



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 12693-2023

**National food safety standard - Good manufacturing practice
for milk products**

食品安全国家标准 乳制品良好生产规范

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Foreword

This document was issued on 6 September 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 6 September 2024.

It is a GB standard without the /T suffix: compliance is mandatory in China.

1 Scope

GB 12693-2023 governs the way a dairy plant is built, staffed and run - the basic requirements and management criteria for the sites, facilities and personnel involved in procuring, processing, packaging, storing and transporting the raw materials that become milk products. It rests on the general food hygiene code GB 14881, which supplies its terms and definitions and the baseline for site selection and the factory environment, and adds

the dairy-specific layers on top: the zoning of work areas inside factory buildings and workshops, facilities and equipment, hygiene management, the control of food raw materials, food additives and food related products, and food safety control during the production process, where the principles of Hazard Analysis and Critical Control Point are to be applied. Inspection, storage and transport, product recall management, training, the management system and personnel, and records and document management close the chain. Appendix A covers the computer systems used in dairy production enterprises and Appendix B gives guidelines for microbiological monitoring programmes. Milk is perishable and a good growth medium, and contamination in a dairy plant tends to be found in the market rather than on the line, which is why recall and record keeping sit in the same document as plant hygiene. For dairy manufacturers, their auditors, and the food safety inspectors who visit them.

This standard specifies the basic requirements and management criteria for the sites, facilities and personnel involved in the procurement, processing, packaging, storage and transportation of raw materials during the production of dairy products.

This standard applies to the production of dairy products using raw milk and its processed products as the main raw materials.

2 Terms and definitions

The terms and definitions defined in GB 14881 apply to this standard.

3 Site selection and factory environment

It shall comply with the relevant provisions of GB 14881.

4 Factory buildings and workshops

4.1 Basic requirements

It shall comply with the relevant provisions of GB 14881.

4.2 Work area zoning requirements

4.2.1 Reasonable zoning shall be carried out based on product characteristics, production technology and the requirements for cleanliness in the production process, combined with the actual conditions of the factory and workshop. Generally, the factory and workshop are divided into common work areas, quasi-cleaning work areas and cleaning work areas.

4.2.2 The commonly work area includes the milk collection room, raw material warehouse, packaging material warehouse, outer packaging workshop, post-sterilization room for post-filling sterilization process, finished product warehouse, etc.

4.2.3 The quasi-cleaning work area includes the workshop of raw material pre-treatment, weighing, blending, and temporary storage of inner packaging materials for subsequent sterilization or disinfection processes.

4.2.4 Cleaning work areas include workshops for weighing, batching, filling, etc. that are in contact with the air environment and without subsequent sterilization or disinfection processes, auxiliary areas with special cleaning requirements (such as temporary storage rooms for exposed inner packaging after cleaning and disinfection), workshops for storage and filling of exposed semi-finished products to be packaged, and the workshop for inner packaging that are in contact with the air environment and without subsequent sterilization, etc.

5 Facilities and equipment

5.1 Basic requirements

It shall comply with the relevant provisions of GB 14881.

5.2 Facilities

5.2.1 Water supply facilities

Safety and sanitation facilities shall be added at the entrances and exits of water supply facilities to prevent animals and other foreign objects from entering and causing food contamination.

5.2.2 Drainage facilities

5.2.2.1 Drainage facilities shall be sloped, unobstructed and easy to clean. The junction between the side and bottom of the drainage ditch shall have a certain curvature or take appropriate measures to prevent water accumulation. Drainage facilities in the work area shall avoid sewer backflow and turbid gas escape. If necessary, floor drains with water seals, check valves or backflow prevention shall be used.

5.2.2.2 There shall be no water supply pipelines for production water under the drainage

facilities.

5.2.3 Personal hygiene facilities

5.2.3.1 Changing rooms (including changing shoes or wearing shoe covers), hand washing and drying facilities, and disinfection facilities shall be set up near the entrance of the production site or production workshop.

5.2.3.2 Necessary cleaning measures shall be taken before personnel enter the cleaning work area, and a dedicated changing room shall be set up at the personnel entrance. Hand disinfection facilities shall be set up at the entrance of the cleaning work area, and hand washing facilities may not be set up.

5.2.4 Ventilation facilities

5.2.4.1 Effective measures shall be taken at outdoor air inlets to prevent animals or other foreign objects from entering, and they shall be kept away from pollution sources and exhaust ports, and equipped with air filtration equipment. Exhaust ports shall be equipped with easy-to-clean, corrosion-resistant mesh covers to prevent animals from intruding.

5.2.4.2 Compressed air or other gases used in food production and cleaning of food contact surfaces and equipment shall be filtered and purified to prevent indirect contamination.

5.2.4.3 In areas where odors, gases (steam and harmful gases) or dust are generated and may contaminate food, appropriate removal, collection or control devices shall be installed.

5.2.4.4 Cleaning work areas shall be equipped with purification air conditioning systems to prevent steam condensation and keep the indoor air fresh; commonly work areas shall be equipped with ventilation facilities or ensure good ventilation to remove damp and dirty air in time. When air conditioning, air intake and exhaust or fans are used in the factory, the air shall flow from areas with high cleanliness requirements to areas with low cleanliness requirements to prevent food, production equipment and inner packaging materials from being contaminated. The pressure difference between