

Attachment Two

Technical Guidelines for the Cold Chain Food Production and Operation Process Covid Control and Disinfection (Second Edition)

1. Basis and Scope of Application

In order to standardize and guide the prevention and control of COVID-19 in the cold chain food production and operation process, and prevent food packaging materials be contaminated by COVID-19, refer to the "Guidelines for the Prevention and Control of COVID-19 of Meat Processing Enterprises" issued by the State Council's Joint Prevention and Control Mechanism for covid-19”(Joint Prevention and Control Mechanism [2020] No. 216), “Emergency Notice on Strengthening the Nucleic Acid Testing of the New Coronavirus in Cold Chain Foods” (Joint Defense and Joint Control Mechanism [2020] No. 220), “Agricultural Trade Market’s COVID19 Prevention and Control Technical Guide (Joint Prevention and Control Mechanism [2020] No. 223), "COVID-19 Prevention and Control Plan (8th Edition)" (Joint Prevention and Control Mechanism [2021] No. 51)), as well as relevant national food safety standards and the “Guidelines for Preventing the Spread of COVID-19 in Food Businesses " (August 2021) issued by the Food and Agriculture Organization of the United Nations/World Health Organization and other documents to formulate this guide. This guide is applicable to cold chain foods that are processed by freezing, refrigeration and other methods, and the products are always in a low temperature state from the factory to the sale. It is used to guide the normal operation of food production and business units and 13 individuals during the normalization of the prevention and control of COVID-19. Disinfection of cold chain foods from high-risk areas of COVID-19 from abroad during the process of loading and unloading, transportation, storage, production and sales.

The business units and relevant practitioners of places where imported cold chain food is stored in the port area can refer to the implementation. Relevant units and individuals of food production and operation strictly abide by laws and regulations and relevant national food safety standards and implement local competent authorities' regulations on the prevention and control of COVID-19 are the prerequisites for applying this guide.

2. Cleaning and Disinfection During Production and Processing

During the production and processing of cold chain food, an effective cleaning and disinfection system should be formulated for processing personnel, production environment, and related equipment and facilities based on the characteristics of food raw materials and product characteristics, and the characteristics of production and processing technology, and the implementation and effects of disinfection measures should be regularly reviewed.

2.1 Food Production and Processing Personnel

Food production and processing personnel entering the work area, on the premise of confirming that their health and personal protection meet the requirements, should focus on hand hygiene, disinfect their hands with quick-drying hand sanitizer, and take an appropriate amount of hand sanitizer to rub their hands until dry. When using it, keep away from fire sources. 2.2 Outer Packaging of Raw Materials and Semi-finished Products.

2.2.1 The outer packaging of cold-chain food raw materials and semi-finished products from high-risk areas (countries) of COVID-19 should be strictly and effectively disinfected before entering the enterprise or warehouse. The coordination and cooperation of departments should be strengthened, and in principle, preventive disinfection of imported cold chain food transportation vehicles and packaging should be carried out only once, and repeated disinfection should be avoided.

2.2.2 Tools and equipment (such as transfer boxes, spoons, pliers, etc.) used to transport cold chain food raw materials or semi-finished products should be cleaned and disinfected in time after each use.

2.2.3 For food raw materials or/and semi-finished products from foreign epidemic areas that have been tested and contaminated by the new crown virus, they should be implemented in accordance with the relevant requirements for the classification and classification of cold chain food for the prevention and control of the new crown pneumonia epidemic.

2.3 Production and processing equipment and environment.

2.3.1 Equipment and appliances. Utensils used before and after processing should be placed separately and kept properly to avoid cross contamination. All equipment and utensils after production and processing (or when necessary, during production and processing) should be effectively cleaned and disinfected, and the selected cleaning and disinfection procedures and disinfectants should be able to effectively kill the new coronavirus.

2.3.2 Environment. Increase the frequency of disinfection in high-risk areas such as the production workshop environment of each stage of cold chain food raw material processing, the workshop environment of each production stage of ready-to-eat and cooked food, and the storage cold storage. The environment must be thoroughly cleaned and disinfected during the production process and after production. In particular, it is necessary to strengthen the frequency of cleaning and disinfection of various operating surfaces, contact surfaces/points (such as door handles, switches, appliance handles, telephones, toilets, etc.) that people touch during production and processing, and crowded environments.

2.3.3 For all kinds of meat, aquatic products, egg products and other foods rich in protein and fat, it is difficult to remove dirt due to the easy formation of dirt on the surface of the contact object, and the production and processing environment is usually low in temperature and high in humidity, in order to improve the disinfection effect, minimize the amount of disinfectant used, shorten the action time of the disinfectant on the surface of the object, all meat, aquatic products, egg products and other foods rich in protein and fat contact with the container, equipment or environmental object surface must be disinfected after thorough cleaning.

2.3.3.1 Selection of cleaning agent

Commonly used food processing equipment and environmental cleaning agents include alkaline solutions, salt solutions (such as phosphate, carbonate, silicate), acid (such as citric acid, phosphoric acid) solutions and synthetic detergents (such as anions, cations, non-ionic alkaline detergent) and so on. Among them, alkaline solution is the most commonly used cleaning solution in the processing environment of meat, aquatic products and egg products. At present, the most commonly used cleaning agent for meat processing enterprises is 1.5% sodium hydroxide solution, which can saponify fat and hydrolyze protein deposits. In addition, various synthetic detergents can also effectively remove meat deposits, fats and dirt. They should be in full contact with the surface to be cleaned at an appropriate temperature and kept for a certain period of time before being rinsed with water. Another way to saponify fat and facilitate cleaning is to prepare a protease solution with a low-concentration alkaline solution that can decompose protein. Since the enzyme is inactivated at high pH and high temperature, the temperature and pH value of the enzyme solution are moderate, which can greatly reduce the corrosion of the surface to be cleaned.

2.3.3.2 Cleaning procedures

(1) To save detergent and water, first use physical methods to remove the dirt on the surface.

(2) Use water to further rinse off the dirt. In order to reduce the generation of aerosols, try not to use high pressure water flushing.

(3) Apply an alkaline solution or a synthetic detergent/enzyme solution at a temperature of 50- 55°C to the surface to be cleaned. After contacting for 6-12 minutes, clean and wipe the surface to be cleaned. In order to make the cleaning agent fully contact the surface to be cleaned, it is best to use foaming detergent to clean the vertical surface.

(4) Rinse the alkali solution or detergent with clean water.

(5) Alkaline solution cannot remove scale or rust spots. Acid (such as phosphoric acid, hydrochloric acid or organic acids such as citric acid, gluconic acid) can be used to remove scale or rust spots.

2.3.3.3 Disinfection

(1) In order to improve the disinfection effect and prevent insufficient contact between the disinfectant and the surface of the object and reduce its activity, all equipment, or environmental surfaces to be disinfected must be thoroughly cleaned according to the above procedures before they can be disinfected. Commonly used disinfectants include chlorine, iodine-containing disinfectants, or quaternary ammonium salt solutions.

(2) Whether the disinfected surface needs to be cleaned depends on the disinfectant used. Quaternary ammonium salt and iodine-containing disinfectants need to be thoroughly rinsed with water after use.

(3) If the surface of the equipment is corroded after disinfection, the corroded area can be coated with oil for protection. There is no need to remove when using food grade spreads, non-food grade spreads need to be removed before the start of the next processing shift.

(4) Use the in-situ cleaning method to continuously clean the moving conveyor belt and other parts of the production and processing equipment.

3. Cleaning and Disinfection During Transportation and Distribution

3.1 Personnel

During the cold chain food delivery process, drivers and transport attendants should maintain personal hand hygiene, and alcohol-based hand sanitizers, disinfectants and paper towels should be provided in the car to ensure that hands are disinfected regularly without washing hands with clean water.

3.2 Object surface

Drivers should wash or disinfect their hands before transferring or submitting delivery documents to employees. To avoid washing the returned items, the documents are best placed in disposable containers and packaging materials. For reusable containers, regular and appropriate sanitary cleaning and disinfection should be carried out. Surfaces that are most likely to be contaminated by viruses, such as steering wheels, door handles, and mobile devices that are frequently touched by human hands, should be disinfected regularly. During the transportation of cold chain food, it is strictly forbidden to unpack and dump the goods. If it is necessary to unpack and dump the goods, they must be disinfected according to the requirements of 2.2.

3.3 Transportation

In order to avoid contamination of cold chain food, drivers must ensure that transport vehicles, handling tools and containers are clean and regularly disinfected. When goods are mixed, keep food and other goods as separate as possible when loading vehicles. Before and after the vehicle carries a batch of goods, the parts in the vehicle that may be touched by human hands, especially the inside and outside of the vehicle, must be thoroughly disinfected.

4. Cleaning and Disinfection During Sales Operation

4.1 Personnel in the cold chain food sales and operation area shall maintain good hygiene practices and frequently use hand sanitizer to wash and disinfect their hands to keep their hands clean and hygienic.

4.2 Clean and disinfect all kinds of surfaces, handles (such as door handles, refrigerating equipment handles, container handles, cart handles, etc.), buttons (such as calculators, electronic weighing device buttons, etc.) frequently touched by human hands in time. After the operation is completed every day, the operation area shall be fully disinfected.

4.3 It is convenient for customers to wash their hands and disinfect. It should be ensured that the hand washing facilities in the store are operating normally and equipped with quick-drying hand disinfectants; when conditions permit, they can be equipped with induction hand disinfection facilities.

5. Cleaning and Disinfection of Catering Processing

5.1 The catering industry should regularly clean and disinfect all cold-chain food contact surfaces, outer packaging and utensils, and strengthen the cleaning and disinfection of tableware (drinking) utensils and condiment containers.

5.2 Do a good job of disinfecting the surface of high-frequency contact objects, and perform various equipment, areas, contact surfaces/high-frequency contact points (such as countertops/clips/service appliances/open self-service display stands/doorknobs), trash cans, sanitary ware, etc. More frequent cleaning and disinfection. At the same time, increase the frequency of cleaning and disinfecting the work clothes of the staff.

5.3 Ensure that the hand washing facilities in the store are operating normally and are equipped with quick-drying hand disinfectants; when possible, they can be equipped with induction hand disinfection facilities.

6. Commonly Used Disinfection Methods in the Production and Operation Process

In the production and operation process of cold chain food production, transportation and sales, chemical and physical disinfection techniques can be selected for disinfection.

6.1 Physical Disinfection

The physical disinfection methods that have been validated by laboratories and on-site and have been evaluated as qualified by relevant institutions can be used to disinfect all aspects of cold chain food production and operation.

6.2 Chemical Disinfection Commonly used disinfectants and methods of use are shown in the attached table.

6.3 Quality Control of Disinfection

Relevant units of cold chain food production and operation should be equipped with professional disinfection personnel and special equipment to disinfect cold chain food, production equipment, and the environment. Among them, disinfection personnel should be systematically trained and qualified before they can take up their posts; disinfection equipment should be regularly repaired and maintained; The effect evaluation should be carried out in strict accordance with the requirements of the attached table or annex.

6.4 Whether chemical or physical techniques are used to sterilize, ensure that all sides of food packaging materials are thoroughly sterilized. In order to avoid the heterogeneity of artificial disinfection, it is recommended to use automatic disinfection equipment.