



**United States  
Department of  
Agriculture**

**Agricultural  
Marketing  
Service**

**Dairy  
Division**

# **United States Standards for Grades of Monterey (Monterey Jack) Cheese**

**Effective May 10, 1996**

## United States Standards for Monterey (Monterey Jack) Cheese<sup>1</sup>

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### Definitions

§ 58.2465 *Monterey (Monterey Jack) cheese.*

Monterey (Monterey Jack) cheese is cheese made by the monterey process or by any other procedure which produces a finished cheese having the same organoleptic, physical, and chemical properties as the cheese produced by the monterey process. The cheese is made from pasteurized cow's milk. It may contain added common salt and contains not more than 44 percent moisture, its total solids content is not less than 50 percent milkfat, and it conforms to the applicable provisions of 21 CFR Part 133, "Cheeses and Related Cheese Products," as issued by the Food and Drug Administration.

§ 58.2466 *Types of surface protection.*

The following are the types of surface protection for monterey (monterey jack) cheese:

(a) *Rinded and paraffin-dipped.*

The cheese that has formed a rind is dipped in a refined paraffin, amorphous wax, microcrystalline wax, or other suitable substance. Such coating is a continuous, unbroken, and uniform film adhering tightly to the entire surface of the cheese rind.

(b) *Rindless.*

(1) *Wrapped.* The cheese is completely enveloped in a tight-fitting wrapper or other protective covering, which is sealed with sufficient overlap or satisfactory closure. The wrapper or covering shall not impart color or objectionable taste or odor to the cheese. The wrapper or covering shall be of sufficiently low permeability to air so as to prevent the formation of a rind.

(2) *Paraffin-dipped.* The cheese is dipped in a refined paraffin, amorphous wax, microcrystalline wax, or other suitable substance. The paraffin shall be applied so that it is continuous, unbroken, and uniformly adheres tightly to the entire surface. If a wrapper or coating is applied to the cheese prior to paraffin dipping, it shall completely envelop the cheese and not impart color or objectionable taste or odor to the cheese.

(c) If antimycotics are used, they shall be used in accordance with the provisions of Food and Drug Administration regulations (21 CFR Part 133).

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<sup>1</sup>Compliance with these standards does not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act.

## U.S. Grades

### § 58.2467 *Nomenclature of U.S. grades.*

The nomenclature of U.S. grades is as follows:

- (a) U.S. Grade AA.
- (b) U.S. Grade A.
- (c) U.S. Grade B.

### § 58.2468 *Basis for determination of U.S. grade.*

- (a) The cheese shall be graded no sooner than 10 days of age.
- (b) The rating of each quality factor shall be established on the basis of characteristics present in any vat of cheese.
- (c) The U.S. grades of monterey (monterey jack) cheese are determined on the basis of rating the following quality factors:
  - (1) Flavor.
  - (2) Body and Texture.
  - (3) Color.
  - (4) Finish and Appearance.
- (d) The final U.S. grade shall be determined on the basis of the lowest rating of any one of the quality factors.

### § 58.2469 *Specifications for U.S. grades.*

The general requirements for the U.S. Grades of Monterey (Monterey Jack) Cheese are as follows:

- (a) *U.S. Grade AA.* U.S. Grade AA Monterey (Monterey Jack) Cheese shall conform to the following requirements (See Tables I, II, III, and IV of this section):
  - (1) *Flavor.* The cheese shall possess a fine and highly pleasing monterey (monterey jack) cheese flavor which is free from undesirable tastes and odors; or may be lacking in flavor development. The cheese may possess a very slight acid or feed flavor. See Table I of this section.
  - (2) *Body and Texture.* A plug drawn from the cheese shall be reasonably firm. Dependent upon the method of manufacture, a satisfactory plug may exhibit evenly distributed small mechanical openings or a close body. The cheese shall be free from sweet holes, yeast holes, or

other gas holes. The body may be very slightly weak, and the texture may be definitely curdy. See Table II of this section.

(3) *Color.* The color shall be natural, uniform, and bright. See Table III of this section.

(4) *Finish and appearance.*

(i) *Rinded and paraffin-dipped.* The bandage shall be evenly placed over the entire surface of the cheese and be free from unnecessary overlapping and wrinkles, and not burst or torn. The rind shall be sound, firm, smooth, and provide good protection to the cheese. The surface shall be smooth, bright, and have a good coating of wax or coating of paraffin that adheres firmly to all surfaces. The cheese shall be free from mold under the paraffin. The cheese shall be free from high edges, huffing, or lopsidedness, but may possess soiled surface to a very slight degree. See Table IV of this section.

(ii) *Rindless and wrapped.* The wrapper or covering shall be practically smooth and properly sealed with adequate overlapping at the seams or sealed by any other satisfactory type of closure. The wrapper or covering shall be neat and shall adequately and securely envelop the cheese, but may be slightly wrinkled. Allowance should be made for slight wrinkles caused by crimping or sealing when vacuum packaging is used. The cheese shall be free from mold under the wrapper or covering and shall not be huffed or lopsided. See Table IV of this section.

(iii) *Rindless and paraffin-dipped.* The cheese surface shall be smooth, bright, and have a good coating of paraffin that adheres firmly. If a wrapper or coating is applied prior to paraffin dipping, it shall completely envelop the cheese. The cheese shall be free from high edges, huffing, lopsidedness, or mold. The cheese may possess soiled surface to a very slight degree. The wrapper may be wrinkled to a slight degree. See Table IV of this section.

(b) *U.S. Grade A.* U.S. Grade A Monterey (Monterey Jack) Cheese shall conform to the following requirements (See Tables I, II, III, and IV of this section):

(1) *Flavor.* The cheese shall possess a pleasing monterey (monterey jack) cheese flavor which is free from undesirable tastes and odors; or may be lacking in flavor development. The cheese may possess bitter or flat flavor to a very slight degree; and acid or feed flavor to a slight degree. See Table I of this section.

(2) *Body and texture.* A plug drawn from the cheese shall be reasonably firm. Dependent upon the method of manufacture, a satisfactory plug may exhibit evenly distributed mechanical openings or a close body. The plug shall be free from sweet holes, yeast holes, or other gas holes. The body and texture may be very slightly weak or loosely knit, and definitely curdy. See Table II of this section.

(3) *Color.* The color shall be natural, fairly uniform, and bright. The cheese may possess waviness to a very slight degree. See Table III of this section.

(4) *Finish and appearance.*

(i) *Rinded and paraffin-dipped.* The bandage shall be evenly placed over the entire surface of the cheese and not be burst or torn. The rind shall be sound, firm, smooth, and provide good protection to the cheese. The surface shall be practically smooth, bright, and have a good coating of paraffin that adheres firmly to all surfaces. The cheese shall be free from mold under the paraffin. The cheese may possess the following characteristics to a very slight degree: Soiled

surface or surface mold; and to a slight degree: High edges, irregular press cloth, lopsided, or rough surface. See Table IV of this section.

(ii) *Rindless and wrapped.* The wrapper or covering shall be practically smooth, properly sealed with adequate overlapping at the seams or sealed by any other satisfactory type of closure. The wrapper or covering shall be neat and adequately and securely envelop the cheese but may be slightly wrinkled. Allowance should be made for slight wrinkles caused by crimping or sealing when vacuum packaging is used. The cheese shall be free from mold under the wrapper or covering and shall not be huffed but may possess to a slight degree: High edges, irregular press cloth, lopsided, or rough surface. See Table IV of this section.

(iii) *Rindless and paraffin-dipped.* The cheese surface shall be bright and have a good coating of paraffin that adheres firmly. If a wrapper or coating is applied prior to paraffin dipping, it shall completely envelop the cheese and have a good coating of paraffin that adheres firmly. The cheese may possess soiled surface to a very slight degree but shall be free from mold, and it may possess to a slight degree: High edges, irregular press cloth, lopsided, rough surface, or wrinkled wrapper or covering. See Table IV of this section.

(c) *U.S. Grade B.* U.S. Grade B Monterey (Monterey Jack) Cheese shall conform to the following requirements (See Tables I, II, III, and IV of this section):

(1) *Flavor.* The cheese may possess a fairly pleasing monterey (monterey jack) cheese flavor; or it may be lacking in flavor development. The cheese may possess onion or sour flavor to a very slight degree; barny, bitter, flat, fruity, malty, old milk, rancid, utensil, weedy, whey-taint, or yeasty flavor to a slight degree; and acid or feed flavor to a definite degree. See Table I of this section.

(2) *Body and texture.* A plug drawn from the cheese shall be moderately firm. Dependent upon the method of manufacture, a satisfactory plug may exhibit mechanical openings or a close body. The cheese may possess the following characteristics to a slight degree: Coarse, corky, crumbly, gassy, loosely knit, mealy, pasty, short, slitty, sweet holes, or weak; and the following to a definite degree: Curdy. See Table II of this section.

(3) *Color.* The cheese may possess the following characteristics to a slight degree: Acid-cut, dull, faded, mottled, salt spots, unnatural, or wavy. In addition, rindless monterey cheese may have a bleached surface to a slight degree. See Table III of this section.

(4) *Finish and appearance.*

(i) *Rinded and paraffin-dipped.* The bandage shall be placed over the entire surface of the cheese and may be uneven and wrinkled, but not burst or torn. The rind shall be reasonably sound and free from soft spots, rind rot, cracks, or openings of any kind. The surface may be rough and unattractive but shall possess a fairly good coating of paraffin. The paraffin may be scaly or blistered, with very slight mold under the bandage or paraffin, but there shall be no indication that mold has entered the cheese. The cheese may possess the following characteristics to a slight degree: Checked rind, defective coating, soiled surface, sour rind, surface mold, or weak rind; and to a definite degree: High edges, irregular press cloth, lopsided, or rough surface. See Table IV of this section.

(ii) *Rindless and wrapped.* The wrapper or covering shall be unbroken and shall adequately and securely envelop the cheese. The following may be present to a very slight

degree: Mold under the wrapper but not entering the cheese; to a slight degree: Soiled surface or surface mold; and to a definite degree: High edges, irregular press cloth, lopsided, rough surface, or wrinkled wrapper or cover. See Table IV of this section.

(iii) *Rindless and paraffin-dipped.* The wrapper or coating applied prior to paraffin dipping shall adequately and securely envelop the cheese and have a coating of paraffin that adheres firmly to the cheese wrapper and shall be unbroken but may be definitely wrinkled. The paraffin may be scaly or blistered, with very slight mold under the paraffin, but there shall be no indication that mold has entered the cheese. The cheese may possess the following characteristics to a slight degree: Defective coating, soiled surface, or surface mold; and the following to a definite degree: High edges, irregular press cloth, lopsided, rough surface, or wrinkled wrapper or covering. See Table IV of this section.

**Table I.--Classification of Flavor With Corresponding U.S. Grade**

<b>Flavor characteristics</b>	<b>AA</b>	<b>A</b>	<b>B</b>
Acid	VS	S	D
Barny	--	--	S
Bitter	--	VS	S
Feed	VS	S	D
Flat	--	VS	S
Fruity	--	--	S
Malty	--	--	S
Old milk	--	--	S
Onion	--	--	VS
Rancid	--	--	S
Sour	--	--	VS
Utensil	--	--	S
Weedy	--	--	S
Whey-taint	--	--	S
Yeasty	--	--	S

(--) = Not permitted VS = Very Slight S = Slight D = Definite.

**Table II.--Classification of Body and Texture With Corresponding U.S. Grade**

<b>Body and texture characteristics</b>	<b>AA</b>	<b>A</b>	<b>B</b>
Coarse	--	--	S
Corky	--	--	S
Crumbly	--	--	S
Curdy	D	D	D
Gassy	--	--	S
Loosely knit	--	VS	S
Mealy	--	--	S
Pasty	--	--	S
Short	--	--	S
Slitty	--	--	S
Sweet holes	--	--	S
Weak	VS	VS	S

(--)= Not permitted VS = Very Slight S = Slight D = Definite.

**Table III.--Classification of Color With Corresponding U.S. Grade**

<b>Color characteristics</b>	<b>AA</b>	<b>A</b>	<b>B</b>
Acid-cut	--	--	S
Bleached surface (rindless)	--	--	S
Dull or faded	--	--	S
Mottled	--	--	S
Salt spots	--	--	S
Unnatural	--	--	S
Wavy	--	VS	S

(--)= Not permitted VS = Very Slight S = Slight D = Definite.

**Table IV.--Classification of Finish and Appearance With Corresponding U.S. Grade**

<b>Finish and appearance characteristics</b>	<b>AA</b>	<b>A</b>	<b>B</b>
Rindless:			
Defective coating (paraffin-dipped: scaly, blistered, and checked)	--	--	S
High edges	--	S	D
Irregular press cloth (uneven, wrinkled, and improper overlapping)	--	S	D
Lopsided	--	S	D
Mold under wrapper or covering	--	--	VS
Rough surface	--	S	D
Soiled surface	--	--	S
Soiled surface (paraffin-dipped)	VS	VS	S
Surface mold	--	--	S
Wrinkled wrapper or covering	S	S	D
Rinded:			
Checked rind	--	--	S
Defective coating (scaly, blistered, and checked)	--	--	S
High edges	--	S	D
Irregular press cloth (uneven, wrinkled, and improper overlapping)	--	S	D
Lopsided	--	S	D
Mold under paraffin	--	--	VS
Rough surface	--	S	D
Soiled surface	VS	VS	S
Sour rind	--	--	S
Surface Mold	--	VS	S
Weak rind	--	--	S

(--) = Not permitted VS = Very Slight S = Slight D = Definite.

§ 58.2470 *U.S. grade not assignable.*

Monterey (Monterey Jack) cheese shall not be assigned a U.S. grade for one or more of the following reasons:

(a) The cheese fails to meet or exceed the requirements for U.S. Grade B.

(b) The cheese is produced in a plant that is rated ineligible for USDA grading service or is not USDA-approved.

### **Explanation of Terms**

§ 58.2471 *Explanation of terms.*

(a) *With respect to types of surface protection:*

(1) *Paraffin.* Refined paraffin, amorphous wax, microcrystalline wax, or any combination of such or any other suitable substance.

(2) *Paraffin dipped.* Cheese that has been coated with paraffin.

(3) *Rind.* A hard coating caused by the dehydration of the surface of the cheese.

(4) *Rinded.* A protection developed by the formation of a rind.

(5) *Rindless.* Cheese which has not formed a rind due to the impervious type of wrapper, covering, or container, enclosing the cheese.

(6) *Wrapped.* Cheese that has been covered with a transparent or opaque material (plastic film type or foil) next to the surface of the cheese.

(7) *Wrapper or covering.* A plastic film or foil material next to the surface of the cheese, used as an enclosure or covering of the cheese.

(b) *With respect to flavor:*

(1) *Very slight.* Detected only upon very critical examination.

(2) *Slight.* Detected only upon critical examination.

(3) *Definite.* Not intense but detectable.

(4) *Undesirable.* Those listed in excess of the intensity permitted or those characterizing flavors not listed.

(5) *Acid.* Sharp and puckery to the taste, characteristic of lactic acid.

(6) *Barny.* A flavor characteristic of the odor of a poorly ventilated cow barn.

(7) *Bitter.* Distasteful, similar to the taste of quinine.

(8) *Feed.* Feed flavors (such as alfalfa, sweetclover, silage, or similar feed) in milk which have carried through into the cheese.

(9) *Flat.* Insidid, practically devoid of any characteristic monterey (monterey jack) cheese flavor.

(10) *Fruity.* A fermented, sweet, fruit-like flavor resembling apples.

(11) *Lacking in flavor development.* No undesirable and very little, if any, monterey (monterey jack) cheese flavor development.

- (12) *Malty*. A distinctive, harsh flavor suggestive of malt.
- (13) *Old milk*. Lacks freshness.
- (14) *Onion*. A flavor recognized by the peculiar taste and aroma suggestive of its name. Present in milk or cheese when the cows have eaten onions, garlic, or leeks.
- (15) *Rancid*. A flavor suggestive of rancidity or butyric acid; sometimes associated with bitterness.
- (16) *Sour*. An acid, pungent flavor resembling vinegar.
- (17) *Utensil*. A flavor that is suggestive of improper or inadequate washing and sterilization of milking machines, utensils, or factory equipment.
- (18) *Weedy*. A flavor present in cheese when cows have eaten weedy hay or grazed on weed-infested pasture.
- (19) *Whey-taint*. A slightly acid flavor characteristic of fermented whey.
- (20) *Yeasty*. A flavor indicating yeast fermentation.
- (c) *With respect to body and texture:*
- (1) *Very slight*. Detected only upon very critical examination and present only to a minute degree.
- (2) *Slight*. Barely identifiable and present only to a small degree.
- (3) *Definite*. Readily identifiable and present to a substantial degree.
- (4) *Coarse*. Feels rough, dry, and sandy.
- (5) *Corky*. Hard, tough, over-firm cheese which does not readily break down when rubbed between the thumb and fingers.
- (6) *Crumbly*. Tends to fall apart when rubbed between the thumb and fingers.
- (7) *Curdy*. Smooth but firm; when worked between the fingers is rubbery and not waxy or broken down.
- (8) *Firm*. Feels solid, not soft or weak.
- (9) *Gassy*. Gas holes of various sizes and may be scattered.
- (10) *Loosely knit*. Curd particles which are not well-matted and fused together.
- (11) *Mealy*. Short body, does not mold well and looks and feels like corn meal when rubbed between the thumb and fingers.
- (12) *Mechanical openings*. Irregular shaped openings that are caused by variations in make procedure and not caused by gas fermentation.
- (13) *Pasty*. Is usually a weak body and when the cheese is rubbed between the thumb and fingers becomes sticky and smeary.
- (14) *Pinny*. Numerous very small gas holes.
- (15) *Reasonably firm*. Somewhat less firm but not to the extent of being weak.
- (16) *Short*. No elasticity in the cheese plug and when rubbed between the thumb and fingers, the cheese tends toward mealiness.
- (17) *Slitty*. Narrow, elongated slits generally associated with a cheese that is gassy or yeasty. These slits may sometimes be referred to as "fish-eyes."
- (18) *Sweet holes*. Spherical gas holes which are glossy in appearance and usually about the size of BB shots. These gas holes are sometimes referred to as "shot holes."

(19) *Weak*. The cheese plug is soft but is not necessarily sticky like a pasty cheese and requires little pressure to crush.

(d) *With respect to color:*

(1) *Very slight*. Detected only upon very critical examination and present only to a minute degree.

(2) *Slight*. Barely identifiable and present only to a small degree.

(3) *Acid-cut*. A bleached or faded color which sometimes varies throughout the cheese and appears most often around mechanical openings.

(4) *Bleached surface*. A faded color beginning at the surface and progressing inward.

(5) *Dull or faded*. A color condition lacking in luster or translucency.

(6) *Mottled*. Irregular shaped spots or blotches in which portions are not uniform in color. Also an unevenness of color due to combining the curd from two different vats, sometimes referred to as "mixed curd."

(7) *Natural*. White to light cream in color.

(8) *Salt spots*. Large light-colored spots or areas.

(9) *Unnatural*. Any color which is not white to light cream.

(10) *Wavy*. An unevenness of color which appears as layers or waves.

(e) *With respect to finish and appearance:*

(1) *Very slight*. Detected only upon very critical examination and present to a minute degree.

(2) *Slight*. Barely identifiable and present to a small degree.

(3) *Definite*. Readily identifiable and present to a substantial degree.

(4) *Adequately and securely enveloped*. The wrapper or covering is properly sealed and entirely encloses the cheese with sufficient adherence to the surface of the cheese to protect it from contamination or dehydration.

(5) *Bandage*. Cheese cloth used to wrap cheese prior to dipping in paraffin.

(6) *Bandage evenly placed*. Placement of the bandage so that it completely envelops the cheese and overlaps evenly about one inch.

(7) *Bright surface*. Clean, glossy surface.

(8) *Burst or torn bandage*. A severance of the bandage usually occurring at the side seam; or when the bandage is otherwise snagged or broken.

(9) *Checked rind*. Numerous small cracks or breaks in the rind which sometimes follows the outline of curd particles.

(10) *Defective coating*. A brittle coating of paraffin that breaks and peels off in the form of scales or flakes; flat or raised blisters or bubbles under the surface of the paraffin; checked paraffin, including cracks, breaks or hairline checks in the paraffin or coating of the cheese.

(11) *Firm sound rind*. A rind possessing a firmness and thickness (not easily dented or damaged) consistent with the size of the cheese and which is dry, smooth, and closely knit, sufficient to protect the interior quality from external defects; free from checks, cracks, breaks, or soft spots.

(12) *High edge*. A rim or ridge on the side of the cheese.

(13) *Huffed*. A block of cheese which is swollen because of gas fermentation. The cheese becomes rounded or oval in shape instead of having flat surfaces.

(14) *Irregular press cloth*. Press cloth improperly placed in the hoop resulting in too much press cloth on one end and insufficient on the other causing overlapping; wrinkled and loose fitting.

(15) *Lopsided*. One side of the cheese is higher than the other side.

(16) *Mold under bandage and paraffin*. Mold spots or areas under the paraffin.

(17) *Mold under wrapper or covering*. Mold spots or areas under the wrapper or covering.

(18) *Rind rot*. Soft spots on the rind that have become discolored and are decayed or decomposed.

(19) *Rough Surface*. Lacks smoothness.

(20) *Smooth surface*. Not rough or uneven.

(21) *Soft spots*. Areas soft to the touch and which are usually faded and moist.

(22) *Soiled surface*. Milkstone, rust spots, or other discoloration on the surface of the cheese.

(23) *Sour rind*. A fermented rind condition, usually confined to the faces of the cheese.

(24) *Surface mold*. Mold on the exterior of the paraffin or wrapper.

(25) *Wax or paraffin that adheres firmly to the surface of the cheese*. A coating with no cracks, breaks, or loose areas.

(26) *Weak rind*. A thin rind which possesses little or no resistance to pressure.