

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
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Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 3

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

43rd Session
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METHODS OF ANALYSIS IN THE OTHER SIX STANDARDS FORWARDED BY CCSCH

(Prepared by the Codex Secretariat)

Background

1. CX/MAS 24/43/3, Appendix I, Part A lists the corresponding responses from CCSCH7 to the questions raised by CCMAS42, aiming to support the endorsement regarding various methods in the spices and culinary herbs (SCH) standards.
2. In addition, CX/MAS 24/43/3, Appendix I, Part B includes the testing methods in the three SCH standards requiring endorsement by CCMAS43 and all these three standards will be submitted to CAC47 for adoption.

Explanatory notes

3. It is noted that, apart from the five SCH standards listed in the first sub-bullet point of paragraph 1 of CX/MAS 24/43/3 (i.e., *Standards for dried or dehydrated ginger* (CXS 343-2021), *Cloves* (CXS 344-2021), *Basil* (CXS 345-2021), *Saffron* (CXS 351-2021), *Chili Pepper and Paprika* (CXS 353-2022)), the testing methods in the *Standard for Dried Seeds – Nutmeg* (CXS 352-2022) will also require endorsement by CCMAS43. This standard was inadvertently omitted.
4. In summary, a total of nine SCH standards requires endorsement of their testing methods by CCMAS43. Among these, the testing methods for three standards are included in CX/MAS 24/43/3 Appendix I, Part B. To facilitate the discussions, the testing methods for the remaining six standards are reproduced in Annex I of this document, with responses from CCSCH7 incorporated in yellow highlighted mode.

Recommendation

5. CCMAS43 is invited to endorse the methods of analysis outlined in Annex I of this document.

1. Standard for Dried Roots, Rhizomes and Bulbs: Dried or Dehydrated Ginger (CXS 343-2021)

Parameter	Method	Principle	Type
Moisture	ISO 939	Distillation	I
Total Ash on dry basis	ISO 939 and ISO 928	Distillation and Gravimetry	I
Acid Insoluble Ash on dry basis	ISO 939 and ISO 930	Distillation and Gravimetry	I
Volatile Oil on dry basis	ISO 939 and ISO 6571	Distillation followed by Volumetry	I
Extraneous Matter	ISO 927	Visual Examination followed by Gravimetry	I
Foreign Matter	ISO 927	Visual Examination followed by Gravimetry	I
Insect Damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual) MPM: V-8. Spices	Visual Examination	IV
Whole dead insect	ISO 927	Visual examination	I
Mammalian/ Other Excreta	MPM V-8 Spices, Condiments, Flavours and Crude Drugs (Macroanalytical Procedure Manual) MPM: V-8. Spices (For whole)	Visual Examination followed by Gravimetry	IV-I
Mould visible	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual) MPM: V-8. Spices	Visual examination	IV
Live Insect	ISO 927 AOAC 960.51	Visual Examination Visual Examination	IV-I IV
Calcium (as oxide) on dry basis	ISO 1003, Annex A	Chemical reaction followed by gravimetry	IV
SO ₂	AOAC 963.20	Colorimeter	II

2. Standard for Dried Floral Parts: Cloves (CXS 344-2021)

Parameter	Method*	Principle	Type
Moisture	ASTA 2.0	Distillation	I
Volatile oil	ISO 6571	Distillation Volumetry	I
Total ash (dry basis)	ISO 928	Gravimetry	I
Acid Insoluble Ash	ISO 930	Gravimetry	I
Extraneous matter	ISO 927	Visual Gravimetry	I
Foreign matter	ISO 927	Visual Gravimetry	I
Insect damage	ISO 927 Method V-8 Spices, Condiments, Flavors and Crude Drugs	Visual Examination Visual Examination	IV IV
Insects/Excreta/Insect fragments	ISO 927	Visual Examination	IV
Crude fibre	ISO 5498	Gravimetry	I
Mold visible	Method V-8 Spices, Condiments, Flavours and Crude Drugs	Visual Examination	IV
Live insect	ISO 927	Visual Examination	IV-I
Mammalian or/and Other excreta	Method V-8 Spices, Condiments, Flavours and Crude Drugs	Visual Examination	IV

3. Standard For Dried Basil (CXS 345-2021)

Parameter	Method	Principle	Type
Moisture	ISO 939	Distillation	I
Total Ash	ISO 928	Gravimetry	I
Acid Insoluble Ash	ISO 928 and ISO 930	Gravimetry	I
Volatile Oil	ISO 6571	Distillation Volumetry	I
Extraneous Matter	ISO 927	Visual Examination followed by Volumetry	I
Foreign Matter	ISO 927	Visual Examination followed by Volumetry	I
Insect Damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5)	Visual Examination	IV
Insects/Excreta/Insect Fragments	Method appropriate for particular spice from AOAC Chapter 16, subchapter 14	Visual Examination	IV
Mould damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5)	Visual examination (for whole)	IV
Mammalian Excreta, And Other Excreta	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, USFDA, Technical Bulletin V.39 B) (For whole)	Visual Examination	I

4. Draft Standard for Dried Floral Parts – Saffron (CXS 351-2021)

Provision	Method	Principle	Type
Moisture	ISO 3632-2	Gravimetry	I
Total Ash	ISO 3632-2 and ISO 928	Gravimetry	I
Acid Insoluble Ash	ISO 3632-2 and ISO 930	Gravimetry	I
Soluble extract in cold water	ISO 3632-2 and ISO 941	Extraction	I
Taste strength (expressed as picrocrocin) $A_{1cm}^{1\%}$ 257 nm	ISO 3632-2	Absorbance	IV-I
Aroma strength (expressed as safranal) $A_{1cm}^{1\%}$ 330 nm	ISO 3632-2	Absorbance	IV-I
Coloring strength (expressed as crocin) $A_{1cm}^{1\%}$ 440 nm	ISO 3632-2	Absorbance	IV-I
Extraneous Matter	ISO 3632-2	Visual Examination followed by Gravimetry	I
Foreign Matter	ISO 3632-2	Visual Examination followed by Gravimetry	I

Insect Damage	ISO 927	Visual Examination followed by Gravimetry	I
Whole dead Insects /Insect Fragments	ISO 927	Visual Examination	I
Visible mould	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macro analytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/Laboratory Methods/ucm084394.htm#v-32	Visual Examination followed by Gravimetry	I
Mammalian Excreta	Macro analytical Procedure Manual, USFDA, Technical Bulletin V.39 B (For whole)	Visual Examination followed by Gravimetry	I
Other Excreta	AOAC 993.27 (For Ground)	Enzymatic Detection Method	IV
Rodent filth	ISO 927	Visual Examination	I

5. Standard for Dried Seeds – Nutmeg (CXS 352-2022)

Provision	Method	Principle	Type
Moisture content	ISO 939	Distillation	I
Total ash	ISO 939 and ISO 928	Gravimetry	I
Acid-insoluble ash	ISO 939 and ISO 930	Gravimetry	I
Water-insoluble ash	ISO 939 and ISO 929	Gravimetry	I
Volatile oils content	ISO 939 and ISO 6571	Distillation	I
Extraneous matter	ISO 927	Visual examination/ Gravimetry	I
Foreign matter	ISO 927	Visual examination/ Gravimetry	I
Visible Mould	ISO 927	Visual examination	IV
Insect defiled/infested	MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32)	Visual Examination/ gravimetry	I
Dead insect, insect fragments, rodent contamination	ISO 927	Visual examination	IV
Live insect	ISO 927	Visual examination	IV-I
Mammalian and or other excreta	Macroanalytical Procedure Manual (MPM) USFDA technical bulletin V.41	Visual examination	IV
Piece of mace	ISO 927	Visual examination	IV

6. Standard for Dried or Dehydrated Chili Pepper and Paprika (CXS 353-2022)

Provision	Method ¹	Principles	Type
Moisture	ISO 939	Distillation	I
Total Ash	ISO 939 and ISO 928	Distillation Gravimetry	I
Acid-insoluble ash	ISO 939 and ISO 930	Distillation Gravimetry	I
Pungency Scoville Heat units	ASTA 21.3	Chromatography	IV
	ISO 3513	Sensory evaluation	I
Colour value	ISO 7541	Spectrophotometry	IV
Mammalian excreta	ISO 927	Visual examination followed by Gravimetry (whole)	I
Mould damage	MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32)	Visual Examination (for whole)	I
	AOAC 945.94	Visual Examination (for Ground)	I
Insect Damage	MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32)	Visual Examination followed by Gravimetry	I
Extraneous matter ³	ISO 927	Visual Examination followed by Gravimetry	I
Foreign matter ⁴	ISO 927	Visual Examination followed by Gravimetry	I
Live insect	ISO 927 / AOAC 960.54	Visual Examination	I
Insect filth	ISO 927	Visual Examination	I
Insect fragments	ISO 927	Visual examination counting	I
Rodent hair	AOAC 978.22 (Ground chilli)	Microscopic examination	I
	AOAC 977.25 B (Ground paprika)	Microscopic examination	I