

<b>Company name</b>	Toray Research Center, Inc.
<b>Founded</b>	June 1, 1978
<b>Head Office</b>	1-7-2 Nihonbashi Honcho, Chuo-ku, Tokyo
<b>Capital</b>	250 million JPY (Authorized capital: 1 billion JPY)

## Domestic Sales Offices

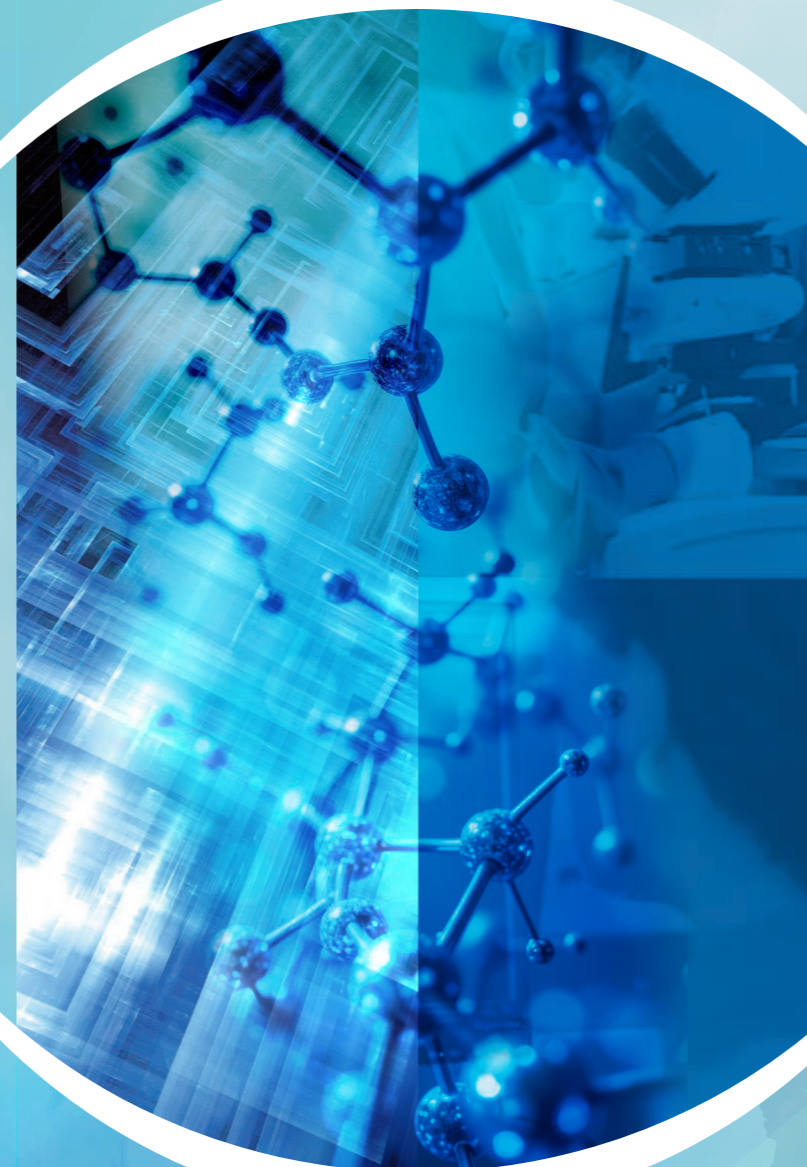
<b>Tokyo</b>	1-7-2 Nihonbashi Honcho, Chuo-ku, Tokyo <b>TEL</b> +81-3-3245-5633
<b>Shiga</b>	1-1-1 Sonoyama, Otsu, Shiga <b>TEL</b> +81-77-534-1655
<b>Nagoya</b>	1-24-20 Meiekiminami, Nakamura-ku, Nagoya, Aichi <b>TEL</b> +81-52-571-5510

## Domestic Research Laboratories

<b>Shiga</b>	3-2-11 Sonoyama, Otsu, Shiga <b>TEL</b> +81-77-510-9100
<b>Nagoya</b>	9-1 Oe-cho, Minato-ku, Nagoya, Aichi <b>TEL</b> +81-52-613-5318
<b>Kamakura</b>	6-10-1, Tebiro, Kamakura, Kanagawa <b>TEL</b> +81-467-32-9967

## Global Network

Toray Research Center (Shanghai) Co., Ltd. (Shanghai City)  
 Toray Engineering Co., Ltd. (Taipei City)  
 KTS Global Co., Ltd. (Anyang City, Republic of Korea)



**'TORAY'**

Toray Research Center, Inc.



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<https://www.toray-research.co.jp/en/>

# A Message from Toray Research Center

At Toray Research Center (TRC), we deliver comprehensive solutions to complex technical challenges by combining decades of trusted expertise with world-leading analytical and evaluation technologies.

As industries undergo rapid transformation and face increasingly sophisticated issues, we remain committed to addressing “questions with no clear answers.” By working in close partnership with our customers, we generate new insights, create tangible value, and support innovation at every stage of development.

Established in 1978 as an independent spin-off from Toray Industries, Inc., TRC has built its foundation on trust, integrity, and technical excellence. Our strength lies in the seamless integration of Technology and People—advanced analytical methodologies developed through collaboration with leading universities and research partners, cutting-edge instrumentation co-created with manufacturers, and highly skilled specialists with extensive global research experience.

Guided by scientific rigor and a spirit of continuous innovation, we will continue to evolve as a distinctive total solution partner—striving to be an indispensable presence for our customers and for society, while contributing to a more sustainable future.

## Evolution of Our Analytical Capabilities



**1978**  
Raman microscopy



**1983**  
FT-NMR



**1986**  
GD-MS



**1999**  
Temperature-modulated DSC

### Founded in 1978

Based in: Tokyo, Shiga, Kamakura  
Sales: 460 million JPY  
Number of employees: 67

**1988**  
10th anniversary  
Sales: 4.26 billion JPY

**1983**  
Research base established in Nagoya

**1982**  
Publication of the TRC News launched

**1985**

**1980**

**1991**  
Study abroad program started

**1990**

**1998**  
20th anniversary  
Sales: 6.85 billion JPY

**1997**  
Stability Testing Center established

**1995**

**1999**  
ISO9001 certificate acquired

# Management Philosophy

## Contributing to society through Advanced Technology

Under this basic philosophy, we support cause analysis and problem solving in customers' R&D, with “providing advanced and reliable technology (Technology)” and “strictly observing complete confidentiality (Trust)” as our mottoes.

### Evolution of Our Analytical Capabilities



**2000**  
Triple Q LC-MS/MS



**2011**  
LC-MS/MS highly sensitive TQMS

**2003**  
Full ownership of Toray Techno Co., Ltd. acquired

**2000**

**2005**

**2008**  
30th anniversary  
Sales: 7.88 billion JPY

**2010**

**2015**

**2020**

**2025**

**2022**  
New laboratory construction in Shiga completed Platform for advanced analysis (TAAP) established

**2022**  
Contract analysis services started at European laboratory (in Munich area, Germany)

**2018**  
Toray Research Center (Shanghai) Co., Ltd. (abbreviated as TRCS) established

**2018**  
40th anniversary  
Sales: 8.2 billion JPY

### Installed Equipment



**2018**  
NanoSIMS



**2020**  
O-PTIR



**2022**  
Atomic resolution TEM/STEM

# Challenge Together, Solve Together: Your Strategic Analytical Partner

At Toray Research Center, we support our customers in shaping the future. We empower our customers to overcome their most complex challenges, from the creation of innovative materials and revolutionary processes to the optimization of manufacturing sites.

As the world shifts toward a sustainable future, we are dedicated to supporting your environmental goals, including the transition to Carbon Neutrality.

By leveraging our world-leading analytical technologies and physical evaluation expertise, we drill down to the core of every problem, providing seamless, consistent support from initial diagnosis to the final solution.

## Total Solutions through Advanced Analysis & Evaluation

We deliver comprehensive, contract-based analytical services across a diverse range of industries. By leveraging our deep history of success in complex problem-solving, we provide more than just raw data—we provide actionable intelligence.

Our team of specialized sales representatives and researchers brings expert-level knowledge to every project. We work closely with you to accurately diagnose technical challenges and design a bespoke analysis and evaluation strategy tailored to your specific goals.

### Batteries

We provide comprehensive analysis and evaluation for the next generation of energy. Our expertise spans Lithium-ion batteries (LIB), Fuel Cells, and emerging All-Solid-State technologies.

- Structural Dynamics: We analyze deformation during charge/discharge cycles to improve cell longevity.
- Degradation Analysis: We identify root causes of performance loss to support the development of high-reliability energy solutions.

### Automotive, Aircraft & Aerospace

From automotive to space applications, we support the evolution of mobility through advanced analytical and evaluation technologies.

- Electric Vehicles: Evaluation of battery materials supporting the global transition to electrified mobility.
- Advanced Composites: Testing and analytical services for aircraft composite materials and aerospace components.
- Space Applications: Material characterization for projects operating in demanding and extreme environments.

### Life Science

We bridge the gap between industrial precision and biological insight to support next-generation drug discovery.

- Pharmaceutical Excellence: Providing reliable data for drug discovery, clinical trials, and rigorous stability testing.
- Visualizing the "Invisible": By applying high-sensitivity technologies originally developed for semiconductors, we reveal the efficacy mechanisms and spatial distribution of intracellular components.
- Biomedical Imaging: Our ability to visualize molecular structures at the nanoscale is driving the future of medicine.

### Semiconductor

As devices become smaller and more powerful, we provides the high-resolution insights necessary for the next generation of hardware.

- Nanoscale Precision: We implement defect detection and impurity analysis at the nanometer level.
- 3D Structural Analysis: From fine-structure characterization to physical material evaluation, we support the push toward further miniaturization and high performance.
- Consistent Support: We offer total solutions, from R&D phase material testing to failure analysis of finished devices.

### Automotive, Aircraft & Aerospace

### Batteries

### IT Equipment

## Analysis / evaluation

### Environment

### Life Science

### Semiconductor

### Materials

### Technical Seminars

Expert-led lectures, covering everything from analytical principles to real-world applications.

### Data Sales

We provide high-quality spectral data for a wide range of polymers

### Contract analytical services

With over 40 years of expertise, we offer specialized contraction implantation services for semiconductors and advanced materials to enhance performance and functionality.

### IT Equipment

We provide comprehensive evaluation for the future of digital tech, from OLED displays (Mobile/VR) to 5G communication materials. We also support the development of eco-friendly manufacturing processes with low-environmental-impact manufacturing processes.

### Environment

We provide critical testing and evaluation for environmental protection, specializing in PFAS, fuel emissions, and exhaust gases. Beyond detection, we analyze catalyst mechanisms for hazardous substance purification and pioneer new analytical methods to address emerging environmental challenges.

### Materials

Our expertise lies in the 360° evaluation of physical properties, structure, and composition. We support a vast range of applications—from electronic components to household goods—across polymers (resins, plastics, rubber) and inorganic materials (metals, ceramics).

# Analytical Professionals Pioneering the Future

As social and industrial landscapes evolve faster than ever, we stand as your trusted partner, helping you navigate the challenges of today to build the successes of tomorrow.



**“Insights”**

to identify true challenges



**“Proposal capabilities”**

to derive the optimal approach



**“Analytical capabilities”**

using reliable data



**“Conceptual capabilities”**

to visualize the future beyond analysis

## A foundation of analytical excellence built on 40 years of mastery.

High-performance equipment alone does not guarantee true analysis. Since our founding in 1978, we have been dedicated to solving our customers' challenges by grounding our analytical capabilities in a wealth of experience and accumulated expertise. Our most invaluable assets are the deep-rooted partnerships we share with equipment manufacturers, academic institutions, and industry collaborators.



## Repeated discussions and support through to problem resolution.

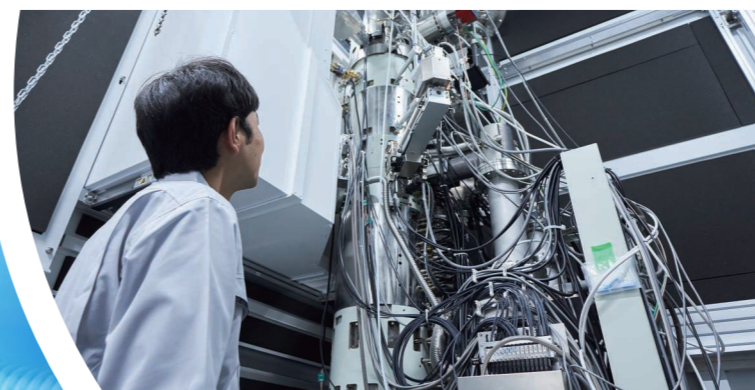
We are more than an analytical firm that simply submits data. We believe that standard analytical services are fundamentally different from the "total solutions" we provide. By engaging in thorough consultation and continuous collaboration, we work alongside our customers to design analytical strategies and interpret results. Our unwavering commitment is to provide seamless support until a definitive resolution is achieved.



## R&D and human resource development to create the “cutting-edge.”

We are committed to continuously adopting cutting-edge equipment and co-developing new technologies with leading manufacturers.

By fostering collaborations with academic institutions and driving rigorous in-house research, we empower every employee to become a specialized expert. We continue to push the boundaries of innovation while refining our techniques, training our people, and strengthening our "overall capabilities."



The challenges faced by each individual will generate new technologies and shape the future of society.



## Major Locations & Global Network

Our headquarters is located in Tokyo, supported by specialized research and sales offices in Shiga, Nagoya, and Kamakura. To meet the global demand for advanced local analysis, we collaborate closely with Toray Group companies worldwide, providing seamless technical support across international borders.



Shiga



Nagoya



Kamakura

Main Building, Basic Research Center,  
Toray Industries, Inc.



Tokyo



Shanghai

Toray Advanced Materials Research Laboratories (China) Co., Ltd.  
Toray Research Center (Shanghai) Co., Ltd.



Munich

Toray Automotive Center Europe

Tokyo



Shiga



Nagoya



Kamakura

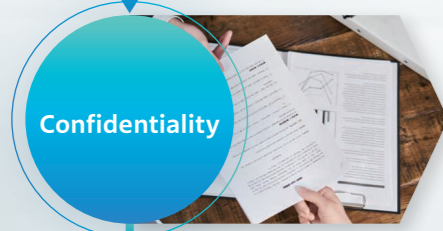


## Service Flow



**Inquiry**

Please contact us via the inquiry form on our website. An expert specialist in your specific field will conduct a thorough consultation to understand your R&D and production challenges as well as technical requirements.



**Confidentiality**

We prioritize data security from the very first interaction. Toray Research Center implements rigorous security protocols and comprehensive in-house training, ensuring a safe environment where customers can discuss sensitive projects with total confidence.



**Proposal**

We propose the most effective analytical methods to resolve your specific challenges. Every approach is refined and optimized through continuous dialogue with our customers to ensure the highest quality results.



**Quotation & Ordering**

Once the analytical method is finalized, we will provide a formal quotation. After confirming the scope of analysis, delivery timeline, and costs, please place your order to initiate the project. Our dedicated team will then guide you through the necessary administrative procedures.



**Analysis & Evaluation**

We execute the analysis with precision. Beyond simply providing measurement data, we interpret the results in direct relation to your specific challenges, providing meaningful insights rather than just raw numbers.



**Interim Reporting & Consultation**

For complex or long-term projects, we provide interim reports to review progress and refine analytical methods. We maintain an open dialogue through repeated discussions to ensure the project remains aligned with your objectives.



**Final Report & Review**

Upon completion, we deliver a comprehensive analytical report designed to drive your problem-solving process. We remain available for further consultation or technical debriefings to discuss the findings and address any follow-up questions.

## Quality Assurance Activities

### Quality Management System Certificate (ISO9001)

**Associated Organization** Head Office(Tokyo), Shiga Laboratory, Kamakura Laboratory, Nagoya Laboratory, Nagoya Sales Department(Nagoya), Kansai Sales Department(Shiga)

**Certificate Number** JQA-QM3356

### GLP compliance verification (Pharmaceuticals)

**Applicable Testing Facility** Integrated Analysis Laboratories of Bioscience, Functional Molecule Analysis Laboratory

**Inspection Authority** Pharmaceuticals and Medical Devices Agency

### Environmental Management System Certificate (ISO14001)

**Associated Organization** Shiga, Nagoya

**Certificate Number** JQA-EM0527(Shiga) JQA-EM0237(Nagoya)

### ISO/IEC 17025

**Name of Laboratory** Toray Research Center, Inc., Surface Science Division, Surface Science Laboratory 1 (Otsu, Shiga, Japan)

**Scope of accreditation** Chemical Testing (As described in the appendix)

**Accreditation Number** RTL05240