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कृषि और प्रसंस्कृत खाद्य उत्पाद
निर्यात विकास प्राधिकरण
(वाणिज्य एवं उद्योग मंत्रालय, भारत सरकार)

Agricultural and Processed Food Products Export Development Authority
(Ministry of Commerce & Industry, Govt. of India)

ADVISORY

Date 25th April'2022

The general administration of customs of China (GACC) shared the "Technical guidelines for the Prevention and control of Covid-19 in the production and Operation Cold Chain Food (Second edition)"and "Technical Guidelines for the prevention, control and Disinfection of Covid-19 in the production and operation process of Cold Chain Food (Second edition)" to notify the production and operation enterprises of cold chain food exported to China which is attached below.

Exporters are advised to follow the requirement for export of grapes and other fruits to China.

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Unofficial Translation

Annex 1

Technical Guidelines for the Prevention and Control of COVID-19 in the Production and Operation of Cold Chain Foods

(Second Edition)

1. Basis and scope of application

To regulate COVID-19 normal operation during the period of epidemic prevention and control normalized cold chain food related units and personnel to carry out the good production management main body responsibility, prevention and control of reference issued by the State Council to COVID-19 outbreak zone spreading mechanism of "Guidelines for the Prevention and Control of COVID-19 Epidemic of Meat Processing Enterprises" (Comprehensive Group of Joint Prevention and Control Mechanism No. 216 [2020]), "Technical Guidelines for the Prevention and Control of the COVID-19 Epidemic in the Agricultural Trade Market (Trading market)" (Comprehensive Group of Joint Prevention and Control Mechanism No. 223 [2020]), "COVID-19 Prevention and Control Protocol (Eighth Edition)" (Comprehensive Group of Joint Prevention and Control Mechanism No. 51 [2021]), "Circular of the Joint Prevention and Control Mechanism of the State Council on Strengthening the Prevention and Control of COVID-19 in Port Cities" (State Council Office No. 14 [2021]), as well as relevant national food safety standards and the Guidance on Preventing and Spread of COVID-19 in Food Production and Operation issued by the Food and Agricultural Organization of the United National (August 2021), this guidance is formulated for cold chain food producers and operators and key links in production and operation.

This guide is applicable to the prevention and control of COVID-19 contamination in the production, loading and unloading, transportation, storage and sale of cold chain food products that are processed by freezing, refrigerating and other means and remain at a low temperature from leaving factory to sale. Business units and relevant employees storing imported cold chain food in the port area can refer to the implementation.

This guide is aimed at preventing cold chain food workers and related personnel from being infected by COVID-19, and highlighting the epidemic prevention and control of high-risk workers such as porters, pick workers and other key workers engaged in loading, unloading, storage and transportation in key warehouses such as centralized warehouses or first station cold storage and focuses on strengthening the cleaning and disinfection of cold-chain food packaging. The application of the guidelines is prerequisite for producers and operators to strictly comply with laws and regulations and relevant national food safety standards, as well as all regulations of local authorities on COVID-19 prevention and control.

2. COVID-19 prevention and control health management of practitioners

The health of practitioners is fundamental to preventing COVID-19 from polluting cold chain food. Producers and operators involved in the production, loading, unloading, transportation, storage, sales and catering services of cold-chain food shall, in accordance with the COVID-19 prevention and control requirements, timely adjust and update the health management system for employees, improve COVID-19 prevention and control measures, and ensure strict personal protection for employees.

2.1 Establish health registration system for employees on duty

Cold chain food producers and operators should do well in the 14 days' travel and health status registration of employees (including new recruits and temporary staff), and establish health cards for the workers on the posts. The newly recruited staff need to issue COVID-19 vaccination certificates, nucleic acid negative tests within 48 hours, health codes and travel codes are not abnormal, and monitor the turnover and health of employees.

2.2 Daily health monitoring of employees

Cold-chain food producers and operators shall strengthen personnel access management and health monitoring, and establish a record of the health status of all employees (including 10 main symptoms: (fever, dry cough, fatigue, decreased sense of smell and taste, stuffy nose, runny nose, sore throat, conjunctivitis, myalgia and diarrhea) and risk contact information reporting system, set up temperature measurement points at the entrance of food production and business areas, implement prevention and control measures such as registration, temperature measurement, disinfection, health code check, implement the "green code"on duty system.

2.3 Nucleic acid testing of employees

Nucleic acid testing is an important means of early detection of infection. Cold-chain food practitioners should be tested in accordance with the COVID-19 Prevention and Control Protocol (Eighth Edition) (Joint Prevention and Control Mechanism [2021] No. 51). The frequency of nucleic acid testing should be appropriately increased for personnel at high-risk positions in key places and links.

Personnel in high-risk positions include but are not limited to the following personnel: porters, loaders and unloaders, sorting worker, disinfectors, forklifts, warehouse managers, sampling personnel, garbage cleaners and other personnel in high-risk positions who directly contact imported cold chain food without preventive disinfection for the first time in central supervision warehouse and first station cold storage; slow front-end personnel, such as porters, packers, etc in imported cold chain food production and processing enterprises.

High frequency nucleic acid testing shall be carried out for personnel in high-risk posts, and the specific frequency can be appropriately adjusted on the basis of risk research and judgment according to local conditions. In principle, reasonable arrangements should be made to ensure that nucleic acid tests are carried out by people of the same category every day.

2.4 Registration and management of personnel from outside

Try to reduce the entry of personnel from outside into the production and operation area as much as possible. If it is necessary to enter, it is necessary to register their work units, their health status and people in contact with epidemic area, and implement measures such as health code and travel code inspection and registration, temperature measurement and personal protection (such as wearing masks). When vehicles entering and leaving, the personnel in the vehicle shall not leave the vehicle unless necessary. If it is really necessary to leave the vehicle, it shall be managed according to the above requirements. The guard on duty, staff and drivers shall avoid unnecessary contact.

2.5 Hygienic requirements for employees

2.5.1 Healthy work. Ensure good physical condition before work, and report health information to the producer and operator, take the initiative to accept the temperature test of the producer and operator, in case of fever, dry cough, fatigue and other symptoms, immediately take the initiative to leave, and seek medical treatment in time.

2.5.2 Do a good job of personal protection. Employees shall correctly wear masks, gloves and uniform in the workshop. Work clothes shall be kept clean and tidy, cleaned regularly and disinfected when necessary. Employees in special posts (fresh slaughter, segmentation workshop, etc.) shall wear waterproof aprons, rubber gloves, etc. in addition to work clothes. It is recommended that food practitioners wear disposable gloves, but they must change them frequently, and wash their hands between changes and when they are not wearing gloves. To avoid secondary contamination of protective products, gloves must be changed after non food related activities (such as opening / closing doors and emptying dustbins by hand).

2.5.3 Pay attention to personal hygiene. Cover your nose and mouth with tissue when sneezing or coughing, or use elbow and arm to cover. Do not spit everywhere and pay attention to hygiene when blowing your nose. Try to avoid touching the mouth, eyes and nose with hands.

2.5.4 Improve hand hygiene. When handling goods, or when hands touch shelves, handrails and other public objects, wash hands with hand sanitizer or soap in running water, or rub hands with quick-drying hand disinfectant.

2.6 Establish health abnormality reporting procedures

Once employees find that they and the people living together have suspected symptoms such as fever, dry cough and fatigue, they should report to the top management of production and operation in time, and report level by level or directly according to the situation. Once the producers and operators find that the employees have the above-mentioned abnormal health symptoms, regardless of their health status, they shall take effective measures to quickly exclude themselves and the employees in close contact from the food working environment. In areas with high risk of COVID-19 transmission, it is recommended that healthy employees be required to report "zero" in accordance with the prevention and control regulations of local authorities.

2.7 Procedures for employees to return to work

According to the registration and health records of personnel working in the production and operation areas, the treatment and recovery status of employees with abnormal health, physical discomfort, suspected or COVID-19 infection (patients or asymptomatic infections) shall be tracked in time, and the conditions for their return to work shall be assessed scientifically after their recovery. Isolation can be lifted for confirmed COVID-19 cases whose symptoms subside and whose two PCR nucleic acid tests are negative at least 24 hours apart. Practitioners who are close contacts of COVID-19 patients should also meet the above control requirements before returning to work.

2.8 Strengthen prevention and control knowledge publicity

Various forms of health education are carried out to guide practitioners to master the knowledge and skills related to the prevention and treatment of COVID-19 and other respiratory infectious diseases, develop good hygiene practices, and strengthen the awareness of self-protection.

3. Prevention and control requirements during loading, unloading, storage and transportation

3.1 Health requirements for loading and unloading workers

For porters, loaders, box removers, disinfection personnel and other high-risk personnel who have direct contact with imported cold chain food without preventive disinfection for the first time in centralized supervision warehouse or cold storage of the first station, personnel fixation, closed-loop management, nucleic acid testing shall be carried out according to 2.3.

In addition to general personal hygiene requirements, special work clothes and hats, disposable medical masks, gloves, etc. shall be worn before handling goods. If necessary, goggles and face screens shall be worn to avoid frequent contact between the surface of goods and personnel's body surface.

In particular, when loading and unloading imported cold-chain food from epidemic areas, the relevant personnel should wear masks in a standard manner during the whole process of handling the goods to prevent the goods from touching their faces, touching their mouths and noses, and preventing direct contact with frozen aquatic products that may be contaminated by COVID-19. If the mask is damaged during handling, it should be replaced immediately.

3.2 Health requirements for transport drivers

In addition to the health requirements of employees to do a good job of self-protection, transportation of imported cold chain food personnel (drivers, etc.) in the process of transportation shall not open the box without authorization, can not open cold chain food packaging directly contact cold chain food. When entering or leaving the vehicle, the driver and the accompanying personnel shall avoid unnecessary contact with the guard on duty and staff.

3.3 Health management at the source of goods

For imported cold-chain food, the importer or consignor shall cooperate with relevant departments to sample and test the food and its packaging. For out-of-town food, the distributor shall take the initiative to request relevant food safety and epidemic prevention and testing information from the supplier. If an importer or consignor entrusts a third-party logistics company to provide transportation, storage and other services, the importer or consignor shall take the initiative to provide the third-party logistics company with the testing information required for food safety and epidemic prevention when the goods are delivered to the third-party logistics company.

In the process of cold chain logistics, if the logistics package needs to be equipped with support or liner, it shall meet the relevant food safety and hygiene requirements. Temperature conditions for storage and transportation of cold-chain food shall be indicated on the logistics package. Strengthen the operation management of cargo loading, unloading and handling, so that the goods can not directly contact the ground, do not open cold chain food packaging at will. It should be ensured that the

temperature of cold-chain food is always within the allowable fluctuation range in the process of transportation, storage and sorting. Record and keep the time, temperature and other information of each delivery link.

3.4 Vehicle hygiene management

It shall ensure that the interior of the vehicle compartment is clean, non-toxic, harmless, odorless and pollution-free, and carry out preventive disinfection regularly. For specific disinfection measures, please refer to the Technical Guidelines for the Prevention, Control and Disinfection of COVID-19 in the Production and Operation Process of Cold Chain Foods (Second Edition).

3.5 Sanitary management of storage facilities

Strengthen warehousing inspection, in addition to checking the appearance and quantity of cold-chain food, should also check the central temperature of cold-chain food. Strengthen storage management in the warehouse, cold chain food stacking should be placed on pallets or shelves as required. Cold-chain food should be placed in separate storage or storage code according to characteristics. Cold-chain food with large difference in temperature and humidity requirements and easy cross-contamination should not be mixed. The temperature and humidity in the storehouse should be tested regularly. The temperature and humidity in the storehouse should meet the storage requirements of cold-chain food and remain stable. Regularly clean and disinfect the internal environment, shelves and working tools of the warehouse. For specific cleaning and disinfection measures, refer to the Technical Guidelines for the Prevention, Control and Disinfection of COVID-19 in the Production and Operation Process of Cold Chain Foods (Second Edition).

4. Prevention and control requirements during production and processing

4.1 Health requirements for personnel

According to the requirements of 2.5.

For the slow front-end personnel of imported cold chain food production and processing enterprises, such as porters, packers and other high-risk personnel, personnel are required to be fixed, closed-loop management, and nucleic acid testing is carried out according to 2.3.

4.2 Keep a safe distance

Keep at least 1 meter distance between employees. Feasible measures to keep distance in the food processing environment include: setting up worktables only on one side of the production line, dislocating production or assembling baffles in the middle of the production line to prevent employees from facing each other; Strictly limit the number of employees in the food preparation area and exclude all non-essential personnel; Divide employees into working groups or teams to reduce communication and interaction between working groups.

4.3 Protection and inspection of purchasing

4.3.1 Handling protection. Stevedores who need to directly contact cold-chain food goods should wear work clothes and caps, disposable medical masks and gloves before handling the goods, and wear goggles and face screens when necessary to avoid frequent contact with human body surfaces.

4.3.2 Source control. Cold-chain food enterprises shall do a good job of supplier compliance inspection and evaluation, carefully do a good job of each batch of food purchase inspection, truthfully record and keep food and raw materials purchase inspection, factory inspection, food sales and other secondary self-guaranteed food traceability. The shelf life of records and vouchers shall not be less than 6 months after the expiration of the warranty period, or not less than 2 years if there is no clear warranty period.

4.3.3 Check the certificate. For imported cold-chain food, the importer or consignor shall cooperate with relevant departments to sample and test the food and its packaging. For out-of-town food, the distributor shall take the initiative to request relevant food safety and epidemic prevention and testing information from the supplier.

4.4 Cleaning and disinfection

Refer to the Technical Guidelines for the Prevention, Control and Disinfection of COVID-19 in the Production and Operation Process of Cold Chain Foods (Second Edition).

4.5 Other protective measures

4.5.1 Ventilation requirements. Natural ventilation is preferred in ordinary plant areas, and mechanical ventilation can be supplemented if conditions are not available. Indoor air circulation and air supply of air conditioning system shall be kept safe in the closed plant area. The air conditioning and ventilation system shall be inspected, cleaned and disinfected regularly to ensure clean and safe operation.

4.5.2 Water supply and drainage facilities. There should be perfect sewers and keep them unblocked. The ground flushing faucet and disinfection facilities shall be equipped for the flushing and disinfection of sewage. Sewage discharge shall comply with relevant regulations.

5. Prevention and control requirements during sales and operation process

Cold chain food centralized trading market (agricultural products wholesale market, farmers' market, community vegetable market), supermarket, convenience store, catering, self operated e-commerce and other food operators shall have corresponding refrigeration and freezing facilities.

5.1 Personnel hygiene requirements

According to the requirements of 2.5. In addition to working clothes, food operators of special stalls such as fresh slaughter also need to wear waterproof aprons and rubber gloves.

5.2 Keep a safe distance

Reasonably control the number of customers entering the cold chain food sales area, avoid aggregation and crowding, keep the distance between people at least more than 1 meter, and increase the distance appropriately in confined spaces. Floor markings can be used to guide and manage orderly customer

queues to facilitate customer distance, especially in crowded areas such as service counters and cash registers.

5.3 Cleaning and disinfection

Refer to Technical Guidelines for the Prevention, Control and Disinfection of COVID-19 in the Production and Operation Process of Cold Chain Foods (Second Edition).

5.4 Warning notice

5.4.1 Set a sign at the entrance, asking customers not to enter the shop when they are in a state of abnormal health, discomfort or suspected symptoms of COVID-19.

5.4.2 Regularly broadcast or post notices in cold chain food retail areas (stores, markets and supermarkets) to remind customers to keep a distance and clean their hands in time. If consumers bring their own shopping bags, it is suggested that they should pay attention to clean the used shopping bags of cold chain food before using it.

5.5 Other Protective measures

Glass barriers shall be set at the cashier and counter to encourage the use of non-contact payment to reduce contact. Consideration should be given to not publicly displaying or selling unpackaged cold chain food at the self-service counter.

6. Prevention and control requirements for catering processing

In order to prevent and control COVID-19 pollution related to cold chain food service, catering service operators should pay attention to the following protection points.

6.1 Health requirements for personnel

According to the requirements of 2·.5.

6.2 Keep a safe distance

6.2.1 Use appropriate measures to prevent overcrowding and keep food practitioners at least 1 meter apart.

6.2.2 The seating arrangement of the canteen should reach a safe social distance.

6.2.3 Use floor markers in the store to keep customers at a distance, especially in crowded areas, such as service desks and cash registers·

6.3 Cleaning and disinfection

Refer to the Technical Guidelines for the Prevention, Control and Disinfection of COVID-19 in the Production and Operation Process of Cold Chain Foods (Second Edition).

6.4 Other Protective measures

6.4.1 Provide disinfectant. Provide hand sanitizer or wash free disinfectant for employees and consumers entering and leaving the catering area.

6.4.2 Prevent cross contamination. Raw and cooked food should be processed and stored separately. Utensils used to handle uncooked food should be adequately disinfected before serving or processing cooked food.

6.4.3 Avoid unnecessary physical contact. Encourage mobile non-contact financial payment, non-contact delivery, etc.

6.4.4 Maintain air circulation, and open windows frequently for ventilation in the room.

6.4.5 Try to provide cooked food. During the epidemic, food should be fully heated.

6.4.6 Catering services should advocate individual serving. If it is impossible to eat individual meals, public spoons and chopsticks should be provided.

7. Emergency response measures in relevant areas

Cold-chain food producers and operators shall formulate an emergency response plan for COVID-19 to promptly handle and report on the epidemic situation and effectively prevent the transmission of COVID-19.

7.1 Emergency treatment of persons with abnormal health conditions

Once a confirmed case or a person with abnormal condition suspected of COVID-19 is found in a cold-chain food production and operation area, prevention and control measures must be taken to prevent the spread of the virus inside the country and the export of the virus outside the country. It must cooperate with relevant departments in carrying out epidemiological investigation, tracing and management of close contacts, disinfection of the epidemic site, and sampling and nucleic acid testing of the cold-chain food in the area where the person is working, where he appears and where he processes it. If there is an air conditioning and ventilation system, it can be cleaned and disinfected at the same time, and can be re-used after passing the evaluation. According to the severity of the epidemic, the work area will be temporarily closed, and the production will be resumed after the epidemic is controlled.

In accordance with COVID-19 prevention and control requirements, measures should be taken to cut off transmission routes and isolate close contacts, while pollutants should be disposed of in accordance with regulations.

7.2 Emergency handling of nucleic acid test positive samples

Upon receipt of the notification of positive samples of COVID-19 nucleic acid test, cold-chain food producers and operators shall promptly launch their own emergency plans and take emergency treatment of relevant items and the environment in a timely manner according to local requirements and under the guidance of professional personnel. Relevant items shall be temporarily sealed up, accompanied by sampling and harmless treatment, work areas shall be disinfected, and nucleic acid tests and health screening measures shall be carried out for people who may come into contact. Keep

refrigerators, freezers, cold storage and other refrigeration equipment in normal operation before handling items to prevent spoilage and possible contamination. Avoid spillage or leakage during transportation when handling related items. Personnel involved in the cleaning and transportation of relevant articles shall strictly take good personal protection.

Cold-chain foods that have been tested positive for COVID-19 nucleic acid will be disposed of in accordance with the relevant requirements for the graded and classified disposal of cold-chain foods for COVID-19 prevention and control.

Unofficial Translation

Annex 2

Technical Guidelines for the Prevention, Control and Disinfection of COVID-19 in the Production and Operation Process of Cold Chain Foods (Second Edition)

1. Basis and scope of application

To regulate COVID-19 control and disinfection work in cold chain food production and operation process, and prevent food packaging materials from being polluted by COVID-19, prevention and control of reference issued by the State Council to COVID-19 outbreak zone spreading mechanism of "Guidelines for the Prevention and Control of COVID-19 Epidemic of Meat Processing Enterprises" (Comprehensive Group of Joint Prevention and Control Mechanism No. 216 [2020]), "Technical Guidelines for the Prevention and Control of the COVID-19 Epidemic in the Agricultural Trade Market (Trading market)" (Comprehensive Group of Joint Prevention and Control Mechanism No. 223 [2020]), "COVID-19 Prevention and Control Protocol (Eighth Edition)" (Comprehensive Group of Joint Prevention and Control Mechanism No. 51 [2021]), "Circular of the Joint Prevention and Control Mechanism of the State Council on Strengthening the Prevention and Control of COVID-19 in Port Cities" (State Council Office No. 14 [2021]), as well as relevant national food safety standards and the Guidance on Preventing and Spread of COVID-19 in Food Production and Operation issued by the Food and Agricultural Organization of the United National (August 2021), this guidance is formulated.

This guide is suitable for cold chain food which is processed by freezing, refrigerating and other methods and whose products are always in a low temperature state from factory to sale. This guide is intended to guide the disinfection of cold-chain food from high-risk areas of COVID-19 from abroad during the process of loading, unloading, transportation, storage, production and sale by food production and management units and individuals in normal operation during the normalization of COVID-19 prevention and control. Business units and relevant employees storing imported cold chain food in the port area can refer to the implementation.

The application of the guidelines is based on strict compliance with laws and regulations and relevant national food safety standards, as well as the provisions of local authorities on COVID-19 prevention and control.

2. Cleaning and disinfection during production and processing

In the process of production and processing of cold-chain food, an effective cleaning and disinfection system shall be formulated for processing personnel, production environment and related equipment and facilities according to the characteristics of food raw materials, products and production processes, and the implementation and effect of disinfection measures shall be evaluated regularly.

2.1 Food production and processing personnel

Food production and processing personnel entering the work area shall, on the premise of confirming their physical health and meeting the requirements for personal protection, focus on hand hygiene. They shall disinfect their hands with quick-drying hand disinfectant and rub their hands with proper amount of hand disinfectant until dry. Keep away from fire source when using.

2.2 Outer packing of raw materials and semi-finished products

2.2.1 The outer packaging of cold chain food raw materials and semi-finished products from COVID-19 high-risk areas (countries) shall be strictly and effectively disinfected before entering enterprises or warehousing. Coordination among departments should be strengthened, and preventive disinfection should be carried out only once for imported cold chain food loading and transportation vehicles and packages in principle to avoid repeated disinfection.

2.2.2 The utensils used for transporting cold chain food raw materials or semi-finished products (such as transfer boxes, spoons, pliers, etc.) should be cleaned and disinfected after each use.

2.2.3 For food raw materials and/or semi-finished products from foreign epidemic areas that have been tested COVID-19 contamination, the relevant requirements for the graded and classified disposal of cold-chain food for the prevention and control of COVID-19 shall be followed.

2.3 Production and processing equipment and environment

2.3.1 Equipment and utensils. The equipment used before and after production and processing shall be placed separately and kept properly to avoid cross contamination. All equipment and utensils after production (or production process necessary) should be effectively cleaned and sterilized, and ensure that the selected cleaning procedures and disinfectants can effectively kill COVID-19.

2.3.2 The environment. Increase the frequency of disinfection of workshop environment in processing of raw materials of cold chain food, workshop environment in production of ready-to-eat and cooked food, storage and cold storage and other high-risk areas. The environment should be thoroughly cleaned and disinfected during production and after production. In particular, we should strengthen the frequency of cleaning and disinfection of various operating tables, contact surfaces/points (such as door handles, switches, handles of equipment, telephones, toilets, etc.) and environments with crowded steam of people.

2.3.3 For all kinds of meat, aquatic products, egg products and other foods rich in protein and fat, it is easy to form dirt on the surface of the object, which is not easy to remove, and its production and processing environment is usually low temperature and high humidity. In order to improve the disinfection effect, minimize the use of disinfectant and shorten the action time between disinfectant and the surface of the object, all the containers, equipment or environmental surfaces that come into contact with meat, aquatic products, egg products and other foods rich in protein and fat must be thoroughly cleaned before disinfection.

2.3.3.1 Selection of cleaning agent

Commonly used cleaning agents for food processing equipment and environment include alkaline solution, salt solution (such as phosphate, carbonate, silicate), acid (such as citric acid, phosphoric acid) solution and synthetic detergent (such as anionic, cationic, non-ionic alkali detergent). Alkaline solution is the most commonly used cleaning solution in the processing environment of meat, aquatic products and egg products. 1.5% sodium hydroxide solution can be used as a cleaner, which can make fat saponification and hydrolyze protein deposits. In addition, a variety of synthetic detergents can also effectively remove meat sediments, fat and dirt, and should be used at an appropriate temperature to make it fully contact with the surface to be cleaned and kept for a certain period of time before washing with water. Another way to make fat saponification easy to clean is to mix protease solutions that break down proteins with a low concentration of alkali. Because the enzyme will be 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 cleaning surface.

2.3.3.2 Cleaning procedure

(1) In order to save detergent and water, first remove the dirt on the surface by physical methods.

(2) Further wash away the dirt with water. In order to reduce the generation of aerosol, try not to use high-pressure water.

(3) Apply alkaline solution or synthetic detergent / enzyme solution with temperature of 50-55 ℃ 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 with the surface to be cleaned, it is best to use foaming detergent for cleaning the vertical surface.

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

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

2.3.3.3 Disinfect

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

(2) Whether the disinfected surface needs cleaning depends on the disinfectant used. Quaternary ammonium salts and iodine containing disinfectants should be thoroughly rinsed with water after use.

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

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

3. Cleaning and disinfection during transportation and distribution

3.1 Personnel

In the process of cold chain food distribution, the driver and attendants shall maintain personal hand hygiene, and the vehicle shall be equipped with alcohol hand sanitizer, disinfectant and paper towel to ensure regular disinfection of hands without clean water.

3.2 Object surface

Drivers should wash their hands or disinfect before transmitting and submitting distribution documents to enterprise employees. In order to avoid cleaning returned goods, it is best to place the documents in disposable containers and packaging materials. Containers that are reused shall be cleaned and disinfected regularly and appropriately.

The surfaces most likely to be contaminated by virus, such as steering wheel, door handle and mobile equipment, which are frequently contacted by personnel, shall be disinfected regularly.

During the transportation of cold chain food, it is strictly prohibited to unpack and pour goods. If it is necessary to unpack and pour goods, it shall be disinfected according to the requirements of 2.2.

3.3 Means of transportation

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

4. Cleaning and disinfection during sales and operation

4.1 Employees in cold-chain food sales and operation areas shall maintain good hygiene and frequently use hand sanitizer for hand disinfection to keep their hands clean and hygienic.

4.2 Timely clean and disinfect various surfaces, handles (such as doorknobs, handles of refrigerated equipment, handles of storage devices, and handles of carts) and buttons (such as buttons of calculators and electronic weighing devices) that are frequently contacted by personnel. After each day's operation, the operation area shall be thoroughly disinfected

4.3 To be convenient for customers to wash their hands and disinfect. Ensure that hand-washing facilities in the store operate properly and are equipped with quick-drying hand sanitizers; Induction type hand disinfection facilities can be equipped when conditions are available.

5. Cleaning and disinfection of food and beverage processing

5.1 The catering industry shall regularly clean and disinfect all cold chain food contact surfaces, outer packages and utensils, and strengthen the cleaning and disinfection of tableware and condiment containers.

5.2 Disinfect the surface of high-frequency contact objects, and clean and disinfect all kinds of equipment, areas, contact surfaces / high-frequency contact points (such as countertops / clips / service appliances / open self-service display tables / door handles), garbage cans, sanitary ware, etc. at a higher frequency. At the same time, increase the frequency of cleaning and disinfection of staff's uniforms.

5.3 Ensure that hand-washing facilities in the store operate properly and are equipped with quick-drying hand sanitizer; Induction type hand disinfection facilities can be equipped when conditions are available.

6. Disinfection methods commonly used in production and operation

Chemical and physical disinfection technologies can be selected for disinfection in the production, transportation and sales of cold chain food.

6.1 Physical disinfection

Physical disinfection methods that are verified to be effective in the laboratory and on-site and qualified by relevant institutions can be selected to disinfect all links of cold chain food production and operation.

6.2 Chemical disinfection

See the attached table for commonly used disinfectants and use methods.

6.3 Quality control of disinfection

Units related to the production and operation of cold chain food shall be equipped with professional disinfection personnel and special equipment to disinfect cold chain food, production equipment and environment. Among them, disinfection personnel shall be systematically trained and pass the examination before taking up their posts; Disinfection equipment shall be overhauled and maintained regularly; The selection, proportioning method, disinfection concentration, ambient temperature conditions, action time, operation methods, precautions and disinfection effect evaluation of chemical disinfectants shall be carried out in strict accordance with the requirements of the attached table or annex.

6.4 Whether chemical or physical disinfection is adopted, it shall ensure that each side of food packaging materials is disinfected thoroughly. In order to avoid the heterogeneity of artificial disinfection, it is recommended to give priority to automatic disinfection equipment.

Appendix:

1. Low-temperature disinfectants commonly used in cold chain food production and operation and their application methods
2. Guidelines for on-site low temperature disinfection evaluation of cold chain food packaging

Unofficial Translation

Appendix 1

Low-temperature disinfectants commonly used in cold chain food production and operation and their application methods

Disinfectant type	Main active ingredients and dosage forms	Usage method	Matters needing attention
Low temperature disinfectant containing chlorine	Sodium dichloroisocyanurate binary packaging, powder and liquid	1. Disinfection method: spray disinfection, soak disinfection, wipe disinfection. 2. Dosage of disinfectant: -18 ℃low temperature disinfectant concentration is 3000mg/L, action time is 10-20 minutes, spray about 200ml/㎡. The action concentration of -40 ℃low temperature disinfectant is 5000mg/L, the action time is 10-20 minutes, spray about 200ml/㎡	1. The low-temperature disinfectant used on site must be legal and effective. Before listing, the health and safety evaluation of disinfection products shall be made and filed in accordance with the notice of the General Office of the National Health Commission on printing and distributing the technical requirements for health and safety evaluation of low-temperature disinfectants (GWB supervision letter [2020] No. 1062). 2. Disinfect in strict accordance with the scope and method of use. It is strictly prohibited to use beyond the scope. It is recommended to determine the content of active ingredients (chlorine containing disinfectant) before use. 3. During mechanized low-temperature disinfection, the disinfection equipment shall be debugged to make it reasonably
Chlorine dioxide low temperature disinfectant	Chlorine dioxide	1. Disinfection method: spray disinfection and wipe disinfection. 2. Dosage of disinfectant: strictly follow the product instructions.	
Peroxide low temperature disinfectant	Hydrogen peroxide or peracetic acid	1. Disinfection method: spray disinfection, soak disinfection and wipe disinfection. 2. Dosage of disinfectant: strictly follow the product instructions.	
Quaternary ammonium salt low temperature disinfectant	Quaternary ammonium salt	1. Disinfection method: spray disinfection, soak disinfection and wipe disinfection.	

		2. Dosage of disinfectant: strictly follow the product instructions.	matched with the low-temperature disinfectant to ensure that the low-temperature disinfectant fully covers the six sides of the outer package; When it is used for the first time, the on-site disinfection effect shall be evaluated, and it can be used only after the disinfection effect is qualified. 4. During low-temperature disinfection, the technical training of disinfection staff shall be strengthened to ensure that the disinfection operation is standardized and the disinfectant is fully covered. 5. Organic matters have a great impact on the disinfection effect. When the disinfection object is seriously polluted, it shall be washed or soaked with low-temperature disinfectant before treatment. Spraying or wiping disinfection is strictly prohibited. 6. When preparing, repacking and using low-temperature disinfectants, personal protection shall be strictly done, and work clothes, masks, gloves, etc. shall be worn to avoid contact with skin. 7. The low-temperature

			disinfectant is an external disinfectant, which shall not be taken orally. It shall be placed in a place not easy to be touched by children. If it is accidentally splashed into the eyes, it shall be washed with water immediately. If it is serious, it shall be treated immediately. Do not contact with inflammables and keep away from fire sources.

Appendix 2

Guidelines for on-site low temperature disinfection evaluation of cold chain food packaging

1. Evaluation principle

On site low temperature disinfection evaluation includes process evaluation and effect evaluation. Process evaluation shall be conducted for each low-temperature disinfection. Generally, the disinfection implementation unit shall conduct self inspection and self-evaluation. Relevant supervision departments can conduct random inspection on the disinfection process and self-examination and self-evaluation process to ensure the effectiveness of the disinfection process. The effect evaluation generally adopts the method of regular random inspection, and it is recommended to evaluate once every half a year. When the low-temperature disinfection method is changed, the disinfection effect shall be evaluated to prove that the low-temperature disinfection is effective before it can be put into use.

2. On site low temperature disinfection process evaluation

During each disinfection process, the disinfection implementation unit shall make disinfection records and conduct self-evaluation to evaluate whether the whole disinfection operation is carried out according to the disinfection work plan, whether the low-temperature disinfection products used are legal and effective, whether the disinfection method matches the disinfection object and environment, whether the disinfection parts are fully covered, whether the use amount meets the requirements, and whether the disinfection action time is sufficient Whether the disinfection records are standardized, etc. The contents include but are not limited to disinfection day, disinfection place, disinfection scope, disinfection object, disinfection procedure, disinfectant preparation, disinfectant concentration and dosage, action time, disinfection method, disinfection equipment, personal protection, etc.

The low-temperature disinfection products used shall meet the requirements of relevant national health standards and specifications, and the health and safety evaluation shall be qualified. Disinfectant information includes disinfectant name, main active ingredients and their content, validity period, preparation method, application scope, application method, etc; Disinfection equipment information includes equipment name, main sterilization factors and their intensity, scope of use, method of use, etc.

3. Evaluation of disinfection effect of low temperature on site

(1). Evaluation objects and indicators

The evaluation object of low-temperature disinfection effect is the object surface. Indicator microorganisms are selected according to the resistance of COVID-19 virus to disinfection factors, and the killing rate of indicator microorganisms is taken as the evaluation index. Indicates that the resistance of the microbe should be equivalent to or higher than that of the Novel Coronavirus, easy to cultivate and in compliance with laboratory biosafety and WS/T683 requirements. For chemical disinfection, staphylococcus aureus (ATCC 6538) and Escherichia coli (8099) can be used. During physical disinfection, the indicator microorganism meeting the above requirements should be selected according to the characteristics of disinfection factors.

(2). Evaluation method

Prepare bacterial tablets for experiment according to GB / T 38502 (tryptone soybean broth medium is used as organic disruptor in the evaluation of low-temperature field disinfection effect), so that the number of recovered bacteria of each bacterial tablet is 1x106CFU / tablet ~ 5 x106CFU / tablet. Put the indicator microorganism tablet into the corresponding low-temperature environment, and at least ensure that the indicator microorganism reaches the same low temperature before the next operation.

Before disinfection: put the bacteria tablets on the site, and focus on the desktop, door handle, button, etc., with no less than 2 samples for each type of object; For the outer packaging of cold chain food, points shall be arranged on six sides of the outer packaging; The total number of test samples shall not be less than 30.

After disinfection: after the disinfection reaches the action time, use sterile tweezers to move the bacterial tablets into the test tube containing 5.0 ml of corresponding neutralizer, vibrate 80 times in the palm of the hand or mix evenly with a mixer and neutralize for 10 minutes. At the same time, a positive control group should be established.

Laboratory culture: shake the sampling tube on the mixer for 20 s or shake it vigorously for 80 times, absorb 1.0 ml of the sample to be tested and inoculate it on sterile plates, inoculate two plates in parallel for each sample, add 15 ml ~ 18 ml of dissolved culture medium at 45 ℃ ~ 48 ℃, pour and shake it evenly, wait for agar to solidify, incubate at 36 ℃ ± 1 ℃ for 48 hours, count the number of colonies and calculate the killing rate.

(3). Result judgment

The average killing rate of indicator microorganisms on the object surface is ≥ 99.9%, and the number of samples with killing rate > 99.9% accounts for more than 90%, which is judged as qualified disinfection.

4. Matters needing attention

(1) Combined with the characteristics of the place, clarify the disinfection object, and carry out the disinfection work in strict accordance with the disinfection procedures and specifications.

(2) The implementation unit of disinfection work shall have the ability of on-site disinfection. The operators shall receive professional disinfection training, master the basic knowledge of disinfection and personal protection, and be familiar with the use of disinfection equipment and the preparation of disinfectants.

(3) All on-site disinfection shall be recorded and kept for at least 2 years, and self-monitoring shall be carried out at the same time. When conducting disinfection effect evaluation, attention should be paid to standardized operation, and harmless treatment of samples and relevant test materials should be done in strict accordance with biosafety requirements.

(4) During on-site disinfection, personal protection shall be done well, and formal and effective personal protective equipment shall be selected according to the on-site conditions and relevant standards.