CODEX ALIMENTARIUS COMMISSION

E

Food and Agriculture Organization of the United Nations

World Health Organization

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REP15/FO

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

Thirty-eighth Session

CICG, Geneva, Switzerland

6 – 11 July 2015

REPORT OF THE TWENTY FORTH SESSION OF THE CODEX COMMITTEE ON FATS AND OILS

Melaka, Malaysia

9 - 13 February 2015

NOTE: This report includes Circular Letter CL 2015/05-FO

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CL 2015/05-FO
February 2015

TO: Codex Contact Points

Interested International Organizations

FROM: Secretariat, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme

FAO, 00153 Rome, Italy

SUBJECT: **Distribution of the Report of the 24th Session of the Codex Committee on Fats and Oils (REP15/FO)**

The report of the 24th Session of the Codex Committee on Fats and Oils will be considered by the 38th Session of the Codex Alimentarius Commission (Geneva, Switzerland, 6-11 July 2015).

PART A - MATTERS FOR ADOPTION BY THE 38th SESSION OF THE COMMISSION:

Proposed Draft Standards at Step 5 of the Procedure

1. Proposed Draft Standard for Fish Oils (para. 47, Appendix III)

Other matters for adoption

2. Amendments to the list of Acceptable Previous Cargoes, in the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (CAC/RCP 36-1987) (para. 60, Appendix IV)

3. Amendments to the following standards for fats and oils, in respect to the statement on voluntary application (Para. 63):

   a. *Standard for Edible Fats and Oils not Covered by Individual Standards* (CODEX STAN 19-1981);

   b. *Standard for Named Vegetable Oils* (CODEX STAN 211-1999);

   c. *Standard for Named Animal Fats* (CODEX STAN 210-1999); and

   d. *Standard for Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1981)

Governments and interested international organizations wishing to comment on the above documents should do so in writing to the Secretariat, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, Viale delle Terme di Caracalla, 00153 Rome, Italy (e-mail: codex@fao.org) **before 30 May 2015.**

PART B - REQUEST FOR COMMENTS AND INFORMATION

4. Additional information on the fatty acids profiles of anchovy and krill oils and proposals for alternative texts in Section 7.3 “Other Labelling Requirements” of the proposed draft Standard for Fish Oils (para 44);

5. Proposals for further amendments to the List of Acceptable Previous Cargoes, Appendix 2 of CAC/RCP 36-1987 (third bullet; para 60);

6. Proposals for the transfer of provisions, other than those in Table 3 and Table 4, from the Appendix into the main body of the *Standard for Named Vegetable Oils* (CODEX STAN 210-1991) (para 70) ;

7. Information for deviating parameters of sunflowerseed oil in relation to ranges of oleic and linoleic acids values and related quality composition factors (para 79).

Governments and international organizations wishing to submit comments and information on the above matters should do so in writing to the Malaysian Secretariat for CCFO, Food Safety and Quality Division, Ministry of Health Malaysia, E-mail: ccfo_malaysia@moh.gov.my, with a copy to the Secretariat of the Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, Viale delle Terme di Caracalla, 00153 Rome, Italy (e-mail: codex@fao.org) based on the following deadlines:

a) For Points 5 and 7: **before 1st June 2016**

b) For Points 4 and 6: **before 1st December 2016**

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SUMMARY AND CONCLUSIONS

The 24th Session of the Codex Committee on Fats and Oils (CCFO24) reached the following conclusions:

Matters for adoption/approval by CAC38

The Committee agreed to forward:

Draft Standard for adoption at Step 5 of the Procedure

- Draft Standard for Fish Oils (para. 47, Appendix III)

Other texts for adoption

- Amendments to Appendix 2: *List of Acceptable Previous Cargoes* of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (CAC/RCP 36–1987) (para. 60, Appendix IV);
- New text replacing the statement on voluntary application in the following standards: *for Edible Fats and Oils not Covered by Individual Standards* (CODEX STAN 19-1981); *for Named Vegetable Oils* (CODEX STAN 211-1999), *for Named Animal Fats* (CODEX STAN 210-1999) and *for Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1981) (para. 63).

New Work for approval

- Revision of the *Standard for Named Vegetable Oils*: addition of palm oil with high oleic acid (OxG) (para. 89, Appendix VI);
- Revision of the *Standard for Named Vegetable* Oils: Revision of Fatty Acid Composition and Other Quality Factors of Peanut Oil (para. 97, Appendix VII);
- Revision of the *Standard for Olive Oil and Olive Pomace Oil*): Revision of Section 3 (para. 118, Appendix VIII).

Matters for consideration by CAC38 and FAO and WHO

The Committee:

- Provided replies regarding the status of implementation of selected activities of the Codex Strategic Plan 2014-2019 relevant to its work (para. 10 and Appendix II);
- Forwarded the 23 substances to FAO and WHO for evaluation (para. 60 and Appendix V).

Matters referred to other Committees

The Committee agreed to:

- Inform CCMAS that ISO 12228:1999 was withdrawn and replaced by ISO 12228-1:2014 and ISO 12228-2, and that ISO 12228-2:2014 and COI/T.20/Doc. No. 30 were equivalent (para. 11);
- Forward the methods of analysis and sampling and food additive provisions of the proposed draft Standard for Fish Oils to CCMAS and CCFA respectively for endorsement (para. 48, Appendix III).

Other matters for information

The Committee agreed to:

- Retain the provisions in Tables 3 and 4 of the Appendix of the *Standard for Named Vegetable Oils* and to consider any further proposals for transferring provisions from the Appendix to the main body only after review of the parameters (para. 69);
- Consider proposals from members on the amendments to the *List of Acceptable Previous Cargoes* of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (para. 60);
- Revise the discussion papers on revision of the *Standard for Named Vegetable Oils* : ranges of oleic and linoleic acids values and related quality composition factors in sunflowerseed oil (para. 79); and inclusion of walnut oil, almond oil, hazelnut oil, pistachio oil, flaxseed oil and avocado oil" (para. 105);

- Prepare discussion papers on revision of the: *Standard for Named Vegetable Oils* (– (i) Replacement of acid value with free fatty acids for virgin palm oils in the (para. 126); (ii) Inclusion of quality parameters of crude rice bran oil in the (para. 131); of the *Standard for Named Animal Fats* – Inclusion of unrefined edible tallow (para. 128);
- Discontinue consideration on revision of the: *Standard for Named Vegetable Oils* (i) Inclusion of high oleic soybean oil (para. 82); and (ii) Inclusion of provisions for high stearic high oleic acids in sunflower seed oils (para. 100); of the *Standard for Olive Oils and Olive Pomace Oils* - Content of delta-7-stigmastenol (para 106); and of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (para 123).

INTRODUCTION

1. The 24th Session of the Committee on Fats and Oils (CCFO24) was held in Melaka, Malaysia from 9 to 13 February 2015 at the kind invitation of the Government of Malaysia. The Session was chaired by Ms Noraini Mohd. Othman, Senior Director for Food Safety and Quality, Ministry of Health. The Session was attended by participants from 40 Member countries, one Member organization and 5 international organizations. A complete list of participants, including the Secretariats, is attached in Appendix I to this report.

OPENING

2. The Session was opened by the Dato' Seri Dr Hilmi Bin Haji Yahaya, the Honourable Deputy Minister of Health, on behalf of the Government of Malaysia and the Ministry of Health, Malaysia. In his opening remarks, the Deputy Minister reiterated that Malaysia is committed to continue to actively participate in Codex activities and host CCFO. The Deputy Minister further informed the Committee that the Food Safety and Quality Division in the Ministry of Health was expected to be transformed into an independent and autonomous Food Safety Authority, which would enhance Malaysia's capacity to deal with food safety issues in an efficient and timely manner.

3. Mr Tom Heilandt, Secretary of the Codex Alimentarius Commission, also addressed the delegates. The opening remarks and speech are presented in CRD4.

Division of competence

4. The Committee noted the division of competence between the European Union and its Member States, according to paragraph 5, Rule II of the Rules of Procedure of the Codex Alimentarius Commission, as presented in CRD1.

ADOPTION OF THE AGENDA (Agenda Item 1)[1]

5. The Committee agreed to consider the following items under Agenda Item 10 "Other business and future work":

   - Discussion Paper on Proposed Draft Amendments to the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999): to Replace Acid Value with Free Fatty Acids for Virgin Palm Oils, prepared by Malaysia;
   - Discussion Paper to Support New Work Amendment to the *Standard for Named Animal Fats* (CODEX STAN 211-1999), prepared by Australia; and
   - Discussion Paper on Quality Parameters of Crude Rice Bran Oil for including in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999), prepared by India.

6. With these modifications, the Committee adopted the provisional agenda as the agenda for this session and also adjusted the discussion order.

MATTERS REFERRED BY THE CODEX ALIMENTARIUS COMMISSION (CAC) AND OTHER CODEX COMMITTEES (Agenda Item 2a)[2]

7. The Committee noted matters arising from CAC36 and CAC37 and other committees and agreed that several matters were only for information and while others would be discussed under relevant agenda items.

Monitoring of Codex Strategic Plan 2014-2019

8. The Committee considered the responses to questions prepared by an in-session Working Group as contained in CRD24, and agreed to amend the responses related to activities 1.1.1 and 2.1.3 as in the Committee's view existing provisions of the Procedural Manual relating to establishing criteria for work priorities were adequate and address both new work and revision of standards.

9. With regard to the response to Activity 1.1.1, one Delegation proposed that the Committee could consider in the future establishing criteria for new work in relation to amendments of existing standards. However, the Committee did not agree to the proposal.

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[1] CX/FO 15/24/1

[2] CX/FO 15/24/2; Comments of CCFO and Codex Secretariats (CRD5); Comments of Canada, European Union and Kenya (CRD10); Report of in-session Working Group Monitoring of the Strategic Plan (CRD24).

Conclusion

10. The Committee agreed to forward the replies as contained in Appendix II to CCEXEC70 and CAC38 for consideration.

Provisions of the *Standard on Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1981)

11. With regard to request from CCMAS to clarify whether the method COI/T.20/doc No 30-2013 was equivalent to ISO 12228:1999, the Committee considered information provided by the European Union, as contained in CRD10, and agreed to inform CCMAS that ISO 12228:1999 was withdrawn and replaced by ISO 12228-1:2014 and ISO 12228-2, and that ISO 12228-2:2014 and COI/T.20/Doc. No. 30 were equivalent.

12. The Observer from AOCS noting the position that the ISO standard (ISO 12228-2:2014) is suitable for the determination of the erythrodiol and uvaol (and other sterols), expressed concern that the precision data in the method is significantly different from the same data now contained in ISO 12228-1 and might not be considered equivalent.

Replacement of the IUPAC method for relative density

13. The Observer from AOCS clarified that the equivalent methods for relative density were ISO 6883:2007 and AOCS Cc 10c-95 and that these methods were harmonized by the relevant committees of both organizations.

ACTIVITIES OF INTERNATIONAL ORGANIZATIONS RELEVANT TO THE WORK OF CCFO (Agenda Item 2b)[3]

14. The Committee noted the information provided by the Fédération de l'industrie de l'huilerie de la CE (FEDIOL), as presented in CX/FO INFO.

Fats Associations International (FOSFA International)

15. The Observer from FOSFA International provided a brief their activities as presented in CX/FO INFO.

International Olive Council (IOOC)

16. The Observer from IOOC provided a brief presentation and pointed out that the International Olive Council (IOOC) was created in 1959 under the auspices of the United Nations. The mandate it has been assigned by its Members included establishing a standard for international trade in olive oils, which Members undertake to apply. At present, the IOOC had 44 member countries (28 through the European Union). As a result, it accounts for 97% of world production, 96% of world exports and 80% of world consumption. The international trade standard of the IOOC was drawn up by experts who are designated by member country governments and who meet at least twice a year. Observers from both IOOC member and non-member countries might attend these meetings. Parameters, methods of determination and limits were established after collaborative tests involving numerous international laboratories with the objective of encouraging fair and equitable international trade and fighting adulteration. It is for this reason that the member countries of the IOOC wished for the Codex standard to be harmonised with the IOOC standard.

Conclusion

17. The Committee expressed appreciation to FEDIOL, FOSFA and IOOC for the information provided.

PROPOSED DRAFT STANDARD FOR FISH OILS (Agenda Item 3)[4]

18. The Delegation of Switzerland introduced the report of the physical Working Group (PWG) in CRD3 and reported that while agreement had been reached on most parts of the standard:

- It had not been possible to introduce farmed and wild salmon oil as new named fish oil categories because trade data received by the electronic Working Group (EWG) did not allow to differentiate between the two types;
- During the PWG it had been questioned whether concentrated fish oils (section 2.5) and concentrated fish oil ethyl esters (section 2.6) were traded in sufficient quantities to justify the inclusion of these oils in the standards and that additional data were needed;
- An alternative proposal concerning the definition of refined oils from Chile still needed to be discussed; and

[3] CX/FO INFO

[4] CX/FO 15/24/3, Comments of Brazil, Chile, Costa Rica, Iceland, India, Japan, Kenya, Malaysia, Norway, Thailand, United States of America, IADSA, IFFO and ISDI (CX/FO 15/24/3 Add.1); India (CRD19), Indonesia (CRD20); IFFO (CRD21); Norway, Switzerland, Republic of Korea, IADSA (CRD26); Ecuador (CRD28); Report of the PWG on the proposed draft Standard on Fish Oils (CRD3).

- Further discussion was also needed on the individual list of food additives.

19. The Delegation further informed the Committee that following the PWG, additional data were submitted to allow for differentiation between farmed and wild salmon oil and the inclusion of menhaden oil and krill oil (CRD 21 and CRD26).

Specific Comments

20. The Committee considered the revised standard (Annex 1 of CRD3) section by section and noted comments and made the following decisions:

2. Description

21. The Committee:

- Noted that the PWG had proposed to move relevant texts on “processing” and “crude fish oils and crude fish liver oils” to the introductory paragraphs of the section;
- Did not support the inclusion of the alternative text on the definition of refined oils proposed by Chile;
- Agreed to include Salmon oil in Section 2.1 “Named fish oils”.

22. The Delegation of Argentina referring to section 2.1 expressed their concern that the definition used for named fish oil could restrict the name to specific fish species and thus excluding analogous fish species. They recommended seeking the advice of the Committee on Fish and Fishery Products (CCFFP) on the correspondence between the generic name of the fish oil and the fish species indicated in the standard.

23. To this concern, Switzerland explained that the fish oil names indicated in the section corresponded to the ones for which robust data on fatty acid profiles had been provided and that the definition included any of the species or families for which such data had been provided.

24. The Codex Secretariat noted that the Committee had the expertise to decide on this issue, which was related to fish oil, and that the advice of CCFFP was not necessary.

25. The Delegations of Argentina and Russia Federation expressed reservation to retain the current definitions without consulting with CCCFP or the Legal Counsel of FAO.

Sections 2.5 and 2.6 – Concentrated Fish Oils and Concentrated Fish Oils Ethyl Esters

26. Switzerland noted that global trade data for concentrated fish oils and concentrated fish oils ethyl esters (12,579 metric tons in 2013), presented in CRD26, justified the inclusion of these products in the standard.

Table 1

27. The Committee noted that:

- GLC ranges of fatty acid composition specified in Table 1 had been calculated on the basis of the data provided to the EWG (established by CCFO23), could accommodate seasonal, climatic and geographical variations and were calculated on a minimum of 10 data sets and in one case on 5-10 data sets but including an official standard (European pharmacopoeia);
- The EWG had received data on fatty acid composition from various members and observers, including those working globally, however it had not differentiated between data submitted by members and observers and had only considered the adequacy of the data submitted;
- The inclusion of trans-fatty acids in the fatty acid profiles of Table 1 was not raised in the EWG.

28. The Delegation of Chile was concerned that the data presented for anchovy oil might not be representative of the oil produced in Chile, which accounts for the 30% of the global production; they noted that the data on Chilean production used to establish the fatty acid profiles for anchovy oil in the present draft were not yet confirmed by official Chilean sources.

29. The Committee agreed to replace the data related to krill oil with the revised data submitted by Norway and to include two new columns, i.e. for farmed and wild salmon oils, as proposed by Switzerland (both in CRD26). The Delegation of Canada informed that they need to confirm the data for krill oil.

30. The Committee agreed on the fatty acid profiles in Table 1 with the exception of those for anchovy and krill oils.

Section 3.2 – Quality Parameters

31. The Committee noted that the value of “total oxidation of oil” (ToTox value), which is calculated from the peroxide and anisidine values, was set to ≤ 26 to assure good quality of fish oils, to reflect current practices, and to ensure adequate consumer protection.

32. The Committee noted the explanation provided by Norway in response to several questions regarding the ToTox value for fish oils and fish liver oils as follows:

"Fish oils are easily oxidized. The peroxide value is a parameter for primary oxidation products. The anisidine value is a parameter for secondary oxidation products. Liquid oxidation is a sequential process. Following an initial raise of peroxide value, the anisidine value rises. To prevent having both of these oxidation products at maximum levels in the same oil - the parameter ToTox, which means "total oxidation of oil", was established. The footnote in the standard explains that the ToTox value is calculated by 2 × peroxide value plus 1 × anisidine value. To ensure that consumers are adequately protected, it is imperative that the maximum allowed ToTox value is set separately and lower than the sum of the individual possible maximum limits set for peroxide and anisidine values."

33. The Committee noted that:

- The values presented in Section 3.2 were representative of the products currently in trade, reflected current practices and had been applied since many years;
- The spectrophotometry method used to measure anisidine is not suitable for krill oil as this oil contains astaxanthin; and
- The presence of Omega 3 fatty acids is addressed in the labelling provisions.

34. The Delegation of Sudan expressed their reservation for the values for anisidine and ToTox, which were, in their view too high.

Section 4 – Food Additives

35. The Committee noted that the section on food additives included a reference to the *General Standard for Food Additives* (GSFA) in conformity with the format of commodity standards in the Procedural Manual.

36. The Committee agreed to replace ascorbyl palmitate (INS 304) with ascorbyl esters (INS 304,305) for consistency with the GSFA and to reduce the maximum level for tocopherols (INS 307a, b, c) to 6,000 mg/kg.

37. The Committee also noted that:

- Higher levels for antioxidants were justified by the fact that fish oils are more easily oxidized than other animal oils; and
- The maximum levels reflected those currently used by the industry.

Section 5 – Contaminants

38. The Committee recalled that CCCF7 had agreed to consider the allocation of MLs for lead and arsenic for fish oils once the Standard for Fish Oils was finalized and whether the MLs should apply to total arsenic or inorganic arsenic as more appropriate for these products[5] and agreed to inform CCCF when the Standard will be completed.

Section 7. – Labelling

39. The Committee needed further discussion on the labelling of the content of vitamin A and vitamin D in fish liver oils and of EPA and DHA in all fish oils and will consider alternative texts (currently put in square brackets) for these issues at its next Session.

Section 8. – Methods of Analysis and Sampling

40. The Committee noted that:

- A sampling method for animal and vegetable fats and oils had been introduced by the PWG that was applicable to fish oils;
- The methods described two steps, i.e. saponification of the sample and esterification with methanol, and that the methods were appropriate for fish oils and for concentrated fish oils and concentrated fish oils ethyl esters;
- The methods were capable to separate ethyl esters directly but also after their conversion into methyl esters and that they had been tested in the field and found suitable;
- The relevant AOAC and ISO methods were identical.

41. The Committee added new method for the determination of phospholipids (Section 8.10).

[5] REP13/CF paras 11-12.

42. The Delegation of Spain expressed their reservation on the suitability of the method for the acidity determination (Section 8.5) in fish oils high in phospholipids.

Conclusion

43. The Committee noted that substantial progress had been made on the standard but that a few issues needed to be further discussed and that the information in Table 1 needed to be strengthened with additional data.

44. The Committee agreed to request the Codex Secretariat to issue a Circular Letter asking:

- Additional information on the fatty acids profiles of anchovy and krill oils; and
- Proposals for alternative texts in Section 7.3 “Other Labelling Requirements”.

45. The Committee appealed to members to reply to the Circular Letter in a timely manner to allow adequate time for preparation and translation of working documents for the next Session of the Committee.

46. The Committee also agreed to establish a PWG, chaired by Switzerland, open to all Members and Observers, working in English only and meeting immediately prior to CCFO25 to:

- Consider the replies to the CL;
- Consider comments submitted at Step 6 (subject to adoption at Step 5 by CAC38); and
- Prepare a report for consideration by the Plenary.

Status of the Proposed Draft Standard for Fish Oils (N09-2011)

47. The Committee agreed to forward the proposed draft Standard to CAC38 for adoption at Step 5 (Appendix III).

48. The Committee further agreed to forward the provisions for food additives and methods of analysis and sampling to the relevant committees for endorsement.

REVIEW OF THE LIST OF ACCEPTABLE PREVIOUS CARGOES (Agenda Item 4)[6]

49. The Delegation of Malaysia introduced the report of the PWG on the review of the List of Acceptable Previous Cargoes (“the List”) (CRD2).

50. The Delegation said that the PWG had recommended that:

- 93 substances were considered as acceptable, including a new substance, i.e. methyl acetate (CAS No. 79-20-9) which fulfilled all four criteria (CRD2 Appendix IV);
- 22 were for evaluation by FAO and WHO, plus a new substance, i.e. ethyl tertiary butyl ether (ETBE) (CAS No. 637-92-3) (CRD2 Appendix V); and
- One, i.e. silicon dioxide (microsilica) (CAS No. 7631-86-9) was to be removed from the List.

51. In addition the PWG had recommended that the Committee consider the request for evaluation of the substances by FAO and WHO and the criteria for their prioritisation.

General Comments

52. The Codex Secretariat drew the Committee’s attention to the FAO and WHO comments in CRD18 and reiterated the proposal already made in the PWG that it was preferable to refer any requests for scientific input on this matter to FAO and WHO rather than to JECFA. The Codex Secretariat also emphasized that the Committee needed: to clearly define the type of evaluation or scientific advice required; to prioritize the substances for evaluation; and to provide the data necessary for the requested evaluation.

Recommendations related to the chemical substances

53. The Committee agreed to the PWG recommendations concerning substances: considered as acceptable; to be evaluated; and to be removed from the List with the following amendments.

- To add iso-butanol (2-methyl-1-propanol), which had been evaluated by JECFA as a flavouring agent; to the substances considered as acceptable;
- To add to the substances for evaluation by FAO and WHO:

[6] CX/FO 15/24/4, Comments of European Union, Kenya, Norway, FEDIOL (CRD11), FAO and WHO (CRD18); Report of the PWG on Acceptable Previous Cargoes (CRD2); Information from the European Union (CRD22); Report of in-session Working Group on Acceptable Previous Cargoes (CRD27).

- ✧ Calcium ammonium nitrate solution (CAS No. 6484-52-2); calcium nitrate (CN-9) solution (CAS No. 35054-52-5) and unfractionated fatty alcohol mixture or mixtures of fatty alcohols from natural oils and fats for evaluation due to their reaction products;
- ✧ Calcium lignosulphonate liquid (lignin liquor; sulphite lye) (CAS No. 8061-52-7) for evaluation due to its impurities.

54. The Delegation of the European Union stated their preference to retain all substances in the List except Montan wax as these substances had been safely used as previous cargoes for a long time and had been reviewed by EFSA against the four criteria (CRD22).

55. The Committee further agreed:

- To add a footnote “usually transported in small quantities” to the four waxes in the List, as recommended by the PWG; and
- To maintain in the List the 22 substances forwarded to FAO and WHO for evaluation currently included in the List, but to add a footnote “under review by FAO and WHO” .

Recommendations related to the FAO and WHO Evaluation

56. The Committee noted the explanation from the Codex Secretariat that within the framework of the Codex Alimentarius Commission and its procedures, the responsibility for providing advice on risk assessment lies primarily with the joint FAO/WHO expert bodies and consultations.

57. The Committee agreed to the recommendation of an in-session WG, which considered the request of FAO and WHO to clearly define the type of evaluation or scientific advice and prioritise the substances for evaluation (CRD27).

58. The Committee considered a proposal prepared by an in-session WG (CRD27) and agreed to:

- Request FAO and WHO to evaluate whether the 23 substances were suitable as previous cargoes and to provide an assessment against the four criteria as mentioned in the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (CAC/RCP 36-1987). At least the evaluation should address ease of cleaning (impact with respect to possible carry-over of residues into edible oils and fats), toxicological profile, possible allergenicity, reactivity with edible oils and fats resulting in reaction products that would result in adverse human health effects for the substances and their expected impurities; and.
- Cluster the 23 substances based on chemical properties and rank according to priorities (i.e. low, medium or high).

59. The Committee encouraged members to provide FAO and WHO with information on relevant evaluations of these substances.

Conclusion

60. The Committee agreed to the following:

- To forward the amendments to Appendix 2: *List of Acceptable Previous Cargoes* in CAC/RCP 36-1987 to CAC38 for adoption (Appendix IV);
- To forward the 23 substances to FAO and WHO for evaluation (Appendix V) with the above request;
- To request the Codex Secretariat to issue a CL inviting interested members and observer organisations to propose further amendments to Appendix 2: *List of Acceptable Previous Cargoes* of CAC/RCP 36-1987;
- To establish an EWG, led by Malaysia, open to all members and observers and working in English only with the following Terms of Reference:
  - ✧ To consider proposals from members on new substances to be added to the List provided such proposals are supported by adequate and relevant information provided by the proponent.
  - ✧ Prioritise substances to be submitted to FAO and WHO for evaluation.
  - ✧ Consider proposals from members to remove substances from the list in the light of new data.
  - ✧ To report to the Committee with recommendations as indicated by the findings.
- To convene a PWG, if needed, chaired by Malaysia to consider the report of the EWG and meeting immediately prior to CCFO25, open to all members and observers and working in English only.

REFERENCE TO ACCEPTANCE / VOLUNTARY APPLICATION IN CODEX STANDARDS (Agenda Item 5)[7]

61. The Secretariat provided some background information to this item and recalled that:

- CAC32 had discussed the matter on the statement referring to the voluntary application that was included in several Codex standards and had concluded that the deletion of the statement should be decided case by case by the relevant Committee;
- CCFO22 had discussed the matter and agreed to retain the current appendices in the standards for fats and oils and to consider two alternative texts to replace the current statements;
- CCFO22 had further agreed to ask for comments on the possibility to include the provisions currently in Table 3 (desmethylsterols) and Table 4 (tocopherols and tocotrienols) of the Appendix in the *Standard for Named Vegetable Oils* (CODEX STAN 211-1999) into the main body;
- Comments on the two issues above were requested with CL 2011/2-FO Part B; and
- CCFO23 could not consider the reply to the CL due to time constraints.[8]

Reference to Acceptance / Voluntary Application

62. The Committee focused its discussion on the two statements proposed by CCFO22 and supported the second option with an amendment to replace in the second sentence "*is deemed to*" with "*may still*".

Conclusion

63. The Committee agreed to forward to CAC38 for approval the replacement of the current statement on voluntary application with the following text in the standards for fats and oils, namely: *Standards for Edible Fats and Oils not Covered by Individual Standards* (CODEX STAN 19-1981); *for Named Vegetable Oils* (CODEX STAN 211-1999), *for Named Animal Fats* (CODEX STAN 210-1999) and *for Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1981).

> *These quality and composition factors are supplementary information to the essential composition and quality factors of the standard. A product, which meets the essential quality and composition factors but does not meet these supplementary factors, may still conform to the standard.*

Inclusion of provisions in Tables 3 and 4 into the main body of the *Standard for Named Vegetable Oils* (CODEX STAN 210-1991)

64. A number of delegations were in favour of retaining the provisions in Tables 3 and 4 in the Appendix, as their transfer to the main body of the Standard might create trade restrictions. They were of the view that the transfer of the provisions currently in the Appendix into the main body should be considered only after a careful review of the parameters.

65. Other delegations were in favour of a transfer of the provisions in Tables 3 and 4 (either both or only the provision in Table 3) to the main body and supported to review these parameters.

66. Some delegations suggested transferring other parameters, which are important to determine the identity, authenticity and quality of fats and oils (e.g. peroxide value, refractive index and other physical and chemical values) from the Appendix into the main body.

67. One delegation proposed transferring one parameter from the Appendix into the main body of the *Standard for Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1988).

68. In view of the number of proposals to transfer different provisions from the Appendix into the main body of the Standard, many delegations supported to issue a CL asking which provisions should be considered for transfer.

Conclusion

69. The Committee agreed to retain the provisions in Tables 3 and 4 in the Appendix of the *Standard for Named Vegetable Oils* and that any further proposals for transferring provisions from the Appendix to the main body should be considered only after reviewing the parameters.

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[7] Comments in reply to CL 2011/2-FO Part B of Australia, Brazil, Canada, Chile, Costa Rica, European Union, Malaysia, Mali, Thailand (CX/FO 15/24/5), India (CRD12); Republic of Korea (CRD23).
[8] REP11/FO paras 13-14 and REP13/FO para. 130.

70. The Committee further agreed to request the Codex Secretariat to issue a CL asking whether provisions other than those in Table 3 and Table 4 should be transferred into the main body of the Standard for consideration at its next Session.

71. The Chairperson drew the attention of the Committee that any proposal to review the values would be subject to the procedures for new work.

DISCUSSION PAPERS ON THE AMENDMENT OF THE *STANDARD FOR NAMED VEGETABLE OILS* (Agenda Item 6)

SUNFLOWERSEED OILS - REVISION OF LIMITS OF OLEIC AND LINOLEIC ACIDS (Agenda Item 6a)[9]

72. The Chairperson recalled that at its last Session, the Committee had agreed to establish an EWG to revise the discussion paper on the ranges of oleic and linoleic acids values for sunflowerseed oils in the CODEX STAN 210-1999.

73. The Delegation of Argentina, as chair of the EWG, introduced CX/FO 15/24/6 and explained that they had used information from various parts of the world to revise the discussion paper. The Delegation pointed out that a limited number of members had participated in the EWG and, therefore, it had only been possible to collect limited information. The Delegation further explained that scientific studies had shown that climate with high temperatures could affect the oleic acid and linoleic acid contents of traditional varieties of sunflowerseed oils and that the proposed revision was aimed at ensuring that these oils were covered by CODEX STAN 210-1999.

74. The Delegation of Brazil presented CRD25, which provided additional data and information on increase in production, areas of cultivation of sunflowers and on the influence of the climate with high temperatures during seed maturation and fatty acid composition.

Discussion

75. A number of delegations supported the proposal. Others, while not objecting, noted that the document had been distributed late and there had not been sufficient time to consult with their stakeholders, and requested for more time to study the information and to respect the provisions in the Procedural Manual regarding the timelines for distribution of the documents.

76. Some delegations questioned the proposed ranges of fatty acids and the quality of the data used to derive them, and pointed out that the proposed amendment would lead to overlapping ranges of the two fatty acids in sunflowerseed oils with possible negative consequences to trade.

77. The Delegation of Argentina expressed their willingness to further revise the proposal to address the concerns raised. The Delegation emphasized the importance of traditional sunflowerseed oils in international trade.

Conclusion

78. The Committee noted that there was considerable support for the proposal but that that some members needed more time to develop a national position due to the late arrival of the document.

79. The Committee agreed:

- To establish an EWG, led by Argentina and co-chaired by Brazil, open to all Members and observers and working in English only, with the following Terms of Reference: "*To revise the discussion paper and project document on the basis of the data received with respect to ranges of oleic and linoleic acids values and related quality composition factors in sunflowerseed oil for consideration at its next Session.*"; and
- To ask the Codex Secretariat to issue a Circular Letter to request for information in particular on deviating parameters of sunflowerseed oil for consideration by the EWG.

[9] CX/FO 15/24/6 (in English and Spanish only); comments of Brazil (CRD25).

SOYBEAN OIL – HIGH OLEIC (Agenda Item 6b)[10]

80. The Delegation of the United States of America, as chair of the EWG, recalled that CCFO23 had established an EWG to revise the discussion paper on the amendment of *the Standard for Named Vegetable Oils* (CODEX STAN 210-1999) to include High Oleic Soybean Oil (HOSO). The Delegation explained that HOSO was first introduced in the market in 2010 in limited quantities for performance testing, and that the results obtained indicated improved oil stability performance and longer shelf life for food in which it was used. The Delegation noted that the trade in HOSO was expected to increase in the years to come as such it was important for HOSO to have consistent naming and specification to ensure fair trade domestically and internationally.

81. The Delegation further pointed out that based on the current levels of international trade of HOSO, the EWG had recommended delaying efforts for amending the Standard to include HOSO so that the limited resources of the Committee could be spent on other issues.

Conclusion

82. The Committee agreed to discontinue consideration of the matter and noted that the United States of America would resubmit their proposal when higher volumes of HOSO would be traded internationally.

ADDITION OF PALM OIL WITH HIGH OLEIC ACID (OxG) (Agenda Item 6c)[11]

83. The Delegation of Colombia as Chair of the EWG introduced the revised discussion paper and project document. The Delegation highlighted that the revised project document contained the required information on volume of production and consumption of palm oil with high oleic acid.

Discussion

84. The Committee expressed general support for the new work.

85. Delegations were of the view that given the growing production volume and cultivation area of OxG the development of a relevant standard was important to enable trade of this product.

86. One delegation suggested to amend the current provisions for palm oil and to classify it into different categories such as “Palm oil - high oleic acid” and “Palm oil - mid oleic acid,” which was in line with the approach taken for other oils.

87. In response to this suggestion, the Delegation of Colombia explained that this oil was different from conventional palm oil because of its high oleic acid value and emphasized the need to develop specific provisions for “palm oil with high oleic acid”.

88. The European Union and its Member States did not object to the Committee’s decision to start new work on this item, however, they expressed their general concern that when considering proposals for new work, the Committee should ensure that the procedures of the *Guideline on the application of the criteria for the establishment of work priorities* (Procedural Manual) are strictly applied.

Conclusion

89. The Committee agreed to request CAC38 to approve new work on the revision of the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) to add palm oil with high oleic acid (OxG) and to forward the revised project document to the Executive Committee for critical review (Appendix VI).

90. The Committee also agreed to establish an EWG, led by Colombia and co-chaired by Ecuador, open to all Members and Observers and working in English only, to prepare, subject to approval of the Commission, a proposed draft revision of the *Standard for Named Vegetable Oils*, for circulation for comments at Step 3 and consideration at its next session.

[10] CX/FO 15/24/7 (NOT ISSUED).
[11] CX/FO 15/24/8; Comments of Kenya, India (CRD13); Comments of Ecuador (CRD28).

PEANUT OIL – FATTY ACID COMPOSITION AND OTHER QUALITY FACTORS (Agenda Item 6d)[12]

91. The Delegation of Argentina introduced CX/FO 15/24/9 and explained that the fatty acid profiles and other parameters for peanut oils (arachis oil or groundnut oil) contained in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) presently excluded peanut oils obtained from new varieties whose fatty acid profiles were different. The Delegation pointed out that this was an obstacle to trade and that the market did not distinguish between the oils derived from new varieties and traditional varieties. In order to remedy this situation amendments were needed to the following parameters: palmitic acid, oleic acid, linoleic acid, arachidic acid, eicosenoic acid and erucic acid as well as other quality parameters including iodine values and relative density.

Discussion

92. Several delegations expressed support for starting new work to amend the Standard and reported that there had been rejections of exports, including re-export, for this commodity based on differences in fatty acid profiles and other quality characteristics.

93. Other delegations pointed out that: the project document did not clearly state the volume of production, of international trade and of products rejected in trade; the project document did not indicated the volume of oil production but only that of oilseeds. It was also questioned whether the proposed amendment would focus on changing the existing compositional ranges or if new provisions for oils from these varieties would be introduced within the standard.

94. The Delegation of Argentina clarified that there were no precise data on trade volumes for these new peanut varieties, but that in general they contributed about 60% of the global trade for peanut oil.

95. It was suggested that the proposed new upper limit of 80% for oleic acid might not be high enough and that consideration could be given to higher values, e.g. 82%.

96. The European Union and its Member States did not object to the Committee's decision to start new work on this item, however, they expressed their general concern that when considering proposals for new work, the Committee should ensure that the procedures of the *Guideline on the Application of the Criteria for the Establishment of Work Priorities* (Procedural Manual) are strictly applied.

Conclusion

97. The Committee agreed to request CAC38 to approve new work on the revision of the fatty acid composition and other quality factors of peanut oil in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) and to forward the project document to the Executive Committee for critical review (Appendix VII).

98. The Committee also agreed to establish an EWG, led by Argentina, open to all Members and Observers and working in English only, to prepare, subject to approval of the Commission, the proposed draft revision for circulation for comments at Step 3 and consideration at its next session.

SUNFLOWER SEED OILS – INCLUSION OF PROVISIONS FOR HIGH STEARIC HIGH OLEIC ACIDS (Agenda Item 6e)[13]

99. The Delegation of Argentina explained that this work had been proposed at CCFO23 but had not been considered due to lack of time. The Delegation further explained that it had not been possible to finalise the discussion paper, and that the document would be submitted to the Committee at an appropriate time in future.

Conclusion

100. The Committee agreed to discontinue consideration on this matter for the time being.

DISCUSSION PAPER ON COLD PRESSED OILS (Agenda Item 7)[14]

101. The Delegation of Iran, as chair of the EWG, introduced the revised discussion paper and project document covering walnut oil, almond oil, hazelnut oil, pistachio oil, flaxseed oil and avocado oil. The Delegation highlighted that the information regarding fatty acids, sterols and tocopherols had been provided by members and included in the project document.

102. A number of delegations supported new work on these oils.

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[12] CX/FO 15/24/9; Comments of Kenya, FEDIOL (CRD14).
[13] CX/FO 15/24/10 (NOT ISSUED).
[14] CX/FO 15/24/11; Comments of Kenya (CRD15).

103. Other delegations did not support new work because: the production volume shown in Table 1 of the project document was for vegetable oils in general and not specifically for these oils; the production volume shown in another table was related to nuts and not nut oil; data on fatty acids, sterols and tocopherols were incomplete while data for other parameters were complete; international trade in these oils was estimated to be very low.

Conclusion

104. The Committee agreed to establish an EWG, led by Iran, open to all Members and Observers and working in English only, to revise the discussion paper including a project document, taking into account comments made at the present session and based on the *Guideline for Application of the Criteria for the Establishment of Work Priorities Applicable to Commodities* and information as required by the CCFO when proposing the addition of new oils to the *Standard for Named Vegetable Oils* agreed by the CCFO16, for consideration at its next Session.

105. The Committee agreed to amend the title of discussion paper and project document to read "Amendment to the *Standard for Named Vegetable Oils* to include walnut oil, almond oil, hazelnut oil, pistachio oil, flaxseed oil and avocado oil".

DISCUSSION PAPERS ON THE AMENDMENT OF THE *STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS* (CODEX STAN 33-1981) (Agenda Item 8)

CONTENT OF DELTA-7-STIGMASTENOL (Agenda Item 8a) [15]

106. The Committee agreed to discontinue consideration on this matter for the time being, noting that no document had been submitted since CCFO22.

107. The Committee noted the IOOC study on delta-7 stigmastenol (CRD6). The Observer from IOOC informed the Committee that a paper on this subject could be submitted at CCFO25.

REVISION FOR THE LIMIT FOR CAMPESTEROL (Agenda Item 8b) [16]

108. The Committee noted the documents prepared by the Delegations of Australia and Argentina related to the revision of the limit for campesterol.

109. The Delegation of Australia introduced CX/FO 15/47/13, which in their view demonstrated that a significant amount of authentic virgin olive oils from all over the world did not meet the current Codex limit for campesterol and this presented a challenge to market access. The Delegation, referring to the document prepared by Argentina, pointed out that the submission of two documents on the same issue from different geographical areas showed the need to revise the campesterol limit in the existing standard and the need for CCFO to facilitate legitimate trade in these oils. In order to facilitate the discussion on this issue, Australia suggested that subsequent discussion be based on Argentina document.

110. The Delegation of Argentina, referring to CX/FO 15/47/15, recalled that this issue had been debated in the Committee for several years. The Delegation explained that in 2009 Argentina had decided to become a member of IOOC to address, among others the issue of virgin olive oils that exceed campesterol limit and that in the same year IOOC had decided to begin new work on this issue. The Delegation further explained that in 2012 an IOOC study had concluded that authentic virgin olive oils could have higher values in some parameters, including campesterol. Since campesterol was an important parameter in the detection of fraud, in particular adulteration, IOOC had suggested a decision tree to verify the authenticity of virgin olive oils with campesterol value between 4 and 4.5%. The decision tree was subsequently incorporated in the IOOC standard in 2013[17]. The Delegation drew the attention of the Committee to the proposal for new work in Appendix 1 of CX/FO 15/24/15.

General Discussion

111. The Committee noted the comments submitted by the Delegation of Uruguay in CRD16.

112. Delegations generally supported the Argentinean proposal and highlighted the importance of ensuring the authenticity of virgin olive oils to avoid fraud and adulteration.

113. In view of the support from delegations, the Committee agreed to consider the project document by Argentina with the view to initiate new work on this subject.

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[15] CX/FO 15/24/12 (NOT ISSUED); IOOC Study on Authentic Olive Oil displaying off-limits: delta-7 stigmastenol (CRD6).
[16] CX/FO 15/24/13 (prepared by Australia); CX/FO 15/24/15 (prepared by Argentina); IOOC Study on Authentic Olive Oil displaying off-limit: campesterol (CRD6); Comments of Kenya, India, Uruguay, IOOC (CRD16).
[17] Trade Standard COI/T.15/NC No 3/Rev. 7.

Project document

114. The Committee considered the project document prepared by Argentina in CX/FO 15/24/15, section by section and noted comments and made the following decisions:

1. Purpose and scope of the proposed work

115. The Committee revised the section to carefully define the scope of the new work, which objective are to ensure the authenticity of the virgin olive oils that deviate from the current limits.

116. After an extensive discussion and in a spirit of compromise the Committee agreed to the following text:

> *To review Section 3 of the Standard for Olive Oils and Olive Pomace Oils (CODEX STAN 33-1981) and in* particular *to introduce an exception for authentic virgin olive oils that naturally deviate from the current limit of campesterol, provided that more effective criteria are set by reducing limits of certain already existing parameters, taking into account Codex Member data, the IOOC Standard and other relevant work with a view to facilitate trade and ensure virgin olive oil authenticity.*

117. The Committee revised the other sections, as follows:

- 2. Relevance and timeliness – made some minor amendments and also amended the third paragraph to refer to other studies which had shown that campesterol level of 4.5% might be exceeded; the last paragraph was also amended to state that existing standards should reflect the global variability of the authentic traded olive oils;
- 3. Main aspects to be covered – revised the section to be consistent with 1. "Purpose and scope of the work";
- 4. Assessment against the Criteria for the establishment of work priorities – included a paragraph on the revision in 2013 of the IOOC standard for olive oils and olive pomace oils;
- 5. Relevance in relation to Codex strategic objectives – replaced the entire section with the corresponding section of the document prepared by Australia.

Conclusion

118. The Committee agreed to request CAC38 to approve new work on the revision of Section 3 of the *Standard for Olive Oil and Olive Pomace Oil* (CODEX STAN 33-1988) (as describe above) and to forward the revised project document to the Executive Committee for critical review (Appendix VIII).

119. The Committee also agreed to establish an EWG, led by Argentina and co-chaired by Australia and Italy, open to all Members and Observers and working in English only, to prepare, subject to approval of the Commission, a proposed draft revision of Section 3, as described in the project document, for circulation for comments at Step 3 and consideration at its next session.

120. The Committee further noted that in the event that this work is not completed, the provisions in the current standard would apply.

DISCUSSION PAPER ON THE AMENDMENT OF THE *CODE OF PRACTICE FOR THE STORAGE AND TRANSPORT OF EDIBLE FATS AND OILS IN BULK* (CAC/RCP 36-1987) (Agenda Item 9)[18]

121. The Observer from FOSFA introduced the CX/FO 15/24/14 and explained that the proposed amendments, limited to Section 2.1.3 of the Code, were intended to provide clarity and facilitate the use of the Code and thus contributing to reduce the risk to consumers derived from banned previous cargoes.

Discussions

122. A number of delegations did not support the proposed amendments noting that the present text was clear, and that it would be more important for the Committee to complete the work on the revision of the list of acceptable previous cargoes before considering new work related to the Code.

Conclusion

123. The Committee noted that there was not sufficient support to initiate new work and agreed to discontinue consideration on this matter.

[18] CX/FO 15/24/14; Comments of Kenya, India (CRD17).

OTHER BUSINESS AND FUTURE WORK (Agenda Item 10)

Proposed Draft Amendments to the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999): Replacement of Acid Value with Free Fatty Acids for Virgin Palm Oils[19]

124. The Delegation of Malaysia introduced CRD8 and explained that under current trade practice the main quality specification to characterize acidity for virgin palm oil was "free fatty acids (FFA)", while in the *Standard for Named Vegetable Oils* acidity of virgin palm oil was expressed as "acid value" and thus leading to trade problems.

125. The Delegation of Malaysia clarified that the intention of the amendment was not to modify the current acid value but the way acidity was expressed. The Committee noted that the current acid value in the standard (i.e. 10.0 mg KOH/g oil) was not equivalent to the FFA 5% (as palmitic acid), but it was the same FFA 5% (as oleic acid). Since FFA of palm oil is expressed as palmitic acid, being the major fatty acid of palm oil, there would be a mismatch of the acidity expressed as acid value of 10.00 mg KOH/g oil with the specification of FFA 5% (as palmitic acid) currently being practised in the international trade of palm oil. The Committee generally supported the proposal and also noted a suggestion to also include FFA for palm kernel oil.

Conclusion

126. The Committee agreed that Malaysia would prepare a discussion paper including a project document, taking into account comments made at the present session for consideration at its next Session.

Proposed draft Amendment to the *Standard for Named Animal Fats* (CODEX STAN 211-1999): inclusion of unrefined edible tallow[20]:

127. The Delegation of Australia introduced CRD9 and explained that unrefined edible tallow was commonly traded and used in the processed food industry and that the absence of clear standards for this product resulted in loss of markets because of food safety concerns. They, therefore, suggested a revision of the *Standard for Named Animal Fats* to include unrefined edible tallow, and proposed to prepare a discussion paper for consideration at the next session of the Committee.

Conclusion

128. The Committee supported the proposal and agreed that Australia would prepare a discussion paper including a project document to revise the *Standard for Named Animal Fats* (CODEX STAN 211-1999) to include unrefined edible tallow and based on the *Guideline for Application of the Criteria for the Establishment of Work Priorities Applicable to Commodities* for consideration at its next session.

Proposed draft Amendment to the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999): Inclusion of Quality Parameters of Crude Rice Bran Oil[21]

129. The Delegation of India introduced CRD7 and explained that it was not clear whether crude rice bran oil was covered under the specification for rice bran oil in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999). They pointed out that the values for the fatty acid composition ranges for rice bran oil in the Standard were the same as those for crude rice bran oil and proposed adding a footnote reading: "including crude rice bran oil".

130. A number of delegations supported new work, while others were of the view that a detailed description of the problem was necessary to take a decision on new work. It was also suggested to: clarify whether crude rice bran oil was as intended for direct human consumption; and examine the need to cover all crude oils in a general way in the description section of the standard.

Conclusion

131. The Committee agreed that India would prepare a discussion paper, including a project document, which clearly describes the problem together with an analysis of the implication of the suggested amendment with respect to crude bran rice oil to other parts of the standard, for consideration at its next session. The proposal should be based on the *Guideline for Application of the Criteria for the Establishment of Work Priorities Applicable to Commodities* and include information as required by CCFO when proposing the addition of new oils to the *Standard for Named Vegetable Oils*, as agreed by CCFO16.

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[19] Proposal of Malaysia (CRD8).
[20] Proposal of Australia (CRD9).
[21] Proposal of India (CRD7).

DATE AND PLACE OF THE NEXT SESSION (Agenda Item 11)

132. The Committee was informed that CCFO25 was tentatively scheduled to be held in Malaysia from 27 February to 3 March 2017. The exact time and venue would be decided between the Malaysian and Codex Secretariats.

SUMMARY STATUS OF WORK

SUBJECT MATTER	STEP	ACTION BY	DOCUMENT REFERENCE (REP15/FO)
Proposed Draft Standard for Fish Oils	5	Members CAC38 Members PWG (Switzerland) CCFO25	Paras. 46, 47 and App. III
Amendments to Appendix 2 "List of Acceptable Previous Cargoes" of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (CAC/RCP 36–1987)	Adoption	Members CAC38	Para. 60 and App. IV
Reference to Acceptance / Voluntary Application in Codex Standards	Adoption	Members CAC38	Para. 63
Amendments Appendix 2 "List of Acceptable Previous Cargoes" of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (CAC/RCP 36–1987)	-	Members EWG (Malaysia) PWG (Malaysia) CCFO25	Para. 60
Amendments to the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999)			
Addition of Palm Oil with High Oleic Acid (OxG)	1/2/3	CAC38 EWG (Colombia/ Ecuador) CCFO25	Paras 89, 90 and App. VI
Revision of Fatty Acid Composition and Other Quality Factors of Peanut Oil	1/2/3	CAC38 EWG (Argentina) CCFO25	Paras 97. 98 and App. VII
Amendments to the *Standard for Olive Oils and Olive Pomace Oils* (CODEX STAN 33 – 1981)			
Revision of the Limit for Campesterol	1/2/3	CAC38 EWG (Argentina/ Australia/ Italy) CCFO25	Paras 118, 119 and App. VIII
Discussion Papers on Amendments of the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999)			
Revision of Limits of Oleic and Linoleic Acids in Sunflower Seed Oils	-	EWG (Argentina/ Brazil) CCFO25	Para. 79
Inclusion of Provisions for Walnut Oil, Almond Oil, Hazelnut Oil, Pistachio Oil, Flaxseed Oil and Avocado Oil	-	EWG (Iran) CCFO25	Paras 104-105
Replacement of Acid Value with Free Fatty Acids for Virgin Palm Oils	-	Malaysia CCFO25	Para. 126
Inclusion of Quality Parameters for Crude Rice Bran Oil	-	India CCFO25	Para. 131
Inclusion of Provisions for High Oleic Soybean Oil	Discontinue	-	Para. 82
Inclusion of Provisions for High Stearic High Oleic Acids of Sunflower Seed Oils	Discontinue	-	Para. 100
Discussion Paper on Amendment of the *Standard for Olive Oils and Olive Pomace Oils*			
Content of delta-7-stigmastenol	Discontinue	-	Para. 106

Other Discussion Papers			
Discussion Paper on the Amendment of the *Standard for Named Animal Fats* (CODEX STAN 211 – 1999): Inclusion of Unrefined Edible Tallow	-	Australia CCFO25	Para. 128
Discussion paper on the Amendment of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* (CAC/RCP 36 – 1987)	Discontinue	-	Para. 123

Appendix I

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LISTE DES PARTICIPANTS
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Appendix II

RESPONSES OF CCFO24 TO THE STRATEGIC PLAN IMPLEMENTATION

The responsed of CCFO24 are indicated in **bold and underline** font.

Strategic Goal	Objective	Activity	Expected Outcome	Measurable Indicators/Outputs
1: Establish international food standards that address current and emerging food issues.	1.1: Establish new and review existing Codex standards, based on priorities of the CAC.	1.1.1: Consistently apply decision-making and priority-setting criteria across Committees to ensure that the standards and work areas of highest priority are progressed in a timely manner.	New or updated standards are developed in a timely manner.	- Priority setting criteria are reviewed, revised as required and applied. - # of standards revised and # of new standards developed based on these criteria.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** Does the Committee use any specific criteria for standards development? **The Committee uses "Criteria for the Establishment of Work Priorities" in the Procedural Manual, as criteria for standards development.** Does the Committee intend to develop such criteria? **The Committee notes the importance of applying relevant provisions of the Procedural Manual when reviewing new proposals, and more guidance and objective criteria on the mentioned provisions might be useful.**				
	1.2: Proactively identify emerging issues and Member needs and, where appropriate, develop relevant food standards.	1.2.1: Develop a systematic approach to promote identification of emerging issues related to food safety, nutrition, and fair practices in the food trade.	Timely Codex response to emerging issues and to the needs of Members.	- Committees implement systematic approaches for identification of emerging issues. - Regular reports on systematic approach and emerging issues made to the CCEXEC through the Codex Secretariat.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** How does the Committee identify emerging issues and members needs? **Emerging issues identified by Members, other committees or FAO/WHO are brought to the attention of the Committee.** Is there a systematic approach? Is it necessary to develop such an approach? **Currently, there is no systematic approach, however, there may be a need to develop one should the current process is found to be insufficient.**				
		1.2.2: Develop and revise international and regional standards as needed, in response to needs identified by Members and in response to factors that affect food safety, nutrition and fair practices in the food trade.	Improved ability of Codex to develop standards relevant to the needs of its Members.	- Input from committees identifying and prioritizing needs of Members. - Report to CCEXEC from committees on how standards developed address the needs of the Members as part of critical review process.
Included in question to 1.1 and 1.2.				

Strategic Goal	Objective	Activity	Expected Outcome	Measurable Indicators/Outputs
2: Ensure the application of risk analysis principles in the development of Codex standards.	2.1: Ensure consistent use of risk analysis principles and scientific advice.	2.1.1: Use the scientific advice of the joint FAO/WHO expert bodies to the fullest extent possible in food safety and nutrition standards development based on the "Working Principles of Risk Analysis for Application in the Framework of the Codex Alimentarius".	Scientific advice consistently taken into account by all relevant committees during the standard setting process.	-. # of times the need for scientific advice is: - identified, - requested and, - utilized in a timely manner.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** Does the committee request scientific advice in course of its work, how often does it request such advice? Does the committee always use the scientific advice, if not, why not? **The Committee had requested scientific advice from FAO/WHO. For example, upon the request from CCFO, the FAO/WHO Technical Meeting for the development of Criteria for Acceptable Previous Cargoes for Fats and Oils was held in 2006 to draft Criteria to identify substances to be listed in List of Acceptable Previous Cargoes. CCFO developed the Criteria based on the output of the mentioned Technical Meeting.** **CCFO23 decided to have a standing agenda item in every session of the CCFO to consider the review of the Codex List of Acceptable Previous Cargoes which is related to JECFA evaluation where scientific advice will be required. Expert consultations from FAO/WHO could also be requested.**				
		2.1.2: Encourage engagement of scientific and technical expertise of Members and their representatives in the development of Codex standards.	Increase in scientific and technical experts at the national level contributing to the development of Codex standards.	- # of scientists and technical experts as part of Member delegations. - # of scientists and technical experts providing appropriate input to country positions.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** How do members make sure that the necessary scientific input is given into country positions and that the composition of the national delegation allows to adequately present and discuss this position? What guidance could be given by the Committee or FAO and WHO? **Prior to developing and advancing a country's position, Members typically seek and engage national scientific and technical expertise from within their government and from those outside of government. Delegations are properly constituted by selecting experts who has sufficient knowledge for items shown in the Provisional Agenda and qualified to be involved in the discussion.** **No specific guidance from FAO/WHO or the Committee is currently needed.**				
		2.1.3: Ensure that all relevant factors are fully considered in exploring risk management options in the context of Codex standard development.	Enhanced identification, and documentation of all relevant factors considered by committees during the development of Codex standards.	- # of committee documents identifying all relevant factors guiding risk management recommendations. - # of committee documents clearly reflecting how those relevant factors were considered in the context of standards development.

Strategic Goal	Objective	Activity	Expected Outcome	Measurable Indicators/Outputs
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** How does the Committee ensure that all relevant factors have been taken into account when developing a standard and how are these documented? **The Chair ensures that all relevant factors according to the Procedural Manual are considered by Committee and also ensures that "Working Principles for Risk Analysis" is consistently applied when exploring risk management options. The relevant discussion is captured in reports of the Committee or its working groups.** **In addition, the CCFO ensures this by referring relevant questions to other committees such as CCMAS, CCFFP, etc**				
		2.1.4: Communicate the risk management recommendations to all interested parties.	Risk management recommendations are effectively communicated and disseminated to all interested parties.	- # of web publication/ communications relaying Codex standards. - # of media releases disseminating Codex standards.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** When taking a risk management decision, does the committee give guidance to members how to communicate this decision? Would more consideration of this be helpful to members? **Communication of the risk management recommendations are done through standards, guidelines, and other related texts, which are posted on the Codex website. The Commitee does not give specific guidance to Members on how to communicate this decision. The development of a communication strategy may have a positive impact on this activity.**				
3: Facilitate the effective participation of all Codex Members.	3.1: Increase the effective participation of developing countries in Codex.	3.1.5: To the extent possible, promote the use of the official languages of the Commission in committees and working groups.	Active participation of Members in committees and working groups.	- Report on number of committees and working groups using the languages of the Commission
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** Is the use of official languages in working groups of the committee sufficient? **Not always. It would be advisable to use as many languages as possible in working groups in order to enhance participation of members** What are the factors determining the choice of languages? How could the situation be improved? **The Committee determines the choice of language based primarily on the availability of resources and on the chair of the working group. The Committee mainly uses English for electronic working groups, but has used French or Spanish when resources have allowed for this approach. Promoting the co-chairing arrangements by countries with different languages may contribute to the use of more official languages.**				
	3.2: Promote capacity development programs that assist countries in creating sustainable national Codex structures.	3.2.3: Where practical, the use of Codex meetings as a forum to effectively conduct educational and technical capacity building activities.	Enhancement of the opportunities to conduct concurrent activities to maximize use of the resources of Codex and Members.	-. # of activities hosted on the margins of Codex meetings.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** Does the Committee organize technical capacity activities or other activities in the margins of Committee sessions? If yes – how many and with which topics have been organized in the past. If no – could this be				

Strategic Goal	Objective	Activity	Expected Outcome	Measurable Indicators/Outputs
useful and what topics could be addressed? **No technical capacity building activity have been organized in the margin of the Committee sessions.**				
4: Implement effective and efficient work management systems and practices.	4.1: Strive for an effective, efficient, transparent, and consensus based standard setting process.	4.1.4: Ensure timely distribution of all Codex working documents in the working languages of the Committee/ Commission.	Codex documents distributed in a more timely manner consistent with timelines in the Procedural Manual.	- Baseline Ratio (%) established for documents distributed at least 2 months prior to versus less than 2 months prior to a scheduled meeting. - Factors that potentially delay the circulation of documents identified and addressed. - An increase in the ratio (%) of documents circulated 2 months or more prior to meetings.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** Does the Committee have a mechanism in place to ensure timely distribution of documents? What could be done to further improve the situation? **The requirement for timely distribution of documents already exists and is included in the Procedural Manual. Every possible effort should be made to ensure the timely distribution of documents; however, all members should be more disciplined in ensuring its implementation. When electronic working groups are established, timelines are developed to ensure timely distribution of documents. In particular members who submit new work proposals should ensure timely distribution to allow other members to consider their proposals.**				
		4.1.5: Increase the scheduling of Work Group meetings in conjunction with Committee meetings.	Improved efficiency in use of resources by Codex committees and Members	- # of physical working group meetings in conjunction with committee meetings, where appropriate.
Question to the Committee: Is this activity relevant to the work of the Committee? **YES** Does the Committee hold physical working groups independent of Committee sessions? If yes – why is this necessary? **In general the system in place today, e-working groups combined with physical working groups organised in conjunction with Committee sessions, is sufficient to ensure the efficiency of the work of the Committee. There does not seem to be any added value of working groups independent of Committee sessions, unless it is fully justified by specific needs. CCFO is concerned about the additional resources that such organisation would require.**				
	4.2: Enhance capacity to arrive at consensus in standards setting process.	4.2.1: Improve the understanding of Codex Members and delegates of the importance of and approach to consensus building of Codex work.	Members and delegates awareness of the importance of consensus in the Codex standard setting process improved.	- Training material on guidance to achieve consensus developed and made available in the languages of the Commission to delegates. - Regular dissemination of existing material to Members through Codex Contact Points. - Delegate training programs held in

Strategic Goal	Objective	Activity	Expected Outcome	Measurable Indicators/Outputs
				association with Codex meetings. - Impediments to consensus being achieved in Codex identified and analyzed and additional guidance developed to address such impediments, if necessary.

Question to the Committee:

Is this activity relevant to the work of the Committee? **YES**

Are there problems with finding consensus in the Committee? If yes – what are the impediments to consensus? What has been attempted and what more could be done?

CCFO experienced some difficulties in finding consensus when developing standards and also discussing the need of new work proposals. The Committee tries to address these issues by making the best use of eWG, pWG and/or in-session WGs, and especially for the new work proposals by respecting the relevant provisions of the Procedural Manual. All efforts should be made to ensure that all decisions of the Committee are taken on the basis of consensus, or the standard should not be forwarded to the CAC

Appendix III

PROPOSED DRAFT CODEX STANDARD FOR FISH OILS

(at Step 5 of the Procedure)

1. Scope

This Standard applies to the fish oils described in section 2 that are presented in a state for human consumption. For the purpose of this Standard, the term fish oils refers to oils derived from fish and shellfish as defined in section 2 of the *Code of Practice for Fish and Fishery Products* (CAC/RCP 52-2003)[1]. This standard only applies to fish oils used in food and in food supplements where those are regulated as foods.

2. Description

Fish oils means oils intended for human consumption derived from the raw material as defined in Section 2 of the *Code of Practice for Fish and Fishery Products* (CAC/RCP 52-2003). Processes to obtain fish oil for human consumption may involve, but are not limited to, extraction of crude oil from raw material and refining of that crude oil. *Fish oils* and *concentrated fish oils* are primarily composed of glycerides of fatty acids whereas *concentrated fish oils ethyl esters* are primarily composed of fatty acids ethyl esters. Fish oils may contain other lipids and unsaponifiable constituents naturally present.

Crude fish oils and crude fish liver oils are oils intended for human consumption after they have undergone further processing, refining and purification and have to comply with section 3.1, as applicable, as well as with sections 4, 6.1 and 7.

The refined fish oil production process typically includes several steps such as repeated heating at high temperatures as well as alkali/ acid treatments and repeated removal of the water phase. Fish oils may also be subjected to processing steps (e.g. solvent extraction, saponification, re-esterification, trans-esterification).

2.1 **Named fish oils** are derived from specific raw materials which are characteristic of the major fish or shellfish taxon from which the oil is extracted.

2.1.1 **Anchovy oil** is derived from species of the genus *Engraulis* (*Engraulidae*).

2.1.2 **Tuna oil** is derived from the species of the genus *Thunnus* and from the species *Katsuwonus pelamis* (*Scombridae*)**.**

2.1.3 **Krill oil** is derived from *Euphausia superba*. The major components are triglycerides and phospholipids. The content of phospholipids should be at least 30 w/w %.

2.1.4 **Menhaden oil** is derived from the genus *Brevootia* (*Clupeidae*).

2.1.5 **Salmon oil** is derived from the family *Salmonidae*.

2.2 **Fish oils** (unnamed) are derived from a single species of fish other than the ones listed in Section 2.1 or are a mixture of fish oils derived from specified and/or unspecified raw materials. This includes also mixtures with fish liver oils.

2.3.1 **Named fish liver oils** are derived from the livers of fish and are composed of fatty acids, vitamins or other components that are representative of the livers from the species from which the oil is extracted.

2.3.2 **Cod liver oil** is derived from the liver of wild cod, *Gadus morhua* L and other species of *Gadidae*.

2.4 **Fish liver oil** (unnamed) may be derived from the livers of fish other than those used for named fish liver oils or are a mixture of named fish liver oils and/or single species fish liver oils.

2.5 **Concentrated fish oils** are derived from fish oils described in Sections 2.1 to 2.4 which have been subjected to processes that may involve, but are not limited to, hydrolysis, fractionation, winterization and/or re-esterification to increase the concentration of specific fatty acids.

2.5.1 **Concentrated fish oil** contains 35 to 50 w/w % fatty acids as sum of C20:5 (n-3) eicosapentaenoic acid (EPA) and C22:6 (n-3) docosahexaenoic acid (DHA), at least 50 w/w % of fatty acids are in the form of triglycerides.

2.5.2 **Highly concentrated fish oil** contains greater than 50 w/w % fatty acids as sum of EPA and DHA, at least 50 w/w % of fatty acids are in the form of triglycerides.

[1] *Fish:* Any of the cold-blooded (ecothermic) aquatic vertebrates. Amphibians and aquatic reptiles are not included. *Shellfish:* Those species of aquatic molluscs and crustaceans that are commonly used for food.

2.6 **Concentrated fish oils ethyl esters** are derived from fish oils described in Section 2.1 to 2.4 and are primarily composed of fatty acids ethyl esters.

2.6.1 **Concentrated fish oil ethyl esters** contains fatty acids as esters of ethanol of which 40 to 60 w/w % are as sum of EPA and DHA.

2.6.2 **Highly concentrated fish oil ethyl esters** contain fatty acids as esters of ethanol of which greater than 60 w/w % are as sum of EPA and DHA.

3. Essential composition and quality factors

3.1 **GLC ranges of fatty acid composition** (expressed as percentages of total fatty acids)

Samples falling within the appropriate ranges specified in Table 1 are in compliance with sections 2.1 and 2.3 of this Standard. Supplementary criteria, for example national geographical and/or climatic variations, may be considered, as necessary, to confirm that a sample is in compliance with the Standard.

3.2 **Quality parameters**

Note: this section does not apply to flavoured fish oils where the added flavourings may interfere with the analytical determination of oxidation parameters.

3.2.1 **Fish oils, fish liver oils, concentrated fish oils, and concentrated fish oils ethyl esters (Section 2.1. to 2.6) with the exception of oils dealt with in Section 3.2.2 shall comply with the following:**

Acid value	≤ 3 mg KOH/g
Peroxide value	≤ 5 milliequivalent of active oxigen/kg oil
Anisidine value	≤ 20
Total oxidation value (ToTox)[2]	≤ 26

3.2.2 **Fish oils with a high phospholipid concentration of 30% or more such as krill oil (Section 2.1.3) shall comply with the following:**

Acid value	≤ 30 mg KOH/g
Peroxide value	≤ 5 milliequivalent of active oxigen/kg oil

3.3 **Vitamins**

Fish liver oils except of deep sea shark liver oil (Sections 2.3 and 2.4) shall comply with following:

Vitamin A	≥ 40 µg of retinol equivalents/ml of oil
Vitamin D	≥ 1.0 µg/ml

4. Food Additives

Antioxidants, sequestrants, antifoaming agents, and emulsifiers used in accordance with Tables 1 and 2 of the *General Standard of Food Additives* (CODEX STAN 192-1995), in food category *02.1.3 Lard, tallow, fish oil, and other animal fats.*

[2] Total oxidation value (ToTox) = 2 x Peroxide value + Anisidine value

The following additives may be used in addition:

INS	Additive name	Maximum level
Antioxidant		
300	Ascorbic acid, L-	GMP
304, 305	Ascorbyl esters	2500 mg/kg, as ascorbyl stearate
307a, b, c	Tocopherols	6000 mg/kg, singly or in combination
Emulsifier		
322 (i)	Lecithin	GMP
471	Mono- and di-glycerides of fatty acids	GMP

The flavourings used in products covered by this standard should comply with the *Guidelines for the Use of Flavourings* (CAC/GL 66-2008).

5. Contaminants

The products covered by this Standard shall comply with the Maximum Levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CODEX STAN 193-1995).

The products covered by this Standard shall comply with the maximum residue limits for pesticides and/or veterinary drugs established by the Codex Alimentarius Commission.

6. Hygiene

6.1 General hygiene

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* (CAC/RCP 1-1969), the *Code of Practice for Fish and Fishery Products* (CAC/RCP 53-2003), and *Code of Hygienic Practice for the Storage and Transport of Edible Oils and Fats in Bulk* (CAC/RCP 36-1987).

6.2 Microbiological criteria

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

7. Labelling

7.1 Name of the food

The product shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CODEX STAN 1-1985). The name of the fish oil shall conform to the descriptions given in Section 2 of this Standard. For salmon oil the label shall specify the source of the raw material (wild, farmed).

7.2 Labelling on non-retail containers

Information on the above labelling requirements shall be given either on the container or in accompanying documents, except that the name of the food, lot identification and the name and address of the manufacturer or packer shall appear on the container.

However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

For crude fish oils and crude fish liver oils the label shall indicate that these oils are intended for human consumption only after they have undergone further processing**.**

7.3 Other labelling requirements

[For fish liver oils (Sections 2.3 and 2.4) the content in vitamin A and vitamin D shall be given.

or

For fish liver oils (Sections 2.3 and 2.4) the content in vitamin A and vitamin D, naturally present or restored, shall be given if required by country of retail sale.]

The content of EPA and DHA [shall/may] be given for all fish oils covered by this Standard .

8. Methods of Analysis and Sampling

8.1 Sampling

ISO 5555: Animal and vegetable fats and oils -- Sampling

8.2 Determination of fatty acid composition

According to applicable ISO methods including: ISO 5508 and ISO 12966-2 (Animal and vegetable fats and oils -- Analysis by gas chromatography of methyl esters of fatty acids) or AOCS methods including: Ce 1b-89 (Fatty acid composition of Marine Oils by GLC), Ce 1i-07 (Determination of saturated cis-, monounsaturated, and cis-polyunsaturated fatty acids in Marine Other Oils containing long chain Polyunsaturated Fatty Acids (PUFAs) by Capillary GLC), Ce 2b-11 (Direct Methylation of Lipids in Foods by Alkali Hydrolysis), Ce 1a-13 (Determination of Fatty Acids in edible oils and fats by capillary GLC) and Ce 2-66 (Preparation of Methyl Esters of Fatty Acids)

8.3 Determination of arsenic

According to AOAC 952.13 (Silver Diethyldithiocarbamate Method); AOAC 942.17 (Molybdenum Blue); or AOAC 986.15 (Spectroscopy/Atomic Absorption Spectroscopy).

8.4 Determination of lead

According to AOAC 994.02 (Atomic Absorption Spectroscopy); or ISO 12193 (Animal and vegetable fats and oils -- Determination of lead by direct graphite furnace atomic absorption spectroscopy); or AOCS Ca 18c-91 (Determination of Lead by Direct Graphite Furnace Atomic Absorption Spectrophotometry).

8.5 Determination of acid value

According to AOCS Ca 5a-40 (Free Fatty Acids), AOCS Cd 3d-63 (Acid Value); ISO 660 (Animal and vegetable fats and oils -- Determination of acid value and acidity); European Pharmacopoeia 2.5.1 (Acid value).

8.6 Determination of peroxide value

According to AOCS CD 8b-90 (Peroxide Value Acetic Acid-Isooctane Method); ISO 3960 (Animal and vegetable fats and oils -- Determination of peroxide value -- Iodometric (visual) endpoint determination); European Pharmacopoeia 2.5.5 (Peroxide value).

8.7 Determination of p-anisidine value

According to AOCS Cd 18-90

8.8 Determination of vitamin A

According to PhEur 2.2.29 liquid chromatography, monograph Cod liver oil (type A).

8.9 Determination of vitamin D

According to PhEur 2.2.29 liquid chromatography, monograph Cod liver oil (type A).

8.10 Determination of phospholipids

According to AOCS Ca 12b-92 (Phosphorus by direct graphite furnace atomic absorption spectrometry); AOCS Ca 12a-02 (Colorimetric determination of phosphorus content in fats and oils; Ca 20-99 (Analysis for phosphorus in oil by inductively coupled plasma optical emission spectroscopy).

Table 1: Fatty acid (FA) composition of named fish oil and fish liver oil categories as determined by gas liquid chromatography from authentic samples (expressed as percentage of total fatty acids) (see Section 3.1 of the Standard)

Fatty acids	Anchovy (Section 2.1.1)	Cod Liver (Section 2.3.1)	Tuna (Section 2.1.2)	Krill (Section 2.1.3)	Menhaden (Section 2.1.4)	Salmon oil (Section 2.1.5)	
						Wild	Farm
C14:0 myristic acid	5.0-11.5	2.0-6.0	ND-5.0	6.4-13.0	8.0-11.0	2.0-4.5	1.5-5.5
C15:0 pentadecanoic acid	ND-1.5	ND-0.5	ND-2.0	NA	ND-1.0	ND-1.0	ND-0.5
C16:0 palmitic acid	13.0-22.0	7.0-14.0	14.0-24.0	17.0-24.6	18.0-20.0	12.0-16.0	6.5-12.0
C16:1 (n-7) palmitoleic acid	5.0-12.0	4.5-11.5	ND-12.5	2.1-8.9	9.0-13.0	4.5-6.0	2.0-5.0
C17:0 heptadecanoic acid	ND-2.0	na	ND-3.0	NA	ND-1.0	ND-1.0	ND-0.5
C18:0 stearic acid	1.0-7.0	1.0-4.0	ND-7.5	NA	2.5-4.0	2.0-5.0	2.0-5.0
C18:1 (n-7) vaccenic acid	na	2.0–7.0	ND– 7.0	8.4-21.7	2.5-3.5	na	na
C18:1 (n-9) oleic acid	5.0-17.0	12.0-21.0	10.0-25.0	NA	5.5-8.5	16.0-18.0	30.0-47.0
C18:2 (n-6) linoleic acid	ND-3.5	0.5-3.0	ND-3.0	0.7-2.1	2.0-3.5	1.5-2.0	8.0-15.0
C18:3 (n-3) linolenic acid	ND-7.0	ND-2.0	ND-2.0	0.1-4.7	ND-2.0	ND-1.0	3.0-6.0
C18:3 (n-6) γ-linolenic acid	ND-5.0	na	ND-4.0	NA	ND-2.5	ND-1.0	ND-0.5
C18:4 (n-3) stearidonic acid	ND-5.0	0.5-4.5	ND-2.0	1.0-8.1	1.5-3.0	1.0-2.5	0.5-1.5
C20:0 arachidic acid	na	na	ND-2.5	NA	0.1-0.5	ND-0.5	0.1-0.5
C20:1 (n-9) eicosenoic acid	ND-4.0	5.0-17.0	ND-2.5	NA	ND-0.5	4.5-6.0	1.5-7.0
C20:1 (n-11) eicosenoic acid	ND-4.0	1.0-5.5	ND-3.0	NA	0.5-2.0	na	na
C20:4 (n-6) arachidonic acid	ND-2.0	ND-1.5	ND-3.0	NA	ND-2.0	0.5-1.0	ND-1.2
C20:4 (n-3) eicosatetraenoic acid	ND-2.0	ND-2.0	ND-1.0	NA	na	1.0-2.0	0.5-1.0
C20:5 (n-3) eicosapentaenoic acid	5.0-26.0	7.0-16.0	2.5-9.0	14:3-24.3	12.5-19.0	6.5-9.5	2.0-6.0
C21:5 (n-3) heneicosapentaenoic acid	ND-4.0	ND-1.5	ND-1.0	NA	0.5-1.0	ND-1.0	na
C22:1 (n-9) erucic acid	ND-5.0	ND-1.5	ND-2.0	NA	0.1-0.5	1.0-1.5	3.0-7.0
C22:1 (n-11) cetoleic acid	ND-5.0	5.0-12.0	ND-1.0	NA	ND-0.1	1.0-1.5	na
C22:5 (n-3) docosapentaenoic acid	ND-4.0	0.5-3.0	ND-3.0	0-0.07	2.0-3.0	1.5-3.0	1.0-2.5
C22:6 (n-3) docosahexaenoic acid	4.0-23.0	6.0-18.0	21.0-42.5	7.2-25.7	5.0-11.5	6.0-8.5	3.0-10.0

ND = non-detect, defined as ≤0.05%
na = not available
NA = not applicable

Appendix IV

CODE OF PRACTICE FOR THE STORAGE AND TRANSPORT OF EDIBLE FATS AND OILS IN BULK

(CAC/RCP 36 – 1987)

APPENDIX 2 - LIST OF ACCEPTABLE PREVIOUS CARGOES

(for adoption)

New texts added are shown in underlined. Deletions are shown in ~~strikethrough~~.

Substance (synonyms)	**CAS Number**
Acetic acid (ethanoic acid; vinegar acid; methane carboxylic acid)	64-19-7
Acetic anhydride (ethanoic anhydride)[1]	108-24-7
Acetone (dimethylketone; 2-propanone)	67-64-1
Acid oils and fatty acid distillates - from animal, marine and vegetable fats and oils	
Ammonium hydroxide (ammonium hydrate; ammonia solution; aqua ammonia)	1336-21-6
Ammonium polyphosphate	68333-79-9
Animal, marine and vegetable oils and fats (including hydrogenated oils and fats) - other than cashew shell nut oil and tall oil	
Beeswax – white[2]	8006-40-4
Beeswax – yellow2	8012-89-3
Benzyl alcohol (pharmaceutical and reagent grades)	100-51-6
1,3-Butanediol (1,3-butylene glycol)	107-88-0
1,4-Butanediol (1,4-butylene glycol)1	110-63-4
Butyl acetate, n-	123-86-4
Butyl acetate, iso-	110-19-0
Butyl acetate, sec-1	105-46-4
Butyl acetate, tert-1	540-88-5
Calcium ammonium nitrate solution1	6484-52-2
Calcium chloride solution	10043-52-4
Calcium lignosulphonate liquid (lignin liquor; sulphite lye)1	8061-52-7
Calcium nitrate (CN-9) solution1	35054-52-5
Candelilla wax2	8006-44-8
Carnauba wax (Brazil wax)-2	8015-86-9
Cyclohexane (hexamethylene; hexanaphthene; hexahydrobenzene)1	110-82-7
Ethanol (ethyl alcohol; spirits)	64-17-5
Ethyl acetate (acetic ether; acetic ester; vinegar naphtha)	141-78-6
2-Ethylhexanol (2-ethylhexy alcohol)	104-76-7
Fatty acids	
Arachidic acid (eicosanoic acid)	506-30-9
Behenic acid (docosanoic acid)	112-85-6
Butyric acid (n-butyric acid; butanoic acid; ethyl acetic acid; propyl forinic acid)	107-92-6
Capric acid (n-decanoic acid)	334-48-5
Caproic acid (n-hexanoic acid)	142-62-1
Caprylic acid (n-octanoic acid)	124-07-2
Erucic acid (cis-13-docosenoic acid)	112-86-7
Heptoic acid (n-heptanoic acid)	111-14-8

[1] Under review by FAO and WHO
[2] Usually transported in small quantities

Substance (synonyms)	CAS Number
Lauric acid (n-dodecanoic acid)	143-07-7
Lauroleic acid (dodecenoic acid)	4998-71-4
Linoleic acid (9,12-octadecadienoic acid)	60-33-3
Linolenic acid (9,12,15-octadecatrienoic acid)	463-40-1
Myristic acid (n-tetradecanoic acid)	544-63-8
Myristoleic acid (n-tetradecenoic acid)	544-64-9
Oleic acid (n-octadecenoic acid)	112-80-1
Palmitic acid (n-hexadecanoic acid)	57-10-3
Palmitoleic acid (cis-9-hexadecenoic acid)	373-49-9
Pelargonic acid (n-nonanoic acid)	112-05-0
Ricinoleic acid (cis-12-hydroxy octadec-9-enoic acid; castor oil acid)	141-22-0
Stearic acid (n-octadecanoic acid)	57-11-4
Valeric acid (n-pentanoic acid; valerianic acid)	109-52-4
Unfractionated fatty acid mixture or mixtures of fatty acids from natural oils and Fats	
Fatty alcohols	
Butyl alcohol (1-butanol; butyric alcohol)	71-36-3
iso-Butanol (2-methyl-1-propanol)	78-83-1
Caproyl alcohol (1-hexanol; hexyl alcohol)	111-27-3
Capryl alcohol (1-n-octanol; heptyl carbinol)	111-87-5
Cetyl alcohol (alcohol C-16; 1-hexadecanol; cetylic alcohol; palmityl alcohol; n-prirnary hexadecyl alcohol)	36653-82-4
Decyl alcohol (1-decanol)	112-30-1
Iso decyl alcohol (isodecanol)1	25339-17-7
Enanthyl alcohol (1-heptanol; heptyl alcohol)	111-70-6
Lauryl alcohol (n-dodecanol; dodecyl alcohol)	112-53-8
Myristyl alcohol (1-tetradecanol; tetradecanol)1	112-72-1
Nonyl alcohol (1-nonanol; pelargonic alcohol; octyl carbinol)	143-08-8
Iso nonyl alcohol (isononanol)1	27458-94-2
Oleyl alcohol (octadecenol)	143-28-2
Stearyl alcohol (1-octadecanol)	112-92-5
Tridecyl alcohol (I-tridecanol)1	27458-92-0
Unfractionated fatty alcohol mixture or mixtures of fatty alcohols from natural oils and fats1	
Fatty alcohol blends	
Cetyl stearyl alcohol (C16-C18)	67762-27-0
Lauryl myristyl alcohol (C12-C14)	
Fatty acid esters – combination of above fatty acids and fatty alcohols	
e.g. Butyl myristate	110-36-1
Cetyl stearate	110-63-2
Oleyl palmitate	2906-55-0
Unfractionated fatty esters or mixtures of fatty esters from natural oils and fats	
Fatty acid methyl esters (these include for example)	
e.g. Methyl laurate (methyl dodecanoate)	111-82-0
Methyl oleate (methyl octadecenoate)	112-62-9
Methyl palmitate (methyl hexadecanoate)	112-39-0
Methyl stearate (methyl octadecanoate)	112-61-8
Formic acid (methanoic acid; hydrogen carboxylic acid)	64-18-6
Fructose	
Glycerine (glycerol, glycerin)	56-81-5

Substance (synonyms)	CAS Number
Heptane	142-82-5
n-Hexane	110-54-3
Hydrogen peroxide	
Kaolin slurry	1332-58-7
Limonene (dipentene)	138-86-3
Magnesium chloride solution	7786-30-3
Methanol (methyl alcohol)	67-56-1
Methyl Acetate	79-20-9
Methyl ethyl ketone (2-butanone; MEK)	78-93-3
Methyl isobutyl ketone (4-methyl-2-pentanone; iso propylacetone; MIBK)	108-10-1
Methyl tertiary butyl ether (MBTE)1	1634-04-4
Mineral oil, high viscosity	8012-95-1
Mineral oil, medium viscosity	
Mineral oil, medium and low viscocity, class II1	
Mineral oil, medium and low viscocity, class III1	
Molasses those obtained from citrus, sorghum, sugar beet and sugar cane only	57-50-1
Montan wax1	8002-53-7
iso-Octyl alcohol (isooctanol)1	26952-21-6
Pentane1	109-66-0
Petroleum wax (parafin wax)	8002-74-2
Phosphoric acid (ortho phosphoric acid)	7664-38-2
Potable water	7732-18-5
Polypropylene glycol	25322-69-4
Potassium hydroxide solution (caustic potash)	1310-58-3
Propyl acetate	109-60-4
Propyl alcohol (propane-1-ol; l-propanol)	71-23-8
iso-Propyl alcohol (isopropanol; dimethyl carbinol; 2-propanol)	67-63-0
Propylene glycol, 1,2- (1,2-propylene glycol; propan-1,2-diol; 1.2- dihydroxypropane; monopropylene glycol (MPG); methyl glycol)	57-55-6
1,3 -Propylene glycol1	504-63-2
Propylene tetramer ((tetrapropylene; dodecene)1	6842-15-5
~~Silicon dioxide (microsilica)~~	~~7631-86-9~~
Sodium hydroxide solution (caustic soda, lye; sodium hydrate; white caustic)	1310-73-2
Sodium silicate (water glass)	1344-09-8
Sorbitol (D-sorbitol; hexahydric alcohol; D-sorbite)	50-70-4
Soybean oil epoxidized1	8013-07-8
Sulphuric acid	7664-93-9
Urea ammonia nitrate solution (UAN)	
~~White mineral oils~~	~~8042-47-5~~

Appendix V

LIST OF SUBSTANCES TO BE FORWARDED TO FAO AND WHO FOR EVALUATION

No.	Substance	CAS No.	Chemical Group	Priority
A) Current Substances in the List of Acceptable Previous Cargoes				
1	Acetic anhydride (ethanoic anhydride)	108-24-7	Solvents, reactants	Low
2	1,4-Butanediol (1,4-butylene glycol)	110-63-4	Alcohol	Low
3	Butyl acetate, sec-	105-46-4	Solvents, reactants	Low
4	Butyl acetate, tert-	540-88-5	Solvents, reactants	Low
5	Cyclohexane (hexamethylene; hexanaphthene; hexahydrobenzene)	110-82-7	Solvents, reactants	Low
6	Iso decyl alcohol (isodecanol)	25339-17-7	Alcohols	Low
7	Myristyl alcohol (1-tetradecanol; tetradecanol)	112-72-1	Alcohols	Low
8	Iso nonyl alcohol (isononanol)	27458-94-2	Alcohols	Low
9	Tridecyl alcohol (I-tridecanol)	27458-92-0	Alcohols	Low
10	Methyl tertiary butyl ether (MBTE)	1634-04-4	Butyl ethers	High
11	Montan wax	8002-53-7	Oils / Waxes	High
12	iso-Octyl alcohol (isooctanol)	26952-21-6	Alcohols	Low
13	Pentane	109-66-0	Solvents, reactants	Low
14	1,3 -Propylene glycol	504-63-2	Alcohols	Low
15	Propylene tetramer ((tetrapropylene; dodecene)	6842-15-5	Oils / Waxes	Medium
16	Soybean oil epoxidized	8013-07-8	Oils / Waxes	Medium
17	Mineral oil, medium and low viscocity, class II		Oils / Waxes	Medium
18	Mineral oil, medium and low viscocity, class III		Oils / Waxes	Medium
19	Calcium ammonium nitrate solution*	6484-52-2	Solutions	High
20	Calcium nitrate (CN-9) solution*	35054-52-5	Solutions	High
21	Unfractionated fatty alcohol mixture or mixtures of fatty alcohols from natural oils and fats*		Oils / Waxes	High
22	Calcium lignosulphonate liquid (lignin liquor; sulphite lye)	8061-52-7	-	High
B) New Substance Proposed to be Added to the List of Acceptable Previous Cargoes				
23	Ethyl tertiary butyl ether (ETBE)	637-92-3	Butyl ethers	High

* Recommended for evaluation due to its reaction products

Appendix VI

PROJECT DOCUMENT

Proposal for New Work on Revision of the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) to Add Palm Oil with High Oleic Acid (OxG)

1. Purpose and scope of the standard

The objective of this project is to request the inclusion of high oleic palm oil (OxG) (*Elaeis oleifera x Elaeis guineensis*), for marketing in edible form oriented industries involved in refining processes, bleaching and deodorization and consumers.

The inclusion of food safety and quality requirements of this oil in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999) will enable the establishment of standards and the monitoring of food safety procedures in this product, facilitate the conditions for its commercialization and serve as a frame of reference for the establishment of technical standards on edible fats and oils of this type.

2. Relevance and timeliness

During the last 20 years, global consumption of vegetable oils has increased significantly in regards to production, marketing and industrial use. However, this growth has involved an adaptation process to new consumer trends, a consumer-oriented health food, and increased competition among industries for this type of product positioning.

Following these changes both consumers and the food industry, prefer the use of oils high in oleic acid, through the recognized nutritional benefits of consuming more oleic acid and oxidation stability as a mechanism to improve chemical, nutritional and physical product quality characteristics. This results in greater demand for more nutritional foods and increased competition among industries to sell their products.

Based on the above, and considering that world consumption trends show a preference for natural and nutritional foods, the oil obtained from hybrid materials OxG represents a healthy alternative to cover daily requirements of fats and fat-soluble vitamins. Similarly, the high concentration of minor components in these oils represents a commercial alternative to obtain carotene, vitamin E (*tocopherols and tocotrienols*) and sterols of high bioavailability with numerous applications in the food products industry.

These comparative advantages of oils extracted from the different oil palm varieties should facilitate their acceptance in the food products industry and make their way to reach consumers. For this reason, it is necessary to establish both general and specific requirements to characterize palm oil high in oleic acid (OxG).

(i) Information on the species

Palm oil is extracted from the mesocarp of the palm fruit; there are two species of the *Elaeis* genus of importance in the global oil palm industry: *Elaeis guineensis*, which originated in central and western Africa, and *Elaeis oleifera*, which is originally from South and Central America.

Since the 1970s, several countries have developed hybrids between the American oil palm, *Elaeis oleifera*, and the African oil palm, *Elaeis guineensis*. The result of the crossing is an interspecific hybrid called OxG. In Colombia, Ecuador, Brazil, Costa Rica, France and Malaysia, there are gene banks of this material. Highlights of EMBRAPA (Brazil), ASD (Costa Rica), CIRAD (France) and MPOB (Malaysia). In Colombia and Ecuador for more than 10 years ago there are commercial plantations of hybrid palm OxG.

The characteristics of this new material include:

- High resistance to diseases and pests that commonly affect E. guineensis of African origin, such as the bud rot disease (BRD) in Colombia and yellowing disease in Brazil.
- The oil extracted from the fruit features a high content of unsaturated fatty acids: oleic values above 50%, linoleic values above 12%, and iodine content above 60%, which increases the fluidity of the oil and facilitates its use in the food processing industry and home cooking.
- The oil has high carotene content, greater than 1050 ppm, as well as over 1175 ppm of tocopherols and tocotrienols.

Even though several countries have other interspecific hybrid materials, in 2009 Ecuador and Colombia agreed to denote the oil extracted from the fruits of the interespecific hybrid OxG as “palm oil high in oleic acid”.

Currently, this hybrid material OxG is an excellent alternative compared to *Elaeis guineensis* for oil palm growers affected by BRD, given that it has mitigated the impact of BRD in oil palm plantations in Colombia and Ecuador. It is now sown as hybrid OxG in Central America. Brazil reports the planting of 12,000 hectares that are in their early growth stage.

(ii) Characterization of *Elaeis oleifera* interspecific hybrid by *Elaeis oleifera x Elaeis guineensis* (OxG)

Metabolites and fatty acid composition in oil

The oil extracted from the interspecific hybrid OxG, is characterized by a significantly higher content of carotenoids, tocopherols, tocotrienols, and oleic acid than the traditional palm oil. **Table 1** to **Table 4**.

Table 1. Characteristics of oil palm (*Elaies guineensis*) and palm oil high in oleic acid

Characteristics	Palm oil (*Elaeis guineensis*)[1]	Palm oil high in oleic acid
Relative density (x°C/water at 20°C)	*(i) 0.891 – 0.899* x=50°C	*(ii) 0.895 – 0.910*[2,3] X=50°C
Refractive index (ND 40°C)	*(iii) 1.454 – 1.456* at 50°C	*(iv) 1.459 – 1.461*[2,3]
Saponification value (mg KOH/g oil)	190 – 209	189 – 199 [2,3]
Iodine value	50.0 – 55.0	65 – 72[4]
Unsaponifiable matter (g/Kg)	<12	<12[2,3]
Total carotenoids	500 -700[5]	850 - 1050[4]

Source:
[1] Codex *Standard for Named Vegetables Oils* (CODEX STAN 210 -1999).
[2]Norma Técnica Colombiana NTC 5713:2009, Aceite de palma OxG (*Elaeis guineensis x Elaeis oleífera*) alto oleico. Requisitos.
[3] Norma Técnica Andina 0073:2009, Aceite de palma (OxG) alto oleico. Requisitos.
[4] Data of the high oleic palm oil producers
[5] Nagendran, B; Unnithan U.R.; Choo, Y.M and Sundram, K. (2000) Characteristics of red palm oil, a carotene – and Vitamin E- rich refined oil for food uses. Food & Nutrition Bulletin, Volume 21, Number 2, June 2000, pp. 189-194(6)

Table 2. Fatty acid profile of the oil palm (*Elaeis guineensis*) and high oleic palm oil

Fatty acid (%)		*Palm oil (Elaeis guineensis)[1]*	*Palm oil high in oleic acid[2,3]*
Lauric acid	C12:0	< 0,5	0,11 – 0,38
Miristic acid	C14:0	0,5 – 2,0	0,4 – 0,7
Palmitic acid	C16:0	39,3 – 47,5	25 – 34
Estearic acid	C18:0	3,5 – 6,0	2,0 – 3,8
Oleic acid	C18:1	36 – 44	48 – 58
Linoleic acid	C18:2	9 -12	10 – 14
Linolenic acid	C18:3	< 0,5	< 0,6
Araquidic acid	C20:0	< 0,1	<0,4

Source:
[1] Codex *Standard for Named Vegetables Oils* (CODEX STAN 210 -1999).
[2] Norma Técnica Colombiana NTC 5713:2009, Aceite de palma OxG (*Elaeis guineensis x Elaeis oleífera*) alto oleico. Requisitos.
[3] Norma Técnica Andina 0073:2009, Aceite de palma (OxG) alto oleico. Requisitos

The fatty acid profile shows significant differences between genetic material *Elaeis guineensis* and the interspecific hybrids OxG, mainly in the percentages of saturated fats, monounsaturated and polyunsaturated fats. The high oleic palm oil has some features that make it a healthy food to be considered:

- Oleic acid is an essential fatty acid, has a neutral-reducing effect on the lipid profile, increase high density lipoprotein (HDL) and reduces low density lipoprotein (LDL). Is involved in the regulation of fat metabolism and body weight balance. When located in the sn-2 triglyceride position, it is more easily absorbed by the body. The distribution analysis of fatty acids in triglycerides in high oleic palm oil shows that 65.5% of the oleic acid is located in the sn-2 position[1].
- It is a good source of linoleic acid, an essential fatty acid used in the synthesis of prostaglandins involved in inflammatory response, in the temperature regulation and the hormonal response.
- Carotenoids, Vitamin E and sterols are bioactive food components are substances that generate beneficial physiological effects on health: reduction of plasma cholesterol and prevent arteriosclerosis, cancer and degenerative diseases, reduce the risk of cardiovascular diseases and strengthens defenses and slows the aging process of the body.

According to the above, and considering the current trends towards the consumption of natural and nutritious food, high oleic palm oil is a healthy alternative to meet the daily requirement of fat, essential fatty acids and fat soluble vitamins.

Table 3. Levels of desmethylsterols of the oil palm (*Elaeis guineensis*) and high oleic palm oil

Desmethylsterol	Palm oil (*Elaeis guineensis*)[1]	Palm oil high in oleic acid[2]
Cholesterol	2,6 – 7,0	2,5-3,6
Brassicasterol	ND	*(v) ND-0,2*
Campesterol	12,5-39,0	16,6-18,6
Stigmasterol	7,0-18,9	13,4-15,5
Beta-sitosterol	45,0-71,0	57,2-60,9
Delta-5-aventasterol	ND-3,0	1,4-1,9
Delta-7-stigmasterol	ND-.,0	0,1-0,2
Delta-7-avenasterol	ND-6,0	ND-0,1
Others	ND-10,4	1,8-6,0
Total sterols (mg/kg)	270-800	740-1723

Source:
[1] Codex *Standard for Named Vegetables Oils* (CODEX STAN 210 -1999).
[2] Cenipalma 2014.

Table 4. Levels of tocoferols and tocotrienoles in crude oil palm (*Elaeis guineensis*) and high oleic palm oil

	Palm oil (*Elaeis guineensis*)[1]	Palm oil high in oleic acid[2]
Alpha – tocopherol	4-193	126 – 151
Beta – tocopherol	ND – 234	*(vi) 0,48 – 3,60*
Gamma – tocopherol	ND – 526	ND
Delta – tocopherol	ND – 123	ND
Alpha – tocotrienol	4 – 336	179 – 252
Gamma – tocotrienol	14 – 710	586 – 753
Delta – tocotrienol	ND – 377	33 – 35
Total (mg/kg)	150 – 1500	955 - 1165

Source:
[1] Codex *Standard for Named Vegetables Oils* (CODEX STAN 210 -1999).
[2] Cenipalma 2014.

[1] M. Mozzon et al. Crude palm oil from interspecific hybrid *Elaeis oleifera x Elaeis guineensis*: Fatty acid regiodistribution and molecular species of glycerides. Food Chemisty 141 (2013) 245-252

3. Main aspects that should be covered

The proposal to add high oleic palm oil (OxG) would include the following aspects:

- Establishment of general requirements for palm oil high in oleic acid (OxG).
- Establishment of specific requirements for palm oil high in oleic acid (OxG).
- Establishment of the information that must be included in package labels and markings based on Codex Alimentarius guidelines.

Specifically it proposes the inclusion of high oleic palm oil in the following items in the norm:

- 2.1 Product definition. Include the description of the high oleic palm oil.
- 3.3 Slip point – include the slip point of high oleic palm oil.
- Table 1. Include the fatty acid composition of the high oleic palm oil.
- Table 2. Include the chemical and physical characteristics of high oleic palm oil.
- Table 3. Include the levels of desmethylsterols of high oleic palm oil.
- Table 4. Include the levels of tocopherols and tocotrienoles of high oleic palm oil.

4. Assessment against the criteria for the establishment of work priorities

General criterion

Consumer protection from the point of view of health, food safety, ensuring fair practices in the food trade and taking into account the identified needs of developing countries.

The proposed new standard will meet this criterion by:

- Promoting consumer protection and the prevention of fraudulent practices.
- Providing greater assurance of the quality of the product to meet consumer needs and the minimum requirements for food safety.
- Arriving at levels of standardization based on the properties of different varieties to meet industrial and consumer needs with exactness and credibility.

In addition, the elaboration of the standard would be to the benefit of many countries in particular developing countries, which are the major producers, exporters, and consumers of high oleic palm oil.

Criteria applicable to commodities

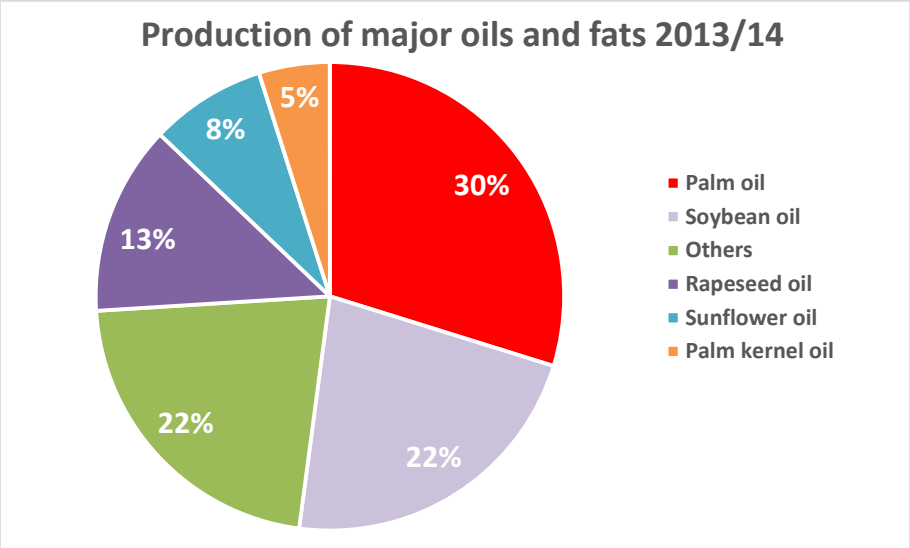
(a) Volume of production and consumption in individual countries and volume and pattern of trade relations between countries

World production of the 17 main oils and fats in 2013 was 188.18 million tons, with the largest share of palm oil, soybean, rapeseed, sunflower and palm kernel. In the past 8 years the oil production sector presented a growth of 3,4 % annually, particularly marked by increases in the supply of palm oil and palm kernel oil in Southeast Asia. Palm oil, soybean, rapeseed and sunflower seed are the largest market share with market shares of 29%, 22%, 13% and 7%, respectively.

In this context, the global production of palm oil ranks high considering a volume of 55,9 million tons in 2013 instead, which represents an increase of 6,6 % from the previous year. The main producers are Indonesia, with 46,9 % of production; Malaysia with 29,4 %; and Colombia, with a production of 1,028,000 tons as the fifth largest producer and the first of the Americas.[2]

[2] Source: statistical Yearbook Fedepalma. 2014

Figure 1. Participation in the production of major oils and fats 2013/2014



Source: Statistical Yearbook Fedepalma. 2014

Meanwhile, global consumption of oils and fats maintains its dynamic growth in the last 20 years at an average rate of 4%. Its main use has been strongly linked to the food industry, followed in the last decade, by the biofuel sector consumption, which primarily uses rapeseed oil, soybean and palm oil**.**

According to experts, this dynamic will continue to grow at the rate of population growth and following the trend of the emerging markets of India and China.

According to the above and the new trends in the use of healthy vegetable oils, the potential of oils rich in oleic acid, to participate meaningfully in the oil market for food is evident.

Table 5. Supply and global apparent consumption of the 17 major oils and fats (in thousands of tons)

Product	2006	2007	2008	2009	2010	2011	2012	2013	13/12 % *Growth rate*
I. Production	150.152	154.405	160.227	165.052	172.130	177.752	186.285	188.180	*1,0%*
Palm oil	37.415	39.103	43.572	45.269	45.873	49.516	52.466	55.947	*6,6%*
Soybean oil	35.196	37.330	36.834	36.114	40.181	41.345	42.215	42.140	*-0,2%*
Rapeseed oil	18.446	18.745	19.971	21.718	23.778	24.059	24.434	25.035	*2,5%*
Sunflower oil	11.217	10.926	10.861	13.035	12.428	12.400	15.259	13.571	*-11,1%*
Tallow and greases	8.474	8.530	8.403	8.364	8.465	8.453	8.356	8.485	*1,5%*
Cotton oil	4.933	5.086	5.039	4.697	4.601	4.793	5.146	4.994	*-3,0%*
Palm kernel oil	4.365	4.498	5.022	5.235	5.232	5.397	5.805	6.183	*6,5%*
Groundnut oil	4.416	4.108	4.210	4.158	4.074	4.269	4.098	3.856	*-5,9%*
Coconut oil	3.140	3.198	3.191	3.258	3.629	3.090	3.123	3.451	*10,5%*
Olive oil	2.779	2.907	2.902	3.024	3.331	3.384	3.630	2.586	*-28,8%*
Corn oil	2.270	2.317	2.350	2.319	2.346	2.526	2.690	2.898	*7,7%*
Other oils an fats	17.501	17.658	17.873	17.861	18.192	18.520	19.063	19.034	*-0,2%*
II. Imports	56.108	57.839	61.597	64.252	66.542	67.976	71.890	75.418	*4,9%*
Palm oil	29.342	29.267	33.916	36.335	37.137	38.100	40.367	43.962	*8,9%*
Soybean oil	10.174	11.241	10.722	9.230	9.868	10.156	8.995	9.530	*5,9%*
Sunflower oil	4.308	4.378	3.910	5.148	4.770	5.035	7.155	6.315	*-11,7%*
Palm kernel oil	2.339	2.627	2.671	3.169	3.051	3.030	3.052	3.365	*10,3%*
Tallow and greases	2.201	2.223	2.208	1.956	2.075	2.010	1.675	1.565	*-6,6%*
Rapeseed oil	2.068	2.161	2.375	2.670	3.330	3.567	4.142	4.153	*0,3%*

Product	2006	2007	2008	2009	2010	2011	2012	2013	13/12 % *Growth rate*
Coconut oil	2.044	1.993	1.971	1.834	2.333	1.974	1.907	2.082	*9,2%*
Olive oil	747	768	737	725	757	800	893	945	*5,8%*
Corn oil	907	745	716	677	633	730	890	855	*-3,9%*
Groundnut oil	213	163	176	177	226	215	181	189	*4,4%*
Cotton oil	148	149	145	149	151	170	215	201	*-6,5%*
Other oils an fats	1.617	2.124	2.050	2.182	2.211	2.189	2.418	2.256	*-6,7%*
III. Exports	57.509	58.222	60.866	64.126	66.436	67.922	72.101	75.384	*4,6%*
Palm oil	29.941	29.782	33.695	36.206	36.508	38.130	40.354	44.030	*9,1%*
Soybean oil	10.435	11.192	10.093	9.278	10.150	10.032	9.014	9.640	*6,9%*
Sunflower oil	4.467	4.295	4.081	5.176	4.736	4.955	7.300	6.175	*-15,4%*
Palm kernel oil	2.390	2.675	2.715	3.042	3.064	3.068	3.077	3.320	*7,9%*
Tallow and greases	2.153	2.263	2.200	2.000	2.158	2.039	1.668	1.550	*-7,1%*
Rapeseed oil	2.103	2.058	2.331	2.578	3.432	3.610	4.114	4.089	*-0,6%*
Coconut oil	1.987	1.996	1.882	1.857	2.353	1.948	1.922	2.084	*8,4%*
Olive oil	733	761	741	716	779	808	905	940	*3,9%*
Corn oil	888	716	725	689	634	769	895	870	*-2,8%*
Groundnut oil	211	196	147	207	201	208	180	193	*7,2%*
Cotton oil	158	157	143	155	153	174	229	200	*-12,7%*
Other oils an fats	2.014	2.093	2.042	2.186	2.268	2.181	2.443	2.293	*-6,1%*
IV. Available Supply (I+II-III)	148.751	154.022	160.958	165.178	172.236	177.806	186.074	188.214	*1,2%*
V. Change in stocks	1.339	478	1.240	802	517	1.301	2.687	-635	*-123,6%*
IV. Disappearance (IV-V) /	147.412	153.544	159.718	164.376	171.719	176.505	183.387	188.849	*3,0%*
Palm oil	36.125	37.882	42.485	42.638	42.784	48.020	51.229	56.478	*10,2%*
Soybean oil	34.370	36.944	37.823	35.906	39.220	41.597	42.347	42.134	*-0,5%*
Rapeseed oil	18.070	19.024	19.802	21.198	23.507	24.139	24.059	24.251	*0,8%*
Sunflower oil	10.876	11.229	10.517	12.576	12.690	12.516	14.562	13.975	*-4,0%*
Tallow and greases	8.528	8.433	8.428	8.355	8.466	8.438	8.342	8.467	*1,5%*
Cotton oil	4.902	5.067	5.050	4.684	4.611	4.743	5.112	5.045	*-1,3%*
Palm kernel oil	4.176	4.544	4.808	5.399	5.211	5.207	5.575	6.255	*12,2%*
Groundnut oil	4.450	4.114	4.265	4.182	4.046	4.271	4.132	3.889	*-5,9%*
Coconut oil	3.199	3.218	3.266	3.181	3.589	3.238	3.057	3.387	*10,8%*
Olive oil	2.913	3.018	3.027	3.113	3.218	3.292	3.352	3.126	*-6,7%*
Corn oil	2.219	2.362	2.295	2.347	2.386	2.460	2.633	2.846	*8,1%*
Other oils an fats	17.584	17.709	17.952	20.797	21.991	18.584	18.987	18.996	*0,0%*

Source: Oil World Annual 2014", ISTA Mielke GmbH, 2014, Fedepalma – Sispa.

One of the oils that have greater potential for use of the food industry is the palm oil high in oleic acid. The planted areas of this hybrid material are concentrated in countries located in the tropics of Central and South America. Its cultivation has been promoted as the better alternative to the traditional oil palm (*Elaeis guineensis*) infected with BRD.The BRD is a principal disease that affect the palm oil in Americas.

The countries with the largest areas planted with this hybrid are Colombia and Ecuador, which in turn are the most affected by the disease. Today interspecific hybrid material is not only an alternative for disease involvement but a new market option for growers due to the physicochemical characteristics of this oil, as already mentioned.

The area planted up till 2013 is 72,445 hectares. This area has been mostly cultivated in the last 4 years. In the case of Colombia, under production is 30 % of the cultivated area, 42 % in its first year of production and the rest under development (Fedepalma, 2014 – data taken from producers).

Table 6. Area planted and production of hybrid palm OxG

Colombia[1]	Production area (Ha)	Developing area (Ha)	Planted area (Ha)
North	35	--	35
East	6.920	1.660	8.580
Western	2.399	3.100	5.499
Central	13.065	3.266	16.331
Ecuador[2]	Production area (Ha)	Developing area (Ha)	Planted area (Ha)
San Lorenzo	4.253	5.020	9.273
Western	1.250	1.350	2.600
East	11.227	3.199	14.426
Rest of country	3.701	--	3.701
Brazil[3]	Production area (Ha)	Developing area (Ha)	Planted area (Ha)
Total country	--	12.000	12.000
Total	42.850	29.595	72.445

Source:
[1] Fedepalma, comunicación electrónica con productores septiembre de 2014.
[2] Palmar del Río, comunicación electrónica septiembre de 2014.
[3] Comercializadores Internacionales de Aceite, comunicación electrónica octubre 2014

At present, there are few OxG hybrid palm plantations that are into oil extraction process, partly because of the current low production volumes and the difficulty of marketing since there is no international standard to guide the sales.

The production of high oleic palm oil in Colombia in 2013 was 23,000 tons, of which 77% went to the international market and 23 % was used in the country. Meanwhile in Ecuador, there were 92,000 tons/year, from which 9 % were for the export market and 91 % to the local market (ANCUPA, 2014). Table 7 presents the main destinations of exports from Colombia and Ecuador.

Table 7. Main destinations of exports of palm oil high in oleic acid from Colombia and Ecuador

2013	Destination country (Tons)						
Country of origin	Spain	Netherlands	United Kingdom	Mexico	United States	Venezuela	Total
Colombia	2.400	2.000	1.000	12.387	--	--	17.787
Ecuador	1.900	3.500	1.000	500	2.100	3.000	12.500
						Total	29.787

Source:
[1]Colombia: Local traders and Fedepalma, 2014.
[2]Ecuador: International traders, 2014

(b) Diversification of national legislations and apparent resultant or potential impediments to international trade.

Considering the nutritional profile that has high oleic palm oil, is ideal for direct or incorporated into different food preparations for human consumption. By the physicochemical characteristics of the oil, especially the content of unsaturated fatty acids, this oil is more liquid at room temperature in compared to traditional palm oil, which facilitates inclusion in some food formulations used in cold climates where palm oil traditional not used because of its high melting point.

Additionally, considering that 25% of the oil produced in 2013 was exported to Europe, Mexico and United States, and that these markets appreciate quality of high oleic palm oil for food industry, not include the high oleic palm oil in the CODEX STAN 210-1999, will affect the marketing of this oil.

Today, there are two regional standars for the high oleic palm oil, but this norm only influences the Andean Community.

Norma Técnica Andina 0073:2009, High oleic palm oil (OxG). Requirements. This standard establishes the requirements that high oleic edible oil palm (OxG) made from hybrid palms (*Elaeis oleifera x Elaeis guineensis*) must meet. This Andean standard applies to high oleic edible palm oil (OxG) RDB: red and de-colored. It does not apply to crude palm oil or to the olein and stearin derived from the oil of this hybrid palm (*Elaeis oleifera x Elaeis guineensis*).

Norma Técnica Colombiana NTC 5713:2009, High oleic palm oil OxG (*Elaeis guinensis x Elaeis oleifera*). Requirements. This standard establishes the requirements that high oleic edible oil palm (OxG) made from hybrid palms (*Elaeis oleifera x Elaeis guineensis*) must meet. It applies to high oleic edible palm oil, red or de-colored. It does not apply to crude high oleic palm oil OxG (*Elaeis oleifera x Elaeis guineensis*), or to the olein and stearin derived from this oil.

Resolución 2154 de 2012 del Ministerio de Salud y Protección Social de Colombia, which establishes the technical regulations on the requirements for oils and fats of vegetable or processed, packaged and stored animal origin, including for export, import or marketing in the country, for human consumption.

(c) International or regional market potential

As mentioned previously, there are approximately 72,445 hectares of hybrid material OxG planted in Colombia, Ecuador and Brazil. When this whole area is in full production in about three years, the potential for oil production is 275,000 tons/year (Fedepalma - SISPA, 2014).

In Colombia, it is expected that within four years there should be 12,000 hectares of new plantings of OxG hybrid material. This expansion of the area planted with OxG hybrid material, is part of a series of targeted measures aimed at recovering the planted areas of the destructive impact of BRD in different countries affected with this disease. These new areas planted with a potential production of 50,000 tons/year additional, in full production.

In addition, with data supplied by private companies in Ecuador who reported a total of 30,000 hectares of which 20,431 are already in production.

(d) Amenability of the commodity to standardization

High oleic palm oil is a product amenable to standardization by the CCFO that has different characteristics compared to traditional palm oil (Elaeis guinnensis) and its fractions, specifically in the oleic acid content, vitamin E and beta-carotene. These characteristics have an impact on the uses of this oil in the food industry.

(e) Coverage of the main consumer protection and trade issues by existing or proposed general standards

The addition of palm oil high in oleic acid to Codex Stan 210-1999, to include essential factors related to composition, health and quality would enable the standardization of oils of this type and contribute to consumer protection.

(f) Number of commodities which would need separate standards indicating whether raw, semi processed or processed

Just as in the standard Codex Stand 210-1999 have been including a variety of oils such as sunflower oil high, medium oleic acid content, is proposing to amend the rule, this time for the case of oils from the palm. It's feasible to amend the standard fulfilling the requirements concerning the proposal of new work.

(g) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body (ies)

None known to date.

5. Relevance to the Codex strategic objectives

The development of a Codex standard for high oleic palm oil reflects the strategic objective of promoting the maximum application of Codex standards by countries in their national legislations, and facilitating international trade. This proposal is based on scientific considerations and helps stipulate minimum quality requirements for Palm oil high in oleic acid destined for human consumption, with the intention of protecting consumer health and ensuring fair practices in the food trade. The proposal corresponds to Objective 1.1: "Establish new and review existing Codex standards, based on priorities of the CAC" of the Codex Strategic Plan 2014- 2019.

6. Information on the relation between the proposal and other existing Codex documents

None.

7. Identification of any requirement for and availability of expert scientific advice

The proposal of an addition to CODEX STAN 210-1999 uses as reference the information developed by the research group working at the national level in Colombia-Cenipalma on the characterization of edible oils and fats. The Standardization Institute of Ecuador (INEN) also participated in the characterization of this type of oil. Therefore, in the event additional information is required on this project, it is possible to contact this group of experts.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for

None

9. Proposed time-line for completion of the new work

Calendar	MEETING	PROGRESS
February 2015	CCFO24	Agrees to send the new work proposal to CAC38 for approval
July 2015	CAC38	Approval of new work
February 2017	CCFO25	Discuss Proposed Draft Amendments
July 2017	CAC40	Adoption at Step5
February 2019	CCFO26	Discuss Draft Amendments
July 2019	CAC42	Adoption at Step 8

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Appendix VII

PROJECT DOCUMENT

Proposal for New Work on Revision of Fatty Acid Composition and Other Quality Factors of Peanut Oil in the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999)

1. Purpose and scope of the standard

The purpose of this new work is to revise the *Standard for Named Vegetable Oils* (CODEX STAN 210-1999), in order to modify some acid composition profiles of peanut oil and the corresponding quality factors, with the aim of supporting, through the introduction of such adjustments, the variability of peanut oils currently traded that fall outside the standard.

Argentina, as one of the world's main exporters of crude peanut oil, has noticed that there are genuine Argentine peanut oils in the market that are not covered by the *Standard for Named Vegetable Oils* and, consequently, cannot be classified, even when they come from certified peanut seeds.

In particular, deviations are noticed in the following fatty acids: C16:0 (Palmitic acid), C18:1 (Oleic acid), C18:2 (Linoleic acid), C20:0 (Arachidonic acid), C20:1 (Eicosenoic acid) and C22:1 (Erucic acid).

In addition, the authenticity parameters should be adjusted:

- Iodine value
- Relative density

The aim of this new work is to revise the composition and quality parameters that define peanut oil, proposing the characterization of the fatty acids mentioned, as well as their respective values of physical and chemical characteristics.

2. Relevance and timeliness:

Argentina is one of the few countries in the world that produce high quality peanuts for human consumption and, consequently, a peanut oil of great quality and taste, whose properties as food are highly beneficial and which is an important input for the food industry of snacks and confectionery.

An important aspect of Argentine peanut oils in terms of their nutritional quality is that, in recent years, the use of varieties with higher oleic acid content has increased, with a strong tendency to rise in subsequent crop seasons. This makes the resulting oil have an acid profile not currently covered in the Codex Standard.

In order to ensure a regional and/or international trade that is fair, dynamic and transparent, it is essential that Codex consider amending the parameters related to the content of fatty acids, with a view to providing a framework adapted to the peanut oils currently traded and consistent from the stoichiometric calculation point of view, thus supporting the concept of genuineness and associated quality factors.

3. Main aspects to be covered

The proposed new work to amend parameters of Arachis oil in the *Standard for Named Vegetable Oils* will be conducted under the existing procedures for Codex standards and will include, among others, the following:

- Essential composition and quality factors;
- Tables with the characteristic fatty acid composition;
- Other quality and composition factors.

Profile of fatty acid composition for peanut oil

Fatty acids	Argentina's proposal	CODEX-STAN 210
C16:0	**5.0**-14.0	8.0-14.0
C16:1	ND-0.2	ND-0.2
C18:0	1.0-4.5	1.0-4.5
C18:1	35.0-**80**	35.0-69.0
C18:2	**4.0**-43.0	12.0-43.0
C18:3	ND-0.3	ND-0.3

Fatty acids	Argentina's proposal	CODEX-STAN 210
C20:0	**0.7**-2.0	1.0-2.0
C20:1	0.7-**3.2**	0.7-1.7
C22:0	1.5-4.5	1.5-4.5
C22:1	ND-**0.55**	ND-0.3
C24:0	0.5-2.5	0.5-2.5
C24:1	ND-0.3	ND-0.3

Other quality parameters

Iodine value

Codex: 86-107

Argentina's proposal: 77-107

Relative density

Codex: 0.912-0.920 x=20ºC

Argentina's proposal: 0.909-0.920 x=20ºC

4. An Assessment against the Criteria for the establishment of work priorities

General criterion

Consumer protection from the point of view of health, food safety, ensuring fair practices in the food trade and taking into account the identified needs of developing countries.

This proposal is intended to revise the values detailed in item 3) with a view to providing proper information about the composition of the genuine product, taking into account world variability.

Criteria applicable to commodities

(*a) Volume of production and consumption in individual countries, and volume and pattern of trade between countries.*

Argentina exports most of its total production of peanuts. The total area planted is about 418,000 hectares. In 2013, Argentina exported about 518,000 tons of peanuts and some 40,804 tons of peanut oil to major markets worldwide.

About 60% of Argentine peanut exports go to the European Union (mainly the Netherlands, Germany, United Kingdom, Spain, Italy, Greece and France), and the rest is divided between the United State of America, United Arab Emirates, South Africa, Australia, Chile, Russian Federation, Algeria, Ukraine, China, Vietnam, Turkey, Israel, China (Hong Kong SAR) and other countries.

(b) Diversification of national legislations and apparent resultant or potential impediments to international trade

In recent years, due to the use of new peanut varieties, the genuine peanut oil obtained has presented a fatty acid composition and quality parameters that do not fall within the values set by the Codex Standard. Several countries base their legislation on the Codex standard, which could become a barrier to the trade in Argentine peanut oil.

The proposed amendment to the *Standard for Named Vegetable Oils* will help provide a harmonized international approach to quality and compositional factors and will facilitate world trade in peanut oil.

(c) International or regional market potential

There is a peanut oil market highly valued at regional and international levels that is affected by problems arising from the formal classification of the the *Standard for Named Vegetable Oils*, which leads to difficulties in trade.

The following are statistics of peanut oil in tons:

Global production, imports and exports of peanut oil

(thousands of tons, January/February)

	2.009	2010*	2011	2012*	2013*
Production					
China	1,903.9	2,034.3	2,015.0	2,029.0	1,955.0
India	819.7	650.0	646.0	447.0	348.0
Nigeria	276.0	291.4	273.0	300.0	316.0
Sudan	161.8	178.5	158.0	154.0	158.0
Senegal	125.4	164.0	211.0	112.0	121.0
USA	65.2	73.0	86.0	91.0	96.0
Argentina	**80.6**	**53.0**	**38.0**	**58.0**	**57.0**
Myanmar	221.5	236.7	244.0	234.0	225.0
Vietnam	31.0	28.3	47.0	na	na
Other	565.2	549.6	469.0	605.0	632.0
Total	**4,250.3**	**4,258.8**	**4,187.0**	**4,030.0**	**3,908.0**
Importers					
EU	83.6	83.5	79.0	62.0	68.0
USA	33.6	26.2	15.0	9.0	19.0
China	20.7	68.5	61.0	64.0	61.0
China (Hong-Kong SAR)	11.9	16.3	12.0	8.0	8.0
Other	27.3	32.3	29.0	27.0	36.0
Total	**177.1**	**226.8**	**196.0**	**170.0**	**192.0**
Exporters					
Senegal	30.9	57	58	14	12
Argentina	**82.1**	**60.4**	**37**	**57**	**55**
Brazil	31.1	23.5	23	38	63
China	9.8	7.8	9	8	7
India	2	0.4	7	18	5
Other	49.9	60.4	56	54	54
Total	**205.8**	**209.5**	**190**	**189**	**196**

* Estimated

Source: OilWorld / United Nations Commodity Trade Statistics Database (Comtrade) / FAOSTAT

Main destinations of Argentine exports

% of total	2010	2011	2012	2013
China	39	50	61	43
Netherlands	30	9	12	30
USA	22	27	6	24
China (Hong Kong SAR)	2	6	5	2,0
Spain	-	-	-	0,3
Others	7	9	16	0,7
Total	100	100	100	100

Source: INDEC

(d) Amenability of the commodity to standardization

The commodity is already standardized by the CCFO. It is proposed to amend the fatty acid profiles with the aim of covering the peanut oil currently traded. It is also proposed to revise the quality parameters of the iodine value and relative density at 20°C.

The proposed amendments are based on solid scientific studies and analytical data, which support the justification for amendment to the *Standard for Named Vegetable* . The following studies are available:

- *Characterization of the Chemical and Sensory Properties of Argentine Confectionery Peanuts for the Determination of the Designation of Origin. National Institute of Agricultural Technology (INTA), 2007.*
- *Phyto-biological Characterization of Peanuts Produced in the Province of Córdoba - Chemical Composition and Nutritional Attributes of the Product with the Designation of Origin "Córdoba Peanuts" - Second Phase. INTA, 2009.*
- An overview of the different "denominations", from their acidic composition in dissimilar species of vegetable oils. Sunflower and peanut oil. A&G 72, Volume XVIII, No. 3, 676-687, 2008.
- Characterization of the Quality of Argentine Confectionery Peanuts. Chemical and Nutritional Composition. Fatty Acid Profile. INTA - Argentine Peanut Board - Argentine Peanut Foundation[1].

These studies specifically show that, in the characterization of the composition and quality parameters of peanut oil, it is noted that, in many cases, the value ranges of the different parameters fall outside Codex Standards, thus supporting the proposed request for amendment.

(e) Coverage of the main consumer protection and trade issues by existing or proposed general standards

As mentioned above, the amendment to parameter of Archis Oil in the *Standard for Named Vegetable Oils* will improve the information available to consumers, in addition to ensuring fair practices in the trade of these oils.

(f) Number of commodities which would need separate standards indicating whether raw, semi processed or processed

Not relevant.

(g) Work already undertaken by other international organizations in this field and/or suggested by

None known.

5. Relevance in relation to Codex Strategic Objectives

The proposed amendment to the *Standard for Named Vegetable Oils* is relevant to Goal 1, Promoting Sound Regulatory Frameworks.

It states that “the CAC will provide essential guidance for its members through the continued development of international standards and guidelines relating to food safety and hygiene, nutrition, labelling, and import/export inspection and certification and quality of the food stuff.”

The Goal stresses that "Codex standards and related texts for food safety and quality, including labelling aspects, should be carefully prepared to reflect global variations. Codex standards for food quality should focus on essential characteristics of products to ensure that they are not overly prescriptive and that the standards are not more trade restrictive than necessary."

The proposed amendment to the *Standard for Named Vegetable Oils* will facilitate fair trade in peanut oil, preventing genuine oils from being left out of the Standard.

6. Information on the relationship between the proposal and existing Codex documents

Codex has developed standards for almost all edible fats and oils, including:

- *General Standard for Edible Fats and Oils not Covered by Individual Standards (*CODEX STAN 19-1981*).*
- *Standard for Olive Oils and Olive Pomace Oils (*CODEX STAN 33-1981*]*
- *Standard for Named Animal Fats* (CODEX STAN 211-1999)

7. Identification of any Requirement for and Availability of Expert Scientific Advice

None identified.

[1] http://www.alimentosargentinos.gob.ar/contenido/sectores/aceites/documentos/031.pdf

8. Identification of any Need for Technical Input to the Standard from External Bodies so that this can be Planned for

None identified.

9. Proposed Timeline for Completion of the New Work, Including the Start Date, the Proposed Date for Adoption at Step 5/8, and the Proposed Date for Adoption by the Commission

- Approved as new work by the CAC38 in 2015
- Proposed draft amendments considered at step 4 by the CCFO25 in 2017
- Adopted at Step 5/8 in the CAC40 in 2017.

Appendix VIII

PROJECT DOCUMENT

Proposal for New Work on Revision of Section 3 of the *Standard for Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1981)

1. Purpose and scope of the proposed work.

To review Section 3 of the *Standard for Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1981) and in particular to introduce an exception for authentic virgin olive oils that naturally deviate from the current limit of campesterol, provided that more effective criteria are set by reducing limits of certain already existing parameters, taking into account Codex Member Data, the IOC Standard and other relevant work with a view to facilitate trade and ensure virgin olive oil authenticity.

2. Relevance and timeliness

The proposed work is consistent with the mandate of the Codex Committee on Fats and Oils (CCFO): *"To elaborate worldwide standards for fats and oils of animal, vegetable and marine origin, including margarine and olive oil"*.

For years, several countries have been calling the Committee's attention to the fact that a part of their olive oils do not succeed in meeting the limits established, both in the IOC and in the Codex, for some parameters, particularly campesterol.

The International Olive Council (IOC) has conducted a study to examine, among other issues, the situation of these virgin olive oils falling outside the limits established for campesterol and has recognized that they are indeed genuine oils which may have higher values due to the plant varieties used or the soil and climate conditions in the production areas. By virtue of this study, the IOC has established a decision tree for those oils with campesterol values between 4 and 4.5%. Furthermore studies by other Codex members have identified that campesterol values of authentic virgin olive oils may exceed 4.5%.

The existing Codex standard should reflect the global variability of the genuine traded olive oils in order to ensure that possible unrepresentative chemical parameter limits do not act as potential technical barriers to trade in authentic virgin oil. Considering that these standards are the international reference for the World Trade Organization (WTO), measures need to be adopted for campesterol values not to become a technical barrier to trade.

3. Main aspects to be covered

To introduce an exception for authentic virgin olive oils that naturally deviate from the current limit of campesterol, provided that more effective criteria are set by reducing limits of certain already existing parameters, taking into account Codex Member data, the IOC Standard and other relevant work with a view to facilitate trade and ensure virgin olive oil authenticity.

4. Assessment against the Criteria for the establishment of work priorities

This proposal for new work is consistent with the following criteria applicable to the products:

(a) Consumer protection from the point of view of health, food safety, ensuring fair practices in the food trade and taking into account the identified needs of developing countries.

The limits for campesterol have been established to determine if there is adulteration of the olive oil with other edible oils, thus ensuring fair practices in the food trade. At present, the campesterol limit does not reflect in a proper way the global variability existing as a result of the entry of new production areas in which the behavior of varieties is different as well as seasonal, soil and climate conditions. The campesterol values have no relation to the safety of the food and public health.

(b) Volume of production and consumption in individual countries, and volume and pattern of trade between countries.

According to the data published by the IOC the world production of olive oil totaled 3,270,500 t, accounting for an increase of 36% in relation to the previous year. The 2013/14 year has been so far the second best year (the best one being the 2011/12 year with 3,321,000 t). IOC member countries reached a total production of 3,199,500 t, i.e., 98% of world production. The European producing countries reached 2,476,500 t, a 69% increase as compared to the previous year (Spain had a record year with 1,775,800 t; Italy 461,200 t; Greece 131,900 t; Portugal 91,600 t; Cyprus 5,600 t; Croatia 4,900 t; France 4,900 t; and

Slovenia 600 t). For the rest of IOC member countries as a whole, it fell16% (first, Turkey with 190,000 t, followed by Syria with 165,000 t; Morocco with 120,000 t; Tunisia with 70,000 t, a strong reduction in relation to the previous year; Algeria with 44,000 t; Argentina and Jordan with 30,000 t each; Lebanon with 20,500 t; Israel and Libya with 15,000 t each; Albania with 10,500 t; Iran with 5,000 t; and the other four members with smaller volumes). It should be stressed that the Spanish production for this year increased 187% as compared to the previous year and accounted for 54% of world production.

The world consumption for the 13/14 year amounted to 3,030,000 t, out of which 1,717,000 t corresponded to the EU/28 countries, accounting for a 6% increase as compared to the previous year. Consumption in the rest of IOC member countries was reduced by 11%, the largest reductions taking place in Syria, Tunisia, Egypt, Algeria and Albania. Consumption in the rest of non IOC member countries increased 6%. The cases of the United States with a 5% increase, Australia with 19% (for this country it is the 2013 spring harvest), Canada with 9%, and Japan with 6% should be highlighted. However, consumption fall sharply in China (18%) and slightly in Brazil (1%).

Imports and exports for the 2013/14 year totaled 794,000 t and 817,500 t, respectively.

World trade in olive oil and olive pomace oil ends the 2013/14 year (October 2013 - September 2014) with an increase of 10% in Canada; 5% in the United States; 4% in Japan; 1% in Australia, as compared to the previous year. Imports fell in the markets of China (15%) and, to a lower degree, of Brazil (2%). Russian data are only available for up to April 2014. For the 7 months of the year, they show an increase of 8%.

(c) Diversification of national legislations and apparent resultant or potential impediments to international trade.

Codex Standards are the international reference as regards food standards for the WTO, both for health and technical regulations. Member States should take into account the standards prepared by international reference organizations, if any, when establishing their national regulations.

Considering the characteristics of this proportion of olive oils, Argentina needed to set campesterol values at 4.5% because, due to the varieties used and the geographical and climatic conditions of production areas, the value established in Codex does not reflect the characteristics of these oils, and thus affecting its trade.

However, IOC has inserted in 2013 in its standard one exception in the form of a decision tree to address the particular issue of virgin olive oil with campesterol levels deviating from the limit stated in the standard.

According to the information provided in CX/FO 13/23/09 in 2010, the United States Department of Agriculture (USDA) completed the revision of the national standards on quality grades for olive oil and olive pomace oil (*United States Standards for Grades of Olive Oil and Olive-Pomace Oil)*. In revising the standard, the USDA established a campesterol limit (≤ 4.5%) different from that of the Codex standard; however, this new limit, which is less restrictive, does not constitute a barrier to international trade.

In Australia, the Australian Olive Association prepared the Australian Olive Industry Code of Practice and the national standard for olive oils and olive pomace oils, which is of a voluntary nature (AS 5264-2011). Like the American standard, the Australian standard establishes a less restrictive limit for campesterol (≤ 4.8%), thus preventing genuine olive oils from being excluded, while protecting their authenticity with a stricter limit for stigmastadiene and the introduction of tests for pyropheophytins and diacylglycerols.

(d) International or regional market potential.

While Mediterranean countries will maintain their leadership in the production of olive oil as evidenced by the latest figures of the IOC (Spain and its record year with 1,775,800 t; Italy with 461,200 t; Turkey 190,000t., followed by Syria with 165,000 t; Greece with 131,900 t; and Morocco with 120,000 t), new producing countries like Argentina, the USA, Brazil, South Africa, China and Australia, among others, should also be covered by the standard.

(e) Amenability of the commodity to standardization.

The *Standard for Olive Oils and Olive Pomace Oils* (CODEX STAN 33-1981) is in force since 1981. However, with the entry of new producing countries into international trade, it is necessary to revise certain parameters so as to prevent it from becoming a trade barrier. The study made by the IOC called “IOC STUDY ON AUTHENTIC OLIVE OILS DISPLAYING OFF-LIMIT PARAMETERS: CAMPESTEROL” [1] and other available data should be examined.

(f) Coverage of the main consumer protection and trade issues by existing or proposed general standards.

While addressing all the aspects, the Codex Standard does not take properly into account the natural variation of composition based on the variety of olive used and the geographic and climatic conditions.

[1] http://www.internationaloliveoil.org/documents/index/353-chemistry/1606-ioc-studies

(g) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body(ies).

The study "IOC STUDY ON AUTHENTIC OLIVE OILS DISPLAYING OFF-LIMIT PARAMETERS: CAMPESTEROL" has been recently published to examine the authenticity of olive oils with parameters above the regulated campesterol values. Almost 200 samples received from 13 countries were used to adopt a decision tree applicable to those cases where campesterol values are between 4 and 4.5%.

Also, scientific bibliography referred to the campesterol values observed in genuine olive oils of Argentina, Spain, Australia, etc. was submitted to the Codex in previous years.

5. Relevance to the Codex Strategic Objectives

The new work proposed would contribute to ensuring fair practices in the international trade in olive oil, taking into account the needs and special concerns of all countries, by satisfying the following strategic objectives and priorities elaborated in *Codex Alimentarius Commission: Strategic Plan 2014-2019*.

Goal 1: Establish international food standards that address current and emerging food issue: –

1.2.2 Develop and revise international and regional standards as needed, in response to needs identified by Members and in response to factors that affect food safety, nutrition and fair practices in the food trade.

Developing more globally representative Codex standards will help to ensure their widest adoption by member countries, minimising the potential negative effects of technical regulations on international trade by ensuring that they do not act as technical barriers to trade.

Goal 2: Ensure the application of risk analysis principles in the development of Codex standards.

The proposed work will promote the development of Codex commodity standards based on rigorous scientific analysis of data collected from all regions of the world, so that the compositional parameters are globally relevant.

Goal 4: Implement effective and efficient work management systems and practices: - 4.2 Enhance capacity to arrive at consensus in standards setting process.

Codex and member countries will continue to work closely with the IOC to collect and analyse data and develop more globally applicable requirements in the Codex and IOC standards[2].

6. Information on the relationship between the proposal and existing Codex documents

None.

7. Identification of any requirement for and availability of expert scientific advise

None.

8. Identification of any Need for Technical Input to the Standard from External Bodies so that this can be Planned for

None identified.

9. Proposed Timeline for Completion of the New Work, Including the Start Date, the Proposed Date for Adoption at Step 5/8, and the Proposed Date for Adoption by the Commission

- Approved as new work by the CAC38 2015
- Proposed draft amendments considered at Step 4 by the CCFO25 in 2017
- Adopted at Step 5/8 in the CAC40 in 2017.

[2] http://www.internationaloliveoil.org/estaticos/view/222-standards