

Packaging law and regulations

Food Quality: The term food quality refers to attributes that influence a product's value to consumers. This includes both negative attributes such as spoilage, contamination, adulteration, food safety hazards as well as positive attributes such as colour, flavour, texture.

- It is therefore a **holistic concept** integrating factors such as nutritional traits, **sensorial properties** (colour, texture, shape, appearance, taste, flavour, odour), social considerations, safety. **Safety is a preliminary attribute** and precursor of quality.
- In order to ensure that foods are safe and of good quality, across the world **various governments and international bodies have laid down food standards** that manufacturers/suppliers are expected to adhere to.

Thus, all food service providers (those involved at all stages of pre-preparation and preparation/processing, packaging and service) should adhere to **good manufacturing practices** and **ensure food safety**.

Salient points to be borne in mind are:

1. Quality of raw materials and water
2. Cleanliness of the premises, personnel, equipment, food preparation and storage and serving areas
3. Storage of food at appropriate temperature
4. Food hygiene
5. Good service practices.

Food Standards

Effective food standards and control systems are required to integrate quality into every aspect of food production and service, to ensure the supply of hygienic, wholesome food as well as to facilitate trade within and between nations. There are **four levels of standards** which are well coordinated.

- a. Company Standards:** These are **prepared by a Company** for its own use. Normally, they are **copies of National Standards**.
- b. National Standards:** These are issued by the **national standards body**, Food Safety and Standards Authority of India (FSSAI).

c. Regional Standards: Regional groups with similar geographical, climate, etc. have legislation standardisation bodies.

d. International Standards: The International Organisation for Standardisation (ISO) and Codex Alimentarius Commission (CAC) publish international standards.

Food Standards and Regulations in India

Voluntary product certification: There are voluntary grading and marking schemes such as ISI mark of BIS and Agmark.

- The **Bureau of Indian Standards (BIS)** deals with standardization of various consumer goods including food products and runs a voluntary certification scheme known as 'ISI' mark for **processed foods**.
- **Agmark** is a voluntary scheme of certification of **agricultural products** (raw and processed) for safeguarding the health of consumers.
- Since the government had several regulations and laws, food industry found it cumbersome to adhere to. A need was therefore felt to integrate all such laws for regulating the quality of food.
- With this in view, Indian Government has passed **Food Safety and Standards Act (FSSA), 2006**, to bring the different pieces of legislation pertaining to food safety under one umbrella.

Food Safety and Standards Act, 2006

The objects of the Act are to consolidate the laws relating to food. The **Food Safety and Standards Authority of India (FSSAI)** has been established under **Food Safety and Standards-2006**, which **consolidates various acts and orders** that have hitherto handled food related issues in various Ministries and Departments.

- The Food Safety and Standards Authority of India was established for laying down science-based standards for food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption.
- The Act has provisions for maintenance of hygienic conditions in and around manufacturing premises, assessment and management of risk factors to human health in a scientific manner, which were not specified in the PFA.
- The FSSAI reflects the international shift in food laws, from compositional standards or vertical standards to safety or horizontal standards.

Food Safety and Standards Authority of India (FSSAI) has been mandated by the Food Safety Standards Act, 2006 for performing the following functions:

- Framing of regulations to lay down the standards and guidelines for articles of food and system of enforcing various standards.
- Laying down mechanisms and **guidelines for accreditation of certification** bodies for certification of food safety management system for food businesses and accreditation of laboratories and notification of the accredited laboratories.
- To provide **scientific advice and technical support** to Central Government and State Governments **for framing the policy** and rules related to food safety and nutrition.
- Collect and **collate data regarding food consumption**, incidence and prevalence of biological risk, contaminants in food, residues of various contaminants in food products, identification of emerging risks and introduction of rapid alert system.

- Creating an **information network across the country** so that the public, consumers, Panchayats, etc., receive rapid, reliable and objective information about food safety and issues of concern.
- Provide **training programmes** for persons who are involved or intend to get involved in food businesses.
- Contribute to the **development of international technical standards** for food, sanitary and phyto-sanitary standards.
- Promote general **awareness** about food safety and food standards.

For more information visit: <https://fssai.gov.in>

International Organizations and Agreements in the Area of Food Standards, Quality, Research and Trade

Since ancient times, governing authorities the world over, have made attempts to develop and implement food standards in order to protect health of consumers and prevent dishonest practices in sale of food. There have been several international organizations and agreements which have played a role in enhancing food safety, quality and security, facilitating research and trade. The major organizations which are playing a key role are:

1. Codex Alimentarius Commission (CAC)
2. International Organization for Standardization
3. World Trade Organization

1. Codex Alimentarius Commission

CAC is an **intergovernmental body** formed with the objective of establishing international standards to protect the health of the consumers and facilitate food and agricultural trade.

- In 2017, the membership of Codex was 187 member countries and one Member Organization (European Community) respectively. India is a member through the **Ministry of Health and Family Welfare**.
- CAC has become the **single most important international reference point** for developments associated with food standards. The document published by the CAC is **Codex Alimentarius** which means 'Food Code' and is a collection of internationally adopted Food Standards.
- The document includes **Standards, Codes of Practice, Guidelines** and other recommendations in order to protect consumers and ensure fair practices in food trade. **Different countries use Codex Standards to develop national standards.**

The Prevention of Food Adulteration Act 1954

(PFA, 1954) was enacted by the Government of India to prevent adulteration of food. The Act has been **amended over 200 times as per need**. In addition to PFA, there are other Orders or Acts that help to ensure the quality of specific foods such as:

Fruit and Vegetable Product Order: Specifications for fruit and vegetable products are laid down.

Meat Food Products Order: Processing of meat products is licensed under this order.

Vegetable Oil Products Order: Specifications for vanaspati, margarine and shortenings are laid down. All such acts have been consolidated under the Food Safety and Standards Act.

All food products manufactured in India, or imported and sold in India have to meet the requirements prescribed under the Food Safety and Standards Act.

2. International Organization for Standardization

(ISO) The International Organization for Standardization (ISO) is a worldwide, **non-governmental federation** of national standards bodies (ISO member bodies).

- The mission of ISO is to promote the **development of standardization** and related activities in the world with a view to facilitate the international exchange of goods and services, and to develop cooperation in the spheres of intellectual, scientific, technological and economic activity.
- The work done by ISO results in **international agreements** which are published as **International Standards**.
- **ISO 9000 is an international reference for quality requirements**. It is concerned with “**Quality Management**” of an organization. Adoption of these standards is voluntary.

The difference between Codex and ISO are given in the box given hereby.

Differences between Codex and ISO

Codex	ISO
<ul style="list-style-type: none">● Used to develop national regulations● Slow to change● Describe the minimal acceptable practices	<ul style="list-style-type: none">● Voluntary● Standards are reviewed every five years.● Describe current standard industrial practices.

For more information visit <http://www.iso.org>

3. World Trade Organization (WTO)

WTO was established in 1995. The main objective of WTO is to help trade flow smoothly, freely, fairly and predictably, by administering trade agreements, settling trade disputes, assisting countries in trade policy issues. The WTO Agreement covers **goods**, **services** and **intellectual property**.

➤ In order to enforce adoption and implementation of standards, there is a need for a strong **Food Control System**. An effective food control system must consist of-

- (i) Food Inspection
- (ii) Analytical capability

Food Inspection: Conformity of products to standards is verified through inspection. This will ensure that all foods are produced, handled, processed, stored and distributed in compliance with regulations and legislation.

Government / Municipal authorities appoint food inspectors to investigate the status of quality conformity to standards in their laboratories.

Analytical capability: There is need for well-equipped, state-of-the-art accredited laboratories to carry out analysis of food. Further, well-trained personnel having knowledge of principles of laboratory management and physical, chemical and microbiological analysis of food, test foods and food products are also required. A broad range of analytical capabilities is required for detecting food contaminants, environmental chemicals, biotoxins, pathogenic bacteria, food-borne viruses and parasites.

Food Safety Management Systems

Over the years, issues related to food safety and quality have gone beyond just the avoidance of food-borne pathogens, chemical toxicants and other hazards. **A food hazard can enter/come into the food at any stage of the food chain, therefore, adequate control through out the food chain is essential.** Food safety and quality can be ensured through:

- I. Good Manufacturing Practices (GMP)
- II. Good Handling Practices (GHP)
- III. Hazard Analysis Critical Control Points (HACCP)

1. Good Manufacturing Practices (GMP) are a part of quality assurance to ensure that manufacturers/processors take proactive steps to ensure that their products are safe. It enables to minimize or eliminate contamination and false labelling, thereby protecting the consumer from being misled and helping in purchasing products that are not harmful. GMP is a good business tool that helps to refine compliance and performance by the manufacturers/producers.

2. Good Handling Practices indicate a comprehensive approach from the farm to the store or consumer, in order to identify potential sources of risk and indicates **what steps and procedures are taken to minimize the risk** of contamination. It ensures that all persons who handle food have good hygiene practices.

3. Hazard Analysis Critical Control Point (HACCP)

HACCP is a means of providing assurance about safety of food. HACCP is an approach to food manufacture and storage in which raw materials and each individual step in a specific process are considered in detail and evaluated for its potential to contribute to the development of pathogenic micro organisms or other food hazards. It involves **identification of hazards**, assessment of **chances of occurrence of hazards during each step** /stage in the food chain **raw material procurement**, manufacturing, distribution, usage of food products and defining measures for hazard(s) control.