ALINORM 78/25
AGRI/WP.1/GE.3/9

ECONOMIC COMMISSION FOR EUROPE
COMMITTEE ON AGRICULTURAL PROBLEMS
Working Party on Standardization of
Perishable Produce

CODEX ALIMENTARIUS COMMISSION
Twelfth Session
Rome, April 1978

REPORT OF THE ELEVENTH SESSION OF THE JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON STANDARDIZATION OF QUICK FROZEN FOODS

Geneva, 14-18 March 1977

INTRODUCTION

1. The Joint ECE/Codex Alimentarius Group of Experts on Standardization of Quick Frozen Foods held its eleventh session at Geneva from 14 to 18 March 1977.

2. Representatives from 21 countries were present: Australia; Austria; Belgium; Brazil; Canada; Denmark; Finland; France; Germany, Federal Republic of; Hungary; Israel; Italy; Japan; the Netherlands; Norway; Poland; Spain; Sweden; Switzerland; the United Kingdom and the United States of America. The European Economic Community (EEC) was represented. Non-governmental organizations represented by members of their secretariat were the American Frozen Food Institute, the Association of Official Analytical Chemists (AOAC), the International Institute of Refrigeration (IIR), Association Mondiale des Industries de Traitement des Algues Marines.

ELECTION OF RAPPORTEUR

3. Dr. R.W. Weik (United States of America) agreed to act as rapporteur and was so appointed by the Group of Experts.

ADOPTION OF AGENDA

4. The Group of Experts unanimously adopted the Provisional Agenda for the session with a slight change to the order of work.

MATTERS ARISING FROM REPORTS OF THE COMMISSION AND OF OTHER CODEX COMMITTEES

(i) Report of the Eleventh Session of the Codex Alimentarius Commission

5. The secretariat informed the Group that the Commission had adopted as Recommended Standards, the Draft Standards for Quick Frozen Peaches, Bilberries and Spinach. However, in adopting the Draft Code of Practice for Processing and Handling of Quick Frozen Foods, the Commission decided that the Code should be reviewed in five years time in the light of further information, and that the recommendations concerning product temperature (sections 5.6 and 6.3), were subject to reconsideration prior to the thirteenth session of the Commission.

6. In adopting the new provision which the Group had introduced in some draft standards at early Steps of the Codex Procedure permitting the marketing of new styles of products, the Commission considered that the provision on "other styles" was not for general and automatic application to all Codex Standards, but should be considered by Codex Committees on a commodity by commodity basis. The Commission had also agreed to the consequential amendments to the labelling section, to ensure that these new styles, not specifically identified in the standard, would be subject to analogous labelling requirements as regards the name of the product.

7. Finally, the Commission had advanced the proposed Draft Standards for Quick Frozen Blueberries, Broccoli, Cauliflowers and Leeks to Step 6 of the Codex Procedure and, similarly, the Commission had advanced the Method of Checking Temperature of Quick Frozen Foods to Step 6 of the Codex Procedure (ALINORM 76/44).

(ii) Other matters

8. The Group was informed that the Codex Committee on Methods of Analysis and Sampling (ALINORM 76/20 paras. 75-85), had endorsed the relevant sections of the Draft Standards for Quick Frozen Bilberries and Peaches including Thawing Procedure, Net Weight, Total Soluble Solids, Drained Fruit, but that final decisions had not been taken in regard to sampling and the determination of mineral impurities.

9. The Group took note that the Codex Committee on Food Labelling had approved the consequential addition to the Labelling section of the Draft Standard for Quick Frozen Spinach arising from new section 2.4.2, permitting the use of styles other than those defined in section 2.4.1. - new sub-section was 6.1.2. The Committee had also endorsed sub-section 6.1.3 the re-drafted provisions on characterizing ingredients, and another new section 6.7 for keeping and cooking. The Committee had endorsed all labelling provisions of the standard (ALINORM 76/22A paras. 5-7).

10. The Group was informed that as far as the Guidelines for Date Marking were concerned the Commission had agreed that, where appropriate, Codex Commodity Committees should incorporate date marking provisions in the standards. The Codex Committee on Food Labelling will again study the Guidelines at its next session which will be held in Ottawa from 16-20 May 1977 (ALINORM 76/44).

METHOD OF CHECKING TEMPERATURE OF QUICK FROZEN FOODS

11. The Group of Experts had before it the above standard method contained in Appendix VI of ALINORM 76/25A and government comments thereon (CX/QFF 77/7 : AGRI/WP.1/GE.3/44, CX/QFF 77/8 : AGRI/WP.1/GE.3/45, and AGRI/WP.1/GE.3/CRP.16).

12. The Group discussed the purpose and scope of the proposed method for checking the temperature of quick frozen foods:

(i) After detailed discussion the Group agreed that the Method should be annexed to the Code of Practice for the Processing and Handling of Quick Frozen Foods.

(ii) The Group also agreed that the purpose of the Method was to provide a procedure for the checking of product temperature when individual standards specifically incorporate the temperature provisions of the Code of Practice as well as when measurement of internal product temperature was desired but not mandatory.

(iii) Further, the Group agreed that the Method defined the meaning of the term "product temperature" whenever the term vas used in the Code of Practice.

13. While the Group recognized that the method of measuring internal product temperature gave more reliable results than measuring the surface temperature of packages of quick frozen food, it agreed that the measurement of internal product temperatures (see section 6 of the Method) was not intended only for situations of dispute (i.e. as "referee" method).

14. The Group agreed to make amendments to the Scope section of the Method to reflect the above considerations. The terminology intended to distinguish between the "referee" and "routine" methods referred to in the various sections of the Method was agreed to be "internal product temperature" and "package surface temperature" respectively. Several delegations were of the opinion that the Scope section should include a statement indicating that rejection of lots in relation to the temperature of the product should only be done on the basis of a determination of internal product temperature. The Group was of the opinion that statements concerning rejection or acceptance of lots of quick frozen foods were not appropriate to a technical document*

15. The Group agreed that it was not in a position to make statements in quantitative terms (i.e. ± 1 C), concerning agreement between package surface measurement and measurement of internal product temperature as indicated in section 7.1 of the Method. It was decided to rephrase this section in general terms indicating that package surface temperature measurements can give a reasonable indication of internal product temperature.

16. The Group noted that section 8.1 was perhaps not as detailed as might be desirable, but agreed that it was not possible at this stage to include more specific instructions concerning the selection of test packages in the Method.

17. It was recognized by the Group that reference to temperature in transit was desirable in connexion with the movement in vehicles of quick frozen foods across national boundaries. The Group discussed a proposal to amend section 8.3 in such a way as to include instructions concerning the selection of locations for temperature measurement both in transit and on complete unloading. The Group adopted a new amended text of section 8.3 based on the proposal of the Australian delegation and giving recognition to current inspection practices.

18. As regards temperature measurement in retail display cabinets, the Group considered a proposal to indicate more specifically the location of temperature measurement. It was agreed that, considering the large number of different types of display cabinets, there was no need to make any change to section 8.4. at this time, except for some editorial ones.

19. The Group also adopted a certain number of editorial and minor changes to the Method. The text of the Method as amended is given in Appendix II to this report. It was decided to submit the Method for Checking Temperature of Quick Frozen Foods to the Commission at Step 8 of the Codex Procedure with the recommendation that the Method be incorporated as an annex to the Code of Practice for the Processing and Handling of Quick Frozen Foods.

CONTAMINANTS IN QUICK FROZEN FOODS

20. The Group was reminded of its deliberations on the subject at the previous session, where it had been decided to request governments to comment on the preliminary conclusions (ALINORM 76/25A, para. 6). It was noted that only two governments had sent in observations.

21. The Codex secretariat had prepared an analysis of the various contaminant sources, differentiating between (i) environmental contaminants which became part of the food prior to processing and thus were not particular to quick frozen foods, and (ii) contaminants which became part of the quick frozen products during the handling and freezing or originated from packaging materials (CX/QFF 77/10; AGRI/WP.1/GE.3/R.47).

22. The Group held the view that for the first category of contaminants as described above maximum limits should be set by general Codex Committees appointed to deal with specific groups of contaminants, e.g. the Committees on Pesticide Residues and Food Additives. With regard to the second category of contaminant the Group found that present knowledge was insufficient to warrant establishing maximum limits for contaminants including those from a microbiological source. It further appeared that contaminants did not present serious problems in quick frozen foods.

23. The Group agreed to rediscuss this issue if at a future session a member governmemt wished to have the matter reviewed.

CONSIDERATION OF PROVISION FOR STYLES

24. The Group was informed that, at its eleventh session (1976), the Commission had agreed to include provisions for "other styles" in the Description and Labelling Sections of certain standards for quick frozen foods and fishery products (see document CX/QFF 77/9; AGRI/WP.1/GE.3/R.46).

25. The Group agreed that provision for "other styles" should be included in the Step 9 Standard for Quick Frozen Strawberries similar to those agreed to at its tenth session for the Standards for Quick Frozen Peaches and Spinach.

26. The delegation of the United Kingdom pointed out, and the Group agreed, that where possible harmonization of styles in standards for fruit and vegetables covered both by the Codex Committee on Processed Fruits and Vegetables and the present Group should be pursued.

REPORT OF THE WORKING GROUP ON TEMPERATURE AND QUALITY CONTROL OF QUICK FROZEN FOODS

27. The Group had before it an interim report of the above Working Group. In introducing the document Mr. R.J. Attwell, (United Kingdom) chairman of the Group, indicated that only a few governments had responded to the questionnaire on temperature and quality of quick frozen foods (CL 1976/1, February 1976). For this reason, and since some of the replies had been received but a short time before this session, only an interim report could be prepared for consideration by the Group of Experts. The Working Group wished to emphasize that they had been impressed by the potential significance of even the limited data available, and suggested that further work at Working Group level would be necessary to assess fully the implication of those data, together with any further data that could be made available. As a point of detail Mr. Attwell reported that the figure to be inserted in para. 9(1) of the Working Group's report, covering the period spend in the retail cabinet prior to purchase, was 12 days - 73 per cent of the samples examined having given some indication in this respect.

28. The delegations of USA, France, Canada, Sweden, and Japan indicated that they would endeavour to furnish information as requested by the Working Group. The delegation of the Federal Republic of Germany was of the opinion that in the present investigation of the Working Group it was important to ensure that the study on quality of quick frozen foods was done in a standardized manner and that it was also necessary to obtain more information concerning the history of the quick frozen food in the cold chain. While agreeing that such information was necessary, some delegations pointed out that it would be difficult to obtain and would make the questionnaire unduly detailed.

29. The Group noted the preliminary conclusions of the Working Group, particularly that approximately 5 per cent of quick frozen foods taken from retail cabinets were found to be wanting on the basis of the method used in the investigation, and that, within the range of temperature encountered and the period the packs had remained in the retail cabinet prior to sale, there was no correlation between quality and the temperature of the product as sold. The Group recognized that more information was needed especially concerning the effect of time, temperature and other factors operating in the cold chain before valid conclusions could be reached concerning the quality of quick frozen foods handled according to current practices. It was noted that the International Institute of Refrigeration, scheduled to meet in September 1977 in Karlsruhe, would address itself to questions relating to quick frozen foods. It was thought desirable to bring the preliminary conclusions of the Working Group to the attention of that meeting. Similarly, the preliminary conclusions of the Working Group should be brought to the attention of the Codex Committee for Fish and Fishery Products.

30. The Group thanked the Working Group and the United Kingdom for their efforts and requested governments which had not yet responded to the questionnaire (CL 1976/1) to do so by 31 December 1977. It also requested the Working Group (again including Switzerland as a member) to evaluate all the data available at that date with a view to presenting a full report, incorporating recommendations regarding section 5.6 and 6.3 of the Code of Practice for Processing and Handling Quick Frozen Foods (see para. 5 above) to the next meeting of the Group of Experts.

31. Concerning the problem raised by several delegations and mentioned in paragraph 29 above (a problem which was outside the scope of the survey conducted by the Working Group), about the effect on final product quality of the time/temperature history of the product before it reached the retail cabinet, it was agreed that the Working Group should set up a technical sub-group, under the chairmanship of Professor Spiess (Federal Republic of Germany). The membership of the technical sub-group should be the same as that of the Working Group, together with France, Sweden and Italy. The French and Swedish delegations were able to agree provisionally that they were prepared to co-operate; the Italian authorities, who were not represented, would be approached separately. In principle, moreover, any country which felt that it could contribute to the work of the technical sub-group would be welcome to participate. The delegation of the United States agreed to supply the technical sub-group as soon as possible with details of research carried out in that country.

32. The task of the technical sub-group would be to formulate a research programme to cover the time/temperature problems likely to arise before arrival of the products in the retail cabinet, to allocate the execution of particular parts of that programme to research institutes in the individual participating countries, and to collate the results of that research into a report to the Working Group. For this reason it was essential that delegates to the sub-group should be from professional and technical rather than administrative circles, and that they should be well-briefed on the research position in

their own countries. The results of this research would be considered by the Working Group which, on the basis of those results, would formulate recommendations to the Group of Experts as to appropriate action.

33. It was the intention that the technical sub-group would meet to discuss the programme in conjunction with the IIR meeting at Karlsruhe, Federal Republic of Germany, in September 1977. The Group of Experts accepted that it would not be possible to present more than a progress report to the Twelfth Session of the Group, but hoped that the Working Group would be in a position to present a comprehensive report, incorporating recommendations to the thirteenth Session of the Group of Experts.

DATE MARKING

34. The Group noted that the Codex Alimentarius Commission, at its eleventh session, had requested Codex commodity committees to incorporate date marking provisions into standards (para 112, ALINORM 76/44 where appropriate. It also noted that the Codex Committee on Food Labelling vas elaborating guidelines on date marking for use by Codex Commodity Committees.

35. The Group considered that the interim report of the Working Group on Temperature and Quality Control of Quick Frozen Food (paras 27 to 30), did not provide sufficient information concerning the relationship between the time/temperature history of the product prior to final sale to the consumer, and the quality of that product. For these reasons the Group felt that it was not in a position to reach conclusions concerning the need for date marking of quick frozen food and, if needed, the particular method that would be most appropriate.

36. The Group noted that some governments and the Codex Committee on Food Labelling had in this connexion expressed their preference for minimum durability.

DRAFT STANDARD FOR QUICK FROZEN BLUEBERRIES

37. The Group had before it the above-named draft standard as contained in Appendix V to ALINORM 76/25 and government comments thereon (CX/QFF 77/7: AGRI/VP.1/GE.3/R.44, and Add.1, and AGRI/WP.VGE.3/CRP.16).

3.2. Composition

38. The Group discussed a proposal to align the limits allowed for total soluble solids, in the products prepared with dry sugars and with syrup, with those set for bilberries (Step 9). It was noted that the acidity of blueberries was less than that of bilberries. The Group considered that the range permitted for the total soluble solids content to be sufficiently wide, however, to make the value identical - i.e. "18" - 35% and "15" -25% total soluble solids content for quick frozen blueberries prepared with dry sugar and with syrup respectively.

39. Considerable discussion took place on the appropriateness of providing for a tolerance to the range for total soluble solids in the definition of "defective" for composition (3.2.3).

40. The Group considered various alternatives: (i) to retain the present text (also contained in the bilberry standard) with a slight modification in order better to quantify the tolerance; (ii) to delete the tolerance allowance; (ill) to delete the provision for the "Definition of Defective"(3.2.3) and "Lot Acceptance" (3.2.4) as applicable to composition, which would imply rejection of any consignment with a total soluble solids content outside the indicated range on a single sample; and (iv) introducing a general provision for lot acceptance for composition as well as quality factors. It was ultimately

agreed to end section 3.2.3 after the word "defective" and to delete the clause pertaining to a tolerance allowance in the Definition of "Defective" for Composition (3.2.3). The delegation of Switzerland reserved its position with regard to this decision.

3.3.4.1 Definitions for Visual Defects

41. In sub-paragraphs (c) and(e) the Group agreed:

(i) to amend the definition "green berries" to read "unripe berries" which were described as "green" rather than "uncoloured", (c). A consequential amendment was made in the defect table (Table I).

(ii) to provide for mechanical injury as a cause for the defect "blemished" (e).

6.1 Name of the Food

42. The Group briefly considered a proposal specifically to allow for the term "I.Q.F." or "individually quick frozen" in the Name of the Food (new 6.1.4) to cover one of the two styles of the product and to be in harmony with the Standard for Quick Frozen Peas. It was noted, however, that para. 6.1 of the Recommended International General Standard for the Labelling of Prepackaged Food provided for such additional nomenclature. No change was made.

6.2 List of Ingredients

43. Reference to subsection 3.2 (d) of the Recommended International General Standard for the Labelling of Prepackaged Foods was deleted as not being applicable to the product concerned.

6.5 Country of Origin

44. The Group agreed to leave the declaration of the country of origin as. optional instead of making it mandatory as was proposed by one delegation which suggested deletion of the clause "if an omission would mislead or deceive the consumer". It was further not considered necessary to provide for the processing in a second country in relation to the declaration of the country of origin.

8.4.2 Mineral Impurities

45. It was agreed to update the reference to the method to be used. Status of the Standard for Quick Frozen Blueberries

46. The Group advanced the Standard for Quick Frozen Blueberries to Step 8 of the Codex Procedure. The revised standard is contained in Appendix III to this Report.

DRAFT STANDARD FOR QUICK FROZEN LEEK

47. The Group had before it the above draft standard in ALINORM 76/25A Appendix IV, together with written government comments in documents CX/QFF 77/7: AGRI/WP.1/GE.3/R.44 and Add.1, and AGRI/WP.1/GE.3/CRP.16.

48. Considering the draft standard paragraph by paragraph the Group decided to remove all square brackets shown in the text, but in so doing made several alterations to the content shown in some of the square brackets.

2.4.1 Styles

49. In sub-section (e) the Group increased the minimum size from 10 to 15 mm and deleted the last word "width" and replaced it by the word "size".

2.4.4 Sizing

50. In sub-section (a) the words "leek, cut leek and leek rings" were deleted.

3.2.3 Definition of Visual Defects

51. In sub-section (f) the sentence was amended to read: "the white or pale green portion is less than one-third of the total product".

3.2.4 Standard Sample Size

52. The standard sample size for leek rings and chopped leek was reduced from 300 g to 250 g.

53. The Group approved the revised figures for Total Allowable Points for whole leek, leek and cut leek but retained the totals shown in Table II for leek rings and chopped leek.

54. The Group decided to incorporate a new section 6.1.5 to cover the addition of ingredients other than salt, and further decided to add a section on Cooking Procedure and a reference to the FAO/MHO Codex Alimentarius Method for the Determination of Mineral Impurities in Quick Frozen Fruits and Vegetables (CAC/RM 54-1974). The secretariat was asked to harmonize the various sections of the standard editorially with that of the standard for Quick Frozen Spinach.

Status of the Standard for Quick Frozen Leek

55. The Group advanced the Draft Standard for Quick Frozen Leek to Step 8 of the Codex Procedure. The revised standard is contained in Appendix IV to this Report.

DRAFT STANDARD FOR QUICK FROZEN CAULIFLOWER

56. The Group had before it the above standard (App. II, ALINORM 76/25A) and written government comments (CX/QFF 77/7: AGRI/WP.1/GE.3/R.44 and Add.1, and AGRI/WP.1/GE.3/ CRP.16). The following discussion took place:

1. SCOPE

57. The Group recalled that the purpose of the last sentence of this section was to exclude from the standard quick frozen cauliflower which would be further processed (e.g. as a pickled ingredient) or used otherwise in food manufacture (e.g. as an ingredient of quick frozen vegetable mixes).

2.4.1 Style

58. The Group considered whether there was any need to provide the style "whole" in view of diminishing trade in the product. It was agreed not to make any changes as a number of delegations pointed out that "whole" size graded cauliflowers were still marketed. The Group considered a proposal of Poland to reduce the dimension of florets to 10 mm; it agreed to reduce the figure to 12 mm as proposed by the delegations of the United Kingdom and Netherlands. The delegation of Canada proposed to introduce two new styles: "fragments" and "finely chopped". It appeared that these styles were not important in international trade. Moreover, the Group considered that the introduction of new styles would necessitate a considerable revision of various sections of the standard and concluded that further styles were covered by section 2.4.2. "other styles".

2.4.3 Sizing

59. The Group adopted an improved rewording as proposed by Australia, except that the size of florets was changed to 12 mm as indicated above.

2.4.3 (c)

60. After discussion the Group decided to renumber this sub-section under the heading "Tolerances for Sizes" and to apply the Sampling Plan (AQL 6.5) to sizing separately from section 3.4 "Lot Acceptance for Quality Factors". For this purpose two additional sections, i.e. "Definition of "defective" for Sizing" and "Lot Acceptance for Sizing" were added as sections 2.4.4 and 2.4.5 respectively. The delegation of Canada was not in agreement with this change as they considered the 20% tolerance for sizing already sufficiently liberal.

3.2.1 General Requirements

61. The Group discussed the proposal of the delegation of Poland to require that quick frozen cauliflower be reasonably free from insect contamination. The Group did not accept this proposal since it considered this requirement was covered by section 5 "Hygiene".

3.2.2 Definition of Visual Defects

62. As there were several written proposals to amend this section, the Group requested the Netherlands, United Kingdom and Canada to form a Working Group to revise this section as well as section 3.2.4. The Working Group made extensive editorial changes to this section and also made material improvements and amendments all of which were accepted by the Group. The amended text of Section 3.2.2 and 3.2.4 is given in Appendix V. to this Report.

3.3 Definition of "Defective" for Quality Factors

63. The Group deleted sub-section (b) of this section as "fragments" of cauliflower were included in the Total Allowable Points as an additional defect rather than being expressed as a tolerance by percentage.

3.4 Lot Acceptance

64. The Group also decided to follow the same approach adopted for blueberries in applying lot acceptance separately to defectives as defined in 3(a) and 3(b).

4. Food Additives

65. The Group considered a proposal of the United States to add malic acid to the list of processing acids. The Group noted that malic acid served the same function as citric acid in the blanching or cooling water leaving minimal residue on the food.

6.1 The Name of the Food

66. The Group discussed whether the designation "clusters" should be permitted as an alternative to "florets". On the one hand it was thought desirable to standardize terminology as far as possible, while on the other hand it was maintained that recognition should be given to currently used designations with which consumers were familiar. The Group adopted an amendment proposed by the United Kingdom but decided to place it in square brackets. The amended text is given in Appendix V to this report.

New Sections 6.1.4 and 6.1.5

67. The Group agreed that, in view of the fact that the addition of condiments and spices was permitted, the standard should include a labelling section dealing with characterizing ingredients as in other standards. It also agreed to include a section dealing with declaration of size, as proposed by the Netherlands.

6.5 Country of Origin

68. The delegation of Canada and Australia were of the opinion that paragraph 3.5 of the General Standard on Labelling dealing with further processing should be inserted in this section. The Group considered that quick frozen food could not be further processed without changing its nature and did, therefore, not agree to making this change.

Date Marking

69. The delegation of Japan pointed out that Japanese food legislation provided for a compulsory date marking of quick frozen foods. The Group did not take any action concerning date marking at this time (see paras 31 to 33).

Status of the Standard

70. In view of the extensive changes made to the standard the Group decided to return the draft standard for Quick Frozen Cauliflower to Step 6 of the Codex Procedure for a further round of government comments (see Appendix V).

DRAFT STANDARD FOR QUICK FROZEN BROCCOLI

71. The Group had before it the above-named standard as contained in Appendix III to ALINORM 76/25 A and government comments thereon (CX/QFF 77/7: AGRI/WP.1/GE.3/44 and Add. 1, and AGRI/WP.1/GE.3/CRP.16).

72. Following a proposal by the Chairman, a Working Group consisting of representatives of the delegations of the United Kingdom and the United States was set up during the session to review the standard on the basis of comments received.

73. The Chairman of the Working Group - Mr. D.A. Patton (United States of America) -reported to the Group that agreement had been reached on a large number of proposals for changes. There were, however, some questions where views differed and further discussions seemed necessary.

74. The delegation of Australia proposed that an additional style "pieces", marketed in that country, should be introduced into section 2.4.1. The Group, noted that this product was not important in international trade and that the introduction of a new style would require a significant revision of various sections of the standard. The Group concluded that the above style was covered by the general provision, and did not accept the Australian proposal.

75. The delegation of Poland proposed that section 3.2.1 be amended by including reference to insect contamination. The Group did not adopt this proposal (see para 61).

76. There was discussion as regards the suitability of the dimensions for the styles, spears and florets. The Group decided not to make any changes, pending the receipt of further comments. As regards the definition of the defect "fragments" the appropriateness of the maximum weight of 5 g provided for in the standard was questioned. The Group agreed to reconsider this matter at its next session.

77. The Group concurred with the amendments agreed to by the ad hoc Working Group and expresses its appreciation for the efforts of the Working Group.

Status of the Standard

78. Following some discussion the Group agreed - in the light of the numerous changes made to the document - to return the draft standard for Quick Frozen Broccoli to Step 6 of the Procedure to allow for a further round of government comments. The revised standard is contained in Appendix VI to this report.

CONSIDERATION OF STANDARDS AT STEP 4 OF THE PROCEDURE

79. In view of the shortage of time and in order make the most of the available time, the Group agreed that the report of the Session should only show the essential discussions and conclusion. Furthermore, the rapporteur, the secretariat and individual delegations were requested to ensure that the amendments to particular standards adopted by the Group would be made after the session before submitting the standards to the Commission or governments for comments.

PROPOSED DRAFT STANDARD ON BRUSSELS SPROUTS

80. The Committee had before it the above standard contained in document CX/QFF 75/15: AGRI/WP.1/GE.3/37 and government comments thereon in CX/QFF 77/6: AGRI/WP.1/GE.3/R.43 and Add. 1. The Group had detailed discussions of the above standard in the light of government comments.

(i) A number of minor amendments and improvements to the text were made

(ii) The Group also agreed to the following major amendments:

(a) A new style for free-flowing and non-free flowing products was introduced into the standard.
(b) Sizing was made subject to Lot Acceptance separately from visual defects as in the cauliflower standard.
(c) The sizing was revised by introducing four categories 'very small', 'small', 'medium' and 'large' and reducing the category 'small' to 30 mm in square brackets as a compromise between the various current practices of sizing. In addition a minimum size of 12 mm was laid down as applicable for all size categories.
(d) A new visual defect "seriously blemished" was introduced in section 3.3.
(e) A new section dealing with Lot identification was introduced in the labelling section.

Status of the Standard

81. The Group advanced the draft standard for Quick Frozen Brussels Sprouts to Step 5 of the Codex Procedure. The revised standard will be circulated in a separate document.

PROPOSED DRAFT STANDARD FOR GREEN BEANS

82. The Group had before it the draft standard for Green Beans as revised by the United Kingdom in CX/QFF 75/16: AGRI/WP.1/GE.3/R.38, and written government comments in CX/QFF 77/6: AGRï/WP.1/GE.3/R.43. The following decisions were made:

1. Scope

83. In response to suggestions from several delegations, the Group decided to provide for both "green beans" and "wax beans" and amended the relevent sections of the draft standard accordingly. The Group agreed to use the Codex standard for processed beans as a guide in formulating the various provisions of this standard, realizing that the standard for processed beans was a very early standard.

2.4 Presentation

84. (i) The delegation of the Netherlands suggested the introduction of a new section 2.4.3 Colour and the Group agreed to incorporate such a section but decided to restrict it to "wax beans".

(ii) After a discussion the Group, in taking up the suggestion of the Netherlands on 2.4.2 Style, decided to rearrange (e) as follows:

(e) Sliced
(f) Shoestring

"At the suggestion of the delegation of the United States, the Group decided to add a further subdivision, namely:

(g) mixed styles, and also decided to place all three names in square brackets for further comments.

85. (iii) In section 2.4.4 (old section 2.4.3) Sizing the Group decided to retain the text appearing in CX/QFF 75/16 and to put the whole section in square brackets for further comments.

86. Considering the lack of time, the Group decided to ask the rapporteur (United Kingdom) to revise the draft standard, taking into account the comments made at this session and the outstanding written comments of governments in document CX/QFF 77/6, and where appropriate to harmonize the sections with those in the standard for Quick Frozen Spinach.

Status of the Standard

87. The Group advanced the proposed draft standard for Quick Frozen Green Beans to Step 5 of the Codex Procedure. It was noted, however, that the standard was not ready for the omission of steps and should be sent to Governments for comment at Step 6 of the Procedure. The revised standard will be. circulated as a separate document.

PROPOSED DRAFT STANDARD FOR CORN-ON-THE-COB

88. In considering the proposed draft standard in document CX/QFF 77/3: AGRI/WP.1/GE.3/ R.40, and the written comments of governments in Add.1, Add. 2 and Add.3 to that document and AGRI/WP.1/GE.3/CRP.18, the Group heard a report from a small working group composed of the delegations of Australia, Israel, Japan, Sweden, the United Kingdom and the United States who discussed the proposed draft standard for corn-on-the-cob with a view to expediting the work of the Group. The results of their deliberations were presented by the chairman of the sub-group, Mr. T. Nilsson (Sweden), with further information being given by Mr. D.A. Patton (United States).

89. The Group decided to ask the rapporteur (Sweden) to revise the proposed draft standard particularly in the following way:

2.4.1 Presentation

Recognizing that corn-on-the-cob was being marketed in a variety of styles decided to incorporate these styles into the standard.

3.2.1 General Requirements

The Group decided to harmonize the lay-out of this section with the other draft standards. The Group also agreed to provide in section 8.0 standards methods for the determination of (a) Alcohol Insoluble Solids and (b) Dry Matter.

3.2.3 Standard Sample Size

The Group agreed to take up the suggestion of the delegation of Australia and introduce the following wording: "In the case of the style "Cut Cob" and "Small Cut Cob", the least number of pieces which will give a weight of not less than 500 grammes".

90. The Group asked the rapporteur (Sweden), when preparing the revision of the proposed draft standard, to take into account the comments made at this session, and to harmonize the sections with those draft standards already advanced in the Procedure, and with the standard for Quick Frozen Spinach.

Status of the Standard

91. The Group advanced the proposed draft standard for Quick Frozen Corn-on-the-Cob to step 5 of the Codex Procedure. The revised draft standard is contained in Appendix VII to this report.

PROPOSED DRAFT STANDARD FOR QUICK FROZEN FRIED POTATO CHIPS

92. At the beginning of the session, the Chairman proposed and the Committee agreed to set up a Working Group to study and revise the Proposed Draft Standard for Quick Frozen Potato Chips (CX/QFF 77/5: AGRI/WP.1/GE.3/R.42) in the light of government comments in document CX/QFF 77/5: AGRI/WP.1/GE.3/R.42 Add. 1 and Add. 2. The Working Group consisted of representatives of the delegations of Australia, Japan, Netherlands, Switzerland, the United Kingdom and the United States of America.

93. The Chairman of the Working Group, Mr. A.W. Randell (Australia), in reporting to the session stated that within the Working Group full agreement had been reached with regard to revisions of a number of provisions for a standard which applied to French Fried Potatoes (Potato Chips) only. It had not been found feasible to cover diced sliced or disc styles or reformed potato products in the same standards owing to the complexity of the defects tables that would be required. The Working Group held the view that these products should be dealt with in a different standard.

94. The Group was informed that in the revised standard "definition of defects" a defect table had been included. In line with the carry-over principle those food additives contained in the product and which originated from the ingredients used - e.g. antioxidants in oils etc. - had not been listed as food additives.

95. The Group decided not to discuss the revised standard in detail but to limit the deliberations to some selected issues. It was suggested that the standard should only cover pre-fried products and should not cover fried products. The Group noted that in some countries products were marketed which could be either fried or heated in an oven and that thus a distinction between pre-fried and fried was not practicable. It was thought that it should be left to the manufacturer to inform the consumer on the method of preparation.

96. The Group further noted that in different countries different terms existed to describe the fried potato chips. After some discussion, it was agreed that the title of the document should read: "Standard for French Fried Potatoes*", with an accompanying footnote to read: *"In some English speaking countries the term Potato Chips is used as an alternative to "French Fried Potatoes". It was further agreed that the French translation of the term "French Fried Potatoes" should read "Pommes de terre Frltes" and the Spanish: "Patatas Fritas".

97. The Group considered the possibility of also covering in the present standard reformed fried potato products. It was noted that the Working Group had advised against this in view of difficulties expected in covering the regular and the reformed product in the defect table. The Group decided to accept an offer made by the delegation of the United States to develop a standard for the reformed product which would follow the text of the present standard as closely as possible.

98. It was agreed that, following consideration of the two standards at the next session, the feasibility of combining the two products in one standard would be considered.

99. Concerning styles the Group agreed that these would be determined by the nature of the surface and the nature of the cross section of the potato strip.

100. A number of delegations held the view that the carry-over principle was not applicable to the fried potatoes as such additives which might be contained in oil or fat used would - in view of the substantial proportion of the oil or fat on the end product - be at a functional level in the end product. It was, therefore, agreed that antioxidants and colours should be listed.

101. It was agreed to request governments when commenting on the revised document, to consider specifically the form and nature of the defect table and the food additives. It was further agreed that the Working Group including Canada should remain in existence at least until the next session of the Group to review well in advance of the next session the standard in general and the defect table in particular in the light of government comments.

102. The delegation of Australia as the rapporteur agreed to act as a focal point for receipt of comments and to correspond with other members of the Working Group concerning progress in the elaboration of the standard. The delegation was asked to revise the proposed draft standard taking into account decisions made at this session and written government comments, and to harmonize the sections with those draft standards already advanced in the Procedure and with the Standard for Quick Frozen Spinach. The Group thanked the Working Group for the considerable amount of work done.

Status of the Standard

103. The Group advanced the proposed draft standard for Quick Frozen French Fried Potatoes to Step 5 of the Codex Procedure for submission to the Commission. The revised standard is contained in Appendix VIII to this Report.

PROPOSED DRAFT STANDARDS FOR WHOLE KERNEL CORN AND CARROTS

104. Because of lack of time the above two standards could not be considered by the Group. It was agreed that, in order to advance work on these standards, they should be redrafted taking into consideration written comments already received. The delegation of the United States undertook to redraft the standard on whole kernel corn (relevant

documents were (CX/QFF 77/4: AGRI/WP.1/GE.3/R.41 and Add. 1 and 2, and AGRI/WP.1/GE.3/CRP.19) while the delegation of the Netherlands undertook to redraft the standard for carrots (relevant documents CX/QFF 77/2: AGRI/WP.1/GE.3/R.39 and Add. 1 and 2 and AGRI/WP.1/GE.3/ CRP.17 and a letter from Austria dated 22 February 1977).

Status of the Standards

105. The Group agreed to hold these standards at Step 4 of the Codex Procedure pending reconsideration of the revised versions.

OTHER BUSINESS

Future Work

106. The Group agreed that the list of items given below should appear on the agenda of the next session. It was realized that this work would represent a heavy load for a normal five-day session. The Secretariat was requested to arrange, if possible, for a six-day session. The Group noted that the Secretariat was in the process of collating government acceptances at Step 9 of the Procedure and that this information would be issued to governments on a regular basis. The Group wished such information to be made available at the next session.

107. The delegation of the United States was of the opinion, and the Group agreed, that the question of sample size and the sampling plans should be re-examined as a general issue in relation to the quality assessment of quick frozen foods. Along a similar line and at the suggestion of the delegation of the United Kingdom, the Group agreed that the principle of quality assessment of quick frozen foods in the light of "defective units" and "lot acceptance" should be reconsidered as a general issue. Both the above delegations undertook to produce working papers for the next session of the Group.

		Author Country
-	Review of Acceptance of Step 9 Standards	-
-	Report of the Working Group on Temperature and Quality of Quick Frozen Foods	UK
-	Date marking (in the light of conclusions of the Codex Committee on Food Labelling and the above Working Group)	-
-	Guide fr Handling Quick Frozen Food During Local Distribution	USA
-	Draft standard for Quick Frozen:	

	At present at Step	
Cauliflowers	6	USA
Broccoli	6	USA
Brussels Sprouts	5	UK
Green Beans	5	UK
French Fried Potatoes	5	Australia
Corn-on-the-Cob	5	Sweden
Carrots	4	Netherlands
Whole Kernel corn	4	USA
Reformed potato chips	-	USA

- Paper on Quality Assessment of Quick Frozen Foods (paper to be prepared by the United Kingdom, see para. 104).
- Paper on Sampling Size and Sampling Plans (paper to be prepared by the United States, see para. 104.).

Date and Place of the Next Session

108. The Group noted that only one session had been foreseen on quick frozen foods for the biennium 1978/79, but that more than likely two sessions of the Commission would be held in the same biennium. Given these circumstances, the Group agreed that the second half of 1978 would be the most appropriate time for the session. It was also noted that in all probability the next session of the Group would take place in Rome.

ELECTION OF CHAIRMAN AND VICE-CHAIRMAN

109. The Group of Experts unanimously re-elected Mr. T. van Hiele (Netherlands) as Chairman of the session. Mr. W. Orlowski (Poland) was unanimously re-elected as Vice-Chairman, both to serve from the end of the eleventh session to the end of the twelfth session.

SUMMARY STATUS OF WORK

(prepared by the secretariat)

Quick Frozen Peas		CAC/RS 41-1974 plus amendment, June 1976
Quick Frozen Strawberries		CAC/RS 52-1971 plus Corrigendum plus amendment, June 1976
Quick Frozen Raspberries		CAC/RS 69/74.
Quick Frozen Peaches		CAC/RS 75-1976
Quick Frozen Bilberries		CAC/RS 76-1976
Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods		CAC/RCP 8-1976
Recommended International Standard Procedure for Thawing of Quick Frozen Fruits and Vegetables and Cooking of Quick Frozen Vegetables for Examination Purposes		CAC/RM 32/33-1970
FAO/WHO Codex Alimentarius Methods of Analysis for Quick Frozen Fruits and Vegetables - First Series		
Method of Checking Temperature of Quick Frozen Foods	Step 8	This report - Appendix II
Quick Frozen Blueberries	Step 8	This report - Appendix III
Quick Frozen Leek	Step 8	This report - Appendix IV
Quick Frozen Cauliflower	Step 6	This report- Appendix V
Quick Frozen Broccoli	Step 6	This report - Appendix VI
Quick Frozen Brussels Sprouts	Step 5	[1]
Quick Frozen Green Beans	Step 5	[1]
Quick Frozen Corn-on-the-Cob	Step 5	This report - Appendix VII
Quick Frozen French Fried Potatoes	Step 5	This report - Appendix VIII

Quick Frozen Whole Kernal Corn	Step 4	[1]
Quick Frozen Carrots	Step 4	[1]
Reformed French Fried Potatoes		[2]

[1] To be circulated as separate documents when revised by the rapporteur countries.

[2] A proposal to be submitted by the rapporteur country.

ALINORM 78/25
APPENDIX I

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* The Heads of Delegations are listed first.
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APPENDIX II

METHOD FOR CHECKING PRODUCT TEMPERATURE OF QUICK-FROZEN FOODS

(Advanced to Step 8 of the Procedure)

Annex I to Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods

1. SCOPE

The procedures outlined herein provide methods for the measurement of product temperatures of quick-frozen foods. Temperature measurement involves two aspects:

(a) to obtain an accurate temperature at point of measurement, using proper equipment; and
(b) to select a representative number of locations for measurement to provide information regarding average temperature of the lot as well as variations within the lot.

Two methods are recommended for temperature measurement, namely for

Measuring internal product temperature

Measuring surface package temperature Unless otherwise agreed the product temperature mentioned in the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods.(CAC/RCP8-1976) refers to internal product temperatures as indicated in paragraph 6 of the Annex.

2. DEFINITION OF TEMPERATURE

"Temperature" for the purpose of this document is the temperature measured at the point of placement of the sensitive part of the temperature measuring instrument or device.

3. GENERAL SPECIFICATIONS FOR TEMPERATURE MEASURING INSTRUMENTS

Only equipment that meets the following requirements should be used for measuring and control purposes:

(a) The half-value period* should not exceed 0.5 minutes;
(b) The instrument should be accurate to within $\pm$ 0.5ºC over the range -30ºC to 30ºC;
(c) The instrument should be sensitive to changes of 0.5ºC;
(d) The accuracy of the measurement should not be affected by the temperature of the surroundings;
(e) Markings on the scale should be in divisions of 1ºC or less and readable to 0.5ºC;
(f) For measuring equipment, other than glass-stem thermometers, a setting device to allow adjustment of the indicating needle during recalibration should be provided;
(g) The sensitive part of the measuring device should be so constructed as to ensure good thermal contact with the product;
(h) Electrical equipment should be protected from undesirable influence resulting from condensation of moisture.

* Halfvalue period means the time in minutes needed to change a thermometer reading from the initial temperature to that halfway to the final temperature.

4. EQUIPMENT FOR MEASURING TEMPERATURE

4.1 Glass Stem Thermometer

Glass stem thermometers are not recommended for routine testing, but where used they should be used with great care in proximity of food. The glass stem thermometer should have the following characteristics:

(a) An overall length of about 25 cm.
(b) A sharp pointed round stem for product measurement and an elliptical stem for surface measurement.
(c) Alcohol filling is preferred to mercury.

4.2 Dial Thermometer

Equipment may be based on the principle of liquid expansion, vapour pressure change, spring deformation, or metal expansion.

The dial thermometer should have the following characteristics:

(a) An overall length of the sensitive part of about 15 cm.
(b) A sharp pointed stainless steel stem for product measurement and preferably a flat stem (not over 5 mm thick) for surface measurement.
(c) A dial, hermetically sealed with plastic and not with glass.

4.3 Electrical Thermometer

A portable instrument powered by a dry cell battery is recommended in preference to an instrument using a mains voltage supply. The instrument should incorporate a method of checking the battery voltage, to indicate when replacement or recharging is necessary. Electrical resistance or thermocouple as the sensing element. The overall length of the probe or blade should be about 15 cm. The sensing element of the electrical thermometer should have the following characteristics:

(a) A stainless steel sensitive part - either probe or blade type.
(b) Leads of known resistance or, preferably, leads with built-in compensation resistance.

4.4 Instruments for Making Holes in the Product

A sharp pointed metal instrument such as an ice pick or hand drill, which can easily be cleaned, should be used. The hole in the packet and product should be only marginally larger in diameter than the sensitive part of the sensing element to be used.

5. CALIBRATION OF THERMOMETERS

5.1 Thermometers should be checked at regular intervals depending on how consistent they are. for accuracy. Instruments handled from one load to another should be checked weekly. Instruments used during transport should be checked before a new load is to be carried.

5.2 The test can be made by immersing the thermometer sensing element in an ice water bath. A litre container (vacuum flask) should be filled with chipped ice and then filled entirely with cold water. It should be stirred for at least two minutes, before the sensing element is inserted into the centre of the mixture. The sensing element should not be allowed to touch the container. The temperature indicated by the thermometer should be observed after pausing for at least three minutes to allow stabilization to take place. The immersed thermometer should read within 0.5ºC, plus or minus, of 0ºC. The 0ºC point on the scale of a glass stemmed thermometer should emerge just above the

top of the flask. The sensing element of all other types should be entirely immersed in the ice bath.

5.3 For checking the thermometer at temperatures in the range of –18 C to -21ºC, a brine mixture consisting of one part by weight of table salt and three parts by weight of chipped ice should be used. The reading of the thermometer being tested should be compared with that of a thermometer known to be accurate. Both temperature sensors should be inserted into the brine mixture with the stems next to each other, and they should not touch the container. The temperatures indicated by the thermometers should be observed after pausing for at least three minutes to allow stabilization to take place.

5.4 Thermometers can also be checked by comparing the reading from the thermometer being tested with a thermometer which is known to be accurate; both are held alongside each other in the same ambient environment and the readings compared.

5.5 If no reference thermometer is available, an eutectic mixture of analytical grade sodium chloride and ice gives a temperature of -21.4ºC.

5.6 If an error greater than 0.5ºC (1 F) is indicated, the calibration of the thermometer should be corrected by means of its standard adjustment mechanism. After adjustment, the thermometer should be rechecked for accuracy.

5.7 Glass thermometers having an error greater than 0.5ºC (1ºF) should not be used for the checking of product temperatures.

6. PROCEDURE FOR MEASURING INTERNAL PRODUCT TEMPERATURE

6.1 Reliable information on the internal product temperature can be obtained only by measuring the temperature in the product.

6.2 The internal product temperature shall be measured at any point in the product which is 2.5 cm below the surface. In the case of products (or products in packages) with one dimension less than 5 cm, the point of measurement should be half-way through the dimension.

6.3 Making a Hole - Sensing elements are in general not structurally designed to penetrate a frozen food. A hole should be made in the product (packages) concerned using a probe or hand drill which has been previously pre-cooled. The hole should be at least 5 cm deep.

6.4 Pre-cooling

(1) A package should be selected at random for use in pre-cooling the probe or hand drill and the sensing element. This will be referred to hereafter as the "pre-cool package". A warm probe, hand drill or sensing element should never be placed in the test package.

(2) The sensing element should be inserted into the centre of the "pre-cool" package and it should be left there for at least three minutes. It should not be removed from the "pre-cool" package until it is ready to be inserted in the test package.

(3) Pre-cooling may also be accomplished by inserting the sensing element between packages of frozen foods, provided good thermal contact can be attained. If readings are being taken in cold storage facilities, pre-cooling can be accomplished by allowing the equipment to equalize with the ambient temperature of the cold stores.

6.5 Measuring Temperature of Test Package

For an accurate temperature measurement it is essential that the formation of the hole and subsequent temperature readings in the product with the sensing element are carried out with the product in the refrigerated environment from which it was selected, or in ambient conditions as close as possible to that environment.

(1) The sensing element should be removed from the pre-cool package and immediately inserted into the test package so that the point of measurement is approximately 2.5 cm below the surface of the product.

(2) It is preferable to reach this point by inserting the sensing element so that as much of it as is practicable is in the product.

(3) In the case of packages less than 5 cm in one dimension, insert the sensing element so it is close to the mid point of the package.

(4) Record the temperature after it has reached a steady value.

(5) Allow the sensing device to remain in the test package, after recording the temperature of that package, until ready to take readings on subsequent packages. This will eliminate the need to again pre-cool the device.

7. PROCEDURE FOR MEASURING PACKAGE SURFACE TEMPERATURE

7.1 The package surface temperature can be obtained in a non-destructive way and is sufficiently accurate for routine temperature cheeks, provided good contact is achieved by the sensing device between the packages or cases and adequate pressure is applied. A reasonable approximation to internal product temperature can be obtained by measuring the temperature at the package surface.

7.2 Measuring Package Surface Temperature

(1) Pre-cool the sensing device as specified in paragraph 6.4.
(2) If the product is in shipping cases, cut the sidewall of the case with a sharp knife and bend the cut tab outward.
(3) Insert the sensing element between the first and second layers of packages so that all of the sensing element is in firm contact with the package walls.
(4) Stack additional cases of the frozen product obtained from the same general location on top of the test case in order to ensure good thermal contact with the sensing element.
(5) Record the temperature after it has reached a steady value.
(6) If several test cases are being checked, do not remove the sensing instrument from the test case until the succeeding case is ready for testing.
(7) If the product is not cased, as in a retail cabinet, observe the same steps ((l) through (6)). Stack sufficient packages on top of the test package in order to obtain good thermal contact.

8. SAMPLING

8.1 Selection of Teat Packages

The selection of location from which to take test packages for temperature measurement is difficult to specify precisely and must be a matter of judgement, taking account of any previous history of the load or lot being examined and also the results obtained as the sampling proceeds. The correct interpretation of the results depends to a very large extent, on informed sampling. Test packages should be selected in such a way and in such number that their temperatures will be representative of the stock being examined.

8.2 Cold Stores

If cases are stacked closely together, e.g. on a pallet or in a stack, temperature readings should be taken from packages on the outer face of outer cases, and from packages from cases in the centre of the lot. These temperatures are known as "outer temperatures" and "centre temperatures". A significant difference between the two readings will indicate a temperature gradient in the lot and is an indication that more temperature readings should be taken in order to establish more reliable data on the temperature condition of the product.

8.3 Vehicles or Transport Container Unit

Product temperatures should be measured in the following locations:

If required during transport:

- top and bottom of the load adjacent to the opening edge of each door or pair of doors;

When unloading:

- top and bottom of the load adjacent to the opening edge of each door or pair of doors;
- top of the load at the rear corners (furthest from the refrigeration unit if applicable)
- centre of the load;
- centre of the face of the load (nearest to the refrigeration unit if applicable)
- top corners of the face of the load (nearest to the refrigeration unit if applicable).

Other locations for temperature measurement may be selected at the discretion of the inspecting officer.

8.4 Retail Display Cabinets

In all cases check a package from at least the front top layer, the centre area of the cabinet and the bottom portion of the cabinet. If the cabinet is on a defrost cycle it should so be noted on the report.

DRAFT STANDARD FOR QUICK FROZEN BLUEBERRIES

(Advanced to Step 8 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen blueberries of the species Vaccinium corymbosum 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, nor to the bilberries as covered by the Recommended International Standard for Quick Frozen Bilberries (Ref. No. CAC/RS 76/1976).

2. DESCRIPTION

2.1 Product Definition

Quick frozen blueberries are the product prepared from fresh, clean, sound, ripe and stemmed blueberries of firm texture, conforming to the characteristics of Vaccinium corymbosum L., and which are packed with or without a dry sugar or a sugar syrup and frozen in an appropriate manner.

2.2. Process Definition

Quick frozen blueberries 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. 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

Quick frozen blueberries may be presented as free-flowing (i.e. as individual berries not adhering to one another) or non free-flowing (i.e. as a solid block).

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional Ingredients

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

3.2 Composition

3.2.1 Blueberries prepared with dry sugars

The total soluble solids content of the liquid extracted from the thawed, comminuted sample shall be not more than 35% nor less than.18%, expressed as sucrose, as determined by refractometer at 20ºC.

3.2.2 Blueberries prepared with syrup

The amount of syrup used shall be no more than that required to cover the berries and fill the spaces between them. The total soluble solids content of the liquid extracted from the thawed, comminuted sample shall be not more than 25% nor less than 15% expressed as sucrose, as determined by refractometer at 20ºC.

3.2.3 Definition of "Defective" for Composition

Any sample unit that falls outside the limits for the soluble solids range specified in 3.2.1 and 3.2.2 shall be regarded as a "defective".

3.2.4 Lot Acceptance for Composition

A lot is considered acceptable for Compositional Criteria when the number of "defectives", as defined in 3.2.3 does not exceed the acceptance number (c) for the appropriate sample size of the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.3) (Ref. No. CAC/RM 42-1969).

3.3 Quality Factors

3.3.1 General Requirements The product shall be:

(a) - of similar varietal characteristics;
(b) - of good colour;
(c) - free from foreign flavour and odour;
(d) - clean, sound and practically free from mould and other harmless foreign matter; and with respect to visual or other defects with a tolerance shall be:
(e) - practically free from sand and grit;
(f) - when presented as free-flowing, practically free from berries adhering one to another and which cannot be easily separated by hand without damage when in the frozen state;
(g) - practically free from extraneous vegetable material (EVM);
(h) - reasonably free from cap stems (stalks);
(i) - practically free from unripe berries;
(j) - practically free from dissimilar varieties of edible berries other than blueberries;
(k) - reasonably free from blemished berries;
(l) - reasonably free from undeveloped or mummified berries.

3.3.2 Analytical Requirements

Mineral impurities such as sand, grit, and silt shall be not more than 0.04$ m/m on the whole product (berries and packing medium, if any).

3.3.3 Free-flowing Characteristics

When presented as "free-flowing" a tolerance of 10% m/m shall be allowed for berries which are stuck together and not easily separated in the frozen state. The sample unit for free "flowing" is the entire contents of the container or as large a quantity as practicable.

3.3.4 Definitions and tolerances for Visual Defects

3.3.4.1 Definitions

(a) Extraneous Vegetable Material (EVM) means leaves or portions of the blueberry plant, or other similar vegetable material which is harmless.

(b) Cap Stems (Stalks) - means the immediate stem that attaches the blueberry to the plant, whether or not attached to the berry, and which is 2 mm, or greater in length.

(c) Unripe Berries - means completely green berries or berries that have a green cast that predominates over the normal reddish purple colour of blueberries.

(d) Dissimilar Varieties - means other edible berries that are distinctly different in colour or shape, which have definitely different internal characteristics than blueberries.

(e) Blemished - means blueberries which show visible signs of damage by insects or by pathological or mechanical injury.

(f) Undeveloped or Mummified - means berries that are badly shriveled, dried or hard.

3.3.4.2 Standard Sample Size

The sample size for evaluating visual defects, including application of tolerances is 300 grams of drained berries. (8.3.2)

3.3.4.3 Tolerances for Visual Defects

For tolerances based on the standard sample sizes indicated in Section 3.3.4.2 visual defects shall be assigned points in accordance with the 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

(Sample Size 300 grammes)

	DEFECT	UNIT OF MEASUREMENT	DEFECT CATEGORIES		
			Minor	Major	Total
(a)	EVM	each piece 1 cm^2	1		
		each piece 1 cm^2 and larger		2	
(b)	Cap Stems	each stem	1		
(c)	Unripe Berries	each berry		2	
(d)	Dissimilar Varieties	each berry		2	
(e)	Blemished slightly	each berry	1		
	materially	each berry		2	
(f)	Undeveloped or Mummified	each berry		2	
	TOTAL ALLOWABLE POINTS		15	8	15
	Disintegrated, Badly Crushed, or Smashed			10% m/m	

3.4 Lot Acceptance for Quality Factors

3.4.1 Definition of "defective" 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) that exceeds the tolerance for mineral impurities (3.3.2);
(b) that exceeds the tolerance for "free-flowing" (3.3.3);
(c) that exceeds the "maximum total points for visual defects" in any one or more of the categories in Table I (3.3.4.3); or that exceeds the tolerance for disintegrated, badly crushed, or smashed, Table I (3.3.4.3).

3.4.2 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 3.4.1 does not exceed the acceptance number (c) for the appropriate sample size as specified in the Sampling Plans for Prepackaged Foods.

In applying the acceptance procedure each "defective" (as defined in 3.4.1 sub-paragraphs (a) or (b) or (c) is treated individually for the respective characteristics.

4. FOOD ADDITIVES

None permitted.

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 applies 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 "blueberries".

6.1.2 In conjunction or in close proximity to the word "blueberries" the packing medium: "with (name of sweetener and whether as such or as the syrup)".

6.1.3 The words "quick frozen" 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 sub-section 2.2 of this standard

[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 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 or 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

Information for keeping and thawing of the product shall be given on retail packs.

6.8 Bulk Packs

In the case of quick frozen blueberries in bulk the information required in 6.1 to 6.6 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 6.1.3 of this standard) and the name and address of the manufacturer or packer must appear on the container.

7. PACKAGING

7.1 Packaging used for quick frozen blueberries must:

7.1.1 protect the organoleptic and other quality characteristics of the product;

7.1.2 protect the product against microbiological and other contamination;

7.1.3 protect the product from dehydration, and, where appropriate, leakage as far as technologically practicable;

7.1.4. 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

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).

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).

8.3 Test Procedures

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

Drained Berries

8.3.2 "Drained berries" is determined by thawing the product until it is practically free from ice crystals and then draining on a screen - 3 mesh/cm (8 mesh/inch) - for two minutes. The weight of product retained by the screen is "drained berries". When dry

sugar(s) is added to the berries it shall be removed with a gentle spray of water before draining.

8.4 Analysis

8.4.1 Total Soluble Solids - FAO/WHO Codex Alimentarius Method - Determination of Total Soluble Solids Content in Frozen Fruits (Ref. No. CAC/RM (43-1971).

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).

APPENDIX IV

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

1. SCOPE

This standard shall apply to quick frozen leek of the species Allium porrum L. as defined below and offered for direct consumption without further processing, except for sizing 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 leek is the product prepared from fresh, clean, sound edible parts of the leek plant conforming to the characteristics of the species Allium porrum L., and which have been trimmed, washed, possibly blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

2.2 Process Definition

Quick frozen leek 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 has reached -18ºC (OºF) 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 be handled in accordance with the provisions in the 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) Whole leek - the leek plant with roots and non-tender leaves removed.
(b) Leek - parts of the whole leek with a length, corresponding to the longest dimension of the package, but not less than 7 cm.
(c) Cut leek - parts of the whole leek, cut perpendicularly to the longitudinal axis, minimum length 20 mm, maximum length 6 cm.
(d) Leek rings - parts of the whole leek, cut perpendicularly to the longitudinal axis into slices, not thinner than 10 mm and not thicker than 20 mm.
(e) Chopped leek - the whole leek chopped into pieces, such that the original structure is almost entirely lost, resulting in a "unit" generally smaller than 15 mm in size.

2.4.2. Other styles

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

(a) is sufficiently distinctive from other form 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

(a) leek may be presented as white;
(b) if leek is presented as "white", not more than 10% shall be present, of leaves or parts of leaves with a green colour.

2.2.4 Sizing

(a) whole leek, may be presented as sized or unsized;
(b) the minimum diameter of whole leek, measured perpendicularly to the axis immediately above the swelling at the neck shall be not less than 10 mm.
(c) when sized, the difference between the largest and smallest leek in the same package, measured perpendicular to the axis immediately above the swelling at the neck, shall be not more than 10 mm.

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 leek shall :

- have good colour characteristics;
- be clean, sound, and practically free from foreign material;
- be free from foreign flavour and odour, taking into consideration added optional ingredients;
- have similar varietal characteristics;
- be free from objectionable tough parts;

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

- practically free from sand and grit;
- free from yellow and/or yellowish leaves;
- reasonably free from damage such as staining, discoloration, or insect injury;
- reasonably free from extraneous vegetable material;
- practically free from roots;
- reasonably well trimmed;
- practically free from loose or detached leaves in whole style only.

3.2.2 Analytical Characteristics

Mineral impurities - not more than 0.1% m/m measured on a whole product basis.

3.2.3 Definition of Visual Defects

(a)	Discoloration	- discoloration of any kind on the product and which materially detracts from the appearance of the product;
	Minor	- discoloration which is light in colour. Each area or combined area of 4 cm^2 = 1 defect;
	Major	- discoloration which is dark in colour. Each area or combined area of 4 cm^2 = 1 defect.
(b)	Damaged	- each leaf or part of leaf that is affected by blemishes, staining or insect injury;
(c)	Extraneous Vegetable Material (EVM)	- each cm^2 harmless vegetable material other than from the leek;
(d)	Roots	- each disk of roots attached to the leek or loose;
(e)	Parts of roots	- parts of roots attached to the leek or loose;
(f)	Poorly trimmed	- the white or pale green portion is less than one-third of the total product;
		- for the presentation "white" (2.4.3) not more than 10% m/m of green leaves is permitted;
(g)	Loose leaves (Whole Style only)	- leaf or part of it which is detached from the shaft.

3.2.4 Standard Sample Size

The standard sample size for segregating and evaluating visual defects shall be as follows :

Style	Standard Sample Size
Whole leek	500 g but not less than two pieces -(for sizing 10 pieces)
Leek and Cut leek	500 g
Leek rings	250 g
Chopped leek	250 g

3.2.5 Method,, of Examination

For separation and enumeration of visual defects the standard sample is placed in deep water in a deep tray, and the shafts or leaf portions separated one by one.

3.2.6 Tolerances for Visual Defects

Based on the standard sample sizes indicated in 3.2.4, visual defects shall be assigned points in accordance with the following Tables. The maximum number of defects permitted is the Total Allowable Point rating indicated for the respective defect categories Minor, Major and Serious or the Combined Total of the foregoing categories.

TABLE I
Whole Leek

Standard Sample Size 500 grammes but not less than two pieces

Defect	Defect Categories		
	Minor	Major	Total
Discoloration - Minor	1		
Major		2	
Damaged		2	
EVM	1		
Roots		2	
Parts of roots	1		
Poorly trimmed		2	
Loose leaves	1		
Total Allowable Points	8	6	10

TABLE II

Leek. Cut Leek. Leek Rings and Chopped Leek
Standard Sample Size 500 grammes (Leek and Cut Leek)
Standard Sample Size 250 grammes (Leek Rings and Chopped Leek)

Defect		Defect Categories		
		Minor	Major	Total
Discoloration - Minor		2		
Major			2	
Damaged			2	
EVM				
Roots			2	
Parts of Roots		1		
Poorly trimmed			2	
Total Allowable Points	Leek and Cut Leek	10	10	12
	Leek Rings and Chopped Leek	5	6	6

3.2.7 Tolerances for Sizing

If size graded, the product shall contain not less than 80% by number of whole leek of the declared size.

3.3 Definition of "Defective" for Quality Factors

Any sample unit taken in accordance with the Sampling Plans for Prepackaged Foods (AQL-6.5) Ref. No. CAC/RM 42-1969), and which is adjusted to a standard sample size for applying the tolerances relating to "Visual Defects" shall be regarded as "defective" for the respective characteristics} as follows :

(a) any sample unit that falls to meet the general requirements of paragraph 3.2.1;
(b) any sample unit that fails to meet the analytical requirements of paragraph 3.2.2;
(c) any sample unit that fails the Total Allowable Points for defect categories Minor or Major; or which fails the Total Allowable Points for the combined Total of the respective defects (see section 3.2.6);
(d) any sample unit that fails to comply with the sizing requirements of paragraph 3.2.7.

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 (c) for the appropriate sample size as specified in the Sampling Plans for Prepackaged Foods. In applying the acceptance treated individually for the respective characteristics.

4. FOOD ADDITIVES

None permitted.

5. HYGIENE

It is recommended that the product covered by the provisions of this standard is 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 "leek".

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

(a) the style as appropriate: "whole leek", "leek", "cut leek", "leek rings" or "chopped leek";
(b) When presented as white, the word: "white".[1]

[1] "6.1.2 The name of the food shall also include the style as appropriate: "whole", "cut", "rings", or "chopped" in accordance with Section 2.4.1 and when presented as whit the word "white" in accordance with Section 2.4.3."; as amended by the Codex Committee on Food Labelling (Alinorm 78/22).

6.1.3 If the product is produced in accordance with sub-section 2.4.2 the label shall contain in close proximity to the word leek such additional words or phrases 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"[2] may be applied in countries where this term is customarily used for describing the product processed in accordance with the section 2.2 of the standard.

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

6.1.5 Where a characterising ingredient has been added, this shall be stated as "with X" or "X flavoured" as appropriate.

6.2 Size Designation

If a term designating the size of whole leek is used, it shall:

(a) be supported by a statement of the predominant range of the maximum diameter of the leek in millimeters, or fractions of an inch in those countries where the English system is in general use; and/or

(b) conform to 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 (CAC/RS 1-1969).

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 leek in bulk, the information required in 6.1 to 6.7 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 section 6.1.4 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 leek 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 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

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).

8.2 Thawing Procedure

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

8.3 Cooking Procedure

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 leek may vary within the following range, depending upon variety, maturity and size :

leek cut leek	10 - 20	minutes
leek rings	5 - 8	"
chopped leek	3 - 5	"

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/RM 41-1970, sub-section 8.3).

8,5 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).

APPENDIX V

DRAFT STANDARD FOR QUICK FROZEN CAULIFLOWER

(Returned to Step 6 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

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 (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 be handled in accordance with the provisions in the 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 small, tender, modified leaves.
(b) Split - the whole head, cut vertically into two or more sections.
(c) Florets - 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 Small, tender, modified leaves may be present or attached to the units.

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

Quick frozen cauliflower florets may be presented sized or unsized. If florets are 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

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

2.4.5 Definition of "Defective" for Sizing

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

2.4.6 Lot Acceptance for Sizing

A lot will be considered acceptable with respect to sizing when the number of "defectives" as defined in paragraph 2.4.5 does not exceed the…….

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 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 have a tinge of green or 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 well developed;

for cluster and floret styles:

– practically free from loose styles.

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 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

- A unit in which more than 50% of the curd has been mechanically damaged or is missing (for split and floret styles)
- A unit in which more than 25% 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 - Coarse green leaves or parts thereof whether or not attached to the unit.

(f) 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 - Pieces 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

3.2.4. Tolerances 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.

Table I
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	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 II
Split and Floret 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	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 sw. cms.		2		
Loose Stem		Each piece	1			
Total Allowable Points			*[25]*	*[16]*	*[4]*	*[25]*

3.3 Definition of "defective" for Quality. Factors

Any sample unit taken in accordance with the 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 given in section 3.2.1;
(b) when 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 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

Citric acid or malic acid[2], as processing aids for use in the blanching or cooling water in accordance with GMP.

[2] Pending endorsement of the Codex Committee on Food Additives.

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, 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 "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.

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

6.1.2 The name of the food shall also include the style, as appropriate: "whole", "split", or "florets" in accordance with sections 2.4.1 and 2.4.3 except that in the case of "florets" the description "clusters" may be used if this is customary in the country where the product is sold.

6.1.3 If the product is produced in accordance with sub-section 2.4.2 the label shall contain in close proximity to the word cauliflower such additional words of 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 product is sold."

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).

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 or 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 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 subsection 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 caulifower-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 AND SAMPLING

8.1 Sampling

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).

8.2 Thawing Procedure

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

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

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).

DRAFT STANDARD FOR QUICK FROZEN BROCCOLI

(Returned to Step 6 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 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 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, cut, trimmed, washed, sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles, and properly drained.

2.2 Process Definition

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 -18ºC (0 F) 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.

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 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 per cent 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 per cent 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 25 per cent m/m of the total product. No single sample unit may contain less than 15 per cent m/m of head material or more than 35 per cent m/m of leaf material.

(d) Chopped - Broccoli finely cut into pieces less than 2 cm in the longest dimension. Leaf material may be present but shall not exceed 25 per cent m/m of the total product, and the head material shall not be less than 25 per cent m/m of the total product. No single sample unit may contain less than 15 per cent m/m of head material or more than 35 per cent m/m of leaf material.

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.

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:

- reasonably free from an excessive amount of leaf material, particularly large coarse 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 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 leaves, stems, 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 other than leaves weighing less than 5 grammes.

(d) Blemished - A unit of product affected by discolouration or disease or insect injury.
- minor - Slightly affecting the appearance or eating quality.
- major - Markely 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 per cent 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 or are more than moderately enlarged without flowering; 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 loosely 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	-	300 grammes
Chopped	-	100 grammes

3.2.4 Tolerances 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.

TABLE I
FOR SPEARS AND FLORETS

	Unit of Measurement	Defect Categories			Total
		Minor	Major	Serious	
EVM	Each Piece		2		
Detached Leaves	Each 15 cm^2	1			
Fragments	Each 20 g	1			
Blemished	Each Unit				
Minor		1			
Major			2		
Serious				4	
Mechanical Damage	Each Unit		2		
Poorly Trimmed	Each Unit	1			
Over-mature/Poorly Developed	Each Unit		2		
Fibrous	Each Unit		2		
Woody	Each Unit			4	
TOTAL ALLOWABLE POINTS		20	12	4	20

TABLE II
FOR CUT AND CHOPPED STYLES

	Unit of Measurement	Defect Categories			Total
		Minor	Major	Serious	
EVM	Each Piece		2		
Blemished					
Minor	Each Piece	1			
Major	Each Piece		2		
Serious	Each Piece			4	
Over-mature/Poorly Developed	Each 10 g for cut		2		
	Each 2 g for chopped		2		
Fibrous	Each 2 g		2		
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 Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969) shall be regarded as "defective" for the respective characteristics as follows:

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

(c) it exceeds the leaf or head material allowance for "Cut spears" or "Chopped" styles (2.4.1); or

(d) it fails to meet the length requirements of 2.4.1

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 in section 3.3. (a) to (d) is treated individually for the respective categories.

In applying the foregoing acceptance criteria defect (d) of 3.3 is treated independently of the other defectives (a) through (c).

4. FOOD ADDITIVES

None permitted.

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 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 "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 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 "broccoli" the style, as appropriate: "Spears", "Florets", "Cut Spears" and "Chopped". [2]

[2] "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."; as amended by the Codex Committee on Food Labelling (Alinorm 78/22).

6.1.3 If the product is produced in accordance with sub-section 2.4.2 the label shall contain in close proximity to the word "Broccoli" such additional words of 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.

6.2 List of Ingredients

A complete list of ingredients shall be declared in descending order or proportion in accordance with sub-section 3.2(c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (1969).

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 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 dehdration 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 AND SAMPLING

8.1 Sampling

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).

8.2 Thawing Procedure

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

8.2 Cooking Procedure

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

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).

Appendix VII

PROPOSE!) DRAFT STANDARD FOR QUICK FROZEN CORN-ON-THE-COB

(Advanced to Step 5 of the Procedure)

1. SCOPE

This standard shall apply to quick frozen Corn-on-the-Cob of the species Zea mays L. subsp. rugosa Bonaf. 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, clean, sound, properly matured ears conforming to the characteristics of the sweet corn variety Zea mays L. subsp. rugosa Bonaf. which are trimmed (except for the style "Whole or natural"), 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

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 (0 F) at the thermal centre after thermal stabilization.

The recognized practice of repacking quick frozen produce 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, transportion, 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 or natural - the whole, intact ear of corn to which a small part of the stalk may be attached.

(b) Trimmed whole - the product obtainable from one whole ear after trimming of both ends. To a length not shorter than *[*120 mm*]*.

(c) Cut Cob or Cobette - portions of the whole trimmed ear, cut transversely into pieces not shorter than *[*70*]* mm.

(d) Small Cut Cob - portions of the whole trimmed ear, cut transversely into pieces not shorter than *[*45*]* 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 Sizing

(a) The diameter of the product of any style in 2.4.1 (a) to (d), measured perpendicularly to the axis at the maximum diameter shall be not less than 30 mm.

(b) The products of the styles in 2.4.1. (a) and (b) may be presented as sized or unsized.

(c) When presented as sized, the differences between the largest and the smallest cob in the same sample unit, measured perpendicularly to the axis, at the maximum diameter, shall be not more than 15 mm, and in length not more than 50 mm.

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 Corn-on-the-Cob shall be:

- of suitable degree of maturity: The Alcohol Insoluble Solids (A.I.S.) value of the whole kernels, detached from the cob, shall lie within the limits of [17 to 27%] and at the same time the soluble solids of the juice pressed from the kernels and determined by refractometry shall lie within the limits [20 to 28%];
- free from foreign flavour and odour;
- 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 uniform in size;*]*
- reasonably well developed;
- reasonably free from blemished or mechanically damaged areas;
- reasonably free from poorly timmed units;
- practically free from extraneous vegetable matter, (EVM).

3.2.2 Definition of Visual Defects

(a) Uniform white, cream to yellow (golden) colour means that the whole individual ear or (Small; Cut Cob as well as the number of units in the sample unit shall be of reasonably uniform colour.

(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 50 mm, (20 mm for the two 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.

- outside one of the limits (length or diameter) by maximum 5 mm = 1 defect (minor);
- outside both limits by maximum 5 mm = 2 defects (major);
- outside one or both of the limits by more than 5 mm = 4 defects, (2+2 given in the "major" defect column in table I).

(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.

- Appearance materially affected by irregular pattern of kernels =,1 defect (minor);
- More than 10% but less than 15% by count of the kernels missing or shrunken = 2 defects (major);
  15% or more by count of the kernels missing or shrunken = 4 defects (serious).

(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.

- more than 5% but less than 10% by count of the kernels are slightly affected but not more than 0.5% by count of all kernels are seriously blemished or damaged = 1 defect (minor);
- 10% or more but leas than 15% by count of the kernels are slightly affected but not more than 1% by count of all kernels are seriously blemished or damaged = 2 defects (major);
- more than 1% by count of the kernels are seriously affected = 4 defects (serious).

(e) Poorly trimmed means (i) 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 or natural" the top is untrimmed and a piece of the stalk of maximum [15]mm may remain attached, and note considered-defects.

- at one end of unit maximum 5 mm left = 1 defect (minor);

- at one end of unit 5 - 10 mm left = 2 defects (major);
- at one end of unit more than 10 mm left = 4 defects (serious).

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

- 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 (minor);
- husks larger than 2 cm^2 in total surface = 2 defects (major).

3.2.3 Standard Sample Size

In the cases of the styles "whole ear of corn" and "corn-on-the-cob", the sample unit is two ears, in the case of the styles "cut cob" or "small cut cob": the least number of units or whole pieces which will give a weight of not less than 500 grammes.

3.2.4 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 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

ALL STYLES

Defect	Unit of Measurement	DEFECT CATEGORIES Minor	Major	Serious	Total
Colour variation	in one ear				
Light		1			
Pronounced			2		
Light	sample unit	1			
Pronounced			2		
Difference in size outside given range	" "	1	2 (+2)		
Damaged or Blemish	each ear	1	2	4	
Not well developed	" "	1	2	4	
Poorly trimmed	" "	1	2	4	
EVM	sample unit	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/RM 42-1969) shall be regarded as a "defective" for the respective characteristics as follows:

(a) when it fails to meet the general requirements given in section 3.2.1;
(b) when it exceeds the "Total Allowable Points" in any one or more of the defect categories including the total in Table I, in Section 3.2.4.

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 FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods

4. FOOD ADDITIVES

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

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.

6.1 The Name of the Food

6.1.1 The name of the food as declared on the label shall include "Corn" preceeded 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 such additional words or phrases that will avoid misleading or confusing the consumer.

6.1.3 In addition, there shall for the styles "whole or natural" 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 Size Designation

If a term designating the size of cob is used, it shall:

(a) be supported by a statement or the predominant range of the maximum diameter of the cob in millimeters, or fractions of an inch in those countries where the English system is in general use; and/or

(b) conform to 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 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).

6.4 Net Contents

The minimum 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 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 corn in bulk, regardless of style, the information required in 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 subsection 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, 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 on the product any odour, taste, colour or other foreign characteristics.

8. METHODS OF EXAMINATION, ANALYSIS AND SAMPLING

8.1 Sampling

Sampling shall be carried out in accordance with FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969).

8.2 Thawing Procedure

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

8.3 Cooking Procedure

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

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

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

8.5.1 The following procedure shall be used to determine the amount of Alcohol Insoluble Solids in frozen whole kernels from corn-on-the—cob all styles:

Thaw the same according to 8.2 Thawing Procedure. With a blunt instrument, e.g. a spoon, remove the whole grains from the cob.

Comminute a representative 100 g sub-sample of corn kernels from which the silk, husk, cob and other extraneous material have been removed. An equal weight of water is added to facilitate the operation. Weigh into a 600 ml beaker, a portion of the comminuted material equivalent to approximately 20 g. (If a 100 g sub-sample of drained corn is comminuted with 100 g of water, in order to obtain the equivalent of a 10 g sample of drained corn, it will be necessary to weigh 20 grammes of this comminuted mixture). Weighing of this sample should be accurate to within 0.01 g.

Add 300 ml of 80 per cent alcohol (by volume), stir, cover beaker and bring to a boil. Simmer slowly for 30 minutes. Fit a Buchner funnel with a previously prepared filter paper of such size that its edges extend at least 33 mm up the. vertical sides of the funnel. The previous preparation of the filter paper consists of drying it in a flat-bottomed dish for 2 hours at 100 C covering the dish with a tight fitting cover, cooling it in a desiccator, and then weighing it promptly to the nearest 0.001 g. After the filter paper is fitting to the funnel, apply suction, and transfer the contents of the beaker to the funnel. Do not allow any of the material to run over the edge of the paper. Wash the material on the filter paper with 80 per cent alcohol (by volume) until the washings are clear and colourless. These washings must be very thorough in order that all sugars and matter that, are soluble in alcohol are removed from the residue retained by the filter paper. Transfer the filter paper with the material retained thereon to the dish used in preparing the filter paper. Dry the material (residue) in the dish in a ventilated oven without covering the dish, for 2 hours at 100 C. Place the cover on the dish, cool it in a desiccator for approximately l/2 hour and promptly weight to the nearest 0.001 g. From this weight, subtract the weight of the dish, cover and paper as previously determined. Calculate the remainder (residue) as percentage of alcohol insoluble solids of the drained corn.

8.6 Determination of Total Soluble Solids Content

8.6.1 *[*According to the FAO/WHO Codex Alimentarius Method for the Determination of Total Soluble Solids Content of Quick Frozen Fruit (Ref. No. CAC/RM 43-1971)*]*.

*[*Thaw the sample according to 8.2 Thawing Procedure. With a blunt instrument, e.g. a spoon, remove the whole grains from the cob. Comminute a representative sample which may be from the same unit. Place the slurry on a square of cheese cloth and squeeze out some liquid for evaluation by refractometer.*]*

APPENDIX VIII

DRAFT STANDARD FOR QUICK FROZEN FRENCH FRIED POTATOES (1)

(Advanced to Step 5 of the Procedure)

(1) In some English speaking countries the name of this product is "Quick Frozen Potato Chips".

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, 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, 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

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 (0 F) at the thermal centre after thermal stabilization.

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 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 Nature of the cross section

The cross sectional dimensions of quick frozen french fried potatoes which have been cut on all four sides shall not be less than 5 mm or greater than *[*20*]* mm. Any cross section within these limits shall be permissable provided that 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 section or by reference to the following system for designations:

Designation	Dimensions
Small	5 x 5mm to 8 x 8 mm
Medium	greater than 8 x 8 mm to 12 x 12 mm
Large	greater than 12 x 12 mm to 20 x 20 mm

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

3.1.2 Optional Ingredients

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

3.2 Analytical Characteristics

3.2.1 Moisture - maximum *[*25%*]*

3.2.2 Fat (in dry material) - maximum *[*25%*]*.

3.2.3 The fat extracted from the product shall have a free fatty acid content of not more than *[*1.5%*]* measured as oleic acid.

3.3 Quality Factors

3.3.1 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.

3.3.2 Definition of Visual Defects

3.3.2.1 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) 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.

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

(c) 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.

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

3.3.2.2 Sorting defects

(a) Sliver - A very thin unit (generally an edge piece).
(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,

3.3.2.3 Frying defects

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

3.3.3 Standard Sample, Size

The standard sample size shall be 1 Kilogram.

3.4 Tolerances for Visual Defects

Based on the standard sample size as specified in 3.3.3. the visual external defects are classified as "minor" or "major" or "serious" and assigned points (number of units affected).

The tolerances in respect of external defects are dependent on the cross section of the french fried potatoes.

To be acceptable the standard sample shall not contain units exceeding the points for the respective categories, including total, in Table 1.

Table 1

Tolerances for External Defects

Defect category	cross section	
	5 - 8 mm	over 8 - 16 mm
Serious	7	5
Serious + major	21	14
Total (serious + major + minor)	60	40

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

Sorting defects

Small Pieces and Scraps	max. 6 % m/m
Total Sorting Defects	max. 12 % m/m

Frying defects

Units with Burnt Parts	max. 0.5 % m/m

FOOD ADDITIVES

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

4.1 Sequestrants	Maximum level in final product
Disodium dihydrogen pyrophosphate Tetrasodium pyrophosphate	250 mg/kg singly or in combination
4.2 Preservatives	**Maximum level in the final product**
Sulphlte, bisulphite, metabisulphite) (sodium or potassium salts)	50 mg/kg as SO_2 singly or in combination
4.3 Antioxidants	**Maximum level in the final product**
L-ascorbic acid, sodium or potassium salts	250 mg/kg
	Maximum level in the final product (Moisture-free basis)
Propyl, octyl, and dodecyl gallates	25 mg/kg singly or in combination
Butylated hydroxytoluene (BHT) Butylated hydroxyanisole (BHA)	50 mg/kg singly or in combination
Any combination of gallates with BHT or BHA or both	50 mg/kg, but gallates not to exceed 25 mg/kg
Natural and synthetic tocopherols	not limited
Ascorbyl palmitate Ascorbyl stearate	125 mg/kg singly or in combination
Dilauryl thiodipropionate	50 mg/kg

4.4 Colours	Maximum level in the final product (Moisture-free basis)
Beta - carotene	Not limited
Annatto	Not limited
Curcumin	Not limited
Canthaxanthine	Not limited

4.4 Colours	Maximum level in the final product (Moisture-free basis)
Beta - apo - 8' -carotenal	Not limited
Methyl and ethyl esters of beta - apo - 8' - carotenal	Not limited

4.5 Antioxidant synergists	Maximum level in the final product (Moisture-free basis)
Citric acid and its sodium salt	Not limited
Isopropyl citrate mixture	25 mg/kg individually or in combination.
Phosphoric acid	

4.6 Crystallization Inhibitor	Maximum level in the final product (Moisture-free basis)
Oxystearin	315 mg/kg

4.7 Processing Aids	Maximum level in the final product
Sodium hydroxide	Not limited
Citric acid	Not limited

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) recommended by Codex Alimentarius Commission.

6. LABELLING

In addition to Sections 1,2, A 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" or the equivalent designation used in the country in which the product is intended to be sold.

6.1.2 In addition, there may appear on the label a designation of the style as appropriate for example "straight cut" or "crinkle cut"; "large", "medium" or "small".

6.1.3 If the product is produced in accordance with sub-section 2.4.2, the label shall contain in close proximity to the words "french fried potatoes" such additional words or phases that ill avoid misleading or confusing the consumer.

6.1.4. 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 sub-section 2.2 of this standard.

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).

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, 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 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 6.1.4 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

Sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plan for Prepackaged Foods (AQL-6.5) (Ref. No. CAC/RM 42-1969).

8.2 Thawing Procedure

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

8.3 Cooking Procedure

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

8.4 Determination of Net Weight

FAO/WHO Codex Alimentarius Standard Procedure for Determination of Met Weight of Quick Frozen Foods 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).

CODEX ALIMENTARIUS COMMISSION.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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ALINORM 78/25 – CORRIGENDUM
AGRI/WP.1/GE. 3/9

September 1978

REPORT OF THE ELEVENTH SESSION OF THE JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON STANDARDIZATION OF QUICK FROZEN FOODS

Please make the following corrections in document ALINORM 78/25: AGRI/WP.1/GE.3/9:

APPENDIX III - DRAFT STANDARD FOR QUICK FROZEN BLUEBERRIES

Section 3.2.4 Lot Acceptance for Composition

Last line: change AQL 6.3 to AQL-6.5.

Section 3.4.2 Lot Acceptance for Quality Factors

At end of first sentence add reference (CAC/RM 42-1969)

APPENDIX IV - DRAFT STANDARD FOR QUICK FROZEN LEEK

Section 3.4 Lot Acceptance for Quality Factors

In third line after "Sampling Plans for Prepackaged Foods" add reference CAC/RM 42-1969.

Continue last sentence as follows: "In applying the acceptance procedure each "defective" as defined in Section 3.3 (a) - (d) is treated individually for the respective characteristics."