

DRAFT UGANDA STANDARD

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Edible Cotton Seed Oil — Specification



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DUS 170: 2018

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The Executive Director
Uganda National Bureau of Standards
P.O. Box 6329
Kampala
Uganda
Tel: +256 414 333 250/1/2/3
Fax: +256 414 286 123
E-mail: info@unbs.go.ug
Web: www.unbs.go.ug

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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. 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 Agreement 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 key stakeholders including government, academia, consumer groups, private sector and other interested parties.

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.

The committee responsible for this document is Technical Committee UNBS/TC2, Subcommittee SC 2, on Edible oil seeds, fats and oils

This second edition cancels and replaces the first edition (US170:2000), which has been technically revised.

Cotton Seed Oil — Specification

1 Scope

This Draft Uganda Standard specifies the requirements, sampling and test for crude and refined cotton oil derived from Cottonseeds (*gossypium*)

2 Normative references

The following referenced documents referred to in the text in such a way that some or all of their content constitutes requirements 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 EAS 38, *Labelling of pre-packaged foods — Specification*

US EAS 39, *Code of practice for hygiene for food and drink industries*

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

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

US ISO 663, *Animal and vegetable fats and oils — Determination of insoluble impurities content*
US ISO 3596, *Animal and vegetable fats and oils — Determination of unsaponifiable matter — Method using diethyl ether*

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

US ISO 3960, *Animal and vegetable fats and oils — Determination of peroxide value — Iodometric (visual) endpoint determination*

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

US ISO 5508, *Animal and vegetable fats and oils — Analysis by gas chromatography of methyl esters of fatty acids*

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

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

US ISO 6321, *Animal and vegetable fats and oils — Determination of melting point in open capillary tubes (Slip point)*

US ISO 8294, *Animal and vegetable fats and oils — Determination of copper, iron and nickel contents — Graphite furnace atomic absorption method*

US ISO 12193, *Animal and vegetable fats and oils — Determination of lead by direct graphite furnace atomic absorption spectroscopy*

US ISO 15305, *Animal and vegetable fats and oils — Determination of Lovibond colour*

3 Terms and definitions

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

3.3 Crude cotton seed oils,
oils of plant origin obtained by mechanical procedures and/or solvent extraction only that have been purified by washing, settling, filtering and centrifuging only.

3.4 Non –crude (refined) cotton seed oils
oils of plant origin obtained by mechanical procedures and/or solvent extraction and subjected to refining processes to adopt it specially for use in food products.

4 Requirements

4.1 General Requirements

Cottonseed oil shall be

- of colour characteristic of the designated product;
- free from adulterants, sediments, suspended or foreign matter, separated water and added colouring or flavouring substances;
- free from foreign or rancid odour and taste.
- obtained from good quality, clean and sound cotton seed by the process of expression

4.5 Specific requirements

Cottonseed oil shall have the specific characteristics shown in Tables 1.

Table 1 —Specific requirements of Cotton seed Oil

S/N	Characteristic	Requirement	Test Method
I	Relative Density (20oC/ water at 20oC)	0.91-0.921	IUPAC 2.101
li	Refractive Index (n D 40	1.458 – 1.466	US ISO 6320
lii	Saponification Value (mg KOH/g oil)	189 – 198	US ISO 3657
Iv	Iodine Value (Wij's)	99 – 119	US ISO 39611
V	Colour, units in a 25.4 mm Lovibond cell, max	Depends on gossypol content	US ISO 15305
Vi	Unsaponifiable Matter, g/kg, max.	1.5	US ISO 3596
viii	Acid Value, mg KOH/g, max.	Virgin 4.0 Non Virgin 0.6	US ISO 660
Ix	Peroxide Value, meq. Peroxide oxygen/kg, max.	10	US ISO 3960
iv	Iron, mg/kg	Virgin 5 Non Virgin 1.5	US ISO 8294
v	Copper, mg/kg	Virgin 0.4 Non Virgin 0.1	

4.3 Fortification

Refined Cottonseed oil shall contain Vitamin A, Vitamin D, Vitamin E and their esters, and other vitamins in accordance with US EAS 769.

5 Food additives

Only the food additives permitted in US 45 may be used.

6 Contaminants

6.1 Pesticide residues

The maximum levels of pesticide residues in cottonseed oil shall conform to the internationally accepted levels recommended by Codex Alimentarius Commission.

6.2 Heavy metals

The level of contaminants in Edible Cottonseed oil shall comply with those maximum pesticide residue limits established by CODEX Alimentarius commission for similar commodities.

Table 2 —Heavy metals limits for Edible Cotton seed oil

S/N	Contaminants	Maximum Level	Test Method
i	Lead, mg/kg	0.1	US SO 12193
ii	Arsenic, mg/kg	0.1	US ISO 2590

7 Hygiene

Edible Cotton seed oil shall be produced, processed, handled and stored in accordance with EAS 39.

8 Weights and measures

Edible cotton seed oil shall be packaged in accordance with the Weights and measures regulations of the destination country

5 Packaging borrowing

Edible Cotton seed oil shall be packaged in food grade containers which will safeguard the hygienic, nutritional, and organoleptic qualities of the product..

6 Labelling borrowing

In addition to the requirements in US EAS 38, each package shall be legibly and indelibly labelled with the following:

- name of the product shall be "Cottonseed oil";
- brand name/trade name;

- c) name and physical address of the manufacturer;
- d) lot identification;
- e) batch/code number;
- f) net weight in metric units;
- g) date of manufacture;
- h) country of origin;
- i) storage conditions; and
- j) expiry date/best before date

7 Sampling borrowing

Sampling of rice flour shall be done in accordance with and prepared in accordance to US ISO 661

Bibliography

- [1] CODEX STAN. 22, 1981 (Rev 1, 1989), Codex standard for edible cottonseed oil.
- [2]. Technical Specifications for the manufacture of: Fortified Refined Cottonseed Oil -COTTONSEED OIL
- [3] US 170: 2000, Cottonseed oil

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