



# NNCrystal US Corporation

## Methylated Silver Nanoparticles

### Technical Data:

Core diameter: 10-100nm (Coefficient of Variance < 18%)

Surface Composition: methoxy-PEG-SH

Concentration: 1mg/mL (OD 46-125 Size Dependent)

Absorption Peak: 390-520nm (Size Dependent)

Carboxyl surface density:  $\sim 4/\text{nm}^2$

Solvent: USP Grade Purified H<sub>2</sub>O

Storage: Store at 4°C. Do not freeze.

Lifetime: At least 3 months

### Specifications for each size:

Diameter (nm)	Peak SPR Wavelength (nm)	NPS/ml	Wt. Conc (mg/ml)	Size Dispersity (+/-nm)	Particle Volume (nm <sup>3</sup> )	Surface Area (nm <sup>2</sup> )	Surface/Volume Ratio	Particle Mass (g)	Molar Mass (g/mol)	Molar Concentration
10	390-405	$\sim 3.6\text{E}+12$	2.0E-02	<18%	5.24E+02	3.14E+02	0.600	5.49E-18	3.31E+06	5.98E-09
20	390-410	$\sim 4.6\text{E}+11$	2.0E-02	<15%	4.19E+03	1.26E+03	0.300	4.39E-17	2.65E+07	7.64E-10
30	400-410	$\sim 1.4\text{E}+11$	2.0E-02	<15%	1.41E+04	2.83E+03	0.200	1.48E-16	8.93E+07	2.32E-10
40	405-425	$\sim 5.7\text{E}+10$	2.0E-02	<15%	3.35E+04	5.03E+03	0.150	3.52E-16	2.12E+08	9.47E-11
50	410-430	$\sim 2.9\text{E}+10$	2.0E-02	<12%	6.54E+04	7.85E+03	0.120	6.87E-16	4.13E+08	4.28E-11
60	425-450	$\sim 1.7\text{E}+10$	2.0E-02	<12%	1.13E+05	1.13E+04	0.100	1.19E-15	7.14E+08	2.82E-11
80	440-480	$\sim 7.1\text{E}+09$	2.0E-02	<12%	2.68E+05	2.01E+04	0.075	2.81E-15	1.69E+09	1.18E-11
100	480-520	$\sim 3.6\text{E}+09$	2.0E-02	<10%	5.24E+05	3.14E+04	0.060	5.49E-15	3.31E+09	5.98E-12