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**The food additive. 2-methylbutyrate
(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 2-methyl butyric acid and ethanol as raw materials prepared by the food additive 2-methyl butyrate.

2.1 Chemical name

2-methyl butyrate

2.2 Molecular formula

C₇H₁₄O₂

2.4 Relative molecular mass

130.19 (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 and colorless State liquid Place the sample in a colorimetric tube with visual inspection Observation of law Aroma fragrance - fragrant, apple - like aroma 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 2-methyl butyrate content, w /% ≥ 95.0 Appendix A Acid value (in KOH)/(mg/g) ≤ 2.0 GB/T 14455.5 Refractive index (20 ° C) 1.393 ~ 1.400 GB/T 14454.4 Relative density (25 ° C/25 ° C) 0.863 ~ 0.870 GB/T 11540 Appendix A Determination of ethyl ethyl 2 - methyl 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 2-Methyl Butyrate Typical Gas Chromatography (Area Normalization) See Appendix B.

Appendix B

Food additive 2 - methyl ethyl butyrate Typical gas chromatogram (Area normalization method) B.1 Food Additive 2-Butyl Butyrate Typical Gas Chromatography Food additives 2-methyl ethyl butyrate Typical gas chromatograms are shown in Figure B.1.

Figure B.1 Food additive 2-methyl ethyl 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. Polyethylene glycol.

B.2.3 Film thickness. 0.25 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 ~ 230 °C, the rate 10 °C/min, and finally at 230 °C for 10 min.

B.2.5 Inlet temperature. 240 °C.

B.2.6 Detector temperature. 240 °C.

B.2.7 Detector. Hydrogen flame ionization detector.

B.2.8 Carrier gas. nitrogen.

B.2.9 Carrier gas flow rate. 1.5 mL/min.

B.2.10 Injection volume. 0.2 μL .

B.2.11 Split ratio. 1/10.