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

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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  $\text{KLCL}_2\cdot\text{H}_2\text{O}$ .

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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.

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