

SUPPLEMENTAL DATA

Uptake: AuNPs per cell			Hela cells			U87 cells			HCC 1806		
Date	02.01.2016	Batch	AuNPs-citrate PCS: 20.83 nm	AuNPs-SST PCS: 26.3 nm	AuNPs-SST&Antagonist PCS: 26.3 nm	AuNPs-citrate PCS: 20.83 nm	AuNPs-SST PCS: 26.3 nm	AuNPs-SST&Antagonist PCS: 26.3 nm	AuNPs-citrate PCS: 20.83 nm	AuNPs-SST PCS: 26.84 nm	AuNPs-SST&Antagonist PCS: 26.84 nm
Concentration in solution/ in cells											
d [nm]			20.83	26.3	26.3	20.83	26.3	26.3	20.83	26.84	26.84
r [nm]			10.415	13.15	13.15	10.415	13.15	13.15	10.415	13.42	13.42
Au ³⁺ [ppm]	value cells	[1 ppm = 1 mg/kg = 1 mg/l]	#REF!	19.87	3.87	3.21	5.11	4.82	2.1334	9.8	4.176
Au ³⁺ [g/l]	* 10 ³		#REF!	1.99E-02	3.87E-03	3.21E-03	5.11E-03	4.82E-03	2.13E-03	9.80E-03	4.18E-03
Au ³⁺ [mol/l]	Au ³⁺ [g/l] / 197 g/mol [c=m/(M*V)]		#REF!	1.01E-04	1.96E-05	1.63E-05	2.59E-05	2.45E-05	1.08E-05	4.97E-05	2.12E-05
Number Au ³⁺ [1/l]	Au ³⁺ [mol/l] * L		#REF!	6.07E+19	1.18E+19	9.81E+18	1.56E+19	1.47E+19	6.52E+18	3.00E+19	1.28E+19
Dilution ICP measurement	1		1	1	1	1	1	1	1	1	1
Au ³⁺ [mol/l]	* Dilution		#REF!	1.01E-04	1.96E-05	1.63E-05	2.59E-05	2.45E-05	1.08E-05	4.97E-05	2.12E-05
Number Au ³⁺ [1/l]			#REF!	6.07E+19	1.18E+19	9.81E+18	1.56E+19	1.47E+19	6.52E+18	3.00E+19	1.28E+19
V _{AuNP} [cm ³]	4/3 * π * r ³ * (10 ⁻⁷) ³ (1nm = 10 ⁻⁷ cm)		4.73E-18	9.53E-18	9.53E-18	4.73E-18	9.53E-18	9.53E-18	4.73E-18	1.01E-17	1.01E-17
m _{AuNP} [g]	19.3 g/cm ³ * V _{AuNP} [cm ³]		9.13E-17	1.84E-16	1.84E-16	9.13E-17	1.84E-16	1.84E-16	9.13E-17	1.95E-16	1.95E-16
Mol atoms per AuNP [mol]	m _{AuNP} / 197g/mol		4.64E-19	9.33E-19	9.33E-19	4.64E-19	9.33E-19	9.33E-19	4.64E-19	9.92E-19	9.92E-19
Atoms per AuNP	Atoms per AuNP [mol] * L		2.79E+05	5.62E+05	5.62E+05	2.79E+05	5.62E+05	5.62E+05	2.79E+05	5.97E+05	5.97E+05
Number AuNP per l [1/l]	Au ³⁺ [1/l] * Atoms per AuNP		#REF!	1.08E+14	2.11E+13	3.51E+13	2.78E+13	2.62E+13	2.34E+13	5.02E+13	2.14E+13
AuNP [mol/l]	Number AuNP per l / L		#REF!	1.79E-10	3.50E-11	5.84E-11	4.62E-11	4.35E-11	3.88E-11	8.33E-11	3.55E-11
Number AuNP per µl [1/µl]	Number AuNP / l / 1000000		#REF!	1.08E+08	2.11E+07	3.51E+07	2.78E+07	2.62E+07	2.34E+07	5.02E+07	2.14E+07
Number AuNP 5 ml volumetric flask			#REF!	5.40E+11	1.05E+11	1.76E+11	1.39E+11	1.31E+11	1.17E+11	2.51E+11	1.07E+11
Concentration in cells											
Number AuNP / 5 ml flask			#REF!	5.40E+11	1.05E+11	1.76E+11	1.39E+11	1.31E+11	1.17E+11	2.51E+11	1.07E+11
Number of cells total			21938000	21938000	21938000	21938000	21938000	21938000	21938000	21938000	21938000
Number AuNP / cell			#REF!	2.46E+04	4.80E+03	8.01E+03	6.34E+03	5.98E+03	5.32E+03	1.14E+04	4.87E+03

Uptake: unmodified AuNPs per cell												
Date	3/10/2013			Batch	PCS: 20.83 nm							
											Conc of Au3+ [ppm]	
Concentration in solution/ in cells											0.9	
d [nm]							18					1
r [nm]							9					1.1
Au ³⁺ [ppm]	value cells				[1 ppm = 1 mg/kg = 1 mg/l]			0.98333333				0.9
Au ³⁺ [g/l]	* 10 ³							9.83E-04				0.9
Au ³⁺ [mol/l]	Au ³⁺ [g/l] / 197 g/mol [c=m/(M*V)]							4.99E-06				1.1
Number Au ³⁺ [1/l]	Au ³⁺ [mol/l] * L							3.01E+18	sum			5.9
Dilution ICP measurement	1							1	average			0.98333333
Au ³⁺ [mol/l]	* Dilution							4.99E-06				
Number Au ³⁺ [1/l]								3.01E+18				
V _{AuNP} [cm ³]	4/3 * π * r ³ * (10 ⁻⁷) ³ (1nm = 10 ⁻⁷ cm)							3.05E-18				
m _{AuNP} [g]	19.3 g/cm ³ * V _{AuNP} [cm ³]							5.89E-17				
Mol atoms per AuNP [mol]	m _{AuNP} / 197g/mol							2.99E-19				
Atoms per AuNP	Atoms per AuNP [mol] * L							1.80E+05				
Number AuNP per l [1/l]	Au ³⁺ [1/l] * Atoms per AuNP							1.67E+13				
AuNP [mol/l]	Number AuNP per l / L							2.77E-11				
Number AuNP per µl [1/µl]	Number AuNP / l / 1000000							1.67E+07				
Number AuNP 5 ml volumetric flask								8.34E+10				
Concentration in cells												
Number AuNP / 5 ml flask								8.34E+10				
Number of cells total								21938000				
Number AuNP / cell								3.80E+03				