Letter to the Editor

Assay of Vitamin B₁₂

Orrell and Caswell (1972) have reported that the radioisotopic method of Raven, Robson, Walker, and Barkhan (1969) for the assay of vitamin B₁₂ in serum gives lower values when a higher temperature or a longer period of heating is used in the extraction procedure. We would like to support these observations and to add that the use of a larger volume of N/4 HCl in the extraction mixture or the use of a stronger HCl solution has similar effects. These observations, however, have little clinical importance because the differences between the serum vitamin B₁₂ values obtained with an extraction process involving heating at 115°C for 15 minutes, which is the method we recommended in 1969, and one involving heating at 115°C for one minute, which is our current method, only became apparent when the serum vitamin B₁₂ values exceeded about 800 pg/ml. The lower limit of normal (200 pg/ml) and the low values found in vitamin B₁₂-deficient sera remain unaltered. The main advantage of the shorter time of heating in the extraction process is that the amount of ⁵⁷⁷CoB₁₂ bound non-specifically by the denatured serum proteins is reduced and thus the background count for each serum sample is reduced. In an attempt to reduce background counts to avoid the need for individual background counts, we have in the past considered changing from the use of a whole serum extraction procedure to one involving deproteinization, such as that used in the Lactobacillus leichmanii microbiological assay. However, extensive use of deproteinization in the radioisotopic method (during studies into the extraction of vitamin B₁₂ from its binding proteins in serum) convinced us that higher and more accurate serum vitamin B₁₂-values were obtained when a whole serum extraction process was used. For the present, the best compromise appears to be an extraction process involving heating at 115°C for one minute and this is the method that we are now using. These conditions are very similar to those suggested by Orrell and Caswell, i.e., heating at 110°C for 15 minutes.

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References

Notice
Host-Virus Reactions with Special Reference to Persistent Agents

The published proceedings of the Royal College of Pathologists' symposium on 'Host-virus reactions with special reference to persistent agents' is now available from the Publishing Manager, Journal of Clinical Pathology, BMA House, Tavistock Square, London WC1H 9JR, price £2.00 post free. All those who paid the registration fee for the meeting itself will receive a copy of the symposium. For members of the Royal College of Pathologists and members of the Association of Clinical Pathologists there is a concessionary rate of £1.75 post free.

Fourth Congress of the International Society on Thrombosis and Haemostasis

The fourth congress will be held in Vienna, Austria from 19 to 22 June 1973. The main topics will be on biochemistry and biosynthesis of normal and abnormal clotting factors, clinical trials in the treatment of thromboembolic disorders, and pathogenesis of thrombosis. Free communications are invited and abstracts of these should reach the President of the Congress, Professor Dr E. Deutsch, c/o Intercongress, Stadiongasse 6-8, A-1010 Vienna, Austria, not later than 15 February 1973.

Book reviews


Into some 270 pages, Dr Bernard Knight has packed a mass of information primarily of value to the general practitioner or junior hospital practitioner but by no means confined to them. Most pathologists will find in this book a great deal of valuable information, easily obtainable through an excellent index. Dr Knight has illustrated his work by a number of self-explanatory diagrams and he covers most subjects coming under his title of 'Legal aspects of medical practice'. He has added a summary of the relevant part of the Brodrick Report, carefully pointing out that none of it is yet implemented. It seems likely that in due course he will have to publish a revised edition to cover such changes as may arise from this and from the new Crown courts and perhaps other changes. It is to be hoped that the occasional factual error (magistrates are not appointed by the Lord Lieutenant in England) and rare spelling mistake will be corrected then. This book should be available in every hospital, and general practitioners will be well advised to have a copy available for reference.

A. G. MARSHALL


The purpose of the second edition of this book is 'to attempt a comprehensive review of the entire field of study of the lymphocyte'. The author has almost succeeded in achieving this ambitious aim. The first four chapters deal with the basic anatomy, physiology, production, circulation and life span of lymphocytes, and provide a useful summary of present knowledge in this complex field. The remainder of the book is mainly concerned with the immunological activities of the lymphocyte and deals in turn with antibody production, cell-mediated immunity, lymphocyte transformation, and homograft reactions in vitro. These chapters have been extensively revised, or written anew, and although most of the subject is