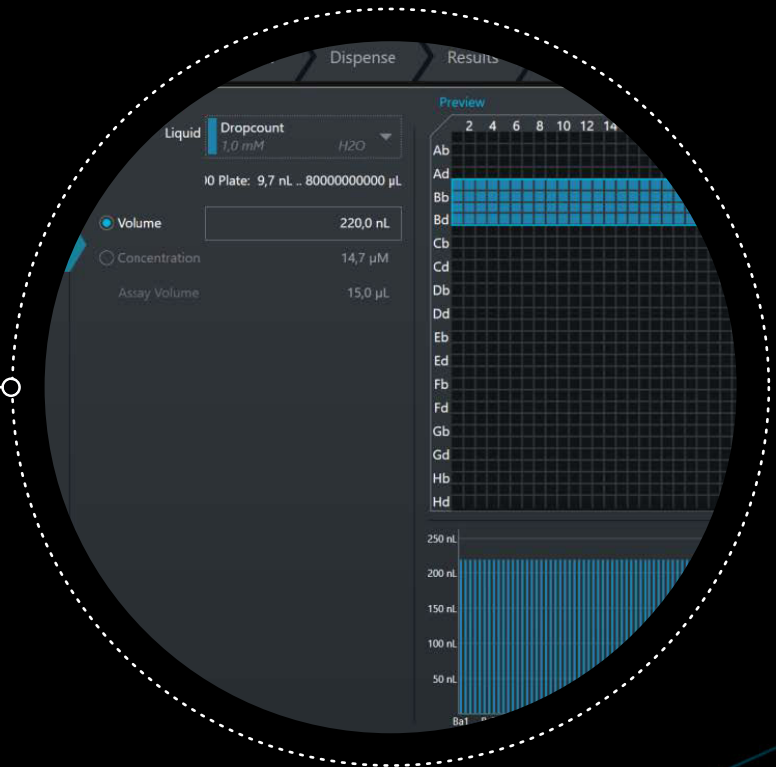DISPENDIX >>
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Behind The Scenes

## – Verification Method: Dropcount

Behind the scenes

VERIFICATION METHOD: DROPCOUNT

After creating a liquid class or after assigning a liquid class to your sample liquid, the liquid class needs to be verified. Therefore, our verification method 'the Dropcount' was developed.

The idea behind it is that you fill the well with a defined volume (here 22µl) and you are dispensing spots with one per cent of the filling level (here 220 nL). If the liquid class fits to the respective liquid, there would be exactly 100 spots dispensed – if not, the offset in percent is directly correlating to the number of missing or additional spots.
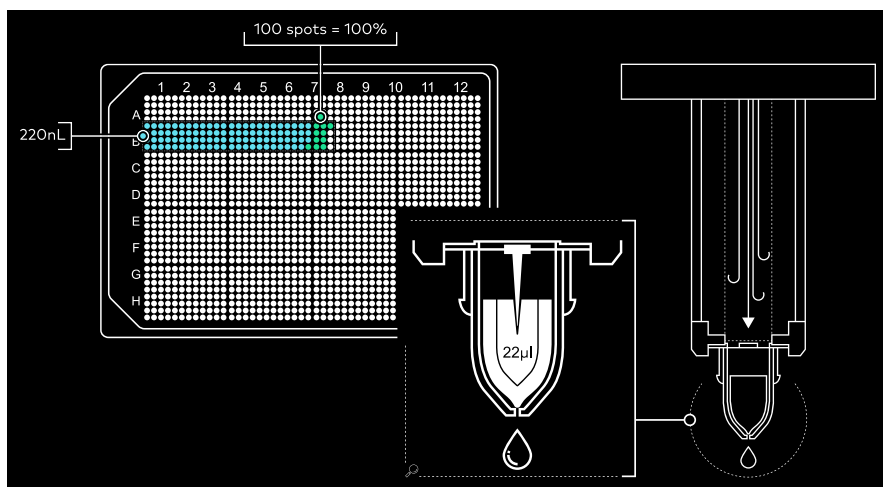
1.

**Assign the chosen liquid class to the liquid named "Dropcount"**

Open Assay Studio, navigate to the liquid library and edit the liquid named "Dropcount". Assign the chosen liquid class to this liquid.

2.

Open the Dropcount protocol

Open the Dropcount protocol which is saved on your device. The protocol shows 30 columns of 4 target spots.

The goal of the verification run is to get 25 columns (25*4 = 100) dispensed successfully. The selection of 30 columns of target spots just allows you to detect an underdispensing offset of the liquid class (more than 100 spots dispensed).
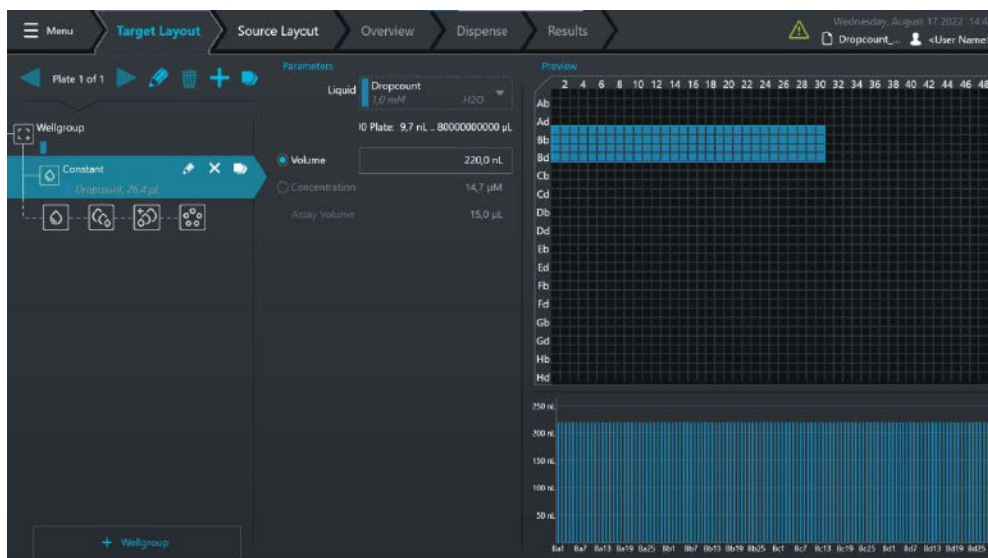
3.

Fill the source well (here with 22 µl)

Take your sample liquid and fill your source well. In this step, it is crucial that the pipette uses is calibrated and no pipetting error is introduced.
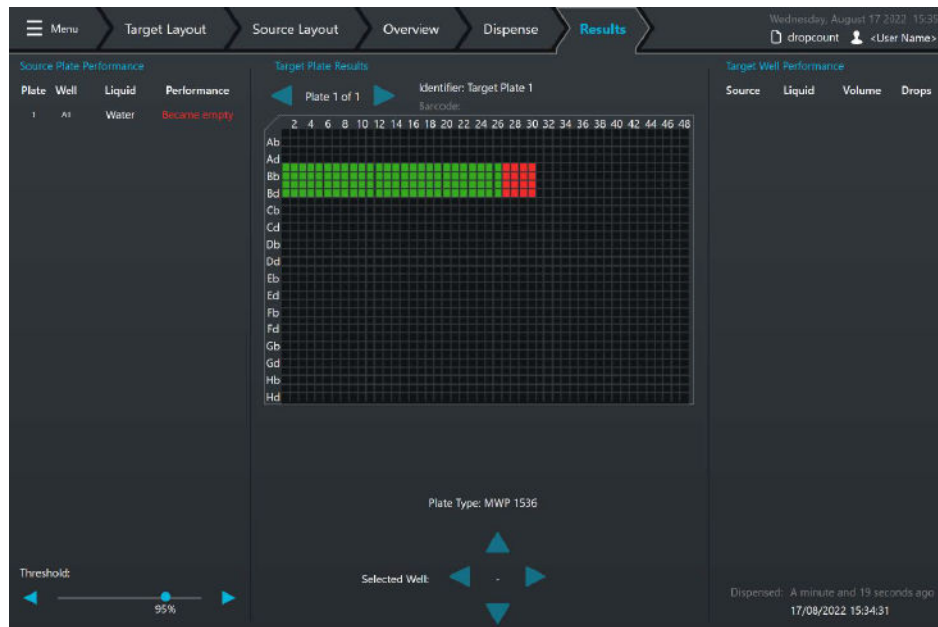
4.

Run the protocol

Click on "Dispense" and wait until the protocol is dispensed

5.

Read out the successfully dispensed spots

– compare the results in the software and on the plate.

Interpretation of the results

Too few droplets:

- One spot is containing more than 220 nL
- The droplets at the used dosing energy are bigger as deposited in the liquid class
- That's why the well is running empty too early
- The device is OVERDISPENSING

Action points:

Either:
Increase the droplet volume in the liquid class according to the offset in percent

Or:
Try the next lower viscosity liquid class

Too many droplets:

- One spot is smaller than 220 nL
- The droplets at the used dosing energy are bigger as deposited in the liquid class
- That's why the well is running empty too late
- The device is UNDERDISPENSING

Action points:

Either:
Decrease the droplet volume in the liquid class according to the offset in percent

Or:
Try the next higher viscosity liquid class

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