



DESCRIPTION

Polymer microspheres present a flexible platform for applications in diagnostics and bioseparations. They may be coated with ligands such as antibodies, antigens, peptides, or nucleic acid probes, and can be loaded with hydrophobic dyes and other compounds. Polymer microspheres also are used extensively as standards for instrument set-up and calibration.

Plain polystyrene microspheres may be protein coated via adsorption, and have been utilized in a range of diagnostic tests and assays. Reference *TechNote 204, Adsorption to Microspheres*, for a general protocol and additional information & references.

Surface-modified microspheres are available with carboxyl or primary amine groups for covalent ligand attachment. *TechNote 205, Covalent Coupling*, details a basic foundation for successful attachment of a variety of ligands through coupling protocols, buffer recipes, blockers, and references. See bangslabs.com for available coupling reagents and kits.

Our polystyrene-based spheres are synthesized via emulsion polymerization, and are available in diameters from ~20nm to 20µm, with typical CVs of 5-10%. For applications requiring highly stringent CVs (e.g. 2-5%), please contact our Customer Service group.

CHARACTERISTICS

Mean Diameter:	20nm - 20µm
Particle Concentration:	10% solids (100 mg/mL)
Surface Functionality:	COOH - titrated Lot-specific values provided on our website or CofA NH ₂ - ninhydrin confirmation (non-quantitative)

STORAGE AND STABILITY

Store at 2-8°C. Freezing, drying, or aggressive centrifugation of microsphere suspension may result in irreversible aggregation and loss of binding activity. Uncoated polymer microspheres are not assigned expiration dates.

SAFETY

These particle suspensions may contain sodium azide. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Upon disposal of material, flush with a large volume of water to prevent azide accumulation. Please consult the product specific SDS for more information.

These products are for research use only and are not intended for use in humans or for *in vitro* diagnostic use.

ORDERING INFORMATION - Standard units available are 0.5g, 1.0g, 1.5g, or 5.0g

PLAIN POLYMER MICROSPHERES

Catalog Number	Diameter	Diameter Range	Catalog Number	Diameter	Diameter Range
PS02001	0.025µm	0.015-0.035	PS03002	0.600µm	0.570-0.630
PS02002	0.050µm	0.040-0.060	PS03003	0.700µm	0.670-0.730
PS02003	0.075µm	0.065-0.085	PS03004	0.800µm	0.770-0.830
PS02004	0.100µm	0.090-0.110	PS03005	0.900µm	0.870-0.930
PS02005	0.125µm	0.115-0.135	PS04001	1.00µm	0.95-1.05
PS02006	0.150µm	0.140-0.160	PS05001	2.00µm	1.80-2.20
PS02007	0.175µm	0.165-1.185	PS05002	3.00µm	2.80-3.20
PS02008	0.200µm	0.190-0.210	PS05003	4.00µm	3.80-4.20
PS02009	0.300µm	0.270-0.330	PS06001	5.00µm	4.80-5.20
PS02010	0.400µm	0.370-0.430	PS06002	5.50µm	5.30-5.70
PS03001	0.500µm	0.470-0.530	PS06003	6.00µm	5.80-6.20

PLAIN POLYMER MICROSPHERES CONTINUED

Catalog Number	Diameter	Diameter Range
PS06004	7.00µm	6.80-7.20
PS06005	7.50µm	7.30-7.70
PS07001	10.00µm	9.50-10.50
PS07002	15.00µm	14.50-15.50
PS07003	20.00µm	19.00-21.00
PS08001	>25.µm	>25.µm

CARBOXYL POLYMER MICROSPHERES

Catalog Number	Diameter	Diameter Range
PC02001	0.025µm	0.015-0.035
PC02002	0.050µm	0.040-0.060
PC02003	0.070µm	0.060-0.080
PC02004	0.100µm	0.090-0.110
PC02005	0.125µm	0.115-0.135
PC02006	0.150µm	0.140-0.160
PC02007	0.175µm	0.165-0.185
PC02008	0.200µm	0.190-0.210
PC02009	0.300µm	0.270-0.330
PC02010	0.350µm	0.340-0.360
PC02011	0.400µm	0.370-0.430
PC03001	0.500µm	0.470-0.530
PC03002	0.600µm	0.570-0.630
PC03003	0.800µm	0.770-0.830
PC03004	0.900µm	0.870-0.930
PC04001	1.00µm	0.95-1.05
PC05001	2.00µm	1.80-2.20
PC05002	2.50µm	2.30-2.70
PC05003	3.00µm	2.80-3.20
PC05004	4.00µm	3.80-4.20
PC05005	4.50µm	4.30-4.70
PC06001	5.00µm	4.80-5.20
PC06002	5.50µm	5.30-5.70
PC06003	6.00µm	5.80-6.20
PC06004	7.00µm	6.80-7.20
PC07001	10.00µm	9.50-10.50
PC07002	15.00µm	14.50-15.50
PC07003	20.00µm	19.00-21.00
PC08001	>25.µm	>25.µm

AMINE POLYMER MICROSPHERES

Catalog Number	Diameter	Diameter Range
PA02001	0.200µm	0.190-0.210
PA03001	0.500µm	0.470-0.530
PA03002	0.750µm	0.740-0.760
PA04001	1.00µm	0.95-1.05

ADDITIONAL RESOURCES

TN203	Washing Microspheres
TN204	Adsorption to Microspheres
TN205	Covalent Coupling
TSD 0300	Buffers
PDS 731	Fluorescent Microspheres
	Microsphere Reagent Guide

Order online anytime at www.bangslabs.com.