ISO 14595:2023-06 (E)

Microbeam analysis - Electron probe microanalysis - Guidelines for the specification of certified reference materials (CRMs)

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Preparation of the research material 2
4.1 Selection of material 2
4.2 Preliminary inspection of the material 2

5 Heterogeneity of material 2
5.1 Sample preparation 2
5.2 Sample size 3
5.3 Test conditions 3
5.4 Test procedure 4
5.5 Statistical evaluation of data 4
5.6 Criteria for certification 9

6 Stability of the research material 9

7 Determination of the chemical composition of CRMs 9
7.1 Classification of CRMs 9
7.2 Determination of classification of CRMs 9
7.3 Selection of analytical method 10
7.4 CRM material tested by EPMA only 10

8 CRM specimen preparation, packaging, transportation, and storage 10
8.1 Preparation of CRM specimen 10
8.2 Packaging 10
8.3 Storage 10
8.4 Repolishing and recoating of CRMs 10

9 CRM certificate 11
9.1 Classification of CRM 11
9.2 of the certificate 11

Annex A (informative) Spreadsheet instructions for the statistical evaluation of heterogeneity data 12

Annex B (normative) Suggested classification of CRMs for EPMA 15

Annex C (informative) Example of a certificate for EPMA CRMs 16

Bibliography 17