

Size controlling of Nanoparticle for DNA detection

The prevalence of new and current diseases is rising continuously. A high sensitivity and rapid detection are main concern for the development, especially in clinical diagnostic. Recently, DNA detection have been designed for higher precisely detection. One of DNA sensor is the DNA tagging with nanoparticles. It is widely used to apply in a variety of target including nucleic acids, small molecule and protein. This work would show the possibility of applying the nanoparticles in DNA hybridization detection. The characteristics of the nanoparticles were studied by transmission electron microscopy (TEM) and Ultraviolet spectroscopy in real serum solution by using a simple optical technique. The results was shown about the key parameters for size changing in nanoparticles and correlation to the capability of DNA detection. Some parameters such as time for seed growth, pH value and acids reagents were proved that there are effect on the size of nanoparticles. The UV-via signal were analyzed to show the size controlling of nanoparticles.

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