

CONTENTS

| CHAPTER | PAGE |
|--|------|
| I. HYDROCARBONS | 1 |
| Saturated Hydrocarbons, 1. Unsaturated Hydrocarbons, 10. Cyclic Hydrocarbons, C_nH_{2n} , 26. Cyclic Hydrocarbons, C_nH_{2n-2} , 30. Cyclic Hydrocarbons, C_nH_{2-4} , 31. Dicyclic Terpene Hydrocarbons, 34. Carotenes, 35. Aromatic Hydrocarbons, 37. References, 44. | |
| II. HALOGENATED HYDROCARBONS | 45 |
| Fluorine Compounds, 50. Chlorine Compounds, 51. Iodine and Bromine Compounds, 58. Halogenated Aromatic Hydrocarbons, 59. References, 61. | |
| III. HYDROXYL DERIVATIVES OF THE HYDROCARBONS | 62 |
| Alcohols, 62. Polyhydroxy Alcohols, 79. Unsaturated Alcohols, 84. Cyclic Alcohols, 89. The Sterols, 97. Aromatic Alcohols, 101. Phenols, 102. Phenolic Alcohols, 117. Halogenated Hydroxyl Compounds, 118. References, 121. | |
| IV. ETHERS AND ETHER PEROXIDES | 122 |
| Ethers, 122. Unsaturated Ethers, 127. Aromatic Ethers, 128. Cyclic Ethers, 129. Hydroxy Ethers, 130. Phenolic Ethers, 130. Ether Peroxides, 132. References, 132. | |
| V. CARBONYL GROUP | 133 |
| Aldehydes and Ketones, 133. Aldehydes, 139; Aromatic Aldehydes, 144. Phenolic Aldehydes, 146. Unsaturated Aldehydes, 147. Ketones, 149. Cyclic Ketones, 151. Aromatic Ketones, 155. Quinones, 157. Halogenated Carbonyl Derivatives, 161. Acetals and Thioacetals, 163. Carbohydrates, Saccharoses, Saccharides or Glucides, 164. The Glycosides or Heterosides, 182. Saponins, 193. Tannins, 195. Hormones of the Adrenal Cortex, 197. The Sex Hormones, 198. References, 203. | |
| VI. CARBOXYL GROUP | 206 |
| Monobasic Carboxylic Acids, 206. Polybasic Acids, 215. Unsaturated Acids, 219. Cyclic Acids, 222. Halogenated Acids, 225. Hydroxy Acids, 228. Aldehydic and Ketonic Acids, 238. Acid Halides, 242. Acid Anhydrides, 243. Phthaleins, 246. Esters, 251. Esters of Inorganic Acids, 252. Esters of Aliphatic Acids, 256. Esters of Cyclic Acids, 259. Esters of Dicarboxylic Acids, 260. Esters of Aromatic Acids, 260. Salicylic Acid and Its Derivatives, 262. Acetoacetic Ester, 268. Lactones, 272. References, 279. | |
| VII. NATURAL MIXTURES | 280 |
| Fixed Oils and Fats, 280. Volatile Oils, 289. Gum Resins and Balsams, 291. Enzymes, 298. References, 304. | |

CONTENTS

VI
CHAPTER

PAGE

| | |
|---|-----|
| VIII. AMINES AND AMINE DERIVATIVES..... | 307 |
| <p>Amines, 307. Aniline Derivatives, 324. Halogenated Amines, 325. Alkanolamines, 325. Choline and Its Derivatives, 328. <i>p</i>-Aminophenol Derivatives, 330. Esters of Dialkylaminoalkanols, 333. Phenylethylamine Derivatives, 353. Medicinal Dyes, 360. Amino Acids, 365. Aromatic Amino Acids, 374. Amides, 375. Proteins, 383. Amidines, 391. References, 395.</p> | |
| IX. CYANIDES AND NITRO COMPOUNDS..... | |
| <p>Cyanides, 396. Nitro Compounds, 399. References, 405.</p> | |
| X. SULFUR COMPOUNDS..... | |
| <p>Mercaptans, 407. Thiophenols, 407. Thioethers, 407. Sulfones, 410. Thioaldehydes and Thioketones, 411. Thioacids, 412. Thiourea, 413. Thiocyanates and Isothiocyanates, 413. Sulfonic Acids, 414. Aromatic Aminosulfonic Acids, 418. Sulfonamide Derivatives, 419. References, 431.</p> | |
| XI. COMPOUNDS OF PHOSPHORUS, ARSENIC, AND ANTIMONY..... | 433 |
| <p>Phosphorus Compounds, 433. Arsenic Compounds, 434. Alkyl Arsenic Compounds, 434. Aryl Arsenic Compounds, 437. Arsenobenzene Derivatives, 442. Antimony Compounds, 447. References, 448.</p> | |
| XII. METALLIC DERIVATIVES OF ORGANIC COMPOUNDS..... | 450 |
| <p>Organometallic Compounds, 450. Grignard Reagent, 450. Gold Compounds, 452. Silver Compounds, 453. Mercury Compounds, 455. Bismuth Compounds, 461. References, 462.</p> | |
| XIII. HETEROCYCLES CONTAINING ONE HETEROATOM..... | 463 |
| <p>Oxygen Heterocycles, 463. Nitrogen Heterocycles, 473. References, 538.</p> | |
| XIV. HETEROCYCLES CONTAINING TWO OR MORE HETEROATOMS..... | 540 |
| <p>Pyrazole Derivatives, 540. Imidazole Derivatives, 546. Diazines, 551. Pyrimidines, 551. Thiazoles, 555. Purines, 562. Xanthines, 563. Thionine Dyes, 566. References, 567.</p> | |
| XV. STEREOISOMERISM..... | 569 |
| <p>Relative Configuration, 573. Asymmetric Synthesis, 594. Physiological Activity, 597. Asymmetric Carbon Atoms in the Cycle, 601. Polycyclic Compounds, 606. Isomerism about the Ethylenic Bond, 610.</p> | |
| XVI. SOME PHYSICOCHEMICAL PROPERTIES OF MEDICINAL PRODUCTS..... | 616 |
| <p>Colloid Science, 617. The Meyer and Overton Theory of Narcosis, 618. Molecular Size and Surface Area, 620. Molecular Shape, 621. Oxidation-Reduction Potential, 622. Hydrogen-Ion Concentration, 622. Dielectric Polarization, 622. Raman Spectrum, 624. Electromotive Force, 624. The Periodic Table, 626.</p> | |
| GENERAL BIBLIOGRAPHY..... | 629 |
| INDEX..... | 637 |