

**Stock Solutions**

*Potassium Bromate*.—0.0206 F.<sup>1</sup> made from Merck's potassium bromate and standardized by decomposing a known volume with excess of potassium iodide and hydrochloric acid, adding excess of the solution of ammonium bicarbonate, and titrating against the volumetric sodium arsenite.

*Potassium Iodide*.—0.9890 F. neutralized (to litmus) by hydriodic acid and standardized gravimetrically with silver.

*Potassium Bromide*.—2.002 F. neutralized and standardized with silver.

*Hydrochloric Acid*.—Two solutions 0.9539 F. and 0.9542 F. respectively, by comparison (phenolphthaleïn) with a freshly prepared volumetric potassium solution, which in turn was standardized with potassium bichromate.

*Sodium Arsenite*.—0.02504 F.  $\text{As}_2\text{O}_3$  (0.10017 normal) prepared according to Mohr<sup>2</sup> and standardized with dry freshly sublimed iodine.

*Iodine*.—Approximately decinormal, prepared from freshly sublimed iodine and compared frequently with the sodium arsenite, the accurate titre so found being used in the calculations.

*Ammonium Bicarbonate*.—A half-saturated solution was kept under carbon dioxide; it was tested from time to time, and not used unless a distinct blue color was obtained by adding one drop of centinormal iodine to a mixture of 250 cc water, 10 cc ammonium bicarbonate, 10 cc potassium iodide and 3 cc starch.

*The Starch* was prepared fresh daily: 1 gram to the liter.

All these solutions were diluted to one-tenth their concentration to form the "stock solutions" and volumetric solutions referred to in the preceding section.

**Explanation of the Tables**

The numbers at the head of each table, divided by 100,000, give the gram-formula weights of each reagent initially present

<sup>1</sup> Formula weights per liter.

<sup>2</sup> Chemisch-Anal. Titrimethode, 9th ed., p. 392.