



AFDC 26 (1114) DTZS

DRAFT TANZANIA STANDARD

Leeks - specification

DRAFT STANDARD FOR PUBLIC COMMENTS ONLY

TANZANIA BUREAU OF STANDARD

0 foreword

Leek is a leafy vegetable which the edible part is whitish green stem with a bundle of leaf sheaths and slightly developed bulb. It can be consumed cooked or raw, with or without leaves. Leek is rich in vitamins (A, C and K) and magnesium.

This Tanzania Standard was prepared in order to provide guidance to leeks 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: UNECE standard FFV-21 LEEKS 2017.

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 tests of leeks varieties (cultivars) grown from *Allium ampeloprasum* L. of the family *Alliaceae* to be supplied fresh to the consumer. Leeks 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 whereas 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 552, *Code of hygienic practice for fresh leafy vegetables*
- f) TZS 729, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms — Colony-count technique*

- g) TZS 730-2, *Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of -b-glucuronidase-positive Escherichia coli – Part 2 – Colony-count technique at 44 °C using 5-bromo-4-chloro-3-indolyl-b-D-glucuronide*
- h) TZS 1002, *Fresh fruits and vegetables - Sampling.*
- i) TZS 1003, *Guide to the pre-packaging of fresh fruits and vegetables*
- 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

3.1 sound

produce neither affected by rotting nor deterioration such as to make it unfit for consumption

3.2 clean

practically free of any visible foreign matter; however, the roots may have remnants of soil adhering to them and traces of soiling within the sheathed part are allowed

3.3 pests

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

4 Requirements

4.1 General requirements

- a. In all classes, subject to the special provisions for each class and the tolerances allowed, the leeks shall be:
 - intact (this requirement does not apply, however, to roots and ends of leaves which may be cut)
 - sound;
 - clean,
 - fresh in appearance, with wilted or withered leaves removed
 - practically free from pests and damage caused by them
 - not running to seed
 - free of abnormal external moisture
 - free of any foreign smell and/or taste
- b. When the leaves are cut, they shall be neatly cut
- c. The development and condition of the leeks shall be such as to enable them:

- to withstand transportation and handling
- to arrive in satisfactory condition at the place of destination

4.2 Classification

Leeks shall be classified in two classes, as defined below:

4.2.1 Class I

Leeks in this class shall be of good quality. They shall be characteristic of the variety and/or commercial type.

The white to greenish white part of the leeks shall represent at least one-third of the total length of the sheathed part.

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:

- slight superficial and dry damage on not more than two leaves
- slight bruising on the leaves
- slight damage caused by thrips on the leaves

4.2.2 Class II

This class includes leeks that do not qualify for inclusion in Class I but satisfy the general requirements specified in clause 4.1.

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

- slight superficial and dry damage
- slight bruising
- damage caused by thrips
- slight traces of rust on the leaves
- slight brownish discoloration due to low temperatures
- a tender flowering stem, provided that it is enclosed within the sheathed part.

4.3 Provisions concerning sizing

Size is determined by the diameter measured at right angles to the longitudinal axis in the middle of the sheathed part.

To ensure uniformity in size, the diameter of the largest leek in the same bundle or package must not be more than twice the diameter of the smallest leek.

Uniformity in size is compulsory for Class I.

4.4 Provisions concerning tolerances

At all marketing stages, tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

4.4.1 Quality tolerances

4.4.1.1 Class I

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

4.4.1.2 Class II

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

4.4.2 Size tolerances

For all classes (if sized); a total tolerance of 10%, by number or weight, of leeks not satisfying the requirements as regards sizing is allowed.

4.5 Provisions concerning presentation

4.5.1 Uniformity

The contents of each package, or each bundle in the same package shall be uniform and contain only leeks of the same origin, variety or commercial type, quality and size (if sized), and appreciably the same degree of development and colouring.

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

5

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 552.

6.2 Leeks shall be free from any pathogenic micro organisms, parasites or toxins that may present hazards to human health. Leeks shall comply with the microbial requirements prescribed in Table 1.

Table 1 Microbiological limits for leeks

Test	Test method	Requirement
Total coliforms cfu/g	TZS 729	Max 10 ³
Presumptive <i>Escherichia coli</i> , cfu/g	TZS 730-2	Absent
<i>Salmonella</i> , in 25 g	TZS 122-1	Absent

7 Contaminants

7.1 Heavy metal contaminants

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

7.2 Pesticide residues

Leeks 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 leeks 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

Leeks 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 leeks. 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, leeks 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 English on the same side:

- a) Name and address of exporter/importer, packer and/or dispatcher/distributor;
- b) Name of the produce (leeks);
- c) Country of origin;
- d) Class;
- e) Batch number;
- f) Net weight (in 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.