

INTERNATIONAL STANDARD

ISO 875

Second edition
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Essential oils — Evaluation of miscibility in ethanol

Huiles essentielles — Évaluation de la miscibilité à l'éthanol



Foreword

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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 875 was prepared by Technical Committee ISO/TC 54, *Essential oils*.

This second edition cancels and replaces the first edition (ISO 875:1981), which has been technically revised.

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Essential oils — Evaluation of miscibility in ethanol

1 Scope

This International Standard specifies a method for the evaluation of the miscibility of essential oils with mixtures of ethanol and water of known ethanol content.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative documents referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 356, *Essential oils — Preparation of test sample*.

ISO 385-2, *Laboratory glassware — Burettes — Part 2: Burettes for which no waiting time is specified*.

ISO 648, *Laboratory glassware — One-mark pipettes*.

3 Principle

Gradual addition to an essential oil, at a temperature of 20 °C, of an ethanol solution of suitable concentration.

Evaluation of miscibility and possibly of opalescence.

4 Classification of miscibility

4.1 An essential oil is said to be miscible with V volumes or more of ethanol of a given concentration, at a temperature of 20 °C, when the mixture of 1 volume of the oil in question with V volumes of that ethanol is clear and remains so after further gradual addition of ethanol of the same concentration up to a total of 20 volumes.

4.2 An essential oil is said to be miscible with V volumes of ethanol of a given concentration, at a temperature of 20 °C, and to become cloudy when diluted in V' volumes, when the mixture of 1 volume of the oil in question with V volumes of the ethanol is clear and becomes cloudy after further gradual addition of $(V' - V)$ volumes of ethanol of the same concentration and remains cloudy after further addition of the ethanol up to a total of 20 volumes.

4.3 An essential oil is said to be miscible with V volumes of ethanol of a given concentration, at a temperature of 20 °C, and to become cloudy when diluted in V' to V'' volumes, when the mixture of 1 volume of the oil in question with V volumes of the ethanol is clear, becomes cloudy after further gradual addition of $(V' - V)$ volumes of ethanol of the same concentration, and again becomes clear after further addition of $(V'' - V')$ volumes of ethanol of the same concentration.

4.4 An essential oil is said to be miscible with opalescence when the mixture of the oil with ethanol of a given concentration (under the conditions as given in 4.1, 4.2 and 4.3) shows an opalescence identical with the one of the standard solution for opalescence, freshly prepared in accordance with the method given in 5.3.

NOTE The numerical values of V , V' and V'' are not more than 20.