zole to rabbit plasma protein was determined by the membrane ultrafiltration technique (9). Analysis of the clearance data was performed using the analog computer.

The results are shown in Fig. 1. The simulation curve of Model A fitted well with the experimental data. However, in Model B, a fitting curve could not be obtained with any of the various parameters available. When the parameters were selected at the values given in Fig. 1*a*, the calculated curve of Model A agreed well with the experimental data obtained by inhibitory experiments (2, 3) (Fig. 2). From these results, it is considered that the tubular reabsorption of sulfamethizole can be explained by nonionic diffusion, while the tubular secretion can be explained by active transport that conforms to the Michaelis–Menten equation.

In addition, since Model A fits the experimental data, it can be presumed that the tubular secretion of sulfamethizole is dependent upon the unbound sulfamethizole concentration in plasma. Details of pharmacokinetic analyses of some sulfonamides and phenolsulfonphthalein using Model A will be described in a subsequent paper.

In conclusion, this analytical method permits analysis of a limited amount of experimental data on the renal excretion of sulfamethizole in a dynamic condition where the concentration in plasma varies with time after administration of a single dose. It also can be used to clarify the renal handling of sulfamethizole within a short period. This method is presently being applied to humans.

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BOOKS

REVIEWS

A Textbook of Pharmaceutical Analysis, Second Edition. By KENNETH A. CONNORS. Wiley, 605 Third Avenue, New York, NY 10016, 1975. 15.5 × 23.5 cm. Price $18.95.

Many changes have been incorporated into the second edition of this classic textbook. A new chapter on analytical toxicology has been included which adds immeasurably to the topics covered. The analysis of drugs in blood and/or urine samples is fast becoming an important area of interest and responsibility for the clinical pharmacist. In a community pharmacy, knowledge of preferred qualitative screening methods for drugs allows the pharmacist to function better as a drug expert in his or her locality. Another addition to the book is a chapter that provides basic information on volumetric techniques. This is of tremendous value to those pharmacy schools where a separate course in quantitative analysis is no longer required due to changing curricula. New sections dealing with such topics as ion-selective electrodes, ORD and CD, NMR and ESR, mass spectrometry, and high-pressure liquid chromatography have also been added.

The material is presented in six sections, which are entitled Titrimetric Analysis, Physical and Instrumental Methods, Separation Techniques, Elemental Analysis, Functional Group Analysis, and General Topics. These sections are further divided into chapters where the various techniques and/or subjects are discussed. A theoretical treatment is presented initially followed by practical application of the methodology in drug identification and/or quantification.

At the end of each chapter, the author has included laboratory exercises and questions dealing with the application of the subject matter in that segment. Several experiments have been added to those chapters where none existed in the first edition and other existing experiments have been updated and/or changed. The book therefore functions suitably as a source of sound laboratory exercises which can be performed either totally or in part during the customary 3-hr lab period.

The book is effective in its scope, variety of experiments and problems, and presentation style. It is a must for any student interested in pharmaceutical analysis. The researcher may find the book to be a helpful source of information on almost any analytical technique. The second edition of this textbook is truly an exciting adventure.

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