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

GB 28345-2012

**Food additives -- Cinnamyl acetate
(English Translation)**

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Table of Contents

- 1 Scope
- 2 Chemical name, molecular formula, structural formula and relative molecular mass
 - 2.1 Chemical name
 - 2.2 Molecular formula
 - 2.3 Structural formula
 - 2.4 Relative molecular mass
- 3 Technical requirements

1 Scope

This standard applies to acetic anhydride (or acetic acid) and cinnamyl alcohol as raw materials made of food additives cinnamate.

2.1 Chemical name

3-phenyl-2-propen-1-ol acetate

2.2 Molecular formula

C₁₁H₁₂O₂

2.4 Relative molecular mass

176.22 (according to 2007 International Relative Atomic Quality)

3 Technical requirements

3.1

sensory requirements. should be consistent with the provisions of Table 1.

Table 1 sensory requirements

The project requires a test method Colorless to pale yellow State liquid Place the sample in a colorimetric tube with visual inspection Observation of law Aroma sweet, creamy, floral GB/T 14454.2

3.2

Physical and chemical indicators. should be consistent with the provisions of Table 2.

Table 2 Physical and chemical indicators

Item Index Test Method Cinnamate content, w /% ≥ 98.0 Appendix A Acid value (in KOH)/(mg/g) ≤ 3.0 GB/T 14455.5 Refractive index (20 ° C) 1.539 ~ 1.544 GB/T 14454.4 Relative density (25 ° C/25 ° C) 1.047 ~ 1.054 GB/T 11540 Appendix A Determination of cinnamyl acetate content A.1 Instruments and equipment A.1.1 chromatograph. according to GB/T 11538-2006 in Chapter 5 of the provisions.

A.1.2 Column. Capillary column.

A.1.3 Detector. Hydrogen flame ionization detector.

A.2 Determination method Area normalization method. according to GB/T 11538-2006 10.4 determination of content.

A.3 repeatability and result representation According to GB/T 11538-2006 11.4 implementation of the provisions.

Food Additives Cinnamyl Cinnamate Typical Gas Chromatography (Area Normalization)
See Appendix B.

Appendix B

Food Additives Cinnamyl Cinnamate Typical Gas Chromatography (Area normalization method) B.1 Food Additives Cinnamyl Cinnamate Typical Gas Chromatography Food additives Glucose Cinnamate Typical gas chromatograms are shown in Figure B.1.

Figure B.1 Food Additives Cinnamyl Cinnamate Typical Gas Chromatography

B.2 Operating conditions B.2.1 Column. capillary column, length 30m, diameter 0.53mm.

B.2.2 Stationary phase. Dimethylpolysiloxane.

B.2.3 Film thickness. 1.5 μm .

B.2.4 Chromatographic furnace temperature. linear program temperature from 120 °C ~ 180 °C, the rate of 5 °C/min, and then from 180 °C ~ 250 °C, the rate of 10 °C/min, and finally at 250 °C constant temperature 10min.

B.2.5 Inlet temperature. 250 ° C.

B.2.6 Detector temperature. 260 ° C.

B.2.7 Detector. Hydrogen flame ionization detector.

B.2.8 Carrier gas. nitrogen.

B.2.9 Carrier gas flow rate. 1.1 mL/min.

B.2.10 Injection volume. 0.2 μL .

B.2.11 Split ratio. 1/40.