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Title:	Probing aggregation of human insulin in solution using pulsed-field gradient NMR spectroscopy
Authors:	Mishra, Aditya (/jspui/browse?type=author&value=Mishra%2C+Aditya)
Keywords:	Probing aggregation NMR Spectroscopy Spin Angular Momentum Diffusion NMR Primary Structure Diffusion Study of Insulin
Issue Date:	5-Sep-2018
Publisher:	IISERM
Abstract:	Insulin plays an important role in biological systems and it has been extensively studied as a model of protein structure and function. Its ability to exist in different forms makes it an interesting model therefore it has been extensively studied through circular dichroism (CD) spectroscopy, 1D-1H NMR spectroscopy, dynamic light scattering (DLS), mass-spectroscopy etc. The insulin produced and stored in the pancreas is in the active Zn hexamer in which three dimers are surrounded by Zn ²⁺ ion, but when it is released into blood serum by the pH change, this hexamer dissociates into dimer and subsequently monomers which is its physiologically active form. However, monomers are less stable than hexamer exposing it to heat and motion it tends to aggregate. In this project, we are trying to study about insulin (with and without EDTA) aggregation at different pH, EDTA, temperature and amount of sucrose.
URI:	http://hdl.handle.net/123456789/1004 (http://hdl.handle.net/123456789/1004)
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