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ISO RECOMMENDATION

R 1242

ESSENTIAL OILS

DETERMINATION OF ACID VALUE

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BRIEF HISTORY

The ISO Recommendation R 1242, *Essential oils – Determination of acid value,* was drawn up by Technical Committee ISO/TC 54, *Essential oils,* the Secretariat of which is held by the Repartiçao de Normalizaçao (IGPAI).

Work on this question led to the adoption of Draft ISO Recommendation No. 1242, which was circulated to all the ISO Member Bodies for enquiry in May 1967.

The Draft was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Israel	Sweden
Belgium	Italy	Thailand
Bulgaria	Japan	Turkey
Canada	Netherlands	U.A.R.
France	New Zealand	United Kingdom
Greece	Portugal	U.S.S.R.
India	Romania	
Iran	South Africa, Rep. of	

No Member Body opposed the approval of the Draft.

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

ISO Recommendation R 1242 November 1971

ESSENTIAL OILS

DETERMINATION OF THE ACID VALUE

1. SCOPE

This ISO Recommendation specifies the method to be used in determining the content of free acids in essential oils. This method is not applicable to essential oils containing lactones.

2. DEFINITION

Acid value, A.V. The number of milligrammes of potassium hydroxide required to neutralize the free acids contained in 1 g of the essential oil.

3. PRINCIPLE

Neutralization of the free acids using a standard volumetric alkali solution.

4. REAGENTS

4.1 *Ethanol*, 95 % (V/V) at 20 °C, freshly neutralized with the potassium hydroxide solution (4.2), using as indicator the solution (4.3), or solution (4.4) whenever the essential oil may have constituents containing phenolic groups.

4.2 *Potassium hydroxide*, 0.1 N standard volumetric ethanolic solution, checked during the 24 hours preceding the determination of acid value.

4.3 *Phenolphthalein* solution of 2 g/dm^3 in ethanol (4.1).

4.4 *Phenol red* solution of 0.4 g/dm^3 in neutralized 20 % (V/V) ethanol.

5. APPARATUS

5.1 *Saponification flask*, round-bottomed, of alkali-resistant glass, capacity 100 to 200 cm^3, and to which can be fitted a glass tube, at least 1 m in length and at least 1 cm internal diameter. The tube acts as a reflux cooler in the subsequent determination of the ester value.

5.2 *Measuring cylinder* of 5 cm^3 capacity.

5.3 *Burette* graduated in tenths of a cubic centimetre.

6. SAMPLING

See ISO Recommendation R 212, *Essential oils – Sampling*.