

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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CODEX ALIMENTARIUS COMMISSION

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COMMENTS ON THE METHODS OF ANALYSIS / PERFORMANCE CRITERIA / SAMPLING PLAN AND ANNEX ON NITROGEN TO PROTEIN CONVERSION FACTORS SUBMITTED BY THE 44TH SESSION OF THE CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING FOR ADOPTION BY THE 48TH SESSION OF THE CODEX ALIMENTARIUS COMMISSION

BACKGROUND

1. This document compiles the comments on the methods of analysis / performance criteria / sampling plan and annex on nitrogen to protein conversion factors as indicated in the relevant circular letter (CL 2025/57-CAC). The comments include those received through the Codex Online Commenting System (OCS)¹, or via email by the time this document was issued. The comments are as shown in Appendix I.

EXPLANATORY NOTES ON APPENDIX I

2. The comments received are presented in a table format, with two columns as follows:
 - **First column** – Presents the comments with the rationale.
 - **Second column** – Presents the provider of the comments (name of Member or Observer).

¹ OCS is an online tool that enables Codex Contact Points to submit comments on draft texts in a standardised way, thus providing more transparency and better management of comments on different Codex texts as requested through Circular Letters. Since its launching at CAC39 (2016), the OCS has been used for different Codex Committees.

COMMENTS IN REPLY TO CL 2025/57-CAC

Submitted by

Algeria, Colombia, Egypt, Indonesia, Iran (Islamic republic of), Iraq, Paraguay, Peru, United States of America (USA), and European Vegetable Protein Association (EUVEPRO), International Commission for Uniform Methods of Sugar Analysis (ICUMSA), International Special Dietary Food Industries (ISDI)

COMMENT	MEMBER / OBSERVER
Methods of analysis / performance criteria / sampling plan for provisions in Codex standards, REP25/MAS, paragraphs 19, 27, 45, 59(i) and 86(i), Appendix II, Part 1	
Egypt appreciates the work undertaken by the Committee and the Codex Secretariat on CL 2025/57-CAC. After review, Egypt is pleased to express its agreement with the following: 1 - Methods of Analysis / Performance Criteria / Sampling Plan Egypt supports the adoption of the proposed methods of analysis, performance criteria, and sampling plan for provisions in Codex standards (REP25/MAS, paragraphs 19, 27, 45, 59(i) and 86(i), Appendix II, Part 1).	Egypt
Iran supports the adoption of both the methods of analysis / performance criteria / sampling plan and the Annex on Nitrogen to Protein Conversion Factors as proposed by CCMAS44 - The revisions and inclusions in CXS 234-1999 are appropriate, scientifically justified, and aligned with current analytical practice. - The proposed revocations are acceptable as the methods are outdated or superseded by more reliable alternatives. - Iran supports their adoption without modification.	Iran (Islamic republic of)
Agree	Iraq
Paraguay esta de acuerdo con la aprobación de este documento.	Paraguay
FISH AND FISHERY PRODUCTS. De acuerdo con la adopción de los métodos. Sin embargo, respecto a la Tabla 1 Method performance criteria for sodium chloride and for salt determined as chloride expressed as sodium chloride, se presenta el siguiente comentario: Se advierte que el método AOAC 971.271 citado, cuyo principio es Titrimetry (Potentiometric) es aplicable a conservas vegetales, por lo que se debería confirmar su validación para los productos: - Boiled dried salted anchovies - Fish sauce - Salted Atlantic herring and salted sprat - Salted Fish and dried salted fish of Gadidae family of fishes - Sturgeon Caviar FOODS FOR SPECIAL DIETARY USES De acuerdo con la adopción de los métodos. FRUIT JUICES AND NECTARS De acuerdo con la adopción de los métodos. En concordancia con la posición país remitida en respuesta a la carta circular CL 2025/16-MAS Revisión de métodos en revisión de los métodos de análisis que figuran en la norma CXS 234: conjunto manejable para los zumos (jugos) de frutas. MILK AND MILK PRODUCTS De acuerdo con la adopción de los métodos. Sin embargo, respecto al producto "Cheese" se presenta el siguiente comentario: Se advierte que el método AOAC 2016.03 2 citado, no incluye al producto queso, por lo que debería revisarse la propuesta	Peru

COMMENT	MEMBER / OBSERVER
MISCELLANEOUS PRODUCTS De acuerdo con su adopción	
The United States supports adoption of the methods of analysis, performance criteria, and sampling plan forwarded by CCMAS44.	USA
ISDI believes that the methods of analysis proposed by CCMAS44 and the annex on nitrogen to protein conversion factors are ready for adoption.	ISDI
Inclusion of “Nitrogen to protein conversion factors” as an Annex to the Recommended methods of analysis and sampling (CXS 234-1999), REP25/MAS, paragraph 11(vi), Appendix III.	
Il est important d'adopter l'annexe Nx par la CAC48 ; l'adoption d'une liste de facteurs de conversion (Nx) de l'azote en protéines pour toutes les catégories d'aliments et l'inclure dans une unique annexe dans la norme CXS 234-1999, ceci permettra d'apporter clarté et accessibilité, pour faciliter l'utilisation et permettre aux laboratoires d'analyse de la qualité de se prononcer sur la conformité des aliments avec les exigences du codex concernant la teneur en protéines et d'éviter les incohérences avec différents facteurs de conversions en se référant à la seule norme sus citée.	Algeria
1. FACTORES DE CONVERSIÓN DE NITRÓGENO EN PROTEÍNA PARA PRODUCTOS APROBADOS POR LOS COMITÉS DE PRODUCTOS Fuente de proteínas animales Leche y productos lácteos - 6,38 Carne - 6,25 Jamón cocido - 6,25 Preparados para lactantes - El cálculo del contenido de proteínas de los preparados para lactantes listos para el consumo puede basarse en N x 6,25, a menos que se justifique científicamente la utilización de un factor de conversión diferente para un producto determinado. El valor de 6,38 se establece generalmente como factor específico apropiado para la conversión de nitrógeno en proteínas en otros productos lácteos, y el valor de 5,71 como factor específico para la conversión de nitrógeno en proteínas en otros productos a base de soja. Pescado y productos pesqueros Galletas de pescado marino y de agua dulce, crustáceos y moluscos - 6,25 Fuente de proteínas vegetales Trigo, productos proteínicos de trigo - 5,71 Soja y productos de soja no fermentada - 5,71 Maíz - 6,25 Quinoa - 6,25 Sorgo - 6,25 Tempe - 5,71 Gochujang - 6,25 Productos elaborados por separación de granos y harinas de trigo y soja de determinados constituyentes no proteínicos (almidón, otros hidratos de carbono) - 6,25. 2. FRENTE A LOS MÉTODOS DE ANÁLISIS PARA LA DETERMINACIÓN DE NITRÓGENO O PROTEÍNA SEGÚN EL CASO SE TIENE: 1. AOAC 978.02: Nitrógeno total en salsa de pescado 2. AOAC 923.03: Proteína en productos a base de soja 3. AOAC 955.04D: Proteína de origen Vegetal 4. AOAC 2001.11: Proteína en Galletas de pescado marino y de agua dulce, crustáceos y moluscos 5. AOAC 981.10, el cual es específico para la determinación de proteína en carne cruda y por tanto las características de su digestión se adaptan para la determinación de otros derivados cárnicos. Colombia esta de acuerdo con la información de los factores de conversión de nitrógeno a proteína , la cual es coherente con los encontrados en la	Colombia

COMMENT	MEMBER / OBSERVER
literatura y también con los empleados en el laboratorio Nacional de Referencia. Así las cosas, se sugirió en su momento incluir el método acreditado (método interno), a saber: Numeral 5. AOAC 981.10, el cual es específico para la determinación de proteína en carne cruda y por tanto las características de su digestión se adaptan para la determinación de otros derivados cárnicos. Intervalo de medición : 0,8 g de Nitrógeno total/100 g de muestra a 8,0 g de Nitrógeno total/100 g de muestra (0,8 % de Nitrógeno total a 8,0 % de Nitrógeno total) Colombia agradece tener en cuenta la anterior información y, está de acuerdo con la propuesta para su adopción, basados en las consideraciones técnicas presentadas por el CCMAS .	
2. Annex on Nitrogen to Protein Conversion Factors : Egypt supports the adoption of the Annex on Nitrogen to Protein Conversion Factors, to be included in the Recommended Methods of Analysis and Sampling (CXS 234-1999) (REP25/MAS, paragraph 11(vi), Appendix III).	Egypt
Indonesia supports the inclusion of "Nitrogen to protein conversion factors" as an Annex to the Recommended Methods of Analysis and Sampling to be adopted by CAC48.	Indonesia
Iran supports the adoption of both the methods of analysis / performance criteria / sampling plan and the Annex on Nitrogen to Protein Conversion Factors as proposed by CCMAS44 The consolidation of Nx values into a single annex of CXS 234 is highly beneficial for clarity and ease of use. - The factors reflect consensus values already referenced in Codex commodity standards and should therefore be adopted. - Iran recommends ensuring consistency in guidance for formula products (infant and follow-up formula) by explicitly noting that deviations from $N \times 6.25$ must be scientifically justified and clearly documented	Iran (Islamic republic of)
Agree	Iraq
Paraguay esta de acuerdo con la aprobación de este documento.	Paraguay
- Anexo sobre factores de conversión de nitrógeno a proteínas b) Adopción: Inclusión de los "Factores de conversión de nitrógeno a proteínas" como anexo a los Métodos de análisis y de muestreo recomendados (CXS 234-1999), REP25/MAS, párrafo 11 vi), Apéndice III. De acuerdo con su adopción.	Peru
In reviewing the nitrogen to protein conversion factors, the United States noticed an error in the transfer of the wheat protein products conversion factor. Section 3.2.2 of the Standard for wheat protein products including wheat gluten (CXS 163-1987) states that $N \times 6.25$ is to be used for crude protein, whereas the proposed Annex forwarded by CCMAS currently lists a conversion factor of 5.71 for wheat protein products. Following alignment of this value with the conversion factor in CXS 163-1987, the United States looks forward to supporting adoption of the Annex at CAC48.	USA
EUVEPRO, representing the interests of European manufacturers of vegetable proteins for human consumption, welcomes the opportunity to comment on the proposed Annex on nitrogen-to-protein conversion factors (NCF). We note, however, that several inconsistencies remain in the Annex presented at CCMAS44 which undermine the aim of the Annex to gather all relevant information on NCFs for clarity and operationality.	EUVEPRO

COMMENT	MEMBER / OBSERVER
1. Wheat and wheat protein products - The Annex proposes an NCF of Nx 5.71. However, CXS 163-1987 specifies an NCF of Nx 6.25. - Solubilised wheat protein is also included in CXS 163-1987, with protein naming and NCF consistent with other wheat proteins in this standard. The mismatch arises from the different terminology and factor used in the wheat flour standard, not in the wheat protein product standard. 2. Standards terminology - In CXS 234-1999 (General Standard for Vegetable Protein Products), the term “protein” is used with an NCF of 6.25. - In CXS 174-1999 (General Standard for Soy Protein Products), the term “crude protein” is used, but with the same NCF (6.25). - For wheat protein products specifically, neither CXS 163-1987 nor CXS 234-1999 makes reference to 5.71. CXS 163-1987 refers to “crude protein” with NCF 6.25, and CXS 234-1999 does not provide a factor but also uses the term “crude protein.” 3. Vegetable proteins - The Annex lists “vegetable proteins” with an NCF of 6.25, in line with many vegetable-sourced proteins and most soya protein products. - However, for some regional specialties such as tempe, a factor of 5.71 is applied. This creates inconsistency within the soy protein category, since the general soy protein product standard (CXS 174-1999) applies 6.25. 4. Inconsistencies in soy protein products Finally, while we welcome CCMAS44’s recognition of inconsistencies in soy protein products (an issue EUVEPRO has previously raised), it remains unclear how these inconsistencies will be addressed going forward. We therefore recommend that a clear process and timeline for reviewing and harmonising nitrogen-to-protein conversion factors across Codex standards should be defined.	
The suggested update seems appropriate but the footnotes will have to be changed (once agreement for removal of the current [3] reference has passed).	ICUMSA
ISDI believes that the methods of analysis proposed by CCMAS44 and the annex on nitrogen to protein conversion factors are ready for adoption.	ISDI