

SECTION C

C-1 NSN/ITEM DESCRIPTION

PCR-J-001 JAMBALAYA, WITH HAM AND SHRIMP, PACKAGED IN A FLEXIBLE POUCH, SHELF STABLE

Each component is consumed by combat personnel under worldwide environmental extremes as part of an operational ration, which is the sole 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 product shall be processed until commercially sterile.

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

D. Appearance.

(1) Ham. The ham shall be piece sizes typically produced by a 3/8 inch dicer setting. The cooked ham shall be free of bone or bone fragments, cartilage, coarse connective tissue, tendons or ligaments, and glandular material.

(2) Shrimp. The finished count of shrimp shall not be greater than 200 per pound. The cooked shrimp shall be free of shell and tail.

(3) Rice. The rice shall be typical of rice produced from enriched, parboiled, long grain, milled rice. The cooked rice shall have an off white color. The rice shall be distinct rice grains.

(4) General. The finished product shall be a mixture of rice, diced ham, small shrimp and tomato pieces, in a brownish red sauce. There shall be little free sauce. The packaged food shall be free from foreign material.

E. Odor and flavor.

(1) General. The jambalaya shall have a mildly fishy, smoky, cooked tomato odor and flavor and a moderate pungency. The product shall elicit a sensation of medium heat.

(2) Foreign. The packaged food shall be free from foreign odors and flavors.

F. Texture.

(1) Ham. The ham pieces shall be moist and tender.

(2) Shrimp. The shrimp pieces shall be tender.

(3) Rice. The rice shall be moist and shall be slightly soft to slightly firm.

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. Jambalaya. The average drained weight shall be not less than 5.8 ounces. The drained weight of the shrimp, ham, rice, and vegetables (combined) in an individual pouch shall be not less than 5.6 ces.

b. Shrimp and ham. The average drained weight of shrimp and ham shall be not less than 1.0 ounce. The drained weight of the shrimp and ham, (combined) in an individual pouch shall be not less than 0.80 ces.

c. Shrimp. The average drained weight of shrimp shall be not less than 0.40 ounces. The drained weight of the shrimp in an individual pouch shall be not less than 0.35 ces.

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. Analytical Requirements.

(1) Fat content. The fat content shall be not greater than 5.0 percent.

(2) Salt content. The salt content shall be not greater than 1.3 percent.

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.

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

<u>Ingredient</u>	<u>Percent by weight</u>
Tomatoes, crushed, chunky (8% SS)	23.50
Rice, blanched	14.00
Shrimp	18.00
Chicken broth, canned (3.5% SS)	9.57
Ham, diced	25.00
Onions, dehydrated, chopped	3.25
Vegetable oil	2.00
Tomato paste (24% SS)	1.80
Starch, modified	0.75
Celery, dehydrated, sliced	0.50
Garlic powder	0.50
Salt	0.50
Smoke flavor	0.25
Basil, ground	0.15
Cayenne pepper	0.11
Oregano, ground	0.07
Bay leaves, ground	0.03
Thyme, ground	0.02

SECTION D

D-1 PACKAGING

Product shall be filled into pouches and each pouch shall be packed in a carton in accordance with MIL-PRF-44073, 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 panel with permanent black ink as follows:

- a. Product name (7/32 to 9/32 inch block letters).
- b. Ingredients (class 1, 2, and 3 - mandatory; class 4 - not applicable).
- c. Net weight.
- d. Name and address of packer.
- e. Code (same as pouch code, see pouches). 1/ 2/
- f. USDA approval stamp for the packers plant (applicable to meat and poultry items only).
- g. "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 shall be printed on the large carton panel opposite to the panel printed with the data in D-2,B,(1) above. The information, provided by the contacting officer, shall be clearly printed with permanent black ink in an area no smaller than 4-1/4 inches by 6-3/4 inches as follows:

- a. On entrée cartons - the information entitled "Military Rations Are Good Performance Meals".
- b. On non-entrée cartons - the information entitled "Nutrition: A FORCE MULTIPLIER".

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 DSCP 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 lot size shall be expressed in shipping containers. The sample unit shall be one shipping container fully packed. 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) Production 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. 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 III. Product defects 1/ 2/ 3/ 4/

Category		Defect
Major	Minor	
		<u>Appearance</u>
101		Bone or bone fragment measuring more than 0.3 inch in any dimension.
	201	Presence of cartilage, coarse connective tissue, tendons, or glandular material.
	202	Presence of loose shell or tail on shrimp.
	203	Rice not an off white color.
	204	Rice not distinct grains.
	205	Product is not a mixture of rice, ham, shrimp, and tomato pieces in little free sauce.
	206	Sauce color not brownish red.
		<u>Odor and flavor</u>
102		Jambalaya not a mildly fishy, smoky, cooked tomato odor or flavor and a moderate pungency or does not elicit a sensation of medium heat.
		<u>Texture</u>
	207	Ham not moist or not tender.
	208	Shrimp not tender.
	209	Rice not moist or not slightly soft to slightly firm.
		<u>Net weight</u>
	210	Net weight of an individual pouch less than 7.5 ounces. 5/
		<u>Drained weight</u>
211		Drained weight of shrimp, ham, rice, and vegetables (combined) in an individual pouch less than 5.6 ounces. 6/
212		Drained weight of shrimp and ham (combined) in an individual pouch less than 0.80 ounce.
213		Drained weight of shrimp in an individual pouch less than 0.35 ounce.

8/

1/ Presence of any foreign material such as, but not limited to dirt, insect parts, hair, glass, wood or metal, or foreign odors or 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 product standard in palatability and overall appearance shall be cause for rejection of the lot.

3/ Dicer size requirement for ham pieces shall be verified with a certificate of conformance. Count per pound for shrimp shall be verified with a certificate of conformance.

4/ Enriched, parboiled, long grain rice shall be verified with the statement of ingredients on the label.

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

6/ If the sample average drained weight is less than 5.8 ounces the lot shall be rejected.

7/ If the sample average drained weight of shrimp and ham is less than 1.0 ounces the lot shall be rejected.

8/ If the sample average drained weight of shrimp is less than 0.40 ounces the lot shall be rejected.

C. Methods of inspection.

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

(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) 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 0.1 ounce.

(4) Drained weight. The contents of the pouch 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 remove the sauce. The contents shall then be poured into a U.S. Standard No. 8 sieve in a manner that will distribute the product over the sieve. 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.

(5) 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 for fat content and salt content in accordance with the following methods of the Official Methods of Analysis of AOAC International:

Test

Method Number

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

DPSC FORM

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

MILITARY SPECIFICATION

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

AMSRD-NSC-CF-F (Richards/5037)
18 December 2003

TO: DSCP-HROAC (Lowry/7773)

SUBJECT: ES04-027, (DSCP-SS-04-01187), Request Technical Assistance,
PCR-J-001, Jambalaya, MRE.

- 1. Date received: 12 December 2003
Date due: 22 December 2003
Date replied: 18 December 2003

2. The Natick Soldier Center (NSC) submits the following changes to the subject document:

C-2, G, Insert:

(2) Drained weight.

a. Jambalaya. The average drained weight shall be not less than 5.8 ounces. The drained weight of the shrimp, ham, rice, and vegetables (combined) in an individual pouch shall be not less than 5.6 ounces.

b. Shrimp and ham. The average drained weight of shrimp and ham shall be not less than 1.0 ounce. The drained weight of the shrimp and ham, (combined) in an individual pouch shall be not less than 0.80 ounces.

c. Shrimp. The average drained weight of shrimp shall be not less than 0.40 ounces. The drained weight of the shrimp in an individual pouch shall be not less than 0.35 ounces.

TABLE III, Change Weight to Net weight. Insert new line Drained weight.

Change Minor defects as follows:

211 Drained weight of shrimp, ham, rice, and vegetables (combined) in an individual pouch less than 5.6 ounces. 6/

212 Drained weight of shrimp and ham (combined) in an individual pouch less than 0.80 ounce.

213 Drained weight of shrimp in an individual pouch less than 0.35 ounce. 8/

AMSRD-NSC-CF-F (Richards/5037)
18 December 2003
SUBJECT: ES04-027, (DSCP-SS-04-01187), Request Technical Assistance,
PCR-J-001, Jambalaya, MRE.

TABLE III, Insert new footnotes as follows:

6/ If the sample average drained weight is less than 5.8 ounces the lot shall be rejected.

7/ If the sample average drained weight of shrimp and ham is less than 1.0 ounces the lot shall be rejected.

8/ If the sample average drained weight of shrimp is less than 0.40 ounces the lot shall be rejected.

3. POC for this action is Mr. Allen Richards, X5037.

DONALD A. HAMLIN
Team Leader
DoD Food Integration and
Engineering Services Team

(ARichards)

CF: NSC:	CF: DSCP & SVCs:	
Aylward	Anthony	Miller
Arcidiacono	Bedford	Richardson H
Friel	Galligan	Salerno
Hamlin	Gordon	Spencer
Hill	Haldeman	
Richards	Kavanagh	
Sherman	Kasa	
Trottier	Lowry	
Valvano	Malason	