



Absorption Spectrum of the Sun and Bright Line Spectra of Elements.

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MANUAL

OF

CHEMISTRY

A GUIDE TO LECTURES AND LABORATORY WORK FOR BEGINNERS
IN CHEMISTRY. A TEXT-BOOK SPECIALLY ADAPTED FOR
STUDENTS OF MEDICINE, PHARMACY AND DENTISTRY

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ELEVENTH EDITION, THOROUGHLY REVISED

WITH FIFTY-FIVE ILLUSTRATIONS, ONE COLORED SPECTRA PLATE
AND SIX COLORED PLATES REPRESENTING FORTY-EIGHT
CHEMICAL REACTIONS



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PREFACE TO THE ELEVENTH EDITION.

IN this new edition a number of changes involving rearrangement, addition and deletion have been made. In Section I on Physics, the chapters on light and electricity have been omitted, because it seemed to the reviser that the physics of light has little bearing on a course in elementary chemistry and that, while electricity is of greater importance than light in the study of chemistry, it can be studied to better advantage in a separate treatise on physics. However, the articles on the spectroscope and the polariscope have been retained, but have been placed in the Appendix. Former Sections II, III and IV are consolidated as Section II under the title General Chemistry, which falls into two subdivisions, the first of which treats of the non-metals, the second of the metals. While this classification of the elements is not in strict adherence to the periodic law, it nevertheless seems well adapted for the instruction of beginners, as shown by experience, and therefore is retained in this book.

The first subdivision of Section II, dealing with the non-metals has been entirely rearranged so as to give a logical sequence in the presentation of laws, theories, and facts of observation. Much new matter has been added, some portions have been partly, and the chapter on the determination of atomic and molecular weights entirely, rewritten.

The second subdivision of Section II deals with the metals and their compounds. The classification adopted is that of the analytical groups, but at the same time the position of each metal in the periodic system and the resemblance it bears to the other members of the family to which it belongs are pointed out, thus keeping before the student the periodic system of classification.

Section III is devoted to analytical chemistry and will serve the student as a guide in his laboratory work. Qualitative methods are chiefly considered, but a chapter on quantitative determinations by volumetric methods is also included.

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