Our products and technologies are utilized everyday everywhere, from your familiar convenience stores, supermarkets, restaurants, and your home dining table.

Based on our philosophy to “contribute to food and health by exploiting our strengths in life science technology,” Mitsubishi Corporation Life Sciences engages in eight fields of business:

- Nutrition: We provide foods and dietary supplements that support the health of customers, as well as provide health ingredients.
- Savoury Ingredients: We provide yeast extracts, hydrolyzed proteins, and the characteristic “koku-mi” seasonings.
- Extracted Seasonings: We offer extracted seasonings, sauces, and flavor seasonings to help manufacturers of processed, ready-made, and restaurant foods create delicious tastes.
- Umami Seasonings: We are the first company globally to use a fermentation process to mass-produce a nucleic acid and L-monosodium glutamate, leading components of umami.
- Food Materials & Food Additives: We provide thickening stabilizers and quality-improving agents for improved texture and water retention as well as emulsifiers and other ingredients that support manufacturers of processed, ready-made, and restaurant foods. We also produce freeze-dried foods for households, such as soups and rice porridge.
- Sweeteners: We help manufacturers in diverse ways by providing sweeteners, including polyols such as sorbitol, maltitol, and reduced sugar syrup, as well as stevia extract.
- Bakery Specialties: We help confectionary and bread manufacturers by providing baker’s yeast, fermented flavor enhancers, quality-improving agents for bakery, bakery premises, and more.
- Brewed Seasonings & Liquors: We offer umami seasonings (flavor enhancers), food additives, sweeteners, and bakery specialties. Offer are transformed and brought to you as processed foods, of confectionery and bread manufacturers.
Our Business

As a food ingredients manufacturer that supports food and health, we help develop an assortment of foods and meals by leveraging the strengths of life science technologies.

Nutrition Business
In addition to the tastiness and selection of foods, people are becoming increasingly conscious of their added health benefits and health value. We provide health ingredients to the food, dietary supplement, and feed industries in Japan and overseas through R&D focused on microbial fermentation technology and through commissioned manufacturing.

Savoury Ingredients Business
We offer yeast extracts, such as AROMIL™, the most versatile umami enhancer, and AJITOP™, flavor enhancer like MSG attempt, as well as hydrolyzed proteins and “kabu-mi seasonings”. We also offer blended seasonings that combine amino acids, organic acids, and other ingredients to make them easy to utilize.

Extracted Seasonings Business
Stocks made from meat, fish, vegetables, and other ingredients create the base flavors for cooking and give foods richer tastes. We offer various extracted seasonings produced by carefully extracting and concentrating flavors, as well as sauces and flavor seasonings that have applied such technologies. We help processed food manufacturers and other customers in the ready-made and restaurant food industries create delicious tastes.

Umami Seasonings Business
We are a leading seasonings manufacturer in Japan and the first company globally to use a fermentation process to mass-produce a nucleic acid and L-monomonosodium glutamate, leading components of umami. In addition, our flagship product INOICHIBAN™, a product with both industry and household fans, has long contributed to the development of the Japanese food industry.

Brewed Seasonings and Liquors Business
In addition to being delicious, processed foods must meet many requirements including shape and texture, convenience, shelf life, and sanitation for processing. We have a wide range of products tailored to the diversifying uses of our customers, including thickening stabilizers and quality-improving agents for improved texture and water retention, emulsifiers that are essential for bakery and tofu manufacturing, and functional ingredients for health conscious customers.

Food Materials and Food Additives Business
We have various types of sweeteners, including polyols such as sorbitol, maltitol, and reduced sugar syrup, as well as stevia extract. Polyols have various functions and processing characteristics and are utilized for a range of uses based on their characteristics. We propose reliable technology and high-quality products suited for use in various fields.

Main Products
- Yeast-based ingredients
- Lactic acid bacteria
- Amino acids
- Egg-based ingredients
- High performance dextrin
- Hyaluronic acid
- Other health ingredients

Bakery Specialties Business
As a comprehensive supplier for customers in the confectionary and bakery industries, we provide baker’s yeast, fermented flavor enhancers, quality-improving agents for bakery, bakery premixes, and other products that leverage our unique strengths. We engage in business activities to meet the needs and address the challenges of our customers through developing a wide selection of products and through our ability to make unique offerings from the customer’s perspective.

Trading
We trade primarily food additives and food additives with many countries, using the global network of the Mitsubishi Corporation Group. We handle a range of items, and provide products and services that meet our customers’ demands based on our many years of experience and achievements.

Main Products
- Food additives
- Food raw materials
- Plating materials

Sweeteners Business
We offer a variety of sweeteners, including polyols such as sorbitol, maltitol, and reduced sugar syrup, as well as stevia extract. Polyols have various functions and processing characteristics and are utilized for a range of uses based on their characteristics. We propose reliable technology and high-quality products suited for use in various fields.

Main Products
- Sorbitol
- Maltitol
- Polyglycitol syrup (Hydrogenated starch hydrolysate)
- Other polyols and sweeteners

Bakery Specialties Business
As a comprehensive supplier for customers in the confectionary and bakery industries, we provide baker’s yeast, fermented flavor enhancers, quality-improving agents for bakery, bakery premixes, and other products that leverage our unique strengths. We engage in business activities to meet the needs and address the challenges of our customers through developing a wide selection of products and through our ability to make unique offerings from the customer’s perspective.

Main Products
- Yeast
- Premixes
- Fermented flavor enhancers and fermentations
- Quality-improving agents for bakery
Research & Development

Our strength lies in our ability to create distinct seasonings and ingredients for confectionery and bread making through unique technologies acquired over many years — in areas such as fermentation, separation and extraction, cooking and processing, bread baking, and flavor analysis.

Applications

Creating the future of food and health with customers
"Application proposal" refers to the development of applications based on our diverse product range, and the accurate communication of these innovations to our customers after taking into account their differing needs.

- Polysols
  We propose innovative applications to food and pharmaceutical industries.
  Our food clients are found in the chewing gum, candy, chocolate, tablet, beverage, ice cream and bakery industries.

- Seasonings and all food ingredients
  We propose solutions and ideas for new products and product renewals to processed food manufacturers, convenience stores, and customers in the ready-made and restaurant food industries. We also conduct surveys of successful shops, prototype evaluations with the sales division, and make presentations at customer seminars.

- Polysaccharide texturants
  The physical property of foods is a critical component of tastiness. We handle a variety of polysaccharide texturants which give physical properties to foods. We propose physical properties sought by customers by examining various combinations.

Product Development

Product development to meet customer needs
In developing and researching products, we keep in close contact with the sales division to get a sense of customer feedback as well as the needs and issues that customers do not realize themselves, and conduct various R&D day-to-day in order to develop new product solutions.

Examples of products we developed

- AROMAWAY™
- SOURD™ MOIST
- AIMATOME™ DJ

Extensive food evaluation technologies
Palatability and other factors are thought to make objective evaluations of food taste challenging. We have combined a sensory testing method and an instrumental analysis technique to enable more scientific evaluations of food taste.

We use analyzing technologies, based on a wealth of knowledge gained through manufacturing a variety of food items, to develop new products and help address the issues of our customers.

Initiatives for the future
As part of our R&D initiatives for the future, we establish opportunities for researchers to create new synergies by pooling each other’s strengths, holding discussions, and conducting reviews, and generate ideas that are not bound by existing frameworks.

Basic Research

Basic research focused on microbial fermentation
We carry out basic research for efficiently producing targeted ingredients through the fermentation of microbes, mainly yeasts.

We also conduct microbial strain breeding and culture control. In addition to developing functional ingredients as well as food and seasoning ingredients that meet our customers’ demands, we conduct applications development and applied research using existing products.

Such applications are not limited to foods; we aim to develop ingredients with a range of properties from a mid- to long-term perspective, including added health benefits.

Wide-ranging research themes
Our research themes are wide-ranging. We also conduct analyses based on our customers’ requests.

- Yeast (microorganism) strain breeding
- Yeast (microorganism) culture control
- R&D of functional ingredients
- R&D of food and seasoning ingredients

Production Technology

Towards more advanced technology and higher quality
We continue to conduct research day-to-day in order to turn new ideas from R&D into actual products and provide them to customers in a safe, secure, and stable manner, as well as to further improve existing products.

We pay careful attention to all steps of the production process, including review of a product’s manufacturing conditions, design and development of process equipment, in collaboration with the production and engineering divisions, and studies for the optimization of people, goods, machinery, and information. We harness comprehensive manufacturing technology to ensure a stable supply of the industry’s world-leading products for customers.

Production technological capability tailored to various products
Using fermentation technology, we have produced new products from microorganisms in a variety of genres, such as nucleic acids, yeast extracts, functional ingredients, polysaccharide texturants, enzymes, bakery ingredients, and cooking liquor. We have also produced polysols using advanced hydrogenation reaction (reduction) technology and nursing foods (e.g., foods for easy swallowing) using polysaccharide texturants.

Such products have been produced also using our long-cultivated advanced microbial control technology and high-pressure reaction technology, together with our purification technology for efficiently turning target substances into products (e.g., solid-liquid separation, distillation, concentration, crystallization). In addition, we have sought to reduce costs and contribute to stable production at plants by developing and enhancing our underlying technologies, including powder manufacturing using our unique drying technology, extract manufacturing technology such as extraction and emulsification, granulation technology, and sterilization technology for greater safety.

We not only seek to improve our existing equipment and processes, but also actively engage in the development of new technologies and equipment to strengthen our production technological capability.
Quality & Safety

We deliver great quality products worldwide by giving our highest priority to food safety and trustworthiness at all times.

Quality Verification and Assurance through the Food Chain

From procurement of raw materials to shipment to customers, we have developed a system that enables us to deliver safe and trusted products all around the world based on the food chain concept.

Check raw materials

To supply safe and high quality products, we determine whether or not to utilize raw materials through our own audits of raw material manufacturers and through an analysis of the quality of our raw materials.

Manage production situation, improve production sites

We work with production sites to maintain sound production processes and improve production sites, through developing a quality control system to ensure the production of safe and high quality products in all steps of the process, from receipt of raw materials to manufacturing and shipment.

Quality verification of products

We analyze the components and parameters set for each product, such as microorganisms, to ensure the quality of the products we produced comply with laws, ordinances, and our own specifications. In addition, our staff performs a comprehensive evaluation of “tastiness,” a property that cannot be measured by machinery, before making the final decision on shipment.

Quality assurance

For the purpose of delivering safe and high quality products to our customers, we establish appropriate sell-by dates, create a table of quality test results, and utilize a traceability system that can trace the process from raw materials, production, to delivery.

Safety and Good Quality Control Mechanisms

We have achieved international standards—ISO9001(1) and FSSC22000(2)—in order to enforce thorough quality and safety control at our production locations in Japan and overseas, including our plants and the plants of our affiliate companies, including Tsuchiura Plant, Nikko Plant, Fuji Plant, Miyoshi Plant, KOHJIN Life Sciences Co., Ltd. (Saki Plant), PT. Sorini Towa Berlian, KKHUN Life Sciences Co., Ltd. (Saki Plant), MC Freeze Drying Foods Company, Limited, PT. Fermentech Indonesia, MCLS Asia Co., Ltd., and PT. Sontor Towa Berlian. In addition, we have established mechanisms for managing GMP(3) and other standards to enforce thorough quality. Tsuchiura Plant undergoes periodic assessments and inspections by external third party organizations on AIB Food Safety Program(4) and other standards.

Examples of Certifications

- ISO9001
  Management system international standard for providing products and services of the required level of quality and raising customer satisfaction.
- FSSC22000 (Food Safety System Certification)
  Food safety management system that expands on the ISO22000 international standard on food safety management system.
- GMP (Good Manufacturing Practice)
  Manufacturing process management standards to ensure a product is being safely manufactured to an identified quality standard throughout the process from receipt of raw materials to production and shipment.
- AIB Food Safety Program
  Factory floor-oriented manufacturing process management standards proposed by the American Institute of Baking (AIB).

Component Analysis and Sensory Testing System

Palatability and other factors are thought to make objective evaluations of food taste challenging. More scientific evaluations of food taste can be made possible by combining a sensory testing method and an instrumental analysis technique. In sensory testing, our staff performs a comprehensive evaluation of “tastiness,” a property that cannot be measured by component analysis using machinery, so that we can manage the quality of our products.

Food Safety and Quality Policy

Mitsubishi Corporation Life Sciences Limited, through its integrated corporate strength and strong focused R&D capability in the life sciences, aims to become a leading global company in the food science business.

We aim to become a company that satisfies all stakeholders, including clients, employees, and shareholders. We provide the ultimate great tasting and healthy high value-added products sought by customers, together with reliable information.

We value internal and external communication in every step of the process, from R&D to procurement of raw materials, production, and distribution, and consistently provide safe and high quality products.

All products and services we handle are in compliance with relevant laws, ordinances, and regulatory requirements in order to earn the trust of our customers.
On April 1, 2019, we consolidated Mitsubishi Shoji Foodtech, MC Food Specialties, and KOHJIN Life Sciences to launch Mitsubishi Corporation Life Sciences Limited. Our origin traces back to the food ingredient businesses of various companies. We leverage their respective histories and technologies to create new values in the field of food and health. As a member of the Mitsubishi Corporation Food Industry Group, we plan to work in cooperation with member companies of the Mitsubishi Corporation Group to offer delicious tastes founded on technologies which are one step in advance of the times to create an enjoyable and healthy food culture together with our customers.

The company provides high value to customers through our business divisions, namely, nutrition, savory ingredients, extracted seasonings, umami seasonings (flavor enhancers), brewed seasonings & liquors, food materials & food additives, sweeteners, and bakery specialties. Our strength lies in our research and development ability, which allows us to produce new ingredients using fermentation and other technologies, as well as our ability to propose applications, aimed at resolving our customers' problems through development and optimized combination of the various ingredients. By leveraging these abilities, as a leading producer of food ingredients in Japan, we will implement a value proposal business that speedily mobilizes expertise built up over our history to further enhance our ability to meet customer needs and increase the quality of our products, founded on our commitment to health, safety, trustworthiness, and great taste.

We are also aware that compliance is the most important social responsibility of a business enterprise and will engage in activities aimed at food safety and trustworthiness and also the preservation of the global environment through rigid control of raw materials and manufacturing processes. Mitsubishi Corporation Life Sciences will continue to pursue its mission of contributing to the food (taste) and health of people not only in Japan but also around the world, by mobilizing our life science technologies. We look forward to the continuing support and patronage of our customers and stakeholders.
Mitsubishi Corporation Life Sciences engages in world-leading scale businesses in the food science industry.

<table>
<thead>
<tr>
<th><strong>Company Name</strong></th>
<th>Mitsubishi Corporation Life Sciences Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date Founded</strong></td>
<td>June 12, 1954</td>
</tr>
<tr>
<td><strong>Date Established</strong></td>
<td>April 1, 2019</td>
</tr>
<tr>
<td><strong>Head Office</strong></td>
<td>Tokyo Takarazuka Building 14F, 1-1-3 Yurakucho, Chiyoda-ku, Tokyo 100-0006</td>
</tr>
<tr>
<td><strong>Phone</strong></td>
<td>(+81)3-6891-7100</td>
</tr>
<tr>
<td><strong>Capital</strong></td>
<td>1,399 million yen</td>
</tr>
<tr>
<td><strong>Shareholder</strong></td>
<td>Mitsubishi Corporation Life Sciences Holdings Limited (100%)</td>
</tr>
<tr>
<td><strong>Main Business</strong></td>
<td>Development, manufacturing and sales of seasonings, polyols, sweeteners, quality-improving agents, yeast extract, yeast-based ingredients, confectionery and bakery ingredients, liquors for cooking and confectionary, health ingredients, cosmetics</td>
</tr>
<tr>
<td><strong>Representative</strong></td>
<td>Representative Director &amp; President Hiroshi Fujiki</td>
</tr>
<tr>
<td><strong>Number of employees</strong></td>
<td>1,286</td>
</tr>
<tr>
<td><strong>URL</strong></td>
<td><a href="https://www.mcls-ltd.com/en/">https://www.mcls-ltd.com/en/</a></td>
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</tbody>
</table>

(as of April 1, 2020)
Our origin traces back to the food ingredient businesses of various companies. We leverage their respective histories and technologies to create new values in the field of food and health.

**History of former MC Food Specialties Inc.**

- **December 2001**
  - Kirin Brewery Co., Ltd. and Takeda Pharmaceutical Co., Ltd. reached basic agreement on food business tie-up.

- **April 2002**
  - Founded as Takeda-Kirin Foods Corporation and began operation after transferring food business of Takeda Pharmaceutical Co., Ltd.

- **April 2005**
  - Food business of Kyowa Hakko Kogyo Co., Ltd. spun off and formed Kyowa Hakko Specialties Co., Ltd.

- **April 2007**
  - Takeda-Kirin Foods Corporation became wholly owned subsidiary of Kirin Brewery Co., Ltd. Trade name changed to Kirin Food-Tech Co., Ltd.

- **April 2009**
  - Kyowa Hakko Food Specialties Co., Ltd. and Kirin Food-Tech Co., Ltd. merged to launch Kirin Kyowa Foods.

- **July 2010**
  - Consolidated industrial liquor and fermentation seasonings businesses of Mercian Corporation.

- **July 2013**
  - Became subsidiary of Mitsubishi Corporation through its acquisition of approx. 81% of shares. Became Group company of Mitsubishi Corporation.

- **January 2014**
  - Changed trade name to MC Food Specialties Inc.

- **January 2015**
  - Became wholly owned subsidiary of Mitsubishi Corporation through its acquisition of shares owned by Kirin Holdings Co., Ltd.

**History of former Mitsubishi Shoji Foodtech Co., Ltd.**

- **June 1954**
  - Towa Chemical Industry Co., Ltd. was founded, and sorbitol manufacturing and sales started.

- **April 1977**
  - Chuo Kasei Co., Ltd.’s Banshu Plant started manufacturing seaweed extract carrageenan.

- **March 1991**
  - Yoshioka Co., Ltd. founded Yoshioka Engineering Co., Ltd. to design, produce, and sell food processing machinery. In 1992, switched business from manufacturing machinery to producing new ingredients. In 1993, changed trade name to Yoshioka Food Mix Co., Ltd.

- **March 1999**
  - Yoshioka Food Mix Co., Ltd. changed trade name to Yoshioka Foodtech Co., Ltd.

- **April 2000**
  - Functional ingredient business divisions of Chuo Kasei Co., Ltd. and Banshu Chemical Co., Ltd. were split off and combined. Chuo Foods Material Co., Ltd. established and started manufacturing and selling ingredient-related raw materials.

- **August 2003**
  - Yoshioka Foodtech Co., Ltd. changed trade name to MC Foodtech Co., Ltd.

- **August 2007**
  - Towa Chemical Industry Co., Ltd., MC Foodtech Co., Ltd. and Chuo Foods Material Co., Ltd. merged, and trade name changed to Mitsubishi Shoji Foodtech Co., Ltd.

**History of former KOHJIN Life Sciences Co., Ltd.**

- **April 1953**
  - Saiki Plant began operation as dissolving pulp factory of Koukoku Jinken Pulp Co., Ltd.

- **January 1969**
  - Trade name changed to KOHJIN Co., Ltd.

- **November 2012**
  - KOHJIN Life Sciences Co., Ltd. established after spinoff of fermentation business of KOHJIN Co., Ltd.

**History of Mitsubishi Corporation Life Sciences Limited**

- **April 2019**
  - MC Food Specialties Inc., Mitsubishi Shoji Foodtech Co., Ltd., and KOHJIN Life Sciences Co., Ltd. consolidated to start Mitsubishi Corporation Life Sciences Limited.
Head Office

Tokyo Takarazuka Building (*)
Tokyo Takarazuka Building 14F,
1-1-3 Yurakucho, Chiyoda-ku, Tokyo 100-0006

Toho Hibiya Building
Toho Hibiya Building 16F.,
1-2-2 Yurakucho, Chiyoda-ku, Tokyo 100-0006

Head Office of Mitsubishi Corporation Life Sciences is spread over two buildings: the Tokyo Takarazuka Building and the Toho Hibiya Building. If paying a visit to Head Office, please confirm which office you are to visit and go to the respective office’s Reception.

(* Indicates the registered address of MCLS’s Head Office)
**Plants**

Tsuchiura Plant  
4041 Ami, Ami-machi, Inashiki-gun, Ibaraki 300-0398

Nikko Plant  
1195-5 Uenohara, Aza, Todoroku, Nikko-shi, Tochigi 321-2404

Fuji Plant  
93 Nakagawara, Fuji-shi, Shizuoka 417-0036

Miyoshi Plant  
10-3 Chikumazawahigashi, Miyoshi-cho, Iruma-gun, Saitama 354-0046

**Laboratories**

Food Science Research Laboratories  
R&D Group (Savoury Ingredients Division, Extracted Seasoning Division, Brewed Seasoning & Liquor Division, Bakery Specialties Division)  
4041 Ami, Ami-machi, Inashiki-gun, Ibaraki 300-0398 (Located inside Tsuchiura Plant)

Bio Science Research Laboratories  
1-6 Higashihama, Saiki-shi, Oita 876-8580 (Located inside KOHJIN Life Sciences Co., Ltd.)

Sweeteners Division, Sweeteners Sales Department, Research and Development Group  
2-159 Shimada-cho, Fuji-shi, Shizuoka 417-0033

Food Material & Food Additives Division, Food Materials Development Center  
10-3 Chikumazawahigashi, Miyoshi-cho, Iruma-gun, Saitama 354-0046 (Located inside Miyoshi Plant)

**Distribution Centers**

Tennouzu Center  
Sphere Tower Tennouzu 16F., 2-2-8 Higashi-shinagawa, Shinagawa-ku, Tokyo, 140-0002

Fuji Center  
2-62 Shimada-cho, Fuji-shi, Shizuoka 417-0033

Miyoshi Center  
10-3 Chikumazawahigashi, Miyoshi-cho, Iruma-gun, Saitama 354-0046 (Located inside Miyoshi Plant)

**Subsidiaries**

KOHJIN Life Sciences Co., Ltd.  
Tokyo Takarazuka Building 14F., 1-1-3 Yurakuchō, Chiyoda-ku, Tokyo 100-0006

Vitamin C60 BioResearch Corporation  
Nihonbashi-dori Nichome Building 4F., 2-2-6 Nihonbashi, Chuo-ku, Tokyo 103-0027

Ohland Foods Company, Limited  
369-1 Kotehashicho, Hanamigawa-ku, Chiba-shi, Chiba 262-0013

MC Freeze Drying Foods Company, Limited  
2062-3 Tsukiji, Shinzen Aza, Oaza, Hofu-shi, Yamaguchi 747-0825

Houkoku Kogyo Co., Ltd.  
1-6 Higashihama, Saiki-shi, Oita 876-8580

MCLS (China) Inc.  
Head Office : Jiangyin, Jiangsu Province, China  
Branch Office : Shanghai, China

MCLS Asia Co., Ltd.  
Head Office & Plant : Rayong, Thailand  
Branch Office : Bangkok, Thailand

PT. Fermentech Indonesia  
Head Office : Jakarta, Indonesia  
Plant: Lampung, Indonesia

PT. Centram  
Head Office & Plant : Surabaya, Indonesia

MCLS Europe B.V.  
Head Office : Amstelveen, Netherlands