SECTION C

This document covers dry, non-dairy creamer packaged for use by the Department of Defense as a component of operational rations.

C-1 ITEM DESCRIPTION

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR CID A-A-20043D, CREAMER, NON-DAIRY, DRY

Style, and flavor.

Style I – Regular

Flavor A – Plain/unflavored

C-2 PERFORMANCE REQUIREMENTS

A. Product standard. 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 Packaging Requirements and Quality Assurance Provisions 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. Shelf life. The packaged product shall meet the minimum shelf life requirement of 36 months at 80°F.

C. Dehydrated product.

(1) Net weight. The net weight of one packet shall be not less than 4.0 grams.

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

E. Analytical and microbiological tests. The fat, *trans* fatty acid, moisture, Standard Plate Count, Coliform count, *Salmonella*, and *Escheria coli (E. coli)* requirements, procedures, and testing shall be in accordance with A-A-20043D and the NOTE cited in Section E-5.

SECTION D

D-1 PACKAGING

A. Packaging. Not less than 4.0 grams of dry, non-dairy creamer shall be filled into a packet having maximum outside dimensions of 3-5/8 inches by 2-3/4 inches. The packet shall be made from a heat sealable barrier material, one layer of which is a minimum of 0.00035 inch thick aluminum foil. All four edges of the packet shall be heat-sealed with seals not less than 1/8 inch wide. The sealed packet shall not leak when examined in accordance with Section E-6, B(1). There shall be no crushed, misshapen or unclean packets.

D-2 LABELING

A. Packets. Each packet shall be correctly and legibly labeled. Printing ink shall be permanent black ink or any 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 1/8 inch high)
(2) Ingredients
(3) Date 1/
(4) Net weight
(5) Name and address of packer
(6) "Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA regulations.
(7) Directions: Dissolve contents in 1/3 canteen cup (8 ounces) of beverage.

1/ Each packet 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 2018 would be coded as 8045. The Julian day code shall represent the day the product was packaged into the packet.

D-3 PACKING

A. Packing. Not more than 40 pounds of product shall be packed in a fiberboard shipping box constructed in accordance with style RSC-L of ASTM D5118/D5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The fiberboard shall conform to type CF, class D, variety SW, burst grade 200 or ECT grade 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-5 MARKING

A. Shipping containers and unit loads. Shipping containers 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) 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 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) Periodic review evaluation. 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. Six (6) sample units shall be randomly selected from that one production lot. The six (6) 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) Conformance inspection. Conformance inspection shall include the product examinations/tests and 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 A-A-20043D and Section C of this Packaging Requirements and Quality Assurance Provisions document utilizing the double sampling plans indicated in ANSI/ASQ Z1.4. The lot size shall be expressed in packets. The sample unit shall be the contents of one packet. 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 4.0 for minor defects. Defects and defect classifications are listed in table I.

TABLE I. Product defects 1/ 2/

Category	Defect

Major	Minor	
		Dehydrated product
		General
101		Product not style or not flavor as specified.
		Appearance
	201	Finished product not a white to light cream color.
		Odor and flavor
102		Presence of any objectionable odors or flavors, such as, malty, tallow, soapy, or bitter.
		Texture
	202	Product not free flowing or not uniform or not a granular powder.
	203	Presence of lumps. 3/
		Net weight
	204	Net weight of an individual packet less than 4.0 grams.
		Hydrated product 4/
		Appearance
103		Product does not readily dissolve in hot liquid or shows evidence of curdling or feathering or undissolved floating particles.
		Odor and flavor
104		Hydrated product does not have a sweet or creamy flavor.

1/ Presence of any foreign material 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 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/ Lumps that do not fall apart under light pressure shall be scored as a defect.

4/ Prior to conducting the hydrated product examination, the product shall be hydrated per label instructions. Product that does not fully dissolve within 15 seconds with constant stirring shall be cause for rejection of the lot.

B. Methods of Inspection.

(1) Shelf life. The contractor shall provide a certificate of conformance 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) Net weight. The net weight of the filled and sealed packets shall be determined by weighing each sample on a suitable scale tared with a representative empty packet. Results shall be reported to the nearest 0.1 gram.

(3) Dispersability test. To 8 ounces (227 ml) of potable water at 175°F to 180°F (79°C to 82°C) contained in a clean transparent glass vessel, add 2.5 grams of instant coffee. Add 4.0 grams of dry cream substitute and observe for product dissolving in 15 seconds, no evidence of curdling, feathering, or undissolved particles. After observing this, stir the coffee for 15 seconds. Observe the whitening power of the cream substitute, which shall be equivalent to the color rendered by addition of homogenized milk to coffee prepared in the same manner 1/. There shall be no sediment on the bottom of the vessel after one minute of standing following the stirring. The sample for inspection shall be a 4.0 gram composite drawn from the number of sample units called for by table I. Nonconformance to one or more of the requirements shall be cause for rejection of the lot.

1/ To a second 8 ounce (227 ml) portion of prepared coffee add 1 ounce (30 ml) of homogenized milk.

(4) *Salmonella* and microbiological testing. The filled and sealed pouches shall be tested as specified in A-A-20043D, and this NOTE shall be applied to that testing process:

NOTE: The following conditions apply for *Salmonella* and microbiological testing:

(1) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis (CoA) that the

product represented is *Salmonella* negative and meets all microbiological requirements.

(2) For bulk product received, the contractor is responsible for providing a CoA stating that the bulk product is *Salmonella* negative and meets all microbiological requirements. USDA S*almonella* 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. Packaging and labeling.

(1) Packet material certification. Conformance to thickness of packet laminate foil shall be determined by a Certificate of Conformance.

(2) Filled and sealed packet examination. The filled and sealed packets shall be examined for the defects listed in table II. The sample size shall be expressed in packets. The sample unit shall be one packet. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 0.65 for major defects and 2.5 for minor defects.

TABLE II. Filled and sealed packet defects 1/

Category		Defect
Major	Minor	
101		Tear or hole or open seal, or sifter. 2/
102		Packet dimensions exceed maximum length and width as specified.
103		Packet crushed or misshapen resulting in two or more creases in the product area of the packet.

104		Leakage. 3/
105		Seal separation. 3/
106		Delamination or degradation. 3/
107		Packet not heat sealed on all four edges with minimum 1/8 inch wide seals.
108		Unclean packet.
109		Packet has foreign odor.
110		Seal width less than 1/8 inch. 4/
	201	Label missing or incorrect or illegible.

1/ Any evidence of rodent or insect infestation shall be cause for rejection of the lot.

2/ A sifter is a packet which loses any amount of contents when shaken vigorously.

3/ Examine packet after removal from leakage test apparatus.

4/ The effective closure seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/8 inch wide, from side to side seal that produces a hermetically sealed pouch.

B. Methods of Inspection.

(1) Leakage test. The filled and sealed packets shall be tested by placing them in a dry desiccator, or similar apparatus, and subjecting them to a vacuum of 26 inches of mercury (atmospheric pressure is 29.9 inches of mercury) for 30 seconds. Any packet that does not swell to form a tightly distended package having at least one distorted edge during the test shall be recorded as a leaker. After vacuum testing, the packets shall be visually inspected for evidence of delamination and for seal separation. Any leakage, any delamination, or any seal separation of more than 1/16 inch from the product edge of any seal shall be recorded as a defect.

C. Packing.

(1) Shipping container and marking examination. The filled and sealed shipping containers shall be examined for the defects listed in table III. 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 III. Shipping container defects

Category		Defect
Major	Minor	
101		Marking missing or incorrect or illegible.
102		Inadequate workmanship. 1/
	201	More than 40 pounds of product.

1/ Inadequate workmanship is defined as, but not limited to incomplete closure of container flaps, loose strapping, inadequate stapling, improper taping, or bulged or distorted container.

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 Form

Form 3556 — Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence

NON-GOVERNMENTAL STANDARDS

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

ANSI/ASQZ1.4 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