Antibodies have become one of the most important tools in the areas of cell and molecular biology. Antibodies offer a unique combination of sensitivity and specificity that surpasses nearly all other detection systems. Hence immunoassays of all types are now widely used in many areas of research. This book describes in clear, very precise protocols the whole range of important immunodetection methods in current use in cell and molecular biology and as such it is essential for anyone either using, or about to use, antibody techniques in their work. After a general introduction, this book covers the following:

— Labeling of antibodies

— Detection and quantification of soluble antigen or antibody

— Detection and quantification of cell-associated antigen or antibody

— Purification of antigen or antibodies

— Characterization of antigen or antibody

— Cell depletion and enrichment

and includes a list of buffers and reagents, and addresses of suppliers.

This book would be useful for people working in the fields of biochemistry, immunology, and molecular biology, as well as for advanced students.

PII: S0960-0760(96)00242-7

Gel Electrophoresis. Nucleic Acids. P. Jones. Essential Techniques Series, edited by D. Rickwood. Published 1995 by John Wiley & Sons, Chichester, UK. 150 pages. ISBN: 0-471-96043-8Price at Nov. 1995: £14.95.

Gel electrophoresis of nucleic acids is the one technique that spans the whole range of molecular biology techniques. The combination of its high resolution and versatility of its applications makes it the one method used by all molecular biologists. This book gives clear, step-by-step protocols for all the important techniques from simple analytical separations of nucleic acids to the latest PCR techniques, and hence is essential reading for all those working in the area of molecular biology. It is divided into the following main sections:

— Introduction to gel electrophoresis

— Isolation of DNA and RNA

— Methods for labeling nucleic acids

— Gel electrophoresis of RNA

— Electrophoresis of DNA

— Detection of nucleic acid species–autoradiography and fluorography

— Isolation of nucleic acids from gels

— Analysis of nucleic acids: protein interactions.

In addition, three appendixes cover:

— Calculation of moles and molarity

— Solution recipes

— Suppliers.

This book would be useful for people working in the fields of biochemistry, molecular biology, biophysics, and for advanced students.

PII: S0960-0760(98)00018-1

Cell and Molecular Biology. D. Rickwood and D. Patel. Essential Data Series, edited by D. Rickwood and B. D. Hames. Published 1995 by John Wiley & Sons, Chichester, UK. 224 pages. ISBN: 0-471-95568-XPrice at Jan. 1995: £14.99.

This volume is an invaluable compendium of essential information required by all cell and molecular biologists. As well as providing a wide range of core information needed by all researchers in the biomolecular sciences, it brings together additional selected information of importance from the areas of biochemistry, cell biology, genetics and molecular biology.

The book is divided in to the following sections:

— Buffers end solutions

— Properties of small molecules

— Properties of macromolecules

— Cells and subcellular fractions

— Fractionation and analytical methods

— Numerical data

— Safety

and includes a list of manufacturers and suppliers.

PII: S0960-0760(96)00244-0

Nucleic Acid Hybridization. P. M. Gilmartin. Essential Data Series, edited by D. Rickwood and B. D. Hames. Published 1996 by John Wiley & Sons, Chichester, UK. 135 pages. ISBN: 0-471-95084-XPrice at Jan. 1995: £12.99.

This book provides essential information on nucleic acid hybridization, which is central to a range of important techniques in widespread use in molecular biology, but which requires careful optimization in order to generate reliable experimental data. It includes invaluable guidance and key data on, for example, labeling probes, blotting procedures, hybridization conditions and detection system.

The following main topics are covered:

— Equipment, reagents and chemicals

— Electrophoresis of nucleic acids for hybridization analysis