



chlorate, m. p. 187.1–187.8°, calcd. for $C_{13}H_{14}O_4 \cdot NCl$: C, 55.05; H, 4.97. Found: C, 55.12; H, 5.05).

In a similar reaction, the use of the lithium derivative of N-methylharman³ (IV) led to the smooth synthesis of salts of the methylsempervirininium cation (V). Synthetic samples of sempervirine methopicate, m. p. 239–240°, and

(3) Cf. Späth and Lederer, *Ber.*, **63**, 2102 (1930). Our material was made from N-methyltryptophan, which was itself prepared very smoothly by a new synthesis analogous to that used by Warner and Moe (*THIS JOURNAL*, **70**, 2766 (1948)) for the preparation of tryptophan. Our melting point (285°) for N-methyltryptophan agrees with that (289°) of Wieland, Konz and Mittasch (*Ann.*, **513**, 23 (1934)) rather than that (225°) recently reported by Snyder and Eliel (*THIS JOURNAL*, **70**, 3855 (1948)).

sempervirine methochloride, m. p. 330–332°, showed no depression in melting point on admixture with the corresponding salts of identical melting points prepared from natural sempervirine. The identity was further confirmed through the reproduction by synthetic sempervirine methochloride of the very characteristic ultraviolet absorption behavior of the salt from the natural alkaloid [λ_{\max} . (log ϵ): 241 (4.56), ~250 (4.49), 292 (4.20), 330 (4.28), 395 (4.22); λ_{\min} . (log ϵ): 280 (4.14) 305 (4.09), 365 (4.10)].

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NEW BOOK

Microdiffusion Analysis and Volumetric Error. By EDWARD J. CONWAY, M.B., D.Sc., Professor of Biochemistry, University College, Dublin, and Member of the Royal Irish Academy. Crosby Lockwood and Son, Ltd., 20 Tudor Street, London, E. C. 4, England, 1947. xix + 357 pp. Illustrated. 14 × 22.5 cm. Price 21/- net.

Although the literature shows an ever-increasing application of the microdiffusion principle, the lack of a general description of the technique in books on methodology makes this detailed and carefully written book especially valuable.

Conway was the first to develop the microdiffusion technique to a point where full advantage is taken of the simplicity, accuracy and convenience inherent in this method. By eliminating distillation or aeration in the determination of volatile substances, labor, apparatus and time are saved particularly in serial analyses. It may surprise many that the diffusion time in the micro-ammonia procedure, for example, may be less than thirty minutes and that the accuracy is equal to that of the macro procedure.

The book is divided into three sections. The first deals with the design of the diffusion cell and the factors governing the rate of diffusion. The second section describes critically and in detail most of the published applications of the microdiffusion principle. The last section discusses the factors influencing variable error in volumetric analysis and establishes a rational basis for maintaining macro accuracy in micro procedure. This discussion should be of value to all analysts who wish to maintain given standards of accuracy in volumetric analysis.

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BOOKS RECEIVED

November 10, 1948–December 10, 1948

- A. D. BOOTH. "Fourier Technique in X-Ray Organic Structure Analysis." Cambridge at the University Press. The Macmillan Company, 60 Fifth Ave., New York 11, N. Y. 1948. 106 pp. \$2.75.
- LI CH'IAO-P'ING. "The Chemical Arts of Old China." Chemical Education Publications, 2030 Northampton St., Easton, Pa. 1948. 215 pp. \$5.00.
- ALEXANDER FINDLAY. "A Hundred Years of Chemistry." The Macmillan Company, 60 Fifth Ave., New York 11, N. Y. 1948. 318 pp. \$4.50.
- R. W. HARMON AND C. B. POLLARD. "Bibliography of Animal Venoms." University of Florida Press, Law Building, Gainesville, Fla. 1948. 340 pp. \$8.00.
- JOSEPH H. KEENAN AND JOSEPH KAYE. "Gas Tables. (Thermodynamic Properties of Air Products of Combustion and Component Gases. Compressible Flow Functions.)" John Wiley and Sons, Inc., 440 West 44th St., New York 16, N. Y. 1948. 238 pp. \$5.00.
- HUGH C. MULDOON. "Organic Chemistry." Third Edition. The Blakiston Company, Philadelphia 5, Pa. 1948. 648 pp.
- R. T. SANDERSON. "Vacuum Manipulation of Volatile Compounds." John Wiley and Sons, Inc., 440 West 44th St., New York, N. Y. 1948. 162 pp. \$3.00.
- R. STROOPS, Editor. "Rapports et Discussions sur les Isotopes." 76-78 Coudenberg, Bruxelles. 411 pp.
- "Reports of the Biochemical Research Foundation of the Franklin Institute." Vol. IX. 1946-47. Dr. Ellice McDonald, Director. Biochemical Research Foundation, Newark, Del.