

SPHERO™ Easy Calibration Fluorescent Particles

- Surface labeled polystyrene beads with commonly used fluorophores
- Used to determine the linearity of the logarithmic amps and sensitivity of flow cytometers in specific channels
- Supplied as individual products for use in specific channels of flow cytometers.

| Particle Type and Surface | Size, μm | Catalog No. | Unit |
|--|---------------------|-------------|----------|
| FITC Calibration, $2 \times 10^6/\text{mL}$, 5 peaks | 3.0-3.4 | ECFP-F1-5K | 5 x 1 mL |
| PE Calibration, $2 \times 10^6/\text{mL}$, 5 peaks | 3.0-3.4 | ECFP-F2-5K | 5 x 1 mL |
| PE-Cy5 Calibration, $2 \times 10^6/\text{mL}$, 5 peaks | 3.0-3.4 | ECFP-F4-5K | 5 x 1 mL |
| GFP Calibration, $2 \times 10^6/\text{mL}$, 6 peaks | 3.0-3.4 | ECFP-F9-5K | 6 x 1 mL |

Figure 47 Histograms of the Easy Calibration Fluorescent Particles; (A) Cat. No. ECFP-F1-5K (FITC), (B) Cat. No. ECFP-F2-5K (PE), (C) Cat. No. ECFP-F4-5K (PE-Cy5), and (D) Cat. No. ECFP-F9-5K (GFP) on a Beckman Coulter Cyan™ ADP.

The **Easy Calibration Fluorescent Particles** consist of a mixture of particles with intensities calibrated in terms of Molecules of Equivalent Fluorochrome (MEF) units. Spherotech offers **Easy Calibration Fluorescent Particles** with three different fluorochromes including FITC, PE, PE-Cy5 and GFP.

Since each **Easy Calibration Fluorescent Particle** population is assigned a MEF unit, linearity calibrations and quantitative determinations can be performed. A linearity calibration is performed by graphing each population's channel number against its assigned MEF value. As a result, a regression line is created. This line can be used to track the performance history of the instrument. In addition, quantitative determinations for stained cells is performed when their obtained channel numbers are cross calibrated against the regression line. Refer to **SPHERO™** Technical Note #9 (STN #9) at <http://www.spherotech.com/tech.htm> for more information regarding the cross calibration of unknowns.

Unlike the Rainbow Calibration Particles, these beads are surfaced labeled. As a result, these beads interact with their environment and are used to detect changes within the flow cytometer such as contaminants or pH changes.

