

## CERTIFICATE OF ANALYSIS

### Particle Description

Catalog Code: **PS06N**    Manufacturer Lot Number: **5668**    Inventory Number: **L021203B**  
Polymer Description: **PS/DVB**

### Characteristics

Mean Diameter #1 ( $\mu\text{m}$ ):	<b>6.1 (Coulter Principle)</b>	Standard Deviation #1 ( $\mu\text{m}$ ):	<b>0.69</b>
Solids Content (%):	<b>10.38</b>	Antimicrobial:	<b>0.05%NaN3</b>
Microbial Load:	<b>No Growth 12/5/02</b>	Buffer:	<b>DI water + 0.1%SDS</b>

### Calculated Data

Density (g/cm <sup>3</sup> ):	<b>1.062</b>	Number of Microspheres/gram*:	<b>7.923e+09</b>
Number of Microspheres per ml:	<b>8.274e+08</b>	Surface area ( $\mu\text{m}^2/\text{g}$ ):	<b>9.262e+11</b>

**Approved by Quality Department**

**Date of issue: May 23, 2017**

### Recommended Storage Conditions:

Aqueous microspheres should be stored at 2-8°C. AVOID FREEZING!

Dry microspheres do not require special storage conditions.

\*Number of particles per gram of dry particles.

In an effort to save trees we do not routinely send Material Safety Data Sheets with our shipments. However, if you would like to receive one please call Customer Service at 800-387-0672 or 317-570-7020.

For research use only. Not intended for *in vivo* use.

## CERTIFICATE OF ANALYSIS

### Particle Description

Catalog Code: **DS02B**    Manufacturer Lot Number: **12123**    Inventory Number: **L150617C**  
Polymer Description: **PS**

### Characteristics

Mean Diameter #1 ( $\mu\text{m}$ ):	<b>0.044 (PCS/QELS)</b>	Standard Deviation #1 ( $\mu\text{m}$ ):	<b>0.009</b>
Color:	<b>Blue</b>	Solids Content (%):	<b>10</b>
Antimicrobial:	<b>0.09% NaN<sub>3</sub></b>	Buffer:	<b>DI Water</b>

### Calculated Data

Density (g/cm <sup>3</sup> ):	<b>1.05</b>	Number of Microspheres/gram*:	<b>2.135e+16</b>
Number of Microspheres per ml:	<b>2.145e+15</b>	Surface area ( $\mu\text{m}^2/\text{g}$ ):	<b>1.299e+14</b>

**Approved by Quality Department**

**Date of issue: May 23, 2017**

### Recommended Storage Conditions:

*Aqueous microspheres should be stored at 2-8°C. AVOID FREEZING!*  
*Dry microspheres do not require special storage conditions.*

\*Number of particles per gram of dry particles.

In an effort to save trees we do not routinely send Material Safety Data Sheets with our shipments. However, if you would like to receive one please call Customer Service at 800-387-0672 or 317-570-7020.

For research use only. Not intended for *in vivo* use.

**B E A D S • A B O V E T H E R E S T**

**CERTIFICATE OF ANALYSIS**

**Particle Description**

Catalog Code: **PS03N**    Manufacturer Lot Number: **9396**    Inventory Number: **L100503A**

Polymer Description: **PS**

**Characteristics**

Mean Diameter #1 ( $\mu\text{m}$ ):	<b>0.96 (PCS/QELS)</b>	Solids Content (wt. %):	<b>9.97</b>
Antimicrobial:	<b>0.05% NaN<sub>3</sub></b>	Buffer:	<b>DI + 0.1% SDS</b>

**Calculated Data**

Density (g/ml):	<b>1.05</b>	Number of Microspheres/gram*:	<b>2.088e+12</b>
Number of Microspheres per ml:	<b>2.092e+11</b>	Surface area ( $\mu\text{m}^2/\text{g}$ ):	<b>5.984e+12</b>

**Approved by Quality Department**

**Date of issue: November 3, 2014**

**Recommended Storage Conditions:**

Aqueous microspheres should be stored at 2-8°C. AVOID FREEZING!

Dry microspheres do not require special storage conditions.

\*Number of particles per gram of dry particles.

In an effort to save trees we do not routinely send Material Safety Data Sheets with our shipments. However, if you would like to receive one please call Customer Service at 800-387-0672 or 317-570-7020.

For research use only. Not intended for *in vivo* use.