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c tbic centimeters of 0.010017 normal arsenite; the second, under "KI Corr.," the potassium iodide initially present, which was calculated by subtracting one-half the number in the first column from 98.67 (which was the amount of potassium iodide in the solution before addition of iodine), according to the equation:

$KI + I_1 = KI_1$

Under x is entered the amount of iodine liberated during the time t (minutes), obtained by subtracting the initial iodine from the "titration." Under "x cale" is given the amount of iodine that would be liberated in the same time in solutions which contained throughout the experimen. the amount of bromate and acid entered at the head of the table, and the amount of potassium iodide entered in the second column under "KI corr.," but no "initial iodine."

It will be noted that the difference between "x" and "x calc." entered in the last column of Table XI, although small, are all positive, and increase with increase in the amount of iodine present. This is in accord with the results of Mr. Dushman's measurements on the rate of oxidation of potassium iodide by iodic acid in the presence of free iodine, and points to the oxidation of triiodion by bromic acid.

The correction for this subsidiary reaction is so small, however, that the relations between concentrations and rate given by equation 2 should hold whether free iodine be present or not, and the equation should be able to account for the whole progress of the reaction between bromic and hydriodic acids from its commencement to its end. This conclusion is borne out by the experiments recorded in Table XLI of the Appendix, for which I am indebted to Mr. F. C. Bowman, where the value of K remains constant within 1 or 2 percent while 95 percent of the bromate is reduced.

Temperature Coefficient

To find the temperature coefficient, I made a series of measurements at 30° , 25° and 0° C.

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