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SUPERSEDING
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MILITARY SPECIFICATION

BEEF PATTIES, DEHYDRATED, UNCOOKED

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

1. SCOPE

1.1 Scope. This document covers raw uncooked, freeze dehydrated beef patties for use by the Department of Defense as an item of general issue and as a component of operational rations.

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

FEDERAL

TT-C-495	- Coatings, Exterior, for Tinned Food Cans
PPP-B-636	- Boxes, Shipping, Fiberboard
PPP-C-29	- Canned Subsistence Items, Packaging and Packing Of

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 8905

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

MILITARY

- MIL-L-1497 - Labeling of Metal Cans for Subsistence Items
- MIL-L-35078 - Loads, Unit: Preparation of Semiperishable Subsistence Items; Clothing, Personal Equipment and Equipage; General Specification For

STANDARDS

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
- MIL-STD-129 - Marking for Shipment and Storage

(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 officer.)

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.)

United States Standards for Condition of Food Containers

(Application for copies should be addressed to the Director, Market Research and Development Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, DC 20250.)

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.

AMERICAN DRY MILK INSTITUTE, INC.

Standards for Grades of Dry Milk, Including Methods of Analysis, Bulletin 916

(Application for copies should be addressed to the American Dry Milk Institute, Inc., 130 North Franklin St., Chicago, IL 60606.)

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.)

THE UNITED STATES PHARMACOPEIAL CONVENTION, INC.

The United States Pharmacopeia (USP) and the National Formulary (NF)

(Application for copies should be addressed to the United States Pharmacopeial Convention, Inc., 12601 Twinbrook Parkway, Rockville, MD 20852.)

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Traffic Department, 2200 Mill Road, Alexandria, VA 22314.)

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Suite 1160, 222 South Riverside Plaza, Chicago, IL 60606.)

(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 conflict between the text of this document and the references cited herein (except for associated detail specifications, specification sheets, or MS standards), the text of this document shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

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 or 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 carcasses, quarters, and any of the following recognizable primal and subprimal cuts: square-cut chucks, shoulder clods, chuck rolls, ribs, ribeyes, trimmed full loins, trimmed short loins, strip loins, sirloins, top sirloin butts, rounds (with heel and shank off), top rounds, knuckles, and bottom rounds (with heel off). Recognizable cuts are those which, when compared to Institutional Meat Purchase Specifications (IMPS) cuts, have had no more than a minor amount of lean, fat, or bone removed or included from an adjacent cut. All suitable lean meat shall be used, except tenderloins, and any part of a rough cut 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, grade, and cut of meat) and typical of meat that 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 very slight discoloration due to oxidation or microbial activity. No odors foreign to fresh meat shall be present. Changes in color and odor characteristically associated with vacuum-packaged meat in excellent condition shall be acceptable. Also, the meat shall show no evidence of freezing, defrosting, or mishandling.

3.2.1.1 Boning and trimming. The fresh-chilled beef shall be boned and trimmed to remove objectionable material such as bone, cartilage, heavy connective tissue, etc. The boneless trimmed meat shall meet the limitations specified in 3.4 and table 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, and
 - held after storage at an internal temperature not to exceed 40°F when further processing is resumed.

3.2.2 Nitrogen. Nitrogen shall be U.S. Pharmacopeia grade and shall be water or liquid nitrogen pumped.

3.3 Processing.

3.3.1 Grinding and blending. The meat shall be initially ground through a plate with holes 3/4 to 1 inch in diameter (or it may be otherwise reduced in size, provided that the texture and appearance of the product after final grinding is typical of ground beef prepared by grinding only). Final grinding shall be through a plate having holes 3/16 inch in diameter. The temperature of the fresh-chilled meat shall not exceed 45°F at any time up to and including placement into the freezer. The meat may be blended after each reduction in size. The ground meat may not be blended after final grinding. Frozen meat may be tempered to facilitate grinding, provided that the internal temperature of the meat does not exceed 40°F when further processing is resumed. Frozen meat that has been thawed shall not be refrozen prior to freezing the finished product for dehydration. Grinding equipment used must have sharp knives and plates. The analytical fat content of either the coarse ground or final ground product shall be not less than 12.0 percent nor greater than 21.0 percent. Final grinding shall be accomplished immediately following the initial reduction in size if the coarse ground product is not designated to be frozen.

3.3.1.1 Frozen ground beef. Fresh ground beef as specified in 3.3.1 may be frozen after coarse grinding or final grinding. The ground beef shall be packaged to protect the product from contamination or freezer burn. The beef shall be placed in a freezer within 4 hours after grinding and frozen to an internal product temperature of 0°F or below within 72 hours after grinding. The frozen ground beef shall be held at 0°F or below for not longer than 30 days from time of placement in the freezer until further processing.

3.3.2 Forming. After the final grind, the beef shall be formed, extruded, and cut or molded into patties so as to comply with the finished product requirements specified in 3.4. Alternatively, the product may be formed into loaves, frozen, and cut into individual patties by a bandsaw or similar means without tempering. After the individual patties are made, they shall be placed in the freezer. Frozen meat may be tempered to an internal temperature of 28° to 30°F prior to forming, extruding, or molding.

3.3.3 Time and temperature limitations. The product shall be handled so as to comply with the following limitations:

- a. Maximum time from forming of patties until individual patties reach an internal temperature of 0°F or lower shall be 48 hours.
- b. Maximum temperature of beef at any time during preparation of product shall be 45°F.
- c. Maximum internal temperature of product in frozen storage shall be 0°F.
- d. Maximum internal temperature of product at time of starting dehydration shall be 0°F.
- e. Maximum time from start of freezing of patties until start of dehydration shall be 20 days.

3.3.4 Dehydration. The product shall be freeze dehydrated at an absolute pressure not to exceed 1.5 millimeters of mercury except that momentary increases in pressure due to operational factors may be permitted provided that no thawing of the product or moisture drip on the product occurs. The product temperature, as indicated by suitable instruments, shall be not more than 150°F. If the platen temperature is maintained at 155°F or below, the product temperature may be disregarded. After dehydration is completed, the pressure shall be equalized to atmospheric level with nitrogen, and the product shall be immediately packaged as specified in 5.1. In no case shall more than 16 hours elapse between the time the chamber is opened and the time the patties are completely unit packed. During this interim period, the product shall be adequately protected from oxygen and moisture by either holding under a nitrogen atmosphere with a maximum of 2.0 percent oxygen or under a vacuum of at least 27 inches of mercury for the entire period. If vacuum is used, it shall be broken with nitrogen.

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

Dehydrated product. (If compliance with a requirement is questionable in the dry state, the product in question may be rehydrated for further examination.)

- a. There shall be no foreign material, such as, but not limited to, dirt, insects, insect parts, hair, wood, paper, paint, glass, or metal.
- b. There shall be no foreign odor or flavor, 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. At least 90 percent of the container net weight shall consist of whole patties meeting the following dimension requirements:
 1. Length of 3 5/8 inches ($\pm 1/8$ inch), width of 2 1/8 inches ($\pm 1/8$ inch), and thickness of 1/2 inch ($\pm 1/16$ inch), or
 2. Diameter of 3 7/8 inches ($\pm 1/8$ inch) and thickness of 3/8 inch ($\pm 1/16$ inch).

Edge imperfections shall not be considered in dimension requirements. Patties of variable thickness shall be in conformance provided that more than 3/4 of the patty meets the thickness requirement.

- e. There shall be no evidence of incomplete dehydration such as wet or soft spots.
- f. There shall be no evidence of faulty dehydration procedures such as glazed areas more than 1/2 inch in any dimension or dark-colored cores of any dimension.
- g. Moisture content of the dehydrated product shall not exceed 2.0 percent.

Rehydrated product.

- h. When the product is rehydrated in an excess of water at 70° to 100°F for 20 minutes, the patties shall hold together so that they may be transferred from the rehydration vessel with a spatula or similar instrument without breaking when using reasonable care.

- i. When the product is prepared as specified in footnote 4 of table III, the cross section shall show no unhydrated spots larger than 1/8 inch in any dimension.
- j. When the product is prepared as specified in footnote 4 of table III, it shall have flavor, odor, and texture in a range considered as normal for grilled frozen beef patties.

3.4.1 Palatability. The product shall be equal to or better than the approved preproduction sample (see 6.2) in palatability and overall appearance.

3.5 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.

3.6 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.

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 3.1), 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 of 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 requirements. The sample unit shall be a minimum of 12 pounds of adjacent boneless beef. 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.

TABLE I. Sampling plan for boned and trimmed beef

Lot size (pounds)	Sample size (No. sample units)	Defect categories			
		Major		Minor	
		AC	RE	AC	RE
500 or less	13	1	2	3	4
501 to 1,200	20	2	3	5	6
1,201 to 3,200	32	3	4	7	8
3,201 to 10,000	50	5	6	10	11
10,001 to 35,000	80	7	8	14	15
Reinspection lots of 10,001 to 35,000	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.

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

Category		Defect
<u>Major</u>	<u>Minor</u>	
	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.
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 the gracilis membrane) measuring 0.5 square inch 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.

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

Category		Defect
<u>Major</u>	<u>Minor</u>	
	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 one dimension and 0.2 inch or more in a second dimension (when measured at right angles to each other).
	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.

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

Category		Defect
<u>Major</u>	<u>Minor</u>	
	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.

4.5.1.4 Unfilled can inspection. Conformance of unfilled cans to the requirements specified in 5.1.1 shall be determined by examination of certificates of conformance or other valid documents. Any nonconformance shall be cause for rejection of the can 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.

4.5.2.1 In-process testing for fat content. Four 1-pound samples shall be selected at random from the day's production of raw ground beef. Each of the four samples shall be tested for fat content in accordance with the Official Methods of Analysis of the Association of Official Analytical Chemists. Results shall be reported to the nearest 0.1 percent. If the fat content of one or more samples is greater than or less than the limit specified in 3.3.1, the lot of ground beef or any product made therefrom shall be rejected.

4.5.3 Product examination. The finished product shall be examined for the defects listed in table III. The lot size shall be expressed in cans. The sample unit shall be the contents of one filled and sealed can. The inspection level shall be S-3, and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 1.5 for major defects and 6.5 for minor defects.

TABLE III. Product defects 1/ 2/

Category		Defect
<u>Major</u>	<u>Minor</u>	
	201	Less than 30 patties in the can.
	202	Broken pieces, meat dust, and patties not meeting dimension requirements that collectively weigh more than 10 percent of the container net weight (see 3.4d). <u>3/</u>
		<u>Dehydrated product</u>
101		Presence of wet or soft area.
102		Glazed area greater than 1/2 inch in any dimension or dark colored core of any dimension except glazed area caused by surface blood.

TABLE III. Product defects 1/ 2/

Category		Defect
<u>Major</u>	<u>Minor</u>	<u>Rehydrated and grilled product</u> <u>4/</u>
	203	Patty breaks apart or crumbles when transferred from the vessel to grill (using a spatula or similar instrument).
103		Grilled patty does not have flavor, odor, or texture considered as normal for grilled frozen beef patties.
104		Cross section shows unhydrated spot larger than 1/8 inch in any dimension (tally one defect per patty).

- 1/ The presence of foreign material (e.g., glass, dirt, insect parts, hair, wood, metal, foreign odor or flavor (e.g., burnt, scorched, moldy, rancid, sour, stale), or foreign color shall be cause for rejection of the lot.
- 2/ Product not equal to or better than the approved preproduction sample 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/ Patties with edge imperfections less than 1/4 inch shall not be considered defective.
- 4/ One patty from each can in the sample shall be rehydrated in an excess of water (85° + 15°F) for 20 minutes, drained, grilled 1 minute per side on a lightly greased 400°F grill, and cut twice at right angles through the center of the patty.

4.5.4 Moisture content testing. The finished product shall be tested for moisture content in accordance with the Moisture-Drying in Vacuum method in the Meat section of the Meat and Meat Products chapter in the Official Methods of Analysis of the Association of Official Analytical Chemists, except that a temperature of 70°C for 16 hours under a pressure of 100 mm of mercury shall be used. The results shall be reported to the nearest 0.1 percent. Any result not conforming to the requirement in 3.4g shall be considered a major defect. The lot size shall be expressed in cans. The sample unit shall be one filled and sealed can. The inspection level shall be S-2, and the AQL, expressed in terms of percent defective, shall be 1.5.

4.5.5 Oxygen in headspace testing. The filled and sealed cans shall be tested for oxygen in headspace in accordance with the Determination of Oxygen method in Bulletin 916 of the American Dry Milk Institute, Inc. Alternatively, the headspace oxygen content may be determined by an Instrumentation Laboratories Oxygen Analyzer or equivalent instrument. Test results shall be reported to the nearest 0.1 percent. Any result failing to conform to the oxygen in headspace requirements in 5.1.1 shall be classified as a major defect. When referee testing is necessary, The American Dry Milk Institute Method shall be followed. The lot size shall be expressed in cans. The sample unit shall be one filled and sealed can. The inspection level shall be S-2, and the AQL, expressed in terms of percent defective, shall be 1.5.

4.5.6 Can condition examination. Examination of filled and sealed cans shall be in accordance with the United States Standards for Condition of Food Containers, except that inspection for labeling shall be in accordance with MIL-L-1497 (see 5.4).

4.5.7 Leakage inspection. Inspection for leakage shall be in accordance with PPP-C-29 (see 5.1.1).

4.5.8 Shipping container examination. When shipping containers are required to be in accordance with PPP-B-636, examination for defects in assembly, closure and reinforcement shall be in accordance with the appendix of PPP-B-636. In addition, the following defects shall be classified as follows:

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- Major: National stock number, item description, contract number or date of pack markings missing, incorrect, or illegible.
Number of cans not as specified.
Reinforced with other than nonmetallic strapping or tape.
- Minor: Other required markings missing, incorrect, or illegible.
Container not snug-fitting.
Arrangement of cans not as specified.

Level C shipping containers shall be examined for the markings, arrangement, and number of cans defects specified above and for the closure method specified in 5.2.3.

4.5.9 Unit load inspection. Inspection of unit loads shall be in accordance with the quality assurance provisions of MIL-L-35078.

5. PACKAGING

5.1 Preservation. The product shall be preserved in accordance with level A or C, as specified (see 6.1 and 6.3).

5.1.1 Level A. Not less than 30 patties shall be unit packed into a size 603 by 700, open-top style, round, metal can, with welded or soldered side seam or one-piece drawn body and compound-lined, double-seamed ends. The can shall be made throughout from not less than commercial 0.25-pound per base box electrolytic tin plate. Alternatively, the can ends may be fabricated from ECCS plate fully enameled both inside and out. The can shall be coated overall on the outside with a coating conforming to type I of TT-C-495. The product shall be unit packed under an atmosphere of nitrogen so that the oxygen content of the gases in the filled and sealed container shall not exceed 2.0 percent when tested in accordance with 4.5.5. The cans shall be hermetically sealed and shall not show leakage when tested in accordance with PPP-C-29.

5.1.2 Level C. The product shall be preserved as specified in 5.1.1 except that cans with or without commercial exterior coating will be acceptable. Alternatively, cans may be made from a 0.20 pound per base box electrolytic tin plate that is coated with a commercial exterior coating.

5.2 Packing. Six cans of the product arranged three in length, two in width, and one in depth shall be packed on end in a snug-fitting shipping container in accordance with level A, B, or C, as specified (see 6.1 and 6.3).

5.2.1 Level A packing. The shipping container shall be constructed and closed in accordance with style RSC, grade V2s of PPP-B-636. Each fiberboard box shall be reinforced with nonmetallic strapping or pressure-sensitive adhesive filament reinforced tape in accordance with the appendix of PPP-B-636. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.1). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

5.2.2 Level B packing. The shipping container shall be constructed and closed in accordance with style RSC, V3c, V3s, or V4s of PPP-B-636. Alternatively, the box may be fabricated of fiberboard conforming to W5c or W5s of PPP-B-636. Each fiberboard box shall be reinforced with nonmetallic strapping or pressure-sensitive adhesive filament reinforced tape in accordance with the appendix of PPP-B-636.

5.2.3 Level C packing. The shipping containers shall be in accordance with Uniform Freight Classification or National Motor Freight Classification, as applicable, except that the closure of fiberboard boxes shall be in accordance with Method II as specified in the appendix of PPP-B-636.

5.3 Unit loads. When specified (see 6.1), the product, packed as specified in 5.2.2 and 5.2.3, shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified. When unit loads are strapped, the strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

5.4 Labeling and marking.

5.4.1 Cans. Cans shall be labeled in accordance with MIL-L-1497. Paper labels are not permitted. The label shall include the following information:

BEEF PATTIES, DEHYDRATED, UNCOOKED
 Minimum number of patties - 30
 Lot number (to be concurrent with dehydration load)
 Date of packaging (day, month, and year)
 Number of manufacturer
 Gas packed

Directions for use

Rehydrate patties as soon as can is opened. Use enough lukewarm (90°F to 100°F) water to cover meat. Handle patties carefully because they break easily. Soak 20 to 30 minutes or until patties are moistened. Drain well. If any hard spots are felt, soak meat 5 to 10 minutes longer.

Patties may be rehydrated in advance, drained, and refrigerated until cooking time, or they may be drained and cooked immediately.

Cook patties quickly on hot, lightly greased grill (400°F) about 1 minute per side or until lightly browned. Do not overcook. Serve immediately or hold in hot gravy.

NOTE: Use 1 pound product for 3 pounds fresh, ground beef.

5.4.2 Shipping containers. Shipping containers shall be marked in accordance with MIL-STD-129.

5.4.3 Unit load marking. Unit loads shall be marked in accordance with MIL-L-35078.

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. Level of preservation and packing required (see 5.1 and 5.2).
- d. Type and class of unit load when unit loading is specified (see 5.2.1 and 5.3).

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 specify the appropriate type of first article and the number of units to be furnished. The contracting officer should include specific instructions in all acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.3 Appropriate level of pack. Based on conditions known or expected to be encountered during shipment, handling, and storage of the specific item being procured, the contracting officer should select the appropriate level of pack in accordance with the criteria established in AR 700-15/NAVSUPINST 4030.28/AFR 71-6/MCO 4030.33/DLAR 4145.7.

6.4 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:

Army - GL
Navy - SA
Air Force - 50

Preparing activity:

Army - GL
Project No. 8905-B024

Review activity:

Army - MD
Navy - MC, MS
DLA - SS

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

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US Army Natick Research and Development Center
Natick, Massachusetts 01760



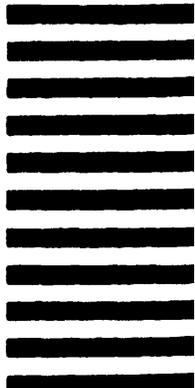
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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER MIL-B-43143E		2. DOCUMENT TITLE Beef Patties, Dehydrated, Uncooked	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one) <input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER (Specify): _____	
b. ADDRESS (Street, City, State, ZIP Code)			
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) - Optional		b. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8. DATE OF SUBMISSION (YYMMDD)	