	T	he gold nanopa	rticle for nanot	technology		
Certificate	of Analys	is				
Product Family				Nanoparticles		
Product Numbe	r	A11-2.2-CIT	-DIH-1-10			
Lot #		SPEC				
Form		Gold Colloid				
Capping Agent		Citrate				
Solution		18MEG DI V	Vater			
Source		SPA219				
		measured	TEM,			
Diameter	nm	average	UVVIS	2.2		
SPR Abs	OD	measured	UV/VIS	1.1		
PDI	stddev/size		TEM	15%		
SPR Peak	nm	measured	UV/VIS	505		
рН		measured	Orion	7		
	mV	measured	DLS	-35		
Concentration	nps/mL	calc	520	5.13E+14		
Wt. conc.	mg/mL	calc		0.06		
ppm	mg/mL	calc		55		
Wt. %	%	calc		0.0055%		
Molarity	uM	calc		8.54E-01		
Molar Ext.	M-1cm-1	calc		1.29E+06		
Citrate	mM	measured		1.292.100		
Volume	mL	measured		10		
volume	IIIL	measureu		10		
Date				10/4/2019		
Exp Date				4/1/2020		
EXP Bato				17 11 2020		
Alex Schoen, M	lanager Qua	lity Control				
Absorbance		I			SW.	
1.25						
1			-			
0.75					*	
(m) 0.75 OD (1cm)						
0.5			-		· · · · · · · · · · · · · · · · · · ·	
10						
0.25				W. 27		
0					•	
400	600 80	0 1000				
	Waveleng			PA219 105000x-2-jpg al: 0.134517 nn/pix		