

MIL-C-44204  
30 January 1986

## MILITARY SPECIFICATION

### CORNED BEEF HASH, THERMOSTABILIZED, FOR MEAL READY-TO-EAT

This specification is approved for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This document covers thermostabilized corned beef hash in flexible pouches for use as a component of the Meal, Ready-to-Eat, Individual and Meal, Flight Feeding, Individual.

#### 2. APPLICABLE DOCUMENTS

2.1 Government documents. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

#### SPECIFICATIONS

##### MILITARY

MIL-P-44073 - Packaging and Thermoprocessing of Foods in Flexible Pouches

#### STANDARDS

##### MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8940

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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MIL-STD-900 - Bacterial Standards for Starches, Flours,  
Cereals, Alimentary Pastes, Dry Milks,  
and Sugars Used in the Preparation of  
Thermostabilized Foods for the Armed Forces

(Copies of documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

OTHER GOVERNMENT DOCUMENTS

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder  
(21 CFR Parts 1-199)

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

U.S. DEPARTMENT OF AGRICULTURE (USDA)

Meat and Poultry Inspection Regulations

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

ENVIRONMENTAL PROTECTION AGENCY (EPA)

National Interim Primary Drinking Water Regulations

(Application for copies should be addressed to the Office of Drinking Water WH550, Environmental Protection Agency, Washington, DC 20460.)

2.2 Other publications. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS (AOAC)

Official Methods of Analysis of the Association of Official Analytical Chemists

(Application for copies should be addressed to the Association of Official Analytical Chemists, 1111 North 19th Street, Suite 210, Arlington, VA 22209.)

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NATIONAL ACADEMY OF SCIENCES

Food Chemicals Codex

(Application for copies should be addressed to the National Academy Press, 2101 Constitution Avenue, N.W., Washington, DC 20418.)

AMERICAN DEHYDRATED ONION AND GARLIC ASSOCIATION (ADOGA)

Official Standards and Methods of the American Dehydrated Onion and Garlic Association for Dehydrated Onion and Garlic Products .

(Application for copies should be addressed to the American Dehydrated Onion and Garlic Association, 375 Sutter Street, Suite 700, San Francisco, CA 94108).

(Technical society and technical association documents are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

2.3 Order of precedence. In the event of a conflict between the text of this document and references cited herein, the text of this document shall take precedence.

3. REQUIREMENTS

3.1 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.4, 6.1, and 6.2).

3.2 Ingredients. All ingredients shall be clean, sound, wholesome, and free from foreign material, evidence of rodent and insect infestation, extraneous material, off-odors, off-flavors, and off-colors.

3.2.1 Beef. The beef shall be from steers, heifers, or cows and shall be derived from any combination of primal or sub-primal cuts of the round, shank-off (round, top round, bottom round, and knuckles). Recognizable cuts are those which, when compared to Institutional Meat Purchase Specifications (IMPS) cuts, have no more than a minor amount of lean, fat, or bone removed or included from an adjacent cut. Rough cuts (foreshanks, flanks, short plates, briskets) shall be excluded. All suitable lean meat shall be used except tenderloins and rib fingers (intercostal meat) may be excluded at the option of the contractor. The beef shall be in the fresh chilled state and shall be in excellent condition, i.e., exposed lean and fat surfaces shall be of a color and bloom normally associated with the class and cut of meat, and typical of meat which has been properly stored and handled; cut surfaces and naturally exposed lean surfaces shall show no more than slight darkening or discoloration due to dehydration, aging, or microbial activity; the fat shall show no more than a slight discoloration due to oxidation or microbial activity; no odors foreign to fresh

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meat shall be present; changes in color and odor characteristically associated with vacuum-packaged meat in excellent condition shall be acceptable and there shall be no evidence of freezing, defrosting, or mishandling.

3.2.1.1 Boning and trimming. The beef shall be boned and trimmed to remove objectionable material such as bone, cartilage, heavy connective tissue, etc. The boneless trimmed beef shall meet the limitations specified in tables I and II.

3.2.1.2 Handling and storage. Handling and storage of the boned and trimmed beef prior to processing into the finished product shall be in accordance with the following requirements:

- a. Beef processed on the day of initial certification shall be maintained in the temperature range of 28° to 50°F (inclusive).
- b. Holding in the fresh chilled state for not more than 4 days after certification is permitted provided that the beef is maintained in the temperature range of 28° to 40°F (inclusive).
- c. Holding in the frozen state for not more than 120 days after placement in the freezer is permitted provided that the beef is:
  - placed in the freezer within 4 hours after certification
  - frozen to 0°F or lower within 72 hours after placement in the freezer
  - stored at 0°F or lower
  - protected from freezer deterioration and damage
  - stored in containers that are adequate to maintain product excellence
  - held after storage at an internal temperature not to exceed 40°F when further processing is resumed.

### 3.2.2 Potatoes.

3.2.2.1 Potatoes, fresh. The potatoes shall be fresh, firm, and of a white flesh variety suitable for canning. The maximum specific gravity for the potatoes shall be 1.075 with a reducing sugar content of not more than 2.0 percent on a dry weight basis.

3.2.2.2 Potatoes, dehydro-frozen, diced. The dehydro-frozen potatoes shall be firm, have a good color and flavor and be of a white flesh variety suitable for canning. The maximum specific gravity for the potatoes shall be 1.075 with a reducing sugar content of not more than 2.0 percent on a dry weight basis. The potatoes shall be of the most recent season's crop. The potatoes shall be mechanically diced to approximately 1/4 by 1/4 by 3/8 inch dimensions.

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3.2.3 Onion, dehydrated, chopped. The dehydrated, chopped onion shall be Fancy Grade of the Official Standards and Methods of the American Dehydrated Onion and Garlic Association for Dehydrated Onion and Garlic Products.

3.2.4 Pepper, green, sweet, freeze-dried. The peppers shall be 1/4-inch dices of sweet bell peppers which have been sulfited and dehydrated by freeze-drying or partially air dried followed by freeze-drying. The dices shall be free of seeds, seed cells, and diseased or rotted areas. The pepper dices shall have a fresh, clean, typical sweet green pepper flavor and odor and a green (with minimal brownish) color. The moisture content shall be not greater than 4 percent and the sulfite level shall be in the range of 500 to 1500 ppm (as SO<sub>2</sub>).

3.2.5 Garlic powder. Garlic powder shall be Fancy Grade of the Official Standards and Methods of the American Dehydrated Onion and Garlic Association for Dehydrated Onion and Garlic Products.

3.2.6 Pepper, black, ground. The ground black pepper shall have been ground from the deep brown to black, deep-set, wrinkled, immature berries of Piper nigrum L. The ground pepper shall have a characteristic, penetrating odor, a hot biting pungent flavor, and a light grey to speckled black-grey color. The volatile oil content shall be not less than 2.0 mL/100 grams of ground black pepper and shall be of such size that not less than 95 percent shall pass through a U.S. Standard No. 16 sieve.

3.2.7 Bay leaves, ground. Ground bay leaves shall be derived from the dried leaves of Laurus nobilis L. The bay leaves shall possess a pleasant aromatic odor and pungent, mildly bitter flavor with a pale green to yellow green color. A minimum of 95 percent shall pass through a U.S. Standard No. 30 sieve. Volatile oil content shall be not less than 1.0 mL of volatile oil per 100 grams of ground bay leaves.

3.2.8 Clove, ground. Ground cloves shall be prepared from the dried, unopened flower buds of Caryophyllus aromatic L. The powder shall be dark reddish-brown in color and shall possess a strong aromatic odor with a hot pungent taste. The ground clove shall contain not less than 15.0 mL of volatile oil per 100 grams and be of such size that not less than 95 percent shall pass through a U.S. Standard No. 30 sieve.

3.2.9 Salt. Salt shall be noniodized, white, refined sodium chloride with or without anticaking agents.

3.2.10 Sugar, white, granulated. The sugar shall be white, refined, granulated cane or beet sugar or a blend of both, and shall comply with MIL-STD-900.

3.2.11 Sodium erythorbate. Sodium erythorbate shall comply with the requirements of the Food Chemicals Codex.

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3.2.12 Sodium nitrite. Sodium nitrite shall comply with the requirements of the Food Chemicals Codex.

3.2.13 Starch, filling and processing aid (see 6.3). The filling and processing aid shall be white, odorless, finely pulverized, modified waxy maize starch for use as a filling and processing aid in canned, retorted foods and shall comply with MIL-STD-900. During retort temperatures of 165° to 200°F, the starch shall form a clear, bland paste that retains its initial high viscosity under conditions of moderate shear and prolonged holding times. During the retort process the starch shall thin out and lend no appreciable viscosity to the final product.

3.2.14 Water. Water used for formulation, rehydration, blanching, ice-making and washing shall conform to the National Interim Primary Drinking Water Regulations.

3.2.15 Preblended spice and seasoning mixture. Preblended spices and seasonings may be used. The spices and seasonings in the mixture shall comply with the requirements of this document. The containers used for the spice and seasoning blend shall be labeled with each ingredient and the percentage of each ingredient in the blend. The ingredients shall be in the same proportions as specified in the ingredient formula.

3.3 Preparation and further processing. Processing shall be on a continuous basis.

3.3.1 Cured beef preparation. The boned and trimmed beef shall be ground once through a grinder plate having holes measuring 1/2-inch in diameter and then uniformly blended with the following cure ingredients.

<u>Ingredient</u>	<u>Pounds per 100 pounds of beef</u>
Water	2.500
Salt	2.500
Sugar	1.000
Sodium erythorbate	0.050
Sodium nitrite	0.015

a. The mixture shall be held for sufficient time in the temperature range of 28° to 40°F to assure a uniform gray color prior to its being cooked.

b. The cured ground meat shall be cooked in a steam-jacketed kettle to obtain a yield of approximately 75 percent. The broth shall be retained for inclusion in the corned beef hash.

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### 3.3.2 Potato preparation.

3.3.2.1 Fresh potato preparation. The fresh potatoes shall be washed, sorted, peeled and trimmed. The potatoes shall be mechanically diced to approximately 1/4 by 1/4 by 3/8-inch dimensions, and the dices blanched sufficiently to prevent discoloration and to remove excess air. The blanched potatoes shall be cooled rapidly to 45°F or lower by washing with cold water and held at a temperature of 45°F or below for not longer than 4 hours after blanching and in a manner to prevent discoloration prior to product preparation.

3.3.2.2 Dehydrofrozen potato preparation. The dehydrofrozen potatoes shall be used without further preparation and shall be handled in a manner to prevent discoloration prior to product preparation.

3.3.3 Onion preparation. The dehydrated chopped onion shall be rehydrated in an excess of cold water for 10 minutes or until a tender texture is achieved. Drain thoroughly before filling. If the rehydrated onion is not immediately filled, it shall be immediately cooled to a temperature of 30° to 40°F and held in this temperature range for not longer than 4 hours prior to filling.

3.3.4 Green pepper preparation. The dehydrated green peppers shall be rehydrated in an excess of cold water for 30 minutes or until a tender texture is achieved. Drain thoroughly before filling. If the rehydrated green pepper is not immediately filled, it shall be immediately cooled to a temperature of 30° to 40°F and held in this temperature range for not longer than 4 hours prior to filling.

3.3.5 Filling and processing aid starch preparation. When a filling and processing aid starch is used, a solution (slurry) shall be prepared with the filling and processing aid starch and cold water in a concentration adequate to hold ingredients in suspension for uniform distribution during mixing and pumping of product.

3.3.6 Product formulation and preparation. The corned beef hash shall be formulated and prepared as follows:

<u>Ingredient</u>	<u>Percent by weight</u>
Beef, cured, cooked	50.000
Broth	24.387
Potatoes, diced <u>1/</u>	21.500
Onion, chopped, rehydrated	3.060
Pepper, green, sweet, rehydrated	0.780
Garlic powder	0.170
Pepper, black, ground	0.070
Bay leaves, ground	0.025
Clove, ground	0.008

1/ When dehydrofrozen potatoes are used, the 21.5 percent by weight shall consist of 10.75 percent by weight of dehydrofrozen potatoes and 10.75 percent by weight of additional broth or water.

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a. The ingredients shall be mixed sufficiently to assure a uniform blend, without deforming the potato dices.

b. The corned beef hash shall be filled into the pouches within 4 hours after mixing. As a final step before filling, a filling and processing aid starch solution (see 3.3.5) may be uniformly blended into the corned beef hash in the amount required to facilitate uniform ingredient distribution in single-stage filling operations when dehydrofrozen potatoes are used. If a cold fill method is used, the prepared hash shall be held at a temperature not to exceed 40°F at all times prior to filling into the pouches. If a hot fill method is used (see 3.4), the prepared hash shall be heated and held in the temperature range of 150° to 180°F at all times prior to filling into the pouches.

3.4 Pouch filling and sealing. Each pouch (see 5.1), shall be filled with product such as to conform to the finished product requirements and to the following requirements:

a. Each pouch shall be filled and sealed in accordance with the pouch filling and sealing requirements specified for class 3 of MIL-P-44073.

b. A hot fill system is permitted if compatible with the filling and sealing method used.

c. The temperature of the corned beef hash at time of filling shall be as specified (see 3.3.6) for the applicable filling process used.

d. Each filled and sealed pouch shall be in the retort process within 1 hour after sealing.

3.5 Pouch thermoprocessing. The filled and sealed pouches shall be thermo-stabilized by retorting until a sterilization value ( $F_0$ ) of not less than 6 has been achieved. The thermoprocessing operation shall be in compliance with the thermoprocessing requirements for class 3 of MIL-P-44073.

3.6 Finished product requirements. The finished product shall comply with the following requirements:

a. There shall be no foreign material such as, but not limited to, dirt, insect parts, hair, wood, paper, paint, glass, or metal.

b. There shall be no foreign odors or flavors such as, but not limited to, burnt, scorched, stale, sour, rancid, musty, or moldy.

c. There shall be no color foreign to the product.

d. Total weight of bone, cartilage, coarse connective tissue, section of tendons or ligaments, and glandular material, collectively, shall be not more than 0.35 ounce.



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- e. The average net weight shall be not less than 8.0 ounces.
- f. No individual pouch shall contain less than 7.5 ounces of product.
- g. No individual pouch shall contain more than 0.3 ounces of free liquid.
- h. At least 75 percent of the potatoes shall be discernible dices.
- i. The product shall have the appearance of a uniform distribution of corned beef and potatoes.
- j. Texture of the potato dices shall not be mushy, hard, fibrous, or tough.
- k. The average fat content of the product shall be not greater than 8.0 percent.
- l. The fat content of the product in any individual pouch shall be not greater than 10.0 percent.
- m. The salt content of the product in any individual pouch shall be not greater than 1.7 percent and not less than 1.0 percent.
- n. The product shall show no evidence of excessive heating (materially darkened or scorched).

3.6.1 Palatability. The product shall be equal to or better than the approved preproduction sample (see 6.1) in palatability and overall appearance.

3.7 Plant qualification. The beef component and the finished product shall originate and be produced, processed, and stored in plants regularly operating under Meat and Poultry Inspection Regulations of the U.S. Department of Agriculture.

3.8 Federal Food, Drug, and Cosmetic Act. All deliveries shall conform in every respect to the provisions of the Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Contractor's responsibility. Inspection and acceptance by the USDA shall not relieve the contractor of obligation and responsibility to deliver a product complying with all requirements of this document. The contractor shall assure product compliance prior to submitting the product to the USDA for any inspection.

4.2 Inspection and certification. Product acceptability shall be determined by the USDA. The USDA will determine the degree of supervision necessary to assure compliance with the requirements of this document.

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4.3 Classification of inspection. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.4).
- b. Quality conformance inspection (see 4.5).

4.4 First article inspection. When a first article is required (see 6.1), it shall be inspected in accordance with the quality assurance provisions of this document and evaluated for overall appearance and palatability. Any failure to conform to the quality assurance provisions of this document or any appearance or palatability failure shall be cause for rejection of the first article.

4.5 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

4.5.1 Component and material inspection. In accordance with 4.1 components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this document or applicable purchase document.

4.5.1.1 Beef examination for condition and cut. All beef shall be examined in either the bone-in or boneless state for conformance to the condition and cut requirements in 3.2.1. Cuts initially examined in the boneless state shall be in the form of whole boneless recognizable cuts. Any nonconforming beef shall be rejected.

4.5.1.2 Boned and trimmed beef examination. After boning and trimming and prior to any further processing or to any freezing, the beef shall be examined for the defects listed in table II. The lot size expressed in terms of pounds shall be declared to the Agricultural Marketing Service (AMS) agent by the contractor. However, the AMS agent reserves the right to declare as a lot a portion of a declared lot, if, in his or her opinion, that portion may be out of compliance with any requirement. The sample unit shall be a minimum of 12 pounds of adjacent boneless beef. The sample size shall be as specified in table I. If all or a portion of the sample unit falls within a larger cut, the entire cut shall be examined. Failure of the beef to meet the acceptance criteria as indicated in table I shall be cause for rejection of the lot. Except for beef rejected because of freezing, defrosting, or not being in excellent condition, the beef may be reworked by the contractor and reoffered for examination. For reexamination, the sampling plan used shall be the one in table I designed for the next larger lot size than the one under which the lot was initially rejected. Beef shall not be reexamined more than one time.

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TABLE I. Sampling plan for boned and trimmed beef

Lot size (pounds)	Sample size (No. of sample units)	Defect categories			
		Major		Minor	
		AC	RE	AC	RE
500 or less	13	1	2	3	4
501 to 1200	20	2	3	5	6
1201 to 3200	32	3	4	7	8
3201 to 10000	50	5	6	10	11
10001 to 35000	80	7	8	14	15
Reinspection lots of 10001 to 35000	125	10	11	21	22

TABLE II. Boned and trimmed beef defects 1/ 2/

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Presence of popliteal, prescapular, prefemoral or any exposed lymph gland measuring 0.5 inch or more in any dimension.
102		Presence of blood clot measuring 1.0 inch or more in any dimension.
	201	Presence of blood clot measuring 0.5 inch or more but less than 1.0 inch in any dimension.
103		Presence of bruise measuring 1.0 inch or more in any dimension.
	202	Presence of bruise measuring 0.5 inch or more but less than 1.0 inch in any dimension.
104		Presence of bone measuring 0.3 inch or more in any dimension.
105		Presence of cartilage measuring 0.5 inch or more in any dimension.

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TABLE II. Boned and trimmed beef defects 1/ 2/(cont'd)

Category		Defect
<u>Major</u>	<u>Minor</u>	
106		Presence of backstrap measuring 1.0 inch or more in one dimension and 0.2 inch or more in a second dimension (when measured at right angles to each other).
	203	Presence of backstrap measuring 0.5 inch or more but less than 1.0 inch in one dimension and 0.2 inch or more in a second dimension (when measured at right angles to each other.)
107		Presence of heavy connective tissue (for example, on the surface of the outside round adjacent to the knuckle, along the skin surface of the strip loin, or the gracilis membrane) measuring 2.0 square inches or more.
	204	Presence of heavy connective tissue (for example, on the surface of the outside round adjacent to the knuckle, along the skin surface of the strip loin, or gracilis membrane) measuring 0.5 square inches or more but less than 2.0 square inches.
	205	Presence of heavy connective tissue on lower edge of short plate or flank.
	206	Presence of heavy connective (abdominal tunic) tissue on the flank measuring 1.0 inch or more in any dimension.
	207	Presence of membranous portion of diaphragm or membranous covering from skirt, flank, or abdominal section of short plate measuring 3.0 square inches or more.
108		Presence of knuckle cover.
109		Presence of kidney, pizzle eye, prepubic tendon, thymus gland, or hanging tender measuring 1.0 inch or more in one dimension and 0.2 inch or more in a second dimension (when measured at right angles to each other).
	208	Presence of kidney, pizzle eye, prepubic tendon, thymus gland, or hanging tender measuring less than 1.0 inch in longest dimension and 0.2 inch or more in a second dimension (when measured at right angles to each other).

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TABLE II. Boned and trimmed beef defects 1/ 2/ (cont'd)

Category		Defect
<u>Major</u>	<u>Minor</u>	
	209	Presence of calcified (scratchy) periosteum measuring 2.0 square inches or more.
	210	Presence of shank, clod, knuckle, or bottom (outside) round with tendinous end showing less than 75 percent lean tissue on a cross-sectional cut surface.
	211	Presence of dehydrated surface measuring 1.0 square inch or more.
	212	Presence of discolored meat (including blood discolored neck meat) measuring 1.0 square inch or more.
	213	Presence of exposed blood vessel measuring 1.0 inch or more in any dimension.
	214	Presence of cod, udder, kidney, or pelvic fat.

1/ Determination of wholesomeness and acceptability of product with respect to the presence of foreign material (e.g.; glass, dirt, insect parts, hair, wood, metal) shall be made by a Meat and Poultry Inspection Operations employee.

2/ Evidence of freezing or defrosting or product not in excellent condition shall cause rejection of the lot.

4.5.1.3 Ingredient and component examination. Conformance of ingredients and components to identity, condition, and other requirements specified in 3.2 shall be certified by the ingredient supplier or ingredient manufacturer, or compliance be evident by examination of pertinent labels, markings, U.S. Grade Certificates, certificates of analyses, or other such valid documents acceptable to the inspection agency. In addition, prior to use, each ingredient shall be examined organoleptically, as necessary, to determine conformance to the condition requirements. Any nonconformance to an identity, condition, or other requirement shall be cause for rejection of the ingredient or component lot or of any involved product.

4.5.2 In-process examination. In-process examination shall be performed to determine conformance to the preparation, processing, filling, sealing, and packaging requirements. Any nonconformance revealed by actual examination or by review of records of time, temperature, and formulation or of other valid documents shall be cause for rejection of the involved product.

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4.5.3 Filled and sealed pouch inspection. Inspection of filled and sealed pouches shall be in accordance with the quality assurance provisions of MIL-P-44073.

4.5.4 Net weight inspection. The net weight of the filled and sealed pouches shall be determined by weighing each sample unit on a suitable scale tared with a representative empty pouch. Any individual net weight of less than 7.5 ounces shall be scored as a minor defect. The lot size shall be expressed in pouches. The sample unit shall be one filled and sealed pouch. The inspection level shall be S-3, and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5. Results shall be reported to the nearest 0.1 ounce. In addition, the lot shall be rejected if the sample average net weight is less than 8.0 ounces.

4.5.5 Product inspection. The filled and sealed sample pouches shall be held for a minimum of 72 hours at room temperature (65° to 75°F), after completion of the thermoprocessing operation. The pouches shall be heated in boiling water for 10 minutes, opened, and inspected for the defects indicated in table III. The lot size shall be expressed in pouches. The sample unit shall be the contents of one pouch. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 1.5.

TABLE III. Product defects 1/ 2/

Category	Defect
<u>Major</u>	
101	Total weight of bone, cartilage, coarse connective tissue, section of tendons or ligaments, and glandular material, collectively, is more than 0.35 ounce.
102	Free liquid in a pouch is more than 0.3 ounce. 3/
103	Less than 75 percent of the potatoes are discernible dices.
104	Corned beef and potatoes not uniformly distributed.
105	Texture of the potato dices is mushy, hard, fibrous, or tough. 4/

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TABLE III. Product defects 1/ 2/ (cont'd)

Category	Defect
<u>Major</u>	
106	Product shows evidence of excessive heating (materially darkened or scorched).

1/ The presence of foreign material (e.g., glass, dirt, insect parts, hair, wood, metal), foreign odor or flavor (e.g., stale, sour, rancid, musty, moldy), or foreign color shall be cause for rejection of the lot.

2/ Product not equal to or better than the approved preproduction sample (see 6.1) in palatability and overall appearance shall be cause for rejection of the lot. (This comparison shall be performed only when deemed necessary by an AMS agent.)

3/ To determine the amount of free liquid in a pouch, the sealed pouch shall be heated in 180° to 190°F water for 10 minutes. Remove the pouch from the hot water, cut top of pouch and drain any free liquid into a suitable, tared container and weigh. Report the amount of free liquid to the nearest 0.1 ounce.

4/ Examination for appearance and texture conformance of the potato dices shall be made following the determination of free liquid.

4.5.6 Fat and salt content testing. The unopened sample pouches shall be warmed in a water bath to melt fat adhering to the inside of the pouches. The sample pouches shall be opened and the entire contents of each pouch shall be separately blended in a Waring blender or equivalent. The fat and salt content of the product from each pouch in the sample shall be determined in accordance with the Official Methods of Analysis of the Association of Official Analytical Chemists, Chapter: Meat and Meat Products. Test results shall be reported to the nearest 0.1 percent. Any result failing to conform to the fat or salt requirement in 3.6 shall be classified as a major defect. The lot size shall be expressed in pouches. The sample unit shall be one filled and sealed pouch. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 1.5.

4.5.7 Packaging inspection. Inspection of packaging shall be in accordance with the quality assurance provisions of MIL-P-44073.

## 5. PACKAGING

5.1 Packaging. Packaging shall be in accordance with the requirements of MIL-P-44073.

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## 6. NOTES

6.1 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. When a first article is required (see 3.1, 4.4, and 6.2).
- c. Provisions for approved preproduction samples (see 3.6.1 and 6.2).

6.2 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample. The contracting officer should include specific instructions in all acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.3 Starch, filling and processing aid. Shur-Fil<sup>R</sup> CS-500 starch, A.E. Staley Mfg. Co., Decatur, IL 62525 has been found to be satisfactory in holding ingredients in suspension for uniform distribution during mixing and pumping of product for single-stage filling operations.

## Custodians:

Army - GL  
Navy - SA  
Air Force - 50

## Preparing activity:

Army - GL  
Project No. 8940-0527

## Review activities:

Army - MD, TS  
Navy - MC, MS  
DP - SS



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