

**SECTION C**

**C-1 ITEM DESCRIPTION**

PCR-B-015, BEEF STEW, COOKED, DEHYDRATED, PACKAGED IN A BRICKPACK POUCH, SHELF STABLE

Styles.

- Style A - Meal, Cold Weather (MCW), Packaged in a White Brickpack Pouch
- Style B - Food Packet, Long Range Patrol (LRP), Packaged in a Subdued Colored Brickpack Pouch

Each component is consumed by combat personnel under worldwide environmental extremes as part of an operational ration, and is a source of nutritional intake.

**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. Dehydrated product.

(1) Appearance.

a. General. The dehydrated beef stew shall be a mixture of cooked, beef pieces, potatoes, carrots, and peas, in beef flavor sauce, that has been dehydrated. The dehydrated product shall be free from foreign materials.

b. Beef. The beef pieces shall be medium brown color and shall be characteristic of cooked, dehydrated beef.

c. Vegetables. The vegetables shall be potato dices, carrot dices or slices, peas, and onion pieces and shall be the characteristic color of cooked, dehydrated vegetables.

(2) Odor.

a. General. The odor shall be characteristic of cooked, dehydrated beef stew.

b. Foreign. The dehydrated product shall be free from foreign odors.

(3) Texture. The product shall be fully dehydrated. There shall be discernible pieces of beef, potatoes, carrots, and peas.

(4) Weight.

a. Net weight. No individual pouch shall weigh less than 140 grams.

(5) Nutrient content.

a. Protein content. The protein content shall be not less than 29.0 percent.

b. Fat content. The fat content shall be not greater than 21.0 percent.

c. Sodium content. The sodium content shall be not greater than 2300 mg per 100 grams.

(6) Moisture content. The moisture content of the dehydrated product shall not exceed 2.5 percent.

(7) Microbiological. The aerobic plate count shall not be greater than 75,000 per gram in four of five samples, and not greater than 150,000 per gram in any sample. The E. coli count shall have no positive tubes in the standard three tube most probable number (MPN) technique.

D. Rehydrated product.

(1) Appearance.

a. General. The rehydrated beef stew shall be a mixture of beef pieces, potato dices, carrot dices or slices, peas, and onion pieces in beef flavor sauce. The overall appearance shall be characteristic of beef stew that has been frozen and reheated. The rehydrated product shall be free from foreign materials.

b. Beef. The cooked beef shall be pieces typically produced by a 3/4 inch machine setting and shall be a medium brown color. The cooked beef shall be free of bone or bone fragment, cartilage, coarse connective tissue, tendons or ligaments, and glandular material.

c. Vegetables. The vegetables shall be potato dices, carrot dices or slices, peas, and onion pieces and shall be the characteristic color.

d. Sauce. The sauce shall be opaque and shall be medium brown color.

(2) Odor and flavor.

a. General. The beef stew shall have an odor and flavor characteristic of frozen and reheated cooked beef, potatoes, carrots, peas, and onions in beef flavor sauce.

b. Foreign. The rehydrated product shall be free from foreign odors and flavors.

(3) Texture.

a. General. The product shall rehydrate within ten minutes.

b. Beef. The beef shall be moist and tender.

c. Vegetables. The vegetables shall be slightly soft to slightly firm.

d. Sauce. The sauce shall be smooth and moderately thick.

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

**C-3 MISCELLANEOUS INFORMATION**

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

Spice and seasoning mix.

<u>Ingredient</u>	<u>Percent by weight</u>
Soup stock, dehydrated	32.0
Onions, chopped, dehydrated	28.2
Onion powder	18.0
Salt	15.6
Caramel color powder	2.1
Pepper, black, ground	1.7
Garlic powder	0.7
Celery seed	0.7
Bay leaves, ground	0.5
Allspice, ground	0.5

Product formulation.

<u>Ingredient</u>	<u>Percent by weight</u>
Water	30.0
Beef, cooked	25.0
Potatoes, fresh or frozen, diced	20.0
Peas	10.0
Carrots, raw, diced	10.0
Spice and seasoning mix	2.25
Corn oil	2.0
Starch	0.75

**SECTION D**

**D-1 PACKAGING**

Product shall be filled into pouches in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH.

**D-2 LABELING**

Each pouch shall be labeled in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH.

**D-3 PACKING**

Packing for shipment to ration assembler shall be in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH.

**D-4 MARKING**

Marking of shipping containers shall be in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH.

**SECTION E INSPECTION AND ACCEPTANCE**

Inspection for packaging, labeling, packing, and marking shall be in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR DEHYDRATED PRODUCT IN A BRICKPACK POUCH.

**E-6 QUALITY ASSURANCE PROVISIONS**

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.

Quality Assurance Provisions.

The following quality assurance criteria, utilizing ANZI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are required.

A. 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 Performance-based Contract Requirements 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.

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

B. Product examination. The finished product shall be examined for compliance with the performance requirements specified in Section C of this Performance-based Contract Requirements document utilizing the double sampling plans indicated in ANSI/ASQC Z1.4 - 1993. The lot size shall be expressed in pouches. The sample unit shall be the contents of one pouch. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 1.5 for major defects and 4.0 for minor defects. Defects and defect classifications are listed in table I.

TABLE I. Product defects 1/ 2/

Category		Defect
<u>Major</u>	<u>Minor</u>	
		<u>Dehydrated product</u>
		<u>Appearance</u>
101		Glazed surface area measuring more than 0.5 inch in any dimension. <u>3/</u>
102		Dark colored core in any dimension. <u>3/</u>
	201	Beef not medium brown color or not characteristic of cooked, dehydrated beef.

- 202 Peas not green or carrots not pale orange or potatoes not off-white.  
Odor
- 103 Not characteristic of dehydrated beef stew.  
Texture
- 104 Wet spots or soft spots. 4/  
Weight
- 204 Net weight of an individual pouch less than 140 grams.  
Rehydrated product 7/ 8/  
Appearance
- 105 Bone or bone fragment measuring more than 0.3 inch in any dimension.

TABLE I. Product defects 1/ 2/ - Continued

Category		Defect
<u>Major</u>	<u>Minor</u>	
106		Not a mixture of beef pieces, potato dices, carrot dices, peas, onion pieces, and sauce.
	205	Total weight of skin, cartilage, coarse connective tissue, tendons or ligaments, and glandular material more than 0.20 ounce.
	206	Beef not medium brown color.
	207	Vegetables not as specified. <u>Odor and flavor</u>
107		Odor or flavor not characteristic of frozen and reheated beef stew. <u>Texture</u>
108		Hard cores due to incomplete water penetration. <u>9/</u>
	208	Beef not moist or not tender.
	209	Vegetables not slightly soft to slightly firm.
	210	Sauce not moderately thick.

1/ Presence of foreign material such as, but not limited to dirt, insect parts, hair, glass, wood or metal, or any foreign odors and flavors (such as, but not limited to burnt, scorched, rancid, sour, or stale) shall be cause for rejection of the lot. Foreign flavor is not applicable to dehydrated product.

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. Palatability is not applicable to dehydrated product.

3/ Evidence of faulty dehydration.

4/ Evidence of incomplete dehydration.

7/ Rehydrate according to pouch instructions. Product that does not rehydrate within ten minutes shall be cause for rejection of the lot.

8/ Machine setting requirement for beef pieces shall be verified with the producer's certificate of conformance.

9/ Dry areas attributable to gristle and similar materials in the meat shall not be considered as defects because they do not necessarily rehydrate properly.

C. Methods of inspection.

(1) Shelf life. The contractor shall provide a certificate of conformance that the product has a 3 year shelf life when stored at 80°F. Government verification may include storage for 6 months at 100°F or 36 months at 80°F. Upon completion of either storage period, the product will be subjected to a sensory evaluation panel for appearance and palatability and must receive an overall score of 5 or higher based on a 9 point hedonic scale to be considered acceptable.

(2) Net weight. 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.

(3) Nutrient content. 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 for protein content, fat content, and sodium content in accordance with the following methods of the Official Methods of Analysis of AOAC International:

<u>Test</u>	<u>Method Number(s)</u>
Protein	988.05, 991.20
Fat	925.12, 2008.06
Sodium	985.35, 984.27

Test results for protein and fat shall be reported to the nearest 0.1 percent. Test results for sodium content shall be reported to the nearest 1.0 mg per 100 grams. Any result not conforming to the requirements specified in Section C of this Performance-based Contract Requirements document shall be cause for rejection of the lot.

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

(4) Moisture content testing. Eight filled and sealed pouches shall be selected at random from the lot regardless of lot size. The contents of each pouch shall be blended to uniformity using a blender or a food processor. The blending must be rapid and conducted in such a way that minimum heat is transferred to the product and that the product has minimum exposure to atmospheric moisture. Each sample shall be tested for moisture content in accordance with the Official Methods of Analysis of the AOAC method 926.08, except that the temperature-time cycle for moisture analysis shall be modified by using a temperature of 70°C for 16 hours at a pressure of not more than 100mm of mercury. Test results shall be reported to the nearest 0.1 percent. Any result not conforming to

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the requirements specified in Section C of this Performance-based Contract Requirements document shall be cause for rejection of the lot.

(5) Microbiological testing. Five filled and sealed pouches of finished product shall be selected at random from the lot regardless of lot size. The contents of each sample pouch shall be tested for aerobic plate count in accordance with the Official Methods of Analysis of the AOAC, method 966.23 or 990.12, and E.coli in accordance with the Official Methods of Analysis of the AOAC, method 966.24. The diluent shall be added to each sample of dry product and allowed to stand for 15 minutes before the blending of that sample. Continue as directed. Any result not conforming to the requirements specified in Section C of this Performance-based Contract Requirements document shall be cause for rejection of the lot.

#### **SECTION J REFERENCE DOCUMENTS**

##### NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY CONTROL (ASQC)

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

AOAC INTERNATIONAL Official Methods of Analysis of the AOAC International

## For DLA Troop Support Website Posting

RDNS-SEC-EM

12 August 2016

TO: Defense Logistics Agency (DLA) - Troop Support - Subsistence DSCP-FTRE

SUBJECT: ES16-037 (DSCP-SS-16-01015); Document change; United States Department of Agriculture (USDA) recommendation to add an additional Official Method of Analysis (OMA) of the Association of Official Analytical Chemists (AOAC) International Fat Test Method 2008.06 to fourteen individual and group ration documents.

1. Reference: Memo from RDNS-SEC-EM to DSCP-FTRE, dated 1 March 2016, SUBJECT: ES16-022 (DSCP-SS-16-00433); Document change; USDA Proposal to add an additional Official Method of Analysis (OMA) of the Association of Official Analytical Chemists (AOAC) International Fat Test Method 2008.06 to four bakery documents
2. Natick received an Engineering Support Case (ES Case) from DLA - Troop Support stating the USDA Laboratory has made a recommendation to add an additional method for fat testing, Official Method of Analysis (OMA) of the Association of Official Analytical Chemists (AOAC) International Fat Test Method 2008.06, to fourteen individual and group ration specifications.
3. In addition, Natick is deleting OMA of the AOAC fat test method number 985.15 from eight of the fourteen individual and group ration specifications. The Agriculture Marketing Service laboratory no longer performs test method 985.15 for fat as it requires a toxic solvent that is no longer used in the laboratory.
4. The fourteen specifications are listed below under each individual or group ration:
  - a. **Meal, Cold Weather/Food Packet, Long Range Patrol (MCW/LRP):** PCR-B-015, Beef Stew, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-B-016, Beef Stroganoff with Noodles, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-C-025, Chicken and Rice, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-C-026, Chicken, Spicy Oriental with Rice, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-C-073, Chili Macaroni with Beef, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-E-001, Eggs, Scrambled, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-R-011, Rice and Chicken, Mexican Style, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-S-017, Seafood Chowder, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; PCR-S-008, Spaghetti with Meat Sauce, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; and PCR-T-002, Turkey Tetrazzini, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable.
  - b. **Meal, Ready-to-Eat (MRE):** PCR-G-003A, Granola, Packaged in a Flexible Pouch, Shelf Stable.
  - c. **Unitized Group Ration - Heat & Serve (UGR-H&S):** PCR-B-052, Beef and Potatoes in Cream Gravy, Packaged in a Polymeric Tray, Shelf Stable; and PCR-B-039A, Buffalo Style Chicken, Packaged in a Polymeric Tray, Shelf Stable.

**d. Unitized Group Ration - Marine (UGR-M):** PCR-C-059, Chili Con Carne with Beans, Cooked, Dehydrated, Packaged in a No. 10 Can, Shelf Stable.

5. Natick Research Chemists reviewed this request and concur with USDA's recommendation to add AOAC of the OMA Fat Test Method 2008.06 as an additional fat test method to the fourteen subject documents.

6. Natick submits the following changes to subject documents for all current, pending, and future procurements until the document is formally amended or revised:

**a. Meal, Cold Weather/Food Packet, Long Range Patrol (MCW/LRP):**

- (1) In PCR-B-015, Beef Stew, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 6, Section E-6, Paragraph C(3), under column for Fat Test Method Number(s), after "925.12" insert ", 2008.06".
- (2) In PCR-B-016, Beef Stroganoff with Noodles, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 6, Section E-6, Paragraph C(3), under column for Fat Test Method Number(s), after "925.12" insert ", 2008.06".
- (3) In PCR-C-025, Chicken and Rice, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 6, Section E-6, Paragraph C(3), under column for Fat Test Method Number(s), after "925.12" insert ", 2008.06".
- (4) In PCR-C-026, Chicken, Spicy Oriental with Rice, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 6, Section E-6, Paragraph C(3), under column for Fat Test Method Number(s), after "925.12" insert ", 2008.06".
- (5) In PCR-C-073, Chili Macaroni with Beef, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 10, Section E-5, Paragraph B(3), under column for Fat Test Method Number, after "925.12 or" delete "985.15" insert "2008.06".
- (6) In PCR-E-001, Eggs, Scrambled, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 7, Section E-6, Paragraph C(3), under column for Fat Test Method Number, after "925.32" insert ", 2008.06".
- (7) In PCR-R-011, Rice and Chicken, Mexican Style, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 10, Section E-5, Paragraph B(3), under column for Fat Test Method Number, after "925.12," delete "985.15" insert "2008.06".
- (8) In PCR-S-017, Seafood Chowder, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 9, Section E-5, Paragraph B(3), under column for Fat Test Method Number, after "925.12," delete "985.15" insert "2008.06".
- (9) In PCR-S-008, Spaghetti with Meat Sauce, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 6, Section E-6, Paragraph C(3), under column for Fat Test Method Number(s), after "925.12" insert ", 2008.06".
- (10) In PCR-T-002, Turkey Tetrazzini, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable, on Page 6, Section E-6, Paragraph B(3), under column for Fat Test Method Number(s), after "925.12" insert ", 2008.06".

**b. Meal, Ready-to-Eat (MRE):**

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- (1) In PCR-G-003A, Granola, Packaged in a Flexible Pouch, Shelf Stable, on Page 12, Section E-5, Paragraph B(3), under column for Fat Test Method Number, delete "985.15" insert "945.38, 960.39, 2008.06".

**c. Unitized Group Ration - Heat & Serve (UGR-H&S):**

- (1) In PCR-B-052, Beef and Potatoes in Cream Gravy, Packaged in a Polymeric Tray, Shelf Stable, on Page10, Section E-5, Paragraph B(5), under column for Fat Test Method Number, delete "985.15" insert "991.36, 2008.06".
- (2) In PCR-B-039A, Buffalo Style Chicken, Packaged in a Polymeric Tray, Shelf Stable, on Page10, Section E-5, Paragraph B(5), under column for Fat Test Method Number, delete "985.15" insert "991.36, 2008.06".

**d. Unitized Group Ration - Marine (UGR-M):**

- (1) In PCR-C-059, Chili Con Carne with Beans, Cooked, Dehydrated, Packaged in a No. 10 Can, Shelf Stable, on Page 10, Section E-5, Paragraph B(7), under column for Fat Test Method Number, delete "985.15" insert "925.12, 991.36, 2008.06".

7. The following documents with Changes highlighted and dated 12 August 2016 are attached: **Meal, Cold Weather/Food Packet, Long Range Patrol (MCW/LRP):** Change 02, PCR-B-015, Beef Stew, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 03, PCR-B-016, Beef Stroganoff with Noodles, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 02, PCR-C-025, Chicken and Rice, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 03, PCR-C-026, Chicken, Spicy Oriental with Rice, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 01, PCR-C-073, Chili Macaroni with Beef, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 06, PCR-E-001, Eggs, Scrambled, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 01, PCR-R-011, Rice and Chicken, Mexican Style, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 01, PCR-S-017, Seafood Chowder, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; Change 02, PCR-S-008, Spaghetti with Meat Sauce, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; and Change 03, PCR-T-002, Turkey Tetrazzini, Cooked, Dehydrated, Packaged in a Brickpack Pouch, Shelf Stable; **Meal, Ready-to-Eat (MRE):** Change 03, PCR-G-003A, Granola, Packaged in a Flexible Pouch, Shelf Stable; **Unitized Group Ration - Heat & Serve (UGR-H&S):** Change 02, PCR-B-052, Beef and Potatoes in Cream Gravy, Packaged in a Polymeric Tray, Shelf Stable; and Change 05, PCR-B-039A, Buffalo Style Chicken, Packaged in a Polymeric Tray, Shelf Stable; **and Unitized Group Ration - Marine (UGR-M):** Change 01, PCR-C-059, Chili Con Carne with Beans, Cooked, Dehydrated, Packaged in a No. 10 Can, Shelf Stable.