Optical Observation of Nanoparticles

The ability to observe and characterize nanoparticles and their interaction with biological materials is critical for nanotoxicology and nano drug delivery research. CytoViva, Inc. provides this capability with its patented darkfield based optical microscope technology. With optimized focus and alignment of oblique angle illumination (also known as darkfield), CytoViva produces a very high signal-to-noise ratio image. This enables fast observation of the Rayleigh scatter from a wide range of nanoscale materials. Figure 1 illustrates CytoViva's high signal-to-noise optical image of 80nm Au Nanoparticles adhering to a glass slide substrate. CytoViva's Technology has proven to produce superior results over other standard optical illumination methods. Figure 2 provides a comparison of standard darkfield microscopy (a) and CytoViva (b) using polystyrene latex standard 240nm beads. The image acquisition settings were identical for both images.

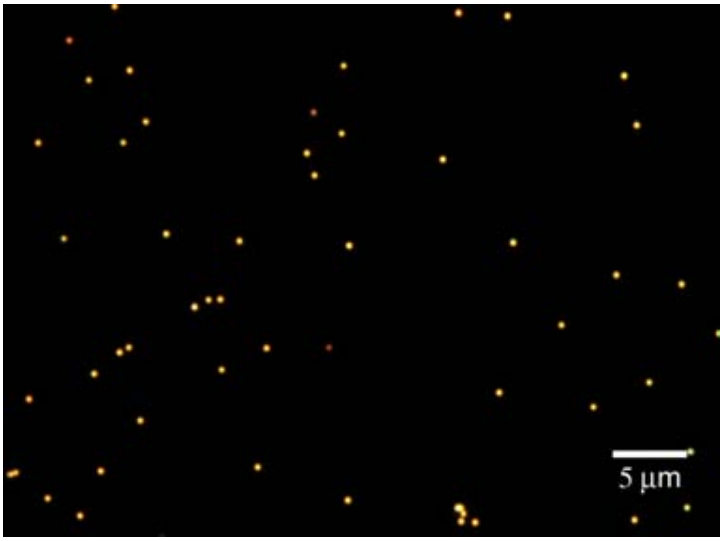


Figure1. 80nm AuNP in Solution

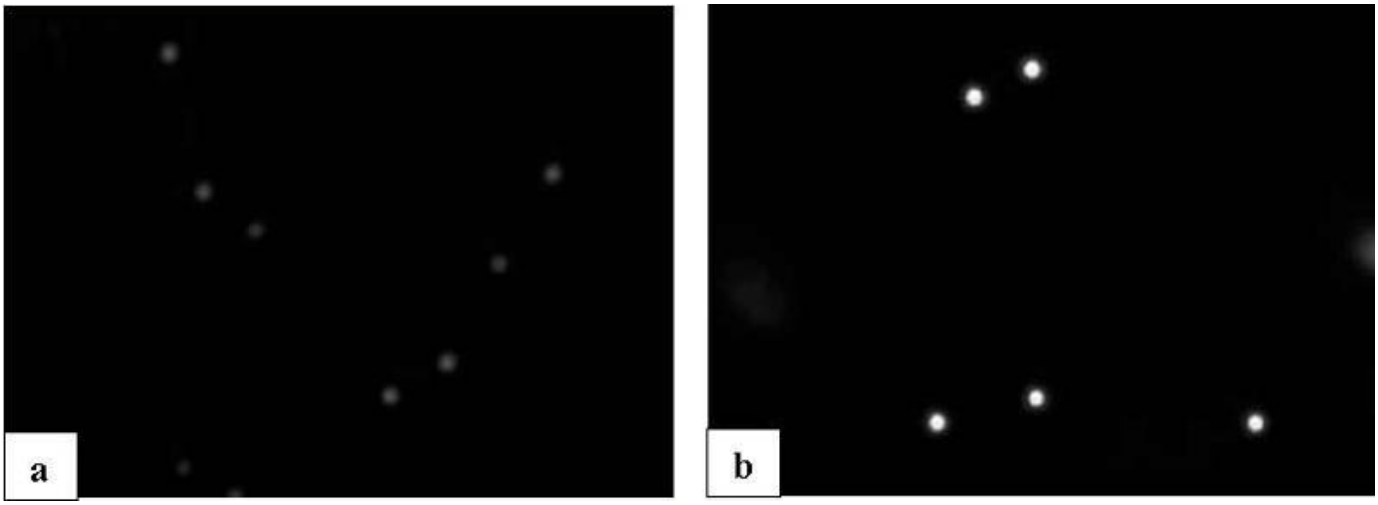
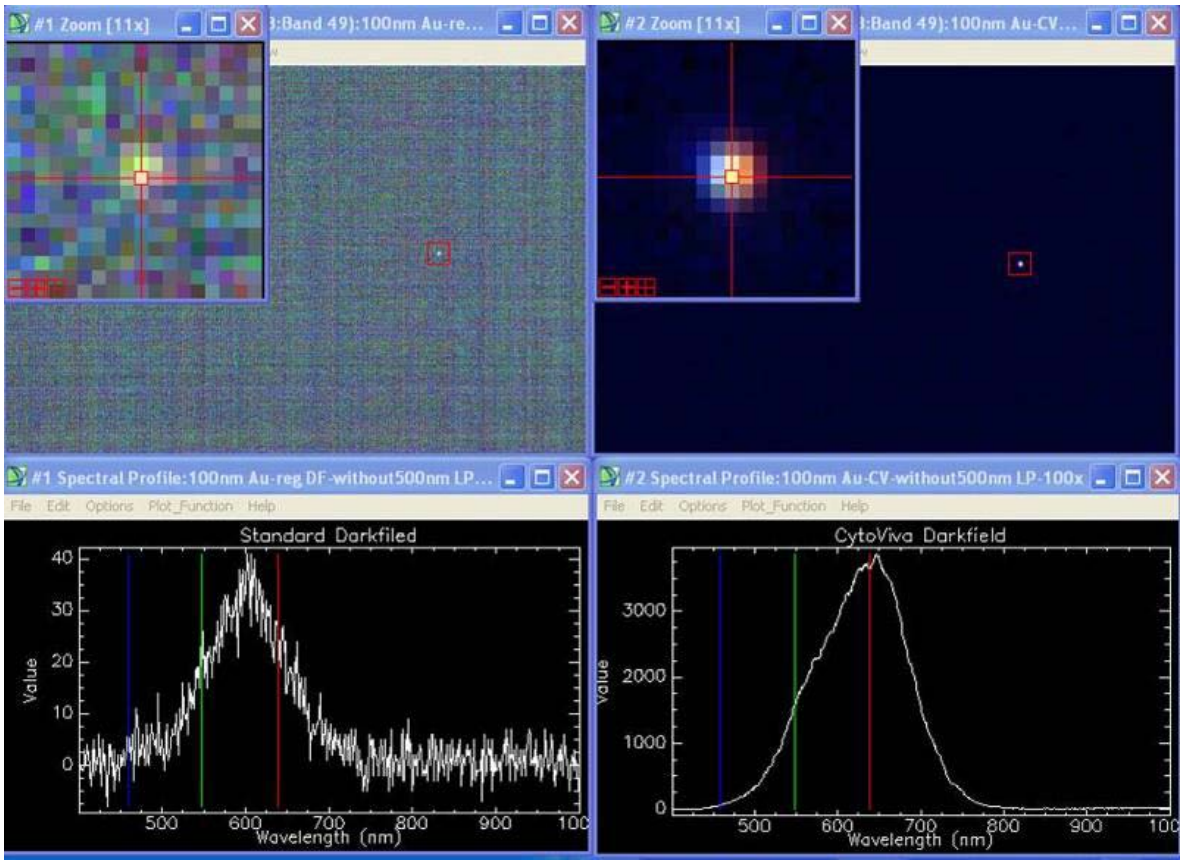


Figure 2. Conventional Darkfield and CytoViva Comparison (See Footnote[1])

[1]**Imaging of Submicron Particulate in an Optical Flow Cell, The Dow Chemical Company, Analytical Sciences, 1897 Building, Midland, MI 48667,** D.R. Rothe, S.P. Wood, W.A. Heeschen 672 CD Microsc Microanal 13(Suppl 2), 2007 DOI: 10.1017/S1431927607071127 Copyright 2007 Microscopy Society of America

CytoViva, Inc. • 570 Devall Drive • Suite 301 • Auburn, AL • 36832
info@cytoviva.com • 888-737-3130 • www.cytoviva.com


#1 Zoom [11x]
#2 Zoom [11x]
#1 Spectral Profile:100nm Au-reg DF-without500nm LP...
#2 Spectral Profile:100nm Au-CV-without500nm LP-100x
File Edit Options Plot_Function Help
Standard Darkfiled
CytoViva Darkfield
Value
Wavelength (nm)