



Food and Agriculture
Organization of the
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World Health
Organization

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Agenda Item 5

CX/MAS 19/40/5
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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING**

40th Session

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REVISION OF THE RECOMMENDED METHODS OF CXS 234 –PREAMBLE AND STRUCTURE

(Prepared by the EWG led by Brazil and Uruguay)

Codex members and Observers wishing to submit comments on this draft should do so as instructed in CL 2019/15-MAS available on the Codex webpage/Circular Letters:
<http://www.fao.org/fao-who-codexalimentarius/resources/circular-letters/en/>.

Background

1. Over the past years, Brazil and Uruguay conducted the revision work of the *Recommended Methods of Analysis and Sampling* (CXS 234-1999). The main goal of this work was to harmonize information available on this standard as a single source for methods search to assess compliance for provisions described in Codex Commodities standards. The revision was guided by decisions taken at CCMAS over the last 3 past years:
 - CCMAS37 (2016) reaffirmed its decision to have CXS 234 (CXS 234-1999) as the single reference for methods of analysis in CXS. The Committee agreed to an internal procedure for the maintenance of CXS 234-1999
2. CCMAS38 (2017) noted the importance of having a searchable database with information specific to CCMAS to manage the regular review process and a general interface with information on methods of analysis and sampling adopted by CAC for Codex members and observers available on the Codex website. In the meanwhile, CCMAS can work with an informative document to track the review process. The Committee agreed that new work on the standard would address the preamble, scope, structure and other relevant information aimed at facilitating the reading of the methods listed in CXS 234. The Committee agreed that it would continue to work on the workable packages for the review and update of the Standard.
3. CCMAS39 (2018) agreed:
 - the Annexes were useful but should be simplified and retained as an internal document to guide the work of the Committee when revising and updating CXS 234. In particular for the commodity categorization, they should be aligned with the commodities as currently described in CXS 234 which reflect the structure of CAC and its subsidiary bodies (e.g. commodity committees) and would therefore facilitate the inclusion of commodities and corresponding methods of analysis in CXS 234
 - The structure of CXS 234 should reflect the current policy of CCMAS to encourage Codex committees to develop method performance criteria as opposed to the identification of methods of analysis and as such identified four sections that would constitute the structure of CXS 234.
 - to add a definition for method performance criteria in line with the definition in the Procedural Manual and the definition of provision was clarified to cover both quality and safety provisions by referring to criterion only.
 - that explanatory text under this provision would require further consideration especially as to the description of provisions determined by calculation where two or more methods and a calculation are required to get the result of the relevant provision.
 - Description provided under Part II (Methods of Analysis) was sufficient to address the definition / interpretation of “identical methods” and thus there was no need to define “technically equivalent methods”.
 - that when a method is endorsed as Type I for a specific commodity/provision combination, only one method should be listed in CXS 234. For some commodity/provision combinations, CXS 234 may list more than one method and these methods have been determined to be identical. Identical methods,

published in a single document by different SDOs, are in the same row separated by a vertical bar "|". Identical methods, published in separated documents by different standard development organizations, that differ only in formatting but that contain identical technical procedures are in the same row and separated by a forward slash "/".

- All provisions endorsed by CCMAS would be kept in an excel spreadsheet in the revised format and made available to CCMAS at every session as an information document to facilitate work on endorsement of provisions from Codex committees.

WORK OF THE EWG

4. CCMAS39 agreed to re-establish the EWG led by Brazil and Uruguay to further develop CXS 234 (Introduction, Part I, Part II and sections I –IV). The Annexes (I: structure; II: provisions; and III: principles) would also be revised and simplified (for internal use by CCMAS). On this revision work, several countries contributed to simplify and create a user-friendly document that makes it easy for a user to select methods that are fit-for- purpose. The eWG received contributions from following countries: Australia, Canada, Colombia, Costa Rica, Ecuador, Iran, Japan, Norway and Thailand. The document was reviewed to include all discussion as summarized below:

- Provision definition - “criterion” was replaced by “analytical parameter” to avoid confusion with the “method criteria”;
- The criteria to use the symbols “|”, “/” e “and” were aligned with the first draft of the discussion paper “Guidance on Endorsement of Methods”;
- The columns of the tables (Part II) were reordered to reflect the description adopted in Part I;
- The term CXSdard was replaced by CXS;
- The “Maximum Level” was included in Section II,
- An Annex with all the notes was included.

5. With respect to list of commodities, we would like to clarify that the commodities structure arrangement presented in Appendix I was done based on current commodity standards available in Codex. The content of this list will not be static, and commodities description will be updated or withdrawn according to requests by commodity Committees to include methods in CXS 234. Regarding this assumption, we strongly believe that full description of commodity names in the list can lead to achieve more precise searching of methods endorsed by CCMAS. Otherwise, a general description of commodity names would lead to incorrect application of a method not endorsed for one specific commodity. We also support this list could guide activities of vertical Codex Committees on technical discussions about what is currently available in CXS 234 categorized by commodities. The use of the list of principles (see Appendix II) and provisions by Codex committees (see Appendix III) and the list of commodities (Appendix IV) will avoid inconsistencies in CXS 234.

6. It is important to highlight that this version reflects the information in the current CXS 234, since the CCMAS decided that changes and corrections should be made by the endorsement PWG. The removal of methods of analysis and sampling from CXS would be done as the review and updating of CXS 234 progresses and inconsistencies and other pending issues requiring action from the Codex Secretariat, Codex committees as well as international standards development organizations were resolved.

7. The use of “|”, “/”, “and” and the use of separated lines will be aligned with the output of the discussion of the Guidance on Endorsement (CX/MAS 19/40/4) by CCMAS, under agenda item 4 to ensure that the same definitions and symbols/separators are used. This part of the text is in grey shading. After this decision the connectors “or” and “/” should be revised.

RECOMMENDATIONS

The Committee is invited to consider the revised preamble and document structure for CXS234 as presented in Appendix I

**PROPOSED DRAFT PREAMBLE AND DOCUMENT STRUCTURE FOR THE GENERAL STANDARD ON
METHODS OF ANALYSIS AND SAMPLING (CXS 234-1999)
(for comments through CL 2019/15-MAS)**

INTRODUCTION

1. This Standard contains definitions, lists of methods of analysis, method performance criteria, descriptions of some methods and a list of methods of sampling to verify the provision, criterion or characteristic in CXSdards to be applied to commodities moving in international trade.
2. The methods are primarily intended to allow competent national and/or regional authorities to select appropriate methods of analysis and sampling for the verification of provisions, criteria or characteristic found in Codex [commodity] standards.
3. It is recommended that this Standard should be read in conjunction with the related CXSdards, guidelines and other documents¹.
4. In case of disputes of analytical results, guidance is given in the *Guidelines for Settling Disputes over Analytical (Test) Results* (CXG 70-2009), including guidance on the use of methods of analysis.
5. The methods of analysis and sampling contained in this Standard are the recommended ones to be used to assess compliance for a specific provision described in Codex commodity standards.

¹ Harmonized IUPAC Guidelines for the Use of Recovery Information in Analytical Measurement (CXG 37-2001), Harmonized IUPAC Guidelines for Single-Laboratory Validation of Methods of Analysis (CXG 49-2003), Guidelines on Sampling (CXG 50-2004), Guidelines on Measurement Uncertainty (CXG 54-2004), Protocol for the Design, Conduct and Interpretation of Method Performance Studies (CXG 64-1995), Harmonized Guidelines for Internal Quality Control in Analytical Chemistry Laboratories (CXG 65-1997), protocols for method performance determination through collaborative study. (IUPAC/AOAC and ISO 5725)

Standard consists of three main parts:

PART I. PREAMBLE

PART II. METHODS OF ANALYSIS

SECTION I - METHODS OF ANALYSIS AND METHOD PERFORMANCE CRITERIA BY COMMODITY

SECTION II - PROVISIONS FOR WHICH THERE ARE METHOD PERFORMANCE CRITERIA

SECTION III - COMPLETE DESCRIPTIONS OF METHODS OF ANALYSIS

SECTION IV - METHODS OF ANALYSIS BY COMMODITY CATEGORIES

PART III. METHODS OF SAMPLING BY COMMODITY CATEGORIES AND NAMES

ANNEX. NOTES TO THE STANDARD FOR METHODS OF ANALYSIS AND SAMPLING

PART I. PREAMBLE

1. Scope

This Standard is intended to provide a single reference to methods of analysis and sampling for food as adopted by the Codex Alimentarius Commission.

2. Definition of Terms

2.1 Codex Methods of Analysis: methods for the verification of provisions in CXStandards. The methods are classified as Defining Methods (Type I), Reference Methods (Type II), Alternative Approved Methods (Type III), & Tentative Methods (Type IV) (see Codex Procedural Manual, Section II: Elaboration of Codex texts, Definition of types of methods of analysis).

2.2 Methods of Analysis Principle: The science-based analytical principle of the method of analysis, described concisely, focusing on the technique.

2.3 Provision: Analytical parameter of a commodity that needs to be confirmed by analysis to ensure that it conforms to that standard.

2.4 Method criteria: Set of performance characteristics to which a method used must comply when determining a provision, criterion or characteristic.

PART II. METHODS OF ANALYSIS

This part contains 4 sections, the first one lists all the commodities and provisions including a link to the other sections, depending on how the methodologies are proposed, endorsed and approved by CAC.

Section I presents all the methods by commodities and provisions.

Section II presents method performance criteria and examples of methods that meet these performance criteria.

Section III presents complete descriptions of methods of analysis

Section IV presents methods of analysis by commodity categories. In this section, the most updated version of the method should be used in accordance with ISO/IEC 17025 unless it is not appropriate or possible to do so.

All Codex methods, including Type IV methods, can be used for control, inspection and regulation and when parties so agree, for resolution of disputes. A Type I method determines a value that can only be arrived at in terms of the method per se and serves by definition as the only method for establishing the accepted value of the measurand. A Type II method is the one designated Reference Method where Type I methods do not apply. A Type III Method is one which meets the criteria required by the Committee on Methods of Analysis and Sampling and a Type IV is a method which has been used traditionally or else has been recently introduced but for which the criteria required for acceptance by the Committee on Methods of Analysis and Sampling have not yet been determined.

In general, each line of this section lists only one method of analysis to check the provision. It is necessary to consider the following commands when more than one method is listed.

- "I": used when the methods are identical and published jointly by two or more Standard Development Organisations (SDOs) as a single document, or separate documents containing identical text.
- ~~"/": used for methods with the identical technical procedures published separately by two or more Standard Development Organizations (SDOs) as distinct documents, but based on the same set of validation data. The only difference is the style as per the originating SDO.~~
- Separate lines, scope specified under commodity column are used when two or more methods are required to cover the full range of values.
- "and": used when more than one method is necessary to calculate the required answer for a given provision.

When a calculation step is necessary to determine a provision, a brief description of the calculation shall be given in the method column.

Initially from the Commodity and Provision combination in Section I, use the link to identify the appropriate Codex endorsed Method or Method Performance criteria from sections II, III or IV.

SECTION I – METHODS OF ANALYSIS AND METHOD PERFORMANCE CRITERIA BY COMMODITY

This section contains:

- a) The name of the commodity/product;
- b) The provision to which the methods apply;
- c) CXS to which the method is directed;
- d) Link to the performance criteria or method.

SECTION II – PROVISIONS FOR WHICH THERE ARE METHOD PERFORMANCE CRITERIA

This section contains:

- a) The name of the commodity/product;
- b) The provision to which the methods apply;
- c) Maximum level (ML)
- d) Minimum applicable range;
- e) Limit of detection (LOD);
- f) Limit of quantification (LOQ);
- g) RSD_R (Relative Standard Deviation of Reproducibility);
- h) % Recovery;
- i) Examples of Methods that meet the criteria and their principles also can be mentioned. However, any method that complies with the established performance criteria can be used;
- j) Principle.

SECTION III – COMPLETE DESCRIPTION OF THE METHODS OF ANALYSIS

This section contains:

- a) Description and scope of the method that includes the commodity and provision.

SECTION IV – METHODS OF ANALYSIS BY COMMODITY CATEGORIES

This section contains:

- a) The name of the commodity/product;
- b) The provision to which the methods apply;
- c) Identification of the method;
- d) Principle;
- e) Type of analytical metho

PART III. METHODS OF SAMPLING BY COMMODITY CATEGORIES AND NAMES

This part contains:

- a) The name of the commodity/product;
- b) Identification of method of sampling;
- c) Notes.

ANNEX. NOTES TO THE STANDARD FOR METHODS OF ANALYSIS AND SAMPLING

PART II. METHODS OF ANALYSIS

SECTION I – METHODS OF ANALYSIS AND METHOD PERFORMANCE CRITERIA BY COMMODITY

Commodity	Provision	CXS	Link to the performance criteria or method
All Foods			
All foods	Acesulfame K, Aspartame	CXS 239 CXS 192	Section IV
All foods	Cyclamate	CXS 239 CXS 192	Section IV
All foods	Saccharin	CXS 239 CXS 192	Section IV
All Foods (see also meat products)	Nitrates and/or Nitrites	CXS 239 CXS 192	Section IV
Individual Foods	Sulphites	CXS 239 CXS 192	Section IV
General methods that do not measure the lower molecular weight fraction (i.e. monomeric units <=9)¹			
All foods ²	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction. ³	-	Section IV
All foods ²	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction and also includes determination for soluble and insoluble dietary fibres. ³	-	Section IV
All foods ²	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction, in foods and food products containing more than 10% dietary fibres and less than 2% starch (e.g. fruits). ³	-	Section IV
All foods ²	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction. Provides sugar residue composition of dietary fibre polysaccharides, as well as content of Klason lignin. ³	-	Section IV
All foods ²	Insoluble dietary fibres in food and food products. ³	-	Section IV
All foods ²	Soluble dietary fibres in food and food products. ³	-	Section IV
General methods that measure both the higher (monomeric units > 9) and the lower molecular weight fraction (monomeric units <=9)¹			
All foods ²	Method applicable for determining the content of dietary fibres of higher and lower molecular weight, in food where resistant starches are not present.	-	Section IV
All foods ²	Method applicable for determining the content of dietary fibres of higher and lower molecular weight. The method is applicable in food that may, or may not, contain resistant starches.	-	Section IV
All foods ²	Method applicable for determining the content of insoluble and soluble dietary fibres of higher and lower molecular weight. The method is applicable in food that may, or may not, contain resistant starches.	-	Section IV
Methods that measure individual specific components (monomeric units: the whole range for each type of components is covered)¹			
All foods ²	(1□3)(1□4) <i>Beta</i> -D-Glucans	-	Section IV
All foods ²	Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses, fructooligosaccharides) (applicable to added fructans)	-	Section IV

All foods ²	Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses, fructooligosaccharides) (not applicable highly depolymerised fructans)	-	Section IV
All foods ²	Polydextrose	-	Section IV
All foods ²	Trans-galacto-oligo saccharides	-	Section IV
All foods ²	Resistant starch (Recommended for RS3)	-	Section IV
Other methods¹ that have not been subjected to interlaboratory evaluation under AOAC international guidelines			
Yeast cell wall	Insoluble glucans and mannans of yeast cell wall (for yeast cell wall only)	-	Section IV
All foods	Fructo-oligosaccharides (monomeric units<5)	-	Section IV
All foods	Non-starch polysaccharides (NSP) ⁴	-	Section IV

Cereals, Pulses and Legumes and Derived Products

Commodity	Provision	CXS	Link to the performance criteria or method
Certain pulses	Moisture	CXS 171	Section IV
Degermed maize (corn) meal and maize (corn) grits	Ash	CXS 155	Section IV
Degermed maize (corn) meal and maize (corn) grits	Fat, crude	CXS 155	Section IV
Degermed maize (corn) meal and maize (corn) grits	Moisture	CXS 155	Section IV
Degermed maize (corn) meal and maize (corn) grits	Particle size (granularity)	CXS 155	Section IV
Degermed maize (corn) meal and maize (corn) grits	Protein	CXS 155	Section IV
Durum wheat semolina and durum wheat flour	Ash (semolina)	CXS 178	Section IV
Durum wheat semolina and durum wheat flour	Moisture	CXS 178	Section IV
Durum wheat semolina and durum wheat flour	Protein (N x 5.7)	CXS 178	Section IV
Instant Noodles	Extraction of oil from instant noodles	CXS 249	Section III
Instant Noodles	Acid Value	CXS 249	Section III
Instant Noodles	Moisture	CXS 249	Section III
Maize (corn)	Moisture	CXS 153	Section IV
Peanuts (raw)	Aflatoxins, total	CXS 200 CXS 193	Section IV
Peanuts (intended for further processing)	Aflatoxins, total	CXS 200 CXS 193	Section IV
Peanuts (Cereals, shell-fruits and derived products (including peanuts))	Sum of aflatoxins B1, B2, G1 and G2	CXS 200 CXS 193	Section IV
Pearl millet flour	Ash	CXS 170	Section IV

Pearl millet flour	Colour	CXS 170	Section IV
Pearl millet flour	Fat, crude	CXS 170	Section IV
Pearl millet flour	Fibre, crude	CXS 170	Section IV
Pearl millet flour	Moisture	CXS 170	Section IV
Pearl millet flour	Protein	CXS 170	Section IV
Quinoa	Moisture content	-	Section IV
Quinoa	Protein Content (N x 6.25in dry weight basis)	-	Section IV
Sorghum flour	Ash	CXS 173	Section IV
Sorghum flour	Colour	CXS 173	Section IV
Sorghum flour	Fat, crude	CXS 173	Section IV
Sorghum flour	Fibre, crude	CXS 173	Section IV
Sorghum flour	Moisture	CXS 173	Section IV
Sorghum flour	Particle size (granularity)	CXS 173	Section IV
Sorghum flour	Protein	CXS 173	Section IV
Sorghum flour	Tannins	CXS 173	Section IV
Sorghum grains	Ash	CXS 172	Section IV
Sorghum grains	Fat, crude	CXS 172	Section IV
Sorghum grains	Moisture	CXS 172	Section IV
Sorghum grains	Protein	CXS 172	Section IV
Sorghum grains	Tannins	CXS 172	Section IV
Soy protein products	Ash	CXS 175	Section IV
Soy protein products	Fat	CXS 175	Section III
Soy protein products	Fibre, crude	CXS 175	Section IV
Soy protein products	Moisture	CXS 175	Section IV
Soy protein products	Protein	CXS 175	Section IV
Vegetable protein products	Ash	CXS 174	Section IV
Vegetable protein products	Fat	CXS 174	Section III
Vegetable protein products	Fibre, crude	CXS 174	Section IV
Vegetable protein products	Moisture	CXS 174	Section IV
Vegetable protein products	Protein	CXS 174	Section IV
Wheat flour	Ash	CXS 152	Section IV
Wheat flour	Fat acidity	CXS 152	Section IV
Wheat flour	Moisture	CXS 152	Section IV
Wheat flour	Particle size (granularity)	CXS 152	Section IV
Wheat flour	Protein	CXS 152	Section IV
Wheat protein products including wheat gluten	Protein	CXS 163	Section IV
Wheat protein products including Wheat gluten	Fibre, crude	CXS 163	Section IV

Wheat protein products including Wheat gluten	Ash	CXS 163	Section IV
Whole and decorticated pearl millet grains	Ash	CXS 169	Section IV
Whole and decorticated pearl millet grains	Fat, crude	CXS 169	Section IV
Whole and decorticated pearl millet grains	Fibre, crude	CXS 169	Section IV
Whole and decorticated pearl millet grains	Moisture	CXS 169	Section IV
Whole and decorticated pearl millet grains	Protein	CXS 169	Section IV
Whole maize (corn) meal	Ash	CXS 154	Section IV
Whole maize (corn) meal	Fat, crude	CXS 154	Section IV
Whole maize (corn) meal	Moisture	CXS 154	Section IV
Whole maize (corn) meal	Particle size (granularity)	CXS 154	Section IV
Whole maize (corn) meal	Protein	CXS 154	Section IV

Cocoa Products and Chocolate

Commodity	Provision	CXS	Link to the performance criteria or method
Chocolate and chocolate products	Cocoa butter	CXS 87	Section IV
Chocolate and chocolate products	Fat-free cocoa solids	CXS 87	Section IV
Chocolate and chocolate products	Fat-free milk solids	CXS 87	Section IV
Chocolate and chocolate products	Fat, total	CXS 87	Section IV
Chocolate and chocolate products	Milkfat	CXS 87	Section IV
Chocolate and chocolate products	Moisture	CXS 87	Section IV
Chocolate and chocolate products	Non-cocoa butter vegetable fat	CXS 87	Section III Section IV
Cocoa (Cacao) Mass or Cocoa/Chocolate Liquor, and Cocoa Cake	Cocoa shell	CXS 141	Section IV
Cocoa (Cacao) Mass or Cocoa/Chocolate Liquor, and Cocoa Cake	Fat	CXS 141	Section IV
Cocoa butter	Free fatty acids	CXS 86	Section IV
Cocoa butter	Unsaponifiable matter	CXS 86	Section IV
Cocoa powders (cocoa) and dry	Moisture	CXS 105	Section IV

cocoa-sugar mixtures			
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Fats and Oils and Related Products

Commodity	Provision	CXS	Link to the performance criteria or method
Fats and Oils (all)	Arsenic	CXS 19, CXS 33, CXS 210, CXS 211, CXS 193	Section IV
Fats and oils	Butylhydroxyanisole, butylhydroxytoluene, tert-butylhydroquinone, & propyl gallate	CXS 19	Section IV
Fats and Oils (all)	Insoluble impurities	CXS 19, CXS 211	Section IV
Fats and Oils (all)	Lead	CXS 19, CXS 193	Section IV
Fats and Oils (all)	Matter volatile at 105°C	CXS 19	Section IV
Fats and Oils (all)	Soap content	CXS 19	Section IV
Fats and oils not covered by individual standards	Acid Value	CXS 19	Section IV
Fats and oils not covered by individual standards	Copper and Iron	CXS 19	Section IV
Fats and oils not covered by individual standards	Peroxide value	CXS 19	Section IV
Fat spreads and blended spreads	Fat content	-	Section IV
Fish oils	Fatty acid composition	-	Section IV
Fish oils	Acid value	-	Section IV
Fish oils	Peroxide value	-	Section IV
Fish oils	Phospholipids	-	Section IV
Fish oils	P-Anisidine value	-	Section IV
Fish oils	Triglycerides	-	Section IV
Fish oils	Vitamin A	-	Section IV
Fish oils	Vitamin D	-	Section IV
Named Animal Fats	Acidity	CXS 211	Section IV
Named Animal Fats	Copper and Iron	CXS 211	Section IV
Named Animal Fats	GLC ranges of fatty acid composition	CXS 211	Section IV
Named Animal Fats	Iodine value (IV)	CXS 211	Section IV
Named Animal Fats	Peroxide value	CXS 211	Section IV
Named Animal Fats	Relative density	CXS 211	Section IV
Named Animal Fats	Refractive index	CXS 211	Section IV
Named Animal Fats	Saponification value	CXS 211	Section IV
Named Animal Fats	Unsaponifiable matter	CXS 211	Section IV
Named Animal Fats	Titre	CXS 211	Section IV
Named Vegetable Oils	Acidity	CXS 210	Section IV
Named Vegetable Oils	Apparent density	CXS 210	Section IV
Named Vegetable Oils	Baudouin test (modified Villavecchia or	CXS 210	Section IV

	sesameseed oil test)		
Named Vegetable Oils	Carotenoids, total	CXS 210	Section IV
Named Vegetable Oils	Copper and iron	CXS 210	Section IV
Named Vegetable Oils	Crismer value	CXS 210	Section IV
Named Vegetable Oils	GLC ranges of fatty acid composition	CXS 210	Section IV
Named Vegetable Oils	Halphen test	CXS 210	Section IV
Named Vegetable Oils	Insoluble impurities	CXS 210	Section IV
Named Vegetable Oils	Iodine value (IV)	CXS 210	Section IV
Named Vegetable Oils	Lead	CXS 210 CXS 193	Section IV
Named Vegetable Oils	Moisture & volatile matter at 105°C	CXS 210	Section IV
Named Vegetable Oils	Peroxide value (PV)	CXS 210	Section IV
Named Vegetable Oils	Refractive index	CXS 210	Section IV
Named Vegetable Oils	Reichert value and Polenske value	CXS 210	Section IV
Named Vegetable Oils	Relative density	CXS 210	Section IV
Named Vegetable Oils	Saponification value (SV)	CXS 210	Section IV
Named Vegetable Oils	Slip point	CXS 210	Section IV
Named Vegetable Oils	Soap content	CXS 210	Section IV
Named Vegetable Oils	Sterol content	CXS 210	Section IV
Named Vegetable Oils	Tocopherol content	CXS 210	Section IV
Named Vegetable Oils	Unsaponifiable matter	CXS 210	Section IV
Olive Oils and Olive Pomace Oils	Absorbency in ultra-violet	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Acidity, free (acid value)	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Alpha-tocopherol	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Difference between the actual and theoretical ECN 42 triglyceride content	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Erythrodiol + uvaol	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Halogenated solvents, traces	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Insoluble impurities in light petroleum	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Iodine value	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Iron and copper	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Lead	CXS 33 CXS 193	Section IV
Olive Oils and Olive Pomace Oils	Moisture and volatile matter	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Organoleptic characteristics	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Peroxide value	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Relative density	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Refractive index	CXS 33	Section IV

Olive Oils and Olive Pomace Oils	Saponification value	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Sterol composition and total sterols	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Stigmastadienes	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	<i>Trans</i> fatty acids content	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Unsaponifiable matter	CXS 33	Section IV
Olive Oils and Olive Pomace Oils	Wax content	CXS 33	Section IV

Fish and Fishery Products

Commodity	Provision	CXS	Link to the performance criteria or method
Fish and fishery products	Histamine	-	Section II Section IV
Fish and fishery products	Mercury	CXS 193	Section IV
Fish and fishery products: canned products	Drained weight	-	Section III
Fish and fishery products: canned products	Net weight	-	Section III
Boiled Dried Salted Anchovies	Sodium Chloride (chloride expressed as sodium chloride)	CXS 236	Section IV
Canned shrimps or prawns	Size, determination of	-	Section III
Fish Sauce	Total nitrogen	CXS 302	Section IV
Fish Sauce	Amino acid nitrogen	CXS 302	Section IV
Fish Sauce	pH	CXS 302	Section IV
Fish Sauce	Sodium chloride	CXS 302	Section IV
Fish Sauce	Histamine	CXS 302	Section II Section IV
Frozen abalone (covered by glaze)	Net weight	CXS 312	Section IV
Frozen fish and fishery products	Thawing and cooking procedures	-	Section III- Thawing Section III- Cooking
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Proportion of fish fillet and minced fish	CXS 165	Section IV
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Net content of frozen fish blocks covered by glaze	CXS 165	Section III
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Sodium chloride	CXS 165	Section IV

Quick frozen fish fillets	Net weight of products covered by glaze	-	Section III
Quick Frozen Fish sticks (fish fingers) and fish portions - breaded or in batter	Fish content (declaration)	CXS 166	Section III Section IV
Quick frozen fish sticks (fish fingers) and fish portions - breaded or in batter	Net weight	CXS 166	Section III
Quick Frozen Fish Sticks (fish fingers) and Fish Portions-Breaded and in Batter (except for certain fish species with soft flesh)	Proportion of fish fillet and minced fish	CXS 166	Section III
Quick frozen fish sticks (fish fingers) and fish portions - breaded or in batter	Sodium chloride	CXS 166	Section IV
Salted Atlantic Herring and Salted Sprat	Water content	CXS 244	Section IV
Salted Fish of the <i>Gadidae</i> Family	Salt	CXS 167	Section III
Salted Fish and Dried Salted Fish of the <i>Gadidae</i> Family of Fishes	Salt Content Water content	-	Section III
Smoked Fish, Smoke-Flavoured fish and Smoke-dried fish	Water phase salt	CXS 311	Section III Section IV
Smoked Fish, Smoke-Flavoured fish and Smoke-dried fish	Water activity	CXS 311	Section IV
Sturgeon Caviar	Salt content	CXS 167	Section III
Live and raw bivalve molluscs	Paralytic shellfish toxicity	CXS 292	Section II Section IV
All Tuna	Methylmercury	CXS 193	Section II
Alfonsino	Methylmercury	CXS 193	Section II
All Marlin	Methylmercury	CXS 193	Section II
Shark	Methylmercury	CXS 193	Section II

Foods for Special Dietary Uses

Commodity	Provision	CXS	Link to the performance criteria or method
Special foods	Ash	-	Section IV
Special foods	Calcium	-	Section IV
Special foods	Calories by calculation	-	Section III
Special foods	Carbohydrates	-	Section III
Special foods	Chloride	-	Section IV
Special foods	Dietary fibre, total	-	Section IV
Special foods	Fat	-	Section III
Special foods	Fat in foods not containing starch, meat or vegetable products	-	Section III

Special foods	Fill of containers	-	Section III
Special foods	Folic acid	-	Section IV
Special foods	Linoleate (in the form of glycerides)	-	Section IV
Special foods	Loss on drying (milk based)	-	Section IV
Special foods	Nicotinamide for foods not based on milk	-	Section IV
Special foods	Nicotinamide for milk-based foods	-	Section IV
Special foods	Pantothenic acid/enriched foods	-	Section IV
Special foods	Pantothenic acid/non-enriched foods	-	Section IV
Special foods	Phosphorous	-	Section IV
Special foods	Protein efficiency ratio (PER)	-	Section IV
Special foods	Protein, crude	-	Section III
Special foods	Riboflavin	-	Section IV
Special foods	Sodium and Potassium	-	Section IV
Special foods	Vitamin A	-	Section IV
Special foods	Vitamin A in foods in which carotenes have been added as a source of vitamin A	-	Section IV
Special foods	Vitamin B12	-	Section IV
Special foods	Vitamin B6	-	Section IV
Special foods	Vitamin C	-	Section IV
Special foods	Vitamin D	-	Section IV
Special foods	Vitamin D (D3, milk based infant formula)	-	Section IV
Special foods	Vitamin E	-	Section IV
Special foods	Vitamin E (milk based infant formula)	-	Section IV
Follow-up formula	Dietary fibre, total	CXS 156	Section IV
Follow-up formula	Iodine (milk based formula)	CXS 156	Section IV
Follow-up formula	Pantothenic acid	CXS 156	Section IV
Follow-up formula	Vitamin A	CXS 156	Section IV
Follow-up formula	Vitamin A (retinol isomers)	CXS 156	Section IV
Follow-up formula	Vitamin A (retinol) (above 500 IU/l milk after reconstitution)	CXS 156	Section IV
Follow-up formula	Vitamin K	CXS 156	Section IV
Foods with low-sodium content (including salt substitutes)	Iodine	CXS 53	Section IV
Foods with low-sodium content (including salt substitutes)	Silica (colloidal, calcium silicate)	CXS 53	Section IV
Gluten-free foods	Gluten	CXS 118	Section IV
Infant formula	Biotin	CXS 72	Section IV
Infant formula	Calories (by calculation) ¹	CXS 72	Section III
Infant formula	Calcium	CXS 72	Section IV
Infant formula	Chloride	CXS 72	Section IV
Infant formula	Choline	CXS 72	Section IV

Infant formula	Copper	CXS 72	Section IV
Infant formula	Chromium (Section B of CXS 72-1981 only)	CXS 72	Section IV
Infant formula	Crude protein	CXS 72	Section IV
Infant formula	Fatty acids (including trans fatty acid)	CXS 72	Section IV
Infant formula	Folic acid	CXS 72	Section IV
Infant formula	Iodine (for milk-based formula)	CXS 72	Section IV
Infant formula	Iron	CXS 72	Section IV
Infant formula	Magnesium	CXS 72	Section IV
Infant formula	Manganese	CXS 72	Section IV
Infant formula	Melamine	CXS 72	Section IV
Infant formula	Molybdenum (Section B of CXS 72-1981 only)	CXS 72	Section IV
Infant formula	Myo-Inositol	CXS 72	Section IV
Infant formula	Niacin	CXS 72	Section IV
Infant formula	Pantothenic acid	CXS 72	Section IV
Infant formula	Phosphorus	CXS 72	Section IV
Infant formula	Riboflavin	CXS 72	Section IV
Infant formula	Selenium	CXS 72	Section IV
Infant formula	Sodium and potassium	CXS 72	Section IV
Infant formula	Thiamine	CXS 72	Section IV
Infant formula	Total carbohydrates	CXS 72	Section IV
Infant formula	Total fat	CXS 72	Section IV
Infant formula	Total fat for milk-based infant formula (Products not completely soluble in ammonia)	CXS 72	Section IV
Infant formula	Total fatty acids	CXS 72	Section IV
Infant formula	Total nucleotides	CXS 72	Section IV
Infant formula	Total phospholipids	CXS 72	Section IV
Infant formula	Vitamin A	CXS 72	Section IV
Infant formula	Vitamin A Palmitate (Retinyl Palmitate), Vitamin A Acetate (Retinyl Acetate)	CXS 72	Section IV
Infant formula	Vitamin C	CXS 72	Section IV
Infant formula	Vitamin D	CXS 72	Section IV
Infant formula	Vitamin E	CXS 72	Section IV
Infant formula	Vitamin B6	CXS 72	Section IV
Infant formula	Vitamin B12	CXS 72	Section IV
Infant formula	Zinc	CXS 72	Section IV

Fruit Juices and Nectars

Commodity	Provision	CXS	Link to the performance criteria or method
Fruit Juices and Nectars	Ascorbic acid-L (additives)	CXS 247	Section IV
Fruit Juices and Nectars	Carbon dioxide (additives and processing aids)	CXS 247	Section IV

Fruit Juices and Nectars	Cellobiose	CXS 247	Section IV
Fruit Juices and Nectars	Citric acid (additives)	CXS 247	Section IV
Fruit Juices and Nectars	Glucose and fructose (permitted ingredients)	CXS 247	Section IV
Fruit Juices and Nectars	Glucose-D and fructose-D (permitted ingredients)	CXS 247	Section IV
Fruit Juices and Nectars	HFCS & HIS in apple juice (permitted ingredients)	CXS 247	Section IV
Fruit Juices and Nectars	Malic acid (additives)	CXS 247	Section IV
Fruit Juices and Nectars	Malic acid-D	CXS 247	Section IV
Fruit Juices and Nectars	Malic acid-D in apple juice	CXS 247	Section IV
Fruit Juices and Nectars	Malic acid-L	CXS 247	Section IV
Fruit Juices and Nectars	Pectin (additives)	CXS 247	Section IV
Fruit Juices and Nectars	Benzoic acid and its salts; sorbic acid and its salts	CXS 247	Section IV
Fruit Juices and Nectars	Benzoic acid and its salts	CXS 247	Section IV
Fruit Juices and Nectars	Preservatives in fruit juices (sorbic acid and its salts)	CXS 247	Section IV
Fruit Juices and Nectars	Quinic, malic & citric acid in cranberry juice cocktail and apple juice (permitted Ingredients and additives)	CXS 247	Section IV
Fruit Juices and Nectars	Saccharin	CXS 247	Section IV
Fruit Juices and Nectars	Soluble solids	CXS 247	Section IV
Fruit Juices and Nectars	Sucrose (permitted ingredients)	CXS 247	Section IV
Fruit Juices and Nectars	Sulphur dioxide (additives)	CXS 247	Section IV
Fruit Juices and Nectars	Tartaric acid in grape juice (additives)	CXS 247	Section IV
Fruit Juices and Nectars	Total nitrogen	CXS 247	Section IV
Fruit Juices and Nectars	Determination of acetic acid	CXS 247	Section IV
Fruit Juices and Nectars	Determination of alcohol (ethanol)	CXS 247	Section IV
Fruit Juices and Nectars	Detection of anthocyanins	CXS 247	Section IV
Fruit Juices and Nectars	Determination of ash in fruit products	CXS 247	Section IV
Fruit Juices and Nectars	Detection of beet sugar in fruit juices	CXS 247	Section IV
Fruit Juices and Nectars	Determination of benzoic acid as a marker in orange juice	CXS 247	Section IV
Fruit Juices and Nectars	Determination of C ¹³ /C ¹² ratio of ethanol derived from fruit juices	CXS 247	Section IV
Fruit Juices and Nectars	Determination of carbon stable isotope ratio of apple juice	CXS 247	Section IV
Fruit Juices and Nectars	Determination of carbon stable isotope ratio of orange juice	CXS 247	Section IV
Fruit Juices and Nectars	Determination of carotenoid, total/individual groups	CXS 247	Section IV

Fruit Juices and Nectars	Determination of centrifugable pulp	CXS 247	Section IV
Fruit Juices and Nectars	Determination of chloride (expressed as sodium chloride)	CXS 247	Section IV
Fruit Juices and Nectars	Determination of chloride in vegetable juice	CXS 247	Section IV
Fruit Juices and Nectars	Determination of essential oils (Scott titration)	CXS 247	Section IV
Fruit Juices and Nectars	Determination of essential oils (in citrus fruit) (volume determination)	CXS 247	Section IV
Fruit Juices and Nectars	Determination of fermentability	CXS 247	Section IV
Fruit Juices and Nectars	Determination of formol number	CXS 247	Section IV
Fruit Juices and Nectars	Determination of free amino acids	CXS 247	Section IV
Fruit Juices and Nectars	Determination of fumaric acid	CXS 247	Section IV
Fruit Juices and Nectars	Determination of glucose fructose and saccharose	CXS 247	Section IV
Fruit Juices and Nectars	Determination of gluconic acid	CXS 247	Section IV
Fruit Juices and Nectars	Determination of glycerol	CXS 247	Section IV
Fruit Juices and Nectars	Determination of hesperidin and naringin	CXS 247	Section IV
Fruit Juices and Nectars	Determination of hydroxymethylfurfural	CXS 247	Section IV
Fruit Juices and Nectars	Determination of isocitric acid-D	CXS 247	Section IV
Fruit Juices and Nectars	Determination of Lactic acid- D and L	CXS 247	Section IV
Fruit Juices and Nectars	Determination of L-malic/total malic acid ratio in apple juice	CXS 247	Section IV
Fruit Juices and Nectars	Determination of naringin and neohesperidin in orange juice	CXS 247	Section IV
Fruit Juices and Nectars	Determination of pH-value	CXS 247	Section IV
Fruit Juices and Nectars	Determination of phosphorus/phosphate	CXS 247	Section IV
Fruit Juices and Nectars	Determination of proline by photometry – non-specific determination	CXS 247	Section IV
Fruit Juices and Nectars	Determination of relative density	CXS247	Section IV
Fruit Juices and Nectars	Determination of sodium, potassium, calcium, magnesium in fruit juice	CXS 247	Section IV
Fruit Juices and Nectars	Determination of sorbitol-D	CXS 247	Section IV
Fruit Juices and Nectars	Determination of stable carbon isotope ratio in the pulp of fruit juices	CXS 247	Section IV
Fruit Juices and Nectars	Determination of stable carbon isotope ratio of sugars from fruit juices	CXS 247	Section IV
Fruit Juices and Nectars	Determination of stable hydrogen isotope ratio of water from fruit juices	CXS 247	Section IV
Fruit Juices and Nectars	Determination of stable oxygen isotope ratio in fruit juice water	CXS 247	Section IV
Fruit Juices and Nectars	Detection of starch	CXS 247	Section IV
Fruit Juices and Nectars	Determination of sugar beet derived syrups in frozen concentrated orange juice $\delta^{18}\text{O}$ Measurements in Water	CXS 247	Section IV

Fruit Juices and Nectars	Determination of titrable acids, total	CXS 247	Section IV
Fruit Juices and Nectars	Determination of total dry matter (vacuum- oven drying at 70°C)	CXS 247	Section IV
Fruit Juices and Nectars	Determination of total solids (Microwave oven drying)	CXS 247	Section IV
Fruit Juices and Nectars	Determination of Vitamin C (dehydro-ascorbic acid and ascorbic acid)	CXS 247	Section IV

Milk and Milk Products

Commodity	Provision	CXS	Link to the performance criteria or method
Milk products	Iron	-	Section IV
Milk and Milk Products	Melamine	CXS 193	Section IV
Milk products (products not completely soluble in ammonia)	Milk fat	-	Section IV
Blend of evaporated skimmed milk and vegetable fat	Total fat	CXS 250	Section IV
Blend of evaporated skimmed milk and vegetable fat	Milk solids-not-fat (MSNF)	CXS 250	Section IV
Blend of evaporated skimmed milk and vegetable fat	Milk protein in MSNF	CXS 250	Section IV
Reduced fat blend of evaporated skimmed milk and vegetable fat	Total fat	CXS 250	Section IV
Reduced fat blend of evaporated skimmed milk and vegetable fat	Milk solids-not-fat (MSNF)	CXS 250	Section IV
Reduced fat blend of evaporated skimmed milk and vegetable fat	Milk protein in MSN	CXS 250	Section IV
Blend of skimmed milk and vegetable fat in powdered form	Total fat	CXS 251	Section IV
Blend of skimmed milk and vegetable fat in powdered form	Water	CXS 251	Section IV
Blend of skimmed milk and vegetable fat in powdered form	Milk protein in MSNF	CXS 251	Section IV
Reduced fat blend of skimmed milk powder and vegetable fat in powdered form	Total fat	CXS 251	Section IV
Reduced fat blend of skimmed milk powder and vegetable fat in powdered form	Water	CXS 251	Section IV
Reduced fat blend of skimmed milk powder and	Milk protein in MSNF	CXS 251	Section IV

vegetable fat in powdered form			
Blend of sweetened condensed skimmed milk and vegetable fat	Total fat	CXS 252	Section IV
Blend of sweetened condensed skimmed milk and vegetable fat	Sucrose	CXS 252	Section IV
Blend of sweetened condensed skimmed milk and vegetable fat	Milk solids-not-fat (MSNF)	CXS 252	Section IV
Blend of sweetened condensed skimmed milk and vegetable fat	Milk protein in MSNF	CXS 252	Section IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Total fat	CXS 252	Section IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Milk solids-not-fat (MSNF)	CXS 252	Section IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Milk protein MSNF	CXS 252	Section IV
Butter	Copper	CXS 279	Section IV
Butter	Lead	CXS 279	Section IV
Butter	Milk solids-not-fat (MSNF)	CXS 279	Section IV
Butter	Milkfat	CXS 279	Section IV
Butter	Milk fat purity	CXS 279	Section IV
Butter	Salt	CXS 279	Section IV
Butter	Vegetable fat (sterols)	CXS 279	Section IV
Butter	Water	CXS 279	Section IV
Cheese	Citric acid	CXS 283	Section IV
Cheese	Milkfat	CXS 283	Section IV
Cheese	Moisture	CXS 283	Section IV
Cheese (and cheese rind)	Natamycin	CXS 283	Section IV
Cheese	Propionic acid	CXS 283	Section IV
Cheese	Sodium chloride	CXS 283	Section IV
Cheeses, individual	Dry matter (Total solids)	CXS 283	Section IV
Cheeses, individual	Milk fat in dry matter	CXS 283	Section IV
Cheeses in brine	Milk fat in dry matter (FDM)	CXS 283	Section IV
Cottage cheese	Fat-free dry matter	CXS 273	Section IV
Cottage cheese	Milk fat	CXS 273	Section IV

Cottage cheese	Milk fat in dry matter	CXS 273	Section IV
Cheese, Unripened Including Fresh Cheese	Milk protein	CXS 221	Section IV
Cream and Prepared Creams	Milk protein	CXS 288	Section IV
Cream	Milkfat	CXS 288	Section IV
Cream	Solids	CXS 288	Section IV
Creams Lowered in Milkfat Content	Milkfat	CXS 288	Section IV
Creams, Whipped Creams and Fermented Creams	Milk solids-not-fat (MSNF)	CXS 288	Section IV
Cream cheese	Dry matter	CXS 275	Section IV
Cream cheese	Moisture on fat free basis	CXS 275	Section IV
Dairy fat spreads	Milk fat purity	CXS 253	Section IV
Dairy fat spreads	Total fat	CXS 253	Section IV
Dairy fat spreads	Vegetable fat (sterols)	CXS 253	Section IV
Dairy permeate powders	Milkfat	CXS 331	Section IV
Dairy permeate powders	Nitrogen	CXS 331	Section IV
Dairy permeate powders	Moisture	CXS 331	Section IV
Dairy permeate powders	Ash	CXS 331	Section IV
Edible casein products	Acids, free	CXS 290	Section IV
Edible casein products	Ash (including P ₂ O ₅)	CXS 290	Section IV
Edible casein products	Copper	CXS 290	Section IV
Edible casein products	Lactose	CXS 290	Section IV
Edible casein products	Lead	CXS 290 CXS 193	Section IV
Edible casein products	Milkfat	CXS 290	Section IV
Edible casein products	pH	CXS 290	Section IV
Edible casein products	Milk Protein (total N x 6.38 in dry matter)	CXS 290	Section IV
Edible casein products	Sediment (scorched particles)	CXS 290	Section IV
Edible casein products	Water	CXS 290	Section IV
Emmental	Calcium >= 800mg/100g	CXS 269	Section IV
Emmental	Propionic acid	CXS 269	Section IV
Evaporated milks	Milk fat	CXS 281	Section IV
Evaporated milks	Milk Protein in MSNF	CXS 281	Section IV
Evaporated milks	Solids, total	CXS 281	Section IV

Fermented milks	Colony-forming units of yeasts and/or moulds	CXS 243	Section IV
Fermented milks	Dry matter (total solids)	CXS 243	Section IV
Fermented milks	total acidity expressed as percentage of lactic acid	CXS 243	Section IV
Fermented milks	<i>Lactobacillus acidophilus</i>	CXS 243	Section IV
Fermented milks - Yoghurt and yoghurt products	<i>Lactobacillus delbrueckii</i> subsp <i>bulgaricus</i> & <i>Streptococcus thermophilus</i>	CXS 243	Section IV
Fermented milks	Microorganisms constituting the starter culture	CXS 243	Section IV
Fermented milks	Milk fat	CXS 243	Section IV
Fermented milks	Milk Protein	CXS 243	Section IV
Milk powders and cream powders	Acidity, titratable	CXS 207	Section IV
Milk powders and cream powders	Milk fat	CXS 207	Section IV
Milk powders and cream powders	Milk Protein	CXS 207	Section IV
Milk powders and cream powders	Scorched particles	CXS 207	Section IV
Milk powders and cream powders	Solubility Index	CXS 207	Section IV
Milk powders and cream powders	Water	CXS 207	Section IV
Milk fat Products	Copper	CXS 280	Section IV
Milk fat products	Fatty acids, free (expressed as oleic acid)	CXS 280	Section IV
Milk fat products	Milk fat purity	CXS 280	Section IV
Milk fat Products	Peroxide value (expressed as meq. of oxygen/kg fat)	CXS 280	Section IV
Milkfat products (anhydrous milkfat)	Peroxide value	CXS 280	Section IV
Milk fat products	Vegetable fat (sterols)	CXS 280	Section IV
Milk fat products	Water	CXS 280	Section IV
Milk fat products (anhydrous milk fat)	Peroxide value	CXS 280	Section IV
Mozzarella	Milkfat in dry matter – with high moisture	CXS 262	Section IV
Mozzarella	Milkfat in dry matter – with low moisture	CXS 262	Section IV
Sweetened condensed milk	Milkfat	CXS 282	Section IV
Sweetened Condensed Milks	Milk Protein in MNSF	CXS 282	Section IV
Sweetened Condensed Milks	Solids	CXS 282	Section IV
Whey cheeses by coagulation	Milk fat	CXS 284	Section IV
Whey cheeses by coagulation	Milk fat in dry matter	CXS 284	Section IV
Whey cheeses by concentration	Milk fat	CXS 284	Section IV
Whey cheeses by concentration	Milk fat in dry matter	CXS 284	Section IV
Whey powders	Ash	CXS 289	Section IV
Whey powders	Copper	CXS 289	Section IV
Whey Powders	Lactose	CXS 289	Section IV

Whey powders	Lead	CXS 289 CXS 193	Section IV
Whey powders	Milkfat	CXS 289	Section IV
Whey powders	Milk protein (total N x 6.38)	CXS 289	Section IV
Whey powders	Moisture, "Free"	CXS 289	Section IV
Whey powders	Water	CXS 289	Section IV

Natural Mineral Waters

Commodity	Provision	CXS	Link to the performance criteria or method
Natural mineral waters	Calcium	CXS 108	Section IV
Natural mineral waters	Chloride	CXS 108	Section IV
Natural mineral waters	Iron, dissolved	CXS 108	Section IV
Natural mineral waters	Magnesium	CXS 108	Section IV
Natural mineral waters	Phenols	CXS 108	Section IV
Natural mineral waters	Potassium	CXS 108	Section IV
Natural mineral waters	Sodium	CXS 108	Section IV
Natural mineral waters	Sulphates	CXS 108	Section IV
Natural mineral waters	Sulphide	CXS 108	Section IV
Natural mineral waters	Antimony	CXS 108 CXS 193	Section II
Natural mineral waters	Arsenic	CXS 108 CXS 193	Section II
Natural mineral waters	Barium	CXS 108 CXS 193	Section II
Natural mineral waters	Borate	CXS 108 CXS 193	Section II
Natural mineral waters	Cadmium	CXS 108 CXS 193	Section II
Natural mineral waters	Chromium	CXS 108 CXS 193	Section II
Natural mineral waters	Copper	CXS 108 CXS 193	Section II
Natural mineral waters	Cyanide	CXS 108 CXS 193	Section II
Natural mineral waters	Fluoride	CXS 108 CXS 193	Section II
Natural mineral waters	Lead	CXS 108 CXS 193	Section II
Natural mineral waters	Manganese	CXS 108 CXS 193	Section II
Natural mineral waters	Mercury	CXS 108 CXS 193	Section II
Natural mineral waters	Nickel	CXS 108 CXS 193	Section II
Natural mineral waters	Nitrate	CXS 108 CXS 193	Section II
Natural mineral waters	Nitrite	CXS 108 CXS 193	Section II
Natural mineral waters	Selenium	CXS 108 CXS 193	Section II

Processed Fruits and Vegetables

Commodity	Provision	CXS	Link to the performance criteria or method
Processed fruits and vegetables	Benzoic acid	CXS 192, CXS 115, CXS 143, CXS 160, CXS 223, CXS 240, CXS 260, CXS 296, CXS 67	Section IV

Processed fruits and vegetables	Calcium	Stan 103, Stan 110, Stan 111, Stan 112, Stan 113, Stan 114, Stan 115, Stan 13, Stan 130, Stan 131, Stan 143, Stan 145, Stan 160, Stan 017, Stan 177, Stan 223, Stan 240, Stan 241, Stan 242, Stan 254, Stan 260	Section IV
Processed fruits and vegetables	Drained Weight	Stan 103, Stan 110, Stan 111, Stan 112, Stan 113, Stan 114, Stan 115, Stan 13, Stan 130, Stan 131, Stan 143, Stan 145, Stan 160, Stan 017, Stan 177, Stan 223, Stan 240, Stan 241, Stan 242, Stan 254, Stan 260	Section IV
Processed fruits and vegetables	Fill of containers	CXS 115, CXS 13, CXS 145, CXS 17, CXS 223, CXS 241, CXS 242, CXS 254, CXS 260, CXS 296, CXS 297, CXS 319, CXS 38, CXS 42, CXS 57, CXS 60, CXS 62, CXS 66, CXS 78, CXS 99	Section III
Processed fruits and vegetables	Lead	Stan 296, Stan 297, Stan 319, Stan 320, Stan 38, Stan 39, Stan 41, Stan 42, Stan 103, Stan 110, Stan 111, Stan 112, Stan 113, Stan 114, Stan 115, Stan 13, Stan 130, Stan 131, Stan 143, Stan 145, Stan 160, Stan 017, Stan 177, Stan 223, Stan 240, Stan 241, Stan 242, Stan 254, Stan 260, Stan 296, Stan 297, Stan 319, Stan 320, Stan 38, Stan 39, Stan 41, Stan 42, Stan 52, Stan 57, Stan 60, Stan 62, Stan 66, Stan 67, Stan 69, Stan 75, Stan 76, Stan 77, Stan 78, Stan 99, CXS 193	Section IV
Processed fruits and vegetables	Packing medium Canned berry fruits (raspberry, strawberry)	CXS 55, CXS 60, CXS 62, CXS 69	Section IV
Processed fruits and	pH	CXS 13	Section IV

Vegetables (except canned bamboo shoots)			
Processed fruits and vegetables	pH	CXS 13	Section IV
Processed fruits and vegetables	Soluble solids	CXS 103, CXS 115, CXS 13, CXS 145, CXS 160, CXS 17, CXS 296, CXS 319, CXS 52, CXS 57, CXS 69, CXS 75	Section IV
Processed fruits and vegetables	Sorbates	CXS 192, CXS 115, CXS 143, CXS 160, CXS 223, CXS 240, CXS 260, CXS 296, CXS 67	Section IV
Processed fruits and vegetables	Tin	CXS 13, CXS 193	Section IV
Processed fruits and vegetables	Total solids	Stan 103, Stan 110, Stan 111, Stan 112, Stan 113, Stan 114, Stan 115, Stan 13, Stan 130, Stan 131, Stan 143, Stan 145, Stan 160, Stan 017, Stan 177, Stan 223, Stan 240, Stan 241, Stan 242, Stan 254, Stan 260	Section IV
Aqueous Coconut Products	Total Fats	CXS 240	Section IV
Aqueous Coconut Products	Total solids	CXS 240	Section IV
Aqueous Coconut Products	Non-fat solids	CXS 240	Section IV
Aqueous Coconut Products	Moisture	CXS 240	Section IV
Canned Apple Sauce	Fill of containers	CXS 17	Section III Section IV
Canned Apple Sauce	Soluble solids	CXS 17	Section IV
Canned green beans and wax beans	Tough strings	CXS 297	Section III
Canned green peas	Proper fill (in lieu of drained weight)	CXS 297	Section III
Canned green peas	Types of peas, distinguishing	CXS 297	Section III
Canned mangoes	Syrup	CXS 184	Section IV
Canned mushrooms	Washed drained weight	CXS 38	Section III
Canned palmito	Mineral impurities	CXS 297	Section IV
Canned Stone Fruits	Drained weight	CXS 242	Section IV
Canned Stone Fruits	Soluble solids	CXS 242	Section IV
Canned strawberries	Calcium	CXS 62	Section IV
Canned strawberries	Mineral impurities	CXS 62	Section IV
Certain canned citrus fruits	Calcium	CXS 254	Section IV
Certain Canned Vegetables (palmito)	Mineral impurities (sand)	CXS 297	Section IV
Citrus marmalade	Calcium	CXS 296, CXS 80, CXS 79	Section IV

Dates	Identification of defects	CXS 143	Section III
Dates	Moisture	CXS 143	Section IV
Desiccated coconut	Total acidity of the extracted oil	CXS 177	Section IV
Desiccated coconut	Ash	CXS 177	Section IV
Desiccated coconut	Extraneous vegetable matter	CXS 177	Section III
Desiccated coconut	Moisture	CXS 177	Section IV
Desiccated coconut	Oil content	CXS 177	Section IV
Dried apricots	Identification of defects	CXS 130	Section III
Dried apricots	Moisture	CXS 130	Section IV
Dried apricots	Sulphur dioxide	CXS 130	Section IV
Jams (fruit preserves) and jellies	Fill of Containers	CXS 296	Section III
Jams (fruit preserves) and jellies	Soluble solids	CXS 296	Section IV
Mango chutney	Ash insoluble in HCl	CXS 160	Section IV
Pickled cucumbers	Acidity, total	CXS 115	Section IV
Pickled cucumbers	Drained weight	CXS 115	Section IV
Pickled cucumbers	Mineral impurities	CXS 115	Section IV
Pickled cucumbers	Salt in brine	CXS 115	Section IV
Pickled cucumbers	Volume fill by displacement	CXS 115	Section III
Preserved tomatoes	Calcium	CXS 13	Section IV
Preserved tomatoes	Minimum Drained Weight	CXS 13	Section IV
Preserved tomatoes	Mould count	CXS 13	Section IV
Processed tomato concentrates	Lactic acid	CXS 57	Section IV
Processed tomato concentrates	Mineral impurities (sand)	CXS 57	Section IV
Processed tomato concentrates	Mould count	CXS 57	Section IV
Processed tomato concentrates	Natural tomato soluble solids	CXS 57	Section IV
Processed tomato concentrates	Sodium chloride	CXS 57	Section IV
Processed tomato concentrates	Tomato soluble solids	CXS 57	Section IV
Raisins	Mineral impurities	CXS 67	Section III
Raisins	Mineral oil	CXS 67	Section III
Raisins	Moisture	CXS 67	Section IV
Raisins	Sorbitol	CXS 67	Section IV
Raisins	Sulphur dioxide	CXS 67	Section IV
Table olives	Drained weight	CXS 66	Section IV
Table olives	Fill of containers	CXS 66	Section III Section IV
Table olives	pH of brine	CXS 66	Section IV
Table olives	Salt in brine	CXS 66	Section IV
Table olives	Lead	CXS 66, CXS 193	Section IV
Table olives	Tin	CXS 66, CXS 193	Section IV

Processed Meat and Poultry Products and Soups and Broths

Commodity	Provision	CXS	Link to the performance criteria or method
Meat Products	Nitrates and/or Nitrites	CXS 192	Section IV
Processed meat and poultry products	Fat	-	Section IV
Processed meat and poultry products	Lead	CXS 193	Section IV
Processed meat and poultry products	Nitrates	-	Section IV
Processed meat and poultry products	Nitrites	-	Section IV
Processed meat and poultry products	Tin	CXS 193	Section IV
Processed meat and poultry products	Nitrogen/protein	-	Section IV
Bouillons and Consommés (soups and broths)	Amino nitrogen	CXS 117	Section IV
Bouillons and Consommés (soups and broths)	Creatinine	CXS 117	Section IV
Bouillons and Consommés (soups and broths)	Nitrogen, total	CXS 117	Section IV
Bouillons and Consommés (soups and broths)	Sodium chloride	CXS 117	Section IV
Canned corned beef	Lead	CXS 88 CXS 193	Section IV
Canned corned beef	Nitrites, potassium and/or sodium salt	CXS 88	Section IV
Canned corned beef	Tin (Products in tinplate and other containers)	CXS 88 CXS 193	Section IV
Cooked cured chopped meat	Fat	CXS 98	Section IV
Cooked cured chopped meat	Lead	CXS 88 CXS 193	Section IV
Cooked cured chopped meat	Nitrites	CXS 98	Section IV
Cooked cured chopped meat	Tin	CXS 88 CXS 193	Section IV
Cooked cured ham	Fat	CXS 96	Section IV
Cooked cured ham	Gelatin, added	CXS 96	Section III
Cooked cured ham	Lead	CXS 96 CXS 193	Section IV
Cooked cured ham	Nitrites	CXS 96	Section IV
Cooked cured ham	Protein (conversion factor 6.25)	CXS 96	Section IV
Cooked cured ham	Tin	CXS 96 CXS 193	Section IV
Cooked cured pork shoulder	Fat	CXS 97	Section IV
Cooked cured pork shoulder	Gelatin, added	CXS 97	Section III
Cooked cured pork shoulder	Lead	CXS 97 CXS 193	Section IV
Cooked cured pork	Nitrites	CXS 97	Section IV

shoulder			
Cooked cured pork shoulder	Protein	CXS 97	Section IV
Cooked cured pork shoulder	Tin	CXS 97 CXS 193	Section IV
Luncheon meat	Fat	CXS 89	Section IV
Luncheon meat	Lead	CXS 89 CXS 193	Section IV
Luncheon meat	Nitrites, potassium and/or sodium salt	CXS 89	Section IV
Luncheon meat	Tin	CXS 89 CXS 193	Section IV

Quick Frozen Fruits and Vegetable

Commodity	Provision	CXS	Link to the performance criteria or method
Quick frozen fruits and vegetables (non-glazed)	Net weight	CXS 320	Section IV
Quick frozen fruits and vegetables	Thawing procedure	CXS 320	Section III
Quick frozen fruits and vegetables: Berries, leek and carrot	Mineral impurities	CXS 320	Section IV
Quick frozen fruits and vegetables: Berries, Whole kernel corn and Corn-on-the-cob	Soluble solids, total	CXS 320	Section IV
Quick frozen fruits and vegetables: Peaches and berries	Drained fruit/drained berries	CXS 320	Section IV
Quick frozen fruits and vegetables: Vegetables	Cooking procedure	CXS 320	Section III
Quick frozen French fried potatoes	Moisture	CXS 114	Section IV
Quick frozen green and wax beans	Tough strings	CXS 113	Section III
Quick frozen peas	Solids, alcohol insoluble	CXS 41	Section III
Quick frozen spinach	Dry matter, Sodium chloride-free	CXS 77	Section III

Spices and Culinary Herbs

Commodity	Provision	CXS	Link to the performance criteria or method
Cumin	Moisture	-	Section IV
Cumin	Total ash	-	Section IV
Cumin	Acid-insoluble ash	-	Section IV
Cumin	Volatile oils	-	Section IV
Cumin	Extraneous vegetable matter	-	Section IV
Cumin	Foreign matter	-	Section IV
Cumin	Insect damage	-	Section IV
Cumin	Mammalian excreta	-	Section IV

Cumin	Mould damage	-	Section IV
Thyme	Moisture	-	Section IV
Thyme	Total ash	-	Section IV
Thyme	Acid-insoluble ash	-	Section IV
Thyme	Volatile oils	-	Section IV
Thyme	Extraneous vegetable matter	-	Section IV
Thyme	Foreign matter	-	Section IV
Thyme	Insect damage	-	Section IV
Thyme	Mammalian excreta	-	Section IV
Thyme	Mould damage	-	Section IV
Black and white pepper	Bulk density	-	Section IV
Black pepper	Light berries	-	Section IV
Black, white and green pepper	Extraneous vegetable matter	-	Section IV
Black, white and green pepper	Foreign matter	-	Section IV
Black, white and green pepper	Black berries	-	Section IV
Black, white and green pepper	Broken berries	-	Section IV
Black, white and green pepper	Mouldy berries	-	Section IV
Black, white and green pepper	Insect damage	-	Section IV
Black, white and green pepper	Pinheads or broken berries	-	Section IV
Black, white and green pepper	Mammalian excreta	-	Section IV
Black, white and green pepper	Moisture content	-	Section IV
Black, white and green pepper	Total ash	-	Section IV
Black, white and green pepper	Non-volatile ether extract	-	Section IV
Black, white and green pepper	Volatile oils	-	Section IV
Black, white and green pepper	Piperine content	-	Section IV
Black, white and green pepper	Acid-Insoluble ash	-	Section IV
Black, white and green pepper	Crude Fibre	-	Section IV

Sugars and Honey

Commodity	Provision	CXS	Link to the performance criteria or method
Honey	Acidity	CXS 12	Section IV
Honey	Diastase activity	CXS 12	Section IV
Honey	Moisture	CXS 12	Section IV
Honey	Sample preparation	CXS 12	Section IV
Honey	Solids, water-insoluble	CXS 12	Section IV

Honey	Sugars added (for sugar profile)	CXS 12	Section IV
Honey	Sugars added: detection of corn and cane sugar products	CXS 12	Section IV
Sugars (dextrose anhydrous and dextrose monohydrate)	D-Glucose	CXS 212	Section IV
Sugars (dextrose anhydrous and dextrose monohydrate)	Solids, total	CXS 212	Section IV
Sugars (dextrose anhydrous and dextrose monohydrate, dried glucose syrup, glucose syrup, powdered dextrose, lactose)	Sulphated ash	CXS 212	Section IV
Sugars (dextrose anhydrous and dextrose monohydrate)	Sulphur dioxide	CXS 212	Section IV
Sugars (fructose)	pH	CXS 212	Section IV
Sugars (fructose)	Conductivity ash	CXS 212	Section IV
Sugars (fructose)	D-Fructose	CXS 212	Section IV
Sugars (fructose)	D-Glucose	CXS 212	Section IV
Sugars (fructose)	Loss on drying	CXS 212	Section IV
Sugars (fructose)	Sulphur dioxide	CXS 212	Section IV
Sugars (glucose syrup and dried glucose syrup)	Reducing sugar	CXS 212	Section IV
Sugars (glucose syrup and dried glucose syrup)	Solids, total	CXS 212	Section IV
Sugars (glucose syrup and dried glucose syrup)	Sulphur dioxide	CXS 212	Section IV
Sugars (lactose)	Lactose, anhydrous	CXS 212	Section IV
Sugars (lactose)	Loss on drying	CXS 212	Section IV
Sugars (lactose)	pH	CXS 212	Section IV
Sugars (plantation and mill white sugar)	Colour	CXS 212	Section IV
Sugars (plantation or mill white sugar)	Conductivity ash	CXS 212	Section IV
Sugars (plantation or mill white sugar)	Invert sugar	CXS 212	Section IV
Sugars (plantation or mill white sugar)	Loss on drying	CXS 212	Section IV
Sugars (plantation or mill white sugar)	Polarization	CXS 212	Section IV
Sugars (plantation or mill white sugar)	Sulphur dioxide	CXS 212	Section IV
Sugars (powdered sugar and powdered dextrose)	Sulphur dioxide	CXS 212	Section IV
Sugars (powdered sugar)	Colour	CXS 212	Section IV

Sugars (powdered sugar)	Conductivity ash	CXS 212	Section IV
Sugars (powdered sugar)	Invert sugar	CXS 212	Section IV
Sugars (powdered sugar)	Loss on drying	CXS 212	Section IV
Sugars (powdered sugar)	Polarization	CXS 212	Section IV
Sugars (raw cane sugar)	Sulphur dioxide	CXS 212	Section IV
Sugars (soft white sugar and soft brown sugar)	Conductivity ash	CXS 212	Section IV
Sugars (soft white sugar and soft brown sugar)	Invert sugar	CXS 212	Section IV
Sugars (soft white sugar and soft brown sugar)	Loss on drying	CXS 212	Section IV
Sugars (soft white sugar and soft brown sugar)	Sucrose plus invert sugar	CXS 212	Section IV
Sugars (soft brown sugar)	Sulphated ash	CXS 212	Section IV
Sugars (soft white sugar and soft brown sugar)	Sulphur dioxide	CXS 212	Section IV
Sugars (soft white sugar)	Colour	CXS 212	Section IV
Sugars (white sugar)	Conductivity ash	CXS 212	Section IV
Sugars (white sugar)	Invert sugar	CXS 212	Section IV
Sugars (white sugar)	Loss on drying	CXS 212	Section IV
Sugars (white sugar)	Polarization	CXS 212	Section IV
Sugars (white sugar)	Sulphur dioxide	CXS 212	Section IV

Miscellaneous Products

Commodity	Provision	CXS	Link to the performance criteria or method
Chili sauce	pH	CXS 306R	Section IV
Chili sauce	Fill of containers	CXS 306R	Section III
Date Paste	Moisture	CXS 314R	Section IV
Date Paste	Mineral impurities	CXS 314R	Section IV
Date Paste	Ash	CXS 314R	Section IV
Date Paste	Acid Soluble Ash	CXS 314R	Section IV
Edible cassava flour	Fibre, crude	CXS 176	Section IV
Edible cassava flour	Granularity	CXS 176	Section IV
Edible cassava flour	Moisture	CXS 176	Section IV
Fermented Soybean Paste	Total Nitrogen	CXS 298R	Section IV
Fermented Soybean Paste	Amino Nitrogen	CXS 298R	Section IV
Fermented Soybean Paste	Moisture	CXS 298R	Section IV

Food grade salt	Arsenic	CXS 150 CXS 193	Section IV
Food grade salt	Cadmium	CXS 150 CXS 193	Section IV
Food grade salt	Calcium and magnesium	CXS 150	Section IV
Food grade salt	Copper	CXS 150	Section IV
Food grade salt	Insoluble matter	CXS 150	Section IV
Food grade salt	Iodine	CXS 150	Section IV
Food grade salt	Lead	CXS 150 CXS 193	Section IV
Food grade salt	Loss on drying	CXS 150	Section IV
Food grade salt	Mercury	CXS 150 CXS 193	Section IV
Food grade salt	Potassium	CXS 150	Section IV
Food grade salt	Sodium chloride	CXS 150	Section III
Food grade salt	Sulphate	CXS 150	Section IV
Foul medames	Sample Preparation	CXS 258R	Section IV
Foul medames	Salt content	CXS 258R	Section IV
Foul medames	Drained weight	CXS 258R	Section IV
Gari	Ash	CXS 151	Section IV
Gari	Fibre, crude	CXS 151	Section IV
Gari	Granularity	CXS 151	Section IV
Gari	Moisture	CXS 151	Section IV
Ginseng Products	Moisture	CXS 321	Section IV
Ginseng Products	Solids	CXS 321	Section IV
Ginseng Products	Ash	CXS 321	Section IV
Ginseng Products	Water-insoluble Solids	CXS 321	Section III
Ginseng Products	Water-saturated n-butanol extracts	CXS 321	Section III
Ginseng Products	Identification of ginsenosides Rb1 and Rf	CXS 321	Section III
Gochujang	Capsaicin	CXS 294R	Section III Section IV
Gochujang	Crude protein	CXS 294R	Section IV
Gochujang	Moisture	CXS 294R	Section IV
Guideline level for acrylonitrile	Acrylonitrile	CXS 193	Section IV
Guideline levels for mercury in fish	Methyl mercury	CXS 193	Section IV
Guideline levels for vinyl chloride monomer	Vinyl chloride monomer	CXS 193	Section IV
Guidelines for nutrition labelling	Polyunsaturated fatty acids	-	Section IV
Guidelines for nutrition labelling	Saturated fat	-	Section IV
Guidelines for nutrition labelling	Saturated fatty acids	-	Section IV
Harissa	Acidity	CXS 308	Section IV
Harissa	Acid insoluble ash	CXS 308	Section IV
Harissa	Dry extract – soluble solids	CXS 308	Section IV

Halwa Tehenia	Acidity	CXS 309r	Section IV
Halwa tehena	Ash	CXS 309r	Section IV
Halwa tehena	Fat	CXS 309r	Section IV
Halwa tehena	Moisture	CXS 309r	Section IV
Halwa Tehenia	Sugars	CXS 309r	Section IV
Humus with tehena	Salt content	CXS 257r	Section IV
Humus with tehena	Total acidity	CXS 257r	Section IV
Non-fermented soybean products	Moisture content	CXS 175	Section IV
Non-fermented soybean products	Protein content	CXS 175	Section IV
Sago Flour	Moisture Content	CXS 301R	Section IV
Sago Flour	Ash (inorganic extraneous matter)	CXS 301R	Section IV
Sago Flour	Acidity	CXS 301R	Section IV
Sago Flour	Crude Fibre	CXS 301R	Section IV
Sago Flour	Starch	CXS 301R	Section IV
Tehena	Moisture Content	CXS 259R	Section IV
Tehena	Protein content	CXS 259R	Section IV
Tehena	Total Ash	CXS 259R	Section IV
Tehena	Acid Insoluble Ash	CXS 259R	Section IV
Tehena	Total Acidity	CXS 259R	Section IV
Tehena	Sesame oil	CXS 259R	Section IV
Tempe	Lipid Content	CXS 313R	Section IV
Laver products	Moisture Content	-	Section IV
Unrefined shea butter	Moisture content	CXS 325R	Section IV
Unrefined shea butter	Free fatty acid content acid value and acidity	CXS 325R	Section IV
Unrefined shea butter	Relative density	CXS 325R	Section IV
Unrefined shea butter	Saponification value	CXS 325R	Section IV
Unrefined shea butter	Iodine value	CXS 325R	Section IV
Unrefined shea butter	Peroxide value	CXS 325R	Section IV
Unrefined shea butter	Unsaponifiable matter	CXS 325R	Section IV
Unrefined shea butter	Insoluble impurities content	CXS 325R	Section IV
Unrefined shea butter	Melting point	CXS 325R	Section IV

PART II. METHODS OF ANALYSIS
SECTION II - PROVISIONS FOR WHICH THERE ARE METHOD PERFORMANCE CRITERIA

The following are minimum method performance criteria which an analytical method validation need to have achieved to be considered suitable.

Commodity	Provision	ML	Minimum applicable range	LOD	LOQ	RSDR (%)	Recovery (%)	Examples of methods that meet the criteria	Principle
Fish and fishery products	Histamine	10 mg/100 g (average)	8 – 12 mg/100 g	1 mg/100 g	2 mg/100 g	16.0	90 – 107	AOAC 977.13 NMKL 99, NMKL 196,	Fluorometric HPLC
Fish and fishery products	Histamine	20 mg/100 g (each unit)	16 – 24 mg/100 g	2 mg/100 g	4 mg/100 g	14.4	90 – 107	AOAC 977.13 NMKL 99, NMKL 196,	Fluorometric HPLC
Natural Mineral Waters	Antimony	0.005 mg/L	0.0028 mg/L	0.001 mg/L	0.002 mg/L	44	80-110	ISO 17294-2 ISO 15586 EPA 200.8	ICP-MS GF-AAS ICP-MS
Natural Mineral Waters	Arsenic	0.01 mg/L	0.0056 mg/L	0.002 mg/L	0.004 mg/L	44	90-107	ISO 17294-2 ISO 15586 ISO 11969 EPA 200.8	ICP-MS GF-AAS AAS (Hydride) ICP-MS
Natural Mineral Waters	Barium	0.7 mg/L	0.35 mg/L	0.07 mg/L	0.14 mg/L	34	95-105	ISO 11885 ISO 17294-2 EPA 200.8	ICP-OES ICP-MS ICP-MS
Natural Mineral Waters	Borate	5 mg/L	3.1 mg/L	0.5 mg/L	1 mg/L	25	97-103	ISO 9390 ISO 11885 ISO 17294-2	Spectrophotometry ICP-OES ² ICP-MS ⁶
Natural Mineral Waters	Cadmium	0.003 mg/L	0.0017 mg/L	0.0006 mg/L	0.0012 mg/L	44	80-110	ISO 11885 ISO 17294-2 ISO 15586 ISO 5961 (Section 3) EPA 200.8	ICP-OES ICP-MS GF-AAS AAS ICP-MS
Natural Mineral Waters	Chromium	0.05 mg/L	0.028 mg/L	0.01 mg/L	0.02 mg/L	44	90-107	ISO 11885 ISO 17294-2 ISO 15586 ISO 18412 (Cr VI) ISO 23913 (Cr VI) ISO 9174 (Section 4) EPA 200.8	ICP-OES ICP-MS GF-AAS Photometric CIA, spectrophotometry AAS ICP-MS
Natural Mineral Waters	Copper	1 mg/L	0.52 mg/L	0.1 mg/L	0.2 mg/L	32	97-103	ISO 11885 ISO 17294-2 ISO 15586 ISO 8288 EPA 200.8	ICP-OES ICP-MS GF-AAS Flame-AAS ICP-MS
Natural Mineral Waters	Cyanide	0.07 mg/L	0.039 mg/L	0.014 mg/L	0.028 mg/L	44	90-107	ISO 14403 ISO 6703-1	CFA Photometric, trimetric

Natural Mineral Waters	Fluoride	1.0 mg/L	0.52 mg/L	0.1 mg/L	0.2 mg/L	32	97-103	ISO 10304-1 ISO 10359-1 (dissolved fluoride) ISO 10359-2 (inorganic bound)	LC of ions Electrochemical probe Digestion, distillation
Natural Mineral Waters	Lead	0.01 mg/L	0.0056 mg/L	0.002 mg/L	0.004 mg/L	44	90-107	ISO 17294-2 ISO 15586 EPA 200.8	ICP-MS GF-AAS ICP-MS
Natural Mineral Waters	Manganese	0.4 mg/L	0.18 mg/L	0.04 mg/L	0.08 mg/L	37	95-105	ISO 11885 SO 17294-2 ISO 15586 EPA 200.8	ICP-OES ICP-MS GF-AAS ICP-MS
Natural Mineral Waters	Mercury	0.001 mg/L	0.00056 mg/L	0.0002 mg/L	0.0004 mg/L	44	80-110	EN 1483 ISO 17852 ISO 5666 ISO 16590 EPA 200.8	AAS Enrichment by amalgamation (III) AFS AAS after tin(II) chloride reduction Enrichment by amalgamation (III) ICP-MS
Natural Mineral Waters	Nickel	0.02 mg/L	0.011 mg/L	0.004 mg/L	0.008 mg/L	44	90-107	ISO 17294-2 ISO 15586 EPA 200.8	ICP-MS GF-AAS ICP-MS
Natural Mineral Waters	Nitrate	50 mg/L	37 mg/L	5 mg/L	10 mg/L	18	98-102	ISO 10304-1 ISO 13395 ISO 7890-3	LC of ions CFA, FIA, Spectrophotometry Spectrophotometry
Natural Mineral Waters	Nitrite	0.1 mg/L	0.03 mg/L	0.01 mg/L	0.02 mg/L	44	95-105	ISO 10304-1 ISO 13395 ISO 6777	LC of ions UV CFA, FIA, Spectrophotometry Spectrophotometry
Natural Mineral Waters	Selenium	0.01 mg/L	0.0056 mg/L	0.002 mg/L	0.004 mg/L	44	90-107	ISO 17294-2 ISO 15586 ISO 9965 EPA 200.8	ICP-MS GF-AAS AAS (Hydride) ICP-MS
Natural Mineral Waters	Surface active agents	-	0.05 – 5.0 mg/L	0.05 mg/L	-	< 44	70-100	ISO 16265	CFA
Natural Mineral Waters	Mineral oil (hydrocarbon index)	-	>0.1 mg/L	-	-	< 41	71-102	ISO 9377-2	GC
Natural Mineral Waters	PCB	-	>15 ng/L	-	-	<20	70-130	AOAC 990.06	GC ECD

Natural Mineral Waters	Pesticide (organochlorine)	-	> 15 ng/L	-	-	<20	70-130	AOAC 990.06	GC ECD
Natural Mineral Waters	PAH	-	0.005 µg/L 0.04 µg/L 0.005 µg/L	-	-	<10 <18 <19	80-110 80-110 80-100	ISO 17993 ISO 7981-1 ISO 7981-2	HPLC FD TLC HPLC
Live and raw bivalve molluscs	Saxitoxin (STX) - STX Group	-	0.05 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	50 – 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	NEO - STX Group	-	0.05 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	50 – 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	dcSTX - STX Group	-	0.05 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	50 – 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	GTX1 - STX Group	-	0.05 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	50 – 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	GTX2 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	GTX3 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	GTX4 - STX Group	-	0.05 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	50 – 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	GTX5 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	GTX6 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	dcGTX2 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	dcGTX3 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02	-

								NMKL 197	
Live and raw bivalve molluscs	C1 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	C2 - STX Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	C3 - STX Group	-	0.5 – 1.5 mg/kg	0.1 mg/kg	0.2 mg/kg	32	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	C4 - STX Group	-	0.5 – 1.5 mg/kg	0.1 mg/kg	0.2 mg/kg	32	50– 130	AOAC 2005.06 NMKL 182, EN 14526 AOAC 2011.02 NMKL 197	-
Live and raw bivalve molluscs	OA - OA Group	-	0.03 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	60-115	See reference below	-
Live and raw bivalve molluscs	DTX1 - OA Group	-	0.03 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	60-115	See reference below	-
Live and raw bivalve molluscs	DTX2 - OA Group	-	0.1 – 0.5 mg/kg	0.03 mg/kg	0.06 mg/kg	38	60-115	See reference below	-
Live and raw bivalve molluscs	DA - Domoic Acid	-	14 – 26 mg/kg	2 mg/kg	4 mg/kg	20	80-110	-	-
Live and raw bivalve molluscs	AZA1 - AZA Group	-	0.03 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	40 - 120	See reference below	-
Live and raw bivalve molluscs	AZA2 - AZA Group	-	0.03 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44	40 - 120	See reference below	-
Live and raw bivalve molluscs	AZA3 - AZA Group	-	0.03 – 0.2 mg/kg	0.01 mg/kg	0.02 mg/kg	44%	40 - 120	See reference below	-
All Tuna	Methylmercury ^Z	1.2	0.64 – 1.8 mg/kg	0.12 mg/kg	0.24 mg/kg	31%	80 – 110%	EN 16801	GC-ICP/MS
Alfonsino	Methylmercury ^Z	1.5	0.82 – 2.2 mg/kg	0.15 mg/kg	0.30 mg/kg	30%	80 – 110%	AOAC 988.11 EN 16801	GC-electron capture GC-ICP/MS
All Marlin	Methylmercury ^Z	1.7	0.95 – 2.5 mg/kg	0.17 mg/kg	0.30 mg/kg	30%	80 – 110%	AOAC 988.11 EN 16801	GC-electron capture GC-ICP/MS
Shark	Methylmercury ^Z	1.6	0.88 – 2.3 mg/kg	0.16 mg/kg	0.30 mg/kg	30%	80 – 110%	AOAC 988.11 EN 16801	GC-electron capture GC-ICP/MS

Reference: http://aesan.msssi.gob.es/en/CRLMB/web/procedimientos_crlmb/crlmb_standard_operating_procedures.shtml Harmonised-SOP-LCMS-OA- Version4.pdf – This article is not available!

The site was changed to http://www.aecosan.msssi.gob.es/AECOSAN/docs/documentos/laboratorios/LNRBM/ARCHIVO2EU-Harmonised-SOP-LIPO-LCMSMS_Version5.pdf - This article should be evaluated.

Total toxicity is estimated as the sum of the molar concentrations of detected analogs multiplied by the relevant specific toxicity equivalency factors (TEFs). Internationally scientifically validated TEFs must be used. The science behind TEFs is developing. Current internationally validated TEF's will be found on the FAO website. Information on TEFs could be incorporated in this standard at a future date.

Methods should be validated and used for the relevant toxin analogues that may contribute to total toxicity. Currently known toxin analogues to consider are listed in table above.

Where toxin analogues that are not listed in the table are determined the competent authority must assess the contribution of these analogs to total toxicity whilst conducting further investigations.

PART II. METHODS OF ANALYSIS**SECTION III - COMPLETE DESCRIPTION OF THE METHODS OF ANALYSIS****DETERMINATION OF WATER CAPACITY OF CONTAINERS (CAC/RM 46)****1. SCOPE**

This method applies to glass containers.

2. DEFINITION

The water capacity of a container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

3. PROCEDURE

3.1 Select a container which is undamaged in all respects.

3.2 Wash, dry and weigh the empty container.

3.3 Fill the container with distilled water at 20°C to the level of the top thereof, and weigh the container thus filled.

4. CALCULATION AND EXPRESSION OF RESULTS

Subtract the weight found in 3.2 from the weight found in 3.3. The difference shall be considered to be the weight of water required to fill the container. Results are expressed as mL of water.

STANDARD PROCEDURE FOR THAWING OF QUICKEN FROZEN FRUITS AND VEGETABLES

1. SCOPE

This thawing procedure is for the purposes of analysis and assessing the organoleptic characteristics and is generally applicable to all quick frozen fruits and vegetables.

2. FIELD OF APPLICATION

- 2.1 Most quick frozen fruits and many vegetables can be examined on the basis of their organoleptic characteristics in a thawed condition. Where a vegetable requires cooking prior to organoleptic testing the prescribed procedure for the cooking of quick frozen vegetables is to be followed (CAC/RM 33-1970).
- 2.2 Where a particular quick frozen fruit or vegetable requires special treatment not fully covered by this general procedure for examination, the treatment outlined in the appropriate Codex commodity standard should be followed.

3. DEFINITIONS

- 3.1 Thawing of quick frozen fruits and vegetables for the purpose of this examination procedure, means subjecting the product to controlled conditions of temperature until the product is sufficiently free from ice crystals so that the individual units can be readily separated and handled.
- 3.2 Air thawing, means thawing of the product in unopened container by exposure to air of an ambient temperature in free or forced ventilation.
- 3.3 Water thawing by indirect contact, means thawing of the product in a tightly sealed container by immersion in water, stationary or flowing, at a temperature not exceeding 30°C.
- 3.4 Water thawing by direct contact, means thawing of the unpacked product by immersion in water at a temperature not exceeding 30°C. (This method is applicable only to some vegetables).

4. PRINCIPLE OF METHODS

By rapidly thawing quick frozen products under controlled conditions, the quality factors of the original product retained by the quick freezing process are preserved to a high degree.

For the purpose of this examination procedure there are two general methods for thawing quick frozen fruits and vegetables: air thawing and water thawing, Water thawing is faster and in some instances more desirable than air thawing, some quick frozen commodities, especially those where the product consists of small individual units surrounded, by air, thaw much faster than others, Through experience the analyst will learn to judge the best procedure and time requirement for adequate thawing for each commodity.

5. APPARATUS

- 5.1 Electric fan (optional), for forced ventilation air thawing.
- 5.2 Water bath with thermostat and circulation pump, for indirect or direct water thawing.
- 5.3 Plastic bags or other suitable watertight and closable container, for samples to be subjected to water thawing.
- 5.4 Clamps or weights, to prevent agitation of package in water bath during thawing.
- 5.5 Screen, to remove excess water after water thawing by direct contact.
- 5.6 Tray, on which the product is placed after removal of excess water when thawed by direct contact with water.

6. SAMPLES

The entire package or sample unit is used intact, except that in the case of bulk or industrial size containers a representative sample of 1-2 kg is adequate for testing and organoleptic examination.

7. PROCEDURE

For the rapid thawing of quick frozen products contained in consumer-size packages, bulk or industrial packages and sub-samples of these in suitable containers, one of the following methods should be used:

7.1 Air thawing

Thaw in unopened containers at ambient temperature. To hasten the thawing process forced air ventilation may be applied and the packages may be separated from each other.

7.2 Water thawing by indirect contact

Products packed in tightly sealed containers may be thawed by immersion of the container in water at a temperature not exceeding 30°C, e.g. a water bath with thermostat and circulation pump.

7.3 Water thawing by direct contact (applicable only to some vegetables)

The vegetable is removed from the pack and thawed by immersion in water at a temperature not exceeding 30°C. As soon as the product is thawed sufficiently to permit easy separation of the individual units, it is drained on a suitable screen to remove excess water and placed on a tray for final air thawing and examination.

8. NOTES ON PROCEDURE

8.1 Selection of thawing method

8.1.1 Certain quick frozen vegetables should not be subjected to water thawing by direct contact in order to prevent leaching of soluble solids or product material.

8.1.2 If there is an indication of off flavours or off odours in the quick frozen product when the packages are opened, water thawing by direct contact is not to be used as a preparatory step to cooking as the off flavour or off odour may be partially removed during such thawing. Such suspect samples are to be placed in a cooking receptacle while still frozen.

8.2 Prevention of damage

Extreme care should be taken during the thawing process in order that the product is not damaged or exposed to abuse that will alter or degrade the true characteristics of the product. Quick frozen fruits are more susceptible to abuse during thawing than quick frozen vegetables. Some fruits, especially light coloured fruits, oxidize quite readily and should be examined for colour before thawing is completed. Also some fruits show a breakdown in texture or "bleed" when thawed more than necessary. Consequently, rapid thawing under controlled conditions is most desirable in preparing the product for laboratory examination.

9. TEST REPORT

The identity of the sample and the thawing procedure used should be recorded.

10. ADDITIONAL NOTES

10.1 Quick frozen corn (maize) or products containing corn should always be air thawed or water thawed by indirect contact to avoid leaching of soluble solids or product material.

10.2 Quick frozen peaches and apricots (light coloured fruits) and red cherries oxidize quite readily and should be examined while some ice crystals remain in the product.

STANDARD PROCEDURE FOR COOKING OF QUICK FROZEN VEGETABLES**1. SCOPE**

This cooking procedure is for the purposes of analysis and assessing the organoleptic characteristics and is generally applicable to all quick frozen vegetables.

2. FIELD OF APPLICATION

- 2.1 The cooking procedure described below applies to those quick frozen vegetables which are normally cooked prior to consumption for the proper evaluation of such organoleptic quality factors as texture, tenderness, maturity or flavour.
- 2.2 Where a particular quick frozen vegetable requires a special cooking procedure not fully covered by this general procedure for examination, the method outlined in the appropriate Codex commodity standard shall be followed.

3. DEFINITION

Cooking of vegetables, for the purpose of this examination procedure, means to prepare, food for the table by subjecting quick frozen vegetables to an appropriate standard (cooking) procedure by partial or whole immersion of the product in boiling water for a specified time.

4. PRINCIPLE OF METHOD

By heating the quick frozen vegetable, through partial or whole immersion in water at boiling temperature for such a period of time as to undergo specific changes of conditions.

5. APPARATUS

- 5.1 Two-litre sauce pan with cover;
- 5.2 Hot plate or gasfire;
- 5.3 Tray on which product is placed after cooking for cooling and presentation;
- 5.4 Graduated cylinder or similar measuring device for water.

6. SAMPLES

Generally a separate set of samples for cooking purposes only need not be taken. Ordinarily part of the, contents of a larger retail size package or part of a sample of a bulk container, used, for testing other product characteristics can be used for the cooking procedure. Care should be taken, however, that the portion used for cooking is not treated differently from the normal procedure, e.g. thawed prior to cooking whereas the product would usually be put in boiling water while still in the frozen state.

STANDARD PROCEDURE FOR TOUGH STRING TEST OF QUICK FROZEN GREEN AND WAX BEANS**1. DEFINITION**

A tough string is a string that will support the weight of 250 g for five seconds or longer when tested in accordance with the procedure described below.

2. PRINCIPLE

Strings are removed from individual pods, fastened through a clamp assembly weighing 250 g, and hung so that the string supports the entire weight. If the string supports the weight for five seconds or more it is considered a tough string.

3. APPARATUS**3.1 Weighted clamp**

Use battery clamp (with teeth filed off or turned back), spring operated clothes pin, or binder clip which presents a flat clamping surface. Attach weight so that entire assembly of weight and clamp weighs 250-g. See Figure

1. A bag containing lead pellets is convenient as a weight.

4. PROCEDURE

4.1 From the drained product select a representative sample of not less than 285 g. Record the weight of this test sample.

4.2 Break the individual bean units and set aside those that show evidence of tough strings. Remove the strings from the pods and retain the pod material for weighing.

4.3 Fasten the clamp assembly to one end of the string. Grasp the other end of the string with the fingers (a cloth may be used to aid in holding the string) and lift gently.

4.4 If the string supports the 250 g assembly for at least five seconds consider the bean unit as containing tough string. If the string breaks in less than five seconds, retest the broken parts that are 13 mm or longer to determine if such portions are tough.

4.5 Weigh the bean units which contain tough strings.

5. CALCULATION AND EXPRESSION OF RESULTS

$$\% \text{ m/m pods containing tough strings} = \frac{\text{pods containing tough strings (g)}}{\text{test sample (g)}} \times 100$$

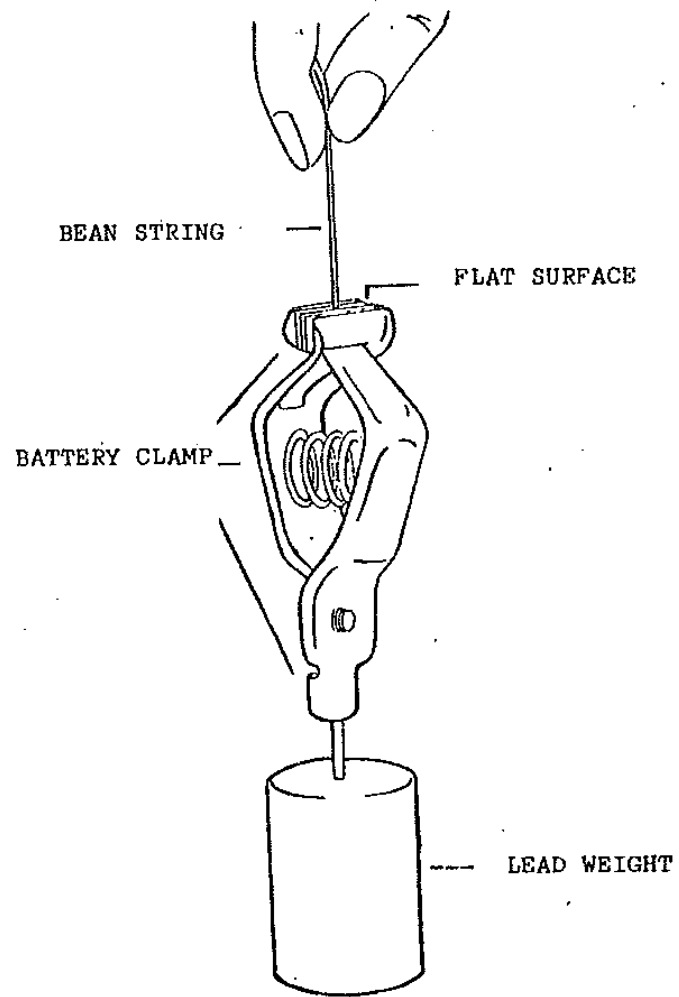


Figure 1 - Tough String Tester for Green or Wax Beans

DETERMINATION OF THE ALCOHOL-INSOLUBLE SOLIDS CONTENT OF QUICK FROZEN PEAS**1. PRINCIPLE OF THE METHOD**

The alcohol-insoluble solids in peas consist mainly of insoluble carbohydrates (starch) and protein. A weighed quantity of the sample is boiled with slightly diluted alcohol. The solids are washed with alcohol until the filtrate is clear. The alcohol-insoluble solids are dried and weighed. The percentage by mass present is used as a guide to maturity.

2. REAGENTS

2.1 Ethanol (95%) or denaturated ethanol Ethanol denaturated with 5% v/v methanol.

2.2 Diluted ethanol or diluted denaturated ethanol 80% v/v

Dilute 8 parts by volume of reagent under 8.2.1 to 9.5 parts by volume with H₂O.

3. APPARATUS

3.1 Analytical balance;

3.2 Beaker, 600 mL, if sample is boiled or 250 mL (standard taper ground-glass joint) flask with reflux condenser if refluxed;

3.3 Buchner funnel;

3.4 Drying dish with lid, flat bottomed;

3.5 Hot plates or boiling water bath for refluxing or boiling;

3.6 Clamps or weights to prevent agitation of package in water bath during thawing;

3.7 Desiccator with active desiccant;

3.8 Drying oven, well ventilated and thermostatically controlled and adjusted to operate at $100 \pm 2^\circ\text{C}$;

3.9 Filter paper, Whatman No. 1 or equivalent;

3.10 Macerator or blender;

3.11 Plastic bag of sufficient capacity to hold the entire sample for thawing;

3.12 "Policemen" on glass rods, bent so as to facilitate cleaning flask or beaker;

3.13 Water bath, with continuous flow at room temperature or regulated at room temperature for thawing.

4. PREPARATION OF TEST SAMPLE

Place frozen peas or frozen peas with sauce in plastic bag and tie off. Immerse sample in water bath with continuous flow at room temperature or regulated at room temperature. Avoid agitation of package during thawing by using clamps or weights if necessary. When completely thawed, remove package from bath. Blot off adhering water from the plastic bag. Transfer the peas from container to a sieve, the meshes of which are made by so weaving wire as to form square openings of 2.8 mm by 2.8 mm. If sauce is present, wash with gentle spray of water at room temperature until the sauce is removed. Without shifting the peas, incline the sieve as to facilitate drainage, and drain two minutes. Wipe the bottom of the sieve. Weigh 250 g peas into blender, add 250 mL distilled water and macerate to a smooth paste. If there is less than 250 g sample, use the entire sample of peas with an equivalent quantity by mass of distilled water and macerate to a smooth paste.

5. PROCEDURE

5.1 Dry a filter paper in flat-bottomed dish, lid off, for 2 hours at $100 \pm 2^\circ\text{C}$. Cover dish, cool in a desiccator, and weigh accurately. (The filter paper should be larger than

the base of the funnel and folded at the circumference to facilitate subsequent removal without loss of solids).

- 5.2 Weight 20 g \pm 0.01 g paste into a 250 mL ground-joint flask, add 120 mL denaturated ethanol or ethanol, and swirl to mix. Reflux on a steam or water bath for 30 minutes.

If boiling rather than refluxing is preferred, weight 40 g \pm 0.01 g paste into a 600 mL beaker. Add 240 mL denaturated ethanol or ethanol, stir, and cover beaker. Bring solution in the beaker to a boil and simmer slowly for 30 minutes on a hot plate.

Immediately filter with suction on a Buchner funnel through the dried and weighed filter paper. Decant most of the supernatant liquid through the filter paper. Wash the solids in the flask or beaker without delay, with small portions of 80% denaturated ethanol or 80% ethanol until the washings are colourless, allow solids to become dry during the washing. Transfer solids to the filter paper, spreading the solids evenly.

- 5.3 Remove the filter paper containing the 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 $100 \pm 2^\circ\text{C}$. Cover the dish, cool in a desiccator, and weight accurately. The weight of the dry residue is the difference between the weight under Section 5.1 and this final weight.

6. CALCULATION AND EXPRESSION OF RESULTS

Calculate the alcohol-insoluble solids content of the sample by means of the following formula:

- 6.1 If 20 g sample is refluxed:

Alcohol-insoluble solids content (% m/m) = $10 \frac{M}{20}$ Where:

M = the mass in g of dry residue (see Section 5.3)

- 6.2 If 40 g sample is refluxed:

Alcohol-insoluble solids content (% m/m) = $5 \frac{M}{40}$ Where:

M = the mass in g of dry residue (see Section 5.3)

7. REPEATIBILITY OF RESULTS

The difference between results of duplicate determination (results obtained simultaneously or in rapid succession by the same analyst) should not exceed 0.6 g alcohol-insoluble solids for 100 g of the product.

8. EXPRESSION OF RESULTS

Results are expressed as g alcohol-insoluble solids per 100 g of the product (% m/m).

DETERMINATION OF SALT-FREE DRY MATTER (QUICK FROZEN SPINACH)**PROCEDURE**

1. Determine the total dry matter of the product by drying over sand for 4 hours at 105°C.
2. From the value obtained in (1) deduct the amount of salt (NaCl) determine by either (a) electrometric titration using a pH meter with a silver electrode; or (b) direct titration with AgNO_3 . Express the result, after deducting salt from total dry matter, as "salt-free dry matter."

PROCEDURES TO BE INCLUDED

- CAC/RM 1
- CAC/RM 39
- CAC/RM 44
- CAC/RM 45
- CAC/RM 48
- CAC/RM 51
- CAC/RM 52
- CAC/RM 55 - Method 1
- PROCEDURES DESCRIBED IN THE STANDARDS

PART II. METHODS OF ANALYSIS**SECTION IV - METHODS OF ANALYSIS BY COMMODITY CATEGORIES****All Foods**

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
All foods	Acesulfame K, Aspartame	EN 12856	High performance liquid chromatography	II
All foods	Cyclamate	EN 12857	High performance liquid chromatography	II
All foods	Cyclamate	NMKL 123	Spectrophotometry	III
All foods	Saccharin	EN 12856	High performance liquid chromatography	III
All Foods (see also meat products)	Nitrates and/or Nitrites	EN 12014-1	Part 1- General considerations	N/A
Individual Foods ⁸	Sulphites	EN 1988-1 AOAC 990.28	Part 1: Optimized Monier-Williams method	III
Individual Foods ⁹	Sulphites	EN 1988-2 NMKL 135	Part 2: Enzymatic method	III
All foods	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction.	AOAC 985.29 AACC Intl 32-05.01	Enzymatic gravimetry	I
All foods	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction and also includes determination for soluble and insoluble dietary fibres	AOAC 991.43 AACC Intl 32-07.01 NMKL 129	Enzymatic gravimetry	I
All foods	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction, in foods and food products containing more than 10% dietary fibres and less than 2% starch (e.g. fruits)	AOAC 993.21	Gravimetry	I
All foods	Method applicable for determining dietary fibres that do not include the lower molecular weight fraction. Provides sugar residue composition of dietary fibre	AOAC 994.13 AACC Intl 32- 25.01 NMKL 162	Enzymatic GC/ colorimetry gravimetry	I

	polysaccharides, as well as content of Klason lignin.			
All foods	Insoluble dietary fibres in food and food products	AOAC 991.42 (Specific for insoluble fibre) AACC Intl 32-20.01	Enzymatic gravimetry	I
All foods	Soluble dietary fibres in food and food products	AOAC 993.19 (Specific for soluble fibre)	Enzymatic gravimetry	I
All foods	Method applicable for determining the content of dietary fibres of higher and lower molecular weight, in food where resistant starches are not present	AOAC 2001.03 AACC Intl 32-41.01	Enzymatic gravimetry and Liquid chromatography	I
All foods	Method applicable for determining the content of dietary fibres of higher and lower molecular weight. The method is applicable in food that may, or may not, contain resistant starches.	AOAC 2009.01 AACC Intl 32-45.01	Enzymatic-Gravimetry High Pressure Liquid Chromatography	I
All foods	Method applicable for determining the content of insoluble and soluble dietary fibres of higher and lower molecular weight. The method is applicable in food that may, or may not, contain resistant starches	AACC Intl 32-50.01 AOAC 2011.25	Enzymatic-Gravimetry High Pressure Liquid Chromatography	I
All foods	(1→3)(1→4) <i>Beta</i> -D-Glucans	AOAC 995.16 AACC Intl 32-23.01	Enzymatic	II
All foods	Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses, fructooligosaccharides) (applicable to added fructans)	AOAC 997.08 AACC Intl 32-31.01	Enzymatic & HPAEC- PAD	II
All foods	Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses, fructooligosaccharides) (not applicable highly depolymerised fructans)	AOAC 999.03 AACC Intl 32-32.01	Enzymatic & colorimetric	III
All foods	Polydextrose	AOAC 2000.11 AACC Intl 32-28.01	HPAEC-PAD	II
All foods	Trans-galacto-oligo saccharides	AOAC 2001.02 AACC Intl 32-33.01	HPAEC-PAD	II
All foods	Resistant starch (Recommended	AOAC 2002.02	Enzymatic	II

	for RS3)	AACC Intl 32-40.01		
Yeast cell wall	Insoluble glucans and mannans of yeast cell wall (for yeast cell wall only)	Eurasyp (European association for specialty yeast product) – LM Bonanno. Biospringer- 2004 – online version: http://www.eurasyp.org/public.technique.home.screen .	Chemical & HPAEC-PAD	IV
All foods	Fructo-oligosaccharides (monomeric units<5)	Ouarne et al. 1999 in <i>Complex Carbohydrates in Foods</i> . Edited by S. Sungsoo, L. Prosky & M. Dreher. Marcel Dekker Inc, New York	HPAEC-PAD	IV
All foods	Non-starch (NSP) polysaccharides	Englyst H.N, Quigley M.E., Hudson G. (1994) Determination of dietary fibre as non-starch polysaccharides with gas-liquid chromatographic high performance liquid chromatographic or spectrophotometric measurement of constituent sugars – Analyst 119, 1497-1509	Gas-Liquid Chromatography	IV

Cereals, Pulses and Legumes and Derived Products

Commodity	Provision	Method	Principle	Type
Certain pulses	Moisture	ISO 665	Gravimetry	I
Degermed maize (corn) meal and maize (corn) grits	Ash	AOAC 923.03 ISO 2171 ICC Method No 104/1	Gravimetry	I
Degermed maize (corn) meal and maize (corn) grits	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Degermed maize (corn) meal and maize (corn) grits	Moisture	ISO 712 ICC Method No 110/1	Gravimetry	I
Degermed maize (corn) meal and maize (corn) grits	Particle size (granularity)	AOAC 965.22	Sieving	I
Degermed maize (corn) meal and maize (corn) grits	Protein	ICC Method No 105/1	Titrimetry, Kjeldahl digestion	I
Durum wheat semolina and durum wheat flour	Ash (semolina)	AOAC 923.03 ISO 2171	Gravimetry	I
Durum wheat semolina and durum wheat flour	Moisture	ISO 712 ICC 110/1	Gravimetry	I
Durum wheat semolina and durum wheat flour	Protein (N x 5.7)	ICC 105/1	Titrimetry, Kjeldahl digestion	I

wheat flour				
Maize (corn)	Moisture	ISO 6540	Gravimetry	I
Peanuts (raw)	Aflatoxins, total	AOAC 991.31	Immunoaffinity column (Aflatest)	II
Peanuts (raw)	Aflatoxins, total	AOAC 993.17	Thin layer chromatography	III
Peanuts (intended for further processing)	Aflatoxins, total	AOAC 975.36	Romer minicolmn	III
Peanuts (Cereals, shell-fruits and derived products (including peanuts))	Sum of aflatoxins B ₁ , B ₂ , G ₁ and G ₂	EN 12955 ISO 16050	HPLC with post column derivatization and immunoaffinity column clean up	III
Peanuts (intended for further processing)	Aflatoxins, total	AOAC 979.18	Holaday-Velasco minicolumn	III
Pearl millet flour	Ash	AOAC 923.03	Gravimetry	I
Pearl millet flour	Colour	<i>Modern Cereal Chemistry</i> , 6th Ed., D.W. Kent-Jones and A.J. Amos (Ed.), pp. 605- 612, Food Trade Press Ltd, London, 1969.	Colorimetry using specific colour grader	IV
Pearl millet flour	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Pearl millet flour	Fibre, crude	ISO 5498: (B.5 Separation)	Gravimetry	I
Pearl millet flour	Moisture	ISO 712: ICC 110/1	Gravimetry	I
Pearl millet flour	Protein	AOAC 920.87	Titrimetry, Kjeldahl digestion	I
Quinoa	Moisture content	ISO 712/ AACCI 44-15.02	Gravimetry	I
Quinoa	Protein Content (N x 6.25in dry weight basis)	ISO 1871	Titrimetry (Kjeldahl)	IV
Sorghum flour	Ash	AOAC 923.03 ISO 2171 ICC 104/1	Gravimetry	I
Sorghum flour	Colour	<i>Modern Cereal Chemistry</i> , 6th Ed., D.W. Kent-Jones and A.J. Amos (Ed.), pp. 605- 612, Food Trade Press Ltd, London, 1969.	Colorimetry using specific colour grader	IV
Sorghum flour	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Sorghum flour	Fibre, crude	ICC 113 ISO 6541	Gravimetry	I
Sorghum flour	Moisture	ISO 712 ICC 110/1	Gravimetry	I
Sorghum flour	Particle size (granularity)	AOAC 965.22	Sieving	I
Sorghum flour	Protein	ICC 105/1	Titrimetry, Kjeldahl digestion	I
Sorghum flour	Tannins	ISO 9648	Spectrophotometry	I

Sorghum grains	Ash	AOAC 923.03 ISO 2171 ICC 104/1	Gravimetry	I
Sorghum grains	Fat, crude	AOAC 945.38F, 920.39C	Gravimetry (ether extraction)	I
Sorghum grains	Moisture	ISO 6540	Gravimetry	I
Sorghum grains	Protein	ICC 105/1	Titrimetry, Kjeldahl digestion	I
Sorghum grains	Tannins	ISO 9648	Spectrophotometry	I
Soy protein products	Ash	AOAC 923.03 ISO 2171: (Method B)	Gravimetry	I
Soy protein products	Fibre, crude	ISO 5498	Gravimetry	I
Soy protein products	Moisture	AOAC 925.09	Gravimetry (vacuum oven)	I
Soy protein products	Protein	AOAC 955.04D (using factor 6.25)	Titrimetry, Kjeldahl digestion	II
Vegetable protein products	Ash	AOAC 923.03 ISO 2171 (Method B)	Gravimetry, Direct	I
Vegetable protein products	Fibre, crude	AACC 32-17	Ceramic fiber filtration	I
Vegetable protein products	Moisture	AOAC 925.09	Gravimetry (vacuum oven)	I
Vegetable protein products	Protein	AOAC 955.04D (using factor 6.25)	Titrimetry, Kjeldahl digestion	II
Wheat flour	Ash	AOAC 923.03 ISO 2171 ICC 104/1	Gravimetry	I
Wheat flour	Fat acidity	AOAC 939.05	Titrimetry	I
Wheat flour	Moisture	ISO 712: ICC 110/1	Gravimetry	I
Wheat flour	Particle size (granularity)	AOAC 965.22	Sieving	I
Wheat flour	Protein	ICC 105/1	Titrimetry, Kjeldahl digestion	I
Wheat protein products including wheat gluten	Protein	Vital wheat gluten and devitalized wheat gluten AOAC 979.09 (wheat protein in grain N x 5.7)	Kjeldahl	I
		Solubilized wheat protein AOAC 920.87 (wheat protein in flour N x 5.7)	Kjeldahl	I
Wheat protein products including Wheat gluten	Fibre, crude	AOAC 962.09	Ceramic fiber filtration	I
Wheat protein products including Wheat gluten	Ash	AOAC 923.03 ISO 2171: method B	Gravimetry	I
Whole and decorticated pearl millet	Ash	AOAC 923.03	Gravimetry	I

grains				
Whole and decorticated pearl millet grains	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Whole and decorticated pearl millet grains	Fibre, crude	ISO 5498 (B.5 Separation)	Gravimetry	I
Whole and decorticated pearl millet grains	Moisture	ISO 712 ICC 110/1	Gravimetry	I
Whole and decorticated pearl millet grains	Protein	AOAC 920.87	Titrimetry, Kjeldahl digestion	I
Whole maize (corn) meal	Ash	AOAC 923.03 ISO 2171 ICC 104/1	Gravimetry	I
Whole maize (corn) meal	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	I
Whole maize (corn) meal	Moisture	ISO 712 ICC 110/1	Gravimetry	I
Whole maize (corn) meal	Particle size (granularity)	AOAC 965.22	Sieving	I
Whole maize (corn) meal	Protein	ICC 105/1	Titrimetry, Kjeldahl digestion	I

Cocoa Products and Chocolate

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
Chocolate and chocolate products	Cocoa butter	AOAC 963.15 IOCCC 14	Gravimetry (Soxhlet extraction)	I
Chocolate and chocolate products	Fat-free cocoa solids	AOAC 931.05	Oven evaporation and factor	I
Chocolate and chocolate products	Fat-free milk solids	IOCCC 17 or AOAC 939.02	Titrimetry, Kjeldahl digestion; after extraction of milk proteins	II
Chocolate and chocolate products	Fat, total	AOAC 963.15	Gravimetry (Soxhlet extraction)	I
Chocolate and chocolate products	Milkfat	IOCCC 5 AOAC 945.34; 925.41B; 920.80	Titrimetry/Distillation	I
Chocolate and chocolate products	Moisture	IOCCC 26 or AOAC 977.10 (Karl Fischer method); or AOAC 931.04 or IOCCC 1	Gravimetry	I
Chocolate and chocolate products	Non-cocoa butter vegetable fat	AOCS Ce 10/02	-	I
Cocoa (Cacao) Mass or Cocoa/Chocolate Liquor, and Cocoa Cake	Cocoa shell	AOAC 968.10 and 970.23	Spiral vessel count, Stone cell count	I
Cocoa (Cacao) Mass or Cocoa/Chocolate Liquor, and Cocoa Cake	Fat	AOAC 963.15 or IOCCC 14	Gravimetry (Soxhlet extraction)	I
Cocoa butter	Free fatty acids	ISO 660 or AOCS Cd 3d-63	Titrimetry	I
Cocoa butter	Unsaponifiable matter	ISO 3596 or ISO 18609 or AOCS Ca 6b-53	Titrimetry after extraction with diethyl ether	I
Cocoa powders (cocoa) and dry cocoa-sugar mixtures	Moisture	IOCCC 26 or AOAC 977.10 (Karl Fischer method)	Gravimetry	I

Fats and Oils and Related Products

Commodity	Provision	Method	Principle	Type
Fats and Oils (all)	Arsenic	AOAC 952.13 (Codex general method)	Colorimetry (diethyldithiocarbamate)	II
Fats and Oils (all)	Arsenic	AOAC 942.17 (Codex general method)	Colorimetry (molybdenum blue)	III
Fats and Oils (all)	Arsenic	AOAC 986.15 (Codex general method)	Atomic absorption spectrophotometry	III
Fats and oils	Butylhydroxyanisole, butylhydroxytoluene, tert-butylhydroquinone, & propyl gallate	AOAC 983.15; or AOCS Ce-6-86	Liquid chromatography	II
Fats and Oils (all)	Insoluble impurities	ISO 663	Gravimetry	I
Fats and Oils (all)	Lead	AOAC 994.02 ISO 12193 (Codex general method) or AOCS Ca 18c-91	Atomic absorption spectrophotometry (direct graphite furnace)	II
Fats and Oils (all)	Matter volatile at 105°C	ISO 662	Gravimetry (open-drying)	I
Fats and Oils (all)	Soap content	BS 684 Section 2.5; or AOCS Cc 17-95	Gravimetry	I
Fats and oils not covered by individual standards	Acid Value	ISO 660; or AOCS Cd 3d-63	Titrimetry	I
Fats and oils not covered by individual standards	Copper and Iron	AOAC 990.05 ISO 8294 or AOCS Ca 18b-91 (Codex general method)	Atomic absorption Spectrophotometry (direct graphite furnace)	II
Fats and oils not covered by individual standards	Peroxide value	AOCS Cd 8b-90 ISO 3960	Titrimetry using <i>iso</i> -octane	I
Fat spreads and blended spreads	Fat content	ISO 17189 IDF 194	Gravimetry	I
Fish oils	Fatty acid composition	ISO 5508	Gas chromatography	III
Fish oils	Fatty acid composition	ISO 12966-2	Gas chromatography	III
Fish oils	Fatty acid composition	AOCS Ce 1b-89	GLC	III
Fish oils	Fatty acid composition	AOCS Ce 1-07	Capillary GLC	III
Fish oils	Fatty acid composition	AOCS Ce 2b-11	Alkali hydrolysis	III
Fish oils	Fatty acid composition	AOCS Ce 1a-13	Capillary GLC	III
Fish oils	Fatty acid composition	AOCS Ce 2-66	Preparation of methyl esters by fatty acids	III
Fish oils	Acid value	AOCS Ca 5a-40 AOCS CD 3D-63 ISO 3960 NMKL 38	Titration	I

Fish oils	Peroxide value	AOCS Cd 8b-90 ISO 3960 NMKL 158	Titration	I
Fish oils	Peroxide value	European Pharmacopoeia 2.5.5 (Part B Iso-octane as solvent)	Titration	I
Fish oils	Phospholipids	USP-FCC10 2S(Krill oil): Phospholipids, Nuclear Magnetic Resonance, Appendix IIC	NMR Spectroscopy	IV
Fish oils	P-Anisidine value	European Pharmacopoeia 2.5.36 / AOCS Cd 18-90 / ISO 6885	Spectrophotometry	I
Fish oils	Triglycerides	USP 40-NF35(Omega-3 Acid Triglycerides): Content of oligomers and partial glyceride	HPLC-RI	III
		European Pharmacopoeia 1352 (Omega3 acid triglycerides): Oligomers and partial glycerides	HPLC RI	III
		AOCS Cd 11d-96	HPLC-ELSD	III
Fish oils	Vitamin A	European Pharmacopoeia Monograph on Cod Liver Oil (Type A), monograph 01/2005:1192, with LC end-point 2.2.29	LC	III
Fish oils	Vitamin A	EN 12823-1 (Determination of vitamin A by high performance liquid chromatograph – Part 1: Measurement of all-E-retinol and 13- Z-retinol	LC	III
Fish oils	Vitamin D	EN 12821 (Determination of vitamin D by high performance liquid chromatography – Measurement of cholecalciferol (D3) or ergocalciferol (D2))	LC	III
Fish oils	Vitamin D	NMKL 167 (Cholecalciferol (vitamin D3) and Ergocalciferol (vitamin D2). Determination by HPLC in foodstuffs	LC	III
Named Animal Fats	Acidity	ISO 660; or AOCS Cd 3d-63	Titrimetry	I
Named Animal Fats	Copper and Iron	AOAC 990.05 ISO 8294; or AOCS Ca 18b-91 (Codex general method)	Atomic absorption Spectrophotometry (direct graphite furnace)	II
Named Animal Fats	GLC ranges of fatty acid composition	ISO 5508 and ISO 12966-2 or AOCS Ce 2-66 and Ce 1e-91 or Ce 1f-96	Gas chromatography of methyl esters	II
Named Animal Fats	Iodine value (IV)	ISO 3961; or AOAC 993.20; or AOCS Cd 1d-92	Wijs-Titrimetry	I

Named Animal Fats	Peroxide value	AOCS Cd 8b-90 ISO 3960	Titrimetry using <i>iso</i> -octane	I
Named Animal Fats	Relative density	ISO/AOCS method for apparent density to be inserted	Pycnometry	II
Named Animal Fats	Refractive index	ISO 6320; or AOCS Cc 7-25	Refractometry	II
Named Animal Fats	Saponification value	ISO 3657; or AOCS Cd 3-25	Titrimetry	I
Named Animal Fats	Unsaponifiable matter	ISO 3596 or ISO 18609; or AOCS Ca 6b-53	Titrimetry after extraction with diethyl ether	I
Named Animal Fats	Titre	ISO 935; or AOCS Cc 12-59	Thermometry	I
Named Vegetable Oils	Acidity	ISO 660; or AOCS Cd 3d-63	Titrimetry	I
Named Vegetable Oils	Apparent density	ISO 6883, with the appropriate conversion factor; or AOCS Cc 10c-95	Pycnometry	I
Named Vegetable Oils	Baudouin test (modified Villavecchia or sesameseed oil test)	AOCS Cb 2-40	Colour reaction	I
Named Vegetable Oils	Carotenoids, total	BS 684 Section 2.20	Spectrophotometry	II
Named Vegetable Oils	Copper and iron	ISO 8294; or AOAC 990.05; or AOCS Ca 18b-91	AAS	II
Named Vegetable Oils	Crismer value	AOCS Cb 4-35 and AOCS Ca 5a- 40	Turbidity	I
Named Vegetable Oils	GLC ranges of fatty acid composition	ISO 5508 and ISO 12966-2; or AOCS Ce 2-66 and Ce 1--62 or Ce 1h-05	Gas chromatography of methyl esters	II
Named Vegetable Oils	Halphen test	AOCS Cb 1-25	Colorimetry	I
Named Vegetable Oils	Insoluble impurities	ISO 663	Gravimetry	I
Named Vegetable Oils	Iodine value (IV)	Wijs - ISO 3961; or AOAC 993.20; or AOCS Cd 1d-92; or NMKL 39	Wijs-Titrimetry ¹⁰	I
Named Vegetable Oils	Lead	AOAC 994.02; or ISO 12193; or AOCS Ca 18c-91	Atomic Absorption	II
Named Vegetable Oils	Moisture & volatile matter at 105°C	ISO 662	Gravimetry	I
Named Vegetable Oils	Peroxide value (PV)	AOCS Cd 8b-90 or ISO 3960	Titrimetry	I
Named Vegetable Oils	Refractive index	ISO 6320 or AOCS Cc 7-25	Refractometry	II
Named Vegetable Oils	Reichert value and Polenske value	AOCS Cd 5-40	Titrimetry	I
Named Vegetable Oils	Relative density	IUPAC 2.101 with the appropriate conversion factor See comment above (Named Animal Fats) ¹¹	Pycnometry	I

Named Vegetable Oils	Saponification value (SV)	ISO 3657 or AOCS Cd 3-25	Titrimetry	I
Named Vegetable Oils	Slip point	ISO 6321 for all oils; AOCS Cc 3b-92 for all oils except palm oils; AOCS Cc 3-25 for palm oils only	Open ended capillary tube	I
Named Vegetable Oils	Soap content	BS 684 Section 2.5; or AOCS Cc 17-95	Gravimetry	I
Named Vegetable Oils	Sterol content	ISO 12228; or AOCS Ch 6-91	Gas chromatography	II
Named Vegetable Oils	Tocopherol content	ISO 9936 or AOCS Ce 8-89	HPLC	II
Named Vegetable Oils	Unsaponifiable matter	ISO 3596; or ISO 18609; or AOCS Ca 6b-53	Gravimetry	I
Olive Oils and Olive Pomace Oils	Absorbency in ultra-violet	COI/T.20/Doc. No. 19 or ISO 3656 or AOCS Ch 5-91	Absorption in ultra violet	II
Olive Oils and Olive Pomace Oils	Acidity, free (acid value)	ISO 660 or AOCS Cd 3d-63	Titrimetry	I
Olive Oils and Olive Pomace Oils	Alpha-tocopherol	ISO 9936	HPLC	II
Olive Oils and Olive Pomace Oils	Difference between the actual and theoretical ECN 42 triglyceride content	COI/T.20/Doc. no. 20 or AOCS Ce 5b-89	Analysis of triglycerides of HPLC and calculation	I
Olive Oils and Olive Pomace Oils	Erythrodiol + uvaol	COI/T.20/Doc.no. 30	Gas chromatography	II
Olive Oils and Olive Pomace Oils	Halogenated solvents, traces	COI/T.20/Doc. no. 8	Gas chromatography	II
Olive Oils and Olive Pomace Oils	Insoluble impurities in light petroleum	ISO 663	Gravimetry	I
Olive Oils and Olive Pomace Oils	Iodine value	ISO 3961 or AOAC 993.20 or AOCS Cd 1d- 92 or NMKL 39	Wijs-Titrimetry	I
Olive Oils and Olive Pomace Oils	Iron and copper	ISO 8294 or AOAC 990.05	AAS	II
Olive Oils and Olive Pomace Oils	Lead	AOAC 994.02 or ISO 12193 or AOCS Ca 18c-91	AAS	II
Olive Oils and Olive Pomace Oils	Moisture and volatile matter	ISO 662	Gravimetry	I
Olive Oils and Olive Pomace Oils	Organoleptic characteristics	COI/T.20/Doc. no. 15	Panel test	I
Olive Oils and Olive Pomace Oils	Peroxide value	ISO 3960 or AOCS Cd 8b-90	Titrimetry	I
Olive Oils and Olive Pomace Oils	Relative density	IUPAC 2.101, with the appropriate conversion factor. See comment above.	Pycnometry	I
Olive Oils and Olive Pomace Oils	Refractive index	ISO 6320 or AOCS Cc 7-25	Refractometry	II
Olive Oils and Olive Pomace Oils	Saponification value	ISO 3657 or AOCS Cd 3-25	Titrimetry	I
Olive Oils and Olive Pomace Oils	Sterol composition and total sterols	COI/T.20/Doc. no. 30 ISO 12228-2 or AOCS Ch 6-91	Gas chromatography	II

Olive Oils and Olive Pomace Oils	Stigmastadienes	COI/T.20/Doc. no. 11 or ISO 15788-1 or AOCS Cd 26-96	Gas chromatography	II
Olive Oils and Olive Pomace Oils	Stigmastadienes	ISO 15788-2	HPLC	III
Olive Oils and Olive Pomace Oils	<i>Trans</i> fatty acids content	COI/T.20/Doc no. 17 or ISO 15304 or AOCS Ch 2a-94	Gas chromatography of methyl esters	II
Olive Oils and Olive Pomace Oils	Unsaponifiable matter	ISO 3596 or ISO 18609 or AOCS Ca 6b-53	Gravimetry	I
Olive Oils and Olive Pomace Oils	Wax content	COI/T.20/Doc. no. 18 or AOCS Ch 8-02	Gas chromatography	II

Fish and Fishery Products

Commodity	Provision	Method	Principle	Type
Fish and fishery products	Histamine	AOAC 977.13	Fluorimetry	II
Fish and fishery products	Mercury	AOAC 977.15	Flameless atomic absorption spectrophotometry	III
Boiled Dried Salted Anchovies	Sodium Chloride (chloride expressed as sodium chloride)	AOAC 937.09	Titrimetry	II
Fish Sauce	Total nitrogen	AOAC 940.25	Digestion	I
Fish Sauce	Amino acid nitrogen	AOAC 920.04 and AOAC 920.03	Determining formaldehyde titration method subtracting by ammoniacal nitrogen (magnesium oxide method)	I
Fish Sauce	pH	AOAC 981.12 The pH shall be measured in a sample of fish sauce diluted with water to 1:10 using a pH meter. The dilution of fish sauce is necessary because of the high ionic strength in the undiluted sauce.	Electrometry	III
Fish Sauce	Sodium chloride	AOAC 976.18	Potentiometry	II
Fish Sauce	Sodium chloride	AOAC 937.09	Titrimetry	IV
Fish Sauce	Histamine	AOAC 977.13	Fluorimetry	II
Frozen abalone (covered by glaze)	Net weight	AOAC 963.18	Gravimetry	I
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Proportion of fish fillet and minced fish	AOAC 988.09	Physical separation	I
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	Sodium chloride	AOAC 971.21 (Codex general method)	Potentiometry	II
Quick Frozen Fish sticks (fish fingers) and fish portions - breaded or in	Fish content (declaration)	AOAC 996.15 and calculation	Gravimetry	I

batter				
Quick frozen fish sticks (fish fingers) and fish portions - breaded or in batter	Sodium chloride	AOAC 971.27 (Codex general method)	Potentiometry	II
Salted Atlantic Herring and Salted Sprat	Water content	AOAC 950.46B	Air drying	I
Smoked Fish, Smoke-Flavoured fish and Smoke-dried fish	Water phase salt	AOAC 952.08 AOAC 937.09	Calculation	I
Smoked Fish, Smoke-Flavoured fish and Smoke-dried fish	Water activity	NMKL 168 ISO 21807	Electrometry	III
Live and raw bivalve molluscs	Paralytic shellfish toxicity	AOAC 959.08	Mouse bioassay	IV
Live and raw bivalve molluscs	Paralytic shellfish toxicity	AOAC 2011.27	Receptor binding assay	IV

Foods for Special Dietary Uses

Commodity	Provision	Method	Principle	Type
Special foods	Ash	AOAC 942.05	Gravimetry	I
Special foods	Calcium	AOAC 984.27	ICP emission spectrometry	III
Special foods	Chloride	AOAC 971.27 (Codex general method)	Potentiometry	II
Special foods	Dietary fibre, total	AOAC 985.29	Gravimetry (enzymatic digestion)	I
Special foods	Folic acid	AOAC 944.12	Microbioassay	II
Special foods	Linoleate (in the form of glycerides)	AOAC 922.06; 969.33; 963.22	Acid hydrolysis, preparation of methyl esters and gas chromatography	II
Special foods	Linoleate (in the form of glycerides)	AOAC 922.06; 979.19	Acid hydrolysis and spectrophotometry	III
Special foods	Loss on drying (milk based)	AOAC 925.23 ISO 6731 IDF 21	Gravimetry	I
Special foods	Nicotinamide for foods not based on milk	AOAC 961.14	Colorimetry	II
Special foods	Nicotinamide for milk-based foods	AOAC 944.13	Microbioassay	II
Special foods	Pantothenic acid/enriched foods	AOAC 945.74	Microbioassay	II
Special foods	Pantothenic acid/non-enriched foods	<i>The Analyst</i> 89 (1964):1, 3-6, ibid. 232 US Dept Agr., <i>Agr. Handbook</i> 97 (1965)	Microbioassay	IV
Special foods	Phosphorous	AOAC 986.24	Colorimetry (molybdovanadate)	II
Special foods	Protein efficiency ratio (PER)	AOAC 960.48	Rat bioassay	I
Special foods	Riboflavin	AOAC 970.65	Fluorometry	II

Special foods	Sodium and Potassium	ISO 8070 IDF 119	Flame atomic absorption spectrometry	II
Special foods	Sodium and potassium	AOAC 984.27	ICP emission spectrometry	III
Special foods	Vitamin A	AOAC 974.29	Colorimetry	IV
Special foods	Vitamin A in foods in which carotenes have been added as a source of vitamin A	AOAC 941.15	Spectrophotometry	III
Special foods	Vitamin B ₁₂	AOAC 952.20	Microbioassay	II
Special foods	Vitamin B ₆	AOAC 961.15	Microbioassay	II
Special foods	Vitamin C	AOAC 967.22	Microfluorometry	II
Special foods	Vitamin C	AOAC 967.21	Colorimetry (dichloroindophenol)	III
Special foods	Vitamin D	AOAC 936.14	Rat bioassay	IV
Special foods	Vitamin D (D ₃ , milk based infant formula)	AOAC 992.26	Liquid chromatography	II
Special foods	Vitamin E	AOAC 971.30	Colorimetry	IV
Special foods	Vitamin E (milk based infant formula)	AOAC 992.03	Liquid chromatography	II
Follow-up formula	Dietary fibre, total	AOAC 991.43	Gravimetry (enzymatic digestion)	I
Follow-up formula	Iodine (milk based formula)	AOAC 992.24	Ion-selective potentiometry	II
Follow-up formula	Pantothenic acid	AOAC 992.07 Measures total pantothenate (free pantothenic acid + CoA- + ACP-bound) and measured as D-pantothenic acid (or calcium D-pantothenate)	Microbioassay	II
Follow-up formula	Vitamin A	AOAC 974.29	Colorimetry	IV
Follow-up formula	Vitamin A (retinol isomers)	AOAC 992.04	HPLC	II
Follow-up formula	Vitamin A (retinol) (above 500 IU/l milk after reconstitution)	AOAC 992.06	HPLC	III
Follow-up formula	Vitamin K	AOAC 999.15 EN 14148 (vitamin K ₁) (Measures either aggregated cis + trans K ₁ or can measure individual cis and trans forms depending on LC column.)	HPLC With C30 column to separate the cis- and the trans- K vitamins	II
Foods with low-sodium content (including salt substitutes)	Iodine	AOAC 925.56	Titrimetry	II
Foods with low-sodium content	Silica (colloidal, calcium	AOAC 950.85N	Gravimetry	IV

(including salt substitutes)	silicate)			
Gluten-free foods	Gluten	Enzyme-Linked Immunoassay R5 Mendez (ELISA) Method <i>Eur J Gastroenterol Hepatol</i> 2003; 15: 465-474	Immunoassay	I
Infant formula	Biotin	EN 15607 (d-biotin) (Measures total D-biotin (free + D-biocytyl)	HPLC-fluorescence	III
Infant formula	Biotin	AOAC 2016.02	HPLC-UV	II
Infant formula	Calcium	ISO 8070 IDF 119	Flame atomic absorption spectrophotometry	II
Infant formula	Calcium	AOAC 985.35	Flame atomic absorption spectroscopy	III
Infant formula	Calcium	AOAC 984.27	ICP emission spectroscopy	III
Infant formula	Chloride	AOAC 986.26	Potentiometry	III
Infant formula	Chloride	AOAC 2016.03 / ISO 21422 IDF 242	Potentiometry	II
Infant formula	Choline	AOAC 999.14	Enzymatic Colorimetric Method with limitations on applicability due to choline and ascorbate concentration.	II
Infant formula	Copper	AOAC 985.35	Flame atomic absorption spectroscopy	II
Infant formula	Copper	AOAC 984.27	ICP emission spectroscopy	III
Infant formula	Chromium (Section B of CXS 72-1981 only)	EN 14082	Graphite furnace atomic absorption after dry ashing	III
Infant formula	Chromium (Section B of CXS 72-1981 only)	EN 14083	Graphite furnace AAS after pressure digestion	III
Infant formula	Chromium (Section B of CXS 72-1981 only)	AOAC 2006.03	ICP emission spectroscopy	III
Infant formula	Chromium (Section B of CXS 72-1981 only)	AOAC 2011.19 ISO 20649 IDF 235	ICP-MS	II
Infant formula	Crude protein ¹²	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Infant formula	Fatty acids (including trans fatty acid)	AOAC 996.06	Gas chromatography	III
Infant formula	Fatty acids (including trans fatty acid)	AOCS Ce 1i-07	Gas chromatography	III
Infant formula	Folic acid	AOAC 992.05 (Measures free folic acid + free, unbound natural folates, aggregated and measured as folic acid) EN 14131	Microbioassay	II

		(Total folate (free + bound), aggregated and measured as folic acid)		
Infant formula	Folic acid	J AOAC Int. 2000:83; 1141-1148 (Measures free folic acid + proportion of free, natural folate)	Optical Biosensor Immunoassay	IV
Infant formula	Folic acid	J Chromatogr. A., 928, 77-90, 2001 (Measures total folates after conversion to, and measurement as 5-Me-H4PteGlu)	HPLC, incorporating immunoaffinity clean-up and conversion to 5- methyltetrahydrofolate	IV
Infant formula	Iodine (for milk-based formula)	AOAC 2012.15 ISO 20647 IDF 234	ICP-MS	II
Infant formula	Iron ¹³	AOAC 985.35	Flame atomic absorption spectrophotometry	III
Infant formula	Iron	AOAC 984.27	ICP emission spectroscopy	III
Infant formula	Iron	AOAC 999.11 NMKL139	AAS after dry ashing	II
Infant formula	Magnesium	ISO 8070 IDF 119	Flame atomic absorption spectrophotometry	II
Infant formula	Magnesium	AOAC 985.35	Flame atomic absorption spectroscopy	III
Infant formula	Magnesium	AOAC 984.27	ICP emission spectroscopy	III
Infant formula	Manganese	AOAC 985.35	Flame atomic absorption spectrophotometry	II
Infant formula	Manganese	AOAC 984.27	ICP emission spectroscopy	III
Infant formula	Melamine	ISO/TS 15495 IDF/RM 230	LC-MS/MS	IV
Infant formula	Molybdenum (Section B of CXS 72-1981 only)	EN 14083	Graphite furnace AAS after pressure digestion	III
Infant formula	Molybdenum (Section B of CXS 72-1981 only)	AOAC 2006.03	ICP emission spectroscopy	III
Infant formula	Molybdenum (Section B of CXS 72-1981 only)	AOAC 2011.19 ISO 20649 IDF 235	ICP-MS	II
Infant formula	Myo-Inositol	AOAC 2011.18 ISO 20637	LC-pulsed amperometry	II
Infant formula	Niacin	AOAC 985.34 (niacin (preformed) and nicotinamide)	Microbioassay and turbidimetry	III
Infant formula	Niacin	EN 15652 (Free and bound and phosphorylated forms measured either as aggregate of nicotinic acid + nicotinamide, or as individual forms)	HPLC	II ¹⁴
Infant formula	Pantothenic acid	AOAC 2012.16 ISO 20639	UHPLC-MS/MS	II

Infant formula	Phosphorus	AOAC 986.24	Spectrophotometry (molybdovanadate)	II
Infant formula	Phosphorus	AOAC 984.27	ICP emission spectroscopy	III
Infant formula	Riboflavin	AOAC 985.31 ¹⁵	Fluorimetry	III
Infant formula	Riboflavin	EN 14152 (Measures natural and supplemental forms, free, bound and phosphorylated (FMN and FAD) aggregated and measured as riboflavin.)	HPLC	II
Infant formula	Selenium	AOAC 996.16 or AOAC 996.17	Continuous hydride generation Flame atomic absorption spectrometry (HGAAS)	III
Infant formula	Selenium	EN 14627	Hydride generation atomic absorption spectrometry (HGAAS)	III
Infant formula	Selenium	AOAC 2006.03	ICP emission spectroscopy	III
Infant formula	Selenium	AOAC 2011.19 ISO 20649 IDF 235	ICP-MS	II
Infant formula	Sodium and potassium	AOAC 984.27	ICP emission spectrometry	III
Infant formula	Sodium and potassium	ISO 8070 IDF 119	Flame atomic absorption spectrophotometry	II
Infant formula	Thiamine	AOAC 986.27 ¹⁶	Fluorimetry	III
Infant formula	Thiamine	EN 14122 (Measures all vitamin B ₁ forms (natural and added free, bound and phosphorylated) following extraction and conversion to thiamine)	HPLC with pre-or post column derivatization to thiochrom	II
Infant formula	Total carbohydrates	AOAC 986.25	Determination by difference	I
	Moisture/Total Solids	AOAC 990.19 or AOAC 990.20 ISO 6731 IDF 21	Gravimetry	
	Ash	AOAC 942.05	Gravimetry	
Infant formula	Total fat	AOAC 989.05 ISO 8381 IDF 123	Gravimetry (Röse-Gottlieb)	I
Infant formula	Total fat for milk-based infant formula (Products not completely soluble in ammonia)	ISO 8262-1 IDF 124-1	Gravimetry (Weibull-Berntrop)	I
Infant formula	Total fatty acids	AOAC 996.06	Gas Chromatography	III
Infant formula	Total fatty acids	AOAC 2012.13 ISO 16958 IDF231	Gas Chromatography	II
Infant formula	Total nucleotides	AOAC 2011.20	LC	II

		ISO 20638		
Infant formula	Total phospholipids	AOCS Ja7b-91	Gas chromatography with suitable extraction and preparation procedures	III
Infant formula	Vitamin A	EN 12823-1 (all-trans-retinol and 13-cis- retinol) Vitamin A (both natural + supplemental ester forms) aggregated and quantified as individual retinol isomers (13 - cis and all- trans)	HPLC	III
Infant formula	Vitamin A Palmitate (Retinyl Palmitate), Vitamin A Acetate (Retinyl Acetate)	AOAC 2012.10 ISO 20633	HPLC	II
Infant formula	Vitamin C	AOAC 2012.22 ISO/DIS 20635	HPLC-UV	II
Infant formula	Vitamin D	AOAC 2016.05 / ISO 20636	LC-MS	II
Infant formula	Vitamin D	EN 12821 (D2 and/or D3 measured as single components. Hydroxylated forms not measured.) NMKL 167	HPLC-UV	III
Infant formula	Vitamin D	AOAC 995.05 D2 and D3 measured	HPLC-UV	III
Infant formula	Vitamin E	AOAC 992.03 Measures all rac-vitamin E (both natural + supplemental ester forms) aggregated and quantified as α -congeners	HPLC	III
Infant formula	Vitamin E	EN 12822 (Measures Vitamin E (both natural + supplemental ester forms) aggregated and quantified as individual tocopherol congeners (α , β , γ , δ).	HPLC	II
Infant formula	Vitamin E	AOAC 2012.10 ISO 20633	HPLC	II
Infant formula	Vitamin B ₆	AOAC 985.32	Microbioassay	III
Infant formula	Vitamin B ₆	EN 14166 (Aggregates free and bound pyridoxal, pyridoxine and pyridoxamine and measures as pyridoxine)	Microbioassay	III

Infant formula	Vitamin B ₆	AOAC 2004.07 EN 14164 (Free and bound phosphorylated forms (pyridoxal, pyridoxine and pyridoxamine) converted and measured as pyridoxine)	HPLC	II
Infant formula	Vitamin B ₆	EN 14663 (includes glycosylated forms)(Free and bound phosphorylated and glycosylated forms measured as the individual forms pyridoxal, pyridoxine and pyridoxamine)	HPLC	III
Infant formula	Vitamin B ₁₂	AOAC 986.23 (Measures total vitamin B ₁₂ as cyanocobalamin)	Turbidimetric Method	III
Infant formula	Vitamin B ₁₂	AOAC 2011.10 ISO 20634	HPLC	II
Infant formula	Zinc	AOAC 985.35	Flame atomic absorption spectroscopy	II
Infant formula	Zinc	AOAC 984.27	ICP emission spectroscopy	III

Fruit Juices and Nectars

Commodity	Provision	Method	Principle	Type
Fruit Juices and Nectars	Ascorbic acid-L (additives)	IFUMA 17A	HPLC	II
Fruit Juices and Nectars	Ascorbic acid-L (additives)	ISO 6557-1	Fluorescence spectrometry	IV
Fruit Juices and Nectars	Ascorbic acid-L (additives)	AOAC 967.21 IFUMA 17 ISO 6557-2	Indophenol method	III
Fruit Juices and Nectars	Carbon dioxide (additives and processing aids)	IFUMA 42	Titrimetry (back-titration after precipitation)	IV
Fruit Juices and Nectars	Cellobiose	IFUMA 4	Capillary gas chromatography	IV
Fruit Juices and Nectars	Citric acid ^{IV} (additives)	AOAC 986.13	HPLC	II
Fruit Juices and Nectars	Citric acid ^{IV} (additives)	EN 1137 IFUMA 22	Enzymatic determination	III
Fruit Juices and Nectars	Glucose and fructose (permitted ingredients)	EN 12630 IFUMA 67 NMKL 148	HPLC	III
Fruit Juices and Nectars	Glucose-D and fructose-D (permitted ingredients)	EN 1140 IFUMA 55	Enzymatic determination	II
Fruit Juices and Nectars	HFCS & HIS in apple juice (permitted ingredients)	Determination of HFCS & HIS by Capillary GC method JAOAC 84, 486 (2001)	CAP GC Method	IV
Fruit Juices and Nectars	Malic acid (additives)	AOAC 993.05	Enzymatic determination and HPLC	III
Fruit Juices and Nectars	Malic acid-D	EN 12138 IFUMA 64	Enzymatic determination	II

Fruit Juices and Nectars	Malic acid-D in apple juice	AOAC 995.06	HPLC	II
Fruit Juices and Nectars	Malic acid-L	EN 1138 IFUMA 21	Enzymatic determination	II
Fruit Juices and Nectars	Pectin (additives)	IFUMA 26	Precipitation/photometry	I
Fruit Juices and Nectars	Benzoic acid and its salts; sorbic acid and its salts	IFUMA 63 NMKL 124	HPLC	II
Fruit Juices and Nectars	Benzoic acid and its salts	ISO 5518, ISO 6560	Spectrometry	III
Fruit Juices and Nectars	Preservatives in fruit juices (sorbic acid and its salts)	ISO 5519	Spectrometry	III
Fruit Juices and Nectars	Quinic, malic & citric acid in cranberry juice cocktail and apple juice (permitted ingredients and additives)	Determination of quinic, malic and citric acid in cranberry juice cocktail and apple juice AOAC 986.13	HPLC	III
Fruit Juices and Nectars	Saccharin	NMKL 122	Liquid chromatography	II
Fruit Juices and Nectars	<i>Soluble solids</i>	AOAC 983.17 EN 12143 IFUMA 8 ISO 2173	Indirect by refractometry	I
Fruit Juices and Nectars	<i>Sucrose (permitted ingredients)</i>	EN 12146 IFUMA 56	Enzymatic determination	III
Fruit Juices and Nectars	Sucrose (permitted ingredients)	EN 12630 IFUMA 67 NMKL 148	HPLC	II
Fruit Juices and Nectars	Sulphur dioxide (additives)	Optimized Monier Williams AOAC 990.28 IFUMA 7A NMKL 132	Titrimetry after distillation	II
Fruit Juices and Nectars	Sulphur dioxide (additives)	NMKL 135	Enzymatic determination	III
Fruit Juices and Nectars	Sulphur dioxide (additives)	ISO 5522, ISO 5523	Titrimetry after distillation	III
Fruit Juices and Nectars	Tartaric acid in grape juice (additives)	EN 12137 IFUMA 65	HPLC	II
Fruit Juices and Nectars	Total nitrogen	EN 12135 IFUMA 28	Digestion/titration	I
Fruit Juices and Nectars	Sections 3.2 Quality Criteria and 3.3 Authenticity ¹⁸	Determination of acetic acid EN 12632; IFUMA 66	Enzymatic determination	II
Fruit Juices and Nectars		Determination of alcohol (ethanol) IFUMA 52	Enzymatic determination	II
Fruit Juices and Nectars		Detection of anthocyanins IFUMA 71	HPLC	I
Fruit Juices and Nectars		Determination of ash in fruit products AOAC 940.26; EN 1135; IFUMA 9	Gravimetry	I
Fruit Juices and Nectars		Detection of beet sugar in fruit juices AOAC	Deuterium NMR	II

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Fruit Juices and Nectars	Determination of benzoic acid as a marker in orange juice AOAC 994.11	HPLC	III
Fruit Juices and Nectars	Determination of C ¹³ /C ¹² ratio of ethanol derived from fruit juices JAOAC 79, No. 1, 1996, 62-72	Stable isotope mass spectrometry	II
Fruit Juices and Nectars	Determination of carbon stable isotope ratio of apple juice AOAC 981.09 - JAOAC 64, 85 (1981)	Stable isotope mass spectrometry	II
Fruit Juices and Nectars	Determination of carbon stable isotope ratio of orange juice AOAC 982.21	Stable isotope mass spectrometry	II
Fruit Juices and Nectars	Determination of carotenoid, total/individual groups EN 12136; IFUMA 59	Spectrophotometry	I
Fruit Juices and Nectars	Determination of centrifugable pulp EN 12134; IFUMA 60	Centrifugation/% value	I
Fruit Juices and Nectars	Determination of chloride (expressed as sodium chloride) EN 12133 IFUMA 37	Electrochemical titrimetry	III
Fruit Juices and Nectars	Determination of chloride in vegetable juice AOAC 971.27 (Codex general method) ISO 3634	Titration	II
Fruit Juices and Nectars	Determination of essential oils (Scott titration AOAC 968.20 - IFUMA 45 ¹⁹)	(Scott) distillation, titration	I
Fruit Juices and Nectars	Determination of essential oils (in citrus fruit) (volume determination) ¹⁹ ISO 1955	Distillation and direct reading of the volume determination	I
Fruit Juices and Nectars	Determination of fermentability IFUMA 18	Microbiological method	I
Fruit Juices and Nectars	Determination of formol number EN 1133 IFUMA 30	Potentiometric titration	I
Fruit Juices and Nectars	Determination of free amino acids EN 12742 IFUMA 57	Liquid Chromatography	II
Fruit Juices and Nectars	Determination of fumaric acid IFUMA 72	HPLC	II
Fruit Juices and Nectars	Determination of glucose fructose	HPLC	II

	and saccharose EN 12630 IFUMA 67 NMKL 148		
Fruit Juices and Nectars	Determination of gluconic acid IFUMA 76	Enzymatic determination	II
Fruit Juices and Nectars	Determination of glycerol IFUMA 77	Enzymatic determination	II
Fruit Juices and Nectars	Determination of hesperidin and naringin EN 12148 IFUMA 58	HPLC	II
Fruit Juices and Nectars	Determination of hydroxymethylfurfural IFUMA 69	HPLC	II
Fruit Juices and Nectars	Determination of hydroxymethylfurfural ISO 7466	Spectrometry	III
Fruit Juices and Nectars	Determination of isocitric acid-D IFUMA 54	Enzymatic determination	II
Fruit Juices and Nectars	Determination of Lactic acid- D and L EN 12631 IFUMA 53	Enzymatic determination	II
Fruit Juices and Nectars	Determination of L-malic/total malic acid ratio in apple juice AOAC 993.05	Enzymatic determination and HPLC	II
Fruit Juices and Nectars	Determination of naringin and neohesperidin in orange juice AOAC 999.05	HPLC	III
Fruit Juices and Nectars	Determination of pH-value NMKL 179 EN 1132 IFUMA 11 ISO 1842	Potentiometry	II IV
Fruit Juices and Nectars	Determination of phosphorus/phosphate EN 1136 IFUMA No 50	Photometric determination	II
Fruit Juices and Nectars	Determination of proline by photometry – non- specific determination EN 1141 IFUMA 49	Photometry	I
Fruit Juices and Nectars	Determination of relative density EN 1131 (1993); IFUMA 01 & IFU Method No General sheet (1971)	Pycnometry	II
Fruit Juices and Nectars	Determination of Relative density IFUMA 01A	Densitometry	III
Fruit Juices and Nectars	Determination of sodium, potassium, calcium, magnesium in fruit juices EN 1134 IFUMA 33	Atomic Absorption Spectroscopy	II
Fruit Juices and Nectars	Determination of sorbitol-D IFUMA62	Enzymatic determination	II

Fruit Juices and Nectars	Determination of stable carbon isotope ratio in the pulp of fruit juices ENV 13070 Analytica Chimica Acta 340 (1997)	Stable isotope mass spectrometry	II
Fruit Juices and Nectars	Determination of stable carbon isotope ratio of sugars from fruit juices ENV 12140 Analytica Chimica Acta.271 (1993)	Stable isotope mass spectrometry	II
Fruit Juices and Nectars	Determination of stable hydrogen isotope ratio of water from fruit juices ENV 12142	Stable isotope mass spectrometry	II
Fruit Juices and Nectars	Determination of stable oxygen isotope ratio in fruit juice water ENV 12141	Stable isotope mass spectrometry	II
Fruit Juices and Nectars	Detection of starch AOAC 925.38 IFUMA 73	Colorimetric	I
Fruit Juices and Nectars	Determination of sugar beet derived syrups in frozen concentrated orange juice $\delta^{18}\text{O}$ Measurements in Water AOAC 992.09	Oxygen isotope ratio analysis	I
Fruit Juices and Nectars	Determination of titrable acids, total EN 12147 IFUMA 03 ISO 750	Titrimetry	I
Fruit Juices and Nectars	Determination of total dry matter (vacuum- oven drying at 70°C) ¹⁹ EN 12145 IFUMA 61	Gravimetric determination	I
Fruit Juices and Nectars	Determination of total solids (Microwave oven drying) ¹⁹ AOAC 985.26	Gravimetric determination	I
Fruit Juices and Nectars	Determination of Vitamin C (dehydro-ascorbic acid and ascorbic acid) AOAC 967.22	Microfluorometry	III

Milk and Milk Products

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
Milk products	Iron	NMKL 139 AOAC 999.11 (Codex general method)	Atomic absorption spectrophotometry	II
Milk products	Iron	NMKL 161 / AOAC 999.10	Atomic absorption spectrophotometry	III
Milk products	Iron	AOAC 984.27	Inductively Coupled Plasma optical emission spectrophotometry	III
Milk products	Iron	ISO 6732 IDF 103	Photometry (bathophenanthroline)	IV
Milk and Milk Products	Melamine	ISO/TS 15495 IDF/RM 230	LC-MS/MS	IV
Milk products (products not completely soluble in ammonia)	Milk fat	ISO 8262-3 IDF 124-3	Gravimetry (Weibull-Berntrop)	I
Blend of evaporated skimmed milk and vegetable fat	Total fat	ISO 1737 IDF 13	Gravimetry (Röse-Gottlieb)	I
Blend of evaporated skimmed milk and vegetable fat	Milk solids-not-fat ¹⁷ (MSNF)	ISO 6731 IDF 21 and ISO 1737 IDF 13	Calculation from total solids content and fat content Gravimetry (Röse-Gottlieb)	I
Blend of evaporated skimmed milk and vegetable fat	Milk protein in MSNF ²⁰	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	IV
Blend of evaporated skimmed milk and vegetable fat	Milk protein in MSNF ²¹	AOAC 991/20	Titrimetry (Kjeldahl)	IV
Reduced fat blend of evaporated skimmed milk and vegetable fat	Total fat	ISO 1737 IDF 13	Gravimetry (Röse-Gottlieb)	I
Reduced fat blend of evaporated skimmed milk and vegetable fat	Milk solids-not-fat (MSNF)	ISO 6731 IDF 21 and ISO 1737 IDF 13	Calculation from total solids content and fat content Gravimetry (Röse-Gottlieb)	I
Reduced fat blend of evaporated skimmed milk and vegetable fat	Milk protein in MSNF ¹⁷	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	IV
Reduced fat blend of evaporated skimmed milk and vegetable fat	Milk protein in MSNF ¹⁷	AOAC 991.20	Titrimetry (Kjeldahl)	IV
Blend of skimmed milk and vegetable fat in powdered form	Total fat	ISO 1736 IDF 9	Gravimetry (Röse-Gottlieb)	I
Blend of skimmed milk and vegetable fat in powdered form	Water ²²	ISO 5537 IDF 26	Gravimetry, drying at 87 °C	I
Blend of skimmed milk and vegetable fat in powdered form	Milk protein in MSNF ¹⁷	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	IV
Reduced fat blend of skimmed milk powder and vegetable fat in powdered Form	Total fat	ISO 1736 IDF 9	Gravimetry (Röse-Gottlieb)	I
Reduced fat blend of skimmed milk powder and vegetable fat in	Water ¹⁸	ISO 5537 IDF 26	Gravimetry, drying at 87 °C	I

powdered form				
Reduced fat blend of skimmed milk powder and vegetable fat in powdered form	Milk protein in MSNF ¹⁷	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	IV
Reduced fat blend of skimmed milk powder and vegetable fat in powdered form	Milk protein in MSNF ¹⁷	AOAC 991.20	Titrimetry (Kjeldahl)	IV
Blend of sweetened condensed skimmed milk and vegetable fat	Total fat	ISO 1737 IDF 13	Gravimetry (Röse-Gottlieb)	I
Blend of sweetened condensed skimmed milk and vegetable fat	Sucrose	ISO 2911 IDF 35	Polarimetry	IV
Blend of sweetened condensed skimmed milk and vegetable fat	Milk solids-not-fat (MSNF)	ISO 6734 IDF 15	Calculation from total solids content, fat content and sugar content	IV
Blend of sweetened condensed skimmed milk and vegetable fat	Milk protein in MSNF ¹⁷	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	IV
Blend of sweetened condensed skimmed milk and vegetable fat	Milk protein in MSNF ¹⁷	AOAC 991.20	Titrimetry (Kjeldahl)	IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Total fat	ISO 1737 IDF 13	Gravimetry (Röse-Gottlieb)	I
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Milk solids-not-fat (MSNF)	ISO 6734 IDF 15	Calculation from total solids content and sugar content	IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Milk protein in MSNF ¹⁷	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	IV
Reduced fat blend of sweetened condensed skimmed milk and vegetable fat	Milk protein MSNF ¹⁷	AOAC 991.20	Titrimetry (Kjeldahl)	IV
Butter	Copper	ISO 5738 IDF 76AOAC 960.40	Photometry, diethyldithiocarbamate	II
Butter	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Butter	Milk solids-not-fat (MSNF)	ISO 3727-2 IDF 80-2	Gravimetry	I
Butter	Milkfat	ISO 17189 IDF 194	Gravimetry Direct determination of fat using solvent extraction	I
Butter	Milk fat purity	ISO 17678 IDF 202	Calculation from determination of triglycerides by gas chromatography	I
Butter	Salt	ISO 1738 IDF 12/ AOAC 960.29	Titrimetry (Mohr: determination of chloride, expressed as sodium chloride)	III
Butter	Salt	ISO 15648 IDF 179	Potentiometry (determination of chloride, expressed as sodium chloride)	II

Butter	Vegetable fat (sterols)	ISO 12078 IDF 159	Gas chromatography	II
Butter	Vegetable fat (sterols)	ISO 18252 IDF 200	Gas chromatography	III
Butter	Water ¹⁸	ISO 37271 IDF 80	Gravimetry	I
Cheese	Citric acid	ISO/TS 2963 IDF/RM 34	Enzymatic method	IV
Cheese	Citric acid	AOAC 976.15	Photometry	II
Cheese	Milkfat	ISO 1735 IDF 5	Gravimetry (Schmid-Bondzynski- Ratzlaff)	I
Cheese	Moisture	ISO 5534 IDF 4	Gravimetry, drying at 102 °C	I
Cheese (and cheese rind)	Natamycin	ISO 9233-1 IDF 140-1	Molecular absorption spectrophotometry	III
		ISO 9233-2 IDF 140-2	HPLC	II
Cheese	Propionic acid	ISO/TS 19046-1 IDF/RM 233-1	Gas Chromatography - FID	IV
Cheese	Propionic acid	ISO/TS 19046-2 IDF/RM 233-2	Ion exchange chromatography-UV	IV
Cheese	Sodium chloride	ISO 5943 IDF 88	Potentiometry (determination of chloride, expressed as sodium chloride)	II
Cheeses, individual	Dry matter (Total solids)	ISO 5534 IDF 4	Gravimetry, drying at 102°C	I
Cheeses, individual	Milk fat in dry matter	ISO 1735 IDF 5	Gravimetry (Schmid-Bondzynski- Ratzlaff)	I
Cheeses, individual	Dry matter (Total solids)	ISO 5534 IDF 4	Gravimetry, drying at 102°C	I
Cheeses in brine	Milk fat in dry matter (FDM)	ISO 1735 IDF 5	Gravimetry (Schmid-Bondzynski- Ratzlaff)	I
Cottage cheese	Fat-free dry matter	ISO 5534 IDF 4 and ISO 1735 IDF 5	Calculation from dry matter content and fat content	I
			Gravimetry, drying at 102 °C	
			Gravimetry (Schmid-Bondzynski- Ratzlaff)	
Cottage cheese	Milk fat	ISO 1735 IDF 5	Gravimetry (Schmid-Bondzynski- Ratzlaff) (for samples containing lactose up to 5%)	I
		ISO 8262-3 IDF 124-3	Gravimetry (Weibull-Berntrop) (for samples containing lactose over 5%)	I
Cottage cheese	Milk fat in dry matter	ISO 8262-3 IDF 124-3	Gravimetry (Weibull-Berntrop)	I

Cheese, Unripened Fresh Cheese	Including Milk Protein	ISO 8968-1 IDF 20-1	Titrimetry, Kjeldahl	I
Cream and Prepared Creams	Milk protein	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Cream	Milkfat	ISO 2450 IDF 16	Gravimetry (Röse-Gottlieb)	I
Cream	Solids	ISO 6731 IDF 21	Gravimetry (drying at 102°C)	I
Creams Lowered in Content	Milkfat	ISO 2450 IDF 16 / AOAC 995.19	Gravimetry (Röse-Gottlieb)	I
Creams, Whipped and Fermented Creams	Milk solids-not-fat (MSNF) ¹⁷	ISO 3727-2 IDF 80-2 AOAC 920.116	Gravimetry	I
Cream cheese	Dry matter	ISO 5534 IDF 4	Gravimetry drying at 102 °C (forced air oven)	I
Cream cheese	Moisture on fat free basis	ISO 5534 IDF 4 ISO 1735 IDF 5	Calculation from fat content and moisture content Gravimetry drying at 102°C (forced air oven) Gravimetry (Schmid-Bondzynski- Ratzlaff)	I
Dairy fat spreads	Milk fat purity	ISO 17678 IDF 202	Calculation from determination of triglycerides by gas chromatography	I
Dairy fat spreads	Total fat	ISO 17189 IDF 194	Gravimetry Direct determination of fat using solvent extraction	I
Dairy fat spreads	Vegetable fat (sterols)	ISO 12078 IDF 159	Gas chromatography	II
Dairy fat spreads	Vegetable fat (sterols)	ISO 18252 IDF 200	Gas chromatography	III
Dairy permeate powders	Milkfat	ISO 1736 IDF 9	Gravimetry (Röse-Gottlieb)	I
Dairy permeate powders	Nitrogen	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Dairy permeate powders	Moisture ²³	ISO 5537 IDF 2	Gravimetry (drying at 87°C)	I
Dairy permeate powders	Ash	NMKL 173	Gravimetry (ashing at 550°C)	IV
Edible casein products	Acids, free	ISO 5547 IDF 91	Titrimetry (aqueous extract)	IV
Edible casein products	Ash (including P ₂ O ₅)	ISO 5545 IDF 90 or ²⁴ ISO 5544 IDF 89 ISO 5544 IDF 89	Gravimetry (ashing at 825 °C)	I
Edible casein products	Copper	AOAC 985.35	Atomic absorption spectrophotometry	II
Edible casein products	Copper	ISO 5738 IDF 76	Colorimetry (diethyldiethiocarbamate)	III

Edible casein products	Lactose	ISO 5548 IDF 106	Photometry (phenol and H ₂ SO ₄)	IV
Edible casein products	Lead	NMKL 139 (Codex general method) AOAC 999.11	Atomic absorption spectrophotometry	II
Edible casein products	Lead	NMKL 161 / AOAC 999.10 AOAC 999.10	Atomic absorption spectrophotometry	III
Edible casein products	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	III
Edible casein products	Lead	AOAC 982.23 (Codex general method)	Anodic stripping voltammetry	III
Edible casein products	Lead	ISO/TS 6733 IDF/RM 133	Spectrophotometry (1,5-diphenylthiocarbazone)	IV
Edible casein products	Milkfat	ISO 5543 IDF 127	Gravimetry (Schmid-Bondzynski- Ratslaff)	I
Edible casein products	pH	ISO 5546 IDF 115	Electrometry	IV
Edible casein products	Milk Protein (total N x 6.38 in dry matter)	ISO 8968-1 IDF 20-1	Titrimetry, Kjeldahl	I
Edible casein products	Sediment (scorched particles)	ISO 5739 IDF 107	Visual comparison with standard disks, after filtration	IV
Edible casein products	Water ¹⁸	ISO 5550 IDF 78	Gravimetry (drying at 102 °C)	I
Emmental	Calcium >= 800mg/100g	ISO 8070 IDF 119	Flame atomic absorption	IV
Emmental	Propionic acid	ISO/TS 19046-1 IDF/RM 233-1	Gas Chromatography - FID	IV
Emmental	Propionic acid	ISO/TS 19046-2 IDF/RM 233-2	Ion exchange chromatography-UV	IV
Evaporated milks	Milk fat	ISO 1737 IDF 13	Gravimetry (Röse-Gottlieb)	I
Evaporated milks	Milk Protein in MSNF ¹⁷	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Evaporated milks	Solids, total	ISO 6731 IDF 21	Gravimetry (drying at 102°C)	I
Fermented milks	Colony-forming units of yeasts and/or moulds	ISO 6611 IDF 94	Colony-count at 25 °C	IV
Fermented milks	Dry matter (total solids)	ISO 13580 IDF 151	Gravimetry (drying at 102 °C)	I
Fermented milks	Total acidity expressed as percentage of lactic acid	ISO/TS 11869 IDF/RM 150	Potentiometry, titration to pH 8.30	I
Fermented milks	<i>Lactobacillus acidophilus</i>	ISO 20128 IDF 192	Colony count at 37 °C	I
Fermented milks - Yoghurt and yoghurt products	<i>Lactobacillus delbrueckii</i> subsp <i>bulgaricus</i> & <i>Streptococcus thermophilus</i>	ISO 7889 IDF 117	Colony count at 37°C	I
Fermented milks - Yoghurt and yoghurt products	<i>Lactobacillus delbrueckii</i> subsp <i>bulgaricus</i> &	ISO 9232 IDF 146	Test for strain identification	I

<i>Streptococcus thermophilus</i>				
Fermented milks	Microorganisms constituting the starter culture	ISO 27205 IDF 149 (Annex A)	Colony count at 25 °C, 30 °C, 37 °C and 45 °C according to the starter organism in question	IV
Fermented milks	Milk fat	ISO 1211 IDF 1 / AOAC 989.05	Gravimetry (Röse-Gottlieb)	I
Fermented milks	Milk Protein	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Milk powders and cream powders	Acidity, titratable	ISO 6091 IDF 86	Titrimetry, titration to pH 8.4	I
Milk powders and cream powders	Milk fat	ISO 1736 IDF 9	Gravimetry (Röse-Gottlieb)	I
Milk powders and cream powders	Milk Protein	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Milk powders and cream powders	Scorched particles	ISO 5739 IDF 107	Visual comparison with standard disks, after filtration	IV
Milk powders and cream powders	Solubility Index	ISO 8156 IDF 129	Centrifugation	I
Milk powders and cream powders	Water ¹⁸	ISO 5537 IDF 26 ²⁵	Gravimetry (drying at 87°C)	I
Milk fat Products	Copper	ISO 5738 IDF 76 AOAC 960.40	Photometry, diethyldithiocarbamate	II
Milk fat products	Fatty acids, free (expressed as oleic acid)	ISO 1740 IDF 6	Titrimetry	I
Milk fat products	Milk fat purity	ISO 17678 IDF 202	Calculation from determination of triglycerides by gas chromatography	I
Milk fat Products	Peroxide value (expressed as meq. of oxygen/kg fat)	ISO 3976 IDF 74	Photometry	I
Milkfat products (anhydrous milkfat)	Peroxide value	AOAC 965.33	Titrimetry	I
Milk fat products	Vegetable fat (sterols)	ISO 12078 IDF 159	Gas chromatography	II
Milk fat products	Vegetable fat (sterols)	ISO 18252 IDF 200	Gas chromatography	III
Milk fat products	Water	ISO 5536 IDF 23	Titrimetry (Karl Fischer)	II
Milk fat products (anhydrous milk fat)	Peroxide value	ISO 3976 IDF 74	Photometry	I
Milkfat products (anhydrous milkfat)	Peroxide value	AOAC 965.33	Titrimetry	I
Mozzarella	Milkfat in dry matter – with high moisture	ISO 1735 IDF 5	Gravimetry after solvent extraction	I
Mozzarella	Milkfat in dry matter – with low moisture	ISO 1735 IDF 5	Gravimetry after solvent extraction	I
Sweetened condensed milk	Milkfat	ISO 1737 IDF 13	Gravimetry (Röse-Gottlieb)	I
Sweetened Condensed Milks	Milk Protein in MNSF ¹⁷	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Sweetened Condensed Milks	Solids	ISO 6734 IDF 15	Gravimetry, drying at 102 °C	I

Whey cheeses by coagulation	Milk fat	ISO 1735 IDF 5	Gravimetry (Schmid-Bondzynski- Ratzlaff)	I
Whey cheeses by coagulation	Milk fat in dry matter	ISO 1735 IDF 5 and ISO 5534 IDF 4	Calculation from fat content and dry matter content Gravimetry (Schmid-Bondzynski-Ratzlaff Gravimetry, drying at 102°C)	I
Whey cheeses by concentration	Milk fat	ISO 1854 IDF 59	Gravimetry (Röse Gottlieb)	I
Whey cheeses by concentration	Milk fat in dry matter	ISO 1854 IDF 59 and ISO 2920 IDF 58	Calculation from fat content and dry matter content Gravimetry (Röse Gottlieb) Gravimetry, drying at 88 C	I
Whey powders	Ash	ISO 5545 IDF 90	Gravimetry (ashing at 825°C)	IV
Whey powders	Copper	AOAC 985.35	Atomic absorption spectrophotometry	II
Whey powders	Copper	ISO 5738 IDF 76	Photometry (diethyldithiocarbamate)	III
Whey Powders	Lactose	ISO 5765-1/2 IDF 79-1/2	Enzymatic method: Part 1 - Glucose moiety or Part 2 - Galactose moiety	II
Whey powders	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Whey powders	Milkfat	ISO 1736 IDF 9	Gravimetry (Röse-Gottlieb)	I
Whey powders	Milk protein (total N x 6.38)	ISO 8968-1 IDF 20-1	Titrimetry (Kjeldahl)	I
Whey powders	Moisture, "Free"	ISO 2920 IDF 58	Gravimetry (drying at 88°C ±2°C)	IV
Whey powders	Water ²⁶	ISO 5537 IDF 26	Gravimetry (drying at 87°C)	I

Natural Mineral Waters

Commodity	Provision	Method	Principle	Type
Natural mineral waters	Calcium	ISO 7980	Atomic absorption spectrophotometry	III
Natural mineral waters	Chloride	<i>Examination of Water Pollution Control. WHO Pergamon Press (1982) Vol. 2, pp. 205-208</i>		II
Natural mineral waters	Chloride	AOAC 973.51	Titrimetry (Mercuric nitrate)	III
Natural mineral waters	Chloride	ISO 9297	Titrimetry	III
Natural mineral waters	Iron, dissolved	ISO 6332	Spectrophotometry	II
Natural mineral waters	Magnesium	ISO 6059	Titrimetry	II
Natural mineral waters	Magnesium	ISO 7980	Atomic absorption spectrophotometry	III
Natural mineral waters	Phenols	ISO 6439	Spectrophotometry	I
Natural mineral waters	Potassium	<i>Examination of Water Pollution Control. WHO Pergamon Press</i>		II

		(1982) Vol.2, pp. 142-145		
Natural mineral waters	Sodium	<i>Examination of Water Pollution Control.</i> WHO Pergamon Press (1982) Vol.2 pp. 148-151		II
Natural mineral waters	Sodium	<i>Examination of Water Pollution Control.</i> WHO Pergamon Press (1982) Vol.2, pp. 151-152		III
Natural mineral waters	Sulphates	ISO 9280	Gravimetry	III
Natural mineral waters	Sulphide	<i>Handb. Spurenanal.</i> 1974		IV

Processed Fruits and Vegetables

Commodity	Provision	Method	Principle	Type
Processed fruits and vegetables	Benzoic acid	NMKL 124	Liquid Chromatography	II
Processed fruits and vegetables	Benzoic acid	NMKL 103; or AOAC 983.16	Gas Chromatography	III
Processed fruits and vegetables	Calcium	AOAC 968.31	Complexometry/ Titrimetry	II
Processed fruits and vegetables	Drained Weight	AOAC 968.30 (Codex General Method)	Sieving Gravimetry	I
Processed fruits and vegetables	Lead	AOAC 972.25 (Codex general method)	AAS (Flame absorption)	III
Processed fruits and vegetables	Packing medium Canned berry fruits (raspberry, strawberry)	AOAC 932.12 ISO 2173	Refractometry	I
Processed fruits and Vegetables (except canned bamboo shoots, pH determined by AOAC 981.12)	pH	ISO 1842	Potentiometry	IV
Processed fruits and vegetables	pH	AOAC 981.12	Potentiometry	III
Processed fruits and vegetables	pH	NMKL 179	Potentiometry	II
Processed fruits and vegetables	Soluble solids	ISO 2173 AOAC 932.12	Refractometry	I
Processed fruits and vegetables	Sorbates	NMKL 103 / AOAC 983.16	Gas Chromatography	III
Processed fruits and vegetables	Sorbates	NMKL 124	Liquid Chromatography	II
Processed fruits and vegetables	Tin	AOAC 980.19 (Codex general method)	AAS	II
Processed fruits and vegetables	Total solids	AOAC 920.151	Gravimetry	I
Aqueous Coconut Products	Total Fats	ISO 1211 IDF 1	Gravimetry (Röse-Gottlieb)	I
Aqueous Coconut Products	Total solids	ISO 6731 IDF 21	Gravimetry	I

Aqueous Coconut Products	Non-fat solids	ISO 1211 IDF 1 ISO 6731 IDF 21	Calculation: Gravimetry (Röse-Gottlieb) Gravimetry	I
Aqueous Coconut Products	Moisture	ISO 6731 IDF 21	Calculation: Gravimetry	I
Canned Apple Sauce	Fill of containers	ISO 90-1 (for metal containers) (Codex general method for processed fruits and vegetables)	Weighing	I
Canned Apple Sauce	Soluble solids	AOAC 932.12 ISO 2173 (Codex general method for processed fruits and vegetables)	Refractometry	I
Canned mangoes	Syrup	AOAC 932.14C	Brix spindle method	I
Canned palmito	Mineral impurities	ISO 762	Gravimetry	I
Canned Stone Fruits	Drained weight	AOAC 968.30 ISO:2173	Gravimetry	I
Canned Stone Fruits	Soluble solids	AOAC 932.14C	Refractometry	I
Canned strawberries	Calcium	AOAC 968.31	Complexometric titrimetry	II
Canned strawberries	Mineral impurities	AOAC 971.33	Gravimetry	I
Certain canned citrus fruits	Calcium	NMKL 153	Atomic Absorption Spectrophotometry	II
Certain canned citrus fruits	Calcium	AOAC 968.31	Complexometry Titrimetry	III
Certain Canned Vegetables (palmito)	Mineral impurities (sand)	AOAC 971.33 ISO 762	Gravimetry	I
Citrus marmalade	Calcium	AOAC 968.31	Complexometric titrimetry	II
Dates	Moisture	AOAC 934.06	Gravimetry (vacuum oven)	I
Desiccated coconut	Total acidity of the extracted oil	ISO 660 or AOCS Cd 3d-63	Titrimetry	I
Desiccated coconut	Ash	AOAC 950.49	Gravimetry	I
Desiccated coconut	Moisture	AOAC 925.40	Gravimetry (loss on drying)	I
Desiccated coconut	Oil content	AOAC 948.22	Gravimetry	I
Dried apricots	Moisture	AOAC 934.06	Gravimetry (vacuum oven)	I
Dried apricots	Sulphur dioxide	AOAC 963.20	Colorimetry	II
Jams (fruit preserves) and jellies	Soluble solids	ISO 2173 AOAC 932.12	Refractometry	I
Mango chutney	Ash insoluble in HCl	ISO 763	Gravimetry	I
Pickled cucumbers	Acidity, total	AOAC 942.15	Titrimetry	I

Pickled cucumbers	Drained weight	AOAC 968.30	Gravimetry	I
Pickled cucumbers	Mineral impurities	AOAC 971.33	Gravimetry	I
Pickled cucumbers	Salt in brine	AOAC 971.27 (Codex general method)	Potentiometry	II
Preserved tomatoes	Calcium	AOAC 968.31	Complexometric titrimetry	III
Preserved tomatoes	Calcium	NMKL 153	Atomic Absorption Spectrophotometry	II
Preserved tomatoes	Minimum Drained Weight	AOAC 968.30	Gravimetry (sieving) note: Use a No. 14 screen instead of '7/16' or No. 8	I
Preserved tomatoes	Mould count	AOAC 965.41	Howard mould count	I
Processed tomato concentrates	Lactic acid	EN 2631	Enzymatic determination	II
Processed tomato concentrates	Mineral impurities (sand)	AOAC 971.33	Gravimetry	IV
Processed tomato concentrates	Mould count	AOAC 965.41	Howard mould count	I
Processed tomato concentrates	Natural tomato soluble solids	AOAC 970.59	Refractometry	I
Processed tomato concentrates	Sodium chloride	AOAC 971.27 (Codex general method)	Potentiometry	II
Processed tomato concentrates	Tomato soluble solids	AOAC 970.59	Refractometry	I
Raisins	Moisture	AOAC 972.20	Electrical conductance	I
Raisins	Sorbitol	AOAC 973.28	Gas chromatography	II
Raisins	Sulphur dioxide	AOAC 963.20	Colorimetry	II
Table olives	Drained weight	AOAC 968.30 (Codex general method for processed fruits and vegetables)	Sieving Gravimetry	I
Table olives	Fill of containers	ISO 90-1 (for metal containers) (Codex general method for processed fruits and vegetables)	Weighing	I
Table olives	pH of brine	NMKL 179 (Codex general method for processed fruits and vegetables)	Potentiometry	II
		AOAC 981.12 (Codex general method for processed fruits and vegetables)		III
		ISO 1842		IV
Table olives	Salt in brine	AOAC 971.27 NMKL 178 (Codex general method)	Potentiometry	II
Table olives	Lead	AOAC 999.11 NMKL 139 (Codex general method)	AAS (Flame absorption)	II

Table olives	Tin	NMKL 190 EN 15764	AAS	II
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Processed Meat and Poultry Products and Soups and Broths

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
Meat Products	Nitrates and/or Nitrites	EN 12014-3	Spectrometric determination of nitrate and nitrite content of meat products after enzymatic reduction of nitrate to nitrite	III
Meat Products	Nitrates and/or Nitrites	EN 12014-4 NMKL 165	Ion-exchange chromatographic method	III
Processed meat and poultry products	Fat	ISO 1443	Gravimetry	I
Processed meat and poultry products	Lead	AOAC 934.07	Colorimetry (dithizone)	II
Processed meat and poultry products	Nitrates	ISO 3091	Colorimetry (cadmium reduction)	II
Processed meat and poultry products	Nitrites	ISO 2918	Colorimetry	IV
Processed meat and poultry products	Tin	AOAC 985.16 (Codex general method)	Atomic Absorption Spectrophotometry	II
Processed meat and poultry products	Nitrogen/protein	ISO 937	Titrimetry	II
Bouillons and Consommés (soups and broths)	Amino nitrogen	AIIBP Method No 2/7	Volumetry (modified Van Slyke)	II
Bouillons and Consommés (soups and broths)	Creatinine	AIIBP Method No 2/5	HPLC	II
Bouillons and Consommés (soups and broths)	Nitrogen, total	AOAC 928.08	Kjeldahl	II
Bouillons and Consommés (soups and broths)	Sodium chloride	AIIBP Method No 2/4	Potentiometric titration (chloride expressed as sodium chloride)	II
Canned corned beef	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Canned corned beef	Nitrites, potassium and/or sodium salt	AOAC 973.31 (Codex general method)	Colorimetry	II
Canned corned beef	Nitrites, potassium and/or sodium salt	ISO 2918	Colorimetry	IV
Canned corned beef	Tin (Products in tins and other containers)	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured chopped meat	Fat	ISO 1443	Gravimetry (extraction)	I
Cooked cured chopped meat	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured chopped meat	Nitrites	AOAC 973.31 (Codex general method)	Colorimetry	II

Cooked cured chopped meat	Nitrites	ISO 2918	Colorimetry	IV
Cooked cured chopped meat	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured ham	Fat	ISO 1443	Gravimetry (extraction)	I
Cooked cured ham	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured ham	Nitrites	AOAC 973.31 (Codex general method)	Colorimetry	II
Cooked cured ham	Nitrites	ISO 2918	Colorimetry	IV
Cooked cured ham	Protein (conversion factor 6.25)	ISO 937	Titrimetry, Kjeldahl digestion	II
Cooked cured ham	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured pork shoulder	Fat	ISO 1443	Gravimetry (extraction)	I
Cooked cured pork shoulder	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Cooked cured pork shoulder	Nitrites	AOAC 973.31 (Codex general method)	Colorimetry	II
Cooked cured pork shoulder	Nitrites	ISO 2918	Colorimetry	IV
Cooked cured pork shoulder	Protein	ISO 937	Titrimetry, Kjeldahl digestion	II
Cooked cured pork shoulder	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II
Luncheon meat	Fat	ISO 1443	Gravimetry (extraction)	I
Luncheon meat	Lead	AOAC 972.25 (Codex general method)	Atomic absorption spectrophotometry	II
Luncheon meat	Nitrites, potassium and/or sodium salt	AOAC 973.31 (Codex general method)	Colorimetry	II
Luncheon meat	Nitrites, potassium and/or sodium salt	ISO 2918	Colorimetry	IV
Luncheon meat	Tin	AOAC 985.16 (Codex general method)	Atomic absorption spectrophotometry	II

Quick Frozen Fruits and Vegetable

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
Quick frozen fruits and vegetables(non-glazed)	Net weight	AOAC 963.26	Weighing	I
Quick frozen fruits and vegetables: Berries, leek and carrot	Mineral impurities	AOAC 971.33	Gravimetry	I
Quick frozen fruits and vegetables: Berries, Whole kernel corn and Corn-	Soluble solids, total	AOAC 932.12	Refractometry	I

on-the-cob

Quick frozen fruits and vegetables: Peaches and berries	Drained fruit/drained berries	AOAC 953.15	Draining	I
Quick frozen French fried potatoes	Moisture	AOAC 984.25	Gravimetry (convection oven)	I

Spices and Culinary Herbs

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
Cumin	Moisture	ISO 939	Distillation	I
Cumin	Total ash	ISO 928	Gravimetry	I
Cumin	Acid-insoluble ash	ISO 930	Gravimetry	I
Cumin	Volatile oils	ISO 6571	Distillation / Volumetric	I
Cumin	Extraneous vegetable matter	ISO 927	Visual examination/ Gravimetry	I
Cumin	Foreign matter	ISO 927	Visual examination/Gravimetry	I
Cumin	Insect damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual examination	IV
Cumin	Mammalian excreta	Macroanalytical procedure manual USFDA technical bulletin. V.39 B(for whole)	Visual examination	IV
Cumin	Mammalian excreta	AOAC 993.27 (for ground)	Enzymatic Detection method	IV
Cumin	Mould damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual examination	IV
Thyme	Moisture	ISO 939	Distillation	I
Thyme	Total ash	ISO 928	Gravimetry	I
Thyme	Acid-insoluble ash	ISO 930	Gravimetry	I
Thyme	Volatile oils	ISO 6571	Distillation/Volumetric	I
Thyme	Extraneous vegetable matter	ISO 927	Visual examination/Gravimetry	I
Thyme	Foreign matter	ISO 927	Visual examination/Gravimetry	I

Thyme	Insect damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual examination	IV
Thyme	Mammalian excreta	Macroanalytical procedure manual USFDA technical bulletin V.39 B (for whole)	Visual examination	IV
Thyme	Mammalian excreta	AOAC 993.27 (for ground)	Enzymatic detection method	IV
Thyme	Mould damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual examination	IV
Black and white pepper	Bulk density	ISO 959-1 Annex B (black) ISO 959-2 Annex A (white)	Gravimetry	IV
Black pepper	Light berries	ISO 959-1 Annex A (black)	Flotation	IV
Black, white and green pepper	Extraneous vegetable matter	ISO 927	Visual examination / Gravimetry	I
Black, white and green pepper	Foreign matter	ISO 927	Visual examination / Gravimetry	I
Black, white and green pepper	Black berries	Physical separation and weighing ISO 959-2	Visual examination	IV
Black, white and green pepper	Broken berries	Physical separation and weighing ISO 959-2	Visual examination	IV
Black, white and green pepper	Mouldy berries	Macroanalytical procedure manual USFDA technical bulletin. V.39 B	Visual examination	IV
Black, white and green pepper	Insect damage	Macroanalytical procedure manual USFDA technical bulletin. V.39 B	Visual examination	IV
Black, white and green pepper	Pinheads or broken berries	Physical separation and weighing ISO 959-1	Visual examination	IV
Black, white and green pepper	Mammalian excreta	Macroanalytical procedure manual USFDA technical bulletin. V.39 B (For Pepper Whole)	Visual examination(For whole pepper)	IV
Black, white and green pepper	Mammalian excreta	AOAC 993.27 (for ground pepper)	Enzymatic Detection method (For ground pepper)	I
Black, white and green pepper	Moisture content	ISO 939	Distillation	I
Black, white and green pepper	Total ash	ISO 928	Gravimetry	I
Black, white and green pepper	Non-volatile ether extract	ISO 1108	Soxhlet extraction	I

Black, white and green pepper	Volatile oils	ISO 6571	Distillation	I
Black, white and green pepper	Piperine content	ISO 5564	Spectrophotometry	I
Black, white and green pepper	Acid-Insoluble ash	ISO 930	Gravimetry	I
Black, white and green pepper	Crude Fibre	ISO 5498	Gravimetry	I

Sugars and Honey

Commodity	Provision	Method	Principle	Type
Honey	Acidity	MAFF Validated Method V19. <i>J. Assoc. Public Analysts</i> (1992) 28 (4) 171-175	Titrimetry	I
Honey	Diastase activity	IHC Method for Determination of Diastase activity with Phadebas, 2009 except that the incubation time should be increased from 15 to 30 minutes		IV
Honey	Moisture	AOAC 969.38B or MAFF Validated Method V21	Refractometry	I
Honey	Sample preparation	AOAC 920.180	-	-
Honey	Solids, water-insoluble	MAFF Validated Method V22 <i>J. Assoc. Public Analysts</i> (1992) 28(4) 189-193	Gravimetry	I
Honey	Sugars added (for sugar profile)	AOAC 998.18	Carbon isotope ratio mass spectrometry	I
Honey	Sugars added: detection of corn and cane sugar products	AOAC 978.17	Carbon isotope ratio mass spectrometry	I
Sugars (dextrose anhydrous and dextrose monohydrate)	D-Glucose	ISO 5377	Titrimetry	I
Sugars (dextrose anhydrous and dextrose monohydrate)	Solids, total	ISO 1741	Gravimetry (vacuum oven)	I
Sugars (dextrose anhydrous and dextrose monohydrate, dried glucose syrup, glucose syrup, powdered dextrose, lactose)	Sulphated ash	ISO 5809	Single sulphonation	I
Sugars (dextrose anhydrous and dextrose monohydrate)	Sulphur dioxide	ISO 5379	Acidimetry and nephelometry	IV
Sugars (fructose)	pH	ICUMSA GS 1/2/3/4/7/8-23	Potentiometry	I
Sugars (fructose)	Conductivity ash	ICUMSA GS 2/3-17	Conductimetry	I
Sugars (fructose)	D-Fructose	ISO 10504	Liquid chromatography (refractive index detection)	II
Sugars (fructose)	D-Glucose	ISO 10504	Liquid chromatography (refractive index	II

			detection)	
Sugars (fructose)	Loss on drying	ISO 1742	Gravimetry	I
Sugars (fructose)	Sulphur dioxide	ISO 5379	Acidimetry and nephelometry	IV
Sugars (glucose syrup and dried glucose syrup)	Reducing sugar	ISO 5377	Titrimetry	I
Sugars (glucose syrup and dried glucose syrup)	Solids, total	ISO 1742	Gravimetry (vacuum oven)	I
Sugars (glucose syrup and dried glucose syrup)	Sulphur dioxide	ISO 5379	Acidimetry and nephelometry	IV
Sugars (lactose)	Lactose, anhydrous	ICUMSA GS 4/3-3	Titrimetry	II
Sugars (lactose)	Loss on drying	USP General Chapter 731	Gravimetry (Drying at 120°C for 16 h)	I
Sugars (lactose)	pH	ICUMSA GS 1/2/3/4/7/8-23	Potentiometry	I
Sugars (plantation and mill white sugar)	Colour	ICUMSA GS9/1/2/3-8	Photometry	I
Sugars (plantation or mill white sugar)	Conductivity ash	ICUMSA GS 1/3/4/7/8-13	Conductimetry	I
Sugars (plantation or mill white sugar)	Invert sugar	ICUMSA GS 1/3/7-3	Titrimetry (Lane & Eynon)	I
Sugars (plantation or mill white sugar)	Loss on drying	ICUMSA GS 2/1/3-15	Gravimetry	I
Sugars (plantation or mill white sugar)	Polarization	ICUMSA GS 1/2/3-1	Polarimetry	II
Sugars (plantation or mill white sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 NMKL 135 EN 1988-2	Enzymatic method	II
Sugars (powdered sugar and powdered dextrose)	Sulphur dioxide	ICUMSA GS 2/3-35 NMKL 135 EN 1988-2	Enzymatic method	II
Sugars (powdered sugar)	Colour	ICUMSA GS 2/3-9	Photometry	I
Sugars (powdered sugar)	Conductivity ash	ICUMSA GS 2/3-17	Conductimetry	I
Sugars (powdered sugar)	Invert sugar	ICUMSA GS 2/3-5 after filtration if necessary to remove any anticaking agents	Titrimetry	I
Sugars (powdered sugar)	Loss on drying	ICUMSA GS 2/1/3-15	Gravimetry	I
Sugars (powdered sugar)	Polarization	ICUMSA GS 2/3-1 after filtration if necessary to remove any anticaking agents	Polarimetry	II
Sugars (raw cane sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 NMKL 135 EN 1988-2	Enzymatic method	II
Sugars (soft white sugar and soft brown sugar)	Conductivity ash	ICUMSA GS 1/3/4/7/8-13	Conductimetry	I
Sugars (soft white sugar and soft brown sugar)	Invert sugar	ICUMSA GS 4/3-3 (applicable at levels >10% m/m)	Titrimetry (Lane & Eynon)	I

Sugars (soft white sugar and soft brown sugar)	Invert sugar	ICUMSA GS 1/3/7-3 (applicable at levels <10% m/m)	Titrimetry (Lane & Eynon)	I
Sugars (soft white sugar and soft brown sugar)	Loss on drying	ICUMSA GS 2/1/3-15	Gravimetry	I
Sugars (soft white sugar and soft brown sugar)	Sucrose plus invert sugar	ICUMSA GS 4/3-7	Titrimetry	I
Sugars (soft brown sugar)	Sulphated ash	ICUMSA GS 1/3/4/7/8-11	Gravimetry	I
Sugars (soft white sugar and soft brown sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 NMKL 135 EN 1988-2	Enzymatic method	II
Sugars (soft white sugar)	Colour	ICUMSA GS 2/3-9	Photometry	I
Sugars (white sugar)	Conductivity ash	ICUMSA GS 2/3-17	Conductimetry	I
Sugars (white sugar)	Invert sugar	ICUMSA GS 2/3-5	Titrimetry	I
Sugars (white sugar)	Loss on drying	ICUMSA GS 2/1/3-15	Gravimetry	I
Sugars (white sugar)	Polarization	ICUMSA GS 2/3-1	Polarimetry	II
Sugars (white sugar)	Sulphur dioxide	ICUMSA GS 2/3-35 NMKL 135 EN 1988-2	Enzymatic method	II

Miscellaneous Products

Commodity	Provision	Method	Principle	Type
Chili sauce	pH	NMKL 179 (Codex general method)	Potentiometry	II
Chili sauce	pH	AOAC 981.12 (Codex general method)	Potentiometry	III
Date Paste	Moisture	AOAC 934.06	Gravimetry	I
Date Paste	Mineral impurities	ISO 762	Gravimetry	I
Date Paste	Ash	AOAC 940.26	Gravimetry	I
Date Paste	Acid Soluble Ash	AOAC 900.02D	Gravimetry, Calculation	I
Edible cassava flour	Fibre, crude	ISO 5498 (B.5 separation)	Gravimetry	I
Edible cassava flour	Granularity	ISO 2591-1	Sieving	I
Edible cassava flour	Moisture	ISO 712	Gravimetry	I
Fermented Soybean Paste	Total Nitrogen	AOAC 984.13	Kjeldahl	I
Fermented Soybean Paste	Amino Nitrogen	AOAC 920.154 on the conditions specified in the standard ²⁷	Volumetry	I
Fermented Soybean Paste	Moisture	AOAC 934.01 (≤70°C, ≤ 50 mm Hg)	Gravimetry	I
Food grade salt	Arsenic	EuSalt/AS 015	ICP-OES	IV

Food grade salt	Cadmium	EuSalt/AS 015	ICP-OES	III
Food grade salt	Cadmium	EuSalt/AS 014	Atomic absorption spectrophotometry	IV
Food grade salt	Calcium and magnesium	ISO 2482	Complexometric titrimetry	II
Food grade salt	Calcium and magnesium	EuSalt/AS 009	Flame atomic absorption spectrometry	III
Food grade salt	Calcium and magnesium	EuSalt/AS 015	ICP-OES	III
Food grade salt	Copper	EuSalt/AS 015	ICP-OES	III
Food grade salt	Insoluble matter	ISO 2479	Gravimetry	II
Food grade salt	Iodine	EuSalt/AS 002	Titrimetry using sodium thiosulphate	II
Food grade salt	Iodine	EuSalt/AS 019	ICP-OES	III
Food grade salt	Iodine	WHO/UNICEF/ICCIDD method ²⁸ Only applicable to a product which has been fortified with iodate	Titrimetry using sodium thiosulphate	IV
Food grade salt	Lead	EuSalt/AS 015	ICP-OES	III
Food grade salt	Lead	EuSalt/AS 013	Atomic absorption spectrophotometry	IV
Food grade salt	Loss on drying	ISO 2483	Gravimetry (drying at 110°C)	I
Food grade salt	Mercury	EuSalt/AS 012	Cold vapour atomic absorption spectrophotometry	IV
Food grade salt	Potassium	EuSalt/AS 008	Flame atomic absorption spectrophotometry	II
Food grade salt	Potassium	EuSalt/AS 015	ICP-OES	III
Food grade salt	Sulphate	ISO 2480	Gravimetry	II
Food grade salt	Sulphate	EuSalt/AS 015	ICP-OES	III
Food grade salt	Sulphate	EuSalt/AS 018	Ion chromatography	III
Foul medames	Sample Preparation	AOAC 945.68	-	-
Foul medames	Salt content	AOAC 971.27 NMKL 178	Potentiometry	II
Foul medames	Drained weight	AOAC 968.30	Sieving	I
Gari	Ash	ISO 2171	Gravimetry	I
Gari	Fibre, crude	ISO 5498 (B.5 separation)	Gravimetry	I
Gari	Granularity	ISO 2591-1	Sieving	I
Gari	Moisture	ICC 109/1 ISO 712	Gravimetry	I
Ginseng Products	Moisture	AOAC 925.45 B (Dried ginseng) Quantity of sample: 2 g	Gravimetry	I

Ginseng Products	Moisture	AOAC 925.45 D (Ginseng extract) Quantity of sample: 1.5 g (mixing with 20 g of sea sand)	Gravimetry	I
Ginseng Products	Solids	AOAC 925.45 B (Dried ginseng) calculated by subtracting the content of water from 100% Quantity of sample: 2 g	Calculation	I
Ginseng Products	Ash	AOAC 923.03 AACC Intl 08-01.01	Gravimetry	I
Gochujang	Capsaicin	AOAC 995.03	HPLC	II
Gochujang	Crude protein	AOAC 984.13 (Nitrogen conversion factor: 6.25)	Kjeldahl	I
Gochujang	Moisture	AOAC 934.01 ($\leq 70^{\circ}\text{C}$, ≤ 50 mm Hg)	Gravimetry	I
Guideline level for acrylonitrile	Acrylonitrile	AOAC 985.13	Gas chromatography	II
Guideline levels for mercury in fish	Methyl mercury	AOAC 988.11	Atomic absorption spectrophotometry	II
Guideline levels for vinyl chloride monomer	Vinyl chloride monomer	ISO 6401	Gas chromatography	II
Guideline levels for vinyl chloride monomer	Vinyl chloride monomer	Commission Directive 81/432/EEC O.J. No. L.167, p. 6, 24.6.81	Gas chromatography ("head-space")	III
Guidelines for nutrition labelling	Polyunsaturated fatty acids	AOCS Ce 1h-05 ²⁹	Gas liquid chromatography	II
Guidelines for nutrition labelling	Saturated fat	AOAC 996.06; or AOCS Ce 1h-05	Gas liquid chromatography	II
Guidelines for nutrition labelling	Saturated fatty acids	AOCS Ce 1h-05	Gas liquid chromatography	II
Harissa	Acidity	ISO 750	Titrimetry	I
Harissa	Acid insoluble ash	ISO 763	Gravimetry	I
Harissa	Dry extract – soluble solids	ISO 2173	Refractometry	I
Halwa Tehenia	Acidity	AOAC 924.53, AOAC 942.15	Titrimetry	IV
Halwa tehena	Ash	AOAC 900.02 AACC Intl 8.14.01	Gravimetry	I
Halwa tehena	Fat	AOAC 963.15	Gravimetry	I
Halwa tehena	Moisture	AOAC 925.45 AACC Intl 44.60.01	Gravimetry	I
Halwa Tehenia	Sugars	ISI 28-1e ³⁰	Titrimetry	IV
Humus with tehena	Salt content	AOAC 971.27 NMKL 178	Potentiometry	II
Humus with tehena	Total acidity	AOAC 925.53	Titrimetry	I

Non-fermented soybean products	Moisture content	AOAC 925.09 AACCI 44-40.01	Gravimetry (vacuum oven)	I
Non-fermented soybean products	Protein content	NMKL 6 or AACCI 46-16.01 or AOAC 988.05 or AOCS Bc 4- 91 or AOCS Ba 4d-90 (Nitrogen factor 5.71)	Titrimetry, Kjeldahl digestion	I
Sago Flour	Moisture Content	ISO 712	Gravimetry	I
Sago Flour	Ash (inorganic extraneous matter)	ISO 2171	Gravimetry	I
Sago Flour	Acidity	AOAC 939.05	Titrimetry	I
Sago Flour	Crude Fibre	ISO 6541	Gravimetry	I
Sago Flour	Starch	AOAC 920.44	Gravimetry	I
Tehena	Moisture Content	ISO 934	Gravimetry	I
Tehena	Protein content	ISO 1871	Titrimetry, Kjeldahl	I
Tehena	Total Ash	ISO 6884	Gravimetry	I
Tehena	Acid Insoluble Ash	ISO 735	Gravimetry	I
Tehena	Total Acidity	ISO 729	Titrimetry	I
Tehena	Sesame oil	AOCS Cb 2-40 (Baudouin Test)	Colour reaction	I
Tempe	Moisture content	AOAC 925.09 AACCI 44-40.01	Gravimetry (vacuum oven)	I
Tempe	Protein content	NMKL 6 or AOAC 988.05 or AACCI 46-16.01 (Nitrogen factor 5.71)	Titrimetry, Kjeldahl digestion	I
Tempe	Lipid Content	AOAC 963.15	Gravimetry (Soxhlet Extraction)	I
Tempe	Crude fibre	ISO 5498 or AOAC 962.09 or AACCI 32-10.01	Gravimetry	I
Laver products	Moisture Content	AOAC 925.45B	Gravimetry, drying at atmospheric pressure	IV
Unrefined shea butter	Moisture content	ISO 662	Gravimetry	I
Unrefined shea butter	Free fatty acid content acid value and acidity	ISO 660 AOCS Cd 3d-63	Titrimetry	I
Unrefined shea butter	Relative density	AOCS Cc 10c-95/ ISO 6883	Pycnometry	I
Unrefined shea butter	Saponification value	ISO 3657 AOCS Cd 3d-25	Titrimetry	I
Unrefined shea butter	Iodine value	AOAC 993.20/ ISO 3961/ AOCS Cd 1d-92/ NMKL 39	Wijs Titrimetry	I

Unrefined shea butter	Peroxide value	AOCS Cd 8b-90/ ISO 3960/ NMKL 158	Titrimetry	I
Unrefined shea butter	Unsaponifiable matter	ISO 3596/ AOCS Ca 6a-40	Gravimetry	I
Unrefined shea butter	Insoluble impurities content	ISO 663/ AOCS Ca 3a-46	Gravimetry	I
Unrefined shea butter	Melting point	ISO 6321 AOCS Cc 3b-92	Open ended capillary tube	I

PART III. METHODS OF SAMPLING BY COMMODITY CATEGORIES AND NAMES

Commodity Categories	Method of Sampling	Notes
Cereals, Pulses and Legumes and Derived Products		
Wheat protein products including wheat gluten	ISO 13690	
Fats and Oils		
Olive Oils and Olive-Pomace Oils	ISO 661 and ISO 5555.	
Fish oils	ISO 5555	
Milk and Milk Products		
Milk products	ISO 707 IDF 50	General instructions for obtaining a sample from a bulk
Milk products	ISO 5538 IDF 113	Inspection by attributes
Milk products	ISO 3951-1	Inspection by variables
Processed Fruits and Vegetables		
Desiccated coconut	Described in the Standard	
Certain canned vegetables, jams and jellies	Described in the Standard	
Chili sauce	Described in the Standard	
Table Olives	Described in the Standard	

ANNEX. NOTES TO THE STANDARD FOR METHODS OF ANALYSIS AND SAMPLING

¹ Two issues are left for national authorities: to include monomeric units 3-9 and which isolated or synthetic compounds have physiological benefit. (Refer to the Guidelines for Nutrition Labelling (CXG 2-1985)).

² Users should consult the description of each method for the food matrices that were the subject of interlaboratory study in the Official methods of Analysis of AOAC International.

³ Quantitation lost for inulin, resistant starch, polydextrose and resistant maltodextrins. Refer to specific methods.

⁴ Quantitation lost for resistant starch. Refer to specific methods.

⁵ Section 9. Calories by calculation – Section 9.2 Conversion Factors

(a) protein 4 kcal per g

(b) carbohydrate 4 kcal per g

(c) fat 9 kcal per g

(d) monosaccharides 3.75 kcal per g

(e) specific food ingredients See “Energy and Protein Requirements”(FAO Nutrition Meeting Report Series No. 52 or WHO Technical Report Series No. 522)

(f) other specific calorie conversion factors maybe used where the formulation of the food and the nutrient content are known and where such specific conversion factors are physiologically more meaningful than the factors listed above

⁶ Total Boron is determined

⁷ Countries or importers may decide to use their own screening when applying the ML for methylmercury in fish by analysing total mercury in fish. If the total mercury concentration is below or equal to the ML for methylmercury, no further testing is required and the sample is determined to be compliant with the ML. If the total mercury concentration is above the ML for methylmercury, follow-up testing shall be conducted to determine if the methylmercury concentration is above the ML. The ML also applies to fresh or frozen fish intended for further processing.

⁸ Hominy, fruit juice, sea food

⁹ Wine, dried apples, lemon juice, potato flakes, sultanas, beer

¹⁰ It is possible to calculate the Iodine Value from fatty acid composition data obtained by gas chromatography e.g. using AOCS Cd 1b-87

¹¹ The method is no longer available.

¹² Determination of Crude Protein

The calculation of the protein content of infant formulas prepared ready for consumption may be based on N x 6.25, unless a scientific justification is provided for the use of a different conversion factor for a particular product. The value of 6.38 is generally established as a specific factor appropriate for conversion of nitrogen to protein in other milk products, and the value of 5.71 as a specific factor for conversion of nitrogen to protein in other soy products

¹³ General Codex methods are also available

¹⁴ When published as EN method.

¹⁵ Care should be taken in the application of the method due to spectral interference.

¹⁶ Care should be taken in the application of the method due to spectral interference.

¹⁷ When published as EN method.

Care should be taken in the application of the method due to spectral interference.

Care should be taken in the application of the method due to spectral interference.

¹⁸ 3.4 Verification of Composition, Quality and Authenticity

Fruit juices and nectars should be subject to testing for authenticity, composition, and quality where applicable and where required. The analytical methods used should be those found in Section 9, Methods of Analysis and Sampling.

The verification of a sample's authenticity / quality can be assessed by comparison of data for the sample, generated using appropriate methods included in the standard, with that produced for fruit of the same type and from the same region, allowing for natural variations, seasonal changes and for variations occurring due to processing.

¹⁹ Because there is no numerical value in the Standard duplicate Type I methods have been included which may lead to different results.

²⁰ Milk total solids and Milk solids-not-fat (MSNF) content include water of crystallization of lactose.

²¹ Milk total solids and Milk solids-not-fat (MSNF) content include water of crystallization of lactose.

²² Water content excluding the crystallized water bound to lactose (generally known as "moisture content").

²³ Moisture content excluding the water of crystallization of lactose

²⁴ Refer to scope of methods

²⁵ Water content excluding the crystallized water bound to lactose (generally known as "moisture content").

²⁶ Water content excluding the crystallized water bound to lactose (generally known as "moisture content").

²⁷ **Section 9.2 Determination of Amino Nitrogen**

Preparation of test samples: Weigh 2 g of sample into a 250 mL beaker and mix the sample with 100 mL of cold (15°C) NH₃-free H₂O and then stir the mixture for 60 min. Next, decant the mixture through a quantitative filter and collect the filtrate in a 100 mL volumetric flask.

Endpoint - A pH meter shall be used to determine the endpoint instead of optical verification of colours.

²⁸ Assessment of iodine deficiency disorders and monitoring their elimination. A guide for programme managers. Third edition, Annex 1: Titration method for determining salt iodate and salt

²⁹ Can also be used to measure *trans* unsaturated fatty acids.

³⁰ <http://www.starch.dk/isi/methods/28luff.htm>.

Appendix II

**The LIST OF PRINCIPLES OF THE METHODS
(for information)**

This list serves as an inventory of principles to choose from in order to refer to the principles in a consistent manner in the other sections of this standard.

Principle in CXS 234	Principle suggested
AAS	Flame atomic absorption spectrometry
AAS (Flame absorption)	Flame atomic absorption spectrometry
AAS after drying ashing	Flame atomic absorption spectrometry
Absorption in ultra violet	Spectrophotometry
Acid hydrolysis and spectrophotometry	Spectrophotometry
Acid hydrolysis, preparation of methyl esters and gas chromatography	Gas chromatography
Acidimetry and nephelometry	Titrimetry Nephelometry
Air drying	Gravimetry
Alkali hydrolysis	Sample Preparation
Analysis of triglycerides of HPLC and calculation	High Performance Liquid Chromatography
Anodic stripping voltametry	Anodic stripping voltametry
Ashing	Gravimetry
Atomic absorption	Graphite furnace atomic absorption spectrometry
Atomic absorption spectrophotometry	Flame Atomic absorption Spectrometry
Atomic absorption spectrophotometry (Atomic absorption Spectrophotometry (direct graphite furnace))	Graphite furnace atomic absorption spectrometry
Atomic absorption spectrophotometry (direct graphite furnace)	Graphite furnace atomic absorption spectrometry
Atomic absorption spectrophotometry (Flame absorption)	Flame atomic absorption spectrometry
Atomic absorption spectroscopy	Flame Atomic absorption spectrometry
Atomic absorption spectrophotometry (direct graphite furnace)	Graphite furnace atomic absorption spectrometry
Bioassay	Bioassay
Calculation	Calculation
Calculation from determination triglycerides by gas chromatography	Gas chromatography
Calculation from dry matter content and content fat Gravimetry, drying at 102 °C Gravimetry (Schmid-Bondzynski-Ratzlaff)	Gravimetry
Calculation from fat content and dry matter content Gravimetry (Röse Gottlieb) Gravimetry, drying at 88 °C	Gravimetry
Calculation from fat content and dry matter content Gravimetry (Schmid-Bondzynski-Ratzlaff) Gravimetry, drying at 102 °C	Gravimetry
Calculation from fat content and moisture content Gravimetry drying at 102°C (forced air oven) Gravimetry (Schmid-Bondzynski-Ratzlaff)	Gravimetry
Calculation from total solids content and fat content Gravimetry (Röse-Gottlieb)	Gravimetry

Calculation from total solids content, fat content and sugar content	Gravimetry
Calculation: Gravimetry (Röse-Gottlieb) Gravimetry	Gravimetry
CAP GC Method	Gas chromatography
Capillary gas chromatography	Gas chromatography
Capillary GLC	Gas chromatography
Carbon isotope ratio mass spectrometry	Mass spectrometry
Centrifugation	Centrifugation
Centrifugation/% value	Centrifugation
Ceramic fiber filtration	Gravimetry
Chemical & HPAEC-PAD	High Performance Liquid Chromatography
cold vapour atomic absorption spectrometry	Cold vapour atomic absorption spectrometry
Colony count at 25 °C, 30 °C, 37 °C a 45 °C according to the starter organism question	Colony count
Colony count at 37 °C	Colony count
Colony-count at 25 °C	Colony count
Colorimetric	Spectrophotometry
Colorimetry	Spectrophotometry
Colorimetry (cadmium reduction)	Spectrophotometry
Colorimetry (dichloroindophenol)	Spectrophotometry
Colorimetry (diethyldithiocarbamate)	Spectrophotometry
Colorimetry (dithizone)	Spectrophotometry
Colorimetry (Molybdenum blue)	Spectrophotometry
Colorimetry (molybdovanadate)	Spectrophotometry
Colorimetry using specific colour grader	Spectrophotometry
Colorimetry, diethyldithiocarbamate	Spectrophotometry
Colorimetry, diethyldithiocarbamates	Spectrophotometry
Colour reaction	Colour reaction
Complexometry Titrimetry	Titrimetry
Conductimetry	Conductimetry
Continuous hydride generation Flame atomic absorption spectrometry (HGAAS)	Hydride generation flame atomic absorption spectrometry
Cooking	Cooking
Densitometry	Densitometry
Determination by difference Gravimetry Gravimetry	Gravimetry
Determining formaldehyde titration method subtracting by ammoniacal nitrogen (magnesium oxide method)	Titrimetry
Deuterium Nuclear Magnetic Resonance (Deuterium NMR)	Nuclear Magnetic Resonance
digestion	Sample Preparation
Digestion/titration	Sample Preparation and Titrimetry
Direct Epifluorescent Filter Technique/Aerobic Plate Count (DEFT/APC)	Direct Epifluorescent Filter Technique and Aerobic Plate Count (DEFT/APC)

Distillation (Scott) , titration	Distillation and Titrimetry
Distillation and direct reading of the volume determination	Distillation and Volumetry
DNA comet assay	Electrophoresis
Drying and weighing	Gravimetry
Electrical conductance	Conductimetry
Electrochemical titrimetry	Titrimetry
electrometry	Potentiometry
Enzymatic gravimetry High Pressure Liquid Chromatography	Gravimetry and High Performance Liquid Chromatography
Enzymatic & colorimetric	Spectrophotometry
Enzymatic & HPAEC-PAD	High Performance Liquid Chromatography
Enzymatic Colorimetric Method with limitations on applicability due to choline and ascorbate concentration.	Spectrophotometry
Enzymatic determination	Spectrophotometry
Enzymatic determination and HPLC	High Performance Liquid Chromatography
Enzymatic digestion/gravimetry	Gravimetry
Enzymatic GC/ colorimetry gravimetry	Gas chromatography and Spectrophotometry and Gravimetry
Enzymatic method	Spectrophotometry
Enzymatic method: Part 1 - Glucose moiety or Part 2 - Galactose moiety	Spectrophotometry
Enzymatic/Gravimetry	Gravimetry
Enzymatic-Gravimetry High Pressure Liquid Chromatography	High Performance Liquid Chromatography
ESR spectroscopy	Electron Spin Resonance spectroscopy
Extraction and separation on alumina	Sample Preparation
Extraction/gravimetry	Gravimetry
Flame atomic absorption	Flame atomic absorption spectrometry
Flame atomic absorption spectrophotometry	Flame atomic absorption spectrometry
Flame atomic absorption spectrometry	Flame atomic absorption spectrometry
Flame atomic absorption spectroscopy	Flame atomic absorption spectrometry
Flameless atomic absorption spectrophotometry	Cold Vapour Atomic absorption spectrometry
Flotation and sedimentation	Sample Preparation
Fluorescence spectrometry	Fluorometry
Fluorometry	Fluorometry
Gas chromatographic analysis of hydrocarbons	Gas chromatography
Gas chromatographic method	Gas chromatography
Gas chromatographic/spectrophotometric analysis of 2/alkylcyclobutanones	Gas chromatography
Gas chromatography	Gas chromatography
Gas chromatography ("head-space")	Gas chromatography
Gas chromatography of methyl esters	Gas chromatography

Gas chromatography with suitable extraction and preparation procedures	Gas chromatography
Gas chromatography	Gas chromatography
Gas-Liquid Chromatography	Gas chromatography
GC	Gas chromatography
GC	Gas chromatography
GFAAS	Graphite furnace atomic absorption spectrometry
GLC	Gas chromatography
Graphite furnace AAS after pressure digestion	Graphite furnace atomic absorption spectrometry
Graphite furnace atomic absorption after dry ashing	Graphite furnace atomic absorption spectrometry
Gravimetric	Gravimetry
Gravimetric determination	Gravimetry
Gravimetry (loss on drying)	Gravimetry
Gravimetry Direct determination of fat using solvent extraction	Gravimetry
Gravimetry (ashing at 825 °C)	Gravimetry
Gravimetry (drying at 102 °C)	Gravimetry
Gravimetry (drying at 120°C for 16 h)	Gravimetry
Gravimetry (drying at 87°C)	Gravimetry
Gravimetry (drying at 88 °C ±2°C)	Gravimetry
Gravimetry (enzymatic digestion)	Gravimetry
Gravimetry (ether extraction)	Gravimetry
Gravimetry (extraction)	Gravimetry
Gravimetry (extraction)	Gravimetry
Gravimetry (ignition at 600°C)	Gravimetry
Gravimetry (open drying)	Gravimetry
Gravimetry (Röse-Gottlieb)	Gravimetry
Gravimetry (Schmid-Bondzynski-Ratzlaff)	Gravimetry
Gravimetry (Schmid-Bondzynski-Ratzlaff) (for samples containing lactose up to 5%) Gravimetry (Weibull- Berntrop) (for samples containing lactose over 5%)	Gravimetry (Schmid-Bondzynski-Ratzlaff) (for samples containing lactose up to 5%) Gravimetry (Weibull-Berntrop) (for samples containing lactose over 5%)
Gravimetry (sieving) note: Use a No. 14 screen instead of '7/16' or No. 8	Gravimetry
Gravimetry (Soxhlet extraction)	Gravimetry
Gravimetry (vacuum oven)	Gravimetry
Gravimetry (vacuum)	Gravimetry
Gravimetry (Weibull-Berntrop)	Gravimetry
Gravimetry after solvent extraction	Gravimetry
Gravimetry drying at 102 °C (forced air oven)	Gravimetry
Gravimetry(ether extraction)	Gravimetry
Gravimetry, after ashing at 550°C	Gravimetry
Gravimetry, Calculation	Gravimetry
Gravimetry, Direct	Gravimetry
Gravimetry, Direct determination of fat using solvent extraction	Gravimetry

Gravimetry, drying at 102 °C	Gravimetry
Gravimetry, drying at 87 °C	Gravimetry
Gravimetry, drying at atmospheric pressure	Gravimetry
High performance liquid chromatography	High Performance Liquid Chromatography
Holiday-Velasco minicolumn	High Performance Liquid Chromatography
Howard mould count	Microscopy
HPAEC-PAD	High Performance Liquid Exchange Anion Chromatography
HPLC	High Performance Liquid Chromatography
HPLC with post column derivatization and immunoaffinity column clean up	High Performance Liquid Chromatography
HPLC with pre-column derivatization and thiochrom	High Performance Liquid Chromatography
HPLC with C30 column to separate the cis- and the trans- K vitamins	High Performance Liquid Chromatography
HPLC, incorporating immunoaffinity clean-up and conversion to 5-methyltetrahydrofolate	High Performance Liquid Chromatography
Hydride generation atomic absorption spectrometry (HGAAS)	Hydride generation atomic absorption spectrometry
ICP emission spectroscopy	Inductively Coupled Plasma Optical Emission Spectrometry
ICP-MS	Inductively Coupled Plasma Mass Spectrometry
ICP-MS ; GF-AAS ICP-MS	Inductively Coupled Plasma Mass Spectrometry
	Graphite furnace atomic absorption spectrometry
	Inductively Coupled Plasma Mass Spectrometry
ICP-OES	Inductively Coupled Plasma Optical Emission spectrometry
Immunoaffinity Column (Aflatest) Method Equipment Chromatography/Column Chromatography, Spectroscopy/Fluorometer	High Performance Liquid Chromatography
Immunoassay	Immunoassay
Indirect by refractometry	Refractometry
Indophenol method	Spectrophotometry
Inductively Coupled Plasma optical emission spectrophotometry	Inductively Coupled Plasma Optical Emission spectrometry
Ion chromatography	High Performance Liquid Chromatography
Ion-exchange chromatographic method	High Performance Liquid Chromatography
Ion-selective potentiometry	Potentiometry
Karl Fisher	Titrimetry
Kjeldahl	Titrimetry
Kjeldahl digestion	Sample preparation
Kjeldahl, titrimetry	Titrimetry
LC	Liquid Chromatography
LC-FL	Liquid Chromatography

LC-MS/MS	Liquid Chromatography - Mass Spectrometry
Liquid chromatography	Liquid Chromatography
Liquid chromatography, refractive index detection	Liquid Chromatography
Magnesium oxide	Titrimetry
Microbioassay	Microbioassay
Microbioassay and turbidimetry	Microbioassay
Microbiological method	Biochemical method
Microbiological turbidimetry	Microbioassay
Microfluorometry	Fluorimetry
Molecular absorption spectrophotometry	Spectrophotometry
Mouse bioassay	Bioassay
Open ended capillary tube	Melting point
Optical Biosensor Immunoassay	Potentiometry
Oven evaporation and factor	Gravimetry
Oxygen isotope ratio analysis	Mass spectrometry
Panel test	Sensory analysis
Part 1: Optimized Monier-Williams method	Titrimetry Gravimetry
Part 2: Enzymatic method	Spectrophotometry
Photometric determination	Spectrophotometry
Photometry	Spectrophotometry
Photometry (bathophenanthroline)	Spectrophotometry
Photometry (diethyldithiocarbamate)	Spectrophotometry
Photometry (phenol and H ₂ SO ₄)	Spectrophotometry
Photometry, diethyldithiocarbamate	Spectrophotometry
Photostimulated luminescence	Photostimulated luminescence
Physical separation	Gravimetry
Polarimetry	Polarimetry
Potentiometric titration	Potentiometric titration
Potentiometry	Potentiometry
Potentiometry (determination of chloride expressed as sodium chloride)	Potentiometry
Potentiometry, titration to pH 8.30	Potentiometry
Pouring and measuring	Volumetry
Precipitation/photometry	Spectrophotometry
Preparation of fatty acids methyl esters	Sample Preparation
Pycnometry	Pycnometry
Rat bioassay	Bioassay
Receptor binding assay	Radioassay
Refractometry	Refractometry

Romer minicolmn Ultraviolet Light Source	Minicolumn screening / Fluorescence
Sieving	Granulometry
Sieving Gravimetry	Gravimetry
Single sulphonation	Gravimetry
Sohxlet extraction – Gravimetric	Gravimetry
Spectrometry	Spectrophotometry
Spectrometric determination of nitrate and nitrite content of meat products after enzymatic reduction of nitrate to nitrite	Spectrophotometry
Spectrometry	Spectrophotometry
Spectrophotometer	Spectrophotometry
Spectrophotometry	Spectrophotometry
Spectrophotometry (1,5 diphenylthiocarbazone)	Spectrophotometry
Spectrophotometry (molybdovanadate)	Spectrophotometry
Spectrophotometry, silver diethyldithiocarbamate	Spectrophotometry
Spiral vessel count, Stone cell count	Microscopy
Stable isotope mass spectrometry	Mass spectrometry
Stretching	Rheology
Test for strain identification	Biochemical test
Thawing	Thawing
Thermoluminescence	Thermoluminescence
Thermometry	Thermometry
Thin layer chromatography	Thin-Layer Chromatography
Thin-Layer Chromatography-Fluorodensit	Thin-Layer Chromatography
Titration	Titrimetry
Titrimetry	Titrimetry
Titrimetry (aqueous extract)	Titrimetry
Titrimetry (back-titration after precipitation)	Titrimetry
Titrimetry (Karl Fischer)	Titrimetry
Titrimetry (Kjeldahl)	Titrimetry
Titrimetry (Lane & Eynon)	Titrimetry
Titrimetry (Mercuric nitrate)	Titrimetry
Titrimetry (Mohr: determination of chloride, expressed as sodium chloride)	Titrimetry
Titrimetry , Kjeldahl digestion	Titrimetry
Titrimetry after distillation	Titrimetry
Titrimetry after extraction with diethyl ether I	Titrimetry
Titrimetry after extraction with diethyl ether	Titrimetry
Titrimetry after extraction with diethyl ether	Titrimetry
Titrimetry using iso-octane	Titrimetry
Titrimetry using sodium thiosulphate	Titrimetry
Titrimetry Chloride expressed as sodium chloride	Titrimetry
Titrimetry, Kjeldahl	Titrimetry

Titrimetry, Kjeldahl digestion	Titrimetry
Titrimetry, Kjeldahl digestion; after extraction of milk protein	Titrimetry
Titrimetry, titration to pH 8.4	Titrimetry
Titrimetry/Distillation	Titrimetry
TLC followed by spectrophotometry or GLC	Thin layer chromatography Spectrophotometry Gas chromatography
Tritrimetry	Titrimetry
Turbidimetric Method	Turbidimetry
Turbidity	Turbidimetry
Visual comparison with standard disks, after filtration	Visual inspection
Visual inspection	Visual inspection
Volumetry	Volumetry
Volumetry (modified Van Slyke)	Volumetry
Weighting	Gravimetry
Wijs-Titrimetry	Titrimetry

Appendix III

**THE LIST OF PROVISIONS
(for information)**

This list serves as an inventory of provisions to choose from in order to refer to the provisions in a consistent manner in the other sections of this standard and in the commodities standards.

Provision in CXS 234 and other CXSdards	Provision suggested
(1→3)(1→4) Beta -D-Glucans	Beta-D-Glucans
sorbency in ultraviolet	Absorbance
Acesulfame K, Aspartame	Acesulfame K
	Aspartame
Acetic acid (Sections 3.2 Quality criteria and 3.3 Authenticity)	Acetic acid
Acid Insoluble Ash	Ash, acid insoluble
Acid Soluble Ash	Ash, acid soluble
Acid Value	Acid value
Acidity	Acidity
Acidity, free (acid value)	Acidity, free
Acidity, titratable	Acidity, titratable
Acids, free	Acids, free
Acrylonitrile	Acrylonitrile
Aflatoxins, total	Aflatoxins, total (sum of B1, B2, G1 and G2)
Aflatoxin M1	Aflatoxin M1
Alcohol (ethanol) (Sections 3.2 Quality criteria and 3.3 Authenticity)	Ethanol
alpha-Linolenic Acid	Linolenic acid, alpha
Alpha-tocopherol	Tocopherol, alpha
Amino acid nitrogen	Nitrogen, amino acid
Amino nitrogen	Nitrogen, amino
Ammonium < 3 % (m/m)	Ammonium
Anthocyanins (Sections 3.2 Quality criteria and 3.3 Authenticity)	Anthocyanins
Apparent density	Density, apparent
Arsenic	Arsenic
Ascorbic acid-L (additives)	Ascorbic acid, L-Ascorbic acid
Ash	Ash
Ash (including P2O5)	Ash (including P2O5)
Ash (inorganic extraneous matter)	Ash, insoluble
Ash (semolina)	Ash
Ash in fruit products (Sections 3.2 Quality criteria and 3.3 Authenticity)	Ash
Ash insoluble in HCl in cocoa nib, cocoa mass and cocoa press cake	Ash, insoluble
Ash insoluble in HCl	Ash, insoluble
Beet sugar in fruit juices (Sections 3.2 Quality criteria and 3.3 Authenticity)	Stable isotope ratio, oxygen
Benzoic acid	Benzoic acid
Benzoic acid and its salts	Benzoic acid and its salts
	Benzoic acid and its salts

Benzoic acid and its salts; sorbic acid and its salts	Sorbic acid and its salts
Benzoic acid as a marker in orange juice (Sections 3.2 Quality criteria and 3.3 Authenticity)	Benzoic acid
Biotin	Biotin
Broken kernels	Kernels, broken
Butylhydroxyanisole, butylhydroxytoluene, tert- butylhydroquinone, & propyl gallate	Antioxidant, phenolics
C13/C12 ratio of ethanol derived from fruit juices (for the determination of quality and authenticity, according to Stan 247-2005 Sections 3.2 Quality criteria and 3.3 Authenticity)	Stable isotope ratio, carbon
cadmium	Cadmium
Cadmium and Lead	Cadmium
	Lead
Calcium	Calcium
Calcium and magnesium	Magnesium
	Calcium
Capsaicin	Capsaicin
Carbon dioxide (additives and processing aids)	Carbon dioxide
Carbon stable isotope ratio of apple juice (Sections 3.2 Quality criteria and 3.3 Authenticity)	Stable isotope ratio, carbon
Carbon stable isotope ratio of orange juice (Sections 3.2 Quality criteria and 3.3 Authenticity)	Stable isotope ratio, carbon
Carotenoid, total/individual groups (Sections 3.2 Quality criteria and 3.3 Authenticity)	Carotenoids, total and individual fractions
Carotenoids, total	Carotenoids, total
Casein in protein	Casein/protein ratio (expressed as percentage)
Cellobiose	Cellobiose
Centrifugable pulp(Sections 3.2 Quality criteria and 3.3 Authenticity)	Pulp, centrifugable
Chloride	Chloride
Chloride (expressed as sodium chloride)(Sections 3.2 Quality criteria and 3.3 Authenticity)	Chloride expressed as NaCl
Chloride in vegetable juice(Sections 3.2 Quality criteria and 3.3 Authenticity)	Chloride
Choline	Choline
Chromium (Section B of STAN 72 only)	Chromium
Citric acid	Citric acid
Citric acid (additives)	Citric acid
Cocoa Butter	Fat, cocoa butter
Cocoa shell	Shell, cocoa
Colour	Colour
Conductivity ash	Ash, conductivity
Cooking Procedure	Cooking procedure
Copper	Copper
Copper and iron	Copper
	Iron
Copper, manganese, zinc, magnesium, iron	Copper
	Manganese
	Zinc

	Magnesium
	Iron
Cottonseed oil	Oil, cottonseed
Creatinine	Creatinine
Crismer value	Crismer value
Crude fat	Fat
Crude fibre	Fibre, crude
Crude protein	Protein, crude
Crude protein (Nx6.25) \geq 5 m/m%	Protein, crude (total Nx6.25)
Cyclamate	Cyclamate
Determination of granularity	Particle size
Deoxynivalenol	Deoxynivalenol
D-Fructose	Fructose, D-Fructose
D-Glucose	Glucose, D-Glucose
Diastase activity	Diastase
Dietary Fibre, Method applicable for determining dietary fibres that do not include the lower molecular weight fraction.	Fibre, dietary
Dietary fibre, total	Fibre, dietary
Dietary fibre, total/ Method applicable for determining the content of dietary fibres of higher and lower molecular weight. The method is applicable in food that may, or may not, contain resistant starches	Fibre, dietary
Dietary fibres (Method applicable for determining dietary fibres that do not include the lower molecular weight fraction. Provides sugar residue composition of dietary fibre polysaccharides, as well as content of Klason lignin)	Fibre, dietary
Dietary fibres (Method applicable for determining the content of dietary fibres of higher and lower molecular weight, in food where resistant starches are not present)	Fibre, dietary
Dietary fibres (Method applicable for determining the content of dietary fibres of higher and lower molecular weight. The method is applicable in food that may, or may not, contain resistant starches.)	Fibre, dietary
Dietary fibres (not include the lower molecular weight fraction, in foods and food products containing more than 10% dietary fibres and less than 2% starch (e.g. fruits))	Fibre, dietary
Dietary fibres, Method applicable for determining dietary fibres that do not include the lower molecular weight fraction and also includes determination for soluble and insoluble dietary fibres	Fibre, dietary
Difference between the actual and theoretical ECN 42 triglyceride content	Triglyceride
Dissolved iron	Iron, dissolved
Drained weight	Drained weight
Drained weight of shucked molluscs	Drained weight
Drained Weight	Drained weight
Dry extract – soluble solids	Soluble solids
Dry matter	Dry matter
Dry matter (specified in individual standards)	Dry matter
Dry matter (total solids)	Dry matter

Electrical conductivity	Conductivity, electrical
Erythrodiol and uvaol	Erythrodiol and uvaol
Essential oils (in citrus fruit) (volume determination) (Sections 3.2 Quality criteria and 3.3 Authenticity)	Oils, essential
Essential oils (Scott titration) (Sections 3.2 Quality criteria and 3.3 Authenticity)	Oils, essential
Fat	Fat
Fat acidity	Fat acidity
Fat content	Fat
Fat Crude	Fat, crude
Fat in foods not containing starch, meat or vegetable products	Fat
Fat, total	Fat
Fat-free cocoa solids	Fat-free cocoa solids
Fat-free dry matter	Fat-free dry matter
Fat-free Milk Solids	Fat-free dry matter
Fatty acid composition various levels	Fatty acid, composition
Fatty acid composition	Fatty acid, composition
Fatty acids (including trans fatty acid)	Fatty acid, composition
Fatty acids in the 2-position of the triglycerides	Fatty acid, composition in the 2-position of the triglycerides
Fatty acids, free (expressed as oleic acid)	Fatty acid, free
Fermentability	Fermentability
Fibre, crude	Fibre, crude
Fill of containers	Fill of containers
Fish content (declaration)	Fish content
Fish/mince proportions	Proportion of whole and fragmented product
Folate	Folate
Folic acid	Folic acid
Folic Acid (as monoglutamate)	Folic acid
Formol number (Sections 3.2 Quality criteria and 3.3 Authenticity)	Formol number
Free amino acids (Sections 3.2 Quality criteria and 3.3 Authenticity)	Amino acids, free
Free fatty acids	Fatty acids, free fatty acids
Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses) fructooligosaccharides) (applicable to added fructans)	Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses, fructooligosaccharides)
Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses, fructooligosaccharides) (not applicable highly depolymerised fructans)	Fructans (oligofructoses, inulin, hydrolyzed inulin, polyfructoses, fructooligosaccharides)
Fructo-oligosaccharides (monomeric units<5)	Fructo-oligosaccharides (monomeric units<5)
Fructose and Glucose (sum of both)	Fructose and Glucose (sum of both)
Fumaric acid	Fumaric acid
Fumonisin	Fumonisin (sum of B1 and B2)
Gelatinous condition	Gelatinous, condition gelatinous
GLC ranges of fatty acid composition	Fatty acid, composition
Gluconic acid (Sections 3.2 Quality criteria and 3.3 Authenticity)	Gluconic acid

Glucose fructose and saccharose (Sections 3.2 Quality criteria and 3.3 Authenticity)	Glucose
	Fructose
	Saccharose
Glucose-D and fructose-D (permitted ingredients)	Glucose, D-Glucose
	Fructose, D-Fructose
Gluten	Gluten
Glycerol	Glycerol
Granularity	Particle size
Halogenated solvents, traces	Halogenated solvents
Halphen test +/-	Oil, cotton seed
Hesperidin and naringin	Hesperidin
	Naringin
High Fructose Corn Syrup and Hydrolized Inulin Syrup in apple juice - HFCS & HIS in apple juice (permitted ingredients)	Fructose, high fructose
	Inulin
Histamine	Histamine
Hydrogen carbonate (Bicarbonate HCO ₃ -)	Bicarbonate
Hydroxymethylfurfural	Hydroxymethylfurfural
Insoluble dietary fibres in food and food products	Fibre, insoluble dietary fibres
Insoluble glucans and mannans of yeast cell wall (for yeast cell wall only)	Glucans and mannans of yeast cell wall (for yeast cell wall only), insoluble
Insoluble impurities	Impurities, insoluble impurities
Insoluble matter	Insoluble matter
Insoluble impurities in light petroleum	Impurities, insoluble impurities in light petroleum
Insoluble impurities	Impurities, Insoluble impurities
Invert sugar	Sugar, Invert sugar
Iodine	Iodine
Iodine (milk based formula)	Iodine
Iodine value	Iodine value or Iodine Index
Iodine value (IV)	Iodine value or Iodine Index
Iodine value 6.3-148 % m/m absorbed iodine	Iodine value
Iodine (for milk-based formula)	Iodine
Iron	Iron
Iron and copper	Iron
	Copper
Irradiated food	Irradiation
Isocitric acid-D	Isocitric acid, D-Isoacitric acid
Lactic Acid	Lactic acid
Lactic acid- D and L	Lactic acid, D and L-Lactic Acid
Lactobacillus acidophilus	Lactobacillus acidophilus
Lactobacillus delbrueckii subsp bulgaricus & Streptococcus thermophilus	Lactobacillus delbrueckii subsp bulgaricus
	Streptococcus thermophilus
Lactose	Lactose
Lead	Lead
Lead (Pb)	Lead
	Lead

Lead, cadmium, copper, iron and zinc	Cadmium
	Cooper
	Iron
	Zinc
Linoleate	Linoleate
Linoleate (in the form of glycerides)	Linoleate
Linolenic Acid	Linolenic acid
Lipid Content	Lipid
L-malic/total malic acid ratio in apple juice	Malic acid, L-malic/total malic acid ratio
Loss on drying	Moisture
Loss on drying (milk based)	Moisture
Magnesium	Magnesium
Malic acid (additives)	Malic acid
Malic acid-D	Malic acid, D-Malic Acid
Malic acid-D in apple juice	Malic acid, D-Malic Acid
Malic acid-L	Malic acid, L-Malic Acid
Manganese	Manganese
Matter volatile at 105°C	Moisture
Melamine	Melamine
Mercury	Mercury
Methyl Mercury	Methyl Mercury
Microorganisms constituting the starter culture	Microorganisms
Milk fat	Fat, milk fat
Milk Fat (min. 3.5% on dry matter)	Fat, milk fat
Milk fat content (butyric acid)	Fat, milk fat
Milk fat in dry matter	Fat, Milk fat in dry matter
Milk fat in dry matter (FDM)	Fat, Milk fat in dry matter
Milk fat in dry matter with high moisture	Fat, Milk fat in dry matter
Milk fat in dry matter with low moisture	Fat, Milk fat in dry matter
Milk fat purity	Fat, milk fat, triglycerides
Milk protein	Milk protein (total N x 6.38)
Milk protein (total N x 6.38 in dry matter)	Milk protein (total N x 6.38)
Milk protein (total N x 6.38)	Milk protein (total N x 6.38)
Milk protein in MSNF	Milk protein in MSNF
Milk solids-not-fat (MSNF)	Milk solids-not-fat (MSNF)
Milkfat	Fat, milk fat
Mineral (ash)	Ash
Mineral impurities	Mineral impurities
Mineral Impurities (Sand)	Mineral impurities (sand)
Mineral oil	Oil, mineral
Minimum Drained Weight	Weight, Drained weight
Moisture	Moisture
Moisture & volatile matter at 105°C	Moisture
Moisture and volatile matter	Moisture
Moisture Content	Moisture
Moisture Content (for expression of values on dry matter)	Moisture
Moisture on fat free basis	Moisture on fat free basis

Moisture, "Free"	Moisture
Moisture/Total Solids	Moisture
	Dry-matter
Molybdenum (Section B of CXS 72 -1981 only)	Molybdenum
Mould count	Mould count
MSNF	Milk solids-not-fat (MSNF)
Naringin and neohesperidin in orange juice (Sections 3.2 Quality criteria and 3.3 Authenticity)	Naringin
	Neohesperidin
Natamycin	Natamycin
Net contents of products covered by glaze	Weight, Net weight
Net weight	Weight, Net weight
Net weight and drained weight drained wt/net wt \geq 60%	Weight, Drained weight
Net weight of products covered by glaze	Weight, Net weight
Net weight of products covered by glaze with water added inside a "block-frozen" product	Weight, Net weight
Niacin	Niacin
Nicotinamide for foods not based on milk	Nicotinamide
Nicotinamide for milk-based foods	Nicotinamide
Nitrates	Nitrates
Nitrates and/or Nitrites	Nitrates
	Nitrites
Nitrite, potassium and/or sodium Salts	Nitrites
Nitrites	Nitrites
Nitrogen	Nitrogen, total
Nitrogen, total	Nitrogen, total
Nitrogen/Protein	Nitrogen/Protein Ratio
Non-cocoa butter vegetable fat	Non-cocoa butter
Non-fat solids	Dry matter, Fat-free
Non-starch polysaccharides	Polysaccharides, non-starch
Ochratoxin A	Ochratoxin A
Oil content	Oil, content
Organoleptic characteristics	Organoleptic characteristics
Packing medium \geq 10°Brix Canned berry fruits (raspberry, strawberry)	Packing medium
P-Anisidine value	Anisidine, P-Anisidine
Pantothenic acid	Pantothenic acid
Pantothenic acid/enriched foods	Pantothenic acid
Pantothenic acid/non-enriched foods	Pantothenic acid
Paralytic shellfish toxicity	Toxicity, paralytic shellfish
Particle Size (granularity)	Particle size
Patulin	Patulin
Pectin (additives)	Pectin
Peroxide value	Peroxide value
Peroxide value (expressed as meq. of oxygen/kg fat)	Peroxide value
Peroxide value(PV)	Peroxide value
pH	pH
pH \geq 4.0; 4.0-4.6 (if acid is added)	pH

pH 4.5-7.0	pH
pH of brine	pH
Phenols	Phenols
Phosphorous	Phosphorous
Phosphorous/phosphate	Phosphorous
	Phosphate
pH-value	pH
Polarization	Polarization
Polydextrose	Polydextrose
Potassium	Potassium
Preservatives in fruit juices (sorbic acid and its salts)	Sorbic acid and its salts
Proline by photometry – non-specific determination	Proline
Proper fill (in lieu of drained weight)	Proper fill
Proportion of fish fillet and minced fish	Proportion of whole and fragmented product
Proportion of fish flesh in fish sticks (fish core)	Proportion of fish flesh in fish sticks (fish core)
Protein	Protein
Protein (N x 5.7)	Protein (Nx5.7)
Protein (Nx6.21)	Protein (Nx6.21)
Protein (Nx6.25)	Protein (Nx6.25)
Protein (Solubilized wheat protein)	Protein
Protein (Vital wheat gluten and devitalized wheat gluten)	Protein
Protein content	Protein
Protein Efficiency Ratio (PER)	Protein Efficiency Ratio (PER)
Quinic, malic and citric acid in cranberry juice cocktail and apple juice	Quinic acid
	Malic acid
	Citric acid
Reducing sugar	Sugar, Reducing sugar
Refractive index	Refractive index
Reichert value and Polenske value	Reichert value
	Polenske value
Relative density (40 0C/water at 20 0C)	Density, relative density
Relative density	Density, relative density
Resistant starch (Recommended for RS3)	Resistant starch
Riboflavin	Riboflavin
Saccharin	Saccharin
Salt	Chloride expressed as NaCl
Salt (NaCl)	Chloride expressed as NaCl
Salt (sodium chloride)	Chloride expressed as NaCl
Salt content	Chloride expressed as NaCl
Salt in brine	Chloride expressed as NaCl
Sample preparation	Sample preparation
Saponification value	Saponification, Saponification value
Saturated fat	Fat, saturated fat
Saxitoxin Group	Saxitoxin
Scorched particles	Particles, Scorched particles
Sediment (scorched particles)	Particles, Scorched particles

Selenium	Selenium
Sesame seed oil	Oil, content
Silica (colloidal, calcium silicate)	Silica
Slip point	Slip point
Soap content	Soap content
Sodium	Sodium
Sodium + Potassium	Sodium
	Potassium
Sodium & Potassium	Sodium
	Potassium
Sodium and Potassium	Sodium
	Potassium
Sodium Chloride	Chloride expressed as NaCl
Sodium chloride $\leq 15\%$ m/m (dry basis)	Chloride expressed as NaCl
Sodium, potassium, calcium, magnesium in fruit juices	Sodium
	Potassium
	Calcium
	Magnesium
Solids	Dry matter
Solids (soluble)	solids, soluble
Solids, alcohol insoluble	solids, alcohol insoluble
Solids, total	Dry matter
Solubility Index	Solubility Index
Soluble dietary fibres in food and food products	Fibre, dietary, soluble
Soluble solids	solids, soluble solids
Soluble solids, total	Solids, soluble solids
Sorbate	Sorbates
Sorbates	Sorbates
Sorbitol	Sorbitol
Sorbitol-D	Sorbitol, D
Stable carbon isotope ratio in the pulp of fruit juices	Stable carbon isotope ratio
Stable carbon isotope ratio of sugars from fruit juices	Stable carbon isotope ratio
Stable hydrogen isotope ratio of water from fruit juices (Sections 3.2 Quality criteria and 3.3 Authenticity)	Stable hydrogen isotope ratio
Stable oxygen isotope ratio in fruit juice water	Stable oxygen isotope ratio
Starch	Starch
Sterol composition and total sterols	Sterols, total and composition
Sterol composition content	Sterols, composition
Sterol content	Sterols
Stigmastadienes	Stigmastadienes
Sucrose (permitted ingredients)	Sucrose
Sucrose content	Sucrose
Sucrose plus invert	Sucrose
Sugar beet derived syrups in frozen concentrated orange juice $\delta^{18}\text{O}$ Measurements in Water	Stable oxygen isotope ratio
Sugars	Sugars
Sugars added: detection of corn and cane sugar products.	Sugar, sugar profile
Sugars added: detection of high fructose syrup, corn syrup.	Sugar, high-fructose

Sugars added: for sugar profile	Sugars, sugar profile
Sulphate	Sulphates
Sulphated ash	Ash, sulphated ash
Sulfates	Sulphates
Sulphide	Sulphites
Sulphites	Sulphites
Sulphur dioxide	Sulphur dioxide
Sulphur dioxide (additives)	Sulphur dioxide
Sum of aflatoxins B1, B2, G1 and G2	Aflatoxins, total (sum of B1, B2, G1 and G2)
Syrup measurements (Refractive index)	Refractive index
Tannins	Tannins
Tartaric acid in grape juice (additives)	Tartaric acid
Thawing procedure	Thawing procedure
Thiamine	Thiamine
Tin	Tin
Tin (Products in other containers)	Tin
Titration acids, total	Acids, Titration acids
Titre (0°C)	Titre
Tocopherol content	Tocopherol
Tomato soluble solids	Solids, soluble solids
Total acidity	Acidity, total
Total acidity (as lactic acid)	Acidity, total
Total acidity expressed as percentage of lactic acid	Acidity, total expressed as percentage of lactic acid
Total acidity of the extracted oil	Acidity, total
Total Acidity	Acidity, total
Total Ash	Ash, total
Total Ash, (Max, 10% m/m of fat free dry matter or 14% m/m) when treated with alkalizing agents	Ash, total
Total carbohydrates	Carbohydrates, total
Total carbohydrates Moisture/Total Solids Ash	Carbohydrates, total
	Moisture
	Dry matter
	Ash
Total carotenoids 300-2000 mg--carotene/kg	Carotenoids, total
Total dietary fiber	Fibre, dietary fibre
Total dry matter (vacuum-oven drying at 70°C)	Dry matter
Total fat	Fat
Total fat for milk-based infant formula (products not completely soluble in ammonia)	Fat
Total fats	Fat
Total nitrogen	Nitrogen
Total phospholipids	Phospholipids
Total protein content	Protein
Total solids	Dry matter
Total solids (Microwave oven drying)*	Dry matter

Total solids \geq 70.0% m/m (glucose syrup) \geq 93.0 m/m (dried glucose syrup)	Dry matter
Total soluble solids	Solids, soluble solids
Total Solids	Dry matter
Tough Strings	Tough Strings
Traces of halogenated solvents	Solvents, halogenated
Trans fatty acids content	Fatty acids, trans
Trans-galacto-oligo saccharides	Galacto-oligo saccharides, trans
Types of peas, distinguishing	Classification, type of peas
Unsaponifiable matter	Unsaponifiable matter
Unsaponifiable matter 0-30 g/kg	Unsaponifiable matter
Vegetable fat (sterols)	Fat, sterols
Vinyl chloride monomer	Monomer, Vinyl chloride
Vitamin A	Vitamin A
Vitamin A above 500 IU/l milk after reconstitution	Vitamin A
Vitamin A in foods in which carotenes have been added as a source of vitamin A	Vitamin A
Vitamin B12	Vitamin B12
Vitamin B6	Vitamin B6
Vitamin C	Vitamin C
Vitamin C (dehydro-ascorbic acid and ascorbic acid)	Vitamin C
Vitamin D	Vitamin D
Vitamin D (D3, milk based infant formula)	Vitamin D3
Vitamin E	Vitamin E
Vitamin E (milk based infant formula)	Vitamin E
Vitamin K	Vitamin K
Vitamin K1	Vitamin K1
Wash drained weight	Weight, wash drained
Water	Water activity
Water activity	Water activity
Water activity \leq 0.75	Water activity
Water capacity	Fill of containers
Water capacity and fill of containers	Fill of containers
Water content	Water
Water phase salt	Salt, salt in water phase
Water-insoluble solids content	Solids, Water-insoluble solids
Wax content	Wax
Zinc	Zinc

**THE LIST OF COMMODITIES CATEGORIES AND NAMES
(for information)**

This list serves as an inventory of commodities to choose from in order to refer to the commodity (or a group of commodities) in a consistent manner in the other sections of this standard. This list is a provisional dataset that will be comprehensively revised according with CXS 234 and all commodities standards.

1. All Foods

2. Individual Foods

3. Cereals, Pulses and Legumes and Derived Products

3.1 Cereals

3.1.1. Whole and decorticated pearl millet grains

3.1.2. Maize (corn)

3.1.3. Whole maize (corn) meal

3.1.4. Oat

3.1.5. Durum Wheat

3.1.6. Wheat

3.1.7. Rice

3.1.8. Sorghum grains

3.1.9. Quinoa

3.2. Cereal products

3.2.1. Wheat flour

3.2.2. Durum wheat semolina and durum wheat flour

3.2.3. Sorghum flour

3.2.4. Wheat protein products including wheat gluten

3.2.5. Instant Noodles

3.2.6. Couscous

3.2.7. Degermed maize (corn) meal and maize (corn) grits

3.2.8. Pearl millet flour

3.3. Certain pulses

3.4. Vegetable protein products

3.4.1. Soy protein products

4. Nuts and seeds

4.1. Tree nuts

4.2. Oilseed

4.2.1. Peanuts

5. Cocoa Products and Chocolate

5.1. Cocoa Products and Chocolate

5.2. Chocolate and chocolate products

5.3. Cocoa (Cacao) Mass or Cocoa/ Chocolate Liquor, and Cocoa Cake

5.4. Cocoa butter

5.5. Cocoa powders (cocoa) and dry cocoa-sugar mixtures

6. Fats and Oils and Related Products

- 6.1. Fat spreads and blended spreads
- 6.2. Edible fats and oils not covered by individual standards
- 6.3. Fish oils
- 6.4. Named Animal Fats
- 6.5. Named Vegetable Oils
- 6.6. Olive Oils and Olive Pomace Oils

7. Fish and Fishery Products

- 7.1. Live and raw bivalve molluscs
- 7.2. Live abalone and for raw fresh chilled or frozen abalone for directed consumption or for further processing
- 7.3. Fresh and quick frozen raw scallop products
- 7.4. Frozen fish and fishery products
 - 7.4.1. Frozen abalone (covered by glaze)
 - 7.4.2. Quick frozen finfish
 - 7.4.3. Quick frozen shrimps or prawns
 - 7.4.4. Quick frozen lobsters
 - 7.4.5. Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh
 - 7.4.6. Quick frozen fish sticks (fish fingers) and fish portions - breaded or in batter
 - 7.4.7. Quick frozen fish fillets
 - 7.4.8. Quick frozen raw squid
- 7.5. Salted and dried fish
 - 7.5.1. Salted Atlantic Herring and Salted Sprat
 - 7.5.2. Salted and dried fish of the Gadidae Family
 - 7.5.3. Boiled Dried Salted Anchovies
 - 7.5.4. Dried shark fins
- 7.6. Canned products
 - 7.6.1. Canned shrimps or prawns
 - 7.6.2. Canned salmon
 - 7.6.3. Canned crab meat
 - 7.6.4. Canned finfish
 - 7.6.5. Canned tuna and bonito
 - 7.6.6. Canned sardines
- 7.7. Smoked Fish, Smoke-Flavoured fish and Smoke-dried fish
- 7.8. Crackers from Marine and freshwater fish crustaceans and molluscan shellfish
- 7.9. Fish Sauce
- 7.10. Sturgeon Caviar

8. Foods for Special Dietary Uses

- 8.1. Infant formula
- 8.2.** Follow-up formula
- 8.3. Formula for especial medical purposes intended for infants
- 8.4. Canned baby foods

- 8.5. Foods with low-sodium content (including salt substitutes)
- 8.6. Gluten-free foods
- 8.7. Cereal based foods for infants and young children
- 8.8. Foods for special dietary use for persons intolerant to gluten
- 8.9. Formula foods for use in weight control diets
- 8.10. Formula foods for use in very low energy diets for weight reduction

9. Milk and Milk Products

- 9.1. Blend of evaporated skimmed milk and vegetable fat
 - 9.1.1. Reduced fat blend of evaporated skimmed milk and vegetable fat
- 9.2. Blend of skimmed milk and vegetable fat in powdered form
 - 9.2.1. Reduced fat blend of skimmed milk powder and vegetable fat in powdered form
- 9.3. Blend of sweetened condensed skimmed milk and vegetable fat
 - 9.3.1. Blend of Sweetened Condensed Skimmed Milk and Vegetable Fat;
 - 9.3.2. Reduced Fat Blend of Sweetened Condensed Skimmed Milk and Vegetable Fat
- 9.4. Butter
- 9.5. Cheese
 - 9.5.1. Cheese (and cheese rind)
 - 9.5.2. Cheese, Unripened Including Fresh Cheese
 - 9.5.3. Cheeses in brine
 - 9.5.4. Cheeses, individual
 - 9.5.5. Cottage cheese
 - 9.5.6. Whey cheeses by coagulation
 - 9.5.7. Whey cheeses by concentration
 - 9.5.8. Cheddar
 - 9.5.9. Gouda
 - 9.5.10. Tilsiter
 - 9.5.11. Saint-Paulin
 - 9.5.12. Provolone
 - 9.5.13. Camembert
 - 9.5.14. Extra hard grating cheese
 - 9.5.15. Mozzarella
 - 9.5.16. Danbo
 - 9.5.17. Edam
 - 9.5.18. Havarti
 - 9.5.19. Samsø
 - 9.5.20. Emmental
 - 9.5.21. Coulommiers
 - 9.5.22. Brie
- 9.6. Cream and Prepared Creams
 - 9.6.1. Cream cheese
 - 9.6.2. Creams Lowered in Milkfat Content

9.6.3. Creams, Whipped Creams and Fermented Creams

- 9.7. Dairy fat spreads
- 9.8. Edible casein products
- 9.9. Evaporated milks
- 9.10. Fermented milks
- 9.11. Dairy Permeate Powders
- 9.12. Milk fat Products
- 9.13. Sweetened condensed milk
- 9.14. Milk powders and cream powders
- 9.15. Whey powders

10. Miscellaneous Products

- 10.1. Chili sauce
- 10.2. Date Paste
- 10.3. Edible cassava flour
- 10.4. Fermented Soybean Paste
- 10.5. Fresh fungus chanterelle
- 10.6. Food grade salt
- 10.7. Foul medames
- 10.8. Gari
- 10.9. Ginseng Products
- 10.10. Gochujang
- 10.11. Halwa Tehenia
- 10.12. Harissa
- 10.13. Canned Humus with tehena
- 10.14. Laver products
- 10.15. Non-fermented soybean products
- 10.16. Sago Flour
- 10.17. Tehena
- 10.18. Tempe
- 10.19. Unrefined shea butter

11. Natural Mineral Waters

- 11.1. Natural Mineral Waters
- 11.2. Bottled/Packaged Dinking Waters

12. Processed Fruits and Vegetables

- 12.1. Canned
 - 12.1.1. Canned applesauce
 - 12.1.2. Canned green peas
 - 12.1.3. Canned mangoes
 - 12.1.4. Canned Pineapple
 - 12.1.5. Canned Raspberries
 - 12.1.6. Canned Strawberries

- 12.1.7. Canned Tropical Fruit salad
- 12.1.8. Canned chestnuts and canned chest nut purée
- 12.1.9. Canned stone fruits
- 12.1.10. Canned bamboo shoots
- 12.1.11. Canned fruit cocktail
- 12.1.12. Certain canned citrus fruits
- 12.1.13. Certain canned fruits
- 12.1.14. Canned green beans and wax beans
- 12.1.15. Canned palmito
- 12.1.16. Canned mushrooms
- 12.2. Quick frozen
 - 12.2.1. Quick frozen fruits and vegetables(non-glazed)
 - 12.2.2. Quick frozen peas
 - 12.2.3. Quick frozen strawberries
 - 12.2.4. Quick frozen raspberries
 - 12.2.5. Quick frozen peaches
 - 12.2.6. Quick frozen bilberries
 - 12.2.7. Quick frozen blueberries
 - 12.2.8. Quick frozen green beans and wax beans
 - 12.2.9. Quick frozen spinach
 - 12.2.10. Quick frozen cauliflower
 - 12.2.11. Quick frozen brussels sprouts
 - 12.2.12. Quick frozen French fried potatoes
 - 12.2.13. Quick frozen vegetables
 - 12.2.14. Quick frozen berries, leek and carrot
 - 12.2.15. Quick frozen berries, whole kernel corn and corn-on-the-cob
- 12.3. Aqueous Coconut Products
- 12.4. Fruit juices and nectars
- 12.5. Dates
- 12.6. Desiccated coconut
- 12.7. Dried apricots
- 12.8. Jams, jellies and marmalades
 - 12.8.1. Citrus marmalade
- 12.9. Mango chutney
- 12.10. Preserved tomatoes
- 12.11. Processed tomato concentrates
- 12.12. Raisins
- 12.13. Ginseng products
- 12.14. Pickled fruits and vegetables
 - 12.14.1. Pickled cucumbers
- 12.15. Table olives

- 12.16. Unshelled pistachio nuts
- 12.17. Kimchi
- 12.18. Edible fungi and fungus products
 - 12.18.1. Dry Edible fungi

13. Processed Meat and Poultry Products

- 13.1. Corned beef
- 13.2. Cooked cured chopped meat
- 13.3. Cooked cured ham
- 13.4. Cooked cured pork shoulder
- 13.5. Luncheon meat

14. Soups and Broths

- 14.1. Bouillons and Consommés

15. Spices and Culinary Herbs

- 15.1. Black, white and green pepper
- 15.2. Cumin
- 15.3. Thyme

16. Sugars and Honey

- 16.1. Honey
- 16.2. Sugars
 - 16.2.1. Sugars (dextrose anhydrous and dextrose monohydrate)
 - 16.2.2. Sugars (dextrose anhydrous and dextrose monohydrate, dried glucose syrup, glucose syrup, powdered dextrose, lactose)
 - 16.2.3. Sugars (fructose)
 - 16.2.4. Sugars (glucose syrup and dried glucose syrup)
 - 16.2.5. Sugars (lactose)
 - 16.2.6. Sugars (plantation and mill white sugar)
 - 16.2.7. Sugars (powdered sugar and powdered dextrose)
 - 16.2.8. Sugars (powdered sugar)
 - 16.2.9. Sugars (raw cane sugar)
 - 16.2.10. Sugars (soft white sugar and soft brown sugar)
 - 16.2.11. Sugars (soft white sugar)
 - 16.2.12. Sugars (white sugar)