

ICS 71.100.60

CCS X 44



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

GB 1886.50-2015

Replacing GB 23487-2009

**National Food Safety Standard -- Food Additives --
Methyl-3-mercapto-furan**

食品安全国家标准 食品添加剂 2-甲基-3-巯基呋喃

(English Translation)

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2.1 Chemical Name

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Foreword

This standard replaces GB 23487-2009 "Food additive methyl-3-furan thiol." this standard compared with GB 23487-2009, the main changes are as follows.

--- Standard name was changed to "national food safety standards for food additives methyl-3-mercapto furan." National Food Safety Standard Food additive methyl-3-mercapto-furyl

1 Scope

This standard applies to 2-methyl furan and thioacetic acid as raw materials by a chemical reaction of a food additive methyl-3-mercapto-furan (Also known as 2-methyl-furan thiol).

2.1 Chemical Name

Methyl-3-mercapto-2-methyl-furan or furan thiol 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 Pale pink to pale orange color Liquid state the sample was

placed in a cuvette, were visually observed Aroma of barbecue 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 3-mercapto-2-methyl-furan content, w /% ≥ 97.0 Appendix A
Refractive index (20 °C) 1.5090 ~ 1.5300 GB/T 14454.4 the relative density (25 °C/25 °C)
1.100 ~ 1.150 GB/T 11540 Appendix A Determination of 3-mercapto-2-methyl-furan
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 Performed according to GB/T 11538-2006 11.4 provisions.

Food additive methyl-3-mercapto furan gas chromatograph (area normalization method)
See Appendix B.

Appendix B

Food additive methyl-3-mercapto-furyl gas chromatogram (Area normalization method)
Food additives B.1 3-mercapto-2-methyl-furan-gas chromatogram Food additive
methyl-3-mercapto-furan-by gas chromatography is shown in Figure B.1.

Explanation.

1 --- 3-mercapto-2-methyl furan;

2 --- bis (2-methyl-3-furyl) disulfide.

Figure B.1 food additive methyl-3-mercapto-furyl gas chromatogram

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

B.2.2 stationary phase. 5% phenyl, 95% dimethylpolysiloxane.

B.2.3 film thickness. 0.50 μ m.

B.2.4 chromatography oven temperature. 80 °C constant temperature 2min; then linear
temperature programmed from 80 °C ~ 220 °C, the rate of 20 °C/min; and finally 220 °C
constant temperature 10min.

B.2.5 Inlet temperature. 200 °C.

B.2.6 detector temperature. 220 °C.

B.2.7 Detector. Hydrogen flame ionization detector.

B.2.8 carrier gas. nitrogen.

B.2.9 carrier gas flow rate. 4mL/min.

B.2.10 Injection volume. about 0.2μL.

B.2.11 Split ratio. 100:1.

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