

or to the presence of other substances which the methods of purification thus far developed do not wholly remove.

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CORRECTION.

On page 1231, of the June number, in the first column of Table I, read "Conc. KCl" instead of "Conc. HCl."

NEW BOOK.

Qualitative Analysis. Vol. I of Analytical Chemistry, Based on the Eighth Edition in German by F. P. TREADWELL, PH.D. (Polytechnic Institute of Zürich). Translated and Revised by WILLIAM T. HALL, S.B. (Massachusetts Inst. of Technology). 4th Ed. xiii + 538 p. New York: John Wiley & Sons, Inc. Cloth, \$3.00.

The fourth edition of this well-known text on qualitative analysis merits favorable reception as a thorough and convenient laboratory guide. Treadwell-Hall always has been a favorite text, both for the student and the practical chemist, combining, as it does, compactness with sufficient detail. It is not too unwieldy for the student who wishes to go somewhat below the surface in this subject and still covers the ground sufficiently well to meet all the usual requirements of a reference text.

The scope and volume of this edition is, in general, the same as that of previous editions. The introductory or theoretical part covers 75 pages, 117 pages are devoted to the reactions of the cations, 138 to those of the anions, 32 to systematic analysis and 64 to the reactions of the rarer elements.

In revising the book for the 4th ed. Professor Hall has rewritten, and materially added to, the theoretical portion in particular. As stated in the preface, the text is not a literal translation of the German "Treadwell" although it is kept along the same general lines, and in sympathy with the views of Professor Treadwell. Other well-known texts, as Noyes, Stieglitz, Böttger and Ostwald have been drawn upon and indebtedness to these authors is acknowledged.

The theoretical portion is furnished with valuable tables (solubility products, oxidation potentials) and examples in connection with the discussion, which is clear and to the point. The present reviewer hails with pleasure the complete adoption, in this text, of the valence method for balancing oxidation and reduction equations. While there is room for discussion, in general, of the question whether oxidation can *actually* be represented by simple electronic transfer in every case, it is obvious in many cases, and probable in the majority, that this is the actual mechanism. At all events, whoever has had occasion to fight the bug-bear of oxidation and reduction reactions on the part of students, employing long-