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Nota di contenuto	Reference Materials for Chemical Analysis; Foreword; Contents; Preface; 1 Introduction; 1.1 Historical; 1.1.1 Early Developments; 1.1.2 Growth and Maturity; 1.1.3 Milestones and The Future; 1.2 The Theoretical Basis; 1.3 Technical Requirements; 1.4 References; 2 From Planning to Production; 2.1 Material Collection and Preparation; 2.1.1 Introduction; 2.1.2 General Collection and Preparation Principles; 2.1.3 Specific Examples; 2.1.4 Concluding Remarks and Recommendations; 2.2 Control of Material Properties; 2.2.1 Particle Size and Particle Size Distribution; 2.2.2 Homogeneity/Heterogeneity 2.2.3 Humidity (Water Content)2.2.4 Degradation Studies/Shelf Life; 2.3 References; 3 Certification; 3.1 Certification Philosophy of RM Producers; 3.1.1 Introduction; 3.1.2 Approaches to the Characterization/Certification of Reference Materials; 3.1.2.1 General Principles of Certification; 3.1.2.2 Classification of Characterization/Certification Schemes; 3.1.2.3 Specific Examples;

3.1.3 Conclusions; 3.2 Certification of Elements; 3.2.1 Methods Used for the Certification of RMs for Elements; 3.2.2 Multi-Method Elemental RM Certification; 3.2.2.1 River Sediment; 3.2.2.2 Lichen
3.2.2.3 Examples of Selected RMs Certified for Elements
3.2.3 Certification of Element Contents by Neutron Activation Analysis; 3.2.3.1 General Features; 3.2.3.2 Internal Cross-Checking (Self-Verification) in NAA; 3.2.3.3 Applications in Certification and Analysis; 3.2.3.4 NAA for the Detection of Errors; 3.2.3.5 Summary; 3.3 Certification of Organometallic and Other Species; 3.3.1 Introduction; 3.3.2 Potential Sources of Error in Speciation Analysis; 3.3.3 Restricted List of Chemical Species for Trace Elements and Their Compounds; 3.3.3.1 Aluminum; 3.3.3.2 Antimony; 3.3.3.3 Arsenic
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4.2.3 Preparation

Sommario/riassunto

There are many academic references describing how RMs are made, but few that explain why they are used, how they should be used and what happens when they are not properly used. In order to fill this gap, the editors have taken the contributions of more than thirty RM practitioners to produce a highly readable text organized in nine chapters. Starting with an introduction to historical, theoretical and technical requirements, the book goes on to examine all aspects of RM production from planning, preparation through analysis to certification, reviews recent development areas, RMs for li