requirements of an accurate analysis, yet the fractional alteration in the concentrations of the reagents involved is so small that the rate may be treated as practically constant during the interval." Where the reaction has proceeded so far that this assumption could not be made, a correction has been applied for the small changes in concentrations of the reagents involved. In all cases these corrections are comparatively small, the conclusions to be drawn from the experiments being, in general, obvious enough, even without the correction.

Method of Work

Temperature.—All the measurements were made at 30°, this temperature being maintained by a thermostat within one-tenth of a degree.

Calibration.—All the pipettes used were calibrated by weighing the distilled water discharged, thirty seconds being allowed for drainage. The burettes were calibrated as described in "Ostwald's Hand- und Hilfsbuch," p. 103.

Details of an Experiment.—Each measurement contained in the following tables involved the preparation of a new reacting mixture. Portions of the stock solutions used in the measurements were kept in the thermostat in glass-stoppered flasks. The potassium bromate was added to a suitable volume of water in a wide-mouthed half-liter glass-stoppered bottle, while the potassium iodide and hydrochloric acid were pipetted into a large test-tube together with enough water to make up a volume of 80 cc. After pipetting out the solutions they were allowed to stand in the thermostat for five minutes, and then the contents of the test-tube were quickly poured into the bottle and shaken, the exact time of mixing being noted. The total volume of the reacting mixture was always 250 cc. When it was desired to stop the reaction the contents of the bottle were rapidly stirred, 10 cc of a half-saturated ammonium bicarbonate solution were thrown in, and the time was noted. The iodine liberated was then determined with hundredth-normal arsenite.