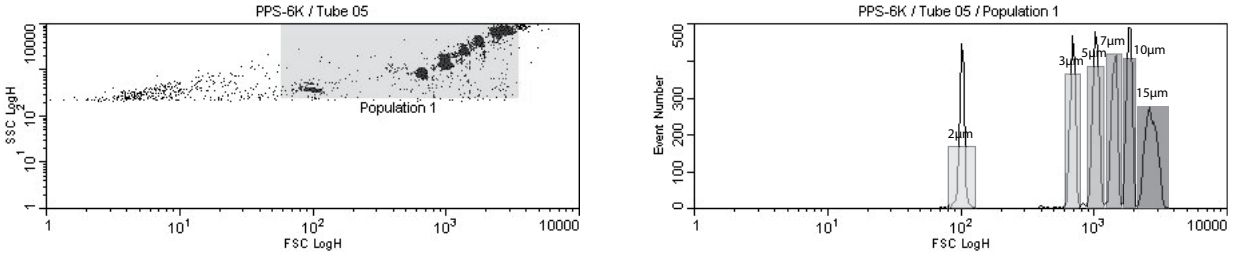
SPHERO™ Flow Cytometry Particle Size Standard Kit

The SPHERO™ Flow Cytometry Particle Size Standard Kit is designed to be a reliable size reference for flow cytometry. This kit consists of six different size particles with a known diameter. The diameter for each particle has been determined using a Scanning Electron Microscope and NIST traceable particles.

Using FSC signals of the flow cytometry, the size of cells can be estimated when compared to the SPHERO™ Flow Cytometry Particle Size Standards. When using this product, be aware that FSC signals are related to both size and refractive index.

Particle Type and Surface	Size, µm	Catalog No.	Unit
Particle Size Standard Kit, Flow Cytometry Grade, 2.5x10^6/mL	2.0-2.4, 3.0-3.4, 5.0-5.9, 7.0-7.9, 8.0-12.9, & 13.0-17.9	PPS-6K	6x5 mL

Figure 79 FSC Log Histograms of Cat. No. PPS-6K, Lot No. AG03 on a Stratedigm S1400.



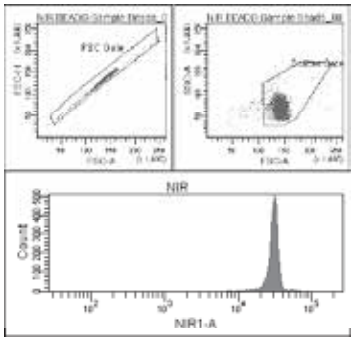
SPHERO™ Flow Cytometry Grade Fluorescent Particles

- Designed for flow cytometry applications
- Manufactured from high grade polystyrene particles
- Available in a variety of sizes and chemistries

Note: Many of the beads on pages 14 to 19 are also useful in flow cytometry applications.

Fluorescent Particles	Excitation	Emission
UltraBlue	635 or 785 nm	APC-Cy7 / IR
CyGreen	635 or 785 nm	APC-Cy7 / IR
Aqua Green	635 or 785 nm	APC-Cy7 / IR
Jade Green	635 or 785 nm	APC-Cy7 / IR

Figure 80 Histograms of Cat. No. CFH-5078-2 at 735nm Ex dected by a PMT with 840/30 nm BP.



* Data provided by David Haviland, Ph.D., University of Texas Health Science Center - Houston Center for Stem Cell Research - Flow Cytometry Laboratory

SPHERO™ Fluorescent IR Flow Cytometer Grade Particles

Particle Type and Surface	Size, µm	Catalog No.	Unit
Fluorescent, CyGreen, 10^7/mL	2.8-3.4	FP-3074-2	2 mL
Fluorescent, Jade Green, 10^7/mL	2.8-3.4	FP-3078-2	2 mL
Fluorescent, Aqua Green, 10^7/mL	3.0-3.4	FP-3079-2	2 mL
Fluorescent, CyGreen, 10^7/mL	5.0-5.9	FP-5074-2	2 mL
Fluorescent, Jade Green, 10^7/mL	5.0-5.9	FP-5078-2	2 mL
Fluorescent, CyGreen, Low Intensity, 10^7/mL	10.0-14.0	FL-10074-2	2 mL
Fluorescent, CyGreen, Mid Intensity, 10^7/mL	10.0-14.0	FP-10074-2	2 mL
Fluorescent, CyGreen, High Intensity, 10^7/mL	10.0-14.0	FH-10074-2	2 mL
Fluorescent, Jade Green, Low Intensity, 10^7/mL	10.0-14.0	FL-10078-2	2 mL
Fluorescent, Jade Green, Mid Intensity, 10^7/mL	10.0-14.0	FP-10078-2	2 mL
Fluorescent, Jade Green, High Intensity, 10^7/mL	10.0-14.0	FH-10078-2	2 mL
Fluorescent, Aqua Green, 10^7/mL	10.0-14.0	FP-10079-2	2 mL

Figure 81 Spectra of CyGreen, Jade Green and Aqua Green fluorophores at 640 nm excitation.

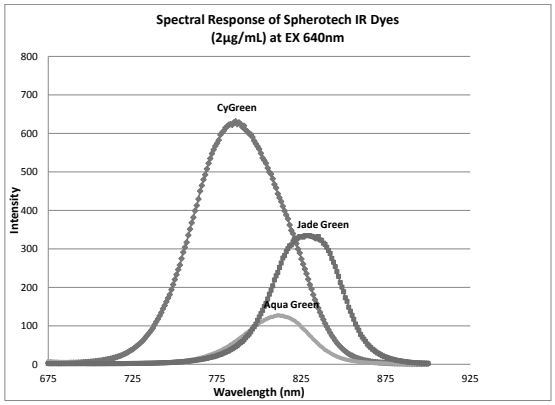
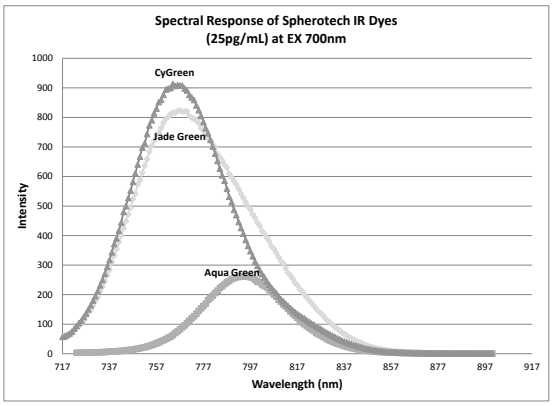
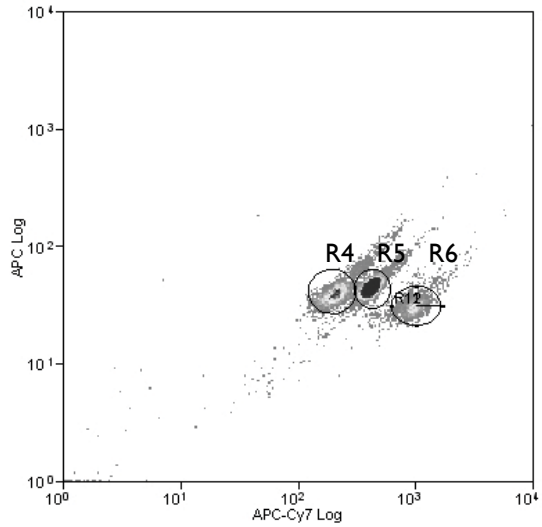


Figure 82 Fluorescence data for CyGreen, Jade Green, and Aqua Green. (a) Spectra of CyGreen, Jade Green and Aqua Green fluorophores at 700 nm excitation. (b) Histograms of Cat. No. CFP-5074-2 (R4), CFP-5078-2 (R5) & CFP-5079-2 (R6) at 635nm Ex dected in the ACP-Cy7 channel of a Beckman Coulter Cyan ADP

(A)



(B)



SPHERO™ Carboxyl Fluorescent IR Flow Cytometer Grade Particles

Particle Type and Surface	Size, µm	Catalog No.	Unit
Carboxyl, Fluorescent, Aqua Green, $2.9x10^{10}$/mL	0.1-0.3	CFP01-0279-10	10 mL
Carboxyl, Fluorescent, Aqua Green, $1.8x10^{9}$/mL	1.0-1.9	CFP01-1079-3	3 mL
Carboxyl, Fluorescent ,CyGreen 10^{7}/mL	3.0-3.4	CFP-3074-2	2 mL
Carboxyl, Fluorescent, Aqua Green, 10^{7}/mL	3.0-3.4	CFP-3079-2	2 mL
Carboxyl, Fluorescent, UltraBlue, 10^{7}/mL	3.5-3.9	CFP-3571-2	2 mL
Carboxyl, Fluorescent, CyGreen, 10^{7}/mL	3.5-3.9	CFP-3574-2	2 mL
Carboxyl, Fluorescent, Jade Green, 10^{7}/mL	3.5-3.9	CFP-3578-2	2 mL
Carboxyl, Fluorescent, Aqua Green, 10^{7}/mL	3.5-3.9	CFP-3579-2	2 mL
Carboxyl, Fluorescent, UltraBlue, 10^{7}/mL	5.0-5.9	CFP-5071-2	2 mL
Carboxyl, Fluorescent, CyGreen, 10^{7}/mL	5.0-5.9	CFP-5074-2	2 mL
Carboxyl, Fluorescent, Jade Green, 10^{7}/mL	5.0-5.9	CFP-5078-2	2 mL
Carboxyl, Fluorescent, Jade Green, Low Intensity Peak I, 10^{7}/mL	5.0-5.9	CFL-5078-2A	2 mL
Carboxyl, Fluorescent, Jade Green, Low Intensity Peak 2,10^{7}/mL	5.0-5.9	CFL-5078-2B	2 mL
Carboxyl, Fluorescent, Aqua Green, 10^{7}/mL	5.0-5.9	CFP-5079-2	2 mL
Carboxyl, Fluorescent, Jade Green, High Intensity, 10^{7}/mL	5.0-5.9	CFH-5078-2	2 mL

Figure 83 Spectra of Cat. No. CFP-5078-2, CFL-5078-2A, CFP-5078-2B & CFH-5078-2 at 785 nm excitation.