

Press Release

June 10, 2013

MALDI-7090™

New MALDI TOF-TOF mass spectrometer combining high throughput, high resolution and high-energy MALDI tandem MS.

Shimadzu, one of the world leaders in analytical instrumentation, introduces the new MALDI-7090™ MALDI TOF-TOF mass spectrometer targeted for proteomics and tissue imaging research. The combination of Shimadzu's extensive MALDI-TOF-TOF expertise with novel patented technology provides the MALDI-7090 with ultimate capabilities for identification and structural characterisation of biomolecules.

Innovative technology incorporated into the MALDI-7090 such as ASDF™- Axial Spatial Distribution Focussing, delivers market leading high resolution MALDI MS/MS for accurate compound characterisation. This, in combination with proprietary solid state laser technology, true 2 kHz acquisition speed in all modes (MS and MS/MS), an integrated 10-plate loader and newly designed MALDI Solutions™ software, sets a new benchmark in MALDI TOF-TOF design.

Assistant professor Takeshi Kawamura from RCAST, University of Tokyo commented "The 2kHz laser speed and high MS/MS resolution in the MALDI-7090 has accelerated our research in proteomics analysis for protein complex and histone modification using LC-MALDI"

Furthermore, the 20keV high energy CID capability of the MALDI-7090 efficiently produces additional fragment ions to further enhance

characterisation. When commenting on the value of high-energy CID and high resolution MS/MS capabilities of the MALDI-7090, Professor Guenter Allmaier from the Technical University of Vienna said “High-energy CID is the only way to locate double bonds in compounds containing fatty acids without any derivatization - e.g. of triglycerides in plant oils used as food or corcins (color responsible structures) isolated in saffron . Data interpretation for structure elucidation of such high-energy CID spectra without isotopic resolved fragment ions is very hard to achieve.”

Comprising a powerful range of tools for method development, acquisition, data processing and interpretation, MALDI Solutions software allows automatic and manual control of the MALDI-7090 and has been designed to provide a flexible platform in the hands of both novice and expert users. Targeted software modules within MALDI Solutions address a wide variety of research applications such as proteomics and tissue imaging amongst others.

Commenting on the launch of the MALDI-7090 Mr Kozo Shimazu, Managing director of Kratos Analytical wholly owned subsidiary of Shimadzu Corporation, stated “We are very proud to announce the release of the MALDI-7090 at ASMS 2013. This newly designed MALDI TOF-TOF mass spectrometer broadens the Shimadzu MALDI product portfolio into the high performance high-throughput research field. The MALDI-7090 is the perfect complement to our AXIMA range of MALDI TOF and MALDI-QIT TOF instruments which already provide MS, MS/MS and MSⁿ capabilities.

The MALDI-7090 offers ultimate sample throughput with high energy CID and high resolution MS/MS. This introduction forms an integral part of Shimadzu’s comprehensive mass spectrometry range of LCMS, GCMS and MALDI TOF mass spectrometers”.



Figure 1: New MALDI TOF-TOF mass spectrometer - MALDI-7090

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