

# Triton Technology Inc

## Dye-Trak® & FluoSphere® Microsphere Catalog



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## Microsphere Price List

<b>Product:</b>	<b>Page</b>
<b>Dye-Trak® microspheres - 15µm in 10ml bottle</b>	<b>3</b>
<b>Dye-Trak® microspheres - 15µm in 10ml bottle</b>	<b>5</b>
Fluorescent <i>Dye-Trak 'F'</i> - 15µm in 10ml bottle	7
Fluorescent <i>Dye-Trak 'F'</i> - 15µm in 20ml bottle	8
<b>FluoSpheres® Molecular Probes - 10µm in 10ml bottle</b>	<b>9</b>
<b>FluoSpheres® Molecular Probes - 15µm in 10ml bottle</b>	<b>10</b>
<b>FluoSpheres® Molecular Probes - Kits</b>	<b>11</b>
<b>FluoSpheres® Molecular Probes - 10µm in 20ml bottle</b>	<b>12</b>
<b>FluoSpheres® Molecular Probes - 15µm in 20ml bottle</b>	<b>13</b>
<b>Microsphere Filters</b>	<b>14</b>

## DYE-TRAK<sup>®</sup> microspheres

The Dye-Trak<sup>®</sup> and Dye-Trak<sup>®</sup> VII+ microspheres provide a proven non-radioactive method of measuring regional blood flow. These precisely dyed, highly uniform spheres are quantified by spectrophotometry. DMF is used as the dye extraction solvent for *original* Dye-Trak colors. Use acidified Celloslve Acetate as a solvent for Dye-Trak VII+ colors.

DYE-TRAK<sup>®</sup> is packaged in a concentration of 3 million microspheres (15 $\mu$ m diameter) per ml of injectable saline solution containing 0.05% Tween 80 (surfactant) and 0.01% Thimerosal (bacteriostat).

DYE-TRAK<sup>®</sup> is a registered trademark of Triton Technology. DYE-TRAK<sup>®</sup> is included by Triton Technology patents 5,230,343 and 5,253,649, German patent 40,19,025 and other foreign patents pending.

Part No.	Item	
145-0370	<b>White DYE-TRAK<sup>®</sup> microspheres</b> <i>Absorbance maximum 370nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0390	<b>Lemon DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 390nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0448	<b>Yellow DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 448nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0495	<b>Orange DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 495nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0525	<b>Tangerine DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 525nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0531	<b>Eosin DYE-TRAK<sup>®</sup> microspheres</b> <i>Absorbance maximum 531nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0545	<b>Persimmon DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 545nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0590	<b>Berry DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 590nm. 30 million microspheres, 15<math>\mu</math>m diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml

## DYE-TRAK<sup>®</sup> microspheres (continued)

Part No.	Item	
145-0594	<b>Violet DYE-TRAK<sup>®</sup> microspheres</b> <i>Absorbance maximum 594nm. 30 million microspheres, 15µm diameter microspheres in 10 ml in an injectable saline solution.</i>	10ml
145-0672	<b>Blue DYE-TRAK<sup>®</sup> microspheres</b> <i>Absorbance maximum 672nm. 30 million microspheres, 15µm diameter microspheres in 10 ml in an injectable saline solution.</i> <b>Blue should always be used as the Process Control color, as none of the other colors spills-over into Blue's peak.</b>	10ml

### **Preferred Dye-Trak VII+ color sequence (left to right):**

*Yellow, Persimmon, Orange, Lemon, Tangerine, Berry, Blue*

### **Preferred original Dye-Trak color sequence (left to right):**

*Yellow, Eosin, White, Violet, Blue*

## DYE-TRAK<sup>®</sup> microspheres (continued)

Part No.	Item	
155-0370	<b>White DYE-TRAK<sup>®</sup> microspheres</b> <i>Absorbance maximum 370nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0390	<b>Lemon DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 390nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0448	<b>Yellow DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 448nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0495	<b>Orange DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 495nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0525	<b>Tangerine DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 525nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0531	<b>Eosin DYE-TRAK<sup>®</sup> microspheres</b> <i>Absorbance maximum 531nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0545	<b>Persimmon DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 545nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0590	<b>Berry DYE-TRAK<sup>®</sup> VII+ microspheres</b> <i>Absorbance maximum 590nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml

## DYE-TRAK® microspheres (continued)

Part No.	Item	
155-0594	<b>Violet DYE-TRAK® microspheres*</b> <i>Absorbance maximum 594nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i>	20ml
155-0672	<b>Blue DYE-TRAK® microspheres</b> <i>Absorbance maximum 672nm. 60 million microspheres, 15µm diameter microspheres in 20 ml in an injectable saline solution.</i> <b><i>Blue should always be used as the Process Control color, as none of the other colors spills-over into Blue's peak.</i></b>	20ml

**Preferred Dye-Trak VII+ color sequence (left to right):**

*Yellow, Persimmon, Orange, Lemon, Tangerine, Berry, Blue*

**Preferred *original* Dye-Trak color sequence (left to right):**

*Yellow, Eosin, White, Violet, Blue*

## DYE-TRAK 'F' FLUORESCENT microspheres

The DYE-TRAK 'F' microspheres are available in 4-color fluorescently dyed family. DYE-TRAK 'F' microspheres are precisely dyed, highly uniform spheres are quantified by fluorescence spectrophotometry. Fluorescent colors are used with larger volumes of solvent for ease of use. DYE-TRAK 'F' fluorescent colors have sharp, widely separated peaks and require no mathematical processing of the data. A fifth fluorescent color, Navy, is available for use as a process control color to detect and correct for the loss of microspheres during tissue processing. These colors are used with Cellosolve Acetate as a solvent.

Dye-Trak 'F' is packaged in a concentration of 1 million microspheres (15µm diameter) per ml of injectable saline solution containing 0.05% Tween 80 (surfactant) and 0.01% Thimerosal (bacteriostat).

A validation of the Dye-Trak 'F' fluorescent microspheres can be found on the University of Washington Fluorescent Microsphere Resource Center website: <http://fmrc.pulmcc.washington.edu/ResVal/Triton4.shtml>

DYE-TRAK® is a registered trademark of Triton Technology. DYE-TRAK® is included by Triton Technology patents 5,230,343 and 5,253,649, German patent 40,19,025 and other foreign patents pending.

Part No.	Item	
140-0445	<b>Fluorescent Lemon - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 390nm / Recommended Emission 445nm. 10 million 15µm microspheres in 10ml of an injectable saline solution.</i>	10ml
140-0485	<b>Fluorescent Yellow - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 440nm / Recommended Emission 485nm. 10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
140-0525	<b>Fluorescent Orange Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 495nm / Recommended Emission 525nm. 10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
140-0575	<b>Fluorescent Persimmon - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 545nm / Recommended Emission 575nm. 10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
140-0670	<b>Fluorescent Navy - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 640nm / Recommended Emission 670nm. 10 million 15µm microspheres in 10ml in an injectable saline solution. <b>Caution: Fluorescent Navy should only be used as a 'process control' color and only with Filtration microsphere recovery.</b></i>	10ml

**NOTE: The four Dye-Trak 'F' colors can be used with two of the Molecular Probes colors (Red and Crimson) to make a set of six fluorescent colors which can be used together without the need to do a mathematical spill-over correction. For more information see:**  
[www.Triton-Technology.com/Best6Combo.htm](http://www.Triton-Technology.com/Best6Combo.htm)

## DYE-TRAK® *FLUORESCENT* microspheres (continued)

Part No.	Item	
150-0445	<b>Fluorescent Lemon - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 390nm / Recommended Emission 445nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
150-0485	<b>Fluorescent Yellow - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 440nm / Recommended Emission 485nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
150-0525	<b>Fluorescent Orange Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 495nm / Recommended Emission 525nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
150-0575	<b>Fluorescent Persimmon - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 545nm / Recommended Emission 575nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
150-0670	<b>Fluorescent Navy - Dye-Trak 'F' microspheres</b> <i>Recommended Excitation 640nm / Recommended Emission 670nm. 20 million 15µm microspheres in 20ml in an injectable saline solution. <b>Caution: Fluorescent Navy should only be used as a 'process control' color and only with Filtration microsphere recovery.</b></i>	20ml

**NOTE:** *The four Dye-Trak 'F' colors can be used with two of the Molecular Probes colors (Red and Crimson) to make a set of six fluorescent colors which can be used together without the need to do a mathematical spill-over correction. For more informations see:  
[www.Triton-Technology.com/Best6Combo.htm](http://www.Triton-Technology.com/Best6Combo.htm)*



## FluoSpheres® fluorescent microspheres (Molecular Probes Packaging)

FluoSpheres® fluorescent microspheres provide a highly sensitivity tool for the measurement of regional blood flow quantified by fluorescence spectrofluorometry.

Each 10ml bottle with 10 micron beads contains 36 million spheres and each 10ml bottle with 15 micron beads contains 10 million spheres. All spheres are suspended in a injectable saline solution with .05% Tween 20 and .02% Thimerosal as a bacteriostat.

These products are covered by Triton Technology patents 5,230,343, 5,253,649 and pending, plus foreign patents issued and pending. The dyes are covered by Molecular Probes patents 5,187,288 , 5,248,782 and pending.

Part No.	Item	
F-8829	<b>Blue FluoSpheres® microspheres</b> <i>Excitation wavelength 365nm, Emission wavelength 415nm.</i> <i>3.6 million 10µm microspheres in 10ml in an injectable saline solution.</i>	<b>10ml</b>
F-8830	<b>Blue-Green FluoSpheres® microspheres</b> <i>Excitation wavelength 430nm, Emission wavelength 495nm.</i> <i>3.6 million 10µm microspheres in 10ml in an injectable saline solution.</i>	<b>10ml</b>
F-8831	<b>Crimson FluoSpheres® mcrospheres</b> <i>Excitation wavelength 625nm, Emission wavelength 645nm.</i> <i>3.6 million 10µm microspheres in 10ml in an injectable saline solution.</i>	<b>10ml</b>
F-8833	<b>Orange FluoSpheres® microspheres</b> <i>Excitation wavelength 540nm, Emission wavelength 560nm.</i> <i>3.6 million 10µm microspheres in 10ml in an injectable saline solution.</i>	<b>10ml</b>
F-8834	<b>Red FluoSpheres® microspheres</b> <i>Excitation wavelength 580nm, Emission wavelength 605nm.</i> <i>3.6 million 10µm microspheres in 10ml in an injectable saline solution.</i>	<b>10ml</b>
F-8836	<b>Yellow-Green FluoSpheres® microspheres</b> <i>Excitation wavelength 505nm, Emission wavelength 515nm.</i> <i>3.6 million 10µm microspheres in 10ml in an injectable saline solution.</i>	<b>10ml</b>

## FluoSpheres<sup>®</sup> Molecular Probes Packaging (continued)

Part No.	Item	
F-8837	<b>Blue FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 365nm, Emission wavelength 415nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-8838	<b>Blue-Green FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 430nm, Emission wavelength 495nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-8839	<b>Crimson FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 625nm, Emission wavelength 645nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-8841	<b>Orange FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 540nm, Emission wavelength 560nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-8842	<b>Red FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 580nm, Emission wavelength 605nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-8843	<b>Scarlet FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 645nm, Emission wavelength 680nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-8844	<b>Yellow-Green FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 505nm, Emission wavelength 515nm</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-21010	<b>Green FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 450nm, Emission wavelength 480nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-21011	<b>Yellow FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 515nm, Emission wavelength 534nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-21012	<b>Red-orange FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 565nm, Emission wavelength 580nm.</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml
F-21013	<b>Carmine FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 580nm, Emission wavelength 620nm</i> <i>10 million 15µm microspheres in 10ml in an injectable saline solution.</i>	10ml

## FluoSpheres<sup>®</sup> Molecular Probes Packaging (continued)

### KITS

Part No.	Item
<b>F-8890</b>	<b>Seven Color 10µm FluoSpheres<sup>®</sup> Kit</b> Kit consists of seven 10ml bottles of one each of the following colors: Crimson, Blue-Green, Red, Orange, Blue, Scarlet and Yellow-Green
<b>F-8891</b>	<b>Seven Color 15µm FluoSpheres<sup>®</sup> Kit</b> Kit consists of seven 10ml bottles of one each of the following colors: Crimson, Blue-Green, Red, Orange, Blue, Scarlet and Yellow-Green
<b>F-8892</b>	<b>Five Color 15µm FluoSpheres<sup>®</sup> Kit</b> Kit consists of five 10ml bottles of one each of the following colors: Crimson, Blue-Green, Red, Orange and Yellow-Green
<b>F-21015</b>	<b>Four Color 15µm FluoSpheres<sup>®</sup> Kit</b> Kit consists of four 10ml bottles of one each of the following colors: Red-Orange, Carmin, Green and Yellow

## FluoSpheres® fluorescent microspheres (Triton Technology Packaging)

FluoSpheres® are non-radioactive fluorescent microspheres for high sensitivity measurement of regional blood flow determination quantified by spectrofluorometry.

Each 10ml bottle with 20 micron beads contains 72 million spheres and each 20ml bottle with 15 micron beads contains 20 million spheres. All spheres are suspended in a injectable saline solution with .05% Tween 20 and .02% Thimerosal as a bacteriostat.

These products are covered by Triton Technology patents 5,230,343, 5,253,649 and pending, plus foreign patents issued and pending. The dyes are covered by Molecular Probes patents 5,187,288, 5,248,782 and pending.

FluoSpheres is a registered trademark of Molecular Probes, Inc.

Part No.	Item	
F-17091	<b>Blue FluoSpheres® microspheres</b> <i>Excitation wavelength 365 nm, Emission wavelength 415 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml
F-17092	<b>Blue-Green FluoSpheres® microspheres</b> <i>Excitation wavelength 430 nm, Emission wavelength 495 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml
F-17093	<b>Crimson FluoSpheres® microspheres</b> <i>Excitation wavelength 625 nm, Emission wavelength 645 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml
F-17094	<b>Green FluoSpheres® microspheres</b> <i>Excitation wavelength 450 nm, Emission wavelength 480 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml
F-17095	<b>Orange FluoSpheres® microspheres</b> <i>Excitation wavelength 540 nm, Emission wavelength 560 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml
F-17096	<b>Red FluoSpheres® microspheres</b> <i>Excitation wavelength 580 nm, Emission wavelength 605 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml
F-17097	<b>Scarlet FluoSpheres® microspheres</b> <i>Excitation wavelength 645 nm, Emission wavelength 680 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml
F-17098	<b>Yellow-Green FluoSpheres® microspheres</b> <i>Excitation wavelength 505 nm, Emission wavelength 515 nm.</i> <i>72 million 10µm microspheres in 20ml in an injectable saline solution.</i>	20ml

## FluoSpheres<sup>®</sup> fluorescent microspheres (Triton Technology Packaging)

Part No.	Item	
255-9890	<b>Blue FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 365 nm, Emission wavelength 415 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9891	<b>Yellow-Green FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 505 nm, Emission wavelength 515 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9892	<b>Orange FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 540 nm, Emission wavelength 560 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9893	<b>Red FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 580 nm, Emission wavelength 605 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9894	<b>Crimson FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 625 nm, Emission wavelength 645 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9895	<b>Scarlet FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 645 nm, Emission wavelength 680 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9896	<b>Blue-Green FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 430 nm, Emission wavelength 495 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9897	<b>Green FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 450 nm, Emission wavelength 480 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9898	<b>Yellow FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 515 nm, Emission wavelength 535 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9899	<b>Red-orange FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 565 nm, Emission wavelength 580 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml
255-9900	<b>Carmine FluoSpheres<sup>®</sup> microspheres</b> <i>Excitation wavelength 580 nm, Emission wavelength 620 nm. 20 million 15µm microspheres in 20ml in an injectable saline solution.</i>	20ml

## Microsphere Filters

Part No.	Item
31079	<b>Filter Membranes</b> <i>Box of 100 polyester membranes, 25mm in diameter, 10µm pore size for use with 15µm micropsheres (200,000 pores/cm<sup>2</sup>)</i>