

DRAFT UGANDA STANDARD

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Tofu — Specification



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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 coordinate 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/TC 2, *Food and agriculture*, Subcommittee SC 2, *edible oilseeds, fats and oils*

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Tofu — Specification

1 Scope

This Draft Uganda Standard specifies requirements, sampling and test methods for Tofu for human consumption.

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 1659, *Materials in contact with food — Requirements for packaging materials*

US EAS 38, *Standard specification for the labelling of pre-packaged foods*

US CAC/GL 50, *General guidelines on sampling*

US EAS 39, *Standard specification for factory and employee requirements for food factories*

US EAS 762, *Dry soybeans – Specification*

US EAS 803, *Nutrition labelling — Requirements*

EAS 804, *Claims on foods — Requirements*

EAS 805, *Use of nutritional and health claims — Requirement*

ISO 7251, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique*

ISO 6579, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Salmonella spp.*

US ISO 5985, *Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid*

US ISO 665, *Oilseeds -- Determination of moisture and volatile matter content*

US ISO 16634-1, *Food products - Determination of the total nitrogen content by combustion according to the Dumas principle and calculation of the crude protein content — Part 1: Oilseeds and animal feeding stuffs*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in this clause shall apply ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

Tofu

It's a solid curd or cake made from coagulated soy milk

3.2

foreign matter

pieces or loose particles of any substance other than soy bean or skins

4.0 Raw materials

4.1. Basic Ingredients.

Ingredients use in the manufacture of Tofu shall include the following

- a) whole soybeans,
- b) food-grade coagulants
- c) potable water (US EAS 12)

4.2 Optional ingredients

- a) spices,
- b) additives ,
- c) seasonings,
- d) supplemental protein

4.3 Types of Tofu

4.3.1 Silken tofu

This is a type of soy bean curd that is fine and smooth in texture. It is a type that is processed by solidifying all soymilk into a soft and fine texture tofu.

The basic ingredients in Silken Tofu are whole soybeans, one or more food-grade coagulants (typically a salt, such as magnesium chloride or calcium sulfate, or an acid or acid-forming compound, such as glucono delta-lactone), and water.

4.2.3 Regular Tofu

Regular tofu is a type of tofu that firm in texture. It is processed by coagulating soymilk with a coagulant and pressing out the curd in a mold. It varies significantly depending on how much whey is pressed out. The more

they is pressed out, the firmer it becomes. This Tofu will range from soft, to medium firm, to firm to extra firm. The Tofu can also go an additional step of frying or baked for a final product.

The basic ingredients in regular Tofu are whole soybeans, one or more food-grade coagulants (typically a salt, such as magnesium chloride or calcium sulfate, or an acid or acid-forming compound, such as glucono delta-lactone), and water

5 Requirements

5.1 Forms of regular Tofu

Regular Tofu Products shall be in form of:

- a) Medium-firm, firm or extra firm Tofu
- b) Deep-fried Tofu
- c) Baked Tofu
- d) Deep-Fried Tofu Pouches
- e) Tofu Burgers/Tofu Balls/Tofu Frankfurters
- f) Grilled Tofu
- g) Smoked Tofu

5.2. General requirements

Tofu products shall

- a) Have taste and flavour characteristic of the products
- b) Be made from soya beans conforming to US EAS 762
- c) Free from foreign matter

5.3 Specific requirements

When tested according to the methods specified therein, the tofu shall not exceed the limits specified in Table 1.

Table 1 —Specific requirements for Tofu

S/N	parameter	Requirements					Test method
		Soft/Silken Tofu	Regular Tofu	Medium firm	Firm, Tofu	Extra Firm	
i	Moisture content percent by mass, Max	88		84.9	79.3	79.3	US ISO 665
ii	Total protein (N X 6.25) (on dry basis), percent by	5.0		6.5	10.0	14	US ISO 16634-1

	mass, Min						
iii	Total ash (basis), percent by mass, Max	6.0		7.8	10.6	14.0	US ISO 5985,

6 Food additives

Only the food additives permitted in CODEX STAN 192 standards for food additives may be used

7 Contaminants

7.1 Pesticide residues

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

7.3 Aflatoxin

Total Aflatoxin shall not exceed 10 µg/kg while aflatoxin B1 shall not exceed 5 µg/kg when tested in accordance with ISO 16050.

8 Hygiene

Tofu shall be produced, processed, handled and stored in accordance with US EAS 39.

8.1 Microbiological limits

Table 2 — Microbiological limits for Tofu

S/No.	Parameter	Requirement	Method of test
ii)	Yeast and mould count, per gram, Max.	<1000	US ISO 21527-2
iv)	Salmonella	Absent	US ISO 6579
v)	Staphylococcus aureus	Absent	IEC
vi)	Escherichia coli	Absent	US ISO 11866,

9 Packaging

Tofu shall be shall be packed in food grade containers which will safeguard the hygienic, nutritional, and organoleptic qualities of the product.

10 Labelling

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

- a) The name of the product shall be by the type of tofu i.e. Soft/Silken Tofu, medium firm Tofu, Firm Tofu, Extra firm Tofu, grilled Tofu, Baked Tofu, Fried Tofu
- b) lot identification
- c) the name and address of the manufacturer or packer.
- d) "best before date
- e) Manufacture date
- f) Net weight
- g) Ingredients

10.2 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:

10.3 Nutrition labelling

The amount of micronutrients in the tofu shall be declared on the label in accordance with US EAS 803.

10.4 Nutrition and health claims

Tofu may have claims on the importance of the micronutrients in nutrition and health. Such claims when declared shall be consistent with US EAS 804 and US EAS 805.

11 Sampling

Sampling shall be carried in accordance with US Codex Stan 50.

Bibliography

[1]

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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.

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