

# SunCollect

A most versatile MALDI spotter  
and tissue preparation device.



# What can it do?

## ➤ LC-MALDI

- Spots HPLC eluent onto MALDI target plates
- Most plates fit into the plate holders
- Can split eluent between MALDI target and microtitre plates

## ➤ Imaging MALDI preparation

- Automatically spray tissue sections with matrix or digest
- Spot tissue with matrix or digest, Fresh Frozen even FFPE tissues

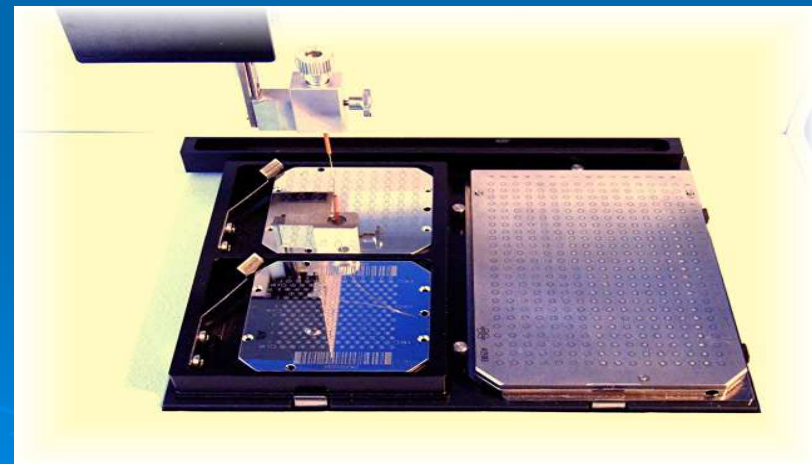
## ➤ Fraction collection

- Collects HPLC eluent into multi-well plates

All these functions on the same device!

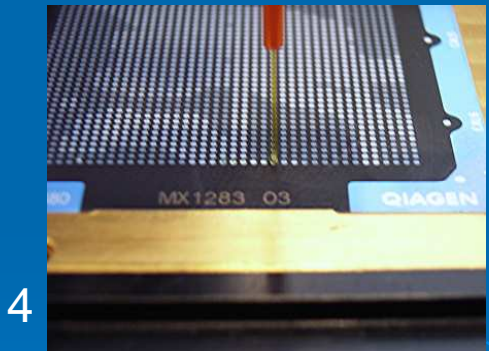
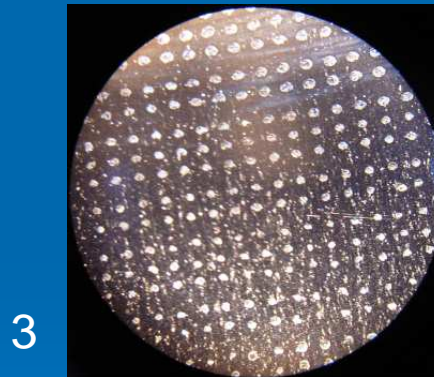
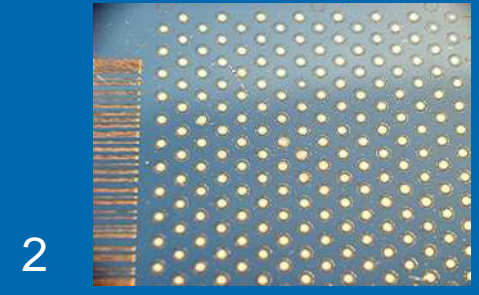
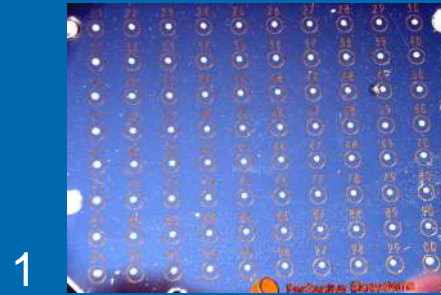
# The SunCollect

- Smallest footprint of spotter & sprayer on the market – just 36cm x 30cm x 26cm ( w,d,h)
- Very rapid, moves from one spot to the next in < 1second
- Multiple format plates can be loaded simultaneously



# Spotting

- Very precise spotting
- Spots as small as 10nl
- Fig 1 = 100 spots, Fig 2 = 192 spots, Fig 3 = 5625 spots on 5cm x 5cm target all with a fraction time of 1 second
- Fig 4 shows Qiagen target and needle precision

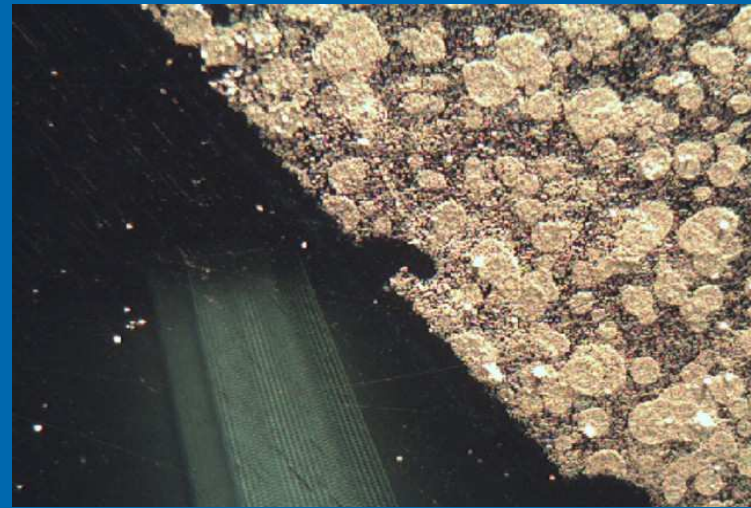


# Tissue Preparation

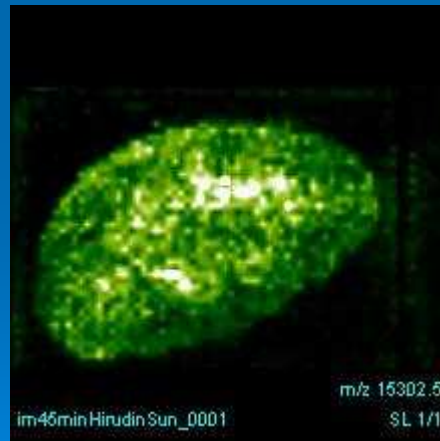
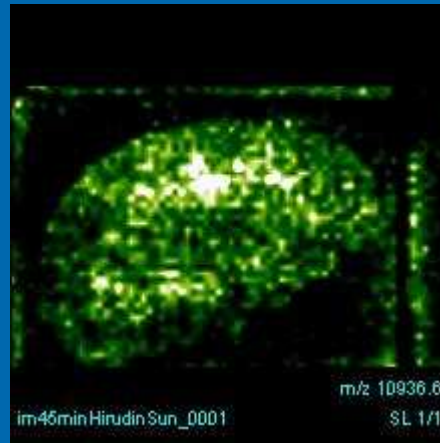
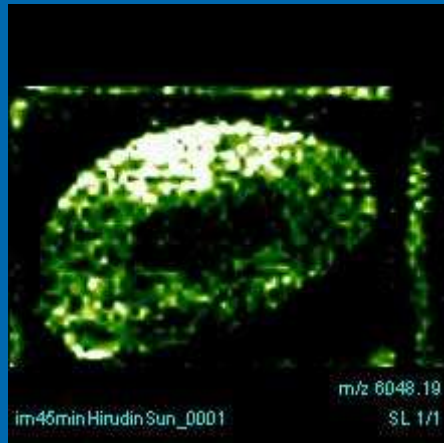
- With the rapid exchange of the needle (< 5 minutes) connected to a compressed air line, the SunCollect Spotter is changed into a spraying device.
- The syringe pump delivers either a matrix solution or a digest to coat the tissue section

# Manual spraying vs SunCollect so you think you're good???

- Many people have tried to use manual spraying. In reality the droplet size is too large to make good crystal structures.
- Compare the results on the right. At the top is shown the edge of sample prepared by manual spraying, note the gaps in the matrix coverage. underneath, a SunCollect sprayed tissue showing homogenous coverage



# MALDI images produced from a rat kidney section using the SunCollect to spray matrix on the fresh frozen tissue



Data courtesy Prof. Malcolm Clench Sheffield Hallam University

# But I already have a Spotter?

- Compare the SunCollect features with that of the Probot & see the difference.

	<u>SunCollect</u>	<u>Probot</u>
Speed: Change from spot to the next spot::	<1 sec	5 sec
Completely metal free fluid line	yes	no
Needle / Probe change/replace	15 sec	1/2 hour
Learning/teaching new target formats	max. 10 min	up to 1/2 day
No. of Targets placed on the instrument's table (e.g. ABI 4700)	up to four	up to six
Table dimensions (w x d )mm	180x150	210x135
Diameter of the smallest spot	0.260 mm	1.6 mm
Volume of smallest spot	2 nl	20 nl
Spotting and fraction collection simultaneously	yes	no
MALDI imaging feature	yes	no
Continuous sampling/spotting	yes	no
Access to the targets	extremely easy	difficult
Visual following the spot procedure	simply look at	need camera and monitor option
Footprint (h x w x d )mm	270x360x300	300x480x500
Matrix renew or change	30 sec	10 min
Auto refill of the syringe	no	yes
Automatic/software control of the matrix pump	yes	yes
Need for new matrix volume for a 250 µl syringe	250 µl	approx. 5 ml



- UK price of SunCollect with Spotting & spraying capability is <£20K
- Don't have MALDI – ask us about the retrofit AP-MALDI source

Interested?

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