

# Spherotech

Let the Possibilities Flow

## SPHERO™ Silica Microparticles

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

### Silica Nano and Microspheres

- Higher density (1.96g/mL) which allows centrifugation when working with nanometer sized particles
- Maintains shape and size when exposed to aqueous or nonaqueous environments
- 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.

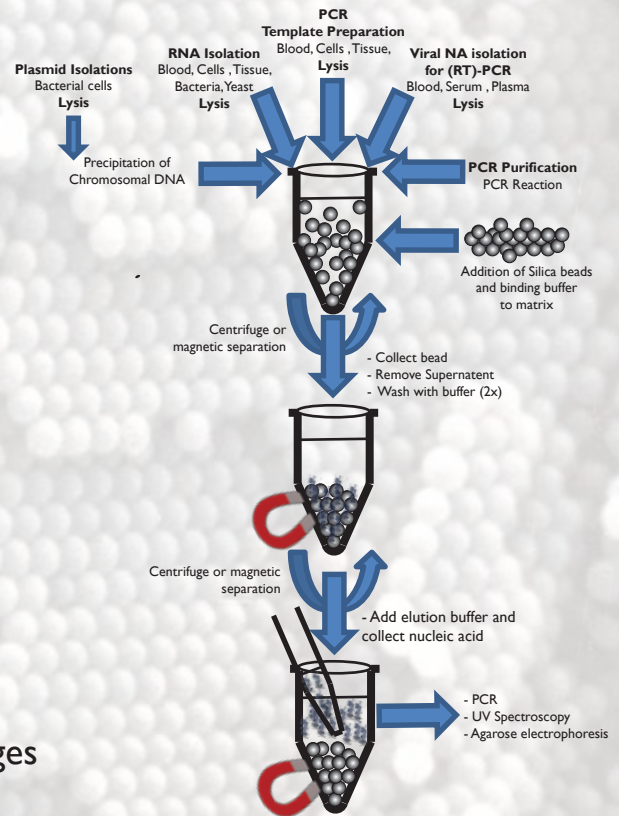


Figure 1: Silica Beads for DNA Purification Principle

To learn more about Spherotech Silica Particles visit us online

[www.spherotech.com](http://www.spherotech.com)

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## SPHERO™ Silica Particles

### SPHERO™ 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™ 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.

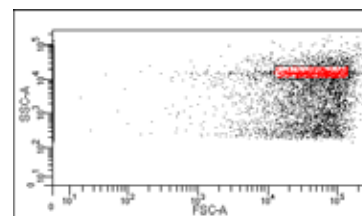
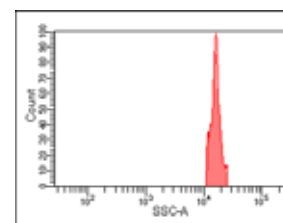


Figure 2. BD Fortessa X-20 flow cytometer histogram of Cat. No. SIM-025-10H

### SPHERO™ Silica Particles

| Particle Type and Surface | Size, $\mu\text{m}$ | % 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™ Streptavidin Silica Particles

| Particle Type and Surface | Size, $\mu\text{m}$ | % 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™ Amino Silica Particles

| Particle Type and Surface | Size, $\mu\text{m}$ | % 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™ Silica Superparamagnetic

| Particle Type and Surface      | Size, $\mu\text{m}$ | % w/v | Catalog No. | Unit  |
|--------------------------------|---------------------|-------|-------------|-------|
| Silica Superparamagnetic       | 0.1-0.39            | 2.5   | SIM-025-10H | 10 mL |
| Silica Superparamagnetic       | 0.4-0.69            | 2.5   | SIM-05-10H  | 10 mL |
| Amino Silica Superparamagnetic | 0.1-0.39            | 2.5   | SIM-025-10H | 10 mL |
| Amino Silica Superparamagnetic | 0.4-0.69            | 2.5   | SIM-05-10H  | 10 mL |

### SPHERO™ 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.

#### Protein

- Avidin
- Streptavidin
- Biotin
- Protein A
- Protein G

#### Antibody

- Goat anti-Human
- Goat anti-Rabbit
- Goat anti-Mouse
- Donkey anti-Goat
- Sheep anti-Rat

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