



27845 Irma Lee Circle  
Lake Forest, Illinois 60045-5100

Tel : (847) 680 8922  
Fax : (847) 680 8927  
<http://www.spherotech.com>

**TECHNICAL DATA**

**PRODUCT:** SPHERO™ Rainbow Calibration Particles, 8 Peaks, 3.0-3.4 µm

**CAT. NO.:** RCP-30-5A(EuroFlow™)

**LOT NO.:** EAQ01

**SIZE:** 5mL

**CONCENTRATION:**  $1 \times 10^7$  particles/mL

**STORAGE BUFFER:** Deionized water with 0.02% Sodium Azide and 0.01% NP40

**STORAGE TEMP.:** Stable at room temperature. Store between 2 and 8° C after first use.

**CAUTION:** Do not freeze. Protect from light.

**DESCRIPTION:** This product contains a mixture of 3.4 µm Rainbow Particles in **eight** different fluorescent intensities. Every Rainbow particle contains a mixture of fluorophores that enable the Rainbow particles to be excited at any wavelength from 365 to 650 nm.

**NOTE:** Shake vigorously or vortex briefly before use. Inclusion of a small amount of detergent in the diluent will help to increase the number of singles. Diluted Particles can be stored in the refrigerator for future use. Expires one year after opening. Please record opening date on bottle.

**INSTRUCTIONS FOR USE:**

RCP-30-5A (EuroFlow™) are used with the EuroFlow™ standardization guidelines to study the initial PMT characterization, to set target MFI values, and to perform daily performance tracking of flow cytometers.

**A. Preparation of Particles**

1. Vortex the particles vigorously.
2. Dilute 3-5 drops to 1 mL of deionized water.

**B. For the placement of PMT voltages for fluorescence measurements or for the determination of the EuroFlow™ SOP instrument settings visit:** T Kalina, et al. on behalf of the EuroFlow Consortium (EU-FP6, LSHB-CT-2006-018708) (2012). EuroFlow standardization of flow cytometer instrument settings and immunophenotyping protocols. **Leukemia, 26: 1986-2010**. Related link: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3437409/>

**C. For linearity assessment visit SPHERO™ Technical Note #8 Calibration and Performance Tracking of Flow Cytometer Using SPHERO™ Calibration Particles at** [https://www.spherotech.com/tech\\_SpheroTech\\_Note\\_8.html](https://www.spherotech.com/tech_SpheroTech_Note_8.html)

**D. For the determination of the flow cytometer sensitivity visit SPHERO™ Technical Note #17 Determination of a Flow Cytometer's Sensitivity Using Detection Efficiency (Q) and the Background Light Level (B) at** [https://www.spherotech.com/tech\\_SpheroTech\\_Note\\_17.html](https://www.spherotech.com/tech_SpheroTech_Note_17.html).

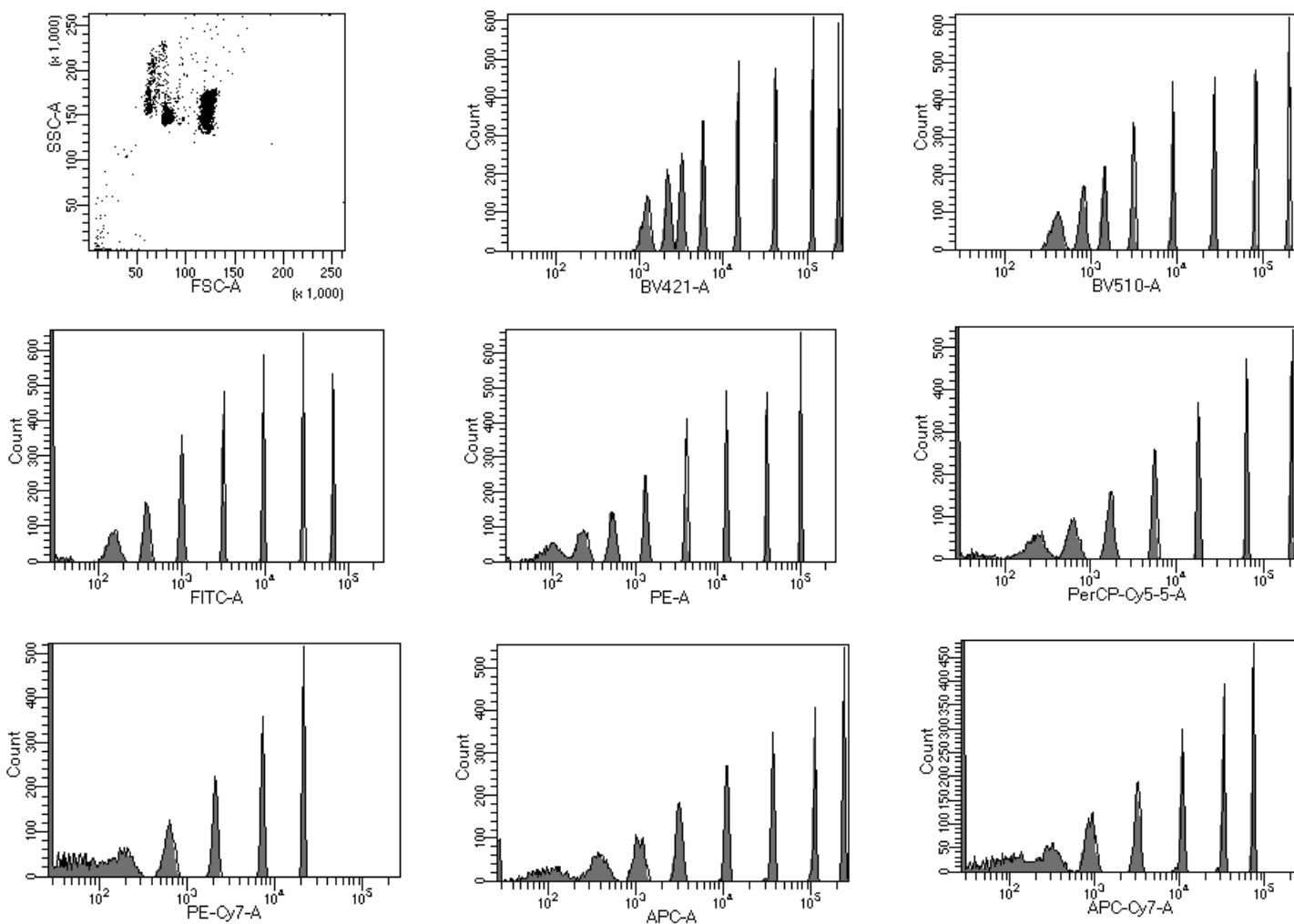
**Molecules of Equivalent Fluorochrome (MEF) for RCP-30-5A (EuroFlow™)**

| Peak# | MEFL    | MEPE    | MEPTR   | MECY    | MEAP    |
|-------|---------|---------|---------|---------|---------|
| 1     | N/A     | N/A     | N/A     | N/A     | N/A     |
| 2     | 789     | 443     | 187     | 1,137   | 736     |
| 3     | 1,896   | 1,245   | 543     | 3,041   | 1,892   |
| 4     | 4,872   | 3,415   | 1,536   | 7,960   | 4,804   |
| 5     | 15,619  | 11,299  | 5,423   | 25,995  | 14,248  |
| 6     | 47,116  | 35,875  | 17,825  | 82,663  | 42,425  |
| 7     | 143,912 | 112,460 | 63,989  | 294,040 | 113,026 |
| 8     | 333,068 | 287,758 | 207,649 | 973,175 | 227,044 |

**Dot Plot and Histograms for RCP-30-5A (EuroFlow™) on a  
BD Biosciences LSRFortessa™ X-20 using Assigned Target Values**

**FACSCanto™ Fluorescence Intensity  
Target Values for RCP-30-5A-7 (Peak 7)**

| Channel        | Lower MFI (-15%) | Target Value | Upper MFI (+15) |
|----------------|------------------|--------------|-----------------|
| Pacific Blue   | 90,855           | 106,888      | 122,922         |
| Pacific Orange | 72,500           | 85,294       | 98,088          |
| FITC           | 23,292           | 27,402       | 31,513          |
| PE             | 32,666           | 38,430       | 44,195          |
| PerCP-Cy5.5    | 57,874           | 68,087       | 78,301          |
| PE-Cy7         | 6,774            | 7,969        | 9,165           |
| APC            | 95,180           | 111,976      | 128,773         |
| APC-H7         | 28,594           | 33,641       | 38,687          |



**SPHERO™ Rainbow Calibration Particles (EuroFlow™)**  
 CATALOG NO.: RCP-30-5A EuroFlow™ LOT NO.: EAQ01