



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 (e.g. polystyrene) microspheres may be protein coated via protein adsorption, and have been utilized in a range of diagnostic tests and assays. Reference *TechNote 204, Adsorption to Microspheres*, for information on protein adsorption guidelines, the use of blockers, and further 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.

Affinity binding systems offer simple and efficient ligand attachment. Coatings of Fc binding proteins are able to orient antibodies for optimal activity, and streptavidin offers the extremely stable attachment of biotinylated molecules, such as proteins, peptides, and oligonucleotides. See *TechNote 101, Affinity Ligand Microspheres*, for basic attachment protocols. Other related literature may include, *TechNote 205, Covalent Coupling*, as well as our *Microsphere Reagent Guide*, or *PDS 731* for a fluorescent microsphere product listing and don't forget the Technical Support section of our website for all of our online resources.

Offering uniform polystyrene (PS), crosslinked poly(styrene/divinylbenzene) (P[S/DVB]), and poly(methyl methacrylate) (PMMA) microspheres, Bangs' 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 Customer Service.

CHARACTERISTICS

Mean Diameter: 20nm - 200µm
Particle Concentration: 10% solids (100 mg/mL)

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. Affinity ligand coated products expire 12 months from the date of purchase, provided the product is handled in accordance with the manufacturer's recommendations. 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, 1.5g, or 5.0g

PLAIN POLYMER MICROSPHERES

Catalog Number	Catalog Code	Diameter	Diameter Range
PS02001	PS02N	0.025µm	0.015-0.035
PS02002	PS02N	0.050µm	0.040-0.060
PS02003	PS02N	0.075µm	0.065-0.085
PS02004	PS02N	0.100µm	0.090-0.110
PS02005	PS02N	0.125µm	0.115-0.135
PS02006	PS02N	0.150µm	0.140-0.160

PLAIN POLYMER MICROSPHERES CONTINUED

Catalog Number	Catalog Code	Diameter	Diameter Range
PS02007	PS02N	0.175µm	0.165-1.185
PS02008	PS02N	0.200µm	0.190-0.210
PS02009	PS02N	0.300µm	0.270-0.330
PS02010	PS02N	0.400µm	0.370-0.430
PS03001	PS03N	0.500µm	0.470-0.530
PS03002	PS03N	0.600µm	0.570-0.630
PS03003	PS03N	0.700µm	0.670-0.730
PS03004	PS03N	0.800µm	0.770-0.830
PS03005	PS03N	0.900µm	0.870-0.930
PS04001	PS04N	1.00µm	0.95-1.05
PS05001	PS05N	2.00µm	1.80-2.20
PS05002	PS05N	3.00µm	2.80-3.20
PS05003	PS05N	4.00µm	3.80-4.20
PS06001	PS06N	5.00µm	4.80-5.20
PS06002	PS06N	5.50µm	5.30-5.70
PS06003	PS06N	6.00µm	5.80-6.20
PS06004	PS06N	7.00µm	6.80-7.20
PS06005	PS06N	7.50µm	7.30-7.70
PS07001	PS07N	10.00µm	9.50-10.50
PS07002	PS07N	15.00µm	14.50-15.50
PS07003	PS07N	20.00µm	19.00-21.00
PS08001	PS08N	>25.µm	>25.µm

AMINE POLYMER MICROSPHERES

Catalog Number	Catalog Code	Diameter	Diameter Range
PA02001	PA02N	0.200µm	0.190-0.210
PA03001	PA03N	0.500µm	0.470-0.530
PA03002	PA03N	0.750µm	0.740-0.760
PA04001	PA04N	1.0µm	0.95-1.05

CARBOXYL POLYMER MICROSPHERES

Catalog Number	Catalog Code	Diameter	Diameter Range
PC02001	PC02N	0.025µm	0.015-0.035
PC02002	PC02N	0.050µm	0.040-0.060
PC02003	PC02N	0.070µm	0.060-0.080
PC02004	PC02N	0.100µm	0.090-0.110
PC02005	PC02N	0.125µm	0.115-0.135
PC02006	PC02N	0.150µm	0.140-0.160
PC02007	PC02N	0.175µm	0.165-0.185
PC02008	PC02N	0.200µm	0.190-0.210
PC02009	PC02N	0.300µm	0.270-0.330
PC02010	PC02N	0.350µm	0.340-0.360
PC02011	PC02N	0.400µm	0.370-0.430
PC03001	PC03N	0.500µm	0.470-0.530
PC03002	PC03N	0.600µm	0.570-0.630
PC03003	PC03N	0.800µm	0.770-0.830
PC03004	PC03N	0.900µm	0.870-0.930
PC04001	PC04N	1.0µm	0.95-1.05
PC05001	PC05N	2.00µm	1.80-2.20
PC05002	PC05N	2.50µm	2.30-2.70
PC05003	PC05N	3.00µm	2.80-3.20
PC05004	PC05N	4.00µm	3.80-4.20
PC05005	PC05N	4.50µm	4.30-4.70
PC06001	PC06N	5.00µm	4.80-5.20
PC06002	PC06N	5.50µm	5.30-5.70
PC06003	PC06N	6.00µm	5.80-6.20
PC06004	PC06N	7.00µm	6.80-7.20
PC07001	PC07N	10.00µm	9.50-10.50
PC07002	PC07N	15.00µm	14.50-15.50
PC07003	PC07N	20.00µm	19.00-21.00
PC08001	PC08N	>25.µm	>25.µm

Order online anytime at www.bangslabs.com.