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JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX ALIMENTARIUS COMMISSION

Geneva, 4-14 March, 1969
Sixth Session

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

Geneva
2-6 September 1968

CORRIGENDUM

Annex II, Paragraph 2 "Definition" of the Draft Provisional Standard for Quick-frozen Foods should read as follows:

"Quick Frozen foods are those which, complying with the conditions laid down hereafter, have been subjected to a freezing process in appropriate equipment. This freezing operation should be carried out in such a way that the area of temperature of maximum crystallization is passed quickly, taking into account the dimension and type of product. The equipment must be designed and operated in a manner to reduce the temperature to -18 C or lower at the thermal centre of the product after thermal stabilization, and to retain the product continuously at this low temperature up to and including the time of final sale, subject to the provisions of paragraphs 6.2 and 6.3. When a product or group of products requires a specific freezing speed or a lower temperature, the speed of freezing and the temperature to be reached will be specified in the group or individual product standard."

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JOINT FAO/WHO FOOD STANDARDS
PROGRAMME

COMMITTEE ON AGRICULTURAL
PROBLEMS

CODEX ALIMENTARIUS COMMISSION

Working Party on Standardization of
Perishable Foodstuffs

REPORT OF THE FOURTH SESSION OF THE
JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON THE
STANDARDIZATION

OF QUICK FROZEN FOODS - Geneva, 2-6 September 1968

1. The Joint ECE/Codex Alimentarius Group of Experts on the Standardization, of Quick Frozen Foods held its Fourth Session in Geneva, from 2-6 September 1968. Delegates from the following countries participated at the meeting: Argentina, Australia, Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, Finland, France, Hungary, Italy, the Netherlands, Poland, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States of America. Also present were observers from the International Federation of Glucose Industries, the European Association of Refrigeration Enterprises, the Union of Industries of the European Community, the International Institute of Refrigeration and the International Organisation for Standardisation. The list of participants is contained in Annex I of this report.
2. The Group of Experts unanimously re-elected Mr. R. Linden (Belgium) and Mr. W. Orłowski (Poland) as its Chairman and Vice-Chairman respectively.
3. The meeting adopted the Provisional Agenda (document AGRI/WP.1/561) with a slight re-arrangement of items.

Draft Provisional General Standard for Quick Frozen Foods

4. The Group of Experts had before it the Report of its last session containing in Annex II the General Standard for Quick (Deep) Frozen Foods (Document ALINORM 68/25: AGRI/292, AGRI/WP.1/527). The Codex Alimentarius Commission at its Fifth Session (February - March 1968) had advanced this General Standard to Step 6 of the Procedure for the Elaboration of Codex Standards. The Commission had expressed the view that the Group of Experts should endeavour to define more clearly the scope of the General Standard in order to distinguish Quick Frozen Foods from other kinds of frozen foods. In the light of the government comments received the Group of Experts examined the General Standard, paragraph by paragraph, and made a number of slight modifications in the text of the standard. The revised text appears in Annex II of this report.

5. On the subject of nomenclature the Group decided that in English the term ' Quick Frozen Foods" should be used. The Group of Experts in considering the scope and definition sections confirmed its original decision that the General Standard should be considered as being applicable to all Quick Frozen Foods which conform to the definition given in the General Standard. Furthermore this General Standard should cover all Quick Frozen products for human consumption. The delegations of Australia, Canada and Spain expressed doubts as to the applicability of the General Standard to Meat, Fish and Dairy Products.

6. In respect of the provision in the General Standard dealing with storage, transportation and distribution the Group of Experts noted that there were temperature tolerances provided for during these operations. With regard to quick-frozen products whose temperatures had deviated by more than the specified tolerances, the Group of Experts took the view that it would be a matter for the national control services to exercise judgment whether, taking into account the other provisions in the standard, the product could still be regarded as a quick-frozen product. In respect of temperatures for all Quick Frozen Foods, the delegations of Australia, Canada and the United States reserved their positions as in their opinion all requirements are stringent and those relating to transport and distribution are impracticable at this stage.

7. The delegation of Poland reserved its position as regards the addition of additives in the standards without a declaration on the label.

8. In connection with the provision for date marking in the labelling provisions of the General Standard the attention of the Group of Experts was drawn to a recommendation of the Codex Committee on Food Labelling at its third session (Document ALINORM 68/22, paragraph 37) which was "that Codex Commodity Committees, when elaborating standards for perishable foods, should consider in the interest of protection of the consumer, the need for such foods to bear an expiry date after which time the food should not be consumed. The Committee stressed the need for sound scientific justifications for the use of expiry dates". However, in noting this recommendation the Group of Experts nevertheless considered that Quick Frozen Foods have special characteristics which do not necessarily link the quality of the product to the expiry date. The Group of Experts therefore decided to communicate this decision to the Codex Committee for Food Labelling.

In relation to the labelling of products in bulk the delegation of Spain pointed out that in their country certain types of fish, which otherwise meet the provisions of the General Standard, do not conform to the labelling provisions of the Standard as they are marketed without packaging. The Group of Experts was informed that the problem of labelling of non-prepackaged foods will be discussed at the forthcoming session of the Codex Committee on Food Labelling. Not all delegations were of the opinion that labelling should apply only to prepackaged frozen foods but that it should also apply to all Quick Frozen Foods covered by the General Standard.

In this connection the delegation of Italy informed the Group of Experts that according to its recently promulgated legislation, all Quick Frozen Foods have to be prepackaged.

Status of the General Standard

9. On the question of whether the General Standard should be mandatory or advisory the following reasons were put forward by those countries which were in favour of the General Standard becoming an advisory Code of Practice:

it would be extremely difficult to enforce all its provisions

- (a) the problem how to deal with products which are technically unsuitable has not yet been resolved
- (b) at this stage there was insufficient information as to what impact the mandatory implementation of the General Standard would have on the industry.

However those countries which considered that the General Standard must be mandatory stated that in their opinion it would have no value if it was not mandatory and therefore made the following points:

- (i) the Group of Experts had been charged by the Commission with the duty of elaborating a General Standard; not a Code of Practice;
- (ii) the draft General Standard set out the definition and basic requirements for quick-frozen products. The definition and requirements would only be meaningful if treated as mandatory;
- (iii) in any case, the individual product standards being developed by the Group of Experts contained specific references to the General Standard, and for these products the provisions of the General Standard would be mandatory.

In view of the continued divergence of opinion in which ten countries expressed themselves in favour of the General Standard becoming mandatory and eight countries in favour of it having an advisory nature, the Group decided by a large majority that the General Standard should be submitted to the Codex Alimentarius Commission at Step 8 of the Procedure for the Elaboration of Codex Standards with the understanding that the General Standard would be examined together with the viewpoints as expressed in the present report of the Joint Group of Experts.

Draft Provisional Standard for Quick Frozen Strawberries

10. The Group had before it Annex II of Document ALINORM 68/25; AGRI/292, AGRI/WP.1/527 which contained the proposed Draft Provisional Standard for Quick Frozen Strawberries. The Group also had before it an adapted version of this Standard which had been put into the Codex Format by the Secretariat. The Group decided to proceed with the examination of the Standard in the new Format, paragraph by paragraph, on the basis of Government comments received. The revised text appears as Annex III of this report.

Draft Provisional Standard for Quick Frozen Peas

11. The Group had before it Annex III of document ALINORM 68/25; AGRI/292; AGRI/WP.1/527, which contained the Proposed Draft Provisional Standard for Quick (Deep) Frozen Peas. The Group decided to proceed with the examination of the standard, on the basis of government comments received. The revised text appears as Annex IV of this report.

12. The delegations of the Federal Republic of Germany and Switzerland expressed the view that they could not accept size grading without at the same time also including grading of tenderness. It was pointed out that as the standard was a minimum standard quality criteria such as grading by tenderness were not relevant at this stage.

13. The delegations of the Federal Republic of Germany and Poland reserved their positions as regards the addition of additives and ingredients. The delegation of Hungary reserved its position on the addition of additives only. It was pointed out that the well-

established consumer demand for the addition of ingredients to the product could not be ignored.

14. The Group of Experts decided that in the product description a reference should be included that the product should be sufficiently blanched in order to inactivate the enzyme systems. The provision for control on inactivation of enzyme systems was discussed with regard to its applicability to either the catalase or peroxydase test. It was decided that more information is required before a decision could be taken as to preference and applicability.

In connection with the alcohol-insoluble solids content of the analytical characteristics it was noted that the values as outlined in the draft need confirmation by practical experience. The delegations of the United States and the Netherlands stated that recent surveys carried out in their countries have shown that some good quality eating peas have higher AIS figures.

The Group of Experts noted that the Codex Committee on Food Additives had temporarily endorsed the use of natural flavourings and their identical synthetic equivalents in Quick Frozen Peas. It was decided that governments should be asked to submit information to the Secretariat in respect of these substances and their level of use.

In relation to the method of determination of types by microscopical analysis the Group decided that governments should submit comments as to their experiences to the next session of the Group of Experts.

15. Code of Hygienic Practice for Quick (Deep) Frozen Fruit and Vegetable Products

The Group of Experts had before it document AGRI/WP.1/577 containing in Appendix I the "Proposed Draft Provisional Code of Hygienic Practice for Deep Frozen Fruit and Vegetable Products" and in Appendix II the "General Principles of Food Hygiene".

The Group of Experts was informed that the Codex Committee on Food Hygiene at its last session (Washington, May 1968) had considered the Code of Hygienic Practice for Deep Frozen Fruit and Vegetable Products and decided to submit that Code at Step 5 of the Procedure for the Elaboration of Codex Standards to the next session of the Codex Alimentarius Commission. The Codex Committee on Food Hygiene had also agreed that this document should be submitted to the Group of Experts for information.

The Group of Experts decided not to consider this document in detail in view of the fact that the Code of Hygienic Practice for Deep Frozen Fruit and Vegetable Products would, after adoption by the Codex Alimentarius Commission at step 5, be sent out to all governments for comments. These comments would be examined by the Codex Committee on Food Hygiene and the decisions of that Committee would be placed before the Group of Experts at its next session. It was agreed that when government comments were being sought special mention should be made of the fact that the competent government authorities dealing with quick frozen fruits and vegetables should be given an opportunity to examine this document. In addition the Group decided that at the same time the Code of Hygienic Practice for Deep Frozen Fruit and Vegetables should also be accompanied by the General Standard for Quick Frozen Foods in order that the Codex Committee on Food Hygiene should only consider matters relating to hygiene as all technical aspects were already contained in the General Standard. The Group of Experts decided that it would not be necessary to

include the and product specifications as contained in Section V of the Code of Hygienic Practice of Deep Frozen Fruits and Vegetables in the individual standards.

Inspection Manual for Quick Frozen Foods

16. The Group of Experts considered Item 9 of the Provisional Agenda, Examination of Comments on the Inspection Manual for Quick Frozen Foods (document AGRI/WP.1/523). The Rapporteur (the United States of America) gave a brief summary as to the essential points of the document which included a General Inspection Procedure, procedures for net weight determination, thawing and cooking, enzyme inactivation tests (catalase and peroxydase) and a method for checking temperature. Also included were the Sampling Plans for Frozen Fruits and Vegetables.

17. The Group of Experts was informed that these Sampling Plans had been elaborated by the Codex Committee on Processed Foods and Vegetables and that they would be submitted to the next (sixth) Session of the Codex Alimentarius Commission at Step 5 of the Procedure for the Elaboration of Standards. These Sampling Plans are statistical sampling plans applicable to all packaged products.

18. The delegation of the United States stated that the test procedures had been elaborated mainly for Quick Frozen Fruit and Vegetables and that some of these procedures could readily be adapted to other Quick Frozen Foods.

19. The Group of Experts then considered the various possibilities of dealing with the test procedures as contained in the Inspection Manual. These procedures had not yet been examined by the Codex Committee on Methods of Analysis and Sampling, and before they could be incorporated in the standards which had passed Step 5, the endorsement of the Codex Committee on Methods of Analysis and Sampling would be needed. It was noted that the finalization of these standards could be held up considerably if the endorsement of the Codex Committee on Methods of Analysis and Sampling could not be obtained at the forthcoming session of that Committee (November 1968). Under the circumstances, the Group of Experts requested the delegation of the Federal Republic of Germany, which is the Chairman of that Committee, to try to include examination of the Inspection Manual at that session. The delegation of the Federal Republic of Germany expressed its willingness to comply with this request and the Secretariat undertook to have the Inspection Manual, together with the Government comments thereon, sent without delay to the Codex Committee on Methods of Analysis and Sampling. This Committee should give priority to the methods of checking temperature, which are an essential part of the General Standard for Quick Frozen Foods which had been advanced to Step 8. An equally important test procedure to consider would be the determination of net weight of Quick Frozen Foods. As regards the other tests, i.e. thawing procedure, cooking procedure and enzyme inactivation tests, the Codex Committee on Methods of Analysis and Sampling should consider these tests in principle if time did not allow a full examination. Delegates were again asked to submit their comments on the Inspection Manual to the Rapporteur by the end of 1968.

Status of Commodity Standards

20. The Group decided that both the Draft Provisional Standards for Quick Frozen Strawberries and Quick Frozen Peas should be retained at Step 6 of the Procedure for the Elaboration of Codex Standards, in view of the facts that numerous modifications had been made and that the Standards had also been adapted into the new format.

21. The Group decided that the Proposed Draft Provisional Standards for Quick Frozen Raspberries and Quick Frozen Spinach as contained in Annexes V and VI of this report should be retained at Step 3 and submitted to Governments for further comments.

22. Comments on the Draft Provisional Standards for Quick Frozen Strawberries and Quick Frozen Peas and the Proposed Draft Provisional Standards for Quick Frozen Raspberries and Quick Frozen Spinach should be sent to the Secretariat, with a copy to the Chief of the Food Standards Programme, Rome not later than the end of January 1969.

23. As time did not permit a full discussion of the remaining Standards appearing on the agenda (Quick Frozen Bilberries, Blueberries, Broccoli, Brussels Sprouts, Cauliflowers, Green Beans, Peaches and Sour Cherries) it was decided that the rapporteur countries should re-draft them into the new format and send them to the Secretariat, with a copy to the Chief of the Food Standards Programme, Rome by the end of 1968.

24. Chairmanship of the Joint ECE/Codex Alimentarius Group of Experts on Standardization of Quick Frozen Foods.

The Group was informed of the recommendation of the Executive Committee, which had been endorsed by the Codex Alimentarius Commission at its Fifth Session, that it should consider adopting the Codex Alimentarius Commission's procedures by electing at the end of each session its chairman for the next session. The Group agreed with this recommendation and re-elected Mr. R. Linden (Belgium) as Chairman of the Group of Experts to serve in that capacity from the end of the fourth to the end of the fifth session.

25. Date and Place of the Next Session

The Group noted that its next session would probably be held in September 1969 in Rome.

ANNEX I
ANNEXE I
ПРИЛОЖЕНИЕ 1

LIST OF PARTICIPANTS
LISTE DES PARTICIPANTS
СПИСОК УЧАСТНИКОВ

Chairman:	Mr. R. LINDEN, Chef de Travaux, Laboratoire frigorifique, Gembloux, Belgium
Vice-Chairman:	Mr. W. ORLOWSKI, Central Board of Standardization, Ministry of Foreign Trade, Warsaw, Poland
<u>Argentina</u>	Mr. W.M. LAURELLI Permanent Delegation of Argentina, Geneva
<u>Australia</u>	Mr. W.J. BETTENAY Chief Fruit Officer, Department of Primary Industry, Victoria
<u>Austria</u>	Mr. H. WOIDICH Lebensmittelversuchsanstalt, Vienna
<u>Belgium</u>	Mr. R. LINDEN Chef de Travaux, Laboratoire frigorifique, Gembloux
	Mr. J.L. VERLINDEN Ingenieur principal, Ministère de l'Agriculture, Bruxelles
<u>Canada</u>	Mr. E.P. GRANT Director, Fruit and Vegetable Div. Canada Department of Agriculture, Ottawa
	Mr. D.J. GRAHAM Manager, Research and Quality Assur.. Green Giant of Canada Ltd., Windsor, Ontario
<u>Denmark</u>	Mr. E. BACHE Director, Civil engineer, Danish Institute of Frozen Food, Copenhagen
	Mr. F. BRAMSNAES Department of Technical Biochemistry, Copenhagen
<u>Federal Republic of Germany</u>	Mrs. H. MERKEL Federal Ministry of Health, Bad Godesberg
	Mr. E. FORSCHBACH Ministerialdirigent A.D., Dottingen
	Mrs. R. NEJSSEL Federal Ministry of Health, Bad Godesberg
	Mr. J. GUTSCHMIDT Federal Institute for Food Preservation, Karlsruhe
	Mr. auf dem HOVEL Burgdorfer Konservenfabrik, Burgdorf/Hannover

	Mr. H. HAUPT	Bundesverband des Obst- und Gemüseverwertungsindustrie e.V., Bonn
<u>France</u>	Mr. C. GROSS	Inspecteur général de la repression des fraudes, Paris
	Mr. R.J. CHICHE	Syndicat National des Fabricants de Produits Surgelés, Paris
<u>Finland</u>	Mr. T. RAUTAVAARA	Head of Horticultural Section, Administration of Agriculture, Helsinki
<u>Hungary</u>	Mr. E. ALMASI	Professeur, Faculté d'Horticulture et Viticulture, Budapest
	Mr. G. BEKE	Chief of the Research Laboratory of Refrigeration Industry, Budapest
<u>Italy</u>	Mr. R. ANDREOTTI	Capo Reparto, Staz. Sperim. Industria Conserva, Parma
	Mr. U. SELLERIO	Capo del Laboratorio d'Ingegneria dell'Istituto Superiore di Sanità, Rome
	Mr. G. GIANNI	Directeur adjoint, Associazioni Italiana Industriali Prodotti Alimentari, Milan
	Mr. J.A. PESCHEL	Chemical Engineer, via Umberto Primo 29, Latina
<u>Netherlands</u>	Mr. T. van HIELE	Director, Sprenger Institute, Wageningen
	Mr. P.J. MEEREBUER	Ministry of Agriculture and Fisheries, The Hague
	Mr. J. van WAARDENBERG	Produktschap voor Groenten en Fruit, The Hague
	Mr. D.M. van IJSELSTEIN	Technical Director, IGLON.V. Utrecht
<u>Poland</u>	Mr. W. ORLOWSKI	Expert of Central Board of Standardization, Warsaw
<u>Spain</u>	Mr. L. ESTEBAN	Jefe Seccion Normalizacion, Ministerio de Comercio, Madrid
	Mr. J. CARBALLO CAABEIRO	Ministère de l'Agriculture dans la Subcommission d'experts du Code Alimentaire espagnol, Madrid
<u>Sweden</u>	Mr. K.I. NILSSON	Managing Director, The Institute for Quick Frozen Foods, Stockholm
	Mr. U. RAMBECH	Expert, Bjuv,
<u>Switzerland</u>	Mr. P. GRANDJEAN	Adjoint regie fédérale des alcools, Geneva
	Mr. G.S. SCHUBIGER	Sous-directeur, Afico S.A., Le tour de Peilz

	Mr. A.J. KUMIN	Directeur, Institut suisse de la Surgélation, Zurich'
<u>Turkey</u>	Mr. K. YETIS	Conseiller Economique de la Délégation permanente de Turquie, Genève
<u>United Kingdom</u>	Mr. H.M. GOODALL	Senior Executive Officer, Ministry of Agriculture, Fisheries and Food, London
	Mr. R.B. SPARNON	Technical Manager, Findus Eskimo Food, Cleethorpes
	Mr. L.P. MATTHEWS	Assistant Secretary, National Assoc. of Frozen Food Producers, London
	Mr. G.W.P. STRETTON	Chief Chemist, Ross Foods Ltd., Grimsby
<u>U.S.A.</u>	Mr. F. DUNN	Chief, Processed Products, Stand, and Inspection Branch, U.S. Dept. of Agriculture, Washington
	Mr. C.E. GASCOIGNE	Winter Garden Freezer Co., Bells, Tenn.
	Mr. L.S. FENN	Technical Director, National Assoc. of Frozen Food Packers, Washington
	Mr. V.H. BLOMQUIST	Food Technology Branch, Div. of Food Chemistry and Technology, Dept. of Health, Education and Welfare, Washington

Non-Governmental Organizations

Mr. G. RAGAZZI Association Européenne des Exploitations Frigorifiques Milan
 Mr. S.L.R. SALLES " " " " " Chaville
 Mr. J.B. VERLOT, " " " " " Paris
 Mr. L.E.F. LEEMANS, International Federation of Glucose Industries, Brussels
 Mr. F. BRAMSNAES, International Institute of Refrigeration, Paris
 Mr. G. MONTORFANO, Union des Industries de la Communauté Européenne, Milan
 Mr. W. MAJLERT, International Organization for Standardization (ISO/TC.34/SC.3)
 Polski Komitet Normalizacyjny, 14 rue Swietokwzyska, Warsaw
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Mr. L.W. JACOBSON, FAO/ECE Agriculture Division, Geneva,
 Mr. J. NEMETH, Liaison Officer, Food Standards Program, Rome
 Mr. Z. MATYAS, Food Hygienist, WHO, Geneva.

DRAFT PROVISIONAL GENERAL STANDARD FOR QUICK FROZEN FOODS

(to be submitted to the Codex Alimentarius Commission at Step 8)

Scope

1. This general standard shall apply to all quick frozen products as defined in paragraph 2 sold normally for human consumption and may be supplemented by additional provisions or standards for individual products, or groups of, products.

2. Definition

Quick frozen foods are those which, complying with the conditions laid down hereafter, have been subjected to a freezing process in appropriate equipment. This freezing operation should be carried out in such a way that the area of temperature of maximum crystallization is passed quickly, taking into account the dimension and type of- the product. The equipment must be designed and operated in a manner to reduce the temperature to - 18°C or lower at the thermal centre of the product after thermal stabilization, and which are continuously retained at this low temperature up to and including the time of final sale subject to the provisions of articles 6.2 and 6.3. When a product or group of products requires a specific freezing speed or a lower temperature, the speed of freezing and the temperature to be reached will be specified in the group or individual product standard.

3. Raw Material

The raw material which is to be quick frozen shall be wholesome, suitable for the freezing process and such that the final product at least meets the minimum requirements laid down in the appropriate individual product standard.

4. Treatment before and/or after quick freezing

All steps and processes, which may also include packaging, shall be carried out quickly with the maximum care under good hygienic conditions, taking into account any storage or conditioning which is required. These processes may be carried out before or after quick freezing. After the preliminary processes have been completed the product shall be subjected without delay to a freezing process as described in para. 2 under "Definition". The recognized practice of thawing certain products under controlled conditions exclusively for further industrial processing is admitted but such products shall comply with at least the minimum requirements laid down in the appropriate individual product standard.

5. General Hygiene Requirements

The General Principles of Food Hygiene as elaborated by the Codex Committee on Food Hygiene shall be followed. If a Code of Hygienic Practices has been elaborated for a given product or group of products, this Code should also be followed. This applies in particular to the paragraphs 3 and 4 above.

6. Storage, Transportation and Distribution

6.1 Storage

The storage of quick frozen products shall be carried out at a temperature appropriate to the product and the duration of storage, with the minimum

of fluctuation. This temperature shall under no circumstances be higher than - 18°C, or at whatever lower temperature may be specified in the group standard or the individual product standard,

6.2 Transportation

The transport of quick frozen products shall be carried out in equipment capable of maintaining the temperature of the product at - 18°C (0°F) or lower. A rise in the temperature of the product may be tolerated for very brief periods, but the temperature of the product shall never be higher than - 15°C.

6.3 Distribution

The distribution (including local transport) of quick frozen products and their sale in the appropriate equipment shall ensure that the product is kept at a temperature of - 18°C or lower. A rise in the temperature of the product may be tolerated for very brief periods, but the temperature of the product shall never be higher than - 15°C.

7. Packaging

Throughout the freezing, preservation and distribution of the product, the packaging must, up to the time of final sale

- (a) protect the organoleptic and quality characteristics of the product;
- (b) protect the product from bacteriological and other contamination (including contamination from the packaging material itself);
- (c) prevent moisture loss, dehydration and, where appropriate, leakage; and
- (d) not pass on to the product any odour, taste, colour or other foreign characteristic.

8. Labelling

Products to which this standard applies shall be subject to the general provisions laid down by the Codex Committee on Food Labelling and subsequently approved by the Commission.

The following additional labelling provisions shall apply to all quick frozen prepackaged foods intended for retail sale.

- (a) the term "quick frozen" shall accompany the name of the product;
- (b) there may be an indication in code or in clear of the date of production, that is, the date the final product was packaged for final sale;
- (c) there shall be instructions for keeping ;
- (d) there shall be instructions for utilization.

The above provisions may be supplemented by further labelling provisions deemed advisable for groups of products or individual products.

9. Methods of Analysis and Sampling

The Methods of Analysis Inspection and Sampling will be established or referenced in each group standard or in each individual product standard.

10. Food Additives

Additives used in the preparation of quick frozen foodstuffs shall be specified in the standards subject to approval by the Codex Committee on Food Additives.

11. Pesticide and other Residues

Such residues present in quick frozen foodstuffs shall not exceed the level of tolerance laid down by the appropriate Codex Committees.

ANNEX III
DRAFT PROVISIONAL STANDARD
FOR QUICK FROZEN STRAWBERRIES
(Recast in Codex Format and retained at Step 6)

I. DESCRIPTION

I.1 Product definition

Quick frozen strawberries are the product:

- (a) prepared from sound, ripe, clean and stemmed strawberries of firm texture conforming to the characteristics of Fragaria grandiflora L. and Fragaria vesca L.
- (b) packed with or without dry sugar(s) or sugar syrup(s) (sucrose, invert sugar, dextrose, fructose, glucose, syrup, dried glucose syrup)}
- (c) frozen and maintained at temperatures necessary to assure preservation of the product in accordance with the General Standard for Quick (Deep) Frozen Foods.

I.2 Presentation

Quick frozen strawberries may be presented sized or unsized, free-flowing (i.e. as individual berries not stuck to one another) or non free-flowing (i.e. as a solid block), in the following forms:

- (a) whole
- (b) halves
- (c) sliced

I.2.2 Sizes Whole Strawberries

Whole strawberries may be presented as size graded provided -

- (a) the berries are reasonably uniform within each package such that the diameter of the largest berry does not exceed the diameter of the smallest berry by more than 10 mm.; and
- (b) in the case of Fragaria grandiflora L. the diameter of each berry shall be no less than 12 mm.

II ESSENTIAL COMPOSITION AND QUALITY FACTORS

II.1 Composition

II.1.1 Strawberries prepared with dry sugars

The finished product shall contain not more than 25% by weight of added dry sugars.

II.1.2 Strawberries with syrup

(a) Syrup strength

Not less than 40% by weight of sugars.

(b) Quantity of syrup

Not more than 40% of the weight of the finished product shall be syrup.

II.2 Quality factors

II.2.1 Organoleptic characteristics

Quick frozen strawberries shall be:

- of a good colour and free from foreign flavour and odour;
- intact if whole, and not materially disintegrated;
- clean, practically free from sand and grit, and other foreign material;
- practically free from stalks, calyces, leaves and other extraneous vegetable material;
- sound, practically free from insect bites and other blemishes;
- practically free from green fruits;
- normally developed
- when presented as free-flowing, practically free from being stuck to one another and not icy.

II.2.2 The contents of each pack must be of similar varietal characteristics.

II.2.3 Sliced or halved fruit

In sliced and half style the appearance of the product must not be seriously affected by disintegrated or crushed berries.

II.3 Tolerances

II.3.1 Specification of defects

Based on a sample unit of 500 grams of drained fruit the end product shall have no more than the following:

- | | | |
|-----|---|--------------------|
| (a) | Stalks or parts of stalks each greater than 3 mm in one dimension | 3 by number |
| (b) | Calices, leaves or similar extraneous vegetable material (cm) | 3 |
| (c) | Berries of dissimilar varieties | 5% by weight |
| (d) | Blemished or mis-shapen fruit | 5% |
| (e) | Berries with 25% or more of the outer surface area uncoloured | 5% |
| (f) | Berries completely uncoloured | 0.5% |
| (g) | Broken or smashed whole berries | 5% |
| (h) | Ash weight insoluble in HCl | not more than 0.1% |

II.3.2 Allowances for defects

Any sample unit from a sample taken in accordance with the Sampling Plan for Processed Fruit and Vegetables shall be regarded as "defective" if more than 3 of the defects listed under II.3.1 are present in excess of the allowances provided for them or if the total of (c) to (g) exceeds 20%.

II.3.3 Size of whole strawberries

When presented as sized a tolerance of 5% by weight is allowed for fruit that fail to meet the requirements of paragraph I.2.2, sub-paragraphs (a) and (b).

II.3.4 Lot acceptance

A lot is considered acceptable when the number of such "defectives" does not exceed the acceptance number (c) of the Sampling Plan for Processed Fruit and Vegetables.

III. FOOD ADDITIVES

For sliced and halved strawberries the addition of ascorbic acid and citric acid is permitted.

IV. CONTAMINANTS

The product shall comply with such requirements as may be specified by the Codex Committee on Pesticide Residues.

V. HYGIENE

VI The product covered by the provisions of this standard should be prepared in accordance with the Codex Alimentarius Code of Hygiene Practice for Quick Frozen Fruit and Vegetable Products.

VI. LABELLING

VI.1 The provisions of sections 1 to 2.9 and 2.11 to 2.12 of the General Standard for the Labelling of Prepackaged Foods shall apply.

VI.2 The labelling shall conform with the provisions in the General Standard for Quick Frozen Foods and the following specific provisions shall also apply:

VI.2.1 The name of the product shall include:

- (a) the designation "Strawberries", or, in the case of fruit of the specie Fragaria vesca L., "wild strawberries" or "alpine strawberries";
- (b) the style: "halves" or "slices", as appropriate} and
- (c) the packing medium: "with (name of sweetener and whether as such or as the syrup)".

VI.2.2 The name of the product may include the style: "whole" or "free-flowing".

VI.2.3 If a terra designating the sizing is used, such as "small", "medium" or "large", it must be supported by an exact graphic representation of the predominant range of size of the strawberry and/or by a statement of the predominant range of the maximum dimension in millimeters.

VII. PACKAGING

As in the General Standard for Quick Frozen Foods.

VIII. METHODS OF ANALYSIS AND SAMPLING

VIII.1 The methods of analysis and sampling described hereunder are international referee methods which are to be endorsed by the Codex Committee on Methods of Analysis and Sampling.

VIII.2 Sampling

Sampling shall be in accordance with the Sampling Plan for Processed Fruits and vegetables.

VIII.3 Methods of Analysis

ANNEX IV
DRAFT PROVISIONAL STANDARD
FOR QUICK FROZEN PEAS

(Recast in Codex Format and retained at Step 6)

I. DESCRIPTION

I.1 Product definition

Quick frozen peas are the produce:

- (a) prepared from fresh, clean, substantially sound, whole, shelled, immature seed of peas which have been washed, sufficiently blanched to inactivate the enzyme systems and which conform to the characteristics of the species Pisum sativum L.
- (b) frozen and maintained at temperatures necessary to assure preservation of the product in accordance with the General Standard for Quick (Deep) Frozen Foods.

I.2 Types and Presentation

I.2.1 Types

- (a) any suitable variety of pea may be used
- (b) peas may be presented by type as either,
 - (i) Peas or
 - (ii) "Garden", "Green" or "Sweet" Peas
- (c) when peas are presented as "Garden", "Green" or "Sweet" they should have a starch pattern typical of the type.

I.2.2 Presentation

- (a) Quick Frozen Peas of either type may be presented sized or unsized,
- (b) Size-grading and/or sub-size grading if applied is optional.
- (c) Three main size-groups are accepted:
 - (i) small - 8.75 mm sieve size
 - (ii) medium - 10.2 cm “ “
 - (iii) large - 10.2 mm “ “
- (d) Sub-sizing (optional)

It was agreed that group No. (i) could be sub-graded and if this is done the following sub-grades are allowed:

- | | | | |
|---------------|-----------|-------|------|
| - extra small | - 7.5 mm | sieve | size |
| - very small | - 8.2 mm | “ | “ |
| - small | - 8.75 mm | “ | “ |

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

II.1 Quality factors

II.1.1 Organoleptic characteristics The product shall be:

- clean, practically free from grit or silt
- practically free from damage by insects or diseases
- practically free from insects and insect fragments
- of a reasonable uniform green colour according to type
- whole
- practically free from extraneous vegetable matter
- free from any foreign taste or smell.

The product shall have a normal flavour, taking into consideration any seasonings or ingredients added,

II.1.2 Analytical characteristics

The alcohol-insoluble solids contents as determined by the method specified in this Standard must not exceed:

- | | |
|---------------------------------|----------|
| for Garden, Green or Sweet Peas | - (19%) |
| for Peas | - (2356) |

II.2 Tolerances

II.2.1 Definition of defects

- | | |
|--|---|
| Blond Peas | - means peas which are yellow or white but which are edible (that is, not sour or rotted). |
| Blemished Peas | - means peas which are slightly stained or spotted. |
| Seriously Blemished Peas | - means peas which are hard, shrivelled, spotted, discoloured or otherwise blemished to an extent that the appearance or eating quality is seriously affected. These shall include worm-eaten peas. |
| Pea Fragments | - means portions of peas, separated or individual cotyledons, crushed, partial or broken cotyledons and loose skins, but does not include entire intact peas with skins detached. |
| Extraneous Vegetable Material (E.V.M.) | - means any vine or leaf or pod material from the pea plant, or other vegetable materials such as poppyheads or thistles. |

II.2.2 Allowances for defects

Any sample unit from a sample taken in accordance with the Sampling Plan for Processed Fruit and Vegetables shall be regarded as defective if more than 3 of the defects listed below are present in excess of the allowances provided for them or if the total of (a) to (d) exceeds 12%. A sample unit shall be 500 grs. of peas.

<u>DEFECTS</u>	<u>ALLOWANCE</u>
(a) Blond peas	2% by weight
(b) Blemished peas	5% by weight
(c) Seriously Blemished peas	1% by weight
(d) Pea Fragments	10% by weight
(e) E.V.M.	0.5% by weight but not more than 12 sq. cms. in area

II.2.3 Tolerance for sizing

If size graded as 'small', 'medium' or 'large' not more than 15% by number or weight, belonging to the adjacent size group, and not more than 5% of the next adjacent size group.

III FOOD ADDITIVES AND INGREDIENTS

- sugars (sucrose, invert sugar, dextrose, fructose, glucose syrup, dried glucose syrup)
- natural flavourings and their identical synthetic equivalents
- salt

IV CONTAMINANTS

The product shall comply with such requirements as may be specified by the Codex Committee on Pesticide Residues.

V HYGIENE

The products covered by the provisions of this standard should be prepared in accordance with the Codex Alimentarius Code of Hygiene Practice for Quick Frozen Fruit and Vegetable Products.

VI LABELLING

1. The provisions of Section 1 and Sections 2.1 to 2.9 and 2.11 to 2.12 of the General Standard for the Labelling of Prepackaged Foods shall apply.
2. The labelling provisions of the General Standard for Quick Frozen Foods shall apply to this product.
3. The following specific provisions in respect of the labeling of the product are subject to endorsement by the Codex Committee on Food Labelling:
 - (a) The name of the product is Quick Frozen Peas.
 - (b) Where a characterising flavouring has been added this shall be stated as 'with x', as appropriate.

- (c) Where a statement of type is made, this shall be 'Peas', 'Garden Peas', 'Green Peas' or 'Sweet Peas'.
- (d) Where the peas have been size-graded, either the sieve size or the words 'extra small', 'very small', 'small', 'medium' or 'large', as appropriate, shall be stated.²

VII PACKAGING

As in the General Standard for Quick Frozen Foods.

VIII METHODS OF ANALYSIS AND SAMPLING

VIII.1 The methods of analysis and sampling described hereunder are international referee methods which are to be endorsed by the Codex Committee on Method of Analysis and Sampling.

VIII.2 Sampling

Sampling shall be in accordance with the Sampling Plan for Processed Fruit and Vegetables.

VIII.3 Methods of analysis

VIII.3.1 Determination of alcohol-insoluble solids

The alcohol-insoluble solids in peas consists mainly of insoluble carbohydrates and protein. The amount present is used as a guide to maturity.

Reagents

Denatured alcohol (Methylated spirits)

Ditto: 80% v/v

Apparatus

Buchner funnel

Whatman No,1 or equivalent filter paper

A Macerator or Blender

(e.g. Atomix, Turmix, or Waring)

Process:

The paper should be larger than the base of the funnel and should be folded at the circumference to facilitate subsequent removal without loss of solids. The filter paper should be dried in a flat-bottomed dish, lid off, for 2 hours at 100°C, cover dish, cool for 30 minutes in a desiccator and weigh.

Place frozen peas or frozen peas with sauces in water bath at room temperature. The water should be flowing continuously. After peas are completely thawed and clean, drain the peas for 2 minutes on a No.8 sieve. Weigh 250 gms peas into the blender, add 250 ml distilled water and macerate to a smooth paste. If there is less than 250 gms sample, add the entire sample of peas, add an equivalent quantity of distilled water and macerate to a smooth paste. Weigh 20 gms of the paste into a 250 ml ground-necked flask, add 120 ml methylated spirit and reflux on the steam bath for 30 minutes. Immediately filter with suction on a Buckner funnel through the dried, weighed filter paper.

Spread the alcohol insoluble solids evenly on the filter paper Wash the solids without delay with 80% spirit until the washings are colourless. Do not allow the solids to become dry during the washing. " Remove the filter paper with residue from the funnel, transfer to the dish used in preparing the filter paper and dry uncovered in an air oven for 2 hours at + 100°C (+ 212°F).. Cool covered dish for 30 minutes in a desiccator and weigh. Deduct the dried weight of filter paper and dish plus cover from this weight to obtain weight of dry residue.

Calculation

Let: Weight (in grams) of dry residue = w
Alcohol insoluble solids % = 10w

VIII.3.2 Microscopical analysis of types

(a) Equipment and Reagents

Microscope, Compound - 100 to 250 magnifications
- Phase Contrast

Ethenol - 95%

Glycerol

Microscope Slide and Cover Glass

Spatula

(b) Preparing Mount

(1) Remove a small portion of the endosperm and place on glass slide;

(2) Using a spatula grind the material with 95% ethanol;

(3) Add a drop of glycerol, place cover glass on material and examine under microscope.

(c) Identification

Starch granules of Peas of the 'Garden', 'Green' and 'Sweet' types show up as clear cut, well defined, generally spherical particles.

Starch granules of the other types show up as an amorphous mass with no well defined geometric shape.

[This method is subject to further testing as to its applicability to all varieties of peas (including hybrids) which are or may in the future properly be presented as 'Garden', 'Green' or 'Sweet' Peas]

ANNEX V
PROPOSED DRAFT PROVISIONAL
STANDARD

for

QUICK FROZEN RASPBERRIES

(Recast in Codex Format and retained at Stop 3)

I. DESCRIPTION

I.1 Product definition

Quick frozen raspberries are the product:

- (a) prepared from sound, ripe and clean berries conforming to the characteristics of the species Rubus idaeus Linné (red, yellow or black varieties). Before freezing, the raspberries must be stemmed;
- (b) Packed with or without dry sugar(s) or sugar syrup(s), e.g. sucrose invert sugar, dextrose, fructose glucose syrup, dried glucose syrup;
- (c) frozen and maintained at the temperature necessary to ensure preservation of the product in accordance with the General Standard for Quick Frozen Foods.

I.2. Presentation

Quick frozen raspberries may be presented sized or unsized, non-free-flowing (i.e. as a solid block) or free-flowing (i.e. as individual berries not stuck to one another).

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

II.1. Composition

II.1.1 Raspberries prepared with dry sugars

The product shall be prepared in accordance with the following formula: dry sugars not more than 25 per cent by weight of the end product.

II.1.2. Raspberries prepared with syrup

(a) Syrup strength

Not less than 4.0 per cent by weight of sugars.

(b) Quantity of syrup

The amount of syrup used shall be no more than that required to cover the berries and fill the spaces between them. The syrup should not exceed 40 per cent by weight of the product. II.2

Quality factors

II.2.1. Organoleptic characteristics

Quick frozen raspberries shall be:

- reasonably intact;
- clean and practically free from extraneous material;
- practically free from stalks, leaves and other vegetable matter;
- sound, practically free from insect bites, molds and other blemishes;
- normally developed and practically without unripe berries;
- of a good colour and free from foreign taste or smell;
- when presented as free-flowing, practically free from berries stuck to one another, and not icy (free from ice crystals).

II.2.2. The contents of each package must be of similar varietal characteristic

II.3. Tolerances

II.3.1. Based on a sample unit of 500 grams of drained fruit the end product in have no more than the following:

- II.3.2. (a) Not less than 70 per cent by weight of whole fruit.
- (b) Not more than 5 cm of calycas, leaves and similar extraneous vegetable matter per 500 g of the end product.
- (c) Not more than 5 stems or parts of stems longer than 3 mm per 500 g of the end product.
- (d) Not more than 5 per cent per weight of fruits which are visibly blemished.
- (e) Not more than 5 per cent by weight of berries visibly of a different variety.
- (f) Not more than 5 per cent by weight of unripened and/or not normally developed berries.
- (g) For raspberries when size-graded, not more than 10 per cent by weight of fruit belonging to an adjacent size-group.

II.3.3. Allowances for defects

Any sample unit from a sample taken in accordance with the Sampling Plan for Processed Fruit and Vegetables shall be regarded as "defective" if more than 3 of the defects listed under II.3.2 are present in excess of the allowances provided for them or if the total of (d) to (f) exceeds 20%.

III. ADDITIVES

None.

IV. CONTAMINANTS

The produce shall comply with such requirements as may be specified by the Codex Committee on Pesticide Residues.

V. HYGIENE

The products covered by the provisions of this standard should be prepared in accordance with the Codex Alimentarius Code of Hygiene Practice for Quick Frozen Fruit and Vegetable Products.

VI. PACKAGING

As in the General Standard for Quick Frozen Foods.

VII. LABELLING

VII.1 The provisions of sections 1 to 2.9 and 2.11 to 2.12 of the General Standard for the Labelling of Prepackaged Foods shall apply.

VII.2 The labelling shall conform with the provisions in the General Standard for Quick Frozen Foods and the following specific provisions shall also apply:

VII.2.1 The name of the product shall also include:

- (a) the designation "Raspberries" together with a reference to their colour for varieties other than the red variety;
- (b) the packing medium: "with (name of sweetener and whether used dry or as a syrup)".

VII.2.2 The name of the product may include the style in the case of "free-flowing" raspberries.

VII.2.3 If a term designating size is used, such as "small", "medium" or "large", it must be supported by an exact graphic representation of the predominant size of the raspberries and/or by a statement indicating the maximum dimension in millimetres of the predominant size.

VIII METHODS OF ANALYSIS AND SAMPLING

VIII.1. The methods of analysis and sampling described hereunder are international referee methods which are to be endorsed by the Codex Committee on Methods of Analysis and Sampling.

VIII.2. Sampling

Sampling shall be in accordance with the Sampling Plan for Processed Fruit and Vegetables.

VIII.3. Methods of Analysis

Annex VI

PROPOSED DRAFT PROVISIONAL STANDARD
FOR QUICK FROZEN SPINACH

(Recast in the Codex Format and retained at Step 3)

I. DESCRIPTION

1.2 Product definition

Quick frozen spinach are the product:

- (a) prepared from fresh, clean, sound, leaves of spinach which conforms to the characteristics of the species Spinacia Oleracea L.
- (b) which have been sorted, washed, sufficiently blanched to inactivate the enzyme systems and drained; and
- (c) are frozen and maintained at temperatures necessary to assure preservation of the product in accordance with the General Standard for Quick Frozen Foods.

1.2 Presentation

Quick frozen spinach shall be presented as:

- (a) leaf spinach: whole leaves of spinach:
- (b) chopped spinach; spinach comminuted into discernible parts of leaves:
- (c) spinach puree: mashed.

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

II.1 Quality factors

II.1.1 Organoleptic characteristics

Colour - the product shall have a normal green colour, practically free from yellowish or brownish shades.

Flavour - the product shall have a good characteristic flavour free from foreign odours or flavours of any kind.

Texture - spinach of whole or cut styles shall be practically free from large, coarse stems. Spinach of pureed style shall be practically free from tough, fibrous material.

II.1.2 Other characteristics

- practically free from sand and grit
- practically free from extraneous vegetable material
- practically free from flower stems (seed heads), crowns and root material

- practically free from damage due to yellow leaves, discolouration and insect or pathological injury.

II.1.3 Analytical characteristics

The, salt free (i.e. after subtraction of added salts) total dry matter of the finished product, determined by drying over sand for 4 hours at 105 degrees centigrade, should not be lower than (5.5%). [The sand content should not exceed 0.1%, determined as hydrochloric and insoluble ash content of the finished product.]

II.2 Tolerances

II.2.1 Definition of defects

- | | |
|---|--|
| flower stems | - means stems with or without crowns |
| crowns | - means crowns including buds without stems |
| leaves, spotted or pierced by diseases or insects | - means leaves, from which the surface or the form is failed or which are pierced from insects |
| [buds | - means the opened or unopened separate flowerbuds.] |

II.2.2 Allowances for defects

(a) Spinach, whole leaves, should show at most the following defects:

	<u>Defects per sample unit of 500 grams</u>	
- leaves which are partly discoloured and spotted or pierced by diseases or insects	[25] pieces	
- flower stems	[5] pieces	
- crowns	[4] pieces	
- weeds parts of weeds and straw	[25] pieces	
- roots	[2] pieces	
- buds	[?] pieces	
- Large weeds	maximum length of one piece: total length of all large weeds:	85 mm 300 mm

(b) Spinach, cut, should fulfil the following requirements:

- each 5 grams of the finished product should contain not more than 25 buds

III. FOOD ADDITIVES AND INGREDIENTS

Permitted are:

- [salt]
- [seasonings]
- calcium salts

IV. CONTAMINATES

The product shall comply with such requirements as may be specified by the Codex Committee on Pesticide Residues•

V. HYGIENE

The products covered by the provisions of this standard should be prepared in accordance with the Codex Alimentarius Code of Hygienic Practice for Quick Frozen Fruit and Vegetable Products.

VI. LABELLING

- VI.1 The provisions of sections 1 to 2.9 and 2.11 to 2.12 of the General Standard for the Labelling of Prepackaged Foods shall apply.
- VI.2 The labelling shall conform with the provisions in the General Standard for Quick Frozen Foods and the following specific provisions shall also apply:
- (a) the name of the product is Quick Frozen Spinach,
 - (b) a statement of presentation in the following words:
"spinach in whole leaves" or "branch"
"chopped leaves" or "chopped spinach"
"mashed" or "puree".

VII. PACKAGING

As In the General Standard for Quick Frozen Foods.

VIII. METHODS OF ANALYSIS AND SAMPLING

VIII.1 The methods of analysis and sampling described hereunder are international referee methods which are to be endorsed by the Codex Committee on Methods of Analysis and Sampling.

VIII.2 Sampling

Sampling shall be in accordance with the Sampling Plan for Processed Fruits and Vegetables.

VIII.3 Methods of analysis