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**Essential oils — Determination of content  
of phenols**

*Huiles essentielles — Détermination de la teneur en phénols*



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Printed in Switzerland

## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 1272 was prepared by Technical Committee ISO/TC 54, *Essential oils*.

This second edition cancels and replaces the first edition (ISO 1272:1973), which has been technically revised.

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# Essential oils — Determination of content of phenols

## 1 Scope

This International Standard specifies a method for the determination of the percentage, by volume, of phenols in essential oils.

NOTE See 8.2.2 which establishes some limits to the application of this method.

## 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 document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 356:1996, *Essential oils — Preparation of test sample*.

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

ISO 1773, *Laboratory glassware — Narrow-necked boiling flasks*.

## 3 Principle

The phenolic compounds contained in a known volume of an essential oil are transformed into their alkaline phenol esters, which are soluble in the aqueous phase. The volume of the unabsorbed portion of the essential oil is measured.

## 4 Reagents

Unless indicated otherwise, use only reagents of recognized analytical grade, and distilled or demineralized water or water of equivalent purity.

**4.1 Tartaric acid**, pulverized.

**4.2 Potassium hydroxide**, free from silica and alumina, 1 mol/l aqueous solution.

**4.3 Xylene**, free from impurities soluble in the potassium hydroxide solution (4.2).

## 5 Apparatus

Usual laboratory apparatus and, in particular, the following.

**5.1 One-mark pipettes**, of 2 ml and 10 ml capacities, conforming to class A of ISO 648.