



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Processed
Products
Branch**

United States Standards for Grades of Tomato Catsup

Effective date February 26, 1992

This is the fifth issue of the United States Standards for Grades of Tomato Catsup published in the **FEDERAL REGISTER** of January 27, 1992 (57 FR 2980) to become effective February 26, 1992. This issue supersedes the fourth issue, which has been in effect since August 31, 1953.

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:

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United States Standards for Grades of Tomato Catsup

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Authority: Agricultural Marketing Act of 1946, Secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended; (7 U.S.C. 1622, 1624).

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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.

§52.2101 Identity.

- (a) **Tomato catsup** means the product as defined in the standard of identity for catsup, ketchup, catchup (21 CFR 155.194) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§52.2102 Grades of tomato catsup.

- (a) **U.S. Grade A** is the quality of tomato catsup that possesses a good color; that possesses a good consistency; that is practically free from defects; that possesses a good flavor; that possesses a good finish; that has a total solids content of not less than 33 percent, by weight; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.
- (b) **U.S. Grade B** is the quality of tomato catsup that possesses a good color; that possesses a good consistency; that is practically free from defects; that possesses a good flavor; that possesses a good finish; that has a total solids content of not less than 29 percent, by weight ; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.
- (c) **U.S. Grade C** is the quality of tomato catsup that possesses a fairly good color; that possesses a fairly good consistency; that is fairly free from defects; that possesses a good finish; that possesses a fairly good flavor; that has a total solids content of not less than 25 percent, by weight; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.
- (d) **Substandard** is the quality of tomato catsup that fails to meet the requirements of U. S. Grade C.

§52.2103 Recommended fill of container for tomato catsup.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of tomato catsup be filled as full as practicable without impairment of quality and that the product occupy not less than 90 percent of the capacity of the container.

§52.2104 Ascertaining the grade.

- (a) The grade of tomato catsup is ascertained by considering in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, consistency, absence of defects, and flavor. 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	25
Consistency	25
Absence of defects	25
Flavor	<u>25</u>
Total score	100

§52.2105 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 each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, 17 to 20 points means 17, 18, 19, or 20 points).

§52.2106 Color.

- (a) **General.** The amount of red in the tomato catsup is determined by comparing the color of the product with that produced by spinning a combination of the following Munsell color discs:

Disc 1	Red	(5R 2.6/13)	(glossy finish).
Disc 2	Yellow	(2.5YR 5/12)	(glossy finish).
Disc 3	Black	(N1)	(glossy finish).
Disc 4	Gray	(N4)	(mat finish).

Any method or device approved by the USDA (including electric color meters) which gives equivalent results may be used.

- (b) **"A" and "B" classification.** Tomato catsup that possesses a good color may be given a score of 21 to 25 points. **Good color** means that the color is typical of tomato catsup made from well-ripened red tomatoes and which has been properly prepared and properly processed. Such color contains as much or more red than that produced by spinning the specified Munsell color discs in the following combinations or an equivalent of such composite color: 65 percent of the area of Disc 1; 21 percent of the area of Disc 2; 14 percent of the area of either Disc 3 or Disc 4, or 7 percent of the area of Disc 3 and 7 percent of the area of Disc 4, whichever most nearly matches the reflectance of the tomato catsup. To receive a score in this classification, tomato catsup, when packed in glass, shall show no discoloration in the "neck" of the bottle.
- (c) **"C" classification.** If the tomato catsup possesses a fairly good color, a score of 17 to 20 points may be given. Tomato catsup 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 that the color is typical of tomato catsup and contains as much or more red than that produced by spinning the specified Munsell color discs in the following combinations or an equivalent of such composite color: 53 percent of the area of Disc 1; 28 percent of the area of Disc 2; 19 percent of the area of either Disc 3 or Disc 4, or 9.5 percent of the area of Disc 3 and 9.5 percent of the area of Disc 4, whichever most nearly matches the reflectance of the tomato catsup.
- (d) **"SStd" classification.** Tomato catsup that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 16 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§52.2107 Consistency.

- (a) **General.** The factor of consistency refers to the viscosity of the product and the tendency to hold its liquid portion in suspension.
- (b) **"A" and "B" classification.** Tomato catsup that possesses a good consistency may be given a score of 22 to 25 points. **Good consistency** means tomato catsup shows not more than slight separation of free liquid when poured on a flat grading tray, is not excessively stiff, and flows not less than 3.0 centimeters nor more than 7.0 centimeters in 30 seconds at 20 degrees Celsius in the Bostwick consistometer. Within this range, the higher consistency catsup will receive the higher score points.

- (c) **"C" classification.** Tomato catsup that possesses a fairly good consistency may be given a score of 18 to 21 points. Tomato catsup that falls into this classification shall not be graded above U.S. Grade C regardless of the total score for the product. **Fairly good consistency** means tomato catsup may show a noticeable, but not excessive, separation of free liquid when poured on a flat grading tray, is not excessively stiff, and is outside the limits of flow for **good consistency**, but flows not less than 2.0 centimeters nor more than 10.0 centimeters in 30 seconds at 20 degrees Celsius in the Bostwick consistometer. Within this range, catsup approaching **good consistency** would receive the higher score points.
- (d) **SStd classification.** Tomato catsup that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product.

§52.2108 Absence of defects.

- (a) **General.** The factor of absence of defects refers to the degree of freedom from defects such as: dark specks or scale-like particles, seeds, particles of seed, tomato peel, core material, or other similar substances. This factor is evaluated by observing a layer of the product on a smooth white, flat surface. Such layer is prepared by drawing a scraper with a clearance of 3/32 inch high by 7 inches long rapidly through the product in two horizontal planes so as to form an approximate square.
- (b) **"A" and "B" classification.** Tomato catsup that is practically free from defects may be given a score of 21 to 25 points. **Practically free from defects** means that any defects present do not more than slightly affect the appearance or eating quality of the product.
- (c) **"C" classification.** If the tomato catsup is fairly free from defects, a score of 18 to 20 points may be given. Tomato catsup that falls into this classification shall not be scored 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 defects present may be noticeable but are not so large, so numerous, or of such contrasting color as to seriously affect the appearance or eating quality of the product.
- (d) **"SStd" classification.** Tomato catsup that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this a limiting rule).

§52.2109 Flavor.

- (a) **"A" and "B" classification.** Tomato catsup that possesses a good flavor may be given a score of 21 to 25 points. **Good flavor** means a good, distinct flavor characteristic of good quality ingredients. Such flavor is free from scorching or any objectionable flavor of any kind.
- (b) **"C" classification.** If the tomato catsup possesses only a fairly good flavor, a score of 17 to 20 points may be given. Tomato catsup 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 flavor** means a flavor characteristic of the ingredients in which there may be slight traces of undesirable flavor such as scorched, bitter, or astringent, but is free from objectionable or off flavor of any kind.
- (c) **"SStd" classification.** Tomato catsup that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 16 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§52.2110 Definitions of terms used in these standards.

- (a) **Total solids** in tomato catsup for the purposes of these standards is the refractometric sucrose value of the filtrate determined in accordance with the International Scale of Refractive Indices of Sucrose Solutions to which value is added 1 percent.
- (b) **Good finish** means that the product has a uniform, smooth texture.

§52.2111 Ascertaining the grade of a lot.

The grade of a lot of the processed product 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 (7CFR 52.1 through 52.83).