techniques available to the classroom or at least provides background for understanding the rationale of microbial methodology. For teachers wishing to develop bacteriologic procedures as class demonstrations or exercises, the book provides clear, stepwise procedures for a wide variety of investigations. For example, it would be possible to devise projects involving microbial purity of milk and milk products without special equipment other than that normally available for bacteriologic work. From such a project, discussion could go on to the topics of modern health practices, governmental agencies, statistical accuracy, and bacterial population development.

The book is somewhat unevenly written: certain topics are explained in very elementary detail, but in other places considerable knowledge is assumed. For this reason it may not always be possible to have students use the book directly to follow a procedure unless they are advanced in skill. Similarly, an instructor with a minimal background may encounter problems in obtaining success in every case. Furthermore, some tests require specialized equipment or cultures that may not be available. This situation may be complicated by the exclusive use of English sources of supply, without additional description beyond a trade name. (Professionals in the field could make the translation into products of American origin, and it may be possible to obtain this assistance readily.) However, so much information is assembled in an easily accessible form and the test procedures are so straightforward that a teacher wishing to increase or to improve his competency in this field should regard this as an important reference volume.

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RESPIRATION AND CIRCULATION, ed. by Philip L. Altman and Dorothy S. Ditmer. 1971. Federation of American Societies for Experimental Biology, Bethesda, Md. 930 p. $30.00.

This volume presents an extensive collection of tables and graphs summarizing data on respiration and circulation. There are measurements from plants and animals, including microorganisms, as well as brief discussions of general principles and physicochemical data related to the behavior of gases and the flow of fluids in vessels. More than 400 research workers have contributed materials to the book. It has been edited carefully, and measurements have been grouped effectively to assist in locating information. The scope is indicated by the titles of major sections: general principles; basic physical and chemical data; thorax and ventilation; airways and gas movements; blood gases; heart and pumping action; vascular system and blood distribution; capillaries and the exchange system; invertebrate respiration; invertebrate circulation; plant respiration and fluid movement.

Like other handbooks in this series prepared by FASEB, *Respiration and Circulation* is designed primarily for specialists. In addition to meeting their needs, the collections of measurements offer valuable material to biologists in general. The book could be a mine of information for imaginative teachers who wish to bring research data to their students for discussion and analysis. The interplay and interdependence of circulatory and respiratory functions is documented in convincing detail. Interested students—even beginners—could use the tables, graphs, and references as points of departure for their own investigations. *Respiration and Circulation* deserves a place in reference libraries of secondary schools and colleges, in addition to its more obvious place in laboratories where research is carried out in relevant biologic fields.

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GAS CHROMATOGRAPHY IN BIOLOGY AND MEDICINE, ed. by Ruth Porter. 1969. J. & A. Churchill, Ltd., London. 222 p. $11.50.

This book, reporting a symposium on gas chromatography, consists of an historical introduction and sections on design, biologic and medical applications, and trends in development. Most of the 24 members of the symposium are eminently qualified, and the book contains some useful contributions; but I wish there had been more "practical" information, especially for the user of gas-chromatography equipment who does not have access to shops that can make special accessories.

The chapter (by A. J. P. Martin) on the historical background of gas chromatography and the chapters on detectors, on chromatographic analysis of blood, tissue, and respiratory gases, and on the applications of gas chromatography in forensic medicine must be singled out and commended.

This book is recommended to those who are contemplating the purchase of gas-chromatography equipment and to those who are interested in keeping abreast of developments in the field. It is not recommended to students generally or to others who have only a casual interest in the subject.

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