

A Manual of PAPER CHROMATOGRAPHY and PAPER ELECTROPHORESIS

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PREFACE TO PART I

The object of the first monograph is to provide a readily accessible source for some of the many uses and adaptations of paper chromatography that have appeared since the publication by Consden, Gordon, and Martin approximately ten years ago. No attempt has been made to list all the references in which paper chromatography has been used but rather an effort has been made to write a practical manual in which tried and proved procedures, employing relatively simple equipment and available reagents, are summarized. It is hoped that sufficient detailed information is provided, in the majority of instances, so that the reader will be able to apply the technique of paper chromatography to his particular problem without recourse to an extensive search of the literature.

The authors hope that this manual may be of value in the average chemical laboratory. They will appreciate the correction of any erroneous statements and calculations and hope that readers will be so kind as to call to their attention important papers on this subject that have been omitted.

We wish to thank Miss Mary Ruth Bateman, Librarian, Boyce Thompson Institute, Yonkers, New York, for her invaluable aid in the preparation and checking of the bibliography.

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PREFACE TO PART II

When Dr. Block invited me to collaborate with him in the preparation of the second edition of "Paper Chromatography" I accepted only after considerable hesitation. It seemed to me that it would not be possible to cover the entire rapidly expanding literature relating to zone electrophoresis or even paper electrophoresis with the thoroughness it deserves in the space it was then contemplated to make available. However, when it was agreed that the emphasis was to be placed on basic principles and methodology, the task became feasible. This will explain the emphasis of this section. No attempt has been made to present the entire literature, particularly that dealing with the many applications of the method, and in considering the remaining literature I have indulged in much editorial license. This is reflected in the treatment which has been limited entirely

to paper electrophoresis, the only references to anticonvectant or zone electrophoresis appearing in Chapter XV. Further, it will be noted that emphasis throughout has been on the separation of protein mixtures, particularly blood serum. This reflects the fact that it is in this particular application that paper electrophoresis has thus far not been challenged by paper chromatography, whereas many of the smaller molecules can be resolved equally well or better by the thus far more widely employed chromatographic procedures.

Finally, I wish to acknowledge the deep debt I owe to my associates who have assisted both in the development of techniques and in the preparation of the manuscript, particularly Dr. E. R. B. Smith, Dr. William P. Jencks, Mrs. Mera R. Jetton, and Mrs. Helen C. Crosby.

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