

## Abstract

The cellular uptake of different sized silver nanoparticles (10 nm, 50 nm, and 75nm) coated with polyvinylpyrrolidone (PVP) or citrate in ARPE-19 cells following 24 hour incubation was detected by side scatter through the use of a flow cytometer. A large far red fluorescence signal in the 700-800 nm range was detected in five different flow cytometers after 24 hr incubation with 50 nm and 75 nm particles but not with 10 nm particles. A dose dependent correlation of side scatter and far red fluorescence was observed with both PVP and citrate-coated silver particles. The citrate-coated silver nanoparticles (AgNP) revealed a slightly higher scatter and far red fluorescence than did the PVP coated silver nanoparticles. Morphological evaluation showed the silver particles (50 nm and 75 nm) to be clumped and concentrated around the nucleus.