

# MALDI-TOF and TOF/TOF Mass Spectrometry

## Bruker's flagship FLEX series is the global leader for MALDI applications

*Bruker's FLEX series – well-known for outstanding performance, reliability, convenience, and innovative design – is a market leading technology platform. It is the gold standard for top-down protein sequencing, MALDI Imaging, and polymer analysis. Flex series MALDI systems include a wide range of capabilities enabling beginners and experts to achieve maximum efficiency.*

*Highly automated workflows enable data acquisition and in-depth analysis from the smallest amounts of samples within seconds. Intuitive and powerful software packages support data visualization and turn-key target characterization.*

### microflex series

From peptide and protein QC applications to biomarker discovery or the analysis of oligonucleotides, small molecules, polymers and quality control screening, the bench-top microflex® LRF is the perfect choice.

It is easy to use with intuitive operations that are ideal for non-expert users and busy multi-instrument labs. The oil free vacuum system is fully integrated and noise reduced. Stable ion generation is produced by a 60 Hz fiber-optic laser – this robust design guarantees reliable daily operation.



#### microflex LRF

resolution:	15,000
mass range:	up to 300,000
mass accuracy:	15 (int. calib.) [ppm]
laser:	Nitrogen
size [mm]:	530 x 680 x 1350
laser frequency [Hz]:	60 (MS)

### autoflex maX series

Innovative MALDI-TOF and TOF/TOF technology optimized for robustness enables reliable and detailed protein/peptide characterization, polymer analysis, MALDI tissue imaging, glycan analysis, and high-throughput biochemical screening. Its smartbeam-II laser technology with up to 2,000 Hz repetition rate is a must for MALDI Imaging and delivers superior performance for proteomics studies. The field-upgradable autoflex® maX instruments are available as linear, high resolution reflectron or TOF/TOF versions. The TOF/TOF configurations enable fast and sensitive MS/MS experiments via LID and high energy CID.



#### autoflex maX [LIN, LRF and TOF/TOF]

resolution:	26,000	
mass range:	up to 500,000	
mass accuracy:	2 (int. calib.) [ppm]	
laser:	smartbeam II	
size [mm]:	825 x 1920 x 750	
laser frequency [Hz]:	LRF	TOF/TOF
	2,000 (MS)	2,000 (MS) 200 (TOF/TOF)

# MALDI Solutions



## rapifleX MALDI PharmaPulse

The rapifleX MALDI PharmaPulse (MPP) enhances label-free HTS, combining the mass detection of enzymes, substrates and products with the required speed to comb through compound libraries containing millions of substances. The use of mass spectrometry allows the measurement of unmodified substrates in primary screens, greatly reducing false positive rates, and minimizes compounds sent to confirmation screens. The system is designed for automatic handling of 1536 well sample plates to screen more than a million compounds in a week in support of drug discovery.



## rapifleX MALDI Tissuetyper

The newly developed smartbeam 3D laser fires at a repetition rate of up to 10 kHz and features a laser diameter of 5 µm. The laser can move independently from the (continuously moving) sample stage to scan the full area of each pixel and achieve high pixel rates. This produces truly square pixels, utilizing all of the available sample area for maximum sensitivity and pixel-to-pixel reproducibility for routine imaging at 20 µm spatial resolution.

## ultrafleXtreme

With its further enhanced dynamic range and the patented smartbeam-II laser the ultrafleXtreme provides outstanding spectral quality in both MS and MS/MS modes empowering tissue imaging, intact protein analysis, glycoproteomics, biologics or oligo QC, and LC-MALDI workflows. Broadband mass resolving power up to 40,000 enables precision proteomics via Bruker's unique PAN™ technology for highest mass resolution across a very wide mass range. A very long MALDI laser lifetime in combination with automated laser-based source cleaning in just minutes leads to high uptime and low maintenance costs.

## rapifleX series

The rapifleX® series is the most advanced and adaptable MALDI TOF(/TOF) system available today. The 10 kHz smartbeam 3D technology allows for up to 20 times faster MALDI tissue imaging in MS and MS/MS modes. With its mass resolving power of up to 50,000 and increased dynamic range, applications such as ultra-high throughput biochemical screening, top-down sequencing (e.g., of biotherapeutics), glycan structure analysis or disulfide/scrambling/trisulfide bond determination are easily addressed. Adaptable ion optics allow for best sensitivity in MS and MS/MS modes.



### ultrafleXtreme TOF/TOF

resolution:	40,000
mass range:	up to 1,000,000
mass accuracy:	1.5 (int. calib.) [ppm]
laser:	smartbeam II
size [mm]:	784 x 1332 x 2300
laser frequency [Hz]:	2,000 (MS) / 1,000 (TOF/TOF)



### rapifleX [LRF and TOF/TOF]

resolution:	45,000	
mass range:	up to 1,000,000	
mass accuracy:	1 (int. calib.) [ppm]	
laser:	smartbeam 3D	
size [mm]:	950 x 800 x 2750	
optional:	autoloader	
laser frequency [Hz]:	TOF 10,000 (MS)	TOF/TOF 10,000 (MS)& (TOF/TOF)