

Computer Software Reviews

Statistical Navigator Professional. Version 1.0. The Idea Works, Inc., 607 Jackson Street, Columbia, MO 65203. List price \$150.00.

Statistical Navigator Professional is sophisticated statistics software aimed at advising the user on strategies to take in the analysis of data or in the design of future experimentation. However, this program does not incorporate any computational statistical data analysis. The program is not copy protected and is easily installed on MS-DOS (IBM compatible) systems. We evaluated it on both 80286/7 and 80386/7 systems with VGA color graphics and a mouse. The program is menu driven with multiple menus able to be stacked on screen. The program is space intensive (at least 640K RAM and a hard disk drive) and does not make use of either extended or expanded memory options, although the supplier claims that this will be available in the next version of the program. The program will work with CGA, EGA, VGA, and monochrome monitors.

The program has two principle modes of operation—Browse Mode and Consult Mode. In Browse Mode the user is able to explore the various types of statistical analyses which are able to be used. It is especially helpful to the novice statistician to be able to seek definitions of key terms used in the program at nearly any point. In this manner the program is very helpful in teaching the user about options for data analysis which may have not been considered previously. But often in this mode the user must wait for a very long time for memory reorganization and disk access to occur.

In Consult Mode the user is asked to supply information about a data or future data set to be analyzed and the degree of confidence in various parameters describing that data set. However, the user-software inter-

face to do this is very cumbersome and inconsistent leaving the user at times guessing how to respond. At specific points the user is asked to input numerical estimates of confidence levels, etc. To the average Chemist, the questions asked by the program will seem vague and, in all probability, confusing. Having entered a set of numerical estimates, the user is given the option of editing these entries. However, this editing process is a slow recycling of the entry process and not really an editing process. In some of these data entry sections all of the questions are displayed simultaneously and in others the questions are displayed one at a time.

A report is able to be formed summarizing the results of the Consult Mode and this is useful as a hardcopy of a rather complicated evaluation of statistical analysis strategies. The program writes as ASCII file to disk that contains the report. This file also contains a few program control statements. The printout of the ASCII file is to the default printer and the output is unformatted. Nonetheless, we were able to easily reformat this file within a standard wordprocessor.

We found the program to be slow in execution even on a fast 80386/7 system. It is our opinion that this program might be useful to chemists who are interested in exploring possible ways to analyze large blocks of data. For example, the program may be useful to those interested in finding statistical relationships which exist between physical properties and molecular structure. However, on the whole, this program will find little application in the traditional chemistry laboratory which produces limited data sets mainly from unidimensional experiments.

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Book Reviews*

The Alkaloids. Chemistry and Pharmacology. Volume 41. By Arnold Brosi (National Institutes of Health) and Geoffrey A. Cordell (University of Illinois at Chicago). Academic Press: San Diego. 1992. ix + 252 pp. \$85.00. ISBN 0-12-469541-8.

This book constitutes the forty-first issue of the well-known series on alkaloids edited formerly by Manske and, in more recent times, by Brosi. It consists of four chapters: (a) alkaloids from Thai plants, (b) marine alkaloids, (c) tropolonic Colchicum alkaloids, and (d) Veratrum alkaloids of the cevane type. Whereas the first chapter constitutes a deviation from the norm (the chapter on alkaloids from Chinese medicinal plants in Volume 32 having been an earlier deviation) in its emphasis on a geographical region and whereas it is dubious whether the Thai flora recognizes the frontiers of Burma, Laos, Cambodia, and Malaysia, the write-up is lucid, smoothly flowing, and instructive. Only three flaws were recognizable in the review: (1) the unacceptable redundancy of "new and Novel" (page 11), popular especially in the American, organochemical, primary literature; (2) the omission of the nuclear oxygen from glycosides 102 and 103 (page 35); and (3) the inadmissibility of plant metabolites 58-64 (page 25) and 93-101 (pages 33 and 34) as alkaloids (see discussion below).

In view of the massive outpouring of publications on marine natural products during the last decade, a second chapter on marine alkaloids (the first having appeared in Volume 24, 1985) was in order. The authors of the second chapter of the present book address the presumed topic with enthusiasm and clarity but, with the acceptance of the editors, run into the ground the definition of an alkaloid. In fairness, the least the authors could have done is to call their chapter "Marine Alkaloids and Other Nitrogenous Metabolites". Even though the alkaloid realm has broadened since the days of *The Alkaloids*. Volume 1 (at which time an alkaloid was defined as a nitrogenous, basic, pharmacologically active, higher plant product, the admitted exceptions having been amides such as colchicine, piperine, and their relatives), this reviewer, at least, feels that alkaloids are not all nitrogenous natural products.

The third chapter entitled "Tropolonic Colchicum Alkaloids and Allo Congeners" constitutes the fifth contribution to this field in the forty-one volumes of *The Alkaloids* but is nicely updated and appropriate for the

moment. It is rich in chemistry (especially synthesis), including some experimental details, and intriguing on the discussion of conformational analysis. It shows only a few trivial flaws. One major mistake, unforgivable in a credible review, is the omission of a discussion (or, at least, citation) of the following formal, total synthesis of colchicine: Wenkert, E.; Kim, H. S. In *Studies in Natural Product Chemistry, Stereoselective Synthesis*, Part B; Atta-ur-Rahman, Ed.; Elsevier Science Publisher B.V.: Amsterdam, The Netherlands, 1989; Vol. 3, p 287.

The fourth chapter is made up mostly of tables of structures of cevanic veratrum alkaloids (including structures, mp, [α]_D and references) and some synthetic transformations. It is questionable whether another review of this research-dormant field was warranted (only one-third of all citations, 69 out of 212, having appeared in the 1980s).

Finally it is worthy of comment that the time is ripe for review books and journals to come to some concensus on the avoidance of redundancy and relief of the heavy financial pressure on library and individual subscribers. Thus, for example, there is no need for both *The Alkaloids* and *Natural Product Reports* to feature nearly identical alkaloid reviews.

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Organic Syntheses, Volume 70. Edited by Albert I. Meyers. John Wiley and Sons: New York. 1992. xxii + 306 pp. \$39.95. ISBN 0-471-57743X.

This volume continues the high standards of previous volumes in this series. Procedures for the preparation of a variety of compounds are included. Of particular interest is the resolution of 1,1'-bi-2-naphthol; tris(trimethylsilyl)silane; and 9-borabicyclo[3.3.1]nonane dimer.

Patai's 1992 Guide to the Chemistry of Functional Groups. By Saul Patai (The Hebrew University). John Wiley and Sons: New York. 1992. x + 524 pp. \$95.00. ISBN 0-471-93022-9.

This guide serves as an extremely useful entry into Patai's series on the chemistry of functional groups. It represents more than a collected table of contents because the subject matter of each chapter in each volume is briefly detailed. In addition, cross references to complementary and relevant chapters in other volumes are provided with the description of each of the chapters. This volume should serve as a handy entry into the Patai series and can be recommended not only as an addition to individual libraries but also for those who use the series frequently.

*Unsigned book reviews are by the Book Review Editor.