



## PRODUCT DATA SHEET

### Epoxy Polystyrene Particles

#### Description

Abvigen has developed a large selection of polystyrene micro- and nanoparticles. Polystyrene particles and Microparticles are highly spherical plastic particles in sizes between 50 nm to 100  $\mu$ m. The polystyrene particles are prepared by using emulsion polymerization process. Coated or conjugated particles are prepared either by passive adsorption or covalent coupling.

For custom sizes, formulations or bulk quantities please contact our customer service department.

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#### Characteristics

Core diameter: 50 nm to 100  $\mu$ m

Size: 10 ml; 20 ml; 50 ml; 100 ml

Shape: Spherical

Concentration: 50 mg/ml

Density: 1.03 g/ccm

Composition: Polystyrene Particles

Buffer: DI Water

Form: Suspension

Colour: White

#### Storage

This product should be stored at 4°C. **DO NOT FREEZE.** If stored unopened and as specified, Abvigen Polystyrene Particles are stable for at least 12 months.

#### Highlights

Superior size distribution compared to the leading competitor

Available from 50 nm to 100  $\mu$ m

Size Standards

Exceptional protein binding characteristics

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Available with multiple surface functionalities to suit all your needs

#### NPS of Polystyrene particles, 50 mg/ml

| Diameter | Conc.<br>mg/ml | Particles/mg | Particles/ml | Diameter | Conc.<br>mg/ml | Particles/mg | Particles/ml |
|----------|----------------|--------------|--------------|----------|----------------|--------------|--------------|
| 25 nm    | 50             | 1.19E+14     | 1.19E+15     | 10 um    | 50             | 1.85E+06     | 1.85E+07     |
| 50 nm    | 50             | 1.48E+13     | 1.48E+14     | 20 um    | 50             | 2.32E+05     | 2.32E+06     |
| 100 nm   | 50             | 1.85E+12     | 1.85E+13     | 30 um    | 50             | 6.87E+04     | 6.87E+05     |
| 200 nm   | 50             | 2.32E+11     | 2.32E+12     | 40 um    | 50             | 2.90E+04     | 2.90E+05     |
| 300 nm   | 50             | 6.87E+10     | 6.87E+11     | 50 um    | 50             | 1.48E+04     | 1.48E+05     |
| 400 nm   | 50             | 2.90E+10     | 2.90E+11     | 60 um    | 50             | 8.58E+03     | 8.58E+04     |
| 500 nm   | 50             | 1.48E+10     | 1.48E+11     | 70 um    | 50             | 5.41E+03     | 5.41E+04     |
| 600 nm   | 50             | 8.58E+09     | 8.58E+10     | 80 um    | 50             | 3.62E+03     | 3.62E+04     |
| 700 nm   | 50             | 5.41E+09     | 5.41E+10     | 90 um    | 50             | 2.54E+03     | 2.54E+04     |
| 800 nm   | 50             | 3.62E+09     | 3.62E+10     | 100 um   | 50             | 1.85E+03     | 1.85E+04     |
| 900 nm   | 50             | 2.54E+09     | 2.54E+10     | 200 um   | 50             | 2.32E+02     | 2.32E+03     |
| 1 um     | 50             | 1.85E+09     | 1.85E+10     | 300 um   | 50             | 6.87E+01     | 6.87E+02     |
| 2 um     | 50             | 2.32E+08     | 2.32E+09     | 400 um   | 50             | 2.90E+01     | 2.90E+02     |
| 3 um     | 50             | 6.87E+07     | 6.87E+08     | 500 um   | 50             | 1.48E+01     | 1.48E+02     |
| 4 um     | 50             | 2.90E+07     | 2.90E+08     | 600 um   | 50             | 8.58E+00     | 8.58E+01     |
| 5 um     | 50             | 1.48E+07     | 1.48E+08     | 700 um   | 50             | 5.41E+00     | 5.41E+01     |
| 6 um     | 50             | 8.58E+06     | 8.58E+07     | 800 um   | 50             | 3.62E+00     | 3.62E+01     |
| 7 um     | 50             | 5.41E+06     | 5.41E+07     | 900 um   | 50             | 2.54E+00     | 2.54E+01     |
| 8 um     | 50             | 3.62E+06     | 3.62E+07     | 1 mm     | 50             | 1.85E+00     | 1.85E+01     |
| 9 um     | 50             | 2.54E+06     | 2.54E+07     | 3 mm     | 50             | 6.87E-02     | 6.87E-01     |

#### Polystyrene Particles Centrifugation Parameters

| Particle Size | Centrifugal Acceleration | Time   | Resuspension of Pellet     |
|---------------|--------------------------|--------|----------------------------|
| 50 nm         | 45,000 x g               | 30 min | 30 min sonication / vortex |
| 100 nm        | 45,000 x g               | 30 min | 30 min sonication / vortex |

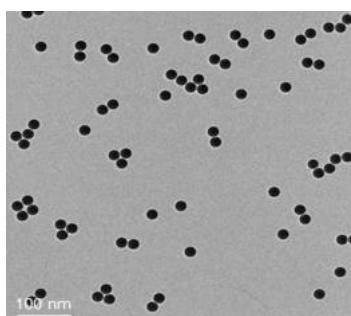
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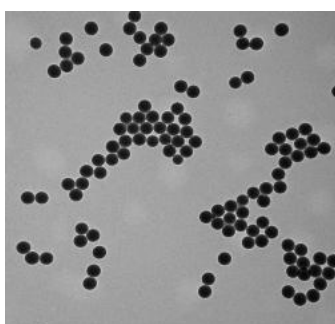
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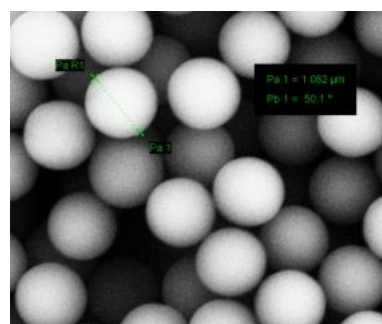
|               |            |        |                            |
|---------------|------------|--------|----------------------------|
| 200 nm        | 45,000 x g | 30 min | 30 min sonication / vortex |
| 500 nm        | 45,000 x g | 20 min | 10 min sonication / vortex |
| 800 nm        | 10,000 x g | 20 min | 10 min sonication / vortex |
| 1 $\mu$ m     | 3,500 x g  | 15 min | 10 min sonication / vortex |
| 2 – 4 $\mu$ m | 1,600 x g  | 15 min | vortex                     |
| 5 - 8 $\mu$ m | 1,200 x g  | 10 min | vortex                     |
| > 8 $\mu$ m   | 25 x g     | 10 min | vortex                     |



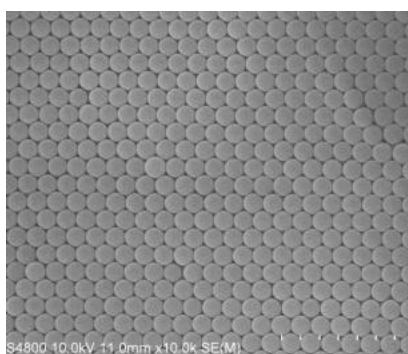
20 nm



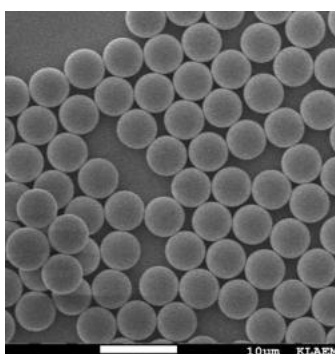
300 nm



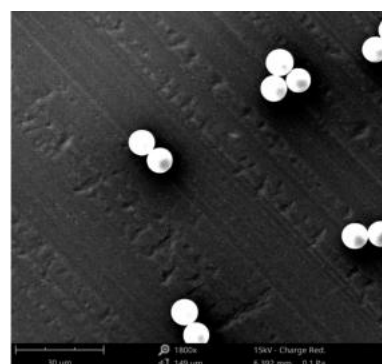
1 um



500 nm



5 um



10 um

## Ordering Information

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