

ICS 71.040.40

CCS G 04



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

GB/T 32565-2016

**Surface chemical analysis -- Recording and reporting data in
Auger electron spectroscopy (AES)**

表面化学分析 俄歇电子能谱 (AES) 数据记录与报告的规范要求

(English Translation)

Issued on: February 24, 2016

Implemented on: January 1, 2017

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

Table of Contents

Preface
Introduction
1 Scope
2 Normative reference document
3 Terms and definitions
4 Symbols and abbreviations
5 Record and report the scope of
6 Send data to the user
Appendix A (informative) Spectrum Example
Reference

Foreword

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

This standard uses the translation method equivalent to ISO 16242.:2011 "Surface Chemistry Analysis Auger Electron Spectroscopy (AES) Data Record and Report the specification requirements ".

And the normative reference in this standard international documents are consistent with the relationship between China's documents are as follows.

GB/T 29732-2013 Surface Chemistry Analysis Medium Resolution Auger Electron Spectrometer Elemental Analysis Energy Standard Calibration (ISO 17973.:2002, IDT);

GB/T 29731-2013 Surface Chemistry Analysis High Resolution Auger Electron Spectrometer Elemental and Chemical State Analysis Energy Labels (ISO 17974.:2002, IDT);

Surface chemistry analysis vocabulary (ISO 18115.:2001, IDT) GB/T 22461-2008.

This standard is proposed by the National Microparraph Analysis Standardization Technical Committee (SAC/TC38).

This standard is responsible for the drafting unit. Department of Chemistry, Tsinghua University, School of Chemistry and Chemical Engineering, Xiamen University.

The drafters of this standard. Cen Danxia, Yao Wenqing, Wang Shuiju, Tang Dingliang, Li Zhanping, Liu Fen.

Introduction

Auger electron spectroscopy can be used for a wide range of experimental types of experimental and conventional surface analysis. The results of the analysis should be written in standard format Recorded in a format that is sufficiently detailed to make the experiment repeatable. The format needs to meet the reporting requirements.

The report should include experimental conditions and data acquisition parameters to assess the quality of the data.

Surface Chemistry Analysis Auger Electron Spectroscopy (AES) Data recording and reporting requirements

1 Scope

This standard specifies the minimum requirements for the analyst to report the information immediately after analyzing the sample using Auger Electron Spectroscopy (AES), including the original Record and analyze the recorded information.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

ISO 17973 Surface chemistry analysis Medium resolution Auger electron spectrometer Elemental analysis Energy standard calibration (Surface chemicalanalysis-Medium-resolutionAugerelectronspectrometers-Calibration ofenergyscalesfor elementalanalysis ISO 17974 Surface Chemistry Analysis High Resolution Auger Electron Spectrometer Element and Chemical State Analysis Energy Standard Calibration (Surface chemicalanalysis-High-resolutionAugerelectronspectrometers-Calibrationofenergyscalesfor ele-mentalandchemical-stateanalysis ISO 18115-1 Surface Chemical Analysis Vocabulary (Surfacechemicalanalysis-Vocabulary-Part 1. Generalterms andtermsusedinspectroscopy)

3 Terms and definitions

ISO 18115-1 and the following terms and definitions apply to this document.

Outside the system ex-situ Analyze the outside of the system.

System in-situ

Analysis system inside.

4 Symbols and abbreviations

The following symbols and abbreviations apply to this document.

AES Auger electron spectroscopy KLL is an abbreviation for Auger Spectrum. The line is due to the presence of an electron vacancy in the shell of the atomic K, and electrons transition from the L shell to the vacancy of the K shell and at the same time from the L shell to produce the Auger electrons generated.

KVV is an abbreviation for Auger Spectrum. The line is due to the presence of an electron vacancy in the atomic K shell, the electrons from the valence band ("V") Jump to the K shell of the vacancy and at the same time from the valence band generated by the Auger electrons generated.

The abbreviations used for L and M and other Auger series are similar.