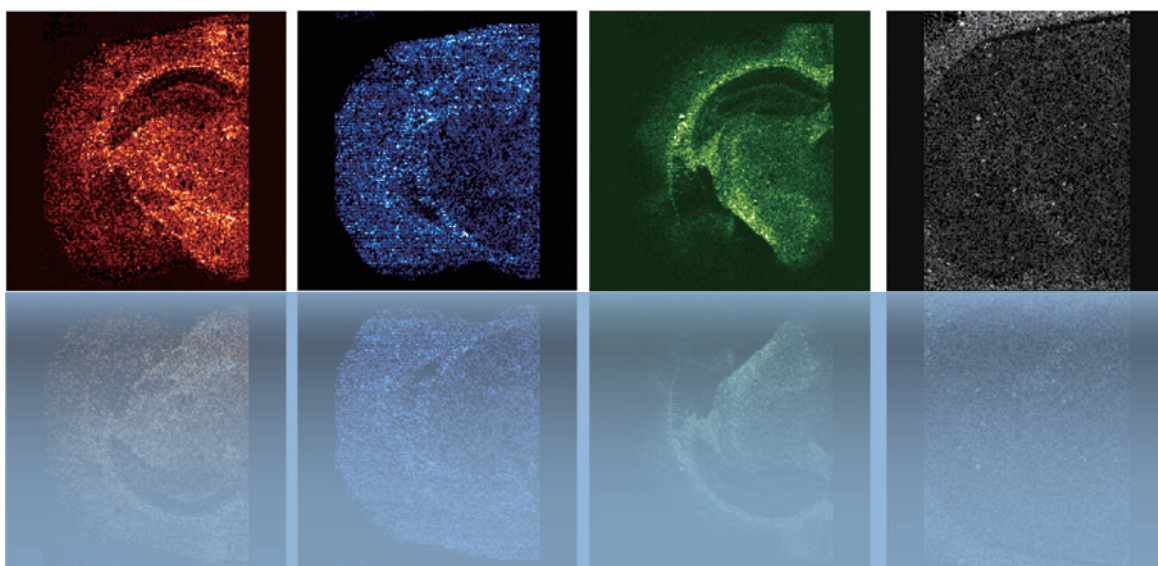


JMS-S3000 SpiralTOF

**Tissue imaging with
high mass-resolving power and
high-energy CID**



JEOL

Serving Advanced Technology

The JMS-S3000 is based on JEOL's proprietary SpiralTOF ion optic system that offers the highest resolving power available in a MALDI-TOF mass spectrometer. The unique properties of the SpiralTOF provide a new level of performance in MALDI imaging.

SpiralTOF
JMS-S3000

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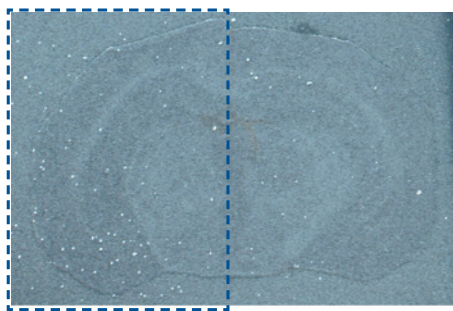
High resolution mass spectrometry imaging

In MALDI imaging mass spectrometry, the sample is moved beneath the focused laser beam to create a time-dependent series of mass spectra where each time corresponds to a specific spatial location. Analysis of the data allows the researcher to visualize the spatial distribution of specific compounds on the sample surface. Because the SpiralTOF's 17-meter flight path minimizes the effect of topographic variations on the sample surface, high mass-resolving power can be maintained for tissue imaging.

The data below were acquired in a joint research project with the Graduate School of Science, Osaka University.

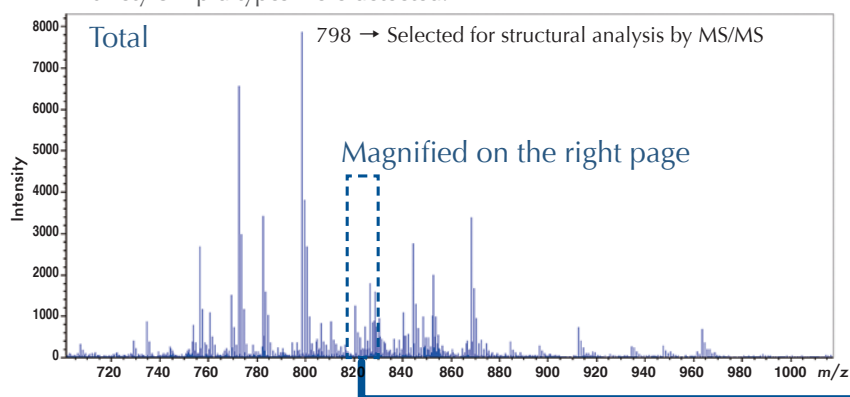
Mouse brain section (digital scanner image)

This is a digital scanned image acquired after DHB was sprayed as a matrix. The mass spectrum was acquired from the left half of the image.



Average mass spectrum

A variety of lipid types were detected.

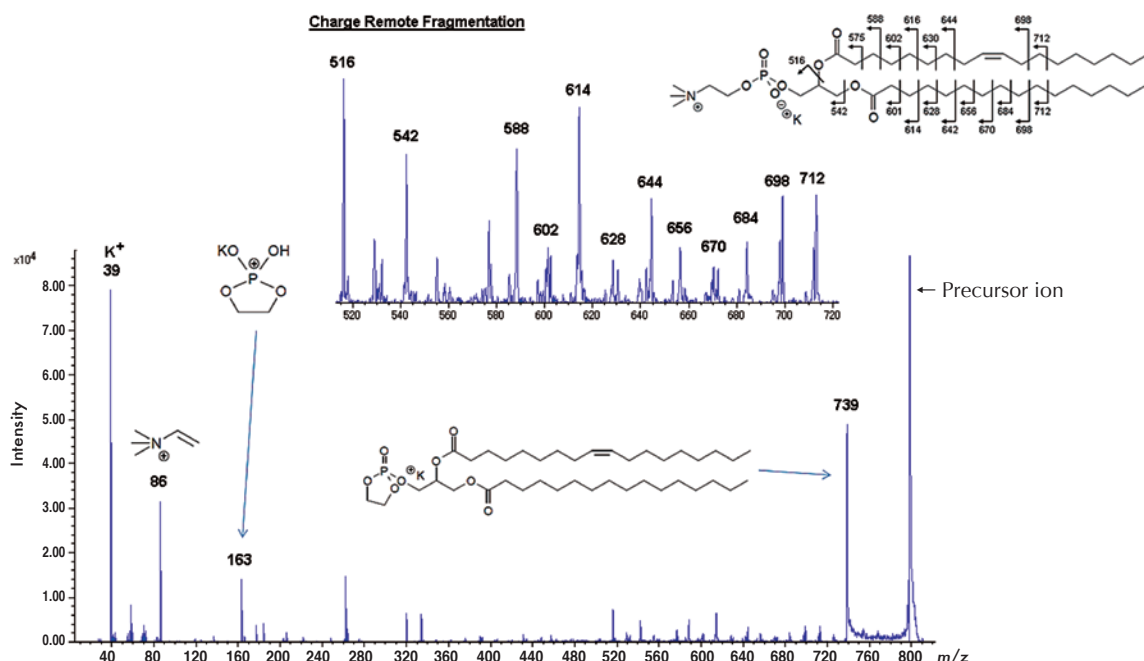


SpiralTOF
JMS-S3000

2

Structural analysis of compounds on sample surface

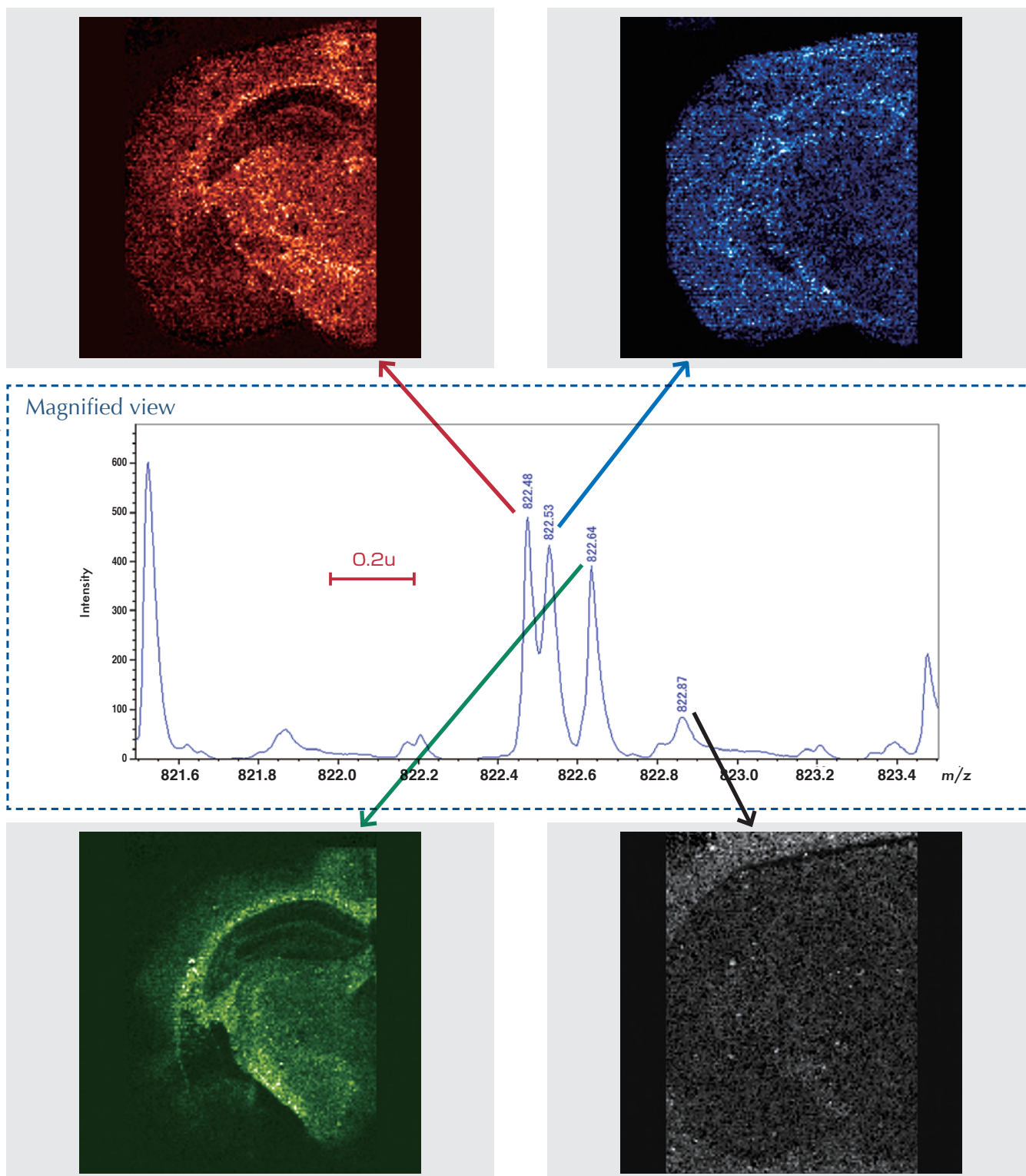
The JMS-S3000 with TOF-TOF option allows for the structural analysis of the compounds on the surface of a tissue sample by high-energy collision induced dissociation. (In the example below, m/z 798 was identified as phosphatidylcholine (34:1).)



JMS-S3000 SpiralTOF High resolution MALDI-TOFMS system

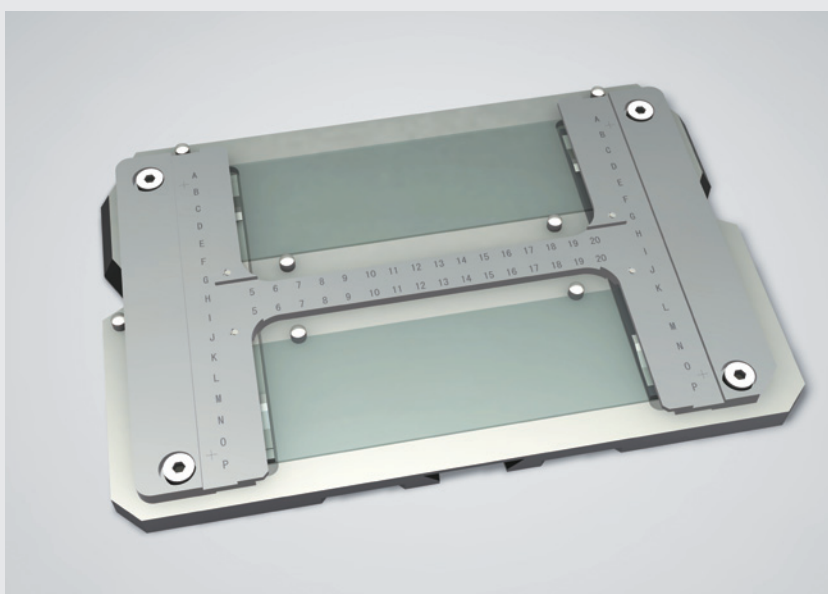


The unique ion optics of the JMS-S3000 SpiralTOF are capable of generating chemical images of compounds with m/z values separated by less than 0.1 u. This makes it possible to accurately determine the spatial distribution of compounds that would be difficult to distinguish by conventional reflectron TOF systems.



High resolution MALDI-TOFMS system

Model	Name	Remarks
JMS-S3000	MALDI-TOFMS system	
MS-56530MSI	MS imaging support program	
MS-56520HLC	High speed laser control program	Optional; to enhance measurement throughput. We recommend purchase of this item together with service contract
MS-50610TT	TOF-TOF option	Optional; to support MS/MS measurement.
MS-50620LNR	Linear TOF option	Optional; to support measurement of high molecular weight compounds.
	Glass slide holder ITO	Needed for glass slides; accommodates 2 slides 0.7 mm thick.
	ITO glass slide	0.7 mm thick



Glass slide holder



High technology for quality assurance and the environment.

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