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## A Measurement of the Magnitude of the Electrokinetic Current in Liquid Flow through a Single Capillary

W. G. Eversole  
*State University of Iowa*

W. W. Boardman  
*State University of Iowa*

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## DISSOCIATION PRESSURES OF SOME POTASSIUM POLYHALIDES

JACOB CORNOG AND ELDON BAUER

Potassium dichloro iodide ( $\text{KLCL}_2$  or  $\text{KCL-ICL}$ , m. p.  $195^\circ$ ) and potassium trichloro di-iodide ( $\text{KCL}_2\text{ICL}$ , m. p.  $45^\circ$ ) have been prepared and their dissociation pressures measured.

Both of these are new compounds. The potassium dichloro iodide (m. p.  $60^\circ$ ) described by Wells and Wheeler (also by Ephraim) has been found to have the formula  $\text{KLCL}_2\cdot\text{H}_2\text{O}$ .

CHEMISTRY DEPARTMENT,  
UNIVERSITY OF IOWA,  
IOWA CITY, IOWA

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## A MEASUREMENT OF THE MAGNITUDE OF THE ELECTROKINETIC CURRENT IN LIQUID FLOW THROUGH A SINGLE CAPILLARY.

W. G. EVERSOLE AND W. W. BOARDMAN

The potential difference,  $E$ , between the two ends of a capillary, through which a steady flow of liquid was maintained, was measured by means of unpolarizable electrodes connected to a potentiometer circuit, and at the same time shunted through a known resistance,  $R$ . The value of  $R$  was varied from 1 to 98000 megohms. For each value of  $R$  there was a corresponding value of  $E$ , and a current,  $I$  ( $=E/R$ ), through the resistance. The electrokinetic current,  $I_e$ , was obtained by extrapolating the plot of  $E/R$  versus  $R$  to the limit  $R=0$ .

The value of the electrokinetic potential,  $\zeta$ , can be calculated from  $I_e$  by means of the Helmholtz-Smoluchowski equation,

$$\zeta = \frac{4 \eta l}{r^2 DP} I_e,$$

without the use of conductivity data.

The specific surface conductivity can also be evaluated from the same data if the specific conductivity of the liquid in bulk is known.

DEPARTMENT OF CHEMISTRY,  
STATE UNIVERSITY OF IOWA,  
IOWA CITY, IOWA