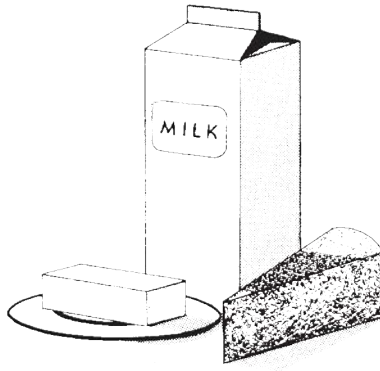


Pocket Guide to Dairy Sanitation

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International Association for
Food Protection®

TO ALL EMPLOYEES

Sanitation Policy

To assure that the products we offer for sale are safe, it is company policy to:

1. Operate clean and sanitary facilities that meet high standards of integrity in the protection of food.
2. Comply with or exceed all national, state, and local public health laws relative to personal health and hygiene and to sanitary procedures in food production, processing, and distribution.
3. Prevent unsanitary conditions before it becomes necessary to correct them.

Read this Pocket Guide thoroughly. It contains information that is absolutely essential for you to perform your job satisfactorily.

Contact your supervisor immediately if there is anything in this Pocket Guide that you do not completely understand.

Keep this Pocket Guide handy for ready reference. (Not in shirt pocket.)

Always be alert for things that might cause product contamination emergencies. Examples are: inadequate pasteurization; post-pasteurization contamination; spoiled or contaminated food; broken equipment such as refrigeration failure; suspicious people or activities and anything else that may threaten your product or your facility. Immediately report such items to your supervisor.

IMPORTANT NOTE: If you begin feeling ill, have diarrhea, nausea, stomach cramps, or fever, you are obligated to immediately report this to your supervisor.

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DEFINITIONS

Allergen – Substance that causes an allergic response (e.g., swelling of lips, rashes, hives, nausea, wheezing, coughing, swelling of throat, or more severe symptoms). **Food allergens** of primary concern as defined by U.S. federal regulations and international regulations, include **milk, eggs, soy, wheat, peanuts, tree nuts, fish, and crustacean shellfish**, although others may present risks to some individuals. Canadian regulations include additional allergens such as mustard, molluscan shellfish, sesame, and sulfites (not a true allergen). EU regulations include celery, mustard, molluscan shellfish, sesame, lupin, and sulfites > 10 ppm (not a true allergen) as additional allergens. Australian and New Zealand regulations include lupin as an additional allergen.

Allergen Cross-Contact – The unintentional incorporation of a food allergen into a food, e.g., contamination of a food or ingredient not containing a specific allergen with an allergenic food or ingredient that is not part of the ingredient list. May occur during storage and handling or processing of allergen and non-allergen with the same equipment without effective cleaning.

Brushes – A variety of brushes designed to assist you in proper cleaning of the equipment and areas assigned to you should be provided. Use each brush only for its intended function. In some cases, brushes may be color-coded; floor drain brushes should be a different color from equipment brushes.

C.I.P. – (Clean in place) Circulating a soap or detergent solution through pipelines and large equipment using a system of pumps and sprays to automatically clean these systems. Some handwork and manual cleaning is required.

C.O.P. – (Clean out of place) Cleaning of equipment, typically after dismantling, either manually (appropriate brushes) and/or mechanically in “COP” tank or sink designed to circulate hot soapy water by a pump mounted on the tank base or by rapidly bubbling air through the water. Parts must be rinsed prior to being placed in a C.O.P. tank. Manual/hand cleaning may be required first for some parts prior to placing in a C.O.P. tank.

Cleaner – Soap or detergent that breaks down and loosens soils so they can be rinsed away.

Cleaning – (Cleanup) Removing all traces of fats, solid materials and product, or other residues from equipment and other surfaces.

Contaminate – The transfer (or allowing the transfer) of impurities (adulterants, such as cleaning chemicals, lubricants, water, foreign material, toxins, bacteria, rodent filth, insects) to raw or finished product(s).

Cross-contamination – Contamination from insanitary objects and/or practices to food, food-packing materials & other food-contact surfaces, including processing equipment, utensils, gloves (hands) & outer garments or contamination of raw product (i.e., raw milk) to pasteurized/processed product. May also include contamination of food product with cleaning solutions. Any occurrence must be reported immediately to prevent contaminated product from leaving the facility, or further contamination of other food products.

FIFO – First in, first out, means rotation of stored items (finished product, raw product, packaging materials, ingredients) so that the oldest items are used first.

Finished Product – The packaged food product in a form for human consumption.

Germs – A common term used for bacteria, or other microscopic (invisible to the naked eye) organisms, or microorganisms, that can sometimes cause sickness or death.

Hazard – Any biological, chemical (including radiological), or physical agent that has the potential to cause illness or injury.

Microorganisms – Include yeasts, molds, bacteria, viruses, protozoa, and microscopic parasites and includes species that are pathogens. The term “**Undesirable Microorganisms**” includes those microorganisms that are “pathogens” that subject food to decomposition, that indicate that food is contaminated with filth, or that otherwise may cause food to be adulterated.

Pathogen – A “germ” or microorganism capable of causing illness or disease; a microorganism of public health significance. The term **Environmental Pathogen** refers to those capable of surviving and persisting in the food facility environment (e.g., through poor

sanitation) that can potentially contaminate a food product through poor sanitation practices.

Pests – Insects, rodents, reptiles, or birds.

Potentially Hazardous Products – Products that will support the growth of germs capable of causing disease. This includes all products consisting entirely or partly of milk or milk products. Food safety demands that food product workers observe strict sanitation and time/temperature control rules when working with these food products.

Potable Water – Water that is clean and safe to drink.

Product or Food Contact Surface – Any surface of a processing, filling or packaging machine, valves and piping, tank walls, conveyors that actually touches the product. Your hands or gloves can become contact surfaces if for some reason you touch the product or a product contact surface. Also includes any part of equipment that milk or milk products may contact through the 3D's– Drip, Drain, or Be Drawn into.

Sanitize – Chemical or heat treatment to kill germs. Includes rinsing, soaking, spraying or wiping with a sanitizer solution. All items to be sanitized must first be **thoroughly cleaned**. Sanitization may also be done by heat.

Sanitizer – A chemical compound designed to kill germs. Some of the most common sanitizers are chlorine (e.g., liquid bleach), quaternary ammonium compounds (“quats”), iodine and acid sanitizers. Sanitizer solutions are made by mixing a small amount of the concentrated sanitizer with potable water. Sanitizers must be made according to the directions for proper strength and to prevent concentrations above “no-rinse” applications.

Single-Service Articles – Articles which are intended to be used one time only, such as sanitary air filters, milk product packaging, and in-line milk filters.

Thermometer – Dial or digital read-out instruments used to measure temperature; glass- and mercury-based thermometers must not be used in processing facilities. Thermometers must be routinely calibrated to ensure accuracy. May be used to monitor a process heating or cooling essential for control of microorganisms. Your job may or may not require you to use a thermometer.

Utensils – Hand tools and/or hand-held containers such as pails, strainers, scoops, stirring paddles and sanitary shovels.

PERSONAL HEALTH & HYGIENE

Any person who, by medical examination or supervisory observation, is shown to have, or appear to have, an illness, open lesion, including boils, sores, or infected wounds, or any other abnormal source of microbial contamination by which there is a reasonable possibility of food, food-contact surfaces, or food packaging materials becoming contaminated, must be excluded from any operations which may be expected to result in such contamination until the condition is corrected, unless conditions such as open lesions, boils, and infected wounds are adequately covered (e.g., by an impermeable cover). Personnel must report such health conditions to their supervisors. Personnel are responsible for personal cleanliness and hygiene practices to prevent contamination and cross-contact.

Do:

1. Notify your supervisor if you have been diagnosed with or have symptoms of communicable illness that may be spread through contact with food, or if you have been in close contact with someone ill (e.g., family member). Symptoms such as vomiting, diarrhea, sore throat, fever, chills, jaundice (yellowing of skin/eyes).
2. Bathe daily
3. Have clean, well-groomed hair
4. Have clean hands and fingernails
5. Have clean teeth
6. Wear clean, washable outer garments (not street clothing or footwear)
7. Wear clean shoes, boots or rubbers (no street footwear)
8. Wear suitable hair, and beard and mustache coverings
9. Wash hands and exposed portions of arms thoroughly (also sanitize where available):
 - a) Before starting work, each time entering the processing area
 - b) After using toilet
 - c) After eating, smoking or otherwise touching the mouth or anything that has been in the mouth
 - d) After touching hair, nose, ears
 - e) After working with trash, garbage, dirty utensils, hoses

- f) After sneezing or coughing onto hands (use inside of elbow)
 - g) After changing from raw to pasteurized milk surface handling
 - h) After any absence from the work area
10. Maintain gloves, if they are used in food handling, in an intact, clean, and sanitary condition. Must be changed under any of the conditions listed in # 9.

Do Not:

1. Work, if you are diagnosed with or have symptoms of or are a possible carrier of a communicable disease, e.g., experiencing vomiting, diarrhea, sore throat, fever, chills, jaundice (yellowing of skin/eyes) or have had close personal contact with someone diagnosed as having a communicable disease, such as a family member. These symptoms should be reported to your supervisor immediately.
2. Work in areas where product or product contact surfaces are exposed if you have infected cuts, abrasions, boils, or any condition that causes flaking of the skin. Consult with your supervisor if such conditions can be bandaged or covered to allow work in these areas.
3. Wear jewelry (follow company policy regarding wedding bands or other simple rings).
4. Carry any items in shirt pockets; ideally uniforms or work clothes should not have shirt pockets.
5. Wear fingernail polish, false fingernails, or excess makeup.
6. Eat, drink, smoke, or chew (tobacco or gum) except in an authorized area.
7. Pick, scratch, groom, or otherwise handle parts of your body while preparing and packaging the product.
8. Spit, while in product-handling areas.
9. Store street clothing, personal belongings, or personally owned food and beverage products in preparation, packaging, or storage areas.
10. Wear strong cologne, perfume, or other products with strong odors.
11. Engage in any activity that may result in allergen cross-contact (allergen contaminated clothing or utensils) or cross-contamination with insanitary objects or raw product.

RECEIVING INGREDIENTS & SUPPLIES

I. General Instructions

- A. Inspect all inbound ingredients, product packaging supplies, single-service items, laundry, including pallets and slip sheets, for evidence of damage and/or contamination, including allergen cross-contact.
- B. Reject or discard (check with lab):
 1. Out-of-condition, outdated, damaged, leaking, contaminated or soiled products.
 2. Items that **may** have been contaminated by water, condensation, pests, or by previous cargo on the truck.
 3. Refrigerated dairy ingredients warmer than 40°F (4.4°C)* and frozen edible ingredients warmer than 0°F (-17.8°C). If a recording thermometer is mounted in the truck or packed with the product, check it to see the temperature “history” of the load.
 4. Canned ingredients that are leaking, badly dented, pitted with rust, or have swollen or puffy ends.

II. Important Notes

Frozen and refrigerated items – handle them first. Get them to proper storage immediately!

*Refrigerated dairy is recommended to be maintained at or below 40°F for quality assurance (e.g., shelf life). For regulatory purposes, the temperature storage/receiving requirements for dairy may be different (e.g., U.S. FDA Pasteurized Milk Ordinance (PMO) is 45°F/7.2°C; Canadian Food Inspection Agency (CFIA) is 42.8°F/6°C; Australia New Zealand Food Standards Code is 41°F/5°C). Check your local or regional regulations for dairy temperature requirements.

STORAGE OF PRODUCT, INGREDIENTS & SUPPLIES

I. General Instructions

A. Store all **dry, refrigerated, and frozen items**:

1. In regular storage areas that are clean and tidy.
2. In an orderly manner, at least six inches off the floor, on clean shelves, dollies, racks, or pallets. and ideally at least 18 inches away from walls and equipment.
3. Arranged in the proper order for FIFO item rotation. Place newest items at bottom or back of older items.
4. In a manner to avoid cross-contamination. Items that might leak or drip must be stored below other items.
5. In a manner that prevents allergen cross-contact if allergenic ingredients are used that may contaminate ingredients, products or packaging that do not contain the allergen. Separate, well-labeled storage areas are required.
6. In clean, covered, labeled containers if they have been removed from their original containers. (Follow company policy.)

B. Do not store:

1. Under possible sources of contamination, such as sewer lines, water lines or refrigeration lines, where there is accumulated condensation or evidence of leakage.
2. In toilet rooms, vestibules, garbage rooms, salvage areas or mechanical equipment rooms.
3. Directly on the floor or against a wall.
4. In overcrowded conditions.
5. Under conditions that allow refrigerated items to exceed 40° F (4.4°C)* or for frozen items to exceed 0°F (-17.8°C).

II. Dry Storage

- A. Keep ingredient containers sealed until used. When using only a portion of a bag or container of an ingredient, close the bag or container securely or transfer contents of opened bags or boxes of ingredients to clean, sanitized and dried, covered, labeled, approved plastic or metal containers.
- B. Frequently check critical products for signs of pest infestation. Insects may be tiny and difficult to see. Critical products are all dairy-based powders, nuts, dry sugars, flavoring ingredients.
- C. Leave a space of at least 18 inches between stacks of product and between stacks and walls if storage is for more than 30 days, and observe the “white line.”
- D. Store all clean utensils, packaging, and single-service supplies under the same sanitary conditions as for ingredients. Again, check all partial packages of either packaging materials or ingredients to be sure they are properly sealed.
- E. DO NOT store cleaners and sanitizers above or close to ingredients, packaging supplies, single service items, or product contact items. Cleaners and sanitizers should be stored in a separate location from production, properly labeled.
- F. Store insecticides and other toxics in a separate area locked away from cleaners and sanitizers. DO NOT store them above or close to ingredients, packaging supplies, single-service items, or product contact items. These areas need to be properly ventilated.

III. Controlled Temperature Storage

- A. Frozen items (0°F/-17.8°C or below). Check freezer temperature frequently – at least twice daily. If frozen ingredients must be thawed before use, do so in a manner that does not allow temperatures to increase above 40°F (4.4°C)*.
- B. Refrigerated items (40°F/4.4°C or below*). Check refrigeration temperature frequently – at least twice daily.

PRODUCT PREPARATION

General Instructions – For All Products:

1. Always clean and sanitize all product contact surfaces:
 - a) At intervals determined by the company.
 - b) After final use each work day.
2. Keep scouring pads clean and stored in sanitizer solution or hung up to dry (ideally scouring pads should be single service items). Replace sanitizer solution as needed to keep proper strength (use test strips or other testing as provided).
3. Paper towels must be held by a dispenser.
4. Wear disposable gloves where possible when hand contact is necessary. Clean hands and/or clean intact gloves are a **must**.
5. Keep product preparation area free of clutter. Clean, sanitize and put away equipment not being used. Store equipment so it will **stay** clean and sanitary.
6. Wash hands and change gloves frequently, and always when leaving and returning to the work area, handling unsanitary objects or after personal activities as mentioned previously (i.e., sneezing, scratching face, using the bathroom).
7. Use sanitary hand-dip or hand-wash stations when they are provided.
8. Clean and sanitize utensils and other food contact items when they fall to the floor before reuse.
9. Pick up and handle utensils only by the handles.
10. Use a suitable, clean utensil to remove any utensil that falls into the product.
11. Discard single-service items after one use.
12. Hold packaging and single-service supplies, stocked at work stations, off the floor, on shelving or clean plastic pallets or racks. Limit to a one-day supply.
13. Break out from storage only the amount of ingredients needed.
14. Ensure products are not stored in the temperature danger zone (40°F/4.4°C to 140°F/62.8°C) any longer than necessary to prepare them.

15. Do not taste products with any utensil used to prepare foods. Use single service plastic spoon. Do not use fingers to sample product. Tasting product as needed should only be done for authorized evaluations in authorized areas.
16. Do not reuse pipes, caps, utensils that have been exposed to milk or milk products until they have been properly washed and sanitized.

CLEANING & SANITIZING PRODUCT CONTACT ITEMS

Follow prescribed standard operating procedures (SOPs) for cleaning and sanitizing all equipment. Inspect items for cleanliness and overall condition; repair and/or replace as needed.

I. C.O.P. Items — Require Disassembly and Manual or C.O.P. tank cleaning:

- A. Follow written SOPs for cleaning that generally includes:
 1. Pre-rinse with warm water.
 2. Wash with manual detergent solution, made as directed in hot (e.g., 125°F/51.7°C) water using appropriate brushes and brushing action or by placing parts in a C.O.P. tank with the appropriate detergent solution, made as directed in hot (e.g., 160°F/71.1°C) water. Ensure that C.O.P. tanks are not over crowded and allows circulation action.
 3. Rinse with cool water after wash.
 4. Acid rinse if needed.
- B. Clean and sanitize smaller items such as valve and pump parts, gaskets and “O” rings, retainer rings, springs. Place these parts in a basket. Some parts you will be asked to leave in the sanitizer solution until reassembled into their places of use. The balance you will **drain and air dry**.
- C. Store cleaned and sanitized items where they will stay sanitary.
- D. C.O.P. tank or sink should be kept clean (manually cleaned as necessary).

II. Large Items & Equipment (Non-C.I.P.)

- A. Remove all food, debris, and packaging and processing supplies from the work area.
- B. Breakdown all equipment for cleaning.
- C. Clean all food contact items as follows:
 1. Drain or remove excessive, visible food soil
 2. Rinse thoroughly with warm water
 3. Soap and scrub with appropriate brush or cleaning pad
 4. Rinse
 5. Soap and scrub again as needed
 6. Rinse
- D. Sanitize by spraying or pouring sanitizer solution over all surfaces. Dip small, removable parts in sanitizer solution. **Do not rinse after sanitizing.**
- E. Position all items so they will drain and dry completely. (Air dry.)
- F. Reassemble at beginning of next shift.
- G. Sanitize as necessary after reassembly.
- H. Apply food-grade mineral oil spray or gel lubricants only as necessary to protect equipment from sticking.

Note: Remember the purpose of cleaning is to deny the food and moisture necessary for germs to grow; re-examine the items you have cleaned to be sure they are clean and positioned to dry.

III. Machinery Surfaces and Frame Work

- A. Clean thoroughly with hot, soapy water. Use foam cleaners as applicable.
- B. Rinse immediately with warm, clean water.
- C. Apply sanitizer solution as appropriate.
- D. Air dry.

IV. Mixing Instructions for Sanitizer Solution

Follow label directions. **DO NOT** use more sanitizer than called for by the directions.

V. Testing for Strength of Sanitizer Solution

Strength of sanitizer solutions should be confirmed after preparation. Save a sample in a container provided for by lab personnel. If you are assigned to check the solutions, test papers or kits will be supplied to you along with instructions for their use.

HOUSEKEEPING & PEST CONTROL

I. Housekeeping

- A. Regularly remove dirt, dust, debris, insect or spider webbing, mold from floors, walls, cracks, fixtures and equipment.
- B. Use and store cleaning and maintenance materials so they cannot contaminate food, utensils, packaging supplies and food contact items.
- C. Hold recyclable materials and dispose of trash and garbage so they will not contaminate products or ingredients, attract pests, or contribute to insanitary conditions. (Suitable bins or containers for recyclable materials should be furnished by the company and positioned to prevent any chance of cross contamination.)
 - 1. Keep trash containers covered, clean, and in good repair.
 - 2. Empty containers when necessary to prevent overflowing or otherwise becoming a nuisance, or at least daily. DO NOT allow trash and garbage to accumulate at work stations or other places inside the facility.
 - 3. DO NOT allow outside trash and garbage storage to attract pests. Keep dumpsters tightly covered and locked if necessary.

II. Pest Control

- A. Keep outside doors and windows closed or screened. Report obvious gaps or openings that might allow pests to enter the facility.
- B. Inspect incoming ingredients and materials as well as delivery vehicles.
- C. Keep trash and garbage in covered, appropriate containers.
- D. Report any signs of pest activity to your supervisor, including actual pests, droppings, or damage.

- E. Keep exterior areas free from debris, standing water or other pest harborage sites.
- F. Cleanup and remove any signs of pest activity.
- G. Use and store pesticides so they do not contaminate product utensils, packaging supplies, contact items. Must be locked in a separate area.
- H. Only trained and licensed personnel shall apply pesticides.

REGULATORY INSPECTIONS

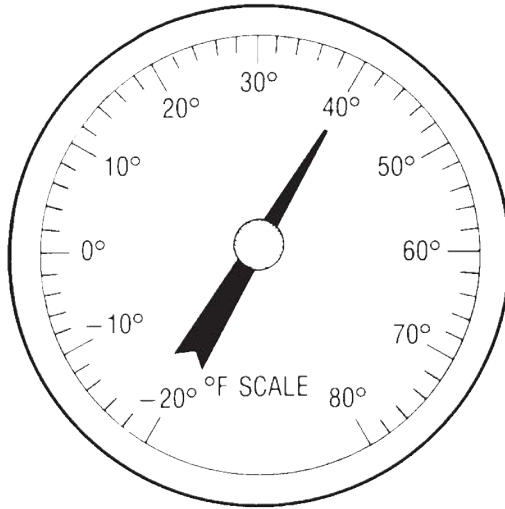
I. General

- A. Officials who visit your facility to inspect your sanitation and food procedures may represent the federal, state, county, or city.
- B. Inspectors may legally inspect your facility at any reasonable time of day.

II. What to Do

- A. Be courteous.
- B. Do not keep the inspector waiting.
- C. Do not answer questions asked by the inspector. Instead, politely refer him/her to your supervisor. Do not volunteer information to the inspector.
- D. Immediately take the inspector to your supervisor.

QUALITY ASSURANCE
TEMPERATURE GUIDE



Celsius	Fahrenheit	
10°C	50°F	Dairy products lose freshness very rapidly at this temperature or above
7.2°C	45°F	Days of shelf life (freshness) are lost for every degree above 40°F
4.4°C	40°F	Maximum temperature for dairy product storage
1.1° to 3.9°C	34° to 39°F	Safe range of temperatures for dairy product storage
0°C	32°F	Water freezes
-1.1° to -0.6°C	30° to 31°F	Milk will freeze in a short time
-23.3°C	-10°F	Safe storage of already frozen dairy products (ice cream, frozen yogurt, sherbet)
-28.9° to -34.4°C	-20° to -30°F	Temperature necessary to rapidly freeze ice cream and other frozen desserts

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