

Dipole moments of N,N- diethyl(dialkoxyphosphinyl)formamides

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Abstract

1. Dipole-moment measurements have been made on six N,N-diethyl(dialkoxyphosphinyl)formamides. The mean value obtained for the dipole moments is 2.96 D, which is close to the value calculated on the assumption of free rotation of the irregular groups ($\mu = 3.33$ D). 2. Calculation of the interatomic distances between, individual groups in N,N-diethyl(dialkoxyphosphinyl)formamides, taking into account the free rotation of the irregular groups, shows, however, the presence of a great measure of overlap of the spheres of action of Van der Waals forces due to methyl and methylene groups, and this makes it improbable that free rotation of the irregular groups can occur. 3. It is more probable that there is a synchronous vibration of OR and [Figure not available: see fulltext.] groups, having an amplitude of 180° . © 1953 Consultants Bureau.

<http://dx.doi.org/10.1007/BF01198864>
