

VET SCI DIV
LIBRARY
ROOM 250
Please sign out
if removed

MIL-STD-175E

10 August 1982
SUPERSEDING
MIL-STD-175D
19 April 1979

MILITARY STANDARD
SANITARY STANDARDS FOR
EQUIPMENT AND METHODS FOR THE HANDLING
OF MILK AND MILK PRODUCTS IN BULK MILK
DISPENSING OPERATIONS



FSC 8910

20071005329

MIL-STD-175E
10 August 1982

DEPARTMENT OF DEFENSE
Washington, DC 20301

Sanitary Standards for Equipment and Methods for the Handling of Milk and Milk
Products in Bulk Milk Dispensing Operations

MIL-STD-175E

1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to Commandant, Academy of Health Sciences, US Army, ATTN: HSHA-IVS, Fort Sam Houston, TX 78234, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Service Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ORGANIZATION.					
1. REPORT DATE (DD-MM-YYYY) 10-08-1982		2. REPORT TYPE final		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE MILITARY STANDARD (MIL-STD-175E) Sanitary Standards for Equipment and Methods for the Handling of Milk and Milk Products in Bulk Milk Dispensing Operations				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Commandant, Academy of Health Sciences, U.S. Army, ATTN: HSHA-IVS, Fort Sam Houston, TX 78234				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This standard establishes the sanitary requirements for the materials, design, and construction of containers and equipment used in dispensing milk and milk products from bulk dispensers. This military standard is mandatory for use in CONUS and to the extent feasible in overseas commands. This standard is primarily intended to insure clean, wholesome food products that are free from chemical, microbiological, and physical contaminants to prevent the transmission of foodborne disease to members of the Armed Forces.					
15. SUBJECT TERMS sanitation, food, milk, foodborne diseases					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE			19b. TELEPHONE NUMBER (Include area code)

CONTENTS

		<u>PAGE</u>
Paragraph 1	SCOPE-----	1
1.1	Purpose-----	1
1.2	Application-----	1
1.3	Objectives-----	1
1.4	Limitations-----	1
2	REFERENCE DOCUMENTS-----	1
2.1	Issues of documents-----	1
2.2	Other publications-----	1
3	DEFINITIONS-----	2
3.1	Bulk milk dispenser-----	2
3.2	Corrosion resistant-----	2
3.3	Filler-----	2
3.4	Holder case-----	2
3.5	Milk zone-----	2
3.6	Multiple-service dispenser container-----	2
3.7	Multiple-use plastic-----	3
3.8	Nonsplash zone-----	3
3.9	Reusable shipping container-----	3
3.10	Sanitize-----	3
3.11	Sealed-----	3
3.12	Single-service dispenser container or liner-bag---	3
3.13	Single-service dispenser tube-----	3
3.14	Single-service shipping container-----	3
3.15	Splash zone-----	3
4	GENERAL REQUIREMENTS-----	3
4.1	Material, design, and construction-----	3
4.1.1	Material-----	3
4.1.2	Design, construction, and utilization-----	4
4.2	Multiple-service dispenser tubes-----	8
5	DETAILED REQUIREMENTS-----	8
5.1	Bulk milk dispenser cabinet-----	8
5.1.1	Use of cabinet-----	8
5.1.2	Temperature-----	8
5.2	Cleaning and sanitizing treatment-----	8
5.2.1	Multiple-service dispenser containers-----	8
5.2.2	Storage and handling of dispenser containers-----	9
5.2.3	Sanitization tests-----	9
5.3	Dispenser tubes-----	9

CONTENTS (Cont)

	<u>PAGE</u>
5.3.1 Single-service dispenser tubes-----	9
5.3.2 Sanitization technique-----	9
5.3.3 Bacterial requirement for dispenser tubes----	9
5.4 Filling and closing-----	9
5.4.1 Dispenser containers-----	9
5.4.2 Filler(s)-----	10
5.4.3 Covers and coverings-----	10
5.4.4 Shipping containers-----	10
5.5 Pasteurization date-----	11
5.6 Cooling-----	11
5.7 Handling and disposition of emptied dispenser container and shipping container-----	11
5.7.1 Multiple-service container-----	11
5.7.2 Single-service dispenser container in a reusable shipping container-----	11
5.7.3 Single-service dispenser container and shipping container-----	12

1. SCOPE

1.1 Purpose. This standard establishes the sanitary requirements for the materials, design, and construction of containers and equipment used in dispensing milk and milk products from bulk dispensers.

1.2 Application. This military standard is mandatory for use in CONUS and to the extent feasible in overseas commands.

1.3 Objectives. This standard is primarily intended to insure clean, wholesome food products that are free from chemical, microbiological, and physical contaminants to prevent the transmission of foodborne disease(s) to members of the Armed Forces.

1.4 Limitations. This standard will not be used to determine the capability of an establishment to produce or furnish products or services which are in compliance with specifications or other purchase descriptions. The criterion shall be the equipment's ability to furnish wholesome and sanitary products.

2. REFERENCED DOCUMENTS

2.1 Issues of documents. The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this standard to the extent specified herein.

LAWS AND REGULATIONS

US Department of Health and Human Services (HHS)

Code of Federal Regulations (CFR), Title 21, Food and Drug, and Regulations Promulgated Thereunder

Fabrication of Single-Service Containers and Closures for Milk and Milk Products - Sanitation Standards, 1978 Edition

Grade A Pasteurized Milk Ordinance - 1978

Recommendations of the United States Public Health Service/Food and Drug Administration, Publication No. 229

(Application for copies should be addressed to Superintendent of Public Documents, US Government Printing Office, Washington, DC 20402.)

2.2 Other publications. The following documents form a part of this standard to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply:

American Iron and Steel Institute

Steel Products Manual of Stainless and Heat Resisting Steels

(Application for copies should be addressed to the American Iron and Steel Institute, 1000 16th Street, N.W., Washington, DC 20036.)

American Public Health Association (APHA)

Standard Methods for the Examination of Dairy Products

(Application for copies should be addressed to the American Public Health Association, Inc., 1015 15th Street, N.W., Washington, DC 20005.)

International Association of Milk, Food, and Environmental Sanitarians, Inc.

3-A Sanitary Standards

(Application for copies of particular standards pertaining to dairy equipment should be addressed to the Journal of Food Protection, P.O. Box 701, Ames, Iowa 50010.)

National Sanitation Foundation (NSF)

NSF Standard C-2 for Special Equipment and/or Devices

NSF Standard 20 for Commerical Bulk Milk Dispensing Equipment and Appurtenances

(Application for copies should be addressed to the National Sanitation Foundation, P.O. Box 1468, Ann Arbor, MI 48106.)

(Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using federal agencies.)

3. DEFINITIONS

3.1 Bulk milk dispenser. A refrigerated cabinet with a mechanism designed to dispense milk and fluid milk products from single-service or multiple-service containers in a sanitary manner.

3.2 Corrosion resistant. Capable of maintaining original surface characteristics under prolonged influence of the milk to be contacted.

3.3 Filler. An automatic or manually-operated device used to conduct pasteurized milk or fluid milk products into dispenser containers.

3.4 Holder case. A case or rigid supporting frame to hold and support a single-service dispenser container or liner bag when placed in a bulk milk dispenser. This may be the reusable shipping container or another separate piece of equipment.

3.5 Milk zone. Those surfaces of the equipment with which the milk normally comes in contact.

3.6 Multiple-service dispenser container. A container fabricated from stainless steel or multiple-use plastic materials that is suitable for reuse after it has been thoroughly cleaned and sanitized by an approved bactericidal process.

10 August 1982

3.7 Multiple-use plastic. A plastic that has been approved as a milk contact surface by the Federal Food and Drug Administration. It must comply with the applicable 3-A Sanitary Standards and with the applicable portions of the USPHS Grade A Pasteurized Milk Ordinance.

3.8 Nonsplash zone. All exposed surfaces other than milk and splash zones.

3.9 Reusable shipping container. A shipping container which is utilized to protect and support a single use milk dispenser container or liner bag and which is intended to be reused. This may also be referred to as a transfer case or milk case.

3.10 Sanitize. Adequate treatment of clean milk zones by a process that is effective in destroying vegetative cells of pathogenic bacteria and in substantially reducing other microorganisms. Such treatment shall not adversely affect the product and shall be safe for the consumer.

3.11 Sealed. Having no openings that will permit the entry of dirt or permit liquid seepage.

3.12 Single-service dispenser container or liner-bag. A primary container fabricated from a plastic material approved as a milk-contact surface by the Federal Food and Drug Administration and which is intended for one usage only.

3.13 Single-service dispenser tube. Any tube or pipe of rubber, plastic, or plastic-type material used to dispense milk or milk products from any dispenser container in a sanitary manner and which is intended for one usage only.

3.14 Single-service shipping container. A shipping container fabricated from either plastic material, moisture-resistant fiberboard, or other moisture-resistant material used to inclose a single-service dispenser container or liner-bag, which is intended for one usage only.

3.15 Splash zone. Those surfaces which are subject to routine splash, spillage, and other soiling during normal use.

4. GENERAL REQUIREMENTS

4.1 Material, design, and construction. All material, design, and construction shall comply with standards described in 4.1.1 thru 4.2 and National Sanitation Foundation Standard No. 20 for Commercial Bulk Milk Dispensing Equipment and Appurtenances.

4.1.1 Material.

4.1.1.1 Cabinet and accessories. All interior and exterior surfaces of the cabinet and all exposed surfaces of accessories shall be of durable, non-absorbent, corrosion-resistant material. All milk zones shall have a surface free of pits and inclusions and shall be at least as smooth as a number 3 (100 grit) finish on stainless steel. Splash and nonsplash zones shall have a surface made of commercial grade hot rolled steel free of visible scale. This stainless steel shall

be in accordance with the Steel Product
Steels. Stainless steel for fabricati
resistant, nontoxic, stable, and nonab
impart odor, color, or taste, nor cont

In conjunction with
25 percent load or g
shall be as specifie

to be removed and shall

4.1.2.1 Bulk milk dispenser. Bulk milk (Type I, regulated) shall be sealed in place, constructed to exclude vermin, dust, dirt, and moisture. The dispenser shall have gaskets shall zone and to be easily cleaned, maintained input and maximum internal cavity. Exposed contact surfaces shall be readily accessible; specification sheet, the door(s) are fully assembled position or when removed. The dispenser shall be designed and constructed so that the converter shall be visible and visual inspection added and the milk dispensed, removed, minimum, minimum, and maximum simple take-apart transfer of milk from the primary converter at sea level shall be visible in the splash guard is specifically prohibited. Tests shall be conducted as follows: construction, i.e., without channel sections at

4.1.2.1.1 Seams and joints. All seams and permanent joints shall be sealed and

4.1.2.1.2 Internal angles. Any internal angle formed by the intersection of surfaces at 13_e. The converter shall have a minimum continuous and starting voltage

4.1.2.1.3 External corners and angle milk zone shall be sealed; smooth as specified by the manufacturer to eliminate sharp edge. The class converter at interfere with proper drainage.

4.1.2.1.4 Exposed threads. Exposed and projecting screws and studs shall be eliminated from the nonsplash zone, exposed screw only when it has been demonstrated that they shall be eliminated from the screw or bolt heads in the splash zone, brazier or modified brazier rivets or areas subject to cleaning, interior in a manner as to minimize projections, 1

4.1.2.1.5 Door(s). Door(s) shall be designed and constructed to have a rubber or rubber-like gasket be designed and constructed to be moisture tight, and cannot be removed from the milk be sealed to prevent the entrance of two, three and four id All multiuse milk containers shall have no in-lets in parallel and t-able, either in an opened and all removable parts remov-ity in steps of 10 p-ll be readily removable. portions of the cabinet shall be acc-ralleled converters c-ilk containers can be Hinges in the splash zone shall be e-to provide all possi-itary manner. The design and construction. Piano type-and minimum input vol-r purposes of dispens- zone. Door(s) shall be fabricated i-fied by the applicab-ld interior, and all single or double panel. Single pane-at nominal input and minimum input freque-nd interior, and all the bottom. If channel sections are-minimum input freque-nd interior, and all shallow and wide enough to be easily-sheet when supplied b-nd interior, and all Hollow sections of double panel door-ts shall meet the req-nd interior, and all

be designed and con-
ge from the milk
t All multiuse milk con-
F nable, either in an
C all be readily removable.
i Milk containers can be
l itary manner. The
r purposes of dispens-

and interior, and all

contact surfaces, formed
igned to be manually cleaned,
inch (6.4 mm).

corners and angles in the
joined, and with suffi-
n accident hazard or

10 August 1982

provided when necessary; but when provided they shall be effectively screened with a minimum of 16 mesh screen or equal, against vermin and protected against the entrance of seepage and spillage. All tracks and guides for doors and access panels shall be built to be easily cleaned and to minimize the collection of food particles, condensation, spillage, and foreign matter.

4.1.2.1.6 Temperature indicating devices. The dispenser shall be so designed and equipped as to be capable of maintaining an internal cabinet temperature of not more than 40°F (4.4°C) when tested in a 110°F (43.3°C) ambient temperature. Temperature sensing and indicating devices shall be provided for each temperature zone of the dispenser. Such devices shall be calibrated in 2°F increments and shall have an accuracy of $\pm 2^\circ\text{F}$ ($\pm 1^\circ\text{C}$) at the critical range, shall be of an easy-to-read type, and so located as to be readily visible from the exterior of the cabinet when the door is closed. The sensing element of the device shall be easily cleanable and so located as to reflect the representative temperature of the milk container storage compartment.

4.1.2.1.7 Drains. Drains, other than condensate drains, shall be eliminated from the milk container storage compartment. Condensate drains shall be so designed and/or located as to prevent their use as a general drain for the splash zone.

4.1.2.1.8 Mounting. Unless the dispenser is designed to be sealed to the floor, counter, or shelf, one or more of the following provisions shall be made for cleaning the area underneath the unit:

a. The unit shall be mounted on legs of sufficient height to provide a clear space between the lowest horizontal member of the unit and the floor of not less than 6 inches (152 mm); or

b. The unit shall be mounted on casters, rollers, or gliders of such material, design, and construction as to permit its being easily moved by one person. Casters shall be so installed as to be easily cleanable and shall conform to National Sanitation Foundation Standard C-2 for Special Equipment and/or Devices; or

c. The unit shall be small enough and light enough to be easily moved by one person and shall have no utility connection, or have a connection that can be easily disconnected without tools, or have a utility connection of sufficient length to permit the unit to be moved for cleaning; or,

d. Equipment, other than portable, designed to be placed on counters or shelves, shall be designed to be sealed to the counter or be mounted on legs of sufficient height to provide a clear space between the lowest horizontal member of the unit and the counter or shelf of not less than 4 inches (102 mm).

4.1.2.1.9 Legs and feet. Legs and feet shall be of simple design, free from embellishments and exposed threads. If the legs are hollow tubes, they must be sealed.

10 August 1982

4.1.2.1.10 Refrigeration equipment. Automatic controls shall be provided to insure the maintenance of the temperature at all times except when the milk container is being inserted or removed from the compartment. Evaporation coils and refrigerant tubing shall be installed in such a manner that milk contact surfaces are protected both from condensate and other fluids that may drop or splash thereon or therefrom. Refrigeration coils if exposed to splash or spillage shall be finless type and enclosed in a housing to protect against spillage. Adequate provision shall be made for the drainage of any accumulation of condensate. The refrigeration unit shall be accessible for cleaning.

4.1.2.2 Dispenser containers. Filling of the dispenser containers with milk and milk products shall be performed only at the processing plant in accordance with normal plant operating procedures. The containers shall be designed and constructed so that when filled and sealed it is impossible to withdraw any part of their contents, or to introduce any substance without breaking the seal or seals. All types of dispenser containers shall be of such dimensions that they fit into the bulk milk dispenser and permit proper air circulation and cooling of contents. The interior of the dispenser container shall be designed and constructed so that when properly placed in the milk dispenser complete product drainage is permitted.

4.1.2.2.1 Multiple-service dispenser container. Multiple-service dispenser containers shall be designed and constructed of multiple-use product contact surfaces which are durable, can be easily cleaned and sanitized and the materials shall comply with appropriate FDA regulations. Multi-service dispenser containers and dispensing devices including measuring devices, with which milk or milk products come into contact, shall be thoroughly cleaned and sanitized at the milk plants. The dispenser containers shall be designed so that inspection for milk stone deposits can be made and the containers appropriately treated for milk stone removal on a regularly scheduled basis, substantiated by an adequate quality control program.

4.1.2.2.1.1 Metal cans. Cans will have a neck not less than 7 inches (178 mm) in diameter and will be seamless or solderless, except that stainless steel cans may be welded. The covers shall be umbrella type, fitted with a standard vent hole and with two holes in the rim for sealing wires. A means shall be provided for sealing all openings of the can so that the product cannot be withdrawn nor any substance added to the product without breaking or defacing the seals. Each can shall be fitted with two lugs opposite each other, to permit the covers to be sealed. Cans that have single service, nonmetallic dispenser tubes shall have a means of positioning or holding the tube during filling, storage, and transportation to protect the tube and covering material from damage. All product contact surfaces of appurtenances to the container shall be visible and accessible. Permanent attachments shall be welded or brazed to the container with durable, corrosion-resistant, nontoxic material and all joints shall be smooth and flush. There shall be no exposed threads in the milk zone. Bottoms of containers shall be constructed to facilitate ease of cleaning and permit visual inspection of all surfaces. Metal containers with double-bottom construction shall not be used.

4.1.2.2.1.2 Multiple-service plastic dispenser containers. Multiple service plastic dispenser containers shall be seamless. The entire milk contact surface shall be easily (readily) cleanable upon removal of cover. A means shall be provided for sealing all openings of the container so that the product cannot be withdrawn nor any substance added to the product without breaking or defacing the seals. The containers shall have a means of positioning or holding the dispenser tube during filling, storage, and transportation to protect the tube and the covering material from damage. All product contact surfaces of appurtenances to the container shall be visible and accessible. The container shall be vented. The vent hole shall be sealed until ready for dispensing.

4.1.2.2.2 Single-service dispenser containers. The single-service dispenser container or liner-bag shall be designed and constructed of materials that are durable and will resist puncturing or tearing when handled during shipping and/or when the container is transferred from the transfer case to the holding case. The single-service dispenser container or liner-bag shall have an integrated plastic snap-cap (protected with a dust cover when applicable), which will provide a tight, leakproof seal after filling with product and shall be inclosed in or shall be an integral part of the single-service dispenser container. Both the liner-bag and the dispenser tube shall be protected overall by an outer or double bag construction, made of similar material or by a dispenser case equipped with a tight cover. The shipping container used with the single-service container shall be closed and sealed in such a manner that the contents receive maximum protection against damage and contamination. The shipping container shall be marked with special instructions for upright positioning of the container during shipment, storage, and proper placement in the bulk milk dispenser. Upon arrival at destination, the single-service dispenser container may be transferred to a dispenser case having a suitable sanitary opening for the dispenser tube and encased on all four sides. All reusable shipping and dispenser cases used with the single-service dispenser container or liner bag shall be of sanitary design, and shall meet all local and State Health Department requirements. Such containers shall be thoroughly washed in accordance with standard practice after each use or service. The plastic dispenser container or liner-bag shall not be placed in the bulk milk dispenser without adequate support of a suitable shipping container or supported on all four sides by side walls, exclusive of the bulk milk dispenser itself.

4.1.2.3 Dispenser tubes and dispensing mechanisms.

4.1.2.3.1 For multiple-service dispensing containers. When using multiple-service dispenser containers, the dispenser tube and any milk-contact parts of the dispensing mechanism shall be attached at the milk plant, and shall be protected by a moisture-proof covering, or housed in a compartment with a moisture-tight closure which shall not be removed until after the container is placed in the refrigerated compartment of the bulk milk dispenser. A single-use compartment closure shall be made so that it cannot be reused or returned to its original condition after removal. A multiple-use closure may be used if it is tamper-proof.

4.1.2.3.2 For single-service dispensing containers. For single-service dispenser containers or liner bags, when being stored or transported in a reusable shipping

10 August 1982

container or where the dispensing tube can be exposed to contamination, the dispenser tube shall be protected against contamination before and during the placement of the dispenser container in the bulk milk dispenser. As a means of affording such protection, a protective sleeve or covering shall inclose the dispenser tube and shall be removed only after the container has been placed in the operating position in the bulk milk dispenser. For single-service dispenser containers where the container or liner bag and the single service dispenser tube are inclosed and sealed inside the single service shipping container (moisture-resistant fiberboard box) at the point of filling and remains inclosed until placement into the bulk milk dispenser, the dispenser tube need not have an additional covering or plastic sleeve. If the dispenser tube is not attached to the container, the milk cap attachment to the liner-bag shall be completely sealed and protected against contamination with a cover-all, sanitary, snap-on cap. The dispenser tube and riser tube (if used) shall be furnished with a single-use, sanitary, protective covering or sleeve. The discharge opening of the dispenser tube shall have a moisture-tight, single-use closure or plug.

4.1.2.3.3 Disassembly. All dispensing mechanisms shall be so fabricated that they can be easily disassembled without tools. When disassembled, all surfaces shall be visible and accessible for cleaning. The dispensing mechanisms shall be designed so that condensation or other moisture is diverted from the normal filling position of the container. If a removable drain guard is used, it shall be designed so that milk cannot be dispensed unless the guard is in position.

4.2 Multiple-service dispenser tubes. Multiple-service dispenser tubes shall not be used.

5. DETAILED REQUIREMENTS

5.1 Bulk milk dispenser cabinet.

5.1.1 Use of cabinet. Contractor provided cabinets, whether owned or leased by the contractor, while in possession and use by the Government, shall be used only for milk and fluid milk products unless otherwise specified in procurement documents.

5.1.2 Temperature. The air temperature inside the cabinet shall be kept between 32° and 45°F (0° and 7°C) except that it may exceed 45°F (7°C) the first half hour after reloading the cabinet with full dispenser containers. Milk in the dispensing mechanism and/or tube shall not exceed 45°F (7°C) upstream from the closure device. If a milk product is retained in the dispensing tube beyond the closure, then the 45°F (7°C) temperature requirement shall apply to the milk product remaining in the dispensing tube.

5.2 Cleaning and sanitizing treatment.

5.2.1 Multiple-service dispenser containers. Multiple-service dispenser containers and their covers shall be thoroughly cleaned and subjected to an approved sanitizing process after each cleaning, at the place of pasteurization and filling.

10 August 1982

The same equipment and utensils as those used for cleaning and sanitizing farmers' cans or containers that have contained raw milk and milk products may be used only, if the dispenser containers are subjected to additional cleaning and sanitizing processes in accordance with Grade A Pasteurized Milk Ordinance.

5.2.2 Storage and handling of dispenser containers. After cleaning and sanitizing and prior to filling, the multiple-service containers shall be handled, transported, and stored in a sanitary manner. Single-service dispenser containers shall be handled and stored in a sanitary manner.

5.2.3 Sanitization tests. A sanitization test of dispenser containers and dispenser tubes may be conducted at any time, but the preferred time is just prior to filling. The procedures shall be in accordance with the Standard Methods for the Examination of Dairy Products. The residual bacteria count of a dispenser container and dispenser tube shall not exceed one colony per mL of capacity by the Rinse Method, nor more than 50 colonies per 8 square inches (one colony per square centimeter) by the Swab Contact Method, in 3-out-of-4 samples taken at random on a given day. All multi-use and single-service containers shall be free of coliform organisms.

5.3 Dispenser tubes.

5.3.1 Single-service dispenser tubes. Single-service dispenser tubes shall be long enough to be put into operation by cutting beyond the termination of the dispensing mechanisms. The tubes should be cut at an angle so as to aid drainage of residual milk. Not more than 1/4-1/2 inch (6.4-12.8 mm) of the dispenser tube shall extend beyond the termination of the dispensing mechanism while the tube is in operation. Its contact surfaces shall be of material approved by the Federal Food and Drug Administration.

5.3.2 Sanitization technique. Immediately prior to filling, the open ends of dispenser tubes for all multiple-service containers and for single-service dispenser containers without dispenser tubes attached, shall be immersed for at least 1 minute in a hypochlorite solution with not less than 50 ppm available chlorine and having a minimum temperature of 75°F (24°C). For each 18°F (10°C) drop in temperature; approximately twice the exposure time is needed to achieve the equivalent bactericidal action with the same strength solution. Tools used to attach dispenser tubes shall be designed and constructed to promote sanitation, and shall be handled in a sanitary manner.

5.3.3 Bacterial requirement for dispenser tubes. Dispenser tubes prepared for attachment to dispenser containers at the milk plant shall meet the residual bacterial plate count requirement of 5.2.3. The dispenser tubes attached to the single-service dispenser containers at the place of manufacture shall be included in the sanitization test for that dispenser container.

5.4 Filling and closing.

5.4.1 Dispenser containers. Dispenser containers shall be filled and closed at the place of pasteurization, in accordance with Grade A Pasteurized Milk Ordinance.

5.4.2 Filler(s). The filler shall be made of smooth, nonabsorbent, corrosion-resistant, nontoxic material and shall be so constructed that it can be easily cleaned and sanitized. Manually operated fillers (valves) shall be designed and constructed to comply with 3-A Sanitary Standards. The filler shall have a flange or drip deflector to protect the milk or fluid milk product from water condensate or atmospheric contamination during the filling operation.

5.4.3 Covers and coverings.

5.4.3.1 Paper covering. Immediately after filling, the mouth or opening, of the multiple-service dispenser container shall be completely covered with parchment or similar material accepted by the Federal Food and Drug Administration. The paper or material shall be clean, waterproof, and grease-resistant. Prior to use, it shall be stored and handled in a sanitary manner. At the time of use, the residual bacterial plate count of the surface of the covering paper or material shall not exceed 50 colonies per 8 square inches (one colony per square centimeter) of residual bacteria by the Swab-Contact Method, as determined by procedures in Standard Methods for the Examination of Dairy Products, in 3-out-of-4 samples taken at random on a given day. The paper covering or material shall be free of coliform organisms. The paper cover shall be fabricated with a vent. After filling, the parchment shall be immediately placed on the container, the cover put on and sealed using standard lead and wire seals or banded, flat, metal tapes at opposite edges of the top.

5.4.3.2 Can cover. The can cover for the metal multiple-service dispenser container shall have an unobstructed vent in the shell or cup, approximately 3/16 inch (4.8 mm) in diameter, $\pm 1/16$ inch (1.6 mm) and located approximately 7/8 inch (22.2 mm) below the inside cover rim. The dispenser container shall remain sealed until it has been emptied.

5.4.3.3 Plastic covers. Covers for plastic multiple-service dispenser containers shall be placed on the container and sealed immediately after the containers are filled at the pasteurization plant. The covers shall not be removed nor the seal broken until the containers are returned to the pasteurization plant after use.

5.4.4 Shipping containers.

5.4.4.1 Shipping containers for multiple-service dispenser containers. The multiple-service dispenser container shall be its own shipping container. The outside of the multiple-service dispenser container shall be cleaned and sanitized at the same time as the insides while at the processing facility. The outside of these containers shall be maintained in a clean sanitary appearance free from stains, dirt, or product build-up.

5.4.4.2 Single-Service shipping containers for single-service dispenser containers. The single-service dispenser container or liner-bag shall be closed and sealed in a sanitary manner immediately after filling. The dispenser tube must not be exposed to contamination. The single-service shipping containers shall be closed and sealed in such a manner that the contents will receive maximum protection against damage and contamination. A single-service shipping container shall be closed by gluing, stapling, taping, or any other means, in such a way that a break in the closure shall prevent its reuse. The shipping container shall remain closed until the container has been emptied.

10 August 1982

5.4.4.3 Reusable shipping containers and holder case. Alternatively, reusable shipping containers may be used in connection with the single-service dispenser container or liner-bag, provided the latter meets the requirements of 4.1.2.2.2 and 4.1.2.3.2, in addition, the primary container or liner-bag is protected overall by an outer or double bag construction of similar material. The reusable shipping container serves as a shipping container and as such, shall provide protection against contamination and accidental fallout of the filled single-service dispenser container or liner-bag during shipment. Upon arrival at final destination, the single-service dispenser container or liner-bag may be transferred to a holder case if applicable. The holder case shall be equipped with a suitable dispenser tube opening and shall be of a size and shape which fits appropriately in the bulk milk dispenser. The reusable shipping container shall only be used for its intended purpose and shall not be used as a storage container for other foods or kitchen related materials. The reusable shipping container shall be returned to the pasteurizing facility after each use for cleaning by the usual case cleaning procedures. The reusable shipping container shall be free from accumulations of dirt, grease, or product build-up. The holder case shall be maintained in a clean sanitary condition. The responsibility for routine cleaning of the holder case is that of the using activity.

5.5 Pasteurization date. Dispenser containers shall be labeled with the date of pasteurization or pull date as recognized by State and local health authorities. This date shall be legibly marked on tags firmly attached to the dispenser container, stamped with indelible ink on the visible lip of parchment or parchment-like paper, or stenciled on the topside of the shipping cartons in a location where it can be easily read whether in or out of the milk dispenser.

5.6 Cooling. All pasteurized milk and milk products shall be cooled to 45°F (7°C) or lower immediately after pasteurization and shall be maintained at a temperature not to exceed 45°F (7°C) during the filling, packing, storage, delivery, and dispensing of the product.

5.7 Handling and disposition of emptied dispenser container and shipping container.

5.7.1 Multiple-service container. After the metal or plastic multiple-service dispenser container has been emptied, the dispenser tube shall be kept intact and secured back into the transporting position to prevent milk drippage while awaiting and transporting the containers back to the milk processing facility. After emptying the multiple-service dispenser container, the covers and cover seals shall also remain intact and shall be returned to the processing facility in that condition. Multiple-service dispenser containers while in the possession and being used by the Government shall be used only for dispensing the product as initially delivered therein.

5.7.2 Single-service dispenser container in a reusable shipping container. After the single-service dispenser container or liner-bag has been emptied or transferred to a holder case, the single-service dispenser container shall be destroyed or disposed of in the proper manner and the reusable shipping container returned to the processing facility for cleaning and sanitation (see 5.4.4.3).

5.7.3 Single-service dispenser container and shipping container. After the single-service dispenser container or liner-bag has been emptied, the entire package shall be destroyed or disposed of in the proper manner.

Custodians:

Army - GL

Navy - SA

Air Force - 50

Preparing Activity:

Army - GL

Project No. 8910-0427

Review activities:

Army - MD ,TS

Navy - MS , MC

Copies of this standard for military use may be requisitioned on DD Form 1425 (Specification and Standard Requisition) and submitted to Commanding Officer, Naval Publications and Form Center, 5801 Tabor Avenue, Philadelphia, PA 19120. The title and identifying symbol should be stipulated when requesting copies of military standards.

FOLD

DEPARTMENT OF THE ARMY

**OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300**



**NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES**

BUSINESS REPLY CARD

FIRST CLASS

PERMIT NO. 12062

WASHINGTON D. C.

POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE ARMY

Commandant
Academy of Health Sciences, US Army
ATTN: HSHA-IVS
Fort Sam Houston, TX 78234



FOLD

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS: This form is provided to solicit beneficial comments which may improve this document and enhance its use. DoD contractors, government activities, manufacturers, vendors, or other prospective users of the document are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity. A response will be provided to the submitter, when name and address is provided, within 30 days indicating that the 1426 was received and when any appropriate action on it will be completed.

NOTE: This form shall not be used to submit requests for waivers, deviations or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

DOCUMENT IDENTIFIER (Number) AND TITLE

MIL-STD-175E Sanitary Standards For Equipment And Methods For The Handling Of

NAME OF ORGANIZATION AND ADDRESS OF SUBMITTER Milk And Milk Products In Bulk Milk
Dispensing Operations

☐ VENDOR ☐ USER ☐ MANUFACTURER

1. ☐ HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? ☐ IS ANY PART OF IT TOO RIGID, RESTRICTIVE, LOOSE OR AMBIGUOUS? PLEASE EXPLAIN BELOW.

A. GIVE PARAGRAPH NUMBER AND WORDING

B. RECOMMENDED WORDING CHANGE

C. REASON FOR RECOMMENDED CHANGE(S)

2. REMARKS

SUBMITTED BY (Printed or typed name and address — Optional)

TELEPHONE NO.

DATE

DD FORM 1426
1 OCT 76

EDITION OF 1 JAN 72 WILL BE USED UNTIL EXHAUSTED.

MIL-STD-414
NOTICE 1
8 MAY 1968

MILITARY STANDARD

SAMPLING PROCEDURES AND TABLES
FOR INSPECTION BY VARIABLES
FOR PERCENT DEFECTIVE

TO ALL HOLDERS OF MIL-STD-414:

1. The following changes shall be made in pen and ink:
 - a. page 98, Example D-4 under Example line 8: change "65,500" to "60,500"
 - b. page 98, Example D-4 under Example line 9: change "68,000 to "63,000"
2. Add "FSC MISC" on bottom of cover sheet.
3. Retain this notice and insert before the table of contents.
4. Holders of MIL-STD-414 will verify that changes indicated above have been entered. This notice will be retained as a check sheet. This issuance is a separate publication. Each notice is to be retained by stacking points until the Military Standard is completely revised or cancelled.

(Project MISC-0538)