

Section III. FOOD

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3-1 PROCUREMENT, ACCEPTANCE & INSPECTION OF FOOD ITEMS

- 3-1.1 PROCUREMENT OF FOOD ITEMS
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3-1.1 Procurement of Food Items

a. The Subsistence Prime Vendor (SPV) Program is a major reengineering effort within the Department of Defense (Food Purchasing Procedures) whereby a single distributor serves as the major provider of product to various Federal customers within a geographical region or zone. Navy and Marine Corps dining facilities will no longer receive food items from Defense Logistics Agency (DLA) warehouses. The vendor supplies commercially available subsistence under a contractual agreement established by the Defense Personnel Support Activity (DPSC) - the lead agency for the SPV program. The SPV selected for each zone will deliver directly to dining facilities or a chosen location within 48 hours after ordering. The customer will select the number of deliveries and the day of the week deliveries should be made. At time of delivery, items are accepted or rejected by the ordering activity, rejections will be replaced by the SPV.

b. All food delivered by SPV to Navy and Marine corps will originate from facilities listed in the U.S. Army publication, *Directory of Sanitarily Approved Food Establishments*, or from one of the following establishments exempted from the listing:

- (1) Establishments listed in USDA publication, *Meat and Poultry Inspection Directory*.

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(2) Establishments listed in USDA publication, *List of Plants Operating Under USDA Poultry and Egg-grading and Egg Products Inspection Programs*.

(3) Establishments having a pasteurized milk compliance rating of 90 percent or higher, certified by a State Milk Sanitation Officer, and listed in the *Sanitation Compliance and Enforcement Ratings of Interstate Milk Shippers List* (IMSL). The IMSL is published quarterly by the U.S. Department of Health and Human Services; Public Health Service (PHS); FDA, Center for Food and Applied Nutrition, Office of Compliance, Division of Cooperative Programs, Milk Safety Branch.

(4) Establishments listed in the *Dairy Plants Surveyed and Approved for USDA Grading Service*.

(5) Fish establishments listed in Parts I, II, and III of the United States Department of Commerce (USDC) *Approved List of Fish Establishments and Products* published by the USDC, National Oceanic and Atmospheric Administration and the National Fisheries Service.

(6) Shellfish establishments listed in *Interstate Certified Shellfish Shippers List*, published monthly by the U.S. Department of Health and Human Services, Food and Drug Administration, Washington, DC.

(7) The following establishments are also exempt from the *Directory of Sanitarily Approved Food Establishments* listing:

(a) Food imported by distributors or brokers into the United States.

(b) Plants located in the United States that process food known to possess little or no potential health hazards. Specific exemptions from the directory listing of other plants are on an item by item basis. See Naval Supply Systems Command Instruction 4355.4 /AR 40-657/MCO P10110.31

3-1.2 Acceptance Authority

- 3-1.2.1 General Information
- 3-1.2.2 Meats and Poultry
- 3-1.2.3 Fish and Shellfish (seafood)
- 3-1.2.4 Fruits and Vegetables
- 3-1.2.5 Canned Products
- 3-1.2.6 Dry Food Items
- 3-1.2.7 Milk

3-1.2.8 Butter, Eggs and Cheese

3-1.2.1 General Information

a. Acceptance of supplies will be at the food establishment or at the delivery points chosen by the activity. The acceptance authority is assigned to the ordering activity. Each activity is responsible for accepting or rejecting supplies as they are received. The receiving official is the final authority on acceptance or rejection of product. The ordering activity shall designate, in writing, those individuals authorized to accept or reject supplies delivered under the Subsistence Prime Vendor Program.

b. Changes in procurement brought about by the SPV program will include greater efficiencies and better partnership with industry through such practices as just in time deliveries, best value contracting, shared production agreements and electronic data interchange. However, some of basic concepts have not changed. They are as follows:

(1) All foods delivered to Navy and Marine Corps food establishments will originate from approved food establishments. See section 3-1.1b.

(2) Deliveries made under SPV do not need to be inspected by the Army Veterinary Inspector or the PMA prior to being accepted. (NOTE): Suspected unwholesome products of any kind will not be accepted without the concurrence of the responsible PMA.

(3) Fitness for human consumption is still required on any local purchase food items not delivered by the SPV.

c. When deliveries are made to a Navy or Marine Corps food establishment by a subsistence prime vendor or a subcontractor under a prime vendor contract, inspection of delivery product by the PMA or Army veterinary personnel is not required. However, when requested by the food service officer or representative, the PMA will assist with any determination concerning food that is delivered deteriorated, contaminated, or infested.

d. Fitness for human consumption inspections must be conducted by the PMA both ashore and afloat. These inspections will be conducted only on locally purchased food items that were not obtained from an SPV and were not inspected by U.S. Army veterinary service personnel.

e. The PMA concerned with food inspections ashore should maintain liaison with local personnel of the U.S. Army veterinary services, USDA, and/or USDC inspectors to avail themselves of

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general information and techniques involved in food inspection.

f. Food inspections afloat should be made in the company of the supply officer or representative, thus a combination of knowledge and training can result in an effective inspection program.

g. The practice of sound judgement, coupled with experience and common sense will help determine what items are fit or unfit. Foul odor and unnatural appearance, as determined by the PMA, are causes for rejection.

3-1.2.2 Meats and Poultry

a. In the United States all meat and poultry purchased from subsistence prime vendors or a subcontractor under a prime vendor contract must have originated from plants operating according to all USDA requirements and the law. In overseas areas where meats, meat products, poultry, and poultry products cannot be obtained from plants under Federal or State inspection systems, the U.S. Army Veterinary Service provides inspection services. These approved plants are listed in the *Directory of Sanitarily Approved Food Establishments*.

b. Guidelines for receipt of meats and poultry may be found in NAVSUP PUB 421 AND NAVSUP PUB 486.

3-1.2.3 Fish and Shellfish (seafood)

a. Fish may not be received from subsistence prime vendors Unless they are legally caught, harvested, and obtained from a source listed in *Directory of Sanitarily Approved Food Establishments or USDC Approved List of Fish Establishments and Products*.

b. Fish must be carefully inspected. Refrozen fish must not be used. Fresh fish have bright red gills, prominent clear eyes and firm elastic flesh. Stale fish are dull in appearance, have cloudy and red bordered eyes and soft flesh; finger impressions are made easily and remain when digital pressure is released.

c. Fish caught over the side at sea must not be consumed.

3-1.2.4 Fruits and Vegetables

Inspections of fresh fruits and vegetables are based on USDA standards. Use common sense when inspecting fruits and vegetables. For additional information refer to NAVSUP 421.

3-1.2.5 Canned Products

a. Foods in hermetically sealed containers shall be obtained from an approved source. The use of home canned foods is prohibited.

b. Canned foods shall be inspected upon delivery. Do not accept defective canned goods.

c. Do not serve food from cans with abnormal odor, taste or appearance, or from containers showing abnormalities such as dented seams, bulging, swelling or leakage and rusting - particularly at the seams. Identify suspect canned foods, set them aside and hold for inspection by the PMA or the veterinary service.

3-1.2.6 Dry Food Items

a. Dry food items, other than canned goods, include such foods as cereals, sugar, dried fruits/vegetables, flour and meal. They must be stored under controlled conditions of temperature, humidity and air circulation.

b. Insects, particularly cockroaches and stored products pests, are often transported from one location to another concealed among bulk food items such as potatoes and onions or in and on cartons used to hold other dry food items. Therefore, pierce inspection of these items is essential.

3-1.2.7 Milk

a. Only Grade A pasteurized fluid milk and fluid milk products from approved plants will be used or served. Manufactured milk products will meet applicable Federal standards for quality.

b. Dry milk and dry milk products will be made from pasteurized milk and milk products.

c. Milk and fluid milk products for drinking purposes will be procured and served in the original, unopened, individual container of one pint or less, packaged at the milk plant, or be procured in containers approved for use with bulk milk dispensers. The PMA may approve use of original one gallon containers.

(1) An exception is granted for child development center programs. At child development center programs, milk may be transferred from bulk milk dispensers, commercial one gallon or smaller containers to small, clean, sanitized serving pitchers.

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The pitchers will be covered and transported immediately to child activity rooms. All milk remaining in the serving pitchers will be discarded.

d. Individual, single service, disposable containers of one pint or less will be used when fresh milk is served in flight, in transit, at field exercises, to patients in isolation for infectious or suspected infectious disease, or to individuals under similar conditions.

e. Milk and fluid milk products will not be offered for consumption beyond product expiration date without approval from the local veterinary activity.

f. Delivery inspections of dairy products are normally conducted by personnel attached to the receiving activity. Inspectors must ensure milk and milk products are from an approved source and delivered in containers which are in good condition, properly sealed, organoleptically acceptable, and that the temperature of the product on delivery is 45°F or less or under the current procurement contract.

g. Vehicles used in transportation of milk in its final delivery containers must be refrigerated, constructed with permanent tops and sides, and must be clean. The use of ice on tops of milk cartons for cooling milk during delivery or on the serving line is prohibited.

3-1.2.8 Butter, Eggs and Cheese

a. Butter. Butter should be received in clean, unbroken cases. The color should be uniform and the texture firm.

b. Shell Eggs.

(1) Shell eggs shall be received clean and sound and may not exceed the restricted egg tolerances for U.S. Consumer Grade B as specified in 7 CFR Part 56 - Regulations Governing the Grading of Shell Eggs and U.S. Standards, Grades, and Weight Classes for Shell Eggs, and 7 CFR Part 59 - Regulations Governing the Inspection of Eggs and Egg Products.

(2) Shell eggs must be received at 45° F or less and cooled and maintained at 41° F or below.

(3) Liquid, frozen, or dry eggs and egg products shall be obtained pasteurized.

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c. Cheese may be received in either natural or processed form. The rind should be clean and free from mold or wrinkles. Moldy cheese must not be sold or served unless it has been reconditioned. Cheese is reconditioned when the following criteria are followed:

(1) If the cheese has been held at 41°F, a ½ inch layer is removed and the moldy portions are discarded.

(2) The cutting must be performed so that mold contamination of the new surfaces is prevented.

(3) Cheese with high moisture content (e.g., cream and cottage) or with mold filaments which deeply penetrate the surfaces, and cheese portions too small to be reconditioned, must be discarded.

(4) All cheese procured for use by the Navy and Marine Corps is manufactured and labeled as required by 21 CFR 133.

3-1.3 Inspection of Food Items

a. The U.S. Army Veterinary Inspector (AVI) and the Navy PMA will assume a new role in support of food inspection and the acceptance of subsistence delivered to DoD activities under the Subsistence Prime Vendor Program. AVIs perform three types of product compliance evaluations under prime vendor: cursory, routine, and special compliance evaluations. The basic concept of these inspections and the acceptance of food evaluations, are as follows:

(1) The person in charge or designated representative at the receiving activities are responsible and have the authority to accept or reject subsistence delivered under the Subsistence Prime Vendor Program. AVIs will not normally be available to perform a wholesomeness determination on every delivery nor will the Navy PMA be required to be present at time of delivery to determine wholesomeness. Day-to-day quality assurance is the responsibility of the ordering activity.

(2) The person in charge or designated representative must ensure that authorized receiving individuals conduct a sanitary inspection of the vehicle and determine the identity, quantity and condition on all items received. AVIs will perform random sampling, called "cursory product compliance evaluation" of deliveries to evaluate wholesomeness of subsistence.

(3) AVIs are responsible for providing timely wholesomeness determinations on food items delivered to or accepted at prime vendor delivery points (receiving activities).

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AVIs will not impede deliveries to accommodate any product or any product evaluations unless they identify unwholesome products or unsanitary vehicle conditions.

(4) When products of questionable quality are identified prior to acceptance, authorized receiving individual's may request that AVIs or the Navy PMA provide guidance on or actually perform expedited product quality evaluations on deliveries.

(5) Routine Product Compliance Evaluations are performed to ensure food items comply with packaging and marking, best value for their intended use, satisfaction by customer, wholesomeness and at a minimum, count, condition and identity are determined. AVIs evaluate food products against applicable vendor specifications. Generally, cooking of product is not involved and the evaluation is done on-site at the food establishment. Items selected for Routine Compliance Evaluation are food items which have caused customer dissatisfaction.

(6) Special Product Compliance Evaluations are performed to ensure items meet all requirements in the specifications under which they were procured and they are wholesome. Special evaluations may involve cooking or other forms of processing and will be performed on-site at the food establishment by the AVI. However, food service authorities at any location may request evaluation of items other than or in addition to those scheduled for a Special Product Compliance Evaluation.

b. Inspection of food items conducted without the assistance of AVIs or the Navy PMA should be approached using common sense and knowledge obtained through food service sanitation training. If food has a foul odor or appears unnatural, it is cause for rejection and should be immediately reported through the chain of command.

3-1.4 Temperature Specifications for Receiving of Food Items

a. Except as specified in paragraph b of this section, refrigerated, PHF shall be at a temperature of 41°F (5°C) or below when received.

b. If a temperature other than 41°F (5°C) for a PHF is specified in the law(s) governing its distribution, such as laws governing milk, molluscan shellfish and shell eggs, the food may be received at the specified temperature.

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c. PHF that is cooked to a temperature required by section 3-5 and received hot shall be maintained at a temperature of 140°F (60°C) or above.

d. A food that is labeled frozen and shipped frozen by a food processing plant shall be received frozen.

e. Upon receipt, PHF shall be free of evidence of previous temperature abuse.

3-2 PROTECTION OF FOOD ITEMS FROM CONTAMINATION AFTER RECEIVING

- 3-2.1 PREVENTING CONTAMINATION FROM HANDS**
- 3-2.2 PREVENTING CONTAMINATION WHEN TASTING**
- 3-2.3 PACKAGED AND UNPACKAGED FOOD - SEPARATION, PACKAGING AND SEGREGATION**
- 3-2.4 FOOD STORAGE CONTAINERS, LABELED WITH COMMON NAME OF FOOD**
- 3-2.5 PASTEURIZED EGGS, SUBSTITUTE FOR SHELL EGGS FOR CERTAIN RECIPES AND POPULATIONS**
- 3-2.6 WASHING FRUITS AND VEGETABLES**
- 3-2.7 ICE USED AS EXTERIOR COOLANT, IS PROHIBITED FROM REUSE**
- 3-2.8 SINGLE USEGLOVES, USED FOR ONE PURPOSE AND DISCARDED**

3-2.1 Preventing Contamination From Hands

a. Food employees shall wash their hands as specified under section 2-3.1.

b. Except when washing fruits and vegetables, food employees must not touch exposed, ready-to-eat food with their bare hands and shall use suitable utensils such as deli tissue, spatulas, tongs, single use gloves or other dispensing equipment to handle food products.

c. Food employees shall minimize bare hand and arm contact with exposed food that is not in a ready-to-eat form.

3-2.2 Preventing Contamination When Tasting

A food employee may not use a utensil more than once to taste food that is to be sold or served.

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3-2.3 Packaged and Unpackaged Food - Separation, Packaging and Segregation

a. Food shall be protected from cross contamination by separating raw animal foods during storage, preparation, holding, and display from:

(1) Raw ready-to-eat food including raw animal food such as fish for sushi or molluscan shellfish, or other raw ready-to-eat food such as vegetables; and

(2) Cooked ready-to-eat food.

b. Except when combined as ingredients, separate types of raw animal foods from each other such as beef, fish, lamb, pork, and poultry during storage, preparation, holding, and display by:

(1) Using separate equipment for each food type; or

(2) Arranging each type of food in equipment so that cross contamination of one type with another is prevented; and

(3) Preparing each type of food at different times or in separate areas.

c. Cleaning equipment and utensils and sanitizing as specified in this chapter;

d. Storing food in packages, containers, or wrappings;

e. Cleaning hermetically sealed containers of food of visible soil before opening;

f. Protecting food containers that are received packaged together in a case or overwrap from cuts when the case or overwrap is opened;

g. Clearly distinguishing damaged, spoiled, or recalled food being held in the food establishment;

h. Separating fruits and vegetables, before they are washed.

3-2.4 Food Storage Containers, Labeled with Common Name of the Food

Containers holding food or food ingredients shall be labeled with the common name of the food. Containers holding food that can be readily and unmistakably recognized (e.g., dry pasta, bread) need not be identified.

3-2.5 Pasteurized Eggs, Substitute for Shell Eggs for Certain Recipes and Populations

Pasteurized liquid, frozen, or dry eggs or egg products shall be substituted for shell eggs in the preparation of:

a. Foods such as Caesar salad dressing, hollandaise or béarnaise sauce, mayonnaise, eggnog, ice cream, and egg-fortified beverages.

b. Eggs for a highly immunocompromised or otherwise susceptible population.

3-2.6 Washing Fruits and Vegetables

a. Raw fruits and vegetables shall be thoroughly washed in water to remove soil and other contaminants before being cut, combined with other ingredients, cooked, served, or offered for human consumption in ready-to-eat form.

b. Vegetables of uncertain origin and those purchased in foreign countries, as well as those suspected of being contaminated with pathogenic organisms, must be chemically disinfected by immersion for at least 15 minutes in a 100 ppm Free Available Chlorine (FAC) solution or for 30 minutes in a 50 ppm FAC solution (or other approved solution). Following disinfection, vegetables must be thoroughly rinsed with potable water before being cooked or served. A 100 ppm chlorine solution can be made by adding 3 tablespoons of 5% sodium hypochlorite to 5 gallons of water; use 1½ tablespoons for a 50 ppm solution. Head items such as lettuce, cabbage, celery, etc., must be broken apart before disinfection.

3-2.7 Ice used as Exterior Coolant is Prohibited from Reuse

Ice may not be used as food after it has been used as a medium for cooling the exterior surfaces of food such as melons or fish, packaged foods, canned beverages, or cooling coils and tubes of equipment.

3-2.8 Single use Gloves, used for one Purpose and Discarded

If used, single use gloves shall be used for only one task such as working with ready-to-eat food or with raw animal food, used for no other purpose, and discarded when damaged or soiled, or when interruptions occur in the operation.

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3-3 DISPOSITION OF UNSATISFACTORY FOOD ITEMS

a. The discovery of a hazardous food item in a military food establishment will:

(1) Be reported by the person in charge by OP-IMMEDIATE message to the Defense Personnel Support Center, Philadelphia ATTN: DPSC-HQS (Consumer Safety Officer). The mailing address is 2800 South 20th Street, Philadelphia, PA 19145. Commercial telephone: (215) 737-3845; DSN: 444-3845; FAX: (215) 737-7526. Message plad is DPSC PHILADELPHIA PA.

(2) The person in charge shall place the item on medical hold and submit samples and tests of the suspected food as follows:

(a) Shore activities. Samples of the product (both normal and abnormal) will be submitted when considered necessary by the PMA or veterinary representative. Samples will be sent with an original and four copies of DD Form 1222, Request for Results of Tests.

(b) Ships. At the direction of the PMA, samples of the food product both normal and abnormal, will be turned into the nearest Navy shore activity which will arrange for veterinary inspection of the product as in section (a) above.

(c) Submit samples to one of the following addresses, as appropriate.

(d) Veterinary Laboratories:

CONUS:

DoD Veterinary Laboratory
2472 Schofield Road
Bldg 2632
Fort Sam Houston, TX 78234

Hawaii:

Veterinary Services, TAMC
ATTN: Food Analysis Laboratory
Bldg 936 Duck Road
Schofield Barracks, HI 96859-5460

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Europe:

Veterinary Laboratory
Gebäude 3810
6790 Landstuhl Kirchberg Germany

Panama:

Veterinary Public Health Lab
Bldg 502
USAMEDDAC
APO AA34004-5003 Corazal Republic of Panama

b. NAVSUP Publication 486, Volume 1, Food Service Management-General Messes, provides a line-by-line procedure for the preparation, addressing, and information copies of the message and DD Form 1222.

c. Hazardous food items are products which would certainly or possibly cause, or suspected to have already caused, harm when consumed. Such items may be unfit for human consumption, suspected of being unfit for human consumption, or suspected to be the source of a food borne disease outbreak. Determination of "fitness for human consumption" is the responsibility of the PMA.

d. Examples of hazardous food items are:

(1) Widespread presence of swollen or leaking cans, (The contents of bulged or swollen cans should never be consumed or even tasted);

(2) Products with offensive or unusual odors and colors and/or any other evidence of deterioration, spoilage, or contamination. (Try to determine whether or not the hazardous condition is due to an isolated instance, excessive storage, or mishandling prior to reporting the item hazardous);

(3) Food items containing glass, dirt, pieces of metal, etc.

(4) Any apparently wholesome food items which, based on the best medical knowledge available, is suspected or known to harbor disease causing agents. (Food items which have become hazardous due to overage, mishandling while in the custody of the user, or other isolated instances of abuse will not be reported under these procedures).

(5) Infested with insects.

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3-4 STORAGE AND CARE OF FOOD ITEMS

- 3-4.1 GENERAL INFORMATION
- 3-4.2 REFRIGERATED STORAGE
- 3-4.3 HEATED STORAGE
- 3-4.4 SEMIPERISHABLE FOOD
- 3-4.5 FRESH AND FROZEN FOOD
- 3-4.6 FOOD STORAGE PROCEDURES
- 3-4.7 ICE
- 3-4.8 SALVAGE OF FOOD EXPOSED TO REFRIGERATION FAILURE

3-4.1 General Information

a. Proper food storage minimizes contamination and improves shelf life. Food, whether raw or prepared, if removed from the container or package in which it was obtained, shall be stored in a clean, covered container. Container covers shall be impervious and nonabsorbent, except clean linens or napkins may be used for covering small quantities of bread or rolls. Solid cuts of meat will be covered in storage, except that quarters or sides of meat may be hung uncovered on clean, sanitized hooks if no food product is stored beneath the meat. Where dissimilar species of raw meats or raw and cooked items are stored in the same refrigeration unit, physical separation or other effective product protection shall be provided to prevent cross contamination.

b. Containers or bulk lots of food will be stored 6 inches (15 cm) above the floor and 4 inches (10 cm) from the walls, on clean racks, dollies, non wood pallets, or other easily cleanable surfaces. Storage racks and dollies should be easily moveable to facilitate inspection and cleaning. Wood pallets must not be used for food storage.

c. Do not store food or clean equipment including single service utensils in locker areas, toilet rooms, open stairwells or vestibules, garbage rooms, or mechanical areas, including boiler, electrical or telephone control rooms and elevator shafts.

d. Do not store food or food containers under exposed or unprotected sewer lines, steam, water or waste lines or other pipes on which condensation forms, under leaking automatic fire sprinkler systems or other sources of contamination. (Note: In existing facilities violating this requirement, the PMA will determine the need for; drip pans or other shielding to intercept and direct potential dripping or condensate into a sanitary waste line, insulation, relocation, renovation of storage areas or other corrective action).

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e. Food not subject to further washing or cooking before serving will be stored in a way that protects it against cross contamination. Separate refrigerated storage units should be used for raw meats and seafood. If a unit is used to store both raw and cooked foods, raw meats and fish should be covered and stored below any cooked foods, or foods such as salads, which will receive no cooking or reheating before serving.

f. Nonacidic bulk food, such as cooking oil, syrup, salt, sugar, or flour, should be stored in the original product package or container.

(1) If bulk packages of flour, sugar and similar items are open, store packages in containers with tight fitting lids that meet NSF International standards for food service. Label the container with the common name of the food. The plastic garbage bags available through the supply system generally do not meet requirements for food contact.

g. Do not use galvanized metal cans for storage of wet foods or beverages.

h. Only food items will be stored in food storage spaces.

3-4.2 Refrigerated Storage

a. Proper temperature control is the most effective means of minimizing the risk of food borne illness and reducing loss through spoilage. One "nonproduct" or built-in air measuring thermometer must be provided in all refrigerated storage spaces. Thermometers or air measuring devices must be readily observable, easily readable, numerically scaled, and accurate to $\pm 3^{\circ}\text{F}$ at the critical range. Mercury thermometers are prohibited. The temperature sensor of the thermometer must be positioned to register the warmest air in the refrigerated space.

(1) To maintain product temperatures, check refrigerator temperature frequently, especially at times of peak load and low load. Make adjustments as required.

(2) Primary attention should be placed on monitoring product temperatures.

(3) Required temperature ranges are 32-41°F for refrigeration and 0°F or below for freezers.

(4) Frost or glaze ice must not be allowed to accumulate to more than 1/4 inch in thickness on the interior surfaces or on the refrigeration coils.

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(5) The interior surfaces of refrigerated storage units must be routinely washed with warm water and hand ware washing detergent then rinsed with warm potable water.

(6) Temperature logs must be maintained for all bulk cold storage spaces. Accurate entries will be made at least twice daily. Any prolonged deviation (more than 4 hours) from the recommended storage temperatures must be promptly reported to the food service officer and PMA for appropriate action;

(7) Refrigerators that contain advance prepared PHF will also have temperatures logged twice daily. Logs must be maintained in the facility for at least 1 year.

b. PHF requiring refrigeration after preparation will be cooled to an internal product temperature of 41°F or below within 4 hours.

c. Frozen food will be kept frozen and stored at a product temperature of 0° F or below. Ice cream being dispensed by a scoop can be held between 6°F and 10°F to facilitate serving.

d. Wet storage of food is prohibited, except for short term holding (24-36 hours) of peeled or sliced potatoes, carrots, and celery sticks. Wet storage of live lobsters is authorized prior to preparation.

e. All food stored in refrigerated storage units will be covered or otherwise protected from contamination. See section 3-5.6 for cooling procedures.

f. Direct storage of raw or prepared foods, except for unpeeled hard skin fruits and vegetables, on refrigerator shelves is prohibited.

g. Foods protected in single shelf refrigerated display cases are not required to be individually covered.

3-4.3 Heated Storage

a. Provide sufficient conveniently located hot food holding units to assure the maintenance of food at the required temperature during holding. Each piece of equipment used for holding PHF will be provided with an easily readable numerically scaled indicating thermometer, accurate to $\pm 3^{\circ}\text{F}$, located to measure the air temperature in the coolest part of the unit and placed to be easily readable. Recording thermometers, accurate $\pm 3^{\circ}\text{F}$, may be used in lieu of indicating thermometers. Where it is impractical to install thermometers on equipment such as hot

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food tables, steam tables, steam kettles, heat lamps or insulated food transport carriers, a sanitized product thermometer will be available and used to check the internal product temperature of the food.

b. PHF that is cooked, cooled and reheated for hot food holding or transport shall be rapidly reheated, within 2 hours, so all parts of the food reach an internal product temperature of at least 165°F (74°C) for at least 15 seconds.

(1) Food reheated in a microwave shall be covered, rotated and stirred until the internal product temperature reaches 165°F, then it must remain covered for 2 minutes to obtain temperature equilibrium.

(2) Ready to eat food from a commercially processed, hermetically sealed container or packaging shall be heated to a temperature of at least 141°F for hot holding.

(3) Hot food holding containers shall be preheated to at least 145°F prior to placing hot food in the containers. Where possible, boiling water shall be used for preheating.

c. Steam tables, warmers, or other hot food storage units are not designed for rapid heating of PHF and shall not be used for heating food items.

3-4.4 Semi Perishable Food

a. The term "semiperishable" refers to food items that are canned, dried, dehydrated, or otherwise processed to the extent that such items, under normal circumstances, may be stored in nonrefrigerated spaces.

b. Semiperishable food items shall be considered overaged when stored in excess of the inspection test date marked on the case and/or the keeping time shown in the semiperishable food storage table of NAVSUP PUB 476, volume 1, chapter 5. The U.S. Army Veterinary Service, at stock points, inspects overaged food items and warehouse personnel mark the cases and/or the DD Form 1348-1 of those items that are in good condition to indicate the keeping time has been extended. Even when items are not so marked, they will be considered fit for use if the container is in good condition and the food item has no offensive odor and is palatable. Overaged items are not considered suitable for continued storage unless they have been extended by a qualified inspector. Extended food items must be consumed as soon as feasible. Items must not be surveyed solely because of age. Outdated food items will be surveyed only if a qualified

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inspector finds them to be unfit for human consumption.

c. When inspecting storerooms, the outward appearance of food containers and the condition of the foods must be checked. Torn or broken bags of food must be immediately used, transferred to insect proof containers or surveyed. If an insect infestation is discovered, several specimens should be carefully collected and sent for species identification to the nearest military activity capable of identifying insects. A report of suspected hazardous food items must be submitted as required by NAVSUP PUB 486, Volume 1.

d. Heavily infested food, i.e. seven or more living or dead insects per pound must be surveyed (see MIL-STD-904A). Lightly infested food should be immediately removed, placed in a freezer for 72 hours, sifted to remove the insects and used as soon as possible, except as follows:

(1) When an infestation is found to involve living or dead larval stages of an insect species belonging to the genus *Trogoderma*, or other dermestids, one insect within the product itself (not external) will be justification for the condemnation of the container or bag;

(2) When an infestation is found to involve living or dead insect species belonging to the genus *Tribolium*, three insects per pound within the packages inspected will be justification for the condemnation of the lot.

(3) When an infestation is found to involve insects other than those belonging to the genus *Trogoderma* (or other dermestids) or *Tribolium*, an average of seven or more insects per pound of product, in the lot being inspected, shall be justification for condemnation of that lot.

e. It is important to remember that 72 hours in a freezer will arrest the development of the infestation but will not kill all of the insects. To kill all insects in all stages, the infested product must be kept at 0°F or below for 2 weeks. When insect infestations are discovered, they must be handled by Chapter 8, Medical Entomology and Pest Control Technology, of this manual, NAVMED P-5010.

3-4.5 Fresh and Frozen Food

a. To promote proper air circulation, fresh and frozen food items must be stored on pallets or one inch high deck grating away from bulkheads and cooling coils. At least 6 inches of clearance must be maintained between the tops of the stacks and the openings of the air ducts.

b. Generally, when the recommended temperatures are uniform in all areas of the storage refrigerator or freezer, the air circulation is considered adequate.

3-4.6 Food Storage Procedures

a. Because age is a contributing factor in food spoilage, foods must be rotated so the oldest items are used first. Use the rule "first in first out" (FIFO). Adequate stock rotation reduces losses due to spoilage.

b. Only food items may be stored in food storage spaces, e.g., storerooms, refrigerators, reefers. On some classes of ships medical supplies may be stored in refrigerated food storage spaces if kept under lock and key and no other place is available.

c. Decayed or otherwise spoiled food items must be identified and removed from wholesome foods.

d. Foods which readily absorb foreign odors, such as eggs, fresh milk, and butter, must not be stored with fruits and vegetables.

e. Food or containers of food must not be stored close to steam pipes or other sources of heat which would reduce the shelf life of the product.

3-4.7 Ice

a. Commercially procured ice must be from a supplier listed in the Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement. Ice intended for human consumption in food or drink shall be manufactured from potable water only. Ice used for cooling stored food and food containers will not be used for human consumption.

b. Ice machines must be located, installed, operated, and maintained in a sanitary manner to prevent contamination. They must be cleaned monthly or more often as required. See Table 1-1.

c. Ice buckets, other containers and scoops must be of smooth impervious material designed for easy cleaning. They shall be kept clean and stored and handled in a sanitary manner. Scoops shall be stored handle up in a freely draining metal bracket outside the ice storage compartment or in a metal bracket installed within the machine at such a height to preclude the scoop being covered by the ice.

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d. Ice should be bacteriologically sampled as determined by the PMA.

Table 1-1. Directions for monthly cleaning of ice making machines

BULK ICE MAKING MACHINES

STEP	PROCEDURES
1. Turn off motor	Empty, defrost and clean. Make certain overflow pipes carry off water used for defrosting.
2. Wash all parts, including ice storage bin.	Use a plastic bristle brush to scrub inside and outside of bins with mild detergent solution.
3. Rinse	Rinse with water containing at least 50 ppm chlorine to preclude bad odors and the accumulation of film deposits from detergents. Water drain should be clear and free to allow proper rinse.
4. Check Water Control	Clean to prevent clogging of holes of water flow control.

ICE DISPENSING MACHINES
Cleaning instruments without unit disassembly

STEP	PROCEDURES
1. Shut off water.	Pour 1 qt. cleaning solution slowly into water reservoir.
2. Place a container below ice chute in bin and start ice machine.	Ice will be formed from cleaning solution. Discard ice. Shut off machine.
3. Flush ice making system	Add 1 qt. cleaning water to reservoir. Catch ice in a container. Discard.
4. Wash down storage bin with mild detergent solution. Rinse.	Scrub interior with a plastic brush and detergent solution. Thoroughly rinse with clean water.

3-4.8 Salvage of Food Exposed to Refrigeration Failure

Food that was exposed to refrigeration failure may be salvaged under proper conditions. The PMA or Army Veterinary Service should be contacted for assistance. Further guidelines may be obtained from the US Army Guide to the Salvage of Chilled/Frozen Foods Exposed to Refrigeration Failure.

3-5 PREPARING AND SERVING OF FOOD

- 3-5.1 INTRODUCTION
- 3-5.2 COOKING RAW ANIMAL PRODUCTS
- 3-5.3 SAFE HOLDING TEMPERATURES FOR COOKED FOOD
- 3-5.4 RECONSTITUTING OR FORTIFYING FOOD
- 3-5.5 TIME AS A PUBLIC HEALTH CONTROL
- 3-5.6 ADVANCE PREPARATION/LEFTOVERS
- 3-5.7 FROZEN FOODS
- 3-5.8 RECONSTITUTED, DEHYDRATED FOODS
- 3-5.9 SANDWICHES
- 3-5.10 SERVING LINES
- 3-5.11 SALAD BARS
- 3-5.12 SELF-SERVICE ITEMS
- 3-5.13 BUFFETS
- 3-5.14 FAMILY STYLE SERVICE
- 3-5.15 SPECIAL MEALS
- 3-5.16 COMMERCIAL MEATS, CHEESES, AND SALADS

CHAPTER 1, FOOD SAFETY

3-5.1 Introduction

a. All food (including ice) will be obtained from approved sources and will be wholesome, honestly presented and labeled per Federal law.

b. Food prepared in a private home may not be used or offered for human consumption in a food establishment. This requirement does not apply to chapel suppers, family child care homes, neighborhood cookouts, unit bake sales, and similar functions, provided the food is identified as home prepared food. Serving home canned foods is prohibited at command sponsored events.

c. Food Protection Measures. Minimum food protection measures include:

(1) Applying good sanitation practices in the handling of food.

(2) Maintaining high standards of personal hygiene.

(3) Keeping PHF refrigerated or heated to temperatures that minimize the growth of pathogenic microorganisms.

(4) Inspecting food products for wholesomeness, temperature, and sanitary condition prior to acceptance at the facility.

(5) Cooking potentially hazardous foods (PHFs), as appropriate, to kill harmful microorganisms.

(6) Providing adequate personnel, equipment, and facilities to ensure sanitary operation.

(7) Preventing infestation or contamination of food by insects and rodents, and contamination of food with toxic chemicals.

(8) Use properly designed, cleaned and sanitized equipment for its intended use.

3-5.2 Cooking Raw Animal Products

a. Except as specified in the paragraphs below, raw animal foods such as eggs, fish, poultry, meat (except roast beef), and foods containing these raw animal foods, shall be cooked to heat all parts of the food to an internal temperatures as identified in Table 1-2:

(1) Poultry, poultry stuffing, stuffed meats, stuffed fish or stuffing containing fish, meat or poultry shall be cooked immediately after preparation and without interruption to heat all parts to a minimum internal product temperature of 165°F (74°C) for 15 seconds.

(a) Poultry may be stuffed, but the internal temperature of the stuffing must reach 165°F. Stuffing must be removed from the bird immediately and stored at 140°F or above until served. It is not recommended to stuff multiple birds for a large meal. Stuffing for large meals should be prepared separately.

(2) Pork, game animals, comminuted fish and meats, injected meats and eggs that are not cooked to order shall be cooked to meet one of the time temperature combinations shown in Table 1-2 below:

TABLE 1-2. Minimum cooking time and temperature combinations for pork, game animals, comminuted fish and meats, injected meats and eggs that are not cooked to order.

Minimum Internal Product Temperatures	Time
145°F (63°C)	3 minutes
150°F (66°C)	1 minute
155°F (68°C)	15 seconds

(3) Ground beef should be cooked to a minimum internal temperature of 155°F for 15 seconds or until juices run clear.

(4) Whole beef roasts and corned beef roasts shall be cooked in an oven that is preheated to the temperature specified in table 1-3 and is held at or above that temperature; and to a food temperature as specified in table 1-4 for the corresponding amount of time for that temperature.

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Table 1-3. Oven parameters required for destruction of pathogens on the surface of roasts of beef and corned beef.

Oven Type	Oven Temperature	
	Based on Roast Weight	
	Less than 10 lbs (4.5 kg)	10 lbs (4.5 kg) or greater
Still Dry	350°F (177°C) or greater	250°F (121°C) or greater
Convection	325°F (163°C) or greater	250°F (121°C) or greater
High Humidity¹	250°F (121°C) or less	250°F (121°C) or greater

¹Relative humidity greater than 90% for at least 1 hour as measured in the cooking chamber or exit of the oven; or in a moisture impermeable bag that provides 100% humidity.

Table 1-4. Minimum holding times required at specified temperatures for cooking all parts of roasts of beef and corned beef.

Temperature Time ¹ °F (°C)		Temperature Time ¹ °F (°C)		Temperature Time ¹ °F (°C)	
54 (130)	121 minutes	58 (136)	32 minutes	61 (142)	8 minutes
56 (132)	77 minutes	59 (138)	19 minutes	62 (144)	5 minutes
57 (134)	47 minutes	60 (140)	12 minutes	63 (145)	3 minutes

¹Holding time may include post oven heat rise.

b. Microwave Cooking

(1) Raw animal foods cooked in a microwave oven shall be:

(a) Rotated or stirred throughout or midway during cooking to compensate for uneven distribution of heat;

(b) Covered to retain surface moisture;

(c) Heated to a temperature of at least 165°F (74°C); in all parts of the food;

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(d) Allowed to stand covered for 2 minutes after cooking to obtain temperature equilibrium.

c. Raw, marinated, or partially cooked fish (other than molluscan shellfish), will be frozen before service or sale in ready-to-eat form as follows:

(1) Frozen throughout to a temperature of:

(a) -4°F (20°C) or below for 168 hours (7 days) in a freezer.

(b) -31°F (-35°C) or below for 15 hours in a blast freezer.

d. Safe Egg Handling Guidelines:

(1) Serving raw eggs and foods containing raw eggs is prohibited.

(2) Recipes which call for uncooked eggs, e.g., mayonnaise, eggnog, ice cream, Caesar salad dressing, hollandaise sauce, etc., will be prepared using only pasteurized frozen table eggs.

(3) Shell eggs that are broken and prepared to order and for immediate service, will be cooked to a minimum internal product temperature of at least 145°F for at least 15 seconds or until the white is firm, not running, and the yolk is set.

(4) Scrambled eggs, in bulk amounts, may be prepared using pasteurized frozen table eggs, pasteurized dehydrated egg mix, or fresh shell eggs. If fresh shell eggs are used, the following provisions are required:

(a) Cook bulk amounts of scrambled eggs in small batches of no more than 3 quarts. Cook to heat all parts of the food to a minimal internal temperature of 155°F (63°C) for at least 15 seconds and until there is no visible liquid egg.

(b) Hold until served at 140°F or higher, such as on a hot food table.

(c) Do not combine just cooked scrambled eggs to the batch held on a hot food table. A clean sanitized container is required for each 3 quarts of scrambled eggs.

3-5.3 Safe Holding Temperatures for Cooked Food

a. General. Potentially hazardous foods which are not served

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immediately after cooking must be either rapidly chilled to temperatures of 41°F or lower, or held at 140°F or higher. Growth of harmful bacteria and the development of toxins (poisons) formed by bacteria occur rapidly in protein foods when held at temperatures between 41°F and 140°F. Potentially hazardous foods which have been held at temperatures between 41°F and 140°F longer than 4 hours are considered unsafe for consumption and must be destroyed. If the product is refrigerated at intervals and then permitted to warm, the total time of the various periods between 41°F and 140°F must not exceed 4 hours.

b. Potentially hazardous ingredients for foods that are in a form to be consumed without further cooking such as salads, sandwiches, filled pastry products and reconstituted foods must have been chilled to 41°F or below prior to preparation.

3-5.4 Reconstituting or Fortifying Food

a. The ingredients and the container must be prechilled to 41°F or below before reconstituting or fortifying a potentially hazardous food with the addition of a dry ingredient such as dry milk or milk product, a dessert mix or similar product if the container is larger than 1 gallon.

b. A potentially hazardous food which has been reconstituted or fortified by the addition of a dry ingredient such as dried milk, eggs, soup, sauce, dessert mix or similar product, if not for immediate service, must be:

(1) Held at 41°F or below until served;

(2) Immediately placed, after mixing, into either a frozen dessert machine or other liquid product refrigeration unit; or

(3) Held at 140°F or above.

c. A reconstituted or fortified potentially hazardous food that is held between 41°F and 140°F for longer than 4 hours will be discarded.

3-5.5 Time as a Public Health Control

Time only, rather than time in conjunction with temperature, may be used as the public health control for a working supply of potentially hazardous food before cooking, or for ready to eat potentially hazardous food that is displayed or held for service

for immediate consumption, if:

- a. The food is marked or otherwise identified with the time within which it shall be cooked, served, or discarded;
- b. The food is served or discarded within 4 hours from the point in time when the food is removed from temperature control;
- c. Food in unmarked containers or packages, or for which the time expires, is discarded;
- d. Temperature logs are required to document cooling and ensure all requirements are met.

3-5.6 Advance Preparation/Leftovers

3-5.6.1 ADVANCE PREPARATION

3-5.6.2 LEFTOVERS

3-5.6.3 DONATION OF EXCESS FOOD TO LOCAL RELIEF ORGANIZATIONS

3-5.6.1 Advance Preparation

a. "Advance Preparation" is defined as food that is prepared for future service beyond a specific meal. Advanced preparation foods that include PHF may not be retained as leftovers. Advance preparation foods must not be placed in "Hot Holding," and must be immediately cooled after cooking, as indicated below.

(1) Hot items to be retained chilled, must be cooled within a 4-hour period in the following manner:

(a) From required cooking temperature (as noted in this chapter) to 70°F within 2 hours; and

(b) From 70°F to 41°F, or below, within the total 4 hour period.

(2) "Advance Preparation" foods that are prepared from ingredients at ambient temperature, such as reconstituted foods or canned food ingredients, must be cooled to 41°F or below within 4 hours.

(3) Temperature logs are required to document cooling and ensure all requirements are met.

b. Rapid cooling of "Advance Preparation" foods will be accomplished by using one or more of the following methods to bring the product temperature from the required cooking temperature to 41°F or below within the 4-hour period:

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(1) Quick chilling with ice bath and agitation (stirring mechanically or manually every 20 to 30 minutes).

(2) Portioning to shallow pans (3 inches (7.6 cm) product depth or less) or smaller containers (1 gallon or less).

(3) Using prechilled pans and containers for portioning products.

(4) Circulating cold water in steam jacket or kettles (where feasible).

(5) Short term storage with agitation in walk-in refrigerator operating below 38°F, or in a rapid chill refrigerator to reduce the temperature prior to placing in a standard refrigerator.

(6) Immersing the cooking container in cold, running water with product agitation.

(7) Spreading sliced or layered solid items in shallow pans, then refrigerating.

(8) Distributing the product among several refrigerators.

(9) Using metal, stainless steel or aluminum, containers. (Metal containers have higher rates of heat transfer than plastic or glass containers.)

(10) Using reduced water content for recipes such as stews. After cooking add potable ice to make up the volume of water and promote rapid cooling.

(11) Using ice type paddles.

c. Protect advance preparation foods from contamination by the following:

(1) Hot foods may be loosely covered, or uncovered if protected from overhead contamination during the cooling period to facilitate heat transfer from the surface of the food.

(2) Tightly cover food as soon as possible after the product temperature reaches 41°F.

(3) Potentially hazardous foods to be transported will be prechilled and held during transport at an internal product temperature of 41°F or below unless maintained per section 3-4.3(B).

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d. "Advance Preparation" food items that are considered potentially hazardous food may be retained for use or sale up to 72 hours from the original time of preparation.

(1) The HACCP principles found in section 3-8 of this chapter should be followed, but a formal HACCP plan is not normally required.

(2) A waiver may be requested, based on a written HACCP plan, from the PMA to extend "Advance Preparation" holding time from 72 hours up to 7 days. Guidance for a HACCP plan is located in section 3-8 of this chapter.

e. Labeling of "Advance Preparation" food is required.

(1) "Advance Preparation" food must be labeled "Advance Preparation Food" with the date and time of original preparation and the required discard date and time. Other methods for labeling may be used if approved in writing by the PMA.

f. Reheating "Advance Preparation" food items that are considered potentially hazardous food.

(1) Potentially hazardous food that has been cooked and then refrigerated and which is reheated for hot holding must be reheated so all parts of the food reach 165°F for a minimum of 15 seconds. It must then be held at 140°F or above until served. The time for reheating to 165°F will not exceed 2 hours.

(2) However, food taken from commercially processed hermetically sealed containers, food in intact packages from commercial food processing establishments, and whole or remaining unsliced portions of beef roasts may be reheated to 140°F for hot holding.

(3) Potentially hazardous foods which are not reheated to 165°F before serving, (e.g., custards and cream filled pies) that have been cooled to 41°F or below after preparation and have been maintained at 41°F or below must be served within 72 hours of cooking. These food items must be used within two hours after removal from refrigeration.

g. Commercial meats, cheeses and salad requirements are found under section 3-5.17.

h. A waiver for freezing of limited menu items that are advance prepared foods, (e.g., lumpia, egg rolls) may be authorized by the PMA under certain conditions, but may require an HACCP plan.