

Australian Standard<sup>®</sup>

**Surface chemical analysis—X-ray  
photoelectron spectroscopy—  
Description of selected instrumental  
performance parameters**

**STANDARDS**  
Australia



This Australian Standard® was prepared by Committee CH-016, Spectroscopy. It was approved on behalf of the Council of Standards Australia on 20 September 2006. This Standard was published on 20 October 2006.

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## PREFACE

This Standard was prepared by the Standards Australia Committee CH-016, Spectroscopy. This Standard is identical with, and has been reproduced from, ISO 15470:2004, *Surface chemical analysis—X-ray photoelectron spectroscopy—Description of selected instrumental performance parameters*.

The objective of this Standard is to provide a basic list of selected performance parameters to enable all X-ray photoelectron spectrometers to be described in a common manner.

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<i>Reference to International Standard</i>	<i>Australian Standard</i>
ISO	AS ISO
18115     Surface chemical analysis— Vocabulary	18115     Surface chemical analysis— Vocabulary

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## INTRODUCTION

X-ray photoelectron spectrometers are produced by many manufacturers throughout the world. While the basic principle of the XPS analytical method in each instrument is the same, the specific designs of the instruments and the way that performance specifications are provided differ widely. As a result, it is often difficult to compare the performance of instruments from one manufacturer with those from another. This International Standard provides a basic list of items devised to enable all X-ray photoelectron spectrometers to be described in a common manner. This International Standard is not intended to replace the manufacturer's specification, which may extend to 30 or more pages. It is intended that, where certain items are defined in that specification, there is an agreed and defined meaning to that item.

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AUSTRALIAN STANDARD

# Surface chemical analysis — X-ray photoelectron spectroscopy — Description of selected instrumental performance parameters

## 1 Scope

This International Standard describes the way in which specific aspects of the performance of an X-ray photoelectron spectrometer shall be described.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 18115, *Surface chemical analysis — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18115 apply.

## 4 Symbols and abbreviations

FWHM full width at half maximum

XPS X-ray photoelectron spectroscopy

## 5 Description of selected instrumental performance parameters

### 5.1 Method of analysis

A short description of the methods used to obtain information from the sample shall be given, and the availability (as an option) of other analytical techniques in the system under consideration shall be stated.

### 5.2 Samples

The size and shape of samples that may be analysed with the instrument performing to specification shall be given. If the size or shape is restricted for particular modes of analysis, e.g. angle-resolved measurements, measurements for insulators, etc., this shall be specified.