleted as already covered by the general provisions for prepackaged foods as laid down in section 4.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985).

Section 8: The Committee may identify additional methods for analysis for specific provisions applying to canned mushrooms for inclusion in the Annex. Otherwise the relevant provisions in Section 9 of the Standard for Certain Canned Vegetables apply. The Committee also needs to determine the appropriateness of CAC/RM 44-1972 vis-à-vis the availability of more updated methods developed by relevant international organizations.

1-2 COMMENTS RECEIVED FROM BRAZIL, KENYA, SOUTH AFRICA AND THAILAND**1 Scope**

The current scope covers only cultivated varieties of the genus *Agaricus* (*Psalliota*) including *A. bisporus*. A country proposes to extend the scope to other cultivated varieties as *Lentinula edodes*, *Volvarela Volvacea*, *Pleurotus ostreatus*.

Comments:

1 - The aim of the Working Group is to introduce the existing provisions of the Standard for Canned Mushrooms into an additional annex of the Standard for Certain Canned Vegetables. Therefore the scope would not be changed. If yes, the opinion of the Committee would be necessary.

2 - In addition, some characteristics of *Agaricus* mushrooms are specific (colour, styles, defects...) and are not adapted to other cultivated mushrooms.

1.4 Styles

1.3.1 Buttons: A country considered that the length of 5 mm maximum was not sufficient and should be 10 or 15 mm because the stem keeps on growing when the mushrooms are chilled for storage after cutting.

1.3.4 Sliced or sliced whole: A country considered that 3mm to 10mm thick were more adapted. Another one felt that 10mm was a little too thick for smaller mushrooms but was acceptable for larger mushrooms.

1.4.7 Stems and pieces (cut): A country considered that the percentage of stems should not exceed 50%, otherwise the whole consignment would be dominated with mushrooms stems.

2.1 Composition

- A country requested to introduce the ingredients of the current Standard for Canned Mushrooms, as butter, butter sauce, cream sauce, etc.
- Another country considered that the provision “Juice exuding from the mushrooms” in section 2.1.1 was already included in section 3.1.3 of the Standard for Certain Canned Vegetables.

Comments:

1 - The Standard for Certain Canned Vegetables only includes packing media and others ingredients. The standardization of canned vegetables applies, as for the products in the annexes, to those which are subject to an international trade (canned mushrooms with sauce added are only traded in a local area).

2- Juice exuding from the mushrooms is little different than vegetable juice. It is the natural juice recovered during the process.

2.2 Quality Criteria

- A country felt that the colour of the packing media depended on mushrooms varieties and the maturity. Therefore, it was proposed to introduce a provision in accordance with this specificity:
“the liquid medium, in conformity with paragraph 3.1.3 of the Standard for Certain Canned Vegetables, should be either clear for white or creams mushrooms or light brown for brown varieties”.
- Another country felt that the provisions for colour, flavour and texture were already covered by the Standard for Certain Canned Vegetables.

2.2.2 A country proposed to introduce “substantially intact” in paragraph 1 (texture).

Comment

This quality criterion applies to canned product after treatment, whereas paragraph 1 applies to raw material. This characteristic is an important criterion for the freshness of the mushroom (raw material) and of the good process applied to the raw material.

2.2.4 Defects and allowances

(a) Defects in shape: A country proposed to have a percentage of 5%.

4. Weights and Measures**4.1 Minimum Drained Weight**

- A country considered that the current wording lead to misunderstanding and preferred the wording of the sweet corn standard.

Comment:

This wording is used in the annexes of the Standard for Certain Canned Vegetables.

- A country requested a minimum drained weight of 50% instead of 53% for mushrooms packed in brine (and 40% for mushrooms with other ingredients).

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LISTA DE PARTICIPANTES**

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