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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 28331-2012

National food safety standards -- Food additives -- Amyl butyrate

(English Translation)

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1 Scope

This standard applies to butyrate and amyl alcohol as raw materials prepared by the food additive amyl butyrate.

2.1 Chemical name

Butyrate

2.2 Molecular formula

C9H18O2

2.3 Structural formula

CH3 (CH2) 2COO (CH2) 4CH3

2.4 Relative molecular mass

158.23 (according to the 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 Color colorless to pale yellow State liquid Place the sample in a colorimetric tube with visual inspection Observation of law Aroma aroma, banana - like aroma GB/T 14454.2

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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 Butyrate content, w /% >= 98.0 Appendix A Acid value (in KOH)/(mg/g) <= 1.0 GB/T 14455.5 Refractive index (20 ° C) 1.409 ~ 1.414 GB/T 14454.4 Relative density (25 °C/25 °C) 0.863 ~ 0.866 GB/T 11540 Appendix A Determination of pentyl butyrate 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 Butyl Butyrate Typical Gas Chromatography (Area Normalization) See Appendix B.

Appendix B

Food Additives Butyl Butyrate Typical Gas Chromatography (Area normalization method) B.1 Food Additives Butyl Butyrate Typical Gas Chromatography Food additives Butyl butyrate Typical gas chromatograms are shown in Figure B.1.

Figure B.1 Food additive Butyl butyrate Typical gas chromatogram

B.2 Operating conditions B.2.1 Column. capillary column, length 30m, inner diameter 0.32mm.

B.2.2 Stationary phase. (5% phenyl) methylpolysiloxane.

B.2.3 Film thickness. 0.25 μm.

B.2.4 Chromatographic furnace temperature. 160 °C constant temperature.

B.2.5 Inlet temperature. 250 ° C.

B.2.6 Detector temperature. 250 ° C.

B.2.7 Detector. Hydrogen flame ionization detector.

B.2.8 Carrier gas. nitrogen.

B.2.9 Carrier gas flow rate. about 30 mL/min.

B.2.10 Injection volume. 0.2 μL.

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B.2.11 Split ratio. 1/75.

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