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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Essential oils - Determination of water content - Karl Fischer
method**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules for Standardization Documents" drafting.

This document is equivalent to ISO 11021.1999 "Determination of Moisture Content in Essential Oils by Karl Fischer Method".

The following editorial changes have been made to this document.

---Changed the footnote, change the footnote to note (see 6.3);

--- Increased note (see 9.3).

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document describes the Karl Fischer method for the determination of water content in essential oils.

This document applies to the determination of the moisture content of essential oils.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is

applicable to

this document.

Note. GB/T 6283-2008 Determination of moisture content in chemical products Karl Fischer method (general method) (ISO 760.1978, NEQ)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

Moisture content

The amount of water contained in the essential oil.

Note. Moisture content is expressed in mass fraction (%).

4 principles

The moisture present in the sample is absorbed by the dry methanol. The water reacts with the Karl Fischer reagent (without pyridine), while the Karl Fischer test

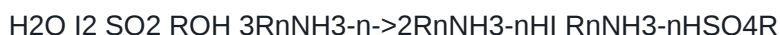
The reagents were previously calibrated by titration using a Karl Fischer apparatus.

Reaction endpoints were obtained electrometrically.

5 reactions

During the determination of moisture according to the Karl Fischer method, the moisture present in the sample, in the presence of an amine and an alcohol, reacts with iodine and dioxygen

Sulfurization reaction.



In the formula, R is an alkyl or alkoxy group.

The end point of the reaction is obtained by electrometry according to the remaining amount of iodine.

6 reagents

Use only approved analytical grade reagents and distilled water, or demineralized water, or water of equivalent purity.