



KYOWA HAKKO GROUP

SUSTAINABILITY REPORT 2007



The English edition of the Kyowa Hakko Group Sustainability Report is distributed online only.



Special Features

New antibody therapeutics for tomorrow's healthcare **7**

Bio-chemical products that enable people to lead healthy, fulfilling lives **9**

Contributing to healthier communities through pharmaceuticals **11**

Corporate Governance

The Board of Directors has formulated a basic policy on internal control. **13**



Social Performance

Awards received in the area of occupational safety include a certificate from the Japan Industrial Safety and Health Association recognizing accident-free operations and a Safety Award from the Minister of Health, Labour and Welfare. **19**

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Editorial Policy

The information contained in Kyowa Hakko Group Sustainability Report 2007 refers primarily to the performance of Kyowa Hakko Kogyo Co., Ltd., Kyowa Hakko Chemical Co., Ltd., Kyowa Hakko Food Specialties Co., Ltd., Kyowa Medex Co., Ltd. and the domestic consolidated production subsidiaries listed on Page 4. In June 2007, we held a stakeholder meeting with representatives of nonprofit organizations with the aim of reflecting stakeholder opinions in report concept development and contents. We obtained third-party verification to improve the reliability of information contained in the report and also obtained the opinion of an expert in the field about the overall concept of the report, which we have included in the report.

In compiling this report, we referred to the Environmental Reporting Guideline of the Ministry of the Environment and the Responsible Care Code. From the viewpoint of corporate social responsibility (CSR), we have also included material concerning business ethics, interaction with society and communities, voluntary initiatives by employees and the social significance of our business operations.

To maintain continuity with past reports and reflect differences in the attribution of emissions, we have compiled data pertaining to three overseas production companies (BioKyowa, Shanghai Kyowa Amino Acid and Wuxi Xiehe Food) separately from data for our Japanese operations.

Areas and Periods Covered by Report

The information contained in this report covers production, R&D and sales sites in Japan as well as production, development and sales sites in other countries (Page 4).

Environmental loads and other data were gathered from production and R&D sites in Japan and from BioKyowa, Shanghai Kyowa Amino Acid and Wuxi Xiehe Food. Green Office Plan data for the head office and sales sites in Japan have been integrated. Daiichi Fine Chemical, which joined the Group on June 1, 2007, is excluded from fiscal 2006 performance. Statistics for Japan are for fiscal 2006 (April 2006 to March 2007), while those for outside Japan are for the 2006 calendar year. However, some information pertaining to fiscal 2007, such as the results of initiatives, is included.

■ Corporate Philosophy

Kyowa Hakko will contribute to the health and well-being of people worldwide by creating new value with the pursuit of advancements in life science and technology.

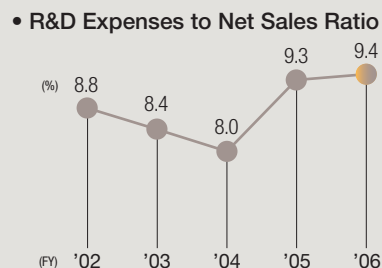
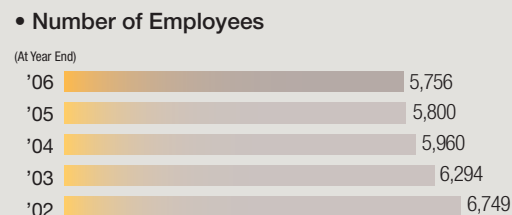
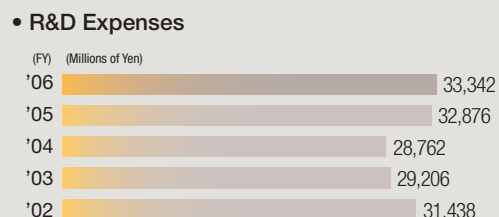
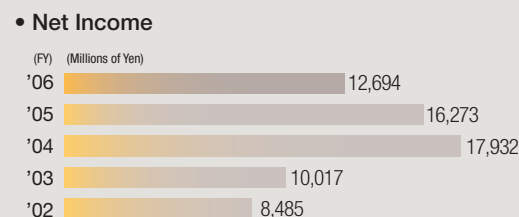
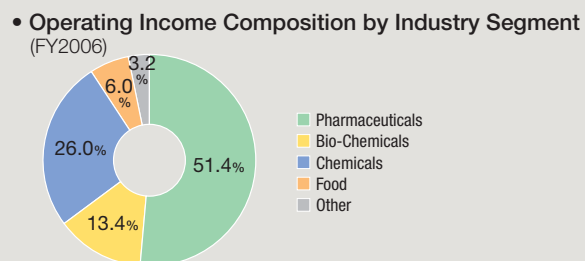
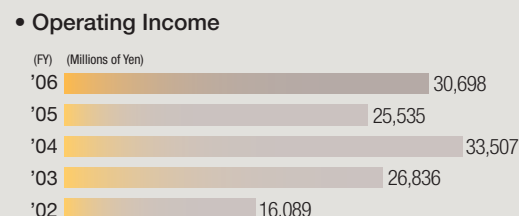
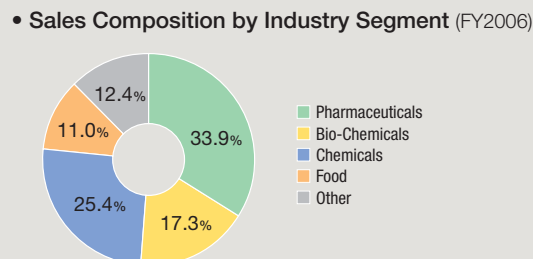
■ Corporate Data

Corporate Name Kyowa Hakko Kogyo Co., Ltd.
 Established July 1, 1949
 Paid-in Capital ¥26,745 million (at March 31, 2007)
 Representatives President and CEO: Yuzuru Matsuda
 Head Office 1-6-1, Ohtemachi, Chiyoda-ku, Tokyo 100-8185, Japan
 TEL: +81 (3) 3282-0007


Industry Segment

- **Pharmaceuticals:** Manufacture and sale of pharmaceuticals and clinical diagnostic reagents
- **Bio-Chemicals :** Manufacture and sale of pharmaceutical and industrial-use raw materials, healthcare products, agrochemicals, products for livestock and fishery industries and alcohol
- **Chemicals :** Manufacture and sale of solvents, plasticizer raw materials and specialty chemicals
- **Food :** Manufacture and sale of seasonings, baking ingredients and products, such as premixes
- **Other :** Wholesaling and transportation

■ Consolidated Financial Data




Kyowa Hakko Kogyo Co., Ltd.



PHARMACEUTICALS

We will use our original technology and ideas to create products that will enhance the lives of individuals.

Focusing primarily on cancer, allergies and central nervous system diseases, Kyowa Hakko is using antibody technology and other advanced technologies to create revolutionary therapeutic agents through research and clinical development activities on a global scale.



BIO-CHEMICALS

Biotechnology is helping to enhance the vitality and beauty of life.

Kyowa Hakko supplies many industries with amino acids, nucleic acids and other products, using its world-class fermentation technology. Amino acids are produced under a global production network with facilities in Japan, the United States and China.

Kyowa Hakko Chemical Co., Ltd.

CHEMICALS

Our mission is to create environment-friendly materials so that we can continue to live in harmony with the Earth.

Kyowa Hakko Food Specialties Co., Ltd.

FOOD

We will continue to enhance food flavor and safety by exploring the fundamental characteristics of foods.

■ BUSINESS BASES

• **Principal Production Bases**

<In Japan>
 Kyowa Hakko Kogyo Co., Ltd.*
 Fuji, Sakai, Yokkaichi (Pharmaceuticals)
 Tsuchiura (Healthcare), Yamaguchi (Hofu Plant, Ube Plant)
 Principal Consolidated Subsidiaries
 Kyowa Hakko Chemical Co., Ltd. Chiba Plant
 Kyowa Hakko Chemical Co., Ltd. Yokkaichi Plant
 Kyowa Hakko Food Specialties Co., Ltd. Tsuchiura Plant
 Kyowa Medex Co., Ltd. Fuji Plant
 Daiichi Fine Chemical Co., Ltd. Headquarters Plant (Takaoka, Toyama)
 Other Consolidated Subsidiaries
 Ohland Foods Co., Ltd. Chiba and Tsuchiura Plants
 Riiken Kagaku Co., Ltd. (Itabashi, Tokyo)
 Kyowa F. D. Foods Co., Ltd. (Hofu, Yamaguchi)
 Kyowa Hifoods Co., Ltd. Ube Plant

<Outside Japan>
 BioKyowa, Inc. (Missouri, U.S.A.)
 Shanghai Kyowa Amino Acid Co., Ltd. (Shanghai, China)
 Wuxi Xiehe Food Co., Ltd. (Wuxi, China)
 Kyowa Foods (Jiangyin) Co., Ltd. (Jiangyin, China)
 Qingdao Kyowa Wanfu Foods Co., Ltd. (Qingdao, China)
 Kyowa Hakko Pharmaceuticals (Suzhou) Co., Ltd. (Suzhou, China)

• **Principal Sales Bases**

<In Japan>
 Kyowa Hakko Kogyo Co., Ltd.
 Headquarters, Sapporo, Tohoku, Tokyo, Nagoya, Osaka, Chugoku, Shikoku and Kyushu branches

<Outside Japan>

Kyowa Hakko U.S.A., Inc. (New York, U.S.A.)
 Kyowa Hakko Europe GmbH (Düsseldorf, Germany)
 Kyowa Hakko U.K. Ltd. (Berkshire, U.K.)
 Kyowa Italiana Farmaceutici S.R.L. (Milan, Italy)
 Kyowa Hakko (H.K.) Co., Ltd.
 Kyowa Pharmaceutical (H.K.) Co., Ltd.
 Kyowa Hakko Industry (Singapore) Pte Ltd.
 Kyowa Hakko (Malaysia) Sdn Bhd.

• **Principal Laboratories**

<In Japan>
 Kyowa Hakko Kogyo Co., Ltd.
 Pharmaceutical Research Center (Fuji Plant/Shizuoka)
 BioFrontier Laboratories (Machida, Tokyo)
 Healthcare Products Development Center (Tsukuba, Ibaraki)
 Technical Research Laboratories (Hofu Plant/Yamaguchi)
 Kyowa Hakko Chemical Co., Ltd.
 Yokkaichi Research Laboratories (Yokkaichi Plant/Mie)
 Kyowa Hakko Food Specialties Co., Ltd.
 Food Creation Center (Tsuchiura Plant/Ibaraki)
 Kyowa Medex Co., Ltd.
 Research Laboratories (Fuji Plant/Shizuoka)

<Outside Japan>

Kyowa Pharmaceutical, Inc. (New Jersey, U.S.A.)
 BioWa, Inc. (New Jersey, U.S.A.)
 Kyowa Hakko U.K. Ltd. (Berkshire, U.K.)

* Throughout the report "Kyowa Hakko" means "Kyowa Hakko Kogyo Co., Ltd."



Continuation of the Founding Spirit is the Essence of Social Responsibility

A passionate desire to eradicate tuberculosis prompted Kyowa Hakko Group founder Dr. Benzaburo Kato to introduce in Japan the antituberculosis medication streptomycin. The spirit of the company founder continues to epitomize the essence of Kyowa Hakko. I believe that a company discharges its social responsibility only when the labor of its employees, and the products and services that result, benefit society and are thoroughly integrated into its basic fabric. The focus of Kyowa Hakko's chemical operations is the environment-friendly functional products sector. The use in refrigerating equipment of chlorofluorocarbon substitutes to replace CFC refrigerants, which destroy the earth's ozone layer, necessitates the replacement of refrigerator lubricants with compatible substances. I believe that we can contribute, albeit indirectly, to ecosystem preservation by helping to protect the ozone layer through the augmentation of production capacity for isononanoic acid and octanoic acid, raw materials used in these lubricants. Also, I am convinced that the backbone of green chemistry is bio-processes that involve the use of renewable biomass resources as raw materials in the manufacture of chemical products under mild conditions of room temperature and atmospheric pressure. Such an approach would also help conserve oil resources in the future.

Benefiting Customers and Host Communities

Business is all about knowing what customers desire and providing appropriate products and services. Are customers looking for price, quality or a completely new function? It is important to rapidly and accurately ascertain such customer requirements. The same can be said of host communities. It is important to ascertain through constant communication with area residents what people perceive to be problems in the vicinity of business sites.

An example of the Kyowa Hakko Group's community involvement is the Bio-adventure Mobile Laboratory program. Employees visit schools in a specially designed mobile laboratory filled with a variety of experimental equipment to "deliver" science instruction

to students of local elementary schools and junior and senior high schools. We are committed to continuing our modest efforts to instill interest in genes and fermentation, as well as Japan's wonderful traditional biotechnology. Most of all, we seek to cultivate an active interest in science among the children who will be tomorrow's leaders.

Aiming to Be a Unique Company Essential to Society

The Kyowa Hakko Group has set forth a long-term vision of being "A life sciences company built on the world's very best fermentation biotechnologies." Over the years, the Group has brought the world Mitomycin C and many other chemotherapeutic agents produced by means of fermentation technologies. In the field of antibody drugs, Kyowa Hakko was among the first companies to adopt monoclonal antibody production technology during the so-called biotechnology boom in the 1970s, foresight that resulted in our current success with POTELLIGENT® technology. In this way, the Kyowa Hakko Group aims to be a unique company essential to people the world over: a life sciences company that makes wide-ranging contributions to the health and well-being of people through pharmaceuticals and other beneficial products based on biotechnologies derived from fermentation, a traditional Japanese technology.

The recently published IPCC* Fourth Assessment Report outlines a future in which global warming caused by fossil fuel consumption is a certainty. In this era of environmental concern, wise corporate leadership to chart a difficult course between growth strategies and environmental protection is required. I would like to ask for your continued guidance and encouragement in the coming years as Kyowa Hakko continues its quest to realize its long-term vision.

September 2007

Dr. Yuzuru Matsuda
President & Chief Executive Officer
Kyowa Hakko Kogyo Co., Ltd.

* IPCC: Intergovernmental Panel on Climate Change

Contributing to People's Well-being Through Fermentation

The prefix "bio" comes from the Greek word "bios," meaning "life," and the word "biotechnology" is a collective term for technologies that apply biological functions to create engineering solutions. The Japanese are a people who have long been highly skilled in the use of biotechnologies in everyday living; for instance, the traditional production of miso, tofu and sake and indigo dyeing involve the clever use of the biological functions of organisms. It is precisely because of this solid foundation in the use of biotechnology in Japan that many antibiotics (a classic example of medications obtained from microorganisms) have been discovered in Japan.

The Kyowa Hakko Group's first business was the manufacturing and sale of solvents, antibiotics, amino acids, alcohol and other useful substances produced by fermentation. This is a traditional Japanese technology with a thousand-year history, and this was the background to the breakthrough Kyowa Hakko achieved in 1956 when it became the first company in the world to successfully produce an amino acid on an industrial scale by means of fermentation. Today Kyowa Hakko continues to apply biotechnology to create many new products that greatly contribute to people's health and well-being.

Corporate Philosophy

Kyowa Hakko will contribute to the health and well-being of people worldwide by creating new value with the pursuit of advancements in life science and technology.

(Amended in March 1999)

Company Guiding Principles

Wachu Kyodo (Harmonious Cooperation)

Kappatsu Hatchi (Energy and Vitality)

Jinbun Ritsuyo (Self-knowledge and Service)

Management Guidelines for Social Responsibility

Kyowa Hakko has drafted seven management guidelines based on its Corporate Philosophy that bear on operations; its relationships with customers, shareholders and employees as well as society; its corporate ethics; and the environment and safety. (Introduced in March 1999)

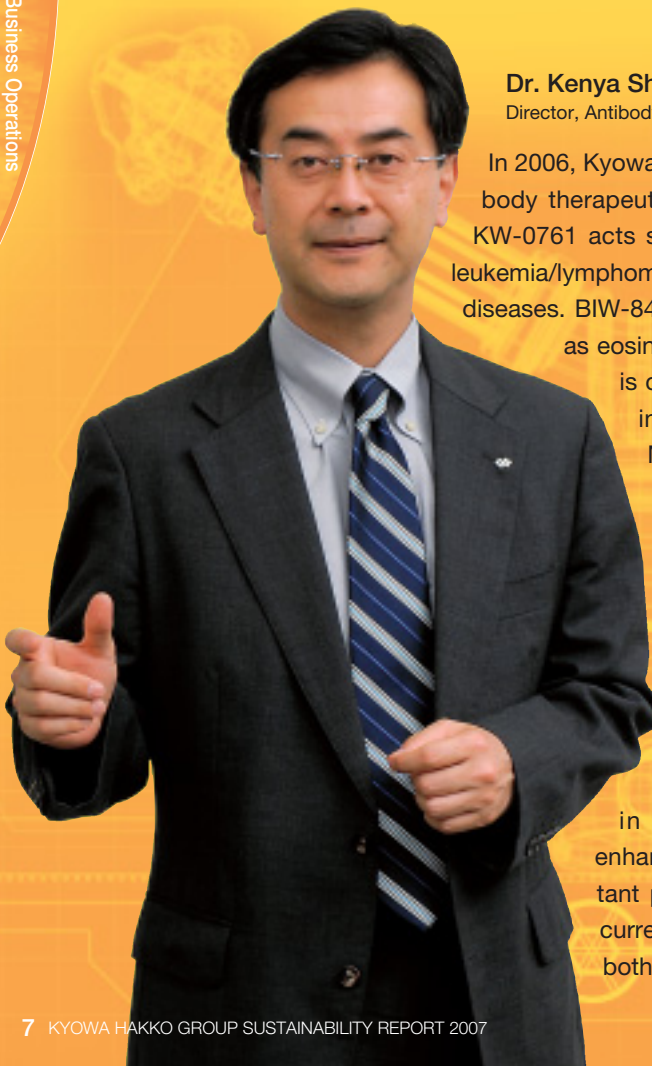
Pharmaceuticals

POTELLIGENT® Technology

Kyowa Hakko has developed POTELLIGENT® technology, an ADCC-enhanced antibody engineering technology that dramatically increases the activity of therapeutic antibodies, today's most closely watched biotechnology-based pharmaceuticals. This technology enhances cellular cytotoxicity by removing fucose, a sugar chain that naturally occurs in antibody molecules, and efficiently kills cancer cells and other target cells. The technology is expected to contribute to improvement in therapeutic efficacy and medical care economics. In addition to application in therapeutic antibody development at Kyowa Hakko, the technology is actively being licensed out to pharmaceutical and bioscience companies around the world.



For Tomorrow's Healthcare



Dr. Kenya Shitara
Director, Antibody Business Office, Pharmaceuticals Business Unit, Kyowa Hakko

In 2006, Kyowa Hakko initiated clinical trials of KW-0761 and BIW-8405, two antibody therapeutics independently developed using POTELLIGENT® technology. KW-0761 acts specifically on immune cells involved with allergic diseases and leukemia/lymphoma cells, and is being developed for use in the treatment of these diseases. BIW-8405, which acts specifically on a class of white blood cells known as eosinophils, is being developed for the treatment of asthma. BIW-8405 is currently in Phase I clinical trial, and the development and marketing rights for Europe and North America have been licensed to MedImmune, a major U.S. biotechnology company.

U.S. subsidiary BioWa is moving forward with POTELLIGENT® technology out-licensing activities, and the technology has been licensed to a total of nine companies (including two undisclosed companies), such as Genentech, Biogen Idec, MedImmune, Medarex, and other leading antibody therapeutics companies around the world.

POTELLIGENT® technology enhances antibody-dependent cellular cytotoxicity (ADCC), an important physiological mechanism of antibody therapeutics. Kyowa Hakko has also succeeded in the establishment of COMPLEGENT™ technology, which enhances complement-dependent cytotoxicity (CDC), another important physiological mechanism. These technologies can be used concurrently, and Kyowa Hakko plans antibody drug enhancement using both technologies and promotion of out-licensing activities.

The BioWa, Inc. Story

The Antibody Business Crosses the Ocean

BioWa is an antibody venture company established in Princeton, New Jersey, for the purpose of strategically commercializing POTELLIGENT® technology. The company has exclusive licensing rights to POTELLIGENT® and COMPLEGENT™ technologies and engages in activities to out-license these technologies to clients.

The name BioWa was derived by combining "Biotechnology" and "Kyowa." The "Wa" in Kyowa means "harmony" in Japanese, and the company name reflects the aspiration that the employees cooperate and work harmoniously to improve health through advancements in life science and technology.

Kyowa Hakko established BioWa in February 2003, with only three employees. The first president of BioWa was Dr. Nobuo Hanai, who was involved in antibody research and played a main role in the establishment of POTELLIGENT® technology. He successfully established BioWa's business in the United States, overcoming many difficulties. In April 2007, Dr. Masamichi Koike became president and is expected to achieve further development of global technology licensing for POTELLIGENT® and COMPLEGENT™ to pharmaceutical manufacturers and bioscience companies.



The BioWa website
<http://www.biowa.com/>



President Koike (front row, second from the left) and the BioWa team

New Drug Application in the U.S. for KW-6002 Anti-Parkinson's Agent

On April 25, 2007, Kyowa Hakko filed with the U.S. Food and Drug Administration (FDA) an application for approval of KW-6002 anti-Parkinson's agent. Parkinson's disease is an illness that strikes when a nervous system imbalance occurs as a result of lack of dopamine, neurotransmitter substance in the brain. Although the mainstream therapy for Parkinson's disease is administration of L-DOPA to replenish the decreased

dopamine, efficacy decreases in long-term administration. KW-6002 acts to improve the motor functions of Parkinson's disease patients when used in combination with L-DOPA.

KW-6002 is an agent that acts as an Adenosine A_{2A} receptor antagonist in the brain and is expected to become a new type of anti-Parkinson's agent that can contribute to improvement of Parkinson's disease symptoms.

Bio-Chemicals

Hydroxyproline Derivative AHYP®

Hydroxyproline is an amino acid generated during the synthesis of collagen. In the past, hydroxyproline was obtained by means of the hydrolytic cleavage of animal collagen. In 1997, Kyowa Hakko successfully industrialized a process for producing hydroxyproline from plant-derived sugar using microorganisms. Since that time, we have supplied the world with raw materials for pharmaceutical syntheses and cosmetic raw materials.

Development of Materials That Realize New Functions

Tetsuo Nakano

Marketing & Business Development Department, Kyowa Hakko

AHYP® is acetyl hydroxyproline, and is synthesized using plant-derived hydroxyproline as a raw material. AHYP® acts to increase collagen synthesis in the skin. In Germany and France, it has been used as an active ingredient of osteoarthritis drugs and antipyrotics (burn treatments). In Japan and the United States, where it can be used as a general chemical or a cosmetic ingredient that make use of its anti-aging action and moisturizing action have come on the market. Recent approval by Japan's Ministry of Health, Labour and Welfare for use of AHYP® as a quasi-drug additive in Japan has given rise to expectations of more applications to come.

A new physiological function of AHYP® that has attracted public attention is its action of improving skin barrier function. In recent years, the number of people who suffer from itching caused by atopic dermatitis or dry sensitive skin has increased, and skincare that restores the skin barrier function has been reported to be effective in aiding the treatment of and preventing such skin conditions. We have found that AHYP® promotes ceramide synthesis, which is essential to the skin barrier function, and have confirmed in volunteer testing that it is an effective ingredient for use in skincare for itchy skin.

Also, the spread of air conditioning and increasing airtightness of residences have aggravated allergic diseases caused by mites and house dust. Recent research has shown that AHYP® has direct action against mite allergens and pollen allergens and is capable of converting them into largely non-allergenic substances. Application of this property to clothing and to non-woven fabrics, woven fabrics and other textile products is possible, and we hope that AHYP® will contribute to the creation of comfortable environments for allergy sufferers.

Healthcare Products Development Center



Remake Fermented Coenzyme Q10

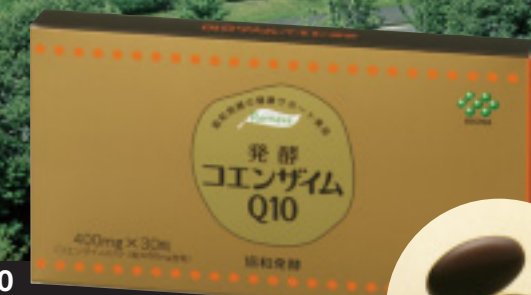
Coenzyme Q10 is a substance found in the human body that assists in the creation of energy and functions as an antioxidant. Kyowa Hakko has developed an original fermentation technology that uses photosynthetic microbes in the efficient manufacture of Coenzyme Q10.

Akemi Kitamura

Healthcare Products Development Center, Kyowa Hakko

Coenzyme Q10 has become rather famous, even in Japan. Kyowa Hakko has succeeded in producing high-quality Coenzyme Q10 by making a series of improvements to Coenzyme Q10 purification techniques. On April 3, 2007, Kyowa Hakko launched *Remake Fermented Coenzyme Q10*, a new addition to our *Remake* series of exclusive direct-market products, with the aim of directly providing customers with Coenzyme Q10 of our own manufacture. In the manufacture of *Remake Fermented Coenzyme Q10*, we place importance on the reliability that is so important for health foods, and have confirmed reliability in objective third-party examinations. For instance, we have acquired the certification mark of the Japan Health Food & Nutrition Food Association (JHFA) and the quality approval examination acceptance mark of the Japan Coenzyme Q Association.

Remake Fermented Coenzyme Q10 is a supplement that has evolved through input from customers. To cite an example, in response to requests from customers to use more compact packaging materials to minimize waste, we have improved and reduced the size of the packaging materials. We expect the product to further evolve in the future.



Medical Representative

Morning Tasks
MRs manage schedules and share information.



Sending Out Product Literature
This is another opportunity to demonstrate teamwork.



A Customer Visit
Appropriate information provision is the key to winning trust.



A Business Presentation
The sales office holds independent study sessions.



Group Learning
Participants enhance the practicality of instructor advice when self-confirmation of learning becomes important to them.



The Vocation of Providing Medical Information

Contributing to Community Medicine through Products Developed In-house

Motohiro Hayase

Manager, Yokohama No. 4 Sales Office, District Yokohama, Tokyo Branch, Kyowa Hakko

The Yokohama No. 4 Sales Office is a new sales office established less than five years ago. From this base, seven medical representatives (MRs), including one woman, cover medical practitioners in the six wards of northern Yokohama and all of Kawasaki. Newly established clinics have proliferated in this area with a growing population, and the separation of dispensing from medical practice has resulted in a large number of dispensing pharmacies. These developments have brought a sharp increase in the number of accounts per MR. For this reason, we strive to maintain close daily communication and ensure that the seven MRs can constantly share information. The MRs demonstrate close teamwork in the collection and provision of information on the proper use of pharmaceuticals, focusing on hypertension/cardiac angina therapeutic agents and allergy therapeutic agents developed in-house. We will carry on with enthusiastic, active MR activities grounded in our mission of contributing to community medicine through our pharmaceuticals.

“Education Without Teaching” to Nurture Employees through Self-growth

Takashi Kato

Manager, Education and Training Group, Marketing Department, Pharmaceutical Business Unit, Kyowa Hakko

Our industry has seen a boom in “education without teaching,” an educational approach similar to conventional active learning* and discovery-based education. Kyowa Hakko was among the first companies in the industry to introduce this approach when we adopted it for new MR introductory training in fiscal 2006, and we have drawn attention as a company for applying this method to nurturing employees through self-growth.

What is “education without teaching”? Basically, it is about having people learn methods of acquiring knowledge by means of group learning, not teaching knowledge in a lecture format, as in conventional education. Although we teach basic knowledge, subsequent learning is by means of joint learning in groups. In these groups, the employees take the initiative in acquiring knowledge and learning methods of knowledge acquisition and output techniques. They follow a process of seeking out and compiling information themselves, giving presentations, and answering questions. Whereas, in our previous training, I think that many employees could not wait for the lectures to end, and since the adoption of this method, I have been deeply impressed that people lose track of time and learn proactively.

* Active learning is a learning method by which students take the initiative in learning rather than learn passively, and consequently grow through self-awareness. The role of the instructor is to guide students through the process.

The Basic Approach to Corporate Governance

Kyowa Hakko's corporate philosophy is to contribute to the health and well-being of people worldwide by creating new value with the pursuit of advancements in life sciences and technology. We have established the management organization and structures and are implementing the measures needed to realize this philosophy. We recognize that increasing the transparency of management and strengthening management supervision are important for continuously increasing corporate value and are working to enhance corporate governance.

Strengthening Corporate Governance and Internal Control

The Board of Directors and the Board of Auditors are the foundation of Kyowa Hakko's system of management institutions. The Board of Directors consists of six directors, of whom one is an outside director, and four corporate auditors, of whom three are outside corporate auditors (as of June 20, 2007). In accordance with audit policies determined by the Board of Auditors, the corporate auditors attend important meetings, including meetings of the Board of Directors. They also audit the performance of the directors' duties by surveying corporate operations and finances. The Company has established the Management Meeting and introduced an executive officer system to ensure efficient management decisions and rapid decision making and has established the Advisory Board (consisting of four outside advisors) to strengthen the management structure and increase management transparency and soundness.

At a meeting of the Board of Directors held in May 2006, Kyowa Hakko passed a resolution on a policy to develop systems for ensuring the appropriateness of

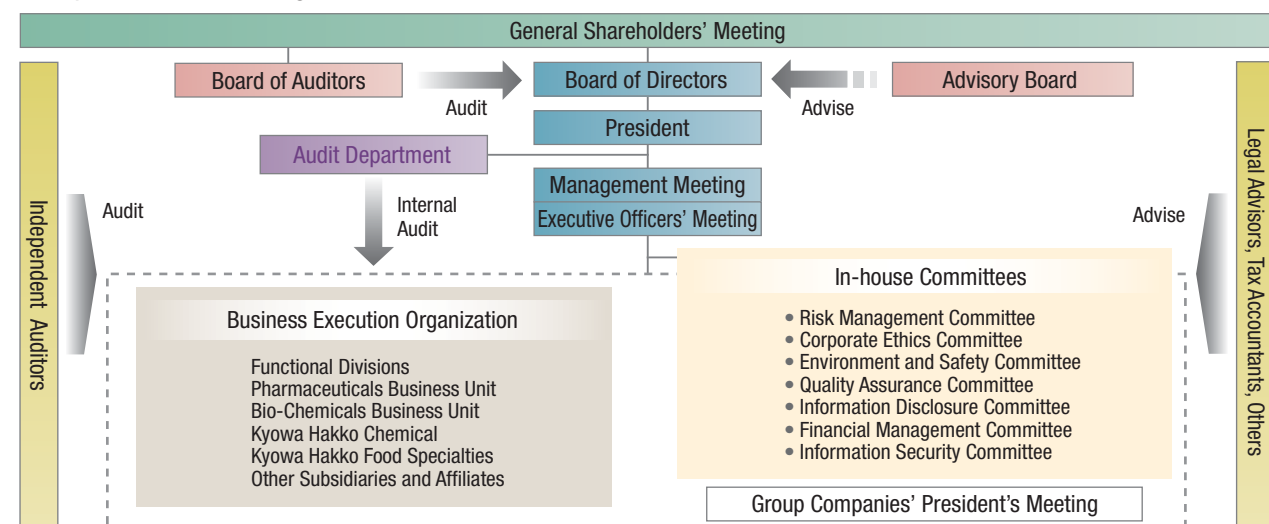
business operations (internal control systems) and is continuously developing systems based on specific points of the resolution. The Audit Department, which controls internal auditing, works with the corporate auditors to conduct audits of business operations in the Kyowa Hakko Group with regard to compliance with laws, regulations and the Articles of Incorporation, and from the perspective of management efficiency. It reports the audit results and offers advice and proposals for improvements and greater efficiency.

Managing Risk through In-house Committees

Kyowa Hakko has established in-house committees to deliberate on basic policies of management and develop responses to a variety of potential risk factors. These committees submit annual reports on their activities to the Board of Directors. The principal roles of the in-house committees are described below.

- **Risk Management Committee:** Deliberates on measures to implement group-wide risk management to identify potential management risks; Assess risks from a group-wide perspective and implements a risk response.
- **Corporate Ethics Committee:** Ensures and promotes legal and ethical behavior in order to earn the confidence of the general public; Formulates ethical codes of conduct for employees. Focuses on the soundness and appropriateness of the corporate activities.
- **Environment and Safety Committee:** One of the President's advisory groups, debates basic policies relating to environmental protection and safety.
- **Quality Assurance Committee:** One of the President's advisory groups, focuses on basic quality assurance policies.
- **Information Disclosure Committee:** Deliberates on important matters relating to basic information policies and information disclosure.
- **Financial Management Committee:** Focuses on the efficiency of financing activities and discusses finance-related risks.
- **Information Security Committee:** Discusses basic policies relating to the protection and handling of confidential information held by the Kyowa Hakko Group.

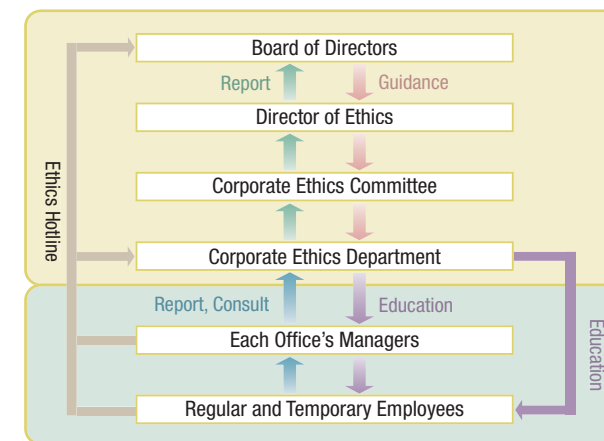
Corporate Governance Organization



Basic Policy and Implementation Structure

The Kyowa Hakko Group regards compliance as a top management priority and strives to promote corporate ethics and ensure rigorous compliance with the law. The Corporate Ethics Committee, established in July 1998, has played a central role in the formulation of the Kyowa Hakko Ethical Principles and the Kyowa Hakko Codes of Ethical Conduct for Employees and the establishment of the Ethics Hotline, an internal compliance-related reporting system. The Company has also established the Corporate Ethics Department, a dedicated organization whose role is to ensure the observance of corporate ethics and compliance throughout the Group in Japan.

The structure for promoting corporate ethics is shown below.



Education and Awareness Activities

Kyowa Hakko emphasizes education and awareness activities to ensure that all employees, including corporate officers, recognize the importance of corporate ethics and acquire correct knowledge about ethics. We engage in the following cornerstone education and awareness activities once each year.

- **Corporate ethics lectures:** We hold lectures for corporate officers, business site managers and general managers. Depending on the specific topic, these lectures are conducted by attorneys, university professors or other outside instructors.
- **Corporate ethics briefing sessions:** We hold briefing sessions for all corporate officers and employees as collective instruction conducted at individual business sites. The topic changes each year, and the Corporate Ethics Department conducts the briefings.
- **E-learning instruction:** We provide ethical instruction centered on case studies for officers and employees. Once each year we use the e-learning system to conduct an ethics check (a monitoring activity) by which all officers and employees review their own day-to-day behavior.



In addition to these activities, we continuously conduct department-level training about relevant laws, regulations and rules.

Shared Widely Via the Intranet

The Corporate Ethics Department has opened its own website on the intranet of Kyowa Hakko. The website features Kyowa Hakko's ideas and system on corporate ethics, a guide to the "Ethics Hotline" as an internal compliance-related reporting system and other essential information on corporate ethics. The website also releases the monthly "Corporate Ethics News," which has some comments from the Corporate Ethics Department on the latest topics.

Information Security, Personal Information Protection, Control of Trade

Kyowa Hakko recognizes the importance of information control in a corporation. We implement information security measures and respond to various societal requirements by putting in place internal systems and regulations and conducting training to ensure compliance with laws, regulations and rules, including the Act on the Protection of Personal Information and security export control laws and ordinances.

Management Guideline & Points

Extracts from the "Kyowa Hakko Ethical Principles"

Management Guideline

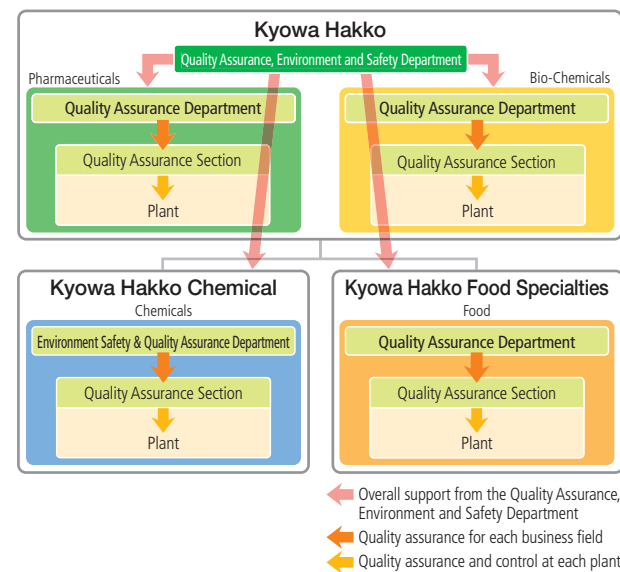
We will respect corporate ethics and also fulfill social responsibilities.

Key Points

- The Company will comply with the law, self-imposed restrictions and the highest ethical principles in all business practices.
- While the Company is a for-profit organization, it will not seek to realize gain or advantage that cannot be obtained without violating the law or compromising its ethical principles.
- The Company will engage in fair, transparent and free competition and transactions in all business activities. The Company will maintain sound and proper relationships with political or administrative organizations and any other interested parties.

Triple-check Quality Assurance System

The Kyowa Hakko Group consists of three companies, which are active in four business fields. We maintain a triple-check system to confirm that quality assurance systems function properly from the customer's perspective by maintaining quality assurance units at each manufacturing site (plant), quality assurance units for each business field and the Quality Assurance, Environment and Safety Department, which provides group-wide audit support.



Management Guideline & Points

Customers

Management Guideline

We will provide products, services and information that are superior in terms of quality and function in accordance with a policy of placing top priority on customer satisfaction.

Points (Extract)

- We will create products, services and information that satisfy customers, are at the forefront of the era and have new value.
- We will seek to engage in consultative selling grounded in the point of view of our customer and provide high-quality information and heartfelt service.
- We will diligently work toward group-wide cooperation to disseminate customer feedback with the aim of quickly responding to customer needs and complaints.
- We will actively collect safety information and incorporate it into products, services and information while making the necessary disclosures to customers.
- We will closely examine raw materials and create quality through sophisticated manufacturing processes.
- We will implement such international quality assurance systems as GMP, ISO and HACCP to improve manufacturing and quality management.
- We will collaborate with outsourcing partners and suppliers and strive to ensure the quality of outsourced products and raw materials.

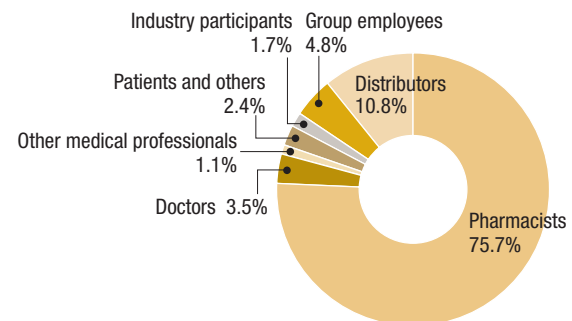
Ensuring the Appropriate Use of Pharmaceuticals

Kyowa Hakko provides information about the appropriate use of pharmaceuticals in various forms, including prescribing information, interview forms, product overviews and instruction sheets, as well as responses to telephone, e-mail and mail inquiries. This work is handled by the Medical Information Center. The number of inquiries handled has gradually increased, and the total number in fiscal 2006 rose by 2,000 from the previous year to exceed 27,000. More than three-fourths (75.7%) of telephone inquiries were from pharmacists, and the number of inquiries from pharmaceutical wholesalers is on the rise. It is likely that the increase is attributable to the launch of the new drugs Patanol and Bothdel, drug price revisions and the launch of generic drugs corresponding to Kyowa Hakko products. In April 2007, we introduced a system to record all telephone calls as a part of risk management, and a customer recognition system with the aim of increasing customer satisfaction.

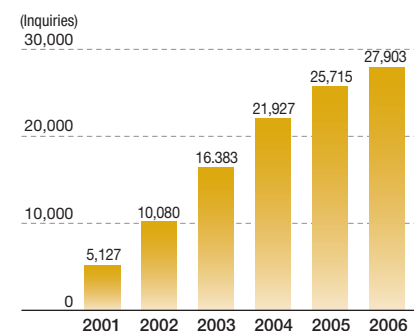


Medical Information Center

Breakdown of the Number of Telephone Inquiries in FY 2006



Change in Number of Inquiries



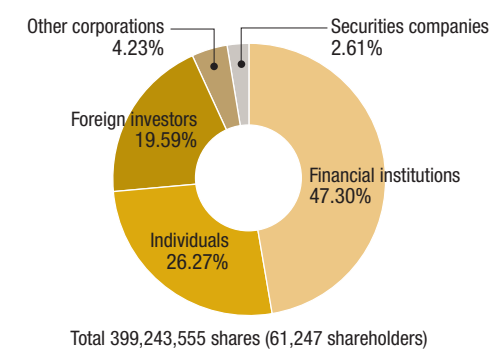
Relations with Shareholders and Investors

The Kyowa Hakko Group regards investor relations as an important management priority and endeavors to provide shareholders and investors with business information in a manner that is timely, appropriate and fair. We have established a disclosure policy to ensure the information benefits our customers, employees, society, shareholders, investors and other stakeholders. Our aim is to communicate a wide variety of information about the Kyowa Hakko Group as one element of sincere and highly transparent management.

Disclosure Policy

Based on the principles of transparency, fairness and consistency, Kyowa Hakko strives to provide timely, accurate disclosure of information to shareholders and other investors in accordance with the Financial Instruments and Exchange Law and the timely disclosure rules of the Tokyo Stock Exchange (TSE). In addition, Kyowa Hakko is committed to the timely and active disclosure of other information that, in the judgment of the Company, will be effective in helping shareholders and other investors to understand Kyowa Hakko. (Established September 2006)

Shareholder Composition (As of March 31, 2007)



Analyst meeting on financial results held on April 27, 2007

Analyst Meetings

Kyowa Hakko holds meetings at which the CEO explains to institutional investors, securities analysts and mass media representatives the financial results for the interim period and fiscal year. Interested parties unable to attend the meetings may obtain accounts of the meetings from the Kyowa Hakko website for shareholders and investors. The CEO and other corporate executives strive to actively disclose business information at all times and visit overseas investors each year.



Kyowa Hakko Website for Shareholders and Investors
<http://ir.kyowa.co.jp/english/index.cfm>

Reports for Shareholders and Investors
 —“To Our Shareholders” and the Annual Report—

Kyowa Hakko sends the report “To Our Shareholders” (formerly the business report) to shareholders twice a year and posts the report on its website for viewing by investors other than shareholders. We distribute a printed English-language annual report for overseas investors and post the English version and Japanese version of the report on the corporate website.



Annual Report 2007

Relations with Business Partners

Since 2000, the Kyowa Hakko Group has conducted a questionnaire survey among our principal suppliers of raw materials, packaging materials and other items seeking information on green procurement. The survey helps to clarify our request for their cooperation in environmental consideration. The survey in 2005 covered the establishment of environmental management systems and chemical substance usage restrictions. For 2007, we are considering a change from green procurement to CSR procurement.

Employee Training

In parallel with the corporate-culture reform initiatives (For details, see page 21, Sustainability Report 2006.), Kyowa Hakko also devotes considerable effort to human resource development. Employee training is broadly divided into rank-based training, upper management training, organizational culture reform and support for employee upskilling. There are also numerous programs specific to individual business operations, including business upskilling courses. Kyowa Hakko regards human resource development as a key management priority and will continue to enhance and strengthen programs in this area.

There are also educational and training programs designed to raise employee's environmental and safety awareness. Furthermore, we have created an ecology page in the employee newsletter that provides employees with timely information concerning the environment, health and safety.

Mission & Action for Progress (MAP) System

In April 2005, Kyowa Hakko radically revised its existing skill-development programs and introduced a management tool named the "Mission & Action for Progress" (MAP) system. The aim of this management approach is to speed up the achievement of operational priorities through appropriately repeated plan-do-see (PDS) cycles. The MAP system is used as a tool to promote communication between employees and supervisors. Work targets and expectations about approaches to work are clearly defined and result assessments are clearly explained.

Women account for over 1% of the managers at Kyowa Hakko. Through the ∞URUOI (motivation) Project and other activities, Kyowa Hakko is seeking to expand opportunities for women.

Active Challenge System (Internal Job-posting Program)

Kyowa Hakko operates an internal job-posting system and a free-agent (FA) system for its employees. Job details are posted on an internal website. The aim of this recruitment method is to match the needs of the workplace with the ambitions and career goals of employees.

Award System

Kyowa Hakko presents a variety of awards, including the President's Awards and awards for inventions, in recognition of especially meritorious achievement by employees. (For details, see page 18, Sustainability Report 2002.) Employees who have made significant contributions in the areas of the environment, safety, or quality are also recognized under this system.



President's Award ceremony

Childcare Support Measures

Out of desire to provide childcare support for employees, Kyowa Hakko has prepared the following programs jointly with the labor union for study and sequential implementation.

- Implementation of support systems for employees who take childcare leave (implemented in 2006)
- Enhancement of the system providing reduced working hours for childcare (implemented in 2006)
- Assistance for childcare service expenditures (under consideration)
- Active publicizing of internal systems, information provision and development of a consultation system (implementation planned for 2007)
- Publicizing of systems pertaining to the Childcare Leave Law (implementation planned for 2007)

Employment of Workers with Disabilities

Kyowa Hakko's rate of employment of people with disabilities increased from 1.54% in June 2005 to 1.9%, the standard in the Law for Employment Promotion, etc. of Persons with Disabilities, in June 2006. The figure of 2.02% in June 2007 satisfied the legal standard. Kyowa Hakko will continue to implement workplace environment improvements consistent with the aptitudes and lifestyles of individual employees.

Labor-management Communication

Both management and labor recognize the importance of communication as the basis of labor-management relations in Kyowa Hakko, and there is a shared commitment to problem solving through proper consultation. The key forums for labor-management communication are the Management and Union Communication Councils at central and site levels, which are used to discuss issues relating to corporate management and operational policies. The forum for consultation on salaries and working conditions is the Remuneration Committee. Meetings of the Management and Union Communication Councils and Remuneration Committee are convened from time to time to facilitate the resolution of issues that arise in relation to reforms under the current medium-range management plan. Labor and management are working together in the spirit of cooperation to ensure the survival and growth of business operations as the source of employment.



Central Management and Union Communication Council

Mental Health Initiatives

On the basis of the General Outline for Measures to Create Lively Workplaces, which focuses on mental health, since 2006 Kyowa Hakko has implemented comprehensive measures based on four types of mental health care: self-care, care provided by line managers, care provided by industrial physicians and healthcare staff and care utilizing external resources. We have proceeded with group-wide development of systems throughout Japan for the maintenance and promotion of mental health, and since 2006, have conducted stress diagnosis for all employees and provided feedback to enable individual employees to implement stress countermeasures. Eighteen employees have obtained industrial counselor qualifications and act as mental health promoters in workplaces.

Company Events are Ideal Venues for Promoting Communication

Masahiro Iwamoto
Industrial Counselor
General Affairs Section
Kyowa Hakko Food
Specialties Tsuchiura Plant



An article with the headline "Sharp Increase in Emotional Disorders among Company Employees in Their 30s" recently appeared in a newspaper. While the pressure of results-oriented jobs is one cause of increased emotional disorders, another cause mentioned in the article as exerting a significant impact is the workplace environment, for instance a decrease in workplace communication.

At the Tsuchiura Plant, we have independently conducted communication training since the year before last with the aim of improving communication by working on two points: listening skills and stroking*. Although companies implement various measures to promote mental health, I feel that what is most necessary is to create personal relationships and workplace relationships that enable people to talk freely when they have problems or worries.

*The term "stroking" refers to various forms of encouragement that affirm the existence and value of others. Means of stroking are "skinship" (such as shaking hands or hugging), language (such as words of praise or encouragement) and nonverbal signals (nodding, watching intently).

Management Guideline & Points

Employees

Management Guideline

We will establish a motivating workplace by promoting the enhancement of individuals' abilities and creativity, as well as emphasizing fair evaluation and treatment of employees.

Points (Extract)

- We will nurture a corporate culture that encourages proactive and creative work by providing opportunities for employees to demonstrate these qualities.
- We will carry out thorough evaluations and award compensation based on work, special skills and performance.
- We will upgrade training programs and a self-improvement system.
- We will provide support programs for financial planning.
- We will ensure a safe and hygienic workplace.
- We will create a work environment that fosters both mental and physical health.
- We will create a work environment that enables every employee, including senior citizens, women, people with disabilities and foreigners, to demonstrate their abilities.
- We will create an environment in which employees can act as members of the community and participate in activities to improve the community.

Occupational Safety and Health Management Systems, Risk Assessment

The Kyowa Hakko Group engages in safety and health activities in accordance with the Management Guidelines for Safety and the Environment (see page 25). On the basis of the Environment and Safety Policy, Group organizations individually decide policies, objectives, targets and plans and engage in safety activities in accordance with their business circumstances. Progress is checked in annual safety audits, improvements are systematically implemented, and the audit results are reported to management at meetings of the Environment and Safety Committee and reflected in the action plan for the following year.

When starting up new businesses or changing existing businesses or processes, we conduct risk assessments of technical and production processes, facilities and machinery, and chemical substances. The Company seeks to minimize risk by eliminating or mitigating risk factors in accordance with the danger or hazard risk level by conducting safety and environmental impact studies. In fiscal 2006, to enhance risk assessments, we began training in comprehensive safety standards for machinery targeting managers with responsibility for environmental and safety matters and facilities managers of production and research bases. Affiliated companies identify dangers and hazards and engage in risk mitigation activities by means of close-call analysis hazard prediction training and risk assessments.

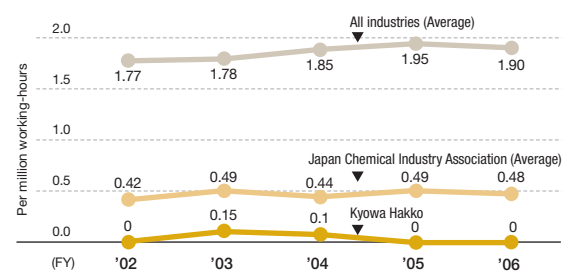


Training in comprehensive safety standards for machinery

Accident Statistics

In fiscal 2006, as in fiscal 2005, the number of accidents resulting in lost working days at Kyowa Hakko, Kyowa Hakko Chemical, Kyowa Hakko Food Specialties and Kyowa Medex was zero, and the occupational injury frequency rate*1 and severity rate*2 remained zero. As indicated in the following graph, Kyowa Hakko has maintained an occupational injury frequency rate that ranks among the best in the chemical industry. For the

Kyowa Hakko Occupational Injury Frequency Rate



Kyowa Hakko Group (domestic companies) including Kyowa Hakko, the number of accidents resulting in lost working days was zero.

★1 Defined as the number of injuries resulting in lost days per million working hours
★2 Defined as lost days per thousand working hours

Awards

We received or set a number of major awards and accident-free records in Fiscal 2005 and 2006.



2006

- **Ministry of Health, Labour and Welfare Class 1 Safety Record** (6.2 million accident-free hours) Hofu Plant
- **Certificate awarded by the Japan Industrial Safety and Health Association (JISHA) in recognition of a new accident-free record for the organic chemical industry** (22.76 million accident-free hours) (above, left) Kyowa Hakko Chemical Yokkaichi Plant
- **Green Cross Award** (for individuals) Kyowa Hakko Chemical Yokkaichi Plant
- **Minister of Health, Labour and Welfare Safety Award** (above, right) Sakai Plant

2005

- **Certificate awarded by the Japan Industrial Safety and Health Association (JISHA) in recognition of a new accident-free record for the organic chemical industry** (22.12 million accident-free hours) Kyowa Hakko Chemical Yokkaichi Plant
- **Ministry of Health, Labour and Welfare Class 3 Safety Record** (14 million accident-free hours) Fuji Plant
- **Japan Association for Safety of Hazardous Materials Chairman's Award** Kyowa Hakko Chemical Sakai Distribution Center (Chiyoda Kaihatsu Osaka Sales Office)

Accident Prevention Assessments

To prevent fires, explosions and other safety-related accidents, the Kyowa Hakko Group implements safety activities centered on risk assessment. It is important for a manufacturing plant that is surrounded by residential areas to minimize the impact outside plant premises, should a malfunction occur. Accordingly, Kyowa Hakko conducts rigorous accident prevention assessments and implements accident prevention measures. Although a small fire broke out on December 25, 2006 at Kyowa Hifoods when sparks from a metal cutting machine ignited rubbish in a dust collector exhaust duct, the fire was extinguished in early-stage firefighting. The company undertook improvements in equipment and procedures to prevent a recurrence and resumed production.

Plant Emergency Drill (Hofu Plant)

On June 9, 2006, the Hofu Plant and the Hofu City Fire Department jointly conducted a comprehensive disaster-preparedness drill that simulated an alcohol tank explosion and fire. The drill was conducted due to a previous bitter experience with an explosion and fire accident and



Emergency Drill (Hofu Plant)

the reorganization of the plant fire brigade.

Measures to Prepare for a Major Earthquake

The Kyowa Hakko Group in Japan is determined to fulfill its social responsibilities as a manufacturer, particularly its responsibilities as a supplier of pharmaceuticals. The Group has made preparations that include the dispersal of production and distribution operations, the earthquake-proofing of buildings and the preparation of manuals and other measures regarding equipment and procedures. It also makes periodic reviews of these preparations. Kyowa Hakko has augmented its emergency communication system by installing satellite cellular telephones at all business sites, including sales offices, and engaging in twice-monthly broadcast drills.

Each November, the Fuji Plant conducts disaster-preparedness drills in preparation for an earthquake in

the Tokai region. In 2006, the plant confirmed the extent of its response capability by means of emergency instructions issued from the fire department to the brigades during training with no advance disclosure of the instructions. The plant intends to continue with practical drills based on emergency situations. Furthermore, the plant has established procedures for the provision of support to area residents in times of earthquake emergency. These include maintaining a primary evacuation site; the provision of food, water, bedding and other commodities; temporary lavatory facilities and firefighting and lifesaving services. In 2006, Kyowa Hakko headquarters conducted a fire and emergency evacuation drill and an emergency response headquarters establishment drill. Based on the results, in June 2007 we introduced a safety confirmation system for employees and their families for use in an earthquake emergency. The headquarters and sales offices have stockpiled drinking water and food and deployed radios, helmets and other emergency supplies.

Distribution Safety

The Kyowa Hakko Group maintains a 24-hour emergency response system to rapidly deal with emergencies during the transportation of chemicals and alcohol. We have introduced the Yellow Card and Container Yellow Card systems and thoroughly instruct distribution and transportation workers in disaster response methods. There were no distribution-related accidents during fiscal 2006.



Checking the Yellow Card (Kyowa Hakko Chemical Chiba Plant)

Emergency Action Guideline

Emergency

Guideline for Action

The basic principles for individual action are awareness of one's role as an official member of society and consideration of how one should act in relation to society.

Points

- Consideration for human life and health is the first priority.
- We will strive to minimize impacts on customers, shareholders, suppliers, consumers and communities.
- We will give priority to humanitarian and social contribution, even if this causes a temporary disadvantage to the Company.
- We will take all possible care to protect and conserve the environment.
- We will maintain a high standard of transparency and disclose accurate information as part of corporate governance.

Responsible Care (RC) Community Dialog (Ube Plant)

Kyowa Hakko actively participates in community dialogs conducted by the Japan Responsible Care Council. Each year, the Ube Plant participates in a Responsible Care Community Dialog meeting in the Ube-Onoda District held jointly by five Japan Responsible Care Council member companies. The 2007 meeting drew about 50 participants, including representatives from residents' associations, environmental non-governmental organizations and public administration. Plant tours (of Central Glass Co., Ltd. Ube Plant) and explanations of environmental activities from the member companies were followed by vigorous questions from area residents concerning odor, chemical substances, global warming countermeasures, public relations activities and individual company presentations about their environmental and security activities.



The Ube-Onoda District Responsible Care Community Dialog meeting (March 15, 2007)

Health Promotion Lecture (Fuji Plant)

The Fuji Plant holds health promotion lectures for area residents on the topic of contributing to the health and well-being of people, the central tenet of Kyowa Hakkō's corporate philosophy. In October 2006, Toshikazu Kamiya of the Healthcare Products Development Center, delivered the second lecture in the series, titled The Function of Amino Acids in Health Maintenance and Promotion. He indicated that people can expect health maintenance and promotion benefits from knowing the characteristics of specific amino acids and skillfully selecting and ingesting amino acids suited to their individual health conditions and lifestyles.



Lecture given by Toshikazu Kamiya, a general manager at the Center

Plant Tour (Sakai Plant)

Fifty-two members of the Sakai City Town Development Expedition toured the Sakai Plant during an expedition in the vicinity of the plant, where a gunsmith shop from the Edo period and other historical structures remain. Following a general explanation of the company and plant, the participants toured the plant grounds, where a

red-brick building that housed the pilot plant for Japan's first commercial manufacturing of synthetic acetic acid and other structures of historical interest remain.



Members of the Town Development Expedition

Cook Mama Invitational Table Tennis Tournament

The 13th Cook Mama Invitational Table Tennis Tournament, supported by the Japan Table Tennis Association, drew 720 mothers living in Tokyo, Kanagawa, Saitama and Chiba who are competitive table tennis players. The participants took advantage of the rare opportunity to compete against peers from other prefectures in hotly contested matches. The event featured a rally and demonstration matches with members of the Kyowa Hakkō Table Tennis Team, and the spectators responded to super plays, bloopers and other thrilling action with applause and smiling faces.



A hard-fought table tennis match (February 2007, Yokohama Cultural Gymnasium)

Participation in the Kasumigaura Water Quality Conservation Network Exchange Project

The Tsuchiura Plant of Kyowa Hakkō Food Specialties has been awarded the Ibaraki Prefecture Governor's Environmentally Friendly Company Award (Environmental Project Category) in recognition of its achievements in separated collection of trash and recycling promotion activities.

In a lecture for citizens' groups on the theme Thinking About the Problem of Trash, the plant delivered an activities report titled Kyowa Hakkō's Waste Recycling Program. People involved with Lake Kasumigaura environmental problems attended the lecture and listened intently, indicating a high level of interest and concern about the problem of trash.

Science Experiment Classes

Kyowa Hakkō conducts science experiment classes to communicate the fun and fascination of science. The Hofu Plant's Technical Research Laboratories have planned voluntary science classes for local junior high schools. Since 2000, the Biofrontier Laboratories have operated a program by which volunteer researchers visit elementary, junior high and senior high schools with the Bio-adventure Mobile Laboratory, a dedicated vehicle filled with a variety of experimental equipment, to "deliver"



A class sponsored by Hofu Plant taught using microphotographs of amino acid crystals

instruction about the mechanisms of genes, beneficial microorganisms and other science topics. Kyowa Hakkō engages in other activities closely tied to host communities, such as the Children's Science Experiments and Junior Science School.

The Kato Memorial Bioscience Foundation

In fulfillment of the desire of Kyowa Hakkō founder Dr. Benzaburo Kato to promote the advancement of science and technology, The Kato Memorial Bioscience Foundation provides in wide-ranging research support for young researchers who aim to conduct creative, pioneering research in the field of bioscience. In fiscal 2006, the foundation supported 28 research projects.

Nippon Keidanren 1% Club

Kyowa Hakkō participates in the activities of the Nippon Keidanren 1% Club, a group established by the Nippon Keidanren (the Japan Federation of Economic Organizations) for companies that devote at least 1% of their ordinary income to fund social contribution activities. We engage in activities that include support in the fields of general and social education and academics and research as well as the provision of assistance for victims of the Chuetsu Offshore Earthquake.



Nineteenth Asahi Young Session

In a lecture titled Pursuing the Answer to the Mystery of Allergies delivered on March 10, 2007, Dr. Kimishige Ishizaka, the immunologist who discovered immunoglobulin E and elucidated the mechanisms of allergy, spoke to high school students and other youths about dreams, aspirations and guiding principles for living.

WWF Japan

The World Wide Fund for Nature (WWF), one of the world's largest conservation non-governmental organizations, engages in environmental conservation activities in about 100 countries around the world. WWF addresses six critical issues: forests, freshwater ecosystems, marine ecosystems, endangered species, climate change and toxic chemical substances. The WWF's activities are all supported by donations from individuals and corporations. Kyowa Hakkō provides support as a corporate member.

Distribution of Braille Calendars to Schools for the Blind Nationwide

Each year since 1994, Kyowa Hakkō has produced Braille calendars for people with visual impairments and distributed them free of charge to schools for the blind nationwide. We delivered about 4,000 copies of the 2007 edition of the calendar to 71 schools across Japan.



Management Guideline & Points

Society

Management Guideline

We will strive for management that is open to society and also vigorously adopt thinking based on global standards.

Points (Extract)

- We will carry out corporate activities that aim to realize growth that is in harmony with the communities in which we have operations, thus contributing to the development of society and the economy.
- We will work to earn the understanding and trust of local communities through communications, including the exchange of information, and participation in social contribution activities.
- We will carry out social contribution activities that will provide the young people who will lead the next generation with guidance for their lives and dreams to follow.
- We will respect the culture and customs of the regions in which we operate—both inside and outside Japan.
- In the event of a disaster, we will work closely with the local community in aid activities as well as recovery and reconstruction.

Management Guidelines for Safety and the Environment

“Work to protect the environment and maintain safety and also provide products with consideration of the environment and safety.” (Introduced in March 1999)

Declaration of Basic Policies for Health, Safety, the Environment and Product Safety

We declare with profound respect for all living things that, in accordance with the “Basic Policies for Health, Safety, the Environment and Product Safety,” we will carry out Responsible Care activities extensively to preserve health, safety and the environment, as well as step up quality assurance to ensure the safety of consumers in our daily business activities. (Introduced in April 1996)



Basic Policy on Health, Safety, the Environment and Product Safety

Kyowa Hakko’s policy formulated at its establishment is to “contribute to the health and well-being of people worldwide by creating new value with the pursuit of advancements in life science and technology.” Based on this policy, we will exert ourselves to realize an affluent society by conducting business activities with scientific consideration for health, safety, the environment and product safety throughout the whole life cycles of our products, from research and development through production, marketing, use and disposal, as well as by making efforts to ensure the quality and safety of our products, taking the safety of consumers as a matter of the greatest importance.

Guidelines for Action

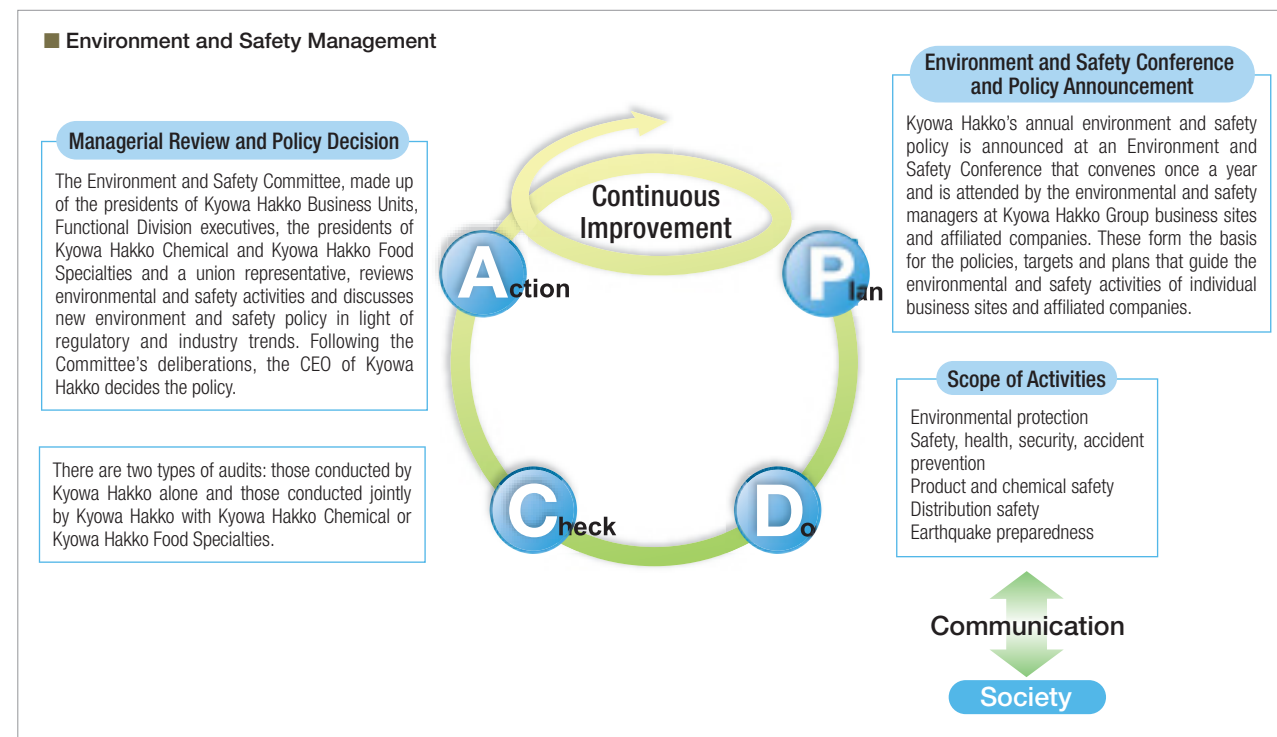
As our first rule, we should strictly control ourselves with profound respect for all living things and with modesty toward science, prove ourselves worthy of public confidence, and contribute to the growth of a healthy and affluent society. Therefore, we should advance our business activities under the following principles, with the protection of human beings and the environment, as well as the safety of consumers, as our first consideration.

- 1 Along with the establishment of the basic policies and control systems for health, safety, the environment and product safety as our highest principles in the management of Kyowa Hakko, we strive to enhance our employees’ consciousness of health, safety, the environment and product safety by making these principles generally known to them and to advance our activities under these principles from a global standpoint.
- 2 We observe international regulations, as well as domestic laws, rules, regulations and agreements relevant to health, safety, the environment and product safety, in cooperation with relevant foreign and domestic agencies and organizations and make efforts to raise our level of control over these principles by observing our self-imposed control standards and utilizing auditing systems.
- 3 Together with our efforts to ensure the safety of our business activities and to reduce negative impact on the environment, we strive to ensure the quality of health, safety, the environment and product safety throughout the whole life cycles of our products by engaging in overseeing the purchase of raw materials; the production, transportation and sale of products; and the use and disposal of products by our consumers.
- 4 We carry out assessments of health, safety, the environment and product safety prior to the development of new technologies and products, the transfer of technologies and the start of novel businesses. These assessments enable us to ensure our products meet the highest standards with respect to such technologies throughout the whole life cycles of such products commencing in the planning stage.
- 5 We contribute to health, safety, the environment and product safety on a global scale by working actively toward the development of “earth-friendly” technologies and products as well as toward the development of energy-conservation and resource-conservation technologies.
- 6 We concentrate our efforts on research and development to keep abreast of scientific progress, and we strive to strictly assure the usefulness and safety of our products.

(Introduced in January 1996)

The Kyowa Hakko Group establishes annual environment and safety policies and decides objectives, targets and plans for the environment and safety on the basis of the Basic Policy on Health, Safety, the Environment and Product Safety, which was formulated in January 1996. The Group has built an environment and safety manage-

ment system based on the integration of ISO 14001 and Occupational Safety and Health Management Systems (OSHMS). Kyowa Hakko is in the process of integrating ISO 14001 at the head office, production and research facilities, and distribution units.



Environmental and Safety Audits

An overview of the environmental and safety audits conducted with respect to the Kyowa Hakko Group and affiliated companies is provided in the table below.

Environmental and Safety Audits

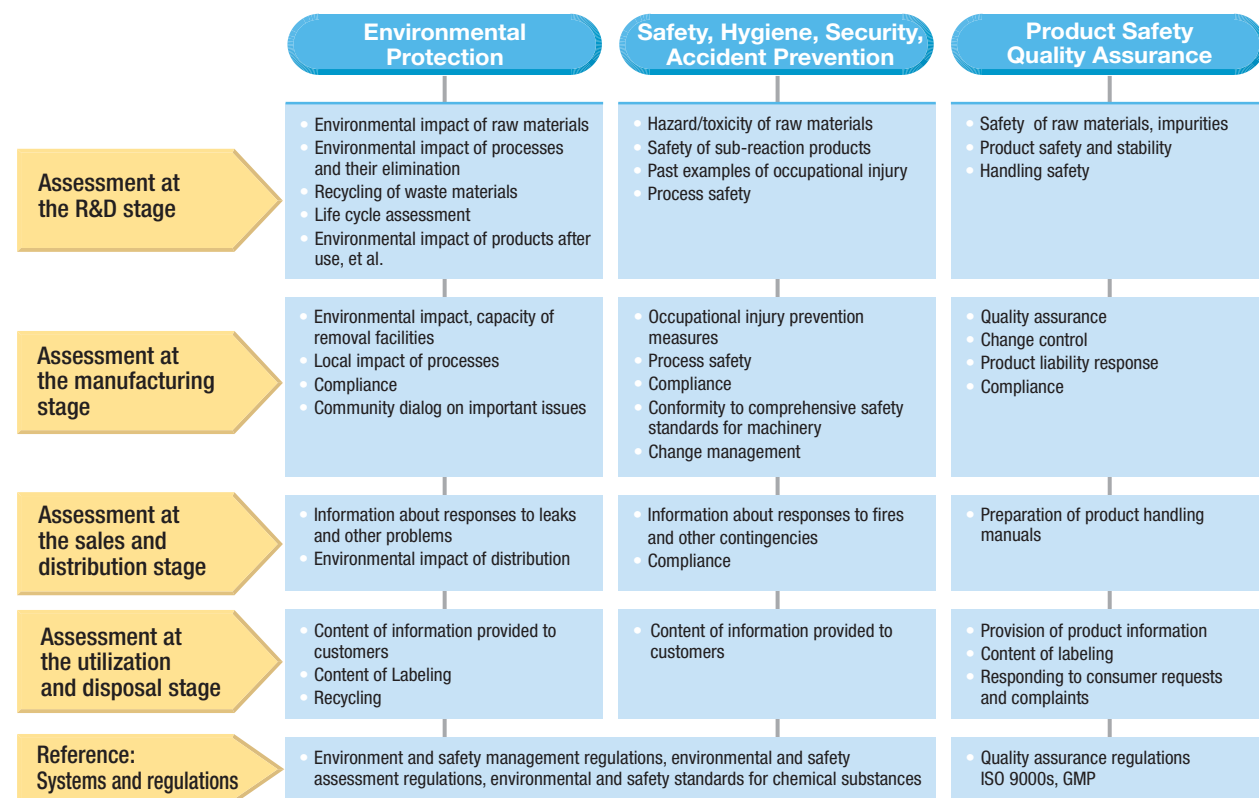
Scope	All sites of Kyowa Hakko, Kyowa Hakko Chemical and Kyowa Hakko Food Specialties (9 plants, 2 research laboratories, 8 sales bases, headquarters) 14 consolidated and non-consolidated subsidiaries (production, engineering, transportation)
Items	Progress with policies, objectives and targets; compliance with environment and safety laws; environmental safety-related risk management; progress with the Kyowa Eco-project, consideration of safety at business partners and other matters
Auditors	Environment and safety director, qualified ISO auditors, environment and safety officers of the business units, Kyowa Hakko Chemical and Kyowa Hakko Food Specialties, local union representatives
Frequency	Kyowa Hakko, consolidated and non-consolidated subsidiaries in Japan: once a year, overseas subsidiaries: once in three years

In fiscal 2006, the results of a total of 38 audits performed at all business sites of Kyowa Hakko and its consolidated subsidiaries, most business sites of non-consolidated subsidiaries and overseas business sites revealed no major legal infringements or environmental accidents.

Complaints

In fiscal 2006, nine complaints were received about Kyowa Hakko Group plants in Japan and overseas (following nine complaints in fiscal 2005): six complaints about noise or vibration, one complaint about odors and two complaints about dust. We regret the inconvenience caused to residents in nearby areas due to demolition work and other activities and have taken prompt action to prevent the recurrence of these problems. We will pay heed to these complaints in environmental assessments and aim to reduce the number of complaints to zero.

■ Environmental, Safety and Product Safety Assessments



Safety Assessment of Chemical Products

The Kyowa Hakko Group conducts international chemical product safety assessments in cooperation with the Japan Chemical Industry Association and the Japan Plasticizer Industry Association. The Organization for Economic Cooperation and Development (OECD) plays a central role in conducting the HPV program (a program for acquiring and assessing safety data for high production-volume chemical substances for which such information is insufficient) on a global scale. Kyowa Hakko has acted as the lead company in preparing assessment reports for two HPV products and has completed final assessment. Kyowa Hakko has also acted as a supporting company for 12 products, of which assessment of nine products has been completed.

We have registered as a sponsor of the Program for Gathering and Disseminating Safety Information on Existing Chemical Substances (Japan Challenge Program) and, in a joint effort with other companies, have reached the stage of submission of the final draft report for one substance.

GHS Compliance

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) to promote the safe use of chemical substances, has become the subject of legislation. The Kyowa Hakko Group is gradually converting to GHS hazard labels and MSDS. Also, in accordance with the revision to the Industrial Safety and Health Law, we have held explanatory meetings concerning the chemical substance hazard classifications and pictograms that the GHS aims to standardize.



A GHS hazard label

Joint Environmental and Safety Assessments

■ Kyowa Foods (Jiangyin) Co., Ltd.

Kyowa Foods (Jiangyin) is a new company that was established in November 2005 and began production in January 2007. The company, working in tandem with previously established Wuxi Xiehe Food Co., Ltd., manufactures natural seasonings, Japanese seasonings and seafood seasonings, among others. The company engages in environmental and safety activities in accordance with its policies of rigorously observing environmental protection laws, while putting safety first and assuring work safety, traffic safety and health. Once each month, the company holds a safety meeting to share information, such as close-call reports and safety patrol reports. The company has identified issues involving wastewater treatment facilities and safety education and training for new employees and is taking measures to address them.



A joint environmental and safety assessment

■ Kyowa Hakko Pharmaceuticals (Suzhou) Co., Ltd.

The Suzhou Pharmaceuticals Plant is a new plant constructed in April 2006 in Suzhou Industrial Park (a state-owned industrial park developed and certified by the Chinese government). Electricity and steam supply and other infrastructure are extremely well developed, and to date, no emergency plant shutdown due to power outage or other infrastructure failure has occurred. Validation work for manufacturing is proceeding smoothly, and the company has commenced manufacturing of some products. Future plans call for the plant to apply for and obtain a manufacturing license for tablets, principally the integrated manufacture of Coniel® tablets. The company provides education and training concerning safety and engages in awareness movies at monthly general meetings.



The plant management team

Ethical Considerations in Research and Development

■ Bioethics

With the aim of assuring ethical and scientific validity in human genome analysis and research using human tissue and of preventing the loss of the dignity and human rights of tissue donors, Kyowa Hakko has established the Ethics Review Guidelines Concerning Research Using Human Biological Materials, internal regulations based on Japan's research ethics guidelines, and has established a Research Ethics Review Committee in accordance with the guidelines and internal regulations. The committee, made up of employees, experts in the law and natural sciences, along with members of the general public, discusses the ethical validity of the use of human biological materials.

■ Consideration of Human Rights in Clinical Trials

Although the objective of pharmaceuticals development, as the term indicates, is to rapidly develop and introduce medications that provide relief and healing to patients, the development process necessitates clinical trials conducted on human subjects. When commencing a clinical trial involving human subjects, Kyowa Hakko convenes an internal clinical

trial committee consisting of external physicians and employees not involved in pharmaceutical development. The committee discusses ethicality, including the protection of the human rights and personal information of the trial subjects (patients) and volunteers, as well as safety and clinical trial quality. In the operation of internal clinical trial committees, we put ourselves in the position of the trial subjects and strive to protect their human rights and interests.

■ Consideration of Laboratory Animals

To ensure the appropriate conduct of animal testing, Kyowa Hakko has established the basic policy Standards for Conducting Animal Testing and policies governing experiments for each research site and has established steering committees at the head office and research sites. Our basic policy is the 3R principle: consideration of methods of replacing animal testing (Replacement), consideration of methods of reducing animal testing (Reduction), and the avoidance of unnecessary pain (Refinement). On that basis, we define matters for consideration concerning the ethics and usefulness of such testing and strive to plan and conduct appropriate experiments.

Action Plans and Performance in Fiscal 2006 (Environment and Safety)

*From fiscal 2005 to fiscal 2007

Guideline for Action	Initiative	Target	Fiscal 2006 Performance (Status of Progress)		Evaluation*	Medium-Term* Targets	Page		
Guideline for Action 1 Expand the application of environmental and safety management systems	Establishment of ISO 14001 environmental management system	Kyowa Hakko, Kyowa Hakko Chemical, Kyowa Hakko Food Specialties, Kyowa Medex: Introduction of environmental activities assessment	Continued renewal of ISO 14001 certification at 8 business sites, implementation of environmental activity assessments in internal audits		○	Assessment of environmental activities ISO 14001 integration at Kyowa Hakko	P24		
		Consolidated subsidiaries: Establishment of ISO 14001 system by fiscal 2007	Voluntary declaration system set up and launched at 4 companies		○	Qualitative improvement of environmental management systems	P24		
	Integration of ISO 14001 and Occupational Safety and Health Management System (OSHMS)	Kyowa Hakko, Kyowa Hakko Chemical, Kyowa Hakko Food Specialties, Kyowa Medex: Operation of integrated management system	Environment and safety management systems in operation Risk assessments introduced at affiliated companies		○	Expansion of ISO 14001, OSHMS systems into affiliated companies	P24 P19		
	Audits of consolidated and non-consolidated subsidiaries	Annually engage in audits of 85% of Group companies	Audits of sites of consolidated and non-consolidated subsidiaries and sites in other countries.(100%)		○	Audits of consolidated subsidiaries (100%)	P24		
Guideline for Action 2 Ensure compliance and continuously improve performance	Ensuring compliance	Zero legal infringements, zero complaints	Zero serious legal infringements concerning environmental safety 9 complaints (noise and vibration: 6, dust: 2, odors: 1)		○ ×	Zero legal infringements, zero complaints Secure compliance and establish a management and operation system for handling of waste materials and recycling	P24		
			Kyowa Eco-Index*1						
			2005	2006					
	[Production and R&D]								
	Kyowa Eco-Project								
	•CO ₂ emissions	Reduction of CO ₂ emissions to 6% below fiscal 1990 levels or lower by fiscal 2010	729,000 tons*3, 3.6% increase from fiscal 1990 levels (scope of aggregation reviewed) Boiler fuel conversion at 2 plants		0.75	0.85	△*3	Achieve fiscal 2010 CO ₂ emissions at or below 6% from fiscal 1990 levels	P32, 33
	•Unit energy consumption	Reduction of unit energy consumption by 1% or more per annum	4.5% improvement from the previous year's level at 7 principal plants				○	Average reduction in unit energy consumption of 1% or higher (7 plants)	P32, 33
	•Volume of waste disposal at landfill sites	Maintaining zero emissions, a target of 250 tons or lower	Continued zero emission status. 97 tons, 12% reduction from the previous year's levels		0.006	0.006	○	Maintenance of final disposal at landfills of less than 125 tons in fiscal 2007*4 Formulation of medium-to-long-term plan for landfill volume reduction at Daiichi Fine Chemical, a company newly included in the Group (fiscal 2007)	P36
	•Reduction in chemical substance emissions	50% reduction in chemical substance emissions from fiscal 2003 levels in fiscal 2007	12 chemical substances: 6.5 tons, 34% reduction from 2003 levels PRTR Class 1 chemical substances: 32.8 tons, 15% reduction from 2003 levels VOCs: 418 tons, 32% reduction from 2003 levels				○	Reduction of fiscal 2007 chemical substance emissions by 50% from fiscal 2003	P35
	Atmosphere								
	•SO _x emissions	Below 2,595 tons*5	800 tons, 4% decrease from the previous year's levels		2.2	2.0	○	Below 250 tons*6 in fiscal 2007	P34
	•NO _x emissions	Below 731 tons*5	507 tons, 7% decrease from the previous year's levels		1.0	0.9	○	Below 610 tons*6 in fiscal 2008	P34
	•Dust emissions	Below 287 tons*5	19.7 tons, 20% decrease from the previous year's levels		0.64	0.48	○	Below 110 tons*6 in fiscal 2008	P34
	Water								
	•Fresh water usage volume	—	54.4 million tons, 2% reduction from the previous year's levels		3.4	3.2		Ongoing rationalization of water use	P34
	•COD levels	Below 920 tons*7	499 tons, 23% increase from the previous year's levels		1.3	1.5	○	Below 920 tons*7 in fiscal 2007	P34
	•Nitrogen levels	Below 850 tons*7	412 tons, 53% increase from the previous year's levels		1.0	1.4	○	Below 850 tons*7 in fiscal 2007	P34
	•Phosphorous levels	Below 25 tons*7	20.3 tons, 4% decrease from the previous year's levels		1.0	1.0	○	Below 25 tons*7 in fiscal 2007	P34
	Disasters, accidents	Record no labor/work or environment- or safety-related accidents	Recorded zero labor/work accidents with absence and zero accidents at consolidated subsidiaries, and no environment or safety-related accidents				○ ○	No labor/work accidents, no environmental or safety-related accidents	P19 P20, 24
Distribution environment and safety	Rationalization of distribution, assurance of environmental and safety in distribution 100% of corporate sales vehicles to be low-emission vehicles by fiscal 2010	Continued distribution streamlining Low-emission cars accounted for 95% of cars in business use				○	Rationalization of distribution, ensure environmental safety in distribution 100% of corporate sales vehicles to be low-emission vehicles by fiscal 2010	P33 P19	
[Administration]									
Green Office Plan (GOP)	Reduction of at least 1% per annum in power consumption	2.3% reduction from the previous year's levels				○	1% or higher reduction in electricity use per year	P32	
	Reduction in copy paper use of 10% below fiscal 2003 levels over 3 years	4.8% reduction from the previous year's levels, 11.8% reduction from 2003 levels				○	10% reduction in copy paper use from fiscal 2003 levels over 3 years	P32	
	Green purchasing of 70% in fiscal 2007 (value basis)	Green purchasing of 75% of copy paper and office supplies				○	Green purchasing of 70% in fiscal 2007	P32	
Guideline for Action 3 Consider the environment throughout the entire product life cycle	LCA/Material balance	Transparency and analysis in material balance at each business	LCA-type analyses of material balance and environmental loads, continued assessments of each company's resource efficiency and unit emissions				○	Ongoing business assessments through LCA/material balance assessments	P29, 30, 31
	Green procurement	Implementation of environmental consideration inquiries at business partner companies	Began consideration of expansion from green procurement to CSR procurement				○	Improve environment-related activities with business partners Preferential use of environment-friendly raw materials	P16
	Packaging materials	Application of Guidelines for Environment-supportive Packaging Materials	Continuously improving pharmaceutical packaging materials				○	Promotion of streamlined packaging	P10
Guideline for Action 4 Upgrade environmental and safety assessments	Thorough environmental, safety and product safety assessments	Thorough environmental and safety assessment, risk management	Ongoing emergency communication training for large-scale earthquakes Ongoing safety confirmation system for large-scale earthquakes Conducted education in comprehensive safety standards for machinery at 6 plants				○	Thorough risk management, reduction of risk levels Introduction of safety confirmation system for large-scale earthquakes (head office) Implement activities to promote awareness of comprehensive safety standards for machinery	P20 P19
	Environment-conscious technology and product development	Realization of development of technologies and products	Consolidation of core technology for efficient development of bio-processes with lower environmental loads (national research project) October introduction of new dephosphorization technology at the Hofu Plant				○	Development of environmental business outside of Company Analysis of sales of environment-friendly products	P39, 40 P34
Guideline for Action 5 Provide safe and useful products	Assurance of consumer safety and product user-friendliness	Comprehensive product information and disclosure	Continuation of large-scale clinical trial of drugs targeted toward establishment of evidence-based medicine (EBM) Began introducing GHS-compliant labels Registered as a Japan Challenge Program sponsor				○	Large-scale clinical trial for EBM Further improvement of product information services	P26

*1 The Kyowa Eco-Index compares unit emissions with Japanese averages on a production value basis. The fiscal 2005 COD, nitrogen, and phosphorous figures were recalculated using fiscal 2004 pollution loads.
 •CO₂, air-pollution, waste index = [Total emissions by the Kyowa Hakko Group / Total emissions in Japan] / [Total production value by the Kyowa Hakko Group / Japan's net domestic product]
 CO₂ emissions: Carbon dioxide emissions in fiscal 2005 (May 29, 2007 press release from the Ministry of the Environment website)
 SO_x, NO_x, dust emission volume: Emissions in fiscal 2002, based on survey of fixed sources affecting the atmospheric environment (Environmental Statistics Book 2007, Environmental Policy Bureau, Ministry of the Environment, Japan)
 Waste emission volume, landfill volume: Industrial waste volume, treatment status in fiscal 2004

(January 22, 2007, report from the Ministry of the Environment website)
 Net domestic product: Statistical data (Economic and Social Research Institute, Cabinet Office, Government of Japan)
 •Water pollution index = [Total emissions by the Kyowa Hakko Group / Total emissions into closed bodies of water] / [Total production value of the Kyowa Hakko Group / Net domestic product of prefectures surrounding closed bodies of water]
 COD, nitrogen, phosphorous: Volume occurring in fiscal 2004 in regions targeted by water regulations (Environmental Statistics Book 2007, Environmental Policy Bureau, Ministry of the Environment, Japan)
 Net domestic product of prefectures surrounding closed bodies of water: Fiscal 2004 Prefectural Economic Accounts (Economic and Social Research Institute, Cabinet Office, Government of Japan)

•Fresh water usage volume index = [the Kyowa Hakko Group's total usage volume / Japan's total usage volume] / [the Kyowa Hakko Group's total production value / Japan's net domestic product]
 Fresh water usage volume: Fiscal 2003 domestic non-commercial water (14.1 billion tons) + industrial water fresh water replacement volume (11.1 billion tons)
 (Data: Water Resources Department, Ministry of Land, Infrastructure and Transport in 2006)
 *2 Evaluation ○: Achieved target
 ○: Improved, but did not achieve target
 △: Change in the scope of aggregation
 ×: Target not reached

*3 Kyowa Hakko Chemical conducted detailed audits of fiscal 2006 CO₂ emissions in conformance with revisions to the Act Concerning the Rational Use of Energy and the Act Concerning the Promotion of the Measures to Cope with Global Warming and changed the scope of aggregation.
 *4 This figure is for the production and research sites of Kyowa Hakko, Kyowa Hakko Chemical, and Kyowa Hakko Food Specialties.
 *5 The target is 50% of the emission level conforming to the legally mandated concentration.
 *6 This is a new target that takes into account boiler fuel conversion.
 *7 The target is 50% below the site's self-imposed target level.

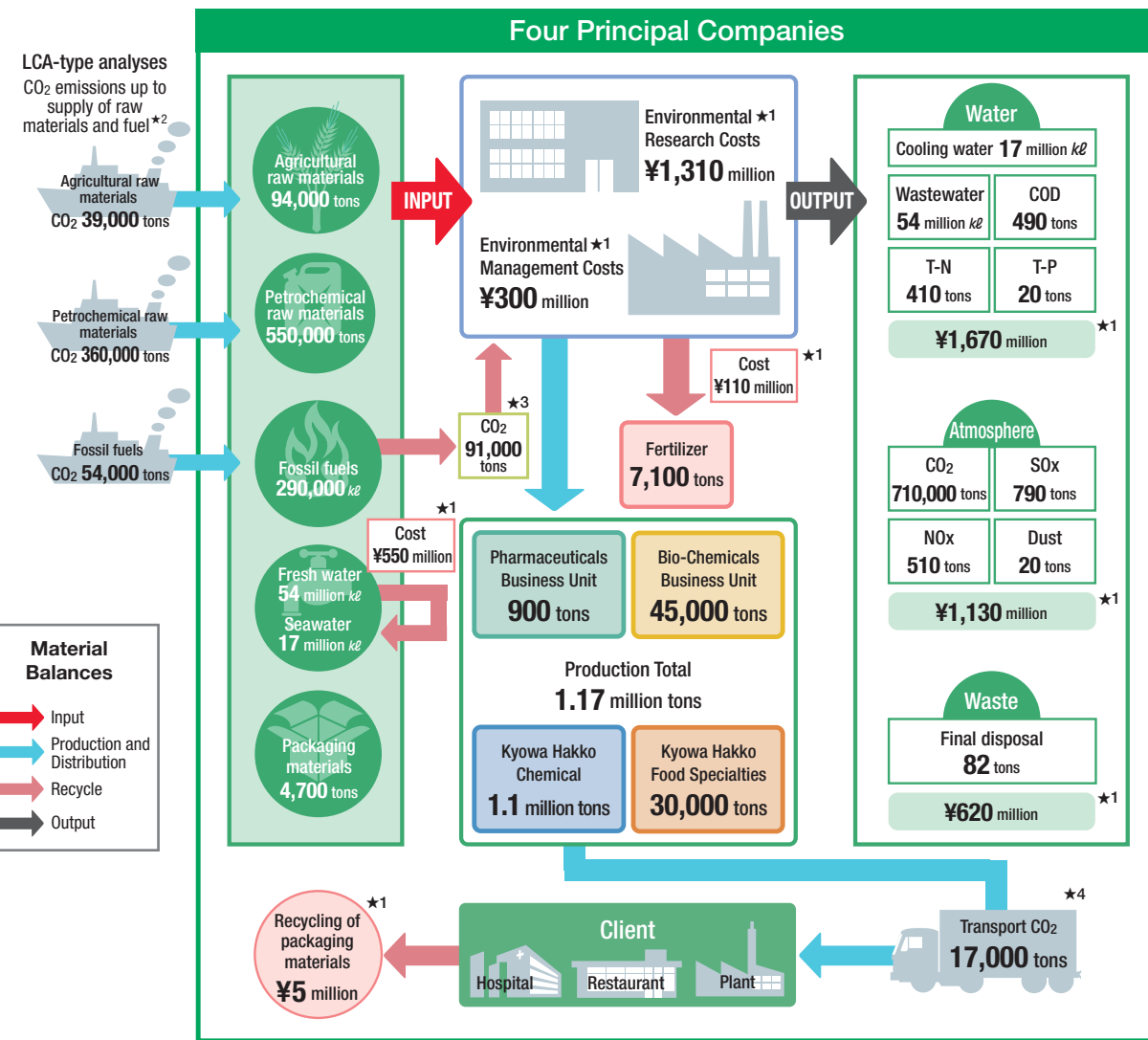
Environmental Performance

Action Plans and Performance in Fiscal 2006

Environmental Performance

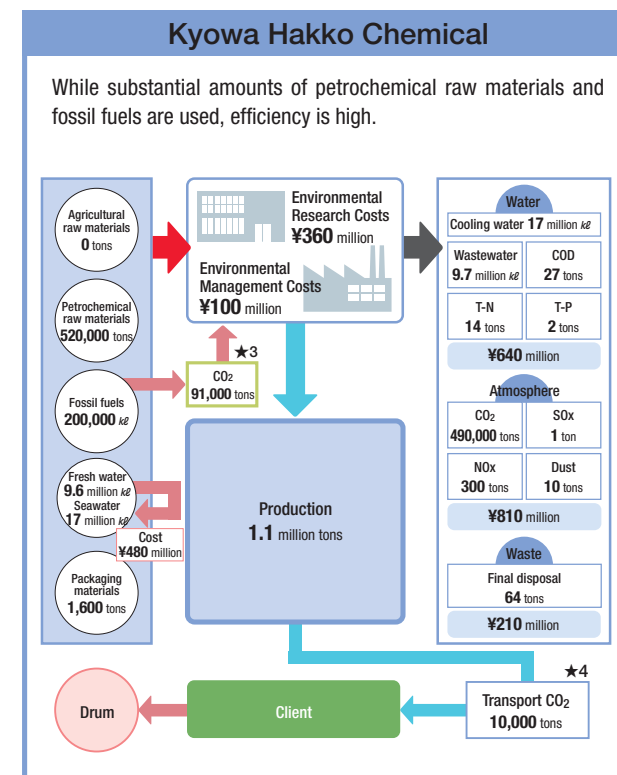
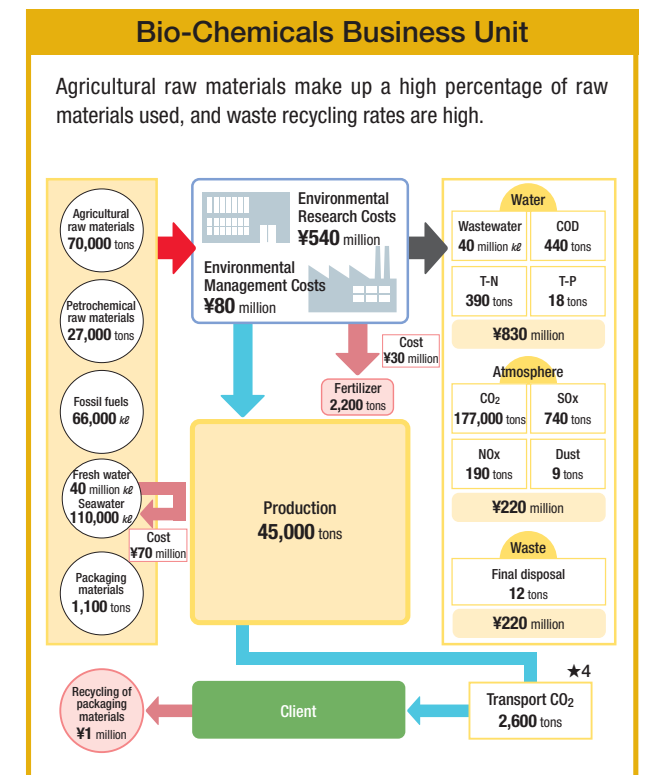
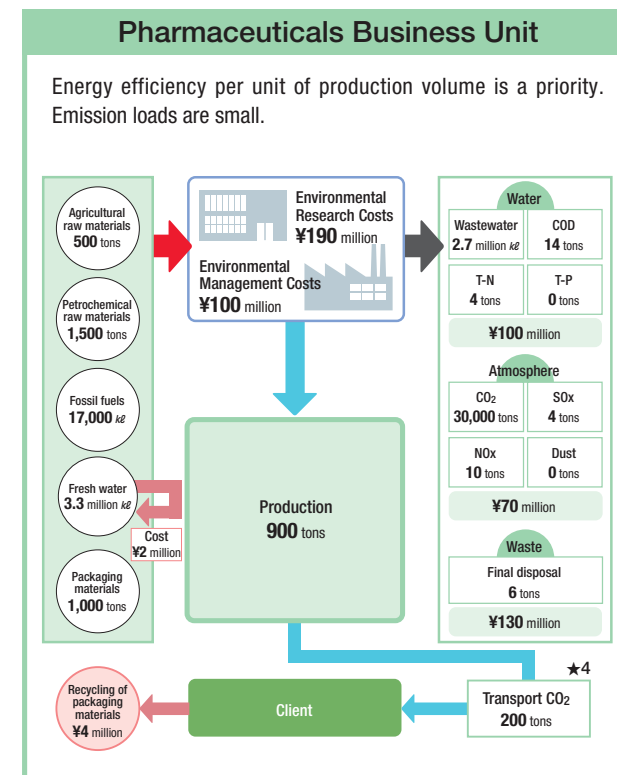
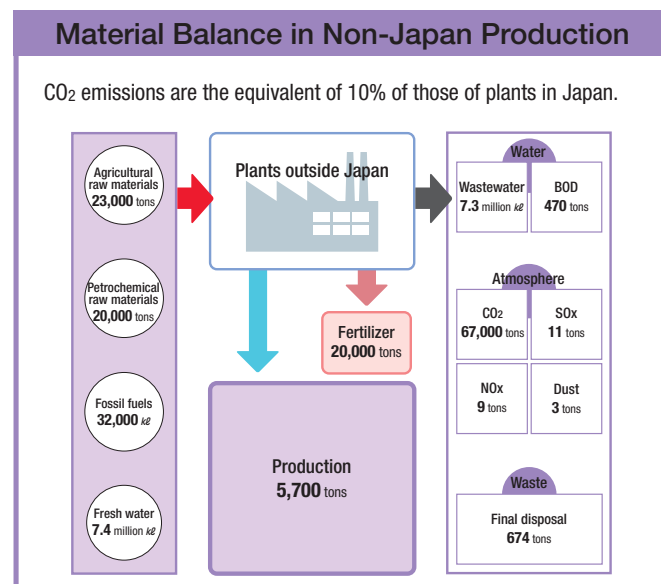
Action Plans and Performance in Fiscal 2006

Material Balance by the Kyowa Hakko Group Business Operations

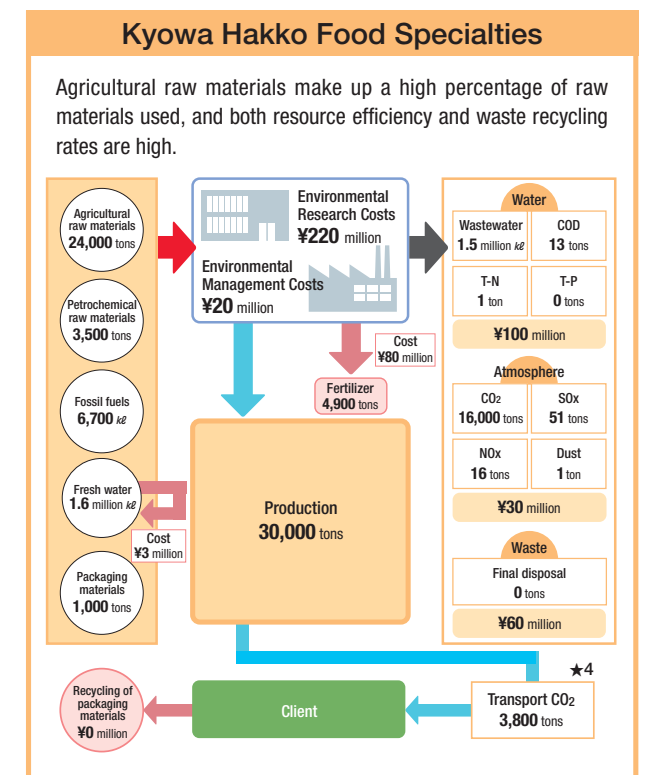


*1 The figures shown here were extracted from the environmental accounts.
 *2 J.LCA-LCA Database 2004 (2nd Edition), An Introduction to LCA Administration—Environmental Load of 4,000 Social Stocks, Japan Environmental Management Association for Industry (JEMA) (1998)
 *3 The amount of CO₂ fixed in products by means of the oxo process
 *4 As the consignor, CO₂ emission figures corresponding to the provisions of the Act Concerning the Rational Use of Energy have been used (ton-kilometer method).

Inputs (raw materials, fuels, water, packaging materials) and outputs (products, byproducts, water and atmospheric emissions, waste products) have been totaled for plants operated by Kyowa Hakko, Kyowa Hakko Chemical, Kyowa Hakko Food Specialties and Kyowa Medex. Figures for individual business operations are also shown. Inputs and outputs for the three production plants outside Japan are shown separately from figures for Japan. CO₂ emissions during the manufacture of raw materials and fuels were ascertained as accurately as possible for the purpose of LCA-type analyses.



*3 The amount of CO₂ fixed in products by means of the oxo process



Resource Efficiency

Year-on-year Evaluation/ ↗ : Deterioration → : Unchanged ↘ : Improvement

		Pharmaceuticals Business Unit	Bio-Chemicals Business Unit	Kyowa Hakko Food Specialties	Kyowa Hakko Chemical	Four Principal Companies
Resource Efficiency*1	tons/¥100 million sales	1.75 ↗	303 ↘	290 →	652 ↘	271 ↘
	tons/tons of production	2.29 ↗	2.16 →	0.90 →	0.47 ↘	0.55 ↘
Fuel Efficiency*2	kℓ/¥100 million sales	14.5 →	207 ↘	72 →	253 →	123 →
	kℓ/tons of production	18.9 ↗	1.5 →	0.22 →	0.18 →	0.25 →
Packaging Materials Efficiency	tons/¥100 million sales	0.89 ↗	3.3 ↘	10.6 ↘	2.0 ↘	2.0 ↘
	tons/tons of production	1.16 ↗	0.023 →	0.033 ↘	0.0014 ↘	0.0040 ↘
Fresh Water Resource Efficiency	1,000kℓ/¥100 million sales	2.81 ↗	124 ↘	17 ↘	12 ↘	23 ↘
	1,000kℓ/tons of production	3.7 ↗	0.88 →	0.053 ↘	0.009 →	0.046 →

Resource efficiency, fuel efficiency, and fresh water resource efficiency in the Bio-Chemicals business and at Kyowa Hakko Chemical increased owing to the introduction of new high-value-added products and production increases. Although resource efficiency in the Pharmaceuticals business decreased, the impact on the Kyowa Hakko Group as a whole was minor as resource use in this business is low.

Unit Emissions

		Pharmaceuticals Business Unit	Bio-Chemicals Business Unit	Kyowa Hakko Food Specialties	Kyowa Hakko Chemical	Four Principal Companies
Unit CO ₂ Emissions	tons/¥100 million sales	25.3 →	552 ↘	173 →	616 →	300 ↗
Unit Final Disposal	tons/¥100 million sales	0.005 ↘	0.04 ↘	0 →	0.08 ↗	0.034 ↘
Unit Water Pollution Emissions*3	tons/¥100 million sales	0.015 →	2.6 ↗	0.15 →	0.05 ↘	0.39 ↗
Unit Air Pollution Emissions*4	tons/¥100 million sales	0.012 ↘	2.9 ↘	0.72 ↘	0.38 ↘	0.55 ↘

*1 Index of total usage of agricultural and petrochemical raw materials
 *2 Index of crude oil conversion to express energy usage in kℓ
 *3 Index of total COD, N and P levels
 *4 Index of total SO_x, NO_x and dust emissions

Fiscal 2006 brought a marked reduction in unit emissions rates due to recycling promotion in the Bio-Chemicals business and increased wastewater treatment efficiency at Kyowa Hakko Chemical. However, improvement of unit water pollution emissions in the Bio-Chemicals business, which worsened to fiscal 2004 levels, is an action point. The deterioration in unit CO₂ emissions (at Kyowa Hakko and Kyowa Hakko Chemical) is attributable to the impact of a review of the scope of energy consumption.

Environmental Accounting

Environmental Protection Costs

(¥ million)

Classification	Principal Activities (FY2006)	FY2005		FY2006	
		Investment	Expense	Investment	Expense
(1) In-Situ Operating Costs		359	3,851	1,037	4,135
(1)-1 Pollution Control Costs					
① Water pollution control	Investment in water pollution control facilities, operation and maintenance expenses	165	1,450	485	1,699
② Air pollution control, etc.	Investment in air pollution control facilities and odor control facilities, operation and maintenance expenses	57	544	238	556
(1)-2 Global Environmental Protection Costs	Investment in new gas boiler construction, oxo process CO ₂ raw material expenses	117	504	264	580
(1)-3 Resource Recycling Costs	Investment in water conservation facilities and waste recycling and treatment facilities, operation and maintenance expenses	20	1,353	50	1,300
(2) Upstream and Downstream Costs	Green purchasing and package recycling expenses	0	46	0	42
(3) Environmental Activities Costs	Environmental management systems operation and environmental impact monitoring expenses	30	456	100	436
(4) R&D Costs	Expenses for R&D of environment-friendly products and curbing environmental impact	18	1,290	4	1,322
(5) Community Activities Costs	Expenses for participation and cooperation in environmental protection and nature conservation activities	0	14	0	14
(6) Environmental Damage Related Costs	Oil pollution liability insurance premiums	0	1	0	1
Total		407	5,658	1,141	5,950

Kyowa Eco-Project (KEP)

KEP Targets

- To reduce the Group's CO₂ emissions by 6% from the fiscal 1990 level by fiscal 2010
- To reduce energy consumption per unit by 1% per annum
- To reduce the Group's environmental management costs by 10% from the fiscal 2003
- To achieve final disposal at landfills for the Group of 125 tons or less in fiscal 2007

The Kyowa Eco-Project is the core of the Kyowa Hakko Group's global warming prevention and zero emissions activities. The project was launched in 1998, and over the course of nearly ten years, has brought many accomplishments and environmental benefits.

In June, we held the annual Eco-Project meeting, during which representatives of the Group's business sites reported on case examples and actively exchanged opinions. This year's case studies included fuel conversion from heavy oil to gas at the Yokkaichi and Hofu Plants, the conversion of waste oil to fuel and more thorough separation and sorting of waste at eco-stations. Another topic of discussion was the use of solar photovoltaic generation, wind power and other renewable energy sources, which are currently attracting attention as energy alternatives.

The Ube Plant, in cooperation with the local government, participated in a one-day-per-month campaign to promote commuting by means other than private cars.



▲ Gas boilers at the Hofu Plant



▲ Conversion from waste oil to byproduct oil



The Kyowa Hakko Chemical Yokkaichi Plant eco-station

Green Office Plan (GOP)

GOP Targets

- To reduce electricity consumption by at least 1% per annum
- To reduce copy paper use by 10% from the fiscal 2003 level over next three years
- To achieve a green purchasing ratio of 70% in fiscal 2007

The Kyowa Hakko Group's head office, branches, plants and research facilities, in cooperation with the labor union and Kyowa Hakko General Affairs Department, engage in the Green Office Plan (GOP), a program of environmental protection activities for administrative sections.

In the results for fiscal 2006, energy consumption was reduced by 2.3% year on year due to initiatives such as a campaign to discontinue the wearing of neckties and suit coats in summertime (from June to September) and efforts to turn off unnecessary lighting and optimize air conditioner temperature settings. Copier paper use was reduced by 4.8%, a reduction of 11.8% from the 2003 level, and the medium-term target was achieved a year ahead of schedule. The green purchasing ratio (the value of Eco-Mark products and other eco-friendly products expressed as a percentage of total office supplies and copier paper purchased) was 75%, marking achievement of the medium-term target for the second consecutive year.

Making GOP Activities Second Nature



Mariko Tamase
Business Department
Osaka Branch

At the Osaka Branch, each quarter we put up posters and send e-mails to publicize GOP targets and request the cooperation of employees, including those at the sales offices, in GOP implementation activities. In this way, we have increased energy conservation, green purchasing and the use of recycled paper. With regard to waste, we conduct collection drives twice a year and recycle items in accordance with the manifest. We cannot achieve our GOP targets without the cooperation of all employees, and I aim to continue to appeal to my colleagues so that GOP activities become second nature.



Poster to promote the GOP

Targets	Results for Fiscal 2006	Medium-Term Targets
<ul style="list-style-type: none"> To reduce the Group's CO₂ emissions by 6% from the fiscal 1990 level by fiscal 2010 (Kyowa Eco-Project) To reduce per-unit energy consumption at the seven principal plants by at least 1% annually (Kyowa Eco-Project) To reduce per-unit energy consumption to 90% of the fiscal 1990 level by fiscal 2010 (Japan Chemical Industry Association target) 	<ul style="list-style-type: none"> Per-unit energy consumption at the seven principal plants was reduced by 4.5% year on year. Investments in boiler-fuel conversion facilities were made at the Hofu Plant and Kyowa Hakko Chemical Yokkaichi Plant. 	<ul style="list-style-type: none"> To reduce the Group's CO₂ emissions by 6% from the fiscal 1990 level by fiscal 2010 To lower unit energy consumption index to 90% of the fiscal 1990 level by 2010 To reduce CO₂ emissions at distribution units

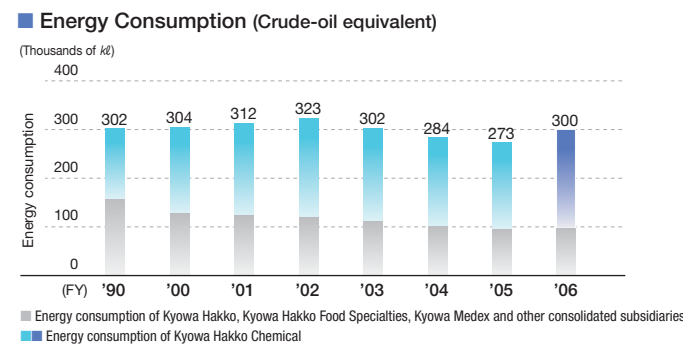
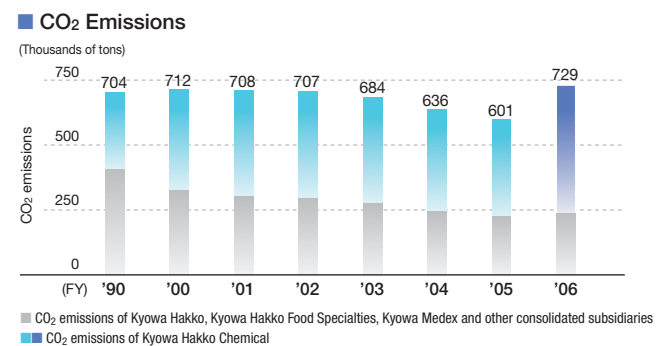
Reducing Greenhouse Gas Emissions

About 60% of Kyowa Hakko Group's greenhouse gas emissions originate from Kyowa Hakko Chemical, which manufactures chemical products. In conformance with revisions to the Act Concerning the Rational Use of Energy and Law Concerning the Promotion of the Measures to Cope with Global Warming, in fiscal 2006 Kyowa Hakko Chemical conducted detailed audits of byproduct oil and byproduct gas CO₂ emissions and detailed audits of the scope of energy consumption at its plants. The audit results showed that energy consumption increased by 24,483 kiloliters and CO₂ emissions by 114,900 tons from fiscal 2005 levels. However, due to the audits, the figures for fiscal 2006 are more accurate than the figures for previous years. Accordingly, we added a supplementary note indicating the reason for the increases and reported the results to the Bureau of Economy, Trade and Industry in the periodic report mandated by the Act Concerning the Rational Use of Energy. (We have indicated the difference in this report by changing colors in the graph on this page.)

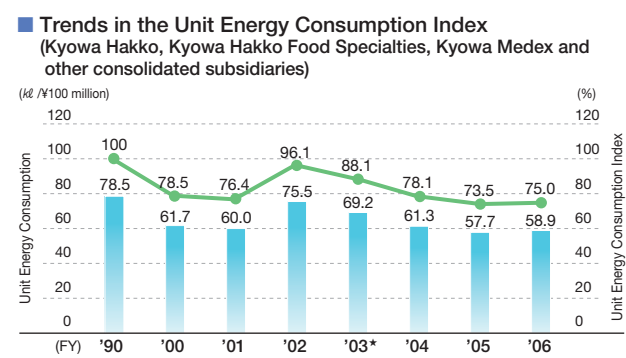
The Group is reducing CO₂ emissions at plants that use large amounts of energy as a greenhouse gas emissions reduction measure. In March 2007, we ceased operation of the heavy-oil-burning main boiler and switched to using purchased steam and a gas boiler. The Kyowa Hakko Chemical Yokkaichi Plant obtained funding from a natural-gas conversion promotion subsidy project, converted its main boiler from heavy oil to gas and, in April 2007, completed fuel conversion from heavy oil to gas. We forecast a reduction of 58,000 tons (8% of the fiscal 2006 level) in CO₂ emissions due to fuel conversion in fiscal 2007. We will undertake further energy conservation activities with the aim of achieving the fiscal 2010 target of a reduction of 6% in CO₂ emissions from the fiscal 1990 level.

Preventing Ozone Layer Depletion

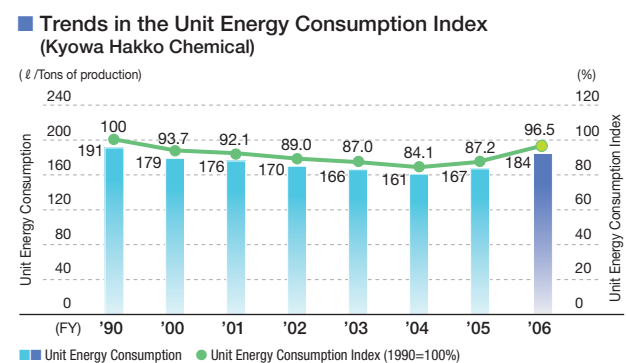
Emissions in fiscal 2006 of specified chlorofluorocarbons (CFCs) from freezers and other equipment used at 15 Kyowa Hakko Group business sites decreased year on year by 1.98 tons, or 14%.



The scope of energy consumption statistics has been revised in accordance with the revision to the Act Concerning the Rational Use of Energy.



* The deterioration in per-unit consumption in fiscal 2002 resulted from the sale of the liquor business.



Targets	Results for Fiscal 2006	Medium-Term Targets
Atmospheric Emissions*1 SOx emission less than 2,595 tons NOx emission less than 731 tons Dust emission less than 287 tons Water Emissions*2 COD levels less than 920 tons Nitrogen levels less than 850 tons Phosphorous levels less than 25 tons	SOx emission 800.0 tons, 4% reduction NOx emission 507.0 tons, 7% reduction Dust emission 19.7 tons, 20% reduction COD levels 499.0 tons, 23% increase Nitrogen levels 412.0 tons, 53% increase Phosphorous levels 20.3 tons, 4% reduction	SOx emission less than 250 tons NOx emission less than 610 tons Dust emission less than 110 tons COD levels less than 920 tons Nitrogen levels less than 850 tons Phosphorous levels less than 25 tons

★1 The value obtained by applying a value equivalent to 50% of the legally mandated concentration to the total volume
 ★2 50% of the value subject to voluntary management at business sites.

Air Pollution Prevention Measures

Although the problem of SOx emissions was a concern for the Kyowa Hakko Group for many years, as the result of study of a fuel conversion plan, the Hofu Plant ceased operation of its heavy-oil-burning main boiler and switched to using a gas boiler and purchased steam in March 2007. The Hofu Plant accounted for 98% (784 tons) of the Group's SOx emissions in fiscal 2006, and the forecast for fiscal 2007 is less than 100 tons.

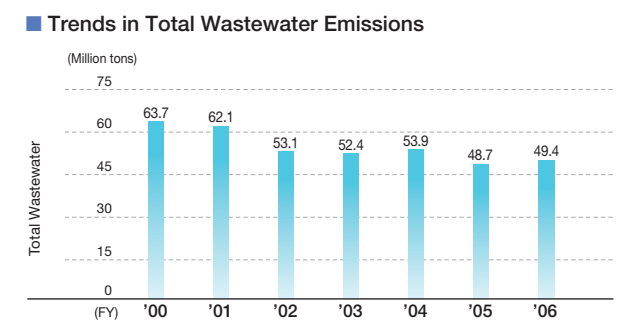
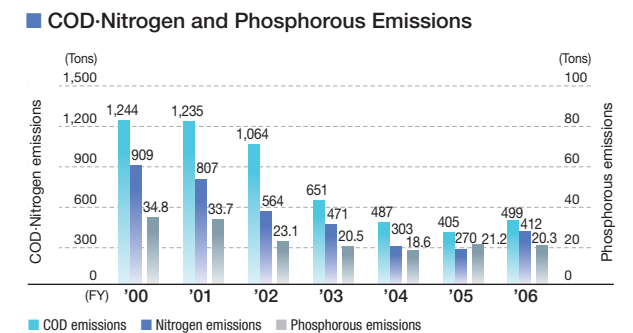
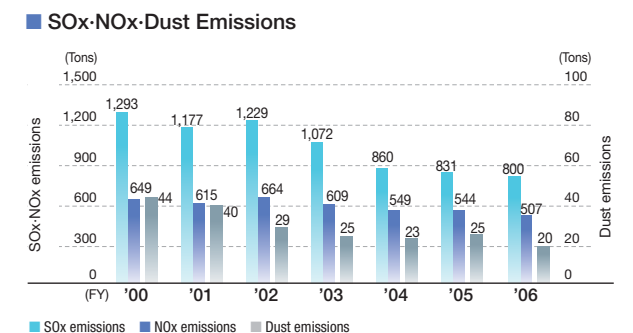
Water Pollution Prevention Measures

Group emissions of COD and nitrogen increased in fiscal 2006, as fermentation plants operated at high capacity due to expansion of amino acid production. However, a dephosphorization system at the Hofu Plant went into operation in November 2006, and an increase in the phosphorous removal rate of wastewater treatment facilities resulted in a decrease in phosphor emissions. Also, as the quality of recovered calcium phosphate has been confirmed to be equivalent to that of imported phosphate rock, we are considering recycling it as raw material for phosphoric acid production.

Employee support for conservation of biodiversity in areas surrounding business sites is increasing. Examples of this are voluntary participation (by Hofu Plant) in Seto Inland Sea wetlands restoration sponsored by Yamaguchi Prefecture and participation in activities of the Kano River System Water Quality Conservation Council (by Fuji Plant).



Clean-up at Ayutsubonotaki Waterfall (Fuji Plant)



Targets	Results for Fiscal 2006	Medium-Term Targets
<ul style="list-style-type: none"> To reduce emissions of chemical substances by 50% from the 2003 level by fiscal 2007 	<ul style="list-style-type: none"> Emissions of twelve targeted chemical substances were 6.5 tons, 34% below the 2003 level Emissions of PRTR Law-designated substances were 32.8 tons, 15% below the 2003 level Emissions of VOCs were 418 tons, 32% below the 2003 level 	<ul style="list-style-type: none"> To reduce emissions of chemical substances by 50% from the 2003 level by fiscal 2007

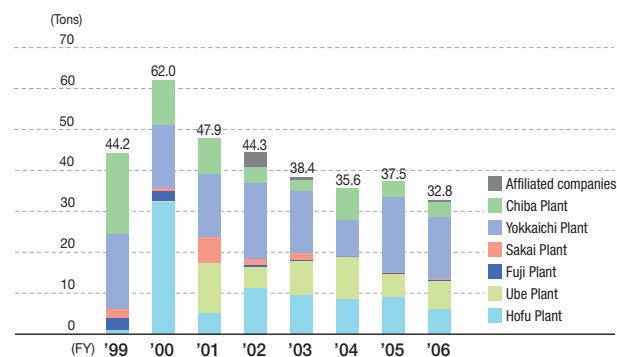
Restriction on Emissions of 12 Chemical Substances

In fiscal 2006 emissions of 12 chemical substances targeted by the chemical industry for priority efforts to reduce emissions were 6.5 tons. This represents a reduction of 34% from the 2003 level.

Curbing Emissions of PRTR* Law Class I Chemical Substances

The Kyowa Hakko Group issued a report for fiscal 2006 for seven plants subject to reporting requirements for PRTR Law Class I chemical substances. The total amount of these substances handled by the Kyowa Hakko Group in fiscal 2006 was approximately 230,000 tons, and emissions into the environment decreased to 32.8 tons. The decrease is mainly attributable to lower emissions of xylene and toluene.

■ Total Emissions of Class I Chemical Substances



*PRTR: Pollutant Release and Transfer Register, relating to release amounts of specific chemical substances in the environment.

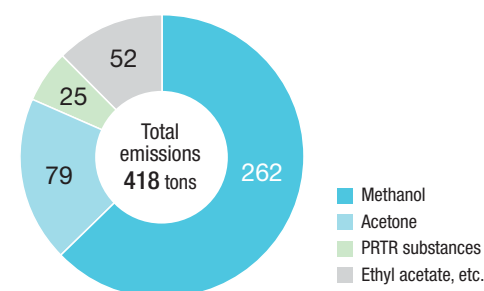
Managing Soil Pollution Risk

The Kyowa Hakko Group periodically analyzes soil and groundwater at five production sites on the basis of soil pollution countermeasure regulations established in 2004. With regard to fiscal 2006 analysis results, internal environment and safety audits conducted by the head office confirmed that there were no problematic soil pollution figures. When buying or selling land, we voluntarily conduct analysis in conformance with the Soil Contamination Countermeasures Law if circumstances require.

Reducing Volatile Organic Compound (VOC) Emissions

Kyowa Hakko Group has one dryer and four storage tanks subject to regulation under the Air Pollution Control Law. We analyze emissions from these facilities, decide targets and dates for curbing emissions, and take measures for reduction. In fiscal 2006, the Group's VOC emissions increased by 20 tons over the previous year to 418 tons. The increase is partly attributable to an increase in low-boiling-point VOCs, due to the introduction of new products. We will strive for optimal operation of recovery facilities and continue reduction efforts.

■ Emissions of Volatile Organic Compounds (Fiscal 2006)



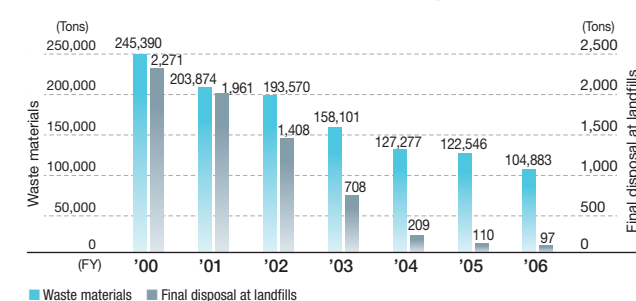
Targets	Results for Fiscal 2006	Medium-Term Targets
<ul style="list-style-type: none"> To maintain zero emission status (Final disposal at landfills of 250 tons or less)* 	<ul style="list-style-type: none"> Zero emission status was maintained, with final disposal at landfills of 97 tons. 	<ul style="list-style-type: none"> To maintain final disposal at landfills of 125 tons or less in fiscal 2007 at Kyowa Hakko, Kyowa Hakko Chemical, and Kyowa Hakko Food production and research sites To formulate a long-term plan for land-fill volume reduction at Daiichi Fine Chemical, a company newly included in the Group (fiscal 2007)

*In addition to recycling, the Kyowa Hakko Group deals with waste materials that require appropriate disposal through incineration. The Group's zero emission strategy, therefore, calls for final disposal at landfills, which involves a high environmental risk, of no more than 0.1% of total waste. The original target was to achieve a level at or below 250 tons (0.1% of 250,000 tons, the total in fiscal 2000) by 2007.

Maintaining Zero Emission Status

The Kyowa Hakko Group's waste volume in fiscal 2006 was 104,883 tons, a reduction of 57% in comparison with the basis year (2000). Final disposal at landfills was 97 tons, a substantial improvement on the target of 250 tons. As a result of converting the waste processing method from incineration to recycling-centered processing, we were able to cease operation of the Ube Plant's industrial waste incinerator. Improvements will continue in fiscal 2007, as the number of operational incinerators has decreased from six to four (including two waste-liquid incinerators).

■ Trends in Waste Materials and Final Disposal at Landfills



Overall Flow of Waste Reprocessing and Disposal

The Group's overall plant emissions have increased due to the elimination of industrial waste incinerators. However, the business sites are moving forward with external recycling aimed at achieving more upstream recycling as part of Kyowa Eco-Project activities. For instance, the Hofu Plant converts waste flexible container bags and plastic bags into solid fuel or recycles them as materials, the Tsuchiura Plant converts plastic bags and waste paper into solid fuel, and the Fuji Plant dissolves waste paper to produce recycled paper.

Waste Recycling Governance

When the Kyowa Hakko Group newly commissions the processing of waste, the business site environmental and safety managers or other responsible persons conduct environmental surveys. The business sites conduct periodic outsourcing partner audits and have created a system for summarizing the audit results on a list that is shared group-wide. The aim is to use the list in outsourcing partner selection and to simplify audit work.

Measures Concerning Polychlorinated Biphenyls (PCBs)

In the past, the Kyowa Hakko Group used transformers, condensers, stabilizers and other items containing PCBs. In accordance with the PCB Special Measures Law, these items have been placed in secure storage facilities designed to prevent seepage into the ground. We also appropriately manage the transformers of dissolved affiliated companies.

Condensers and transformers	91
Lighting stabilizers	3,441
Insulation oil containing PCBs	454 l

Hofu Plant



Location 1-1, Kyowa-machi, Hofu City, Yamaguchi Prefecture
Telephone 0835-22-2511
Site area 694,000 m²
Main activities Pharmaceuticals, foodstuffs, biochemicals, alcohol
ISO 14001 accreditation date July 26, 1999

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */N100 million of production)	180	79%
SOx emissions (tons/year)	784	101%
NOx emissions (tons/year)	196	103%
Dust emissions (tons/year)	9.7	88%
Wastewater volume (million tons/year)	18	102%
COD levels (tons/year)	302	158%
Nitrogen levels (tons/year)	322	181%
Phosphorous levels (tons/year)	10	146%
Volume of waste materials*1 (tons/year)	62,255	77%
Volume of waste disposal at landfill sites (tons/year)	11	33%

*crude-oil equivalent

Ube Plant



Location 2548, Fujimagari, Ube City, Yamaguchi Prefecture
Telephone 0836-22-5500
Site area 479,000 m²
Main activities Pharmaceuticals, biochemicals
ISO 14001 accreditation date September 11, 2000

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */N100 million of production)	58	127%
SOx emissions (tons/year)	4.1	9%
NOx emissions (tons/year)	2.2	28%
Dust emissions (tons/year)	0.04	20%
Wastewater volume (million tons/year)	23	100%
COD levels (tons/year)	143	99%
Nitrogen levels (tons/year)	71	104%
Phosphorous levels (tons/year)	8	87%
Volume of waste materials*1 (tons/year)	6,196	111%
Volume of waste disposal at landfill sites (tons/year)	2	40%

*crude-oil equivalent

Fuji Plant



Location 1188, Shimotogari, Nagaizumi-cho, Sunto-gun, Shizuoka Prefecture
Telephone 055-986-7600
Site area 65,000 m²
Main activities Pharmaceuticals
ISO 14001 accreditation date May 29, 2000

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */m ² -floor area)	0.21	105%
SOx emissions (tons/year)	0.1	3%
NOx emissions (tons/year)	3.0	43%
Dust emissions (tons/year)	0	0%
Wastewater volume (million tons/year)	2.5	101%
COD levels (tons/year)	2.6	79%
Nitrogen levels (tons/year)	3.3	109%
Phosphorous levels (tons/year)	0.25	50%
Volume of waste materials*1 (tons/year)	630	96%
Volume of waste disposal at landfill sites (tons/year)	0	—

*crude-oil equivalent

Sakai Plant



Location 1-1-53, Takasu-cho, Sakai-ku, Sakai City, Osaka Prefecture
Telephone 072-223-5554
Site area 21,000 m²
Main activities Pharmaceuticals
ISO 14001 accreditation date November 27, 2000

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */m ² -floor area)	0.157	98%
SOx emissions (tons/year)	0	—
NOx emissions (tons/year)	0.5	82%
Dust emissions (tons/year)	0	—
Wastewater volume (million tons/year)	0.073	113%
COD levels (tons/year)	3.1	136%
Nitrogen levels (tons/year)	0.5	271%
Phosphorous levels (tons/year)	0.10	170%
Volume of waste materials*1 (tons/year)	382	135%
Volume of waste disposal at landfill sites (tons/year)	5	59%

*crude-oil equivalent

Tsuchiura Plant, Kyowa Hakko Food Specialties Co., Ltd. Including Tsuchiura (Healthcare) of Kyowa Hakko



Location 4041, Ami, Ami-machi, Inashiki-gun, Ibaraki Prefecture
Telephone 029-888-8001
Site area 178,000 m²
Main activities Foodstuffs
ISO 14001 accreditation date March 21, 2000

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */N100 million of production)	41.4	101%
SOx emissions (tons/year)	0.5	158%
NOx emissions (tons/year)	2.8	81%
Dust emissions (tons/year)	0.22	108%
Wastewater volume (million tons/year)	0.6	122%
COD levels (tons/year)	7.6	119%
Nitrogen levels (tons/year)	0.6	45%
Phosphorous levels (tons/year)	0.05	54%
Volume of waste materials*1 (tons/year)	1,017	97%
Volume of waste disposal at landfill sites (tons/year)	0	—

*crude-oil equivalent

Chiba Plant, Kyowa Hakko Chemical Co., Ltd.



Location 11-1, Goiminamikaigan, Ichihara City, Chiba Prefecture
Telephone 0436-23-9111
Site area 215,000 m²
Main activities Chemicals
ISO 14001 accreditation date November 27, 2000

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */ton of production)	176	109%
SOx emissions (tons/year)	0.3	150%
NOx emissions (tons/year)	30	75%
Dust emissions (tons/year)	2.1	84%
Wastewater volume (million tons/year)	1.83	102%
COD levels (tons/year)	18	90%
Nitrogen levels (tons/year)	11.4	109%
Phosphorous levels (tons/year)	0.6	67%
Volume of waste materials*1 (tons/year)	685	73%
Volume of waste disposal at landfill sites (tons/year)	43	860%

*crude-oil equivalent

Yokkaichi Plant, Kyowa Hakko Chemical Co., Ltd. Including Yokkaichi (Pharmaceuticals) of Kyowa Hakko

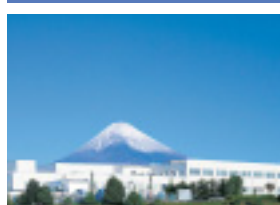


Location 2-3, Daikyo-cho, Yokkaichi City, Mie Prefecture
Telephone 0593-31-0624
Site area 323,000 m²
Main activities Chemicals, pharmaceuticals
ISO 14001 accreditation date July 23, 2000

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */ton of production)	187	111%
SOx emissions (tons/year)	0.4	25%
NOx emissions (tons/year)	265	93%
Dust emissions (tons/year)	7.5	72%
Wastewater volume (million tons/year)	2.80	151%
COD levels (tons/year)	9.5	33%
Nitrogen levels (tons/year)	2.4	30%
Phosphorous levels (tons/year)	1.2	32%
Volume of waste materials*1 (tons/year)	32,377	103%
Volume of waste disposal at landfill sites (tons/year)	21	51%

*crude-oil equivalent

Fuji Plant, Kyowa Medex Co., Ltd.



Location 600-1, Minamiishiki, Nagaizumi-cho, Sunto-gun, Shizuoka Prefecture
Telephone 055-988-6000
Site area 24,000 m²
Main activities Diagnostic reagents, medical equipment, contract analysis
ISO 14001 accreditation date November 26, 2001

Initiative	Fiscal 2006	
	Performance	Comparison
Unit energy consumption (k ² */N100 million of production)	14.0	80%
SOx emissions (tons/year)	0.59	203%
NOx emissions (tons/year)	6.2	97%
Dust emissions (tons/year)	0.12	52%
Wastewater volume (million tons/year)	0.08	87%
COD levels (tons/year)	0.04	200%
Nitrogen levels (tons/year)	0.02	—
Phosphorous levels (tons/year)	0.01	—
Volume of waste materials* (tons/year)	68	105%
Volume of waste disposal at landfill sites (tons/year)	0	—

*crude-oil equivalent

★ Amounts calculated on the assumption that biologically treated sludge has an 85% water content

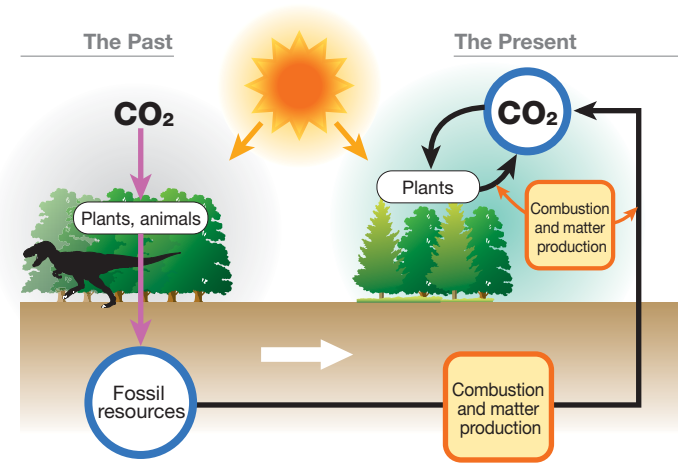
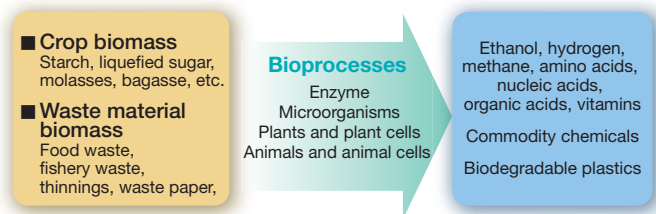
KYOWA HAKKO

Opening Up a New World of Fermentation Green Sustainable Chemistry

The expression “green chemistry” refers to the conversion of raw materials, reactions, solvents and products to safe alternatives to reduce the impact of chemical substances on human health and the global environment. When considered from this perspective, bioprocesses are manufacturing methods that use sustainable raw materials, products (including byproducts) and reaction conditions.

Crop biomass and agricultural waste, the principal raw materials in bioprocesses, are resources in which atmospheric CO₂ has been converted using the solar energy of plant photosynthesis. By way of contrast, since the second half of the 20th century, our way of life has been made possible by energy and raw materials derived from use of oil and coal (fossil resources) that are storehouses of CO₂ from remote times. That is to say, we are leading a life of affluence and comfort by releasing into the atmosphere today carbon dioxide stored up eons ago.

The many technological advances since the 1970s, such as the decoding of genetic information of organisms and genetic recombination technology, have given rise to advancement in technological innovation. We have come to the point where many chemicals that could previously be obtained only by synthesis can now be manufactured by means of bioprocesses. These technologies are expected to provide solutions to the future challenges of coping with fossil resource depletion and combating global warming.



KYOWA HAKKO FOOD SPECIALTIES

Cold-Sensitive Yeast Dia Yeast REIZO/Dia Yeast FRZ

Bread is a fermented food made from flour and baker's yeast. Dia Yeast REIZO and Dia Yeast FRZ are unique yeasts that yield bread dough with suspended fermentability at moderately low temperatures and ordinary fermentability at room temperature. As bread dough made using these cold-sensitive yeasts can be stored at refrigerator temperature, dough can be refrigerated for baking the following morning, thus reducing early-morning work for bakers. Not only that, refrigerating dough instead of freezing it offers the added benefit of energy conservation.



Kyowa Hakko's BioFrontier Laboratories developed Dia Yeast REIZO and FRZ in the 1990s, and major baking companies have used these bread yeasts for many years to produce croissants and other delicious bakery products. As these yeasts not only contribute to the normalization of bakers' working hours and improvement in production efficiency, but also make possible just-in-time production of the exact amount of bread needed, when it is needed, they play an important role in the provision of the fresh-baked bread consumers prefer.

KYOWA HAKKO CHEMICAL

Lubricant Raw Materials for Ozone-friendly CFC-substitute (HFC) Refrigeration Isononanoic Acid and Octanoic Acid



Specified CFCs (HCFCs, R-22) are still used as the main refrigerants of domestic and commercial air conditioners and industrial freezers. However, worldwide efforts to prevent damage to the ozone layer have been under way since the late 1980s. Several countries, including Japan and the United States, aim to end production of specified CFCs (HCFCs) by 2010. It is necessary to manufacture air conditioners and large-capacity freezers with systems that use ozone-friendly CFC-substitute refrigerants, such as HFC R-407C and R-410A. Compressor lubricants used in air conditioners, large-capacity freezers and other equipment must be highly compatible with CFC-substitute products. The main ingredients of these lubricants are isononanoic acid and octanoic acid. Kyowa Hakko Chemical increased its production capacity of isononanoic acid to over 12,000 tons in 2005 and that of octanoic acid to 40,000 tons in 2006 as required to meet expanding world demand.

Environmental and Social History

When asked for advice about which of two research subjects to choose, our founder told the person concerned to “choose the subject that brings greater benefit to the world.” Based on this spirit, Kyowa Hakko promotes the development of products and technology in its business operations that contribute to society and environmental initiatives.

● Business events ● R&D events ● Environmental events

1948 ● Establishment of Japan's first mass-production system for the manufacture of acetone and butanol from molasses. This technology will be the key to Kyowa Hakko's future success.

1949 ● Kyowa Hakko Kogyo Co., Ltd. is established.

1956 ● Kyowa Hakko invents the world's first fermentation-based production method for L-glutamic acid, pioneering the use of fermentation technology to produce amino acids.

1958 ● Kyowa Hakko invents a fermentation-based production method for L-lysine.

1964 ● Production of organic fertilizer using recycled fermentation mother liquor at the Hofu Plant.

1996 ● Implementation of Responsible Care.



Founder Dr. Benzaburo Kato

2001 ● Received ISO 14001 certification at eight Kyowa Hakko, Kyowa Hakko Chemical, Kyowa Hakko Food Specialties and Kyowa Medex plants.

● Conversion of boiler fuel to city gas at the Sakai Plant.

● Conversion of boiler fuel to city gas at the BioFrontier Laboratories.

2003 ● Installation of energy-saving air distributors for wastewater treatment facilities at the Yokkaichi, Hofu and Fuji plants.

2004 ● Zero emission status is achieved throughout the entire Group.

2005 ● Conversion of boiler fuel to city gas at the Fuji Plant.

2006 ● Conversion of the part of boiler fuel to city gas at the Hofu Plant.

2007 ● Conversion of boiler fuel to liquefied natural gas at the Kyowa Hakko Chemical Yokkaichi Plant.



Kyowa Hakko has held stakeholder meetings since 2005. This year's meeting was held at the BioFrontier Laboratories on June 1, following a tour of the facilities.

The Educational Objective of the Bio Adventure Project

Tatsumi: You showed us the Bio Adventure Mobile Laboratory earlier. The logo is unique, isn't it?

Hashizume: It represents a microorganism. As part of our instruction for elementary school students, we distribute petri dishes prepared for growing microorganisms and ask the students to place objects of their choice on the dishes. They bring in dishes containing pencil leads, human hair, leaves..., all sorts of things.

Ohno: It turns out that microorganisms have grown in nearly all of the dishes. When the children discover that microorganisms grow, no matter what is placed in the petri dishes, they come to understand the ubiquity of microbes.

Tatsumi: Sometimes an exceptional event reminds us of something that we read about in school. Even though we only vaguely understood what we read at the time, the experience years later makes the meaning clear.

Kojima: It seems that we even surprise some of the teachers who participate in the instruction with this teaching approach.

Fujisawa: Even employees from the Pharmaceutical Research Center in Fuji and the Technical Research Laboratories in Hofu volunteer for the program. It's an activity in which mainly young researchers participate on a voluntary basis.



ISO 14001 is a Guideline for Thought and Action

Tsunoda: It's necessary to understand the mutual connections between humans and ecosystems. How do we affect ecosystems? And, conversely, how are we affected by them? Although some organizations operate ISO 14001 systems based on the exclusion of human beings (workers) from the environment, humans are part of the environment, too, aren't we?

Saito: The definition of "environment" in ISO 14001 is the surroundings in which organizational activities occur. This includes air, water, soil, plants, animals, and finally, human beings. One aspect of "environmental impact" in the ISO 14001 definitions is the impact of organizational activities on nearby people. As the ability of people to feel comfortable is part and parcel of environmental impact, the fact that the BioFrontier Laboratories makes the impact on human beings a central consideration in its ISO 14001 activities, is a reflection of the personality of the organization.

Azuma: An ISO 14001 program isn't the mere preparation of documents. It's necessary to consider animals and plants, even microorganisms, when developing a program.

Ueda: With regard to fermentation-related activities in particular, thanks to the activities of Professor Takeo Koizumi, people have an image of microbes as having great power. When I consider the question of ISO 14001 at the BioFrontier Laboratories, I think that it's extremely important to impart the message that Kyowa Hakko takes a distinctive approach in thinking about the environment as a basic premise of its involvement in ISO 14001. Listening to the discussion today, I think that the point that microorganisms and people and pharmaceuticals and the environment are all linked, and what it means for Kyowa Hakko to protect the environment in such circumstances, comes through naturally.

Saito: It's about linkage with the core business. For instance, inevitably Kyowa Hakko contributes to society through the activities of its people. Although environmental impacts can

<Stakeholders>



Ms. Kimie Tsunoda
Steering Committee of the Valdez Society



Mr. Akifumi Ueda
Representative Citizens' Science Initiative Japan



Ms. Kikuko Tatsumi
Board Member, Chairperson Environmental Committee Nippon Association of Consumer Specialists



Mr. Yoshitaka Saito
President AUDIX Registrars Inc.

<Participants from Kyowa Hakko>

Noboru Kojima, Manager, Environment and Safety Department, BioFrontier Laboratories

Takuro Ohno, Environment and Safety Department, BioFrontier Laboratories

Kazuko Hashizume, Research Planning Department, BioFrontier Laboratories

Masaki Azuma, General Manager, Quality Assurance, Environment and Safety Department

Toshio Fujisawa, Manager, Quality Assurance, Environment and Safety Department

include both beneficial and adverse environmental aspects, it's good to place importance on the beneficial aspects, isn't it? Of course, it's also necessary to consider adverse environmental aspects, such as waste that cannot be discharged externally: for instance, how to dispose of biological waste and the problem of biohazards—although I suppose Kyowa Hakko doesn't perform dangerous experiments.

Kojima: On the subject of environmental aspects, the site reports of last year's Sustainability Report provide information on waste materials. In fiscal 2006, the total volume of waste materials at the BioFrontier Laboratories was 71 tons, and landfill volume was 3 tons. Although last year's landfill volume increased due to high emissions of vinyl chloride waste plastic, this April we changed the disposal contractor, and the waste is now recycled as a raw material for roadbeds.

Accordingly, this year we are a step closer to achieving zero emission status. With regard to biological sample waste, we carefully manage it internally and consign it in sealed containers to a reliable disposal contractor.

Ohno: On the subject of the risks associated with recombination, biological samples and the like, we have prepared mechanisms for conducting experiments in laboratories without discharging substances externally.

Saito: Research results are achieved, but lots of waste is generated. Debate inevitably occurs about whether it is more beneficial to achieve results or avoid waste. I think that precedence should probably be placed on the Company's business. The question is how to control adverse environmental aspects, and the Company should achieve results while considering how to reduce them if possible. Among the ISO 14001 objectives, the term "prevention of pollution" appears. This term means to reduce, avoid and—another important consideration—control the emission and discharge of waste and pollutants into the environment. The idea is to simultaneously curb adverse aspects to prevent them from worsening and create beneficial environmental aspects (research results).

Linking the Potential of Kyowa Hakko with the Potential of Microorganisms

Tsunoda: Are materials from tropical forest organisms included among the microbiological resources that Kyowa

Hakko works with? The Millennium Ecosystem Assessment issued by the United Nations is connected with corporate social responsibility. Many useful resources remain untapped in tropical forests, and the question of how to harvest them—for instance, how to harvest them without destroying ecosystems or how to properly employ local people to harvest them—is a pharmaceutical-related CSR issue.

Azuma: Kyowa Hakko has engaged in pharmaceutical development from microorganisms found in tropical forests by means of joint research with universities in Southeast Asia.

Tsunoda: The inclusion of the ecosystems of developing countries or collaboration with workers among the ISO 14001 objectives and targets is a conceivable means of linking the ISO 14001 program with ecosystems, isn't it? I think it would be good if there were a "win-win" target to halt ecosystem degradation.

Ueda: With regard to working with microorganisms in business activities, in a future in which various resources become depleted, I think that a competitive advantage in biological resources will lead to business strength. Following hundreds of years of use of fermentation in Japan, Kyowa Hakko is revisiting fermentation from a scientific perspective and applying it in business activities. I think that this course of action will become the Company's greatest strength in the coming years. With regard to the environment as well, the power of microorganisms in environmental purification and pollution prevention is likely to come under intensive reexamination. I envision Kyowa Hakko as engaging in business activities grounded in the use of microorganisms, with those activities extending into the areas of food, pharmaceuticals and the environment.

Tsunoda: In the 2008 report, it would be good to have a discussion of the tremendous potential of ISO activities at the BioFrontier Laboratories among the various ISO activities at Kyowa Hakko. As the ISO activities of research institutions don't receive much media coverage, such information would likely have a major impact on other companies.

Azuma: We hope to draw upon your opinions, increase the positive aspects and decrease the negative aspects of our business activities, and create a better Kyowa Hakko. Thank you very much.

Itaru Yasui, Ph.D.
Vice-Rector
United Nations University



Emeritus Professor, University of Tokyo
Former Head of the Center for Collaborative
Research, University of Tokyo

An expert in materials chemistry, Dr. Itaru Yasui has been implementing major environmental research projects for the past 15 years and is an important opinion leader in this area. He is concerned that there have been no comprehensive environmental research projects to meet today's need for research data based on intelligent insights. In line with his view that appropriate policy decisions must be based on a comprehensive viewpoint, he is currently implementing his own Internet-based campaign asking people to consider the extent to which an individual can achieve comprehensiveness.

<http://www.yasuienv.net>

CSR in Advanced Companies

The British Treasury issued the Stern Review on the economics of climate change toward the end of October 2006. This was followed in quick succession by the release of former U.S. Vice President Al Gore's movie "An Inconvenient Truth" and the announcement of an outline of the IPCC's report. And, in June 2007, then Prime Minister Shinzo Abe's proposal to halve worldwide greenhouse gas emissions by 2050 was agreed to in principle at the G8 Summit. It just might be that these developments were an historic turning point in mankind's response to global environmental problems. This movement arose because the problem of global warming has become a vote-winning issue for politicians, including those in the U.S., and a money earner for the business world. Scholars who have been urging a response to environmental problems, may greet the G8 Summit action with bewilderment and a sense of discomfort that a greenhouse gas emission proposal should be so readily agreed to without due consideration.

The fact is, halving greenhouse gases worldwide by 2050 will be no simple matter. This is because emissions from developing countries, including China, India and Brazil, are on track to increase. If that situation is accepted as is, it is questionable whether the objective can be achieved even with an 80% cut in emissions from developed countries. Still, if no action is taken on grounds of difficulty, the world will probably miss the turning point. What is the important consideration in such circumstances? It is for companies to bring their core businesses into alignment with global environmental imperatives.

Although people talk about the importance of CSR, the talk is limited to compliance, a more basic issue than CSR. What does a company aspire to achieve in its core business and what should its relationship with consumers be? Earnest discussion of such matters, which you might say are obvious, is the starting point of CSR.

These days, ISO 26000 is becoming a hot topic. This is an ISO standard concerning social responsibility for all organizations, including companies. Although it will be a voluntary standard that entails no certification, the requirements define an organization whose activities are consistent with the sustainable development of society

and whose approach to social responsibility is an integral part of its core business.

As I read this year's Sustainability Report, what first caught my attention was what was written in the section about the stakeholder meeting. The meeting was somewhat different in nature from ordinary stakeholder meetings with respect to the participation of members drawn primarily from the BioFrontier Laboratories Environment and Safety Department and Research Planning Department. When I read the account of the round-table discussion and attempt to understand what transpired intuitively, I get the impression that evidently Kyowa Hakko may at last be returning to its founding business—or perhaps I should say, may focus its efforts on fermentation technology. When I flipped through the pages and read from that perspective, I found descriptions that suggest that Kyowa Hakko may have set a new course for its fermentation technology involving inclusion in the scope of its activities the manufacturing of general-purpose chemicals, not amino acids and food-related products only. The message is that this simultaneously contributes to CO₂ reduction. Upon reading this I felt I understood the company's focus and direction.

Although the report contains a veritable wealth of other information that promises to yield many interesting discoveries if analyzed, there is so much information that I was a bit concerned whether anyone will carefully read it. To mention one such obscuring detail, the 2006 data show an increase in CO₂ emissions, which seems to have resulted from a close examination of energy consumption that revealed energy consumption previously excluded from the calculation. Although I think this honesty is to be commended, the resulting loss of continuity with historical data is a demerit that may warrant correction.

Examination of this type of data makes it easy to understand the truly meticulous concern for detail at work. It makes me wish that politicians exercised this much attention in the management of their own finances. To repeat my point, the true essence of CSR is the way the core business of a company is integrated with the various components of the environment. I look forward with anticipation to the future development of CSR at Kyowa Hakko.



レスポンスフルケア
Dr. Yuzuru Matsuda
President and Chief Executive Officer
Kyowa Hakko Kogyo Co., Ltd.

Sustainability Report 2007
Third-Party Verification—Written Opinion
(Translation from Japanese)

September 4, 2007

Akio Yamamoto
Akio Yamamoto

Chairman, Verification Advisory Committee

Yasuo Tanaka
Yasuo Tanaka

Chief Director, Responsible Care Verification Center

● Objectives of Verification

This Responsible Care Report Verification refers to "Sustainability Report 2007," which was prepared by Kyowa Hakko Kogyo Co., Ltd. It expresses our opinion as chemical industry specialists.

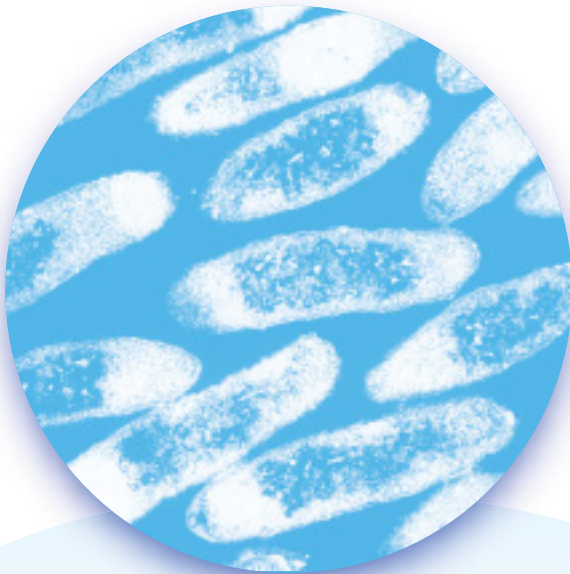
● Verification Procedures

- At the corporate level: The consistency of the report with the evidence was checked, and the methods used to aggregate and compile performance indicators reported from each site (office, plant) were confirmed by interviewing those responsible for operations and the compilation of data, and by seeking documents and requesting explanations of those documents.
- At the site level: The consistency of the report with the evidence was checked, and the methods used to calculate and aggregate performance indicators reported to the head office by each site (office, plant) and the accuracy of numerical values were confirmed by interviewing those responsible for operations and the compilation of data, and by seeking documents and requesting explanations of those documents. The site selected was the Sakai Plant.

- Performance indicators and information in the report were verified by sampling.

● Opinion

- 1) The reasonableness of methods used to calculate and aggregate performance indicators (numerical data), and the accuracy of numerical values.
 - Performance indicators were calculated and aggregated reasonably by the head office and the Sakai Plant.
 - The performance statistics were calculated and aggregated accurately across the scope of the survey.
 - Performance calculation using Excel risks accidental replacement of fixed numbers such as coefficients. Accordingly, it is advisable to ensure that figures cannot be overwritten.
- 2) Consistency between information in the report and evidential documents and materials.
 - It was confirmed that information shown in the report was consistent with the evidential documents and materials that were examined.
 - There were issues with the appropriateness of expressions or ease of understanding at the draft stage, but these have been corrected in the present report, and there are now no specific aspects that require further documentation.
- 3) Evaluation of Responsible Care (RC) activities
 - We were impressed that Kyowa Hakko actively undertakes to develop new products with the aim of contributing to society through its business activities.
 - We were impressed with Kyowa Hakko's efforts to enhance corporate governance by such means as strengthening internal control and establishing an internal compliance-reporting system.
 - We were impressed that the Sakai Plant promotes understanding among area residents through advance explanations of important new plant facilities, that it actively seeks to reduce atmospheric emissions of organic matter, that it has continued its accident-free record, that it practices neatness, orderliness, cleanliness and cleaning, and that it has worked to improve wastewater treatment facilities.
- 4) Characteristics of the report
 - We were impressed by Kyowa Hakko's effort in again holding a stakeholder meeting, soliciting the views of concerned parties and reflecting those opinions in the report.
 - The report is designed for easy reading: the Foreword contains information on highlights and featured topics, and technical terminology is appropriately explained where it appears.
 - The report contains information on therapeutic antibodies developed using fermentation technology and on Kyowa Hakko's involvement in green chemistry.



**Electron microscope photograph of
*Escherichia coli***

General-purpose *Escherichia coli* strains that have no pathogenic factors are used in the production of various substances.

For instance, Kyowa Hakko has established an interferon production technology that uses the *Escherichia coli*.

KYOWA HAKKO KOGYO CO., LTD.

1-6-1 Ohtemachi, Chiyoda-ku, Tokyo 100-8185, Japan

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Inquiries	Quality Assurance, Environment and Safety Department TEL: 81-3-3282-0051 FAX: 81-3-3282-0030 e-mail: info@kyowa.co.jp
URL	http://www.kyowa.co.jp