

ICS 67.220.20
CCS C 54;X40



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

GB 28337-2012

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

Issued on: January 1, 1970

Implemented on: January 1, 1970

Issued by: Ministry of Health of the People's Republic of China

Table of Contents

- 1 Scope
- 2 Chemical name, molecular formula, structural formula and relative molecular mass
 - 2.1 Chemical Name
 - 2.3 Formula
 - 2.4 Molecular Weight
- 3 Technical requirements

1 Scope

This standard applies to the acetic anhydride and menthol for raw materials of food additives menthyl acetate. The products are divided dl- type and type l-Two sizes.

2.1 Chemical Name

Methyl-2- (1-methylethyl) cyclohexanol acetate Formula 2.2 C₁₂H₂₂O₂

2.4 Molecular Weight

198.31 (according to 2007 international relative atomic mass)

3 Technical requirements

3.1

Sensory requirements. shall meet the requirements in Table 1.

Table 1 Sensory requirements

Project requires test methods Colorless to pale yellow color Liquid state the sample was placed in a cuvette, visually Was observed Mild aroma of mint aroma GB/T 14454.2

3.2

Physical indicators. to comply with Table 2.

Table 2. Physical and chemical indicators

project

index

dl- type type l-

Testing method

Solubility (25 °C)

Full sample was dissolved in 1mL 6mL70% (volume fraction) ethanol;

Full sample was dissolved in 1mL 1mL80% (volume fraction) ethanol GB/T 14455.3

Menthyl acetate content, w /% $\geq$ 97.0 98.0 Appendix A Acid number (as KOH)/(mg/g) $\leq$

2.0 GB/T 14455.5 Refractive index (20 °C) 1.443 ~ 1.450 1.443 ~ 1.447 GB/T 14454.4

Relative density (25 °C/25 °C) 0.919 ~ 0.924 0.921 ~ 0.926 GB/T 11540 Optical rotation

(20 °C) $\geq$ - -69 ° GB/T 14454.5 Appendix A Determination of the content of menthyl acetate A.1 instruments and equipment A.1.1 Chromatography. in GB/T 11538-2006 specified in Chapter 5.

A.1.2 Column. capillary column.

A.1.3 Detector. hydrogen flame ionization detector.

A.2 Determination

Area normalization method. Press the GB/T 11538-2006 Determination 10.4.

A.3 repeatability and results are expressed the implementation of GB/T 11538-2006 provisions in 11.4.

Food additive menthyl acetate typical gas chromatogram (area normalization method) Appendix B.

Appendix B

Food additive menthyl acetate typical gas chromatogram (Area normalization method) B.1 food additives menthyl acetate typical gas chromatogram Food additives are typically gas chromatograph see FIG menthyl acetate B.1.

A typical gas chromatogram of FIG B.1 food additives menthyl acetate B.2 operating conditions B.2.1 Column. capillary column, length 30m, internal diameter 0.32mm.

B.2.2 stationary phase. (5% phenyl) methyl polysiloxane.

B.2.3 film thickness. 0.25 μ m.

B.2.4 chromatographic oven temperature. 220 °C thermostat.

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 30mL/min.

B.2.10 Injection volume. 0.2 μ L.

B.2.11 split ratio. 1/75.