
International Standard



3518

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Oil of sandalwood (*Santalum album* Linnaeus)

Huile essentielle de bois de santal (Santalum album Linnaeus)

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Descriptors : essential oils, sandalwood, materials specifications, physical properties, optical properties, chemical properties, sensorial properties.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

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International Standard ISO 3518 was developed by Technical Committee ISO/TC 54, *Essential oils*, and was circulated to the member bodies in October 1977.

It has been approved by the member bodies of the following countries:

Austria
Brazil
Canada
France

India
Italy
Korea, Rep. of
Netherlands

South Africa, Rep. of
Spain
Turkey
USSR

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No member body expressed disapproval of the document.

Oil of sandalwood (*Santalum album* Linnaeus)

1 Scope and field of application

This International Standard specifies certain characteristics of oil of sandalwood, with a view to facilitating the assessment of its quality.

2 References

ISO/R 210, *Essential oils — Packing.*

ISO/R 211, *Essential oils — Labelling and marking containers.*

ISO 212, *Essential oils — Sampling.*

ISO/R 279, *Determination of the density and relative density of essential oils.*

ISO 280, *Essential oils — Determination of refractive index.*

ISO 592, *Essential oils — Determination of optical rotation.*¹⁾

ISO 709, *Essential oils — Determination of ester value.*²⁾

ISO 875, *Essential oils — Evaluation of miscibility with ethanol.*³⁾

ISO 3793, *Essential oils — Estimation of primary and secondary free alcohols content by acetylation in pyridine.*

3 Definition

oil of sandalwood: The oil obtained by steam distillation of the heartwood of *Santalum album* Linnaeus.

4 Requirements

4.1 Appearance

Clear, slightly viscous liquid.

4.2 Colour

Almost colourless to yellow.

4.3 Odour

Characteristic, sweet, woody, persistent.

4.4 Relative density at 20/20 °C

Minimum : 0,968

Maximum : 0,983

4.5 Refractive index at 20 °C

Minimum : 1,503 0

Maximum : 1,508 0

4.6 Optical rotation at 20 °C

Range from – 21° to – 15°

4.7 Miscibility with 70 % (V/V) ethanol at 20 °C

The miscibility with 70 % (V/V) ethanol shall be 1 volume in 5 volumes to give a clear solution.

4.8 Ester value

Maximum : 10

4.9 Primary free alcohols content, expressed as santalol

Minimum: 90 % (m/m)

5 Sampling

See ISO 212.

Minimum volume of final sample : 25 ml

1) At present at the stage of draft. (Revision of ISO/R 592.)

2) At present at the stage of draft. (Revision of ISO/R 709.)

3) At present at the stage of draft. (Revision of ISO/R 875.)

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6 Methods of test

6.1 Relative density at 20/20 °C

See ISO/R 279.

6.2 Refractive index at 20 °C

See ISO 280.

6.3 Optical rotation at 20 °C

See ISO 592.

6.4 Miscibility with 70 % (V/V) ethanol at 20 °C

See ISO 875.

6.5 Ester value

See ISO 709.

Saponification time : 1 h

Relative molecular mass of the santalyl acetate : $M_r = 262,4$

6.6 Primary free alcohols content, expressed as santalol

See ISO 3793.

Volume of acetic anhydride : 20 ml

Relative molecular mass of santalol : $M_r = 220,4$

7 Packing, labelling and marking

See ISO/R 210 and ISO/R 211.

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