

**BRIEFER COURSE;
ELEMENTS OF
CHEMISTRY: DESCRIPTIVE
AND QUALITATIVE**

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Briefer Course; Elements of Chemistry: Descriptive and Qualitative by James H. Shepard

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JAMES H. SHEPARD

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BRIEFER COURSE.

ELEMENTS OF CHEMISTRY,

DESCRIPTIVE AND QUALITATIVE.

BY

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PREFACE.

THIS briefer course follows, in general, the plan of Shepard's Elements of Chemistry; but the reader will notice that the student is told, to a still less extent than in the larger book, what he may expect to see while working.

Directions for preparing reagents, and equipping the laboratory, and discussions of methods of presentation are not given here, since these matters are fully treated in the larger book, which is now so generally used that it is readily accessible to all.

The subject-matter of this text is so arranged, and the experiments are so simplified, that the laboratory work will come within the time available in those schools where but part of the year is allotted to the study of chemistry. The text will also be found acceptable in many schools where a special or a technical course is offered.

Data for chemical computations given at the beginning of the chapters, numerous exercises for review or advanced course, a close adherence to inductive methods, and, wherever possible, careful experimental illustrations

of all important facts not readily understood by analogy, are features of this briefer course which will, it is hoped, commend themselves to the many truly scientific educators of the youth in all parts of our land.

In the chapters devoted to the carbon compounds, owing to the unsatisfactory results usually to be had at the hands of beginners working with organic substances, it seemed best to limit the work to the preparation and discussion of the more important compounds and at the same time dwelling upon the general laws governing the origin of the derivatives belonging to the different series.

The author takes pleasure in acknowledging the valuable assistance rendered during the preparation of this work by Mr. H. Ellsworth Call, of the Des Moines, Ia., High School; Miss Ada J. Todd, of the Bridgeport, Conn., High School; Mr. H. N. Chute, of the Ann Arbor, Mich., High School; Prof. I. P. Bishop, State Normal and Training School, Buffalo, N. Y.; Mr. J. T. Draper, Pueblo High School, Col.; and by many other prominent educators in all parts of the country.

J. H. S.

BROOKINGS, March 30, 1891.

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