

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 62:2008
ICS 67.080

Fresh vegetables – Cucumber



BUREAU OF PRODUCT STANDARDS

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Foreword

The Philippine National Standard for Cucumber, PNS/BAFPS 62:2008 was undertaken by the Bureau of Agriculture and Fisheries Product Standards (BAFPS) in order to reflect the recent technology developments in the industry, and the need for its harmonization with ASEAN standards and Codex requirements in Heavy Metals, Pesticide Residues and Hygiene.

The Standard for Cucumber was based from the Philippine Trade Standard Specification for Fresh Cucumber with PTS No. 054-09.10: 1968.

This standard cancels and replaces SAO 28:1969.

BAFPS organized a Technical Committee (TC) and Sub-Committee (SC) through Special Order No. 411, series of 2001, and Special Order No. 169, series of 2007 to identify members and expert that shall be involved in the formulation of the PNS for Cucumber. Modifications were made concerning its scope, definition of terms, types of cucumber, minimum requirements, classification, sizing, tolerances, sampling, packaging, marking and labeling, contaminants and hygiene. BAFPS, in collaboration with the TC, conducted technical reviews and public consultations in three major islands of the country prior to the finalization of the standard.

PNS/BAFPS 62:2008 aims to provide a common understanding on the grading and classifying cucumbers grown from different varieties and produced in the Philippines to be supplied fresh to the consumers.

1 Scope

This standard establishes a system of grading and classifying cucumbers grown from varieties (cultivars) of *Cucumis sativus* Linn., produced in the Philippines to be supplied fresh to the consumer. Cucumbers for industrial processing are excluded.

2 References

The titles of the standard publications and other references of this standard are listed on the inside back cover.

3 Definitions

3.1

badly deformed

cucumber is badly curved, constricted, tapered or badly misshapen that seriously affects the appearance

3.2

damage

any defect which materially affects the appearance, or the edible or shipping quality of the cucumber. The following defects shall be considered as damage: (a) scars when aggregating more than the area of a circle 1.5 cm in diameter on a cucumber 15.0 cm in length, or correspondingly smaller or greater areas of scars on smaller or larger cucumbers, respectively; (b) cuts which are fresh and more than slight; and (c) bruises when materially affecting the appearance of the cucumber, or when container imprints affect an aggregate area greater than that of a circle 5.0 cm in diameter

3.3

diameter

the greatest dimension of the cucumber measured at right angles to the longitudinal axis, exclusive of "warts"

3.4

fairly well-colored

for green colored cucumber two-thirds (2/3) of its surface is medium green or darker color. For white and light green cucumber, the color is fairly typical of the variety

3.5

fairly well-formed

that the cucumber may be moderately curved but not deeply constricted, not extremely tapered or pointed and not misshapen

3.6

firm

the cucumber is crispy, not soft, shrivelled, limp or pliable

3.7

moderately colored

one-half (1/2) of the surface of the cucumber is of the color of the variety

3.8

over-mature

that the cucumber has developed beyond the best stage for slicing. It usually yields to slight pressure of the thumb. The seeds may be tough and fibrous, and the pulp in the seed cavity is usually watery or jelly-like. In most advanced cases, pithy streaks may be found in the flesh of the cucumber

3.9

serious damage

any defect which seriously affects the appearance, or the edible or shipping quality of the cucumber. The following defects shall be considered as serious damage: (a) scars when aggregating more than the area of a circle 2.5 cm in diameter on a cucumber 15.0 cm in length, or correspondingly smaller or greater areas of scars on smaller or larger cucumbers, respectively; and (b) bruises when seriously affecting the appearance of the cucumber, or when container imprints affect more than one-third (1/3) of the surface of the cucumber

3.10

similar varietal characteristics

the cucumbers shall have the same general characteristics of the variety

3.11

well-colored

$\frac{3}{4}$ of the surface of the cucumber is of the color of the variety

3.12

well-formed

cucumber is practically straight and not more than very slightly constricted or more than moderately tapered or pointed

4 Types of cucumber

- a. Pickling varieties are generally smaller and with thicker skin.
- b. Slicing or salad varieties are larger and milder in flavor.

5 Minimum requirements

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

- intact;

- fresh in appearance (not affected by rotting or deterioration);
- firm;
- clean, practically free of any visible foreign matter;
- practically free of damage caused by pests, diseases, dead and living insects, wormholes, decay, mold or other contaminants;
- free of bitter taste (subject to the special provisions for class II, within this tolerance a maximum of 2 % by number of cucumbers may have tips with a bitter taste);
- free of abnormal external moisture; and
- free of foreign smell and/or taste.

Cucumbers must be sufficiently developed but their seeds must be soft.

The development and condition of the cucumber must enable it:

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

6 Classification

Cucumbers are classified into three classes as defined below:

6.1 Extra class – Cucumbers in this class must be of superior quality and have the characteristics of the variety and/or commercial type. It must be well-developed, well-shaped and practically straight (maximum height of the arc: 1.0 cm per 10 cm of length of the cucumber). It must have a typical color of the variety and free of defects, including all deformations and particularly those caused by seed formation 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.

6.2 Class I – Cucumbers in this class must be of good quality. It must be reasonably developed, reasonably well-shaped and practically straight (maximum height of the arc: 1.0 cm per 10 cm of length of cucumber). The following defects are allowed: (a) a slight deformation, but excluding that caused by seed formation; (b) a slight defect in color, especially the light colored part of the cucumber where it touched the ground during growth; and (c) slight skin blemishes due to rubbing and handling or low temperatures, provided that such blemishes have healed and do not affect the keeping quality and presentation in the package.

6.3 Class II – This class includes cucumbers which do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above. However, the following defects are allowed provided the cucumbers retain their essential characteristics as regards the quality, the keeping quality and presentation: (a) deformations other than serious seed development, (b) defects in color up to one-third (1/3) of the surface (in the case of cucumbers grown under protection, considerable defects in color in the affected part are not allowed), (c) healed cracks, and (d) slight damage caused by rubbing and handling which does not seriously affect the keeping quality and appearance.

All the defects listed above are allowed for straight and slightly crooked cucumbers.

Crooked cucumbers are allowed only if they have no more than slight defects in color and have no defects or deformation other than crookedness.

Slightly crooked cucumbers may have a maximum height of the arc of 2.0 cm per 10 cm of length of cucumber.

Crooked cucumbers may have a greater arc and must be packed separately.

7 Size classification

Size is determined by diameter and length of the cucumber.

| Size | Diameter (cm) | Length (cm) |
|--|---------------|-------------|
| Small | < 3.5 | < 10 |
| Medium | 3.5 - 5.0 | 10 - 15 |
| Large | > 5.0 | > 15 |
| NOTE Length (cm) of cucumber shall be a priority in sizing. | | |

8 Tolerances

8.1 Quality tolerance

8.1.1 Extra Class – Five percent by number of cucumbers not satisfying the requirements for the class but meeting the requirements for Class I, or exceptionally coming within the tolerances for that class.

8.1.2 Class I – Ten percent by number of cucumbers not satisfying the requirements for the class but meeting the requirements for Class II, or exceptionally coming within the tolerances for that class.

8.1.3 Class II – Ten percent by number of cucumbers not satisfying neither the requirements for the class nor the minimum requirements, to the exclusion of produce affected by rotting or deterioration such as to make it unfit for consumption. Within this tolerance a maximum of two percent by number of cucumbers may have tips with a bitter taste.

8.2 Size tolerance

For all classes, ten percent by number of cucumbers not satisfying the size requirements. However, this tolerance is applicable only to produce which differs by not more than ten percent from the size limits specified.

9 Sampling

Sampling to be used for ascertaining conformance shall be in accordance with PNS/ISO 874.

10 Packaging

The cucumbers must be packed in a suitable container as specified by the buyer that will protect from any external or internal damage. The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of cucumber.

11 Marking and Labeling

Each package shall be legibly and indelibly marked with the following information:

- 11.1** Name of the produce, variety and/or commercial type;
- 11.2** Class and size;
- 11.3** Net content, weight (kg)/pieces/pack;
- 11.4** Name and address of the producer, trader and/or exporter;
- 11.5** Province where grown;
- 11.6** Date of harvest;
- 11.7** Shelf-life of the produce (optional);
- 11.8** Product Certification (optional); and
- 11.9** Product of the Philippines.

12 Contaminants

12.1 Heavy metals

Cucumber shall comply with the maximum levels of heavy metals established by the Codex Alimentarius Commission and/or authority for this commodity.

12.2 Pesticide Residues

Cucumbers shall comply with the maximum residue limits established by the Codex Alimentarius Commission and/or authority for this commodity.

13 Hygiene

13.1 It is recommended that the produce covered by the provisions of this standard be prepared and handled in accordance with appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1 – 1969, Rev. 4 – 2003), and other relevant Codex texts such as Code of Hygienic Practice and Code of Practice.

13.2 Cucumber shall comply with the microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

References

PNS/BAFPS 62:2008

The following referenced documents are indispensable for the application 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.

Commission Regulation (EEC) No. 1677/88. 1998. Laying down quality standards for cucumbers

Philippine Trade Standard Specification for Fresh Cucumber. No. 054 – 09.10. 1968

PNS/ISO 874 (e): Fresh Fruits and Vegetables – Sampling

UNECE Standard for Fresh Fruits and Vegetables – 15. 1989. Concerning the marketing and commercial quality control of cucumbers

United States Standards for Grades of Cucumbers. 1997 (Reprint). US Department of Agriculture

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