

sample preparation, the statistical assessment of errors, and the preparation and storage of solutions. A series of useful tables summarizes the methods available for the determination of each major constituent. A very useful section summarizes sample decomposition methods and is followed by sections (pp. 76–183) dealing individually with each constituent, rounded off by brief appendices on the care of platinum and glass apparatus, and safety and first-aid in the laboratory.

Like virtually all books on geochemical analysis, this one outlines some procedures for which the author has a particular predilection and omits some more familiar in other laboratories. The author himself stresses that it should be used in conjunction with fuller texts such as that of J. A. Maxwell, and so used it is much to be commended.

E. A. VINCENT

SAGGERSON (E. P.). *Identification tables for minerals in thin sections*. London and New York (Longman), 1975. x+378 pp. Price £3.75 (U.K.).

This book supplies a set of determinative tables for optical mineralogy based on the data in the standard work *Rock-forming Minerals* by Deer, Howie, and Zussman. The author and publishers are to be congratulated on the idea of adding this search facility to the original work. The format of the book and the clarity of the tables are both good, and the result should prove useful.

Table 1 places the minerals in colour groups, then in sub-groups by optical character and sign, and within these sub-groups in order of increasing birefringence. Table 2 uses the same groups and sub-groups, the order within the latter being now that of increasing refractive index. Tables 3 to 11 group the minerals by crystal structure (amphibole group, feldspar group, etc.).

Throughout, birefringence is expressed on a scale of 1 to 5 and refractive index on an eight-step scale denoted by letters (–M, –L, N, +L+M, etc.). The limits of these steps have to be memorized. It would have been better to enter the numerical values of the parameters concerned in the tables. It is a pity that relief and birefringence were not given precedence over optical character and sign in the subdivision of Tables 1 and 2, as these criteria are readily assessed in most cases, whereas an interference figure yielding an unequivocal sign may be hard to find where grains are few, especially for students. Once the mineral is located the tables give 2V, dispersion, extinction, orientation, crystal system, habit, cleavage, twinning, zoning, alteration, and occurrence.

An unfortunate error is the constant use of isometric as a description of optical character where *isotropic is meant*. This will confuse students.

Though avowedly designed for student use, the book contains data on a host of minerals the student will never encounter, and one would hardly expect him to buy it. It will, however, in spite of the criticisms, be a useful adjunct to teaching and the student could reasonably expect to find a copy available to him in any well-equipped petrology laboratory.

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