

ICS 67.100
CCS C53



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

GB/T 22400-2008

**Rapid determination of melamine in raw milk - High
performance liquid chromatography method**

原料乳中三聚氰胺快速检测 液相色谱法

Issued on: October 15, 2008

Implemented on: October 15, 2008

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

Appendix A of this standard is an informative annex. The standard proposed by China Institute of Metrology. This standard by National Instrument Analysis and Testing Standardization Technical Committee. This standard drafting units. China Institute of Metrology. Participated in the drafting of this standard. Shaanxi People's Republic of China Exit Inspection and Quarantine, Chinese PLA General Hospital, Beijing production Product quality supervision, inspection, national geological experiments testing center, Beijing Institute of Technology, People's Republic of China Beijing Entry-Exit Inspection and Quarantine Bureau, Peking University, Beijing Institute of Nutrition source, Military Medical Sciences, Beijing University of Technology, Tsinghua University. The main drafters of this standard. Li Hongmei, Zhang together, Tang Hua, Heya Juan, all Chan, Li Xiuqin, Huang Ting, Su Fuhai, Dai Xinhua, Malcolm, LI Xiao-min, Song Dewei, Xu Bei. Rapid detection of melamine in raw milk Liquid chromatography

1 Scope

GB/T 22400-2008 is the Chinese national standard on rapid determination of melamine in raw milk - high performance liquid chromatography method, in the field of food technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 15 October 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 15 October 2008. Classification: ICS 67.100, CCS C53. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the liquid chromatography rapid detection of melamine in raw milk approach. This standard applies to raw milk, but also for additive-free liquid dairy products. The standard quantitative detection range of 0.30mg/kg ~ 100.0mg/kg, method detection

limit of 0.05mg/kg.

Note. When raw milk melamine content is more than 100.0mg/kg, specific methods of operation, see 6.2.2.3.2.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 6379.1 measurement methods and results of Accuracy (trueness and precision) - Part 1. General principles and definitions (GB/T 6379.1-2004, ISO 5725-1.1994, IDT)

GB/T 6379.2 measurement methods and results of Accuracy (trueness and precision) - Part 2. Determine the standard measurement method to repeat Of the basic methods of reproduction (GB/T 6379.2-2004, ISO 5725-2.1994, IDT)

GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD) Principle

3 Using acetonitrile as raw milk protein precipitating agent and melamine extraction agents, strong cation exchange column separation, high performance liquid chromatography Spectrum - ultraviolet detector or diode array detector and quantified by external standard.

4 Reagents and materials

Unless otherwise indicated, the reagents used were of analytical grade or above specifications, water GB/T 6682 a water regulations.

4.1 acetonitrile (CH_3CN). chromatography.

4.2 phosphoric acid (H_3PO_4).

4.3 potassium dihydrogen phosphate (KH_2PO_4).

4.4 Standard substance melamine ($\text{C}_3\text{H}_6\text{N}_6$). purity of greater than or equal to 99%.

4.5 melamine stock standard solution ($1.00 \times 10^3 \text{mg/L}$). Weigh 100mg (accurate to 0.1mg) melamine standard substance use After complete dissolution of water, 100mL flask to volume, mix, at 4 °C dark preservation, valid for one month.

4.6 Standard working solution. the use of the preparation.

4.6.1 standard solution A ($2.00 \times 10^2 \text{mg/L}$). accurate Pipette 20.0mL melamine stock standard solution (4.5) and placed in 100mL Volumetric flask, dilute with water to volume,

and mix.

4.6.2 standard solution B (0.50mg/L). accurate Pipette 0.25mL standard solution A (4.6.1), set 100mL flask with water Dilute to volume, and mix.

4.6.3 Table 1 pipette different volumes of each standard solution A (4.6.1) in the volumetric flask, dilute with water to volume, and mix. Table 2 points Standard solution B (4.6.2) Do not pipette different volumes in volumetric flask, dilute with water to volume, and mix.