

Laboratory Experiments in Trace Environmental Quantitative Analysis



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Laboratory Experiments in Trace Environmental Quantitative Analysis is a collection of student-tested experiments that introduce important principles that underlie various laboratory techniques in the field of trace environmental organics and inorganics quantitative analysis. It crosses the more traditional academic disciplines of environmental science and analytical chemistry.

The text is organized to begin with minimally rigorous sessions/experiments and increase in rigor as each session/experiment unfolds. Each experiment features learning objectives, expected student outcomes, and suggestions for further study.

Additional features include:

- Students are introduced to the principles and laboratory practice of instrumental analysis (determinative techniques) which are clearly presented.
- Students are carefully taken through various ways to prepare samples for trace quantitative analysis (sample prep techniques). Safety warnings are listed within each experiment.
- Students are introduced to all three types of instrument calibration: external, internal, and standard addition.

Instructors who are responsible for laboratory courses in analytical chemistry with potential application to environmental sample matrices will find this textbook of value. Graduate programs in environmental science and engineering will also greatly benefit from the content.



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