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Specification for edible fats and oils (General)



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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Tourism, Trade and Industry established by the Act of Parliament of 1983, of the Laws of Uganda. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (c) the National Enquiry Point on TBT/SPS Agreements of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

Committee membership

The following organisations were represented on the Oils and Oil Seeds Sub Committee under the supervision of Technical Committee TC 2 on Agricultural and Food Products in the preparation of this standard:

- Appropriate Technology (Uganda) Limited
- Dairy Corporation
- Department of Food Science and Technology, Makerere University
- Food Science and Technology Research Institute (FOSRI)
- Government Chemist and Analytical Laboratory
- Mukwano Industries Limited
- Kakira Sugar Works (1985) Limited
- Kengrow Industries Limited
- Uganda Consumer Protection Association (UCPA)
- Uganda Oil Seed Producers and Processors Association (UOSPA)
- Unilever Uganda Limited
- Vegetable Oil Development Project, Ministry of Agriculture, Animal Industries and Fisheries
- BIDCO
- Muddu Oil Refinery
- Uganda National Farmers Federation (UNFF)

Specifications for edible fats and oils (General)

1 Scope

This Uganda Standard prescribes the specification for edible fats and oils intended for human consumption. It does not apply to any fat or oil, which is a subject of specific Uganda Standard designated by specific name.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

US 7, *Standard specification for the labelling of pre-packaged foods*

US 28, *Standard specification for factory and employee requirements for food factories*

US 176/ISO 5555, *Animal and vegetable fats and oils — Sampling*

US 177/ISO 661, *Animal and vegetable fats and oils — Sample preparation*

US 178 /ISO 3960, *Animal and vegetable fats and oils — Determination of peroxide value*

US 179/ISO 660, *Animal and vegetable fats and oils — Determination of acid value and acidity*

US 180/ISO 3598, *Animal and vegetable fats and oils — Determination of unsaponifiable matter*

US 181/ISO 3961, *Animal and vegetable fats and oils — Determination of iodine value*

US 182/ISO 6320, *Animal and vegetable fats and oils — Determination of refractive index*

US 183/ISO 662, *Animal and vegetable fats and oils — Determination of moisture and volatile matter*

US 184/ISO 663, *Animal and vegetable fats and oils — Determination of insoluble impurities*

US 186/ISO 3657, *Animal and vegetable fats and oils — Determination of saponification value*

US 187/ISO 12193, *Animal and vegetable fats and oils — Determination of lead*

US 188/ISO 8294, *Animal and vegetable fats and oils — Determination of copper, iron and nickel*

US -*, *Animal and vegetable fats and oils — Determination of arsenic*

US - *, *Animal and vegetable fats and oils – Determination of soap content*

3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply.

3.1 fats and oils

food stuffs which are composed of glycerides of fatty acids of vegetable, animal or marine origin. They may contain small amounts of other lipids such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in the fat or oil.

3.2 compounded fats and oils

a blend or mixture of two or more fats and/or oils of plant and/or animal of good health at the time of harvesting or slaughter and fit for human consumption as determined by Uganda National Bureau of Standards or other competent authority

3.3 virgin fats and oils

fats and oils obtained by mechanical procedures and/or solvent extraction only. They may have been purified by washing, settling, filtering and centrifuging only.

3.4 non-virgin (refined) fats and oils

fats and oils obtained by mechanical procedures and/or solvent extraction and subjected to refining processes to adopt it specially for use in food products

3.5 edible fats and oils

foodstuffs which are composed of glycerides of fatty acids of vegetable, animal or marine origin complying with the provisions of this standard. They may contain small amounts of other lipids such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in the in the fat or oil.

3.6 edible vegetable fat

semi-solid product, which consists of an edible fat or a blend of edible oils and fats of plant origin, complying with the provisions of this standard

4 Quality requirements and essential composition

4.1 Organoleptic characteristics

Edible fats and oils shall be free from foreign and/or rancid odour and/or taste. The colour of the product shall be characteristic of designated product.

* US -, to be developed

4.2 Fortification

Edible fats and oils may contain Vitamin A and its esters, Vitamin D, Vitamin E and its esters, and other vitamins or a mixture thereof in accordance with the laws of Uganda.

4.3 Chemical and physical characteristics

Edible fats and oils shall have the physical and chemical characteristics as in Table 1.

5 Food additives

Edible fats and oils may contain the following food additives:

- colours,
- flavouring,
- antioxidants,
- antioxidant synergists,
- antifoaming agents and
- crystallisation inhibitors,

as approved by Uganda National Bureau of Standards for the purpose of restoring natural properties lost during processing as long as it does not deceive or mislead the customer by concealing damage or inferiority or by making the product appear to be of greater value than actual value.

Table 1 — Physical and chemical characteristics of edible fats and oils

Characteristic	Requirement	Test method, US
Fat content, % by mass, min.	99.5	US-*
Colour	creamy white to yellow	Sensory
Slip point max.	56 °C	US-*
Acid value, mg KOH/g, max	Non virgin 0.6 Virgin 4	US 179
Peroxide value, meq. Peroxide oxygen/kg, max.	10	US 178
* US- To be developed		

6 Contaminants

6.1 The level of contaminants in edible fats and oils shall conform to the limits specified in Table 2.

Table 2 — Limits for contaminants in edible fat and oils

Contaminants	Maximum level	Test method
Moisture and matter volatile at 105 °C, % m/m	0.2	US 174
Insoluble impurities, % m/m	0.05	US 175
Soap content, % m/m	0.005	US -
Iron, mg/kg	Virgin 4	US 178
	Non virgin 1.5	
Copper, mg/kg	Virgin 0.4	US 178
	Non virgin 0.1	
Lead, mg/kg	0.1	US 177
Arsenic, mg/kg	0.1	US 190
Nickel, mg/kg	0.1	US 178

6.2 The maximum levels of pesticide residues in edible fats and oils shall conform to the internationally accepted levels recommended by Codex Alimentarius Commission.

7 Hygiene

Edible fats and oils shall be

- a) free from objectionable matter in accordance with Good Manufacturing Practice;
- b) fit for human consumption as determined by Uganda National Bureau of Standards;
- c) produced, processed, handled and stored in accordance with US 28;
- d) produced from animals of good health at the time of slaughter and be fit for human consumption as determined by Uganda National Bureau of Standards or other competent authority.

8 Weights and measures — Minimum fill of container

The container shall be well filled with the product. When packed in rigid containers, the product shall occupy not less than 90 % of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20 °C, which the sealed container shall hold when completely filled.

9 Packaging and labelling

9.1 Packaging

Edible fats and oils shall be packaged in food grade containers of material protecting the product from spoilage or contamination without adversely affecting the physical chemical and sensory quality of the product.

9.2 Labelling

9.2.1 In addition to the mandatory labelling provisions found in US 7, *Standard specification for the labelling of pre-packaged foods*, the following specific provisions apply:

- a) the name of the product shall be edible 'X' fat or oil or blended 'X' fat or oil where X is the word vegetable or animal or name of such vegetable or animal;
- b) the words virgin, non-virgin or refined shall be declared on the label to indicate the type of oil or fat;
- c) where vegetable fat has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency, the name of the product or any synonym shall not be used unless qualified to indicate the nature of the product.
- d) date marking shall be declared in the following manner: The "date of minimum durability" (preceded by the words "best before") shall be declared by the day, month and year in un-coded numerical sequence except that for products with a shelf life of more than three months, the month and year shall suffice.

9.2.2 The following exceptions shall be noted:

- a) the product shall be designated in accordance with the laws of Uganda and in manner so as to not mislead the consumer about the nature of the product;
- b) a quantitative declaration of ingredients shall be made in accordance with US 7, *Standard specification for the labelling of pre-packaged foods*;
- c) the labelling of non-retail containers is restricted to outer containers for a number of pre-packaged foods only and shall appear in the following manner,
- d) the name of the product, lot identification and the name and address of the manufacturer or packer shall appear on the container.

9.3.3 Each product units may also be marked with Uganda National Bureau of Standards certification mark where the industry qualifies to use the mark.

9.4 Labelling prohibition

Edible fats and oils consisting of fats and/or oils of animal origin or marine origin shall not be labelled vegetable fats or oils.

10 Sampling

Sampling shall be carried in accordance with US 176/ISO 5555, *Animal and vegetable fats and oils — Sampling* and US 177/ISO 661, *Animal and vegetable fats and oils — Sample preparation*.

Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

Further particulars of the terms and conditions of licensing may be obtained from the Director, Uganda National Bureau of Standards.



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