THE DEPARTMENT OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

For years we have had a fairly definite procedure for qualitative and quantitative analysis of inorganic compounds. Within the past decade attention has been given to the qualitative and quantitative analysis of organic compounds and steps are being made toward the development of procedures for similar analyses of organic compounds. The following paper by Dr. George D. Beal, of Mellon Institute of Industrial Research, is of special interest because the author is a leader in the field and he discusses the important subject of background necessary for the development of quantitative organic analysis.—C. B. JORDAN, *Editor.*

WHAT CONSTITUTES A PROPER FOUNDATION FOR THE STUDY OF QUANTITATIVE ORGANIC ANALYSIS.*

BY GEORGE D. BEAL.**, ***

When accepting the invitation to contribute this paper, it was the writer's intention to discuss, in a very general way, the prerequisites for the most effective teaching of organic analysis, or rather pharmaceutical assaying. The subject was therefore fixed as has been announced. Deeper reflection made evident the folly of attempting to review a curriculum in chemistry in a few pages. The paper will accordingly be limited to a discussion of one most essential prerequisite, a comprehensive course covering the fundamentals of quantitative analysis.

Thorough preparation in general chemistry and qualitative analysis is assumed, and also proper training in organic chemistry to accompany or follow the course that we are outlining here. To those who will object that what we are proposing herein is a part of the training of a chemist and not of a pharmacist, we make our reply at this point. Organic analysis, pharmaceutical assaying and clinical analysis are chemical subjects of an applied character. While the practice of these is becoming more empirical, and the list of arbitrary procedures to be followed by the laboratory technician is multiplying, the interpretation of data requires sound fundamental training, with a correct understanding of contributory factors.

Every teacher of analytical chemistry is disturbed, sooner or later, by the pleas of his students to be given practical work. The agricultural student wishes to plunge immediately into the analysis of soils and fertilizers, the budding chemist is anxious to get at coal or stainless steel and the pharmaceutical apprentice doubtless longs to begin upon the assay processes of the United States Pharmacopœia. Teachers generally agree that a proper training in the fundamental principles of quantitative analysis is essential for the student who proposes to master its technical applications and to interpret properly the data so obtained. What shall constitute this fundamental training?

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