

# I-DOT Application Examples

The I-DOT is a highly flexible platform for low volume dispensing applications

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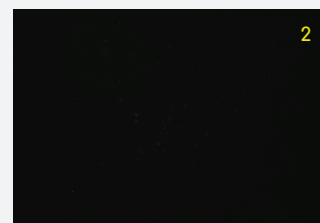
## Cell dispensing



Using the I-DOT cells can be dispensed for different applications, such as single cell genomics or cell line development. Viability after dispensing with the I-DOT is nearly 100%. Jurkat cells (100x10<sup>4</sup> cells/ml) were stained with Calcein AM (Figure 1) and Calcein PI (Figure 2) for Live / Dead staining and printed with I-DOT PURE Plate at a concentration of 100 cells per spot. Results show a nearly 100% cell viability.

Figure 1: Calcein AM, viable cells

Figure 2: Calcein PI, Dead cells



## Compound screen prep



Compound screens in the nL-range is an ideal application for the I-DOT.

A typical example is shown in Figure 3: I-DOT was used to prepare all possible compound combinations (352 x 352 compounds =

123.904 combinations). 400 nL of each compound was dispensed into each well of 384 well plates. Precision (CV) was 3,5 %.

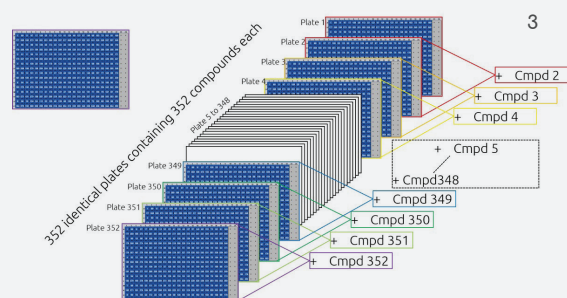


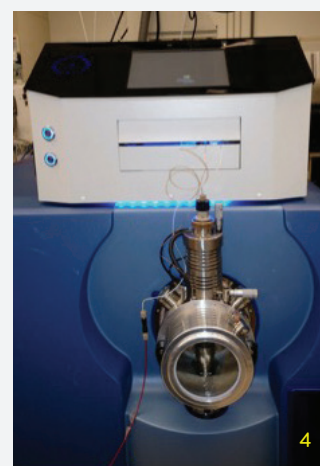
Figure 3: Set-up of a compound Screen of 352 x 352 compounds @ 400 nL

## Mass spectrometry



The I-DOT can also be used to dispense solvents, such as methanol. A recent publication demonstrates the analytical performance of coupling the I-DOT to a mass spectrometer via the recently introduced open port sampling device interface and ESI (Van Berkel. et al., Immediate drop on demand technology (I-DOT) coupled with mass spectrometry via an open port sampling interface, Bioanalysis, 10.4155/bio-2017-0104)

Figure 4: I-DOT positioned on top of Sciex 5600+ Quadrupole Time of Flight Mass Spectrometer



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