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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3881-2014

Determination of arsenic, barium, cadmium, chromium, mercury, lead, selenium, stibium in packing materials for import and export - ICP-MS method

进出口包装材料中砷、钡、镉、铬、汞、铅、硒、锑的检测 ICP-MS法

(English Translation)

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Foreword

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

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

This standard was drafted. People's Republic of China Anhui CIQ.

1 Scope

This standard specifies the import and export of packaging materials arsenic (As), barium (Ba), cadmium (Cd), chromium (Cr), mercury (Hg), lead (Pb), selenium (Se) and antimony (Sb) inductively coupled plasma mass spectrometry (ICP-MS) spectrometry.

This standard applies to plastics, paper and wood packaging materials, packaging materials, import and export of arsenic, barium, cadmium, chromium, mercury, lead, selenium and antimony Determination.

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.

Preparation of standard solution of GB/T 602 Determination of impurities in chemical reagents Laboratory use specifications and test methods GB/T 6682 Analysis

3 Method summary

After microwave digestion sample injection inductively coupled plasma mass spectrometer, in a certain concentration range, analyte-containing ionic strength Proportional to the amount, compared with standard series quantitation.

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4 Reagents and materials

Unless otherwise stated, use only the gifted class pure reagents, test water should be consistent with GB/T 6682 provided a water requirements.

4.1
concentrated nitric acid. rho = 1.42g/mL, 65% (mass fraction).

4.2
nitric acid solution (2% volume fraction).

4.3
Hydrogen peroxide. rho = 1.10g/mL, 30% (mass fraction).

4.4
of arsenic, barium, cadmium, chromium, lead, antimony, selenium, mercury and gold elements stock standard solution (1000μg/mL). according to GB/T 602 preparation or direct use of Element Standards Certificate solution.

4.5
gold standard intermediate solution (10μg/mL). Imbibe 1mL gold standard stock solution (4.4) in 100mL flask, with nitric acid (4.2) Dilute to volume, and mix.

4.6
of arsenic, barium, cadmium, chromium, lead, antimony and selenium mixed standard solution. Pipette of arsenic, barium, cadmium, chromium, lead, antimony and selenium standard solution (4.4), nitric acid (4.2) progressively diluting the concentration of mixed standard series were. 1μg/L, 10μg/L, 20μg/L, 50μg/L, 100μg/L.

4.7
mercury standard solution. lessons mercury standard stock solution (4.4), (4.2) stepwise diluted with nitric acid to prepare a standard mercury concentration was followed by series is. 1μg/L, 2μg/L, 4μg/L, 8μg/L, 10μg/L, should be added during formulation intermediate gold standard solution (4.5), so that each concentration of mercury Gold standard working solution concentration of 100μg/L.

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