



## DRAFT TANZANIA STANDARD

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Table grapes – specification

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## 0 foreword

Table grapes are berry fruits developed in clusters with each berry attached to the bunch stem of vine. Often, they are seedless with thickened pulp, thickened skins and less acidic. They are rich in vitamins (C and K), minerals and antioxidants. They are consumed while fresh as opposed to other grapes varieties that are grown for wine and juice or drying into raisins.

This Tanzania Standard was prepared in order to provide guidance to table grapes producers and traders as well as regulators, and to ensure safety and quality of the produce.

In the preparation of this Tanzania Standard considerable assistance was derived from: Codex Alimentarius CXS 255-2007 *Standard for table grapes*.

In reporting the results of a test or analysis made in accordance with this standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4 (see clause 2).

## 1 Scope

This standard specifies quality and safety requirements, methods of sampling and test of table grapes grown from *Vitis vinifera* L., of the *Vitaceae* family, to be supplied fresh to the consumer. Grapes for industrial processing are excluded.

## 2 Normative references

The following referenced standards are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced standards (including any amendments) applies.

- a) TZS 4, *Rounding off of numerical values*
- b) TZS 109, *Code of hygiene for food processing unit*
- c) TZS 122-1- *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella- Part 1: Detection of Salmonella spp.*
- d) TZS 538, *Packaging, marking and labeling of foods*
- e) TZS 852-1- *Microbiology of the food chain - Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp - Part 1: Detection method*

- f) TZS 1002, *Fresh fruits and vegetables - Sampling.*
- g) TZS 1003, *Guide to the pre-packaging of fresh fruits and vegetables*
- h) TZS 1496, *Fruits, vegetables and derived products - Determination of soluble solids*
- i) TZS 1743, *Code of hygienic practice for fresh fruits*
- j) TZS 2425 - *Microbiology of food and animal feeding stuffs- Horizontal method for the detection of Escherichia coli O157*
- k) Codex Stan 193, *Codex General standard for contaminants and toxins in food and feed*
- l) *Codex pesticide residues in food online data base*

### **3 Terms and definitions**

For the purposes of this standard, the following terms and definitions apply;

#### **3.1 table grapes**

grapes intended for consumption while fresh

#### **3.2 produce**

fresh berries and bunches of table grapes

#### **3.3 sound**

produce not affected by rotting or deterioration such as to make it fit for consumption

#### **3.4 clean**

practically free of any visible foreign matter

#### **3.5 pests**

any organism that directly or indirectly affects the quality and safety of the produce

#### **3.6 whole**

uninjured and undamaged table grapes intended for consumption while fresh

#### **3.7 berries**

small fresh fruits that have many seeds enclosed in pericarp formed from one or more carpels from the same flower

### **4 Requirements**

#### **4.1 General requirements**

In all classes, subject to the special provisions for each class and the tolerances allowed, the bunches and berries shall be:

- sound
- clean
- practically free of pests and damage caused by them affecting the general appearance of the produce;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- practically free of damage caused by low and/or high temperatures.

In addition, the berries shall be:

- whole;
- well formed;
- normally developed.

Pigmentation due to sun is not a defect so long as this only affects the skin of the berries.

**4.1.1** The development and condition of the table grapes shall be such as to enable them:

- to withstand transport and handling; and
- to arrive in satisfactory condition at the place of destination.

#### **4.1.2 Maturity Requirements**

Table grapes shall be sufficiently developed and display satisfactory ripeness. In order to satisfy this requirement, the fruit shall have obtained a refractometric index of at least 16°Brix. Fruit with a lower refractometric index are accepted provided the sugar/acid ratio is at least equal to:

Table 1 Maturity Requirements

S/N	Test characteristic	Requirement	Test method
1	Refractometric index (°Brix)	≥16°Brix	TZS 1496
2	Sugar/Acid ratio		
	if the Brix level ≥ 12.5° and < 14°Brix	20:1 (sugar:acid)	TZS 1496
	if the Brix level ≥ 14° and < 16°Brix	18:1 (sugar:acid)	TZS 1496

#### **4.2 Classification**

Table grapes shall be classified in three classes defined below:

##### **4.2.1 “Extra” class**

Table grapes in this class shall be of superior quality.

The bunches be characteristic of the variety in shape, development and colouring, allowing for the district in which they are grown.

The berries must be firm, firmly attached to the stalk, evenly spaced along the stalk and have their bloom virtually intact.

They must be free of defects, with the exception of 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.

#### **4.2.2 Class I**

Table grapes in this class shall be of good quality.

The bunches shall be characteristic of the variety in shape, development and colouring, allowed for the district in which they are grown.

The berries shall be firm, firmly attached to the stalk and, as far as possible, have their bloom intact. They may be less evenly spaced along the stalk than in the "Extra" class.

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

- a slight defect in shape;
- a slight defect in colouring;
- very slight sun scorch affecting the skin only.

#### **4.2.3 Class II**

This class includes table grapes which do not qualify for inclusion in the higher classes, but satisfy the general requirements specified in clause 4.1 above.

The bunches may show slight defects in shape, development and colouring, provided these do not impair the essential characteristics of the variety, allowed for the district in which they are grown.

The berries shall be sufficiently firm and sufficiently attached to the stalk. They may be less evenly spaced along the stalk than in Class I.

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

- defects in shape;
- defects in colouring;
- slight sun scorch affecting the skin only;
- slight bruising;
- slight skin defects.

### **4.3 Provisions concerning sizing**

Size is determined by the weight of the bunch.

#### **4.3.1 Minimum bunch weight**

The minimum bunch weight shall be 75g. This provision does not apply to packages intended for single servings.

#### **4.4 Provisions concerning tolerances**

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

##### **4.4.1 Quality Tolerances**

###### **4.4.1.1 “Extra” Class**

Five percent by weight of bunches not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

###### **4.4.1.2 Class I**

Ten percent by weight of bunches not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

###### **4.4.1.3 Class II**

Ten percent by weight of bunches satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

##### **4.4.2 Size Tolerances**

Ten percent by weight of bunches not satisfying the size requirements as specified in clause 4.3.

#### **4.5 Provisions concerning presentation**

##### **4.5.1 Uniformity**

The contents of each package shall be uniform and contain only bunches of the same origin, variety, quality and degree of ripeness. In the “Extra” class, the bunches must be of more or less identical size and colouring. In the case of Class I, the bunches may have slight variation in size.

However, consumer packages of a net weight not exceeding 1kg may contain mixtures of table grapes of different varieties, provided they are uniform in quality, degree of ripeness and, for each variety concerned, in origin.

The visible part of the contents of the package shall be representative of the entire contents.

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#### **6 Hygiene**

**6.1** It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with TZS 109 (see clause 2) and TZS 1743. Table grapes shall also comply with the microbial requirements prescribed in Table 2.

**Table 2 Microbiological limits for table grapes**

S/N	Test	Test Method	Requirement
1.	<i>Listeria monocytogenes</i> per 25g	TZS 852-1	Absent
2.	<i>Escherichia coli</i> O157:H7	TZS 2425	Absent
3.	<i>Salmonella</i> per 25g	TZS 122-1	Absent

## 7 Contaminants

### 7.1 Heavy metal contaminants

Table grapes shall comply with those maximum metal contaminants established by the Codex Stan 193.

### 7.2 Pesticide residues

Table grapes shall comply with those maximum residue limits established in the Codex pesticide residues in food online data base.

## 8 Sampling and tests

### 8.1 Sampling

Representative samples of table grapes shall be drawn as prescribed in TZS 1002 (see clause 2).

### 8.2 Tests

Tests shall be done in accordance with the methods prescribed in this standard.

## 9. Packing, marking and labelling

### 9.1 Packing

Table grapes shall be packed in such a way as to protect the produce properly. The materials used shall be of food grade, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed, provided the printing or labelling has been done with nontoxic ink or glue. In the case of the "Extra" Class, the bunches must be packed in a single layer.

**9.1.1** The containers shall meet the quality, hygiene, ventilation and resistance characteristics that shall ensure suitable handling, shipping and preserving table grapes. Packages shall be free of foreign matter and objectionable smell.

**9.1.2** The use of any substance tending to modify the natural characteristics of the produce, especially form, texture and taste shall be prohibited.

**9.1.3** In addition to the provisions covered by this standard, table grapes shall also be packed in accordance with TZS 538 and TZS 1003 (See clause 2).

## **9.2 Marking and labelling**

**9.2.1** Each package shall legibly and indelibly bear the following information in Swahili or and English on the same side:

- a) Name and address of exporter/importer, packer and/or dispatcher. Identification code (optional);
- b) Name of the produce (Table Grapes). Name of the variety or, where applicable, names of varieties.
- c) Country of origin;
- d) Batch number;
- e) Class;
- f) Net weight (kg);
- g) Storage condition

**9.2.2** Certification mark – Each container may also be marked with TBS certification mark.

**NOTE:** The use of TBS certification mark is governed by provisions of the Standards Act, 2009. Details of the conditions under which a license for the use of TBS certification mark may be granted to manufacturers or producers, may be obtained from TBS.

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