



**2008 European
Mass Spectrometry Product Line Strategy Award**



"We accelerate growth"

2008 European Mass Spectrometry Product Line Strategy Award

Research Methodology

To select the Award recipient, the analyst team tracks end-user requirements and market dynamics within the industry. This process includes interviews with suppliers, end-users, and industry experts. The product lines are compared with customer base demands, and the top-ranking provider is then presented the Award.

Measurement Criteria

In addition to the methodology described below, there are additional criteria used to determine the final competitor rankings in this industry. The recipient of this Award will have excelled in one or more of the following criteria:

- Introduction of new products, strategically positioned to balance the product line
- Ability to accommodate different market segments, or different markets within an industry by repurposing technology
- Enhancement of product offerings through optimization of packaging, service, delivery, financing, and/or other value-added services
- Strategic technology or marketing acquisitions or alliances



The “2008 European Mass Spectrometry Product Line Strategy Award,” is presented to Shimadzu in Europe. The company is a subsidiary of the bigger Shimadzu Corporation, which is headquartered at Kyoto, Japan. The parent company has been in existence since 1875, and started its EU operations 40 years ago. In recent years, Shimadzu has launched significant developments in the field of mass spectrometry. Starting the MALDI-TOF business in 1988 with the first commercial MALDI mass analyzer, Shimadzu launched its latest AXIMA MALDI-TOF models beginning of 2008. In the LCMS field the recent development of the LCMS-IT-TOF, the first mass spectrometer with an ion trap–TOF hybrid configuration, received big customer interest and two awards.

In GCMS business Shimadzu has shown well above average market growth in the last years due to innovative hardware and software developments resulting in more than doubling the GCMS market share since 2003.

In 2007, the global turnover of Shimadzu group was approximately 2.40 billion US\$. The revenues from Europe alone contributed about 123 Mill Euro to this total. The company showed a significant increase in mass spectrometry sales in 2007, expanding its customer base across Europe.

Application Range

Shimadzu competes in the European mass spectrometry markets with its range of MALDI-TOF, LCMS and GCMS systems. The company offers for the MALDI and LCMS market unique high end hybrid MS configurations employing quadrupole ion-trap-TOF technology. Beginning of 2008 the new MALDI-TOF successor models, AXIMA Assurance, AXIMA Confidence and AXIMA Performance have been launched. Shimadzu’s MS technology is easy to use, providing accurate and high sensitivity in areas of Proteomics, Metabolomics, Glycomics, Lipidomics or polymer analysis respectively. To offer an outstanding solution for the expanding field of microorganism identification by MALDI-TOF technology, a third party software (SARAMIS, AnagnosTec GmbH) has been added to the portfolio in 2008. The systems provided by Shimadzu strive at delivering unmatched results at considerably short time spans covering a wide sample range.

Product Portfolio

Chart 2.1 displays the basis of the success of Shimadzu's mass spectrometry product line strategy in the European mass spectrometry market in 2007.

The company’s Flagship MALDI system is the AXIMA Performance. It is considered to be one of the most powerful MALDI systems in today’s market. The system delivers unmatched mass accuracy coupled with higher confidence in identification. This TOF-TOF configuration incorporates the novel ion-gate technology for high-end precursor ion selection. The system delivers the highest energy collisions in its range (CID with laboratory energy of 20 KeV).

Chart 2.1: Mass Spectrometry Instruments Market: Product Line Strategy employed by Shimadzu (Europe), 2007



The AXIMA MALDI-TOF systems

This platform is adapted to be flexible to the users work flow allowing single sample manual acquisition and also fully automated data-dependent analysis. In the context of biomarker detection, the data obtained from analysis can be exported to alternative processing packages allowing comparative analysis using standard data formats. Integrated with the system are software tools for Protein, Oligo, Tissue imaging and polymer analysis as well as for microorganism identification.

The AXIMA Performance model hosts unparalleled flexibility for PSD or real high energy CID fragmentation, automated sample target handling and the analysis of various bio-chip formats. The systems have a mass range of 1-500 kDa in the linear mode and 1-80 kDa in the reflection mode.

The AXIMA QIT is Shimadzu's MALDI quadrupole ion-trap time of flight mass spectrometry system. The unique design in this system allows the structural elucidation from a large variety of posttranslational modifications on proteins, responsible for different diseases.

The LCMS systems

The LCMS-IT-TOF (Ion-Trap Time-of-Flight) high end instrument finds its use in the different areas like impurity analysis, metabolite identification as well as Metabolomics application. The LCMS-IT-TOF convinces by its high mass accuracy in all MS_n modes obtained with an external calibration and the advanced software solution to predict formula compositions and the identification of Metabolites. This mass analyzer is used in large pharmaceutical accounts as well as research institutes and university.

The low cost MS system includes the LCMS 2010EV, a single quadrupole mass analyser for simple mass confirmation or mass triggered auto purification.

The GCMS systems

The GCMS-QP2010 Plus is a high end instrument with topmost sensitivity and a breakthrough in flexibility and ease of use. Its capability of high speed acquisition offers qualitative and quantitative analysis and makes it a perfect choice for novel technologies like comprehensive GCxGC(qMS). The GCMS-QP2010S equipped with a smaller pump system covers the lower price segment.

Product line Strategy

Shimadzu's MS division primarily concentrates on their instruments design to get high end specification for different application and combines them with advanced software solution. The company's mass analyzers are designed primarily to avoid signal discarding and provide high sensitivity. Over the past couple of years, the company has diversified its application base to cater to the upcoming needs in the clinical diagnostic sector as well as areas such as bio-marker identification. This consistent approach by the company has shown results in terms of an increase in its market share in the mass spectrometry sector. Its hybrid systems have been introduced into the European markets creating a benchmark for metabolite identification, bio-marker discovery and proteomics. The company strives to provide an overall analysis platform for a wide range of applications by providing versatile systems, extending the research capabilities and delivering unprecedented sensitivity and exceptional performance. The company is the deserving recipient of the "2008 European Mass Spectrometry Product Line Strategy Award."

About Best Practices

Frost & Sullivan constantly tracks companies across various industries globally. It conducts in-depth interviews with industry participants as part of its syndicated research process. The plethora of primary interviews, along with extensive secondary research, provides Frost & Sullivan with reliable market intelligence and knowledge of the best practices adopted by diverse organisations.

The Best Practices Program determines accolades to companies in a variety of regional and global markets for demonstrating outstanding achievement and superior performance in areas such as market leadership, technological innovation, customer service, and strategic product development.



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