
UNIT 5 RULES AND REGULATION GOVERNING DAIRY INDUSTRY

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5.0 OBJECTIVES

After reading this unit we should be able to:

- 1 Enumerate various legal and quality standards for milk and milk product;
- 1 State the role of various national and international agencies regulating milk and milk products standards;
- 1 Describe the basic features of important national legislations and standards such as PFA Act, ISI Standards and Food safety and Standards Act 2006;
- 1 Outline the important features of the ISO standards; and
- 1 Specify procedure of product certification and licensing.

5.1 INTRODUCTION

We know that the “Quality” has become a necessity for survival and success. Quality ensures “safety of food”. Food borne diseases can be fatal to human beings and can damage trade and tourism. All the stakeholders of the dairy industry i.e. milk producers, milk handlers, manufactures and processors, distributors and retailers, consumers and law enforcement agencies have a responsibility to ensure that food is safe and suitable for consumption. Placement of quality control standards, particularly international standards adds value to the products in global market. The laws regulating the safety and quality of food are in existence since 1899. The number of legislations and quality standards have also increased substantially with the passage of time and growth of the industry. The food sector in India is governed by a multiplicity of laws under different Ministries. The recent enacted “Food Safety and Standards Act, 2006”, aims to integrate the food safety laws in the country in order to systematically and scientifically develop the food processing industry and shift from a regulatory regime to self-compliance. As part of the process of consolidation, the Act covers repealing of eight existing laws related to food safety. The unit will give an orientation to important laws and quality standards in reference to the dairy industry.

5.2 FOOD LAWS AND STANDARDS

susceptible to adulteration and spoilage due to various reasons. The adulterated/spoiled food can affect a large number of population and at times hazards may occur. Secondly, the consumer must get the product for which he has paid. It should neither be of inferior quality nor adulterated. The processor may add any prohibited preservative or add a permitted additive in excess of the prescribed limits to extend its shelf life. It is essential to set the minimum quantities of desirable characteristics required and the maximum quantities of undesirable components that the food should contain. The standards also help to prevent confusion among consumers. These are a few reasons to set and formulate common standards for commodities.

Regulations and products standards are used as the yardsticks that define specific requirements manufacturers must follow to assure product safety and to provide accurate information to health professionals and consumers. The standards ensure quality products.

The laws regulating the safety and quality of food in India date back to the year 1899. Until 1954, several states formulated their own food laws that led to a considerable variance in the rules and specifications of food items and consequently created conflicts in inter-provincial trade. The Central Advisory Board appointed in 1943, while reviewing the subject of food adulteration, recommended for a central legislation that brings in uniformity across the country. With the constitution of India providing powers to the Central Government for making such legislation as the subject of foods and drugs adulteration in the Concurrent list, the Government of India enacted a Central legislation called the 'Prevention of Food Adulteration Act' (PFA) 1954, in the year 1954, which came into effect from 1st June 1955. The Act repealed all laws existing at that time concerning food.

The objective envisaged in this salient legislation was to ensure pure and wholesome food to the consumers and to prevent fraud or deception. All the food products manufactured in India or imported and sold in India have to meet the requirements prescribed under PFA Act, 1954 and the Prevention of Food Adulteration Rules made there under.

However, there are some more legislations, which are equally applicable to different food products. These legislations are being implemented by different departments of the Government of India. These legislations are divided in two groups, namely:

- 1 Mandatory viz. all orders under Essential Commodities Act, 1955
- 1 Quality standards viz. 'ISI' mark of BIS and 'Agmark'

The thrust on value addition and export seeks to harmonize the quality standards and practices in the country with international norms. The BIS is implementing the Management Certification Schemes, and recently has adopted and launched Food Safety Management Systems (FSMS) Certification according to IS/ISO 22000. It entails the food manufacturers in priority areas to adopt 'Hazard Analysis and Critical Control Point' (HACCP) approach to enhance food safety.

The Government has empowered several agencies and institutions to lay down standards and promulgate a number of acts and orders to ensure availability of quality product to the consumers. The manner in which food is weighed and packed is also covered by a number of regulations. We shall learn about these

legislations and quality standards in detail. We shall also learn about important associated institutions.

5.3 NATIONAL QUALITY CONTROL LAWS AND ASSOCIATED INSTITUTIONS

The important Acts and quality standards in reference to processing of milk and milk products are as follows:

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

The Prevention of Food Adulteration Act was enacted in 1954 (37 of 1954) to strengthen the system for preventing adulteration in articles of food. The rules framed under the Act are known as the “Prevention of Food Adulteration Rules, 1955”. The Act is being enforced since 1st June 1955. The objective of this Act was to ensure that food articles sold to the customers are pure and wholesome. It is also intended to prevent frauds or deception and encourage fair trade practices. The Act prohibits the manufacture, sale and distribution of not only adulterated foods but also food contaminated with toxicants and misbranded foods. All the food products manufactured in India or imported and sold in the country have to meet the requirements prescribed under PFA Act, 1954. The PFA Rules, 1955 are amended from time to time. As per notification GSR (365) E dated 7.6.2005, the same are called the Prevention of Food Adulteration (Fourth Amendment) Rules, 2005.

The administration is through a three tier system (a) Government of India, (b) State / Union Territory Governments (UTs), and (c) Local bodies. A Central Committee for Food Standards has been constituted under the Act and has been charged with the function of advising the Central Government on matter relating to the food standards. The Ministry of Health and Family Welfare under the Government of India is the nodal unit at the Central level. Four Central Food Laboratories are situated at Kolkata, Ghaziabad, Mysore and Pune.

The enforcement of the food laws rest primarily with State/ UTs. The implementation of the Act in most of the States is under the administrative control of the Directorate of Health Services, whereas, in a few States, the implementation is being combined with Drug Administration under Joint Food and Drug Administration. Implementation at local level rests with the corporation/ municipal bodies. Licensing of food industries is also done by them. At the State level, the Director of Public Health and Preventive Medicine is appointed as the Food Health Authority. He is responsible for the good quality and standards of food items available to the consumers. Local Health Authority (LHA) under FHA is appointed in every city. There are about 80 food laboratories in the country at District/ Regional or State level in addition to four Central Food Laboratories.

ii. Essential Commodities Act, 1955

The Essential Commodities Act was enacted in 1955 with an objective to regulate the manufacture, commerce, and distribution of essential commodities, including food. The Act extends to the whole of India. A number of Control Orders have been formulated under the provisions of Essential Commodities Act, 1955 and few orders are enlisted here: (a) Fruit Product Order, 1955 (Ministry of Food

Processing Industries), (b) Milk and Milk Product Order, 1992 (Ministry of Agriculture), (c) Vegetable Oils Product (Regulation) Order, 1998, (d) Solvent Extracted Oil, De-oiled Meal and Edible Flour (Control) Order, (e) Meat Product Order, 1973 and (f) Edible Oil Packaging (Development and Regulation) Order, 1998. However, excluding the Fruit Product Order, 1995, the majority of the Orders under the essential Commodities Act, 1955 have not prescribed specification of food products but specify the hygiene and food safety requirements. Specification of food articles formulated under these Order are in line with the Standards laid down under the PFA Act and Rules. The details of Fruit Product Order and Milk and Milk Product Order are given here.

(a) Fruit Product Order: The Fruit Product Control Order was issued in 1946. Subsequently, this order was brought under Essential Supplies Act, 1948. The order is known as Fruit Products Order (FPO), 1955 as per the provision under Section 3 of the Essential Commodities Act. Products covered under this order are fruit and vegetables products. The order aims at regulating sanitary and hygienic conditions in manufacture of fruit and vegetable products. It is mandatory for all the manufacturers of fruit and vegetables products to obtain a licence under this order. The order is implemented by the Ministry of Food Processing Industries, Government of India. The order has been amended in 2000 and is called as the Fruit Products (Amendment) Order, 2000.

(b) Milk and Milk Product Order (MMPO): Consequent upon the new industrial policy announced by the Government of India in July, 1991, a number of industries including dairying were liberalized from the purview of compulsory licensing. In order to have a check on the mushroom growth of dairy units in the organized/private sector, the Department of Animal Husbandry and Dairying Ministry of Agriculture had issued Milk and Milk Product Order (MMPO), 1992 on 9th June 1992, to enforce discipline in the milk trade. The order was issued under Section 3 of the Essential Commodity Act, 1955. The main objective of the order is to maintain and increase supply of liquid milk of desired quality in the interest of the general public and also for regulating the production, processing and distribution of milk and milk products. The order prescribes conditions for registration and renewal .The milk and milk products shall meet the standards prescribed under the PFA rules.

As per paragraph 5 (2), a person handling more than 10,000 litres of milk per day or milk solids in excess of 500 tonnes/annum, is required to obtain registration certificate from the Registering Authority for carrying on his business. This order has been revised on 26.3.2006 to delegate the powers to the concerned State Government for registration of units handling up to 2,00,000 litres of milk per day or 10, 000 metric tonnes of milk solid/annum. The other amendments are: (a) The provision of assigning milk shed has been done away with; (b) The registrations under MMPO-92 will now cover sanitary, hygienic condition, quality and food safety; (c) The provision of inspection of dairy plant has been made flexible and (d) The provision to grant registration in 90 days has been reduced to 45 days.

iii. Standards of Weight and Measure Act, 1976

The Standards of Weights and Measure Act, 1976 was enacted to establish standards of weights and measures, to regulate trade or commerce in weights, measures and other goods which are sold or distributed by weight, measure or

number, to provide for matters connected therewith or incidental thereto. It extends to the whole of India primarily to protect the consumers. Packaging Commodities Rules were framed under the Act to regulate packaged commodities. Standards of Weights and Measures (Enforcement) Act, 1985 was passed with a view to enable State Governments to enforce provisions of Standards of Weights and Measures Act, 1976. The Act can be termed as '3 in 1' Act as it is designed to: (a) Standardise weights and measures; (b) Control manufacture and sale of weights and measures to ensure accuracy and (c) Control over packaging commodities. The salient features of the Act are:

1. Use of non-standardised weights, measures is an offence under this Act.
2. Every manufacturer, dealer and repairer of weights & measures is required to obtain licence.
3. Every licensee has to keep records of his business as per conditions of this licence.
4. All weights, measures, weighing and measuring instruments are required to be verified and stamped in requisite period.
5. Use or sale of non-verified and unstamped weights, measures is offence under this Act.
6. Distribution of quantity less than the standard weights, measures to consumer or excess demand of quantity than the standard weights, measures is an offence under this Act.
8. Use of fake weights and measures or elimination of the verification and stamping marks is offence under this Act.
9. Sale or distribution of goods by means of unstandardized weights and measures is offence under this Act.
10. Display of certificate of verification & stamping at prominent place is essential.
11. Every package shall bear there on or a label securely affixed there to a declaration regarding manufacturer's, packer's or importer's name, generic name of the product, number of content, net weight / measure, year and month of manufacturing, packing or importing & sale price of the package i.e. maximum retail price (inclusive of all taxes). Sale of package commodity at a higher price than the declared price or elimination of such information or label on packing is offence under this Act.
12. Manufacturer, packer or importer of the prepacked commodities are required to register as manufacturer, packer or importer.

The Act is enforced by the Ministry of Consumer Affairs, Food and Public Distribution, Government of India. The Government of India is revising the various rules under the Act from time to time. The changes are as follows: (a) The Standards of Weights and Measures (General) Rules, 1987, are called as Standards of Weights and Measures (General) Rules, 2004; (b) The Standards of Weights and Measures (Packaged Commodities), Rules 1977 are amended as: The Standards of Weights and Measures (Packaged Commodities) Amendment Rules,

2006 and (c) Standards of Weights and Measures (Enforcement) Act, 1985 as Standards of Weights and Measures (Enforcement) Act, 2005 is under process.

iv. The Water (Prevention and Control of Pollution), Act 1974

The Act is controlled by the Ministry of Environment and Forests and Central Pollution Control Board (CPCB) constituted for this purpose enforces the Act. A no-objection certificate from the respective State Pollution Control Board is essential for all dairy plants. This Act has been amended and is designated as Water (Prevention and Control of Pollution) (Amendment) Act, 2003. The Water (Prevention and Control of Pollution) Act establishes an institutional structure for preventing and abating water pollution. It establishes standards for water quality and effluent. Polluting industries must seek permission to discharge waste into effluent bodies.

v. The Air (Prevention and Control of Pollution), Act 1981

The Act provides for the control and abatement of air pollution. It entrusts the power of enforcing this act to the CPCB.

vi. Environment Protection Act, 1986

The Environment (Protection) Act, 1986 has been formulated to provide for the protection and improvement of environment and for matters connected there with. The Act implements the decisions taken under at the United Nations Conference on the Human Environment held at Stockholm in June, 1972, so far as they relate to the protection and improvement of environment and the prevention of hazards to human beings, other living creatures, plants and property. It also covers rule for the manufacture, use, import and storage of hazardous microorganism/genetically engineered organisms or cells. The salient features include:

- (a) planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution;
- (b) laying down standards for the quality of environment in its various aspects;
- (c) laying down standards for emission or discharge of environmental pollutants from various sources whatsoever;
- (d) no person carrying on any industry, operation or process shall discharge or emit or permit to be discharged or emitted any environmental pollutants in excess of such standards as may be prescribed;
- (e) no person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed;
- (f) any person empowered by the Central Government in this behalf has a right to enter any premises all at reasonable times in order to carry out the purpose of this Act; and
- (g) the Central Government or any officer empowered by it on this behalf has power to take for the purpose of analysis, samples of air, water, soil or other substance from any factory, premises or other place in the prescribed names

and analysis of such sample may be produced an evidence in case of a legal proceeding.

vii. Export (Quality Control and Inspection) Act, 1963

The Act aims at facilitating export trade through quality control and inspection before the products are sold to international buyers. The Government of India has notified an order titled “Exports of Milk Products (Quality Control, Inspection and Monitoring) Rules, 2000” for regulating the exports of milk products from India and calls for subjecting them to quality control inspection prior to their export. It takes into account the demands and requirements of the world dairy market with the regard to such factors as quality, health requirements, management practices and processing norms. It covers animal health, hygiene in milk production, collection, storage and transportation. It also specifies levels of residues permissible in milk products, microbiological criteria for milk products, packaging, marketing and labelling, storage and transportation requirements, as well as management of herds and dairy plant, employee hygiene and the like. These rules also mark an important step in upgrading the dairy trade within India and bringing about quality consciousness at all levels of dairying from producer to the consumer.

These rules have been amended and are designated as the Export of Milk Products (Quality Control Inspection and Monitoring) Amendment Rules, 2005.

viii. The Infant Milk Substitutes, Feeding Bottles and Infant Food (Regulation of Production, Supply and Distribution) Act, 1992 and Rules 1993

This Act aims at promoting breast feeding and ensuring proper use of infant milk substitutes and infant food. The Act has been amended and is designated as Infant milk Substitutes, Feeding Bottles and Infant Food (Regulation of Production, Supply and Distribution) Amendment Act, 2003. The act provides for the regulation of the production, supply and distribution of infant milk substitutes, feeding bottles and infant foods, with a view to protecting and promoting breast-feeding and ensuring the proper use of infant foods.

Under the Act, “infant food” means any food that is marketed or otherwise represented as a complement to mother’s milk to meet the needs of the infant after the age of six months and up to the age of two years. “Infant milk substitute” refers to any food being marketed or otherwise represented as a partial or total replacement for mother’s milk for the infant up to the age of two years.

The Act prohibits persons from advertising, or taking part in the publication of any advertisement, for the distribution, sale or supply of infant milk substitutes, feeding bottles or infant foods, or giving an impression or creating a belief in any manner that the feeding of infant milk substitutes and infant foods is equivalent to, or better than, feeding mother’s milk, or taking part in the promotion of infant milk substitutes, feeding bottles or infant foods. Similarly, it expressly prohibits persons from supplying or distributing samples of infant milk substitutes or feeding bottles of infant foods or gifts of utensils or other articles, or contacting any pregnant woman or the mother of an infant, or offering inducement of any other kind for the purpose of promoting the use or sale of infant milk substitutes or feeding bottles or infant foods.

The Act lays down standards and quality control requirements, where it prohibits all persons from producing, selling or distributing any infant milk substitutes, feeding bottles or infant foods unless they confirm to the standards specified under the Prevention of Food Adulteration Act, 1954. All such containers should bear the standard mark specified by the Bureau of Indian Standards Act, 1986.

ix. The Food Safety and Standards Act, 2006

The Food Safety and Standard Act, 2006 (No.34 of 2006) has been enacted to consolidate the laws related to food and to establish the “Food Safety and Standards Authority of India” for laying 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 and for matters connected herewith or incidental thereto.

There are twelve chapters in the Act. A brief description of different chapters is given below:

Chapter- 1: Titled as “Preliminary” and outlines title, extent and commencement. It defines the core and associated terms and contexts related to food, manufacturer, standards, authority, quality and testing such as: food, adulterants, contaminants, extraneous matter, food additives, hazards, ingredients, misbranded food, primary food, unsafe food, food business, sample of food, sale of food, chairperson of Food Authority, commissioner of food safety, food analyst, food authority, designated officer, food analyst, food business operator, food safety officer, food manufacturer, consumer, advertisement, claim, food business, food laboratory, food safety, food safety audit, food safety management system, import, license, local area notification, package, premises, prescribed, prohibition order risk, risk analyses, risk assessment, risk communication, risk management, tribunal, etc.

Chapter – 2: Titled as “Food Safety and Standards Authority of India” deals with its establishment; composition of food authority and qualifications for appointment of its chairperson and other members; selection committee composition for selection of chairperson and members, terms of office, salary, allowances and other conditions of service for chairperson and members, officers and other employees of food authority; and functions of Central Advisory Committee, etc. Different committees and panels in it and duties and functions of the Authority are also described. The food authority shall consist of a Chairperson and 22 members.

Chapter – 3: Titled as “General Principles of Food Safety” outlines general principles to be followed in administration of Act.

Chapter – 4: Titled as “General Provision as to Articles of Food” deals with use of food additives or processing aids; contaminant, naturally occurring toxic substances, heavy metals etc.; pesticides, veterinary drugs residues, antibiotic residues and microbiological counts; generally modified foods, organic foods, functional foods, proprietary foods, etc.; packaging and labelling of foods and restrictions of advertisement and prohibition as to unfair trade practices etc.

Chapter – 5: Titled as “Provision related to Import” specifies: all imports of articles of food to be subject to this Act.

Chapter – 6: Titled as “Special Responsibilities as to Food Safety” deals with responsibilities of the food business operator, liability of manufacturers, packers, wholesalers, distributors and sellers and recall procedures.

Chapter – 7: Titled as “Enforcement of The Act” outlines authorities responsible for enforcement of act.; commissioner of food safety of the State; licensing and registration of food business; improvement notices; prohibition orders; emergency prohibition notices and orders; notification of food poisoning; designated officer; food safety officer; powers of food safety officer; liability of food safety officer in certain cases; analysis of food by the purchaser; power of search, seizure, investigation, prosecution and procedure thereof and procedure for launching prosecution. The section 31 specifies that no person shall commence or carry on any food business except under a licence. However, the petty manufacturer, petty retailer, hawker, itinerant vendor or a temporary stall holders or tiny food business operators are exempted from licence but they shall register themselves with an authority to ensure availability of safe and wholesome food to consumers.

Chapter – 8: Titled as “Analysis of Food” deals with the provisions of recognition and accreditation of laboratories, research institutions and referral food laboratory; recognition of organization or agency for food safety audit; food analyst; functions of food analyst and sampling and analysis.

Chapter – 9: Titled as “Offences and Penalties” specifies general provision related to offences; general provisions relating to penalty; penalty for selling food not of the nature of substance or quality demanded; penalty for substandard food; penalty for misbranded food; penalty for misleading advertisement; penalty for food containing extraneous matter; penalty for failure to comply with directions of the food safety officer; penalty for unhygienic or unsanitary processing or manufacturing of food; penalty for possessing adulterants; penalty contraventions for which no penalty is provided; punishment for unsafe food; punishment for interfering with sized items; punishment for false information; punishment for obstructing or impersonating a food safety officer for carrying out business without license; compensation for injury to consumer and penalty for contravention of provisions in case of import of food article.

Chapter – 10: Titled as “Adjudications and Food Safety Appellate Tribunal” deals with adjudication and notifying adjudicating officer; establishment of Food Safety Appellate Tribunal; procedure of and powers of the tribunal; civil court not to have jurisdiction; power of court to try cases summarily; special courts and public prosecutor; power to transfer cases to regular courts; appeal; time limit for prosecution; magistrate’s power to impose enhanced punishment and defences which may or may not be allowed in prosecution under this Act.

Chapter – 11: Titled as “Finance, Account Audit and Reports” deals with Budget, Finances and Accounts and audit of food authority and annual report of food authority.

Chapter – 12: Titled as “Miscellaneous” outlines the power of central Government to issue directions to food authority and obtain reports and returns; power of Central Government to give directions to State Government(s); members, officers of food authority and commissioner of food safety to be public servants; protection of action taken in good faith; overriding effect of this Act over all other food related laws; transfer of existing employees of central Government Agencies governing various food related Acts of orders to Food Authority; power of Central Government to make rules; power of Food Authority to make regulations; laying of rules and regulations before parliament; power of state Government to make rules; reward by State Government(s); recovery of penalty; repeal and

savings; transitory provision for food standards; Milk and Milk Products Order, 1992 shall be deemed to be regulations made under this Act; amendments to the infant milk substitutes, feeding Bottles and infant foods (Regulation of Production, Supply and Distribution) Act, 1992 and power to remove difficulties.

The section 97 specifies that on commencement of this Act, enactment and order relating to food specified relating in the Second Schedule shall stand repealed. The Second Schedule enlists: (a) The Prevention of Food Adulteration act, 1954 (PFA 37 of 1954), (b) The Fruit Product Order (FPO) 1955, (c) The Milk and Milk Product Order, 1992, (d) The Vegetable Oils Product (Control) Order, 1998, (e) The Solvent Extracted Oil, De-oiled Meal and Edible Flour (Control) Order, 1967 (f) Meat food Product Order, 1973 (g) The Edible Oils Packaging (Regulation) Order, 1998 and (h) Any other order issued under the Essential Commodities Act, 1955 (10 of 1955) relating to food.

x. Bureau of Indian Standards

The Indian Standard Institution (ISI), a national standard organization, was set up in 1947 as a registered society. It was accorded a statutory body status as “Bureau of Indian Standards (BIS)” under Bureau of Indian Standards Act, 1986. It started functioning from 1.4.1987. The BIS certification is voluntary and aims at providing quality, safety and dependability to the consumers. The objectives are: (a) harmonious development of standardization, marking and quality certification; (b) to provide new thrust to standardization and quality control and (c) to evolve a national strategy for according recognition to standards and integrating them with growth and development of production and export. The functions are:

- (a) **Formulation of Indian Standards:** The bureau develops Indian standards for products, processes and services by bringing together and coordinating various interest groups like manufacturers, consumers, technical experts, testing personnel and others interested. The standards so prepared are known as Indian Standards (IS) and are considered as legal documents.
- (b) **Product Certification:** The manufacturers of products interested in producing their products as per relevant Indian Standards are permitted to use the Standard Mark of the Bureau (the popular ISI mark) on their products after obtaining a licence from the Bureau. The BIS product certification scheme is essentially voluntary in nature. The pre-requisites for obtaining a licence are: (a) the manufacturer has the necessary manufacturing and testing facility for the product and (b) agrees to follow the quality assurance scheme of the Bureau in addition to payment of necessary fees as stipulated. The other certification schemes are: (i) Certification for Indian Importers, (ii) Certification for Foreign Manufacturers, (iii) ECO MARK Certificate for environment friendly products- the products should conform to additional requirements specified in the Indian Standards and (d) Hall Marking of Gold Jewellery: The certification of purity of Gold Jewellery is done in accordance with the Indian Standard IS: 1417 (Specification for Gold and Gold Alloys, Jewellery/ Artifacts - Fineness and Marking). The Standard is equivalent to the International Standard ISO 9202:1991-Jewellery.
- (c) **Management System Certifications:** The Bureau operates the following Certification Schemes:
 - i) Quality Management System Certification (ISO 9001 Certification: The Bureau operates the Quality Management System Certification based on

the ISO 9001:2000 standard published by the International Organization of Standardization (ISO).

- ii) Environment Management System Certification: The certification scheme is based on the ISO 14001 standards.
 - iii) Information Security Management System Certification (ISMS based on ISO/IEC 27001).
 - iv) Hazard Analysis and Critical Control Point: Hazard Analysis and Critical Control Point (HACCP) is a process control system designed to identify and prevent microbial and other hazards in food production. We have studied the details in the Unit 3 of Block 1 of this course. BIS offers two Certification schemes to the food industry : (a) HACCP Stand-alone Certification against IS 15000:1998 and (b) HACCP based Quality System Certification provides for two certification through one audit Certification of Quality System against IS/ISO 9000 and Certification of HACCP against IS 15000.
 - v) Occupational Health and Safety Management Systems: Good health and safety performance ensures an accident-free industrial environment. IS 18001:2000 standard prescribes requirements for an OH&S Management Systems.
 - vi) Food Safety Management System Certification: BIS has launched Food Safety Management Systems (FSMS) Certification licence to organizations according to IS/ISO 22000. 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.
- (d) Laboratories Network for Product Testing: BIS has established a network of its own and accredited laboratories to cater to the ever increasing load of testing samples generated from its Product Certification Scheme.,
- (e) Accreditation of Laboratories: BIS laboratory recognition scheme is in line with “IS 14874:2000/ ISO/IEC 17025:1999 General requirements for the competence of Testing and Calibration laboratories”.
- (f) Training: BIS has set up a National Institute of Training for Standardization for organization of various types of training programmes at Noida, UP.
- (g) Enquiry Point for WTO: Ministry of Commerce, Government of India, has designated BIS as an enquiry point under the Agreement on Technical Barriers to Trade of the World Trade Organization (WTO). According to the Agreement, the BIS Enquiry Point issues notifications on proposed technical regulations and certification systems in India to WTO.
- (h) Standard Promotion: Includes: activities related to consumer awareness, other certification bodies, financial incentives to SSIs, benefits and preference given to BIS licenses, etc.

xi. Agriculture Produce Grading and Marketing Act (Agmark Act 1937)

“AGMARK” insignia stands for: “AG” for “Agricultural” and “MARK” for “Marking”. The Agricultural Produce (Grading and Marking) Act, 1937 was passed by the Indian Legislature for the orderly marketing of Agriculture produce on all-India basis. The “AGMARK” seal ensures quality and purity. The Act empowers the Government to fix quality standards, and to prescribe terms and conditions for using the seal of ‘AGMARK’. It is a voluntary organization in nature for certification of agricultural produce (raw and processed) and act as “Third Party Guarantee”. So far, grade standards have been notified for 181 agricultural and allied commodities. Among the dairy products, the *ghee* and creamery butter are covered under the Act. Three types of *Ghee*- Standard, General (Green Label), and Special Grade (Red Label) are marketed under the AGMARK Seal. The Act was amended in 1986 (No. 76 of 1986). The Directorate of Marketing and Inspection, under the Ministry of Agriculture is the nodal unit for its implementation. The definition of quality for “Standard Grade” shall be same as laid down under the PFA rules.

xii. Customs Act, 1962

It is basic act governing import of products into India and is implemented by the Ministry of Finance.

xiii. The Director General of Foreign Trade

Director General of Foreign Trade under the Ministry of Commerce and Industry regulates the import and export and issues necessary notifications. For example, the Notification no 44 dated 24.11.2000 imposes special conditions of compliance of all the conditions to provisions of the Standards of Weights and Measures (Packaged Commodities) Rules, 1977 on import as applicable to domestic producers. The compliance of these shall be ensured before the import consignment of such commodities is cleared by Customs for home consumption. All prepackaged commodities, imported into India, shall in particular carry the following declarations:

- (a) Name and address of the importer;
- (b) Generic or common name of the commodity packed;
- (c) Net quantity in terms of standard unit of weights and measures. If the net quantity in the imported package is given in any other unit, its equivalent in terms of standard units shall be declared by the importer;
- (d) Month and year of packing in which the commodity is manufactured or packed or imported;
- (e) Maximum retail sale price at which the commodity in packaged form may be sold to the ultimate consumer. This price shall include all taxes local or otherwise, freight, transport charges, commission payable to dealers, and all charges towards advertising, delivery, packing, forwarding and the like, as the case may be.

xiv. The Insecticide Act, 1968

The Act envisages safe use of insecticides so as to ensure that the leftover chemical residue do not pose any health hazard.

xv. Industrial Licence

No licence is required for setting up a dairy plant in India. Only a memorandum has to be submitted to the Secretariat for Industrial Approvals (SIA) and an acknowledgement obtained. However, a certificate of registration is required under the Milk and Milk Products Order (MMPO), 1992.

xvi. The Export Inspection Council of India (EIC)

The Export Inspection Council (EIC) was set up by the Government of India in order to ensure sound development of export trade of the country through quality control and inspection and for matters connected thereof. It notifies commodities, establishes standards of quality control and /or inspection and prohibits the export of a notified commodity unless a certificate issued under section 7 of the Act accompanies it. Through its network of laboratories, it inspects and issues certificate of export. It also renders services in the areas of:

- (a) 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.
- (b) Certification of quality of food items for export through installation of Food safety Management System in the food processing units.
- (c) Issue of Certificates of origin to exporters under various preferential tariff schemes for export products.

The milk products are certified by the EIC.

xvii. Agricultural and Processed Food Products Export Development Authority (APEDA)

The Agricultural and Processed Food Products Export Development Authority (APEDA) under the Ministry of Commerce and Industry came into existence in 1986 to promote the export of our agricultural commodities and processed foods. APEDA puts its quality logo on the products to be exported and its seal of quality is designated as “Quality Produce of India”. This logo is a mark of pride and reliability. Milk products along with fruits, vegetables, meat and meat products, honey, *jaggery* and sugar products, alcoholic and non alcoholic beverage, cereals, groundnuts, peanut, walnut, pickles, *chuteny*, guragum, flowers and herbal and medicinal products comes under the purview of the APEDA.

xviii. Indian Institute of Packaging

Indian Institute of Packaging (IIP) is registered under the Societies Registration Act 1860. It was established in the year 1966 jointly by the Ministry of Commerce and Industry and the Packing and Allied Industries of the country. The main aim of the Institute is to undertake research in raw materials for the packaging industry, to organise training programmes on packaging technology and to stimulate the need for good packaging, etc. The Institute keeps checks on quality of packaging material through testing and performance evaluation.

xix. National Numbering Organisation (EAN-India)

National Numbering Organisation (EAN – India) is a society registered under the

Societies Registration Act with objectives of promoting Article Numbering, Bar Coding and EDI (electronic data interchange) in Indian trade and industries. It is managed by a board of management comprising representatives of the Ministry of Commerce and Industry, APEDA (Agricultural and Processed Food Products Exports Developments Authority), ASSOCHAM (The Associated Chambers of Commerce and Industry), BIS (Bureau of Indian Standards), CII (The Confederation of Indian Industry), FICCI (Federation of Indian Chambers of Commerce and Industry), FIEO (Federation of Indian Export Organisations), Spices Board, Indian Merchant Chamber, Mumbai and Indian Institute of Packaging, Mumbai. It is a member of EAN International based at Brussels. EAN stands for International Article Numbering Association, originally called the European Article Number (hence EAN).

xx. National Accreditation Board for Testing and Calibration Laboratories (NABL)

National Accreditation Board for Testing and Calibration Laboratories (NABL) is an autonomous body under the aegis of Department of Science & Technology, Government of India, and is registered under the Societies Act. It is established with an objective to provide third party assessment of the quality and technical competence of testing and calibration laboratories. In order to achieve this objective, NABL provides laboratory accreditation services to laboratories that are performing tests / calibrations in accordance with NABL criteria, which is based on internationally accepted standards and guidelines.

xxi. Quality Council of India

Quality Council of India (QCI) has been setup as an Autonomous body by the Government of India, (Ministry of Commerce & Industry, Department of Industrial Policy & Promotion being the nodal Ministry) with headquarters at Jaipur. The main objectives of the QCI are: -

- i. To establish National Accreditation Boards for:
 - a. Bodies certifying Quality Management Systems, Environment Management Systems, Products and carrying out third party inspection,
 - b. Registration of Quality Management Personnel and Training Organizations,
 - c. Testing and Calibration Laboratories
- ii. To raise quality consciousness in the country through National Board for Quality Promotion.
- iii. To ensure effective functioning of a National Information and Inquiry Service on Standards and Quality
- iv. To promote, coordinate, guide and implement a national quality initiative for building confidence in Indian products and services and for improving the competitiveness of the Indian Industry
- v. To enter into arrangements with similar foreign agencies and develop procedures for exchange and transfer of technologists and technologies,

- vi. To encourage industrial/applied research and development in the field of quality
- vii. To facilitate up-gradation of testing and calibration facilities and laboratories
- viii. To raise the level of training for personnel engaged in quality activities including the assessors and trainees.
- ix. To develop and operate an appeal mechanism to deal with unresolved complaints.

xxii. Consumer Protection Act, 1986

The Consumer Protection Act came into force on 15.4.1986 to protect the consumers from exploitation and to save them from adulterated and substandard goods and deficient services. A Statutory Consumer Protection Council has been set-up under the Act implemented by the Ministry of Consumer Affairs, Food and Public Distribution. The main aim of the council is to redress the grievances of the consumer about quality of purchased goods, including food articles. The Act also provides setting up of such councils at State/ District level.

Check your progress – 1

- 1. What is the need for Standards?

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- 2. What are quality standards?

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- 3. What is the objective of the PFA?

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- 4. What is the objective of MMPO?

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5. What are food standards?

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6. What is the colour of label for general and special grades of Ghee under AGMARK standards?

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7. What do you understand by Milk and Milk Products Order (MMPO)? It is issued by which Ministry?

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8. What is Food Safety and Standards, Act 2006?

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9. Enumerate the important management system certifications operated by BIS.

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5.4 INTERNATIONAL INSTITUTIONS

i. International Dairy Federation (IDF)

Founded in 1903, the International Dairy Federation (IDF) is an organization created by dairy sector worldwide where dairy specialists of all kinds meet to resolve common issues and exchange ideas and experience. The Head Office is at Brussels, Belgium. The major activities are:

- (a) Provides science-based information on which Governments and legislators can develop policy and regulations;

- (b) Collects, compiles and disseminates information on all issues of interest to the dairy sector;
- (c) Provides a discussion forum on all aspects of production, distribution, consumption and trade of milk and milk products;
- (d) Bolsters the work of other international organizations such as Codex by providing scientific and technical advice on dairy issues.

ii. International Organization for Standardization (ISO)

The International Organization for Standardization (ISO), a non-governmental organization, is a network of the national standards institutes of 157 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. The word “ISO”, the short form of the organization, has been derived from the Greek isos, meaning “equal”. ISO’s principal activity is the development of technical standards and it is the world’s largest developer of standards. ISO standards are voluntary. As a non-governmental organization, ISO has no legal authority to enforce their implementation.

ISO develops only those standards for which there is a market requirement. The work is carried out by experts from the industrial, technical and business sectors which have asked for the standards, and which subsequently put them to use. These experts may be joined by others with relevant knowledge, such as representatives of government agencies, consumer organizations, academia and testing laboratories.

ISO has published more than 16,000 International Standards. ISO’s work ranges from standards for traditional activities, such as agriculture and construction, through mechanical engineering, to medical devices, to the newest information technology developments, such as the digital coding of audio-visual signals for multimedia applications. An ISO standard carries the ISO logo and the designation, “International Standard”.

The vast majority of ISO standards are highly specific to a particular product, material, or process. The ISO 9000 and ISO 14000 are the most popular “generic management system standards” ISO 9000 series are quality management and quality assurance standards. The principle of these standards is, “if the system (input, process, output) through which the product is produced, is perfect then the product coming-out of the system will also be perfect.” The ISO 14000 family is primarily concerned with “environmental management”. This means what the organization does to: (a) minimize harmful effects on the environment caused by its activities, and to (b) achieve continual improvement of its environmental performance. Both ISO 9000 and ISO 14000 concern with the way an organization goes about its work, and not directly result of this work. In other words, they both concern processes, and not products – at least, not directly. The main principal of achieving this certification is ‘SAY what you Do and Do what you SAY’. A few important ISO standards are as follows:

- (a) ISO 9000 series: Under this series, the three standards ISO 9001, ISO 9002 and ISO 9003 have been integrated into the new ISO 9001:2000. It specifies requirements for a quality management system for any organization aiming for product that meets customer and applicable regulatory requirements. It also

outlines the measures to enhance customer satisfaction by improving the quality management system. The standard is used for certification/registration and contractual purposes by organizations seeking recognition of their quality management system. The ISO 9004:2000 is used to extend the benefits obtained from ISO 9001:2000 to all other associated parties such as employees, owners, suppliers, etc. and may include society in general. The standard recognizes that the word “product” applies to services, processed material, hardware and software intended for, or required by, the customer.

- (b) ISO 14000 series: The ISO 14000 family consists of standards relating to environmental management systems and others which are specific tools for realizing environmental policy and achieving objectives and targets. ISO 14001:2004 specifies the requirements and guidelines for use.
- (c) ISO 22000 is first in family of food safety management system standards. ISO 22000:2005, is a new International Standard designed to ensure safe food supply chains worldwide
- (d) ISO/PAS 28000:2005 is for supply chain security management.

iii. Codex Alimentarius

The Codex Alimentarius, or the food code, has become the global reference point for consumers, food producers and processors, national food control agencies and the international food trade. Term Codex Alimentarius is taken from Latin and means Food code. The FAO/WHO codex Alimentarius commission was established to implement the joint FAO/WHO Food Standard Programme. About 150 countries including India are members of the commission. The purpose of this commission is to protect the health of consumers and to ensure fair practices in food trade, to promote coordination of all food standard work undertaken by international and Governmental organizations, to determine priorities and initiate and guide the preparation of draft standards through and with the aid of appropriate organizations and publish the standards. These standards are accepted by World Trade Organisation (WTO) in setting dispute in international trade. The “Codex-India” National Codex Contact Point (NCCP) for India is located at the Directorate General of Health Services, Ministry of health and Family Welfare, Government of India.

Simply stated, the Codex Alimentarius is a collection of standards, codes of practice, guidelines and other recommendations. The Codex General Principles of Food Hygiene introduces the use of the Hazard Analysis and Critical Control Point (HACCP) food safety management system.

iv. Association of Official Analytical Chemists (AOAC)

AOAC is an independent organization promoting method validation and quality measurements in the analytical sciences by reviewing and validating approved standard methods of analysis. AOAC methods are recognized worldwide for their authenticity due to a very rigorous testing procedure.

v. Asia Pacific Laboratory Accreditation Co-operation (APLAC)

It is the Asia Pacific Laboratory accreditation organization and NABL is a member of this organization.

vi. International Laboratory Accreditation Co-operation (ILAC)

It is the international organization and has an internal criterion for laboratory accreditation and NABL is member of this organization.

vii. World Trade Organisation (WTO)

WTO is the global international organization dealing with the rules of trade between nations. We know that the countries have been engaged in reducing trade barriers associated with the movement of manufactured products since the late 1940s. It began with a small group of industrialized nations which negotiated the first significant trade treaty known as the General Agreement on Tariffs and Trade (the GATT). In 1986 the member countries initiated a new GATT Round which became known as the Uruguay Round (1986-1994). The Uruguay Round was the most comprehensive GATT round ever conducted, covering new sectors of trade, such as services, and first time negotiations on agricultural trade. The Uruguay Round also resulted in the establishment of the World Trade Organization (WTO), including several Committees within the WTO structure to monitor implementation of the various agreements and to administer the dispute settlement procedures. Thus the WTO trading system came into existence in 1995 as the successor to the General agreement on Tariffs and Trade (GATT). The WTO agreement covers goods, services and intellectual property. The agreement spells out the principles of liberalization and the permitted exceptions. It includes individual countries' commitment to lower customs tariffs and other trade barriers and to open and keep open services markets. The WTO outlines procedures for settling disputes. It prescribes special treatment for developing countries. The agreement requires governments to make their trade policies transparent. Some of the important measures are:

One of the important agreements is on "Sanitary and Phyto-sanitary Measures (SPS)": The SPS Agreement recognizes the fundamental right of countries to protect the health and life of their consumers, animals, and plants against pests, diseases, and other threats to health. It set out the basic rules for food safety and animal and plant health. But it also says regulations must be based on science and are encouraged to use international standards. The objective the SPS Agreement is to ensure that a member country does not use SPS measures as a new form of trade protectionism. The SPS measures can take many forms such as: (a) requiring products to come from a disease-free area, (b) inspection of products, (c) specific treatment or processing of products, (d) setting of allowable maximum levels of pesticide residues and (e) permitted use of only certain additives in food. The primary obligation under the agreement is that SPS protection measures must be based on either a relevant international standard, established by an international standards body recognized by the SPS Agreement, or a scientific risk assessment. Towards this end, the SPS Agreement encourages countries to harmonize their SPS measures, to the greatest extent possible, by basing their health measures on relevant international standards. Harmonization is intended to reduce unnecessary variances between countries' technical standards differences which can often be the source of trade friction.

5.5 PRODUCT CERTIFICATION AND LICENSING

Product certification and licensing in India is done by a number of organizations. Bureau of Indian standards (BIS) operate product certification under the rules and regulations of BIS Act 1986. A manufacture is granted licence to use the standard mark after assessment of his infrastructure facilities for manufacturing and quality control checks to produce goods in consistent with quality control. The conformity to standards is further ensured by regular surveillance at licensee, performance by surprise inspections and testing of samples from the factory and market. BIS offers certification schemes to food industries.

The Directorate of marketing and Inspection (DMI) issues “AGMARK” certificate to the notified food products under Agriculture produce Grading and Marketing Act. 1937. Ministry of civil supplies, Consumers Affairs and Public distribution regulate the standardization of weight and measures, and quality of the vanaspati and vegetable oils and fats through solvent extraction for export materials, APEDA issues the certificate for export of agriculture commodities. This organization has developed a system for grant of the certificate “quality produce of India” for Agriculture produce being exported.

Check your progress – 2

1. What is International organization for standardisation (ISO)?
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2. For what purpose the ISO 9000 certificate is issued?
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3. What do you understand by the term Codex Alimentarius?
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4. Which are the international organizations responsible for setting Codex Alimentarius Commission?
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5. Which dairy products are covered under AGMARK certification scheme?

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5.6 LET US SUM UP

The Indian dairy industry has good export potential. The country has not been able to translate these opportunities as quality of milk produced by us falls below the internationally accepted standards. A number of interventions are being introduced to improve the quality of processed food products. The laws regulating the safety and quality of food are in existence since 1899. The numbers of legislations and quality standards have also increased substantially with the passage of time and growth of the industry. The compulsory national legislations are: (a) Prevention of Food Adulteration Act, 1954, Milk and Milk Products Order, 1992 under the Essential Commodities Act, Standards on Weights and Measures (Packaged Commodities) Rules, 1977, Export (Quality Control & Inspection) Act, 1963 and Pollution Control. The voluntary quality standards are: ISI standards of the Bureau of Indian Standards and AGMARK of the Directorate of Marketing and Inspection. Some of the other important institutions associated in facilitating production of quality products are: The Agricultural and Processed Food Products Export Development Authority (APEDA), Quality Council of India (QCI), National Accreditation Board for Testing and Calibration Laboratories (NABL) and National Numbering Organisation. Similarly international institutes and standard organizations associated for quality regulations are: The International Dairy Federation (IDF), International Organization for Standardization (ISO), Codex Alimentarius Commission, Association of Official Analytical Chemists (AOAC) and World Trade Organisation (WTO). Codex Alimentarius standards are accepted by WTO in setting dispute in international trade. The “Codex- India” National Codex Contact Point (NCCP) for India is located at the Directorate General of Health Services, Ministry of health and Family Welfare, Government of India. The ISO 9000 and ISO 14000 are the most popular “generic management system standards” of the ISO. BIS has launched Food Safety Management Systems (FSMS) Certification licence to organizations based on 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. The recent enacted “Food Safety and Standards Act, 2006”, aims to integrate the food safety laws in the country in order to systematically and scientifically develop the food processing industry and shift from a regulatory regime to self-compliance.

5.7 KEY WORDS

Adulterant	: Any material which is or could be employed for making the food unsafe or sub-standard or containing extraneous matter.
AGMARK	: Agriculture Produce Grading and Marketing Act,;
AOAC	: Association of Official Analytical Chemists.
APEDA	: Agricultural and Processed Food Products Export Development Authority.
APLAC	: Asia Pacific Laboratory Accreditation Co-operation.
BIS	: Bureau of Indian Standards.
Codex Alimentarius	: A food code commission set up by FAO/WHO to implement food standard programme.
Contaminant	: Any substance, whether or not added to food, but which is presenting such food as a result of the production (including operations in carried out, in crop husbandry, animal husbandry or veterinary medicine) manufacture, processing, preparation, treatment, packaging, transport or holding of such food or as a result of environmental contamination and does not include insect fragments, rodent hairs and other extraneous matter.
EAN	: National Numbering Organisation/ European Article Numbering.
Food additive	: Any substance not normally consumed as a food itself or used as atypical 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, packing, 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.
Food Safety	: The term denotes assurance that food is acceptable for human consumption.
Hazard	: A biological, chemical or physical agent in, or

condition of, food with the potential to cause an adverse health effect.

IDF	: International Dairy Federation.
ILAC	: International laboratory Accreditation Co-operation.
Import	: Bringing into India any article of food by land, sea or air.
Ingredient	: Any substance, including a food additive used in the manufacture or preparation of food and present in the final product, possibly in a modified form.
ISO	: International Organization for Standardization.
MMPO	: Milk and Milk Products Order.
NABL	: National Accreditation Board for Testing and Calibration Laboratories.
Organic Food	: Food products that have been produced in accordance with specified organic production standards.
PFA	: Prevention of Food Adulteration Act.
WTO	: World Trade Organization.

5.8 SOME USEFUL BOOKS

AGMARK: Directorate of Marketing and Inspection (DMI), Department of Agriculture and Cooperation, Ministry of Agriculture, www.agmarknet.nic.in, agricoop.nic.in.

Agriculture and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, www.apeda.com

BIS : Bureau of Indian Standards, Ministry of Consumer Affairs, Food and Public Distribution www.bis.org.in and www.fcamin.nic.in

Codex Alimentarius: www.codexindia.nic.in; www.codexalimentarius.net and mohfw.nic.in.

Directorate General of Foreign Trade, Ministry of Commerce and Industry, <http://dgft.delhi.nic.in>

Essential Commodities Act, 1955, Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution; www.fcamin.nic.in

Export Inspection Council of India (EIC), Ministry of Commerce and Industry, www.eicindia.org

Food And Agriculture Organization(FAO), www.fao.org

Food Safety and Standards Act (No.34 of 2006), 2006 : Ministry of Food Processing Industries, <http://www.mofpi.nic.in>

International Dairy Federation(IDF): www.idf.org

International Organization for Standardization(ISO) : www.iso.org

Milk and Milk Products Order 1992. Department of Animal Husbandry and Dairying ,Ministry of Agriculture, www.dahd.nic.in

Prevention of Food Adulteration Act (1954) 24th Edition, 2003 Eastern Book Company Lucknow. : Ministry of Health and Family Welfare, mohfw.nic.in (under health activities)

Weights & Measures, Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution; www.fcamin.nic.in

World Health Organization (WHO); <http://www.who.org>

5.9 ANSWERS TO CHECK YOUR PROGRESS

Your answers should include the following points

Check Your Progress – 1

1. Standards ensure better quality product, effective hygienic control, less chances for adulteration/ contamination and spoilage of food.
2. Quality standards are better than legal standards because these are voluntary and will be adopted only when these are better than legal standards.
3. The objective of the PFA Act is to ensure that food articles sold to the customers are pure and wholesome
4. The main objective of the order is to maintain and increase in supply of liquid milk of desired quality in the interest of the general public and also for regulating the production, processing and distribution of milk and milk products
5. Food standards are the specification characteristics of food and minimum requirements for undesirable constituents or characteristics which are harmful to human health or undesirable from quality point of view.
6. Red for special grade and Green for general grade Ghee.
7. Milk and milk product order is an order issued by the Ministry of Agriculture to control the collection of milk and production of milk products in addition to hygienic requirements of the plant.
8. Food Safety and Standards Act is promulgated to consolidate the laws related to food, for laying 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 and for matters connected herewith or incidental thereto.
9. The Bureau of Indian Standards operates the following Certification Schemes:

- i) Quality Management System Certification (ISO 9001 Certification)
- ii) Environment Management System Certification (ISO 14001).
- iii) Information Security Management System Certification (ISMS based on ISO/IEC 27001).
- iv) Hazard Analysis and Critical Control Point: Certification of HACCP against IS 15000.
- v) Occupational Health and Safety Management Systems: IS 18001:2000
- vi) Food Safety Management System Certification: IS/ISO 22000.

Check Your Progress – 2

1. ISO is an international organization which has laid down standards, for food safety and hygienic.
2. It specifies requirements for a quality management system for any organization aiming for product that meets customer and applicable regulatory requirements.
3. Codex Alimentarius means Food Code : The purpose of this commission is to protect the health of consumers and to ensure fair practices in food trade.
4. FAO and WHO
5. Butter and Ghee