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

GB/T 39014-2020

Essential oil of ginger (*Zingiber officinale* Roscoe)

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4.3 Relative density (20 degrees C/20 degrees C). 0.870~0.883.

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4.6 Characteristic component content (GC). See Table 1.

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to modify and adopt ISO 16928.2014 "Ginger Essential Oil".

The technical differences between this standard and ISO 16928.2014 and the reasons are as follows.

--- Deleted the relevant Indian ginger essential oil and in the chapters of ISO 16928.2014 Chapter 1, Chapter 3, Chapter 4 and Appendix A

The description and requirements of West African ginger essential oil are adapted to the technical conditions of our country.

--- Regarding normative references, this standard has made adjustments with technical differences to adapt to my country's technical conditions and adjustments.

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows.

* Replace ISO 279 with GB/T 11540 which is modified to adopt international standards;

* Replace ISO 280 with GB/T 14454.4 which is modified to adopt international standards;

* Replace ISO 592 with GB/T 14454.5 which is modified to adopt international standards;

* Added reference to GB/T 11538-2006, GB/T 14454.2;

* ISO /T R210, ISO /T R211, ISO 212, ISO 11024 are deleted.

--- Combine 4.1 and 4.2 of ISO 16928.2014 (see 4.1) to adapt to my country's technical conditions.

--- The relative density of 4.4 (20 degrees C/20 degrees C) of ISO 16928.2014 is revised from "0.873~0.885" to "0.870~0.883" (see

4.3) to adapt to the technical conditions of our country.

--- Deleted the text description and requirements in front of the 4.7 form of ISO 16928.2014 to adapt to my country's technical conditions.

--- Change 4.7 "Gas Chromatography Image" of ISO 16928.2014 to "Characteristic Component Content" (see 4.6) and "Ginger Essential Oil Representative

And the content range of characteristic components" (see Appendix B). That is, the 4 components in Table 1 of ISO 16928.2014 are selected as characteristic groups

The points are put into Table 1 (see Table 1), and the other content in ISO 16928.2014 Table 1 is amended to Appendix B, and amended as follows. alpha-Pinene

The content was changed from "1.5%~2.5%" to "0.1%~2.5%", and the content of curcumene was changed from "5.0%~11.0%" to "2.5%~

11.0%", the content of beta-bisabolene was changed from "2.5%~9.0%" to "2.5%~11.0%", and the content of sesquiphellandrene was changed from "10.0%~

14.0%" was revised to "10.0%~16.0%" to adapt to my country's technical conditions.

--- Deleted ISO 16928.2014 4.8 and Appendix B "flash point" content to adapt to my country's technical conditions.

---The fifth chapter sampling of ISO 16928.2014 was deleted to adapt to my country's technical conditions.

---Increase the verification of 5.1 color and the evaluation of 5.2 aroma to meet the application needs of our country.

---Chapter 6 inspection rules have been added to meet the application needs of our country.

---The specific regulations on signs, packaging, transportation, storage and shelf life in Chapter 7 have been supplemented to meet the application needs of our country.

This standard was proposed by the China National Light Industry Council.

This standard is under the jurisdiction of the National Standardization Technical Committee for Fragrance, Flavor and Cosmetics (SAC/TC257).

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1 Scope

This standard specifies the requirements, test methods, inspection rules and signs, packaging, transportation, storage and shelf life of ginger essential oil.

This standard applies to the analysis and evaluation of the quality of ginger essential oil.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 11538-2006 Essential Oil Capillary Column Gas Chromatographic Analysis General Method (ISO 7609.1985, IDT)

GB/T 11540 Determination of relative density of spices (GB/T 11540-2008, ISO 279..1998, MOD)

GB/T 14454.2 Spice aroma evaluation method

GB/T 14454.4 Determination of Refractive Index of Spices (GB/T 14454.4-2008, ISO 280.1998, MOD)

GB/T 14454.5 Determination of Optical Rotation of Spices (GB/T 14454.5-2008, ISO 592.1998, MOD)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Essential oil extracted from the rhizome of ginger by steam distillation.

4.6 Characteristic component content (GC). See Table 1.

Table 1 Content of characteristic components

Minimum content of characteristic components/% Maximum content/%

Camphene 4.5 10.0

Aroma curcumene 2.5 11.0

alpha-Zingene 29.0 40.0

beta-Bisabolene 2.5 11.0

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