DESCRIPTION

The only reference to provide both current and thorough coverage of this important analytical technique

Static headspace-gas chromatography (HS-GC) is an indispensable technique for analyzing volatile organic compounds, enabling the analyst to assay a variety of sample matrices while avoiding the costly and time-consuming preparation involved with traditional GC.

Static Headspace-Gas Chromatography: Theory and Practice has long been the only reference to provide in-depth coverage of this method of analysis. The Second Edition has been thoroughly updated to reflect the most recent developments and practices, and also includes coverage of solid-phase microextraction (SPME) and the purge-and-trap technique. Chapters cover:

* Principles of static and dynamic headspace analysis, including the evolution of HS-GC methods and regulatory methods using static HS-GC

* Basic theory of headspace analysis-physicochemical relationships, sensitivity, and the principles of multiple headspace extraction

* HS-GC techniques-vials, cleaning, caps, sample volume, enrichment, and cryogenic techniques

* Sample handling

* Cryogenic HS-GC

* Method development in HS-GC
* Nonequilibrium static headspace analysis
* Determination of physicochemical functions such as vapor pressures, activity coefficients, and more

Comprehensive and focused, Static Headspace-Gas Chromatography, Second Edition provides an excellent resource to help the reader achieve optimal chromatographic results. Practical examples with original data help readers to master determinations in a wide variety of areas, such as forensic, environmental, pharmaceutical, and industrial applications.

⚠️ ABOUT THE AUTHOR

Dr. BRUNO KOLB is an internationally recognized expert on gas chromatography. Until his retirement in 1996, he managed the GC Applications Laboratory at Perkin-Elmer Corporation, Germany; he has also been involved in instrument development with special emphasis on specific detectors. He has been a guest lecturer at the University of Konstanz, as well as at international meetings. He has published many journal articles and book chapters, and is the author of a textbook on gas chromatography.

Dr. LESLIE S. ETTRE was a senior scientist at Perkin-Elmer Corporation until his retirement in 1990. Between 1988 and 1995 he served as an adjunct professor in the Department of Chemical Engineering at Yale University, and from 1995 until 2004 he continued his association with the school as a research affiliate. In addition to lecturing widely in the field of gas chromatography, Dr. Ettre has published over 200 scientific and technical papers, and is the author and editor of numerous books, including Encyclopedia of Industrial Chemical Analysis. He has received numerous awards, including the National Award in Chromatography of the American Chemical Society and the AJP Martin Award of the Chromatographic Society—the highest honors in the United States and Europe, respectively.

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