

INTERNATIONAL STANDARD

ISO
3140

Second edition
1990-12-15

Oil of sweet orange [*Citrus sinensis* (Linnaeus) Obsbeck] obtained by mechanical treatment

iTeh STANDARD PREVIEW
*Huile essentielle d'orange douce [Citrus sinensis (Linnaeus) Obsbeck]
obtenue par des procédés mécaniques*
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ISO 3140:1990

<https://standards.iteh.ai/catalog/standards/sist/d2479520-cc43-4d59-b446-0f00169f8e7f/iso-3140-1990>



Reference number
ISO 3140:1990(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75% of the member bodies casting a vote.

International Standard ISO 3140 was prepared by Technical Committee ISO/TC 54, *Essential oils*.

This second edition cancels and replaces the first edition (ISO 3140:1976), of which it constitutes a technical revision.

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Oil of sweet orange [*Citrus sinensis* (Linnaeus) Obsbeck] obtained by mechanical treatment

1 Scope

This International Standard specifies certain characteristics of oil of sweet orange [*Citrus sinensis* (Linnaeus) Obsbeck], obtained by mechanical treatment, with a view to facilitating the assessment of its quality.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/R 210:1961, *Essential oils — Packing.*

ISO/R 211:1961, *Essential oils — Labelling and marking containers.*

ISO 212:1973, *Essential oils — Sampling.*

ISO 279:1981, *Essential oils — Determination of relative density at 20 °C (Reference method).*

ISO 280:1976, *Essential oils — Determination of refractive index.*

ISO 592:1981, *Essential oils — Determination of optical rotation.*

ISO 1279:1984, *Essential oils — Determination of carbonyl value — Hydroxylammonium chloride method.*

ISO 4715:1978, *Essential oils — Quantitative evaluation of residue on evaporation.*

3 Definition

For the purposes of this International Standard, the following definition applies.

oil of sweet orange, obtained by mechanical treatment: The oil obtained without heating, by mechanical treatment, from the pericarp of the fruit of *Citrus sinensis* (Linnaeus) Obsbeck and, in the case of the Guinea-type oil, from the varieties *limo-viridis* A. Chevalier and *djalonis* A. Chevalier.

4 Requirements

4.1 Appearance

Clear, mobile liquid, which may become cloudy when chilled.

4.2 Colour

Yellow to reddish yellow.

4.3 Odour

Characteristic of orange peel.

4.4 Relative density at 20/20 °C

Minimum: 0,842.

Maximum: 0,850.

4.5 Refractive index at 20 °C

Minimum: 1,4700.

Maximum: 1,4760.

4.6 Optical rotation at 20 °C

Range from + 94° to + 99°.

4.7 Residue on evaporation

Minimum: 1,0 %.

Maximum: 5,0 %.

4.8 Carbonyl compounds content, expressed as decanal

Minimum: 0,9 %.

Maximum: 3,1 %.

5 Sampling

See ISO 212.

Minimum volume of test sample: 50 ml.

NOTE 1 This volume is enough to carry out all the tests specified in this International Standard at least once.

6 Methods of test

6.1 Relative density of 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.

6.4 Residue of evaporation

See ISO 4715.

Test portion: 5 g.

Evaporation time: 5 h.

6.5 Carbonyl compounds content, expressed as decanal

See ISO 1279.

Test portion: 10 g.

Standing time: 15 min.

7 Packaging, labelling and marking

See ISO/R 210 and ISO/R 211.

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