Research Article

Differential Analysis of O-(2-hydroxypropyl) cellulose by Using Two-Dimensional 1H-NMR Spectroscopy

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Two-dimensional 1H-NMR is used to determine the intra-molecular interactions of O-(2-hydroxypropyl) cellulose (HPC) in aqueous (D2O), DMF and DMSO solutions. Four grades HPC with different molecular weights are analyzed by using NOESY (Nuclear Overhauser Effect Spectroscopy) for proton-proton cross-interactions. A strong dependence of the polymer chain structure on th ...

Review Article

Dynamic buffer capacity versus alkalinity. Formulation in terms of Simms constants idea

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The Simms constants (gi) concept is put in context with equations for some acid-base titration curves, formulated for D+T systems, with titrand D and titrant T prepared according to normal and isomolar mode. The relationships between gi and successive dissociation constants (Ki) values for polyprotic acids are formulated. The mathematical formulation of dynamic buffer ...