
ViscY experiments in phosphoric acid as viscous solvent for the individualisation of small molecules within mixtures by spin diffusion

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Résumé

The problem of the analysis of small molecule mixtures has fostered in the recent years an active search for effective and practical solutions. Application fields include the study metabolite mixtures and of chemical reaction media. ViscY is a collective name for the NMR experiments that take benefit from spin diffusion in highly viscous solvents for the individualization of the NMR spectra of small molecule mixture components. Two viscous media were prepared from ortho-phosphoric acid (85 %) by dilution with either D₂O or DMSO-d₆, thus providing solvent blends with slightly different polarities in which all liquid-state NMR experiments can be carried out easily. Two mixtures, one of four dipeptides and one of four low-polarity phosphorus-containing compounds were used for method assessment.

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