

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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Agenda Item 3

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ORIGINAL LANGUAGE ONLY

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING

44th Session

Virtual

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PROPOSAL FOR THE AMENDMENT OF CXS 234-1999: ADDITIONAL METHODS OF ANALYSIS AND/OR NUMERIC PERFORMANCE CRITERIA FOR VARIOUS COMMODITIES

(Prepared by the Codex Secretariat)

1. The *Recommended methods of analysis and sampling* (CXS 234-1999) has been amended to reflect the methods of analysis and sampling, as well as numeric performance criteria, adopted and consequentially revoked by several sessions of the Codex Alimentarius Commission (CAC).
2. Recalling that CCMAS37 (2016) reaffirmed its earlier decision to have CXS 234-1999 as the single reference for methods of analysis in Codex standards, all methods of analysis in commodity standards must consequently be transferred to CXS 234-1999 and replaced with a reference to CXS 234-1999 in accordance with the Procedural Manual.
3. The Codex Secretariat has thus been amending commodity standards in light of this decision following completion of the review of methods of analysis: workable packages.
4. Following the completion of the review of the methods of analysis for the fats and oils (FO), and cereals, pulses and legumes (CPL) workable packages and following the submission of the reports of the EWG: review of the cocoa products and chocolate (CPC) and fruit juices workable packages (CX/MAS 25/44/6 and CX/MAS 25/44/7), the Codex Secretariat has identified some methods of analysis that were not included in these reviews, but are present in the related commodity standards, that require review.
5. Appendix I of this document contains methods of analysis identified for action by CCMAS. It includes four parts:
 - a. Part 1 contains methods of analysis that appear in CPL standards but not in CXS 234-1999. It also contains methods of analysis that appear in the *General standard for fruit juices and nectars* (CXS 247-2005) and CPC standards but not in CX/MAS 25/44/6 and CX/MAS 25/44/7. CCMAS is requested to determine if the methods of analysis are still fit-for-purpose, and:
 - review or provide the principle and typing, or propose numeric performance criteria, if the method of analysis is still fit-for-purpose, so that it can be transferred to CXS 234-1999; or
 - recommend revocation of the methods of analysis from the commodity standard, if the method of analysis is not fit-for-purpose.
 - b. Part 2 contains methods of analysis indicated in CPL and CPC standards to be under development or to be determined. CCMAS is requested to determine if methods of analysis can be identified for these entries.
 - c. Part 3 contains methods of analysis identified in the *Standards for degermed maize (corn) meal and maize (corn) grits* (CXS 155-1985) and *named vegetable oils* (CXS 210-1999), whereby new methods of analysis for the commodity and provisions have been adopted by CAC46 (2023). As a result of this adoption, CCMAS is requested to confirm or determine if the methods of analysis in Part 3 should be replaced by those endorsed by CAC46 and consequentially revoked.

- d. Part 4 contains a method of analysis included in CX/MAS 25/44/6 which was typed as Type III in the commodity standard (i.e. CXS 247-2005) but Type II in CXS 234-1999. CCMAS is requested to confirm the typing of the method under Agenda item 5.1.
6. Appendix II of this document contains methods of analysis for information by CCMAS. It includes two methods of analysis for lead in CPC standards which should be revoked. No methods of analysis are required as there are no maximum levels for lead for the related commodities in the *General standard for contaminants and toxins in food and feed* (CXS 193-1995).
7. The methods of analysis in Appendices I and II should be considered in conjunction with those identified in CX/MAS 25/44/3-Add.1.

Recommendation

8. CCMAS44 is requested to:
- take action on the methods of analysis in Appendix I in accordance with paragraph 5 (a-d); and
 - note the consequential revocation of methods of analysis in Appendix II.

Appendix I

Part 1. Methods of analysis that appear in cereals, pulses and legumes (CPL) standards but not in CXS 234-1999, and methods of analysis that appear in CXS 247-2005 and cocoa products and chocolate (CPC) standards but not in CX/MAS 25/44/6 and CX/MAS 25/44/7

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
<u>Cereals, pulses and legumes</u>				
Maize (corn)	Broken kernels	ISO 5223-1983 ¹		
Sorghum grains	Fibre, crude	ICC 113		I
Sorghum grains	Fibre, crude	ISO 6541 (1981)		
Rice	Head rice	ISO 7301 (Annex A)		
Rice	Large broken kernel	ISO 7301 (Annex A)		
Rice	Medium broken kernel	ISO 7301 (Annex A)		
Rice	Small broken kernel	ISO 7301 (Annex A)		
Rice	Chips	ISO 7301 (Annex A)		
Rice	Heat-damaged kernels	ISO 7301 (Annex A)		
Rice	Damaged kernels	ISO 7301 (Annex A)		
Rice	Immature kernels	ISO 7301 (Annex A)		
Rice	Chalky kernels	ISO 7301 (Annex A)		
Rice	Red kernels	ISO 7301 (Annex A)		
Rice	Red-streaked kernels	ISO 7301 (Annex A)		
Rice	Pecks	ISO 7301 (Annex A)		
Rice	Maximum recommended levels of other types of rice	ISO 7301 (Annex A)		
Wheat and durum wheat	Minimum test weight	See Appendix *		
Wheat and durum wheat	Shrunken and broken kernels	ISO 5223-1983		
Wheat and durum wheat	Edible grains other than wheat and durum wheat	ISO 7970-1987: (Annex C)		

¹ 4.50 mm metal sieve

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
<u>Cereals, pulses and legumes</u>				
Wheat and durum wheat	Damaged kernels	ISO 7970-1987: (Annex C)		
Oats	Minimum test weight	See Appendix *		
<u>Cocoa products and chocolate</u>				
Chocolate and chocolate products	Determination of centre and coating of filled chocolate	See Appendix **		
Cocoa powders (cocoas) and dry mixtures of cocoa and sugars	Determination of full-fat cocoa powder, fat-reduced cocoa powder and highly fat-reduced cocoa powder	AOAC 977.04 or IOCCC 26 (1988)-Karl Fisher Method		
<u>Fruit juices and nectars</u>				
Fruit juices and nectars	Isocitric acid-D	EN 1139 (1999)	Enzymatic determination	II

APPENDIX *: DETERMINATION OF MINIMUM TEST WEIGHT IN CEREALS, PULSES AND LEGUMES

Oats

The test weight shall be the weight per ISO 7971-1986 or any other equipment giving equivalent results expressed as kilograms per hectolitre as determined on a test portion of the original sample

Wheat and durum wheat

The test weight shall be the weight per ISO 7971-1986 expressed in kilograms per hectolitre as determined on a test portion of the original sample.

APPENDIX **: DETERMINATION OF CENTRE AND COATING OF FILLED CHOCOLATE IN CHOCOLATE AND CHOCOLATE PRODUCTS

All methods approved for the chocolate type used for the coating and those approved for the type of centre concerned.

Part 2. Methods of analysis indicated in cereals, pulses and legumes (CPL) and cocoa products and chocolate (CPC) standards to be under development or to be determined

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
<u>Cereals, pulses and legumes</u>				
Wheat and durum wheat	Insect bored kernels	To be developed		
Oats	Hull-less and broken kernels	To be developed		
Oats	Edible grains other than oats	To be developed		
Oats	Damaged kernels	To be developed		
Oats	Wild oats	To be developed		
Oats	Insect bored kernels	To be developed		
Oats	Blemished grains	To be developed		
Peanuts	In-pod defects: Empty pods	To be determined		
Peanuts	In-pod defects: Damaged pods	To be determined		
Peanuts	In-pod defects: Discoloured pods	To be determined		
Peanuts	Kernel defects: Damaged kernels	To be determined		
Peanuts	Kernel defects: Discoloured kernels	To be determined		
Peanuts	Kernel defects: Broken and split kernels	To be determined		
Peanuts	Peanuts other than the designated type	To be determined		
<u>Cocoa products and chocolate</u>				
Cocoa powders (cocoas) and dry mixtures of cocoa and sugars	Determination of cocoa butter	To be developed		

Part 3. Methods of analysis proposed for revocation consequential to the decisions of CAC46

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
<u>Cereals, pulses and legumes</u>				
Degermed maize (corn) meal and maize (corn) grits	Protein (N x 6.25)	ISO 1871: 1975		
Degermed maize (corn) meal and maize (corn) grits	Crude fat	ISO 5986: 1983		
<u>Fats and oils</u>				
Named vegetable oils	Fatty acid composition	ISO 5509: 2000		

Part 4: Method of analysis for confirmation of typing

Note: The text in strikethrough has been proposed in CX/MAS 25/44/6 for removal from CXS 234-1999. See CX/MAS 25/44/6 for further information.

<i>Commodity</i>	<i>Provision</i>	<i>Method</i>	<i>Principle</i>	<i>Type</i>
<u>Fruit juices and nectars</u>				
Fruit juices and nectars	Glucose, fructose and saccharose	EN 12630 IFU 67 (1996) (2005) NMKL 148 (1993)	High performance liquid chromatography	II or III?

CONSEQUENTIAL REVOCATION OF METHODS OF ANALYSIS IN COMMODITY STANDARDS - FOR INFORMATION ONLY***Standard for Cocoa Butter (CXS 86-1981)*****6.3 Determination of lead**

According to AOAC 934.07 or IUPAC Method (*Pure & Appl. Chem.*, **63**).

Standard for Cocoa (Cacao) Mass (Cocoa/Chocolate Liquor) and Cocoa Cake (CXS 141-1983)**7.3 Determination of Lead**

According to AOAC 934.07.