

CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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STANDARD FOR EDIBLE FATS AND OILS NOT COVERED BY INDIVIDUAL STANDARDS

CXS 19-1981

Adopted in 1981. Revised in 1987 and 1999. Amended in 2009, 2013, 2015, 2017, 2019, 2021, 2023 and 2024.

2024 Amendments

Following decisions taken at the Forty-seventh Session of the Codex Alimentarius Commission in November 2024, amendments were made in Section 6.2 Labelling of non-retail containers.

2023 Amendments

Following decisions taken at the Forty-sixth Session of the Codex Alimentarius Commission in November 2023, amendments were made in the Appendix under Section 2. Methods of analysis and sampling.

1. SCOPE

This standard (formerly CAC/RS 19-1969) applies to oils and fats and mixtures thereof in a state for human consumption. It includes oils and fats that have been subjected to processes of modification (such as trans-esterification or hydrogenation) or fractionation.

This standard does not apply to any oil or fat which is covered by one of the following:

- *Standard for named animal fats* (CXS 211-1999);¹
- *Standard for named vegetable oils* (CXS 210-1999);²
- *Standard for olive oils and olive-pomace oils* (CXS 33-1981);³ and
- *Standard for fish oils* (CXS 329-2017).⁴

2. DESCRIPTIONS

- 2.1 *Edible fats and oils*** are foodstuffs defined in Section 1 which are composed of glycerides of fatty acids. They are of vegetable, animal or marine origin. They may contain small amounts of other lipids such as phosphatides, of unsaponifiable constituents and of free fatty acids naturally present in the fat or oil. Fats of animal origin must be produced from animals in good health at the time of slaughter and be fit for human consumption.
- 2.2 *Virgin fats and oils*** are edible vegetable fats and oils obtained, without altering the nature of the oil, by mechanical procedures, e.g. expelling or pressing, and the application of heat only. They may be purified by washing with water, settling, filtering and centrifuging only.
- 2.3 *Cold pressed fats and oils*** are edible vegetable fats and oils obtained, without altering the oil, by mechanical procedures, e.g. expelling or pressing, without the application of heat. They may have been purified by washing with water, settling, filtering and centrifuging only.

3. FOOD ADDITIVES

Antifoaming agents, antioxidants and colours used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)⁵ in food category 02.1 (Fats and oils essentially free from water) and its subcategories, and emulsifiers in food category 02.1.2 (Vegetable oils and fats) are acceptable for use in foods conforming to this standard.

No additives are permitted in virgin or cold pressed oils covered by this standard.

The flavourings used in products covered by this standard should comply with the *Guidelines for the use of flavourings* (CXG 66-2008).⁶

4. 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* (CXS 193-1995).⁷

4.1 Pesticide residues

The products covered by the provisions of this standard shall comply with those maximum residue limits established by the Codex Alimentarius Commission for these commodities.

5. 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* (CXC 1-1969),⁸ and other relevant Codex texts such as codes of hygienic practice and codes of practice.

The products should comply with any microbiological criteria established in accordance with the *Principles and guidelines for the establishment and application of microbiological criteria related to foods* (CXG 21-1997).⁹

6. LABELLING

The product shall be labelled in accordance with the *General standard for the labelling of pre-packaged foods* (CXS 1-1985).¹⁰

6.1 Name of the food

The designation "virgin fat" or "virgin oil" may only be used for individual fats or oils conforming to the definition in Section 2.2 of this standard.

The designation "cold pressed fat" or "cold pressed oil" may only be used for individual fats or oils conforming to the definition in Section 2.3 of this standard.

6.2 Labelling of non-retail containers

The labelling of non-retail containers should be in accordance with the *General standard for the labelling of non-retail containers of foods* (CXS 346-2021).¹¹

APPENDIX**OTHER QUALITY AND COMPOSITION FACTORS**

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.

1. QUALITY CHARACTERISTICS**Colour:**

Characteristic of the designated product.

Odour and taste:

Characteristic of the designated product and free from foreign and rancid odour and taste.

	<u>Maximum level</u>
Matter volatile at 105 °C:	0.2% m/m
Insoluble impurities:	0.05 % m/m
Soap content:	0.005 % m/m
Iron (Fe):	
Refined fats and oils	2.5 mg/kg
Virgin fats and oils	5.0 mg/kg
Cold pressed fats and oils	5.0 mg/kg
Copper (Cu):	
Refined fats and oils	0.1 mg/kg
Virgin fats and oils	0.4 mg/kg
Cold pressed fats and oils	0.4 mg/kg
Acid value:	
Refined fats and oils	0.6 mg KOH/g fat or oil
Virgin fats and oils	4.0 mg KOH/g fat or oil
Cold pressed fats and oils	4.0 mg KOH/g fat or oil
Peroxide value:	
Virgin oils and cold pressed fats and oils	up to 15 milliequivalents of active oxygen/kg oil
Other fats and oils	up to 10 milliequivalents of active oxygen/kg oil

2. METHODS OF ANALYSIS AND SAMPLING

For checking the compliance with this standard, the methods of analysis and sampling contained in the *Recommended methods of analysis and sampling* (CXS 234-1999)¹² relevant to the provisions in this standard, shall be used.

NOTES

¹ FAO and WHO. 1999. *Standard for named animal fats*. Codex Alimentarius Standard, No. CXS 211-1999. Codex Alimentarius Commission. Rome.

² FAO and WHO. 1999. *Standard for named vegetable oils*. Codex Alimentarius Standard, No. CXS 210-1999. Codex Alimentarius Commission. Rome.

³ FAO and WHO. 1981. *Standard for olive oils and olive-pomace oils*. Codex Alimentarius Standard, No. CXS 33-1981. Codex Alimentarius Commission. Rome.

⁴ FAO and WHO. 2017. *Standard for fish oils*. Codex Alimentarius Standard, No. CXS 329-2017. Codex Alimentarius Commission. Rome.

⁵ FAO and WHO. 1995. *General standard for food additives*. Codex Alimentarius Standard, No. CXS 192-1995. Codex Alimentarius Commission. Rome.

⁶ FAO and WHO. 2008. *Guidelines for the use of flavourings*. Codex Alimentarius Guideline, No. CXG 66-2008. Codex Alimentarius Commission. Rome.

⁷ FAO and WHO. 1995. *General standard for contaminants and toxins in food and feed*. Codex Alimentarius Standard, No. CXS 193-1995. Codex Alimentarius Commission. Rome.

⁸ FAO and WHO. 1969. *General principles of food hygiene*. Codex Alimentarius Code of Practice, No. CXC 1-1969. Codex Alimentarius Commission. Rome.

⁹ FAO and WHO. 1997. *Principles and guidelines for the establishment and application of microbiological criteria related to foods*. Codex Alimentarius Guideline, No. CXG 21-1997. Codex Alimentarius Commission. Rome.

¹⁰ FAO and WHO. 1985. *General standard for the labelling of pre-packaged foods*. Codex Alimentarius Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.

¹¹ FAO and WHO. 2021. *General standard for the labelling of non-retail containers of foods*. Codex Alimentarius Standard, No. CXS 346-2021. Codex Alimentarius Commission. Rome.

¹² FAO and WHO. 1999. *Recommended methods of analysis and sampling*. Codex Alimentarius Standard, No. CXS 234-1999. Codex Alimentarius Commission. Rome.