



DRAFT TANZANIA STANDARD

Lettuces and endives – specification

DRAFT STANDARD FOR PUBLIC COMMENTS ONLY

0 Foreword

Lettuces and Endives are broad leafy vegetables existing in different forms that mark their differences. Lettuces exist in four commercial varieties; Cos lettuce has tall and loose oblong heads; Crisp head lettuce has tight heads that resemble cabbage; leafy lettuce has loose rosette of tender leaves off the stem; butter head has soft, thick-leaved heads; Curly lettuce has bushy head of greens with leaves of a lacy texture.

Endives exist in two forms; curled-leaved endives which has bushy head of curly greens with leaves of lacy texture and Broad-leaved (Batavian) endives has broad, bright green, and curling leaves.

Both lettuces and endives have bitter taste but endives is slightly bitter than lettuces.

This Tanzania Standard was prepared in order to provide guidance to lettuces and endives 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-22 *Standard for Lettuces, curled-leaved endives and broad-leaved (batavian) endives.*

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 requirements, sampling and test methods of i) broad-leaved (Batavian) endives (escaroles) of varieties *Cichorium endivia* var. *latifolium* Lam, ii) curled-leaved endives of varieties *Cichorium endivia* var. *crispum* Lam and iii) other lettuces of varieties; *Lactuca sativa* var. *capitata* L. (head lettuces including crisp-head and "Iceberg" type lettuces), *Lactuca sativa* var. *longifolia* Lam. (cos or romaine lettuces), *Lactuca sativa* var. *crispa* L. (leaf lettuces) and crosses of these varieties to be supplied fresh to the consumer after preparation and packaging.

This standard does not apply to produce for industrial processing, produce presented as individual leaves, lettuces with root ball or lettuces in pots.

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, *Food processing and manufacturing units -Code of hygiene - General*
- c) TZS 538, *Labelling of prepackaged foods – General requirements*
- d) TZS 1002, *Fresh fruits and vegetables - Sampling*
- e) TZS 1003, *Guide to the pre-packaging of fresh fruits and vegetables*
- f) TZS 552, *Code of hygienic practice for fresh leafy vegetables*
- g) Codex Stan 193, *Codex General standard for contaminants and toxins in food and feed*
- h) *Codex pesticide residues in food online data base*
- i) CAC/GL 21, *Principles for the Establishment and Application of Microbiological Criteria for Foods*

3 Terms and definitions

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

3.1 produce

fresh curled-leaved endives, broad-leaved (batavian), endives head lettuces, cos or romaine lettuces, leaf lettuces and crosses of the named varieties,

3.2 sound

produce not affected by rotting or deterioration to make it unfit for consumption

3.3 clean

practically free from all earth or other growing medium and practically free of any visible foreign matter

3.4 pest

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

3.5 turgescient

turgid, crisp and not wilted

3.6 intact

produce not having any mutilation or injury spoiling its integrity.

4 Requirements

4.1 General requirements

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

- sound;
- clean and trimmed;
- intact;
- fresh in appearance;
- practically free from pests and/or damage caused by them;
- turgid;
- not running to seed;
- free of abnormal external moisture;
- free of any foreign smell and/or taste.

In the case of lettuce, a reddish discolouration, caused by low temperature during growth, is allowed, unless it seriously affects the appearance of the lettuce.

The roots shall be cut close to the base of the outer leaves and the cut shall be neat.

The produce shall be of normal development. The harvesting stage of the produce shall enable it to:

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

4.2 Specific requirements

4.2.1 Classification

The produce is classified in two classes, as defined below:

4.2.1.1 Class I

Produce in this class shall be of good quality. It shall be characteristic of the variety and/or commercial type. The produce shall also be well formed, free of frost damage, free of damage or deterioration impairing edibility and firm (taking into account the cultivation methods and the type of produce).

Head lettuces shall have a single well-formed heart. However, in the case of head lettuces grown under protection, the heart may be small.

Cos lettuces shall have a heart, which may be small.

The centre of curled-leaved endives and broad-leaved (Batavian) endives shall be yellow in colour.

4.2.1.2 Class II

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

The produce shall be reasonably well-formed and free from damage and deterioration which may seriously impair edibility.

Slight discolouration and slight damage caused by pests may be allowed provided the produce retains its essential characteristics as regards the quality, the keeping quality and presentation.

Head lettuces shall have a heart, which may be small. However, in the case of head lettuces grown under protection, absence of heart is permissible.

Cos lettuces may show no heart.

4.2.2 Provisions concerning sizing

Size is determined by the weight of one unit.

To ensure uniformity in size in all classes, the difference between the lightest and heaviest units in the same package shall not exceed:

- a) Lettuces
 - 40 g when the lightest unit weighs less than 150 g per unit
 - 100 g when the lightest unit weighs between 150 g and 300 g per unit
 - 150 g when the lightest unit weighs between 300 g and 450 g per unit
 - 300 g when the lightest unit weighs more than 450 g per unit.
- b) Curled-leaved and broad-leaved (Batavian) endives
 - 300 g.

4.4 Provisions concerning tolerances

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 percent, by number, of produce not satisfying the requirements of the class, but meeting those of Class II is allowed. Within this tolerance not more than 1 percent 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 percent, by number, of produce satisfying neither the requirements of the class nor the general requirements is allowed. With this tolerance not more than 2 percent in total may consist of produce affected by decay.

4.4.2 Size tolerances

For all classes: a total tolerance of 10 percent, by number, of produce not satisfying the requirements as regards sizing is allowed.

4.5 Provisions concerning presentation

4.5.1 Uniformity

The contents of each package shall be uniform and contain only produce of the same origin, variety or commercial type, quality and size.

However, a mixture of lettuces and/or endives of distinctly different varieties, commercial types and/or colours may be packed together in a package, provided they are uniform in quality and, for each variety, commercial type and/or colour concerned, in origin. However, in case of those mixtures uniformity in size is not required. 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 552.

6.2 The produce shall be free from parasites, pathogenic microorganisms or substances originating from them in amounts, which may present a hazard to human health in accordance with the principles and guidelines for the establishment and application of microbiological criteria related to food (CAC/GL 21).

7 Contaminants

7.1 Heavy metal contaminants

The produce shall comply with those maximum levels of metal contaminants established by the Codex Stan 193.

7.2 Pesticide residues

The produce 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 the produce 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

The produce shall be packed in such a way as to protect it properly. It shall be reasonably packed having regard to the size and type of packaging, without empty spaces or crushing. 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 the produce. Packages (or lot for produce presented in bulk) 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, the produce shall also be packed in accordance with TZS 1003 (See clause 2).

9.2 Marking and labelling

9.2.1 In addition to the requirements of the TZS 538; each package shall legibly and indelibly bear the following information in Swahili or and English on the same side:

- a) Name of the produce; 'lettuces' 'endives' or "mixture of lettuces/endives" and variety (where appropriate);
- b) Name and address of exporter/importer, packer and/or dispatcher;
- c) Country of origin;
- d) Class;
- e) Size expressed by the minimum weight per unit, or number of units;
- f) Identification code and/or batch number;
- g) Storage instruction;
- h) Pack date

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.