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# **United States Standards for Grades of Canned Baked Beans**

**Effective June 8, 2016**

This issue of the United States Standards for Grades of Canned Baked Beans (81 FR 27985) supersedes the previous issue which has been in effect since September 1, 1976.

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

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**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 Baked Beans

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**§52.6461 Product description.**

**Canned baked beans** is the product prepared from dry mature beans used for canning; but not including soybeans. Any safe and suitable ingredients permissible under the provisions of the Federal Food, Drug, and Cosmetic Act may be used. The product is prepared by washing, soaking, and baking beans and sauce through the application of heat in a closed or open container for a period of time sufficient to provide texture, flavor, color, and consistency attributes that are typical for this product. It is packed in hermetically sealed containers and sufficiently processed by heat to assure preservation.

**§52.6462 Types.**

- (a) **White beans.**
- (b) **Red kidney beans.**
- (c) **Yelloweye beans (including soldier beans).**
- (d) **Beans of other colors or types suitable for baking (except soybeans).**

**§52.6463 Styles.**

- (a) **In brown sugar, molasses, or New England sauce** means packed with nutritive carbohydrate sweetening ingredient(s) and any other safe and suitable ingredient(s).
- (b) **In tomato sauce** means packed with tomato pulp or a similar tomato product and any other safe and suitable ingredient(s).

**§52.6464 Grades.**

- (a) **U.S. Grade A** is the quality of canned baked beans that has the following attributes:
  - (1) Practically similar varietal characteristics;
  - (2) Scores at least 17 points for consistency;
  - (3) Practically free from defects;
  - (4) Scores at least 17 points for character;
  - (5) Scores at least 17 points for flavor;
  - (6) Scores at least 13 points for color; and

- (7) Totals not less than 90 points when scored in accordance with the scoring system outlined in this subpart.
- (b) **U.S. Grade B** is the quality of canned baked beans that has at least the following attributes:
  - (1) Reasonably similar varietal characteristics;
  - (2) Reasonably good consistency;
  - (3) Reasonably free from defects;
  - (4) Reasonably good character;
  - (5) Reasonably good flavor;
  - (6) Reasonably good color; and
  - (7) Totals not less than 80 points when scored in accordance with the scoring system outlined in this subpart.
- (c) **Substandard** is the quality of canned baked beans that fails to meet the requirements of U. S. Grade B.

**§52.6465 Sample unit size.**

Compliance with requirements for factors of quality is based on a sample unit consisting of the entire contents of one container, irrespective of container size.

**§52.6466 Determining the grade.**

- (a) **General.** The grade of canned baked beans is determined by considering, in addition to the requirements of the respective grade, the following factors:
  - (1) **Factors not rated by score points:**
    - (i) Similar varietal characteristics;
  - (2) **Factors rated by score points.** The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

<b>Factors:</b>	<b>Points</b>
Color	15
Consistency	20
Flavor	20
Character	20
Absence of defects	25
<b>Total Score</b>	<b>100</b>

**(b) Definitions.**

**(1) Similar varietal characteristics:**

- (i) Contrasting varieties** means dried beans of the same type or of other types that are of a noticeably different color, size, or shape from the dried beans of the predominating variety (such as red beans with white beans);
- (ii) Varieties that blend** means dried beans of same type or of other types that are similar in color, size or shape to the dried beans of the predominating variety (such as pea beans with small white beans);
- (iii) Practically similar varietal characteristics** means that the beans are practically alike in size, shape, color, general characteristics, and that there may be present not more than 0.5 percent, by weight, of contrasting varieties; and not more than 5 percent, by weight, of varieties that blend; and
- (iv) Reasonably similar varietal characteristics** means that the beans are reasonably alike in size, shape, color, general characteristics, and that there may be present not more than 1 percent, by weight, of contrasting varieties; and not more than 10 percent, by weight, of varieties that blend.

**§52.6467 Determining the rating of the factors which are scored.**

The essential variations within each factor which is scored are so described that the value is determined for each factor 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).

**§52.6468 Color.**

- (a) **Good color** means that the baked beans have a uniform, typical of the baked variety and style of pack. Canned baked beans that have a good color may be given a score of 14 or 15 points.
- (b) **Reasonably good color** means that the beans have a reasonably uniform color typical of the baked variety and style of pack. Canned baked beans that have a reasonably good color may be given a score of 12 or 13 points. Canned baked beans that score 12 points for color shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).
- (c) **Substandard.** Canned baked beans that fail to meet the requirements of Grade B may be given a score of 0 to 11 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

**§52.6469 Consistency.**

- (a) **General.** The factor of consistency is determined two minutes after the product, without prior stirring or shaking, is emptied on a dry flat surface.
- (b) **Good consistency** means that the product shall form a well - rounded mound when emptied from the container and that the sauce shall be of such quantity and character that it clings to the beans with not more than a reasonable separation from the mound. Canned baked beans that have a good consistency may be given a score of 18 to 20 points.
- (c) **Reasonably good consistency** means that the product shall form a mound that may tend to take shape of container with little leveling or may level itself substantially with fairly large amount of sauce separation from the beans. Canned baked beans that have a reasonably good consistency may be given a score of 16 or 17 points. Canned baked beans that score 16 points for consistency shall not be graded above U. S. Grade B, regardless of the total score for the product (this is a limiting rule).
- (d) **Substandard.** Canned baked beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

**§52.6470 Flavor.**

- (a) **Good flavor** means that the product has a good baked bean flavor and odor which is characteristic of the variety of bean and style of pack with all flavor components in proper balance. The product is free from objectionable flavors and objectionable odors. Canned baked beans that have a good flavor may be given a score of 18 to 20 points.

- (b) **Reasonably good flavor** means that the product has a reasonably good baked bean flavor and odor which is characteristic of the variety of bean and style of pack with all flavor components in reasonable balance. The product is free from objectionable flavors and objectionable odors. Canned baked beans that have a reasonably good flavor may be given a score of 16 or 17 points. Canned baked beans that score 16 points for flavor shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).
- (c) **Substandard.** Canned baked beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

**§52.6471 Character.**

- (a) **General.** The factor of character refers to the degree of freedom from hard beans, mushy beans, beans with tough skins; and the overall texture of the product.
- (b) **Good character** means that the baked beans have a good typical texture, that may be slightly soft or slightly firm; and that the skins are tender. Canned baked beans that have a good character may be given a score of 18 to 20 points.
- (c) **Reasonably good character** means that the baked beans have a reasonably good typical texture, that may be soft but not hard or mushy; and that the skins may be slightly tough. Canned baked beans that have a reasonably good character may be given a score of 16 or 17 points. Canned baked beans that score 16 points for character shall not be grade above U. S. Grade B, regardless of the total score for the product (this is a partial limiting rule).
- (d) **Substandard.** Canned baked beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

**§52.6472 Absence of defects.**

- (a) **General.** The factor of absence of defects refers to the degree of freedom from extraneous vegetable material, loose skin, broken and mashed beans, and blemished beans; or any other defects that may affect the appearance or eating quality of the product.
- (b) **Definitions:**
  - (1) **Loose skin** means skin or portions of a skin which have become separated wholly from the cotyledons;
  - (2) **Broken** means a cotyledon or portions of a cotyledon which have become



separated; or a bean or portions of a bean with the skin or portions of the skin missing;

- (3) **Mashed** means a bean that is crushed or flattened to the extent that the appearance is seriously affected;
  - (4) **Blemished** means a bean that is affected or damaged by any means to the extent that its appearance or eating quality is adversely affected;
    - (i) Slightly;
    - (ii) Materially;
    - (iii) Seriously; and
  - (5) **Extraneous vegetable material** means vegetable material common to the bean plant or other plants that is harmless upon eating and includes, but is not limited to, peas, lentils, cereal grains, and corn.
- (c) **Practically free from defects** means that the canned baked beans comply with the allowances in Table I. Canned baked beans that are practically free from defects may be given a score of 22 to 25 points.
  - (d) **Reasonably free from defects** means that the canned baked beans comply with the allowances in Table II. Canned baked beans that are reasonably free from defects may be given a score of 20 or 21 points and shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).
  - (e) **Substandard.** Canned baked beans that fail to meet the allowances for Grade B may be given a score of 0 to 19 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

**TABLE I – ALLOWANCES IN CANNED BAKED BEANS  
U.S. GRADE A**

Defects	Maximum amount of defects permitted		
	Sample unit		Sample average
	Percent of net weight		
	Type (a)	Types (b), (c), (d)	
Loose skin, broken, and mashed	10	20	
Total blemished (slightly, materially, and seriously)	9	3	
Materially blemished	2	2	
Seriously blemished	1	1	
Extraneous vegetable material	No limit	No limit	1 piece per 80 ounces net weight

**TABLE II - ALLOWANCES IN CANNED BAKED BEANS  
U.S. GRADE B**

Defects	Maximum amount of defects permitted		
	Sample unit		Sample average
	Percent of net weight		
	Type (a)	Types (b), (c), (d)	
Loose skin, broken, and mashed	20	35	
Total blemished (slightly, materially, and seriously)	6	6	
Materially blemished	4	4	
Seriously blemished	2	2	
Extraneous vegetable material	No limit	No limit	1 piece per 20 ounces net weight

**§52.6473 Determining the grade of a lot.**

The grade of a lot of canned baked beans covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruit and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (7 CFR 52.1 through 52.83).

**§52.6474 Score sheet for canned baked beans.**

Number, size, and kind of container			
Label			
Container marks or identification			
Net weight (ounces)			
Vacuum (inches)			
Type			
Style			
Similar Varietal Characteristics			
	Factors	Grade	Score Points
Color	15		
		"A"	14-15
		"B"	12-13 <sup>1</sup>
		"SStd"	0-11 <sup>2</sup>
Consistency	20		
		"A"	18-20
		"B"	16-17 <sup>1</sup>
		"SStd"	0-15 <sup>2</sup>
Flavor	20		
		"A"	18-20
		"B"	16-17 <sup>1</sup>
		"SStd"	0-15 <sup>2</sup>
Character	20		
		"A"	18-20
		"B"	16-17 <sup>1</sup>
		"SStd"	0-15 <sup>2</sup>
Absence of defects	25		
		"A"	22-25
		"B"	20-21 <sup>2</sup>
		"SStd"	0-19 <sup>2</sup>
Total Score	100		
U.S. Grade			

<sup>1</sup> Indicates partial limiting rule.

<sup>2</sup> Limiting rule