

**PKG & QAP
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SECTION C

This document covers shelf stable toaster pastries packaged in flexible pouches 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-20211B, TOASTER PASTRIES, SHELF STABLE**

Types, styles, flavors, frosting options, grain compositions, fortification, shape, and servings.

Comment [RAV1]: Natick case ES09-155, change 01, 1 Mar 10 Document changes for new classification (frosting, grains) added. Various highlighted and strike through changes are located throughout this document. Careful review is strongly recommended. See memo at the end of document for a summary of change

Type I - Regular

Style A Unfrosted

-

Flavor 3- Brown Sugar Cinnamon

Flavor 4- Apple Cinnamon

Style B - Frosted ~~without sprinkles~~

Flavor 3- Brown Sugar Cinnamon

Flavor 12- Chocolate Chip

Frosting option (B) - Without sprinkles
Frosting option (C) - With swirled or drizzled icing

Grain composition (1)- Enriched wheat flour
Grain composition (2)- Whole wheat flour 1/

1/ Verify with supplier availability of toaster pastries with whole wheat flour.

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Fortification a- Fortified
Fortification b- Non-Fortified

Shape i - Rectangular

Servings (a) - Single serving packet

Packages.

Package A - Meal, Cold Weather (MCW)
Package B - Food Packet, Long Range Patrol (LRP)
Package C - Meal, Ready-to-Eat™ (MRE™)
Package D - Arctic Supplement (ARC Sup)
Package J - First Strike Ration® (FSR®)

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. 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~~ **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. Net weight. The product shall have a net weight of not less than 45 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 requirements.

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(1) Nutrient content. The calorie content per serving shall be not less than 190 calories.

(2) Moisture content. The moisture content shall be not greater than 14.5 percent.

SECTION D

D-1 PACKAGING

A. Packaging. When specified, the toaster pastry with or without commercial wrapping shall be packed in a preformed or form-fill-seal barrier pouch as described below.

(1) Preformed pouches.

a. Pouch material. The preformed pouch shall be fabricated from 0.002 inch thick ionomer or polyethylene film laminated or extrusion coated to 0.00035 inch thick aluminum foil which is then laminated to 0.0005 inch thick polyester. Tolerances for thickness of plastic films shall be plus or minus 20 percent and tolerance for foil layers shall be plus or minus 10 percent. The material shall show no evidence of delamination, degradation, or foreign odor when heat sealed or fabricated into pouches. The material shall be suitably formulated for food packaging and shall not impart an odor or flavor to the product. For package A (MCW), the complete exterior surface of the pouch shall be colored white overall with a color in the range of 37778 through 37886 of FED-STD-595, Colors Used in Government Procurement. For package B (LRP), package C (MRETM), and package D (ARC Sup) and **package J (FSR®)** the complete exterior surface of the pouch shall be uniformly colored with 20219, 30219, 30227, 30279, 30313, 30324, or 30450 of FED-STD-595.

b. Pouch construction. The pouch shall be a flat style preformed pouch having maximum inside dimensions of 4 inches wide by 7 inches long. The pouch shall be made by heat sealing three edges with 3/8 inch (-1/8 inch, +3/16 inch) wide 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,(1),a. Alternatively, the pouch shall exhibit no rupture or seal separation greater than 1/16 inch when tested for internal pressure resistance as specified in E-6,B,(1),c. A tear nick, notch, or serrations shall be provided to facilitate opening of the filled and sealed pouch. A 1/8 inch wide lip may be incorporated at the open end of the pouch.

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c. Pouch filling and sealing. Product shall be inserted into the pouch and the filled pouch shall be vacuum sealed under a vacuum level of 12-15 inches of mercury with a minimum 1/8 inch wide heat seal. 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,(1),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 for internal pressure resistance as specified in E-6,B,(1), c.

(2) Horizontal form-fill-seal pouches.

a. Pouch material. The horizontal form-fill-seal pouch shall consist of a formed tray-shaped body with a flat sheet, heat sealable cover or a tray-shaped body with a tray-shaped heat sealable cover. The tray-shaped body and the tray-shaped cover shall be fabricated from a 3-ply flexible laminate barrier material consisting of, from outside to inside, 0.0009 inch thick oriented polypropylene bonded to 0.0007 inch thick aluminum foil with 10 pounds per ream pigmented polyethylene or adhesive and bonding the opposite side of the aluminum foil to 0.003 inch thick ionomer or a blend of not less than 50 percent linear low density polyethylene and polyethylene. The linear low density polyethylene portion of the blend shall be the copolymer of ethylene and octene-1 having a melt index range of 0.8 to 1.2 g/10 minutes in accordance with ASTM D 1238, Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer and a density range of 0.918 to 0.922 g/cc in accordance with ASTM D 1505, Standard Test Method for Density of Plastics by Density-Gradient Technique. Alternatively, 0.0005 inch thick polyester may be used in place of the oriented polypropylene as the outer ply of the laminate. The flat sheet cover shall be made of the same 3-ply laminate as specified for the tray-shaped body except the aluminum foil thickness may be 0.00035 inch. Tolerances for thickness of plastic films shall be plus or minus 20 percent and tolerance for foil layer shall be plus or minus 10 percent. The color requirements of the exterior (oriented polypropylene or polyester side) of the laminate shall be as specified in D-1,A,(1), a. The material shall show no evidence of delamination, degradation, or foreign odor when heat sealed or fabricated into pouches. The material shall be suitably formulated for food packaging and shall not impart any odor or flavor to the product.

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b. Pouch construction. The tray-shaped body and the tray-shaped cover shall be formed by drawing the flexible laminate material into an appropriately shaped cavity. The flat cover shall be in the form of a flat sheet of the barrier material taken from roll stock. Product as specified in D-1, A shall be placed into the tray-shaped body of the pouch. The filled pouch shall be sealed with a vacuum level of 15-20 inches of mercury. Pouch closure shall be effected by heat-sealing together the cover and body along the entire pouch perimeter. The closure seal width shall be a minimum of 1/8 inch. The closure seal 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,(1),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 for internal pressure resistance as specified in E-6,B,(1),c. The maximum outside dimensions of the sealed pouches shall be 5 1/2 inches wide by 7 3/8 inches long. A tear nick, notch, or serrations shall be provided to facilitate opening of the filled and sealed pouch. The sealed pouches shall not show any evidence of material degradation, aluminum stress cracking, delamination or foreign odor. Heat seals shall be free of occluded matter. Seals shall be free of impression or design on the seal surface that would conceal or impair visual detection of seal defects.

D-2 LABELING

A. Pouches. Each 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 and flavor 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.

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, 14

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February 2007¹⁰ would be coded as 7⁰⁰45. The Julian day code shall represent the day the product was packaged into the pouch.

NOTE: For commercially packaged items that are over wrapped, the above information shall be printed on either the inner or outer package or both. The product name and date shall be printed on the outer package.

D-3 PACKING

~~A. Packing for shipment to ration assembler. Not more than 40 pounds of pouched product shall be packed in a fiberboard shipping container box constructed in accordance with style RSC-L, class domestic, variety SW, grade 200 of ASTM D 5118/D 5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes. Each container shall be securely closed in accordance with ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes.~~

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 D 5118/D 5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The fiberboard shall conform to type CF, class D, variety SW, grade 200 of ASTM D 4727/D 4727M, Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes. Each box shall be closed in accordance with ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes.

D-5 MARKING

A. Shipping containers. Shipping containers shall be marked in accordance with DSCP 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 (CoC) to the appropriate inspection activity. CoC(s) not provided shall be cause for rejection of the lot.

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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 Research, Development and Engineering Center
~~AMSRD-NSC-CF-F~~ **RDNS-CFF**
15 Kansas Street
Natick, MA 01760-5018 **5056**

One lot shall be randomly selected during each calendar month of production. Six (6) sample units of each item produced shall be randomly selected from that one production lot. The six (6) 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

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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 in A-A-20211B and specified in Section C of the 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 pouches. The sample unit shall be the contents of one pouch. 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.

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TABLE I. Product defects 1/ 2/

Category		Defect
Major	Minor	
		<u>General</u>
101		Product not type, style, flavor, frosting option, grain composition, fortification, shape, or servings as specified.
102		More than 1/4 of the toaster pastry is crushed.
	201	Toaster pastry broken into more than three parts. <u>3/</u>
103		Toaster pastry does not contain at least 33 percent by weight of filling. <u>4/</u>
	202	Toaster pastry crust or filling not uniform.
		<u>Appearance 5/</u>
	203	Appearance or color not characteristic for a baked pastry of the applicable type, style, flavor, frosting option or grain composition, as specified.
	204	Baked toaster pastry not light to golden brown in color
	205	Filling not thick with a color characteristic of the flavor specified.
		<u>Style B</u>
	206	Icing not smooth or not opaque.
	207	Top crust of pastry shows through the icing.
	208	Icing has fissures or splits or color variation. <u>5/</u>
	209	Icing does not evenly coat the top crust within approximately 1/2 inch of the edges. <u>6/</u>

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

Category		Defect
<u>Major</u>	<u>Minor</u>	
	210	For flavor I2, frosting option (C), icing does not have a swirl-like appearance.
104		<u>Odor and flavor</u> Odor or flavor not characteristic of the applicable type, style, or flavor, frosting option or grain composition, as specified.
	211	Filling not sweet or not sugary flavor.
	212	Pastry crust does not have a baked flavor or not slightly sweet.
	213	For Style B, icing not sweet or not sugary.
105		<u>Texture</u> Baked toaster pastry not tender or not firm, but hard or brittle or dry or soggy.
106		Filling not moist.
107		For Style B, icing not smooth with slight resistance, but is glassy or hard. 7/
	214	<u>Weight</u> Net weight of product less than 45 grams.

1/ Presence of any foreign materials such as, but not limited to dirt, insect parts, hair, wood, glass, metal, or mold, 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.

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3/ A toaster pastry can be considered intact if it is held together by either the pastry or filling. A part of a toaster pastry should be considered broken only if it is completely separated from the other portion(s) of the toaster pastry.

4/ Weight of filling shall be verified with a Certificate of Conformance.

5/ Some minor cracks in the icing are acceptable, but should not contribute to the flaking of the icing or breaking of the pastry.

6/ Not applicable to icing with only a drizzle or swirl-like appearance.

7/ Slight finger pressure on icing shall not leave an imprint.

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 hedonic scale to be considered acceptable.

(2) Net weight examination.

a. Commercially wrapped product in pouch. The net weight shall be verified with the label on the commercial package. Product not conforming to the net weight requirement in Section C of this document shall be cause for rejection of the lot.

b. Without commercial wrap product in pouch. The net weight of the filled and sealed pouches 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 1 gram.

(3) Nutrient content. The calorie content shall be verified by the NLEA "Nutrition Facts" label. Product not conforming to the calorie content as specified in Section C of this document shall be cause for rejection of the lot.

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(4) Moisture content testing. The sample to be analyzed shall be a composite of eight filled and sealed pouches that have been selected at random from one production lot. The composite sample shall be prepared and analyzed for moisture content in accordance with the latest edition of the Official Methods of Analysis (OMA) of AOAC International, method number 925.45D. Test results shall be reported to the nearest 0.1 percent. **Government** verification will be conducted through actual testing by a Government laboratory. Any result not conforming to the moisture content requirement shall be cause for rejection of the lot.

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

A. Packaging.

(1) Pouch material certification. **The pouch material shall be tested for these characteristics**. A Certificate of Conformance (CoC) may be accepted as evidence that the characteristics listed below conform to the specified requirements.

<u>Requirement</u>	<u>Characteristic</u>	<u>Requirement Paragraph</u>	<u>Test procedure</u>
Thickness of films for laminated material		D-1, A, (1), a and D-1, A, (2), a	As specified in ASTM D 2103 <u>1/</u>
Aluminum foil thickness		D-1, A, (1), a and D-1, A, (2), a	As specified in ASTM B 479 <u>2/</u>
Laminated material identification and construction		D-1, A, (1), a and D-1, A, (2), a	Laboratory evaluation
Color of laminated material		D-1, A, (1), a and D-1, A, (2), a	Visual evaluation by FED-STD-595 <u>3/</u>

1/ ASTM D 2103 Standard Specification for Polyethylene Film and Sheeting

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2/ ASTM B 479 Standard Specification for Annealed Aluminum and Aluminum-Alloy Foil For Flexible Barrier, Food Contact, and Other Applications

3/ FED-STD-595 Colors Used in Government Procurement

(2) Unfilled preformed pouch certification. A CoC may be accepted as evidence that unfilled pouches conform to the requirements specified in D-1,A,(1) a and b. When deemed necessary by the USDA, testing of the unfilled preformed pouches for seal strength shall be as specified in E-6,B,(1),a.

(3) Filled and sealed pouch examination. The filled and sealed pouches shall be examined for the defects listed in table II. The lot size shall be expressed in pouches. The sample unit shall be one pouch. 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.

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TABLE II. Filled and sealed pouch defects 1/

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Tear or hole or open seal.
102		Seal width less than 1/16 inch. <u>2/</u>
103		Presence of delamination. <u>3/</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>
107		Not packaged as specified.
108		Presence of stress cracks in the aluminum foil. <u>6/ 7/</u>
	201	Label missing or incorrect or illegible.
	202	Tear nick or notch or serrations missing or does not facilitate opening.
	203	Seal width less than 1/8 inch but greater than or equal to 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:

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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 (+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.

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

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.

6/ Applicable to form-fill-seal pouches only.

7/ The initial examination shall be a visual examination of the closed package. Any suspected visual evidence of stress cracks in the aluminum foil (streaks, breaks, or other disruptions in the laminated film) shall be verified by the following physical examination. To examine for stress cracks, the inside surface of both tray-shaped bodies shall be placed over a light source and the outside surface observed for the passage of light. Observation of light through the pouch material in the form of a curved or straight line greater than 2 mm in length shall be evidence of the presence of stress cracks. Observation of light through the pouch material in the form of a curved or straight line 2 mm in length or smaller or of a single pinpoint shall be considered a pinhole. Observation of ten or more pinholes per pouch shall be evidence of material degradation.

B. Methods of inspection

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

a. Unfilled preformed pouch seal testing. The seals of the unfilled preformed pouch shall be tested for seal strength in accordance with ASTM F88, Standard Test Method for Seal Strength of Flexible Barrier Materials. The lot size shall be expressed in pouches. The sample unit shall be one unfilled pouch. 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 classified as a major defect and shall be cause for rejection of the lot.

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b. Pouch closure seal testing. The closure seals of the pouches shall be tested for seal strength in accordance with ASTM F88. The lot size shall be expressed in pouches. The sample unit shall be one ~~unfilled~~ pouch. 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. For the form-fill-seal pouches, three adjacent specimens shall be cut from each side and each end of each pouch in the sample. The average seal strength of any side, end or closure shall be calculated by averaging the three specimens cut from that side, end or 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 classified as a major defect and 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 lot size shall be expressed in pouches. The sample unit shall be one ~~unfilled~~ pouch. 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 II, footnote 2/) shall be considered a test failure. Any test failure shall be classified as a major defect 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 III 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.

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TABLE III. Shipping container and marking defects

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Marking missing or incorrect or illegible.
102		Inadequate workmanship. <u>1/</u>
	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 issues of these documents are those active on the date of the solicitation or contract.

DSCP FORMS

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

FEDERAL STANDARD

FED-STD-595 Colors Used in Government Procurement

NON-GOVERNMENTAL STANDARDS

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

ANSI/ASQ Z1.4-2003 Sampling Procedures and Tables for Inspection by Attributes

ASTM INTERNATIONAL www.astm.org

B 479-06 Standard Specification for Annealed Aluminum and Aluminum-Alloy Foil For Flexible Barrier, Food Contact, and Other Applications

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D 1238-04e	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer
D 1505-03	Standard Test Method for Density of Plastics by Density-Gradient Technique
D 1974-98 (2003)	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes
D 2103-05	Standard Specification for Polyethylene Film and Sheeting
D4727/D4727M	Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes
D 5118/D 5118M-05ae1	Standard Practice for Fabrication of Fiberboard Shipping Boxes
F 88-07	Standard Test Method for Seal Strength of Flexible Barrier Materials

AOAC INTERNATIONAL www.aoac.org

Official Methods of Analysis (OMA) of AOAC International

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RDNS-CFF

March 1, 2010

TO: DSCP- FTRC

SUBJECT: ES09-155; Document Changes, Packaging Requirements and Quality Assurance Provisions for CID A-A-20211B, Toaster Pastries, Shelf Stable

1. Changes to subject document were coordinated and provide packaging and quality assurance provisions for the new whole grain brown sugar cinnamon toaster pastry, frosted that was added to CID A-A-20211B for use in First Strike Ration®.

2. Natick recommends that DSCP implement the changes to subject document as outlined below for use in First Strike Ration® (FSR®) 08 and future procurements until the subject document is formally amended or revised.

- a. Paragraph C-1, line 3, after “flavors,”: Insert “frosting options, grain compositions,”
Line 9, after “Frosted”: Delete “without sprinkles”.
Line 11, after “Flavor 12- Chocolate Chip”: Insert the following:

“Frosting option (B) - Without sprinkles
Frosting option (C) - With swirled or drizzled icing

Grain composition (1)- Enriched wheat flour
Grain composition (2)- Whole wheat flour 1/

1/ Verify with supplier availability of toaster pastries with whole wheat flour . ”

- b. Paragraph C-1, after “fortification b-”: Delete “Non” and substitute “Not”.
- c. Paragraph C-1, under “Packages.”, line 3, after “Eat” and after “MRE”: Insert “™”. Add: “Package J- First Strike Ration® (FSR®)”
- d. Paragraph C-2, line 7, after “shall”: Delete “arrange for a new or alternate” and replace with “submit a replacement”. After “PDM” insert “for”.

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e. Paragraph D-1, A (1) a, line 10, after “MRE”: Insert “™”. Delete “and” before “package”. Lines 10 and 11, after second “and”: Insert “package J (FSR®)”.

f. Paragraph D-2, A, footnote 1/, line 3: Delete “07” and replace with “10”. Delete “7” and replace with “0”.

g. Paragraph D-3, A: Delete in its entirety and substitute the following:

“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 D 5118/D 5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The fiberboard shall conform to type CF, class D, variety SW, grade 200 of ASTM D 4727/D 4727M, Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes. Each box shall be closed in accordance with ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes.”

h. Section E, B (1), line 11: Delete “AMSRD NSC CF F” and replace with “RDNS-CFF”. Delete “5018” and replace with “5056”.

i. Paragraph E-5, A, table I, defect 101, after “flavor,”: Insert “frosting option, grain composition,”

Defect 203, after “flavor,”: Insert “frosting option or grain composition,”.

Defect 210, after “flavor 12,”: Insert “frosting option C,”.

Defect 104: Delete “or” and replace with “;”.

Defect 104, after “flavor,”: Insert “frosting option or grain composition,”

j. Paragraph E-5, B (4), line 5: Insert “Government” before “Verification” and change the “V” to a lowercase “v”.

k. Paragraph E-6, A (1), lines 1: Insert “The pouch material shall be tested for these characteristics.”

Line 5: Delete “Requirement” and replace with “Characteristic”.

l. Paragraph E-6, A (3), table II, defect 203, after “than”: Insert “or equal to”

m. Paragraph E-6, B (1), b & c, line 3: Delete “unfilled”.

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n. Under Section J: Insert “Unless otherwise specified, the issues of these documents are those active on the date of the solicitation or contract.” Delete “4-2003”, “-06”, “-04c”, “-03”, “-05”, “-05ae1”, “-07” from document numbers.

o. Section J: After “(ASQ)” insert “www.asq.org”; after “ASTM INTERNATIONAL” insert “www.astm.org”; and after “AOAC INTERNATIONAL” insert: “www.aoac.org”

p. Section J: Add the following reference:

“D 4727/D 4727M Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes”

3. Attached is the document, Packaging Requirements and Quality Assurance Provisions for CID A-A-20211B, Toaster Pastries, Shelf Stable with Change 01, dated 1 March 2010, with changes highlighted.

4. The monograph for the whole grain brown sugar cinnamon toaster pastry, frosted [Type I, style B, flavor 3, frosting option (B), grain composition (2), Fortification a, shape i, servings (a)] will be submitted under separate cover.