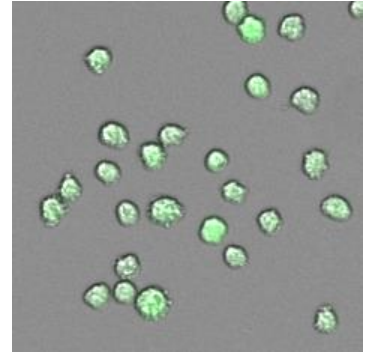


## Suspension Cell Count (1F)

### General Purpose

The Suspension Cell Count (1F) analysis algorithm operates with a brightfield and one fluorescence channel. The image analysis counts all cells in the brightfield image and searches in a second step for a fluorescence signal in the area of the detected cells. It can be used as an endpoint determination e.g. with a viable (e.g. Calcein-AM) or dead (e.g. Propidium Iodide) cell marker to check the culture condition. Furthermore determination of transfection efficiency with marker-co-transfection is another application.



Short Note  
SN-B121-XVII-04

### Result Table

• <i>TC-BF [#]</i>	<i>Total number of cells detected in the brightfield channel</i>
• <i>TC-1F [#]</i>	<i>Total number of cells in the 1st fluorescence channel</i>
• <i>Living Cells [#]</i>	<i>Quantity of living cells</i>
• <i>Viability</i>	<i>Percentage of viable cells in your sample</i>
• <i>CD-1F [#/mL]</i>	<i>Number of cells labeled with fluorescence 1 per sample volume</i>
• <i>1F/BF [%]</i>	<i>Fluorescence ratio: <math>(TC-1F/TC-BF) * 100</math></i>
• <i>CD [#/mL]</i>	<i>Cell density = Total number of cells per sample volume</i>
• <i>Sample Volume [μL]</i>	<i>'Undiluted' volume of your sample</i>
• <i>Avg Cell Size [μm<sup>2</sup>]</i>	<i>Average cell size per well</i>
• <i>Avg Fluo CH1 Intensity BC</i>	<i>Average fluorescence intensity in channel 1 over background</i>
• <i>Sum of Cell Sizes [μm<sup>2</sup>]</i>	<i>Sum of cell sizes</i>

### Example

This examples show suspension cells with a green fluorescent CD10 marker.

#### Marked green:

Detected in brightfield only

#### Marked orange:

Detected in BF AND fluorescence channel

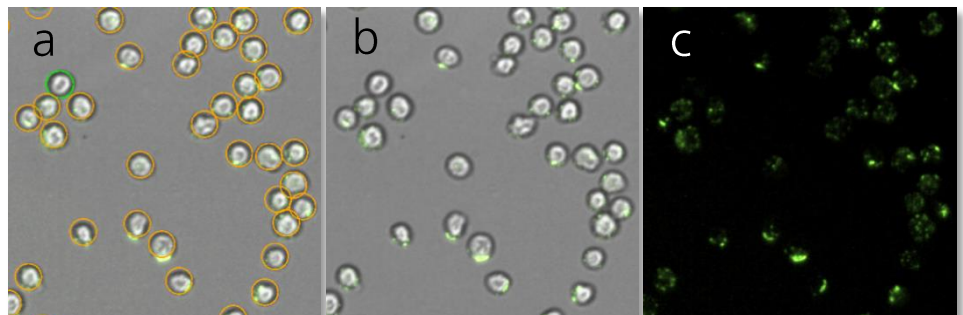


Fig. 1: a) Overlay of brightfield and fluorescence channel with image analysis. b) Brightfield image of suspension cells. c) Fluorescence channel (FITC-labeled CD10-antibody).