

ISO 18118:2024-02 (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	4
5	General information	5
6	Measurement conditions	6
6.1	General	6
6.2	Excitation source	7
6.3	Energy resolution	7
6.4	Energy step and scan rate	7
6.5	Signal intensity	7
6.6	Gain and time constant (for AES instruments with analogue detection systems)	7
6.7	Modulation to generate a derivative spectrum	7
7	Data-analysis procedures	7
8	Spectrometer response function	8
9	Determination of chemical composition using relative sensitivity factors	8
9.1	Calculation of chemical composition	8
9.1.1	General	8
9.1.2	Composition determined from elemental relative sensitivity factors	9
9.1.3	Composition determined from atomic relative sensitivity factors or average matrix relative sensitivity factors	9
9.2	Uncertainties in calculated compositions	9
Annex A (informative) Formulae for relative sensitivity factors		10
Annex B (informative) Information on uncertainty of the analytical results		16
Bibliography		19