Chemicals will also find this book useful for expanding their understanding of the information included, and access to the references provided, should interest individuals in both the scientific and public health communities. Individuals involved in regulatory agencies, environmental consulting firms, and industry would find this book very useful. Researchers involved in environmental areas who have experience with a limited number of chemicals will also find this book useful for expanding their interest and work.

In summary, the reader of this book will find a lot of useful information from a variety of sources at his or her fingertips. I applaud the authors for their ambitious endeavor to condense such a volume of data into a useful format, given the complex nature of their subject matter. For individuals interested in the environment this book makes a nice addition to their reference library.

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**Water Sampling**


This book, written in 1985 and subsequently translated into English before its 1989 publication, treats water sampling as an independent and complex technological discipline. In addition, the inclusion of the human factor in planning, conducting, and evaluating all aspects of a water sampling program is discussed. Herein lies the value of this book.

Specifically, the book has seven chapters, in a sequence that follows the natural circulation of water through the atmosphere (precipitation), hydrosphere (surface and soil water), and lithosphere (groundwater), preceded by general problems and common aspects of sampling. The first chapter covers general considerations in establishing a safe, technically sound, and appropriate water sampling program. Subsequent chapters are devoted to automatic and manual sampling of atmospheric precipitation as rain, snow, or ice; surface waters, with streams and reservoirs treated in more detail than marine sampling, although further reading for the latter is suggested; soil water; and groundwater. In these chapters attention is not only given to the determination of amounts and flow characteristics, but to sampling techniques for subsequent physical, chemical, radiochemical, bacteriological, biological, and isotopic analysis.

A chapter is devoted to auxiliary measurements, observations, and equipment, where sampling conditions are evaluated to assess the reliability of collected samples. The final chapter discusses legislative, standardization, organizational, and economic aspects of sampling. Literature citations in the book are limited primarily to post-1945 publications. Unfortunately, however, many of the 156 references will be difficult to obtain by readers in the USA. The book is of excellent printing and editorial quality, with many explicit figures and plates. Also included is an extensive index, which will be of great value to all readers.

The book provides a current and comprehensive reference for precipitation, surface, and groundwater sampling procedures, technology, and associated problems, which will be of value to those in research, consulting, or industrial disciplines.

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**Toxicological Chemistry---A Guide to Toxic Substances**


This text is a concise but relatively complete treatment of the topic toxicological chemistry. It contains chapters on the following: toxicology and toxicological chemistry; fundamentals of chemistry; exposure and effects of toxic substances; biochemical action and transformation of toxicants; toxic elements; organometallaics and organometaloids; toxic inorganic compounds; toxic organic compounds and hydrocarbons; chapters each on oxygen-, nitrogen-, halide-, sulfur-, and phosphorus-containing organic compounds; and toxic natural compounds.

This text is written for those with little background in toxicology, and as such will be valuable for nonmedical professionals in the environmental sciences. Likewise, undergraduate-level chemistry is used in the text, particularly the chapter on chemistry fundamentals. The real value of this book is in the good general treatment of the subject of chemical toxicology and the use of the important toxic chemicals as examples. The reader will also appreciate the clear and simple representation of organic chemical formulae and the consistency of style from one chapter to another. I used this text this year (1989) in a senior undergraduate-graduate course in environmental science and found it to be a very valuable departure for more detailed discussion of individual toxic substances. It will also be a useful reference for environmental professionals who need a general understanding of human and animal response to toxic chemicals.

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