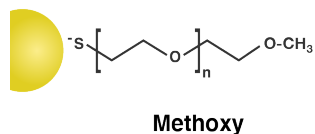


## PRODUCT DATA SHEET

### Methylated Silver Nanoparticles



### Description

Cytodiagnosics methylated silver nanoparticles are available with two different lengths of PEG surface spacers, i.e. 2000Da and 5000Da offering control of particle hydrodynamic size.

Our methylated silver nanoparticles are available in 8 different sizes ranging from 10 -100nm, are more than 95% spherical and have uniform size distribution (CV <18%).

For custom sizes, formulations or bulk quantities please contact our customer service department.

### Features

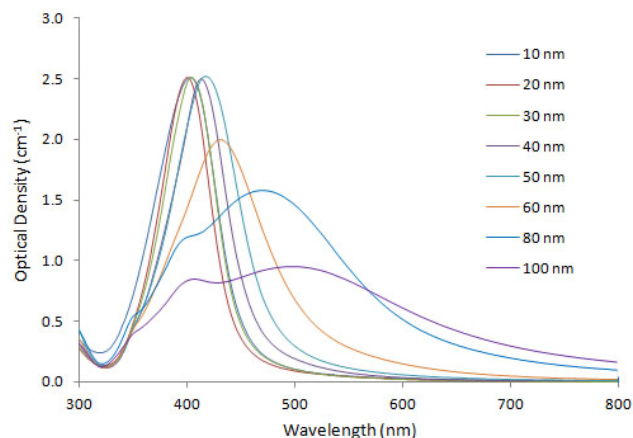
- Superior size distribution compared to the leading competitor; available from 10nm to 100nm.
- Precisely engineered surface with low protein binding characteristics.

### Applications

- Ideal as an inactive control to other functionalized silver nanoparticles, e.g. carboxyl, amine and biotin.

### Characteristics

Core diameter: 10 -100nm (Coefficient of Variance < 18%)  
 Polydispersity Index (PDI): < 0.25  
 Concentration: ~0.02mg/ml  
 Absorbance ( $\lambda_{max}$ ): 390-490nm  
 Supplied in ddH<sub>2</sub>O.



### Storage

This product should be stored at 4°C. **DO NOT FREEZE**. If stored as specified, Cytodiagnosics Methylated Silver Nanoparticles are stable for at least 4 months.

### Handling

When stored for a long period of time silver nanoparticles may sediment at the bottom of the vial, which is especially true for larger particle sizes. Prior to use, re-suspend the sedimented particles by swirling until a homogenous solution is obtained.

### Precautions and Disclaimer

These products are for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet available online.

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 Conc.
10	390-405	~1.8E+14	2.00E-02	<18%	5.24E+02	3.14E+02	0.6	5.49E-18	3.31E+06	2.99E-07
20	390-410	~2.3E+13	2.00E-02	<15%	4.19E+03	1.26E+03	0.3	4.39E-17	2.65E+07	3.82E-08
30	400-410	~7.0E+12	2.00E-02	<15%	1.41E+04	2.83E+03	0.2	1.48E-16	8.93E+07	1.16E-08
40	405-425	~2.8E+12	2.00E-02	<15%	3.35E+04	5.03E+03	0.15	3.52E-16	2.12E+08	4.74E-09
50	410-430	~1.4E+12	2.00E-02	<12%	6.54E+04	7.85E+03	0.12	6.87E-16	4.13E+08	2.14E-09
60	425-450	~8.5E+11	2.00E-02	<12%	1.13E+05	1.13E+04	0.1	1.19E-15	7.14E+08	1.41E-09
80	440-480	~3.5E+11	2.00E-02	<12%	2.68E+05	2.01E+04	0.075	2.81E-15	1.69E+09	5.90E-10
100	480-520	~1.8E+11	2.00E-02	<10%	5.24E+05	3.14E+04	0.06	5.49E-15	3.31E+09	2.99E-10

Catalog Number	Description	Lambda max (nm)	Sizes
SM2K-10- X*	10nm Methyl Silver Nanoparticles (2000Da PEG)	390-405	0.5ml, 1.0ml (125 OD)
SM2K-20- X*	20nm Methyl Silver Nanoparticles (2000Da PEG)	390-410	0.5ml, 1.0ml (125 OD)
SM2K-30- X*	30nm Methyl Silver Nanoparticles (2000Da PEG)	400-410	0.5ml, 1.0ml (125 OD)
SM2K-40- X*	40nm Methyl Silver Nanoparticles (2000Da PEG)	405-425	0.5ml, 1.0ml (125 OD)
SM2K-50- X*	50nm Methyl Silver Nanoparticles (2000Da PEG)	410-430	0.5ml, 1.0ml (125 OD)
SM2K-60- X*	60nm Methyl Silver Nanoparticles (2000Da PEG)	425-450	0.5ml, 1.0ml (100 OD)
SM2K-80- X*	80nm Methyl Silver Nanoparticles (2000Da PEG)	440-480	0.5ml, 1.0ml (80 OD)
SM2K-100- X*	100nm Methyl Silver Nanoparticles (2000Da PEG)	480-520	0.5ml, 1.0ml (46 OD)
SM5K-10- X*	10nm Methyl Silver Nanoparticles (5000Da PEG)	390-405	0.5ml, 1.0ml (125 OD)
SM5K-20- X*	20nm Methyl Silver Nanoparticles (5000Da PEG)	390-410	0.5ml, 1.0ml (125 OD)
SM5K-30- X*	30nm Methyl Silver Nanoparticles (5000Da PEG)	400-410	0.5ml, 1.0ml (125 OD)
SM5K-40- X*	40nm Methyl Silver Nanoparticles (5000Da PEG)	405-425	0.5ml, 1.0ml (125 OD)
SM5K-50- X*	50nm Methyl Silver Nanoparticles (5000Da PEG)	410-430	0.5ml, 1.0ml (125 OD)
SM5K-60- X*	60nm Methyl Silver Nanoparticles (5000Da PEG)	425-450	0.5ml, 1.0ml (100 OD)
SM5K-80- X*	80nm Methyl Silver Nanoparticles (5000Da PEG)	440-480	0.5ml, 1.0ml (80 OD)
SM5K-100- X*	100nm Methyl Silver Nanoparticles (5000Da PEG)	480-520	0.5ml, 1.0ml (46 OD)

**NOTE: X\* is either -25 for 0.5ml format, or -50 for 1.0ml format.**