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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3516-2013

Determination of lead iron cadmium copper tin antimony in high-purity zinc. Inductively coupled plasma mass spectrometry

高纯锌中铅、铁、镉、铜、锡、锑的测定 电感耦合等离子体质谱法

(English Translation)

Issued on: March 1, 2013 **Implemented on: September 16, 2013**

Issued by: General Administration of Customs

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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 Guangdong CIQ.

1 Scope

This standard provides high purity zinc lead, iron, cadmium, copper, tin, antimony inductively coupled plasma mass spectrometry (ICP-MS) was measured.

This standard applies to lead, iron, cadmium, copper, tin, antimony in high purity zinc, the detection limit of the elements shown in Table 1.

Table 1 standard detection limit of the elements

Element Pb Fe Cd Cu Sn Sb the detection limit/(mg/kg) 0.001 0.5 0.002 0.02 0.001 0.001

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 6682-2008 Analysis

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3 Method summary

High purity zinc samples after digestion nitric acid pretreatment, using ICP-MS method for the determination of lead in high purity zinc, iron, cadmium, copper, tin and antimony.

4 Reagents and materials

In addition to this section use the gifted class pure reagents, test water should be consistent with a water GB/T 6682-2008 stipulated.

4.1
nitric acid (rho = 1.19g/mL).

4.2
nitric acid solution (11).

4.3
nitric acid solution (119).

4.4
lead, iron, cadmium, copper, tin, antimony standard stock solution. 1000μg/mL.

4.5
internal standard. 45Sc, 115In, 209Bi standard solution, 1μg/mL.

4.6
internal standard solution. an internal standard (4.5) diluted 100 times to give 10μg/L.

4.7
purity argon gas (purity greater than 99.999%).

5 Apparatus

5.1
Inductively Coupled Plasma Mass Spectrometer. Instrument parameters and conditions of use, see Appendix A.

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