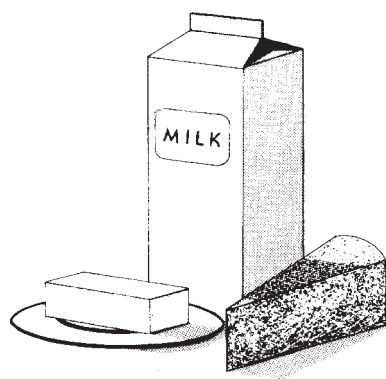


Pocket Guide to Dairy Sanitation

Reprinted January 2002



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, drugs, and cosmetics.
2. Comply with or exceed all national, state, and local public health laws relative to sanitation in food production, processing, and distribution.
3. Prevent insanitary 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 which you do not completely understand.

Keep this Pocket Guide handy at all times while on the job 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; and anything else that may threaten your product or your plant. 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 fact to your supervisor.

TABLE OF CONTENTS

	Page
Definitions	1
Personal Hygiene	3
Receiving Ingredients & Supplies	4
Storage of Product, Ingredients & Supplies	5
Product Preparation	7
Cleaning & Sanitizing Product Contact Items	8
Housekeeping & Pest Control	10
Regulatory Inspections	11
Quality Assurance – Temperature Guide	12

Prepared by the Dairy Quality and Safety
Professional Development Group
Robert Darrah, Primary Author

*The publishers do not warrant, either expressly or by
implication, the factual accuracy of the materials or recommen-
dations herein, nor do they so warrant any views or opinions
offered by the authors.*



**International Association for
Food Protection®**

6200 Aurora Avenue, Suite 200W
Des Moines, Iowa 50322-2864, USA
Phone: 800.369.6337; 515.276.3344
Fax: 515.276.8655
E-mail: info@foodprotection.org
Web site: www.foodprotection.org

DEFINITIONS

Brushes – A variety of brushes designed to assist you in properly cleaning 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 a different color from equipment brushes.

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

C.O.P. – (Clean out of place) Usually done in a long rectangular tank or sink. 1-1/2 ft. to 2 ft. deep and 1-1/2 ft. wide, filled with hot, soapy water circulated in the tank or sink by a pump mounted on the tank's or sink's base or by rapidly bubbling air through the water. Hand cleaning is done first for parts in a C.O.P. tank or sink.

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, etc.) to raw or finished product(s).

Cross contamination – Mixing of raw product, cleaning solution or finished product. Any occurrence must be reported immediately to prevent contaminated product from leaving the plant, 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 – The common term for bacteria, or other microscopic (invisible to the naked eye) organisms, that can sometimes cause sickness or death.

Pests – Insects, rodents, birds.

Potentially Hazardous Products – Products that will support the growth of germs capable of causing disease. This includes all products which consist 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 Contact Surface – Any surface of a processing, filling or packaging machine, valves and piping, tank walls, conveyors, etc. 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 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 sanitizing 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 (liquid bleach) and “Quat.” (quaternary ammonium), acid, and iodine. Sanitizer solutions are made by mixing a small amount of the sanitizer with potable water according to the directions on the sanitizer label.

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-reading or other thermometer accurate to plus or minus 2°F. Your job may or may not require you to use a thermometer. If your job requires the use of a thermometer, one of a proper type with a metal probe will be furnished to you.

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

PERSONAL HYGIENE

Do:

1. Bathe daily
2. Have clean, well-groomed hair
3. Have clean hands and fingernails
4. Have clean teeth
5. Wear clean, washable outer garments (not street clothing or footwear)
6. Wear clean shoes, boots or rubbers (no street footwear)
7. Wear suitable hair and beard coverings
8. Wash hands and exposed portions of your arms thoroughly: (also sanitize where available)
 - a) Before starting work;
 - 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, etc.;
 - e) After working with trash, garbage, dirty utensils, etc.;
 - f) After sneezing or coughing onto hands;
 - g) After changing from raw to pasteurized milk surface handling;
 - h) After any absence from the work area.

Do Not:

1. Work, if you have a sore throat or are infected with, or are the possible carrier of a communicable disease (e.g., experiencing fever, diarrhea, or have a personal contact with someone diagnosed as having a communicable disease). 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.
3. Wear jewelry (follow company policy).
4. Carry any items in shirt pockets.
5. Wear fingernail polish 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.

RECEIVING INGREDIENTS & SUPPLIES

I. General Instructions

- A. Inspect all inbound ingredients, product packaging supplies, single service items, laundry, etc., including pallets and slip sheets, for evidence of contamination.
- 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 45°F (7.2°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!

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.
 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 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.

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, 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.

II. Dry Storage (*cont.*)

- 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, product contact items.
- 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 or Below). Check freezer temperature frequently – at least twice daily.
- B. Refrigerated items (40°F 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. Replace sanitizer solution as needed to keep proper strength. Paper towels must be held by a dispenser.
3. Wear disposable gloves where possible when hand contact is necessary. Clean hands and/or clean gloves are a **must**.
4. 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.
5. Wash hands frequently.
6. Use sanitary hand-dip or hand-wash stations when they are provided.
7. Clean and sanitize utensils and other food contact items which fall to the floor before reuse.
8. Pick up and handle utensils only by the handles.
9. Use a suitable, clean utensil to remove any utensil that falls into the product.
10. Discard single-service items after one use.
11. 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.
12. Break out from storage only the amount of ingredients needed.
13. Do not keep products in the temperature danger zone (40°F to 145°F) any longer than necessary to prepare them.
14. Do not taste products with any utensil used to prepare foods. Use single service plastic spoon. Do not use fingers to sample product.
15. Do not reuse pipes, caps, utensils which have been exposed to milk or milk products until they have been properly washed and sanitized.

CLEANING & SANITIZING PRODUCT CONTACT ITEMS

I. C.O.P. Items

- A. Clean and sanitize smaller items such as valve and pump parts, gaskets and “O” rings, retainer rings, springs, etc. 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.
- B. Store cleaned and sanitized items where they will stay sanitary.
- C. 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. Remove excessive, visible soil
 - 2. Soap and scrub
 - 3. Rinse
 - 4. Soap and scrub
 - 5. 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.
- B. Rinse with warm, clean water.
- C. Apply sanitizer solution.
- 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 use 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, etc. 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 plant.
 3. DO NOT allow outside trash and garbage storage to attract persons or pests. Keep dumpsters tightly covered and locked if necessary.

II. Pest Control

- A. Keep outside doors and windows closed or screened.
- B. Keep trash and garbage in covered, appropriate containers.
- C. Report any signs of pest activity to your supervisor.
- D. Cleanup and remove any signs of pest activity.
- E. Use and store pesticides so they do not contaminate product utensils, packaging supplies, contact items, etc. Must be locked in a separate area.
- F. Only trained and licensed personnel shall apply pesticides.

REGULATORY INSPECTIONS

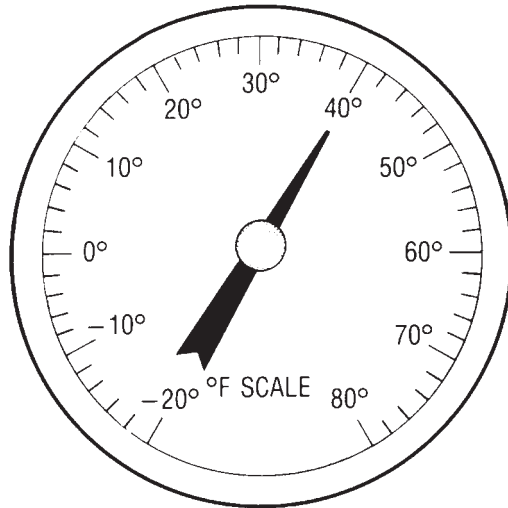
I. General

- A. Officials who visit your plant to inspect your sanitation and food procedures may represent the federal, state, county, or city.
- B. Inspectors may legally inspect your plant 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 to your supervisor. Do not volunteer information to the inspector.
- D. Immediately take the inspector to your supervisor.

**QUALITY ASSURANCE
TEMPERATURE GUIDE**



Copyright® 2002 by the International Association for Food Protection. No part of this publication may be reproduced without written permission by the copyright owner.

COPIES AVAILABLE FROM



**International Association for
Food Protection®**

6200 Aurora Avenue, Suite 200W
Des Moines, Iowa 50322-2864, USA
Phone: 800.369.6337; 515.276.3344
Fax: 515.276.8655
E-mail: info@foodprotection.org
Web site: www.foodprotection.org

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°
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, etc.)
-28.9° to -34.4°C	-20° to -30°F	Temperature necessary to rapidly freeze ice cream and other frozen desserts