# Gas phase IR spectra of systems with intramolecular hydrogen bonds.

Autorzy

Konstanty Rutkowski

Aleksander Koll

Rok wydania

1994

Czasopismo

Journal of Molecular Structure

Numer woluminu

322

Strony

195-203

DOI

10.1016/0022-2860(94)87035-7

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The IR spectra of intramolecular hydrogen bonds in ortho Mannich bases have been measured in the gas phase and in diluted $CCl_4$ solutions. It is demonstrated that the intramolecular hydrogen bonds are stable both in the gas phase and in $CCl_4$ solutions. The hydrogen bonds in the gas phase are weaker but the $\nu_s$(OH) bands are still broad with a halfwidth of about 400–500 $cm^{-1}$. It demonstrates that the coupling with internal modes of a molecule is a sufficient condition for such band broadening. Spectral moments of $\nu_s$(OH) bands were determined and correlated with $\Delta pK_a$ values both in the gas phase and in $CCl_4$ solutions.

Adres publiczny

https://doi.org/10.1016/0022-2860(94)87035-7

Strona internetowa wydawcy

http://www.elsevier.com