

ICS 97.200.50

CCS Y57



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

GB/T 26193-2010

**Determination of the content of migration of
Sb,As,Ba,Cd,Cr,Pb,Hg and Se from toy material by ICP-MS**

玩具材料中可迁移元素锑、砷、钡、镉、铬、铅、汞、硒的测定 电感耦合等离子
体质谱法

Issued on: January 14, 2011

Implemented on: June 1, 2011

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

Table of Contents

- 1 Scope
- 2 Normative reference documents
- 3 Principle
- 4 Reagents and materials

Foreword

Appendix A to this standard is an informative appendix. This standard is proposed by the China Light Industry Federation. This standard by the National Toy Standardization Technical Committee (SAC/TC253) centralized. The drafting of this standard. Fujian Province, the Central Laboratory, the National Commodity Quality Supervision and Inspection Center, Beijing in the light of the certification center, wide East Exit Inspection and Quarantine Bureau Inspection and Quarantine Technology Center Toy Laboratory, Ningbo Entry-Exit Inspection and Quarantine Bureau Light Industry Product Testing Center, Shenzhen Measurement Quality Inspection Research Institute, Zhejiang Province Quality and Technical Supervision and Testing Institute. The main drafters of this standard. Zheng Xiaoyan, Lin Song, Huang Hongxia, Chen Dwen, Liu Chonghua, Ruan Jianmiao, Huang Yisheng, Chen Xiaozhen, Zhang Xia. Toy material can be transferred elements of antimony, arsenic, barium, cadmium, Determination of chromium, lead, mercury and selenium Inductively coupled plasma mass spectrometry WARNING - Personnel using this standard should have practical experience in formal laboratory work. This standard does not indicate all possible security questions question. It is the responsibility of the user to take appropriate safety and health measures and to ensure compliance with the conditions set forth in the relevant national regulations.

1 Scope

GB/T 26193-2010 is the Chinese national standard on determination of the content of migration of sb,as,ba,cd,cr,pb,hg and se from toy material by icp-ms, in the field of domestic and commercial equipment, entertainment, sport. 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 14 January 2011 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 1 June 2011. Classification: ICS 97.200.50, CCS Y57. 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 determination of traceable antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium in toy materials by inductively coupled plasma mass spectrometry. Measuring method. This standard applies to GB 6675 applicable to all the toys in the transferable elements of antimony, arsenic, barium, cadmium, chromium, lead, mercury, selenium Determination. The limits of detection of this standard method. the use of non-online added, antimony, arsenic, barium, cadmium, chromium, lead, mercury, selenium detection limit 0.25mg/kg; internal standard with online added, antimony, arsenic, barium, cadmium, chromium, lead, mercury, selenium detection limit of 0.05mg/kg.

2 Normative reference documents

The terms of the following documents are hereby incorporated by reference into this standard. Whichever is the date of the reference file, which is followed by all (Excluding corrigenda) or revisions do not apply to this standard, however, encourage the parties to reach an agreement under this standard Whether to use the latest version of these files. For undated references, the latest edition applies to this standard.

GB 6675 national toy safety technical specifications

GB/T 6682 Analytical laboratory water specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD)

3 Principle

After the sample is processed, the test solution is atomized by the carrier gas into the inductively coupled plasma torch flame, under the action of the high temperature of the plasma Product to solvate, atomize, ionize into the mass spectrometer, mass spectrometer according to the mass ratio of the material qualitative. For a certain mass-to-charge ratio The signal strength CPS (countpersecond) is proportional to the concentration of the element to be measured in the sample extract, and the sample is measured by measuring the CPS The content of each element to be measured in the extract.

4 Reagents and materials

4.1 used glassware are required to use 20% nitric acid soak overnight, washed repeatedly with water. All test water is GB/T 6682 Prescribed first class water.

4.2 nitric acid ($\rho_{20} = 1.42\text{g/mL}$). excellent grade pure.

4.3 nitric acid solution (volume fraction of 2%). take 20mL nitric acid (4.2), diluted with water to 1000mL.

4.4 hydrochloric acid solution. $c(\text{HCl}) = (0.070 \pm 0.005) \text{ mol/L}$.

4.5 Scandium, germanium, yttrium, indium, rhenium mixed standard solution (10.0mg/L), the use of standard solution (nitric acid or hydrochloric acid medium) prepared into the required concentration.

4.6 standard stock solution of antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium, the standard solution (nitric acid or hydrochloric acid medium) Concentration (antimony, arsenic, cadmium, chromium, lead and mercury concentrations were 100.0mg/L, barium and selenium concentrations were 1000mg/L).

4.7 antimony, arsenic, barium, cadmium, chromium, lead, mercury, selenium mixed standard liquid. 10.00mL of antimony, arsenic, cadmium, chromium, lead, mercury, barium and selenium (4.6), placed in a 100 mL volumetric flask, diluted with nitric acid solution (4.3) to a graduated volume and mixed. Prepared into the following concentrations