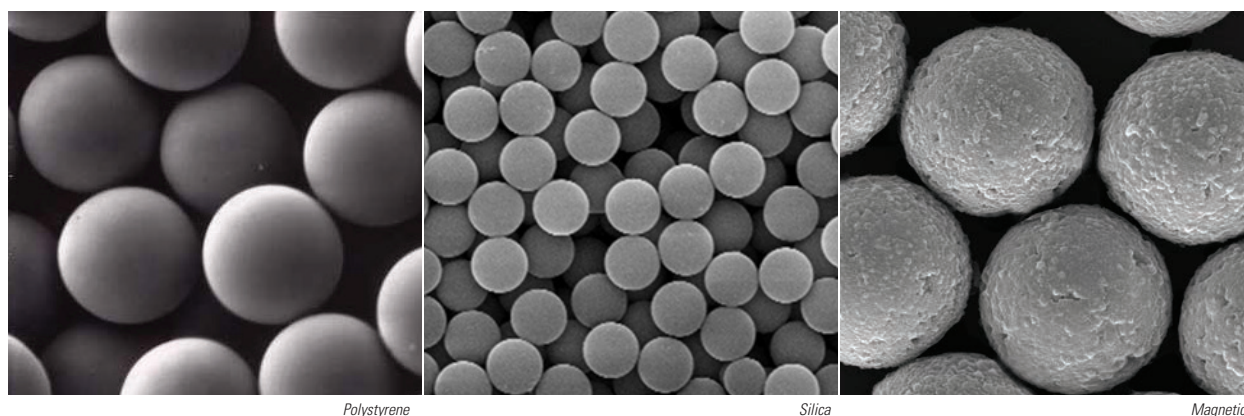


Microsphere Overview

Offering a Wide Variety of Polystyrene, Silica, and Superparamagnetic Microspheres to Meet Your Needs!



Bangs Laboratories is a manufacturer of quality specialty microspheres for a variety of immunoassay, molecular biology, and cell biology applications. Bangs supplies polystyrene, silica, and superparamagnetic particles offered with a variety of surface functional groups, with plain and fluorescent dyes, and pre-coated with generic binding proteins, such as streptavidin and secondary antibodies. Our QuantumPlex™ beads offer a unique platform for multiplexed analysis of analytes, and our Flow Cytometry products provide standardization and calibration tools that lead the industry in quantitative flow cytometry. Our catalog also contains many types of instrument standards, including size, count, cell viability, and slide-based products.

Polystyrene Microspheres

Polystyrene microspheres may be used “as-is” for standards or markers, or coated with proteins via adsorption for use in diagnostic tests and assays. For the covalent immobilization of proteins, peptides, and nucleic acids we offer functionalized polystyrene microspheres. Our polystyrene microspheres are available in diameters from ~20nm to 200µm with typical size CVs of 5-10%. Most products are supplied at 10% solids in aqueous suspension. Our polystyrene-based spheres are also available in visibly dyed or fluorescently labeled versions.

Silica Microspheres

Uniform, non-porous silica (SiO₂) microspheres are available in diameters of ~150nm-5µm. These particles typically have size CVs of 10-15%. Standard silica include both non-functionalized products or products with carboxyl, amine, or streptavidin functionalities. Suspended and dry preparations are available.

Inorganic supports such as silica microspheres have become increasingly important for a variety of applications, including isolation of nucleic acids, cell separation, and immuno- and DNA-based assays. They offer the combined benefits of a broad platform and the unique properties of a silica substrate:

- Flexible silanization chemistries
- Unique refractive index and density
- Low autofluorescence
- Low nonspecific binding of many biomolecules
- Hydrophilicity
- Ease of handling

Superparamagnetic Microparticles

Superparamagnetic particles have been used extensively in diagnostics and other research applications for the purification of cells and biomolecules, such as antibodies, nucleic acids, and proteins. They confer a number of benefits, including ease of separation and suitability for automation. When coated with recognition molecules, magnetic microspheres are ideal for the efficient capture and separation of target. Unwanted sample constituents may be washed away following a simple magnetic separation step.

Our three lines of superparamagnetic microparticles, including BioMag®, COMPEL™, and ProMag®, allow us to uniquely address a wide range of applications in the life sciences, from cell separations and immuno and molecular assays to suspension arrays and flow cytometry.

Instrument Standards

We also offer an extensive catalog of instrument standards such as NIST Traceable Size Standards, SureCount™ Particle Count Standards, ViaCheck™ for Cell Viability Analyzers as well as dedicated standards for Flow Cytometry.

If a product that you require is not listed here, please check our website www.bangslabs.com as our product line is continually expanding. For special requirements, please contact us regarding our custom synthesis and contract manufacturing services.




Bangs Laboratories manufactures magnetic, polymeric and silica microsphere products setting the standards for diagnostic, research, and flow cytometry applications. No matter the project, we have a product that serves or we'll work to custom-design a solution to fit. And that's not the half of it.


We also stand behind our products. Regardless of the size of your question or the size of your company, we offer tech support, absolutely free.

Sound interesting? 

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