



Method of determining the surface-tension of mercury

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conductivity and diffusion of an electrolyte.—*Zeitschrift für physikalische Chemie*, vol. vi. p. 564; *Beiblätter der Physik*, vol. xv. p. 370.

METHOD OF DETERMINING THE SURFACE-TENSION OF MERCURY.

BY H. SENTIS.

A rectangular plate of iron of the volume abc and the weight p floats on mercury; the actual dimensions were about $120 \times 8 \times 2$ c. millim. The depth h to which it sinks is determined by means of a spherometer. On the one hand, we have from the principle of Archimedes,

$$p = abhD + 2(a+b)F \cos \alpha;$$

in which D is the density of mercury, F the surface-tension, and α the edge-angle, and the second term on the right is the weight of the mercury which would fill up the groove about the plate. The error which is due to the corners may be eliminated by means of another plate of volume cde , and weight p' , immersed to the same extent, which gives exactly the same error. On the other hand, the well-known equation

$$h = \sqrt{\frac{2F}{D}(1 - \cos \alpha)}$$

holds, and by eliminating the error and the edge-angle we get the formula

$$F = \frac{Dh^2}{4} + \frac{[p_1 - p_2 - (ab - cd)hD]^2}{[d + b - c - d]^2 h^2 D},$$

from which observations give $F = 39.23$ mg.—*Journal de Physique*, vol. ix. p. 384 (1890).

ALLOTROPIC SILVER.

Mr. M. Carey Lea requests us to correct a typographical error occurring in his paper, entitled "Notes on Allotropic Silver," which appeared in our October number. In this paper in several places appears "protochloride" where photochloride is the correct reading. Silver photochloride is the name proposed some years ago by Mr. Lea for the coloured compounds resulting from the union of normal silver chloride with small quantities of subchloride in no definite proportion, but after the manner of lakes as specially described by him.—The violet substance resulting from the exposure of silver chloride to light is a photochloride.