

## **SECTION C**

This document covers shelf stable scrambled eggs, cooked, dehydrated, packaged in a stand up pouch for use by the Department of Defense as a component of operational rations.

### **C-1 ITEM DESCRIPTION**

#### **PCR-E-001A, EGGS, SCRAMBLED, COOKED, DEHYDRATED, PACKAGED IN A STAND UP POUCH, SHELF STABLE**

##### Types.

- Type I – Scrambled eggs with uncured bacon
- Type II – Western style scrambled eggs with uncured ham, cheese, peppers and onions

### **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 noncomparable to the product standard, the contractor shall submit a replacement FA or PDM for approval. In any event, all product produced must meet all requirements of this document including product standard comparability.

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

##### C. Dehydrated product.

###### (1) Appearance.

a. General. The finished product shall be cooked, dehydrated scrambled egg pieces. The egg pieces shall be a light to medium yellow color. The finished product shall be fully dehydrated. The finished product shall be free from foreign materials.

b. Type I. The scrambled eggs shall have cooked, dehydrated uncured bacon. The cooked, dehydrated bacon pieces shall be a reddish-brown color.

c. Type II. The Western style scrambled eggs shall have cooked, dehydrated uncured ham, cheddar cheese, green and red bell peppers and onions. The cooked, dehydrated ham dices shall be a pinkish-beige color. The cooked, dehydrated green bell pepper pieces shall be a green color and red bell pepper pieces shall be a red color. The cooked, dehydrated onion pieces shall be an off-white color.

(2) Odor.

a. General. The dehydrated packaged food shall have a slight smoked egg odor. The dehydrated packaged food shall be free from foreign odors.

b. Type I. The scrambled eggs with uncured bacon shall have a bacon odor.

c. Type II. The Western style scrambled eggs shall have a ham odor.

(3) Texture. The product shall not have wet or soft spots indicating incomplete dehydration.

D. Net weight.

a. Type I. The net weight of an individual pouch shall be not less than 2.6 ounces (74 grams).

b. Type II. The net weight of an individual pouch shall be not less than 2.7 ounces (76 grams).

E. Rehydrated product.

(1) Appearance.

a. General. The finished product shall be rehydrated scrambled egg pieces. The egg pieces shall be a light to medium yellow color. The packaged food shall be practically free of bone or bone fragments, cartilage, coarse connective tissue, tendons or ligaments, and glandular material. The finished product shall be free from foreign materials.

b. Type I. The rehydrated bacon pieces shall be a reddish-brown color.

c. Type II. The rehydrated ham dices shall be a pinkish-beige color. The rehydrated green bell pepper pieces shall be a green color and red bell pepper pieces shall be a red color. The rehydrated onion pieces shall be a translucent white to off-white color.

(2) Odor and flavor.

a. General. The rehydrated packaged food shall have a cooked, moderate, smoked egg odor and flavor. The rehydrated packaged food shall be free from foreign odors and flavors.

b. Type I. The rehydrated packaged food shall have a cooked bacon odor and flavor.

c. Type II. The rehydrated packaged food shall have a cooked, moderate ham, bell pepper and a mild cheddar cheese and onion odor and flavor.

(3) Texture.

a. General. The product shall fully rehydrate within twelve minutes. The rehydrated eggs shall be moist and tender and may be slightly spongy.

b. Type I. The rehydrated bacon pieces shall be tender and slightly chewy.

c. Type II. The rehydrated ham dices shall be moist and tender. The rehydrated bell pepper and onion pieces shall be soft and tender.

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

G. Analytical requirements.

(1) Protein. The protein content shall be not less than 32.0 percent.

(2) Fat. The fat content shall be not greater than 41.0 percent.

(3) Sodium. For type I, the sodium content shall be not greater than 1600 mg per 100 grams. For type II, the sodium content shall be not greater than 2050 mg per 100 grams.

(4) Moisture. The moisture content of the dehydrated product shall be not greater than 3.0 percent.

(5) Oxygen. The oxygen content in the filled and sealed pouch shall not exceed 0.50 percent.

H. Microbiological requirements.

(1) Aerobic plate count. The aerobic plate count shall be not greater than 75,000 Colony Forming Units (CFU) per gram in four of five samples and not greater than 150,000 CFU per gram in any individual sample.

(2) Escherichia coli (E. coli) count. *E. coli* shall have less than 10 CFU per gram or less than 3 Most Probable Number (MPN) per gram, where findings indicate zero colonies CFU per plate or zero tubes producing gas for MPN.

(3) Salmonella. The *Salmonella* test shall be negative for each of five pouches tested per production lot.

**SECTION D**

**D-1 PACKAGING**

A. Packaging. Product shall be filled and sealed into a pouch with an oxygen scavenger in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT PACKAGED IN A STAND UP POUCH.

**D-2 LABELING**

The product shall be formulated and labeled in accordance with all USDA labeling regulations and policies. Each pouch shall be correctly and legibly labeled. Printing ink shall be permanent ink in a contrasting color which is free of carcinogenic elements. The label shall contain the following information:

- (1) Product name (letters not less than 1/8 inch high)
- (2) Ingredients
- (3) Date 1/
- (4) Net weight
- (5) Name and address of packer

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(6) “Nutrition Facts” label in accordance with the Nutrition Labeling and Education Act (NLEA) and all applicable USDA regulations

(7) Directions for preparation: Label shall include package opening instructions, instructions for removal and discard of oxygen scavenger, and amount of boiling water and time required to fully rehydrate the product.

1/ Each stand up pouch shall have the date of pack noted by using a four-digit code beginning with the final digit of the current year followed by the three-digit Julian day code. For example, 14 February 2050 would be coded as 0045. The Julian day code shall represent the day the product was packaged into the stand up pouch.

### **D-3 PACKING**

Packing for shipment to ration assembler shall be in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT PACKAGED IN A STAND UP POUCH.

### **D-5 MARKING**

Marking of shipping containers shall be in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT PACKAGED IN A STAND UP POUCH.

## **SECTION E INSPECTION AND ACCEPTANCE**

The following quality assurance criteria, utilizing ANSI/ASQ Z1.4, Sampling Procedures and Tables for Inspection by Attributes, are required. Unless otherwise specified, single sampling plans indicated in ANSI/ASQ Z1.4 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.

(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 appearance, odor, flavor, and texture. Any failure to conform to the performance requirements or any appearance or palatability failure shall be cause for rejection of the lot.

(2) Periodic review evaluation. 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:

COMBAT CAPABILITIES DEVELOPMENT COMMAND (DEVCOM) SOLDIER CENTER  
FCDD-SCD-SCR  
10 GENERAL GREENE AVENUE  
NATICK, MA 01760-5000

One lot shall be randomly selected during each calendar month of production or as otherwise specified in the contract. Three (3) sample units shall be randomly selected from that one production lot. The three (3) sample units shall be shipped to DEVCOM Soldier Center within five (5) working days from the end of the production month from which they are randomly selected and upon completion of all USDA inspection requirements. The sample units will be evaluated for overall quality against the current first article or product demonstration model.

(3) Conformance inspection. Conformance inspection shall include the examinations/tests and the methods of inspection cited in this section and in the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT PACKAGED IN A STAND UP POUCH.

**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/ASQ Z1.4. 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.

TABLE I. Product defects 1/ 2/

Category		Defect
<u>Major</u>	<u>Minor</u>	
<b><u>Dehydrated product</u></b>		
<u>Appearance</u>		
101		Product not cooked or not dehydrated scrambled egg pieces.
102		Tear or hole or open seal in oxygen scavenger. <u>3/</u>
103		Product not fully dehydrated. <u>4/</u>
	201	Egg pieces not a light to medium yellow color.
104		Type I scrambled eggs not with cooked or not dehydrated uncured bacon.
	202	Type I cooked, dehydrated bacon not pieces or not a reddish-brown color.
105		Type II Western style scrambled eggs not with cooked or not dehydrated uncured ham or not cheddar cheese or not green or not red bell peppers or not onions.
	203	Type II cooked, dehydrated ham not dices or not a pinkish-beige color.
	204	Type II cooked, dehydrated green bell pepper not pieces or not a green color or red bell pepper not pieces or not a red color.

TABLE I. Product defects 1/ 2/ - Continued

Category		Defect
<u>Major</u>	<u>Minor</u>	
	205	Type II cooked, dehydrated onion not pieces or not an off-white color.
		<u>Odor</u>
106		Dehydrated packaged food does not have a slight smoked egg odor.
107		Type I scrambled eggs with uncured bacon does not have a bacon odor.
108		Type II Western style scrambled eggs does not have a ham odor.
		<u>Texture</u>
109		Product has wet or soft spots indicating incomplete dehydration.
		<u>Net weight</u>
	206	Type I net weight of an individual pouch less than 2.6 ounces (74 grams).
	207	Type II net weight of an individual pouch less than 2.7 ounces (76 grams).
<b><u>Rehydrated product 5/</u></b>		
		<u>Appearance</u>
	208	Product not rehydrated scrambled egg pieces.
110		Bone or bone fragment measuring more than 0.3 inch in any dimension.
	209	Total weight of cartilage, coarse connective tissue, tendons or ligaments, and glandular material more than 0.35 ounce (9.9 grams).
	210	Egg pieces not a light to medium yellow color.
	211	Type I rehydrated bacon not pieces or not a reddish-brown color.



TABLE I. Product defects 1/ 2/ - Continued

Category	Defect
<u>Major</u>	<u>Minor</u>
	212 Type II rehydrated ham not dices or not a pinkish-beige color.
	213 Type II rehydrated green bell pepper not pieces or not a green color or red bell pepper not pieces or not a red color.
	214 Type II rehydrated onion not pieces or not translucent or not a white to off-white color.
	<u>Odor and flavor</u>
111	Rehydrated packaged food does not have a cooked, moderate, smoked egg odor or flavor.
112	Type I rehydrated packaged food does not have a cooked bacon odor or flavor.
113	Type II rehydrated packaged food does not have a cooked, moderate, ham or not a bell pepper or not a mild cheddar cheese or not onion odor or flavor.
	<u>Texture</u>
	215 The rehydrated eggs not moist or not tender.
	216 Type I rehydrated bacon pieces not tender or not slightly chewy.
	217 Type II rehydrated ham dices not moist or not tender.
	218 Type II rehydrated bell pepper or onion pieces not soft or not tender.

1/ Presence of any foreign materials such as, but not limited to dirt, insect parts, hair, glass, wood, or metal, or any foreign odors or flavors such as, but not limited to burnt, scorched, rancid, sour, stale, musty or moldy shall be cause for rejection of the lot. Foreign flavor is not applicable to dehydrated product.

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. Palatability not applicable to dehydrated product.

3/ Construction of the oxygen scavenger and compliance with FDA regulations shall be verified by Certificate of Conformance (CoC).

4/ Presence of dark colored cores or a glazed surface area more than 0.25 inch in any dimension.

5/ Prior to conducting the rehydrated product examination, the product shall be rehydrated per pouch instructions. Product that does not rehydrate within twelve minutes shall be cause for rejection of the lot.

B. Methods of inspection.

(1) 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 quality scale to be considered acceptable.

(2) 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 or to the nearest 1 gram.

(3) Analytical. The sample to be analyzed shall be a composite of eight filled and sealed pouches which have been selected at random from one lot. The composite sample shall be blended to uniformity using a blender or a food processor. The blending must be rapid and conducted in such a way that minimum heat is transferred to the product and that the product has minimum exposure to atmospheric moisture. The composite sample shall be analyzed in accordance with the following methods of the Official Methods of Analysis (OMA) of AOAC International:

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<u>Test</u>	<u>Method Number</u>
Protein	988.05 or 992.15
Fat	925.32, 991.36, 2007.04, or 2008.06
Sodium	984.27, 985.35, 2011.14, or 2011.19
Moisture <u>1/</u>	950.46A <u>2/</u> , 985.14 <u>3/</u> , or 2008.06

1/ Moisture determination may be performed on a calibrated Brookfield Ametek Computrac Moisture Analyzer using the manufacturer's recommended instructions for test method and sample preparation. Moisture analysis on this device shall be performed at 110°C for type I and 105°C for type II.

2/ When AOAC method 950.46A is performed, the temperature-time cycle for moisture analysis shall be modified by using a temperature of 70°C for 16 hours at a pressure of not more than 100 mm of mercury.

3/ AOAC method 985.14 may also be performed after the method has been validated against method 950.46A 2/.

Test results for the protein, fat and moisture shall be reported to the nearest 0.1 percent. Test results for sodium shall be reported to the nearest 1 milligram per 100 grams. Government verification will be conducted through actual testing by a Government laboratory. Any result not conforming to the analytical requirements specified in Section C of this Performance-based Contract Requirements document shall be cause for rejection of the lot.

(4) Oxygen testing. Eight filled and sealed pouches shall be randomly selected from one production lot and individually tested for oxygen content. Testing shall be accomplished after the filled and sealed pouches have been allowed to equilibrate at room temperature for not less than 96 hours from the time of sealing. Test results shall be reported to the nearest 0.01 percent. Any individual result not conforming to the oxygen content requirement specified in Section C of this Performance-based Contract Requirements document shall be classified as a major defect and shall be cause for rejection of the lot.

(5) Microbiological testing. Five filled and sealed pouches shall be selected at random from one lot regardless of lot size. The product shall be individually tested for microbiological levels in accordance with the OMA of AOAC International or the Food and Drug Administration (FDA) Bacteriological Analytical Manual (BAM). Government verification will be conducted through actual testing by a Government laboratory. Any result not conforming to the microbiological requirements specified in Section C of this Performance-based Contract Requirements document shall be cause for rejection of the lot.

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<u>Test</u>	<u>Method Number</u>
Aerobic plate count	966.23, 990.12, or BAM Ch. 3
<i>E. coli</i>	991.14 or BAM Ch. 4
<i>Salmonella</i>	967.26, 967.28, 991.13, 2003.09, 2004.03, 2013.09, or BAM Ch. 5

**E-6 QUALITY ASSURANCE PROVISIONS (PACKAGING AND PACKING MATERIALS)**

Inspection for packaging, labeling, packing, and marking shall be in accordance with the PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS FOR PRODUCT PACKAGED IN A STAND UP POUCH.

**SECTION J REFERENCE DOCUMENTS**

Unless otherwise specified, the applicable version of these documents is that which is active on the date of the solicitation or contract.

SPECIFICATION

PACKAGING REQUIREMENTS AND QUALITY ASSURANCE PROVISIONS  
FOR PRODUCT PACKAGED IN A STAND UP POUCH

GOVERNMENT PUBLICATION

FOOD AND DRUG ADMINISTRATION    Bacteriological Analytical Manual (BAM)  
<http://www.fda.gov/food/foodscienceresearch/laboratorymethods/ucm2006949.htm>

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR QUALITY (ASQ) [www.asq.org](http://www.asq.org)

ANSI/ASQ Z1.4            Sampling Procedures and Tables for Inspection by Attributes

AOAC INTERNATIONAL [www.aoac.org](http://www.aoac.org)

Official Methods of Analysis (OMA) of AOAC International