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Title:	Cationized gelatin/gum arabic polyelectrolyte complex: Study of electrostatic interactions
Authors:	Pavithran, Anupama (/jspui/browse?type=author&value=Pavithran%2C+Anupama)
Keywords:	gelatin/gum polyelectrolyte complex electrostatic interactions cationized gelatin (CG)
Issue Date:	2015
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Abstract:	The electrostatic interactions between cationized gelatin (CG) and gum arabic (GA) have been investigated through turbidity measurements and dynamic light scattering. Gelatin was modified with ethylenediamine (EA) to introduce additional primary amino groups to enhance polycationic nature needed for complexation with polyanionic gum arabic. This study aims to gain an insight into the interactions of gelatin with GA after modification with EA. The interaction between these polyelectrolytes (GA and CG) has been studied by varying different parameters. Nanosized CG/GA complex was formed by the simple mixing of CG (0.1%, w/v) and GA (0.1%, w/v) with mixing ratio 1:1 (v/v). The effect of pH on the CG/GA complex nanoparticles (1:1, v/v) was examined by measuring changes in turbidity, hydrodynamic size and zeta potential. By varying the mixing ratio of the corresponding polymers, different types of CG/GA complex (clear and turbid) could be prepared. This study provides information regarding the effect of pH, ionic strength and biopolymer mixing ratio on the formation of polyelectrolyte complexes of cationized gelatin and gum arabic
Description:	Only IISERM authors are available in the record.
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