

SECTION CC-1 NSN/ITEM DESCRIPTION

PCR-C-018 CHICKEN TETRAZZINI, 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. Production 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) Chicken. The chicken shall be pieces typically produced by a 3/4 inch machine setting and shall be in natural proportions. The cooked chicken shall free of bone or bone fragment, skin, cartilage, coarse connective tissue, tendons or ligaments, and discolored meat. The chicken pieces shall have a characteristic cooked, chicken color.

(2) Spaghetti. The cooked spaghetti shall be enriched macaroni product and shall be approximately 2.0 inches in length. The cooked spaghetti shall be an off white color.

(3) Sauce. The sauce shall be cream color and shall be opaque. The sauce shall have pieces of mushroom, pimento, onion, and green pepper.

(4) General. The chicken tetrazzini shall be a uniform mixture of chicken pieces and spaghetti in an opaque, cream colored sauce with pieces of mushroom, pimento, onion, and green pepper. The packaged food shall be free from foreign materials such as but not limited to dirt, insect parts, hair, glass, wood, or metal.

E. Odor and flavor.

(1) General. The packaged chicken tetrazzini shall have an odor and flavor characteristic of cooked chicken, spaghetti, and a mild, cheese flavored sauce with pieces of mushroom, pimento, onion, and green pepper.

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

SECTION C CONTINUED

F. Texture.

- (1) Chicken. The chicken pieces shall be moist and tender.
- (2) Spaghetti. The spaghetti shall be slightly soft to slightly firm. The spaghetti shall not be pasty.
- (3) Sauce. The sauce shall be moderately thick with pieces of mushroom, pimento, onion, and green pepper.

G. Weight.

- (1) Net weight. The average net weight of the pouched product shall be not less than 8.0 ounces. No individual pouch shall contain less than 7.5 ounces.
- (2) Drained weight. The average drained weight of the chicken pieces shall be not less than 2.1 ounces. The drained weight of the chicken in an individual pouch shall be not less than 1.9 ounces. The average drained weight of the spaghetti and vegetables (combined) shall be not less than 3.5 ounces. The drained weight of the spaghetti and vegetables (combined) in an individual pouch shall be not less than 3.0 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) Protein content. The protein content shall be not less than 10.0 percent.
- (2) Fat content. The fat content shall be not greater than 4.5 percent.
- (3) Salt content. The salt content shall be not greater than 1.0 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 for the chicken tetrazzini may be as follows:

(1) Sauce

<u>Ingredients</u>	<u>Percent by weight</u>
Water	40.00
Chicken broth, canned	39.27
Mushrooms, stems and pieces, drained	5.60
Margarine	3.30
Starch	2.75
Pimentos, drained, chopped	2.60
Cheese, sharp, cheddar, white, powder	2.00
Vegetable shortening, powder (21%fat)	1.80
Salt	1.00

SECTION C CONTINUED

<u>Ingredients</u>	<u>Percent by weight</u>
Onion, chopped, dehydrated	0.80
Green pepper, dehydrated	0.80
White pepper, ground	0.08
 (2) <u>Fill ratio</u>	
Sauce	55.50
Spaghetti, enriched, blanched 2X dry weight	14.50
Chicken, pieces	30.00

SECTION DD-1 PACKAGING

The 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

Each pouch and each carton shall be labeled in accordance with the Quality Assurance Provisions and Packaging Requirements for MIL-PRF-44073.

D-3 PACKING

Packing for shipment to ration assembler shall be in accordance with the Quality Assurance Provisions and Packaging Requirements for MIL-PRF-44073.

D-4 MARKING

Marking of shipping containers shall be in accordance with the Quality Assurance Provisions and Packaging Requirements for MIL-PRF-44073.

SECTION E INSPECTION AND ACCEPTANCE

Inspection for packaging, labeling and packing, and marking shall be in accordance with the Quality Assurance Provisions and Packaging Requirements for MIL-PRF-44073.

E-6 QUALITY ASSURANCE PROVISIONS (Product)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 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 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.

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

<u>Category</u>		<u>Defect</u>
<u>Major</u>	<u>Minor</u>	
		<u>Appearance</u>
101		Bone or bone fragment measuring more than 0.3 inch in any dimension
102		Product not a uniform mixture of chicken pieces, spaghetti, and sauce with pieces of mushroom, pimento, onion, and green pepper
103		Color of chicken not characteristic of cooked chicken
	201	Total weight of skin, cartilage, coarse connective tissue, tendons or ligaments, and discolored meat more than 0.20 ounce
	202	Spaghetti not off white color
	203	Sauce not cream color or not opaque
		<u>Odor and flavor</u>
104		Odor or flavor not characteristic of cooked chicken, spaghetti, and a mild, cheese flavored sauce with pieces of mushroom, pimento, onion, and green pepper
		<u>Texture</u>
	204	Chicken not moist or not tender
	205	Spaghetti not slightly soft to slightly firm
	206	Spaghetti is pasty
	207	Sauce not moderately thick with pieces of mushroom, pimento, onion, and green pepper
		<u>Weight</u>
	208	Net weight of an individual pouch less than 7.5 ounces <u>5/</u>
	209	Drained weight of the chicken in an individual pouch less 1.9 ounces <u>6/</u>
	210	Drained weight of spaghetti and vegetables (combined) in an individual pouch less than 3.0 ounces <u>7/</u>

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, 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.

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3/ Machine setting requirement for chicken pieces shall be verified with a certificate of conformance. The requirement for natural proportions of chicken shall be verified with a certificate of conformance.

4/ Length of the cooked spaghetti shall be verified with a certificate of conformance. The enriched spaghetti 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 weight of the chicken pieces is less than 2.1 ounces, the lot shall be rejected.

7/ If the average drained weight of the spaghetti and vegetables (combined) is less than 3.5 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) 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) 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 chicken or the spaghetti. 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 chicken or the spaghetti. 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) 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:

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<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

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

AOAC INTERNATIONAL

Official Methods of Analysis of the AOAC International

TO: DSCP-HSL (Woloszyn/4435)

Subject: Document changes; PCR-C-018 Chicken Tetrazzini, Packaged in a Flexible Pouch, Shelf Stable; Protein Requirement Deletion (DDC01-015)

1. Based on recent inquiries, the U.S. Army Soldier and Biological Chemical Command, Soldier Systems Center (SBCCOM) and COL Applewhite, Chief Dietician of the Army, have determined that, on a case-by-case basis, the protein requirement in some operational ration entrees could be eliminated. In these instances, reliance on drained weight and other nutritional/analytical requirements was acceptable.

2. SBCCOM requests that DSCP implement the following changes to the subject document for all MRE XXI and pending procurements until the document is formally amended or revised:

In section C-2, para I (Nutrient content): Delete "(1) protein content..." entirely.

In section E-6, para C (5) Nutrient content, lines 3 and 7: delete references to "protein content" and "protein 988.05, 992.15" accordingly.

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