Technews

National Dairy Development Board

For Efficient Dairy Plant Operation

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NEW CODEX STANDARDS RELEVANT FOR DAIRY INDUSTRY

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 **New Codex Standards Relevant for Dairy Industry**. It may be understood that the information given here is by no means complete.

In this issue:

1. INTRODUCTION

The Codex standards, codes of practice and guidelines, are recognized as reference points in international trade by the World Trade Organization (WTO). Codex standards and other related texts are developed by the various Committees of the Codex Alimentarius Commission (CAC) through a specific procedure and finally approved by the Commission in its sessions. As described in Technews Issue 22 (September-October 1999), the Codex standards are developed through an 8-step procedure. For final adoption, the Codex Committees may submit to the Commission draft standards at Step 8 or 5/8, which means that Steps 6 & 7 are recommended to be omitted; or at Step 5 Accelerated where there is urgency, in which case the final endorsement is made at Step 5 itself. The proposed standards are also submitted to the Commission at regular Step 5, at which the Commission may adopt them provisionally as draft standards and these would then be further considered by the respective Committees.

The important decisions of the 28th Session of the Commission (Rome, 4–9 July 2005) were reported in Technews Issue 57 (July-August 2005). The 29th Session of the Commission was held in Geneva during 3-8 July 2006. The important decisions of the Commission according to its Report ALINORM 06/29/41, relevant to the dairy sector, are presented in this issue.

2. NEW STANDARDS ADOPTED

The Commission endorsed several standards and related texts at Step 8, 5/8 or 5 Accelerated, as proposed by different

Codex Committees. These standards have now become applicable. Such standards and related texts important for dairy industry are listed below along with their salient features.

a) Amendment to Codex General Standard for Cheese (ALINORM 06/29/11 Appendix II)

The Section 2 Description, Subsection 2.1(a) of the *Codex General Standard for Cheese* has been amended to include the following principle to address the issue of minimum protein content in cheese:

'Cheese-making results in a concentration of milk protein (in particular, the casein portion), and that consequently, the protein content of the cheese will be distinctly higher than the protein level of the blend of the milk materials from which the cheese was made.'

This inclusion is expected to reduce the chances of non-cheese products getting sold as cheese.

b) Standard for a Blend of Evaporated Skimmed Milk and Vegetable Fat (ALINORM 06/29/11, Appendix III)

c) Standard for a Blend of Skimmed Milk and Vegetable Fat in Powdered Form (ALINORM 06/29/11, Appendix IV)

d) Standard for a Blend of Sweetened Condensed Skimmed Milk and Vegetable Fat (ALINORM 06/29/11, Appendix V)

The above three standards are for milk-based products in which milk fat has been replaced with the vegetable fats/oils. These products are intended to be used for direct consumption, or for further processing. The products can be

labelled as a '*Blend* (or *Reduced fat blend) of evaporated skimmed milk and vegetable fat'; '*Blend* (or *Reduced fat blend) of skimmed milk and vegetable fat in powdered form'; or '*Blend* (or *Reduced fat blend) of sweetened condensed skimmed milk and vegetable fat'*, as the case may be. Separate minimum fat content requirements have been specified for '*blends'* and '*reduced fat blends'*. All these products should carry a label declaration to indicate that the product should not be used as a substitute for infant formula, such as "NOT SUITABLE FOR INFANTS".

e) Revised Standard for Whey Cheeses (ALINORM 06/29/11, Appendix VIII)

The revised standard for whey cheeses includes cheeses produced by either concentration or coagulation of whey. The earlier standard for whey cheese included only the product obtained by concentration of whey. In the product obtained through coagulation, the ratio of whey protein to casein of whey shall be distinctly higher than that of milk. The revised standard allows addition of permitted nutrients and provides separate list of additives for the product obtained through concentration and that obtained through coagulation process.

f) Standard for Dairy Fat Spreads (ALINORM 06/29/11, Appendix XXIII)

This Standard applies to dairy fat spreads - milk products relatively rich in fat in the form of a spreadable emulsion principally of the type of water-in-milk fat that remains in solid phase at a temperature of 20°C. The product may be intended for use as spread for direct consumption or for further processing. The milk fat content can range from 10%

to less than 80% (m/m) and should represent at least 2/3 of the dry matter. Dairy fat spread may be salted or sweetened. When salted, it may be labelled to indicate the presence of salt. However, if sweetened, it shall be so labelled.

g) Methods of Analysis and Sampling for Inclusion in Codex Standards for Endorsement (ALINORM 06/29/23, Appendix II)

The Commission adopted the methods of analysis previously endorsed by the Codex Committee on Methods of Analysis and Sampling. These include methods of analysis for different compositional parameters like total fat, milk solids not fat, milk protein in milk solids not fat, water, etc., depending upon the product, in vegetable fat blended products, individual cheese varieties, whey cheeses and dairy fat spreads.

h) Principles and Guidelines for Imported Food Inspection Based on Risk (ALIORM 06/29/30, Appendix II)

The principles and guidelines for imported food inspection based on risk have been developed in the form of an Annex to the *Codex Guidelines for Food Import Control Systems (CAC/GL 47-2003)* to provide competent authorities with information to assist them with the design and implementation of inspection programmes for imported food, based on the food safety risks. The Annex provides a more effective means for addressing the food safety risks that are associated with imported food, ensuring compliance of imported foods with importing countries' food safety requirements, and allows greater attention to be given to foods that present a higher level of risk to human health.

i) Principles for Traceability/Product Tracing as a Tool within a Food Import and Export Inspection and Certification System (ALINORM 06/29/30, Appendix III)

Traceability/product tracing has been recognized as a tool to contribute to the protection of consumers against food-borne hazards and deceptive marketing practices and the facilitation of trade on the basis of accurate product description.

This document elaborates a set of principles to assist competent authorities in utilizing traceability/product tracing as a tool within their food inspection and certification system. These principles cover the context, rationale, design and application of traceability/product tracing. The salient features of the principles are as follows:

- A food inspection and certification system without a traceability/product tracing tool may meet the same objective and produce the same outcomes (e.g. regarding food safety, provide the same level of protection) as a food inspection and certification system with traceability/ product tracing.
- It is not mandatory for an exporting country to replicate (i.e. establish the same) the traceability/product-tracing tool as used by the importing country, when applicable.
- The traceability/product tracing tool may apply to all or specified stages of the food chain (from production to distribution), as appropriate to the objectives of the food inspection and certification system.
- The application of the traceability/product-tracing tool should be practical, technically feasible and economically viable within a food inspection and certification system.

- Traceability/product tracing tool within the context of a food inspection and certification system should be implemented when and as appropriate on a case-by-case basis.
- The application of traceability/product tracing should take into account the capabilities of developing countries.

j) Maximum Residue Limits (MRLs) for Pesticides (ALINORM 06/29/24, Appendices II, III)

The MRLs for pesticides, proposed by the Codex Committee on Pesticide Residues (CCPR), that have been endorsed, are given below:

Pesticide	Product	Maximum Residue Level (ppm)
Paraquat	Milks	0.005 (*)
Carbendazim	Milks	0.05 (*)
Oxydemeton methyl	Milks	0.01 (*)
Chlorpropham	Cattle milk	0.0005 (F,*)
Pyraclostrobin	Milks	0.03
Fludioxonil	Milks	0.01
Trifloxystrobin	Milks	0.02 (*)
Phorate	Milks	0.01 (*)
Methoprene	Milks	0.1 (F)
Glyphosate	Milks	0.05 (*)
Terbufos	Milks	0.01 (*)
Dimethenamid-P	Milks	0.01 (*)
Fenhexamid	Milks	0.01 (F, *)
Novaluron	Milks	0.4
	Milk fat	7.0
*= At or about the limit of determination F= Residue is fat soluble		

k) Maximum Residue Limits (MRLs) for Veterinary Drugs (ALINORM 06/29/31, Appendix II)

The MRLs proposed by the Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF) that have been endorsed are given in the following table:

Veterinary drugs	Type of milk	Maximum Residue Level (ppb)
Trichlorfon (Metrifonate)	Cattle milk	50
Pirlimycin	Cattle milk	200
Cypermethrin and Alpha-Cypermethrin	Cattle milk	100
Doramectin	Cattle milk	15

l) Code of Practice for the Prevention and Reduction of Dioxin and Dioxin-like PCB Contamination in Foods and Feeds (ALINORM 06/29/12, Appendix XXVI)

The Code focuses on measures (e.g., Good Agricultural Practices, Good Manufacturing Practices, Good Storage Practices, Good Animal Feeding Practices, and Good Laboratory Practices) for national authorities, farmers, and feed and food manufacturers to prevent or reduce dioxin and dioxin-like PCB contamination in foods and feeds. Monitoring programmes are to be organized by the operators in the feed and food chain to the extent feasible.

m) Revised Preamble of the Codex General Standard for Food Additives (GSFA) (ALINORM 06/29/12, Appendix V)

The Preamble of the Codex General Standard for Food

Additives (GSFA) has been revised to remove certain inconsistencies. The Commission has also recognized the GSFA as the single reference point for food additive provisions of codex standards and the food additive provisions contained in the Codex Commodity standards are being transferred into the GSFA to this end.

n) Food Additive Provisions of the General Standard for Food Additives (GSFA) (ALINORM 06/29/12, Appendix VII, Appendix XI)

Several food additive provisions in whey cheese, whey protein cheese, dried whey and whey products, butter and concentrated butter, butteroil (anhydrous milk fat, ghee), milk powder, creams and cream powder (plain) have been adopted.

o) Amendment to the Guidelines on Nutrition Labelling: Definition of Trans-Fatty Acids (ALINORM 06/29/22, Appendix V)

A definition of trans - fatty acids has been adopted by the Commission to enable declaration of presence of trans - fatty acids in a food as per the Codex Guidelines on Nutrition Labelling (CAC/GL 002 – 1985, Rev. - 1993, Amnd.–2003) appropriately. A footnote to the definition allows Codex members to review, for the purposes of nutrition labelling, the inclusion of specific trans-fatty acids (TFAs) in the definition of TFAs if new generally accepted scientific data become available. Therefore, if new scientific data demonstrates that nutritional effects of some specific trans - fatty acids differ from those observed for trans - fatty acids in general, these could be included in the definition.

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3. STANDARDS ADVANCED OR DEFERRED FOR FURTHER CONSIDERATION

a) Draft Revised Standards for Individual Cheeses (Cheddar, Danbo, Edam, Gouda, Havarti, Samso, Emmental, Tilsiter, Saint-Paulin, Provolone, Cottage Cheese, Coulommiers, Cream Cheese, Camembert, Brie and Mozzarella) (ALINORM 06/29/11, Appendices VI, VII, IX – XXII)

The Commission has held these draft revised standards at Step 8. An important revision is in Section 3.1: Raw Materials of the revised standards which now includes *"cows' milk or buffaloes' milk or their mixtures"* or *"milk"* (in cream cheeses) as raw materials for these cheeses, which has been endorsed by the Commission. The current standards permit use of cow milk only for making these products.

Another provision in the draft revised standards is for mandatory declaration of the 'country of origin', which now means the country of manufacture, and not the country in which the name originated as is the case in the current Codex standards for these products. When the product undergoes substantial transformation (for instance, repackaging, cutting, slicing, shredding and grating are not regarded as substantial transformation) in a second country, the country in which the transformation is performed is considered to be the country of origin for the purpose of labelling. There was no consensus on this, and hence this issue has been referred to the Codex Committee on Food Labelling by the Commission for further consideration.

b) Proposed draft Model Export Certificate for Milk and Milk Products (ALINORM 06/29/11, Appendix XXIV)

The proposed draft Model Export Certificate for Milk and Milk Products was adopted by the Commission at Step 5. This draft standard is intended to provide a harmonized format for milk and milk products that can be used to attest to attributes of products presented for international trade. The Commission noted that the following issues would be considered during further elaboration of this draft standard: raw milk products to be covered, shelf life indication and inclusion of country of origin. Some of the features of the draft model certificate are:

- Date of manufacturing *(yet to be discussed).*
- Date of minimum durability is to be provided in the certificate, when required, and it should be as provided on label of the product *(yet to be discussed).*
- Attestation includes the following:
  - The product is manufactured as per regulations of exporting country.
  - The product is manufactured in accordance with Codex Code of Hygienic Practices for Milk and Milk Products and/or the product is produced as per health requirements of ... (specific country).

The certificate is not intended to deal with matters of animal and plant health unless directly related to human health.

c) Draft Revised Standard for Infant Formula and Formulas for Special Medical Purposes Intended for Infants (ALINORM 06/29/26, Appendix IV A, IV B)

This is a proposed revision of an existing standard. The standard is proposed to be revised in two Sections: Section 'A' on infant formula for healthy infants and Section 'B' on infant formula for special medical purposes. The Section 'A' of the draft revised standard was adopted at Step 5 by the Commission in July 2004 and Section 'B' was adopted at Step 5 in the current Session in July 2006, as proposed by the Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU).

The Section A of the draft-revised standard proposes a nitrogen conversion factor (NCF) of 6.25 for all types of infant formula, which also applies to the products covered under Section B. The International Dairy Federation (IDF), India and several other countries are supporting use of the specific NCF of 6.38 for infant formula that derives proteins solely from milk, which is supported by science and is also consistent with the other relevant Codex standards. The Commission agreed to request the CCNFSDU to consider the NCF based on the principle of scientific analysis and evidence, involving thorough review of all relevant information, taking into account the need for consistency. The issue will now be discussed in the next Session of the CCNFSDU scheduled to be held during October/November 2006.

d) Proposed Draft Maximum Levels for Tin in Canned Foods (Other than Beverages) and in Canned Beverages (ALINORM 06/29/12, Appendix XXVIII)

The proposed draft maximum levels for tin - 250 mg/kg in canned foods other than beverages and 150 mg/kg in canned beverages - were adopted by the Commission at Step 5. Concentrated dairy products like sweetened condensed milk

and evaporated milk, which are usually canned, may qualify as canned foods other than beverages. The Codex proposed level for canned foods other than beverages is the same as the one allowed under PFA for processed canned foods.

e) Proposed Draft Maximum Residue Levels (MRLs) for Pesticides in Milk (ALINORM 06/29/24, Appendix VI)

The proposed draft MRLs for Indoxacarb as 2 ppm in milk fats and 0.1 ppm in milks were adopted at Step 5 by the Commission.

f) Proposed Draft Maximum Residue Levels (MRLs) for Veterinary Drugs in Milk (ALINORM 06/29/31, Appendix IV)

The proposed draft MRL for Colistin of 50 ppb in cattle milk and sheep milk was adopted at Step 5 by the Commission.

4. STANDARDS REVOKED

a) Food Additive Provisions of the GSFA (ALINORM 06/29/12, Appendix XII)

The Commission agreed to revoke certain food additive provisions in the GSFA that were not consistent with the food additive provisions in the Commodity standards having one-to-one relationship with the GSFA food categories such as butter, infant formula, milkfat products, whey cheeses, whey powders, sugars or food grade salts. This has been done with a view to make the GSFA a single reference point for food additive provisions.

b) Maximum Residue Levels (MRLs) of Pesticides (ALINORM 06/29/24, Appendix VII)

The following MRLs for milk and milk products have been revoked:

Pesticide	Product	Maximum Residue Level (ppm)
Azocyclotin	Milks	0.05 (*)
	Milk Products	0.05 (*)
Methoprene	Cattle Milk	0.05 (F)
Glyphosate	Cattle Milk	0.10 (*)
Terbufos	Cattle Milk	0.01 (*)
*= At or about the limit of determination F= Residue is fat soluble		

- The complete report of the 29th Session of the CAC (ALINORM 06/29/41) can be accessed at Codex website http://www.codexalimentarius.net.
- The next (30th) Session of the CAC is tentatively scheduled during July 2007 in Rome.

NEWS SECTION

Indian Food Laws

- **Notification GSR 398 (E) of 3 July 2006 of the Ministry of Health and family Welfare:** The notification revises the compositional and labelling provisions pertaining to

the infant milk foods and will become effective from 3 January 2007. Some important revisions are:

- Manufacturing of infant milk food and infant formula permitted by spray drying method only *(roller drying not permitted now);*
- Definitions include a list of sources from which the vitamin and minerals may be used;
- Infant formula may contain other permitted nutrients, when required, to provide nutrients ordinarily found in human milk;
- In milk and cereal based weaning foods, the required minimum content of milk solids reduced to 15% from 20%, on product weight basis. Also, the minimum requirement of 12 % milk protein *(includes casein plus whey proteins*) has been changed to a minimum 10 % casein;
- Label to contain information on time within which the product should be used after opening the container;
- '*Expiry date'* to be provided, instead of '*month and year before which it is to be consumed'*, on label;
- Name of the specific additives used to be declared in addition to class names; and,
- Label declarations '*Sucrose Free'* and '*Hypoallergenic Formula'* necessary where relevant.

- **Notification GSR 425 (E) of 17 July 2006 of the Ministry of Consumer Affairs, Food and Public Distribution:** The notification revises the existing labelling provisions including those applicable to the milk and milk products and will become effective from 12 January 2007. Some important revisions are:

- Ice ream can only be sold by weight (*and not by volume);*
- Every package shall carry contact details that consumers can use for making complaints;
- Products can be packed in non-standard sizes with declaration as permitted;
- Concept of '*Combination package'*, '*Group package'* and '*Multipiece package'* has been dropped by deleting their definitions and related provisions;
- The definition of '*Prepackaged commodity'* includes open packages containing commodities with pre-determined value;
- A weighing facility has to be maintained at retail counters, that are covered under Value Added Tax (VAT) or Turn Over Tax (TOT), which may be used by the consumer for checking weight of the prepackaged commodity being purchased;
- The declarations made on package or its label have to be ensured at the factory level or at the depot of the factory;
- Schedules I, IV and VI have been deleted; and,
- The exemption to the Rules has been provided to the commodities packed in quantities that are 10 gm (or ml) or less (*instead of 20gm (or ml) or less).*

- **Food Safety and Standards Bill:** The Parliament (Lok Sabha and Rajya Sabha) has cleared the Food safety and Standards Bill (see also Technews issues 60: January - February 2006 and 61: March-April 2006). It now awaits President's assent after which it will become applicable as an Act. It seeks to establish a body - Food Safety and Standards Authority of India (FSSAI) - which is proposed to regulate the food-processing sector. It also seeks to

consolidate laws relating to food. Farmers and fishermen have been excluded from the purview of the legislation. The amount of fine for non-compliance with the provisions of food laws has been increased and categorized according to severity of offence, ranging from Rs. 2 to 5 lakhs. The FSSAI would have two representatives each from food industry, consumer organizations, farmer's bodies and retailer organizations among its 22 members, besides a Chairman.

Codex Alimentarius Commission

- The Codex Committee on Food Additives and Contaminants has been split into two separate committees: Codex Committee on Food Additives and Codex Committee on Contaminants in Foods. The following countries have been designated the host countries:
  - Codex Committee on Contaminants in Foods: The Netherlands *(The Netherlands was host country for the erstwhile Codex Committee on Food Additives and Contaminants)*
  - Codex Committee on Food Additives: China
- The new host country designated for the Codex Committee on Pesticide Residues is China as United Kingdom has decided to discontinue being host to this Committee.
- The period September – December 2006 features meetings of the following important Codex Committees:
  - 28th Session of the Codex Committee on Nutrition and Foods for Special Dietary Uses, 30 October to 03 November 2006, Chiang Mai, Thailand;

  - 15th Session of the Codex Committee on Food Import and Export Inspection and Certification Systems, 06 – 10 November 2006, Mar De Plata, Argentina;
  - 15th Session of the Codex Coordinating Committee for Asia, 21-24 November 2006, Seoul, Republic of Korea; and,
  - 38th Session of the Codex Committee on Food Hygiene, 04-09 December 2006, Houston, USA.

International Dairy Federation (IDF)

The IDF has published the following standards recently:

- IDF Standard No.180/ISO 17792: Milk, milk products and mesophilic starter cultures - Enumeration of citrate - fermenting lactic acid bacteria - Colony-count technique at 25 degrees C.
- IDF Standard No.206/ISO 17129: Milk powder - Determination of soy and pea proteins using capillary electrophoresis in the presence of sodium dodecyl sulfate (SDS-CE).

For purchasing the IDF publications, Mr. Oscar Chavez, Office Manager, International Dairy Federation, Brussels, Belgium (Email: OChavez@fil-idf.org) may be contacted.

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