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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 14353.7-2010

Replacing GB/T 14353.7-1993

Methods for chemical analysis of copper ores, lead ores and zinc ores - Part 7: Determination of arsenic content

铜矿石、铅矿石和锌矿石化学分析方法 第7部分：砷量测定

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Table of Contents

Foreword

GB/T 14353 "copper ores lead ores and zinc ores chemical analysis method" is divided into 18 parts.

--- Part 1. Determination of copper content;

--- Part 2. Determination of lead content;

--- Part 3. Determination of the amount of zinc;

--- Part 4. Determination of cadmium content;

--- Part 5. Determination of nickel content;

--- Part 6. Determination of cobalt content;

--- Part 7. Determination of arsenic content;

--- Part 8. Determination of the amount of bismuth;

--- Part 9. Determination of molybdenum;

--- Part 10. Determination of tungsten;

--- Part 11. determination of silver;

--- Part 12. Determination of sulfur content;

--- Part 13. the amount of gallium, indium and thallium amount for determination;

1 Scope

GB/T 14353.7-2010 is the Chinese national standard on methods for chemical analysis of copper ores, lead ores and zinc ores - part 7: determination of arsenic content, in the field of mining and minerals. 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 10 November 2010 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 February 2011. Classification: ICS 73.060, CCS D40. 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.

GB/T 14353 in this section specifies the method for determination of copper ores lead ores and zinc ores of arsenic content. This section applies to copper ores, lead ores and zinc ores - Determination of arsenic content. Measuring range. 5μg/g ~ 1500μg/g arsenic.

2 Normative references

The following documents contain provisions which, through reference

GB/T 14353 in this section constitute provisions of this part of the dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section. Laboratory use specifications and test methods GB/T 6682 Analysis

GB/T 14505 method for chemical analysis of rocks and ores General rules and regulations Principle

3 Sample with nitric acid, sulfuric acid decomposition in sulfuric acid medium, in the presence of potassium iodide, stannous chloride with the pentavalent arsenic to trivalent arsenic reduction, reuse Arsenic-free zinc particles is reduced to trivalent arsenic gaseous arsine. Overflow arsine, triethanolamine containing diethyl dithiocarbamate Silver (Ag-DDTC) of the chloroform solution absorption. Diethyl dithiocarbamate silver silver ions are reduced to red-brown colloidal silver, in points A photometer to measure the absorbance at the wavelength of 530nm at the indirect determination of arsenic content.

4 Reagents

Unless otherwise stated in this section are consistent with the use of analytical reagent and GB/T 6682 analytical laboratory use in the analysis.

4.1 arsenic-free zinc particles (diameter of 2mm ~ 3mm).

4.3 Triethanolamine (rho1.12g/mL).

4.4 hydrochloride (rho1.19g/mL). Nitrate 4.5 (rho1.42g/mL).

4.6 sulfuric acid (11), Warning. improper dilution will produce dangerous

4.7 Sodium hydroxide solution (100g/L). Weigh 10g of sodium hydroxide dissolved in 100mL of water, shake well.

4.8 Lead acetate solution (100g/L). Weigh 10g lead acetate [Pb (CH3COO) 2 · 3H2O], dissolved in 100mL of water, shake well.

4.9 potassium iodide solution (300g/L). Weigh 30g of potassium iodide was dissolved in 100mL of pure water, shake well. Using now.