

## Synthesis of chitosan oligosaccharide-gold nanocomposite

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Drug delivery system was applied to increase the effectiveness of treatment by the pharmaceutical body and to minimize the side effects of medication, which are used to heal the damaged areas of the disease in the human body. Specific drugs of DDS are targeting a specific area in order to obtain the optimal efficacy and stability of drugs. Chitosan had various function such as reducing side effects from an anti-cancer medicine, control of cholesterol, control of blood sugar level, effect of antioxidant, so it was used in diverse fields. Chitosan also has effective functions of controlling the biorhythm as well as activating a function of self-healing. And the drug have the larger surface and the rate of dissolution and permeation were increased depend on the surface. The nanocomposite of chitosan oligosaccharide which is low molecular weight than chitosan polymer and gold nanoparticles were synthesized as drug delivery material. The shape and characterization of chitosan oligosaccharide-gold nanoparticles was checked by Scanning electron microscopy(SEM), Transmission electron microscopy(TEM), Ultraviolet-visible spectroscopy (UV), Electrophoretic Light Scattering, and Atomic force microscopy (AFM).