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

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**Food additive -- Benzoate
(English Translation)**

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 - 2.1 Chemical name
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1 Scope

This standard applies to benzoic acid and methanol as raw materials prepared by the food additives methyl benzoate.

2.1 Chemical name

Benzoate

2.2 Molecular formula

C₈H₈O₂

2.4 Relative molecular mass

136.15 (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 irritant, strong floral, with a fruit fragrance 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 Benzoic acid methyl ester content, w /% ≥ 98.0 Appendix A Acid value (in KOH)/(mg/g) ≤ 1.0 GB/T 14455.5 Refractive index (20 ° C) 1.513 ~ 1.520 GB/T 14454.4 Relative density (25 °C/25 °C) 1.082 ~ 1.089 GB/T 11540 Appendix A Determination of methyl benzoate 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 Benzoic acid methyl ester Typical gas chromatograms (area normalization)
See Appendix B.

Appendix B

Food additives - Benzoic acid methyl esters - Typical gas chromatograms (Area normalization method) B.1 Food Additives Benzoic acid methyl esters Typical gas chromatograms Food additives Benzoic acid methyl ester Typical gas chromatograms are shown in Figure B.1.

Figure B.1 Food additive Benzoic acid methyl ester Typical gas chromatogram

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 100 °C ~ 150 °C, the rate of 3 °C/min, and then from 150 °C ~ 250 °C, the rate 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. 1.5 mL/min.

B.2.10 Injection volume. 0.2 μL .

B.2.11 Split ratio. 1/40.