
INTERNATIONAL STANDARD



3809

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

Oil of lime^u obtained by expression of the whole fruit^u

Huile essentielle de lime (obtenue par expression du fruit entier)

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[ISO 3809:1976](#)

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Descriptors: essential oils, lime (fruit), materials specifications, physical properties, optical properties, chemical properties, sensorial properties.

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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.

International Standard ISO 3809 was drawn up by Technical Committee ISO/TC 54, *Essential oils*, and was circulated to the Member Bodies in May 1975.

It has been approved by the Member Bodies of the following countries:

Belgium
Canada
France
Italy

Netherlands
Portugal
South Africa, Rep. of
Spain

Thailand

Turkey

Yugoslavia

No Member Body expressed disapproval of the document.

Oil of lime (obtained by expression of the whole fruit)

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies certain characteristics of oil of lime (obtained by expression of the whole fruit), 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/R 280, *Determination of the refractive index of essential oils.*

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

ISO 1279, *Essential oils – Determination of carbonyl compounds content – Hydroxylammonium chloride method.*

ISO 4715, *Essential oils – Determination of residue on evaporation.*²⁾

3 DEFINITION

oil of lime (obtained by expression of the whole fruit) :
The oil extracted by centrifuging without heating, from the juice resulting from crushing whole fruits of *Citrus aurantifolia* (Christmann) Swingle, Mexican type.

4 REQUIREMENTS

4.1 Appearance

Clear, mobile liquid.

4.2 Colour

Yellow to greenish-yellow.

4.3 Odour

Characteristic, strong, recalling that of lemon.

4.4 Relative density at 20/20 °C

Minimum : 0,874

Maximum : 0,882

4.5 Refractive index at 20 °C

Minimum : 1,482 0

Maximum : 1,486 0

4.6 Optical rotation at 20 °C

Range from + 35° to + 40°

4.7 Carbonyl compounds, expressed as citral

Minimum : 4,5 %

Maximum : 9,0 %

4.8 Residue on evaporation

Minimum : 8,0 %

Maximum : 13,5 %

5 SAMPLING

See ISO 212.

Minimum volume of final sample : 50 ml.

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/R 280.

1) At present at the stage of draft. (Revision of ISO/R 592-1967.)

2) In preparation.

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6.3 Optical rotation at 20 °C

See ISO 592.

6.4 Carbonyl compounds content, expressed as citral

See ISO 1279.

Test portion : 10 g.

Titrate immediately. Calculate the result as citral, relative molar mass (M) = 152,2.

6.5 Residue on evaporation

See ISO 4715.

Test portion : 2 g.

Heat for 5 h.

7 PACKING, LABELLING AND MARKING

See ISO/R 210 and ISO/R 211.

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