

January 23, 1961

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REGULATIONS GOVERNING MILK DERIVATIVES *C.A.B.*

Above regulations have been on file in the Department of Records since
December 23, 1960.

The above regulations were advertised in the local newspapers on
December 24, 1960.

Since no requests for a hearing were received as a result of this advertising,
the regulations, having been on file for the required thirty days, are now in
effect.

CAB:cad

cc: Henry V. Walkowiak
Isidor Kransel, Assistant City Solicitor

SEP 20 1960

~~REGULATIONS~~ REGULATIONS GOVERNING MILK DERIVATIVES

1. DEFINITIONS

In this regulation, the following definitions apply:

- (a) Approved. Satisfactory compliance as determined and recorded by the Department of Public Health.
- (b) Milk. The lacteal secretion obtained by the milking of one or more cows or goats.
- (c) Milkfat or butterfat. The fat of milk.
- (d) Sanitary Milk Piping. Properly designed and constructed piping and fittings for the conveyance of milk derivatives or ingredients used therein.
- (e) Auxiliary Equipment. Equipment not in physical contact with milk derivatives, but present in a milk derivatives plant, such as lighting, ventilation, electrical equipment and similar equipment.
- (f) Utensils or Equipment. Utensils or equipment used in the receiving, processing, packaging, storage or transport of milk derivatives.
- (g) Containers. Containers used in the receiving, processing, packaging, storage, and transport of milk derivatives.
- (h) Milk Derivatives. Butter, cheese, condensed milk, condensed skim milk, evaporated milk, powdered milk, and powdered milk products.
- (i) Milk Derivative Plant. Any food establishment where milk is prepared, processed, packaged, pasteurized or prepared in any manner for sale as milk derivatives.

- (j) Milk Products. Skim milk, non-fat milk, cream, sour milk, sour cream, buttermilk, flavored milk, cultured milk, cottage cheese, creamed cottage cheese, and all other fluid derivatives of milk except those defined as milk derivatives.
- (k) Communicable Disease. An illness or infectious disease which is transmissible directly or indirectly by a person, animal, arthropod, or through the agency of an intermediate host, vector, or the inanimate environment to another person.
- (l) Pasteurization. Pasteurization shall be the process whereby every particle of milk or milk products is heated to at least 145°F. with holding at such temperature continuously for at least thirty (30) minutes or to at least 161°F. with holding at such temperature continuously for at least fifteen (15) seconds in approved and properly operated equipment; or other process whereby every particle of milk or milk derivative is heated to such temperature and held continuously for such period of time as the Department may declare to afford equivalent protection against contamination.
- (m) Readily perishable milk derivatives. Any milk derivative capable of supporting rapid and progressive growth of microorganisms which can cause food infections or food intoxication. However, derivatives in hermetically sealed containers processed by heat to prevent spoilage, and dehydrated, dry or powdered derivatives so low in moisture content as to preclude development of microorganisms are excluded from this definition.
- (n) Cheese. Cheese is the food product from the separated curd obtained by coagulating the casein of milk, skim milk or milk creamed with cream and include hard cheeses, semi-soft cheeses,

soft uncured cheeses, whey cheese, soft cured cheese, cheese spreads, processed cheeses, cheese foods and related products; excepting cottage cheese and creamed cottage cheese.

The following regulations shall apply to milk derivative plants located in the City of Philadelphia or selling or delivering their products to persons in the City:

2. FLOORS

The floors of all rooms in which milk derivatives are processed, or in which utensils are washed, shall be constructed of impervious and easily cleaned material, and shall be smooth, properly drained, provided with trapped drains, and kept clean and in good repair. All other floors in milk derivative plants shall be constructed of easily cleaned material and kept clean and in good repair.

3. WALLS AND CEILINGS

Walls and ceilings of rooms in which milk derivatives are handled or stored, or in which utensils are washed shall have a smooth, washable, light-colored surface, and shall be kept clean and in good repair and such walls shall be constructed of an impervious material to a height four (4) feet above the floor level. All other walls and ceilings shall be kept clean and in good repair.

4. OPENINGS TO THE OUTSIDE

From May 1 to November 1, rooms in which milk derivatives are handled or stored, or in which utensils are washed, shall have all openings to the outside effectively screened and all outer doors self-closing for the exclusion of flies. The Department of Public Health may approve other

Methods or devices which effectively exclude flies, to be used instead of screening openings to the outside.

5. LIGHTING

Rooms in which milk derivatives are handled, or in which utensils are washed shall be provided with natural or artificial light sufficient to provide an illumination of at least twenty (20) foot candles on all working surfaces and in all working areas. Rooms used only for dry storage and cold storage shall be provided with sufficient light to provide illumination of at least four (4) foot candles at a point thirty inches (30) above the floor.

6. VENTILATION

Room in which milk derivatives are handled or in which utensils are washed, shall be kept free of objectionable odors, condensate and excess moisture. Exhaust outlets from mechanical ventilating devices shall be conducted to the outside air and shall be so arranged, placed and extended as to avoid creating a nuisance to adjacent areas, as prescribed in Title 3 of the Code of General Ordinances and any regulations thereunder.

7. TOILET FACILITIES

Conveniently located toilet facilities conforming to the Plumbing Code and regulations and the Air Pollution Code and regulations shall be provided in the plant. Toilet room shall be enclosed and the toilet room doors shall be self-closing. Toilet rooms shall be constructed with easily washable floors and walls. Toilet rooms and appurtenances shall be kept clean, well illuminated and in good repair. Toilet rooms shall be ventilated to the outside air. Durable legible signs shall be posted conspicuous in each toilet room directing employees to wash their hands before return-

ing to work. Plumbing in plants outside of the City of Philadelphia shall conform to requirements equivalent to those of the Philadelphia Plumbing Code. Toilet room doors shall not open directly into a processing area.

8. HANDWASHING FACILITIES

Adequate handwashing facilities, consisting of handwashing sinks with hot and cold running water located not more than fifteen (15) feet outside the toilet room, and soap and individual sanitary towels or other approved drying facilities in suitable holders or dispensers shall be available at all times and kept clean and in good repair. Common towels are prohibited. No person shall resume work after using the toilet room without first washing his hands. Handwashing sinks with hot and cold running water, soap and sanitary towels shall be provided in or no more than fifty (50) feet from the entrance point of any room in which milk derivative operations are conducted and on the same floor level as each room.

9. WATER SUPPLY

Hot and cold running water, under pressure, in amounts adequate to supply the peak demands of the plant shall be provided in all rooms where milk derivatives are handled or utensils are washed. The water supply shall be of a safe, sanitary quality. All plumbing and water supply shall conform to the Plumbing Code and regulations and applicable regulations of the Department of Public Health and the Water Department of the City of Philadelphia. Cross-connections or backflow connections as defined in American Standard National Plumbing Code, ASA A 40.8 - 1955 and including connections, conditions or arrangements between a potable water supply and any other water supply, plumbing or drainage system, water receptacle or liquid or other substance or between the City water supply and any other water supply such that backflow can occur, are prohibited. Water supply in plants outside of Philadelphia shall conform to equivalent requirements.

10. DISPOSAL OF WASTES

- (a) All liquid wastes shall be disposed of in accordance with the requirements of the Plumbing Code and regulations. Liquid waste disposal in plants outside of the City shall conform to equivalent requirements; except that where public sewers are not available, the liquid wastes shall be disposed of by methods which are not conducive to fly-breeding or other insanitary conditions and which are approved by the Pennsylvania Department of Health and the Philadelphia Department of Public Health.
- (b) All plumbing and drain lines shall be designed, installed and maintained so as to prevent contamination of milk utensils or equipment and all overhead drains, and piping shall be so installed that possible leakage and condensation are directed away from the milk, equipment, and utensils.
- (c) No trash or garbage shall be present upon the plant premises except in tightly covered impervious containers. Waste containers may be uncovered only when in actual use. All such containers shall be washed and cleaned when emptied.

11. CLEANING AND BACTERICIDAL TREATMENT

- (a) All containers, equipment and utensils, except single-service containers, shall be thoroughly cleaned after each usage. Any equipment in continuous use shall be thoroughly cleaned at least once in every twenty-four (24) hour period. The cleaned containers, utensils, or equipment shall be subjected to an approved bactericidal process before usage.

- (b) Approved final bactericidal treatment for washing and sanitizing containers, utensils, and equipment shall mean the treatment by one of the following methods:
- (1) Hot water at a minimum temperature of 170° F. for at least three (3) minutes.
 - (2)a. Hypochlorite compounds or chlorine containing compounds of equal efficiency at a minimum residual concentration of 50 P.P.M. for two (2) minutes.
 - b. Iodophor compounds at a minimum residual concentration of 5 P.P.M. for two (2) minutes.
 - c. Quaternary ammonium compounds at a residual concentration of 200 P.P.M. for two (2) minutes.
 - d. Such other bactericidal methods or processes as may be approved by the Department.
- (c) No compound or method shall be used in the washing or the bactericidal treatment of containers, equipment and utensils unless it has been demonstrated that no toxic residue is left in its normal manner of use. No bactericidal agent for the bactericidal treatment of containers, equipment and utensils shall be used for which there is not available a satisfactory field test for the determination of the concentration of the bactericidal solution.
- (d) Cleaned-in-place milk lines may be used providing they conform to the following requirements:
- (1) The average velocity of the cleaning solution shall be not less than five (5) feet per second.

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- (2) The milk pipe line shall slope to provide for self-drainage of the solutions and for maintenance of full lines during circulation and to insure contact of solutions with all milk-contact surfaces.
 - (3) A separate pump of adequate capacity shall be provided to maintain full lines for the particular circuit. Valves in the line, except at the outlet, shall be fully open, to prevent decrease in velocity during circulation of cleaning and bactericidal solutions.
 - (4) The circulating system shall consist of one or more solution tanks connected to the suction side of a pump large enough to circulate solutions at the specified velocity; and the circulating system shall be so designed and operated as to maintain full lines throughout the circulating period.
 - (5) A recording thermometer of proper range shall be connected to the return line near its downstream end, to maintain a record of the temperature and the time when the line is exposed to cleaning and bactericidal solutions, and the thermometer charts shall be dated and kept on file for three (3) months.
 - (6) Wash solution temperatures shall not fall below 120° F.
 - (7) The lines shall be rinsed. All caps, plugs, and special fittings, including valve seats, crosses and tee ends, shall be removed and brushed clean, and the lines examined and brushed if necessary. Used solutions shall be discarded, the solution tank thoroughly cleaned each day, and fresh solutions prepared daily. The outside of the lines also shall be cleaned.

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- (8) After reassembling, and shortly before starting milk flow, the lines shall be given an approved bactericidal treatment.

12. STORAGE

- (a) After bactericidal treatment, all bottles, cans, and other multi-use containers and equipment shall be transported and stored in such a manner as to be protected from contamination. Bottle caps or cap stock, parchment paper, single-service containers, cartons, wrappers, can liners, and gaskets shall be sanitary and stored only in sanitary tubes, wrappings or cartons; shall be kept therein in a clean, dry place until used; and shall be handled in a sanitary manner.
- (b) Suitable cabinets or rooms shall be provided for the storage of caps, cap stock, parchment paper, cartons, wrappers, can liners and gaskets.

13. CONSTRUCTION AND MAINTENANCE

- (a) All utensils, equipment, or containers, used in a plant shall be constructed as to be easily cleaned and shall be maintained in good repair, and operated in a sanitary manner. All containers, utensils or equipment the surfaces of which come into contact with milk derivatives shall be made of stainless steel or other smooth, corrosion resistant non-toxic material, kept in good repair and free of breaks, chips, cracks, rough areas, corrosion and open seams. Milk derivatives contact surfaces shall drain freely and shall be easily accessible for cleaning, servicing and inspection

- (b) Stationary equipment shall be installed and maintained in such a manner as to prevent the harboring of rodents, and arthropods and to facilitate cleaning.
- (c) All piping used to conduct milk or milk derivatives shall be sanitary milk piping of a type which can be easily cleaned. The use of rubber, plastic and similar material is permitted only when approved by the Department.
- (d) Cleaned-in-place milk pipe lines shall be self-draining, and also have joints provided with self-positioning, flexible gaskets of non-toxic low-absorption material, and of such design as to form a flush, interior joint; or have self-positioning joints, of such design and finish as to form a smooth, flush interior; or have all joints welded and smoothly polished on the interior face, and are provided with inspection parts, removable elbows, or welded elbows provided with inspection openings of adequate size. Return, recirculating lines shall be installed, and shall be of the same or equivalent material and construction as the milk line.
- (e) The Department of Public Health may adopt or develop standards for the construction and design of utensils, equipment and containers consistent with the provisions of this regulation, to be used for reference and interpretation purposes.

14. HANDLING OF CONTAINERS, UTENSILS AND EQUIPMENT

Between bactericidal treatment and usage, and during usage, containers utensils and equipment shall not be handled or operated in such a manner

as to permit contamination of the milk. Pasteurized milk, and milk derivatives shall not come into contact with equipment with which unpasteurized milk or milk derivatives have been in contact, unless the equipment has first been thoroughly cleaned and subjected to an approved bactericidal process.

15. PASTEURIZATION

a. Cheeses

Cheeses made from unpasteurized milk shall be aged for a period of not less than sixty (60) days at temperatures not less than 35° F.

Cheeses which are not aged as above shall be made from pasteurized milk.

b. Dry Milk Products

Milk, milk products, or milk derivatives shall be pasteurized in the plant in which the milk or milk product is dried.

c. Butter

Butter shall be made from pasteurized milk or cream.

d. Condensed milk, condensed skim milk and evaporated milk.

These products shall be subjected to sterilization by heat or to temperatures equivalent to pasteurization temperatures.

16. COOLING

- (a) All milk or milk products received for pasteurization or processing shall be cooled immediately in approved equipment to 50° F. or less, and shall be maintained at that temperature until pasteurized or processed.

(b) Milk for pasteurization or processing unless delivered to a milk plant within two (2) hours after completion of milking, shall be cooled immediately to 50°F. or less and shall be maintained at that temperature until delivered to a milk plant.

(c) Each refrigerator room in which milk, milk products or milk derivatives are stored shall be equipped with an approved thermometer located in the warmest zone.

All readily perishable milk derivatives shall be refrigerated at 50°F. or less until sale or delivery to the consumer.

(d) Recirculated water and liquid refrigerant which are used in coolers and regenerators shall be properly protected against contamination. All open-surface coolers and open-surface regenerative coolers shall be provided with tight-fitting shields that protect the milk or milk products from possible contamination by flies, dust, drip, splash, condensation, manual contact, and droplets from coughs and sneezes.

17. PACKAGING

Containers and fabricating materials, such as paper stock, foil, wax, plastic coating, etc., shall be handled in a sanitary manner, and shall be protected against undue exposure during the assembly operation.

18. PERSONNEL HEALTH AND CLEANLINESS

(a) All employees shall wear clean outer garments and shall keep their hands clean at all times when engaged in handling milk derivatives, containers, utensils or equipment, and shall wear a suitable head covering. Employees shall not expectorate or use tobacco in rooms in which milk derivatives are handled.

- (b) No person who is affected with any infection or disease in a communicable form or is a carrier of such an infection or disease shall work in a milk derivatives plant, and no plant shall employ any such person or any person suspected of being affected with an infection or disease in a communicable form or of being a carrier of such disease.
- (c) All employees shall furnish such information, submit to such physical examinations, and submit such laboratory specimens as the Department may require for the purpose of determining freedom from communicable disease.
- (d) No person with an infected cut or lesion on hands or arms shall handle milk derivatives, containers or equipment.

19. MISCELLANEOUS PROTECTION

- (a) The various plant operations shall be located and conducted so as to prevent any contamination of the milk derivative or of cleaned equipment. All necessary means shall be used for the elimination of flies, other insects, and rodents. In a milk derivative plant there shall be separate completely partitioned rooms for the pasteurizing, processing, cooling, and packaging operations, and the washing and bactericidal treatment of containers. Rooms in which milk, milk products, or milk derivatives, clean utensils, or containers are handled or stored shall not open directly into any stable or living quarters.
- (b) Bulk milk cans such as producer cans shall be thoroughly cleaned and sanitized in approved mechanical equipment and stored in a sanitary manner subsequent to being filled ~~and~~ AND before being returned to a producer by a plant.

- (c) All equipment and containers with which milk comes into contact shall be covered, or otherwise protected, to prevent the access of flies, dust, condensation, and other contamination during operation.
- (d) All food substances used in the preparation of milk derivatives shall be stored in a clean place, six (6) inches off the floor, and shall be so handled as to be protected from contamination.
- (e) No insecticides or other poisonous or deleterious substances shall be stored in any room where milk derivatives or their ingredients are handled. All insecticides and similar materials shall be kept in properly labeled containers and shall be so employed as not to create a public health hazard.
- (f) Lubricants such as orange oil or petroleum jelly applied to equipment shall be dispensed in a sanitary manner from the original container.
- (g) The surrounding outer premises appertaining to the plant shall be kept clean and free of litter and rubbish, and from all other conditions that may serve as rodent harborages or attract flies and other arthropods.
- (h) Facilities shall be supplied for the storing and hanging of employees' clothing and such facilities shall be kept clean. These shall be separated from rooms where milk, milk products or milk derivatives are handled. Soiled coats and aprons shall be kept in containers provided for that purpose.
- (i) All vehicles used for the transportation of milk derivatives shall be constructed and operated so as to protect their contents from contamination. The vehicles shall be constructed

with permanent tops and sides and shall be kept clean.

20. PLANS FOR NEW CONSTRUCTION OR EXTENSIVE RECONSTRUCTION

In the case of new construction or extensive reconstruction or alterations or the installation of new equipment, duplicate plans shall be submitted to the Department of Public Health for prior approval. Such approvals shall be recorded and a set of plans will be kept on file in the offices of the Department.

21. STANDARDS FOR MILK DERIVATIVES

- (a) Bacterial plate counts, direct microscopic counts, coliform determinations, phosphatase tests, efficiency of bactericidal treatment, and other laboratory and screening tests shall conform to the procedures in the latest edition of "Standard Methods for the Examination of Dairy Products" recommended by the American Public Health Association. Examinations may include such other chemical and physical determinations as the Department may deem necessary for the detection of adulteration.
- (b) All milk derivatives and ingredients used therein shall be clean, wholesome, unadulterated, free from spoilage, hazardous chemicals, rodents, insects and insect parts, other arthropods or other foreign materials.
- (c) All milk derivatives shall have a negative phosphatase test.