



Estapor[®] Fluorescent Microspheres

A critical raw material for the manufacture of IVD and life sciences reagents

Fluorescent Microspheres

We offer photostable fluorescent microspheres that have been specifically developed and patented by Estapor. Made in polystyrene (PS) or in polyvinyltoluene (PVT), our fluorescent microspheres are monodisperse and uniform, ranging in size from 20 nm to 4 µm. Our Fluorescent products are also available as plain or functionalized microspheres (COOH, NH₂, CH₂Cl...). To prevent dyes leaching and to provide the maximum of active surface, the fluorescent dyes are physically and irreversibly entrapped inside the microspheres.

Preparation of our fluorescent microspheres comprising:

- Swelling the polymeric microsphere so that fluorescent dyes may enter the microspheres pores.
- Unswelling the polymeric microspheres so that the fluorescent dyes become physically entrapped in the pores.

The main applications for Estapor® Fluorescent Microspheres are the following:

- Membrane-based technologies
- Flow cytometry
- Confocal Microscopy
- FLISA: Fluorescent Linked Immuno-Sorbent Assay
- Toxicology
- Cell Biology
- Microbiology
- Embolization
- BioSensors
- BioChips
- Microfluidics.

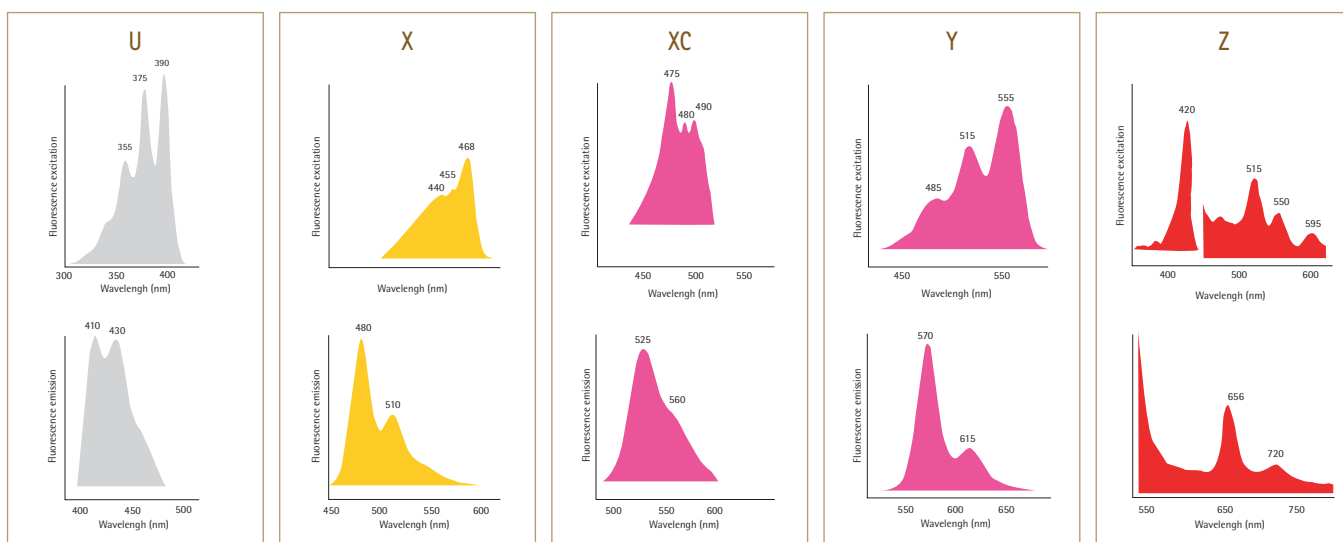
Our Fluorescent Microspheres are supplied at 1% concentration in water (100mg/10ml).

Dye	λ Excitation Wavelength (nm)	λ Emission (nm)	Color
U	Scintillator or eventually photoexcitable at 375		White
X	440, 455, <u>468</u>	<u>480</u> , 510	Yellow
XC	<u>470</u> , 490	<u>525</u> , 560	Pink
Y	515, <u>555</u>	568, <u>610</u>	Pink
Z	<u>420</u> , 515, 550	<u>656</u> , 720	Red

Underlined wavelengths represent predominant excitation and emission wavelengths.

X is excitable at the 442nm He-Cd laser line.

XC and Y are well suited to the 488nm and 515nm bands of the Argon laser.



For ordering

We offer a very large selection of fluorescent microspheres and we make it very easy for you to order them to meet your particular application.

How to order our fluo microspheres in 4 easy steps?

- 1) Choose the right fluorescent dye U, X, XC, Y or Z
- 2) Choose the surface: plain or modified as COOH-, NH₂-,
- 3) Choose the microsphere diameter from 20nm to 4µm
- 4) Choose the amount of material you need from 10ml to bulk volume

1	2	3	4
CODE	SURFACE	SIZE	LABEL
..

Fluorescent Standard Microspheres for Flow Cytometer

New type of Fluorescent and Monodisperse Microspheres have been developed and patented. Kits, containing those new products, are designed for the routine calibration and control for flow cytometry. The fluorescent particles have a long term photo-stability and are supplied as ready-to-use reagents.

ESTAFOCUS

Kit for aligning and focusing flow cytometers

Size of particles : 2 – 2.5 μm
 Argon-ion laser excitation : 488 nm
 Emission range : 500 – 660 nm
 CV_{fluorescence} : < 2 %

ESTACAL

An intensity calibration kit (different beads suspensions of various % relative fluorescent intensities) recommended for calibrating.

Size of particles : 2 – 2.5 μm
 Argon-ion laser excitation : 488 nm
 Emission range : 500 – 660 nm
 CV_{fluorescence} : < 4 %

ESTACOLOR

Kit for aligning flow cytometers at different wavelengths.

λ Excitation (nm)	λ Emission (nm)
360	450
488, 514	585 - 610
360, 488, 514	560 - 670

Custom Development of Fluorescent Microspheres

If you are looking for fluorescent microspheres which are not available from our standard offer, Estapor[®] Microspheres provide custom development for the Diagnostic, the Biotech and the Pharmaceutical industries. Our experience in Fluorescent Microspheres development allows our technical department to quickly and inexpensively produces custom microspheres to fit your very specific requirements. Please send your detailed custom requirements to your Estapor[®] representative. You don't have to search any further for a potential source of fluorescent microspheres.

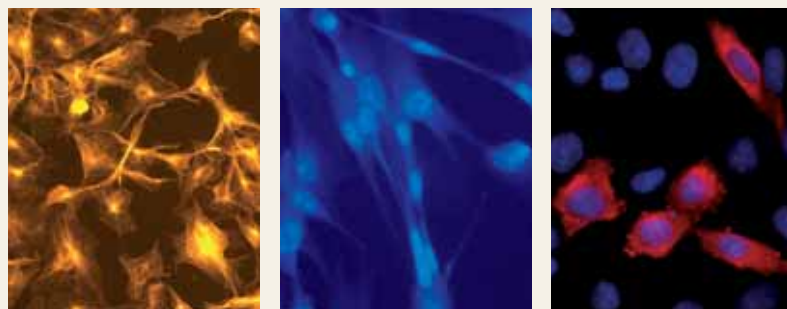
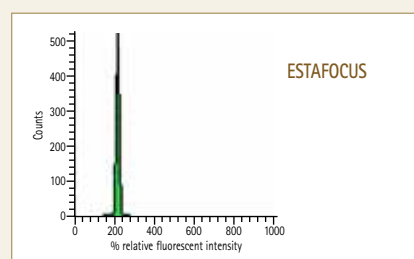
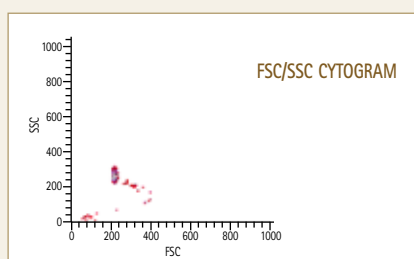
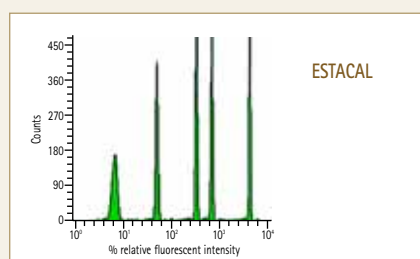


Fig.1: Excitation and Emission Spectrum. Estapor Fluorescent Microspheres comprise 5 unique dyes, spanning the visible spectrum from UV (Excitation wavelength = 375 nm / Emission wavelength = 435 nm) to red (Excitation wavelength = 420 nm / Emission wavelength = 660 nm)

Estapor[®] kits for evaluation

To enable you to test several types of Microspheres of different diameters. Each kit of uncoated Microspheres consists in 5 vials of 5 ml or 10 ml.

- Kit of 5 Fluorescent Estapor[®]



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