

TABLE X.

Temp.	Concentration.	Spec. Conductivity.
25°C	Water	$3.000 \times 10^{-6}$
"	$44.4 \times 10^{-7} \text{N AgNO}_3$	$3.733 \times 10^{-6}$
"	AgNO <sub>3</sub> sol. along with $4.4 \times 10^{-8} \text{N HCl}$	$3.932 \times 10^{-6}$
"	$8.8 \times 10^{-8}$ "	$4.500 \times 10^{-6}$
"	$17.7 \times 10^{-8}$ "	$4.879 \times 10^{-6}$
"	$84.4 \times 10^{-8}$ "	$5.226 \times 10^{-6}$
"	$173.3 \times 10^{-8}$ "	$5.364 \times 10^{-6}$

Tables V, IX and the corresponding curves given in Figs. VII, VIII, IX, X, and XI, shew that the same effect was noticeable throughout until a silver nitrate solution of normality  $39.5 \times 10^{-7}$  was reached after which it was not observed, i.e., with concentrations above this the conductivity steadily increased with the addition of  $\frac{\text{N}}{10000}$  HCl as will be seen from the measurements which are recorded in table X and illustrated in Fig. XII.

*Experiment V.*—A silver chloride solution was made by adding HCl to AgNO<sub>3</sub>. This was passed through a filter paper, and the precipitate washed with distilled water in order to remove the hydrochloric and nitric acid. The precipitate was then transferred to a beaker containing a small quantity of distilled water. This solution was then added drop by drop to 76 cc. of distilled water until the conductivity of the resulting solution had increased by an amount corresponding to the increase in the previous case with AgNO<sub>3</sub>. Then to this solution of AgCl there was added drop by drop a  $\frac{\text{N}}{100}$  solution of HNO<sub>3</sub>, and the conductivities taken as before. Tables XI, XII, XIII and the curves given in Figs. XIII, XIV and XV shew the variation in conductivity as obtained when a  $\frac{\text{N}}{10000}$  nitric acid solution was added to different concentrations of the silver chloride solution.