Certificate		he gold nanopa	· / \	$RTz^{\scriptscriptstyleTM}$	
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Certificate		The gold Hallopa	litticle for hanote	echnology	
	of Analys	sis			
Product Family	,	Accurate Sp	herical Gold N	Nanoparticles	
Product Number		A11-80-CIT-			
Lot #		SPEC			
Form		Gold Colloid			
Capping Agent		Citrate			
Solution		18 MEG DI water			
Source		11H100			
Diameter	nm	measured average	TEM, DLS, UVVIS	80	
SPR Abs	OD	measured	UV/VIS	1.1	
PDI	stddev/size		TEM	4%	
SPR Peak	nm	measured	UV/VIS	542	
pH		measured	Orion	7	
Zeta Potential	mV	measured	DLS	-36	
Concentration	nps/mL	calc		1.07E+10	
Wt. conc.	mg/mL	calc		0.06	
ppm		calc		55	
Wt. %	%	calc		0.0055%	
Molarity	uM	calc		1.78E-05	
Molar Ext.	M-1cm-1	calc		6.19E+10	
Citrate	mM	measured		5	
Volume	mL	measured		25	
Data				40/4/0040	
Date				10/4/2019	
Exp Date				4/1/2020	
Alex Schoen, N	∄ anager Qua	lity Control			
Absorbance				ACCOS!	
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