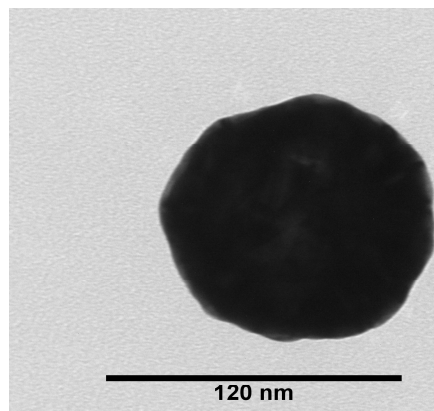
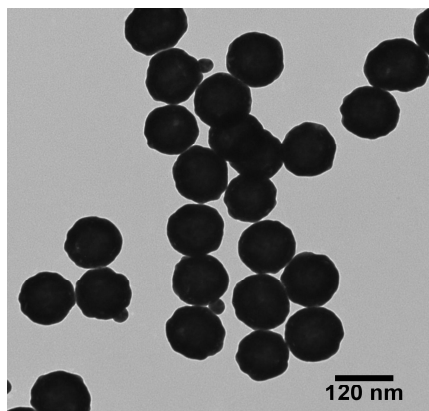
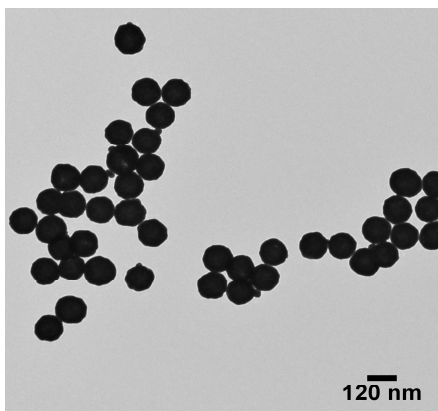
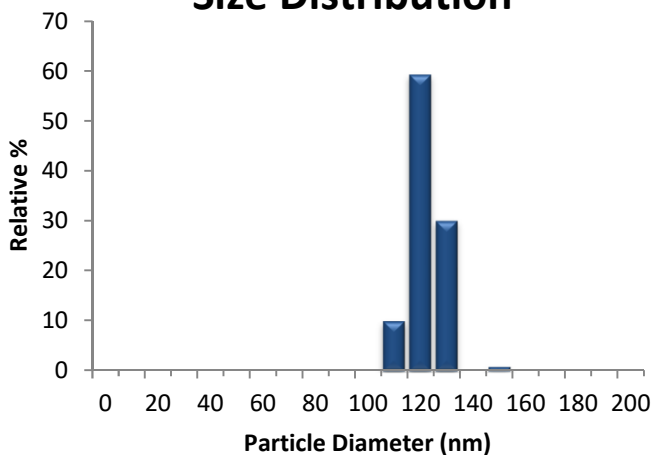
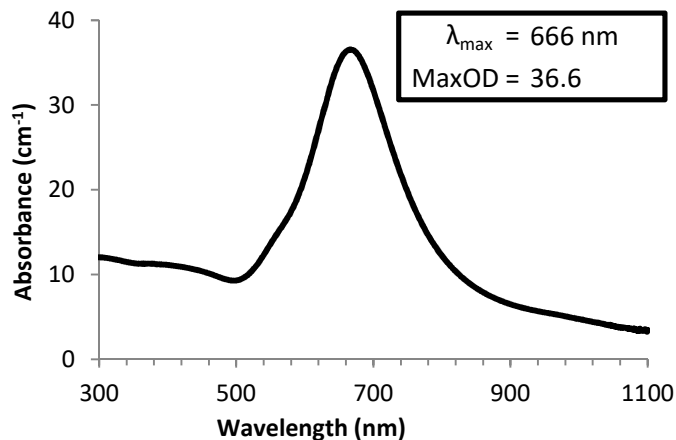


**Gold Nanoshells, Peak Absorbance @ 660 nm, Lipoic Acid, NanoXact™**
**Product Number: GSLH660**
**Lot Number: WTJ0543**

<b>Total Diameter ± Std.Dev (TEM)*</b>	117 ± 6 nm	<b>Mass Concentration (Au):</b>	1.08 mg/mL
<b>Coefficient of Variation*:</b>	5.0 %	<b>Hydrodynamic Diameter:</b>	129 nm
<b>Core Diameter ± Std.Dev (TEM)*:</b>	78 ± 5 nm	<b>Zeta Potential:</b>	-62 mV
<b>Shell Thickness (Calc'd):</b>	20 nm	<b>pH of Solution:</b>	7.4
<b>Surface Area (Calc'd):</b>	3.6 m <sup>2</sup> /g	<b>Particle Surface:</b>	Carboxyl (Lipoic Acid)
<b>Particle Concentration (Calc'd):</b>	9.5E+10 particles/mL	<b>Solvent:</b>	0.02 mM Potassium Carbonate
<b>% Absorbance at 660 nm:</b>	99.3 %		


**Size Distribution**

**Optical Properties**

**Characterization Instrumentation**
**Diameter and Size Statistics:**
**Mass Concentration:**
**Spectral Properties:**
**Hydrodynamic Diameter/Zeta Potential:**
**pH:**

JEOL 1010 Transmission Electron Microscope; ImageJ

Thermo Fisher X Series 2 ICP-MS

Agilent 8453 UV-Visible Spectrometer

Malvern Zetasizer Nano ZS

Horiba - Laqua Twin pH Meter

**Shake vigorously before use. Bath sonicate if needed. Storage: 2-8 °C. DO NOT FREEZE.**

\*Particle size data is based on measurements of singlet particles only.