

Preface

Since Debye¹⁾ postulated the existence of permanent dipole moments, this molecular constant has become of decisive importance for the interpretation of the dielectric properties of gases, liquids and solids. More than twenty-five hundred compounds have been measured to date, many under a variety of conditions and by a number of different methods. These substances were selected according to the diverse interests of the investigators, and the results are scattered in the physical and chemical literature of many countries.

We felt the need, from the standpoint of co-ordinated research on dielectrics, for a well-organized compilation of these dipole moments²⁾, and L. G. Wesson of this Laboratory has undertaken the arduous and exacting task.

It is hoped that the "Tables of Electric Dipole Moments" will prove of value to all research workers in this field, and that we may count on the support of previous, as well as future authors, in making these "Tables" more reliable, complete and up-to-date.

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- 1) P. Debye, *Physik. Z.* 13, 97 (1912).
- 2) For earlier summaries see:- C. P. Smyth, *Dielectric Constant and Molecular Structure*, Chemical Catalog Co., New York, 1931; P. Debye, *Polare Molekeln*, Hirzel, Leipzig, 1929, with supplementary lists dated 1930 and 1931; N. V. Sidgwick, G. C. Hampson and R. J. B. Marsden, *Trans. Far. Soc.* 30, Appendix (1934); O. Fuchs and K. L. Wolf, *Hand- und Jahrbuch der chemischen Physik* 6, I (1935); *Physikalisch-chemische Tabellen*, Landolt-Börnstein, Springer, Berlin, 5th Ed., Suppl. II a, pp. 74-86; II b, pp. 969, 970; III a, pp. 117-150 (1935); R. J. W. Le Fèvre, *Dipole Moments*, Methuen and Co. Ltd., London (1938).