CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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**Agenda item 4.1** **CX/MAS 24/43/4 Add.1**

**April 2024**

**ORIGINAL LANGUAGE ONLY**

**JOINT FAO/WHO FOOD STANDARDS PROGRAMME**

**CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING**

**Forty-third Session**

**Budapest, Hungary**

**13 – 18 May 2024**

# REVIEW OF METHODS OF ANALYSIS IN CXS 234

# CEREALS, PULSES AND LEGUMES WORKABLE PACKAGE

## Comments in reply to CL 2024/14-MAS

*submitted by*

*Burundi, Colombia, Ecuador, Egypt, Guatemala, Indonesia, Jamaica, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Sierra Leone, ICUMSA and USP*

### Background

1. This document compiles comments received through the Codex Online Commenting System (OCS) in response to CL 2024/14-MAS issued in February 2024. Under the OCS, comments are compiled in the following order: general comments are listed first, followed by comments on specific sections.

### Explanatory notes on the appendix

2. The comments submitted through the OCS are hereby annexed and presented in tabulated format.

**ANNEX**

**GENERAL COMMENTS**

| COMMENT | MEMBER / OBSERVER |
|---|---|
| Burundi supports to consider the proposed recommendations, and to endorse the proposed changes to CXS 234-1999. | **Burundi** |
| Referente al punto vi, se agradece al grupo de trabajo y a los organismos de normalización, en la revisión de los métodos y la sustitución por métodos adecuados y una vez revisado se ratifique los cambios propuestos a CXS 234.<br><br>Se considera que, los cambios, eliminación, y sustituciones por otros Métodos de Referencia aplicables, son válidos para cada producto enlistado y por tratarse de Métodos Oficiales reconocidos bibliográficamente a nivel mundial, cumplen con los requerimientos, que los laboratorios de análisis debemos aplicar en las diversas determinaciones, considerando los procesos de pre tratamiento, tratamiento y análisis final de muestras.<br><br>Se recomienda que sería necesario considerar que, los métodos señalados deben corresponder a las versiones vigentes, es decir para los Métodos AOAC 22nd Edition 2023. | **Ecuador** |
| Egypt appreciates the work which done in the revision of methods and agrees on it | **Egypt** |
| • Los métodos descritos en la tabla métodos revisados durante la EWG para la provisión de ceniza concierne analizar si el método a 550 °C es lo suficientemente aplicable para todas las matrices a analizar.<br>• Establecer los parámetros de aceptabilidad de análisis para poder utilizar metodologías alternas en caso de no contar con la infraestructura para los análisis planteados. | **Guatemala** |
| Agree | **Iraq** |
| Panama agrees with the advancement to its next step in the Codex Committee in reference. | **Panama** |
| The Philippine supports the provision for Ash-550 which is based on AOAC 923.03 and considered standard procedure for this commodity and regularly used in Proficiency Testing.<br>Also, we support the methods with different provisions in temperature due to environmental conditions across different regions where these methods are being applied. Additionally, validation should be conducted to verify the suitability and reliability of the methods under various temperature conditions.<br><br>The Philippine supports the provision for Ash-550 which is based on AOAC 923.03 and considered standard procedure for this commodity and regularly used in Proficiency Testing. Also, we support the methods with different provisions in temperature due to environmental conditions across different regions where these methods are being applied. Additionally, validation should be conducted to verify the suitability and reliability of the methods under various temperature conditions. | **Philippines** |
| Sierra Leone agrees with the suggestions | **Sierra Leone** |
| The ashing temperature of 550°C is fairly standard for many foodstuffs and other materials (it is common in ASTM methods too). It would be useful to harmonise on 550°C unless there is a cogent arguement for the higher temperature. | **ICUMSA** |

**SPECIFIC COMMENTS**

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| **Degermed maize (corn) meal and maize (corn) grits** | |
| Indonesia proposes to add "on dry basis" in this provision | **Indonesia** |
| **<u>Ash-900</u>**<br><br>Jamaica supports the change for the ash analyses being distinguished by the incineration temperatures at 550 and 900oC. | **Jamaica** |
| **ISO 2171**<br><br>Tachar. Se sugiere verificar pertinencia.<br>El mismo corresponde a mufla a 900°C<br><br>**Only one Type I method is allowed for each provision, to allow for the two temperatures used in the ash determination globally, a change to the provision is suggested**<br><br>Nos encontramos atentos al debate que se pueda generar sobre esta posibilidad. | **Paraguay** |
| En la práctica el análisis para ceniza en los laboratorios se realiza a una temperatura máxima de 550°C De acuerdo con la referencia del método AOAC 923.03/ ISO 2171; y el principio Calculation from moisture and Gravimetry (incineration at 550°C) | **Peru** |
| **<u>Calculation from moisture and</u>** Gravimetry **<u>(incineration at 550°C)</u>**<br><br>I believe moisture methods also work upon the principle of gravimetry (unless this is a true water content test). Suggest the 'Principle' for all such tests be stated simply as 'Gravimetry' or 'Gravimetric', whichever is consistent with the rest of the document. | **USP** |
| Only one Type I method is allowed for each provision, to allow for the two temperatures used in the ash determination globally, a change to the provision is suggested | **Paraguay** |
| **Gari** | |
| **To align with CXS 151: 1250 µm aperture sieve is required**<br><br>Indonesia proposes to add number of mesh for more clarity | **Indonesia** |
| **Edible Cassava flour** | |
| **To align with CXS 151: 600, 1200 µm aperture sieves are required**<br><br>Indonesia proposes to add number of mesh for more clarity | **Indonesia** |
| **Pearl millet flour** | |
| **CXS 170-1989 (2019)**<br><br>Indonesia propose to add "ISO 16624:2020" as one of the methods, because ISO 16624 specify the methods for the determination of colour in durum wheat semolina and wheat flour<br><br>**Colorimetry ~~using~~ (specific colour grader)** | **Indonesia** |

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| In line with our comments to the methods, Indonesia proposes to add "diffuse reflectance" in principle | |
| **Colorimetry ~~using~~ (specific colour grader)**<br>Chromatography ( HPLC and this layer) | **United Arab Emirates** |
| De acuerdo con la propuesta del GTE | **Peru** |
| **Quinoa** | |
| **Moisture**<br>There are minor differences between AACCI 44-15.02 and ISO 712. Jamaica has no issue with the replacement of the method AACCI 44-15.02 with ISO 712 | **Jamaica** |
| **Gravimetry (oven drying)**<br>Suggest to add Halogen moisture analyzer method | **United Arab Emirates** |
| Se sugiere se mantenga la AACCI 44-15.02 y se incluya también el<br>método AOAC 945.15<br>Es importante mencionar que la temperatura de 130°C (ISO 712)<br>podría ser muy elevada para la matriz quinua. | **Peru** |
| **Quinoa** | |
| De acuerdo con la propuesta del GTE | **Peru** |
| Support<br><br>Both methods are listed in CXS 234 but ISO 712 is the reference method regularly used in the laboratory and in Proficiency Testing.<br>The Philippine supports the deletion of Nitrogen conversion factor since these factors will be placed in an annex to CXS 234<br><br>The Philippine supports the replacement of AOAC 955.04D due to the use of hazardous chemicals, such as mercury catalysts, in this method. We also support the new methods that can achieve similar results without the need for mercury catalysts or other hazardous chemicals. | **Philippines** |
| **Sorghum flour** | |
| **ISO 2171**<br>Tachar. Se sugiere verificar pertinencia.<br>El mismo corresponde a mufla a 900°C | **Paraguay** |
| **<u>Calculation from moisture and</u> Gravimetry <u>(incineration at 550°C)</u>** | **USP** |

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|---|---|
| I believe moisture methods also work upon the principle of gravimetry (unless this is a true water content test). Suggest the 'Principle' for all such tests be stated simply as 'Gravimetry' or 'Gravimetric', whichever is consistent with the rest of the document. | |
| **Only one Type I method is allowed for each provision, to allow for the two temperatures used in the ash determination globally, a change to the provision is suggested**<br><br>En la práctica el análisis para ceniza en los laboratorios se realiza a una temperatura máxima de 550°C Para Ash-550: De acuerdo con la referencia del método AOAC 923.03/ ISO 2171; y su principio Calculation from moisture and Gravimetry (incineration at 550°C)<br><br>Para Ash -900: Se sugiere retirar los métodos IS0 712/ICC 110/1 El método ISO 712 indica temperatura de incineración de 900°C. El método ICC 110/1 es para la determinación de humedad | **Peru** |
| **Sorghum grains** | |
| **CXS 173-1989 (2019)**<br><br>Indonesia propose to add "ISO 16624:2020" as one of the methods, because ISO 16624 specify the methods for the determination of colour in durum wheat semolina and wheat flour | **Indonesia** |
| **Colorimetry ~~using~~ (specific colour grader)**<br><br>In line with our comments to the methods, Indonesia proposes to add "diffuse reflectance" in principle | **Indonesia** |
| **Colorimetry ~~using~~ (specific colour grader)**<br><br>Chromatography (HPLC and this layer) | **United Arab Emirates** |
| De acuerdo con la propuesta del GTE | **Peru** |
| **~~Ash~~ Ash-550**<br><br>Indonesia proposes to add "on dry basis" in this provision | **Indonesia** |
| **AOAC 923.03 / ISO 2171**<br><br>Tachar. Se sugiere verificar pertinencia.<br>El mismo corresponde a mufla a 900°C | **Paraguay** |
| **Calculation from moisture and Gravimetry (incineration at 550°C)**<br><br>I believe moisture methods also work upon the principle of gravimetry (unless this is a true water content test). Suggest the 'Principle' for all such tests be stated simply as 'Gravimetry' or 'Gravimetric', whichever is consistent with the rest of the document. | **USP** |
| **Only one Type I method is allowed for each provision, to allow for the two temperatures used in the ash determination globally, a change to the provision is suggested** | **Peru** |

| | |
|---|---|
| En la práctica el análisis para ceniza en los laboratorios se realiza a una temperatura máxima de 550°C De acuerdo con la referencia del método AOAC 923.03/ ISO 2171; y principio Calculation from moisture and Gravimetry (incineration at 550°C) Se sugiere retirar la ISO 6540, pues el método es para determinar humedad en maíz. | |
| **Soy protein products** | |
| **ISO 11085 has been proposed by EWG member**<br>Indonesia proposes to add "ISO 16634-2" for cereal, pulses & milled cereal products, and "ISO 16634-1" for animal and feeding stuff | **Indonesia** |
| **ISO 11085 has been proposed by EWG member**<br>De acuerdo con la referencia ISO 734:2023 | **Peru** |
| **ISO 11085 has been proposed by EWG member**<br>The Philippine supports the replacement of CAC/RM 55 since this method is not anymore available. We also support the replacement of a Type I method listed in CXS 234 once the performance data of these methods has been evaluated to ensure that the replacement method meets the required validation criteria. | **Philippines** |
| De acuerdo con los 3 métodos AOCS Ba 4f-00 / AACCI 46.30 / ISO 16634-1:2008 | **Peru** |
| **Vegetable protein products** | |
| Indonesia proposes to add "ISO 16634-2" for cereal, pulses & milled cereal products, and "ISO 16634-1" for animal and feeding stuff | **Indonesia** |
| De acuerdo con el método ISO 734:2023 | **Peru** |
| **Vegetable protein products** | |
| De acuerdo con los 3 métodos AOCS Ba 4f-00 / AACCI 46.30 / ISO 16634-1:2008 | **Peru** |
| **Wheat Flour** | |
| ~~Ash~~ **Ash-550**<br>Indonesia proposes to add "on dry basis" in this provision | **Indonesia** |
| **ISO 2171**<br>Tachar. Se sugiere verificar pertinencia. El mismo corresponde a mufla a 900°C | **Paraguay** |
| En la práctica el análisis para ceniza en los laboratorios se realiza a una temperatura máxima de 550°C Para Ash-550: De acuerdo con la referencia del método AOAC 923.03/ ISO 2171; y su principio Calculation from moisture and Gravimetry (incineration at 550°C) Para Ash -900: Se sugiere retirar AOAC 923.03, ISO 2171 / ICC 104/1 | **Peru** |

| **Whole maize (corn) meal** | |
|---|---|
| ~~Ash~~ **Ash-550**<br><br>Indonesia proposes to add "on dry basis" in this provision | **Indonesia** |
| **ISO 2171**<br><br>Tachar. Se sugiere verificar pertinencia.<br>El mismo corresponde a mufla a 900°C | **Paraguay** |
| **Calculation from moisture and** Gravimetry **(incineration at 550°C)**<br><br>I believe moisture methods also work upon the principle of gravimetry (unless this is a true water content test). Suggest the 'Principle' for all such tests be stated simply as 'Gravimetry' or 'Gravimetric', whichever is consistent with the rest of the document. | **USP** |
| En la práctica el análisis para ceniza en los laboratorios se realiza a una temperatura máxima de 550°C Para Ash-550: De acuerdo con la referencia del método AOAC 923.03/ ISO 2171; y su principio Calculation from moisture and Gravimetry (incineration at 550°C) Para Ash -900: Se sugiere retirar los métodos IS0 171 / ICC 104/1 El método ICC 110/1 es para la determinación de humedad | **Peru** |