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

GB/T 19267.5-2008

Replacing GB/T 19267.5-2003

**Physical and chemical examination of trace evidence in
forensic sciences - Part 5: Atomic absorption spectrometry**

刑事技术微量物证的理化检验 第5部分：原子吸收光谱法

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions

Foreword

GB/T 19267 "criminal and chemical examination of trace evidence" is divided into 12 parts.

- Part 1. Infrared absorption spectrometry;
- Part 2. UV - visible absorption spectroscopy;
- Part 3. Molecular Fluorescence Spectroscopy;
- Part 4. atomic emission spectrometry;
- Part 5. Atomic absorption spectrometry;
- Part 6. Scanning electron microscopy/X-ray spectroscopy;
- Part 7. Gas chromatography - mass spectrometry;
- Part 8. microscopic spectrophotometry;
- Part 9. thin layer chromatography;
- Part 10. gas chromatography;
- Part 11. High performance liquid chromatography;
- Part 12. Thermal Analysis. This section GB/T Part of 519,267. This Part replaces GB/T 19267.5-2003 "criminal and chemical examination of trace evidence in Part 5. atomic absorption spectrometry." Section compared with the GB/T 19267.5-2003 The main changes are as follows:

--- In the "principles" section describes the main qualitative and quantitative analysis based on this method, remove the characteristics of the analysis method of presentation (See Chapter 4 of this section and GB/T 19267.5-2003's);

1 Scope

GB/T 19267.5-2008 is the Chinese national standard on physical and chemical examination of trace evidence in forensic sciences - part 5:atomic absorption spectrometry, in the field of environment and health protection, safety. 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 14 August 2008 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 March 2009. Classification: ICS 13.310, CCS A92. 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 19267 provisions of this part of the test method of atomic absorption spectrometry. This section applies to the technical field of trace evidence in criminal physical and chemical testing, may also refer to other areas of use.

2 Normative references

The following documents contain provisions which, through reference

GB/T 19267 in this section, constitute provisions of this part. For 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.

GB/T 4470 flame emission, atomic absorption and atomic fluorescence spectrometry term (GB/T 4470-1998, idt ISO 6955. 1982)

GB/T 13966 Analytical Instruments terms

GB/T 14666 analytical chemistry terms

3 Terms and Definitions

GB/T 4470, GB/T 13966, GB/T 14666 and established in the following terms and definitions apply to this section.

3.1 The method of measuring the evaporation of the sample gas in the ground state atoms of element characteristics measured radiation absorption of light to measure the chemical elements based on atomic absorption Close spectrometry.

3.2 Belonging to one kind of glow discharge lamp having a cathode comprising a cylindrical hollow body or a metal alloy or more elements, the operation can shade Element atoms sputtered vapor generated a particularly narrow emission characteristic lines.

3.3 Using air - acetylene flame, nitrous oxide - acetylene flame or other reducing atmosphere generated by the combustion flame temperature and flame mist Analysis of the

samples after the conversion into atomic vapor for atomic absorption analysis apparatus.

3.4 By a low voltage, high current control heating rate of the graphite tube, temperature, heating time, to sample molecules into atoms in the graphite tube steam Gas for atomic absorption analysis apparatus.

3.5 Characteristics of each element of the absorption lines are more than one, select high sensitivity without the other elements of the spectrum as the analysis of interference lines, this Elements for the analysis wavelength line wavelength.