

theory, personal probability appears to be most relevant and gives rise to some searching and fundamental questions. As the author states in his introduction,

... the superficially incompatible systems of ideas associated on the one hand with a personalistic view of probability and on the other with the objectivistically inspired developments of the British-American School do in fact lend each other mutual support and clarification.

As the title suggests, the book is highly theoretical and abstract. The formal discussion is presented symbolically and is frequently introduced by oversimplified problems of the world around us. A study such as this is intended for a very limited audience—specifically, those interested in the abstract theory of statistics.

The author is not prepared, nor am I, to say how far reaching this unique approach to statistics will be, but it does give rise to a number of important and unanswered questions.

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Colorimetric Methods of Analysis. Including some turbidimetric and nephelometric methods. vol. IV. Foster Dee Snell and Cornelia T. Snell. Van Nostrand, New York, and Macmillan, London, ed. 3, 1954. vii + 676 pp. Illus. \$12.50.

Volume IV of this comprehensive treatise presents methods for the colorimetric chemical analysis of organic materials that were not covered in volume III. The present volume contains chapters dealing with the following classes of compounds: nitrites, nitrates and nitro compounds; aliphatic amines and amides; amino acids; proteins; aromatic primary, secondary, and tertiary amines; azo compounds, nitrogen-containing cycles, and so forth; urea and related compounds; compounds with inorganic radicals; sterols; hormones; alkaloids; enzymes; antibiotics; hemoglobin and related compounds; and natural pigments. In addition, there is a brief chapter on the determination of the color of liquids.

Each of the foregoing chapters is divided into sections that cover the analysis of either a specific compound or a closely related group of compounds. A typical section contains a paragraph or two covering the methods available for the analysis, the interfering substances and methods for eliminating the interference, and the types of sample to which the various methods are applicable. A section that deals with the preparation of samples of various types for the analysis follows. Finally, the actual procedure for the development of the color and its estimation is described.

The preface states that the aim has been completeness, and it appears that this is very nearly what the authors have achieved. With the wealth of colorimetric methods available for the analysis of these compounds, it is amazing that the Snells have been able to incorporate in the space available not only the actual

directions for the analyses but also the discussions on applicability of the methods and interfering substances. This feat was accomplished through the use of a terse, economical style of writing so that one has to search through the book to find a single wasted word. This will be no hardship to the skilled analytic chemist, who knows that the bare instruction "dilute to 100 ml." may mean the use of a volumetric flask in one case or a graduated cylinder in another, depending on the precision desired. Complete references to the literature are provided, and there are extensive author and subject indexes. I noticed a few instances of misspelling in the bibliography; in some cases the author is listed both under his correct name and under a misspelled version.

This book should prove of great value, both as a reference work and as a guide to the literature, to all analytic chemists who use colorimetric methods.

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Wasserbestimmung mit Karl-Fischer-Lösung. Ernst Eberius. Verlag Chemie, Weinheim/Bergstr., Germany, 1954. 138 pp. Illus. Paper, DM. 12.80.

This monograph is, in large part, a condensation and a literal translation of *Aquamestry*, by John Mitchell, Jr., and Donald M. Smith (Interscience, 1948).

Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to *Science*, but to the publisher or agency sponsoring the publication.)

The Occurrence of Oily Pilchards in New South Wales Waters. Div. of Fisheries Tech. Paper No. 3. M. Blackburn and R. Downie. Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia, 1955. 11 pp.

Latitudinal and Seasonal Variations of the Absorption of Solar Radiation by Ozone. Geophysical Research Papers, No. 33. Jerome Pressman. U.S. Air Force Cambridge Research Center, Cambridge, 1954 (Order from U.S. Dept. of Commerce, Office of Tech. Services, Washington 25). 34 pp.

Statistical Information on Component Parts of Chemical Compounds. Estaleta Dale and Karl F. Heumann. Chemical-Biological Coordination Center, Natl. Acad. of Sciences-Natl. Research Council, Washington 25, 1955. 11 pp.

The Orbits of Two F-Type Spectroscopic Binary Stars. Dominion Astrophysical Observatory Publ., vol. IX, No. 14. K. O. Wright and R. E. Pugh. Canada Dept. of Mines and Tech. Surveys, Dominion Observatories, Victoria, B.C., 1954. 7 pp. 25¢.

Laboratory Analysis of Soils, Grain Size and Liquid Limit. Highway Research Bd., Bull. 95. Natl. Acad. of Sciences-Natl. Research Council, Washington 25, 1955. 37 pp. 60¢.

Die Papierchromatographie der Kondensierten Phosphate. Herbert Grunze and Erich Thilo. Akademie-Verlag, Berlin, 1954. 25 pp. DM. 2.

- The Nutritive Value of Winter Range Plants in the Great Basin.* As determined with digestion trials with sheep. Bull. 372. C. W. Cook, L. A. Stoddart, and L. E. Harris. Agr. Expt. Sta., Utah State Agr. College, Logan, 1954. 55 pp.
- The Effect of Fetch Width on Wave Generation.* Tech. Memo. No. 70. Beach Erosion Bd., Office of the Chief of Engineers, Dept. of the Army, Washington 25, 1954. 9 pp.
- Washington, D.C., Precipitation of 1954 and 1955.* Smithsonian Misc. Coll., vol. 128, No. 2. C. B. Abbot. Smithsonian Institution, Washington 25, 1955. 3 pp.
- Archeological Excavations in Mesa Verde National Park, Colorado, 1950.* Archeological Research Ser. No. 2. Natl. Park Service, U.S. Dept. of Interior, Washington 25, 1954 (Order from Supt. of Documents, GPO, Washington 25). 118 pp. \$1.
- Indices of Heat Stress.* A statistical comparison of effective temperature and an index based on sweat loss. Medical Research Council Memo. No. 29. F. E. Smith. Medical Research Council and Director of Publications, Her Majesty's Stationery Office, London, 1955. 52 pp. 50¢.
- The Thyroid.* Report of symposium held 9-11 June 1954. Biology Dept., Brookhaven Natl. Lab., Upton, N.Y., 1955 (Order from Office of Tech. Services, Dept. of Commerce, Washington 25). 271 pp. \$1.75.
- Informe del Comisionado de Agricultura y Comercio para el año fiscal 1950-1951.* R. Colon Torres. Dept. de Hacienda, San Juan, P.R., 1953.
- The Annellated Coral Snake.* vol. 34, No. 30. Karl P. Schmidt. Chicago Natural History Museum, Chicago 5, 1954. 6 pp. 10¢.
- Class and Society.* SSS 10. Kurt B. Mayer. Doubleday, Garden City, N.Y., 1955. 88 pp. 95¢.
- The 6th Report of the Sub-committee on Non-Proprietary Names.* Expert Committee on the International Pharmacopoeia, World Health Organization, New York, 1954. 57 pp.
- Industrial Engineering and Economic Studies of Peanut Marketing.* Bull. No. 286. J. J. Moder, Jr., and N. M. Penny. Engineering Expt. Sta., Georgia Inst. of Technology, Atlanta, 1954. 185 pp.
- The 87th Annual Report of The Clarke School for the Deaf, Northampton, Mass. for year ending Aug. 31, 1954.* Clarke School, Northampton, 1954. 97 pp.
- Carte des sols et de la végétation du Congo Belge et du Ruanda-Urundi.* Nioka (Ituri)—A, Sols; B, Végétation; C, Utilisation des sols; D, Géomorphologie. *Notice explicative de la carte des sols et de la végétation.* N. Holowaychuk *et al.* 31 pp. *Geology of the Soils of the Nioka-Ituri Area, Belgian Congo.* Robert V. Ruhe. 27 pp. Institut National pour l'Etude Agronomique du Congo Belge, Brussels, 1954.
- Public Health Reports.* Index for vol. 69, Nos. 1-12, Jan.-Dec. 1954, including 1954 titles for Public Health Monogr., Nos. 18-24. U.S. Dept. of Health, Education, and Welfare, Public Health Service, Washington 25, 1955. 30 pp.
- Variedades de Batatas.* Antonio de la Huerta and Enrique Navarro. 54 pp. P. 35. *Trigos Arqueológicos de Espana* (Spanish archaeological wheats). R. Tellez and F. Ciferri. 129 pp. Instituto Nacional de Investigaciones Agronomicas, Madrid, 1954.
- Oxidation of Benzene by Hydrogen Peroxide and Reaction of Hydrogen Peroxide with Some Iron Complexes.* Reilly lectures, vol. X. J. H. Baxendale. Univ. of Notre Dame Press, Notre Dame, Ind., 1955. 34 pp. \$1.50.
- Employment Opportunities.* Dept. of the Navy, Bur. of Ordnance, Washington 25, 1955. 61 pp.
- Publications from Illinois Institute of Technology.* Annual publication of references to theses. vol. 3. The Institute, Chicago 16, 1954. 24 pp.
- Zur Biochemie und Biogenese der Inhaltsstoffe Ätherischer Öle.* Wilhelm Treibs. 18 pp. DM. 1. *Über Einheitengruppe und Klassenzahl Reeller Abelscher Zahlkörper.* H. W. Leopoldt. 47 pp. DM. 27.
- Anesthesieprobleme.* Sektions-Veröffentlichung Nr. 1 der Klasse für Medizinische Wissenschaften der Akademie, Sektion für Chirurgie. 73 pp. DM. 7. Akademie-Verlag, Berlin, 1954.
- Catalogue of Wild Mammals of the Sudan Occurring in the Natural Orders Artiodactyla and Perissodactyla.* Publ. No. 4. P. Z. Mackenzie. Sudan Museum (Natural History), Khartoum Sudan, 1954. 21 pp. Pi. 40.
- Spectroscopic Molecular.* pt. II, *Tratamientos del Coordinados Normal de Moléculas Polyatómicas; A, Teoría General* (In Interlingua). Salvador M. Ferigle and Alfons Weber. Forrest F. Cleveland, c/o Spectroscopy Lab. Illinois Inst. of Technology, Chicago 16, 1955. 27 pp. \$1.
- The Cod.* Contributions to special scientific meetings, 1953. Council Permanent International pour l'Exploration de la Mer, Charlottenlund Slot, Denmark, 1954. 102 pp. Kr. 18.
- Stabilization of Soils.* Highway Research Bd. Bull. 98. Natl. Acad. Sciences-Natl. Research Council, Washington 25, 1955. 52 pp. 75¢.
- Prévisions numériques en météorologie.* Contrib. No. 14. P. Defrise. 15 pp. *L'aérologie des nuages à développement vertical.* Contrib. No. 15. A. Descamps. 15 pp. *Ensoleillement et orientation en Belgique.* pt. V, *Etude de l'éclairement lumineux naturel.* Publ. Ser. No. 12. R. Dogniaux. 76 pp. Institut Royal Météorologique de Belgique and Koninklijk Meteorologisch Instituut van België, Bruxelles, 1954.
- Tumor-Host Studies.* The physiological and pharmacological action of an iodide-trapping substance formed in tumor-bearing animals. vol. 2, No. 22. Kenneth G. Scott and Chin-Tzu Peng. Univ. of California Press, Berkeley 4, 1955. 30 pp. 75¢.
- ASTM Standards on Paint, Varnish, Lacquer, and Related Products (with Related Information).* Prepared by Committee D-1. American Soc. for Testing Materials, Philadelphia 3, 1955. 847 pp. \$6.
- The Black Flies (Diptera, Simuliidae) of Guatemala and Their Role as Vectors of Onchocerciasis.* Smithsonian Misc. Coll., vol. 125, No. 1. Herbert T. Dalmat. Smithsonian Institution, Washington 25, 1955. 425 pp.
- Economic Aspects of Nuclear Power.* AECL No. 165. W. B. Lewis. Atomic Energy of Canada Ltd., Chalk River, Ont., 1955. 9 pp.
- Annual Report of the Jute Agricultural Research Institute (1953-54).* Indian Central Jute Committee, Calcutta, 1955. 145 pp.
- In Your Service.* The work of Uncle Sam's forest rangers. U.S. Dept. of Agriculture Forest Service, Washington, 1955 (Order from Supt. of Documents, GPO, Washington 25). 23 pp. 20¢.
- The Ciba Foundation for the Promotion of International Co-operation in Medical and Chemical Research, 1954 Report.* The Foundation, London W.1, 1954. 39 pp.
- The Caltech Alumni.* A survey of their background, training, income, employment, and opinions. vol. 64, No. 1. California Inst. of Technology, Pasadena, 1955. 28 pp.