

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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Agenda Item 3.4

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ORIGINAL LANGUAGE ONLY

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON METHODS OF ANALYSIS SAMPLING

40th Session

Budapest, Hungary, 27 – 31 May 2019

REVIEW OF FATS AND OILS METHODS

Comments submitted by ISO TC34/SC11 "Animal and vegetable fats and oils"

ISO TC34/SC11 "Animal and vegetable fats and oils"

The TC34/SC11 Committee would like to thank the AOCS for the extensive work undertaken in preparing the Review of Fats and Oils Methods (Fats and Oils Workable Package).

There are a few comments from ISO TC34/SC11 and corrections that needs to be made. Please take these into account when the review of the fats and oils methods is discussed at the CCMAS40 meeting.

1. **Fatty acid composition** (for Fish oils p4, Named Animal fats p6, Named Vegetable oils p8): ISO 5508 listed in the Report has been withdrawn. It should be replaced by the ISO 12966 series as the determination is split into different sections:
 - o ISO 12966-1 (Guidelines on modern gas chromatography of fatty acid methyl esters);
 - o ISO 12966-2 (Preparation of methyl esters of fatty acids);
 - o ISO 12966-3 (Preparation of methyl esters using trimethylsulfonium hydroxide (TMSH)) and
 - o ISO 12966-4 (Determination by capillary gas chromatography).

At least ISO 12966-2 as well as ISO 12966-4 should be included as they are the most commonly used for the fatty acid composition determination.

2. **Trans fatty acid content** (Olive and Olive pomace oils p10). ISO 15304 has been withdrawn. It should be replaced by the ISO 12966 series:
 - o ISO 12966-1 (Guidelines on modern gas chromatography of fatty acid methyl esters);
 - o ISO 12966-2 (Preparation of methyl esters of fatty acids) and
 - o ISO 12966-4 (Determination by capillary gas chromatography).

At least ISO 12966-2 and ISO 12966-4 should be included as the determination is split in separate parts.

3. **Copper and Iron** (for Fats and Oils not covered by individual standards p4, Named Animal Fats p6, Named Vegetable oils p8, Olive and Olive pomace oils p10)
Only the AAS method is listed and we see increasingly in the industry that ICP-OES is used for the determination of trace elements. Many labs do not use AA anymore but prefer ICP for accuracy. Therefore the analysis method of trace elements by ICP should be included: ISO 21033:2016 Animal and vegetable fats and oils -- Determination of trace elements by inductively coupled plasma optical emission spectroscopy (ICP-OES).
I suspect that this can only be proposed by CCFO and then will be endorsed by CCMAS.
4. **Lead** (Fats and Oils (all) p3, Named vegetable oil p 8, Olive and Olive pomace oils p10) Same as above. The ICP-OES option should be included: ISO 21033:2016 Animal and vegetable fats and oils -- Determination of trace elements by inductively coupled plasma optical emission spectroscopy (ICP-OES)
5. **Acid value** – Fish oils p4 Incorrect method is listed (ISO 3960 Determination of peroxide value -- Iodometric (visual) endpoint determination) and need to be replaced with the correct method namely ISO 660 Determination of acid value and acidity.

6. **Sterol content** (for Named Vegetable oils p9) There are two in the series. Part two is for Olive oils and olive pomace oils whereas part one is for general Animal and vegetable fats and oils. Therefore should be ISO 12228-1.