

SECTION CC-1 ITEM DESCRIPTION

PCR-P-009, PASTA WITH VEGETABLES IN TOMATO 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. 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) Pasta. The pasta shall be a small spiral shape and shall be enriched macaroni product. The pasta shall be intact, distinct, and separate. The pasta shall be off white in color.

(2) Vegetables. The vegetables shall be evenly distributed mix of carrots, corn, green beans, peas, sweet red peppers, tomatoes, and mushrooms. The vegetables shall be discernible pieces and shall have a characteristic color.

(3) Sauce. The sauce shall be red to reddish brown in color and shall be typical of a tomato-based sauce with pieces of tomato and flecks of herbs and spices.

(4) General. The finished product shall be a uniform mixture of small shell pasta and vegetables in a tomato-based sauce. The packaged food shall be free from foreign material such as, but not limited to dirt, insect parts, hair, glass, wood, or metal.

E. Odor and flavor.

(1) General. The packaged food shall have an odor and flavor characteristic of cooked pasta and vegetables in a tomato-based sauce with a mild Italian flavor.

(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.

SECTION C CONTINUEDF. Texture.

- (1) Pasta. The cooked pasta shall be slightly soft to slightly firm.
- (2) Vegetables. The vegetables shall be slightly soft to slightly firm.
- (3) Sauce. The sauce shall be moderately thick with pieces of tomato.

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. The drained weight of pasta and vegetables (combined) in an individual pouch shall be not less than 4.5 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 2.0 percent.
- (2) Salt content. The salt content shall be not greater than 1.3 percent.

J. Vegetarian requirements. This product shall contain no ingredients, major or trace, and/or processing aids derived from the flesh, skin, blood, entrails, or bones of animals. This includes, but is not limited to oils, fats, fatty acids and their esters (palmitic, stearic, oleic, and pelargonic acids), flavorings, gelling agents, coagulants, (rennet derived from calves or pepsin derived from swine which are used in cheese manufacture), binders, emulsifiers (mono/di-glycerides, sodium or magnesium stearate, polysorbate, sorbitans, monostearate, glycerine), fatty alcohol, aldehydes and ketones, lactones, glycerol, amino acids, hydrolyzed proteins, enzymes, and enzyme modified products. Furthermore, these products shall contain no ethyl alcohol or ingredients derived from or containing ethyl alcohol. Milk and eggs, and ingredients derived from them such as yogurt or cheese (produced without animal based rennet or pepsin), are allowed.

SECTION C CONTINUED

C-3 MISCELLANEOUS INFORMATION

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

A. Ingredients. Water, tomatoes, enriched spiral shaped pasta (semolina, egg whites, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, and folic acid), tomato paste, carrots, corn, green beans, onions, peas, food starch-modified with erythorbic acid added, mushrooms, soybean oil, garlic puree (pasteurized and acidified with citric acid), parmesan cheese, sugar, salt, celery, diced red bell peppers, and spices.

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

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 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.

SECTION E CONTINUEDTABLE I. Product defects 1/ 2/ 3/ 4/

Category		Defect
<u>Major</u>	<u>Minor</u>	
		<u>Appearance</u>
101		Product not a uniform mixture of cooked pasta and vegetables in a tomato-based sauce
	201	Pasta not intact, distinct, or separate
	202	Color of pasta not off white
	203	Pasta not small spiral shape
	204	Sauce not red to reddish brown
	205	Vegetables not an evenly distributed mix of carrots, corn, green beans, peas, sweet red peppers, and mushrooms
	206	Vegetables not discernible pieces or not of typical color
		<u>Odor and flavor</u>
102		Odor or flavor not characteristic of cooked pasta and vegetables in a tomato-based sauce
	207	Sauce not a mild Italian flavor
		<u>Texture</u>
	208	Pasta not slightly soft to slightly firm
	209	Vegetables not slightly soft to slightly firm
	210	Sauce not moderately thick with pieces of tomato
		<u>Weight</u>
	211	Net weight of an individual pouch less than 7.5 ounces 5/
	212	Drained weight of the pasta and vegetables (combined) in an individual pouch less than 4.5 ounces

1/ Presence of any foreign material such as, but not limited to dirt, insect parts, hair, wood, glass, 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.

SECTION E CONTINUED

3/ Product not verified by a certificate of conformance as meeting the vegetarian requirements shall be cause for rejection of the lot.

4/ Verification of the enriched macaroni product shall be 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.

C. Methods of inspection.

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

(2) Shelf life. Compliance with shelf life shall be determined by incubation for 1 month at 120°F or 6 months at 100°F or 36 months at 80°F. Contractor shall provide a certificate of conformance.

(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 pasta 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 pasta 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.

* (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 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 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