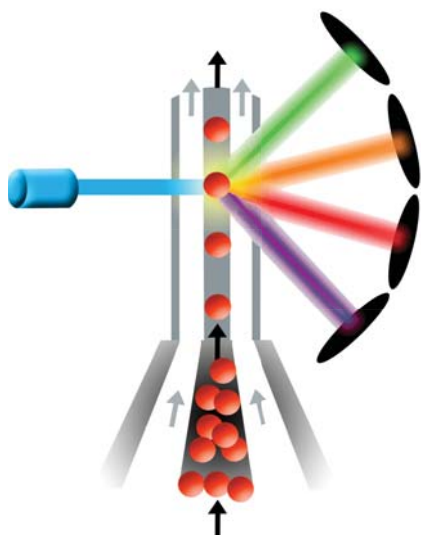


Stable calibration material for assessing instrument stability and precision in multiple channel instruments. The product is designed to simultaneously monitor flow cytometer emissions from the violet, blue and red laser sources to provide an independent check on instrument sensitivity and performance.

Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrator



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.



Product Description. The calibrator is a mixture of uniform 3 μm particles with multiple dyes in five different fluorescent intensities. Included in the mixture is also a blank bead containing no dye. Due to the high uniformity of the particles, singlet gating is not required. The calibrator consists of a single vial of fluorescent beads precisely stained with fluorescent dyes that have optimized intensity and broad emission in multiple channels. Each intensity level has an MESF (mean equivalent soluble fluorochrome) value for each fluorescent intensity for the multiple channels. Software is included to use with the results generated by the flow cytometer to check the linearity of the instrument.

Applications. Flow Cytometry Calibration, Set-up and Cell Sorting

Advantages. Superior bead size uniformity and dye intensity uniformity

No singlet gating required

Stable thermally and photolytically

Firefli™ Dye Process - Dye is incorporated throughout the polymer (hard dyed)

Product comes with a history of more than 30 years experience in synthesis, dyeing, measuring, packaging and support

Benefits. Stable for the life of the product, confidence in instrument performance and results and compliant with most QC programs

Appropriate dyes and intensity levels provide data from four decades of the log amp, which is the entire sensitivity range of most instruments

Provides insight into the linearity, range and calibration of the log amps

Easy-to-use, single-vial formula

Thermo Scientific Cyto-Cal Multifluor Plus Violet Intensity Calibrator

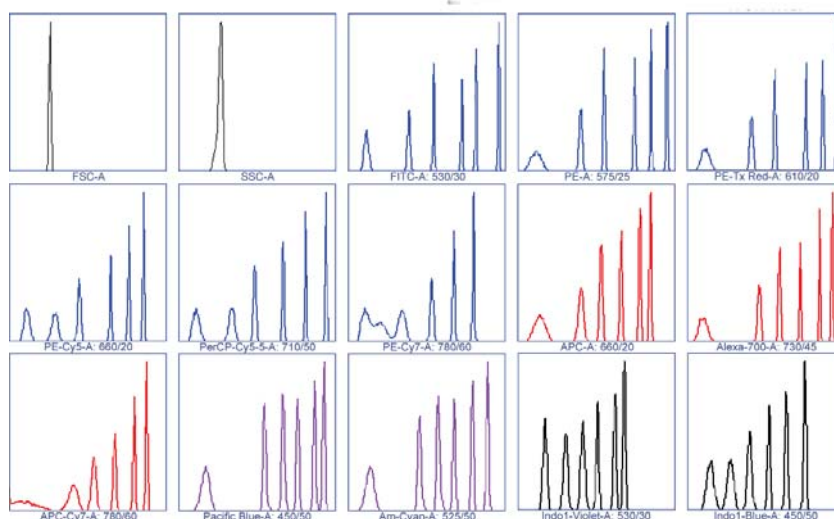
Product Attributes

Catalog Number	FC3MV
Particle Composition	Polystyrene Particles Containing Encapsulated Dyes
Dyes	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 ⁷ particles per mL
Particle Density	1.06 g/cm ³
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
Package Includes	Software disk with operation instructions, Package Insert Sheet and Material Safety Data Sheet (MSDS). Compatible with MAC OS and Microsoft.
Storage & Handling	Refrigerate when not in use; do not freeze. Store upright and keep bottle tightly sealed. Mix product by gentle inversion by hand or vortex mixer.

Application Use

Flow Cytometer Linearity	The linearity of a flow cytometer provides information about the accuracy of the system, specifically the response of the Photo Multiplier Tubes (PMT) throughout the dynamic voltage range to be used. For this reason, flow cytometers must be calibrated frequently to ensure precision and reliability in order to perform color compensation accurately.
Routine Checks	By performing routine checks on linearity the user can be alerted of changes in PMT responses, laser intensity and flowcell cleanliness before starting analysis to avoid the flow cytometer returning poor or inconsistent data. Fluorescent particles of differing intensities are used to generate a standard curve relating channel values to standardized fluorescence intensities.
Fluorescence Scale Calibration	Using the Cyto-Cal Multifluor Calibrator containing one blank and five different fluorescent intensities, with each intensity level having predefined fluorescence intensity, calibration of the fluorescence scale can be performed.
Software	With the included software you can plot the mean or median channel number against the predefined fluorescence value and apply 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 Cyto-Cal calibrator contains particles with dyes that excite and emit at the spectral ranges commonly used in flow cytometry. The figure below shows typical results from a Becton Dickinson instrument.



Data from FACSaria®, Becton Dickinson, San Jose, CA. Results on different instruments may vary.

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