

NNCrystal US Corporation

Reactant Free Gold Nanoparticles

Technical Data:

Core diameter: 5-400nm (Coefficient of Variance < 12%)

Polydispersity Index (PDI): < 0.20

Concentration: OD=1 (~ 0.05 mg/ml)

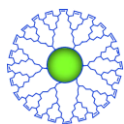
Absorbance Peak: 510-570nm (Size Dependent)

Solvent: 0.1mM Phosphate-Buffered Saline (0.01X PBS)

Storage: Store at 4°C. Do not freeze.

Lifetime: If stored properly the nanoparticles are stable for at least 6 months.

Dia m. (nm)	Peak SPR (nm)	NPS/mL	Wt. Conc (mg/mL)	Molar Ext (M-1cm-1)	Size Dispersity (+/-nm)	Particle Volume (nm ³)	Surface Area (nm ²)	Surface / Volume Ratio	Particle Mass (g)	Molar Mass (g/mol)	Molar Conc.
5	515-520	5.47E+13	6.94E-02	1.10E+07	<15%	6.54E+01	7.85E+01	1.200	1.27E-18	7.64E+05	9.08E-08
10	515-520	5.98E+12	6.07E-02	1.01E+08	<15%	5.24E+02	3.14E+02	0.600	1.02E-17	6.11E+06	9.93E-09
15	520	1.64E+12	5.61E-02	3.67E+08	<12%	1.77E+03	7.07E+02	0.400	3.43E-17	2.06E+07	2.72E-09
20	524	6.54E+11	5.31E-02	9.21E+08	<12%	4.19E+03	1.26E+03	0.300	8.12E-17	4.89E+07	1.09E-09
30	526	1.79E+11	4.91E-02	3.36E+09	<12%	1.41E+04	2.83E+03	0.200	2.74E-16	1.65E+08	2.98E-10
40	530	7.15E+10	4.65E-02	8.42E+09	<12%	3.35E+04	5.03E+03	0.150	6.50E-16	3.91E+08	1.19E-10
50	535	3.51E+10	4.45E-02	1.72E+10	<10%	6.54E+04	7.85E+03	0.120	1.27E-15	7.64E+08	5.83E-11
60	540	1.96E+10	4.30E-02	3.07E+10	<10%	1.13E+05	1.13E+04	0.100	2.19E-15	1.32E+09	3.25E-11
70	548	1.20E+10	4.17E-02	5.03E+10	<10%	1.80E+05	1.54E+04	0.086	3.48E-15	2.10E+09	1.99E-11
80	553	7.82E+09	4.06E-02	7.70E+10	<10%	2.68E+05	2.01E+04	0.075	5.20E-15	3.13E+09	1.30E-11
90	564	5.37E+09	3.97E-02	1.12E+11	<8%	3.82E+05	2.54E+04	0.067	7.40E-15	4.46E+09	8.92E-12



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Diameter (nm)	NPS/ml	Wt. Conc (mg/ml)	Size Dispersity (+/-nm)	Particle Volume (nm ³)	Surface Area (nm ²)	Surface/Volume Ratio	Particle Mass (g)	Molar Mass (g/mol)	Molar Concentration
150	3.60E+09	1.20E-01	<8%	1.77E+06	7.07E+04	0.040	3.43E-14	2.06E+10	5.98E-12
200	1.91E+09	1.55E-01	<8%	4.19E+06	1.26E+05	0.030	8.12E-14	4.89E+10	3.17E-12
250	7.08E+08	1.13E-01	<8%	8.18E+06	1.96E+05	0.024	1.59E-13	9.55E+10	1.18E-12
300	4.50E+08	1.24E-01	<8%	1.41E+07	2.83E+05	0.020	2.74E-13	1.65E+11	7.48E-13
400	1.88E+08	1.22E-01	<8%	3.35E+07	5.03E+05	0.015	6.50E-13	3.91E+11	3.12E-13