

Nuclear magnetic resonance spectra of protons and structure of azines and phenylhydrazones

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Abstract

1. The high-resolution PMR spectra of azines, phenyl- and methylphenyl-hydrazones of aliphatic ketones and aldehydes were obtained and deciphered. 2. On the basis of an analysis of the data obtained, conclusions were drawn on the hydrazone structure of the compounds studied in the free state. 3. Using the data obtained and the theory of the magnetic anisotropy of aromatic rings, calculations were made of the probable configuration of the acetaldazine, dimethylketazine, acetone phenyl- and methylphenyl-hydrazones, and acetaldehyde methylphenylhydrazone molecules. 4. A study of the influence of temperature on the PMR spectrum of acetone methylphenylhydrazone within the interval from -14 to $+80^{\circ}$ indicated the absence of free rotation of the phenyl radical around the C-N bond. © 1966 Consultants Bureau.

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