

Press Release

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New series of AXIMA MALDI-TOF mass spectrometers Mass accurate, high-resolution, high-sensitivity

**Molecular mass determination, fragment spectra, CID MS/MS-
fragmentation /
Individual software packages for many application areas /
Flexible combination options with other instruments**

Shimadzu, one of the world-leaders in analytical instrumentation, introduces three new MALDI-TOF instruments. The AXIMA-Assurance, AXIMA-Confidence and AXIMA-Performance are the successors of the well-established series of the same name. While the AXIMA-Assurance is suitable for fast mass determination of molecules, the AXIMA-Confidence is focused on the creation of fragment spectra via PSD (for instance for the identification of proteins). The AXIMA-Performance is a reflectron MALDI-TOF/TOF mass spectrometer for high-energy CID MS/MS fragmentations. The AXIMA series is used primarily in the chemical, biochemical and life sciences research laboratory, as well as for quality control and analysis of microorganisms.

Increased sample throughput, individual software packages

The new AXIMA MALDI-TOF MS systems establish a new standard in mass accuracy and mass resolution while maintaining high sensitivity. Sample throughput is markedly increased due to the higher

laser frequencies and the new nitrogen laser technology applied in all models. The nitrogen laser enables the use of all conventional matrices without compromising absorption. Individual software packages for various application areas such as polymer analysis, MS imaging, LC-MALDI, Oligo QC as well as the identification of microorganisms complement the new hardware series.

Flexible combination options with other instruments

Thanks to its flexible design, the new AXIMA series integrates well with other Shimadzu Biotech systems such as the CHIP-1000 chemical printer for tissue imaging or the AccuSpot for LC-MALDI. This results in the most flexible and high-performance MALDI platforms currently available for the chemical, biochemical and life sciences research laboratory.

A closer look at the new AXIMA series features:

- **AXIMA-Assurance**

The linear MALDI-TOF mass spectrometer is designed for fast mass determination of molecules without the need to generate additional structural information. The system design is ideally suited for high-throughput analysis in the identification of microorganisms, QA/QC applications in the areas of oligonucleotides, protein and polymer analysis as well as micro-satellite DNA characterization.

- **AXIMA-Confidence**

is a reflectron MALDI-TOF mass spectrometer equipped with the unique patented “curved field reflectron”. The curved field reflectron with fast seamless PSD provides the most efficient fragment spectra, for instance for the identification of proteins via the PSD fragment spectra of their tryptic peptides. Automatic PSD experiments can be combined with “peptide mass fingerprint” measurements for protein identification or confirmation.

- **AXIMA-Performance**

The reflectron MALDI-TOF mass spectrometer is suitable for high-energy CID MS/MS fragmentation providing the highest mass resolution and sensitivity with excellent mass accuracy. The newly developed, patented monoPulse Ion Gate offers unparalleled resolution for the selection of precursor ions in MS/MS experiments. The 20-K high-energy collision cell in combination with the novaCFR reflectron enables fast and effective generation and registration of MS/MS fragment spectra. The novel zoomIMMO function allows zooming in on the MS/MS fragments in the low mass end of the spectrum, for instance the immonium fragmentation of a peptide.

Registered Trademarks:

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20-K™ is a registered trademark of Shimadzu Corp.

novaCFR™ is a registered trademark of Shimadzu Corp.

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Caption: The new AXIMA MALDI-TOF mass spectrometer instrument series is targeted at the chemical, biochemical and life sciences research laboratory. The systems are suitable for mass determination of molecules, generation of fragment spectra and high-energy CID MS/MS fragmentations.

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