

SECTION C

This document covers cakes, brownies, and mini loaves packaged in a polymeric tray for use by the Department of Defense as a component of operational rations.

C-1 ITEM DESCRIPTION

PCR-C-024, CAKES, BROWNIES, AND MINI LOAVES, PACKAGED IN A POLYMERIC TRAY, SHELF STABLE

Types and flavors.

Type I - Cakes

- Flavor 1 - Yellow cake with chocolate crumb topping
- Flavor 2 - Chocolate cake with vanilla crumb topping
- Flavor 3 - Marble cake with toffee crumb topping
- Flavor 4 - Devil's fudge cake with coconut topping
- Flavor 5 - Spice cake with vanilla crumb topping
- Flavor 6 - Coffee cake with cinnamon crumb topping
- Flavor 7 - Walnut tea cake
- Flavor 8 - Lemon crumb cake

Type II - Brownies

- Flavor 1 - Fudge brownie with chocolate icing
- Flavor 2 - Brownie with pan coated disks topping
- Flavor 3 - Brownie with Butterfinger pieces™
- Flavor 4 - Blonde brownie

Type III - Mini loaves

- Flavor 1 - Banana nut loaf

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 Performance-based 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 non

comparable to the Product Standard, the contractor shall arrange for a new or alternate FA or PDM 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. Appearance.

(1) General. The product shall be fully baked. There shall be no evidence of compression streaks. The product shall be free from foreign materials and shall show no evidence of excessive baking (materially darkened or scorched).

a. Type I – The topping shall be uniformly distributed on the top of the cake, except flavor 7, which has no topping. The cake height, excluding the topping, shall be not less than 1-1/4 inches.

b. Type II – The flavor 1 chocolate icing is packaged separately and shall be spread evenly on the top surface of the brownie at the serving time. The flavor 2 pan coated disks may be in pieces and may exhibit cracks. The brownie height, excluding the icing or pan coated disks or Butterfinger™ pieces, shall be not less than 3/4 inch.

c. Type III – The mini loaf rectangular shape shall be not less than 3 inches long by 1.5 inches wide by 1.5 inches high. Eighteen (18) intact mini loaves shall be arranged in a polymeric tray.

(2) Type I.

a. Flavor 1 – The cake shall be pale, off-white. The topping shall be medium brown, irregular shaped crumbs.

b. Flavor 2 – The cake shall be dark brown with a reddish hue. The topping shall be light to medium tan, irregular shaped crumbs.

c. Flavor 3 – The cake shall be pale, off-white with swirls of dark brown. The topping shall be light tan, irregular shaped crumbs with toffee nuggets.

d. Flavor 4 – The cake shall be deep, chocolate brown. The topping shall be light to medium tan with coconut flakes.

e. Flavor 5 – The cake shall be medium beige with flecks of spices. The topping shall be light to medium tan, irregular shaped crumbs.

f. Flavor 6 – The cake shall be pale, off-white. The topping shall be dark tan, irregular shaped crumbs.

g. Flavor 7 – The cake shall have a golden to tan surface and very light tan crumb with small pieces of walnuts distributed throughout.

h. Flavor 8 – The cake shall have a bright yellow, moist dense cake with a uniform crumb and a bright yellow crumbly topping.

(3) Type II.

a. Flavor 1 – The brownie shall have a very dark brown surface and crumb. The chocolate icing shall be shiny, dark brown.

b. Flavor 2 – The brownie shall have a medium dark brown surface and crumb. The surface shall have pan coated, chocolate disks of assorted colors distributed throughout. The interior crumb may have pan coated, chocolate disks. Color from the pan coated disks may be absorbed in the brownie surface.

c. Flavor 3 – The brownie shall have a dense fudge-like dark brown color with slightly cracked or baked surface appearance; light caramel color top with dark orange-tan pieces of Butterfinger™ melted into the surface.

d. Flavor 4 – The blonde brownie shall have a light tan to medium golden brown color.

(4) Type III.

a. Flavor 1 – The mini loaf shall have a rectangular shape (single serving) with uniform tan/golden brown exterior; pale gold crumb with walnut pieces randomly distributed.

D. Odor and flavor.

(1) Foreign. The packaged food shall be free from foreign odors and flavors.

(2) Type I.

- a. Flavor 1 – The cake shall have a sweet, mild vanilla odor and flavor. The topping shall have a mild chocolate, slightly sweet odor and flavor.
- b. Flavor 2 – The cake shall have a sweet, strong chocolate odor and flavor. The topping shall have a sweet, mild vanilla odor and flavor.
- c. Flavor 3 – The cake shall have a sweet, mild vanilla-almond and mild sweet chocolate odor and flavor. The topping shall have a sweet toffee odor and flavor.
- d. Flavor 4 – The cake shall have a medium sweet chocolate odor and flavor. The topping shall have a sweet, strong coconut odor and flavor.
- e. Flavor 5 – The cake shall have a cinnamon and allspice odor and flavor. The topping shall have a slightly sweet, mild vanilla odor and flavor.
- f. Flavor 6 – The cake shall have a sweet, mild vanilla odor and flavor. The topping shall have a sweet cinnamon odor and flavor.
- g. Flavor 7 – The cake shall have a sweet, mild vanilla-walnut odor and flavor.
- h. Flavor 8 - The cake shall have a sweet lemon odor and flavor with a slight cooked wheat flour note.

(3) Type II.

- a. Flavor 1 – The brownie shall have a sweet, slightly bitter chocolate odor and flavor. The chocolate icing shall have a sweet chocolate odor and flavor.
- b. Flavor 2 – The brownie shall have a sweet chocolate odor and flavor. The pan coated disks shall have a sweet chocolate odor and flavor.
- c. Flavor 3 – The brownie shall have a sweet cocoa, fudge chocolate caramelized odor and flavor. The topping shall have sweet caramelized odor and flavor.
- d. Flavor 4 – The blonde brownie shall have a sweet caramelized butterscotch odor and flavor.

(4) Type III.

- a. Flavor 1 – The mini loaf shall have a sweet vanilla, banana and walnut odor and flavor.

E. Texture.

(1) Type I.

a. Flavor 1, flavor 2, flavor 5, or flavor 6 – The cake shall have a dense, tender, moist, fine grain texture. The topping shall have moist, soft crumbs.

b. Flavor 3 – The cake shall have a dense, tender, moist, fine grain texture. The topping shall have moist, soft crumbs with toffee nuggets.

c. Flavor 4 – The cake shall have a very dense, tender, moist, fine grain texture. The topping shall have moist, soft crumbs with coconut flakes.

d. Flavor 7 – The cake shall have a dense, tender, moist, fine grain texture with walnut pieces.

e. Flavor 8 - The cake shall have be a moderately moist slightly dense cake with a soft crumb and a topping.

(2) Type II.

a. Flavor 1 – The brownie shall have a dense, firm, moist texture. The icing shall be smooth and easily spreadable.

b. Flavor 2 – The brownie shall have a dense, firm, slightly moist texture. The pan coated, chocolate disks shall have a hard coating with a firm chocolate center.

c. Flavor 3 - The brownie shall have a moist, dense texture with caramelized candy pieces. The topping shall be crunchy.

d. Flavor 4 – The blonde brownie shall have a moist, dense texture.

(3) Type III.

a. Flavor 1 – The mini loaf shall have a dense, tender, moist, fine grain texture with walnut pieces.

F. Net weight.

(1) Type I. The average net weight for flavors 1 – 6 shall be not less than 42 ounces. No individual polymeric tray shall have a net weight less than 41 ounces. For Type I flavor

7, the average net weight shall be not less than 41 ounces and no individual polymeric tray shall have a net weight less than 39 ounces. For Type I flavor 8, the average net weight shall be not less than 36 ounces and no individual polymeric tray shall have a net weight less than 35 ounces.

(2) Type II. The average net weight for flavor 1 without icing shall be not less than 42 ounces. No individual polymeric tray of flavor 1 shall have a net weight of less than 40 ounces. The average net weight of the chocolate icing shall be not less than 6.0 ounces. The average net weight for flavors 2 and 3 shall be not less than 36 ounces. No individual polymeric tray of flavors 2 and 3 shall have a net weight of less than 34 ounces. The average net weight for flavor 4 shall be not less than 29 ounces. No individual polymeric tray of flavor 4 shall have a net weight of less than 27 ounces.

(3) Type III. No individual polymeric tray shall have a net weight of less than 34 ounces.

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

H. Analytical requirements.

(1) Type I fat content. The fat content for flavors 1, 3, 4, 5, and 6 shall be not less than 14.0 percent. The fat content for flavors 2 and 7 shall be not less than 16.0 percent. The fat content for flavor 8 shall be not less than 12.0 percent.

(2) Type II fat content. The fat content for flavor 1 shall be not less than 12.0 percent. The fat content for flavors 2, 3, and 4 shall be not less than 14.0 percent.

(3) Type III fat content. The fat content for flavor 1 shall be not less than 20.0 percent.

(4) Type I moisture content. The moisture content for flavors 1 – 6 shall be not less than 20.0 percent. The moisture content for flavors 7 and 8 shall be not less than 18.0 percent.

(5) Type II moisture content. The moisture content for flavor 1 shall be not less than 14.0 percent. The moisture content for flavors 2, 3, and 4 brownie shall be not greater than 16.0 percent.

(6) Type I, Type II and Type III water activity (Aw). The water activity of types I, II (without icing), and III packaged product shall be not greater than 0.890.

I. Oxygen content. The oxygen content of the filled and sealed polymeric tray shall not exceed 0.3 percent after 72 hours.

C-3 MISCELLANEOUS INFORMATION

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

A. Cake ingredients/formulation. Ingredients and formulation percentages for cakes may be as follows:

<u>Flavor</u> <u>Ingredients</u>	<u>1</u>	<u>2</u>	<u>3</u> <u>Choc</u>	<u>4</u> <u>Yellow</u>	<u>5</u>	<u>6</u>	
Sugar, white, granulated	30.24	26.70	26.50	31.00	26.62	29.53	30.24
Flour, cake	22.42	17.75	17.70	22.48	15.84	22.29	22.42
Water	14.80	11.86	11.90	14.82	18.55	14.71	14.80
Eggs, whole, frozen	13.91	19.78	19.78	13.98	15.32	13.83	13.91
Shortening, high ratio	12.54	14.52	14.52	12.54	11.09	12.47	12.54
Glycerol	3.14	2.36	2.36	3.14	3.23	3.12	3.14
Starch, instant, granular	1.00	-	-	-	1.00	1.00	1.00
Salt	0.85	0.80	0.80	0.84	0.73	0.85	0.85
Baking powder	0.68	0.41	0.42	0.68	0.38	0.68	0.68
Potassium sorbate	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Guar gum	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Xanthan gum	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Flavoring, vanilla liquid	0.10	0.10	0.10	-	0.09	0.10	0.10
Flavoring, cream, artificial	0.02	-	-	0.02	-	0.02	0.02
Cocoa	-	3.80	3.80	-	5.00	-	-
Maltodextrin	-	1.48	1.48	-	1.48	-	-
Bicarbonate of soda	-	0.14	0.14	-	0.09	-	-
Flavoring, almond/vanilla powder	-	-	0.20	0.20	-	-	-
Cinnamon	-	-	-	-	0.28	0.26	-
Allspice	-	-	-	-	-	0.28	-
Ginger	-	-	-	-	-	0.05	-
Sugar, light brown	-	-	-	-	-	0.51	-

B. Ingredients:

(1) Ingredients for type I - flavor 7, walnut cake may be as follows: sugar, enriched wheat flour, eggs, emulsified shortening, water, glycerol, walnuts, maltodextrin, sour cream flavor, starch, salt, baking powder, butter flavor, vanilla flavor, xanthum gum, guar gum, potassium sorbate.

(2) Ingredients for type I - flavor 8, lemon crumb cake may be as follows: Sugar, enriched bleached flour (bleached flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), water, egg, partially hydrogenated soybean and cottonseed oils with mono and diglycerides, lemon crunch topping [sugar, corn syrup, corn cereal, wheat flour, modified food starch (corn and/or wheat), natural and artificial flavors, partially hydrogenated vegetable oil (cottonseed and/or soybean), citric acid, yellow #5], glycerol, contains 2 percent or less of the following: salt, leavening (sodium acid pyrophosphate, sodium bicarbonate, monocalcium phosphate), citric acid, modified food starch, guar gum, xanthan gum, lemon oil with other natural flavors, yellow color, (fractionated coconut oil, FD&C yellow #5 lake, hydroxylated lecithin), potassium sorbate(preservative) artificial flavor.

(3) Ingredients for type II - flavor 1, brownie may be as follows: sugar, corn syrup, oil, flour, egg white, whole eggs, cocoa, water, glycerol, milk, starch, salt, flavors, leavening, preservative, emulsifier, gum.

(4) Ingredients for type II - flavor 1, chocolate icing may be as follows: sugar, partially hydrogenated vegetable oil (soybean and cottonseed), water, high fructose corn syrup, corn syrup, cocoa (processed with alkali), mono and diglycerides, polysorbate 60, salt, lecithin, potassium sorbate, natural and artificial flavor, citric acid.

(5) Ingredients for type II - flavor 2, brownie with pan coated disks topping may be as follows: sugar, enriched wheat flour, vegetable shortening, cocoa and pan coated chocolate disks of assorted colors and other ingredients common to the baking industry.

(6) Ingredients for type II - flavor 3, brownie with Butterfinger™ pieces may be as follows: sugar, enriched bleached flour (bleached flour, malted barley flour, niacin, reduced iron, thiamine mononitrate, riboflavin and folic acid), eggs, water, partially hydrogenated soybean and cottonseed oils, soybean oil, cocoa, Butterfinger™ pieces [sugar, corn syrup, ground roasted peanuts, partially hydrogenated palm kernel oil, cocoa, molasses, confectioner's corn flakes, skim milk, whey, salt, emulsifiers (monoglycerides and soy lecithin), cornstarch, artificial flavors, Yellow 5, TBHQ and citric acid (to preserve freshness), Red 40], high fructose corn syrup, contains 2 percent or less of the following: cornstarch, nonfat dry milk, potassium sorbate (preservative) xanthan gum, salt, natural and artificial flavors.

(7) Ingredients for type II - flavor 4, blonde brownies may be as follows: brown sugar, enriched bleached flour, vegetable shortening, butterscotch chips, white chips, chocolate chips, eggs and other ingredients common to the baking industry.

(8) Ingredients for type III - flavor 1, banana nut mini loaves may be as follows: enriched bleached flour (bleached flour, reduced iron, niacin, thiamine mononitrate, riboflavin, folic acid), sugar, eggs, partially hydrogenated soybean and cottonseed oils with mono and diglycerides, water, soybean oil, wheat germ nuts (partially hydrogenated soybean oil, wheat germ, sugar, wheat gluten, sodium caseinate, soy protein, natural and artificial flavor, yellow 5, red 40, blue 1), glycerol, maltodextrin, may contain 2% or less of the following: English walnuts, modified food starch, natural and artificial flavor, salt, leavening (sodium acid pyrophosphate, sodium bicarbonate, monocalcium phosphate), potassium sorbate (preservative), xanthan gum, guar gum.

C. Cake topping formulation.

<u>Flavor</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
<u>Ingredients</u>						
Flour, wheat	46.94	47.84	36.84	25.24	47.84	46.14
Sugar, white, Granulated	24.28	24.88	23.88	22.48	24.88	24.88
Margarine	12.44	12.44	11.44	12.44	12.44	12.44
Shortening, Vegetable	10.94	12.44	10.44	12.44	12.44	12.44
Cocoa	3.00	-	-	-	-	0.80
Silica	2.00	2.00	2.00	2.00	2.00	2.00
Flavoring, vanilla powder	0.40	0.40	0.40	0.40	0.40	0.40
Toffee nuggets	-	-	15.00	-	-	-
Coconut flakes	-	-	-	25.00	-	-
Cinnamon	-	-	-	-	-	0.90

SECTION D

D-1 PACKAGING

A. Preservation. Product as specified plus the appropriate number of oxygen scavengers and ovenable tray insert, if applicable, shall be filled and sealed into polymeric trays and the trays shall conform to the requirements of section 3 of MIL-PRF-32004, Packaging of Food

in Polymeric Trays, Type II Oven-baked Products. Verification testing and inspection of trays and lids 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. The requirement for protective sleeves shall not apply to Type II Oven-baked Products.

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

C. Component. One pouch containing chocolate icing shall be provided for each polymeric tray of type II, flavor 1 brownie. The following materials and processing requirements are for chocolate icing in a pouch prior to packaging with the type II, flavor 1 product:

(1) Icing pouch.

a. Material and construction. The preformed pouch shall be fabricated from material suitably formulated for food packaging and shall be in compliance with all applicable FDA and USDA regulations. The material shall show no evidence of delamination, degradation, or foreign odor when heat-sealed or fabricated into pouches. The material shall not impart an odor or flavor to the product after filling and sealing. The pouch shall be made by heat sealing three edges with 3/8 inch (-1/8 inch, +3/16 inch) wide seals. The heat seals shall be made in a manner that will assure hermetic seals. The side and bottom 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 when tested as specified in E-6,B.,(3),a. Alternatively, the filled and sealed pouch shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the manufacturer's seals to less than 1/16 inch when tested as specified in E-6,B.,(3),c. A tear notch shall be present in one or both side seals to facilitate opening.

b. Filling and sealing. Six ounces (6.0) of chocolate icing shall be filled into the pouch and the filled pouch shall be heat sealed. The closure seal shall be free of foldover wrinkles or entrapped matter that reduces the effective closure seal width to less than 1/16 inch. Seals shall be free of impression or design on the seal surface that would conceal or impair visual detection of seal defects. The average seal strength shall be 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 when tested as specified in E-6,B.,(3),b. 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 as specified in E-6,B.,(3),c. Residual headspace in the filled and sealed pouch shall be minimized to facilitate packing.

c. Pouch size. The filled and sealed pouch shall be a size that fits within the void created between the tray lid material and fiberboard pad added during packing.

D. Oxygen scavenger packet. The oxygen scavenger (absorber) shall be constructed of materials that are safe for direct or indirect food contact and shall be suitable for use with edible products. The oxygen scavenger (absorber) shall be in compliance with all applicable FDA and USDA regulations.

E. Ovenable tray insert. The ovenable tray insert (if utilized) shall be constructed of materials that are safe for direct or indirect food contact and shall be suitable for use with edible products. The ovenable tray insert shall be in compliance with all applicable FDA and USDA regulations.

D-2 LABELING

A. Polymeric tray body. The polymeric tray body 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. One end of the polymeric tray (see figure 1 of MIL-PRF-32004) shall be marked with the product name and number of portions. If the tray body end markings are not readily legible in low light conditions, a small, easily legible label shall be applied, but not over any existing tray markings. All other markings may be applied along the tray body side. The product name, lot number and filling equipment number shall be applied at the time of tray sealing. 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

1/ As an alternate method, tray body markings may be clearly printed or stamped onto the polymeric tray lid at the time of tray sealing, 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 prior to packing for shipment to ration assembler.

2/ 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, 27 February 2004 would be coded as 4058). The Julian code shall represent the day the

product was packaged into the tray and the tray sealed. 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 and flavor
 - Ingredients
 - Net weight
 - Name and address of manufacturer

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.

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

For Type I –

YIELD: Serves 18 portions; cut 3 rows by 6 rows.

For Type II, flavor 1 –

CHOCOLATE ICING: Chocolate icing is packaged in a separate pouch. Spread icing evenly on the brownie surface using a spatula or knife, prior to cutting the brownie.

YIELD: Serves 18 portions; cut 3 rows by 6 rows.

For Type II, flavors 2, 3 and 4 –

YIELD: Serves 18 portions; cut 3 rows by 6 rows.

For Type III –

YIELD: Serves 18 portions of 1 mini loaf each.

C. Icing pouch. Each pouch shall be clearly printed or stamped, in a manner that does not damage the pouch. Permanent black ink or other contrasting color which is free of

carcinogenic elements shall be used. The information may be located anywhere on the pouch (in one complete print).

(1) Icing labeling shall include:

- Product name
- Ingredients
- Date 1/
- Net weight
- Name and address of manufacturer

1/ Each 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, 27 February 2004 would be coded as 4058. The Julian day code shall represent the day the product was packaged into the pouch.

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

- Knead pouch to soften chocolate icing.
- Squeeze icing onto surface of brownie and spread evenly using a spatula or knife.

**CAREFULLY PEEL ICING POUCH AWAY FROM TRAY LID
PRIOR TO SERVING**

D-3 PACKING

A. Packing for shipment to ration assembler. Four filled, sealed and processed polymeric trays shall be packed in a snug fitting fiberboard box conforming to style RSC-L, type CF, grade 275 of ASTM D5118/D5118M-95 (2001) Standard Practice for Fabrication of Fiberboard Shipping Boxes. The trays shall be stacked with lids oriented upright. Fiberboard pads shall be placed between the trays and on the top and bottom of the stacked trays. The pad dimensions shall be not less than 1/8 inch of the full length and width inside dimensions of the box and shall be fabricated of class domestic, grade 275 fiberboard. The box shall be closed in accordance with ASTM D1974-98 Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes.

B. Type II. The type II, flavor 1 brownies shall be packed as above. In addition, one filled and sealed icing pouch shall be provided for each polymeric tray of specified product. The filled and sealed icing pouch shall be placed between the polymeric tray lid and fiberboard pad and secured to the tray lid using a food grade, peelable adhesive or alternate method of attachment.

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 DSCP FORM 3556, Marking Instructions for Boxes, Sacks and Unit Loads of Perishable and Semiperishable Subsistence.

D-6 MISCELLANEOUS INFORMATION

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

A. Icing pouch material. It has been found that a pouch with minimum inside dimensions of 8-3/4 inches in length by 6-5/8 inches in width and fabricated from a 3-ply laminate constructed of, from inside to outside, 0.002 inch thick linear low density polyethylene, extrusion coated or laminated to 0.00035 inch thick aluminum foil, and extrusion coated or laminated to 0.0006 inch thick biaxially oriented nylon, meets the performance requirements of this document.

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. Unless otherwise specified, single sampling plans indicated in ANSI/ASQC Z1.4-1993 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 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. 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:

US Army Research, Development and Engineering Command
Natick Soldier Center
AMSRD-NSC-CF-F
15 Kansas Street
Natick, MA 01760-5018

One lot of each item produced shall be randomly selected during each calendar month of production. 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 working days from the end of the production month and upon completion of all USDA inspection requirements. The sample units will be evaluated for the characteristics of appearance, odor, flavor, texture and overall quality.

(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 polymeric trays. The sample unit shall be the contents of one polymeric 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 filled and sealed polymeric trays shall be brought up to room temperature (65°F to 75°F).

TABLE I. Product defects 1/ 2/ 3/

<u>Category</u>		<u>Defect</u>
<u>Major</u>	<u>Minor</u>	
		<u>General</u>
101		Product not type, style, flavor, size, or icing as specified.
102		Evidence of excessive baking (materially darkened or scorched).
103		Polymeric tray does not contain intact oxygen scavenger packet(s).
	201	Evidence of delamination by ovenable tray insert (if utilized).
	202	Icing pouch missing, as applicable.
104		Icing pouch leaking, as applicable.
	203	Icing pouch not adhered to tray lid.
	204	Icing pouch does not peel away easily from tray lid.
105		Product not fully baked (gummy center or soggy areas or raw portions).
	205	Topping not uniformly distributed over top of cake.
	206	Product height, excluding topping, less than 1 inch for Types I and III, or less than 3/4 inch for Type II. <u>4/</u>
	207	Evidence of compression streaks.
		<u>Type I, Flavor 1</u>
106		Cake odor or flavor not sweet, mild vanilla.
	208	Topping odor or flavor not slightly sweet, mild chocolate.

TABLE I. Product defects 1/ 2/ 3/ cont'd

Category	Defect
<u>Major</u>	<u>Minor</u>
	209 Cake not a pale off-white color.
	210 Topping not medium brown irregular shaped crumbs.
	211 Cake not dense, tender, moist, fine grain.
	212 Topping not moist, soft crumbs.
	<u>Type I, Flavor 2</u>
107	Cake odor or flavor not sweet, strong chocolate.
	213 Topping odor or flavor not sweet, mild vanilla.
	214 Cake not a dark brown color with a reddish hue.
	215 Topping not light to medium tan irregular shaped crumbs.
	216 Cake not dense, tender, moist, fine grain.
	217 Topping not moist, soft crumbs.
	<u>Type I, Flavor 3</u>
108	Cake odor or flavor not sweet, mild vanilla-almond or not mild sweet chocolate.
	218 Topping odor or flavor not sweet toffee.
	219 Cake not a pale off-white color with swirls of dark brown.
	220 Topping not light tan irregular shaped crumbs with toffee nuggets.
	221 Cake not dense, tender, moist, fine grain.
	222 Topping not moist, soft crumbs with toffee nuggets.
TABLE I. <u>Product defects 1/ 2/ 3/</u> cont'd	
Category	Defect

<u>Major</u>	<u>Minor</u>	
		<u>Type I, Flavor 4</u>
109		Cake odor or flavor not medium sweet chocolate.
	223	Topping odor or flavor not sweet, strong coconut.
	224	Cake not a deep chocolate brown color.
	225	Topping not light to medium tan with coconut flakes.
	226	Cake not very dense, tender, moist, fine grain.
	227	Topping not moist, soft crumbs with coconut flakes.
		<u>Type I, Flavor 5</u>
110		Cake odor or flavor not cinnamon or not allspice.
	228	Topping odor or flavor not slightly sweet, mild vanilla.
	229	Cake not a medium beige color with flecks of spices.
	230	Topping not light to medium tan irregular shaped crumbs.
	231	Cake not dense, tender, moist, fine grain.
	232	Topping not moist, soft crumbs.
		<u>Type I, Flavor 6</u>
111		Cake odor or flavor not sweet, mild vanilla.
	233	Topping odor or flavor not sweet cinnamon.
	234	Cake not a pale off-white color.
TABLE I. <u>Product defects 1/ 2/ 3/ cont'd</u>		
<u>Category</u>	<u>Defect</u>	
<u>Major</u>	<u>Minor</u>	

- 235 Topping not dark tan irregular shaped crumbs.
- 236 Cake not dense, tender, moist, fine grain.
- 237 Topping not moist, soft crumbs.
- Type I, Flavor 7
- 112 Cake odor or flavor not sweet, mild vanilla-walnut.
- 238 Cake surface not a golden to tan color.
- 239 Cake crumb not a very light tan color with small pieces of walnuts distributed throughout.
- 240 Cake not dense, tender, moist, fine grain with walnut pieces.
- Type I, Flavor 8
- 113 Cake odor or flavor not a sweet lemon with a slight cooked wheat flour note.
- 241 Cake not a bright yellow color with a uniform cake crumb.
- 242 Cake not moderately moist, slightly dense cake with a soft crumb.
- 243 Topping not bright yellow.
- Type II, Flavor 1
- 114 Brownie odor or flavor not sweet, slightly bitter chocolate.
- 244 Icing odor or flavor not sweet chocolate.
- 245 Brownie surface or crumb not a very dark brown color.

TABLE I. Product defects 1/ 2/ 3/ cont'd

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

- 246 Icing not shiny, dark brown.
- 247 Brownie not dense, firm, moist.
- 248 Icing not smooth or not easily spreadable.

Type II, Flavor 2

- 115 Brownie odor or flavor not sweet chocolate.
- 249 Pan coated chocolate disks not a sweet chocolate flavor.
- 250 Brownie surface or crumb not a medium dark brown color.
- 251 Brownie surface does not have pan coated chocolate disks of assorted colors distributed throughout.
- 252 Brownie not dense, firm, slightly moist.
- 253 Pan coated, chocolate disks not hard coating with a firm chocolate center.

Type II, Flavor 3

- 116 Brownie odor or flavor not sweet cocoa, fudge chocolate caramelized.
- 254 Topping odor or flavor not sweet caramelized.
- 255 Brownie not dense fudge-like dark brown color with slightly cracked or baked surface appearance.
- 256 Topping not light caramel colored with dark orange-tan pieces of Butterfinger™ melted into the surface.

TABLE I. Product defects 1/ 2/ 3/ cont'd

Category		Defect
<u>Major</u>	<u>Minor</u>	
	257	Brownie not moist, dense, soft with caramelized candy pieces.

- 258 Topping not crunchy.
Type II, Flavor 4
- 117 Blonde brownie odor and flavor not sweet caramelized butterscotch.
- 259 Blonde brownie not a light tan to medium golden brown color.
- 260 Brownie not moist, dense texture.
Type III, Flavor 1
- 118 Less than 18 mini loaves in a tray.
- 261 Not an intact mini loaf.
- 262 Mini loaf not rectangular shaped, single serving.
- 119 Mini loaf odor or flavor not a sweet vanilla, banana with walnuts.
- 263 Mini loaf surface not a light tan/golden brown exterior color.
- 264 Loaf crumb not a pale gold color with walnut pieces randomly distributed.
- 265 Mini loaf not dense, tender, moist, fine grain with walnut pieces.
Net weight
- 266 Type I, flavors 1 to 6, net weight of an individual polymeric tray less than 41 ounces. 5/
- 267 Type I, flavor 7, net weight of an individual polymeric tray less than 39 ounces. 5/

TABLE I. Product defects 1/ 2/ 3/ cont'd

<u>Category</u>		<u>Defect</u>
<u>Major</u>	<u>Minor</u>	
	268	Type I, flavor 8, net weight of an individual polymeric tray less than 35 ounces. <u>5/</u>

- 269 Type II, flavor 1 net weight of an individual polymeric tray less than 40 ounces. 6/
- 270 Type II, flavors 2 and 3, net weight of an individual polymeric tray less than 34 ounces. 7/
- Type II, flavor 4, net weight of an individual polymeric tray less than 27 ounces. 8/
- 271 Type III, net weight of an individual polymeric tray less than 34 ounces.
- 272 Net weight of icing pouch less than 6.0 ounces.
-

1/ Presence of any foreign materials such as, but not limited to dirt, insect parts, hair, glass, wood, metal or mold, or 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/ As applicable, bisect cake or brownie or mini loaf vertically in the center with a sharp knife to inspect for defects.

4/ As applicable, cake or brownie or mini loaf heights shall be measured at the lowest point along the vertical cut.

5/ Cake flavors 1 to 6, sample average net weight less than 42 ounces shall be cause for rejection of the lot. Cake flavor 7, sample average net weight less than 41 ounces shall be cause for rejection of the lot. Cake flavor 8, sample average net weight less than 36 ounces shall be cause for rejection of the lot.

6/ Brownie flavor 1, sample average net weight less than 42 ounces shall be cause for rejection of the lot.

7/ Brownie flavors 2 and 3, sample average net weight less than 36 ounces shall be cause for rejection of the lot.

8/ Brownie flavors 4, sample average net weight less than 29 ounces 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 3 year 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 hedonic scale to be considered acceptable.

(2) Net weight.

a. Types I, II and III. 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, ovenable tray insert (if utilized), appropriate number of oxygen scavengers, and lid. Results shall be reported to the nearest 1 ounce.

b. Chocolate Icing. The net weight of the filled and sealed icing pouch shall be determined by weighing each sample unit on a suitable scale tared with a representative empty pouch. Results shall be reported to the nearest 0.1 ounce.

(3) Analytical. The sample to be analyzed shall be a composite of three filled and sealed polymeric trays which have been selected at random from one production lot. For type II – brownies, the sample to be analyzed shall not include the chocolate icing. The composite sample shall be prepared and analyzed in accordance with the following methods of the Official Methods of Analysis of AOAC International (OMA):

<u>Test</u>	<u>Method Number</u>
Fat	922.06
Moisture	925.45

Test results shall be reported to the nearest 0.1 percent. Verification will be conducted through actual testing by a Government laboratory. Any nonconforming result shall be cause for rejection of the lot.

(4) Water activity. Eight filled and sealed polymeric trays shall be selected at random from the lot regardless of lot size. Water activity (Aw) shall be determined not less than 4 days but not more than 14 days after baking to allow moisture equilibration in the product. The product shall be individually tested for water activity in accordance with the Official Methods of Analysis of the AOAC method 978.18, using an electric hygrometer system self-temperature controlled at 25°C or an equivalent instrument. The sample unit shall be a specimen from the center of the product. The results of each Aw determination shall be

reported to the nearest 0.001. Any nonconforming result shall be cause for rejection of the lot. For type II, flavor 1 brownies, the samples to be tested shall not include the chocolate icing.

(5) Oxygen content testing. Eight filled and sealed polymeric trays shall be randomly selected from one production lot and individually tested for oxygen content in accordance with any USDA approved test method. Testing shall be accomplished after the filled and sealed polymeric trays have been allowed to equilibrate at room temperature for not less than 72 hours from the time of sealing. Test results shall be reported to the nearest 0.01 percent. Verification will be conducted through actual testing by a Government laboratory. Any individual result not conforming to the oxygen content requirement shall be cause for rejection of the lot.

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 container and container materials 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

Characteristic	<u>Prior to processing</u>		
	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

<u>After processing</u>			
Characteristic	Lot size expressed in	Sample unit	Inspection level
Processing	Trays	1 tray	S-2
Rough handling survivability	Test containers	1 container	S-2
Headspace (vacuum) <u>1/</u>	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

1/ Lack of visible gap between straight edge and lidding material along entire length of lidding and/or lack of  less by the lidding shall not be scored as defects.

(2) Examination of container. The container 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. Fifty 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.

(3) Label adhesive examination. When self-adhering labels are used, the adhesive shall be tested in accordance with ASTM D3330/D3330M-00 Standard Test Method for Peel Adhesion of Pressure Sensitive Tape. In lieu of testing, a certificate of conformance (COC) shall be provided.

B. Component. Inspection for icing pouch shall be as follows:

(1) Unfilled preformed icing pouch certification. A certificate of conformance may be accepted as evidence that unfilled pouches conform to the requirements specified in D-1,C.,(1),a. When deemed necessary by the USDA, testing of the unfilled preformed pouches for internal pressure resistance shall be as specified in E-6,B.,(3),c.

(2) Filled and sealed icing pouch examination. The filled and sealed pouches shall be examined for the defects listed in table IV. The lot size shall be expressed in pouches. The sample unit shall be one pouch. 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 6.5 for minor defects.

TABLE IV. Filled and sealed icing pouch defects 1/

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Tear, hole, or open seal.
102		Seal width less than 1/16 inch. <u>2/</u>
103		Presence of delamination. <u>3/</u>

TABLE IV. Filled and sealed icing pouch defects 1/ cont'd

Category		Defect
<u>Major</u>	<u>Minor</u>	
104		Unclean pouch. <u>4/</u>
105		Pouch has foreign odor.

106	Any impression or design on the heat seal surfaces which conceals or impairs visual detection of seal defects. <u>5/</u>
201	Label smudges, is missing, incorrect, or illegible.
202	Tear notch missing or does not facilitate opening.
203	Seal width less than 1/8 inch but greater than 1/16 inch.
204	Presence of delamination. <u>3/</u>

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

2/ The effective closure seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, from side seal to side seal that produces a hermetically sealed pouch.

3/ Delamination defect classification:

Major - Delamination of the outer ply in the pouch seal area that can be propagated to expose aluminum foil at the food product edge of the pouch after manual flexing of the delaminated area. To flex, the delaminated area shall be held between the thumb and forefinger of each hand with both thumbs and forefingers touching each other. The delaminated area shall then be rapidly flexed 10 times by rotating both hands in alternating clockwise-counterclockwise directions. Care shall be exercised when flexing delaminated areas near the tear notches to avoid tearing the pouch material. After flexing, the separated outer ply shall be grasped between thumb and forefinger and gently lifted toward the food product edge of the seal or if the separated area is too small to be held between thumb and forefinger, a number two stylus shall be inserted into the delaminated area and a gentle lifting force applied against the outer ply. If separation of the outer ply can be made to extend to the product edge of the seal with no discernible resistance to the gentle lifting, the delamination shall be classified as a major defect. Additionally, spot delamination of the outer ply in the body of the pouch that is able to be propagated beyond its initial borders is also a major defect. To determine if the laminated area is a defect, use the following procedure: Mark the outside edges of the delaminated area using a bold permanent marking pen. Open the pouch and remove the contents. Cut the pouch transversely not closer than 1/4 inch ($\pm 1/16$ inch) from the delaminated area. The pouch shall be flexed in the area in question using the procedure described above. Any propagation of the delaminated area, as evidenced by the delaminated area exceeding the limits of the outlined borders, shall be classified as a major defect.

Minor - Minor delamination of the outer ply in the pouch seal area is acceptable and shall not be classified as a minor defect unless it extends to within 1/16 inch of the food product edge of the seal. All other minor outer ply delamination in the pouch seal area or isolated spots of delamination in the body of the pouch that do not propagate when flexed as described above shall be classified as minor defects.

4/ Outer packaging shall be free from foreign matter which is unwholesome, has the potential to cause pouch damage (for example, glass, metal filings) or generally detracts from the clean appearance of the pouch. The following examples shall not be classified as defects for unclean:

a. Foreign matter which presents no health hazard or potential pouch damage and which can be readily removed by gently shaking the package or by gently brushing the pouch with a clean dry cloth.

b. Dried product which affects less than 1/8 of the total surface area of one pouch face (localized and aggregate).

c. Water spots.

5/ If doubt exists as to whether or not the sealing equipment leaves an impression or design on the closure seal surface that could conceal or impair visual detection of seal defects, samples shall be furnished to the contracting officer for a determination as to acceptability.

(3) Seal testing. The icing pouch seals shall be tested for seal strength as required in a., b., or c., as applicable.

a. Unfilled preformed icing pouch seal testing. The seals of the unfilled preformed pouch shall be tested for seal strength in accordance with ASTM F 88-00 Standard Test Method For Seal Strength of Flexible Barrier Materials. The lot shall be expressed in pouches. The sample size shall be the number of pouches indicated by inspection level S-1. Three adjacent specimens shall be cut from each of the three sealed sides of each pouch in the sample. The average seal strength of any side shall be calculated by averaging the three specimens cut from that side. Any average seal strength of less than 6 pounds per inch of width or any test specimen with a seal strength of less than 5 pounds per inch of width shall be cause for rejection of the lot.

b. Icing pouch closure seal testing. The closure seals of the pouches shall be tested for seal strength in accordance ASTM F 88-00. The lot size shall be expressed in pouches. The sample size shall be the number of pouches indicated by inspection level S-1. For the closure seal on preformed pouches, three adjacent specimens shall be cut from the closure

seal of each pouch in the sample. The average seal strength shall be calculated by averaging the three specimens cut from the closure. Any average seal strength of less than 6 pounds per inch of width or any test specimen with a seal strength of less than 5 pounds per inch of width shall be cause for rejection of the lot.

c. Internal pressure test. The internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product (+1/16 inch). Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table IV, footnote 2/) shall be considered a test failure and shall be cause for rejection of the lot.

C. Packing.

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

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Marking omitted, incorrect, illegible, or improper size, location sequence or method of application.
102		Inadequate workmanship. <u>1/</u>

201 Arrangement or number of polymeric trays not as specified.

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.

D. 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.

SECTION J REFERENCE DOCUMENTS

DSCP FORMS

DSCP FORM 3507 Loads, Unit: Preparation of Semiperishable Subsistence Items
DSCP FORM 3556 Marking Instructions for Boxes, Sacks and Unit 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

ASTM INTERNATIONAL

PCR-C-024
27 February 2004
W/CHANGE 03 5 Oct 04

D1974-98	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes
D3330/D3330M-00	Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape
D5118/D5118M-95 (2001) F 88-00	Standard Practice for Fabrication of Fiberboard Shipping Boxes Standard Test Method for Seal Strength of Flexible Barrier Materials

AOAC
INTERNATIONAL Official Methods of Analysis of the AOAC International (OMA)

AMSRD-NSC-CF-F (A. Richards/5037)

5 October 2004

TO: DSCP-HRUT (L. Charya/3832)

SUBJECT: Reply to ES05-001, Request for Change, MIL-PRF-32004B Packaging of Food in Polymeric Trays.

1. Date received: 5 October 2004
Date due: 5 October 2004

Date replied: 5 October 2004

2. The subject ES Case requests a change to MIL-PRF-32004B to accommodate initial production related issues related to the evidence of vacuum requirement for certain oven-baked products. In particular, Type I, II, and III (Cakes, Brownies and Mini-Loaves, respectively) oven-baked products of PCR-C-024 contain delicate toppings and/or oversized portions, which prevent them (in fear of excess compression/breakage) from being subjected to manual vacuum to achieve the desired visual vacuum appearance. Instead, the contractor relies on the use of oxygen scavengers and natural product cooling to achieve an evidence of vacuum. However, this process does not result in a package conforming to the exact vacuum language of MIL-PRF-32004B. The contractor has requested that the language be changed slightly to properly reflect the level of vacuum achieved during normal production for Type I, II and III oven-baked products. The NSC concurs with the need to clarify the vacuum language so as not to compromise the quality and acceptability of the end item oven-baked products through the forced inclusion of a manual vacuum process. However, rather than a change to MIL-PRF-32004B, which would affect all oven-baked products, NSC recommends a change to the affected product document (PCR-C-024) only, as follows:

Section E-6, A(1), Table II: Change "Headspace (vacuum)" to "Headspace (vacuum) 1/"
Add "1/ Lack of visible gap between straight edge and lidding material along entire length of lidding and/or lack of tautness by the lidding shall not be scored as defects."

3. The subject ES Case also requests to change the icing pouch labeling instructions slightly for PCR-S-007 (Swirls) and PCR-S-003 (Scones) to allow for the same labeling to be used for all pouches, thereby eliminating the need for the contractor to procure separate labels and/or separate pre-labeled icing pouches for scones and swirls. Customer utility will not be compromised as language for applying the icing to each specific product will still be present on the tray product label. The language on the icing pouches currently duplicates that on the tray product label. The NSC concurs with the request to change the icing pouch labeling to allow the contractor procurement of a single label and/or labeled icing pouch. As such, NSC recommends changing the affected product documents as follows:

PCR-S-007, Section D-2.C(2): Delete "Squeeze icing onto surface of sweet rolls and spread evenly using a spatula or knife." and substitute with "Apply icing in accordance with tray label instructions."

AMSRD-NSC-CF-F (A. Richards/5037)

5 October 2004

SUBJECT: Reply to ES05-001, Request for Change, MIL-PRF-32004B Packaging of Food in Polymeric Trays.

PCR-S-003, Section D-2.C(2): Delete "Drizzle icing over warm scones." and

substitute with "Apply icing in accordance with tray label instructions."

4. The requests that inspection be performed on receipt lots of the icing pouches instead of each individual production lot is nonconcurrent with. The icing pouches are a critical part of the end item and must be inspected as such.

5. The POC for this action is Bob Trottier, X5053 or Allen Richards, X5037.

DONALD A. HAMLIN
Team Leader
DoD Food Engineering Services Team

3 Attachments

(ARichards)

CF: NSC:
Canniff, M
Friel, M
Hamlin, D
Harrington, S
Richards, A
Swantak, W
Trottier, R
Valvano, R
Sheldon, R

CF: DSCP & SVCs:
Tucker, S
Byrd, R
Dyduck, L
Ervin, C
Gordon, T
Haldeman, E
Henry, C
Kasa, T
Malason, M
Miller, G
Paster, D
Salerno, L
Spencer, B
Streibich, H