



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

GB 1886.281-2016

National Food Safety Standard -- Food Additives -- Citronellal

食品安全国家标准 食品添加剂 香茅醛

(English Translation)

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1 Scope

This standard applies to the lemon eucalyptus oil or citronella oil was isolated as the raw material, or added as a raw material in citral by chemical reaction of a food Agent citronellal.

2.1 Chemical Name

3,7-dimethyl-6-octenal Formula 2.2 C₁₀H₁₈O

2.4 Molecular Weight

154.25 (according to 2007 international relative atomic mass)

3.1 Sensory requirements

Sensory requirements shall comply with the requirements in Table 1.

Table 1 Sensory requirements

Project requires test methods Color status Colorless to pale yellow liquid the sample was placed in a cuvette, were visually observed Qiang Lie aroma of lemon, lemongrass, rose-like aroma 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 Citronellal content, w /% >= 85.0 (citronella oil or lemon eucalyptus

oil as raw materials) 96.0 (citral as raw materials) Appendix A Acid number (as KOH)/(mg/g) ≤ 3.0 GB/T 14455.5 Refractive index (20 °C) 1.446 ~ 1.456 GB/T 14454.4 Relative density (25 °C/25 °C) 0.845 ~ 0.860 GB/T 11540 Appendix A Determination of aldehyde content of citronella 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.

Sample Preparation. amount of this product was dissolved in 0.05mL 1mL95% (volume fraction) of ethanol, shake up. Direct measurement or sampling.

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 and citronellal GC operating conditions Referring to Appendix B, appendix C, Appendix D.

Appendix B

Citronella oil as a raw material of food additives citronellal GC operating conditions and FIG.

(Area normalization method) B.1 citronella oil as raw material in food additive gas chromatogram citronellal Citronella oil as a raw material of food additives citronellal gas chromatography is shown in Figure B.1.

Description.

1 --- citronellal;

2 --- linalool;

3 --- isopulegol.

Figure B.1 citronella oil as raw material in food additive gas chromatogram citronellal

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

B.2.2 stationary phase. nitro-terephthalic acid-modified polyethylene glycol.

B.2.3 film thickness. 0.5 μ m.

B.2.4 chromatographic oven temperature. 80 deg.] C from linear temperature programmed to 240 °C, a rate of 4 °C/min, and then at 240 deg.] C thermostat 10min.

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 Column Flow. 1mL/min.

B.2.10 Injection volume. 0.2μL.

B.2.11 split ratio. 120:1.

Appendix C

Lemon eucalyptus oil as a raw material of food additives citronellal GC operating conditions and FIG.

(Area normalization method) C.1 lemon eucalyptus oil as a raw material of food additives citronellal gas chromatogram Lemon eucalyptus oil as a raw material of food additives citronellal gas chromatography is shown in Figure C.1.

Description.

1 --- Ethanol (solvent);

2 --- citronellal;

3 --- isopulegol.

FIG C.1 lemon eucalyptus oil as a raw material of food additives citronellal gas chromatogram

C.2 operating conditions C.2.1 Column. capillary column, length 30m, internal diameter 0.32mm.

C.2.2 stationary phase. polyethylene glycol 20000.

C.2.3 film thickness. 0.25μm.

C.2.4 chromatographic oven temperature. 105 °C thermostat 1min, followed by a linear temperature programmed from 105 °C to 185 °C, a rate of 7.5 °C/min, and finally Temperature 185 deg.] C 15min.

C.2.5 Inlet temperature. 250 °C.

C.2.6 Detector temperature. 280 °C.

C.2.7 Detector. hydrogen flame ionization detector.

C.2.8 Carrier gas. nitrogen.

C.2.9 front column pressure. 36.5kPa.

C.2.10 injection volume. 1.0 μ L.

D.2.10 injection volume. 0.2 μ L.

D.2.11 split ratio. 120.1.