SECTION C

C-1 ITEM DESCRIPTION

PCR-H-009, HAM SLICES IN BRINE, PACKAGED IN A POLYMERIC TRAY, SHELF STABLE

Each component is consumed by combat personnel under worldwide environmental extremes as part of an operational ration, and is a source of nutritional intake.

C-2 PERFORMANCE REQUIREMENTS

A. Product standard. A sample shall be subjected to first article or product demonstration model inspection as applicable, in accordance with the tests and inspections of Section E of this Performance-based Contract Requirements document.

B. Commercial sterility. The packaged food shall be processed until commercially sterile.

C. Shelf life. The packaged product shall meet the minimum shelf life requirement of 36 months at 80°F.

D. Appearance.

(1) General. The finished product shall be ham slices in brine. The packaged food shall be free from foreign materials.

(2) Ham slice. The ham slices shall be intact and shall be uniform in size and shape after cooking, and shall be practically free of bone or bone fragments, cartilage, coarse connective tissue, tendons or ligaments, and glandular material. The ham slices shall be practically free of adherent fat, fat pockets and void areas. The ham slices shall be free of finely ground, flaked, or otherwise comminuted product. The ham slices shall possess a natural cooked ham color.

E. Odor and flavor. The packaged food shall have a characteristic cooked ham odor and flavor. The packaged food shall be free from foreign odors and flavors.

F. Texture. The ham slices shall be moist and tender.

G. Net weight. The average net weight shall be not less than 92 ounces. No individual polymeric tray shall have a net weight of less than 90 ounces.

H. Drained weight of ham slices. The average drained weight shall be not less than 52.0 ounces. The drained weight of the 36 intact ham slices in an individual polymeric tray shall be not less than 50.0 ounces.

I. Palatability and overall appearance. The finished product shall be equal to or better than the approved product standard in palatability and overall appearance.

J. Analytical requirements.

(1) Fat content. The fat content shall be not greater than 6.0 percent.

(2) Salt content. The salt content shall be not less than 1.5 and not greater than 2.5 percent.

C-3 MISCELLANEOUS INFORMATION

THE FOLLOWING IS PROVIDED FOR INFORMATION ONLY TO PROVIDE THE BENEFIT OF PAST GOVERNMENT EXPERIENCE. THIS IS NOT A MANDATORY REQUIREMENT.

A. Ingredients/formulation. Ingredients and formulation percentages for the preparation of the cured ham may be as follows: 1/

Ingredients	Pounds per 100 pounds of ham
Water or ice	3.0000
Salt 2/	2.5000
Granulated white sugar 3/	1.0000
Sodium tripolyphosphate	0.2500
Sodium ascorbate and/or sodium erythorbate	0.0550
Flavoring, smoke, single strength	0.0400
Sodium nitrite 4/	0.0156

1/ For best results, boned and trimmed pork should be reduced in size to chunk type pieces by mechanically grinding once through a kidney shaped plate, having openings measuring 2.5 inches or more in the least dimensions, and using a two bladed knife that yields pieces weighing at least 2 ounces.

2/ The total amount of salt in the formula may be adjusted, as necessary, to produce a product that complies with the finished product salt requirements.

3/ The use of other sweeteners such as dextrose, fructose, or corn syrup solids will cause the ham slices to turn black after thermoprocessing.

4/ Sodium nitrite should be of sufficient strength to ensure a complete cure without exceeding 156 parts per million of nitrite in the cured ham during preparation.

SECTION D

D-1 PACKAGING

A. Preservation. Product shall be filled into polymeric trays and the trays with protective sleeves, shall conform to the requirements of section 3 of MIL-PRF-32004, Packaging of Food in Polymeric Trays. Verification testing and inspection of trays, lids and sleeves shall be in accordance with Section 4 of MIL-PRF-32004 and the Quality Assurance Provisions of Section E of this Performance-based Contract Requirements document.

B. Polymeric tray closure. The filled, sealed, and processed tray shall be securely closed.

D-2 LABELING

A. Polymeric tray body. One side of each polymeric tray shall be clearly printed or stamped, in a manner that does not damage the tray, with permanent ink of any contrasting color, which is free of carcinogenic elements. To avoid erroneous marking of trays, the product name, lot number and filling equipment number shall be applied prior to processing. All other tray marking may be applied before or after processing. If these markings are applied along the tray body side (see figure 1 of MIL-PRF-32004), or if applied along the tray body end, are not readily legible in low light conditions, a small, easily legible label detailing product name and number of portions shall be applied along one tray body end, but not over any existing tray markings. 1/

Tray body markings shall include:

(1) Product name. Commonly used abbreviations may be used when authorized by the inspection agency.

(2) Tray code includes: 2/
Lot Number
Filling equipment identification number
Retort identification number
Retort cook number

1/ As an alternate method, tray body markings may be clearly printed or stamped onto the polymeric tray lid prior to processing, in a manner that does not damage the lid, with permanent ink of any contrasting color, which is free of carcinogenic elements, provided that the required markings are applied onto the tray body after processing.

2/ Shall be code marked as follows: The lot number shall be expressed as a four digit Julian code. The first digit shall indicate the year of production and the next three digits shall indicate the day of the year (Example, 5 June 2000 would be coded as 0157). The Julian code shall represent the day the product was packaged into the tray and processed. Sublotting (when used) shall be represented by an alpha character immediately following the four digit Julian code. Following the four digit Julian code and the alpha character (when used), the other required code information shall be printed in the sequence as listed above.

B. Polymeric tray lid. The lid shall be clearly printed or stamped, in a manner that does not cause damage. Permanent ink of any contrasting color, which is free of carcinogenic elements, shall be used. As an alternate labeling method, a pre-printed self-adhering 0.002 inch thick clear polyester label printed with indelible contrasting color ink may be used.

(1) Lid labeling shall include:
Product name
Ingredients
Net weight
Name and address of packer
Official establishment number (for example, EST 38) or a three letter code identifying the establishment

(2) Lid labeling shall also show the following statements:

TO HEAT IN WATER: Submerge unopened tray in water. Bring water to a boil. Simmer gently 25 - 30 minutes. Avoid overheating (tray shows evidence of bulging).

WARNING: Do not heat tray in oven.

TO TRANSPORT AFTER HEATING: Insert tray back into protective sleeve to protect during transport. If sleeve is unavailable, stack trays lid-to-lid with fiberboard pads in between.

CAUTION: Use care when opening as pressure may have been generated within the tray.

TO OPEN: Using a clean knife, cut the lidding around the inside perimeter of the tray seals.

SUGGESTION: Cut lid along 3 sides and fold over uncut portion. Fold back to keep unused portions protected.

YIELD: Serves 18 portions of 2 slices each.

D-3 PACKING

A. Packing for shipment to ration assembler. Four filled, sealed, processed and sleeved polymeric trays shall be packed in a snug fitting fiberboard box conforming to style RSC-L, type CF, grade 275 of ASTM D 5118, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The sleeved trays shall be placed flat with the first two trays placed with the lids together and the next two trays with the lids together. The inside of each box shall be provided with a box liner. The height of the box liner shall be equal to the full inside depth of the box (+ 0 inch, - 1/8 inch). Flute direction of the box liner shall be vertical. The box shall be closed in accordance with ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers.

D-4 UNITIZATION

A. Unit loads. Unit loads shall be as specified in DSCP FORM 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items.

D-5 MARKING

A. Shipping containers and unit loads. Marking of shipping containers and unit loads shall be as specified in DPSC FORM 3556 Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence.

SECTION E INSPECTION AND ACCEPTANCE

The following quality assurance criteria, utilizing ANSI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are required. When required, the manufacturer shall provide the certificate(s) of conformance to the appropriate inspection activity. Certificate(s) of conformance not provided shall be cause for rejection of the lot.

A. Definitions.

(1) Critical defect. A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the item; or a defect that judgment and experience indicate is likely to prevent the performance of the major end item, i.e., the consumption of the ration.

(2) Major defect. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

(3) Minor defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

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

(1) Product standard inspection. The first article or product demonstration model shall be inspected in accordance with the provisions of this Performance-based Contract

Requirements document and evaluated for overall appearance and palatability. Any failure to conform to the performance requirements or any appearance or palatability failure shall be cause for rejection of the lot.

(2) Conformance inspection. Conformance inspection shall include the examinations and the methods of inspection cited in this section.

E-5 QUALITY ASSURANCE PROVISIONS (PRODUCT)

A. Product examination. The finished product shall be examined for compliance with the performance requirements specified in Section C of this Performance-based Contract Requirements document utilizing the double sampling plans indicated in ANSI/ASQC Z1.4 - 1993. The lot size shall be expressed in trays. The sample unit shall be the contents of one tray. The inspection level shall be S-3 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 4.0 for major defects and 6.5 for minor defects. Defects and defect classifications are listed in Table I below. The trays shall be heated in accordance with the heating instructions from the tray label prior to conducting any portion of the product examination. The samples for drained weight inspection shall be selected using the same sampling criteria as above.

TABLE I. Product defects 1/ 2/

Category		Defect
Major	Minor	
		Appearance
101		Bone or bone fragment measuring more than 0.3 inch in any dimension.
102		Ham slices not intact.
	201	Ham slices not a natural cooked ham color.
	202	Total weight of cartilage, coarse connective tissue, tendons or ligaments, and glandular material is more than 2.0 ounces.
	203	Ham slices not uniform in size and shape.
	204	Tray of product contains ham slices with adherent fat or a fat pocket measuring more than 0.5 inch by 0.5 inch.
	205	Tray of product contains ham slices with a void area or air pocket measuring more than 0.5 inch by 0.5 inch.
	206	Tray of product contains ham slices with finely ground, flaked, or otherwise comminuted product.
		Odor and flavor
103		Packaged food does not have an odor or flavor of cooked ham slices.
		Texture
	207	Ham slices not moist or not tender.
		Net weight
	208	Net weight of an individual polymeric tray is less than 90 ounces. 3/

TABLE I. Product defects 1/ 2/ - Continued

Category		Defect
Major	Minor	
		Drained weight
	209	Drained weight of 36 intact ham slices in an individual polymeric tray is less than 50.0 ounces. 4/

1/ The presence of any foreign material such as but not limited to, dirt, insect parts, hair, wood, glass, metal, or mold or the presence of any foreign odors or flavors such as, but not limited to burnt, scorched, rancid, sour, or stale shall be cause for rejection of the lot.

2/ Finished product not equal to or better than the approved product standard in palatability and overall appearance shall be cause for rejection of the lot.

3/ Sample average net weight less than 92 ounces shall be cause for rejection of the lot.

4/ Sample average drained weight less than 52.0 ounces shall be cause for rejection of the lot.

B. Methods of inspection.

(1) Commercial sterility. Commercial sterility shall be verified in accordance with USDA/FSIS regulations.

(2) Shelf life. The contractor shall provide a certificate of conformance that the product has a 3 year shelf life when stored at 80^0F. Government verification may include storage for 6 months at 100^0F or 36 months at 80^0F. Upon completion of either storage period, the product will be subjected to a sensory evaluation panel for appearance and palatability and must receive an overall score of 5 or higher based on a 9 point hedonic scale to be considered acceptable.

(3) Net weight. The net weight of the filled and sealed polymeric tray shall be determined by weighing each sample unit on a suitable scale tared with a representative empty tray and lid. Results shall be reported to the nearest 1 ounce.

(4) Drained weight. The polymeric tray contents shall be poured into a flat-bottom container. A minimum of three times the tray's volume of 140^oF to 190^oF water shall be added to the container so as to cover the contents. The contents and water shall be gently agitated so as to liquefy rendered fat without breaking the ham slices. The contents shall then be poured into a U.S. Standard 1/4 inch sieve in a manner that will distribute the product over the sieve without breaking the ham slices. The sieve area shall be such that the distributed product does not completely cover all the openings of the sieve. The sieve shall be tilted at approximately a 45^o angle and allowed to drain for two minutes before determining the drained weight. Thirty-six ham slices shall be weighed to determine the drained weight. The drained weight shall be reported to the nearest 0.5 ounce.

(5) Analytical. The sample to be analyzed shall be a composite of ham slices from three thoroughly drained polymeric tray which have been selected at random from the lot. The composited ham slices shall be prepared (see NOTE) and analyzed in accordance with the following methods of the Official Methods of Analysis of AOAC International:

Test	Method Number
Fat	~~985.15~~ 960.39, 991.36, 2007.04, or 2008.06
Salt	935.47

Comment [RDNS-CFF1]: ES13-046 (DSCP-SS-13-00925), 27 Sep 13, p. 7, E-5, B(5) Analytical, delete Fat Test Method Number "985.15" and insert "960.39, 991.36, 2007.04, or 2008.06".

Test results shall be reported to the nearest 0.1 percent. Any nonconforming results shall be cause for rejection of the lot.

NOTE: The USDA will use AOAC method 983.18 for preparation of the sample.

E-6 QUALITY ASSURANCE PROVISIONS (PACKAGING AND PACKING MATERIALS, POLYMERIC TRAY)

A. Packaging and labeling.

(1) Polymeric tray testing. For purposes of clarification, the polymeric tray without the lid will be referred to as the "tray" and the polymeric tray with the lid shall be referred to as the "container". The polymeric tray with protective sleeve and polymeric tray material shall be examined for the characteristics listed in table I of MIL-PRF-32004, Packaging of Food in Polymeric Trays. The lot size, sample unit, and inspection level criteria are provided in table II below for each of the test characteristics. Any test failure shall be classified as a major defect and shall be cause for rejection of the lot. For rough handling survivability at frozen temperature, polymeric tray survival rate shall be at least 85 percent.

TABLE II. Polymeric tray quality assurance criteria

Prior to processing

Characteristic	Lot size expressed in	Sample unit	Inspection level
Tray configurations and dimensions	Trays	1 tray	S-1
Oxygen gas transmission rate of tray	Trays	1 tray	S-1
Oxygen gas transmission rate of lid	Yards	1/2 yard	S-1
Water vapor transmission rate of tray	Trays	1 tray	S-1
Water vapor transmission rate of lid	Yards	1/2 yard	S-1
Camouflage	Containers	1 container	S-1

After processing

Characteristic	Lot size expressed in	Sample unit	Inspection level
Processing	Trays	1 tray	S-2
Rough handling survivability	Test containers	1 container	S-2
Protective sleeve	Containers	1 container	S-1
Residual gas	Containers	1 container	S-1
Closure seal	Containers	1 container	S-1
Internal pressure	Containers	1 container	S-1
Lid opening	Containers	1 container	S-1

(2) Examination of container. The container with protective sleeve removed shall be examined for the defects listed in table II of MIL-PRF-32004 and the labeling defects listed in table III below. The lot size shall be expressed in containers. The sample unit shall be one processed and labeled container. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 0.65 for major A defects, 2.5 for major B defects and 4.0 for minor defects. Two hundred sample units shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot.

TABLE III. Container labeling defects

Category		Defect
Major A	Minor	
101		Polymeric tray lid or body labeling missing, incorrect or illegible.
	201	When a pre-printed self adhering label is used, the label not adhering to tray lid (for example, label raised or peeled back from edge to corner) or presence of any areas of gaps along the perimeter of the label where the label is not properly adhered.

B. Packing.

(1) Shipping container and marking examination. The filled and sealed shipping containers shall be examined for the defects listed in table IV below. The lot size shall be expressed in shipping containers. The sample unit shall be one shipping container fully packed. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0 for major defects and 10.0 for total defects.

TABLE IV. Shipping container defects

Category		Defect
Major	Minor	
101		National stock number, item description, contract number, name and address of producer, or date of pack missing, incorrect, or illegible.
102		Container not closed properly.
103		Interior packing not as specified.
	201	Other required markings missing, incorrect, or illegible.
	202	Arrangement or number of trays not as specified.

C. Unitization.

(1) Unit load examination. The unit load shall be examined in accordance with the requirements of DSCP Form 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items. Any nonconformance shall be classified as a major defect and shall be cause for rejection of the lot.

SECTION J REFERENCE DOCUMENTS

DPSC/DSCP FORMS

DSCP FORM 3507	Loads, Unit: Preparation of Semiperishable Subsistence Items
DPSC FORM 3556	Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence

MILITARY SPECIFICATIONS

MIL-PRF-32004	Packaging of Food in Polymeric Trays

GOVERNMENT PUBLICATIONS

Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder (21 CFR Parts 1-199) and (9 CFR Parts 1-391)

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ)

ANSI/ASQCZ1.4-1993	Sampling Procedures and Tables for Inspection by Attributes

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 1974	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers
D 5118	Standard Practice for Fabrication of Fiberboard Shipping Boxes

AOAC INTERNATIONAL Official Methods of Analysis of the AOAC International

PCR-H-009
W/Change 02 27 Sep 13
21 June 2000

For DLA Troop Support Website Posting

RDNS-CFF 27 September 2013

TO: DLA Troop Support – Subsistence DSCP-FTRE

SUBJECT: ES13-046 (DSCP-SS-13-00925); Specification update; PCR-H-009 Ham Slices in Brine, Packaged in a Polymeric Tray, Shelf Stable; Update Fat requirement

1. DLA completed a review of the testing requirements in subject document and found methods that are out of date, wrong, or allow for tests which cannot determine the applicable requirement. DLA submitted their findings to USDA for review. The USDA S&T laboratory has reviewed the testing requirements for Fat in subject document and concurs with DLA’s recommended changes.

2. Natick submits the following change to subject document for all current, pending, and future procurements until the document is formally amended or revised:

Paragraph E-5, B(5), Analytical.
Reference: Fat: delete “985.15” insert “960.39, 991.36, 2007.04, or 2008.06”

3. Attached is Change 02, PCR-H-009 Ham Slices in Brine, Packaged in a Polymeric Tray, Shelf Stable dated 27 September 2013, with the change highlighted.