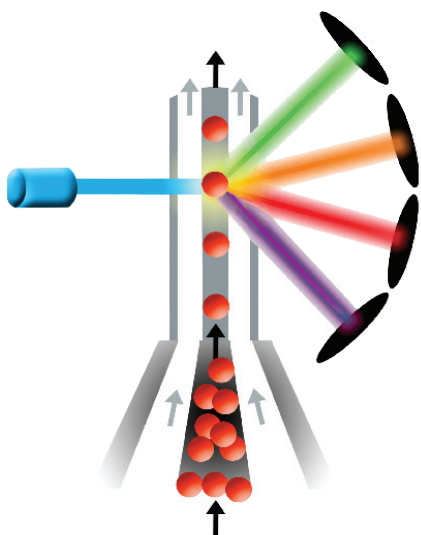
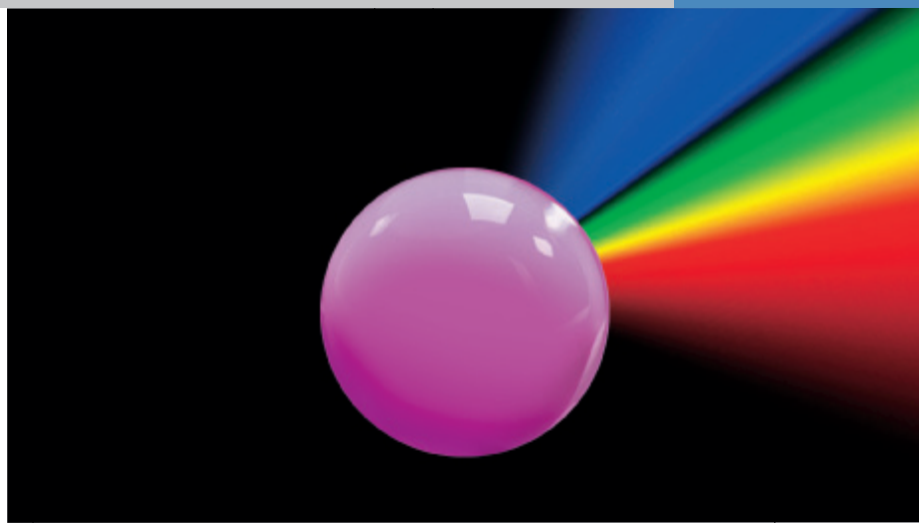


## Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrator

Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrators provide the precise accuracy required for those who cannot compromise their flow cytometer results. Our stable calibration material assesses instrument stability and precision in multiple channel instruments, and simultaneously monitors flow cytometer emissions from violet, blue and red laser sources to check instrument linearity, sensitivity and performance.



The Thermo Scientific Cyto-Cal Multifluor Calibrator contains polymer particles with dyes that excite and emit at the spectral ranges commonly used in flow cytometry..



- Superior bead size and dye intensity uniformity eliminates singlet gating
- Each fluorescent intensity level has a Mean Equivalent Soluble Fluorochrome (MESF) value to generate standard curves used to ensure reproducibility and stability
- Low fluorescent CV% allows for excellent specificity and sensitivity when calibrating linearity
- Thermal and photolytic stability over the life of the product ensures confident instrument performance and results, making it compliant with most QC programs
- Dye incorporated throughout the polymer (hard dyed) to eliminate leaching
- Appropriate dyes and intensity levels are based on four decades of the log amp data to cover the entire sensitivity range of most instruments

The Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrator is a mixture of highly uniform 3  $\mu\text{m}$  particles with green, orange, blue and red dyes in five different fluorescent intensities. It also includes one blank undyed bead for effective calibration of the fluorescent scale. These particles are so uniform that no singlet gating is required.

Packaged in an easy-to-use single-vial formula, the calibrator consists of beads precisely stained with fluorescent dyes that have optimized intensity levels and broad emissions detectable in multiple channels. The Thermo Scientific Calicurve 1.0 software (included) provides insights into the linearity, range and calibration of the log amps to optimize flow cytometer performance.

Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrators are backed by over 30 years of experience in synthesis, dyeing, measuring, packaging and technical support.

## Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrator

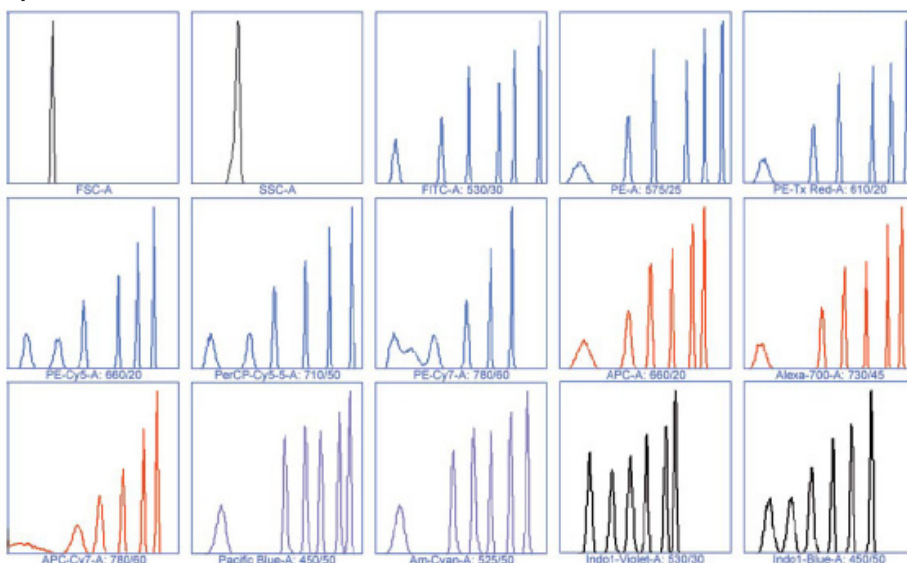
### Specifications

Catalog Number	FC3MV
Particle Composition	Polystyrene particles containing encapsulated dyes
Dyes	Thermo Scientific Firefli fluorescent green (488/510 nm), orange (488/575 nm), red (488, 633, 635/700 nm) and blue (405/450 nm)
Particle Size	3 µm nominal diameter
Concentration	Approximately 1.5 x 10 <sup>7</sup> particles per mL
Particle Density	1.06 g/cm <sup>3</sup>
Fill Volume	2 mL (~ 50 tests)
Content	Dyed polymer particles in water
Additives	0.05% Tween® 20 dispersant/surfactant with 2 mM sodium azide preservative
Packaging	Mac OS® and Microsoft Windows® compatible software disk with operation instructions, package insert sheet, and Material Safety Data Sheet (MSDS).
Storage and Handling	Unless otherwise stated, refrigerate (2-8 °C) product when not in use but do not freeze. Store upright and keep bottle tightly sealed. Mix product with gentle inversion by hand or vortex mixer.

### Applications

Flow Cytometer Linearity	The linearity of a flow cytometer provides information about the accuracy of the system, specifically the response of the photomultiplier tubes (PMT) throughout the dynamic voltage range. For this reason, flow cytometers must be calibrated frequently to ensure precision and reliability in order to accurately perform color compensation.
Routine Checks	By performing routine checks on linearity, the user can be alerted before starting analysis of changes in PMT responses, laser intensity and flow cell cleanliness. This prevents the flow cytometer from returning poor and/or inconsistent data.
Fluorescence Scale Calibration	The Cyto-Cal Multifluor Calibrator contains one blank and five different fluorescent intensities with each fluorescent intensity level having a predefined MESF value for optimal calibration of the fluorescence scale.
Software	Calicurve plots the mean or median channel number against the predefined fluorescence value and applies linear regression analysis to the measured values for each of the channels tested. The accurate measurement of fluorescence signal is imperative for quantitative fluorescence cytometry.

**The Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrator contains particles with dyes that excite and emit at the spectral ranges commonly used in flow cytometry. The figure below shows the uniformity of the particle as well as the tight fluorescent CV of the fluorescent emissions. The clear peak separation and clean base lines allow for precise gating when checking the linearity of the flow cytometer.**



**Data from a BD FACSAria™, BD Biosciences, San Jose, CA. Results may vary on different instruments.**

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