Nanoparticle preparation by self-assembly of chitosan and Fucoidan

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In this study novel nanoparticles were prepared by polyelectrolyte complexation between chitosan and Fucoidan at simple and mild conditions. Specifically the effect of pH of chitosan solution and chitosan-Fucoidan mass ratio was studied on the turbidity of the suspension, yield of the dried mass and particle size. The prepared chitosan-Fucoidan complex nanoparticles were observed by field emission sacnning electron microscope and the mean size of prepared nanoparticles located in matrix was measured as less than 100nm. The nanoparticles tended to grow as the pH of chitosan increased and the mass ratio of chitosan and Fucoidan decreased, which led to the formation of the aggregated nanoparticles.