

## Preparation and characterization of magnetic nanoparticles

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The magnetic nanoparticles (MNPs) with core diameter 10 nm have been modified by poly-L-lysine to bind antibody for cancer cell detection. Prepared biocompatible magnetic fluids (MFPLL) were characterized by dynamic light scattering method to obtain the particle size distribution. The microstructure of the MNPs and MFPLL samples has been studied by transmission electron microscopy, X-ray diffraction and Mössbauer spectroscopy. Magnetic properties of the samples were measured by SQUID magnetometer and superparamagnetic behavior of the samples was confirmed.