

**SECTION C**

This document covers dairyshake powder, fortified with calcium and Vitamin D packaged in a flexible pouch for use by the Department of Defense as a component of operational rations.

**C-1 ITEM DESCRIPTION**

**PCR-D-002 DAIRYSHAKE POWDER, FORTIFIED WITH CALCIUM AND VITAMIN D, PACKAGED IN A FLEXIBLE POUCH, SHELF STABLE**

Flavors.

- I. Vanilla
- II. Chocolate
- III. Strawberry

**C-2 PERFORMANCE REQUIREMENTS**

A. Product standard. A sample shall be subjected to first article or product demonstration model inspection as applicable, in accordance with the tests and inspections of Section E of this Performance-based Contract Requirements document.

B. Shelf life. The packaged food shall meet the minimum shelf life requirement of 36 months at 80°F.

C. Powdered product.

(1) Appearance. The dairyshake powder shall be a uniform blend of dry homogenous ingredients and have a color characteristic of the flavor specified. The packaged food shall be free from foreign materials.

(2) Odor. The packaged food shall have an odor typical of the dairy shake flavor specified. The packaged food shall be free from foreign odors.

(3) Texture. The packaged food shall be free flowing and have no lumps that cannot be broken apart under light finger pressure.

(4) Instant nonfat dry milk. The dairy shake formula shall contain not less than 35 percent U. S. Extra Grade instant nonfat dry milk.

D. Hydrated product.

(1) Appearance. The hydrated product shall have a color as specified below:

- |            |                         |
|------------|-------------------------|
| Vanilla    | - pale to medium cream  |
| Chocolate  | - light to medium brown |
| Strawberry | - light to medium pink  |

(2) Odor and flavor. The hydrated product shall have a pleasing sweet odor and flavor that is characteristic of flavor as specified below:

- |            |   |
|------------|---|
| Vanilla    | - typical vanilla odor and moderately intense recognizable vanilla flavor       |
| Chocolate  | - typical chocolate odor and moderately intense recognizable chocolate flavor   |
| Strawberry | - typical strawberry odor and moderately intense recognizable strawberry flavor |

(3) Texture. The prepared product shall be smooth, creamy, and moderately thick with no discernable lumps, chalkiness or sedimentation.

E. Net weight. The average net weight of the dairyshake powder shall be not less than 100 grams. The net weight of an individual pouch shall be not less than 95 grams.

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

G. Microbiological. The aerobic plate count shall be not greater than 50,000 per gram in four of five samples and not greater than 75,000 per gram in any individual sample. The Eschericia coli count shall have no positive tubes in the standard 3 tube most probable number (MPN) technique. The Salmonella test shall be negative per 25 grams of product.

H. Analytical requirements. The analytical requirements of the dairyrshake powder:

- (1) Protein content. The protein content shall be not less than 15.0 percent.
- (2) Fat content. The fat content shall be not greater than 21.0 percent.
- (3) Salt content. The salt content shall be not greater than 1.0 percent.
- (4) Moisture content. The moisture content shall be not greater than 3.5 percent.

(5) Calcium content. The calcium content shall be not less than 400 mg and not greater than 650 mg per pouch.

(6) Vitamin D content. The Vitamin D content shall be not less than 100 IU and not greater than 200 IU per pouch.

C-3 MISCELLANEOUS INFORMATION. THE FOLLOWING FORMULAS ARE PROVIDED FOR INFORMATION ONLY TO PROVIDE THE BENEFIT OF PAST GOVERNMENT EXPERIENCE. THIS IS NOT A MANDATORY CONTRACT REQUIREMENT.

A. Ingredients and formulation. Ingredients and formulation percentages may be as follows:

Formulation for vanilla dairyrshake 1/

<u>Ingredients</u>	<u>Percent by weight</u>
Milk, nonfat, dry, instant	45.3998
Non-dairy creaming agent	27.2000
Sugar, white, powdered	18.2000
Dry sweet dairy whey	4.5000
Starch, instant	2.7000
Calcium caseinate	1.9000
Titanium dioxide	0.0379
Flavoring, vanilla, artificial	0.0300
Flavoring, French vanilla, natural and artificial	0.0300
Color, Yellow No. 5	0.0018
Color, Red No. 40	0.0005

Formulation for chocolate dairyrshake 1/

<u>Ingredients</u>	<u>Percent by weight</u>
Milk, nonfat, dry, instant	39.0000
Non-dairy creaming agent	23.4400
Sugar, white, powdered	23.4000
Cocoa	6.2000
Dry sweet dairy whey	3.9000
Starch, instant	2.3000
Calcium caseinate	1.6000
Flavoring, chocolate, artificial	0.1200
Flavoring, vanilla, artificial	0.0200
Flavoring, French vanilla, natural and artificial	0.0200

Formulation for strawberry dairyrshake 1/

<u>Ingredients</u>	<u>Percent by weight</u>
Milk, nonfat, dry, instant	45.3000
Non-dairy creaming agent	27.3010
Sugar, white, powdered	18.1000
Dry sweet dairy whey	4.5000
Starch, instant	2.7000
Calcium caseinate	1.8000
Flavoring, strawberry, artificial	0.2300
Flavoring, vanilla, artificial	0.0300
Flavoring, French vanilla, natural and artificial	0.0300
Color, Red No. 40	0.0090

1/ Vitamin D shall be added to products so that the requirement of 100 I.U. of Vitamin D shall be met.

**SECTION D**

**D-1 PACKAGING**

A. Packaging. One hundred (100) grams of powdered product shall be packed in a preformed barrier pouch as described below. The pouch is to be used as a unit pack and a rehydrating pouch for the dairyrshake powder.

(1) Preformed pouches.

a. Pouch material. The preformed pouch shall be fabricated from 0.0035 inch thick linear low density polyethylene sealant layer laminated or extrusion coated to 0.00035 inch thick aluminum foil which is then bonded with 10 pounds per ream low density polyethylene to 0.0006 inch thick biaxially oriented nylon. The three plies shall be laminated with the nylon on the exterior of the pouch. All tolerances for thickness of pouch material shall be plus or minus 20 percent. The structure shall be approved for food contact with the addition of near boiling water. 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. 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.

b. Pouch construction. The pouch shall be a flat style preformed pouch having inside dimensions of 4 7/8 (+1/8) inches in width by 8 3/8 (+1/8) inches in length. 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 7 pounds per inch of width and no individual specimen shall have a seal strength of less than 6 pounds per inch of width when tested as specified in E-6,A,(4),a. Alternatively, peelable 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 or greater than 14 pounds per inch of width when tested as specified in E-6,A,(4),a. A tear notch shall be provided on one outside edge or two opposite outside edges of the pouch to facilitate opening of the filled and sealed pouch. A 1/8 inch (+1/16 inch) wide lip may be incorporated at the open end of the pouch to facilitate opening and filling of the pouch.

c. Pouch filling and sealing. One flavor of dairyrshake powder shall be filled into the pouch and the filled pouch shall be sealed 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 7 pounds per inch of width and no individual specimen shall have a seal strength of less than 6 pounds per inch of width when tested as specified in E-6,A,(4),b. Alternatively, peelable closure seals shall have an average seal strength of not less than 6 pounds per inch of width and no individual specimen shall have a seal strength of less than 5 pounds per inch of width or greater than 14 pounds per inch of width when tested as specified in E-6,A,(4),a.

#### D-2 LABELING

A. Pouches. Each pouch shall be clearly printed or stamped, in a manner that does not damage the pouch, with permanent black ink or other, dark, contrasting color which is free of carcinogenic elements. The information shall be located on the body of the pouch not closer than 1/16 inch to any seal. If a non-contact type printer is used, the information may be located anywhere on the pouch (in one complete print), except the closure seal area. The label shall contain the following information:

Name and flavor of dairyrshake (letters not less than 1/8 inch high).

Ingredients

Net weight

Contractor's name and address

Directions: **TEAR POUCH AT NOTCH. ADD 6 OUNCES OF COLD WATER (ABOUT 1/4 canteen cup) TO POUCH. FOLD OVER TOP OF POUCH. FIRMLY HOLDING THE TOP OF POUCH, SHAKE 60 SECONDS, CONSUME PROMPTLY (WITHIN 1 HOUR).**

Date of pack 1/

"Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA/USDA regulations

1/ 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, 12 April 2000 would be coded as 0103). The Julian code shall represent the day the product was packaged into the pouch and processed. Sub-lotting (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. For food products that do not require an establishment number, the Julian code shall be preceded by three capital letters, which represent the packer's name.

#### D-3 PACKING

A. Packing for shipment to ration assembler. Not more than 40 pounds of pouched product shall be packed flat in layers in a fiberboard shipping container constructed in accordance with style RSC-L, class domestic, variety SW, grade 200 of ASTM D 5118, 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 Shipping Containers. When metal fasteners are used in the box manufacturer's joint or set-up, the fasteners on the inside shall be covered with tape to protect the contents from mechanical damage.

#### D-4 MARKING

A. Shipping containers. Shipping containers shall be marked in accordance with DPSC Form 3556, Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence.

#### 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. 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 Soldier & Biological Chemical Command  
Soldiers System Ctr., Natick Soldier Center  
Attn: AMSSB-RCF-F(N)  
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 two (2) working days upon completion of all USDA inspection requirements. The sample units will be evaluated for the characteristics of appearance, odor, flavor, texture and overall quality. Failure of samples to conform to all such characteristics may be cause for rejection.

(2) Conformance inspection. Conformance inspection shall include the product examinations and methods of inspection cited in this section.

**E-5 QUALITY ASSURANCE PROVISIONS (PRODUCT)**

A. Product examination. The finished product shall be examined for compliance with the performance requirements specified in Section C of this Performance-based Contract Requirements utilizing the double sampling plans indicated in ANSI/ASQC Z1.4-1993. The lot size shall be expressed in pouches. The sample unit shall be one filled and sealed 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 major defects and 4.0 for minor defects. Defects and defect classifications are listed in Table I.

TABLE I. Product defects 1/ 2/ 4/

Category		Defect
<u>Major</u>	<u>Minor</u>	
<u>Powdered product</u>		
<u>Appearance</u>		
101		Powdered product not uniformly blended and homogenous.
	201	Powder color not characteristic of flavor specified.
<u>Odor</u>		
102		Powdered product not typical of specified dairy shake odor.
<u>Texture</u>		
103		Powder product not free flowing or contains lumps which do not fall apart under light finger pressure.
<u>Hydrated product</u>		
<u>Appearance</u>		
104		Hydrated product color not as specified.
<u>Odor and flavor</u>		
105		Hydrated product odor or flavor not as specified.
<u>Texture</u>		
106		Hydrated product not smooth, not creamy, not moderately thick, or has discernable lumps, chalkiness, or sedimentation.
<u>Weight</u>		
	202	Net weight of an individual pouch less than 95 grams. <u>3/</u>

1/ Presence of any foreign material such as, but not limited to dirt, insect parts, hair, wood, glass, metal, or foreign odors or flavors such as, but not limited to burnt, scorched, rancid, sour, or stale, oxidized milk powder, perfumey or medicinal odor and flavor indicative of excessive artificial flavors.

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/ Sample average net weight less than 100 grams shall be cause for rejection of the lot.

4/ Percentage of instant nonfat dry milk shall be verified by producer's formulation. The Grade of instant nonfat dry milk shall be certified by a USDA Grade Certificate.

B. Methods of inspection.

(1) Net weight examination of pouches. 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 gram.

(2) 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.

(3) Microbiological testing. Five filled and sealed pouches shall be selected at random from the lot regardless of lot size. The pouched product shall be individually tested for microbiological levels in accordance with the Official Methods of Analysis of the AOAC, for Aerobic Plate Count method 966.23 or 990.12 and for E.coli, method 966.24 or the method on page 4.05, Section F, Chapter 4, 8th edition, FDA Bacteriological Analytical Manual (BAM). The diluent shall be added to each sample and allowed to stand for 15 minutes before blending the sample. Salmonella testing shall be in accordance with the Official Methods of Analysis of the AOAC, method 967.26, 986.35, or 996.08. Any result not conforming to the microbiological requirements shall be cause for rejection of the lot.

**NOTE:** The following conditions apply for salmonella and microbiological ting:

- (1) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the product represented is Salmonella Negative and meets all microbiological requirements.
- (2) For bulk product received, the contractor is responsible for providing a certificate of analysis stating that the bulk product is Salmonella negative and meets all microbiological requirements. USDA salmonella and additional microbiological testing is required for each end item lot and shall be the basis for lot acceptance with respect to Salmonella and other microbiological testing requirements.

(4) Analytical. The sample to be analyzed shall be a composite of eight filled and sealed pouches which have been selected at random from the lot. The composited sample shall be prepared (see NOTE) and analyzed in accordance with the following methods of the Official Methods of Analysis of AOAC International:

<u>Test</u>	<u>Method Number</u>
Protein	992.15, 984.13
Fat	932.06A(a) using the extractions
Salt	935.47
Moisture	925.45A, the product shall be dried for 16 hours at 70°C.
Calcium	984.27, 985.35 <u>1/</u>
Vitamin D	981.17 <u>1/</u>

Test results shall be reported to the nearest 0.1 percent for protein, fat, salt and moisture. Any nonconforming results shall be cause for rejection of the lot.

NOTE: The USDA will use AOAC method 983.18 for preparation of the sample.

1/ Tests will be conducted for calcium and Vitamin D on the first production lot and USDA will certify the formula. A certificate of conformance will be provided on all future lots. If the formula is changed, another set of tests shall be conducted for calcium and Vitamin D.

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

A. Packaging.

(1) Pouch material certification. Materials listed below may be accepted on the basis of a contractor's certification of conformance to the indicated requirements. In addition, compliance to the requirements for inside pouch dimensions and dimensions of the manufacturer's seals may be verified by certification of conformance.

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

1/ ASTM D 2103 Specification for Polyethylene Film and Sheeting

2/ ASTM B 479 Specification for Annealed Aluminum Foil for Flexible Barrier Application

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

(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,A,(4),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.

TABLE II. Filled and sealed pouch defects 1/

<u>Category</u>		<u>Defect</u>
<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>
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		Peelable pouch does not open where indicated. <u>6/</u>
	201	Label smudges, is missing, incorrect, or illegible.
	202	Tear 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 (+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.

6/ Not applicable to peelable seal pouches.

(4) Seal testing. The pouch seals shall be tested for seal strength as required in a. or b. 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, Seal Strength of Flexible Barrier Materials. The lot size 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. 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 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 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 cause for rejection of the lot.

B. 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 omitted, incorrect, illegible, or of improper size, location sequence or method of application.
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**

DSCP FORMS

DPSC FORM 3556 Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence

GOVERNMENT STANDARD

FOOD AND DRUG ADMINISTRATION BACTERIOLOGICAL ANALYTICAL MANUAL (BAM)

FEDERAL STANDARD

FED-STD-595 Colors Used in Government Procurement

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ)

ANSI/ASQCZ1.4-1993 Sampling Procedures and Tables for Inspection by Attributes

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

B 479 Specification for Annealed Aluminum Foil For Flexible Barrier Application  
D 1974 Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers  
D 2103 Specification for Polyethylene Film and Sheeting  
D 5118 Standard Practice for Fabrication of Fiberboard Shipping Boxes  
F 88 Seal Strength of Flexible Barrier Materials

AOAC INTERNATIONAL Official Methods of Analysis of the AOAC International

AMSSB-RCF-FN (Valvano/4259)

14 August 2003

TO: DSCP-HRAC (Lowry/7773)

Subject: ES 03-094; DSCP-SS-03-03266; Document changes; inserting new verification conditions for microbiological and aflatoxin requirements

Date recv'd: 3 Apr 03

Date due: 24 Apr 03

Date extended: OPEN

Date replied: 14 August 03

Refs:

(a) Conference call (Natick/USDA/DSCP/User Services Reps/Vetcom), Feb 10, 2003, subject: Salmonella Testing, discuss issue from JSORF on salmonella testing of commercial vs. military products

(b) Follow up to ES02-189; dated 4 Mar 03, subject: Document changes, PCR-D-002 Dairyshake Powder, Fortified with Calcium and Vitamin D, Packaged in a Flexible Pouch; A-A-20043A Creamer, Nondairy, Dry; PKGQAP for A-A-20336 Coffees, Flavored, Instant, Powdered; MIL-C-3031J Cocoa Beverage Powder, inserting new verification conditions for Salmonella negative requirements

(c) Govt meeting at R&DA May 29 03, subject: Discuss verification for Salmonella, aflatoxin, and microbiology requirements

1. Based on the ref case, DSCP requested that Natick apply the same verification criteria for microbiological testing methods in the subject documents as well. Aerobic plate and standard plate and coliform counts and aflatoxin levels would be covered using this new verification process. The documents affected are as follows:

PKG&QAP for A-A-20043A Creamer, Nondairy, Dry  
PKG&QAP for A-A-20336 Coffees, Flavored, Instant, Powdered  
MIL-C-3031J Cocoa Beverage Powder  
PCR-D-002 Dairyshake Powder, Fortified with Calcium and Vitamin D, Packaged in a Flexible Pouch  
PCR-N-002 Nut Raisin Mix  
PKG&QAP for A-A-20164B Nuts, Shelled  
PKG&QAP for A-A-20328 Peanut Butter and Peanut Spread

2. In ref a and c, the discussion on Salmonella determined:

(a) Services restated the requirement that salmonella negative was a valid requirement; and

(b) Differences exist between product received in packets (and product not further processed except for overwrapping or placement in accessory or meal bag), and product received in bulk and filled into packets for assembly, and whether a certificate of analysis (COA) is acceptable in lieu of testing.

3. Based on a review of the subject case and ref a and c, it was decided to include MICROBIOLOGICAL VERIFICATION with the salmonella statement. Separate statements will also be added for those items needing AFLATOXIN NEGATIVE VERIFICATION testing. These will be additional verifications added to the documents, which may already include the salmonella version.

4. Natick requests DSCP implement the changes cited below for the subject documents for all current, pending, and future procurements until the documents are formally amended or revised:

(a) In the documents (coffee flavored, cocoa beverage powder, nondairy creamer & dairyrshake powder) section where the microbiological testing paragraph is specified, delete the current "salmonella statement" and insert the following statements at the end:

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ES03-094

**"NOTE:** The following conditions apply for salmonella and microbiological testing:

- (3) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the product represented is Salmonella Negative and meets all microbiological requirements.
- (4) For bulk product received, the contractor is responsible for providing a certificate of analysis stating that the bulk product is Salmonella negative and meets all microbiological requirements. USDA salmonella and additional microbiological testing is required for each end item lot and shall be the basis for lot acceptance with respect to Salmonella and other microbiological testing requirements."

(b) In the documents (nuts shelled & nut raisin mix & peanut butter spread) section where the aflatoxin testing paragraph is specified, insert the following statements at the end:

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

- (1) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the aflatoxin in the roasted peanuts (in the case of roasted peanuts end item) represented is not greater than 15 parts per billion (ppb). No additional testing is required.
- (2) For roasted peanuts received in bulk (to be used in roasted peanuts end item), 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.
- (3) If roasted peanuts are received in bulk (to be used in roasted peanuts end item), and the conditions in (2) above are not met, each end-item lot must be sampled and tested by USDA. End item lots determined to be not greater than 15 ppb in aflatoxin as evidenced by a USDA Certificate will be considered acceptable. Bulk roasted peanuts with aflatoxin greater than 15 ppb shall not be used as ingredients."

**"NOTE:** The following conditions apply for aflatoxin testing on nut raisin mix:

- (1) For prepackaged product received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the aflatoxin in the roasted peanuts (in the case of roasted peanuts end item) represented is not greater than 15 parts per billion (ppb). No additional testing is required.
- (2) For roasted peanuts received in bulk (to be used in nut raisin mix end item), 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.
- (3) If roasted peanuts are received in bulk (to be used in nut raisin mix end item), and the conditions in (2) above are not met, the bulk roasted peanut product may not be used as an ingredient. Rework or segregation of portions of the bulk lot, and further testing may be considered on a case by case basis."

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"NOTE: The following conditions apply for aflatoxin testing on peanut butter spread:

- (1) For prepackaged peanut butter received from a supplier and is not further processed, the contractor will furnish a Certificate of Analysis that the product represented is not greater than 15 ppb for aflatoxin.
- (2) For bulk peanut butter received, the contractor is responsible for providing a USDA certificate of analysis stating that the bulk product is not greater than 15 ppb in aflatoxin. When end item lots are manufactured using that bulk peanut butter and both the bulk and end item lots' identities have been preserved, then no further aflatoxin testing is required.
- (3) If peanut butter is received in bulk, and the conditions in (2) above are not met, each end-item lot must be sampled and tested by USDA. End item lots determined to be not greater than 15 ppb in aflatoxin as evidenced by a USDA Certificate will be considered acceptable. Bulk peanut butter with aflatoxin greater than 15 ppb shall not be used as an ingredient.

(c) With regard to the MRE components using roasted peanuts, the following note should be included in those applicable DSCP contracts in order that the end item contain the most recent crop of product:

"Note: A USDA certificate of analysis on roasted peanuts from the most recent crop year which have been kept in cold storage (between approximately 40-50 deg. F at low humidity) is acceptable. Contractor must attest to these storage conditions. If storage conditions for roasted peanuts are not established, a USDA certificate of analysis on roasted peanuts will be considered current if not more than 30 days have elapsed since the date of the analysis."

5. The changes will be made to the Natick prepared documents either in the item document or the PKGQAP supplement, as applicable. For DSCP prepared documents, the following notes apply:

(a) For A-A-20043A Creamer Nondairy Dry and A-A-20336 Cofees Flavored, Instant, the microbiological testing for standard plate and coliform counts is specified in the CID. Normally DSCP would need to make a change to the CID; however, in this case, Natick will insert the salmonella and microbiological verification in the PKGQAP for these items in the methods of inspection section.

(b) For A-A-20164B Nuts, Shelled and A-A-20328 Peanut Butter, the aflatoxin testing is specified in the CID. Normally DSCP would need to make a change to the CID; however, in

this case, Natick will insert aflatoxin verification in the PKGQAP for these items in the methods of inspection section.

6. The updated applicable document files are attached with this message.

7 attachments

DONALD A. HAMLIN  
Team Leader  
Food Engineering Services Team  
Combat Feeding Directorate

R Valvano

**CF: NSC:**

Aylward      Trottier                      CF: DSCP & SVCs:  
Bennett      Valvano                      Anthony      Beward Friel Arcidiocona Arthur Malason  
Hamlin Ferrante Miller Hill Galligan Richardson H. Richards Kavanagh      Salerno  
Sherman Lowry