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ALINORM 74/10

JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX ALIMENTARIUS COMMISSION  
Tenth Session, Geneva 1974

REPORT OF THE CODEX COMMITTEE  
ON COCOA PRODUCTS AND CHOCOLATE  
Tenth Session  
Lausanne, 7-11 May 1973

1. The Tenth Session of the Codex Committee on Cocoa Products and Chocolate, under the Chairmanship of the Government of Switzerland, was held in Lausanne from 7 to 11 May 1973. Mr. J. Ruffy acted Chairman of the Committee.
2. The session was opened by the President of the Swiss National Codex Alimentarius Committee, Mr. B. Matthey, who Spoke on behalf of the Conseiller Fédéral Tschudi, Chef du Département de l'Intérieur de la Confédération Suisse.
3. Representatives from 23 countries were present: Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Finland, France, Germany Fed. Republic, Ghana, Ireland, Italy, Ivory Coast, Netherlands, Nigeria, Norway, Philippines, Sweden, Switzerland, United Kingdom, United States of America, Venezuela and Yugoslavia. Observers from the following 5 international organizations were also present: Association of Official Analytical Chemists (AOAC), European Economic Community (EEC), Cocoa Producers' Alliance (COPAL), International Organization of Consumers' Unions (IOCU), Office international du cacao et du chocolat (OICC). The Secretariat consisted of representatives of FAO and the Office of Mr. E. Matthey (see Appendix I for the list of Participants).

Appointment of Rapporteur

4. The Committee appointed Mr. E. Hubbard (U.K.) as Rapporteur.

Adoption of Agenda

5. The Committee agreed to adopt the Provisional Agenda without any change.

Matters Arising from the Report of the Ninth Session of the Codex Alimentarius Commission

6. The Committee was informed that the four standards, which appear as Appendices II, III, IV and V in the Report of the Ninth Session of the Committee (ALINORM 72/10), had been advanced to Step 6 of the Codex Procedure. However, as regards the draft standard for Cocoa Powder (Cocoa) and Sweetened Cocoa Powder

(Sweetened Cocoa), the Codex Alimentarius Commission considered that the Netherlands proposal which appears as an Annex to Appendix IV to ALINORM 72/10, was not an amendment at Step 5, but should be considered as a new suggestion (e.g. for a separate parallel standard), to be further discussed at this session of the Committee.

Examination of Results of the International Study (1972) on (i) Unsaponifiable Matter and (ii) Refractive Index, Saponification Value, Iodine Value, Melting Behaviour and Fatty Acid Composition in Cocoa Butters.

7. The Committee had before it a document entitled "International Study. Cocoa Butter: Unsaponifiable Matter" (CX/CPC 73/3), submitted to the Committee by Mr. Meyers (USA), which contained the results of a programme decided at the Ninth Session (see ALINORM 72/10 para 5, and Appendix VII), i.e.: phase I - Ruggedness Test (according to Youden); phase II - Reproducibility Test; phase III - Establishing values for distinguishing the various types of cocoa butters. 30 laboratories had been involved in this study. The Committee took note of the conclusions of the Report and agreed that the figures which would appear in the Standard would be discussed at a later stage.

8. The Committee had before it Conference Room Document No. 1 "Cocoa Butter Characteristics, except Unsaponifiable Matter. International Study 1972/73", based on results obtained from the laboratories involved in the study on unsaponifiable matter. The Committee agreed to discuss the figures themselves when considering the standard for cocoa butters. As regards the fatty acid composition, however, the Committee was informed that results from 6 laboratories only were known and decided that a further study was needed before including in the standard any provision regarding fatty acid composition. The Committee congratulated the group in charge of conducting the International Study which had involved a considerable amount of work.

Draft Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines) for use in the Manufacture of Cocoa and Chocolate Products.

9. The Committee considered the above proposed draft standard at Step 7 of the Codex Procedure in the light of comments received from Governments and international organizations (Appendix II, ALINORM 72/10, and document CX/CPC 73/4 and Addendum 1). It noted that a number of additional written comments contained in addenda 2 and 3 to document CX/CPC 73/4, had been distributed by the Secretariat in time but had not been received by member countries, due to postal difficulties.

SCOPE

10. The Committee discussed a proposal to delete the last sentence of this section but agreed that it should be retained.

DESCRIPTIONS

Cocoa (cacao) Beans

11. The question was discussed as to whether unfermented seeds should be included in the definition of cocoa (cacao) beans. On the one hand it was argued that certain varieties of seeds (e.g. criollo) were used without fermentation and that, therefore, the definition should not exclude the use of such products. The exclusion of unfermented seeds from the standard (Appendix II, ALINORM 72/10) would prevent their use in the preparation of cocoa and chocolate products. On the other hand it was stressed that the fermentation of cocoa beans was an essential process in the

preparation of the various cocoa and chocolate products. The inclusion of unfermented cocoa (cacao) seeds in the definition of "cocoa beans" without knowing the extent of use of those products and the extent to which the provisions of Section 3.1 would be applicable to unfermented cacao seeds, would be premature.. Furthermore, it was pointed out that both the FAO Model Ordinance and Code of Practice on Cocoa Beans and the Draft ISO Recommendation No. 2451 "Cocoa Beans Specification" defined "cocoa beans" as the fermented seeds of the cocoa tree. It was desirable that, the Codex Standard should be consistent with these two last mentioned texts.

12. A number of delegations considered that two standards should be developed, one for fermented beans and one for unfermented seeds. The Committee considered that in practice the minimum quality values would be the same for both products and it was therefore unnecessary to develop two standards.

13. The Committee agreed to delete the words "may or may not" from the definition but decided to indicate by means of a footnote that the question of the use of unfermented cocoa seeds in the production of cocoa and chocolate products would be examined in the future. The delegation of the U.S.A. expressed a reservation as to this decision. It was agreed that certain specific information was needed as follows:

- (a) the varieties of cocoa seeds which are normally used without the fermentation process;
- (b) the extent of fermentation of the seeds before the process is arrested by drying or other means (i.e. are there truly unfermented seeds?);
- (c) the quantity of unfermented seeds in trade.

14. The Committee also agreed that the question of the use of unfermented cocoa seeds should be referred, with the agreement of the Codex Alimentarius Commission, to the FAO Study Group on Cocoa as well as ISO/TC 34.

15. The delegation of the U.S.A., supported by Canada and Australia, proposed that the definition of cocoa beans should be amended in such a way as to require the product to be free (not only practically free) from living insects. The Committee did not adopt this proposed amendment on the grounds that it would not be practical to achieve a total absence of living insects. The delegation of the Federal Republic of Germany also observed that the proposed amendment would lead to an increased use of insecticides.

#### Insect-Damaged Bean

16. The Committee agreed that for the purpose of the standard, the term "insects" included "mites" (acarides) and agreed to amend section 2.1 accordingly.

#### ESSENTIAL COMPOSITION AND QUALITY FACTORS

17. The Committee considered a proposal of the delegation of the Ivory Coast to increase the limit for "mouldy beans" to 6% by count. It was pointed out that a level of mouldy beans greater than 4%, would affect the taste of some products and that the use of cocoa beans containing more than 4% of mouldy beans was already permitted in the manufacture of refined cocoa butter. The Committee, therefore, did not adopt the proposal of the delegation of the Ivory Coast. This delegation made a reservation on the limit of 4% for mouldy beans. The Committee considered a written proposal from Italy to provide for a minimum fat content of 20% and 8% cocoa butter calculated on the dry matter for cocoa press cake and low-fat cocoa press cake respectively, as well as a maximum of 9% of water content for these products. Noting that such provisions were

already included in the standards for cocoa powders, the Committee did not consider it necessary to so amend the standard contained in Appendix II of ALINORM 72/10.

#### FOOD ADDITIVES

18. The delegation of the Federal Republic of Germany supported by Belgium, France and the Netherlands, was against the inclusion of phosphoric acid in the group of neutralizing agents on toxicological and technological grounds. The Committee noted that, at the Ninth Session of the Committee, this subject had been fully discussed and it had been agreed that the use of phosphoric acid was technologically justified and it also noted that the Codex Committee on Food Additives had endorsed the maximum level for that acid; the Committee decided not to make any changes to this section of the standard.

19. In response to a written comment by Canada, the Secretariat drew the Committee's attention to the definitions adopted by the Codex Committee on Food Additives for "natural", "nature-identical" and "artificial" flavours (see ALINORM 72/12 para 59). On the basis of information available to the Secretariat, ethyl vanillin would appear to fall into the category of "artificial" flavours, while "vanillin", depending on source, would be covered by the general provision of "natural flavours and their synthetic equivalents". The Committee decided not to make any changes to the provision for flavouring agents. The Committee did not adopt the written proposal of Poland that reference should be made to products described under Section 1 rather than Section 2 in the section of food additives.

#### CONTAMINANTS

20. The delegation of the Federal Republic of Germany stated that results of analysis of cocoa nibs did not reveal levels above 0.4 mg/kg of lead and that, as a result of manufacturing, very little additional lead would be introduced into the products described under Section 2 of the standard. In their opinion, therefore, a maximum limit of 2 mg/kg was not required. The delegation of Australia stated that regulations in that country provided for a limit of 30 mg/kg copper in cocoa press cake and that, therefore, a limit of 50 mg/kg copper in cocoa press cake would not be acceptable. The Committee had before it a document (CX/CPC 73/9) prepared by Poland showing the results of analysis of 52 samples of cocoa beans of various origin. These results showed a scatter of values ranging from 7 to 27.4 mg/kg copper. The Committee agreed that, while it was necessary to uphold the principle of minimum levels of contaminants in food, it was also necessary to provide for a limit which would not hinder the free movement of food in international trade. Since this was a natural contaminant the presence of which was not within the control of the manufacturer or producer, it was agreed on the basis of the data submitted by Poland, and information supplied by Ghana, that it would be necessary to increase the maximum level of copper to 30 mg/kg. No changes to the maximum levels of the other contaminants were made. Considering further that limits of contaminants were also dealt with in the various standards for cocoa and chocolate products, it was agreed to raise the limit for copper to 30 mg/kg in cocoa beans, nib and mass, but not to make changes to the other limits for contaminants. The delegations of the Federal Republic of Germany and Switzerland were not in favour of this last decision. The Committee considered that all available data on lead should be made available so that delegations could consider whether a reduction in the maximum level of lead could be made.

## LABELLING

21. The Committee considered a proposal of the Secretariat that the name of the product and the name and address of the manufacturer or packer always appear on the container. Taking into account that in some cases the nature of the "container" would not make such a mandatory provision feasible, but agreeing to this proposed amendment in principle, the Committee decided to include a provision in the labelling section requiring that the bulk container should be clearly identifiable with the accompanying documents. The Committee also agreed to change the word "food" to "product" wherever it appeared in the standard. The Secretariat also pointed out that the General Standard for the Labelling of Prepackaged Foods provided for a limited number of "generic names" for food additives and that, therefore, it might be desirable to amend sub-section 7.2 accordingly. Furthermore, it may be more informative to use specific rather than generic names for food additives. The Committee decided not to make any changes to the sub-section considering that the accompanying documents would contain all necessary information in this respect to appropriately inform the users of the products covered by the standard.

## STATUS OF THE STANDARD

22. The Committee decided that the Draft Standard for Cocoa (cacao) Beans, Cocoa (cacao) Nib, Cocoa (cacao) Mass, Cocoa Press Cake and Cocoa Dust (cocoa fines), for use in the Manufacture of Cocoa and Chocolat Products, as amended, should be submitted to the Codex Alimentarius Commission at Step 8 of the Procedure for the elaboration of world-wide Codex standards.

### Draft Standard for Cocoa Butters

23. The Committee considered the above draft standard contained in Appendix III of ALINORM 72/10 at Step 7 of the Codex Procedure in the light of comments received from Governments (see paragraph 9).

## DESCRIPTIONS

### Expeller Cocoa Butter

24. The Committee decided to include cocoa mass, cocoa press cake and low-fat cocoa press cake as permitted raw materials in the manufacture of this type of cocoa butter.

### Refined Cocoa Butter

25. The delegation of the United Kingdom was of the opinion that neutralization (2.1(c)) and bleaching (2.1(d)) of cocoa butters were not always necessary and should, therefore, be made the subject of optional provisions. This was, in fact, the case where good quality raw materials had been used in the manufacturing process. Other delegations held the view, however, that treatment under 2.1(a) and (b) without neutralisation and/or bleaching was not a refining process and that, therefore, the United Kingdom amendment meant that cocoa butters which did not require refining and which had only been treated in accordance with sections 2.1(a) and (b) would have to be called 'refined' cocoa butters.

26. The Committee also considered the desirability of including a definition for solvent extracted cocoa butters, since such butters were not adequately covered by the definition of refined cocoa butter. The definitions adopted by the Committee for 'solvent

extracted cocoa butter' and 'refined cocoa butter' are given in Appendix III and satisfactorily resolved the problems raised by the United Kingdom and other delegations'

27. As regards the footnote to sub-sections 2.2, 2.3 and 2.4 of the standard, the Committee agreed to a proposal of the delegation of the U.S.A. to insert the words 'shall be refined before being added to cocoa butter and' after the words 'but which does not comply with all the analytical values laid down for cocoa butter....'. It was also agreed that the footnote should apply to all the categories of cocoa butter under the new sub-section 2.1 (see Appendix III) and that the title of the footnote should be amended by substituting the word 'composition' for 'definitions'.

#### ESSENTIAL COMPOSITION AND QUALITY FACTORS

28. The Committee examined the figures obtained in the International Study on Unsaponifiable Matter and agreed to the following limits for the four categories of cocoa butter in trade:

Press cocoa butter:	not more than 0.35% m/m
Expeller cocoa butter:	not more than 0.4% m/m
Solvent extracted cocoa butter:	not more than 0.5% m/m
Refined cocoa butter:	not more than 0.5% m/m

The delegation of Brazil and Nigeria reserved their position as regards the value for unsaponifiable matter in press cocoa butter.

29. The Committee also considered the figures obtained in the International Study on Refractive Index, Saponification Value, Iodine Value and Fatty Acid Composition. There was a proposal made by the working group in charge of the International Study to include figures corresponding to the arithmetical mean of the figures obtained plus or minus twice the standard errors, i.e. accepting a risk of 5% that not all samples would be included in the range. It was pointed out that the number of samples examined was not sufficient and that further study was needed to cover cocoa butters coming from all producing countries. No decision was reached regarding the figures to be included in the standard but the Committee decided to put in square brackets the values found by the working group i.e.:

	<u>Press Cocoa</u> <u>Butter</u>	<u>Expeller Cocoa</u> <u>Butter</u>	<u>Solvent extracted</u> <u>Cocoa Butter</u>	<u>Refined</u> <u>Cocoa Butter</u>
Refractive Index $n_D$ 40°C	[1.456-1.459]	1.456-1.459	1.456-1.459	1.456-1.459]
Melting Behaviour				
slip point	[30 - 34°C	30 - 34°C	30 - 34°C	30 - 34°C]
clear point	[31 - 35°C	31 - 35°C	31 - 35°C	31 - 35°C]
AOAC method	[29 - 34°C	29 - 34°C	29 - 34°C	29 - 34°C]
Saponification value (expressed as mg KOH/g fat)	[192-196	192-196	92-196	192-196]
Iodine value (Wijs) (see also para 71 of this Report)	[33.8-39.5	35.6-40.6	36.7-41.0	36.7-41.0]

30. The delegation of Brazil objected that the Brazilian press cocoa butters could have a saponification value of 188 and proposed to change the figures for press cocoa butter into 188-198, while the Nigerian delegation was in favour of the figures of 190-195. The Nigerian delegation explained that the figures 190-195 were not new proposals by Nigeria but that these figures had already been proposed by that delegation during the Ninth Session of the Committee (see ALINORM 72/10 para 23). Moreover this

delegation pointed out that, since the result of the International Study showed a lower limit of 190.5 for Saponification Value, therefore the lower limit indicated in the draft standard should be lowered from 192 to 190 and possibly to 188 to incorporate the Brazilian proposal. The Nigerian delegation had no objection to the upper limit of 196. The Committee agreed that Government comments should be requested on all figures in square brackets in the standard.

31. As regards the provision for fatty acid composition, the Committee recognised that values for individual fatty acids obtained by gas liquid chromatography would probably replace values such as saponification and iodine values in the future, but that it would be premature, at this stage, to provide figures since any values should be based on a statistical appreciation of a number of analytical values. Therefore the Committee agreed to include in the standard a footnote which would indicate that the standard would be re-examined when figures on the fatty acid composition of the various kinds of cocoa butters are available. A similar decision was made as regards the Blue Value and the Extinction Value at 270 nm.

32. As regards the provision for free fatty acids, the Committee agreed not to change the figures included in the standard.

#### FOOD ADDITIVES

33. The Committee noted that, although Section 4 of the standard did not provide for the use of food additives, Section 2.1 permitted the use of processing aids such as neutralizing agents, bentonite, activated charcoal and other compounds normally used for bleaching. Furthermore, section 2.4 provided for the use of permissible solvents. Considering the definition for food additives adopted by the Codex Committee on Food Additives, the Committee agreed that appropriate provisions be included under Section 4 for the use of permitted solvents and processing aids approved by the Codex Alimentarius Commission and in accordance with good manufacturing practice.

34. It was also decided that governments, which had been requested to provide information on the solvents used in the extraction of cocoa butter together with the levels of residues found, should also be asked to supply information on processing aids used in the refining of cocoa butters. The Committee noted that the Codex Committee on Food Additives had set up lists of additives cleared for use in food by the Joint FAO/WHO Expert Committee on Food Additives (Ref. CAC/FAL 1-1973, to be published). The delegation of the Federal Republic of Germany was of the opinion that substances which were added to food, but not expected to remain after subsequent manufacture were not additives but contaminants if traces remained.

#### LABELLING

35. The Committee decided to make certain changes in this section as a consequence of drawing up new definitions for solvent extracted and refined cocoa butters. The amended text as adopted by the Committee is given in Appendix III. The delegation of Canada pointed out that the labelling provisions in Section 7.1 of the standard did not entirely cover all the possible mixtures of the various types of cocoa butter or the names which should be assigned to them. An example of this was given in the penultimate sentence of the new text adopted for solvent extracted cocoa butter (see 7.1.3, Appendix III). The Committee considered that the revised provisions covered all types of cocoa butters in trade.

### Status of the Standard

36. The Committee decided that the Draft Standard for Cocoa Butters should be again submitted to Governments for comments at Step 6 of the Procedure for the elaboration of Codex standards.

### Draft Standard for Chocolate

37. The Committee considered the above standard at Step 7 of the Codex Procedure (Appendix V, ALINORM 72/10) in the light of Government comments (see paragraph 9).

### SCOPE

38. The Committee adopted the text proposed by the delegation of Switzerland with minor modifications. The text of the scope section is given in Appendix IV.

### DESCRIPTIONS

39. In connection with sub-sections 2.1.1. and 2.1.3 the delegation of France, supported by the delegations of Austria and Switzerland, stated that in their view, unsweetened chocolate was in fact cocoa mass, and were against the inclusion of that product in the standard for chocolate. The Committee decided not to amend the standard as proposed above.

40. The question was raised in connection with the definition of sugars (sub-section 2.2) as to whether or not the definition should be restricted to sugars for which Codex standards had been elaborated. The Committee decided to leave the text unchanged to allow for the use of other carbohydrate sweeteners suitable for use in food (e.g. molasses, honey, maltose etc..).

### ESSENTIAL COMPOSITION AND QUALITY FACTORS

41. Sub-sections 3.1.1 and 3.1.3 - The Committee agreed with the proposal of the Federal Republic of Germany, supported by France, Austria and Switzerland, to provide for a minimum content of 31% m/m cocoa butter in couverture chocolate and 31% m/m total fat in milk couverture chocolate.

42. Sub-section 3.1.2 - The Committee decided to increase the minimum fat-free cocoa solids to 12% m/m.

The delegation of Austria stated that the product referred to sweet or plain chocolate (sub-section 3.1.2) was known and marketed in that country as 'cooking chocolate' ('kochschokolade' or 'haushaltschokolade') which was in conformity with sub-section 3.1.1 of the present standard, and that, therefore, the provisions of sub-section 3.1.2 were not acceptable.

43. Sub-section 3.1.3 - The Committee considered a proposal by the delegation of the United Kingdom for a further category of milk chocolate containing higher amounts of milk solids than that provided for in sub-section 3.1.3 of the standard and with a requirement of 20% m/m minimum total cocoa solids instead of 85%. It also considered a proposal by the delegate of Norway to reduce the minimum total cocoa solids to 20% m/m without making other changes to this sub-section except for a reduction of the maximum sugars content of 55% to 50% m/m. In the opinion of the delegate of Norway, such an amendment would accommodate the product referred to by the United Kingdom as well as products covered by the provisions of sub-section 3.1.3 as presently drafted. Some of the principal arguments put forward by the United Kingdom were that the product containing higher milk solids was already the object of significant national and

international trade and one which enjoyed consumer preference in a number of countries. This being the case, there appeared no reason why such a product should not be included in the standard for chocolate which already included products of lesser importance in trade, two of which were subject to a provision for a minimum total cocoa solids content of 20% m/m. A number of delegations supported the United Kingdom proposal.

44. The delegations of Nigeria and Brazil, supported by a number of cocoa producing and importing countries as well as the representative of COPAL, were strongly against the United Kingdom proposal, and requested clarification as to why the sugar content of the product could not be reduced to accommodate the addition of an increased amount of milk solids and information on the total production of the product covered by the United Kingdom proposal. In reply to the question posed by the delegation of Nigeria, the delegation of the United Kingdom informed the Committee that, while it did not have exact statistical data, it estimated that the production of high milk chocolate would be about 10% of world production of milk chocolate and about 30% of that produced in Western Europe. The delegation of Ghana, supported by a number of delegations, was of the opinion that 25% total cocoa solids represented a lower limit below which it would be fraudulent to refer to such a product as chocolate. Furthermore, it was questionable whether there was a need to establish an international standard for the product covered by the United Kingdom proposal.

45. The delegation of Brazil was of the opinion that, in order to manufacture the product proposed by the United Kingdom, it would be technologically necessary to use non-cocoa fats, a practice which was not acceptable to this country and that the inclusion of such fats would cause a re-examination of the compositional criteria of all chocolate products in the draft standard, which, so far, had been agreed upon.

46. As a majority of the delegations present were in favour of the United Kingdom proposal, the Committee decided that the proposal of the United Kingdom should be included in the standard tentatively (in square brackets) so that Governments would be given the opportunity to send written comments on the United Kingdom proposal. It was understood that, should provisions be made for a separate category of milk chocolate as proposed by the United Kingdom, there would be a need to reconsider other sections of the standard such as the section on labelling (e.g. name of the product, declaration of ingredients etc.).

47. Sub-section 3.2 Optional Ingredients

As regards Spices and Salt, the Committee agreed to replace the words "limited by good manufacturing practice" with the words "in small quantities to balance flavour". As regards Milk Solids, the Committee agreed to delete the words "in their natural proportion or otherwise".

48. Sub-Section 4.2 Additives

The delegations of Austria, Belgium, the Federal Republic of Germany, France and the Netherlands were of the opinion that the use of emulsifiers other than lecithin was not necessary. The delegation of Switzerland reserved its position concerning the use of sorbitan esters in view of a recent study which had suggested, but not proved, doubts on the safety-in-use of these substances. As regards Flavouring Agents, the Committee agreed to amend "in small amounts for flavour adjustment" to read "in small quantities to balance flavour".

## CONTAMINANTS

49. There was a proposal made by the delegation of the Federal Republic of Germany to reduce the level of lead to 1 mg/kg. This proposal was based on data for German products produced in modern factories which had shown no level in excess of 0.7 mg/kg. Other delegations were of the opinion that it was premature to fix any maximum level for metal contaminants before knowing the results of studies presently being undertaken by Governments e.g. in Ireland. The Committee considered that unsweetened chocolate should be provisionally given the same maximum levels as those already agreed to for cocoa mass and agreed that, wherever possible, all the figures should be reduced, as requested by the Codex Committee on Food Additives, but kept in square brackets, pending information to be provided by Governments on levels actually observed.

## LABELLING

50. The Committee agreed to a recommendation made by the Codex Committee on Food Labelling (ALINORM 72/22, para 12) to delete the item 'specific' from the preamble to this section. The Committee agreed that the designation of the various products provided for in this standard, as well as in the other standards, for cocoa products and chocolate, had to be made mandatory and therefore to change the wording "only products described may be designated" into: "products described..... shall be designated".

51. Sub-section 7.4.2 - As regards the weight of small units up to which they might be excluded from a declaration of net weight on the label, the Committee agreed to 50 g and decided to remove the square brackets. The delegations of the U.S.A. and Sweden were of the opinion that this figure was too high and, therefore reserved their position.

## Status of the Standard

52. The Committee decided that the draft standard for chocolate should be returned to Step 6 of the Procedure for the elaboration of Codex standards for further government comments, in particular on the amendments proposed by the United Kingdom.

## Proposed Draft Standard for Composite and Flavoured Chocolate

53. The Committee considered the above proposed draft standard (Appendix VI, ALINORM 72/10) at Step 4 of the Codex Procedure, in the light of comments from governments (see para.9).

## SCOPE

54. The text proposed by the delegation of Switzerland was adopted by the Committee with minor amendments. The Committee discussed whether the Scope section should refer only to those ingredients or flavouring substances which characterized the product or whether it was sufficient simply to refer to ingredients or flavouring substances. The Committee agreed to the text given in Appendix VI with the understanding that this matter should be discussed at the Eleventh Session of the Committee.

## DESCRIPTION

55. In respect of the definition of composite chocolate (Section 2.1) the delegation of the United Kingdom raised the question of the addition of edible non-cocoa fats in small amounts for technological purposes. The United Kingdom made it clear that, in its view, the addition of such fats was an addition to, not substitution for, the cocoa butter

required by the compositional standards for chocolate. The United Kingdom observed that Section 2.1 of the present draft would permit the addition of such fats when contained in any of the permitted edible substances. For example, it pointed out that in its view, this section would permit the addition of biscuits and even margarine in quantities up to 30% to chocolate. This would in effect introduce significant amounts of edible fats to the chocolate products. The United Kingdom stated that it was only proposing the additional small amounts, up to 5%, if such fats were for textural and organoleptic improvement of the chocolate products, and subject to percentage label declaration. The United Kingdom referred to paragraph 2 of Article 52 of the International Cocoa Agreement and said that the United Kingdom was not proposing the substitution of cocoa constituents and that its proposals would in no way mislead the consumer. Other delegations supported the view of the United Kingdom.

56. The delegation of Brazil was strongly opposed to the proposal made by the United Kingdom as, in its opinion, the same technological results could be achieved by the use of additional amounts of cocoa butter, a practice which would be more in line with the spirit of the International Cocoa Agreement. It stated, furthermore, that the acceptance of such a proposal would inevitably lead to reopening a discussion on the standard for chocolate because of the contradictions that would be introduced between the proposal made and the basic concepts of the standard. It expressed its regret that this proposal would prevent the standard from moving forward in the Codex Procedure. The delegation of Austria was not in agreement with the United Kingdom proposal and pointed out that the partial replacement of cocoa solids with non-cocoa fats must lead to a reduction in the cocoa-solids content of chocolates. The delegation of Nigeria was opposed to the United Kingdom proposal and stated that it was not in a position to discuss Conference Room Document No. 2, containing the proposal, as it had only been distributed during the session and as it represented a substantive amendment which would have an effect on all chocolate standards.

57. The delegation of Ghana, speaking also on behalf of the delegations of Nigeria, Ivory Coast, Venezuela, Brazil and the observer of COPAL, was of the opinion that the use of non-cocoa fats was in actual fact a substitution of cocoa butter and that there were no justifiable technological reasons for their use. Furthermore, the comments in document CX/CPC 73/4 concerning the use of non-cocoa fats was not a sufficient basis on which to base discussions during the present session and the proposal of the United Kingdom contained in Conference Room Document No. 2 should have been first circulated to governments for comments. The delegation of Ghana drew the Committee's attention to a similar request under consideration by the EEC to allow the use of up to 5% of non-cocoa fats in the manufacture of chocolate. The authorisation for use of such fats would open the door to a significant reduction of the cocoa solids content of chocolates and this was not in line with the meaning of Article 52 of the International Cocoa Agreement to which a majority of the countries participating at the present session were signatories. In the light of the foregoing, it would appear appropriate for the United Kingdom to withdraw its proposal. (The full text of the declaration of Ghana is given in Appendix XI to this Report).

58. The delegation of Ireland pointed out that for the last 20 years non-cocoa fats had been used in that country for technological reasons in the manufacture of chocolates which were in conformity with the minimum compositional criteria. The addition of such fats, if declared on the label, did not represent a fraudulent practice, and did not, in Ireland's view, represent an usage "so as to mislead the consumer" within the meaning of paragraph 2 of Article 52 of the International Cocoa Agreement. It pointed

out that the usage of fats as proposed by the United Kingdom was supported by the views expressed by the IOCU in document CX/CPC 70/2. The purpose of the Codex was not to protect the interests of the producers but of the consumers.

59. The delegations of the Federal Republic of Germany and Austria were opposed to the use of non-cocoa fats since such a practice was not acceptable to consumers in these countries. The delegation of Switzerland supported the above statement and pointed out that label declaration did not necessarily represent a sufficient safeguard against the use of refined non-cocoa fats which, furthermore, were not a characterising ingredient in composite chocolates in accordance with Section 1 of the proposed draft standard under discussion. The observer of IOCU pointed out that the document quoted by the delegation of Ireland contained the views of only some of the members of the IOCU, as only eleven countries had replied to the questionnaire sent by IOCU. Speaking on behalf of the Swiss consumers, she supported the statement made above by the Federal Republic of Germany, Austria and Switzerland.

60. In replying to some previous statements the delegation of the United Kingdom pointed out that the non-cocoa fats did affect the characteristics of the finished product and should, therefore, be regarded as characterising ingredients. The United Kingdom consumers were in favour of the continued use of edible fats (up to the 5% level) in the United Kingdom, subject to declaration. The United Kingdom rejected the suggestion that the adoption of its proposals would lead to the complete substitution of cocoa butter and stated the declaration of edible fats would inform the consumer of their presence in the same way as other declarations e.g. "with nuts". The delegation of Austria was also against the addition of non-cocoa fats. Furthermore, the question of whether the addition of non-cocoa fats was a substitution or not, should be judged on the finished product. The delegation of Switzerland pointed out that the use of the milk chocolate standard was an obvious one of substitution. The delegation of France was against the use of non-cocoa fats and pointed out that such a practice should be viewed in relation to the quality of the finished product. The United Kingdom agreed to produce a paper explaining the technological advantages in the use of edible fats, the paper to be considered at the Eleventh Session of the Committee in the light of government comments.

#### Flavoured Chocolate

61. The Committee requested the delegation of Switzerland to elaborate a definition for this product so that it could be considered at the Eleventh Session of the Committee in the light of government comments.

62. In connection with sub-section 3.1.4 the Committee adopted the proposal of the United States of America to insert the words "fat-free" in relation to milk solids in order to avoid conflict with sub-section 3.1.2 in which ingredients such as cream and butter were permitted.

63. The delegation of Canada proposed that peanuts and coconut should be also listed as examples of permitted ingredients. The Committee agreed with this proposal.

#### 64. 3.2 Flavoured Chocolate

The Committee requested the delegation of Switzerland to elaborate essential composition and quality factors for this type of chocolate so that they could be considered at the next session in the light of government comments.

## ADDITIVES

65. In view of the amendments which had been agreed to concerning the levels of use for flavouring agents in the standard for chocolate (i.e. in small amounts for flavour adjustment), the Committee agreed that the present text would have to be adjusted to provide for the use of natural flavours, which came under the definition of 'food additives' so that appropriate quantities can be used in the manufacture of 'flavoured' and 'composite' chocolates. The question of 'carry-over' from the use of ingredients containing permitted additives, was also discussed. The Secretariat informed the Committee that the Codex Committee on Food Additives was considering this problem as a general one applicable to all Codex Commodity Standards. The Committee requested the delegation of Switzerland to give consideration to this section so that it could be discussed in detail at its Eleventh Session. The delegation of the United Kingdom was of the opinion that, as a matter of principle, flavours which had been found safe for use in food but which came under the definition of synthetic 'artificial' flavours should also be permitted.

### Status of the Standard

66. The Committee decided that the proposed draft standard for composite and flavoured chocolate should be returned to governments for a new round of comments at Step 3 of the Procedure for the Elaboration of Codex Standards (see Appendix VI to this Report).

### DRAFT STANDARD FOR COCOA POWDER (COCOA) AND SWEETENED COCOA POWDER (SWEETENED COCOA)

67. The Committee examined the above draft standard (Appendix IV, ALINORM 72/10) at Step 7 of the Procedure (see paras 6 and 9). The Committee considered a proposal from the United Kingdom for the addition of "Drinking Chocolate" with a 25% cocoa powder content and "Fat Reduced Drinking Chocolate" to this standard. The Committee also had before it a proposal from the Netherlands for Cocoa Powder Mixture, a product which contains 20% cocoa solids mixed with sugars and milk solids (CX/CPC 73/5, first part). Some delegations were not in favour of including these products in the standard, while other delegations saw no objection to their inclusion, provided that appropriate names were given to differentiate between all the products. The Committee also took note that the provision for food additives in cocoa powder mixture was somewhat different from that for the other products. Several delegations also objected to the use of the word "Chocolate" appearing in the name of these products in countries other than those whose legislation permits the 'use of the name "Chocolate"'. The Committee agreed to amalgamate the draft standard, the United Kingdom proposal and the Netherlands proposal for Cocoa Powder Mixture. The delegations of the Netherlands, Switzerland and the United Kingdom undertook to prepare a revised version to be sent to the Secretariat and then to governments for a further round of comments at Step 6 (see Appendix V to this Report).

### PROPOSED DRAFT STANDARD FOR COCOA POWDER (COCOA) WITH ADDITIVES FOR INDUSTRIAL PURPOSES

68. The Committee examined a second proposal made by the Netherlands for this product (CX/CPC 73/5 second part) and agreed that this proposed draft standard would be submitted to governments for comments at Step 3 of the Procedure (see Appendix VII to this Report).

## PROPOSED DRAFT STANDARD FOR FILLED CHOCOLATE

69. The Committee examined briefly a proposal made by the Swiss government (CX/CPC 73/8) and agreed that this proposed draft standard would be submitted to governments for comments at Step 3 of the Procedure (see Appendix VIII to this Report).

## PROPOSED DRAFT STANDARD FOR WHITE CHOCOLATE

70. The Committee re-examined the proposals made by the Swiss delegation at the Ninth Session of the Committee (ALINORM 72/10, Appendix IX), and agreed that this paper would be appended, in the form of a Codex Standard, to this report and submitted to governments for comments at Step 3 of the Procedure. The delegation of Nigeria made a reservation as regards the advancement of the standard to Step 3 (see Appendix IX to this Report).

## METHODS OF ANALYSIS AND SAMPLING

71. The Committee had before it Conference Room Document No. 7 (see Appendix X to this Report), a report prepared by an ad hoc group of experts, which included:

- (a) A list of the methods already endorsed by the Codex Committee on Methods of Analysis and Sampling;
- (b) a list of the methods not yet endorsed by that Committee;
- (c) a list of new methods to be proposed to that Committee for endorsement.

The Committee agreed with the view of the Group of Experts, but with the following comments:

- (a) No method is needed for pH determination,- as had also been stated by the Codex Committee on Methods of Analysis and Sampling (see ALINORM 72/23, para. 79) - since no limits for pH were included in the standards;
- (b) As regards melting behaviour, only the OICC method 8b 1961 (slip point and clear point) was proposed for endorsement, as the AOAC method XI, 13039 had not been found as satisfactory as the OICC method by the delegation of Austria and the experts of the ad hoc group; the Committee, therefore, agreed to delete in the standard for cocoa butter, the figures obtained using the AOAC method.
- (c) As regards the IUPAC method for unsaponifiable content, the attention of this organisation should be drawn to Dr. Meyers' report and to a revised version of that method, which was in the process of publication.
- (d) As regards the determination of total cocoa solids, this method, when agreed to by OICC, might also be used for the determination of chocolate content in composite and flavoured chocolates.

The Committee agreed that the method for solvent residues proposed by the Codex Committee on Fats and Oils would be applicable to cocoa butters and also agreed that both the method for total sterols and GLC analysis of sterols would be submitted for endorsement when results of collaborative testing of these methods under way in OICC will be available.

## HYGIENE

72. The Committee was informed that the paper on hygiene requirements was almost finalised by the United States of America and the Netherlands delegations and agreed that this item would be discussed at the Eleventh Session of the Committee.

## OTHER BUSINESS - FUTURE WORK

73. There was no proposal for other business. The Committee considered that there was no need to envisage, for the time being, other work than that already undertaken.

## DATE AND PLACE OF THE ELEVENTH SESSION

74. The Committee was informed by the Chairman that the Eleventh Session would take place in Switzerland, towards the end of 1974, pending a decision to be taken by the Codex Alimentarius Commission at its Tenth Session.

## SUMMARY STATUS OF WORK

(Prepared by the Codex Alimentarius Commission Secretariat)

### 1. Status of Standards and papers under consideration by the Committee

#### (i) Standards

- Draft Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines) for Use in the Manufacture of Cocoa and Chocolate Products (Appendix II) at Step 8.
- Draft Standard for Cocoa Butters (Appendix III) at Step 6 for a further round of comments.
- Draft Standard for Cocoa Powder (Cocoa) and Sweetened Cocoa Powder (Sweetened Cocoa) (to be incorporated as Appendix V to this Report at a future date. See para 67) at Step 6 for a further round of comments.
- Draft Standard for Chocolate (Appendix IV), at Step 6 for a further round of comments.
- Proposed Draft Standard for Composite and Flavoured Chocolate (to be incorporated as Appendix VI to this Report at a future date. See paras 61-64) at Step 3 for a further round of comments.
- Proposed Draft Standard for Cocoa Powder (Cocoa) with Additives for Industrial Purposes (Appendix VII), at Step 3.
- Proposed Draft Standard for Filled Chocolate (Appendix VIII), at Step 3.
- Proposed Draft Standard for White Chocolate (Appendix IX), at Step 3.

#### (ii) Other Documents

- Hygiene requirements (paper almost finalized by the delegations of the United States of America and the Netherlands), to be considered at the Eleventh Session (para. 72).

2. Other Matters of Interest to the Codex Alimentarius Commission
  - Use of unfermented cocoa seeds in the production of cocoa and chocolate products (paras 11-14).

3. Matters of Interest to other Committees

<u>Codex Committee</u>	<u>Paragraphs in the Report</u>	<u>Reference in the Standards</u>
Food Additives	18, 19, 20, 65	Appendix II, Section 5
Method of Analysis and Sampling	71	Appendix II, Section 8.1.4
Food Hygiene	72	
Food Labelling	21	Appendix II, Section 7 Appendix III, sub-section 7.5

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## APPENDIX II

### DRAFT STANDARD FOR COCOA (CACAO) BEANS, COCOA (CACAO) NIB, COCOA (CACAO) MASS, COCOA PRESS CAKE AND COCOA DUST (COCOA FINES), FOR USE IN THE MANUFACTURE OF COCOA AND CHOCOLATE PRODUCTS

(At Step 8 of the Procedure for the Elaboration of World-Wide Standards)

#### 1. SCOPE

This Standard applies to Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines), as defined, for use in the Manufacture of Cocoa and Chocolate Products and intended for human consumption. It does not apply to these products when intended for other uses.

#### 2. DESCRIPTIONS

2.1 Cocoa (Cacao) Beans are the seeds of the Cocoa tree (Theobroma cacao L.) which have been fermented<sup>1</sup> and are dry as defined in Section 2.1.8. They shall be practically free from:

- smoky beans;
- abnormal or foreign odours;
- insect/mite-damaged beans;
- germinated beans;
- flat beans;
- broken beans;
- fragments;
- pieces of shell;
- slaty beans;
- mouldy beans;

and practically free from foreign matter and living insects.

<sup>1</sup> The question of the use of unfermented cacao seeds is subject to examination by the Codex Alimentarius Commission at a future date (see paras 11 to 14 of this Report).

2.1.1 Broken bean: A cocoa bean of which a fragment is missing, the missing part being equivalent to less than half the bean.

2.1.2 Fragment: A piece of cocoa bean equal to or less than half the original bean.

2.1.3 Insect/mite-damaged bean: A cocoa bean, the internal parts of which are found to contain insects and/or mites at any stage of development, or to show signs of damage caused thereby, which are visible to the naked eye.

2.1.4 Mouldy bean: A cocoa bean on the internal parts of which mould is visible to the naked eye.

2.1.5 Flat bean: A cocoa bean of which the cotyledons are too thin to be cut to give a surface of cotyledon.

2.1.6 Germinated bean: A cocoa bean the shell of which has been pierced, slit or broken by the growth of the seed germ.

2.1.7 Slaty bean: A cocoa bean which shows a slaty colour on half or more of the surface exposed by a cut made lengthwise through the centre.

2.1.8 Dry cocoa: Cocoa which has been evenly dried and the moisture content of which corresponds to the requirements included in sub-section 3.1.2.

2.2 Cocoa (Cacao) Nib is the product obtained from beans which have been cleaned and freed from shells as thoroughly as it is technically possible.

2.3 Cocoa (Cacao) Mass is the product obtained by the mechanical disintegration of cocoa nib without abstraction or addition of any of its constituents.

2.4 Cocoa Press Cake is the product obtained by partial removal of fat from cocoa nib or cocoa mass by mechanical means.

2.5 Expeller Press Cake is press cake prepared by the expeller process from cocoa beans with or without the addition of cocoa nib, cocoa press cake and cocoa dust (cocoa fines).

2.6 Cocoa Dust or Cocoa Fines is a fraction of the cocoa bean which is produced as a by-product during winnowing and degerming. It consists of a mixture of finely divided nib, shell and germ.

### 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 3.1 Cocoa Beans

3.1.1 Minimum quality of cocoa beans for the manufacture of semi-processed and finished cocoa products, press cocoa butter and expeller cocoa butter, and chocolate: not more than the following limits of defective beans:

(a) mouldy beans	4% by count
(b) slaty beans	8% by count
(c) insect/mite damaged beans, germinated beans tor flat beans	6% by total count

3.1.2 The moisture content of cocoa shall not exceed 7.5%. This maximum moisture content is applied to cocoa in trade outside the producing country, as determined at first port of destination or subsequent points of delivery.

#### 3.2 Cocoa Nib, Cocoa Mass, Cocoa Press Cake

Cocoa shell:	not more than 4% m/m calculated on the fat-free dry matter
Total ash:	not more than 10% m/m calculated on the fat-free dry matter or 14% m/m when treated with permitted alkalizing agents
Ash insoluble in hydrochloric acid:	not more than 0.3% m/m calculated on the fat-free dry matter.

### 4. FOOD ADDITIVES

[The following provisions in respect of food additives and their specifications as contained in Section ..... of the Codex Alimentarius have been endorsed by the Codex Committee on Food Additives:

4.1	<u>Additive:</u>	<u>Maximum Level</u>	<u>Products</u>
	<u>Alkalizing Agents</u>		
	Ammonium carbonate		
	Ammonium hydroxide		
	Ammonium hydrogen carbonate		
	Calcium carbonate	50 g/kg singly or in	
	Magnesium carbonate	combination, expressed all products described	
	Magnesium hydroxide	as anhydrous K <sub>2</sub> CO <sub>3</sub> on under Section 2	
	Potassium carbonate	a fat-free basis	
	Potassium hydroxide		
	Potassium hydrogen carbonate		
	Sodium carbonate		
	Sodium hydroxide		
	Sodium hydrogen carbonate		
4.2	<u>Neutralizing Agents</u>		
	Phosphoric acid	2.5 g/kg expressed as	
		P <sub>2</sub> O <sub>5</sub>	all products described
	<u>OR</u>		under Section 2
	Citric acid,	5 g/kg singly or in any	
	L-tartaric acid	combination	
4.3	<u>Emulsifiers</u>		
	Mono- and diglycerides of		
	edible fatty acids	15 g/kg	
	Lecithin	10 g/kg of the acetone	
		insoluble component, of	Cocoa Mass, Cocoa
		lecithin	Press Cake
	Ammonium salts of		
	phosphatidic acids	7 g/kg	
	Total emulsifiers	15 g/kg singly or in any	
		combination	
4.4	<u>Flavouring Agents</u>		
	Natural flavours, as defined in		
	the Codex Alimentarius and		
	their synthetic equivalents,		
	other than those which would	in small quantities to	Cocoa Mass, Cocoa
	imitate natural chocolate or milk	balance flavour	Press Cake
	flavours <sup>(a)</sup>		
	Vanillin		
	Ethyl Vanillin		

<sup>(a)</sup> Temporarily endorsed

## 5. CONTAMINANTS

[The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, except otherwise indicated:]

<u>Contaminant</u>	<u>Maximum Level</u>	<u>Products</u>
Arsenic	1 mg/kg <sup>(a)</sup>	All products described
		under Section 2

Copper	30 mg/kg <sup>(b)</sup>	Cocoa Beans, Cocoa Nib, and Cocoa Mass
	50 mg/kg <sup>(a)</sup>	Cocoa press Cake
Lead	2 mg/kg <sup>(a)</sup>	All products described under Section 2

<sup>(a)</sup> Temporarily endorsed

<sup>(b)</sup> To be endorsed by the Codex Committee on Food Additives

## 6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the appropriate sections of the Recommended International Code of Hygienic Practice entitled "General Principles of Food Hygiene" as approved by the Codex Alimentarius Commission (Ref. No. CAC/RCP 1-1969).

6.2 To the extent possible in good manufacturing practice, the products shall be free from objectionable matter.

6.3 When tested by appropriate methods of sampling and examination, the products shall not contain any substances originating from microorganisms in amounts which may be toxic.

## 7. LABELLING

[The following provisions in respect of labelling are subject to endorsement by the Codex Committee on Food Labelling:]

### 7.1 Designation of the Products

Products conforming with the appropriate description in Section 2 of this Standard and the essential composition and quality factors in Section 3 shall be designated cocoa nib, cocoa mass and cocoa press cake, respectively.

### 7.2 List of Ingredients

Ingredients such as alkalizing and neutralizing agents, emulsifiers and flavouring agents shall be declared under generic or specific names.

### 7.3 Net Contents

The net contents shall be declared by weight in either the metric system ("Système international" units) or avoirdupois or both systems of measurement as required by the country in which the product is sold.

### 7.4 Name and Address

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

### 7.5 Country of Origin

7.5.1 The country of origin of the products covered by the Standard shall be declared unless they are sold within the country of origin, in which case the country of origin need not be declared.

7.5.2 When a product 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 Presentation of Information

The information required by sub-sections 7.1 to 7.5 shall either be given on the container or be given in accompanying documents except that the name of the product and the name and address of the manufacturer or packer shall appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

## 8. METHODS OF ANALYSIS AND SAMPLING

[The methods of analysis and sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling, except otherwise indicated]:

### 8.1 Analysis

	<u>Criterion</u>	<u>Method</u>	<u>Product</u>
8.1.1	Cut test	ISO R 1114 <sup>(a)</sup>	
8.1.2	Moisture content (loss on drying)	ISO R2291	Cocoa Beans
8.1.3	Cocoa shell	AOAC-OICC study under way based on the count of stone cells (AOAC (1970) 13.023-13.027) and spiral vessels. <u>Method not yet proposed</u>	Cocoa Nib, Cocoa Mass, Cocoa Press Cake
8.1.4	Total ash	AOAC/OICC study completed but not yet published	<u>To be endorsed</u>
8.1.5	Ash insoluble in hydrochloric acid	AOAC/OICC study under way. <u>Method not yet proposed</u>	Cocoa Nib, Cocoa Mass, Cocoa Press Cake
8.1.6	Arsenic	AOAC (1970) 25.011 (25.016-25.017) diethyldithiocarbamate	
8.1.7	Copper	AOAC (1970) 25.023-25.028 <sup>(b)</sup>	All products described under Section 2
8.1.8	Lead	AOAC (1970) 25.053, (25.047-25.048) <sup>(b)</sup>	
8.2	<u>Sampling</u>	ISO R 2292 <sup>(a)</sup>	Cocoa Beans

(a) Temporarily endorsed.

(b) Temporarily endorsed. Might be replaced by Atomic Absorption Spectrophotometry (AAS) in the future. The Codex Committee on Cocoa Products and Chocolate has been invited to try methods based on AAS (see ALINORM 72/23, paras 18-19 and 76, and CX/MAS 70/C/2: General Methods for the Determination of Metallic Contaminants).

DRAFT STANDARD FOR COCOA BUTTERS

(At Step 6 of the Procedure for the Elaboration of World-Wide Standards)

## 1. SCOPE

This Standard applies exclusively to cocoa butter used as ingredient in the manufacture of chocolate and chocolate products.

## 2. DESCRIPTIONS

2.1 Cocoa Butter<sup>(c)</sup> is the fat produced from one or more of the following:

Cocoa beans (as defined in Section 2.1 and 3.1 of the Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines), for Use in the Manufacture of Cocoa and Chocolate Products, cocoa nib, cocoa mass, cocoa press cake, expeller press cake or cocoa dust (cocoa fines), by a mechanical process and/or with the aid of permissible solvents. Cocoa butter shall not contain shell fat or germ fat in excess of the proportion in which they occur in the whole bean.

- (c) Note on the Composition of Cocoa Butter for Use in Chocolate Fat which has been prepared from the raw materials permitted for the manufacture of cocoa butter and by one of the methods of preparation authorised for cocoa butter and with or without one of the treatments authorised for cocoa butter, but which does not comply with all the analytical values laid down for cocoa butter, shall be refined before being added to cocoa butter and may only be added to cocoa butter and only in such amount that the resulting mixture is in compliance with the analytical values for refined cocoa butter.

Cocoa butter may be treated as follows:

- (a) filtered, centrifuged;
- (b) degummed, deodorized by steam under vacuum and all other normal methods of deodorization;
- (c) treated with lye or a similar substance normally used for neutralizing;
- (d) treated with bentonite, activated charcoal and other compounds normally used for bleaching.

Cocoa butter is normally traded under the following categories:

2.1.1 Press Cocoa Butter<sup>(a)</sup>

Press Cocoa Butter is the fat which is obtained by pressure from cocoa nib or cocoa mass (cocoa liquor) obtained from cocoa beans as described in Section 2.1 and complying with the Minimum Quality laid down in Section 3.1 of Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines). It may only be treated as stated under <sup>(a)</sup> and <sup>(b)</sup> of Section 2.1, general definition of cocoa butter.

2.1.2 Expeller Cocoa Butter<sup>(a)</sup>

"Expeller Cocoa Butter" is the fat prepared by the expeller process from cocoa beans, cocoa nib, cocoa mass, cocoa press cake, singly or in combination as described in Sections 2.1, 2.2, 2.3 and 2.4 and complying with the Minimum Quality laid down in Section 3.1 of the Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines). It may only be treated as stated under <sup>(a)</sup> and <sup>(b)</sup> of Section 2.1 above, containing the general definition of cocoa butter. Cocoa butter prepared by the Expeller process from other raw materials is not included in the present description.

### 2.1.3 Solvent Extracted Cocoa Butter <sup>(a)</sup>

Solvent Extracted Cocoa Butter is the fat obtained by extraction with permitted solvents from cocoa beans and or from the other raw materials as described in Section 2 of Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines). Such butter shall have been treated as indicated under <sup>(a)</sup> and <sup>(b)</sup> of Section 2.1 above, containing the general definition of cocoa butter.

### 2.1.4 Refined Cocoa Butter <sup>(a)</sup>

Refined Cocoa Butter is the fat obtained by any of the means described in sub-sections 2.1.1, 2.1.2 or 2.1.3 of the Standard which has been treated as indicated under <sup>(a)</sup> and <sup>(b)</sup> and either or both of treatments (c) and (d) of Section 2.1 above, containing the general definition of cocoa butter.

<sup>(a)</sup> Please see footnote (c) on page 4

## 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 3.1 Identification and quality values <sup>(b)</sup>

	<u>3.1.1</u> <u>Press Cocoa</u> <u>Butter</u>	<u>3.1.2</u> <u>Expeller</u> <u>Cocoa Butter</u>	<u>3.1.3</u> <u>Solvent</u> <u>extracted</u> <u>Cocoa Butter</u>	<u>3.1.4</u> <u>Refined</u> <u>Cocoa Butter</u>
<u>Characteristic</u>	<u>(b)</u> <u>Values</u>	<u>(b)</u> <u>Values</u>	<u>(b)</u> <u>Values</u>	<u>(b)</u> <u>Values</u>
Organoleptic characteristics: Colour	characteristic of the designated product			
Odour and taste	Characteristic of the designated product and free from foreign odour and foreign taste	Characteristic of the designated product and free from foreign odour and foreign taste	Characteristic of the designated product and free from foreign odour and foreign taste	Characteristic of the designated product and free from foreign odour and foreign taste
Refractive Index No. $n_D^{40^\circ C}$	[1.456 - 1.459]	[1.456 - 1.459]	[1.456 - 1.459]	[1.456 - 1.459]
Melting behaviour (Fincke) <sup>(b)</sup>				
(slip point)	[30 - 34°C]	[30 - 34°C]	[30 - 34°C]	[30 - 34°C]
(clear melting point)	[31 - 35°C]	[31 - 35°C]	[31 - 35°C]	[31 - 35°C]
Free fatty acids (expressed as %m/m oleic acid)	0.5 - 1.75	[0.5 - 1.75]	[0 - 1.75]	[0 - 1.75]
Saponification value (expressed as mg KOH/g fat)	[192 - 196]	[192 - 196]	[192 - 196]	[192 - 196]

<sup>(b)</sup> This Section is subject to revision when statistical data on fatty acid composition are available, as well as data on Blue Value (behenic acid tryptamide content) and Extinction Value at 270 nm (after rinsing with NaOH).

Iodine value (Wijs)	[33.8 - 39.5]	[35.6 - 40.6]	[36.7 - 41.0]	[36.7 - 41.0]
Unsaponifiable matter (petroleum ether) %m/m	not more than 0.35	not more than 0.4	not more than 0.5	not more than 0.5

<sup>(b)</sup> See para 71 of this Report.

#### 4. FOOD ADDITIVES

##### 4.1 Processing Aids

##### Maximum Level of Use

4.1.1 Clarifying, 'degumming' and filtration aids  
[to be specified]

4.1.2 Neutralizing agents

Lye and other suitable neutralizing agents appearing in the codex List (CAC/PAL 1-1973)

Limited by Good Manufacturing Practice leaving minimum residues in the final product

4.1.3 Bleaching agents

Bentonite,  
Activated charcoal and other suitable bleaching agents appearing in the Codex List (CAC/PAL 1-1973)

4.2 Extraction Solvents

Suitable extraction solvents appearing in the Codex List (CAC/FAL 1-1973)

Limited by Good Manufacturing Practice leaving minimum residues in the final product

#### 5. CONTAMINANTS

##### Contaminant

##### Maximum Level

Arsenic

0.5 mg/kg

Copper

0.4 mg/kg

Lead

0.5 mg/kg

Iron

2.0 mg/kg

#### 6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the appropriate sections of the Recommended International Code of Hygienic Practice entitled "General Principles of Food Hygiene" as approved by the Codex Alimentarius Commission (Ref. No. CAC/RCP 1-1969).

6.2 To the extent possible in good manufacturing practice, the products shall be free from objectionable matter.

6.3 When tested by appropriate methods of sampling and examination, the product shall not contain any substances originating from micro-organisms in amounts which may be toxic.

#### 7. LABELLING

[The labelling provisions described hereunder are subject to endorsement by the Codex Committee on Food Labelling];

In addition to Sections 1,2,4 and 6 of the General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following declarations shall be made.

#### 7.1 Designation of the product

7.1.1 Press Cocoa Butter: Products described under Section 2.1.1 and complying with the requirements of Section 3.1.1 of the standard shall be designated "cocoa butter" or "press cocoa butter". If the product has been deodorized by steam and/or vacuum and all other normal methods of deodorization (as mentioned in 2.1(b)), the designation may include the term "deodorized".

7.1.2 Expeller Cocoa Butter: Products described under Section 2.1.2 and complying with the requirements of Section 3.1.2 of the standard shall be designated "expeller cocoa butter". If the product has been deodorized by steam and/or vacuum and all other normal methods of deodorization (as mentioned in 2.1 (b)), the designation may include the term "deodorized".

7.1.3 Solvent Extracted Cocoa Butter: Products described under Section 2.1.3 and complying with the requirements of Section 3.1.3 of the standard shall be designated "solvent extracted cocoa butter". Any mixture of solvent extracted cocoa butter with any other category of cocoa butter complying with this standard shall be designated Solvent Extracted Cocoa Butter except as provided in 7.1.4. If the product has been deodorized by steam and/or vacuum and all other normal methods of deodorization (as mentioned in 2.1(b)), the designation may include the term "deodorized".

7.1.4 Refined Cocoa Butter: Products described under Section 2.1.4 and complying with the requirements of Section 3.1.4 of the standard shall be designated "refined cocoa butter". Any mixture of refined cocoa butter with any other category of cocoa butter complying with this standard shall be designated Refined Cocoa Butter. If the product has been deodorized by steam and/or vacuum and all other normal methods of deodorization (as mentioned in 2.1(b)), the designation may include the term "deodorized".

#### 7.2 Net Contents

The net contents shall be declared by weight in either the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the food is sold.

#### 7.3 Name and Address

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

#### 7.4 Country of Origin

7.4.1 The country of origin of the products covered by the standard shall be declared, unless they are sold within the country of origin, in which case the country of origin need not be declared.

7.4.2 When a 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 purposes of labelling.

## 7.5 Bulk Packs

The information required by sub-section 7.1 to 7.4 shall either be given on the container or be given in accompanying documents except that the name of the product and the name and address of the manufacturer or packer shall appear on the container. However the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

## 8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described hereunder are international referee methods which have been endorsed, unless otherwise indicated, by the Codex Committee on Methods of Analysis and sampling.

### 8.1 Analysis

<u>Criterion</u>	<u>Method</u>
8.1.1 Refractive index $n_D^{40^\circ\text{C}}$	IUPAC II.B.2
8.1.2 Melting behaviour (Fincke)	
(i) slip point	OICC 8b, 1961. <u>To be endorsed</u>
(ii) clear melting point	
8.1.3 Free fatty acids (expressed as % oleic acid)	IUPAC II.D.1
8.1.4 Saponification value	IUPAC II.D.2
8.1.5 Iodine value (Wijs)	IUPAC II.D.7.3
8.1.6 Unsaponifiable matter (petroleum ether)	IUPAC II.D.5.2, revised by AOAC/OICC. New text <u>to be endorsed</u> (J.A.O.A.C.)
8.1.7 Arsenic	AOAC (1970) 25.011 (25.016-25.017) (diethyldithiocarbamate)
8.1.8 Copper	AOAC (1970) 25.023-8 <sup>(b)</sup>
8.1.9 Lead	AOAC (1970) 25.053 (25.047-25.048) <sup>(b)</sup>
8.1.10 Iron	B.S. Method: CAC/RM 14-1969 <sup>(b)</sup>
8.2 <u>Sampling</u>	
8.2.1 Preparation of sample	IUPAC II.A.1 <sup>(a)</sup>

<sup>(a)</sup> Not applicable to melting behaviour.

<sup>(b)</sup> Temporarily endorsed. Might be replaced by Atomic Absorption Spectrophotometry (AAS) in the future. The Codex Committee on Cocoa Products and Chocolate is invited to try methods based on AAS (see ALINORM 72/23, paras 18-19 and 76, and CX/MAS 70/C/2; General Methods for the Determination of Metallic Contaminants).

DRAFT STANDARD FOR CHOCOLATE

(At Step 6 of the Procedure for the Elaboration of World-Wide Standards)

## 1. SCOPE

The Standard applies to various types of the homogenous product prepared from cocoa nib, cocoa mass, cocoa press cake and/or cocoa powder with additions such as sugars, cocoa butter, milk products and optional ingredients provided for in the standard according to the types of chocolate desired.

## 2. DESCRIPTIONS

2.1 Chocolate

2.1.1 Chocolate other than sweet chocolate or plain chocolate or unsweetened chocolate is the homogenous product obtained by an adequate process of manufacture, from a mixture of one or more of the following as defined in Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines), for Use in the Manufacture of Cocoa and Chocolate Products: cocoa nib, cocoa mass, cocoa press cake, cocoa powder including fat-reduced cocoa powder, with sugars, with or without the addition of cocoa butter as defined in Standard for Cocoa Butters and with or without permitted optional ingredients and which complies with the provisions of 3.1.1

2.1.2 Sweet chocolate or plain chocolate is the homogeneous product obtained by an adequate process of manufacture, from a mixture of one or more of the following as defined in Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press cake and Cocoa Dust (Cocoa Fines): cocoa nib, cocoa mass, cocoa press cake, cocoa powder including fat-reduced cocoa powder, with sugars, with or without the addition of cocoa butter as defined in Standard for Cocoa Butters, and with or without permitted optional ingredients and which complies with the provisions of 3.1.2.

2.1.3 Unsweetened chocolate is the homogeneous product obtained by an adequate process of manufacture, from a mixture of one or more of the following as defined in Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines); cocoa nib, cocoa mass, cocoa press cake, cocoa powder including fat-reduced cocoa powder, without the addition of sugars with or without the addition of cocoa butter as defined in Standard for Cocoa Butters, and with or without permitted optional ingredients and which complies with the provisions of 3.1.1.

2.1.4 Milk chocolate is the homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the following as defined in the Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines); cocoa nib, cocoa mass, cocoa press cake, cocoa powder including fat-reduced cocoa powder, with sugars and milk solids, with or without the addition of cocoa butter, with or without permitted optional ingredients and which complies with the provisions of 3.1.3.

2.1.5 Cream chocolate is the homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the following as defined in the Standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines): cocoa nib, cocoa mass, cocoa press cake, cocoa powder including fat-reduced cocoa powder, with sugars and cream solids, with or

without the addition of cocoa butter and of other milk solids, with or without permitted optional ingredients and which complies with the provisions of 3.1.6.

2.1.6 Couverture chocolate is chocolate as defined in the standard and is suitable for covering purposes, with or without permitted optional ingredients and which complies with the provisions of 3.1.1

2.1.7 Milk couverture chocolate is milk chocolate as defined in the standard and is suitable for covering purposes, with or without permitted optional ingredients and which complies with the provisions of 3.1.3.

2.1.8 Chocolate Vermicelli and Chocolate Flakes are chocolate in the form of grains and flakes, with or without permitted optional ingredients and which complies with the provisions of 3.1.7.

2.1.9 Milk Chocolate Vermicelli and Milk Chocolate Flakes are milk chocolate in the form of grains and flakes, with or without permitted optional ingredients and which complies with the provisions of 3.1.8.

2.2 Sugars, for the purposes of this standard, include sucrose, dextrose (anhydrous and monohydrate), dried glucose syrup, lactose, fructose and any other suitable carbohydrate sweetener.

### 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 3.1 Composition

##### 3.1.1 Chocolate, Unsweetened Chocolate and Couverture Chocolate

Cocoa butter:	not less than 18% m/m calculated on the dry matter in chocolate; not less than 31% m/m calculated on the dry matter in couverture chocolate; not less than 50% m/m and not more than 58% m/m calculated on the dry matter in unsweetened chocolate.
Fat-free cocoa solids:	not less than 14% m/m calculated on the dry matter in chocolate; not less than 2.5% m/m calculated on the dry matter in couverture chocolate.
Total cocoa solids:	not less than 35% m/m calculated on the dry matter in chocolate and couverture chocolate.

##### 3.1.2 Sweet (plain) Chocolate

Cocoa butter:	not less than 18% m/m calculated on the dry matter.
Fat-free cocoa solids:	not less than 12% m/m calculated on the dry matter.
Total cocoa solids:	not less than 30% m/m calculated on the dry matter.

##### 3.1.3 Milk Chocolate and/Milk Couverture Chocolate

Fat-free cocoa solids:	not less than 2.5% m/m calculated on the dry matter.
Total cocoa solids:	not less than 25% m/m calculated on the dry matter.
Milk fat:	not less than 3.65% m/m calculated on the dry matter.
Fat-free milk solids:	not less than 10.5% m/m in their natural proportions calculated on the dry matter.

Total fat:	not less than 25% m/m calculated on the dry matter in milk chocolate; not less than 31% m/m calculated on the dry matter in milk couverture chocolate.
Sugars:	not more than 55% m/m.

### 3.1.4 Milk Chocolate with High Milk content <sup>1</sup>

Fat-free cocoa solids:	not less than 2.5% m/m calculated on the dry matter.
Total cocoa solids:	not less than 20% m/m calculated on the dry matter.
Milk fat:	not less than 5% m/m calculated on the dry matter.
Fat-free milk solids:	not less than 15% m/m in their natural proportions calculated on the dry matter.
Total fat:	not less than 25% m/m calculated on the dry matter.
Sugars:	not more than 55% m/m].

<sup>1</sup> Title proposed by the United Kingdom; delegation (see para. 46 of this Report).

### 3.1.5 Skimmed Milk Chocolate and Skimmed Milk Couverture Chocolate

As for milk chocolate except that there shall be no requirement as to milk fat and the provision for fat-free milk solids shall be 14% m/m in their natural proportions calculated on the dry matter.

### 3.1.6 Cream Chocolate

Fat-free cocoa solids:	not less than 2.5% m/m calculated on the dry matter.
Total cocoa solids:	not less than 25% m/m calculated on the dry matter.
Milk fat:	not less than 7% m/m calculated on the dry matter.
Fat-free milk solids:	not more than 14% and not less than 3% m/m in their natural proportions calculated on the dry matter.
Total fat:	not less than 25% m/m calculated on the dry matter.
Sugars:	not more than 55% m/m.

### 3.1.7 Chocolate Vermicelli and Chocolate Flakes

Fat-free cocoa solids:	not less than 14% m/m calculated on the dry matter.
Cocoa butter:	not less than 12% m/m calculated on the dry matter.
Total cocoa solids:	not less than 32% m/m calculated on the dry matter.

### 3.1.8 Milk Chocolate Vermicelli and Milk Chocolate Flakes

Fat-free cocoa solids:	not less than 2.5% m/m calculated on the dry matter.
Total cocoa solids:	not less than 20% m/m calculated on the dry matter.
Milk fat:	not less than 3.65% m/m calculated on the dry matter.
Fat-free milk solids:	not less than 10.5% m/m in their natural proportions calculated on the dry matter.
Total fat:	not less than 12% m/m calculated on the dry matter.
Sugars:	not more than 66% m/m.

### 3.2 Optional Ingredients

<u>Spices</u>	<u>Maximum level</u>	<u>Food</u>
Salt (sodium chloride)	in small quantities to balance flavour	Products described under 2.1
Milk solids	not more than 5%/m/m calculated on the dry matter	Chocolate and Couverture Chocolate, Unsweetened Chocolate, Sweet (plain) Chocolate, Chocolate Vermicelli and Chocolate Flakes

## 4. FOOD ADDITIVES

[The following provisions in respect of food additives and their specifications as contained in Section. . . . . of the Codex Alimentarius have been endorsed by the Codex Committee on Food Additives except otherwise indicated.]

4.1 Alkalizing and neutralizing agents carried over in proportion to the maximum quantity as provided for in standard for Cocoa (Cacao) Beans, Cocoa (Cacao) Nib, Cocoa (Cacao) Mass, Cocoa Press Cake and Cocoa Dust (Cocoa Fines).

<u>Emulsifiers</u>	<u>Maximum Level</u>	<u>Food</u>
Mono- and di-glycerides of edible fatty acids	15 g/kg	Products described under 2.1
Lecithin	10 g/kg of the acetone insoluble component of lecithin	" " " "
Ammonium salts of phosphatidic acids	7 g/kg	" " " "
Polyglycerol polyricinoleate <sup>(a)</sup>	5 g/kg	Products described under 2.1
Sorbitan mono-stearate	10 g/kg	" " " "
Sorbitan tri-stearate	10 g/kg	" " " "
Polyoxyethylene sorbitan mono-stearate	10 g/kg	" " " "
Total emulsifiers	15 g/kg singly or in combination	" " " "

<u>Flavouring agents</u>		
Natural flavours as defined in the Codex Alimentarius, and their synthetic equivalents, except those which would imitate natural chocolate or milk flavours (a)	in small quantities to balance flavour	Products described under 2.1
Vanillin		" " " "
Ethyl vanillin		" " " "

<sup>(a)</sup> Temporarily endorsed.

## 5 CONTAMINANTS

[The following provisions in respect of contaminants are subject to endorsement by the Codex Committee on Food Additives]:

<u>Contaminant</u>	<u>Maximum Level</u>	<u>Food</u>
Arsenic	[0.5] mg/kg	Products described under 2.1 except Unsweetened Chocolate
Copper	[ 1] mg/kg	Unsweetened chocolate
	[15] mg/kg	Products described under 2.1 except Unsweetened Chocolate
Lead	[30] mg/kg	Unsweetened Chocolate
	[ 1] mg/kg	Products described under 2.1 except Unsweetened Chocolate
	[ 2] mg/kg	Unsweetened Chocolate

## 6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the appropriate sections of the Recommended International Code of Hygienic Practice entitled "General Principles of Food Hygiene" as approved by the Codex Alimentarius Commission (Reference No. CAC/RCP 1-1969).

6.2 To the extent possible in good manufacturing practice, the products shall be free from objectionable matter.

6.3 When tested by appropriate methods of sampling and examination, the products shall not contain any substance originating from micro-organisms in amounts which may be toxic.

## 7. LABELLING

[The labelling provisions described hereunder are subject to endorsement by the Codex Committee on Food Labelling]

In addition to Sections 1, 2, 4 and 6 of the General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following declarations shall be made:

### 7.1 Designation of the Product

7.1.1 Chocolate: Products described under Section 2.1.1 and complying with the appropriate requirements of Section 3.1.1. of the Standard shall be designated 'chocolate'.

7.1.2 Sweet or Plain Chocolate: Products described under Section 2.1.2 and complying with the appropriate requirements of Section 3.1.2 of the standard shall be designated 'sweet chocolate' or 'plain chocolate'.

7.1.3 Unsweetened Chocolate: Products described under Section 2.1.3 and complying with the appropriate requirements of Section 3.1.1 of the standard shall be designated 'unsweetened chocolate'.

7.1.4 Couverture Chocolate: Products described under Section 2.1.6 and complying with the appropriate requirements of Section 3.1.1 of the standard shall be designated 'couverture chocolate'. Couverture chocolate containing not less than 16% m/m fat-free cocoa solids, calculated on the dry matter, may be designated 'dark couverture chocolate'.

7.1.5 Milk Chocolate and Milk Couverture Chocolate: Products described under Sections 2.1.4 and 2.1.7 and complying with Section 3.1.3 of the standard shall be designated as 'milk chocolate' and 'milk couverture chocolate' as appropriate.

7.1.6 [ . . . . . ]: Products described under Section 2.1.4 and complying with Section 3.1.4 of the standard shall be designated as [ . . . . . ]

7.1.7 Skimmed Milk Chocolate and Skimmed Milk Couverture Chocolate: Products not complying with Section 3.1.3 but complying with Section 3.1.5 of the standard shall be designated 'skimmed milk chocolate' or 'skimmed milk couverture chocolate' as appropriate.

7.1.8 Cream Chocolate: Products described under Section 2.1.5 and complying with Section 3.1.6 of the standard shall be designated 'cream chocolate'.

7.1.9 Chocolate Vermicelli and Chocolate Flakes: Products described under Section 2.1.8 and complying with Section 3.1.7 of the standard shall be designated 'chocolate vermicelli' or 'chocolate flakes' as appropriate.

7.1.10 Milk Chocolate Vermicelli and Milk Chocolate Flakes: Products described under Section 2.1.9 and complying with Section 3.1.8 of the standard shall be designated 'milk chocolate vermicelli' or 'milk chocolate flakes' as appropriate.

## 7.2 List of Ingredients

A complete list of ingredients shall be declared in descending order of proportion and alkalizing and neutralizing agents, emulsifiers and flavouring agents shall be declared under generic or specific names.

## 7.3 Declaration of cocoa butter content on couvertures

Couverture Chocolate, Milk Couverture Chocolate and Skimmed Milk Couverture Chocolate shall carry an additional declaration of the cocoa butter content of the product.

## 7.4 Net Contents

7.4.1 The net contents shall be declared by weight in either the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the food is sold.

7.4.2 Small units of up to 50 g may be excluded from a declaration of net weight on the label.

## 7.5 Name and Address

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

## 7.6 Country of origin

7.6.1 The country of origin of the products covered by the Standard shall be declared, unless they are sold within the country of origin, in which case the country of origin need not be declared.

7.6.2 When a 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.

## 8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described hereunder are international referee methods [which have been endorsed by the Codex Committee on Methods of Analysis and Sampling unless otherwise indicated]:

### 8.1 Analysis

	<u>Criterion</u>	<u>Method</u>	<u>Product</u>
8.1.1	Cocoa shell	(AOAC-OICC study under way based on the count of stone cells AOAC (1970) 13.023-13.027 and Spiral vessels <u>Method not yet proposed</u> .)	All products described under Section 2.1
8.1.2	Total ash	AOAC-OICC study completed, but not yet published. <u>To be endorsed</u>	All products described under Section 2.1
8.1.3	Ash insoluble in hydrochloric acid	AOAC-OICC study under way <u>Method not yet proposed</u> .	All products described under Section 2.1
8.1.4	Percentage of cocoa butter	Through a) Total fat. OICC-AOAC method AOAC (1970) 13.035-13.036 - OICC 8a/1972 (common text)	Products described under sub-sections 2.1.1, 2.1.2, 2.1.3, 2.1.6 and 2.1.8
		<u>AND</u>	
		b) Total sterols OICC 14/1970	" " "
		c) GLC analysis of sterols OICC 15/1973 (in press) Methods b) and c) <u>will be submitted to endorsement</u> when values of collaborative testing are available	
8.1.5	Moisture Content (loss on drying)	a) AOAC method (1970) 13.001-13.002 <u>OR</u> b) OICC 3E (1952)	Products described under Section 2.1
8.1.6	Fat-free cocoa solids ( or dry, fat-free cocoa mass)	a) AOAC method (1970) 13.033	Sweet (plain) Chocolate containing Cocoa, Sugar and fat only

	b) OICC study under way. <u>Method not yet proposed</u>	All products described under Section 2.1, except sweet (plain) Chocolate containing Cocoa, Sugar and fat only.
8.1.7	Total cocoa solids	By calculation from actual fat-free cocoa solids and total fat contents. Milk fat and fat other than cocoa butter are to be deducted from total fat in case of milk chocolates. <u>Method not yet proposed</u>
		All products described under Section 2.1
8.1.8	Milk fat	Semi-micro indices OICC 8i/1962 and Mole percent butyric acid AOAC (1970) 28.034-28.039 are provisionally recommended. OICC study under way <u>Method not yet proposed</u>
		Products described under 2.1.4, 2.1.5, 2.1.7 and 2.1.9
8.1.9	Fat-free milk solids	OICC study under way, Methods based on milk protein: AOAC (1970) 13.051, OICC 6b/1963 and OICC 6c/1963 are provisionally recommended. <u>Method not yet proposed</u>
		Products described under 2.1.4, 2.1.5, 2.1.7 and 2.1.9. The determination of milk protein is not applicable to chocolate products containing milk protein which have been submitted to high heat treatment.
8.1.10	Total fat	OICC-AOAC method: - AOAC (1970) 13.035 13.036-13.037 OICC 8a/1972(common text)
		Products described under 2.1.4, 2.1.5, 2.1.7 and 2.1.9
8.1.11	Sugars	OICC 7a/ to 7e/1960 provisionally recommended. A collaborative test is envisaged (AOAC/OICC/AIFC) <sup>(a)</sup> based on GLC/TMS and/or enzymatic methods. <u>Methods not yet proposed</u>
		Products described under 2.1.4, 2.1.5, 2.1.7 and 2.1.9
8.1.12	Arsenic	AOAC (1970) 25.011 (25.016-25.017) (diethyldithiocarbamate)
8.1.13	Copper	AOAC (1970) 25.023-25.028 <sup>(b)</sup>
		All products described under Section 2.1
8.1.14	Lead	AOAC (1970) 25.053 (25.047-25.048) <sup>(b)</sup>

<sup>(a)</sup> Association internationale des fabricants des confiseries.

<sup>(b)</sup> Temporarily endorsed. Might be replaced by Atomic Absorption Spectrophotometry (AAS) in the future. The Codex Committee on Cocoa Products and Chocolate is invited to try methods based on AAS (see ALINORM 72/23, paras 18-19 and 76, and CX/MAS 70/C/2: General Methods for the Determination of Metallic Contaminants).

APPENDIX V

DRAFT STANDARD FOR COCOA POWDER (COCOA) AND SWEETENED COCOA POWDER (SWEETENED COCOA) (At Step 6)

(To be incorporated at a future date. See para. 67 of this Report).

APPENDIX VI

PROPOSED DRAFT STANDARD FOR COMPOSITE AND FLAVOURED CHOCOLATE (At Step 3)

(To be incorporated at a future date, with a definition and essential composition and quality factors for flavoured chocolate. See paras 61-64 of this Report).

APPENDIX VII

PROPOSED DRAFT STANDARD FOR COCOA POWDER (COCOA) WITH ADDITIVES FOR INDUSTRIAL PURPOSES

(At Step 3 of the Procedure for the Elaboration of World-Wide Standards)

1. SCOPE

[To be elaborated]

2. DESCRIPTION

2.1 Cocoa Powder with Additives for Industrial Purposes or Cocoa with Additives for industrial purposes is cocoa powder (cocoa) as defined under 2.1.1 of Standard for Cocoa Powder (Cocoa) and Sweetened Cocoa Powder (Sweetened Cocoa) to which emulsifiers and/or stabilizers may have been added.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

3.1.1 Cocoa Powder with Additives for Industrial Purposes or Cocoa with Additives for Industrial Purposes

Cocoa Powder (Cocoa) not less than 95% m/m calculated on the dry matter

3.1.2 Fat-reduced Cocoa Powder with Additives for Industrial Purposes or Fat-reduced Cocoa with Additives for Industrial Purposes

Fat-reduced cocoa powder not less than 95% m/m calculated on the dry matter (Fat reduced cocoa)

3.2 <u>Optional Ingredients</u>	<u>Maximum Level</u>	<u>Food</u>
Spices	limited by good	Cocoa Powder (Cocoa)
Salt (sodium chloride)	manufacturing practice	with Additives for Industrial Purposes Fat-reduced Cocoa Powder (Fat-reduced Cocoa) with Additives for Industrial Purposes

4. FOOD ADDITIVES

[The following provisions in respect of food additives and their specifications as contained in Section..... of the Codex Alimentarius are subject to endorsement by the Codex Committee on Food Additives]:

4.1 Alkalizing and neutralizing agents carried over in proportion to the maximum quantity as provided for in standard for Cocoa Powder (Cocoa) and Sweetened Cocoa Powder (Sweetened Cocoa).

<u>4.2</u>	<u>Emulsifiers</u>	<u>Maximum Level</u>	<u>Food</u>
	Lecithin	50 g/kg of the acetone insoluble component of lecithin	Cocoa Powder (Cocoa) with Additives for Industrial Purposes
	Mono- and diglycerides of edible fatty acids	50 g/kg	Fat-reduced Cocoa Powder (Fat-reduced Cocoa) with Additives for Industrial Purposes

4.3 Stabilizers

Carrageenan			
Alginates <sup>(a)</sup>			- ditto -
Carboxymethylcellulose or its sodium salt	3,5 g/kg		

4.4 Flavouring Agents

Natural flavours as defined in the Codex Alimentarius, and their synthetic equivalents, other than those which would imitate natural chocolate or milk flavours	limited by good manufacturing practice		- ditto -
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Vanillin

Ethyl Vanillin

<sup>(a)</sup> Note by the Secretariat: Sodium, potassium, calcium, ammonium and propylene glycol alginates have been cleared by the Joint FAO/WHO Expert Committee on Food Additives.

5. CONTAMINANTS

[The following provisions in respect of contaminants are subject to endorsement by the Codex Committee on Food Additives].

	<u>Maximum level on the cocoa fraction</u>	<u>Food</u>
Arsenic	1 mg/kg	Cocoa Powder (Cocoa) with Additives for Industrial Purposes
Copper	50 mg/kg	Fat-reduced Cocoa Powder (Fat-reduced Cocoa ) with Additives for Industrial Purposes
Lead	2 mg/kg	

6. HYGIENE.

[The following provisions in respect of food hygiene are subject to endorsement by the Codex Committee on Food Hygiene].

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the appropriate sections of the Recommended

International Code of Hygienic Practice entitled "General Principles of Food Hygiene" as approved by the Codex Alimentarius Commission (ref. CAC/RCP 1-1969).

6.2 To the extent possible in good manufacturing practice, the products shall be free from objectionable matter.

6.3 When tested by appropriate methods of sampling and examination, the products shall not contain any substances originating from microorganisms in amounts which may be toxic.

## 7. LABELLING

[The labelling provisions described hereunder are subject to endorsement by the Codex Committee on Food Labelling].

In addition to Sections 1,2,4 and 6 of the General Standard for the Labelling of Prepackaged Foods (ref. No. CAC/RS 1-1969) the following declarations shall be made.

### 7.1 Designation of the Product

7.1.1 Cocoa Powder with Additives for Industrial Purposes or Cocoa with Additives for Industrial Purposes: Products described under Section 2.1 and complying with Section 3.1.1 of the standard shall be designated as "Cocoa Powder with Additives for Industrial Purposes", or "Cocoa with Additives for Industrial Purposes".

7.1.2 Fat-reduced Cocoa Powder with Additives for Industrial Purposes or Fat-reduced Cocoa with Additives for Industrial Purposes: Products not complying with Section 3.1.1 but complying with Section 3.1.2 of the Standard shall be designated "Fat reduced Cocoa Powder with Additives for Industrial Purposes" or "Fat-reduced Cocoa with Additives for Industrial Purposes".

### 7.2 List of Ingredients

A complete list of ingredients shall be given in descending order of proportion and alkalizing and neutralizing agents, emulsifiers, stabilizers and flavouring agents shall be declared under generic or specific names.

### 7.3 Net Contents

The net content shall be declared by weight in either the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the food is sold.

### 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 products covered by the Standard shall be declared, unless they are sold within the country of origin, in which case the country of origin need not be declared.

7.5.2 When a 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 purposes of labelling.

## 8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described hereunder are international referee methods [which are subject to endorsement by the Codex Committee on Methods of Analysis and Sampling].

### 8.1 Analysis

	<u>Criterion</u>	<u>Method</u>	<u>Food</u>
8.1.1	Cocoa shell	AOAC-OICC study under way, based on the count of stone cells AOAC (1970) 13.023-13.027 and Spiral vessels <u>Method not yet proposed</u>	All products described under Section 2.1
8.1.2	Total ash	AOAC-OICC study completed, but not yet published	- ditto -
8.1.3	Ash insoluble in hydrochloric acid	AOAC-OICC study under way. Method not yet proposed	- ditto -
8.1.4	Percentage of cocoa butter	(a) Total fat. OICC-AOAC method. AOAC (1970); 13.035-13.036  AND (b) Total sterols OICC 14/1970 (c) GLC analysis of sterols OICC 15/1973 (in press) Methods (b) and (c) will be submitted to endorsement when Values of collaborative studies are available	- ditto -  - ditto - - ditto -
8.1.5	Moisture content (loss on drying)	AOAC (1970) 13.001-13.002	- ditto -
8.1.6	Percentage of - Cocoa Powder - Fat-reduced cocoa powder	Through: (a) Fat-free cocoa solids. AOAC (1970) 13.033. OICC study Under way. <u>Method not yet proposed</u> (b) Calculation from actual fat-free, cocoa solids, and cocoa butter consents. <u>Method not yet proposed</u>	- ditto - - ditto -
8.1.7.	Arsenic	AOAC (1970) 25.011 (25.016-25.017 (Diethyldithiocarbamate)	- ditto -

8.1.8 Copper

AOAC (1970) 25.023-  
25.028<sup>(a)</sup>

8.1.9 Lead

AOAC (1970) 25.053  
(25.047-25,048)<sup>(a)</sup>

<sup>(a)</sup> Might be replaced by Atomic Absorption Spectrophotometry (AAS) in the future. The Codex Committee on Cocoa Products and Chocolate is invited to try methods based on AAS (see ALINORM 72/23, paras 18-19 and 76, and CX/MAS 70/C/2: General Methods for the Determination of Metallic Contaminants).

## APPENDIX VIII

### PROPOSED DRAFT STANDARD FOR FILLED CHOCOLATE

(At Step 3 of the Procedure for the Elaboration of World-Wide Standards)

#### 1. COPE

[To be elaborated]

#### 2. DESCRIPTION

Filled chocolate is a product covered with chocolate, the centre of which is clearly distinct, through its composition, from the external coating.

#### 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

##### 3.1 Composition

3.1.1 Coating: Shall be made of chocolate that meets the requirements of one of the chocolate types listed in the Standard for Chocolate under 3.1.1. It may contain the optional ingredients stated under 3.2 of the Standard for Chocolate. The amount of the coating shall not be less than 40 percent of the total weight of the finished product.

3.1.2 Centre: The products and/or the ingredients used to make up the centre have to comply with the requirements of the Codex standards concerning them as far as such standards exist.

#### 4. FOOD ADDITIVES

[The following provisions in respect of food additives and their specifications as contained in Section . . . . of the Codex Alimentarius are subject to endorsement by the Codex Committee on Food Additives].

4.1 Coating: As permitted under Section 4. of the Standard for Chocolate.

4.2 Centre: As permitted in the standards concerning the products and/or the ingredients which constitute the centre.

#### 5. CONTAMINANTS

[The following provisions in respect of contaminants are subject to endorsement by -the Codex Committee on Food Additives]

5.1 Coating: As stated under Section 5. of the Standard for Chocolate.

5.2 Centre: As stated in the standards concerning the products and/or the ingredients which constitute the centre.

#### 6. HYGIENE

[The following provisions in respect of food hygiene are subject to endorsement by the codex Committee on Food Hygiene].

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the appropriate sections of the Recommended International Code of Hygienic Practice entitled "General Principles of Food Hygiene" as approved by the Codex Alimentarius Commission (ref. No. CAC/RCP 1-1969).

6.2 To the extent possible in good manufacturing practice, the products shall be free from objectionable matter.

6.3 When tested by appropriate methods of sampling and examination, the products shall not contain any substance originating from micro-organisms in amounts which may be toxic.

## 7. LABELLING

[The labelling provisions described hereunder are subject to endorsement by the Codex Committee on Food Labelling]:

In addition to Sections 1, 2, 4 and 6 of the General Standards for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following declarations shall be made:

### 7.1 Designation of the Product

7.1.1 Filled chocolate: Products described under Section 2. and complying with the appropriate requirements of Section 3.1 of the standard shall be designated "filled chocolate".

7.1.2 The type of chocolate of which the external coating is made up may be specified, whereby the designations used shall be the same as stated under 7.1 of the Standard for Chocolate.

7.1.3 An appropriate statement shall inform the consumer about the nature of the centre.

### 7.2 List of Ingredients

A complete list of ingredients shall be declared in descending order of proportion and alkalizing and neutralizing agents, emulsifiers and flavouring agents shall be declared under generic or specific names.

### 7.3 Net Contents

7.3.1 The net contents shall be declared by weight in either the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the food is sold.

7.3.2 Small units of up to 50 g may be excluded from a declaration of net weight on the label.

### 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 products covered by the standard shall be declared unless they are sold within the country of origin, in which case the country of origin need not be declared.

7.5.2 When a 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.

## 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 Coating: All the methods approved for the chocolate type used for the coating.
- 8.2 Centre: The methods of analysis approved for the type of centre concerned.

PROPOSED DRAFT STANDARD FOR WHITE CHOCOLATE  
(At Step 3 of the Procedure for the Elaboration of World-Wide Standards)

## 1. SCOPE

[The standard applies to the homogeneous product prepared from cocoa butter, milk products and sugars and optional ingredients provided for in the standard]

## 2. DESCRIPTION

2.1 "White chocolate is the homogeneous product obtained by an adequate process of manufacture from the following substances in different proportions: cocoa butter, milk solids and sugars".

2.2 Sugars, for the purpose of this standard, includes sucrose, dextrose (anhydrous and monohydrate), dried glucose syrup, lactose, fructose and any other suitable carbohydrate sweetener.

## 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

Cocoa butter:	not less than 20%, calculated on the basis of dry matter
Milk fat:	not less than 3.65%, calculated on the basis of dry matter.
Fat-free milk solids:	not less than 10.5% in their natural proportion, calculated on the basis of dry matter
Sugars:	not more than 55%.

3.2 Optional Ingredients

	<u>Maximum level</u>
Spices	in small quantities to balance flavour
Salt (sodium chloride)	
Milk solids	not more than 5% m/m calculated on the dry matter

## 4. FOOD ADDITIVES

[The following provisions in respect of food additives and their specifications as contained in Section . . . . . of the Codex Alimentarius are subject to endorsement by the Codex Committee on Food Additives]:

<u>Emulsifiers</u>	<u>Maximum Level</u>
Mono- and di-glycerides of edible fatty acids	15 g/kg
Lecithin	10 g/kg of the acetone insoluble component of lecithin
Ammonium salts of phosphatidic acids	7 g/kg
Polyglycerol polyricinoleate <sup>(a)</sup>	5 g/kg
Sorbitan mono-stearate	10 g/kg
Sorbitan tri-stearate	10 g/kg
Polyoxyethylene sorbitan	10 g/kg

mono-stearate  
Total emulsifiers 15 g/kg singly or in  
combination

#### 4.2 Flavouring agents

Natural flavours as defined  
in the Codex Alimentarius,  
and their synthetic  
equivalents, except those in small quantities to balance  
flavour  
which would imitate natural  
chocolate or milk flavours  
(a)

Vanillin  
Ethyl vanillin

(a) Temporarily endorsed.

### 5. CONTAMINANTS

[The following provisions in respect of contaminants are subject to endorsement  
by the Codex Committee on Food Additives]:

	<u>Maximum Level</u>
Arsenic	[0.5] mg/kg
Copper	[15] mg/kg
Lead	[1 ] mg/kg

### 6. HYGIENE

[The following provisions in respect of food hygiene are subject to endorsement  
by the Codex Committee on Food Hygiene]:

6.1 It is recommended that the products covered by the provisions of this standard  
be prepared in accordance with the appropriate sections of the Recommended  
International Code of Hygienic Practice entitled "General Principles of Food Hygiene" as  
approved by the Codex Alimentarius Commission (Reference No. CAC/RCP 1-1969).

6.2 To the extent possible in good manufacturing practice, the products shall be free  
from objectionable matter.

6.3 When tested by appropriate methods of sampling and examination, the products  
shall not contain any substance originating from micro-organisms in amounts which may  
be toxic.

### 7. LABELLING

[The labelling provisions described hereunder are subject to endorsement by the  
Codex Committee on Food Labelling].

In addition to Sections 1, 2, 4 and 6 of the General Standard for the Labelling of  
Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following declarations shall be  
made:

#### 7.1 Designation of the Product

Products described under Section 2.1 and complying with Section 3.1 of the  
standard shall be designated white chocolate.

## 7.2 List of Ingredients

A complete list of ingredients shall be declared in descending order of proportion and alkalizing and neutralizing agents, emulsifiers and flavouring agents shall be declared under generic or specific names.

## 7.3 Net Contents

7.3.1 The net contents shall be declared by weight in either the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the food is sold.

7.3.2 Small units of up to 50 g may be excluded from a declaration of net weight on the label.

## 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 products covered by the Standard shall be declared, unless they are sold within the country of origin, in which case the country of origin need not be declared.

7.5.2 When a 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 purposes of labelling.

## 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 Analysis

	<u>Method</u>
8.1.1 Percentage of cocoa butter	Through
	a) Total fat. OICC-AOAC method AOAC (1970) 13.035-13.036 - OICC 8a/1972 (common text)
	<u>AND</u>
	b) Total sterols OICC 14/1970
	c) GLC analysis of sterols OICC 15/1973 (in press) Methods b) and c) <u>will be submitted to endorsement</u> when values of collaborative testing are available
8.1.2 Milk fat	Semi-micro indices OICC 8i/1962 and Mole percent butyric acid AOAC (1970) 28.034-28.039 are provisionally recommended. OICC study under way. <u>Method not yet proposed</u>
8.1.3 Fat-free milk solids	OICC study under way. Methods based on milk

protein: AOAC (1970) 13.051, OICC 6b/1963 and OICC 6c/1963 are provisionally recommended.

Method not yet proposed

8.1.4 Sugars

OICC 7a/to 7e/1960 provisionally recommended.

A collaborative test is envisaged (AOAC/OICC/AIFC) <sup>(a)</sup> based on GLC/TMS and/or enzymatic methods.

Methods not yet proposed

8.1.5 Arsenic

AOAC (1970) 25.011 (25.016-25.017)  
(diethyldithiocarbamate)

8.1.6 Copper

AOAC (1970) 24.023-24.028 <sup>(b)</sup>

8.1.7 Lead

AOAC (1970) 25.053 (25.047-25.048) <sup>(b)</sup>

<sup>(a)</sup> Association internationale des fabricants des confiseries.

<sup>(b)</sup> Temporarily endorsed. Might be replaced by Atomic Absorption Spectrophotometry (AAS) in the future. The Codex Committee on Cocoa Products and Chocolate is invited to try methods based on AAS (see ALINORM 72/23, paras 18-19 and 76, and CX/MAS 70/C/2: General Methods for the Determination of Metallic Contaminants).

## APPENDIX X

### METHODS OF ANALYSIS AND SAMPLING FOR COCOA PRODUCTS AND CHOCOLATE

Upon the request of the Committee, a group of experts comprising Messrs. Buser, Chavéron, Rostagno, Fincke, Hubbard, Owusu, examined the status of the methods of analysis for cocoa products and chocolate (document CX/CPC 73/6) and made the following comments:

1. Methods already endorsed by the Committee on Methods of Analysis and Sampling
  - Cut Test (ISO R 1114): temporarily endorsed, because the risk of error is too high, with the small sample (300 beans) used.
  - Moisture: ISO R 2291, for cocoa beans  
AOAC, XI, 13.001-13.002 or OICC 3E/1952, for all other cocoa and chocolate products.
  - Arsenic: AOAC, XI, 25.011(25.016-25.017)  
(diethyldithiocarbamate)
  - Copper: AOAC, XI, 25.023-25.028 temporarily
  - Lead: AOAC, XI, 25.053 (25.047-25.048) endorsed, but to be replaced by atomic
  - Iron: BS Method: CAC/RM 14-1969 absorption methods. Study under way (Canada).
  - Sampling: ISO R 2292, for cocoa beans: temporarily endorsed, pending reconsideration of general principles of sampling by Codex Committee on Methods of Analysis and Sampling.  
IUPAC II.A.I (Preparation of samples), for cocoa butter.
  - Refractive Index ( $n_D^{40^\circ C}$ ): IUPAC II.B.2
  - Free fatty acids (as % oleic acid): IUPAC II.D.I
  - Saponification Value: IUPAC II.D.2
  - Iodine Value: IUPAC II.D.7.3
  - Total fat: OICC 8a/1972 common text  
AOAC, XI, 13.035-13.036
  - Fat-free cocoa solids: AOAC, XI, 13.033. For the time being, this is the only method available, but is only applicable to products like plain chocolate containing cocoa, sugar and fat only. An OICC study is under way.
- II. Methods not yet endorsed by the Committee on Methods of Analysis and Sampling
  - pH: AOAC, XI, 13.008 common text  
OICC, 9/1972  
No limits of pH are fixed in the cocoa standards, the experts feel that this is intentional and propose to delete the method from all cocoa standards.

- Cocoa shell: AOAC/OICC collaborative study under way, based on microscopic count of stone cells and spiral vessels.
- Total ash (\*): AOAC/OICC study completed, but not yet published in their collections.
- HC1 insoluble ash: AOAC/OICC study under way.
- Melting behaviour of cocoa butter: Slip point (\*) OICC 8b/1961  
Clear point (\*) OICC 8b/1961  
Melting point AOAC, XI, 13.039 <sup>(a)</sup>

The experts feel that the OICC method is more accurate, because in this method the fat is tempered: tempering is a key operation for the melting behaviour of a fat.

- Unsaponifiable content (\*) : The Codex International Study is completed. The original IUPAC method II.D.5.2 has been modified. The new text, and results, should be submitted jointly by AOAC and OICC to the Codex Committee on Methods of Analysis and Sampling and to IUPAC, and published in a scientific magazine (JAOAC and Int. Choc. Review).
- Blue Value: OICC study under way
- Extinction values at 270 mm: OICC 8b and 8c/1973  
the methods will be published within a few weeks: this will provide the basis for building up data and suggesting useful numerical limits in the future.
- Fatty acid composition: OICC 17a and 17b/1973: in press  
AOAC, XI, 28.051 to 28.062  
international study under way (Dr. Chavaron)

The two methods are equivalent and mutually approved by AOAC and OICC.

- Sugars: provisionally recommended OICC 7a to 7e methods.  
A collaborative test is envisaged (AOAC/OICC/AIFC) based on GLC/TMS and/or enzymatic methods.
- Total cocoa solids: This is more a method of calculation than a method of analysis. It should be issued as soon as a method on fat-free cocoa solids, milk fat, and fat other than cocoa butter (to be deducted from total fat) is ready.
- Milk fat: Provisionally recommended OICC 8i/1962 or AOAC, XI, 28.034-28.039. OICC study under way.
- Milk solids: Provisionally recommended OICC 6b/1963 and 6c/1963 or AOAC, XI, 13.051: not applicable if the milk proteins have been subjected to high heat treatment. OICC study under way.

(\*) To be presented to the Codex Committee on Methods of Analysis and Sampling for endorsement.

<sup>(a)</sup> See para. 71 of this Report.

III. New methods to be proposed to the Codex Committee on Cocoa Products and Chocolate

- Solvent residues: The experts feel that the methods proposed by the Codex Committee on Fats and Oils <sup>(a)</sup> are applicable to cocoa butters and should be quoted.
- Sterols content: Total sterols OICC 14/1970 <sup>(b)</sup>  
GLC analysis of sterols OICC 15/1973 (in press) <sup>(b)</sup>  
The experts feel that these methods will help in identifying cocoa butter, milk fat, foreign fat and their mixtures.
- Added substances in visible pieces or in indiscernable form: these methods are required for the composite and flavoured chocolates.  
Methods are to be developed case by case depending on the types and the physical state of the optional components. A general method will be available when the "total cocoa solids" method of calculation is ready.

<sup>(a)</sup> Under discussion at the Codex Committee on Methods of Analysis and Sampling (see ALINORM 72/23, paras 20-22).

<sup>(b)</sup> To be endorsed, when results of collaborative testing are available (see para 71 (iii) of this Report).

## APPENDIX XI

### DECLARATION MADE BY THE DELEGATION OF GHANA IN THE NAME OF COCOA PRODUCING COUNTRIES

#### THE USE OF EDIBLE FATS OTHER THAN COCOA BUTTER IN CHOCOLATE

1. The delegations of the following cocoa producing countries: Brazil, Ghana, Ivory Coast, Nigeria, Venezuela and the observer of the Cocoa Producers Alliance (COPAL) have examined jointly the Conference Room Document 2, presented by the United Kingdom delegation, on the use of edible fats other than cocoa butter in chocolate.
2. We note that it is proposed that edible fats be allowed to some extent in the manufacture of chocolate. This proposal will contravene the existing provisions of the proposed draft standards for cocoa and chocolate, which leave no room for the use of foreign fats beyond that specified for milk fat. There is no need to mention the fact that the allowance of foreign fats would lead to adulteration, and probably to a reduction of the cocoa butter permitted in the standards. We can indeed foresee a gradual and progressive reduction of cocoa butters until their eventual total replacement in chocolate by foreign fats.
3. The technological reasons put forward in support of the proposal are not justified. Many countries whose laws and regulations prohibit the use of fats other than cocoa butter do make and export all over the world chocolate of very high quality.
4. This is not the first time that this proposal has been rejected by this Committee and we cannot see the grounds on which the Committee can base a decision to accept the proposal.
5. The use of edible fats other than cocoa butters in chocolate would inflict a big blow on the economy of producing countries. Secondly, the final products that would go under the description of chocolate would not conform to the standards set out for chocolate and the Committee would again and again be asked to elaborate new standards for the new products.
6. From the economic reasons, therefore, and for safeguarding the cocoa industry, the delegations of the countries mentioned above, namely, Brazil, Ghana; the Ivory Coast, Nigeria, Venezuela, and the observer from the Cocoa Producers Alliance (COPAL) categorically oppose the proposed introduction of the use of edible fats other than cocoa butter into the Codex Standards for Cocoa Products and Chocolate.
7. According to information available, a proposal similar to that put forward by the United Kingdom, is under consideration by the European Economic Commission (EEC). The Commission proposes a new regulation which would allow the use of up to 5% of foreign fats in the manufacture of chocolate. It will be necessary here to draw the attention of the Codex Committee and that of the observer of the EEC in particular to Article 52 of the International Cocoa Agreement which was concluded in 1972. I quote  
"Members recognize that the use of substitutes may prejudice the expansion of cocoa consumption. In this regard they agree to establish regulations on cocoa products and chocolate or to adapt existing regulations, if necessary, so that the said regulations shall prohibit materials of non-cocoa origin from being used in place of cocoa to mislead the consumer".

8. It should be noted that not only are all the members of the EEC signatories to the Cocoa Agreement but also the Commission itself is. The United Kingdom is also a signatory to the Agreement.

9. How could we who are signatories to the International Cocoa Agreement escape the charge of responsibility of acting knowingly, since we must be aware of the provisions of Article 52 of the Agreement mentioned above. The way out of the dilemma is for the United Kingdom delegation to desist from pressing on with the proposal.