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Supporting information for article:

Towards a compact and precise sample holder for macromolecular crystallography

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SPINEplus pins, 15 pins puck prototype and tools

Figure S 1: SPINEplus sample holder, puck 15 slots and manual handling tools (picture)



SPINEplus puck Beta1

Figure S 2: SPINEplus puck 16 slots (3D view)



Figure S 3: miniSPINE sample holders, puck and manual handling tools (picture)

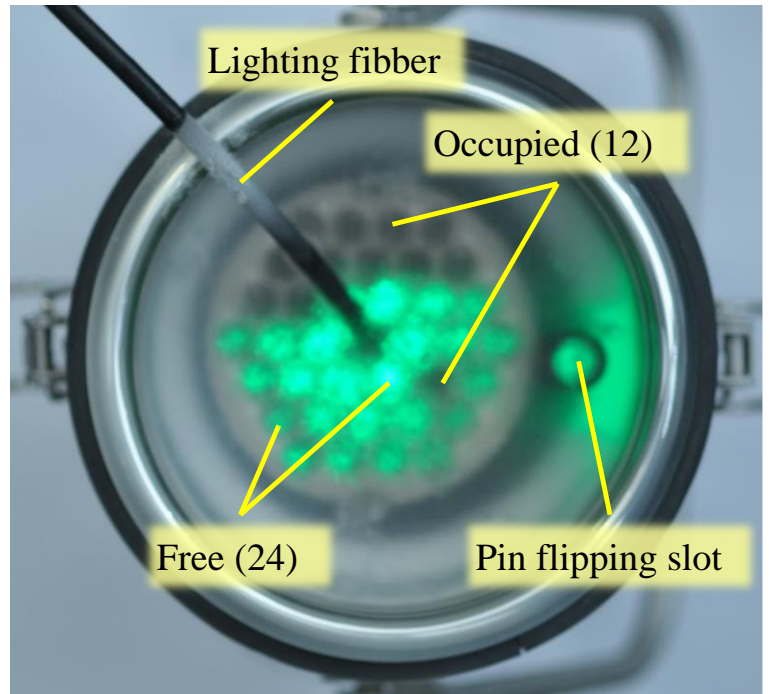


Figure S 4: miniSPINE puck filling assistant (picture)

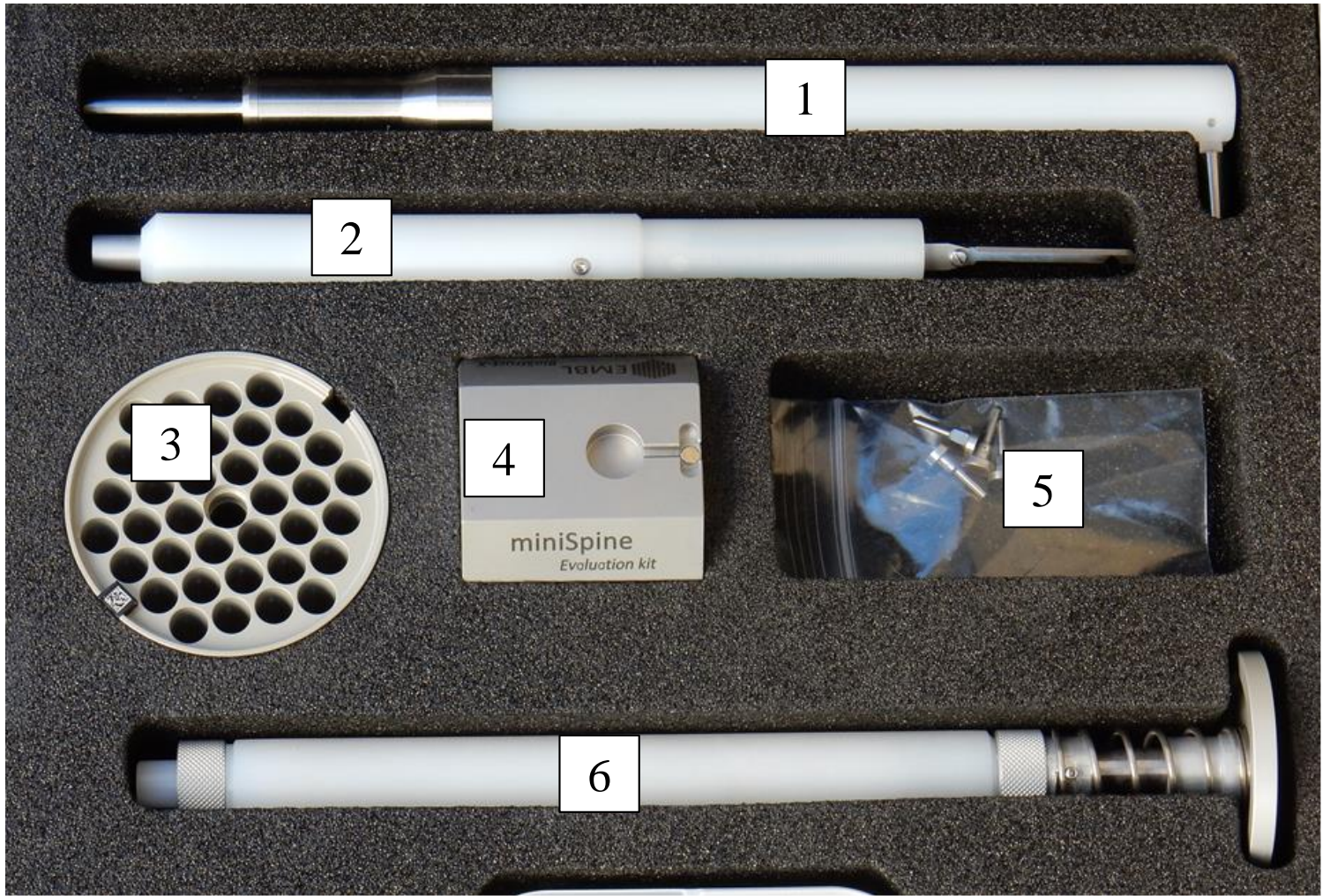
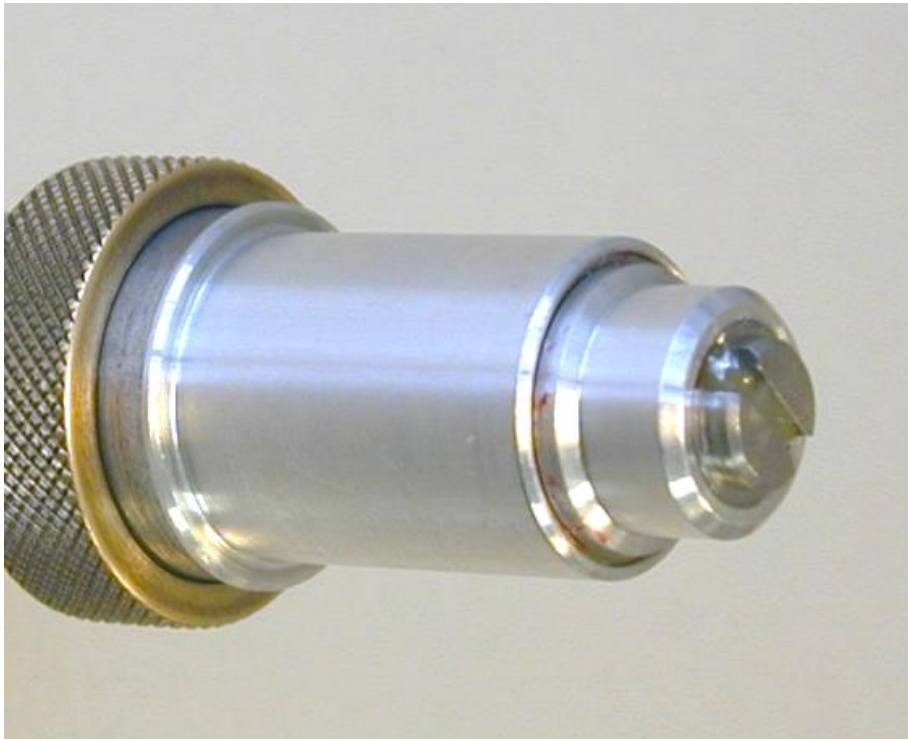
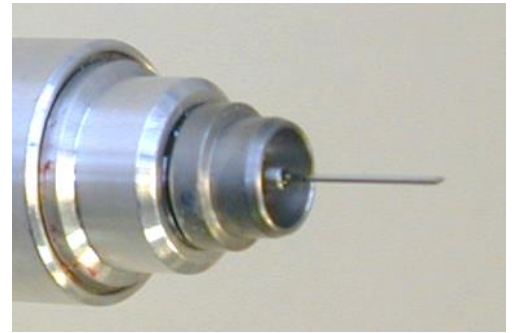


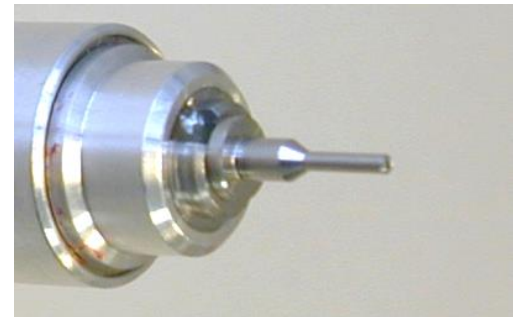
Figure S 5: miniSPINE manual handling evaluation kit (picture): Pin extraction tool (1), manual harvesting tool (2), puck (3), harvesting assistant (4), sample holders (5) and puck handling tool (6)



SPINE & miniSPINE SmartMagnet head



SPINE pin



miniSPINE pin

Figure S 6: miniSPINE/SPINE SmartMagnetP (picture)



Figure S 7: NewPin sample holder, puck and manual handling tools (picture)

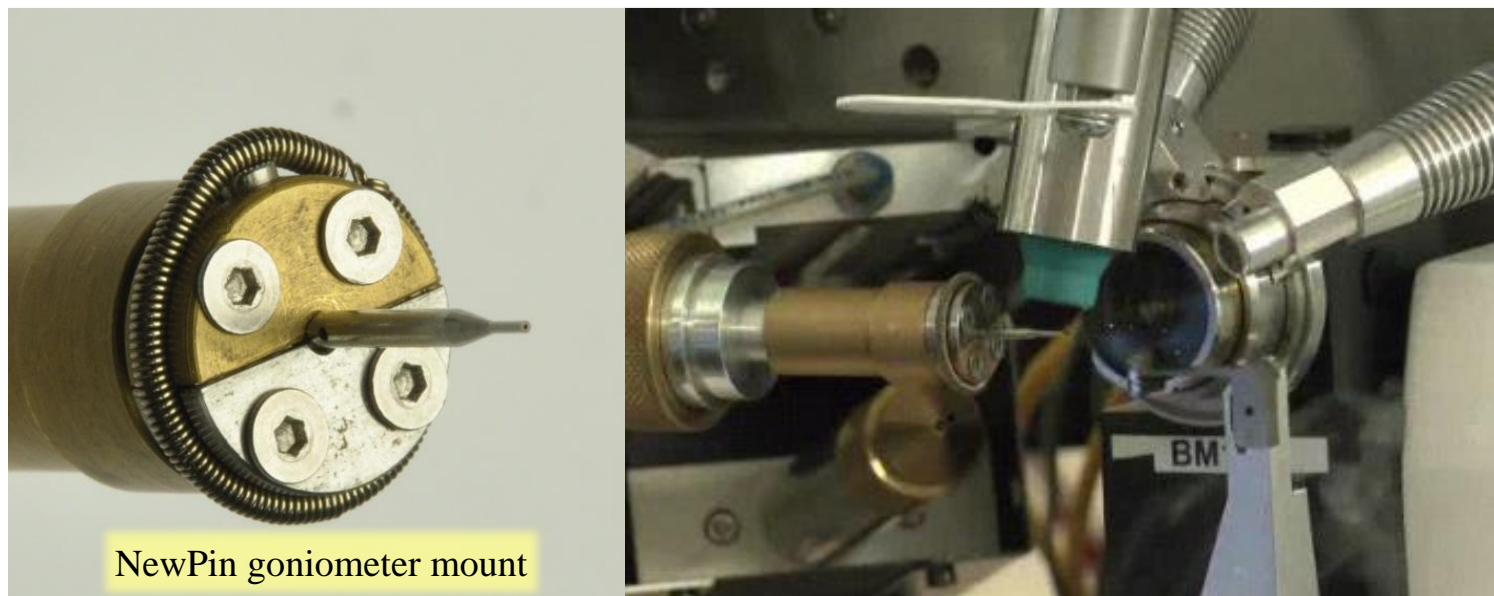
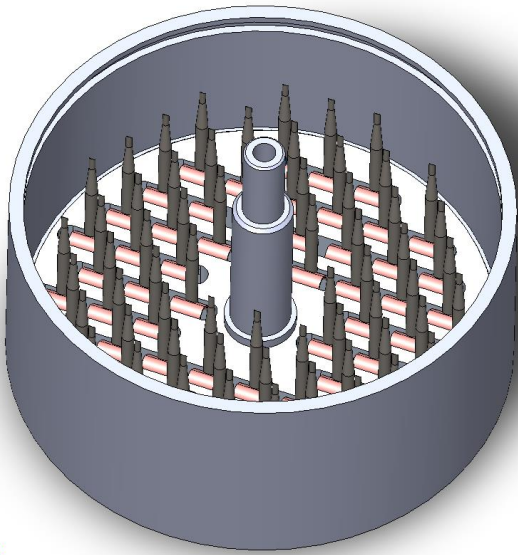
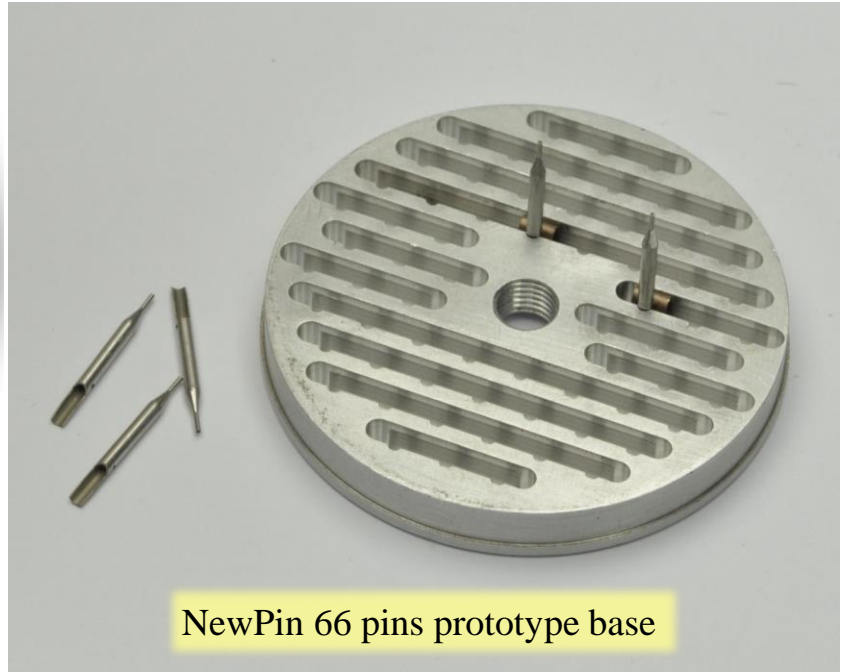


Figure S 8: NewPin goniometer mount (picture)



NewPin 66 pins prototype



NewPin 66 pins prototype base

Figure S 9: NewPin puck 66 pins prototype (picture)

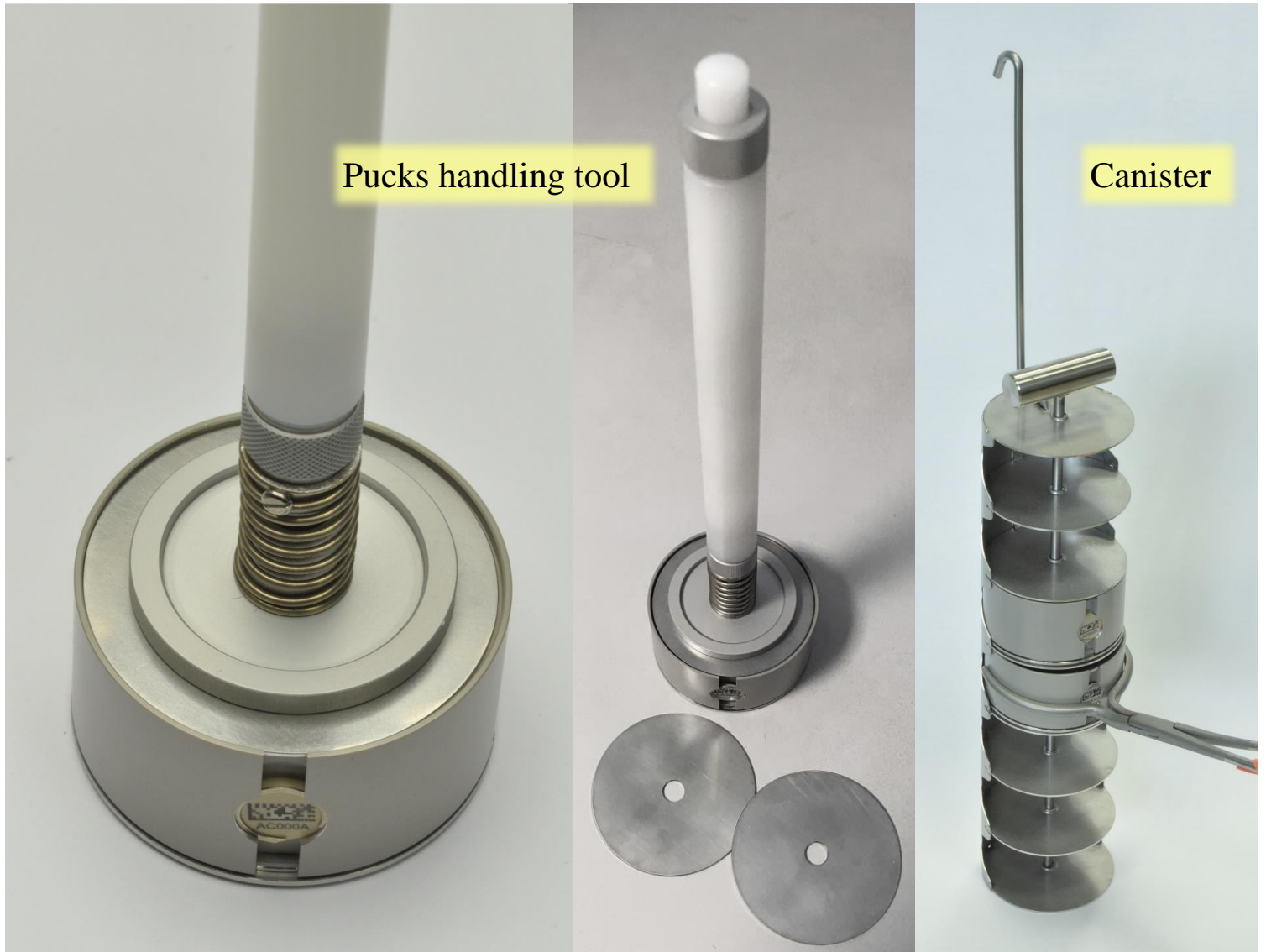
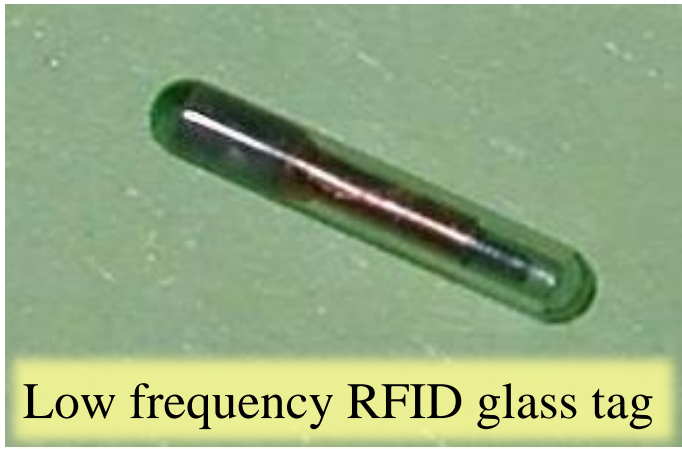
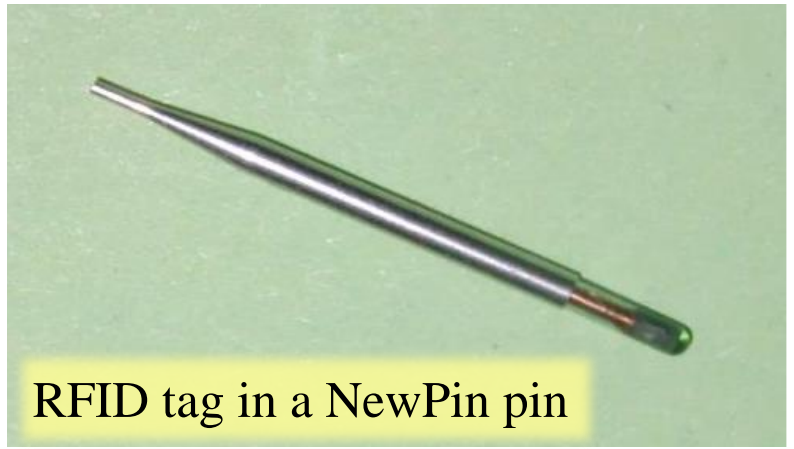


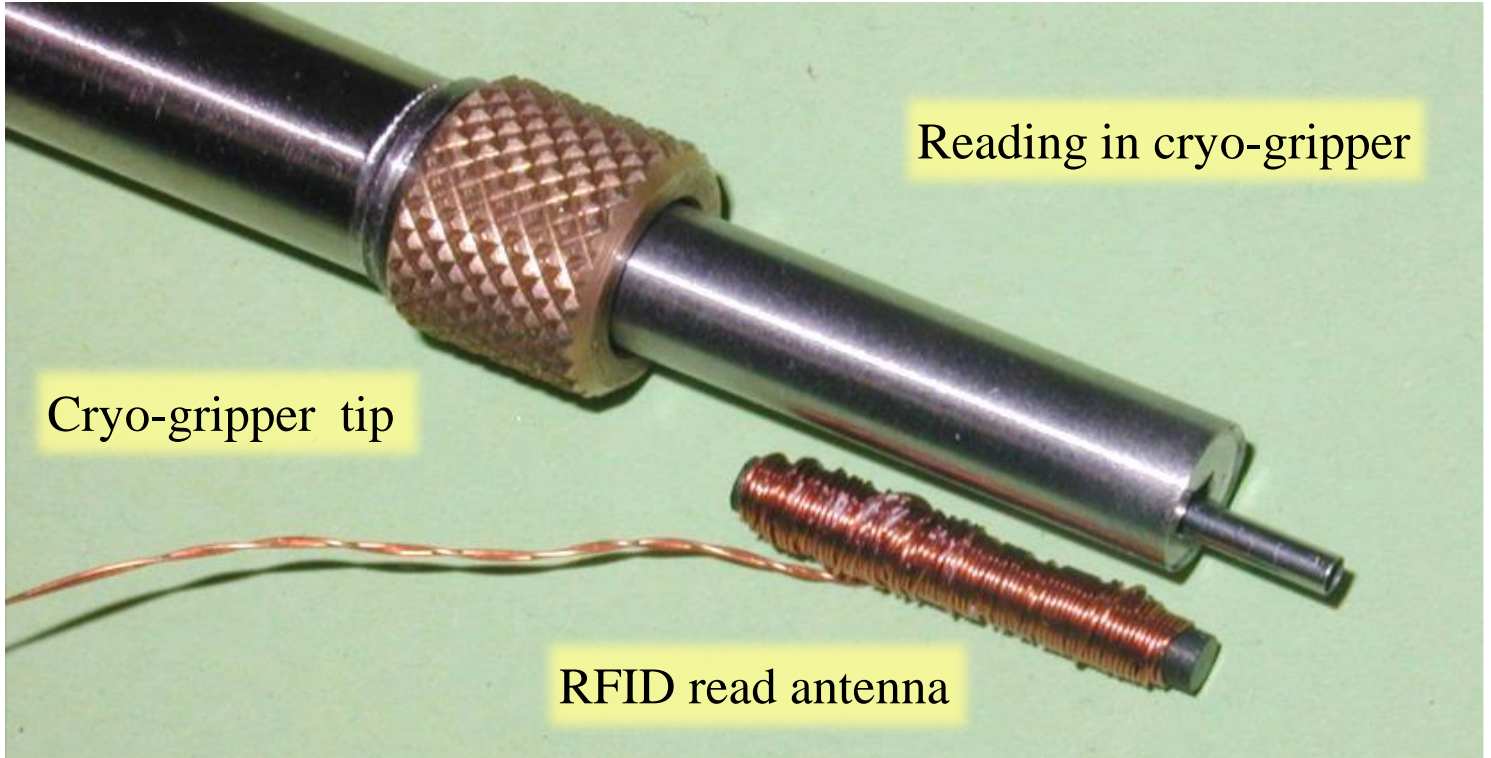
Figure S 10: Pucks handling tool and 7 puck shelved canister (picture)



Low frequency RFID glass tag



RFID tag in a NewPin pin



Reading in cryo-gripper

Cryo-gripper tip

RFID read antenna

Figure S 11: miniSPINE MSrf and NewPin RFID identification: RFID glass tag , NewPin prototype with RFID glass tag inside , NewPin/miniSpine robot gripper prototype with tagged NewPin Pin inside and RFID reader antenna

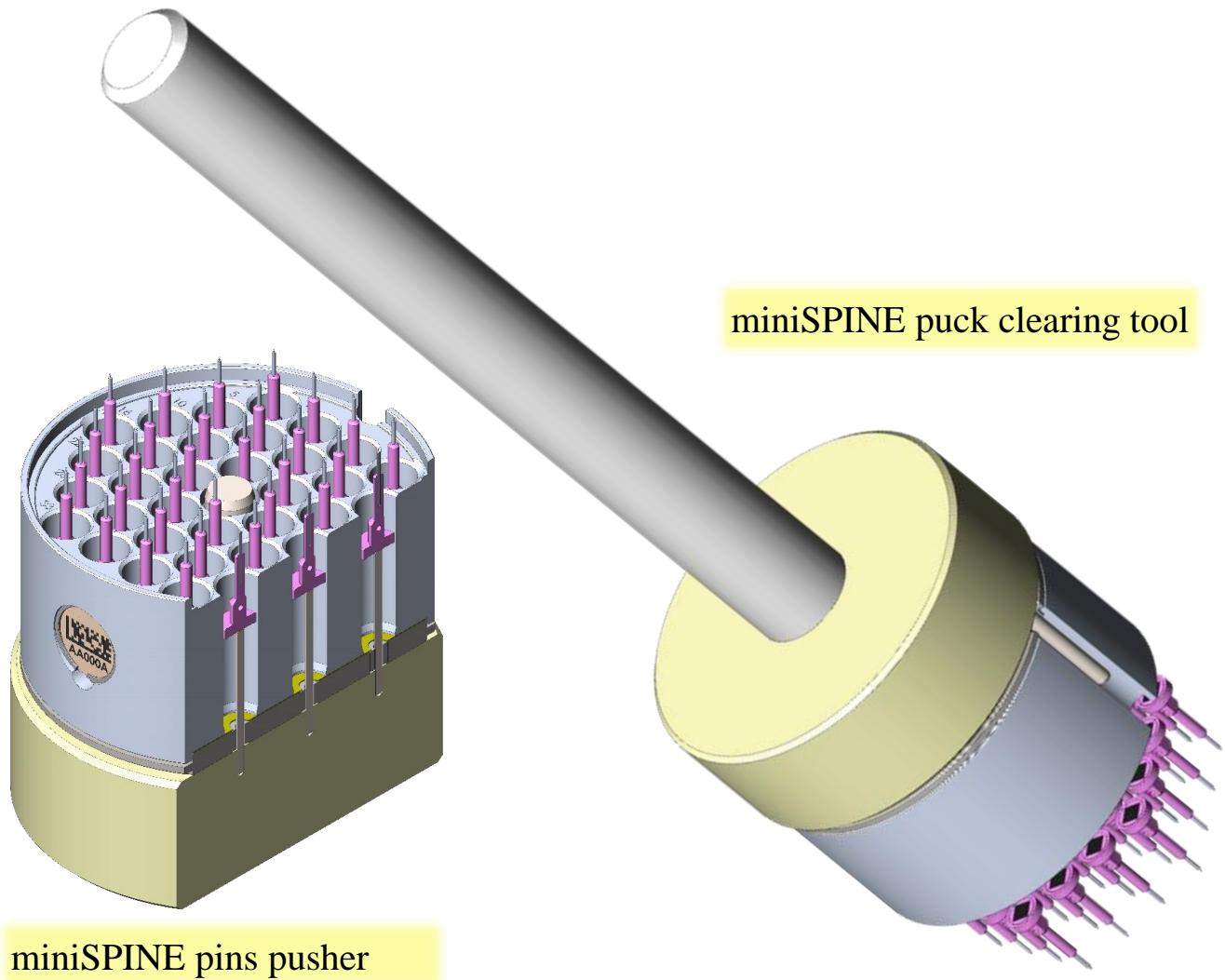
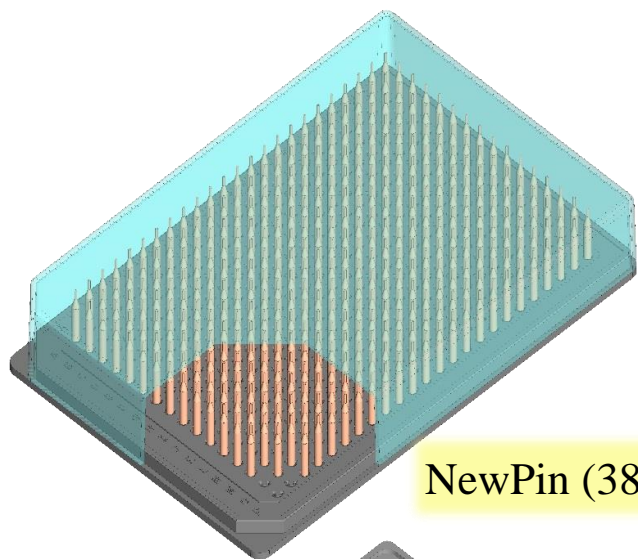
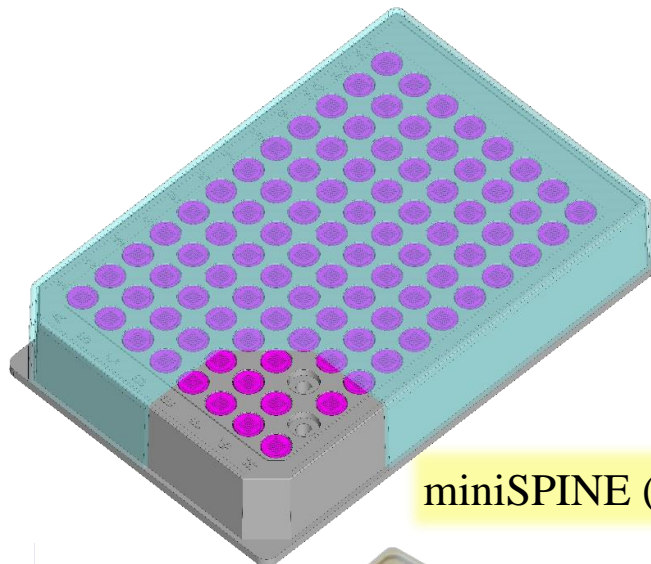


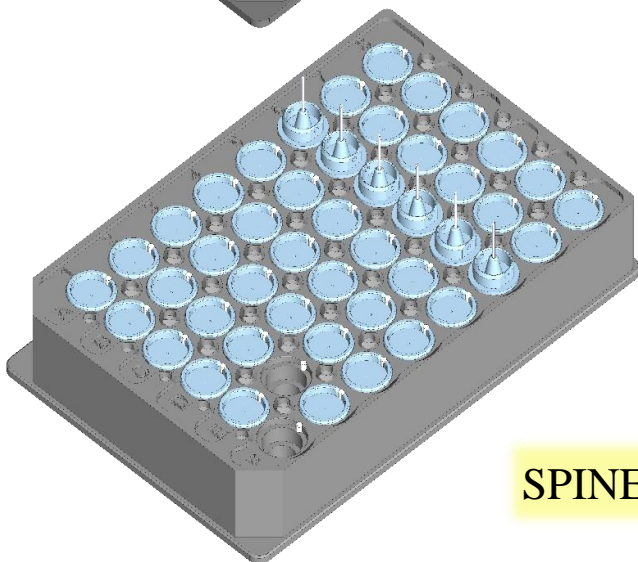
Figure S 12: miniSPINE pins pusher and puck clearing tool



NewPin (384)



miniSPINE (96)



SPINEplus (48)



Sample holders storage/supply racks (SBS Microplates footprint)

Figure S 13: Examples of storage racks with pin orientation for NewPin, miniSPINE and SPINEplus sample holders