

ISO 18118:2015-04 (E)

Surface chemical analysis - Auger electron spectroscopy and X-ray photoelectron spectroscopy - Guide to the use of experimentally determined relative sensitivity factors for the quantitative analysis of homogeneous materials

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	2
5 General information	3
6 Measurement conditions	4
6.1 General	4
6.2 Excitation source	4
6.3 Energy resolution	4
6.4 Energy step and scan rate	4
6.5 Signal intensity	4
6.6 Gain and time constant (for AES instruments with analogue detection systems)	4
6.7 Modulation to generate a derivative spectrum	4
7 Data-analysis procedures	5
8 Intensity-energy response function	5
9 Determination of chemical composition using relative sensitivity factors	5
9.1 Calculation of chemical composition	5
9.1.1 General	5
9.1.2 Composition determined from elemental relative sensitivity factors	6
9.1.3 Composition determined from atomic relative sensitivity factors or average matrix relative sensitivity factors	6
9.2 Uncertainties in calculated compositions	6
Annex A (normative) Formulae for relative sensitivity factors	7
Annex B (informative) Information on uncertainty of the analytical results	20
Bibliography	23