

blank reactions. *Ann. clin. Biochem.*, **8**, 189-194.

- Hirst, A. D., and Howorth, P. J. N. (1972). Standardization of clinical enzyme assays. (Letter to the Editor). *J. clin. Path.*, **25**, 740-743.
- Moss, D. W., Baron, D. N., Walker P. G., and Wilkinson, J. H. (1971). Standardization of clinical enzyme assays. *J. clin. Path.*, **24**, 740-743.

[We have given the authors this opportunity to reply to the criticisms of Hirst and Howorth and King et al.—EDITOR]

Abbreviations for Names of Diagnostic Importance

A recent communication (Baron, Moss, Walker, and Wilkinson, 1971) is disturbing inasmuch as the group, although representatives of specified organizations, was acting without the authority of these bodies. In addition, the authors state that although the International Union of Biochemistry (1961, 1965) strongly discouraged the use of abbreviations for enzymes, and that this was still upheld, they nevertheless arbitrarily continue, 'we recommend . . .'

The pitfalls of abbreviations have been discussed elsewhere (King, 1969). The system put forward by Baron et al differentiates glutamate dehydrogenase and glutathione reductase as GMD and GTD respectively, but what happens to glycerate dehydrogenase and glyoxalate reductase? Alcohol dehydrogenase is AD, and presumably adenosine deaminase would be ADS, trypsin is TPS, and triose phosphate isomerase, TPI. It becomes easier to remember and use the trivial name than the abbreviation and it requires little imagination to see what the computer-controlled data processing systems mentioned would do with some of these abbreviations.

A second communication from this group (Moss, Baron, Walker, and Wilkinson, 1971) deals with the 'standardization' of alkaline phosphatase assay and a further report on the standardization of aspartate and alanine transaminase is promised. This raises the problem of how many standardizations the world can expect, since the German Society of Clinical Chemistry (1970) have already published their standard assays for the transaminases, alkaline phosphatase, lactate dehydrogenase, 2-hydroxybutyrate dehydrogenase, creatine kinase, and 'leucine arylamidase'. The situation is even more complicated because the London group state that an 'expert panel'

of the International Federation of Clinical Chemists has the same subject under discussion.

Doubtless it is natural progression from the first report which discredits recommendations made by an international representative and authorized body to the later reports which disqualify such proposals before they are even made.

J. KING
A. R. HENDERSON
M. MCQUEEN
*Department of Biochemistry,
Royal Infirmary, Glasgow*

References

- Baron, D. N., Moss, D. W., Walker, P. G., and Wilkinson, J. H. (1971). Abbreviations for names of enzymes of diagnostic importance. *J. clin. Path.*, **24**, 656-657.
- German Society for Clinical Chemistry (1970). Standardisation of methods for the estimation of enzyme activity in biological fluids. *Z. klin. Chem.*, **8**, 658-660.
- International Union of Biochemistry (1961). *Report of the Commission on Enzymes*, p. 33. Pergamon Press, Oxford.
- International Union of Biochemistry (1965). *Enzyme Nomenclature*, p. 31. Elsevier, Amsterdam.
- King, J. (1969). The nomenclature of enzymes and methods of expressing results. *Brit. J. Anaesth.*, **41**, 222-226.
- Moss, D. W., Baron, D. N., Walker, P. G., and Wilkinson, J. H. (1971). Standardization of clinical enzyme assays. *J. clin. Path.*, **24**, 740-743.

Correction

We regret that the list of references, now set out below, was not printed with the Letter to the Editor, 'A red herring in the detection of Bence Jones protein', by R. B. Payne (*J. clin. Path.*, **25**, 183).

References

- Hobbs, J. R. (1966). The detection of Bence-Jones proteins. *Biochem. J.*, **99**, 15P.
- Hobbs, J. R. (1971). Immunocytoma o' mice an' men. *Brit. med. J.*, **2**, 67-72.
- Jones, H. B. (1847). Papers on chemical pathology. Lecture III. *Lancet*, **2**, 88-92.
- Putnam, F. W., Easley, C. W., Lynn, L. T., Ritchie, A. E., and Phelps, R. A. (1959). The heat precipitation of Bence-Jones proteins. I. Optimum conditions. *Arch. Biochem.*, **83**, 115-130.
- Whitehead, T. P., and Worthington, S. (1961). The determination of carboxyhaemoglobin. *Clin. chim. Acta*, **6**, 356-359.

Book reviews

Reference Methods for the Microbiological Examination of Foods. (Report prepared by the Subcommittee on Food Microbiology of the Food Protection Committee.) (Pp.39. \$2.25.) Washington, DC: National Academy of Sciences. 1971.

This booklet could be useful although it is incomplete. There is no mention of the surface plate count and its advantages or the importance of anaerobic counts. There is no section on the isolation of *Clostridium welchii* (*perfringens*) which figures highly in both UK and USA statistics for food poisoning.

All the methods given appear in 'Microorganisms in foods' by the International Committee on Microbiological Specifications for Foods.

Many media are available for the isolation and enumeration of coagulase positive staphylococci so surely a reference method could have been chosen but no information is given.

In the salmonella section there is no guidance on the preparation of samples. The beneficial effect of incubation at 43°C for some liquid enrichment media is not given.

Methods for faecal streptococci, *Vibrio parahaemolyticus*, and *Bacillus cereus* are not given, but there is a clear description of the serological identification of the enteropathogenic *E. coli*.

BETTY C. HOBBS

Laboratory Diagnosis of Diseases Caused by Toxic Agents Edited by F. W. Sunderman, and F. W. Sunderman, Jr. (Pp. xvii + 592; illustrated. £12.60.) St. Louis, Missouri: Warren H. Green. 1970. London: Adam Hilger Ltd. 1971.

This book contains the edited proceedings of an applied seminar held under the auspices of the Association of Clinical Scientists in March 1970. The book is divided into four parts: 'General toxicological considerations', 'General methodological considerations', 'Specific toxic agents', and 'Clinicopathologic considerations'. Fifty-five papers are presented over a very wide toxicological field. Papers range from mode of action of poisons to metabolism, toxicity of food additives.

J Clin Pathol: first published online 10 April 1978

and cosmetics, general analytical methodology as well as specific methodology for such poisons as cholinesterase inhibitors, fluoride, narcotics, carbon monoxide, cyanide, methanol, ethanol, arsenic, and mercury. A substantial part of the book deals with the pathological aspects of poisoning including the detection of cytogenetic effects.

Obviously, in a book that deals with everything from bee and snake venoms to drowning, with pneumoconiosis and electrical and chemical burns adding to the toxicological (*sic*) picture, there is something in this book for almost everyone.

However, I found the treatment of those papers in which I am best able to judge very superficial. In the 129 references quoted in chapters on the isolation and separation of toxic substances, thin-layer chromatography, atomic absorption, and polarography, only 24 were after 1966 and none later than 1968. Toxicological literature is expanding at such a rate that it must be clear that these proceedings do not represent a major contribution to the literature. The contribution on mass spectrometry is of interest only and makes no mention of GC-MS that is now so widely used. In the diagnosis of drowning the conclusion is reached that no single reliable chemical or physical test is yet available for diagnosis.

The chapter on modifications in toxicity from the interaction of drugs and chemicals occupies three pages and eight references and deals mainly with ethanol-barbiturates and anti-diabetics with sulphamide and dicoumarol. This may reflect the time available to the participants—clearly such a subject is of book size proportions and cannot be done in a few pages. Similarly Hays' three pages on the predictive value of human toxicity from animal data with the summary that 'unless the current approach to toxicology changes significantly, the predictive value of human toxicity from animal data will become even more obscure' will surely raise many hackles if not the blood pressure of financial directors of pharmaceutical firms!

This book thus becomes a gentle introduction to topics that interest toxicologists.

It is very well produced but at £12.60 it is expensive for what it contains.

A. S. CURRY

Practical Hints on Infra-red Spectrometry from a Forensic Analyst By M. J. de

Faubert Maunder. (Pp. 239; illustrated. £5.20.) London: Adam Hilger Ltd. 1971.

The title of this book might lead the reader to expect a full coverage of all practical aspects of infra-red spectroscopy, particularly when the wide range of items submitted to a forensic laboratory is remembered. However, this is not the case. The author has chosen to restrict this field to the spectroscopy of drugs and within this compass to consider only the techniques for handling solid samples and the storage and retrieval of data from collections of pharmaceutical spectra. Thus a whole range of topics of interest to the forensic chemist, such as ways of obtaining the spectra of intractable materials such as paint fragments, insoluble polymers, oils, petrols, and fibres, have been ignored.

However, within the limits set by the foregoing, this book is one to be recommended almost unreservedly. The whole range of treatment of solids is discussed clearly and thoroughly. The merits and weaknesses of the mull and salt-disc methods are explored lucidly, and any chance of misinterpretation of the spectrum through an error of technique is well brought out. There is an excellent set of spectra to illustrate these points.

Attention is also devoted to the recovery of samples for infra-red measurement from analytical gas and thin-layer chromatography. The treatment is timely, since this combination of the high powers of separation of chromatography with the identification facility of infra-red is still too little used. The only minor omission in this section is a mention of the elegant method of G. W. Goodman¹ for transference of material from thin-layer plate to potassium bromide.

The book is well written, the style is lucid, and errors are remarkably few.

R. L. WILLIAMS

¹G. N. Goodman, 'Quantitative Paper and Thin Layer Chromatography', p. 91, ed. by E. J. Shellard, Academic Press, London, 1968.

Clinical Chemistry and Automation: A Study in Laboratory Proficiency By R. Robinson (pp. viii + 188; illustrated. £3.20.) London: Charles Griffin. 1971.

This book is in many respects a contemporary history of the art (hopefully a science) of clinical chemistry. From analytical error as the base, he examines the impact of work simplification and mechanization, the potential of computers in the laboratory,

quality control of analyses, the interpretation of results and the role of biochemical screening. With the ardour of an Old Testament prophet, he gently chides us, castigates us, shows us the road to improvement, peers into the future, and lays down the law. Colleagues, past, present, and future, are his flock—or so the introduction on the jacket implies. Sir Edward Wayne, in the foreword, expresses another view, commending the book to the clinician. Herein is the dilemma—for whom *is* the book intended? Dr Robinson does not say. The title is perhaps unfortunate for it will deter the clinician, and Sir Edward is right. Some parts the clinician may omit without loss, whereas others need expansion for the clinical chemist—the section on choice of a laboratory computer, for example, is very superficial. Nevertheless, the clear message of this beautifully produced book is one not to be ignored by either group.

P. D. GRIFFITHS

G-6-PD Deficiency By Dan F. Keller. (Pp. 67; illustrated. £5.00.) London: Butterworth Group. 1971.

This is one of a series of monographs issued by the Chemical Rubber Company of America. It is devoted to a general survey of G6PD deficiency. To anyone interested in this field it supplies a wide cover of the subject in a clear and readable style. The biochemical background to the disorder can easily be followed although the basic chemical nature of the enzyme deficiency is not so clearly described. Aspects of the syndrome are covered in ample detail with the exception of the favism problem which is only mentioned very briefly. There is a methods section at the end of the book in which a wide variety of relevant investigations are described and referenced, but unfortunately detailed recipes for individual tests are not given and those interested will have to refer to the original papers for further information. The book is accompanied by a very detailed reference section but this appears to omit the excellent WHO monograph on G6PD. All told this is a very useful book but its cost, at £5, is very high.

T. PRANKER

Some Implications of Steroid Hormones in Cancer Edited by D. C. Williams, and M. H. Briggs. (Pp. x + 138; illustrated.