ISO/TS 15338:2009-04 (E)

Surface chemical analysis - Glow discharge mass spectrometry (GD-MS) - Introduction to use

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Safety 2
4.1 Use of high-voltage power supply and connection of the instrument 2
4.2 Use and storage of compressed-gas cylinders 2
4.3 Handling of cryogenic materials 2

5 Principle 2

6 Materials 2

7 Apparatus 3
7.1 Ion source 3
7.2 Mass analyser 5
7.3 Detector system 8
7.4 Vacuum system 9
7.5 Data acquisition and control 9

8 Samples and sample preparation 9
8.1 General 9
8.2 Sample type 10
8.3 Sample geometry 10
8.4 Sample preparation for bulk analysis 10
8.5 Sample preparation for depth profiling 11

9 Measurement procedures 11
9.1 System precautions 11
9.2 Selection of discharge parameters and isotopes 12
9.3 Presputtering 12
9.4 Optimizing the ion current 12
9.5 Analytical set-up 13
9.6 Data analysis 13
9.7 Depth profile analysis 14
9.8 Instrument performance 14
9.9 Analysis 14

10 Test report 23

Bibliography 26