codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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ECONOMIC COMMISSION FOR EUROPE
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Working Party on Standardization of Perishable Products

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REPORT OF THE TWELFTH SESSION OF THE

JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON STANDARDIZATION OF QUICK FROZEN FOODS

Rome, 30 October - 6 November 1978

INTRODUCTION

1. The Joint ECE/Codex Alimentarius Group of Experts on Standardization of Quick Frozen Foods held its Twelfth Session in Rome from 30 October to 8 November 1978. Dr. T. Van Hiele, Director, Sprenger Institute, Wageningen, the Netherlands, acted as Chairman. The Session was attended by government delegates, experts, observers and advisers from the following 23 countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Federal Republic of Germany, Hungary, Italy, Japan, Kuwait, the Netherlands, Norway, Poland, Spain, Sweden, Switzerland, Tunisia, the United Kingdom, the United States of America, Yugoslavia and South Africa (observer). The following international organizations were also represented: Association of Official Analytical Chemists (AOAC), European Economic Community (EEC), International Institute of Refrigeration (IIR), International Union of Food and Allied Workers (IUF), Union Européenne des Industries de Transformation de la Pomme de Terre (UEITP) and the Nordic Committee on Food Analysis (NMKL). The List of Participants, including officers from the Secretariat, is set out as Appendix I to this Report.

Opening of the Session

2. The session was opened by Mr. G.O. Kermode, Officer-in-Charge, Food Policy and Nutrition Division, who welcomed the delegates on behalf of the Directors-General of FAO and WHO and the Executive Secretary of the UNECE. He indicated that the Commission, at its 12th Session, had carried out a review of the general direction of its work and also of its priorities, The Commission had amended its procedures for the elaboration of Codex Standards in order to provide for government comments on the economic as well as the technical aspects of the draft standards. The Commission, in response to the wishes of developing countries, wished to provide the opportunity for assessing the impact of the draft standards on the export interests and food industries of developing countries.

3. Mr. Kermode indicated that a number of the Commission's subsidiary bodies had been adjourned sine die, as they had completed their current work assignments. There had been discussion in the Commission's session on whether the Group's work on the

development of standards for quick frozen fruits and vegetables could be concluded in the near future. In this connection, the view had been expressed in the Commission that the Group could, in perhaps two more sessions, conclude its current work programme. Mr. Kermode concluded by indicating that adjournment sine die would seem appropriate at that time, unless, at the request of governments, the Group of Experts were to embark upon standards for other commodities, which were considered to be of importance from the point of view of world trade.

Tribute to Mr. H. U. Pfister (Switzerland)

4. The Chairman informed the Group of the death of Mr. H. U. Pfister (Switzerland) since the last session of the Group. He recalled the many years of association, not only with this Group. but with the Commission and other Committees of the Commission and the active role that Mr. Pfister played in all of the work of the Commission from the earliest days. Consequently the wide background knowledge that Mr. Pfister was able to bring to his work ensured that his participation would be greatly missed in the future sessions of this Group.

Appointment of Rapporteur

5. Dr. R.W. Weik (USA) agreed to act as rapporteur and was so appointed by the Group of Experts

Adoption of the Agenda

6. The Group of Experts adopted the provisional agenda without any rearrangement in the order of the items to be discussed. However, the Group of Experts agreed that those agenda items for which no working documents had been prepared by governments, would either not be discusser or would only be discussed in general terms.

7. The Group of Experts was informed that the ad hoc Working Group on French Fried Potatoes would meet during the session prior to the discussion of agenda item 5 (vi), under the chairmanship of Dr. A.W. Randell (Australia). The Group of Experts had a brief preliminary discussion on the Draft Standard for French Fried Potatoes in order to give guidance to the Working Group. In particular, the Group of Experts discussed the feasibility of including potato dises in the standard concerned. On the one hand, it was pointed out that the inclusion of such a croduct, which, as a result of frying, became highly dehydrated, was not appropriate. Furthermore, its inclusion would involve reconsideration of the Defect Tables and other parts of the Standard. On the other hand, it was pointed out that the dehydrated product was a potato chip or crisp and not a French fried potato since the potato disc was about 5-6 mm thick and was not dehydrated during cooking. It was suggested however that potato discs only represented an additional style and that, therefore, their inclusion in the standard should not present any difficulties. For the same reason, it would not be necessary to provide information concerning international trade, as requested by one delegation.

8. The Group of Experts agreed that the Working Group should make an appropriate recommendation concerning the desirability of including the potato discs in the standard paras 99-118 of this report).

Matters of Interest to the Group of Experts

9. The Group of Experts had before it the document CX/QFF 78/2 containing matters of interest to the Group arising from the Twelfth Session of the Codex Alimentarius Commission, from the Eleventh Session of the Codex Committee on. Food

Additives, the Twelfth Session of the Codex Committee; on Food Labelling and the Tenth Session of the Codex Committee on Methods of Analysis and Sampling. In addition, the Secretariat informed the Group of Experts concerning matters arising from the Tenth Session of the Codex Committee on Pesticide Residues and the Twelfth Session of the Codex Committee on Fish and Fishery Products.

Carry-over Principle

10. The Group of Experts noted that the question of the carry-over principle had been discussed by the last session of the Codex Committee on Food Additives and that certain recommendations had been made by that Committee to the Commission in connection with the way the carry-over principle should be applied to individual Codex commodity standards (see ALINORM 79/12). The Group of Experts considered that, in all probability, the carry-over principle (Section 3), would be relevant to standards for quick frozen products elaborated by it, with the possible exception of Quick Frozen French Fried Potatoes. The Group of Experts requested Mr. G.R. Parlet of the U.S. delegation to examine the various standards for quick frozen foods in order to see to what products the carry-over principle might be relevant. It was understood that the Working Group on Quick Frozen French Fried Potatoes would look into the question of carry-over in relation to that product (see paras 78-80 of this report).

Labelling of Bulk Containers

11. The Group of Experts noted the conclusions of the Codex Committee on Food Labelling concerning the labelling of bulk containers with respect to lot identification and storage instructions. It was also noted that the question of date marking had been raised in connection with quick frozen foods at the Twelfth Session of the Codex Committee on Food Labelling. The Group of Experts noted that the question of date marking would be discussed under a later agenda item (see para. 49, ALINORM 78/22 and paras 81 to 83 of this Report).

Sampling Plans

12. The Group of Experts noted that the Tenth Session of the Codex Committee on Methods of Analysis and Sampling had not endorsed the sub-section dealing with sampling included in the various standards for quick frozen foods. That committee had also wished to have clarification as to whether the Sampling Plans applied to the determination of net weight and had sought an explanation from the Group of Experts as to what constituted "defective" in terms of the Sampling Plans (see para. 78, ALINORM 78/23).

13. The Secretariat was of the opinion that the question of sampling plans should be considered during the session notwithstanding the fact that no working paper had been prepared for agenda item 4 (vi). This was necessary in order to clarify the problems involved in order to be able to decide what further action should be taken in connection with Sampling Plans. The Group of Experts agreed to take this matter up under agenda item 4 (vi). (See paras 70 to 77 of this Report).

Maximum Pesticide Residue Limits in Quick Frozen Foods

14. The Group of Experts was informed that the Codex Committee on Pesticide Residues was considering the question of maximum residue limits in processed foods, including quick frozen-foods. The Group of Experts would be informed of developments in due course (see paras 18, 218 of ALINORM 79/24).

Date Marking of Quick Frozen Fish

15. The Group of Experts was informed that the Codex Committee on Fish and Fishery Products had noted the work of the Group on temperature/time effects on quality. The Committee had pointed out that the quality of fish products particularly depended on proper handling throughout the cold chain and a controlled time/temperature relationship. The Codex Committee on Fish and Fishery Products was following developments in the Group of Experts on this subject (see paras 142-144 of ALINORM 78/18A).

Consideration of the Report of the Working Group on Temperature and Quality of Quick Frozen Foods

16. The Group of Experts had before it the report of the Working Group on Temperature and Quality of Quick Frozen Foods (CX/QFF 78/3), as prepared by the rapporteur, the United Kingdom. The rapporteur explained that he had received further information from only four countries. Examination of the data indicated that there would be little, if any change to the tentative results already drawn in the interim report. Consequently as he had felt that a meeting of the Working Group was not warranted prior to this session, the overall conclusions and recommendations in the report were those of the United Kingdom as chairman of the Working Group.

17. The report recommended that the Group of Experts should consider the following:

(i) Draw the survey to a close by asking governments who were in the process of completing the questionnaire to do so by, say, 30 June 1979 so that the Working Group could assess fully the implications of all the available data and produce a final report. It was not felt that any new surveys initiated at this stage would reveal significantly different results to those already obtained.

(ii) Give priority to the work being done by the technical sub-group under the chairmanship of Professor W.E.L. Spiess. The final recommendations of the subgroup might indicate the direction the Working Group should take in the future.

18. During the course of the discussion on the report, the delegations of France, Italy and Sweden indicated that they had surveys underway in their countries and would send the results, when they became available, to the rapporteur.

19. Professor Spiess, chairman of the technical sub-group, supported by a number of delegations, emphasized the significant influence that the history of the product before freezing had on final quality of the product. Factors such as variety, quality of raw materials, pre-treatment and packaging played an important role in the temperature/time quality relationship (see paras 23-27 of this Report). Consequently, acceptable quality and methods of quality evaluation should first be defined before discussing temperature effects.

20. The Group noted that the survey carried out by the Working Group had involved various factors throughout the whole cold chain and had tested the acceptability of quick frozen products from the consumers point of view. Although there were shortcomings in the sort of information that such a survey could produce and there were relatively few responses, nonetheless the results obtained indicated that the samples were generally of acceptable quality. On the other hand, the technical sub-group would carry out more

fundamental investigations including the history of the product before freezing, from which the future work of the Group of Experts would benefit.

21. The Group of Experts decided that the Working Group would remain in existence with its present terms of reference and would submit to the Group of Experts at its 13th Session, a final report. The Group asked delegations to see that the results of their surveys reached the rapporteur not later than 1 October 1979.

22. Finally, because it was not possible to amend sections 5.6 and 6.3 of the Code of Practice for the Handling of Quick Frozen Foods on the data available, the Group of Experts asked the Secretariat to amend the footnote to this section indicating that a recommendation would be made to the Commission at a future session.

Progress Report on the Technical Sub-Group on Time/Temperature Problems during Transport and Storage

23. The report was introduced by the chairman of the Technical Sub-Group who informed the Group of Experts that the Technical Sub-Group, which had been set up at the 11th Session of the Group of Experts in Geneva, 1977, had met twice, in September 1977 in Karlsruhe and in October 1978 in Hamburg and for both meetings, representatives of most ECE countries were present.

24. As a first task, the Technical Sub-Group had tried to clarify and define more precisely its work programme. Throughout the discussions, especially during the first meeting in Karlsruhe, and through a literature survey which was sponsored by the Deep Frozen Food Institute of the Federal Republic of Germany (DTI), it became evident that the time/temperature data used so far were, to a large extent, derived more or less arbitrarily and in the case of certain fruits and vegetables, obtained from varieties not used any more. Furthermore, the entire processing technology had improved since some of the older data were elaborated. One problem, however, seemed to be that the evaluation systems used by the various groups were not quite comparable and did produce different results; for example for such important quality levels as high quality (it is necessary to define high quality life (HQL)) and the quality level considered as applicable for the definition of the practical storage life (PSL) of deep frozen food material. It was, therefore, agreed that the first activity of the Technical Sub-Group should be to establish a quality evaluation system, which would allow all the participating groups to produce comparable results when working with identical samples. Because of a lack of sufficiently reliable objective methods, it was felt that for quality evaluation of quick frozen foods in the programme envisaged, emphasis should be placed on sensory methods. It was also decided to apply selected objective methods such as colour measurement and, for certain products, chemical analysis, to support the sensory analysis. The development of texture analysis, leading to more understandable information on textural changes during processing and storage, was considered to be very important to the work of the Group of Experts, but outside the present scope of the Technical Sub-Group.

25. The Technical Sub-Group- envisaged that after agreement on sensory evaluation, storage tests should be carried out with selected products of defined origin at relevant temperatures. As a further point of interest, the influence of certain processes, such as pre-treatment and packaging, should be studied.

26. The Group of Experts noted that, in order to get a clearcut idea about the institutes willing to collaborate in the work of the Sub-Group, a questionnaire had been circulated to Codex Contact Points. The results of the enquiry, up to 14 June 1978, are

given in the accompanying table (see Appendix XI). Further replies had been received from Sweden and the United States of America.

27. The Group of Experts was in agreement that it was necessary to develop a uniform assessment of organoleptic qualities in order to make clearer statements about product quality. It was noted that a simple reference to product temperature did not define product quality and that the survey of the Working Group had shown this to be indeed the case. It was further agreed that, although it may not be necessary for the Codex Group of Experts to elaborate standard methods of sensory assessment for the purpose of checking compliance with Codex standards, the work of the Group would undoubtedly benefit by the research work which would follow the development by the Technical Sub-Group of such methods. Finally, the Group thanked Professor Spiess for his report and asked all delegations and Codex member countries to cooperate in the work of the Technical Sub-Group.

Consideration of a Proposed Code of Practice for the Handling of Quick Frozen Foods in Transport

28. The Group had before it the above mentioned document (CX/QFF 78/6; AGRI/Wp. 1/GE. 3/ R55) which had been prepared by the Chairman in cooperation with the President of the Commission on Inland Transport of the International Institute for Refrigeration (para. 51, ALINORM 76/25A).

29. In opening the discussion the delegation of the United Kingdom mentioned that the Group of Experts on Transport of Perishable Foodstuffs of the Economic Commission for Europe had met in Geneva (23-27 October 1978), in order, among other things, to amend Annex 2 to the Agreement on the International Carriage of Foodstuffs and on the Special Equipment to be Used for such Carriage (ATP). As Annex 2 concerned temperatures at which quick frozen foods were to be transported, the delegation asked the Group of Experts to consider ways and means of ensuring that the joint group's work in the area of transport of quick frozen foods, was made known to the Inland Transport Committee of the Economic Commission and to offer its assistance in future deliberations by the Inland Transport Committee, when the transport of quick frozen foods was being discussed.

30. The Group of Experts, noting that the Inland Transport Committee was competent in the field of transport equipment, affirmed its own competence in matters concerning the quality, including hygiene, of quick frozen foods and in particular regarding the conditions for the maintenance of quality in the transport of quick frozen foods. Several delegations expressed concern at the possibility of duplication of effort within the UN system and the Group asked all delegations to ensure that whenever quick frozen foods were being discussed, the views of the ECE Codex Alimentarius Group of Experts were well represented when national delegations were being arranged for sessions of United Nations Organizations. In this connection, it was pointed out that greater internal coordination at the national level would be helpful in avoiding the possibility of different national views on the same topic in different international meetings. The Group of Experts asked the Secretariat to ensure continuing liaison with the secretariats of other international organizations with the aim of presenting the Codex view on quick frozen foods wherever it was considered appropriate.

31. In discussing the proposed code of practice for the handling of quick frozen foods in transport, the Group of Experts agreed that the code concerned the quality of the product and how that quality should be maintained during loading, transport and unloading, and that the code would not in any way conflict with other codes or

agreements, and logically followed on from the Code of Practice for the Handling of Quick Frozen Foods.

32. As far as the scope of the Code was concerned, the Chairman stated that it did not apply to local transport, but he felt that it should apply to all quick frozen foods in all other forms of transport. However, he felt that the code should be sent to governments for comment, which should lead to the production of a new draft. In this regard, the Group of Experts asked the Secretariat to ensure that government comments were taken into account in the production of the new draft, which should be presented to the next session of the Group for discussion. The Representative of IIR offered to assist in the preparation of the revised draft.

Status of the Code of Practice

33. The Group of Experts decided to advance the Code of Practice for the Handling of Quick Frozen Foods in Transport to Step 3 of the Codex Procedure (see Appendix II).

Quality Assessment of Quick Frozen Foods

34. The delegation of the United Kingdom regretted that it had not been able to prepare the paper on the principle of the quality assessment of quick frozen food referred to in paragraph 107 of ALINORM 78/25. The United Kingdom delegation undertook to study the problem again and to prepare a paper in time for the Thirteenth Session, if the United Kingdom deemed it necessary.

Consideration of the Draft Standard for Quick Frozen Broccoli

35. The Group of Experts had before it the above draft standard (Appendix VI, ALINORM 78/25) and government comments thereon contained in document CX/QFF 78/9, The Group of Experts discussed the standard in detail and the amendments agreed to are recorded in the following paragraphs:

Section 2.1 - Product Definition

36. The Group of Experts agreed to delete the words "cut" and "properly drained" as it was not considered necessary to make reference to cutting and draining of the product in the definition.

Section 2.4.1 - Style

37. It was agreed that, in sub-sections (a) and (b) the percentage should be expressed by count.

38. On the basis of written comments submitted by the USA and the Netherlands, the Group of Experts decided to redraft sub-sections (c) and (d), as shown in Appendix III to this report.

Section 3.2.2 - Definition of Visual Defects

39. The delegation of Poland was of the opinion that the term "extraneous vegetable material" should be further qualified as being harmless EVM. The Group of Experts considered that the term "EVM" had received wide acceptance and that it was understood that the term meant harmless vegetable material. The proposal of the delegation of Poland was, therefore, not accepted.

40. In order to ensure that the standard corresponded to actual practices in the trade, the Group of Experts decided to amend sub-section (c) "Fragments" distinguishing between "spears" and "florets" in terms of length and weight, respectively. The amendment adopted by the Group of Experts is shown in Appendix III to this report.

41. In sub-section (d) "blemished" - "major", the Group of Experts changed the first word to "materially".

42. In sub-section (g) the Group of Experts decided to delete the words "or are more than moderately enlarged without flowering", in view of the fact that in some varieties the buds became quite enlarged at an early stage of development. It was thought that the Codex standard, being a minimum standard, should take this into account.

Section 3.2.3 - Standard Sample Size

43. It was decided that the standard size of 300 g should apply to cut spears and "other styles".

Section 3.2.4 - Tolerances for Visual Defects

44. After detailed discussion, the Group of Experts amended Table I as follows:

(a) The unit of measurement for "detached leaves" was changed to 5 g;

(b) The unit of measurement for fragments was divided into "spears" and set at each 20 mm" and "florets" which was set at each 5 g;

(c) The allowable points for "mechanical damage" was decreased from 2 to 1, as the provision was considered to be too restrictive for a minimum standard.

45. In view of the changes made to the unit of measurement for "fragments", the Group of Experts decided to increase the total allowable points under "minor" and under "total" to 25.

Section 6.1.2

46. The Group of Experts noted that the Codex Committee on Food Labelling (CCFL) had amended this section. The effect of the amendment was to require that the style designations be part of the name rather than be presented on the label in conjunction with or in close proximity to the name, as originally proposed by the Group of Experts. While noting that the change made by the CCFL did not materially affect this section, the Group of Experts wished to draw the attention of the CCFL to possible difficulties which the style designation "cut spears" might cause when it formed part of the name. The CCFL was requested to consider this matter.

Section 6.1.3

47. The Group of Experts considered a written proposal to change this section but agreed that it represented a text common to a number of standards for quick frozen foods in which a provision was included for other styles. It was decided not to change the text except to change the word "produce" to "presented".

Carry-over, Date Marking, Sampling

48. As the above issues were general in nature and affected all quick frozen food standards, the Group of Experts decided to set up working groups to make recommendations as to how these matters should be dealt with. The conclusions of the Group of Experts on these topics are given in paras 78 to 80; 81 to 83 and 70 to 77 respectively of this report.

Status of the Standard

49. The Group of Experts advanced the Draft Standard for Quick Frozen Broccoli as amended to Step 8 of the Codex Procedure (see Appendix III to this report).

Consideration of the Draft Standard for Quick Frozen Cauliflower

50. The Group of Experts had before it the above draft standard in Appendix V of ALINORM 78/25 and government comments thereon in document CX/QFF 78/10.

Section 2.4.1 - Style

51. In adopting an amendment to sub-section (c) of this section, the Group noted the explanation of the delegation of the United Kingdom that a tolerance was necessary for cauliflower when put up as unsized "florets", because it was impossible to exclude from the pack small pieces of cauliflower which were larger than fragments but smaller than the 12 mm minimum cross-section measurement allowed. The redraft of sub-section (c) is shown in Appendix IV of this report. Also, the Group added a footnote to this section to allow for the use of the word "clusters" in place of "florets" as that term was used in some English-speaking countries, and further, made a similar consequential footnote to section 6.1.2 - The name of the food.

Sections 2.4.5 - "Tolerance for Sizes" and 2.4.6 - "Definition of 'Defective' for Sizing"

52. Some delegations suggested that these sections should be completed by adding a statement concerning "sample size". It was also suggested that 2.4.5 and 2.4.6 dealing with the number of "defectives" which would lead to non-acceptance of the lot should be transferred to Section 3.3 and Section 3.4. However, after considerable discussion, in which some delegations felt that this information should more correctly be included in Section 3 or alternatively in section 8 - Methods of Examination, Analysis and Sampling, the Group decided to retain unchanged the two above-mentioned sections. Further, the Group agreed to amend Section 2.4.4 by adding to this Section a statement on sample size, i. e. 500 g for sizing florets.

53. The Group of Experts adopted several other amendments to the standard either to clarify or make improvements to the following sections:

(i) in 3.2.1, the first inset was amended to allow for a. "dark cream colour" over the tops of the units and to allow the stem or branch portions to be "light green" or to have a "tinge of blue". Also in the ninth inset the word "reasonably" was added in front of "well developed". A new inset was added, namely - "reasonably free from coarse green leaves".

(ii) editorial amendments were made to section 3.2.2 (a) and (c);

(iii) a sample size of 500 g was added to 3.2.3 for "other styles";

(iv) the square brackets were removed from Total Allowable Points in Tables I and II in section 3.2.4.

Date Marking, Carry-over, Sampling

54. See paragraph 48 above.

Status of the Standard

55. The Group advanced the draft standard for Quick Frozen Cauliflower, as amended to Step 8 of the Codex Procedure (see Appendix IV).

Consideration of the Proposed Draft Standard for Quick Frozen Brussels Sprouts

56. The Group had before it the above mentioned draft standard (Addendum to ALINORM 78/25) and government comments thereon in documents ALINORM 78/36-Part I-Add. 1, CX/QFF 78/11 and CX/QFF 78/11-Add. 1. The Group of Experts

discussed the above standard in detail and the amendments agreed to are recorded in the following paragraphs.

Section 2.4.2 - Sizing

57. The Working Group, under the chairmanship of the United Kingdom, was successful in bringing about a compromise proposal in relation to size designation, sizing, and for tolerances for sizes which was acceptable to the Group of Experts. The Group of Experts adopted the proposal that there should be four size designations and four size ranges expressed in millimeters and based on the diameter of the frozen sprout using a square hole sieve. The delegation of Poland was not in agreement with this decision because it felt that the Group had already adopted a sizing scheme at its last session and that this had been endorsed by the last session of the Commission.

58. Following the decision mentioned above the Group agreed to complete the section on presentation by inserting in the draft standard a section - Definition of "Defective" for Presentation and another section for Lot Acceptance for Presentation Factors.

Section 3.1 - Optional Ingredients

59. It was agreed to add sodium chloride (NaCl) after salt.

Section 3.2.1 - General Requirements

60. As regards the requirements for visual defects, the Group adopted the amendments proposed by the USA. These amendments were partly of an editorial nature but also included a requirement that the product be reasonably free from loose leaf. The delegation of Poland proposed that the word "harmless" be included in the provision for extraneous vegetable material. As the definition of EVM made it clear that the extraneous vegetable material referred to harmless material, the Group of Experts decided not to make any change to this provision.

Section 3.2.2 - Free-flowing Characteristics

61. This section was deleted as it was included in section 2.4 of the standard.

Section 3.3 - Definition of Visual Defects

62. The following amendments were agreed to:

"(b) Yellow colour - this definition was amended to indicate that yellow colour could also be "due to loss of outer leaves resulting either from overtrimming or mechanical damage".

(c) Loosely structured - sprouts in which the leaves formed a rosette appearance were added to this definition.

(d) Perforated leaves - in order to clarify that the defect was due to surface perforation through insect damage rather than mechanical damage during trimming, this definition was amended as shown in Appendix V.

(e) A new (e) Decayed was introduced which reads "a sprout which shows significant internal or external decay".

(f) As a consequence the present section Seriously Blemished was rewritten to read "Seriously Blemished - a sprout which is stained, spotted, discoloured or otherwise blemished, covering an aggregate area greater than that of a circle 15 mm in diameter,

in such a way as to detract seriously from its appearance/eating quality, and to such an extent that it would be discarded under normal culinary preparation. ".

(g) Blemished - it was agreed to indicate a minimum area (circle of 6 mm in diameter) which had to be affected for a product to be regarded as blemished. It was also agreed that sprouts with slight blemishes were not to be regarded as being defective.

(h) Poorly trimmed or mechanically damaged unit

(i) This point was amended editorially and indicating that only very ragged butt end below the lowest outer leaves would be regarded as defective.

(ii) The number of damaged out leaves was increased from 3 to 4.

(iii) The following new wordings were adopted:

(a) “the butt end is brown or otherwise discoloured", and
(b) “the butt extends more than 10 mm below the point of attachment of the lowest outer leaves".

(i) Loose leaf - the following new wording was adopted: "Leaf or leaf fragments detached from the bud"."

Section 3.4 - Tolerances for Visual Defects

63. It was agreed to delete the square brackets but to increase the standard sample size to 1 kilogram for the assessment of EVM and loose leaf and to increase the standard sample size for the assessment of other visual defects in sprouts to 100 by number.

Section 3.4.2 - Tolerances

64. The amendments made to section 3.3 as described in paragraph 62 above were reflected in the Table in 3.4.2 by the insertion of a new (e) Decayed and the deletion of (b) Yellow colour, which would be placed separately. The Group amended the table and replaced the headings Minor. Major and Serious by Category I, 2 and 3 and made some amendments to the allowable points and to the total alllowable points.

Section 3.5 - Tolerance for Sizes

65. The Group of Experts adopted the proposal of the Working Group to amend this section by inserting a table which would show, for each size designation, the minimum percentage by number of sprouts which may be present and not be of that size designation. This section was deleted and transferred co the section Preservatives as 2.4.4.

Section 3.6 - Definition of “Defective" for Quality Factors

66. The definitions in (b) and (d) were deleted as the requirements were covered in a new Section 2.4.7 of the standard, under a separate section: - Lot Acceptance for Presentation Factors.

Section 6.8- Additional Requirements

67. The word "instructions" was changed to "directions".

Section 8.3 - Cooking Procedure

68. The range of cooking time was extended to 20 minutes in order to take into account large sized sprouts.

Status of the Standard

69. The Group advanced the proposed draft standard for Quick Frozen Brussels Sprouts, as amended, to Step 8 of the Codex Procedure (see Appendix V of this report).

Sampling

70. The Group of Experts had before it a report of an ad hoc Working Group on Sampling set up during the session. The delegate from Australia, Dr. A. Randell, outlined the conclusions of the Working Group (see report of the Working Group in Appendix XIII).

71. As regards the sampling plan for the determination of net weight which the Codex Committee on Methods of Analysis and Sampling was elaborating, the Group of Experts noted that those sampling plans would define net weight in relation to lots. The delegation of Norway drew the Group's attention to the fact that in some Codex standards for fish products (e.g. quick frozen shrimps and prawns) the average net weight was specified in relation to the lot. The Secretariat was of the opinion that any sampling plan elaborated for the definition and determination of net weight should be considered by the Group of Experts in order to see whether they applied to quick frozen foods. The Group of Experts agreed that, in any event, the Sampling Plans for Prepackaged Foods (CAC/RM 42-1969) quoted in quick frozen food standards might not be appropriate to define net weight in relation to the lot and also doubted whether the acceptance plan indicated in the Sampling Plans would be appropriate for checking compliance with net weight provisions.

72. As regards the determination of compliance with provisions for quality factors and presentation, the Group of Experts agreed with the opinion of the Working Group that the Sampling Plans for Prepackaged Foods, as amended by the Codex Committee on Processed Fruits and Vegetables, were appropriate for these parameters.

73. With respect to the determination of analytical characteristics, the Group of Experts agreed that the Sampling Plans (CAC/RM 42" 1969) presently included in standards for quick frozen foods would not be applicable. The Group agreed that the question of the elaboration of sampling plans for the determination of analytical characteristics was a matter for the Codex Committee on Methods of Analysis and Sampling (see paragraph 146 of this report).

74. The Working Group had also proposed standard wording to be applied in standards for quick frozen foods to cover the three types of sampling plans mentioned above, i.e. sampling plans for: (a) net weight; (b) quality factors and presentation; and (c) analytical characteristics. The Working Group had also proposed standard wording for classification of defectives and lot acceptance. The Group agreed that, since section 8.1.3 of Appendix XI -Sampling for Analytical Characteristics, envisaged the use of Sampling Plans, it was considered necessary to allow for a provision under lot acceptance to cover sampling plans which may be required for analytical characteristics.

75. The Secretariat drew the Group of Expert's attention to possible inconsistencies in terminology between the sections on "standard sample size" and that in the Sampling Plans. Furthermore, the "standard sample size" should be checked against the sample

size indicated in the Sampling Plans. The Group of Experts agreed that this matter should be given further consideration.

76. The Group of Experts decided that the wording for Sampling as contained in Section 8.1 of the report of the ad hoc Working Group (see Appendix XIII) should be included in all the standards under consideration during the Session, as appropriate. As regards Step 9 standards the Group of Experts was of the opinion that similar amendments should be made and requested the Commission to consider this matter, which was thought to be desirable to clarify the role of the various Sampling Plans. The Codex Committee on Methods of Analysis and Sampling was also requested to give this matter attention.

77. As regards the proposed standard wording for "classification of defectives" and "lot acceptance" (see Appendix XIII), the Group of Experts decided to bring it to the attention of the Codex Committee on Methods of Analysis and Sampling and to request government comments.

Application of the Carry-over Principle

78. The Group of Experts had before it Conference Room Document No. 3 prepared by the delegation of the USA containing a survey of all Codex standards for quick frozen foods from a point of view of possible carry-over of food additives from ingredients and from food additives. The Group noted the recommendations of the 12th Session of the Codex Committee on Food Additives for standard wording to be used in the application of the Carry-over Principle in Codex commodity standards,

79. In considering Document No. 3 the Group of Experts discussed whether the additives carried over would be functional in the final product. The Group of Experts agreed that with the possible exception of Frozen French Fried Potatoes Section 3 of the Carry-over Principle applied to all the Step 7 and 9 standards. The reason was that there was a possibility of carryover of additives only at non-functional levels or at levels which would not be considered to be significant in the light of section 4 of the Principles. The Group decided to consider the applicability to Frozen French Fried Potatoes when the draft standard was discussed (see paras 105 to 109 of this report).

80. The Group of Experts decided to include wording concerning the applicability of the Carryover Principle, section 3, in all standards under consideration at the present session. It was also agreed to include appropriate wording under the section dealing with List of Ingredients indicating that additives carried over in conformity with Section 3 of the Carry-over Principle need not be declared on the label. As regards the standards at Step 9 of the Procedure, it was agreed that Section 3 of the Carry-over Principle should be included in each standard. The Commission was requested to consider the matter in the light of its decisions concerning the Carry-over Principle.

Date Marking

81. The Group of Experts had before it a report of an ad hoc Working Group on Date Marking set up during the session (see Appendix X). It was noted that the Working Group had drawn up a questionnaire requesting information on the forms of date marking of all types of quick frozen foods in use in each country and on the consequences of date marking. It was also noted that the Working Group had defined "open date marking" for the purposes of the questionnaire.

82. Some delegations were of the opinion that the questionnaire was too detailed and that it would be difficult for governments to reply to all the points included in the questionnaire.

83. The Group of Experts decided that the questionnaire should be distributed to governments separately and as soon as possible so that replies could be obtained by 30 June 1979. The delegations of the USA and Switzerland undertook to evaluate the replies and to prepare a position paper for the next session of the Group of Experts, indicating what further action should be taken regarding date marking of quick frozen foods. It was understood that other Codex committees would also be interested in the information obtained in response to the questionnaire.

Consideration of the Draft Standard for Corn-on-the-Cob

84. The Group had before it the above mentioned draft standard in Appendix VII of ALINORM 78/25 and written government comments thereon in document CX/QFF 78/13 and Add. 1, and Conference Room Document No. 2.

85. The Working Group under the Chairmanship of Sweden, presented to the Group a proposal for the revision of the standard, taking into account the written comments. The proposal incorporated some new sections, deleted others and recommended a number of editorial amendments.

Section 2.4.1 - Style

86. The Group of Experts agreed to adopt a minimum length requirement of 120 mm for whole cob, a minimum length of 40 mm for cut cob portions and set a minimum diameter of 30 mm for cob in any style.

Section 3.2.2 - Analytical Characteristics

87. There was considerable discussion on the limits to be set for alcohol insoluble solids (AIS) and for soluble solids content. The delegation of Japan preferred to have the safeguard of a lower limit as well as an upper limit for AIS, but the Working Group had recommended an upper limit only for AIS and a lower limit only for soluble solids. The Group decided to revise the text as recommended by the Working Group and to await further comments.

Section 4 - Food Additives

88. In line with its decision on the applicability of the Section 3 of the Carry-over Principle to the standards for quick frozen foods (see paras 78 to 80 of this report), the Group decided to insert an appropriate section in this draft standard.

Section 6.2 - List of Ingredients

89. The Group of Experts, noting the recommendation of the Committee on Food Additives and the precedent given by other standards, decided that the processing aids provided for in this standard need not be declared on the label.

Section 8 - Methods of Examination, Analysis and Sampling

90. The Working Group had proposed a method for the determination of AIS based on that shown in the standard for quick frozen peas but adapted for use with whole grains from the cob. Some delegations doubted the applicability of the method as written.

91. The delegation of the United Kingdom pointed out that there was some ambiguity in interpretation since the text gave no clear indication of the procedure for taking a bulk sample for the analysis.

92. The chairman requested that the delegation of the United Kingdom should examine the texts of the method presented in the draft standard, and of that in the pea standard, and to make proposals regarding the alignment. The Secretariat was requested to circulate the proposals in advance of the next meeting and to invite comments from Governments on the basis of their experience.

93. The delegation of the United Kingdom was also requested to make an appraisal of the Sampling section of existing standards in the light of the draft document on sampling, analysis and lot acceptance (see para. 146 of this report).

94. The Chairman stressed that the methodology relating to the standards for quick frozen foods needed to be given greater attention when drawing up draft standards.

Status of the Standard

95. Considering the number of amendments made to the draft standard and the extensive rewriting of some sections, the Group decided to return the standard to Step 6 of the Codex Procedure (see Appendix VII).

Consideration of the Draft Standard for Green and Wax Beans

96. The Group had before it the above-mentioned document in Addendum to ALINORM 78/25 and government comments thereon in CX/QFF 78/12, Add. 1, and in ALINORM 78/36, Part I, Add. I (QFF). The Working Group, under the chairmanship of the United Kingdom, presented a proposal for revision of the draft standard, which the Group of Experts examined paragraph by paragraph. The major changes are covered in the following decisions: -

2.4.2 Style

In this section the Group of Experts adopted amendments in sub-sections (c) and (d) to give greater precision to the wording. Sub-sections (e) and (f) were combined to read:

> ""Sliced": pods sliced lengthwise or at an angle up to approximately 45º to the longitudinal axis with a maximum thickness of 7 mm".

The section (g) was deleted and the present sub-section (h) became sub-section 2.4.2.2 Other Styles.

2.4 Presentation

Following the precedent set in previous standards the Group of Experts inserted a section 2.4.4 Form which incorporated the "free flowing" provisions to which was added the tolerance provisions presently appearing in 3.2.2. This part of the standard was completed by the addition of sections concerning Definition of "Defective" for Presentation and Lot Acceptance for Presentation Factors. This action lead to a consequential amendment to the present section 3,6 Definition of "Defective" for Quality Factors, which hitherto had contained the conditions relating to defectives for "free flowing" and "sizing". A section (2.4.3) was also added specifying the colour of wax beans.

2.4.5 Sizing

The Group of Experts decided to remove the square brackets enclosing this section and agreed on bean pod diameters for each size designation and moved the section on Tolerance for Sizes to 2.4.5.3 from 3.5.

3.3 Definition of Visual Defects

In this section the Group of Experts amended sub-section (f) by deleting the words "is misshapen or distorted", and rewrote sub-section (i) Small Pieces to read:

> "Small Pieces : - (Cut and Sliced styles) bean pieces less than 10 mm in length including loose seeds and pieces of seeds; - (Whole style): bean pieces less than 20 mm in length including loose seeds and pieces of seeds."

3.4.1 Standard Sample Size

This section was amended by the Group of Experts to read:

> "Standard sample size is 1 kilogramme for EVM and stem ends, and 300 grammes for other defect categories".

3.4.2 Tolerances

The table in this section was amended by re-arranging the defect categories to ensure that comparable defects were considered in the same defect categories. The Group of Experts adopted two expressions for Total Allowable Points, one for "all styles but whole style" and a second for "whole style only".

4. Food Additives

The Group decided that the wording for this section should be "none permitted", and further, as it had done in previous standards, the Group agreed to including a sentence concerning the application of Section 3 of the Carry-over Principle.

97. Finally, the Group of Experts made several amendments to section 6 - Labelling because of decisions it had taken in earlier sections of the draft standard.

Status of the Standard

98. The Group of Experts advanced the draft standard for Green and Wax Beans to Step 8 of the Procedure. (See Appendix VI to this report).

Consideration of the Draft Standard for Quick Frozen French Fried Potatoes

99. The Group of Experts had before it the above-mentioned draft standard in Appendix VIII of ALINORM 78/25 and the comments of governments thereon in CX/QFF 78/14, Add. 1, Add. 2 and Add. 3, and in Conference Room Document 2. An ad hoc Working Group, consisting of delegates from ten countries and the observer from UEITP met under the chairmanship of Australia. The rapporteur of the Working Group presented a proposal to the Group of Experts for the revision of the draft standard (Conference Room Document No. 7). The Group of Experts agreed to discuss the revised standard proposed by the Working Group.

Section 2.4.1 - Style

100. The Group adopted the recommendation of the Working Group not to include the proposed "disc" style in the standard (see paras 78 of this report).

Section 2.4.1.2 - Dimensions of the Cross Sections

101. The Group of Experts adopted the system of presentation based on dimension of the cross section proposed by the Working Group. It also agreed to designate the dimension 12-16 mm as "thick cut" noting that this designation was currently used in trade. It was noted that, when translating designations into other languages, terms actually used in those languages would be used. As regards the Spanish and French versions of Codex standards it was considered necessary for delegations from countries using these languages to indicate the actual terms to be used in Codex standards.

Section 3.2 - Analytical Characteristics

102. The Group of Experts agreed that there was no need to provide for a maximum fat content. As regards moisture content (Section 3.2.1) it was agreed that it referred to 'wet weight' i.e. on a whole product basis, expressed as m/m.

103. As regards the limit of 2% free fatty acid proposed by the Working Group, the Group of Experts decided to adopt 1.5% m/m. It was pointed out by some delegations that free fatty acid content indicated hydrolysis of the fat and was not an entirely appropriate measure of rancidity. The delegation of the USA was of the opinion that a fat with a 2% fatty acid was of an acceptable quality and proposed either the deletion of the provision (section 3. 2. 2) or a limit of 2%.

Section 3.5 - Definition of "Defective" for Composition and Quality Factors

104. The Group decided to delete reference to analytical requirements as defined in Section 3.2 in view of its previous decision in para. 73.

Section 4 - Food Additives

105. After thorough discussion the Group of Experts agreed with the conclusions of the Working Group concerning the food additives carried over from the frying fat or oil (see report of the Working Group in Appendix XII which includes the technological justification). It also agreed that dimethylpolysiloxane should be listed under processing aids in the light of the definition of "processing aids" adopted by the Codex Committee on Food Additives. The delegation of the Federal Republic of Germany was against the inclusion of dimethylpolysiloxane in the standard, while the delegate from Belgium considered that a maximum limit (on a fat basis) of 3 mg/kg was sufficient. The Group of Experts noted that the use of this anti-foaming agent had been endorsed by the CCFA at the limit of 10 mg/kg.

106. In discussing the sequestrants (pyrophosphates and EDTA) proposed by the Working Group, several delegations stressed the technological need for effective colour stabilizers such as phosphates and EDTA, especially as there were varieties of potatoes which were more prone to discolouration. The delegations of Belgium, the Federal Republic of Germany, Poland, France, Sweden and Switzerland were against the use of these substances. It was pointed out that the use of ascorbic, citric or malic acids provided a satisfactory product for some countries and might help to overcome problems which could arise from the excessive use of phosphates as food additives. Some slight discolouration which was present when the pyrophosphates and EDTA were not used was accepted in some countries following consumer education or in other countries by using different varieties of potatoes. On the other hand it was pointed out that the question of Ca/P ratio in the diet was a matter for the CCFA to consider and that the use of EDTA as an alternative to phosphates would help to reduce any contribution to total phosphate intake from the product in question.

107. The Group of Experts accepted the sequestrants proposed by the Working Group specifying that EDTA referred to the disodium calcium salt. It was also agreed to include citric and malic acids limited by GMP and ascorbic acid with the limit of 100 mg/kg as for the other sequestrants.

108. The delegation of the USA proposed the addition of diammonium phosphate used as a processing aid in the peeling of potatoes. In the absence of adequate information the Group of Experts deferred consideration of this substance.

109. The delegation of Japan indicated that potassium hydroxide, potassium sulphite, potassium bisulphite and sodium metabisulphite were not permitted in that country and were of the opinion that a limit for SO_2 of 30 mg/kg was effective in Japan.

Section 6.1 - Name of the Food

110. The Group of Experts discussed the question of whether alternative names should be permitted to describe the product. A number of delegations indicated that both in the English and French languages there were different terms used to designate the product, depending on usage in different countries. The delegation of Norway pointed out that the provision of several alternative names for the same product represented a general labelling problem which seemed to be dealt with differently by the various Codex Committees. It was agreed that this matter be brought to the attention of the Codex Committee on Food Labelling.

111. The Group of Experts decided to provide for one name (i.e. French Fried Potatoes) in the standard and to indicate in a footnote that in some countries the alternative name "Quick Frozen Potato Chips" was used. In the French text the name "Pommes de terre frites" was adopted; the terms "Pommes frites", "Frites", and "Patates frites" were included in the footnote.

Section 6.1.2

112. The Group agreed that the style designations in sections 2.4.1.1 and 2.4.1.2 should be made mandatory and optional respectively to reflect the mandatory or optional nature of the above two sections. The wording was also redrafted to be consistent with other standards.

Section 6.1.4

113. The Group agreed to include a footnote indicating that the term "frozen" is used in some countries.

Section 6.2 - List of Ingredients

114. It was agreed that this section be amended to show that processing aids need not be declared on the label.

Section 8 - Methods of Analysis and Sampling

115. Section 8.1 was redrafted in the light of the previous decision of the Group (see para. 76 of this report).

116. It was agreed that section 8 should show that methods for the determination of moisture content and free fatty acid were pending elaboration. The Working Group was requested to propose methods for these criteria for the next session. The delegate of Australia undertook to coordinate the work.

117. As regards the "cooking procedure" for organoleptic examination it was agreed that it was sufficient if the instructions included on the label were followed.

Status of the Standard

118. It was decided that the draft standard for Quick Frozen French Fried Potatoes, as amended, should be advanced to Step 8 of the Codex Procedure (see Appendix VIII).

Consideration of the Proposed Draft Standard for Whole Kernel Corn

119. The Group of Experts had before it the proposed draft standard in document CX/QFF 78/15 and, although government comments had not been formally requested, comments were contained in Conference Room Document No. 1. The delegation of Sweden had also made written proposals for amendment of the draft during the session. The Group of Experts decided to read quickly through the standard paragraph by paragraph in order to give the rapporteur (USA) the benefit of the feelings of the Group in order to assist the rapporteur in the revision of the proposed draft standard.

1. Scope

120. The proper botanical name of the product had given the Group some concern and the Secretariat explained that it had approached competent experts who had made enquiries. The Group agreed that only specific raw material could be used to produce this product (and corn-on-the-cob) and that this would refer to the sweet corn species Zea mays L. convar. saccharata Koern.

3.1 Optional Ingredients

121. The Group of Experts discussed the amount of garnish permitted in the final product. In some countries, a product with 15% m/m of garnish would be considered as mixed vegetables. The Group decided to leave the provision as drafted but to amend 15% to read 5% m/m.

3.2.1 General Requirements

122. In this section, the Group decided to place the present sixth and seventh insets below the heading "and with respect to visual defects subject to a tolerance shall be:". The delegation of the United States mentioned the difficulty in trying to develop a tolerance for "ragged" kernels and "loose" skins.

123. Also the Group decided to delete the reference to A.I.S. in this section and to include a new section headed "Analytical Requirements". The new section will include both A.I.S. and soluble solids, the language to be taken from the Draft Standard for Quick Frozen Corn-on-the-Cob. The present limitation on A.I.S. would be amended from 27 per cent m/m to 30 per cent m/m and the soluble solids minimum was 20% to bring them in line with the limit already provided in the Draft Standard for Quick Frozen Corn-on-the-Cob.

4. Food Additives

124. In line with decisions taken earlier (paras. 78-80 of this report), the Group decided to include the paragraph indicating that the Carry-over Principle, Section 3, would apply to this Standard, but that a label declaration would not be necessary. Further, the present wording in the standard concerning food additives was deleted and the words "none permitted" were substituted.

6.2 List of Ingredients

125. The Group agreed that, in conformity with the statement made in 4. - Food Additives, a similar paragraph would be included in the section referring to the Carry-over Principle and the labelling declaration.

8.1 Sampling

126. Again in line with decisions taken earlier (paras 70-77 of this report), the Group agreed to delete the present wording and to substitute the words "the sections 8.1.1, 8.1.2 and 8.1.3 of Appendix XIII will be reproduced here".

8.5 Determination of Alcohol-Insoluble Solids (A.I.S.)

127. A suitable analytical method for the determination of A.I.S. for this product was still to be elaborated. The Group of Experts decided, so that the draft standard may be advanced in the Procedure, to delete the present wording and to substitute the words "to be elaborated".

128. Finally, the Group asked the rapporteur to revise the draft standard, taking into account comments made and decisions taken during the session.

Status of the Standard

129. The Group decided to advance the proposed draft standard for whole kernel corn to Step 5 of the Procedure. The proposed draft standard revised by the author country (USA) editorially and in the light of government comments, and decisions of a general nature made at this session is appended to this report (Appendix IX).

Consideration of the Proposed Draft Standard for Quick Frozen Carrots

130. The Group had before it the proposed draft standard in document CX/QFF 78/16. Governments had not been formally requested to submit comments on the proposed draft standard, but a Working Group composed of representatives of Denmark, France, the Federal Republic of Germany, the Netherlands, Switzerland; the United Kingdom and the United States of America, under the chair-manship of the Netherlands, studied the proposed draft standard and reported the results of their meeting to the Group of Experts.

131. The Working Group recommended to the Group of Experts that it should take note of the Draft Standard for Canned Carrots, now at Step 8 of the Procedure, especially in elaborating the section on styles and defects. The Group of Experts agreed with the recommendation.

132. The Group of Experts adopted the recommendation of the Working Group to add two new Sub-sections to 2.4.2 Style to include Baby Carrots and Julienne, both styles being the subject of considerable trade in this product,

133. The Group of Experts decided to put the whole section 2.4.5 Sizing in square brackets as an indication that this section was still being developed. The section on Presentation should then be completed by adding sections on Definition of "defectives" for Presentation and Lot Acceptance for Presentation.

134. As the Group of Experts had adopted the suggestion of the Working Group that the defects section of the Standard for Canned Carrots should be noted (see para. 131 above), the Group further decided to replace present sections 3.2.1 through 3.2.3 with sections 2.3.1 through 2.3.4 of the Canned Carrot Standard, as appropriately modified. It was further decided to place in square brackets the Total Allowable Defects in the proposed text from the Canned Carrot Standard while their appropriateness was being evaluated.

135. After discussion, the Group of Experts decided in 4. Food Additives to delete the reference to "mint essence" and to name citric acid and sodium hydroxide as the only additives to be permitted as processing aids. As was decided for other standards, the

paragraph concerning the Carry-over Principle and the labelling declaration would be included in this section, as well as in section 6.2 List of Ingredients.

136. Finally, the present wording in 8.1 Sampling was deleted and the following words substituted: "....sections 8.1.1, 8.1.2 and 8.1.3 of Appendix XIII to ALINORM 79/25 will be reproduced here".

137. The Group of Experts asked the rapporteur to revise the proposed draft standard, taking into account comments made and decisions taken at this session.

Status of the Standard

138. The Group of Experts decided to advance the Proposed Draft Standard for Quick Frozen Carrots to Step 5 of the Procedure. The proposed draft standard revised by the Rapporteur is given as Appendix XIV to this report.

Consideration of a Draft Standard for Reformed French Fried Potatoes

139. In the absence of a working paper, the Group of Experts was not in a position to consider this matter. After some discussion, it was decided that there was no need at this time to embark on the standardization of reformed French Fried Potatoes.

Review of Acceptances

140. The Group had before it document CX/QFF 78/18, summarizing government notifications of acceptances concerning some of the standards for quick frozen fruits and vegetables as at 31 August 1978. It was noted that since that date no further notifications had been received. The Group considered that the extent of acceptances received to-date was less than might reasonably be expected - more especially in the case of the standards which had been adopted several years ago. The Group noted, however, that some of the standards had been adopted and sent out to governments for acceptance only a year or so ago.

141. The Group agreed that more emphasis should be placed on seeking notifications from governments concerning the acceptance of Codex recommended standards for quick frozen fruits and vegetables. Although it was recognized that the process of accepting Codex standards took time as it involved consultations with industry, consumer groups and other interested parties, the Group expressed the hope that governments would expedite their notifications of acceptance to the Secretariat. In this connection, it was noted that notifications such as "target acceptance" and "non-acceptance with arrangements permitting the free distribution of the products in conformity with Codex standards" would be useful information to receive at the earliest possible date.

142. It was agreed that delegations attending sessions of the Group of Experts should, as far as possible, promote action that would, hopefully, lead to further notifications of acceptance of the standards developed by the Group. Similarly, International Organizations participating in the work of the Group of Experts had a role to play in promoting acceptance of he recommended standards.

143. The Group agreed that an item should be included on the Agenda of its next session, enabling delegations to report verbally on progress made as regards the acceptance of the recommended standards developed by the Group.

Other Business

144. The delegate from Finland proposed that the wording included in section 3.3.1 (d) of the Recommended International Standard for Quick Frozen Blueberries (Appendix

III, ALINORM 78/25 pending publication) should be editorially amended by deleting the word "harmless" in relation to "foreign matter" because the use of this word in the same sentence as the word "mould", might lead to misinterpretation. The Group of Experts noted that the wording used in that standard was identical with that used in the standard for Quick Frozen Bilberries (at Step 9) and agreed that it would not be appropriate at this time to propose a change as suggested by the delegation of Finland at this session.

Future Work of the Group of Experts

145. The Group agreed that it had now almost completed its work on the development of international standards for quick-frozen fruits and vegetables. The Group held itself ready to undertake new work, including, in particular, work on the development of standards for other kinds of commodities, if, in the light of the justification criteria for the elaboration of standards, this should be the wish of member governments. The Group requested the Secretariat to inform member governments of its readiness to undertake such new work and also to bring this matter specifically to the attention of the Regional Coordinating Committees. In this way, it was expected that a decision concerning the question of new work for the Group could be taken by the Commission at its Thirteenth Session (Rome, 3-14 December 1979).

146. The Group agreed that the list of items given below represented work still outstanding which should appear on the agenda of its next session.

	At Step	Rapporteur Country
- Standards for:		-
Quick Frozen Corn-on-the-Cob	6	
Quick Frozen Whole Kernel Corn	5	USA
Quick Frozen Carrots	5	The Netherlands
- Code of Practice for the Handling of Quick Frozen Foods in Transport	3	IIR
- Report of the Working Group on Temperature and Quality of Quick Frozen Foods		UK
- Paper on Date Marking (on the basis of questionnaire)		USA Switzerland
- Report of the Technical Sub-Group on sensoric method of quality assessment		Fed. Rep. of Germany IIR
- Quality assessment of Quick Frozen Foods		UK
- Sampling Plan for analytical criteria in standards for quick frozen foods		UK
- Problems relating to the sampling of quick frozen foods		Australia
Methods of analysis of moisture content and free fatty acid content (in the fat) of Quick Frozen French Fried Potatoes		Australia
- Alcohol insoluble solids and sugar content of Quick Frozen Corn-on-the-Cob and Whole Kernel Corn		UK

- Progress report on acceptances	FAO (including verbal report by participants)

Date and Place of Next Session

144. The Group was informed that the next session would be held in Geneva during the middle of 1980.

Election of Chairman and Vice-Chairman

145. The Group of Experts unanimously re-elected Mr. T. van Hiele (Netherlands) as Chairman and Mr. M. Orlowski (Poland) as Vice-Chairman, both to serve from the end of the Twelfth to the end of the Thirteenth Session of the Committee.

ALINORM 79/25
APPENDIX I

LIST OF PARTICIPANTS (*)
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LISTA DE PARTICIPANTES

(*) The Head of Delegations are listed first.
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ALINORM 79/25
APPENDIX II

PROPOSED INTERNATIONAL CODE OF PRACTICE FOR THE HANDLING OF QUICK FROZEN FOODS IN TRANSPORT

1. Scope

1.1 This Code is intended to provide guidelines for the loading, transport and unloading of quick frozen foods, other than for retail purposes.[1]

[1] Detailed technical information may be found in the following publications of the International Institute of Refrigeration:
(i) Recommendations for the Processing and Handling of Frozen Foods
(ii) Recommended Conditions for Land Transport of Perishable Foodstuffs.

1.2 This Code of Practice is intended to he applied to quick frozen foods of all types which have been subjected to the process of quick freezing as described in section 3 of the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. No. CAC/RCP 8-1976), and which are offered for sale in the quick frozen state.

1.3 This Code of Practice is based on the knowledge that a product with an acceptable quality, offered by a shipper, [2], will have to be delivered by a carrier at the final point of destination to the receiver in an almost unchanged qualitative condition. To achieve the transportation, the carrier provides adequate transport facilities, capable of maintaining the desired temperature from the point of shipping to the point of receiving.

[2] In this document the shipper, carrier and receiver are considered as identical to the responsible person who offers, respectively transports and receives the load or the person who works under his responsibility.

1.4 The provisions of this Code of Practice should be interpreted as recommendations and are intended as a guide to assist in the handling and transportation of quick frozen foods in order to maintain their quality up to the time of final sale.

1.5 This code relates to any type of transport of quick frozen foods and, therefore, also applies to transport of quick frozen foods in containers suitable for the purpose.

2. Product and Quality

2.1 Quick frozen foods, when offered for transportation, have a quality which is determined by the quality of the raw material and by the processing before freezing, the quick freezing process itself, by the packaging and the packaging material and the storage temperature-time history and handling up to that time.

2.2 Maintenance of quality should be achieved by keeping temperature as low as possible with as few fluctuations in temperature as possible.

2.3 Provided the product was of good quality at the time of loading, it is unlikely that any material change in quality will result from the loading, transportation and unloading as long as temperature conditions have been maintained as indicated in section 4 of this code.

2.4 Maintaining temperature according to the recommendations of section 4 of this code provides no guarantee that the quality of a product will be at the acceptable quality level (A.Q.L.).

2.5 A product arriving at the point of delivery not at the recommended temperature needs careful inspection for quality; however, it is not necessarily of a "bad quality, but keeping time may have been decreased. Further handling of such a product should "be determined in consultation with the National Inspection Service.

2.6 It is recommended to have a certificate for quality of a quick frozen product made out before loading. In case of dispute on the quality at the time of arrival, this may help to clarify a possible reason for a non-acceptable quality for the receiver.

3. Loading, Unloading and Transportation

3.1 Handling of quick frozen foods during loading and unloading of the transport equipment should be done as fast as practicable. Pans in the transport equipment must be stopped during the loading process.

3.2 Use should be made of loads oh standardized pallets, handled by mechanical lift-trucks.

3.3 The quick frozen food should not reside longer than is unavoidable in an environment with higher temperatures taking into account par. 4.4 of this code.

3.4 The selection and grouping of quick frozen foods for certain destinations should be done well in advance and before leaving the cold store.

3.5 The order of loading should be well prepared in advance in cases where the transport equipment is not unloaded at one destination.

3.6 Any handling of quick frozen foods at air temperatures higher than the product temperature will result in an increase of the product temperature and may result in condensation, and should be avoided as much as possible.

4. Product and Temperature

4.1 Transportation of quick frozen foods from warehouse cold-store to warehouse cold-store may imply at least twice contact with higher environmental air temperature, once during loading, once during unloading.

4.2 Removal of heat, picked up by a load during transfer in higher ambient temperatures, is a time consuming process with restricted technical possibilities during transportation and should be avoided to the utmost.

4.3 Most transport equipment is designed to keep temperatures in a load as they are offered and with some exceptions is not possible to decrease temperature due to the restricted space for air circulation, restricted temperature differences between cooler and product and the restricted overall capacity of the equipment

4.4 On arrival at the final destination, product temperature should be kept at temperature recommended for the product and in any case not be warmer than -18ºC.

4.5 Carrier and receiver should agree on the temperature of the product at the time of receiving the load at entry to the warehouse cold-store, taking into account the temperature recommended for the product and the ambient air temperature during the unloading process and the time needed for unloading.

4.6 Shipper and carrier should agree on the temperature of the product at the time of preparing the load in the warehouse cold-store for delivery to the transport equipment taking into account the temperature recommended for the product and

the time needed for the loading process, the ambient air temperature during the loading process, the characteristics of the refrigerated transport equipment and the time needed for transportation.

4.7 Temperature measurement at the time of loading and unloading should preferably be done on the same packages, taking into consideration the recommendations laid down in ALINORM 78/25 App. II (par. 8.3).

4.8 Temperatures measured should be written in a protocol accompanying the load for the benefit of the receiver, with a copy to all parties concerned, including eventual insurance organizations.

4.9 It is recommended not to ship a product with a too high initial temperature but to decrease temperature before shipping, unless it is certain that the carrier can ensure a decrease in temperature during transportation as required.

4.10 In cases where the temperature of a product at arrival has increased too much, this product should not be refused, but placed under such conditions as to lower the temperature as soon as possible.

5. Measuring Temperature

5.1 Temperature should be checked in the product according to the recommendations as presented in ALINORM 78/25 App. II.

5.2 If agreed by the parties concerned, package surface temperature may be measured instead of product temperature, but in case of dispute only the product temperature should be valid.

5.3 Checking of temperature in the situations as mentioned in 4.4, 4.5 and 4.6 always should take place in the environmental conditions of the warehouse cold store where the product will be stored or was stored unless the temperature measuring equipment provides for recording temperatures of the load, visible outside the storage (ref. No. GAC/RCP 8-1976 par. 5.4).[1]

5.4 Reading the temperature should be done by shipper/carrier and carrier/receiver, at the same time, on the same sample.

5.5 Checking product temperatures should not delay the loading or unloading process. In case of dispute the measuring procedure should follow the directions presented in paragraph 5.2 of this Code, meanwhile keeping the transport equipment closed.

[1] This sub-paragraph is not in conformity with the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (para. 5.5). It is proposed to revise the last mentioned paragraph as follows: "During unloading the vehicle as indicated in 5.1, but after entering the cold store the product temperature should be checked".

6. Transport Equipment

6.1 It is the responsibility of the carrier to offer equipment that complies with the requirements of the quick frozen food to be transported, taking into account the conditions during loading and unloading and the ambient air temperature during transportation and the duration of the transport. Other equipment may be used on request of the shipper and/or receiver.

6.2 The transport equipment should be offered free from foreign smell or odour and in good hygienic condition.

6.3 The transport equipment should be offered precooled to +10°C or lower, at the place of loading.

6.4 In the event of a refrigerating system being supplied that may have repercussions on the health of people entering the refrigerated space, prescriptions must be presented to protect the workers.

6.5 The carrier is responsible for the stowing with respect to stabilizing the load and providing adequate refrigeration, taking into account the characteristics of the load and of the transport equipment.

6.6 A temperature rise of the product during transportation from warehouse cold-store to warehouse cold-store, to -15 C due to unforeseen circumstances, may be tolerated but any product temperature higher than -18 C should be reduced as soon as possible either during transport or immediately after delivery to -18 C.

6.7 The carrier should keep records for his own information of:
- the temperature in the return air flow;
- the temperature of the load at different locations in the transport equipment;
- the running conditions of the refrigerating unit.

6.8 Transport of quick frozen foods should be realized within the shortest time.

7. Facilities at loading and-unloading place

7.1 The warehouse cold store should provide for adequate connections with a conditioned space for the transport equipment, such that the refrigerated transport equipment is subject to a minimum of heat load, and the cargo transferred, so that increase in product temperature is restricted as much as possible.

7.2 Shipper, carrier, receiver and Inspection Services should contribute to accelerate the loading and unloading procedure so as to avoid any unnecessary delay.

7.3 Door(s) of the transport equipment must always be closed when the loading or unloading is interrupted for any reason.

8. Inspection

8.1 Inspection of the temperature of the product, other than by reading the recording instruments outside the vehicle, as provided for in CAC/RCP 8-1976 (par. 5.4), between the time of loading and unloading by opening the transport equipment is strongly dissuaded and should be done as recommended in 5.3 of this Code.

8.2 It is strongly recommended that inspection by governmental authorities for other purposes be organized at the point of loading and unloading.

ALINORM 79/25
APPENDIX III

DRAFT STANDARD FOR QUICK FROZE BROCCOLI
(Advanced to Step 8 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen broccoli of the species Brassica oleracea L. var. italica Plenck (Sprouting Broccoli), as defined below and offered for direct consumption with ut further processing, except for repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definition

Quick frozen broccoli is the product prepared from the fresh, clean, sound stalks or shoots of the broccoli plant conforming to the characteristics of the species Brassica oleracea L. var, italica Plenck (Sprouting Broccoli) which have been sorted, trimmed, washed, and sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

2.2.1 Quick frozen broccoli is the product subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18 C (OºF) at the thermal centre after thermal stabilization. The product shall be maintained at a low temperature such as will maintain the quality during transportation, storage and distribution up to and including the time of final sale.

2.2.2 The recognized practice of repacking quick frozen products under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under conditions such as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. No. CAC/RCP 8-1976).

2.4 Presentation

2.4.1 Styles

(a) Spears - the head and adjoining portion of the stem, with or without small tender attached leaves, ranging in length from more than 7 cm to 16 cm. The spears may be split longitudinally. Within each sample unit not more than 20 percent by count fall outside the designated length.

(b) Florets - the head and adjoining portion of the stem with or without small tender attached leaves ranging in length from 3 cm to 7 cm with sufficient

attached stem to maintain a compact head. The florets may be split longitudinally. Within each sample unit not more than 20 percent by count fall outside the designated length.

(c) Cut spears - spears of the broccoli plant, which have been cut into portions and which may be irregular in shape. Pieces from 2 cm to 5 cm in the longest dimension. Leaf material may be present but shall not exceed 35 percent m/m and head material shall not be less than 15 percent m/m.

(d) Chopped - Broccoli finely cut into pieces less than 2 cm in the longest dimension. Leaf material may be present but shall not exceed 35 percent m/m and head material shall not he less than 15 percent m/m.

2.4.2 Other Styles

Any other presentation of the product shall be permitted provided that it:

(a) is sufficiently distinctive from other forms of presentation laid down in this standard ;
(b) meets all other requirements of this standard;
(c) is adequately described on the label to avoid confusing or misleading the consumer.

2.4.3 Definition of "Defectives" for Presentation

Any sample unit from a sample taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Pre-Packaged Foods (AQL 6.5) (Ref. No. CAC/RM 42-1969) shall be regarded as "defective" for the respective characteristics where:

(a) it exceeds the leaf and head material allowance for "Cut Spears" or "Chopped Styles" in section 2.4.1, or
(b) it fails to meet the length requirements-section 2.4.1.

2.4.4 Lot Acceptance for Presentation factors

A lot will be considered acceptable to Presentation factors where the number of defectives as defined in section 2.4.3 does not exceed the acceptance number (c) for the appropriate sample size as specified in the FAO/WHO Sampling Plans for Pre-Packaged Foods.

2.4.5 Standard Sample Size

The standard sample size shall be 300 g.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

Salt (Sodium Chloride)
Condiments such as spices and herbs

3.2 Quality factors

3.2.1 General requirements

Quick frozen broccoli shall be:

- of reasonably uniform characteristic colour, taking into consideration any added optional ingredients;
- free from foreign flavour and odour taking into consideration any added optional ingredients;

- clean, free from sand, grit, and other foreign material and with respect to visual or other defects with a tolerance shall be:
- reseonably free from an excessive amount of leaf material, particularly large course leaves;
- practically free from detached fragments and loose leaves (only for spears and florets).
- practically free from extraneous vegetable material;
- reasonably free from yellow or brown coloured florets;
- reasonably free from damage due to mechanical, pathological, or insect injury
- reasonably free from from poorly trimmed units (spears and florets);
- practically free from flowered or poorly developed units; ,
- practically free from fibrous or woody-units;

3.2.2 Definition of Visual Defects

(a) Extraneous vegetable material (EVM) means leaf, stem, or similar harmless vegetable material other than from the broccoli plant.
(b) Detached leaves (for spears and florets), means broccoli leaves and pieces thereof not attached to a unit.
(c) Fragments (for spears and florets), means pieces less than 20 mm in length for spears and weighing less than 5 grammes for florets.
(d) Blemished - A unit of product affected by discolouration or disease or insect injury.
minor - Slightly affecting the appearance or eating quality.
major - Materially affecting the appearance or eating quality.
serious - Seriously affecting the appearance or objectionably affecting the eating quality to such an extent that customarily it would be discarded under normal culinary preparation.
(e) Mechanical Damage (for spears and florets) means a unit bearing the general configuration of a spear or floret, but from which more than 50 percent of the buds have become detached, or otherwise mechanically damaged so as to materially affect the appearance of the product.
(f) Poorly trimmed (for spears and florets) means units in which the appearance is seriously affected by attached coarse leaves or pieces thereof, or ragged removal of leaves, or small side shoots, or poor cutting of the stem.
(g) Overmature or Poorly developed means individual buds are in the flowered stage and with respect to spears and florets branching bud clusters which comprise the head are spread so as to seriously affect the appearance of the unit, or the bud clusters are of such advanced maturity that individual buds and supporting stems form loosly structured clusters.
(h) Fibrous means tough fibre that is normally developed near the outside portion of the broccoli stem; such units are tough but still edible.
(i) Woody means tough fibre that is normally developed near the outside portion of the broccoli stem, such units are extremely tough and highly objectionable.

3.2.3 Standard Sample Size

Spears, florets	- 300 grammes for detached fragments, loose leaves, and EVM; for other defects 25 units
Cut spears and other styles	- 300 grammes
Chopped	- 100 grammes

3.2.4 Tolerance for Visual Defects

For tolerance based on the standard sample sizes indicated in section 3.2.3, visual defects shall be assigned points in accordance with the appropriate Table in this Section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories Minor, Major and Serious or the Combined Total of the foregoing categories.

Table 1

SPEARS AND FLORETS

	Unit of Measurement	Defect categories			Total
		Minor	Major	Serious	
(a) EVM	Each Piece		2		
(b) Detached Leaves	Each 5 g	1			
(c) Fragments					
- spears	Each 20 mm	1			
- florets	Each 5 g	1			
(d) Blemished	Each unit				
minor		1			
major			2		
serious				4	
(e) Mechanical Damage	Each Unit		1		
(f) Poorly trimmed	Each Unit	1			
(g) Over-mature/poorly Developed	Each Unit		2		
(h) Fibrous	Each Unit		2		
(i) Woody	Each Unit			4	
Total Allowable Points		25	12	4	25

Table 2

CUT AND CHOPPED STYLES

	Unit of Measurement	Defect Categories			Total
		Minor	Major	Serious	
(a) EVM	Each Piece		2		
(d) Blemished					
minor	Each Piece	1			
major	Each Piece		2		
serious	Each Piece			4	
(g) Over-mature/Poorly Developed	Each 10 g for cut		2		
	Each 2 g for chopped		2		
(h) Fibrous	Each 2 g		2		
(i) Woody	Each 2 g			4	
Total Allowable Points		20	10	4	20

3.3 Definition of “Defectives" for Quality Factors

Any sample unit from a sample taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Pre-packaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969) shall be regarded as "defective" for the respective characteristics when:

(a) it fails to meet any of the general requirements of section 3.2.1;

(b) it exceeds the "maximum total points" in any one or more of the respective defect categories as appropriate for the style (3.2.4).

3.4 Lot Acceptance for Quality Factors

A lot is considered acceptable with respect to Quality Factors when the number of "defectives" as defined in section 3.3 does not exceed the acceptance number (c) for the appropriate sample size as specified in the Sampling Plans for Prepackaged Foods (Ref. CAC/RM 42-1969). In applying the acceptance procedure each "defective" (as defined to section 3.3. (a) and (b) is treated individually for the respective categories.

4. FOOD ADDITIVES

4.1 None Permitted.

4.2 Carry Over Principle

4.2.1 "Section 3" of the "Principle Relating to the Carry-Over of Additives into Foods shall apply.

4.2.2 This Section reads as follows:

The presence of an additive in food, through the application of the Carry-Over Principle, is generally permissible if:

(a) The additive is permitted in the raw materials or other ingredients (including additives) by an applicable Codex standard or under any other acceptable provision which takes into account the health requirements of food additives;
(b) the amount of the additive in the raw material or other ingredient (including additives) does not exceed the maximum amount so permitted;
(c) the food into which the additive is carried over does not contain the additive in greater quantity than would be introduced by the use of the ingredients under proper technological conditions or manufacturing practice; and
(d) the additive carried over is present at a level which is non-functional, i.e. at a level significantly less than that normally required to achieve an efficient technological function in its own right in the food. *[*To be endorsed*]*.

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

6. LABELLING

In addition to Sections 1, 2, 4, and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following provisions apply: *[*endorsed*]*.

6.1 The Name of the Food

6.1.1 The name of the food as declared on the label shall include "broccoli". The words "quick frozen" shall also appear on the label, except that the term "frozen" [1] may be applied in countries where this term is customarily used for describing the product processed in accordance with with section 2.2 of the standard.

6.1.2 The name of the food shall also include the style as appropriate: "spears", "florets", "cut spears", "chopped" as described in Section 2.4.1.

6.1.3 If the product is presented in accordance with section 2.4.2 the label shall contain in close proximity to the word "Broccoli" such additional words or phrases that will avoid misleading or confusing the consumer.

6.1.4 When any ingredient other than salt, has been added, which imparts to the food, the distinctive flavour of the ingredient, the name of the food shall be accompanied by the term "with x" or "x flavoured" as appropriate.

[1] "Frozen": This term is used as an alternative to "quick frozen" in some English speaking countries.

6.2 List of Ingredients

A complete list of ingredients shall be declared in descending order or proportion in accordance with section 3.2 (c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (1969), except that the food additives present in the product in accordance with section 4.2 need not be declared.

6.3 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 food is sold.

6.4 Name and Address

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

6.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

6.7 Additional Requirements

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

6.8 Bulk Packs

In the case of quick frozen broccoli in bulk the information required in section 6.1 to 6.5 must either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words "quick frozen" (the term "frozen" may be used in accordance with sub-section 6.1.1 of this standard) and the name and address of the manufacturer or packer must appear on the container.

7. PACKAGING

Packaging used for quick frozen broccoli shall:

(a) protect the organoleptic and quality characteristics of the product;
(b) protect the product from micro-biological and other contamination;
(c) protect the product from dehydration and, where appropriate, leakage as far as technologically practicable; and
(d) not pass on to the product any odour, taste, colour, or other foreign characteristics, through the processing (where applicable) and distribution of the product up to the time of final sale.

8. METHODS OF EXAMINATION, ANALYSIS MB SAMPLING

8.1 Sampling

8.1.1 Sampling for Presentation and Visual Defects. For those provisions detailed in Sections 2.4 and 3.2 of this standard sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) (Ref. No. CAC/RM 42-1969), as amended.

8.1.2 Sampling for Net Weight: shall be carried out in accordance with the FAO/WHO sampling plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

*[*8.1.3 Sampling for Analytical Requirements: Sampling Plans to be elaborated*]*. *[*To be endorsed*]*.

8.2 Thawing Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 33-1970). *[*Endorsed*]*.

8.3 Cooking Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Cooking of Quick Frozen Vegetables (Ref. No. CAC/RM 33-1970). *[*Endorsed*]*.

The cooking time for quick frozen broccoli varies according to the style and variety characteristics. The following figures should be considered as a guideline:

Spears	8-12	minutes
Florets and Cut spears	5-8	minutes
Chopped	3-5	minutes

8.4 Determination of Net Weight

FAO/WHO Codex Alimentarius Standard Procedure for Determination of Net Weight of Frozen Fruits and Vegetables, (Ref. No. CAC/RM 34-1970); also contained in Recommended International Standard for Quick Frozen Peas (CAC/RS 41-1970, Section 8.3). *[*Endorsed*]*.

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APPENDIX IV

DRAFT STANDARD FOR QUICK FROZEN CAULIFLOWER
(Advanced to Step 8 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen cauliflower of the species Brassica oleracea L. var. botrytis L. as defined below and offered for direct consumption without further processing, except for repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definition

Quick frozen cauliflower is the product prepared from fresh, clean, sound heads of the cauliflower plant conforming to the characteristics of the species Brassica oleracea L. var. botrytis L. which heads may be trimmed and separated into parts, and which are washed and sufficiently blanched to ensure stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

2.2.1 Quick frozen cauliflower is the product subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18ºC (OºF) at the thermal centre after thermal stabilization.

2.2.2 The recognized practice of repacking quick frozen products under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. No. CAC/RCP 8-1976).

2.4 Presentation

2.4.1 Style

(a) Whole - the whole, intact head, which is trimmed at the base and which may have attached email, tender, modified leaves.
(b) Split - the whole head, cut vertically into two or more sections.
(c) Florets [1] - segments of the head, which may have a portion of the secondary stem attached, measuring at least 12 mm across the top in the greatest dimension. A maximum tolerance of 20 percent m/m is permitted for units in which the greatest dimension across the floret is more than 5 mm and less than 12 mm. Small, tender, modified leaves may be present or attached to the units.

[1] The term "clusters" is used as an alternative to "florets" in some English speaking countries.

2.4.2 Other Styles

Any other presentation of the product shall be permitted provided that it:

(a) is sufficiently distinctive from other forms of presentation laid down in this standard;
(b) Meets all other requirements of this standard;
(c) Is adequately described on the label to avoid confusing or, misleading the consumer.

2.4.3 Sizing

2.4.3.1 Quick frozen cauliflower florets may be presented sized or unsized.

2.4.3.2 If presented as size graded they shall conform to the following specifications:

(a) Large florets - segments of head measuring at least 30 mm across the top in the greatest dimension and of which a portion of secondary stem may be attached. Small tender modified leaves may be present or attached to the unit.
(b) Small florets - segments of head measuring at least 12 mm but less than 30 mm across the top in the greatest dimension and to which a small portion of secondary stem may be attached. Small tender modified leaves may be present or attached to the unit.

2.4.4 Tolerances for Sizes

2.4.4.1 When cauliflower is presented as sized, a tolerance of 20 percent by weight is permitted as not conforming to the size indicated on the package.

2.4.4.2 Standard Sample Size

The standard sample size shall be 500 g.

2.4.5 Definition of "Defective" for Presentation

Any sample unit which fails to comply with the sizing requirements of Section 2.4.4 shall be regarded as defective.

2.4.6 Lot Acceptance for Presentation Factors

A lot will be considered acceptable with respect to sizing when the number of "defectives" as defined in section 2.4.5 does not exceed the acceptance number (c) for the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (Ref. No. CAC/RCP 42-1969),

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

Salt (sodium chloride)
Condiments, such as spices and herbs.

3.2 Quality Factors

3.2.1 General Requirements

Quick frozen cauliflower shall be:

- of reasonably uniform white to dark cream colour over the tops of the units which may be slightly dull and have a tinge of green, yellow or pink. The stem or branch portions may be light green or have a tinge of blue;
- free from foreign flavour or odour, taking into consideration any added optional ingredients;
- clean, free from sand, grit and other foreign material:

and with respect to Visual Defects or Other Defects subject to a tolerance shall be:

- reasonably free from discoloured areas confined essentially to the surface;
- reasonably free from damaged or blemished areas;
- reasonably free from fibrous stems;
- reasonably free from poorly trimmed units:
- reasonably free from fragments;
- reasonably compact and reasonably well-developed;
- reasonably free from coarse green leaves;

for cluster and floret styles:

- practically free from loose stems.

3.2.2 Definition of Visual Defects

(a) Discolouration - grey, brown, green or similar discolouration confined essentially to the flower surface of the unit and which materially detracts from the appearance of the product. Branches or stems with a bluish or greenish tinge are not to be considered as discoloured.

Light - the discolouration disappears almost entirely upon cooking.
Dark - the discolouration does not disappear upon cooking.

(b) Blemished

- A -unit affected by pathological or insect injury, and which may extend into the cauliflower.

Minor - The appearance of the unit is only slightly affected.
Major - The appearance of the unit is materially affected.
Serious - The appearance of the -unit is objectionally affected to such an extent that it would customarily be discarded under normal culinary preparation.

(c) Mechanically damaged
Major - A unit in which more than 50 percent of the curd has been mechanically damaged or is missing (for split and floret styles)
Major - A unit in which more than 25 percent of the curd has been mechanically damaged or is missing (for whole style).

(d) Fibrous
Major - A unit which possesses tough fibres that are quite noticeable and materially affect the eating quality.
Serious - A unit which possesses tough fibres that are objectionable and of such nature that it would be customarily discarded.

(e) Poorly trimmed

- A unit which has deep-knife gouges or a ragged appearance.

(f) Leaves

- Course green leaves or parts thereof whether or not attached to the unit.

(g) Fragments - Portions of the floret 5 mm or less across the greatest dimension.

(h) Not compact - A unit in which the florets are spreading, or the flowerhead has a "ricey" appearance or the flowerhead is very soft or mushy.

(i) Loose Stem - Each piece of stem exceeding 2.5 cms in length detached from a cauliflower unit.

3.2.3 Standard Sample Size

(i) Whole style - The minimum number of heads weighing in total at least 500 grammes.
(ii) Split sections - 500 grammes
(iii) Florets - 500 grammes
(iv) Other styles - 500 grammes

3.2.4 Tolerance for Visual Defects

For tolerances based on the standard sample sizes indicated in section 3.2.3, visual defects shall be assigned points in accordance with the appropriate Table in this Section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories Minor, Major and Serious or the Combined Total of the foregoing categories.

3.3 Definition of "defective" for Quality Factors J

Any sample unit taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5). (Ref. No. GAG/RM 42-1969) shall be regarded as a "defective" for the respective characteristics when:

(a) it fails to meet the general requirements given in section 3.2.1.
(b) it exceeds the "maximum total points" in any one or more of the defect categories in Table I or Table II, as appropriate for the style given in section 3.2.4.

3.4 Lot Acceptance for Quality Factors

A lot will he considered acceptable with respect to Quality Factors when the number of "defectives" as defined in section 3.3 does not exceed the acceptance number (c) for the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (Ref. No. CAC/RM 42-1969).

Table 1

WHOLE STYLE

Defect		Unit of Measurement	Defect categories			
			Minor	Major	Serious	Total
Discolouration	Light	Each area or combined area of 8 sq. cms.	1			
	Dark	Each area or combined area of 4 sq. cm.		2		
Blemished	Minor	Each head	1			
	Major	Each head		2		
	Serious	Each head			4	
Mechanically-damaged	Major	Each head		2		
Fibrous	Major	Each head		2		
	Serious	Each head			4	
Poorly trimmed		Each head		2		
Leaves		Each 2 sq. cm.		2		
Not compact		Each area or combined area of 12 sq. cm.		2		
Total Allowable Points			10	6	4	10

Table 2

SPLIT, FLORETS, AND OTHER STYLES

Defect		Unit of Measurement	Defect categories			
			Minor	Major	Serious	Total
Discolouration	Light	Each area or combined area of 8 sq. cm.	1			
	Dark	Each area or combined area of 4 sq. cm.		2		
Blemished	Minor	Each unit	1			
	Major	Each unit		2		
	Serious	Each unit			4	
Mechanically damaged	Major	Each unit		2		
Fibrous	Major	Each unit		2		
	Serious	Each unit			4	
Poorly trimmed		Each unit	1			
Leaves		Each 2 sq. cms.		2		
Fragments		Each 3% m/m		2		
Not compact		Each area or combined area of 12 sq. cms.		2		
Loose Stem		Each piece	1			
Total Allowable Points			25	16	4	25

4. FOOD ADDITIVES

4.1 Citric acid or malic acid, as processing aids for use in the blanching or cooling water in accordance with GMP.

4.2 Carry-Over Principle

4.2.1 "Section 3"of the "Principle relating to the Carry-Over of Additives Into Foods" shall apply.

4.2.2 This section reads as follows: The presence of an additive in food, through the application of the Carry-Over-Principles, is generally permissible if:

(a) the additive is permitted in the raw materials or other ingredients (including additives) by an applicable Codex standard or under any other acceptable provision which takes into account the health requirements of food additives;
(b) the amount of the additive in the raw material or other ingredient (including additives) does not exceed the maximum amount so permitted:
(c) the food into which the additive is carried over does not contain the additive in greater quantity than would be introduced by the use of the ingredients under proper technological conditions or manufacturing practice; and
(d) the additive carried over is present at a level which is non-functional, i.e. at a level significantly less than that normally required to achieve an efficient technological function in its own right in the food. *[*to be endorsed*]*.

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969), recommended by the Codex Alimentarius Commission.

6. LABELLING *[*endorsed*]*

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), the following specific provisions apply:

6.1 The Name of the Food

6.1.1 The name of the food as declared on the label shall include "cauliflower". The words "quick-frozen" shall also appear on the label except that the term "frozen" [1] may be applied in countries where this term is customarily used for describing the product processed in accordance with section 2.2 of the standard.

6.1.2 The name of the food shall also include the style, as appropriate: "whole", "split" or " florets" [2] in accordance with sections 2.4.1 and 2.4.3.

6.1.3 If the product is- produced in accordance with Section 2.4.2 the label shall contain in close proximity to the word cauliflower such additional words or Phrases that will avoid misleading or confusing the consumer.

6.1.4 When any ingredient other than salt, has been added which imparts to the food the distinctive flavour of the ingredient, the name of the food shall be accompanied by the term "with X" or "X flavoured", as appropriate.

6.1.5 If a term designating the size of the florets is used:

(a) the words "large florets" or "small florets" as appropriate, and/or
(b) by a correct representation on the label of the size range to which the florets predominantly conform, and/or-
(c) the customary method of declaring size in the country in which the product is sold."

[1] "Frozen": This term is used as an alternative to "quick frozen" in some English speaking countries.
[2] The term "clusters" issued as an alternative to "florets" in some English speaking countries.

6.2 List of Ingredients

A complete list of ingredients shall be-declared in descending order of proportion in accordance with section 3.2 (c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1963), except that the food additives . present in the product in accordance with section 4.2 need not be declared.

6.3 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 food is sold.

6.4 Name and Address

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

6.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

6.7 Additional Requirements

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

6.8 Bulk Packs

In the case of quick frozen cauliflower in bulk, the information required in Sections 6.1 to 6.5 shall either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words "quick frozen" (the term "frozen" may be used in accordance with section 6.1.1 of this standard) and the name and address of the manufacturer or packer shall appear on the container.

7. PACKAGING

Packaging used for quick frozen cauliflower shall:

(a) protect the organoleptic and quality characteristics of the product;
(b) protect the product from microbiological and other contamination;
(c) protect the product from dehydration and, where appropriate, leakage as far as technologically practicable and
(d) not pass on to the product any odour, taste, colour or other foreign characteristics, thoughout the processing (where applicable) and distribution of the product up to the time of final sale.

8. METHODS OF EXAMINATION, ANALYSIS ASP SAMPLING

8.1 Sampling

8.1.1 Sampling for presentation and visual defects; For those provisions detailed in sections 2.4 and 3.2 of this standard, sampling shall be carried out in accordance with

the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) (Ref. No. CAC/RM 42-1969), as amended.

8.1.2 Sampling for net weight: Shall be carried out in accordance with the FAO/WHO Sampling Plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling.

*[*8.1.3 Sampling for Analytical Requirements: Sampling Plans to be elaborated*].*
*[*to be endorsed*]*

8.2 Thawing Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 33-1970).

*[*endorsed*]*

8.3 Cooking Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Cooking of Quick Frozen Vegetables (Ref. No. CAC/RM 33-1970). The cooking time for the quick frozen cauliflower varies according to the style and variety characteristics. The following figures should be considered as guidelines: *[*endorsed*]*

Whole and Split	10-20 minutes
Florets	3-8 "

8.4 Determination of Net Weight

FAO/WHO Codex Alimentarius Standard Procedure for Determination of Net Weight of Frozen Fruits and Vegetables. (Ref.No. CAC/RM 34-1970); also contained Recommended International Standard for Quick Frozen Peas, (CAC/RS 41-1970, Section 8.3). *[*endorsed]

DRAFT STANDARD FOR QUICK FROZEN BRUSSELS SPROUTS
(Advanced to Step 8 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen Brussels Sprouts of the species Brassica oleracea L. var. gemmifera (DC) Schulz as defined below and offered for direct consumption, without further processing except for size grading or repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definition

Quick frozen Brussels Sprouts are the product prepared from fresh, clean, sound, whole axillary buds of the plant conforming to the characteristics of Brassica oleracea L. var. gemmifera (DC) Schulz - which buds are trimmed, sorted, washed and sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

2.2.1 Quick frozen Brussels Sprouts are the product subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18ºC (0ºF) at the thermal centre after thermal stabilization.

2.2.2 The recognized practice, of repacking quick frozen products under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. No. CAC/RCP 8-1976).

2.4 Presentation

2.4.1 Form

Quick frozen Brussels Sprouts may be presented as free flowing (i. e. in which the individual, sprouts are not adhering to one another) or non-free flowing (i.e. as a solid block).

2.4.2 Tolerance for "Free Flowing".

When the product is presented as "free flowing" a tolerance of 10% m/m shall be allowed for pieces which are stuck together to such an extent that they cannot easily be separated in the frozen states.

2.4.3 Sizing

2.4.3.1 Quick Frozen Brussels Sprouts may be presented sized or unsized.

2.4.3.2 Whether sized or unsized, the amount of frozen sprouts passing a square hole sieve of 12 mm, shall not exceed 5 per cent by number.

2.4.3.3 If quick frozen Brussels Sprouts are presented as size graded, they shall conform when , measured in the frozen condition to the following system of specifications of the size names:

Size Designation	Diameter of sprouts in mm using a square hole sieve
"very small"	12-22 mm
"small"	12-26 mm
"medium"	22-36 mm
"large"	over 36 mm

2.4.4 Tolerances for sizes

If represented as size graded, of the sprouts 12 mm or larger, a minimum of 80% by number shall be of the declared size and a maximum of the following percentages by number of other sizes:

Size designation	Max % 12-22 mm	Max % 22-26 mm	Max % 22-36 mm	Max % over 36 mm	Total maximum %
"very small"	-	20	5	0	20
"small"	-	-	20	5	20
"medium"	20	-	-	20	20
"large"	5	-	20	-	20

2.4.5 Standard Sample Size - The standard sample shall be 1 kg.

2.4.6 Definition of "Defective" for Presentation

Any sample unit from a sample taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969) shall be regarded as "defective" for the respective characteristics where:

(a) the requirement for free-flowing in section 2.4.1 is not complied with;
(b) the sizing requirements, in section 2.4.2 are not complied with.

2.4.7 Lot Acceptance for Presentation Factors

A lot will be considered as acceptable with respect to free flowing and sizing when the number of "defectives" as defined in section 2.4.1 and section 2.4.2 does not exceed the acceptance number (c) of the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

(a) Sugars (sucrose, invert sugar, dextrose, fructose, glucose syrup, dried glucose syrup)

(b) Salt (sodium chloride)

(c) Condiments, such as spices and herbs.

3.2 Quality Factors

3.2.1 General Requirements

Quick frozen Brussels Sprouts shall be:

- free from foreign flavour and odour, taking into account any added optional ingredient;
- clean, free from sand and grit and free from other foreign material;
- of a normal colour for the variety used;

and with respect to visual defects or other defects subject to a tolerance shall be:

- reasonably free from extraneous vegetable material (EVM)
- reasonably free from loosely structured buds
- reasonably free from poorly trimmed or mechanicallly damaged units
- reasonably free from damage by insect or disease
- reasonably free from loose leafs.

3.2.2 Definition of Visual Defects

(a) Extraneous Vegetable Material (EVM): extraneous material from the Brussels Sprouts plant including stem and leaf, but excluding bud leaves and fragments thereof; harmless vegetable material from other plants.

(b) Yellow Colour more than 50% of the outer surface of a sprout yellow in colour due to loss of outer leaves resulting either from overtrimming or mechanical damage.

(c) Loosely Structured: sprout not compact, having loosely packed or open leaves. A sprout in which the leaves form a rosette appearance.

(d) Perforated leaves (by insects): a sprout with one or more surface perforations (due to insect, etc.), larger than 6 mm in diameter, showing scar tissue at the edge of the perforation(s).

(e) Decayed: a sprout which shows significant internal or external decay.

(f) Seriously Blemished: a sprout which is stained, spotted, discoloured or otherwise blemished, covering an aggregate area greater than that of a circle 15 mm in diameter, in such a way as to detract seriously from its appearance/eating quality, and to such an extent that it would be discarded under normal culinary preparation.

(g) Blemished: a sprout which is stained, spotted, discoloured, or otherwise blemished to the extent that the aggregate area affected is greater than the area of a circle 6 mm in diameter, or in such a way as to detract materially but not seriously from its appearance. Sprouts with slight blemishes may be ignored.

(h) Poorly Trimmed or Mechanically Damaged Unit: a unit in which:

(i) the butt end is very ragged leaving a heel extending more than 10 mm beyond the point of attachment of the lowest outer leaves;

(ii) 4 or more outer leaves have been damaged such that only the petioles remain attached to the butt;

(iii) the butt extends more than 10 mm below the point of attachment of the lowest outer leaves;

(iv) the appearance is damaged to an extent that the sprout is lacerated, can be separated easily into two pieces, or more than 25% of its volume has been removed.

(i) Loose Leaf: leaf or leaf fragments detached from the bud.

3.2.3 Standard Sample Size

The standard sample size shall be 1 kilogramme for the assessment of EVM and loose leaf, and 100 sprouts for the assessment of other visual defects.

3.2.4 Tolerances for Visual Defects

For tolerances based on the standard sample size indicated in Section 3.2.3 visual defects shall be assigned points in accordance with the Table in this section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories 1, 2 and 3 or the Combined Total of the foregoing categories.

Defect	Unit of Measurement	Category 1	Category 2	Category 3	Total
(a) EVM	Each piece	2			
(c) Loosely structured	Each sprout		2		
(d) Perforated leaves	Each sprout		1		
(e) Decayed	Each sprout			4	
(f) Seriously blemished	Each sprout			2	
(g) Blemished	Each sprout		2		
(h) Poorly trimmed or mechanically damaged	Each sprout		1		
(i) Loose leaf	Each 1% m/m	1			
Maximum Total Allowable Points		10	45	10	55

Maximum percentage of (b) Yellow Sprouts: 25.

3.3 Definition of "Defective" for Quality Factors

Any sample unit from a sample taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969) shall be regarded as "defective" when:

(a) any one of the general requirements in Section 3.2.1 is not complied with; or
(b) the total in Section 3.2.4 (a) to (i) exceeds the Total Allowable Points in any of the respective defect categories

3.4 Lot Acceptance for Quality Factors

A lot is considered acceptable when the number of "defectives" as defined in paragraph 3.3 does not exceed the acceptance number (e) for the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods. In applying the acceptance procedure each "defective" (sub-paragraph (a) and (b) of 3.3) is treated individually for the respective characteristics.

4. FOOD ADDITIVES

4.1 None permitted.

4.2 Carry-Over Principle

4.2.1 "Section 3" of the "Principle relating to the Carry-Over of Additives into Foods" shall apply.

4.2.2 This section reads as follows:

"The presence of an additive in food, through the application of the Carry-Over Principle, is generally permissible if:

(a) the additive is permitted in the raw materials or other ingredients (including additives) by an applicable Codex standard or under any other acceptable provision which takes into account the health requirements of food additives;

(b) the amount of the additive in the raw material or other ingredient (including additives) does not exceed the maximum amount permitted;

(c) the food into which the additive is carried over does not contain the additive in greater quantity than would be introduced by the use of the ingredients under proper technological conditions or manufacturing practice; and

(d) the additive carried over is present at a level which is non-functional, i.e. at a level significantly less than that normally required to achieve an efficient technological function in its own right in the food.

*[*to be endorsed*]*

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969), recommended by the Codex Alimentarius Commission.

6. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following specific provisions apply: *[*to be endorsed*]*

6.1 The Name of the Food

6.1.1 The name of the product as declared on the label shall include "Brussels Sprouts". The words "quick frozen" shall also appear on the label, except that the term "frozen" [1] may be applied in countries where this term is customarily used for describing the product processed in accordance with section 2.2 of this standard.

6.1.2 Where a characterizing ingredient has been added, this shall be stated as "with x" or "x flavoured" as appropriate.

[1] "Frozen": This term is used as an alternative to "quick frozen" in some English-speaking countries.

6.2 Size Designation

If a term designating the size of the Brussels Sprouts is used:

(a) it shall be supported by the sieve size in mm; and/or
(b) the words "very small", "small", "medium" or "large" as appropriate; and/or

(c) by a correct representation on the label of the size range to which the Brussels Sprouts predominantly conform; and/or
(d) the customary method of declaring size in the country in which the product is sold.

6.3 List of Ingredients

A complete list of ingredients shall be declared in descending order of proportion in accordance with section 3.2 (c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (1969) (Ref. No. CAC/RS 42-1969) except that the food additives present in the product in accordance with Section 4.2 need not be declared.

6.4 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.

6.5 Name and Address

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

6.6 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.7 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot,

6.8 Additional Requirements

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

6.9 Bulk Packs

In. the case of quick frozen Brussels Sprouts in bulk, the information required in Sections 6.1 to 6.6 shall either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words "quick frozen" (the term "frozen" may be used in accordance with Section 6.1.1 of this standard) and the name and address of the manufacturer or packer shall appear on the container.

7. PACKAGING

7.1 Packaging used for quick frozen Brussels Sprouts must:

(a) protect the organoleptic and other quality characteristics of the product;
(b) protect the product against microbiological and other contamination;
(c) protect the product from dehydration and, where appropriate, leakage as far as technologically practicable; and
(d) not pass on to the product any odour, taste, colour or other foreign characteristics, throughout the processing (where applicable) and distribution of the product up to the time of final sale.

8. METHODS OF EXAMINATION, ANALYSIS AND SAMPLING

The methods of examination, 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 Sampling

8.1.1 Sampling for Presentation and Visual Defects: For these provisions detailed in sections 2.4 and 3.2 of this standard sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969) as amended.

8.1.2 Sampling for Net Weight: Shall be carried out in accordance with the FAO/WHO Sampling Plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

*[*8.1.3 Sampling for Analytical Requirements: Sampling Plans to be elaborated*]*."

*[*to be endorsed*]*

8.2 Thawing Procedure

FAO/WHO Codex Alimentarius Procedure for the Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 32-1970).

*[*to be endorsed*]*

8.3 Cooking Procedure

8.3.1 FAO/WHO Codex Alimentarius Procedure for Cooking of Quick Frozen Vegetables (Ref. No. CAC/RM 33-1970) *[*to be endorsed*]*

8.3.2 The cooking time for quick frozen Brussels Sprouts may vary between 6 and 20 minutes according to size.

8.4 Determination of Net Weight

FAO/WHO Codex Alimentarius Standard Procedure for the Determination of Net Weight of Frozen Fruits and Vegetables also contained in the Recommended International Standard for Quick Frozen Peas, Section 8.3 (CAC/RS 41-1970, Ref. No. CAC/RM 34-1970). *[*to be endorsed*]*

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APPENDIX VI

DRAFT STANDARD FOR QUICK FROZEN GREEK BEANS AND QUICK FROZEN WAX BEANS

(Advanced to Step 8 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen green beans and quick frozen wax beans from suitable varieties of the species Phaseolus vulgaris L. and quick frozen green beans from suitable varieties of the species Phaseolus coccineus L. as defined below and offered for direct consumption without further processing, except for size-grading or repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definitions

Quick Frozen Green Beans is the product prepared from fresh, clean, sound, succulent pods of the plants conforming to the characteristics of suitable varieties of the species Phaseolus vulgaris L. or Phaseolus cocoineus L. Quick Frozen Wax Beans is the product prepared from fresh, clean, sound, succulent pods of the plants conforming to the characteristics of suitable varieties of the species Phaseolus vulgaris L. Strings, (if any), stems, and stem ends are removed, and the pods washed and sufficiently, blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

2.2.1 Quick frozen green and quick frozen wax beans are the products subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18ºC (0ºF) at the thermal centre after thermal stabilization.

2.2.2 The recognized practice of repacking quick frozen products under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick. Frozen Foods. (Ref. No. CAC/RCP 8-1976).

2.4 Presentation

2.4.1 Type

Green beans or wax beans having distinct varietal differences with regard to shape may be designated as:

(a) Round: pods having a width not greater than 11/2 times the thickness.

(b) Flat: pods having a width greater than 11/2 times the thickness.

2.4.2 Style

2.4.2.1 Quick frozen green beans and quick frozen wax beans shall be presented in the following styles:

(a) Whole: whole pods of any length.
(b) Cut: transversely cut pods in which 70 percent or more by count of the units are at least 20 mm long but not longer than 65 mm.
(c) Short Cut: transversely cut pods in which 70 percent or more by count of the units are more than 10 mm but less than 20 mm long.
(d) Diagonal Cut: pods cut approximately 45º to the longitudinal axis in which 70 percent by count of the units are more than 6 mm long.
(e) Sliced: pods sliced lengthwise or at an angle up to approximately 45 to the longitudinal axis, with a maximum thickness of 7 mm.

2.4.2.2 Other Styles

Any other style of presentation shall he permitted provided that it:

(a) is sufficiently distinctive from other forms of presentation laid down in this standard;
(b) meets all other requirements of this standard;
(c) is adequately described on the label to avoid confusing or misleading the consumer.

2.4.3 Colour

The predominant colour of the pods of wax beans excluding the seeds and immediate surrounding tissue shall be yellow, or yellow with a green tinge.

2.4.4 Form

2.4.4.1 Quick frozen green beans and quick frozen wax beans may be presented as free flowing (i.e. in which the individual units are not adhering to one another) or non free flowing (i.e. as a solid block).

2.4.4.2 Tolerances for "free flowing" When the product is presented as "free flowing" tolerance of 10 percent (m/m) shall be allowed for pieces which are stuck together to such an extent that they cannot easily be separated in the frozen state.

2.4.5 Sizing

2.4.5.1 Quick frozen whole and out green beans and wax beans may be presented sized or unsized.

2.4.5.2 If round type beans are presented as size graded on diameter, they shall conform when measured in the frozen condition, to the following system of specifications for the size names:

Size Designations	Bean Pod Diameter in mm measured toy passing through parallel bars
Extra small	up to 6.5
Very email	up to 8
Small	up to 9.5
Medium	up to 11
Large	over 11

2.4.5.3 Tolerance for Sizes

If presented as size graded, the product shall contain not less than 80 percent by number of bean pods of the declared size or smaller sizes. Of the 20 percent by number which may be of larger sizes, not more than a quarter may be of the second size larger and none may be larger than the second size larger.

2.4.6 Standard Sample Size (for Presentation)

2.4.6.1 The standard sample size for "free flowing" shall be the entire contents of the pack or as large a quantity as is practicable.

2.4.6.2 The standard sample size for sizing shall be one kilogramme.

2.4.7 Definition of "Defective" for Presentation

Any sample unit from a sample taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969) -shall be regarded as "defective" for the respective characteristics when:

(a) the requirement for free-flowing in section 2.4.4 is not compiled with;
(b) The sizing requirements in section 2.4.5 are not complied with.

2.4.8 Lot Acceptance for Presentation Factors

A lot is considered as acceptable with respect to free flowing and sizing when the number of "defectives" as defined in sections 2.4.4 and 2.4.5 does not exceed the acceptance number (c) for the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

(a) Sugars (sucrose, invert sugar, dextrose, fructose, glucose syrup, dried glucose syrup)
(b) Salt (sodium chloride)
(c) Condiments, such as spices and herbs.

3.2 Quality Factors

3.2.1 General Requirements

Quick frozen beans shall be:

- of a reasonably uniform colour
- free from foreign flavour and odour taking into account any added optional ingredients
- clean and free from foreign material

and with regard to visual defects subject to a tolerance shall be

- reasonably free from extraneous vegetable material (EVM)
- reasonably free from stem ends
- reasonably free from damage by insects or disease
- reasonably free from mechanically damaged units
- for whole beans normally developed
- reasonably free from tough strings and fibrous units
- without excessive small pieces

3.2.2 Definition of Visual Defects

(a) Extraneous Vegetable Material: vegetable material from the bean plant, other than pod, such as leaf or vine, but excluding stem ends; other harmless vegetable material, not purposely included as an ingredient. For the purpose of assessment, EVM comprising bean leaf material will be differentiated from other EVM.

(b) Stem End: a piece of the immediate stem which attaches the pod to the vine stem whether still attached to the unit or loose in the product.

(c) Major Blemish: each piece blemished due to insect or pathological damage affecting an area greater than a 6 mm diameter circle, or blemished by other means to a degree which seriously detracts from its appearance.

(d) Minor Blemish: each piece blemished due to insect or pathological damage affecting an area greater than a 3 mm diameter circle but less than a 6 mm diameter circle, or blemished by other means to a degree which noticeably detracts from its appearance.

(e) Mechanical Damage: (Whole and Cut Styles): a unit that is broken or split into two parts, crushed, or has very ragged edges to an extent that the appearance is seriously affected.

(f) Undeveloped: (Whole Style only): each unit which measures less than 3 mm at its widest point.

(g) Tough Strings; tough fibre which will support a weight of 250 g for 5 seconds or more when tested in accordance with the procedure in 8.5.

(h) Fibrous Unit: each piece having parchment - like material formed during the ripening of the pod, to the extent that the eating quality is seriously affected.

(i) Small Pieces; (Cut and Sliced Styles): bean pieces lees than 10 mm in length including loose seeds and pieces of seeds;

- (Whole Style) bean pieces less than 20 mm in length including loose seeds and pieces of seeds.

3.2.3 Standard Sample Size

Standard sample size is 1 kilogramme for EVM and stem ends, and 300 grammes for other defect categories.

3.2.4 Tolerances for Visual Defects

For tolerance based on the standard sample size indicated in section 3.4.1, visual defects shall be assigned points in accordance with the table in this section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories 1, 2 and 3 or the Combined Total of the foregoing categories.

	Defect	Category 1	Category 2	Category 3	Total
(a)	EVM (i) Bean Leaf (each piece)	1			
	(ii) Other EVM (each piece)	2			
(b)	Stem end	1			
c	Major blemish		3		
(d)	Minor blemish		1		
(e)	Mechanical damage (Whole and cut sizes)		1		
(f)	Undeveloped (Whole style)		2		
(g)	Tough strings			3	
(h)	Fibrous unit			1	
Total Allowable Points					
	(A) All but whole style	15	50	10	60
	(B) Whole style only	15	30	6	40
(i)	Small pieces (Whole, Cut and Sliced styles) - maximum 20 percent m/m				

3.3 Definition of "Defective" for Quality Factors

Any sample unit from a sample taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-Ó.5) (Ref. No. CAC/RM 42-1969) shall be regarded as "defective" for the respective characteristics when:

(a) any one of the general requirements in section 3.2.1 is not complied with;
(b) the total in section 3.2.4 (a) to (h) exceeds the Total Allowable Points in any of the respective defect categories;
(c) the tolerance for small pieces is exceeded.

3.4 Lot Acceptance for Quality Factors

A lot is considered acceptable when the number of "defectives" as defined section 3.3 does not exceed the acceptance number (c) for the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plane for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969). In applying the acceptance procedure each "defective" (sub-paragraph (a) to (c) of 3.3 is treated individually for the respective characteristics.

4. FOOD ADDITIVES

4.1 None permitted

4.2 Carry-over Principle *[*To be endorsed*]*.

4.2.1 "Section 3" of the "Principle relating to the carry-over of additives into foods" shall apply.

4.2.2 This section reads as follows:

The presence of an additive in food, through the application of the Carry-Over Principle, is generally permissible if:

(a) the additive is permitted in the raw materials or other ingredients (including additives) by an applicable Codex standard or under any other acceptable provision which takes into account the health requirements of food additives;
(b) the amount of the additive in the raw material or other ingredient (including additives) does not exceed the maximum amount so permitted;

(c) the food into which the additive is carried over does not contain the additive in greater quantity than would be introduced by the use of the ingredients under proper technological conditions or manufacturing practice; and
(d) the additive carried over is present at a level which is non-functional, i.e. at a level significantly less than normally required to achieve an efficient technological function in its own right in the food. *[*To be endorsed*]*.

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

6. 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 specific provisions apply: [To be endorsed].

6.1.1 The name of the product, as declared on the label, shall include "green beans" or "Wax beans" as applicable. The words "quick frozen" shall also appear on the label, except that the term "frozen" [1] may be applied in countries where this term is customarily used for describing the product processed in accordance with section 2.2 of this standard.

6.1.2 In addition, there shall appear on the label in conjunction with, or in close proximity to, the words "green beans" or "wax beans": the style, as appropriate, "whole", "cut", "short cut", "diagonal cut", or "sliced".

6.1.3 If the product is produced in a style other than shown in 2.4.2.1, the label shall contain in close proximity to the words "green beans" or "wax beans", such additional words or phrases that will avoid misleading or confusing the consumer.

6.1.4 Where a characterizing ingredient has been added, this shall be stated as "with x", as appropriate.

6.1.5 A statement regarding type ("round" or "flat") may be made if customary in countries in which the product is sold.

[1] "Frozen": this term is used as an alternative to "quick frozen" in some English speaking countries.

6.2 Size Designation

If a term designating the size of the beans is used:

(a) it shall be supported by the size in mm as shown in section 2.4.5.2 and/or
(b) the words "extra small", "very small", "small", "medium", or "large" as appropriate; and/or
(c) by a correct graphic representation on the label of the size range to which the beans predominantly conform; and/or
(d) the customary method of declaring size in the country in which the product is sold.

6.3 List of Ingredients

A complete list of ingredients shall be declared in descending order of proportion in accordance with section 3.2 (c) of the General Standard for the Labelling of

Prepackaged Foods (1969), except that food additives present in the product in accordance with section 4.2 need not be declared

6.4 Net Contents

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

6.5 Name and Address

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

6.6 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.7 Lot Identification

Each container shall be embossed or otherwise permanently marked in code or in clear to identify the producing factory and the lot.

6.8 Additional Requirements

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

6.9 Bulk Packs

In the case of quick frozen green beans or wax beans in bulk, the information required in sections 6.1 to 6.6 shall either be placed on the container or be given in accompanying documents, except that the name of the fond accompanied by the words "quick frozen" (the term "frozen" may be used in accordance with section 6.1.1 of this standard) the the name and address of the manufacturer or packer shall appear on the container.

7. PACKAGING

7.1 Packaging used for quick frozen beans or wax beans must:

(a) protect the organoleptic and other quality characteristics of the product;
(b) protect the product against microbiological and other contamination
(c) protect the product from dehydration and, where appropriate, leakage as far as technologically practical; and
(d) not pass on to the product any odour, taste, colour or other foreign characteristics throughout the processing (where applicable) and distribution of the product up to the tire of final sale.

8. METHODS OF EXAMINATION, ANALYSIS AND SAMPLING

The methods of examination, analysis and sampling described hereunder are international referee methods which are to be endorsed by the Codex Committee Methods of Analysis and Sampling.

8.1 Sampling

8.1.1 Sampling for Presentation and Visual Defects: For those provisions detailed in sections 2.4 and 3.2 of this standard sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) (Ref. No. CAC/RM 42-1969), as amended.

8.1.2 Sampling for Net Weight: shall be carried out in accordance with the FAO/WHO sampling plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

*[*8.1.3 Sampling for Analytical Requirements: Sampling Plans to be elaborated.*] [*To be endorsed*]*.

8.2 Thawing Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 32-1970). *[*To be endorsed*]*.

8.3 Cooking Procedure

8.3.1 FAO/WHO Codex Alimentarius Standard Procedure for Cooking of Quick Frozen Vegetables (Ref. No. CAC/RM 33-1970).

8.3.2 The cooking time for quick frozen green beans and wax beans may vary within the range of 5 to 20 minutes, depending upon style, variety, maturity and size. *[*To be endorsed*]*.

8.4 Determination of Net Weight

FAO/WHO Codex Alimentarius Standard Procedure for Determination of Net Weight of Frozen Fruits and Vegetables (Ref. No. CAC/RM 34-1970); also contains Recommended International Standards for Quick Frozen Peas (Ref. CAC/RS 41-1970 Section 8.3) *[*Endorsed*]*.

8.5 Determination of Tough Strings

FAO/WHO Codex Alimentarius Method of Analysis for Processed Fruits and Vegetables, CAC/RM 39-1970, Tough String Test after the product has been cooked according to 8.3. *[*To be endorsed*]*.

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APPENDIX VII

DRAFT STANDARD FOR QUICK FROZEN CORN-ON-THE-COB

(Returned to Step 6 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen Corn-on-the-Cob of the species Zea mays L. Convar saccharata KOERN as defined below and offered for direct consumption without further processing, except for repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definition

Quick frozen Corn-on-the-Cob is the product prepared from fresh, olean, sound, properly matured whole or pieces of ears conforming to the characteristics of the sweet corn variety Zea mays L. convar saccharata KOERN which are trimmed (except for the style "Whole"), separated from husk and silk, sorted and washed and sufficiently blanched to ensure stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

2.2.1 Quick frozen Corn-on-the-Cob is the product subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18 C (0ºF) at the thermal centre after thermal stabilization.

2.2.2 The recognized practice of repacking quick frozen products under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. Ho. CAC/RCP 8-1976).

2.4 Presentation

2.4.1 Style

2.4.1.1 Style

(a) Whole - the whole, intact ear of corn to which a small part of the stalk may be attached. Minimum length not less than 120 mm.
(b) Trimmed whole - the product obtainable from one whole ear after trimming of both ends. Minimum length not less than 20 mm.
(c) Cut Cob - portions of the whole trimmed ear, out transversely into pieces not shorter than 40 mm.

2.4.1.2 The diameter of the product of any style, measured perpendicularly to the axis at the maximum diameter shall be not less than 30 mm.

2.4.2 Other Styles

Any other presentation of the product shall be permitted provided that it:

(a) Is sufficiently distinctive from other forms of presentation laid down in this standard;
(b) Meets all other requirements of this standard;
(c) Is adequately described on the label to avoid confusing or misleading the consumer.

2.4.3 Definition of "Defectives" for Presentation

Any sample unit from a sample taken in accordance with the FAO/WHO Sampling Plans for Prepackaged Foods (AQL 6.5) (Re. Ho. CAC/RM 42-1969) which fails to comply with the length and diameter requirements in section 2.4.1.1 and 2.4.1.2, shall be regarded as defective.

2.4.4 Lot Acceptance for Presentation Factors

A lot will be considered acceptable in respect of length and diameter when the number of defectives as defined in section 2.4.3 does not exceed the acceptance number (c) for the appropriate sample sizes as specified in the FAO/WHO Sampling Plans for Pre-packaged Foods.

2.4.5 Standard Sample Site

The standard sample size shall be 4 ears for whole and trimmed corn and 8 pieces of ear for the out cob.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

(a) Salt (sodium chloride)
(b) Condiments, such as spices and herbs.

3.2 Quality Factors

3.2.1 General Requirements

Quick Frozen Corn-on-the-Cob shall be:

- free from foreign flavour and odours, taking into consideration any added optional ingredients;
- clean, free from sand and grit and other foreign material;
- free from insect contamination;

and with respect to visual defects subject to a tolerance shall be:

- of reasonably uniform white, cream to yellow (golden) colour;
- reasonably well developed
- reasonably uniform in size;
- reasonably free from blemished or mechanically damaged areas;
- reasonably free from poorly trimmed units (except for whole style);
- practically free from extraneous vegetable matter (EVM)

3.2.2 Analytical Requirements

3.2.2.1 The Alcohol Insoluble Solids (A.I.S.) contents of the whole kernals detached from the cob, as determined by the method specified in section 8.5 of this standard shall not exceed 30 mm.

3.2.2.2 The total from a sample taken in accordance with the FAO/WHO Sampling Plans for Pre-packaged Foods (AQL 6.5) (Ref. No. CAC/RM 42-1969) of soluble solids content of the juice pressed from the kernels and determined according to section 8.6 of this standard by refractometer at 20ºC, uncorrected for acidity and read as Brix on the International Sucrose Scale shall be not less than 20.

3.2.3 Definition of Visual Defects

(a) Uniform white, cream to yellow (golden) colour means, that all kernels on one (part of an) ear are of the same colour and that the different units in one sample are of the same colour and that the different units in one sample are of the same colour.

- Light variation - Some difference in colour exists, only slightly affecting the appearance.
- Pronounced variation - difference in colour between the different kernels and/or (part of an) ear are noticeable and affecting the appearance.

(b) Uniform in size means that the length of the longest ear in the sample unit does not exceed the length of the shortest ear by more than 50mm (20 mm for the whole and cut styles), and that the largest diameter of the largest unit does not exceed the largest diameter of the smallest unit by more than 15 mm.

Minor - outside one of the limits (length or diameter) by maximum 5 mm = 1 defect;
Major - outside both limits by maximum 5 mm = 2 defects
Major - outside one or both of the limits by more than 5 mm = 4 defects

(c) Well developed means that the kernels shall be positioned in a symmetrical pattern in distinct lines or rows which are not seriously affected by missing or shrunken kernels. The whole style may have some shrunken or under-developed parts.

Minor - Appearance materially affected by irregular pattern of kernels = 1 defect;
Major - More than 10 percent but less than 15 percent by count of the kernels missing or shrunken = 2 defects
Serious - 15 percent or more by count of the kernels missing or shrunken = 4 defects.

In "Whole style" the length of the part of ear which is shrunken or underdeveloped shall be considered as follows:
Minor - more than 20 mm and up to 25 mm = 1 defect
Major - more than 25 mm and up to 30 mm = 2 defects
Serious - more than 30 mm = 4 defects

(d) Blemished or mechanically damaged areas

Blemished: A unit affected by pathological or insect injury with associated discolouration which affects the kernels.
Mechanically damaged: A unit affected by cuts or by crushing of the kernels. Kernels at the ends of the units which are damaged by cutting shall not be considered as damaged by mechanical injury.

Minor - more than 5 percent but less than 10 percent by count of the kernels are slightly affected but not more than 0.5 percent by count of all kernels are seriously blemished or damaged = 1 defect
Major - 10 percent or more but less than 15 percent by count of the kernels are slightly affected but not more than 1 percent by count of all kernels are seriously blemished or damaged = 2 defects

Serious - more than 1 percent by count of the kernels are seriously affected = 4 defects

(e) Poorly trimmed means (1) ears or cut cobs where at the stem end a small part of stalk remains attached and also means (ii) that the top end of the ear or the cut cob is cut too high leaving under-developed kernels on the cob. For the style "whole" the top is untrimmed and a piece of the stalk of maximum 15 mm may remain attached, and not be considered defects.

Minor - at one end of unit maximum 5 mm left = 1 defect
Major - at one end of unit 5 - 10 mm left = 2 defects
Serious - at one end of unit more than 10 mm left = 4 defects

(f) EVM - Silks to the total length twice of that of the unit in question are considered normal and not a defect.

Minor - silks to a total length of 2-6 times the length of the units = 1 defect
Minor - husks not more than 2 cm in total surface = 1 defect
Major - husks larger than 2 cm in total surface = 2 defects

3.2.4 Standard Sample Size,

The standard sample sizes for the respective styles shall be

Whole and trimmed whole	4 ears
Cut Cob	8 pieces of ears

3.2.5 Tolerances for Visual Defects

For tolerances based on the standard sample sizes indicated in section 3.2.4 visual defects shall be assigned points in accordance with Table I in this section. The maximum number of defects permitted in the Total Allowable Points rating indicated for the respective categories Minor, Major, and Serious or the Combined Total of the foregoing categories.

Table 1

ALL STYLES

Defect	Unit of Measurement	Defect Categories			
		Minor	Major	Serious	Total
(a) Colour variation					
- Light	One ear	1			
- Pronounced			2		
- Light	Standard	1			
- Pronounced	Sample Size		2		
(b) Difference in size outside given range (in standard sample unit)		1	4		
(c) Not well developed	Each ear	1	2	4	
(d) Blemish or damaged	Each ear	1	2	4	
(e) Poorly trimmed	Bach ear	1	2	4	
(f) EVM	Standard Sample Size	1	2		
Total Allowable Points		21	6	4	21

3.3 Definition of "defective" for Quality Factors

Any sample unit taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plan for Prepackaged Foods AQL-6.5 (Ref. No. CAC/HM 42-1969) shall be regarded as a "defective" for the respective characteristics when:

(a) it fails to meet the general requirements given in section 3.2.1
(b) it exceeds the "Total Allowable Points" in any one or more of the defect categories including the total in Table 1, in section 3.2.5

3.4 Lot Acceptance for Quality Factors

A lot will be considered acceptable with respect to Quality Factors when the number of "defectives" as defined in section 3.3 does not exceed the acceptance number (c) for the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods.

4. FOOD ADDITIVES

4.1 Citric or malic acid, as processing aids for use in the blanching or cooling water in accordance with GMP *[*citric acid endorsed, malic acid to be endorsed*]*.

4.2 Carry-Over Principle

4.2.1 "Section 3 of the "Principle relating to the Carry-Over of Additives into Foods" shall apply.

4.2.2 This section shall read as follows:

The presence of an additive in food, through the application of the Carry-Over Principle, is generally permissible if:

(a) the additive is permitted in the raw materials or other ingredients (including additives) by an applicable Codex standard or under any other acceptable provision which takes into account the health requirements of food additives;
(b) the amount of the additive in the raw material or other ingredient (including additives) does not exceed the maximum amount so permitted;
(c) the food into which the additive is carried over does not contain the additive in greater quantity than would be introduced by the use of the ingredients under proper technological conditions or manufacturing practice; and
(d) the additive carried over is present at a level which is non-functional, i.e. at a level significantly less than that normally required to achieve an efficient technological function in its own right in the food. *[*To be endorsed*]*.

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

6. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standards for Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), the following specific provisions apply subject to endorsement by the Codex Committee on Food Labelling. *[*To be endorsed*]*.

6.1 The Name of the Food

6.1.1 The name of the food as declared on the label shall include "Corn-on-the-Cob" proceeded or followed by a description of the style as indicated in section 2.4. The words "quick frozen" shall also appear on the label except that the term "frozen" may be applied in countries where this term is customarily used for describing the product processed in accordance with section 2.2 of the standard.

6.1.2 If the product is produced in accordance with Section 2.4.2 the label shall contain in close connection to the word "Corn-on-the-Cob" such additional words or phrases that will avoid misleading or confusing the consumer.

6.1.3 In addition, there shall for the styles "whole" and "trimmed whole" appear on the label, in conjunction with, or in close proximity to the name a clear indication of the number of units included in the package.

6.2 List of Ingredients

A complete list of ingredients shall be declared in descending order or proportion in accordance with section 3.2 (c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), except that food additives present in the product in accordance with sections 4.1 and 4.2 need not be declared.

[1] "Frozen": this term is used as an alternative to "quick frozen" in some English speaking countries.

6.3 Net Contents

The minimum net contents shall be declared by count and/or by weight. If by weight, it shall be declared 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.

6.4 Name and Address

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

6.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identity the producing factory and the lot.

6.7 Additional Requirements

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

6.8 Bulk Packs

In the case of quick frozen Corn-on-the-Cob, in bulk, regardless of style, the information required in section 6.1 to 6.5 shall either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words "quick . frozen", (the term "frozen" may be used in accordance with section 6.1.1 of this

standard), and the name and address of the manufacturer or packer shall appear on the container.

7. PACKAGING

Packaging used for quick frozen Corn-on-the-Cob, regardless of style, shall:

(a) protect the organoleptic and quality characteristics of the product;
(b) protect the product from microbiological and other contamination;
(c) protect the product from dehydration and, where appropriate, leakage as far as technologically practicable; and
(d) not pass onto the product any odour, taste, colour or other foreign characteristics through the processing (where applicable) and distribution of the product up to the time of final sale.

8. METHODS OF EXAMINATION. ANALYSIS AND sampling

8.1 Sampling

8.1.1 Sampling for Presentation and Visual Defects: For those provisions detailed in sections 2.4 and 3.2 of this standard sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) (Ref. No. CAC/RM 42-1969), as amended.

8.1.2 Sampling for Net Weight; shall be carried out in accordance with the FAO/WHO Sampling Plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

*[*8.1.3 Sampling for Analytical Requirements; Sampling Plans*] [*To be endorsed*]*.

8.2 Thawing Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 32-1970). *[*Endorsed*]*.

8.3 Cooking Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Cooking of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 33-1970). *[*Endorsed*].*

Cooking time for quick frozen corn, regardless of style, may vary somewhat according to variety characteristics and degree of maturity and is in the order of 10 minutes.

8.4 Determination of Net Weight

FAO/WHO Codex Alimentarius Standard Procedure for Determination of Net Weight of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 34-1970); also contained in the Recommended International Standard for Quick Frozen Peas (CAC/RS 41-1970 section 8.3). *[*Endorsed*]*.

8.5 Determination of the Alcohol-Insoluble Solids (A.I.S.) (To be developed).

8.6 Determination of Total Soluble Solids Content

Thaw the sample according to 8.2 Thawing Procedure. With a blunt instrument, e.g. a spoon remove the whole grains from the cob. Proceed according to FAO/WHO Codex Alimentarius Method for the Determination of Total Soluble Solids Content of Quick Frozen Fruit (Ref. No. CAC/RM 43-1971). It will be necessary to place the slurry on a square of cheese cloth and squeeze out some liquid for evaluation by refractometry, *[*To be endorsed*]*.

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APPENDIX VIII

DRAFT STANDARD FOR QUICK FROZEN FRENCH FRIED POTATOES

(Advanced to Step 8 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen French fried potatoes which have been prepared from tubers of the species Solanum tuberosum L. and offered for direct consumption without further processing except for repacking if required.

2. DESCRIPTION

2.1 Product Definition

Quick frozen French fried potatoes is the product prepared from clean, mature, sound tubers of the potato plant conforming to the characteristics of the species Solanum tuberosum L. Such tubers shall have been sorted, washed, peeled, cut into strips, and treated as necessary to achieve satisfactory colour and fried in edible oil or fat. The treatment and frying operations shall be sufficient to ensure adequate stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

2.2.1 Quick frozen French fried potatoes is the product subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. The freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18ºC (OºF) at the thermal centre after thermal stabilization.

2.2.2 The recognized practice of repacking quick frozen foods under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that the product be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. No. CAC/RCP 8-1976).

2.4 Presentation

2.4.1 Styles

The styles of the product shall be determined by the nature of the surface and the nature of the cross section.

2.4.1.1 Nature of the Surface

The product shall be presented in one of the following styles:

(a) Straight cut - strips of potato with practically parallel sides and with smooth surfaces
(b) Crinkle cut - strips of potato with practically parallel sides and in which two or more sides have a corrugated surface.

2.4.1.2 Dimensions of the cross section

The cross sectional dimensions of strips of quick frozen French fried potatoes which have been cut on all four sides shall not be less than 5 mm when measured in the frozen condition. The quick frozen French fried potatoes within each pack shall be of similar cross sections.

The product may be identified by the approximate dimensions of the cross sections or by reference to the following system for designations:

Designation	Dimension in mm across the largest cut surface
Shoestring	5-8
Medium	8-12
Thick cut	12-16
Extra large	greater than 16

2.4.2 Other Styles

Any other presentation of the product, based on differing cross sections shall be permitted provided that it:

(a) is sufficiently distinctive from other forms of presentation laid down in this standard;
(b) meets all other requirements of this standard;
(c) is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

3.1.1 Basic Ingredients

(a) Potatoes as defined in Section 2.1.
(b) Edible fats and oils as defined by the Codex Alimentarius Commission.

3.1.2 Optional Ingredients

(a) Sugars, (sucrose, invert sugar, dextrose, fructose, glucose syrup, dried glucose syrup) as defined by the Codex Alimentarius Commission;

(b) Salt (sodium chloride);

(c) Condiments, such as herbs and spices.

3.2 Quality Factors

3.2.1 General Requirements

Quick frozen French fried potatoes shall:

- be free from any foreign flavours and odours;
- be clean, sound and practically free from foreign matter;
- have a reasonably uniform colour;

and with respect to visual defects subject to a tolerance shall be:

- without excessive external defects, such as blemishes, eyes and discolouration;
- without excessive sorting defects, such as slivers, small pieces and scrap;
- reasonably free from frying defects, such as burnt parts.

When prepared in accordance with the manufacturer's instructions, quick frozen French fried potatoes shall:

- have a reasonably uniform colour;
- have a texture characteristic of the product and be neither excessively hard nor excessively soft or soggy.

3.2.2 Analytical Requirements

3.2.2.1 Moisture - the maximum moisture content of the whole product in the styles shoestring, medium and thick cut shall be 76% m/m; and in extra large and other styles 78% m/m.

3.2.2.2 The fat or oil extracted from the product shall have a free fatty acid content of not more than 1.5% m/m measured as oleic acid or an equivalent fatty acid value based on the predominant fatty acid in the fat or oil.

3.2.3 Definition of Visual Defects

3.2.3.1 External defects are blemishes or discolouration (either internally or on the surface) due to exposure to light, mechanical, pathological or pest agency; eye material or peeling remnants.

(a) Minor defect - A unit affected by disease, dark or intense discolouration, eye material, or dark peel covering an area or a circle greater than 3 mm but less than 7 mm in diameter; pale brown peel or light discolouration of any area greater than 3 mm in diameter.

(b) Major defect - A unit affected by disease, dark or intense discolouration, eye material, or dark peeling covering an area or a circle greater than 7 mm but less than 12 mm in diameter.

(c) Serious defect - A unit affected by disease, dark or intense discolouration, eye material, or dark peel covering an area or a circle of 12 mm in diameter or more.

Note:

("slight" external defects which in either area or intensity fall below the definition shown for minor defects shall be ignored).

3.2.3.2 Sorting defects

(a) Sliver - A very thin unit (generally an edge piece) which will pass through a slot the width of which is 50% of the minimum dimension of the nominal or normal size.

(b) Small piece - Any unit less than 25 mm in length.

(c) Scrap - Potato material of irregular form not conforming to the general conformation of French fried potatoes.

3.2.3.3 Frying defects

Burnt pieces - Any unit which is dark brown and hard due to gross overfrying.

3.2.4 Standard Sample Size

The standard sample size shall be 1 kilogram.

3.2.5 Tolerances for Visual Defects

For tolerances based on the standard sample size as specified in Section 3.3.3 the visual external defects are classified as "minor" or "major" or "serious", The tolerances in respect of external defects are dependent on the cross section of the French fried potatoes.

To be acceptable, the standard samples shall not contain units in excess of the numbers shown for the respective categories, including total, in Table 1.

	Maximum Level in Final Product
4.2.2 Sodium hydroxide 4.2.3 Potassium hydroxide 4.2.4 Citric acid	Limited by GMP
4.2.5 Dimethylpolysiloxane	10 mg/kg on a fat basis

4.3 Carry-Over Principle

4.3.1 "Section 3" of the "Principle Relating to the Carry-Over of Additives into Foods" shall apply.

4.3.2 This section reads as follows:

"The presence of an additive in food, through the application of the Carry-Over Principle, is generally permissible if:

(a) the additive is permitted in the raw materials or other ingredients (including additives) by an applicable Codex standard or under any other acceptable provision which takes into account the health requirements of food additives;

(b) the amount of the additive in the raw material or other ingredient (including additives) does not exceed the maximum amount so permitted;

(c) the food into which the additive is carried over does not contain the additive in greater quantity than would be introduced by the use of the ingredients under proper technological conditions or manufacturing practice; and

(d) the additive carried over is present at a level which is non-functional, i.e. at a level significantly less than that normally required to achieve an efficient technological function in its own right in the food. " *[*to be endorsed*]*

5. HYGIENE

It is recommended that the product be prepared in accordance with the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

6. LABELLING

In addition to Sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following specific provisions shall apply subject to endorsement by the Codex Committee on Food Labelling.

6.1 The Name of the Food

6.1.1 The name of the food as declared on the label shall include the designation "French Fried Potatoes" [1]

[1] or the equivalent designation used in the country in which the product is intended to be sold, e.g. "Chips" (in some English-speaking countries), "Pommes frites", "Frites", "Patates frites" (in some French-speaking countries).

6.1.2 In addition, there shall appear on the label a designation of the style as appropriate i.e. "straight cut" or "crinkle cut" and there may also appear an indication of the approximate dimensions of the cross section or the appropriate designation i. e. "shoestring", "medium", "thick cut" or "extra large".

6.1.3 If the product is produced in accordance with Section 2.4.2, the label, shall contain in close proximity to the words "French fried potatoes" such additional words or phases that will avoid misleading or confusing the consumer.

6.1.4 The words "Quick Frozen" shall also appear on the label, except that the term "Frozen" [1] may be applied in countries where this term is customarily used for describing the product processed in accordance with Section 2.2 of this standard.

[1] "Frozen": this terms is used as an alternative to "quick frozen" in some English-speaking countries

6.2 List of Ingredients

A complete list of ingredients shall appear on the label in descending order of proportion in accordance with section 3.2 (c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), except that food additives present in the product in accordance with Sections 4.2 and 4.3 need not be declared.

6.3 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 food is sold.

6.4 Name and Address

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

6.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

6.7 Additional Requirement

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

6.8 Bulk Pack

In the case of quick frozen French fried potatoes in bulk, the information required in Sections 6.1 to 6.5 shall either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words "quick frozen" (the term "frozen" may be used in accordance with Section 6.1.4 of this standard) and the name and address of the manufacturer or packer shall appear on the container.

7. PACKAGING

Packaging used for quick frozen French fried potatoes shall:

(a) protect the organoleptic and other quality characteristics of the product;
(b) protect the product against microbiological and other contamination;
(c) protect the product from dehydration and, where appropriate, leakage as far as technologically practicable; and
(d) not pass on to the product any odour, taste, colour or other foreign characteristics, throughout the processing (where applicable) and distribution of the product up to the time of final sale.

8. METHODS OF EXAMINATION, ANALYSIS AND SAMPLING

"8.1 Sampling

8.1.1 Sampling for Presentation and Visual Defects: For those provisions detailed in Sections 2.4 and 3.2 of this standard sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969), as amended.

Table 1

Tolerances for External Defects

Defect category	Number of Units Affected Cross section of strips	
	5 - 16 mm	over 16 mm
Serious	7	3
Serious + major	21	9
Total (serious - major + minor)	60	27

The tolerances for the other defects (not depending on cross section) are:

Sorting defects

Slivers	max. 12% m/m
Small Pieces and Scraps	max. 6% m/m
Total Sorting Defects	max. 12% m/m
Frying defects	max. 0.5% m/m

3.3 Definition of "defective" for Composition and Quality Factors

Any sample unit taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods AQL-6.5 (Ref. No. CAC/RM 42-1969) shall be regarded as a "defective" for the respective characteristics when:

(a) it fails to meet any of the requirements given in Section 3.1;
(b) it fails to meet any of the general requirements given in Section 3.2.1;
(c) when it exceeds the tolerances for visual defects in any one or more respective defect categories in Section 3.2.5.

3.4 Lot Acceptance for Composition and Quality Factors

A lot will be considered acceptable with respect to Composition and Quality Factors when the number of "defectives" as defined in Section 3.5 does not exceed the acceptance number (c) for the appropriate sample size as specified in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods. In applying the acceptance

procedure each "defective" (as defined in section 3.3 (a) to (c) is treated individually for the respective characteristics.

3.5 Definition of 'defective' for Analytical Requirements [1] - To be elaborated.

3.6 Lot Acceptance for Analytical Requirements [1] - To be elaborated.

[1] Included on the advice of the Rapporteur and the Chairman of the Group of Experts after adoption of the Report (see para. 104 of this Report).

4. FOOD ADDITIVES

		Maximum Level in Final Product
4.1	Sequestrants	
4.1.1	Disodium dihydrogen pyrophosphate	100 mg/kg singly or in combination (phosphates expressed as P_2O_5)
4.1.2	Tetrasodium pyrophosphate	
4.1.3	Ethylene diamine tetra-acetic acid (Ca-diNa salt)	
4.1.4	Ascorbic acid	Limited by GMP
4.1.5	Citric acid	
4.1.6	Malic acid	
4.2	Processing Aids	
4.2.1	Sulphite, bisulphite, metabisulphite (sodium or potassium salt)	50 mg/kg, singly or in combination, expressed as SO_2

8.1.2 Sampling for Net Weight : Shall be carried out in accordance with the FAO/WHO Sampling Plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

*[*8.1.3 Sampling, for Analytical Requirements: Sampling Plans to be elaborated*]* *[*to be endorsed*]*

8.2 Thawing Procedure

FAO/WHO Codex Alimentarius Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 32-1970). *[*endorsed*]*

8. 3 Cooking Procedure

Samples for examination shall be cooked in accordance with the manufacturer's instructions.

*[*to be endorsed]

8.4 Determination of Net Weight

FAO/WHO Codex Alimentarius Standard Procedure for Determination of Net Weight of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 34-1970) also contained in the Recommended International Standard for Quick Frozen Peas (Ref. No. CAC/RS 41-1970, Section 8.3).

*[*endorsed*]*

8.5 Determination of moisture content (to be developed)

8.6 Determination of free fatty acid content in the fat or oil (to be developed)

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APPENDIX IX

PROPOSED DRAFT STANDARD FOR QUICK FROZEN WHOLE KERNEL CORN [1]
(Advanced to Step of the Procedure)

[1] Revised by the author country (USA) editorially and in the light of government comments and decisions of a general nature made at the twelfth session of the Group of Experts (1978).

1. SCOPE

This standard shall apply to quick frozen whole kernel sweet corn of the species Zea mays L.convar. saccahrata Koern as defined below and offered for direct consumption without further processing, except repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definition

Quick frozen whole kernel corn is the product prepared from fresh, clean, whole, sound, succulent kernels of sweet corn species Zea mays L.convar. saccahrata Koern of either the white or yellow varieties by removing husk and silk; by sorting, trimming, and washing; and by sufficiently blanching before or after removal from the cob to ensure adequate stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

Quick frozen whole kernel corn is the product subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18ºC (0ºF) at the thermal centre after thermal stabilization.

The recognized practice of repacking quick frozen products under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage, and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution, and at retail, the product be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. No. CAC/RCP 8 - 1976).

2.4 Presentation

2.4.1 Colour

(a) Yellow
(b) White

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

(a) salt (sodium chloride) .

(b) condiments, such as spices and herbs
(c) garnishes, such as pieces of green peppers or red peppers, or mixtures of both, either of which may be sweet or hot and may be dried. Other vegetables may be used as garnishes. A garnish may not exceed 5 per cent m/m of the finished food.

3.2 Quality Factors

3.2.1 General Requirements

Quick frozen whole kernel corn shall be:

- of similar varietal characteristics;
- of a reasonably uniform colour which may be slightly dull;
- before and after cooking, free from foreign flavour and odour, taking into consideration any added optional ingredients;
- reasonably tender;
- clean, free from sand, grit, insect contamination and other foreign material;

and with respect to visual defects subject to tolerances shall be:

- reasonably free from ragged, crushed or broken kernels;
- reasonably free from loose skins;
- reasonably free from damaged or blemished kernels;
- reasonably free from pieces of cob, husk, or silk;
- practically free from harmless extraneous vegetable material; and
- reasonably free from pulled kernels.

3.2.2 Analytical Requirements

3.2.2.1 The Alcohol Insoluble Solids (AIS) content of the kernels, as determined by the method specified in sub-section 8.5 of this standard shall not exceed 30% m/m.

3.2.2.2 The soluble solids content of the juice pressed from the kernels and determined according to sub-section 8.6 of this standard by refractometer at 20ºC, uncorrected for acidity and expressed as degrees Brix on the International Sucrose Scales shall be not less than 20.

3.2.3 Definitions of Visual Defects

(a) Damage or blemish means any kernel affected by insect injury or damaged by discoloration, pathological injury, or by any other means to the extent that the appearance or eating quality is affected. This category of defect may be further classified as "minor", "major" or "serious" depending upon the extent to which the appearance is affected.

Minor - means damage or blemish that affects the kernel to only a slight degree.

Major - means damage or blemish that is quite noticeable and materially affects the kernel.

Serious - means damage or blemish that is very noticeable and of such nature that it would customarily be discarded under normal culinary preparation.

(b) Cob - means the very firm to hard cellulose-like material to which the kernels of corn are attached and from which the kernels are removed during processing.

(c) Husk - means the membranous outer covering and one of the constituent parts of an ear of corn that is removed during processing.

(d) Silk - means the coarse thread-like filaments that are one of the constituent parts of an ear of corn. Such silk is found beneath the husk and in immediate contact with the corn kernels. Corn silk is normally removed during processing.

(e) Harmless extraneous vegetable material - means vegetable matter other than cob, husk, or silk which is harmless. Such material may include, but is not limited to, grass, weeds, leaves and portions of stalk. This category of defect may be further classified as "minor", "major" or "serious", depending upon the amount of severity of the material.

Minor - only slightly noticeable and affects the product to only a slight degree.

Major - readily noticeable and affects the product to a material degree.

Serious - very noticeable and objectionable and would customarily be discarded under normal culinary preparation.

(f) Pulled kernels - means kernels of corn that have been so cut or removed from the ear of corn that portions of cob or hard tissue remain. This category of defect may be further classified as "minor" or "major", depending upon the amount of adhering cob that is present.

Minor - slight amount of cob material or hard tissue remains around the base of the kernel.

Major - moderate to noticeable amount of adhering cob material. (If there is an excessive amount of cob material adhering, apply tolerance given in Table I.)

3.2.4 Standard Sample Unit Size

250 grammes

3.2.5 Tolerances for Visual Defects

For tolerances based on the standard sample size indicated in Section 3.2.4, visual defects shall be assigned points in accordance with Table I in this Section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories Minor, Major and Serious or the Combined Total of the foregoing categories.

TABLE I

Defects	Unit of Evaluation	Defect Categories			Total
		Minor	Major	Serious	
Damage or blemish	Each kernel				"
minor	" "	1			
major	" "		2		
serious	" "			4	
Harmless EVM	Each piece				
minor	" "	1			
major	" "		2		
serious	" "			4	
Pulled kernels	Each kernel				
minor	" "	1			
major	" "		2		
Total allowable points		60	40	20	60

Pieces of cob - maximum tolerance-	0.6 cubic centimetres
Husk - maximum tolerance	4.4 square centimetres
Silk -	160 cm
Ragged, crushed or broken kernels	( )
Loose skins	( )

3.3 Definition of "Defective" for Quality Factors

Any sample unit taken in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL - 6.5) (Ref. No. CAC/RM 42-1969) shall be regarded as a "defective" for the respective characteristics as follows:

(a) when it fails to meet the general requirements (3.2.1); or
(b) when it fails to meet the analytical requirements (3.2.2); or
(c) when it exceeds the "total allowable points" in any one or more of the defect categories, including "total", in Table I; or
(d) when it exceeds any one or more of the tolerances for cob, husk, silk, ragged crushed or broken kernels, or loose skins given in Table I.

3.4 Lot Acceptance for Quality Factors

A lot will be considered acceptable with respect to quality factors when the number of "defectives" as defined in paragraph 3.3 does not exceed the acceptance number (c) for the appropriate sample size as specified in the Sampling Plans for Prepackaged Foods (Ref. No. CAC/RM 42-1969).

4. FOOD ADDITIVES

4.1 None permitted.

4.2 Carry-over principle

Section 3 of the "Principle Relating to the Carry-over of Additives into Foods" (Ref. ALINORM 76/12, App. IX) shall apply.

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

6. LABELLING

In addition to Sections 1, 2, 4, and 6 of the "Recommended International General Standard for the Labelling of Prepackaged Foods" (Ref. No. CAC/RS 1-1969), the following provisions apply:

6.1 the Name of the Food

6.1.1 The name of the food as declared on the label shall include the designation "corn",

6.1.2 In addition, there shall appear on the label in conjunction with or in close proximity to the word "corn" -

(a) The words "whole kernel" except that the description "whole grain", "cut", "sweet", or "kernels" may be used if this is customary in the country where the product is sold.

(b) The colour "yellow" or "white" except that the colour "golden" may be used in lieu of "yellow" if this is customary in the country where the product is sold.

6.1.3 The words "quick frozen" except that the word "frozen" [1] may be applied in countries where this term is customarily used for describing the product processed in accordance with subsection 2.2 of this standard.

6.1.4 When any ingredients other than salt have been added which imparts to the food the distinctive flavour of the ingredients or appearance of the garnish, the name of the food shall be accompanied by the term "with X" or "X flavoured", as appropriate.

[1] "Frozen" - this term is used as an alternative to "quick frozen" in some English speaking countries.

6.2 List of Ingredients

A complete list of ingredients shall be declared in descending order of proportion: Section 3.2(c) of the "Recommended International General Standard for the Labelling of Prepackaged Foods" (Ref. No. CAC/RS 1-1969) shall also apply, except that food additives present in the product in accordance with section 4.2 need not be declared.

6.3 Net Contents

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

6.4 Name and Address

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

6.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

6.7 Additional Requirements

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

6.8 Bulk Packs

In the case of quick frozen whole kernel corn in bulk, the information required in 6.1 through 6.6 shall either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words "quick frozen" (the term "frozen" may be used in accordance with subsection 6.1.3 of this standard) and the name and address of the processor or packer shall appear on the container.

7. PACKAGING

Packaging used for quick frozen whole kernel corn shall:

(a) Protect the organoleptic and other quality characteristics of the product;

(b) Protect the product from micro-biological and other contamination;

(c) Protect the product from dehydration and, where appropriate, leakage as far as technologically practicable; and

(d) Not pass on to the product any odour, taste, colour or other foreign characteristics throughout the processing (where applicable) and distribution of the product up to the time of final sale.

8. METHODS OF SAMPLING, EXAMINATION, AND ANALYSIS

The methods of examination, 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 Sampling

8.1.1 Sampling for Quality Factors: For those provisions detailed in sections 3.1, 3.2.1, 3.2.3, 3.2.5 of this standard, sampling shall be in accordance with FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6:5) (Ref. No. CAC/RM 42-1969, as amended).

8.1.2 Sampling for Net Weight shall be in accordance with FAO/WHO Codex Alimentarius Sampling Plans for Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

*[*to be endorsed*]*

8.1.3 Sampling for Analytical Requirements

To be elaborated

8.2 Thawing Procedure

According to the FAO/WHO Codex Alimentarius Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 32-1970). [to be endorsed 7

8.3 Cooking Procedures

According to the FAO/WHO Codex Alimentarius Standard Procedure for Cooking of Quick Frozen Vegetables (Ref. No. CAC/RM 33-1970). The following figures should be considered as guidelines for the cooking time for quick frozen whole kernel corn – two to four minutes. *[*to be endorsed*]*

8.4 Determination of Net Weight

According to the FAO/WHO Codex Alimentarius Method: Net Weight Determination of Frozen Fruits and Vegetables; also contained in Recommended International Standard for Quick Frozen Peas (Section 8.3, CAC/RS 41-1970, CAC/RM-1970). *[*endorsed*]*

8.5 Determination of Alcohol-Insoluble Solids (A.I.S.)

To be elaborated

8.6 Determination of Soluble Solids

To be elaborated

REPORT OF THE WORKING GROUP ON DATE MARKING

Request for Information on Open Date Marking of Quick Frozen Foods

The Codex Committee on Food Labelling, at its Twelfth Session (May, 1977) addressed itself to the subject of date-marking of prepackaged food. It amended the definition of the purpose of date marking to read:

> "The purpose of date marking is to give the consumers a date which will provide information about the expected quality of the product provided that it has been properly stored. This does not mean that date marking guarantees either the acceptability or the safety of the product."

The Committee also agreed that "minimum durability" is best conveyed to the purchaser by phrases such as "will keep at least until" or "best before".

The Committee went on to say -

"Based on a study of the nature of the food, Codex Commodity Committees shall determine the type of date marking. First consideration should be given to the date of minimum durability. If, in the opinion of the Commodity Committees, this date is not appropriate for the commodity in question, the Commodity Committees should choose from the other alternatives listed in Section 3 above. Finally, they may decide that a date is not necessary and, if so, a justification should be submitted to the Codex Committee on Food Labelling, indicating the reason for the proposed omission."

Section 3 is reproduced below for your convenience:

"3. Definition of Types of Date Marking

3.1 Date of Manufacture - The date on which the food becomes the product as described.

3.2 Date of Packaging - The date on which the food is placed in the immediate container in which it will be ultimately sold.

For certain food products these two dates will be the same.

3.3 Sell-by date - The "sell-by" date is the last date of offer for retail sale after which there remains a reasonable storage period in the home.

3.4 Date of Minimum Durability ("will keep at least until" "best before") – The date which signified the end of the period under any stated storage conditions during which the product will remain fully marketable and will retain any specific qualities for which tacit or express claims have been made. However, beyond that date the food may still be perfectly satisfactory.

3.5 Use-by-Date (Recommended Last Consumption Date (Expiration Date)) - The date which signified the end of the estimated period under any stated storage conditions, after which the product probably will not have the quality attributes normally expected by the consumers. After this date, the food should not be regarded as marketable."

At the Twelfth Session of the Joint ECE/Codex Alimentarius Group of Experts on the Standardization of Quick Frozen Foods (October/November 1978) it was resolved to try and discover, from all Contact Points, both what is the current state of legislation and

practice in each country and also - in those countries in which open date marking is practised - what effects has this practice had in the market place. This information is necessary in order to enable this Group of Experts to reply to the Committee on Food Labelling in respect of quick frozen foods.

The attached questionnaire has, therefore, been developed by this Group of Experts. You are asked to collaborate with this Group to assist them in this task by discovering the replies to these questions, completing the questionnaire and forwarding it to the Codex Secretariat before June 30 1979.

Throughout this document "open date marking" is defined as placing any date (year, month and/or day) en clair on retail packages of quick frozen foods which is visible to and understandable by the purchaser. It should not be confused with the good manufacturing practice adopted by most manufacturers of placing a code on every consumer package which gives information on matters like factory of origin, origin of raw material, production line, production shift, date of packaging, etc. and which is useful in unusual circumstances such as those demanding a product recall, investigating a customer complaint, etc. Nor should open date marking of retail packages be confused with any dates, numbers or codes placed on outer packages or shipping cases intended to be used in stock identification and rotation.

While recognizing the difficulty of obtaining precise answers to all the questions posed in this questionnaire, the Expert Group earnestly requests each country to try and produce answers as meaningful as possible even if exact quantification is not feasible in every case.

QUESTIONNAIRE ON OPEN BATE MARKING OF QUICK FROZEN FOODS

Q.1 Is there any system (either voluntary or mandatory) of open date marking for quick frozen foods in use in your country? Please briefly sketch the history of open date marking in your country: to what extent has the subject been debated and what reasons (events, pressures or problems) led to the decision whether or not to introduce open date marking?

IF NO SYSTEM OF OPEN DATE MARKING FOR QUICK FROZEN FOODS IS IN USE IN YOUR COUNTRY, PLEASE ANSWER Q.1 ONLY AND IGNORE THE REMAINDER OF THIS QUESTIONNAIRE.

Q.2 What type of open date marking for quick frozen foods is in use in your country Specifically:

(a) Do y u use minimum durability, date of manufacture, date of packaging, sell by date, use by date, any other date or a combination of two or more of these?

(b) Is open date marking applied uniformly to all quick frozen foods or are distinctions made either according to type of product (meat, fish, etc.) or are products treated differently according to their keeping qualities in cold store (at -18 C (OºF)) or colder, i.e. are products with, a long keeping quality at -18 C (o F) exempted, etc?

(c) Who determines the "keepability periods" in use and what criteria are used in this determination? Please give a list of the "keepability periods" prescribed, for various products or those which are commonly used in practice. How are changes in technology handled; how are the "keepability periods" altered with

improvements in product or packaging technology or with the introduction of new products?

(d) Is the system in use voluntary or required by law? If voluntary, to what extent is this obeyed?

Q.3 What information is available on the cost consequences of any open date marking of quick frozen foods practised in your country? Specifically:

(a) Costs of installing and operating coding devices on the production lines, including any loss of production owing to breakdowns or slowing down the line?

(b) Extra costs of inventory control of cold store costs to ensure precise stock rotation (First In - First Out - FIFO).

(c) c). Any increased distribution costs in terms of translocating product likely to run "out of life" to other markets, etc.

(d) Any discount applied to product approaching the ending of its "keepability period"?

(e) Loss of value of food (at retail selling price) removed from normal sale, destroyed or reprocessed when stored beyond its "keepability period".

(f) Any increase experienced in the cost of market launches of new products. Has this resulted in any reduction of new products being developed?

Q.4 How does the retailer react to open date marking of quick frozen foods? Specifically:

(a) Does your law, code of practice or custom and practice on open date marking lay down any provision for the amount of residual "keepability period" to be remaining when the product is delivered to the retailer?

(b) How do the retailers use these dates? Do they display more than one "keepability date" of each product simultaneously; if not, how much discriminatory selecting out of order (rummaging) of packages by the purchaser occurs?

(c) Is there any problem with the retailers; not accepting stock out of date sequence?

Q.5 How is the purchaser informed how to use the "keepability date"? Specifically:

(a) What qualifications, especially with regard to storage temperature, are made when telling the purchaser, on the label, how to make use of the "keepability date"?

(b) How are instructions for product storage in the home conveyed on the label, when open date marking is employed?

Q.6 Has the introduction of open date marking of quick frozen foods had any impact on consumer choice? Specifically:

(a) Have retailers reacted to open date marking by limiting the number of brands they stock of various products? Does this generally favour the leading brands and the larger retailers, tending to drive the smaller processor or smaller retailers out of the market?

(b) Have minority products or slow-selling lines been withdrawn from the market as a result of open date marking?

Q.7 How successful has open date marking of quick frozen foods been in maintaining or improving product quality? Specifically:

(a) When quick frozen food beyond its "keepability period" is examined, what proportion is found to be of unacceptable quality?

(b) Has the proportion of "out of condition" quick frozen food sold in your market declined as a result of open date marking? If so, by how much?

(c) How is quick frozen food beyond its "keepability period" required to be dealt with? What options are permitted? Can it be relabelled with a new date, and if so, by whom and on what criteria?

Q.8 Has open date marking altered the legal liability for product quality and safety? Specifically:

(a) If a quick frozen food is found to be of unacceptable quality but is still within its "keepability period", is the person who applied the "keepability date" guilty of misbranding?

(b) Is it against the law to offer for sale or sell a product, still within its "keepability period", which is of unacceptable quality or does the "keepability period" carry with it the implication of a guarantee of quality?

Q.9 Has the introduction of open date marking of quick frozen foods had any effect on the control of temperature in the cold chain? Are temperature criteria more lightly regarded in the face of the prominence given to time imposed by open date marking?

Q.10 Is everybody satisfied with the present position over open date marking of quick frozen foods? Specifically:

(a) Are there any dissatisfied sections of the community: processors, distributors, retailers, consumer bodies, enforcement officials or legislators?

(b) Are there any intentions or plans to revise or alter the present codes of practice, laws, etc.?

Working group on the influence of time / temperature conditions on the final quality of deep frozen food products

List of laboratories responding to inquiry of June 14.1970

Name	Nr.	Product	Available Analytical Methods				Storage Facilities	Manpower
			Sensorial Methods	Texture	Colour	Chemical Methods		
Station de recherches sur la viande, Beaumont, F. Boccard	1	Meat	All methods (Panel of 40 Persons)	Shear force and stress (Tenderness and collagen) Warner Bratzler Special Appar by sale (Inna)	Myoglobin-Evolution Pigment-Content Spectrophoto-meter – Sphere Beckmann, Vi-tatron. True Col. Neotec	Fat Content Sarcoplasmic Contractile Connective Cathepsine Collagenase-Activity	-40ºC -20ºC	Eventually (Partly)
C.N.E.R.P.A.C. France Rosset	2	Meat	Hedonic scales triangular comparison syst. Paired Comp. syst. All methods (Panel of 10 Persons)		Colorimeter Tru-Color from "Neotec"		Freezer Cabinets	yes
TNO Institute for Fishery Products, Jmuiden, NL Doesburg	3	Fish	Hedonic Seal (Panel of.8 Persons) 1-9 scores	Kramer Shear Press	Spectrometric Reflection	Volatile Acids and Volatile Bases, Gaschromatography	Freezer Stores	yes Eventually
Bundesforsch. für Fischerei, Hamburg, D. Palmaille 9 Schreiber	4		All methods			TMAO TMA DMA FFA	-20ºC -30ºC	no

Bundesanst. für Fleischforsch. , Kulmbach, D. Hamm	5	Meat	Hedonic Scale, Ranking Systems	Instron Penetrometer, Waterbinding Capac.	Not Specified	Peroxyd Value Aldehyd Value Acid Value Jodide Value Nucleotides Glycogen and its Metabolites	-10ºC -20ºC -30ºC -40ºC Freezer Stores	1 Scient. 1 Techn.
Ecole Nationale Vétérinaire de Toulouse Laboratoire D'Hygiène et Industrie des Denrées Aliment. 31076 Toulouse, F. Labie	6	Meat Fish	yes	For Meat: Tenderometer [+)] For Fish Prod.: Histology (Type Salé)		Bacteriolog. Quality Histolog. Methods Fat and Protein	Not Specified	1-2 Scient.
Bundesgesund-heitsamt Berlin, D Levetzow	7	All Products				Fat Protein Carbohydrate		yes
Food Technology Laboratory Lyngby, DK Poulsen	8	Meat	All Methods (Panel of 8 Persons)	Kramer Shear Press		Vitamins, Aromacompon. Protein Comp. Enzymes, Fat, Dimethylamine	-5ºC -12ºC -18ºC -24ºC -30ºC -40ºC -60ºC	yes
Ensbana, Campus Universitaire De Dijon, 21000 Dijon, F. Simatos	9	Fruits and Vegetables	All Methods	Water Binding Capac. Kramer Shear Press		Vitamin C Aromacomp.	-37ºC -45ºC	yes Eventually

Sprenger Instituut Wageningen, NL Steinbuch	10	Fruits and Vegetables	All Methods (Panel of 8 to 10 Persons)	Kramer Shear Press (Instron)	Hunter-Colour-Difference Meter	Vitamin C Enzymes Peroxidase, Catalase	-6ºC to -30ºC (-70ºc)	yes
Eidgen. Forsch.-Anst. für Obst-Wein- und Gartenbau Wädenswil, CH Stoll	11	Fruits and Vegetables	All Methods (Panel of 15 to 20 Persons)		Spectral-Photometer Disc-Colorim. Neotec-Apparatus Lovibond-Tintometer	Vitamins Aromacomp. Proteincomp.	-2ºC to -30ºC	yes
C.N.R.S. 92190 Meudon, 4ter Route des Gardes Bellevue, F Ulrich	12	Fruits and Vegetables	All Methods	Shear Press	Hunter-Colorimeter	Vitamins Aromacompon Enzymes Chlorophylls-Phenols Browning Reactions	Not Specified	Eventually
Danish Meat Products Lab. Howitzvej Copenhagen, DK Bøgh-Sørensen	13	Meat and Poultry	Hedonic Scales Triangel Test (Panel of 12 Persons)			Vitamins Ascorbic Acid, Thiamin, Nicotinacid	Not Specified	Eventually yes
Bundesforsch. für Ernährung Karlsruhe, D. Spieß	14	All Products	All Methods (Panel of 25 Persons)	Kramer Shear Press and Others	Hunter Colorimeter		-9ºC to -50ºC	yes
I.B.V.L. P.O. Box 18 6700 Wageningen, NL Ludwig	15	Potato Products	All Methods (Panel of 9 Persons)	Kramer Shear Press	Agtron Reflect. Spectrophot.	Vitamins Fat Carbohydrate Compounds	To -30ºC	yes

Magyar Hütöipar Fejleszto Laboratoriuma 2094 Budapest Márton u. 3/b Beke	16	Vegetables and Ready-to-Eat-Products	Hedonic Scale (Panel of 5 Persons) (0-10 Scores)	Penetrometer Instron 1140 Food Testing System Rheotest 2 Rotating Viscometer Höppler Consist.	Lovibond Tintometer	Drip Losses, Weight Losses, Vitamins, Ascorbic Acid, Carotenes Protein Content, Fat Content, TBA, Carbohydrate Content, Starch, Sugar, Saccharose A.J.S., Total Ash Salt. Various Photometer, Methods	-25ºC to ± 10ºc	2 Specialists
Liko Research Institute Miletiéova 23 Bratislava Forsthoffer + Neumann	17	Fruits and Vegetables Convenience Foods and Meals	Subjective Sensory Evaluat. According for the CNS-Standards (Panel of 10 Persons)	Penetrometer AP 4-2	Chlorophyll β 6-Caroten Lycopen, Betanin, Myoglobin, Anthocyanin-Pigtients	Thjamine, Riboflavine, Niacin, Ascorbic-Acid, Protein: 17 Aminoacids, Peroxidase, Catalase, Polyphenoloxidase, α-Amylase, Invertase, Linoleic Acid, Linolenic Acid, Oleic Acid, Sugar	-12ºC -18ºC -24ºC -30ºC -40ºC -70ºC	6 Persons

Spelderholt Inst. for Poultry Research Beekbergen, NL Gerrits	18	Poultry	Hedonic and Sensory Changes, Ranking Tests	Scalingmodel for Goodness of Fit, True Interval Scales (Stevens, 1966)	-12ºC -18ºC -23ºC
Frigoscandia AB Fack S-25100 Helsingborg Sweden Löndahl	19	All Products	All Methods	To be arranged according to the case	
Ross Foods Ross House South Humberside DN31 35W Newman	20	Vegetables	ten Point Scale	No further information	

REPORT OF THE WORKING GROUP ON THE STANDARD FOR QUICK FROZEN FRENCH FRIED POTATOES

Part I

1. The Working Group consisted of delegates from Canada, France, Federal Republic of Germany, Japan, the Netherlands, Poland, Switzerland, United Kingdom, the U.S.A. and the observer of the UEITP. The Working Group was chaired by Dr. Alan W. Randell (Australia).

SCOPE

2. It was decided to restrict the scope to the rectangular strips commonly known as French Fried Potatoes (Pommes frites, Patatas Fritas). The U.S.A. and Australia proposed the inclusion of the sliced or "Cottage" style of product, and this was supported by Poland. It was noted that these products were of regional interest and had significant trade potential. The decision to restrict the scope of the standard was taken in the light of the necessity of finalizing the standard within the time, period allocated to the Group of Experts and it was thought that additional styles would complicate the standard and hinder its progress.

FOOD ADDITIVES

3. The problem of food additives was discussed in the light of the recent decisions of the Codex Committee on Food Additives and the Working Group addressed itself to the problem of identifying which substances were food additives, which were processing aids and which substances fell within the area of non-functional additives carried over from the oil into the final product.

The following decisions were taken:

Sequestrants: These were identified as food additives. Upon the proposal of the U.S.A. the level of use was reduced to 100 mg/kg and the delegation of the U.K. noted that the levels of the complex phosphates should be expressed as P_2O_5 delegations of the Fed. Rep. of Germany and Switzerland felt that the use of sequestrants was unnecessary.

Preservatives: It was noted that SO_2 was used to prevent the development of undesirable colour in the period following peeling and before the frying process. It is not commonly used but is necessary at certain times in certain varieties. Because the residual SO_2 has no effect on the storage of the final product and most will be evaporated during frying, the Working Group was of the opinion that this substance was a processing aid as defined by the Codex Committee on Food Additives. The delegation of Japan noted that the maximum residue limit in their country was 30 mg/kg and that the bisulphite and metabisulphite forms were not permitted.

Antioxidants: The Working Group was not aware of the use of ascorbic acid as an antioxidant and this provision was deleted. With regard to antioxidants and synergists carried over from the oil, the Working Group agreed that (i) most of these substances would be volatilized during frying; and (ii) that any residual levels would be less than that required to stabilise the product, i.e. they were not functional. It was therefore agreed to delete these from the food additives

provision and make a note that Section 3 of the Carry-Over Principle applies in this case.

Anti-foaming agent; It was agreed that dimethylpolysiloxane was a processing aid, in that its presence was intended only to prevent foaming in the frying process, and that it had no further function.

APPENDIX XII
ANNEX I

TECHNOLOGICAL JUSTIFICATION FOR THE USE OP CERTAIN FOOD ADDITIVES IN QUICK FROZEN FRENCH FRIED POTATOES

1. INTRODUCTION

The draft standard for Quick Frozen French Fried Potatoes (ALINORM 78/25, Appendix VIII) was advanced to Step 6 by the Twelfth Session of the Commission, April 1978. The andorsement of the FOOD ADDITIVES provision of this draft standard was postponed by the Eleventh Session of the Codex Committee on Food Additives (ALINORM 78/12, para 67).

2. PRODUCT DEFINITION

Quick Frozen French Fried Potatoes are the product prepared from clean, mature, sound, white or cream tubers of the potato plant conforming to the characteristics of the species Solanum tuberosum L. Such tubers shall have been sorted, washed (may or may not be peeled) cut into strips, and treated as necessary to achieve satisfactory colour and fried in edible oil or fat. The treatment and frying operations shall be sufficient to ensure adequate stability of colour and flavour during normal marketing cycles.

3. APPLICATION OF THE CARRY-OVER PRINCIPLE

The Working Group decided that Section 5 of the Carry-Over Principle applied to Quick Frozen French Fried Potatoes on the basis that:

(i) few of the additives which are permitted to be present in the "fats and oils as defined by the Codex Alimentarius Commission" (see Section 3.1.1) are actually used in commercial oils used in the preparation of French Fried Potatoes;

(iii) a large proportion of those that are used is volatilized during the frying process; and

(iv) the residues of these substances are at levels which are insufficient to protect the product against poor handling practices. This function is entirely provided by the low temperatures of storage and therefore any carry-over is considered to be non-functional.

4. TECHNOLOGICAL JUSTIFICATION

4.1 Sequestrants

Sequestrants	Maximum Level in the Final Product
Disodium dihydrogen pyrophosphate Tetrasodium pyrophosphate Ethylene diamine tetra-acetic acid (sodium salts)	100 mg/kg singly or in combination, with complex phosphates expressed as P_2O_5.

Sequestrants are used to stabilize the colour of the product, particularly colour development after cooking due in part to the presence of trace amounts of iron. Colour stabilization to the same degree cannot be achieved with good commercial or agricultural practices alone in many cases.

4.2	Processing Aids	Maximum Level in the Final Product
	Sulphite, bisulphite, metabisulphite (sodium or potassium salts)	(50 mg/kg) as SO_2 singly or in combination.

These preparations are used to inhibit undesirable colour changes due to Maillard browning during temporary storage before frying. The level of use is less than that required for bacteriostatic action.

REPORT OF THE WORKING PARTY ON SAMPLING

Present: Australia, Norway, the U.S.A.

1. The Working Group agreed that there were three different requirements which could apply to sampling of quick frozen foods:

Net Weight - it was agreed that the conclusions of the Committee on Analysis and Sampling, when finalized, would apply to these products.

Visual Defects, Presentation - The Working Group agreed that the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (CAC/RM 42-1969), amended as proposed by the Codex Committee on Processed Fruits and Vegetables, would be appropriate in these cases.

Analytical Characteristics - Where analytical characteristics such as moisture percentage, fat percentage or salt percentage, are specified in the standard, the Codex plans (CAC/RM 42-1969) might not be appropriate. The Committee on Methods of Analysis and Sampling should be requested to provide guidance in these cases.

2. In view of the above, the Working Group recommends the following general wording to be applied in standards for quick frozen foods unless individual standards require otherwise:

"8.1 Sampling

8.1.1 Sampling for Presentation and Visual Defects: For those provisions detailed in Sections ..... and ..... of this standard sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5 percent) (Ref. No. CAC/RM 42-1969), as amended.

8.1.2 Sampling for Net Weight: shall be carried out in accordance with the FAO/WHO Sampling Plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

8.1.3 Sampling for Analytical Characteristics: Sampling Plans to be elaborated).

APPENDIX XIII
ANNEX 1

Proposed Sub-Sections in the Sampling and Analysis Section or Separate Sections after that Section at the end of Standards

1. CLASSIFICATION OF DEFECTIVES

A sample shall be considered as a "defective" when it fails to meet one or more of the requirements for

- presentation (as in paras.....)
- quality factors (as in paras.....)
- sizing (as in paras.....) etc.

(This will have to be edited in accordance with the individual standard requirements).

2. LOT ACCEPTANCE

A lot will be considered as meeting the final product requirements of this standard when:

(a) The total number of "defectives" as defined in section ..... does not exceed the acceptance number (c) of the appropriate sampling plan in the Sampling Plans for Prepackaged Foods (1969) (AQL 6.5) (CAC/RM 42-1969) and

(b) The average net contents of the lot as determined by appropriate sampling plans for net contents is not less then the declared net contents (sampling plans for net contents to be elaborated).

ALINORM 79/25
APPENDIX XIV

PROPOSED DRAFT STANDARD FOR QUICK FROZEN CARROTS

(Step 5 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen carrots of the species Daucus carota L. as defined below and offered for direct consumption without further processing, except for repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Production Definition

Quick frozen carrots are the product prepared from fresh, clean, sound, rootlets of carrot varieties (cultivars) conforming with the characteristics of the species Daucus carota L. from which the leaves, green tops, peel and secondary roots have been removed and which have bee, washed and sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

Quick frozen carrots are the product subjected to a freezing process in appropriate equipment and complying with the definitions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product has reached -18ºC (0ºF) at the thermal centre after thermal stabilization.

The recognized practice of repacking quick frozen products under controlled conditions is permitted.

2.3 Handling Practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product will be handled in accordance with the provisions in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (Ref. No. CAC/RCP8-1976)

2.4 PRESENTATION

2.4.1 Types only for the styles Whole and Baby Whole:

(a) Long - Any suitable variety of long carrots

(b) Round - Any suitable variety which has the appearance of the spherical type.

2.4.2 Styles

(a) Whole : consist of carrots which, after processing, retain their approximate original conformation. The largest diameter of carrots, measured at right angles to the longitudinal axis shall not exceed 50 mm. The variation in diameter between the largest carrot and smallest carrot shall not exceed 4.1.

The "Paris carrot" consists of fully mature carrots of a roundisch shape of which the largest diameter in each direction shall not exceed 45 mm.

(b) Baby Whole : whole carrots having a diameter not greater than 23 mm, measured at right angles to the longitudinal axis and being not longer than 100 mm.

Baby Whole "Paris carrots" may have a largest diameter in each direction not exceeding 18 mm.

(c) Baby carrots : baby whole and carrots cut into pieces not less than 30 mm long and having a diameter not greater than 23 mm.

(d) Halved : carrots out longitudinally into two approximately equal halves.

(e) Quartered : carrots cut longitudinally into four approximately equal sections.

(f) Sliced Length-wise : carrots sliced longitudinally, either smooth or corrugated into four or more pieces of approximately equal size. Not less than 20 mm long and not less than 5 mm in width measured at the maximum width.

(g) Shoestring : carrots cut longitudinally, either smooth or corrugated into strips. The cross section shall not exceed 5 mm (measured at longest side of the cross section

(h) Julienne : carrots cut longitudinally, either smooth or corrugated, The cross section shall be 10 mm.

(i) Sliced or Ring Cut : carrots cut, either smooth or corrugated at right angles to the longitudinal axis into rings, having a maximum thickness of 10 mm and a maximum diameter of 50 mm.

(j) Finger Cut : carrots cut into pieces not less than 40 mm long and having a maximum cross sectional dimension of not more than 23 mm.

(k) Chunks or Pieces : carrots cut cross-wise into sections having a thickness greater than 10 mm or whole carrots which are halved and then cut cross-wise into sections or sections of carrots that may be irregular in shape and size and which are larger than ring cut or double diced.

(l) Diced : carrots cut into cubes with edges not exceeding 12.5 mm.

(m) Double diced : carrots cut into uniformly shaped units having a cross section that is square and of which the longest dimension is approximately twice that of the shortest dimension - the shortest dimension not exceeding 12.5 mm.

2.4.3 Other styles

Any other presentation of the product shall be permitted provided that it:

(a) Is sufficiently distinctive from other forms of presentation laid down in this standard;

(b) Meets all other requirements of this standard;

(c) Is adequately described on the label to avoid confusing or misleading the consumer.

2.4.4. Tolerances for Styles

A tolerance of 10 per cent by weight of non-conforming units applies to the provisions for the various styles.

2.4.5 Sizing

(a) Whole quick frozen carrots of either type (see section 2.4.1.) may be presented sized or unsized

(b) If whole carrots are size-graded they shall, dependent on the type used, conform to one of the two following systems of specification for the size names.

Specification for carrots (non-spherical type):

Size designation	Diameter	Length
very small	between 6 and 10 mm	more than 3 cm
small	between 6 and 15 mm	more than 3 cm
medium	between 15 and 18 mm	more than 5 cm
large	between 18 and 22 mm	more than 5 cm
extra large	over 22 mm	

Specification for round carrots:

Size designation	Diameter
very small	less than 18 mm
small	between 18 and 22 mm
medium	between 22 and 27 mm
large	between 27 and 35 mm
extra large	over 55 mm

2.4.6 Tolerances for sizes

If presented size graded the product shall contain not less than 90 per cent by mass of carrots of the declared size or of smaller sizes.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

3.1.1 Salt (sodium chloride), sucrose, invert sugar syrup, dextrose, glucose syrup, dried glucose syrup, fructose, and fructose syrup.

3.1.2 Aromatic herbs and spices; stock or juice of vegetables and aromatic herbs lettuce, onions, etc.); garnishes composed of one or more vegetables lettuce, onions; pieces of green or red peppers, or mixtures of both) up to a maximum of 5 per cent m/m of the total drained vegetable ingredient.

3.2 Quality Factors

3.2.1 Colour

The colour of the product, including the packing medium, shall be normal.

3.2.2 Flavour

Quick frozen carrots shall have a normal flavour and odour free from flavours or odours foreign to the product.

3.2.3 Texture

The carrot units shall be reasonably free from units that are excessively-fibrous or tough.

3.2.4 Defects and Allowances

Quick frozen carrots shall be reasonably free from defects and shall not exceed the limits set herein for the respective defects:

(a) Extraneous Vegetable Material - consisting of any leaf or plant material from the carrot plant or other harmless plant material not purposely added as an ingredient.

Allowance - 1 piece per 1000 grammes based on total contents of all the containers in the sample (i.e. Sample Average).

(b) Other Defects - defects other than EVM shall comply with the limitations as set forth in Table I and Table II for the respective styles.

The sample unit size for "Other Defects" is as follows:

(1) Whole - 40 units

(2) Baby whole, Baby carrots], Halves, Quartered, Sliced lengthwise, Chunks, Finger cuts - 80 units

(3) Diced, Double diced, Shoestring, Julienne, Slices or Ring cut styles - 400 grammes drained weight.

TABLE I

Whole, Baby whole, Baby Carrots, Halved, Quartered, Sliced Lengthwise, Chunks, Finger Cuts

DEFECT		CATEGORY		
		Minor	Major	Serious
(a)	Blemished - spotted or discoloured areas			
	- up to 30 mm^2	x		
	- 30 mm^2 up to 200 mm		x	
	- 200 mm^2, or any very dark or black exceeding 30 mm^2			x
(b)	Mechanical - damaged by crushing or fraying during packing			
	- slightly frayed	x		
	- crushed or broken or showing cracks		x	
(c)	Misshapen- abnormal distortion or growth cracks			
	- slightly affected	x		
	- materially affected		x	
(d)	unpeeled - unpeeled areas			
	- slightly affected	x		
	materially affected		x	
(e)	Fibrous - units that are tough or woody due to fibre development			
	- slightly affected	x		
	- materially affected		x	
	- seriously affected (woody)			x
(f)	Green - units with green tops, except "Baby Whole" and "Whole style"		x	
	- slightly affected	x		
	- materially affected		x	
	"Whole style"			
	- materially affected	x		

Allowance for Defects (Maximum Number Permitted)

Baby Whole, Baby Carrots, Halved. Quartered. Sliced Lengthwise. Chunks, Finger Cuts

Sample of 80 Units - Total of all defects 13 per sample unit, provided that not more than 10 are major and serious combined, and further provided that not more, than 1 is serious,

Whole

Sample of 40 Units - Total of all defects 13 per sample unit, provided that not more than 5 are major and serious combined, and further provided that not more than 1 is serious.

TABLE II

Diced, Double-diced, Shoestring, Julienne, and Sliced or Ring Cut Styles
Definition of Defects (a) Disintegrated Unit is a unit deformed or disintegrated to the extent that the original shape is destroyed or not recognizable. (b) Blemished unit with dark or green spots, or pieced of peel to the extent that the appearance or eating quality is seriously affected. (c) Fibrous unit is a unit with a fibrous texture to the extent that the eating quality is seriously affected.
Allowance for Defects Total of all defects - 50 grammes per 400 gramme sample unit, provided that no single defect ((a), (b) or (c) above) exceeds 25 grammes per sample unit.

3.2.5 Analytical Characteristics

Mineral impurities measure on a whole product basis not more than 0.1 per cent m/m.

3.3 Definition of "defective" for Quality Factors

A sample unit that exceeds the allowance provisions applicable to Tables I and II (3.2.4) or other quality criteria (3.2.1 - 3.2.3) or the analytical characteristics of section 3.2.5 shall be considered a "defective".

3.4 Lot Acceptance for Quality Factors

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 3.2 when the number of "defectives", as defined in sub-section 3.3, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods, CAC/RM 42-1969, and does not exceed the allowance provisions for harmless extraneous material which is based on the sample average (3.2.4 (a)).

4. FOOD ADDITIVES

4.1 *[*Citric acid*]*
*[*Sodium hydroxide*]*
*[*None permitted*]*

4.2 Carry-Over Principle

Section 3 of the "Principles Relating to Carry-Over of Additives into Foods" (Ref. ALINORM 76/12, App. IV) shall apply.

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

6. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following provisions apply:

6.1 The Name of the Food

6.1.1 The name of the food as declared on the label shall include the designation "carrots". The words "quick frozen" shall also appear on the label, except that the term "frozen" [1] may be applied in countries where this term is customarily used for describing the product processed in accordance with the sub-section 2.2 of the standard.

[1] "Frozen": this term is used as an alternative to "quick frozen" in some English speaking countries.

6.1.2 In addition, there shall appear on the label in conjunction with or in close proximity to the word "carrots":

(a) the type Long or Round as appropriate

(b) the style as appropriate: "Whole", "Baby Whole", "Halves", "Quartered", "Sliced lengthwise", "Shoestring", "Sliced or Ring Cut", "Finger Cut", "Chunks of Pieces", "Diced", or "Double Diced".

6.1.3 If the product is produced in accordance with sub-section 2.4.3 the label shall contain in close proximity to the word "carrots" such additional words or phrases that will avoid misleading or confusing the consumer.

6.1.4 When any ingredient, other than salt, has been added which imparts to the food the distinctive flavour of the ingredient, the name of the food shall be accompanied by the term "with X" or "X flavoured" as appropriate.

6.1.5 Where a statement of size is made, the words "very small", "small", "medium", "large" and "extra large", as appropriate shall be indicated.

6. 2 List of Ingredients

A complete list of ingredients shall be declared, in descending order of proportion. Section 3.2.(c) of the "Recommended International General Standard for the Labelling of Prepackaged Foods" (Ref. No. CAC/RS 1-1969) shall also apply except that food additives present in the product in accordance with Section 4. 2 need not be declared.

6.3 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 food is sold.

6.4 Name and address

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

6.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6 Lot Identification

Each container shall be embossed or otherwise permanently marked in code or in clear, to identify the producing factory and the lot.

6.7 Additional Requirements

The package shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use as well as directions for cooking.

6.8 Bulk Packs

In the case of quick frozen carrots in bulk the information required in 6.1 to 6.6 shall either be placed on the container or to be given in accompanying documents, except that the name of the food accompanied by the words "quick frozen" (the term "frozen" may be used in accordance with sub-section 6.1 of this standard) and the name and address of the manufacturer or packer shall appear on the container.

7. PACKAGING

Packaging used for quick frozen carrots shall:

(a) Protect the organoleptic and other quality characteristics of the product;

(b) Protect the product against microbiological and other contamination;

(c) Protect the product from dehydration, and where appropriate, leakage as far as technologically practicable;

(d) Not pass on to the product any odour, taste, colour or other foreign characteristics, throughout the processing (where applicable) and distribution of the product up to the time of final sale.

8. METHODS OF EXAMINATION, ANALYSIS AND SAMPLING

The methods of examination, 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 Sampling

8.1.1 Sampling for Quality Factors: For these provisions detailed in Sections 2.4, 3.1 and 3.2 of this standard sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969), as amended.

8.1.2 Sampling for Net Weight: Shall be carried out in accordance with the FAO/WHO Sampling Plans for the Determination of Net Weight (under elaboration by the Codex Committee on Methods of Analysis and Sampling).

8.1.3 Sampling for analytical requirements: Sampling Plans to be elaborated. *[*to be endorsed*]*

8. 2 Thawing Procedure

According to the FAO/WHO Codex Alimentarius Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 32-1970). *[*to be endorsed*]*

8.3 Cooking Procedure

According to the FAO/WHO Codex Alimentarius Standard Procedure for Cooking of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 33-1970). The cooking time for quick frozen I carrots may vary within the following range, depending on variety, maturity, style and size:

carrots	(3-6) minutes	*[*to be endorsed*]*
cut carrots	(2-4) minutes	

8.4 Test Procedure

8.4.1 Net Weight - FAO/WHO Codex Alimentarius Standard Procedure for Net Weight Determination of Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 34-1970; also contained in the Recommended International Standard for Quick Frozen Peas (Section 8 Ref. No. CAC/RM 41-1970). *[*endorsed*]*

8.4.2 Mineral Impurities - FAO/WHO Codex Alimentarius Standard Procedure for Determination of Mineral Impurities in Quick Frozen Fruits and Vegetables (Ref. No. CAC/RM 54-1974). *[*to be endorsed*]*

CORRIGENDA TO

ALINORM 79/25
(August 1979)

(English Text)

REPORT OP THE 12th SESSION OF THE JOINT ECE/CODEX ALIMENTARIUS GROUPS OF EXPERTS ON STANDARDIZATION OF QUICK-FROZEN FOODS

Para. 65, last line, should read "to the section Presentation as 2.4.4.".

Para. 100, last line, should read "(see paras. 7-8 of this report).

Last paras. 144 and 145 should be renumbered 147 and 148.

Appendix II. Section 5.5. Last line, should read "paragraph 5.3 of this Code...".

Appendix IV. Section 2.4.6. First line, should read: "A lot will be considered acceptable to presentation factors when ...".

Appendix V. Section 3.2.1. Last line should read "from loose leaf".

Appendix VI. Section 3.2.4. First line, should read "indicated in section 3.2.3...".

Appendix VII. Section 3.2.2.2. First and second line, delete the phrase "from a sample taken in accordance .... CAC/RM 42-1969)", to read "The total solution solids contents of the juice...".

Appendix VIII. Section 3.2.5. First line, should read "as specified in section 3.2.4**...**".

Then pages 68, 69 and 70 should be renumbered 69, 70 and 68, respectively.

Appendix XII. Section 3. First line, should read "decided that Section 3 of the...".