

KINGDOM OF CAMBODIA
NATION RELIGION KING



MINISTRY OF HEALTH

GOOD MANUFACTURING PRACTICE GUIDELINE
FOR
FOOD ESTABLISHMENT

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Good Manufacturing Practice Guideline for Food Establishment

1. Introduction

The guideline is designed for food establishments characterized as food factory or handicraft. But for food are sold in restaurant, hotel, market, food distribution, food transportation and food storage out of food establishment are not included in this guideline.

Guideline requirement for food hygiene for food manufacturing is used to assess whether or not food production factory produces food that meets the hygienic practice and is safe for human consumption. This guideline cover all hygienic aspects of the factory i.e. its site, food production house/building, equipment, sanitary, conduction, production process and controlling mechanism including packaging and storage. Details are the followings:

2. Definition

2.1 Produce means: to make, mix, transform and includes repacking.

2.2 Food factory means: only premise that operate with the use of machines which have a total power not less than five horse powers or have workers employed not less than seven.

3. Factory Site and Food Production House/Building

3.1 The factory site and its vicinity must not be located in the area where food products can get contaminations easily.

3.2 The factory site and its vicinity must not be allowed to store any unused equipment or instrument in an inappropriate manner or carelessly waste or garbage to pile up which might become ground for insects and other microorganism.

3.3 The factory site must be located away from the road, walkway or others where dust can accumulate at an exceptionally large quantity which, in turn, could contaminate food products.

3.4 The factory site must be located away from distasteful spots, for example, animal raising stalls, crematorium, toxic substances manufacturing house, or slum areas which could be sources of contamination.

3.5 The factory site must be not have any slops or filthy water. It must have drainage Pipe to drain water into public gutter.

In case when food production house is located next to an unsuitable area or it is not in accordance with 3.2-3.4 as aforementioned, the factory must have an effective mechanism to prevent and exterminate rodents, flies, dust, and other potential sources of contamination.

4.Raw Material Receiving and Quality of Food Establishment

4.1 All elements and operations involved with receiving and storage of ingredients, packaging material, and other incoming material must be evaluated and monitored potential contamination of the food product manufactured. Incoming materials must be received into an area which is separated from processing areas. Only safe, approved food grade direct and indirect shall be used.

4.2 Food production house must be suitable in size, construction and design to facilitate maintenance and sanitary operations for food manufacturing purposes.

4.3 The plan and facilities must be made from durable material and constructed in such a manner that floors, walls and ceiling may be adequately cleaned and kept clean and kept in good repair.

4.4 Separate the residential area from the production house.

4.5 There must be a system to prevent any pest to enter the production house.

4.6 There must be provided sufficient space for placement of equipment and be separated by type of production activities to prevent any contamination which is likely to occur.

4.7 There must be a system to control the elimination of waste or irrelevant thing in the production area.

4.8 There must be adequate lighting and good ventilation system for work within the production house.

5. Instrument and Equipment

5.1 All instruments or equipments coming into contact with food, must be made of material with no toxic effect which might be harmful to consumers.

5.2 Table used for food production must be properly designed for both type of material and manner and enough for operating. The food contact surface must be corrosion resistant and easily cleaned.

5.3 Instruments and equipments must be properly designed and constructed to ensure that the potential contaminations must be avoided and they can be easily and thoroughly cleaned.

5.4 Sufficient instruments and equipments for each type of work must be provided.

5.5 Protocols and calibration methods must be established for all equipment that could impact of food safety. These include:

- thermometers,
- pH meters,
- water activity meters,
- refrigeration controls.
- scales,
- recording thermometers.
- hygrometers, and other equipment.

All reagents used for monitoring and verification must be documented and stored properly.

Appropriate monitors must be used.

6. Production and Process Controls

6.1 All operation in the examining raw materials and other ingredients, transporting, segregating, preparing, producing, packaging and storing of food must be strictly controlled in accordance with good sanitary practice. Responsible officials must be assigned to inspect and supervise the entire process as follows:

6.1.1 Raw materials and other ingredients must be inspected and segregated or other wise handled as necessary to ascertain that they are clean and suitable for processing into food and must be stored under conditions that will prevent contamination, minimize deterioration and have effective stock rotation system.

6.1.2 Equipment, containers, and utensils used to convey, hold or store raw materials, work-in-process or food must be constructed, handled and maintained during manufacturing or storage in a manner that can prevent contamination.

6.1.3 When ice or steam are used in contact with food, they must meet the standard Quality of ice or drinking water specified in the Ministerial Notification and be produced, handled stored and under hygienic condition.

6.1.4 Water used in the production process must meet the standard quality of drinking water specified in the Ministerial Notification.

6.1.5 Production, storage and transportation of finished food product must be kept under

conditions that will protect food against physical, chemical and microbial contamination as well as against deterioration of the food and the container.

6.1.6 The entire in the production process must be done under proper condition in regarding to time, temperature, humidity, vapor pressure, flow rate and other related processes such as water eradication, heat treatment and freezing.

6.2 Records & Reports must be provided at the site, at least

- the laboratory analysis results of food products.
- type, quantity of food production with manufacturing date.
- other relevant factors.

7. Packaging

7.1 Storage and characteristic of container materials:

7.1.1 All container material should be stored in a clean and sanitary manner. The material should be appropriate for the product to be packed and for the expected conditions of storage and should not transmit to the product objectionable substances beyond the limits acceptable to the official agency having jurisdiction. The container material should be sound and should provide appropriate protection from contamination from contamination. The product containers should be sufficiently durable to withstand the mechanical, chemical and thermal stresses encountered during normal distribution. An overwrap may be necessary for flexible and semi-rigid containers. With laminates particular attention should be paid to ensure that the delamination, as this may result in loss of integrity.

7.1.2 All empty containers or container material used in aseptic systems should be as clean as possible. Soiled or damaged aseptic packaging materials, may impede sterilization and proper ealing and should not be used. Aseptic container material may be affected by changes in hysical parameters such as relative humidity and should be stored so as to minimize such changes. All storage and handling procedures should minimize the chance of contamination or damage of packaging material.

7.2 Inspection of container materials and containers

7.2.1 Appropriate sampling and inspection schemes should be used by both container manufacturers and food processors to ensure that containers and closures are in compliance with jointly

agreed specifications and any requirements of the agency having jurisdiction that may apply.

7.2.2 If container or container material cleaning methods are available, they may be used providing the cleaning process does not proper sterilization of container material or its arrier properties after filling and sealing. Inspection is particularly important in the case of glass containers which might possibly contain fragments of glass and glass defects which are difficult to see.

7.2.3 Faulty containers should not be filled. Care should be taken to avoid damage to empty containers, closures and container materials which can result from faulty handling prior to closure. If these are filled, material will be wasted and there is always a danger of damaged container jamming a filling or sealing machine and necessitating a shutdown and resterilization. Faulty containers may leak during or after processing and storage.

7.3 Cleaning of container materials

Containers materials to be sterilized chemically as with hydrogen peroxide should be stored in accordance with 7.2.2 so that the necessity for cleaning is avoided.

7.4 Proper use of containers

Containers must never be used within the processing facility for any purpose other than packing food. They must never be used as trays, small waste container, receptacles for small machine parts or for other purposes. This should be avoided because there is a considerable risk that such containers may accidentally find their way back onto the production line and result in the packing of food in the same container with very objectionable or possibly dangerous material.

During filling, contamination of seal or seam areas with product should be avoided unless equipment is specifically designed to remove product from seal areas prior to sealing. (Overfilling and splashing can lead to contamination of seams or seals and adversely affect container integrity).

7.6 Closing operations

7.6.1 Particular attention should be given to the operation, maintenance, routine checking and adjustment of container closing equipment. Sealing and closing machines should be fitted and adjusted for each type of container material used. Seams and other closures should be tight and secure and meet the requirements of the container material and closing equipment manufacturers, the food processor and those of the agency having jurisdiction.

7.6.2 Seam or seal areas should be kept as clean and dry as necessary to obtain a satisfactory closure.

7.7 Inspection of closed containers

During the production runs, regular observations should be made for external container defects. At intervals of sufficient frequency to ensure proper closure, the operator, or other person competent to inspect container and their closures, should examine the filled, sealed containers for product leakage or the presence the defects which may affect container integrity.

Records of observations should be maintained and, where irregularities are found, corrective action should be taken. Additional visual closure inspections should be made immediately following a machine malfunction, adjustment or start-up following a prolonged shut down.

7.8 Preproduction equipment sterilization

Before production begins, all piping, valves, pumps, surge tanks and product fillers and other product contact surfaces downstream from the hold section or tube must be brought to a condition of commercial sterility, and this condition must be maintained until production is completed.

7.9 Packaging equipment

The aseptic zone of filling and packaging equipment must be cleaned and brought to a condition of sterility prior to the initiation of product filling and must be maintained in a condition of sterility throughout production. The aseptic zone should be re-sterilized when conditions occur which may result in loss of sterility.

8. Sanitation

8.1 The water supply must be sufficient for the operation intended and be safe and of adequate sanitary quality and have water treatment system if necessary.

8.2 Adequate lavatories for employees must be provided including wash basin in front of each lavatory room. The facilities must be in hygienic condition and must be equipped with necessary hand washing facilities. The lavatories must be located separately at a distance away from production zone or provided door that do not open directly to the production area.

8.3 Numbers of toilet, urinals and hand washing should be defined as followed

Number of employee	Toilet	Urinal	Hand washing
not more than 15	1	1	1
not more than 40	2	2	2
not more than 80	3	3	3

If the number of workers more than 80, the numbers of toilet, urinal and hand washing shall be increased by one for every 50 increasing workers.

8.4 Effective measure must be applied to prevent and exclude pest from the production area.

8.5 Adequate pest-proof waste containers in the proper position of the food production area and appropriate waste disposal system must be provided.

4.6 Adequate drainage and waste disposal systems and facilities must be provided. They must be designed and constructed so that in risk of contaminating food is avoided.

9. Maintenance and Cleaning

9.1 The production house must be adequately clean and kept in hygienic condition.

9.2 Instruments, equipments and utensils must be adequately clean both prior or after processing and be proper maintained in an appropriate hygienic condition.

9.3 All food-contact surfaces of equipment and instrument must be regularly cleaned.

9.4 Instruments, equipments, and utensils must be maintained in proper and good working condition.

9.5 Cleaning chemicals including chemicals associated with the production process must be handled and used under safety condition. They must to be stored separately and safely and they must be stored in clearly identified containers to avoid the risk of contamination.

10. Personnel

10.1 Shall not employed incapable or mental disorder person or any person having disease capable of transmitting to food products. Such communicable diseases are as follows

1-Leprosy

2-Infecting stage of T.B

3-Drug addict

4-Alcoholic

5-Elephantiasis

6-Repugnant skin disease.

10.2 All persons working in food establishment shall have medical examination documents or health book and they have to receive medical check-up done by doctors at least two times per year.

10.3 All persons working in direct contact with food, food-contact surfaces, and food-packaging materials must conform to hygienic practices, while on duty they must :

10.3.1 Keep their body clean and wear a clean gown.

10.3.2 Wash hands thoroughly (and sanitizing if necessary) before starting work, after each absence from the work and at any time when the hands may have become contaminated.

10.3.3 Maintain gloves, if they are used in food handling, in an intact, clean, and sanitary condition. The gloves must be made from non-solvent and impermeable material to prevent food contamination.

10.3.4 Remove all personal effects such as jewellery, watches, pins or other items while working, if they pose a threat to the safety and suitability of food. There must be measure to maintain personal cleanliness.

10.3.5 Wear, where appropriate, in an effective manner, cap, bonnet, or hair net.

10.4 Food handlers must receive appropriate training in food hygiene and proper food handling technique.

persons working in food establishment shall report to management when they have health problem such as:

- jaundice;
- diarrhea;
- vomiting;
- fever;
- sore throat with fever;
- visibly infected skin lesions(boils, cuts, etc.)
- discharges from the ear, eye or nose.

After receiving above information, the management should take action whether they need for medical examination and /or possible exclusion from food handling.

10.5 Visitors to food manufacturing, processing or handling areas must, where appropriate, behave in accordance with 10.1-10.3. *By*