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SECTION C

This document covers nuts packaged in a flexible pouch 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-20164D NUTS, SHELLED, ROASTED

Types, sizes, and styles.

Type V – Peanuts, Virginia type or Runner type, dry roasted
Style A – Salted

Type VI – Cashews
Size 2 – Halves (splits)
Style C – Flavored

Type IX – Almonds (unblanched)
Style C – Flavored (smoked, barbecue)

Packages.

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

Comment [EP1]:Natick ES12-051,(DSCP-SS-12-72451) change 02, 07-Aug-12 - p. 1, Paragraph C-1, line 10, after "Flavored" insert "(smoked, barbecue)"

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 the 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

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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. Texture. The finished shelled roasted nuts shall have a crunchy texture.

D. Net weight. The net weight of one serving of type V, style A shall be not less than 28 grams. The net weight of one serving of type VI, size 2, style C (jalapeno flavor) and type IX, size 1, style C (smoked and barbecue flavor) shall be not less than 19 grams.

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

F. Salt content. For types V and VI, the salt content requirements shall be as specified in tables IV and V of A-A-20164D. For type IX, the salt content shall be not less than 1.1 percent and not more than 1.7 percent by weight.

G. Moisture content. For all types, the moisture content requirements and procedures and testing shall be in accordance with A-A-20164D.

H. Aflatoxin content. For all types, the aflatoxin requirement shall be 15 ppb or less.

I. Other. For all types, the nuts shall be from the latest season's crop. For type VI, the cashews shall be derived from the classification of "Extra" class of the United Nations Economic Commission for Europe (UNECE) Standard DDP-17.

SECTION D

D-1 PACKAGING

A. Packaging. The nuts shall be packed in a preformed or form-fill-seal barrier pouch.

(1) Preformed pouches.

Comment [EP2]: Natick ES12-051, (DSCP-SS-12-72451) change 02, 07-Aug-12 - p. 2, Paragraph C-2, D, line 3, after "IX," delete "size 1" which is not necessary as almonds and peanuts follow the US #1 Grade Standards and only come in whole

Comment [EP3]: Natick ES12-051, (DSCP-SS-12-72451) change 02, 07-Aug-12 - p. 2, Paragraph C-2, D, line 3, after "style C" insert "(smoked and barbecue flavor)"

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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 the foil layer 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 (MRE™) and package J (FSR™).~~ The complete exterior surface of the pouch shall be uniformly colored in the range of 20219, 30219, 30227, 30279, 30313, 30324, or 30450 of FED-STD-595, Colors Used in Government Procurement.

b. Pouch construction. The pouch shall be a flat style preformed pouch having maximum inside dimensions of 3-3/4 inches wide by 5 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 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. 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.

c. Pouch filling and sealing. Product shall be inserted into the pouch. The pouch shall be sealed under a vacuum of not less than 25 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.

Comment [EP4]: Natick ES12-051, (DSCP-SS-12-72451) change 02, 07-Aug-12 - p. 3, Paragraph D-1, A (1) a, after sentence 4, delete "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 (MRE™) and package J (FSR™)."; insert new sentence "The complete exterior surface of the pouch shall be uniformly colored in the range of 20219, 30219, 30227, 30279, 30313, 30324, or 30450 of FED-STD-595, Colors Used in Government Procurement."

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(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 D1238, 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 the 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 the 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.

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 shall be placed into the tray-shaped body of the pouch. The pouch shall be hermetically sealed under a vacuum of not less than 25 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

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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 pouch 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 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 February 2010 would be coded as 0045. The Julian day code shall represent the day the product was packaged into the pouch.

D-3 PACKING

A. Packing. Not more than 40 pounds of product shall be packed in a fiberboard shipping box constructed in accordance with style RSC-L of ASTM 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.

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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 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

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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
RDNS-CFF
15 Kansas Street
Natick, MA 01760-5018

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 units will be evaluated for the characteristics of appearance, odor, flavor, texture and overall quality.

(2) Conformance inspection. Conformance inspection shall include the product examination 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 A-A-20164D and 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/ 3/ 4/ 5/ 6/

Category		Defect
<u>Major</u>	<u>Minor</u>	
		<u>General</u>
101		Product not type or size or style or flavor as specified.
102		Nuts do not have a firm bite or do not have a crunchy texture or are excessively hard.
	201	Surface of nuts do not have an even distribution of salt or fine seasoning dust, as applicable, or shows excessive caking of salt.
	202	Nuts excessively coated with oil.
		<u>Type V, style A</u> <u>Peanuts, Virginia type or Runner type, dry roasted, whole, salted</u>
	203	Type V pouch contains less than 28 grams of product.
		<u>Type VI, size 2, style C</u> <u>Cashews, halves (splits), jalapeno flavor</u>
103		Cashews not a fresh roasted cashew odor or flavor or not with a distinct jalapeno odor or flavor.
	204	Type VI pouch contains less than 19 grams of product.
		<u>Type IX, style C</u> <u>Almonds (unblanched), smoked flavor</u>
	205	Almonds skin not cinnamon brown or not intact.
104		Almonds not fresh roasted almond odor or flavor or not with a distinct smoked odor or flavor.
	206	Type IX pouch contains less than 19 grams of product.

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TABLE I. Product defects 1/ 2/ 3/ 4/ 5/ 6/ - Continued

Category		Defect
Major	Minor	
		Type IX, style C Almonds (unblanched), barbecue flavor
	207	Almonds skin not cinnamon brown or not intact.
105		Almonds not fresh roasted almond odor or flavor or not with a distinct barbecue odor or flavor.
	208	Type IX pouch contains less than 19 grams of product.

Comment [EP5]: Natick ES12-051, (DSCP-SS-12-72451) change 02, 07-Aug-12 - P. 9, Paragraph E-5, A. TABLE I. Product defects, insert new Type IX, style C, Almonds (unblanched), barbecue flavor and defects as applicable

1/ Presence of any foreign materials such as, but not limited to, dirt, insect parts, hair, glass, wood or metal or any foreign odors or flavors such as, but not limited to burnt, scorched, rancid, sour, stale, musty or moldy 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/ Grade or quality requirements or class requirements of UNECE (type VI only) for nuts as specified in A-A-20164 shall be verified by Certificate of Conformance (CoC).

4/ The salt contents requirements shall be verified by the nut supplier's Certificate of Analysis (CoA). The salt coating requirements shall be verified by CoC.

5/ The requirements for composition of single variety nuts and for percent splits and small pieces as specified in Table IV and V of A-A-20164D shall be verified by the nut supplier's CoC.

6/ The producer shall provide a CoC from the supplier for each incoming lot indicating that the nuts supplied and used meet all the requirements for the latest season's crop at the time of issue. The CoC shall be dated, state the harvest period for the lot(s) (for example – Harvested during October 2010 through January 2011 crop season), and identify the lot(s) covered by the CoC. Any nonconformance to this requirement shall be cause for rejection of any component lot(s) or any involved product.

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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. 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. Product not conforming to the net weight requirement as specified shall be cause for rejection of the lot.

(3) Aflatoxin testing for all types. The filled and sealed pouches shall be tested as specified in A-A-20164D, with preparation of the sample performed according to AOAC Official Method 977.16, and these NOTES applied to that testing process:

NOTE: The following conditions apply for aflatoxin testing on nuts shelled:

a. For nuts received in bulk, the contractor shall have the bulk shipment sampled and tested by USDA. If (a) the bulk shipment is not more than 2 ppb for aflatoxin as evidenced by a USDA Certificate, (b) the end item lots are manufactured using that bulk product, and (c) both the bulk and end item lots' identities have been preserved, then no further aflatoxin testing is required.

b. If nuts are received in bulk and the conditions in (3)a above are not met, each end-item lot must be sampled and tested by USDA.

Three sets of representative independently drawn pouches/containers shall be submitted to the laboratory for testing – the exact number of pouches/containers per set to be determined using USDA procedures. Each of the three sets of pouches/containers shall be composited and respectively designated as test sample 1, test sample 2, and test sample 3. Lots will be reported as negative for aflatoxin if test sample 1 has an aflatoxin level at or below 5 ppb. If test sample 1 is at or above 25 ppb the lot fails. If the aflatoxin level for test sample 1 is above 5 ppb and less than 25 ppb, test sample 2 may be analyzed. Test results for test sample 1 and 2 will be averaged. If the average aflatoxin level for test samples 1 and 2 is

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10 ppb or less the lot will be reported as negative for aflatoxin, but fails if the aflatoxin level is at or above 20 ppb. If the average value for test samples 1 and 2 is above 10 ppb but less than 20 ppb, test sample 3 may be analyzed. The results of test samples 1, 2 and 3 will be averaged. If the average aflatoxin level for test samples 1, 2, and 3 is 15 ppb or less the lot will be reported as negative for aflatoxin. If the average aflatoxin level for test samples 1, 2, and 3 is above 15 ppb the lot fails. End item lots determined to be negative for aflatoxin as evidenced by a USDA certificate will be considered acceptable. Bulk nuts with aflatoxin greater than 15 ppb shall not be used as ingredients.

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 CoC may be accepted as evidence that the characteristics conform to the specified requirements.

<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	ASTM D 2103 <u>1/</u>
Aluminum foil thickness	D-1,A(1)a and D-1,A(2)a	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	FED-STD-595 <u>3/</u>

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

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

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(2) Unfilled preformed pouch certification. A certification of conformance 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) Pouch vacuum examination. When applicable, the filled and sealed pouches shall be visually examined for conformance to the vacuum requirement not less than 96 hours after filling and sealing. The sealed pouch shall continue to exhibit tight adherence to the surface contours of the contents when a pulling force is applied at the center of each side seal. This force shall be applied by holding each side seal between thumb and forefinger of each hand, while simultaneously exerting a slight pull with both hands. Any evidence of loss of vacuum shall be classified as a major defect. The lot size shall be expressed in pouches. The sample unit shall be one filled and sealed pouch. The inspection level shall be I and the AQL, expressed in terms of defects per hundred units, shall be 0.65.

(4) 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.

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. ^{2/}
103		Presence of delamination. ^{3/}
104		Unclean pouch. ^{4/}
105		Pouch has foreign odor.
106		Any impression or design on the heat seal surfaces which conceals or impairs visual detection of seal defects. ^{5/}
107		Not packaged as specified.

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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 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)

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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).

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

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considered a pinhole. Observation of ten or more pinholes per pouch shall be evidence of material degradation.

B. Methods of inspections.

(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 F 88, 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.

b. Pouch closure seal testing. The closure seals of the pouches shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in pouches. The sample unit shall be one 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 sample size shall be the number of pouches indicated by inspection level S-1. The sample unit shall be one pouch. 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

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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.

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. 1/
	201	More than 40 pounds of product.

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

SECTION J REFERENCE DOCUMENTS

Unless otherwise specified, the issues of these documents are those active on the date of the solicitation or contract.

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DSCP FORM

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 Sampling Procedures and Tables for Inspection by Attributes

ASTM International www.astm.org

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

D 1238 Standard Test Method for Melt Flow Rates of
Thermoplastics by Extrusion Plastometer

D 1505 Standard Test Method for Density of Plastics by the
Density-Gradient Technique

D 1974 Standard Practice for Methods of Closing, Sealing, and
Reinforcing Fiberboard Boxes

D2103 Standard Specifications for Polyethylene Film and
Sheeting

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D 4727/D 4724M Standard Specification for Corrugated and Solid
Fiberboard Sheet Stock (Container Grade) and Cut
Shapes

D 5118/D 5118M Standard Practice for Fabrication of Fiberboard Shipping
Boxes

F 88 Standard Test Method for Seal Strength of Flexible
Barrier Materials

AOAC INTERNATIONAL www.aoac.org

Official Methods of Analysis (OMA) of AOAC International

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (UNECE)

UNECE STANDARD DDP 17 Cashew Kernels

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For DLA Website Posting

RDNS-CFF

7 August 2012

TO: DLA-FTRE

ES12-051 (DSCP-SS-12-72451) Document Changes, Packaging Requirements and Quality Assurance Provisions for CID A-A-20164D, Nuts, Shelled, Roasted

1. Changes to subject document were coordinated and provide packaging and quality assurance provisions for the smoked and barbecue flavors added to Type IX - Almonds (unblanched) Style C - Flavored in CID A-A-20164D for use in Meal, Ready-to-Eat™ (MRE™)
2. Natick recommends that DLA Troop Support implement the changes to subject document as outlined below for use in Meal, Ready-to-Eat™ (MRE™) 33 and future procurements until the subject document is formally amended or revised.
 - a. p. 1, Paragraph C-1, line 10, after “Flavored” insert “(smoked, barbecue)”
 - b. p. 2, Paragraph C-2, D, line 3, after “IX,” delete “size 1” which is not necessary as almonds and peanuts follow the US #1 Grade Standards and only come in whole
 - c. p. 2, Paragraph C-2, D, line 3, after “style C” insert “(smoked and barbecue flavor)”
 - d. p. 3, Paragraph D-1, A (1) a, after sentence 4, delete “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 (MRE™) and package J (FSR™).”; insert new sentence “The complete exterior surface of the pouch shall be uniformly colored in the range of 20219, 30219, 30227, 30279, 30313, 30324, or 30450 of FED-STD-595, Colors Used in Government Procurement.”

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- e. P. 9, Paragraph E-5, A. TABLE I. Product defects, insert new Type IX, style C, Almonds (unblanched), barbecue flavor and the following defects:
- Defect 207, Insert “Almonds skin not cinnamon brown or not intact.”
 - Defect 105, Insert “Almonds not fresh roasted almond odor or flavor or not with a distinct barbecue odor or flavor.”
 - Defect 208, Insert “Type IX pouch contains less than 19 grams of product.”