

Fluorescent Microspheres

A Rainbow of Choices



BEADS • ABOVE THE REST



Bangs' Laboratories Fluorescent Microspheres provide a versatile platform for research and diagnostic applications.

BLI Fluorescent Microspheres

Fluorescent microspheres are a mainstay in diagnostics and the life sciences research, due to their utility for an unlimited number of applications. In order to meet the unique performance criteria required of microparticles in these different applications, Bangs Laboratories stocks an extensive array of fluorescent microspheres.

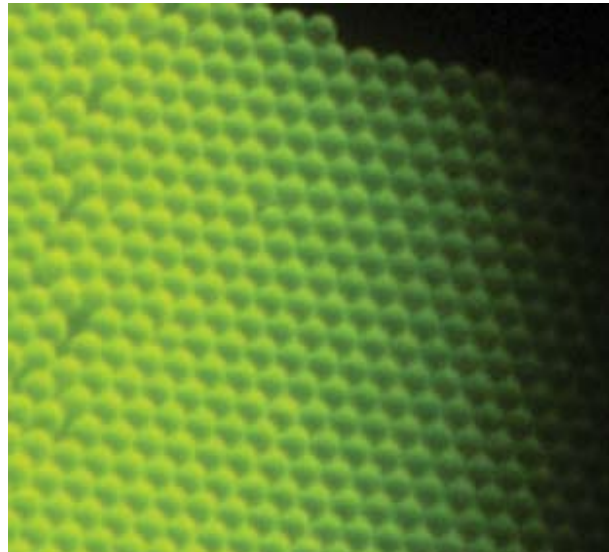
Internal versus External Labeling

Bangs Laboratories employs two dyeing techniques to fluorescently label microspheres - internal dyeing and surface-labeling. The two techniques produce beads with unique properties, each important for different applications.

Internal dyeing produces very bright and stable particles with typically narrow fluorescent CV's. With this strategy, surface groups remain available for conjugating ligands (proteins, antibodies, nucleic acids, etc.) to the surface of the bead, which is important for analyte-detection and immunoassay applications. Internally-dyed beads are also used extensively in imaging applications, as they display a greater resistance to photobleaching.

Surface-labeling involves conjugation of the fluorophore to the particle surface, where it is able to interact with the environment just as the fluorophore molecules on a stained cell. The result is a bead standard that exhibits the same

excitation and emission properties as stained cell samples under a variety of different conditions, such as buffers at different ionic strength or pH. The "environmentally responsive" nature of surface-labeled microspheres makes them ideally suited for mimicking biological samples. Externally labeled microspheres are frequently used as controls and standards in flow cytometry applications.



An image of 5.7 μ m polymeric microspheres

FLUORESCENT MICROSPHERES

Fluorescent Polymer

Cat. # Product Description

FS02F	≤ 0.49µm
FS03F	0.50-0.99µm
FS04F	1.00-1.99µm
FS05F	2.00-4.99µm
FS06F	5.00-9.99µm
FS07F	10.00-24.99µm
FS08F	≥ 25.00µm

Fluorescent Carboxyl Polymer

Cat. # Product Description

Applications

Bangs Laboratories has developed fluorescent microspheres for use in a wide range of traditional and emerging applications, such as:

- High Throughput Screening
- Flow Cytometry
- SNP Analysis
- Signal Enhancement
- DNA Hybridization Probes
- Confocal Microscopy
- Diagnostics
- Filtration/Purification Efficiency Studies
- Biosensors
- Phagocytosis Studies
- Tissue Perfusion Studies
- Velocimetry Studies

We also offer a number of specialty products optimized for performance in unique applications:

- QuantumPlex™ is an innovative bead kit designed for suspension array development. QuantumPlex allows for detection of up to 10 different analytes per sample or efficient screening of multiple samples. QuantumPlexM provides the added convenience of magnetic separation.
- Bangs Laboratories' Flow Cytometry Standards division provides standards for instrument set-up and QC, as well as for quantitative flow cytometry and related applications. See the flow cytometry portion of our website for further product information.

Custom Fluorescent Microspheres

If we do not have a product that meets your specific requirements, please inquire about our capabilities for customization. For example, we offer custom dyeing and protein coating of polymeric and superparamagnetic microspheres. See available fluorophores and spectra in the Tech Support portion of our website.



Bangs Laboratories supplies a large variety of uniform 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? Give us a call.



317.570.7020

Fluorescent Microspheres. Revision 1.02