BOOK REVIEWS

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MASS SPECTROMETRY IN THE STUDY OF THE METABOLISM OF MEDICINAL PREPARATIONS*

Reviewed by P. B. Terent'ev

Although this book is addressed primarily to biochemists and pharmacologists, it may be useful for all organic chemists familiar with the fundamentals of the mass-spectral method for the investigation of organic compounds. The book consists of five chapters. The construction of mass spectrometers and the fundamental principles of the formation of mass spectra are examined briefly in the first chapter. The second chapter is devoted to a concise exposition of the principal pathways of dissociative ionization of the most important classes of organic compounds. Problems involved in the use of high-resolution mass spectra are summarized in chapter three. In particular, methods for the direct analysis of metastable ions (DADI) and the ion kinetic energy (IKE) spectra are examined briefly in this chapter. Finally the fourth and fifth chapters include the description of the use of mass fragmentography for the study of the metabolism of medicinal preparations in the living organism. Examples of the analysis of the products of the metabolism of a CNS stimulator — prolintane (1-phenyl-2-pyrrolidylpentane hydrochloride) — the antitumorigenic preparation fosfamid [phosphoric acid N-pyrimidyl-2-N¹, N²-di(ethylene)triamide], and the antidepressant nortriptyline [1-(3-methyl-aminopropylidene)dibenzo[2.3;6.7]cyclohepta-2,6-diene] are also analyzed.

The book is distinguished by its clarity and lucidity of exposition. The fine design of the book with an adequate number of figures, diagrams, and chromatographic mass spectra adds to the pleasant impression created by the book as a whole.

^{*}Meditsina, 1978.