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## The Vapor Pressures and the Activity Coefficients of Aqueous Solutions of Perchloric Acid at 25°

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molality curve has been found to follow very closely that of a normal undissociated solute, indicating only a slight degree of dissociation. From this data the activities and free energy relations are calculated.

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### THE VAPOR PRESSURES AND THE ACTIVITY COEFFICIENTS OF AQUEOUS SOLUTIONS OF PERCHLORIC ACID AT 25°.

J. N. PEARCE AND A. F. NELSON

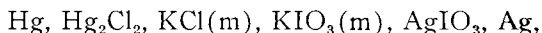
The vapor pressures of aqueous solutions of perchloric acid have been measured at 25° for concentrations ranging from 0.1 m to 12.0 m. The activity of the water and the activity coefficients of the ions have been calculated and compared with those of hydrochloric acid for the same concentrations and at the same temperature. The free energy of transfer of both the solvent and the solute, and the partial molal volumes of both components have been calculated for each concentration. Deviations from Raoult's law have been discussed in terms of the attraction of water dipoles by the electrically charged ions.

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### THE POTENTIAL OF THE SILVER-SILVER IODATA ELECTRODE AT 25°

J. N. PEARCE AND VERDA I. WIRTH

The electromotive force of a series of cells of the type:



have been measured at 25°. By combination of these potentials with the potentials of the corresponding calomel electrodes, they find the most probable potential of the Ag, AgIO<sub>3</sub>, IO<sub>3</sub><sup>-</sup> ( $\alpha = 1$ ) electrode to be  $E^\circ_{298} = 0.3569$  volt.

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