Katherine A. Bakeev (Editor)

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DESCRIPTION

Process Analytical Technology explores the concepts of PAT and its application in the chemical and pharmaceutical industry from the point of view of the analytical chemist. In this new edition all of the original chapters have been updated and revised, and new chapters covering the important topics of sampling, NMR, fluorescence, and acoustic chemometrics have been added.

Coverage includes:

- Implementation of Process Analytical Technologies
- UV-Visible Spectroscopy for On-line Analysis
- Infrared Spectroscopy for Process Analytical Applications
- Process Raman Spectroscopy
- Process NMR Spectroscopy: Technology and On-line Applications
- Fluorescent Sensing and Process Analytical Applications
- Chemometrics in Process Analytical Technology (PAT)
- On-Line PAT Applications of Spectroscopy in the Pharmaceutical Industry
• Future Trends for PAT for Increased Process Understanding and Growing Applications in Biomanufacturing

• NIR Chemical Imaging

This volume is an important starting point for anyone wanting to implement PAT and is intended not only to assist a newcomer to the field but also to provide up-to-date information for those who practice process analytical chemistry and PAT.

It is relevant for chemists, chemical and process engineers, and analytical chemists working on process development, scale-up and production in the pharmaceutical, fine and specialty chemicals industries, as well as for academic chemistry, chemical engineering, chemometrics and pharmaceutical science research groups focusing on PAT.

Review from the First Edition

“The book provides an excellent first port of call for anyone seeking material and discussions to understand the area better. It deserves to be found in every library that serves those who are active in the field of Process Analytical Technology.”— *Current Engineering Practice*

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ABOUT THE AUTHOR

Katherine A. Bakeev is Principal Scientist with GlaxoSmithKline in King of Prussia, PA where she works in the Process Analytics and Chemometrics group supporting chemical development. She has twelve years of industrial experience including work in process analytical chemistry with ISP, and as a product specialist for Foss NIRSystems. She holds a PhD in Polymer Science and Engineering from the University of Massachusetts in Amherst, and a Masters in Technology Management from Stevens Institute of Technology. She has given numerous presentations on the use of near-infrared spectroscopy (NIR), and in 2007 received the Coblentz Society Craver Award for her work in NIR and chemometrics.

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