

SECTION C

C-1 NSN/ITEM DESCRIPTION

PCR-B-0001 BEEF IN TERIYAKI SAUCE WITH VEGETABLES, 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. It is essential that this item be produced in accordance with good commercial practice to attain high standards of appearance, odor, flavor, and texture so that high levels of troop acceptance are achieved.

C-2 PERFORMANCE REQUIREMENTS

A. First article. A sample shall be subjected to first article inspection in accordance with the tests and inspections of Section E of this Performance-based Contract Requirements.

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) Beef. The beef slices may be of random length and shall be typically produced by equipment with settings that result in slices/strips 1/8 inch to 1/4 inch in thickness. The cooked beef shall be free of cartilage, coarse connective tissue, section of tendons or ligaments, and glandular material. The cooked, sliced beef shall have a dark brown color.

(2) Vegetables. The oriental style vegetables shall be of the following kinds: water chestnuts, bamboo shoots, mushrooms. The vegetables shall be intact and shall have a typical color.

(3) Sauce. The sauce shall be a semi-opaque, glossy, medium dark to dark brown color.

(4) General. The finished product shall have the characteristics of cooked beef in teriyaki sauce with vegetables. There shall be no bone or bone fragment in the packaged food.

E. Odor and flavor.

(1) General. The packaged food shall have an odor and flavor characteristic of processed beef teriyaki with oriental-style vegetables in a teriyaki flavored sauce.

(2) Foreign. The packaged food shall be free from foreign odors and flavors such as, but not limited to, burnt, scorched, rancid, sour, or stale.

F. Texture.

(1) Beef. The cooked, sliced beef shall be moist and tender.

(2) Vegetables. The oriental-style vegetables shall be slightly soft to slightly firm.

(3) Sauce. The sauce shall be smooth and moderately thin.

G. Weight.

(1) Net weight. The average net weight shall be not less than 8.0 ounces. No individual pouch shall contain less than 7.5 ounces.

(2) Drained weight.

a. Beef. The average drained weight of beef slices shall be not less than 2.5 ounces. The drained weight of the beef slices in an individual pouch shall be not less than 2.0 ounces.

b. Vegetables. The average drained weight of the vegetables (combined) shall be not less than 1.5 ounces. The drained weight of the vegetables (combined) in an individual pouch shall be not less than 1.0 ounces.

H. Palatability. The finished product shall be equal to or better than the approved first article when applicable, or other approved model, in palatability and overall appearance.

I. Nutrient content.

(1) Fat content. The fat content shall be not greater than 7.3 percent.

(2) Salt content. The salt content shall be not greater than 1.9 percent.

C-3 MISCELLANEOUS INFORMATION

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

(1) <u>Sauce:</u>	<u>Ingredients</u>	<u>Percent by weight</u>
	Water	31.40
	Light Soy Sauce	27.50
	Pineapple juice, unsweetened	20.00
	Sugar, white, granulated	8.80
	Vegetable oil	4.00
	Starch, food, modified, high opacity	3.50
	<u>Ingredients</u>	<u>Percent by weight</u>
	Cooking wine	1.50
	Cider vinegar	1.00
	Lemon juice	1.00
	Ginger, ground	0.60
	Onion powder	0.50
	Garlic powder	0.20
(2) <u>Product:</u>	<u>Ingredients</u>	<u>Percent by weight</u>
	Beef slices, cooked	38.00
	Sauce	38.00
	Water chestnuts, cnd, sld	10.10
	Mushrooms, cnd, stems & pieces	7.40
	Bamboo shoots, cnd, sld	6.00
	Beef slices, cooked	45.56
	Sauce	45.56
	Mushrooms, cnd, stems & pieces	8.88

SECTION D

D-1 PACKAGING

A. Product shall be filled into pouches and the pouches shall be filled into cartons. Both shall meet the requirements of Section 3 and Figures 1 and 2 of MIL-PRF-44073. Verification testing and inspection of pouch and carton conformance to the requirements shall be by the testing and inspections of Section 4 of MIL-PRF-44073 and the Quality Assurance Provisions of Section E of this Performance-based Contract Requirements.

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 (1/8 to 7/16 inch block letters). 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
Retort cook number

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, July 1, 1997 would be coded as 7182). 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.

B. Cartons.

(1) The cartons shall be clearly printed on one of the largest panel 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 approval stamp for the packers plant (applicable to meat and poultry items only).
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.

(2) Military nutrition information entitled "Nutrition: A FORCE MULTIPLIER" shall be printed on the large carton panel opposite to the panel printed with the data in D-2, B.(1). 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.

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

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 ANSI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are recommended.

A. Classification of inspections. The inspection requirements specified herein are classified as follows:

(1) First article inspection. The first article shall be inspected in accordance with the provisions of this Performance-based Contract Requirements 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 first article.

(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 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 I. For drained weight inspection, a separate set of pouches shall be selected from the lot using the same

sampling criteria as above. The pouches shall be immersed in 140°F to 190°F water for 10 minutes prior to the drained weight inspection.

TABLE I. Product defects 1/ 2/ 3/

Category		Defect
<u>Major</u>	<u>Minor</u>	
		<u>Appearance</u>
101		Bone or bone fragment measuring more than 0.3 inch in any dimension.
102		Color of cooked beef slices not dark brown.
	201	Total weight of cartilage, coarse connective tissue, section of tendons or ligaments, and glandular material is more than 0.35 ounces.
	202	Vegetable pieces not intact.
	203	Color of sauce not semi-opaque, glossy, medium dark to dark brown.
	204	Color of vegetables not as specified.
	205	Product does not contain kinds of vegetables as specified.
		<u>Odor and flavor</u>
103		Odor or flavor not characteristic of processed beef with oriental-style vegetables in a teriyaki flavored sauce.
		<u>Texture</u>
	206	Sliced beef not moist or not tender.
	207	Vegetables not slightly soft to slightly firm.
	208	Sauce not smooth or not moderately thin.
		<u>Weight</u>
	209	Net weight of an individual pouch less than 7.5 ounces. <u>4/</u>
	210	Drained weight of beef slices in an individual pouch less than 2.0 ounces. <u>5/</u>
	211	Drained weight of vegetables (combined) in an individual pouch less than 1.0 ounces. <u>6/</u>

1/ Presence of 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.

2/ Finished product not equal to or better than the approved first article, when applicable, or other approved model in palatability and overall appearance shall be cause for rejection of the lot.

3/ Machine size requirement for beef slices/strips shall be verified by certificate of conformance.

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

5/ If the sample average drained weight of beef slices is less than 2.5 ounces, the lot shall be rejected.

6/ If the sample average drained weight of vegetables (combined) is less than 1.5 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 scale to be considered acceptable.

(3) Drained weight. The pouch contents shall be poured into a flat-bottom container. A minimum of three times the volume of the pouch of 180°F to 190°F water shall be added to the container so as to cover the contents. The contents and water shall be gently agitated so as to liquefy rendered fat and to remove the sauce without breaking the beef slices or vegetables. The contents shall then be poured into a U.S. Standard No. 7 sieve in a manner that will distribute the product over the sieve without breaking the beef slices or vegetables. The sieve area shall be such that the distributed product does not completely cover all the openings of the sieve. The sieve shall be tilted at approximately a 45° angle and allowed to drain for 2 minutes before determining the drained weight by subtracting the sieve tare weight from the gross weight. The drained weight 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 and analyzed for 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>
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 shall be cause for rejection of the lot.

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

FEDERAL SPECIFICATION

FED-STD-595 Colors Used in Government Procurement

MILITARY SPECIFICATIONS

MIL-PRF-44073 Packaging of Food in Flexible Pouches

NON-GOVERNMENTAL STANDARDS

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 3985 Oxygen Gas Transmission Rate Through Plastic Film and Sheeting Using a Coulometric Sensor
- D 5118 Standard Practice for Fabrication of Fiberboard Shipping Boxes
- F 372 Standard Test Method for Water Vapor Transmission of Flexible Barrier Materials Using an Infrared Detection Technique

AOAC INTERNATIONAL Official Methods of Analysis of the AOAC International

AMSSB-RCF-FN (Valvano/4259)

30 January 2003

TO: DSCP-HRAC (Arthur/7775)

Subject: ES03-045S (DSCP phone call); Technical Inquiry Request; PCR-B-0001 Beef in Teriyaki Sauce with Vegetables, Flexible Pouch; PCR-C-0003 Chicken in Thai Style Sauce, Flexible Pouch; Reinsertion of Water Chestnuts and Bamboo Shoots; MRE XXIII procurement

References:

(a) AMSSB-RCF-FN message dated 6 April 2001, Subject: (DDC 01-067) Technical Inquiry Request; PCR-B-0001 Beef in Teriyaki Sauce with Vegetables, Flexible Pouch; PCR-C-0003 Chicken in Thai Style Sauce, Flexible Pouch; Removal of Water Chestnuts; MRE XXI

(b) AMSSB-RCF-FN message dated 9 May 2001, Subject: (DDC 01-079) Technical Inquiry Request; PCR-B-0001 Beef in Teriyaki Sauce with Vegetables, Flexible Pouch; Removal of Bamboo Shoots; MRE XXI

Date received: 22 Jan 2003

Date due: ASAP

Date replied: 30 Jan 2003

1. DSCP requested that the water chestnuts and bamboo shoots, as applicable, be reinserted into the subject documents since the Berry Amendment has been modified to allow those ingredients not normally grown domestically to be used in operational rations if the end item is manufactured in the United States. They stated that the vendors are asking for this for the upcoming MRE XXIII procurement.

2. The beef teriyaki product portion of the formulation is being revised. Since there is only an ingredient statement for the chicken in Thai sauce, we can only recommend that the contractors decrease the other ingredients proportionately

3. SBCCOM requests that DSCP implement the following changes to the subject documents, as indicated, for all MRE XXIII procurements until the documents are formally amended or revised:

a. PCR-B-0001 Beef in Teriyaki Sauce with Vegetables, Flexible Pouch

(i) In section C-2, para D(2)(Vegetables): after "kinds" insert "water chestnuts", bamboo shoots and".

(ii) In section C-3, para A(2)(Product): Delete formulation and insert:

"Beef slices, cooked	38.00
Sauce	38.00
Water chestnuts, cnd, sld	10.10
Mushrooms, cnd, stems & pieces	7.40
Bamboo shoots, cnd, sld	6.50"

b. PCR-C-0003 Chicken in Thai Style Sauce, Flexible Pouch

(i) In section C-2, para D(2)(Vegetables): after "sliced celery" insert "sliced water chestnuts".

(ii) In section C-3, para A(Ingredients): after "sliced celery" insert "sliced water chestnuts".

4. The attached document files includes the new changes to the formulations or ingredients as applicable.

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5. In this situation, where a major ingredient is reinserted and the other ingredients are decreased proportionately, we recommend that an alternate first article or product standard, whichever is applicable, be submitted to Natick for technical evaluation and approval.

2 Attachments

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

CF: NSC:
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Friel
Hamlin
Hill
Konrady A.
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