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Division

United States Standards for Grades of Canned Tomato Puree (Tomato Pulp)

Effective June 12, 2026

This issue of the United States Standards for Grades of Canned Tomato Puree (Tomato Pulp) (91 FR 26985) supersedes the previous issue which has been in effect since May 1, 1978.

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 fresh and processed fruits, vegetables, and specialty crops 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 U.S. grade standards and inspection instructions for all fresh and processed fruits, vegetables, and specialty crops are available on the internet and upon request at the address below. These documents provide detailed interpretations of the grade standards and provide step-by-step procedures for grading the product.

Grade standards are issued by the U.S. Department of Agriculture (USDA) after careful consideration of all data and views submitted during rulemaking. The Department welcomes suggestions for improving the standards in future revisions. Comments may be submitted to, and copies of standards and inspection instructions obtained from:

Director, Specialty Crops Inspection Division
Specialty Crops Program,
USDA, Agricultural Marketing Service
1400 Independence Avenue, SW, STOP 0240
Washington, D.C. 20250

Authority: 7 U.S.C. 1621-1627.

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.

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United States Standards for Grades of Canned Tomato Puree (Tomato Pulp)

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Product Description, Concentration, Texture, Grades
§52.5081 Product description.

Tomato Puree (or Tomato Pulp), hereinafter referred to as Tomato Puree, is the clean sound, wholesome product as defined in the Standard of Identity for Tomato Puree (Tomato Pulp) (21 CFR §155.191), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§52.5082 Concentration.

- (a) The degree of concentration is not considered a factor of quality for the purposes of these standards, but tomato puree contains not less than 8 percent, but less than 24 percent of natural tomato soluble solids.
- (b) The following designations of concentration may be used in connection with these standards for the applicable natural tomato soluble solids group:

Tomato Soluble Solids	
Extra heavy concentration	15.0 percent or more, but less than 24.0 percent
Heavy concentration	11.3 percent or more, but less than 15.0 percent
Medium concentration	10.2 percent or more, but less than 11.3 percent
Light concentration	8 percent or more, but less than 10.2 percent

§52.5083 Texture.

- (a) **Texture** is the degree of fineness or coarseness of the product. Texture is classified when the product is diluted with water, when necessary, to between 8 percent and 9 percent, inclusive, of natural tomato soluble solids.
- (b) **Kind of texture.**
 - (1) **Fine** texture means smooth uniform finish.
 - (2) **Coarse** texture means a coarse, slightly granular finish.

§52.5084 Grades.

- (a) **U.S. Grade A** is the quality of tomato puree that:
 - (1) Has a good flavor and odor;
 - (2) Has a good color;

- (3) Is practically free from defects; and
 - (4) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.
- (b) **U.S. Grade C** is the quality of tomato puree that:
 - (1) Has at least a fairly good flavor and odor;
 - (2) Has at least a fairly good color;
 - (3) Is at least fairly free from defects; and
 - (4) Scores not less than 80 points when scores in accordance with the scoring system outlined in this subpart.
- (c) **Substandard** is the grade of tomato puree that fails to meet the requirements of U.S. Grade C.

Fill of Container

§52.5085 Recommended fill of container.

It is recommended that container of tomato puree be filled as full as practicable without impairment of quality.

Factors of Quality

§52.5086 Determining the grade of a sample unit.

The grade of a sample unit of tomato puree is determined by considering the factor of flavor and odor which is not scored, the ratings for the factors of color and defects which are scored, the total score, and the limiting rules which apply.

(a) Factors not rated by score points.

(1) Flavor and odor.

The flavor and odor of the product is determined on undiluted samples and after dilution with water to between 8 percent and 9 percent, inclusive, of natural tomato soluble solids.

- (i) **Good flavor and odor** means a distinct tomato puree flavor characteristic of ripe, good quality tomatoes and inclusive of salt which may be added. Such flavor and odor may be no more than slightly affected by any one or combination of the following: stems, sepals, leaves, crushed seeds, cores; by immature, soured, or

overripe tomatoes; from the effects of unsatisfactory preparation, processing, or storage; or from any other factor not specifically mentioned.

(ii) **Fairly good flavor and odor** means a characteristic tomato puree flavor and inclusive of salt which may be added. Such flavor and odor may be affected, but not to a serious degree, by any one or combination of the following: stems, sepals, leaves, or crushed seeds, cores; by immature, soured or overripe tomatoes; from the effects of unsatisfactory preparation, processing, or storage; or from any other factor not specifically mentioned.

(iii) **Off flavor and odor** means tomato puree flavor that fails to meet the requirements of fairly good flavor and odor or which has a flavor and/or odor which is seriously objectionable.

(b) **Factors rated by score points.** The relative importance of each scoring factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors:	Points
Color	50
Defects	50
Total Score	100

§52.5087 Determining 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 determined numerically. The numerical range within each factor is inclusive. (For example, 45 to 50 points means 45, 46, 47, 48, 49, or 50 points).

§52.5088 Color.

The amount of red in tomato puree is determined by comparing the color of the product, diluted, if necessary, with water to between 8.0 percent and 8.6 percent, inclusive, of tomato soluble solids (TSS). Information regarding the color guides may be obtained by contacting the USDA.

(a) Use of electric color meters.

(1) Values that may be used for conversion to a numerical score point color evaluation of the product, may be determined by any electronic color meter system approved by the USDA. Such values may be determined by

electronic color meters only on tomato puree that has a concentration of, or may be diluted with water to, 8.5 percent (± 0.1 percent) tomato soluble solids (TSS).

- (2) The values derived with the approved electronic color meter system must be resolvable into a calculated numerical score point by use of any appropriate conversion formula that has been approved by the USDA.

(b) Grade “A” classification.

- (1) Tomato puree that has a good color may be given a score of 45 to 50 points.

Good color means a bright, typical, red tomato puree color that contains as much or more red than the USDA Color Standard A2 for Tomato Products.

- (2) Any calculated numerical score of 45 points, for a product shall be equivalent to a visually evaluated color score of 45 points produced under the conditions specified in paragraph (b)(1) of this section. Proportionately higher calculated numerical scores or visually assigned score points may be assigned to products of proper concentration which show more redness.

(c) Grade “C” classification.

- (1) Tomato puree that has at least a fairly good color may be given a score of 40 to 44 points. Tomato puree that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule).

Fairly good color means a typical red tomato puree color which may be slightly dull or may have a slight yellow, yellow-orange, or brownish cast and contains as much or more red than the USDA Color Standard C2 for Tomato Products.

- (2) Any calculated numerical score of 40 points for a product of the proper concentration, shall be equivalent to a visually evaluated color score of 40 points produced under the conditions specified in paragraph (c)(1) of this section. Proportionately higher calculated numerical scores or visually assigned score points may be assigned to products of proper concentration which show more redness.

- (d) **“Substandard” (SStd) classification.** Tomato puree that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 39 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§52.5089 Defects.

This factor is concerned with the degree of freedom from defects such as dark specks or scale-like particles, seeds or objectionable tomato particles of seeds, objectionable tomato peel, harmless extraneous material, or any other similar substances.

- (a) **Grade “A” classification.** Tomato puree that is practically free from defects may be given a score of 45 to 50 points.

Practically free from defects means that any defects present do not more than slightly affect the appearance or usability of the product.

- (b) **Grade “C” classification.** Tomato puree that is fairly free from defects may be given a score of 40 to 44 points. Tomato puree that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule).

Fairly free from defects means that any defect present may be noticeable but are not so large, so numerous, nor of such contrasting color or nature as to seriously affect the appearance or usability of the product.

- (c) **“Substandard” (SStd) classification.** Tomato puree that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 39 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

Lot Compliance

§52.5090 Determining the grade of a lot.

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

Score Sheet**§52.5091 Score sheet for canned tomato puree.**

Number, size, and kind of container			
Label			
Container marks or identification			
Net weight (ounces)			
Vacuum (inches)			
Texture (fine or coarse)			
Refractive index			
Temperature			
Tomato soluble solids (percent)			
Concentration (Extra Heavy, Heavy, Medium, or Light)			
Factors		Grade	Score Points
Color	50	A	45-50
		C	40-44 ¹
		SStd	0-39 ¹
Defects	50	A	45-50
		C	40-44 ¹
		SStd	0-39 ¹
Total Score	100		
Flavor and Odor (Good, Fairly Good, or Off)			
U.S. Grade			

¹ Limiting Rule.