

PREFACE.

The object of this work is to present to college students the main facts and methods of Qualitative Analysis with the fullness requisite for successful study, but in a form simplified by the omission of the rarer elements, and more condensed than that in which they are given in the classical *Manual* of Fresenius.

Believing that the study of this branch should always be preceded by theoretical and practical instruction in General Chemistry, an elementary acquaintance with that science is assumed. Nevertheless, all the more important qualitative reactions are elucidated by chemical equations, and but little knowledge is taken for granted, beyond that which a comprehension of the symbols and of the nomenclature implies. The nomenclature adopted is in harmony with the recommendations of the Chemical Society of London and of the Committee on Nomenclature of the American Chemical Society, except in one minor point.

It is hoped that the scheme for the systematic detection of the acid radicals, which offers some novel features, will be found elsewhere as practical and useful as an experience of some years has shown it to be at this laboratory. The aim throughout has been to discourage, so far as possible, the pernicious habit of working in a mechanical way by rule of thumb, and, for this reason, analytical tables have been excluded, with the exception of tables for the blowpipe examination of metallic and non-metallic substances, to which the suggested objection does not apply and which have been elaborated with especial care.

Numerous cross-references have made it possible to avoid many repetitions, which without them would have been necessary, and will