Silver nanoparticle SERS substrate Instructions for Use

Nikalyte silver nanoparticle SERS substrates are supplied in packs of 5 paper substrates packed in a glass vial purged with Argon. The substrate can either be used as supplied (see instructions for use of unmounted SERS substrate on p2) or mounted on the glass slides, which are also provided in the pack (see instructions for mounting and using the SERS substrates on glass slides on p3)

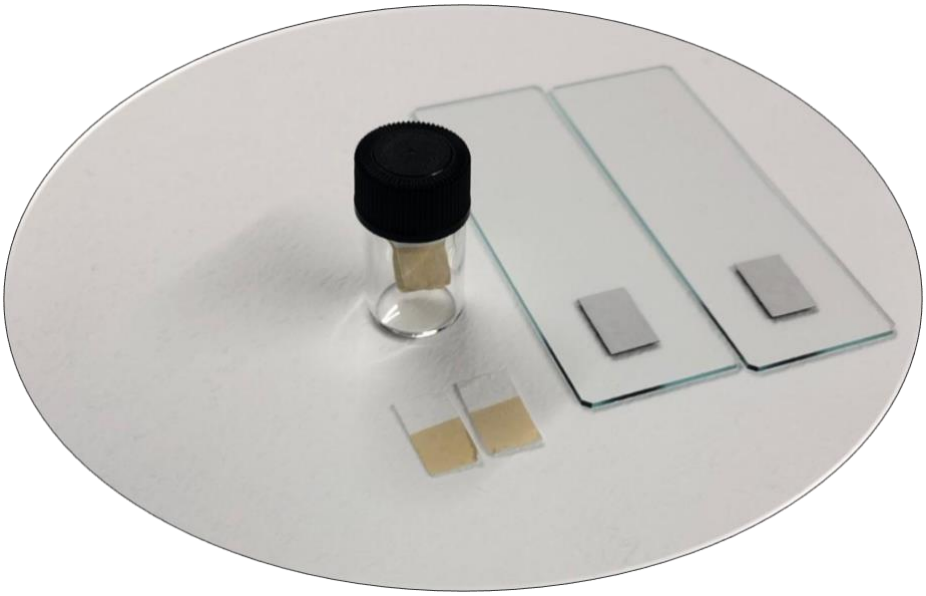
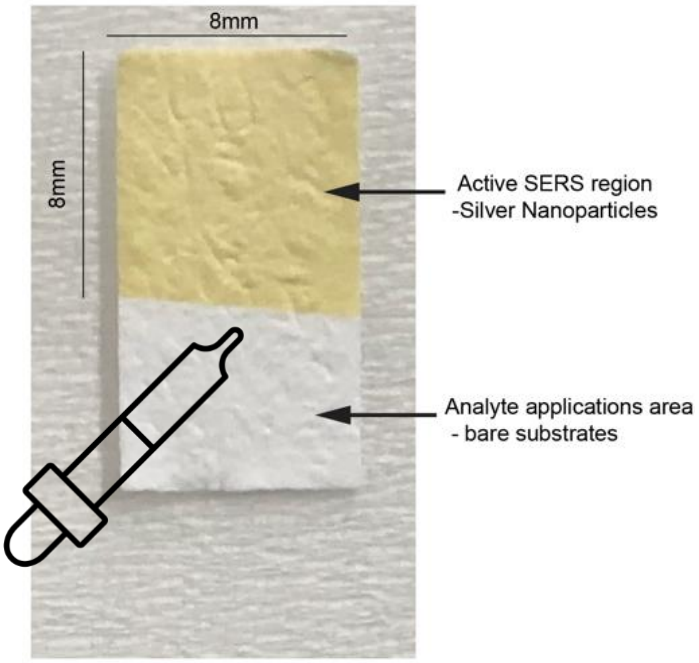


Figure 1 Nikalyte Silver SERS substrates kit

Specification	
SERS active material	Silver nanoparticles
Sensitivity	ppm to ppb
Laser Wavelength	532nm, 785nm
Dimensions	75mm x 25mm
Active area	8mm x 8mm
Analyte application area	4mm x 4mm
Lifetime (unopened)	3 months
Lifetime (open pack)	1 week

Procedure for as supplied SERS substrates

- Remove paper substrate from the vial without touching the active area to avoid contamination.
- Do not wash the substrate or expose to ultrasound.
- Place paper substrate onto a clean absorbent tissue, such as filter paper or low lint paper towel, to absorb any excess analyte.
- Slowly and carefully inject analyte solution directly onto the uncoated area of the paper.
- Bring pipette into contact with the bare substrate close to the coated area.
- Apply sufficient analyte to just wet the substrate active area but avoid having non-absorbed liquid on the substrate surface as excess analyte liquid can reduce the Raman signal. 20 to 30 µl of analyte is usually sufficient.
- Avoid dropping or splashing the analyte from above.
- Do not dip the substrate into the analyte.
- Measure the Raman signal immediately.
- Recommended laser power density 15W/cm^2
- Maximum laser power density 20W/cm^2



Procedure for glass mounted SERS substrates

- Peel off the protective layer from the carbon sticky pad on the glass slide.
- Remove paper substrate from the vial with a clean pair of tweezers without touching the active area to avoid contamination.
- Do not wash the substrate or expose to ultrasound.
- Place the paper substrate onto the carbon pad and press gently on the corners to ensure the pad is stuck securely.
- Slowly and carefully inject analyte solution directly on to the uncoated area of the paper.
- Bring pipette into contact with the bare substrate close to the coated area.
- Apply sufficient analyte to just wet the substrate active area but avoid having non-absorbed liquid on the substrate surface as excess analyte liquid can reduce the Raman signal. 20 to 25 µl of analyte is normally sufficient.
- Avoid dropping or splashing the analyte from above.
- Do not dip the substrate into the analyte.
- Measure the Raman signal immediately.
- Recommended laser power density 15W/cm^2
- Maximum laser power density 20W/cm^2