

ISO/TS 22933:2022-04 (E)

Surface chemical analysis - Secondary ion mass spectrometry - Method for the measurement of mass resolution in SIMS

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	Definitions of mass resolution based on peak separation of two mass peaks	2
5.1	General	2
5.2	X% valley	2
5.3	X% peak width M (X%) or R (X%) = $M/M (X\%)$	3
5.4	X% peak tail interference	4
5.5	Summary	4
6	Procedure to determine the mass resolution	5
6.1	General	5
6.2	Removing contamination on sample surface	5
6.3	Obtaining spectrum peak	5
6.4	Determination of mass resolution	5
7	Mass resolution comparison between different type of SIMS	5
7.1	Mass resolution comparison between M-SIMS and TOF-SIMS	5
7.2	Mass resolution comparison between TOF-SIMS and FTICR-SIMS	7
7.3	Mass resolution of flat top mass peak	8
8	Conclusion	9
Annex A (informative)	Examples of mass resolution measured by Q-SIMS, TOF-SIMS, Magnetic-SIMS, Orbitrap-SIMS and FTICR-SIMS	10
Bibliography		15