Synthesis of Nanocomposites Gold in Starch Matrix

Contreras Reyes, Angel
Salazar Garces, Mayra
Salazar Molina, David

The present project aims to develop the mechanism for introduction of gold nanoparticles into a biological system. To achieve this, we are looking for biologically compatible matrix that on one hand will permit to keep the nano-particles in a stable form and, on the other hand, will reduce the risk of rejection of the particles by a biological system. One of good and non-expensive materials of such kind is starch. Therefore, the starch matrix was used as a reducer and stabilizer agent nanocomposites of gold. We report the successful stabilization of nano-particles from the results of our experimental study. The obtained nanocomposites of gold have the average size of 72 and 84 nm. The physical and morphological properties were measured with STEM , EDAX , spectroscopy in visible U.V ranges and FTIR. The resulting materials are promising for applications in medicine and electronics.

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