

1939

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Recommended Citation

Oelke, W. C. and Wagner, Charles (1939) "The Solubility of Cadmium Iodate in Aqueous Salt Solutions at 25° C," *Proceedings of the Iowa Academy of Science*, 46(1), 187-188.

Available at: <https://scholarworks.uni.edu/pias/vol46/iss1/26>

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THE SOLUBILITY OF CADMIUM IODATE IN AQUEOUS SALT SOLUTIONS AT 25°C.

W. C. OELKE AND CHARLES WAGNER

The determination of the solubility of a slightly soluble salt such as cadmium iodate in different concentrations of salt solutions furnishes a good method for verifying solubility hypotheses. The solubility of cadmium iodate has been determined in potassium chloride solutions up to a concentration of 2.5 molal and in magnesium sulfate solutions up to 2.0 molal.

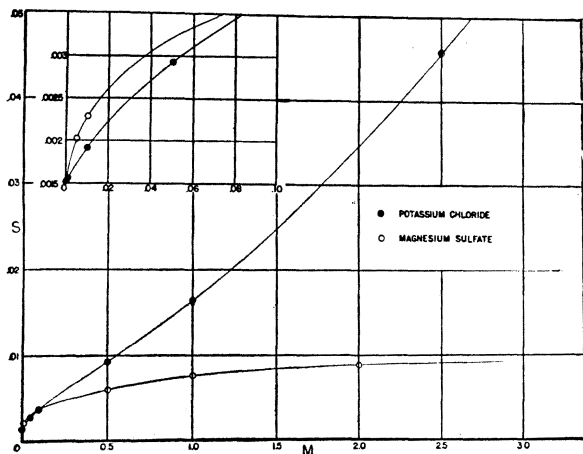


Fig. 1. Solubility Curves.

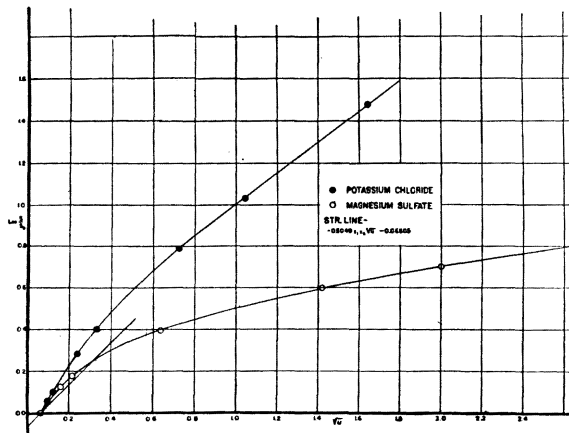


Fig. 2. Activity Coefficient Curves.

The materials were prepared by methods similar to those used by Pearce and Oelke⁽¹⁾. Saturation was obtained by the shaker method⁽¹⁾. Analyses of the saturated solutions were made by using standard methods⁽²⁾ and weight burets.

The molal solubilities determined were plotted against the molality of the solvent salt. (Fig. 1.)

The log of the solubility ratio was plotted against the ionic strength and activity coefficients were calculated. (Fig. 2.)

The relative positions of the activity coefficient curves substantiate the work of Peterson and Myers⁽³⁾ on copper iodate in that the curve for magnesium sulfate solvent is lower than that for potassium chloride solvent.

REFERENCES

1. PEARCE AND OELKE: *J. Phys. Chem.* 42, 95 (1938)
2. TREADWELL AND HALL: *Analytical Chemistry*, Vol. II, pp. 511, 551, 554. John Wiley & Sons, Inc., N. Y., (1924).
3. PETERSON AND MEYERS: *J. Am. Chem. Soc.* 52, 4853 (1930).

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