SECTION C

C-1 ITEM DESCRIPTION

PCR-C-032, CHICKEN BREAST IN GRAVY, PACKAGED IN A POLYMERIC TRAY, 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.

Packages.

Package E - Unitized Group Ration (UGR) – Heat and Serve
Package K - Unitized Group Ration – Express (UGR-E)

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 product shall meet the minimum shelf life requirement of 36 months at 80ºF.

D. Appearance.

(1) General. The finished product shall be chicken breast in gravy. Each individual polymeric tray shall contain not less than 18 intact chicken breast halves. The packaged food shall be free from foreign materials.

(2) Chicken breast. The chicken breast shall be intact, boneless half breast of chicken and shall be uniform in size and shape. The chicken shall be practically free of skin, bone or bone fragment, cartilage, coarse connective tissue, tendons or ligaments, and discolored meat. The chicken breast shall have a cooked color.

(3) Gravy. The gravy shall have a light tan to golden color and may contain visible flecks of spices.

E. Odor and flavor.

(1) General. The packaged food shall have an odor and flavor typical of chicken breast in chicken gravy. The packaged food shall be free from foreign odors and flavors.

(2) Gravy. The gravy shall have the odor and flavor of chicken broth with cream cheese seasoned with herbs and spices.

F. Texture.

(1) Chicken breast. The chicken breast shall be moist and tender.

(2) Gravy. The gravy shall be smooth.

G. Viscosity. The viscosity of the gravy shall be not less than 7.5 cm per ten seconds or not greater than 16.0 cm per ten seconds.

H. Net Weight. The average net weight shall be not less than 95 ounces. No individual polymeric tray shall have a net weight of less than 93 ounces.

I. Drained weight. The average drained weight shall be not less than 38.0 ounces. The drained weight of 18 intact chicken breast halves in an individual tray shall be not less than 36.0 ounces.

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

K. Nutrient content.

(2) Fat content. The fat content shall be not greater than 5.5 percent.

(3) Salt content. The salt content shall be not less than 0.5 percent and not greater than 1.3 percent.

C-3 MISCELLANEOUS INFORMATION

THE FOLLOWING IS PROVIDED FOR INFORMATION ONLY TO PROVIDE THE BENEFIT OF PAST GOVERNMENT EXPERIENCE. THIS IS NOT A MANDATORY REQUIREMENT.

A. Ingredients/formulation. Ingredients and formulation percentages for the gravy may be as follows:

Ingredients	Percent by weight
Chicken broth (3.0 to 3.5 percent solids) 1/	79.76
Starch, modified, high opacity 2/	5.50
Cream cheese	4.00
Chicken fat	4.00
Onion powder	3.00
Shortening, vegetable, powdered	1.50
Salt 3/	1.40
Monosodium glutamate	0.50
Lecithin	0.20
Pepper, white, ground	0.08
Garlic powder	0.02
Celery seed, ground	0.02
Bay leaves, ground	0.01
Thyme, ground	0.01

1/ Chicken broth with different soluble solids content may be adjusted to the solids specified.

2/ The total amount of starch in the formula may be adjusted, as necessary, to ensure compliance with the finished product viscosity requirements.

3/ The total amount of salt in the formula may be adjusted as necessary to produce a product that complies with the finished product salt requirements.

SECTION D

D-1 PACKAGING

A. Preservation. Product shall be filled into polymeric trays and the trays with protective sleeves, shall conform to the requirements of section 3 of MIL-PRF-32004,

Packaging of Food in Polymeric Trays. Verification testing and inspection of trays, lids and sleeves shall be in accordance with Section 4 of MIL-PRF-32004 and the Quality Assurance Provisions of Section E of this Performance-based Contract Requirements document. The requirement for protective sleeves shall not apply to Package K.

B. Polymeric tray closure. The filled, sealed, and processed tray shall be securely closed.

D-2 LABELING

A. Polymeric tray body. One side of each polymeric tray shall be clearly printed or stamped, in a manner that does not damage the tray, with permanent ink of any contrasting color, which is free of carcinogenic elements or ingredients. To avoid erroneous marking of trays, the product name, lot number and filling equipment number shall be applied prior to processing. All other tray marking may be applied before or after processing. If these markings are applied along the tray body side (see figure 1 of MIL-PRF-32004), or if applied along the tray body end, are not readily legible in low light conditions, a small, easily legible label detailing product name and number of portions shall be applied along one tray body end, but not over any existing tray markings. 1/

(1) Tray body markings shall include:

Product name. Commonly used abbreviations may be used when authorized by the inspection agency.
Tray code. Tray code includes: 2/
Lot Number
Filling equipment identification number
Retort identification number
Retort cook number
Official establishment number

1/ As an alternate method, tray body markings may be clearly printed or stamped onto the polymeric tray lid prior to processing, in a manner that does not damage the lid, with permanent ink of any contrasting color, which is free of carcinogenic elements or ingredients, provided that the required markings are applied onto the tray body after processing.

2/ 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, 27 January 2000 would be coded as 0027). The Julian code shall represent the day the product was packaged into the tray and processed. Sublotting (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.

B. Polymeric tray lid. The lid shall be clearly printed or stamped, in a manner that does not cause damage. Permanent ink of any contrasting color, which is free of carcinogenic elements or ingredients, shall be used. As an alternate labeling method, a pre-printed self-adhering 0.002 inch thick clear polyester label printed with indelible contrasting color ink may be used.

(1) Lid labeling shall include:
Product name
Ingredients
Net weight

Name and address of packer
~~Official establishment number (for example, EST 38) or a three letter code identifying the establishment~~Official inspection legend
"Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable USDA regulations

(2) Lid labeling shall also show the following statements:

TO HEAT IN WATER: Submerge unopened tray in water. Bring water to a boil. Simmer gently 35-40 minutes. Avoid overheating (tray shows evidence of bulging).

WARNING: Do not heat tray in oven.

TO TRANSPORT AFTER HEATING: Insert tray back into protective sleeve to protect during transport. For UGR-E, or if sleeve is unavailable, stack trays lid-to-lid with fiberboard pads in between.

CAUTION: Use care when opening as pressure may have been generated within the tray.

TO OPEN: Using a clean knife, cut the lidding around the inside perimeter of the tray seals.

SUGGESTION: Cut lid along 3 sides and fold over uncut portion. Fold back to keep unused portions protected.

YIELD: Serves 9 portions (2 chicken breast halves plus approximately 4 ounces of gravy). For UGR-E, Serves 18 portions (1 chicken breast half plus approximately 2 ounces of gravy).

(3) The product shall be formulated and labeled in accordance with all USDA labeling regulations and policies. The lid shall be labeled with the following product name:

CHICKEN BREAST IN GRAVY

D-3 PACKING

A. Packing for shipment to ration assembler. Four filled, sealed, processed and sleeved, as applicable, polymeric trays shall be packed in a snug fitting fiberboard box conforming to style RSC-L, type CF, grade 275 of ASTM D 5118/D 5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes. The sleeved trays shall be placed flat with the first two trays placed with the lids together and the next two trays with the lids together. For Package K, the trays shall be stacked lid-to-lid. Fiberboard pads shall be placed between the trays and on the top and bottom of the stacked trays. The pad dimensions shall be not less than 1/8 inch of the full length and width inside dimensions of the box and shall be fabricated of class domestic, grade 275 fiberboard. The box shall be closed in accordance with ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes.

D-4 UNITIZATION

A. Unit loads. Unit loads shall be as specified in DSCP FORM 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items.

D-5 MARKING

A. Shipping containers and unit loads. Marking of shipping containers and unit loads shall be as specified in DPSC FORM 3556 Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence.

SECTION E INSPECTION AND ACCEPTANCE

The following quality assurance criteria, utilizing ANSI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are required. When required, the manufacturer shall provide the certificate(s) of conformance to the appropriate inspection activity. Certificate(s) of conformance not provided shall be cause for rejection of the lot.

A. 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.

B. 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 examinations and the methods of inspection cited in this section.

E-5 QUALITY ASSURANCE PROVISIONS (PRODUCT)

A. 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 trays. The sample unit shall be the contents of one tray. The inspection level shall be S-3 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 4.0 for major defects and 6.5 for minor defects. Defects and defect classifications are listed in Table I below. The trays shall be heated in accordance with the heating instructions from the tray label prior to conducting any portion of the product examination. For drained weight inspection, the samples shall be selected using the same sampling criteria as above.

TABLE I. Product defects 1/ 2/

Category		Defect
Major	Minor	
		Appearance
101		Bone or bone fragment measuring more than 0.3 inch in any dimension.
	201	Gravy not a light tan to golden color.
	202	The chicken breast halves not a cooked chicken color.
	203	Chicken breast halves are not easily removed as individual breast halves.
	204	Total weight of skin, cartilage, coarse connective tissue, tendons or ligaments, and discolored meat is more than 1.0 ounce.
		Odor and flavor
102		The packaged food does not have an odor or flavor of chicken breast in chicken gravy.
103		The gravy does not have the odor or flavor of chicken broth with cream cheese seasoned with herbs and spices.
		Texture
	205	Chicken breast halves not moist or not tender.
	206	Gravy not smooth.
		Net weight
	207	The net weight of an individual polymeric tray is less than 93 ounces. 3/
		Drained weight
	208	Individual tray contains less than 18 intact chicken breast halves or drained weight of 18 intact chicken breast halves in an individual polymeric tray less than 36.0 ounces. 4/

1/ The presence of any foreign material such as but not limited to, dirt, insect parts, hair, wood, glass, metal, or mold or the presence of any 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/ Sample average net weight less than 95 ounces shall be cause for rejection of the lot.

4/ Sample average drained weight less than 38.0 ounces shall be cause for rejection of the lot.

C. Methods of inspection.

(1) Commercial sterility. Commercial sterility shall be verified in accordance with USDA/FSIS regulations.

(2) Shelf life. The contractor shall provide a certificate of conformance that the product has a 3 year shelf life when stored at 80ºF. Government verification may include storage for 6 months at 100ºF or 36 months at 80ºF. 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 tray shall be determined by weighing each sample unit on a suitable scale tared with a representative empty tray and lid. Results shall be reported to the nearest 1 ounce.

(4) Drained weight test. The free liquid in each tray shall be poured off, strained through a U.S. Standard No. 8 sieve, and each free liquid sample shall be reserved for viscosity determinations. The remaining contents of the tray shall be poured into a flat bottom container. A minimum of three times the volume of a tray of 140º to 190ºF water shall be added to the container so as to cover the contents. The contents and water shall be agitated so as to fully dissolve the sauce without undue breakup of the chicken breast halves. The contents shall then be poured into a U.S. Standard 1/4 inch sieve in a manner that will distribute the product evenly over the sieve. Sieve area shall be such that the distributed product does not completely cover all the openings of the sieve. All pieces of chicken or any amount of intact chicken breast halves that exceed 18 shall be removed from the sieve prior to determining the drained weight. The sieve shall be tilted at such an angle to assure complete drainage of liquid from the product. Drain product for two to three 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 0.5 ounce.

(5) Gravy viscosity. Viscosity testing using a Bostwick Consistometer shall be performed on each of the free liquid samples collected (see C, (4) Drained weight test). The gravy shall be heated to 100ºF ±1ºF. 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.

(6) Nutrient content. The sample to be analyzed shall be a composite of three filled and sealed polymeric trays which have been selected at random from the lot. The composited sample shall be prepared (see NOTE) and analyzed in accordance with the following methods of the Official Methods of Analysis of AOAC International:

Test	Method Number
Fat	922.06 or 985.15
Salt	935.47

Test results shall be reported to the nearest 0.1 percent. Any nonconforming results shall be cause for rejection of the lot.

NOTE: The USDA will use AOAC method 983.18 for preparation of the sample.

E-6 QUALITY ASSURANCE PROVISIONS (PACKAGING AND PACKING MATERIALS, POLYMERIC TRAY)

A. Packaging and labeling.

(1) Polymeric tray testing. For purposes of clarification, the polymeric tray without the lid will be referred to as the “tray” and the polymeric tray with the lid shall be referred to as the “container”. The container and container materials shall be examined for the characteristics listed in table I of MIL-PRF-32004, Packaging of Food in Polymeric Trays.—The lot size, sample unit, and inspection level criteria are provided in table II below 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. For rough handling survivability at frozen temperature, polymeric tray survival rate shall be at least 85 percent.

TABLE II. Polymeric tray quality assurance criteria

Prior to processing

Characteristic	Lot size expressed in	Sample unit	Inspection level
Tray configurations and dimensions-	Trays	1 tray	S-1
Oxygen gas transmission rate – tray-	Trays	1 tray	S-1
Oxygen gas transmission rate – lid-	Yards	½ yard	S-1
Water vapor transmission rate – tray-	Trays	1 tray	S-1
Water vapor transmission rate – lid-	Yards	½ yard	S-1
Camouflage-	Containers	1 container	S-1

After processing

Characteristic	Lot size expressed in	Sample unit	Inspection level
Processing-	Trays	1 tray	S-2
Rough handling survivability-	Test containers	1 test container	S-2
Protective sleeve (Package E only)	Containers	1 container	S-1
Residual gas	Containers	1 container	S-1
Closure seal	Containers	1 container	S-1
Internal pressure	Containers	1 container	S-1
Lid opening	Containers	1 container	S-1

(2) Examination of container. The container shall be examined for the defects listed in table II of MIL-PRF-32004 and the labeling defects listed in table III below. The lot size shall be expressed in containers. The sample unit shall be one processed and labeled container. 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.

TABLE III. Container labeling defects

Category		Defect
Major A	Minor	
101		Polymeric tray lid or body labeling missing, incorrect or illegible.
	201	When a pre-printed self adhering label is used, the label not adhering to tray lid (for example, label raised or peeled back from edge to corner) or presence of any areas of gaps along the perimeter of the label where the label is not properly adhered.

B. Packing.

(1) Shipping container and marking examination. The filled and sealed shipping containers shall be examined for the defects listed in table IV 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-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0 for major defects and 10.0 for total defects.

TABLE IV. Shipping container defects

Category		Defect
Major	Minor	
101		National stock number, item description, contract number, name and address of producer, or date of pack missing, incorrect, or illegible.
102		Container not closed properly.
103		Interior packing not as specified.
	201	Other required markings missing, incorrect, or illegible.
	202	Arrangement or number of trays not as specified.

C. Unitization.

(1) Unit load examination. The unit load shall be examined in accordance with the requirements of DSCP Form 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items. Any nonconformance shall be classified as a major defect and shall be cause for rejection of the lot.

SECTION J REFERENCE DOCUMENTS

DPSC/DSCP FORMS

DPSC FORM 3556	Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence
DSCP FORM 3507	Loads, Unit: Preparation of Semiperishable Subsistence Items

MILITARY SPECIFICATIONS

MIL-PRF-32004 Packaging of Food in Polymeric Trays

GOVERNMENT PUBLICATIONS

Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder (21 CFR Parts 1-199)
U.S. Standards for Condition of Food Containers

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ)

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