

**SECTION C**

The Meal, Ready-to-Eat™ (MRE™) provides an operational ration for the individual.

**C-1 ITEM DESCRIPTION**

**ACR-M-031, MEAL, READY-TO-EAT™ (MRE™), ASSEMBLY REQUIREMENTS**

**C-2 ASSEMBLY REQUIREMENTS**

A. Components. The components are specified in table I.

TABLE I. Components

Component	Reference
<u>Entrées</u>	
Beef Patty, Grilled	<a href="#">PCR-B-029</a>
Beef Ravioli in Meat Sauce	<a href="#">PCR-B-021</a>
Beef Roast with Vegetables	<a href="#">PCR-B-035</a>
Beef Stew	<a href="#">PCR-B-020</a>
Brisket Entrée (Gravy with Seasoned Beef Brisket Slices)	<a href="#">PCR-B-050</a>
Cheese Tortellini in Tomato Sauce	<a href="#">PCR-C-020</a>
Chicken Fajita	<a href="#">PCR-C-055</a>
Chicken, Noodles and Vegetables, in Sauce	<a href="#">PCR-C-021A</a>
Chicken Pesto Pasta	<a href="#">PCR-C-069</a>
Chicken, Pulled with Buffalo Style Sauce	<a href="#">PCR-C-074</a>
Chicken with Tomatoes and Feta Cheese	<a href="#">PCR-C-077</a>
Chili and Macaroni	<a href="#">PCR-C-027</a>
Chili with Beans	<a href="#">PCR-C-062</a>
Meatballs in Marinara Sauce	<a href="#">PCR-M-015</a>
Penne with Vegetable Sausage Crumbles in Spicy Tomato Sauce, Made with Whole Grain Penne Rigate	<a href="#">PCR-P-036</a> , Type II
Pork Rib, Boneless, Imitation, Smoke Flavoring Added	<a href="#">PCR-P-028</a>
Pork Sausage in Cream Gravy	<a href="#">PCR-P-047</a>
Pork Sausage Patty, Maple Flavored	<a href="#">PCR-P-045</a>
Ratatouille (Mixed Vegetables and Penne)	<a href="#">PCR-R-012</a>
Sloppy Joe Filling	<a href="#">PCR-S-013</a>

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TABLE I. Components - Continued

Component	Reference
Southwest Beef and Black Beans	<a href="#">PCR-S-018</a>
Spaghetti with Beef and Sauce	<a href="#">PCR-S-002</a>
Tuna, Flexible Pouch, Chunk, Light, Water Packed, Lemon Pepper, Regular Salt/Sodium Level	<a href="#">A-A-20155D</a> , Type B, Form I, Color a, Packing Media 1, Flavor 1, Salt/Sodium Level (a)
Vegetable Lasagna	<a href="#">PCR-V-008</a>
<u>Starches and Soups</u>	
Biscuit	<a href="#">PCR-B-049</a>
Cornbread	<a href="#">PCR-C-075</a>
Cornbread Stuffing	<a href="#">PCR-C-066</a>
Granola	<a href="#">PCR-G-003A</a>
With Milk and Blueberries	Type I
With Milk and Bananas	Type II
Potato Cheddar Soup Flavored with Bacon	<a href="#">PCR-P-046</a>
Potatoes, Mashed, Garlic	<a href="#">PCR-P-011A</a> , Flavor II
Refried Beans	<a href="#">PCR-R-007</a>
Rice	<a href="#">PCR-R-001A</a>
Mexican Rice	Type II
Santa Fe Style Rice and Beans	<a href="#">PCR-S-019</a>
Snack Bread, Fortified	<a href="#">PCR-S-009B</a>
Wheat Snack Bread, Single or Twin Pack	Type I, Style A or B
Chipotle Snack Bread	Type III
Italian Bread Sticks	Type IV
Tortillas	<a href="#">PCR-T-008</a>
<u>Fruits</u>	
Apple Pieces in Spiced Sauce	<a href="#">PCR-A-001A</a>
Cobbler, Cherry Blueberry	<a href="#">PCR-C-058</a> , Flavor I
Fruits, Osmotically Dried	<a href="#">A-A-20299B</a>
Sliced Cranberries, Not Fortified	Type VII, Fortification a
Raisins, Not Fortified	Type IX, Fortification a

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TABLE I. Components - Continued

Component	Reference
Fruits, Wet Pack	<a href="#">PCR-F-002C</a>
Pears, Sweetened, Slice or Diced	Type IV
Mixed Fruit, Sweetened	Type V
Applesauce, with Raspberry Puree, Sweetened, Reg.	Type VI
Applesauce, Carbohydrate Enhanced, Sweetened, Reg.	Type VII
Applesauce, with Mango and Peach Puree, Sweet, Reg.	Type VIII
<u>Desserts and Snacks</u>	
Beef and Turkey Snacks, Cured	<a href="#">A-A-20298B</a>
Beef, Moist Cured/Kippered, Chopped and Formed, Strips, Smoked	Variety A, Type II, Style a, Class 1, Flavor (a)
Turkey, Moist Cured/Lactate, Natural Style, Nuggets, Smoked	Variety B, Type III, Style b, Class 4, Flavor (a)
Cakes and Brownies, and Muffin Tops	<a href="#">PCR-C-007D</a>
Cakes	Type I
Vanilla Pound	Flavor 1
Lemon Poppy Seed Pound	Flavor 6
Spice Pound	Flavor 7
Almond Poppy Seed Pound	Flavor 8
Carrot Pound	Flavor 10
Marble Pound	Flavor 11
Brownies	Type II
Fudge Brownie with Chocolate Drops	Flavor 1
Muffin Tops	Type III
Chocolate Banana Nut	Flavor 1
Maple	Flavor 2
Cheese Spread, Cheddar; Fortified	<a href="#">PCR-C-039</a>
Plain	Type I
With Jalapeno Peppers	Type II
With Bacon	Type III

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TABLE I. Components - Continued

Component	Reference
Cookies, Regular, Individual Serving Package, Crisp	<a href="#">A-A-20295C</a> , Type I, Class 1, Bake Type a
Sugar, Patriotic	Style D, Shape (b)
Oatmeal, Plain	Style I, Flavor 1
Chocolate Chip, Plain	Style J, Flavor 1
Kreamsicle	Style K
Toffee Crunch	Style L
Crackers, Fortified	<a href="#">PCR-C-037</a>
Plain	Type I
Vegetable	Type II
Dessert Powder, Pudding, Regular, Instant,	<a href="#">A-A-20344A</a> , Type I,
Nonfat Dry Milk	Preparation Method C, Style 1
Vanilla	Flavor a
Chocolate	Flavor b
Filled Bakery Item	<a href="#">MIL-DTL-32221A</a>
Cinnamon Bun	Type II
Apple Turnover	Type III
First Strike™ Bar	<a href="#">PCR-F-001</a>
Chocolate, Regular	Flavor I, Style A
Apple-Cinnamon, Regular	Flavor II, Style A
Jelly, Fruit, Standardized, Single, Regular, U.S. Grade A	<a href="#">A-A-20078C</a> , Type I, Style 1, Finished Product Quality a
Apple	Kind A
Grape	Kind M
Nuts, Shelled, Roasted	<a href="#">A-A-20164D</a>
Peanuts, Virginia Type or Runner Type, Dry Roasted, Salt	Type V, Style A
Cashews, Halves (Splits), Jalapeno	Type VI, Size 2, Style C
Almonds (Unblanched), Flavored (Smoked)	Type IX, Style C
Nut and Fruit Mix	<a href="#">PCR-N-003</a>
Nut and Raisins	Type I
Nut and Raisins with Pan Coated Chocolate Disks	Type II
Peanut Butter and Peanut Spread, Regular,	<a href="#">A-A-20328A</a> , Class A, Type a,
Stabilized, Fortified	Fortification b
Peanut Butter, Smooth	Style I, Texture 1
Peanut Butter, Chunky/Crunchy	Style I, Texture 3
Peanut Spread, Smooth, Chocolate	Style II, Texture 1, Flavor 2

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TABLE I. Components - Continued

Component	Reference
Preserves (or Jams), Fruit, U.S. Grade A	<a href="#">A-A-20079C</a> , Type I, Finished Product Quality a
Single Fruit, Blackberry, Regular	Group I, Flavor A Style 1
Single Fruit, Strawberry, Regular	Group I, Flavor Q, Style 1
Ranger Bar	<a href="#">PCR-R-008B</a>
Caramel Apple	Flavor II
Chocolate Covered Chocolate Chip	Flavor III
Cran-apple	Flavor IV
Snack Foods	<a href="#">A-A-20195D</a>
Pretzels, Bavarian or Hard, Rods, Sticks,	Type II, Style A, B, C (Flavor 1
Twists (Original) or Nuggets, Plain, Salted	D (Flavor 1) or E (Flavor 1)
Filled Pretzels, Cheddar Cheese or Nacho Cheese	Type II, Style F, Flavor 1 or 2
Baked Snack Crackers, Cheddar Cheese or	Type V, Flavor 1 or 2
Hot and Spicy Cheese	
Toasted Corn Kernels, Plain, Salted	Type VI, Flavor 1
Cheese Filled Crackers, Cheddar Cheese or	Type VII, Flavor 1 or 2
Pepperoni Pizza	
Toaster Pastry, Regular, Shelf Stable, Not fortified,	<a href="#">A-A-20211B</a> , Type I,
Rectangular, Single Serving	Fort. b, Shape i, Servings a
Frosted Brown Sugar Cinnamon	Style B, Flavor 3
Chocolate Chip	Style B, Flavor 12
<u>Candy</u>	
Candy and Chocolate Confections	<a href="#">A-A-20177E</a>
Toffee, Chocolate Flavored, Roll or Cube	Type II, Style A or B
Pan Coated Candy	Type VI
Disks, Chocolate, Plain	Shape A, Flavor 1
Disks, Fruit Flavored, Original	Shape A, Flavor 2, Fl. Style a
Disks, Fruit Flavored, Berry	Shape A, Flavor 2, Fl. Style b
Disks, Fruit Flavored, Tropical	Shape A, Flavor 2, Fl. Style c
Disks, Peanut Butter	Shape A, Flavor 4
Oval/Round, Chocolate with Peanuts	Shape B, Flavor 1
Licorice Style Candy, Bite Size, Cherry	Type X, Shape B, Flavor 1
Caffeinated Mints, Round Tablets	Type XII, Style A
Peppermint	Flavor 1

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TABLE I. Components - Continued

Component	Reference
<u>Beverages</u>	
Beverage Base, Powdered	<a href="#">A-A-20098E</a>
Sweetened with Nutritive Sweetener	Type II
Flat Interlocking Closure Pouch	Design B
Orange, Fortified with Vitamin Pre-mix	Flavor 1, Formulation c
Small Flat Pouch	Design E
Orange, Fortified with Ascorbic Acid and Maltodextrin	Flavor 1, Formulation d
Lemon-Lime, with Ascorbic Acid and Maltodextrin	Flavor 4, Formulation d
Tropical Punch, with Ascorbic Acid and Maltodextrin	Flavor 10, Formulation d
Sweetened with Non-nutritive Sweetener	Type III
Lap or Fin Seal Pouch	Design D
Orange, with Vitamin C and Calcium	Flavor 1, Formulation h
Beverage Powder, Carbohydrate Electrolyte, Flat Pouch	<a href="#">PCR-B-013A</a> , Design A
Fruit Punch	Flavor I
Grape	Flavor II
Lemon-Lime	Flavor III
Orange	Flavor IV
Cocoa Beverage Powder, Fortified,	<a href="#">PCR-C-041</a> , Design B
Flat Interlocking Closure Pouch	
Cocoa Beverage Powder, Sugar Sweetened,	<a href="#">A-A-20189B</a> , Type I, Style B,
Without Marshmallows, Chocolate Hazelnut,	Flavor F, Design B
Flat Interlocking Closure Pouch	
Dairyshake Powder, Fortified with Calcium and Vit. D	<a href="#">PCR-D-002A</a>
Flat Interlocking Closure Pouch	Design B
Vanilla	Flavor I
Chocolate	Flavor II
Strawberry	Flavor III
Strawberry Banana	Flavor IV
Drink Mixes, Coffee (Flavored and Unflavored),	<a href="#">A-A-20336A</a>
Flavored Instant Cappuccino, Regular	Type V, Style A
Flat Interlocking Closure Pouch	Design B
French Vanilla	Flavor 1
Mocha	Flavor 2
Irish Cream	Flavor 4

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TABLE I. Components - Continued

Component	Reference
<u>Other Items</u>	
Bag, Hot Beverage	<a href="#">MIL-PRF-32176</a>
Barbecue Sauce, Plain/Regular, Without Fruit Purees	<a href="#">A-A-20335A</a> , Flavor I, Type B
Fork, Knife and Spoon, Picnic (Plastic), High Impact	A-A-3109B, Type IV, Item 13
Spoon, MRE, 7-inch (Brown)	
Hot Sauce, 1/8 fluid ounce pouch	<a href="#">A-A-20097F</a>
Extra Hot 4x	Type II
Mayonnaise, Salad Dressing and Tartar Sauce	<a href="#">A-A-20140D</a>
Mayonnaise, Fat Free	Type I, Style C
Natural Butter Flavor Granules, Spray Dried, Regular	<a href="#">A-A-20351</a> , Type I, Style A,
2 gram packet	Package 1
Ration Supplement, Flameless Ration Heater (FRH)	<a href="#">MIL-R-44398B</a>
Spices and Spice Blends	<a href="#">A-A-20001A</a>
Red Pepper, Ground	Type I, Class Z, Form 1
Seasoning Blend, Salt Free, with Herbs and Citrus	Type II, Class D, Blend (1)
Syrup, Table, Imitation Maple, Regular Calorie	<a href="#">A-A-20124D</a> , Type IV,
	Flavor A, Style 1

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B. Accessory components. Accessory components are specified in table II.

TABLE II. Accessory Components

Component	Reference	Acc. Pack
Chewing Gum, Tablet, Regular, Without Caffeine, Xylitol Sweetened, Peppermint or Cinnamon	<a href="#">A-A-20175C</a> , Type I, Size B, Style (1), Class 3, Flavor a or c	All
Hand Cleaner ( towelette), Unscented, Water Based	<a href="#">A-A-461B</a> , Type II	All
Matches, Safety	<a href="#">A-A-59489A</a> , Type I, Class B	A
Salt, Table, Iodized, 4 grams	<a href="#">NaCl Monograph</a>	All
Toilet Tissue, Institutional	<a href="#">A-A-59594</a> , Style II, Type A, Sheet b	All
Coffee, Instant, Freeze Dried, Reg.	<a href="#">A-A-20184B</a> , Type III, Style A	A, C
Creamer, Non-dairy, Dry, Regular, Original	<a href="#">A-A-20043C</a> , Style I, Flavor A	A, C
Sugar, 1/7 ounce	<a href="#">A-A-20135C</a> , Type I, Style A	A
Beverage Base (Powdered) <u>1/</u> Sweetened with Non-Nutritive Sweetener, Lap or Fin Seal Pouch	<a href="#">A-A-20098E</a> Type III Design D	B
Lemonade, Non-fortified	Flavor 8, Formulation a	
Raspberry, Non-fortified	Flavor 13, Formulation a	
Sugar Substitutes, Non-Carbohydrate Sucralose	<a href="#">A-A-20178A</a> , Type IV	C

1/ Flavors shall be procured in equal quantities and assembled in a uniform distribution.

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C. Contents. The contents of each meal are specified in table III. Refer to Table I for full citation and document number of components.

**Comment [C1]:** Natick case ES11-105, change 05, 17 Jun 11, to provide additional guidance for components.

TABLE III. Contents

<u>Menu #1</u> Chili with beans Cheese spread, plain Corn bread Crackers, plain Toaster pastry <u>1/</u> Dairyshake <u>1/</u> Spice, red pepper Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #2</u> Chicken fajita Refried beans Brownie Cheese spread, plain Tortillas Drink, cappuccino, Irish Cr. Spice, seasoning blend Accessory packet B Spoon Flameless ration heater Hot beverage bag	<u>Menu #3</u> Beef ravioli Toaster pastry <u>1/</u> Cookies <u>4/</u> Cheese spread, Jalapeno Crackers, plain Candy, caffeine mints Beverage, carb fortified, orange, formul c Hot sauce Accessory packet C Spoon Flameless ration heater Hot beverage bag
<u>Menu #4</u> Pork sausage, maple Granola, milk, blueberries Peanut butter, smooth Jam <u>1/</u> Crackers, plain Maple muffin top Beverage, sugar free, orange, vit. C and calcium Syrup Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #5</u> Chicken, tomato, feta Cornbread stuffing Fruit, dried <u>1/</u> Cheese spread, plain Crackers, veg Candy II <u>2/</u> Beverage, carbo electro <u>1/</u> Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #6</u> Beef patty Cheese spread, bacon Snack crackers, filled <u>1/</u> Nut raisin mix Snack bread, wheat, twin pack Beverage, carb fortified <u>1/</u> BBQ sauce Accessory packet A Spoon Flameless ration heater Hot beverage bag

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<u>Menu #7</u> Brisket entree Biscuit Cookies <u>4/</u> Cheese spread, plain Crackers, plain Candy I <u>2/</u> Cocoa Accessory packet B Spoon Flameless ration heater Hot beverage bag	<u>Menu #8</u> Meatballs marinara sauce Mashed potatoes, garlic Cheese spread, plain Tortillas Nuts <u>1/</u> First Strike™ bar <u>1/</u> Beverage, carb fortified <u>1/</u> Butter granules Accessory packet C Spoon Flameless ration heater Hot beverage bag	<u>Menu #9</u> Beef stew Peanut butter, smooth Jelly <u>1/</u> Snack bread, wheat Filled bakery, apple turnover Cocoa, hazelnut Hot sauce Accessory packet B Spoon Flameless ration heater Hot beverage bag
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<u>Menu #10</u> Chili and macaroni Beef snacks Dessert, pudding <u>1/</u> Cheese spread, Jalapeno Crackers, plain Candy III <u>2/</u> Beverage, carbo electro <u>1/</u> Spice, red pepper Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #11 Vegetarian</u> Vegetable lasagna Fruit, wet pack <u>1/</u> Cake <u>3/</u> Peanut butter, smooth Snack bread, wheat Drink, cappuccino, Fr. Van. Hot sauce Accessory packet B Spoon Flameless ration heater Hot beverage bag	<u>Menu #12 Vegetarian</u> Penne spicy pasta Fruit, wet pack <u>1/</u> Muffin top, choc. banana Snack bread, wheat Peanut butter, smooth Beverage, carbo electro <u>1/</u> Hot sauce Accessory packet A Spoon Flameless ration heater Hot beverage bag
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<u>Menu #13 Vegetarian</u> Cheese tortellini Apples, spiced First Strike™ bar <u>1/</u> Peanut butter, chunky Crackers, plain Candy II <u>2/</u> Beverage, carbo electro <u>1/</u> Spice, seasoning blend Accessory packet B Spoon Flameless ration heater Hot beverage bag	<u>Menu #14 Vegetarian</u> Ratatouille Snack, bake sn cracker <u>1/</u> Cake <u>3/</u> Peanut butter, smooth Crackers, plain Beverage, carb fortified <u>1/</u> Spice, seasoning blend Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #15</u> Southwest beef, black beans Rice, Mexican Snack, filled pretzels <u>1/</u> Cheese spread, plain Tortillas Beverage, carb fortified <u>1/</u> Spice, red pepper Accessory packet A Spoon Flameless ration heater Hot beverage bag
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<u>Menu # 16</u> Pork rib Potato cheddar soup Ranger bar <u>1/</u> Cheese spread, plain Snack bread, wheat, twin pac Candy II <u>2/</u> Beverage, carbo electro <u>1/</u> BBQ sauce Accessory packet B Spoon Flameless ration heater Hot beverage bag	<u>Menu #17</u> Pork sausage with gravy Granola with banana Biscuit Cheese spread, Jalapeno Snack bread, wheat Fruit, dried <u>1/</u> Beverage, carb fortified <u>1/</u> Hot sauce Accessory packet C Spoon Flameless ration heater Hot beverage bag	<u>Menu #18</u> Chicken with noodles Nut raisin mix with choc Peanut butter, smooth Snack bread, wheat Jam <u>1/</u> Beverage, carb fortified <u>1/</u> Hot sauce Accessory packet A Spoon Flameless ration heater Hot beverage bag
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<u>Menu #19</u> Beef roast with vegetables Fruit, wet pack <u>1/</u> Cake <u>3/</u> Peanut spread, chocolate Crackers, plain Cocoa Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #20</u> <del>Spaghetti with meat sauce</del> Spaghetti with beef and sauce Fruit, dried <u>1/</u> Cheese spread, plain Snack, pretzels <u>1/</u> Snack bread, chipotle Candy III <u>2/</u> Beverage, carb fortified, orange, formul c Hot sauce Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #21</u> Tuna, lemon pepper Tortillas Cookies <u>4/</u> Cobbler Candy I <u>2/</u> Dairyshake <u>1/</u> Mayonnaise, fat free Spice, seasoning blend Accessory packet B Spoon
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**Comment [C2]:** Natick case ES11-105, change 05, 17 Jun 11, provide correct component name.

<u>Menu #22</u> Sloppy Joe Peanut butter, chunky Jelly <u>1/</u> Snack bread, wheat Cinnamon bun Candy I <u>2/</u> Beverage, carbo electro <u>1/</u> Hot sauce Accessory packet C Spoon Flameless ration heater Hot beverage bag	<u>Menu #23</u> Chicken pesto pasta Cheese spread, plain Snack bread, Italian Snacks, corn nuts Dessert, pudding <u>1/</u> Beverage, carbo electro <u>1/</u> Spice, red pepper Accessory packet A Spoon Flameless ration heater Hot beverage bag	<u>Menu #24</u> Buffalo chicken Santa Fe rice and beans Patriotic Cookies Turkey nuggets Cheese spread, Jalapeno Tortillas Drink, cappuccino, Mocha Accessory packet B Spoon Flameless ration heater Hot beverage bag
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1/ Flavors shall be procured in equal quantities and assembled in a uniform distribution. Wet pack fruit (Menus 11, 12, 19) include raspberry applesauce, carbohydrate enhanced applesauce, mango/peach applesauce, pears, and mixed fruit. Nuts (Menu 8) include dry roasted peanuts, smoked almonds and Jalapeno cashews. Dairyshakes (Menus 1, 21) include vanilla, chocolate, strawberry-banana and strawberry. Jams (Menus 4, 18) include blackberry and strawberry. Jellies (Menus 9, 22) include apple and grape. Beverages with nutritive sweetener (Menus 6, 8, 14, 15, 17, 18) include orange, lemon-lime and tropical punch. Beverages with carbohydrate electrolyte (Menus 5, 10, 12, 13, 16, 22, 23) include fruit punch, grape, lemon-lime and orange. Dried fruit (Menus 5, 17, 20) include cranberries and raisins. Toaster pastries (Menus 1, 3) include brown sugar cinnamon and chocolate chip. Puddings (Menus 10, 23) include vanilla and chocolate. First Strike™ bars (Menus 8, 13) include chocolate and apple-cinnamon. Ranger bars (Menu 16) include caramel apple, chocolate cover chocolate chip and cran-apple. Pretzels (Menu 20) include rods, sticks, twists and nuggets. Filled pretzels (Menu 15) include cheddar cheese and nacho cheese. Baked snack crackers (Menu 14) include cheddar cheese and hot and spicy cheese. Cheese filled crackers (Menu 6) include cheddar cheese and pepperoni pizza.

2/ Candy I (Menus 7, 21, 22) include chocolate toffee rolls and toffee chocolate cube; Candy II (Menus 5, 13, 16) include plain chocolate disks, chocolate with peanuts ovals and peanut butter disks; and Candy III (Menus 10, 20) include original, tropical and berry fruit disks and licorice; shall be procured in equal quantities and assembled in a uniform distribution.

3/ Cakes; vanilla, lemon poppy, spice, almond poppy, carrot and marble; shall be procured in equal quantities and assembled in a uniform distribution in Menus 11, 14 and 19.

4/ Cookies (Menus 3, 7 and 21) include oatmeal, chocolate chip, creamsicle and toffee crunch. Cookies shall be procured in equal quantities and assembled in a uniform distribution.

**SECTION D**

**D-1 PACKAGING**

A. Components.

(1) Subassembly packet/accessory packet. The subassembly/accessory packet shall be a preformed packet or a form-fill-seal packet. Dimensions shall be sufficient to contain all components. Seals shall be a minimum 1/8 inch wide. A tear nick, notch or serrations shall be provided to facilitate opening the filled and sealed pouch. The average seal strength of the packet seals shall be not less than 3.5 pounds per inch of width and no individual specimen shall have a seal strength of less than 3.0 pounds per inch of width. As an alternative to the seal strength requirement, the filled and sealed packet shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective seal width to less than 1/16 inch when tested for internal pressure resistance. The packet shall be made from polymeric films or film combinations with adequate strength and thickness to contain and protect the components. The water vapor transmission rate (WVTR) of the film shall not exceed 6.2 gm/m<sup>2</sup>/24hrs/90%rh/100°F when tested in accordance with ASTM F 372, Standard Test Method for Water Vapor Transmission Rate of Flexible Barrier Materials Using an Infrared Detection Technique; ASTM E 96, Standard Test Methods for Water Vapor Transmission of Materials or Method 3030 of FED-STD-101, Test Procedures for Packaging Materials. The exterior color of the packet shall be clear or tan.

(2) Time-temperature indicator (TTI) label. The TTI label shall be a 3/4 inch square, bull's-eye type, pressure sensitive adhesive label. The TTI label shall have an activation energy (Ea) of 24–30 kcal/mole, be protected from ultraviolet radiation and have a shelf life of 1100 days at 80°F as pivot point.

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(3) Meal bag. The meal bag shall be made from food grade, low density polyethylene (LDPE) tubing or tubing made from a blend of food grade, low density polyethylene (LDPE) and linear-low density polyethylene (LLDPE). Additives may be used in order to improve sealability, peelability, tear resistance or other attributes provided all additives are food grade and are certified by the FDA as approved for food contact. Polyethylene shall have a minimum thickness of 0.010 inch. Inside dimensions of the bag shall not exceed 8-1/2 by 13-1/4 inches. The color of the bag shall conform to number 20219, 30219, 30227, 30279, 30313, 30324 or 30450 of FED-STD-595, Colors Used in Government Procurement. One seal shall be a minimum 1/8 inch wide, continuous, peelable seal that forms a hermetic closure. The seal shall be designed with an inverted “V” shaped peel indicator along the seal path. There shall be a minimum of 1/2 inch between the apex of the “V” and the end of the bag. The seal strength of the peelable seal shall be not less than 4 pounds per inch of width and shall be not greater than 10 pounds per inch of width. Alternative bag construction, bag materials, and material thicknesses may be used provided that the alternative method can be demonstrated to meet or exceed the requirements of this document and military abuse testing and controlled pest testing. Samples may be submitted to the contracting officer to be qualified on a case by case basis.

**B. Assembly.**

(1) Subassembly/accessory packet assembly. One of each applicable component as described in table II shall be inserted in a packet. If a subassembly is used, additional components may also be inserted in the packet. For a preformed packet, contents shall be inserted in the pouch and the pouch shall be closed with a heat seal not less than 1/8 inch wide. For a form-fill-seal packet, components shall be placed in the body and the cover applied by heat sealing with a seal not less than 1/8 inch wide. The closure seal shall be free of foldover wrinkles or entrapped matter that reduces the effective seal width to less than 1/16 inch. The average seal strength of the packet seals shall be not less than 3.5 pounds per inch of width and no individual specimen shall have a seal strength of less than 3.0 pounds per inch of width. As an alternative to the seal strength requirement, the filled and sealed pouch shall exhibit no rupture or seal separation greater than 1/16 inch or seal separation that reduces the effective closure seal width to less than 1/16 inch when tested for internal pressure resistance

(2) Meal assembly. Each applicable component for each meal as described in table III shall be inserted in a meal bag. The bag shall be closed with a heat seal not less than 1/8 inch wide. The closure seal shall have an average seal strength of not less than 4 pounds per inch of width with no individual specimen test result less than 3 pounds per inch of width. The sealed meal bag shall not show any evidence of foreign odor.

**D-2 LABELING**

A. Subassembly/accessory packet. The subassembly/accessory packet shall be labeled on one face in permanent dark contrasting color ink with 'A', 'B' or 'C', as applicable. Alternatively, the packet letter may be embossed in the seal of the packet.

B. Meal bag. Each meal bag shall be correctly and legibly labeled on at least one face with permanent ink or other dark contrasting color with the information contained in accordance with Figures 1, 2 or 3, as applicable. The label shall cite the correct Menu number, name of entrée, name and address of assembler, and cite "Vegetarian" for Menus 11-14. Menus 1-4, and 13-16 shall be printed in accordance with Design 1 (Figure 1). Menus 5-8 and 17-20 shall be printed in accordance with Design 2 (Figure 2). Menus 9-12 and 21-24 shall be printed in accordance with Design 3 (Figure 3).

**D-3 PACKING**

A. Packing. Twelve meals shall be packed in a fiberboard box. Case "A" shall contain meals 1 through 12, and case "B" shall contain meals 13 through 24. The fiberboard box shall conform to RSC-L of ASTM D 5118/D 5118M, Standard Practice for Fabrication of Fiberboard Shipping Boxes and grade V2s of ASTM D 4727/D 4727M Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes, except the requirements for dry burst strength shall be minimum 425 psi, the requirement for wet burst strength shall be minimum 250 psi and the laminated board thickness shall be 0.069 inches. [US Army Research, Development and Engineering Command; Natick Soldier Research, Development, and Engineering Center found that solid fiberboard shipping container material consisting of two outer facings of 90 pound wet strength linerboard and an inner ply of 69# linerboard meets the performance criteria of this specification.] The box liner shall be a full inside width box liner fabricated from grade W5c fiberboard in accordance with ASTM D 5118/D 5118M, except the terminal ends of the liner shall overlap a minimum of 2 inches and no fastening of the overlap is required. The box shall be closed in accordance with closure method 2A1 of ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes; except the gap between the outer flaps shall be not more the 3/4 inch wide. Each box shall be reinforced with two girthwise nonmetallic straps. The inside dimensions of the box shall be 16-11/16 inches in length, 9-1/8 inches in width and 10-1/4 inches in depth.

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#### **D-4 UNITIZATION**

A. Unit loads. Forty-eight boxes shall be arranged in unit loads in accordance with type I, class C of DLA Troop Support Form 3507, Loads, Unit: Preparation of Semiperishable Subsistence Items. Each load shall have 24 "A" cases and 24 "B" cases. At least two boxes in each tier shall be oriented to display the TTI label.

#### **D-5 MARKING**

A. Shipping containers. Shipping containers shall be marked in accordance with DSCP FORM 3556, Marking Instructions for Boxes, Sacks, and Unit Loads of Perishable and Semiperishable Subsistence and as specified in the contract with the following exceptions:

(1) Identification markings normally placed on an end of the shipping container shall read from top to bottom, left to right, when the shipping container is rotated from its upright position onto its side for palletization. The major flaps of the shipping container closure immediately to the right of the marked end of the shipping container shall bear the following marking:

Contract data and other required markings  
Date of pack  
Lot number  
Case A or B, as applicable  
U.S. GOVERNMENT PROPERTY – COMMERCIAL RESALE IS UNLAWFUL  
NOTE: WATER ACTIVATED Flameless Ration heater,  
NSN 8970-01-321-9153, supplied in each MRE bag

Time Temperature Indicator label shall be centrally positioned on the panel. A minimum distance (quiet zone) of 1/4 inch from the nearest identification marking shall be maintained.

(2) One side panel of shipping container shall be marked "MEAL, READY-TO-EAT™, INDIVIDUAL" in letters not less than 1-1/4 inches high. Underneath the ration nomenclature, in letters not less than 1 inch, the shipping container shall be marked "DO NOT ROUGH HANDLE WHEN FROZEN (0°F or below)".

B. Unit loads. Unit loads shall be marked in accordance with DLA Troop Support Form 3556. In addition, each unit load shall be provided with a Material Safety Data Sheet (MSDS), in accordance with MIL-R-44398. The MSDS shall be packaged and attached to one side of the unit load. A copy of the MSDS must be included with the shipping papers and a copy must also be placed in the vehicle manifest.

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Peelable Seal ↗



**Meal, Ready-to-Eat,  
Individual**

Warfighter Recommended,  
Warfighter Tested,  
Warfighter Approved™



**MENU 18  
MEATBALLS  
IN MARINARA  
SAUCE**

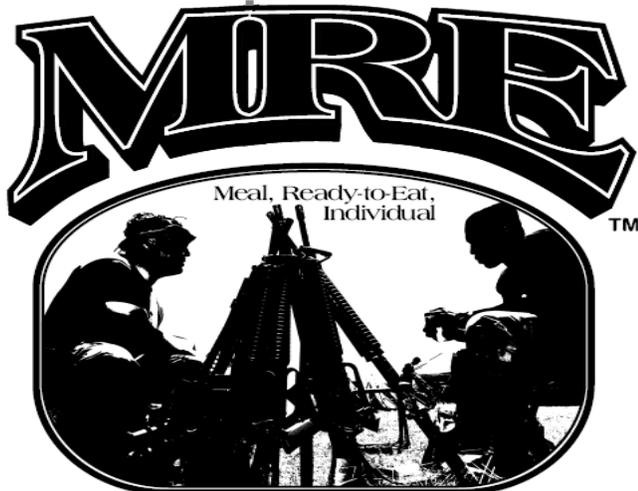
**THE WORNICK COMPANY  
CINCINNATI, OHIO 45242  
U.S. GOVERNMENT PROPERTY  
COMMERCIAL RESALE IS UNLAWFUL**

**FLAMELESS RATION HEATERS ARE PROHIBITED ON COMMERCIAL  
AIRLINES UNLESS SEALED IN ORIGINAL MRE MENU BAG**

FIGURE 1. Design 1 of Meal Bag Graphics

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Peelable Seal ↑



**MENU 18**  
**Meatballs**  
**in Marinara**  
**Sauce**

Warfighter Recommended, Warfighter Tested, Warfighter Approved™

**SOPAKCO INC.**  
**MULLINS, SC 29574-1047**  
**U.S. GOVERNMENT PROPERTY**  
**COMMERCIAL RESALE IS UNLAWFUL**

**FLAMELESS RATION HEATERS ARE PROHIBITED ON COMMERCIAL AIRLINES UNLESS SEALED IN ORIGINAL MRE MENU BAG**

FIGURE 2. Design 2 of Meal Bag Graphics

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Peelable Seal ↑



**MENU 18  
MEATBALLS  
IN MARINARA SAUCE**

**MRE™**  
**MEAL, READY-TO-EAT, INDIVIDUAL**

**Warfighter Recommended,  
Warfighter Tested,  
Warfighter Approved™**

**AMERIQUAL PACKAGING  
EVANSVILLE, IN 47710**

**U.S. GOVERNMENT PROPERTY  
COMMERCIAL RESALE IS UNLAWFUL**

**FLAMELESS RATION HEATERS ARE PROHIBITED ON COMMERCIAL  
AIRLINES UNLESS SEALED IN ORIGINAL MRE MENU BAG**

FIGURE 3. Design 3 of Meal Bag Graphics

**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 of Conformance (CoC) to the appropriate inspection activity. CoCs 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. Conformance inspection. Conformance inspection shall include the examinations/tests and the methods of inspection cited in this section.

C. Packaging examination.

(1) Pouch material certification. The pouch material shall be tested for these characteristics. A Certificate of Conformance (CoC) may be accepted as evidence that the characteristics conform to the specified requirements.

<u>Requirement</u>	<u>Requirement para</u>	<u>Test procedure</u>
Thickness of meal bag	D-1,A(3)	ASTM D 2103 <u>1/</u>
Color of meal bag and subassembly/accessory packet	D-1,A(1) and D-1,A(3)	Visual evaluation and FED-STD-595, as applicable <u>2/</u>
Water vapor transmission rate	D-1,A(1)	ASTM F 372, ASTM E 96 or Method 3030, FED-STD-101 <u>3/</u>

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- 1/ ASTM D 2103 Standard Specification for Polyethylene Film and Sheeting
- 2/ FED-STD-595 Colors Used in Government Procurement
- 3/ ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials  
 ASTM F 372 Standard Test Method for Water Vapor Transmission Rate of Flexible  
 Barrier Materials Using an Infrared Detection Technique  
 FED-STD-101 Test Procedures for Packaging Materials

(2) Subassembly/accessory packet examination. The filled and sealed packets shall be examined for the defects listed in table IV. The lot size shall be expressed in packets. The sample unit shall be one packet. The inspection level shall be S-4 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects and 4.0 for minor defects.

TABLE IV. Subassembly/accessory packet defects

Category	Defect
<u>Major</u> 101	Not clean. <u>1/</u>
<u>Minor</u> 201	Seal width less than 1/16 inch. <u>2/</u>
202	Tear nick or notch or serrations missing or does not facilitate opening.
203	Tear or hole or open seal.
204	Label missing or incorrect or illegible.
205	Pouch not sealed on four sides.

1/ Outer packaging shall be free from foreign matter, which is unwholesome, has the potential to cause package damage (for example, glass, metal fillings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

- a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the

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package with a clean dry cloth.

b. Localized dried product which affects less than 1/8 of the total surface area of one pouch face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one pouch face.

2/ An effective seal is defined as any uncontaminated, fusion bonded, continuous path, minimum 1/16 inch wide, producing a hermetically sealed pouch.

(3) Subassembly/accessory packet contents examination. The filled and sealed packets shall be examined for the defects listed in table V (this examination may be performed on the preformed packets after filling and prior to sealing). The lot size shall be expressed in packets. The sample unit shall be one packet, open or sealed. The inspection level shall be S-4 and the AQL, expressed in terms of defects per hundred units, shall be 1.5 for major defects and 4.0 for minor defects.

TABLE V. Subassembly/accessory packet contents defects

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Component not clean. <u>1/</u>
	201	Missing or unserviceable component.
	202	Plastic shrink film missing from around screw cap of hot sauce bottle or hot sauce bottle leaking, as applicable.

1/ Outer packaging shall be free from foreign matter, which is unwholesome, has the potential to cause package damage (for example, glass, metal filings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.

b. Localized dried product which affects less than 1/8 of the total surface area of one package face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one package face.

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(4) Assembled meal bag examination. The filled and sealed meal bags shall be inspected for the defects listed in table VI. The lot size shall be expressed in bags. The sample unit shall be one bag. The inspection level shall be S-4 and the AQL, expressed in terms of defects per hundred units, shall be 2.5 for major defects and 4.0 for minor defects. A minimum of 50 samples shall be examined for critical defects. The finding of any critical defect shall be cause for rejection of the lot. The inspection sample shall contain a proportionate amount of each of the meals.

TABLE VI. Assembled meal bag defects

Category			Defect
<u>Critical</u>	<u>Major</u>	<u>Minor</u>	
1			Tear or hole or puncture through carton or open carton causing a hole in the pouch or obviously wet or stained carton due to leaking pouch. <u>1/</u>
2			Tear or hole or open seal in cheese spread.
3			Swollen cheese spread pouch, or swollen pouch or carton of thermostabilized item.
4			Tear or hole or puncture in uncartoned thermostabilized pouch.
	101		Tear or hole in carton exposing pouch to potential damage.
	102		Menu component missing or incorrect assortment for menu. <u>4/</u>
	103		Meal bag not clean or outer packaging of its contents not clean. <u>2/</u>
	104		Foreign odor.
	105		Labeling missing or incorrect or illegible.
	106		Swollen peanut butter or jelly or jam pouch.

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TABLE VI. Assembled meal bag defects (continued)

Category			Defect
<u>Critical</u>	<u>Major</u>	<u>Minor</u>	
	107		Tear or hole or open seal in component packages.
	108		Crushed or broken component. <u>3/</u>
	109		Broken spoon.
	110		Chocolate toffee rolls or cubes not packaged in barrier pouch.
		201	Tear or hole or open seal or split in meal bag.
		202	Tear or hole or open seal in subassembly/accessory packet.
		203	Thermostabilized carton flaps open or tear or hole in carton not exposing pouch to potential damage.
		204	Inverted "V" shaped peel indicator missing or not located as specified.
		205	Plastic shrink film missing from around screw cap of hot sauce bottle or hot sauce bottle leaking, as applicable.
		206	Labeling graphics of meal bag not correct.

1/ Applies to cartoned items.

2/ Outer packaging shall be free from foreign matter, which is unwholesome, has the potential to cause package damage (i.e. glass, metal filings, etc.), or generally detracts from the clean appearance of the package. The following examples shall not be scored as defects for unclean:

a. Foreign matter which presents no health hazard or potential package damage and which can be readily removed by gently shaking the package or by gently brushing the package with a clean dry cloth.

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b. Localized dried product which affects less than 1/8 of the total surface area of one pouch face, or an aggregate of scattered dried product which affects less than 1/4 of the total surface area of one pouch face.

3/ For definition of crushed or broken, refer to applicable ration component document.

4/ A missing entrée shall be cause for rejection of the lot.

D. Methods of inspection.

(1) Seal testing. The pouch seals shall be tested for seal strength or internal pressure resistance as required in a, b, c, or d, as applicable.

a. Unfilled preformed subassembly/accessory packet pouch. The seals of the unfilled preformed pouches for the subassembly/accessory packet shall be tested for seal strength in accordance with ASTM F 88, Seal Strength of Flexible Barrier Materials. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection shall be level S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. Three specimens shall be cut from each of the three sealed sides of each pouch in the sample. The average seal strength of any side shall be calculated by averaging the results of the three specimens cut from that side. Any test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table IV, footnote 2/) shall be considered a test failure. Any test failure shall be a major defect and shall be cause for rejection of the lot.

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b. Unfilled meal bag. The seals of the unfilled meal bags shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the sealed end of each bag in the sample. Samples shall not be taken from the inverted "V" peel initiation. Any specimen with a seal strength less than 4 pounds per inch of width or greater than 10 pounds per inch of width shall be a major defect and shall be cause for rejection of the lot.

c. Subassembly/accessory packet pouch closure. The closure seals of the pouches for the subassembly/accessory packet shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in pouches. The sample unit shall be one pouch. The inspection level shall be S-1 and the AQL, expressed in defects per hundred units, shall be 10.0. For the closure seal on preformed pouches, three adjacent specimens shall be cut from the closure seal of each pouch in the sample. For the form-fill-seal pouches, three specimens shall be cut from each side and each end of each pouch in the sample. The average seal strength of any side, end or closure shall be calculated by averaging the three specimens cut from that side, end or closure. Any test specimen failing to meet a seal strength of 3 pounds per inch of width shall be scored as a major defect. Any average seal strength of less than 3.5 pounds per inch of width shall be cause for rejection of the lot. Alternatively, the internal pressure resistance shall be determined by pressurizing the pouches while they are restrained between two rigid plates. The sample size shall be the number of pouches indicated by inspection level S-1. If a three seal tester (one that pressurizes the pouch through an open end) is used, the closure seal shall be cut off for testing the side and bottom seals of the pouch. For testing the closure seal, the bottom seal shall be cut off. The pouches shall be emptied prior to testing. If a four-seal tester (designed to pressurize filled pouches by use of a hypodermic needle through the pouch wall) is used, all four seals can be tested simultaneously. The distance between rigid restraining plates on the four-seal tester shall be equal to the thickness of the product +1/16 inch. Pressure shall be applied at the approximate uniform rate of 1 pound per square inch gage (psig) per second until 14 psig pressure is reached. The 14 psig pressure shall be held constant for 30 seconds and then released. The pouches shall then be examined for separation or yield of the heat seals. Any rupture of the pouch or evidence of seal separation greater than 1/16 inch in the pouch manufacturer's seal shall be considered a test failure. Any seal separation that reduces the effective closure seal width to less than 1/16 inch (see table IV, footnote 2/) shall be considered a test failure. Any test failure shall be a major defect and shall be cause for rejection of the lot.

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d. Meal bag closure. The closure seals of the meal bags shall be tested for seal strength in accordance with ASTM F 88. The lot size shall be expressed in bags. The sample unit shall be one bag. The sample size shall be the number of bags indicated by inspection level S-1. Three specimens shall be cut from the closure seal of each bag in the sample. The average seal strength shall be calculated by averaging the three test specimens cut from that seal (the sample unit). Any test specimen result less than 3 pounds per inch of width shall be cause for rejection of the lot. Any average seal strength of less than 4 pounds per inch of width shall be cause for rejection of the lot.

(2) Unfilled meal bag and unfilled preformed subassembly/accessory packet pouch seal certification. A CoC may be accepted as evidence that unfilled bags or pouches conform to the seal strength requirements specified in D-1,A(1) and (3). When deemed necessary by the government inspector, testing of the unfilled preformed pouches for seal strength shall be as specified in E,D(1)a.

E. Packing.

(1) Shipping container and marking examination. The filled and sealed shipping containers shall be examined for the defects listed in table VII. 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.

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TABLE VII. Shipping container and marking defects

Category		Defect
<u>Major</u>	<u>Minor</u>	
101		Marking missing or incorrect or illegible.
102		Outer flaps do not completely meet, leaving an opening greater than 3/4 inch between flap ends.
103		Inadequate workmanship. <u>1/</u>
104		Missing meal. <u>2/</u>
105		Not one of each menu specified.
	201	Time-temperature indicator missing or not centrally located on panel.
	202	Time-temperature indicator 1/4-inch quiet zone not maintained.
	203	Meal bag graphics do not coincide with specified design.

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.

2/ Each missing meal is a defect.

(2) Flap closure testing. The lot size shall be expressed in shipping containers. The sample unit shall be one shipping container. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 4.0. The closure of the four outer flaps of the container shall be tested separately. A 90 degree angular bar with each leg approximately 5 inches long by 3 inches wide by 1/8 inch thick shall be used to test the flap closures. Insert one leg of the angular bar full length under the center of one outer flap. Insertion shall be made through the open slot between the outer flaps. Lift the container vertically by the other leg of the bar until the container is suspended. The complete upper surface of the inserted leg shall be in contact with the inner surface of the flap during the lifting and suspension of the container. Complete separation of the adhesive bond of one or more of the outer flaps, showing no evidence of fiber tear, shall be scored as a major defect.

F. Unit load examination. The unit load shall be examined in accordance with the requirements of DLA Troop Support Form 3507. Any nonconformance shall be classified as a major defect.

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**SECTION J REFERENCE DOCUMENTS**

Unless otherwise specified, the issues of these documents are those active on the date of the solicitation or contract.

DLA Troop Support Forms

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

MILITARY SPECIFICATIONS

MIL-PRF-32176	Bag, Hot Beverage
MIL-R-44398B	Ration Supplement, Flameless Ration Heater (FRH)

FEDERAL STANDARDS

FED-STD-101	Test Procedures for Packaging Materials
FED-STD-595	Colors Used in Government Procurement

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

ASTM INTERNATIONAL [www.astm.org](http://www.astm.org)  
D 1974 Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes  
D 2103 Standard Specification for Polyethylene Film and Sheeting  
D 4727/D 4727M Standard Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shape  
D 5118/D 5118M Standard Practice for Fabrication of Fiberboard Shipping Boxes  
E 96/E 96M Standard Test Methods for Water Vapor Transmission of Materials  
F 88 Standard Test Method for Seal Strength of Flexible Barrier Materials  
F 372 Standard Test Method for Water Vapor Transmission Rate of Flexible Barrier Materials Using an Infrared Detection Technique

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## For DLA Troop Support Website Posting

RDNS-CFF

17 June 2011

TO: DLA Troop Support- Subsistence DSCP-FTRA

SUBJECT: ES11-105; Document Changes, Updated Reference in ACR-M-031 Meal, Ready-to-Eat™ (MRE™), Assembly Requirements

1. Natick, with the enhanced scrutiny of contract awards and the initial assembly of MRE 31, has recommended some corrections and updates that will keep the MRE assembly document current. Emails with comments were received and additional review of the ACR-M-031 was conducted.

2. The following changes to ACR-M-031 are recommended for current, pending and future MRE 31 contracts:

a. Section C-2,C, Add “Refer to Table I for full citation and document number of components.”

d. . Section C-2,C, Table III, Menu #20. Delete “Spaghetti with meat sauce” and substitute “Spaghetti with beef and sauce”.

3. Any current stock of packaging and labels in the assemblers’ inventories may be used until depleted. Note that the technical requirements for Spaghetti with Beef and Sauce are contained in the revised document, PCR-S-002.

4. Attached is Change 05 to ACR-M-031, Meal, Ready-to-Eat™ (MRE™), Assembly Requirements, dated 17 June 2011, with changes highlighted.