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

GB 31625-2014

**National Food Safety Standard -- Food Additives -- Methyl
dihydrojasmonate**

食品安全国家标准 食品添加剂 二氢茉莉酮酸甲酯

(English Translation)

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1 Scope

This standard applies to the n-valeraldehyde, cyclopentanone, and dimethyl malonate as the starting material, or the n-valeraldehyde and cyclopentanone for raw materials of food Additives dihydro jasmonate.

2.1 Chemical Name

(2-pentyl-3-oxo-cyclopentyl) - acetic acid methyl ester Formula 2.2 C₁₃H₂₂O₃

2.4 Molecular Weight

226.32 (according to 2007 international relative atomic mass)

3.1 Sensory requirements

Shall comply with the requirements in Table 1.

Table 1 Sensory requirements

Project requires test methods Color colorless to pale yellow State oily liquid the sample was placed in a cuvette, were visually observed the aroma of flowers, jasmine-like aroma GB/T 14454.2

3.2 Physical and Chemical Indicators

Shall be in accordance with Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Dihydro jasmonate content (w) /% Trans ≥ 85 Cis $\geq 9 \sim 11$

Appendix A, Appendix B Acid number (as KOH)/(mg/g) ≤ 2.0 GB/T 14455.5 Refractive index (20 °C) 1.454 ~ 1.464 GB/T 14454.4 Relative density (20 °C/20 °C) 0.997 ~ 1.008 GB/T 11540 Appendix A Determination of Content dihydro jasmonate 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 11538-2006 carried out in accordance with the provisions of 11.4 GB/T , should meet the requirements.

Food additives dihydro jasmonate typical gas chromatogram (area normalization method) Appendix B.

Appendix B

Food additives dihydro jasmonate typical gas chromatogram (Area normalization method)

B.1 dihydro jasmonate food additives typical gas chromatogram Food additives dihydro jasmonate typical gas chromatogram shown in Figure B.1.

Description.

A --- trans-dihydro jasmonate.

B --- cis-dihydro jasmonate.

Figure B.1 dihydro jasmonate food additives typical gas chromatogram

B.2 operating conditions B.2.1 Column. capillary column, 30m x 0.32mm. Or other equivalent column.

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

B.2.3 film thickness. 0.25 μ m.

B.2.4 chromatographic oven temperature. program from 100 °C ~ 220 °C, a rate of 5 °C/min, and finally held at 6min 220 °C.

B.2.5 Inlet temperature. 250 °C.

B.2.6 Detector temperature. 280 °C.

B.2.7 Detector. hydrogen flame ionization detector.

B.2.8 Carrier gas. nitrogen purity of 99.99% or more.

B.2.9 carrier gas flow rate. 1.0mL/min.

B.2.10 Injection volume. 0.2 μ L.

B.2.11 split ratio. 1.80.