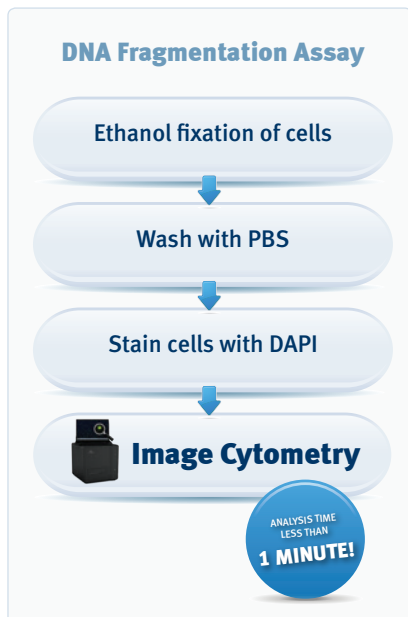


# NC-3000™ DNA Fragmentation Assay

– For easy monitoring of sub-G<sub>1</sub> cells

During apoptosis, calcium- and magnesium-dependent nucleases are activated which degrade DNA. This means that within the DNA there are nicks and double-strand breaks causing fragmentation. This late event of apoptosis is detected using DNA content analysis to measure cell having less than one DNA equivalent (so-called sub-G<sub>1</sub> cells).

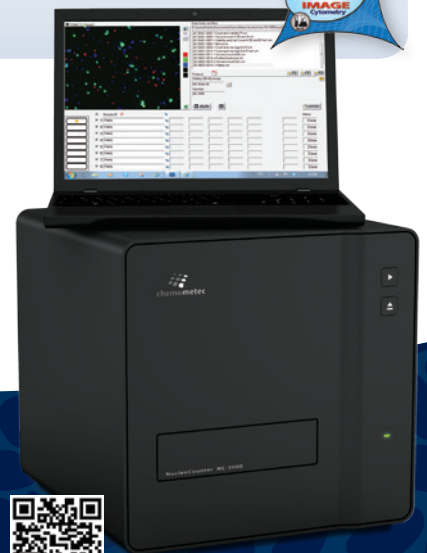











## Key Benefits

of the NC-3000™ DNA Fragmentation Assay

### Analysis time less than one minute

- ✓ Easy measurement of DNA fragmentation at the single cell level
- ✓ Acquisition and analysis in one simple step!
- ✓ User friendly protocol with predefined settings
- ✓ No RNase treatment required
- ✓ No calibration required
- ✓ PlotManager for superior data presentation
- ✓ Automated PDF reports
- ✓ Export of data in FCS/ACS formats

-  **FIXED ASSAYS**
-  **HIGH SPEED CELL COUNT**
-  **FAST ANALYSIS**
-  **VISUAL INSPECTION**
-  **NO RINSING**
-  **NO CLOGGING**
-  **NO CALIBRATION**
-  **NO MAINTENANCE**
-  **LEARN MORE**

## Principle: NC-3000™ DNA Fragmentation Assay

Using fluorescence microscopy and image analysis, the NucleoCounter® NC-3000™ system automates detection of cells with fragmented DNA (sub-G<sub>1</sub> cells).

After DAPI staining of fixed cells the sample is analyzed using the NucleoCounter® NC-3000™ system and cellular fluorescence is quantified and apoptotic cells with fragmented DNA are seen as a sub-G<sub>1</sub> peak in a DNA content histogram displayed on PC screen.

Markers in the histogram can be used to demarcate apoptotic cells.

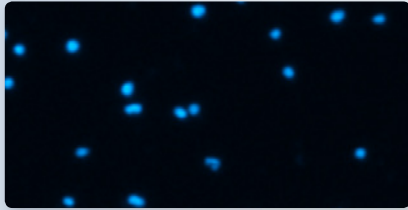
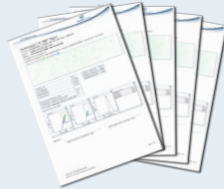


Image acquired with the NucleoCounter® NC-3000™ for the DNA Fragmentation Assay

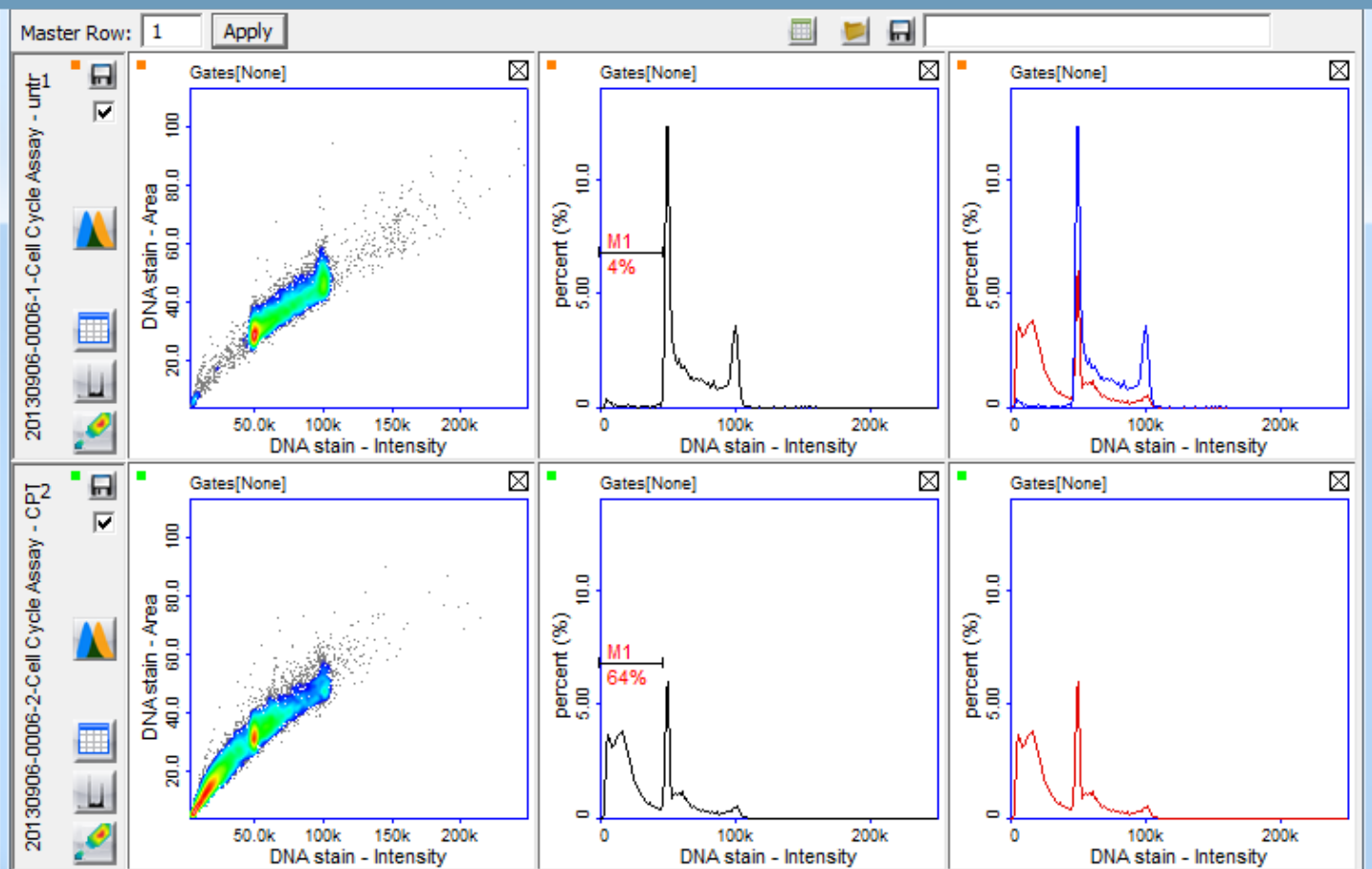


Automated PDF reports



The NucleoCounter® NC-3000™  
- Next generation cell analysis

## Results: Presented in PlotManager



Jurkat cells were grown in the absence (upper row) or in the presence (lower row) of camptothecin and cells were analysed using the DNA Fragmentation Assay and a NucleoCounter® NC-3000™. Scatter plots and histograms were obtained from the NucleoView™ NC-3000 software. Markers in the displayed histograms were used to demarcate cells with fragmented DNA (Sub-G<sub>1</sub> cells). Colored histogram is a merge between untreated (blue line) and camptothecin treated (red line) samples.



For more information, please visit [www.chemometec.com/NC-3000](http://www.chemometec.com/NC-3000)

[www.youtube.com/chemometec](http://www.youtube.com/chemometec)

ChemoMetec A/S  
Gydevang 43  
DK-3450 Allerød  
Denmark

Phone (+45) 48 13 10 20  
Fax (+45) 48 13 10 21  
Mail [contact@chemometec.com](mailto:contact@chemometec.com)  
Web [www.chemometec.com](http://www.chemometec.com)

