ISO 12406:2010-11 (E)

Surface chemical analysis - Secondary-ion mass spectrometry - Method for depth profiling of arsenic in silicon

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 Principle 2

6 Reference materials 2
6.1 Reference materials for calibration of relative-sensitivity factors 2
6.2 Reference materials for calibration of depth scale 2

7 Apparatus 2
7.1 Secondary-ion mass spectrometer 2
7.2 Stylus profilometer 2
7.3 Optical interferometer 3

8 Specimen 3

9 Procedures 3
9.1 Adjustment of secondary-ion mass spectrometer 3
9.2 Optimizing the secondary-ion mass spectrometer settings 3
9.3 Specimen introduction 4
9.4 Detected ions 4
9.5 Measurement of test specimen 4
9.6 Calibration 5

10 Expression of results 6

11 Test report 7

Annex A (informative) Report of round robin test of depth profiling of arsenic in silicon 8

Annex B (normative) Procedures for the depth profiling of NIST SRM 2134 11

Bibliography 13