

QUALITY MANAGEMENT SYSTEM MANUAL
Technical specification of Frozen cauliflower Grade A

- PRODUCT NAME:** Frozen cauliflower (*Brassica oleracea* var. *Botrytis*)
- PRODUCT DESCRIPTION:** Natural product made from the species “*Brassica oleracea* var. *Botrytis*” fresh, healthy and matured which has been selected, cleaned, washed, blanched (ascorbic acid), cooled and frozen in IQF until it reaches a temperature of -18 °C.
- INGREDIENT LIST:** Cauliflower
- SIZE:** Florets of dimensions like indicated in the table.

Diameter:	Maximum 5% by weight < 15 mm Minimum 95% by weight 15 – 50 mm
Length:	Maximum 5% by weight < 20 mm Minimum 95% by weight 20 – 65 mm

Defects	Limit
Size of cauliflower of diameter < 15mm and length < 20mm.	5% by weight
Size of cauliflower of diameter x length same or less to: 10x10 mm	0%*
Diameter of stem of cauliflower: > 15mm	0%*

*See image 4.

- ALLERGEN:** Doesn't contain any allergen
- IRRADIATION:** No irradiation
- GMO:** Doesn't contain any GMO

8. PHYSICOCHEMICAL CHARACTERISTICS

CRITICAL VARIABLE ⁽¹⁾	ATTRIBUTE	LIMIT	METHOD	RATE OF ANALYSIS	SUPPLIER CERTIFICATE
X	Compactness ⁽¹⁾	Firm	Visual and touch	Each lot	Each lot
X	Mechanical damage	Absence	Visual	Each lot	Each lot
X	Foreign nontoxic vegetable material or parts of cauliflower ⁽²⁾	Absence	Visual	Each lot	Each lot
X	Brown color/yellow florets/discolor ⁽³⁾	≤ 3%	Visual	Each lot	Each lot

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X	Putrescence	Absence	Visual	Each lot	Each lot
X	Molds/Fungi	Absence	Visual	Each lot	Each lot
X	Insects and larvae	Absence	Visual	Each lot	Each lot

Microbial agent	Category	Class	n	c	Each lot	
					m	M
Aerobic mesophilic	1	3	5	3	10 ⁴	10 ⁶
Escherichia coli	5	3	5	2	10	10 ²
Salmonella sp.	10	2	5	0	Absence/25 g	----
Listeria monocytogenes (*)	10	2	5	0	Absence/25 g	----

(*) Only for fruits and vegetables from land (except for pre - cooked).

- (1) See figure 1. Cauliflower compactness. It is ideal that the heads are compact. Soft and slightly soft heads can be accepted, provided they are not withered, stained, with color change, putrescence or fat.
- (2) See figure 2. Foreign nontoxic vegetable material or parts of cauliflower
- (3) See figure 3. Brown color/yellow florets/dicolor

9. SENSORY CHARACTERISTICS

CRITICAL VARIABLE ⁽¹⁾	ATTRIBUTE	LIMIT	RATE OF ANALYSIS	SUPPLIER CERTIFICATE
X	Appearance ⁽⁴⁾	Frozen, rounded, very fleshy and medium size vegetable	Each lot	Each lot
X	Color ⁽⁴⁾	Homogenous white color	Each lot	Each lot
X	Odor ⁽⁴⁾	Intense cauliflower	Each lot	Each lot
X	Texture ⁽⁴⁾	Very hard	Each lot	Each lot
X	Flavor ⁽⁴⁾	Intense cauliflower	Each lot	Each lot

10. MICROBIOLOGICAL QUALITY

- **Source:** RM 591-2008 MINSA. XIV.2 SEMIPROCESSED FRESH FRUIT AND VEGETABLES (WASHED, DISINFECTED, FELTED, CUTTED AND / OR PRECUTED) REFRIGERATED AND / OR FROZEN.

11. PESTICIDE RESIDUES

It must meet the following requirements:

HEAVY METAL	LIMIT (mg/Kg)
Ciflutrin/beta-ciflutrin	2
Clorpirifos	0.05

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Dimetoato	0.2
Fluopyram	0.09
Flupyradifurone	6
Imidacloprid	0.5
Indoxacarb	0.2
Metalaxilo	0.5
Metiocarb	0.1
Oxathiapiprolin	0.3
Oxidemetón-Metilo	0.01
Permetrin	0.5
Propamocarb	2
Sulfoxaflor	0.04
Tebuconazol	0.05
Teflubenzuron	0.01

Source: Codex Alimentarius

The pesticides used must be in relation to those approved by the Ministry of Health. Before the first purchase, a sample of the product must be requested to be sent to the pesticide analysis service by a certified external laboratory, only in case of obtaining compliant results can the purchase process be continued.

The supplier must issue a guarantee certificate for each lot and submit a report of the results issued by an external certified laboratory on a quarterly basis. The verification by Danper Trujillo SAC, will be carried out randomly to the lots that enter, applying an annual sampling plan

12. HEAVY METAL CONTENTS

It must meet the following requirements

HEAVY METAL	LIMIT (mg/Kg)	RATE OF ANALYSIS	SUPPLIER CERTIFICATE
Plomo	0.30	Each lot	Each lot
Cadmio	0.05	Each lot	Each lot

- **Source:** Codex Alimentarius for pollutants and toxins present in food and feed CODEX STAN 193-1995. Brasicáceas.

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The supplier must issue a certificate of analysis along with the report there of randomly and annually.

13. TRANSPORT

The transport vehicle must be free of foreign material that can generate some kind of cross contamination or physical damage to the product and must not show signs of infestation. It must be clean and tightly closed to prevent any foreign material from coming into contact with the product.

The bin must be on pallets in good condition, not directly on the transport floor.

14. PACKING AND PACKAING

It must be packed in clean plastic boxes and free of foreign matter, which must ensure the protection of the product against the action of external agents that may alter its chemical or physical characteristics; Resist handling, transport and storage conditions. It is important to mention that the amount of product to be placed inside the bine should be such that stacking the box does not damage the product.

Each pallet of bine must be correctly labeled with: Commercial name of the product, net content, and identification of the manufacturer, city and country of origin, identification of the lot, date of minimum duration or expiration date.

The information should appear clear, well visible, indelible and easy to read characters in normal circumstances of use.

15. STORAGE CONDITIONS

Store in a clean place with ideal storage conditions with temperatures from -20 ° C to -22 ° C. Once defreeze, do not freeze again.

16. SHELF LIFE

Maximum 30 months at a temperature of -20 ° C to -22 ° C, in unopened packaging. Once opened consider 12 months of life at a temperature of -20 ° C to -22 ° C.

17. FIGURES

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Figure 1. Allowed size of cauliflower.



Figure 2. Allowed diameter of cauliflower.

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Figure 3. Allowed length of cauliflower.

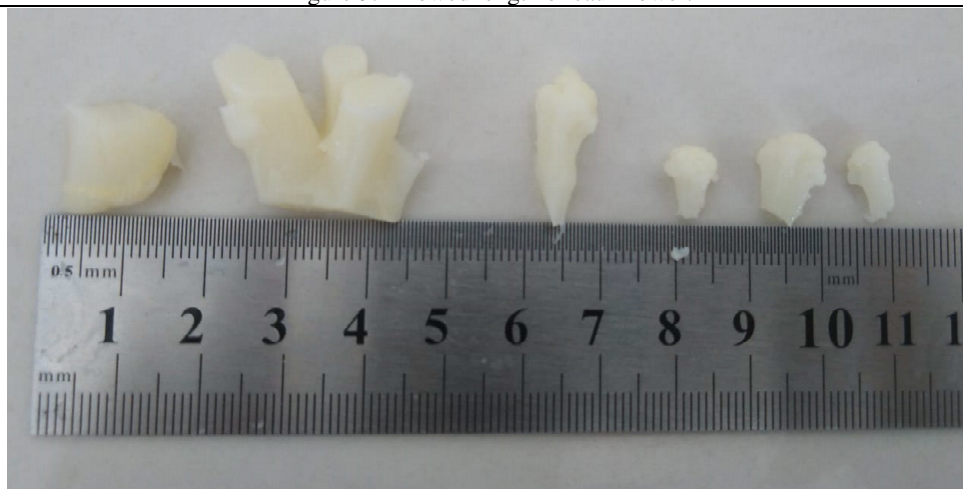


Figure 4. Defects not allowed in size of cauliflower.

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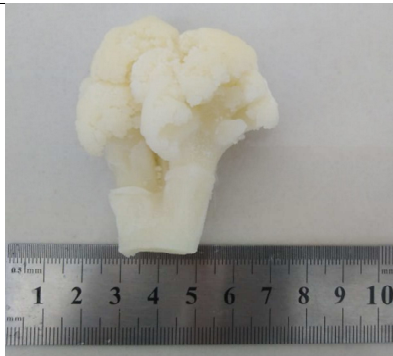


Figure 5. Defects not allowed: diameter of stem of cauliflower > 15mm



Figure 6. Foreign nontoxic vegetable material or parts of cauliflower



Figure 7. Brown color/yellow florets/dicolor