

QUARTERMASTER CORPS
TENTATIVE
SPECIFICATION

C.Q.D. No. 21E
July 24, 1942
Superseding
C.Q.D. No. 21D
May 26, 1942

BISCUIT COMPONENT

U. S. ARMY FIELD RATION K

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:

- Federal Specification C-E-271 - Eggs.
- Federal Specification C-M-351 - Milk, Dry, Powdered; Skimmed and Whole.
- Federal Specification SS-S-31 - Salt; Table.
- Federal Specification EE-S-571 - Soda; Baking.
- Federal Specification EE-S-631 - Spices; Ground and Whole.
- Federal Specification JJJ-S-791 - Sugar; Beet or Cane, Type I.

B. TYPES AND GRADES.

B-1. Biscuit component shall be of two types, as follows:

- Type I - K-1
- Type II - K-2

B-2. Biscuit component shall be of the grades indicated herein.

C. MATERIAL AND WORKMANSHIP.

C-1. All material or ingredients shall have been prepared, manufactured or produced in a strictly sanitary manner.

C-2. Workmanship shall conform to standards established by and commensurate with Army requirements.

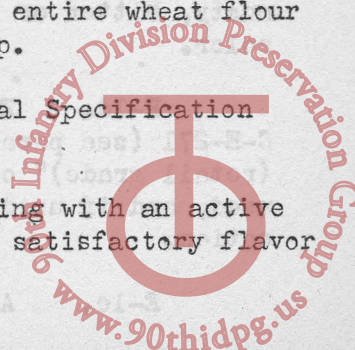
D. GENERAL REQUIREMENTS.

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

D-2. The whole wheat flour used shall be freshly milled entire wheat flour made from pure, sound wheat of the best quality and latest crop.

D-3. Milk, dry, skimmed, shall conform to Type I, Federal Specification C-M-351. (See paragraph A-1).

D-4. Shortening shall be hydrogenated vegetable shortening with an active free-oxygen-keeping test of 140 hours minimum and shall retain satisfactory flavor after heating to a temperature of 400° F.



D-5. Molasses shall be of a grade not lower than New Orleans second molasses

D-6. Sugar shall conform to Type I, Federal Specification JJJ-S-791, for Sugar, Beet or Cane. (See paragraph A-1.)

D-7. Salt shall conform to Federal Specification SS-S-31 for Salt; Table. (See paragraph A-1.)

E. DETAIL REQUIREMENTS.

E-1. Type I, K-1. Shall be prepared in accordance with best commercial practice from ingredients in the following proportions:

Whole Wheat Flour	73 pounds
Wheat Flour	103 pounds
Soybean Flour	100 pounds
Fine Cut Oat Meal	70 pounds
Whole Eggs	112 pounds
Dried Skim Milk	70 pounds
Sugar	24 pounds
Molasses.	12 pounds
Shortening.	114 pounds
Ammonium Bicarbonate.	3 pounds
Salt.	3-3/4 pounds
Cinnamon.	9 ounces

Moisture content of the finished product shall not exceed 7 percent.

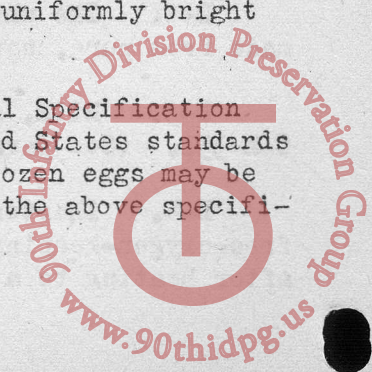
E-1a. The flour used shall be wheat flour not lower than a straight grade.

E-1b. Soybean flour shall be processed from a select grade of properly dehulled soybeans. It shall be properly cooked and debittered and shall have a neutral, bland flavor. It shall contain not more than 1 percent fat, not more than 6 percent ash and not less than 50 percent protein. It shall be of sufficient fineness so that 97 percent will pass through a U. S. Bureau of Standard screen No. 100.

E-1c. Fine cut oat meal shall be made from hulled oats and shall contain not more than 12 percent of moisture, not more than 1.8 percent of crude fiber, not less than 2.24 percent of nitrogen and not more than 2.2 percent of ash. Shall be of a good and uniform granular texture, cut from oat groats made from No. 1 white oats, shall be clean, sound, properly hulled and of the latest crop. Shall be processed without added flavoring. Ninety-five percent of the granular meal shall pass through a U. S. Standard No. 8 screen and not more than 10 percent shall pass through a U. S. Standard No. 40 screen. Shall be free from rancid, musty, bitter or other undesirable flavors and shall be of a uniformly bright color.

E-1d. Eggs shall be whole eggs conforming to Federal Specification C-E-271 (see paragraph A-1) and shall be of the grades "United States standards (retail grade)" or "United States extras (retail grade)". Frozen eggs may be used, and if used, shall be prepared from fresh eggs meeting the above specification.

E-1e. Ammonium bicarbonate shall be U. S. P.



EE-S-C

E-1f. Cinnamon ground shall conform to Type II, Federal Specification EE-S-631 for Spices, Ground and Whole. (See paragraph A-1.)

E-1g. The product shall be uniformly well baked, of reasonably uniform size and thickness, with reasonably clean-cut edges, shall be free from excessive dusting flour and shall have a characteristically appetizing flavor. Biscuits shall be rectangular in shape with dimensions approximately and not exceeding 3-3/16 inches long, 1-3/16 inches wide, and 5/12 inch thick. If four biscuits are used the thickness shall be 5/16 inch per biscuit. Misshapen or bowed biscuits are not acceptable.

E-2. Type II, K-2. Shall be prepared in accordance with best commercial practice from ingredients in the following proportions:

Whole Wheat Flour	200 pounds
Shortening	50 pounds
Invert Sugar	10 pounds
Molasses	15 pounds
Sugar	25 pounds
Dried Skim Milk	70 pounds
Soda	2 pounds
Salt	3 pounds
Calcium Carbonate	1 pound
Ammonium Bicarbonate	3/4 pound
Wheat Germ	15 pounds

Moisture of finished product shall not exceed 7 percent.

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E-2a. Invert sugar shall be high commercial quality.

E-2b. Soda shall conform to Federal Specification EE-S-571 for Soda; Baking. (See Paragraph A-1.)

E-2c. Calcium carbonate shall be of high commercial quality, 100 percent of which shall pass through a U. S. Standard No. 80 screen.

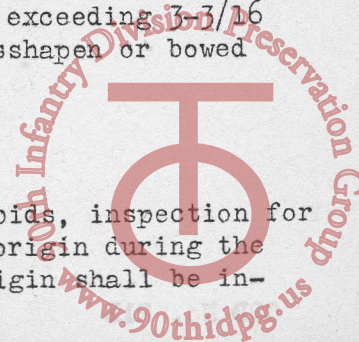
E-2d. Ammonium bicarbonate shall be of high commercial quality.

E-2e. Wheat germ shall be the product obtained in the usual commercial process of flour milling consisting of not less than fifty (50) percent by weight of pure wheat embryo, and may contain some fine wheat-bran particles and some adhering wheat flour. Product used must be fresh, free from any rancidity, and from a recent milling operation.

E-2f. The product shall be uniformly well baked, of reasonably uniform size and thickness, with reasonably clean-cut edges, shall be free from excessive dusting flour and shall have a characteristic appetizing flavor. Biscuits shall be rectangular in shape with dimensions approximately and not exceeding 3-7/16 inches long, and 1-3/16 inches wide, and 5/16 inch thick. Misshapen or bowed biscuits are not acceptable.

F. METHODS OF SAMPLING, INSPECTION AND TESTS.

F-1. Unless otherwise specified in the invitation for bids, inspection for compliance with this specification shall be made at point of origin during the process of manufacture and packing. Products inspected at origin shall be inspected for condition only at the point of delivery.



F-2. Chemical analyses, if required by the purchaser in the examination or testing of samples and deliveries under this specification, shall be made in accordance with methods of the Association of Official Agricultural Chemists in effect on date of invitation for bids, and by approved methods in general use in the trade.

F-3. Awards will be made only after sample of product has been approved by the Subsistence Research Laboratory of the Chicago Quartermaster Depot.

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

G-1. Packaging.

G-1a. For Type I, K-1. The biscuits shall be assembled face to back and tightly wrapped as a unit in amber greaseproof, waxed glassine, moisture-proof cellophane or other suitable material of neutral color. Net weight of this assembly shall be not less than 1.6 ounces. Over-all dimensions of the assembly shall not exceed $3\text{-}\frac{3}{16}$ inches x $1\text{-}\frac{3}{16}$ inches x $1\text{-}\frac{1}{4}$ inches. All faces shall be plane surfaces and shall be at right angles one to the other.

G-1b. For Type II, K-2. Four each of the biscuits shall be assembled face to back and tightly wrapped as a unit in amber greaseproof, waxed glassine, moisture-proof cellophane or other suitable material of neutral color. Net weight of this assembly shall be not less than 1.4 ounces. Over-all dimensions of the assembly shall not exceed $3\text{-}\frac{3}{16}$ inches x $1\text{-}\frac{3}{16}$ inches x $1\text{-}\frac{1}{4}$ inches. All faces shall be plane surfaces and shall be at right angles one to the other.

G-2. Labeling.

G-2a. For Type I, K-1 and Type II, K-2. The wrapper or label shall state the name of product, and the name and address of manufacturer. In lieu of wrapper or label declaration, the name K-1 or K-2, as the case may be, and the initials of identifying name of manufacturer may be imprinted in each biscuit when transparent wrapping materials are used. An insert label shall not be used. Label declaration need not be centered.

G-3. Packing. Unless otherwise specified, the product shall be delivered in standard commercial containers, so constructed as to insure acceptance by common or other carriers, for safe transportation, at the lowest rate, to the point of delivery.

G-3a. Unless otherwise specified, packages shall be packed 336 units per shipping container, or any larger convenient package.

G-4. Marking. All cartons shall be stenciled or printed as follows:

Number of Units - Name of Product
Date (Month and Year)
Contract No.
Name and Address of Manufacturer.

