

Sudanese Standards
Metrology Organization
Gum Olibanum
SDS - 2873/06

CONTENTS

INTRODUCTION

1-SCOPE

2 SYNONYMS

3. DEFINITION

4. DESCRIPTION

5. COMMERCIAL GRADES

6. FUNCTIONAL USES

7. CHARACTERISTICS

8. PACKAGING

9. LABELLING

10. STORAGE

11. SHELF LIFE

12 SAMPLING

13. TESTING

14. REFERENCES

Introduction

This Sudanese standard is formulated by the technical committee No.4 formed according to the administrative decree of the SSMO/I/A/I dated 18/8/01. It applies to gum Olibanum from *Boswell/a papyrifera*. On formulating this standard the committee has referred to international publications and works of Sudanese researchers on the subject.

Gum Olibanum

1- SCOPE

This Sudanese standard applies to the dry exudate from *Boswellia papyrifera* (Del.).

2- SYNONYMS

Amyr/'s papyn'fera, Frankincense, Oleo-gum resin, Luban.

3- DEFINITION

Gum olibanum is the dry exudate obtained from the stems and branches of *Boswellia papyrifera* (Del.) tree (fam. Burseraceae). It consists mainly of salts of an acidic arabino-galactan protein complex which on hydrolysis yields galactose, arabinose, rhamnose, glucuronic acid and 4-O-methoxy glucuronic acid and a trace of L.fucose.

4- DESCRIPTION

Gum olibanum is a greenish-yellow solid in the form of irregular nodules and fragments which on pressing form a slightly plastic mass . Gum olibanum has a characteristic pleasant odour and bitter taste . It may contain extraneous materials such as sand and pieces of bark.

5-COMMERCIAL Grades

GRADE	Particle size
Nagawa	10 mm
GRADE 1	10 - 5 mm
GRADE 2	5 – 2.5 mm
Soksokania	2.5 mm

5- FUNCTIONAL

It is used as a fixative for perfumes, in soap

USES manufacture, in folkloric medicine, an incense

in holly places and as an insecticide.

7- CHARACTERISTICS

7.1 IDENTIFICATION

7.1.1 Solubility : Partially dissolves in distilled water forming a milky emulsion, insoluble in ethanol.

7.1.2 Loss on drying: Less than 10%(105 C, 5hrs).

7.2 PURITY

7.2.1 Total ash* Less than 2%

7.2.2 Nitrogen content" 0.26 to 0.31%.

7.2.3 Oil content* Not less than 2%

7.2.4 Heavy metals* Not more than 40 mg/kg.

7.2.5 Tannin - bearing gums : Formation of a black precipitate indicates presence of tannin.

7.3 MICROBIOLOGICAL CRITERIA

7.3.1 Salmonella sp. : Negative per test.

7.3.2 Ecoli : Negative in 1gm.

8- PACKAGING Multi-layer paper bag lined with polyethylene, capacity of 50 - 25 kg, or as agreed, upon, between customer and shipper

9- LABELLING Should be clear and indicates:

Product Name.

Product Grade.

Producing Company.

Net Weight.

Season of Production.

Storage Conditions.

Country of Origin.

10- STORAGE : Should be stored under clean, cool and dry conditions, in a properly constructed warehouse.

11- SHELF LIFE: Two years under the appropriate storage conditions mentioned in section 10.

12- SAMPLING : Sampling should be carried out according to Sudanese standard SDS No. 145.

13- TESTING : Testing should be carried out according to Sudanese standards SDS No.146, 147,148, 149,152,153, 154,155, 157, 158 and 528.
Test carried out on dry weight basis.

“Nitrogen conversion factor (NCF) according to Anderson, D.M.W.(1986).

14- REFERENCES

- Abd Ei Wahab, S.M., Aboutabl, E.A., Ei-Zalatani, S.M., Fouad, H.A., Depootenr, H.L. and EI-Fallaha, B.(1987). The Essential Oils of Olibanum. *Planta Medica*, 53, 382-384.
- Abd EI- Kariem, E.H.(1992). Structural Studies of Some Sudanese Gums. PhD. Thesis, University of Khartoum, Sudan.
- Mustafa, G.I.(1997). Physico-Chemical Study on Cleo-Gums from Sudan. MSG. Thesis, University of Khartoum, Sudan.
- Sahni, K. C.(1968). “Important Trees of the Northern Sudan”. Forestry Research and Education Center, Khartoum FAO/UNDP.

1. PRODUCT IDENTIFICATION

Product Name: OLIBANUM RESINOID 0020

2. COMPOSITON/INFORMATION ON INGREDIENTS

- a) CAS #: N/A
- b) FEMA #: N/A
- c) HTC #: 3301.30.0000

3. HAZARD IDENTIFICATION

- a) HMIS Classification
- b) Health: 0
- c) Flammability: 0
- d) Reactivity: 0

4. EMERGENCY AND FIRST AID PROCEDURES

- e) Inhalation: If headache, nausea, or drowsiness occurs, remove to fresh air and consult a physician.
- f) Eye Contact: Remove contact lenses. Flush eyes with cool water for at least 15 minutes. If irritation persists, consult a physician.
- g) Skin Contact: Remove contaminated clothing and shoes. Wash effected area thoroughly with soap and water. Consult a physician if symptoms persist.
- h) Ingestion: If conscious and can swallow, give water to dilute and consult a physician or poison control center immediately.

5. FIRE FIGHTING MEASURES

- a) Flash Point: 100 °C
- b) Recommended Extinguishing Media : Foam, Dry Chemical, Carbon Dioxide, Water Fog
- c) Recommended Fire Fighting Procedure: Wear self-contained breathing apparatus and full protective clothing when fighting fires involving chemicals. Prevent Contact with skin and eyes. Use water spray to cool containers exposed to fire.

- d) Development of hazardous combustion gases or vapors possible in the event of fire. Special Risks, if applicable: N/A

6. ACCIDENTAL RELEASE MEASURES

Procedures in Case of Accidental Release, Breakage or Leakage: Remove any source of ignition. If in confined area, use NIOSH approved respiratory protection and other protective equipment. Absorb the spilled material with vermiculite or other absorbent material. Avoid inhaling vapor. Avoid contact with skin, eyes and clothing. Dispose of material in accordance with local, state, and Federal laws and regulations.

7. HANDLING AND STORAGE

- a) Handling: Avoid breathing vapors. Avoid contact with skin, eyes and clothing.
- b) Storage: Store in full sealed containers in cool, dry, ventilated place away from sources of ignition. Keep containers upright and tightly closed when not in use.

8. EXPOSURE CONTROLS/PROTECTION INFORMATION

- a) Ventilation Protection: Ventilation meeting ACGIH standards should be employed.
- b) Respiratory Protection: Respiratory protection is normally not required in well-ventilated area.
- c) Eye Protection: Eye protection should be worn at all times.
- d) Skin Protection: Chemical resistant gloves are recommended.
- e) Others: Use protective clothing as necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

- a) Appearance/Color: Brown-orangey to dark brown pasty to solid product
- b) Odor Description: Green, sweet, woody and balsam-like undertone
- c) Refractive Index: 1.495 – 1.525@20°C
- d) Specific Gravity: N/A
- e) Boiling Point: N/A
- f) Melting Point: N/A
- g) Solubility: N/A
- h) Vapor Pressure: N/A
- i) Vapor Density (Air =1): N/A

10. STABILITY AND REACTIVITY

- a) Protect from light and air.
- b) Avoid sources of ignition.
- c) Avoid contact with strong acids, alkali or oxidizing agents.
- d) Usually Stable

11. TOXICOLOGICAL INFORMATION

- a) Oral LD50: None Established
- b) Dermal LD50: None Established
- c) Inhalation LC50: None Established

12. ECOLOGICAL INFORMATION

Do not allow to enter water, waste water or soil.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with state, local and federal regulations.

14. TRANSPORT INFORMATION

Ground Shipping (USDOT), Air shipping (IATA), and Ocean Shipping (IMDG):

- a) Proper Shipping Name: Environmentally hazardous substance, Liquid, NOS (Olibanum Resinoid)
- b) Hazard Class: 9
- c) Identification Number: UN 3082
- d) Packing Group: III

15. REGULATORY INFORMATION

This substance contains no materials subject to the reporting requirements of Superfund Amendments and Reauthorization Act of 1986 Title III Section 313.

16. OTHER INFORMATION

Disclaimer: The information in this MSDS was obtained from current and reliable sources.

However the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. It is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage, or, expense resulting from improper use of this product.