Magnetic Resonance in Chemistry 2014

Dynamic NMR study of cyclic derivatives of pyridoxine

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Abstract

A series of pyridoxine derivatives was investigated by 1H and 2D nuclear overhauser enhancement spectroscopy (NOESY) NMR. The free energies of activation for the pyridyl-oxygen rotation of the 2,4-dinitrophenyl ether of the seven-membered acetals of pyridoxine were measured by dynamic NMR. A conformational exchange between the chair and twist forms of the seven-membered acetal ring was confirmed by dynamic NMR and STO3G computations. © 2014 John Wiley & Sons, Ltd.

http://dx.doi.org/10.1002/mrc.4123

Keywords

Dynamic 1H NMR, Energy barrier, Pyridoxine