# 3D printing and assembling guidelines for the dehydration device

## ***Introduction:***

## In addition to the protocol described above, the device can be 3D-printed using the .stl files provided here (supplementary). A total of 6 pieces are necessary to assemble the final device. Since the device has to be autoclaved before use, we recommend using polypropylene for printing. Additionally, a capillary conductor (not included here) is necessary to finalize the device (c.f. technical detail above).

## ***Printing details:***

Files provided here can be open with 3D printer slicer (i.e. Cura). We recommend using at least 0.2mm layer thickness and 60% filling pattern. For small pieces (i.e. Transfer tips (5)), the thinnest layer thickness and 100% filling pattern has to be used in order to ensure integrity of the pieces.

The 6 pieces must be printed using polypropylene (PP) filament (or any other plastic that withstand the autoclave). Printing temperature (please refer to the purchaser guidelines): 220°C-240°C. Bed temperature: 0-50°C. To facilitate the adherence of the first layer, the bed was cover with PP adhesive tape before printing and higher printing temperature (240°C) was used to print the first layer.

## Assembling details

### A picture containing text, electronics Description automatically generatedDehydration box

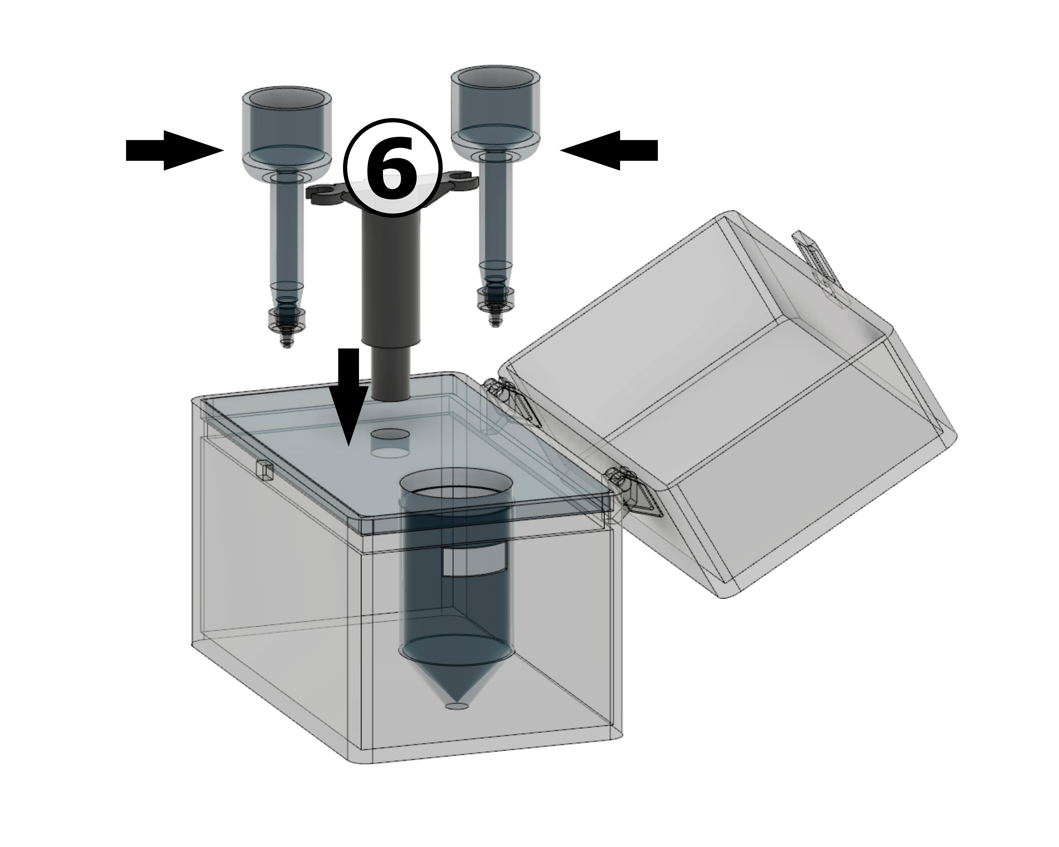
The dehydration box is composed of a body (1), a lid (2) and a plate (3). As shown in the figure above, the lid and the body can be assembled thanks to the dedicated joints (small dark arrow). The plate (3) can then be inserted in the body (1).

NB: If necessary, the edge and the corners can be filed or polished in order to ease the assembling between 1 and 3.

### Dehydration column

The dehydration column is composed of a loading column (4) and a transfer tips (5). The tip of the loading column (4) should fit directly in the wider part of the transfer tip. The narrowest part of the transfer tips (5) will be plugged into the syringe after complete dehydration (not shown here).

### Holder and column on the drying device



Lastly, the column holder (6) has to be inserted into the dedicated hole of the plate (3). A maximum of 2 dehydration columns could be inserted at a time. The device is then ready to use (cf protocol main text).