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## Heat of Adsorption on Charcoal of Certain Organic Vapors

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J. N. Pearce

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A STUDY OF THE REACTIONS INVOLVED IN A  
SYSTEM OF Zn AND H<sub>2</sub>SO<sub>4</sub> UNDER PRESSURES  
UP TO 16000 ATMOSPHERES

A continuation of the investigation described in the previous paper. A method is described for following the rate of the reaction at very high pressures in which the pressure can be varied rapidly and the rate of the reaction continuously read. Very little effect upon the rate of the reaction, directly due to pressure, was noticed up to pressures of 6000 atmospheres.

The pressure cells used for this work were exhibited including one that was ruptured at a very high pressure.

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HEAT OF ADSORPTION ON CHARCOAL OF CERTAIN  
ORGANIC VAPORS

LLOYD MCKINLEY AND J. N. PEARCE

Previous work on the heat of adsorption has been carried out by the use of the ice calorimeter adapted only to those liquids of appreciable vapor pressure at 0°C, and affording no investigation of the effect of temperature upon the heat of adsorption.

In the present paper there is described a method for studying the heat of adsorption at different temperatures by employing a sensitive thermo-couple in a calorimeter system consisting of a known weight of low specific heat oil in a Dewar flask. With this arrangement we find that a change of 1 microvolt in the thermo-couple reading corresponds to 0.06 calories per gram of charcoal.

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SOLUBILITY OF COPPER IN MILK

E. I. SOLOMAN WITH G. N. QUAM

The solubilities of copper in sweet whole raw milk held at a constant temperature for 30 minutes were determined for temperatures ranging from 20 degrees Centegrade to 100 degrees Centegrade. Copper sheets of known dimension were totally immersed and agitated in milk for 30 minutes at the specified temperature. Solubility values were determined by difference in weight of the copper sheets and also by determining colorimetrically with potassium ethyl xanthate the copper present in the ash of the milk.