



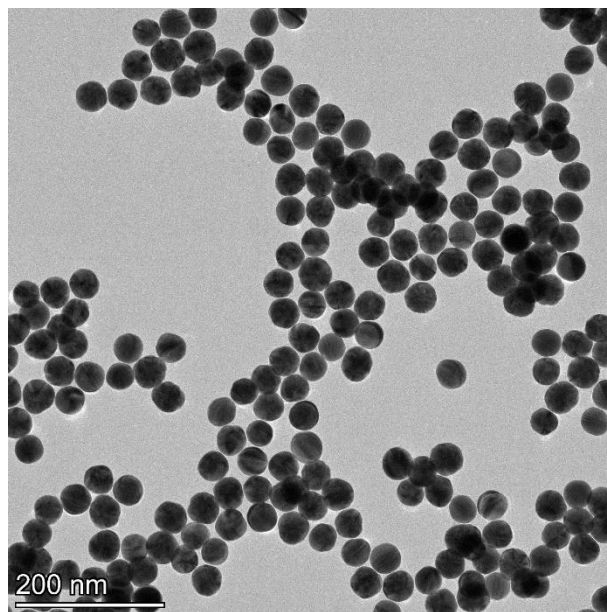
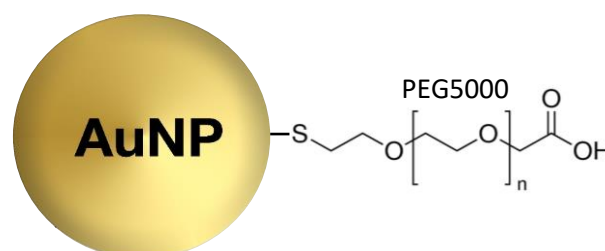
NB-GSPLF-40-5CARB-50

“Lateral-Flow-Easy” 40nm Gold Nano-Spheres

PEG-5K-COOH surface, OD=50

Surface coating: Poly (ethylene glycol) 2-mercaptoethyl ether acetic acid
PEG average M_n 5000 ($n \approx 110$)
Syn.: Thiol-PEG-carboxylate, Thio-PEG

Parameter	Value	Specification
Diameter (TEM):	39.96 ± 0.88 nm	36 – 44 nm
Coefficient of polydispersity:	2.21%	<15%
Optical density (OD):	50.0	49.5 – 50.5
Mass of single particle:	6.448×10^{-13} mg	As reported
Surface of single particle:	5016.5 nm^2	As reported
Volume of single particle:	33410 nm^3	As reported
Particles concentration:	3.162×10^{12} particles/ml	As reported
Molar particles concentration:	5.27 nM	As reported
Surface area (TEM):	$7.78 \text{ m}^2/\text{g}$	As reported
Surface to volume ratio:	0.150 nm^{-1}	As reported
Mass of gold:	$2038.9 \mu\text{g}/\text{ml}$	As reported
Hydrodynamic diameter (DLS):	67.79 nm	60 - 80 nm
PdI (DLS):	0.081	<0.150
Zeta-potential:	-53.0 mV	<-35 mV
pH of the solution:	6.2	5.5 – 6.5
Particle surface:	PEG5000-carboxyl	PEG5000-carboxyl
Solvent:	Milli-Q water (18.1 MΩ-cm)	Milli-Q water (18.1 MΩ-cm)



Instrumentation used for characterization

Diameter and size distribution:	Transmission Electron Microscope Thermo Scientific TALOS F200X
Mass concentration:	PerkinElmer NexION 2000P+ ICP-MS
Spectral properties:	PerkinElmer Lambda 365+ UV-Visible Spectrophotometer
Hydrodynamic Diameter and Zeta Potential:	Malvern Zetasizer

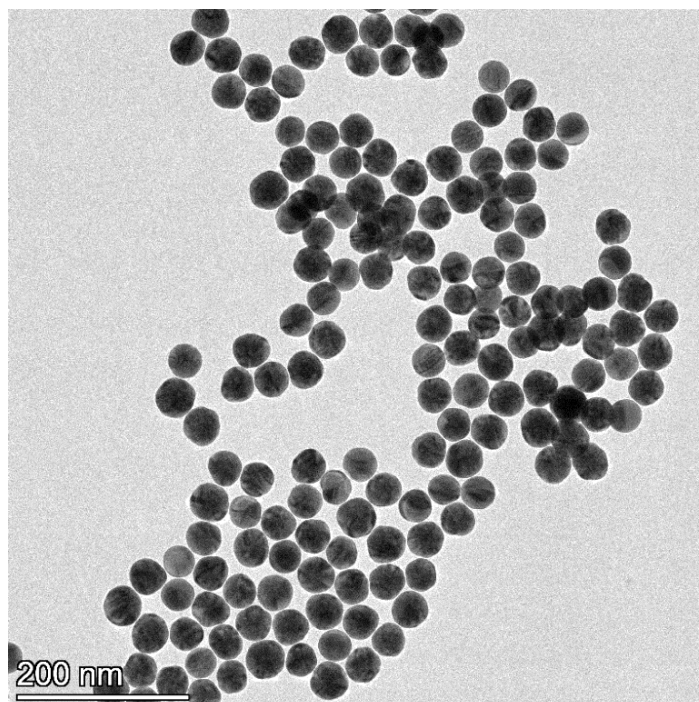
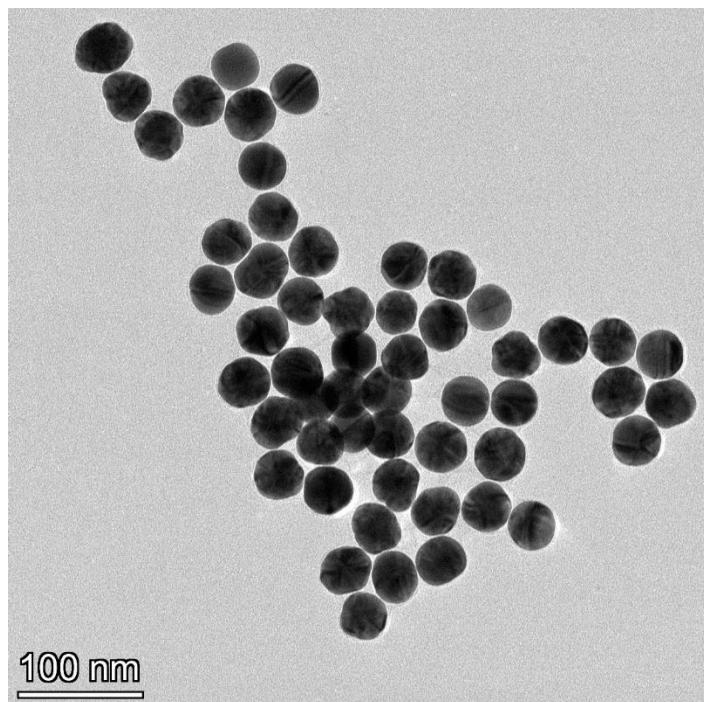
Shake before use. Store at 2-8°C away from light. DO NOT FREEZE



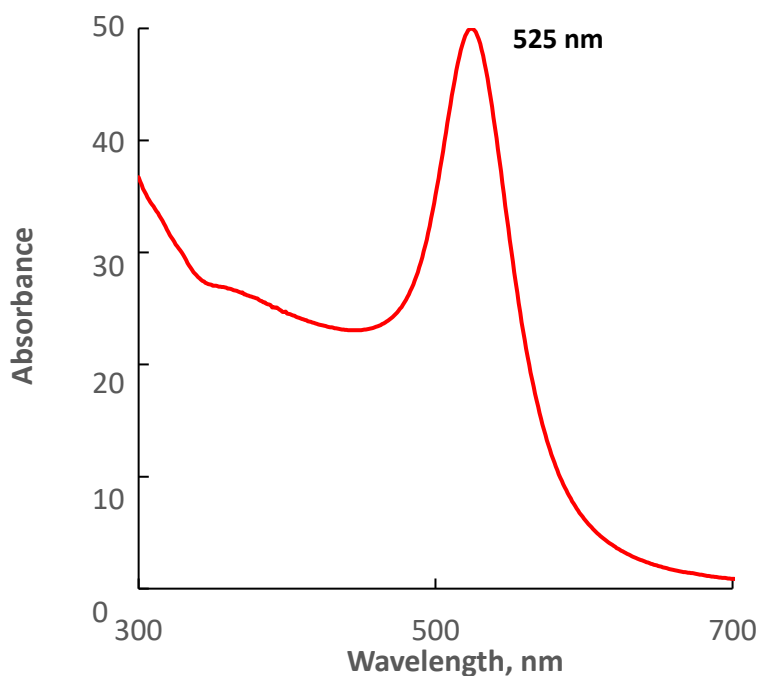
NANOBRAND

NB-GSPLF-40-5CARB-50

“Lateral-Flow-Easy” 40nm Gold Nano-Spheres **PEG-5K-COOH surface, OD=50**



Optical Properties



Size Distribution

