

SECTION C

This document covers thermostabilized barbecue pulled pork packaged in a polymeric tray for use by the Department of Defense as a component of operational rations.

C-1 ITEM DESCRIPTION

PCR-P-043, PULLED PORK IN BARBECUE SAUCE, PACKAGED IN A POLYMERIC TRAY, SHELF STABLE

C-2 PERFORMANCE REQUIREMENTS

A. Product standard. A sample shall be subjected to first article (FA) or product demonstration model (PDM) inspection as applicable, in accordance with the tests and inspections of Section E of this Performance-based Contract Requirements (PCR) document. The approved sample shall serve as the product standard. Should the contractor at any time plan to, or actually produce the product using different raw material or process methodologies from the approved Product Standard, which result in a product non comparable to the Product Standard, the contractor shall arrange for a new or alternate FA or PDM approval. In any event, all product produced must meet all requirements of this document including Product Standard comparability.

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 80°F.

D. Appearance.

(1) General. The finished product shall be cooked pulled pork in barbecue sauce. The packaged food shall be free from foreign materials.

(2) Pork. The pork shall be “pulled” (shredded or cut into slivers). The pork shall be practically free of bone or bone fragments, cartilage, coarse connective tissue, tendons or ligaments, and glandular material. The cooked, pulled pork shall have a cooked pork color. There may be a reddish brown color from absorbed sauce.

(3) Sauce. The barbecue sauce shall be a deep reddish brown color and shall be smooth, glossy, and moderately thick.

PCR-P-043
31 March 2006
Change 01 21 May 2010

E. Odor and flavor. The packaged food shall have an odor and flavor of cooked pork in barbecue sauce. The packaged food shall be free from foreign odors and flavors.

F. Texture.

(1) Pork. The pork shall be moist and tender.

(2) Sauce. The sauce shall be smooth and may have small pieces of onion and tomato and spices.

G. Net weight. The average net weight shall be not less than 93 ounces. No individual polymeric tray shall have a net weight of less than 91 ounces.

~~H. Drained weight. The drained weight of the cooked pulled pork in an individual polymeric tray shall be not less than 48.0 ounces or more than 56.0 ounces.~~

Comment [MTF1]: Followup to ES10-040 (DSCP-SS-10-17224) change 01, 21 May 10. Section C-2, H. Drained weight. Delete entirely.

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

J. Analytical requirements.

(1) Fat content. The fat content shall be not greater than 9.0 percent.

(2) Salt content. The salt content shall be not less than 0.5 percent and not greater than 1.6 percent.

(3) Protein content. The protein content shall be not less than 12.0 percent.

Comment [MTF2]: Followup to ES10-040 (DSCP-SS-10-17224) change 01, 21 May 10. Section C-2, J. after Salt content insert the following: "(3) Protein content. The protein content shall be not less than 12.0 percent."

C-3 MISCELLANEOUS INFORMATION

THE FOLLOWING INGREDIENTS ARE FOR INFORMATION ONLY. THIS IS NOT A MANDATORY CONTRACT REQUIREMENT.

A. Ingredients. Cooked shredded pork with broth (pork, water, salt), water, barbeque sauce mix [processed from: sugar, maltodextrin, tomato powder, molasses powder (molasses solids, maltodextrin), brown sugar, food starch-modified, salt, honey powder (honey, high fructose corn syrup, wheat starch, corn syrup, soy flour), sodium diacetate, paprika, natural smoke flavor, citric acid, spices, onion powder, garlic powder, beet powder, with not more than 2% silicon dioxide added as an anti-caking agent], Worcestershire sauce (distilled vinegar, water, molasses, corn syrup, salt, caramel color, garlic powder, sugar, spices, anchovies, tamarind and natural flavors), modified food starch.

Note: This product was produced by The Wornick Company.

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.

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

D-2 LABELING

A. Polymeric tray body. The polymeric tray body 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. One end of the polymeric tray (see figure 1 of MIL-PRF-32004) shall be marked with the product name and number of portions. If the tray body end markings are not readily legible in low light conditions, a small, easily legible label shall be applied, but not over any existing tray markings. All other markings may be applied along the tray body side. To avoid erroneous marking of trays, the product name, lot number and filling equipment number shall be applied prior to processing. Additional tray marking may be applied before or after processing. ^{1/}

Tray body markings shall include:

- (1) Product name. Commonly used abbreviations may be used when authorized by the inspection agency.
- (2) Tray code includes: ^{2/}
 - Lot Number
 - Filling equipment identification number
 - Retort identification number
 - Retort cook 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, provided that the required markings are applied onto the tray body after processing.

PCR-P-043
31 March 2006
Change 01 21 May 2010

2/ 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, 31 March 2006 would be coded as 6090). 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, 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.

Note: The font tested by Natick was Microsoft Helvetica. The font used shall be similarly clear/easy to read as Helvetica. The recommended font sizes are as follows: 22 for the product name, 14 for "yield" and "to heat in water." If an additional note is required on the label, such as "fluff before serving," it should also be in font size 14. All other information should be in font size 9.

(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

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

YIELD: Serves 18 portions of approximately 2/3 cup each of pulled pork in barbecue sauce.

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).

Note: Stir pulled pork in barbecue sauce before serving.

WARNING: Do not heat tray in oven.

PCR-P-043
31 March 2006
Change 01 21 May 2010

TO TRANSPORT AFTER HEATING: Insert tray back into protective sleeve to protect during transport. 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.

D-3 PACKING

A. Packing for shipment to ration assembler. Four filled, sealed, processed and sleeved 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. 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 DSCP FORM 3556 Marking Instructions for Boxes, Sacks and Unit 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. Unless otherwise specified, Single Sampling Plans indicated in ANSI/ASQC Z1.4-1993 will be utilized. 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.

PCR-P-043
31 March 2006
Change 01 21 May 2010

(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 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 of the lot. The approved first article or product demonstration model shall be used as the product standard for periodic review evaluations. All food components that are inspected by the USDA shall be subject to periodic review sampling and evaluation. The USDA shall select sample units during production of contracts and submit them to the following address for evaluation:

US Army Research, Development and Engineering Command
Natick Soldier Center
AMSRD-NSC-CF-F
15 Kansas Street
Natick, MA 01760-5018

One lot shall be randomly selected during each calendar month of production. Two (2) sample units of each item produced shall be randomly selected from that one production lot. The two (2) sample units shall be shipped to Natick within five working days from the end of the production month and upon completion of all USDA inspection requirements. The sample units will be evaluated for the characteristics of appearance, odor, flavor, texture and overall quality.

(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 in 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

PCR-P-043
31 March 2006
Change 01 21 May 2010

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. ~~The samples for drained weight inspection shall be selected using the same sampling criteria as above.~~

Comment [MTF3]: Followup to ES10-040 (DSCP-SS-10-17224) change 01, 21 May 10. Section E-5, A., Product examination, make the following changes:
Delete sentence 6, "The samples for drained weight... sampling criteria as above."

TABLE I. Product defects 1/ 2/ 3/

Category		Defect
<u>Major</u>	<u>Minor</u>	
		<u>Appearance</u>
101		Product not cooked pulled pork in barbecue sauce.
102		Bone or bone fragment measuring more than 0.3 inch in any dimension.
	201	Total weight of cartilage, coarse connective tissue, tendons or ligaments, and glandular material more than 2.0 ounces.
	202	Pork not a cooked pork color. <u>4/</u>
	203	Sauce not a deep reddish brown color.
	204	Sauce not smooth or not glossy or not moderately thick.
		<u>Odor and flavor</u>
103		The packaged food does not have an odor or flavor of cooked pork in barbecue sauce.
		<u>Texture</u>
	205	Pork not moist or not tender.
	206	Sauce not smooth.
		<u>Net weight</u>
	207	Net weight of an individual polymeric tray less than 91 ounces. <u>5/</u>
		<u>Drained weight</u>

Comment [MTF4]: Followup to ES10-040 (DSCP-SS-10-17224) change 01, 21 May 10. Section E-5, A., Product examination, make the following changes:
Table I, Delete the following "Drained weight" and minor defect 208

PCR-P-043
31 March 2006
Change 01 21 May 2010

~~208 Drained weight of the cooked pulled pork in barbecue sauce in an individual polymeric tray less than 48.0 ounces or more than 56.0 ounces.~~

1/ Presence of any foreign materials 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/ Requirement for pulled pork shall be verified by a Certificate of Conformance.

4/ Reddish brown color from absorbed sauce shall not be scored as a defect.

5/ Sample average net weight less than 93 ounces shall be cause for rejection of the lot.

B. 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 36 month 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 polymeric 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. To determine drained weight, the free sauce in the tray shall be poured off and the remaining contents shall be poured into a flat bottom container. A minimum of three times the polymeric tray's volume of not less than 140°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 sauce without breaking the pork pieces. The contents shall then be poured into a U.S. Standard Number 7 sieve in a manner that will distribute the product over the sieve without breaking the pulled pork pieces. 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 such an angle so as to assure complete drainage of liquid from the product. Drain product for two minutes before determining the drained weight by subtracting~~

Comment [MTF5]: Followup to ES10-040 (DSCP-SS-10-17224) change 01, 21 May 10. Section E-5, B. (4) Drained weight. Delete entirely.

PCR-P-043
31 March 2006
Change 01 21 May 2010

the sieve tare weight from the gross weight. The drained weight shall be reported to the nearest 0.5 ounce.

(5) **Analytical**. The sample to be analyzed shall be a one-pound composite of three filled and sealed polymeric trays that have been selected at random from one production lot. The composite sample shall be prepared and analyzed in accordance with the following Official Methods of Analysis (OMA) of AOAC International.

Comment [MTF6]: Followup to ES10-040 (DSCP-SS-10-17224) change 01, 21 May 10. Section E-5, B. (5), after line 7, insert "Protein 984.13, 992.15 or 988.05"

Test	Method Number
Fat	985.15
Salt	935.47
Protein	984.13, 992.15 or 988.05

Test results shall be reported to the nearest 0.1 percent. Verification will be conducted through actual testing by a Government laboratory. Any result not conforming to the analytical requirements shall be cause for rejection of the lot.

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 polymeric tray with protective sleeve and polymeric tray material 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 of tray	Trays	1 tray	S-1
Oxygen gas transmission rate of lid	Yards	1/2 yard	S-1

PCR-P-043
31 March 2006
Change 01 21 May 2010

Water vapor transmission rate of tray	Trays	1 tray	S-1
Water vapor transmission rate of lid	Yards	1/2 yard	S-1
Camouflage	Containers	1 container	S-1

<u>After processing</u>			
Characteristic	Lot size expressed in	Sample unit	Inspection level
Processing	Trays	1 tray	S-2
Rough handling survivability	Test containers	1 container	S-2
Protective sleeve	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 with protective sleeve removed 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 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
<u>Major A</u>	<u>Minor</u>
101	Polymeric tray lid or body labeling missing, or 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.

(3) Label adhesive examination. When self-adhering labels are used, the adhesive shall be tested in accordance with ASTM D 3330/D 3330M, Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape. In lieu of testing, a Certificate of Conformance shall be provided.

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 and marking defects

Category	Defect
<u>Major</u>	<u>Minor</u>
101	Marking missing or incorrect or illegible.
102	Inadequate workmanship. <u>1/</u>
201	Arrangement or number of polymeric trays not as 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.

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.

SECTION J REFERENCE DOCUMENTS

PCR-P-043
31 March 2006
Change 01 21 May 2010

DSCP FORMS

DSCP FORM 3507 Loads, Unit: Preparation of Semiperishable Subsistence
Items
DSCP FORM 3556 Marking Instructions for Boxes, Sacks and Unit Loads of
Perishable and Semiperishable Subsistence

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) and (9 CFR Parts 1-391)

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ)

ANSI/ASQCZ1.4-1993 Sampling Procedures and Tables for Inspection by
Attributes

ASTM INTERNATIONAL

D 1974-98 (2003) Standard Practice for Methods of Closing,
Sealing, and Reinforcing Fiberboard Boxes
D 3330/D 3330M-04 Standard Test Method for Peel Adhesion of
Pressure-Sensitive Tape
D 5118/D 5118M-05a Standard Practice for Fabrication of Fiberboard
Shipping Boxes

AOAC INTERNATIONAL

Official Methods of Analysis (OMA) of the AOAC International

PCR-P-043
31 March 2006
Change 01 21 May 2010

For DSCP Website Posting

RDNS-CF-F

21 May 2010

TO: DSCP-FTRE

SUBJECT: Follow-up to ES10-040 (DSCP-SS-10-17224) Waiver Request to reduce drained weight requirement in PCR-P-043, Pulled Pork in Barbeque Sauce Packaged in a Polymeric Tray, Shelf Stable;

1. Reference:

a. Memo from RDNS-CF-F to DSCP-FTRE, dtd 12 February 2010,

SUBJECT: ES10-040 (DSCP-SS-10-17224) Waiver Request for failure to meet residual gas requirement and reduce drained weight requirement in PCR-P-043, Pulled Pork in Barbeque Sauce, Lots 9163 (3137 poly trays), 9258 (2140 poly trays) and 9259 (1346 poly trays) (total 6623 poly trays)

1. The contractor has requested a change to the subject document. The current document requires a drained weight of not less than 48.0 ounces or more than 56.0 ounces and does not have a protein requirement. During production, it was determined that the product could not be produced within these requirements without failing the residual gas requirement. Subsequent trials produced an unacceptable product.
2. The contractor requested that the drained weight requirement be removed and a protein requirement be added.
3. In reviewing nutrient data from previous submissions of this and similar products in operational rations, it has been determined that an acceptable protein requirement would be 12.0 percent, which should ultimately provide an acceptable product that meets all document and nutritional requirements. The recently approved PDM meets this protein requirement.
4. Natick recommends removing the drained weight requirement and adding a protein requirement of 12.0 percent.
5. Natick submits the following change to the subject document for all current, pending and future procurements until the document is formally amended or revised:

PCR-P-043
31 March 2006
Change 01 21 May 2010

- a. Section C-2, H. Drained weight. Delete entirely.
 - b. Section C-2, J. after "Salt content" insert the following:
“(3) Protein content. The protein content shall be not less than 12.0 percent.”
 - c. Section E-5, A., Product examination., make the following changes:
 - (1) Delete sentence 6, “The samples for drained weight... sampling criteria as above.”
 - (2) Table I, Delete the following “Drained weight” and minor defect 208
 - d. Section E-5, B. (4) Drained weight. Delete entirely.
 - e. Section E-5, B. (5), after line 7, insert “Protein 984.13, 992.15 or 988.05”
6. The Service reps were contacted and their replies were:
Army: Concurs with Natick.
Marines: Concurs with Natick.
Air Force: Concurs with Natick.
7. Attached is PCR-P-043, Pulled Pork in Barbeque Sauce, Packaged in a Polymeric Tray, Shelf Stable with Change 01 dated 21 May 10 with changes highlighted.