

## NIT Silver-COOH-PEG 25 nm

**#51010715Y & #510107161 & #51010815Y & #510108161**

### Description

25 nm-PEG-Silver Nanoparticles are uniform quasi-spherical nanoparticles functionalized with ligand shells of different monodentate poly(ethylene glycol)-thiol (PEG-SH) ligands (3000 or 5000 Da) having a carboxylic acid end group, which can be further used to immobilize covalently biomolecules by formation of stable amide bonds with primary amines using the carbodiimide coupling reaction with NHS (N-hydroxysuccinimide) and EDC (1-ethyl-3-(3-dimethylaminopropyl) carbodiimide hydrochloride). Polyethylene glycol functionalized gold nanoparticles have a high stability in biological media such as phosphate-buffered saline solution (PBS).

### Technical Specifications

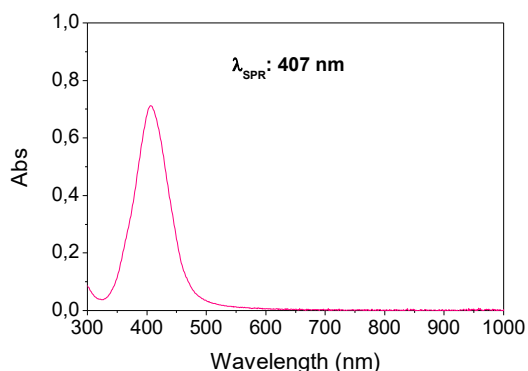
<b>Particle Surface:</b> PEG-COOH(3 - 5 kDa) capping	<b>Peak SPR wavelength:</b> 406-407 nm
<b>Hydrodynamic Diameter (DLS):</b> 33 ± 2 nm	<b>Z-Potential:</b> -23.4 mV
<b>Concentration:</b> 0.02 mg/mL	<b>Molar Concentration:</b> <sup>1</sup> 0.39 nM
<b>Particle Concentration:</b> 2.33×10 <sup>11</sup> particles/mL	<b>O.D.:</b> 6.5
<b>Solvent:</b> Milli-Q Water	<b>pH of Solution:</b> 5.0

<sup>1</sup> Determined according to a  $\epsilon = 1.68 \times 10^{10} \text{ M}^{-1} \cdot \text{cm}^{-1}$ . Werts et al. Analyst 2013,138, 583-592.

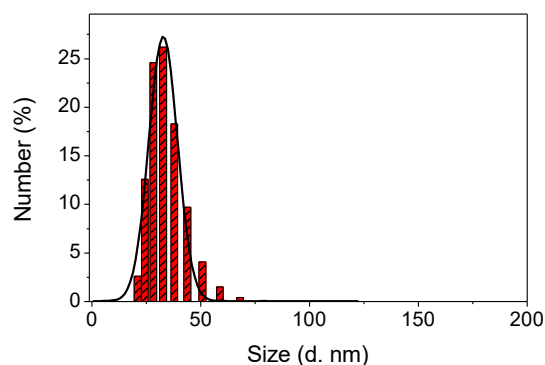
**STORE AT 4°C away from light. DO NOT FREEZE**



### UV/visible absorbance spectrum



### Size Distribution (DLS)



### Suggested Application(s)

- Biological applications
- Bioanalytical applications of SERS spectroscopy

### Ordering Information

Product name	N <sup>o</sup> Nanoparticles/mL	OD	$\epsilon$ (M <sup>-1</sup> cm <sup>-1</sup> )	Quantity	Cat#
NITsilver COOH-PEG 5000Da 25nm	2,33E+11	6,5	1,68E+10	10 ml	51010815Y
NITsilver COOH-PEG 5000Da 25nm	2,33E+11	6,5	1,68E+10	20 ml	510108161
NITsilver COOH-PEG 3000Da 25nm	2,33E+11	6,5	1,68E+10	10 ml	51010715Y
NITsilver COOH-PEG 3000Da 25nm	2,33E+11	6,5	1,68E+10	20 ml	510107161

### Product disclaimer

This nitparticles® product is to be used for research purposes only. Unless stated in the documentation of on an individual product label, catalog or other information provided to the buyer, IT IS FORBIDDEN TO USE IT for different purposes, including but not limited to them: in vitro diagnostic, use in food, pharmaceutical purposes, medical purposes, or use in cosmetic products, neither for use in humans nor animals, nor for any commercial purposes. Please refer to [www.nitparticles.com](http://www.nitparticles.com) for the Material Safety Data Sheet of the product.

