Solid-Phase Extraction: Principles and Practice

E. M. Thurman, M. S. Mills
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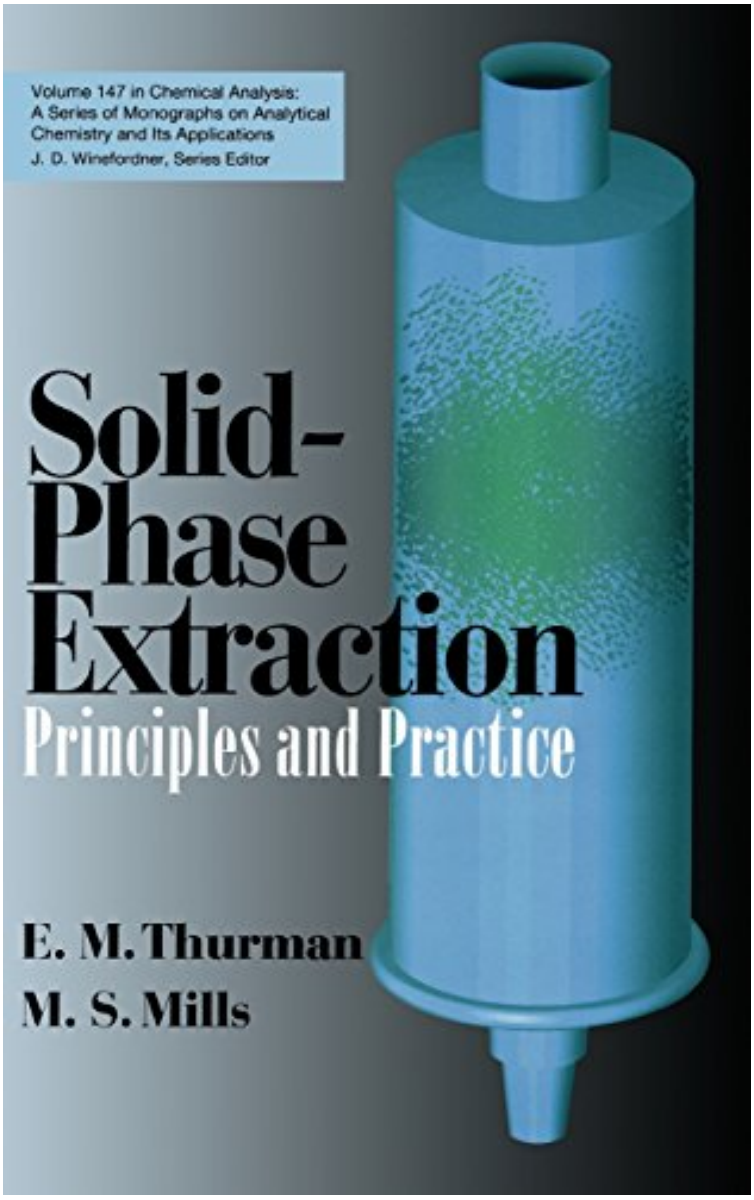

#1931735 in Books E M Thurman 1998-03-02Original language:EnglishPDF # 1 9.21 x .85 x 6.30l, 1.44 #File Name: 047161422X384 pagesSolid Phase Extraction Principles and Practice | File size: 32.Mb

E. M. Thurman, M. S. Mills : Solid-Phase Extraction: Principles and Practice before purchasing it in order to gage whether or not it would be worth my time, and all praised Solid-Phase Extraction: Principles and Practice:

4 of 4 people found the following review helpful. Either theories or applications, the book is satisfied.By Chia-Yang ChenAlthough I have done SPE for several years, I was surprised that this book can brought me so much more ideas and concepts. This readable book shows not only how but also why to choose an approach/adsorbent. Detailed but

concise descriptions of SPE theories on reversed/normal phase and ion exchange are suitable for both novices and aces. Considerations on silica- and polymer-based adsorbent are crucial to real-world situations. Updated information and critical comparisons of existing products will save readers lots of time and cost to choose a right one. The bottom line is that the book enables SPE users to solve problems systematically instead of try-and -error.

Divided into three main parts, the book begins with a clear explanation of basic SPE conceptsincluding theory, chemistry, and mechanisms of interaction as well as methods development, troubleshooting, and optimization. The next section presents an in-depth look at SPE applications, with separate chapters devoted to clinical, environmental, and natural product chemistry. Numerous examples drawn from each of these three areas illustrate SPE in action in the real world, successfully bridging the gap between principles and practice. The final section of this book discusses the latest SPE technology, with detailed coverage of the automation process, solid-phase extraction disks, and innovations such as solid-phase microextraction and small-volume solid-phase extraction. Suggested reading and references are included throughout, providing a useful springboard for further research and study. Whether you are new to SPE or are looking to keep abreast of the newest developments in SPE methods and uses, Solid-Phase Extraction gives you instant access to the information you needan essential companion for chemists of all types who use SPE in their work. Complete coverage of SPE concepts and applicationsat your fingertips Solid-Phase Extraction (SPE) equips chemists in any field with an incomparable one-stop source of up-to-date information on SPE. With sections devoted to fundamental principles, applications, and new technology, it is both comprehensive and easy to use the ideal working reference on this important subject. Presents a straightforward examination of SPE theory, methods development, chemistry, and mechanisms of interaction Provides detailed coverage of SPE applications in clinical, environmental, and natural product chemistry Features practical examples illustrating a range of real-world SPE uses Prepares chemists to make informed decisions on sorbent selection Covers the latest SPE technology, with valuable insights on automation and new sample preparation methods Offers suggestions for further reading, Internet resources, and product guides

From the PublisherSolid Phase Extraction (SPE) is a method of preparing samples for analysis. The technique involves purifying and concentrating a sample using a disposable column. This book explains how solid-phase extraction works and provides detailed applications of SPE in clinical, environmental, and natural product chemistry. The work discusses the latest SPE technology and provided insight into future sophistication and automation.From the Back CoverSolid-Phase Extraction (SPE) offers accessible, up-to-date coverage of every aspect of this tremendously useful separation tool, from how it works and where it works to recent advances in equipment and techniques. Divided into three main parts, the book begins with a clear explanation of basic SPE conceptsincluding theory, chemistry, and mechanisms of interaction as well as methods development, troubleshooting, and optimization. The next section presents an in-depth look at SPE applications, with separate chapters devoted to clinical, environmental, and natural product chemistry. Numerous examples drawn from each of these three areas illustrate SPE in action in the real world, successfully bridging the gap between principles and practice. The final section of the book discusses the latest SPE technology, with detailed coverage of the automation process, solid-phase extraction disks, and innovations such as solid-phase microextraction and small-volume solid-phase extraction. Suggested reading and references are included throughout, providing a useful springboard for further research and study. Whether you are new to SPE or are looking to keep abreast of the newest developments in SPE methods and uses, Solid-Phase Extraction gives you instant access to the information you needan essential companion for chemists of all types who use SPE in their work. Complete coverage of SPE concepts and applicationsat your fingertips Solid-Phase Extraction (SPE) equips chemists in any field with an incomparable one-stop source of up-to-date information on SPE. With sections devoted to fundamental principles, applications, and new technology, it is both comprehensive and easy to usethe ideal working reference on this important subject. Presents a straightforward examination of SPE theory, methods development, chemistry, and mechanisms of interaction Provides detailed coverage of SPE applications in clinical, environmental, and natural product chemistry Features practical examples illustrating a range of real-world SPE uses Prepares chemists to make informed decisions on sorbent selection Covers the latest SPE technology, with valuable insights on automation and new sample preparation methods Offers suggestions for further reading, Internet resources, and product guides About the AuthorE. M. THURMAN is an organic geochemist at the U.S. Geological Survey with twenty years of research experience in the environmental chemistry of water and soil, as well as extensive experience in sorption chromatography and XAD and SPE resin technology. Dr. Thurman has published research papers on the theory of XAD resins, applications of SPE in environmental chemistry, drug applications of SPE, and isolation of natural products by SPE and ion exchange. He is the coauthor of Immunochemical Technology for Environmental Applications, the coeditor of Herbicide Metabolites in Surface Water and Groundwater, and has written over 80 journal articles on environmental analytical chemistry. M. S. MILLS is a research envi-ronmental chemist with Zeneca Agrochemicals at the Jealott's Hill Research Station, Bracknell, U.K. Dr. Mills was formerly employed by the U.S. Geological Survey in Lawrence, Kansas, where her research interests included exploring the mechanisms and

applications of solid-phase extraction in environmental chemistry, investigating the organic geochemistry of naturally occurring aquatic foams, and the degradation and transport of xenobiotics in the vadose zone. She has contributed numerous publications and oral presentations on these topics over the past five years, and was cofounder and co-lecturer of the American Chemical Society short course, "Solid-Phase Extraction in Environmental and Clinical Chemistry." Current research project foci include the degradation and transport of xenobiotics in the vadose zone using radiolabeled techniques and the degradation of xenobiotics in the saturated zone.