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RESEARCH LABORATORIES  
MERCK AND CO.  
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ROBERT L. PECK  
NORMAN G. BRINK  
FREDERICK A. KUEHL, JR.  
EDWIN H. FLYNN  
ALPHONSE WALTI  
KARL FOLKERS

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### S-BENZYLTHIURONIUM SALTS OF SULFOBENZOIC ACIDS

Sir:

In a paper by E. E. Campaigne and C. M. Suter [THIS JOURNAL, 64, 3040 (1942)] which on account of the occupation of Denmark by the Germans has been unknown to me till now, where it has been reviewed in *Chem. Zentr.*, 116, I, 529 (1945), it is stated that whereas *o*-sulfobenzoic acid forms a neutral S-benzylthiuronium salt and

*p*-sulfobenzoic acid an acid salt, the *m*-sulfobenzoic acid does not form a salt with the same facility as the two other acids.

Some years ago [*Bull. soc. chim.*, [5] 5, 1153 (1938)] I prepared a series of S-benzylthiuronium salts of different organic acids amongst which were also the *o*- and the *m*-sulfobenzoic acids. The salt with *o*-sulfobenzoic acid was neutral with m. p. 205–206°, quite in accordance with the indications of Campaigne and Suter. The salt with *m*-sulfobenzoic acid was prepared without any difficulty, using our standard method of preparation: 0.01 equivalent of the acid is dissolved in 10 ml. water, the solution is partly neutralized with 1 *N* sodium hydroxide, till the reaction is just acid against methyl red, and a solution of 2 g. of S-benzylthiuronium chloride in 10 ml. of water is added. The acid salt of *m*-sulfobenzoic acid is readily precipitated and is filtered off. Recrystallized from diluted alcohol it showed m. p. 163–164° (cor.).

LABORATORY OF ORGANIC CHEMISTRY  
ROYAL TECHNICAL COLLEGE  
COPENHAGEN, DENMARK

STIG VEIBEL

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## NEW BOOKS

**Discovery of the Elements.** Fifth edition. By MARY ELVIRA WEEKS, Research Associate in Scientific Literature at the Kresge-Hooker Scientific Library, Wayne University. Illustrations collected by F. B. DAINS. Published by the *Journal of Chemical Education*, 20th and Northampton Sts., Easton, Pa., 1945. xiv + 578 pp. 343 figs. 16 × 24.5 cm. Price, \$4.00.

Nearly fifteen years ago, when a graduate student, this reviewer remembers reading with much pleasure Dr. Weeks' original articles in successive numbers of the *Journal of Chemical Education*, and wishing that they might be collected all in one book. The wish was granted soon thereafter, and apparently many others had the same feeling, as attested by the selling out of four editions in twelve years, each revised and amplified over its predecessor. The book now would almost serve as a history of chemistry in itself.

This new fifth edition shows an increase in text pages over the first from 363 to 578, and of pictures from 281 to 343. A comparison of the two books shows the expansion to have resulted from the normal process of adding new material, illustrations, and entries in the copious "Literature Cited." The original twenty-one chapters have been increased to twenty-seven by the addition of chapters dealing particularly with and presenting new matter concerning the lives and works of Daniel Rutherford, the de Elhuyar Brothers, Klaproth and Kitaibel (on tellurium), Charles Hatchett, Don Andrés del Río and J. A. Arfwedson. The Author deserves a renewed and amplified vote of thanks from the profession for re-issuing this book, which should be required reading for all college teachers, and be on the reserve reading list of all other chemists.

ALLEN D. BLISS

**A Manual of the Aspergilli.** By CHARLES THOM, Collaborator, Northern Regional Research Laboratory, Formerly Principal Mycologist, Bureau of Plant Industry, U. S. Department of Agriculture, Washington, D. C., and KENNETH B. RAPER, Senior Microbiologist, Fermentation Division, Northern Regional Research Laboratory, Bureau of Agricultural and Industrial Chemistry, U. S. Department of Agriculture, Peoria, Illinois. The Williams and Wilkins Company, Baltimore, Md., 1945. ix + 373 pp. 15.5 × 23.5 cm. Illustrated. Price, \$7.00.

This volume, the preparation of which has been based on the actual handling and culturing of the species described, is designed for the ready identification of the numerous strains of aspergilli encountered in microbiological work, either in biological research or in industrial microbiology, fermentation, and the food industry. The senior author, Dr. Thom, as a result of his studies for forty years, has long been recognized as one of the world's leading mycologists, and has previously been the principal author of what is probably the most authentic treatise on the aspergilli.

The present volume is undoubtedly of much less interest to the chemist than to the microbiologist. The latter will hail it as an exceptionally welcome addition to the literature in his field of study and practical operations. Nevertheless, the chemist who has sufficient biological background, and who wishes to broaden his knowledge of the fermentations and physiological phenomena in colorless plants, and the capacities of the fungi to produce breakdown changes in organic substances, can find great enlightenment in this book.

While avowedly written as a manual for the identifica-