

*Methods in Enzymology*

*Volume XVIII*

*Vitamins and Coenzymes*

*Part B*

EDITED BY

*Donald B. McCormick and Lemuel D. Wright*

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## Preface

The expansion of information with respect to vitamins and their analogs and, particularly, the advent of newer chemical and biological techniques for studying the coenzyme forms and the enzymes involved in their biosynthesis and breakdown are reflected in the scope of Volume XVIII. It soon became apparent in the preparation of this work that some subdivision of the material was essential. Consequently, Volume XVIII of *Methods in Enzymology* will appear in three parts. A somewhat arbitrary division of the subject matter had to be made, and we make no apologies for the logic or lack of logic in the way this division was made. Part A covers the vitamin and coenzyme forms of ascorbate, thiamine, lipoate, pantothenate, biotin, and pyridoxine. The present Part B covers nicotinate, flavins, and pteridines. Part C will cover the B<sub>12</sub> group, ubiquinone, tocopherol, and vitamins A, K, and D.

For each vitamin-coenzyme group, detailed descriptions of current laboratory methods are given. Included are chemical and physical, enzymatic, and microbiological analyses; isolation and purification procedures for the coenzymes and derivatives and for the enzymes involved in their metabolism; chemical synthesis and reactions of natural forms, analogs, and radioactively labeled compounds; general metabolism including biosynthesis and degradation. In addition, information on properties and biochemical functions of the vitamins, coenzymes, and relevant enzymes are included.

We wish to thank the numerous contributors for their cooperation and patience. Though a few omissions of value to experimentalists in the area may have been made inadvertently, we believe that the subject has been adequately covered for the purposes intended. Even occasional overlaps, such as modifications of an assay procedure, were deliberately included to offer some flexibility in choice and to represent fairly the different researchers involved. We also wish to express our gratitude to Mrs. Patricia MacIntyre for her excellent secretarial assistance and to the numerous persons at Academic Press for their efficient and kind guidance.

DONALD B. McCORMICK  
LEMUEL D. WRIGHT

July, 1970

# METHODS IN ENZYMOLOGY

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- III. Preparation and Assay of Substrates
- IV. Special Techniques for the Enzymologist
- V. Preparation and Assay of Enzymes
- VI. Preparation and Assay of Enzymes (*Continued*)  
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- VII. Cumulative Subject Index

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