



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FATS AND OILS**

Twenty-Sixth Session

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**PROPOSED DRAFT REVISION OF THE *STANDARD FOR NAMED VEGETABLE OILS (CODEX STAN 210-1999):
REVISION OF THE DEFINITIONS OF SUNFLOWERSEED OILS AND THE LIMITS OF OLEIC AND LINOLEIC
ACIDS IN SUNFLOWERSEED OILS***

(Prepared by the electronic working group led by Argentina and co-chaired by Brazil and EU)

(At Step 3)

Governments and interested international organizations are invited to submit comments on **the proposed draft revision to the standard as presented in Appendix I**, at Step 3, **by 30 November 2018**

Comments should be submitted through the Codex online Commenting System (OCS): <https://ocs.codexalimentarius.org/> as stipulated in [CL 2018/78/OCS – CCFO](#).

Background

1. The Codex Committee on Fats and Oils, at its 25th session (CCFO25), agreed to start new work on the revision of limits of oleic and linoleic acids in sunflowerseed oils and the associated definitions in 2.1 of Standard for Named Vegetable Oils (CODEX STAN 210-1999). The committee further agreed establish an Electronic Working Group (EWG) chaired by Argentina and co-chaired by Brazil and the EU, working in English only, to prepare the proposed draft revision of CODEX STAN 210-1999.
2. The following Codex Members and Observers participated in the EWG: Argentina, Australia, Brazil, Canada, France, Hungary, India, Italy, Russian Federation, Thailand, Turkey, United States, and the EU Vegetable Oil and Proteinmeal Industry Federation (FEDIOL).

Discussion in the Working Group

3. In the first round, an initial and preliminary proposed draft text related to the definition of sunflowerseed oil and the oleic and linoleic acid ranges was circulated, according to the mandate of the group, as following:

2.1 Product definitions

Sunflowerseed oil (sunflower oil) and Sunflowerseed oil - mid oleic acid (mid-oleic acid sunflower oil) are derived from sunflower seeds (seeds of *Helianthus annuus* L.). These oils will be classified according to the oleic acid content as shown in Table 1.

Sunflowerseed oil - high oleic acid (high oleic acid sunflower oil) is produced from high oleic acid oilbearing seeds of varieties derived from sunflower seeds (seeds of *Helianthus annuus* L.).

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

Fatty acid	Current standard of Sunflower seed oil	Proposal
C18:1	14.0 – 39.4	14.0 – 43.0
C18:2	48.3 – 74.0	45.4 – 74.0

4. Some countries agreed with the proposal, but others did not agree with the proposed change to the current standard. Among countries that agreed with the proposal, there were some suggestions to improve draft text or

some other alternatives to deal with this problem. Among the countries that did not agree with the proposal, the main argument was the impact on nutrition labelling and analytical identification when decreasing the gaps between fatty acid ranges to a 0,1 difference.

5. Regarding definitions, concerns were expressed about combining definitions for two classes of sunflower oil that have different quality parameters. In addition, it was mentioned that the reference to seed varieties is important, because there is an expectation to produce oil with the known characteristics from that specific oilseed. On the other hand, data showed that seeds for sunflower oil (SFO) could produce mid-oleic acid sunflower oil (MOSFO) depending of the sunflower growing temperature.

6. It was also mentioned that considering fatty acid data presented, it would be necessary to overlap oleic and linoleic acid ranges between sunflowerseed oil and mid-oleic acid sunflowerseed oil. Nonetheless, the need to maintain a clear distinction between the different types of sunflower oils to avoid confusion in the market was emphasized. Concerns were also expressed about analytical identification because of method error when decreasing the gaps between fatty acid ranges to a 0.1 difference. In addition, it was proposed as an alternative to close the gaps between SFO and MOSFO oleic acid range of sunflowerseed oil by enlarging the ranges of MOSFO oil instead of the ranges of SFO in order to avoid impact on nutrition labelling. Concerns about modifying MOSFO without considering analytical data was raised in the discussion of the eWG and it was also mentioned that there would not be demand for MOSFO with contents of oleic acid as proposed in option 2.

7. In the second round, the following proposed draft text including additional proposals was circulated.

2.1 Product definitions

Sunflowerseed oil (sunflower oil) is derived from sunflower seeds (seeds of *Helianthus annuus* L.). This oil will be classified according to the oleic acid content (see table 1).

Sunflowerseed oil - mid oleic acid (mid-oleic acid sunflower oil) is derived from sunflower seeds (seeds of *Helianthus annuus* L.). This oil will be classified according to the oleic acid content (see table 1).

Sunflowerseed oil - high oleic acid (high oleic acid sunflower oil) is produced from high oleic acid oil-bearing seeds of varieties derived from sunflower seeds (seeds of *Helianthus annuus* L.).

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

Samples falling within the appropriate ranges specified in Table 1 are in compliance with 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.

Option 1 – amending ranges of oleic and linoleic acids in sunflower seed oil

Fatty acid	Current standard of Sunflower seed oil	Current standard of Mid-oleic acid Sunflower seed oil	Proposal for Sunflower seed oil
C18:1	14.0 – 39.4	43.1 – 71.8	14.0 – <u>43.0</u>
C18:2	48.3 – 74.0	17.7 – 45.3	<u>45.4</u> – 74.0

Option 2 – amending ranges of oleic and linoleic acids in mid-oleic sunflower seed oil

Fatty acid	Current standard of Sunflower seed oil	Current standard of Mid-oleic acid Sunflower seed oil	Proposal for Mid-oleic acid Sunflower seed oil
C18:1	14.0 – 39.4	43.1 – 71.8	<u>39.5</u> – 71.8
C18:2	48.3 – 74.0	17.7 – 45.3	17.7 – <u>48.2</u>

Option 3 – amending ranges of oleic and linoleic acids in sunflower seed oil and in mid-oleic sunflower seed oil

Fatty acid	Sunflowerseed oil		Mid-oleic sunflowerseed oil	
	Current standard	Proposal	Current standard	Proposal
C18:1	14.0 – 39.4	14.0 – 47.2	43.1 – 71.8	<u>47.3</u> – 71.8
C18:2	48.3 – 74.0	42 – 74	17.7 – 45.3	17,7 – 41,9

Related indexes (refractive index, saponification value, iodine value and relative density) would be determined stoichiometrically once the new limits are defined.

8. The eWG members reinforced previous arguments and some countries presented more data showing that sunflower seeds can result in oils with oleic acid content higher than current range, more similar to MOSFO.

Conclusions

9. The eWG identified two options to modify the definitions of sunflowerseed oils. The eWG further identified three options to reduce the existing gaps of the ranges for oleic and linoleic acids between SFO and MOSFO. These options are presented in the Annex.

Recommendations

10. The Committee is invited to consider the options in the **Appendix I** and to come into a decision about the most appropriate definition of sunflowerseed oils and the best solution to reduce the existing gaps of the ranges for oleic and linoleic acids between sunflowerseed oil and mid-oleic acid sunflowerseed oil.

Appendix I

**PROPOSED DRAFT REVISION OF STANDARD FOR NAMED VEGETABLE OILS (CODEX STAN 210-1999)
REVISION OF THE DEFINITIONS OF SUNFLOWERSEED OILS AND THE LIMITS OF OLEIC AND LINOLEIC
ACIDS IN SUNFLOWERSEED OILS**

(Step 3)

2. DESCRIPTION

2.1 Product definitions

Option 1

Sunflowerseed oil (sunflower oil) is derived from sunflower seeds (seeds of *Helianthus annuus* L.). This oil will be classified according to the oleic acid content (see table 1).

Sunflowerseed oil - high oleic acid (high oleic acid sunflower oil) is produced from high oleic acid oil-bearing seeds of varieties derived from sunflower seeds (seeds of *Helianthus annuus* L.).

Sunflowerseed oil - mid oleic acid (mid-oleic acid sunflower oil) is produced derived from mid-oleic acid oilbearing sunflower seeds (seeds of *Helianthus annuus* L.). This oil will be classified according to the oleic acid content (see table 1).

Option 2

Sunflowerseed oil (sunflower oil) is derived from sunflower seeds (seeds of *Helianthus annuus* L.).

Sunflowerseed oil - high oleic acid (high oleic acid sunflower oil) is produced from high oleic acid oil-bearing seeds of varieties derived from sunflower seeds (seeds of *Helianthus annuus* L.).

Sunflowerseed oil - mid oleic acid (mid-oleic acid sunflower oil) is produced from mid-oleic acid oil-bearing sunflower seeds (seeds of *Helianthus annuus* L.). Mid-oleic acid sunflower oil may be also derived from traditional sunflower seeds in particular when these are grown in warm climates.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

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

Samples falling within the appropriate ranges specified in Table 1 are in compliance with 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.

Option 1 – amending ranges of oleic and linoleic acids in sunflowerseed oil

Fatty acid	Current standard of Sunflowerseed oil	Current standard of Mid-oleic acid Sunflowerseed oil	Proposal Sunflowerseed oil
C18:1	14.0 – 39.4	43.1 – 71.8	14.0 – <u>43.0</u>
C18:2	48.3 – 74.0	17.7 – 45.3	<u>45.4</u> – 74.0

Option 2 – amending ranges of oleic and linoleic acids in mid-oleic sunflowerseed oil

Fatty acid	Current standard of Sunflowerseed oil	Current standard of Mid-oleic acid Sunflowerseed oil	Proposal Mid-oleic acid Sunflowerseed oil
C18:1	14.0 – 39.4	43.1 – 71.8	<u>39,5</u> – 71.8
C18:2	48.3 – 74.0	17.7 – 45.3	17.7 – <u>48.2</u>

Option 3 – amending ranges of oleic and linoleic acids in sunflower seed oil and in mid-oleic sunflower seed oil

Fatty acid	Current standard of Sunflowerseed oil	Current standard of Mid-oleic acid Sunflowerseed oil	Proposal Sunflowerseed oil	Proposal Mid-oleic acid Sunflowerseed oil
C18:1	14.0 – 39.4	43.1 – 71.8	14.0 – 47.2	<u>47,3</u> – 71.8
C18:2	48.3 – 74.0	17.7 – 45.3	42 – 74	17,7 – 41,9

Related indexes (refractive index, saponification value, iodine value and relative density) would be determined stoichiometrically once the new limits are defined.