

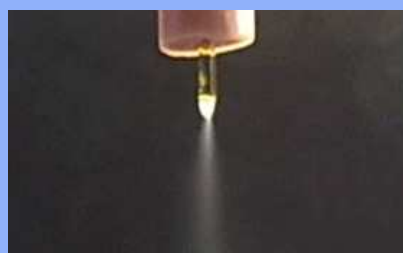
SunCollect

Multipurpose Sample Preparation Instrument for MALDI-MS

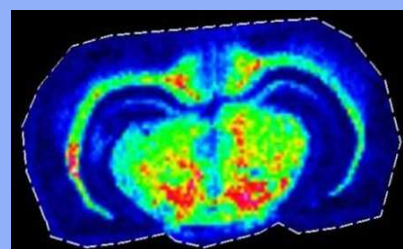
MALDI Spotting



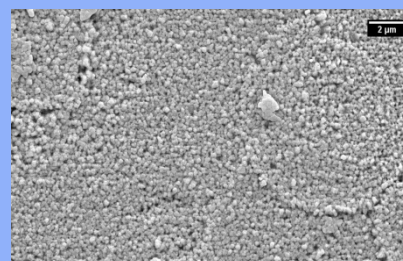
Optimised Spray nozzle



Tissue Distribution of Peptides



Deposition of Matrix + Enzyme



Producing by far the finest matrix crystals worldwide: 100-200 nm

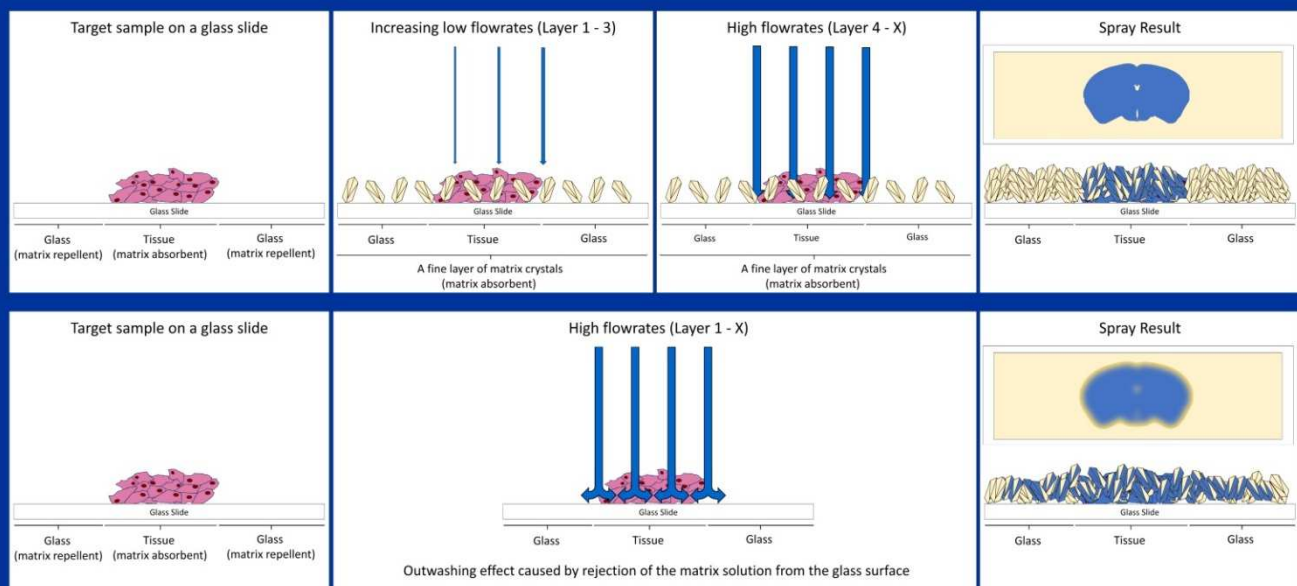
SunCollect can be utilised for

- MALDI-Spotting
- Micro and nano fraction collection
- Continuous eluate and matrix deposition
- Spraying of matrix and enzyme solutions

Outstanding features of the SunCollect

- **Unique multipurpose sample preparation device**
- **MALDI-spotting, fraction collection, continuous fractionation and tissue spray-coating in one single instrument**
- **Completely biocompatible**
- **Maximum precision and minimum sample preparation time:**
≤ 1 sec. for spot switch – spotting ≥ 1 nL possible
≤ 1 min. / layer of matrix deposition on a standard glass slide
- **Highly homogeneous**
- **Smallest crystal size worldwide: 100-200 nm for CHCA !**
- **User optimised:** Fully automated and software controlled system
- **Low maintenance**

SunChrom's patented spray procedure



Other spray procedures

SunDigest

Enzymatic On-Tissue Digestion for MALDI-MS

Full Digestion
Process Control

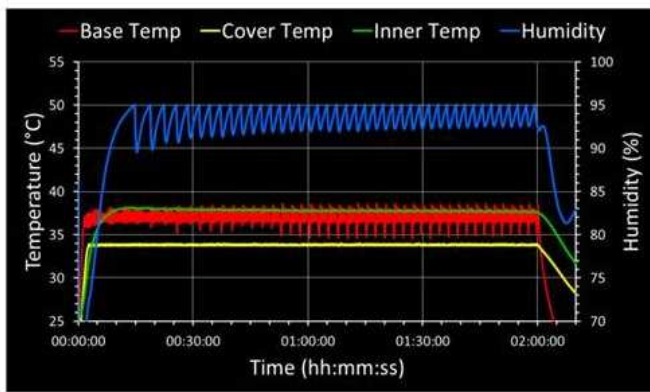
Standardised
Conditions

Reproducible
Results



Temperature	Humidity	Incubation Time
37 °C	95 %	4-16 h
50 °C	95 %	2-5 h

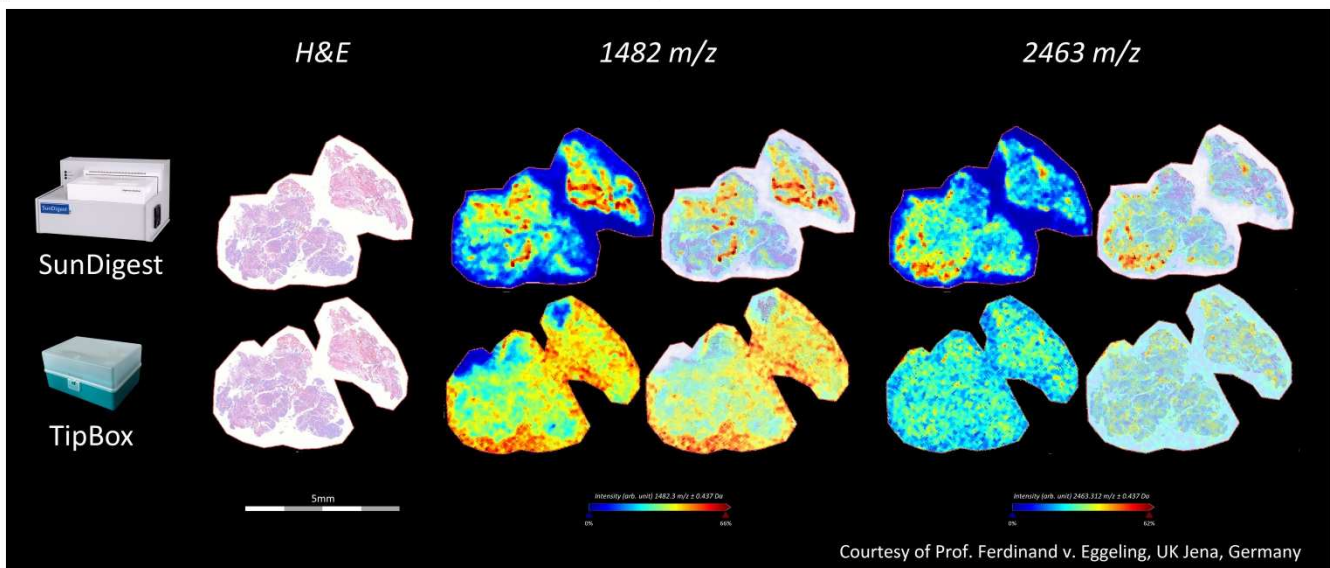
Recommended parameters
for tryptic on-tissue
digestion of proteins



Controlled Digestion Process

The SunDigest incubator actively controls, regulates and records three different temperatures:

- Base temperature
- Inner temperature (on-tissue)
- Cover temperature

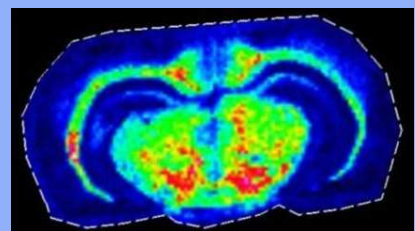


Courtesy of Prof. Ferdinand v. Eggeling, UK Jena, Germany

"MALDI Imaging of peptides after two hours of protein digestion on tissue sections of a human oral squamous cell carcinoma. The samples were incubated using the SunDigest incubation chamber (upper row) and a simple homemade tipbox incubator filled with water (lower row)."

Outstanding features of the SunDigest

- **Temperatures precisely adjustable:**
between 4 °C and 50 °C
- **Humidity adjustable:**
60-100 % rel. humidity
- **Preservation of spatial resolution**
- **Full digestion process control**
- **Essential for reproducible results**
- **Extremely time saving:**
High performance digestion at 50 °C within 2-5 hours



Distribution of a peptide in a mouse brain sample by tryptic digestion using the SunDigest.

Courtesy of ABIMAS, Mannheim University

www.sunchrom.de

SunChrom GmbH • Industriestr. 27 • 61381 Friedrichsdorf • Germany

+49 6172 / 953350 +49 6172 / 953399 sales@sunchrom.de