

CODEX ALIMENTARIUS COMMISSION

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Food and Agriculture
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World Health
Organization

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

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REPORT OF THE 4TH SESSION OF THE CODEX COMMITTEE ON SPICES AND CULINARY HERBS

Thiruvananthapuram, Kerala, India

21–25 January 2019

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SUMMARY AND STATUS OF WORK					
Responsible Party	Purpose	Text/Topic	Code	Step	Para(s)
Members CCEXEC77 CAC42	Adoption	Proposed draft standard for dried or dehydrated garlic	N04-2017	5/8	47
	Adoption	Proposed draft standard for dried oregano	N06-2014	5	30 (i)
	Adoption	Proposed draft standard for dried roots, rhizomes and bulbs — dried or dehydrated ginger	N02-2017	5	39 (i)
	Adoption	Proposed draft standard for dried basil	N05-2017	5	66 (i)
	Adoption	Proposed draft standard for dried floral parts – dried cloves	N08-2017	5	88 (i)
	Adoption	Proposed draft standard for saffron	N06-2017	5	95 (i)
CAC42 CCEXEC77 CCCF	Information	Clarification on the Format for Codex Commodity Standards in the Procedural Manual whether Codex Codes of Practice e.g. CXC74-2014 can be referenced under the provisions for contaminants.			26
		Extension of the timeline for completion of work on oregano to CCSC5			30
CCFA CCFL CCMAS	Endorsement	Relevant sections of the: i) Proposed draft standard for dried or dehydrated garlic ii) Proposed draft standard for dried oregano iii) Proposed draft standard for dried roots, rhizomes and bulbs — dried or dehydrated ginger iv) Proposed draft standard for dried basil v) Proposed draft standard for dried floral parts – dried cloves vi) Proposed draft standard for saffron			30, 39, 47, 66, 88, 95
CCFA	Information/ Action	Alignment of food additives for spices and culinary herbs			9
		Technological justification of food additives			10
		Clarify how processing aids could be addressed under the Section “Food additives” in accordance with relevant provisions in the Procedural Manual;			39 (iii)
EWG (Turkey) CCSCH5	Drafting	Proposed draft standard for Oregano		6/7	30
EWG (Nigeria) CCSCH5	Drafting	Proposed draft standard for dried roots, rhizomes and bulbs — dried or dehydrated ginger		6/7	39
EWG (India) CCSCH5	Drafting	Proposed draft standard for dried chili pepper and paprika		2/3	54
EWG (Egypt) CCSCH5	Drafting	Proposed draft standard for dried basil		6/7	66
EWG (Indonesia) CCSCH5	Drafting	Proposed draft standard for dried nutmeg		2/3	78
EWG (Nigeria) CCSCH5	Drafting	Proposed draft standard for dried floral parts – dried cloves		6/7	88
USA CCSCH5	Updating	Continuation with the task of updating the template		-	98

LIST OF ABBREVIATIONS

ADOGA	American Dried Onion and Garlic Association
AOAC	Association of Official Analytical Chemists
ASTA	American Spice Trade Association
CAC	Codex Alimentarius Commission
CCCF	Codex Committee on Contaminants in Foods
CCEXEC	Executive Committee of the Codex Alimentarius Commission
CCFA	Codex Committee on Food Additives
CCFFV	Codex Committee on Fresh Fruits and Vegetables
CCFH	Codex Committee on Food Hygiene
CCFL	Codex Committee on Food Labelling
CCMAS	Codex Committee on Methods of Analysis and Sampling
CCPFV	Codex Committee on Processes Fruits and Vegetables
CCSCH	Codex Committee on Spices and Culinary Herbs
CL	Circular letter
CRD	Conference room document
CXS	Codex Standard
CXC	Codex code of practice
CXG	Codex guideline
EU	European Union
EWG	Electronic working group
GMP	Good Manufacturing Practice
GSFA	General Standard on Food Additives
FAO	Food and Agriculture Organization of the United Nations
FDA	United States Food and Drug Administration
GSFA	General Standard for Food Additives
ISO	International Organization for Standardization
PWG	Physical working group
SCH	Spices and culinary herbs
WHO	World Health Organization

INTRODUCTION

1. The Codex Committee on Spices and Culinary Herbs (CCSCH) held its fourth session in Thiruvananthapuram, Kerala, India, from 21 to 25 January 2019, at the invitation of the Government of India. Dr M. R. Sudharshan, former Research Director, Spices Board India, Ministry of Commerce and Industry, Government of India, chaired the session, which was attended by 26 Member countries, one Member organization and one Observer organization. A list of participants is contained in Appendix I.

OPENING OF THE SESSION

2. The Governor of the State of Kerala, Shri Justice (Retired) P. Sathasivam, opened the meeting, welcoming participants and underscoring the relevance of CCSCH's work to the global trade in spices. The Committee also heard welcome addresses by: the Minister for Commerce, Industry and Civil Aviation, Government of India, Shri Suresh Prabhu; the Chairperson of the Food Safety and Standards Authority of India, Ms. Rita Teoatia; the Director, Plantations, Ministry of Commerce, Industry and Civil Aviation; and the Secretary, Spices Board India. Vice-Chairperson of the Codex Alimentarius Commission (CAC) Professor Purwiyatno Hariyadi addressed the Committee on behalf of the Chairperson and Vice-Chairpersons of the Commission.

Division of Competence¹

3. The Committee noted the division of competence between the European Union (EU) and its member States, in accordance with paragraph 5, Rule II, of the Rules of Procedure of the Codex Alimentarius Commission.

ADOPTION OF THE AGENDA (Agenda item 1)²

4. The Committee adopted the agenda.
5. The Committee agreed to establish an in-session working group, chaired by the United States of America and co-chaired by India, to:
 - i. consider proposals for new work submitted in reply to CL 2017/67-SCH;
 - ii. assess the proposals against the "Criteria for the establishment of work priorities" set out in the Codex Procedural Manual;
 - iii. prepare recommendations for the plenary;
 - iv. consider:
 - a. a phased approach to implement the elaboration of group standards;
 - b. the prioritization of group standards; and
 - c. the prioritization of work on standards for individual commodities belonging to the same group; and
 - v. finalize the template for group standards and apply it to the priority proposed standards.

MATTERS REFERRED BY THE CODEX ALIMENTARIUS COMMISSION AND ITS SUBSIDIARY BODIES (Agenda item 2)³

6. The Committee took note of the matters referred for information and decided to consider issues raised under the relevant agenda items.

CCSCH work management

7. The Committee referred the recommendation of CAC40 regarding work on group standards for consideration to the in-session working group as per terms of reference (iv) and (v) in paragraph 5 of the present report.

Template for developing sampling plans

8. The Committee noted that work was under way in CCMAS on a template for commodity committees to use in developing sampling plans and agreed to await that template before resuming development of such plans for spices and culinary herbs (SCH).

¹ CRD1 (Annotated Agenda – Division of competence between the European Union and its Member States)

² CX/SCH 19/4/1.

³ CX/SCH 19/4/2; CX/SCH 19/4/2 Add.1; CRD2 (Report of the In-session Working Group on Priorities and Group Standards); CRD3 (United States); CRD10 (India).

Guidance on the alignment of food-additive provisions and alignment plan

9. The Committee noted that only anticaking agents may be used in SCH and only in the powdered form of such products and therefore agreed to forward the following generic statement to CCFA for endorsement:

“Anticaking agents may be used in the powdered form of the product in accordance with Table 3 of the *General Standards for Food Additives* (CXS 192-1995).”

Technological justification for the use of food additives

10. The Committee agreed to inform CCFA that anticaking agents were used in the powdered form of culinary herbs with the purpose of maintaining the free-flowing physical characteristic of the product and that magnesium stearate (INS 470 (iii)) and amorphous silicon dioxide (INS 551) may be used in the powdered form and in accordance with good manufacturing practice (GMP).

PROPOSED DRAFT STANDARD FOR DRIED OREGANO (Agenda item 3)⁴

11. Turkey, as EWG Chair, introduced the proposed draft, noting that consensus had been reached on all provisions except those parameters in square brackets, which required further consideration by the Committee.
12. Recalling that the item had been under consideration since the Committee's first session, the Chairperson urged the Committee to take an expeditious approach with a view to advancing the work.
13. The Committee considered the proposed draft standard section by section; made editorial corrections and further amendments for alignment with the draft CCSCCH layout template and existing CCSCCH Standards; and took the following decisions.

Section 2.1 Product definition

14. The Committee considered the Chairperson's proposal to simplify Table 1 (Dried Culinary Herbs covered by the standard) to cover only the general name “Oregano” and the two species “*Oregano* spp.” and “*Lippia* spp.”, with information relating to scientific names of species addressed as mandatory labelling provisions under Section 8.
15. Delegations in favour noted the proposed changes were in line with trade practices and would have no effect on the layout/format of SCH standards.
16. Other delegations proposed the deletion of Section 2.1 (Table 1) and inclusion of the names “*Origanum* spp.” and “*Lippia* spp.” in Sections 1 (Scope) and 8 (Labelling) so as to distinguish adequately between such products.

Conclusion

17. The Committee agreed to:
- retain Table 1 in Section 2.1, Product definition, recalling that the list of scientific names was non-exhaustive;
 - delete the general name *Lippia* from the Table; and
 - include the additional scientific name “*Origanum dubium*” and trade name “Oregano of Cyprus” in square brackets..

Section 2.2 Styles

18. The Committee amended this Section to include a statement clarifying that the particle size of ground/powdered styles was a matter for contractual agreement between buyer and seller.

Section 3.2.2 Odour, flavour and colour

19. The Committee deleted the description of flavours, for consistency with corresponding provisions in existing CCSCCH Standards.

Section 3.2.3 Classification

20. The Committee noted the explanation that, under existing international trade practices, the grading of oregano was optional and that the chemical and physical characteristics of Class/Grade II were to be considered as minimum requirements for “unclassified/ungraded”. The Committee agreed to amend this Section to: 1) specify that the classification of oregano was optional; and 2) clarify the minimum requirements for oregano traded as unclassified/ungraded with the addition of the following text: “When dried oregano is traded as

⁴ CX/SCH 19/4/3; CX/SCH 19/4/3 Add.1 (Colombia, European Union, India, Japan, Kenya, Mexico, Philippines, United States of America and Zambia); CX/SCH 19/4/3 Add.2 (India and Republic of Korea); CRD3 (USA); CRD4 (Mexico and Morocco); CRD10 (India); CRD11 (Ghana).

unclassified/ungraded, the chemical and physical characteristics for Class/Grade II apply as the minimum requirements”.

Section 3.2.4 Physical characteristics

Table 2

21. The Committee considered the physical requirements for whole, crushed/rubbed and ground oregano (Table 2) and:
- i. agreed to amend the title of the table by inserting “allowed tolerance for defects” and to insert in the body of the table, for consistency with existing CCSCH Standards, parameters for insect fragments, mould damage/insect damage and other excreta;
 - ii. clarified that “other excreta” related to excreta from animal sources other than mammals, such as reptiles and birds, and that methods of analysis were available for this parameter; and
 - iii. agreed on the parameters contained in Table 2.
22. The Committee noted concerns regarding the inconsistent use of units for physical parameters and agreed that this aspect should be clarified in the draft CCSCH layout template and dealt with in future discussions.

Table 3

23. Adopted all proposed values for the chemical requirements and deleted the footnote on volatile markers since this aspect was covered under Section 3.2.2.
24. Agreed to delete Sections 3.3 and 3.4 to avoid duplication with the sampling plans under development.

Section 4 Food additives

25. The Committee confirmed that anticaking agents were used in ground/powdered oregano to maintain the free-flowing physical characteristic of the product and therefore agreed to align these provisions with a standardized text on the use of food additives in spices and culinary herbs (see paragraphs 9).

Section 5 Contaminants

26. The Committee noted concerns regarding the potential need to address pyrrolizidine alkaloid contamination from weeds and agreed that a provisional reference to the *Code of Practice for Weed Control to Prevent and Reduce Pyrrolizidine Alkaloid Contamination in Food and Feed* (CXC 74-2014) may be relevant. The Procedural Manual was not clear on how such Codes of Practice could be referenced under contaminants provisions.
27. The Committee agreed to make a provisional reference to the *Code of Practice for Weed Control to Prevent and Reduce Pyrrolizidine Alkaloid Contamination in Food and Feed* (CXC 74-2014).

Section 8 Labelling

28. The Committee agreed, for consistency with existing CCSCH Standards, to include: mandatory indication of trade name, varietal type and country of origin/harvest; and optional indication of commercial identification (i.e. class, grade, size) and region of production.

Section 9 Methods of analysis and sampling

29. The Committee accepted the proposed methods and their corresponding types.

Conclusion

30. The Committee agreed to:
- i. forward the proposed draft Standard for dried Oregano to CAC42 for adoption at Step 5 (Appendix II) and extension of the timeline for completion until CCSCH5; and
 - ii. forward the provisions on food additives, labelling and methods of analysis and sampling to the appropriate committees for endorsement; and
 - iii. re-establish an EWG, chaired by Turkey and working in English only, to review Sections: 2.1, Product definition, and 8, Labelling, and those outstanding issues as indicated within square brackets.

PROPOSED DRAFT STANDARD FOR DRIED OR DEHYDRATED GINGER (Agenda item 4.1)⁵

31. Nigeria as EWG Chair introduced its report, underscoring that the draft text had been prepared using the standard CCSCCH group template, and highlighted those provisions remaining under discussion.
32. The Committee considered the proposed draft standard section by section, making editorial corrections and the following amendments.

Section 2 Product definition

33. The Committee agreed to align this Section with the standard group template, amending the “Common name” in Table 1 to read “dried ginger”, and further defined the styles “whole” and “pieces”.

Section 8 Labelling

34. The Committee amended this Section for consistency with CCSCCH texts by including provisions regarding trade name/variety type, region of production and year of harvest, and deleting that on species.

Section 9.1 Methods of analysis

35. The Committee agreed to include “Type” for each method indicated and to add rows specifying “Mold visible” and “Live insects”. One delegation expressed concern that some of methods listed used highly toxic chemicals and therefore requested that the Committee consider specifying optional methods.

Annex I

36. The Committee discussed and agreed on the various parameters and values in the table, amending the parameter “Water soluble extract cold” to “Hot water-insoluble solids”, and noting that the proposed levels of calcium oxide and sulphur dioxide and their use as bleaching agents required further consideration.

Annex II

37. The Committee considered the various proposed parameters, inserting “Live insects, Count/100 g (max)”, deleting “Mold damaged” and including “Mold visible” together with “Insect defiled/infested”, and inserted a footnote defining “Excreta, other”.
38. The Committee agreed on all values except that for “Mold visible/Insect defiled/infested” for Ground/Powder, which required further consideration.

Conclusion

39. The Committee:
- i. agreed to forward the proposed draft standard for dried roots, rhizomes and bulbs — dried or dehydrated ginger to CAC42 for adoption at Step 5 (Appendix III);
 - ii. noted that provisions on food additives, labelling and methods of analysis would be forwarded to the relevant committees for endorsement;
 - iii. agreed to request the Codex Committee on Food Additives to clarify how processing aids could be addressed under the Section 4 “Food additives” in accordance with relevant provisions in the Codex Procedural Manual; and
 - iv. agreed to re-establish an EWG, chaired by Nigeria and working in English only, to consider the outstanding issues taking into account the discussions CCSCCH4 and comments received at Step 6.

PROPOSED DRAFT STANDARD FOR DRIED OR DEHYDRATED GARLIC (Agenda item 4.2)⁶

40. India as Chair of the EWG presented its report.
41. The Committee considered the proposed draft standard section by section, aligned its provisions with the draft CCSCCH layout template and relevant sections of existing CCSCCH Standards, made editorial corrections and took the following decisions.

Section 2 - Product definition

42. The Committee clarified that the draft standard would apply to dried or dehydrated cloves and bulbs of garlic, and defined the style “whole”.

⁵ CX/SCH 19/4/4; CX/SCH 19/4/4 Add.1 (Colombia, India, Iraq, Japan, Kenya and United States of America); CX/SCH 19/4/4 Add.2 (India); CRD6 (Indonesia and Nigeria); CRD10 (India); CRD11 (Ghana).

⁶ CX/SCH 19/4/5; CX/SCH 19/4/5 Add.1 (Colombia, Iran, Mauritius, Mexico, United States of America and USP); CX/SCH 19/4/6 Add.2 (India); CRD5 (Nigeria and Morocco); CRD10 (India); CRD11 (Ghana).

Section 3 - Composition

43. The Committee amended “species” to “variety” and agreed to transfer the text regarding the declaration of dominant variety name to a footnote in Section 8.2 “Product name”. It further deleted the text on “Classification of defectives” and “Lot acceptance” since these aspects would be addressed under Section 9.2 “Sampling plan”; and clarified that requirements regarding the presence of live insects, dead insects, insect fragments and rodent contamination were covered in Annex II and therefore deleted them from this Section.

Other sections

44. The Committee agreed to align provisions on food additives, contaminants, hygiene, weights and measures, labelling and methods of analysis and sampling in accordance with the decisions taken with regard to the draft standard for dried or dehydrated ginger (see Appendix III), and in addition: deleted the hygienic requirements for packaging to avoid duplication with existing Codex texts; and inserted methods for “insect fragments” and “mold damage” under Section 9.

Annex I

45. The Committee discussed and agreed on all values and deleted a superfluous footnote.

Annex II

46. The Committee discussed and agreed on parameters, inserting “Excreta, mammalian”, and agreed on all values.

Conclusion

47. The Committee, noting that all outstanding issues had been resolved, agreed to:
- i. forward the proposed draft standard for dried or dehydrated garlic to CAC42 for adoption at Step 5/8 (Appendix IV); and
 - ii. forward the provisions on food additives, labelling and methods of analysis to the relevant Committees for endorsement.

PROPOSED DRAFT STANDARD FOR DRIED OR DEHYDRATED CHILLI PEPPER AND PAPRIKA (Agenda item 5.1)⁷

48. India as Chair of the EWG introduced its report and the proposed draft standard.
49. The Committee considered the proposed draft standard section by section and proposed amendments for consistency with other CCSCCH texts (Appendices II, III, IV, V, VI), including: the clarification under Section 2 “Product definition” that the standard would cover “*Capsicum* spp.”; the addition under Section 2.2 “Styles” of “crushed”; the specification under Section 3.2.3 that “When dried chilli pepper/paprika is unclassified/ungraded, the provisions for physical and chemical characteristics applicable to class/Grade II apply as minimum requirements”; and the inclusion under Section 8 “Labelling” of specifications regarding trade names, the mandatory indication of “country of origin/harvest” and optional indication of “region of production” and “year of harvest”. Furthermore, it was agreed that the level of pungency may be indicated on the label in line with trade practice.
50. The Committee also noted the explanation that chilli pepper and paprika were generic terms, the difference between the two products being the level of pungency, as reflected in Table on chemical properties, and further clarified that, while the scope of the standard did not cover blends of different spices, it did cover mixtures of varieties within the *Capsicum* species. It was further agreed to use the term “chilli pepper” as opposed to simply “chilli” throughout the text for clarity.
51. However, there was a lack of consensus regarding the applicable values for many of the specifications for the chemical and physical properties to be included in Annexes I and II to the draft standard. It was further noted that there was a degree of overlap between Annexes I and II and the Committee could consider merging them or splitting Annex II, consistent with other CCSCCH texts.
52. The Chairperson reiterated that it was the responsibility of EWG chairpersons to ensure the appropriate use of group standard templates so as to ensure consistency across CCSCCH texts.
53. In response to a query from one member country as to whether the draft standard would cover a traditional product consisting of *Capsicum* spp. having undergone a fermentation process and the addition of oil and salt, the Chairperson clarified that such a product was outside the scope of the Committee.

⁷ CX/SCH 19/4/6; CX/SCH 19/4/6 Add.1 (Colombia, Iraq, Japan, Malawi and Sri Lanka); CX/SCH 19/4/6 Add.1 (Brazil, India, Republic of Korea and the United States of America); CRD3 (United States of America); CRD7 (Indonesia, Nigeria and Morocco); CRD10 (India).

Conclusion

54. The Committee, in the light of the significant lack of consensus on the specifications for the chemical and physical properties of dried chilli pepper and paprika, decided to:
- i. retain the proposed draft standard for dried or dehydrated chilli pepper and paprika at Step 2/3 for further consideration, taking into account the comments made at and/or submitted to CCSC4, and
 - ii. establish an EWG, chaired by India and working in English only, to redraft the document for circulation for comments at Step 3.

PROPOSED DRAFT STANDARD FOR DRIED BASIL (Agenda item 6.1)⁸

55. Egypt as Chair of the EWG introduced its report.
56. The Committee agreed to consider the draft standard section by section, made editorial corrections and amendments for clarity and consistency, and took the following decisions.

Product definitions

57. For consistency with existing CCSC Standards, the Committee updated this Section and added two new trade names within square brackets, field basil (*Salvia occidentalis Sw*) and sacred basil (*Pimpinella anisoidis V. Brig*), to Table 1.

Styles and forms

58. The Committee agreed to:
- a. include the term “flaked” to the style “crushed/rubbed/flaked” as it was commonly used in trade;
 - b. delete the provision for pieces; and
 - c. reflect in a footnote under the section on labelling that other distinctly different styles/forms besides the three described in the draft standard were allowed provided that they were labelled.

Quality factors

59. Agreed to delete the provisions on infestations as it was already covered under Annex II (Physical Properties for dried basil) and adulteration.

Odour, flavour and colour

60. This Section was aligned with similar sections in other SCH Standards and a statement clarifying that the colour of dried basil depended on the type of post-harvest treatment used was inserted.

Classification of defectives and lot acceptance

61. The Committee recalled that the requirements for defectives and lot acceptance would be covered under sampling plans to be developed, and agreed to delete these two provisions from the draft standard.

Other sections

62. The Committee considered the sections on food additives, contaminants, hygiene, weights and measures, labelling and methods of analysis and sampling, reaffirmed that the decisions taken on the corresponding sections under agenda item 3 (see paras. 25-29) would apply to these sections, and made the consequential amendments.
63. In addition, the Committee decided to:
- i. add a footnote to the name of product to clarify that the general name may be used for blends of the different species listed in Table 1 and, where a trade name was used, the product must comprise a minimum of 80% of the species listed for that trade name;
 - ii. delete the provision on packaging from the section on labelling to avoid duplication with existing Codex texts; and
 - iii. add a parameter for colour measurement to the Methods of analysis Table.

⁸ CX/SCH 19/4/7; CX/SCH 19/4/7 Add.1 (Colombia, European Union, Iran, Japan, Mexico, United States of America, FoodDrink Europe, IOSTA and USP); CX/SCH 19/4/7 Add.2 (India); CRD10 (India); CRD11 (Ghana).

Annex I – Chemical properties for dried basil

64. The Committee considered the parameters and their values. It deleted the “form/style” section with regard to “pieces”, and the parameters for non-volatile ether extract, crude fibre and other properties. It was agreed to adopt the values for the different parameters in Annex I.

Annex II – Physical properties of basil

65. The Committee, unable to reach consensus on the values for some parameters, agreed to consider them further at CCSCH5.

Conclusion

66. The Committee agreed to:
- i. forward the proposed draft standard for dried basil to CAC42 for adoption at Step 5 (Appendix V);
 - ii. forward the provisions on food additives, labelling and methods of analysis to the relevant committees for endorsement; and
 - iii. re-establish an EWG, chaired by Egypt and working in English only, to consider the outstanding issues taking into account the discussions CCSCH4 and comments received at Step 6.

PROPOSED DRAFT STANDARD FOR DRIED NUTMEG (Agenda item 7.1)⁹

67. Indonesia as Chair of the EWG summarized its work and presented the proposed draft standard.
68. The Committee discussed the draft standard section by section, considered the necessary amendments for alignment with the draft CCSCH layout template and existing CCSCH Standards, and noted the following aspects requiring further consideration.

Scope

69. The scope should be aligned with the standard template for group standards for dried seeds and may therefore deviate from the original scope as articulated in the project document, which had included reference to “mace”. The Committee noted and agreed that mace was excluded as it was not classified as a seed.

Product definition and styles

70. The sections on product definition and styles should be aligned with the draft CCSCH layout template. In accordance with existing trade practices, sizing requirements for whole nutmeg in-shell and shelled were added. The different styles should be defined to accurately reflect product characteristics.

Odour, flavour and colour

71. This section should be aligned with corresponding provisions in existing CCSCH Standards and “odour” should be included as a descriptive characteristic.

Table 1 — General physical requirements for nutmeg

72. This section should articulate the minimum quality requirements for Class II and include a specification regarding “mould-damaged seeds” to assist in the control of contamination of mycotoxins in nutmeg seeds during trade.

Table 2 — Chemical characteristics

73. Some delegations considered that a parameter “calcium content” expressed as “calcium oxide on dry basis (%) by weight (max)” and applicable only to the styles “whole” and “broken” should be included. Those delegations suggested that this substance was used as processing aid for bleaching and to aid the reduction of microbiological contamination. The Committee noted this parameter required further discussion since some members expressed concern about its use and classification.

Classification

74. The proposed draft standard should articulate provisions for two classes (i.e. Class/Grade I and Class/Grade II), with the physical/chemical requirements for Class II applying as minimum requirements to cover any trade in unclassified/ungraded product.
75. The quality criteria specified in Tables 3, 4, 5 and 6 should be combined with either Table 1 or Table 2 or both as appropriate.

⁹ CX/SCH 19/4/8; CX/SCH 19/4/8 Add.1 (Colombia, Iraq, Kenya, Japan, Mexico, United States of America and Zambia); CX/SCH 19/4/8 Add.2 (India); CRD10 (India).

Classification of defectives and lot acceptance

76. Sections 3.3 “Classification of defectives” and 3.4 “Lot acceptance” should be deleted, as should Section 10.2 “Sampling plans”, pending the provision the relevant template by CCMAS.

Others

77. The sections on food additives, contaminants, hygiene, weights and measures, labelling and methods of analysis and sampling should be aligned with other CCSCCH texts, in accordance with the decisions made at CCSCCH4 (see agenda items 3.1, 4.1, 4.2, 5.1, 6.1, 8.1 and 8.2).

Conclusion

78. The Committee, noting that a number of outstanding issues required further consideration, agreed to:
- i. return the proposed draft standard for dried nutmeg to Step 2 for redrafting, taking into account the comments made at and/or submitted to CCSCCH4, then circulation for comments at Step 3; and
 - ii. re-establish an EWG, chaired by Indonesia and working in English only, to proceed with the task of redrafting proposed draft standard for nutmeg.

PROPOSED DRAFT STANDARD FOR DRIED CLOVES (Agenda item 8.1)¹⁰

79. Nigeria as EWG Chair introduced the item, outlined the process followed by the EWG and noted that the draft had been prepared in accordance with the draft CCSCCH layout template for group standards.
80. The Committee agreed to consider the draft standard section by section, made editorial corrections and amendments for clarity and consistency, and took the following decisions.

Scope

81. The Committee clarified that standard applied to dried floral parts only and made appropriate editorial amendments.

Styles/Forms

82. The Committee agreed to define “whole/intact” (dried unopened flower buds of *Syzygium aromaticum* (L.) Merrill & Perry) and “ground/powdered” (products obtained by grinding cloves without any addition), and deleted “cracked/crushed”.

Essential composition and quality factors

83. The Committee aligned this Section with the draft CCSCCH layout template; agreed that the classification for dried floral parts was optional; and noted that the provisions for Class/Grade II requirements would apply as minimum requirements for products traded as unclassified/ungraded.

Other sections

84. The Committee recalled the various decisions taken under other agenda items with respect to the sections on food additives, contaminants, hygiene, weights and measures, labelling and methods of analysis and sampling, and agreed that such decisions would apply to dried floral parts in general and cloves in particular. Those sections were consequently aligned.
85. In addition, the Committee agreed to:
- i. under “Food additives”, insert a standardized text to provide for the use of only anticaking agents listed under Table 3 of the GSFA;
 - ii. align Section 8 “Labelling” with other draft standards discussed during the session; and
 - iii. under “Methods of analysis”, insert parameters and respective methods for crude fibre, mould visible and live insects, and indicate the corresponding type for all methods.

Annex I – Chemical characteristics for dried floral parts (Cloves)

86. The Committee aligned the styles with those specified in Section 2 as revised and agreed to the proposed values for various parameters except for volatile oils and crude fibre in whole cloves.

¹⁰ CX/SCH 19/4/9; CX/SCH 19/4/9 Add.1 (Colombia, Iraq, Kenya, Japan, Mexico and United States of America); CX/SCH 19/4/9 Add.2 (India); CRD8 (Nigeria); CRD10 (India); CRD11 (Ghana).

Annex II – Physical characteristics for dried floral parts (Cloves)

87. The Committee separated the parameters “other excreta” and “mammalian excreta”, inserted that of “dead insects by count”, deleted the requirement and footnote regarding “economic adulteration” and agreed to consider those values on which consensus had not been reached further at CCSCH5.

Conclusion

88. The Committee agreed to:
- i. forward the proposed draft standard for dried floral parts – dried cloves to CAC42 for adoption at Step 5 (Appendix VI);
 - ii. forward the provisions on food additives, labelling and methods of analysis to the relevant Committees for endorsement; and
 - iii. re-establish an EWG, chaired by Nigeria and working in English only, to consider the outstanding issues taking into account the discussions CCSCH4 and comments received at Step 6.

PROPOSED DRAFT STANDARD FOR SAFFRON (Agenda item 8.2)¹¹

89. The Islamic Republic of Iran as Chair of the EWG presented its report.
90. The Committee considered the proposed draft standard section by section, made amendments for consistency and alignment with other CCSCH texts (Appendices II, III, IV, V, VI), and took the following additional actions:
- i. deleted the provisions under Section 3.2 “Quality factors” regarding infestation and adulteration and aligning Sections 3.2.1 “Odour, flavour and colour” and 3.2.3 “Chemical and physical characteristics” for linguistic consistency;
 - ii. agreed that “No food additives are permitted for use in products covered by this standard”;
 - iii. deleted the hygienic requirements for packaging to avoid duplication with existing Codex texts; and
 - iv. deleted the draft sampling plans pending the provision of the relevant template by CCMAS.

Annex I and Annex II

91. The Committee considered and agreed on the parameters and values listed in:
- i. Table 1 Chemical characteristics, except the values for “Water soluble extract cold on dry matter (% max)”, on which members could not reach consensus; and
 - ii. Table 2 Physical characteristics for dried floral parts.
92. The Committee agreed to add a footnote to Table 2 regarding the specific characteristics of saffron relating to extraneous matter and foreign matter.
93. The delegation of the United States of America expressed concern that the tendency of having zero tolerance for defects in saffron and other SCH in powdered form would increase product rejections and was not consistent with existing international trade practices. This view was supported by some other delegations.
94. The delegation of the EU and its Member States underlined that, due to the high value of saffron, it would be appropriate to include classes with respect to the three markers set out in Table I Annex I.

Conclusion

95. The Committee agreed to:
- i. forward the proposed draft standard for saffron to CAC42 for adoption at Step 5 (Appendix VII);
 - ii. forward the provisions on food additives, labelling and methods of analysis to the relevant Committees for endorsement; and
 - iii. re-establish an EWG, chaired by the Islamic Republic of Iran and working in English only, to consider the outstanding issues taking into account the discussions CCSCH4 and comments received at Step 6.

¹¹ CX/SCH 19/4/10; CX/ SCH 19/4/10 Add.1 (Colombia, Egypt, India, Iraq, Japan, Kenya, United States of America and IUFOST); CX/ SCH 19/4/10 Add.2 (European Union); CRD9 (Morocco).

PROPOSAL FOR NEW WORK (REPLIES TO CL 2017/67)¹² (Agenda item 9)**Report of the In-Session Working Group on Priorities and Group Standards**

96. The delegation of the United States of America as Chair of the In-Session Working Group on Priorities and Group Standards presented its report (CRD2). The Committee considered the following five recommendations.

Recommendation 1

97. The Committee welcomed this recommendation, noting that groupings based on the parts of the plant as established at CCSCH3 (2017) were still valid, and endorsed the corresponding approach of updating that list as necessary.

Recommendation 2

98. The Committee noted the updated template to be used for individual and group standards alike, as well as the comments made by members. It requested the United States of America to continue with the task of updating the template, taking into account the various recommendations made at the current session under different agenda items.

Recommendations 3 and 4

99. The Committee did not take a decision on recommendations 3 and 4 due to time constraints.

Recommendation 5

100. The Committee noted the recommendation.

New work proposals

101. On account of its already heavy workload, the Committee declined to submit the two new work proposals to CAC for approval. The Committee recalled that, even without adopting the two new work proposals, there were seven active items on its agenda for the next session.

Potential physical working group at CCSCH

102. Recognizing both the potential value and major resource implications of holding a physical working group (PWG), the Committee welcomed the Chairperson's agreement to request the host country to consider the possibility convening a one-day PWG, without interpretation, to coincide with CCSCH5.

Conclusion

103. The Committee:
- i. noted with gratitude the agreement of the United States of America to proceed with the task of updating the layout template to take account of the discussions undertaken at CCSCH4; and
 - ii. decided, on account of its already heavy workload, to hold the two new work proposals, on cardamom (CRD 13) and dried and dehydrated turmeric, for further consideration at CCSCH5, and noted that they may be updated in the light of new scientific evidence.

OTHER BUSINESS (Agenda item 10)

104. No items were raised under "Other business".

DATE AND PLACE OF NEXT SESSION (Agenda item 11)

105. The Committee agreed to hold its fifth session in India in approximately 18 months, with the exact date and venue subject to confirmation by the host country and Codex Secretariats.

¹² CX/ SCH 19/4/11; CRD2 (Report of the In-session Working Group on Priorities and Group Standards); CRD3 (United States); CRD13 (India and Iran).

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PROPOSED DRAFT STANDARD FOR DRIED OREGANO

(For adoption at Step 5)

1 SCOPE

This Standard applies to dried leaves/flowers of oregano, as defined in Section 2.1, offered for direct consumption, as an ingredient in food processing or for repackaging if required. It excludes dried oregano intended for industrial processing.

2 DESCRIPTION

2.1 Product definition

Dried oregano is the product obtained from the leaves and the flowering tops of plants including but not limited to those listed in Table 1 and processed in an appropriate manner, undergoing operations such as cleaning, drying, rubbing and sifting.

Table 1. Dried culinary herbs covered by this Standard

General name	Trade name	Scientific name
Oregano		<i>Origanum vulgare</i> L.
	Italian oregano	<i>Origanum x majoricum</i> Cambess.
	Turkish oregano Cretan oregano Oikea oregano	<i>Origanum onites</i> L.
	Turkish oregano	<i>Origanum vulgare</i> subsp. <i>virens</i> (Hoffmanns. & Link) Letsw.
	Greek oregano	<i>Origanum vulgare</i> subs <i>hirtum</i> .
	Syrian oregano	<i>Origanum syriacum</i> L.
	Turkestan oregano	<i>Origanum vulgare</i> sub sp. <i>viride</i> (Boiss.) Hayek <i>Origanum vulgare</i> sub sp. <i>Vulgare</i>
	Turkish sword oregano	<i>Satureja montana</i> L.
	[Oregano of Cyprus]	[<i>Origanum dubium</i>]
	Mexican oregano	<i>Lippia graveolens</i> Kunth <i>Lippia berlandieri</i> Schauer <i>Lippia</i> spp <i>Lippia palmeri</i> <i>Poliomintha longiflora</i>

2.2 Styles

2.2.1 Dried oregano may be offered in one of the following styles:

- a) Whole;
- b) Crushed/Rubbed: processed to varying degrees, ranging from a coarse to fine crush; and
- c) Ground/Powdered: processed into a powder.

2.2.2 The particle size of ground/powdered styles is determined by contractual agreement between buyer and seller.

3 ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

Product as defined in Section 2.

3.2 Quality factors

3.2.1 Moisture content

Dried oregano (whole, crushed or ground) shall not contain more than 12% moisture.

3.2.2 Odour, flavour and colour

Dried oregano shall have a characteristic odour and flavour, varying according to the chemical strain of the main components of the volatile oil (carvacrol and/or thymol), which may vary depending on geo-climatic factors/conditions. Dried oregano shall be free from any foreign odour or flavour and especially from mustiness. Dried oregano shall have a characteristic colour varying from pale greyish yellow green to dark green.

3.2.3 Classification

Whole and crushed/rubbed oregano may be classified in three classes/grades according physical and chemical requirements as specified in Table 2 and 3, respectively.

- Extra
- Class/Grade I
- Class/Grade II

When dried oregano is treated as unclassified/ungraded, the chemical and physical characteristics of Class/Grade II apply as the minimum requirements.

3.2.4 Physical characteristics

Whole, crushed/rubbed and ground/powdered oregano shall comply with the physical requirements specified in Table 2.

Table 2. Physical requirements for whole/crushed/rubbed and ground/powdered oregano (allowed tolerance for defects)

Parameter	Whole or Crushed/Rubbed Oregano			Ground/Powdered Oregano
	Extra	Class/Grade I	Class/Grade II	
Extraneous vegetable matter ⁽¹⁾ (maximum % mass fraction)	0.5	2	2	N/A
Foreign matter content ⁽²⁾ (maximum % mass fraction)	0.1	0.1	0.1	N/A
Tolerance for oregano powder among non-powder styles (% smaller than the particle size indicated) ⁽³⁾	5	10	20	N/A
Dead insects (maximum number/100 g)	3	3	3	N/A
Insects fragments (maximum number/10 g)	300	300	300	1250
Visible mold/insect damage (maximum % m/m)	1	3	5	N/A
Live insects	0	0	0	0
Mammalian excreta maximum (mg/Kg)	1.0	2.2	2.2	N/A
Other excreta (maximum mg/Kg) ⁽⁴⁾	10	10	22	N/A

⁽¹⁾: Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product, such as stems/sticks, etc.

⁽²⁾: Any visible/detectable objectionable foreign matter or material not usually associated with the natural components of the spice plant, such as stones, burlap bagging, metal, foreign leaves etc.

⁽³⁾: Particle size is evaluated upon request accompanied by supporting documents.

⁽⁴⁾: Excreta from other animals such as reptiles and birds.

3.2.5 Chemical characteristics

Whole, crushed/rubbed and ground/powdered-oregano shall comply with the chemical requirements specified in Table 3.

Table 3. Chemical requirements for whole/crushed/rubbed and ground oregano

Parameter	Whole/Crushed/Rubbed Oregano			Ground/Powdered Oregano
	Extra	Class/ Grade I	Class/ Grade II	
Total ash, % mass fraction (dry basis), maximum	9	10	10	12
Acid-insoluble ash, % mass fraction (dry basis), maximum	1.2	2	2	2.5
Volatile oils, ml/100 g (dry basis), minimum	2.5	2.0	1.5	1.5

4 FOOD ADDITIVES

Anticaking agents may be used in the powdered form of the product in accordance with Table 3 of the *General Standard for Food Additives* (CXS 192-1995).

5 CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995), [*Code of Practice for Weed Control to Prevent and Reduce Pyrrolizidine Alkaloid Contamination in Food and Feed* (CXC 74-2014)] and other relevant Codex texts.

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 It is recommended that the products covered by this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1-1969), *the Code of Hygienic Practice for Low-Moisture Foods* (CXC 75-2015), Annex III (Spices and Dried Aromatic Herbs), and other Codes of Practice.

6.2 The products shall comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria for Foods* (CXG 21-1997).

7 WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 The products covered by this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985). In particular, the following specific provisions apply:

8.2 Name of the product

8.2.1 The name of the product shall be "dried oregano" or "oregano" when the omission of the word dry would not mislead or confuse the consumer.

8.2.2 The name of the product shall include an indication of the trade name, varietal types as described in Table 1 and the style as described in Section 2.2.

8.3 Country of harvest/origin

8.3.1 Country of origin/country of harvest shall be indicated and the region of production may be indicated.

8.3.2 Year of harvest (optional)

8.4 Commercial identification

- Class/Grade, if applicable
- Size (optional)

8.5 Inspection mark (optional)**8.6 Labelling of non-retail containers**

Information for non-retail containers shall be given either on the package or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING**9.1 Methods of analysis****Table 4.** Methods of analysis¹

Parameter	Method	Principle	Type ¹
Moisture	ISO 939	Distillation	I
	ISO 760	Titration	II
	AOAC 2001.12	Titration	II
	ASTA 2.0	Distillation	I
Total ash	ISO 928	Gravimetry	I
	ASTA 3.0	Gravimetry	I
Acid-insoluble ash	ISO 930	Gravimetry	I
	ASTA 4.0	Gravimetry	I
Volatile oils	ISO 6571	Distillation followed by Volumetric	I
	ASTA 5.0	Distillation followed by Volumetric	I
Extraneous vegetable matter	ISO 927	Visual examination followed by Gravimetry	I
	ASTA 14.1	Visual examination followed by Gravimetry	I
Foreign matter	ISO 927	Visual examination followed by Gravimetry	I
Mammalian excreta	Macroanalytical Procedure Manual, USFDA, Technical Bulletin V.39 B (For whole)	Visual examination	IV
Other excreta	AOAC 993.27 (For Ground)	Enzymatic Detection Method	IV
Whole dead insect	ISO 927	Visual examination	IV
	MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32)	Visual examination	IV
Insect fragments	AOAC 975.49	Flotation method	IV
	AOAC 969.44	Flotation method	IV

¹ Latest edition or version of the approved method should be used

9.2 Sampling plan

To be developed.

¹ According to the definition of “types of method of analysis” as per Codex Procedural Manual Section II.

APPENDIX III

PROPOSED DRAFT STANDARD FOR DRIED ROOTS, RHIZOMES AND BULBS — DRIED OR DEHYDRATED GINGER

(For adoption at Step 5)

1 SCOPE

This Standard applies to dried roots, rhizomes and bulbs in their dried or dehydrated form as spices or culinary herbs, defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing, or for repacking if required. It excludes products for industrial processing.

2 DESCRIPTION**2.1 Product definition**

Dried roots, rhizomes and bulbs covered by this Standard (Table 1) are sold in styles/forms as indicated in 2.2.

Table 1. Dried roots, rhizomes, bulbs covered by this Standard

S/No	Common name	Scientific name
1.	Dried Ginger	<i>Zingiber officinale</i> , Roscoe

2.2 Styles/forms

Dried roots, rhizomes and bulbs may be:

- Whole: single or branched rhizomes of varying sized, which may be cut at both ends with the flattened circular shape intact;
- Pieces: comprising various cut, diced or sliced styles;
- Ground/powdered; or
- Of other styles distinct from those above, provided they are labelled accordingly.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 Composition**

Dried roots, rhizomes and bulbs as described in Section 2 above shall conform to requirements set in Annexes I and II.

3.2 Quality factors**3.2.1 Odour, flavour and colour**

Dried roots, rhizomes and bulbs shall have a characteristic aroma, colour and flavor, which may vary depending on geo-climatic factors/conditions, and shall be free from any foreign odour, flavour and colour.

3.2.2 Chemical and physical characteristics

Dried roots, rhizomes and bulbs shall comply with the requirements specified in Annexes I (Chemical characteristics) and II (Physical characteristics). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package.

3.2.3 Classification (optional)

In accordance with the chemical and physical characteristics in Section 3.2.2, dried roots, rhizomes and bulbs may be classified into the following grades:

- Extra;
- Grade I/Class I; and
- Grade II/Class II.

When unclassified/ungraded, the provisions for class/grade II apply as the minimum requirements.

4 FOOD ADDITIVES

Anticaking agents may be used in the powdered form of the product in accordance with Table 3 of the *General Standards for Food Additives* (CXS 192-1995).

5 CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 93-1995).

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1 - 1969), the *Code of Hygienic Practice for Low-Moisture Foods* (CXC 75 - 2015), *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78 - 2017), and other relevant Codex texts.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CXG 21-1997).

7 WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985). In particular, the following specific provisions shall apply:

8.2 Name of the product

8.2.1 The name of the product shall be as described in Section 2.1

8.2.2 The name of the product may include an indication of the style as described in Section 2.2.

8.2.3 Variety or cultivar, trade name/type may be listed on the label.

8.3 Country of origin/country of harvest

8.3.1 Country of origin/country of harvest shall be indicated, and the region of production may be indicated.

8.3.2 Year of harvest (optional)

8.4 Commercial identification

- Class/Grade, if applicable
- Size (optional)

8.5 Inspection mark (optional)

8.6 Labelling of non-retail containers

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of analysis*

Table 2. Methods of analysis

Parameter	Method	Principle	Type ¹
Moisture	ISO 939	Distillation	I
	AOAC 2001.12	Titration	II
	AOAC 986.21	Distillation	I
	ASTA 2.0	Distillation	I
Total Ash	ISO 928	Gravimetry	I
	AOAC 941.12	Gravimetry	I
	ASTA 3.0	Gravimetry	I
Acid Insoluble Ash	ISO 930	Gravimetry	I
	AOAC 941.12	Gravimetry	I
	ASTA 4.0	Gravimetry	I
Volatile Oil	ISO 6571	Distillation followed by Volumetry	I
	AOAC 962.17	Distillation followed by Volumetry	I
	ASTA 5.0	Distillation followed by Volumetry	I
Extraneous Matter	ISO 927	Visual Examination followed by Gravimetry	I
	AOAC 916.01	Visual Examination followed by Gravimetry	I
	ASTA 14.1	Visual Examination followed by Gravimetry	I
Foreign Matter	AOAC 960.51	Visual Examination followed by Gravimetry	I
	ISO 927	Visual Examination followed by Gravimetry	I
Insect Damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) https://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm105731.htm#v-117	Visual Examination	IV
Extractable Colour	American Dried Onion and Garlic Association (ADOGA) method IV.C.5	Chemical extraction	IV
Hot Water Insoluble Solids	ADOGA method IV.C.7	Chemical extraction followed by Gravimetry	I
Insects/Insect Fragments	Method appropriate for particular spice from AOAC Chapter 16, subchapter 14	Visual Examination	IV
Excreta Mammalian,	Macroanalytical Procedure Manual, USFDA, Technical Bulletin V.39 B (For whole)	Visual Examination	IV
Excreta Other	AOAC 993.27 (For Ground)	Enzymatic Detection Method	IV

¹ According to the definition of "types of method of analysis" as per Codex Procedural Manual Section II.

Mould visible	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual examination	IV
Live Insect	ISO 927 AOAC 960.51	Visual Examination Visual Examination	IV IV

* Latest edition or version of the approved method should be used.

9.2 SAMPLING PLAN

To be developed.

Annex I

Table 3. Chemical requirements for dried roots, rhizomes and bulbs

Product Name	Forms/ Styles	Total Ash %w/w (max)	Acid Insoluble Ash %w/w (max)	Moisture Content %w/w (max)	Volatile Oils mL/ 100g (min)	Hot Water Insoluble Solids (%) (w/w) (min)	Notes
Dried Ginger	Whole/ Pieces	8.0 (unbleached) 12.0 (bleached)	2.0	12.0	1.5	NA	[1.1% Calcium (as oxide) on dry basis by mass, max %, for unbleached. 2.5% Calcium (as oxide) on dry basis by mass, max %, for bleached.
	Ground/ Powder	8.0	2.0	12.0	1.0	10	Sulfur dioxide shall not be detected.]

Annex II

Table 4. Physical requirements for dried roots, rhizomes and bulbs

Product Name	Forms/ Styles	Whole insects, dead Count/100g (max)	Live Insects Count/100g (max)	Excreta mammalian mg/kg (max)	Excreta, other ³ mg/Kg (max)	Mould visible/ Insect defiled/ infested %w/w (max)	Extraneous matter ¹ %w/w (max)	Foreign matter ² %w/w (max)	Notes
Ginger	Whole	4.0	0	1.0	1.0	3.0*	2.0	0.5	
	Pieces	4.0	0	1.0	1.0	3.0*	1.0	0.5	
	Ground	0	0	0	0	[1.0]	1.0	0.5	

¹Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product.

²Any visible/detectable objectionable foreign matter or material not usually associated with the natural components of the spice plant, such as sticks, stones, burlap bagging, metal, etc.

³ Excreta from other animals, such as reptiles and birds.

*The combined defects for mold visible and insect defiled should not exceed 3.0%.

APPENDIX IV

PROPOSED DRAFT STANDARD FOR DRIED OR DEHYDRATED GARLIC

(For adoption at Step 5/8)

1 SCOPE

This Standard applies to garlic in its dried or dehydrated form as spices or culinary herbs, defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing, or for repacking if required. This Standard does not apply to products intended for industrial processing.

2 DESCRIPTIONS**2.1 Product definition**

Dried/Dehydrated garlic is a finished product obtained on drying the cloves and/or bulb of garlic (*Allium sativum* L).

2.2 Styles/forms

2.2.1 Dried roots, rhizomes and bulbs may be:

- Whole, defined as peeled, dry/dehydrated solo garlic and/or intact cloves;
- Cracked/broken;
- Ground/powdered; and
- Of other styles distinct from those above, provided they are labelled accordingly.

2.2.2 The particle size of pieces and ground/powdered styles is determined by contractual agreement between buyer and seller.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 Composition**

The product shall belong to the one defined in Section 2.1 and shall conform to requirements contained in Annexes I and II (Chemical and Physical Characteristics of Dried or Dehydrated Garlic). The general name may be used if the product is a blend of the different varieties listed under the general name for that commodity. When a specific name is used, the product must contain a minimum of 80% of the variety listed for that specific name.

3.2 Quality factors**3.2.1 Odour, flavour and colour**

The product shall have a characteristic aroma, colour and flavour, which may vary depending on geo-climatic factors/conditions/varieties, and shall be free from any foreign odour, colour, flavour and especially from mustiness.

3.2.2 Chemical and physical characteristics

The generic product shall comply with the requirements specified in Annex I (Chemical characteristics) and Annex II (Physical characteristics). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package. There shall not be any form of adulteration in the product.

4 FOOD ADDITIVES

Anticaking agents may be used in the powdered form of the product in accordance with Table 3 of the *General Standards for Food Additives* (CXS 192-1995).

5 CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995).

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1-1969), the *Code Of Hygienic Practice For Low-Moisture Foods* (CXC 75-2015); *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC78-2017) and other relevant Codex texts such as codes of hygienic practice and codes of practice.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria related to Foods* (CXG 21-1997).

7 WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985). In particular, the following specific provisions apply:

8.2 Name of the product

8.2.1 The name of the product shall be as described in Section 2.1.

8.2.2 The name of the product may include an indication of the style as described in Section 2.2.

8.2.3 Species, variety or cultivar may be listed on the label.

8.3 Country of origin/country of harvest

8.3.1 Country of origin/country of harvest shall be indicated, and the region of production may be indicated.

8.3.2 Year of harvest may be indicated.

8.4 Commercial Identification

- Class/Grade, if applicable

- Size (optional)

8.5 Inspection mark (optional)

8.6 Labelling of non-retail containers

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of analysis*

Parameter	Method	Principle	Type ¹
Moisture	ISO 939	Distillation	I
	AOAC 2001.12	Titration	II
	AOAC 986.21	Distillation	I
	ASTA 2.0	Distillation	I
Total Ash	ISO 928	Gravimetry	I
	AOAC 941.12	Gravimetry	I
	ASTA 3.0	Gravimetry	I
Acid Insoluble Ash	ISO 930	Gravimetry	I
	AOAC 941.12	Gravimetry	I
	ASTA 4.0	Gravimetry	I
Extraneous Matter	ISO 927	Visual Examination followed by Gravimetry	I
	ASTA 14.1	Visual Examination followed by Gravimetry	I
Foreign Matter	ISO 927	Visual Examination followed by Gravimetry	I
	AOAC 960.51	Sieving followed by Gravimetry	I
Insects/ /Insect Fragments	Method appropriate for particular spice from AOAC Chapter 16, subchapter 14	Visual Examination	IV
Live Insects	ISO 927	Visual Examination	IV
	AOAC 960.51	Visual Examination	IV
Excreta Mammalian,	Macroanalytical Procedure Manual, USFDA, Technical Bulletin V.39 B (For whole)	Visual Examination	IV
	AOAC 993.27 (For Ground)	Enzymatic Detection Method	IV
Cold Water Soluble Extract	ISO 941	Extraction followed by Gravimetry	I
Volatile Organic Sulfur Compounds Content	ISO 5567	Distillation followed by Titrimetry	IV
Mould damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual Examination (For whole)	IV

* Latest edition or version of the approved method should be used

9.2 SAMPLING PLAN

To be developed.

¹ According to the definition of "types of method of analysis" as per Codex Procedural Manual Section II.

ANNEX I

A. Chemical Characteristics of Dried or Dehydrated Garlic	
Parameter	Requirement
Moisture, % w/w (max)	
(i) In case of Powdered Garlic	7.0
(ii) Other than Powdered Garlic	8.0
Total ash on dry basis, % w/w (max)	6.0
Acid Insoluble Ash, on dry basis, % w/w (max)	0.5
Volatile organic sulfur compounds content, % (m/m) on dry basis, min.	0.3
Cold-water-soluble extract, % (m/m) on dry basis,	
(Min)	70
(Max)	90

ANNEX II

B. Physical Characteristics of Dried or Dehydrated Garlic	
Parameter	Requirements ²
Extraneous matter, % w/w (max) ¹	0.5
Foreign matter ² , % w/w (max)	0.5
Mould visible, % w/w (max)	1.0
Live Insects, Count/100g (max)	0
Dead insects, insect fragments, rodent contamination, max % mass fraction	0.5
Excreta mammalian, mg/kg (max)	1.0

Note:

1. Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product.
2. Any visible/detectable objectionable foreign matter or material not usually associated with the natural components of the spice plant, such as sticks, stones, burlap bagging, metal, etc.

² These requirements apply to all Styles/Forms.

APPENDIX V

PROPOSED DRAFT STANDARD FOR DRIED LEAVES – DRIED BASIL
(For Adoption at Step 5)

1 SCOPE

This Standard applies to basil leaves in their dried form as culinary herbs defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing or for repacking if required. It excludes products for industrial processing.

2 DESCRIPTION**2.1 Product definition**

Dried basil is the product prepared from leaves of *Ocimum Spp.* of the Lamiaceae family (Table 1), dried and processed in an appropriate manner. Undergoing operations such as cleaning, drying, rubbing, milling and sifting are sold in forms as indicated in 2.2.

Table 1. Dried Culinary Leaves covered by this standard

General name	Trade name	Scientific name
Basil	Sweet basil	<i>Ocimum basilicum</i> L.
	Bush basil	<i>Ocimum minimum</i> L.
	American basil	<i>Ocimum americanum</i> L.
	Shrubby basil	<i>Ocimum gratissimum</i> L.
	Camphor basil	<i>Ocimum kilimandscharicum</i> Gürke
	Sacred basil	<i>Ocimum tenuiflorum</i> L. [<i>Pimpinella anisoidis</i> V. Brig.]
	[Field basil]	[<i>Salvia occidentalis</i> Sw.]

2.2 Styles/forms**2.2.1** Dried basil may be:

- Whole/intact;
- Crushed/rubbed/flaked;
- Ground/powdered; or
- Of other styles distinct from those above, provided they are labelled accordingly.

2.2.2 The particle size of ground/powdered styles is determined by contractual agreement between buyer and seller.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 Composition**

Dried culinary leaves as described in Section 2 shall conform to the requirements contained in Annexes I and II.

3.2 Quality factors**3.2.1 Odour, flavour and colour**

Dried basil shall have a characteristic odour and flavour, which may vary depending on geo-climatic factors/conditions. Dried basil shall be free from any foreign odour or flavour and especially from mustiness. The typical colour of basil may change depending on post-harvest treatment.

3.2.2 Chemical and physical characteristics

The generic product shall comply with the requirements specified in Annex I (Chemical Characteristics) and Annex II (Physical Characteristics). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package.

4 FOOD ADDITIVES

Anticaking agents may be used in the powdered form of the product in accordance with Table 3 of the *General Standards for Food Additives* (CXS 192-1995).

5 CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995) [and the *Code of Practice for Weed Control to Prevent and Reduce Pyrrolizidine Alkaloid Contamination in Food and Feed* (CXC 74-2014)].

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1-1969), the *Code of Hygienic Practice For Low-Moisture Foods* (CXC 75-2015) Annex III Spices and Culinary Herbs; *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78 - 2017), and other relevant Codex texts.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria related to Foods* (CXG 21-1997).

7 WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985). In particular, the following specific provisions apply.

8.2 Name of the product¹

8.2.1 The name of the product shall be as described in Section 2.1

8.2.2 The name of the product may include an indication of the trade name and varietal type described in Table 1 and style² as described in Section 2.2.

8.3 Country of origin/country of harvest

8.3.1 Country of origin/country of harvest shall be indicated and the region of production may be indicated.

8.3.2 Year of harvest (optional)

8.4 Commercial Identification

- Class/Grade, if applicable

8.5 Inspection mark (optional)

8.6 Labelling of non-retail containers

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

¹The General name may be used if the product is a blend of the different species listed in Table 1. If a trade name is used then the product must be a minimum of 80% of the species listed for that trade name.

² Other distinctly different styles/forms besides the three described in this standard were allowed

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of Analysis*

Parameter	Method	Principle	Type ¹
Moisture	ISO 760	Titration	II
	ISO 939	Distillation	I
	AOAC 2001.12	Titration	II
	ASTA 2.0	Distillation	I
	AOAC 941.11	Distillation	I
	AOAC 986.21	Distillation	I
Total Ash	ISO 928	Gravimetry	I
	AOAC 950.49	Gravimetry	I
	ASTA 3.0	Gravimetry	I
Acid Insoluble Ash	ISO 930	Gravimetry	I
	ASTA 4.0	Gravimetry	I
Volatile Oil	ISO 6571	Distillation followed by Volumetry	I
	AOAC 962.17	Distillation followed by Volumetry	I
	ASTA 5.0	Distillation followed by 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 [ISPM 08 Determination of Pest Status in an area]	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
Colour	Consider the use of Chroma Meters Measuring Head for color measurement	Colourimetry	IV
Excreta Mammalian,	Macroanalytical Procedure Manual, USFDA, Technical Bulletin V.39 B (For whole)	Visual Examination	IV
Excreta Other	AOAC 993.27 (For Ground)	Enzymatic Detection Method	IV

* Latest edition or version of the approved method should be used.

9.2 SAMPLING PLAN

To be developed.

¹ According to the definition of "types of method of analysis" as per Codex Procedural Manual Section II.

ANNEX I

A. Chemical Characteristics of Dried Basil

General Name	Form/style	Moisture Content (Max. %)	Total ash %w/w max	Acid-insoluble ash % w/w max	Volatile Oils mL/100g (min)
Basil	Whole/ intact	12	16	2	0.3
	Crushed/rubbed / Flaked	12	16	2.5	0.3
	Ground/ powdered	10	16	2.5	0.1

ANNEX II

B. Physical Characteristics of Dried Basil

General name	Form/Style	Extraneous matter ²⁰ % w/w max	Foreign matter ²¹ % w/w max	Dead whole insects, insect fragments and rodent filth, % mass fraction, m/m max	Visible Mold damage %w/w max	Mammalian excreta mg/Kg max	Insect damaged leaves, % w/w, max	Other excreta ²² mg/Kg max	Other Defects	
									Name	Limit
Basil	Whole/ intact	[3.0] [2.0] [0.5] [1.0]	1.0 [0.5] [0.1]	1.0 [2.0]	1.0	1.0 [2.2]	1.0	[4.4]	Color defects ²³ % w/w	5
	Crushed/ Rubbed/ Flaked	[3.0] [2.0] [0.5] [1.0]	1.0 [0.5] [0.1]	1.0 [2.0]	1.0	1.0 [2.2]	1.0	[4.4]		
	Ground/ powdered	[3.0] [2.0] [1.0] [0.5] [0]	1.0 [0.5] [0.1] [0]	1.0 [2.0]	1.0	1.0 [2.2]	1.0	[4.4]		5

²⁰ All vegetable matter from the specific plant other than the required part.

²¹ Any visible and/or apparent matter or material not usually associated with the product.

²² Excreta from other animals such as reptiles and birds.

²³ Colour defects.

APPENDIX VI

PROPOSED DRAFT STANDARD FOR DRIED FLORAL PARTS – DRIED CLOVES
(For Adoption at Step 5)

1 SCOPE

This Standard applies to floral parts in their dried forms as spices or culinary herbs, defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing or for repacking if required. It excludes products for industrial processing.

2 DESCRIPTION**2.1 Product definition**

Dried floral parts covered by this Standard (Table 1) are sold in forms as indicated in 2.2.

Table 1: Dried floral parts covered by this standard

S/No	Generic Name	Scientific Name
1.	Dried Cloves	<i>Syzygium aromaticum</i> (L), Merrill & Perry

2.2 Styles/forms

Dried floral parts may be:

- Whole/ intact: dried unopened flower buds of *Syzygium aromaticum* (L), Merrill & Perry; or
- Ground/powdered: products obtained by grinding cloves without any addition.

3 ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 Composition**

The dried floral parts as described in Section 2 above shall conform to requirements contained in Annexes I and II.

3.2 Quality factors**3.2.1 Odour, flavour and colour**

Dried floral parts shall have a characteristic aroma, colour and flavour which may vary depending on geo-climatic factors/conditions and shall be free from any foreign odour or flavour and colour. The typical colour of dried floral parts may change depending on post-harvest treatment.

3.2.2 Chemical and physical characteristics

Dried floral parts covered by this Standard shall comply with the requirements specified in Annexes I (Chemical Characteristics) and II (Physical Characteristics). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package.

3.2.3. Classification (optional)

In accordance with the Chemical and Physical Characteristics in Section 3.2.2, dried floral parts may be classified into the following grades:

- Extra;
- Grade I/Class I; and
- Grade II/Class II.

When unclassified/ungraded, the provisions for class/grade II apply as the minimum requirements.

4 FOOD ADDITIVES

Anticaking agents may be used in the powdered form of the product in accordance with Table 3 of the *General Standards for Food Additives* (CXS 192-1995).

5 CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995).

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 Dried floral parts within the scope of this Standard shall be prepared and handled in accordance with the relevant sections of the *General Principles of Food Hygiene* (CXC 1-1969), *Code of Hygienic Practice for low moisture foods* (CXC 75-2015), *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78-2017) and other relevant Codex texts.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CXG 21-1997).

7 WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985). In particular, the following specific provisions apply:

8.2 Name of the product

8.2.1 The name of the product shall be as described in Section 2.1

8.2.2 The name of the product may include an indication of the style as described in Section 2.2.

8.2.3 Variety or cultivar, trade name/type may be listed on the label

8.3 Country of origin/country of harvest

8.3.1 Country of origin/country of harvest shall be indicated, and the region of production may be indicated.

8.3.2 Year of harvest may be indicated.

8.4 Commercial Identification

- Class/Grade (if applicable)

- Size (optional)

8.5 Inspection mark (optional)

8.6 Labelling of non-retail containers

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of analysis*

Parameter	Method	Principle	Type ¹
Moisture	ISO 939	Distillation	I
	[AOAC 2001.12]	Titration	II
	[ASTA 2.0]	Distillation	I
Total Ash	ISO 928	Gravimetry	I
	ISO 3632-2	Gravimetry	I
	AOAC 950.49	Gravimetry	I
	ASTA 3.0	Gravimetry	I
Acid Insoluble Ash	ISO 930	Gravimetry	I
	ISO 3632-2	Gravimetry	I
	ASTA 4.0	Gravimetry	I
Volatile oil	ISO 6571	Distillation followed by Volumetry	I
	AOAC 962.17	Distillation followed by Volumetry	I
	ASTA 5.0	Distillation followed by Volumetry	I
Extraneous Matter	ISO 927	Visual examination followed by Gravimetry	I
	ISO 3632-2	Visual examination followed by Gravimetry	I
	ASTA 14.1	Visual examination followed by Gravimetry	I
Foreign Matter	ISO 927	Visual examination followed by Gravimetry	I
	ISO 3632-2	Visual examination followed by Gravimetry	I
Insect Damage	ISO 927	Visual Examination	IV
	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual Examination	IV
Insects/Excreta/Insect Fragments	ISO 927 Method appropriate for particular spice from AOAC Chapter 16, subchapter 14	Visual examination	IV
Crude Fibre	AOAC – 920.169	Gravimetry	I
	ISO 5498	Gravimetry	I
Mould visible	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5)	Visual examination	IV

¹ According to the definition of "types of method of analysis" as per Codex Procedural Manual Section II.

	http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32		
Live Insect	ISO 927 AOAC 960.51	Visual Examination Visual Examination	IV IV
Excreta Mammalian,	Macroanalytical Procedure Manual, USFDA, Technical Bulletin V.39 B (For whole)	Visual Examination	IV
Excreta Other	AOAC 993.27 (For Ground)	Enzymatic Detection Method	IV

* Latest edition or version of the approved method should be used

9.2 SAMPLING PLAN

To be developed.

ANNEX I

Chemical Characteristics of Dried Floral Parts							
Product	Form	Total Ash %w/w (max)	Acid Insoluble Ash % w/w (max)	Moisture Content % w/w (max)	Volatile Oils ml/100g (min)	Crude fibre, % m/m (max)	Notes (if applicable)
Clove	Whole	7	0.5	12	[14] [17]	[13]	
	Ground/powdered	7	0.5	10	14	13	

ANNEX II

Physical Characteristics of Dried Floral Parts										
Product	Form	Excreta mammalian mg/kg (max)	Excreta, other ³ mg/Kg (max)	Live Insects Count/100 g (max)	Mold Visible %w/w (max)	Insect defiled / infested %w/w (max)	Extraneous matter ¹ %w/w (max)	Foreign matter ² %w/w (max)	Defects (Headless ⁴ / Mother ⁵ / Khoker ⁶ Cloves) % (max)	Notes (if applicable)
Clove	Whole	[11] [1]		0	1	1	1	1	[5/6/5][5/4/3] [2/2/2]	
	Ground/powdered	Nil		[0]	[Nil]	[Nil]	[Nil]	[Nil]	NA	

¹Extraneous [vegetable] matter: Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product

²Foreign Matter: Any visible/detectable objectionable foreign matter or material not usually associated with the natural components of the spice plant, such as sticks, stones, burlap bagging, metal, etc.

³Excreta from other animals, such as reptiles and birds.

⁴Headless Clove: Clove consisting of only the receptacle and sepals and which has lost the dome-shaped head.

⁵Mother Clove: Fruit of the clove tree (*Syzygium aromaticum*) in the form of an ovoid brown berry surmounted by four incurved sepals.

⁶Khoker Clove: Clove having undergone fermentation as a result of incomplete drying, as evidenced by its pale brown colour, whitish mealy appearance and often wrinkled surface.

PROPOSED DRAFT STANDARD FOR SAFFRON**(For adoption at Step 5)****1 SCOPE**

This Standard applies to saffron commonly sold in commerce as defined in section 2.1 below, offered for direct consumption as an ingredient in food processing or for repackaging if required. This Standard does not apply to products intended for industrial processing.

2 DESCRIPTION**2.1 Product definition**

Dried floral parts of saffron (*Crocus sativus* L.): saffron is obtained from portion of the pistils (i.e. stigmas with part of style) of the *Crocus sativus* L. flower belonging to the *Iridaceae* family.

The “stigma” is the upper section of the aerial part of the pistil. The “style” is the part of the pistil between stigma and the ovary. The stigma is trumpet shaped, serrated or indented at the top and joined to the style at the end.

2.2 Styles/forms

Saffron may be offered in one of the following styles:

- Filaments entire;
- Cut filaments;
- Powdered; and
- Other styles distinct from those above, provided they are labelled accordingly.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 Composition**

Dried floral parts as described in Section 2.

3.2 Quality factors**3.2.1 Odour, flavour and colour**

The product shall have a characteristic odour, colour and flavour, which may vary depending on geo-climatic factors/conditions/varieties, and shall be free from any foreign odour, flavour and colour, especially from rancidity and mustiness.

3.2.2 Chemical and physical characteristics

The generic product shall comply with the requirements specified in Annex I (Chemical Characteristics) and Annex II (Physical Characteristics). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package. There shall not be any form of adulteration in the product.

3.2.3 Classification

Specific classes/grades of saffron may be set by contractual agreement between buyer and seller.

When unclassified/ungraded, minimum requirements have to apply in accordance with this standard.

4 FOOD ADDITIVES

No food additives are permitted in the products covered by this Standard.

5 CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995).

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXP 1-1969), *Code of Hygienic Practice for low moisture foods* (CXP 75-2015), Annex III, and other relevant Codex texts such as codes of hygienic practice and codes of practice.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria for Foods* (CXG 21-1997).

7 WEIGHTS AND MEASURES

Containers should be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985). In particular, the following specific provisions apply:

8.2 Name of the product

8.2.1 The name of the product shall be "saffron" as described in Section 2.1

8.2.2 The name of the product may include an indication of the style as described in Section 2.2.

8.2.3 Variety or cultivar may be listed on the label.

8.3 Country of origin/country of harvest

8.3.1 Country of origin/country of harvest shall be indicated and the region of production may be indicated.

8.3.2 Year of harvest may be indicated.

8.4 Commercial Identification

- Class/Grade, if applicable

8.5 Inspection mark (optional)

8.6 Labelling of non-retail containers

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, country of origin, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, country of origin, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of analysis^{1,2}

Parameter	Method	Principle	Type ¹
Moisture	AOAC 934.06	Gravimetry	I
	ISO 3632-1	Gravimetry	I
Total Ash	AOAC 941.12	Gravimetry	I
	ISO 928	Gravimetry	I
	ISO 3632-2	Gravimetry	I
Acid Insoluble Ash	AOAC 941.12	Gravimetry	I
	ISO 930	Gravimetry	I
	ISO 3632-2	Gravimetry	I
Soluble extract in cold water	ISO 941	Extraction	I
	ISO 3632-2		I

¹ According to the definition of "types of method of analysis" as per Codex Procedural Manual Section II.

Taste strength (expressed as picrocrocine) $A^{1\%}_{1\text{ cm } 257\text{ nm}}$	ISO 3632-2	Absorbance	IV
Aroma strength (expressed as safranal) $A^{1\%}_{1\text{ cm } 330\text{ nm}}$	ISO 3632-2	Absorbance	IV
Coloring strength (expressed as crocin) $A^{1\%}_{1\text{ cm } 440\text{ nm}}$	ISO 3632-2	Absorbance	IV
Artificial colorants	ISO 3632-2	Chromatography	II
Extraneous Matter	ISO 927	Visual Examination followed by Gravimetry	I
	ISO 3632-2	Visual Examination followed by Gravimetry	I
Foreign Matter	ISO 927	Visual Examination followed by Gravimetry	I
	ISO 3632-2	Visual Examination followed by Gravimetry	I
Insect Damage	ISO 927	Visual Examination	I
Insects/Insect Fragments	ISO 927	Visual Examination	I
Mould visible	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual examination	IV
Excreta Mammalian,	Macroanalytical Procedure Manual, USFDA, Technical Bulletin V.39 B (For whole)	Visual Examination	IV
Excreta Other	AOAC 993.27 (For Ground)	Enzymatic Detection Method	IV

* Note: The minimum laboratory sample according to ISO 3632-2 (Table 1) for duplicate analysis is: filament saffron: 11.5 g x 2 = 23 g, powdered saffron: 6.75 g x 2 = 13.5 g

² Latest edition or version of the approved method should be used.

9.2 SAMPLING PLAN

To be developed.

ANNEX I

Table 1: Chemical Characteristics of Dried Floral Parts — Saffron

General name	Form	Moisture content %w/w (max)	Total ash % w/w (max)	Acid insoluble ash %w/w (max)	volatile oils mL/100 gm	Non-volatile ether extract %w/w	Water soluble extract cold On dry matter % max	Markers (Absorbance)		
								picrocrocinn	safranal	color as crocin
Saffron	Entire filament	12.0	8.0	1.0	NA*	NA	65[55]	Min 50	Min 20 Max 50	Min 120
	Cut filaments	12.0	8.0	1.0	NA	NA	65[55]			
	Ground/Powdered	10.0	8.0	1.0	NA	NA	65[55]			

NA*: Not Applicable

Annex II

Table 2: Physical Characteristics for Dried Floral Parts- Saffron

Product	Style/ Form	Extraneous Matter % w/w (max)	Foreign Matter % w/w (max)	Insect fragments max. /10 gm	Rodent filth Max. number of hairs /10 gm	Mould damaged % w/w (max)	Dead Whole insects, Count/ 100gm (max)	Mammalian excreta mg/Kg (max)	Other Excreta mg/kg ²⁶	Insect defiled/ infested % w/w (max)	Other defects/ Comments
Saffron	Entire filament	5.0	1.0	[0]	[0]	[0]	[0]	[0]	[0]	[0]	---
	Cut Filaments	5.0	1.0	[0]	[0]	[0]	[0]	[0]	[0]	[0]	
	Ground/Powdered	---		[0]	[0]	[0]	[0]	[0]	[0]	[0]	

²⁶ Excreta from other animals, such as reptiles and birds.