INTERNATIONAL STANDARD

ISO 1242

Third edition
2023-01

Essential oils — Determination of acid value by two titration methods, manual and automatic

Huiles essentielles — Détermination de l'indice d'acide par deux méthodes de titrage, manuelle et automatique

Reference number
ISO 1242:2023(E)

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This third edition cancels and replaces the second edition (ISO 1242:1999), which has been technically revised.

The main changes are as follows:

— the title has been changed;

— subclauses 5.2 and 9.2 have been added;

— Annex A has been added;

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Essential oils — Determination of acid value by two titration methods, manual and automatic

1 Scope

This document specifies two titration methods for determining the acid value in essential oils. These two methods are not applicable to essential oils containing appreciable quantities of lactones (e.g. Massoïa essential oil).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 356, *Essential oils — Preparation of test samples*

ISO 385, *Laboratory glassware — Burettes*

ISO 709, *Essential oils — Determination of ester value*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
acid value
number of milligrams of potassium hydroxide required to neutralize the free acids contained in 1 g of the essential oil

4 Principle

Neutralization of the free acids using a titrated ethanolic solution of potassium hydroxide.

5 Reagents

Use only reagents of recognized analytical grade and only distilled water or water of equivalent purity.

5.1 Ethanol 96 % (volume fraction) at 20 °C, freshly neutralized before each series of measurements with the potassium hydroxide solution (5.2), in the presence of the coloured indicator (5.3) used for the determination in the case of manual titration.

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