

Paper Code and Title: H06QF Quantity Food Production
Module Code and Name: H06QF08 PFA and Other Standards
Name of the Content Writer: Dr. V. Suganthi

Component – I

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Component-I (B) Description of Module

Items	Description of Module
Subject Name	Home Science
Paper Name	Quantity Food Production
Module Name	PFA and Other Standards
Module ID	H06QF08
Pre-	Previous knowledge about consumer education and food science

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requisites	
Objectives	<ul style="list-style-type: none">• Know about the different food laws and regulations existing in India.• Know about the different Indian and International food standards.
Keywords	PFA, FPO, MPCO, MMO, BIS, Agmark, CCFS, CFL, ISO, Codex Alimentarius

PFA AND OTHER STANDARDS

1. INTRODUCTION

Different laws govern the food processing sector in India. Multiple laws/regulations prescribe varied standards regarding food additives, contaminants, food colours, preservatives and labeling. The food laws in India are enforced by the Director General of Health Services, Ministry of Health and Family Welfare, Government of India.

2. OBJECTIVES

After studying this chapter, you should be able to:

- Know about the different food laws and regulations existing in India.
- Know about the different Indian and International food standards.

3. NEED FOR FOOD LAWS

Food laws came into existence for a number of reasons:

- (i) To maintain the quality of food produced in the country.
- (ii) To prevent exploitation of the consumers by the sellers. This could only be done by making consumers aware of what to expect in terms of quality when they buy food.
- (iii) To establish a criteria for quality of food products, since more and more foods are eaten in processed forms rather than natural forms. This has resulted in the inability of the consumer to identify the quality of the contents of a packet or can, except through the label, or a mark of quality that could be identified easily.

4. DIFFERENT FOOD LAWS IN INDIA

4.1. Prevention of Food Adulteration, (PFA) Act (1954)

The PFA Act, 1954 lays down the guidelines for setting up standards for various food items like cereals and cereal products, pulses, ghee, etc. All processed items which are mass

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produced for public use are expected to conform to these standards. Amendments to the Act have been made and standards laid down by the Central Committee for Food Standards, on the basis of the standards laid down by the International Codex Alimentarius Commission, a body set up jointly by the FAO and the WHO to prepare international food standards, for the protection of consumers and to ensure fair food trade practices.

The PFA Act states that an article of food shall be deemed to be adulterated:

- (a) If the article sold by a vendor is not of the nature, substance or quality demanded by the purchaser, and is to his prejudice, or is not of the nature, substance or quality thereof.
- (b) If the article contains any other substance which affects, or if the article is so processed as to affect injuriously the nature, substance or quality thereof.
- (c) If any inferior or cheaper substance has been substituted wholly or in part for the article so as to affect injuriously the nature, substance or quality thereof.
- (d) If any constituent of the article has wholly or in part been abstracted so as to affect injuriously the nature, substance or quality thereof.
- (e) If the article has been prepared, baked, or kept under insanitary conditions whereby it has become contaminated or injurious to health.
- (f) If the article consists wholly or in part of any filthy, putrid, disgusting, rotten, decomposed or diseased animal or vegetable substance or is insect infested or otherwise unfit for human consumption.
- (g) If the article is obtained from a diseased animal.
- (h) If the article contains any poisonous or other ingredient which renders it injurious to health.
- (i) If the container of the article is composed wholly or in part, of any poisonous or deleterious substance which renders the contents injurious to health.
- (j) If any colouring matter other than that prescribed in respect thereof and in amounts not within the prescribed limits of variability is present in the article.
- (k) If the article contains any prohibited preservative or permitted preservative in excess of the prescribed limits.
- (l) If the quality or purity of the article falls below the prescribed standard or its constituents are present in quantities which are in excess of the prescribed limits of variability.

Consumers can also take samples from shops and file complaints to the Consumer forums established under the Consumer Protection Act (CPA), if they get adulterated foods. The PFA department can also be contacted by phone.

4.2. Essential Commodities Act, 1955

Under this act, there are a number of control orders. The main objectives of this act are to regulate the manufacture, commerce, distribution of essential commodities including food. The following orders are included under this act:

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4.2.1. The Fruit Products Order, (FPO) 1955: The manufacture and distribution of all fruit and vegetable products, synthetic syrups, aerated beverages and vinegar is regulated under this order. It lays the limits for the presence of poisonous elements, permitted food colours, preservatives and additives. The order specifies the standards of sanitation and hygiene followed in factories. It gives directions regarding packing, marking and labeling of containers. It stipulates the standards for quality products. Under this order, it is mandatory for manufacturers of fruit and vegetable products to secure a valid license from the Ministry of Food Processing Industries.

4.2.2. Meat Products Control Order, 1973: This order controls the manufacture, quality and distribution of all raw and processed meat and meat products. The order is regulated by the Directorate of Marketing and Inspection and requires that the meat be obtained from healthy animals, slaughtered in a licensed slaughter house and is fit for human consumption.

4.2.3. Milk and Milk Products Order, 1992: This order is applicable to large units handling more than 10,000 litres milk per day or milk products containing milk solids in excess of 500 tonnes per year. The production, sales, purchase and distribution of milk powder and milk products are covered under this.

4.2.4. Solvent Extracted oils, De-oiled meal and Edible Flour Control Order, 1967 and Vegetable Products Control Order, 1976: The manufacture and distribution of solvent extracted oils, de-oiled meals, edible flours and hydrogenated vegetable oils is controlled by this order. The order stipulates that any vegetable oil product like vanaspathi or bakery shortening or margarine, unless it conforms to the standards of quality shall not be manufactured, stocked or sold. A license is granted by the Directorate of Vanaspathi, Vegetable oils and fats under the Ministry of Civil Supplies consumer Affairs and Public Distribution. The Directorate also controls the market price of vanaspathi.

4.2.5. Standards on Weights and Measures (Packaged Commodities) Rules, 1977: Under this rule, it is obligatory to declare the quantity of the packed commodity on the label.

4.3. The Edible Oils Packaging (Regulation) Order, 1998

All edible vegetable oils and fats excluding margarine, vanaspathi, , bakeryshortening and fat spreads are included in this Act. From December 15th,1998, no person shall sell or expose for sale, or distribute or offer for sale, or dispatch or deliver to any person for the purpose of sale any edible oil that does not conform to the standards of quality as provided in the Prevention of Food Adulteration Act, 1954 and rules thereunder and that is not packed in a container, marked and labeled in the specified manner.

All edible oil packers need a certificate of registration. This certificate is issued only when sanitary requirements are fulfilled and the plant has qualified, experienced chemists and a laboratory for testing samples of edible oils.

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The container/pouch in which the edible oil is packed should have the following particulars:

- Name/trade name
- Name and address of packer
- Name/description of contents
- Net mass/volume of contents
- Batch no., month and year of manufacture
- Registration number

The label should not contain any statement or claim that is false or misleading with respect to the quality or nutritive value of the edible oil.

5. VOLUNTARY STANDARDS AND CERTIFICATION SYSTEMS IN INDIA

In addition to the mandatory acts and orders, agencies such as Bureau of Indian Standards (BIS) and the Directorate of Marketing and Inspection have also laid down quality standards for foods. These are however voluntary.

5.1. Bureau of Indian Standards (BIS)

BIS, formerly known as Indian Standards Institution (ISI) have the following aspects:

- Food Safety Management Certification as per IS/ISO 2200
- Laboratory Testing, Calibration and Management
- Training of personnel in the field of Standardisation, Quality control, etc

Safety, performance and reliability are assured when the product is BIS marked. The Bureau of Indian standards operates a Certification Mark Scheme under the BIS Act, 1987. Standards covering more than 450 different food products have been published.

The organization runs a voluntary certification scheme for certification of processed food items. Standards are laid for vegetable and food products, spices and condiments, animal products and processed foods. Once these standards are accepted, manufacturers whose products conform to these standards are allowed to use BIS label on each unit of their product. The products are checked for the quality by the BIS in their own network of testing laboratories at Delhi, Mumbai, Kolkatta, Chennai, Chandigarh and Patna or in a number of public and private laboratories recognized by them.

The certification system is basically voluntary in character but some of the items require compulsory BIS certification under PFA. They are food colours and food colour preparation,

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natural food colours, food additives, infant milk foods, infant formula, milk-cereal based weaning food, milk powder and condensed milk.

Activities of BIS for benefit of industry and common consumers

- ❖ Formulation of standards
- ❖ Mark on products under BIS Certification Scheme
- ❖ Certification of Foreign Manufacturers and importers
- ❖ ECO mark for Environment Friendly Products

5.2. The AGMARK Standard

The word 'AGMARK' is derived from Agricultural marketing. The AGMARK standard was set up by the Directorate of Marketing and Inspection of the Government of India by introducing an Agricultural Products Act 1937. The word 'AGMARK' on the product ensures quality and purity. Before affixing the AGMARK seal, there are four stages:

- Preliminary testing
- From the product, Inspecting officers take representative samples
- Technically qualified and experienced officers test the samples and assign AGMARK quality grades
- Afterwards the commodity is packed using AGMARK labels or AGMARK replica on pouches or containers
- Even after sending to the distribution markets, AGMARK products are subjected to continuous inspection

A lot of care is taken in laying down the AGMARK grade and in affixing the AGMARK quality label. The quality of the product is determined with reference to the size, variety, weight, colour, moisture, fat content and other factors. The act defines quality of cereals, spices, oil seeds, oil, butter, ghee, legumes and eggs and provides for the categorisation of commodities into various grades depending on the degree of purity in each case. The grades incorporated are grades 1, 2, 3 and 4 or special, good, fair and ordinary. The standards also specify the types of packaging to be used for different products. The physical and chemical characteristics of products are kept in mind while formulating the AGMARK specifications.

The 'Certificate of Authorisation' is granted only to those in the trade having adequate experience and standing in the market. The staff of the Directorate of Marketing and Inspection or of the State Government is generally present at the time of selection of goods, their processing, grading and packing before applying the AGMARK label.

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Products available under AGMARK are pulses, wheat products, vegetable oils, whole and ground spices, milk products, honey, asafoetida, rice, tapioca, sago, seedless tamarind and gram flour. Grading of these commodities are voluntary. On the other hand, grading of commodities like walnuts, spices, basmati rice, essential oils, and onions and potatoes meant for export. AGMARK ensures the quality of produce to the importers.

The process of grading and administering the grades entails some cost, hence graded products are priced slightly more. Considering the quality assured, the little extra cost is worth paying.

Grading of agricultural commodities has three main purposes:

1. It protects the producer from exploitation. By knowing the quality and of his produce, he is in better bargaining position against the trader.
2. It serves as a means of describing the quality of commodities to be purchased by the buyers and sellers all over the country and abroad. This establishes a common trade language avoids the need for physical checking and handling at many points.
3. It protects the consumer by ensuring the quality of the products he purchases.

The Directorate of Marketing and Inspection of Central Government has 21 laboratories and 50 sub offices spread all over the country. The Central AGMARK Laboratory at Nagpur, continuously carries out research and development work in this field.

6. FOOD STANDARDISATION AND REGULATION AGENCIES IN INDIA

6.1. Central Committee for Food Standards (CCFS)

It is concerned with prevention of food adulteration and fraudulent practices. Since 1947, CCFS has been functioning to advise the Central and State Government on matters arising out of the administration of Food Safety and Standards Act. It provides guidelines for:

- Minimum basic requirements for food quality during handling, storage, preparation and serving of food under sanitary conditions.
- Freedom from extraneous matters, foreign matters, impurities and mixed inferior materials.
- Proper packaging, branding and declaration of net weight as well as dates of manufacturing and packing.
- Use of approved food additives for flavor and colour.

The guidelines are primarily intended to protect consumers from the health hazards of the poisoning food and also exploitation by malpractices such as misbranding, adulteration, incorrect labeling, false claims, less weight, excess and indiscriminate use of food additives, etc.

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6.2. Central Food Laboratories (CFL)

The Government of India has established four central food laboratories serving as appellate laboratories for analysis of food supplies. These are:

1. Central food Laboratory, Kolkatta
2. Food Research and Standardisation laboratory, Ghaziabad
3. Public Health Laboratory, Pune
4. Central Food Technological Research Institute Laboratory, Mysore.

In addition to these, every state has established their own food analyzing food laboratories in their states.

7. INTERNATIONAL STANDARDS

7.1. International Organisation for standardization (ISO)

The objective of ISO is to promote the development of standards in the world with a view to facilitate international exchange of goods and services and to develop mutual cooperation in the sphere of intellectual, scientific, technological and economic activity. Other functions of ISO are:

- Harmonisation of food standards throughout the world.
- Promotion of economic development.
- Exchange of goods.
- Standards help to revise the levels of quality, safety, reliability, efficient compatibility and inter exchangeability.
- Safeguards consumers and users.
- Global exchange of goods and services incorporating rationality, practical applicability, environmental protection, safe guards of safety and health and equal opportunities in world trade.

As a nongovernmental organization, ISO has no legal authority to enforce their implementation.

ISO develops standards in response to market demand. ISO standards are technical agreements, which handle the framework for compatible technology worldwide. In business, suppliers can base the development of their products and services on specifications that has wide acceptance standards. Customers are benefitted from the effect of competition among suppliers. For the Government, it provides the technological and scientific based underpinning health safety and environmental legislation.

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International standards give developing countries a basis for making the right decisions, when investing their scarce resources. For consumers conformity of products and services to international standards provides assurance about their quality, safety and reliability.

7.2. Codex Alimentarius

Codex Alimentarius Commission was established in 1962. The Codex Alimentarius which means "Food Law" or "Food Code" in Latin is a combined set of standards, codes or practices and other model regulations available for countries to use and apply to food in international trade. The dual objectives of Codex Alimentarius Commission are to protect the health of consumers and increase international trade.

The elaboration of Codex Standards, guidelines and other recommendations is based on the principles of sound scientific analysis and evidence in order that the standards assure the quality and safety of the food supply.

The Codex Secretariat is located in Rome and is financed jointly by the FAO and WHO. At present, there are 165 countries including India as Codex's members and this covers ninety eight percent of the world's population. The codex commission meets every two years either in Rome or in Geneva.

Codex can be divided in to three main groups:

1. The commodity standards committee work vertically dealing with food products such as processed fruits and vegetables, fats and oil, fresh fruits and vegetables, natural mineral water, cocoa products and chocolates, fish and fishery products, sugar, milk and milk products, cereals and meat products.
2. The general subject committees work horizontally on standards such as food additives and contaminants, pesticide residues, hygiene, labeling, inspection and certification systems, analysis and sampling, nutrition and foods for special dietary uses. They are used by processors to ensure that foods are microbiologically safe and are fit for human consumption. "Maximum Residue Limits (MRLS) have been set for pesticides. Specifications for "food grade quality" of additives form an important part of codex work.
3. The six regional coordinating committees are based in Africa, Asia, Europe, Latin America and Caribbean, North America and South West Pacific and the near East.

The Codex Alimentarius officially covers all foods, whether processed, semiprocessed or raw. Specific standards have been worked out for foods that are marketed directly to the consumer such as

- ❖ Meat products (fresh, frozen, processed meats and poultry)
- ❖ Fish and Fishery products (marine, fresh water and aquaculture)

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- ❖ Milk and Milk products (all fresh, processed and frozen items)
- ❖ Foods for special dietary uses (including infant formulae and baby foods)
- ❖ Fresh and processed vegetables, fruits and fruit juices
- ❖ Cereals and derived products, dried legumes
- ❖ Fats, oils and derived products such as margarine
- ❖ Miscellaneous food products (chocolate, sugar, honey, mineral water)

Codex food standards, codes of practice and other guidelines protect consumers from unsafe food and fraudulent practices. Codex alimentarius brings together all the interested parties- scientists, technical experts, governments, consumers and industry representatives to help develop standards for food manufacturing trade.

Codex has provided the nations with guides for good agricultural practices, including how to use pesticides, commodity food standards for processing products and with hygiene codes for making food safe for citizens and acceptable in international trade.

Codex India is the National codex Contact Point (NCCP) for India. It is located at the directorate General of Health Services, Ministry of Health and Family Welfare, New Delhi. It coordinates and promotes codex activities in India.

Foods everywhere will ultimately be influenced by codex in many different dimensions ó in safety standards, food additive, pesticide uses, labeling of pre packed foods, international trade, competition and pricing, be the foods locally grown or imported from the other side of the world.No food is nutritious if it is not safe. By following the standards laid down by Codex Alimentarius, countries and individual business can help to ensure that the foods are safe and nutritious.

The Codex Alimentarius is published in five languages namely Arabic, Chinese, English, French and Spanish. Codex Alimentarius is recognized by the World Trade Organisation (WTO) as an international reference standard for resolving disputes concerning food safety and consumer protection.

8. SUMMARY

Today, food safety is an important issue with public health implications. Effective means of food quality can be legislative measures, certification schemes and public participation and involvement in the program. There are several acts and regulations that are in force. Violation of these acts is against the law and any person who fails to comply with these codes may have to pay a heavy fine or undergo prosecution. The food operator has a lot to gain by cooperating with the regulatory agencies and conforming to the rules laid down by them.

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