



UNITED STATES STANDARDS FOR GRADES OF FROZEN HALIBUT STEAKS

Product description.

Frozen halibut steaks are clean, wholesome units of frozen raw fish flesh with normally associated skin and bone and are 2 ounces or more in weight. Each steak has two parallel surfaces and is derived from whole or subdivided halibut slices of uniform thickness which result from sawing or cutting perpendicular to the axial length, or backbone, of a whole halibut. The steaks are prepared from either frozen or unfrozen halibut (*Hippoglossus* spp.) and are processed and frozen in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product.

Styles of frozen halibut steaks.

- (a) *Style I, random weight pack.* The individual steaks are of random weight and neither the weight nor the range of weights are specified.
- (b) *Style II, uniform weight or portion pack.* All steaks in the package or in the lot are of a specified weight or range of weights.

Grades of frozen halibut steaks.

- (a) "U.S. Grade A" is the quality of frozen halibut steaks which possess good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections the total score is not less than 85 points.
- (b) "U.S. Grade B" is the quality of frozen halibut stem which possess at least reasonably good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections the total score is not less than 70 points.
- (c) "Substandard" is the quality of frozen halibut steaks which fail to meet the requirements of the "U.S. Grade B."

Recommended dimensions.

- (a) The recommended dimensions of frozen halibut steaks are not incorporated in the grades of the finished product since dimensions, as such, are not factors of quality for the purpose of these grades. However, the degree of uniformity of thickness among units of the finished product is rated since it is a factor affecting the quality and utility of the product.
- (b) It is recommended that the thickness (smallest dimension) of individually frozen halibut steaks be not less than 1/2 inch and not greater than inches.

Ascertaining the grade.

The grade is ascertained by observing the product in the frozen, thawed, and cooked states and is evaluated by consideration of the following.



(a) *Factors rated by score points.* The quality of the product with respect to scored factors is expressed numerically. Cumulative point deductions are assessed for variations of quality for each factor in accordance with the schedule in Table I, in the frozen, thawed, and cooked states. The total deduction is subtracted from the maximum possible score of 100 to obtain the product score.

(b) *Factors not rated by score points.* The factors of flavor and odor are evaluated organoleptically in the cooked state for both the light and dark meat (surface fat) and are defined as follows:

- (1) *Good flavor and odor.* "Good flavor and odor" (essential requirement for Grade A) mean that the fish flesh has the good flavor and odor characteristics of halibut, and is free from rancidity and from off-flavors and off-odors.
- (2) *Reasonably good flavor and odor.* "Reasonably good flavor and odor" (minimum requirement for Grade B) means that the fish flesh may be somewhat lacking in the good flavor and odor characteristic of halibut, is reasonably free of rancidity, and is free from objectionable off-flavors and off-odors.
- (3) *Substandard flavor and odor.* "Substandard flavor and odor" (Substandard grade) means that the flavor and odor fail to meet the requirements of "reasonably good flavor and odor."

(c) *Determination of final product grade.* The final product grade is derived on the basis of both the product score as determined by the "factors rated by score points" and the grade requirements of flavor and odor as defined under "factors not rated by score points." The lower of the two determines the final grade.

Definitions and methods of analysis.

(a) "Percentage glaze" on halibut steak means the percent by weight of frozen coating adhering to the steak surfaces and includes the frost within the package. It is determined by the method described below or by methods giving equivalent results.

(1) *Equipment needed.* (i) Source of cold tap water with aerated faucet.

- (ii) Balance accurate to 0.1 gm., or 0.01 ounce.
- (iii) Paper towels.
- (iv) Small knife.

(2) *Procedure.*

- (i) Weigh package in overwrap and all its contents (A).
- (ii) Remove steaks and loose frost; weigh dry packaging (B).
- (iii) The difference in weight, A-B represents weight of steaks plus glaze (C)
- (iv) Remove glaze from halibut steaks.
 - (a) Adjust tap water to a flow rate of about 3 quarts/min. through an aerated faucet.
 - (b) Direct 50° to 60° F. tap water onto skin side of steak while gently feeling and rubbing cut surfaces with finger tips (if necessary, temperatures up to 80° F. may be used but require closer control).



- (c) When all glaze is removed from cut mesh surface, as evidenced by absence of slick feel to fingers, remove steak from water.
- (d) Rapidly remove excess water with single paper towel before it has time to refreeze on the steak, and flick off residual skin glaze by knife or hand.
- (e) Repeat steps (b), (c), and (d) on each steak in package or sample unit.
- (f) Weigh deglazed halibut steaks (D, actual net weight of sample).
- (g) (Steps (a) through (f) of this paragraph (a)(2)(ii) are completed within 3 minutes.)
- (v) Calculate percentage glaze: $\text{Percentage glaze} = \frac{C-D}{C} \times 100$.

(b) “Cooked state” means that the thawed product has been cooked in a suitable manner which is defined as being heated submerged in boiling water, unseasoned, and in a boilable film type pouch for 10 minutes. (Steaks over 1 inch in thickness may require 5 additional minutes for heating.)

(c) “Uniformity of thickness” means that the thickness is substantially the same for one or more steaks within a package or sample unit.

(d) Color defects:

- (1) “Discoloration of drip liquor” means that the free liquid which drains from the thawed steaks is discolored with blood residue usually from the dorsal aorta of the halibut.
- (2) “Discoloration of light meat” means that the normal flesh color of the main part of the halibut steak has darkened due to deteriorative influences.
- (3) “Discoloration of the dark meat” means that the normal color of the surface fat shows increasing degrees of yellowing due to oxidation.
- (4) “Non-uniformity of color” refers to noticeable differences in color on a single steak or between adjacent steaks in the same package.

(e) “Dehydration” refers to the appearance of a whitish area on the surface of a steak due to the removal of water or drying of the affected area.

(f) “Honeycombing” refers to the visible appearance of numerous discrete holes or openings of varying size on the steak surface.

(g) “Workmanship defects” refers to appearance defects that were not eliminated during processing and are considered either objectionable or poor commercial practice.

(h) “Texture defect” refers to an undesirable increase in toughness and/or dryness, fibrousness, and watery nature of halibut examined in the cooked state.

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Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified on the basis of Part 260 of this chapter.

SCORE SHEET

Score sheet for frozen halibut steaks.

General

- Label.....
- Size and kind of container.....
- Container mark or identification.....
- Size of lot.....
- Number of samples.....
- Actual net weight (ounces).....
- Number of steaks per container.....
- Product style.....

Scored factors (table 1)	Deductions
Frozen: 1. Dehydration. 2. Percentage glaze 3. Uniformity of thickness 4. Uniformity of weight Thawed: 5. Workmanship 6. Color defects 7. Honeycombing Cooked: 8. Texture	
Total deductions	
Rating for scored factors (100-Total deductions)	
Unscored factors (table 1)	Rating
Cooked: a. Odor b. Flavor (light meat) (dark meat) Flavor and odor rating	
Final Grade	



TABLE 1 - SCHEDULE OF POINT DEDUCTIONS FOR FACTORS RATED BY SCORE POINTS¹

FACTOR	DESCRIPTION OF QUALITY VARIATION	DEDUCT
FROZEN		
Per steak		
1. Dehydration ²	Surface area affected: Less than 1 square inch but obvious..... 1 to 2 square inches..... Above 2 square inches.....	1 2 3
2. Percentage glaze	Over 0.0 not over 6.0 percent by weight of sample unit Over 6.0 not over 7.0 Over 7.0 not over 8.0 Over 8.0 not over 9.0 Over 9.0	0 1 2 3 4
3. Uniformity of thickness	For each 1/16 in above 1/16 inch variation in steak thickness (maximum total deduction permitted 6 points per sample unit).	2
4. Uniformity of weight and minimum weight	Style I - Random weight. - Use either (a) or (b), whichever gives a greater deduction. a. For each steak less than 3.0 ounces in weight per sample package. b. For each 0.1 ounce below 4.0 ounces in average steak weight per sample. Style II - Uniform weight or portions. - For each full 1 percent of the steaks deviating by more than 0.6 ounce from the specified portion weight or the average of the specified portion range (per sample package).	4 1/2 2
THAWED		
5. Workmanship - Defects of: Cutting, collar bone, loose skin, fins, blood spots, bruises, foreign material, backbone, cartilage, sawdust ³ .	Slight or moderate Excessive (For each defect, per occurrence, per sample package or per 2 pounds for packages over 2 pounds net weight).	1 2
6. Color defects:	(Per sample unit)	
Discoloration of drip liquor	Slight Moderate Excessive	1 2 3
Discoloration of light meat ²	(Per steak)	
	Slight Moderate Excessive	1 2 3
Discoloration of dark meat ²	(Per steak)	
	Slight Moderate Excessive	1 2 3
Non-uniformity of color	(Per sample unit)	
	Slight Moderate Excessive	1 2 3
7. Honeycombing ²	(Per steak)	
	Surface area affected: 26 to 50 percent 51 to 75 percent 76 to 100 percent	1/2 1 2
COOKED		
(Per steak)		
8. Texture defect ² (tough, dry, fibrous, or watery).	Slight Moderate Excessive	1 2 3



¹ This schedule of point deductions is based on the examination of sample units composed of: (a) An entire sample package and its contents (for retail sized packages) or (b) a representative sub-sample consisting of three or more halibut steaks taken from each sample package (for institutional sized packages), except that the entire sample package shall be examined for factor 4.

² Point deductions for these factors are based on a 3-steak sample unit. For samples containing other than 3 steaks per sample unit or per package, multiply the results by the correction factor $3/n$ where n equals the number of steaks.

³ Sawdust is examined while the steaks are in the frozen state.

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