



BENVENUTI

50° MS Anniversary Days



MALDI: una tecnica da Premio Nobel per celebrare i 50 di Spettrometria di Massa



19 giugno 2020

**Mattia Casanova, Marketing Manager
Shimadzu Italia S.r.l.**



Shimadzu Group

C O R P O R A T E
P R O F I L E

Shimadzu Corporate Outline

**... It all started with an insatiable thirst for science and technology
and a firm resolve about what was necessary for the future of Japan...**

Founded in 1875, when Genzo Shimadzu Sr. began manufacturing physics and chemistry instruments while also learning about the latest technologies.

That marked the beginning of our history as the Shimadzu Corporation.

Shimadzu provides a broad range of **analytical instruments** indispensable for research, development, and quality control in a variety of fields. Our high-level, sophisticated instruments include chromatographs, spectrometers, and elemental and surface analysis systems. We also provide a broad range of high-precision physical testing and measuring technology that is essential for product development and quality assurance.

Corporate Philosophy:

"Contributing to Society through Science and Technology"



Shimadzu Corporation

Corporate Profile (as of March 31, 2019)



Head Office	Kyoto 604-8511, Japan
Founded	March 1875
Formation of Limited Company	September 1917
Capital	26.6 Billion Yen
Consolidated Sales	376.6 Billion Yen
Number of Employes (Shimadzu Group Total)	12,684



Shimadzu Europa GmbH, Duisburg, Germany

European Headquarter: Duisburg, Germany

11 subsidiaries in Europe

755 employees

> 300 qualified sales and support specialists

> 230 qualified service engineers

13 distributors Europe wide

185 Mio. € turnover in 2018



 Shimadzu  Distributors



Service and Support Facilities

Laboratory World in European Headquarter

Centers of excellence in
Germany, France, UK, Italy, Netherlands

- Application Support
- Sample Measurement
- Project Management
- Demonstration
- Customer Training



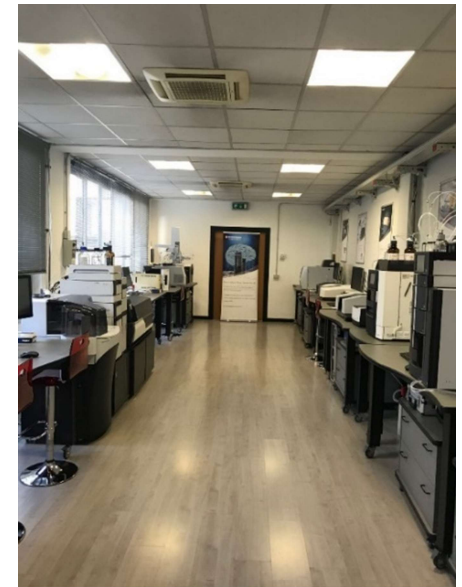
Shimadzu European Headquarter, Laboratory World, Duisburg, DE

Shimadzu in Italy

Shimadzu Italy was opened in 1991: our offices are based in Milan from where we manage all sales, financial, customer care, marketing and application support for all products range. Regarding sales force and service, we can boast a national cover to better satisfy our Customers' requests.



50 employees



Our demo lab in Milan

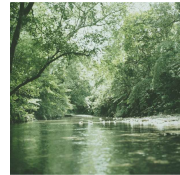
Key Business Segments: Major Markets

Serving society through the power of science. Shimadzu contributes to the progress of a wide variety of fields



Medicine

- Analysis and evaluation at development process
- Support for the quality control
- Support for the control of production facilities



Environment

- Analysis and measurement of atmosphere, water, and soil
- Analysis of emissions and waste substances



Food

- Characteristic evaluation and component analysis of raw materials
- Safety evaluation
- Flavor and texture measuring tests



Medical Care

- Support for the diagnosis and treatment at medical institutions
- Research & development of new medicines



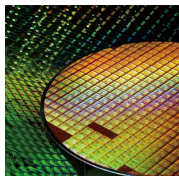
Energy

- Support for the development of renewable energies
- Analysis and evaluation in developing next-generation batteries



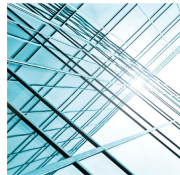
Transport

- Safety transportation of airplane /automobile and comfortable passenger environment
- Evaluation tests for automobile safety and comfort
- Power source for industrial vehicles and construction machinery



Semiconductor / Electronics

- Semiconductor production process
- Displays production process



Material

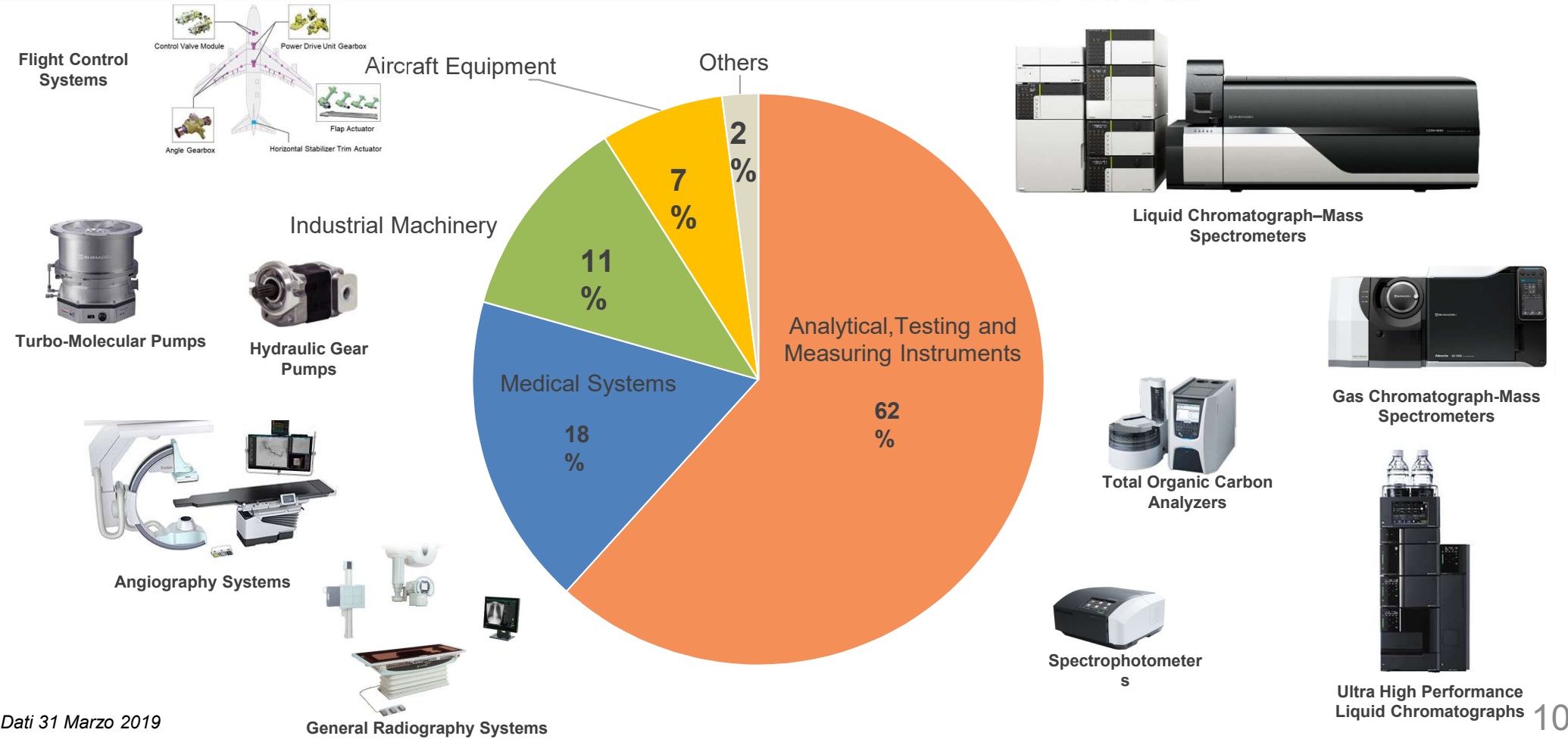
- Analysis and evaluation of oil chemical products and new materials
- Analysis and evaluation of metal, glass, and ceramic materials



Infrastructure

- Testing fatigue/endurance and measuring deterioration of public and industry infrastructure
- Monitoring and deterioration diagnostic services

Overview of Business Performance



Shimadzu Corporation has always stood out for the continuous research and development of new technologies applied to analytical instrumentation



Koichi Tanaka

General Manager, Mass Spectrometry Research Laboratory,
Shimadzu Corporation, Kyoto, Japan

Nobel Prize in Chemistry (2002) “for the development of soft desorption ionization methods for mass spectrometric analyses of biological macromolecules”

Celebrating 50 Years of MS Innovation



The year 2020 marks 50 years since the release of Shimadzu's first mass spectrometry device, the LKB-9000. Over the past half century, our passion for innovation has led to multiple ground-breaking developments in MS technology.

With our considerable experience in the field, we take this opportunity to reflect on the past and look towards the future of MS. Through this we reaffirm our commitment as a company: to provide revolutionary products and services that contribute to society through technology, sustaining the health of the planet and of humankind.

Celebrating 50 Years of MS Innovation

1970



LKB-9000

SHIMADZU
Excellence In Science

Celebrating 50 Years of MS Innovation (1970-2020)

50
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Shimadzu's Beginnings

1875 Shimadzu founded

The history of Shimadzu as a company begins with its founding in Kyoto in 1875 by Gohei Shimadzu Jr., initially as a producer of optical and chemistry equipment. This company was expanded by Gohei's son, Shigetada Shimadzu, to produce scientific instruments such as spectrometers and chromatographs, which contributed to Japan's scientific industry as well as advances in the medical field.

1875 Founding of Shimadzu

1970 The world's first GC-MS: LKB-9000

1978 Began to develop key technologies for quadrupole MS

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1978 Shimadzu released Japan's first general purpose quadrupole GC-MS. The combination of high functionality and ease of use helped to popularize GC-MS technology in Japan.

1982 GCMS-QP1000

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1987 LAMS-50K

Shimadzu released the world's first MALDI-TOF MS, LAMS-50K, and subsequently produced various models including high molecular weight compounds. This dramatically expanded the possible uses of mass spectrometry.

1989 Acquired Kratos Group Plc in the UK

1992 Compact MALDI III/II

The Compact MALDI III/II enabled the analysis of a large range of samples including proteins, polymers, pharmaceuticals and metabolites.

2002 AXIMA-QIT

The AXIMA-QIT was the world's first MALDI TOF MS to combine ion trap and QIT methods. This allowed detailed structural analysis of complex molecules.

2002 Koichi Tanaka awarded the Nobel Prize

Koichi Tanaka received the Nobel Prize in Chemistry for the development of soft desorption/ionization methods for MS analysis of biological macromolecules. The Kyoto Institute of Technology Research Laboratory was established in 2002.

2004 LCMS-IT-TOF

2010 LCMS-8030

The LCMS-8030 was the first domestically produced quadrupole LC-MS/MS, at the same time achieving world-class detection speeds. This dual feature made for processing a high number of samples for applications in the natural sciences, medical pesticide analysis in food safety, pharmaceutical research for detection, environmental pollution monitoring, etc.

2012 GCMS-TQ8030

2012 GCMS-TQ8030

Representing the same technology that enabled the high speed LC/MS/MS analysis of the LCMS-8030, the GCMS-TQ8030 achieved world-leading sensitivity and speed. Thanks to the first triple quadrupole GC-MS/MS in the product line-up.

2015 LCMS-8060

The successful release of the LCMS-8060 in 2015 was followed quickly by the LCMS-8060, a high-resolution quadrupole MS, which supported over the top level of the MS/MS and achieved faster than the market.

2018 GCMS-TQ8050 NX

Shimadzu released the GCMS-TQ8050 NX, an ultra-high-resolution triple quadrupole GC-MS for pioneering research in new fields. It is capable of performing unprecedented quantitative analyses of ultra-trace amounts, often in the femtomole level.

2018 LCMS-9030

As the first domestically produced high quadrupole line of flight LC-MS, the LCMS-9030 allowed Shimadzu to make their mark on the high-resolution market. Proven, sensitive and reliable mass measurements can be carried out with virtually single-operator, increasing the accuracy of each high-resolution analysis.

2017 DPIMS-2020

Shimadzu released the DPIMS-2020 Direct Probe Ionization Mass Spectrometer.

2019 MALDImini™-1

The MALDImini-1 is a high-sensitivity MALDI MS capable of MS/MS measurements. It is a miniaturized, automatically compact thanks to the use of pioneering Digital Ion Trap (DIT) technology. It fits on a bench space equivalent to an A3 piece of paper.

2019 MALDImini™-1

Shimadzu's Unique Technologies

Shimadzu has developed several instruments and technologies that are completely unique. The establishment of Innovation Centers around the world serves to promote this cutting-edge research and development in collaboration with our customers. In these ways, Shimadzu continually strives to contribute to society through the use of new technologies.

2004 LCMS-IT-TOF

Shimadzu released a world-first hybrid LC/MS model featuring IT and TOF, enabling structural analysis etc. with MSⁿ capabilities.

2013 iMScope

The iMScope mass imaging microscope boasts the power of both mass spectrometry and optical microscopy in one hybrid instrument. It can merge precise, high-quality MS images and optical images.

2017 DPIMS-2020

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2020



GCMS-8050 NX

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Prima parte

- 10:00 Benvenuto e introduzione**
Dott. M. Casanova - Marketing Manager, Shimadzu Italia S.r.l.
- 10:15 La ricerca della fAcilità: soluzioni MALDI Shimadzu per le tue analisi**
Dott.ssa S. Giordano – Application Specialist, Shimadzu Italia S.r.l
- 10:45 Intact-cell MALDI TOF mass spectrometry for monitoring of embryonic stem cell cultures**
Dr. Petr Vanhara, PhD. Associate professor & Vice-head Department of Histology and Embryology | Faculty of Medicine | Masaryk University & International Clinical Research Center | St. Anne's University Hospital Brno
- 11:15 Sessione aperta a domande e risposte**
- 11:25 BREAK**

Seconda parte

- 11:30 Various faces of MALDI – Application stories from all over Europe**
Dr. A. Schnapp – Product Specialist MALDI , Center of Innovation & Product Support Shimadzu Europa GmbH
- 12:00 Sessione aperta a domande e risposte**
- 12:10 CHIUSURA LAVORI**



 SHIMADZU

GRAZIE PER L'ATTENZIONE!



Per richiedere gli attestati di partecipazione scrivere a: ffurini@Shimadzu.it

PROSSIMI WEBINAR:

7 luglio H 10:00

ICP-MS: lo stato dell'arte dell'analisi elementare



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