In reducing it to 0° with the coefficient determined by RODGER and WATSON [1]), and comparing the result with those of other investigators, we find with a sufficient agreement:

ARONS [2])	0'.01298 (0°)
QUINCKE [3])	0'.01418 (0°)
RODGER and WATSON [1])	0'.01311 (0°)
SIERTSEMA	0'.01303 (0°)

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[1]) RODGER and WATSON, Zeitschr. phys. Ch. 19, p.323.
[2]) ARONS, Wied. Ann. 24, p. 161 (1885).
[3]) QUINCKE, Wied. Ann. 24, p. 606 (1885).

Dr. L. H. SIERTSEMA. *Measurements on the magnetic rotatory dispersion in gases.*

In the former communications [1]) the magnetic rotations, found for some gases, are expressed in minutes for unity of magnetic potential-difference, by means of a reducing factor, calculated from the dimensions of the apparatus, the number of windings of the coils, and the constant of the tangent galvanometer with which the galvanometer of D'ARSONVAL is calibrated. This latter constant was deduced from comparisons with a copper-voltameter.

The accuracy of this reducing factor is controlled by a determination of the rotatory constant of water, which, as may be seen in the preceding pages, has showed a sufficient agreement with the values found by others.

Meanwhile it appeared necessary to add another correction to the manometer-readings, in consequence of which the following formulae are obtained:

Air (100 KG., 13°.2) $$n.\,10^6 = \frac{190.6}{\lambda}\left(1 + \frac{0.242}{\lambda^2}\right).$$

Oxygen (100 KG., 7°.0) $$n.\,10^6 = \frac{271.7}{\lambda}\left(1 + \frac{0.0704}{\lambda^2}\right).$$

Nitrogen (100 KG., 14°.0) $$n.\,10^6 = \frac{169.9}{\lambda}\left(1 + \frac{0.311}{\lambda^2}\right).$$

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[1]) Communications etc. N°. 24.

Carbonic acid (1 atm. 6°.5) $n. 10^8 = \frac{269.5}{\lambda}\left(1 + \frac{0.307}{\lambda^2}\right).$

Nitrogen monoxide (30.5 atm., 10°.9)

$$n. 10^6 = \frac{75.50}{\lambda}\left(1 + \frac{0.306}{\lambda^2}\right).$$

Hydrogen (85.0 KG., 9°.5) $n. 10^6 = \frac{138.6}{\lambda}\left(1 + \frac{0.325}{\lambda^2}\right).$

In calculating the rotation of air at 13°.2 from that of *O* and *N*, we find:

$$n. 10^6 = \frac{190.0}{\lambda}\left(1 + \frac{0.241}{\lambda^2}\right),$$

in close agreement with the formula which is derived from the direct measurements.

COMMUNICATIONS

FROM THE

PHYSICAL LABORATORY

AT THE

UNIVERSITY OF LEIDEN

BY

PROF. DR. H. KAMERLINGH ONNES,

Director of the Laboratory.

No. 32.

(REPRINT.)

Dr. J. VERSCHAFFELT. On capillary ascension between two cylindrical tubes.

(*Translated from: Verslagen van de Afdeeling Natuurkunde der Kon. Akad. van Wetenschappen te Amsterdam*, **31 October 1896**, p. 175—181).

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