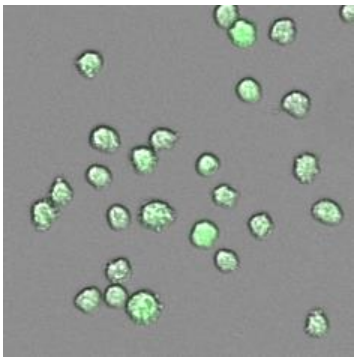
Suspension Cell Count (1F)

Short Note
SN-B121-XVII-04

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.

Result Table

TC-BF [#]	*Total number of cells detected in the brightfield channel*
TC-1F [#]	*Total number of cells in the 1st fluorescence channel*
Living Cells [#]	*Quantity of living cells*
Viability	*Percentage of viable cells in your sample*
CD-1F [#/mL]	*Number of cells labeled with fluorescence 1 per sample volume*
1F/BF [%]	*Fluorescence ratio: (TC-1F/TC-BF)* 100*
CD [#/mL]	*Cell density = Total number of cells per sample volume*
Sample Volume [µL]	*'Undiluted' volume of your sample*
Avg Cell Size [µm²]	*Average cell size per well*
Avg Fluo CH1 Intensity BC	*Average fluorescence intensity in channel 1 over background*
Sum of Cell Sizes [µm²]	*Sum of cell sizes*

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

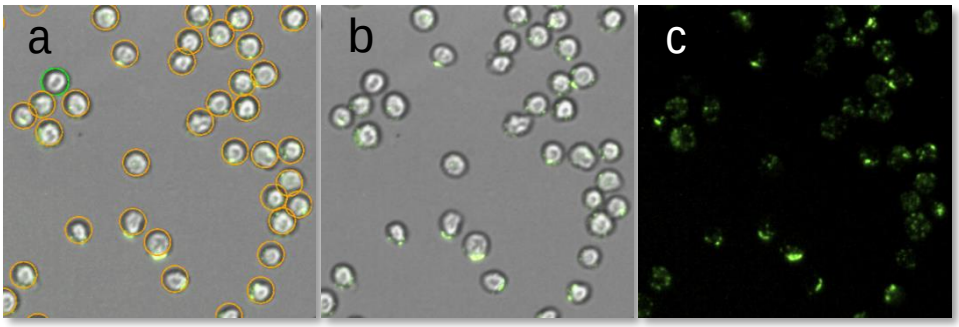


Fig. 1: a) Overlay of brightfield and fluorescence channel with image analysis. b) Brightfield image of suspension cells. c) Fluorescence channel (FITC-labeled CD10-antibody).

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