

It follows, therefore, that *these measurements are not sufficiently accurate to test thoroughly the relation between the color and dissociation.*

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**The Confirmatory Test for Aluminum.**—As a result of experiments carried out in this Laboratory last year, we were about to publish an account of a modified test for aluminum when a published account of practically the same test appeared.<sup>1</sup> Our procedure for carrying out the test was as follows. Pure asbestos fiber, one-half the size of a pea, was looped in a platinum wire, dipped into a solution of 0.05 *N* cobalt nitrate, ignited, then dipped into the solution of the aluminum hydroxide precipitate (dissolved in the least amount of nitric acid) and ignited.<sup>2</sup> We found that the test was easily sensitive to 0.2 mg. of aluminum, that the sodium salts did not interfere and that there was no danger of losing the test as with the fragile filter paper ash. This modified procedure is now being used successfully in our classes. Furthermore, we found that this procedure could be used for zinc, 0.5 mg. of the metal being detected with ease.

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**A Method for Determining Vapor Densities at Room Temperatures.**—A summary of various methods for determining vapor densities is given by Biltz,<sup>1</sup> Windisch<sup>2</sup> and Arndt.<sup>3</sup> A method differing somewhat from any of these was developed and tried out to some extent. It can be carried out at room temperature and the apparatus can easily be built from parts found in any chemical laboratory.

Two two-liter round-bottomed flasks are connected by an oil manometer made of glass tubing of 5-mm. inside diameter. Means for evacuating the flasks simultaneously is provided by two stopcocks joined by a

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<sup>1</sup> Pañganiban and Soliven, *THIS JOURNAL*, 50, 2427 (1928).

<sup>2</sup> A. A. Noyes, "Qualitative Chemical Analysis," p. 190.

<sup>3</sup> Biltz, "Practical Methods for Determining Molecular Weights," The Chemical Publishing Company, 1899.

<sup>2</sup> Windisch, "Bestimmung des Molekulargewichts," Julius Springer, Berlin, 1899.

<sup>3</sup> Kurt Arndt, "Handbuch der physikalisch-chemischen Technik," Ferdinand Enke, Stuttgart, 1923.