

*Third Edition*

# **DATA FOR BIOCHEMICAL RESEARCH**

**Rex M. C. Dawson  
Daphne C. Elliott  
William H. Elliott  
Kenneth M. Jones**

**OXFORD SCIENCE PUBLICATIONS**

**DRL - EXHIBIT 1013**

# DATA for BIOCHEMICAL RESEARCH

---

REX M.C. DAWSON

AFRC Institute of Animal Physiology, Babraham,  
Cambridge

DAPHNE C. ELLIOTT

Flinders University, Bedford Park, South Australia

WILLIAM H. ELLIOTT

University of Adelaide, South Australia

KENNETH M. JONES

University of Leicester

---

*Third Edition*



CLARENDON PRESS • OXFORD • 1986

Oxford University Press, Walton Street, Oxford OX2 6DP  
Oxford New York Toronto  
Delhi Bombay Calcutta Madras Karachi  
Kuala Lumpur Singapore Hong Kong Tokyo  
Nairobi Dar es Salaam Cape Town  
Melbourne Auckland  
and associated companies in  
Beirut Berlin Ibadan Nicosia

Oxford is a trade mark of Oxford University Press

Published in the United States  
by Oxford University Press, New York

© R.M.C. Dawson, D.C. Elliott, W.H. Elliott, K.M. Jones, 1986

First edition 1959  
Second edition 1969  
Third edition 1986

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of Oxford University Press

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out or otherwise circulated without the publisher's prior consent in any form of binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser

British Library Cataloguing in Publication Data  
Data for biochemical research.—3rd ed.  
1. Biological chemistry—Technique  
I. Dawson, R. M. C.  
574.19'2'028 QP519.7  
ISBN 0-19-855358-7

Library of Congress Cataloging in Publication Data  
Main entry under title:  
Data for biochemical research.  
Includes bibliographies and index.  
1. Biological chemistry—Handbooks, manuals, etc.  
I. Dawson, R. M. C. (Rex Malcolm Chaplin)  
QP520.D37 1985 574.19'2'021 85-4239  
ISBN 0-19-855358-7

Set by The Alden Press, London and Northampton  
Printed in Great Britain by  
R. J. Acford, Chichester, Sussex

## Preface

In this third edition, we again aim to supply information needed by biochemists in a form sufficiently concise to be kept in the laboratory. No attempt is made to be comprehensive. Material has been selected under the guiding principle that it should be of potential use to a reasonably large number of readers. We try, in fact, to occupy the central ground of possible interest to all biochemists. This excludes much material of use only to specialists in individual areas, but they will have more comprehensive sources of information in their own fields. Between the extremes of obvious material for inclusion, such as buffers, and for exclusion, such as rarely encountered metabolites, there is a large grey area in which subjective decisions have had to be made. Such decisions cannot suit everyone or every situation, but we have been encouraged by the sustained interest in, and demand for, the previous edition to believe that this policy is supplying a real need in the laboratory.

Much has been deleted from earlier editions to be replaced by new material of current importance to biochemistry and molecular biology. With the increase in commercial availability of biochemicals, references to preparations have been omitted as a routine; with the development of sophisticated separative technologies there is less need for references to estimations of many compounds. References are now included in the general remarks only where they appear to be of use. Alphabetical listing has been retained but functional groupings of compounds has been emphasized so that a reader can see what is available as well as find individual compounds.

Much of the revision has been done by the authors with help from people too numerous to mention individually. Some sections however have been largely revised by specialists and these are listed overleaf. It is emphasized that the final selection and presentation of material has always been made by the authors who must therefore bear the responsibility for omissions and deficiencies. Names no longer appear at the head of sections because with revisions and reorganizations it is difficult to associate any one name with a section. Acknowledgement must be made to contributors to earlier editions on whose work the current volume is based.

*Babraham, Adelaide, Bedford Park, and Leicester*  
July 1984

R.M.C.D. W.H.E.  
D.C.E. K.M.J.

# Acknowledgements

We gratefully acknowledge the help and assistance of the people listed below in the preparation of the sections listed:

- 9 Steroids: Dr R. Seamark, Queen Elizabeth Hospital, University of Adelaide.
- 10 Porphyrins and related compounds: Dr J. Barratt, Division of Plant Industry, CSIRO, Canberra.
- 16B Reagents for protein modification: Dr N.M.C. Kaye, Amersham International plc (Cardiff Laboratories), Whitchurch, Cardiff.
- 17 Stability constants for metal complexes: Dr D. Perrin, John Curtin School of Medical Research, Australian National University, Canberra.
- 19 Gel electrophoresis: Dr R. Symons, Department of Biochemistry, University of Adelaide.

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.