# TQF Certification Program

## Certification Standard 2023
## General Requirement

**TQF**
Association

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# TQF 驗證方案驗證標準簡介

## 1 Introduction

### 1.1 Objective

All food factories have a legal and moral responsibility to provide safe food for consumers. The "Total Quality Food Certification Program" (hereinafter referred to as the "TQF Program") is established to provide food factories with the framework for implementation and maintenance of their food safety management system, and to comply with local food laws and regulations, international food safety standards, and also satisfy stakeholders' expectations.

The TQF Program is a safety and quality food product certification program which provides the norms and requirements governing food sanitation, food safety, and quality, certified by an accredited and licensed third party certification body to ensure the completeness, safety, and quality of the food supplied by the food factory. The TQF Program is co-established by private and public partners in Taiwan's food industry to facilitate the robust development of Taiwan's food industry and ensure consumers' interests and rights.

### 1.2 Scope of the TQF Program, version 2023

The TQF Program provides two levels of certification. TQF Certification Program Level 1 (TQF L1) satisfies the Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Point (HACCP), and Food Safety Management (FSM) requirements. TQF Certification Program Level 2 (TQF L2) includes Quality Management (QM) requirements.

The TQF Program covers TQF L1 and TQF L2 requirements in the manufacturing of four (4) types of processed food:

- the processing of perishable animal products;
- the processing of perishable plant products;
- the processing of perishable animal and plant products (mixed products), and
- the processing of products stable at room temperature.

The TQF Program applies only to processed and packaged food products. TQFA has identified twenty-eight (28) food sector categories which are listed in TQF Certification Program Management, version 2023, Table 1.3.4.

## 1.3 Normative Documents

The TQF Program Management, version 2023 describes the application procedure to achieve and maintain TQF certification, management of the certification program owner, management of certification bodies, management of accreditation bodies, and requirements for professionals.

The TQF Certification Standard, version 2023 (this document) consists of general requirements, technical guideline and technical standards and specifications for testing. Food factories establish, execute, and maintain their food safety and quality management systems in accordance with the TQF Certification Standard.

The general requirements incorporate the GFSI Benchmarking Requirements and integrate the food safety fundamental specifications (previously chapter 4), food safety management requirements (previously chapter 5), and food quality management requirements (previously chapter 6) from the last TQF Program version, describing general requirements of TQF Program for food safety and product quality management in principled manner.

The technical guidelines are designed based on the framework of general requirements which included requirements listed in the previous version of the TQF Program. All these requirements shall also be complied by the food factories.

## 1.4 Structure of the TQF Certification Standard, version 2023

The TQF Certification Standard consists of four parts (Figure 1.4):

Section 1: Good Manufacturing Practices (GMP) sets out the aspects and specifications that can affect food safety, directly or indirectly, such as the layout equipment, sanitation, training, processing and packing operations, and warehousing and transportation within food factories.

Section 2: Hazard Analysis and Critical Control Points (HACCP) system, which sets forth the systematic identification and control of food safety hazards using hazard analysis, identification of critical control points, validation of critical limits, monitoring methods, corrective actions, verification procedures and documentation, for the HACCP plans in certified food factories.

Section 3: Food Safety Management (FSM), which sets out the guidelines governing the management of food safety within food factories, including food safety policies, commitments, procedures, and oversight.

Section 4: Quality Management (QM), which sets forth the requirements for food quality management within TQF certified food factories.
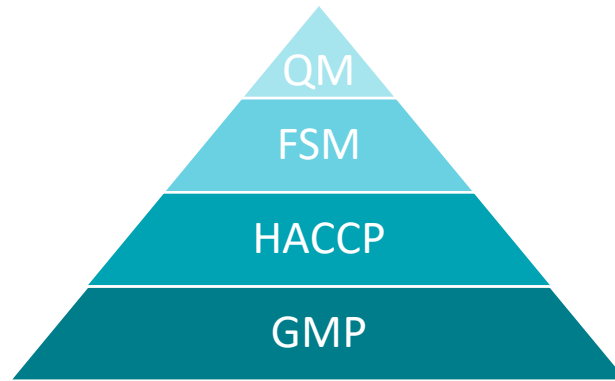
Figure 1.4 Composition of Certification Standards

## 1.5 Normative References

The following normative references are used in the development, implementation, update, maintenance, and management of the TQF Certification Standard, version 2023:

- Codex Alimentarius Commission, General Principles of Food Hygiene, CXC 1-1969, Adopted in 1969. Revised in 1997, 2003, 2020; General Principles, Good Hygiene Practices, and Hazard Analysis and Critical Control Point System and Guidelines for it's Application (herein referred to as "HACCP")

- ISO/IEC 17025 General Requirements for The Competence of Testing and Calibration Laboratories (herein referred to as "ISO17025")

- GFSI Benchmarking Requirements; version 2020.1; part lll, Cl, Cll, Clll, and ClV (herein referred to as "GFSI Benchmarking Requirements")

- Applicable food safety regulations and industry codes of practice in the country where the food manufacturing business is located and the countries in which the manufactured products are sold.

The following operation guidelines of TQF Program Food Sector Categories documents are provided for reference:

- General and Specified Provisions for TQF Technical Specifications

- TQF Specifications and Standards for Product Inspection Test Items

## 2　General Requirement

### 2.1　Good Manufacturing Practice (GMP)

| GMP | Item | General Requirements |
|-----|------|----------------------|
| GMP 1 | Site Location | • Food factories shall be located in areas that are not likely to cause contamination and minimize the risk of contamination of raw materials, semi-finished products, rework, and finished products during inspection and acceptance, storage, production, and shipment. |
| GMP 2 | Management of Local Environment | • Food factories shall establish, implement and maintain food safety standards for the factory premises and its environment to ensure they are maintained in good condition, prevent cross contamination, and minimize the risk of contamination of raw materials, semi-finished products, rework, and finished products. |
| GMP 3 | Site Design, Construction, Layout, and Maintenance of Factory Premises | • Food factories shall ensure that the interior and exterior of the factory and facilities (e.g., warehousing, raw material and product handling, temporary storage, and packaging zones) are designed, constructed, and maintained in a manner sufficient to prevent or minimize food safety risk.<br>• The layout of production equipment and staff movement, raw material intake and storage, and processing operations shall satisfy the intended purpose and prevent food safety risk. |
| GMP 4 | Design and Maintenance of Equipment | • The equipment and utensils in the food factory shall be designed and selected for their intended purpose and to minimize food safety risk.<br>• A maintenance plan shall be established and implemented to maintain the equipment and utensils in good condition. It shall include a complete list of equipment and utensils, the maintenance frequency, and scope of maintenance.<br>• The equipment and utensils shall be used, maintained, and stored in a manner to mitigate the food safety risk. |
| GMP 5 | Facilities for Employees | • Food factories shall make utilities available to employees including, at a minimum, handwashing facilities, locker rooms, and rest rooms.<br>• The utilities shall be designed, constructed, and used in a manner to mitigate food safety risk. |

| GMP | Item | General Requirements |
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| GMP 6 | Sanitation and Hygiene Management Plan | • Food factories shall establish, implement, and maintain procedures for sanitation and hygiene management. The procedures shall include sanitation and hygiene management of the environment, facilities, and equipment at the factory premises, and to confirm that the environment and equipment at the factory premises are kept in an adequate and safe condition that is not likely to cause food safety hazards. |
| GMP 7 | Environmental Management, Cleaning, and Disinfection at Factory Premises | • The sanitation and hygiene management plan for the food factory shall include procedures for the use and storage of cleaning and sanitation equipment, chemicals, and supplies, and shall be designed to minimize food safety risk.<br>• The cleaning and sanitation operations shall be designed and implemented to prevent cleaning agents and sanitizers from contaminating food and food contact surfaces.<br>• Periodic verification of the effectiveness of cleaning and sanitation procedures shall be conducted. |
| GMP 8 | Personnel Hygiene Management | • The food factory shall establish, implement, and maintain personnel hygiene procedures, including personal hygiene standards, work uniforms, and medical checks.<br>• The food factory shall provide adequate protective clothing to everyone entering the site.<br>• Medical checks shall include a regular medical checkup with feedback, follow-up, and treatment of any symptoms for personnel who are found to be unwell or may cause a food safety hazard, such as fever, cough, or open wounds.<br>• The procedures shall be applicable to all personnel entering the work site. |
| GMP 9 | Waste Management | • The food factory shall establish, implement, and maintain waste management procedures which include the collection, storage, and treatment of waste material (including treatment of discharged water and wastewater).<br>• Waste shall be removed from process lines as quickly as possible to prevent cross contamination of food and food contact surfaces. |
| GMP 10 | Pest Control | • The food factory shall establish, implement, and maintain a pest management procedure to prevent or remove harmful animals or insects that could cause a food safety risk in the factory premises, surrounding areas, and facilities. |

| GMP | Item | General Requirements |
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| GMP 11 | Training | • The food factory shall establish, implement, and maintain training programs for new and existing employees. Appropriate food safety training shall apply to all employees who impact food safety to enable them to apply food safety practices in their work environment. |
| GMP 12 | Management of Air and Water Quality | • The food factory shall establish management standards for air, compressed air and other gases, and water (including ice and steam where appropriate) used in the processing of food products and monitor and record their condition periodically to mitigate any food safety risk.<br>• When non-potable water is used within the food factory, appropriate management shall be documented and implemented. |
| GMP 13 | Product Contamination Risk and Segregation | • The food factory shall establish, implement, and maintain process control procedures. All manufacturing operations (including inspection and acceptance, manufacturing, rework, packaging, and storage) shall satisfy the food safety and sanitation regulations and be conducted to prevent the risk of food contamination and cross contamination. |
| GMP 14 | Rework | • The food factory shall establish, implement, and maintain operating procedures for rework of raw materials and ingredients, semi-finished products, finished product, and packaging, to mitigate the risk to food safety. All rework information shall be accurately recorded. Reworked goods shall be traceable. |
| GMP 15 | Reception of Purchased Materials | • The food factory shall establish, implement, and maintain procedures for the receipt of raw materials, ingredients, and food packaging materials. Each batch of raw materials shall be received into the factory only following a successful inspection. A raw material management policy shall be in place to trace the source of all materials.<br>• Any materials found to be defective shall be marked clearly, segregated, and appropriately disposed of. |
| GMP 16 | Warehousing and Transportation Management | • The food factory shall establish, implement, and maintain a warehouse management procedure which includes separation of storage areas, storage conditions, stock-in/stock-out management, and warehouse management. Warehouse management shall be recorded.<br>• The food factory shall establish, implement, and maintain a transport management procedure which includes requirements for |

| GMP | Item | General Requirements |
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|  |  | the forms and condition of transport, intended use, and sanitation and hygiene management. <br><br> • Raw materials shall be used in order of production date, and within the expiry date. This shall also apply to the order in which finished goods are shipped. |

## 2.2 Hazard Analysis and Critical Control Point (HACCP)

| HACCP | Item | General Requirements |
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| HACCP 1 | Establishment of HACCP Plan | • The food factory shall document and implement HACCP plans based on the Hazard Analysis and Critical Control Points (HACCP) guidelines published by the Codex Alimentarius Commission and risk management principles.<br>• Prerequisite Programs shall be implemented before establishment of the HACCP plans.<br>• The HACCP plans shall be managed systematically and consider all applicable food safety laws. |
| HACCP 2 | Establishment of HACCP Team | • The food factory shall establish a food safety management (HACCP) team consisting of competent technical personnel including senior management or their proxies. |
| HACCP 3 | Product Description, Establishment of Flow Diagram and Hazard Analysis | • The hazard analyses shall identify the biological, physical, and chemical hazards (including allergens) that could occur at each process step and the potential frequency and severity. The hazard analyses shall be based on the product descriptions, intended use, and the flow diagram for the target processes.<br>• The HACCP plans shall be defined by product type, processing lines, and production site. |
| HACCP 4 | Critical Control Points (CCPs) | • Critical Control Points (CCPs) shall be documented and implemented at each process step where control is necessary to eliminate a food safety hazard or reduce it to an acceptable level. |
| HACCP 5 | Critical Limits | • Critical limits shall be established and scientifically validated at each CCP to demonstrate food safety control. |
| HACCP 6 | Monitoring Method | • The methods by which the critical limits are monitored, including methods, frequency, and responsible personnel, shall be documented and effectively implemented to ensure the process remains within the established critical limits. |
| HACCP 7 | Corrective Action | • The corrective actions to be taken when monitoring indicates a deviation from the established critical limits shall be documented and implemented. The cause of any identified deviation shall be identified and corrected. |
| HACCP 8 | Verification Procedure | • HACCP verification procedures shall be implemented periodically. HACCP plans shall be re-verified in the event of any changes in the inspection and acceptance, processing, rework, packaging, and storage of materials or finished products that can affect product safety. |

| HACCP 9 | Documents and Records | • Documents and records related to the development and maintenance of HACCP plans shall be retained. |
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## 2.3 Food Safety Management (FSM)

| FSM | Item | General Requirements |
|---|---|---|
| FSM 1 | Organization and Personnel | • The senior management of the food factory shall determine the organizational structure and functions related to food safety and quality activities, including the duties and responsibilities in manufacturing, quality control, sanitation and hygiene management, and food safety management. |
| FSM 2 | Management Commitment and Food Safety Culture | • The senior management shall establish, implement, maintain, and continually improve the food safety commitment and culture, and practice the food safety culture within the factory. A review mechanism shall be in place with respect to management commitment. The food safety culture practices shall include at a minimum communication, training, employee feedback, and performance evaluation related to food safety. |
| FSM 3 | Food Safety Policy and Objective | • The food factory shall document and implement a food safety policy and objectives, set performance indicators for the policy and objectives, and conduct regular performance evaluations. |
| FSM 4 | Management Review | • The food factory shall establish, implement, and maintain management review procedures.<br>• Senior management shall review the food safety management system (including the HACCP plans) at a minimum annually, identify any changes that may impact food safety, correct any anomalies in a timely manner, and confirm the validity of the food safety management system. |
| FSM 5 | Food Safety Legislation | • The food factory shall establish, implement, and maintain procedures to ensure that food safety laws and regulations applicable in the territories of manufacture and sale are effectively implemented. |
| FSM 6 | Food Safety Management System | • The food factory shall establish, implement, and maintain the food safety management system. Its design and management shall be integrated and adjustable to incorporate customers' requirements and the scope of business activities.<br>• Information that might impact food safety and enable improvement of the food safety management system shall be collected, analyzed, and implemented if applicable. |
| FSM 7 | Food Defense Management | • The food factory shall establish and conduct a food defense risk assessment.<br>• A food defense plan shall be established, implemented, and maintained based on the food defense risk assessment, including |

| FSM | Item | General Requirements |
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| | | the analysis of threats and vulnerabilities posed by incoming materials and services, and food manufacturing equipment and facilities.<br>• The food factory shall document and develop the food defense system by identifying the known food defense risk factors that might cause public health risk, and implementing preventive measures that mitigate or remove the identified hazards. |
| FSM 8 | Food Fraud Management | • The food factory shall establish, implement, and maintain a food fraud vulnerability analysis procedure and food fraud prevention plan based on the fraud vulnerability analysis results.<br>• The food factory shall be supported by food safety management system and shall document and implement the food fraud prevention plan within the food safety management system by identifying the known food fraud risk factors and implementing preventive measures that mitigate or remove the identified hazard. |
| FSM 9 | Document Management Procedure | • The food factory shall establish, implement, and maintain a procedure to manage documents and data in electronic and paper form, and confirm that food safety management system documents are current, in use, and controlled effectively.<br>• All related records shall be stored safely for the time period required by law in the applicable territories of manufacture and sale. Records shall at least be maintained until the expiration of the life cycle of the applicable products, and the relevant data shall be available at any time, if required. |
| FSM 10 | Food Safety Management Procedures | • The food factory shall establish, implement, and maintain effective procedures and operating standards for the processes and activities that affect food safety.<br>• The procedures and operating standards shall be documented and available in languages and in a form understood by all relevant personnel. |
| FSM 11 | Resources Management | • The senior management or their proxies shall supervise the application and maintenance of food safety activities, provide sufficient personnel and resources to achieve food safety management objectives, and ensure the continued supply of effective resources to satisfy the needs of operations, maintenance, review, and improvement of the food safety management system. |

| FSM | Item | General Requirements |
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| FSM 12 | Purchasing and Supplier Management | • The food factory shall establish, implement, and maintain purchasing and supplier assessment procedures to ensure that raw materials and services from external sources satisfy the food factory's specific food safety requirements as well as applicable food laws and regulations.<br>• The approved supplier assessment procedure shall include evaluation, implementation methods and continued monitoring frequency. Results shall be recorded. Raw materials shall be sourced from approved suppliers.<br>• In the event of an emergency, if it is necessary to acquire raw materials from a non-approved supplier, an assessment procedure for emergency procurement shall be in place to ensure that the products satisfy related regulations and the food safety specifications of the food factory.<br>• The special procurement procedure shall include specifications for products and services subject to special procurement to ensure they do not cause a food safety risk. |
| FSM 13 | Specifications for Purchased Materials | • The food factory shall establish, implement, and maintain specifications for raw materials and services to ensure that they do not negatively impact product safety and achieve product expectations.<br>• The specifications and requirements for raw materials and services shall be regularly reviewed and revised where necessary. |
| FSM 14 | Contract Management | • The food factory shall establish, implement, and maintain procedures for contract review and business coordination. |
| FSM 15 | Traceability | • The food factory shall document, implement, and maintain a product traceability system able to trace materials and ingredients back to their source, and finished product to the next customer, such as the distributor or retailer. Products shall be traceable from material supplier to finished customer.<br>• The validity of the traceability system shall be tested at least annually. |
| FSM 16 | Product Development | • The food factory shall establish, implement, and maintain product design and development procedures to ensure the safety and quality of new products or changes to existing products or processes, and satisfy food laws and regulations. |

| FSM | Item | General Requirements |
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| FSM 17 | Allergen Management | • The food factory shall document, implement, and maintain an allergen management procedure to prevent the risk to products of cross-contact from allergenic sources.<br>• Finished products shall satisfy the allergen labelling requirements applicable in the territories of sale. |
| FSM 18 | Control Of Measuring and Monitoring Equipment | • The food factory shall have effective measures in place to manage instruments and equipment used to monitor critical control points, conduct product analysis and other food safety controls.<br>• Procedures shall be documented, implemented, and maintained to calibrate, maintain, and label all instruments and gauges used in processing, inspection, and testing. The frequency of calibration shall be based on instrument use.<br>• The methods applied for calibration shall follow national or international standards.<br>• Calibration results shall be recorded and maintained, and corrective action taken if necessary. |
| FSM 19 | Product Labelling and Product Information | • The products manufactured by the food factory shall be labeled in accordance with the laws and regulations applicable in the territories of sale. If product labeling is not required, customers and consumers shall be provided with product information to ensure that they are able to use the product correctly and safely. |
| FSM 20 | Analysis and Testing | • The food factory shall establish, implement, and maintain a sampling and testing procedure which includes an applicable sampling plan for materials, work-in-progress, and finished product.<br>• Critical testing for food safety shall apply sampling and testing methods in accordance with the applicable requirements of ISO 17025.<br>• Outsourced testing shall be conducted by a laboratory accredited to ISO 17025 or equivalent international standard. |
| FSM 21 | Environmental Monitoring | • The food factory shall implement an environmental monitoring plan based on food safety risk which assesses potential microbiological pathogens and allergens. |
| FSM 22 | Internal Audit | • The food factory shall establish, implement, and maintain an effective internal audit procedure covering all elements of the food safety management system, including the HACCP plans. Internal audits shall be conducted at least annually by trained |

| FSM | Item | General Requirements |
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| | | internal auditors delegated by management to identify and resolve actual and potential non-conformances. |
| FSM 23 | Customer Complaints | • The food factory shall establish, implement, and maintain a customer complaint procedure.<br>• The procedure shall analyze, assess, and respond to any complaints or suggestions proposed by customers in writing or verbally, and take corrective actions where necessary. |
| FSM 24 | Extraordinary Event Management | • The food factory shall establish, implement, and maintain an extraordinary event management procedure for any significant event likely to occur, which shall at least include expected responses and product recall procedures. The extraordinary event procedure shall be periodically tested. |
| FSM 25 | Product Release | • The food factory shall establish, implement, and maintain product release procedures to ensure that the released product meets the specifications and satisfies food safety requirements. All inspection and test records related to the product shall be reviewed by trained personnel before the product is released. |
| FSM 26 | Control of Non-Conformity | • The food factory shall establish, implement, and maintain a procedure for control of non-conforming product to expressly identify and control defective products and ensure that defective raw materials, semi-finished products, rework, and finished products are not released or distributed to the market. |
| FSM 27 | Corrective Actions | • The food factory shall establish, implement, and maintain corrective and preventive actions to determine the root cause of non-conformances and take appropriate corrective actions and process changes necessary to prevent a recurrence. Records shall be kept of all identified deviations and their corrective actions. |

## 2.4  Quality Management (QM) (Applicable only at TQF L2)

| QM | Item | General Requirements |
|---|---|---|
| QM 1 | Quality Assurance Commitment and Responsibilities | • The senior management of the food factory shall declare their commitment to maintain and improve product quality and quality management procedures to satisfy internal product specifications and customer requirements. |
| QM 2 | Quality Assurance Procedures and Specifications | • The food factory shall establish, implement, and maintain product quality assurance procedures and standards, and product quality specifications to meet internal and customer requirements. |
| QM 3 | Integrated Quality Program | • The food factory's Integrated Quality Program (IQP) shall be based on the process flowchart (quality flowchart) or HACCP guidelines from the Codex Alimentarius Commission and shall identify the critical points that impact product quality, including raw material management, process control, resource utilization, the application of technology, packaging, storage, and transportation. |
| QM 4 | Shipping Quality | • The food factory shall test and review finished product quality against the quality specifications using defined test methods, or the test method prescribed by customers. Only products which meet quality specifications shall be shipped. |

# TQF
Total Quality Food Association