

ISO 17862:2022-09 (E)

Surface chemical analysis - Secondary ion mass spectrometry - Linearity of intensity scale in single ion counting time-of-flight mass analysers

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms, definitions, symbols and abbreviated terms	1
3.1	Terms and definitions	1
3.2	Symbols	1
3.3	Abbreviated terms	3
4	Outline of method	3
5	Procedure for evaluating the intensity linearity	5
5.1	Obtaining the reference sample	5
5.2	Preparation for mounting the sample	5
5.3	Mounting the sample	5
5.4	Operating the instrument	5
5.4.1	General	5
5.4.2	Setting the ion beam	6
5.4.3	Setting the mass analyser	6
5.5	Acquiring the data	7
5.6	Checking the linearity	10
5.6.1	The relation of corrected and measured counts	10
5.6.2	The measured ratios for isotopes	11
5.6.3	Fitting the data	12
5.6.4	Assessing the linear region without and with any instrumental intensity correction	12
5.6.5	Correcting the intensity and checking the validity of any instrumental correction	13
6	Interval for repeat measurements	15
Annex A (normative)	Computation of raster size, ion beam current, number of frames for analysis and counts per pulse	16
Bibliography		18