

# 产品检测报告

## Certificate of Analysis (COA)

### 产品信息 Product Information

|                         |                                                                                 |                        |                                                           |
|-------------------------|---------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------|
| 产品名称<br>Product Name    | 单分散聚苯乙烯微球<br>Monodisperse Polystyrene Microspheres                              |                        |                                                           |
| 产品型号<br>Cat. No.        | PS01050                                                                         | SKU                    | PS01N500NA                                                |
| 批号<br>Lot No.           | PD4201                                                                          | 文档编号<br>Doc. No.       | COA-PS01050-PD4201                                        |
| 外观<br>Appearance        | 白色乳液 / White emulsion                                                           | 基材<br>Base Material    | 聚苯乙烯 / Polystyrene                                        |
| 折射率<br>Refractive Index | n <sub>D</sub> ≈ 1.59 (25°C)                                                    |                        |                                                           |
| 分散介质<br>Dispersant      | 超纯水 / Ultrapure water                                                           | 防腐剂<br>Preservative    | 无 / None                                                  |
| 固含量<br>Solids Content   | 2.5 wt%                                                                         | 粒子浓度<br>Particle Conc. | ≈2.8×10 <sup>11</sup> /mL (计算近似值, 有误差/<br>calc., approx.) |
| 贮存条件<br>Storage         | 短期常温可, 长期 2-8°C 冷藏; 避免冷冻 / Room temp short-term, 2-8°C long-term; do not freeze |                        |                                                           |

### 检测结果 Test Results

| 检测项目 Test Item                      | 测试方法 Method | 单位 Unit           | 质量标准 Spec.     | 检测结果 Result    | 判定 Verdict |
|-------------------------------------|-------------|-------------------|----------------|----------------|------------|
| 平均粒径<br>Mean Particle Size          | SEM         | nm                | 500 – 600      | 545            | 合格 ✓       |
| 变异系数<br>CV                          | SEM         | %                 | ≤ 8            | 3.5            | 合格 ✓       |
| 多分散指数<br>Polydispersity Index (PDI) | DLS         | —                 | ≤ 0.20         | 0.147          | 合格 ✓       |
| Zeta 电位<br>Zeta Potential           | ELS         | mV                | -20 ~ -50      | -46            | 合格 ✓       |
| 形态<br>Morphology                    | SEM         | —                 | 球形 / Spherical | 球形 / Spherical | 合格 ✓       |
| 密度<br>Density                       | 比重瓶法        | g/cm <sup>3</sup> | 1.05±0.02      | 1.05           | 合格 ✓       |
| 固含量<br>Solids Content               | 烘干法         | wt%               | 2.5 ± 0.5      | 2.5            | 合格 ✓       |

### 检测结论 Conclusion

|                    |                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------|
| 检测结论<br>Conclusion | 本批次产品已检测项目均符合质量标准, 判定为 <b>合格</b> 。<br>All tested items meet specifications. This lot is determined to be QUALIFIED. |
|--------------------|---------------------------------------------------------------------------------------------------------------------|

## 表征图谱 Characterization Data

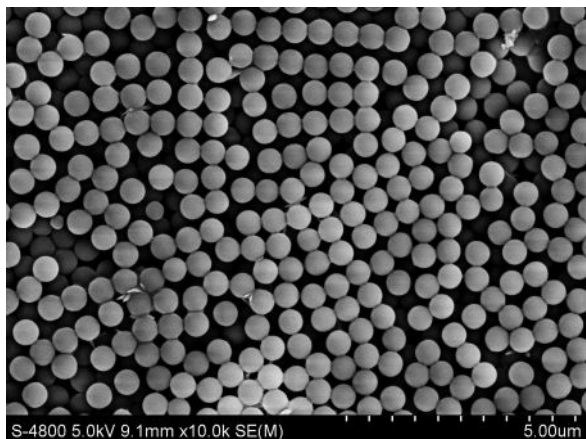


图1 SEM 形貌图/ SEM Image

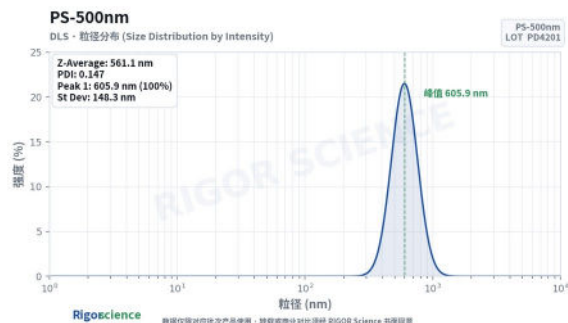


图2 DLS 粒径分布/ DLS Size Distribution

## 声明 Declarations

- 仅供研究使用 For Research Use Only (RUO). Not intended for diagnostic or therapeutic use.
- 使用前请超声或涡旋分散 Resuspend by sonication or vortexing before use.
- 本检测报告仅对本批次有效 This certificate is valid only for the lot specified herein.

## 签署 Authorization

### QC 检测员

Tested By

签名 / Signature:

### QA 审核员

Reviewed By

签名 / Signature: