

from  
**ABSTRACTS  
 OF COMMUNICATIONS**

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TO THE

**XIIIth INTERNATIONAL  
 PHYSIOLOGICAL  
 CONGRESS**

HELD AT BOSTON

August 19-24

1929

p147-148

by Kundson

ice-box for four months. The S. 111 solution will keep in the ice-box more than a year, even with mold growing on it.

bile salts only sometimes precipitate "cholecystokin". From our studies up to the present, we believe that "cholecystokin" is closely allied to, but not identical with, secretin.

KNOWLTON, F. P. and G. J. CAMPBELL (SYRACUSE, NEW YORK). An Electron Tube Stimulating Device. (Demonstration)

KNUDSON, ARTHUR and PHILIP J. SCHAIBLE, (ALBANY). Chemical Changes in the Body Resulting from Exposure to Ultra-High Frequency Field. I. Blood Chemical Findings in the Dog. II. Acid-Base Balance in the Plasma of Dogs.

During the operation of a short-wave radio transmitter, striking heating effects in the vicinity of the antenna have been noted. The general effect on animals when placed in the field of short radio waves of from 25,000 to 10,000 kilocycles (12-30 meters) is a marked heat production so that the temperature is raised considerably in a short period of time. The

U. S. Ho mar. Science, 1928, lxxviii, 325.

rectal temperatures of dogs have been raised to 105-110°F. (40.7-43°C) and maintained at these fever temperatures for varying periods of time. With extreme temperatures of 108-110°F, maintained for a period of 30 to 60 minutes very marked changes in the blood are brought about. A marked decrease in blood volume occurs, with a coincident increase of cell volume. There is a great tendency for increase of non-protein nitrogen, calcium, protein, lactic acid, and chlorides. The alkali reserve and the pH are greatly reduced, indicating a condition toward acidosis.

A study of the electrolytes of the plasma such as the total base, chloride, bicarbonate, proteins, lactic acid, and inorganic phosphates, gives a picture of the total acid-base equilibrium. The total base is generally increased, with an increase in protein, chlorides, and lactic acid. Bicarbonate is markedly reduced. The protein, chloride and lactic acid increase out of proportion to increase in total base so that bicarbonate cedes base, although some base may be yielded by tissues.