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| Nota di contenuto | MAPPING THE CHEMICAL ENVIRONMENT OF URBAN AREAS; Contents; PART 2: CASE STUDIES; Contributors; Foreword; Acknowledgements; Abbreviations and Acronyms; PART 1: GENERAL ASPECTS AND METHODOLOGIES; 1 Introduction; References; 2 Urban Geochemical Mapping: A Review of Case Studies in this Volume; 2.1 Introduction; 2.2 Methodologies and strategies for urban sampling; 2.3 Chemical analysis; 2.4 Quality control; 2.5 Interpreting and presenting the results; 2.6 Legislation; 2.7 Communication; 2.8 Future trends; References 3 Sample Preparation and Inorganic Analysis for Urban Geochemical Survey Soil and Sediment Samples3.1 Introduction; 3.2 Field sample preservation; 3.3 Physical sample preparation; 3.4 Determination of bulk properties; 3.5 Analytical sample preparation; 3.6 Instrumental analysis for inorganic analytes; 3.7 Application of quality assurance; 3.8 Health and safety issues; References; 4 Organic Analysis for Urban Geochemical Survey Soil Samples; 4.1 Introduction; 4.2 Field sample preservation; 4.3 Organic sample preparation; 4.4 Instrumental analysis |

for organic analytes

4.5 Application of quality assurance/quality controlReferences; 5 Understanding the Quality of Chemical Data from the Urban Environment - Part 1: Quality Control Procedures; 5.1 Introduction; 5.2 Preparing for quality control; 5.3 Operational aspects of quality control; 5.4 Assessing data quality; 5.5 Data storage; 5.6 Concluding remarks; Acknowledgements; References; 6 Understanding the Quality of Chemical Data from the Urban Environment - Part 2: Measurement Uncertainty in the Decision-Making Process; 6.1 Introduction; 6.2 Estimation of uncertainty due to sampling and analysis 6.3 Practical detection limit and analytical precision6.4 Limitations of the geochemical data set: quality and reliability; 6.5 Effects of uncertainty and probabilistic risk assessment maps; 6.6 Worked examples; 6.7 Probabilistic risk assessment mapping using kriging; 6.8 Discussion and conclusions; Acknowledgements; References; 7 Data Analysis for Urban Geochemical Data; 7.1 Introduction; 7.2 Preparations for data analysis; 7.3 Urban geochemistry of Berlin; 7.4 Conclusions; References; 8 Sources of Anthropogenic Contaminants in the Urban Environment; 8.1 Introduction; 8.2 Heavy metals 8.3 Gaseous pollutants8.4 Organic compounds; 8.5 Discussion and conclusions; References; 9 Building Materials: An Important Source for Polychlorinated Biphenyls (PCBs) in Urban Soils; 9.1 Introduction; 9.2 What are PCBs?; 9.3 PCBs in the urban environment: levels and concerns; 9.4 Discussion: the road ahead; References; 10 Children, Soils, and Health: How Do Polluted Soils Influence Children's Health?; 10.1 Introduction; 10.2 Sources of arsenic, lead, BaP and PCB in urban soils; 10.3 Exposure, uptake and health effects; 10.4 Discussion and conclusions; References 11 Hazard and Exposure Assessment in Contaminated Land Investigations and Environmental Management

Sommario/riassunto

This comprehensive text focuses on the increasingly important issues of urban geochemical mapping with key coverage of the distribution and behaviour of chemicals and compounds in the urban environment. Clearly structured throughout, the first part of the book covers general aspects of urban chemical mapping with an overview of current practice and reviews of different aspects of the component methodologies. The second part includes case histories from different urban areas around Europe authored by those national or academic institutions tasked with investigating the chemical environments of
