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NY

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

NY/T 713-2003

Determination of vanillin in vanilla pods

香草兰豆荚中香兰素的测定

(English Translation)

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Foreword

This standard is modified to adopt ISO 5562-2:1999 "Vanilla Test Method" (English version).

This standard was redrafted in accordance with ISO 5562-2:1999. The standard chapter number and ISO standard 5562-2 are listed in Appendix A.

A checklist of the numbering of chapters in 1999.

Taking into account China's national conditions, this standard has been modified in the use of ISO 5562-2:1999. Technical differences have been incorporated into the text and marked with a vertical single line in the margins of the terms they refer to. These technical differences and their originals are given in Appendix B.

The list of factors is for reference.

Appendix A and Appendix B of this standard are informative annexes.

This standard was proposed by the Agricultural Bureau of the Ministry of Agriculture.

This standard was drafted. Ministry of Agriculture Tropical Agricultural Products Quality Supervision, Inspection and Testing Center.

1 Scope

Method for determination of vanillin in vanilla orchid.

This standard applies to the determination of vanillin in vanilla bean pods, cuts and powders. This standard does not apply to the fragrance of vanilla bean pod extract
Determination of lansin.

This standard describes three analytical methods for analyzing vanillin.

a) high performance liquid chromatography;

- b) ultraviolet spectrophotometry;
- c) Gas chromatography.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. All dated references, followed by all Modifications (not including errata content) or revisions do not apply to this standard, however, parties to agreements based on this standard are encouraged to study if it is possible to use the latest version of these files? For undated references, the latest edition applies to this standard.

GB/T 12806 laboratory glass instrument single standard line volumetric flask

3.1 Principle

The sample is extracted and diluted, the internal standard is added, separated by high performance liquid chromatography (HPLC), and then the vanillin is determined by a UV detector.

The content.

3.2 Reagents

Analyze pure reagent, distilled water, deionized water or water of equal purity.

3.2.1

Ethanol, 95% (volume fraction).

3.2.2

Methanol.

3.2.3

Phosphoric acid solution. hydrazine (H_3PO_4) = 0.01 mol/L.

3.2.4

Mobile phase. Mix with 25 parts of methanol (3.2.2) and 75 parts of dilute phosphoric acid (3.2.3). Filtered and degassed with membrane (3.3.3).

3.2.5

Vanillin (4-hydroxy-3-methoxybenzaldehyde) is a control standard with a purity greater than 99%.

3.2.6

Internal standard. acetylsalicylic acid, purity greater than 99%.

3.2.7

Vanillin stock solution. Weigh a certain amount of vanillin (3.2.5) to the nearest 0.001g. Formulated with mobile phase to a concentration of 1g/L Standard stock solution.

3.2.8 Working solution

Dilute the stock solution (3.2.7) with mobile phase (3.2.4) to obtain a working solution so that the concentration of the working solution meets the requirements in 3.2.8.1.

The concentration of vanillin working solution is 0.1g/L, which can be stored in the dark at 4 °C for no more than 10 days.

3.2.9 Internal standard solution

Acetylsalicylic acid (3.2.6) was dissolved in the mobile phase (3.2.4) to a concentration of 0.6 g/L, and accurate to 0.001 g when weighed.

Note: The internal standard concentration should be consistent with the vanillin concentration in the sample solution.

3.3 Instruments

3.3.1

Airtight grinder.