

CODEX STANDARD FOR CANNED MUSHROOMS¹**CODEX STAN 55-1981****1. DESCRIPTION****1.1 Product definition**

Canned mushrooms is the product:

- (a) prepared from fresh mushrooms conforming with the characteristics of 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;
- (b) packed with water and/or juice exuding from the mushrooms or other suitable liquid medium, seasonings, and other ingredients, appropriate to the product; and
- (c) processed by heat in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

1.2 Varietal Type

Any suitable variety (cultivar) of the genus *Agaricus (Psalliota)*, including *A. bisporus*, may be used.

1.3 Colour Type

1.3.1 White or cream.

1.3.2 Brown.

1.4 Styles

1.4.1 **Buttons** - Whole mushrooms, with attached stems not exceeding 5 mm in length, measured from the bottom of the veil.

1.4.2 **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.

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

1.4.4 **Sliced or Sliced Whole** - Mushrooms cut into slices 2 mm to 8 mm thick, of which not less than 50% are cut parallel to the axis of the mushroom.

1.4.5 **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.

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

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Formerly CAC/RS 55-1972 as amended.

1.4.7 **Stems and Pieces (Cut)** - Pieces of caps and stems of irregular sizes and shapes.

1.4.8 **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.

1.4.9 **Other Optional Styles** - Other forms not specifically described in 1.4.1 through 1.4.8 above such as diced or chopped which are appropriately described on the label.

1.5 **Other Styles**

Any other presentation of the product shall be permitted provided that the product:

- (a) is sufficiently distinctive from other forms of presentation laid down in this standard;
- (b) meets all relevant requirements of this standard, including requirements relating to limitations on defects, drained weight, and any other requirements in this standard which are applicable to that style in the standard which most closely resembles the style or styles intended to be provided for under this provision;
- (c) is adequately described on the label to avoid confusing or misleading the consumer.

1.6 **Tolerance for the Styles "Buttons" and "Whole"**

10%, by count, of the units for the respective style may exceed the specified stem length.

1.7 **Types of Pack**

1.7.1 Regular or natural pack - in water, brine, and/or juice exuding from the mushrooms.

1.7.2 In butter or butter sauce.

1.7.3 In cream sauce.

1.7.4 In sauce other than a butter or cream sauce.

1.7.5 In vinegar.

1.7.6 In oil.

1.7.7 In wine.

2. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

2.1 **Other Ingredients**

As appropriate for the respective type of pack:

2.1.1 Water, salt, spices, seasonings, soyabean sauce, vinegar, wine.

2.1.2 Sucrose, invert sugar syrup, dextrose, glucose syrup, dried glucose syrup.

2.1.3 Butter or other edible animal or vegetable fats or oils, including olive oil; milk, milk powder,

or cream.

If butter is added, it must amount to not less than 3% m/m of the final product.

2.1.4 Starches - natural (native), physically or enzymatically modified - only when butter or other edible animal or vegetable fats or oils are ingredients.

2.1.5 Wheat or corn flour.

2.2 **Quality Criteria**

2.2.1 **Colour**

2.2.1.1 The mushroom portion of the product shall have normal colour characteristics of the variety of the canned mushrooms. Canned mushrooms of special types and containing special permitted ingredients shall be considered of characteristic colour when there is no abnormal discolouration for the respective ingredients used.

2.2.1.2 The liquid medium in "Regular or Natural Pack" shall be either clear or slightly turbid and yellow to light brown in colour.

2.2.2 **Flavour**

The mushrooms shall have a normal flavour and odour free from flavours or odours foreign to the product.

Canned mushrooms with special ingredients or sauces shall have the flavour characteristic of that imparted by the mushrooms and the other substances used.

2.2.3 **Texture and Character**

The mushrooms in the "Regular or Natural Pack" shall be firm and substantially intact.

In the styles of "Buttons" and "Whole" mushrooms, not more than 10% by count of the mushrooms may have caps which show total or complete breakage of the veil.

In the styles of "Buttons" and "Whole" and "Grilling" mushrooms 5% by count of the mushroom units may be detached caps or stems.

2.2.4 **Defects**

The canned mushrooms (a) may contain no more than a trace of soil, sand, grit or any other extraneous matter, whether of mineral or organic origin; and (b) shall be reasonably free from spotted or otherwise damaged mushrooms.

2.2.5 **Classification of "defectives"**

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-sections 2.2.1 through 2.2.4 shall be considered a "defective".

2.2.6 **Acceptance**

A lot will be considered as meeting the applicable quality requirements referred to in sub-

section 2.2.5, when the number of "defectives" as defined in sub-section 2.2.5, does not exceed the acceptance number (c) of the appropriate sampling plan in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (1969) (AQL-6.5) (CAC/RM 42-1969) (see Codex Alimentarius Volume 13).

3. FOOD ADDITIVES

		Maximum Level
3.1	Ascorbic acid	Limited by GMP
3.2	Citric acid	Limited by GMP
3.3	Monosodium glutamate	Limited by GMP
3.4	Caramel colours for use in sauces	Limited by GMP
3.5	Calcium disodium ethylenediaminetetraacetate (CaNa ₂ EDTA)	200 mg/kg
3.6	Vegetable gums	
3.6.1	Arabic gum)	
3.6.2	Carrageenan)	
3.6.3	Guar gum)	
)	
3.7	Pectins)	
)	
3.8	Alginates (Ca, K, Na, NH ₄))	
3.8.1	Propylene glycol alginate)	
)	¹ 1% m/m of the additives
	specified	
3.9	Modified starches)	under 3.6 to 3.9 inclusive,
	singly	
3.9.1	Acid-treated starches)	or in combination.
3.9.2	Alkali-treated starches)	
3.9.3	Bleached starches)	
3.9.4	Distarch phosphate (sodium trimetaphosphate treated))	
3.9.5	Distarch phosphate, phosphated)	
3.9.6	Monostarch phosphate)	
3.9.7	Starch acetate)	
3.9.8	Starch, hydroxypropyl)	
3.9.9	Distarch, adipate, acetylated)	
3.9.10	Distarch glycerol, hydroxypropyl)	
3.9.11	Oxidized starches)	
3.9.12	Distarch phosphate (phosphorous oxychloride treated))	
3.9.13	Distarch phosphate, acetylated)	
3.9.14	Distarch glycerol, acetylated)	
3.9.15	Distarch glycerol)	

¹ May be used only when butter or other edible animal or vegetable fats or oils are ingredients.

4. CONTAMINANTS

Maximum level

Lead (Pb)	1 mg/kg
Tin (Sn)	250 mg/kg calculated as Sn

5. HYGIENE

5.1 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 Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2 (1985) Codex Alimentarius Volume 1), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product.

5.2 To the extent possible in Good Manufacturing Practice, the product shall be free from objectionable matter.

5.3 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

5.4 The product shall have received a processing treatment sufficient to destroy all spores of *Clostridium botulinum*.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The container shall be well filled with mushrooms and the product (including packing medium) shall occupy not less than 90% of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

6.1.2 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of sub-section 5.1.1 shall be considered a "defective".

6.1.3 Acceptance

A lot will be considered as meeting the requirement of sub-section 6.1.1 when the number of "defectives", as defined in sub-section 6.1.2, does not exceed the acceptance number (c) of the appropriate sampling plan in the Joint FAO/WHO Codex Alimentarius Sampling Plans for

Prepackaged Foods (1969) (AQL-6.5) (CAC/RM 42-1969) (see Codex Alimentarius Volume 13).

6.1.4 **Minimum Drained Weight**

6.1.4.1 **Regular packs, vinegar, wine, oil packs**

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

6.1.4.2 **Sauce packs**

The drained mushroom portion, after washing off the sauce or liquid, shall be not less than 27.5% of the total product weight.

6.1.4.3 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers examined is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

7. **LABELLING**

In addition to the requirements of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985 (Rev. 1-1991) Codex Alimentarius Volume 1), the following specific provisions apply:

7.1 **The Name of the Food**

7.1.1 The name of the product shall be "Mushrooms".

7.1.2 The following shall be included as part of the name or in close proximity to the name:

7.1.2.1 The style -

"Buttons", "Sliced Buttons". "Whole", "Sliced" or "Sliced Whole", "Random Sliced", "Quarters", "Stems and Pieces (Cut)", "Grilling", "Diced" and "Chopped", as appropriate.

7.1.2.2 **Other Styles** - If the product is produced in accordance with the other styles provision (sub-section 1.5), the label shall contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.

7.1.2.3 A declaration of any special sauce and/or seasoning or flavouring which characterizes the product, e.g. "With X" or "In X" when appropriate. If the declaration is "With (or "In") Butter Sauce", the fat used shall only be butter fat.

7.2 **Net contents**

The net contents shall be declared by weight in either the metric ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the product is sold, except that mushrooms packed in regular or natural packs as described in sub-section 1.6.1 shall carry a declaration of drained weight of the food.

8. **METHODS OF ANALYSIS AND SAMPLING**

See Codex Alimentarius Volume 13.