codex alimentarius commission
FOOD AND AGRICULTURE
WORLD HEALTH ORGANIZATION ORGANIZATION OF THE UNITED NATIONS

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ALINORM 76/11
JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX ALIMENTARIUS COMMISSION Eleventh Session, 1976

REPORT OF THE SECOND SESSION OF THE CODEX COMMITTEE ON EDIBLE ICES Stockholm. 23-27 June 1975

## INTRODUCTION

1. The Codex Committee on Edible Ices held its second session in Stockholm, Sweden from 23 to 27 June 1975 by the courtesy of the Government of Sweden. Dr. Gösta Björkman, Sweden, was in the chair.
2. Mr. Rune Henriksson, Ministerial Agricultural Counsellor welcomed the participants on behalf of the Swedish authorities.
3. The session was attended by representatives from the following 18 countries:

| Australia | Ethiopia | Netherlands |
| :--- | :--- | :--- |
| Austria | Finland | Norway |
| Belgium | France | Sweden |
| Brazil | Fed. Rep. of Germany | Switzerland |
| Canada | Ireland | United Kingdom |
| Denmark | Italy | United States of America |

Observers were present from the following International Organizations:
Association of Official Analytical Chemists (AOAC)
European Economic Community (EEC)
Association des Industries des Glaces alimentaires de la CEE
Institut Europeen des Industries de la Gomme caroube (INEC)
International Organization of the Flavour Industry (IOFI)
International Union of Confectioners (UIPCG)
Organization of Manufacturers of Cellulose Products for Foodstuffs in the EEC (OFCA)

The List of Participants, including officers from FAO, is contained in Appendix I to this report.

## SLECTION OF RAPPORTEUR

4. Mr. D.L. Orme (united Kingdom) was appointed rapporteur of the session.

ADOPTION OF PROVISIONAL AGENDA
5. The Committee unanimously adopted the Provisional Agenda.-

## MATTERS ARISING FROM THE TENTH SESSION OF THE CODEX ALIMENTARIUS COMMISSION (ALINORM 74/44, paras 243-247)

6. The Chairman reviewed briefly the deliberations of the Commission concerning the first session of the Committee. It was noted that Austria had expressed itself in favour of the development of certain regional standards. The Committee agreed to consider this issue when discussing the proposal of the delegation of the U.S.A. for the grouping of edible ices as contained in Annex I of the proposed draft standard.

## MATTERS ARISING FROM THE ELEVENTH SESSION OF THE CODEX COMMITTEE ON FOOD HYGIENE (ALINORM 76/13, para 7).

7. The Committee noted that one delegation had stated that in their opinion there , was considerable need for hygienic provisions for raw materials used in the manufacture of edible ices. It was agreed to deal with this matter when discussing the hygiene section of the standard.

## MATTERS ARISING FROM THE ELEVENTH SESSION OF THE CODEX COMMITTEE ON COCOA PRODUCTS AND CHOCOLATE (ALINORM 76/10. paras 13-2I)

8. The Committee was informed that the above Committee had discussed the question raised at the first session of this Committee concerning the use of the term "chocolate" for the coating of edible ices and that the conclusion had been that this term should not be used unless the product conformed to the Codex standard for chocolate. It was further noted that the majority opinion of the Cocoa Products and Chocolate Committee had been that where coatings and glazes could not properly be described as chocolate, they should be described in terms of the ingredients used.

## CONSIDERATION OF PROPOSED DRAFT STANDARD FOR EDIBLE ICES

9. The Committee had before it the above mentioned standard (ALINORM 74/11? Appendix II) for discussion at Step 4 of the Procedure in the light of government comments as contained in documents CX/EI 75/3 + Addenda I and II and documents dealing specifically with food additives and hygienic and microbiological requirements.

## Section 1 - SCOPE

10. The Committee agreed to some editorial changes which took into account the deletion of the definition for speciality ice products; the new text reads: "This standard applies to edible ices ready for consumption and to ice mixes in liquid or powder form. It also applies to the edible ice part of foods containing edible ices".
11. During the consideration of the grouping of edible ices it was pointed out that there was still a considerable small-scale production of edible ices, predominantly for local consumption. To distinguish between such products and those which moved in international trade, it was proposed to amend the Scope by removing reference to edible ices "ready for consumption" and to replace this phrase by "edible ices in prepackaged form for retail sale". It was thought that "craft" production could be covered adequately by national legislation.
12. The Committee agreed, however, that to the extent possible, all edible ices should be covered by the standard whether they were traded internationally or not and decided that the Scope section should remain unchanged.

## Section 2 - DESCRIPTION

## Edible Ices (2.1.1)

13. During the discussion of the Hygiene section of the standard it was pointed out that the provision for pasteurization contained in the proposal of the Swedish Secretariat for hygienic and microbiological requirements (sub-section 5.6 of CX/EI 75/5, App. III) applied only to milk ingredients used in edible ices.
14. A number of delegations pointed out that good manufacturing practice required that the complete mix, except flavouring ingredients, be pasteurized prior to freezing. It was agreed to include in the product definition for edible ices a clause requiring that those products which contain milk ingredients should be pasteurized or undergo an equivalent treatment.

## Ice Mixes (2.1,2)

15. In line with the above decision it was agreed that the products in liquid or powder form intended for the preparation of edible ices would have to have under-gone pasteurization or an equivalent treatment.

## Speciality Ice Products (2.1.3)

16 It was pointed out that there were essential differences between speciality products and those edible ice products to which food and food ingredients had been added. Some delegations considered that the main criterion for the difference was that the edible ice proportion of speciality products was easily separable from the remainder. Some other delegations considered that this would not cover the whole range of speciality products.
17. It was further pointed out that the nature of the product also depended on the quantity and type of added ingredients. The Committee decided to delete the definition for speciality ice products and to amend the last sentence of the Scope as in paragraph 10.

Other Definitions (2.2)
18. The Committee agreed to the deletion of the definition for "prepackaged" as the standard was not restricted to prepackaged edible ices.

Section 3 - ESSENTIAL COMPOSITION

## Edible Ices (3.1) - Ice Mixes (3.2)

19. The Committee had before it a joint proposal by the delegations of the U.S.A. and the Netherlands for sub-section 3.2 "Essential Composition of Ice Mixes" (Lim. 3). There was some discussion on the definitions of the Ice Mix Base (3.2.4) and Dried Ice Mix Base $(3.2,5)$ as to whether water should be mentioned as a necessary ingredient. The Committee agreed to a slight re-wording of the definitions.
Grouping of Edible Ices (3.3)
20. The Committee had before it a table representing a compromise proposal (Lim. 4) on the classification by groups of edible ices (3.3) as worked out during the session by the delegations of Denmark, Switzerland, the U.K. and the U.S.A., and a modification of the table proposed by the delegation of Ireland.
21. It was pointed out that the proposal was an attempt to categorize classes of products for the purpose of international trade without reference to specific names. At
the first session of the Committee it had become evident that this approach was necessary to avoid conflict with differing national nomenclatures. The delegation's of Belgium and France considered that this approach would only postpone the naming problems rather than resolve them.
22. The Committee noted that this classification of products would, under the new acceptance procedure as agreed by the Commission at its tenth session (ALINORM 74/44, paras 185-191), allow governments to take specified deviations for those products which were not covered by their national legislation, It was emphasized that the compositional figures were minimum requirements expressed as mass/mass, unless otherwise specified.
23. The Committee gave detailed consideration to the groups and laid down compositional limits for the various sub-groups. It was questioned whether there was any. necessity to include a figure for total solids since the various sub-groups would carry a requirement for weight/volume of the product and also provided minimum compositional requirements for fat and protein. The consumer would, therefore, be assured of a minimum solids level in the product. The Committee decided to retain the total solids level.
24. The Committee then considered whether, in the light of this decision, any requirement for the weight/volume ratio was necessary. The majority considered that such a provision was required and, after discussions of proposals for limits of $400 \mathrm{~g} / \mathrm{l}$ and $500 \mathrm{~g} / \mathrm{l}$, the Committee decided to retain the present figure of $450 \mathrm{~g} / \mathrm{l}$, but to place it in square brackets for further government comments.
25. The delegation of Australia, supported by the delegation of the U.S.A., made the recommendation that total solids should be specified on the basis of "total solids (i.e. dried solids) per volume of final product (mass/volume)". This recommendation would mean substituting a single specification for the present two specifications of "total solids (mass/mass \%)" and "weight by volume of the final product". The Committee did Rot accept the proposal.
26. It was pointed out that the determination of weight by volume pose considerable practical difficulties, partly because of sampling problems. It was, however, stated that an accurate method for this determination existed and the Committee decided that the table should contain minimum limits for both total solids and weight/volume.
27. It was agreed that egg yolk should be expressed as egg yolk solids rather than liquid egg yolk. It was decided that for the declared addition of optional ingredients - with the exception of fruit - the amount present should be sufficient to characterize the product. This would allow freedom for different flavour preferences both within and between countries. The Committee agreed not to lay down minimum requirements for flavouring ingredients but to retain a figure for egg yolk solids as this ingredient was not added primarily for flavouring purposes.
28. Concerning the addition of fruit, the Committee agreed to make provision for a minimum of $15 \%$ fruit ( $10 \%$ citrus fruit) for Group S products. It was also agreed to specify a minimum of $10 \%$ ( $5 \%$ citrus fruit) for Groups A, B, C and D when fruit is mentioned as part of the name. It was pointed out that the nature of certain fruits, in particular some tropical fruits, was such that much smaller additions would impart a characteristic flavour to the final product. Governments were requested to comment specifically on all the levels and possible exceptions, and their consequences relating to the compositional criteria referred to in Appendix II, subsection 3.3.
29. The delegation of the Federal Republic of Germany said that the use of non-milk fat and non-milk protein, provided for in Groups B, C and D, was not allowed in their country at present. If they were to be allowed, suitable labelling provisions would be necessary for the information of consumers.
30. It was pointed out that the approach based on composition only would enable each country to ensure that the name applied to each group was informative to the consumer. The amended table is contained in the draft standard (Appendix II).

Permitted Ingredients (3.4)
31. It was pointed out that although the heat treatment of edible ices containing milk ingredients and ice mixes was provided for in 2.1.1 and 2.1.2, to avoid misunderstanding egg products (3.4.6) as a permitted ingredient should be pasteurized. The Committee agreed with this change. The delegations of France and Belgium stated that only hen eggs and hen egg products should be allowed.

## Coatings

32. The delegation of Australia proposed to add a new sub-section for coatings which would read: "Any suitable combination of the permitted ingredients under 3.4 may be used as a coating". The Committee did not consider this provision necessary.

## Section 4 - FOOD ADDITIVES

33. The Committee had before it a tabular survey of food additives on edible ices prepared by the Swedish Secretariat on the basis of information received in reply to a questionnaire (CX/EI 74/4 + Addendum I). The Committee was reminded that since its first session, a decision had been made by the Codex Alimentarius Commission with regard to the acceptance procedure allowing for acceptance with specified deviations which had special significance concerning food additives.

Colours (4.1)
34. It was proposed that the Committee should follow the same procedure as the Committee for Processed Fruits and Vegetables when considering the listing of admissible colours in the Draft Standard for Jams (Fruit Preserves) and Jellies (ALINORM 76/20A). In this case those colours most frequently and uniformly used had been assembled and those which did not appear in the List of Additives Evaluated for their Safety-in-Use in Food (Lists A (I) and A (2) - CAC../FAL 1-1973) had been deleted.
35. The Committee discussed at some length whether this approach should be followed or an alternative suggested by the delegations of the United Kingdom and the U.S.A. in which all food colours which figured in Lists A (I) and A (2) should automatically be allowed for use as food colouring agents in edible ices. These food additives which carried specific ADIs for each colour could be considered safe for use in the light of current knowledge and were under constant review by the Joint FAO/WHO Expert Committee on Food Additives (JECFA). It was suggested that this formula had the advantage of providing for the automatic deletion or addition of food colours according to any decision made by the JECFA.
36 Unlike many other foods covered by Codex standards, edible ices utilize a wide range of flavouring ingredients (e.g. fruits, nuts, confections, etc.), all of which may contain one or more food colours. Therefore, it was considered essential that any safe and suitable food colour be permitted in edible ices. In this case, no specific list of food colours would be necessary in the standard and the lengthy procedure for the amendment of standards at Step 9 could be avoided.
37. The delegation of Canada stated that this was not in agreement with the position taken at the tenth session of the Commission in which it was confirmed that the Codex Commodity Committees were responsible for the proposal of specific food additives on the basis of consideration of technological justification and that the maximum levels for food additives should, therefore, represent the smallest amount of the food additive needed (ALINORM 74/44, paras 226-229).
38. The delegation of Switzerland pointed out that the Codex Committee on Foods for Special Dietary Uses had made special provisions with regard to the use of colours, allowing only natural and nature-identical substances in foods for infants and children. In its view, this principle could apply equally to edible ices because of the amounts consumed by children. The delegation of the Federal Republic of Germany suggested that the use of colours should be restricted to certain types of ices, in particular water ices where a loss of colour occurred during processing.
39. The Committee agreed that the list of specified food colours in the Food Additives Section contained in the document prepared by the Swedish Secretariat (CX/EI 75/4, Appendix II) should not be changed. Changes in detail were made in the list following decisions made at the last meeting of the JECFA.

## Emulsifiers, Stabilizers and Thickening Agents (4.2)

40. The Committee agreed to some editorial amendments and to include microcrystalline cellulose and methylcellulose in this sub-section. It was also agreed to remove glycerine from this sub-section and to insert it under miscellaneous food additives 4.4).
41. The question was raised whether there was a technological justification for the use of stabilizers and thickening agents above a level of $0.5 \%$. It was pointed out that in certain products, in particular those described as "no-drip", higher concentrations of stabilizers and thickening agents were needed and the Committee agreed to retain the limit of $1 \%$ proposed in CX/EI 75/4. The delegations of the Federal Republic of Germany and Switzerland considered that the overall limit for emulsifiers, stabilizers and thickening agents should be $0.1 \%$. The Committee decided, however, to leave the provisions as they stood in the proposal.
42. The Committee noted that in some countries starches were not regarded as additives but as ingredients. With regard to modified starches, no limitation to their use had been set. Several delegations pointed out that the technological use of, and experience with, modified starches varied. In some cases, because of shortages of vegetable gums, they had recently, been used as stabilizers and thickening agents and experience was still accumulating in this field.
43. The Committee agreed not to set a limit for the use of starches and modified. starches and to request governments to make known their views on the present applications of starches. The delegation of France expressed opposition to the use of starches or modified starch in the production of ice cream.

## Flavours (4.3)

44. It was pointed out that in addition to all natural and nature-identical flavours, the present provision allowed for the use of all artificial flavouring substances appearing in the Codex List of Additives Evaluated for their Safety-in-Use in Food in Lists A (I) and A (2). Some delegations considered this to be inconsistent with the earlier decision of the Committee to list only specified colours for use in edible ices.
45. The Committee noted that the number of flavouring agents in use in the manufacture of edible ices was extensive but at the levels of use the toxicological hazards were very small and, therefore, decided that a complete listing in the standard was not necessary. Moreover, the Committee noted that the use of colours in edible ices was primarily for cosmetic reasons; they were, therefore, not in the same position as other additives with regard to technological need.
46. The delegation of Prance stated that in their country only natural flavours were allowed. It was pointed out, however, that the "natural" origin of a flavour did not necessarily guarantee its safety-in-use.

## pH Adjusters, Taste Adjusters and Miscellaneous (4.4)

47. The Committee agreed to specify that I- and dl-malic acid and lactic acid could be used. The use of these and the other acids listed, and their salts should be governed by good manufacturing practice. Pending government comments GMP was placed in square brackets.
48. With regard to the use of phosphates, sodium and potassium polyphosphates were added to the list, the limit being $0.2 \% \mathrm{~m} / \mathrm{m}$ expressed as $\mathrm{P}_{2} \mathrm{O}_{5}$
49. As reported above, glycerol had been transferred to the miscellaneous list. A proposal was made to group glycerol with sorbitol and to set the limit for the two substances at $5 \%$ singly or in combination, with an upper limit for glycerol alone of $1.5 \%$. Several delegations stated that in their countries the use of sorbitol was only allowed in dietary products. It was pointed out that sorbitol and glycerol functioned as modifiers of texture and not primarily as sweeteners.
50. The Committee decided to set separate temporary levels of $5 \%$ for sorbitol and glycerol pending government comments. The delegation of Belgium pointed out that in their opinion a $1.5 \%$ limit for glycerol should be set unless used in soft ices.

Justification for the Use of Food Additives
51. The Committee decided to request governments to provide technological justification for the use of all food additives and their level in the final product to the Swedish Secretariat by February 1976 for compilation and presentation to the Codex Committee on Food Additives.

## Section 5 - HYGIENE

52. The Committee had before it a document prepared by the Swedish Secretariat (CX/EI 75/5 + Addendum I) which contained, in addition to information on work undertaken by specialized international bodies - AOAC, ICMSF, IDF and ISO - on hygienic and microbiological requirements for edible ices, also a summary in tabulated form of replies from governments to a questionnaire asking for information on available national regulations or guidelines concerning microbiological specifications for edible ices.

## Microbiological Standards (5.5)

53. The Committee discussed at considerable length the range of microorganisms for which limits should be set. Whereas there was consensus on the relevance of the total mesophilic aerobic count, coliforms and salmonellae, there was some divergence of opinion with regard to the necessity of including Staphylococcus aureus and E. coli in the specifications.
54. The conclusions of the Joint FAO/WHO Expert Consultation on Microbiological

Specifications for Foods (April 1975 - Geneva) with regard to Staphylococcus aureus were brought to the attention of the Committee - that the "estimation of enterotoxins is not likely to become routine until the reagents necessary for their detection become more readily available and more rapid methods are developed". In the case of E. coli technical difficulties with regard to isolation and enumeration were foreseen.
55. It was also suggested that as a pathogen Salmonella was covered under the general provision of sub-section 5.3 and could, therefore, be removed from the bacteriological standards in sub-section 5.5. leaving the total mesophilic aerobic count and coliform count as indicators of the standard of manufacturing practice.
56. The Committee ultimately decided, however, that Salmonella should remain in sub-section 5.5 and also to include in the list of microorganisms for which standards were to be established Staphylococcus aureus and Escherichia coli and suggested that consideration be given to the setting of limits for these organisms. It was pointed out that a "critical load" of Staphvlococcus aureus was necessary to create a hazard and that a requirement that the organism be absent in a certain quantity of product was unduly strict.
57. The Committee noted that the Joint FAO/WHO Expert Consultation had alreadyproposed sampling plans and microbiological limits for mesophilic aerobic bacteria, coliform bacteria and Salmonella in dried and frozen whole egg and other egg products. The Committee agreed that methods selected for examination of egg products might also be applicable to edible ices and decided to request guidance from the Codex Committee on Food Hygiene.
58. The Committee also noted that the Joint FAO/WHO Committee of Government Experts on the Code of Principles concerning Milk and Milk Products had agreed that its work on microbiological end-product specifications should proceed on the basis of need, and potential hazards to health; and that recommendations should be consistent with the availability of suitable methodology.
59. The delegation of the Netherlands was of the opinion that more stringent requirements should be established for the ice mixes and ice mix bases defined under 3.2.2-3.2.5 than for edible ices. It was proposed that governments be asked to comment on the following bacteriological standards for ice mixes and ice mix bases:
(a) total mesophilic aerobic count:50,000 colonies/g (IDF 61-1971)
(b) coliforms:10 colonies/g (IDF 62-1972)
(c) Salmonella: absent in 25 g
(d) coagulase positive Staphylococcae: absent in 1 g
(e) phosphatase: negative

Pasteurization Requirements (5.6)
60. The Committee agreed to make the requirements for the pasteurization of milk ingredients in the edible ices mandatory. It noted that there was some variation of practice with regard to the pasteurization or heat treatment of edible ices. Most countries required the heat treatment of the ice mix before freezing and after some discussion the Committee agreed that there should be a provision for pasteurization (or equivalent treatment) of the whole mix or base except flavouring ingredients.
61. It was pointed out that such treatment would be better included under Section 2 "Description" rather than in the Hygiene Section and the product definitions 2.1.1 "Edible Ices" and 2.1.2 "Ice Mixes" were amended by the addition of a provision for
pasteurization (or equivalent treatment) of the whole mix or base.
62. The delegation of France wished to express a specific reservation with regard to the pasteurization of milk and milk products only. They held the view that the mix to be frozen, irrespective of the type of edible ice, should be subjected to a heat treatment the effect of which should be at least equivalent to pasteurization.
63. The delegation of Ireland expressed reservations on the question of heat treatment as in their view further heat treatment was not necessary for ice cream manufactured from dry ingredients with the addition only of potable water, pasteurized milk, flavouring matter, etc., and which was frozen within one hour of the addition of such substances to the dry ingredients.

## Section 6 - WEIGHTS AND MEASURES

64. The Committee agreed to delete this provision

## Section 8 - LABELLING

65. It was agreed that in, addition to reference to certain provisions in the Recommended international General Standard for Labelling of Prepackaged Foods, there should be reference to the chapter on" milk products in the Code of Principles concerning Milk and Milk Products.

## Name of the Product (8.1)

66. The Committee accepted a form of words by the delegation of the United Kingdom to reads "The name of the food shall be a description customarily used in the country in which the product is sold* provided that any such description shall not mislead the consumer. This description shall be followed by a reference to the appropriate group and sub-group of this Standard".
67. The delegation o£ Canada pointed out that this form of wording allowing for special national labelling provisions did not normally meet with the approval of the Labelling Committee or the Commission, but that it seemed to be the best that could be achieved at this time.

## List of Ingredients (8.2)

68. It was agreed that for the purpose of ingredient declaration, certain milk products and other specified ingredients might be grouped together. The proposed list extracted from the U.S. Federal Register is contained in Annex I to Appendix II to this Report.

## Net contents (8.3); Lot Identification (8.6) and Additional Requirements (8.7)

69. Several delegations were in favour of declaring on the label of all prepackaged edible ices, irrespective of the size of package, the net contents, other delegations thought that there should be a limit to the dimension or the weight or volume of the pack requiring such a declaration. The delegations of Switzerland and Sweden stated that in 'their opinion the net content of all packs should always be declared by weight and that any exceptions should also be related only to weight.
70. It was agreed, however, to set the exemption limit at 75 g or 150 ml . For the sake of uniformity, it was agreed to apply the same limits to "List of Ingredients", "Lot Identification" and "information for Keeping". Governments were requested to comment specifically on the exemption levels and on the method of expressing the exemption.

## Section. 9 - METHODS OF ANALYSIS AND SAMPLING

71. The Committee noted that for the Joint FAO/WHO Committee of Government Experts on the Code of Principles concerning Milk and Milk Products, methods of analysis and sampling were elaborated jointly by an IDF/ISO/AOAC Working Group. It was agreed to request this group to develop methods of analysis and sampling suitable for edible ices and to ask the Codex Committee on Methods of Analysis and Sampling to recognize the work of this group.
Status of the Standard
72. The Committee agreed to advance the standard to Step 5. The revised Standard is contained in Appendix II to this Report.

## DATE AND PLACE OF NEXT MEETING

73. The Committee was informed that the next meeting would take place in Sweden and that the date would be a matter for discussion between the Swedish authorities and the codex Secretariat in Rome.

## LIST OF PARTICIPANTS * LISTB DES PARTICIPANTS LISTA DE_PARTICIPAHTES.

* The Heads of Delegations-are listed firsts. Alternates, Advisers and Consultants are listed in alphabetical order Les Chefs de Delegations figurent en téte et les Suppliants, Conseillers et Consurtanta sont énumérés par ordre alphabétique.

Figuran en primer lugar los Jefes de las delegaoiones; los Suplentes, Asesores y Conaultorea apareoan por orden alfabftico.

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## APPENDIX II

## PROPOSED DRAFT STANDARD FOR EDIBLE ICES AND ICE MIXES

## 1. SCOPE

This standard applies to edible ices ready for consumption and to ice mixes in liquid or powder form. It also applies to the edible ice part of foods containing edible ices.

## 2. DESCRIPTION

### 2.1 Product Definitions

For the purpose of the standard:
2.1.1 Edible ices mean the food preparations obtained either from an emulsion of fat and protein with or without the addition of other ingredients and substances, or from a mixture of water, sugars and other ingredients and substances which have been treated by freezing and are intended for storage, sale and human consumption in the frozen or partially frozen state. For those edible ices containing milk ingredients, the ice mix shall be pasteurised (or undergo an equivalent treatment).
2.1.2 Ice mixes mean the products in liquid or powder form intended for the preparation of edible ices which have been pasteurised (or have undergone an equivalent treatment).

## 3. ESSENTIAL COMPOSITION

3.1 Edible Ices
3.1.1 Group A comprises products manufactured solely from milk fat and mill: protein; with other ingredients permitted under 3.4.4-3.4.8 and additives permitted under 4.
3.1.2 Group B comprises products manufactured from milk fat and any protein other than solely milk protein; with other ingredients permitted under 3.4.4-3.4.8 and additives permitted under 4.
3.1.3 Group $C$ comprises products manufactured from fat other than solely milk fat and milk protein, with other ingredients permitted under 3.4.4-3.4.8 and additives permitted under 4.
3.1.4 Group D comprises products manufactured from any fat not solely milk fat and any protein not solely milk protein, with other ingredients permitted under 3.4.4-3.4.8 and additives permitted under 4.
3.1.5 Group E comprises products manufactured from ingredients permitted under 3.4.4-3-4.8 and additives permitted under 4 except that they contain no fat or protein other v than natural components of the permitted ingredients or additives.

### 3.2 Ice Mixes

3.2.1 Ice mix means the liquid product containing all necessary ingredients in proper amounts so that when frozen the resulting food conforms to one of the definitions under subsections 3.1.1 to 3.1.5.
3.2.2 Concentrated ice mix means the liquid, concentrated product which after the addition of the prescribed, amount of water results in a product which conforms to the definition under subsection 3.2.1.
3.2.3 Dried ice mix means the dry product (moisture contents: $\leqslant 4 \%$ ) which after the addition of a prescribed amount of water gives a product conforming to the definition under subsection 3.2.1.
3.2.4 ice mix base means the liquid, concentrated product which after the addition of the prescribed amount of specified necessary ingredients results in a product which conforms to the definition under subsection 3.2.1.
3.2.5 Dried ice mix base means the dry product (moisture content $\leqslant 4 \%$ ) which after the addition of the prescribed amount of specified necessary ingredients results in a product which conforms to the definition under subsection 3.2.1.

### 3.3 Composition - Groups of Edible Ices

Coating of non-ice character excluded
( $\% \mathrm{~m} / \mathrm{m}$ - minimum unless otherwise indicated)
(Note: All figures in this table are open to comment. Figures in square brackets are those for which specific comments are requested in the Report)

| Product Group | A |  |  |  | B |  |  | C |  |  | D |  |  | E |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subgroup | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 |
| Fat, protein and other requirements | solely milk fat and Milk protein |  |  |  | Milk fat and any protein other than solely milk protein |  |  | fat other than solely milk fat and milk protein |  |  | any fat not solely milk fat and any protein not solely milk protein |  |  | ingredients permitted under 3.4.4-3.4-8 and additives permitted under 4 except that they contain no fat or protein other than natural components of the permitted ingredients or additives |  |
| Composition | with other ingredients |  |  |  | with other ingredients |  |  | with other ingredients |  |  | with other ingredients |  |  |  |  |
| Total solids | 30 | 28 | 26 |  | 30 | 26 |  | 30 | 30 | 20 | 30 | 30 | 20 | 15 | [10] |
| Milk fat | 8 | 2.5 | <2.5 |  | 8 | <2.5 |  | 5 |  |  | 8 |  |  |  |  |
| Fat including milk fat |  |  |  |  |  |  |  | $8$ | $5$ | <5 | $10$ | $5$ | <5 |  |  |
| Milk protein | 2.5 | 2.5 | 2.5 |  |  |  |  |  | 2.5 | 1 |  |  |  |  |  |
| Protein including milk protein |  |  |  |  | $2.5$ | 2.5 |  |  |  |  | $2.5$ | 2.5 | 1 |  |  |
| If egg is declared: Egg yolk solids | [1.4] | [1.4] | [1.4] | [1.4] | [1.4] | [1.4] |  | [1.4] | [1.4] | [1.4] | [1.4] | [1.4] | [1.4] |  |  |
| Fruit <br> Citrus fruit |  |  |  |  |  |  |  |  |  |  |  |  |  | [15] [10] |  |


| If fruit is mentioned in the name 10\% fruit or 556 citrus fruit must be added to the mix. The following requirements then apply to the final products 1 / Total solids Milk fat Fat incl. milk fat Milk protein Protein incl. milk protein | $\begin{gathered} 28 \\ 7 \\ 2.2 \end{gathered}$ | $\begin{array}{\|l\|} \hline 26 \\ 2.2 \\ 2.2 \end{array}$ | $\begin{aligned} & 24 \\ & <2.2 \\ & 2.2 \end{aligned}$ | $\begin{array}{r} 20 \\ 1 \\ 1-3 \end{array}$ | $\begin{array}{\|r} 28 \\ 7 \\ 2.2 \end{array}$ | 24 <br> <2.2 $2.2$ | 20 <br> 1 <br> 1-3 | $\begin{array}{\|c\|} \hline 28 \\ 5 \\ 7 \\ 2.2 \end{array}$ | $\begin{array}{\|l} 28 \\ 4 \\ 2.2 \end{array}$ | $\begin{array}{r} 20 \\ <4 \\ 1 \end{array}$ | $\begin{array}{r} 28 \\ 7 \\ 9 \\ \\ 2.2 \end{array}$ | $\begin{array}{\|c} 28 \\ 4 \\ 2.2 \end{array}$ | $\begin{gathered} 20 \\ <4 \\ 1 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Height by volume (g/l) |  | [450] | [450] | [450] | [450] | [450] | [450] | [450] | [450] | [450] | [450] | [450] | [450] | [450] | [450] |

These requirements also apply where other bulky flavouring ingredients are mentioned in the name.

### 3.4 Permitted Ingredients

3.4.1 Milk, milk constituents and milk products - fresh, concentrated, dried, fermented, reconstituted or recombined.
3.4.2 Edible fats and oils other than those derived from milk.
3.4.3 Edible protein other than that derived from milk.
3.4.4 Sugars for the purpose of this standard mean, those sugars for which standards have been elaborated by the Codex Alimentarius Commission and fructose.
3.4.5 Water - the water shall be of potable quality. Standards for potability shall be not less than those contained in the latest edition of the WHO International Standards for Drinking Water.
3.4.6 Eggs and pasteurized egg products.
3.4.7 Fruit and fruit products.
3.4.8 Food and food ingredients intended to impart flavour, taste or texture, e.g. coffee, ginger, cocoa, honey, nuts, liqueurs.

## 4. FOOD ADDITIVES

The following provisions in respect of food additives are subject to endorsement by the Codex Committee on Food Additives.

Notes: - Proposals for food additives and maximum levels should be made with reference to the Codex Advisory Lists (CAC/FAL 1-1973 and Supp. I)

- Overall limits to be established for groups of additives.
- Substances in are pending toxicological evaluation.

| 4.1 | Colours | Colour Index No. | Maximum level in final product $\% \mathrm{~m} / \mathrm{m}$ |
| :---: | :---: | :---: | :---: |
| 4.1.1 | Black |  |  |
|  | Brilliant black PN | 28440 | 0.01 ) Total |
| 4.1.2 | Blue |  | ) 0.03 |
|  | Indigotine | 73015 | 0.01 ) |
|  | Brilliant blue FCF | 42090 | 0.01 |
| 4.1.3 | Green |  | ) |
|  | Chlorophyll | 75810 | 0.01 |
| 4.1.4 | Red |  | ) |
|  | Amaranth | 16185 | 0.01 |
|  | Ponceau 4R | 16255 | 0.01 |
| 4.1.5 | Yellow, Orange |  | ) |
|  | Annatto extracts | 75120 | 0.01 ) |
|  | Sunset yellow FCF | 15985 | 0.01 ) |
|  | Tartrazine | 19140 | 0.01 ) |
|  | Carotenes and carotenoids: |  | ) |
|  | - $\alpha-, \beta-, \gamma$ carotene | ) | ) |


| $-\beta$-apo-8'-carotenal | ) | 0.01 |  |
| :--- | :--- | :--- | :--- |
| - ethylester -of $\beta$-apo-8'-carotenoic acid | ) |  |  |

4.1.6 Brown

Caramel (not made by the ammonia process) GMP
Caramel (made by the ammonia process) [ ]
4.2 Emulsifiers, Stabilizers and Thickening Agents

Emulsifiers
4.2.1 Glyceryl mono- and di-esters of fatty acids deriving from ) edible fats
4.2.2 Glyceryl mono- and di-esters of fatty acids esterified by one of the following acids:
(a) acetic
(d) L-tartaric
(b) lactic
(e) monoacetyl- and
(c) citric
diacetyl-tartaric
) 0.5 singly or in
4.2.3 Lecithins

## Stabilizers and Thickening Agents

4.2.4 Agar )
4.2.5 Alginic acid and its sodium, potassium and calcium salts )
4.2.6 Carboxymethylcellulose and its sodium and potassium ) salts
4.2.7 Carrageenan
4.2.8 Cellulose, microcrystalline
4.2.9 Cellulose, methyl
4.2.10 Gelatine
4.2.11 Gum arable
4.2.12 [Gum carob (locust) bean]
.0 singly or in
4.2.13 Gum guar
4.2.14 [Gum karaya]
4.2.15 [Gum tragacanth]
4.2.16 Pectins
4.2.17 Propylene glycol alginate
4.2.18 Starch
4.2.19 Modified starches:

- acid treated starches
combination
- alkali-treated starches
- bleached starches
- dextrines, white and yellow
- distarch adipate, acetylated
- distarch glycerol
- distarch glycerol, acetylated
- distarch glycerol, hydroxypropyl
- distarch phosphate
- distarch phosphate, hydroxypropyl
quantity to be determined
- distarch phosphate, phosphated
- distarch phosphate, acetylated
- enzyme-treated starches
- monostarch phosphate
- oxidized starch
- starch acetate
- starch, hydroxypropyl


### 4.3 Flavours

The terms used below are defined in the "List of Additives Evaluated for their Safety-inUse in Food", CAC/FAL 1-1973
Maximum levelin final product $\%$$\mathrm{m} / \mathrm{m}$
4.3.1 Natural flavours and flavouring substances
4.3.2 Nature identical flavouring substances
4.3.3 Artificial flavouring substances appearing in the CodexList, CAC/FAL 1-1973 and Supp. 1
$4.4 \quad \mathrm{pH}$ Adjusters, Taste Adjusters and Miscellaneous
4.4.1 L and DL malic acid . ..... )
4.4.2 L and DL lactic acid and its sodium, potassium ..... )
4.4.3 Citric acid and its sodium, potassium and calcium salts
andcalcium salts ..... )
4.4.4 L-tartaric acid and its sodium, potassium and sodium potassium salts
4.4.5 Sodium, potassium and calcium orthophosphates ..... )
4.4.6 Sodium and potassium polyphosphates (diphosphates,0.2 singly or incombination,tri- bination, expressed phosphates and polyphosphates
[GMP]containing not more than $8 \%$ of cyclic compounds )
4.4.7 Sorbitol
4.4.8 Glycerol

## 5. HYGIENE

The following provisions apply, subject to endorsement by the Codex Committee on Food giene.
5.1 recommended that the products covered by the provisions of this standard e prepared in accordance with the Recommended International Code of Practice General Principles of Food Hygiene (CAC/RCP 1-1969).
5.2 he extent possible in good manufacturing practice the product shall be free from objectionable matter.
5.3 tested by appropriate methods of sampling and examination the product!
(a) shall not contain any pathogenic micro-organisms;
(b) shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health; and
(c) shall not contain any other poisonous or deleterious substances in amounts which may represent a hazard to health.
5.4 ingredients used in the preparation of the product shall conform with all the hygiene provisions of all applicable Codex codes of practice.

### 5.5 Microbiological Standards

- Total mesophilic aerobic count:
- Coliforms:
< 100000 colonies/g; IDF 61: 1971ce Cream and Milk Ices: Colony count, TGA, $30^{\circ} \mathrm{C} 72$ hours.
< 100 colonies/g; IDF 62:1972. Ice Cream Qoliform Bacteria and Milk Icess Count of
- Salmonellae:
- Staphyiococcus aureus
- Escherichia coli
negative in 20 g .
[ $<\mathrm{x} / \mathrm{g}$ ]
$[<\mathrm{y} / \mathrm{g}]$


### 5.6 Pasteurization Requirements

Milk ingredients used in edible ices shall have undergone pasteurization or equivalent treatment (international Standard FIL-IDF 63:1971). Regarding mixes, the whole mix shall have undergone pasteurization or equivalent treatment.

## 6. PACKAGING

6.1 The product shall be packed in containers which will safeguard the hygienic nd other qualities of the food.
6.2 The containers including packaging material shall be made only of substances which are safe and suitable for their intended use. Where the Codex Alimentarius commission has established a standard for any such substance used as packaging material, that standard shall apply.

## 7. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (CAC/RS 1-1969), the following specific provisions apply, subject to endorsement by the Codex Committee on Food Labelling. ${ }^{1}$

1 Reference to milk components shall be in accordance with the Code of Principles concerning Milk and Milk Products (CAC/M-1 1973)

### 7.1 Name of the Product

7.1.1 The name of the food shall be a description customarily used in the country in which the product is sold, provided that any such description shall not mislead the consumer. This description shall*be followed by a reference to the appropriate group and sub-group of this standard.
7.1.2 Where a declaration of a particular ingredient is made in the name of the food, the ingredient shall be present in an amount sufficient to characterize the product. Where the ingredient is chocolate, the characteristic flavour shall be derived from non-fat cocoa solids.

### 7.2 List of Ingredients ${ }^{1}$

7.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with subsections 3.2(b) and (c) of the General Standard for the Labelling of Prepackaged Foods (except as provided for in Annex I).
7.2.2 If the milk ingredient or its constituents are not derived from cows' milk, their origin shall be indicated on the label. If eggs other than hens' eggs are used, their origin shall be indicated on the label.
7.2.3 If other protein than that contained in MSNF is added, the type shall be declared, e.g. soy protein.
7.2.4 For a coated product, the coating shall be described in terms of the ingredients used; the description "chocolate" shall not be used unless the product conforms to the Codex Standard.

### 7.3 Net Contents ${ }^{1}$

The net contents shall be declared by volume and/or weight in either the metric ("Système international" units) or avoirdupois or both systems of measurement as required by the country in which the food is sold.
1 Not compulsory for consumer packs With a net weight less than 75 grammes/ 150 ml , in Which case the labelling should be on each bulk container.

### 7.4 Name and Address

The name and address of the manufacturer, packer, distributor, importer, exporter or vendor of the food shall be declared.

### 7.5 Country of Origin

7.5.1 The country of origin of the food shall be declared if its omission would mislead or deceive the consumer.
7.5.2 When the food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

### 7.6 Lot Identification

Each container shall be embossed or otherwise permanently marked in code or in clear to identify the producing factory and the lot. For consumer packs with a net weight less than 75 grammes/150 ml this information need appear only on the bulk container.

### 7.7 Additional Requirements

Information for keeping the product shall be given on retail packs with a net weight above 75 grammes $/ 150 \mathrm{ml}$.

## 8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described hereunder are international referee methods which are to be endorsed by the Codex Committee on Methods of Analysis and Sampling,
8.1 Samplings according to $\qquad$
8.2 Determination of Fat Content: according to $\qquad$

### 8.3 Determination of Vegetable Fat in Milk Fat

(IDF/ISO/AOAC are working on this;
8.4 Determination of Dry Matter Content
8.5 Determination of Milk Protein
8.6 Determination of Protein Content
8.7 Determination of Weight by Volume
e.g. A modification of : AOAC eleventh edition 1970, Method I (52):16.220 + 16.221; Method II (53):16.222 + 16.223, "Weight per unit volume of packaged ice cream".

INGREDIENT GROUPINGS FOR LABELLING PURPOSES
(proposed by the delegation of the U.S.A.)
Skim milk, concentrated skim milk, and nonfat dry milk may be declared as "skim milk".

Milk, concentrated milk and dried milk may be declared as "milk".
Bacterial cultures may be declared by the word "cultured" followed by the name of the substrate, e.g. "made from cultured skim milk or cultured buttermilk".

Sweetcream buttermilk, concentrated sweetcream buttermilk, and dried sweetcream buttermilk may be declared as "buttermilk".

Cheese whey, concentrated cheese whey, and dried cheese whey may be declared as "whey".

Cream, dried cream, and plastic cream (sometimes known as concentrated milk fat) may be declared as "cream".

Butteroil and anhydrous butterfat may be declared as "butter".
Dried whole eggs, frozen whole eggs, and liquid whole eggs may be declared as "eggs".

Dried egg whites, frozen egg whites and liquid egg whites may be declared as "egg whites".

Dried egg yolks, frozen egg yolks, and liquid egg yolks may be declared as "egg yolks".

Sugar (sucrose) shall be declared as "sugar", and invert sugar may be declared as "sugar".

Sweeteners derived from corn may be' declared as "corn sweeteners".

