

amine showed some rather interesting results. Not only was a spot visible for ethanolamine in its normal position, but there was also a color area in the position of that assigned to the "yellow compound". Further experimentation showed that sodium hydroxide was indeed responsible for the yellow color appearing on this electrophoretogram. In addition to sodium hydroxide, barium hydroxide, lithium hydroxide and potassium hydroxide also produced a spot corresponding in color and in position to that originally assigned to the "yellow compound". Lithium hydroxide was probably responsible for the production of this spot in the case of the reduction of glycylglycine with lithium aluminum hydride. The anomalous spot produced by these basic compounds was very similar to the "slow moving spot" described by WALDRON-EDWARD¹. In this case the anomaly was caused by traces of sulfate.

Additional study indicated that the color formation was independent of the type of paper used. The exact concentration of base required for the production of the "yellow compound" is unknown. However, this spot appeared on electrophoretograms when 5-10 μ l of 10% sodium hydroxide were placed on the paper strip.

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¹ DEIRDRE M. WALDRON-EDWARD, *Chem. & Ind. (London)*, (1954) 104.

Received February 13th, 1959

BOOK REVIEWS

Analytical Chemistry, Some New Techniques, by A. G. JONES. Butterworths Scientific Publications, London, and Academic Press Inc., New York, 1959, 268 pages, price 40 s.

The author states that he selected eight topics of special interest to him and presented them to non-specialists as introductions to these techniques without giving a complete survey. The eight topics are: Flame Photometry (47 pages), Differential Spectrophotometry (28 pages), Gas Chromatography (43 pages), The Use of Ion Exchangers in Analytical Chemistry (36 pages), Acid-Base Titrations in Non-aqueous Media (22 pages), Coulometric Titrations (20 pages), Differential Refractometry (18 pages) and The Determination of Oxygen and Hydrogen in Metals (28 pages).

The reviewer will confine himself to the chapters on gas chromatography and ion exchangers which are both excellent. The author demonstrates that these two topics can be fully explained and illustrated with numerous applications in as little as about 40 pages each, provided, of course, that the whole literature is not discussed. The

chapter on gas chromatography contains adequate theoretical explanations and descriptions of apparatus employed as well as a number of well-chosen examples. Critical comments on various problems of gas chromatography are also made where they are needed, such as: "Many examples of the use of gas-liquid chromatography are now available in the literature but unless some way can be found at an early date of summarising all this information in a concise manner, much of it will be lost because the titles given to papers on this subject rarely betray the kind of separation found therein".

The chapter on ion exchangers again is a very good introduction to the subject. The reviewer feels, however, that the examples used to illustrate the various applications could have been better chosen. Much better separations of transition metals can be obtained on anion exchange resins than the separations of platinum metals quoted. The extensive work by K. A. KRAUS and coworkers should have been mentioned. It is too important to be overlooked.

Nevertheless the book can be strongly recommended to analysts or to advanced students. Only one misprint was noted: "Glueckauf" was written without a c.

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Gas-Chromatographie, von A. I. M. KEULEMANS, übersetzt und bearbeitet von E. CREMER. Verlag Chemie, Weinheim, 1959, 208 Seiten mit 26 Abbildungen. DM 24.—.

Die englische Originalauflage dieses Buches wurde schon in dieser Zeitschrift (Vol. 1, S. 203) von A. T. JAMES besprochen. Die Übersetzung und Bearbeitung von Frau Prof. CREMER ist ausserordentlich gut. Ergänzungen des jetzt schon zwei Jahre alten Originals sind an vielen Stellen angebracht sowie ein Anhang über Gas-Chromatographie an Adsorptionsschichten, dem Arbeitsgebiet der Übersetzerin.

Es ist zu begrüßen, dass in einer Zeit in der sogar eine Zeitschrift wie "Naturwissenschaften" manche Artikel in englischer Sprache veröffentlicht, eine Übersetzung manche sogenannte Anglizismen beibehält eher als neue Worte für schon wohlbekannte Begriffe zu formen, sodass Abkürzungen wie GLC und GSC und Worte wie Retentionsvolumen, Longitudinal Diffusion, Tailing und Tailing Reduktion dem Leser schon bekannt sind und sich keinerlei Schwierigkeiten bei dem Lesen der Originalliteratur ergeben, die momentan in diesem Gebiet hauptsächlich englisch ist.

Der Verlag Chemie hat die gewöhnliche praktische und gefällige Ausstattung diesem Band verliehen mit zahlreichen sehr klaren Illustrationen.

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