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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Oil of bergamot petitgrain [*Citrus aurantium* (Linnaeus) ssp. *bergamia* (Wight et Arnott) Engler]

Huile essentielle de petitgrain bergamotier [Citrus aurantium *(Linnaeus) ssp.* bergamia *(Wight et Arnott) Engler*]

Reference number
ISO 8900 : 1987 (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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8900 was prepared by Technical Committee ISO/TC 54, *Essential oils.*

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Printed in Switzerland

Oil of bergamot petitgrain [*Citrus aurantium* (Linnaeus) ssp. *bergamia* (Wight et Arnott) Engler]

1 Scope and field of application

This International Standard specifies certain characteristics of oil of bergamot petitgrain [*Citrus aurantium* (Linnaeus) ssp. *bergamia* (Wight et Arnott) Engler], 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 of 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 709, *Essential oils — Determination of ester value.*

ISO 875, *Essential oils — Evaluation of miscibility in ethanol.*

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

ISO 3794, *Essential oils (containing tertiary alcohols) — Estimation of free alcohols content by determination of ester value after acetylation.*

3 Definition

oil of bergamot petitgrain: The oil obtained by steam distillation of the leaves, twigs and small green fruits of *Citrus aurantium* (Linnaeus) ssp. *bergamia* (Wight et Arnott) Engler.

4 Requirements

4.1 Appearance

Clear liquid.

4.2 Colour

Amber.

4.3 Odour

Characteristic.

4.4 Relative density at 20/20 °C

Minimum: 0,886.

Maximum: 0,894.

4.5 Refractive index at 20 °C

Minimum: 1,460 0.

Maximum: 1,465 0.

4.6 Optical rotation at 20 °C

Between $-4°$ and $+3°$.

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

Not more than 3 volumes of 70 % (*V*/*V*) ethanol at 20 °C shall be required to give a clear solution with 1 volume of essential oil.

4.8 Acid value

Maximum: 2,0

4.9 Ester value

Minimum: 115.

Maximum: 195.

4.10 Ester value after acetylation

Minimum: 185.

Maximum: 281.

4.11 Establishment of the chromatographic profile

See annex, for information only.

4.12 Flash point

(To be completed later.)

5 Sampling

See ISO 212.

Minimum volume of the final sample: 50 ml.

NOTE — This volume is sufficient to carry out, at least once, each of the tests specified in this International Standard.

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.

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

See ISO 875.

6.5 Acid value

See ISO 1242.

6.6 Ester value

See ISO 709.

6.7 Ester value after acetylation

See ISO 3794.

6.8 Chromatographic profile

See annex, for information only.

6.9 Flash point

(To be completed later.)

7 Packing, labelling and marking

See ISO/R 210 and ISO/R 211.

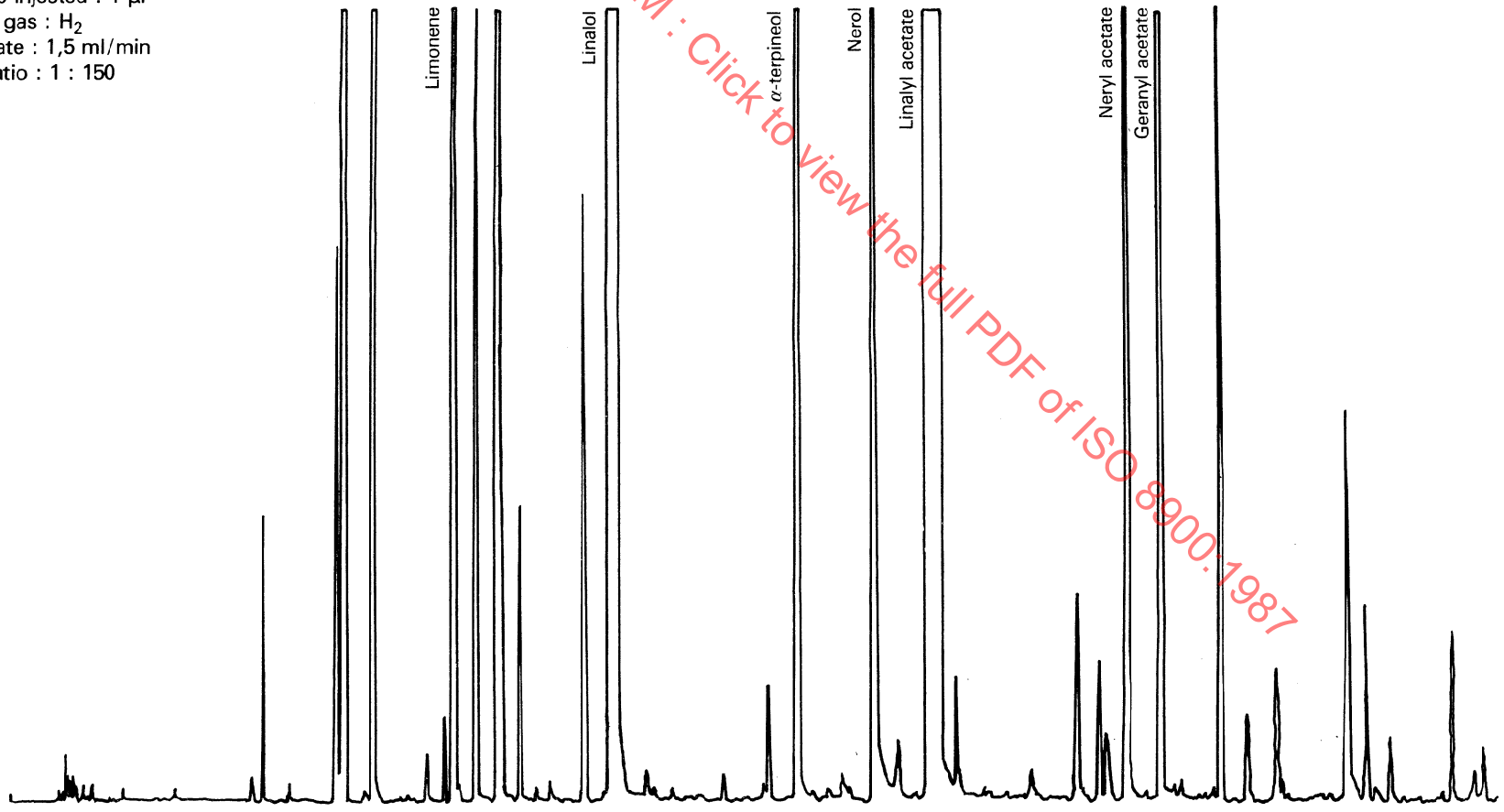
Annex

Typical chromatogram

(This annex does not form part of the Standard.)

Sample : Oil of bergamot petitgrain, Italy

Column : length 25 m, internal diameter 0,32 mm
Stationary phase : SE 52
Film thickness : 0,4-0,45 µm
Oven temperature : 8 min at 65 °C, then 3 °C/min to 100 °C
2,5 °C/min to 130 °C, 3 °C/min to 160 °C
Injection temperature : 280 °C
Detector : F.I.D
Volume injected : 1 µl
Carrier gas : H_2
Flow rate : 1,5 ml/min
Split ratio : 1 : 150



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