1. Record Nr. UNINA9910455447303321

Titolo	Pharmacokinetics in risk assessment [[electronic resource] /] / Subcommittee on Disinfectants and Disinfectant By-Products, Safe Drinking Water Committee, Board on Toxicology and Environmental Health Hazards, Assembly of Life Sciences, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1987
ISBN	1-280-22160-7 9786610221608 0-309-55769-0 0-585-15539-9
Descrizione fisica	1 online resource (512 p.)
Collana	Drinking water and health ; ; v.8
Disciplina	333.9122
Soggetti	Drinking water - Contamination - United States Drinking water - Contamination Drinking water - Health aspects - United States Drinking water - Health aspects Water - Pollution - Toxicology Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	""Pharmacokinetics in Risk Assessment""; ""Copyright""; ""PREFACE""; ""Contents""; ""PART I INTRODUCTION: THE PROBLEM AND AN APPROACH ""; ""Risk Assessment: Historical Perspectives""; ""References""; ""Tissue Dosimetry in Risk Assessment, or What's the Problem Here Anyway?""; ""INTRODUCTION""; ""A DOSE OF WHAT?""; ""ISN'T THIS VOLUME ABOUT PHARMACOKINETICS?""; ""GENOTOXIC CARCINOGENS""; ""PARENT CHEMICAL""; ""STABLE METABOLITES""; ""REACTIVE, NONISOLATABLE METABOLITES""; ""INTERCALATING AGENTS""; ""EPIGENETIC CARCINOGENS""; ""SUMMARY""; ""References""; ""PART II MATHEMATICAL MODELING "" ""Modeling: An Introduction""""""References""; ""Physiologically Based Pharmacokinetic Modeling""; ""INTRODUCTION""; ""BIOLOGICAL BASIS OF PHYSIOLOGICAL PHARMACOKINETICS""; ""DEVELOPMENT OF

MODELS""; ""CHOICE OF COMPARTMENTS""; ""BASIC MASS BALANCES""; ""Mass Balance: Blood Pool""; ""Mass Balance: Tissue Region i""; ""SIMPLIFICATIONS OF MASS BALANCES""; ""Examples""; ""DISCUSSION""; ""FUTURE RESEARCH NEEDS""; ""References""; ""PART III GENERALIZATIONS AND EXTRAPOLATIONS ""; ""Allometry: Body Size Constraints in Animal Design""; ""INTRODUCTION""; ""SIZE, DESIGN, AND PHARMACOKINETICS""
""Aerobic Energetics of Muscle In Vivo""""""Conflict of Physiological and Chronological Time""; ""Species Extrapolations, Physiological Time, and Pharmacokinetics""; ""CONCLUSIONS""; ""SUMMARY""; ""References""; ""Prediction of In Vivo Parameters of Drug Metabolism and Distribution from In Vitro Studies""; ""IN VITRO PREDICTION OF IN VIVO DRUG METABOLISM""; ""IN VITRO PREDICTION OF IN VIVO DRUG BINDING AND DISTRIBUTION""; ""CONCLUSION""; ""References""; ""Dose, Species, and Route Extrapolation: General Aspects""; ""DIFFERENT PROBLEMS AND OBJECTIVES, DIFFERENT MODELS""; ""Different Mechanisms""
""GENERAL PHYSIOLOGICALLY BASED PHARMACOKINETIC MODELS""""""Simplification of Models""; ""Rates of Formation of Complexes""; ""Diffusional Barriers and Modified Fick's Law""; ""Simple PB-PK Models""; ""Basic Parameters fu and R""; ""Nonlinear Kinetics and Lost Concepts""; ""INTERFACE BETWEEN PB-PK MODELS AND CLEARANCES""; ""Organ Availabilities (F), Extraction Ratios (E), and Clearances (CL)""; ""Physiologically Based Linear Compartmental Pharmacokinetic Models""; ""Validity of the Assumption of Virtual Steady State""; ""Calculation of Other Compartmental Model Parameters""
""Approximations of Terminal Half-Lives""""""Approximate Time Required to Approach Steady State""; ""LINEAR PHARMACOKINETIC SYSTEMS""; ""Total Body Clearance""; ""Importance of the Unbound Concentration of Substances""; ""Classification of Organs; Routes of Administration""; ""Non-First-Pass, Nonelimination Organs""; ""Range of Maximum and Minimum Unbound Concentrations in Nonelimination Organs and Repetitive Administration""; ""Non-First-Pass, Elimination Organs""; ""FIRST-PASS, NONELIMINATION ORGANS""; ""First-Pass, Elimination Organs""; ""ROUTE-TO-ROUTE EXTRAPOLATION""
""Lungs and Skin Administration""