



**United States  
Department of  
Agriculture**

**Agricultural  
Marketing  
Service**

**Fruit and  
Vegetable  
Division**

**Processed  
Products  
Branch**

# **United States Standards for Grades of Dried Apples**

**Effective date October 24, 1955**

This is the fourth issue of the United States Standards for Grades of Dried Apples published in the **FEDERAL REGISTER** of September 22, 1955 (20 FR 7095) to become effective October 24, 1955. This issue supersedes the third issue, which has been in effect since November 1, 1943.

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.  
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## United States Standards for Grades of Dried Apples

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Authority: Agricultural Marketing Act of 1946, Secs. 205, 60 Stat. 1090, 7 U.S.C. 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.

**§52.2481 Product description.**

Dried apples are prepared from sound, properly ripened fruit of the common apple (*Malus pumila*) by washing, sorting, trimming, peeling, coring, and cutting into segments. The prepared apple segments are properly dried to remove the greater portion of moisture to produce a semi-dry texture. The product may be sulfured sufficiently to retard discoloration. The dried apples are sorted or cleaned, or both, to assure a clean, sound, wholesome product.

**§52.2482 Styles of dried apples.**

- (a) **Pie pieces.** Pie pieces consist predominantly of irregularly shaped segments of approximate parallel thickness.
- (b) **Slices or rings.** Slices or rings consist predominantly of circular sections or partial circular sections with open or solid centers, cut at approximate right angles to the core and of approximate parallel thickness.
- (c) **Wedges.** Wedges consist predominantly of sectors cut longitudinally and radially from the core.
- (d) **Cuts.** Cuts consist of dried apple segments of irregular shapes or irregular thicknesses, or both, which are not predominantly of a single style of pie pieces, slices or rings, or wedges.

**§52.2483 Grades of dried apples.**

- (a) **U.S. Grade A or U.S. Fancy** dried apples is the quality of dried apples in the style of pie pieces, slices or rings, or wedges in which the moisture content of the finished product is not more than 24 percent by weight, that possess similar varietal characteristics, that possess a normal flavor and odor, that possess a good color, that are practically uniform in size, that are practically free from defects, and that possess a good texture.
- (b) **U.S. Grade B or U.S. Choice** dried apples is the quality of dried apples in the style of pie pieces, slices or rings, or wedges in which the moisture content of the finished product is not more than 24 percent by weight, that possess similar varietal characteristics, that possess a normal flavor and odor, that possess a reasonably good color, that are reasonably uniform in size, that are reasonably free from defects, and that possess a reasonably good texture.

- (c) **U.S. Grade C or U.S. Standard** dried apples is the quality of dried apples in the style of pie pieces, slices or rings, wedges, or cuts in which the moisture content of the finished product is not more than 24 percent by weight, that may possess dissimilar varietal characteristics, that possess a normal flavor and odor, that possess a fairly good color; that are fairly uniform in size, except for cut style; that are fairly free from defects, and that possess a fairly good texture.
- (d) **Substandard** dried apples is the quality of dried apples that fail to meet the requirements of U.S. Grade C or U.S. Standard.

**§52.2484 Definitions of colors.**

- (a) **Good color.** **Good color** means that the dried apples possess a practically uniform bright, light yellow to white color, or other practically uniform bright characteristic color.
- (b) **Reasonably good color.** **Reasonably good color** means that the dried apples possess a reasonably uniform and reasonably bright yellow to white color, or other reasonably uniform and reasonably bright characteristic color.
- (c) **Fairly good color.** **Fairly good color** means that the dried apples possess a yellow to white color or other characteristic color that may be variable but not so variable or dark as to materially affect the appearance, edibility, or keeping quality of the product.

**§52.2485 Definitions of uniformity of sizes.**

- (a) **General.** Uniformity of size is applicable to those styles that are predominantly of the styles of pie pieces, slices or rings, or wedges and does not apply to the style of cuts.
- (b) **Definition of a whole ring.** A **whole** ring is a circular section which may possess an open or solid center and such a ring with an open center may be cut or broken in one place to the open center.
- (c) **Definition of a practically whole ring.** A **practically whole** ring is a partial circular section, with either open or solid center, and in which at least three-fourths of the apparent whole circular section remains.
- (d) **Practically uniform in size.** **Practically uniform in size** has the following meanings for the respective styles:

**(1) Pie pieces.**

- (i)** Practically all of the units are approximately 1/16 inch to no more than approximately 1/4 inch in their greatest thickness;
- (ii)** Not less than 85 percent, by weight, of all the units are 1 inch or more in their longest dimension; and
- (iii)** Not more than 2 percent, by weight, of all the units may be so small as to pass readily through 5/16 inch square openings.

**(2) Slices or rings.**

- (i)** Practically all of the units are no more than approximately 1/4 inch in their greatest thickness;
- (ii)** Not less than 75 percent, by weight, of all the units are whole and practically whole rings; and
- (iii)** Not less than 75 percent, by weight, of all the units are 1-1/4 inches or more in their longest dimension.

**(3) Wedges.**

- (i)** Not less than 90 percent, by weight, of all the units are 1-1/4 inches or more in their longest dimension and the greatest thicknesses of such units do not vary more than 1/4 inch.

**(e) Reasonably uniform in size.** Reasonably uniform in size has the following meanings for the respective styles:

**(1) Pie pieces.**

- (i)** Practically all of the units are approximately 1/16 inch to no more than approximately 1/4 inch in their greatest thickness;
- (ii)** Not less than 60 percent, by weight, of all the units are 1 inch or more in their longest dimension; and
- (iii)** Not more than 6 percent, by weight, of all the units may be so small as to pass readily through 5/16 inch square openings.

**(2) Slices or rings.**

- (i)** Practically all of the units are no more than approximately 1/4 inch in their greatest thickness;
- (ii)** Not less than 60 percent, by weight, of all the units are whole and practically whole rings; and
- (iii)** Not less than 60 percent, by weight, of all the units are 1-1/4 inches or more in their longest dimension.

**(3) Wedges.**

- (i)** Not less than 75 percent, by weight, of all the units are 1-1/4 inches or more in their longest dimension and the greatest thicknesses of such units do not vary more than 1/4 inch.

**(f) Fairly uniform in size.** **Fairly uniform in size** has the following meanings for the respective styles:

**(1) Pie pieces.**

- (i)** Practically all of the units are approximately 1/16 inch to no more than approximately 5/16 inch in their greatest thickness;
- (ii)** Not less than 40 percent, by weight, of all the units are 1 inch or more in their longest dimension; and
- (iii)** Not more than 10 percent, by weight, of all the units may be so small as to pass readily through 5/16 inch square openings.

**(2) Slices or rings.**

- (i)** Practically all of the units are no more than approximately 5/16 inch in their greatest thickness;
- (ii)** Not less than 40 percent, by weight, of all the units are whole and practically whole rings; and
- (iii)** Not less than 40 percent, by weight, of all the units are 1-1/4 inches or more in their longest dimension.

**(3) Wedges.**

- (i)** Not less than 50 percent, by weight, of all the units are 1-1/4 inches or more in their longest dimension and the greatest thicknesses of such units do not vary more than 5/16 inch.

**§52.2486 Definitions of defects and degrees of freedom from defects.**

- (a) Small pieces.** **Small pieces** in the style of slices or rings means units that are less than 1 inch in their longest dimension.
- (b) Loose core or major portion thereof.** **Loose core or major portion thereof** means any part of an apple core that approximates one-half or more of the apparent original core including the seed cells and carpel tissue, with or without seeds. The seeds attached to such loose core or major portion thereof are not scoreable as **seeds** within this section.
- (c) Seeds.** **Seeds** means any loose seeds or seeds attached to carpel tissue that are not considered a **loose core or major portion thereof**.
- (d) Carpel tissue.** **Carpel tissue** means any hard tissue surrounding the seed cells that is not a part of a **loose core or major portion thereof**.
- (e) Damaged.**
- (1) Damaged by peel** means any unit possessing peel exceeding in the aggregate an area of a circle 1/4 inch in diameter, regardless of the color of the peel.
- (2) Damaged by bruises or other discoloration, bitter pit or other corky tissue, and water core** means any unit of which the appearance or eating quality is materially affected by such defects. Slight, very light brown bruises are not regarded as **damage**.
- (3) Damaged by other means** means units damaged by other defects not specifically mentioned, which materially affect the appearance or eating quality of the unit but does not include any filthy, decomposed, or deleterious substance.
- (4) Damaged by calyxes and stems** means that the appearance or eating quality of the unit is materially affected by such defects.



(f) **Practically free from defects.** **Practically free from defects** means that defects or defective units within the following limits may be present:

- (1) No loose cores or major portions thereof;
- (2) In the style of slices or rings, not more than 5 percent, by weight, of the dried apples may be small pieces: **Provided**, That the appearance of the product is not materially affected by the presence of small pieces;
- (3) Not more than 4 seeds for each 16 ounces of dried apples;
- (4) Not more than 3 square inches of carpel tissue in the aggregate for each 16 ounces of dried apples; and
- (5) Not more than 10 percent, by weight, of all the units may be damaged by peel, bruises or other discoloration, bitter pit or other corky tissue, water core, other means, calyxes, and stems: **Provided**, that not more than 1 percent, by weight, of all the units may be damaged by calyxes and stems.

(g) **Reasonably free from defects.** **Reasonably free from defects** means that defects or defective units within the following limits may be present:

- (1) No loose cores or major portions thereof;
- (2) In the style of slices or rings, not more than 7 percent, by weight, of the dried apples may be small pieces: **Provided**, That the appearance of the product is not materially affected by the presence of small pieces;
- (3) Not more than 6 seeds for each 16 ounces of dried apples;
- (4) Not more than 6 square inches of carpel tissue in the aggregate for each 16 ounces of dried apples; and
- (5) Not more than 15 percent, by weight, of all the units may be damaged by peel, bruises or other discoloration, bitter pit or other corky tissue, water core, other means, calyxes, and stems: **Provided**, that not more than 2 percent, by weight, of all the units may be damaged by calyxes and stems.

(h) **Fairly free from defects.** **Fairly free from defects** means that defects or defective units within the following limits may be present:

- (1) Not more than 1 loose core or major portions thereof for each 48 ounces of dried apples;
- (2) In the style of slices or rings, not more than 10 percent, by weight, of the dried apples may be small pieces: **Provided**, that the appearance of the product is not seriously affected by the presence of small pieces;
- (3) Not more than 10 seeds for each 16 ounces of dried apples;
- (4) Not more than 9 square inches of carpel tissue in the aggregate for each 16 ounces of dried apples; and
- (5) Not more than 20 percent, by weight, of all the units may be damaged by peel, bruises or other discoloration, bitter pit or other corky tissue, water core, other means, calyxes, and stems: **Provided**, that not more than 3 percent, by weight, of all the units may be damaged by calyxes and stems.

**§52.2487 Definitions of texture.**

- (a) **Good texture.** **Good texture** means that the units are generally pliable and there may be present a few hard and dry units.
- (b) **Reasonably good texture.** **Reasonably good texture** means that the units may vary in pliability but are reasonably free from hard and dry units.
- (c) **Fairly good texture.** **Fairly good texture** means that the texture may vary in degrees of pliability including hard and dry units.

**§52.2488 Definition of flavor and odor.**

**Normal flavor and odor.** **Normal flavor and odor** means a clean, typical dried apple flavor free from any objectionable flavor or objectionable odor of any kind. A flavor and odor from proper treatment by sulfur is not considered objectionable.

**§52.2489 Moisture.**

**Moisture** means the percentage, by weight, of the dried apples that is moisture, when determined by the Dried Fruit Moisture Tester Method or in accordance with methods that give equivalent results.

**§52.2490 Work sheet for dried apples.**

Size and kind of container .....			
Container mark or identification .....			
Label or brand .....			
Net weight .....			
Style .....			
Moisture content .....			
Varietal characteristics: ( ) Similar; ( ) Dissimilar .....			
Flavor and odor: ( ) Normal; ( ) Other .....			
Color: ( ) Good; ( ) Reasonably good; ( ) Fairly good .....			
	Grade A	Grade B	Grade C
Uniformity of size			
Pie pieces:			
Approximate thickness .....	1/16 to 1/4 inch	1/16 to 1/4 inch	1/16 to 5/16 inch
Length, 1 inch or more (minimum) ..	85 percent	60 percent	40 percent
Pass through 5/16 inch square (maximum) .....	2 percent	6 percent	10 percent
Slices or rings:			
Approximate thickness (maximum) ..	1/4 inch	1/4 inch	5/16 inch
Whole and practically whole rings (minimum) .....	75 percent	60 percent	40 percent
Length, 1-1/4 inches, or more (minimum) .....	75 percent	60 percent	40 percent
Wedges:			
Variation in thickness (maximum) ...	1/4 inch	1/4 inch	5/16 inch
Length, 1-1/4 inches, or more (minimum) .....	90 percent	75 percent	50 percent
Defects			
Slices or rings:			
Small pieces (maximum) .....	5 percent	7 percent	10 percent
All styles:			
Seeds (maximum) .....	4 per 16 ounces	6 per 16 ounces	10 per 16 ounces
Carpel tissue (maximum per 16 ounces) .....	3 square inches	6 square inches	9 square inches
Loose cores (maximum) .....	None	None	1 per 48 ounces
Damaged, total (maximum) .....	10 percent	15 percent	20 percent
Includes calyces and stems .....	1 percent	2 percent	3 percent
Texture: ( ) Good; ( ) Reasonably good; ( ) Fairly good .....			
Grade .....			

(All percentages are **by weight** of dried apples)

The United States Standards for Grade of Dried Apples (which is the fourth issue) contained in this subpart shall become effective 30 days after the date of publication hereof in the Federal Register and thereupon will supersede the United States Standards for Grades of Dried Apples which have been in effect since November 1, 1943.

Dated: September 19, 1955

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Deputy Administrator,  
Marketing Services.

Published in the Federal Register, September 22, 1955 (20 F.R. 7095)