

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC

OF CHINA

中华人民共和国国家标准

GB 5009.24-2010

National food safety standard

Determination of aflatoxins M_1 and B_1 in foods

食品安全国家标准

食品中黄曲霉毒素 M1和 B1的测定

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Foreword

The Standard will replace the GB/T 5009.24-2003 " *Determination of aflatoxins* M_1 and B_1 in foods".

This standard replaces the following historical editions issued::

— GB 5009.24-1985. GB/T 5009.24-1996. GB/T 5009.24-2003.

National food safety standard Determination of aflatoxins M₁ and B₁ in foods

1 Scope

This standard specifies the determination method of aflatoxins M_1 and B_1 in foods such as cow milk and its products, cream and fresh pig tissue (liver, kidney, blood and lean meat).

This standard is applicable to the determination of aflatoxins M_1 and B_1 in foods such as cow milk and its products, cream and fresh pig tissue (liver, kidney, blood and lean meat).

2 **Principle**

After the sample being extracted, concentrated, and separated from the thin layer, aflatoxins M_1 and B_1 produce bluish violet fluorescent under ultraviolet light (wavelength of 365nm), and determine the content according to the lowest detectable amount of the fluorescent shown on the thin layer.

3 Reagents and materials

- 3.1 Methanol: Analytical pure.
- 3.2 Petroleum ether: Analytical pure.
- 3.3 Trichloromethane: Analytical pure.
- 3.4 Anhydrous sodium sulfate: Analytical pure.
- 3.5 Isopropyl alcohol: Analytical pure.
- 3.6 Silica gel G: For chromatography purpose.
- 3.7 Sodium chloride and sodium chloride solution (40g/L).
- 3.8 Sulfuric acid (1+3).
- 3.9 Glass sand: After acid treatment, clean and dry, about 20 mesh.

3.10 Standard solution of aflatoxins M_1 : Prepared with trichloromethane, per milliliter equivalent to containing 10µg aflatoxins M_1 standard solution. Use trichloromethane as reagent blank. The



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