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Altri autori (Persone)	QuevauvillerPh
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Nota di contenuto	Quality Assurance in Environmental Monitoring; Preface; Contents; CHAPTER 1 . QUALITY ASSURANCE AND QUALITY CONTROL FOR ENVIRONMENTAL MONITORING; 1.1 Definitions and general principles; 1.2 Analytical procedures; 1.2.1 Type of methods; 1.2.1.1 Calculable methods; 1.2.1.2 Relative methods; 1.2.1.3 Comparative methods; 1.2.2 Method selection; 1.2.3 Method validation; 1.2.3.1 Literature search; 1.2.3.2 Validation of final detection - calibration; 1.2.3.3 Matrix influence; 1.2.3.4 Analysis of solid material; 1.2.3.5 Ruggedness and robustness; 1.2.3.6 Control points; 1.2.3.7 Control charts 1.2.3.8 Case study1.3 How to achieve accuracy; 1.3.1 Comparison with a different method; 1.3.2 Comparison with other laboratories; 1.3.3 Use of certified reference materials; 1.3.3.1 Calibration, traceability and accuracy; 1.3.3.2 Equivalence between methods; 1.4 Requirements for the preparation of RMs and CRMs; 1.4.1 Selection and preparation; 1.4.2 Homogeneity and stability; 1.4.3 Types of environmental CRMs; 1.4.4 How to establish assigned or certified values; 1.4.4.1 Assigning values to a RM; 1.4.4.2 Certification by a single laboratory approach 1.4.4.3 Interlaboratory certification studies1.4.5 Producers of

environmental CRMs; 1.5 Sampling and sample handling; 1.5.1 Sampling strategy; 1.5.2 Sampling techniques; 1.5.3 Registration; 1.5.4 Storage; 1.5.5 Subsampling; 1.6 Reporting and archiving; 1.7 Regulatory aspects of QA and QC in environmental monitoring; 1.7.1 Good Laboratory Practice (GLP); 1.7.2 Accreditation; 1.7.3 ISO 9000/EN 29000 standards; 1.7.4 Standardization; 1.8 Conclusions; 1.9 References; CHAPTER 2. SAMPLING STRATEGY IN ENVIRONMENTAL MONITORING OF BIOLOGICAL SPECIMENS; 2.1 Objectives of environmental sampling
2.1.1 Representativeness of environmental samples2.1.2 Repeatability and precision; 2.1.3 Spatial comparability; 2.1.4 Reliability and probative force of environmental samples; 2.2 Principles of quality assurance in environmental sampling: requirements and methods; 2.3 Sampling strategies for plants (passive biomonitoring); 2.3.1 Fortuitous sampling; 2.3.2 Selected sampling; 2.3.3 Random sampling; 2.3.4 Systematic sampling (transects, grids); 2.3.5 Stratified random sampling; 2.4 Active or experimental monitoring with plants; 2.5 Sampling strategies for soils for biological specimens
2.6 Sampling strategies for animals in environmental monitoring2.6.1 Indicator function of animals; 2.6.2 Availability of animals; 2.6.3 Stratified random sampling of less mobile animals; 2.6.4 Stratified random sampling of mobile animals; 2.6.5 Zebra mussels as examples of sampling under semi-artificial conditions; 2.7 References; CHAPTER 3. QUALITY ASSURANCE AND QUALITY CONTROL OF SURFACE WATER SAMPLING; 3.1 Quality systems for sampling; 3.2 Development of a sampling strategy; 3.2.1 Analysis of information needed; 3.2.2 Design of a sampling strategy; 3.2.2.1 Representativeness of samples
3.2.2.2 The sampling site

Sommario/riassunto

It is increasingly recognized that the greatest risks of error in environmental analysis lie in the sample preparation rather than the analysis stage. This book describes the precautions that must be taken from the sampling to the sample pretreatment via the storage stage to assure good quality. Typical pitfalls - and recommendations for avoiding them - are discussed. Special emphasis is given to the monitoring of trace contaminants in environmental matrices (e. g., water, sediment, plants, air).This book, based on the experience of specialists, constitutes an invaluable guide to the q