THE BIOCHEMICAL JOURNAL

NOW READY
Index to Authors and Subjects
Volumes XXI—XXX 15s. net (postage 6d.)

PREVIOUSLY PUBLISHED
Index to Authors and Subjects
Volumes I—X 5s. 3d. net (postage 2d.)
Index to Authors and Subjects
Volumes XI—XX 10s. net (postage 4d.)

CAMBRIDGE UNIVERSITY PRESS

QUICKFIT DOES IT BETTER—

WIDMER COLUMN

Detachable type

This fractionating column combines a long vapour path in a short effective length for preliminary separation, with a highly efficient Dufton type spiral column for the sharp cutting of fractions. The spiral is maintained at a constant temperature by vapours in the surrounding annular space and, hence, external temperature changes do not materially affect its efficiency. All parts are detachable to facilitate cleaning.

Apparatus can be supplied in Pyrex, Phoenix or Hysil glass.

CAMBRIDGE UNIVERSITY PRESS

CATTLE FODDER AND HUMAN NUTRITION

WITH SPECIAL REFERENCE TO BIOLOGICAL NITROGEN FIXATION

By A. I. VIRTANEN

25 text-figures, 31 tables. 7s. 6d. net

The problems dealt with in this timely book are of growing interest to research workers, teachers and farmers. Professor Virtanen examines the influence of biological nitrogen fixation and of the symbiosis of leguminous plants and legume bacteria upon fodder and milk production; shows, on the basis of his own investigations, both the importance and possibility of preserving the same vitamin potency of milk winter and summer; and suggests an improved method of fodder preservation. He concludes with a general survey of the problems in their relation to human nutrition.

QUICKFIT & QUARTZ LTD

LABORATORY GLASSWARE WITH STANDARD INTERCHANGEABLE GROUND GLASS JOINTS

Write for fully illustrated catalogue to Dept. B.
1 ALBEMARLE STREET, LONDON, W.1
Phone Regent 8171
Works: Trimplex Works, King's Norton, Birmingham
Third Edition. Revised and Enlarged

PLANT BIOLOGY

An Outline of the Principles underlying Plant Activity and Structure

By H. GODWIN

83 text-figures. 7s. 6d. net

This well-known modern book, "bearing the hall-mark of individuality" as Nature says, and now in its Third Edition, has been revised throughout by the author. A good deal of new matter is added, including chapters on The Fern Plant and The Flower and the Seed.

"It is a pleasure to be able unreservedly to recommend this book, not only to medical and other students preparing for examinations which include biology, but to all who wish to know how plants live and what part they play in the world." The Cambridge Review

CAMBRIDGE UNIVERSITY PRESS

---

Third Edition

VITAMINS

in Theory and Practice

By Dr Leslie HARRIS

Based on a Series of Lectures given at The Royal Institution

66 illustrations. 8s. 6d. net

"Dr Harris's popular book has been only slightly enlarged, but all the important recent discoveries receive due notice. The vigilance with which this revision has been carried out is exemplary; the reader is brought right up to date in a rapidly changing subject." The Lancet

Up-to-date, delightfully written, authoritative, a most valuable addition to current vitamin literature; of value to every biochemist. Science

Informative, meticulously accurate...an undoubted success. Nature

Gives all the essential facts, and many interesting sidelights, numerous striking and unusual illustrations. Science News Letter

An excellent survey, the best at present available, should have a wide appeal: a standard text book which is destined to become a classic. Medical Times

CAMBRIDGE UNIVERSITY PRESS
GIRARD'S REAGENTS
"T" AND "P"
(British Patent No. 431,165)
for the isolation and purification of organic ketones
A. Girard and G. Sandulesco,

Girard's Reagents are made by
The British Drug Houses Ltd.
in England under licence.

Enquiries are invited for quotations for
large or small quantities

THE BRITISH DRUG HOUSES LTD.
GRAHAM STREET . LONDON N.1

MICRO AND SEMIMICRO CHEMICAL ANALYSIS

Micro-chemistry in its various branches has advanced with such remarkable strides during recent years, especially in this country, that we have found it essential to revise our Micro and Semimicro Apparatus catalogue, although the previous edition had been in circulation for such a short period. We shall be pleased to send a copy, free on request. Please apply for Catalogue No. 103B.

A. GALLenkamp & Co., Ltd.
17-29 SUN STREET
FINSBURY SQ., LONDON, E.C.2

Features in the Architecture of Physiological Function

By
JOSEPH BARCROFT

Demy 8vo
106 text-figures, 43 tables
20s. net
_Cambridge Comparative Physiology Series_

Cambridge University Press

The Institute of Chemistry of Great Britain and Ireland

_The Institute of Chemistry was established in 1877 to provide the Government and the public with the means of recognising those who have been properly trained and proved to be competent to practise chemistry as a profession. In 1885 the Institute was granted a Royal Charter with authority to grant certificates of competency, and to register persons qualified to practise. The aims of the Institute include the elevation of the profession of chemistry and the maintenance of the efficiency, integrity and usefulness of persons practising the same by compelling the observance of strict rules of membership, and by setting up a high standard of scientific and practical efficiency. Particulars of the Regulations and Examinations of the Institute can be obtained (free) on application to the Registrar._

_All communications to be addressed to the Registrar_

THE INSTITUTE OF CHEMISTRY
30 Russell Square, London, W.C. 1
NITROGEN N COMPOUNDS

Many of the most important raw materials of biochemical research are compounds of nitrogen. Among those obtainable from the Glaxo Laboratories are the following:

PROTEINS
Casein with low ‘ash’ content
Casein with low ‘ash’ content, extracted for removal of fat and fat-soluble vitamins
Sodium caseinate
Zein

CHEMO-THERAPEUTIC AGENTS
p-aminobenzenesulphonamide

AMINO-ACIDS etc.
z-Alanine. Arginine.
dl-Aspartic acid. Creatine.
d-l-Glutamic acid. Glycine.
Guanosine.
Histamine dihydrochloride.
Histidine hydrochloride.
l-Leucine.
d-Lysine hydrochloride.
dl-Methionine. dl-Proline.
Tryptophane. Tyrosine.

VITAMINS
Aneurin chloride hydrochloride
Lactoflavin
Nicotinic acid

LIVER EXTRACTS
Anti-anaemic factor
Filtrate factor
Eluate factor

For full particulars please write to
THE BIOCHEMICAL DEPARTMENT, GLAXO LABORATORIES LTD., GREENFORD, MIDDLESEX

HEFFER’S BOOKSHOP

The items below are from our large stock of Scientific Books and Journals. Catalogues will be sent on application, and correspondence is invited.

ANALYST (The). The Organ of the Society of Public Analysts and other Analytical Chemists, from Jan. 1878 to Dec. 1936 (Vols. 3–61), 19 vols. cloth, 3 vols. half roan, rest in parts as issued, roy. 8vo. £55

NUTRITION ABSTRACTS AND REVIEWS, issued under the direction of the Imperial Agricultural Bureaux Council, the Medical Research Council, and the Reid Library; from the commencement in October 1931 to April 1938 (Vols. 1 to 7), 7 vols. roy 8vo., in parts as issued. £9. 9s.

We have great experience in supplying English and Foreign Scientific and other Periodicals to all parts of the world, and shall be pleased to give quotations.

W. HEFFER AND SONS LIMITED
CAMBRIDGE

JOURNAL OF HYGIENE (The). Edited by G. H. F. Nuttall, from the commencement in January 1901 to December 1935 (Vols. 1–35), with Plague Supplements Nos. 1–5 and General Index to Vols. 1–10, roy. 8vo., in parts as issued. £45


From Band 3 onwards “Die Tierernährung” forms Abteilung 8 of “Biedermanns Zentralblatt für Agriculturchemie.”