
International Standard



855

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

Oil of lemon, Italy, obtained by expression

Huile essentielle de citron, Italie, obtenue par expression

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Ref. No. ISO 855-1981 (E)

Descriptors : essential oils, lemon, materials specifications.

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 855 was developed by Technical Committee ISO/TC 54, *Essential oils*, and was circulated to the member bodies in November 1979.

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

Austria
Brazil
Bulgaria
Canada
Chile

France
India
Italy
Philippines
Portugal

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South Africa, Rep. of
Spain
USSR

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The member body of the following country expressed disapproval of the document on technical grounds :

Netherlands

This International Standard cancels and replaces ISO Recommendation R 855-1968, of which it constitutes a technical revision.

Oil of lemon, Italy, obtained by expression

1 Scope and field of application

This International Standard specifies certain characteristics of oil of lemon, Italy, obtained by expression, 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 279, *Essential oils — Determination of relative density at 20 °C (Reference method).*

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

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

ISO 1242, *Essential oils — Determination of the acid value.*

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

ISO 4715, *Essential oils — Quantitative evaluation of residue on evaporation.*

ISO 4735, *Oils of citrus — Determination of CD value by ultraviolet spectrophotometric analysis.*

3 Definition

oil of lemon, Italy, obtained by expression : The oil extracted, without heating, by mechanical treatment from the fresh pericarp of the fruit of *Citrus limon* (Linnaeus) N.L. Burman, grown in Italy.

4 Requirements

4.1 Appearance

Mobile clear liquid, which may become cloudy by lowering the temperature.

4.2 Colour

Pale yellow to pale greenish-yellow.

4.3 Odour

Characteristic of fresh pericarp of lemon.

4.4 Relative density, at 20/20 °C

Minimum : 0,849

Maximum : 0,858

4.5 Refractive index at 20 °C

Minimum : 1,474 0

Maximum : 1,476 0

4.6 Optical rotation at 20 °C

Range from + 57° to + 65°

4.7 Residue on evaporation

Minimum : 1,6 %

Maximum : 3,9 %

4.8 Acid value

Maximum : 3,0

4.9 Carbonyl value

Minimum : 11

Maximum : 17

4.10 CD value

Minimum : 0,450

Maximum : 0,950

Dilution of 0,25 g of oil in 100 ml of 95 % (V/V) ethanol

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4.11 CD/DE ratio

Minimum : 0,46

Maximum : 0,57

5 Sampling

See ISO 212.

Minimum volume of test sample : 50 ml

6 Methods of test

6.1 Relative density, at 20/20 °C

See ISO 279.

6.2 Refractive index at 20 °C

See ISO 280.

6.3 Optical rotation at 20 °C

See ISO 592.

$$\alpha_{20} = \alpha_t + 0,14 (t - 20)$$

6.4 Residue on evaporation

See ISO 4715.

Test portion : 5 g

Evaporation time : 5 h

6.5 Acid value

See ISO 1242.

6.6 Carbonyl value

See ISO 1279.

Test portion : 10 g

Period of standing : 15 min

Relative molecular mass (M_r) = 152,2

6.7 CD value

See ISO 4735.

Point B : 285 nm approximately

Maximum value (point D) : 315 nm approximately

Point A : 365 nm approximately

6.8 CD/DE ratio

See ISO 4735.

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7 Packaging, labelling and marking

See ISO/R 210 and ISO/R 211.

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