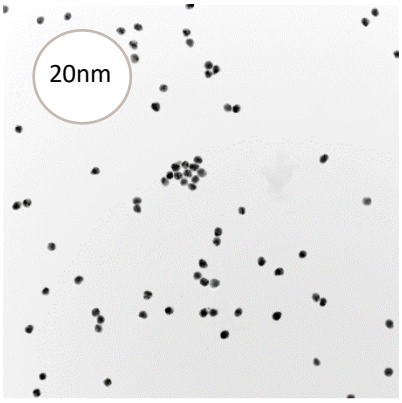
CYTODIAGNOSTICS

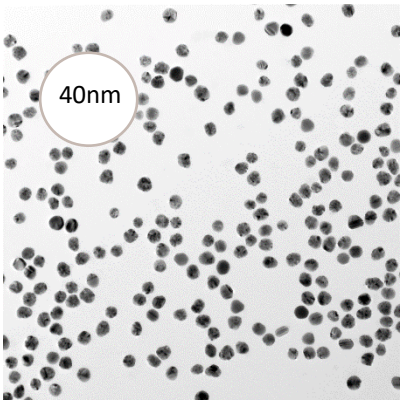
SILVER nanoparticles

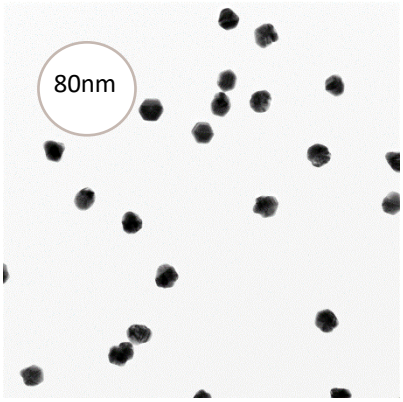
Cytodiagnostics' unique silver nanoparticles synthesis and purification protocols consistently produce high quality monodisperse silver nanoparticles with a narrow size distribution (CV <15%) and high purity.

Nano silver products are ideal for a wide range of applications including photovoltaics, biological sensor development and nanotoxicology studies.

Cytodiagnostics' spherical silver nanoparticles are available with core sizes of 10nm - 100nm.







APPLICATIONS

- Conjugate Development
- Plasmonic Sensor Development
- Molecular Imaging
- Surface Enhanced Raman Spectroscopy (SERS)
- Bactericidal
- Dark Field Microscopy
- Nanotoxicology
- Lateral and Vertical Flow
- Cellular Uptake
- Immunoblotting

PROPERTIES

- Monodisperse
- Well defined sizes from 10nm to 100nm
- Precisely engineered & functionalized surfaces
- Extensive range of surface functionalities designed for *in vitro* and *in vivo* applications

PRODUCTS

- Spherical Silver Nanoparticles
- Reactant Free Silver Nanoparticles
- Antibody and Streptavidin Silver Conjugates
- NHS, Maleimide Activated Silver Nanoparticles
- Carboxy, Amine and Biotinylated Silver Nanoparticles
- Silver Staining Kits
- Passive Adsorption and Covalent Conjugation Kits
- Custom Conjugation Service

RELATED PRODUCTS

- Gold Nanoparticles
- Fluorescent Nanocrystals
- Iron Oxide Magnetic Particles

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Choose SILVER nanoparticle products based on application

Application	Range	Surface Chemistry	Benefits
Protein Conjugation	10nm-100nm	Standard (citrate)	Quick and classical method.
		NHS	Covalent conjugation to primary amines, increased stability, less non-specific protein binding.
		Carboxyl	Covalent conjugation, increased stability, less non-specific protein binding.
		Amine	Conjugation of carboxylated ligands.
		Streptavidin	Can be used with any biotinylated ligand, ideal for high-throughput screenings.
Modification with thiolated ligands (PEG-SH etc.)	10nm-100nm	Standard (citrate)	Classic starting material.
Oligonucleotide Conjugation	10nm-20nm	Standard (citrate)	Ideal for conjugation of thiolated oligonucleotides using a “salt-aging” method.
	10nm-100nm	Carboxyl	Conjugation of amine functionalized oligonucleotides, ideal method for particles above 20nm in diameter.
		NHS	Pre-activated particles for conjugation of amine functionalized oligonucleotides, ideal method for particles above 20nm in diameter.
Immuno-dot blot/Western blot	10nm-30nm	Silver Conjugates (secondary antibodies, streptavidin etc.)	Straightforward colorimetric detection that yields a permanent label with good sensitivity.
Immunohistochemistry (TEM)	10nm-40nm	Silver Conjugates (secondary antibodies, streptavidin etc.)	High contrast label in TEM.
Lateral Flow/Dip-Stick Assays	30nm-80nm	Standard (citrate)	Allows for development of rapid testing kit, point of care assays.
		NHS	
		Carboxyl	
		Amine	
		Streptavidin	
		Protein A/Protein G	
ELISA	10nm-30nm	Silver Conjugates	Straightforward colorimetric detection.
Light Microscopy	10nm	Silver Conjugates	
Cellular Uptake	30nm-60nm	Standard (citrate)	Non-specific cellular uptake.
		Transferrin Silver Conjugates	Active uptake through endocytosis.
In Vitro Applications (eg. Tumor Targeting)	30nm-80nm	Methoxy-PEG	Allows for passive targeting of certain tumors in vivo. Inert material with low non-specific protein binding in serum.

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