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

GB 29972-2013

**Food additive -- Diethyl acetal
(English Translation)**

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1 Scope

This standard applies to acetaldehyde and ethanol as raw materials obtained food additive diethyl acetal.

2.1 Chemical Name

1,1-diethoxyethane

Formula 2.2

C₆H₁₄O₂

2.4 Relative molecular mass

118.18 (according to 2007 international relative atomic mass)

3.1 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 Sensory requirements

Project requires test methods the sample was placed in a colorless color colorimetric tube, were visually observed Liquid state Refreshing aroma, pleasant fruity green fragrance to GB/T 14454.2

3.2 Physical and Chemical Indicators

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

Table 2. Physical and chemical indicators

Item Index Test Method Acetaldehyde diethyl acetal, w /% ≥ 95.0 Appendix A Acid value (in dollars KOH)/(mg/g) ≤ 1.0 GB/T 14455.5 Refractive index (20 °C) 1.378 ~ 1.386 GB/T 14454.4 the relative density (25 °C/25 °C) 0.822 ~ 0.831 GB/T 11540 Appendix A Determination of Content of diethyl acetal A.1 instruments and equipment A.1.1 chromatograph. According to GB/T 11538-2006 provisions in Chapter 5.

A.1.2 Column. capillary column.

A.1.3 Detector. Hydrogen flame ionization detector.

A.2 Determination

Area normalization method. According to GB/T 11538-2006 10.4 Determination.

A.3 repeatability and results are shown According to GB/T 11538-2006 provisions in 11.4, shall comply with the requirements.

Food Additives diethyl acetal gas chromatograph (area normalization method) See Appendix B.

Appendix B

Food additive gas chromatogram diethyl acetal (Area normalization method) B.1 food additive gas chromatogram diethyl acetal

Figure B.1.

Figure B.1 food additive diethyl acetal gas chromatogram

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

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

B.2.3 film thickness. 0.25 μm .

B.2.4 chromatography oven temperature. 80 °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 pre-column pressure. 50 kPa.

B.2.10 Injection volume. 0.2 μL .

B.2.11 split ratio. 75?1.