

**FINAL REPORT OF THE 31<sup>st</sup> MEETING OF INTERNATIONAL ORGANISATIONS  
WORKING IN THE FIELD OF METHODS OF ANALYSIS AND SAMPLING  
(INTER-AGENCY MEETING; IAM-31)**

13.30 – 18.00h, Saturday, 25<sup>th</sup> May 2019

**Present**

Anne Bridges	AACCI
Paul Wehling	AACCI
Darryl Sullivan	AOACI
Erik Konings	AOACI
John Szpylka	AOACI
Palmer Orlandi	AOACI
Scott Bloomer	AOCS
Ralf Josephs	BIPM
Duncan Arthur	CEN
Viktor Kasza	HU
Attila Eli Nagy	HU
Andrea Zentai	HU
Aurelie Dubois	IDF
Steve Holroyd	IDF
Philippe Trossat	IDF
David Hammond	IFU
Dustin Starkey	ISDI
Joseph Thompson	ISDI
Sandrine Espeillac	ISO
Marcel de Vreeze	ISO
Nina Skall Nielsen	NMKL
Richard Cantrill	USP/MoniQA/IND (Chair)
Gina Clapper	USP (Secretariat)

**Invited**

Greg Noonan	USFDA
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**Apologies**

Richard Ten Eyck	AAFCO
Melissa Phillips	AOACI
Erich Dumelin	AOCS/IND
Ray Shillito	BASF
Gracia Brisco	CAC
Verna Carolissen	CAC
Marina Patriarca	Eurachem
Steve Ellison	Eurachem
Gretel Bescoby	FOSFA
Amine Jbeily	ICC
Michaela Pichler	ICC
Roger Wood	ICUMSA/IND
Marie-Noelle Bourquin	ISO

Zoltan Mester	IUPAC
Roland Poms	MoniQA
Michael Sussman	USDA
Jeff Moore	USP
Kristie Laurvick	USP

### **1. Chair's Welcome / Introduction**

The attendees were welcomed by Dr Cantrill who thanked Dr Nagy and Dr Zentai for kindly hosting the meeting at the Hungarian National Food Chain Safety Office.

### **2. Apologies**

See above.

### **3. Introduction of Attendees**

See above.

### **4. Adoption of Agenda**

The Agenda was adopted with the following changes:

- 4.1** Anne Bridges (AACCI) added Gluten methods to Agenda item 7.
- 4.2** Erik Konings (AOACI) added CRD4/revising CCMAS scope to Agenda item 8.
- 4.3** David Hammond (IFU) added an update from IFU under Agenda item 9.

### **5. Report of the Previous Meeting IAM-30, 2018**

There were no corrections to the report of the 30<sup>th</sup> meeting. The document will soon be available on [www.moniqua.org/iam](http://www.moniqua.org/iam).

#### **5.1 Matters arising from the Previous Meeting Not Otherwise on the Agenda**

None presented.

### **6. Update on document: Comprehensive guidance for the process of submission, consideration and endorsement of methods for inclusion in CXS 234**

Kudos to the team who drafted the document last summer and early fall (Cantrill, Clapper, Hammond, Sullivan, and van den Bijgaart). The draft guidance document on endorsement was submitted to Greg Noonan for submission to the relevant eWG for comment. The final document from the eWG would be considered under CCMAS Agenda item 4. The document was written to provide answers to a number of questions previously raised in CCMAS during the revision of CXS 234, particularly the dairy methods package.

A number of issues raised by commenters were discussed by IAM delegates. Time was spent discussing "Is the method validated or fit for purpose?"; "How much detail does CCMAS need to include with a method to meet CCMAS review requirements?"; "Understanding different method requirements for analytical purposes and control purposes"; "Although the method is listed within CXS 234, was the question of fitness for purpose ever considered?" Highlighting the quinoa standard, it was noted that the moisture method selected was not the ISO cereals method, but an alternative ISO method. So, is it truly fit for purpose?

It was noted that the document recommends the involvement of the regional and commodity committees at an early stage, and also the relevant SDOs so that the work of CCMAS can be expedited. Further, some of the comments received when reviewing

the Dairy Package were regarding methods only validated on a few matrices and whether they can be extended to similar matrices such as milk vs cream. The IAM delegates agreed that methods should meet the needs of all stakeholders AND Codex Alimentarius.

Overlaps between the draft guidance document and the preamble to CXS 234 would be identified and addressed during the development of this guidance.

## **7. Update on method review process (as agreed at CCMAS 39)**

### **7.1 ISO/AOACI/IDF**

Dubois reported AOACI, and IDF/ISO conducted separate reviews and then worked together to align. A report can be found in the relevant CCMAS papers. The review process also led to the identification of other methods to carry out the review and involve eWG members. AOACI created a rubric which did deviate from the eWG instructions, but it did help in the concentration and resolution of proposed changes. It was also noted that some of the dairy methods do not contain validation data/performance data, although this may exist in various publications. Such issues may be addressed when such methods are up for review.

### **7.2 AACCI**

Bridges noted that the approach proposed by New Zealand on the Dairy Package was a great help and AACCI decided to wait to review the Cereals, Pulses and Legumes Package until the consideration of the Dairy Package by CCMAS had been undertaken. It was noted there are fewer organizations working with cereals (ISO, AOACI, and AACCI). Provided the Dairy Package is endorsed during CCMAS40, AACCI should have the working sheets for the Cereal Package ready during the 4<sup>th</sup> quarter of 2019 and will work directly with the SDOs involved. The IAM secretariat will distribute the example of the review document to IAM.

### **7.3 AOACI**

Sullivan reported Melissa Phillips has developed the rubrics for the rest of the AOACI methods for non-dairy applications. The AOACI review committee has momentum and will continue the reviews with fats and oils methods and then; cereals methods review will follow in concert with AACCI. The AOACI rubric has been shared with all the other SDOs.

### **7.4 AOCS**

AOCS hired a consultant to complete the initial review and used the AOACI rubric as a starting point. Reviews were completed, compiled, and sent to CAC in April 2019. At this time, comments are received from ISO/TC 34/SC 11 Secretariat. Since more comments are expected, a working group will be formed including AOCS, AOACI, ISO and NMKL.

### **7.5 NMKL**

NMKL is also using the AOACI rubric to start reviewing the NMKL methods. There are joint methods with AOACI in the review package.

### **7.6 Gluten method review/gluten-free**

AACCI informed the IAM on the CCMAS40 agenda under cereals, pulses, and legumes, there is a call to update the gluten-free methods (Agenda item 3.2). The market has changed exponentially since the original endorsement was made. The currently CXS 234 endorsed method has been updated by both

AACCI and AOACI and both SDOs would like CCMAS to update the endorsement and limit the scope to the matrices validated in collaborative trials. AOAC 2018.15 is a new method for gluten in oat-based foods and will ask the PWG consider adding this for CCMAS consideration.

## **8. CCMAS Papers –**

### **8.1 Matters Referred to the Committee by the Codex Alimentarius Commission and Other Subsidiary Bodies**

Cantrill reminded the SDOs they can use this mechanism to update CCMAS on SDO activities. Espeillac stated ISO supplies a report to CAC each year. The latest report will be distributed to IAM members.

### **8.2 Endorsement of Methods of Analysis Provisions and Sampling Plans in Codex Standards (see Agenda 7)**

Noonan indicated the PWG would start with items brought forward under CCMAS Agenda item 3 and will also consider gluten. The submissions for herbs and spices may generate considerable comment. The Dairy Package will be reviewed, starting with Appendix 1.

It was unclear when changes done to the review of the dairy package would be published: either right after endorsement/approval by CCMAS and CAC or whether it would await the availability of the revised format (revision of structure of 234). Therefore, IAM agreed to recommend the changes to be incorporated into CXS 234 as soon as endorsed in the format deemed most appropriate by the secretariat.

Noonan also mentioned he'd carry out future reviews differently with initial step using a small group of experts to develop a preliminary position.

### **8.3 Guidance on Endorsement (see Agenda 6)**

In addition to details already discussed above, some topics remain open for discussion. In a discussion of "identical" some delegates suggested the methods must have the same validation data. IAM delegates are not necessarily in agreement. Do we need to update the definition of "identical"? It was noted during a detailed discussion on the equivalence of ISO 660 and various AOCS methods that ISO 660 contained all the options in the other methods and as such these methods should be considered equivalent though they are not identical as written. It was also true that the methods are the same in principle. The discussion on whether two methods are identical could be reduced when methods are more prescriptive. Allowing more options in a single publication without separating them as identifiable parts makes it difficult to distinguish it from other methods based upon a restricted number of options. Reproducibility may also suffer when the methods with too many options are performed. Future methods could be very specific in terms of key method parameters.

### **8.4 Revision of the Recommended Methods of CXS 234 – preamble and structure**

It was noted there are punctuation differences in the separation of methods

between the preamble and the proposed guidance document. IAM members need to be vigilant and be sure the documents are consistent and reflect the guidance document.

#### **8.5 Revision of the Guidelines on Measurement Uncertainty**

NMKL has recently revised Procedure No. 5. It includes examples on food analysis methods and was updated to include a section on correction for bias in food analysis. NMKL suggests including NMKL Procedure No. 5 as a reference in CXG 54 document.

#### **8.6 Revision of the General Guidelines on Sampling**

No comments were made on this topic

#### **8.7 CRD 4 - CCMAS as nodal committee for methods at Codex**

This topic is a result of a discussion started in 2018 during IAM30. Konings drafted a proposal on behalf of IAM and translated it into French and Spanish. AOACI will propose this discussion during Other Business when the CCMAS40 agenda is adopted in plenary. A single database for ALL analytical methods to verify Codex provisions would be very useful. The document includes a proposal to include other Codex committees, not currently involved with CCMAS or included in the scope of CCMAS.

### **9. Update IAM members**

#### **9.1 News releases for information at CCMAS (see Agenda 8.1)**

Dubois shared the information sent by Codex to Observers:

“In preparation of the upcoming 42nd session of the Codex Alimentarius Commission (CAC42), I would like to inform you that the Codex Secretariat has dedicated a new section of its website to Codex observers. The page gives all Observer organizations an opportunity to highlight activities that are relevant to the work of Codex (e.g. information about events, new work streams, statistics, publications or any other interesting news items) by submitting articles to [david.massey@fao.org](mailto:david.massey@fao.org) and [codex@fao.org](mailto:codex@fao.org).

“With the publication of the new webpages Codex will no longer be requesting submission of INF Documents to CAC sessions.

You are however invited to directly comment on specific items of the CAC agenda (e.g. submitting comments to [codex@fao.org](mailto:codex@fao.org) that will be compiled in Conference Room Documents/CRDs) and by responding in the usual way to Circular Letters (via the Online Commenting System that will be compiled in Comment documents) related to specific items under discussion and contribute to the discussion of these items during the session.

There have been several changes to the Agenda of the CAC this year, among which is the removal of a specific Agenda Item related to Observers.”

We also always look forward to you engaging with Codex on social media (Twitter) using [@FAOWHOCodex](https://twitter.com/FAOWHOCodex) and [#CodexCAC42](https://twitter.com/CodexCAC42) during the session.”

## 9.2 CEN/TC 275 Working Group 0

Arthur reported that the document will be balloted by CEN/TC 275 in June and, subject to Dr Wood revising the document, it will be considered at the CEN meeting in September 2019. Progress will be reported during the next IAM.

## 9.3 Method Validation/Statistical Update

### 9.3.1 AOACI Expert Review Panel Methods Progress – use of proficiency test data

Sullivan indicated the first study on Turmeric (2016.16) is completed using PT data to develop precision data and it will be presented for approval as Final Action during the AOACI Annual Meeting in September 2019. There was question regarding how permission to use the data for purposes other than PT was obtained. Subscribers were asked to sign a waiver before receiving the samples, so the data could be used for this purpose. Also discussed was the PT study included blind duplicates.

### 9.3.2 Revision of ISO 5725 – update

There are 4 parts of this standard under revision. Espeillac reported the following updates:

#### **Part 2: repeatability and reproducibility**

DIS ballot: January-April 2019

The main changes compared to the previous edition:

Restructuring for consistency with current ISO Directives;

Permission is given to use alternative scrutiny and outlier detection tests provided that the performance is similar;

Permission is given to apply modern statistical methods available for calculations of the relevant precision and trueness characteristics;

Guidance on the number of laboratories required for a precision study has been included;

Information on the computation of critical values has been included.

#### **Part 4: trueness**

DIS ballot: January-April 2019

The main changes compared to the previous edition:

Restructuring for consistency with current ISO Directives

Clearly recognizing the requirements of the accepted reference values using in bias evaluation experiments and introducing the uncertainties of the accepted reference values

Changing examples with a current used measurement method.

#### **Part 1: General principles and definitions:**

Still at preliminary stage of revision.

#### **Part 3: Alternative designs for accuracy studies:**

Still at an early stage of revision.

**Comments submitted to the ISO committee in charge of the revision (ISO/TC 69/SC 6) on the differences between ISO 5725 and IUPAC, and the need of harmonization.** These protocols are not totally identical (2 main differences: the

choice of Outliers tests and cell means), which can result in inconsistent calculations of precision data in food sector, depending if the method is validated with ISO 5725, or with the IUPAC/AOACI protocol.

**Answer to this comment:** this difference is not due to a change to the provisions of ISO 5725, the authors of the current IUPAC document chose to use a different outlier rejection probability and automatic rejection with explicit provision for repeated testing, departing from the provisions of ISO 5725 at that time. We agree that this is likely to exclude more cell means but cannot comment on why IUPAC felt that this would be appropriate. No other sector appears to have found it necessary to change the outlier testing probabilities. Although this new draft has introduced similar provisions for limited repeat outlier testing to clarify previously ambiguous provision, the general principle of maintaining consistency with past practice there does not appear to be a case for changing 5725 probabilities or procedure to match the IUPAC protocol.

#### **9.4 International Fruit and Vegetable Juice Association**

IFU represents the global fruit and vegetable industry and are now translating their methods into Arabic, Chinese, French, Japanese, and Spanish. The first document to be translated will be Simplified Quality Guidelines for a fruit juice laboratory. This document highlights some important aspects of ISO 17025, such as the documentation and control of methods, training and competence, records for specific analytical methods and the use of Shewhart charts to monitor performance of analysts. The other methods which will be translated in this trial will be Brix (soluble solids), relative density, titratable acidity and sulfur dioxide.

Another project has been the production of a series of 5 short videos covering the important IFU methods in order to assist in the implementation of some of the IFU methods used in all juice QA labs. These videos cover the measurement of soluble solids by refractive index and relative density measurement, titratable acidity, sulfur dioxide and a general procedures video.

#### **9.5 Eurachem**

We have just completed another workshop, which may be of interest to IAM members: Eurachem workshop - Validation of targeted and non-targeted methods of analysis, held 20-21 May 2019, Tartu, Estonia. Material should be available on the website shortly.

### **10. IAM Housekeeping/Standing Items**

#### **10.1 Exchange of Reports and Information/Concerns of Members:**

Konings reported on recent discussions between AOACI/ISO/IDF and representatives from government, academia and industry in China. In 2018 the

Chinese Society of Inspection and Quarantine (CSIQ) was tasked by the National Food Safety Risk Assessment Center (CFSA) to manage the GB (Chinese National Standards) follow-up evaluation program. One of the important elements of this program is to compare GB with international methods with the objective to align. A first pilot with two GB's was executed. Method gaps were identified together with suitable international standards. Further data will be generated to confirm and then revise GB where applicable. Bloomer (AOCS) and Clapper (USP) indicated each organization employed native speakers of Chinese and offered assistance in this process to AOACI.

**10.2 Conferences, symposia, workshops, white papers, publications, etc.,** Members should send items to Ms. Clapper and copy Dr. Cantrill for inclusion on the IAM website.

- 10.2.1** AOACI Europe – NMKL – NordVal International symposium, 2-3 June 2019, Oslo, Norway – Speeding towards omics
- 10.2.2** NMKL workshop on MALDI-ToF NMKL workshop on MALDI-ToF, 4 June 2019, Oslo, Norway
- 10.2.3** ISO/TC 69/SC 6 (ISO 5725), 17-21 June 2019, Nagoya, Japan
- 10.2.4** IDF/ISO Analytical Week, 21-25 June 2019, Prague, CZ
- 10.2.5** ISO/TC 34/SC 19 Bee products: 27-28 June 2019, Paris, France
- 10.2.6** ISO/TC34/SC 9 Food microbiology, 9-12 July 2019, Milano, Italy
- 10.2.7** ISO/TC 34/SC 12 Sensory analysis: 24-26 July 2019, York, UK
- 10.2.8** AOACI Annual Meeting, 6-12 September 2019, Denver, CO, USA
- 10.2.9** IDF World Dairy Summit, “Milk for Life”, 23-23 September 2019, Istanbul, Turkey
- 10.2.10** ISO/TC 34/SC 17 Food safety (ISO 22000) 16-18 October 2019, Ottawa, Canada
- 10.2.11** 3rd MoniQA International Symposium Food Fraud Prevention and Effective Food Allergen Management, 30 Oct – 1 Nov 2019, USP, Rockville, MD, USA
- 10.2.12** Cereals and Grains 19 (AACCI), 3-5 November 2019, Denver, CO, USA
- 10.2.13** Eurachem Workshop - Uncertainty from sampling and analysis for accredited laboratories, 19 – 20 November 2019, Berlin, Germany
- 10.2.14** ISO/TC 34/SC 16 Biomarkers: 19-21 November, Saitama, Japan
- 10.2.15** ISO/TC 34/SC 11 (Fats and Oils): 12-13 February 2020, SC 2 (oleaginous) 14 February 2020, Sydney, Australia
- 10.2.16** ISO/TC 34 Food products: Mauritius, 2020 (tbc)
- 10.2.17** 10th Eurachem Workshop on Proficiency Testing in Analytical Chemistry, Microbiology and Laboratory Medicine, 12-15 October 2020, Windsor, UK

**10.3 Incorporation of change of methods/method corrections in the Codex Alimentarius Commission** – In response to a request for clarification on how to update method references in CXS-234 during the revision of CXS-234, CAC encouraged the SDOs to report their changes to the PWG and continue to copy the Codex Secretariat as well. SDOs were further encouraged to participate in the eWG.

- Commodity Committees will in the future use boilerplate text instructing people to refer to STAN 234 for methods of analysis

- AACCI is staying as a brand but the association is changing to another name at its upcoming annual meeting.
- ISO has been asked to consider the formation of a new TC related Laboratory Design

#### **10.4 Website Update**

Unfortunately the website is not as available to members as was envisioned. The Chair has been in contact with MoniQA leadership and this should be remedied. Please visit [www.moniqua.org/iam](http://www.moniqua.org/iam) to access information. The login requirement will be removed so that the historical documents are freely available.

#### **Update by Chair and Secretariat**

The Chair asked the participants to consider if the current arrangement for Chair and Secretariat should continue for a further year. No objections were voiced. AOAC reiterated their willingness to succeed as the Chair of IAM in the future.

### **11. Any Other Business**

- 11.1** We need to add dates/version within the documents we distribute as IAM to for traceability. Members agreed.
- 11.2** de Vreeze mentioned the recent circulation of a proposal at ISO for a new Technical Committee on laboratory design, submitted by SAC (Chinese ISO member). It will stipulate technical design requirements for a diverse range of laboratories (including food and agricultural product) with different functions and responsibilities and will include e.g. site selection and design planning, layouts, laboratory staff and smart laboratory (big data, cloud computing, block chain).
- 11.3** Espeillac mentioned the recent CEN initiative to create a new CEN Technical Committee on Food Authenticity (first meeting 14<sup>th</sup> of June 2019)

### **12. Provisional Date and Place of Next Meeting**

The CCMAS Chair confirmed the dates for CCMAS41 as 10-15 May 2020. IAM will meet before CCMAS41, though the date is not confirmed at this time.

- 13.** The meeting was adjourned by a toast thanking the hosts and participants enjoyed a small reception.

## **New developments within International fruit and vegetable juice association (IFU) (2019)**

### **Background:-**

The expert committee for methods of analysis of the IFU (MAC) has, over the years, assessed and published a wide range of validated methods for components seen in fruit and vegetable juices. Many of these methods were converted into a "CEN format" prior to publication and they also represent the majority of the procedures previously approved by CCMAS and published within the Codex fruit juice commodity STN 247 (2005).

Recent developments:-

### **Publications:-**

Recently the committee has also published a number of reviews of the use of specific procedures or on the analysis for specific components in fruit juices where a formal adoption of a method was not going to be published by the MAC.

In this category of literature reviews the following topics have been covered:-

The use of DNA methods in the analysis of fruit juices

An overview on the use of methods to assess the country of origin of fruit juices

An overview on the use of methods to assess the "organic" nature of fruit juices

A proposal for a simplified quality standard that can be adopted by fruit juice quality assurance laboratories.

There have also been recent updates to published recommendations on:-

The use of isotopic methods in the analysis of fruit juices

Detection of patulin in apple and other juices

The committee is working on the following recommendations:-

The use of polyphenols in the assessment fruit juices

The use of <sup>1</sup>H-NMR as a method for the rapid screening the of fruit juices

### **Worldwide Fruit Juice Laboratories & their use of suitable methods:-**

As IFU represents the "world-wide" fruit juice industry the Executive Committee has taken the decision that it would translate some of its more important documents into a number of important non-English languages to facilitate the adoption and use the IFU methods in countries where English is not generally spoken and/or poorly understood.

The languages chosen for the trail are Arabic, Chinese, Japanese, French & Spanish. The first document to be translated will be Simplified quality guidelines for a fruit juice laboratory.

This highlights the important issues of ISO 17025, such as the documentation and control of methods, training and competence records for specific analytical methods and the use of Shewhart charts to monitor performance of analysts. The other methods which will be translated in this trial will Brix (soluble solids), relative density, titratable acidity and sulfur dioxide.

Another project that has been undertaken to assist in the implementation of some of our methods is the production of a series of 5 short videos covering the important IFU methods used in all juice QA labs. These videos cover the measurement of Soluble solids by refractive index and relative density measurement, titratable acidity, sulfur dioxide and a general video. These highlight the critical elements of the methods and should assist a lab with the implementation of our methods in their laboratories.

PART A – METHODS OF ANALYSIS BY COMMODITY CATEGORIES AND NAMES	Reference	Title	Committee	Last modified	English
<i>Commodity</i>	CODEX STAN 234-1999				✓
<b>Cereals, Pulses and Legumes and Derived Products</b>					
Certain Pulses	CODEX STAN 171-1989	Standard for Certain Pulses	CCCPL	1995	
Couscous	CODEX STAN 202-1995	Standard for Couscous	CCCPL	1995	✓
Degermed maize (corn) meal and maize (corn) grits	CODEX STAN 155-1985	Standard for Degermed Maize (Corn) Meal and Maize (Corn) Grits	CCCPL	2018	✓
Durum Wheat Semolina and Durum Wheat Flour	CODEX STAN 178-1991	Standard for Durum Wheat Semolina and Durum Wheat Flour	CCCPL	2018	✓
Foods for Special Dietary Use for Persons Intolerant to Gluten	CODEX STAN 118-1979	Standard for Foods for Special Dietary Use for Persons Intolerant to Gluten	CCNFSDU	2015	✓
Instant Noodles	CODEX STAN 249-2006	Standard for Instant Noodles	FAO/WHO Coop	2016, 2018	
Maize (corn)	CODEX STAN 153-1985	Standard for Maize (Corn)	CCCPL	1995	✓
Whole Maize (corn) meal	CODEX STAN 154-1985	Standard for Whole Maize (Corn) Meal	CCCPL	1995	✓
Degermed Maize (Corn) Meal and Maize (Corn) Grits	CODEX STAN 155-1985	Standard for Degermed Maize (Corn) Meal and Maize (Corn) Grits	CCCPL	1995	✓
Baby Corn	CODEX STAN 188-1993	Standard for Baby Corn	CCFFV	2005	✓
Oats	CODEX STAN 201-1995	Standard for Oats	CCCPL	1995	✓
Peanuts (raw)	CODEX STAN 200-1995	Standard for Peanuts	CCCPL	1995	✓
Peanuts (intended for further processing)	CODEX STAN 234-	Aflatoxins, total			✓
Peanuts (Cereals, shell-fruits and derived products ( including peanuts))	CODEX STAN 234-	Aflatoxins, total			✓
Whole and Decorticated Pearl Millet Grains	CODEX STAN 169-1989	Standard for Whole and Decorticated Pearl Millet Grains	CCCPL	1995	✓
Pearl Millet Flour	CODEX STAN 170-1989	Standard for Pearl Millet Flour	CCCPL	1995	✓
Quinoa	CODEX STAN 234-	<b>New standard in progress</b>	CCCPL	2018	✓
Rice	CODEX STAN 198-1995	Standard for Rice	CCCPL	1995	✓
Sorghum Flour	CODEX STAN 173-1989	Standard for Sorghum Flour	CCCPL	1995	✓
Sorghum Grains	CODEX STAN 172-1989	Standard for Sorghum Grains	CCCPL	1995	✓
Soy Protein Products	CODEX STAN 175-1989	Standard for Soy Protein Products	CCVP	1989	✓



<b>Commodity</b>	<b>Provision</b>	<b>Method</b>	<b>Principle</b>	<b>Type</b>
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
Instant Noodles	Extraction of oil from instant noodles	described in the standard	Gravimetry	I
Instant Noodles	Acid Value	described in the standard	Titrimetry	I
Instant Noodles	Moisture	described in the standard	Gravimetry	I
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 minicolumn	III
Peanuts (Cereals, shell-fruits and derived products ( including peanuts))	Sum of aflatoxins B <sub>1</sub> , B <sub>2</sub> , G <sub>1</sub> and G <sub>2</sub>	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	Holiday-Velasco minicolumn	III
Pearl millet flour	Ash	AOAC 923.03	Gravimetry	I
Pearl millet flour	Colour	Modern Cereal Chemistry, 6th Ed.	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
Quinoa	Moisture content	ISO 712 / AACCI 44-15.02	Gravimetry	I
Quinoa	Protein Content (N x 6.25 in dry weight basis)	ISO 1871	Titrimetry (Kjeldahl)	IV
Pearl millet flour	Protein	AOAC 920.87	Titrimetry, Kjeldahl digestion	I
Sorghum flour	Ash	AOAC 923.03 ISO 2171 ICC 104/1	Gravimetry	I
Sorghum flour	Colour	Modern Cereal Chemistry, 6th Ed.	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	Fat	CAC/RM 55 - Method 1	Gravimetry (extraction)	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	Fat	CAC/RM 55 - Method 1	Gravimetry (extraction)	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 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 grains	Ash	AOAC 923.03	Gravimetry	
Whole and decorticated pearl millet grains	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	
Whole and decorticated pearl millet grains	Fibre, crude	ISO 5498 (B.5 Separation)	Gravimetry	
Whole and decorticated pearl millet grains	Moisture	ISO 712 ICC 110/1	Gravimetry	
Whole and decorticated pearl millet grains	Protein	AOAC 920.87	Titrimetry, Kjeldahl digestion	
Whole maize (corn) meal	Ash	AOAC 923.03 ISO 2171 ICC 104/1	Gravimetry	
Whole maize (corn) meal	Fat, crude	AOAC 945.38F; 920.39C	Gravimetry (ether extraction)	
Whole maize (corn) meal	Moisture	ISO 712 ICC 110/1	Gravimetry	
Whole maize (corn) meal	Particle size (granularity)	AOAC 965.22	Sieving	
Whole maize (corn) meal	Protein	ICC 105/1	Titrimetry, Kjeldahl digestion	





## ISO/TC 34 Food products

### Report of activities relevant to Codex work

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March 2019

#### **Codex and ISO/TC 34, Food products**

1. There is a long history of collaboration between the Codex Committees and ISO/TC 34, *Food products*. ISO/TC 34 supports the collaboration between Codex and ISO, in order to enhance the mutual coordination of work and the elimination of duplication and contradictions. This also includes interest to support any joint or collaborative communication on each others' work.

2. Codex and ISO activities are complementary. Codex, as a governmental organization, prepares documents to assist governments in their statutory and regulatory work to protect their citizens from health hazards caused by food consumption. ISO prepares standards in particular on test methods to assist stakeholders along the whole food chain to fulfil both the statutory and regulatory requirements, as well as the requirements of consumers of these products.

3. Since its creation in 1947, ISO/TC 34 has published more than 850 ISO deliverables (International Standards, Technical Specifications and Technical Reports). Two thirds of these documents are methods of analysis. See [Annex 1](#) for the structure of ISO/TC 34 and a list of projects/publications of interest to Codex:

- Development of methods of analysis for vitamins and nutrients on Infant Formula and Adult Nutritionals, in collaboration with AOAC (SPIFAN project: Stakeholder Panel on Infant Formula and Adult Nutritionals) and IDF
- A new subcommittee was created on bee products
- A new project on food suitable for vegetarians or vegans.

Concerning the work currently undertaken at the Subcommittees' level, ISO/TC 34/SCs are working on the following main topics:

#### **4. ISO/TC 34/SC 2, *Oleaginous seeds and fruits and oilseed meals***

ISO/TC 34/SC 2 covers standardisation in the field of oilseeds and oilseed residues in particular sampling, methods of test and analysis including physical, physical-chemical and biochemical methods.

In 2018:

- one project has been activated : the project prISO 21293 "Oilseeds - Automatic continuous sampling",
- two projects have been submitted to DIS ballot :
  - the project prISO 9167 "Rapeseed and rapeseed meals - Determination of glucosinolates - Method using high performance liquid chromatography" in order to simplify the existing methods, replace a potential toxic chemical (methanol) and group rapeseed and rapeseed meals in only one standard
  - the project prISO 17059 "Oilseeds - Extraction of oil and preparation of methyl esters of triglyceride fatty acids for analysis by gas chromatography (Rapid method)" in order to take into account the replacement of ISO 5509 "Animal and vegetable fats and oils - Preparation of methyl esters of fatty acids" by ISO 12966 "Animal and vegetable fats and oils - Gas chromatography of fatty acid methyl esters" (4 parts).
- The preliminary project prISO 21296 "Oilseeds and oilseed meal – Randall extraction method" in order to develop an automatic fast method for extraction of oil is still running.
- A proposal of specifications on **Soybean** done by China was discussed.

## 5. ISO/TC 34/SC 3, Fruits and vegetables and their derived products

ISO/TC 34/SC 3 works on:

- ISO/NP 20986: Test method for quantitative analysis of pesticide residues in apples and pears using chromatography (LC/MS)
- ISO/NP 20985: Test method for quantitative analysis of pesticide residues in apples and pears using chromatography (GC/MS)
- ISO/NP 24220: PAOCAI (Salted fermented Vegetables)-Specification and Test Methods
- ISO/NP 24090: Dried barberry -- Specifications and test methods
- ISO/NP 24081: Ground cassava leaves (ISOMBE) -- Specification
- ISO/DIS 20984: Cornelian cherry -- Specification and test methods
- ISO/DIS 20982: Priests (Caper) (Capparis spp.) -- Specification and test methods
- ISO/DIS 20981: Asparagus -- Specification and test methods
- ISO/DIS 20980: Artichokes -- Specification and test methods
- ISO/DIS 3631: Citrus fruits -- Guidelines for storage

## 6. ISO/TC 34/SC 4, Cereals and pulses

ISO/TC34/SC4 covers standardization in the field of Cereals and Pulses as well as their products, in particular terminology, sampling, methods of test and analysis, product specifications and requirements for packaging, storage and transportation.

The following projects under development might be of interest to CAC:

- ISO 19942 : 2018 Maize (*Zea mays* L.) – Specification

This document specifies minimum specifications for maize intended for human consumption and which is the subject of international trade. The method of determining impurities and the precision data are included.

- ISO 15141:2018 Cereal and cereal products -- Determination of ochratoxin A -- High performance liquid chromatographic method with immunoaffinity column cleanup and fluorescence detection

This document specifies an up to date method for the determination of ochratoxin A in cereals and cereal products.

- Revision of ISO 7301 Rice — Specification

The purpose is to generally improve the consistency of some definitions and add some new terms, such as "Entire kernel", "Stress crack", "glazed rice" and "camolino rice" which have the extensive use in trade.

- Revision of ISO 7970 Wheat (*Triticum aestivum* L.) — Specification

The purpose is to add the precision data for practical application.

- Revision of ISO 6540:1980 Maize -- Determination of moisture content (on milled grains and on whole grains)

The purpose is to update the method and provide fidelity data derived from international ring test.

## 7. ISO/TC 34/SC 5, Milk and milk products

The field of activity of ISO/TC 34/SC 5 covers standardization of methods of analysis and sampling for milk and milk products. ISO/TC 34/SC 5 has a close cooperation with the International Dairy Federation (IDF) since 1961 in preparing standards which are published jointly as ISO-IDF International Standards by ISO since 2001.

Where appropriate, input is provided for ISO/TC 34 and/or IDF/ISO comments to Codex documents:

- Codex Committee on Methods of Analysis and Sampling – receiving documents and attending Inter Agency Meeting, Working Group meetings and CCMAS meetings, providing updates for CODEX STAN 234-1999 on Recommended Methods of Analysis and Sampling in the area of milk and dairy products
- Codex Committee on Milk and Milk Products (CCMMP)
- Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU)
- Codex Committee on Pesticide Residues (CCPR)

Infant formulas need to provide essential nutrients (including vitamins and minerals) for the adequate growth and development of babies and young children. This is why the nutritional quality of infant formula is laid down in international Codex Alimentarius standards, such as CODEX STAN 72-1981, and national regulations. To verify that infant formulas contain all necessary nutrients, accurate analytical test methods are required. Although some methods are listed in CODEX-STAN 234-1999 and are referenced in CODEX STAN 72-1981, part of these methods is outdated, not validated for infant formula specifically, or not globally harmonized. A cooperation between ISO (TC/34 WG 14 and SC 5), IDF and AOAC in the SPIFAN project is addressing these issues. The first eight standards (fatty acids composition, total iodine, chromium/selenium/molybdenum, vitamin A and E, B12, inositol, nucleotides and pantothenic acid) were published end of 2015 and have meanwhile been endorsement as international dispute resolution methods following a Codex procedure involving CCNFSDU, CCMAS and finally CAC. Later ISO | IDF

method standards endorsed by Codex are for the determination of vitamin C (ISO 20635), vitamin D (ISO 20636) and chloride (ISO 21422 | IDF 242).

Method standards for other nutrients in infant formula are presently in preparation for submission to Codex endorsement:

- ISO 15151 | IDF 229 (minerals and trace elements by ICP-AES);
- ISO 21424 | IDF 243 (minerals and trace elements by ICP-MS);
- ISO 21446 (vitamin K);
- ISO/DIS 23305 (biotin);

In an ongoing effort to keep the CODEX STAN 234-1999 list of recommended methods up-to-date, IDF and ISO/TC 34/SC 5, in cooperation with AOAC, are reviewing all methods related to milk and milk products, and have identified some issues that require attention from CCMAS. Furthermore they have prepared some recommendations on the rules for determining when a defining method should be Type I or Type IV and on the process to be followed to determine whether or not to include such provision in STAN 234 when a provision is not specifically listed in the Commodity Standard.

### **8. ISO/TC 34/SC 6, Meat, poultry, fish, eggs and their products**

The last plenary meeting of TC 34/SC 6 was held in Nanjing, China, in September 2018.

8 projects are under discussion:

- ISO/NP 23722 Meat and meat products -- Basic terminology
- ISO/NP 23772 Meat and meat products-Determination of Chloramphenicol content-Reference method
- ISO/NP 23774 Meat and meat products -- Detection and determination of colouring agents
- ISO/NP 23776 Meat and meat products -- Determination of total phosphorous content
- ISO/NP 23777 Meat and meat products -- Determination of L-(+)-glutamic acid content - Reference method
- ISO/NP 23781 Operating procedures of pig slaughtering
- ISO/NP 23854 Fermented meat products – Specification
- ISO/NP 23855 Frozen surimi—Specification

### **9. ISO/TC 34/SC 7, Spices, culinary herbs and condiments**

The most important liaison organization of ISO/TC 34/SC 7 is the Codex Alimentarius Commission (CAC).

In spite of their main difference, Codex is a governmental and ISO a non-governmental organization, as the field of their activity is the same it is important to avoid overlaps/ duplication, as much as possible. Dialogue & coordination between ISO/TC 34/SC 7 and CCSCH may be enhanced

As a way forward it is suggested that the vast resource of ISO/TC 34/SC 7 can be used as references for Codex standards in this area and information on the projects that are developed on both sides may be shared from time to time.

Projects under development:

- ISO/CD 21983 Guidelines for harvesting, transportation, separation the stigma, drying and storage of saffron before packing
- ISO/CD 21803 Dried dill -- Specification
- ISO/CD 21800 Spices and condiments -- Determination of moisture content
- ISO/CD 7541 Spices and condiments -- Spectrophotometric determination of the extractable colour in paprika
- ISO/CD 7540 Spices -- Ground sweet and hot paprika (*Capsicum annum L.* and *Capsicum frutescens L.*) -- Specification
- ISO/NP 24050 Dried Lime (Whole & Ground) --Specification
- ISO/NP 24052 Dried Sumac -- Specification

### **10. ISO/TC 34/SC 8, Tea**

The field of activity of ISO/TC 34/SC 8 covers standardisation in the field of tea (*Camellia sinensis*) comprising:

- compositional standards for different types of tea (leaf and soluble),
- testing methods for quality (including sensory and composition),
- good manufacturing practice (including transportation),

facilitating clarity of tea quality for international trade to ensure consumer expectation of quality is met.

ISO 19563, Determination of theanine in tea and instant tea in solid form using high performance liquid chromatography was published recently.

The following compositional standard projects under development might be of interest to CAC:

- the project ISO 23983, White tea – definition and basic requirements,
- the preliminary project ISO 23837, Purple tea – definition and basic requirements,
- the preliminary project ISO 20716, Oolong tea – definition and basic requirements.

In the field of sensory test methods the following projects are under development:

- Revision of ISO 3103, Tea – preparation of liquor for use in sensory tests, which expands the scope of the standard from black tea to include green tea (currently at DIS stage)
- The project ISO 18449, Vocabulary for green tea, which aims to provide a descriptive vocabulary for the sensory evaluation of green tea.

### **11. ISO/TC 34/SC 9, *Microbiology***

ISO/TC 34/SC 9, *Food products - Microbiology*

The field of activity of ISO/TC 34/SC 9 covers standardization of microbiological analysis of the food chain: from primary production to animal feed and food as end products, including the environment of food production and handling. Microbiology analysis of the food chain not only refers to detection/enumeration of bacteria. SC9 currently develops an integrative approach including standardization for both typing and toxin detection methods.

The committee works on the international harmonization by consensus of standards describing reference methods, fully validated with performance characteristics derived from collaborative studies.

In 2019, works will continue to standardize:

- detection of *Anisakidae* larvae in fish,
- detection and enumeration of *Clostridium* spp. and *Clostridium perfringens*,
- whole-genome sequencing for food microbial typing and genomic characterization of foodborne microorganisms (link ensured with the FAO works (“Impact of WGS on food safety management within a One Health framework”));

In 2019, standards will be published giving protocols for the validation of alternative methods for microbiological confirmation, for the validation of in-house methods and for the verification of validated methods.

One standard has already been published on Challenge tests to study growth potential, lag time and maximum growth rate (ISO 20976-1:2019).

The link between TC 34/SC 9 and Codex Alimentarius is made via Codex Committee on Food Hygiene. The secretary of CCFH is invited at each SC9 plenary meeting (in 2019 : 9-12 July, Milan, Italy) and encouraged to report CCFH activities.

Some experts from ISO/TC34/SC9 community are nominated in CCFH working groups (former CCFH49 EWG on histamine guidance, one expert will be proposed in CCFH 50 EWG on Guidelines for the Control of Shiga Toxin-Producing *Escherichia coli* (STEC) in Beef Meat, Leafy Greens, Raw Milk and Cheese Produced from Raw Milk, and Sprouts ).

### **12. ISO/TC 34/SC 11, *Animal and vegetable fats and oils***

This sub-committee is concerned with the standardisation of sampling and analysis methods of animal and vegetable fats and oils particularly with regards to aspects of quality, identity and authenticity, beneficial minor components and contamination. Many member bodies of SC 11 are very active within the Codex Committee on Fats and Oils (CCFO).

The 26th Codex Committee on Fats and Oils (CCFO26) was held in Malaysia in February 2019 which was attended by the Secretary of TC34/SC11. A number of tasks and working groups resulted from the meeting that will be relevant to SC11.

CCFO issued an urgent Circular Letter after the meeting to update the methods of analysis for the determination of five of the composition and quality factors in the Standard for Olive oils and Olive Pomace Oils) which were obsolete and withdrawn by International Olive Council (IOC). ISO/TC 34/SC 11 has several standards which apply exclusively to Olive and Olive Pomace Oil and is working with the IOC to ensure that SC 11 methods are exactly the same as those of the IOC.

CCFO26 reported that CCMAS is currently in the process of reviewing the Recommended Methods of Analysis and Sampling (CXS 234). The methods of the workable package, Fats and Oils are currently under review led by AOCS. SC11 members are actively participating in the review of the CXS 234 methods. ISO has also provided relevant ISO Standards that were specifically CCMAS watermarked to aid the evaluation process.

The Codex Committee on Contaminants in Food (CCCF), developed a Code of Practice (COP) for the Reduction of 3-Monochloropropane-1,2-Diol Esters and Glycidyl Esters in refined oils and products made with refined oils, especially infant formula. SC 11 have published three methods (ISO 18363-1, -2 and -3) for the determination of fatty-acid-bound chloropropanediols (MCPDs) and glycidols. An improved rapid determination method (ISO 18363-4, Part 4: Method using fast alkaline transesterification and measurement for 2-MCPD, 3-MCPD and glycidol) is currently in the process of being approved to be developed analysis of the processing contaminants specifically in QC laboratory environment.

Sterols and stanols are listed as one of the compositional characteristics of fats and oils listed in CCFO Standards. SC11 is developing an International Standard in response to worldwide demand for a reference method for quantifying plant sterols and stanols, collectively referred to as phytosterols, in fats and oils, distillate concentrates as well as foods and dietary supplements containing added phytosterols, and in phytosterol food additive concentrates.

Free fatty acid (FFA) determination is an important quality criterion listed in all CCFO Standards. The acidity of oils is constantly reviewed as seen by the CL that was issued to submit comments on the replacement of Acid Value with free fatty acids for Virgin Palm oil and inclusion of Free fatty Acids for Crude Palm Kernel Oils. For safety purposes ISO is in the process of amending their method, with additional validation data, to use alternative indicators rather than phenolphthalein which is classed as a carcinogen.

### **13. ISO/TC 34/SC 15, Coffee**

ISO/TC 34/SC 15 (held by Colombia) is in charge of standardization in the field of coffee, covering the coffee chain from green coffee to consumption. Standardization includes terminology, sampling, test methods and analysis, product specifications and requirements for packaging, storage and transportation.

ISO/TC34/SC15 standards are addressed to support coffee chain from the production of optimal quality coffee to the product qualification mainly,

- ISO 18794, Coffee-Sensory Analysis -Vocabulary was published at 2018. ISO 18794 provides a common terminology for the entire coffee production chain around the world, covers definitions applicable to green, roasted and ground coffee, coffee extracts and soluble coffee. The terms are given under the following sections: a) basic terms in sensory analysis; b) generic terms in sensory assessment of coffee; c) terminology relating to coffee-specific odours and tastes; and d) terms commonly used in sensory assessment of coffee by practitioners.

- ISO CD 22994 Coffee and coffee products — Determination of dry matter content of soluble coffee —Sea sand method for liquid and pasty coffee extracts. This document will specify requirements for the determination of the dry matter content of liquid coffee extracts by means of the sea sand method and is applicable to liquid and pasty coffee extracts.

### **14. ISO/TC 34/SC 17, Management systems for food safety**

The new edition of ISO 22000 was published in June 2018. It brings clarity of understanding for the thousands of companies worldwide that already uses the standard. Its latest improvements include:

- Adoption of the High-Level Structure common to all ISO management system standards, making it easier for organizations to combine ISO 22000 with other management systems (such as ISO 9001 or ISO 14001) at a given time
- A new approach to risk – as a vital concept in the food business – which distinguishes between risk at the operational level and the business level of the management system

#### **• Strong links to the Codex Alimentarius:**

The new standard offers a dynamic control of food safety hazards combining the following generally recognized key elements: interactive communication, systems management, Prerequisite Programmes (PRPs), and the principles of Hazard Analysis and Critical Control Points (HACCP).

ISO 22000:2018 replaces ISO 22000:2005. Organizations certified to the standard have three years from the date of publication to transition to the new version.

2019 will present new challenges for SC17:

- The revisions of the sector specific prerequisite programs (ISO 22002 series) will be initiated - presumably with a common structure

- A guidance documents to the new version of ISO 22000 is under development
- New potentials are being incorporated into the revised version of ISO 22003 Food safety management systems -- Requirements for bodies providing audit and certification of food safety management systems
- A newly established advisory group will work on communicating the concepts of ISO 22000 directly to the users

### **15. ISO/TC 34/SC 18, Cocoa**

The secretariat of SC 18 is held within a twinning arrangement between the Ghana Standards Authority (GSA) and the Netherlands Standardization Institute (NEN). The chairmanship is shared between the Netherlands and Côte d'Ivoire. The subcommittee is in charge of standardization in the field of cocoa, including, but not limited to, terminology, sampling, product specifications, test methods and requirements and verification criteria for determination of the sustainability and traceability of cocoa.

SC 18-secretariat does join to eWGs of CCCF as an observer for the eWGs deal with cocoa and cadmium.

SC 18 has published 2 standards in 2017 for the quality and sampling of cocoa beans:

- ISO 2292, '*Cocoa beans – Sampling*'
- ISO 2451 '*Cocoa beans – Specification and quality requirements*'

SC 18 is currently working in collaboration with CEN/TC 415 'Sustainable and Traceable Cocoa' of the European Committee for Standardization (CEN) on the development of a standard for sustainable and traceable cocoa (EN) ISO 34101 with the following four (4) parts:

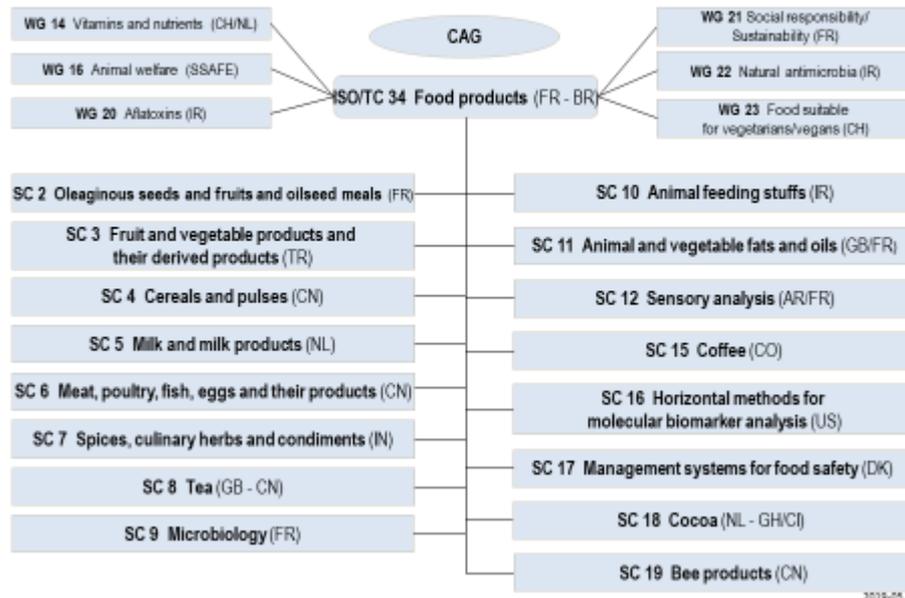
- *Part 1: Requirements for sustainability management systems*
- *Part 2: Requirements for performance (related to economic, social, and environmental aspects)*
- *Part 3: Requirements for traceability*
- *Part 4: Requirements for certification schemes*

## Annex 1

## Structure of ISO/TC 34, Food products

ISO/TC 34 comprises 78 Participating countries and 62 Observing countries. ISO/TC 34 secretariat is held jointly by France and Brazil (twinning arrangement). ISO/TC 34 has established several substructures as follows:

## Overview of ISO/TC 34 (Food products)



## Selected ISO/TC 34 projects having changed status during the past twelve months (as of March 2019)

Project number	Title	Status
ISO 18787	<i>Foodstuffs -- Determination of water activity</i>	Published in Nov 2017
ISO/TS 19657	<i>Definitions and technical criteria for food ingredients to be considered as natural</i>	Published in Dec 2017
ISO 22000	<i>Food safety management systems — Requirements for any organization in the food chain</i>	Published in June 2018
ISO 20635	<i>Infant formula and adult nutritionals – Determination of vitamin C by (ultra) high performance liquid chromatography with ultraviolet detection ((U)HPLC-UV)</i>	Published in July 2018
ISO 20636	<i>Fortified milk powders, infant formula and adult nutritionals -- Determination of vitamin D by liquid chromatography-mass spectrometry</i>	Published in July 2018
ISO/DIS 21446	<i>Infant formula and adult nutritionals -- Determination of trans vitamin K1 content by normal phase high performance liquid chromatography (HPLC)</i>	Under development
ISO/CD 21468	<i>Infant formula and adult nutritionals -- Determination of total choline and carnitine content by Liquid chromatography and tandem mass spectrometry (LC-MS/MS)</i>	Under development
ISO/CD 21470	<i>Infant formula and adult nutritionals -- Determination of vitamin B1, B2, B3 and B6 content by liquid chromatography and tandem mass spectrometry (LC-MS/MS)</i>	Under development
ISO/NP 23305	<i>Fortified milk powders, infant formula, and adult nutritionals -- Determination of total biotin by liquid chromatography coupled with immunoaffinity column clean-up extraction</i>	Under development
ISO/NP 23443	<i>Infant formula and adult nutritionals -- Determination of lutein, beta-carotene and lycopene by reversed phase ultra high performance liquid chromatography</i>	Under development
ISO/NP 23035	<i>Natural antimicrobials – Vocabulary</i>	Under development
ISO/NP 16050	<i>Foodstuffs -- Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products -- High-performance liquid chromatographic method</i>	Under development
ISO/NP 23662	<i>Food suitable for vegetarians / vegans</i>	Under development
ISO/DTS 26030	<i>Social responsibility and sustainable development -- Guidance on using ISO 26000:2010 in the food chain</i>	Under development