
**Oils of orris rhizome (*Iris pallida* Lam. or
Iris germanica L.) — Determination of
irone content — Method using gas
chromatography on a capillary column**

Huile essentielle de rhizomes d'iris (Iris pallida Lam. ou Iris germanica L.) — Détermination de la teneur en irones — Méthode par chromatographie en phase gazeuse sur colonne capillaire



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Foreword

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ISO 18054 was prepared by Technical Committee ISO/TC 54, *Essential oils*.

Since the description of methods of analysis by gas chromatography is very long, it is considered useful to establish general methods giving detailed information on all the recurrent parameters, apparatus, products, methods, formulae, etc. and then standards with short details on the determination of specific constituents in essential oils, giving only those operating conditions specific to the pertinent determination.

Oils of orris rhizome (*Iris pallida* Lam. or *Iris germanica* L.) — Determination of irone content — Method using gas chromatography on a capillary column

1 Scope

This International Standard specifies a method for the determination of irone content in oils of orris¹⁾ rhizome (*Iris pallida* Lam. or *Iris germanica* L.) using gas chromatography on a capillary column.

2 Normative references

The following referenced documents are indispensable for the application 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 7609, *Essential oils — Analysis by gas chromatography on capillary columns — General method*

3 Principle

Gas phase chromatography on small quantities of orris essential oils is carried out on a capillary column, under the specified analytical conditions.

The irone content is determined by the internal standard method.

4 Reagents and products

4.1 Reference substance: synthetic irones of which the sum of the isomers is greater than 90 %, determined by chromatography under the test conditions.

4.2 Internal standard

Select either one of the following recently distilled substances, depending on whether a polar or apolar column is being used.

The internal standard selected shall elute as near as possible to the compound(s) to be determined, and shall not overlap any of the peaks corresponding to the constituents of the essential oil in question.

4.2.1 α -Ionone, having a minimum purity of 98 %, determined by gas chromatography under the test conditions, for determination on a polar column.

4.2.2 *trans*-Anethole, having a minimum purity of 98 %, determined by gas chromatography under the test conditions, for determination on an apolar column.

1) Commercially, this is usually called “orris butter”.