SECTION C

This document covers pasteurized, uncooked, dehydrated, reduced cholesterol egg mix packaged in a boil-in-bag (BIB) then overpacked in a barrier pouch for use by the Department of Defense as a component of operational rations.

C-1 ITEM DESCRIPTION

PCR-E-017B, EGG MIX, REDUCED CHOLESTEROL, PASTEURIZED, UNCOOKED, DEHYDRATED, PACKAGED IN A BOIL-IN-BAG (BIB)

Classes, type and styles.

Classes.

Class 1 - Small opening fitment and cap
For use in Unitized Group Ration – Express (UGR-E)

Class 2 - Large opening fitment and cap
For use in Unitized Group Ration – Heat & Serve (UGR-H&S)
and Unitized Group Ration – Marine (UGR-M)

Type.

Type I - BIB with center seal

Styles.

Style A - Freeze-dried Style B - Spray-dried

C-2 PERFORMANCE REQUIREMENTS

A. <u>Product standard</u>. A sample shall be subjected to first article (FA) or product demonstration model (PDM) inspection as applicable, in accordance with the tests and inspections of Section E of this Product Contract Requirements (PCR) document. The approved sample shall serve as the product standard. Should the contractor at any time plan to or actually produce the product using different raw material or process methodologies

from the approved product standard, which result in a product noncomparable to the product standard, the contractor shall submit a replacement FA or PDM for approval. In any event, all product produced must meet all requirements of this document including product standard comparability.

B. <u>Shelf life</u>. The packaged product, overpacked in a barrier pouch, shall meet the minimum shelf life requirement of 36 months at 80°F.

C. Dehydrated product.

- (1) <u>Appearance</u>. The finished product shall be uncooked, dehydrated, reduced cholesterol egg mix. The egg mix shall be a free-flowing homogenous mixture. The egg mix shall be light yellow in color and free of scorched particles. The egg mix shall be free from foreign materials.
- (2) <u>Odor</u>. The packaged food shall have an odor of egg mix. The egg mix shall be free from foreign odors.
- (3) <u>Texture</u>. The uncooked, dehydrated egg mix shall have no lumps that cannot be broken apart under light pressure.

D. Net weight.

- (1) <u>Class 1 or Class 2, Type I, Style A</u>. The average net weight shall be not less than 16.8 ounces (476 grams). The net weight of an individual BIB shall be not less than 16.3 ounces (462 grams).
- (2) <u>Class 1 or Class 2, Type I, Style B</u>. The average net weight shall be not less than 18.7 ounces (530 grams). The net weight of an individual BIB shall be not less than 17.8 ounces (505 grams).
- (1) <u>Class 1, Type I, Style A</u>. The average net weight shall be not less than 12.5 ounces (357 grams). The net weight of an individual BIB shall be not less than 12.2 ounces (346 grams).
- (2) <u>Class 1, Type I, Style B</u>. The average net weight shall be not less than 13.4 ounces (381 grams). The net weight of an individual BIB shall be not less than 12.8 ounces (363 grams).

- (3) <u>Class 2, Type I, Style A</u>. The average net weight shall be not less than 16.8 ounces (476 grams). The net weight of an individual BIB shall be not less than 16.3 ounces (462 grams).
- (4) <u>Class 2, Type I, Style B</u>. The average net weight shall be not less than 18.7 ounces (530 grams). The net weight of an individual BIB shall be not less than 17.8 ounces (505 grams).
- E. <u>Rehydrated and cooked product</u>. The product shall rehydrate readily in accordance with label instructions and shall show complete water penetration within five minutes. The rehydrated egg mix shall be cooked. Cooking shall be by placing the package of rehydrated egg mix in boiling water, or by pouring egg mix onto a grill, or by cooking with a heater module.
- (1) <u>Appearance</u>. The rehydrated and cooked product shall have the appearance of cooked scrambled eggs. The eggs shall be light yellow in color with no color foreign to the product.
- (2) <u>Odor and flavor</u>. The rehydrated and cooked product shall have an odor and flavor of cooked scrambled eggs with butter. The eggs shall be free from foreign odors and flavors.
- (3) <u>Texture</u>. The rehydrated and cooked product shall be moist and tender and shall have a texture of cooked scrambled eggs.
- F. <u>Palatability and overall appearance</u>. The finished product shall be equal to or better than the approved product standard in palatability and overall appearance.
 - G. Analytical requirements.
 - (1) Protein. The egg protein content shall be not less than 45.0 percent.
 - (2) <u>Salt</u>. The salt content shall be not greater than 1.0 percent.
 - (3) Moisture. The moisture content shall be not greater than 3.0 percent.
- (4) <u>Cholesterol</u>. The cholesterol content shall be not greater than 500 mg per 100 grams.

H. Microbiological requirements.

- (1) <u>Aerobic plate count</u>. The aerobic plate count shall not be greater than 25,000 Colony Forming Units (CFU) per gram.
- (2) <u>Escherichia coli (E. coli)</u> count. E. coli shall have less than 10 CFU per gram or less than 3 Most Probable Number (MPN) per gram, where findings indicate zero colonies CFU per plate or zero tubes producing gas for MPN.
- (3) <u>Salmonella</u>. The Salmonella test shall be negative for each of five BIBs tested per production lot.

I. <u>Ingredients</u>.

- (1) <u>Eggs</u>. The egg component shall be produced under United States Department of Agriculture (USDA) inspection in compliance with the Egg Products Inspection Act. The liquid egg mix, prior to dehydration, shall contain a minimum of 80 percent eggs.
- (2) <u>Nonfat dry milk</u>. When used, the U.S. Extra Grade Nonfat Dry Milk shall be produced in a facility in compliance with the provisions of the General Specifications for Approved Plants and Standards for Grades of Dairy Products and listed in the Publication Dairy Plants Surveyed and Approved for USDA Grading Service.
- (3) <u>Dry buttermilk</u>. When used, the dry buttermilk shall be U.S. Extra Grade Dry Buttermilk and Dry Buttermilk Product.
- (4) <u>Additional ingredients</u>. Additional ingredients such as salt, citric acid, butter flavor, carrageenan, starch, water, and flavors may be used.

J. Processing.

(1) <u>Pasteurization</u>. The liquid egg mix shall be pasteurized in accordance with USDA Food Safety Inspection Service (FSIS) Egg Products Inspection Regulations (9 CFR Part 590). The pasteurized egg mix shall be held at 40°F or below for not more than 120 hours prior to drying or freezing. Note: Frozen eggs may be stored up to twelve months prior to freeze drying if held at 0°F or below.

- (2) <u>Dehydration</u>. The product shall be dehydrated utilizing pressures and temperatures so that the end product meets the requirements and is produced according to USDA FSIS Egg Products Inspection Regulations (9 CFR Part 590).
- K. <u>BIB filling and sealing</u>. The product shall be packaged into the BIB and then into the barrier pouch within 96 hours from drying. If the product cannot be packaged within 96 hours, then the remaining product shall be adequately protected from moisture by either holding under a nitrogen atmosphere with 2.0 percent or less oxygen, or under a vacuum of at least 27 inches of mercury (27 Hg). If a vacuum is used, it shall be broken with nitrogen. Product may be held for a period not to exceed 30 days prior to packaging into BIBs.

SECTION D

D-1 PACKAGING

A. Packaging.

- a. <u>Class 1, Type I, Style A.</u> For Style A, a net weight of 16.8 ounces (476 grams) of product shall be filled and sealed in a preformed BIB in accordance with HEATER MODULE, BOIL IN-BAG (BIB) MODULE. For Style A, a net weight of not less than 12.5 ounces (357 grams) of dehydrated product shall be filled and sealed in a preformed BIB in accordance with HEATER MODULE, BOIL-IN-BAG (BIB) MODULE.
- b. Class 1, Type I, Style B. For Style B, a net weight of 17.8 ounces (505 grams) of product shall be filled and sealed in a preformed BIB in accordance with HEATER MODULE, BOIL IN BAG (BIB) MODULE. For Style B, a net weight of not less than 13.4 ounces (381 grams) of dehydrated product shall be filled and sealed in a preformed BIB in accordance with HEATER MODULE, BOIL-IN-BAG (BIB) MODULE.
- c. <u>Class 2, Type I, Style A</u>. For Style A, a net weight of not less than 16.8 ounces (476 grams) of product shall be filled and sealed in a preformed BIB in accordance with PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT IN A BOIL-IN-BAG (BIB).
- d. <u>Class 2, Type I, Style B</u>. For Style B, a net weight of 17.8 not less than 18.7 ounces (505 530 grams) of product shall be filled and sealed in a preformed BIB in accordance with PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT IN A BOIL-IN-BAG (BIB).

- (1) <u>Barrier pouch</u>. One Class 1, Type I, or two Class 2, Type I BIB(s) and oxygen scavenger(s) (in accordance with the applicable assembly document) shall be placed in a barrier pouch having maximum outside dimensions of 15 by 11 inches for Class 1 and 18 by 18 inches for Class 2. The pouch shall be made from a heat sealable barrier material. Note that material conforming to MIL-PRF-131 has been used. All four edges of the pouch shall be heat-sealed with seals not less than 1/8 inch wide. The BIB(s) and oxygen scavenger(s) shall not be entrapped in the heat seals. The side, bottom and closure seals shall have an average seal strength of not less than 6 pounds per inch of width and no individual specimen shall have a seal strength of less than 5 pounds per inch of width. Alternatively, the filled and sealed pouch shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective closure seal width to less than 1/16 inch when tested for internal pressure resistance. A tear nick, notch or serrations shall be provided to facilitate opening of the filled and sealed pouch.
- (2) Oxygen scavenger. The oxygen scavenger shall be constructed of materials that are safe for direct and indirect food contact. The oxygen scavenger shall be in compliance with all applicable Food and Drug Administration (FDA) regulations.
- (3) Oxygen content. The oxygen content of the headspace gas in the barrier pouch shall not exceed 2.0 percent.
- (4) Box (for class 2 only). One barrier pouch with one Class 1, Type I, or two Class 2, Type I BIB(s) and oxygen scavenger(s) shall be packed in a box in accordance with the applicable assembly document. The box shall be style RSC, or telescoping design. If paperboard is used, it shall be minimum 0.028 inch thick and shall have a minimum basis weight of 100 pounds per square feet. The material may be coated. The material may be bleached. Corrugated materials of E, B, or C flute may also be used. The use of materials composed of the highest percentage of recovered materials practicable is encouraged. The outside dimensions of the carton shall not exceed 12-1/2 by 11-1/2 by 4-1/2 inches.

D-2 LABELING

A. <u>Class 1 or Class 2</u>, <u>Type I</u>, <u>Style A or B</u>, <u>BIB</u>. Each BIB shall be correctly and legibly labeled. Printing ink shall be permanent black ink or other dark contrasting color, which is free of carcinogenic elements. A carcinogenic-free pre-printed self-adhering clear polyester label printed with indelible contrasting ink may also be used. The label shall contain the following information:

- (1) Name of product (letters not less than 1/4 inch high)
- (2) Ingredients
- (3) Date 1/
- (4) Net weight
- (5) Contractor's name and address
- (6) USDA plant number
- (7) "Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA regulations

NOTE: There shall be a black line, minimum 1/16 inch thick, indicating the fill level.

<u>1</u>/ Each BIB shall have the date of pack noted by using a four-digit code beginning with the final digit of the current year followed by the three-digit Julian day code. For example, 14 February 2019 would be coded as 9045. The Julian day code shall represent the day the product was packaged into the BIB.

The following instructions shall be printed on the Class 1, Type I, Style A or B, BIB:

YIELD: Serves 18 portions of approximately 1/2 cup each.

PREPARATION FOR USE IN BIB HEATER MODULE:

- A. Remove cap from Egg Mix Pouch. Remove cap and seal from Rehydration Water Pouch.
- B. Insert nozzle of Water Pouch through hole in Egg Mix Pouch seal. Raise bottom of Water Pouch (slowly) so water flows into Egg Mix Pouch.
- C. Remove as much air as possible from Egg Mix Pouch and replace cap.
- D. Shake Egg Mix Pouch and knead until crystals are dissolved.
- E. Place Egg Mix Pouch (cap up) in box over Flameless Ration Heater.

WARNING: Do not heat BIB in oven.

Rehydrated egg mix should be used within one hour unless refrigerated for use within 24 hours. Do not use rehydrated egg mix in uncooked salad dressings or other recipes that do not require cooking.

TO TRANSPORT AFTER HEATING: Insert BIB into an insulated food container or empty cooked eggs into an insulated food container to protect during transport.

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

TO OPEN: Cut bottom of BIB with clean knife.

The following instructions shall be printed on the Class 2, Type I, Style A or B, BIB:

YIELD: Serves 25 portions of approximately 1/2 cup.

PREPARATION:

- 1. Shake BIB to settle contents. Open cap.
- 2. Support BIB on flat surface.
- 3. Add about 64 ounces (8 cups) of potable water to fill line. Replace cap.
- 4. Shake BIB until contents are rehydrated. Knead if necessary.

WARNING: Do not heat BIB in oven.

Rehydrated egg mix should be used within one hour unless refrigerated for use within 24 hours. Do not use rehydrated egg mix in uncooked salad dressings or other recipes that do not require cooking.

COOKING:

<u>IN WATER</u>: Place rehydrated closed BIB in boiling water. Simmer 12 minutes. Remove from boiling water. Place BIB on a flat surface and knead product until thoroughly mixed. Place BIB back in boiling water for an additional 23 minutes or until egg appears fully cooked. Avoid overcooking (BIB may show evidence of bulging).

ON GRILL: Use as a rehydrated egg mix and fully cook.

BIB HEATER MODULE: Follow instructions on module.

TO TRANSPORT AFTER HEATING: Insert BIB into an insulated food container or empty cooked eggs into an insulated food container to protect during transport.

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

TO OPEN: Cut bottom of BIB with clean knife.

Note: The font tested by Natick was Microsoft Helvetica. The font used shall be similarly clear/easy to read as Helvetica. The recommended font sizes are as follows: 22 for the product name, 14 for "yield" and "to heat in water." If an additional note is required on the label it should also be in font size 14. All other information should be in font size 9.

(1) The product shall be formulated and labeled in accordance with all USDA labeling regulations and policies. The BIBs shall be labeled with the following product name:

EGG MIX, REDUCED CHOLESTEROL, PASTEURIZED, UNCOOKED, DEHYDRATED

- B. <u>Barrier pouch</u>. Each barrier pouch shall be correctly and legibly labeled. Printing ink shall be permanent black ink or other dark contrasting color, which is free of carcinogenic elements. The label shall contain the following information:
 - (1) Name of product (letters not less than 1/4 inch high)
 - (2) Contents
 - (3) Date 1/
 - (4) Contractor's name and address

In addition, the label shall contain the following warnings:

DO NOT OPEN WITH KNIFE USE IMMEDIATELY DO NOT STORE REHYDRATED PRODUCT IN BOIL-IN-BAG POUCHES

<u>1</u>/ Each barrier pouch shall have the date of pack noted by using a four digit code beginning with the final digit of the current year followed by the three digit Julian day code. For example, 14 February 2019 would be coded as 9045. The Julian day code shall represent the day the product was packaged into the BIB.

- C. <u>Box</u>. Each box shall be correctly and legibly labeled. Printing ink shall be permanent black ink or other, dark, contrasting color. The label shall contain the following information:
 - (1) Name of product (letters not less than 1/4 inch high)
 - (2) Contents
 - (3) Date 1/
 - (4) Contractor's name and address

1/ Each box shall have the date of pack noted by using a four digit code beginning with the final digit of the current year followed by the three digit Julian day code. For example, 14 February 2019 would be coded as 9045. The Julian day code shall represent the day the product was packaged into the BIB.

D-3 PACKING

A. <u>Packing</u>. Not more than 40 pounds of product shall be packed in a fiberboard shipping box constructed in accordance with style RSC of ASTM D5118/D5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The fiberboard shall conform to type CF, class D, variety SW, minimum burst grade 200 or ECT 32 of ASTM D4727/D4727M, Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes. Each box shall be closed in accordance with ASTM D1974/D1974M, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes.

D-4 UNITIZATION

A. <u>Unit loads</u>. Unit loads shall be as specified in accordance with DLA Troop Support Form 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items.

D-5 MARKING

A. <u>Shipping containers and unit loads</u>. Shipping containers and unit loads shall be marked in accordance with DLA Troop Support Form 3556, Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence.

SECTION E INSPECTION AND ACCEPTANCE

The following quality assurance criteria, utilizing ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection by Attributes, are required. Unless otherwise specified, single sampling plans indicated in ANSI/ASQ Z1.4 will be utilized. 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) <u>Critical defect</u>. 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) <u>Major defect</u>. 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. <u>Classification of inspections</u>. The inspection requirements specified herein are classified as follows:
- (1) <u>Product standard inspection</u>. The first article or product demonstration model shall be inspected in accordance with the provisions of this document and evaluated for appearance, odor, flavor, and texture. Any failure to conform to the performance requirements or any appearance or palatability failure shall be cause for rejection of the lot.
- (2) <u>Periodic review evaluation</u>. The approved first article or product demonstration model shall be used as the product standard for periodic review evaluations. All food components that are inspected by the USDA shall be subject to periodic review sampling and evaluation. The USDA shall select sample units during production of contracts and submit them to the following address for evaluation:

DEPARTMENT OF THE ARMY RDNS-SEC-EMR NATICK SOLDIER SYSTEMS CENTER 10 GENERAL GREENE AVENUE NATICK, MA 01760

One lot shall be randomly selected during each calendar month of production or as otherwise specified in the contract. Two (2) sample units shall be randomly selected from that one production lot. The two (2) sample units shall be shipped to Natick within five (5) working days from the end of the production month from which they are randomly selected and upon completion of all USDA inspection requirements. The sample units will be evaluated for overall quality against the current first article or product demonstration model.

(3) <u>Conformance inspection</u>. Conformance inspection shall include the examinations/tests and methods of inspection cited in this section and in PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT IN A BOIL-IN-BAG (BIB).

E-5 QUALITY ASSURANCE PROVISIONS (PRODUCT)

A. <u>Product examination</u>. The finished product shall be examined for compliance with the performance requirements specified in Section C of this Product Contract Requirements document utilizing the double sampling plans indicated in ANSI/ASQ Z1.4. The lot size shall be expressed in BIBs. The sample unit shall be the contents of one BIB. The inspection level shall be S-2 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. Defects and defect classifications are listed in table I.

TABLE I. Product defects 1/2/3/4/

Category		Defect
Major 101	Minor	Product not uncooked, dehydrated, reduced cholesterol egg mix.
		Dehydrated product
		Appearance
	201	Egg mix not a free-flowing homogenous mixture.
	202	Egg mix not light yellow in color.
	203	Egg mix not free of scorched particles.
		<u>Odor</u>
102		Packaged food does not have an odor of egg mix.
		<u>Texture</u>
	204	Presence of hard lumps. <u>5</u> /

Net weight

205	Net weight of an individual Class 1 or Class 2, Style A BIB less than 16.3 ounces (462 grams). Net weight of an individual Class 1, Style A, BIB less than 12.2 ounces (346 grams). 6/
206	Net weight of an individual Class 1 or Class 2, Style B, BIB less than 17.8 ounces (505 grams). 7/
206	Net weight of an individual Class 1, Style B, BIB less than 12.8 ounces (363 grams). 7/
207	Net weight of an individual Class 2, Style A, BIB less than 16.3 ounces (462 grams). 8/
208	Net weight of an individual Class 2, Style B, BIB less than 17.8 ounces (505 grams). 9/

TABLE I. Product defects 1/2/3/4/- Continued

Category		Defect
<u>Major</u>	<u>Minor</u>	
		Rehydrated and cooked product 810/ Appearance
103		Not cooked scrambled eggs appearance.
	207 <mark>9</mark>	Eggs not light yellow in color.
		Odor and flavor
104		Not an odor or flavor of cooked scrambled eggs with butter.
		<u>Texture</u>
	2 08 10	Not moist or not tender or not texture of cooked scrambled eggs.

 $[\]underline{1}$ / Presence of any foreign materials such as, but not limited to dirt, insect parts, hair, glass, wood, or metal, or any foreign odors or flavors such as, but not limited to burnt, scorched,

rancid, sour, stale, musty or moldy or foreign color shall be cause for rejection of the lot. Foreign flavor is not applicable to dehydrated product.

- 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. Palatability not applicable to dehydrated product.
- <u>3</u>/ When used, the producer shall provide a USDA Grade Certificate for the nonfat dry milk and the dry buttermilk.
- $\underline{4}$ / The percent egg in the liquid egg mix shall be verified by Certificate of Conformance (CoC).
- 5/ Lumps that do not fall apart under light pressure shall be scored as a defect.
- 6/ Sample average net weight of Class 1 or Class 2, Style A, BIB less than 16.8 12.5 ounces (476 357 grams) shall be cause for rejection of the lot.
- $\frac{7}{530}$ Sample average net weight of Class 1 or Class 2, Style B, BIB less than $\frac{18.7}{13.4}$ ounces (530 381 grams) shall be cause for rejection of the lot.
- 8/ Sample average net weight of Class 2, Style A, BIB less than 16.8 ounces (476 grams) shall be cause for rejection of the lot.
- 9/ Sample average net weight of Class 2, Style B, BIB less than 18.7 ounces (530 grams).
- <u>810</u>/ Prior to conducting the rehydrated product examination, the egg mix shall be rehydrated per BIB instructions. Product that does not show complete water penetration within five minutes shall be cause for rejection of the lot.

B. Methods of inspection.

(1) Shelf life. The contractor shall provide a Certificate of Conformance (CoC) that the product has a 36 month shelf life when stored at 80°F. Government verification may include storage for 6 months at 100°F or 36 months at 80°F. 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 quality scale to be considered acceptable.

- (2) <u>Net weight</u>. The net weight of the filled and sealed BIBs shall be determined by weighing each sample unit on a suitable scale tared with a representative empty BIB and cap. Results shall be reported to the nearest 0.1 ounce or to the nearest 1 gram.
- (3) <u>Analytical</u>. The sample to be analyzed shall be a one-pound composite of dehydrated reduced cholesterol egg mix from three filled and sealed BIBs that have been selected at random from the lot. The composite sample shall be prepared and analyzed in accordance with the following Official Methods of Analysis (OMA) of AOAC International:

 Test
 Method Number

 Protein
 988.05, 992.15

 Salt
 935.47 or 971.27

Moisture 927.05 <u>1</u>/, 985.14, 2008.06

Cholesterol 994.10 <u>2</u>/

Test results for the protein, salt and moisture shall be reported to the nearest 0.1 percent. Test results for cholesterol shall be reported to the nearest 1 milligram per 100 grams. Government verification will be conducted through actual testing by a Government laboratory. Any result not conforming to the analytical requirement shall be cause for rejection of the lot.

- 1/ The temperature-time cycle for moisture analysis shall be modified by using a temperature of 70°C for 16 hours at a pressure of not more than 100 mm of mercury.

 2/ Tests will be conducted for cholesterol on the first production lot of a contract cycle. USDA will perform the verification testing and obtain a copy of the formulation used in the production of that lot. A Certificate of Conformance (CoC) for cholesterol content will be provided on all future lots produced using the same formulation. If the formula is changed or a new contract starts, then another set of tests shall be conducted by USDA, for cholesterol, and USDA will obtain a copy of the formulation.
- (4) Oxygen content testing. Eight filled and sealed barrier pouches shall be randomly selected from one production lot and individually tested for oxygen content. Testing shall be accomplished after the filled and sealed barrier pouches have been allowed to equilibrate at room temperature for not less than 96 hours from the time of sealing. Test results shall be reported to the nearest 0.01 percent. Government verification will be conducted through actual testing by a Government laboratory. Any individual result not conforming to the

oxygen content requirement shall be classified as a major defect and shall be cause for rejection of the lot.

(5) <u>Microbiological testing</u>. Five filled and sealed BIBs shall be selected at random from the lot regardless of lot size. The product shall be individually tested for microbiological levels in accordance with the Official Methods of Analysis (OMA) of AOAC International or the Food and Drug Administration (FDA) Bacteriological Analytical Manual (BAM). Any result not conforming to the microbiological requirements shall be cause for rejection of the lot.

 Test
 Method Number

 Aerobic plate count
 966.23 or 990.12

 E. coli
 966.24, 991.14 or BAM Ch. 4 sections C & F

 Salmonella
 967.26, 986.35, 994.04, 996.08, 2000.06 (b), 2003.09, 2004.03, or 2013.09

NOTE: The following condition applies for Salmonella and microbiological testing:

USDA *Salmonella* and additional microbiological testing is required for each end item lot and shall be the basis for lot acceptance with respect to *Salmonella* and other microbiological testing requirements.

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

A. <u>Class 1 or Class 2, Type I, Style A or B BIB</u>. Inspection for packaging, labeling, packing, and marking shall be in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT IN A BOIL-IN-BAG (BIB).

SECTION J REFERENCE DOCUMENTS

Unless otherwise specified, the applicable version of these documents is that which is active on the date of the solicitation or contract.

DLA Troop Support Forms

Form 3507 Loads, Unit: Preparation of Semiperishable Subsistence Items

Form 3556 Marking Instructions for Boxes, Sacks, and Unit Loads of

Perishable and Semiperishable Subsistence

SPECIFICATION

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT IN A BOIL-IN-BAG (BIB)

GOVERNMENT PUBLICATIONS

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

FDA Bacteriological Analytical Manual (BAM), 8th Edition http://www.fda.gov/food/foodscienceresearch/laboratorymethods/ucm2006949.htm

Inspection of Eggs and Egg Products (Egg Products Inspection Act) (9 CFR Part 590)

General Specifications for Approved Plants and Standards for Grades of Dairy Products (7 CFR Part 58)

Dairy plants surveyed and approved for USDA grading service (7 CFR Part 58)

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-131 Barrier Materials, Watervaporproof, Greaseproof, Flexible, Heat-Sealable

MIL-DTL-32235/3 Heater Module, Boil-In-Bag (BIB) Module

(Copies of these documents are available from http://quicksearch.dla.mil/qsSearch.aspx or from the Standardization Document Order Desk, 700 Robbins Ave, Building 4D, Philadelphia, PA 19111-5094.)

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ) www.asq.org

PCR-E-017B 9 November 2018

W/Change 04 11 Mar 22 ES22-032 (DSCP-SS-22-00622)

SUPERSEDING PCR-E-017A 3 September 2010

ANSI/ASQ Z1.4 Sampling Procedures and Tables for Inspection by Attributes

ASTM INTERNATIONAL www.astm.org

D1974/D1974M Standard Practice for Methods of Closing, Sealing, and

Reinforcing Fiberboard Boxes

D4727/D4727M Standard Specification for Corrugated and Solid Fiberboard

Sheet Stock (Container Grade) and Cut Shapes

D5118/D5118M Standard Practice for Fabrication of Fiberboard Shipping

Boxes

AOAC INTERNATIONAL www.aoac.org

Official Methods of Analysis (OMA) of AOAC International