

Technical Note 1: Optical Properties & Benefits

Nanoplex™ biotags are optical detection nanoparticles with ideal characteristics for a wide range of Clinical and Life Science applications

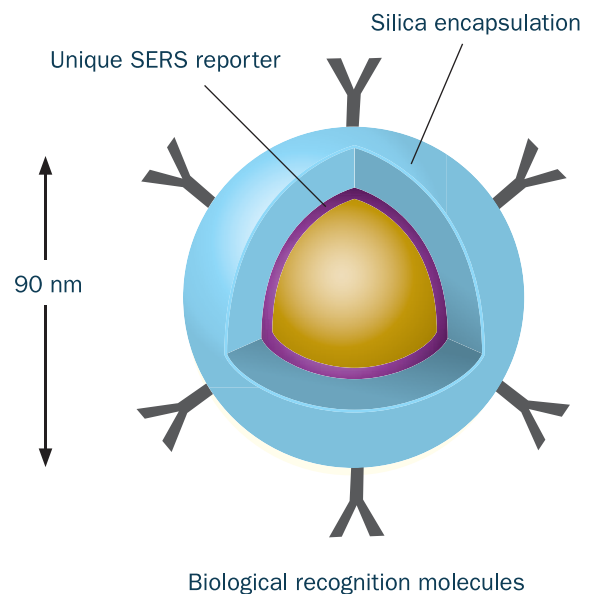
- Patented technology leverages the performance of surface enhanced Raman scattering (SERS)
- Convenient, glass encapsulated format which allows for simple biofunctionalization with proteins and nucleic acids
- Particles are inert and uniform in size
- SERS signal is photostable and, unlike fluorescence, cannot be “quenched”
- Signal is unaffected by ionic strength or temperature variations and is resistant to matrix interference
- Exploiting the low background interference of near-IR detection (785 nm) allows for data collection in whole blood and other biological matrices
- Multiplexed detection capabilities
- Proprietary software for spectral deconvolution and signal analysis

Nanoplex™ biotags Composition

Gold core

Adsorbed reporter molecule with known characteristic Raman spectrum. Multiple unique reporters available

Silica encapsulation

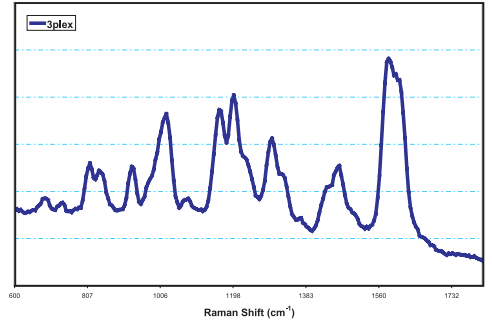


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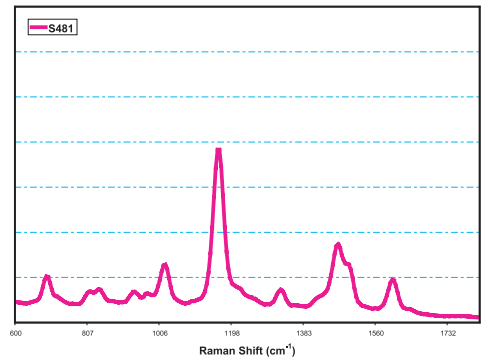
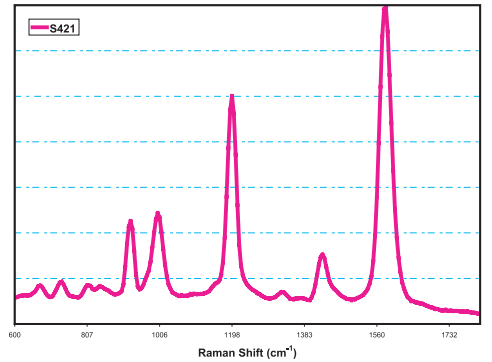
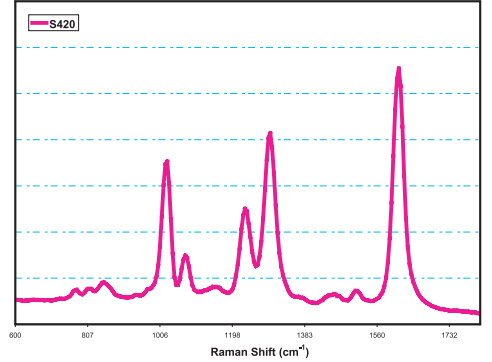
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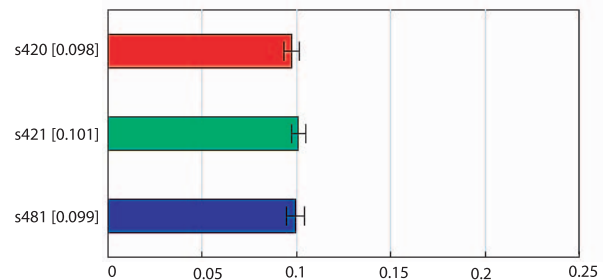
Composite spectra of mixture of three different tags as measured in a multiplexed assay



Proprietary software quantitatively deconvolutes spectra of each tag



Software reports amount of each tag present in sample



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