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

SN/T 3511-2013

**Determination of mercury in minerals. General rules of direct
mercury determining with solid injection method**

(English Translation)

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Foreword

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

The standard reference to the United States Environmental Protection Agency (EPA) method 7473MERCURYINSOLIDSANDSOLUTIONSBY THERMALDECOMPOSITION, AMALGAMATION, ANDATOMICABSORPTIONSPECTRO-PHOTOMETRY thermal decomposition amalgamation AAS solid and liquid mercury (in English).

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

This standard was drafted. People's Republic of China Zhuhai Entry-Exit Inspection and Quarantine Bureau, People's Republic of China Entry-Exit Inspection and Zhongshan Quarantine Bureau.

1 Scope

This standard specifies the determination of mineral mercury, direct solid sampling general rules.

This standard applies to the total mercury content of mineral solids injection directly measured.

Note 1: This method can be used as a guide universal testing method steps or analysis techniques, in order to facilitate the preparation of detailed laboratory scale based on its internal Normalized operating procedures (SOP) or special applications. Unless specified parameters need to use the method, the method performance data for reference only and is not intended as a real Accredited laboratory quality control absolute limit use.

Under special circumstances, when minerals due to a combination of mercury and certain silicates, or other substrates, while unable to thermal decomposition, chemical digestion, etc. need a sample pre-treatment side. Note 2 Method A sample was dissolved and then measured to confirm.

Note 3: The high concentrations of mineral elemental sulfur and a reduced state will affect the test

instrument, should reduce the amount of the specimen or sample digestion before testing.

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 GB/T 2007.2 bulk minerals sampling and sample preparation General manual sample preparation method GB/T 2007.6 bulk minerals sampling and sample preparation General Determination of Water heat drying method Laboratory use specifications and test methods GB/T 6682 Analysis

3 Terms and Definitions

The following terms and definitions apply to this document.

Thermal decomposition Heating by convection and conduction, partial or complete decomposition of sample, the volatile components such as water, carbon dioxide, organic compounds Elements released in the form of oxides or complex compounds and gaseous.

Amalgamation Metallic mercury and gold alloy formation process.

Amalgamator the distribution of gold powder on a support having a large surface area to produce a mercury vapor amalgamation tubular device.