



Technews

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For Efficient Dairy Plant Operation**

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INDIAN FOOD REGULATIONS APPLICABLE TO MILK AND MILK PRODUCTS

This bulletin includes technical information based on latest developments on products, systems, techniques etc. reported in journals, companies' leaflets and books and based on studies and experience. The technical information in different issues is on different areas of plant operation. It is hoped that the information contained herein will be useful to readers.

The theme of information in this issue is **Indian Food Regulations Applicable to Milk and Milk Products**. It may be understood that the information given here is by no means complete.

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With this issue of the *Technews* we are adding a regular column 'News Section'. This section would include brief information on important and relevant events, amendments to food laws, latest useful publications and other important activities of Codex Alimentarius Commission, World Trade Organization, International Dairy Federation and different agencies involved in framing and enforcing Indian food laws, to keep the dairy industry updated on, and informed of, developments in areas of its interest.

We hope this 'News Section' would be useful to cooperative dairy industry.

1. INTRODUCTION

Food regulations are recognized as pre-requisites for protection of the consumer's health and facilitating free and fair trade. There are several regulations and agencies in the country, which are involved in administering quality of foods, both domestically produced and imported. These regulate manufacturing, distribution, marketing and retailing operations by imposing onerous responsibilities and liabilities on the parties. The regulations are amended / revised regularly and such amendments are published through appropriate notifications of the concerned ministries / government departments. All these regulations need to be taken into consideration to address the issues of food safety and quality, and conformity to the provisions of the regulation, in the day-to-day operations of a dairy plant.

This issue of *Technews* provides a summary of various existing regulations and standards, as amended up to 31 December 2005, that are relevant to the dairy industry for guidance of milk products' processors. However, recognizing that the summarized provisions are not exhaustive in coverage, it is necessary to consult the original regulations appropriately as needed.

2. FOOD REGULATIONS

2.1 Prevention of Food Adulteration Act, 1954 and Prevention of Food Adulteration Rules, 1955

The Prevention of Food Adulteration (PFA) Act and Rules is the primary food regulation intended to protect the customer against impure, unsafe and fraudulently-labelled foods. The PFA standards, which are mandatory, prescribe minimum compositional standards and various other provisions on usage of food additives. It also includes a list for the limits of some chemical contaminants like pesticides residues, heavy metals and aflatoxin in foods. The provisions of the Regulation are applicable to domestically produced as well as imported food products.

Director General of Health Services, Ministry of Health & Family Welfare administers the Prevention of Food Adulteration (PFA) Act and the Prevention of Food Adulteration (PFA) Rules with the help of a Central Committee for Food Standards (CCFS), Central Food

Laboratories (CFLs), State Food Laboratories, Local Health Authorities and Custom Authorities. The CCFS is the rule-making body. The local food authorities and the custom authorities (imported foods only) monitor the quality of foods with the help of CFLs and State Food Laboratories. The PFA Act and Rules, and recent notifications are available at the website: <http://mohfw.nic.in/pfa.htm>

2.2 Milk and Milk Products Order, 1992

The Milk and Milk Products Order (MMPO), under the Essential Commodities Act, 1955, is a regulatory order of the Government of India for maintaining and increasing supply of liquid milk of desired quality in the interest of the general public and to provide for regulating the production, supply and distribution of milk and milk products. It includes rules for production, hygienic conditions, packing, labelling, marketing, penalty etc. The Order was amended in 2002 to lay more emphasis on the hygienic production and processing of milk and milk products manufactured in a dairy establishment.

Department of Animal Husbandry and Dairying, Ministry of Agriculture administers the MMPO. As per the Order, any dairy or premises, handling more than 10,000 litres of milk per day has to obtain the registration from appropriate registering authority. However, registration authority of dairies with a milk handling capacity up to 2 lakh litres per day rests with the designated State authorities. The registering authorities organize inspection of all dairy plants, including those handling less than 10,000 litres of milk per day, through experts' teams for verification of implementation of approved guidelines with respect to hygiene and sanitation. For details see website: <http://dahd.nic.in/order/mmpo.doc>

2.3 Standards of Weights & Measures Act, 1976 and Standards of Weights & Measures (Packaged Commodities) Rules, 1977

These regulations are designed to establish fair trade practices with respect to packaged commodities. The Standards of Weights and Measures (Packaged Commodities) Rules (SoW&M(PC) Rules), aim to ensure that the basic rights of consumers regarding vital information about nature of the commodity, the name and address of the manufacturer, the net quantity, date of manufacture, and maximum sale price are provided on the label.

The Department of Consumer Affairs under the Ministry of Consumer Affairs, Food, and Public Distribution administers these regulations.

The entire text of the Standards of Weights and Measures Act, 1976, and the Standards of Weights and Measures (Packaged Commodities) Rule, 1977, and related notifications, can be accessed from the website: http://fcamin.nic.in/wm_ind.htm.

2.4 The Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulations of Production, Supply and Distribution) Act, 1992, and Rules, 1993

The legislation provides for regulation of production, supply and distribution of infant milk substitutes, infant foods etc. with a view to protect and promote breast-feeding and to ensure proper use of infant foods.

It prohibits advertisements and any other form of promotion that indicates or gives an impression about equality or superiority of infant milk substitutes / infant foods over mother's milk, and also any form of incentives for the use or sale of infant milk substitutes / infant foods.

2.5 Export (Quality Control and Inspection) Act, 1963

The Export (Quality Control and Inspection) Act promotes and regulates the commodity export system. The Act comes under the Ministry of Commerce, Government of India. The Export Inspection Council of India (EICI) is responsible for the operation of this Act. Registration of dairy processing establishments with the EICI has been made mandatory for undertaking exports of milk products.

EICI, with the help of Export Inspection Agencies (EIAs), arranges inspection of food plants to verify the implementation of approved guidelines by the plants manufacturing foods for export. The dairy establishments need to maintain records of various checks and tests for presentation to the Authority for a period of 2 years. Full text of the Act is available at the website: http://commerce.nic.in/export_quality_control.htm

2.6 Livestock Importation Act, 1898

The Livestock Importation Act is primarily intended to regulate import of livestock and livestock products and specifies appropriate procedures for the importation of livestock and related products to India. The Act makes it mandatory to obtain an import permit from the Implementing Authority before actually importing some livestock products that include

milk and milk products also. The Authority issues the permit only after conducting a detailed import risk analysis. The import permit issued by the Authority lays down specific conditions that will have to be fulfilled in respect of the consignment including quarantine checks on arrival at the designated entry points.

The Act is administered by the Department of Animal Husbandry and Dairying under the Ministry of Agriculture, Government of India.

The importation procedures specified under the Act are available at the website: <http://dahd.nic.in/order/livestockimport.doc>

2.7 Bureau of Indian Standards (BIS) Act, 1986

Bureau of Indian Standards Act empowers the Bureau of Indian Standards to formulate standards and to operate a product certification scheme for manufacturers, including dairy product processors. The certification allows the licensees to use the ISI Mark on their products. The manufacturing operations are required to follow a defined scheme of testing and inspection, and manufacture products that conform to the appropriate BIS Standards. BIS has formulated standards and guidelines for various dairy products and processes.

The Bureau also has a quality management system certification scheme to help strengthen the industry for the quality control programme. To protect the environment and ecology, BIS has also started ECOMARK scheme for environmental friendly product.

The BIS standards are in general purely voluntary. However, as per certain provisions of the PFA Rules, several milk products can be manufactured/stored/sold only under BIS Certification (**See Section 6 iv**)

2.8 Agricultural Produce (Grading and Marking) Act, 1937

Better known as 'AGMARK', the Act provides quality standards for grading, packing and marking of agricultural and animal husbandry products. The Directorate of Marketing and Inspection under the Ministry of Agriculture is vested with the responsibility to enforce and implement the Act. At present three dairy products viz. *ghee*, butter and fat spread are graded under the scheme.

AGMARK Standards are also voluntary in nature. However, as per certain provisions of the PFA Rules, *ghee* in certain cases cannot be

stored / sold without AGMARK certification (See Section 6 ii).

Full text of the Act and Rules are available on the website:
http://agmarknet.nic.in/agm_std1.htm

3. REGISTRATION / LICENSING REQUIREMENTS FOR BUSINESS OPERATIONS

A food business is required to obtain appropriate license under the PFA Rules, registration certificate under Milk and Milk Products Order and Standards of Weights & Measures (Packaged Commodities) Rules, approval of the unit under Export (Quality Control and Inspection) Act and an import permit under Livestock Importation Act.

3.1 Licensing under PFA Rules

The licensing requirements are specified under Rules 50 and 51 of the PFA Rules. Sub-rule (1) of the Rule 50 states *“No person shall manufacture, sell, stock, distribute or exhibit for sale any article of food, including prepared food or ready to serve food or irradiated food except under a license”* with a provision *“that a producer of milk, who sells milk only to milk cooperative society which is member of milk cooperative union engaged in reconstitution of milk or manufacture of milk products shall be exempted from this sub-rule”*.

One license may be issued by the licensing authority for one or more articles of food and also for different establishments or premises in the same local area (Rule 50(1A)). However, separate licenses are required if the articles of food are manufactured, stored or exhibited for sale at different premises situated in more than one local area (Rule 50(4)).

Rule 51 specifies *“A license shall, unless sooner suspended or cancelled, be in force for a period of five years or for such period as the State Government may prescribe”*. A licensee is required to make an application for renewal of license at least three months before the expiry of the period of validity of the license and the licensing authority is required to take a decision on the application before the expiry period of validity of the license in force.

The procedure for obtaining a license is specified in the Sub-Rules (2) to (5) of the Rule 50. Other requirements, including general hygienic conditions, for a licensee are also specified under various Sub-Rules of the Rule 50. Specifically, a manufacturer or wholesale dealer in butter and *ghee* is required to maintain a register showing the quantity manufactured, received or sold and the destination of each consignment sent out from the place of business (Rule 50(12)).

Section 24 of the PFA Act, empowers State Governments to frame certain rules relating to forms of licenses, the conditions subject to which such licenses may be issued, license fees etc. Accordingly, different states have promulgated additional rules for such matters.

3.2 Registration under MMPO

Requirements with respect to the registration under MMPO 1992 are specified in the Paragraph 5 of the Order. Sub-paragraph (1) of the Paragraph 5 specifies that *“On and from the date of commencement of this Order, no person or manufacturer shall set up a new plant or expand the capacity of the existing plant without obtaining registration / permission as the case may be from the Registering Authority”*. For this the applicant is required to make an application to the Authority (Central or State, as the case may be) which after registering the unit issues a registration certificate.

As per sub-paragraph (10), separate registration certificate is required in respect of each undertaking / establishment / unit if the holder of the registration certificate carries on business in milk and milk product in more than one premises. However, if no independent business is carried on in such premises, separate registration certificates are not needed.

The terms and conditions of the registration under the Order pertaining to sanitary and hygienic conditions, quality and food safety are specified in Fifth Schedule of the Order. These terms and conditions include: a) General conditions of sanitary and hygiene for dairy establishments, b) General conditions of hygiene applicable to staff, c) Sanitary and hygienic requirements for storage, and d) Wrapping and packaging.

Sub-paragraph (5)(B) (a, b, c and d) specify the requirements of an inspection of the premises by a team of experts on behalf of the Registering Authority to ascertain sanitary and hygienic conditions as specified in Fifth Schedule. The inspection is carried out prior to

commissioning of a plant and is valid for a period not exceeding one year.

As per sub-paragraph (7), the Registering Authority shall dispose of every application for registration within ninety days of its receipt or, in the event of the Authority seeking any additional information from the applicant, within forty-five days of receiving such additional information from the applicant.

As per sub-paragraph (12), a licensee is required to make efforts to maintain a cold chain through out its operations from procurement of milk to the final sale of milk or milk product to the end user. A licensee is also required to follow procedures and practices that may be approved by the Advisory Board for clean milk production, collection, transportation and distribution of milk and milk product.

3.3 Registration under SoW&M (PC) Rules

The registration requirements are provided in Section 35 (Chapter VI) of the SoW&M (PC) Rules. As specified under the Rule every individual, firm, Hindu undivided family, society, company or corporation who or which prepacks, or imports any commodity for sale, distribution or delivery is required to register his or its name and complete address with the Registering Authority. For this an application is required to be made to the Registering Authority within ninety days of the commencement of pre-packing of the commodity.

3.4 Registration under Export (Quality Control & Inspection) Act

These details are available in the Ministry of Commerce Notifications (S.O 2719 and S.O. 2720, both dated 28 November 2000). As per Section 14(d) of the Order S.O 2719, any dairy plant intending to export milk and milk products is required to get registered with the Export Inspection Agency (under Export Inspection Council of India) established under Section 7 of the Export (Quality Control and Inspection) Act, 1963. Each approved plant would have an official number assigned to it.

The General Hygienic Conditions for approval of processing establishments are specified in Annexure B of the Order. These include the requirements for site and construction of the establishment, dairy hygiene, plant and equipment hygiene and installation, water supply, employee hygiene, milk collection equipment hygiene etc.

Section 4.15 of the Order S.O. 2720 further specifies that the Competent Authority would satisfy itself that the plant meets requirements with regard to the nature of activities it carries out, prior to according an approval. The approval is valid for a period of 1 year.

3.5 Issue of Import Permit under Livestock Importation Act, 1898

As provided in the Notification S.O. 655(E) of 7 July 2001, issued under Section 3A of the Livestock Importation Act, the import of various livestock products, including milk and milk products are allowed only against a sanitary import permit to be issued by the Department of Animal Husbandry & Dairying as per the procedure laid down in the Schedule annexed to the Notification.

All importers of such products are required to make an application to the designated authority for a permit to import the product(s). On the basis of an import risk analysis, and after satisfying itself that the import of the product(s) will not adversely affect the health of the human and animal population in the country, the Authority may issue the import permit to the importer. The specific conditions that will have to be fulfilled in respect of the consignment, including pre-shipment certifications and quarantine checks, and post import requirements with regard to quarantine inspections are specified on the permit.

The import permit issued is valid for a period of 6 months but can be extended by the concerned authority for a further period of 6 months, if requested by the importer with reasons in writing.

4. REQUIREMENTS IN RESPECT OF PRODUCT QUALITY AND SAFETY

Provisions related to product quality and safety are specified in the PFA Act and Rules, MMPO, BIS Standards and AGMARK Act & Rules.

4.1 Requirements under PFA Act and Rules

4.1.1 Definition of adulteration: Section 2(i) of the PFA Act defines an adulterated food. The definition includes in its scope contaminated food, unwholesome food, unhygienic food, substandard food, foods containing extraneous substances, foods containing additives not otherwise permitted, etc.

4.1.2 Product identity and quality parameters: Milk and milk products produced, manufactured, stored and sold in the market are required to conform to the product definitions and quality parameters specified in Appendix B (Category A.11) of the PFA Rules.

4.1.3 Food additive provisions: These are briefed below:

i. General food additive provisions: General information pertaining to the use of different classes of food additives in foods is provided in various Parts of the PFA Rules, which are listed below:

Part VI, Coloring matter: Rule 29 permits use of permitted synthetic food colours only in ice cream, milk lollies, frozen desserts, flavoured milk, yoghurt, ice cream mix powder and ice candy.

Part X, Preservatives: Specific Class II preservatives are permitted for use in only cheese or processed cheese, *paneer / chhanna*, and fat spreads (Rule 55). Use of more than one Class II preservative in a food is prohibited (Rule 54).

Part XI, Anti-oxidants, emulsifying, stabilizing and anti-caking agents: As per Rule 59, no antioxidants other than lecithin, ascorbic acid and tocopherols are permitted for use in any food unless otherwise provided in Appendices B and C of the PFA Rules. Rule 61 prohibits use of several emulsifying or stabilizing agents in milk and cream.

Part XIII, Flavouring agents and related substances: Rule 64B specifically prohibits use of monosodium glutamate in any food for use by an infant below twelve months, and also in milk and milk products, buttermilk, plain fermented and renneted milk products (excluding dairy based drink), pasteurized cream, sterilized / UHT whipping and reduced fat creams, butter and concentrated butter, infant food and infant milk substitute including infant formulae and follow-on-formulae, fat spreads, ice candies, ice cream, frozen desserts, malted milk food and milk based foods.

Part XVI, Sequestering and buffering agents: Rule 72 provides use of certain sequestering and buffering agents in canned baby foods, milk preparations and some other specified dairy products.

ii. Specific food additive provisions: Part III, Rule 47 permits use of some artificial sweeteners (saccharine sodium, aspartame, acesulfame

potassium and sucralose) in milk product based sweets such as *khoya burfi, peda, gulabjamun, rasgulla* and similar milk product based sweets sold by any name. Sucralose is also permitted for use in ice cream, yoghurt and sweetened buttermilk.

Part XVI, Rule 72D permits use of lactulose syrup in special milk based infant food formulations up to a maximum level of 0.5 percent of final food subject to label declaration. Such foods are to be taken under medical advice.

Part XIX, Rule 81 also permits use of food additives, permitted in the rules and in Table 1 of Appendix C, in traditional foods, namely, milk product based sweets such as *khoya burfi, peda, gulabjamun, rasgulla* and similar milk product based sweets sold by any name, *gulabjamun mix*.

4.1.4 Maximum limits for chemical contaminants: Information regarding chemical contaminants in milk and milk products is provided in various sections of the PFA Rules, 1955 which are listed below:

i. Part XI, Poisonous metals: For milk and milk products maximum levels of poisonous metals indicated in the Table under Rule 57 are as follows:

Name of the poisonous metal	Article of food	Maximum limit (Parts per million)
Lead	Infant milk substitute and infant foods	0.2
	Ice cream, ice lollies and similar frozen confections	1.0
	Other milk products (including milk)	2.5
Copper	Infant milk substitute and infant foods	15.0 (but not less than 2.8)
	Other milk products (including milk)	30.0
Arsenic	Milk	0.1
	Infant milk substitute and infant foods	0.05
	Ice cream, ice lollies and similar frozen confection	0.5
	Other milk products	1.1
Tin	Infant milk substitute and infant foods	5.0
	Other milk products (including milk)	250.0

Name of the poisonous metal	Article of food	Maximum limit (Parts per million)
Zinc	Infant milk substitute and infant foods	50.0 (but not less than 25.0)
	Other milk products (including milk)	50.0
Cadmium	Infant milk substitute and infant foods	0.1
	Other milk products (including milk)	1.5
Mercury	Milk and milk products	1.0
Methyl mercury	Milk and milk products	0.25

ii. **Part XIA, Crop contaminants and naturally occurring toxic substances:** Rule 57A prescribes a maximum permissible level of 0.03 ppm (30 ppb) for aflatoxin in all articles of food. Hence it applies to milk and milk products also. Rule 57 B specifies maximum limit for certain naturally occurring toxic substances as follows:

Name of the toxic substance	Name of the food	Maximum limit (parts per million)
Agaric acid	Milk and milk products	100
Hydrocyanic acid		5
Hypericine		1
Saffrole		10

iii. **Part XIV, Insecticides and pesticides:** Rule 65 provides a list for the maximum permissible limit of pesticide residues in various commodities and food products. Sub-rule (2) specifies maximum permissible limits for 26 pesticides in milk / milk products. These are:

Name of the insecticide	Food	Tolerance limit mg / kg (ppm)
2,4 D	Milk and milk products	0.05
Aldrin, dieldrin	Milk and milk products	0.15 (fat basis)
Benomyl	Milk and milk products	0.10 (fat basis)
Carbendazim	Milk and milk products	0.10 (fat basis)
Carbofuran	Milk and milk products	0.05 (fat basis)
Chlordane	Milk and milk products	0.05 (fat basis)

Name of the insecticide	Food	Tolerance limit mg / kg (ppm)
Chlorfenvinphos	Milk and milk products	0.2 (fat basis)
Chlorpyrifos	Milk and milk products	0.01 (fat basis)
Cypermethrin	Milk and milk products	0.01 (fat basis)
DDT (DDT, DDD and DDE)	Milk and milk products	1.25 (fat basis)
Edifenfos	Milk and milk products	0.01 (fat basis)
Ethion	Milk and milk products	0.5 (fat basis)
Fenitrothion	Milk and milk products	0.05 (fat basis)
Fenthion	Milk and milk products	0.05 (fat basis)
Fenvalerate	Milk and milk products	0.01 (fat basis)
Heptachlor	Milk and milk products	0.15 (fat basis)
α- Hexachlorohexane	Milk (whole)	0.05
β- Hexachlorohexane	Milk (whole)	0.02
γ- Hexachlorohexane (Lindane)	Milk	0.01 (whole basis)
	Milk products	0.20 (fat basis)
	Milk products (having less than 2% fat)	0.20 (whole basis)
δ- Hexachlorohexane	Milk (whole)	0.02
Monocrotophos	Milk and milk products	0.02
Paraquat Dichloride	Milk (whole)	0.01
Phenthoate	Milk and milk products	0.01 (fat basis)
Phorate	Milk and milk products	0.05 (fat basis)
Primiphos methyl	Milk and milk products	0.05 (fat basis)
Trichlorfon	Milk (whole)	0.05

4.2 Product Quality and Safety Provisions in BIS Standards

Product quality and safety requirements are specified in several standards for milk product and hygienic codes developed by the BIS. More emphasis is also laid on microbial requirements in the recent revisions and formulations. The Standards are primarily focused on food processing establishments. Some important product standards include skimmed milk powders (Standard and Extra Grades), milk powder, ice cream, butter etc. Some other BIS Standards are specific to food hygiene and safety, and include:

IS 2491:1998 Food Hygiene – General Principles – Code of Practice.

IS 7005:1973 Code of hygienic conditions for production, processing, transportation and distribution of milk.

IS 5839:2000 Food Hygiene – Code of practice for manufacture, storage and sale of ice-creams.

IS 10974 (PT 1): 1984 Code of hygienic conditions for production, transport, storage and distribution of indigenous milk products: Part 1 *Khoa* and *khoa* based sweets.

IS 10974 (PT 2): 1984 Code of hygienic conditions for production, transport, storage and distribution of indigenous milk products: Part 2 *Dahi*.

IS 10974 (PT 3): 1984 Code of hygienic conditions for production, transport, storage and distribution of indigenous milk products: Part 3 Coagulated products, *chhana* and *chhana* based sweets.

IS 10974 (PT 4): 1984 Code of hygienic conditions for production, transport, storage and distribution of indigenous milk products: Part 4 Frozen products, *kulfi*.

IS 10974 (PT 5): 1984 Code of hygienic conditions for production, transport, storage and distribution of indigenous milk products: Part 5 Fermented products, *shrikhand*.

IS 15000:1998 Food Hygiene – Hazard Analysis and Critical Control Point (HACCP) – System and Guidelines for its Application.

IS 2052: 1979 Specification for compounded feed for cattle.

4.3 Product Quality Requirements under AGMARK Act & Rules

Quality parameters are provided for *ghee* in Schedules I-III of the Appendix III (*Ghee* Grading and Marking Rules) and Appendix IV, and for butter in Schedules I and II of the Appendix V (Creamery Butter Grading and Marking Rules, 1941). The quality parameters for products cover mainly compositional characteristics and adulteration aspects. No microbiological standards are prescribed for the dairy products covered under Act.

5. REQUIREMENTS IN RESPECT OF PRODUCT PACKAGES

These requirements are specified in the SoW&M (PC) Rules, the PFA Rules, Infant Milk Substitute / Infant Foods Act and MMPO.

5.1 Labelling Requirements

The SoW&M (PC) Rules and the PFA Rules (Part VII) establish labelling requirements for all packaged foods. MMPO and Infant Milk

Food Act also specify some labelling requirements for milk and milk products, and infant milk substitutes / infant milk foods, respectively.

5.1.1 General labelling provisions: In general, the product label should provide the information given in the following table:

Requirement	Specified by		
	W&M (PC) Rules (*)	PFA Rules (**)	MMPO (***)
Name and complete address of manufacturer, packer, importer	√	√	√
Name, trade name, or description of product	√	√	√
Name of ingredients used in the product, in descending order of their composition by weight or volume		√	
Net weight, number, or volume of contents	√	√	√
Month and year the product was manufactured or packed.	√	√	√
Maximum retail price (MRP)	√		
Distinctive batch, lot, or code number		√	√
Month and year by which the product is best consumed		√	

* All labelling related requirements specified in Rules 6 to 21 (Chapter II).

** All labelling related requirements specified in Rules 32 to 42A (Part VII).

*** Labelling related requirements specified in Paragraph 26. Requirements not applicable to imported products.

5.1.2 Additional specific labelling requirements under PFA Rules:

i. Where applicable, the product label should also contain the following information (Rule 32b):

- Non-vegetarian food (any food which contains whole or part of any animal including birds, marine animals, eggs, or product of any animal origin as an ingredient, excluding milk or milk products), must have a symbol of a brown colour-filled circle inside a square with a brown outline prominently displayed on the package, contrasting against the background on the principal display panel, in close proximity to the name or brand name of the food.
- Vegetarian food must have a symbol of a green colour-filled circle

inside a square with a green outline prominently displayed on the package, contrasting against the background on the principal display panel, in close proximity to name or brand name of the food.

- Extraneous addition of flavouring and colouring matter.
 - If a product contains 'different type of cheese or cheese mixture' or 'milk and milk products derived solely from milk' as ingredients, such addition could be declared in the list of ingredients by class names 'cheese' and 'milk solids', respectively.
- ii. As per a provision in Rule 32(f), in case of packages containing liquid milk, sterilized or UHT treated milk, flavoured milk, *khoa*, *paneer* or any other commodity which has a short shelf life, the date, month and year in which the commodity is manufactured or prepared or packed is required to be mentioned on the label.
- iii. Rule 37B provides in detail additional labelling provisions for infant milk substitutes and infant food. As per its sub-rule (2) "*No containers or label relating to infant milk substitute or infant food shall have a picture of infant or women or both. It shall not have picture or other graphic materials of phrases designed to increase the saleability of the infant milk substitute or infant food. The terms "Humanized" or "Maternalized" or any other similar words shall not be used. The package and/or any other label of infant milk substitute or infant food shall not exhibit words, "Full Protein Food," "Energy Food," "Complete Food," or "Health Food," or any other similar expressions.*"
- iv. Rule 42, Part VII of the PFA Rules 1955 specifies additional labelling requirements (forms of labels) for certain packaged milk and milk products that include condensed and desiccated milks (sub-rule B), fluid milk (sub-rule C), ice cream (sub-rule D), malted milk food (sub-rule R), milk fat spread (sub-rule ZZZ(5)), cheese (sub-rule ZZZ(9)), and food products containing permitted artificial sweeteners (sub-rule ZZZ (1)).
- v. Implied nutritional and health claims are allowed on food products, and there are no statutory nutritional requirements. As per Rule 32A, foods claiming to be enriched with nutrients such as minerals, proteins, or vitamins, should indicate quantities of such added nutrients on the label.

5.1.3 Additional specific labelling requirements under MMPO:

- i. Rule 26(3) (b) - The licensees are also required to declare their registration number on the label of milk or milk product packages.
- ii. Rule 32(3) (e) - In case of milk packages, the label information should include the day of manufacture or packing also. It, however, exempts ice cream, butter, cheese, liquid milk (in bottles, cartons or sachets), beverages containing milk as ingredient, which are returnable by the consumer for refilling from this labelling requirement.

5.1.4 Additional labelling provisions for infant milk substitutes / infant foods as specified in Infant Foods Act and Rules: In addition to the labelling information to be provided on infant milk substitutes / infant foods packages as required under PFA Rules, the above-mentioned Act (Section 6) / Rules (Rule 7) further specify some special labelling requirements for these products.

The labelling requirements in particular prohibit use of the pictures of an infant and / or a woman, and use of words like 'humanized' or 'maternalized' on the container or label. Section 6 also requires that such container of infant foods and milk substitutes must affix label clearly written in local language, bearing statements: "mother's milk is best for your baby", "should be used only on the advice of a health worker", "a warning that infant milk substitute or infant food is not the sole source of nourishment of an infant" etc.

5.2 Packaging and Container Requirements

Standards of Weights & Measures (PC) Rules specify a host of provisions pertaining to specific commodities to be packed and sold only in standard packages, general provisions relating to declaration of quantity etc.

5.2.1 Maximum permissible errors in relation to the quantity contained in the individual package: Rule 2(i) provides for maximum permissible errors in relation to the quantity contained in an individual package of specific products as listed in Schedules I and II. These limits are specified for *ghee*, infant milkfood including malted milk foods, and milk in Schedule I, and for other commodities (including milk products) in Schedule II.

Rule 24 and Schedule X (Part II) further specify a procedure for examination, and determination, of quantity and error in packages at the premises of the manufacturer or packer by the enforcement authorities. During such examination it is expected that:

- The statistical average of the net quantity contained in the package drawn as samples is not lesser than the quantity declared on the package,
- None of the packages shows an error in deficiency greater than the maximum permissible error.

5.2.2 Commodities to be packed in specified quantities: As per Rule 5 (Chapter II), certain commodities can only be packed in quantities (weight, measure, or number) specified in Schedule III. These commodities include baby food, weaning food, *ghee*, butter oil and milk powder.

5.2.3 Declaration of quantities: Rule 11(4) and Schedule IV provide flexibility with respect to the declaration of quantity in the case of specific commodities that are likely to undergo significant variations in weight and measures on account of environmental or other conditions. In such products the quantity declared may be qualified by the words ‘*when packed*’. In case of dairy products this is applicable only to ice creams, butter and cheese.

5.2.4 Manner of declaration of quantity: Rule 12(2) and Schedule V specify the declaration of specific units of quantities (weight / measure / number) for various products, as follows:

Curd, *Rasgulla* / *gulabjamun* / other sweet preparations ... by mass;
Ghee / butter oil / ice cream and other similar products, Ice cream and other similar frozen products ... by mass or volume;
 Other milk products ... by mass if the commodity is solid, semi solid, viscous or a mixture of solid and liquid / by volume if the commodity is liquid or is sold by cubic measure.

6. PROHIBITION AND REGULATION OF SALES

PFA Rules also specify certain restrictions on the sale of various types of foods and admixtures of foods. Such restrictions in case of dairy products are given below:

- i. As per Rule 44 the sale of following dairy products is prohibited:
 - cream which has not been prepared exclusively from milk or which contains less than 25 percent of milk fat
 - milk which contains added water
 - *ghee* which contains any added matter not exclusively derived from milk fat
 - skimmed milk as milk
 - *dahi* or curd not prepared from boiled, pasteurized or sterilized milk
 - milk or milk product specified in Appendix B containing a substance not found in milk, except as provided in the rule.
- ii. Rule 44B specifies “*the ghee having less RM value and a different standards for Butyro-refractometer reading at 40°C than that specified for the area in which it is imported for sale or storage shall not be sold or stored in that area except under the ‘AGMARK’ seal*”.
- iii. As per Rule 49, Sub-rule 16, certain dairy products are required to be sold only under BIS certification. The products include:
 - Condensed milk sweetened, condensed skimmed milk sweetened, partly skimmed sweetened condensed milk, milk powder, skimmed milk powder and partly skimmed milk powder (sub-rule 16).
 - Infant milk food, infant formula and milk cereal-based weaning food (sub-rule 19). BIS certification is also necessary for manufacture and storage of these products.
- iv. Additionally, sub-rule 23 of Rule 49 specifies that fat spread shall be sold only in packaged form and the packages should not weigh more than 500 g. The word ‘Butter’ shall not be associated while labelling the product. The sealed product could be offered for sale only under AGMARK certification mark.

7. REQUIREMENTS IN RESPECT OF EXPORT OF MILK AND MILK PRODUCTS

These requirements are specified under the Export (Quality Control and Inspection) Act and the Weights & Measures (PC) Rules.

7.1 Requirement under Export (Quality Control and Inspection) Act

These requirements for undertaking exports of milk and milk products are specified in the Export (Quality Control and Inspection) Act, and Department of Commerce Notifications / Orders S.O. 2719 and S.O. 2920 of 28 November 2000.

7.1.1 Applicable specifications for milk products intended for exports:

Specifications for milk products recognized as per Clause (c) of the Section 6 of the Export (Quality Control and Inspection) Act, 1963 are specified in the SCHEDULE of the Department of Commerce Order S.O. 2719 dated 28 November 2000. The products being exported should conform to:

- National Standards of the importing countries or the standards of Codex Alimentarius Commission, or
- Contractual specifications between the foreign buyer and the exporters, provided the same is not below the national standards, or
- In the absence of the above two, the national standards as notified, or
- In case of milk products for which none of the above mentioned standards exist, the standard formulated for such products by a Standing Committee constituted by the Authority.

7.1.2 Raw milk collection and handling requirements: Detailed requirements relating to the acceptance of raw milk at treatment / processing establishments are provided in Annexure A of the Order S.O. 2720. These include animal health requirements for raw milk, hygiene of animal holding, and hygiene in milking, and collection and transportation of milk from production to chilling / processing establishments. Animal health requirements provide for collection of milk only from animals which do not show any visible symptoms of infectious zoonotic diseases. Milk from animals that have been treated with antibiotics or other veterinary drugs shall also not be brought to the collection centre unless the retention period of the drug following such treatment is over.

7.1.3 Raw milk standards: As per the Annexure A of the Order S.O. 2720, raw milk collected for further processing shall conform to relevant national / international standards in respect of the levels of heavy metals, pesticides residues, aflatoxin, antibiotics residues, and contaminants and adulterants.

7.1.4 Processing requirements: Annexure C of the Order S.O. 2720

specifies requirements relating to processing of milk (pasteurization, UHT processing) etc.

7.2 Requirement under Weights & Measures (PC) Rules

Rule 30 specifies specific additional labelling provisions for packages intended for export. Among other requirements, the package should have a declaration that it is intended for export.

As per Rule 31 export packages are required to comply with the laws of the country to which such package is intended to be exported.

As per Rule 32, an export package can not be sold in India unless it has been repacked / relabeled in accordance with the provisions contained in Rules 2A-28 of the said rules.

8. REQUIREMENTS IN RESPECT OF IMPORT OF MILK AND MILK PRODUCTS

These are specified in PFA Act and Rules, Weights & Measures (PC) Rules, and Livestock Importation Act.

8.1 Requirements under PFA Act and Rules

Section 6 of the Act prohibits import of any adulterated or misbranded food, or a food that contravenes any provision of the Act. In case of an article of food for the import of which a license is prescribed, the import is allowed only in accordance with the conditions of the license.

8.2 Requirements under Weights & Measures (PC) Rules

Rule 33 specifies provisions applicable to packages of food articles imported in India. In general imported food packages are required to conform to all provisions of the said rules.

8.3 Requirement under Livestock Importation Act

See section 3.5.

NEWS SECTION

1. **Notification GSR 356(E) of 7 June 2005 of the Ministry of Health & Family Welfare:** The Notification provides revised definitions of some milk products and their quality specifications, and a list of various additives that are permitted for use in various milk products for replacement / inclusion under Appendices B and C, respectively, of the PFA Rules. It also specifies microbiological standards for different milk and milk products. These are likely to become applicable with some modifications shortly.
2. **Draft Notification GSR 27(E) dated 19.01.2006 of the Ministry of Health & Family Welfare:** The Draft Notification proposes some amendment to PFA Rules and invites comments from stakeholders by 19 March 2006. The draft amendments include - permitting use of artificial sweeteners acesulfame potassium and sucralose in ice lollies/ ice candy; increasing the permitted level of the preservative sorbic acid in sweets (carbohydrate based and milk product based) from 100 ppm to 1000 ppm; and restricting the sale of food products containing artificial sweeteners except under packaged condition and subject to compliance with the labelling requirements under Rule 42.
3. **Food Safety and Standards Bill 2005:** The Government of India is in the process of enacting an integrated food law, which is called the '*Food Safety and Standards Act*' in order to establish science-based standards for articles of food and to regulate their manufacture, storage, distribution, sale, import, export etc.

The Bill attempts to integrate various existing food related regulations into a single law for effective implementation and facilitation of easy operations by the food industry. It entails the establishment of a Food Safety Authority of India. The Bill is under consideration of the Parliament, which has referred it to a Standing Committee for comments.

The full text of the Food Safety and Standards Bill, 2005 is available on the website of the Ministry of Food Processing Industry: <http://mofpi.nic.in/foodsfty.htm>

4. **Codex Alimentarius Commission (CAC):** The 7th Session of the Codex Committee on Milk and Milk Products (CCMMP) is scheduled during 27 March-1 April 2006 in Queenstown, New Zealand. Some important agenda items included for discussion are: revision of the standards of various cheeses; elaboration of new standards for Mozzarella cheese, dairy spreads and milk products in which milk fat is replaced by vegetable oils; and elaboration of a Codex export certificate for milk and milk products.

The period March-May 2006 also features the following Codex Committee meetings:

- * 38th Session of the Codex Committee on Pesticides Residues (3-8 April, Brazil): A relevant agenda item is elaboration of risk analysis principles for application by the Committee.
- * 23rd Session of Codex Committee on General Principles (10-14 April, France): A relevant agenda item is elaboration of working principles for risk analysis for food safety.
- * 38th Session of the Codex Committee on Food Additives and Contaminants (24-28 April, Netherlands): Some relevant agenda items include: revisions to Codex general standard for food additives, Codex general standard for contaminants and toxins in foods, and elaboration of Codex code of practice for prevention and reduction of dioxin and dioxin-like PCB contamination in foods and feeds.
- * 34th Session of Codex Committee on Food Labelling (1-5 May, Canada): One agenda item of some relevance is an amendment to General Labelling of Prepackaged Foods proposing further elaboration of provisions related to Quantitative Declaration of Ingredients.

5. **International Dairy Federation (IDF):** The IDF has published the following Bulletins/Standards recently:

- * Bulletin 393/2005 "*Trans Fatty Acids: Scientific Progress and Labelling*". This publication is available free of cost in electronic form at the website: <http://www.fil-idf.org/content/default.asp?PageID=313>
- * Bulletin 401/2005 "*Energy Use in Dairy Processing*".
- * Bulletin 402/2005 "*The World Market for Cheese 1995-2004*" (Sixth Edition).
- * Bulletin 403/2006 "*Payment Systems for Ex-Farm Milk*".
- * Bulletin 404/2006 "*Continuous Monitoring of Machine Milking*".

- * Joint IDF-ISO Standard “*Milk and milk products - Enumeration of presumptive Escherichia coli - Part 1: Most probable number technique using 4-methylumbelliferyl-beta-D-glucuronide (MUG)* (IDF 170-1 / ISO 11866-1)”.
- * Joint IDF- ISO Standard “*Milk and milk products - Enumeration of presumptive Escherichia coli - Part 2: Colony-count technique at 44 degrees C using membranes* (IDF 170-2 / ISO 11866-2)”.
- * Joint IDF- ISO Standard “*Dried milk and dried milk products – Determination of bulk density* (IDF 134 / ISO 8967)”.
- * Joint IDF- ISO Standard “*Milk–Determination of total phosphorus content – Method using molecular absorption spectrometry* (IDF 42 / ISO 9874)”.
- * Joint IDF- ISO Standard “*Anhydrous milk fat – Determination of sterol composition by gas liquid chromatography (Reference method)* (IDF 159 / ISO 12078)”.
- * Joint IDF- ISO Standard “*Anhydrous milk fat – Determination of sterol composition by gas liquid chromatography (Routine method)* (IDF 200 / ISO 18252)”.
- * Joint IDF- ISO Standard “*Milk and milk products – Detection of Enterobacter sakazakii* (IDF/RM 210 / ISO/TS 22964)”.

For purchasing the IDF publications, contact Mr. Oscar Chavez, Office Manager, IDF, Brussels, Belgium (Email: OChavez@fil-idf.org).

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