



## APPLICATION NOTE

AN005-01

### To study the growth performance of MCF7 breast cancer cells in the Cell IQ

#### Aim

- To analyze cell growth in vitro by generating growth curves of the cells grown for one week.
- To study the effects of estrogen on the breast cancer (MCF-7) cell line growth
- To study the effects of a cytostat (cancer drug), Docetaxel, on the growth of MCF-7 cells
- To compare the results obtained with Cell-IQ and with conventional methods

#### Cells

MCF7 cells,  $3 \times 10^4$  cells/well

Dulbecco's MEM /Nut mix F12 (HAM) (Gibco/Life #31330-038)  
5 % dextran-coated charcoal stripped fetal bovine serum (Gibco BRL),  
insulin (10 ng/ml (Gibco BRL)  
Antibiotic solution containing 100 units/ml penicillin (Gibco BRL), 100 g/ml streptomycin (Gibco BRL)

Plating: 3.000 cells/well  
48 well plate/Nunc  
Cells are incubated overnight to attach to the plate

#### Exposure time 7 days

**Endpoint measurements:** 0 day and 2 days, 4 days, 7 days

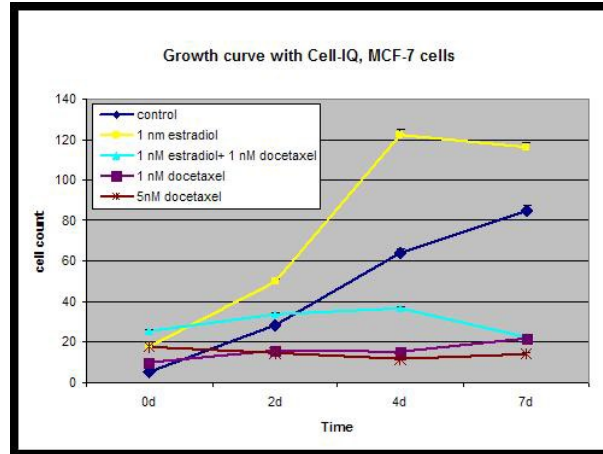
#### Exposure

no estradion and no docetaxel  
1 nM 17beta-estradiol  
1 nM Docetaxel  
5 nM Docetaxel  
1 nM 17beta-estradiol and 1 nM Docetaxel/Aim

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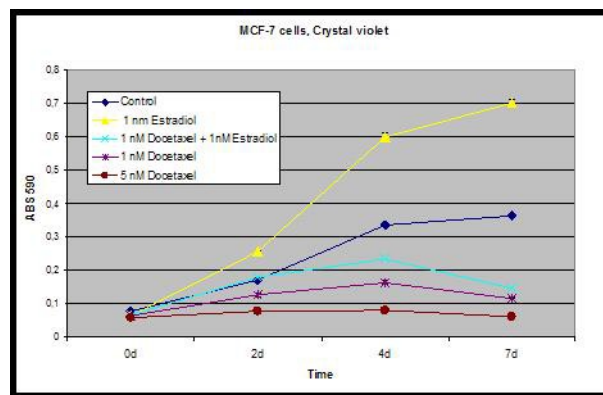
## Results

### Cell-IQ

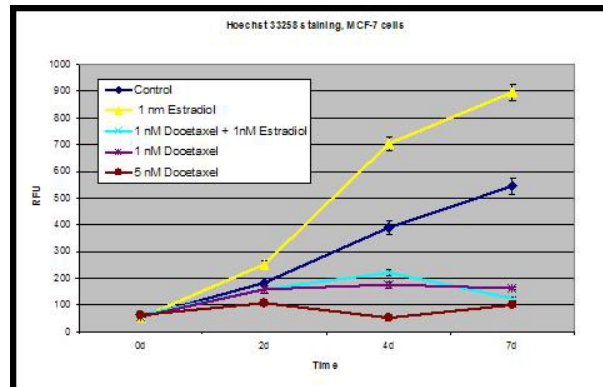


Conventional Method Data

### Crystal Violet



### Hoechst 33258



## Conclusion

Cell-IQ gives similar calculations of the total cell number as can be obtained with conventional methods: Hoechst 33258 staining and crystal violet. However, with Cell-IQ the entire incubation is recorded to allow re-examination and further analysis.