

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 875

DETERMINATION OF SOLUBILITY
OF ESSENTIAL OILS IN ETHANOL

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BRIEF HISTORY

The ISO Recommendation R 875, *Determination of solubility of essential oils in ethanol*, was drawn up by Technical Committee ISO/TC 54, *Essential oils*, the Secretariat of which is held by the Repartição de Normalização (IGPAI).

Work on this question by the Technical Committee led, in 1964, to the adoption of a Draft ISO Recommendation.

In November 1965, this Draft ISO Recommendation (No. 869) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Argentina	Ireland	Portugal
Belgium	Israel	Romania
Brazil	Italy	South Africa, Rep. of
Canada	Japan	Sweden
Chile	Korea, Rep. of	Turkey
France	Netherlands	United Kingdom
Germany	New Zealand	U.S.S.R.
India	Poland	Yugoslavia

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in November 1968, to accept it as an ISO RECOMMENDATION.

DETERMINATION OF SOLUBILITY OF ESSENTIAL OILS IN ETHANOL

1. SCOPE

This ISO Recommendation describes the method to be used and the visual observations to be made in determining the solubility of essential oils in suitable dilutions of ethanol.

2. DEFINITIONS

- 2.1 An essential oil is said to be soluble in V volumes and more of ethanol of given strength t , when the clear solution in V volumes remains clear after further addition of ethanol of the same strength up to a total of 20 volumes of ethanol.
- 2.2 An essential oil is said to be soluble in V volumes of ethanol of given strength t , and to become cloudy when diluted, when the clear solution in V volumes becomes cloudy and stays so after further gradual addition of ethanol of the same strength up to a total of 20 volumes of ethanol.
- 2.3 An essential oil is said to be soluble in V volumes of ethanol of given strength t , and becomes cloudy in V' volumes ($V' < 20$), when the clear solution in V volumes becomes cloudy and stays so after further gradual addition of ethanol of the same strength up to a total of V' volumes of ethanol.
- 2.4 An essential oil is said to be soluble with opalescence when the alcoholic solution on being diluted shows a bluish tinge, this colour being similar to that of the standard of opalescence, freshly prepared in accordance with clause 4.2.

3. PRINCIPLE OF METHOD

An aqueous ethanol solution of suitable known concentration is added progressively at a temperature of 20 °C to an essential oil and the degree of miscibility is observed.