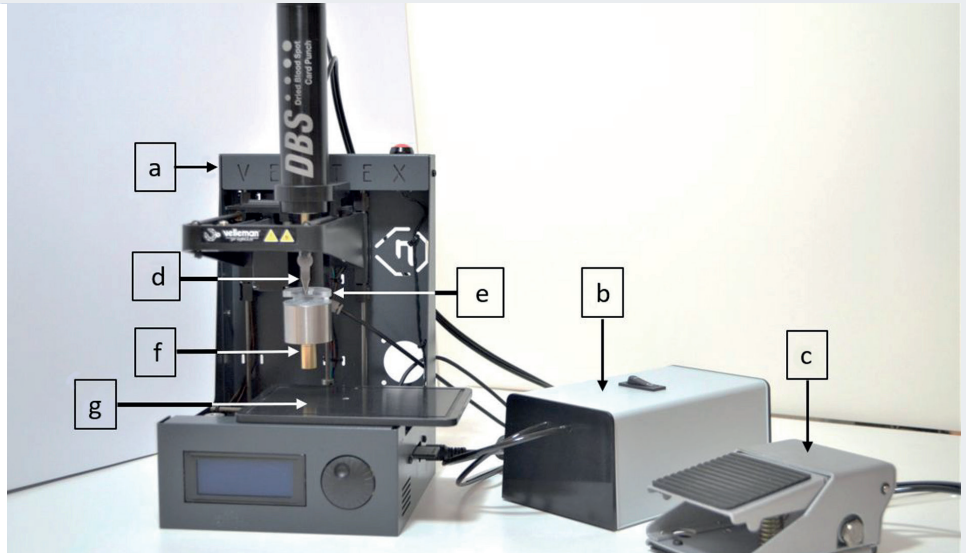


## Instruction manual Capitainer qDBS blade puncher

### Overview

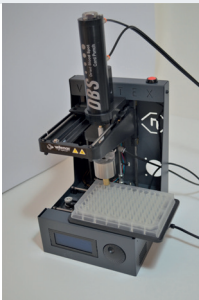
- a) Capitainer qDBS blade puncher
- b) XY-table on/off switch
- c) Foot pedal
- d) Blade
- e) Card holder
- f) Plate connecting tube
- g) XY-table



1

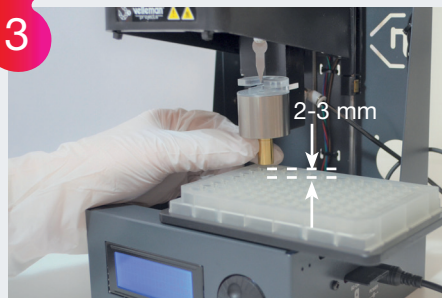
Turn on the power switches on the puncher and the XY-table. Make sure that the pedal is connected to pressurized air of 4 bar and the memory card is inserted in the port on the right side of the puncher. Do not use the jog wheel on the front of the puncher.

2



Place a 96-well microtiter plate on the XY-table.

3



Adjust the plate connecting tube by turning it until about 2-3 mm distance between the upper edge of the microtiter plate and the bottom edge of the tube.

4

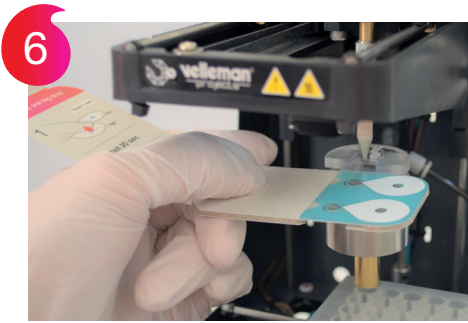
Note down the qDBS card-ID manually or use a bar code reader. Pair card-ID with the well number.

5

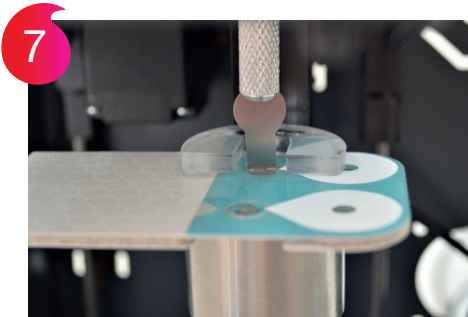
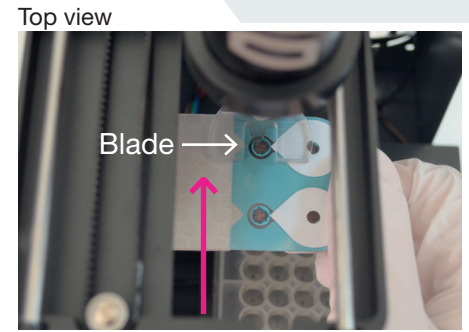
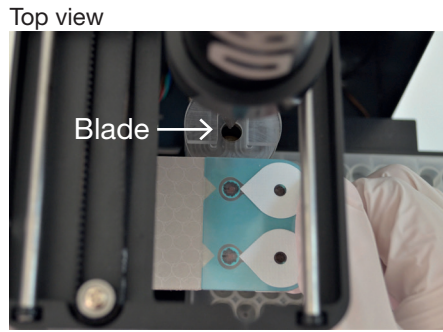


Peel off the two peel tabs on the backside of the Capitainer qDBS card.

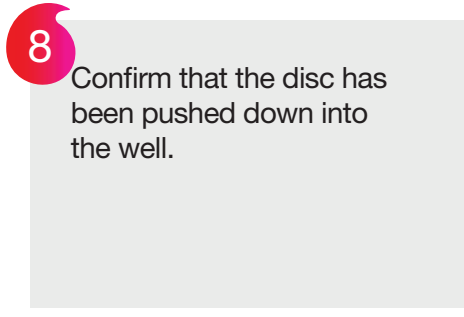




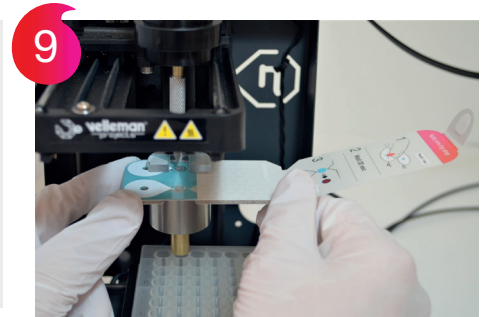
Place the card in the card holder under the blade by sliding it into the fitting and push it forward under the blade.



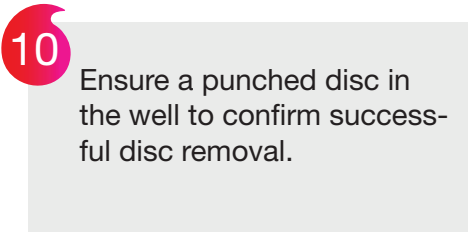
Press the pedal once to activate the lowering of the blade and press the disc down in the well plate.



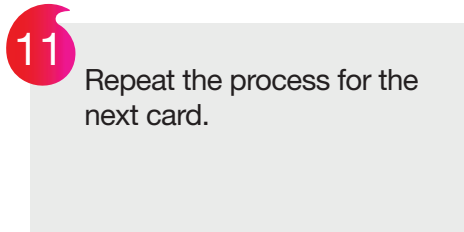
Confirm that the disc has been pushed down into the well.



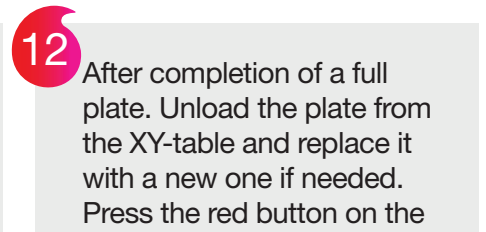
Remove the card by sliding it out of the card holder, turn it 180 degrees and slide it back under the blade to punch the second disc out.



Ensure a punched disc in the well to confirm successful disc removal.



Repeat the process for the next card.



After completion of a full plate. Unload the plate from the XY-table and replace it with a new one if needed. Press the red button on the top right corner of the blade puncher to reset the XY table for the next plate.

### Blade cleaning

Capitainer recommends one of below cleaning methods of the blade to prevent carry over. The methods have been evaluated in collaborations with research groups. Which protocol to be used is depending on the analyte, and **must** be validated for each new assay.

**a** Turn off the XY-table switch to prevent the XY-tray from moving. Punch through a clean DBS paper (Ahlstrom 222 or other). Turn the XY-table switch back on. Proceed with the next *qDBS* sample.

**b** Clean the blade after each 10<sup>th</sup> punch with EtOH first and then deionized water using a synthetic que tip. Cover the hole on the bottom of the card holder with a tissue during the cleaning to prevent liquid from the cleaning to drop down in it. Allow the blade to dry. Proceed with the next *qDBS* sample.

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