



Book review

Electrochemical Methods in Pharmaceutical Analysis and their Validation, S.A. Ozkan. HNB Publishing (2011). ISBN: 978-09664286-74H, 350pp., \$99.75 (hardcover)

Electrochemical analyses provide an essential analytical technique in the analysis of pharmaceuticals. Electrochemical analysis of active drugs is based on redox reactions depending on the electron transfer pathways. Therefore, it is of interest to note that there is a close relationship between electrochemical and biological reactions.

This book discusses various electrochemical methods and their validation in drug analysis and their progress and great impact on analytical chemistry. Electrochemical analysis often offers advantages over other analytical modalities, such as high degree of accuracy, precision, selectivity and also low cost of operation.

The book consists of 9 chapters of discussing various topics (see below for details). Each chapter ends with a list of updated references.

Chapter 1 discusses the similarities and differences between various pharmacological classes of drugs versus chemicals. Chapter 2 provides the reader with background on electrochemistry and essential equations. An overview of electroanalytical experimental considerations and conditions is given.

Chapter 4 presents the different types of working electrodes, including chemically modified electrodes. Chapters 5 and 6 deal with linear sweep voltammetry, cyclic voltammetry and pulse voltammetric methods and their applications in pharmaceutical analysis, while chapter 7 is devoted to various types of stripping

voltammetric techniques.

The recent achievements in electrochemical analysis of pharmaceutical and biomedical chemistry are presented in chapter 8, discussing its role in drug development, metabolite determination, oxidative stress, and electrochemical therapy. This is a very interesting chapter for electrochemists. Finally, chapter 9 discusses the several validation parameters required for electrochemical analysis.

This book is worth having, as it gives details on the electrochemical applications for pharmaceuticals. It is well presented and well written. The figures included are well illustrated.

I highly recommend this valuable book to pharmaceutical and analytical chemists, researchers and graduate and postgraduate students.

The author is a highly qualified pharmaceutical analytical chemist with an impressive record of publication in the field of electrochemistry. Professor Ozkan is to be commended for a job well done.

Reviewed by

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