2.3.4. FOOD AND PROCESSING INDUSTRY ENTERPRISES
(TECHNOLOGICAL PROCESSES. RAW MATERIALS)

Production of Milk and Milk products

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Law of the RSFSR On Sanitary and Epidemiological Welfare of Population

"Sanitary regulations, standards and hygienic standards (hereinafter referred to as the sanitary rules) shall be the regulatory documents establishing human safety and(or) harmlessness criteria of the factors of human living environment and the requirements to provide favorable conditions for human life activity.

The sanitary rules are binding on all governmental authorities and public associations, enterprises and other economic entities, organizations and institutions regardless of their subordinacy and forms of property, on officials and citizens" (Article 3).

Sanitary offense shall mean a wrongful, guilty (deliberate or negligent) act (action or omission) infringing on the rights of citizens and public interests related to non-compliance of the sanitary laws of the RSFSR, including the current health rules...

Officials and citizens of the RSFSR who have committed a sanitary offense may be brought to disciplinary, administrative and criminal responsibility" (Article 27).

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Decree of the State Committee of Sanitary and Epidemiological Supervision of Russia No. 23 dated October 4, 1996
The effective date is the publication date

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1. Scope of Application

These regulations and standards are developed on the basis of the Law of the RSFSR On the Sanitary-Epidemiological Welfare of the Population; the Laws of the Russian Federation On Protection of Consumers Rights, On Certification of Products and Services and Regulations for State Sanitary-Epidemiological Standardization, approved by Decree of the Government of the Russian Federation No. 625 dated June 5, 1994, and they establish hygienic requirements for production and laboratory control of milk and milk products, providing the output corresponding to the medico-biological requirements and sanitary quality standards.

Official publication

All the provisions hereof apply to all operating, designed dairy industry enterprises and enterprises under construction, including integrated plants, factories, workshops for production of children's powdered milk products, babies' milk products, regardless of their departmental identity and forms of ownership.

2. Regulatory References

In these Sanitary Regulations and Standards, references to the following documents are used.

2.1. Law of the RSFSR On Sanitary and Epidemiological Welfare of Population.

2.2. Law of the Russian Federation On Protection of Consumer Rights.

2.3. Law of the Russian Federation On Certification of Products and Services.

2.4. Regulation for State Sanitary and Epidemiological Standardization, approved by Decree of the Government of the Russian Federation No. 625 dated June 5, 1994.

2.5. Law of the USSR On Individual Labor Activity.

2.6. Medical and Biological Requirements and Sanitary Standards for the Quality of Food Raw Materials and Food Products, No. 5061-89 dated August 1, 1989, approved by the Deputy Minister of Health of the USSR .

2.7. Sanitary Standards for Industrial Enterprise Design, CH 245-71.

2.8. Sanitary Regulations for Organization of Processes and Hygienic Requirements for Production Equipment, No. 1042-73, approved on April 04, 1973 by the Ministry of Health of the USSR.

2.9. Sanitary Requirements to Design of Dairy Industry Enterprises, VSDR (Veterinary and Sanitary Design Requirements), dated January 6, 1992.

2.10. Standards for Technological Design of Dairy Industry Enterprises, ВНТП 645/1618-92.

2.11. Engineering Standards for Family Farms and Enterprises of Small Capacity of Processing Industries (Dairy Industry), ВНТП 645/1645-92.

2.12. Construction Norms and Regulations.

2.13. GOST (State Standard) 2874-82 Drinking Water. Hygiene Requirements and Quality Control.

2.14. CN&R (Construction Norms and Regulations) 2.04.01-85. Water-distribution pipelines and sewerage system of buildings;

2.15. CN&R 2.04.01-87. Administrative and Welfare Buildings.

2.16. CN&R Natural and Artificial Lighting. Design Standards.

2.17. Sanitary Standards of Microclimate in Industrial Premises, No. 4088-86 dated March 31, 1986, approved by the deputy chief state sanitary inspector of the USSR.

2.18. Sanitary Standards for Acceptable Noise Levels at the Workplaces, No. 3223-85 dated March 12, 1985, approved by the deputy chief state sanitary inspector of the USSR.

2.19. Instruction for Mandatory Pre-Employment and Periodic Medical Examinations of Employees and Medical Examinations of Individual Vehicle Drivers, Order No. 555 dated September 29, 1989, approved by the Ministry of Health of the USSR.

2.20. Provisional List of Works under which Preliminary and Periodic Medical Examinations of Employees are Mandatory, Order No. 280/88 dated October 5, 1995, approved by Ministry of Health and Medical Industry of the Russian Federation and State Committee of Sanitary and Epidemiological Supervision of the Russian Federation.

2.21. GOST 13264-82 Cow's Milk. Requirements for Procurement.

2.22. Instructions for Microbiological Production Control at Dairy Industry Enterprises, dated December 28, 1987, approved by the State Agri-Industrial Committee of the USSR and agreed with the Ministry of Health of the USSR.

2.23. Instruction for Technical and Chemical Control at Dairy Industry Enterprises, dated December 30, 1988, approved by the State Agri-Industrial Committee of the USSR.

2.24. Instruction for Preparation and Application of Starter Cultures for Cultured Milk Products at Dairy Industry Enterprises, dated November 16, 1992, approved by the Technical Committee for Standardization "Milk and milk products".

2.25. Instruction for Sanitization of Equipment at Dairy Industry Enterprises, dated April 28, 1978, approved by the Ministry of Meat and Dairy Industry of the USSR and agreed with the Ministry of Health of the USSR.

2.26. Instruction for Sanitization of Equipment for Manufacture of Child Nutrition Liquid, Powdered and Pasty Products, dated December 27, 1995, approved by the Ministry of agriculture and food products of the Russian Federation and agreed by the State Committee of Sanitary and Epidemiological Supervision of the Russian Federation.

2.27. On Procedure for Issuing Sanitary Certificates for Products, Decree of the Russian State Committee of Sanitary and Epidemiological Supervision No. 1, dated January 5, 1993.

2.28. Regulations for Certification of Milk and Milk Products for Compliance with the Safety Requirements, 1993.

2.29. Instruction for order and frequency of control of Microbiological and chemical Contaminant Content in Milk and Milk Products at Dairy Industry Enterprises, approved by the Ministry of Agriculture and Food Products of the Russian Federation, and agreed with the State Committee of Sanitary and Epidemiological Supervision on December 28, 1995.

3. General Provisions

3.1. The design and construction of new enterprises as well as technical upgrading, conversion, renovation and expansion of existing enterprises must comply with the Sanitary Design Standards of Industrial Enterprises , the Sanitary Rules of the Technology Process Organization and Hygienic Requirements for Production Equipment, the Sanitary Requirements for Design of Dairy Industry Enterprises, the Engineering Standards for Dairy Industry Enterprises, the Engineering Standards for Family Firms, Small Capacity Enterprises of Processing Industries (Dairy Industry), the Construction Norms and Regulations, as amended, as well as these Sanitary Regulations and Standards.

In general, construction of dairy industry enterprises shall be carried out according to standard designs, as well as re-use projects and individual projects that meet the requirements of the regulatory and technical documents and these Sanitary Regulations and Standards.

3.2. In coordination with bodies and institutions of the State Sanitary and Epidemiological Service, dairy industry enterprises may be integrated with other food processors (bakery plants, confectionery, pasta, liqueurs and spirits and soft drink enterprises). Dairy industry enterprises may not be integrated with meat and fish processing industry enterprises.

3.3. Enterprises can include milk product production, have a profile of a specialized or combined enterprises.

3.4. The range and volume of the output produced by dairy industry enterprises must meet the production capabilities and be agreed with the bodies and institutions of the State Sanitary and Epidemiologic Supervision.

3.5. Conditions of ice-cream production at dairy industry enterprises shall comply with sanitary regulations for ice cream enterprises.

4. Territory

4.1. The selection and allocation of a plot for construction of a dairy industry enterprise must be made with the compulsory participation of bodies of the State Sanitary and Epidemiologic Supervision. Attention should be paid to the location of raw materials, prevailing wind direction, availability of driveways, the ability to provide drinking quality water, conditions of wastewater discharge, organization of sanitary protection area of at least 50 m (in accordance with the Sanitary Design Standards of Industrial Enterprises), and for cheese pants – of no less than 100 m.

4.2. The territory of the enterprise shall be fenced, have a slope to drain air, melted and flush water into storm drains from 0.003 to 0.05, depending on the soil. The underground water level shall be not less than 0.5 m below the basement floor.

4.3. The territory of the dairy enterprise must be clearly divided into functional areas: the prefactory, production and general work and warehouse ones.

In the prefactory area, a building for office and sanitary and welfare premises, a checkpoint, a parking area for personal vehicles, as well as a recreation space for staff shall be located.

In the production area, production buildings, warehouses of food raw materials and finished products, a ground for transport facilities to deliver raw materials and finished products, a boiler house (other than solid and liquid fuel burning one), repair-mechanical workshops shall be located.

In the general work and warehouse area, utility buildings and structures (cooling towers, pumping stations, warehouses for ammonia, lubricants, fuels, chemicals, a liquid or solid fuel burning boiler, storage areas or spaces for stocks of construction materials and packaging, a container area for garbage collection, yard toilets, etc.) shall be located.

A strict access mode area shall allocated as a standalone area around artesian wells and underground water storage tanks, as well as a sanitary-protection area shall be maintained between treatment facilities and production buildings.

4.4. The territory of the dairy plant must be provided with a pass-through or ring-type complete improved surface driveway for vehicles (asphalt concrete, asphalt, concrete, etc.); non-dusty surface walkways for personnel (asphalt, concrete, slabs).

4.5. Parts of the territory free from buildings and driveways shall be used for arrangement of recreational areas, their landscaping with trees and bushes, lawns. The territory of the enterprise along the perimeter of the section and between the areas shall be planted. Planting trees and shrubs, which blossom produces flakes, fibers, furry seeds which can clog the equipment and products shall not be allowed.

4.6. Storage areas for building materials, fuel, packaging, placement of garbage containers shall have a complete concrete or asphalt covering.

4.7. The side clear zones between the functional parts of the area shall be at least 25 m. The open storages for solid fuels and other dusty materials shall be placed windward with a clear zone of at least 50 m from the nearest openable apertures of production buildings and 25 m - from welfare premises. The distance from the yard toilets to production buildings and warehouses shall be at least 30 meters.

Side clear zones between buildings and structures which are lit through the window openings shall be not less than the distance to the copestone top of the highest one of the opposing buildings and structures.

4.8. Garbage containers with lids shall be installed on an asphalt or concrete ground the dimensions of which shall exceed the size of containers not less than by 1 m in all the directions. The garbage container ground shall be fenced on three sides with a solid concreted or brick 1.5 m high wall.

Garbage container grounds shall be located on the windward side of the production or warehousing premises. The side clear zone between them shall be at least 30 meters.

Disposal of waste and garbage from the garbage containers shall be carried out at least once a day, followed by sanitization and disinfection of the containers and ground on which they are located.

4.9. The territory of the enterprise shall be kept clean; cleaning shall be carried out on a daily basis. In the warm season, as appropriate, areas and green spaces shall be watered. In winter, the roadways and walkways of the territory shall be periodically cleared of snow and ice and sanded.

5. Production and Auxiliary Facilities

5.1. Mainly, production shops shall be located in buildings separated from welfare premises. Design and engineering solutions may include multi- or single-storey production buildings. For dairy industry enterprises integrated with the production units of other industries, it is more preferable to construct single-story production buildings.

5.2. The location of production workshops shall ensure a continuous performance of technological processes; technological distribution lines (milk pipelines) shall ensure the shortest and direct flows of raw materials and finished products.

5.3. At the building entrance of enterprises, scrapers, grills or metal mesh shall be made to clean their footwear from the mud, as well as disinfectant mats inside the buildings at the entrance to the manufacturing plants and welfare rooms.

5.4. Acceptance of milk depending on the profile of dairy enterprises, their capacity and location shall be carried out in an enclosed room or on a canopied unloading platform.

The acceptance platforms or premises shall be fitted with brackets and hoses to pump milk. Hoses to pump the milk from the jars or tank through a tank hatch shall have 80-100 cm long tips made of stainless steel. Hoses with coupling nuts shall be used to pump milk from a tank, which are connected to the tank inlet connection.

5.5. Child nutrition workshops at dairy enterprises shall be located in premises isolated from the main production.

Filling and packaging of finished products at specialized child nutrition enterprises shall be carried out in separate premises equipped with bactericidal lamps.

5.6. Feedstuff production (milk replacer, etc.) shall be isolated from dairy products workshops and have a separate raw material department.

Preparation and storage of supplies, materials, food ingredients shall also be carried out in separate premises.

Pallets, shelves, and containers shall be provided for stowing of food products.

5.7. A starter culture division shall be located at the production building with the main workshops consuming them, isolated from the production premises and as close as possible to workshops consuming the starter cultures. The starter preparation premise shall not be of a pass-through type. At the starter division entrance, a tambour for changing sanitary clothing and a disinfectant mat shall be provided. The starter division shall have a number of separate premises in accordance with Section 13 hereof.

5.8. Preparation of solutions of food ingredients from flour, sugar, protein supplements, etc. shall be carried out in a separate premise.

5.9. The walls of the main production workshops, as well as those of starter divisions and laboratory shall be lined with glazed tiles (or other materials permitted by bodies of the State Sanitary and Epidemiological Service) to the full height, but not less than 2.4 m, and above to the bottom of the support structure they shall be painted with water-based and other coatings permitted for this purpose by the state committee of sanitary and epidemiological supervision of Russia.

the walls of the storage areas of finished goods, thermal and freezing areas, as well as in the workshop chiefs' offices, shop floor foremen, etc., may be painted with emulsion paints and other permitted paints; and lime washing of walls shall be provided in raw product and material storage warehouses.

5.10. Ceilings in the main and auxiliary workshops shall be painted with water-based paints or whitewashed.

5.11. Painting or whitewashing the walls and ceilings in all production and ancillary premises shall be made whenever they are soiled, but at least twice a year, using light-colored paints. Together with whitewashing disinfection of the surfaces of enclosing structures shall be carried out.

5.12. In case of mold occurred, the ceilings and corners of the production premises shall be immediately cleaned and painted with paints containing permitted fungicide preparations.

5.13. Floors in production premises shall be coated with covered-slip, acid- and alkali-proof, waterproof materials (approved by bodies and agencies of the State Sanitary and epidemiological Supervision of Russia), have a flat surface without pot-holes with a slant toward covered conduits and duckboards.

5.14. Building glass block must not be used to fill openings in the external walls of the production premises with wet and humid regimes.

5.15. All intrashop pipes - water (drinking and technical water lines), sewer, steam, gas pipes shall be painted in distinctive conventional colors.

5.16. Pedal bins with lids for garbage and containers made of polymeric materials for the collection of sanitary waster shall be placed in the production premises. Waster bins and containers shall be cleaned, washed with detergents and disinfected with a 0.5% chlorine solution on a daily basis.

Storage of waste as well as tools and equipment not used in the technological process in production premises is prohibited.

5.17. Store rooms equipped with a dirty water drain, a sink with hot and cold water supply with a combination faucet, drying radiator and cabinet shall be provided for storage of cleaning equipment, detergents and disinfectants. Built-in cabinets or niches equipped similar to store rooms may be provided for at small capacity enterprises. Cleaning equipment (cleaning machines, carts, buckets, swabs, brushes, etc.) shall be marked and assigned to respective production, auxiliary and utility premises.

5.18. Instruction sheets concerning observance of hygienic and technological modes, posters, warning notices, schedules and modes for cleaning of the equipment, assessment results of the workplace condition and other materials for production staff shall be posted at workplaces near the process equipment.

5.19. The work plans of the enterprise shall include sanitary days at least once a month for spring-cleaning and disinfection of all the premises, equipment, inventory and routine maintenance.

The sanitary days schedule for a quarter shall be agreed with bodies and institutions of the State Sanitary and Epidemiologic Supervision. Sanitary days may be carried out by shops at large enterprises.

A sanitary committee headed by the chief engineer with the participation of technical and engineering employees, representatives of public organizations, workers, quality control department, and the sanitary service shall be established to arrange a sanitary day at each enterprise.

The committee shall determine the scope and order of works prior to the sanitary day and check their performance subsequently.

5.20. Surface of the panels, interior doors in the production workshops, starter divisions, child food workshops shall be, at least once a week, washed with hot soapy water and disinfect with a 0.5% chlorine solution; door handles, the surface beneath them, the door bottoms and taps at the sinks shall be wiped with cleaning and disinfecting solution for each shift.

5.21. The internal side of the window panes, lamp-glazing and frames shall be wiped and clean at least once a month; the external side - at least twice a year, and during the warm season whenever they are soiled.

The space between the window frames shall be cleaned of dust and washed whenever it is soiled.

Electric lighting fixtures shall wiped by specially trained staff whenever they are soiled but at least once a month.

5.22. Floors in the production premises shall be cleaned as needed in the course of operation and after the shift is ended. In the workshops where floors are soiled with fat, they shall be washed with hot soapy alkaline solutions followed by disinfection.

After washing and disinfecting water shall be removed and the floors shall be kept dry.

5.23. The conduits, duckboards, wash-basins, sinks, litter-baskets shall be thoroughly cleaned, flushed and disinfected with a 0.5% chlorine solution whenever they are soiled and after the shift is ended.

5.24. The steps of the staircases shall be washed whenever they are soiled but at least once a day. Railings shall be wiped with a wet cloth dipped with a 0.5% disinfectant solution on a shift basis.

5.25. Disinfectant mats at entrances to the production building and to every workshop shall be wetted with a 0.5% disinfectant solution on a shift basis.

5.26. The temperature and relative humidity in the production premises, storage areas and warehouses for the storage and maturation of products shall comply with the sanitary standards for the design of industrial enterprises, the sanitary requirements for the design of dairy industry enterprises and technological instructions for production of milk products.

6. Welfare Premises

6.1. Welfare premises may be located in standalone buildings, in a structural addition or be integrated into the main production building. It is more preferable to place welfare premises in a standalone building; in this case a warm passage shall be provided for into the production building.

6.2. Welfare premises for workers of manufacturing workshops of the dairy industry enterprises shall be equipped in such a manner as disinfestation posts are. Welfare premises separate from the general factory ones shall be provided for the staff working at specialized child milk product workshops. A mat shall be placed at the entrance to the welfare premises which is permeated with a disinfectant solution on a shift basis.

6.3. Welfare premises for workers of the repair and mechanical workshops, cooperage and box workshops, electromechanical workshops, boiler house, compressor house shall be arranged separately from the general factory ones.

6.4. The sanitary and welfare premises for employees working at manufacturing workshops of dairy industry enterprises shall include: cloakroom for outer garments, play clothes, working and sanitary clothing and footwear, different linen-rooms for clean and dirty sanitary clothing, shower rooms, toilets, a room for women's personal hygiene, washroom with sinks for hands washing, clothes and footwear drying room, manicure room, health post or medical examination room, food service area (a catering facility), a room for storage and sanitary treatment of cleaning equipment.

Additional items included in the composition of welfare and auxiliary premises shall be determined in accordance with the sanitary characteristics of the production processes.

6.5. The cloakrooms for the working and sanitary clothing shall be placed in rooms isolated from the cloakrooms for outer and play clothes.

6.6. Outer and play clothes of the workers of the primary production shall be kept in an open manner including the service, which means installation of hangers or open cabinets, benches and footwear stands.

6.7. Shower rooms shall be located adjacent to the cloakrooms; it is necessary to provide for dressing-rooms equipped with racks and benches. It is necessary to arrange open shower cubicles fenced on three sides and with through passages between the rows of cubicles.

6.8. The number of shower grids shall be determined in accordance with the Construction Norms and Regulations according to the number of employees in the most numerous shift.

6.9. Washrooms shall be located adjacent to the cloakrooms for special clothes; wash basins shall be the collective the number of which is calculated based on the number of employees working in the most numerous shift.

6.10. Linen rooms for issuing clean special clothes and receiving dirty one shall be included in the welfare premise unit.

6.11. Water closets, shower rooms, women’s hygiene rooms and washrooms must not be located above manufacturing workshops, managerial and educational premises, catering rooms, health posts, cultural rooms and premises of public organizations.

6.12. Where the number of women working in the most numerous shift exceeds 100, a room for women's personal hygiene shall be arranged adjacent to the women's water closets. With fewer working women a special cubicle shall be arranged with a hygienic shower in the women's water closet in the welfare premises next to the entrance of the tambour.

6.13. Water closets shall be heat-insulated, sewered, equipped with sluices fitted with racks for sanitary clothes, sinks with hot and cold water supply through a faucet.

Water closets shall be equipped with self-closing doors, disinfectant mats at the entrance, lavatory basin – equipped with a foot water flush, taps – with a pedal or other special control.

Sinks for hand washing shall be provided with soap, brushes, a hands disinfection device, hand-driers or disposable towels.

6.14. For small enterprises which process not more than 5 tons of milk per shift and are located in areas without sewerage system, yard water closets may be arranged at a distance of not less than 30 m from the production and storage premises in agreement with bodies and institutions of the State Sanitary and Epidemiological Supervision.

6.15. The finishing of enclosing surfaces in welfare premises shall be as follows:

• walls: with glazed tiles in the shower rooms to a height of 1.8 m; in cloakrooms for sanitary clothes, linen rooms, water closets, women's personal

hygiene room to a height of 1.5 m above the panels to the bottom of load-bearing structures – with water-based paints or other permitted paints;

• ceilings shall be painted with oil paint in the shower rooms, in all other areas with lime wash;

• floors in all the welfare premises shall be lined with ceramic tiles.

6.16. Welfare premises shall be thoroughly cleaned on a daily basis upon completion of the work: they shall be cleaned of dust, the floors and equipment washed with a soap-alkaline solution and hot water; cabinets in the cloakrooms shall be wet cleaned on a daily basis and disinfected with a 0.5% chlorine solution or other permitted disinfectants at least once a week.

6.17. All panels (tiled or painted with oil paint) shall be cleaned with a damp cloth on a daily basis and disinfected on a weekly basis.

6.18. Water closets and women's personal hygiene rooms shall be treated with detergents and disinfectants at least twice per shift.

At each cleaning of water closets water tap faucets, door handles and locks, flush handles and other surfaces, which may touched with hands when visiting the water closet shall be cleaned with a marked cloth dampened with a 0.5% chlorine solution.

Whenever soiled lavatory basins shall be cleaned of salt stains with a 10% hydrochloric acid solution or other permitted detergents and thoroughly washed.

For washing lavatory basins it is advisable to use the detergent "Sosenka" or other similar permitted detergents.

A mat at the entrance of the water closet shall be wetted at least twice during a shift with a fresh disinfectant solution (0.5%).

6.19. Special equipment (buckets, brooms, shovels, etc.) marked with a special (red) label or color shall be dedicated for cleaning and disinfection of water closets.

The entire cleaning equipment shall be immersed for 2 hours into a 0.5% chlorine solution after each cleaning.

The cleaning equipment for water closets and women's personal hygiene rooms shall be stored separately from the cleaning equipment for other premises - in a dedicated place.

Special staff shall be allocated to clean water closets and women's personal hygiene rooms; their engagement for cleaning other rooms is strictly prohibited.

6.20. Food service areas (catering facilities) can be placed in the welfare premises or in standalone buildings. The number of seats shall be calculated based on the number of employees working in the most numerous shift.

Hangers for sanitary clothing, washrooms with hot and cold water supply through a faucet, soap and hand dryers shall be arranged at the entrance to the canteen;

if necessary, cloakrooms with hooks the number of which shall correspond to the number of seats.

Where there are no canteens (lunchrooms), a room for meals shall be arranged which shall be equipped with hangers for sanitary clothing, a kettle, a sink, tables and chairs. Food intake is prohibited directly in the workshops.

6.21. Use of the welfare premises for other purposes is categorically prohibited.

6.22. A room for additional sanitization of the production staff (hands disinfection, putting on gauze bandages, clothing, etc.) shall be arranged with the workshops for producing products for babies.

7. Water Supply and Sewerage

7.1. Enterprises shall be provided with sufficient amount of drinking quality water; calculation of water needs shall be made in accordance with the Engineering Standards of Dairy Industry Enterprises, the Engineering Standards for Family Farms, Enterprises of Small Capacity of Processing Industries (Dairy Industry) and CN&R Internal Distribution Pipelines and Sewerage System of Buildings.

7.2. The choice of water supply sources, water intake places, calculation of the boundaries and action plan for improvement of sanitary protection zones of water supply sources shall be carried out in accordance with the Instructional Guidelines for Organization and Control of Water Supply of Dairies and are subject to mandatory coordination with bodies of the State Sanitary and Epidemiological Supervision.

The structure of the water supply system of dairy industry enterprises shall meet the requirements of CN&R Water Supply. External Networks and Structures and Internal Distribution Pipelines and Sewerage System of Buildings, as well as hereof.

7.3. The water pipe entry shall be located in an insulated lockable room and maintained in a proper technical and sanitary condition, be equipped with pressure gauges, valves for water sampling, check valves that prevent water backflow; duckboards for runoff. Enterprises shall have and present schemes of water supply and sewerage networks upon request of control organizations.

7.4. At least two tanks of clean water shall be arranged in the water supply system of dairies to ensure a continuous water provision of the enterprises in the peak consumption periods and in emergency situations, as well as to ensure contact time during chlorination or a constant flow rate during disinfection with ultraviolet radiation and for external fire fighting. Water exchange in the tanks shall be carried out in periods of not more than 48 hours. A half-volume of the daily water need for process and welfare needs shall be kept in each tank.

7.5. Disinfection of storage tanks and water pipelines shall be carried out in accordance with the Regulations for Control of Disinfection of Service and Drinking Water and for Disinfection of Waterworks with Chlorine after Washing in Case of Emergencies, Repair Work, as well as upon instruction and under supervision of the territorial centers of the State Sanitary and Epidemiological Supervision and shall be recorded in a special log.

7.6. Disinfection of water supplied for the technological needs of a dairy enterprise shall be carried out depending on the characteristics of the water sources - according to indications and methods in accordance with Instructional Guidelines for Organization and Control of Water Supply of Dairies.

Water disinfection shall be carried out using the methods permitted by bodies of the State Sanitary and Epidemiological Supervision (ozonation, radiation with bactericidal lamps, electrolysis, etc.).

7.7. Water used for welfare and technological needs related to the production of products (including the preparation of detergents and disinfectants, washing and rinsing of equipment, dairy tanks, pipes, cans and bottles, cooling of baby milk products in autoclaves, preparation of process steam) shall comply with the requirements of applicable GOST Drinking Water. Hygiene Requirements and Quality Control. Hygiene Requirements and Quality Control.

Ice drinking water with a temperature of 1-2 °C circulating in a closed system shall be used to cool the milk products in processing units.

Water from the water section of cooling and pasteurizing plants may be used for the hot water system (for washing of dishware in the canteen, cleaning of the equipment, tanks, cans, washing of industrial clothes, washing of floors), after its preheating to not less than 80 °C in the boiler installations.

7.8. Industrial water may be used to supply the run-around systems of compressor cooling installations, vacuum evaporators, supply pipes of the flush tanks of lavatory basins and urinals, outside washing of motor vehicles, cooling of boiler bleed waters, watering of the territory.

Technical water supply pipeline shall be separated from the service and drinking water supply pipeline. Both water supply systems shall have no connections with each other and shall be painted in distinctive colors.

Water intake points of both water supply systems shall be marked with the corresponding notices: "drinking", "technical".

The enterprise shall have a diagram of the technical water supply networks.

Distribution pipelines of the water supply run-around systems shall be disinfected according to plan agreed with bodies and institutions of the State Sanitary and Epidemiological Supervision before commissioning and on a periodical basis during their operation.

7.9. As prevention an annual review of technical repair shall be scheduled and if necessary, repair of water supply source equipment, water supply network, spare tanks, inspection pits, etc.

After each repair, the water pipeline shall be necessarily washed and disinfected followed by a laboratory study of the water before its supply to the enterprise. Control water samples shall be taken immediately after the final disinfection and from the 5 points which are the most dangerous in the epidemiological respect: on the intake, from the tank, in the starter culture division, before the bottle washing department and in the milk processing workshop. Accounting and registration of causes of accidents and repairs on the water pipeline and sewerage system, as well as the reasons for the non-availability of steam and cold shall be made in a special log which shall contain the place, date and time of an accident; the date and time of a repair, etc. (see Supplement 1).

All emergencies on water and sewerage networks shall be immediately reported by the enterprise administration to the bodies of the State Sanitary and Epidemiological Supervision and public utilities.

7.10. The production premises shall be equipped with:

• flushing valves with hot and cold water supply, installed faucets at the rate of a valve for 500 sq.m. in the workshops where the floor can be soiled with drains or products, but at least one valve per room; brackets for storage of hoses;

• sinks for hand washing with hot and cold water supply with a faucet furnished with soap, brush, disinfectant (0.02% chlorine solution), disposable towels, hand-dryers. The sinks shall be placed in each production room at the entrance, as well as in places convenient for use at a distance of no more than 15 m from each workplace;

• drinking fountains or drinking aerators – at a distance of no more than 70 m from a workplace.

7.11. Drinking water for welfare and technological needs shall undergo chemical analysis according to the technological and chemical control instructions at the dairy industry enterprises within the deadlines established by bodies and institutions of the State Sanitary and Epidemiological Supervision, but at least once a quarter, bacteriological analysis – once a month.

Water analysis shall be performed in accordance with GOST Drinking Water: Methods of Sanitary-Bacteriological Analysis.

Water shall be analyzed in the following sampling points: at the intake, in storage tanks, in the production workshops (the milk processing, cottage cheese, sour cream workshop, filling workshop, the starter division, etc.).

Regardless of the water supply source the frequency of water analyses pursuant to the order of bodies and institutions of the State Sanitary and Epidemiological Supervision can be increased depending on the epidemiological situation in the region comprising the factory and the raw area of the enterprise.

7.12. The structure of the sewerage system of dairy industry enterprises shall meet the requirements of CN&R Sewerage. External Networks and Structures and Internal Distribution Pipelines and Sewerage System of Buildings, as well as hereof.

Dairy industry enterprises shall be furnished with sewerage systems for separate collection and disposal of industrial and domestic sewage. A storm sewer system shall be arranged for collection and disposal of precipitations. Connections between the production and household sewerage systems shall be prohibited; each system shall have an independent discharge into the yard network. In case of discharge into the urban wastewater treatment facilities, the conditions of wastewater discharge shall be determined by the Regulations for Admission of Industrial Wastewater into Municipal Sewerage System.

Where an enterprise has its own sewage treatment plants, the conditions of treated wastewater discharge shall be determined by the Rules of Surface Water Protection from Pollution by Sewage. The conditions of wastewater discharge at each particular enterprise shall be agreed with bodies and institutions of the State Sanitary and Epidemiological Supervision.

7.13. In the territory of an enterprise it is more advisable to lay the yard sewerage networks at a lower level than the water distribution pipelines; also water supply and sewerage networks may be laid at the same depth. The installation of the intersection locations of water supply and sewerage pipes, as well as the distances between the pipelines laid in parallel shall meet the requirements of CN&R Water Pipeline. External Networks and Structures and Sewerage. External Networks and Structures.

7.14. If necessary, local treatment of polluted waste water shall be provided for (see ii. 9.6 hereof).

7.15. In coordination with the bodies of the State Sanitary and Epidemiological Supervision, arrangement of small dairy enterprises may be permitted for a certain period in an area which is not sewered.

7.16. Before discharge into water bodies wastewaters of dairy industry enterprises shall undergo mechanical, chemical (if necessary) and full biological treatment in sewerage treatment plants of the locality or in their own wastewater treatment plants.

Discharge of industrial and domestic wastewaters into the open water bodies is strictly prohibited without proper treatment, as well as the arrangement of absorption wells.

7.17. All production and other premises where discharges can occur onto the floor shall be equipped with covered conduits or duckboards with a floor slope to them no less 0.005-0.01 depending on the amount of wastewater.

7.18. Process equipment, tanks, washing baths shall be connected to the sewerage system through hydraulic valves (siphons) with jet rupture of 20-30 mm from the end of the drain pipe to the upper edge of the cone, sinks through a siphon without jet rupture.

7.19. Duckboards, conduits and suspended sewerage pipes with process wastewater shall not be placed over permanent workplaces and open process

equipment. Installation of suspended household drain sewerage pipes is prohibited.

7.20. Household sewerage riser pipes shall not pass through the production premises designed for food storage and processing. It is appropriate to place industrial sewerage riser pipes in ducts with access to the audit from the neutral rooms. Industrial sewerage riser pipes may pass through production premises where there are not audits within them.

8. Lighting, Heating, Ventilation and Air Conditioning

8.1. Lighting of production premises shall comply with CN&R Natural and Artificial Lighting. Design Standards and the Sanitary Requirements for the Design of Dairy Industry Enterprises.

8.2. Natural lighting is the most appropriate in production premises: the light factor (LF) shall be within 1:6-1:8. In the welfare premises the LF shall be at least 1:10. The natural light factor (NLF) shall be provided with regard to the nature of work and eyestrain.

When the natural light is insufficient, artificial lighting shall be applied – mainly fluorescent lamps. Electric incandescent lamp shall be used in premises with arduous working conditions or without permanent workplaces (thermostatic, cooling, saltery departments, warehouses, etc.).

8.3. Artificial lighting shall be performed as general lighting in all the workshops and premises, and in production premises if required – as local or combined one.

In carrying out production operations that require special eyestrain, a combined or local lighting shall be used depending on the scope and nature of the work.

8.4. Lighting fixtures with fluorescent lamps shall be equipped with a trash rack (lattice), a diffuser or special lamp cartridges preventing from a possible fall-down of lamps from the lighting fixture; lighting fixtures with incandescent lamps with an all-over protective glass.

8.5. Lighting fixtures in the premises with open technological processes (production of cottage cheese, cheese and other products in the tanks without lids) shall not be placed above the process equipment in order to prevent from a possible falling of debris into the product.

8.6. Area lights must not be blocked with tares, equipment, etc. from inside and outside the building. Replacement of glasses in the lights with opaque materials is prohibited.

In the case of alterations, changes in the purpose of the production premise, as well as in case of transfer or replacement of one piece of equipment with any other, the intensity of illumination of the premise shall be brought into conformity with the illumination standards in connection with the new conditions.

8.7. In the premises that require a special sanitary regime (in the starter culture division, cheese filming, child milk products filling departments, lab boxes, etc.), bactericidal lamps shall be installed for air disinfection. The operation mode of the bactericidal lamps shall comply with the requirements of the operation instruction.

Medical aid stations shall be provided with UV installations.

8.8. Enterprises shall be provided with emergency lighting in addition to the main lighting.

8.9. The heating system shall meet the requirements of CN&R Heating, Ventilation and Air Conditioning, Production Buildings, Administrative and Welfare Buildings.

For the heating system of production and auxiliary buildings overheated water is preferable as a heat carrier; saturated water steam also may be used.

8.10. Electricity may be used as a source of heat for heating of buildings located far from the heating networks of enterprises or outside the industrial site (pumping sewage systems, water towers, etc.), as well as in heated rooms located in the contours of refrigerators and warehouses.

8.11. In unheated warehouses heating shall only be arranged in the utility rooms for a long stay of the maintenance personnel (during a working day). Heating of warehouses shall be provided when it is necessary to maintain in them a specific temperature required for the storage conditions of products or materials.

8.12. In all the production workshops and auxiliary area of the primary production radiators shall be used as heating devices the design of which ensures easy cleaning of them of dust (preferably batteries of smooth pipes).

8.13. In thermostatic premises, steam heating from the production heat supply system shall be arranged to maintain the temperature required according to the technology using batteries of smooth pipes as heating devices.

8.14. In the production and auxiliary buildings and premises, natural, forced, mixed ventilation or air conditioning shall be provided in accordance with the requirements of Sanitary Design Standards for Industrial Enterprises, the chapter of CN&R Heating, Ventilation and Air Conditioning, Sanitary Requirements for the Design of Dairy Industry Enterprises (VSDR) and hereof.

8.15. In the production and service premises the heating, ventilation (or air conditioning) means shall create a favorable air environment:

- for the health and performance capability of the personnel;
- for preservation of products and materials;
- for support of the technological process;
- for preservation of the equipment.

The parameters of the air shall comply with the requirements of the Hygiene Standards of the Microclimate of Production Premises. The work categories shall be assumed according to the Production Design Standards of Dairy Industry Enterprises.

8.16. At dairy industry enterprises in production and welfare premises, washing rooms, laboratories and certain other premises, a supply and exhaust

general exchange forced ventilation (or air conditioning) shall be provided combined, if necessary, with a local exhaust ventilation.

8.17. Natural ventilation is allowed in certain premises of support services, in milk collecting points, downstream small capacity dairy enterprises.

8.18. Welfare premises, water closets, rooms of the starter culture division, and laboratories shall have independent systems of general exchange and local ventilation.

8.19. Supply air fed into the production premises must be cleaned from dust. Supply air entering the starter culture division and production premises with open technological processes, the baby milk product workshop, sterilized milk department of production with filling in aseptic conditions shall necessarily be cleaned of dust using oil and other fine filters.

8.20. The amount of air that should be fed to the premises to provide the required parameters of ambient air in the working or serviced area of the premises shall be determined by calculation based on the amount of heat, moisture and harmful substances (ammonia, carbon dioxide, aerosols, nitrogen oxides, ozone, etc.) entering the premises.

Frequency of air exchanges in individual premises in manufacturing and auxiliary buildings may be assumed in accordance with the Sanitary Requirements for Design of Dairy Industry Enterprises.

8.21. Any equipment which is a source of intense emission of heat, moisture and harmful substances shall be equipped with local exhaust ventilation systems.

Any equipment which is a source of dust shall be equipped with individual specialized cleaning systems (filters, cyclone collectors, etc.).

8.22. The bottom of the inlet opening of a supply ventilation air-intake shaft shall be placed at least at a height of 2 m from the ground level.

The air removed by exhaust systems shall be dumped through exhaust shafts the height of which shall be at least 1 m above the roof level.

8.23. Emissions from ventilation systems shall be made at least at a horizontal distance of 10 m or a vertical distance of 6 m in case the horizontal distance is less than 10 m away from the supply ventilation air-inlet systems.

8.24. The installation of supply and exhaust dilution ventilation systems shall ensure in whole the air exchange in buildings with a balanced supply and exhaust. In order to localize contaminants in premises in which hazardous substances, aerosols, excess heat and moisture are emitted, the negative disbalance shall be arranged (i.e., with a supply prevailing over the exhaust); in premises where there are no harmful emissions a positive disbalance shall be arranged.

8.25. Ventilation equipment shall be placed in engineering and utility services rooms (ventilation chambers) equipped for noise suppression and vibration rejection in accordance with the requirements of CN&R Protection against Noise, the hygiene rules and regulations and other official documents.

8.26. The operational effectiveness of ventilation systems shall be made in accordance with the Instructional Guidelines Sanitary and Hygienic Control of Production Premises Ventilation.

9. Sanitary Protection of Environment

9.1. In order to protect the environment and public health, dairy industry enterprises must meet the requirements for sanitary protection of the environment in accordance with the following basic regulatory documents: Sanitary Regulations and Standards Hygienic Requirements for Protection of Atmospheric Air of Populated Areas;

Sanitary Regulations and Standards Sanitary Regulations and Standards of Surface Water Protection from Pollution; Sanitary Regulations and Standards Sanitary Regulations and Standards of Sea Coastal Water Protection from Pollution in Places of Water Consumption by Population; Sanitary Regulations Procedure for Accumulation, Transportation, Decontamination and Disposal of Toxic Industrial Waste, etc.

9.2. Dairy industry enterprises shall have measures to prevent environmental pollution due to emissions of aerosols and gases; ingress into sewage waters of separator sludge, flushing and washing water containing fats and protein waste, waste chemicals, disinfectants and detergents etc.

9.3. Enterprises shall be sewered in order to collect and dispose of industrial and domestic wastewater; the sewerage system can be connected to sewage networks of populated localities or to have their own system of sewage treatment plants. In case of discharge into the wastewater treatment facilities of the populated localities, the conditions of wastewater discharge shall be determined by the Regulations for Admission of Industrial Wastewater into Sewerage System of Populated Localities.

9.4. Where an enterprise has its own sewage treatment plants, the conditions of treated wastewater discharge shall be determined by the Sanitary Regulations and Standards of Surface Water Protection from Pollution and Sanitary Regulations and Standards of Sea Coastal Water Protection from Pollution in Places of Water Consumption by Population.

The conditions of sewage water discharge must be necessarily agreed with bodies and institutions of the State Sanitary and Epidemiological Supervision on a case by case basis.

9.5. The pollution density of the general factory sewage waters shall be assumed according to the Production Design Standards of Dairy Industry Enterprises.

9.6. The wastewater of enterprises shall undergo local treatment prior to discharge into the sewer system of the populated locality. Wastewater treatment methods and techniques shall be determined taking into account the local conditions depending on the composition of wastewater.

9.7. In case the wastewater of enterprises are potentially dangerous in epidemiological terms, they may only be discharged into water bodies after appropriate treatment and disinfection to achieve the coliform index of less than 1,000 and the phage index of less than 1,000 PFU /cub.dm according to the Sanitary Regulations and Standards of Protection of Surface Waters from Pollution. The choice of disinfection methods shall be agreed with bodies and institutions of the State Sanitary and Epidemiological Supervision.

9.8. In milk processing enterprises, measures to clean the air of harmful air emissions related to the technological process shall be arranged: dust emission during drying of milk and packaging of powdered milk products; gas and vapor release during smoking of melted cheese, waxing of cheese, etc.

9.9. The exhaust air containing aerosols shall be treated on the filters before its emission into the atmosphere.

9.10. Collection of solid waste shall be made using metal bins or containers with lids and removed designated areas to a sanitary landfill.

9.11. Enterprises that operate some natural object shall implement a systematic internal monitoring of the environmental condition and technical control of the operational efficiency of wastewater treatment plants and ventilation system filters.

9.12. Environmental protection activities shall be developed by the management of enterprises in conjunction with the territorial centers of the State Sanitary and Epidemiological Supervision based on the inventory of production processes and equipment that are sources of harmful substance emissions.

9.13. The management of the enterprise shall bear the responsibility for the implementation of the environmental protection activities developed at the enterprise.

9.14. The state control of implementation of sanitary and anti-epidemic activities and plans of enterprises shall be carried out by bodies of State Sanitary and Epidemiological Supervision of Russia, the state control of implementation of environmental activities and plans – by the institutions of the Ministry of natural resources of Russia, in accordance with the Regulation for Cooperation and Separation of Functions of the State Committee of Sanitary and Epidemiological Supervision of Russia and the Ministry of Natural Resources of Russia, their Bodies and Institutions at the Local Level.

10. Requirements to process equipment, machinery, tools, ware and tare

10.1. Technological equipment, machinery, ware, tare, tools, film and articles made of plastic and other synthetic materials designed for packaging of milk and milk products shall be made from materials permitted by the bodies of the State Sanitary and Epidemiological Supervision for food contact.

10.2. Tanks, metal ware, chutes, conduits, gutters, etc., shall have smooth, easy to clean interior surfaces, without cracks, gaps, protruding screws

or rivets, which hamper their cleaning. Using wood and other materials that are badly washed and disinfected shall be avoided.

10.3. Working surfaces (coatings) of the tables used for food processing shall be smooth, without cracks and gaps, made of stainless metal or polymeric materials permitted by bodies of the State Sanitary and Epidemiological Supervision for food contact.

10.4. Technological equipment and machinery shall be painted from the outside with light tone paint (except for the equipment made of or lined with stainless material) that does not contain harmful impurities. Painting of ware and tools with paints containing lead, cadmium, chromium is not allowed.

10.5. Layout of technological equipment shall be made in accordance with the technological scheme, ensure a continuous performance of the technological process, short and direct layout of milk lines, eliminate counter flows of raw materials and finished products.

10.6. When laying out the equipment the conditions shall be observed which ensure free access to workers operating it to it; sanitary control of production processes, quality of raw materials, intermediate and finished products, as well as a possibility to wash, clean and disinfect the premises and equipment -

10.7. Machinery, equipment, and the milk pipes shall be mounted in such a manner that a complete discharge of milk, detergent and disinfectant solutions is arranged. All the parts which contact with milk and milk products shall be accessible for cleaning, washing and disinfection. Metal milk pipes shall be dismountable.

Glass thermometers without a protective case must not be used.

10.8. Tanks for the manufacture and storage of milk, cream, sour cream and other milk products (except those used to produce cottage cheese and cheese) shall be equipped with tight-fitting lids.

10.9. Machines, tanks and other equipment that are used to manufacture milk products shall be connected to the sewerage system with a jet rupture through the siphoned cones (see Section 7 hereof).

The direct connection of the equipment with the sewerage system and discharge of water from them onto the floor are not allowed.

10.10. Internal factory transport and intrashop tare shall be assigned to certain types of raw materials and finished products and marked accordingly.

11. Sanitization of Equipment, Tools, Ware, Tare

11.1. Machinery, equipment, tools, milk pipes shall undergo thorough washing and disinfection in accordance with the Instruction for Sanitization of Equipment at Dairy Industry Enterprises and the Instruction for Sanitization of Equipment at Manufacturing Child Nutrition Liquid, Powered and Paste Milk Products. Certified imported detergents and disinfectants may be used.

11.2. In order to ensure the strict compliance with the established frequency of sanitization of equipment and machinery, a monthly cleaning and disinfection schedule shall be adopted in each workshop.

11.3. Equipment not used after cleaning and disinfection during more than 6 hours, shall be re-disinfected before commencement of operation. A microbiological control of the washing and disinfection quality shall be made by the laboratories of the enterprise and territorial centers of the State Sanitary and Epidemiological Supervision immediately before the commencement of operation.

11.4. Sanitization of tanks for production and storage of milk and milk products shall be made after each discharge.

11.5. In the case of forced outages due to technical failures or interruptions in the milk supply for 2 hours or more, pasteurized milk or normalized mixtures shall be discharged and sent for re-pasteurization, and the pipelines and equipment shall be cleaned and disinfected.

11.6. For cleaning of the equipment, a centralized preparation of detergents and disinfectants shall be provided for which washing plants В2-ОЦ2-У can be used for the enterprises processing 25 to 50 tons of milk per shift, В2-ОЦА - for enterprises processing 100 to 150 tons of milk per shift, В2-ОЦП - for enterprises processing more than 200 tons of milk per shift.

11.7. Preparation of working chlorine solutions for disinfection of hands, cleaning tools, equipment, water closets, etc. shall be carried out from the 10% chlorine solution centrally prepared and monitored on a daily basis for the content of active chlorine by a dedicated employee.

11.8. Any reduction of the concentration, temperature and circulation time of detergents and disinfectants, as well as violation of the frequency of washings provided by the current instruction is not allowed.

11.9. Where there is no device for automatic control of the concentration of detergent solutions, it shall be monitored by a laboratory at least 2-3 times per shift, and, where necessary, be brought to the established level.

11.10. For washing and disinfection of the equipment, tares, vehicles, etc., special washing facilities shall be arranged which shall be equipped with a waterproof floor, live steam supply, hot and cold water supply, a drain for waste water, ventilation.

11.11. For manual washing of demountable parts of equipment (pipes, valves, metering devices, etc.) special three-section portable tanks with fitting adapters to discharge solutions shall be arranged. The location of fitting adapters shall ensure a complete discharge of solutions. Tanks shall be equipped with shelves for drying of parts.

11.12. Manual washing of tanks shall be made by dedicated trained personnel. Tank washers may not be engaged in cleaning of water closets.

Special clothing, footwear shall only be used during tank cleaning; rubber boots disinfected with a chlorine solution shall be put on near the tank on a special rubber mat.

Washers' clothing and tools for cleaning of tanks for pasteurized and raw milk shall be stored in separate marked cabinets.

11.13. Bottle washing in bottle washers shall be made pursuant to the instruction for each type of washer and in accordance with the current instruction for sanitization of equipment. Bottles soiled with the protein residues, mechanical pollutions and others shall be pre-soaked and washed by hand. Milk and milk products must not be filled in bottles which have previously contained technical liquids.

11.14. Before filling with milk products, bottles shall be visually inspected to check their integrity, cleaning quality and lack of foreign objects. Electric lamps in the workplace of the inspector shall be shielded with a special screen.

The workplace of the inspector working on the light filter shall be fitted with a semi-soft high seat equipped with armrests and a footrest.

For this work it is necessary to select inspectors who have a proved sight and the continuous operation of inspectors on the light filter shall not exceed 1.5-2 hours.

11.15. Filter materials shall be washed and disinfected after each use. Their washing and disinfection shall be carried out in accordance with the Instruction for Sanitization of Equipment at Dairy Industry Enterprises.

When accepting the milk from individual farms, filter materials shall be washed and disinfected after the acceptance of milk from each deliverer.

In case of continuous milk acceptance through automatic counters, cleaning and disinfection of their filters shall be made at least once per shift. In case of periodic milk acceptance, cleaning and disinfection of the filters shall be carried out after each interruption in milk acceptance.

11.16. Immediately after the technological process, bags used for pressing cottage cheese shall be carefully cleaned, washed in special washing machines using detergents as specified in the Instruction for Sanitization of Equipment at Dairy Industry Enterprises, boiled during 10-15 minutes and dried in a drying chamber, a cabinet or in the air (in the workshop premises).

The treatment of bags shall be carried out in a separate room; they must not be treated in a common laundry room.

11.17. After the end of a shift, conveyors, belt conveyors which are in contact with food, shall be cleaned, treated with a hot sodium carbonate solution or synthetic detergents, then washed with hot water.

11.18. Milk tanks after each milk discharge shall be washed and disinfected in a washery for milk tank trucks. After cleaning tanks shall be sealed, and a relevant note shall be made in a trip document.

In the case security employees of the enterprise break the seals the re-sealing of tanks should be made by the security staff. A note "Tank truck been opened for inspection and re-sealed by the security service of the enterprise" shall be made in the trip document or certificate of hygiene.

11.19. The microbiological control of the cleaned equipment shall be performed in the laboratory of an enterprise and territorial centers of the State Sanitary and Epidemiological Supervision without warning, taking into account entries in the equipment cleaning log.

Results of bacteriological studies of outwashes evidencing unsatisfactory cleaning and disinfection of the equipment shall be displayed by the laboratory employees on the performance board specifying the person responsible for the sanitary condition of that section.

11.20. The washing and disinfection of equipment, monitoring of the concentration of detergents and disinfectants used, and observance of the sanitization modes shall be automatically carried out at specialized enterprises and in workshops for production of liquid and pasty milk products for babies.

The system for washing of the equipment and pipes shall be composed of several autonomous cycles:

• equipment and pipes for raw milk and unpasteurized solutions of food components;

• sterilizers, pasteurizers and equipment working in the common scheme with them;

• tanks, milk pipes, automatic dosing-filling machines for sterilized milk products;

tanks, milk pipes, automatic dosing-filling machines in the child’s milk products section;

• tanks, milk pipes, automatic dosing-filling machines in the kefir section;

• cottage cheese equipment.

11.21. For child nutrition workshops of small capacity (up to 5 tons), the washing of the equipment and pipes shall consist of the following cycles:

• equipment and pipes for raw milk and unpasteurized solutions of food components;

• sterilizers, pasteurizers and equipment working in the common scheme with them; tanks, milk pipes, automatic dosing-filling machines for sterilized milk products;

• cottage cheese equipment, equipment for production of cultured milk products, kefir, automatic dosing-filling machines in the sections of children's cultured milk products and kefir (the washing procedure shall be carried out in the above sequence).

12. Sanitary Requirements to Production Processes

12.1. All the processes of acceptance, processing and storage of milk and milk products shall be carried out in the conditions of maintenance of extreme cleanness and protection from contamination and spoilage, as well as from the ingress of foreign objects and substances into them.

12.2. Milk products shall be manufactured strictly in accordance with current regulatory documents.

Shop-floor foremen, process engineers, manufacturing managers and heads of shop (sections) shall bear responsibility for compliance with the technological instructions.

12.3. Enterprises shall not take milk without certificates to be submitted on a monthly basis to the veterinary supervision bodies on veterinary and sanitary security of dairy farms and enterprises (complexes) involved in milk production on an industrial basis, and from individual deliverers - at least once per quarter.

12.4. Milk, cream, auxiliary raw products and materials delivered for processing shall meet the requirements of the relevant GOSTs and technical specifications.

12.5. Milk from farms, unsecured in terms of animal diseases such as brucellosis and tuberculosis, shall be received with a special permission of the veterinary and sanitary-epidemiological supervision bodies in the decontaminated form in accordance with the “Sanitary and veterinary regulations for dairy farms, collective and state farms” and instructions of the veterinary service.

The consignment note for milk or cream from unsecured farms shall contain a mark "pasteurized" and the pasteurization temperature.

Each batch of milk or cream from unsecured farms shall be checked by the factory laboratory in terms of the pasteurization effectiveness by a chemical method and can be received only after a negative peroxidase reaction is identified.

The product range manufactured from this raw material shall be agreed with the bodies of the State Sanitary and Epidemiological Supervision.

12.6. Milk for children's milk products shall be delivered from dedicated farms in consultation with bodies of the veterinarian supervision and state Sanitary and Epidemiological Supervision and shall meet the requirements of GOST for the Prime and I Grade milk to be procured.

12.7. During storage of raw milk at the factory involved in the primary processing of milk (filtering, cooling), following rules shall apply:

• cooled milk received shall not be mixed with the stored (cooled) milk;

• milk with acidity not exceeding 18 °T, cooled to 4 °C, can be stored prior to shipment no more than 6 hours, and cooled to 6 °C - no more than 4 hours.

If the duration of milk transportation is 10 hours or less, it shall be shipped at a temperature not exceeding 6 °C, of the duration of milk transportation does not exceed 16 hours, it shall be cooled to a temperature not exceeding 4 °C.

Milk pasteurization at these plants is carried out in the following cases:

• receipts of milk with acidity 19-20 °T;

• it is necessary to store the milk during more than 6 hours;

• the duration of milk transportation to a city dairy factory exceeds the time limits specified above.

12.8. Immediately prior to receipt of milk, milk hoses and tank fitting adapters shall be disinfected with a chlorine solution and rinsed with drinking water. After the receipt of milk is finished the hoses shall be washed, disinfected, plugged or covered with a waterproof case and hung on brackets. Detergent and disinfectant solutions to treat the hoses and tank nozzles shall be stored in specially marked containers.

12.9. The milk and cream received shall be filtered out and immediately cooled to (4+2) °C or immediately shipped for pasteurization. The allowable period for storage of cooled milk at a temperature of no higher than +4 ° shall be 12 hours, at a temperature of no higher than +6 ° – 6 hours.

12.10. Separate tanks shall be provided for storage of raw and pasteurized milk, and separate milk pipes shall be used to supply raw and pasteurized milk.

Storage tanks for raw and pasteurized milk shall be marked.

12.11. Milk separation, milk and cream normalization and homogenization shall be carried out prior to pasteurization. The homogenization may be made after pasteurization at a temperature of at least 60^{o}C. In the case of separation of pasteurized milk, resulted cream, skim milk or a normalized mixture shall be pasteurized additionally.

12.12. Prior to starting the pasteurization cooling plants the operator shall check: availability in the plants of thermo sensitive paper and ink for recording, serviceability of the return valve to prevent returning of under-pasteurized milk, the writing units of the plants, and the automatic control system to control the milk pasteurization temperature.

12.13. The operator shall mark in ink on the pasteurization temperature control thermogram during each cycle: his/her name, the type and number of the pasteurizer, date, name of the product for which the milk is being pasteurized, work start and end time, progress of the technological process (the washing, disinfection, milk pasteurization stages explaining the reasons for deviations from the established regime).

Thermograms shall be reviewed by the laboratory and stored in it during one year. The head of quality control department (head of the laboratory) shall bear responsibility for their keeping.

12.14. Were there are no control and recording devices, operators shall be responsible for control of the pasteurization temperature (on an hourly basis by measuring the temperature and making appropriate entries in the log) as well as the laboratory (3-4 times during a shift).

12.15. The pasteurization effectiveness shall be controlled using the microbiological method in accordance with the Instruction for Microbiological Control in Production at Dairy Industry Enterprises, as well as using the

chemical method pursuant to GOST 3623 Milk and Milk Products. Methods for Determination of Pasteurization.

The monitoring of the milk pasteurization effectiveness at each pasteurizer shall be carried out using the microbiological method at least once every 10 days, regardless of the quality of the finished product. The pasteurization is deemed to be effective in case of the absence of E. coli bacteria in 10 cub.cm of milk and the total number of bacteria not exceeding 10.000 in the 1 cub.cm of milk.

Determination of the pasteurization effectiveness by the chemical method (enzyme tests) shall be made from each tank after its filling with pasteurized milk.

Milk can only be sent for processing or filling after a negative phosphatase reaction.

12.16. The effectiveness of heat processing in the milk sterilization line shall be monitored at least twice a week by the determination of industrial sterility.

12.17. After pasteurization, milk or cream shall be cooled to a temperature of (4 +2) °C and directed for filling. The maximum allowed storage period of pasteurized milk before filling shall not exceed 6 hours.

Where production requires pasteurized milk to be stored in tanks before filling during more than 6 hours at (6 +2) ° C it is directed to a repeated pasteurization before filling; or the total allowable storage period of the finished product at the enterprise may be reduced respectively.

12.18. A log of movements of pasteurized milk shall be kept in the milk processing workshop specifying the time of filling and emptying tanks.

12.19. When manufacturing fermented milk products, after pasteurization milk or cream shall be cooled to the fermentation temperature and immediately sent for fermentation.

Keeping the milk at the fermentation temperature without addition of the starter culture is strictly prohibited.

Where production so requires, the pasteurized milk may be cooled to a temperature of (4 +2) ° C and stored prior to use no more than 6 hours.

12.20. Only fresh cream shall be used for production of sour cream; fermentation of cream with a high acidity is not allowed.

Sour cream shall be manufactured by a tank method in closed containers.

It is necessary to strictly observe the cream pasteurization temperature, the standard amount of the starter culture added, the fermentation temperature and duration as established by the technological instruction.

Sour cream maturation shall be in cooling chambers at a temperature of 0-8 ° C, in case of filling in large capacities 12-48 hours, in small capacities 6-12 hours.

12.21. When manufacturing children’s milk products the following requirements shall be met:

• when manufacturing milk products, pasteurized milk or mixtures shall be cooled to a temperature 2-6 ° C, after that they are directed for filling or for the subsequent high-temperature processing.

In the case production so requires the pasteurized milk or mixtures may be stored before filling at the temperature of 2-5 ° C during not more than 6 hours, at the temperature of 6-8 ° C - not more than 3 hours.

12.22. Various components (vitamins, minerals, sugar, biologically active additives, etc.) may be added to children's dairy products in order to adapt their composition to the composition of breast milk, to increase the biological and nutritional value. A permit of the state committee of sanitary and epidemiological supervision of Russia and Ministry of Health and Medical Industry of the Russian Federation shall be issued for all the components to be added.

The components to be added shall comply with the regulatory documentation; no components the shelf life of which has expired may be used.

12.23. If cultured milk products must be filled at automatic filling-and-capping machine the following sequence shall observed: products manufactured with bifid bacteria, those with pure cultures of lactic acid bacteria, propionic acid bacteria, Lactobacillus acidophilus, the kefir grains.

12.24. All children's milk products shall be only released in packages in quantities corresponding to a one-time intake.

12.25. Products from broken, under-filled bottles and packages with pasteurized or sterilized milk or cream shall be poured through a layer of lavsan, with cultured milk drinks - a double layer of cheesecloth, after which the milk or cream are directed for re-pasteurization or sterilization; cultured milk products - for processing.

12.26. In order to prevent ingress of foreign objects into products, milk supplied to the plant shall be filtered, cleaned by milk purifiers; flour, sugar shall be screened; raisins sorted and washed; cocoa, coffee, vanilla, etc. shall be checked for the presence of mechanical impurities.

The cottage cheese delivered from downstream plants shall be checked especially carefully, in order to prevent ingress of nails, pieces of wood etc. into the product when it is being defrosted and removed from the tare.

12.27. Only sour cream, cottage cheese and sweet cream curd products manufactured in the own production shall be supplied to child care centers. Such products manufactured in downstream network enterprises must not be supplied.

12.28. Cheeses (hard, soft) shall be made only from pasteurized milk. The terms and conditions of cheese maturation as established by the technological instructions and GOSTs must be strictly observed. Cheeses that have not undergone prescribed maturation period must not be released for sale.

12.29. Cheese storage rooms shall be equipped with shelves and racks which are easy to wash and disinfect.

Butter and cheese storage chambers shall be whitewashed and disinfected at least 2 times per year; and at this time products shall be removed from the chambers. Bactericidal lamps shall be installed in the cheese processing, drying and filming premises in order to sterilize the air.

12.30. Repair work and disinfection of the premises are strictly prohibited during the product output period; repair tools must not be left in production workshops; repair of the equipment during a production cycle is only allowed provided that it must be fenced with portable screens.

Accounting of breakable things shall be kept and an extract from the instruction for prevention of ingress of foreign objects in milk products shall be displayed in each workshop.

12.31. Supply of tare and other materials to pack the finished product shall be made through corridors or a shipping room, bypassing other production premises.

Tare and packaging materials shall not be stored directly in production workshops. They shall be stored in a dedicated room.

12.32. The product labeling shall be carried out strictly in accordance with the regulatory documents.

12.33. The temperature and humidity in the chamber or finished products storage warehouse, as well as the sale procedures and periods for the finished product shall be controlled be the laboratory 2-3 times during a shift. The control results shall be recorded in a special log of the chamber.

12.34. The arrangement of raw materials, supplies and finished products in a chamber or warehouse for their storage shall be carried out strictly by batches specifying the date, manufacturing shift and batch number.

12.35. Release of the finished products shall be performed by the forwarder, storekeeper, or a shop floor foreman who bear administrative responsibility if the products are released without a quality document available.

At enterprises that produce children's milk products, a daily taste test of these products shall be provided with the samples stored until the expiration dates.

12.36. No products in a soiled, damaged packaging, with unclear labeling, broken sealing shall be sold.

12.37. To control mold, chambers, corridors and air ducts with air coolers shall be treated with Antiseptol[1] or chlorine solution, and extremely unsanitary chambers which cannot be treated with these preparations shall be treated with the preparation ЮО-5 (sodium phenolate oxidiphenyl).

12.38. In cooling chambers all goods (in container) shall be placed on a bar lattice or pallets which shall be periodically cleaned and disinfected. Products may be stored in cans and pre-packaged products in metal and plastic crates without pallets or lattices.

[1] A preparation which consists of sodium hypochloride and sodium carbonate. – *Translator's note.*

12.39. The manufacturing manager or head of the laboratory at the enterprise shall establish the assessment of the sanitary state of chambers and whether disinfection is needed.

12.40. The effectiveness of disinfection of chambers shall be determined by the microbiological analysis. Disinfection is considered satisfactory if the number of mold fungi per 1 sq.cm of the surface identified by the analysis does not exceed 10 cells.

12.41. The control of incoming raw materials, finished products, technological processes and hygienic conditions of production shall be carried out by the laboratory of the enterprise in accordance with the Instruction for Microbiological Control in Production at Dairy Industry Enterprises and the Instruction for Technical and Chemical Control at Dairy Industry Enterprises (Supplement 3).

13. Sanitary Requirements to Starter Culture Production

13.1. Preparation of laboratory and industrial starter culture shall be carried out strictly in accordance with the Instruction for Preparation and Application of Starter Cultures for Cultured Milk Products at Dairy Industry Enterprises.

13.2. A department or cubicle shall be dedicated in the microbiology laboratory for the preparation of a laboratory starter culture or work with pure cultures.

Thermostats and refrigerators that are used for preparation and storage of starter cultures must not be used for any other purposes.

13.3. A bacterial starter culture division shall be located at the production building, isolated from the production premises and be as close as possible to workshops consuming the starter cultures. The starter preparation premise shall not be of a pass-through type. At the starter division entrance, a tambour shall be provided for changing sanitary clothing. At the starter division entrance, a disinfectant mat shall be provided.

13.4. In the starter division, particular rooms shall be allocated for: preparation of starter cultures using pure cultures, preparation of kefir and acidophilic starter cultures;

washing, disinfection and storage of ware and tools.

At small enterprises (up to 25 tons of milk processing within a shift) and in case of small amounts of starter cultures to be prepared the preparation of a starter culture on pure cultures, kefir and acidophilic ones, is allowed in the same room. It is necessary to use different tanks for their preparation and pipelines to supply starter cultures on pure cultures and kefir with acidophilic cultures.

13.5. In the starter division, no transport main distribution pipelines (steam, cold, ventilation), as well as discharge stacks are allowed.

13.6. Dust elimination of the fed external air shall be provided in the mechanical supply ventilation systems. No air movement resulted from drafts is allowed.

Bactericidal lamps (БУФ-30, etc.) shall be installed to sterilize the air in the starter divisions and tambour.

13.8. Only workers who prepare the starter culture and clean the premises may enter the starter division.

13.9. The tare and tools of the starter division shall be marked.

13.10. After use, the tare and tools shall be carefully cleaned according to the Instruction for Sanitization of Equipment at Dairy Industry Enterprises and disinfected with a chlorine solution, by steaming or sterilized in an autoclave or drying oven.

Clean tares and tools shall be covered with clean parchment or polyethylene film and stored until use on disinfected shelves or special stands. When storing during more than 24 hours before use, clean tares and tools shall be re-disinfected.

13.11. Sterilization of milk for preparation of a transferable laboratory starter culture in the amount up to 20 dm in sterilized milk shall be carried out in the starter division or in the microbiology laboratory.

13.12. During preparation of the starter culture in pasteurized milk the whole process of its preparation (pasteurization, cooling milk to the fermentation temperature, fermentation, ripening and cooling of the starter) shall be performed in the same container.

Milk pasteurization may be made in a tubular pasteurizer (90-95 ° C) followed by soak, cooling and fermentation in the same container.

13.13. A quality certificate shall be issued for each batch of starter culture of capacity, after that the starter culture may be directed to production.

13.14. Use of any starter culture (dry, laboratory or industrial) the shelf-life of which has expired, as well as industrial starter culture with higher acidity is not allowed.

13.15. The starter culture shall be transferred to tanks for fermentation using the shortest, thoroughly washed and disinfected pipelines.

When using small amounts of starter culture and the transferrable starter culture in sterilized milk it may be carried in closed containers. In this case, the edges of a capacity containing the starter culture shall be wiped with alcohol and flamed prior to pouring the starter culture. An employee, who adds the starter, shall wear a clean gown and thoroughly wash and disinfect hands.

13.16. Preparation of the laboratory starter culture, as well as quality control of laboratory transferrable, industrial starter culture and activated bacterial concentration shall be carried out by the microbiologist of the enterprise.

At small enterprises, where there is no microbiologist, a specially appointed person may carry out the preparation of the laboratory starter culture. The microbiologist shall pass on the laboratory starter to the shop floor foreman for preparation of industrial starter on weekends and holidays.

The transferrable and industrial starter shall be prepared by specially appointed responsible persons who shall also add the starter culture to the milk when preparing the industrial starter and the product on weekdays and weekends.

14. Organization of laboratory control. Certification of products

14.1. The objective of the laboratory control in the dairy industry is to ensure production which is of high nutritional value and safe for the consumer.

14.2. The laboratory control consists in checking the quality of incoming milk and cream, auxiliary materials, starter cultures, finished goods, as well as the observance of technological hygiene regimes of production.

14.3. When organizing the microbiological control the Instruction on the Microbiological Control of Production at Dairy Industry Enterprises shall be followed.

14.4. Finished products (milk, cream, cultured milk drinks) shall be monitored by the microbiology laboratory of the enterprise at least once in five days, sour cream and cottage cheese - at least once in three days.

14.5. Quality of sanitization of the equipment shall be assessed for each piece of equipment at least once in a decade.

14.6. Cleanness of the hands of each employee shall be controlled by the microbiological laboratory of the enterprise at least three times per month.

14.7. Exemplary indicators for assessing the control results of the sanitary state of production are given in Supplement 2.

14.8. To perform microbiological studies in the laboratory of the enterprise a cubicle shall be arranged which consists of two premises: the cubicle itself and an anteroom.

The latter serves to put on special clothing (gown, hood or scarf) when entering the cubicle.

The cubicle shall be equipped with bactericidal lamps, the number of which shall be calculated based on the ratio of 2.5 W per one meter. Bactericidal lamps shall be switched on at the end of the work and cleaning of the premises for 30-60 minutes when the personnel is absent.

Analyses may be performed in the laboratory in case of no cubicle. In this case, the laboratory room shall be insulated and equipped with bactericidal lamps. During inoculations vents and doors shall be closed in order to prevent air movement.

14.9. Every day after the end of the work the cubicle shall be washed with a hot, soapy alkaline solution and wiped dry. Once a week, disinfection of the premises shall necessarily be carried out by wiping all the surfaces with disinfectants pursuant to the relevant instructions for each preparation.

14.10. Sterilization of glassware and nutrient media shall be carried out in autoclaves, for accommodation of which a special isolated room shall be assigned.

Sterile glassware shall be stored in tight fitting cabinets or boxes with lids. The storage period of sterile glassware cannot exceed 30 days. Sterile media shall be stored in a refrigerator at the temperature of 4-6 ° C not longer than 14 days.

14.11. Where there is no microbiology laboratory at the enterprise the said control may be carried out under an economic agreement entered into with bodies and institutions of the State Sanitary and Epidemiological Service or laboratories accredited by bodies of the State Sanitary and Epidemiological Supervision.

14.12. When organizing the technological control the Instruction on Technical and Chemical Control at Dairy Industry Enterprises shall be followed.

14.13. Laboratories of dairies shall be accredited by the State Sanitary and Epidemiological Service for conducting studies that characterize the hygienic safety performance of products manufactured.

14.14. Milk products manufactured using a new technology, new formulations, shall be subject to hygienic certification in the established procedure.

15. Transportation of Milk and Milk Products

15.1. Specialized transport (road, rail, water) shall be provided for transportation of milk and milk products.

15.2. Transportation of milk and milk products shall be carried out in refrigerated carriers, specialized milk tanks, insulated trucks.

Delivery of milk products may be made in transportation containers in platform trucks provided that they are carefully covered with clean canvas cloth.

15.3. Transportation facilities used for transportation of milk and milk products shall be clean, in good condition; the truck body shall have a hygienic coating, which is easy to wash. Transportation facilities shall have a sanitary passport issued by territorial centers of the state sanitary and epidemiological supervision for each vehicle for no more than 6 months. A vehicle without a sanitary passport is not allowed to the territory of the enterprise.

The enterprise management shall appoint a person responsible for control of the condition of transportation facilities. Loading is not allowed without examining of a transportation facility by the responsible person and without his/her permit.

15.4. Carriage of milk products with raw food (meat, poultry, fish, eggs, vegetables, fruits), intermediate products is prohibited, as well as in a transportation facility, which have previously been used to carry toxic chemicals, gasoline, kerosene, and other redolent and toxicant substances.

15.5. In summer, the loading and delivery periods for whole milk perishable goods transported in refrigerated trucks shall not exceed 6 hours, in specialized motor vehicles and by platform trucks – 2 hours.

15.6. A forwarding driver (forwarder) shall have a personal medical record containing notes about the medical examinations passed and hygiene education undergone, special clothing and shall strictly observe personal hygiene rules and milk products transportation regulations.

15.7. Sanitization of the transportation facility designed for bulk transportation of milk and cans shall be made at dairies in accordance with the Instruction for Sanitization of Equipment at Dairy Industry Enterprises. A note on the sanitization carried out shall be made in the trip ticket, without such note the vehicle may not be released from the territory of the factory.

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* Before December 31, 1998.

15.8. Employees of the Sanitary Epidemiological Service are entitled to prohibit the transportation of milk and milk products in transportation facilities that do not meet sanitary requirements.

16. Industrial Hygiene

16.1. The sanitary and hygienic standards and regulations applicable to the work organization and hygiene shall be taken into account when designing and rebuilding dairy industry enterprises.

16.2. The control of working conditions shall include an assessment of production factors (the parameters of the microclimate; industrial noise in workplaces; natural and artificial lighting; pollution of air at workplaces with aerosols and gases; psychophysiological factors related to the nature of labor; living conditions at production; meal arrangement, medical service).

16.3. The microclimate of the premises (temperature, relative humidity, air velocity) shall comply with the requirements of the “Hygiene standards of the microclimate of production premises”.

16.4. The content of harmful substances in the air of the working area shall not exceed the levels established by the State Sanitary and Epidemiological Supervision (“Maximum allowable concentration (MAC) of harmful substances in the air of the working area").

16.5. Noise levels at workplaces of production premises shall comply with the Sanitary Standards of Allowable Noise Levels at the Workplace and shall not exceed 80 dB (A).

16.6. The values of the natural lighting factors (NLF, LF) and that of intensity of illumination of work surfaces with artificial lighting shall comply with the requirements of CN&R Natural and Artificial Lighting and the Sanitary

Design Requirements for Dairy Industry Enterprises, taking into account the characteristics of visual work.

16.7. In dairy industry enterprises welfare premises shall be provided for in accordance with the requirements of CN&R Administrative and Welfare Buildings and the Engineering Standards of Dairy Industry Enterprises (see Section 6 hereof).

16.8. The management shall organize meals for employees (canteen, cafeteria, meal rooms). The working schedule of the catering facility shall be determined based on the number of shifts, their duration, lunchtime.

16.9. People exposed to harmful and unfavorable production factors shall undergo mandatory preliminary and periodic medical examinations in accordance with Order of the Ministry of Health of the USSR No. 555 dated September 20, 1989 and Order of the Ministry of Health and Medical Industry of the Russian Federation and State Committee of Sanitary and Epidemiological Supervision of the Russian Federation No. 280/88 of October 5, 1995.

16.10. Medical workers of medical units, medical stations of enterprises together with the sanitary inspectors of the territorial centers of the State Sanitary and Epidemiological Supervision shall perform an analysis of workers' health status based on a study of morbidity involving temporary disablement, occupational diseases and the results of periodic medical examinations. A plan for corrective and sanitary measures shall be developed based on the results of health studies.

16.11. The management shall provide employees with a full set of special clothing in accordance with the current standards. Workers who are exposed to harmful production factors shall be provided with personal protective equipment.

16.12. All the workshops shall be provided with first aid kits.

17. Personal Hygiene

17.1. Each worker of a dairy industry enterprise shall be responsible for compliance with the personal hygiene rules, the state of their workplace, strict observance of technological and sanitary requirements at their section.

17.2. People who are employed and working at the enterprise shall pass the preliminary and periodic medical examinations in accordance with the Instruction for Mandatory Pre-Employment and Periodic Medical Examinations of Workers and medical examinations of Individual Transportation Facilities Drivers (approved by Order of the Ministry of Health of the USSR No. 555 dated September 29, 1989) and Provisional List of Works under which Preliminary and Periodic Medical Examinations of Employees are Mandatory (approved by the Ministry of Health and Medical Industry of the Russian Federation and the State Committee of Sanitary and Epidemiological Supervision of the Russian Federation No. 280/88 dated October 5, 1995).

17.3. Based on epidemical indications an unscheduled bacteriological examination of workers may be carried out based on the decision of territorial centers of the State Sanitary and Epidemiological Supervision.

17.4. At time of employment a medical record shall be executed for each employee in which the results of all medical examinations and studies, information about past infectious diseases, data on the training undergone under a hygienic preparation program shall be entered.

Personal medical record shall be kept in the medical stations or by the head (foreman) of the workshop.

17.5. People suffering from the following diseases (or who are bacillicarriers) shall not be permitted to work:

- typhoid, paratyphoid, salmonellosis, dysentery;
- hymenolepiasis, enterobiasis;
- syphilis in the period of infectivity;
- leprosy;
- infectious skin diseases: scabies, trichophytosis, microsporia, favus, actinomycosis with ulcerations or fistulas on the open parts of the body;
- infectious and destructive forms of pulmonary tuberculosis; extrapulmonary tuberculosis with the presence of fistulas, bacteriuria; lupus of face and hands;
- pustular diseases.

17.6. Persons who have not passed a medical examination in a timely manner may be dismissed from work in accordance with applicable law.

17.7. Employees of production workshops shall, in case of occurred signs of gastrointestinal disturbances, fever, suppuration and symptoms of other diseases, reported them to the management and approach the medical station of the enterprise or another medical institution to receive appropriate treatment.

17.8. People in whose families or apartment there are contagious patients shall not be permitted to work until a special anti-epidemic measures and submission of a special certificate from the bodies of the State Sanitary and Epidemiological Supervision.

17.9. Upon their arrival to work, each workshop employee shall sign in a special log confirming that neither he/she nor their family members have intestinal diseases.

17.10. To identify people with pustular skin lesions, medical workers of the enterprise shall, on a daily basis, carry out inspections of the personnel's hands to confirm the absence of pustular diseases and make an entry in a special log in which they indicate the inspection date, their surname, name and patronymic, inspection results and actions taken.

Where a medical worker is not included in the enterprise personnel such procedure shall be carried out by a medical aid post (a specially appointed and trained employee) of the enterprise or a shop-floor foreman.

17.11. All newly employed workers shall undergo a mandatory training under the hygienic training program and pass an exam; the note thereon shall be made in the appropriate log and the personal medical record. Later on, all the employees shall pass the training and check of their sanitary knowledge once every two years, employees of the starter culture division – annually. People who have not passed the exam to verify their hygienic preparation, shall not be permitted to work.

17.12. Special committees in partnership with the State Sanitary and Epidemiological Supervision shall, once every two years, carry out certification of managers and specialists in terms of their knowledge of the sanitary regulations and standards and fundamentals of sanitary and anti-epidemic requirements for the production of milk and milk products.

17.13. Prior to work employees of the production workshops shall take a shower, put on clean sanitary clothes in such a manner that they completely cover personal clothing, pick up the hair under a scarf or cap, wash their hands thoroughly with warm soapy water and disinfect them with a chlorine or chloramine solution.

17.14. Each employee of the production workshop shall be provided with 4 sets of sanitary clothing (employees of child nutrition shops with 6 sets);

the change of clothes shall be made on a daily basis and whenever they are soiled. Entering the production workshops without sanitary clothing is prohibited. The washing and disinfection of sanitary clothing shall be made at the enterprises in a centralized manner; washing sanitary clothes at home is prohibited.

17.15. Locksmiths, electricians and other workers engaged in repair work in production, warehouse premises of the enterprises shall comply with the personal hygiene rules, work in workshops in sanitary clothing, carry their tools in special enclosed boxes with handles.

17.16. When leaving the building for the territory and visiting the non-manufacturing premises (water closets, canteen, medical station, etc.) sanitary clothing shall be taken off; no outer garment may be put on atop sanitary clothing.

17.17. It is strictly forbidden to bring into the workshop any foreign objects (watch, matches, cigarettes, bags, etc.) and wear jewelry.

17.18. Smoking is allowed only in designated areas.

17.19. Taking meals is allowed only in canteens, lunchrooms, meal rooms or other catering facilities located in the territory of the enterprise or next to it.

17.20. In particular, workers shall take much care of the cleanliness of their hands. Fingernails shall be cut short and should not be varnished. Employees shall wash and disinfect their hands before the start of the work and after each break in the work, when proceeding from one operation to another, after a contact with soiled things. Employees of the starter culture divisions shall

carefully wash and disinfect their hands before fermentation of milk, a separation of kefir grains and before discharge of the starter culture.

To increase the effectiveness of hand treatment, it is recommended to disinfect the hands with a disinfectant solution with the content of active chlorine of 100 mg/l before washing and after washing the hands to rinse the knob faucet with the same solution before closing the tap.

After visiting the water closet the hands shall be washed and disinfected twice: in the lock after visiting the water closet before putting on their gown and at their workplace immediately before proceeding to work.

When leaving the water closet the footwear shall be disinfected on the disinfectant mat. Disinfecting solutions shall be changed on a daily basis.

17.21. The cleanness of each employee's hands shall be checked at least 2 times a month by the microbiologist of the enterprise's laboratory (without prior warning) before work, after visiting the water closet, especially of those workers who have direct contact with the products or clean equipment. The hands cleanness shall be controlled by the methods described in the Instruction on Microbiological Control of Production at Dairy Industry Enterprises. The hands cleanness shall be monitored using the iodine starch test once per week. The iodine starch test shall be performed by a special appointed and trained employee (medical aid post).

18. Disinfestation and Deratization

18.1. In dairy industry enterprises no flies, cockroaches, rodents and other insects shall not be allowed.

18.2. For desinfestation and deratization the enterprise management shall sign a contract with a disinfection station or a disinfection state unitary enterprise.

The renewal of contracts shall be done on a yearly basis.

18.3. An enterprise shall have all the necessary conditions for efficient performance of desinfestation and deratization avoiding the chance of the chemicals contact with produced goods, auxiliary and packaging materials and containers.

18.4. To eliminate flies in dairy industry enterprises the following proactive and preventive measures shall be taken:

- Thorough and timely cleaning of the premises;
- Timely collection of food waste and garbage in containers with tight lids;
- Timely removal of food waste and garbage followed by the containers washing up and disinfection with 20% chlorine solution or lime milk;
- Netting of all the windows and doorways to be opened in spring-summer period.

Extermination of moving flies shall be performed in accordance with the valid Fly Extermination Procedural Guidelines adopted by the Ministry of Health of the Russian Federation and the instructions.

18.5. In order to avoid cockroaches all the cracks in the walls and partitions shall be filled up. Accumulation of crumbs and food waste shall be avoided. In case of detection of cockroaches thorough cleaning and disinfestation with allowed materials shall be performed.

18.6. In order to protect raw materials and finished goods from rodents the following measures shall be taken:

• All the windows in basements shall be closed with metal grills and manholes shall be closed with tight lids;

• Ventilation openings and ducts shall be closed with metal nets with the mesh of 0.25 x 0.25sm;

• Openings, floor cracks, cracks near the pipelines and radiators shall be closed up with bricks, cement, metal chips and steel sheets;

Warehouse doors shall be covered with metal.

18.7. During reconstruction and renovation of enterprise shops construction and technical measures for protecting buildings and premises from rodents shall be performed in full.

18.8. In case of rodents mechanical extermination methods shall be used (baskets, traps). Extermination of insects and rodents with chemical materials shall be allowed only by professional disinsectors and rat-catchers.

18.9. No bacteriological methods for exterminating rodents in dairy industry enterprises shall be allowed.

19. Responsibilities, liabilities and control over compliance with the present Sanitary Regulations and Standards.

19.1. The heads of dairy industry enterprises shall ensure the following:

• Necessary conditions in entrusted enterprises for production of goods of guaranteed quality that are safe for the health of consumers;

• Upon receipt of unsatisfactory results of microbiological study of milk, milk products and wash-outs immediate actions shall be taken in order to prevent a host of diseases of people consuming the products of the given enterprise;

• Execution of all the necessary additional preventive measures ordered by the bodies for state sanitary and epidemiological supervision in case of bad epidemiological situation;

• Hygienic training for the employees followed by an examination that shall be conducted upon employment of a person and during his/her work in an enterprise;

• Sanitary and hygienic certification of the heads of productions shops, departments and work areas;

• Timely submission to clinics and other medical institutions of lists of employees subject to preliminary and regular medical examination;

• Availability of medical history sheets of each employee containing marks about undergone medical examinations;

• Availability of sanitary journals in the prescribed form the pages of which are bound, numbered and sealed for recording acts and recommendations of representatives of state sanitary and epidemiological supervision bodies;

• All the enterprise employees shall be provided with the necessary conditions in order to comply with the personal hygiene rules;

• All the employees shall be provided with clean sanitary clothes and special uniform as well as with personal protective equipment in case of harmful effect of production environment;

• Regular washing of sanitary clothes;

• Drying facilities for work footwear and rubber boots;

• Availability of sufficient amount of detergents and disinfectants;

• Availability of first aid kits in production shops for immediate treatment;

• The work conditions of employees shall comply with the hygienic standards and safety rules;

• The environment shall be protected from production activities of an enterprise;

• All the enterprise employees shall be acquainted with the present Sanitary Regulations and Standards and shall strictly comply with them.

19.2. The enterprise directors and production shop managers shall be made responsible for compliance with the present Regulations.

19.3. Persons guilty of violation of the present Sanitary Regulations and Standards shall be held disciplinarily, administratively or criminally liable under the established procedure.

19.4. The state sanitary and epidemiological supervision and control over compliance with the present Sanitary Regulations and Standards shall be performed by the bodies and institutions of the State Sanitary and Epidemiological Service of the Russian Federation. Departmental sanitary and epidemiological supervision and control shall be executed by the bodies and institutions of sanitary and epidemiological specialization of corresponding ministries and departments.

Supplement No. 1

Register for
Water Supply and Sewage System Breakdown Control and Elimination

Serial Number	Breakdown Place, Date and Time	Breakdown Type	Repair Date and Type	Responsible Person for Final Water Supply System Disinfection. Method and Time.	Water Bacteriological Test Results after Water Supply System Disinfection	Signatures of Area Manager and Repair Responsible Person

Supplement No. 2

Approximate Indicators for Assessment of Production Sanitary and Hygienic Condition Control Results:

Objects to Be Examined	Surface to Be Examined (cm^2 or amount)	Total Amount of Bacteria per cm^3 or Fermentation Test Results	
		Good	Poor
Railway Milk Tankers (lid, walls, corner, bottom)	100 cm^2	Absence of coliform bacteria	Presence of coliform bacteria
Road Milk Tankers (lid, walls, corner, bottom)	The same	The same	The same
Intra-city Milk Tankers (lid, walls, corner, bottom, churn, valve)	«	«	«
Cans, tubs	«	«	«
Tubes (valves)	«	«	«
Tank (lid, walls, corner, bottom)	«	«	«
Tanks (rubber, churn, probing rod, upper valve, lower valve, three-way valve, glass tube opening)	The whole surface	Absence of coliform bacteria	Presence of coliform bacteria

Barrels, valves	**The whole surface**	**Absence of coliform bacteria**	**Presence of coliform bacteria**
Air tube, rubber	**The whole surface**	**Absence of coliform bacteria**	**Presence of coliform bacteria**

Supplement No. 2 Continuation

Objects to Be Examined	Surface to Be Examined (sm^2 or amount)	Total Amount of Bacteria per cm^3 or Fermentation Test Results	
		Good	Poor
Bottles, jars	The whole inner surface of 10 bottles	100 and less*	Over 100*
Closing caps for bottles and jars	The surface of 10 caps	The same	The same
Jar lids	The whole surface	100 and less*	Over 100*
Culture tanks (lid, walls, corner, bottom, churn, valve and tubes)	100 cm^2	Absence of coliform bacteria	Presence of coliform bacteria
Dairy product boxes (lid, walls, bottom)	The same	The same	The same
Cottage cheese production tanks (walls, corners, bottom, connecting pipe	«	«	«
Cottage cheese bags	«	«	«

Dairy product packing machines - OZK (ОЗК) (bunker, churn, dispenser, puncheon, two outlets for packed products, conveyor)	«	«	«
Cottage cheese packing machines - OFZ (ОФЗ) (bunker, churn, dispenser, puncheon, outlets for packed products, paper, conveyors, scoop bottom and walls)	«	«	«

Supplement No. 2 Continuation

Objects to Be Examined	Surface to Be Examined (sm^2 or amount)	Total Amount of Bacteria per cm^3 or Fermentation Test Results	
		Good	Poor
Mitrofanov (Митрофанов) refrigerating press (drum walls, rolls)	100 cm^2	Absence of coliform bacteria	Presence of coliform bacteria
Cottage cheese self-pressing tanks (walls, corners, bottom, grill)	The same	The same	The same
Butter- and cheese-making equipment (cheese vats, cheese- and butter-making machines)	«	«	«
Vacuum pan (milk inlet pipe, walls, lids, catalysts tubes, condensed milk outlet pipe)	100 cm^2	500 and less*	Over 500*
Vacuum pan crystallizer (walls, churn, end product outlet pipe)	The same	The same	The same
Filling and seaming machine (tank, measuring glass for condensed milk dosing etc.)	«	250 and less*	Over 250*

Other milk equipment and package	«	Absence of coliform bacteria	Presence of coliform bacteria
Wooden equipment	«	No mold growth	Mold growth
Workers' hands	The whole surface of both hands	Absence of coliform bacteria	Presence of coliform bacteria

**In case of gas in Kesler's medium (среда Кесслера) the poor mark shall be given regardless the amount of microflora.*

Supplement No. 3

Microbiological Control Organization Chart

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
Raw material coming to the factory	Raw milk	Methylene blue reduction test Inhibitory substances	Cream and milk average test from each supplier	Once in 10 days	
	Raw cream	Methylene blue reduction test	The same	The same	
	Milk or cream sent to sterilization	Mesophile aerobic bacteria endospores	The same	In case of end product spoiling	0; 1
Pasteurized milk and cream production	Milk and cream before pasteurization	Total amount of bacteria	Out of the balancing tank	Once in a month	IV; V; VI

		Coliform bacteria	The same	The same	From II to V
	Milk and cream after pasteurization	Total amount of bacteria	From the tap at the exit from cooling section	Once in 10 days	I; II; III
		Coliform bacteria	The same	Once in 10 days	10 cm^3
**An extract from the Microbiological Production Control Instruction and Dairy Industry Enterprises, approved on 28.12.87 by Gosagroprom (the State Agricultural Committee) of the USSR and agreed with the Ministry of Health of the USSR.*					

Supplement No. 3 Continuation

Production Processes and Materials to Be	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Thermogram check	All the operating pasteurizing plants	Daily	
	Pasteurized milk	Total amount of bacteria	Tanks upon filling	Once in a month	I; II; III
		Coliform bacteria	The same	The same	0; I; II; III
	Milk and cream out of bottles (or cans)	The same	Bottles in the bottling department	The same	The same
	Milk and cream out of bottles or cans (end products)	Total amount of bacteria	Bottles in the shop-floor storage	Not less than once in 5 days	II; III
		Coliform bacteria	The same	The same	0; I

Heat-treated milk production	Heat-treated milk (VTIS (ВТИС) and Sordi (Сорди) lines)	Definition of industrial sterility	A control flask	2-3 times a week	
	Heat-treated milk after bottling (in 2-stage method)	Total amount of bacteria Amount of thermophilic bacteria endospores	Bottles after filling	3 times a shift by 1 bottle	I; 11

Supplement No. 3 Continuation

Production Processes and Materials to Be	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Heat-treated milk (end products)	Definition of industrial sterility	After the filling machine in an hour from 1 package (VTIS and Sordi) and from 2 bottles (in case of 2-stage method) within a shift	2-3 times a week	0; I
Fermentation control for cultured milk products	Milk for fermentation after pasteurization	Identification of coliform bacteria	Vat pasteurizers, culture tanks, tubs	Once in 10 days	10 cm^3
		Test for pasteurization efficiency	Vat pasteurizers, culture tanks, tubs	In case of identification of thermostable fermented milk rods	

	Kefir fermentation, pure culture fermentation in pasteurized milk	Clotting time, acidity, organoleptic estimation	All the tanks with fungal and production fermentation	Daily	
		Microscopic slide	The same	The same	

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Coliform bacteria	The same	The same	3sm^3 for kefir fermentation, 10sm for pure culture fermentation
	Pure culture fermentation in heat-treated milk	Clotting time Microscopic slide	On a selective basis, from 1 can in a batch	On a daily basis in case of increase of ripening duration	
Production of kefir, soured milk, acidophile products etc.	Milk before pasteurization	Total amount of bacteria	Out of the balancing tank	Not less than once a month	IV; V; VI
		Coliform bacteria	The same	The same	V
		Total amount of bacteria	From the tap at the exit from cooling section	Not less than once a month (at the same time with raw milk examination)	1—III
		Coliform bacteria	The same	Once in 10 days	10 cm^3 of milk
		Thermogram check	All the operating pasteurizing plants	Daily	

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Milk before fermentation input	Coliform bacteria	Tanks	Not less than once a month	0; I
	Milk after fermentation input	The same	Tanks or other containers	The same	0; I
	Milk soured before bottling (in case of the tank method)	The same	Tanks	The same	0; I
	Milk soured after bottling (in case of the tank method)	The same	Bottles	The same	0; I
	Milk soured after bottling (in case of the thermostatic method)	The same	Bottles in the bottling department	The same	0; I
	End products	The same	Bottles in the shop-floor storage	Not less than once in 5 days	0; I
		Microscopic slide	The same	The same	

Cottage cheese production	Pasteurized milk out of a tank	Coliform bacteria	Tanks	Not less than twice a month	I; II; III

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Presence of thermostable fermented milk rods	Tanks, on a selective basis	In case of the overacidity defect in production	
	Inoculated milk and clots	Coliform bacteria	Tanks	Not less than twice a month	I—V
	Cottage cheese after pressing	The same	A batch under control	The same	II—VI
	Cottage cheese after cooling (end products)	Coliform bacteria	A batch under control	Not less than once in 3 days	I; II; IV; V; VI
		Microscopic slide	The same		
	Cottage cheese sent to large dairy enterprises or cooling storehouses	The same	Tanks or packets	Each batch	I—VI
	Cottage cheese received by dairy enterprises and cooling storehouses	The same	The same	Not less than once in 5 days	The same

	Sweet cream curds (end products)	Coliform bacteria	The same	Not less than once in 5 days	I—VI

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Curd snack (end products)	The same	The same	The same	I—VI
Sour cream production	Cream before pasteurization	Total amount of bacteria	Tanks	Not less than twice a month	II; II; VI
		Coliform bacteria	The same	The same	11—VI
	Cream after pasteurization	Total amount of bacteria	Pasteurizers	The same	I—Ill
		Coliform bacteria	Pasteurizers	Once in 10 days	10 cm^3
	Cream before fermentation	The same	Tanks	Twice a month	0—11
		Presence of thermostable fermented milk rods	The same	In case of the overacidity defect in production	
	Cream after fermentation	Coliform bacteria	Tanks	Twice a month	0; I

	Sour cream after cooling and packaging (end products)	The same	Tubs, cans, jars, packets	Not less than once in 3 days	I—V

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Microscopic slide	The same	Not less than once in 3 days and in case of the gassiness defect	
	Sour cream sent to large dairy enterprises or cooling	Coliform bacteria	Cans	Each batch	I—V
	Sour cream received by dairy enterprises and cooling	The same	The same	Not less than once in 5 days	I—V
Ferment production for butter and cheese	Raw milk	Methylene blue reduction test	Each milk batch	2-3 times a week	
	Milk after pastereuzation	Coliform bacteria	Culture tanks	Once in 10 days	10 cm^3
	Ferment (initial, transferring and production)	Analysis under the microscope	Each container	Daily	Smear
		Coliform bacteria	The same	The same	10 cm^3

	Production ferment	The same	The same	The same	The same

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Presence of acetoin + diacetyl + carbon dioxide	In accordance with the instruction	Not less than once a month	
	Mother culture and production ferment	Control under point 3.23.3	In accordance with the instruction	Not less than once a month	
Cheese production	Raw milk	Rennet fermentation test	Average milk test from each supplier	Once in 10 days	
		Fermentation test	The same	The same	
		Total amount of mesophile anaerobic lacto fermentation bacteria endospores	The same	The same	0—11
		Coliform bacteria	The same	The same	II—VI
	Milk out of a pasteurizer	Coliform bacteria	Pasteurizers	Once in 10 days	10 ml
	Milk after pasteurization (before ferment introduction)	The same	Tanks or cheese-making machines	The same	0; I

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Total amount of mesophile anaerobic lacto fermentation bacteria endospores	The same	The same	0—11
	Cheese after pressing	Coliform bacteria	A head of cheese on a selective basis	Once in 10 days	II—V
		pH test	Each set of cooking		II—IV
	Cheese at the end of ripening	Coliform bacteria	A head of cheese on a selective basis	In each batch	II—IV
		Total amount of mesophile anaerobic lacto fermentation bacteria endospores	The same	In case of gassiness	
Control over processed cheese production	Processing components				
	Rennet cheese	Coliform bacteria	1-2 cheese heads from each batch on a selective basis	Not less than once a month	I—Ill

	Other components	Compliance with microbiological indicators, requirements	Each batch on a selective basis	In each batch	Depending on the standards

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Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Processed cheese (end product)	Total amount of bacteria	Average sample from a batch	Not less than once a month	II—IV
		Coliform bacteria	The same	The same	1—11
		Total amount of mesophile anaerobic lacto fermentation bacteria endospores	The same	In each batch	I—Ill
Butter production	Cream after pasteurization	Total amount of bacteria	Pasteurizers	Not less than once a month	I—Ill
		Coliform bacteria	The same	Once in 10 days	10 cm^3
	Cream after cooling (the churning method)	Total amount of bacteria	After the cooler	Not less than once a month	I—IV
		Coliform bacteria	The same	The same	0—11

	Cream before churning	Coliform bacteria	Each tank	The same	0—11
		Amount of reducible bacteria	The same	Once in 10 days	I—III

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Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Cream out of the separator (the concentrated cream conversion method)	Total amount of bacteria	After the separator	Not less than once a month	II—IV
		Coliform bacteria	The same	The same	0; I
	Concentrated cream after standardization	Coliform bacteria	Each tank	Not less than once a month	0; I
		Amount of reducible bacteria	The same	Once in 10 days	I; II
	Butter (end product)	Total amount of bacteria (for sweet butter)	One box of each batch on a selective basis	Twice a month	II—V
		Coliform bacteria	The same	«	I—Ill
		Amount of proteolytic bacteria	The same	«	I—III

		Amount of yeast and mold fungi	The same	«	I—III

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Amount of lipolytic bacteria	The same	In case of defects	I—III
	Butter (the churning method)	Amount of reducing bacteria	The same	Once in 10 days	II—IV
	Butter (the concentrated cream conversion method)	«	«	«	I—III
Production of canned condensed milk	Standardized milk before pasteurization	Total amount of bacteria	Tanks	Once in a month	IV—VI
		Coliform bacteria	The same	The same	0—VI
	Standardized milk after pasteurization	Total amount of bacteria	All the operating pasteurizing plants	Once in 10 days	I; II
		Coliform bacteria	The same	The same	10 cm^3

	From an intermediate tank	Total amount of bacteria	Tanks	Once in a month	1; II
		Coliform bacteria	The same	The same	0—II

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Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Sugar syrup before the vacuum machine	Total amount of bacteria	Syrup-cooking pots, tanks	Once in a month	0; I
		Coliform bacteria	The same	The same	0; I
	Lactose before introduction into condensed milk	The same	Containers	«	0; I
	Dilution of coffee and cocoa before the vacuum machine	Total amount of bacteria	Tanks	The same	II; III
		Coliform bacteria	The same	«	0; I
	Condensed milk mixture after the vacuum machine	Total amount of bacteria	The vacuum machine	«	I; II
		Coliform bacteria	The same	«	0; I

	Canned condensed milk products from the vacuum pan crystallizer or a cooling tank after its filling	Total amount of bacteria	A vacuum pan crystallizer or a cooling tank	«	1, II
		Coliform bacteria	The same	The same	0; I; II

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Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Pasteurized water for standardizing canned condensed milk	Total amount of bacteria		«	0; I
		Coliform bacteria		«	0; I
	Canned condensed milk products from the vacuum pan crystallizer or a cooling tank before release	Total amount of bacteria	The same	The same	1—111
		Coliform bacteria	A vacuum pan crystallizer or a cooling tank	Once in a month	0; I
	Canned condensed milk from a filling machine	Total amount of bacteria	Burrels	Once in a month	I—HI
		Coliform bacteria	The same	«	0; I
	Canned condensed milk after the filling and seaming machine	Total amount of bacteria	Cans	Once in a month	I—III
		Coliform bacteria	Cans	Each batch	0; I
Production of canned powered milk and milk replacer	Standardized milk before pasteurization	Total amount of bacteria	Tanks	Once in a month	I; III

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Production Processes and Materials to Be	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Coliform bacteria	The same	The same	0
	Standardized milk after pasteurization	Total amount of bacteria	All the operating pasteurizers	The same	I
		Coliform bacteria	The same	Once in 10 days	I
	From the intermediate tank before introduction into the vacuum machine	Total amount of bacteria	Tanks or other containers	Once in a month	I
		Coliform bacteria	The same	The same	IV—VI
	From the vacuum machine after condensation	Total amount of bacteria	The vacuum machine	Once in a month	0—VI
		Coliform bacteria	The same	The same	I—III
	From the milk condensation tank before drying	Total amount of bacteria	Tanks or other containers	Once in a month	10 ml
		Coliform bacteria	The same	The same	I—III
	Powdered milk after the drying chamber from under the screw	Total amount of bacteria	The drying chamber	Once in a month	II; III
		Coliform bacteria	The same	The same	0; I

Supplement No. 3 Continuation

Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
	Powdered milk after packing	Total amount of bacteria	Packs	Each batch	II; III
		Coliform bacteria	The same	The same	0; I
Supplementary materials	Parchment, staves, polystyrene film, PVC and other packing materials	Total amount of bacteria	Each batch	2-4 times a year	The area of 100 cm^2
		Coliform bacteria	The same	The same	II; III
	Rennet powder, pepsin, VNIIMS (ВНИИМС) drug and other materials	Total amount of bacteria	The same	Each batch	0
		Coliform bacteria	«c	The same	I
	Salt	Total amount of bacteria	«	«	1
	Sugar	Amount of yeast and mold	«	Each batch upon receipt	II; III
	Flour, extracts, fruit powders, pectins	Total amount of bacteria	Bags	Each batch upon receipt	I
		Coliform bacteria	The same	The same	II; III

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Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Amount of yeast and mold	«	«	I
	Fruit and berry fillers	Amount of yeast and mold fungi	Barrels and other containers	Each batch upon receipt	I
		Lactic acid bacteria			I
Production Sanitary and Hygienic Condition	Tubes, fermentation containers, bottles, jars, sweet condensed milk production line	Total amount of bacteria		Not less than once in 10 days	
		Coliform bacteria		«	
	Heat-treated milk production line	Total amount of bacteria		In case of end product spoiling	
	Other equipment, dishes, implements	Coliform bacteria		Not less than once in 10 days	
	Equipment for dietary products, cottage cheese, sour cream	Presence of thermostable fermented milk rods	From separate containers on a selective basis	In case of the overacidity defect in production	

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Production Processes and Materials to Be Examined	Objects to Be Examined	Analysis Name	The sample is taken from	Control Frequency	Dilution
		Presence of yeast	The same	In case of the gassiness defect in production	
	Air	Total colony amount	Production areas, butter and cheese storage areas, cheese cellars, warehouses, fermentation area	Once in a month	
		Amount of yeast and mold colonies	The same	The same	
	Water	Total amount of bacteria	The taps in production shops, water supplies	Once in a quarter (water supply system) or once a month (the own source)	333 ml
		Coliform bacteria	The same		
	Workers' hands	Coliform bacteria	Workers' hands	Not less than once in 10 days	
		Starch-iodine test		Once a week	