



FOOD SAFETY AND STANDARDS  
AUTHORITY OF INDIA

*Inspiring Trust, Assuring Safe & Nutritious Food*

# Food Regulatory systems and standards



BIS hallmark



Agmark



ISI mark



FPO mark



**Soma Maji**  
**Dairy Technology**

# Legal Standards ??

Legal standard means the specifications or the requirements which pertain to the law of the Govt. and are set up by the Govt. to meet certain minimum requirements in terms of chemical quality (i.e. composition), bacteriological quality (i.e. hygienic quality), and labelling and packaging requirements.

- In our country, legal standards are given under PFA Rules, 1955 (which are amended from time to time).
- Any food that does not confirm to the minimum standards laid down by the legal rulers (PFA rules) is said to be adulterated.



# Parameters Generally Taken into Consideration while Fixing Legal Standards

- **Purity**

- **Composition**

- **Additives:**

Permitted additives like nisin (preservative) in cheese, BHA (antioxidant) in ghee, butter, whole milk powder etc.

- **Efficiency of processing:**

Should be clearly specified rules for the test to be For example, phosphatase test should be negative for pasteurized milk; turbidity test should be negative for sterilized milk.

- **Bacteriological quality (Hygienic quality):**

Permissible limits for coliform count, total count, yeast and mould count etc. should be clearly specified in the rules

- **Packaging and labelling requirements:**

Type of packaging material is to be used for what type of food, the labels like quantity, price, manufacturing date, expiry date etc.

# Quality standards

- Quality standards are those laid down by the Govt or some expert body constituted by the Govt.
- While legal standards are compulsory, the quality standards are not compulsory.
- Quality standards are on voluntary basis.
- In our country, we have two types of quality standards
  1. Agmark standards: Similarly, Agmark standards deal with many types of foods, mainly with the raw agricultural produce. For example: cereals, oils, oil seeds, spices, eggs, legumes (pulses), ghee, butter etc. Among the dairy products, for the purpose of quality standards, ghee and creamery butter (Table butter or salted butter) are covered under Agmark.
  2. BIS/ ISI standards : BIS/ISI standards deal with many types of processed food products, apart from non-food products. Except ghee and creamery butter rest of the dairy products are covered under BIS/ISI
- In 1987, BIS has made it compulsory or mandatory for certain items to have ISI mark. For example, **for food colors and additives, vanaspati, containers for packing, milk powder and condensed milk. Therefore, for these two milk products (milk powder and condensed milk), it is now compulsory to have ISI mark.**

# Why Do We Need Legal and Quality Standards?

- The main purpose of these standards is to protect the interest of the consumer
- Interest of the manufacturer also gets protected, because if it is a certified product with some quality mark (like ISI, Agmark), it will sell more as compared to the uncertified product.
- In case of cost customer does not mind to pay a little more for an assumed quality product i.e. certified product.
- Consumer should get a product of pure quality (i.e. unadulterated) free from pathogenic organisms and also free from harmful substances like pesticides, antibiotics, heavy metals (toxic metals like Arsenics, lead, mercury etc), and toxins etc.
- So, it is the duty of the Govt. to fix legal standards to protect the interest of the consumer and also to fix quality standards so as to improve the quality of the product to a higher degree above the minimum legal (PFA) standards.

# International Organization for Standardization (ISO)

- The name ISO, derived from the Greek isos, meaning "equal".
- ISO is a network of the national standards institutes of **158 countries**
- One member per country, with a **Central Secretariat in Geneva, Switzerland**, that coordinates the system.
- ISO is a non-governmental organization that forms a bridge between the public and private sectors.
- It is the world's largest developer and publisher of International Standards.
- In French ISO was known as "OIN" (Organization internationale de normalization).



# ISO standards

## **1. ISO 9000 family- Quality management system:**

The ISO 9000 family is the world's best-known quality management standard for companies and organizations of any size.

## **2. ISO/IEC 27000 family: Information security management systems:**

Providing security for any kind of digital information, the ISO/IEC 27000 family of standards is designed for any size of organization.

## **3. ISO 14000 family: Environmental management:**

Improve your environmental performance with this family of standards.

## **4. ISO 31000: 2018: Risk Management**

Manage the risks that could jeopardize your company's performance with this ISO standard.

## **5. ISO 50001:2018- Energy management:**

ISO's standard for helping organizations manage their energy performance.

## **6. ISO 26000: 2010 – Social Responsibility:**

Help your organization to operate in a socially responsible way with this standard.

## **7. ISO/IEC 17025 – Testing and calibration laboratories:**

Testing and calibration performed using standard methods, non-standard methods, and laboratory-developed methods

## **8. ISO 37001: 2016 – Anti Bribery Management systems:**

Prevent, detect and address bribery.

## **9. ISO 45001 – Occupational Health and safety:**

Reduce workplace risks and make sure that everyone gets home safely with ISO 45001.

## **10. ISO 22000 – Food Safety Management system:**

Inspire confidence in your food products with this family of standards.



# Characteristics of ISO standards are

## **1. Democratic:**

Every full member of ISO has the right to take part in the development of any standard which it judges to be important to its country's economy. No matter what the size or strength of that economy, each participating member in ISO has one vote. Each country is on an equal footing to influence the direction of ISO's work at the strategic level, as well as the technical content of its individual standards.

## **2. Voluntary**

ISO standards are voluntary. As a non-governmental organization, ISO has no legal authority to enforce the implementation of its standards. ISO does not regulate or legislate. However, countries may decide to adopt ISO standards - mainly those concerned with health, safety or the environment - as regulations or refer to them in legislation, for which they provide the technical basis. In addition, although ISO standards are voluntary, they may become a market requirement, as has happened in the case of ISO 9001 quality management systems, or of dimensions of freight containers and bank cards. ISO itself does not regulate or legislate.

### **3. Market-driven**

- ISO only develops standards for which there is a market requirement. The work is mainly carried out by experts from the industrial, technical and business sectors which have asked for the standards, and which subsequently put them to use.

### **4. By Consensus**

- ISO standards are based on international consensus among the experts in the field.
- Consensus, like technology, evolves and ISO takes account both of evolving technology and of evolving interests by requiring a periodic review of its standards at least every five years to decide whether they should be maintained, updated or withdrawn. In this way, ISO standards retain their position as the state of the art.

### **5. Globally relevant**

- ISO standards are technical agreements which provide the framework for compatible technology worldwide. They are designed to be globally relevant - useful everywhere in the world. ISO standards are useful everywhere in the world.

# PFA Act and Rules

- PFA stands **for Prevention of Food Adulteration**.
- The PFA Act was passed in 1954 and PFA Rules were framed in 1955 to protect the consumers against the supply of inferior quality or adulterated food.
- In recent years the Govt. of India has enacted another Act known as —The Food Safety and Standards Act, 2006 (abbreviated as FSS Act 2006). The regulations under this act have come into force from Aug, 2011.
- The main objectives of PFA Act are:
  - To protect the public from harmful and poisonous foods.
  - To prevent the sale of substandard food containing harmful substances
  - To protect the society against unscrupulous and anti-social dealers by eliminating fraudulent practices.
- PFA standards are **formulated** and revised by an expert body called **Central Committee for Food standards (CCFS)** under the **Directorate General of health Services, Ministry of Health and Family Welfare**. It is the CCFS which advises the Central Govt. and the State Govt. on matters arising out of the administration of PFA Act. It is a very heavy committee. People from all the States and the Union Territories (UTs) and all the major Ministries and departments are representative of this committee.

# Preservative Permitted To Be Added To Samples

- When a food inspector takes the sample of any food for analysis, he has to add a preservative, as may be prescribed from time to time, so as to keep the sample in a condition suitable for analysis.
- The preservative used in the case of samples of any milk (including toned, separated and skimmed milk, standardized milk) chhanna, skimmed milk chhanna, cream, ice-candy, dahi, khoa or khoa based or paneer based sweets, such as kalakand and burfi is **formalin**, a liquid containing about **40 percent of formaldehyde in aqueous solution** in the proportion of 0.1 ml (two drops) for 25ml or 25grams (i.e.@ 0.4%). Provided that in case of **ice-cream and mixed ice-cream**, the preservative used shall be in the proportion of 0.6 ml for 100 ml or 100 gm (i.e.@ 0.6%).



# Agriculture Produce (Grading and Marking) Act (AGMARK)

- Agmark stands for — **Agricultural Marketing**.
- Indian Legislature in 1937 passed an act known as — **Agriculture Produce (Grading and Marking) Act, 1937**.
- This act is not mandatory. It is permissive in nature.
- Rules under this Act are called — **General Grading and Marking Rules, 1937**.
- Rules have been revised in 1988 and are called **General Grading & Marking Rules, 1988**.
- Grading of Agricultural items under these rules is called **AGMARK GRADING** or **Agmark certification**.
- Agmark is the exclusive property of Govt. of India. It is not a private trade mark.
- **Directorate of Marketing & Inspection (DMI)** is the **authority on the Agmark** whose **head quarter is now at Faridabad** and **branched head quarter is at Nagpur**.
- It is the DMI which enforces the Agricultural Produce Act, 1937.
- Under the Agricultural Produce Act, 1937-grade standards are given for agricultural and allied commodities like cereals, oil seeds, oils, creamery butter, ghee, legumes, eggs etc.
- Agricultural commodities are categorized into various grades such as, **special, good, fair, ordinary** etc depending upon the degree of quality (type of composition) in each case.
- These grades are known as — **Agmark Standards**
- Way of categorizing or grading the agricultural products in terms of their chemical composition or quality is called — **Agmark Grading**.

## Objectives of Agmark Scheme

- To assure the consumers a product of pre-tested quality & purity.
- To enable the producer of good quality products to have better returns.
- To have a sale of the product in the market with a uniform composition and well defined quality.
- To eliminate the malpractice of adulteration in the movement of the product from producer to consumer.

As told earlier, among the dairy products, **only ghee and creamery butter (Table butter or salted butter) are graded under Agmark. Deshi or cooking (unsalted or white) butter is not graded under Agmark.**

## How The Certificate of The Authority To Use Agmark Labels Is Obtained?

Interested parties have to apply to the Agricultural Marketing Advisor (AMA) to Govt. of India at Directorate of Marketing & Inspection (DMI) whose H.Q is at Faridabad (Branched H.Q. at Nagpur).

Following pre-requisites are needed to use Agmark labels.

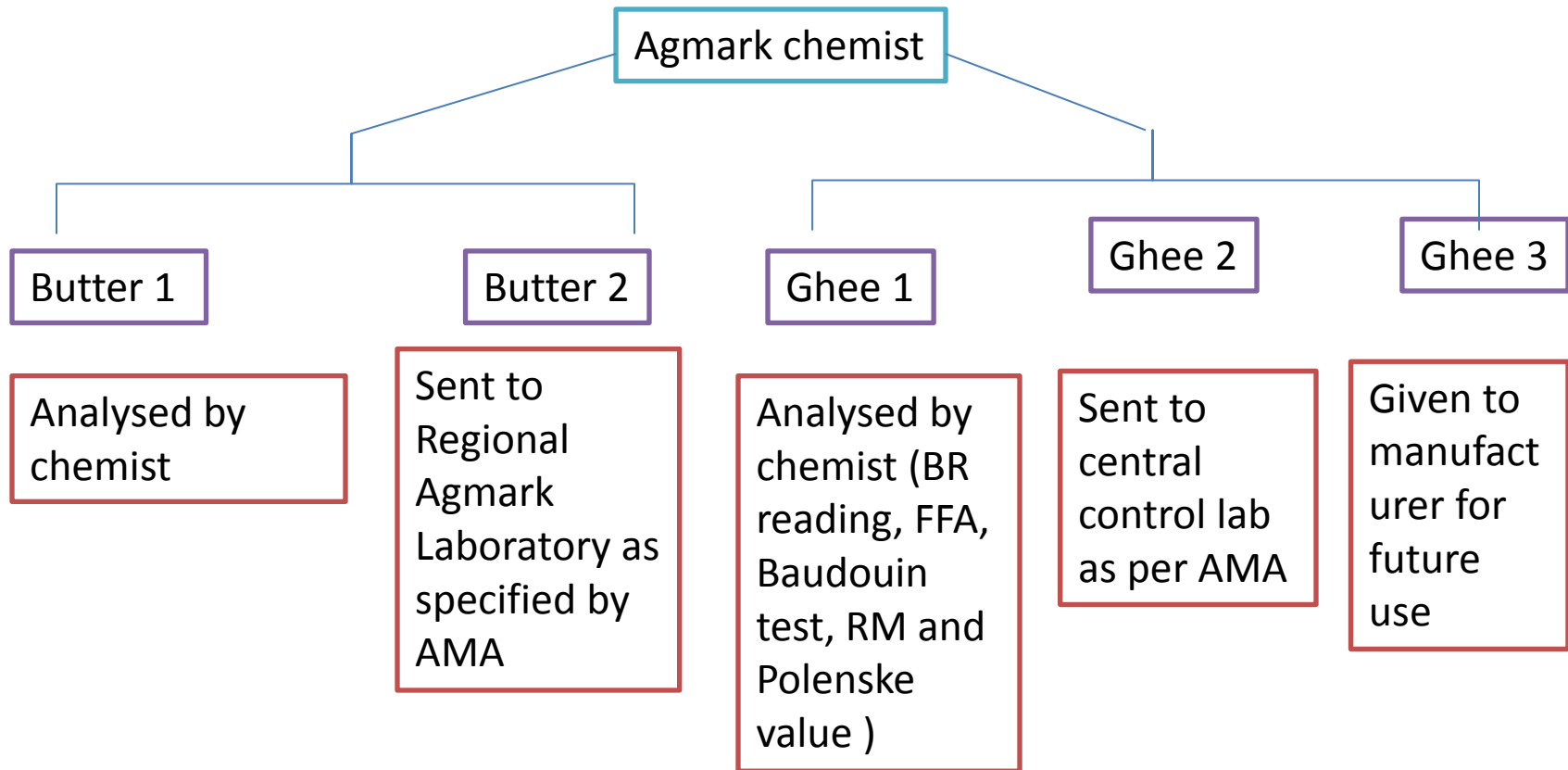
- They should have well equipped, hygienic site and hygienic equipments.
- They should have well equipped lab.
- They should have qualified staff
- Should have pasteurizing plant and cold storage facilities
- Hygienic cream separating station

- They should have quality control checks on cream and raw materials so as to ensure that no adulteration with animal or vegetable fat takes place.
- Packing containers should be clean and rust free.
- No vegetable fat, animal body fat and no artificial flavoring or coloring matter should be seen near the factory and cream separating station.
- Ghee clarification temperature should never go above 110°C.
- They should also send one sample of butter/ghee to Regional Agmark Lab or any other specified lab at regular intervals as advised by AMA.
- All instructions from AMA will have to be followed strictly.
- Container should indicate the name of packer, batch no. (Melt no), date of packing, net weight and Certificate of Authorization (CA) number.

Now if parties concerned can afford, then write to AMA at Faridabad/Nagpur through state marketing officer. Then, AMA or his authorized persons will inspect the premises, the facilities and technical staff etc. After satisfaction, AMA issues the necessary certificate of authority to use Agmark Labels. Certificate of Authorization is renewed periodically on the basis of the past performance of the authorized packer.



# How The Agmark Scheme Operates In Case Of Butter & Ghee



After the ghee and butter are packed and sealed and sold in the market, the field staff of DMI collects the check samples from the market when the products are on sale in the market. These check samples are analysed at different Regional Agmark Laboratories (RAL) and the results are compared with the original. If the results agree then alright, but if the results do not agree, then appropriate action is taken, such as the product is withdrawn from the market, and the authority to use Agmark labels is cancelled etc.



भारतीय मानक ब्यूरो  
**Bureau of Indian Standards**  
The National Standards Body of India



# Bureau of Indian Standards (B.I.S)

The old name of this organization was *ISI (Indian Standards Institution)*, which was established in 1947.

The new name i.e. BIS came into existence from 1st April, 1987 under the BIS Act 1986.

## **Structure of BIS/ Members of BIS**

Minister for food and civil supplies is the *President of BIS*

Members of BIS include:

Members of Parliament

Ministers of state govts.

Nominees of central Govt.

Ministries and departments

Farmers community

Consumers organizations

Academic institutions

Research institutions

Industry and

Professional Associations.

# Objectives and Functions of BIS

1. To formulate Indian standards for various articles, processes, methods of test, codes of practices etc and promote their implementation.
2. To promote the Concepts of standardization and Quality control in industries.
3. To coordinate the efforts of producers and users for making improvements in the materials, products, processes and methods.
4. To operate ISI certification scheme.
5. To establish testing laboratories of its own.
6. To operate laboratory recognition scheme to meet the requirements of testing.
7. To offer technical and consultancy services within and outside the country.
8. To have cooperation and coordination with international standard making bodies like ISO.

**BIS is a member of ISO and IEC**

ISO- international organization for standardization.

IEC- international electro-technical commission.

## How to get authority to use ISI mark?

- The manufactures have to apply to BIS for permission.
- BIS people then send a team to inspect the factory, verify the capabilities of manufacturer to produce and also test the products on continuous basis in accordance with the relevant Indian standards.
- They also check the quality of the products and other facilities and after satisfying themselves they give permission to use ISI mark.
- BIS gives a well defined quality control system to the manufactures and tells them to exercise control measures at various stages like,
  - Raw material,
  - Diff. stages of production,
  - Finished product stage.

BIS also has an elaborate Quality Audit System under which they draw the samples

- From the factory production line, or
- From factory store ,
- Purchase them from the open market.

The samples are tested in their own labs or recognized labs to check the conformity with the relevant Indian standards.

- BIS also entertains complaints from consumers and arranges free replacements of defective ISI-marked goods.
- BIS also provides training in statistical quality control to its applicants and licensees for improving their technical skill.

*fssai*



सत्यमेव जयते

**FOOD SAFETY AND STANDARDS  
AUTHORITY OF INDIA**

*Inspiring Trust, Assuring Safe & Nutritious Food*

# FSSA, 2006

- In order to consolidate the laws relating to food and to establish the Food Safety and Standards Authority of India the Govt. of India has enacted new food laws known as —**The Food Safety and Standards Act, 2006**.
- This Act was passed on **23rd August, 2006**. The Act came in to force only recently in 2011.
- This Act consolidates various acts & orders that handled food related issues in various Ministries and Departments.

## Highlights of the Food Safety and Standard Act, 2006

Various central Acts like

- Prevention of Food Adulteration Act, 1954 ,
  - Fruit Products Order , 1955,
  - Meat Food Products Order , 1973,
  - Vegetable Oil Products (Control) Order, 1947,
  - Edible Oils Packaging (Regulation) Order 1988,
  - Solvent Extracted Oil, De- Oiled Meal and Edible Flour (Control) Order, 1967,
  - Milk and Milk Products Order, 1992 etc
- will treated as repealed after commencement of FSS Act, 2006.

## **Establishment of FSSAI**

- Ministry of Health & Family Welfare, Government of India is the Administrative Ministry for the implementation of FSSAI.
- The Chairperson and Chief Executive Officer of Food Safety and Standards Authority of India (FSSAI) have already been appointed by Government of India.
- The Chairperson is in the rank of Secretary to Government of India.
- FSSAI has been created 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.



# Composition of Food Safety and Standards Authority of India

The Food Authority consists of a **Chairperson** and the following twenty-two members out of which one-third shall be women

- **Seven Members**, not below the rank of a **Joint Secretary** to the Government of India, to be appointed by the Central Government, to respectively represent the Ministries or Departments of the Central Government dealing with –  
{(i) Agriculture, (ii) Commerce, (iii) Consumer Affairs, (iv) Food Processing, (v) Health, (vi) Legislative Affairs, (vii) Small Scale Industries, who shall be Members *ex-officio*; }
- **Two representatives** from **food industry** of which one shall be from small scale industries
- **Two** representatives from **consumer organizations**.
- **Three** eminent **food technologists or scientists**.
- **Five** members to be appointed by rotation every three years, **represent the States and the Union territories**
- **Two** persons to represent **farmers' organizations**.
- **One** person to represent **retailers' organizations**.

# Punishment for unsafe food under FSSAI

Any person who, whether by himself or by any other person on his behalf, manufactures for sale or stores or sells or distributes or imports any article of food for human consumption which is unsafe, shall be punishable

- (i) Unsafe food does **not result in injury**,  
with **imprisonment up to six months** and with **fine up to one lakh rupees**
- (i) Unsafe food results in a **non-grievous injury**,  
with **imprisonment up to one year** and **fine up to three lakh rupees**
- (i) Unsafe food results in a **grievous injury**,  
with **imprisonment up to six years** and **fine up to five lakh rupees**
- (i) Unsafe food **results in death**,  
with **imprisonment** which shall **not be less than seven years** but which may **extend to imprisonment for life** and **fine** not be less than **ten lakh Rupees**.



## **Penalty for selling food not of the nature or substance or quality demanded**

The person shall be liable to a penalty not exceeding five lakh rupees. Provided that the persons covered under sub-section (2) of section 31, shall for such non-compliance be liable to a penalty not exceeding twenty five thousand rupees.

## **Penalty for sub-standard food**

The person shall be liable to a penalty which may extend to five lakh rupees.

## **Penalty for possessing adulterant**

- (1) Subject to the provisions of this chapter, if any person who whether by himself or by any other person on his behalf, imports or manufactures for sale, or stores, sells or distribute any adulterant shall be liable –
  - (i) where such adulterant is not injurious to health, to a penalty not exceeding two lakh rupees;
  - (ii) where such adulterant is injurious to health, to a penalty not exceeding ten lakh rupees.
- (2) In a proceeding under sub-section (1), it shall not be a defence that the accused was holding such adulterant on behalf of any other person.

Thank you