



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Processed
Products
Branch**

United States Standards for Grades of Frozen Blueberries

Effective date May 22, 1957

This is the second issue, as amended, of the United States Standards for Grades of Frozen Blueberries, published in the **FEDERAL REGISTER** of May 22, 1957, (22 FR 3535) to become effective May 22, 1957. This issue supersedes the second issue, as amended, which has been in effect since May 7, 1955.

Voluntary U.S. grade standards are issued under the authority of the Agricultural Marketing Act of 1946, which provides for the development of official U.S. grades to designate different levels of quality. These grade standards are available for use by producers, suppliers, buyers, and consumers. As in the case of other standards for grades of processed fruits and vegetables, these standards are designed to facilitate orderly marketing by providing a convenient basis for buying and selling, for establishing quality control programs, and for determining loan values.

The standards also serve as a basis for the inspection and grading of commodities by the Federal inspection service, the only activity authorized to approve the designation of U.S. grades as referenced in the standards, as provided under the Agricultural Marketing Act of 1946. This service, available as on-line (in-plant) or lot inspection and grading of all processed fruit and vegetable products, is offered to interested parties, upon application, on a fee-for-service basis. The verification of some specific recommendations, requirements, or tolerances contained in the standards can be accomplished only by the use of on-line inspection procedures. In all instances, a grade can be assigned based on final product factors or characteristics.

In addition to the U.S. grade standards, grading manuals or instructions for inspection of several processed fruits and vegetables are available upon request for a nominal fee. These manuals or instructions contain detailed interpretations of the grade standards and provide step-by-step procedures for grading the product.

Grade standards are issued by the Department after careful consideration of all data and views submitted, and the Department welcomes suggestions which might aid in improving the standards in future revisions. Comments may be submitted to, and copies of standards and grading manuals obtained from:

Chief, Processed Products Branch
Fruit and Vegetable Division, AMS
U.S. Department of Agriculture
P.O. Box 96456, Rm. 0709, So. Bldg.
Washington, D.C. 20090-6456

United States Standards for Grades of Frozen Blueberries

Section	Page No.
§52.611	Product description. 2
§52.612	Types of frozen blueberries. 2
§52.613	Grades of frozen blueberries. 2
§52.614	Ascertaining the grade. 2
§52.615	Ascertaining the rating for the factors which are scored. 3
§52.616	Color. 3
§52.617	Absence of defects. 4
§52.618	Character. 6
§52.619	Ascertaining the grade of a lot. 7
§52.620	Score sheet for frozen blueberries. 7
Authority:	Agricultural Marketing Act of 1946, Secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended (7 U.S.C. 1622, 1624).

Note: Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

§52.611 Product description.

Frozen blueberries are prepared from sound, properly ripened fresh fruit of the blueberry bush (Genus *Vaccinium*), including species or varieties often called **huckleberries**, but not of the Genus *Gaylussacia*; are cleaned and stemmed; are properly washed; are packed with or without packing media; and are frozen and maintained at temperatures necessary for the preservation of the product.

§52.612 Types of frozen blueberries.

- (a) **Native or wild type.**
- (b) **Cultivated type.**

§52.613 Grades of frozen blueberries.

- (a) **U.S. Grade A or U.S. Fancy** is the quality of frozen blueberries that possess similar varietal characteristics; that are practically free from defects; that possess a good character; that possess a normal flavor and odor; and are of such quality with respect to color as to score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.
- (b) **U.S. Grade B or U.S. Choice** is the quality of frozen blueberries that possess similar varietal characteristics; that possess a good color; that are reasonably free from defects; that possess a reasonably good character; that possess a normal flavor and odor; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.
- (c) **U.S. Grade C or U.S. Standard** is the quality of frozen blueberries that possess similar varietal characteristics; that possess a fairly good color; that are fairly free from defects; that possess a fairly good character; that possess a normal flavor and odor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.
- (d) **U.S. Grade D or Substandard** is the quality of frozen blueberries that fail to meet the requirements of U.S. Grade C or U.S. Standard.

§52.614 Ascertaining the grade.

- (a) The grade of frozen blueberries may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and character.

- (b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Absence of defects	40
Character	<u>40</u>
Total Score	100

- (c) The scores for the factors of color, absence of defects, and character of frozen blueberries are determined when the product is sufficiently free from ice crystals to permit handling of the blueberries.
- (d) **Normal flavor and odor** means that the product is free from objectionable flavors and objectionable odors of any kind.

§52.615 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, **18 to 20 points** means 18, 19, or 20 points).

§52.616 Color.

- (a) **"A" classification.** Frozen blueberries that possess a very good color may be given a score of 18 to 20 points. **Very good color** means that the blueberries possess a practically uniform, bright, dark blue-purple color typical of properly matured berries for the variety and that there may be present not more than 5 percent by count of berries that possess a red-purple color. Frozen blueberries that are undercolored (not at least red-purple color) or that have a definite green cast are considered **green berries**. (See §52.617 (a).)
- (b) **"B" classification.** If the frozen blueberries possess a good color, a score of 16 or 17 points may be given. **Good color** means that the blueberries possess a reasonably uniform, dark blue-purple color typical of reasonably well-matured berries for the variety and that there may be present not more than 10 percent by count of berries that possess a red-purple color. Frozen blueberries that are under-colored (not at least red-purple color) or that have a definite green cast are considered **green berries**. (See §52.617 (a).)

- (c) **"C" classification.** If the frozen blueberries possess a fairly good color, a score of 14 or 15 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly good color** means that the blueberries may be moderately variable in color, but are not definitely dull or off color, and there may be present not more than 20 percent by count of berries that possess a red-purple color. Frozen blueberries that are undercolored (not at least red-purple color) or that have a definite green cast are considered **green berries**. (See §52.617 (a).)
- (d) **"SStd" classification.** Frozen blueberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§52.617 Absence of defects.

- (a) **General.** The factor of absence of defects refers to the degree of freedom from harmless extraneous material (such as leaves and large stems); from clusters; from cap stems; from green berries, undeveloped berries, or edible berries other than blueberries; and from berries damaged by insect, pathological, or any other injury.
 - (1) **Green berries** are blueberries that are undercolored and do not possess at least a red-purple color or that have a definite green cast, even though the over-all color of the berries may not be a true green color.
 - (2) **Cap stems** are small stems which attach berries to the branch and means single cap stems or joined double cap stems with or without berries attached.
 - (3) **A cluster** means three or more joined cap stems with or without berries attached.
 - (4) **Undeveloped berries** are mummified berries with wrinkled or tough skins or which may be pathologically defective.
- (b) **"A" classification.** Frozen blueberries that are practically free from defects may be given a score of 36 to 40 points. **Practically free from defects** means that the frozen blueberries are reasonably free from cap stems and for each 16 ounces of net weight, or the equivalent thereof, there may be present:

- (1) Not more than a total of 2 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed 1/2 square inch;
 - (2) Not more than a total of 10 berries that are green or undeveloped or edible berries other than blueberries or berries that are damaged, provided not more than 5 berries are undeveloped or edible berries other than blueberries or berries that are damaged; and
 - (3) In Native or wild type, not more than an average of 12 clusters in all samples or containers comprising the sample, provided there are no more than 16 clusters in any single container; or
 - (4) In Cultivated type, not more than 4 clusters.
- (c) **"B" classification.** If the frozen blueberries are reasonably free from defects, a score of 32 to 35 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). **Reasonably free from defects** means that the frozen blueberries are reasonably free from cap stems and for each 16 ounces of net weight, or the equivalent thereof, there may be present:
- (1) Not more than a total of 4 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed 3/4 square inch;
 - (2) Not more than a total of 16 berries that are green or undeveloped or edible berries other than blueberries or berries that are damaged, provided not more than 8 berries are undeveloped or edible berries other than blueberries or berries that are damaged; and
 - (3) In Native or wild type, not more than an average of 20 clusters in all samples or containers comprising the sample, provided there are no more than 28 clusters in any single container; or
 - (4) In Cultivated type, not more than 8 clusters.
- (d) **"C" classification.** If the frozen blueberries are fairly free from defects, a score of 28 to 31 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly free from defects** means that the frozen blueberries are fairly free from cap stems and for each 16 ounces of net weight, or the equivalent thereof, there may be present:

- (1) Not more than a total of 6 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed 1 square inch;
 - (2) Not more than a total of 20 berries that are green or undeveloped or edible berries other than blueberries or berries that are damaged, provided not more than 10 berries are undeveloped or edible berries other than blueberries or berries that are damaged; and
 - (3) In Native or wild type, not more than an average of 28 clusters in all samples or containers comprising the sample, provided there are no more than 40 clusters in any single container; or
 - (4) In Cultivated type, not more than 12 clusters.
- (e) **"SStd" classification.** Frozen blueberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§52.618 Character.

- (a) **"A" classification.** Frozen blueberries that possess a good character may be given a score of 36 to 40 points. **Good character** means that the blueberries are reasonably firm, reasonably fleshy, practically whole, and practically intact with not more than 6 percent by weight of berries that may be crushed, mushy, or broken.
- (b) **"B" classification.** If the frozen blueberries possess a reasonably good character, a score of 32 to 35 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). **Reasonably good character** means that the blueberries may be lacking in firmness and fleshy texture but are reasonably whole and reasonably intact with not more than 10 percent by weight of berries that may be crushed, mushy, or broken.
- (c) **"C" classification.** If the frozen blueberries possess a fairly good character, a score of 28 to 31 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly good character** means that the blueberries are fairly whole and fairly intact with not more than 20 percent by weight of berries that may be crushed, mushy, or broken.

- (d) **"SStd" classification.** Frozen blueberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§52.619 Ascertaining the grade of a lot.

The grade of a lot of frozen blue-berries covered by these standards is determined by procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (7 CFR §52.1 through §52.83).

§52.620 Score sheet for frozen blueberries.

Size and kind of container			
Container marks or identification			
Label (style of pack -- Ratio of fruit to sugar, etc., if shown)			
Net weight (ounces)			
Type			
Factors		Score Points	
Color	20	"A"	18-20
		"B"	16-17
		"C"	14-15 <u>1/</u>
		"D"	0-13 <u>1/</u>
Absence of defects	40	"A"	36-40
		"B"	32-35 <u>1/</u>
		"C"	28-31 <u>1/</u>
		"D"	0-27 <u>1/</u>
Character	40	"A"	36-40
		"B"	32-35 <u>1/</u>
		"C"	28-31 <u>1/</u>
		"D"	0-27 <u>1/</u>
Total Score	100		
Flavor and odor			
Grade			

1/ Indicates limiting rule

Recodified in the Federal Register of December 9, 1953 (18 F.R. 7944)

Amended in the Federal Register of May 7, 1955 (20 F.R. 3096)

Section 52.619 amended May 22, 1957 (22 F.R. 3535)