
UNIT 14 FOOD REGULATIONS: STANDARDS AND QUALITY CONTROL

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14.1 INTRODUCTION

In the last two units we learnt about the concept of risk analysis and HACCP. It is crucial that the food industry try to adapt these concepts so as to ensure food safety and quality. On the other hand, the role of regulatory agencies is of utmost importance as they are the ones to implement the regulations and check their effectiveness. The questions, however, arises what legislations and regulations do we have in place at the international and national level to ensure food safety? This is the focus of this unit.

Till the advent of 21st century, a number of different laws governed the food processing sector in India. The prevailing laws/regulations adopted by the Government to verify the quality of food and drugs prescribe varied standards regarding food additives, contaminants, food colours, preservatives and labelling. In order to rationalize the multiplicity of food laws, a Food Safety Standards Authority of India (FSSAI) was recently set up to suggest legislative and other changes to formulate a modern, integrated food law, which would be a single reference point in relation to the regulation of food products. What these laws actually include? Which Acts are initiated under FSSAI? What rules and regulations are laid under these acts? What are the other national food legislations enacted by the Government? These are few issues discussed in the unit.

Further, various international organizations and agreements placed in the area of food standardizations are also focused.

Objectives

After studying this unit, you will be able to:

- review Food Safety Laws Applicable to Food Processing Industry
- discuss Food Safety Standards Act 2006,
- enumerate Food Safety and Standards Regulations, 2011
- enlist responsibilities and liabilities of the Food Business Operator, Manufacturers, Packers, Wholesalers, Distributors and Sellers
- explain Legal Metrology Act 2009 and Law 2011
- discuss the various compulsory and voluntary legislations enacted by the government
- enumerate the role of various international organizations and agreements in the area of food standardization and quality control

14.2 FOOD STANDARDS AND REGULATION IN INDIA

Food Safety and Standards Authority of India (FSSAI) is an autonomous body established under the Ministry of Health & Family Welfare, Government of India, responsible for protecting and promoting public health through the regulation and supervision of food safety. FSSAI of India has laid down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption. FSSAI has been established under the Food Safety and Standards Act, 2006 which is a consolidating statute related to food safety and regulations in India. This Act replaced all the other food laws existed in the system including Prevention of Food Adulteration (PFA) ACT, 1954 , Food Product Order, (FPO), The Vegetable Oil Product Order, 1998 etc. This is an integrated Food Law and has created unified framework for food regulations which has shifted primary responsibility of safety to food businesses and hence assuring food safety across the food chain and ensuring uniform application of standards and practices across the country. ***Thus, ONE NATION ONE FOOD LAW.***

The main goal of FSSAI is to:

- Lay down science-based standards for articles of food
- To regulate manufacture, storage, distribution, sale and import of food
- To facilitate food safety

This nationwide approach is being adopted in India to ensure better transparency, consistency and predictability of food business environment. We shall now learn about the FSS act, being formulated after merging the old food laws.

14.2.1 Food Safety and Standards Act, 2006

The Food Safety and Standards Act received the assent of the President on 23rd August, 2006 and came into effect on 5th August, 2011. The Act officially repeals the regulatory framework established by the previously existing eight food laws by Notification F.No.P-15025/41/2011-DFQC, issued by the Ministry of Health and Family Welfare on August 4, 2011, consolidating them into the Food Safety and Standards Rules and Regulations 2011 under a single regulator - The Food Safety and Standards Authority of India.

On May 5, 2011, the GOI Ministry of Health and Family Welfare published the final Food Safety and Standards Rules, 2011 vide Notification No.G.S.R.362 (E) in the Indian official gazette. On August 1, 2011, the Ministry of Health and Family Welfare published the final Food Safety and Standards Regulations, 2011 vide Notification No. F.No. 2-15015/30/2010 in the Indian official gazette.

The implementation of the Food Safety and Standards Act, 2006 formally repeals the following laws:

- i) The Prevention of Food Adulteration Act (PFA), 1954,
- ii) The Fruit Products Order, 1955,
- iii) The Meat Food Products Order, 1973,
- iv) The Vegetable Oil Products (Regulation) Order, 1998,
- v) The Edible Oils Packaging (Regulation) Order 1988,
- vi) The Solvent Extracted Oil, De-Oiled Meal and Edible Flour (Control) Order, 1967,
- vii) Milk and Milk Products Order, 1992,
- viii) Any other order issued under the Essential Commodities Act, 1955 relating to food.

The Act puts in place a unified structure for all food safety related matters in the form of FSSAI at the Centre and Commissioners of Food Safety at the State level and covers activities throughout the food distribution chain, from primary production through distribution to retail and catering.

Under this, law is significant in ensuring quality food to the consumer. It protects consumer interest by prohibiting misleading advertisement and penalising adulteration. Additionally there are laws to address contemporary challenges facing the sector like provisions related to Genetically Modified (GM) crops, functional food, international trade in food items etc.

The following are the statutory powers that the FSS Act, 2006 gives to the Food Safety and Standards Authority of India (FSSAI).

- Framing of regulations to lay down food safety standards
- Laying down guidelines for accreditation of laboratories for food testing
- Providing scientific advice and technical support to the Central Government
- Contributing to the development of international technical standards in food
- Collecting and collating data regarding food consumption, contamination, emerging risks etc.
- Disseminating information and promoting awareness about food safety and nutrition in India

In a nutshell, the Act takes care of international practices and envisages an overarching policy framework and provision of single window to guide and regulate persons engaged in manufacture, marketing, processing, handling, transportation, import and sale of food. Hence, the Act is applicable to anyone who handles, processes, manufactures, sells, serves, stores, distributes, transports or imports food.

With an above discussion, now you must be aware of the Indian food safety governing body which intends to ensure better consumer safety through Food Safety Management Systems and setting standards.

Now, let us move on to some of the general provisions under the FSS Act, 2006 in regards to articles of food. These are:

- No article of food should contain any food additive or processing aid unless it is in accordance with the provisions of the Act and Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.
- No article of food should contain any contaminant, naturally occurring toxic substances or toxins or hormone or heavy metals in excess of such quantities as

may be specified by the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

- No article of food should contain insecticides or pesticides residues, veterinary drugs residues, antibiotic residues, solvent residues, pharmacological active substances and micro-biological counts in excess of such tolerance limit as may be specified by regulations. No insecticide should be used directly on article of food except fumigants registered and approved under the Insecticides Act, 1968.
- No person should manufacture, distribute, sell or expose for sale or dispatch or deliver to any agent or broker for the purpose of sale, any packaged food products which are not marked and labeled in the manner as specified by the Food Safety and Standards (Packaging and labeling) Regulations, 2011. Every food business operator shall ensure that the labeling and presentation of food, including their shape, appearance or packaging, the packaging materials used, the manner in which they are arranged and the setting in which they are displayed, and the information which is made available about them through whatever medium, does not mislead consumers.
- No advertisement should be made of any food which is misleading or deceiving or contravenes the provisions of this Act, the rules and regulations made there under.

The most important feature of FSSAI is to define important terms like adulterants, contaminants etc. the important definitions of these terms under FSSAI are presented next.

Important definition under FSSAI

- **Act** means the Food Safety and Standard Act, 2006,
- **Rules** means the Food Safety and Standard rules, 2011,
- **Adulterant** means any material which is or could be employed for making the food unsafe or sub-standard or misbranded or containing extraneous matter.

Contaminants means any substance, whether or not added to food, which is presented in such food as a result of the production (including operations carried out in crop husbandry, animal husbandry or veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination and does not include insect fragments, rodent hair and other extraneous matter;

Food means any substance, whether processed, partially processed or unprocessed, which is intended for human consumption and includes primary food to the extent defined in the Act, genetically modified or engineered food or food containing such ingredients, infant food, packaged drinking water, alcoholic drink, chewing gum, and any substance, including water used in the food during its manufacture, preparation or treatment but does not include any animal feed, live animals unless they are prepared or processed for placing on the market for human consumption, plants, prior to harvesting, drugs and medicinal products, cosmetics, narcotic or psychotropic substances.

Food additive means any substance not normally consumed as a food by itself or used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its by-products becoming a component of or otherwise affecting the characteristics of such food but does not include contaminants or substances added to food for maintaining or improving nutritional qualities.

- **Processing aid** means any substance or material, not including apparatus or utensils, and not consumed as a food ingredient by itself, used in the processing of raw materials, foods or its ingredients to fulfill a certain technological purpose during treatment or processing and which may result in the non-intentional but unavoidable presence of residues or derivatives in the final product.
- **Advertisement** means any audio or visual publicity, representation or pronouncement made by means of any light, sound, smoke, gas, print, electronic media, internet or website and includes through any notice, circular, label, wrapper, invoice or other documents;
- **Food business** means any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of manufacture, processing, packing, storage, transportation, distribution of food, import and includes food services, catering services, sale of food or food ingredients;
- **Food business operator** in relation to food business means a person by whom the business is carried on or owned and is responsible for ensuring the compliances of this Act, rules and regulations made there under.

Having gone through these terms let us next get to know what compliances are there under the Food Safety and Standard Act, 2011. Some of the Compliances under the FSS Act are:

1. **Registration/Licensing of the Food Vendors:** All the Food Vendors that have been contracted by the company need to be Registered/Licensed under the new FSS Act. Any Vendor that operates only in one state needs to get registered with the FDA of the respective State, and for the Vendors who operate in more than one state need to register with the Central Food Safety Authority – FSSAI.
2. **Registration/Licensing of the Corporate Canteen/Cafeteria:** If any Food Items are being cooked / manufactured in the Corporate Canteen, registration / licensing of the Corporate Canteens also need to be done.
3. **Adoption of a Food Safety Management System (FSMS) Plan:** Under the Act it is mandatory for every Food Manufacturer to prepare a Food Safety Management System Plan. A FSMS is a network of interrelated elements that combine to ensure that food does not cause adverse human health effects. These elements include programs, plan, policies, procedures, practices, processes, goals, objectives, methods, controls, role, responsibilities, relationship, documents, records and resources.

The basic key elements of FSMS include:

- Good Practices/Pre-requisite programmes, including Good Manufacturing Practices (GMP) and Good Hygiene Practices (GHP) etc.
- Hazard analysis/HACCP
- Management element/system,
- Statutory and regulatory requirements
- Communication

Basically the purpose of FSMS is to ensure the manufacture, storage, distribution and sale of safe food.

4. **Potable Water being used for cooking:** All the Food Manufacturing bodies and Food Serving Canteens need to get the water from their water source tested for Potability. This would ensure that the water being used for cooking is drinkable and is safe for Human Consumption.

5. **Documentation of Food Quality Monitoring Initiatives:** Regular Audit Reports done by an Internal Auditor (Trained Admin/Facility Manager), and monthly/quarterly Audit Reports by a Food Safety/Hygiene Auditor, coupled with monthly/quarterly Food, Water and Hygiene Swab testing reports, and documentation of the steps taken for rectification of errors in case of any noncompliance to the standards found would complete the documentation required for safe guard against the rough sides of the Law. Such documentation is needed to be maintained at the Food Vendor's end, as well as the Corporate Canteen's too.

After a detailed discussion of the FSS Act, its functions, general guidelines and compliances, next, let us move on to the regulations which are being formulated by the government under the Food Safety and Standard Act, 2011.

14.2.2 Food Safety and Standards Regulations, 2011

The Food Safety and Standards Regulations, 2011, came into force on August 5, 2011. These regulations contain labelling requirements and standards for packaged food, permitted food additives, colours, microbiological requirements, etc. In all they deal with the enforcement structure of the Food Safety and Standards Authority and the procedures to be followed by the authorities. There are total of 17 regulations laid by the FSSAI for enforcement of food safety standards in India. Let us discuss some of these regulations in brief.

- A) **Food Safety and Standards (Packaging) Regulation, 2018:** The Regulations provide a detailed list of packaging materials that may be used for the packaging of specific categories of food products and also prescribe specific requirements/restrictions in their regard. You may recall reading about this under Unit 10.
- B) **Food Safety and Standards (Fortification of Foods) Regulations, 2018:** As per this regulation, every manufacturer and packer of fortified food shall give an undertaking on quality assurance and submit evidence of steps taken in this regard to the Food Authority or such other authority which the Food Authority may designate. Further all fortified food, whether voluntarily fortified or required to undergo mandatory fortification shall be manufactured, packed, labeled, handled, distributed and sold, only in compliance with the standards specified under the provisions of the Act and regulations made. And such products shall be packaged in a manner that takes into consideration the nature of the fortificant added, for example: Every package of food, fortified with Iron shall carry a statement "*People with Thalassaemia may take under medical supervision*".
- C) **Food Safety and Standards (Organic Food) Regulation, 2017:** Under this regulation, the organic food offered or promoted for sale shall also comply with all the applicable provisions of one of the following systems, namely:—
- i) National Programme for Organic Production (NPOP);
 - ii) Participatory Guarantee System for India (PGS-India).
 - iii) Any other system or standards as may be notified by the Food Authority from time to time.

Apart from this, labeling of such products may carry a certification or quality assurance mark of one of the systems mentioned above along with the Food Safety and Standard Authority of India's organic logo.

- D) **Food Safety and Standards (Food or Health Supplements, Nutraceuticals, Foods for Special Dietary Uses, Foods for Special Medical Purpose, Functional Foods and Novel Food) Regulations, 2016**



Under this, the food sold in capsule format, hard or soft or vegetarian, shall comply with general monograph and quality requirements specified by the Indian Pharmacopoeia. Also the quantity of ingredients added to the articles of food shall not exceed the recommended daily allowances (RDA) specified by the ICMR and Codex Alimentarius Commission. And in case the food product falling under health supplements categories, the individual nutrient content shall not be less than 15 percent of the RDA and if claim of higher nutrient content is made, the nutrient shall not be less than 30 percent of the RDA.

E) Food Safety and Standards (Food Product Standards and Food Additives) Regulation, 2011

No article of food should contain any food additive or processing aid except in accordance with the Regulations.

F) Food Safety and Standards (Prohibition and Restriction on sales) Regulation, 2011

The regulation provides for prohibition of sale of certain admixtures For example, milk which contain any added water, a mixture of two or more edible oils as an edible oil, turmeric containing any foreign substance etc.; restriction on use of certain ingredients such as Kesari gram (*Lathyrus sativus*) and its products; prohibition and restriction on sale of certain products and restrictions relating to conditions for sale like food articles coated with mineral oil, food resembling honey but not pure honey, tobacco and nicotine used as ingredients in any food products, use of carbide gas in ripening of fruits, sale or use for sale of admixtures of ghee or butter, sale of common salt etc.,

G) Food Safety and Standards (Contaminants, Toxins and Residues) Regulation, 2011

No article of food should contain any contaminant, naturally occurring toxic substances (Aflatoxin, Patulin, Ochratoxin A, Agaric acid, Hydrocyanic acid, Hypericine and Saffrole) or toxins or hormone or heavy metals (metal contaminants such as copper, lead, arsenic, tin etc.) in excess of such quantities as specified under the Regulation.

H) Food Safety and Standards (Recognition and Notification of Laboratories) Regulation, 2018.

The Food Authority may recognise any notified food laboratory or referral food laboratory as reference laboratory for the purpose of developing methods of testing, validation, proficiency testing and training.

I) Food Safety and Standards (Food Recall Procedure) Regulation, 2017

These regulations shall apply to the food or food products that are determined or prima facie considered unsafe and/or as may be specified by the Food Authority from time to time. In simple words, food articles which require the mandatory mention of statutory warnings related to consumption being “injurious to health” may not be treated as unsafe food as part of any recall plan unless they are specifically determined unsafe and injurious to health

J) Food Safety and Standards (Advertising and Claims) Regulations, 2018.

These regulations are aimed at establishing fairness in claims and advertisements of food products and make food businesses accountable for such claims / advertisements so as to protect consumer interests.

These regulations contain several sections detailing general principles for claims and advertisements; criteria for nutrition claims (including nutrient content or nutrient

comparative claims), non-addition claims (including non-addition of sugars and sodium salts), health claims (reduction of disease risk), claims related to dietary guidelines or healthy diets, and conditional claims; claims that are specifically prohibited; and procedures for approval of claims and redressal of non-compliances under these regulations. According to these, food business cannot use the words/phrases such as natural, fresh, original, traditional, authentic, genuine, real etc. on the food labels except under specific conditions detailed therein.

K) Food Safety and Standards (Import) Regulation, 2017

A number of products are being imported into India from the various countries. As per the mandate fro providing safe and wholesome food to public FSSAI made its presence at various ports to check and clearance of safe food.

To learn more about each of the above discussed regulation you can assess the website <https://www.fssai.gov.in/home/fss-legislation/fss-regulations.html>. Next we shall look at the responsibilities of food business operator and related stakeholders. But first let us recapitulate what we have learnt so far.

Check Your Progress Exercise 1

1) What is the primary objective of FSSAI?

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2) List the important features of Food Sefety and Standards Act, 2006.

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3) Define the term ‘food’ in context of FSSAI

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4) Discuss the regulations provided under the following:

- a) Food Safety and Standard (Fortification of Food) Regulation, 2018.
- b) Food Safety and Standard (Organic food) Regulation, 2017.

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14.3 SPECIAL RESPONSIBILITIES AS TO FOOD SAFETY

Consumers have a right to expect that the foods they purchase and consume will be safe and of high quality. They have a right to voice their opinions about the food control procedures, standards and activities that governments and industry use to ascertain that the food supply has these characteristics. FSSAI has also set responsibilities on part of food owners, food supervisors, manufactures, packers etc. Let us learn about these in brief.

Responsibilities of the Food Business Operator

- Every food business operator should ensure that the articles of food satisfy the requirements of the Act and the rules and regulations made there under at all stages of production, processing, import, distribution and sale within the businesses under his control.
- No food business operator should himself or by any person on his behalf manufacture, store, sell or distribute any article of food, which is unsafe; which is misbranded or sub-standard or contains extraneous matter; for which a license is required, except in accordance with the conditions of the license; which is for the time being prohibited by the Food Authority or the Central Government or the State Government in the interest of public health.
- No food business operator should employ any person who is suffering from infectious, contagious or loathsome disease.
- No food business operator should sell or offer for sale any article of food to any vendor unless he also gives a guarantee in writing about the nature and quality of such article to the vendor.
- Where any food which is unsafe is part of a batch, lot or consignment of food of the same class or description, it will be presumed that all the food in that batch, lot or consignment is also unsafe.
- General hygienic and sanitary practices to be followed by food business operators are covered under Schedule-4 of the licensing regulations.

Liability of the manufacturers, packers, wholesalers, distributors and sellers

- The wholesaler or distributor and seller are liable for any article of food which is supplied after the date of its expiry; Stored or supplied in violation of the safety instructions of the manufacturer; Unsafe or misbranded; Unidentifiable of manufacturer from whom the article of food have been received; Stored or handled or kept in violation of the provisions of the Act; received by him with knowledge of being unsafe.

14.4 LICENSING AND REGISTRATION OF FOOD BUSINESS

Licensing and registration is covered under Sec.31 of the Act and the Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011. One can register online at the below link: Online Licensing and Registration system Link <http://foodlicensing.fssai.gov.in/UserLogin/Login.aspx> -

All Food Business Operators in the country has to be registered or licensed in accordance with the procedures laid down hereinafter;

14.4.1 Registration of Petty Food Business

- 1) Every petty Food Business Operator shall register themselves with the Registering Authority by submitting an application for registration
- 2) The basic hygiene and safety requirements shall be followed by all food operators, some of the basic requirements under this are:
 - potential sources of contamination like rubbish, waste water, toilet facilities, open drains and stray animals shall be avoided
 - The surfaces of the Vending carts which come in contact with food or food storage utensils shall be built of solid, rust/ corrosion resistant materials and kept in clean and good condition.
 - Sale points, tables, awnings, benches and boxes, cupboards, glass cases, etc. shall be clean and tidy.
 - All containers shall be kept clean, washed and dried at the close of business to ensure that there is no growth of mould/ fungi and infestation
 - Cooking, storage and serving shall not be done in utensils of, cadmium, lead, non food grade plastic and other toxic materials.
 - The person suffering from infectious disease shall not be permitted to work.
- 3) The Registering Authority shall issue a registration certificate and a photo identity card, which shall be displayed at a prominent place at all times within the premises or vehicle or cart or any other place where the person carries on sale/manufacture of food in case of Petty Food Business.
- 4) The Registering Authority or any officer or agency specifically authorized for this purpose shall carry out food safety inspection of the registered establishments at least once in a year.

14.4.2 License for Food Business

It is important to hold valid license for opening a food business. According to the FSSAI, no person shall commence any food business unless he or she possesses a valid license. A license shall, subject to the provisions of some Regulations, be issued by the concerned Licensing Authority within a period of 60 days from the date of issue of an application ID number. After the issue of Application ID number, the Licensing Authority may direct the Food Safety Officer or any other person or agency specially designated for auditing to inspect the premises in the manner prescribed by the Food Safety and Standard Authority of India in accordance with Regulations. Such Inspecting Officer or person may issue a notice to the applicant, if it deems fit, guiding food business operator on necessary steps to be taken or changes or alteration to be made in the premises. Within a period of 30 days from receipt of an inspection report, the concerned Licensing Authority shall consider the application and may either grant license or reject the application. A Registration or license granted shall be valid and subsisting, unless otherwise specified, for a period of 1 to 5 years as chosen by the Food Business Operator.

List of documents required for licensing can be assessed from the link given herewith <http://foodlicensing.fssai.gov.in/UserLogin/Login.aspx> -

In addition, for commencing or carrying out any food business, every food business operator has to stick to the set categories of food units listed by the authority. For importing any type of food items, including food ingredients and additives, a food business Operator shall have to obtain a license from the Central Licensing Authority, provided that Food Authority may through notification make such changes or modify the list given below:

List of food business falling under the purview of Central Licensing Authority –

- Dairy units including milk chilling units equipped to handle or process more than 50,000 litres of liquid milk/day or 2500 MT of milk solid per annum.
- Vegetable oil processing units and units producing vegetable oil by the process of solvent extraction and refineries including oil expeller unit having installed capacity more than 2 MT per day.
- All slaughter houses equipped to slaughter more than 50 large animals or 150 or more small animals including sheep and goats or 1000 or more poultry birds per day.
- Meat processing units equipped to handle or process more than 500 kg of meat per day or 150 MT per annum.
- All food processing units other than mentioned under (I) to (IV) including relabellers and repackers having installed capacity more than 2 MT/day except grains, cereals and pulses milling units.
- 100 % Export Oriented Units.
- All Importers importing food items including food ingredients and additives for commercial use.
- All food business operators manufacturing any article of food containing ingredients or substances or using technologies or processes or combination thereof whose safety has not been established through these regulations or which do not have a history of safe use or food containing ingredients which are being introduced for the first time into the country.
- Food Business Operator operating in two or more states.
- Food catering services in establishments and units under Central government Agencies like Railways, Air and airport, Seaport, Defence etc.

After the detailed discussion about the food license for commencing a food business, next, we shall look at some other laws/ regulations and their role in ensuring food security.

14.5 COMPULSORY NATIONAL LEGISLATIONS

Within the compulsory legislations, Legal Metrology Act, 2009 and Export (Quality Control and Inspection) Act are included. Let us learn about these acts.

14.5.1 Legal Metrology Laws

Before reading about the legal metrology laws, you must know what legal metrology stands for. In India, *legal metrology* is the new name of *Standards of Weights and Measures*. The Standard of Weights and Measures Act, 1976 was enacted primarily to establish standards of weights and measures, to regulate trade or commerce in weights, measures and other goods that are sold or distributed by weight, measure or number. It is based on the metric system and international system of units recognized by International Organization of legal metrology (OIML). India is one of the members of OIML. This Act was subsequently replaced by the Legal Metrology Act, 2009 with the aim of protecting consumer interests and other stakeholders including industry.

Let us review Legal Metrology Act, 2009

A) The Legal Metrology Act, 2009

The Legal Metrology Act, 2009 repeals and replaces the Standard of Weights and Measures Act, 1976 and the Standards of weights and Measures (Enforcement) Act, 1985.

The Act has come into force from 1st April, 2011.

The Act, *inter alia*, provides for:

- a) Regulation of weight or measure used in transaction or for protection
- b) Approval of model of weight or measure
- c) Verification of prescribed weight or measure by Government approved Test Centre
- d) Prescribing qualification of legal metrology officers appointed by the Central Government or State Government
- e) Exempting regulation of weight or measure or other goods meant for export
- f) Levy of fee for various services
- g) Nomination of a Director by a company who will be responsible for complying with the provisions of the enactment
- h) Penalty for offences and compounding of offences
- i) Appeal against decision of various authorities, and
- j) Empowering the Central Government to make rules for enforcing the provisions of the enactment.

Any weight or measure which conforms to the standard unit of such weight or measure (based on metric system or prescribed derived units) and also conforms to the provisions of the physical characteristics, configuration, construction details, materials, equipment, performance, tolerances, period of re-verification, etc., are applicable to be the standard weight or measure. Every non-standard or unverified weight or measure is liable to seizure and forfeiture.

B) The Legal Metrology (Packaged Commodities) Rules, 2017

The Legal Metrology (Packaged Commodities) Rules, 2017 were prescribed in order to regulate pre-packaged commodities. Under this rules, pre-packaged commodities are required to comply with certain mandatory labeling requirements with respect to the net quantity, Maximum Retail Price (MRP) and Customer care information.

It is illegal to manufacture, pack, sell, import, distribute, deliver, offer, expose or possess for sale any pre-packaged commodity unless the package is in such standard quantities or number and bears thereon such declarations and particulars in such manner as may be prescribed.

Items exempted from the provisions of the Packaged Commodities Rules are packages containing –

- The net weight or measure of the commodity in 10 g or 10 ml or less, if sold by weight or measure.
- Fast food items packed by restaurant/hotel scheduled and non-scheduled formulations covered under the Drugs (Price Control) Order, 1995
- Agricultural farm produces in packages of above 50 kg.

The items mentioned under the Second Schedule of the Packaged Commodities Rules have to be packed in quantities specified in that schedule. Baby food, weaning food, biscuits, bread, butter, coffee, tea, cereals, pulses, milk powder, salt, edible oils, rice and wheat flour, aerated soft drink, drinking water etc. are among other products that manufacturers are required to pack and sell in standard sizes.

14.5.2 Export (Quality Control and Inspection) Act

The Export Inspection Council (EIC) was set up by the Government of India under Section 3 of the Export (Quality Control and Inspection) Act, 1963 (22 of 1963), in order to ensure sound development of export trade of India through Quality Control

and Inspection and for matters connected thereof. The Council, constituted by the Central Government, is the apex body and has powers to constitute specialist committees to assist it in discharge of its functions. Accordingly, the Council has constituted Administrative Committee to advise it on administrative matters and a Technical Committee to advise it on technical matters.

EIC is an advisory body to the Central Government, which is empowered under the Act to:

- notify commodities which will be subject to quality control and/ or inspection prior to export
- establish standards of quality for such notified commodities, and
- specify the type of quality control and / or inspection to be applied to such commodities.

Besides its advisory role, the Export Inspection Council also exercises technical and administrative control over the five Export Inspection Agencies (EIAs) at Chennai, Delhi, Kochi, Kolkata and Mumbai. EIAs were established by the Ministry of Commerce, Government of India, under Section 7 of the Act for the purpose of implementing the various measures and policies formulated by EIC.

Export Inspection Council, either directly or through Export Inspection Agencies, its field organization, renders services in the areas of:

- Certification of quality of export commodities through installation of quality assurance systems (In-process Quality Control and Self Certification) in the exporting units, as well as, consignment wise inspection.
- Certification of quality of food items for export through installation of Food safety Management System in the food processing units.
- Issue of Certificates of origin to exporters under various preferential tariff schemes for export products.

Further, besides Export Inspection Council (EIC) following units have been set-up by the Ministry of Commerce for ensuring promotion and quality control of export of food item, under the Export (Quality Control and Inspection) Act, 1963:

- a) Agricultural and Processed Food Export Development Authority (APEDA)
- b) Spices Board
- c) Coffee Board
- d) Tea Board, and
- e) Marine Products Export Development Authority (MPEDA).

Pre-shipment inspection and analysis is carried out in order to ensure that exported items conform to the quality prescribed by the importing countries and do not pose any health hazard.

In case of some of the food articles like spices and condiments, fruit products, meat products, a system of compulsory certification has been introduced.

With this, we come to the end of our study about compulsory legislations. Next we shall review the voluntary legislations.

14.6 VOLUNTARY BASED PRODUCT CERTIFICATIONS.

There are a few voluntary schemes of certification aimed at providing quality and safety of foods. The Bureau of Indian Standards and The Agmark Grading and Marketing Act

and Rules and Consumer Protection Act, 1986 are the voluntary schemes of certification. What are these schemes and what are their objectives? Let us find out.

14.6.1 Bureau of Indian Standards (BIS)



The Bureau of Indian Standards (BIS), empowered by the Bureau of Indian Standards Act, 2016, operates product certification schemes by which it grants licenses to manufacturers covering practically every industrial discipline from agriculture and textiles to electronics. BIS is functioning under the administrative control of Ministry of Consumer Affairs, Food & Public Distribution. The certification allows the licensees to use the popular ISI mark, which has become synonymous with quality products for the Indian and neighboring markets for over 55 years.

While the scheme itself is voluntary in nature, the Indian Government has, in public interest, enforced mandatory certification on various products through various quality control orders issued from time to time, under various acts. While BIS continues to grant licenses on application, the enforcement of compulsory certification is done by the authorities notified in such quality control orders. Overseas applicants can also be granted BIS certification for use of ISI mark for their products under the Foreign Manufacturers Certification Scheme (FMCS).

In this connection, the Food Safety and Standards (Prohibition and Restriction on Sales) Regulations, 2011 has prescribed mandatory certification under the BIS Act for the following products:

- Infant formula (IS14433)
- Milk cereal based weaning food (IS1656)
- Processed cereal based weaning food (IS11536)
- Follow up formula (IS15757)
- Packaged drinking water (IS14543)
- Packaged mineral water (IS13428)
- Milk Powder (IS1165)
- Skimmed Milk Powder (IS13334)
- Partly Skimmed Milk Powder (IS14542)
- Condensed Milk, Partly Skimmed and Skimmed Condensed Milk (IS1166)

The main objectives of BIS, include:

- a) harmonious development of standardization, marking and quality certification
- b) to provide a new thrust to standardization and quality control, and
- c) to evolve a national strategy for according recognition to standard integrating them with the growth and development of production and exports.



International Organization for Standardization (ISO) has published ISO 22000:2005 - Food Safety Management Systems (FSMS) – Requirements for any Organization in the Food Chain, with a view to provide framework for systematically managing safety in food supply chains. BIS has adopted this International Standard as IS/ISO 22000:2005. This standard integrates the principles of Hazard Analysis and Critical Control Point (HACCP) system developed by Codex Alimentarius Commission and combines the HACCP plan with Prerequisite Programmes (PRPs) and is fully compatible with Quality Management Systems (QMS) as per ISO 9001: 2000.

BIS has also launched Food Safety Management Systems (FSMS) Certification IS/ISO 22000:2005 scheme which envisages grant of FSMS Certification license to organizations according to IS/ISO 22000.

14.6.2 AGMARK

The word Agmark is derived from Agricultural Marketing. The Agmark standard was set up by the Directorate of Marketing & Inspection (DMI), Ministry of Agriculture, Government of India by introducing an agricultural produce Act in 1937. The word Agmark ensures about quality and purity of the food products. The quality of the product is determined with reference to the size, variety, weight, colour, moisture, fat content etc. Agmark standards differentiate between quality and 2-3 grades are prescribed for each commodity. Grades help farmers to get prices for agricultural commodities as per the quality produced by them and consumers get the desired quality.



Till date, grade standards for 222 agricultural commodities have been notified. These include fruits, vegetables, cereals, pulses, oilseeds, vegetable oils, ghee, spices, honey, creamery butter, wheat *atta*, *besan*, etc. Directorate of Marketing & Inspection (DMI) is implementing the scheme of certification of agricultural commodities for domestic trade and export and this scheme is voluntary. But, Food Safety and Standards (Prohibition and Restriction Sale) Regulation, 2011, has prescribed mandatory certification for Blended Edible Vegetable Oils and Fat Spreads. However, in case of *Til Oil*, *Carbia Callosa*, Honey dew, Tea and Ghee, FSSAI has prescribed few conditional restrictions.

The certification scheme is implemented through 11 Regional Offices, 27 Sub Offices, 11 Regional Agmark Laboratories and Central Agmark Laboratory (Apex laboratory) of the Directorate. Out of twelve laboratories, 08 laboratories at Nagpur, Mumbai, Chennai, Kochi, Kolkata, Delhi, Jaipur and Kanpur have been accredited with the National Accreditation Board for Testing and Calibration Laboratories (NABL) as per the International Standard ISO 17025.

14.6.3 Consumer Protection Act, 1986

In order to protect the consumers from exploitation and to save them from adulterated and substandard goods and deficient services, the Consumer Protection Act came into force on 15th April, 1986 and it applies to the whole of India except the State of Jammu and Kashmir. A Statutory Consumer Protection Council has been set-up under the Consumer Protection Act, 1986, implemented by the Ministry of Consumer Affairs Food and Public Distribution. The main aim of the council is to redress the grievances of the consumers about quality of purchased goods, including food articles. The Act also provides setting up of such Councils at State /District level.

Next, in this unit we shall focus on international organizations and agreements in the area of food standardization and quality control. Before that take a break and refresh your understanding of these Acts by answering the check in your progress exercise 2.

Check Your Progress Exercise 2

- 1) What are the responsibilities of a Food business operator towards Food Safety?

- 2) Discuss the purpose behind the enactment of the following:
 - a) Legal Metrology Act

- b) Bureau of Indian Standard (BIS)
 - c) Consumer Protection Act
 - d) Agmark
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14.7 INTERNATIONAL ORGANIZATIONS AND AGREEMENTS IN THE AREA OF FOOD STANDARDIZATION AND QUALITY CONTROL

While there have been several international organizations and agreements playing role in enhancing food safety, quality and security, facilitating research and trade worldwide, the major organizations and agreements which have and are playing a key role are being taken up here. We start with the Codex Alimentarius.

A) CODEX Alimentarius

Codex Alimentarius Commission is an international body constituted by Food and Agriculture Organization (FAO) and World Health Organization (WHO) of the United Nations with an objective to protect health of consumers and to ensure fair practices in the food trade.

Codex prescribes International Standards for safety and quality of food as well as codes of good manufacturing practices, guidelines to protect health of the customers. These standards, guidelines and recommendations are recognized worldwide for international trade and negotiations and also for settling of disputes by WTO. There are Codex standards for fruits and vegetables, meat and poultry products, pulses and cereals.

Codex standards usually relate to product characteristics and may deal with all government-regulated characteristics appropriate to the commodity, or only one characteristic. Maximum residue limits (MRLs) for residues of pesticides or veterinary drugs in foods are examples of standards dealing with only one characteristic. There are Codex general standards for food additives and contaminants and toxins in foods that contain both general and commodity specific provisions. The Codex General Standard for the Labelling of Prepackaged Foods covers all foods in this category. Because standards relate to product characteristics, they can be applied wherever the products are traded. Codex methods of analysis and sampling, including those for contaminants and residues of pesticides and veterinary drugs in foods, are also considered Codex standards.

Notably, Codex Alimentarius has:

- formulated 237 food standards for commodities
- formulated 41 codes of hygienic or technological practice
- evaluated 185 pesticides
- prescribed limits for pesticide residues
- developed guidelines for 25 contaminants

- evaluated 1005 food additives, and
- evaluated 54 veterinary drugs

What is the national codex contact points for India? Let us find out, next.

B) Codex India

“Codex India”– the National Codex Contact Point (NCCP) for India, is located at the Directorate General of Health Services, Ministry of Health and Family Welfare (MOHFW), Government of India. It coordinates and promotes Codex activities in India in association with the National Codex Committee and facilitates India’s input to work of Codex through an established consultation process.

National Codex Contact Point (NCCP)

The National Codex Contact Point acts as the liaison office to coordinate with the other concerned Government departments (at Central and State level), food industry, consumers, traders, research and development institutions and academia, through the National Codex Committee and its Shadow Committees.

It ensures that the government is backed with an appropriate balance of policy and technical advice upon which to base decision relating to issues raised in the context of the CAC and its subsidiary bodies.

What are the core functions of NCCP-INDIA? Let us get to know about them.

The NCCP has to perform the following core functions, established by the Codex Alimentarius Commission for National Codex Contact Points:

- act as a link between the Codex Secretariat and India Member Body
- coordinate all relevant Codex activities within India
- receive all Codex final texts (standards, codes of practice, guidelines and other advisory texts) and working documents of Codex sessions and ensure that these are circulated to those concerned
- send comments on Codex documents or proposals to the CAC or its subsidiary bodies and/or the Codex Secretariat within the time frame
- work in close cooperation with the National Codex Committee and its Shadow Committees
- act as a channel for the exchange of information and coordination of activities with other Codex members
- receive invitations to Codex sessions and inform the relevant chairpersons and the Codex Secretariat of the names of the participants representing India
- maintain a library of Codex final texts, and
- promote Codex activities throughout India.

Next, a word about the roles / responsibilities of NCCP-INDIA. In order to be able to discharge its core functions, the NCCP has the following responsibilities:

- undertake secretariat responsibilities to the National Codex Committee
- act as the contact point for the country for maintaining liaison with the CAC in elaborating international food standards
- collect, procure and analyze data for elaborating international food standards with the CAC
- keep a track of international food standards work and give comments and data to ensure that international food standards elaborated are practicable for local manufactures and does not hinder export of food products

- undertake the study and research work to solve any problem resulting from the elaboration of international food standards
- encourage food manufacturers to improve quality and hygiene management to meet requirements of international food standards, and
- disseminate information of food standards and food laws to relevant government agencies, primary producers, manufacturers, exporters, consumers and concerned organizations.

C) World Trade Organization (WTO)



The World Trade Organization came into being in 1995. One of the youngest of the international organizations, the WTO is the successor to the General Agreement on Tariffs and Trade (GATT) established in the wake of the Second World War. While the WTO is still young, the multilateral trading system that was originally set up under GATT is well over 50 years old.

The past 50 years have seen an exceptional growth in world trade. Merchandise exports grew on an average by 6% annually. Total trade in 2000 was 22-times the level of 1950. GATT and the WTO have helped to create a strong and prosperous trading system contributing to unprecedented growth.

The system was developed through a series of trade negotiations or rounds, held under GATT. The first rounds dealt mainly with tariff reductions but later negotiations included other areas such as anti-dumping and non-tariff measures. The last round, the 1986-94 Uruguay Round, led to the WTO's creation.

What are the benefits of WTO trading systems?

The ten benefits of the WTO trading system include:

- 1) The system helps promote peace
- 2) Disputes are handled constructively
- 3) Rules make life easier for all
- 4) Freer trade cuts the costs of living
- 5) More choice of products and qualities
- 6) Trade raises incomes
- 7) Trade stimulates economic growth
- 8) The basic principles make life more efficient
- 9) Governments are shielded from lobbying
- 10) The system encourages good government

The WTO agreement covers goods, services and intellectual property. They spell out the principles of liberalization and the permitted exceptions. They include individual countries' commitments to lower customs tariffs and other trade barriers and to open and keep open services markets. They set procedures for settling disputes. They prescribe special treatment for developing countries. They require governments to make their trade policies transparent. And they share a common three-part structure.

D) Agreement on Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT)

Sanitary and Phytosanitary Measures: The Agreement on Sanitary and Phytosanitary Measures (SPS) sets out the basic rules for food safety and animal and plant health standards. It allows countries to set their own standards. But it also says regulations

must be based on science. They should be applied only to the extent necessary to protect human, animal or plant life or health. And they should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail.

Member countries are encouraged to use international standards, guidelines and recommendations where they exist. However, members may use measures which result in higher standards if there is a scientific justification. They can also set higher standards based on appropriate assessment of risks as long as the approach is consistent, not arbitrary. The agreement still allows countries to use different standards and different methods of inspecting products.

The decision to negotiate an agreement on the application of sanitary and phytosanitary measures was made in 1986 when the Uruguay Round was launched. The SPS negotiations were open to all of the 124 Governments, which participated in the Uruguay Round.

All countries maintain measures to ensure that food is safe for consumers and to prevent the spread of pests or diseases among animals and plants. These sanitary and phytosanitary measures can take many forms, such as requiring products to come from a disease-free area, inspection of products, specific treatment or processing of products, setting of allowable maximum levels of pesticide residues or permitted use of only certain additives in food. Sanitary (human and animal health) and phytosanitary (plant health) measures apply to domestically produced food or local animal diseases, as well as, to products coming from other countries.

For the purposes of the SPS Agreement, sanitary and phytosanitary measures are defined as any measures applied to:

- protect human or animal life from risks arising from additives, contaminants, toxins or disease-causing organisms in their food
- protect human life from plant or animal-carried diseases
- protect animal or plant life from pests, diseases, or disease-causing organisms, and
- prevent or limit other damage to a country from the entry, establishment or spread of pests.

Technical Barriers to Trade (TBT): In the Tokyo Round of multilateral trade negotiations (1974-79), an Agreement on Technical Barriers to Trade was negotiated (the 1979 TBT Agreement or “Standards Code”). Although this agreement was not developed primarily for the purpose of regulating sanitary and phytosanitary measures, it covered technical requirements resulting from food safety and animal and plant health measures, including pesticide residual limits, inspection requirements and labeling.

Governments which were members of the 1979 TBT Agreement agreed to use relevant international standards (such as those for food safety developed by the Codex) except when they considered that these standards would not adequately protect health. They also agreed to notify other governments, through the GATT Secretariat, of any technical regulations which were not based on international standards. The 1979 TBT Agreement included provisions for settling trade disputes arising from the use of food safety and other technical restrictions.

The scope of SPS and TBT Agreements are different. The SPS Agreement covers all measures whose purpose is to protect:

- human or animal health from food-borne risks

- human health from animal or plant-carried diseases, and
- animals and plants from pests or diseases, whether or not these are technical requirements.

The TBT (Technical Barriers to Trade) Agreement covers all technical regulations, voluntary standards and the procedures to ensure that these are met, except when these are sanitary or phytosanitary measures as defined by the SPS Agreement. It is, thus, the type of measure which determines whether it is covered by the TBT Agreement, but the purpose of measure is relevant in determining whether a measure is subject to the SPS Agreement.

TBT measures could cover any subject. Most measures related to human disease control are under the TBT Agreement, unless they concern diseases which are carried by plants or animals (such as rabies). In terms of food, labeling requirements, nutrition claims and concerns, quality and packaging regulations are generally not considered to be sanitary or phytosanitary measures and hence are normally subject to the TBT Agreement.

On the other hand, by definition, regulations which address microbiological contamination of food, or set allowable levels of pesticides or veterinary drug residues or identify permitted food additives, fall under the SPS Agreement. Some packaging and labeling requirements, if directly related to the safety of the food, are also subject to the SPS Agreement.

The two agreements have some common elements, including basic obligations for non-discrimination and similar requirements for the advance notification of proposed measures and the creation of information offices (“Enquiry Points”). However, many of the substantive rules are different. For example, both agreements encourage the use of international standards. However, under the SPS Agreement the only justification for not using such standards for food safety for animal/plant health protection are the scientific arguments, resulting government may decide that international standards are not appropriate for other reasons, including fundamental technological problems or geographical factors.

Also, sanitary and phytosanitary measures may be imposed only to the extent necessary to protect human, animal or plant health, on the basis of scientific information. Governments may, however, introduce TBT regulations when necessary to meet a number of objectives, such as national security or the prevention of deceptive practices. Because the obligations that governments have accepted are different under the two agreements, it is important to know whether a measure is a sanitary or phytosanitary measure, or a measure subject to the TBT Agreement.

E) **International Organization for Standardization (ISO)**



The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies from more than 164 countries, one from each country.

ISO is a non-governmental organization established in 1947. 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. ISO’s work results in international agreements which are published as International Standards.

You may have heard about ISO 9000 and ISO 14000. What are these? Let us read and find out.

The ISO 9000 and ISO 14000 families are among ISO's most widely known and successful standards ever. ISO 9000 has become an international reference for quality requirements in business-to-business dealings, and ISO 14000 looks set to achieve at least as much, if not more, in helping organizations to meet their environmental challenges.

The vast majority of ISO standards are highly specific to a particular product, material, or process. However, the standards that have earned the ISO 9000 and ISO 14000 families a worldwide reputation are known as "*generic management system standards*". "*Generic*" means that the same standards can be applied to any organization, large or small, whatever its product – including whether its "product" is actually a service – in any sector of activity, and whether it is a business enterprise, a public administration, or a government department. "*Management system*" refers to what the organization does to manage its processes or activities. "*Generic*" also signifies that no matter what the organization is or does, if it wants to establish a quality management system or an environmental management system, then such a system has a number of essential features which are spelled out in the relevant standards of the ISO 9000 or ISO 14000 families.

ISO 9000 is concerned with "quality management". This means what the organization does to enhance customer satisfaction by meeting customer and applicable regulatory requirements and continually to improve its performance in this regard. *ISO 14000 is primarily concerned with "environmental management"*. This means what the organization does to minimize harmful effects on the environment caused by its activities, and continually to improve its environmental performance.

Both ISO 9000 and ISO 14000 concern with the way an organization goes about its work, and not directly the result of this work. In other words, *they both concern processes, and not products – at least, not directly*. Nevertheless, the way in which the organization manages its processes is obviously going to affect its final product. In the case of ISO 9000, it is going to affect whether or not everything has been done to ensure that the product meets the customer's requirements. In the case of ISO 14000, it is going to affect whether or not everything has been done to ensure a product will have the least harmful impact on the environment, either during production or disposal either by pollution or by depleting natural resources.

The earlier three standards ISO 9001 and ISO 9003 have been integrated into the new ISO 9001:2000.

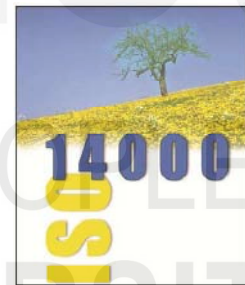
F) Food and Agriculture Organization (FAO)

The Food and Agriculture Organization of the United Nations was founded in 1945 with a mandate to raise levels of nutrition and standards of living, to improve agricultural productivity and to better the condition of rural populations. Today, FAO is one of the largest specialized agencies in the United Nations system and the lead agency to collect, analyze, interpret and disseminate information relating to nutrition, agriculture, forestry, fisheries and rural development. An inter-governmental organization, FAO has 183 member countries plus one member organizations, the European Community.

G) World Health Organization (WHO)

The World Health Organization, the United Nations specialized agency for health, was established on 7th April 1948. WHO's objectives, as set out in its Constitution, is the attainment by all people of the highest possible level of health. Health is defined in WHO's constitution as '*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*'

In carrying out its activities, WHO's Secretariat focuses its work on the following six core functions:



- a) Articulating consistent, ethical and evidence-based policy and advocacy positions
- b) Managing information by assessing trends and comparing performance, setting the agenda for and stimulating research and development
- c) Catalyzing change through technical and policy support, in ways that stimulate cooperation an action and help to build sustainable national and inter-country capacity
- d) Negotiating and sustaining national and global partnerships
- e) Setting, validating monitoring and pursuing the proper implementation of norms and standards.
- f) Stimulating the development and testing of new technologies, tools and guidelines for disease control, risk reduction, health care management and service delivery.

H) Joint FAO/WHO Expert Committee on Food Additives (JECFA)

The Joint FAO/WHO Expert Committee on Food Additives (JECFA) was constituted in 1956 for collecting and evaluating scientific data on food additives and making recommendations on safe level of use. This it does by elaborating specifications for the identity and purity of individual food additives that have been toxicologically tested and are in commerce and by evaluating the toxicological data on these food additives and estimating acceptable intakes by humans.

In 1972, the scope of the evaluation was extended to include the contaminants in food, while in 1987, the scope was extended even further to include residues of veterinary drugs in food.

The purpose and functions of JECFA include the following:

- Reviewing the latest knowledge and expert information and making it available to both FAO and WHO
- Formulating technical recommendations
- Making recommendations designed to initiate, stimulate and coordinate the research necessary to fulfill their terms of reference.

JECFA serves as the scientific advisory body to the Codex Alimentarius Commission (CAC) on all matters relating to food additives, contaminants and residues of veterinary/ drugs in food. Although JECFA is an independent FAO/WHO Expert Committee and is not part of the CAC, most priorities for assessment by JECFA originate with CAC.

Specialists invited to serve as members of JECFA are the independent scientists who serve in their individual capacities as experts and not as representatives of their governments or employers. During each meeting, the Committee members invited by WHO are primarily responsible for reviewing the toxicological and related data for estimating, where possible, acceptable daily intakes (ADIs) or other endpoints of assessment and for establishing principles for toxicological evaluation and testing. The members invited by FAO are primarily responsible for preparing and reviewing the specifications, for identifying purity of food additives that have undergone toxicological evaluation. A report summarizing the conclusions is published after each meeting. Toxicological monographs, which summarize the safety data and provide full references to the literature on the food additives, contaminants and veterinary drugs reviewed by the Committee, are also published after each meeting.

The discussion above presented a detailed review on the different international agreements formulated and various organizations working in the area of food safety, quality control and trade. We hope this would have given you a good global perspective on what is being done at different levels to protect consumers and provide good safe food.

Check Your Progress Exercise 3

1) What is Codex Alimentarius Commission?

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2) Briefly discuss the role of :

a) CAC

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b) NCCP-INDIA

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c) WHO

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d) JECFA

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14.8 LET US SUM UP

In this Unit we have learnt about the FSS Act and other compulsory and voluntary national food legislations regulating the food safety and quality in India. The emphasis was on **ONE NATION ONE FOOD LAW-FSSAI**. The Food Safety and Standards Authority (FSSAI) of India has laid down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption. The FSS Act 2006, replaced all the other food laws existing in the system including Prevention of Food Adulteration (PFA) Act 1954, Food Product Order etc. This is an integrated Food Law and has created unified framework for food regulations which has shifted primary responsibility of safety to food businesses and hence assuring food safety across the food chain and ensuring uniform application of standards and practices across the country. This was further extended by reviewing the Bureau of Indian Standard Act (BIS) and AGMARK, which lay down the provisions for voluntary food product certification, based on specifications encompassing enhanced quality requirements.

The Unit also focused on the role of international organizations like Codex Alimentarius, WHO, FAO, WHO, SPS and TBT working in the area of Food Standardization, Quality, Research and Trade.

14.9 GLOSSARY

- Acceptable Daily Intake** : the amount of chemical that, is ingested daily over a lifetime, appears to be without appreciable effect.
- Additives** : any natural or synthetic material, other than the basic raw ingredients, used in the production of a food item to enhance the final product.
- Adulteration** : the act of adulterating i.e. mixing with extraneous material.
- Buffering agent** : an agent which drives an acidic or alkaline solution to neutral.
- Codex Alimentarius Commission** : the body responsible for compiling the standards, codes of practice, guidelines and recommendations that constitute the Codex Alimentarius.
- Contaminants** : substances that make another substance impure or corrupt by contact or mixture/ chemical and biological constituents of environment capable of producing adverse effects on biological systems
- Dropsy** : an unnatural collection of serous fluid in any serous cavity of the body, or in subcutaneous cellular tissue.
- Environmental management** : the organization does to minimize harmful effects on the environment caused by its activities, and continually to improve its environmental performance.
- Food** : any substance, whether processed, semi-processed or raw, which is intended for human consumption, and includes drink, chewing gum and any substance which has been used in the manufacture, preparation or treatment of food but does not include cosmetics or tobacco or substances used only as drugs.
- Generic Management System:** the same standards can be applied to any organization, large or small, whatever its product – including whether its “product” is actually a service – in any sector of activity, and whether it is a business enterprise, a public administration, or a government department.
- Preservative** : any substance that, for a reasonable length of time, will prevent the action of microorganisms and other spoiling agents when added to food.
- Quality management** : what the organization does to enhance customer satisfaction by meeting customer and applicable regulatory requirements and continually to improve its performance in this regard.
- Sequestering agent** : a chemical that combines with dissolved metals in the water to prevent metals from coming out of solution.

Standard mark	:	presence of certification mark on a product is an assurance of conformity to the specifications.
Tariff	:	a Government tax on imports or exports.

14.10 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check you progress 1

- 1) The main objectives of FSSAI is to:
 - Lay down science-based standards for articles of food
 - To regulate manufacture, storage, distribution, sale and import of food
 - To facilitate food safety
- 2) The most important feature of FSSAI include:
 - definition of important terms like adulterants, contaminants etc.
 - development of international technical standard in food
 - framing regulations to lay down food safety standards
 - collecting and collating data regarding food consumption, contamination and emerging risks,
 - provide single window to guide and regulate persons engaged in manufacture, marketing, processing, handling, transportation, import and sale of food.
- 3) Food, in context of FSSAI, means any substance, whether processed, partially processed or unprocessed, which is intended for human consumption and includes primary food to the extent defined in the Act, genetically modified or engineered food or food containing such ingredients, infant food, packaged drinking water, alcoholic drink, chewing gum, and any substance, including water used in the food during its manufacture, preparation or treatment but does not include any animal feed, live animals unless they are prepared or processed for placing on the market for human consumption, plants, prior to harvesting, drugs and medicinal products, cosmetics, narcotic or psychotropic substances.
- 4) a) Food Safety and Standard (Fortification of Foods) Regulations, 2018 is the regulation laid by FSSAI for enforcement of food safety standards in India. Under the regulation it is mandatory that every manufacturer and packer of fortified food shall give an undertaking on quality assurance and submit evidence of steps taken in this regard to the Food Authority. Also, all fortified food, whether voluntarily fortified or required to undergo mandatory fortification shall be manufactured, packed, labeled, handled, distributed and sold, only in compliance with the standards specified under the provisions of the Act and regulations made. And such products shall be packaged in a manner that takes into consideration the nature of the fortificant added, for example: Every package of food, fortified with Iron shall carry a statement *“People with Thalassemia may take under medical supervision”*.

- b) Under this regulation, the organic food offered or promoted for sale shall also comply with all the applicable provisions of one of the following systems, namely:—
- i) National Programme for Organic Production (NPOP);
 - ii) Participatory Guarantee System for India (PGS-India).
 - iii) Any other system or standards as may be notified by the Food Authority from time to time.

Apart from this, labeling of such products may carry a certification or quality assurance mark of one of the systems mentioned above along with the Food Safety and Standard Authority of India's organic logo.

Check You Progress Exercise 2

1) Responsibilities of the Food Business Operator

- Every food business operator should ensure that the articles of food satisfy the requirements of the Act and the rules and regulations made there under at all stages of production, processing, import, distribution and sale within the businesses under his control.
- No food business operator should himself or by any person on his behalf manufacture, store, sell or distribute any article of food, which is unsafe; which is misbranded or sub-standard or contains extraneous matter; for which a license is required, except in accordance with the conditions of the license; which is for the time being prohibited by the Food Authority or the Central Government or the State Government in the interest of public health.
- No food business operator should employ any person who is suffering from infectious, contagious or loathsome disease.
- No food business operator should sell or offer for sale any article of food to any vendor unless he also gives a guarantee in writing about the nature and quality of such article to the vendor.
- Where any food which is unsafe is part of a batch, lot or consignment of food of the same class or description, it will be presumed that all the food in that batch, lot or consignment is also unsafe.
- General hygienic and sanitary practices to be followed by food business operators are covered under Schedule-4 of the licensing regulations.

2) a) The purpose behind the enactment of Legal Metrology Law is as follows:

- to establish standards of weight and measures
 - to regulate inter-state trade or commerce in weights, measures and other goods which are sold or distributed by weight, measure or number, and
 - penalty for offences and compounding of offenses
- b) The purpose behind the enactment of Bureau of Indian Standards is to facilitate harmonious development of standardization, marking and quality certification. Further it serves to provide a new thrust to standardization and quality control, and to evolve a national strategy for according recognition to standards integrating them with growth and development of production and exports .
- c) The purpose behind the enactment of Consumer Protection Act is redress the grievances of the consumer about quality of purchased goods, including food articles, and to set up such councils at State / District level.

- d) The purpose behind the enactment of Agmark is to provide certification to the agricultural goods. Agmark ensure about the quality and purity of the food products. Agmark grading helps famers to get price for agricultural commodities as per the quality produced by them and also consumers to get the desired quality.

Check Your Progress Exercise 3

- 1) Codex Alimentarius commission is the body responsible for compiling the standards, codes of practice, guidelines and recommendations that constitutes the Codex Alimentarius.
- 2) a) The role of CAC is to create standards to protect consumers, ensuring fair practices in the sale of food, and facilitating trade. Also, it sensitizes global community to the dangers of food hazards and importance of food quality.
- b) The role of NCCP-INDIA is to:
- undertake Secretariat responsibilities to the National Codex Committee
 - act as a contact point for the country for maintaining liasion with CAC
 - collect, procure and analyze data for elaborating international food standards
 - keep a track of international food standards
 - undertake the study and research work
 - encourage food manufacturers to improve quality and hygiene management, and
 - disseminate information of food standards and laws.
- c) The role of WHO is in:
- articulating consistent, ethical and evidence based policy and advocacy positions
 - managing information by assessing trends and comparing performance
 - catalyzing change through technical and policy support
 - negotiating and sustaining National and global partnership
 - setting, validating, monitoring and pursuing implementation of norms and standards, and
 - stimulating the development and testing of new technologies.
- d) The role of JECFA is to review the latest knowledge and expert information and making it available to both FAO and WHO, formulate technical recommendations, make recommendations designed to initiate, stimulate and coordinate the research

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