

This conclusion was verified by a synthesis of IV which made use of the known (9) 3-O-methyl- α -D-glucose, m.p. 164–166°. Acylation with 3-nitropropanoyl chloride in *N*-methylpyrrolidone solution provided an oily tetra-ester whose NMR spectrum showed it to be an anomeric mixture (C-1 proton of α -anomer at τ 3.63, $J_{1,2} = 4$ c.p.s.; C-1 proton of β -anomer at τ 4.10 $J_{1,2} = 8.3$ c.p.s.). However, crystallization from methylene chloride solution afforded an authentic sample of the β -anomer, m.p. 136–140°, whose infrared and NMR spectra were indistinguishable from those of naturally derived IV and whose mixed melting point was undepressed.

- (1) Ritsema, J. C., *Ann. Rep. Dept. of Agriculture, Industry, and Commerce of the Dutch Indies*, 1908–1909; through Reference 2.
- (2) Gorter, K., *Bull. Jard. Bot. Builenzorg (III)*, 2, 187 (1920).
- (3) Carrie, M. S., *J. Soc. Chem. Ind.*, 53, 288T (1934).
- (4) Carter, C. L., and McChesney, W. J., *Nature*, 164, 575 (1949).
- (5) Lewkowitsch, J., *J. Prakt. Chem.*, 20, 159 (1879).
- (6) Carter, C. L., *J. Sci. Food Agr.*, 2, 54 (1951).
- (7) Finnegan, R. A., and Mueller, W. H., *J. Pharm. Sci.*, 54, 1136 (1965).
- (8) Neeman, M., and Hashimoto, Y., *J. Am. Chem. Soc.*, 84, 2972 (1962).

(9) Glen, W. L., Meyers, G. S., and Grant, G. A., *J. Chem. Soc.*, 1951, 2568.

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Keyphrases

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structures
Optical rotation
IR spectrophotometry–structure
NMR spectrometry

Books

REVIEWS

Advances in Chromatography. Vol. 4. Edited by J. CALVIN GIDDINGS and ROY A. KELLER. Marcel Dekker, Inc., 95 Madison Ave., New York, NY 10016, 1967. 15.5 × 23 cm. xiv + 380 pp. Price \$16.50.

Most of the topics included in vols. 1–3 of this series, by and large, provided the balance of breadth and depth of coverage which is needed to present the reader with an overall view of the progress in the entire field of chromatography. It was noted in the reviews of these volumes [*J. Pharm. Sci.*, 55, 863 (1966); 56, 1047 (1967)], however, that not all of the chapters achieved this goal set by the editors.

The latter case is true to a greater extent in vol. 4 than in its predecessors. The one chapter relating directly to pharmaceutical chemistry (Steroid Separation and Analysis: The Techniques Appropriate to the Goal, by R. Neher) is disappointingly superficial; the other chapters, for the most part, emphasize depth of coverage at the expense of breadth. The chapter which achieves the desired balance is "Mass-Spectrometric Analysis of Gas-Chromatographic Eluents," by W. H. McFadden.

In addition, vol. 4 contains the following chapters: " R_f values in Thin-Layer Chromatography on Alumina and Silica," by Lloyd R. Snyder; "Some Fundamentals of Ion-Exchange-Cellulose Design and Usage in Biochemistry," by C. S. Knight; "Adsorbents in Gas Chromatography," by A. V. Kiselev; "Packed Capillary Columns in Gas

Chromatography," by István Halász and Erwin Heine; "The Polarity of Stationary Liquid Phases in Gas Chromatography," by Lutz Rohrschneider.

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Ganglion-Blocking and Ganglion-Stimulating Agents. By D. A. KHARKEVICH. First English Edition, translated from the Russian by R. Crawford. Pergamon Press, Inc., 44-01 21st St., Long Island City, NY 11101, 1967. xi + 367 pp. 14 × 22 cm. Price \$14.00.

Most medicinal chemistry researchers have probably had occasion to encounter both the interesting reports in such journals as *Farmakol. Toksikol.* and *Zhur. Obsh. Khim.* and the reluctance of the scientists to communicate *via* letters or reprints. Dr. Kharkevich's contribution is welcome, not only for the wealth of information and the quality of his book, but perhaps as evidence that more rapport between workers in this field may be imminent. While the reviewer is hardly competent in Russian, Dr. Crawford's translation is very obviously good English and appears to be faithful to the facts.

A study of agents affecting the ganglia is pullulate with experimental problems. The difficulties of obtaining and interpreting accurate data are well known. This book begins with a brief summary of