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May 30, 2007

Cyto-Cal™ Multifluor Fluorescence Intensity Calibrator

CATALOG NUMBER: FC3M

CONTENT: Calibrator microspheres, 1.5×10^7 , in 3 mL aqueous suspension of 0.05% Tween-20 and 2 mM sodium azide

STORAGE UPON RECEIPT: Store refrigerated, protected from light. Do not freeze.

PRODUCT DESCRIPTION: The Cyto-Cal Multifluor Fluorescence Intensity Calibrator is a mixture of uniform 3.0 micrometer (μm) microspheres with multiple dyes in seven different fluorescent intensities, designed for calibrating a flow cytometer when excited by the 488 nm primary line of the argon laser or the 633 nm HeNe laser line. The microspheres have a broad emission in multiple channels (FITC, PE, PE-Cy5, PE-Texas Red, APC, APC-Cy7). Data showing the relative fluorescence intensities of the microspheres were collected on a FACSCalibur (Becton Dickinson, San Jose, CA) and a Coulter FC500 instrument (Figures 1 and 2) and are intended to fall within each log decade intensity level at normally used photomultiplier settings of 500-700. The estimations of MESF (mean equivalents of soluble fluorophores) were obtained using a FACSCalibur and calibration graphs are included. The MESF estimations (page 4) are subject to variation due to differences in instruments and across laboratories. They should only be used to estimate the number of fluorophores in a particular sample. The microspheres are stable and can be reliably used as a daily reference standard for monitoring instrument performance and stability.

DIRECTIONS FOR USE: The microspheres are provided in a convenient dropper tip vial for dispensing the sample. The suspensions should be mixed by gentle inversion by hand or vortex mixer to ensure that the particles are completely suspended before use. Addition of 1–2 drops to approximately 1 mL of buffer or sheath fluid will usually be sufficient to produce acceptable results.

EXPIRATION: The expiration date is printed on the label. This product should not be used past its expiration date.

LIMITED WARRANTY: These products are intended for laboratory use by trained scientific personnel. Determination of their suitability for a specific end-use is the responsibility of the user, who assumes all liability for loss or damage arising out of the use of the product. Rebottling or relabeling voids the warranty. Microgenics Corporation's warranty is limited to replacement of defective products if returned with our authorization within 60 days of purchase date.

THE FOREGOING WARRANTY SHALL BE IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL MICROGENICS BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

NOTE: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC USE. NOT TO BE USED FOR MAKING MEDICAL DECISIONS.

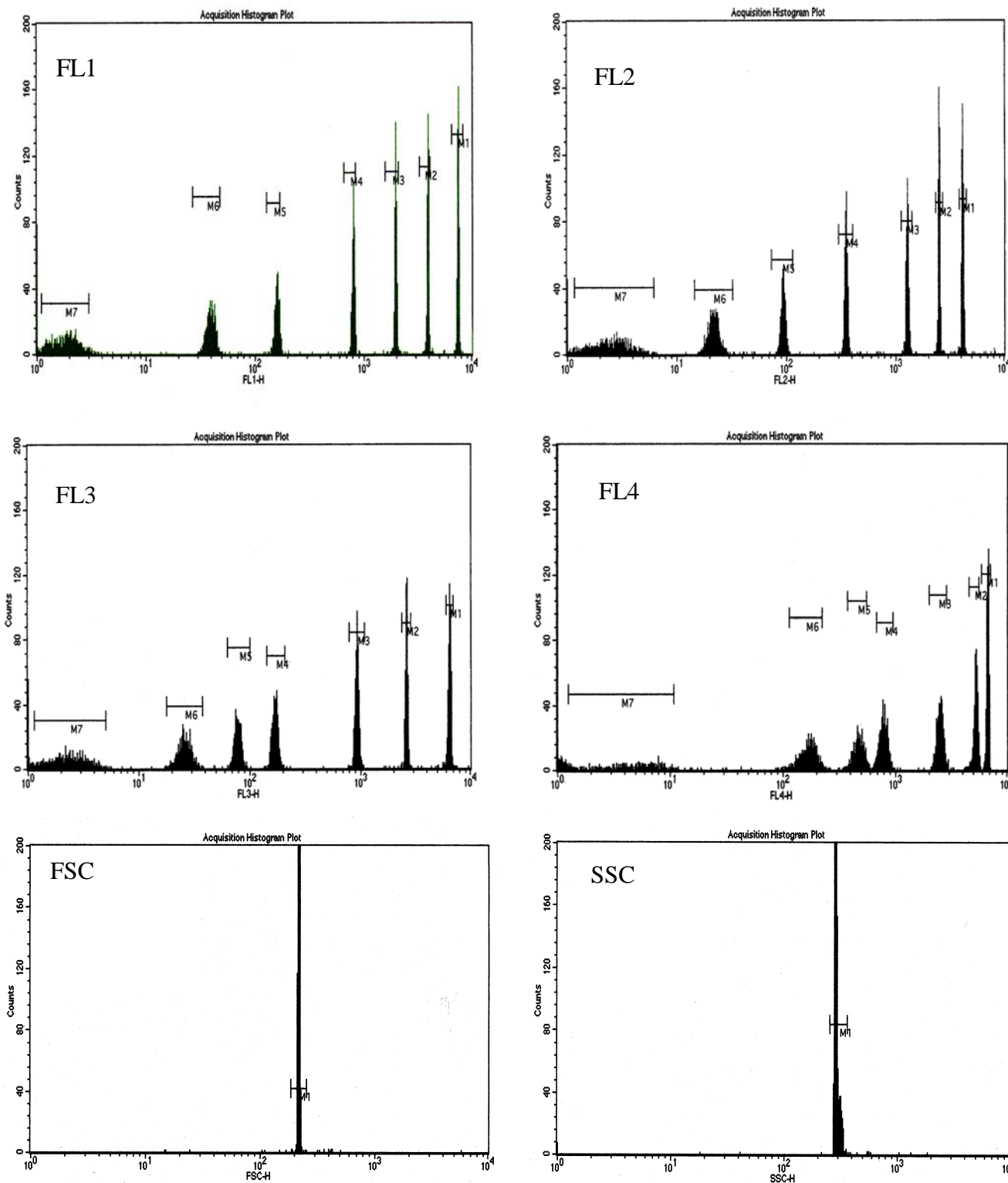


Figure 1. (Data from FACSCalibur, Becton Dickinson, San Jose, CA). The Cyto-Cal™ Fluorescence Intensity Calibrator contains microspheres with dyes that excite and emit at the spectral ranges commonly used in flow cytometry: Green (488/530 nm), Orange (488/575 nm) and Red (488,633/700 nm). Figure 1 shows typical results from a Becton Dickinson Instrument. Other instruments may exhibit different results.

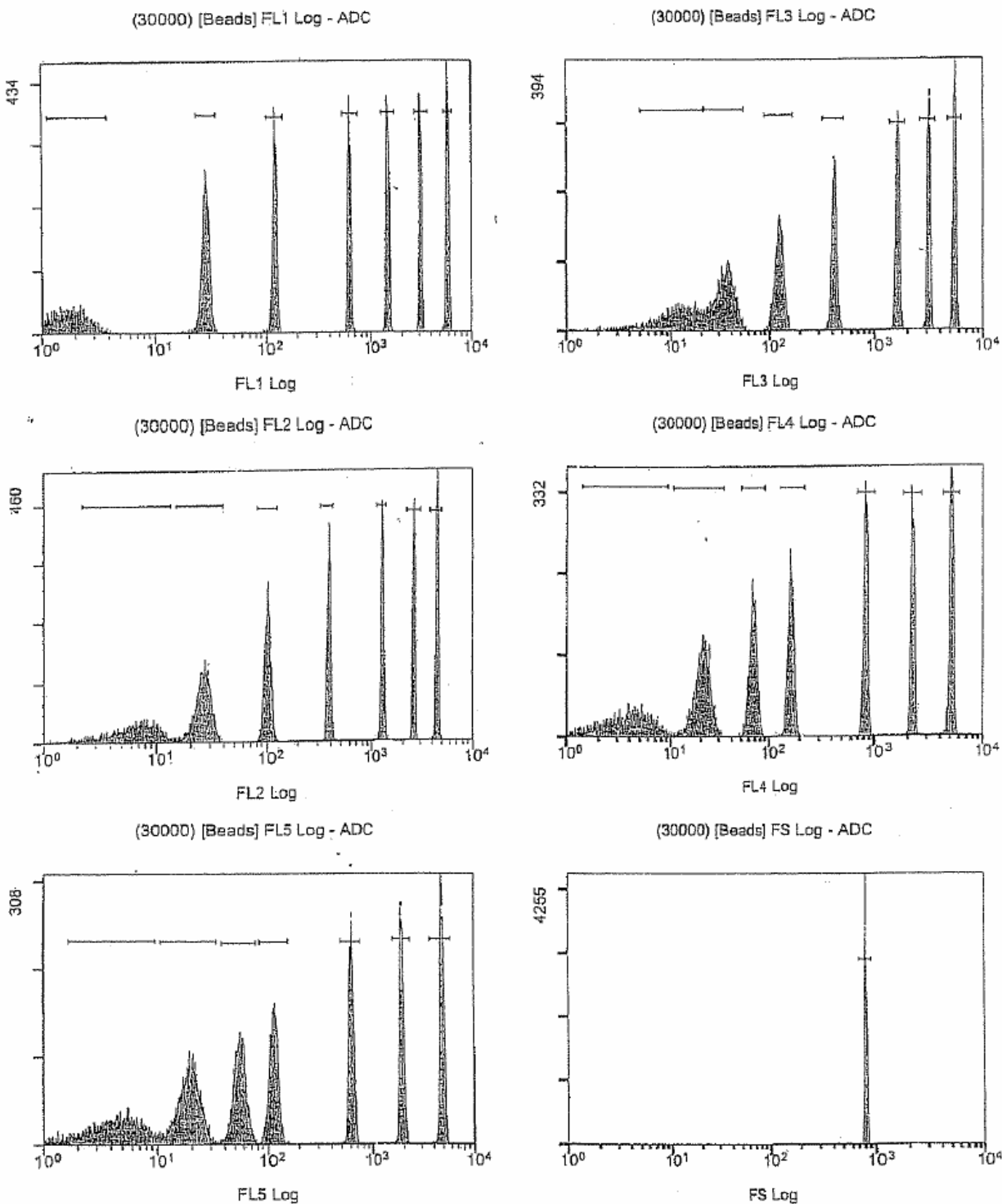
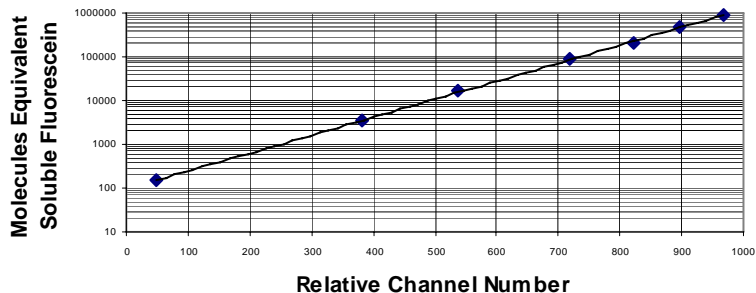


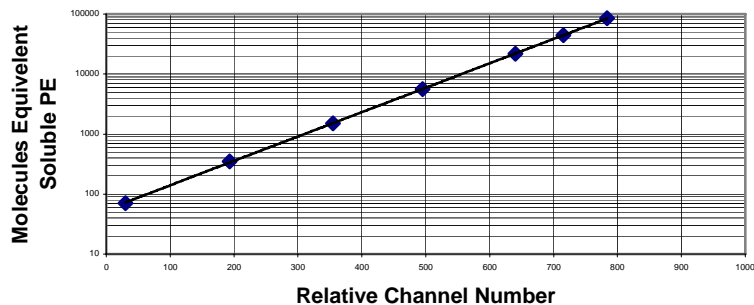
Figure 2. (Data from Coulter FC500 Flow Cytometer) This data shows typical results from a Coulter instrument using different excitation sources and filters.

Calibration of MESF (fluorescein)



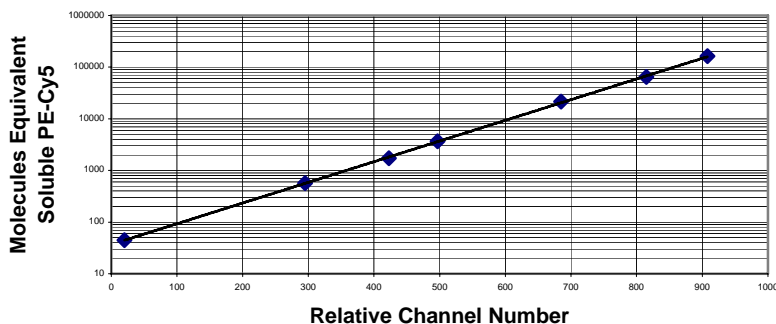
<u>Intensity</u>	<u>MESF</u>
Level 1	148
Level 2	3362
Level 3	16834
Level 4	85539
Level 5	214175
Level 6	465867
Level 7	907780

Calibration of MESF (PE)



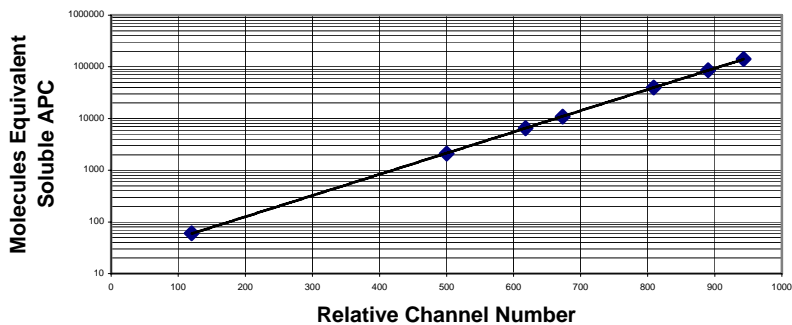
<u>Intensity</u>	<u>MESF</u>
Level 1	71
Level 2	350
Level 3	1503
Level 4	5602
Level 5	21894
Level 6	44311
Level 7	84761

Calibration of MESF (PE-Cy5)



<u>Intensity</u>	<u>MESF</u>
Level 1	45
Level 2	563
Level 3	1728
Level 4	3675
Level 5	21494
Level 6	64833
Level 7	162687

Calibration of MESF (APC)



<u>Intensity</u>	<u>MESF</u>
Level 1	60
Level 2	2112
Level 3	6480
Level 4	10925
Level 5	39765
Level 6	85842
Level 7	142025