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

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**Food additive -- Furfuryl mercaptan (coffee aldehyde)
(English Translation)**

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Table of Contents

- 1 Scope
- 2 Chemical name, molecular formula, molecular mass and structural formula
 - 2.1 Chemical Name
 - 2.3 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 the alcohol and thiourea for raw materials of food additives furfuryl thiol (coffee aldehyde).

2.1 Chemical Name

2-furyl methyl mercaptan Formula 2.2 C₅H₆OS

2.4 Relative molecular mass

114.16 (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 Color colorless (long home easily become dark brown) than the sample is placed inside the color tube, were visually observed State oily liquid aroma Particularly strong diffusion of the atmosphere, it is diluted into Discovery Fast coffee-like aroma, caramel aroma - baking fragrant, sweet 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 Furfuryl thiol content, w /% ≥ 97.0 Appendix A Refractive index

(20 °C) 1.527 ~ 1.542 GB/T 14454.4 the relative density (25 °C/25 °C) 1.122 ~ 1.132 GB/T 11540 Appendix A Determination of furfuryl mercaptan content 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 furfuryl mercaptan gas chromatograph (area normalization method) See Appendix B.

Appendix B

Food additives furfuryl mercaptan gas chromatogram (Area normalization method) B.1 food additive gas chromatogram furfurylthiol

Figure B.1.

Figure B.1 food additives furfuryl mercaptan gas chromatogram

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

B.2.2 stationary phase. polyethylene glycol.

B.2.3 film thickness. 0.25 µm.

B.2.4 chromatography oven temperature. 130 °C constant temperature 10 min; then linear temperature program from 130 °C ~ 200 °C, the rate of 10 °C/min; most After 200 °C heated 20 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. 60 kPa.

B.2.10 Injection volume. about 0.2 µL.

B.2.11 split ratio. 100?1.