

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of
the United Nations



World Health
Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 6(a)

CX/FO 15/24/6
February 2015

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FATS AND OILS

Twenty-fourth Session

Melaka, Malaysia, 9 – 13 February 2015

**DISCUSSION PAPER ON A PROPOSAL TO AMEND THE CODEX STANDARD FOR NAMED
VEGETABLE OILS: SUNFLOWER OILS (CODEX STAN 210-1999)**

(Prepared by Argentina)

INTRODUCTION

1. At the 21st Session of the Codex Committee on Fats and Oils (CCFO), Argentina requested the revision of the limits of oleic and linoleic acids for the categories of sunflower oil covered in the Codex Stan 210-1999, as well as the existing gaps between these parameters in the different categories, and other quality factors related. The Committee welcomed the proposal of the Delegation of Argentina to prepare a revised document including all relevant scientific data on sunflower oil related to possible new work, for consideration by the next session.

2. At the 22nd Session of the CCFO, Argentina submitted a discussion paper on this matter and, considering that some Members noted that the allotted time to examine the proposal was insufficient, the Committee agreed to established an electronic working group led by Argentina which would be in charge of revising the discussion paper submitted for Members' consideration and preparing a draft document for consideration at the 23rd Session of the Committee, taking into account the Guidelines on the Application of the Criteria for the Establishment of Work Priorities Applicable to Commodities and information required by the Committee when proposing the addition of new oils to the Standard for Named Vegetable Oils. The Working Group advanced the clarification of most of the aspects proposed by Argentina, however no agreement was reached on oleic and linoleic values.

3. At the 23rd session of the CCFO, Argentina submitted the conclusions of the Working Group. Some countries repeated their comments, and observations were received from other representations which had not expressed their opinion yet. Several countries questioned the proposal to eliminate the gaps between categories for the linoleic and oleic acids, also questioned the lack of a minimum limit for linoleic acid in the traditional category and the modification of parameters in the high oleic category. The Committee agreed that the scope of the document would be revised, that the second sentence which proposed the elimination of the gaps between fatty acid ranges for the different categories would be deleted and that a new working group to be chaired by Argentina would be created so as to revise the document again...

MANDATE AND CONCLUSIONS OF THE WORKING GROUP OF THE 23RD CCFO SESSION

4. The Committee agreed to form a new electronic working group chaired by Argentina, open to all members of the Committee and with English as its working language, in order to revise the discussion paper and the draft document on the basis of the Guidelines on the Application of the Criteria for the Establishment of Work Priorities (Applicable to Commodities), taking into account world variability, climate and seasonal variations, and differences between varieties, for its consideration at the 24th session of the CCFO. The Committee also agreed that a new Circular Letter requesting for the required data and information would be issued to all members to assist in the collation of data.

5. The following information requested was: Area of production, Geographic coordinates (Latitude and Longitude), Average maximum temperature from flowering to harvest, Average minimum temperature from flowering to harvest, Average temperature from flowering to harvest, Average maximum temperature from flowering to day 25, Average minimum temperature from flowering to day 25, Average temperature from flowering to day 25, Crop season / date of data, Fatty acid composition (included methods of analysis and the way the results are expressed), References. Also production, consumption, export and import values (volume and value) were requested. Main export markets were also requested.

6. The following countries and organizations participated in the first part of the electronic working group: Argentina, Australia, Brazil, Holland, Turkey, Spain, Uruguay, Italy, Canada, United States, Russia, Republic of Korea, France, Egypt, IADSA y FEDIOL.

7. A few participants submitted some of the requested information: Egypt, Turkey, Hungary, Russia, Thailand and FEDIOL. In many cases this information it was not complete.

8. Estonia and United States only sent market information. Korea sent data from Spain. Information sent by FEDIOL did not meet the proposed format.

9. Only Egypt, Turkey, Hungary and Russia reported the methods of analysis and the way the results are expressed. Only Russia reported the source of the information, but could not be possible verified the information. All the collected information is available at www.alimentosargentinos.gov.ar/aceites. The Argentine information is contained in the documents listed in the bibliography.

10. From the information collected, it follows that:

- a) Collected data come from production zones between 37.86° North latitude in Turkey and 54° North latitude in Saransk, Russia and between 3° West longitude in Andalusia and 50° East longitude in Samara, Russia.
- b) Considering the submitted information by different countries, the latitude values of the production areas are not comparable with those of Argentina. The reported values are situated between 37° and 54° North.
- c) Argentina produces sunflower in an approximately area between 38.3° and 26.8° Latitud South. The Temperatures in areas closer to equator are higher and that situation produces higher oleic acid levels.
- d) Although the countries which sent data did not specify the type of varieties used, oleic acid values were between 16.5% and 48.9% and linoleic values were between 42.1% to 74.4%. However, in Argentina, according to the latest study conducted by INTA in 2013, oleic acid values were between 28.2% and 56.4% and linoleic acid values were between 32.5% and 61.6% among the traditional varieties which not include hybrids (see table 4 in INTA'S paper).
- e) According with the information submitted by Russia, Hungary and Turkey, there is a direct relation between oleic acid content and average temperature from flowering to day 25. Oleic acid increases when the temperature increases.
- f) FEDIOL presented time-based graphics of acid contents obtained from refineries of oils from different European countries grouped, which show that oils contain oleic and linoleic acid proportions within the values established for the traditional category. This does not allow to check the lipid profile of each country, as requested by the Chair, in which areas they are produced and which varieties are used.

11. Finally Argentina invited the participants to join a forum in order to organize the different contributions of information, gain fluency and promote a dynamic interchange of opinions to reach a consensus.

Forum activity

12. Argentina, Malaysia, Russia, Italy, Australia, Uruguay, Brasil, France, Canada, United States, FEDIOL and IADSA, joined the forum.

13. In order to start the discussion, Argentina made a proposal about the levels of oleic and linoleic acids in the tradicional category based on studies conducted by Argentine Association of Fats and Oils (ASAGA) and National Institute of Agricultural Technology (INTA).

14. The other aspects (chemical and physical characteristics of sunflower oil and sterol levels) would be discussed later if the working group reached a consensus on the level of oleic acid and linoleic

15. The original proposal was:

Fatty acid	Current CODEX value	Proposed value
C18:1 - Oleic acid	14,0 -39,4	14,0 - 54,9
C18:2 - Linoleic acid	48,3 – 74,0	35,1 – 74,0

Responses to the original proposal:

16. Argentina, Australia, Brazil, Malaysia and FEDIOL participated in the discussion.

17. Australia answered that in their country, in order to make a CLAIM that a food is polyunsaturated, it must contain at least 40% polyunsaturated fatty acids. Australia suggests raising the linoleic acid level in the proposal to at least 40% in the traditional sunflower seed oil. Argentina replied that its proposal was not a matter of labelling but of product definition. However, the possibility of reducing the gap between both proposals was also examined in the forum, as previously done in the group.

18. Comments from Brazil, Malaysia and FEDIOL were also received.

19. As regards the doubts raised by Brazil, Brazil was offered a related study conducted in that country which cleared the doubts.

20. Malaysia argued that Argentina's proposal was not consistent with the results shown in the studies. In this respect, Argentina explained that it had been adapting its aspirations across the different working groups in order to reach a consensus.

21. Finally, no other countries submitted comments rejecting the proposal.

22. Comments received from observers referred to different aspects:

23. They noted that the ranges proposed by Argentina could contribute to the adulteration of oils; however, it was not explained why the current ranges in CODEX STAN 210 avoided such a practice.

24. An observer said that the problem of Argentine oils is that they are produced in unfit areas. Argentina responded that they are fit areas and that their average production yields are equal to or higher than the average of the world's largest producer of sunflower oil.

25. Finally, the observer mentioned the EU labelling policy and said that the proposal made to Australia could be insufficient.

26. Argentina answered all the questions and comments. Further information about "Behavior of the varieties and hybrids in different regions" and "compared yields" was also added.

27. In order to proceed with the negotiation and reach consensus, Argentina presented a new proposal

Fatty acid	Current value	Proposed value
C18:1 - Oleic acid	14,0 -39,4	14,0 – 50,0
C18:2 - Linoleic acid	48,3 – 74,0	40,0 – 74,0

FINAL CONCLUSION OF THE FORUM

28. Argentina has shown its willingness to reach consensus, considering the position of the different countries and adapting its proposal at different times. The forum did not receive contributions of all the Members, so its purpose was not reached. In these conditions, it was not possible to reach consensus to establish new ranges for fatty acids for the traditional category.

29. Therefore, it was not possible either to continue the discussion to address the physical and chemical characteristics and the level of sterols. Given this situation, the activity of the forum it was suspended

30. Argentina is still interested in this issue and we believe that, if Codex members and observers are willing, the next proposal with the parameters amended as below could achieve consensus.

Fatty acid	Current value	Proposed value
C18:1 - Oleic acid	14,0 -39,4	14,0 – 50,0
C18:2 - Linoleic acid	48,3 – 74,0	40,0 – 74,0

BACKGROUND ON SUNFLOWER OIL

31. Sunflower oil is the fourth most important oil in the world. Due to its price as compared to other edible oils, and its nutritional quality, the consumption of sunflower oil has increased significantly in the last few years.

32. According to data published by the USDA and FAO, out of a total of 13,454,000 tons of sunflower oil produced in the 2012/2013 crop year, Argentina produced 990,000 tons, ranking as the third (FAO) and fourth (USDA) highest sunflower oil producer after Ukraine, the Russian Federation and the European Union.

33. In 2012/2013, Argentina, Ukraine and the Russian Federation represented 58% of world sunflower oil production, and 83% of exports. As regards exports, Argentina accounted for 6.4% of total world sunflower exports (5,432,000 tons were traded internationally in this period) and ranked third.

34. This information allows to understand the importance that sunflower production has for Argentina, especially if considering that, with the expansion of the agricultural frontier, which started almost two decades ago, the sunflower production area not only grew but also began to move. As a consequence, changes in the fatty acid profile of sunflower oils from Argentine traditional seeds became evident mainly due to the use of hybrids, high temperatures and the temperature variation in the production areas.

35. Several studies have shown that high temperatures affect the oleic acid content in traditional varieties, which increases naturally as a result of a decreased oleoyl-CoA-desaturase activity. This enzyme desaturates oleic acid to linoleic acid. When temperature is higher, the enzyme reduces its activity, causing the linoleate-oleate ratio to increase (Garcés, R., Sarmiento, C., and Mancha, M. *Temperature Regulation of Oleate Desaturase in Sunflower (Helianthus Annuus L.) Seeds* in *Planta* 186, no. 3 (1992): 461-465.)

36. For this reason, in the 2001/2002 crop year, a study began to be conducted which confirmed this trend already noted by observation and analysis.

37. The analytical results of Argentine traditional oil which served as a basis for the preparation of this document can be found in ASAGA R&D paper¹: **Composición de ácidos grasos del aceite de girasol obtenido de semillas certificadas sembradas en distintas zonas de la República Argentina – Cosecha 2001-2002 (Fatty Acid Composition of the Sunflower Oil Obtained from Certified Seeds Sown in Different Areas of the Republic of Argentina - 2001/2002 Harvest)**. This paper refers to 12 certified varieties of traditional sunflower seeds which are representative samples of 15 different soils of the Argentine territory and whose oil was extracted in laboratories. For each variety, seeds were obtained from three sowings in different plots per district, totaling 441 individual samples.

38. The 441 samples were analyzed in duplicate through the gas chromatography of their fatty acids, from myristic acid (C14:0) to lignoceric acid (C24:0). The iodine values were calculated on the basis of the acid composition.

39. The samples were taken from 15 localities in the provinces of Chaco, Santa Fe, Entre Ríos, Córdoba, La Pampa and Buenos Aires. They correspond to hybrid cultivars recommended for each cropping zone and therefore vary according to the location of the trials.

40. The average results from all localities for oleic acid and linoleic acid content, iodine value and refractive index are as follows:

	Range
Oleic acid (C18:1)	16,1-57,9
Linoleic acid (C18:2)	31,8 – 73,4
Iodine value	104,3 – 140,3
Refractive index	1.4698 – 1.4740

¹ ASAGA R&D. *Composición de ácidos grasos del aceite de girasol obtenido de semillas certificadas sembradas en distintas zonas de la República Argentina – Cosecha 2001-2002 (Fatty Acid Composition of the Sunflower Oil Obtained from Certified Seeds Sown in Different Areas of the Republic of Argentina - 2001/2002 Harvest)* in *Revista Aceites y Grasas (Oils & Fats Journal)* No. 52, pp. 430-437.

41. From the study, it was concluded that in Argentina it is possible to obtain sunflower oils from traditional seeds with an oleic acid content of more than 50%, which does not mean that they can be classified as “mid-oleic”.

42. This trend was also confirmed by Izquierdo, N.G.; Geroudet, C.; Angeloni, P.; Aguirrezábal, L.A.N. in ***Modelado de la respuesta de la composición ácida del aceite a la temperatura en híbridos comerciales de girasol cultivados en Argentina (Modeling of the Response of the Fatty Acid Composition of Oil to Temperature in Commercial Sunflower Hybrids Grown in Argentina)*** published in 2002/2003 by ASAGA R&D² and presented at the Congress of ASAGIR (Argentine Sunflower Association).

43. Attached to this document is a technical report prepared by the Argentine Oil Industry Chamber, CIARA, which describes the current oil situation in Argentina. According to this document, 16 out of 44 analyzed samples from the NEA (i.e. 36%) present a percentage of oleic fatty acid higher than 39.4%, which is the upper limit currently set by CODEX for sunflower oils from traditional seeds (Table 3). On average, these samples have 45.9% of oleic acid.

44. Finally, it is important to point out that IRAM³ modified its Standard 5529 in 2006 as a consequence of the studies carried out by ASAGA.

CONCLUSIONS

45. Argentina occupies an important place in international trade in sunflower oil. An increasing percentage of Argentine sunflower oils from traditional seeds has naturally high values of oleic acid and therefore lower values of linoleic acid, due to the temperatures of production areas and the type of hybrids used.

46. For these reasons, Argentina requests to revise and amend CODEX STAN 210-1999 in relation to the values for oleic (C18:1) and linoleic (C18:2) fatty acids, in the traditional category of sunflower oil.

- Table1: Fatty acid composition of vegetable oils as determined by gas liquid chromatography from authentic samples (expressed as percentage of total fatty acids). Current and proposed values for traditional sunflower oil.

Fatty acid	Sunflower oil	
	Current value	Proposed value
C18:1 - Oleic acid	14.0 - 39.4	14,0 – 50,0
C18:2 - Linoleic acid	48.3 – 74.0	40,0 – 74,0

47. The parameters proposed by Argentina relate to the study carried out by ASAGA and the updated version for oils from Northeast Argentina prepared by CIARA.

48. 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 oleic and linoleic fatty acids, with a view to providing them with a continuing framework that takes into account the characteristics resulting from other production areas, to guarantee that all genuine sunflower oils are included in the Standard and that all associated quality factors are adjusted accordingly.

² ASAGA R&D. *Composición de ácidos grasos del aceite de híbridos de girasol cultivados en Argentina - Caracterización y modelado* (Fatty Acid Composition of the Oil of Sunflower Hybrids Grown in Argentina - Characterization and Modeling) in Revista Aceites y Grasas (Oils & Fats Journal) No. 59, pp. 338-343.

³ Instituto Argentino de Normalización y Certificación (Argentine standardization body). ISO Member.

**PROPOSAL FOR NEW WORK TO AMEND THE CODEX STANDARD FOR NAMED VEGETABLE OILS
(CODEX STAN 210-1999): ESSENTIAL COMPOSITION OF SUNFLOWER OIL**

This draft document has been prepared according to the *Procedural Manual of the Codex Alimentarius Commission*, 19th edition (2010), Section II, Procedure for the Elaboration of Codex Standards and Related Texts, *part 2. Critical Review, Proposals to Undertake New Work or to Revise a Standard (page 25 of the Spanish version)*.

1. Purpose and scope of the standard

The proposed work is intended to amend the Codex Standard for Named Vegetable Oils (CODEX STAN 210-1999) in relation to sunflower oil so as to adapt composition parameters - particularly, the limits for oleic acid (C18:1) and linoleic acid (C18:2) - to represent the actual world variability of this oil.

2. Relevance and timeliness:

Oils derived from sunflower seeds are some of the most consumed oil products worldwide for decades, both for its taste and for its beneficial nutritional qualities, and its functionality in the food industry.

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 oleic and linoleic fatty acids, with a view to providing a framework for them within the standard.

3. Main aspects to be covered:

- The revision of the parameters of oleic and linoleic acids in sunflower oil included in section ***Essential Composition and Quality Factors - Table 1: Fatty acid composition of vegetable oils as determined by gas liquid chromatography from authentic samples (expressed as percentage of total fatty acids)*** (see Section 3.1 of the Standard), and

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

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

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 composition limits set in the Codex Standard have been mainly established to ensure fair practices in the food trade. However, non-representative limits may also act as technical barriers to trade in genuine sunflower oils, particularly sunflower oil from traditional seeds, if these exceed the limits for agroclimatic reasons or other causes related to the hybrids used. These limits are not safety-related.

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

Sunflower oil is the fourth most important oil in the world. Due to its price as compared to other edible oils, its consumption has increased significantly in the last few years.

According to data published by the USDA, a total of 13,454,000 tons of sunflower oil were produced in the 2012/2013 crop. Argentina was the third and fourth highest sunflower oil producer, with 990,000 tons, after Ukraine, the Russian Federation and the European Union.

In 2012/2013, Argentina, Ukraine and the Russian Federation represented 58% of world sunflower oil production, and 83% of exports. As regards exports, Argentina accounted for 6.4% of total world sunflower exports (5,432,000 tons were traded internationally in this period) and ranked third.

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

This Codex Standard may be used by Member States as a reference for the establishment of their own national legislation.

The WTO Agreement on Technical Barriers to Trade states that, whenever a Member adopts a technical regulation in accordance with relevant international standards, it shall be presumed not to create an unnecessary obstacle to international trade (Article 2.5.) There is sound scientific evidence of the world variation in the oleic/linoleic acid levels and related indexes as a consequence of high temperatures in production areas.

In 2006, the Instituto Argentino de Normalización y Certificación (IRAM), the Argentine standardization body which represents Argentina before ISO, revised the sunflower standard based on the results of the ASAGA study attached.

Finally, it should be stressed that the legislation on sunflower oil in the Argentine Food Code is under revision to adapt it to the productive reality, since the Codex Standard no longer allows to reflect the fatty acid profile of sunflower oils from Argentine traditional seeds.

The proposed amendment to the Codex Standard for Named Vegetable Oils (CODEX STAN 210) will help provide a harmonized international approach to the said quality and composition factors and will facilitate sunflower oil world trade.

The resolution of the various inconsistencies found for sunflower oils defined in Codex Stan 210, will avoid difficulties in and barriers to trade.

d) International or regional market potential.

The consumption of edible vegetable oils has risen significantly in the last few years, and this trend is expected to continue and increase in the future.

World production of major oils and fats in 2012/13 was 160 million tons, showing an increase of 2.3% compared to the production in 2011/12. Oils with the largest production include palm, soybean, sunflower, and rapeseed oil with a market share of 35, 27, 16 and 8% respectively, according to USDA.

An increase of 10.5% (about 1.39 million additional tons) is estimated for sunflower oil consumption in the campaign 2013/14, mainly intended for the agri-food sector.

d) Amenability of the commodity to standardization.

This commodity is already regulated by CODEX STAN 210 in force since 1999. However, due to the appearance of new sunflower hybrids and production under new agroclimatic conditions, differences in composition parameters mainly based on production areas with wider temperature variation and high temperatures are becoming increasingly evident.

The proposed changes can easily be introduced in the standard as there are scientific studies and analytical data supporting the rationale for amendment of Codex Stan 210.

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

The Codex Standard in force does not address the natural variation in the fatty acid composition of sunflower oil according to the new hybrids and the agroclimatic conditions of production areas worldwide.

Therefore, the amendment to the Codex Standard will contribute to ensure fair practices in the trade in 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 the relevant international intergovernmental body(ies).

None known.

5. Relevance to the Codex Strategic Objectives:

The proposed new work would contribute to guaranteeing the proper identification of sunflower oil in international trade, taking into account the special needs and concerns of all countries, as it will meet the following goals and strategic priorities of the 2008-2013 Strategic Plan of the Codex Alimentarius Commission. 7

Goal 1: Promoting sound regulatory frameworks.

The elaboration of Codex standards that are more representative of the world conditions will help to ensure their wider adoption by Member States and reduce to a minimum their possibility of causing negative effects on international trade as it is guaranteed that they do not represent any technical barriers to trade. This activity is very important considering the efforts being made by the international community to increase the production of food in order to guarantee food security, for which new regions that used to be unproductive have been incorporated into the productive system over the years.

Goal 2: Promoting widest and consistent application of scientific principles and risk analysis

The proposed work will promote the elaboration of Codex commodity standards based on the rigorous scientific analysis of collected data.

The proposed amendment to this Codex Standard (CODEX STAN 210) will facilitate fair trade in sunflower oil, as the production conditions of other geographic areas with parameters different from those regulated by Codex are considered thus reflecting the existing world variations; also, this will prevent genuine oils from being classified under undefined areas.

6. Information on the Relation between the Proposal and other Existing Codex Documents

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

- Codex General Standard for Edible Fats and Oils not covered by individual standards [CODEX STAN 19- 1981 (Rev. 2-1999, as amended in 2009)].
- Standard for Olive Oils and Olive Pomace Oils [CODEX STAN 33-1981 (Rev. 2-2003, as amended in 2009)].
- Standard for Named Vegetable Oils [CODEX STAN 210 (as amended in 2003, 2005, 2011)].
- Standard for Named Animal Fats (CODEX STAN 211-1999, as amended in 2009).

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

None identified.

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 Time-Line 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.

February 2015	24th Session of the Codex Committee on Fats and Oils	Submission of the proposed revision. The Committee recommends the Codex Alimentarius Commission to undertake new work to amend the Standard for Named Vegetable Oils in relation to sunflower oil, mid oleic sunflower oil and high oleic sunflower oil.
July 2015	38 th Session of the Codex Alimentarius Commission	Adoption of the new work to amend the sunflower oil standard.
From August 2015 To April 2016	Intersession - Electronic Working Group	Circulation of the document for comments and revision, and final report to the working group. The draft document is sent to the Secretariat.
August 2016	The Secretariat circulates the draft document for Members' consideration.	Step 3.
February 2017	25 th Session of the Codex Committee on Fats and Oils	To fast-track 5/8 Step.
July 2017	38 th Session of the Codex Alimentarius Commission	Final Adoption of the Draft Amendment to the Standard.

Attachment

PROPOSED AMENDMENT TO THE CODEX STANDARD FOR NAMED VEGETABLE OILS (CODEX STAN 210-1999): SUNFLOWER OILS**3. ESSENTIAL COMPOSITION AND QUALITY FACTORS****3.1 Fatty acid composition of vegetable oils as determined by GLC (expressed as percentages)**

- *Table1: Fatty acid composition of vegetable oils as determined by gas liquid chromatography from authentic samples (expressed as percentage of total fatty acids). Current and proposed values for sunflower oil.*

Fatty acid	Sunflower oil	
	Current value	Proposed value
C18:1 - Oleic acid	14.0 – 39.4	14,0 – 50,0
C18:2 - Linoleic acid	48.3 – 74.0	40,0 – 74,0

The parameters proposed by Argentina relate to the study carried out by ASAGA and the updated version for oils from Northeast Argentina prepared by CIARA.