

# DRAFT UGANDA STANDARD

First Edition  
2017-mm-dd

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## Methylated spirit — Specification

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Reference number  
DUS 1799: 2017

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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
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- (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 5, *Chemicals and Environment*.



# Methylated Spirit — specification

## 1 Scope

This draft Uganda standard specifies requirements, test and sampling methods for methylated spirit as a finished product suitable for general purpose disinfection and cleaning. This standard does not apply to industrial methylated spirits.

## 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.

FDUS ISO 24153, *Random sampling and randomisation procedures*

US EAS 104, *Alcoholic beverages — Methods of sampling and test*

US 1692, *Determination of bactericidal efficacy of disinfectants/sanitizers*

US ISO 7010, *Graphical symbols safety colours and safety signs — Registered safety*

US 1751 *Test Method for Determination of Ethanol and Methanol Content in Fuels Containing Greater than 20% Ethanol by Gas Chromatography*

## 3 Terms and definitions

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

#### **cleaning**

removal of foreign materials from a surface

### 3.2

#### **disinfection**

process that destroys, inactivates or removes microorganisms

### 3.3

#### **Methylated spirit**

ethyl alcohol denatured with methyl alcohol or other denaturing agents like wood naphtha, Isopropyl alcohol and pyridine for the purpose of preventing its use as an alcoholic beverage.

### 3.4

#### **sedimentation**

separation of particles from the fluid in which they are suspended, by the action of gravity

## 4 General requirements

### 4.1 Appearance

The product shall be clear, volatile liquid and free from sedimentation. It shall either be colourless or coloured by addition of methyl violet

### 4.2 Solubility

Shall be with Miscible with water

### 4.3 Odour

The methylated spirit shall have a characteristic odour.

### 4.4 Weights and measures

The fill and volume of the material shall comply with the requirements of the Weights and Measures Act.

### 4.5 Safety

The product shall have no adverse effects on the human health and environment when it is used for its intended purpose.

### 4.6 Quality requirements

The product shall comply with the requirements given in table 1

**Table 1 — methylated spirit — quality requirements**

Characteristic	Requirement	Test method
Specific gravity at 20°C	0.8305 – 0.8869	US EAS 104
Ethanol content at 20°C,% v/v min	70	US EAS 104 / US 1751
Acidity (as acetic acid), percent by weight, max	0.01	US EAS 104
Aldehydes (as acetaldehyde): g/l, max	1.00	US EAS 104
Non – volatile matter,% w/w max	0.1	Annex A
Methanol content ,% w/v, max	2	US EAS 104
Bactericidal efficacy	to pass test	US 1692

### 4.7 Stability in storage

The product shall not deteriorate in any manner and shall comply with the requirements of this specification when stored in its original sealed container for a period of two year from the date of manufacture.

## 5 Packing and Labelling

### 5.1 Packing

The material in which the product is packaged shall not react chemically or interact physically with the product and shall be strong enough to protect the product adequately during normal handling, transportation and storage.

## 5.2 Labelling

5.2.1 Each container and each bulk package shall bear in prominent, legible, and indelible marking the information required in terms of the Weights and Measures Act, and the following additional information:

- a) manufacturer's name and physical address;
- b) name of the product "methylated spirit";
- c) net mass of the product when packed;
- d) ethanol content % by volume;
- e) instructions for use;
- f) warning/precautions;
- g) country of origin;
- h) storage recommendation;
- i) batch number;
- j) month and year of manufacture and
- k) month and year of expiry.

5.2.2 Each package shall be marked with appropriate safety symbols as specified in US ISO 7010

## 6 Sampling

Samples shall be taken randomly and tested for compliance with the requirements of the standard in accordance with FDUS ISO 24153.

## Annex A (normative)

### Non- volatile matter

#### A.1 Apparatus

- A.1.1 Water bath
- A.1.2 Oven
- A.1.3 Analytical balance
- A.1.4 Desiccator
- A.1.5 Evaporation dish

#### A.2 Procedure

A.2.1 Evaporate 50 ml of sample in a dried tared dish on the water bath in a well ventilated hood and wipe the external sides of the dish

A.2.2 Place the dish with the residue in the oven maintained at  $105\text{ }^{\circ}\text{C} \pm 1^{\circ}\text{C}$  for 1 h. Cool the dish in a desiccator and weigh the dish. Repeat until a constant is obtained

#### A.3 Calculation

$$\text{Non- volatile matter, \% w/v} = \frac{W_1 - W}{V}$$

Where;

$W_1$  weight of evaporating dish with dry residue in grams,

$W$  weight of evaporating dish in grams,

$V$  volume of sample taken in millilitres



## Bibliography

- [1] Indian Standard 323 of 1959 — *Specification for rectified spirit*
- [2] *Kenya Methylated Spirit* 07/07/2017
- [3] *Pharmacopoeia of India, Third Edition*, 1985
- [4] US EAS 109:1987, *Potable spirit — Specification*

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ICS 71.080.60, 11.080.20

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