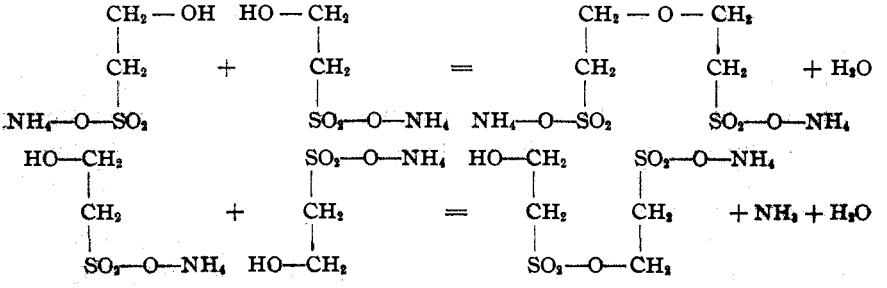
NOTES.

The Change of Ammonium Isethionate by Heating.—The two authors who have investigated the change which occurs on heating ammonium isethionate have reached very different conclusions. Strecker[1] states in his paper that ammonium isethionate (ammonium hydroxyethyl sulfonate) will change to taurine with the loss of 10 to 12% in weight by heating at 220°, according to the following formula:

Carl,[2] on the other hand, having carried out his experiment in exactly the same manner as Strecker, found that by heating 7 hours at 210–220° ammonium isethionate is converted into ammonium diisethionate and another substance, the molecular formula of which is $C_4H_{13}S_2NO_7$, accompanied by the loss of 12% in weight. The change is as follows:



I had occasion lately to synthesize taurine, and after examining the literature concerning the synthesis of this compound, Strecker's method appeared to me to be the most convenient. I tried his method many times but did not succeed in obtaining taurine. After many trials I came to the conclusion that Strecker's reaction never occurred and the change which ammonium isethionate undergoes by heating is that reported by Carl.

In conclusion, the author wishes to express his thanks to Prof. T. B. Robertson for his kind advice in the course of this experiment.

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On the Use of Trichloroacetic Acid as a Protein Precipitant.—In a recent paper,[3] Kober refers to "Greenwald's discovery of trichloroacetic

[1] *Ann. Chem.*, **91**, 97 (1854).

[2] *Ber.*, **12**, 1604 (1879).

[3] Graves and Kober, THIS JOURNAL, **37**, 2445 (1915).

acid as a reagent for the removal of blood proteins." The writer makes no claim to any such discovery. Trichloroacetic acid has long been used as a protein precipitant, and it was merely applied to a specific purpose, *viz.*, the removal of the proteins and lipins of blood in order to permit of the determination of non-protein nitrogen in the filtrate. The use of the phrase "Greenwald's reagent" is without justification.

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NEW BOOKS.

The First Year of Science. By JOHN C. HESSLER, PH.D., Professor of Chemistry, The James Milliken University, Late Instructor in the University of Chicago and in the Hyde Park High School, Chicago. Boston: 1914. Benjamin H. Sanborn & Co. xiii + 484 pp.

Laboratory Exercises of "The First Year of Science." By the same author and publishers (1915). ix + 118 pp.

In his very interesting preface the author states his conviction that while Physics and Chemistry, as such, should not be given in the first year of a high school course, some knowledge of these sciences is essential for all later work in any science, and that the simpler principles can be given in a course in General Science. Such a course is described in this book, and laboratory exercises are provided in the smaller volume, all of which, the author believes, can be successfully given to large classes, without special teachers, or expensive laboratory equipment. The book and the course are designed to "stimulate uncommon thinking about common things."

There are twenty chapters, twelve of which deal essentially with the fundamental principles of physics and chemistry, and their application to common affairs, but without formulas, symbols or equations. The remaining chapters deal with such topics as "Water, Heat, Air, and Light in the Home," "The Weather," "Rocks and Soils," "Plants," "Animals," three chapters on Physiology (sufficient, it is claimed, to constitute by themselves a short course in Physiology), and one on "Sanitation." The text proper and the laboratory manual are to be accompanied by a Teacher's Handbook. At the end of each chapter of the text proper there is a summary of the leading topics of the chapter, and a series of highly suggestive questions. The Appendix contains a series of useful tables, and there is a Glossary.

The Laboratory Manual includes one hundred and seven exercises, ranging through physics and chemistry (as applied to common affairs), weather records, tests upon rocks and soils, growth and study of plants, studies of the habits of the earthworm, mollusks, and insects, and some simple physiological tests. The greatest pains have been taken to sim-