



DRAFT TANZANIA STANDARD

Cape gooseberry- specification

DRAFT STANDARD FOR PUBLIC COMMENTS ONLY

TANZANIA BUREAU OF STANDARD

0 foreword

Cape gooseberry is a short shrub that reaches height of 50 to 100 cm and can spread up to 4 meters wide. This crop produces a fruit called a berry that is commonly bright yellow in colour when ripe but white, green, or even red types exist. The fruits contain numerous small seeds per fruit ranging between 100 to 300 seeds.

Gooseberry is sweet, slightly tart taste and is a good source of vitamins and minerals.

This Tanzania Standard was prepared in order to provide guidance to gooseberry 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 226-2001 *Standard for Cape gooseberry*.

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 cape gooseberries grown from *Physalis peruviana* (L.), of the *Solanaceae* family, to be supplied fresh to the consumer. Cape gooseberries 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 1743, *Code of Hygienic Practice for Fresh fruits*
- i) TZS 2425, *Microbiology of food and animal feeding stuffs- Horizontal method for the detection of Escherichia coli O157*
- j) Codex Stan 193, *Codex General standard for contaminants and toxins in food and feed*
- k) *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 clean

practically free of any visible foreign matter

3.2 sound

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

3.3 mature

fully developed or having a degree of ripeness that will ensure the completion of the ripening process after harvesting

3.4 damage

any defect or injury, which physically affects the appearance or storage quality of the produce

3.5 pest

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

3.6 cultivar

plant within a specie that has been produced in cultivation by selective breeding

3.7 whole berry

undamaged and uninjured parts of the small stone less fruit juicy consumed freshly

3.8 berry fruit

simple freshly 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 cape gooseberries shall be:

- whole, with or without calyx;
- sound;
- clean;
- practically free of pests affecting the general appearance of the produce;
- practically free of damage caused by pests;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- firm;
- fresh in appearance;
- with a smooth and shiny skin;

If the calyx is present, the peduncle shall not exceed 25mm in length

4.1.1 The cape gooseberries shall have reached an appropriate degree of development and ripeness account being taken of the characteristics of the variety and the area in which they are grown.

The development and condition of the cape gooseberries 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

The maturity of the cape gooseberry can be visually assessed from its external colouring, which changes from green to bright yellow, orange or red depending on the cultivar as the fruit ripens. Its condition can be confirmed by determining total soluble solids. The soluble solids content should be at least 14.0°Brix. A change in colouring of the calyx is not indicative of ripening of the fruit.

4.2 Classification

Cape gooseberries are classified in three classes defined below, regardless of size and colour:

4.2.1 “Extra” class

Cape gooseberries in this class shall be of superior quality. They shall be characteristic of the variety and/or commercial type. They shall 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

Cape gooseberries in this class shall be of good quality. They shall be characteristic of the variety and/or commercial type. The following slight defects

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

- slight defects in shape;
- slight defects in colouring;
- slight skin defects.

The defects shall not, in any case, affect the pulp of the fruit.

4.2.3 Class II

This class includes cape gooseberries which do not qualify for inclusion in the higher classes, but satisfy the general requirements specified in clause 4.1. The following defects may be allowed, provided the cape gooseberries retain their essential characteristics as regards the quality, the keeping quality, the general appearance and presentation:

- defects in shape;
- defects in colouring;
- skin defects;
- small healed cracks not covering more than 5% of the total surface area of the fruit.

The defects shall not, in any case, affect the pulp of the fruit.

4.3 Provisions concerning sizing

Size is determined by the maximum diameter of the equatorial section of the fruit, with a minimum diameter of 15mm, in accordance with Table 1

Table 1 Provisions concerning sizing

Size code	Diameter (mm)
A	15.0 – 18.0
B	18.1 – 20.0
C	20.1 – 22.0
D	> 22.1

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 number or weight of cape gooseberries with or without calyx 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 number or weight of cape gooseberries with or without calyx 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 number or weight of cape gooseberries with or without calyx satisfying neither the requirements of the class nor the general requirements, with the exception of produce affected by severe bruising, rotting or any other deterioration rendering it unfit for consumption. Up to a maximum of 20% by number or weight of fruit with small healed cracks covering an area greater than 5% is accepted in this class.

4.4.2 Size tolerances

For all classes, 10% by number or weight of cape gooseberries corresponding to the size immediately above and/or below that indicated on the package.

4.5 Provisions concerning presentation

4.5.1 Uniformity

The contents of each package shall be uniform and contain only cape gooseberries of the same origin, variety, quality, colouring, size and type of presentation (with or without calyx). 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.

6.2 Cape gooseberries shall also comply with the microbial requirements prescribed in Table 2.

Table 2 Microbiological limits for Cape gooseberries

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

Cape gooseberries shall comply with those maximum metal contaminants established by the Codex Stan 193.

7.2 Pesticide residues

Cape gooseberries 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 cape gooseberries 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

Cape gooseberries 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.

9.1.1 The containers shall meet the quality, hygiene, ventilation and resistance characteristics that shall ensure suitable handling, shipping and preserving cape gooseberries. 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, cape gooseberries 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 importer/exporter, packer and/or dispatcher/distributor;
- b) Name of the produce (Cape gooseberries);
- c) Country of origin;
- d) Class;
- e) Size (size code or minimum and maximum diameter in millimeters);
- f) Net weight (kg);
- g) Batch number;
- h) 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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