

A TEXTBOOK  
OF  
ORGANIC CHEMISTRY

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## PREFACE

The growth of chemical industries in this country during the last few years has created a new interest in the science and an increased demand for training in it. In no particular field is this more noticeable than in organic chemistry. The author trusts, therefore, that a new text may be acceptable, and that there may be found in it as much individuality as is possible in a book dealing almost wholly with well established facts and theories.

The student who is planning to fit himself for a life work in chemistry should take up the study of organic chemistry in the spirit of respect for the magnitude and complexity of the subject. He must go through the difficulties and not over or around them, but as he goes through them he must understand them as fully as possible, and the explanations in the textbook should be clear and adequate, though supplemented and emphasized by lectures and laboratory experiments. With these ideas in mind the author has endeavored to present the subject in a sufficiently elementary manner so as not to be beyond the grasp of the student in his first course in organic chemistry yet, at the same time, to make the book comprehensive in that it covers the entire field by taking up practically all of the important groups of compounds. Details as to properties and specific methods of preparation have not been emphasized in the case of individual compounds, except those of out-standing importance and interest. In the sense of being an abridged work, dealing with only relatively few and the simplest reactions and compounds, the book is not elementary. On the other hand the method of treatment in the free lecture style, with full and oftentimes repeated explanation of the steps involved in reactions and relationships, is elementary. To make the apparent complexity of organic chemistry clear and readily comprehended through definite and established relationships has been the chief aim.

The book is written primarily as a textbook for the undergraduate student and the instructor, but it is hoped that those who have

already studied the subject may find it of value for its general presentation. In its method and order of treatment the book is the expression of the author's experience during the last ten years in teaching the subject to students, most of whom have been planning to take up chemistry as a profession.

In attempting to correlate theoretical principles with industrial practice the author has not done more than to mention, in cases where it seems desirable, the fact that a given synthesis is the basis of industrial processes. No effort has been made, in most cases, to describe the technical procedure. In a few of the more common processes some description of the industrial procedure is given, but without any claim that it is exact in minute detail. It is important to emphasize the fact, that oftentimes in industrial practice, reactions while no doubt following the course worked out in the laboratory, are nevertheless frequently shortened by doubling up or by changing physical conditions, so that the process and the laboratory synthesis seem to be quite distinct. If this is kept in mind the author feels that the student will find no difficulty in gaining from a study of this text that fundamental knowledge of the theory of organic chemistry on which all practice rests, and at the same time a realization of the direct connection of this theory with the tremendous industrial application of organic chemistry to the life of the world.

A brief discussion of the separation, purification, identification, analysis and determination of molecular weight of organic compounds is given in an appendix instead of in an introductory chapter as is customary. In the presentation of the above topics, which belong more especially to a laboratory guide, only general methods are given without any of the details that must be observed in each case.

The author, in gathering material for the work, has had access to all of the standard books on the subject, and to a limited amount of original literature, and wishes to acknowledge herewith all such use of texts and journal articles. No references to literature have been made except where direct quotations have been used, as in the author's opinion, this would not increase the value of the book as a text for undergraduate students. A list of books used for reference will be found at the end of the volume, and to these in particular the author acknowledges his indebtedness.

In addition he wishes to acknowledge the assistance and coöperation of friends and associates who have read and criticized the manuscript, and of all others who have in any way assisted him in the large task which he has attempted.

JOSEPH S. CHAMBERLAIN.

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