

## **SUPPORTING INFORMATION**

### **IMPROVING TISSUE PREPARATION FOR MALDI-MSI.**

#### **PART 1: USING MICROSPOTTING**

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**Figure S-1:** Schematic workflow of MALDI MSI using the CHIP-1000. **(a)** Tissue section is transferred onto conductive slide followed by a washing step. **(b)** Matrix deposition for direct analysis of peptides, proteins or lipids. **(c)** in situ enzymatic digestion followed by matrix deposition for protein identification

**Figure S-2:** Pictures of the piezo head after **(a)** HCCA (10mg/mL) deposition during 30 minutes and **(b)** HCCA/ANI (10mg/mL) deposition after 30 minutes printing

**Figure S-3:** Target geometry optimization to improve reproducibility of reagents deposition. Picture of a standard target from Bruker **(a)** and the optimized target **(b)**

**Figure S-4:** Time deposition improvement. **(a)** Region of interest divided in smaller area allowing non-tissue areas not to be printed. **(b)** Reconstructed molecular images for m/z 6732 and m/z 14179 after deposition of SA/ANI

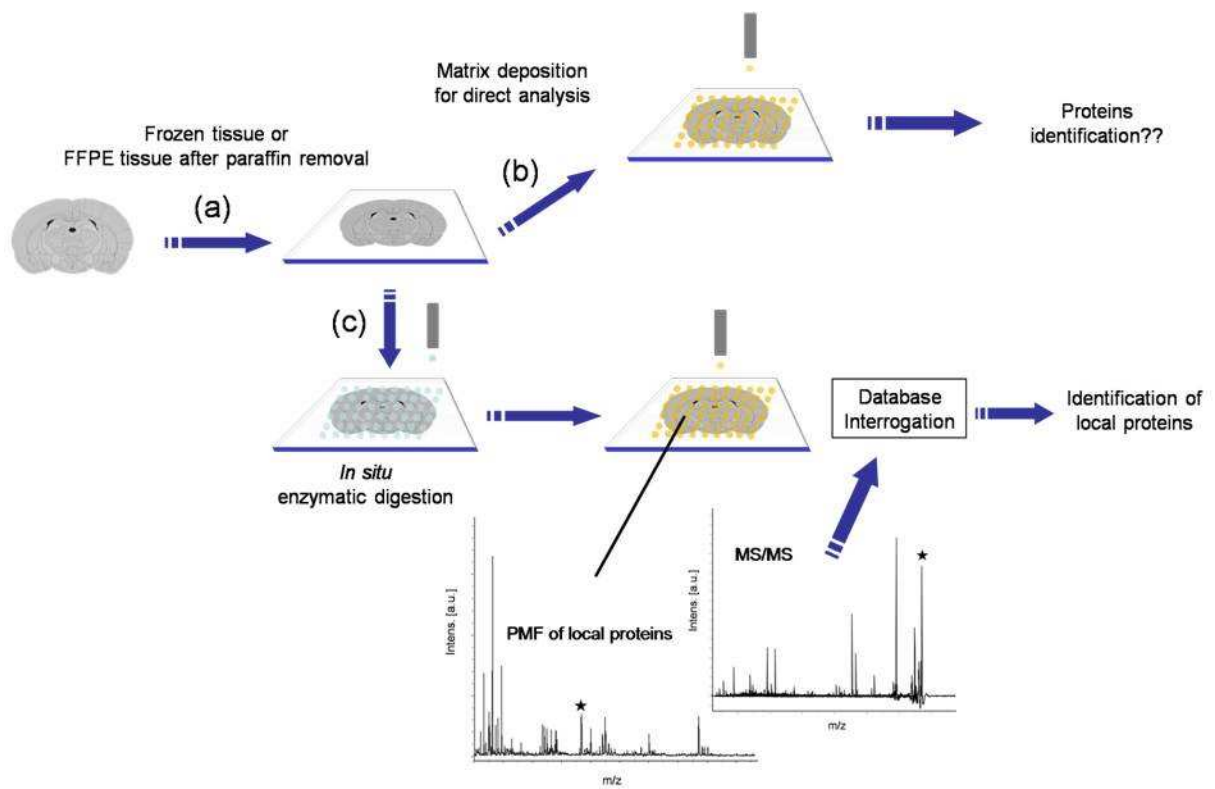


Figure S-1

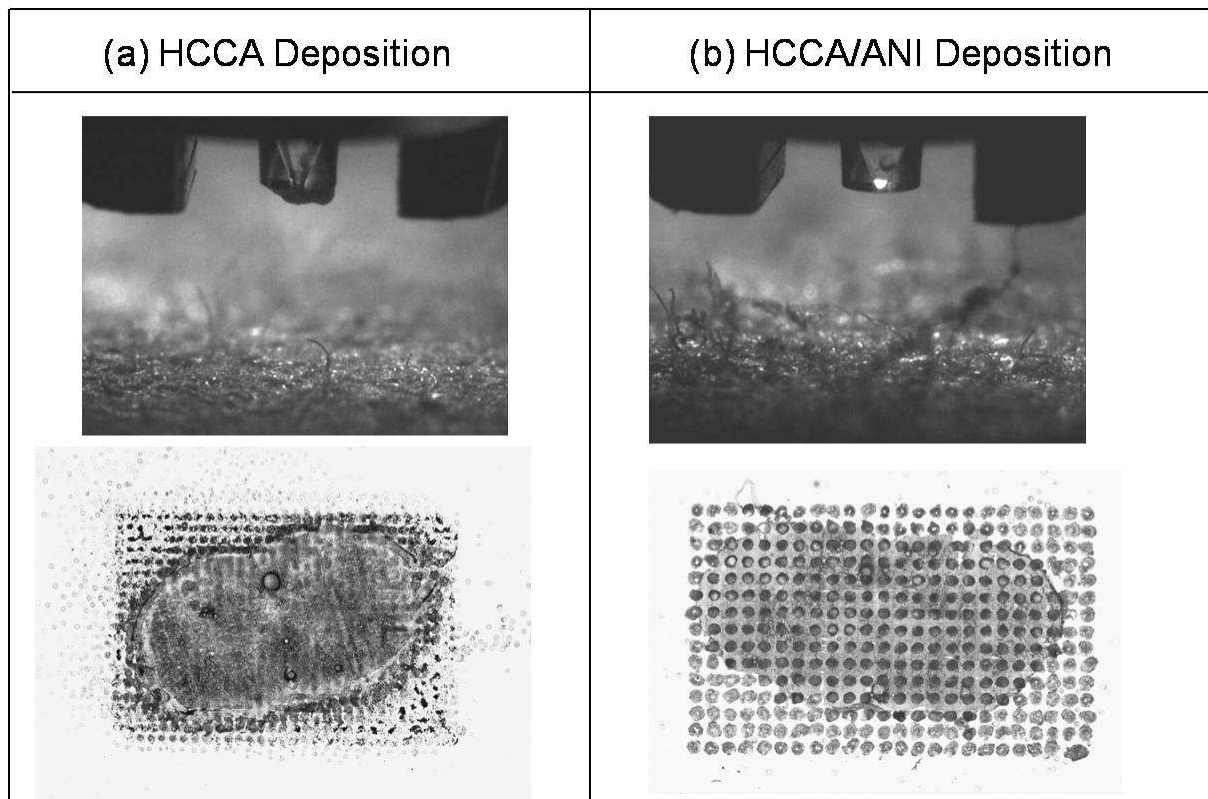


Figure S-2

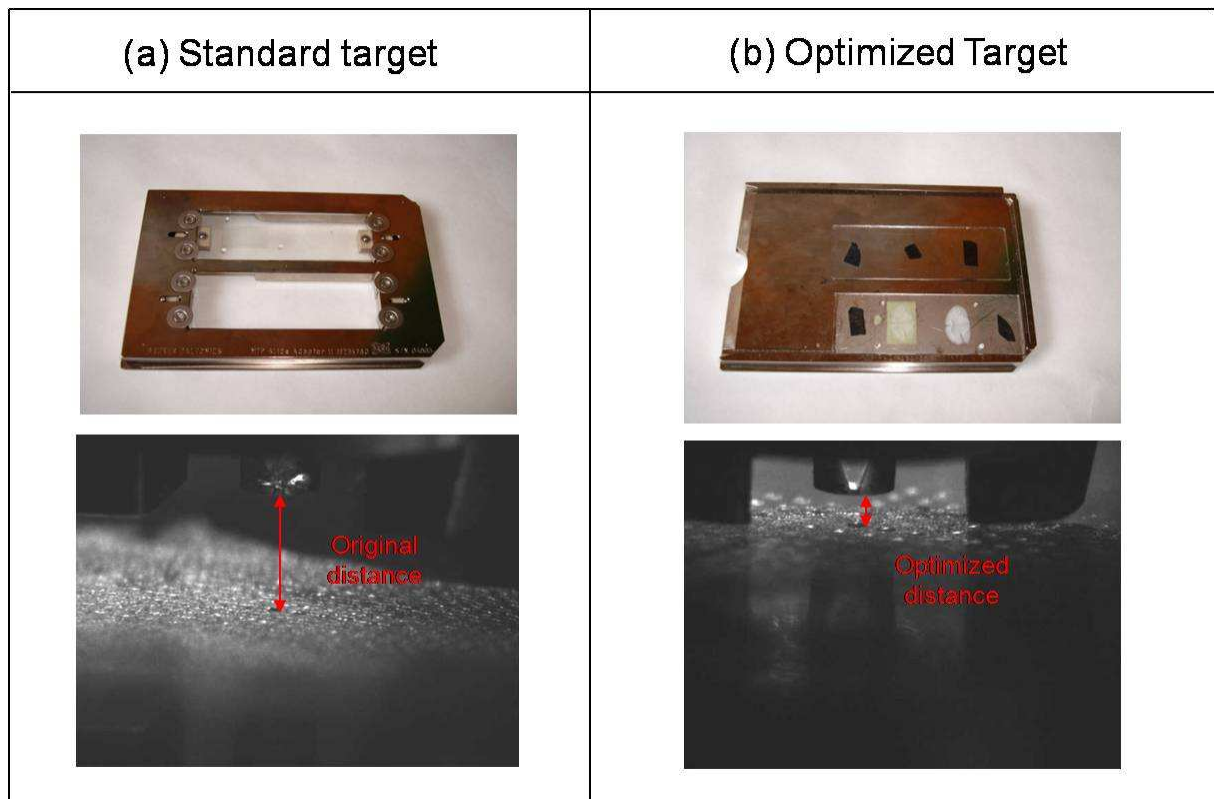


Figure S-3

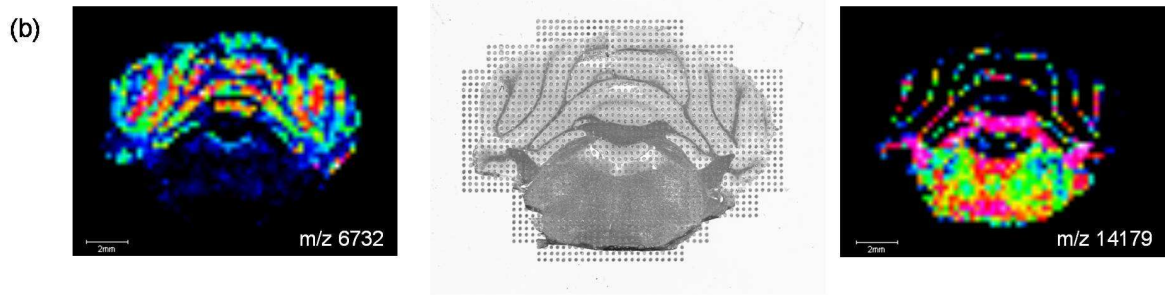
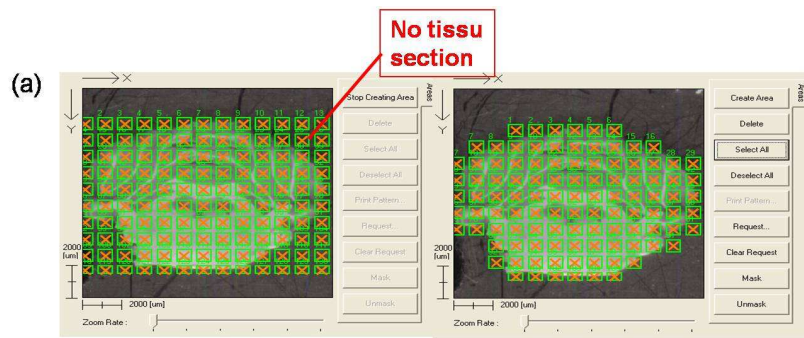


Figure S-4