Determination of the Surface-tension of Water by the Method of Jet-vibration.

By Prof. N. Bohr (Copenhagen).

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(Abstract.)

In the present determination of the surface-tension of water the method of jet-vibration proposed by Lord Rayleigh is used; this method has the fundamental advantage that a perfectly fresh new-formed surface can be examined.

In the theoretical part of this investigation it is shown how Lord Rayleigh's theory of infinitely small vibrations of a jet of a non-viscid liquid can be supplemented by corrections for the influence of the finite amplitudes as well as for the viscosity.

In the experimental part it is shown how it seems to be possible, in a simple manner, to secure that the jet-piece used for the measurements satisfies the assumptions on which the theoretical development rests.

As the final result of the experiments, the author finds the surface-tension of water at 12° to be 73·23 dyne/cm.

The Origin of Osmotic Effects. II.—*Differential Septa.*

By Henry E. Armstrong, F.R.S.

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