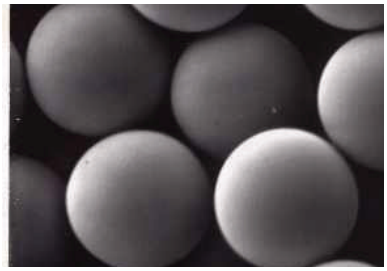
Polysciences, Inc.
Chemistry beyond the ordinary

Polymer Microspheres
Used for Research

Polysciences supplies a full range of uniformly sized polymeric microspheres that support a variety of applications in the life sciences. Available in diameters ranging from 50nm to 200µm, products exhibit excellent size uniformity. With the goal of providing our customers with the highest quality microspheres in the world, we are committed to reproducible, scalable manufacturing, thorough quality assurance, and superior customer care.


Microscopy image of polystyrene microspheres.

Microsphere Features

- Predominantly polystyrene-based, other base polymers are also offered.
- Available cross-linked for increased solvent, heat, and pressure resistance.
- Plain polymer for protein adsorption, or surface modified (COOH or NH_2) for covalent ligand attachment.
- Available with impregnated visible or fluorescent dyes. See Technical Data Sheet (TDS) 808, Polybead® Dyed Microspheres, for a representative color palette, and TDS 745, Microsphere Excitation and Emission Spectra, for sample fluorescence spectra.

APPLICATIONS

Polymer microspheres present a flexible platform for applications in diagnostics and bioseparations. They may be coated with recognition molecules, such as antibodies, antigens, peptides, or nucleic acid probes, and can be loaded with hydrophobic dyes and other compounds. Unmodified polymer spheres also find extensive use as standards for instrument set-up and calibration.

Plain polystyrene microspheres are ideal for protein adsorption, and have been utilized in a range of diagnostic tests and assays. Reference our TDS 238E, Protocol for Adsorbing Proteins on Polystyrene 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. Reference our TDSs (#238C, Covalent Coupling, #238E, Protocol for Adsorbing Proteins on Polystyrene Microspheres, and #238G, Glutaraldehyde Kit for Amino Beads & Blue Dyed Beads) which provides a basic foundation for successful attachment of a variety of ligands through coupling protocols, buffer recipes, blockers, and references.

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 extremely stable attachment of biotinylated molecules, such as proteins, peptides, and oligonucleotides. See our range of TDSs for basic attachment protocols.

For additional information regarding our polymer microspheres, visit our website at www.polysciences.com.

Order online anytime at **polysciences.com**

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