

SECTION C

C-1 NSN/ITEM DESCRIPTION

PCR-B-010 BEEF ENCHILADA IN SAUCE, PACKAGED IN A FLEXIBLE POUCH, SHELF STABLE

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. Commercial sterility. The packaged food shall be processed until commercially sterile.

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

D. Appearance.

(1) Tortilla. The tortilla shall be typical of tortilla made from enriched yellow corn meal and shall be a medium to dark yellow color. There may be a reddish color from absorbed sauce.

(2) Beef filling. The beef filling shall be finely ground beef with a medium brown color typical of cooked, ground beef.

(3) Sauce. The sauce shall be red to reddish-brown color with pieces of tomato, onion, green pepper, herbs, and Mexican-style seasoning and spices.

(4) General. The enchilada shall be a yellow corn tortilla wrapped around beef filling and shall be intact. The enchilada shall be covered with a tomato-based sauce with pieces of tomato, onion, green pepper, herbs, and Mexican-style seasoning and spices. The packaged food shall be free from foreign materials.

E. Odor and flavor.

(1) General. The packaged beef enchilada and sauce shall have an odor and flavor characteristic of beef enchilada and tomato-based sauce with pieces of tomato, onion, green pepper, herbs, and Mexican-style seasoning and spices. The beef enchilada and sauce shall elicit a sensation of medium heat.

(2) Foreign. The packaged beef enchilada and sauce shall be free from foreign odors and flavors.

F. Texture.

(1) Tortilla. The tortilla shall be soft.

(2) Beef filling. The beef shall be finely ground and shall be moist.

(3) Sauce. The sauce shall be moderately thick with pieces of tomato, onion, green pepper, and herbs.

G. Weight.

(1) Net weight. The average net weight of the pouched product with beef enchilada and sauce shall be not less than 8.0 ounces. No individual pouch shall contain less than 7.5 ounces.

(2) Beef filling. The enchilada shall be typically produced with a beef filling weight of 1.9 ounces.

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

I. Nutrient content.

(1) Protein content. The protein content shall be not less than 5.0 percent.

(2) Fat content. The fat content shall be not greater than 6.0 percent.

(3) Salt content. The salt content shall be not greater than 1.2 percent.

C-3 MISCELLANEOUS INFORMATION

THE FOLLOWING LIST OF INGREDIENTS IS PROVIDED FOR INFORMATION ONLY AND IS NOT A MANDATORY CONTRACT REQUIREMENT.

A. Ingredients. Ingredients for the beef enchilada in sauce may be as follows: beef, crushed tomatoes, enriched corn meal, beef broth, water, vegetable oil, enriched wheat flour, chili pepper, paprika, sugar, salt, onions, green peppers, garlic powder, cumin, pepper, herbs, and spices.

SECTION D

D-1 PACKAGING

One beef enchilada and sauce shall be filled into pouches and each pouch shall be packed in a carton in accordance with MIL-PRF-44073E, Packaging of Food in Flexible Pouches.

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 any other contrasting color, which is free of carcinogenic elements or ingredients. To avoid erroneous marking of pouches, the product name, lot number and filling equipment number shall be applied prior to thermal processing. All other marking may be applied before or after thermal processing.

(1) Product name (not less than 1/8 inch high). Commonly used abbreviations may be used when authorized by the inspection agency.

(2) Pouch code includes: 1/
Lot Number
Filling equipment identification number
Official establishment number (for example, EST-38)
(applicable to class 1 and 3 only)
Retort identification number 2/
Retort cook number 2/

1/ Shall be code marked as follows: 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, March 19, 1995 would be coded as 5078). 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.

2/ Required only when retort process used

B. Cartons.

(1) The cartons shall be clearly printed on one of the largest panels with permanent black ink as follows:

Product name (7/32 to 9/32 inch block letters)
Ingredients
Net weight
Name and address of packer
Code (same as pouch code, see pouches) 1/ 2/
USDA official inspection legend for the packer's plant
"Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable FDA/USDA regulations

1/ Code may be ink printed on any outside carton panel. Code may be embossed on any outside carton panel except the largest panels of the carton.

2/ Official establishment number not required in carton code.

Comment [N1]: Es02-105 - clarify carton labeling

(2) Military nutrition information entitled "Do's and Don'ts for Cold Weather Nutrition" shall be printed on the entrée cartons large panel opposite to the panel printed with the data in D-2, B,(1) above. The information, provided by the contracting officer, shall be clearly printed with permanent black ink in an area no smaller than 4-1/4 inches by 6-3/4 inches.

Comment [p2]: Natick Case Number ES04-077, Change 02, 07-JUN-04. Nutrition Labels for Inclusion in the Meal, Ready-to-Eat (MRE).

D-3 PACKING

A. Packing for shipment to ration assembler. Seventy-two pouches (of the same product) in cartons shall be packed flat or on edge in a snug-fitting fiberboard shipping container conforming to style RSC, type CF, class domestic, 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.

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

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.

E-5 PACKAGING AND PACKING MATERIALS

Quality Assurance Provisions.

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

A. Packaging and labeling.

(1) Pouch material testing. The pouch material shall be examined for the characteristics listed in table I. The lot size, sample unit, and inspection level criteria are provided for each of the test characteristics. Any test failure shall be classified as a major defect and shall be cause for rejection of the lot.

TABLE I. Pouch material quality assurance criteria

Characteristic	Lot size expressed in	Sample unit	Inspection level
Oxygen transmission rate	yards	1/2 yard	S-1
Water vapor transmission rate	yards	1/2 yard	S-1
Camouflage	yards	1/2 yard	S-1
Thermal processing	pouches	1 pouch	S-2
Environmental conditions	pouches	1 pouch	S-2

(2) Pouch examination. The pouches shall be examined for the defects listed in table II of MIL-PRF-44073E. The lot size shall be expressed in pouches. The sample unit shall be one thermal processed pouch. The inspection level shall be I and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 0.65 for major A defects, 2.5 for major B defects, and 4.0 for minor defects. Two hundred sample units shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot.

(3) Examination of pouch and carton assembly. The completed pouch and carton assemblies shall be examined for the defects listed in table III of MIL-PRF-44073E. The lot size shall be expressed in units of completed assemblies. The sample unit shall be one pouch and carton assembly. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 0.65 for major defects and 2.5 for minor

defects. Fifty sample pouch and carton assemblies shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot.

B. Packing.

(1) Shipping container examination. The filled and sealed shipping containers shall be examined for the defects listed below. The sample unit shall be one shipping container fully packed. The lot size shall be expressed in shipping containers. The inspection level shall be S-2 and the AQL shall be 2.5 defects per 100 unit.

TABLE II. Shipping container defects

Category	Defect
<u>Major</u>	
101	Marking omitted, incorrect, illegible of improper size, location sequence or method of application.
102	Any material component missing or damaged or not as specified.
103	Inadequate workmanship. <u>1/</u>
104	Contents more or less than specified.

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

E-6 QUALITY ASSURANCE PROVISIONS (PRODUCT)

Quality Assurance Provisions.

The following quality assurance criteria, utilizing ANSI/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 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 III.

TABLE III. Product defects 1/ 2/ 3/ 4/

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

- 101 Enchilada not a yellow corn tortilla wrapped around beef filling.
- 201 Tortilla not a medium to dark yellow color. 5/
- 202 Beef filling not a medium brown color.
- 203 Sauce not a red to reddish-brown color with pieces of tomato, onion, green pepper, herbs, and Mexican-style seasoning and spices.
- 204 Enchilada not intact.
- Odor and flavor
- 102 Odor or flavor not typical of beef enchilada made with yellow corn tortilla, and tomato based sauce with pieces of tomato, onion, green pepper, herbs, and Mexican-style seasoning and spices.
- 205 Enchilada and sauce do not elicit a sensation of medium heat.
- Texture
- 103 Tortilla not soft.
- 206 Beef not finely ground or not moist.
- 207 Sauce not moderately thick with pieces of tomato, onion, green pepper, and herbs.
- Weight
- 208 Net weight of an individual pouch less than 7.5 ounces. 6/
-

1/ Presence of any foreign material such as, but not limited to dirt, insect parts, hair, glass, wood or metal, or foreign odors and 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/ Verification of the enriched corn meal shall be with the statement of ingredients on the label.

4/ Beef filling weight requirement for enchilada shall be verified with a certificate of conformance.

5/ Reddish color from absorbed sauce shall not be scored as a defect.

6/ If the sample average net weight is less than 8.0 ounces, the lot shall be rejected.

C. Methods of inspection.

(1) Commercial sterility. Testing for commercial sterility shall be in accordance with MIL-PRF-44073.

(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 scaled to be considered acceptable.

(3) Net weight. The net weight of the filled and sealed pouches shall be determined by weighing each sample on a suitable scale tared with a representative empty pouch. Results shall be reported to the nearest 0.1 ounce.

(4) 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 salt content in accordance with the following methods of the Official Methods of Analysis of AOAC International:

<u>Test</u>	<u>Method Number</u>
Protein	988.05, 992.15
Fat	960.39, 985.15
Salt	935.47

Test results shall be reported to the nearest 0.1 percent. 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.

SECTION J REFERENCE DOCUMENTS

DSCP FORMS

DPSC FORM 3556 Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence, May 96

MILITARY SPECIFICATIONS

MIL-PRF-44073 Packaging of Food in Flexible Pouches

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY CONTROL (ASQC)

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

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

D 5118 Standard Practice for Fabrication of Fiberboard Shipping Boxes

AOAC INTERNATIONAL Official Methods of Analysis of the AOAC International



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
NATICK SOLDIER CENTER
KANSAS STREET
NATICK, MA 01760-5018
7 June 2004

Food Engineering Services Team

MEMORANDUM FOR Defense Supply Center Philadelphia
Directorate of Subsistence, Bldg. 6
ATTN: DSCP-FTSL (Mr. Mike Malason)
700 Robbins Avenue
Philadelphia, PA 19111-5092

SUBJECT: ES04-077, Nutrition Labels for Inclusion in the Meal, Ready-to-Eat (MRE)

1. Four nutrition labels for inclusion in the MRE have been approved by the Joint Services Operational Rations Forum (JSORF), which was held February 2003, at Fort Lee, VA.
2. The Natick Soldier Center (NSC) has prepared graphic drawings and electronic files (".jpeg" and ".ppt") of the nutrition labels that shall replace the label information entitled, "Military Rations Are Good Performance Meals", on the chipboard cartons of the following MRE Entrees:

For Chili and Macaroni, PCR-C-027, Delete "Military Rations Are Good Performance Meals" and Insert "Food, Water, and Exercise are Tactical Weapons".
For Beef Stew, PCR-B-020, Delete "Military Rations Are Good Performance Meals" and Insert "WHAT'S IN AN MRE".
For Spaghetti w/ Meat Sauce, PCR-S-0002, Delete "Military Rations Are Good Performance Meals" and Insert "Basic Heat Injury Prevention".
For Beef Enchiladas, PCR-B-010 Delete "Military Rations Are Good Performance Meals" and Insert "Do's and Don'ts for Cold Weather Nutrition".
3. NSC requests the Defense Supply Center Philadelphia (DSCP) provide the four nutrition labels to the MRE Assemblers for inclusion in the MRE XXV procurement (2005 Date of Pack). (Enclosed)
4. The point of contact for this action is Ms. Barbara Daley, Individual Combat Ration Team, Combat Feeding Directorate, at DSN 256-4937/COM (508) 233-4937.

12 Encls

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