



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

GB 1886.138-2015

**National Food Safety Standard -- Food Additives - 2-acetyl
pyrazine**

食品安全国家标准 食品添加剂 2-乙酰基吡嗪

(English Translation)

Issued on: September 22, 2015

Implemented on: March 22, 2016

**Issued by: National Health and Family Planning Commission 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
 - 2.2 Molecular formula
 - 2.3 Structural formula
 - 2.4 Relative molecular mass
- 3 Technical requirements
 - 3.1 Sensory requirements
 - 3.2 Physical and chemical indicators

1 Scope

This standard applies to 2-cyanopyrazine or 2-ethyl pyrazine as raw materials by chemical reaction of the food additive 2 - acetyl pyrazine.

2.1 Chemical name

2-acetylpyrazine

2.2 Molecular formula

C₆H₆N₂O

2.4 Relative molecular mass

122.13 (according to the 2007 International Relative Atomic Quality)

3.1 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 sensory requirements

The project requires a test method Colorless to pale yellow State of crystallization Place the sample on a clean white paper and observe it visually Aroma with the aroma of popcorn

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 Solubility (25 ° C) 1 g Samples are fully dissolved in 20 mL 95% (volume fraction) Ethanol GB/T 14455.3 2-acetylpyrazine content, w /% $\geq$ 99.0 Appendix A Melting point/°C 76.0 ~ 78.0 GB/T 14457.3 Appendix A Determination of 2 - acetylpyrazine 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 Preparation of the sample. Weigh the sample 1g dissolved in 10mL 95% (volume fraction) of ethanol, shake back.

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 provisions.

Food additive 2-acetylpyrazine gas chromatogram (area normalization) See Appendix B.

Appendix B

Food Additive 2 - Acetylpyrazine Gas Chromatography (Area normalization method) B.1 Food Additive 2-Acetylpyrazine Gas Chromatography the food additive 2-acetylpyrazine gas chromatogram is shown in Figure B.1.

Description.

1 --- Ethanol (solvent);

2 --- 2-acetylpyrazine.

Figure B.1 Gas Chromatography of 2-Acetylpyrazine Food Additives

B.2 Operating conditions B.2.1 Column. capillary column, length 30m, inner diameter 0.25mm.

B.2.2 Stationary phase. Polyethylene glycol.

B.2.3 Film thickness. 0.25 μ m.

B.2.4 Chromatographic furnace temperature. linear program temperature from 150 °C ~.200 °C, the rate of 10 °C/min.

B.2.5 Inlet temperature. 240 ° C.

B.2.6 Detector temperature. 240 ° C.

B.2.7 Detector. Hydrogen flame ionization detector.

B.2.8 Carrier gas. nitrogen.

B.2.9 Pre-column pressure. 0.07 MPa.

B.2.10 Injection volume. 2 μ L.

B.2.11 Split ratio. 100. 1.