



Environment



Food



Medical



Narcotics



Pharmaceuticals

Silver Nanoparticle SERS Substrates for Raman Spectroscopy



Enhanced detection of trace molecules in minutes

[Buy Silver SERS substrates, click here](#)

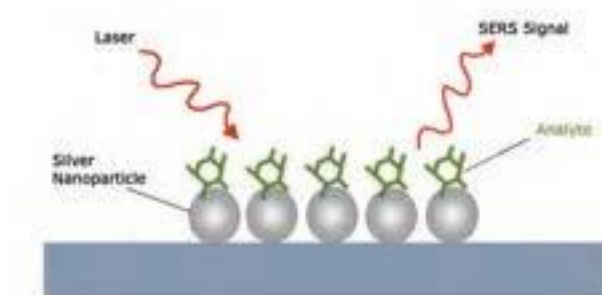
Enhanced detection of trace molecules in minutes

Specifications

Nikalyte Ag nanoparticle SERS substrate.

Dimensions:

(LxW) 75mm x 25mm.



Surface Enhanced Raman Spectroscopy (SERS) using silver nanoparticles.

SERS active material	Silver nanoparticles
Sensitivity	ppm to ppb
Laser wavelength	532nm, 785nm
Max laser power density	20W/cm ²
Analyte application area	4mm x 8mm
Active area	8mm x 8mm
Pack size	5 substrates
Lifetime	6 months

...Data

High Signal Enhancement

Achieve several orders of magnitude signal enhancement compared to standard Raman with Silver SERS substrates, enabling identification of trace levels of molecules in the ppb and ppm range.

Food Safety

SERS enables fast and low-cost identification of food additives and adulterations, including Tartrazine, Melamine and Caffeine. Fig.1. shows the Raman enhancement for Caffeine solution when measured with silver SERS substrates compared to standard Raman.

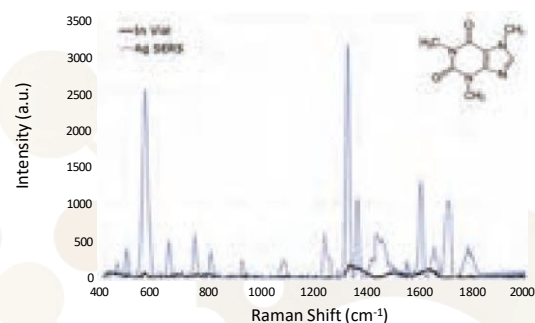


Fig.1. SERS signal enhancement for 1000ppm Caffeine solutions (blue) compared to standard Raman (black) measured at 785nm.

Biological

Detect trace levels of a wide range of biological molecules including proteins, peptides and other indicative biomarkers using silver SERS. High Raman enhancement is demonstrated for common dyes including Rhodamine 6G and 1, 2, di(4-pyridyl)ethylene, more commonly known as BPE.

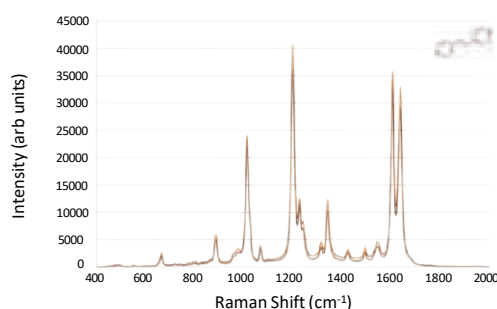


Fig. 2. SERS measurement repeatability for 1000ppm BPE solution measured for 4 different silver SERS substrate at 785nm.

For SERS research the Nikalyte NL50 is the perfect nanoparticle tool
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