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The Effect of Gas-Pressure on Tesla-Luminescence

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was made upon the resistance of the cortical layer transverse to the length of the tuber.

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THE EFFECT OF GAS-PRESSURE ON TESLA-LUMINESCENCE

G. M. WISSINK

In investigating the tesla-luminescence of cod-liver oil, it was observed that the nature of the luminescence would change very rapidly with the pressure. This effect was noticed for the cod-liver oil vapor, for carbon-dioxide and for air. In the case of air it was found that there was an abrupt change from a pinkish glow at about 4 mm. pressure to a bright orange at about 2 mm. The actual value of the pressure at which this effect took place has not as yet been accurately determined.

A preliminary spectroscopic study of the luminescence has shown that bands which are prominent at the higher pressure disappear at the lower.

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VELOCITY OF ULTRA-SONIC WAVES IN VAPOR

GEORGE E. THOMPSON

The velocity of sound waves having a frequency of 107,500 cycles per second has been measured in water vapor and in ether vapor. The waves are generated by a quartz crystal oscillator and velocities measured by an interference method similar to that used by Pierce.[1] The sound chamber is made air tight. After thorough exhaustion of the chamber with an air pump the vapor is introduced through a stop cock which connects the chamber with a glass bottle containing vapor. The sliding joint, through which the rod carrying the sound reflector passes, is made air tight by means of a rubber tube, which, by stretching and contracting, allows the reflector to be moved back and forth by a screw mounted outside the chamber.

The best value obtained for the velocity in water vapor is

1 Proc. Am. Acad. 60, 271 (1925).