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**Fresh watermelon — Specification**



**Table of contents**

1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Provisions concerning quality .....	2
4.1	Minimum requirements .....	2
4.2	Minimum maturity requirements .....	3
4.3	Classification .....	3
5	Sizing .....	4
6	Tolerances .....	4
7	Presentation .....	4
7.1	Uniformity .....	4
7.2	Packaging .....	5
8	Contaminants .....	5
8.1	Heavy metals .....	5
8.2	Pesticide residues .....	5
9	Hygiene .....	5
10	Labelling .....	5
10.1	Consumer packages .....	5
10.2	Non-retail containers .....	6
11	Methods of sampling .....	6
	Bibliography .....	7

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This Second edition cancels and replaces the first edition (ARS 903:2018), which has been technically revised

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## Fresh watermelon — Specification

### 1 Scope

This Draft African standard applies to watermelons of varieties (cultivars) grown from *Citrullus lanatus* (Thunberg) Matsumara & Nakai (also called *C. vulgaris*) to be supplied fresh to the consumer, watermelons for industrial processing being excluded

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CODEX STAN 193:1995 (Rev.5:2009), *General Standard for Contaminants and Toxins in Foods*

CODEX STAN 228:2001 (Rev.1:2004), *General methods of analysis for contaminants*

CODEX STAN 230:2001 (Rev.1:2003), *Maximum levels for lead*

CAC/RCP 1, *Recommended International Code of Practice — General Principles of Food Hygiene*

CAC/RCP 44, *Recommended International Code of Practice for the Packaging and Transport of Tropical Fresh Fruit and Vegetables*

CAC/RCP 53, *Code of Hygienic Practice for Fresh Fruits, and Vegetables*

ARS 53, *General principles of food hygiene — Code of practice*

ARS 56, *Pre-packaged foods — Labelling*

CODEX STAN 193:1995 (Rev.5:2009), *General Standard for Contaminants and Toxins in Foods*

ISO 874, *Fresh fruits, and vegetables — Sampling*

### 3 Terms and definitions

For the purpose of this standard the following terms and definitions apply.

#### 3.1 mature

the watermelon has reached the stage of development at which the flesh is at least fairly sweet and shows characteristic colour of a mature watermelon for the variety.

#### 3.2 overripe

a watermelon has reached such an advanced stage of maturity that the flesh becomes mealy, less juicy or has an insipid taste.

#### 3.3

# **DARS 903:2024**

## **seedless watermelons**

are watermelons which have 10 or less mature seeds, not to include pips/caplets, on the face of the melon which has been cut into four equal sections (one lengthwise cut and one crosswise cut)

### **3.4 damage**

any specific defect described in Annex A, or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects which materially detracts from the appearance, or the edible or marketing quality of the watermelons

### **3.5 serious damage**

any specific defect described in Annex A, or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the watermelons

### **3.6 permanent defects**

defects which are not subject to change during shipment or storage; including, but not limited to scars, hollow heart, or immature watermelons.

### **3.7 condition defects**

defects which are subject to change during shipment or storage, including but not limited to decay, Anthracnose, or sunburn

## **4 Provisions concerning quality**

### **4.1 Minimum requirements**

**4.1.1** In all classes, subject to the special provisions for each class and the tolerances allowed, the watermelons shall be:

- a) Intact;
- b) sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- c) clean, practically free of any visible foreign matter;
- d) practically free from pests;
- e) practically free from damage caused by pests;
- f) firm;
- g) not split;
- h) free of abnormal external moisture; and
- i) free of any foreign smell and/or taste.

**4.1.2** The development and condition of the watermelons shall be such as to enable them:

- a) to withstand transport and handling, and
- b) to arrive in satisfactory condition at the place of destination.

## **4.2 Minimum maturity requirements**

The watermelons shall be sufficiently developed and display satisfactory ripeness. The colour and taste of the flesh should conform to a sufficient state of ripeness.

In order to satisfy this requirement, the refractometric index of the pulp measured at the middle point of the fruit flesh at the equatorial section shall be greater than or equal to 8° Brix.

## **4.3 Classification**

The watermelons are classified in three classes defined below:

### **4.3.1 “Extra” Class**

Watermelons in this class must be of superior quality. They must be characteristic of the variety. The stem of the watermelon must not exceed 5 cm in length. They must be free from defects, except for very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package. A pale colouring of the watermelon which has been in contact with the ground during the period of growth is not regarded as a defect.

### **4.3.2 Class I**

Watermelons in this class shall be of good quality. They shall be characteristic of the variety. The stem of the watermelon must not exceed 5 cm in length.

The following slight defects, however, may be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a) a slight defect in shape;
- b) a slight defect in colouring of the rind; a pale colouring of the watermelon which has been in contact with the ground during the period of growth is not regarded as a defect;
- c) slight healed superficial cracks
- d) slight skin defects due to rubbing or handling of which the total area affected shall not exceed one-sixteenth of the surface of the fruit.

### **4.3.3 Class II**

This class includes watermelons which do not satisfy for inclusion in the higher Classes, but satisfy the minimum requirements specified above.

The following defects may be allowed provided the watermelons retain their essential characteristics as regards the quality, the keeping quality, and presentation:

- a) defects in shape;
- b) defects in colouring of the rind; a pale colouring of the watermelon which has been in contact with the ground during the period of growth is not regarded as a defect;
- c) healed superficial cracks;

# DARS 903:2024

- d) skin defects due to rubbing or handling or to damage by pests or diseases of which the total area affected shall not exceed one-eighth of the surface of the fruit; and
- e) slight bruising.

## 5 Sizing

Size is determined by the weight per unit. To ensure uniformity in size, the range in size between produce in the same package shall not exceed 2 kg or 3.5 kg if the lightest unit exceeds 6 kg. This uniformity in weight is not compulsory for watermelons presented in bulk in pallet boxes/bins or in the transport vehicle.

## 6 Tolerances

Tolerances in respect of quality and size shall be allowed in each package, or in each lot for produce presented in bulk, for produce not satisfying the requirements of the class indicated.

### 6.1 Quality tolerances

#### 6.1.1 “Extra” Class

A total tolerance of 5 per cent, by number or weight, of watermelons not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not more than 0.5 per cent in total may consist of produce satisfying the requirements of Class II quality.

#### 6.1.2 Class I

A total tolerance of 10 per cent, by number or weight, of watermelons not satisfying the requirements of the class but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.

#### 6.1.3 Class II

A total tolerance of 10 per cent, by number or weight, of watermelons satisfying neither the requirements of the class nor the minimum requirements are allowed. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay.

### 6.2 Size tolerances

For all classes (if sized): a total tolerance of 10 per cent, by number or weight, of watermelons not satisfying the requirements as regards sizing is allowed.

## 7 Presentation

### 7.1 Uniformity

The contents of each package (or lot for produce presented in bulk in the transport vehicle) shall be uniform and contain only watermelons of the same origin, variety, quality and size (if sized). In addition, in Classes “Extra” and I, the shape and colour of the rind of the watermelons shall be uniform. The visible part of the contents of the package (or lot for produce presented in bulk in the transport vehicle) must be representative of the entire contents.



## **7.2 Packaging**

The watermelons shall be packed in such a way as to protect the produce properly. The materials used inside the package, shall be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials particularly paper or stamps, bearing trade specifications is allowed provided the printing or labelling has been done with non-toxic ink or glue.

Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects. Information lasered on single fruit should not lead to flesh or skin defects.

Packages (or lots for produce presented in bulk in the transport vehicle) shall be free of all foreign matter.

Watermelons transported in bulk in the transport vehicle shall be separated from the floor and walls of the vehicles by a suitable protective material, which shall be new and clean and not liable to transfer any abnormal taste or smell to the fruit.

## **8 Contaminants**

### **8.1 Heavy metals**

Watermelons shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission for this commodity. (CODEX STAN 193).

### **8.2 Pesticide residues**

Watermelons shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

## **9 Hygiene**

It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of ARS 53, CAC/RCP 53, and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

## **10 Labelling**

### **10.1 Consumer packages**

In addition to the requirements of ARS 56, the following specific provisions apply:

#### **10.1.1 Nature of produce**

- a) "Watermelons" if the contents are not visible from the outside,
- b) Name of the variety (optional),
- c) Colour of flesh if not red,
- d) "Seedless", where appropriate<sup>1</sup>.

## 10.2 Non-retail containers

Each package<sup>2</sup> shall bear the following particulars in letters grouped on the same side, legibly and indelibly marked, and visible from the outside.

For watermelons transported in bulk (direct loading into a transport vehicle) these particulars shall appear on a document accompanying the goods, and attached in a visible position inside the transport vehicle. For this type of presentation, the indication of the size, the net weight or the number of units is not compulsory.

### 10.2.1 Identification

The exporter, packer and/or dispatcher shall be identified by name and physical address (e.g., street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority.<sup>3</sup>

### 10.2.2 Nature of produce

- a) "Watermelons" if the contents are not visible from the outside,
- b) Name of the variety (optional),
- c) Colour of flesh if not red, and
- d) "Seedless", where appropriate.

### 10.2.3 Origin of produce

Country of origin.

### 10.2.4 Commercial specifications

- a) Class;
- b) Size (if sized) expressed in minimum and maximum weight;
- c) Net weight or number of units.

### 10.2.5 Official control mark (optional)

## 11 Methods of sampling

Sampling shall be done in accordance with ISO 874.

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<sup>1</sup> Seedless watermelons may contain underdeveloped seeds and occasional developed seeds.

<sup>2</sup> Package units of produce prepacked for direct sale to the consumer shall not be subject to these marking provisions but shall conform to the national requirements. However, the markings referred to shall in any event be shown on the transport packaging containing such package units.

<sup>3</sup> The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference "packer and/or dispatcher (or equivalent abbreviations)" has to be indicated in close connection with the code mark, and the code mark should be preceded by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

**Bibliography**

UNECE STANDARD FFV-37 concerning the marketing and commercial quality control of WATERMELONS 2021 EDITION



