United States Standards for Grades of Haddock Fillets

Product description

The product described in this part consists of clean, whole, wholesome fillets or primarily large pieces of clean, whole, wholesome fillets, cut away from either side of haddock, *Melanogrammus aeglefinus*: the fillets may be either skinless or with skin on. They are packaged in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product. The product may contain bones when it is clearly labeled to show that the product contains bones. (This part does not provide for the grading of pieces of fish flesh cut away from previously frozen fish blocks, slabs, or similar products.)

[42 FR 52756, Sept. 30, 1977, as amended at 55 FR 23551, June 11, 1990]

Grades of frozen haddock fillets

(a) "U.S. Grade A" is the quality of haddock fillets that possess a good flavor and odor; and for those factors which 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 haddock fillets that possess at least a reasonably good flavor and odor: and for those factors which are rated in accordance with the scoring system outlined in this part have a total score of not less than 70 points: Provided, That no factor receives maximum point score deduction.

(c) "Substandard" is the quality of haddock fillets that fail to meet the requirements of U.S. Grade B.

Product forms

(a) *Types*:
- (1) Fresh,
- (2) Frozen, solid pack; glazed or unglazed.
- (3) Frozen individually; glazed or unglazed.

(b) *Styles*:
- (1) Skin on,
- (2) Skinless.

(c) *Bone classifications*.
- (1) Practically boneless fillet.
- (2) Bone-in (fillet cut, with bones.)

[42 FR 52756. Sept. 30, 1977, as amended at 55 FR 23552, June 11, 1990]

Recommended weights and dimensions

(a) The recommendations as to net weights and dimensions of packaged haddock fillets are not incorporated in the grades of the finished product since net weights and dimensions, as such, are not factors of quality for the purpose of these grades.

(b) It is recommended that the net weights of the packaged haddock fillets be not less than 12 ounces and not over 10 pounds.

Ascertaining the grade

The grade of haddock fillets is ascertained by observing the product in the frozen and thawed states and after representative sample units have been cooked in a suitable manner. The following factors are evaluated in ascertaining the grade of the product: flavor, odor, appearance, size, defects, and character.

(a) These factors are rated in the following manner:

(1) *Flavor and odor*. These factors are rated by organoleptic examination. Score points are not assessed (see Evaluation of the unscored factor of flavor and odor).
(2) *Appearance, size, defects, and character*. These factors are rated by score points expressed numerically on the scale of 100.

(b) The four factors and the maximum number of points that may be given each are as follows:

FACTORS	POINTS
Appearance	20
Size	25
Defects	40
Character	15
Total score	100

[42 FR 52756, Sept. 30, 1977, as amended at 51 FR 34990, Oct. 1, 1986]

Evaluation of the unscored factor of flavor and odor.

(a) Good flavor and odor. "Good flavor and odor" (essential requirement for a Grade A product) means that the fish flesh has good flavor and odor characteristic of haddock (*Melanogrammus aeglefinus*); and is free from staleness, and off-flavors and off-odors of any kind.

(b) Reasonably good flavor and odor. "Reasonably good flavor and odor" (minimum requirement of a Grade B product) means that the fish flesh may be somewhat lacking in good flavor and odor; and is free from objectionable off-flavors and off-odors of any kind.

Ascertaining the rating for the factors which are scored; appearance, size, workmanship defects, and character.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. Point deductions are allotted for each degree or amount of variation within each factor. The value for each factor is the maximum points allotted for the factor less the sum of the deduction-points within the factor.

Appearance

(a) General: The factor of appearance refers to the color of the fish flesh, and to the degree of surface dehydration of the product.

(b) For the purpose of rating the factor of appearance the schedule of deduction-points in Tables I and II apply. Haddock fillets which receive 25 deduction-points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE I-SCORE DEDUCTIONS FOR DISCOLORATION

COLOR	DEDUCTION POINTS	
	"Light" colored portion comprising main portion of fillet	"Dark" colored portion occurring under skin mainly along lateral line
No discoloration	0	0
Slight yellowing	2	1
Moderate yellowing	4	2
Excessive yellowing and/or any rusting	13	12

TABLE II-SCORE DEDUCTIONS FOR DEHYDRATION

DEGREE OF DEHYDRATION	SURFACE AREA AFFECTED (PERCENT)		
	Over	Not over	Deduction points
Slight - Shallow and not color masking	0 1 50	1 50 100	0 2 5
Moderate - Deep but just deep[enough to easily scrape off with fingernail	1 25 50	25 50 100	5 8 16
Excessive - Deep dehydration not easily scraped off	1 25	25 100	12 25

Size

(a) General: The factor of size refers to the degree of freedom from undesirably small fillet pieces. Any piece weighing less than 2 ounces is classed undesirably small.

(b) For the purpose of rating the factor of size the schedule of deduction-points in Table III apply. Haddock fillets which receive 20 deduction points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE III-SCORE DEDUCTIONS FOR SIZE OF FILLET PIECES

NUMBER OF FILLET PIECES LESS THAN 2 OUNCES PER POUND		
Over	Not over	Deduction points
	0	0
0	1	1
1	2	10
2	3	15
3	4	20

Workmanship defects

(a) General: The factor of workmanship defects refers to the degree of freedom from improper packing, cutting and trimming imperfections, blemishes, and bones.

(1) *Improper packing*. "Improper packing" means poor arrangement of fillets, presence of voids, depressions, frost, and the imbedding of packaging material into fish flesh.
(2) *Cutting and trimming imperfections*. "Cutting and trimming imperfections" means that the fillets have ragged edges, tears, holes, or are otherwise improperly cut or trimmed.
(3) *Blemish*. "Blemish" means a piece of skin (except for skin-on fillets), scales, blood spot, a bruise, a black belly lining, a fin, or extraneous material. One "piece of skin" consists of one piece at least 1/2 square inch in area, except that any skin patches larger than 1 1/2 square inches are each considered as two pieces of skin.
(i) "Blood spot" is one of such size and prominence as to be considered objectionable.
(ii) "Black belly lining" is any piece longer than 1/2 inch.
(iii) Each aggregate area up to 1 square inch of identifiable fin or parts of any fin is considered as one "instance of fin".
(iv) Each aggregate area up to 1 square inch per fillet of one scale or group of scales is considered one "instance of scales". "A bruise" consists of an affected area of 1/2 square inch or more in area: except that any bruise larger than 1 1/2 square inches is considered as two bruises.
(4) *Bones*. "Bones" means any bones that can be identified and are objectionable. One instance of bone means one bone or one group of bones occupying or contacting a circular area of 1 square inch. In fillets intended to contain bones, the presence of bones will not be considered a workmanship defect.

(b) For the purpose of rating the factor of freedom from defects, the schedule of deduction-points in Table IV apply.

TABLE IV-SCORE DEDUCTIONS FOR WORKMANSHIP DEFECTS

DEFECTS SUBFACTORS	METHOD OF DETERMINING SUBFACTOR SCORE	DEDUCTION POINTS
Improper packing	Moderate defects, noticeably affecting the product's appearance. Excessive defects, seriously affecting product's appearance	2 4
Blemishes	Number of blemishes per 1 lb. of fish flesh: Over 0 not over 1 Over 1 not over 2 Over 2 not over 3 Over 3 not over 4 Over 4 not over 5 Over 5 not over 6 Over 6	 1 3 5 8 16 30 40
Bones	Number o instances per lb. of fish flesh: Over 0 not over 1 Over 1 not over 2 Over 2 not over 3 Over 3 not over 4 Over 4 not over 5 Over 5	 0 5 10 15 30 40
Cutting and trimming	Slight defects, scarcely noticeable Moderate defects, noticeable but not affecting the usability of any fillets. Excessive defects impairing: (a) the usability of up to 1/4 of the total number of fillets (b) the usability of over 1/4 but not more that 1/2 of the total number of fillets (c) the usability of over 1/2 of the total number of fillets.	0 4 8 16 40

[42 FR 52756, Sept. 30, 1977, as amended at 55 FR 23551, June 11, 1990]

Character

(a) General: The factor of character refers to the amount of drip in the thawed fillets, and to the tenderness and moistness of the properly cooked fish flesh.
(b) For the purpose of rating the factor of character, the schedule of deduction points in Table V apply. Haddock fillets which receive 15 deduction points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE V-SCORE DEDUCTIONS FOR CHARACTER

CHARACTER SUBFACTORS	METHOD OF DETERMINING SUB-FACTOR SCORE	DEDUCTION POINTS
Texture	Texture of the cooked fish: (a) firm, slightly resilient but not tough or rubbery; moist but not mushy. (b) moderately firm; only slightly tough or rubbery; does not form a fibrous mass in the mouth; moist but not mushy. (c) moderately tough or rubbery; has noticeable tendency to form a fibrous mass in the mouth; or is dry; or is mushy. (d) Excessively tough or rubbery; has marked tendency to form a fibrous mass in the mouth; or is very dry; or is very mushy.	 0 4 8 15
Amount of drip	Percent of drip: Over 0 not over 5 Over 5 not over 6 Over 6 not over 8 Over 8 not over 10 Over 10 not over 12 Over 12 not over 14 Over 14 not over 16 Over 16	 0 1 2 4 6 9 12 15

Definitions and methods of analysis

(a) *Percent of drip.* "Percent of drip" means the percent by weight of "free drip" (the fluid which is not reabsorbed by the fish tissue when the frozen fish thaws, and which separates freely without the aid of any external forces except gravity) in an individual package as determined by the following method:

(1) *Apparatus and materials.*

(i) Water bath.
(ii) Balance, accurate to 0.1 gm; or 0.01 ounce.
(iii) Pliable and impermeable bag (cryovac, pliofilm, etc.).
(iv) Vacuum source (Vacuum pump or water aspirator).
(v) U.S. Standard No. 8 mesh circular sieve (both 8 and 12 inch diameters).
(vi) Stirring motor.
(vii) Identification tags.

(2) *Procedure.*
(i) Weight pliable and impermeable bag (cryovac, pliofilm, etc.).
(ii) Remove frozen material from container (container consists of the carton and the inner and outer wrappings).
(iii) Place frozen product, plus scraps of any material remaining on the container, into the pliable bag.
(iv) Weigh bag and contents and subtract tare to determine the net weight of the product.
(v) Evacuate air from bag by use of suction so that bag closely fits contour of product, with no air pockets.
(vi) Crimp the open end of bag and tie off (a secure and leak proof closure may be created by tying close to product and then folding excess bag and tying again).
(vii) Completely immerse bag and contents in a circulated water bath maintained at 68 · F. plus or minus 2 · F.
(viii) Allow to remain immersed until the product is defrosted (a "test run" in advance, is necessary to determine time required for each product and quantity of product).[1]
(ix) Remove bag and contents from bath and gently dry outside of bag.
(x) Weigh dry U.S. Standard No. 8 mesh circular sieve.
(xi) Open bag and empty contents onto U.S. Standard No. 8 circular sieve so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for two minutes.
(xii) Weigh sieve and its contents and calculate drained weight. The drained weight is the weight of the sieve and fillets less the weight of the dry sieve.
(xiii) Calculate percent drip:

Net weight (iv) - drained weight (xii) x (100) / Net weight = Percent of drip

[1]The purpose of the "test run" is to determine the time necessary to thaw the product. The complete thawing of the product is determined by frequent but gentle squeezing of the bag until no hard core of ice crystals are felt. This package which has been squeezed can not be used for drained weight calculations.

(b) *Cooking in a suitable manner*. "Cooking in a suitable manner" shall mean that the product is cooked as follows: Place the thawed unseasoned product into a boilable film-type pouch. The pouch and its contents are then immersed in boiling water and cooked until the internal temperature of the fillets reaches 160° F. (about 20 minutes).

Tolerances for certification of officially drawn samples

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

Score sheet for haddock fillets.

Label.....
Size and kind of container.....
Container mark or identification.....
Size of lot.....
Number of packages per master carton.....
Size of sample .....
Type of overwrap .....
Actual net weight: -------(lb.) -------(kg.).....

FACTOR	SCORE POINTS	SAMPLE SCORE
Appearance	25	
Uniformity	20	
Defects	40	
Character	15	
Total	10	
Flavor and odor		
Final grade		