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The Equilibrium between Gelatin and Water Vapor at 25° C

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THE DIFFUSION COEFFICIENT OF CUPRIC SULFATE AT 25°

W. G. EVERSOLE AND J. D. PETERSON

The diffusion of cupric sulfate into water has been studied by measuring the concentration at different distances and at successive times as the diffusion progressed.

The cupric sulfate was allowed to diffuse upward from a solution of constant concentration into a thin flat cell of optical glass filled with pure water. The concentration at different distances from the open end of the cell, was determined by measuring the absorption of monochromatic red light.

The diffusion coefficient has been calculated by using a method similar to Zuber's for the integration of the general form of the equation for linear diffusion in which the diffusion coefficient is a function of concentration.

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THE EQUILIBRIUM BETWEEN GELATIN AND WATER VAPOR AT 25° C.

W. G. EVERSOLE AND FRED FORDEMWALT

The equilibrium between gelatin and water vapor from 0 per cent to 100 per cent saturation has been measured by weighing the gelatin after suspending it in the vapor to constant weight. The gelatin sample was suspended on a calibrated quartz spring and placed in a closed apparatus with an aqueous solution of known vapor pressure. The rate of attainment of equilibrium was greatly increased by pumping the air from the system.

The isotherms have been determined at 25° for untreated iso-electric gelatin, gelatin treated with thallos thiocyanate, and gelatin treated with thallos sulfate.

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