

ISO 5861:2024-06 (E)

Surface chemical analysis - X-ray photoelectron spectroscopy - Method of intensity calibration for quartz-crystal monochromated Al K α XPS instruments

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols and abbreviated terms	1
5	Requirements	3
5.1	General	3
5.2	X-ray photoelectron spectrometer	3
5.2.1	Operating requirements	3
5.2.2	Instrument geometry	3
5.3	Reference material	4
5.4	Frequency of intensity scale calibration	5
6	Data acquisition	5
6.1	General	5
6.2	Preparation	5
6.2.1	XPS Instrument	5
6.2.2	LDPE reference sample	5
6.2.3	X-ray source and electron flood source	5
6.2.4	Noise spectrum	6
6.3	LDPE intensity measurement	6
6.3.1	Spectra	6
6.3.2	Data preparation	7
7	Relative response	9
7.1	General	9
7.2	Calculation of relative response, T	9
7.2.1	Relative throughput inspection	9
7.2.2	Extension of throughput data	9
7.2.3	Relative response determination	11
7.2.4	Error in relative response	12
7.3	Use of relative response, T	13
7.3.1	Correction of survey spectra	13
7.3.2	Use in quantification	13
Annex A (informative)	Flow charts	14
Annex B (normative)	Table of reference kinetic energies and intensities for LDPE	17
Annex C (informative)	A fitting curve for relative response	19
Annex D (informative)	Examples	20
Bibliography		27