



# NNCrystal US Corporation

## NHS Activated Silver Nanoparticle Kit

### Technical Data:

Surface functionality: NHS-ester (spacer between silver surface and NHS-group)

Core diameter: 10-100nm (Coefficient of Variance < 12%)

Polydispersity Index (PDI): < 0.20

Absorbance ( $\lambda_{max}$ ): 390-520nm (size dependent, see table below)

Supplied in ready to use lyophilized format

All components of this kit should be stored at -20°C. If stored unopened and as specified

NHS-activated silver nanoparticles are stable for 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	~3.6E+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	~4.6E+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	~1.4E+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	~5.7E+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	~2.9E+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	~1.7E+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	~7.1E+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	~3.6E+09	2.0E-02	<10%	5.24E+05	3.14E+04	0.060	5.49E-15	3.31E+09	5.98E-12