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TECHNOTE

Assay Reproducibility

Experimental variance of a BioFlux adhesion assay

Experimental Design

The microfluidic channels of a 24-well BioFlux 200 plate (Figure 1) were coated with human fibronectin (10 µg/mL) for 1 hour. Channels were washed with RPMI + 10 mM HEPES for 10 minutes at 37°C. Cells were added to the inlet A wells, perfused for 5 minutes at 2 dyn/cm^2, and washed with PBS from inlet B wells for 10 minutes at 10 dyn/cm^2. Images were captured beginning at the outlet end of the viewing window.

Figure 1.

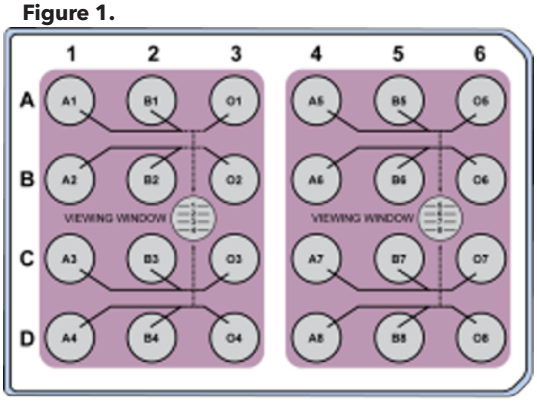

Figure 1. BioFlux 24-well plate channels. Microfluidic channels viewed from beneath a well plate. Inlet well are labeled "A" and "B" and outlet wells are labeled "O".

Figure 2.

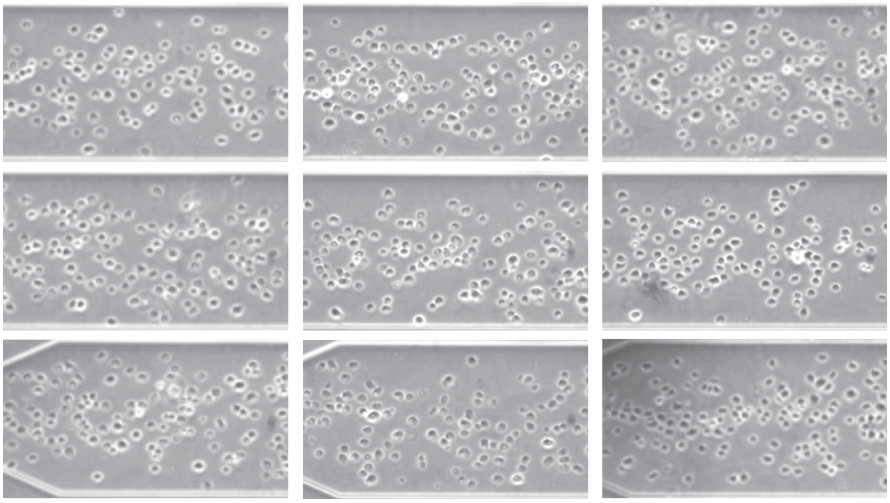

Figure 2. Experimental Images. Images from 3 experiments on the same plate were used for counting adherent cells. Images were taken at the same viewing location of each microfluidic channel.

Results

The average number of cells in all fields was 118 (STD=11). This represents a 9% variance across all populations captured and a 4% variance across the channels, which is in line with the normal variance of samples of cells in suspension.

	Channel 1	Channel 2	Channel 3
Avg. Cell Count	114	117	122
Standard deviation	10	13	12

For more information on BioFlux Technology, visit cellmicrosystems.com

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