

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, <i>T</i>	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, <i>T</i>	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