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BASELINE STUDIES OF THE CLAY MINERALS SOCIETY SOURCE CLAYS: PREFACE

The Source Clays Program of The Clay Minerals Society was initiated in 1972 to distribute a set of reference clays, so that distributed clays could be identical for all recipients. Because most clays do not consist of a single phase, the immediate objective was not to produce a pure product consisting of one clay mineral, but to provide a uniform product. These materials were collected and processed carefully, and sufficient amounts were collected so that material was available for researchers for many years. Large numbers of researchers were thereby assured of working on identical material. Initial descriptions of these materials were presented in the *Data Handbook* (van Olphen and Fripiat, 1979). An updated version of this book was suggested several years ago because of the availability of new analytical techniques and to provide descriptions of material added to the reference set since 1979.

To provide the widest possible distribution of the new data, the CMS Council decided to produce the publication as an issue of *Clays and Clay Minerals*, rather than a book. In this way, the data would be quickly available both to the membership of the Society and to the scientific community at large by distribution to members and libraries already receiving *Clays and Clay Minerals*. The articles describing the Source Clays are fundamentally different from the articles normally published in *Clays and Clay Minerals*. The Source Clay articles are generally more descriptive, and contain less discussion and fewer conclusions than a normal article. For the most part, this is the natural result of a study that involves a group of minerals that are unrelated or nearly unrelated in geological origin and specific structure type. In fact, the choice of these minerals as Source Clay minerals is related in part to their diversity in chemistry and structure within the phyllosilicate family.

The Clay Minerals Society Source Clay minerals include: kaolinite (KGa-1b, KGa-2), palygorskite (PFl-1), montmorillonite (SAz-1, STx-1, SWy-2), hectorite (SHCa-1), and synthetic mica-montmorillonite (Syn-1). Representative samples of these were size fractionated to <2 μm, split, and distributed to each laboratory for analysis. Participating researchers were selected because they had considerable expertise in clay-mineral analysis, and they volunteered to perform the work as a service to the Society. The geological origin, composition (major, minor, trace, rare-earth elements), powder X-ray diffraction patterns, layer charge, infrared spectra, thermal behavior, cation-exchange capacity and colloid and surface properties of these samples were studied.

We thank the current editor, Dr Derek Bain, for allowing us to try a new format involving guest editors. We also thank the many researchers who patiently allowed us to bring this project to conclusion.

Individual copies of this issue are available at a cost of US $40 (including mailing costs) from the CMS Office, P.O. Box 460130, Aurora, CO 80046-0130 or FAX 303-680-9003.

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Guest Editors

REFERENCES

Van Olphen, H. and Fripiat, J.J. (1979) *Data Handbook for Clay Minerals and Other Non-metallic Minerals*. Pergamon Press, Oxford, England, 346 pp.

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