

PHILIPPINE NATIONAL STANDARD

**PNS/BAFS 313:2021
ICS 67.080.01**

Table grapes- Specifications



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS
BPI Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines
Trunkline: **(632) 928-8741 to 64 loc. 3301-3319**
E-mail: **info.dabafs@gmail.com**
Website: **www.bafs.da.gov.ph**

Foreword

In 2017, the Bureau of Agriculture and Fisheries Standards (BAFS) initiated the adoption of relevant Codex standards including that of table grapes as Philippine National Standards (PNS), in compliance with Section 9 (Setting of Food Safety Standards) of Republic Act No. 10611 or the Food Safety Act of 2013. A Technical Working Group (TWG) was created through Special Order (SO) no. 1092, series of 2018 (Creation of Technical Committees [TC] and its TWG for the Development of PNS for Agriculture and Fisheries Products, Machinery, Tools, and Equipment), SO no. 442, series of 2020 (Creation of TC and its TWG for the Development of PNS for Agriculture and Fisheries Products, Machinery, and Structures), and SO no. 81, series of 2021 (Creation of TWG for the development of PNS for Agriculture and Fishery Products, Machinery, Tools, and Equipment). The TWG was composed of representatives from government agencies, academe, non-government organization, and private sector. The draft PNS underwent a series of consultations and TWG meetings via face-to-face and online platforms before it was finalized and approved by the DA Secretary in 2021.

The PNS for table grapes provides for the minimum quality and food safety requirements of table grapes supplied fresh to the consumer after preparation and packaging.

This document was drafted in accordance with the editorial rules of the BPS Directives, Part 2.

Contents

Foreword	1
1 Scope	3
2 Normative references	3
3 Terms and definitions	4
4 Provisions concerning quality	4
5 Provisions concerning sizing	6
6 Provisions concerning tolerances	6
7 Provisions concerning presentation	7
8 Marking and labeling	8
9 Contaminants	9
10 Hygiene	9
Annex A	12
Annex B	13
Annex C	14

1 Scope

This standard applies to commercial varieties (cultivars) of table grapes grown from *Vitis vinifera* L., of the Vitaceae family, to be supplied fresh to the consumer, after preparation and packaging. Grapes for industrial processing are excluded.

2 Normative references

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.

Bureau of Agriculture and Fisheries Standards (BAFS) – Department of Agriculture (DA). (2017). General Standard for Contaminants and Toxins in Food and Feed (GSCTFF) (PNS/BAFS 194:2017).

http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%20194%20-%202017%20-%20General%20Standard%20for%20Contaminants%20and%20Toxins%20in%20Food%20and%20Feed.pdf

BAFS-DA. (2020). Philippine National Standard for the Maximum Residue Limits (MRLs) for Imported Crops (PNS/BAFS 292:2020).

http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%20292-2020%20MRLs%20of%20Pesticides%20on%20Selected%20Imported%20Crops.pdf

Codex Alimentarius Commission (CAC). (1995). Code of practice for packaging and transport of fresh fruits and vegetables (CAC/RCP 44-1995).

http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B44-1995%252FCXP_044e.pdf

CAC. (1995). Codex GSCTFF (CODEX STAN 193-1995). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B1931995%252FCXS_193e.pdf

http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B1931995%252FCXS_193e.pdf

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

berries

individual fruits of the grapes

3.2

brix

°brix

measurement in percentage by weight of sucrose in pure water solution

3.3

bunch

cluster of berries/fruits with their stalks (pedicels) held or joined together in a stem (peduncle)

3.4

refractive index

determines how much the path of light is bent or refracted when entering a material e.g., sugar solution, in relation to the density of the material and typically measured using a refractometer

4 Provisions concerning quality

4.1 Minimum requirements

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

- a. sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- b. clean, practically free of any visible foreign matter;
- c. practically free of pests and damage caused by them affecting the general appearance of the produce;
- d. free of abnormal external moisture, excluding condensation following removal from cold storage;
- e. free of any foreign smell and/or taste; and
- f. practically free of damage caused by low and/or high temperatures.

4.1.2 In addition, the berries shall be:

- a. whole;
- b. well formed; and

- c. normally developed.

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

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

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

4.2 Maturity requirements¹

4.2.1 Table grapes shall be sufficiently developed and display satisfactory ripeness.

4.2.2 In order to satisfy this requirement, the berries shall have obtained a refractive index of at least 16°Brix.

4.2.3 Berries with a lower refractive index are accepted provided the sugar/acid ratio is at least equal to:

4.2.3.1 20:1 if the Total Soluble Solids (TSS) is greater than or equal to 12.5 °Brix and less than 14°Brix,

4.2.3.2 18:1 if the Total Soluble Solids (TSS) is greater than or equal to 14 °Brix and less than 16°Brix.

4.3 Classification

Table grapes are classified in three classes defined below:

4.3.1 Extra class

Table grapes in this class shall be of superior quality. The bunches should be characteristic of the variety in shape, development, and coloring, allowing for the area/district in which they are grown. The berries shall be firm, firmly attached to the stalk, evenly spaced along the stalk, and have their bloom virtually intact. 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.

¹ The provisions 4.1.2.2 and 4.1.2.3 should apply to the Red Cardinal variety.

4.3.2 Class I

Table grapes in this class shall be of good quality. The bunches shall be characteristic of the variety in shape, development, and coloring, allowing for the area/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, however, be less evenly spaced along the stalk than in the Extra Class. The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality, and presentation in the package:

- a. a slight defect in shape;
- b. a slight defect in coloring; and
- c. very slight sun scorch affecting the skin only.

4.3.3 Class II

This class includes table grapes which do not qualify for inclusion in the higher classes, but satisfy the minimum and maturity requirements specified in Section 4.1 and 4.2 above. The bunches may show slight defects in shape, development, and coloring, provided these do not impair the essential characteristics of the variety, allowing for the area/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, however, may be allowed, provided the table grapes retain their essential characteristics as regards the quality, the keeping quality, and presentation:

- a. defects in shape;
- b. defects in coloring;
- c. slight sun scorch affecting the skin only;
- d. slight bruising; and
- e. slight skin defects.

5 Provisions concerning sizing

Size is determined by the weight of the bunch. The minimum bunch weight shall be 75g. This provision does not apply to packages intended for single servings.

6 Provisions concerning tolerances

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

6.1 Quality tolerances

6.1.1 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.

6.1.2 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.

6.1.3 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.

6.2 Size tolerances

Ten percent by weight of bunches not satisfying the size requirements as specified in Section 5.

7 Provisions concerning presentation

7.1 Uniformity

7.1.1 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 shall be of more or less identical size and coloring. In the case of Class I, the bunches may have slight variation in size.

7.1.2 However, consumer packages of a net weight not exceeding 1 kg 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.

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

7.2 Packaging

7.2.1 Table grapes shall be packed in such a way as to protect the produce properly. The materials used inside the package shall be new², 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 non-toxic ink or glue.

7.2.2 Table grapes shall be packed in each container in compliance with the Recommended International Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995) or its equivalent PNS.

7.2.3 In the case of the Extra class, the bunches shall be packed in a single layer.

7.3 Description of containers

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

NOTE: A fragment of vine shoot no more than 5 cm in length may be left on the stem of the bunch as a form of special presentation without prejudice to the applicable plant protection rules.

8 Marking and labeling

8.1 Consumer packages

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply:

8.1.1 Nature of produce

If the produce is not visible from the outside, each package shall be labelled as to the name of the produce and may be labelled as to name of the variety.

8.2 Non-retail containers

Each package shall bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside, or in the documents accompanying the shipment.

8.2.1 Identification

Name and address of producer, packer and/or dispatcher. Identification code (optional).

² For the purposes of this Standard, this includes recycled material of food-grade quality.

8.2.2 Nature of produce

Name of the produce “Table Grapes” if the contents are not visible from the outside.
Name of the variety or, where applicable, names of varieties.

8.2.3 Origin of produce

Country of origin or, where applicable, countries of origin and, optionally, area/district where grown or national, regional, or local place name.

8.2.4 Commercial identification

- a. Class;
- b. Net weight (optional); and
- c. “Bunches below 75 g intended for single servings”, if appropriate.

8.2.5 Date of Harvest

8.2.6 Official Inspection Mark (optional)

9 Contaminants

9.1 The produce covered by this standard shall comply with the maximum levels of the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995) or its equivalent PNS, PNS/BAFS 194:2017.

9.2 The produce covered by this standard shall comply the PNS Maximum Residue Limits (MRLs) of Pesticides on Selected Imported Crops (PNS/ BAFS 292:2020) or in accordance to the limits established by the Codex Alimentarius Commission.

10 Hygiene

10.1 It is recommended that the produce covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), and other relevant Codex texts and PNS such as Codes of Hygienic Practice and Codes of Practice.

10.2 The produce should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

Bibliography

- Bureau of Agriculture and Fisheries Standards (BAFS) – Department of Agriculture (DA). (2017). General Standard for Contaminants and Toxins in Food and Feed (GSCTFF) (PNS/ BAFS 194:2017). http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%20194%20-%202017%20-%20General%20Standard%20for%20Contaminants%20and%20Toxins%20in%20Food%20and%20Feed.pdf
- BAFS-DA. (2020). Philippine National Standard for the Maximum Residue Limits (MRLs) for Imported Crops (PNS/ BAFS 292:2020). http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%20292-2020%20MRLs%20of%20Pesticides%20on%20Selected%20Imported%20Crops.pdf
- Codex Alimentarius Commission (CAC). (2003). Code of hygienic practice for fresh fruits and vegetables (CAC/RCP 53-2003). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B53-2003%252FCXC_053e.pdf
- CAC. (1995). Code of practice for packaging and transport of fresh fruits and vegetables (CAC/RCP 44-1995). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B44-1995%252FCXP_044e.pdf
- CAC. (1995). Codex General Standard for Contaminants and Toxins in Food and Feed (GSCTFF) (CODEX STAN 193-1995). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B1931995%252FCXS_193e.pdf
- CAC. (2011). Codex standard for table grapes (CODEX STAN 255-2007). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B255-2007%252FCXS_255e.pdf
- CAC. (1997). Principles for the establishment and application of microbiological criteria for foods (CAC/GL 21-1997). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXG%2B21-1997%252FCXG_021e.pdf
- CAC. (2003). Recommended international code of practice – General principles of food hygiene (CAC/RCP 1-1969). <http://www.fao.org/fao-who-codexalimentarius/sh->

proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B1-1969%252FCXC_001e.pdf

Annex A
(informative)

Parts of table grapes

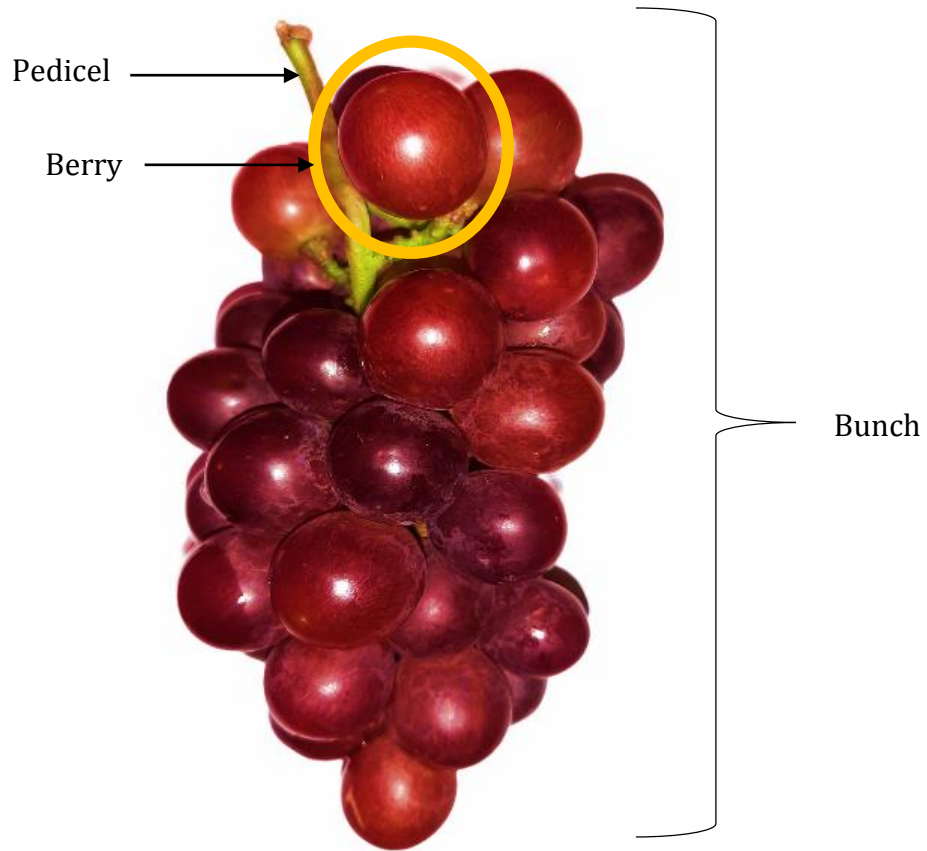


Figure A.1 – External parts of table grapes

Annex B
(informative)

Common table grapes produce in the Philippines



Figure B.1 - Red cardinal variety



Figure B.2 - Brazilian hybrid variety

Annex C
(informative)

Common damages of table grapes and its visible characteristics

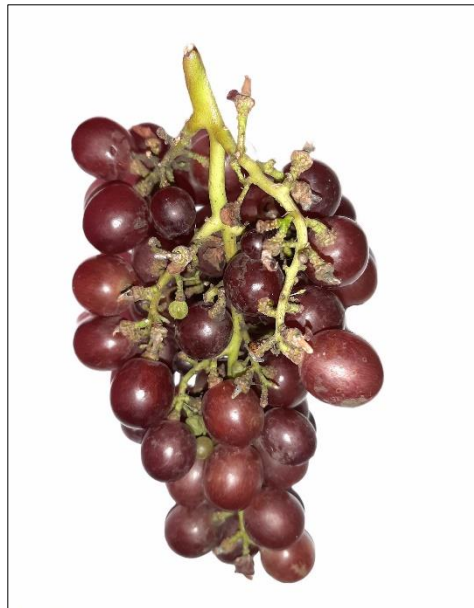


Figure C.1 - Bunch with shot (underdeveloped) and scattered berries



Figure C.2 - Deformed and shriveled berries



Figure C.3 - Split berries



Figure C.4 - Rotten berry

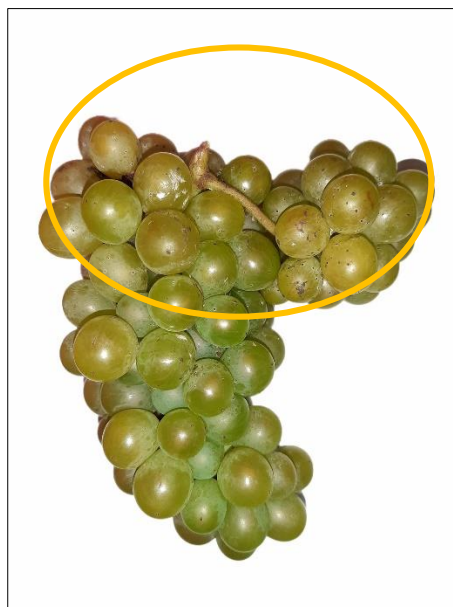


Figure C.5 - Sun scorch



Figure C.6 - Skin damage

**Department of Agriculture (DA)
Bureau of Agriculture and Fisheries Standards (BAFS)**

**Technical Working Group (TWG) for the Adoption of Codex Standard for Table
Grapes as Philippine National Standard (PNS)**

Chairperson

Jocelyn Sales, Ph.D.
DA- Food Development Center (FDC)

Members

- | | | | |
|---|---|---|--|
| 1 | Rachel Rocafort
DA- FDC | 5 | Lorena De Guzman
Vegetable Importers, Exporters & Vendors
Association (VIEVA) Phils. Inc |
| 2 | Alex Palomo | | |
| 3 | Richard Alcaraz
Department of Science and
Technology (DOST) - Food and
Nutrition Research Institute (FNRI) | 6 | Gracia Lomboy
Lomboy Farms |
| 4 | Lavernee Gueco, Ph.D.
University of the Philippines Los
Baños (UPLB)
Institute of Plant Breeding (IPB) | | |

Management Team

Karen Kristine Roscom
Farlash Pancho
Krisha Marie Mecija
Bureau of Agriculture and Fisheries Standards

Adviser

Vivencio Mamaril, Ph.D.
Myer Mula, Ph.D.



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

BPI Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines
T/ (632) 928-8741 to 64 loc. 3301-3319
E-mail: info.dabafs@gmail.com
Website: www.bafs.da.gov.ph