

THE ELECTROCHEMICAL EQUIVALENT OF SILVER.¹

A preliminary account of the recent redetermination of the electrochemical equivalent of silver by Van Dijk and Kunst has been given in the "Proc. Roy. Acad., Amsterdam, Jan. 21, 1904," and in the "Ann. Phys. Vol. 14, p. 569, 1904." Van Dijk has now published the interesting details of the research.

The tangent galvanometer method was employed, a method which requires the accurate knowledge of the intensity of the horizontal component of the Earth's magnetic field. This was determined by means of a bifilar magnetometer, with wires 232 cms. long and 12.4 cms. apart. Great pains were taken to eliminate all possible errors, and the difficulties encountered due to local magnetic influences in the instruments are fully described.

During the electrolytic deposition of silver the variations of H were observed and taken into account.

The coulometer differed from the ordinary type only by the use of filter paper thimbles for surrounding the silver anode. The electrolyte was a neutral 20% silver nitrate solution.

As final result for the silver equivalent 1.11823 ± 0.000024 mg. per coulomb is given, and this value is claimed to be correct within 1 in 10,000. However, we can hardly expect as great an accuracy as this, considering the great number of factors entering into the result and the relatively large discrepancies between the individual determinations.

The second part of the paper contains a comparison of the author's and other types with the porous cup coulometer, which has recently been proposed as the more reliable instrument.

Applying the corrections found to the various determinations of the electrochemical equivalent of silver, Van Dijk comes to the conclusion that it is 1.1180 mg. per coulomb for a porous cup coulometer; i. e., the same value as formerly chosen for the filter paper coulometer, which yields, however, 4 in 10,000 heavier deposits. T. W. Richards and the reviewer had, from similar comparisons, arrived at the values 1.1175 mg. and 1.1178 mg., respectively.

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HISTORY OF THE "OBSERVATORIO DEL COLEGIO DE BELEN, HABANA."²

This work by Father Guitiérrez is a concise but comprehensive history of the well-known Meteorological and Magnetic Observatory in Havana, including a description of the Observatory, a statement of its instrumental equipment, a list of the scientific institutions with which it is in correspond-

¹ VAN DIJK, G., Détermination de l'équivalent électrochimique de l'argent. Arch. Néerl. des Sci. (2) Vol. IX, p. 442.

²M. GUITIÉRREZ-LANZA, S. J., Apuntes historicas acerca del observatorio del Colegio de Belen, Habana. Habana, 1904, 8°, 178 pp.