TABLE VIII

$KBrO_3$, 20.5; KBr, 2000; KI, 98.67; HCl, 190.3

t	x	x' (mixture)	x' (Sum IV and VII)
20	4.75	5.01	6.20
30	7.35	7.98	9.82
45	10.60	12.02	14.57
60	13.40	15.73	19.10
90	18.58	23.43	28.72

The difference between "x' mixture" and "x' sum" in Tables VI and VIII was found to be due to the presence of the large quantities of potassium salts, which, as the readings of Tables IX and X show, retard the oxidation of potassium iodide.

The solutions used in the experiments of these two Tables (IX and X) are the same as those of Tables I and IV, with the addition of enough potassium chloride to make the concentration of the potassium ion the same as in the experiments of Tables V and VII. As is shown in the last columns of Tables IX and X, the iodine liberated in solutions containing both iodide and bromide is the sum of that liberated in solutions containing iodide alone, *plus* the iodine equivalent of the bromide liberated in the absence of iodide. Thus, the two reactions—oxidation of iodide by bromic acid, and oxidation of bromide by bromic acid—proceed independently in the same solution.

TABLE IX

$KBrO_3$, 20.5; KCl, 2000; KI, 98.67; HCl 95.15

t	x	x'	x' (Sum V and IX)	x' mixture (VI)
20	0.67	0.68	1.30	1.31
30	1.01	1.03	1.97	1.93
45	1.49	1.54	2.96	2.87
60	1.85	1.93	3.78	3.58
90	2.91	3.10	5.85	5.80