



## United States Standards for Grades of Frozen Raw Scallops

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### Description of the product

Frozen raw scallops are clean, wholesome, adequately drained, whole or cut adductor muscles of the scallop of the regular commercial species. The portion of the scallop used shall be only the adductor muscle “eye” which controls the shell movement. Scallops shall be washed, drained, packed, and frozen in accordance with good manufacturing practices and are maintained at temperatures necessary for the preservation of the product. Only scallops of a single species shall be used within a lot.

### Styles

- (a) *Style I.* Solid pack scallops are frozen together into a solid mass.
  - (1) *Substyle a.* Glazed.
  - (2) *Substyle b.* Not glazed.
  
- (b) *Style II.* Individually quick frozen pack (IQF) scallops are individually quick frozen. Individual scallops can be separated without thawing.
  - (1) *Substyle a.* Glazed.
  - (2) *Substyle b.* Not glazed.

### Types

- (a) *Type 1.* Adductor muscle.
  
- (b) *Type 2.* Adductor muscle with catch (gristle or sweet meat) portion removed.

### Grades

- (a) “U.S. Grade A” is the quality of frozen raw scallops that:
  - (1) possess food flavor and odor and;
  - (2) for those factors that are rated in accordance with the scoring system outlined in this part, have a total score of 85 to 100 points.
  
- (b) “U.S. Grade B” is the quality of frozen raw scallops that:
  - (1) possess at least reasonably good flavor and odor, and;
  - (2) rate a total score of not less than 70 points for these factors of quality that are rated in accordance with the scoring system outlined in this part.
  
- (c) “Substandard” is the quality of frozen raw scallops that meets the requirements of Description of the product, but otherwise fails to meet the requirements of “U.S. Grade B.”

### Determination of the grade

In a plant under Contract USDC Inspection, the grade is determined by examining the product for factors 1 to 5 in the fresh or thawed state and Factor 6 in the cooked state. For lot inspection, examination of the product for Factor, 1 is carried out in the frozen state and 2 to 5 in the thawed state. Factor 6 is examined in the cooked state.



(a) *Factors rated by score points.* Points are deducted for variation in the quality of each factor in accordance with the schedule in Table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100, the minimum score is 0.

(b) *Factors not rated by score points.* The factor of “Flavor and odor” is evaluated organoleptically by smelling and tasting the product in the cooked state.

(1) Good flavor and odor (essential requirements for a U.S. Grade A product) means that the product has the typical flavor and odor of the species and is free from bitterness, staleness, and off-flavor and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements for a U.S. Grade B product) means the product is lacking in good flavor and odor but is free from objectionable off-flavors and off-odors of any kind.

## Definitions and methods

(a) *Selection of the sample unit.* The sample unit shall consist of the primary container and its entire contents. The number and size of sample units to be examined shall be as indicated in § 260.61.

(b) *Examination of sample, frozen state.* When this product is examined under Contract USDC Inspection, the samples are examined for Factor 1 in Table 1 in the fresh or thawed state. When the product is lot inspected, the samples are examined for Factor 1, in Table 1 in the frozen state.

(1) “Dehydration” refers to the loss of moisture from the scallop’s surface during frozen storage. Small degree of dehydration is color-masking but can be easily scraped off. Large degree of dehydration is deep, color-masking, and requires a knife or other instrument to scrape it off.

(c) *Examination of sample, thawed state.* When necessary, thawing the sample is best accomplished by enclosing it in a water impermeable film type bag and immersing in an agitated water bath at 68°F. ± 2°F. The complete thawing of the product is determined by gently squeezing the bag occasionally until no hard core or ice crystals are felt.

(1) Undesirable small pieces are pieces which will pass through the openings in a 3/4 inch sieve for larger size scallops. For the smaller scallops, such as bay scallops, undesirable pieces are pieces of scallops that do not have the general conformation of the other scallops. The total weight of these pieces within a sample unit will be obtained. These pieces shall not be used for determining the weight ratio.

(2) Uniformity of size refers to the degree of weight uniformity of the individual scallops. This factor is measured by obtaining a weight ratio between the largest and smallest scallops. The determination is made on the thawed scallops by dividing the total weight of the 15 percent (by count) of the largest scallops by the 15 percent (by count) of the smallest scallops.

(3) “Color” refers to reasonably uniform color characteristics of the species used within an individual container. Only noticeable variation in color from the predominating color of the scallops in the container is considered. Medium gray to black colored scallops are not to be graded.



(4) “Extraneous materials” are pieces or fragments of undesirable material that are naturally present in or on the scallops and which should be removed during processing.

- (i) An instance of minor extraneous material includes but is not limited to each occurrence of intestines, seaweed, etc., and each aggregate of sand and grit up to ½-inch square and located on the scallop surface. Deduction points shall be assessed for additional instances of intestines, seaweed, etc., and aggregates of sand and grit up to ½-inch square.
- (ii) An instance of major extraneous material includes but is not limited to each instance of shell or aggregate of embedded sand or other extraneous embedded material that affects the appearance or eating quality of the product.

(d) *Examination of sample, cooked state.* Cooked state means the state of the sample after being cooked. Place at least 25 percent by weight of the thawed sample from each sample unit into a boilable film-type pouch and seal. Submerge the pouch and its contents into boiling water for about 3 or 4 minutes or until cooked. Alternatively the product is placed into a baking pan lined with aluminum foil. A cover of aluminum foil is crimped around the edges of the top of the pan. The pan is placed in an oven that has been preheated to 450°F. for 20 minutes or until cooking has been completed. Flavor and odor and texture shall be evaluated in the cooked state.

- (1) “Texture” refers to the firmness, tenderness, and moistness of the cooked scallop meat, which is characteristic of the species.

(e) *General definitions.*

- (1) “Small” (overall assessment) refers to a condition that is noticeable but is only slightly objectionable.
- (2) “Large” (overall assessment) refers to a condition that not only is noticeable but is seriously objectionable.
- (3) “Minor” (individual assessment) refers to a defect that slightly affects the appearance and/or utility of the product.
- (4) “Major” (individual assessment) refers to a defect that seriously affects the appearance and/or utility of the product.
- (5) “Net weight” means the total weight of the scallop meats within the package after removal of all packaging materials, ice glaze, or other protective materials.

[42 FR 52782, Sept. 30, 1977, as amended at 51 FR 34991, Oct. 1, 1986]

### **Tolerances for certification of officially drawn samples**

The sample rate and grades of specific lots shall be certified in accordance with Part 260 of this chapter (Regulations Governing Processed Fishery Products).



**TABLE 1 -SCHEDULE OF POINT DEDUCTIONS PER SAMPLE**

FACTORS SCORED	METHOD OF DETERMINING SCORE	DEDUCT
<b>Frozen State</b>		
1. Dehydration	Small degree: Easily scraped off of each 10 percent of top surface affected	2
	Large degree: Deep dehydration not easily scraped off, affecting each 10 percent of surface	4
<b>Fresh or Thawed State</b>		
1. Undesirable pieces	Percent by weight: Up to 5 percent.....	3
	Over 5 percent, not over10 percent.....	6
	Over 10 percent .....	16
3. Uniformity	Weight ratio:	
	Over 2.5 but not over3.0 .....	4
	Over 3.0 but not over3.3 .....	6
Over 3.3 .....	10	
4. Color	Each 10 percent by count of non-uniform colored scallops in excess of the 10 percent of non-uniform colored scallops permitted	10
5. Extraneous material	Minor: Each instance of minor extraneous material in the sample unit per pound	1
	Major: Each instance of major extraneous material in the sample unit per pound	5
<b>Cooked State</b>		
6. Texture	Firm but tender and moist	0
	Small degree: Moderately tough, dry, and fibrous or mushy	5
	Large degree: Excessively tough, dry, and fibrous or mushy	15