# Spherotech

Let the Possibilities Flow

## SPHERO<sup>™</sup> Silica Microparticles

Flexible solid phase for cell separation & expansion, proteomics, nucleic acid isolation and IVD assay development.

## Silica Nano and Microspheres

phero

- Higher density (1.96g/mL) which allows centrifugation when working with nanometer sized particles
- Maintains shape and size when exposed to aqueous or nonaqueous evironments
- Low autofluorescence and low nonspecific binding of many biomolecules.

## Amino Functionalized Silica Microspheres

- · Contains primary amines for covalent coupling with electrophilic groups
- React with a number of functional groups such as succinimidyl NHS ester, COOH and many other groups.

## Superparamagnetic Silica Nanospheres

- Sizes of ~200 nm and 500 nm
- Available with silanol groups to form stable siloxane linkages
- Used to purify DNA or RNA under high concentration of chaotropic salts.

To learn more about Spherotech Silica Particles visit us online



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Figure I: Silica Beads for **DNA** Purification Principle



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## SPHERO<sup>™</sup> Silica Particles

#### SPHERO<sup>™</sup> Silica Particles

- Excellent tool for consistent isolation of nucleic acids
- Available in bulk quantities on an OEM basis
- Flexible silanization chemistries
- Unique refractive index and density
- Low autofluorescence and low nonspecific binding of many biomolecules
- Suitable for applications over 1000°C
- Wide range of solvent compatibility

#### SPHERO<sup>™</sup> Silica Nano Superparamagnetic Particles

- Encapsulated silica layer eliminates exposed iron oxide on the surface
- Ensure rapid magnetic mobility and efficient isolation of nucleic acids
- Low sedimentation rate and optimal reaction kinetics due to small diameter making them favorable for automated assays.





Figure 2. BD Fortessa X-20 flow cytometer histogram of Cat. No. SIM-025-10H

#### **SPHERO<sup>™</sup> Silica Particles**

Particle Type and Surface	Size, µm	% w/v	Catalog No.	Unit
Silica	0.4-0.6	5.0	SIP-05-10	10 mL
Silica	1.0-1.4	5.0	SIP-10-10	10 mL
Silica	1.5-1.9	5.0	SIP-15-10	10 mL
Silica	3.0-3.4	5.0	SIP-30-10	10 mL
Silica	6.0-8.0	5.0	SIP-60-10	10 mL

#### SPHERO<sup>™</sup> Amino Silica Particles

Particle Type and Surface	Size, µm	% w/v	Catalog No.	Unit
Amino Silica	0.4-0.6	5.0	ASIP-05-10	10 mL
Amino Silica	1.0-1.4	5.0	ASIP-10-10	10 mL
Amino Silica	1.5-1.9	5.0	ASIP-15-10	10 mL
Amino Silica	3.0-3.4	5.0	ASIP-30-10	10 mL
Amino Silica	6.0-8.0	5.0	ASIP-60-10	10 mL

#### SPHERO<sup>™</sup> Streptavidin Silica Particles

Particle Type and Surface	Size, µm	% w/v	Catalog No.	Unit
Streptavidin Silica	0.4-0.6	1.0	SVSIP-05-10	5 mL
Streptavidin Silica	1.0-1.4	1.0	SVSIP-10-10	5 mL
Streptavidin Silica	1.5-1.9	1.0	SVSIP-15-10	5 mL
Streptavidin Silica	3.0-3.4	1.0	SVSIP-30-10	5 mL
Streptavidin Silica	6.0-8.0	1.0	SVSIP-60-10	5 mL

### SPHERO<sup>™</sup> Silica Superparamagnetic

Particle Type and Surface	Size, µm	% w/v	Catalog No.	Unit
Silica Superparamagnetic	0.1-0.39	2.5	SIM-025-10H	10 mL
Silica Superoaramagnetic	0.4-0.69	2.5	SIM-05-10H	10 mL
Amino Silica Superparamagnetic	0.1-0.39	2.5	ASIM-025-10H	10 mL
Amino Silica Superparamagnetic	0.4-0.69	2.5	ASIM-05-10H	10 mL

#### SPHERO<sup>™</sup> Custom Coated Silica Particles

Spherotech can prepare custom coated silica micro and nanospheres for a variety of industrial and research applications. Our custom coating service is efficient and confidential, and we guarantee the quality of our work.

• Goat anti-Human

Goat anti-Rabbit

#### <u>Protein</u>

- Avidin
- Streptavidin
- Biotin
- Protein A Protein G
- Goat anti-Mouse
  Donkey anti-Goat

**Antibody** 

• Sheep anti-Rat

Quality protein or ligand custom coatings of silica beads for every research need