

RATION, TEN-IN-ONE

The following changes shall be made in Quartermaster Corps Tentative Specification C.Q.D. No. 140A dated 6 March 1944.

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Paragraph F-4, line 4, shall read:

"under 3 inches of tap water at $73 \pm 3^{\circ}$ F., for ten minutes. Remove the board,"

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Paragraph G-1a, line 6, 7, and 8 shall read:

"inch and a minimum basis weight of 147 pounds per thousand square feet or a bending chipboard having a minimum thickness of 0.043 inch and a minimum basis weight of 157 pounds per thousand square feet."

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Paragraph G-3c, line 6, shall read:

"dimensions of $20-5/16$ inches in length by $14-1/4$ inches in width by $6-15/16$ inches in"



RATION, TEN-IN-ONE

A. APPLICABLE SPECIFICATIONS.

A-1. The following specifications, of the issue in effect on date of invitation for bids, shall form a part of this specification:-

A-1a. Quartermaster Corps Tentative Specifications:-

O.Q.M.G. No. 93 - Boxes; Fiberboard, Corrugated and Solid.

O.Q.M.G. No. 94 - Marking of Outside Shipping Containers by Contractors.

O.Q.M.G. No. 106 - Strapping, Steel, Nailless Type (Flat Steel and Round Steel Wire) for Boxes, Crates and Bales.

C.Q.D. No. 200 - Coatings; Exterior, Air-Drying, Camouflage, and Rust-Inhibiting, for Food Cans.

C.Q.D. No. 201 - Coating, Exterior, Camouflage, and Rust-Inhibiting, for Non-Processed Food Cans.

C.Q.D. No. 202 - Coating, Exterior, Camouflage, and Rust-Inhibiting, for Processed Food Cans.

A-1b. Ordnance Tentative Specification:-

AXS No. 843 - Stain, Water Soluble.

A-1c. Specifications relating to individual components are noted in paragraphs E-1a to E-1e inclusive.

B. TYPES AND GRADES.

B-1. Ration Ten-in-One shall contain food for ten (10) men for one day and shall be packed in five menus as follows:

Ration, Ten-in-One, Menu No. 1* (Stock No. 56-R-8710)

Ration, Ten-in-One, Menu No. 2* (Stock No. 56-R-8720)

Ration, Ten-in-One, Menu No. 3* (Stock No. 56-R-8730)

Ration, Ten-in-One, Menu No. 4* (Stock No. 56-R-8740)

Ration, Ten-in-One, Menu No. 5* (Stock No. 56-R-8750)

B-2. The grades of materials shall be as herein specified.

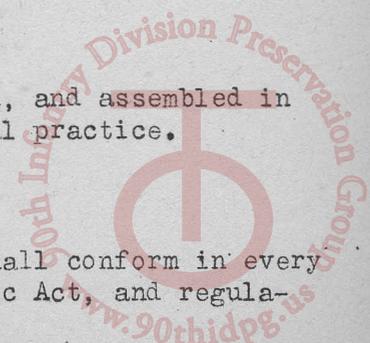
C. MATERIAL AND WORKMANSHIP.

C-1. All materials shall be manufactured, packaged, and assembled in a strictly sanitary manner and in accordance with good commercial practice.

D. GENERAL REQUIREMENTS.

D-1. Unless otherwise specified, all deliveries shall conform in every respect to the provisions of the Federal Food, Drug, and Cosmetic Act, and regulations promulgated thereunder.

* This is the approved nomenclature. Visit <http://www.90thidpg.us> courtesy of the Quartermaster Museum, Ft. Lee, Virginia



E. **DETAIL REQUIREMENTS.** Scanned by the 90th Infantry Division Preservation Group

E-1. The five menus of Ration Ten-in-One shall be as follows:

E-1a. Menu No. 1 shall consist of the following components:

Product	No. of Units	Minimum Net Wt. of Unit	Maximum Measurements of Container	Related Specification
Army Spread, Canned	2	3-3/4 ounces	300 x 106	* CQD 32, Type I
Coffee Product, Soluble, Canned	2	1	200 x 106	CQD 30
Jam, Canned#	2	11	211 x 304	Z-M-106 and Z-J-96
Meat and Rice, Dehy., Canned	2	13	300 x 409	(to be issued by CQD)
Milk, Evaporated	2	6	208 x 206 V.H.	C-M-371
Peanuts, Canned	2	7-1/2	300 x 308	(to be issued by CQD)
Pork Sausage Meat, Canned	2	34	404 x 414	CQD 98
Tomatoes, Canned	2	19	307 x 409	JJJ-T-571, Type I
Egg and Meat Product, Canned	10	3-3/4	300 x 106	CQD 20, Type VIII or IX
Biscuit, C Square	2	32		CQD 55
Cereal, Premixed	2	10		CQD 92
Cocoa Beverage	2	10		CQD 57
Partial Dinner Unit Menu No. 1	10	(see E-2u, this specification)		
Salt	2	1		
or	4	1/2		SS-S-31
Sugar	2	6		JJJ-S-791, Type I, granulated
Cigarettes	10	10 (Cig.)		Good Commercial Quality
Tablets, Water Purification, (halo tone) bottle	2	50 (Tablets)		Medical Dept. Item 1K27507
Matches	10	20 (Sticks)		(to be issued by CQD)
Opener, Can, Small, Ind.	2			** JQMD 313
Paper, Toilet	2	225 (Sheets)		*** JQCD 10
Soap, Toilet	2	1 (Cake)		**** CQMG 100
Towels, Paper	2	20 (Sheets)		UU-T 591, Type B

Unless otherwise specified, ten percent (10%) of the fruit solids in the jam shall be guava.

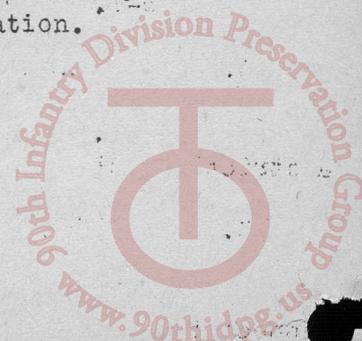
* Chicago Quartermaster Depot Specification.

** Jeffersonville Quartermaster Depot Specification.

*** Jersey City Quartermaster Depot Specification.

**** Office of The Quartermaster General.

(Others refer to Federal Specifications)



E-1b. Menu No. 2 shall consist of the following components:

Product	No. of Units	Minimum	Maximum	Related Specification
		Net. Wt. of Unit ounces	Measurements of Container	
Army Spread, Canned	2	3-3/4	300 x 106	CQD 32, Type I
Bacon, Sliced, Canned	2	24	307 x 509	CQD 145
Beans, Snap, Canned	2	19	307 x 409	JJJ-B-151, Style I
Coffee Product, Soluble, Canned	4	1	202 x 106	CQD 30
Jam, Canned#	2	11	211 x 304	Z-J-96 and Z-M-106
Milk, Evaporated	2	6	208 x 206 V.H.	C-M-371
Stew, English Style, Canned.	2	30	404 x 406	CQD 76
Cheese, Canned	10	4	300 x 106	CQD 20, Type V, VI, or VII.
Biscuits	2	32		CQD 21, Type IV, Square
Cereal, Premixed	2	10		CQD 92
Fruit Bars	10	2		CQD 22
Partial Dinner Unit Menu No. 2	10	(see E-2u, this specification)		
Salt	2	1		
	or 4	1/2		SS-S-31
Sugar	4	6		JJJ-S-791, Type I, granulated
Cigarettes	10	10 (Cig.)		Good Commercial Quality
Tablets, Water Purifica- tion, (Halazone) Bottle	2	50 (Tablets)		Medical Dept. Item 1K27507
Matches	10	20 (Sticks)		(to be issued by CQD)
Opener, Can, Small, Ind.	2			JQMD 313
Paper, Toilet	2	125 (Sheets)		JCQD 10
Soap, Toilet	2	1 (Cake)		OQMG 100
Sponge, Cellulose Type	2	1/4	1 x 2 x 3	L-S-626
Towels, Paper	2	20 (Sheets)		UU-T-591, Type B

Unless otherwise specified, ten percent (10%) of the fruit solids in the jam shall be guava.



Product	No. of Units	Minimum Net. Wt. of Unit. ounces	Maximum Measurements of Container	Related Specification
Army Spread, Canned	2	3-3/4	300 x 106	CQD 32, Type I
Beef, Corned, Canned	4	12	Truncated 314 x 202 x 308	PP-B-201
Coffee Product, Soluble, Canned	2	1	202 x 106	CQD 30
Ham and Eggs, Canned	2	34	404 x 414	CQD 20, Type IX
Jam, Canned#	2	11	211 x 304	Z-J-96 and Z-M-106
Milk, Evaporated	2	6	208 x 206 V.H.	C-M-371
Peas, Canned	2	20	307 x 409	JJJ-P-151
Meat, Canned	10	3-3/4	300 x 106	CQD 20, Type I, II, III or IV
Biscuit, C Square	2	32		CQD 55
Cereal, Premixed	2	10		CQD 92
Cocoa Beverage	2	10		CQD 57
Fruit Bar	10	2		CQD 22
Partial Dinner Unit Menu No. 3	10	(see E-2a, this specification)		
Salt	2	1		
or	4	1/2		SS-S-31
Sugar	2	6		JJJ-S-791, Type I, granulated
Cigarettes	10	10 (Cig.)		Good Commercial Quality
Tablets, Water Purifica- tion, (Halazone) Bottle	2	50 (Tablets)		Medical Dept. Item 1K27507
Matches	10	20 (Sticks)		(to be issued by CQD)
Opener, Can, Small, Ind.	2			JQMD 313
Paper, Toilet	2	125 (Sheets)		JCQD 10
Soap, Toilet	2	1 (Cake)		OQMG 100
Towels, Paper	2	20 (Sheets)		UU-T-591, Type B

Unless otherwise specified, ten percent (10%) of the fruit solids in the jam shall be guava.



E-1d. Menu No. 4 shall consist of the following components:

Product	No. of Units	Minimum Net. Wt. of Unit <u>ounces</u>	Maximum Meas. of Container	Related Specification
Army Spread, Canned	2	3-3/4	300 x 106	CQD 32, Type I
Bacon, Sliced, Canned	2	24	307 x 509	CQD 145
Beef, Roast, Canned	4	12	Truncated 314 x 202 x 308 or 404 x 202	CQD 53
Coffee Product, Soluble, Canned	4	1	202 x 106	CQD 30
Corn, Sweet, Canned	2	20	307 x 409	N-C-501, Style II
Jam, Canned#	2	11	211 x 304	Z-J-96 and Z-M-106
Milk, Evaporated	2	6	208 x 206 VH	C-M-371
Egg and Meat Product, Canned	10	3-3/4	300 x 106	CQD 20, Type VIII or IX
Biscuit, C Square	2	32		CQD 55
Candy, Hard	10	1-3/8		Commercial Quality
Cereal, Premixed	2	10		CQD 92
Partial Dinner Unit, Menu No. 4	10	(see E-2u, this specification)		
Salt	2	1		
	or 4	1/2		SS-S-31
Sugar	4	6		JJJ-S-791, Type I, granulated
Cigarettes	10	10 (Cig.)		Good Commercial Quality
Tablets, Water, Purifica- tion, (Halazone) Bottle	2	50 (Tablets)		Medical Dept. Item 1K27507
Matches	10	20 (Sticks)		(to be issued by CQD)
Opener, Can, Small, Ind.	2			JQMD 313
Paper, Toilet	2	125 (Sheets)		JCQD 10
Soap, Toilet	2	1 (Cake)		OQMG 100
Towels, Paper	2	20 (Sheets)		UU-T-591, Type B

Unless otherwise specified, ten percent (10%) of the fruit solids in the jam shall be guava.



Scanned by the 90th Infantry Division Preservation Group
 E-1e. Menu No. 5 shall consist of the following components:

Product	No. of Units	Minimum Net. Wt. of Unit ounces	Maximum Meas. of Container	Related Specification
Army Spread, Canned	2	3-3/4	300 x 106	CQD 32, Type I
Pork & Egg Yolk, Canned	2	34	404 x 414	CQD 20, Type VIII
Beans, Lima, Canned	2	20	307 x 409	JJJ-B-126
Coffee Product, Soluble, Canned	2	1	202 x 106	CQD 30
Hash, Corned Beef, Dehy.	2	13	300 x 409	(to be issued by CQD)
Jam, Canned#	2	11	211 x 304	Z-J-96 and Z-M-106
Milk, Evaporated	2	6	208 x 206 V.H.	C-M-371
Cheese, Canned	10	4	300 x 106	CQD 20, Type V, VI, or VII
Biscuits	2	32		CQD 21, Type IV, Square
Cereal, Premixed	2	10		CQD 92
Chocolate Bar, Sweet	10	2		CQD 168
Cocoa Beverage	2	10		CQD 57
Partial Dinner Unit, Menu No. 5	10	(see E-2a, this specification)		
Salt	2	1		
or	4	1/2		SS-S-31
Sugar	2	6		JJJ-S-791, Type I, granulated
Cigarettes	10	10 (Cig.)		Good Commercial Quality
Tablets, Water, Purifi- cation, (Halazone) Tablets	2	50 (Tablets)		Medical Dept. Item 1K27507
Matches	10	20 (Sticks)		(to be issued by CQD)
Quaker, Can, Small, Ind.	2			JQMD 313
Paper, Toilet	2	125 (Sheets)		JCQD 10
Soap, Toilet	2	1 (Cake)		CCMG 100
Towels, Paper	2	20 (Sheets)		UU-T-591, Type B

Unless otherwise specified, ten percent (10%) of the fruit solids in the jam shall be guava.



E-2. Packaging of Components.

Unless otherwise specified, the color of the packages, both outside and inside (excepting transparent overwraps) shall be a dull nonreflecting color such as khaki, drab, olive, or that of unbleached kraft. All materials used for packaging shall be free from any odor which may be transmitted to the contents.

The packaging of items not specifically described in this section shall be in accordance with the appropriate specifications listed in paragraphs E-1a, E-1b, E-1c, E-1d, and E-1e, in effect on the date of invitation for bids.

E-2a. Army Spread.- Three and three-quarter ounces shall be packaged in a round, key opening, hermetically sealed, open-top style, metal can with soldered side seam and compound-lined double-seamed ends made from 0.5 pound electrolytic tin plate. The cans shall be coated overall outside with an olive-drab corrosion-resistant enamel complying with Quartermaster Corps Tentative Specification CQD No. 201, and shall be coated inside with an enamel suitable for the product. Each can shall be scored with a key-opening band so as to be readily opened with a key.

E-2b. Bacon, Canned.- Twenty-four ounces shall be packaged in a round hermetically sealed, open-top style, metal can with double-seamed, compound-lined ends and soldered side seams, made of commercial 1.25 pound hot-dip tin plate. The cans shall be coated overall outside with an olive-drab corrosion-resistant lacquer or enamel complying with Quartermaster Corps Tentative Specification CQD No. 202.

E-2c. Coffee Product Soluble.- One ounce shall be packaged in a round hermetically sealed, open-top style, metal can with compound-lined double-seamed ends and soldered side seams. The body and ends of the can shall be manufactured from 0.5 pound electrolytic tin plate or the body from 0.5 pound electrolytic tin plate and the ends from bonderized black plate. If the ends are made of bonderized black plate, the inside of the ends shall be coated with an enamel suitable for the product. The cans shall be coated overall outside with an olive-drab corrosion-resistant enamel complying with Quartermaster Corps Tentative Specification CQD No. 201. A scored top may be employed bearing instructions for opening.

E-2d. Jam, Canned.- Eleven ounces shall be packaged in a round, hermetically sealed, open-top style, metal can with compound-lined double-seamed ends and soldered side seam, made from commercial 1.50 hot-dip tin plate. The cans shall be coated overall outside with an olive drab corrosion resistant enamel complying with Quartermaster Corps Tentative Specification CQD No. 201 and if necessary, inside with an enamel suitable for the product.

E-2e. Meat and Rice; Dehydrated.- Thirteen ounces shall be packaged in a can as specified in E-2b except that the outside coating shall comply with Quartermaster Corps Tentative Specification CQD No. 201.

E-2f. Peanuts, Canned.- Not less than seven and one-half ounces shall be packaged in a round, hermetically sealed, open-top style, metal can with compound-lined double-seamed ends and soldered side seam. The can body shall be made of 0.5 pound electrolytic tinplate and the can ends from bonderized black plate. The cans shall be coated overall outside with an olive-drab corrosion-resistant enamel complying with Quartermaster Corps Tentative Specification CQD No. 201 and the bonderized can ends shall be coated inside with an enamel suitable for the product. The product shall be packaged under not less than a 27 inch vacuum or an equal vacuum released with nitrogen. Not more than 2 percent of free oxygen shall be present in the nitrogen filled and sealed can.

E-2g. Biscuits.-- All be packaged according to paragraph G-1 of C.Q.D. No. 55.

E-2h. Candy, Hard.-- Each piece shall be wrapped with suitable waxed paper or cellophane of such nature as to prevent undue adherence of the paper to the candy. One and three-eighths ounces (ten individually wrapped pieces) shall be overwrapped with a heat-sealing, water-vapor-resistant cellophane or a suitable dark colored waxed paper.

E-2i. Cereal, Premixed.-- The product shall be packaged in a waxed-paper wrapped or wax-dipped, siftproof, seal-end carton with tear slots and extended glue flap, having an inner lamination of greaseproof paper.

The greaseproof paper shall have a basis weight of not less than 25 pounds per ream (24 x 36 -- 500) and shall have an average turpentine test (TAPPI T 454 E-4) of not less than 200 seconds. It shall be laminated to the inner surface of the carton stock with an odor-free adhesive.

The wax-dipped carton shall be made of bending kraft-lined chipboard with not less than a No. 3 finish. The overall thickness of the board, including the greaseproof liner, shall be not less than 0.018 inch. The waxed paper-wrapped carton shall be made of bending chipboard with not less than a No. 3 finish and shall be 0.022 inch thick, including the greaseproof liner.

E-2i(1) The carton shall be overwrapped with a single sheet of waxed paper so as to effect an overlap at the seam and end closure of not less than one-half inch. A continuous heat-seal, the full width of the overlap, shall be made along the seam and closures. The waxed paper shall have a basis weight of not less than 25 pounds per ream (24 x 36 -- 500), a tearing resistance (TAPPI T 414 m-42) of not less than 22 grams in any direction, and shall be coated with sufficient wax to effect a good heat-seal. Not less than 10 lbs. per ream (24 x 36 -- 500) of a fully refined wax shall be used. The wax shall have melting point (ASTM D 87-42) not lower than 132°F.

E-2i(2) Alternatively, the carton shall be wax dipped to effect a partial penetration of at least ten percent of the thickness of the board and to provide an even and continuous film of wax over its surface. The wax or wax mixture shall have a melting point (ASTM D 127-30) of not less than 140° F. and shall neither crack nor flake off when exposed to a temperature of minus 20° F.

E-2j. Cocoa Beverage Powder.-- Ten ounces shall be packaged in a sift-proof bag and carton made as follows:

E-2j(1) The bag shall be a gusset style made from a sheet of high density superfinished No. 1 kraft paper having a basis weight of not less than 25 pounds per ream (24 x 36 -- 500) laminated to a sheet of glassine having a basis weight of 25 pounds per ream, with not less than 8 pounds per ream of a permanently plastic water-vapor-proof adhesive. The kraft shall be on the outside of the bag. Alternatively, the inner sheet may be either Sylvania 450 PMCSX or du Pont 450 MST 54 cellophane.

E-2j(2) The carton shall be of the seal-end style with tear slots, extended glue strip, and full overlapping outer flaps, but if sealing machinery is not available and permission is obtained from the procurement officer, one or both ends may be of the tuck-in style. The carton shall be made from bending chipboard with a kraft or kraft-colored outside liner, having a thickness of not less than 0.022 inch, a No. 2 finish (National Paperboard Association Standards, 1 July 1934) and a weight of not less than 85 pounds per one thousand square feet. The flaps of the carton shall be sealed with a water-resistant adhesive which will not impart an odor or flavor to the product. If one or both ends are the tuck-in style, the bursting strength of the board shall be not less than 90 pounds.

The board used for the carton shall be sized to such a degree that an ink applied to the outside of the board, will show no more than a trace of feathering.

E-2k. Fruit Bars.-- Two ounces shall be sealed in a bag made of Sylvania's 300 PMBS or du Pont's 300 MSAT-82 cellophane and placed in a tuck-end or seal-end carton made from dark colored board at least 0.010 inch thick which will not impart a flavor or odor to the contents. The bar shall then be adequately pasteurized. After cooling, the package shall be overwrapped in a sheet of 450 PMS or 450 MST-54 cellophane. All seams and closures shall be tightly sealed against the transmission of water vapor.

Alternatively, the fruit shall be placed either in a wrapper or liner made from wet-waxed glassine or wet-waxed kraft and then in a dull-colored tray of bending board not less than 0.010 inch thick made from pulp or papers, free from any objectionable materials which would contaminate or impart an odor or flavor to the product, or in a wet-waxed tray made from 0.015 inch solid manila board, vat lined on the inside with bleached sulphite. Both sides of the board shall have a dull color produced by a nontoxic dye. This board shall be sufficiently wax treated so that the tray can be stripped easily from the product. The tray shall be wrapped and sealed with a sheet of 300 PMBS or 300 MSAT-82 cellophane. It shall be adequately pasteurized and, after cooling, rewrapped with a sheet of 450 PMS or 450 MST-54 cellophane. All seams and closures shall be tightly sealed against the transmission of water vapor.

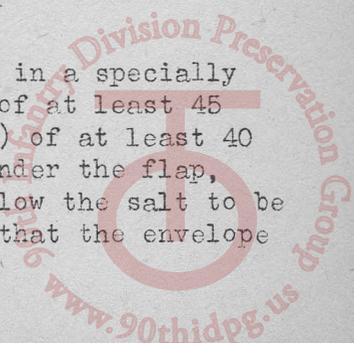
The overall dimensions of the package shall not exceed 1-5/16 inches by 7/8 inch by 3-1/8 inches. The package shall be uniform in contour, and the surfaces shall be squared one with another.

E-2l. Gum.-- Each stick of gum shall be tightly wrapped in a sheet composed of 0.0003 aluminum foil laminated to dry waxed sulphite paper. The sulphite shall have a basis weight (unwaxed) of not less than 12 pounds per ream (24 x 36 -- 500) and shall be waxed with not less than 3 pounds per ream. Each wrapped stick shall be banded in a kraft colored paper label in accordance with good commercial practice.

E-2m. Orange Powder, Synthetic.-- Seven grams shall be packaged in a laminated aluminum foil envelope composed of an outer sheet of cellulose acetate film not less than 0.001 inch thick, laminated to aluminum foil not less than 0.001 inch thick and coated on the foil or inner side with a heavy enough film of a heat-sealing compound to provide the envelope with satisfactory heat seals.

E-2n. Sugar.-- Six ounces shall be packaged in a siftproof seal-end carton with tear slots and extended glue strip made from 0.018 inch thick kraft-lined bending chipboard with a No. 2 finish. If necessary to make the package siftproof, it shall be overwrapped in a single thickness of paper having a basis weight of not less than 23 pounds per ream (24 x 36 -- 500).

E-2o. Salt.-- One-half or one ounce shall be packaged in a specially constructed envelope made from kraft paper having a basis weight of at least 45 pounds (24 x 36 -- 500) and a bursting strength (TAPPI T 403 m-41) of at least 40 points. The bag shall be equipped with a perforated paper tape under the flap, which will expose the perforations when the flap is opened and allow the salt to be shaken out. After filling, the flap shall be securely sealed so that the envelope will not allow its contents to sift.



Alternatively, two ounces shall be packaged in a spirally or convolutely wound fiberboard container not less than 0.040 inch thick. The bottom shall be closed securely by pressed paperboard cap. Near the top shall be inserted a suitable perforated cap to allow the salt to be freely shaken out, and this cap shall be closed with a **removable** inverted paperboard friction plug, which, when in position, will effectively prevent any sifting of the contents. The outside of the container and the interior and exterior of the removable plug shall be kraft colored, khaki, olive or drab.

E-2p. Cigarettes.-- Ten cigarettes shall be packed in a unit wrapped and sealed with water-vapor-resistant cellophane or an equivalent material, in accordance with good commercial practice.

E-2q. Tablets, Water Purification, (Halazone).-- Fifty tablets shall be packaged in a glass bottle with a vinylite lined screw top closure.

E-2r. Soap, Toilet.-- Each 2 oz. bar of soap shall be packaged in a strong bag or wrapper made from paper having a basis weight of 20 lbs. per ream (24 x 36 -- 500). The paper shall be water resistant or wet strength treated and the closure shall be secured by a moisture-resistant adhesive.

E-2s. Toilet Paper.-- One hundred and twenty five (125) sheets shall be packaged in an asphalt-laminated kraft paper envelope. The envelope shall be free from any objectionable odor.

E-2t. Towels, Paper.-- The towels shall be made in accordance with Federal Specification UU-T-591, Type B, except that the paper shall be creped so as to have a stretch of not less than 10 percent in one direction. The minimum basis weight shall be 34 pounds per ream (24 x 36 -- 500), the minimum average tensile strength in both directions shall be 1.0 kg. per 15 mm. strip, and the dimensions of the towel shall be approximately 10 by 11 inches. The color of the towel shall be that of unbleached kraft or a similar dull color.

Each towel shall be folded twice and, if desired, interfolded and delivered to the contractor in suitable packages.

E-2u. Partial Dinner Units.-- All the components excepting the gum shall be assembled and sealed in a laminated cellophane bag described in E-2u(1). The filled bag and the gum shall be inclosed in a folding carton described in E-2u(2). The Partial Dinner Units shall consist of the following components:

Partial Dinner Unit - Menu No. 1

- 2 Packages Biscuits, CQD 21 (One package each of any type).
- 1 Package Hard Candy, Commercial Quality.
- 1 Package Lemon Juice Powder, Syn. CQD 43, Type I.
- 0.8 oz. Sugar, JJJ-S-791, Type I, granulated, (in an approved carton)
- 1 Stick Chewing Gum, CQD 22, Type IV.
- 1 Key, Can, CQD 10, Type II.



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Partial Dinner Unit - Menu No. 2

- 2 Packages Biscuits, CQD 21 (One package each of any type).
- 1 Package Caramels, CQD 22, Type I, Class A.
- 1 Package Lemon Juice Powder, Syn., CQD 43, Type I.
- 0.8 oz. Sugar, JJJ-S-791, Type I, granulated, (in an approved carton).
- 1 Stick Chewing Gum, CQD 22, Type IV.
- 1 Key, Can, CQD 10, Type II.

Partial Dinner Unit - Menu No. 3

- 2 Packages Biscuits, CQD 21 (One package each of any type).
- 1 Two-ounce Sweet Chocolate Bar, CQD 168.
- 1 Package Orange Juice Powder, Syn., CQD 165.
- 0.8 oz. Sugar, JJJ-S-791, Type I, granulated, (in an approved carton).
- 1 Stick Chewing Gum, CQD 22, Type IV.
- 1 Key, Can, CQD 10, Type II.

Partial Dinner Unit - Menu No. 4.

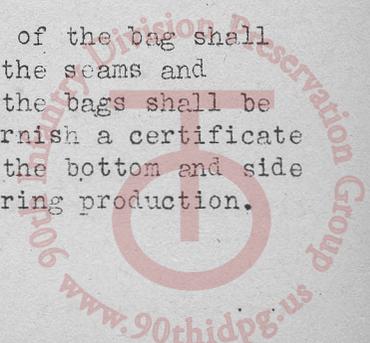
- 2 Packages Biscuits, CQD 21 (One package each of any type).
- 1 Fruit Bar, CQD 22, Type V.
- 1 Package Lemon Juice Powder, Syn., CQD 43, Type I.
- 0.8 oz. Sugar, JJJ-S-791, Type I, granulated, (in an approved carton).
- 1 Stick Chewing Gum, CQD 22, Type IV.
- 1 Key, Can, CQD 10, Type II.

Partial Dinner Unit - Menu No. 5.

- 2 Packages Biscuits, CQD 21 (One package each of any type).
- 1 Fruit Bar, CQD 22, Type V.
- 1 Package Orange Juice Powder, Syn., CQD 165.
- 0.8 oz. Sugar, JJJ-S-791, Type I, granulated, (in an approved carton).
- 1 Stick Chewing Gum, CQD 22, Type IV.
- 1 Key, Can, CQD 10, Type II.

E-2u(1) The flat or envelope style bag shall be constructed of a laminated sheet consisting of a sheet of either du Pont 450 MSAT-83 or Sylvania 450 PMB2CS-K cellophane, laminated to a sheet of either 450 MST 53-G or 450 PMCSX-K cellophane with not less than 12 pounds per ream (24 x 36 -- 500) of a permanently plastic water-vapor-resistant laminating agent. The 450 MSAT-83 or 450 PMB2CS-K cellophane shall comprise the inside wall of the bag.

The bag shall have a center seam, and the side folds of the bag shall not be sharply creased during its manufacture. The sealing of the seams and closure shall be carefully done so that at least 90 percent of the bags shall be airtight as described in paragraph E-6. The bag maker shall furnish a certificate of compliance with this paragraph, based on tests performed on the bottom and side seams of samples taken from each bag machine every half hour during production.



The packer shall comply with this paragraph by maintaining a record of tests carried out on the top closure of sample bags after sealing. At least one package shall be taken from each lot of 3,000 packages for test.

E-2u(2) The folding carton shall be made from bending chipboard having a minimum thickness of 0.020 inch, a No. 2 finish, and a weight of not less than 80 pounds per thousand square feet. The carton may be either a seal-end style with fully overlapping outer flaps, or a notched tuck-end style. The carton shall have inside dimensions of 3-7/16 inches by 1-7/16 inches by 3-7/8 inches deep. If a seal end style carton is used, the flaps shall be sealed with a moisture-resistant adhesive.

E-2u(3) The following marking for the Partial Dinner Unit carton shall appear on the main panel, on the opposite main panel and one side panel as follows:

On the main panel:

PARTIAL
DINNER UNIT
Menu #1 (or appropriate Menu No.)

THE CAN OF MEAT (or Egg and Meat or Cheese,
depending on the Menu No.)

WILL BE FOUND IN THE

CARTON CONTAINING CANS

On the opposite main panel:

"NOTICE: MOSQUITO BITES CAUSE MALARIA."

If you are in a malaria zone keep your
shirt on and your sleeves rolled down.
Use mosquito repellent out of doors
between sunset and sunrise."

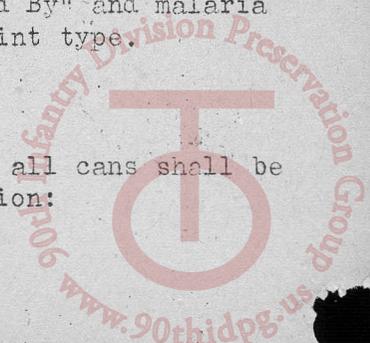
On the side panel:

Packaged By

The printing shall be in bold face Gothic capital letters. The legend "Partial Dinner Unit" shall be in 36 point type. The words "Menu #1" in 18 point type. The statement concerning the meat component and "Packaged By" and malaria notice and the name and address of the packer shall be in 10 point type.

E-3. Labeling of Components.

E-3a. All component packages shall be printed, and all cans shall be lithographed preferably on one end, with the following information:



Scanned by the 90th Infantry Division Preservation Group

Name of Product

Net Weight

Instructions for preparation, (if necessary)

Name and address of Manufacturer.

Any other information required by the Federal Food, Drug, and Cosmetic Act, and regulations promulgated thereunder.

E-3b. The menus for breakfast, dinner, and supper, indicating the components packed, shall be printed on kraft or kraft colored paper and one shall be placed on the top and bottom of each waxed box.

E-4. Packing of Components.- Unless otherwise specified, the component of this ration shall be packed for delivery to the assembly plants in containers complying with the requirements of the Consolidated Freight Classification. The inner packing shall be adequate to ensure arrival of the product at the point of assembly in prime condition.

E-5. Marking for Domestic Shipment of Components.- Unless otherwise specified, legible commercial marking of the shipping container is acceptable provided that the following information is included:

Name (and type of product, if necessary)

Number of units packed and net weight of each

Contract Number.

Date Packed.

Name and Address of Manufacturer.

F. METHODS OF SAMPLING, INSPECTION, AND TEST.

F-1. Unless otherwise specified, inspection shall be made at point of origin.

F-2. Unless otherwise specified, chemical analyses, if required by the purchaser, shall be made in accordance with methods of the Association of Official Agricultural Chemists in effect on date of invitation for bids.

F-3. Unless otherwise specified, physical tests of packaging materials shall be made in accordance with the methods of the Technical Association of the Pulp and Paper Industry (TAPPI) and those of the American Society for Testing Materials (ASTM).

F-4. The sizing of the board in paragraph G-1d shall be determined as follows:

Weigh a 6-inch square section of the board and hold horizontally under 3 inches of tap water at $73 \pm 30^{\circ}$ F. for ten minutes. Remove the board, quickly wipe off the excess water with a dry soft absorbent cloth, using a minimum of pressure and reweigh the board at once. To be efficiently sized, the board shall not absorb more than 4.0 grams of water under these conditions.

F-5. The water-resistance of the adhesives used shall be determined as follows:

Cut two sections approximately 3 inches by 6 inches from the board to be used for the container. Apply the adhesive evenly over the inner surface of one of these sections. Superimpose the outer surface of the other section

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on the first and maintain under a pressure of 5 pounds per square inch for one minute and then allow to dry for twenty-four hours. Trim the combined sections into a 2-inch square piece cut from the interior. Immerse the square piece in tap water for twenty-four hours. Carefully pry the joint apart from all four edges. To be water-resistant, not less than 75 percent of the surface shall show a fiber separation.

F-6. Sample bags described under paragraph E-2u(1) shall be tested as follows: Open each bag to approximately a circular shape, and submerge under water at room temperature, in such a manner that the bag is trapped full of air. Hold the sealed bottom or top closure of the bag at least two inches below the surface of the water. No escape of air bubbles from the interior of the bag shall be visible.

F-7. The wax-treated cartons, described under G-1 (without the outer carton) shall be tested for waterproofness by submerging a completed carton under two inches of water at room temperature for twenty-four hours, then wiping dry, opening and observing the inside surfaces of the carton for the presence of moisture.

G. PACKAGING, LABELING, PACKING, AND MARKING FOR SHIPMENT.

G-1. Packaging.

G-1a. The components of this ration, other than cans, soap and towels, shall be assembled in their respective menus in the most convenient and compact manner in a specially constructed carton with a snug-fitting, one-piece, die-cut, inner, chipboard liner. The liner shall be made according to the attached drawing from either two-ply laminated bending chipboard, having a minimum thickness of 0.042 inch and a minimum basis weight of 147 pounds per ream (24 x 36 -- 500) or a bending chipboard having a minimum thickness of 0.042 inch and a minimum basis weight of 157 pounds per ream.

G-1b. The solid fiber carton shall be manufactured from double kraft-lined bending board between 0.040 and 0.045 inch in thickness. The kraft liners shall be at least 0.006 inch thick; the filler shall be of a furnish which will insure the finished board conforming with all requirements herein specified.

G-1c. The carton shall be of special slotted construction, with all flaps meeting. The inside dimensions shall be approximately 9-5/8 inches by 6-3/8 inches by 7-1/8 inches. No overlap of the inner and outer flaps shall be permissible, nor shall they gap more than 1/16 inch. Each side of the outer flaps shall be tapered inward at an angle of 7° from a point about 5/8 inch from the hinge, and about 1/4 inch from the side of the carton. The corner portions of the outer flaps shall be offset 1/32 inch from the center of the vertical score lines so as not to project over the edges of the closed carton. This will automatically increase the width of the inner flaps by 1/16 inch. The flaps shall be cut to not less than 1/32 inch nor more than 1/16 inch from the horizontal scores so as to provide tear slots. Except at the hinges, all corners, including those situated 5/8 inch from the hinges of the shaped flaps shall be rounded with a 1/4 inch to 5/16 inch radius.

G-1d. The board shall be well-sized throughout. (See F-4). The average bursting strength of the board shall be not less than 145 pounds, and the board shall weigh not less than 140 pounds and not more than 155 pounds per thousand square feet. No scores shall check or crack when folded through 135 degrees

in one direction and 180 degrees in the other. The average tensile strength of the board (TAPPI T 404 m-41) shall be not less than 140 pounds per inch of width, machine direction, nor less than 55 pounds per inch of width, cross direction.

G-1e. The board shall permit penetration of the wax specified in G-1i, to a depth of not less than 35 percent of the thickness of the board when one side is held in contact with the wax, heated to $195^{\circ} \pm 5^{\circ}$ F., for between 5 and 10 second.

G-1f. The convex side of the score line bead shall be on the inside of the carton. The manufacturer's joint on the carton shall be glued and made in the following manner.

The flap of the joint shall be on the outside of the side of the carton and integral with one end of the carton. The outer corners of the flap shall be rounded with a 1/4 inch radius. The flap shall be tightly and adequately glued with a water-resistant adhesive (See F-5) with no excess of glue on the outside of the carton. The center line of the vertical score inside the carton at the glue flap shall meet the adjoining end of the box with a maximum clearance of 1/16 inch. The center line of the scores around each side, or end, or the top or bottom of the carton shall lie in a plane within 1/16 inch.

G-1g. The flaps of the carton shall be securely closed by means of a water-resistant adhesive (See F-5). The closure shall be given special attention in order that it shall be as tight as possible.

G-1h. The sealed carton shall be dipped (completely submerged) in molten wax, having a temperature of approximately 190° F., so as to allow the wax to penetrate the board to a depth of at least 35 percent of the thickness of the board. After a short cooling period, the carton shall be dipped a second time (completely submerged) for 5 seconds or less in a bath of the same wax at a lower temperature so as to build up a continuous film of wax about 0.005 inch thick on the outer surface of the board.

After immersion for 24 hours, according to paragraph F-7, at least 90 percent of the completed waxed cartons shall be dry inside when opened. The packers shall comply with this requirement by maintaining a record of tests carried out on ten samples taken during production each day.

G-1i. The wax mentioned in paragraph G-1h shall be of a microcrystalline type and may be a mixture of waxes, with or without a crystallization inhibitor, which shall give as a final product, an amorphous type of wax having a melting point (ASTM D 127-30) of not less than 140° F. which shall not crack, chip, or become separated from the surface on which applied, when subjected to minus 20° F. The product shall be odorless, tasteless, and nontoxic. A list of approved waxes may be obtained from the Research and Development Branch, Office of The Quartermaster General, Washington, D. C. from the Subsistence Research and Development Laboratory, Chicago Quartermaster Depot, Chicago 9, Illinois.

G-2. Labeling.

G-2a. No labeling is necessary on the wax-dipped carton described in G-1.

G-2b. The corrugated box containing the waxed carton, as described under G-3a, shall be labeled on both the 7-5/16 by 9-13/16 inch panels as follows:

(1 inch capital letters - bold type)

MENU # ---

FIRST HALF OF

5 RATIONS

(1/4 inch capital letters - bold type)

FOR 5 COMPLETE RATIONS

USE THIS BOX AND ONE MARKED

"SECOND HALF OF 5 RATIONS"

G-2c. The solid fiber box containing the canned items described under G-3b shall be labeled on both sides as follows:

(1 inch capital letters - bold type)

MENU # ---

SECOND HALF OF

5 RATIONS

(1/4 inch capital letters - bold type)

FOR 5 COMPLETE RATIONS

USE THIS BOX AND ONE MARKED

"FIRST HALF OF 5 RATIONS"

Alternatively, the word MENU # --- may be placed on the ends of the cartons in such a manner that the menu number may be printed automatically.

G-3. Packing.

G-3a. The wax dipped carton specified in paragraph G-1 shall be placed in a snug-fitting regular slotted container made from 200 pound test B flute, double-faced corrugated board, complying with Rule 41 of the Consolidated Freight Classification. The containers shall have vertical corrugations and the manufacturer's joint shall be taped with not less than 2 inch wide cloth tape. The flaps of the container shall be sealed securely with water-resistant adhesive throughout the entire area of contact between the flaps. The inside dimensions of the box shall be 9-13/16 inches in length x 6-11/16 inches in width x 7-5/16 inches in depth.

G-3b. The cans, soap, towels and sponge, if specified, described in E-1a, E-1b, E-1c, E-1d, and E-1e, shall be assembled according to their respective menus in a regular slotted container made from 0.080 inch thick solid fiberboard. The dry bursting strength of the board shall be not less than 325 pounds and the wet bursting strength (after 2½ hours immersion in water) not less than 100 pounds. The inside dimensions of this container shall be 10 inches in length x 6 inches in width x 6-5/8 inches in depth. The cans shall be packed in the box with interior packing in such a manner that the bodies of the cans are separated from each other by a thickness of 200 pound test, B flute, double-faced corrugated board. Pads may

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be used at the top or bottom if desired. The box shall be closed by gluing as described in G-3a.

G-3c. Two packed corrugated boxes as described in G-3a and two packed solid fiber boxes as described in G-3b, comprising all the components of one complete menu of Ration, 10-in-1 as defined in E-1, shall be packed in fiberboard container with sleeve complying with Quartermaster Corps Tentative Specification, OQMG No. 93, Style RSC-SL, Type SF, Grade 1 or 1R. The shipping container shall have inside dimensions of 20-5/16 inches in length by 14 1/2 inches in width by 6-5/16 inches in depth. The sleeve shall fit snugly over the top, bottom and ends of the container without requiring undue pressure to place into position. The depth of the sleeve shall be equal to the full outside width of the shipping container.

Before the sleeve is applied to the box, all flaps of the box shall be closed securely. A waterproof adhesive shall be applied throughout the entire area of contact between the flaps at the top and bottom. However, the flaps at the bottom may be closed by metal stitches.

G-3d. Strapping.

G-3d(1) After placing the sleeve in position, the shipping case shall be strapped with two flat steel straps 3/8 inch x 0.015 inch thick, having a minimum ultimate tensile strength of 80,000 pounds per square inch and protected with a rust-resistant coating.

G-3d(2) Seals shall provide a joint strength of not less than 75 percent of the strap breaking strength. One strap shall be centered over the ends and sides of the case, and the second strap centered over the top, bottom and sides of the case in such a manner that they cross at right angles over the open end of the sleeve. The longer strap shall be applied first.

G-4. Marking.

G-4a. The case and outer sleeve shall be printed in bold Gothic capital letters as follows:

On one end of the sleeve:

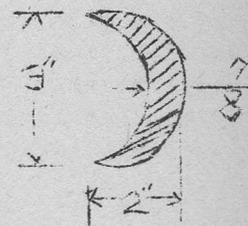
(1/2 inch letters) CONT ---- (Contract Number)

(1-1/2 inch letters) RATION 10-in-1

(1 inch space for strap)

(3/4 inch letters) 10 RATIONS

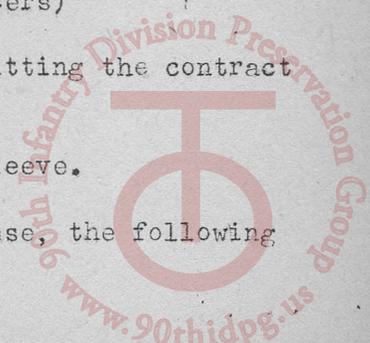
WT 45 CU 1.4 MENU # --- (2 inch letters)



On the other end of the sleeve: as above, omitting the contract number.

The above marking may occupy the entire ends of the sleeve.

On the right-hand side of the front of the case, the following information shall be printed:



(1/2 inch letters) ----- (Name of Packer)

(1/2 inch letters) ----- (Month and Year Packed)

(1/2 inch letters) REQ. ----- (Requisition No.) (Required on at least 10 cases nearest the door of the conveyance or on all containers sent as LCL shipments.)

(1 inch space for strap)

10

in MENU # -----

1

The marking "10-in-1" shall be in letters 3/4 of an inch high.

The lines forming the letters MENU and the numeral shall be 3/8 of an inch in width and the letters and numerals 2-1/2 inches high.

G-4b. The printing shall be either black or green, shall take on fiber, and shall be both sunfast and waterfast.

