CELL Microsystems®

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.**

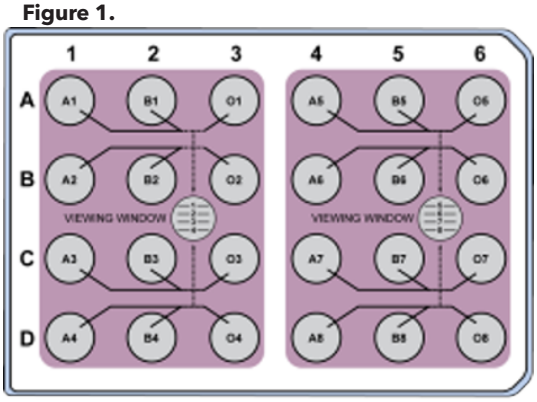


**Figure 1. BioFlux 24-well plate channels.** Microfluidic channels viewed from beneath a well plate. Inlet wells are labeled "A" and "B" and outlet wells are labeled "O".

**Figure 2.**

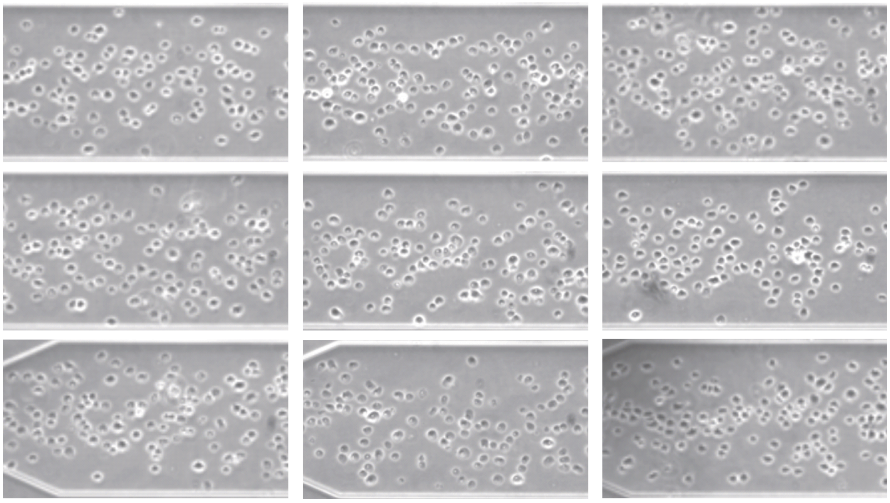

**Figure 2. Experimental Images.** Images from 3 experiments on the same plate were used for counting adherent cells. Images were taken at the same viewing location of each microfluidic channel.

### 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

CELL Microsystems®



801 Capitola Drive, Suite 10
Durham, NC 27713
info@cellmicrosystems.com