



POULTRY BONELESS MEAT DEFECTS

Policy

This procedure defines requirements for certifying boneless meat if stated in the specification.

Procedures

Various commercial, institutional, and commodity specifications contain requirements that deboned raw or cooked poultry products be free of coarse connective tissue, skin, tendons, cartilage, blood clots, bruises, bones, discolored meat, and other defects, as listed, that exceed specified dimensional requirements. Compliance with these requirements shall be determined throughout production using the sampling intervals stated in QAD 537 and the criteria listed below.

Production failing the acceptance criteria, except for bone or bone-like material, may be re-examined under stationary lot grading procedures. Product failing for bone or bonelike material shall be reworked prior to reoffering for acceptance. The sample size for stationary lot grading shall be as required in 7 CFR Part 70.10 of the poultry grading regulations. The sample shall be removed (as applicable) from each master container in the sample selected. The defect criteria below are arranged in categories for sampling purposes based on similar attributes. Each defect, shall be recorded on the LP-232L1 separately as defect (✓). For example, 6 tendons greater than 0.5 (½) inch found in a sample will result in a retention (cartilage and tendons that are soft-like in texture and greater than 0.5 (½) inch). Upon totaling the defects, Sample Plan Level 1 shall be used to determine compliance. The results of the examination for bone or bone-like material shall be totaled and recorded as a separate category.

Record each part, piece or component as one defective unit regardless of the amount of defects found on each piece. As an example: a breast lobe may have a tendon, discolorations and bone less than 0.40 inches. The defect would be recorded as bone.

I. Whole Muscle and Skin

For whole muscle pieces, breast halves or quarters, whole tenderloins, whole or half thighs, or large pieces of skin, randomly select a 30-piece sample to be examined for all defects. Any sample that does not comply with the following criteria shall be rejected.



Whole Muscle and Skin Defect Criteria

Defect Category	Tolerance	Requirement
Bone or bone-like material	> 0.40 inch in length	Retention of product the sample represents
Bone or bone-like material	≤ 0.40 inch in length	Defect – SPL-1
Cartilage (gristle) and tendons that are soft-like in texture	> 0.50 inch in length beyond the meat tissue.	Defect - SPL-1
Bruises or blood clots Dark colored veins or arteries	> 0.25 (1/4) inch in diameter >1.00 inch in length	Defect - SPL-1
Moderate Discoloration	>1.00 inch diameter circle	Defect - SPL-1
Skin on skinless meat items	>1.00 inch diameter circle	Defect - SPL-1

II. Size-Reduced Meat > 0.50 (1/2) inch and Trim

For size-reduced meat > 0.50 (1/2) inch in diameter (chopped, diced, etc.) and trim, a 2-pound sample shall be randomly selected each sample interval. Any sample that does not comply with the following criteria shall be rejected:

Size-Reduced Meat > 0.50 (1/2) inch and Trim Defect Criteria

Defect Category	Tolerance	Requirement
Bone or bone-like material	> 0.40 inch in length	Retention of product the sample represents
Bone or bone-like material	≤ 0.40 inch in length	Defect – SPL-2
Cartilage (gristle) and tendons that are soft-like in texture	> 0.50 inch in length beyond the meat tissue.	Defect - SPL-2
Bruises or blood clots Dark colored veins or arteries	> 0.25 (1/4) inch in diameter >1.00 inch in length	Defect - SPL-2
Moderate Discoloration	>0.50 inch diameter circle	Defect - SPL-2
Skin on skinless meat items	>1.00 inch diameter circle	Defect - SPL-2

NOTE: This defect chart also applies to mixtures of whole muscle and trim meat.

III. Size-Reduced Meat ≤ 0.50 (1/2) inch

For size-reduced meat ≤ 0.50 (1/2) inch in diameter (ground), randomly select a 5-pound sample each sample interval. A sample with any bone or bone-like material observed during this check requires rejection of all product representing the production period. Defects for the category cartilage and tendons shall be recorded on SPL-2 based on the following criteria:



Size-Reduced Meat < 0.50 (1/2) inch Defect Criteria

Defect Category	Tolerance	Requirement
Bone or bone-like material	None	Retention of product sample represents
Cartilage (gristle) and tendons that are soft-like in texture	> 0.50 inch in any dimension	Defect – SPL-2

IV. Sampling by Weight

A. Online Sampling

For products sampled by weight (i.e., 2 or 5-pound sample) online, the individual number of defects shall not exceed a maximum tolerance of 3 provided no carryover or tightened tolerance limits. A retention shall be recorded by entering the defective categories and writing the numerical value representing the total number of individual defects. For example, if four tendons were found in a sample of diced chicken, a check mark (✓) would be recorded for each tendon. The “Type of Defect” section on the worksheet will continue to be used for recording defective categories only.

B. Lot Sampling

For products sampled by weight on a lot basis (origin or destination), the defect tolerance will be determined by using the following formula:

$$\begin{array}{lcl} \text{No. Sample Units (SU)} & \times & \text{No. Defect Categories (DC)} \\ \text{Sample Factor} & \times & 10 \% \text{ (Target Level)} \end{array} = \begin{array}{l} \text{Sample Factor (SF)} \\ \text{Defect Tolerance} \end{array}$$

As shown above, the formula is based on the number of defect categories (including bone), number of sample units, and a target level of 10 percent. Since the defect categories differ in number and kind for each type of product, the formula is designed to account for these variables and provide an appropriate defect tolerance.

Consequently, the total number of defect categories allowed would change with the potential number of defect categories that can occur. This formula will work for any product sampled by weight regardless of the number of categories associated with processing. The following example demonstrates the formula to determine the defect tolerance for 400 cases of diced chicken at destination

Number of defect categories = 6 Number of sample units = 14 (2 per case)

$$\begin{array}{lcl} \text{Formula} & 14 \text{ SU} & \times 6 \text{ DC} \\ & \text{SF } 84 & \times 10 \% \end{array} = \begin{array}{l} \text{SF } 84 \\ 9 (8.4) \text{ Defects Allowed} \end{array}$$

When the final calculation results in a decimal number, the decimal value will always be rounded up to the next whole number. This method of rounding provides the appropriate level of integrity to correspond with the online sampling criteria.



The tables below are being provided with the pre-calculated tolerance for size-reduced meat > 0.50 inch and trim (5 categories) and size-reduced meat ≤ 0.50 inch (2 categories).

<u>Sample Number</u>	<u>Size-Reduced Meat and Trim $> \frac{1}{2}$ inch</u>	<u>Size-Reduced Meat $\leq \frac{1}{2}$ inch</u>
1	1	1
2	1	1
3	2	1
4	2	1
5	3	1
6	3	2
7	4	2
8	4	2
9	5	2
10	5	2
11	6	3
12	6	3
13	7	3
14	7	3
15	8	3
16	8	4
17	9	4
18	9	4
19	10	4
20	10	4

If sample sizes exceed 20 units or new product tolerances are needed, the formula may be used to calculate the applicable tolerance with supervisory concurrence.

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