

# Proceedings of the Iowa Academy of Science

---

Volume 41 | Annual Issue

Article 37

---

1934

## Some Observations of the Boiling Point of Ternary Liquid Mixtures

John Dunham  
*Grinnell College*

W. C. Oelke  
*Grinnell College*

Copyright ©1934 Iowa Academy of Science, Inc.

Follow this and additional works at: <https://scholarworks.uni.edu/pias>

---

### Recommended Citation

Dunham, John and Oelke, W. C. (1934) "Some Observations of the Boiling Point of Ternary Liquid Mixtures," *Proceedings of the Iowa Academy of Science*, 41(1), 141-141.

Available at: <https://scholarworks.uni.edu/pias/vol41/iss1/37>

This Research is brought to you for free and open access by the Iowa Academy of Science at UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact [scholarworks@uni.edu](mailto:scholarworks@uni.edu).

complexity of the adsorbed vapor molecules; further it is found to decrease with increase in the value of the van der Waals constant,  $b$ .

The heats of adsorption  $\Delta H$ , calculated from the adsorption isosteres were found to be: acetone -10690 cal., methyl-ethyl ketone -11225 cal., diethyl ketone -11820 cal., ethyl formate -13140 cal., methyl acetate -11520 cal., ethyl acetate -11920 cal., n-propyl acetate -13200 cal., methyl propionate -14030 cal. As is generally found, the heats of adsorption for the ketones, thus calculated, are lower than those which have been determined experimentally.

DEPARTMENT OF CHEMISTRY,  
STATE UNIVERSITY OF IOWA,  
IOWA CITY, IOWA.

---

### SOME OBSERVATIONS OF THE BOILING POINTS OF TERNARY LIQUID MIXTURES

JOHN DUNHAM AND W. C. OELKE

An exposition of an apparatus for the determination of the boiling points of liquid mixtures under constant pressure, and the results of preliminary investigations upon ternary mixtures of some common organic liquids.

GRINNELL COLLEGE,  
GRINNELL, IOWA.

---

### THE USE OF ELECTRON TUBES AS SUPER- SENSITIVE RELAYS

W. C. OELKE

A brief discussion of the use of electron tubes in relay circuits controlling physical apparatus. The construction and operation of several relay units were shown.

GRINNELL COLLEGE,  
GRINNELL, IOWA.

---

### THE DIPOLE MOMENTS OF CERTAIN ORGANIC COMPOUNDS

J. N. PEARCE AND L. F. BERHENKE

The dielectric constants and densities of dilute solutions of p-brombenzaldehyde, p-tolualdehyde, p-hydroxybenzaldehyde and