FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
ORGANISATION DES NATIONS UNIES POUR L'ALIMENTATION ET L'AGRICULTURE
ORGANIZACION DE LAS NACIONES UNIDAS PARA LA AGRICULTURA Y LA ALIMENTACION
Rome, Viale delle Terme di Caracalla. Cables: FOODAGRI, Rome. Tel. 5797

WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTÉ
Genève, Palais des Nations. Cable: UNISANTÉ, Genève. Tel. 33 10 00

AGRI/236
AGRI/WP. 1/362

ALINORM 65/14
August 1965

JOINT FAO/WHO PROGRAM ON FOOD STANDARDS
CODEX ALIMENTARIUS COMMISSION
Third Session, Rome, 29-29 October 1965

REPORT OF THE SECOND SESSION OF THE JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON STANDARDIZATION OF FRUIT JUICES

1. The joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices held its second session in Geneva from 29 March to 2 April 1965.

2. Experts from the following ECE and/or FAO and/or WHO member countries participated in the meeting: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, France, Israel, Italy, Netherlands, Poland, Republic of China, Spain, Sweden, Switzerland, United Kingdom, United States of America and Yugoslavia.

3. Also present, at the invitation of the Secretariat, were members of the Secretariats of the European Economic Community and of the Organization for Economic Co-operation and Development, and the Secretary-General of the International Federation of Fruit Juice Producers.

4. Mr. R. Mory (Switzerland) was re-elected Chairman, and Mr. C. Gross (France) and Mr. A. Ladyzynski (Poland) were elected Vice-Chairmen.

5. Working Documents

The Group had before it the following documents:

(i) report on the first session of the joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices, held in Geneva from 6 to 10 April 1964 (AGRI/221, AGRI/WP.1/292) 5
(ii) proposals of the Swiss delegation for a classification and definition framework for fruit juices and related products (AGRI/WP.1/337);
(iii) observations by the French delegation on the classification and definition framework for fruit juices and related products contained in document AGRI/WP. 1/337 (AGRI/WP.1/Conf. Room Doc. No .70);
(iv) proposals by the French delegation concerning general provisions applicable to all fruit juices (AGRI/WP.1/343);

(v) latest proposals of the Swiss delegation concerning the draft minimum requirements for apple juice, ready for consumption, preserved exclusively by physical means (AGRI/WP. 1/338);

(vi) latest proposals of the Spanish delegation concerning the draft minimum requirements for orange juice, ready for consumption, preserved exclusively by physical means (AGRI/WP.1/341) ;

(vii) comments of the competent authorities in Israel on document AGRI/221, AGRI/WP.1/292, Annex 2, containing draft minimum requirements for orange juice, ready for consumption and preserved exclusively by physical means (AGRI/WP.1/346);

(viii) latest proposals by the French delegation concerning the draft minimum requirements for grape juice, ready for consumption, preserved exclusively by physical means (AGRI/WP. 1/344);

(ix) preliminary draft minimum requirements drawn up by the Italian delegation for pulpy fruit juices (juice and pulp of), ready for consumption, preserved exclusively by physical means (AGRI/7/P. 1/331);

(x) comments and proposals of the Netherlands delegation as regards document AGRI/221, AGRI/WP. 1/292, Annex 1 (draft minimum requirements for apple juice) and suggested principles for drawing up graded quality standards together with suggested quality standard for clear apple juice (AGRI/WP.1/342);

(xi) paper on filtration enzymes prepared by the delegation of the Federal Republic of Germany (AGRI/WP. 1/335) ;

(xii) proposals of the delegation of the United Kingdom as to minimum requirements for apple juice, orange juice and grape juice, ready for consumption, preserved by chemical means (AGRI/WP.1/345);

(xiii) proposals of the delegation of the United States of America as to minimum requirements for concentrated fruit juice preserved by physical means (AGRI/WP.1/348 - available in English only at the time of the session).

In addition, a report entitled "Tin in Canned Foods", prepared by the competent authorities concerned in the United States of America, was presented by the delegation of the United States and distributed during the course of the session. The report was available in English only.

6. Classification and Definition Framework for Fruit Juices and Fruit Juice Products

The Group of Experts agreed upon the classification and definition framework for fruit juices and fruit juice products set out in Annex 1 to this report.

7. Revised Draft Minimum Requirements for Apple Juice ready for Consumption and Preserved exclusively by Physical Means

Subject to the reservations and other remarks set out hereafter, the Group agreed upon the text set out in Annex 2 to this report.

(i) Labelling

The Group agreed not to enter into details as regards obligatory declaration-It agreed, however, to submit its suggestions in the matter to the Codex Alimentarius Committee on Food Labelling for consideration.

(ii) Mould Filaments.

The expression "mould filaments" was suggested to replace the expression "mould counts in state of development". It was agreed that the question of micro-organisms and mould counts should be examined at a later stage in the light of further information on the subject.

(iii) Traces of Arsenic and Lead

The delegation of Italy and the Netherlands maintained their reservations made at the previous session.

(iv) Other Metals

The delegation of Italy maintained its reservation made at the previous session.

Tin

In the absence of any proposals as to a figure for maximum tin content, the Group was not in a position at this juncture to recommend a figure, This question will be put down on the agenda for the next session of the Group.

(v) Anti-oxidants

The delegation of the Federal Republic of Germany reserved its position with regard to the maximum figures agreed upon for sulphur dioxide or potassium metabisulphite, regarding them as being too high. The delegations of Denmark, United Kingdom, United States of America and Yugoslavia also reserved their positions, maintaining that "sulphur dioxide or potassium metabisulphite" should read "sulphur dioxide or the sulphites or metabisulphites or bisulphites of sodium, potassium or calcium".

(vi) Clarifying Agents

The delegation of the United States of America requested that clean, sound, purified rice hulls and wood fibre be allowed as clarifying agents. In addition, the delegation of France requested that polyamide resin be allowed as a clarifying agent.

(vii) Other substances permitted as treatment aids

The delegation of the Federal Republic of Germany requested that activated carbon be specifically excluded. It was decided to postpone any decision on this proposal until further experience was gained of its use.

(viii) Methods of Analysis

The experts noted the fact that a number of international bodies such as the International Federation of Fruit Juice Producers, the International Wine Office, the International Organization for Standardization and the Association of Official Agricultural Chemists of North America had already done a considerable amount of work in this field. In addition it was noted that a Codex Alimentarius Committee on Methods of Analysis had been set up. It was agreed that a harmonization of the work of the various bodies should be aimed at, and in this connexion the special role of the

Codex Alimentarius Committee was noted. As a first step, it was agreed that it would be useful if the International Federation of Fruit Juice Producers and the International Wine Office together with the French delegation could consult with each other on this matter and prepare a report on the position for the Group at its next session.

(ix) Addition of Flavourings

The delegation of France and Italy reserved their positions.

Cinnamon

The delegation of the United States of America requested that cinnamon be allowed as a flavouring, the presence of cinnamon to be declared on the label.

(x) Addition of Concentrate

The delegation of Prance and Italy reserved their positions. The delegation of the United States of America reserved its position with regard to the addition of reconstituted apple juice. It is opposed to this provision unless the addition of reconstituted apple juice is specifically mentioned on the label.

(xi) Preservation

The experts agreed that preservation by physical means includes the use of carbon dioxide and other inert gases.

(xii) Minimum Soluble Solids Content

The delegation of the United States of America requested that a new paragraph entitled as above should be added, and proposed that the minimum soluble solids content should be 10.5 degrees Brix. It was agreed that this proposal should be examined at a later session.

(xiii) Limits of Acidity .

The delegation of the United States of America requested that a new paragraph entitled as above should be added, and proposed that the acidity calculated as malic acid be not less than 0.3 nor more than 0.8 gr. per 100 grs. It was agreed that this proposal should be examined at a later session.

8. Revised Draft Minimum Requirements for Orange Juice ready for Consumption and Preserved exclusively by Physical Means

Subject to the reservations and other remarks set out hereafter, the Group agreed upon the text set out in Annex 3 to this report.

(i) Technical Description

The delegations of Israel, United States of America and Yugoslavia requested that the words "natural" and/or "unsweetened" should be allowed to be added to the technical description "orange juice" if sugar has not be added to the juice. The delegation of the Netherlands requested that the word "unsweetened" should be allowed to be added.

(ii) Labelling

The remarks made with reference to apple juice apply to orange juice also.

(iii) Recoverable Essential Oils

The delegation of Israel reserved its position.

(iv) Mould Filaments

The remarks made with reference to apple juice apply to orange juice also.

(v) Traces of Arsenic and Lead

The delegation of Italy maintained its reservation made at the last session. The delegation of the Netherlands also reserved its position.

(vi) Other Metals

The delegation of Italy maintained its reservation made at the last session.

Tin.

The Group noted the proposal of the delegation of Israel, set out in AGRI/WP.1/346. This question will be put down on the agenda for the next session of the Group.

(vii) Addition of Flavourings

The delegations of France, Israel and Italy reserved their positions.

(viii) Addition of juices other than of citrus sirensis. Swingle

The delegations of the United States of America and Switzerland requested that the unfermented juice of citrus reticulata and hybrids therof should be allowed to be added in a quantity not exceeding. 10 per cent by volume.

(ix) Addition of concentrate

The delegations of France and Italy reserved their positions. The delegations of Switzerland, the United Kingdom and the United States of America also reserved their positions in maintaining that the concentrate of citus reticulata should be allowed to be added in an amount that the soluble solids content contributed by the concentrate of citrus reticulata is not more than 10 per cent of the soluble solids content of the final product, provided this is declared on the label.

9. Revised Draft Minimum Requirements for Grape Juice, ready for Consumption and Preserved exclusively by Physical Means

Subject to the reservations and other remarks set out hereunder the Group agreed upon the text set out in Annex 4 to this report.

(i) Labelling

The remarks made with reference to apple juice apply to grape juice also.

(ii) Mould Filaments

The remarks made with reference to apple juice apply to grape juice also.

(iii) Traces of Arsenic and Lead

The delegations of Italy and the Netherlands reserved their positions.

(iv) Other Metals

The delegation of Italy reserved its position.

The delegation of Spain reserved its position regarding total metal content, suggesting 20 mg/hg,

Certain delegations expressed the opinion that the iron content and the total metal content should, as with apple juice, be reduced to 10 and 12 mg/hg respectively after a transitional period.

Tin

The remarks made with reference to apple juice apply to grape juice also.

(v) Anti-oxidants, clarifying agents, other substances permitted as treatment aids

The remarks made with reference to apple juice apply to grape juice also.

(vi) Methods of Analysis

The remarks made with reference to apple juice apply to grape juice also.

(vii) Addition of Flavourings

The delegations of France and Italy reserved their positions.

(viii) Addition of Concentrate

The delegations of Switzerland and the United States of America were in favour of allowing the addition of grape juice concentrate. The delegation of Italy, France and Spain were opposed to this. It was agreed that the question should be re-examined at a later stage.

(ix) Preservation

The remarks made with reference to apple juice apply to grape juice also.

10. Filtration Enzymes

The Group had before it a paper on the preparation of filtration enzymes, prepare by the delegation of the Federal Republic of Germany (AGRI/WP.1/335). As, however, the Codex Alimentarius Commission had set up a world-wide Expert Committee on Food Additives, for which the Netherlands Government had accepted responsibility, the Group agreed that as that Expert Committee would be studying the entire field of food enzymes, it would be best not to enter into discussion on this question until the Expert Committee had examined the matter. It was agreed that document AGRI/WP.1/335 should be referred to the Expert Committee for consideration.

11. Pulpy typo Nectars (ital. succo e polpa.)

The Group had before it document AGRI/WP. 1/331, containing preliminary draft minimum requirements for pulpy type nectars (ital. succo e polpa) drawn up by the

Italian delegation. At an early stage in the discussions it became clear that the product called nectar in the United States of America is considerably different from the product called nectar in Europe. It was agreed, therefore, that for the next meeting of the Group, the delegations of Italy and the United States of America should each furnish a detailed description of their pulpy type nectars and of the method of their manufacture. It was also agreed that the two delegations should try, by correspondence, between now and the next meeting of the Group, to reach agreement on a single text. If this proves to be unfeasible, each delegation should submit its own proposals.

12. Principles for drawing up of Graded (Quality Standards

The Group had before it document AGRI/WP. 1/342, containing principles for the drawing up of graded quality standards, drawn up by the Netherlands delegation. That delegation indicated to the Group that since it had prepared the paper it had come to the conclusion that the establishment of graded quality standards is not feasible, as there were too many subjective elements involved. It proposed, therefore, that this question be left aside until work on the minimum standards had been completed. The delegations of the United Kingdom and of the United States of America agreed t hat this subject should be left in abeyance for the time being. The delegation of the Federal Republic of Germany expressed the view that fruit juices did not lend themselves to such grading (health requirements, for example, cannot be graded) and indicated that it was not in favour of establishing quality grades. On the other hand, the delegations of Italy and Spain considered that it would be possible to draw up quality grades. It was agreed that a decision could not be taken on this question at this stage and that the matter should be left aside for another time.

13. Programme of Work for the Next Session

The following programme was agreed to:

(a) Pulpy type nectars (ital. succo e polpa)

The delegations of Italy and the United States of America should each furnish a detailed description of their pulpy type nectars and of the method of their manufacture. The two delegations should try, by correspondence, to reach agreement on a single text. If this proves to be unfeasible, each delegation should submit its own proposals.

(b) Minimum requirements for apple juice, orange juice and grape juice, preserved by chemical means

The Group will examine either the existing proposals of the delegation of the United Kingdom, contained in document AGRI/WP. 1/345, or a modified version of these proposals, if that delegation deems it advisable to modify them.

(c) Minimum requirements for concentrated fruit juices preserved by physical moans

The Group will examine either the existing proposals of the delegation of the United States of America, contained in document AGRI/WP. 1/348, or a modified version of these proposals, if that delegation deems it advisable to modify them.

(d) Filtration Enzymes

The Group will have before it the results of the meeting of the world-wide Expert Committee on Food Additives, which will be studying the entire field of food enzymes, and to which document AGRI/WP.1/335, containing a paper or the preparation of filtration enzymes, drawn up by the delegation of the Federal Republic of Germany, will be referred for consideration.

(e) Tolerances for tin in fruit juices

The delegation of the United States of America will submit proposals.

(f) Tomato Juice

The delegations of Italy and the United States of America should try, by correspondence, to reach agreement on a single text covering minimum requirements for tomato juice ready for consumption, preserved exclusively by physical means. If this proves to be unfeasible, each delegation should submit its own proposals.

(g) Methods of Analysis

Examination of report on results of discussions between the International Federation of Fruit Juice Producers, the International "Wine Office and the French delegation on methods of analysis.

(h) Other business.

ANNEX I.

CLASSIFICATION AND DEFINITION FRAMEWORK
FOR FRUIT JUICES AND FRUIT JUICE PRODUCTS
REGARDLESS OF THEIR INTENDED USE

1. Fruit Juice

Definition: Unfermented juice, obtained from sound ripe fruits; turbid or clear.

Fermentable Juice

1.1 not preserved

1.2 physically preserved

Unfermentable Juice

1.3 chemically preserved

2. Concentrated fruit juice

Definition: Unformented juice, obtained from sound, ripe fruits, the volume of which has been reduced by physical removal of a specified part of its constituent water

Fermentable Concentrate

2.1 not preserved

2.2 physically preserved

Unfermentable Concentrate

2.3 chemically preserved

3. Reconstituted fruit juice

Definition: Unfermented juice, obtained from sound ripe fruits, the volume of which has been reduced by physical removal of a part of its constitutent water and subsequently restored to its original density by the addition of water. The juice may be turbid of clear.

Fermentable Juice

3.1 not preserved

3.2 physically preserved

Unfermentable Juice

3.3 chemically preserved

4. Fruit Juice Products

4.1 Dehydrated fruit juice and powdered fruit juice [1]

Definition: Product prepared from unfermented juice obtained from sound, ripe fruits or from the concentrate of this juice, by physical removal of most of the constituent water

4.2 Nectars

4.2.1 Pulpy typo nectar (ital. succo e polpa)

Definition: Unfermented but fermentable product obtained from the total edible part of sound ripe fruits, sieved, with water and sugars added

It may contain certain permitted ingredients . and additives and must be preserved by physical means

4.2.2 Non-pulpy type nectar (Germ. Süssmost)

Definition: Unfermented but fermentable product obtained from the juice of the following sound ripe fruits - berries, blackcurrants, sour cherries, apricots, peaches, plums and wild fruit, with the addition of water and sugars, preserved by physical means

4.3 Fruit Extract

Definition: Sieved product obtained by an appropriate and authorized treatment of fresh, cooked, heated or dried fruits. The volume of this product can be reduced by the removal of a part of its water

4.3.1 physically preserved

4.3.2 chemically preserved.

4.4 Fruit juice beverage

Definition: Beverage obtained by diluting fruit juice, concentrated fruit juice or dehydrated fruit juice with water to which may be added other suitable ingredients and permitted additives.

4.4.1 physically preserved

4.4.2 chemically preserved

[1] Including accelerated freeze dried juices.

ANNEX II

REVISED DRAFT MINIMUM REQUIREMENTS FOR APPLE JUICE READY FOR CONSUMPTION, PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

1.	Definition	:	Unfermented but fermentable juice, ready for direct consumption, obtained by mechanical extraction from sound, ripe apples, preserved exclusively by physical means. The juice may be turbid or clear. It should have the characteristic smell and taste of apple juice
2.	Technical description (Must be declared)	:	Apple juice
3.	Labelling		
	3.1 Obligatory declarations		
	– Technical description		
	– Other declarations which might be thought necessary		
	3.2 Representation of fruit and fruit juices		
	– Only apples and apple juice may be represented		
4.	Ethanol content	:	Not more than 5 gr/kg.
5.	Volatile acids	:	Not more than 0.4 gr/kg expressed as acetic acid
6.	Micro-organisms in state of development	:	None
7.	Mould counts in state of development	:	None
8.	Traces of arsenic and lead		
	Arsenic (As)	:	Not more than 0.4 mg/kg
	Lead (Pb)	:	Not more than 0.5 mg/kg
9.	Other metals[a]		
	Copper (Cu)	:	Not more than 5 mg/kg
	Zinc (Zn)	:	Not more than 5 mg/kg
	Iron (Fe)	:	Not more than 10 mg/kg
	Total metal content, precipitable by potassium	:	Not more than 12 mg/kg, expressed as Fe.

ferro-cyanide

10. Mineral impurities insoluble in juice : Not more than 20 mg/kg

11. Permitted treatment aids

Substances permitted

11.1 Anti-oxidants

l-ascorbic acid	:	Limit in the final product 150 mg/kg. All reference to vitamin C is prohibited.-
sulphur dioxide or potassium metabisulphite [c]	:	Maximum limit in the final product 50 mg/kg total SO_2 [d]

11.2 Clarifying Agents[e]

- pectolytic or proteolytic enzymes, in conformity with a standard which will be established later, combined or not combined with a strictly essential quantity of edible carriers or with substance permitted in this annex, without preservatives
- gelatine without foreign smell
- tannin [f]
- bentonite, with low soluble iron content
- colloidal solution of cilica (silica sol)
- filtration aids (asbestos, diatomite, cellulose)

11.3 Others

- pure vegetable and animal carbon
- pure carbon dioxide. Content in excess of 2 gr/kg must be declared.

12. Addition of flavourings : The addition of apple juice flavouring to apple juice from which the flavour has been removed is allowed

13. Addition of concentrate : Only the addition of concentrated apple juice or reconstituted apple juice is allowed

14. Addition of clouding or stabilizing agents : None

15. Preservation [g] : By physical means ensuring adequate treatment and good quality juice

16. Other additions : None

[a] The experts agreed to accept a maximum limit of 15 mg/kg for iron and 17 mg/kg for total metal content for a period of 3 years from the time of the adoption of the text as a standard.

[b] This does not refer to vitaminized juices intended for special purposes.

[c] Must conform to the specifications for identity and purity of food additives established by the joint FAO/WHO Committee on Food Additives.

[d] After an interval of 3 years, this figure will be reduced to 20 mg/kg.

[e] Must conform to the technical and purity requirements fixed by the International Wine Office, where such exist.

[f] The use of tannins is to be reviewed before the end of 1967.

[g] Le Groupe d'experts n'a pas considéré que la radiation ionisante soit à inclure parmi les moyens physiques de conservation. Ce dernier procédé est en cours d'examen par d'autres organismes internationaux et sera réexaminé par le Groupe lorsque des renseignements deviendront disponibles.

ANNEX III

REVISED DRAFT MINIMUM REQUIREMENTS FOR ORANGE JUICE READY FOR CONSUMPTION. PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

1.	Definition	:	Unfermented but fermentable juice, ready for direct consumption, obtained by mechanical extraction from the edible part (endocarp) of ripe, sound oranges (citrus sinensis, Swingle), preserved exclusively by physical means. It should have the characteristic smell and taste of orange juice
2.	Technical description (must be declared)		Orange juice
2.1	Supplementary Technical description	:	Where sugar has been added the designation must be sweetened orange juice or orange juice with added sugar
3.	Labelling		
3.1	Obligatory declarations		
	– Technical description or supplementary technical description – Other declarations which might be thought necessary		
3.2	Representation of fruit and fruit juices		
	– Only oranges and orange juice may be represented		
4.	Ethanol content	:	Not more than 3 gr/kg.
5.	Volatile acids	:	Traces
6.	Recoverable essential oils	:	Not more than 0.5 gr/kg. (Clevenger
7.	Micro-organisms in state of development	:	method of analysis)
8.	Mould counts in state of development	:	None
9.	Traces of arsenic and lead	:	None
	Arsenic (As) Lead (Pb)	:	Not more than 0.4 mg/kg Not more than 0. 5 mg/kg
10.	Other metals		
	Copper (Cu)	:	Not more than 5 mg/kg
	Zinc (Zu)	:	Not more than 5 mg/kg
	Iron (Fe)	:	Not more than 15 mg/kg
	Total metal content, precipitable by potassium ferro-cyanide	:	Not more than 20 mg/kg, expressed as Fe.

11.	Addition of flavourings	:	The addition of orange juice flavouring to orange juice from which the flavour has been removed is allowed
12.	Addition of clouding or stabilizing agents	:	Prohibited
13.	Addition of sugar	:	The addition of pure sugars in dry form as
		:	defined by the Committee on Sugars of the Codex Alimentarius Commission is allowed. The quantity added must not exceed 50 gr/kg.
14.	Addition of juices other than of citrus sinensis, Swingle	:	Prohibited
15.	Addition of concentrate	:	Only the addition of concentrated orange juice (citrus sinensis Swingle) is allowed
16.	Addition of colouring substances	:	Prohibited
17.	Preservation [a]	:	By physical means ensuring adequate treatment and good quality juice
18.	Other additions	:	Prohibited

[a] The Group does not take preservation by physical means to include ionizing radiation. This matter is being examined by other international bodies and will be re-examined by the Group when advice becomes available.

ANNEX IV

REVISED DRAFT MINIMUM REQUIREMENTS FOR GRAPE JUICE READY FOR CONSUMPTION, PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

1.	Definition	:	Unfermented but fermentable juice, ready for direct consumption, obtained by mechanical extraction from sound, ripe grape preserved exclusively by physical means. The juice may be turbid or clear. It should have the characteristic smell and taste of grape juice.
2.	Technical description (Must be declared)	:	Grape juice
3.	Labelling		
	3.1 Obligatory declarations		
	– Technical description		
	– Other declarations which might be thought necessary		
	3.2 Representation of fruit and fruit juices		
	– Only grapes and grape juice may be represented		
4.	Ethanol content	:	Not more than 5 gr/kg.
5.	Volatile acids	:	Not more than 0. 4 gr/kg expressed as
6.	Micro-organisms in state of development	:	None
7.	Mould counts in state of development	:	None
8.	Traces of arsenic and lead [a]	:	None
	Arsenic (As)	:	Not more than 0.4 mg/kg
	Lead (Pb)	:	Not more than 0. 5 mg/kg
9.	Other metals [a]		
	Copper (Cn))	:	Not more than 5 mg/kg
	Zinc (Zn)	:	Not more than 5 mg/kg
	Iron (Fe)	:	Not more than 1 5 mg/kg
	Total metal content, precipitable by potassium ferro-cyanide	:	Not more than 17 mg/kg, expressed as Fe.

10. Mineral impurities insoluble in juice: : Not more than 20 mg/kg

11. Permitted treatment aids

Substances permitted

11.1 Anti-oxidants

l-ascorbic acid:	:	Limit in the final product 150 mg/kg. All reference to vitamin C is prohibited. [b]
Sulphur dioxide or potassium metabisulphite [c]	:	Maximum limit in the final product 50 mg/kg total SO_2 [d]

11.2 Clarifying Agents [e]

- pectolytic or proteolytic enzymes, in conformity with a standard which will be established later, combined or not combined with a strictly essential quantity of edible carriers or with substance permitted in this annex, without preservatives
- gelatine without foreign smell
- tannin[f]
- bentonite, with low soluble iron content
- colloidal solution of cilica (silica sol)
- filtration aids (asbestos, diatomite, cellulose)

12. Addition of flavourings : The addition of grape juice flavouring to grape juice from which the flavour has been removed is allowed

13. Addition of concentrate : To be examined later

14. Addition of clouding or stabilizing agents : None

15. Preservation [g] : By physical means ensuring adequate treatment and good quality juice

16. Other additions : None

[a] It was agreed that these figures should be re-examined in the light of further information on the subject to be obtained from the International Wine Office throw the intermediary of the French delegation.

[b] This does not refer to vitaminized juices intended for special purposes.

[c] Must conform to the specifications for identity and purity of food additives established by the joint FAO/WHO Committee on Food Additives.

[d] After an interval of 3 years, this figure will be reduced to 20 mg/kg.

[e] Must conform to the technical and purity requirements fixed by the International Wine Office, where such exist.

[f] The use of tannins is to be reviewed before the end of 1967.

[g] The Group does not take preservation by physical means to include ionizing radiation. This matter is being examined by other international bodies and will be re-examined by the Group when advice becomes available.