

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

**SN/T 3249.2-2012**

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**Imitation jewelry and accessory. Part 2: Determination of lead,  
cadmium, barium, antimony and mercury. Inductively coupled  
plasma optic emission spectrometry method**

**(English Translation)**

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### Foreword

SN/T 3249 "simulation jewelry" is divided into three parts.

- Part 1. lead, cadmium, barium content - Flame atomic absorption spectrometry;
- Part 2. Determination of the inductance of lead, cadmium, barium, antimony, mercury content coupled plasma atomic emission spectrometry;
- Part 3. antimony, mercury content by atomic fluorescence spectrometry.

This section SN/T Section 23249 of.

This section drafted in accordance with GB/T 1.1-2009 given rules.

Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This section proposed and managed by the National Certification and Accreditation Administration Committee.

### 1 Scope

SN/T 3249 provisions of this part of the simulation jewelry alloys, coatings, textiles, leather, polymers and other similar materials Lead (Pb), cadmium (Cd), barium (Ba), antimony (Sb), mercury (Hg) content by inductively coupled plasma atomic emission spectrometry (ICP-OES) measurement method.

This section applies to imitation jewelry alloys, coatings, textiles, leather, polymers and other similar materials of lead (Pb), cadmium (Cd), barium (Ba), antimony (Sb), determination of mercury (Hg) content of lead (Pb), antimony (Sb), mercury (Hg) lower limit of quantification of 15mg/kg, cadmium (Cd), barium (Ba) the lower limit of quantification of 10mg/kg.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

Laboratory use - Specification and test methods GB/T 6682 Analysis Determination of GB/T 22788-2008 toy surface coatings of the total lead content SN/T 2046-2008 Plastics and articles thereof measured inductance of lead, mercury, chromium, cadmium, barium, arsenic coupled plasma atomic emission light Spectroscopy

## 3 Method summary

After the sample concentrated acid complete digestion using ICP-OES analysis measured at a wavelength corresponding solution of lead, cadmium, barium, antimony, mercury elements content.

## 4 Reagents

Unless otherwise specified, use only pure reagents superior grade and in line with two water GB/T 6682 regulations or equivalent purity.

### 4.1

pure zinc. purity of not less than 99.99%, lead, cadmium, barium, antimony, mercury content of less than 0.0005%.

### 4.2

iron. purity of not less than 99.99%, lead, cadmium, barium, antimony, mercury content of less than 0.0005%.

### 4.3

copper. purity of not less than 99.99%, lead, cadmium, barium, antimony, mercury content of less than 0.0005%.

### 4.4

Concentrated nitric acid ( $\rho = 1.42\text{g/mL}$ , 65%).

### 4.5

Concentrated hydrochloric acid ( $\rho = 1.19\text{g/mL}$ , 37%).

### 4.6

nitric acid solution (volume fraction, 1090).

**4.7**

nitric acid solution (volume fraction, 595).

**4.8**

Hydrogen peroxide ( $\rho = 1.10\text{g/mL}$ , 30%).

**4.9**

Lead (1000mg/L) single-element standard solution with traceable certificate.

**4.10**

Cadmium (1000mg/L) single-element standard solution with traceable certificate.